

PLAZA DEL  
REY  
(FINAL)

F I N A L

ENVIRONMENTAL IMPACT REPORT

EIR-74-5

PLAZA DEL REY

Based On  
Draft Environmental Impact Report  
Prepared By

WESTEC Services, Inc.

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PACIFIC  
OCEAN

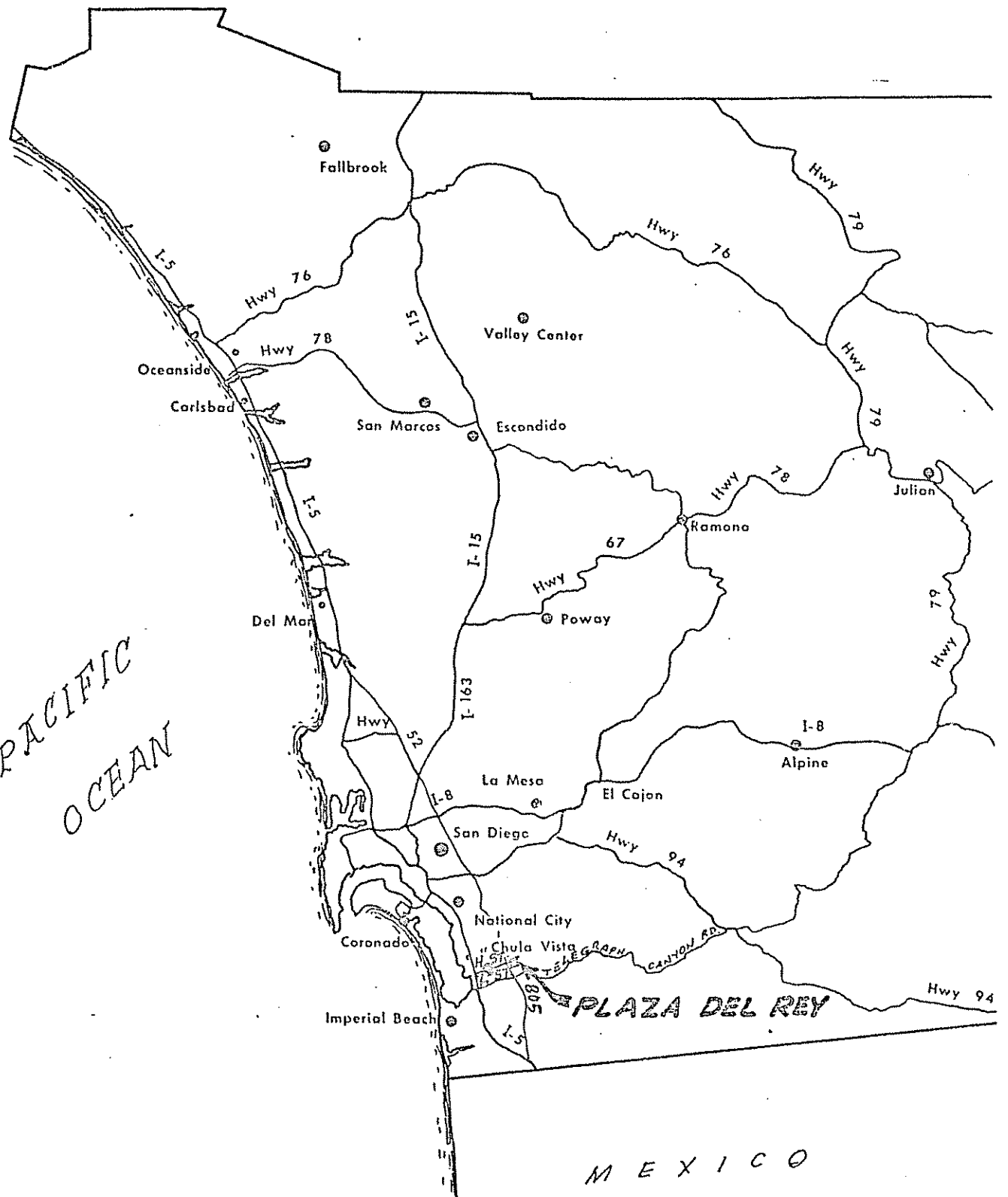


FIGURE I-1  
LOCATION MAP  
PLAZA DEL REY



## I. INTRODUCTION

### A. Purpose

This report is a supplemental final Environmental Impact Report for the western 450 acres of the 1,400 acre Sports World General Development Plan. The final Environmental Impact Report for that project was adopted by the City of Chula Vista in 1973; however, the subsequent referendum election on the matter of the proposed revision to the El Rancho del Rey General Development Plan resulted in the denial of that proposal.

The developer is therefore proposing to revise the western portion of the El Rancho del Rey General Development Plan in order to meet the current and projected market demands for a new regional shopping center, and to begin the development of housing and other facilities which reflect the formerly adopted community plan and the City's General Plan - 1990.

This final report is a supplemental EIR to the final version adopted by the City, and confines itself to the subject 450 acres, except for certain factors such as traffic circulation and air quality which must necessarily be described within a larger context. This report will therefore rely upon the description of the existing Environmental Setting contained in the Sports World EIR (a portion of which is herein contained), since it has not changed significantly. The subject of noise, air quality, and associated meteorological conditions seems worthy of updating, however, since the circumstances related to air quality and automobile transportation are changing so rapidly.

B. Abstract of Environmental Analysis

Land Form

The land form of the project will be irreversibly altered. The visual effect of this grading can be reduced but the basic impact cannot be mitigated. A different alignment for East H Street would reduce the amount of grading, and imposition of hillside development standards would result in far less grading and the retention of much more open space.

Flora and Fauna

The site contains several endemic biological resources. The implementation of the proposed project would result in the elimination of a portion of these resources. Furthermore, the hunting territory will be lost for several raptorial species that are suffering severe population declines or range limitation. Also, several species are classified as depleted.

History, Archaeology

No adverse effects of the project are noted in these areas.

Paleontology

Various fossils have been located on the site; much of this non-renewable resource will be irreversibly committed by the grading of the site. Implementation of alternatives, as noted above (Land Form), would retain a larger amount of the noted fossils.

Drainage/Flood Control

The implementation of the project will not result in a direct significant increase in runoff. However, the long range cumulative development in the Sweetwater and Rice Canyon drainage basins will significantly increase runoff and limit the options for flood plan management/protection in the lower Sweetwater Valley.

The provision of large parking areas will decrease the quality of water in runoff. This will be especially true during the first hour of rainfall.

#### Land Use

The project will irreversibly change the land use of the project. The proposed land uses are not in conformance with the Open Space Element of the Chula Vista General Plan.

#### Climate

The creation of a "heat island" will irreversibly alter the micro-climate of the project setting.

#### Air Quality

The quality of the air in the Chula Vista area will be downgraded by two functions: first, there will be a reassignment of regional traffic to the South Bay area thus shifting a significant amount of air pollution to our portion of the air basin; and, secondly, the auto trip unique to the regional center, plus those associated with the other commercial uses and residential development, will add to the current level of pollution. Chula Vista currently experiences adverse air quality up to 43% of the time; any increase in emissions must be recognized as significant and limiting the ability to attain air health standards within this decade.

#### Noise

The primary source of noise from the project will be from traffic. Normally unacceptable noise levels will extend the following distances from the rights of way:

H Street	670 feet
Lynwood Drive	95 feet
I-805	1200 feet

In most cases residential development can be adequately protected through barrier/line of sight design techniques.

Utility Consumption/Generation

There will be a general rise in the consumption of energy and services. There will also be a concomitant increase in the generation of waste materials. Of greatest concern is the waste water treatment system. The Point Loma treatment facility currently has a capacity of 88 million gallons per day (MGD) while it processes 105 MGD, thus creating inadequately treated effluent. The proposed development will add .6-1.0 MGD or an approximate .57-.95 percent increase in the overall system.

Water Quality

The increased pollution level due to parking lot runoff and inadequate sewage treatment will generally decrease water quality.

Economic

The Cost/Revenue Analysis has identified a significant beneficial economic impact to both the City of Chula Vista and the school districts.

## II. PROJECT SETTING

### A. Findings of EIR-73-1

Portions of the previous environmental description of this project setting are reproduced in this section of the EIR for the convenience of report reviewers and decision making bodies. It should be noted that many of these surveys and descriptions include areas beyond the subject 450 acres.

The vegetation of the subject area is a derivative of the Coastal Sage Scrub Plant Community. The arid climate of southwestern San Diego County has altered the Community from its normal aspect in that several plant species of southern affinity are found. These taxa are *Simmondsia Chinensis*, *Opuntia parryi* var. *serpentina*, *Ferocactus viridescens*, *Mammillaria dioica*, *Isomeris arborea*, *Artemisia palmeri*, *Haplopappus palmeri*, *Oligomeris linifolia*, and *Viguiera laciniata*. Because of their association with a drier climatic regime, these entities are found on the arid, south-facing slopes. North-facing slopes, which are unexplainably steeper, are generally clothed with the more standard brand Coastal Sage Scrub types. These include *Heteromeles arbutifolia*, *Rhus integrifolia*, *Artemisia Californica*, *Mimulus puniceus*, *Jepsonia parryi*, and *Sidalcea malvaeflora*.

Locally rare species were described as follows:

"Several of the plant species found in the subject area are northward extensions of a mainly Baja Californian range and are, therefore, rare in San Diego County, but relatively more abundant in Baja California. Plants of this type are *Opuntia parryi* var. *serpentina*, *Haplopappus palmeri*, and *Artemisia palmeri*. The opuntia is limited to south-facing slopes."

Rice canyon "includes the most varied topography, vegetation, and wildlife". The northeast side of Rice Canyon has a number of "deep, north-running side canyons which, because of their drainage pattern and exposure, are clothed mostly by low scrubs, grasses, and cactus. The south wall of Rice Canyon has a few south-running side canyons which are less steep than those on the north side.

The south-running side canyons support dense, mature stands of coastal sage scrub and relatively few cactus. This area provides suitable habitat and cover for a wide variety of birds for nesting and foraging. A dry stream bed courses along the bottom of Rice Canyon.

The eastern end of Rice Canyon (east of about 117°01') is shallow and broad. The north wall is dominated in some places by tall, dense stands of jumping cholla and prickly pear cactus, while the south wall is fairly steep and dominated by mature stands of coastal sage scrubs and grass".

The results of the trapping and observations were: "The herptiles collected or observed represent a fairly typical assemblage likely to be found in San Diego County coastal sage scrub. Herptiles listed in Table 1 (immediately following this section) are divided into those actually observed, and a hypothetical list of those which should occur on the property but were not directly observed. Many herptiles (especially frogs, toads, and snakes) are not active above ground during the winter months and do not emerge until mid-April, which was past the duration of this study; these species therefore were placed on the hypothetical list. None of the species of herptiles listed in Table 1 are considered rare or endangered .

#### Avifauna

Forty-two species of birds were observed and identified during the survey. Table 2a lists the

observed birds and classifies them as either residents (i.e., those which breed in the area and live there most of the year) or migranta (i.e., those which usually breed in other geographic locations but pass through the area during migration). Table 2b Hypothetical Bird Species List, lists those birds expected to occur on the property at sometime during the year, although not observed during the survey.

Although no species of birds considered rare or endangered were seen at El Rancho del Rey, one species, the Cactus wren, is worthy of special note. While this species is fairly common in desert regions of San Diego County, it is considered rare on the coast by experts of local bird distribution.

While the Cactus wren cannot be termed abundant at El Rancho Del Rey, I sighted or heard this species on four of the eight field visits I made. It always occurred in the vicinity of dense stands of cactus (Jumping chollas and Prickly pear), most commonly on the north side of the western half of Rice Canyon- and the north side of the eastern end of Rice Canyon, and the western end of the proposed open space canyon. Several old and new nests were



located and there is no doubt that this species breeds on the property. Because the Cactus wren depends on cactus thickets for nesting and foraging, it might not survive if these thickets are destroyed.

### Mammals

Table 3a lists mammal species captured or observed, either directly or indirectly (evidence from tracks or scats). These species, along with the hypothetical species listed in Table 3b, are typical of the coastal sage scrub habitat in southern California. Audubon cottontail rabbits and Beechey ground squirrels were the most conspicuous mammals active during the daylight hours. The large stick nests of the Dusky-footed woodrat were very common at the bases of large scrubs (Lemonade berry and Laurel sumac); smaller stick nests around cactus probably belonged to the Desert woodrat and the California mouse, although the latter two species were not trapped. Rodents seemed to prefer the canyon floors and lower slopes, although Deer mice and Pacific kangaroo rats were also caught on the north ridge of Rice Canyon. Although the Coyote was the only carnivore positively identified on the property, others, including the Gray fox, Bobcat and Striped and Spotted skunks, probably also occur there. Bats are not considered

in this survey because no suitable habitat for them exists on the property, although the area is undoubtedly visited by some species of bats. No species of mammals considered rare or endangered is known to occur at the subject property.

Since flora and fauna form an ecological unit, it is felt that the mapping of the significantly denser areas of flora on page II-10.2 will serve to indicate the more likely places for fauna to be found.

FAUNA

TABLE 1. HERPTILES OBSERVED

AMPHIBIANS

Plethodontidae (Lungless salamanders)

California slender salamander (Batrachoseps major)

REPTILES

Iguanidae

Southern California side-blotched lizard  
(Uta stansburiana hesperia)

Western fence lizard  
(Sceleperus occidentalis biseriatus)

Southern California horned lizard (Phrynosoma coronatum)

Anguidae

San Diego Alligator lizard  
(Gerrhonotus multicaudatus webbi)

Teiidae

California orange-throated lizard  
(Cnemidophorus hyperythrus beldingi)

Scincidae

Western skink (Eumeces skiltonianus)

Colubridae

Common king snake (Lampropeltis getulus californiae)

TABLE 1. (Continued)

HYPOTHETICAL LIST OF HERPTILES

AMPHIBIANS

Pelobatidae and Bufonidae (Toads and Spadefoot toads)

Hammond's spadefoot toad (Scaphiopus hammondi)

Western toad (Bufo boreas)

Hylidae (Tree frogs)

Pacific tree frog (Hyla regilla)

REPTILES

Boidae (Boas)

California boa (Lichanura roseofusca)

Colubridae

California striped whipsnake (Masticophis lateralis)

Gopher snake (Pituophus catenifer)

Spotted night snake (Hypsiglena torquata)

Crotalidae (Rattlesnakes)

Red diamond rattlesnake (Crotalus ruber ruber)

Pacific rattlesnake (Crotalis viridis helleri)

TABLE 2A. BIRD SPECIES OBSERVED

Hawks and Falcons

Cooper's hawk (Accipiter cooperi) --resident  
Red-tailed hawk (Buteo jamaciensis) -- resident  
Sparrow hawk (Palco sparverius) -- resident

Game Birds

California quail (Lophortyx californicus) -- resident  
Mourning dove (Zenaidura macroura)-- resident  
Rock dove (Columba livia) --domestic and feral,--resident

Gulls

Ring-billed gull (Larus delawarensis) --migrant

Cuckoos, Goatsuckers, and Hummingbirds

Roadrunner (Geococcyx californianus) --resident  
Lesser nighthawk (Chordeiles acutipennis)  
Anna's hummingbird (calypte anna) --resident, nests\*  
Rufous hummingbird (Selasphorus rufus) --migrant

Woodpeckers, Tyrant flycatchers, Swallows, Jays and Crows

Red-shafted flicker (Colaptes cafer) --resident  
Cassin's Kingbird (Tyrannus vociferans) --resident  
Western flycatcher (Epidonax difficilis) --resident  
Cliff swallow (Petrochelidon pyrrhonota) --resident  
Scrub jay (Aphelocoma coerulescens) --resident  
Common raven (Corvus corax)--resident  
Common crow (Corvus brachyhynchos) --resident

TABLE 2A (Continued)

BIRD SPECIES OBSERVED

Bushtits, Wrentits, and Wrens

Common bushtit (Pealtiparus minimus) --resident, nests\*

Wrentit (Chamaea fasciata) --resident

House wren (Troglodytes aedon) --resident

Bewick's wren (Thryomanes bewickii) --resident

Caetus wren (Campylorhynchus brunneicapillum) --resident,  
nests\*

Mockingbirds, Thrashers, and Thrushes

Mockingbird (Mimus polyglottos) --resident

California thrasher (Toxostoma redivivum) --resident

Robin (Thurdus migratorius) --resident

Hermit thrush (Hylocichla guttata) --migrant

Old World Warblers, Shrikes, Wood Warblers, and Weaver Finches

Blue-gray gnatcatcher (Polioptila caerulea) --resident

Loggerhead shrike (Lanius ludovicianus) --resident

Orange-crowned warbler (Vermivora celata) --resident

Audubon's warbler (Dendroica auduboni) --migrant

House sparrow (Passer domesticus) --introduced, resident

TABLE 2A. (Continued)  
BIRD SPECIES OBSERVED

Meadowlarks, Orioles, Finches, and Sparrows

Western meadowlark (Sturnella neglecta) --resident  
Bullock's oriole (Icterus bullockii) --resident  
House Finch (Carpodacus mexicanus) --resident  
Lawrence's goldfinch (Spinus lawrencei) --resident  
Rufous-sided towhee (Pipilo erythrophthalmus) --resident  
Brown towhee (Pipilo fuscus) --resident  
White-crowned sparrow (Zonotrichia leucophrys) --resident  
Golden-crowned sparrow (Zonotrichia atricapilla)--migrant  
Fox sparrow (Passerella iliaca) --migrant  
Song sparrow (Melospiza melodia) --resident

TABLE 3A. MAMMAL SPECIES OBSERVED

Leporidae (Rabbits and Hares)

California Black-tailed hare (Lepus californicus)

Audubon's cottontail rabbit (Sylvilagus subduboni)

Sciuridae (Squirrels)

Beechey ground squirrel (Otospermophilus beecheyi)

Geomysidae (Pocket gophers)

Botta pocket gopher (Thomomys bottae)

Heteromyidae (Pocket mice and Kangaroo rats)

San Diego pocket mouse (Perognathus fallax)

Pacific kangaroo rate (Dipodomys agilis)

Cricetidae (Deer mice, Meadow mice, and Woodrats)

Deer mouse (Peromyscus californicus)

California Meadow mouse (Microtus californicus)

Dusky-footed woodrate (Neotoma fuscipes)

Desert woodrat (Neotoma lepida)

Canidae (Coyotes)

Coyote (Canus latrans)



TABLE 3A. HYPOTHETICAL LIST OF MAMMAL SPECIES

Didelphidae (Opposums)

Common opossum (Didelphia marsupialis)

Soricidae (Shrews)

Ornate shrew (Sorex ornatus)

Gray shrew (Notisorex crawfordi)

Talpidae (Moles)

Broad-handed mole (Scapanus latimanus)

Leporidae (Rabbits)

Brush-rabbit (Sylvilagus bachmani)

Heteromyidae (Pocket mice)

Little pocket mouse (Perognathus longimembris)

California pocket mouse (P. californicus)

Crioeetidae (New world rodents)

Western harvest mouse (Reithrodontomys megalotus)

Brush mouse (Peromyscus boylii)

California mouse (P. californicus)

Cactus mouse (P. eremicus)

Southern grasshopper mouse (Onychomys torridus)

Canidae (Foxes)

Gray fox (Urocyon cinereoargenteus)

Mustelidae (Weasels and skunks)

Long-tailed weasel (Mustela frenata)

TABLE 3A. HYPOTHETICAL LIST OF MAMMAL SPECIES  
(Continued)

Striped skunk (Mephitis mephitis)

Spotted skunk (Spirogale putorius)

Felidae (cats)

Bobcat (Lynx rufus)

ADDENDUM

Muridae (Old world mice)

House mouse (Mus musculus)

## H. HISTORY

While Spain controlled California, prior to 1822, the subject area was part of Rancho del Rey. This rancho was operated by soldiers from the presidio and used for grazing the cattle belonging to Mission San Diego. Later in the Mexican period, the rancho passed into private hands and the name was changed to Rancho de la Nacion. In 1868 the Kimball Brothers purchased the rancho and began to develop this region of San Diego. The subject area, however, never figured prominently in their activities. Eventually the area became part of the Otay Ranch, which was owned by United Enterprises Inc., a family corporation consisting of the heirs of Stephen Birch, an industrialist who bought the ranch in 1936. Albert Gersten, a Los Angeles land developer, acquired the subject area in 1968.

Sometime after 1924 the subject area became known as Rice Canyon. Why the area received this name remains uncertain. Probably the area was named after Julius A. Rice, the first principal of San Diego's first high school and a long-time resident of National City.

Available sources concerning historic spots in San Diego County show no significant structures within the subject area. The recent San Diego County Planning Commission inventory of natural resources in the County revealed no

historic sites in the area. Also, an unofficial report compiled by the Chula Vista Planning Commission failed to designate any historic sites in the area. The four excavations found at the crest of Hill 478 during the archaeological survey are not considered historically significant.

## WATER

There are no collection areas within the subject project area except for minor depressions on the ridge backs of the canyon walls. Perennial streams may form on the floors of the canyon but these are of short duration and are gone as soon as the period of rain has ended.

There is virtually no ground water within the project area and that which exists is of poor agricultural quality.

## ARCHAEOLOGY

### Physical

The proposed development will occupy 1400 acres in the upper Rice Canyon extending generally east from the proposed Interstate 8 to Otay Lakes Road and north from the proposed "H" Street to 1000 meters south of Bonita Road.

The enclosed area consists of a ridge-and-canyon formation caused by intermittent streams flowing through soft alluvial deposits. Ridges are generally truncated with steep sides dropping as much as 200 feet to sandy canyon floors.

Dominant geologic features include stream-worn metamorphic cobble strata exposed in canyon walls and concentrated on ridge tops, and extensive marine fossil beds at the 200 feet elevation level.

The very common cobbles present provide good flaking tool materials for Diegueno, La Jollan, and San Dieguito peoples. Further, cobbles have been used extensively by the Diegueno and La Jollan peoples for manos or grinding stones.

Three topographical divisions exist: ridge tops, slopes, and canyon bottoms. None of these were of particular use to prehistoric man's existence in this area. The ridge tops are limited in extent and generally barren; the slopes too steep; and the canyon bottoms are too narrow and limited to allow cultivation and too low to afford dry land during rain.

Water is very scarce and does not exist on the surface except following rain. In the major canyon (Rice Canyon) water was no longer running only twelve hours after a rain, and may be presumed to be unavailable after one week.

Palaeontological formations, while having no known value to prehistoric man, do exist in large quantities. The marine formations are constantly eroding from the 200 foot elevation level of ridges in the western (sports arena) portion of the project, providing fossil-containing rubble in many of the canyon floors. In the northeastern section of the project area, possible fossil bone fragments appear on ridge tops at the 300 foot level.

## Biological Environment

### Flora

The Coastal Sage Scrub biological community is represented in this area, with the xerophytic plants concentrated on the steep canyon walls, grasses, and an occasional pepper tree in the large canyon, and moderate amounts of low broad-leaf brush and grass on the ridge tops.

Plant food sources are extremely limited, consisting mainly of edible greens (canyon floor) and prickly pear (canyon walls). No substantial food sources such as oak were evident.

### Fauna

At the present time only small animals such as brush rabbits, skunk, quail and various song birds were observed living in the project area. It can be presumed that large animals did exist in the area at an earlier period, but modern population pressures have eliminated them.

All of the above animals except skunk were acceptable food sources for prehistoric populations. However, the scarcity of water



and animal foods would contain the animal population to a limited density, reducing its food importance.

### Erosion

The proposed development area has been subject to intensive erosion caused by naturally loose alluvium with intermittent inundation, and aided by man's destruction of the small plants. The area is heavily used by off-the-road vehicles, and considerable damage has been done to grassy areas and other relatively smooth surfaces with sparse ground stabilizing plants. On some trails climbing the walls of the canyons, deep gullies have been formed.

### Area History

No published reports on excavations of prehistoric sites in the area south of the San Diego River and west of the Otay Mountain exist. Nevertheless, both surface collection and reports of the activities of pot-hunters provide enough information for a general reconstruction of the prehistoric occupational sequence in that area.

The sequence begins with Phase III of the San Dieguito complex at about 9,000 to 12,000 years b.p. (before the present). It is succeeded by the La Jollan complex, from about 9,000 b.p. to about 500 years b.p. With the addition of such culture elements as pottery and a new type of projectile point to the Phase III of the La Jollan complex, and the substitution of cremation for inhumation as the burial pattern, we have distinguished the culture as Diegueno. This term has come to be used to identify the aboriginal occupants of this part of California when, in 1769, the arrival of the first Spanish colonists ushered in the historic period.

National City owes its name to a large Spanish-Mexican period ranch called Rancho La Nacion, which once may have included the Rice Canyon area.

Most remains of that period will have been obliterated by the urbanization which began, in however small a way, with the coming of Anglo-American settlers to the area as early as 1826.

Within the subject area, however, there is no evidence of land use or occupancy datable to either the Spanish-Mexican or Anglo-American periods. Given the most probable use of the land (as a range for cattle), it is improbable that any construction or modification of the surface of the earth would have been undertaken.

### Cultural Inventory

#### Prehistoric.

Although four lithic artifacts were found within the 1400 acres of the proposed development, no aboriginal sites were discovered. In retrospect, this condition is possible because: (1) the supply of food and water is limited and (2) heavy erosion and associated deposition could destroy or hide any evidence of human occupation.

#### Historic

All historic materials were very recent, dating after 1900. Modern gas and power lines cross Rice Canyon, and the remains of an earlier aqueduct exist. Hundreds of artifacts such as rifle and shotgun shell casings litter the area, reflecting

the use of the area as a suburban recreation site.

Four features were found at the crest of Hill 478. These consist of four square or rectangular excavations ten by ten by three feet in positions as noted in Figure 2. (page V-65). All four features had been subject to considerable erosion as indicated by the edges being crumbled and the shapes distorted. Associated materials were very limited and consisted of several broken adobe bricks, burned and unburned wood fragments, a broken pot-metal military vehicle handle, and obviously more recent garbage (beer cans, bottles).

Because of size, shape, location and relative positioning, it is suggested that these features reflect some form of military installation of the World War II era.

## MINERAL RESOURCES

Based on a review of "Mines and Mineral Resources of San Diego County, California, County Report 3" prepared by the California Division of Mines and Geology, there appears to be no commercial mineral or aggregate resources on the property. Bentonite has been mined in other areas and published reports indicate that these have been from the San Diego Formation; however, the geologic mapping by Woodward-Gizienski of the San Diego area indicates that the bentonite beds are in fact within the Otay Formation. Based on the amount of overburden that overlies the Otay Formation on the property (the San Diego and Terrace Formations), it does not appear that beds of bentonite could be mined economically on this property.

In other areas of San Diego, the terrace materials have yielded aggregate and sand; however, due to the thin and relatively discontinuous occurrence of this non-homogeneous terrace material on the property, it does not appear that there are commercial qualities available. No other mineral resources have been discovered within the project boundaries.

## TOPOGRAPHY

The existing topography is predominantly major west draining canyons with normal sub-canyons separated by ridges and sub-ridges. Rice Canyon is the dominant feature on the site. The topography is a result of dissection of a marine terrace, remnants of which are evident on top of the higher ridges. The site lies between approximate elevations of 100 and 485 feet. The general relief from major valley to ridge ranges from 125 to 200 feet. The ground slopes on the sides of the valleys range from less than 5% on the lower slopes to approximately 50% near the top. The relative occurrence of the ground slopes is approximately as follows:

0 - 5%	Ground Slope	- 6%	of total site area
5 - 10%	"	- 16%	"
10 - 20%	"	- 35%	"
Over 20%	"	- 43%	"

## PALEONTOLOGY

The three rock units that occur in this area are the Miocene(?) "Otay" Formation, the Pliocene San Diego Formation, and the Pleistocene Linda Vista Formation.

The "Otay" Formation was recognized only recently. The quotation marks indicate that it has not been formally named, and the question mark indicates that its age has not been definitely established, but it is probably Miocene. No fossils were observed in this formation, though some of the fine-grained beds may contain microfossils, which are common in such rocks and can be detected only by time-consuming laboratory procedures. However, these rocks are widely distributed and accessible in the surrounding region and it is unlikely that microfossils in the survey area are significantly different from those in nearby areas. Further, most good exposures in the survey area are in places designated for parks and open spaces where they presumably will remain accessible. Thus there is no evident need for preservation of these exposures or for immediate attempts to collect fossils from them.

At least one bed of abundant fossils occurs in the Pliocene San Diego Formation. It consists of strongly cemented, coarse-to medium-grained sandstone and contains abundant fossil molluscs, which are moderately well preserved but difficult to remove from the rock intact. This bed is several feet thick and is widely distributed in the area west of the La Nacion Fault, but it does not occur east of the Fault. No other fossils were observed in the San Diego Formation, though microfossils may be present, as they occur in this formation in many parts of San Diego.

Both megafossils and microfossils are fairly well known in the San Diego Formation, and this occurrence is in no way unique or unusual. Similar occurrences are widespread and common in the surrounding region. Also, the fossil bed occurs partly in planned park and open space areas. Thus, there is no evident reason to preserve these fossils.

No fossils were observed in the Pleistocene Linda Vista Formation, and it is highly unlikely that any are present. Fossils are very rare in this formation, which is widely distributed and well exposed in the survey area and in the surrounding region.



It is desirable, where practical, to preserve fossil-bearing rocks for future scientific and educational use, but there is no evident justification for making special provisions to preserve or salvage the fossils that have been found in this area. It is possible, though not probable, that additional small isolated assemblages of fossils in the area may be covered by soil or vegetation, but they would be inaccessible under present conditions and it is unlikely that they would be of special significance.

#### General Geology and Soil Units

Woodward-Gizienski's study reveals that the subject property is underlain by four general geological units. These are, from youngest to oldest: Alluvium (Qual), Terrace deposits of late Pleistocene Age (Plt), the San Diego Formation (Psd) of Pliocene Age, and the Otay Formation (Mo) of Miocene Age. The major geological formations on the site are the San Diego and Otay Formations. Except for the alluvium which is a mixed deposit, the geological units are nearly horizontally stratified, medium dense to dense, friable to moderately indurated and relatively competent foundation materials. Lithologically these materials generally vary in grain size from clay to gravel.

Alluvium - Alluvium is generally confined to bottom areas of the major westerly draining canyons and consists of a 35 to 300 foot wide mixture of clay, silt and sand. Where the alluvium is estimated to be greater than 25 feet in width in the valley and canyon bottoms,

Typically, the alluvium varies from loose to medium dense, is porous and potentially compressible, and in most areas is not suitable for direct support of large fills or structures without some treatment.

Terrace Deposits - The terrace materials generally occur as discontinuous patches that are confined to the upper few feet on the mesa surface. It is estimated that maximum thicknesses would be 20 feet. The materials typically consist of very dense slightly to moderately well-cemented reddish-brown sands containing some gravel and cobbles. The soil mantle developed on the terrace materials is thin (generally less than two feet in thickness) and consists of loose silty sand, underlain by less than one foot of residual sandy clay, which is potentially expansive.

San Diego Formation - The San Diego Formation is one of the major geologic units present on this property. It typically consists of medium dense to very dense silty fine sands, which normally contain a minor amount of gravel. The San Diego Formation underlies the terrace deposits and/or the soil mantle, where the terrace unit is absent. East of the La Nacion fault, it extends down to an elevation of approximately 400 feet, whereas west of the fault, it extends well below the alluvium in the canyons. Typically, the soil mantle overlying the San Diego formation on the south facing slopes consists of from one to three feet of silty sand containing a trace of clay. Along the north facing slopes, as well as on the broader upper terrace surfaces (in areas of hummocky topography), the soil mantle is generally thicker (two to five feet) and consists of loose silty sand and stiff sandy clay; the latter is moderately potentially expansive.

Otay Formation - The Otay Formation generally underlies the San Diego Formation below an elevation of approximately 400 feet east of the La Nacion fault, and it underlies the alluvium in the canyon east of the fault. West of the La Nacion fault system the Otay Formation is dropped down below the valley alluvium and is not exposed. The Otay Formation, although containing some silty sand beds, generally consists of interbeds of clayey sand and mudstone. These materials are potentially expansive to varying degrees. The soil mantle overlying the Otay Formation on the southerly facing slopes is typically one to three feet in thickness and consists of a clayey sand to sandy clay. On the northerly facing slopes, as well as along the lower colluvial slopes, the soil mantle is thicker (three to five feet). The soil mantle developed on the Otay formation is typically moderately to highly expansive. In addition, where the soil mantle is along the northern facing slopes, there are

indications of some slope creep. It would appear, however, that the zone of creep is relatively thin, and confined to the soil mantle.

#### Ground Water

In the field studies of the property by Woodward-Gizienski, no evidence of any significant seepage, springs, or water flows along the various canyons were found. Ground water has been encountered in test borings at depths of 10 to 25 feet in the canyons. Since the watershed area to the property is somewhat limited, it is very doubtful that ground water fields of significant extent will be found in the alluvial soils above the bottoms of the larger canyons. Based on available literature the San Diego Formation, which underlies the property to depths, has proven to yield water of relatively poor quality. The ground water appears to exist in discontinuous horizons, and quite different yields have been realized at similar levels in adjacent wells. Due to the closeness of the coast line, and based on data from existing wells in adjacent areas, salt water

intrusion is also a possibility.

### Geologic Hazards

Faults - A review of the existing published geologic literature and the geological and soil investigations made on and in the general vicinity of the property indicates that the La Nacion fault and associated branches traverse the property in a general north-south direction. The fault system consists of a main trace and two minor branches. The westerly branch trends to the southeast and extends offsite; the easterly branch appears to terminate on the property.

Within the limits of the fault band,

three zones, distinguished by particular movements, have been identified at specific locations. (1) The zone consists of major fault breaks (lithological dissimilarities) which may include offsets of Holocene (last 10,000 years) materials;

(2) Within a second zone there are brecciated and folded materials broken by either continuous or discontinuous fault traces which offset late Pleistocene (last 100,000 years) sediments; and

(3) The third zone is that portion of the fault where the materials have been disturbed and discontinuously faulted, but are not associated with any particular period of activity. Although the specific limits of the various zones could not accurately be determined for the entire length of the fault system, a band approximately 250 feet wide has been shown on the geological and soil plan. The zones of the La Nacion fault and associated branches generally fall within this band.

Based on measurable offsets along the fault zone, it is interpreted that there is a minimum of 210 feet of vertical offset on the main trace. The measurable offsets along the relative short easterly hinge branch (total length about 6000 feet) varies from approximately 100 feet at its confluence with the main fault trace south of the property, to less than 10 feet approximately 500 feet southerly of its northern terminise. The location and approximate limits of the La Nacion fault and its branches are shown on the attached geological and soil plan.

Earthquakes - A regional evaluation in regard to the occurrence of earthquakes in the San Diego area has been made and published by McEuen and Pinckney, 1972. In this report, it is concluded that for most construction (light industrial and residential) the greatest risk to the San Diego area in regard to shaking is the Elsinore and San Jacinto faults.

Seismic Risks - This can generally be divided into three categories: 1) Damage resulting in physical offset of the ground along faults. On the subject site location of the La Nacion fault zone has been generally defined and is a concern in this regard; 2) Damage due to ground shaking. In this regard, it is our opinion that the site is not considered to be comparatively a more hazardous location from the standpoint of earthquake shaking than that of any other area in San Diego; 3) Damage due to ground failure. Loose alluvial soils combined with a relatively high water table are susceptible to settlement and/or liquefaction. There are some soils, principally the alluvium, in the canyon bottoms that could be subject to settlement and/or liquefaction during an earthquake. Ground failure in the form of landslides is a problem in some hillside areas. Since there are no indications of



landslides on the subject property, slope stability  
in regard to natural slopes should not be a problem.

B. Description Update

Meteorology and Climate

Temperature

In the coastal region, freezing temperatures have occurred only eleven times since 1871. Temperatures of 90°F and above have occurred far more frequently. It is interesting to note the temperature differences between Chula Vista (elevation 9 feet) and Bonita (elevation 105 feet). Records are for the period 1940 to 1970. Bonita has been 2-3° warmer on the average. The highs have been 5-10° higher, and the lows 5° lower than Chula Vista.<sup>1</sup>

The subject property lies inland approximately the same distance as Bonita. Although its topography is more extreme and much higher, it possesses some canyon areas which could be expected to experience the same type of temperature extremes as Bonita. In fact, the more narrow and restricted character of these canyons would most likely experience temperatures even higher and lower than Bonita, due to less air circulation.

Table A-1 (see Appendix A) provides a comparison of the temperature variation at Bonita and Chula Vista.

### Rainfall

Based on records from 1940 to 1970, Bonita's yearly average total rainfall has been significantly higher than Chula Vista (11.12 inches/9.98 inches, respectively). The Lower Otay Reservoir station (elevation 500 feet) has recorded an average of 10.32 inches per year since 1946. Highest monthly rainfall in Bonita for any one year occurred in March (7.32 inches). In Chula Vista 6.9 inches was recorded in December; Lower Otay Reservoir recorded 7.86 inches for the month of March. All three stations recorded highest annual rainfall at slightly over 24 inches.

In order to anticipate extreme conditions, the U.S. Weather Service has constructed a table entitled "Rainfall Intensities Expected Once in 50 Years". The table is divided into three sections: Coastal, Mountain, and Desert. The subject project area is in the Coastal section. Maximum rainfall for the coastal region in a 24-hour period has been calculated to be 4 1/2 inches.

The above information is depicted in Table A-2 (see Appendix A).

### Wind

Specific data on wind direction and velocities at the site are not available. However, rather extensive information does exist regarding the conditions at Ream Field, Imperial Beach, approximately

6.5 miles southwest from the site; and Lindbergh Field, 10.5 miles to the northwest. Table A-3 (see Appendix A) provides an indication of the wind characteristics at Ream Field, while Table A-4 (see Appendix A) shows essentially the same information for Lindbergh Field.

More pertinent to a discussion of winds at the site however, is the somewhat limited data that has been gathered at Brown Field, approximately 5.8 miles southeast of the project site. Although this information is not nearly as extensive as that for Ream and Lindbergh Fields it does give a good approximation of the conditions that will be found at the site.<sup>2</sup> Furthermore, the Brown Field data are corroborated by:

- (1) A comparison with the information in Tables A-3 and A-4,
- (2) An examination of detailed wind rose data for Ream and Lindbergh Fields, and
- (3) Recognition of the fact that those two observation stations lie near the coastline, while Brown Field and the project site are five to eight miles inland.

Based on the data and sources described above, it is therefore estimated that wind conditions at the project site on an annualized basis are as follows:

<u>Time Period</u>	<u>From (Direction)</u>	<u>Speed (Knots)</u>
Mid-morning to early evening (1000-1800)	WSW	10.5
Early evening to late night (1800-0100)	WSW	4.5
Late night to mid-morning (0100-1000)	ESE	4.6

Santa Ana conditions which occur in late summer and early fall introduce high velocity (up to 50 knots), extremely warm winds from the east. These "desert winds" usually bring with them considerably higher air temperatures and, concomitantly, fire hazards.

#### Inversions

Inversions exist when air temperatures increase, rather than decrease, with increasing altitude. The existence of inversions tends to restrict the vertical diffusion of pollutants in the air, thus increasing the possibility of photochemical smog trapped near the earth. Previous studies indicate that inversion base heights tend to be more elevated in the southern portions of San Diego County, sloping downward toward the northern border.<sup>3</sup> The difference in height is probably less than 100 feet, however. In addition, the base height tends to rise with an increase of distance from the ocean and an increase in surface elevation. Furthermore, the height, lapse rate and thickness of the inversion layers vary diurnally, from day to day, and seasonally.

Based on several sources, it appears that inversions exist in the vicinity of the site about 82-88 percent of the time.<sup>3,4,6</sup> Furthermore, when they occur, their base heights are at approximately 1,500 feet or less (above mean sea level) roughly 40-60 percent of the time. Table A-6 (see Appendix A) provides a month-to-month view of the occurrence of inversion layers at Montgomery Field and North Island. As in all near-coastal areas in the San Diego region the frequent occurrence of inversions creates conditions adverse to good air quality because of the limited ventilation during these periods. However, these inversions normally lift on a daily basis so that long periods (several days or more) of adverse air quality conditions are abnormal.

#### Cloud Cover

Another meteorological factor which influences the existence of photochemical smog is the amount of sunshine or conversely, cloud cover, that exists. Table A-7 (see Appendix A) is based on empirical data gathered at Lindbergh Field.<sup>5</sup>

#### Air Quality

The subject property is located within the City of Chula Vista, and falls within the jurisdiction of the San Diego County Air Pollution Control District (SDAPCD) for air quality control purposes. The San Diego air basin equalled or exceeded Federal primary health standards 225 days in 1972 which Chula Vista experienced similar ambient conditions 108 days. The San Diego region therefore, experiences poor air quality a significant proportion of the time.

Increasingly more stringent air pollution control requirements are being implemented in San Diego County in an effort to improve regional air quality and comply with State and Federal air quality standards. There are seven locations in San Diego County where air quality data are monitored. During January 1972 an air quality monitoring station was established in Chula Vista at 100 East "J" Street (Fire Station). This monitoring station had previously been located in Nestor. The station monitors the concentrations of photochemical oxidants only, and does not provide for measurement of other air pollutants such as nitrogen oxides, hydrocarbons and carbon monoxide. However, the measurement of photochemical oxidants provides a good indicator of overall air quality conditions. Reports for the years 1972 and 1973 are available from the SDAPCD and indicate the following air quality conditions in Chula Vista:

TABLE I-1

Total Oxidants - Using Daily Maximum Hourly Averages in Parts Per Million (ppm)

	Quarter - 1973				
	<u>1972</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
Average of Daily Maximum Hourly Averages	.07	.06	.09	.07	.06
Highest One Hour Average	.29	.12	.28	.17	.20
Percent of Days at or Exceeding Air Quality Standards					
State (.1 ppm)	15	8	33	15	11
Federal (.08 ppm)	22	11	43	23	15

Air quality conditions at the subject property can be assumed commensurate with that at the Chula Vista air quality monitoring station in the absence of instrumented measurements at the site; however, there will be some variation due to topography and the meteorological dynamics of the area. Detailed discussions of the interactions of dynamic meteorological forces in the atmospheric diffusion processes are provided in the foregoing discussion of Meteorology and Climate, and in Section III on air quality impacts.

Efforts within San Diego County have been aimed primarily at reducing the emission rates of hydrocarbons. This emphasis exists because, of all the various pollutant levels monitored, State and Federal standards for oxidants and hydrocarbons are exceeded much more frequently than are those for other recognized pollutants. For example, it can be seen from Table I-1 that Federal standards for total oxidants were exceeded 11 to 43 percent of the time at the Chula Vista station. The downtown San Diego station exceeded those same standards up to 22 percent of the time over the same period (1972-1973). Conversely, the downtown station exceeded the Federal standard for carbon monoxide only 8 percent of the time in 1972 and up to 5 percent of the time in 1973. Likewise, the Federal standards for sulfur dioxide and nitrogen dioxide were not exceeded during any of the two years being considered.

Because the oxidant levels existing in the atmosphere are a direct result of the photochemical reactions of hydrocarbons and the oxides of nitrogen under the influence of ultraviolet sunlight, reduction of hydrocarbon emissions was identified by the Environmental Protection Agency and the San Diego APCD as the



best method of meeting the oxidant standards within the prescribed time period.<sup>6</sup> Furthermore, almost any strategy aimed at controlling hydrocarbons will tend to reduce carbon monoxide levels as well.

Because the subject property presently is undeveloped and reasonably accessible to residents of the Chula Vista area, it has been used for off-road vehicle activity and many trails from such vehicles currently exist. When such activity is occurring, localized dust conditions and exhaust fumes are being created. Furthermore, construction activity associated with the extension of Interstate 805 just west of the property is also causing some localized dust and fumes in the area. Completion of the highway project is estimated for mid 1975.

#### Noise

The property presently is unoccupied and, in general, not situated close to any well traveled roads, although Interstate 805 is under construction on the west boundary of the project site. Additionally, the property is currently used as an illicit recreational vehicle area, particularly for trail bikes. This contributes to ambient noise levels on weekends and holidays when most of these activities occur. The topography is such that the property is subjected to general noise attributable to traffic on Interstate 5 and other vehicular activity within the nearby Chula Vista area.

An ambient noise survey of the project site was made on February 12, 1974. The weather was cool and overcast. The

measuring equipment used consisted of a General Radio 1565-B Sound Level Meter (SLM) which meets the requirements listed in American National Standards Institute (ANSI) Standard S1.4-1971, "Sound-Level Meters." The SLM was calibrated with a General Radio Type 1562-A Sound-Level Calibrator and fitted with a windscreen. The measurements were taken approximately 4 feet above the ground to avoid ground reflection influences. Measurements were made between the hours of 0900 and 1030 using the A-weighting network and slow response of the SLM. The slow response was utilized rather than the fast response to obtain a smooth average over the measurement period. Readings were observed every 15 seconds for 3 1/2 minutes on the SLM and recorded on a log sheet. Noise due to animals, birds, insects, and wind blowing through vegetation was almost non-existent because of the nature of the property. Intrusions of man-made noise from aircraft and construction vehicles predominated. Data acquisitions were made at twelve locations throughout the site as shown on Figure I-2. The measurement sites were chosen on the basis of Phase I and II development plans, traffic corridors, and accessibility.

Table I-2 provides the results of the ambient noise survey. As noted, the average range of noise levels fluctuated on this day between less than 40 and 71 dBA. Since measurements were taken on a holiday (Lincoln's Birthday), off-road vehicles and trail bikes were present on the site. The major noise source at the site was heavy equipment working on the construction of the I-805 freeway. In addition, light aircraft and commercial jet aircraft cause frequent noise intrusions (54-56 dBA).

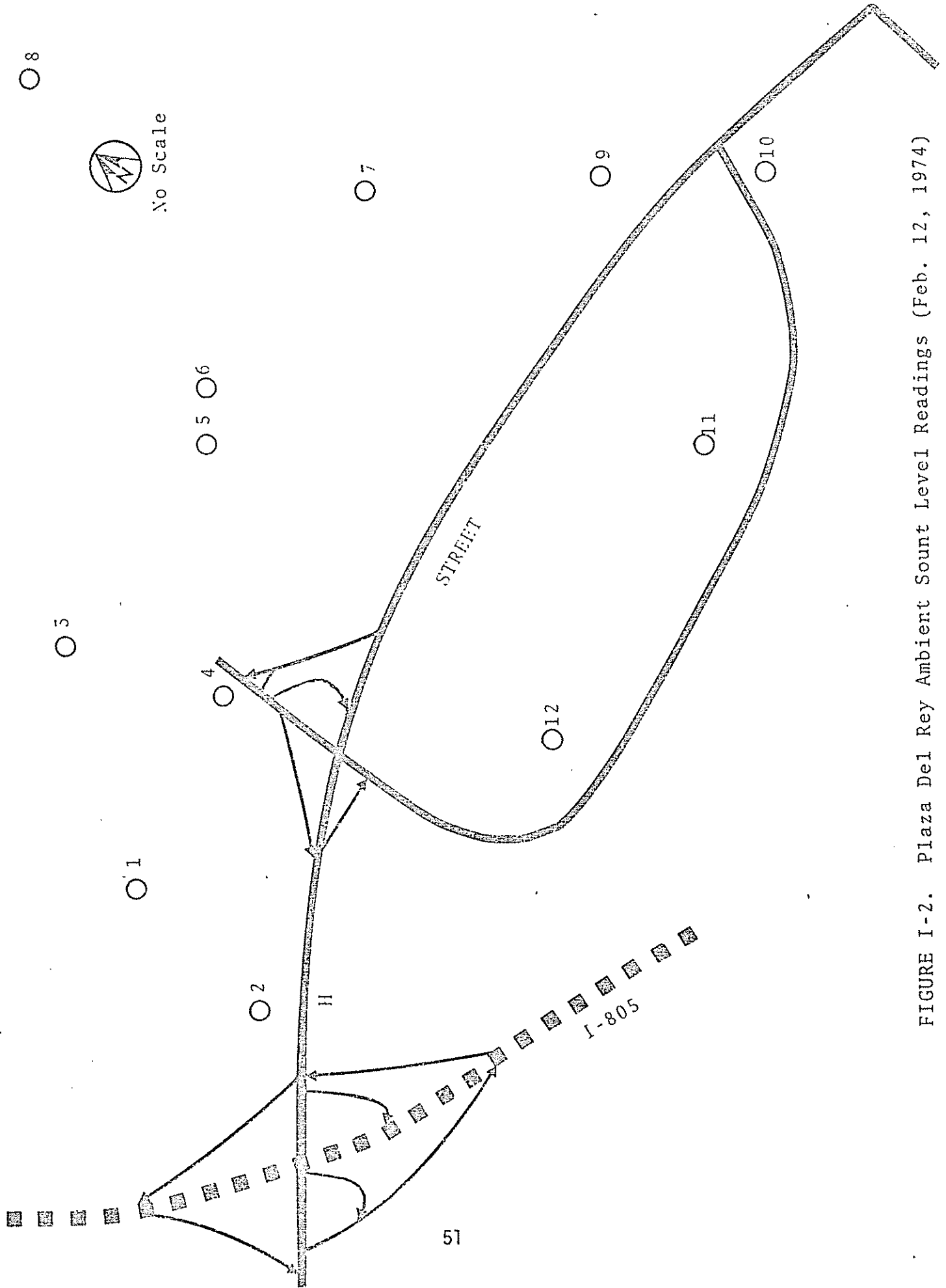


FIGURE I-2. Plaza Del Rey Ambient Sount Level Readings (Feb. 12, 1974)

TABLE I-2

Noise Level Measurements  
Taken On The Subject Property

<u>Location</u>	<u>Acoustical Range dB(A)</u>	<u>Maximum Reading dB(A)</u>	<u>Noise Sources</u>
1	61-62	64	Heavy equip., freeway constr.
2	69-71	73	Heavy equip., freeway constr.
3	54-57	62	
4	58-61	61	
5	45-51	53	
6	51-55	60	
7	40-40	56	High alt. aircraft
8	40-41	54	Light aircraft
9	44-47	82	Off road vehicle (15 ft.)
10	40-42	80	Trail bike (15 ft.)
11	46-48	54	Light aircraft
12	46-56	59	Heavy equip., light aircraft trail bikes

1. National City
2. Southeast San Diego
3. Sweetwater
4. Chula Vista
5. South Bay
6. Jamul
7. Spring Valley
8. . Lemon Grove

With the completion of the Interstate 805 freeway in mid 1975, and the subsequent completion of State Route 54, the proposed site for Plaza Del Rey will provide a superior location for a large regional shopping center, which is supportable by the population base and available dollar volume potential for shoppers' goods. Tabular summaries of the population, household, and income data for the South Bay subregional areas are presented in Appendix B. For a full discussion of the market study, see the report on Plaza Del Rey by Real Estate Research Corporation, February 1974.

1. The inclusion of Jamul, Spring Valley and Lemon Grove statistical areas in the market area is of some concern to the City and the following evaluation is offered:

Jamul - The predominant population is located in the northern segment of statistical area. The only well paved thoroughfare is Highway 94. Traffic is channelled north of Sweetwater Reservoir. From Intersection of 94, Jamacha Blvd. and Willow Glen, it is only 5 miles to Grossmont Center, 5 miles to Parkway Plaza, and less than 6 miles to College Grove, while it is over 10 miles to Plaza del Rey. It is possible that competing centers may intercept virtually all of the Jamul buying power. This area has historically had an East County rather than a South Bay orientation.

Lemon Grove - This area is adjacent to College Grove, has direct freeway connection to both Grossmont Center and Parkway Plaza, as well as Mission Valley and Fashion Valley. The geographic center of Lemon Grove is only 2 miles from College Grove, 4 miles from Grossmont Center; Mission Valley and Parkway Plaza are both 8 miles from the geographic center. The community has had an East County orientation. Penetration of the Lemon Grove market by Plaza del Rey would be minimal.

Spring Valley - This is a rather large sub region, which is bisected by significant topographic barriers. Census Tracts 135, 136, 137 and 138 are all distinctly East County oriented, toward El Cajon and La Mesa, while only the La Presa and Dictionary Hill sections (Census Tracts 139) could be said to approach a South Bay orientation. 1970 population of these tracts is:

135.01	2697	139.01	2786
135.02	2061	139.02	4115
136.01	3993	139.03	<u>1494</u>
136.02	3322		
137	4617	Sub Total	8395
138	<u>5379</u>		
		Total Population	30,464
Sub Total	22,069		

Census Tract 139 constitutes 27.5% of all Spring Valley area.

See Input Section for a response to this evaluation from Real Estate Research Corp.

The center is being designed on three levels; two will be above grade, and the third will include sub-level truck delivery docks, utility and delivery tunnels, basements for the 2 larger department stores, and a restaurant with food preparation and serving area. The center is proposed to be developed in 2 phases; the first with 750,000 square feet of retail space (including the restaurant-dining area), and the second adding 450,000 square feet for the total of 1,200,000 square feet of retail space.

The first phase will include the full development of two major department stores and partial development of the third, as indicated on the following Development Table. The three levels of site development are illustrated schematically on the following page. Off-street parking will be provided in a fully landscaped lot surrounding the main stores and mall area. Phase I will include 3,423 spaces, and Phase II will add 2,009 spaces, for a total of 5,432 spaces serving the shopping center. Two satellite retail facilities, for tires, batteries, and auto accessory sales, will be located in the parking lot area, as shown on the accompanying site plan.

A site plan showing the location of the regional shopping center and other major project elements is provided in Figure II-2.

#### B. Professional Area

A 9.7 net acre professional area is proposed at the eastern end of the shopping center site. This area will include two buildings; one will contain about 50,000 square feet of office space, along with a bank or savings and loan office, and a restaurant. The other building will house three theatres, each containing 150 seats. Additional off-street parking, with 376 spaces in a fully landscaped lot will be provided to serve these activities.

TABLE II-1

Plaza Del Rey  
Development Table and  
Parking Requirements

Regional Shopping Center

	<u>Store Type</u>	<u>Gross Leasable Area</u>	<u>Parking</u>	
			<u>Requirements</u>	<u>Total Spaces</u>
<u>1976</u>				
	Dept. Stores	435,000	1/200 S.F.	2,175
	Apparel Specialty	225,000	1/200 S.F.	1,125
	Furniture & Home Furnishings	48,500	1/600 S.F.	81
	Other - Support & Service	41,500	1/1000 S.F.	42
	TOTAL	750,000 Square Feet		3,423 Spaces
<u>1980</u>				
	Dept. Stores	720,000	1/200 S.F.	3,600
	Apparel Specialty	324,000	1/200 S.F.	1,620
	Furniture & Home Furnishings	84,000	1/600 S.F.	140
	Other - Support & Service	72,000	1/1000 S.F.	72
	TOTAL	1,200,000 Square Feet		5,432 Spaces

Office - Theatre Complex

<u>Building Type</u>	<u>Size of Facility</u>	<u>Parking</u>	
		<u>Requirements</u>	<u>Total Spaces</u>
Office	50,000 S.F.	1/300 S.F.	167
Restaurant	50 Tables	1/2-1/2 Seats	80
Theatre	3 x 150 Seats	1/3-1/2 Seats	129
TOTAL			376 Spaces

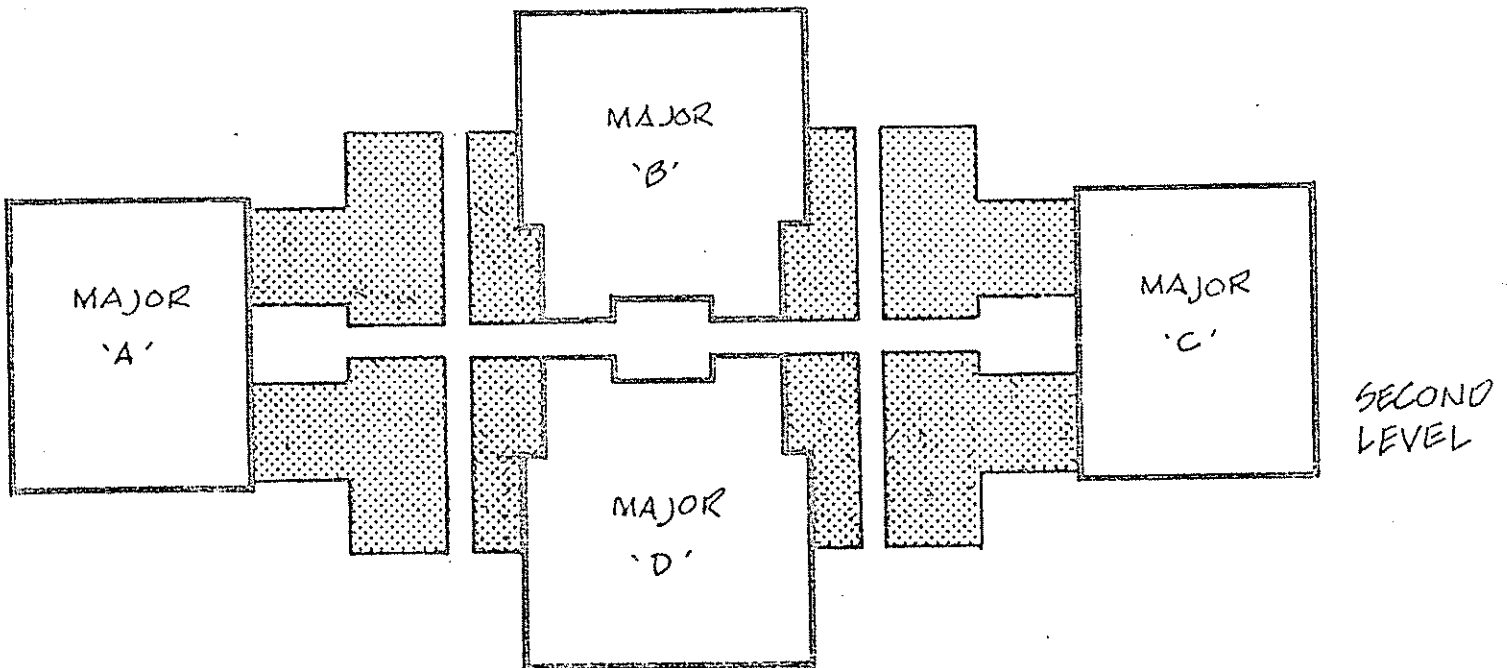
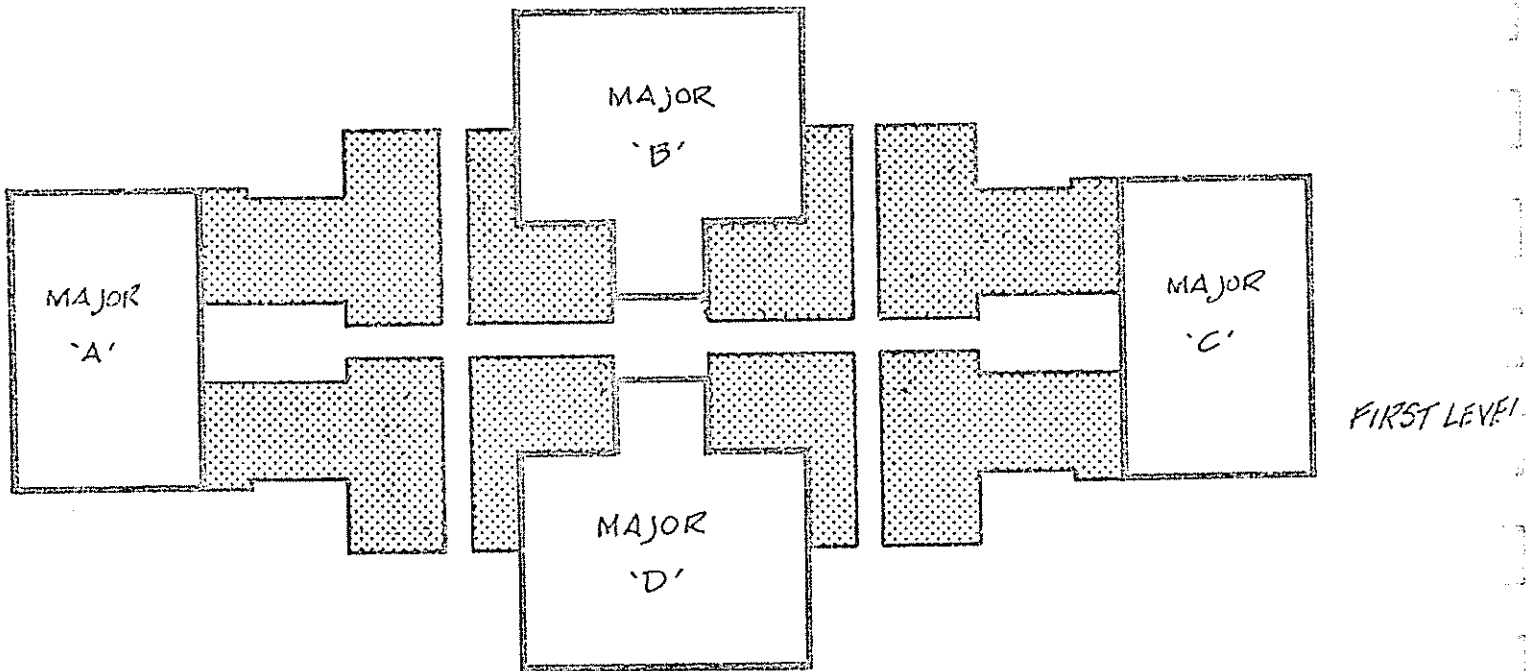
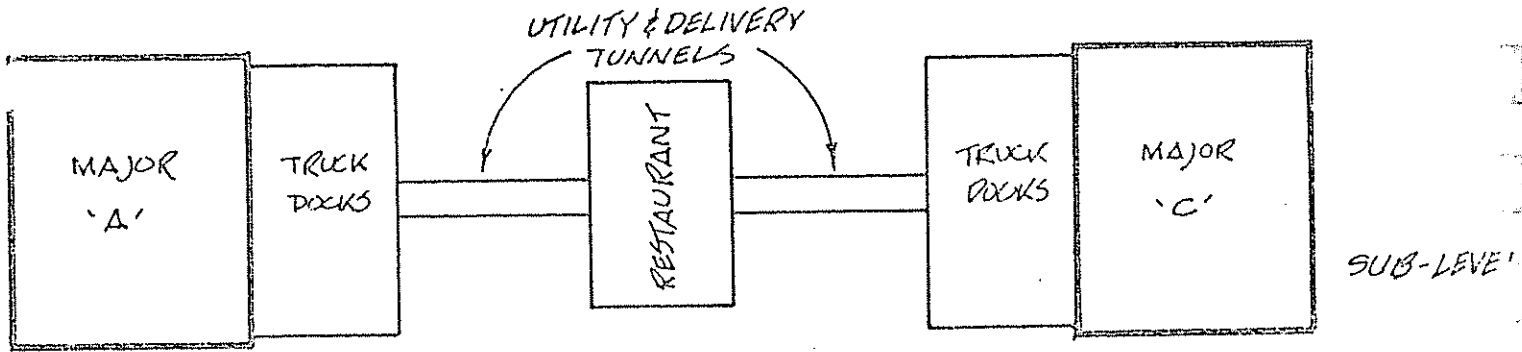
Recreation-Visitor Commercial

<u>Building Type</u>	<u>Size of Facility</u>	<u>Parking</u>	
		<u>Requirements</u>	<u>Total Spaces</u>
House of Ice	50,000 S.F., 300 Seats	1/3-1/2 Seats	86
Club House	250 Seats	1/2-1/2 Seats	100
20 Tennis Courts,	6 Raquet Ball		
Hotel-Motel	150 Rooms	1/25/Room	156
Savings & Loan	12,000 S.F.	1/300 S.F.	40
			382 Spaces



# REGIONAL SHOPPING CENTER

JAN 15, 1974  
Job No. 82104-0102-80



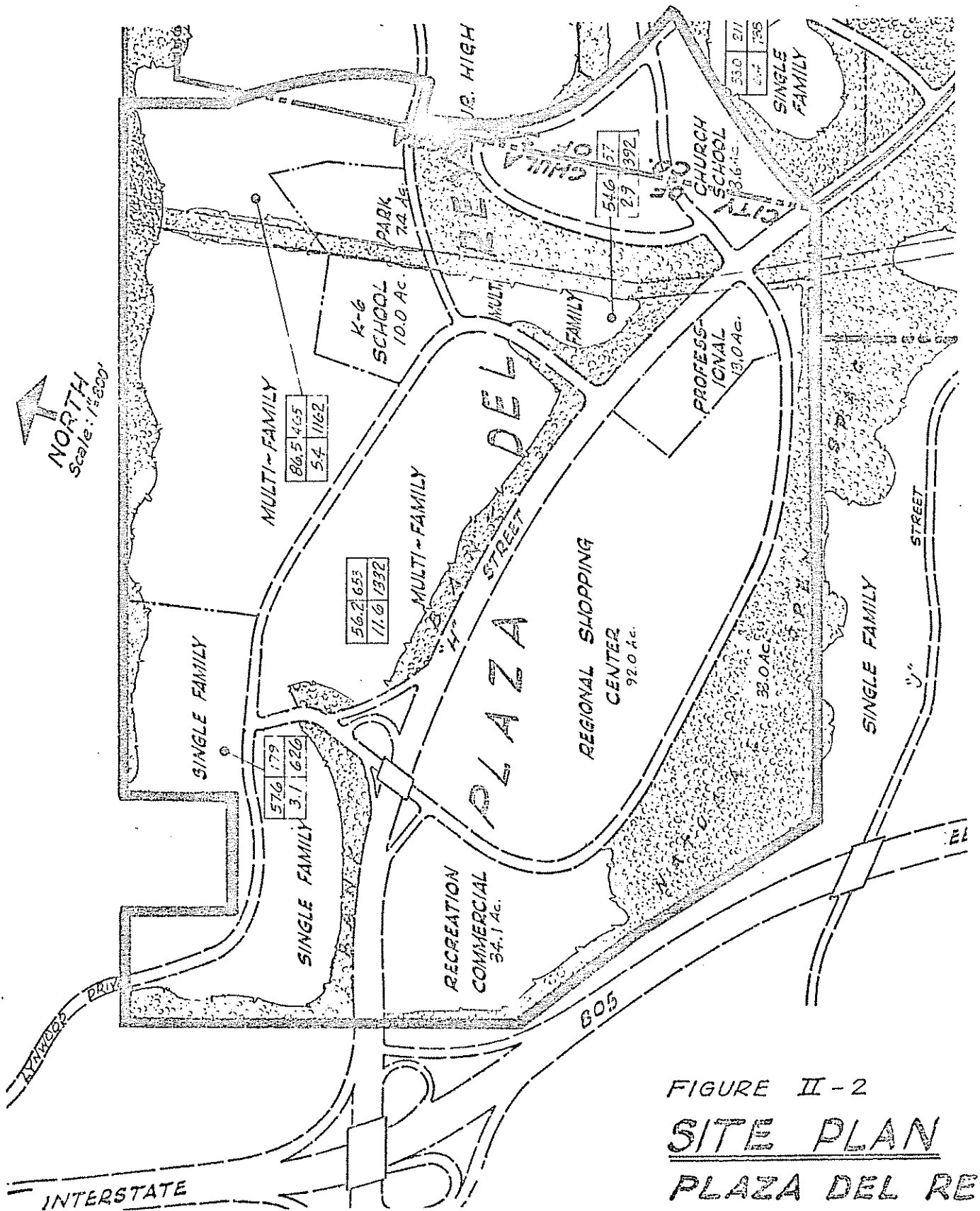


FIGURE II - 2  
SITE PLAN  
 PLAZA DEL REY

C. Recreation/Commercial Area

The recreation/commercial area to the west of the shopping center will occupy a 26.4 net acre site, and will contain a tennis-swim club, ice skating arena, savings & loan, motel, and related off-street parking and landscaping. The tennis club will have 21 courts plus 6 fully enclosed racquet ball courts, an olympic-size swimming pool, and a clubhouse. The ice skating arena will contain approximately 50,000 square feet of building area, and the motel will have about 150 rooms. Off-street parking for 342 cars will be provided in this area, with 186 spaces in a fully landscaped parking lot, and 156 spaces in the base structure of the motel.

D. Multiple Family Residential

The proposed multiple family residential areas will be located to the north and east of Plaza Del Rey, as shown on the site plan. These areas will include approximately 600 apartment units, at a density of 15-20 units per acre, and 675 townhouses, at a density of 8-10 units per acre. Recreational facilities such as swimming pools, volleyball and tennis courts will also be provided, along with adequate off-street parking facilities and full landscaping of each site. The total estimated population residing in the 1,275 units when fully occupied will be nearly 3,700 persons, based upon the City's estimated average family size per unit. Total length of time for the full development of the residential portions of the site, including the single-family area, is expected to be about 10 years.

E. Single-family Residential

The northwestern portion of the site is proposed for additional single-family residential subdivision development, which will blend consistently with the existing Lynwood Hills development. This area will contain 179 dwelling units, with a total population of 662 persons (based upon average of 3.7 persons/unit). The total estimated residential population within the revised plan area will therefore be about 4,350 persons by the mid-1980's, at full development.

F. Public Facilities

The proposed revised site plan includes a ten-acre elementary school site and an adjacent neighborhood park site. The western portion of the park would include the open easement for the Otay water transmission line. These two sites were formerly located entirely to the east of the water line, in the Sports World Plan. In the former plan, the regional shopping center was proposed north of "H" Street. The new location will be more central to its total service area, and still be conveniently accessible from the east.

The developer is currently negotiating with the school district for an exchange of this site for a 10 acre site at the western terminus of the existing portion of east H Street. The school property will be required for the extension of east H Street.

According to average student generation rates provided by the City of Chula Vista Elementary School District, the proposed 1,450 dwelling units will produce 545 elementary-age children; however, applying the average generation rates contained in the City's Environmental Review Manual would result in 880 elementary school students. The District staff has indicated the proposed school site could accommodate up to 950 students, if operated on a year-round basis, which the Board favors. The State, however, is currently discouraging such programs, and it is possible that additional school sites could be required, depending upon future State legislation, and which average student generation rates will be applied to this project.

The proposed 1,450 dwelling units will also generate demands for junior and senior high school facilities, although they are planned beyond the boundaries of the subject 450 acres. There will be approximately 435 junior high school students, and 290 senior high school students coming from the proposed residential

areas by 1986, according to both the Sweetwater Union High School District and the City's Environmental Review Manual. These students will generate part of the demand for development of the proposed junior high school site immediately to the east, as shown on the Sports World General Development Plan. Since the existing high schools in the District are currently operating at full capacity, these additional students will generate a demand for additional senior high school facilities.\*

A new city fire station is proposed to be located about 1/2 mile east of the regional shopping center site, at the intersection of "H" Street and the connecting road south to Telegraph Canyon Road. This station location is nearly identical to the one proposed on the Sports World Plan; however, the street system north of "H" Street has been revised to more fully reflect the existing topographic conditions. Adequate and convenient access will be provided in all directions from this site, and informal approval of the location has been given by the City of Chula Vista Fire Chief. \*

G. Institutional Church/School

A combined church and parochial school are proposed to be located on a 7-acre site at the southeastern boundary of the subject 450 acres. This institutional complex will also include some offices and adequate off-street parking to serve their daily and weekend needs. The site will be fully landscaped, including the parking area.

\* See Input Section and responses thereto for more information on schools and fire protection.

#### H. Open Space

The proposed project plan for the Plaza Del Rey regional shopping center and nearby developments previously described will also include some natural slope areas, which are designated as Open Space. These areas include the upper 150 feet of the south slope of Rice Canyon, the upper portions of two tributary canyons to Sweetwater Valley, and most of the large canyon lying easterly of the major water easement. These 91 acres in natural slope areas will be retained with their existing patterns of vegetation and some wildlife, and provide some natural relief to the major urban developments proposed in the area.

The proposed 7.4 acre park is adequate for the anticipated 4350 people who will occupy this project, based on the existing 2 AC/1000 people standard. The Parks & Recreation Element of the General Plan proposes an increasing of the standard to 4 AC/1000. If this action is taken, 14.8 acres of developed park land will be required.

#### I. Drainage

A major storm drain channel is proposed to carry surface runoff from Rice Canyon, beginning at the southeastern corner of the site, extending along the south boundary road for Plaza Del Rey, and draining into the natural canyon at the western property boundary. The channel will be fully lined, with a depth of 8 feet and a bottom width of 10 feet. The design capacity will be 2,113 CFS (cubic feet per second), which is adequate to accommodate a 50-year storm flow from Rice Canyon. By paralleling the loop

road, at a slightly lower elevation, the channel will not be visually prominent within the total development.

Plaza Del Rey will contribute approximately 290 cubic feet per second to the peak flow in Rice Canyon. Because of the length of the main basin, the type of soil, and the travel time, the increased peak flow will be about 10 cubic feet per second or 3 percent greater than at present. Similar development of upstream areas would have materially greater increase in peak flow than will be experienced here.

Peak flow from the smaller canyons will be 15 to 20 percent higher than present. Drainage in the canyons will be intercepted in pipes at street crossings. Street and parking lot flow from the developed areas and roof drainage from major buildings will be intercepted in a network of pipes or culverts and connected to the Rice Canyon channel southerly of "H" Street.\*

#### J. Circulation System

The circulation system for the western portion (450 acres) of the Sports World General Development Plan has been revised to reflect the modified land uses in this area. "H" Street remains in nearly the same alignment previously shown; however, the partial interchange at the eastern end of the shopping center site has been replaced with a grade intersection, and the former ring road has been substantially reduced on the north side of "H" Street.

The interchange at the western end of the site has been retained and expanded to accommodate more turning movements. The

\*See Input Section and responses thereto for further information on drainage.



high-capacity ring road on the south is necessary to provide for adequate circulation in and out of the shopping center and nearby commercial-recreational facilities. This road has been realigned at the eastern end to intersect directly with "H" Street and the residential collector extending to the northeast. The former direct connection from the ring road south to "J" Street has also been deleted.

The former large ring road north of "H" Street have been realigned and reduced in scale to provide for adequate circulation as a residential collector, and for direct access to the school and park site within the subject 450 acres, and the proposed junior high school site immediately to the east. The direct connection to Bonita Road via the realignment of Lynwood Drive has been retained in the revised General Development Plan, and is intended to be constructed during Phase II of the shopping center development. Local residential streets will be developed to serve the single-family residential development around Lynwood Hills. The initial development phase of Plaza Del Rey is expected to include "H" Street for a distance of 1/2 mile east of the subject property, and the connecting road south to Telegraph Canyon Road. The easterly extension of "H" Street to connect with Otay Lakes Road is anticipated with the development of Phase II of the shopping center.

#### IV. ENVIRONMENTAL IMPACTS

##### A. Findings of EIR-73-1

##### IMPACT AND MITIGATING MEASURES

##### Impact (Flora)

The report of the botanical survey conducted by R. Mitchel Beauchamp, Department of Botany, San Diego State College, between February 25 and April 1, 1972, indicates the botanical impact will be tied to the retention of open spaces. (He states: "Drainage into the canyon will be increased due to elimination of watershed afforded by adjacent vegetative cover and because of paving for streets and parking areas. However, the vegetation associated with the canyon bottom, although not riparian in nature, will not be adversely affected by increased flows during the winter storms. If storm drains are directed into the canyon, the run off from car washing and lawn watering activities would create a higher water flow than has been normally true for the project site. This increased water flow would certainly bring about the development of more aquatic vegetation than is now in the canyon. This could enhance the value of the canyon as a recreation area and wildlife area.")

### Mitigating Measures (Flora)

"The native vegetation of the survey area contains no native trees. Several of the shrubs attain aborescent proportions, i.e., *Heteromeles arbutifolia*, *Rhus integrifolia* and *Sambucus caerulea*. Because of the lack of trees, the park potential of the canyons proposed for open spaces is low.

The abundance of cactus on south-facing slopes and the steepness of the north-facing slopes require paths if for nothing else than safety. Development of a series of parellel and intersecting foot paths through the canyon would greatly augment the accessibility of the area to hikers.

Use of the canyon by motorcycles has already shown that such use is not compatible with a wilderness park. The attendant destruction of vegetation cover, especially on the challenging, north-facing slopes is not only unattractive but also a prelude to erosion.

Equestrian activities have so far been limited to the canyon bottoms and along existing roads. Such activities in the future would produce no adverse effects on the indigenous flora. The corridor under the main power lines is effectively beyond the natural state now and further traffic (whether vehicular, pedestrian, or equestrian) will produce only a weedy, dusty path.

One major consideration with public use of the open spaces is fire. A burn area was encountered in the survey area. Fires in the survey area probably do not reach the size or intensity of chaparral wild-fires because the vegetation is more open and not so flammable. However, the vegetation is not well equipped to recover rapidly from a burn and the scar could very well persist for upwards to a decade. Dwellings on the perimeter of the canyon would be in no immediate danger if a fire were to start. Adequate rear yard setback and fire retardant plant cover on fill or cut slopes would serve as a sufficient barrier.

Dried, north-facing slopes would be most vulnerable to burns due to the more abundant plant cover.

The fact that the open space areas are canyons rather than hills or ridges, gives it a relatively lower value as open space. The break up of the view of a sea of dwellings by a ridge is apparent. Only those homes on the canyon rim would benefit from the visual open space value of the canyon. The power line corridor should be considered open space only as it pertains to recreation.

Regarding the open spaces, it is essential that disturbance within the canyon be avoided. Soil moving activity on the canyon rim will be done so that loose soil is not spilled into the canyon. Improper disturbing of slopes, may lead to invasion by annual weeds. The ridge access and geologic survey cuts have already altered the canyon aesthetically. The planting of native tree species would improve the appearance and value of the canyon as a park.

The above observation will have a great deal of importance throughout the final planning of the subject project.

## IMPACT AND MITIGATING MEASURES

### Impact (Fauna)

The report of the field survey conducted between February 25, and April 1, 1972 by Michael U. Evans, Department of Zoology, San Diego State College, states with regard to the impact to the environment: "No species of wildlife known to occur at the subject property is considered rare or endangered in the State of California. However, the coastal Cactus wren, locally common on the property, is rare in the southern California coastal region.

The impact on the total wildlife population resulting from future development would probably be severe, judging from the absence of wildlife on the housing development adjacent to Rice Canyon. Some resident songbirds (Mockingbirds, California thrashers, Finches, and Sparrows) and some gamebirds (Mourning doves and California quail) can exist and even flourish around human habitations, provided they have sufficient suitable habitat for feeding and nesting, while some other birds (such as Bushtits, Wrentits, and Nighthawks) probably need certain minimal, requisite habitats in order to survive.

Mammals, lacking the aerial mobility of birds, are generally less successful at adapting to radical changes in their habitat. However, many rodents and rabbits (Brush rabbits, Ground squirrels, Woodrats, and Deer mice) are able to maintain themselves in the vicinity of human habitations. Larger mammals probably need corridors of contiguous habitat to migrate to other suitable habitats.

The proposed open space canyon area contains most of the typical habitats found elsewhere on the subject property".

#### Mitigating Measures (Fauna)

The following recommendations have been made by Michael U. Evans.

"Animals are usually intimately dependent on specific types of vegetation, and the two together form a complex, integrated community. If natural plant associations can be maintained through the judicious formation of natural parks, open space, limited recreational areas, and wildlife corridors, the animals associated with them can be expected to survive in viable numbers.

In order to preserve the maximum amount of wildlife, proposed open spaces will be changed as little as possible from their present condition. The human uses of such an area should be limited to "passive recreation" such as horse-back riding, hiking, nature study, and picnicking. More active uses such as motorized recreational vehicles (motorcycles and dune buggies) and hunting are incompatible with the natural wildlife-vegetation community. Parklands with extensive plantings of introduced or exotic vegetation often invite feral or introduced birds and mammals (such as Starlings, House sparrows, Black rats, and House Mice) which displace native species and may even reach pest proportions. Natural parks should be altered as little as possible or practical if wildlife is to be maintained. An added dividend from the preservation of such areas in their intact condition is that they may serve local school children as education centers for nature and ecology study.



The creation and maintenance of wildlife corridors or areas of contiguous habitat may permit interchange and movement of wildlife in response to local pressures. At the subject project, the proposed open spaces and "green belt" beneath the high tension electric lines could serve as a refuge and corridor for wildlife. Buffer zones of natural vegetation will be maintained adjacent to the service road beneath the power lines."

The above observations of Mr. Evans will be considered heavily in the detailed planning of the development. Specific areas to be preserved are the Wilderness Park, as much of the main leg of Rice Canyon as possible, the canyon and slopes on the northern side of the project and various minor canyons and slopes contiguous to the development. His reference to the peril of inviting feral birds or mammals will be of special importance. This condition will be avoided by the use of the list of observed and hypothetical flora species indicating the more compatible vegetation for the area.

Because flora and fauna are an ecological unit, the map on page V-7.1 indicates the most probable location of the displaced fauna.

As pointed out in this section, the more dangerous animal species will most likely be driven out of the area; therefore, it is unlikely to assume they will be a hazard to the residents.

If it does come to pass that the wildlife of the area do threaten the public safety, then the developer will certainly assist the city in preventing any harm to occur to its citizens.

It must be understood that a maximum amount of wildlife is desired to remain in this area but certainly not at the expense of public health and safety.

## History

The description of the present environment it was stated that there are no known items of significant historical value on the property. Therefore, no impact is evident in this category.

### Impact (Archaeology)

#### Prehistoric

Because of the lack of visible prehistoric sites, one must say that no damage will be done. However, if site remains have been covered, construction will forever destroy them. Therefore, it is impossible to say what prehistoric remains will be destroyed through construction.

#### Historic

Virtually all historic use remains will be destroyed (removed, buried, collected, etc.) during construction and eventual occupation of the area. Although extensive parks are planned for the project, most of the historic artifacts will be removed.

Of particular interest, the possible World War II features will be destroyed through construction of the "Single Family Detached" area.

### Mitigating Measures (Archaeology)

#### Prehistoric

Although no prehistoric sites were found, the

possibility exists that sites do exist but are covered with sediment. These sites may become visible during construction and the moving of dirt. An archaeologist shall be notified and construction stopped if possible sites or any cultural materials are unearthed during construction.

#### Historic

Historic remains are generally too scattered and too recent to require or suggest preservation or collection. However, it is recommended that research be conducted to identify (who, what, when, why) the remains of structures on Hill 478. Should these remains reflect local participation in coastal defense of Southern California during World War II, they may be of some historical interest.

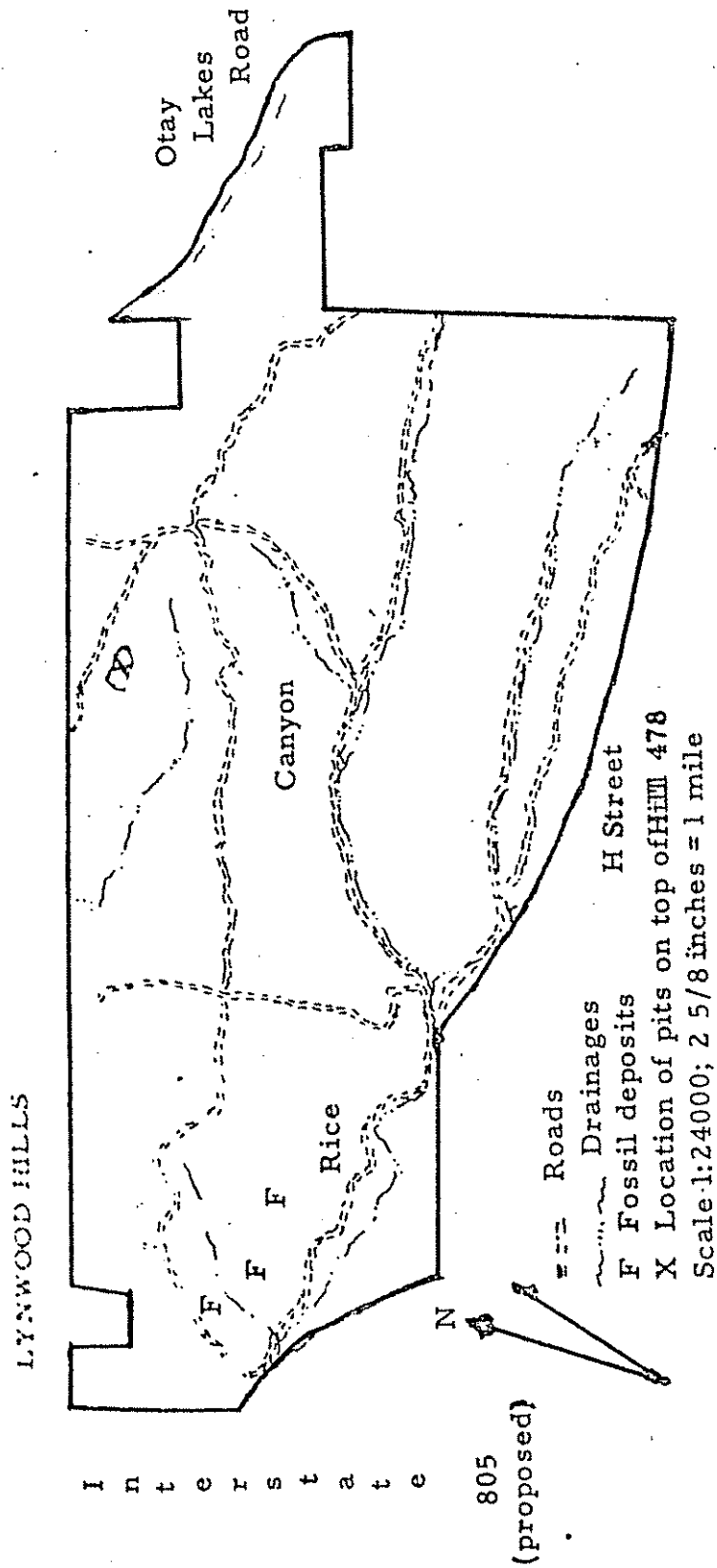
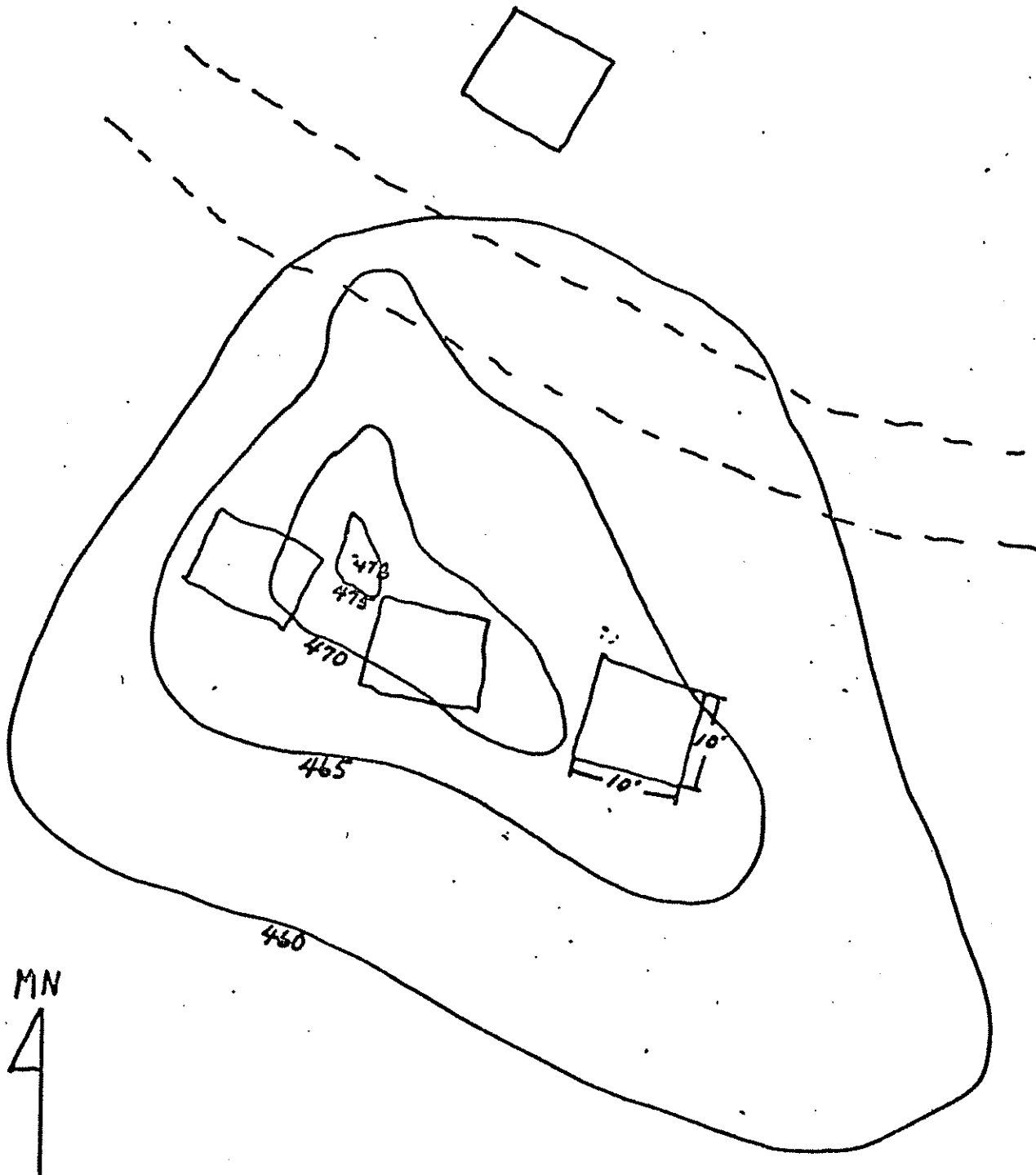


Figure 1. Map of area surveyed.





Scale:  $3/4'' = 10'$   
 Features:   
 Dirt road: 

Figure 2: Hill 478, showing locations of excavations.

### Water

There is no ground water or any other significant water resources on site.

### Mineral Resources

No significant resources have been identified on site.

### Topography

#### Impact (of site development)

The required grading for the subject project will have an unavoidable impact upon the existing topography by lowering and flattening the ridges and raising the valleys. The extent of the proposed grading is shown on the preliminary grading plans. The ground slopes that would exist after complete development are shown on the future ground slope map.

Further discussion of the impact of the proposed grading are presented elsewhere in this report under specific topics.

### Mitigating Measures

The design of the subject project is predicated on the maximum retention of major natural topographic features and the reduction of scarring effects due to grading while maintaining an acceptable level of safety for traffic, and providing protection against unstable slopes or slopes subject to erosion, deterioration, or slippage.

Man-made slopes, resulting from grading, will be blended into the natural topography by the use of

contoured grading and by the use of rounded toes and tops of slopes. Large level pads which are molded and contoured on the tops of slopes and edges will be utilized where possible to avoid "stair-step style" padding of adjacent pads. Split or two-level dwellings will also be utilized to ensure the structures and building sites fit into the natural topography and more effectively utilize smaller pads.

Cut and fill slopes will be protected from storm runoff, erosion and made more pleasing in appearance by landscaping with plants that will blend with the surrounding terrain and development.

The developer will utilize the ideas and concepts contained in the City of Chula Vista manual "Design Criteria for Hillside Development," a copy of which has been furnished to him in the drawing up of precise development plans.

Further discussion of mitigating measures to control the impact of grading on the natural topography are presented elsewhere in this report under specific topics.



### Paleontology

A discussion of the impact and mitigation of this resource is provided in the Archeological section II-A

### Impact (Geology)

#### Site Grading

It is anticipated that the grading of the site will involve the handling and exposure of soils having the following characteristics:

Compressible Soils - The alluvial deposits, which are generally located in the bottoms of canyons and subcanyons within the site, are loose and porous to varying degrees and are potentially compressible. Preliminary investigation of this site, along with information from adjacent areas, indicates that these deposits could range up to approximately 25 feet in thickness. In addition, the topsoils scattered over the site are potentially compressible to a minor degree. The topsoils are usually absent near the top of the ridges and range in thickness from one to three feet on the southern facing slopes of these ridges.

Potentially Expansive Soils - The residual clays of the soil mantle will be exposed where shallow cuts are made during the grading operations and

are anticipated to be encountered within and just underlying the topsoils scattered over much of the site. These clays are moderately potentially expansive and have thicknesses which range from less than one foot to a maximum of approximately three feet. It is also possible that some thin lenses of potentially expansive soils may be encountered in the San Diego Formational materials; however, it is not anticipated that these will be significant. The Otay Formation is composed largely of clayey sands and sandy clays which are moderately to highly potentially expansive soils. These soils will be exposed where deep cuts are made east of the fault system.

Unstable Soils - Soils on the site which may be considered potentially unstable in cut slopes are generally confined to the loose and porous alluvial deposits and loose topsoils. It is anticipated that cuts in these materials will be limited. The formational materials encountered on the site are generally considered to be relatively competent, and should be stable when the slope heights and slope inclinations are properly designed. The

clays or mudstone strata of the Otay Formation, if exposed in deep cuts, are subject to dessication which could result in raveling and slope creep. Special treatment may be required in these areas.

Erosion - All of the soils encountered on the site are subject to erosion to various degrees. The most highly erodible soils are soils with little cohesion; that is, soils that contain small amounts of clay. Upon grading the site, it is expected that all of the topsoils will be removed and mixed into fills, thereby exposing the formational materials that are underlying. The terrace materials would have very small relative erodibility because of the gradation of the materials from soil sizes up through gravel and rock sizes. The San Diego Formation materials are highly erodible under uncontrolled actions of water due to their generally well graded distribution of soil particles and small amounts of clay. In general, the Otay Formation is expected to be relatively resistant to erosion because of the large amounts of clay that are scattered throughout

this formation. In general, the soils on the site are all expected to be relatively wind resistant in terms of erosion, although the topsoils and the soils in the San Diego Formation could create fairly large amounts of dust during grading operations.

#### Supportive Ability of Soils

Bearing Capacity - All of the soils on the site, except for the topsoil and the alluvial deposits, as they now exist, are relatively competent and have adequate strength parameters for the general support of residential and commercial type structures. Analyses will be required for individual structures to determine maximum allowable soil bearing pressures and estimated settlements for design. Treatment of the topsoil and alluvial deposits will be required if they are to support structures.

Slope Stability - The soils encountered on the site, except for the topsoils and the alluvial deposits, generally exhibit strength characteristics which would allow the construction of moderately

high slopes with moderately steep inclinations in both cut and fill areas. Slope designs will require stability analyses. It is not anticipated that extensive cuts will be made in the topsoils or alluvium.

#### Effect of Fault

That portion of the La Nacion fault which traverses the site is relatively short (less than 1 mile) in relation to its overall length (over 20 miles). The proposed grading within the fault area will be basically confined to placement of fill in the canyons across which the fault traversed and making cuts on adjacent ridges, thus general loading along the fault will not be changed. The overall aspect of this operation is considered local in nature and should have no significant effect on the fault or its possible future activity.

#### Mitigating Measures to Control Impact

##### Treatment of Compressible Soils

The potentially compressible alluvial deposits encountered in the majority of the subcanyons and canyons on the site may be made suitable for support of fills and structures

by removing and replacing them as compacted fill under controlled conditions during the grading operations. The potentially compressible topsoils over the site are normally either excavated during the grading operations, or they are keyed through to the formational materials on the side slopes of canyons, mixed in the fill material, and compacted under controlled conditions. Where no fill or structures will be placed on potentially compressible alluvial deposits, no measures will be taken.

#### Treatment of Expansive Soils

The potentially compressible topsoils over the site are normally either excavated during the grading operations or they are benched through (in a series of steps) into the formational materials on the side slopes of canyons, mixed in the fill material and compacted under controlled conditions. Some of the canyon areas may also be utilized as open space or green belt zones. These soils usually have adequate strength parameters to support fills and structures, but their potential expansibility characteristics may be detrimental to structures when they are exposed or placed within two to three feet of finished grade in either cut or fill areas. In cut areas where these soils are exposed and undercut, they may be replaced with properly compacted select nonexpensive materials. There are sufficient amounts of select material on-site.

### Treatment of Erodible Soils

During the grading operations, it is anticipated that the control of dust from the on-site soils can generally be maintained through watering the cut areas and haul roads. Special dust control measures can be employed, if required.

When the grading is complete and final grades have been established for fill slopes, cut slopes, and pad elevations, erosion can be controlled by proper design of surface drainage patterns and proper planting of slope faces. The climatic zone, exposure, and soil type will be taken into consideration in order to aid plant selection, soil treatment, and watering requirements.

### Design of Foundations for Structures

It is anticipated that the area can be developed as outlined on the general development plan dated December 29, 1972, prepared by Charles W. Christensen & Associates. Design of foundations for relatively light to moderate weight structures should present no problems. It is also anticipated that the soils on the site will be suitable or

can be treated to enable the construction of large structures, such as the shopping center and larger buildings in the professional and commercial areas.

Two requirements must be fulfilled by any foundation material in regard to the design of foundations for structures. First, the soil must have sufficient strength such that it is safe against a shear failure. Second, the vertical movement must not exceed the amount permissible for the particular type of structure. The natural undisturbed formational soils on the site are expected to have adequate overall strength parameters for support of structures. Settlement on these soils should not be excessive if the bearing capacity is controlled by the soil type. Uniform compactness of the alluvium, topsoil and fill may be achieved by observation and testing of the placement. Additional studies will be required for final design criteria.

#### Design of Slopes

All of the soils encountered on the site when



properly compacted as fill, and all of the formational materials when exposed as cuts, except for the alluvial deposits, are expected to have adequate strength parameters to support moderately high slopes at moderate slope ratios. It is anticipated that relatively high slopes could be used on the property through proper treatment and design procedures. Additional studies will be required for final design.

#### Seismic Design

As indicated under "present conditions", seismic risk can generally be divided into three categories:

1) damage resulting in physical offset of the ground along the fault; 2) damaging to structures due to ground shaking; and 3) damage to structures due to ground failure.

1) In the case of structures built across a fault trace that subsequently moves, it is relatively apparent that considerable damage and even collapse can occur. Thus, it is of some importance to evaluate and determine if possible where movement is most likely in any particular fault zone. Breaking of new ground adjacent to a fault

previously not broken is not substantiated by historical records. Therefore, for planning purposes, no structures will be built within the fault zone. The fault zone or band may be utilized as an open space or green belt.

2) In regard to shaking, the relative intensity felt in any one location in relation to another in a localized area such as the vicinity of Bonita, Chula Vista, is more a function of the subsurface soil and rock conditions in the area than the distance from the focus of an earthquake. This is partially due to evidence that indicates that the focus of most shallow earthquakes in California results from an energy release generally considered to originate between 3 to 15 miles below ground surface. For this condition, it is relatively obvious that the distance from the energy source to, for example, a residence constructed 50 ft. off the fault trace that is the source of an earthquake receive approximately the same amount of energy as would a residence constructed a mile or so from the epicenter (a point directly above the focus). The effects (shaking) of an earthquake at a given site may be determined from the characteristics of the source

fault, along with the effects of the formational soil and rock. A response spectrum may be developed from this information for use in design. Design earthquakes have been developed for this area; design response spectrum can be determined by additional studies; however, it is not anticipated that design criteria for this site will vary significantly from any other similar coastal inland area in the San Diego vicinity.

3) Seismic risks in regard to ground failure is a function of the shear stress induced by the seismic event as related to the available shear strength of the soil or rock. This again for a particular area is related more to the subsurface soil conditions than proximity to the causive fault. If shear strengths of the surface materials are exceeded, liquefaction or settlement of soils beneath structures can occur or slope failure (landslide) could occur that would result in displacement. There are soils on the site which could be subject to liquefaction under some seismic loadings. Wherever these loose soils occur beneath structures and structural fills, they will be removed and replaced so

that the liquefaction potential areas that could affect structures will be eliminated. (See site grading).

Ground failure in the form of landslides is generally due to ground shaking related to the design of cut and fill slopes and in some cases natural slopes which are left untouched. In this regard, it is noted that old landslides are not present within the general site area and thus natural slope failures are not anticipated to be a problem. In regard to cut and/or fill slopes, ground shaking considerations will be evaluated in the analysis for the design of the height and inclination of the proposed cut and fill slopes on the property. As noted above, the intensity of ground shaking on the property should be comparable to other areas of Bonita, Chula Vista, with similar subsurface profile. Cut and fill slopes will be designed in accordance with local standards and requirements.

B. Landforms

The proposed development of Plaza Del Rey and other facilities described in the previous section of this report will have substantial impacts on the natural landforms of the site. The existing topography was described for the entire 1,400 acres in the adopted Environmental Impact Report for Sports World. The western 450 acres includes a portion of Rice Canyon and several tributary canyons which dissect the marine terrace to the north.

The need for large, relatively flat sites for the type of development proposed will require extensive earthwork, which is illustrated by the preliminary grading plan which is on file in the Planning Dept. Essentially, Rice Canyon will be filled to a depth of about 30-40 feet, while lowering the hilltops and ridges by 50-60 feet in many locations, ranging up to a maximum of 100 feet, and filling the adjacent tributary canyons.

Development of this project will be in many steps over several years. One of the initial grading operations will involve extending "H" Street from Interstate 805 to the shopping center. Construction of the first mile of major highway, from I-805 to near the church-school site will require between 900,000 and 1,000,000 cubic yards of excavation. Banks along this highway will be at a maximum slope of 2 to 1, with slope rounding at the toe & top, and shaping to conform to the curves of the natural contours. All cut and fill slopes will be landscaped in accordance with the City's Landscape Ordinance.

H Street east of I-805 is designated as a scenic route on the Scenic Highways Element of the General Plan. The policies outlined in this element relative to open space, landscaping and structure setting will apply to the review of precise plans.

The next major grading operation will be development of the regional shopping and recreation commercial areas southerly of "H" Street. This will require between 2,000,000 and 2,400,000 cubic yards of earthwork. A portion of this (500,000 to 900,000 cubic yards) will come from the residential area northerly of "H" Street. This will be used as fill during the second phase of development of the shopping center on the south and before extension of "H" Street easterly limits the crossing of that street by earth moving equipment.

Development of the single family area near Lynwood Drive may also occur in the early stages of the project. Grading will involve the excavation of approximately 800,000 cubic yards of material. Development of the remaining residential area is expected to extend over several years. Total excavation in that area will be approximately 1,700,000 cubic yards. Because of the problems of crossing traveled roads with earth moving equipment, excavation or filling of portions of some building areas may occur prior to development, so as to allow a balance at a later date. At this time, it appears that the maximum grading involved in this process would be 200,000 cubic yards and the maximum area would be 10 acres. Planting of these areas and erosion control devices would be constructed in accordance with the City's grading ordinance.

C. Flora and Fauna

The extensive earthwork and construction activities on the site will effectively remove much of the natural vegetation and wildlife, replacing it with the suburban development previously

described. Although some natural slope areas will be preserved, only minor habitats for small mammals, birds, and reptiles will remain. Some of the current residents will migrate into the adjacent undeveloped area, and others will simply cease their visitations to the site. Such forced relocation will result in increased competition for food and living accommodations among the displaced individuals and the established populations.

Some raptorial species which presently utilize the property will suffer a loss of hunting territory. This includes the red-tailed hawk, sparrow hawk, and Cooper's hawk. The latter two species appeared on the Blue List for 1973 indicating that they were showing population declines or range diminution in all or parts of their range (except for the southwest corner of the U.S.).<sup>17</sup> They are not sufficiently limited in population to be classified as rare or endangered. Cooper's hawk was retained on the Blue List for 1974.<sup>18</sup>

A number of species expected to exist on the site have been declared depleted or are tending toward this classification.<sup>19</sup> A depleted species is one that, although still occurring in numbers adequate for survival, has been heavily depleted and continues to decline at a rate which gives cause for concern. Those species considered depleted or potentially depleted which appear in the Sports World Environmental Impact Report are: coast horned lizard, rosy boa, orange-throated whiptail, and red diamond rattlesnake. These species are suffering continuing destruction of their habitats and/or are readily procured as pets (excluding the rattlesnake).

D. Drainage and Flood Control

The proposed project will contain a fully lined drainage channel, as previously described. The channel has been designed to accommodate the 50-year storm runoff from Rice Canyon and its tributary areas, as calculated in the City's overall drainage basin study. The proposed channel will accommodate surface runoff from the Rice Canyon drainage area to the east and discharge it into the natural canyon area at the western boundary of the site. Additional storm drainage facilities are being installed to the north, as part of the freeway construction project, to permit adequate drainage into the Sweetwater Valley.

There would be a small length of unimproved natural drainage between the Plaza del Rey Channel and the inlet under the I-805/H Street interchange. The applicant has indicated his willingness to insure adequate flow through this area to the Cal Trans inlet. However, because this area is under state ownership, no substantiation of the provision of any such facilities can be offered at this time.

Silt production is generally the result of free flowing water over erodible surfaces. In the residential areas, the ground will be disturbed and will be more easily erodible; however, erosion control devices such as brow ditches, terrace drains, slope planting and lot landscaping will mitigate this action over the long-term future. Concentration of waters will generally result in deeper and faster flows which erode soil and carry it downstream. The project drainage plan anticipates intercepting flow from graded areas in either streets, pipes, or culverts, thus



eliminating the possibility of increased flow on natural soil from storm runoff. Irrigation of planted slopes could result in increased silt production until the plantings are well established.

Runoff from the commercial areas will not be subject to erosion in the building or paved areas. The flow in Rice Canyon will ultimately outlet into a natural channel before it enters San Diego Bay. The 10 <sup>CFS</sup> second/feet increased flow from this development is only one-half percent greater than the projected 2113 <sup>CFS</sup> second/feet flow at this point in Rice Canyon. The increased flow is insignificant. The flow at the outlet will be faster than natural, however, and will require energy dissipators to reduce the speed to non-eroding velocity. (See Section VIII for further analysis)

The main impact of the drainage system will be on the quality of water downstream. Materials commonly found on street and parking lot surfaces have been found to contribute substantially to urban pollution. The EPA has found (publication EPA-22-72-DB1) that this run off is similar in many respects to sanitary sewage. During the first hour of a moderately heavy storm, more pollution is washed away than the City sewer system carries in the same time period.

Pesticides and other chemicals used in landscaped areas and residential areas together with hydrocarbons, rubber, and other deleterious material inherent in street travel and parking areas will be carried in the drainage system to its ultimate outlet in San Diego Bay. (See Section VIII for further evaluation) \*

\* See Input Section (Section XIV) and responses thereto (Section XV) for further information on drainage.

E. Land Usage

The proposed development of the western 450 acres of the El Rancho del Rey Planned Community will transform this property from its current undeveloped state into a large regional shopping and recreational complex, accompanied by 1,450 dwelling units of varying densities, and a neighborhood school/park complex. The proposed land uses are those designated for the subject property on the City of Chula Vista General Plan - 1990. However, the project is not in conformance with the open space element of the General Plan.

The circulation and utility support systems are being designed to provide adequate services to the proposed development in conformance with the City's General Plan and other applicable standards and requirements. The completion of the I-805 freeway and interchange with "H" Street will provide the accessibility and exposure necessary for the development of the site. The current market study has indicated support for a regional shopping center, and the anticipated continuing growth of San Diego County will result in sustained housing demands. The proposed development of the subject 450 acres will assist in the implementation of the City's General Plan. The shopping center and other improvements will certainly improve and expand the economic base of the City and help maximize its commercial potential; two of the major economic goals contained in the General Plan. The General Plan also suggests a conservative policy governing future commercial zoning and development, to protect and increase the potential of existing centers. The plan also identifies a regional center of about 75 acres at I-805 and H St. Plaza Del Rey and the recreational facilities will also provide a community service for the eastern portion of the City.

F. Traffic

Traffic for the 450 acre proposed project, as well as the total 1,400 acres previously considered, was calculated on the basis of the revised land uses now being proposed.

The designation of the land uses to the east of the project site in no way commits the City of Chula Vista to these land use patterns. The Planning Dept. staff is currently preparing a revision to the El Rancho del Rey General Development Plan.

The entire area was divided into traffic zones as shown in Figure III-1. The trip generation shown in Table III-1 is calculated for these traffic zones, using trip generation factors currently in use by the City of Chula Vista. The traffic assignments were made to the road network anticipated to exist at the time the various phases (described in Section IV) of the development were completed. The following information and data were used in making the traffic assignments:

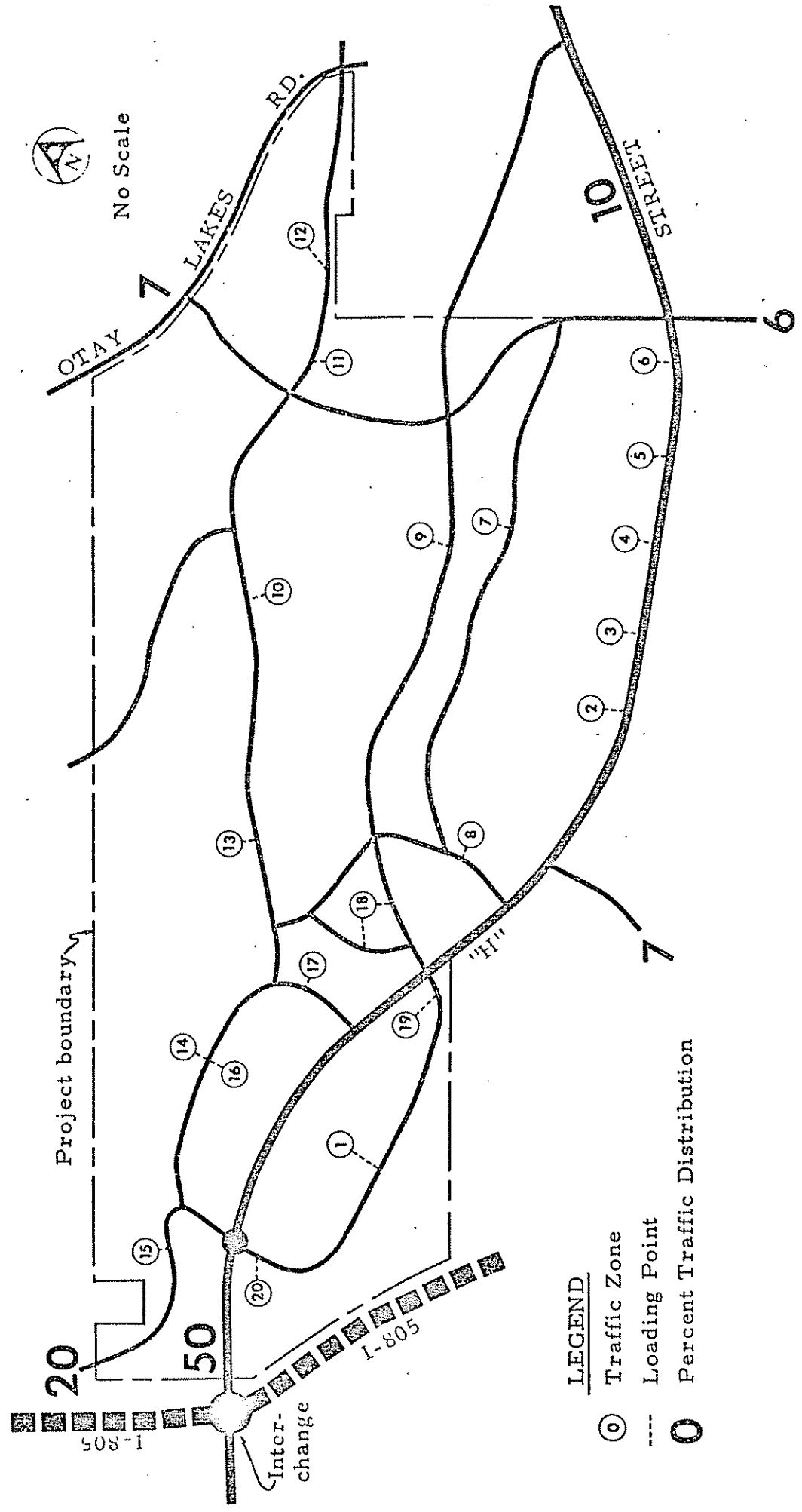


FIGURE III-1. TRAFFIC ANALYSIS ZONES, STREET SYSTEM, AND TRAFFIC DISTRIBUTION PERCENTAGE

1. Distribution of external-internal, and internal-external traffic made on the basis of percentages shown on Figure III-1.
2. 65% of residential trip generation assigned externally.
3. 10% of residential trip generation assigned to regional shopping center.
4. 25% of residential trip generation assigned internally to residential, commercial, professional, recreational commercial, and other internal land uses.
5. The peak traffic hour will occur during the afternoon weekday commuter peak.
6. The peak traffic hour volumes are 11% of the Average Daily Traffic, split 65% in the major direction of travel and 35% in the minor direction of travel. Prior to residential development, peak hour for shopping center is 10% ADT split 50-50.
7. County long-range (full regional development) traffic assignment developed for the City of Chula Vista in November 1972.
8. No reduction in automobile travel due to transit usage, car pooling and energy saving measures.

Based on these procedures, daily and peak hour traffic assignments were made for the following conditions:

TABLE III-1

Trip Generation

<u>ZONE</u>	<u>LAND USE</u>	<u>NO. D/U*</u>	<u>ACRES</u>	<u>TRIP FACTOR</u>	<u>2-WAY ADT*</u>
1	Regional Shopping Center	750,000 GSF* (1,200,000 GSF)	92.0	50/1000'	37,500 (60,000)
2	Professional		33.4	350	11,700
3	Commercial		14.3	550	7,860
4	MF Res.	258	16.1	8	2,060
5	Comm. Ctr.		15.4	100	1,540
6	MF Res.	342		8	2,740
7	SF Res.	700	118.3	10	7,000
8	SF Res.	211	33.0	10	2,110
9	SF Res.	713	112.0	10	7,130
10	SF Res.	356	281.4	10	3,560
11	SF Res.	229	62.2	10	2,290
12	MF Res.	572	75.6	8	4,560
13	SF Res.	77		10	770
14	MF Res.	956		8	7,650
15	SF Res.	206		10	2,060
16	MF Res.	668		8	5,340
17	MF Res.	73		8	580
18	MF Res.	400		8	3,200
19	Professional		9.7	350	3,400
20	Rec. Comm.		26.4	100	2,640

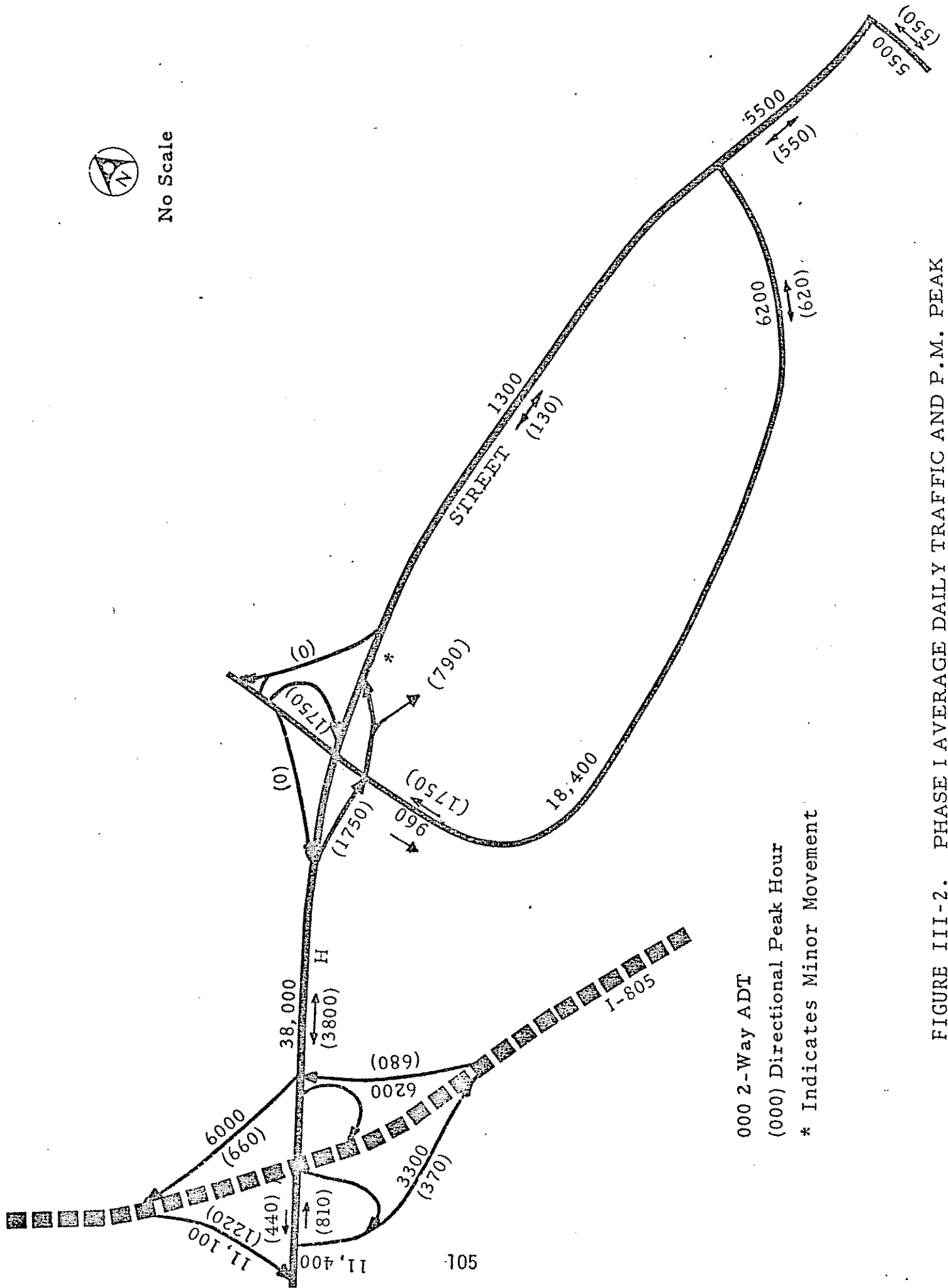
\* D/U = Dwelling Units  
ADT = Average Daily Trips  
GSF = Gross Square Feet

Figure III-2 Phase I consisting of 750,000 sq. ft. of shopping center, 9.7 acres professional office, and 26.4 acres of recreational/commercial. North-south road connection between "H" Street and Telegraph Canyon Road; Lynwood Drive and "H" Street to the east not connected; interchange constructed at "H" Street and Lynwood Drive.

Figure III-3 Phase II - Addition to Phase I of 500 multiple family and 200 single family living units northerly of the shopping center (north of "H" Street); Lynwood Drive connected to the north giving access to Bonita Road.

Figure III-4 Phase III which completes development of 450 acre project; includes addition of 450,000 sq. ft. to shopping center and construction of "H" Street to the east for completion of through route.

Figure III-5 Full development of the 1,400 acre parcel (remaining 950 acres north of "H" Street plus the 450 acres developed in Phases I, II, and III).



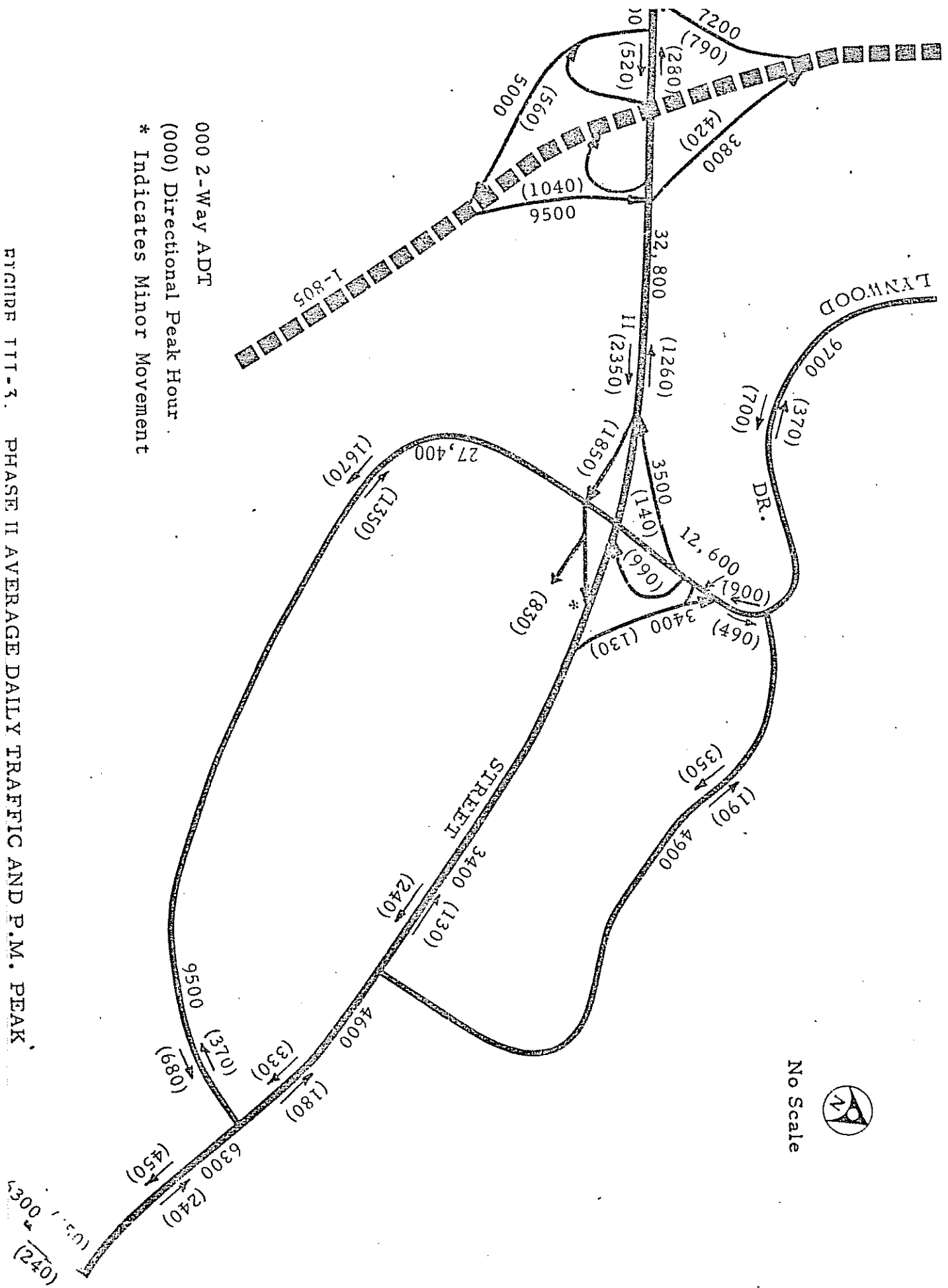
No Scale

000 2-Way ADT  
 (000) Directional Peak Hour  
 \* Indicates Minor Movement

FIGURE III-2. PHASE I AVERAGE DAILY TRAFFIC AND P.M. PEAK HOUR TRAFFIC



FIGURE TTT-7. PHASE II AVERAGE DAILY TRAFFIC AND P.M. PEAK



No Scale



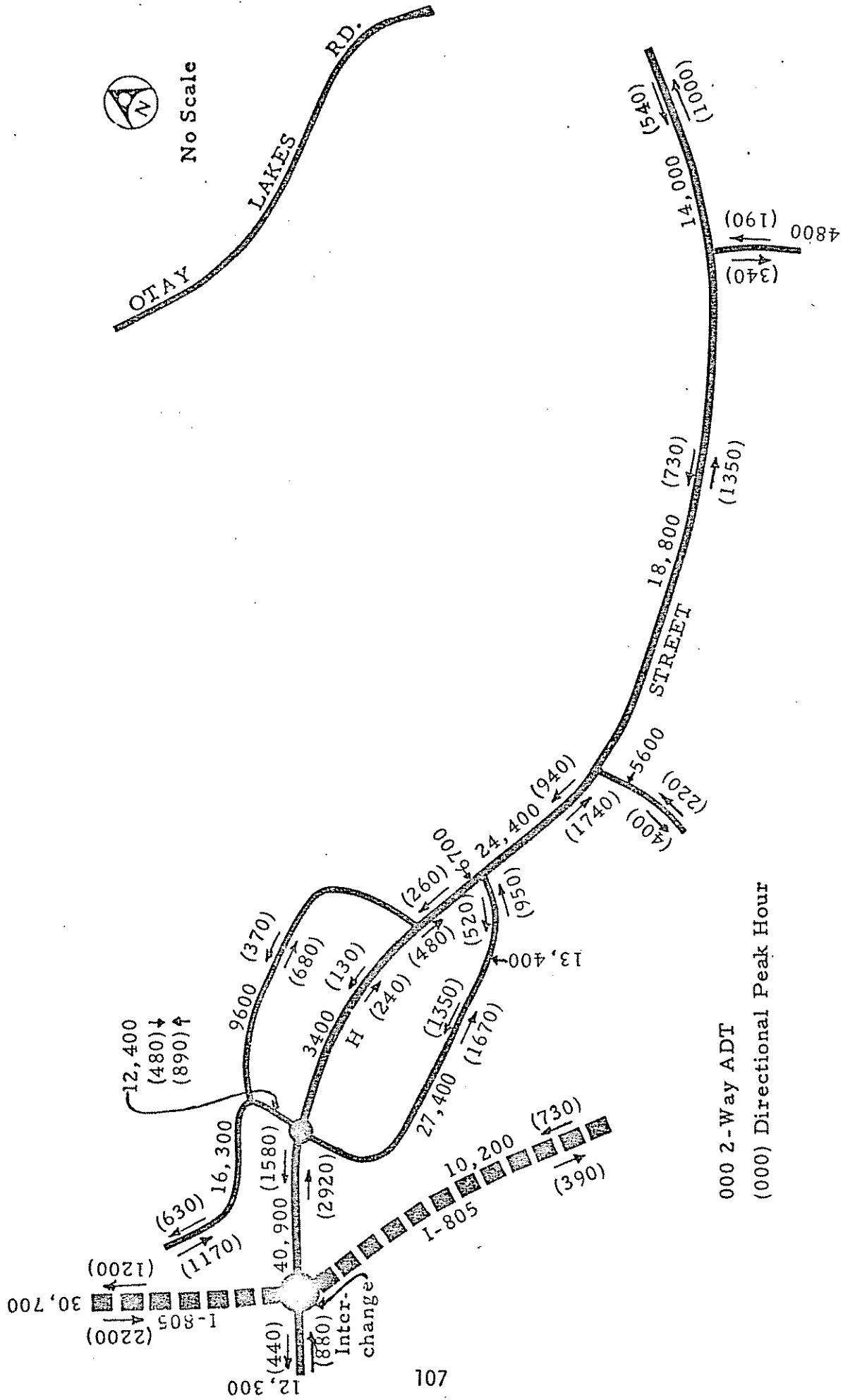
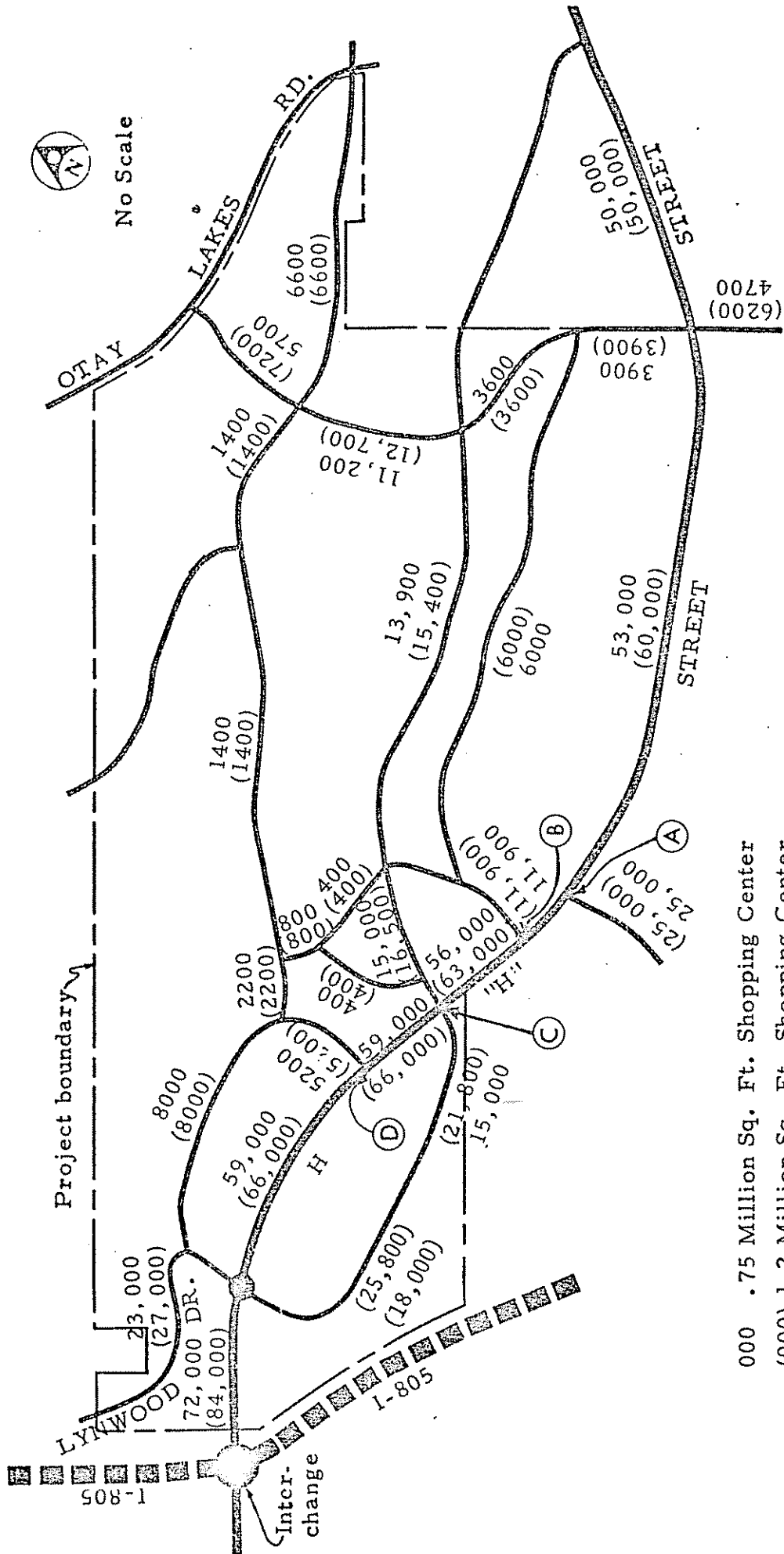


FIGURE III-4. PHASE III AVERAGE DAILY TRAFFIC AND P.M. PEAK HOUR TRAFFIC





000 .75 Million Sq. Ft. Shopping Center  
 (000) 1.2 Million Sq. Ft. Shopping Center

(A) Possible Traffic Capacity Deficient Locations

FIGURE III-6. AVERAGE DAILY TRAFFIC FROM FULL REGIONAL DEVELOPMENT



Figure III-6 Full regional development using County's traffic assignment with reassignment of 6,000 ADT to "J" Street, 12,000 ADT to Lynwood Drive, resulting in 18,000 ADT reduction on westerly end of "H" Street. Detailed traffic capacity analyses for the major intersections under full regional development have been furnished to the City Traffic Engineer.

Directional traffic volumes often appear unbalanced (greater in one direction than another). The reason for this is that in some instances there are only one way ramps or driveways and traffic leaves by a different route than which it arrived. Sudden changes in volume also occur, particularly around the shopping center, since large volumes of traffic are entering and leaving the road system at various points of access. \*

#### G. Climate

Plaza Del Rey will modify the existing micro climate by reducing the amount of vegetation on the land form, which play a major role in the micro-climate of the project site. The current setting is affected when the vegetation intercept precipitation, solar radiation, wind and affect temperature levels. The existing vegetation will in a large part, be replaced by reflective man made surfaces which to a large degree, absorb solar radiation and heat and then release it rapidly into the atmosphere, increasing temperatures. Therefore, Plaza Del Rey will produce a heat island in the micro climate in the project setting.

\* See Input Section (Section XIV) and responses thereto (Section XV) for further information on Traffic.

#### H. Air Quality

The proposed development will have a significant impact on air quality conditions, both in the vicinity of the property and on a regional basis. The sources of this impact are:

1. Construction Vehicles
2. Motor Vehicles
3. Stationary Sources

Section I described the ambient air quality conditions as represented by oxidant levels measured at Chula Vista. That information was offered as baseline data against which the pollutant contribution of the Plaza Del Rey complex can be measured. The following paragraphs plus related appendices will:

1. Describe the emission sources associated with the project.
2. Estimate their individual and cumulative pollutant contribution to the atmosphere at various stages of development.

3. Discuss dispersion of the pollutants using the meteorological information described earlier and, where appropriate, applying Gaussian plume dispersion techniques.
4. Estimate the effect of I-805 on the project site and the area using Gaussian plume dispersion formulas.
5. Discuss the effect of the utilities usage, and
6. Assess the individual and cumulative effect of the above emission sources on the site, the Chula Vista Planning Area and specific locations within the planning area.

#### Construction Impact

During the construction process for the proposed commercial and residential units, dust and other particulate matter will be introduced into the local atmosphere. The major contributor will be the earth moving and grading functions, from which a significant potential for localized dust and fumes exists periodically over the proposed ten year construction process. Additionally, it is to be anticipated that in some cases there will be a time lapse in terms of months between the site grading and the completion of construction of buildings and facilities on the graded sites. This could create a situation wherein blowing dust will occur during portions of the year when meteorological conditions produce high winds, if preventative measures are not taken. In addition, the movement of construction and off-road vehicles over dirt roads and construction sites will create an additional source of localized dust and fumes. Measures to mitigate these impacts are discussed in Section IV.



### Motor Vehicles

Motor vehicle emissions are the major contributor to air pollution in the San Diego Region.<sup>6</sup> Based on the anticipated motor vehicle activity associated with the proposed development, estimates of motor vehicle emissions were made for the completion of Phase I of the shopping center and approximately half of the residential units in the western sector will be completed. Air quality impact assessments or quantitative estimates beyond 1980 would have limited validity due to constantly changing air pollution control standards and enforcement plans, energy considerations and regional transit plans.

### Regional Shopping Center

Phase I of Plaza Del Rey, which will provide 750,000 square feet of commercial space, is scheduled for completion by 1976. It is estimated that this first phase will generate approximately 37,500 motor vehicle trips daily. Current traffic studies indicate that an average one way trip length of five miles is representative of a regional shopping center similar to this project.<sup>13</sup>

Phase II of the project is scheduled for completion by 1980. At that time the shopping center will contain 1.2 million square feet and, coupled with the professional and commercial/recreational center, is expected to generate 66,000 daily trips. As in Phase I, an average trip length of 5 miles was assumed.<sup>13</sup>

Using the methodology described in Appendix A, the total mileage figures were determined and translated into the following motor vehicle emission rates associated with the shopping center:

TABLE III-2  
TOTAL SHOPPING CENTER EMISSIONS

<u>Pollutant</u>	<u>Emission Rate (lbs/day)</u>		<u>Emission Rate (tons/yr)</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
Hydrocarbons (as Hexane)	1,189	1,470	217	269
Carbon Monoxide	11,194	14,276	2,043	2,605
Nitrogen Oxides (as Nitrogen Dioxide)	959	1,275	175	233
Particulates	127	174	23	31

Regarding the above figures, the point is made that the total quantities of pollutant emissions do not represent a net addition to the regional air cell. Based upon the existing General Plan it is estimated that only 25 percent of the total daily trips are what might be termed unique trips;<sup>13</sup> those that would not be made if this particular shopping center did not exist. It is assumed that the remaining 75 percent would have been made to another commercial shopping facility in the Chula Vista trade area.

Conversely, should the massive "agriculture and Reserve" area shown on the General Plan be permitted to develop, such "unique" trips might well constitute up to 50 percent of the total.

In order to correctly assess the net incremental pollutant additions to the regional air cell it is necessary to multiply the estimates in Table III-2 by the appropriate percentage of "unique" trips. The following Table III-3 is based upon the percentage range (25%-50%). Determination of the number of unique trips to be anticipated is at best an approximation in view of the vagaries associated with the timing, density, scope and location of future development within the trade area.

TABLE III-3

## ESTIMATED NET SHOPPING CENTER EMISSIONS

<u>Pollutant</u>	<u>Emission Rate (lbs/day)</u>		<u>Emission Rate (tons/yr)</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
	Hydrocarbons (as Hexane)	297-594	368-736	54-108
Carbon Monoxide	2,799- 5598	3,569- 7138	511-1022	651- 1302
Nitrogen Oxides (as Nitrogen Dioxide)	240-480	319-638	44-88	58-116
Particulates	32-64	44-88	6-12	8-16

The Chula Vista Planning Area will experience a greater effect from the incremental pollutant increase than will other areas of the San Diego air basin. An assessment of this effect is covered in subsequent paragraphs.

A portion of the traffic associated with the regional shopping center will be from Mexico. A very large proportion of these vehicles will not be equipped with air pollution control devices. Using data from the Office of Air Programs publication No. AP-42, assuming no applications of devices prior to 1980, to these vehicles and that the dollar volume into the center will be the same on a per vehicle ('76-10%, '80-13%) basis regardless of origin, the following calculations have been made:

TABLE III-3.1

## Emissions from Mexican Vehicles

<u>Pollutant</u>	<u>Emission Rate lbs/day</u>		<u>Emission Rate tons/yr</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
	Hydrocarbons	714	1484	130
Carbon Monoxide	2888	6006	527	1096
Nitrogen Oxides	271	565	50	103
Particulates	12	26	2	5

TABLE III-3.2

## Total Emissions with Mexican Vehicle Mix

<u>Pollutant</u>	<u>Emission Rate</u> <u>lbs/day</u>		<u>Emission Rate</u> <u>tons/yr</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
	Hydrocarbons	1784	2807	325
Carbon Monoxide	12,963	18,854	2366	3441
Nitrogen Oxides	1134	1713	208	313
Particulates	126	183	23	33

These figures represent the total emissions associated with the vehicle travel associated with the regional shopping center. If the estimation of 25%-50% unique trips associated with the center were applied to these figures the following estimate results:

TABLE III-3.3

Estimated Unique Shopping Center (25-50%)  
emissions including Mexican Vehicle mix.

<u>Pollutant</u>	<u>Emission Rate</u> <u>lbs/day</u>		<u>Emission Rate</u> <u>tons/yr</u>	
	<u>1976</u>	<u>1980</u>	<u>1976</u>	<u>1980</u>
	Hydrocarbons	476-951	739-1478	87-173
Carbon Monoxide	3521-7042	5071-10,141	643-1286	925-1850
Nitrogen Oxides	308-616	460-920	57-114	84-168
Particulates	35-70	51-102	7-13	11-22

### Residential Development

That portion of the overall project that is being addressed in this supplemental report will contain approximately 725 residential units in 1980, and 1,450 at project completion in 1986. Because of the unavailability of emissions data for the post 1980 period, no estimates for 1986 were made. The motor vehicles used by the occupants of the 725 units, in 1980, will of course have an impact on the air quality of the region as well as the immediate area. An estimated 2,175 residents will occupy the proposed residential dwellings in 1980. The 1970 U.S. census population data and motor vehicle registration data for San Diego County indicate an average of .523 automobiles and light duty trucks and .03 motorcycles per person.<sup>14</sup> Thus in 1980, the residential units of the project will contribute approximately 1,138 automobiles and light duty trucks and 65 motorcycles to the Chula Vista area. Data from the State Air Resources Control Board were used to calculate estimated emissions in 1980.<sup>8</sup> These data indicate average vehicle age, number of vehicles in the age bracket, average annual miles driven and total miles driven. The results of these analyses indicate the following emission rates associated with the proposed residential development:

TABLE III-4  
RESIDENTIAL MOTOR VEHICLE EMISSIONS

<u>Pollutant</u>	<u>Emission Rate (lbs/day)</u>
	<u>1980</u>
Hydrocarbons (as Hexane)	108
Carbon Monoxide	1,236
Nitrogen Oxides (as Nitrogen Dioxide)	107
Particulates	14

<u>Pollutant</u>	<u>Emission Rate (tons/yr)</u>
	<u>1980</u>
Hydrocarbons (as Hexane)	19
Carbon Monoxide	225
Nitrogen Oxide (as Nitrogen Dioxide)	19
Particulates	3

The data presented in Table III-4 represent true regional growth to the area and thus reflect net additions to the regional air basin's pollutant levels. In other words they reflect a worst case situation. However, a portion of the residential population of the proposed development may reflect migration within the San Diego Region versus true in-migration. Thus, to whatever extent intra-region migration occurs this will correspondingly decrease the estimated air quality impacts.

#### Stationary Sources

Air quality will be affected by the type of energy source used in the residential and commercial buildings (i.e., natural gas or electric). A mix of these units is assumed. The use of electricity transfers the air pollution emissions to the source of electric power generation if this power is provided by fossil fuel plants. Based on data available from San Diego Gas & Electric Company the average home in the San Diego County area presently consumes about 5,700 kilowatt hours of electricity per year and 86,000 cubic feet of natural gas.<sup>9</sup> Assuming these consumption rates and other factors for the proposed commercial spaces, the air pollutant emission rates for stationary sources were estimated for the project. Using Environmental Protection Agency (EPA) air quality emission standards for low sulfur fuels used in electric power generation, the following pollutant emission rate contributions to the region's air cell are estimated based on present and predicted power generation by fossil fuel plants in San Diego County (refer to Appendix A.2.2):

TABLE III-5  
RESIDENTIAL ELECTRICITY EMISSIONS

<u>Pollutant</u>	<u>Emission Rate (lbs/day)</u>	
	<u>1976</u>	<u>1980</u>
Particulates	8	13
NO <sub>x</sub> (as Nitrogen Dioxide)	16	25
SO <sub>2</sub> (Sulfur Dioxide)	65	102

<u>Pollutant</u>	<u>Emission Rate (tons/year)</u>	
	<u>1976</u>	<u>1980</u>
Particulates	1	2
NO <sub>x</sub> (Nitrogen Dioxide)	3	5
SO <sub>2</sub> (Sulfur Dioxide)	12	19

Using conversion factors for the natural gas combustion process, the following are estimates of the project's contribution of emissions from combustion of natural gases (refer to Appendix A.2.3):

TABLE III-6  
RESIDENTIAL NATURAL GAS EMISSIONS

<u>Pollutant</u>	<u>Emission Rate (lbs/day)</u>	
	<u>1976</u>	<u>1980</u>
Particulates	0.7	4.3
NO <sub>x</sub>	1.9	11.4
Carbon Monoxide	0.8	4.6
Hydrocarbons	0.3	1.8

<u>Pollutant</u>	<u>Emission Rate (tons/year)</u>	
	<u>1976</u>	<u>1980</u>
Particulates	0.1	0.8
NO <sub>x</sub>	0.4	2.1
Carbon Monoxide	0.1	0.8
Hydrocarbons	0.1	0.3



On occasion high sulfur fuels may be used, when this occurs the generation of Oxides of Sulfur will be 6 times the emission presented in the above table.

Planned controls of other emission sources such as hydrocarbon fumes from service stations and similar sources will reduce air pollutant contributions from other stationary sources considerably. Therefore only the sources discussed above are addressed in this report.

#### Other Project Area Emission Sources

Two additional pollutant sources will have a significant effect on the quality of air in the Chula Vista Planning Area. One is the San Diego Gas & Electric Company's South Bay Power Plant. The other is Interstate 805, currently being constructed adjacent to the western border of the project site. Appendix A offers an analysis of the concentration levels of pollutants associated with these two emissions sources.

#### Summary of Regional and Planning Area Air Quality

##### Impacts

As an aid to assessing the air quality impacts of the project, several comparisons are made:

1. Motor vehicle emissions associated with the proposed regional shopping center, compared to the total San Diego region air basin emissions in the 1976 time frame (see Table III-7).

2. Motor vehicle emissions, including Mexican vehicles, associated with the proposed regional shopping center (25-50%) compared to the total region air basin emission in the 1976 time frame (see Table III-7.1)
3. Motor vehicle emissions associated with the regional shopping center, plus the revised residential area, compared to the total San Diego region air basin emissions in the 1980 time frame (see Table III-8).
4. Motor vehicle emission, including Mexican vehicles, associated with the regional shopping center, (25-50%) plus the revised residential area, compared to the total San Diego region air basin emissions in the 1980 time frame (see Table III-8.1)
5. Motor vehicle emissions associated with the proposed shopping center, compared to the total estimated emissions within the Chula Vista Planning area in the 1976 time frame (see Table III-9).
6. Motor vehicle emissions, including Mexican vehicles, associated with the proposed shopping center (25-50%) compared to the total estimated emissions within the Chula Vista Planning area in the 1976 time frame (see Table III-9.1)
7. Motor vehicle emissions associated with the regional shopping center, plus the revised residential area, compared to the total estimated emission within the Chula Vista Planning Area in the 1980 time frame (see Table III-10).

8. Motor vehicle emissions, including Mexican vehicles, associated with the regional shopping center (25-50%) plus the revised residential area, compared to the total estimated emission within the Chula Vista Planning Area in the 1980 time frame (see Table III-10.1)

Tables III-7, III-7.1, III-8, & III-8.1 offer two categories of comparisons: (a) one against total predicted regional emissions without stringent new air quality controls such as gas rationing and transportation limitations (but considering laws and regulations currently in force or those to be implemented under existing law), and (b) one against total regional emissions if all State and Federal air quality standards are to be met. Comparisons for 1976 and 1980 are displayed against the total regional emissions estimates for 1975 because regional forecasts for the 1980 time frame are not available.

As discussed earlier, approximately 25-50% of the trips to the shopping center are considered unique trips representing a net pollutant addition to the atmosphere. The comparisons made herein against the regional basin (Tables III-7, III-7.1 and III-8, III-8.1) as well as the Chula Vista Planning Area air cell (Tables III-9, III-9.1 and III-10, III-10.1) include emissions from 25% to 50% of the motor vehicle trips to the shopping center rather than 100% of the trips.

With regard to 1977 Federal Air Quality Standards, which are under evaluation by the Congress and EPA, this project coupled with the construction of I-805 would appear to preclude compliance with the photochemical oxidants standards in this immediate area. The freeway itself will have the greatest impact, but the shopping center and residential area will add to this impact. This is not a unique situation but rather reflects a similar problem in all major urban areas wherein current and planned emission control devices and mass transit networks are not capable of satisfying Federal Air Quality Standards.

TABLE III-7

Comparison of Project Associated  
 Motor Vehicle Emissions (25-50%)  
 Against Regional Emissions (1976)

Motor Vehicle Emission Source Regional Shopping Center Phase I-750,000 Sq. Ft.	Against Total 1976 Regional Emissions- Without New Control (tons/year)	Against Total 1976 Regional Emissions- To Meet Standards (tons/year)
Hydrocarbons	54-108/86,252=0.06-0.13	54-108/36,400=0.15-0.30
Carbon Monoxide	511-1022/355,559=0.14-0.29	511-1022/309,000=0.47-0.33
Nitrogen Oxides	44-88/58,338=0.08-0.15	44-88/38,338=0.08-0.15
Particulates	6-12/14,694=0.04-0.08	6-12/14,694=0.04-0.08

TABLE III-7.1

Comparison of Project Associated  
 Motor Vehicle Emissions (25-50%)  
 Including Mexican Vehicles  
 Against Regional Emissions (1976)

Motor Vehicle Emission Source Regional Shopping Center Phase I-750,000 sq. ft.	Against Total 1976 Regional Emissions- Without New Control (tons/year)	Against Total 1976 Regional Emissions To Meet Standards (tons/year)
Hydrocarbons	87-173/86,256=.10-.20%	87-173/36,406=.24-.48%
Carbon Monoxide	643-1286/355,559=.18-.36%	643-1286/309,000=.21-.42%
Nitrogen Oxides	57-114/58,338=.10-.20%	57-114/58,338=.10-.20%
Particulates	7-13/14,694=.05-.10%	7-13/14,694=.05-.10%

<u>Motor Vehicle Emission Source</u>	<u>Against Total Regional Emissions - Without New Controls (tons/year)</u>	<u>Against Total Regional Emissions - to meet Standards (tons/year)</u>
<u>Regional Shopping Center (Phase II - 1.2 Million Square Feet)</u>		
Hydrocarbons	67-134/86,256 = .08% - .16%	Ø-134 /36,400 = 0.18% - .37%
Carbon Monoxide	615-1302/355,559 = 0.18% - .37%	615-1302/309,000 = 0.21% - .42%
Nitrogen Oxides	58-116/58,338 = 0.10% - .20%	58-116/58,338 = 0.10% - .20%
Particulates	8-16/14,694 = 0.05% - .10%	8-16/14,694 = 0.05% - .10%
<u>Residential Development (Revised Area - 725 Units)</u>		
Hydrocarbons	19/86,256 = 0.02%	19/36,400 = 0.05%
Carbon Monoxide	225/355,559 = 0.06%	225/309,000 = 0.07%
Nitrogen Oxides	19/58,338 = 0.03%	19/58,338 = 0.03%
Particulates	3/14,694 = 0.02%	3/14,694 = 0.02%
<u>Regional Shopping Center (Phase II) Plus Residential Development (Revised Area - 725 Units)</u>		
Hydrocarbons	86-153 /86,256 = 0.10% - .18%	86-153/36,400 = 0.23% - .42%
Carbon Monoxide	876-1527 /355,559 = 0.25% - .43%	876-1527/309,000 = 0.28% - .49%
Nitrogen Oxides	75-135 /58,338 = 0.13% - .23%	77-135/58,338 = 0.13% - .23%
Particulates	11-19/14,694 = 0.07% - .13%	11-19/14,694 = 0.07% - .13%

Table III-8 Comparison of project associated motor vehicle emissions against regional emissions in 1980 time-frame. (1)

(1) Using 1975 regional emission estimates

Motor Vehicle Emission Source	Against Total Regional Emissions - Without New Controls (tons/year)	Against Total Regional Emissions - to meet Standards (tons/year)
<u>Regional Shopping Center (Phase II - 1.2 million Sq. ft.)</u>		
Hydrocarbons	135-270/86,256 = .16-.31%	135-270/36,400 = .37-.74%
Carbon Monoxide	925-1850/355,559 = .26-.52%	925-1850/309,000 = .30-.60%
Nitrogen Oxides	84-168/58,338 = .14-.29%	84-168/58,338 = .14-.29%
Particulates	11-22/14,694 = .07-.15%	11-22/14,694 = .07-.15%
<u>Residential Development (Revised Area - 725 Units)</u>		
Hydrocarbons	19/86,256 = 0.02%	19/36,400 = 0.05%
Carbon Monoxide	225/355,559 = 0.06%	225/309,000 = 0.07%
Nitrogen Oxides	19/58,338 = 0.03%	19/58,338 = 0.03%
Particulates	3/14,694 = 0.02%	3/14,694 = 0.02%
<u>Regional Shopping Center (Phase II) Plus Residential Development (Revised Area - 725 Units)</u>		
Hydrocarbons	154-289/86,256 = .18-.34%	154-289/36,400 = .43-.79%
Carbon Monoxide	1150-2075/355,559 = .32-.58%	1150-2075/309,000 = .37-.67%
Nitrogen Oxides	103-187/38,338 = .18-.32%	103-187/58,335 = .18-.32%
Particulates	14-25/14,694 = .10-.17%	14-25/14,694 = .10-17%

Table III-8.1 Comparison of project associated motor vehicle emissions (25-50%) including Mexican vehicles, against regional emissions in 1980 time frame. (1)

(1) Using 1975 regional emission estimates

TABLE III-9

Comparison of Project Associated  
 Motor Vehicle Emissions (25-50%) Against Chula Vista  
 Planning Area Emissions (1976)

<u>Motor Vehicle Emission Source</u>	<u>Against Chula Vista Planning Area Emissions (Tons/Year - 1976)</u>
<u>Regional Shopping Center (Phase I - 750,000 Square Feet)</u>	
Hydrocarbons	54-108/1388=3.89-7.78
Carbon Monoxide	511-1022/13,307=3.84-7.86
Nitrogen Oxides	44-88/1602=2.75-5.5
Particulates	6-12/181 = 3.31-6.62

TABLE III-9.1

Comparison of Project Associated  
 Motor Vehicle Emissions (25-50%) Against Chula Vista  
 Including Mexican Vehicles  
 Planning Area Emissions (1976)

<u>Motor Vehicle Emission Source</u>	<u>Against Chula Vista Planning Area Emissions (Tons/Year - 1976)</u>
<u>Regional Shopping Center (Phase I - 750,000 Square Feet)</u>	
Hydrocarbons	87-143/1388= 6.3-10.3
Carbon Monoxide	643-1286/13,307= 4.8-9.7%
Nitrogen Oxides	57-114/1602 = 3.6-7.1%
Particulates	7-17/181 = 3.9-9.4%



TABLE III-10

Comparison of Project Associated  
Motor Vehicle Emissions (25-50%) Against Chula Vista  
Planning Area Emissions (1980)

<u>Motor Vehicle Emission Source</u>	<u>Against Chula Vista Planning Area Emissions (Tons/Year - 1980)</u>
<u>Regional Shopping Center (Phase II - 1.2 Million Square Feet)</u>	
Hydrocarbons	67-134/629 = 10.6% - 21.3%
Carbon Monoxide	651-13025,432 = 12.0% - 24%
Nitrogen Oxides	58-116 /706 = 8.2% - 16.4%
Particulates	8-16 /117 = 6.8% - 13.7%
<u>Residential Development (Revised Area - 725 Units)</u>	
Hydrocarbons	19/629 = 3.0%
Carbon Monoxide	225/5,432 = 4.1%
Nitrogen Oxides	19/706 = 2.7%
Particulates	3/117 = 2.6%
<u>Regional Shopping Center (Phase II) Plus Residential Development (Revised Area - 725 Units)</u>	
Hydrocarbons	86-153 /629 = 13.7% - 24.3%
Carbon Monoxide	876-1527 /5,432 = 16.1% - 28.1%
Nitrogen Oxides	77-135 /706 = 10.9% - 19.1%
Particulates	11-19 /117 = 9.4% - 16.2%

TABLE III-10.1

Comparison of Project Associated  
 Motor Vehicle Emissions including Mexican vehicles (25-50%)  
 Against Chula Vista Planning Area Emissions (1980)

<u>Motor Vehicle Emission Source</u>	<u>Against Chula Vista Planning Area Emissions (Tons/Year - 1980)</u>
<u>Regional Shopping Center (Phase II - 1.2 Million Square Feet)</u>	
Hydrocarbons	135-270/629 = 21.5-42.9%
Carbon Monoxide	925-1850/5432 = 17.5-34.1%
Nitrogen Oxides	84-168/706 = 11.9-23.8%
Particulates	11-24/117 = 9.4-18.8%
<u>Residential Development (Revised Area - 725 Units)</u>	
Hydrocarbons	19/629 = 3.0%
Carbon Monoxide	225/5,432 = 4.1%
Nitrogen Oxides	19/706 = 2.7%
Particulates	3/117 = 2.6%
<u>Regional Shopping Center (Phase II) Plus Residential Development (Revised Area - 725 Units)</u>	
Hydrocarbons	154-289/629 = 24.5-45.9%
Carbon Monoxide	1150-2075/5432 = 21.2-38.2%
Nitrogen Oxides	103-187/706 = 14.6-26.5%
Particulates	14-25/117 = 12.0-21.4%

Project Area Impact Analysis - 1976

Concerning the localized impact of the project on air quality in the Chula Vista vicinity, it can be seen from Tables III-9 and III-10 what the relative contribution of the Plaza Del Rey complex will be. Considering the current air quality conditions in Chula Vista, as provided in Section I, and the meteorological conditions as discussed under Climate and Meteorology, additional impact judgments are made.

The total pollutant contribution from motor vehicles and stationary sources associated with Phase I of the shopping center have been depicted in Tables III-2, III-3 and III-6. Comparisons of the motor vehicle related emissions which have been made in Table III-9 indicate that Phase I of Plaza Del Rey will cause pollutant levels in the Chula Vista Planning Area to increase by 3-4%.

While the project location is not ideal for atmospheric diffusion, there are dynamic meteorological forces present for dispersion and diffusion of pollutants into the regional air basin under most anticipated conditions. It would be desirable to have a detailed microanalysis of the area's atmospheric diffusion processes to facilitate calculating the diffusion of pollutants emitted in the project area. However, no quantitative meteorological data are available for the specific site area, and several years would be required to accumulate sufficient data for such an analysis. Therefore, in addition to estimating the anticipated air pollution dispersion and its subsequent effect

on air quality in the vicinity, a discussion of the project area's dynamic meteorological forces for atmospheric diffusion is presented. Approximate pollutant levels related to the project have been calculated and are presented later in this section.

As pollution sources, Plaza Del Rey and nearby residential development are considered to fall between an instantaneous and continuous emission source. This indicates that both macro (large) and micro (small) dynamic meteorological forces will be important to the atmospheric diffusion process. Significant meteorological parameters are temperature, wind flow, relationship of the inversion height to the area, and vertical and horizontal turbulence.

As described in Section I (Climate) the project area is continually under the influence of the South Bay large scale on-shore/off-shore wind flow, the ever-present land/sea breeze effect, or, during periods of clear skies and calm winds, thermally driven katabatic or anabatic wind flow and eddy effects. Consequently, wind flow and associated turbulence and mass air transport are present in the project area at most times. The dynamics of the gradient wind flow indicate that vertical turbulence will be more prevalent during daylight hours, i.e., when the on-shore sea breeze conditions are present in conjunction with expected rising temperatures through the day. With this condition, the inversion will extend over the mesa, normally to the vicinity of Otay Lakes Road or possibly further east to the next ridge line. The inversion will normally weaken with heating and frequently dissipate, allowing turbulence and wind flow to partially diffuse a portion of the

pollutants, depending on exact meteorological circumstances, into the general San Diego regional air basin.

In horizontal turbulence and cold air drainage, and/or when off-shore wind flow predominates the area, turbulence and eddies will exist, resulting in the dissipation of the inversion, and dispersion of pollutants into the regional air basin. Most significantly, all the above winds and turbulence effects will produce divergent flow out from the project air column, thus diffusing the pollutants into the much larger San Diego regional air basin.

Of utmost importance, the heat island created by Plaza Del Rey will produce considerable vertical turbulence and convection to approximately 600-900 feet, insuring that the inversion base in the project area will normally remain at least 200-400 feet above the highest ridgelines. This eliminates the possibility of the pollutants being frequently trapped in Rice Canyon, and insures a dispersion outlet for any air pollutants emitted in the project area. Consequently, it is estimated that even if the inversion is present 100 percent of the time, atmospheric diffusion will be able to partially disperse a portion of the pollutants into the general San Diego regional air basin.

Assessing the pollutant contribution of motor vehicles to any detailed degree is quite difficult because the automobile is a mobile source, emitting pollutants over a wide and ill-defined area. However, a prediction has been made of project-related concentrations of carbon monoxide for the prevailing meteorological conditions at the site. The following assumptions apply:

1. Emissions are generated within an area described by a circle whose radius equals five miles with its center at Plaza Del Rey.

2. 1976 emission factors.
3. Prevailing wind of 3.6 knots (4.1 mph) from the west-southwest (247.5°).
4. Stability Class B (1-2 meter/sec., moderate incoming solar radiation)
5. Topography will not restrict dispersion.
6. A five percent mix of heavy duty vehicles.
7. Deterioration of control devices was considered when determining the vehicle mix in 1976.
8. Peak hour emissions will equal 11% of the 24-hour emission rate.
9. Emissions enter the atmosphere at ground level.

The result of applying Pasquill's method of estimating diffusion, with Gifford's conversion incorporated (see Appendix A), provide an approximation of the carbon monoxide concentrations near the center of motor vehicle activity described in Assumption 1 above.<sup>8</sup> No estimate of hydrocarbon concentrations can be provided by this method since use of Gaussian Plume dispersion methods has not been validated by the EPA nor is it used by the California Department of Transportation. This is due to the fact that hydrocarbons tend to react with oxides of nitrogen shortly after entering the atmosphere. The reactions occur in the presence of sunlight and are extremely complex.

Approximate Incremental Concentration of Carbon Monoxide In  
Vicinity of Regional Shopping Center (1976)

<u>Motor Vehicle Emission Source</u>	<u>Concentration-1976</u>
Carbon Monoxide	0.7 ug/m <sup>3</sup>

Project Area Impact Analysis - 1980

The portion of the Plaza Del Rey development covered by this supplemental report will contribute between 9 and 16% of the vehicle emissions in 1980 in the Chula Vista Planning Area, depending on the individual pollutants involved. As with the 1976 time frame, approximate concentration levels for specific pollutants have also been calculated for 1980. All assumptions remain the same except those relating to 1976 emission factors and 1976 vehicle mix. Those factors have been modified for the 1980 time frame. The following table shows the results of the calculations which are included in Appendix A:

Approximate Incremental Concentration of  
Carbon Monoxide in  
Vicinity of Project Site (1980)

<u>Motor Vehicle Emission Source</u>	<u>Pollutant Concentrations (1980)</u>
Carbon Monoxide	0.9 mg/m <sup>3</sup>

The concentrations of carbon monoxide that can be expected from motor vehicle traffic associated with the project in either the 1976 or 1980 time frame fall considerably below the Federal one-hour standard for carbon monoxide (40 mg/m<sup>3</sup>). Added to typical average one-hour carbon monoxide measured at El Cajon and Ocean-side (4-7 mg/m<sup>3</sup>), the net result still remains well below the Federal one-hour standard. Appendix A provides a supplemental analysis dealing with the carbon monoxide effects of I-805 in the Chula Vista area for this same time frame.

## Project Area Impact Analysis - Post 1980

Analysis of post-1980 air quality impacts associated with this project is constrained by the unavailability of motor vehicle emissions estimates for this time period.<sup>8</sup> Moreover the present regional emissions inventory factors have only been calculated on the basis of meeting Federal standards for 1975.<sup>6</sup> Because of certain technological problems in automotive emission devices and other factors, including regional transportation strategies, compliance with these standards has been delayed until 1977.

Quantitative calculation of localized and regional impacts of this project at completion and with full regional development in the 1990-1995 time frame cannot realistically be estimated under current circumstances. As in the case of noise, a doubling of the ADT associated with the project could, on the basis solely of miles driven, be expected to double the total project area emissions. However, several additional factors will come into play in this time period:

1. The vehicle age mix will continue to result in overall improvement of emissions as more post-1977 models are added, thus continuing to reduce the average emissions rate in the 1980's time frame.
2. Mass transit should become a viable transportation factor in the post-1980 time frame. In particular, if such a system has a north-south leg reasonably near the project area, it will be a decided factor



in reducing current estimates of automobile usage, and hence motor vehicle emissions. While it can be pointed out that no specific approved mass transit plan exists which will impact this project, it is also unrealistic to ignore the fact that such a system is coming and will undoubtedly influence air quality in this area in the time frame of full regional development.

3. It is likely that further motor vehicle emission control standards and Federal air quality standard revisions will be forthcoming in the 1980's, thus further modifying (and most probably reducing) the overall emissions base.

I. Noise

Several environmental impact noise analyses were performed for the proposed development. The analyses considered the present noise environment, the impact of the initial development plus its subsequent modifications on the surrounding community, and the impact of noise generated within the development upon the residents of the development itself. Noise sources considered in this supplemental report relate only to the proposed shopping center and the revised portion of the residential areas as described in this report. The sources include:

1. Traffic Noise - Freeway I-805
2. Traffic Noise - Surface Streets
3. Aircraft Overflights - Commercial, Military and Private
4. Shopping Center - Power Plant Noise
5. Construction Noise - Heavy Equipment

The noise impact of the portions of the proposed development being considered herein must be viewed in two basic contexts. First, the noise impact of the project upon residential elements of the existing community must be assessed. Secondly, the noise impact of the project upon those living within, working or shopping at the proposed development must be examined.

#### Traffic Noise

In comparing the present and planned environment, the primary noise impact will result from an increased traffic volume through the area. Several conditions were considered:

1. Impact of this portion of the total development on "H" Street and Lynwood Drive at the completion of Phase I of the Regional Shopping Center in 1976; and in 1980.
2. Impact of the shopping center and the residential areas, on road systems integral with or contiguous to the project.

Estimates of traffic volumes within the local area were provided by the traffic analyst (see Figures III-1 and III-2). The values are average daily traffic volumes (ADT).

An estimate of noise generated by the traffic associated with the project was made using the guidelines set forth by the Department of Housing and Urban Development (HUD) for noise assessments.<sup>10</sup> These HUD procedures utilize dBA as a unit of noise measurement for traffic. Furthermore its use as a standard unit has also been adopted uniformly throughout California when assessing noise impacts.

In developing the noise estimates the following assumptions were used:

1. Truck traffic on the major through arteries being considered (I-805, "H" Street and shopping center access streets) was 5 percent of the total traffic volume in accordance with an estimate provided by the traffic analyst.
2. The following road gradients were assumed which affected truck traffic noise computations:
  - a. "H" Street into shopping center at east and west end access - less than 3%
  - b. "H" Street north of shopping center - 6%
  - c. I-805 - less than 3%
3. Estimates of mean traffic speeds on major surface streets associated with this portion of the development were provided by the traffic analyst. They include:
  - a. "H" Street - 35 mph
  - b. Lynwood Drive - 30 mph

4. Mean traffic speeds were 25 mph on secondary surface streets in accordance with an estimate provided by the traffic analyst.
5. Mean traffic speed on the I-805 was estimated to be 50 mph.
6. The ADT for Interstate 805 was based on 1976 and 1980 estimates provided by the State of California, Department of Transportation.
7. Peak hourly traffic volume was either provided by the traffic analyst or computed by multiplying ADT by 11%.

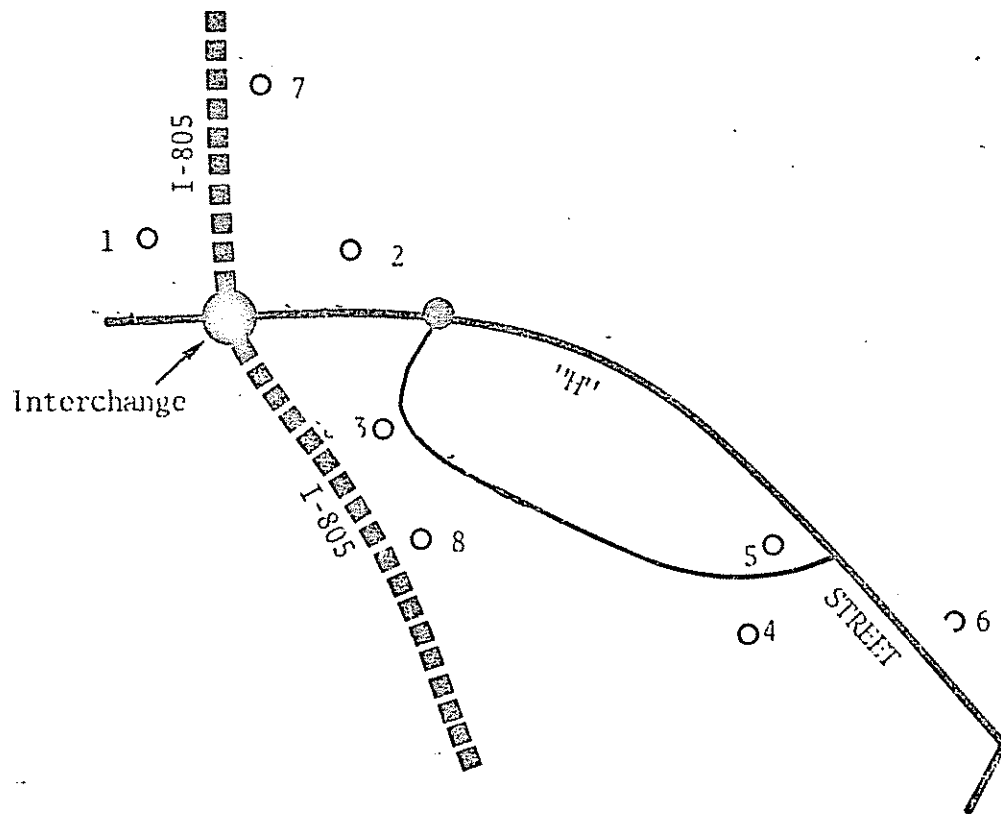
The peak hour traffic volumes were adjusted for the gradient and mean traffic speed factors. No barrier adjustment was used since the barrier would be effective only if it blocked the line-of-sight. This is not to preclude noise reduction by barriers (walls, landscaping, etc.) but to acknowledge that precise plans for such barriers are not available. The adjusted peak hour traffic flow was used to obtain the effective distance from the center of the roadway to the boundary of the Normally Acceptable (NA) noise region. The category of NA was chosen from the external noise exposure standards established by HUD for new residential construction sites. The Normally Acceptable rating is defined as "does not exceed 65 dBA more than 8 hours per 24 hours."<sup>11</sup> The following are reference sound levels for common noises:

	<u>dba</u>
Jet Plane, 100 ft. away	130
Rock Music with Amplifier	120
Thunder; Danger of Permanent Hearing Loss	110
Boiler Shop; Power Mower	100
Orchestral Crescendo, 25 ft. away; Noisy Kitchen	90
Persistent Noise Impairs Hearing for Speech Communication	80
Interior of Department Store	70
Ordinary conversation, 3 ft. away	60
Quiet Automobile at Low Speed	50
Average Office	40
City Residence	30
Quiet Country Residence	20
Rustle of Leaves	10
Threshold of Hearing	0

The NA boundary also defines the beginning of the Normally Unacceptable region which requires noise attenuation measures. Normally Unacceptable is defined by HUD as "exceeds 65 dba 8 hours per 24 hours" or "loud repetitive sounds on site".<sup>11</sup>

Figure III-8 provides an indication of the estimated 1976 traffic volumes on those streets being addressed in this report. In addition, it designates those locations at which noise levels were calculated.

Table III-11 is keyed to the location numbers shown in Figure III-8. The table includes the basic data used to calculate



○ = Calculation Point

FIGURE III-8 . Location of Noise Boundary Calculation Points (1976)

TABLE III-11

Traffic Noise Boundaries - 1976

<u>Location</u>	<u>1976 ADT</u>	<u>Peak Hour</u>	<u>MPH</u>	<u>Cars</u>	<u>Trucks</u>	<u>Adj. (1) Cars</u>	<u>Adj. (1) Trucks</u>	<u>NA/NU (2) Cars (ft)</u>	<u>NA/NU (2) Trucks (ft)</u>
1	11,400	1250	35	1188	62	380	55	82	130
2	38,000	3800	35	3610	190	1155	167	220	500
3	18,400	2710	25	2575	135	464	162	100	500
4	6200	620	25	589	31	106	37	15	75
5	1300	130	35	124	6	40	5	< 10	< 10.
6	5500	550	35	523	27	167	24	26	45
7	64,000	7040	50	6688	352	4682	222	580	740
8	59,000	6490	50	6166	324	4316	204	560	690

(1) Adjusted cars and adjusted trucks refer to peak hour volumes adjusted for speed and road gradient per HUD guidelines.

(2) Distance (ft.) from the roadway centerline to the boundary separating the Normally Acceptable/Normally Unacceptable areas.

the noise boundaries and also shows the distance from the roadway centerline to the demarcation line separating the Normally Acceptable area from the Normally Unacceptable for automobile and truck traffic.

Figure III-9 provides the same information as Figure III-8, but for the 1980 time frame. Correspondingly, Table III-12 provides the 1980 basic data and noise level results for the locations shown in Figure III-9.

Impact of Noise From Traffic Flow (1976 and 1980)

As depicted in Table III-11, the distance from the roadway centerline to the boundary of the Normally Acceptable region in 1976 will be as follows:

<u>Roadway</u>	<u>Distance to NA/NU (ft.)</u>	<u>Dominant Noise Source</u>
"H" Street (at east and west ends of shopping center)	45-500	Trucks
Shopping Center access roads	75-500	Trucks
I-805	690-740	Trucks

Similarly Table III-12 indicates that these distances in 1980 will be:



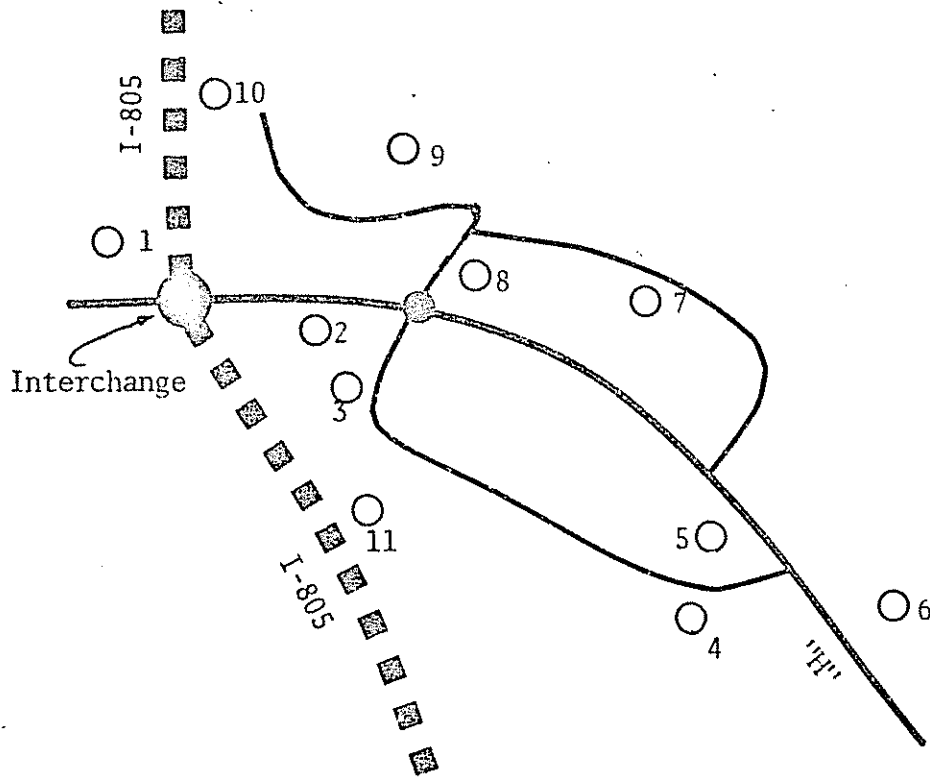


FIGURE III-9 Location of Noise Boundary Calculation Points (1980)

○ = Calculation Point

TABLE III-12

Traffic Noise Boundaries - 1980

<u>Location</u>	<u>1980 ADT</u>	<u>Peak Hour</u>	<u>MPH</u>	<u>Cars</u>	<u>Trucks</u>	<u>Adj. (1) Cars</u>	<u>Adj. (1) Trucks</u>	<u>NA/NU(2) Cars (ft)</u>	<u>NA/NU(2) Trucks (ft)</u>
1	12,300	1353	35	1285	68	411	60	86	140
2	40,900	4499	35	4274	225	1368	198	250	670
3	27,400	3020	25	2869	151	516	181	120	550
4	13,400	1474	25	1400	74	252	89	50	230
5	6,700	737	35	700	37	224	55	42	125
6	24,400	2684	35	2550	134	816	118	170	320
7(3)	9,600	1056	25	1056	--	190	--	35	--
8(3)	12,400	1364	30	1364	--	341	--	70	--
9(3)	16,300	1793	30	1793	--	448	--	95	--
10	111,000	12,210	50	11,600	610	8120	384	850	1200
11	111,000	12,210	50	11,600	610	8120	384	850	1200

(1) Adjusted cars and adjusted trucks refer to peak hour volumes adjusted for speed and road gradient per HUD guidelines.

(2) Distance (ft.) from the roadway centerline to the boundary separating the Normally Acceptable/Normally Unacceptable areas.

(3) Heavy truck (multi-axle) traffic assumed prohibited on these streets.

<u>Roadway</u>	<u>Distance to NA/NU (ft.)</u>	<u>Dominant Noise Source</u>
"H" Street (at east and west ends of shopping center)	125-670	Trucks
Shopping center access roads	230-550	Trucks
Project Residential Streets	35	Cars
Lynwood Drive	70-95	Cars
I-805	1200	Trucks

#### Traffic Noise Impact (Post 1980)

The full development of the Plaza Del Rey project and the traffic impact of full regional development are shown in Figure III-6. This is expected to occur in the 1990-1995 time frame. As a general indication of traffic consequences it is shown that traffic on "H" Street east of I-805 will increase from 18,800-40,900 ADT for Phase III to 60,000-84,000 ADT at full regional development. Thus at the point of higher volume between I-805 and the Lynwood Drive interchange, the traffic volume will double.

Prediction of the traffic noise boundary consequences of full project and regional development in the 1990-1995 time frame is, at best, difficult considering emerging, and often conflicting factors. While traffic volumes in themselves (particularly truck traffic - the key noise factor) will tend to move the normally unsatisfactory boundary outward, two other factors will tend to reduce the traffic noise boundary:

1. Improved transportation noise abatement programs through technology (for trucks this includes engine, tire and exhaust noise),
2. New noise control regulations.

It has been estimated that by 1985 radiated noise levels from heavy duty trucks and busses can be reduced 10 dBA at 50 feet.<sup>16</sup> Every indication is that vigorous new regulations and enforcement programs can be expected over the next ten years to reduce overall community noise levels. Thus it would appear that noise caused by the increase in traffic volumes will be at least commensurately offset by new technology and regulations. It is likely that actual reductions in the distance to the Normally Satisfactory/Unsatisfactory noise boundary will occur in the 1990-1995 time frame. Thus for purposes of judging traffic noise impacts associated with the project, the 1980 evaluations can be considered a worst case.

#### Noise Impact Summary

It is apparent from the preceding data that there will be a substantial traffic noise impact associated with the project. The most severe impact is that associated with traffic noise on I-805 and while this is not a direct result of project associated traffic, it will nevertheless affect residential areas of the project. In particular, the single family residential area in the northwest corner of the project may require some noise barrier at the extreme western boundary, depending on the specific grade and location of homesites in this area. On the preliminary site

plan this area is about 1,100 feet east of the freeway centerline. It is worthy of note that I-805 traffic noise will impact all areas of the Chula Vista Community adjacent to the freeway and that many of these areas are substantially closer (less than 1,000 ft.) than any of the Plaza Del Rey residential elements.

The second major noise element associated with the project is truck traffic into and out of the shopping center and commercial recreation area. A 5% truck traffic factor was assumed and is the basic reason why truck noise predominates over car noise. Using the projections identified herein, the Unacceptable Noise boundary varies from 125-670 feet on "H" Street and 230-550 feet on the access loop to the shopping center. As presently planned, residential areas of Plaza Del Rey (single family and multiple family units) would be within 200 feet of "H" Street to the north. Therefore, it is concluded that some form of sound attenuating barrier will be required in the residential areas. Additionally, the professional area at the east end may require noise attenuation measures to be incorporated in the building design. Because precise site plans are not yet available, a barrier factor for the elevation separation between "H" Street and the residential area has not been applied due to the uncertainty of blocking the line-of-sight. While a 5% truck factor has been assumed, this number may be unrealistically high and should be verified by actual data for similar shopping centers prior to the design of sound barriers. Should this factor be reduced, then the noise boundary for automobile traffic would

tend to control, and noise attenuating elements could be designed to this criteria.

New noise abatement technology and government regulations for transportation systems are expected to at least contain and most probably reduce the traffic noise impacts in the 1990-1995 time frame to below the 1980 levels.

Eventually when Lynwood Drive is connected through to Bonita Road, substantial traffic is expected on this artery (16,300 ADT-1980). Because of the grade on this road (10%) and the residential nature of the area, it was assumed that no substantial truck traffic would occur or be permitted. Automobile traffic in 1980 will cause an Unacceptable Noise zone at 70-95 feet from the center of the roadway.

An additional noise impact factor considered was the possible channelization of noise in the canyon areas. Actual community noise measurements by the Environmental Protection Agency in an area where streets and houses were located along the bottom of a narrow canyon about 300 feet deep showed that 99 percent of the time the levels were less than 65 dBA and that 90 percent of the time the levels were less than 55 dBA. Thus, a negligible impact due to this factor is expected.

#### Other Noise Factors

Aircraft overflights are not expected to be a major noise factor at the project site. The site is outside of the normal takeoff and landing paths of any existing or planned airports. Occasional aircraft overflights will occur, but the

impact is expected to be commensurate with that throughout Chula Vista.

There will be some noise associated with the air conditioning facilities of the shopping center. Current technology and construction factors are such, however, that this impact is expected to be negligible on the surrounding community. Modern commercial air conditioning units such as would be used in this project have a design objective of 65 dBA at 75-100 feet. This is accomplished by the use of slow speed, low pitch exhaust fans, insulated compressor compartments and the use of a sound absorbing screen around the entire air conditioning plant. This screening package also provides aesthetic enhancement.

#### Construction Noise

Periodically during the construction phase of the development, construction equipment noise will exist. This noise factor will be most evident when the earthworking functions are being performed by heavy equipment and will be considerably reduced during other phases of construction. Because of the construction plan, grading will occur periodically for limited periods of time in comparison with the total construction process (perhaps several weeks to a month at a time). The grading function is predominately a daytime activity and no associated noise impacts are expected outside normal working hours. It must be recognized, however, that certain temporary and periodic noise annoyances will have an impact on residents of the immediate area throughout the construction phase.\*

\*See Input Section (Section XIV) and responses thereto (Section XV) for additional discussion of Noise. See especially Mr. McQuillan testimony.

## J. UTILITIES

### Electricity & Natural Gas

Development of this project will result in additional energy demands in the form of electricity and natural gas. These services will be provided by San Diego Gas & Electric Company. In reference to the present energy crisis, SDG&E does not foresee a curtailment of its capability to serve either existing or future loads.<sup>15</sup> However, their continued capability to provide service for future growth loads as well as reliability of electrical service is dependent upon future rulings by the Public Utility Commission (PUC). They have also stated that energy efficiency should be a top priority for all future developments and that it would be advantageous for both the developer and SDG&E to make ultimate use of energy conservation techniques in the project's design.<sup>15</sup> The energy requirements for the project in 1976 and 1980 are as shown in Table III-13.

Three overhead 69 KV power lines presently traverse the property. The east-west line will be relocated southerly near the proposed drainage channel. The most westerly north-south line is being relocated by Caltrans in connection with construction of I-805, and will be placed near the western boundary. The other line will be relocated as required along public streets wherever possible. New electrical distribution lines (of lower voltage) will be placed underground in street rights-of-way and across parking areas.



Water

Water will be supplied by the Otay Municipal Water District through extensions of its existing facilities, either in the existing El Rancho del Rey Units to the east or Telegraph Canyon Road to the south.

The proposed development is within the Otay Municipal Water District Improvement District No. 22, which provides the vehicle for financing major transmission, pumping and storage facilities by assessing the areas within the District that are benefitted.

Otay Municipal Water District has a completed master development plan for furnishing service to the area, which includes the proposed development, and providing future short-term and long-range availability of water. The first elements of the facilities of the plan are currently under construction. The facilities will be funded from the sale of bonds which are already authorized.

Initially water service can be provided either along the alignment of east H Street to the existing developed portions of El Rancho del Rey or along the alignment of the proposed North-South Collector to Telegraph Canyon Rd.

Water consumption will be around 1,212,200 gallons per day for the fully developed 450± acres. Facilities will be installed to provide in excess of this consumption level because of the high peak demands to provide adequate fire protection.

### Sewer

The development will be sewerred through the Rice Canyon trunk sewer to be constructed within the I-805 freeway to the existing Spring Valley trunk sewer approximately 4600 ft. northerly in the Sweet-water Valley.

The development will generate sewage flows of approximately .6-1.0 million gallons per day. The Point Loma treatment plant of the metropolitan sewerage system has a present design capacity of 88 million gallons per day (mgd) and the present flows are in excess of 105 mgd. Although the City of San Diego has plans to upgrade the treatment capacity to 120 mgd, there is no assurance that capacity will be available in the future. This project will result in a .57 to .95 percent increase in sewage flow to a treatment system already working over capacity. This means the quality of effluent being discharged will be further degraded. \*

### Solid Waste

All the proposed uses will produce approximately 52,705 lbs. or 26.35 tons of solid waste per day. The Otay land fill site has a life expectancy, including projected regional growth, of approximately 12 years. If no economic alternative to the sanitary land fill operation is produced in the next decade, vehicle trip length to dispose of solid waste is very likely to significantly increase.\*

\* See Input Section (Section XIV) and responses thereto (Section XV) for additional discussion of sewers and solid waste.

ENERGY REQUIREMENTS

1976 - Phase I - Shopping Center

Electricity - 750,000 sq. ft. x 6.8 kwhr/sq. ft. =  $5.1 \times 10^6$  kwhr/yr  
 Natural Gas - 750,000 sq. ft. x 19.3 cu. ft./sq. ft. =  $14.5 \times 10^6$  cu. ft/yr

1980 - Phase II - Shopping Center + Residential Areas

Electricity

Shopping Center  $1.2 \times 10^6$  sq. ft. x 6.8 kwhr/sq. ft. =  $8.2 \times 10^6$  kwhr/yr  
 Residential 725 units x 5700 kwhr unit/yr =  $4.1 \times 10^6$  kwhr/yr  
 Total Requirement =  $12.3 \times 10^6$  kwhr/yr

Natural Gas

Shopping Center  $1.2 \times 10^6$  sq. ft. x 19.3 cu. ft./sq. ft. =  $23.2 \times 10^6$  cu. ft/yr  
 Residential 725 units x 86,000 cu. ft./unit =  $62.3 \times 10^6$  cu. ft/yr  
 Total Requirement =  $85.5 \times 10^6$  cu. ft/yr

(1) Reference 12

K. Economic (NOTE: See Input Section for Cost/Benefit Study by Dr. Peter J. Watry Jr.)

General

As proposed commercial and residential sites are developed during the life of the project, the developer will be assessed costs for fees, permits and license in accordance with the City of Chula Vista ordinances and regulations. Their fees or charges are normally based on actual or average costs for reviewing plans and inspecting building or utility construction at the site to assure that the public's interest is protected. In this connection, expenses incurred by the City in carrying out these review and inspection procedures will be offset by revenues from the developer for services rendered.

Appropriate charges will also be made for installation, operation, and maintenance of the City's sanitary sewer system and treatment plants. Fees may also be levied for flood control and waste water facilities on a fair-share-of-the-cost basis. Here again City expenditures will be offset by revenues received from the developer and there will be no actual cost to the City or to the residents of Chula Vista.

The proposed project will require other services, however, such as municipal courts, city administrative services, police and fire protection, parks and recreation facilities, libraries, etc. for which further City expenditures will be necessary. Since these services are already available to residents of the City, the main requirement will be to expand them sufficiently to meet the needs of the proposed project.

Cost of City Provided Services

Commercial Property

Commercial development of the property consists of approximately 129 acres to be located in the most westerly portion of the property.

As presently proposed, commercial facilities will consists of:

- a regional shopping center
- a recreational/commercial center containing:
  - . a public ice skating facility,
  - . a semi-public tennis and swim club,
  - . a hotel and other recreationally oriented facilities
- a savings and loan association office
- a professional office building (which will also house a quality restaurant), and
- a movie theatre complex.

The annual expenditure by the City to provide municipal services for the above facilities in their first full year after development (anticipated for the City of Chula Vista's Fiscal Year 1977-78) is projected to be approximately \$203,563. This figure is derived by applying the formula shown in Table B, on the following page. Annual expenditures for commercial facilities developed and placed in operation will continue in subsequent years, increasing in amounts in direct ratio to inflationary trends. Table A, below, illustrates projected annual expenditures through FY 1979-80. In developing Table A, an inflationary factor of 5% per annum, compounded is used.

TABLE A

Projected Annual Expenditures required to support Municipal Services generated by the addition of 129 acres of commercial property of the proposed project for the last six months of FY 1976-77 through FY 1979-80.

<u>Fiscal Year</u>	<u>Annual Expenditures</u>
1976-77 (last six months)	\$ 96,935
1977-78	203,563
1978-79	213,741
1979-80	224,428

Total annual expenditure for the three and one-half year period beginning in FY 1976-77 (last six months) through 1979-80 will amount to \$738,667 for an average of \$211,048 per annum.

TABLE B

FORMULA FOR COMPUTING PROJECTED ANNUAL EXPENDITURES  
BY THE CITY  
REQUIRED TO SUPPORT MUNICIPAL SERVICES  
FOR THE PROPOSED PROJECT'S COMMERCIAL DEVELOPMENT\*

Total annual expenditure for City provided services	÷	Total acreage within the city limits of Chula Vista	=	Annual expenditure for City provided services on a per acre basis
\$10,148,571	÷	8,192.20 acres	=	\$1,238.81
Annual expenditures for City provided services on a per acre basis	x	Total commercially-zoned acreage within the city limits of Chula Vista	=	Annual expenditure for City provided services to commercially-zoned acreage within the city limits of Chula Vista
\$1,238.81	x	515 acres	=	\$637,987.00
Total commercial acreage proposed for project	÷	Total commercially-zoned acreage within the city limits of Chula Vista	=	Percentage of commercial acreage proposed for Phase I of project to total commercially-zoned acreage within the city limits of Chula Vista
129 acres	÷	515 acres	=	25.04%
Annual expenditure for City provided services to commercially-zoned acreage within city limits of Chula Vista	x	Percentage of commercial acreage proposed for the project to total commercially-zoned acreage within city limits of Chula Vista	=	Annual expenditures for City provided services to commercially-zoned acreage of the proposed project
\$637,987	x	25% (rounded from 25.04%)	=	\$159,496.75
Annual expenditure for City provided services to commercially-zoned acreage of the proposed project	x	5% per annum, compounded, to reflect cost of living increase beginning 1972-73 through FY 1976-77 (2nd half)	=	Projected annual expenditure for City provided services to commercially-zoned acreage of proposed project
\$159,496.75	x	5% per annum, compounded for 3.5 yrs.	=	\$193,869.26

\*This formula might more easily be approximated by taking Annual Expenditures per acre (\$1238.81) x Total Commercial Acreage Proposed (129) = Annual Expenditures for Commercial Acreage (\$159,806.49).

Residential Properties

Development of residential areas within the proposed project is planned to occur over a five year period between 1974 and 1980. For sake of convenience, 1980 has been selected as the cut off date for this analysis, even though some residential units may still be unsold at that time.

Proposed residential development will include the following:

Single Family Homes	179 units
Townhouses	674 units
Apartments	<u>600 units</u>
TOTAL	1,453 units

Table C indicates the proposed residential development schedule. Population projections are based on expected occupancy of 3.7 persons per single family unit, and 3.5 persons per townhouse and 2.2 persons per apartment unit.

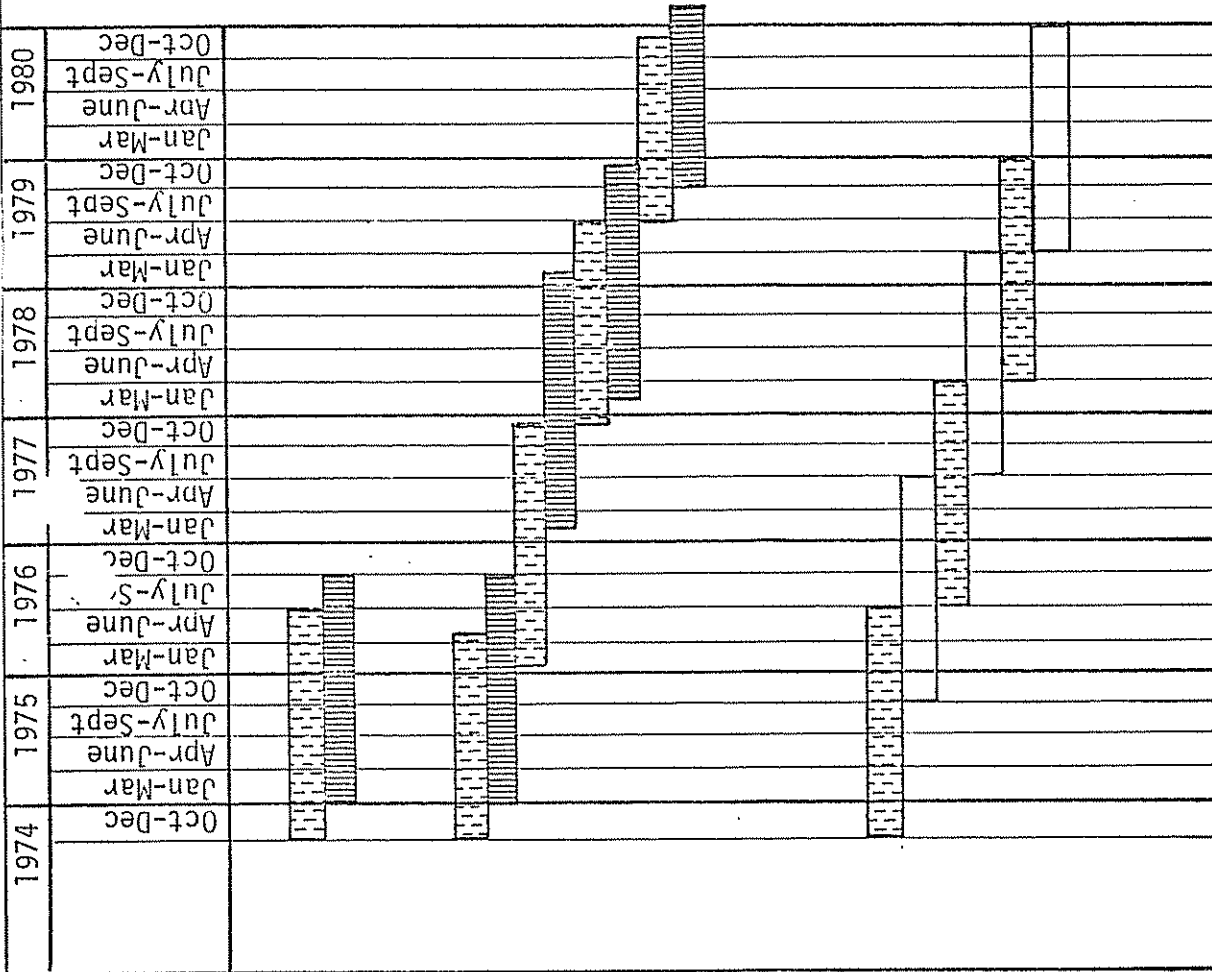
The City will be required to provide municipal services to residential areas of the proposed project beginning in FY 1974-75. Table D shows the projected annual expenditures which the City will be required to make over the next several years to assure that the services it provides are properly supported and maintained. As in previous computations, a 5% per annum, compounded, inflation factor has been used to arrive at an annualized figure. The formula used in computing the City's annual expenditure is developed on a per capita basis. Per capita figures were derived using the City's Revenue/Expense Report of June 30, 1973 and a July 1973 population count of 73,800.

Resident population for the 1453 residential units of the project is projected at 4350 by FY 1979-80. In the first year (FY 1974-75) the City's estimated annual expenditure would amount to \$65,491, increasing to a figure of \$841,682 by FY 1979-80. The total estimated expenditure which the City would be required to make for the six year period is projected to be \$2,428,724.

TABLE C

PLAZA DEL REY  
 PROJECTED RESIDENTIAL DEVELOPMENT SCHEDULE  
 CONSTRUCTION & CLOSINGS  
 1974 - 1980

Construction  
 Closings  
 Fully Rented



Unit Type	Increment	Number of Units
Single Family	1st Increment	179
	2nd Increment	168
	3rd Increment	170
	4th Increment	179
Townhouses	1st Increment	168
	2nd Increment	170
	3rd Increment	179
	4th Increment	166
Sub-Total		674
Apartments	1st Increment	200
	2nd Increment	200
	3rd Increment	200
Sub-Total		600
TOTAL		1,453



TABLE D

Projected Annual Expenditure required to support Municipal Services generated by the addition of an estimated 4,350 residents to the population of Chula Vista during the period between FY 1974-75 and FY 1979-80

<u>Fiscal Year</u>	<u>Estimated Per Capita Tax</u>	<u>Estimated Population**</u>	<u>Estimated Annual City Expenditure</u>
1974-75	\$151.60*	432	\$ 65,491
1975-76	159.18	1,328	211,391
1976-77	167.14	1,837	307,036
1977-78	175.50	2,337	410,144
1978-79	184.27	3,218	592,981
1979-80	193.49	4,350	<u>841,682</u>
TOTAL			<u>\$2,428,725</u>

\*This figure is considered conservative by the reviewer. The estimate arrived at was on the order of \$135, so the figure used by the consultant may well be a "worst case" condition.

\*\*Population figures have been changed from those submitted by the applicant to those reflected in the EIR text.

TABLE E

SUMMARY  
PROJECTED ANNUAL EXPENDITURES  
COMMERCIAL & RESIDENTIAL PROPERTIES  
1974 - 1980

<u>Fiscal Year</u>	<u>Commercial Properties</u>	<u>Residential Properties</u>	<u>Total</u>
1974-75	\$	\$ 65,491	\$ 65,491
1975-76		211,391	211,391
1976-77	96,935	307,036	403,971
1977-78	203,563	410,144	613,707
1978-79	213,741	592,981	806,722
1979-80	<u>224,428</u>	<u>841,682</u>	<u>1,066,110</u>
TOTAL	\$ 738,667	\$2,428,725	\$ 3,167,392

The foregoing analysis of City expenditures was prepared by the applicant. This material has been reviewed by the staff and while minor adjustments have been made, has been found to be generally satisfactory. As a check on the validity of this analysis, an entirely independent analysis has been made using a different methodology. A canvass of the departments of the City expected to be most directly affected (Fire, Police, Public Works, Parks and Recreation, and Building and Housing) was made, and anticipated additional expenditures occasioned by this project were determined. This procedure followed the methodology utilized by the City last year for the larger Sports World project. The data generated are included in the following sections and are summarized in Table F.

The data prepared by the City indicate that the analysis by the applicant is within the same "ball park" as a department by department analysis of costs and revenue.

TABLE F

SUMMARY OF TOTAL COSTS BY DEPARTMENT  
1974 - 1980

Fire	\$ 977,697
Police	354,594
Building & Housing	229,629
Parks & Recreation	236,141
Public Works	539,969
Administrative Overhead	<u>882,293</u>
TOTAL	<u>\$3,220,323</u>

COSTS:

Fire

Concerning the fire protection cost to the City of Chula Vista for the Plaza del Rey development, Fire Chief William Smithey has indicated in an interview on June 17, 1974 that the scope of this project would probably require the addition of another operating fire company, to be accommodated at a proposed relocated station in the central area of the City. The probable time of activating that additional company would probably be desirable about 1977-78 fiscal year, based on the phased project.

With the regional shopping center scheduled to commence operations in 1976, the necessary fire protection must be provided concurrently with these developments.

With the completion of the regional shopping center in 1980, it is possible that Fire Station #2 on East J Street may be closed and its 12 personnel and pumper will be transferred to a new station. Neither the transferred men nor the pumper will be considered new cost since they are already existing budgetary items.

Along with these transferred men and equipment, a new ladder truck will be purchased by the City to fully complete additional necessary fire protection.

The following tables will demonstrate the growth of the fire department based primarily on the completion of the regional shopping center in 1980.

TABLE G

FIRE  
COST SUMMARY

1977-1978	\$ 370,988
1978-1979	293,394
1979-1980	<u>313,315</u>
TOTAL	<u>\$ 977,697</u>

1977-78 - PERSONNEL

3 Captains @ 16,912	(5% compounded)	\$ 58,732
3 Engineers @ 14,964		51,969
6 Fireman @ 13,786		<u>95,754</u>

\$206,455

35% Fringe Benefit Cost	<u>72,259</u>
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Sub-total \$278,714

CAPITAL EQUIPMENT

Triple combustion pumper	\$ 60,775
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Pick-up truck, three-quarter ton full size body	4,132
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Complete outfitting of 1-company station	18,232
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Communication equipment:	
1 handy-talkie	1,000
1 inter-comm	500

1,823

Sub-total \$ 84,971

OPERATION & MAINTENANCE

Vehicular Maintenance: 2,000 annually per vehicle, 2 vehicles @ 2,000 each	\$ 4,862
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Personal Equipment: 125.00 per man 12 men @ 125 each =	1,823
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Building Maintenance: Utilities 150.00 Laundry & Cleaning 150.00 Janitorial Supplies 200.00	<u>608</u>
--	------------

Sub-total \$ 7,293

TOTAL \$370,988

1978-79 - PERSONNEL

3 Captains @ 19,577	\$ 58,732
3 Engineers @ 17,328	51,969
6 Fireman @ 15,959	<u>95,754</u>
	\$206,455
35% Fringe Benefit Cost	<u>72,259</u>
	\$278,714
5% Inflationary Factor Compounded Annually	<u>13,936</u>
Sub-total	\$292,650

OPERATION & MAINTENANCE

Vehicular Maintenance: 2,000 per vehicle 2 vehicles @ 2,000	\$ 4,862
Building Maintenance	<u>608</u>
	\$ 5,470
5% Inflationary Factor Compounded Annually	<u>274</u>
Sub-total	\$ 5,744
TOTAL	<u>\$298,394</u>



1979-80 - PERSONNEL

3 Captains @ 19,577	\$ 58,732
3 Engineers @ 17,323	51,969
6 Fireman @ 15,959	<u>95,754</u>

\$206,455

35% Fringe Benefit Cost	<u>72,259</u>
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\$278,714

5% Inflationary Factor Compounded Annually	<u>28,569</u>
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Sub-total	\$307,283
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OPERATION & MAINTENANCE

Vehicular Maintenance: 2,000 per vehicle 2 vehicles @ 2,000 each	\$ 4,862
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Building Maintenance	<u>608</u>
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\$ 5,470

5% Inflationary Factor Compounded Annually	<u>562</u>
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Sub-total	\$ 6,032
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TOTAL	<u><u>\$313,315</u></u>
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COSTS:

Police

From 1974 through 1975, the Plaza del Rey related population growth to the City of Chula Vista will amount to only 432. With a national standard of 1.1 policemen per 1,000 residential population, not including temporary commercial or industrial population, these first two years would require no additional police forces. However, from 1976 through the completion of the Plaza del Rey development in 1980, the population growth will certainly exceed the minimum standard for additional police manpower and thus require growth of the Police Department vis-a-vis the population growth. The following tables demonstrate this growth of police service and costs for the development years. Year ending population figures are used to determine personnel requirements due to the length of time (approximately one year) to recruit and fully train a Peace Officer for full duty.

ACCUMULATIVE POLICE AND POPULATION GROWTH FOR THE CITY OF CHULA VISTA,  
BASED ON THE PLAZA DEL REY DEVELOPMENT FROM 1975-1980

<u>Year Ending</u>	<u>Units Completed &amp; Occupied</u>			<u>Population</u>	<u>Police</u>
	<u>Single Family</u>	<u>Town- houses</u>	<u>Apartment- ments</u>		
June 1975	605	60	0	432	0
June 1976	179	140	80	1,328	1 Man
June 1977	179	210	200	1,837	2 Men - 1 Car
June 1978	179	290	300	2,337	3 Men
June 1979	179	460	430	3,218	4 Men - 1 Car Replacement
June 1980	179	674	600	4,350	5 Men

TABLE H

POLICE

COST SUMMARY

1975-1976	\$ 19,736
1976-1977	53,630
1977-1978	68,863
1978-1979	96,954
1979-1980	<u>115,411</u>
TOTAL	<u>\$ 354,594</u>

1975-76 - PERSONNEL

1 Peace Officer @ 13,923	\$ 13,923
35% Fringe Benefit Cost	<u>4,873</u>
	\$ 18,796
5% Inflationary Factor Compounded Annually	<u>940</u>
Sub-total	\$ 19,736
TOTAL	<u><u>\$ 19,736</u></u>

1976-77 - PERSONNEL

2 Peace Officers @ 13,923	\$ 27,846
35% Fringe Benefit Cost	<u>9,746</u>
	\$ 37,592
5% Inflationary Factor Compounded Annually	<u>4,794</u>
Sub-total	\$ 42,387

CAPITAL OUTLAY

1 Patrol Car @ 6,000	\$ 6,000
5% Inflationary Factor Compounded Annually	<u>615</u>
Sub-total	\$ 6,615

OPERATION & MAINTENANCE

50,000 miles per year @ .08 per mile	\$ 4,000
5% Inflationary Factor Compounded Annually	<u>630</u>
Sub-total	\$ 4,630
TOTAL	<u>\$ 53,630</u>

1977-78 - PERSONNEL

3 Peace Officers @ 13,923	\$ 41,769
35% Fringe Benefit Cost	<u>14,619</u>
	\$ 56,388
5% Inflationary Factor Compounded Annually	<u>7,613</u>
Sub-total	\$ 64,001

OPERATION & MAINTENANCE

50,000 miles per year @ .08 per mile	\$ 4,000
5% Inflationary Factor Compounded Annually	<u>862</u>
Sub-total	\$ 4,862
TOTAL	<u><u>\$ 68,863</u></u>

1978-79 - PERSONNEL

4 Peace Officers @ 13,923	\$ 55,692
35% Fringe Benefit Cost	<u>19,492</u>
	\$ 75,184
5% Inflationary Factor Compounded Annually	<u>11,372</u>
Sub-total	\$ 86,556

CAPITAL OUTLAY

1 Patrol Car @ 6,000 (replacement)	\$ 6,000
5% Inflationary Factor Compounded Annually	<u>1,292</u>
Sub-total	\$ 7,293

OPERATION & MAINTENANCE

50,000 miles @ .08 per mile	\$ 4,000
5% Inflationary Factor Compounded Annually	<u>1,105</u>
Sub-total	\$ 5,105
TOTAL	<u><u>\$ 96,954</u></u>

1979-80 - PERSONNEL

5 Peace Officers @ 13,923	\$ 69,615
35% Fringe Benefit Cost	<u>24,365</u>
	\$ 93,980
5% Inflationary Factor Compounded Annually	<u>16,071</u>
Sub-total	\$110,051

OPERATION & MAINTENANCE

50,000 miles @ .08 per mile	\$ 4,000
5% Inflationary Factor Compounded Annually	<u>1,360</u>
Sub-total	\$ 5,360
TOTAL	<u><u>\$115,411</u></u>



COSTS:

Building and Housing

The Director of Building and Housing has indicated a requirement for one Assistant Plan Checker immediately, and on April 1, 1975 for one Building Inspector. Equipment to support these positions would be limited to one office calculator and one automobile.

Expenditures for these positions are summarized below.

TABLE I  
BUILDING AND HOUSING  
COST SUMMARY

1974-1975	\$ 27,342
1975-1976	36,504
1976-1977	38,329
1977-1978	40,245
1978-1979	42,839
1979-1980	<u>44,370</u>
TOTAL	<u>\$229,629</u>

1974-75 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
35% Fringe Benefit Cost	<u>5,237</u>
Sub-total	\$ 20,201

CAPITAL OUTLAY

1 Calculator @ 500	\$ 500
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PERSONNEL

1 Building Inspector @ 9,900 (1 quarter)	\$ 2,475
35% Fringe Benefit Cost	<u>866</u>
Sub-total	\$ 3,341

CAPITAL OUTLAY

1 Automobile (intermediate sedan)	<u>\$ 3,300</u>
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TOTAL	<u><u>\$ 27,342</u></u>
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1975-76 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
1 Building Inspector I @ 9,900	<u>9,900</u>
Sub-total	\$ 24,864
35% Fringe Benefit Cost	<u>8,702</u>
Sub-total	\$ 33,566
5% Inflationary Factor Compounded Annually	<u>1,678</u>
Sub-total	\$ 35,244

OPERATION & MAINTENANCE

20,000 miles @ .06 per mile	\$ 1,200
5% Inflationary Factor Compounded Annually	<u>60</u>
Sub-total	\$ 1,260
TOTAL	<u>\$ 36,504</u>

1976-77 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
1 Building Inspector I @ 9,900	<u>9,900</u>
Sub-total	\$ 24,864
35% Fringe Benefit Cost	<u>8,702</u>
Sub-total	\$ 33,566
5% Inflationary Factor Compounded Annually	<u>3,440</u>
Sub-total	\$ 37,006
<u>OPERATION AND MAINTENANCE</u>	
20,000 miles @ .06 per mile	\$ 1,200
5% Inflationary Factor Compounded Annually	<u>123</u>
Sub-total	\$ 1,323
TOTAL	<u>\$ 38,329</u>

1977-78 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
1 Building Inspector I @ 9,900	<u>9,900</u>
Sub-total	\$ 24,864
35% Fringe Benefit Cost	<u>8,702</u>
Sub-total	\$ 33,566
5% Inflationary Factor Compounded Annually	<u>5,290</u>
Sub-total	\$ 38,856
<u>OPERATION &amp; MAINTENANCE</u>	
20,000 miles @ .06 per mile	\$ 1,200
5% Inflationary Factor Compounded Annually	<u>189</u>
Sub-total	\$ 1,389
TOTAL	<u>\$ 40,245</u>

1978-79 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
1 Building Inspector I @ 9,900	<u>9,900</u>
Sub-total	\$ 24,864
35% Fringe Benefit Cost	<u>8,702</u>
Sub-total	\$ 33,566
5% Inflationary Factor Compounded Annually	<u>7,233</u>
Sub-total	\$ 40,799
<u>OPERATION &amp; MAINTENANCE</u>	
20,000 miles @ .06 per mile	\$ 1,200
5% Inflationary Factor Compounded Annually	<u>258</u>
Sub-total	\$ 1,458
TOTAL	<u>\$ 42,257</u>

1979-80 - PERSONNEL

1 Assistant Plan Checker @ 14,964	\$ 14,964
1 Building Inspector I @ 9,900	<u>9,900</u>
Sub-total	\$ 24,864
35% Fringe Benefit Cost	<u>8,702</u>
Sub-total	\$ 33,566
5% Inflationary Factor Compounded Annually	<u>9,273</u>
Sub-total	\$ 42,839

OPERATIONS & MAINTENANCE

20,000 miles @ .06 per mile	\$ 1,200
5% Inflationary Factor Compounded Annually	<u>331</u>
Sub-total	\$ 1,531
TOTAL	<u>\$ 44,370</u>

PARKS AND RECREATION SUMMARY

According to the City Parks Ordinance 1366, the developer is required to dedicate improved park lands to the City. Since the developer is required to pay for all land acquisitions and park construction, all the City is required to do is maintain the dedicated park lands.

According to the Parks and Recreation Director, it would cost a total of \$5,500 per acre to properly maintain improved park lands. Using this formula, the annual cost per year for park maintenance will build up to \$51,946 in 1980. The following table summarizes these park maintenance costs for the 7.4 acres being dedicated over the development period including a 5% per year inflationary factor, compounded annually.

TABLE J

PARKS AND RECREATION

COST SUMMARY

<u>Year</u>	<u>\$5,500 x 7.4 acres for for Park Maintenance</u>	<u>5% Inflation Factor</u>	<u>Total Annual Cost</u>
1975-76	\$ 40,700	\$ 2,035	\$ 42,735
1976-77	40,700	4,172	44,872
1977-78	40,700	6,416	47,116
1978-79	40,700	8,772	49,472
1979-80	40,700	11,246	<u>51,946</u>
			\$236,141



## ADMINISTRATIVE OVERHEAD SUMMARY

This section estimates the costs to City departments other than the five already discussed. The five departments already discussed had the following budgets for FY 1972-73:

Police	\$1,738,180	
Fire	1,037,920	
Public Works	1,283,630	
Parks, & Recreation	650,080	
Building & Housing	<u>427,710</u>	
		\$5,182,520

Subtracting this amount of \$5,182,520 from the total budget for the fiscal year 1972-73 of \$9,117,800, the difference for the other City departments amounts to \$3,935,280. For the purpose of this analysis, this remainder is called "Administrative Overhead." According to the applicant, the budget will increase by 1% for every 1% growth in the population. In the following table the Administrative Overhead is projected on this basis, with an added 5% per year computed for inflation. Thus, for the year 1980 when the development is scheduled to be completed, the Administrative Overhead shows an increase of 6%, including a 5% inflationary factor compounded annually.

TABLE K

ADMINISTRATIVE OVERHEAD

COST SUMMARY

<u>YEAR</u>	<u>POPULATION - (%)*</u>	<u>OVERHEAD</u>	<u>INFLATION - (%)**</u>	<u>TOTAL</u>
1974-1975	432 - (0%)	\$ 0	\$ 0 - (10%)	\$ 0
1975-1976	1,328 - (2%)	78,706	12,593 - (16%)	91,299
1976-1977	1,837 - (2%)	78,706	17,315 - (22%)	96,021
1977-1978	2,337 - (3%)	118,059	33,056 - (28%)	151,115
1978-1979	3,218 - (3%)	157,412	53,520 - (34%)	210,932
1979-1980	4,350 - (6%)	236,118	96,808 - (41%)	332,926
		TOTAL COST		\$882,293

\* Based on a present population of 74,000

\*\* Based on a 5% inflationary factor, compounded annually

PUBLIC WORKS  
ANNUAL COST ANALYSIS  
PLAZA DEL REY

	Sewer Maint. \$269/mi. # Year	Street Lights Maint. & Util. \$24/Light # Year	Street Trees Maint. & Util. \$22/Tree # Year	Street Striping Men Equip. & Mat'l. \$50/mi. # Year	Street Sweeping Year	Traffic Signal Maint. & Util. \$1284/Int. # Year	Correction Factor For 1973 Costs	Comments	
1976	\$62	\$ 629	\$4,493	\$ 69	\$ 774	\$ 1,486	1.1576	Intersection signalized.	
1977	775	1,546	11,046	171	1,909	1,561	1.2155		
1978	1,562	1,976	14,116	218	2,431	1,639	1.2763		
1979	1,954	2,317	16,556	256	2,851	1,721	1.3401		
1980	2,668	3,663	26,166	405	4,507	10,840	1.4071	Five additional inter- sections signalized.	
1981	2,801	5,175	37,030	572	6,369	11,382	1.4774		
TOTALS	9,822	15,306	109,407	1,691	18,841	28,629			
GRAND TOTAL	\$183,696								

\* These figures are 1973 costs.

Total Costs 1976 - 1980	\$159,645
H St. Participation	<u>380,324</u>
Total	\$539,969

"H" St. participation of \$380,324 by City not included - see original report.

This total does not include additional personnel or equipment required to maintain public facilities. Based upon the original report, it is estimated that three people will be required because of this Plaza Del Rey project. The approximate 1980 cost for this personnel will be \$60,000.

TABLE M

Summary of Departmental Expenditures

<u>Department</u>	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>	<u>1978-79</u>	<u>1979-80</u>
Fire				\$370,988	\$293,394	\$313,315
Police		\$19,736	\$53,630	68,863	96,954	115,411
Building and Housing	\$27,342	36,504	38,329	40,245	42,839	44,370
Parks and Recreation		42,735	44,872	47,116	49,472	51,946
Public Works		8,697	20,673	28,004	34,380	448,215*
Administrative Overhead		<u>91,299</u>	<u>96,021</u>	<u>151,115</u>	<u>210,932</u>	<u>332,926</u>
TOTAL	\$27,342	\$198,971	\$253,525	\$706,331	\$727,971	\$1,306,183

\* Includes City participation of extending H Street to eastward to complete through route to Otay Lakes Road.

## Revenue

### General

The City of Chula Vista obtains slightly more than 80% of its annual revenue from two primary sources. In FY 1972-73, almost 53% was derived from various forms of taxes. Revenue sharing accounted for another 29+%. The remainder, somewhere around 18%, was obtained in payment of fire permits, licenses, fines, forfeitures, etc. and in charges for service.

### Property Taxes

As is the case in other California cities, the property tax rate is based upon assessed valuation. State law requires that the assessed value of real property be set at 25% of fair market value. With this fact in mind, an analysis has been prepared to show the estimated fair market value and assessed value of both commercial and residential property within the proposed project. This information is presented in Tables N and O (on pages 191 and 192)

Based upon the assessed valuations derived in Tables N and O, two additional projections have been prepared to show the total amount of property tax revenue which the City might expect to receive annually from the proposed project. The projections, which cover the period between FY 1975-76 through FY 1979-80, have been set up to reflect a 5% per annum inflationary factor. To simplify matters as much as possible, one projection is devoted to commercial properties, the other focuses upon residential properties. The former, labeled Table Q is found on page 194. The latter, labeled Table R follows on page 195.

### Sales Tax

The City of Chula Vista receives a 1% tax on all retail sales made within its legal boundaries. As mentioned earlier, this sales tax is an important source of revenue for the City. With the development and operation of the regional shopping center, it is likely to become an even more important source of revenue for the City. Based on a recent market study submitted by the proponents of the proposed project, the regional shopping center will produce an annual sales volume ranging between \$52,500,000 and \$120,000,000. This translates into revenues for the City of between \$525,000 and \$1,200,000 per annum. A sales tax forecast, which provides a more detailed analysis relating to the amount of revenue the City might expect to receive from the proposed shopping center, is contained on Table P on page 193 herein.

As a check on possible sales tax revenues, an alternative method of forecasting was used. This is the method used in the Sports World study last year. It reflects somewhat larger sales tax revenues initially from the shopping center, but the revenues fall relatively lower in ensuing years. It is estimated that the City will receive \$585,000 in additional sales taxes in 1977, when it is assumed the retail commercial uses in Plaza del Rey are in operation. Although some of the retail uses may not be in existence yet, it is assumed they are, for this analysis for the purpose of simplicity. Thus, in reality, the sales tax revenues may be somewhat high from 1977-1980 (in 1980 all retail commercial uses are scheduled to be completed).

The \$585,000 sales tax revenues in 1977 is derived as follows:

- The new commercial facilities in Plaza del Rey will increase taxable sales in the entire City by 25%.
- Taxable sales in the entire City, without Plaza del Rey, are projected to be \$234 million in 1977.
- 25% of \$234 million is \$58.5 million (additional taxable sales).
- 1% of 58.5 million is \$585,000, which is the sales tax share to be received by Chula Vista and represents additional revenues to be expected citywide after Plaza del Rey commercial uses open.

After 1977 a 10% growth rate per year is projected for taxable sales citywide and, consequently, a 10% growth per year in sales tax income (assuming the City's share @ 1% stays the same) is projected. Thus, sales tax income in the years the commercial uses will be in operation are projected as follows:

<u>Year</u>	<u>Sales Tax Revenue</u>
1977	\$ 585,000
1978	643,500
1979	707,850
1980	778,635

Note: The 25% increase in taxable sales in Chula Vista is a reasonable projection since the experience of other centers shows an increase of about this amount 10% for the cities in which they opened in the first year. 25% is used to reflect the proposed high quality and diverse services to be offered in the Plaza del Rey center. After 1980, there is expected to be a significant increase in sales tax revenue for the center due to projected increase in the size of the center in that year. The applicant has provided his expectations on sales tax revenues based on retail volume derived from his economic market study.

#### Other Taxes

Table S provides a forecast of other tax revenues the City of Chula Vista would receive from the proposed project, once it has been approved. Figures shown on this table are based on percentages derived from the City's Revenue/Expense Report of June 30, 1973. An inflation factor of 5% per annum, compounded, has also been used in making these calculations.

TABLE N  
PLAZA DEL REY - LAND & IMPROVEMENTS  
ESTIMATED FAIR MARKET VALUE & ASSESSED VALUE

	1975 - 76		1976 - 77		1977 - 78		1978 - 79		1979 - 80	
	Fair Market Value	Assessed Value	Fair Market Value	Assessed Value	Fair Market Value	Assessed Value	Fair Market Value	Assessed Value	Fair Market Value	Assessed Value
A. Commercial Properties										
1. Regional Shopping Center										
2. Recreation Commercial Center										
a. Ice Skating Facility	\$2,500,000	\$ 625,000	2,625,000	656,250	2,756,250	689,000	2,894,000	723,500	3,038,800	759,700
b. Tennis & Swim Club			1,500,000	375,000	1,575,000	393,750	1,653,860	431,450	1,736,400	434,100
c. Hotel			3,000,000	750,000	3,150,000	787,500	3,307,500	826,875	3,472,800	868,200
3. Savings & Loan Office	1,200,000	300,000	1,260,000	315,000	1,323,000	330,750	1,389,100	347,275	1,458,600	364,650
4. Professional Office Bldg.			4,000,000	1,000,000	4,200,000	1,050,000	4,410,000	1,102,500	4,630,500	1,157,625
5. Movie Theatre Complex			400,000	100,000	420,000	105,000	441,000	110,250	463,000	115,750
B. Residential Properties										
1. Single Family Homes	4,938,000	1,234,500	9,100,000	2,275,000	9,555,000	2,388,750	10,032,700	2,508,175	10,534,400	2,633,600
2. Townhouses					10,870,800	2,717,700	15,185,000	3,796,250	24,686,100	6,171,525
3. Apartments			3,557,000	889,400	3,745,000	936,250	3,932,200	983,050	4,129,100	1,032,275
C. TOTAL	8,638,000	2,159,500	55,442,000	13,860,600	69,095,050	17,273,700	91,245,360	22,829,325	104,549,700	26,137,425

TABLE 0  
ESTIMATED PROPERTY TAX REVENUES GENERATED BY THE PROPOSED PROJECT

	Commercial		Residential		Total	
	Estimated Assessed Value	Estimated Property Tax Revenues	Estimated Assessed Value	Estimated Property Tax Revenues	Estimated Assessed Value	Estimated Property Tax Revenues
1975-76	\$ 925,000	\$ 13,400	\$1,234,500	\$ 17,900	\$2,159,500	\$ 31,300
1976-77	10,696,250	155,090	3,164,438	45,884	13,860,600	200,980
1977-78	11,231,000	162,850	6,292,300	91,240	17,523,300	254,090
1978-79	15,541,850	225,360	7,287,475	105,670	22,829,325	331,030
1979-80	<u>16,300,025</u>	<u>236,350</u>	<u>9,837,400</u>	<u>142,642</u>	<u>26,137,425</u>	<u>379,000</u>
TOTAL		793,050		403,366		1,196,400



TABLE P  
 ESTIMATED REVENUE FROM SALES TAX  
 GENERATED BY THE PROPOSED REGIONAL SHOPPING CENTER  
 1973 - 1980

<u>Fiscal Year</u>	Regional Shopping Center	
	<u>Estimated Gross Sales</u>	<u>Estimated Sales Tax Revenue</u>
1973-74	-0-	
1974-75	-0-	
1975-76	-0-	
1976-77	\$ 52,500,000	\$ 525,000
1977-78	55,125,000	551,250
1978-79	96,610,000	966,100
1979-80	<u>101,440,500</u>	<u>1,014,405</u>
TOTAL	\$305,675,500	\$3,056,755

TABLE Q

ESTIMATED TOTAL ANNUAL REVENUE  
GENERATED BY RESIDENTIAL PROPERTIES WITHIN THE PROPOSED PROJECT  
1975 - 1980

Description	Chula Vista Revenue Amount FY 1972-73	Citywide Per Capita*	Total for Project				
			1975-76	1976-77	1977-78	1978-79	1979-80
Property Taxes			\$ 17,900	\$ 45,884	\$ 91,240	\$105,670	\$142,642
Other Taxes	\$ 899,333	\$12.18	18,725	27,196	36,316	52,508	74,541
Sales Taxes**	1,005,528	13.63	20,958	30,437	40,660	58,793	83,448
Licenses & Permits	375,240	5.08	7,809	11,334	15,144	21,882	31,059
Fines & Forfeitures	128,221	1.74	2,683	3,894	5,212	7,530	10,701
Use of Money & Property	230,969	3.13	4,807	6,980	9,325	13,483	19,140
Revenue from Other Agencies	3,003,450	41.10	63,040	91,556	122,295	176,829	250,995
Charges for Services	765,577	10.38	15,949	23,165	30,918	44,698	63,423
Other Revenue	253,401	3.43	5,272	7,660	10,236	14,802	21,010
TOTAL			\$157,144	\$248,106	\$361,346	\$496,195	\$696,959

\* Based on July 1973 population of 73,800

NOTE: Except for estimated revenue derived from anticipated property taxes which is computed at \$145 per \$100 of assessed value, all other revenue generated by residential uses for the proposed project are computed on a per capita basis.

\*\* Sales taxes on shoppers goods have been eliminated, assuming that virtually all shoppers goods purchases by residents of the development will be made at Plaza del Rey. In 1971 - 1973, 44% of taxable sales in Chula Vista were for shoppers goods (apparel, general merchandise, drug stores, & home furnishings & appliances). In 1973, revenue from Taxable Sales in Chula Vista according to the State Board of Equalization was \$1,795,580. The above figure represents 56% of this value.

ESTIMATED TOTAL ANNUAL REVENUE  
GENERATED BY COMMERCIAL PROPERTIES WITHIN THE PROPOSED PROJECT  
1975 - 1980

TABLE R

Description	*Chula Vista Revenue Amount FY 1972-73	Total Per Commercial Acre	Total For Project (129 acres through FY 1979-80)						
			1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Property Taxes			-0-	-0-	\$13,400	\$155,090	\$162,850	\$ 225,360	\$ 236,350
Sales Taxes			-0-	-0-	--	525,000	551,250	966,100	1,014,405
Other Taxes	\$2,694,231	\$328.88	-0-	-0-	1,905	51,970	54,560	57,295	60,160
Licenses & Permits	375,240	45.80	-0-	-0-	265	7,180	7,540	7,920	8,315
Fines & Forfeitures	128,221	15.65	-0-	-0-	110	2,470	2,600	2,725	2,860
Use of Money & Property	230,969	28.20	-0-	-0-	160	4,210	4,420	4,645	4,875
Revenue from Other Agencies	3,003,450	366.62	-0-	-0-	2,120	57,485	60,360	63,380	66,550
Charges for Services	765,577	93.45	-0-	-0-	540	14,650	15,385	16,155	16,960
Other Revenue	253,401	30.93	-0-	-0-	180	4,850	5,095	5,350	5,610
<b>TOTAL</b>			X	-0-	\$18,680	\$822,905	\$864,060	\$1,348,930	\$1,416,085

\*Based on Chula Vista Revenue/Expense Report of June 30, 1973

NOTE 1: Except for estimated revenue derived from anticipated property taxes which is computed at \$1.45 per \$100 of assessed value, all other revenue generated by commercial uses for the proposed project are computed on a per acre basis using the same formula as was previously used to calculate annual expenditure.

NOTE 2: Figures are computed adding a 5% per annum inflation factor.

NOTE 3: Due to the impact of the regional shopping center on sales tax revenue received by the City, this item is listed separately in the table above.

PROJECTION OF ESTIMATED REVENUES  
DERIVED FROM ALL SOURCES AS THEY RELATE TO THE PROPOSED PROJECT

TABLE S

Description	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>	<u>1978-79</u>	<u>1979-80</u>
Property Taxes					
Commercial	\$13,400	\$ 155,090	\$ 162,850	\$ 225,360	\$ 236,350
Residential	17,900	45,884	91,240	105,670	142,642
Total	<u>31,300</u>	<u>200,974</u>	<u>254,090</u>	<u>331,030</u>	<u>378,992</u>
Sales Taxes					
Commercial	-----	525,000	551,250	966,100	1,014,405
Residential	20,958	30,437	40,660	58,793	83,448
Total	<u>20,958</u>	<u>555,437</u>	<u>591,910</u>	<u>1,024,893</u>	<u>1,097,853</u>
Other Taxes					
Commercial	1,905	51,970	54,560	57,295	60,160
Residential	18,726	27,196	36,316	52,508	74,541
Total	<u>20,631</u>	<u>79,166</u>	<u>90,876</u>	<u>109,803</u>	<u>134,701</u>
Licenses & Permits					
Commercial	265	7,180	7,540	7,920	8,315
Residential	7,809	11,334	15,144	21,882	31,059
Total	<u>8,074</u>	<u>18,514</u>	<u>22,684</u>	<u>29,802</u>	<u>39,374</u>
Fines & Forfeitures					
Commercial	110	2,470	2,600	2,725	2,860
Residential	2,683	3,892	5,212	7,530	10,701
Total	<u>2,793</u>	<u>6,632</u>	<u>7,812</u>	<u>10,255</u>	<u>13,561</u>
Use of Money & Property					
Commercial	160	4,210	4,420	4,645	4,875
Residential	4,804	6,980	9,325	13,483	19,140
Total	<u>4,967</u>	<u>11,190</u>	<u>13,745</u>	<u>18,128</u>	<u>24,015</u>
Revenue from other Agencies					
Commercial	2,120	57,485	60,360	63,380	66,550
Residential	63,040	91,556	122,295	176,829	250,995
Total	<u>65,160</u>	<u>149,041</u>	<u>182,655</u>	<u>240,209</u>	<u>317,545</u>
Chgs. for Services					
Commercial	540	14,650	15,385	16,155	16,960
Residential	15,949	23,165	30,918	44,698	63,423
Total	<u>16,489</u>	<u>37,815</u>	<u>46,303</u>	<u>60,853</u>	<u>80,383</u>
Other Revenue					
Commercial	180	4,850	5,095	5,350	5,610
Residential	5,272	7,660	10,236	14,802	21,010
Total	<u>5,452</u>	<u>12,510</u>	<u>15,331</u>	<u>20,152</u>	<u>26,620</u>
TOTAL					
Commercial	18,680	822,905	864,060	1,348,930	1,416,085
Residential	157,144	248,106	361,346	496,195	696,959
Total	<u>175,824</u>	<u>1,071,011</u>	<u>1,225,406</u>	<u>1,845,125</u>	<u>2,113,044</u>

TABLE T

Impact on Schools

<u>Year</u>	<u>Assessed Valuation of Project</u>	<u>Tax Rate (Comb. CVCSD &amp; SUHSD)</u>	<u>Schools Revenue from Prop. Tax.</u>	<u>No. of Students</u>	<u>Avg. Cost per Student</u>	<u>Total Cost</u>
1975-76	2,159,500	4.986/100 A.V.	107,672	445	\$ 998	444,110
1976-77	13,860,600		691,090	649	1048	680,152
1977-78	17,273,700		861,267	845	1100	929,500
1978-79	22,829,325		1,138,269	1179	1155	1,361,745
1979-80	26,137,425		1,303,211	1606	1213	1,948,078

It should be noted that revenue to the school districts from property taxes is approximately one-half of total revenues, the others being principally subventions from other governmental levels.

In addition to the educational costs cited above there will be the costs of construction and outfitting of the elementary school. Land costs are not included as land dedication is expected to be negotiated between the developer and the elementary school district. At this time construction costs are expected to be in the general range of \$1.7 million dollars at the time construction would take place

Total school costs	\$7,063,585
Revenues from property taxes 1976-1980	\$4,101,509
Estimated total school revenues	\$8,203,000

Summary

Projected revenues generated by the proposed project are estimated to exceed expenditures for City services substantially, once the project is well underway. For the entire six year period covered by this analysis, the total projected surplus of revenue over expenses is anticipated to be approximately three and one-half million dollars.

The summary schedule, identified as Table U, shows the year by year comparison of projected revenue to projected expenditures and is the basis for calculating the surplus revenues referred to above.

TABLE U  
Summary - Revenue/Expenditures  
City of Chula Vista  
1974 - 1980

<u>Fiscal Year</u>	<u>Revenue</u>	<u>Expenditures</u>		<u>Surplus</u>	
		<u>City Estimate</u>	<u>Applicant Estimate</u>	<u>City Estimate</u>	<u>Applicant Estimate</u>
1974-75	\$	\$ 27,342	\$ 65,491	\$ (27,342)	\$ (65,491)
1975-76	175,824	198,971	211,391	(23,147)	(19,143)
1976-77	1,071,011	253,525	403,971	820,486	690,896
.977-78	1,225,406	706,331	613,707	519,075	643,580
1978-79	1,845,125	727,971	806,722	1,117,154	1,084,494
1979-80	<u>2,113,044</u>	<u>1,306,183</u>	<u>1,066,110</u>	<u>806,861</u>	<u>1,112,261</u>
TOTAL	6,430,410	3,220,323	3,167,392	3,213,087	3,446,597

The project will also impact other commercial developments in the City of Chula Vista.

Freestanding strip commercial areas may in some cases lose significant amounts of business to the new center. Areas such as Chula Vista's Third Avenue & Broadway can be regarded as vulnerable. Chula Vista Center would lose business to the new center, shoppers generally prefer the excitement and greater variety found in larger centers. Overall, while sales at Chula Vista Center would be expected to decrease with the arrival of the new center, the center would be expected to survive as a more locally oriented sub-regional center. This transition might require some shifts in Chula Vista Center's establishment mix.

L.

### Public Services

The proposed development of Plaza Del Rey and other facilities will create demands for additional public services such as schools, parks, police, fire, & library services. The park site in the proposed project will adequately serve the park needs of the projected population in accordance with the current city standards. At a ratio of 1.1 peace officers per 1000 people

5 officers with their associated patrol car and other equipment would be necessary to serve this project. Fire protection will be provided from the J St. Fire Station (#2) which is less than 2 travel miles from the project site. Library services for the projected population will require 2610 sq. ft. of floor area and 7830 volumes, the new library currently in the design stage will be adequate to serve current population and this project. As usual, this does not entirely apply to the school services, although the non-residential portions of the project will have some beneficial economic impacts, as noted above.

Essentially, the proposed revisions to the Sports World General Plan have replaced the sports arena with additional housing units, which will generate net increases in the number of elementary and secondary students who cannot be absorbed into existing facilities. This net increase will result in additional school sites and facilities being needed. The total number and composition of housing units to be developed in the general area of this project and the relative success or failure of current local efforts to expand school capacities by converting to year-round operations will also determine the timing of these facilities. School district planning staff personnel will continue to monitor the development proposals being considered by the City, and attempt to maintain a 3-4 year advance prediction of future enrollments. See the public facilities section of the project description for precise number generated by this development.

M. Social. The Cost/Revenue Analysis would seem to indicate that a preponderance of the dwelling units will have a substantial cost. This does not comply with the preliminary City policy of providing housing for every economic group. The developer has indicated that he will abide by the HUD/Building Contractors Assoc. memorandum of Understanding on fair housing practices.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE IMPACTS

A. Preservation of Natural Open Spaces

The visual impacts of the modified landforms and related suburban development will be somewhat mitigated by the preservation of 91 acres in natural slope areas. These are principally along the south property boundary, and in the eastern portion of the site. Another natural slope area will be preserved north of the large townhouse site, overlooking the Sweetwater Valley. These areas will provide visual relief to the man-made improvements, and retain some limited habitat for the native wildlife in the area. In order to retain the maximum amount of natural character of the developed portions of the project site, the following recommendations are made for landscaping:

1. Retention and use of native shrubs and trees where possible through the use of tree wells and retaining walls. They will reduce maintenance costs (irrigation, fertilizer, pest control).
2. The plantings should include the species present in the area.
3. If grading plan calls for major cuts with resulting banks, the banks could be hydroseeded with native wildflowers. These banks would be superior to the "too often used" ice-plant and ivy. The site would support naturally a wide assortment of spring wildflowers.



B. Landscaping Program

Plaza Del Rey and nearby residential developments will be designed to include full landscaping treatment. The large parking lot required for the shopping center will have pockets of planted areas, with trees, shrubs, and ground cover to relieve the appearance of the large paved areas. The City standard for this landscaping is 10% of the parking area.

All constructed slopes will be held to a maximum slope ratio of 2:1, and will be landscaped with appropriate ground cover, shrubs, and trees. Permanent irrigation systems will also be installed to assure the establishment and maintenance of the plant materials.

The apartment and townhouse areas will be developed in a fully landscaped setting, which will be maintained by the management and homeowners' associations. The single-family residential area will be landscaped by the individual homeowners. The

recreation/commercial area and church/school site are the kinds of activities which normally receive the most extensive landscaping, therefore these two areas should be particularly attractive when fully developed.

C. Controls on Signs and Lighting

The finished site for Plaza Del Rey will be 100-150 feet below the existing residential development to the south, and roughly 100 feet lower than the proposed residential area north of "H" Street. These elevation differences will provide for effective separation from nearby residential properties. In addition, the specific design of lighting systems for the parking areas will include shielding to protect against off-site glare. Similar attention will be given to the lighting for the tennis courts. Signs will be limited to those necessary for adequate building identification, and will be designed as integral parts of each commercial complex. Specific consideration and approval of all elements of the proposed development will be included in the processing of the Precise Plan.

D. Drainage Improvements

Storm runoff and surface drainage will be completely controlled by the design and installation of the fully lined drainage channel, curbs, gutters, and storm drains in the street areas, and proper earthwork design and techniques to protect the constructed slopes against erosion.

The lined channel is specifically designed to carry runoff from Rice Canyon during a 50-year storm, as well as the increased runoff from the developed surfaces of buildings and paved areas. Other drainage improvements will be designed and installed in accordance with the City of Chula Vista standard requirements and good engineering practice.

The "natural" drainage area between Plaza del Rey and the freeway could be improved to eliminate the problems associated with that area.

#### E. Street Improvements

Since automobile traffic will constitute one of the principal impacts of the proposed project, a fairly detailed description of the improvements necessary to accommodate the projected volumes (described in Section III E) is presented here. The reader is referred to Figures 2 through 7 in Section III E. For those locations where traffic problems are anticipated even after street improvements have been made, additional measures are discussed. Detailed roadway widths, median widths, and the numbers and types of lanes are shown on the Precise Plan.

##### Phase I (Figure 2) Street Improvements

The proposed improvements for Phase I include:

1. Construction of "H" Street to eight lanes from I-805 easterly to what will be future Lynwood Drive. This will easily accommodate 38,000 ADT (3,800 peak hour).
2. Construction of interchange at "H" Street and future Lynwood Drive, with traffic signal at two-lane east-bound off-ramp to shopping center loop road. The shopping center loop road will be four lanes (two lanes in and two lanes out).

The two lane off-ramp will accommodate the 1,750 peak hour, while the roadway (ramp) into the shopping center will easily accommodate the 1580 peak volume.

3. Grading of "H" Street for six lanes and paving of four lanes from the interchange at Lynwood Drive to the north-south road connecting to Telegraph Canyon. (Two lanes on this section may be adequate at this time; however, four lanes will provide the additional capacity needed if residential area to the southeast of the shopping center should develop quickly).
4. Construction of four lane interim loop road around the shopping center. This road will provide the capacity needed for this development and future expansion.

#### Phase II (Figure 3) Street Improvements

1. Construction of Lynwood Drive to four lanes which will easily accommodate the maximum 12,600 daily and 900 peak hour directional traffic volumes.
2. Construction of the residential loop road north of "H" Street to four lanes. This will provide approximately three times the capacity needed at this phase of development but will provide the eventual capacity needed for full development.

No additional traffic signals are needed at this stage of development.

### Phase III (Figure 4) Street Improvements

1. Construction of "H" Street to six lanes from the north-south road connecting to Telegraph Canyon Road to the existing constructed section of "H" Street to the east. The largest ADT in this area is 18,800, with the predominant peak hour movement being 1,350, which leaves approximately 50% unused capacity on this section of road.
2. Paving of additional two lanes of "H" Street along shopping center frontage and easterly to north-south road.
3. Construction of traffic signals at the following locations:
  - a. Residential loop road north of "H" Street at Lynwood Drive.
  - b. Residential loop road north of "H" Street at its intersection with "H" Street.
  - c. Shopping center loop road (east end) with "H" street.
  - d. North-south road (connecting to Telegraph Canyon) and "H" Street.
  - e. Signal also possibly needed on easterly end of "H" Street at north-south road.

The above improvements will complete the development of the 450 acre project. Further analysis deals with the full development

of the area. It should be noted at this time that "through" traffic will begin using "H" Street, and the additional capacity described above will be needed to accommodate this through traffic.

#### Full Development of 1,400 Acres (Figure 5)

This traffic assignment was made to show the impact of the total 1,400 acre development on the proposed road system. Traffic for two levels of development are shown; one with a 750,000 sq. ft. shopping center, and one with a 1,200,000 sq. ft. shopping center. The figures show only the traffic for the 1,400 acres. Traffic from adjacent and regional development must be added which is the analysis which follows.

#### Full Regional Development (Figure 6)

The term "full regional development" used here means the development of all the land around the area and the region which will add traffic to the major road system being analyzed. Traffic volumes are shown for the two levels of shopping center development; 750,000 sq. ft. and 1,200,000 sq. ft. The traffic volumes for the major road system were taken from the County of San Diego traffic assignment made in November 1972, with re-assignments of "J" Street, "H" Street, and Lynwood Drive as previously described. The afternoon peak hour traffic volumes for full development are shown on Figure 7. Periods of congestion will occur in the afternoon peak hours along "H" Street. Traffic volumes on the remainder of the road system are within the range of being accommodated with a four lane divided roadway, four lane undivided road, or a two lane collector road, and present no operational problems.

Discussion of "H" Street

Four locations along "H" Street where traffic congestion during the afternoon peak hour may be anticipated with full regional development are shown on Figure 6, labeled A, B and C and D. These impacts are assessed as follows:

Location	<u>Max. P.M. Peak Hr. Approach Volumes</u>				% Intersection Capacity Exceeded (1)	
	w/750,000 ft. <sup>2</sup> Shopping Center		w/1.2 Million ft. <sup>2</sup> Shopping Center		w/750,000 ft. <sup>2</sup>	w/1.2M ft. <sup>2</sup>
	'H' St.	Side St.	'H' St.	Side St.		
A	3,790	960	4,280	960	7	18
B	3,790	460	4,280	460	-	-
C	4,210	580	4,720	840	22	41
D	4,210	200	4,720	200	-	4

(1) Based on mid-range of Level of Service E

Locations A, B, and D are tee (3 leg) intersections, while location C is a four way intersection. The tee intersections have fewer conflicting traffic movements. Location B shows no capacity deficiency and location D shows no capacity deficiency with the first shopping center increment. Capacity deficiency at both locations A and D can be removed by adding an additional lane to "H" Street. At location C the capacity deficiency can be eliminated for the first shopping center increment by adding another lane to "H" Street, but a capacity deficiency of approximately 18% will still remain with the second increment of the shopping center added. In the original traffic assignment, no westbound to southbound left turning traffic was assigned to the interchange at Lynwood Drive. This means that

all these left turns were concentrated at Location C. These left turns have since been divided between the two locations (250 peak hour at each location) which brings Location C within 10% of meeting peak hour capacity requirements. This means that during peak periods in the afternoon, traffic delays would still occur for short periods. Methods which could be used to alleviate this condition are: separation of vehicle and pedestrian traffic with pedestrian bridge across "H" Street; construction of full or partial interchange to eliminate vehicle conflicts with "through traffic"; or reduction of densities.

The entire traffic analysis for this development (and the regional development as well) has been based on techniques learned from past experience. They have been used to "plan now for what we know now," and do not account for the use of public transportation. Current regulations governing development are based heavily on what has occurred, and do not consider current changes which are causing constraints on automobile travel. The possibility of an energy shortage has been present for a long time, and has now become very real. The result from the transportation standpoint is likely to be reduced use of the private automobile, as well as reduced automobile ownership.

The need and desire for improved public transportation is greater than any time since World War II. The experience we need for planning purposes can be drawn from that era. The role of the automobile



will change if forced by the energy constraints, and the role of public transit will change with it. The current interest in public transit was not stimulated so much by an energy crisis, but rather by an interest to provide people with a choice of transportation. Hopefully, a resultant benefit will be a reduction in auto travel. Throughout the United States, there are indications that this is happening. In effect, it appears that, even without additional regulations or controls such as those put forth by EPA and others, the controls and strategies relating to land use planning will continue to change until they reach a balance brought about by acceptance and use of public transportation. The level of that balance cannot be reliably predicted at this time; however, the current strong trend toward development and usage of public transportation will very likely continue for many years.

Like most major developments, the proposed project represents a construction span of several years, while full regional development will occur over a span of 20 years or more. This analysis is based on full utilization of the automobile and represents maximum conditions. Significant changes in our transportation requirements and capabilities will be occurring, and if street improvements are timed with the phased project development, transportation requirements can be periodically assessed to ensure that these improvements reflect the actual requirements. This continuing planning process can therefore provide considerable flexibility for the City and the developer in providing adequate services which reflect the changing needs of the community.

Summary of Proposed Improvements (Numbers keyed to locations shown on Figure IV-1.

PHASE I

1. Construction of "H" Street to eight lanes from I-805 to west end of shopping center loop road.
2. Construction of interchange at "H" Street and shopping center loop road.
3. Grading of six lanes and paving of four lanes on "H" Street from interchange to north-south road connecting to Telegraph Canyon Road.
4. Construction of four lane shopping center loop road, or equivalent interim road pending full development. (Divided with two way left turn lane).
5. Construction of north-south four lane divided major road between "H" Street and Telegraph Canyon Road.

PHASE II

6. Construction of Lynwood Drive (four lanes divided).
7. Construction of residential loop road north of "H" Street to four lanes undivided.

PHASE III

8. Construction of "H" Street to six lanes from the north-south road connecting to Telegraph Canyon Road to the existing constructed section of "H" Street to the east.

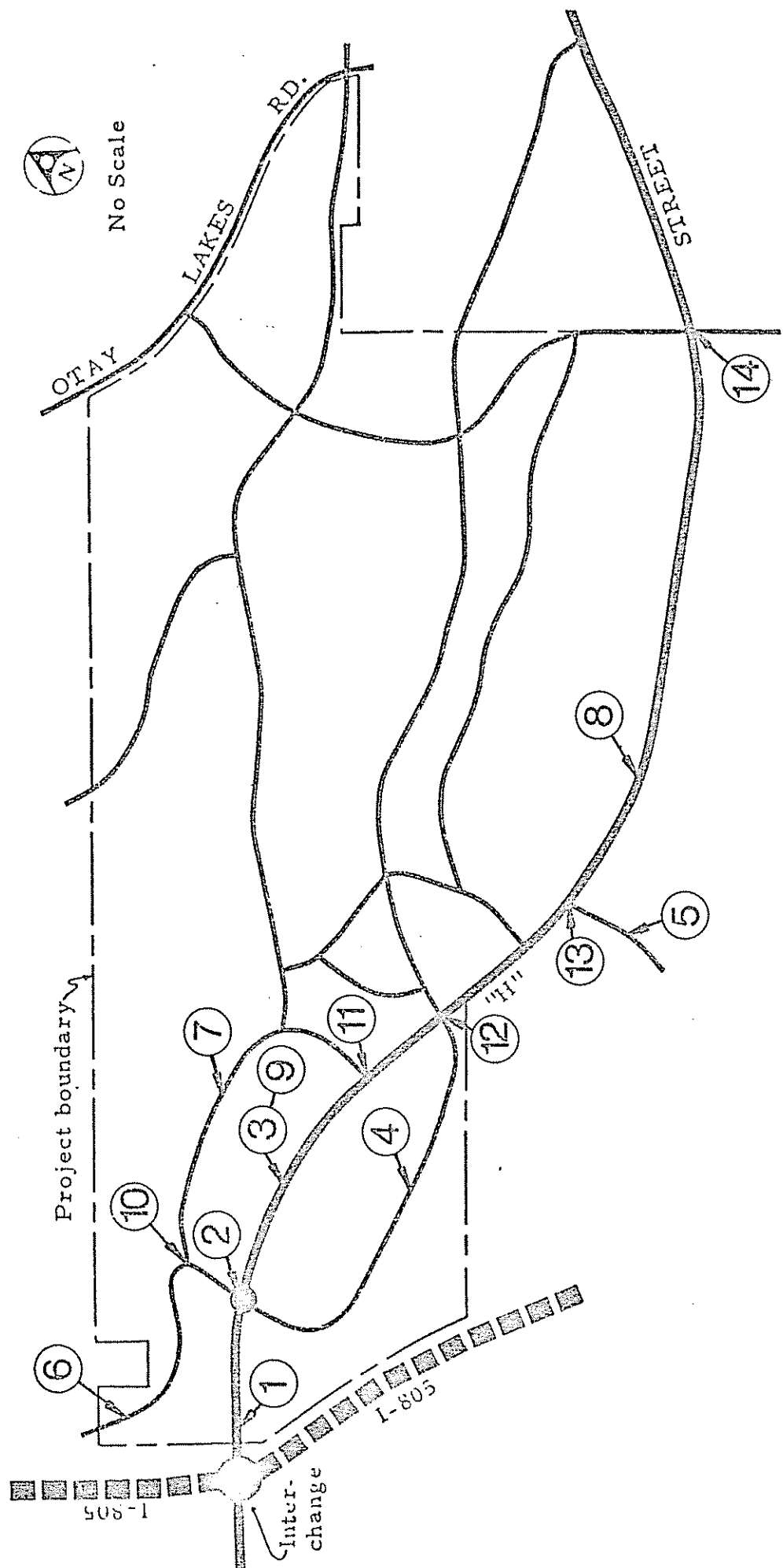


FIGURE IV-1. SUMMARY OF PROPOSED IMPROVEMENTS  
 (Numbers keyed to Summary in text)

9. Paving of additional two lanes of "H" Street  
(see Item 3).

10. through 14. Construction of traffic signals.

Detailed roadway widths, numbers and types of traffic lanes, and median widths are shown on the Precise Plan.

#### Miscellaneous Comments

1. To prevent long delays in traffic and ease congested streets in residential and commercial areas shall wherever practical, be designed such that critical intersections operate at Level "C" and Level "D" capacity respectively in the peak periods. These levels of service are defined in the Highway Capacity Manual 1965 by the Highway Research Board (Special Report #87).
2. With full regional development there will be heavy west-bound left turn movements from "H" Street into the shopping center loop road. This will create congestion and delays to traffic especially in the peak periods. Delays can be reduced and capacity deficiency at location C of shopping center removed by widening "H" Street to 7 through lanes with 2 left turn lanes from "H" Street. However, a capacity deficiency of 18% would still remain with the second increment of the shopping center to 1.2 million sq. ft. Rather than continue to widen "H" Street street to provide additional capacity without reduction in conflicting movement and potential safety, a partial or full interchange should be provided at location C. This interchange will be similar to the Lynnwood Drive interchange to the west, and would eliminate vehicular conflict with through traffic and permit operation without capacity deficiency on "H" Street.

3. Based on traffic volumes for Phase II of this development, it appears that traffic signals would be warranted at the following intersections;

- a. Lynnwood Drive at residential loop road.
- b. "H" Street at shopping center loop road.

These intersections in general would meet Chula Vista's standards for the installation of traffic signals. These signals should be installed with Phase II development.

#### F. Climate

The effect on the micro climate due to the heat island can be reduced through the following mitigating measures;

1. Providing extensive landscaping with fast growing elements.
2. Including underground parking facilities and increasing the percent of the site in landscaping.
3. Utilizing vines or other plants on walls of buildings and other reflective surfaces or using building surfaces that would not absorb heat.

#### G. Air Quality

During construction, the short-term impacts of dust from the grading activities will be alleviated by the normal measures used to ensure proper soils preparation, and to prevent erosion and siltation after grading. These include:

1. In grading each site pad, water is added to ensure required compaction.
2. The final surface is watered and rolled with a sheeps-foot tamper to facilitate formation of a hardened cap of soil as the soils dry. This cap minimizes dust and erosion due to channeling runoff.

3. Installation of sprinklers and planting on slope areas shortly after grading promotes the development of a plant cover and minimizes dust.

These measures should be effective in reducing dust during and after the grading process.

A key cause of dust after construction is disruption of the hardened cap in graded areas by off-road vehicles such as trail bikes. The developer will take measures to preclude off-road vehicles from traversing the graded site areas.

With regard to the long-term impacts on air quality caused by motor vehicle emissions, it should be noted that only a portion of the daily motor vehicle trips to the regional shopping center can be considered as net adds to the regional traffic. While a percentage of the vehicle trips to the shopping center may result from its unique attraction, by and large it is reasonable to assume that most motor vehicle trips (in the approximate range of 50-75%) would be made to some shopping location in the Chula Vista or San Diego area if this one were not built. Furthermore the existence of a regional shopping center at this location may tend to reduce the average trip length of today's visits to more distant regional centers.

Utilization of express buses operating from centralized points in the San Diego Region, operating on existing and planned roadways can help to reduce the air quality impacts. Bus stops are provided on street and off street in development. These impacts have been assessed as if transportation will continue to be provided solely by private automobiles.

H. Employment and Economic Returns

The increased demands for public services and facilities will be largely mitigated by the tax revenues generated by the major commercial development, and the substantial employment opportunities, both during construction and after full development.

The increased assessed valuation of the subject property, combined with an eventual sales tax revenues of more than \$1 million per year will obviously broaden the City's tax base and enhance its commercial potential. Several hundred jobs will be created on the site, initially for construction workers, and later for salesmen, clerks, and other employees of the commercial establishments.

I. Sites Reserved for School and Park

The proposed project includes the reservation of a 10-acre elementary school site, and dedication of a neighborhood park site to meet the local needs of the residential areas. The additional property tax revenues generated by the development of the surrounding areas will assist the School District in budgeting to acquire and develop the school site. The sites have been

relocated a short distance to the west, since the former regional shopping center site shown on the Sports World General Development Plan is now being replaced with residential development.

J. Noise

The assessment of the noise impacts associated with the project indicates that particular attention must be addressed to the proper design, location, shielding, and landscaping of buildings in the residential and professional areas to ensure that housing and office unit dwellers are not subject to undue noise. Existing technology will be used to ensure noise abatement. In particular, the use of shielding, landscape, walls, proper building orientation, elevation differences and, where necessary, additional attenuation barriers, are planned. HUD design criteria for noise abatement will be utilized as required. Since traffic noise from I-805 will be the predominant noise source at the project site as well as in the surrounding community, particular emphasis during project design will be directed toward coping with this noise element.

The landscaped slopes adjacent to many of the major traffic carriers will be non-reflecting in design because of landscaping and will therefore be acoustical absorbers.

Truck traffic associated with the shopping center operation will also cause localized noise in the vicinity of the Plaza Del Rey project. Control of this noise can be partially effected by the screening and shielding techniques discussed above. Additionally, prior to the actual design of noise attenuation features for truck traffic, an accurate estimate of truck traffic should be obtained. With heavy emphasis being placed on truck



noise suppression by the EPA through research projects, it is likely that such noise will be considerably reduced over the next 5-10 years.

Additional methods of traffic noise control include use of speed limit zones. Low speeds are effective in reducing automobile traffic noise, but tend to increase heavy truck noise. Thus speed limits should be chosen which minimize noise based on the actual percentages of automobile and truck traffic. Truck traffic should be prohibited on Lynwood Drive and residential streets in Plaza Del Rey. The steeper grades on these streets would tend to cause very significant noise problems if trucks were permitted.

Schedules for construction activities, particularly earthwork, will be made with noise moderation as an integral scheduling element. This means that such construction activity will be limited to daylight working hours during weekdays. Construction equipment noise suppression is also receiving considerable attention, the effects of which are already becoming apparent.

Construction noise can be mitigated a number of different ways.

1. Properly muffled equipment.
2. Restriction of construction activity to between 8:00 a.m. and 4:30 p.m.
3. Selecting the quietest of alternate items of equipment (e.g., hydraulic instead of pneumatic).
4. Scheduling of equipment operations to maintain a low average noise level by coinciding noisiest operations with times of highest ambient levels and turning off idling equipment.
5. Keep noisy equipment as far as possible from site boundaries.
6. Provide enclosures for stationary noisy equipment.

#### K. Energy Conservation

Energy use throughout the project may be conserved through the following methods:

1. The utilization of maximum natural light in the design of the structures including such features as skylights and light wells.
2. The provision of high insulation standards in all structures including but not limited to; interior wall substances, less window area.
3. Less use of lighting for aesthetic reasons.
4. Minimize the use of interior climatic controls.

#### L. Soils & Geology

Treatment of potentially expansive soils can be accomplished during grading of the property. Hazards due to strong ground shaking from nearby faults can be mitigated by the utilization of sound soil engineering practices and structural design.

#### M. Waste Generation

##### Liquid

The generation of sewage could be reduced through the treatment of some of the substance on site for use in watering landscaping. This at best would be an interim measure until adequate regional treatment facilities are available. Adequate regional management of water quality problems can result in the elimination of this problem.

##### Solid

The generation of solid waste could be mitigated through several methods. On a limited basis the use of trash compactors throughout the development would extend the life of sanitary land fills although energy consumption would rise. Several European new towns are using trash collection via pneumatic tube and then using the trash at electrical generating plants as fuel. The reliability of air pollution control devices with varying fuel composition is questionable however. An alternative would be to process the trash through a pyrolysis plant and use the low sulfur fuel oil produced for energy at generating plants.

#### N. Social Effects of the Project

A question was raised by one of the Commissioners concerning lack of mitigating measures to ameliorate the probable high cost of housing to be provided in this project. The high cost of land, construction and site preparation will almost certainly require that the residential units to be built will be beyond the economic reach of low and moderate income individuals and families. Among measures which might be taken by the developer and/or the City to mitigate the costs of providing housing in accordance with current practices and regulations are the following:

1. Processing of permits, applications etc. could be speeded up to reduce the cost of money to be developer.
2. Portions of the dwelling (i.e. second or third or fourth bedrooms) could be left unfinished, for the occupant to complete at his leisure.
3. No built-in appliances be provided so that the occupant could shop for better buys, arrange short term financing and avoid paying for relatively short-lived property for the full term of the mortgage.
4. Eliminate or reduce the requirements for landscaping, automatic, permanently installed irrigation systems.
5. Fees could be reduced for applications, permits for school districts, and in-lieu payments for parks.
6. Sidewalks could be required on one side of the street and street width reduced.
7. The Zoning Ordinance could be amended to provide less stringent controls on setbacks, lot sizes, lot coverage, minimum floor areas, etc.
8. The number of offstreet parking spaces could be reduced and garage requirements eliminated.

VI. ANY ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED  
IF THE PROPOSAL IS IMPLEMENTED

A. Change in Landform

The proposed development of the regional shopping center and related recreational/commercial facilities at this location will require substantial changes in the existing landforms which cannot be avoided. In order to provide for adequate accessibility and off-street parking, large relatively flat sites are needed, and the necessary earthwork can be safely and economically accomplished within the framework of our current technology.

Similarly, the proposed residential development north of "H" Street will also result in substantial changes to the existing landforms. The various densities and schematic designs proposed are direct reflections of housing market demands and economic feasibility. The development of adequate public facilities such as the proposed school and park sites will also result in unavoidable changes to the existing landforms.

B. Removal of Flora and Fauna

The extensive grading activities proposed in the 450-acre project area will result in the removal of the natural vegetation and wildlife, except for the areas to be retained in natural slopes. This will cause some of the animal population to migrate into the vacant land to the east; however, many individuals will be lost through reduced food supplies and increased predator activity.

Although no rare or endangered species of vegetation or wildlife were found on the subject property, the local occurrence of the coastal cactus wren is considered unusual in this area. It should be noted that much of the eastern 950 acres covered by the Sports World General Development Plan will be retained in natural slope areas, and a large Wilderness Park is allocated for one of the canyon areas. It would therefore appear that sufficient habitat will be preserved to maintain viable numbers of native species in the overall development of the entire property.

C. Increased Traffic

The proposed development of Plaza Del Rey will result in substantial increases in local traffic circulation, which is inherent in any regional shopping center. The impacts of these increases will be largely minimized by the proposed street improvements, which are designed to accommodate the projected volumes.

The degree of long-term impact cannot be reliably established at this time, since regional traffic projections for 1990 are based upon transportation patterns since World War II, when there was little emphasis given to public transportation, and ample fuel supplies were apparently available. These and other fundamental conditions are currently changing at a rapid rate, and long-term traffic conditions will be significantly affected.

D. Increased Air Pollution

The increased traffic volumes will be accompanied by increased vehicle emissions, adding pollutants to the regional air cell, which were described in Section III of this report. The amounts of these pollutants are being gradually reduced through the implementation of increasingly stringent emission controls, and approximately 50-75% of the vehicle trips generated by the proposed regional shopping center are estimated to occur regardless of this project, as previously discussed. The real net additions in pollutants to the regional air cell will be caused by 25%-50% of the shopping center traffic, the proposed recreation/commercial facilities, and the 1,450 dwelling units. The location of the project site east of I-805 can result in temporary total oxidant concentrations in excess of Federal standards during peak traffic hours and at distances approximating the shopping center separation from the freeway. In this regard I-805 is the major source of both air pollutants and noise in the community areas it traverses. Similar unsatisfactory air quality impacts are anticipated all along the community areas immediately to the east of I-805.

E. Noise

Adverse noise impacts will accompany the project both in terms of temporary construction noise in the adjacent community and traffic noise associated with the project itself. The major noise source in the project area and surrounding community is I-805. Truck traffic associated with operation of the shopping

center will also create unsatisfactory noise boundaries that extend into the Plaza Del Rey project. Noise associated with automobile traffic outside the project site should not create significant adverse effects.

## VII. ALTERNATIVES TO THE PROPOSED ACTION

### A. No Project

In considering alternatives to the proposed project, the option of no development would continue the current characteristics of the property,

As long as the site is privately owned, and particularly after completion of the I-805 freeway next year, there will be increasing pressures for its development. The adopted General Plan - 1990 for the City of Chula Vista designates the property for the uses proposed in this project, and the market study conducted in January, 1974 indicates adequate support for the amount of commercial floor space proposed in Phase I and Phase II of the shopping center development.

A majority of this 450 acre region could be managed in its natural condition, while scattered areas already damaged beyond recovery as a result of off-road vehicle activity, could be planted and landscaped for recreational camping areas. Upon acquisition and city annexation for a regional type park, it could be developed and maintained by the City Park and Recreation Department. Development of the park's recreational assets could proceed in phase implementation. The possibilities: 1) The scarred and denuded slopes of the lower Rice Canyon near I-805 could be planted during the rainy season with adaptable types of shrubbery: eucalyptus, pepper tree and Acacia. This landscaping could compliment and beautify the area and this would be best for light use camping or picnicing, site provisions for tenting and small trailer or campers could be provided at this locality. Necessary sanitary facilities could be constructed in simple design and a minimum of cost. Water at this site could be easily obtained from existing water lines. The earlier mention of trees



could provide much enjoyed shade for lawns and picnic areas. 2) At some future date for this site, possibly a swimming pool and tennis court could be considered. 3) Weaving through the hills and canyons of this land, is a present network of equestrian trails. These could be provided with small guideposts at the intersections. 4) Other scarred and denuded areas adjacent to the camp site could be cordoned off and designated as off-road vehicle use areas, which would still provide a host of downhill and uphill thrills and challenges as they always have in the past.

In the Rice Canyon watershed, we find a chaparral form, wildlife habitat and regional park potential unique to our rapidly urbanizing South Bay area. In view of the ever-increasing social pressure brought about by urban stress in our area, the preservation of the Rice Canyon watershed in an essentially natural state would bring relief to the residents of our community. In its present natural state, the chaparral-covered mesas and canyons of Rice Canyon watershed provide an oxygen replenishment to the inversion-plagued atmosphere over our South Bay basin.

Two varieties of cactus found in the Rice Canyon watershed, the Serpentine Cholla and the Velvet Cactus are seriously threatened with elimination by urban development in its restricted southwest San Diego County growth range. As current urban development trends continue, the Rice Canyon watershed will provide the last livable habitat for these unique plants. Inhabiting the dense stands of cactus in Rice Canyon and throughout the watershed, including the 450 acres we're talking about, is the Cactus Wren normally found in desert regions. Also the Coast Horned Lizard, or Horned Toad as many are familiar with, Cooper's Hawk and Sparrow Hawk or the Kestrel, have frequently been observed on or near

the project site. Finally under consideration is the paleontology. The 450 acres under consideration for Plaza Del Rey contain a paleontological asset. A field survey found an abundant occurrence of fossils in the Pliocene San Diego Formation which is 2.7 million years old. This soft sandstone formation yields layers bearing fossil sea shells and bone fragments. However, there are the numerous beds of strongly cemented, coarse to medium grain sandstone which offer difficulty in removing the enclosed fossils, although this is surrounded by softer material easily yielding whole fossils. All these sites occur west of the La Nacion fault, thus directly involving the project site.

B. Reduced Scale of Project

A second alternative considered before submitting the proposed project was to reduce the size of the shopping center to that formerly approved in the El Rancho Del Rey Plan, and to significantly lower the number of dwelling units, in order to minimize the environmental impacts. Although this alternative would reduce the impacts of grading, traffic, air quality, and noise.

The extent of such reductions would be as follows:

The land area occupied by the shopping center would be reduced from 92 to 82 acres (11%), and the amount of grading required for the center and H Street would be reduced by approximately 500,000 cubic yards (23%). The shopping center would contain approximately 476,000 square feet of shoppers goods space, which would generate 23,800 ADT (average daily trips) instead of 60,000 ADT, a reduction of about 60%. Air pollutants resulting from shopping center traffic would also be reduced by 60%, while the extent of noise impacts associated with this traffic would be reduced 2 1/2 times in the area of greatest intensity ("H" Street west of Lynwood Drive). The zone of "normally unacceptable" noise impacts (HUD Guidelines) would be reduced from 670 feet from the centerline of "H" Street to 250 feet from the centerline. This noise intensity relationship is exponential rather than linear, as in the case of air pollutants from motor vehicles.

The economic impacts on existing commercial facilities in Chula Vista would apparently not be greatly affected by a reduced-scale shopping center. The smaller center, with only two department stores instead of four, would be less competitive with Mission Valley, which contains seven such stores, and currently attracts an estimated 45% of the shoppers goods dollars being spent by residents within the Primary Trading Area (page II-6, Market Study - Plaza Del Rey Center, February 1974). The only competitive center within Chula Vista is well-established with three anchor stores, and is expected to retain substantially the market it now commands, regardless of the size of the proposed regional center at I-805 and "H" Street.

C. Project in Strict Compliance With Adopted General Development Plan

A third alternative considered in place of the proposed project was to develop in strict compliance with the adopted El Rancho Del Rey Plan. This Plan contains a much smaller shopping center and a large equestrian community,

which lies primarily east of the subject 450 acres.

The principal differences in environmental impacts would occur in relation to the regional shopping center and "H" Street, as discussed in the previous section (reduced grading, traffic, air pollution, and noise). There would also be less grading required for residential development in the equestrian community, because of the lower densities (less than one unit per acre). Traffic generation and associated air pollution and noise would also be reduced.

The basic reason for amending the adopted General Development Plan to accommodate a larger regional shopping center is that market conditions have changed significantly, and the market study conducted early this year by Real Estate Research Corporation indicates adequate support within the Primary Trading Area for the a regional shopping facility. Conversely, the market support for the equestrian community has greatly diminished, therefore more conventional single

and multiple-family residential development at higher densities is proposed.

D. Different Project Design

A fourth alternative considered in place of the proposed project was a substantially different design, without the commercial activities and only low to medium housing densities. This type of project would be inconsistent with the City's adopted General Plan, would ignore the substantial support for a regional shopping center in the South Bay area, and could not be justified economically in the current and projected housing market. This type of low density, semi-rural project may seem environmentally superior because of greatly reduced impacts; however, it is the opinion of the proponent that the presence of the I-805 freeway, "H" Street interchange, and economic feasibility cannot be entirely ignored.

If the provisions of the recently adopted "H" Hillside Modifying District were applied to the proposed residential areas on the subject property, the average density would be reduced from 4.8 to 1.7 dwelling units per acre, a reduction of 65%. The total number of dwelling units would therefore be about 520 instead of 1450. The amount of grading required to develop the lower number of units has not been computed; however, a substantial reduction seems obvious. Depending upon the alignment of "H" Street, the amount of reduced cubic yardage could be as much as 500,000 to 800,000 cubic yards.

The areas of natural open space would be increased from 88 to 189 acres (115%), occurring primarily in the north-south tributary

canyons which drain into Rice Canyon. This would also preserve that much more natural vegetation and habitat for existing wildlife.

As noted previously in this section, a very low density, semi-rural residential project may be environmentally superior; however, it should be noted that the substantially reduced densities would result in substantially increased land costs per dwelling unit. These costs could not be entirely absorbed by the savings accomplished through reduced grading activities. The net result would be even higher housing costs to new residents in the area,

#### E. Different Project Location

Another alternative would be to construct a similar development at another location; however good regional shopping center sites do not occur often. Even if another suitable site could be found and acquired, a similar development would produce essentially the same environmental impacts at the other location, without removing the pressures for development on the subject property. The different location would automatically result in a different set of conditions relating to land cost, topography, accessibility, and availability of public services. These, in turn, would require a complete evaluation of that project on its own merits.

Another project site has, however, been proposed. It is located at the southeastern quadrant of I-805 and State 54. The project setting includes a flood plain, alluvium soils, is near an earthquake fault which is potentially active and has poor vehicle access. Thus an alternative site could have greater or less environmental sensitivity.

F. Delay of the Project

Another alternative to the proposed project might be to delay its approval. Such action would obviously retain the subject property in its current undeveloped state, and postpone all the environmental impacts such as grading, traffic, air and noise pollution.

The relative merits of delay are difficult to assess because developmental pressures would not be removed from the site but temporarily transferred to other vacant properties to the east and south. The net result would therefore be higher land costs for the subject property at the time when development is permitted.

The principal impact of delaying the project would most likely be in the loss of competitive advantage over the proposed regional shopping center in National City, less than two miles to the north. The site of the Bonita Golf Course has been rezoned for commercial purposes, and efforts are now underway to negotiate long-term lease agreements with at least one or two major department stores at that location. As noted in the current market study, the subject property is far better suited for a regional shopping center; however, if the Chula Vista site cannot be made available to meet current market demands, then potential lessees for Plaza Del Rey would be attracted to the National City site. It is unlikely that a project comparable to the one proposed could be established in Chula Vista at a later time.

If another competitive site were developed, it is apparent from the Market Study that this trade area could not support two centers and an alternative land use for this site would have to be implemented.

VIII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

A. Cumulative and Long-Term Effects of the Project-Adverse Impacts

The substantial changes to the existing landforms caused by lowering the hilltops and ridges, and filling a portion of Rice Canyon and its tributaries will be long-term adverse impacts. Similarly, the earthwork activities will also remove much of the natural vegetation and wildlife from the site, although some interruptions have already occurred from the activities of trail bike riders in the area.

Increasing traffic volumes along the freeway and major streets in the area may eventually result in traffic congestion at certain intersections, as regional growth approaches maximum growth levels. The extent of congestion will depend, to a large degree, upon the balance achieved between public and private transportation modes, and the relative allocations of energy resources to support the various components of the systems.

The street system in the proposed project is designed to adequately serve the long-term development of the subject properties, as well as those to the east. With the exception of the intersection at the eastern end of the shopping center, no serious congestion is expected, nor will the proposed project preclude additional planned developments to the east.

The anticipated traffic loads will limit future options available to the City in making land use decisions on land to the east of this project. Generators of high traffic volumes could not be approved while maintaining an adequate level of service on east "H" Street and other street.



Although heavy emphasis must necessarily be placed upon the private automobile as the major transportation mode in the area, future options for other modes will remain open. Interstate 805 is a major regional travel corridor, which could become one route in a future fixed guideway system. "H" Street is a natural local route which could initially carry bus service and eventually accommodate a more sophisticated type of transit system. The concentration of commercial, residential, recreational, and related activities at the intersection of these two major travel routes could significantly assist in establishing the feasibility of a future public transit system in this part of the region.

A bike path will be provided along "H" Street, which will help maintain the continuity of this City-wide system. Pedestrian amenities such as walks and landscaping will be installed throughout the project, to encourage this basic mode of transportation. As future modifications to the total transportation system become feasible and generally acceptable, appropriate physical adjustments can be made to the present project design.

There will be other long-term impacts caused by the proposed project, such as air pollution caused primarily by motor vehicle emissions. These emissions are being reduced by increasingly stringent control requirements, and the development of the regional shopping center at a location convenient to its support area may actually reduce the number of vehicle trips travelled in the South Bay area. Continued improvements and greater use of public transportation in the future will also tend to minimize the long-term adverse impacts.

The additional urbanization proposed for the subject properties will increase the total runoff and sedimentation flowing into the

Sweetwater River Basin. Such incremental additions tend to increase the need and pressures for expanded drainage facilities in the downstream areas.

This will limit options currently available on the type of flood plain management/ protection that will be utilized in the Sweetwater River flood plain.

These cumulative impacts are generally unavoidable as major vacant land areas become urbanized.

B. Justification for the Project

In January, 1974, a market study was conducted by Real Estate Research Corporation to determine the current and project support for a regional shopping center at the proposed location of Plaza Del Rey. Copies of that report are being submitted separately to the City of Chula Vista.

The market study indicated that Plaza Del Rey would effectively service the entire South Bay area, due to its central location and convenient freeway accessibility. There are currently 355,298 persons residing in the Primary Retail Trading Area, which is composed of the following County subregional areas:

1. National City
2. Southeast San Diego
3. Sweetwater
4. Chula Vista
5. South Bay
6. Jamul
7. Spring Valley
8. Lemon Grove

The economics consultants assembled basic population and income data compiled by the U.S. Census Bureau and the San Diego County Planning Department, and investigated the major existing and proposed commercial facilities in the South Bay area. They determined

the total annual expenditures for shoppers' goods in each subregional area, based upon their analysis of shopping habits, which is explained in the text of that report. They then projected the relative percentage of market penetration (by subregional area) to determine the annual dollar volume support for Plaza Del Rey in 1973, 1976, and 1980. The market study indicated ample support for the proposed two-stage development of a 1.2 million square feet regional shopping center at this location, exclusive of all other existing shoppers' goods facilities in the area. The series of tables which summarize the population, income and dollar volume potential are included in Appendix B.

The gross annual sales volume of Plaza Del Rey is expected to range from \$ 52,500,000 to \$100,000,000 or more, which would produce \$525,000 to \$1,000,000 for the City in annual sales tax revenues. Other taxing agencies such as the school districts would also benefit from the greatly increased assessed valuation of the subject property. Although current State formulas would tend to negate the increased local revenues by decreasing State aid, the net results would probably include some reduction in the local district's taxing rate.

IX. ANY IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED  
IN THE PROPOSED ACTION, SHOULD IT BE IMPLEMENTED

The changes in the existing landforms and substantial reduction in existing flora and fauna will be long-term, irreversible changes caused by the proposed project. Mitigating measures such as landscaping and design features have been previously discussed in this

report. The urbanization of this currently vacant acreage will commit the land to a pattern of development which is essentially irreversible, depending upon the length of one's projection.

The environmental changes caused by the increased traffic, air pollutants, and noise are also irreversible; however, the impacts are mitigatable as previously discussed in Section IV of this report. Moreover, both air and noise impacts are subject to improvement over the long-term through new technology. Similarly, the energy resources required to provide the project with electricity and gas, and the construction materials and labor used will constitute an irreversible consumption of these resources in the proposed project. Also the effects on the land form, fauna, flora, paleontological resources, increased run-off, water quality, public services and utility requirements is irreversibly committed.

## X. THE GROWTH - INDUCING IMPACT OF THE PROPOSED ACTION

The proposed development of a regional shopping center, related recreation/commercial facilities, and 1,450 dwelling units with a neighborhood school and park, will obviously contribute to the growth trend in Chula Vista and nearby areas. This growth reflects the current public policy expressed in the City's General Plan - 1990, which states, "By 1990, it is expected that nearly half the population of Chula Vista will be living in new communities located on the mesas and foothills easterly of the Inland Freeway."

The completion of the I-805 freeway in 1975 will provide a very strong stimulus for growth in the area, which has already occurred in a southeasterly direction. The annexation and development of Southwestern Community College, nearby subdivisions, and secondary schools have followed a public planning and growth policy which may be irreversible. Each individual project extends streets and utility services which facilitate the development of adjacent properties, and thus provides some growth-inducing impact. All are supported, however, by previously established growth policies which reflect market demands for additional housing and related public and private services.

The proposed extension of "H" Street east of I-805, to a southerly connector to Telegraph Canyon Road in Phase I will improve accessibility in that area, and therefore have further growth-inducing impact.

In Phase 3 of the proposed project, "H" Street will be extended an additional 2 miles to the east, to a direct connection with Otay Lakes Road. This action will have a substantial growth-inducing impact because it will provide major street accessibility to a large undeveloped area, and complete a continuous loop system between Otay Lakes Road and I-805. It should also be noted that the extension of the street system and development of the surrounding areas are consistent with the adopted General Plan - 1990 of the City of Chula Vista.

San Diego County has continued to lead nearly all areas of the country in growth and, in spite of the current slump in housing construction, can be expected to attract new residents at relatively high rates in the future. As desirable areas are absorbed in the North San Diego area, and the increased accessibility provided by I-805 becomes apparent, this area will attract a significant amount of the regional growth pressures. The proposed project is therefore an inducement to further growth in the community- physically and economically.

The commercial aspects of the proposed project will also have a growth inducing impact. Large numbers of shoppers would be coming to the new center and the pressure for zone changes to allow "spin-off" commercial floor area will be present. Because of the large areas of vacant land near the proposed facility, the growth inducing effects of the regional shopping center and the proposed access roads, there is likely to occur a fast paced development of the area between I-805, Otay Lakes Road and north of Telegraph Canyon Rd. This development will be of a residential nature and will require further public and private support facilities. It should be noted that to separate the growth inducing effects of this project and I-805 is at best very difficult.

XI. ORGANIZATIONS AND PERSONS CONSULTED

Governmental Agencies

City of Chula Vista

City Manager

Planning Department

Engineering Department

Fire Department

City of Chula Vista Elementary School District

Sweetwater Union High School District

County of San Diego

Air Pollution Control District

County Engineering Department

State of California

Air Resources Board

Department of Transportation

Private Organizations

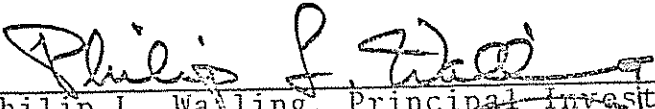
San Diego Gas & Electric Company

Real Estate Research Corporation

## XII. CERTIFICATION OF ACCURACY AND QUALIFICATIONS

### Certification of Accuracy

The environmental information in this report has been compiled and analyzed from the sources and individuals indicated. To the best of our knowledge and belief this information is accurate and correct and reflects our best professional opinion of the environmental impacts associated with the proposed Plaza Del Rey.

  
Philip L. Walling, Principal Investigator

### Qualifications

This report was prepared by WESTEC Services, Inc. of San Diego, California for the Plaza Del Rey. WESTEC Services, Inc. is a consultant to the owner, Dr. Leonard Bloom. The individuals participating in this impact analysis and their areas of contribution are as follows:

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#### Traffic

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XIV.

I N P U T

Transcript of public testimony at public hearing  
on EIR-74-5, Plaza Del Rey Regional Shopping Center,  
before the City Planning Commission on June 12, 1974

ling: Mr. Chairman, my name is Philip Walling of Westec Services, Inc. Since I signed the certification sheet in the report I got to get up here and introduce myself and the rest of the consulting team. The report, as you've seen, is a pretty complex document, lots of items are covered, a lot of different areas of expertise are required. Dave Parkinson is here, also of Westec Services, who worked up the air quality and noise aspects. As Mr. Robens mentioned, Al Krier of Alan N. Voorheis and Associates is here, and he is responsible for the traffic and transportation portions of the report. Rod Strahan of Wilsey and Ham who did the site planning and civil engineering aspects, and Mr. Carroll Sweet of Real Estate Research Corporation, who prepared the market analysis, which is a separate report from the EIR. Mr. Beam's comments are certainly familiar to us and I won't repeat them. I would like to add just one comment that the EIR is a supplemental document pertaining only to the western 450 acres of this total 1400 acre ownership; so it's confined to that area except for certain things like traffic and air quality, which must be addressed on a broader basis. We believe we've prepared a report with the best available information, everything we could lay our hands on. Reports like this are always subject to certain amount of challenge for lack of detail and so on; obviously, some judgments have to be made on certain things by all parties and we hope that your consideration of the adequacy of the report will be addressed primarily to the matters of substance, and I think the staff has spoken to those already. Since a summary of the report would take an awfully long time to do an adequate job, we're just going to sit back, unless you have any questions right now, we'd be happy to respond to your questions later on after you've taken some public testimony, whatever is your pleasure.

Valensky: I'm Mrs. Al Valensky. I live at 93 East Shasta Street, and we've been before the Commission before. I'm representing the Hilltop Home Owners Association this evening. We would like to know as home owners why we haven't been notified of the Commission's intent to rule on the EIR report; previously you have notified us. We would like to know if this is the same one that was considered unsatisfactory by us before, and if so, we would like the opportunity to read it for errors before it's passed upon by you. This is as it pertains to the H Street traffic.

Chandler: Before you go any further, we are not going to pass on this tonight. We are taking public testimony on it tonight; we will close the public hearing but the action on approval or disapproval of the report will not be made until either the 26th or the 10th of July, which will be decided at the end of the public hearing tonight.

Valensky: Then I will make a request that we be notified of it, or our interest in it to that effect. Also, why has the Hillside Ordinance, passed by the City not been enforced--that was another question.

Chandler: I would have to ask Mr. Peterson the latest status on that; maybe he can tell you.

Valensky: Before I have those questions answered, I have some of my own thinking that I'd like to present to the Commission.

?: Mr. Chairman, I think at this point it might be appropriate to inform Mrs. Valensky that the application, I would think, of the Hillside Development Ordinance would pertain to the project itself, and we are not considering the project, we're considering the EIR document.

Valensky: Well, that should be in the EIR document, shouldn't it.

Rice: No, no, no.

Beam: I might comment, the chief reason, really, is this property has not been rezoned. There is an ordinance on the books, the Hillside Modifying District, but as of yet Council has not taken any action rezoning properties to that so this property is not subject to that.

Valensky: All right. This is my own thinking, this has nothing to do with Hilltop Home Owners Association. It's upon reading in the San Diego Union the reports of Dr. Bloom's intentions with regard to the area around East H Street, so this is in reference to traffic and the EIR report that it includes. It occurs to me that the Planning Commission should be thinking in greater terms when contemplating the City's part in directing the population growth of this area. The Doctor's project is very extensive in scope and yet the City's projected access planned through East H Street is not in keeping with the plan's ultimate size. This evening I read in the Chula Vista Star that this is going to be a 9 lane street. I don't know how accurate that is. The City plans to project a 6 lane roadway in an area only 80 feet in width, and through an established residential area. This was the last we heard, and since then this 9 has come about, which leaves at least 10 or 12 homes stranded on an island between the two streets, H and East Shasta. Would it not be more fitting for the City and the County, or whoever the powers be in this case, to get together and purchase the Shasta Street homes at fair market price, rezone the other homes from Hilltop Street on down for business and plan for the possibility of mass transit now, instead of finding out later that the City will indeed need these home owned land and starting condemning their yards piecemeal and proceed to bring a freeway to the very edge of these homes, making it untenable for safe, healthful living.

Rice: Mr. Chairman, I think again Mrs. Valensky has strayed from the advertised subject. We are discussing the EIR and again you are interjecting items that pertain to the project. It's honestly not appropriate, see?

Valensky: Well, it may not be appropriate, when can we bring these ideas in?

Rice: When the applicant were to present his project, and what you should be doing is using this time to discuss what's going into the EIR which ultimately will, as the City Attorney indicated, will appraise the decision making by the Council of those adverse effects and those things that are of an important nature as far as the impact this development would have upon the surrounding area and the community, and I think that's the thing you should be utilizing this time to advantage to present.

Valensky: The only thing I can reiterate then are the things we presented before, and this was noise pollution, air pollution and traffic, safety, and the economy of the area.

handler: Yes, that is what we're interested in. Thank you.

Smith: My name is Carol Smith, 87 F Street, Chula Vista. Mr. Chandler and Commission. I'm speaking this evening concerning the fact that Dr. Bloom's proposal should not be considered at this time in Chula Vista. I recognize that there are legal loopholes to be found when one needs them, but this project is being reintroduced a scant six months after it was defeated by the voters at the polls, thus making a mockery of the referendum process. I would like to refresh our memories on the proposition that was voted on in November and then read the opening statement in the current supplement to the EIR. The proposition was L, as you probably remember:

"Do the people of the City of Chula approve the general development plan and schedule for the Sports World Project as modified by the City Council of the City of Chula Vista incorporating a sports arena, regional shopping center and residential development in accordance with Resolution No. 6910 adopted by the City Council of the City of Chula Vista on the 3rd day of July, 1973."

The introduction states:

"The final Environmental Impact Report for that project was adopted by the City of Chula Vista in 1973; however, the subsequent referendum election on the matter of the proposed Sports Arena resulted in the denial of that facility."

The referendum was not held on the proposed Sports Arena; it was held on the project as a whole. I submit to you that these are not compatible. The people of Chula Vista turned down the Sports World project, not a sports arena, and I would not, and I don't believe anyone has the right to arbitrarily decide why the voters said no. Dr. Bloom is asking Chula Vistans before the required year's time has elapsed to accept a project with more housing, more traffic, more environmental degradation and saying, in essence, you had better swallow this mess or you lose a shopping center. Perhaps morality and politics are not compatible, but I'd like to think that in the City where I have chosen to spend my life, the will of the people is still a concern to our elected and to our appointed officials.

I would ask that these proceedings be postponed until November when this project can, by law, be reintroduced in Chula Vista. Should this request be denied, then the City is in essence stating that this plan is substantially different than the plan voted on in November. Although I would not agree with this decision, if that be the case, then this draft EIR supplement is invalid. A substantially different project requires a new draft Environmental Impact Report, not a supplement, and this is essential before this project can be considered. My request then is two fold: I request that the City not here this project until the November when the year required by law has passed; or should the City Attorney rule that this is a substantially different project, then the City is obligated to consider a new and single draft EIR, specifically designed towards this particular project. It is my sincere hope that these considerations become a vital part of your decision making. Thank you.

Chandler: Thank you, Mrs. Smith. I guess I have to defer to you, Mr. Beam, what do we say in this case?

Beam: First I'd like to say and reiterate that the Commission is not tonight, nor have they the power to approve this project. What they are talking about is a supplemental Environmental Impact Report. I believe Mr. Reid could probably speak to the issue of whether or not a new EIR is required in this particular project. I would have to say, though, that I think the supplemental EIR as it stands, and noted by Mr. Reid to be complete in all regards as the State law is applied to it. But on the question of a new versus supplemental EIR, I would like to defer to Mr. Reid.

Reid: Although this document is called a supplemental to the original EIR that's only because it used some of the information on the project setting, circumstances have not changed during the period. The document contains all the parts necessary to be a legally viable document under State law. It is an independent document, as far as its analysis of the environmental impacts are concerned.

Chandler: The question that I have related to what Mrs. Smith said was, the timing of this submission based on what happened on the voting referendum here a few months back.

Reid: I might just note that that portion that was quoted out of the introduction to the draft EIR is incorrect and we had already planned to modify that in the final report.

Lead Voice in  
Audience

How in the hell can you modify his report? You guys--this ain't democracy. I don't know what the hell you call it, but it ain't democracy.

Chandler: Order, please.

Beam: As I've said before I think the issue isn't even before the Commission nor could they in any way consider this project. All they are considering is an EIR on a proposed project. The action before the Commission tonight is to identify and attempt to list mitigating measures for this project at the time it goes before the governing body, before the decision making body. I realize that many people are strongly opposed to this project and without taking sides I would offer a bit of advice that if you are strongly opposed to the project the best way you can note your opposition is to present the facts of the adverse impacts of this particular project to the City Council. The best vehicle, and the vehicle mandated by State law for that, is the EIR. I think, frankly, you are well advised to speak to inadequacies, if you feel there are inadequacies, in the EIR to best forward your position.

Rudolph: Mr. Chairman, I was wondering if law states that it cannot be brought up again in a year, can we legally be considering any kind of report. I thought was the issue that was raised, and that is speaking about the EIR.

Beam: I realize that particular issue. I do not feel though that this project is a project that was the subject of the referendum, I feel it is a different project. It's a matter of law now. I am sure there are those who disagree.

Smith: Could we have your opinion in writing, when you make an opinion, in answer to...

Beam: If I am so directed by the City Council, yes, ma'am, you may.

Rice: Based on the City Attorney's statement and the indication by Mr. Reid that this is a legal document, I think those two things resolve that particular point and I think we should proceed with hearing comments relative to the EIR.

Chandler: We are not making a decision excepting .....

ice: We are simply taking input tonight on whether or not the EIR is an adequate document on which to base the--all the conditions relative to this type of development.

McQuillan: My name is Mike McQuillan. I live at 4425 Vista Nacion in Lynwood Hills area. Along with what Mrs. Smith just said, what I would like also in writing is a statement, a legal opinion by the City Attorney, that when we consider the EIR we are not considering the project. I fail to see how the EIR does not relate to the project. If there were no project, would there be an EIR. In considering the EIR, we must be considering some project. Are we talking about the airport on Otay Mesa, or what are we talking about in the EIR if it is not the project. Therefore, prior to considering an EIR there should be a legal opinion, in writing, that this is a different project and that this is an adequate document in itself and that no other information outside this document should be considered environmentally.

Beam: First, I think you have a point in that I think I probably mislead you. Of course, there is a project. There is an EIR on the project, so what I apparently failed to convey is that this body has no power of approval or disapproval of that project. The only power that this body sitting here tonight have is to take public testimony on the environmental impact report. Now as that report applies to the project, I think it's obvious that, yes, the project is brought up, but my comments specifically were an attempt to inform people here that their chances to protest the project are not limited to the EIR because even if adverse findings are made in the EIR, that, in itself, does not accomplish a cessation of the project.

McQuillan: Understood, but nevertheless, this is a consideration of the project by an officially appointed City Commission. If it is not an investigation or a consideration, what is it.

Beam: It's an investigation of the report stating...

McQuillan: A report about what?

Beam: The project.

McQuillan: Fine. Then we are considering the project, here, tonight, are we not?

Beam: I think we are arguing in the matter of semantics and I can't find it very productive at this time.

McQuillan: I agree. You're not arguing logically, though.

Peterson: Let me just make a statement that may help to clarify it. I think this is a hearing on the environmental impacts of the project should the project proceed. The Commission isn't trying to decide tonight whether the project should proceed or not. They're trying to decide what the environmental impacts would be if the project should proceed, and that's what the testimony should be about.

McQuillan: I agree, but what we're discussing here is even the appropriateness of even considering an EIR or having a public hearing.

Peterson: Mrs. Smith raised that question and that, frankly, is a new one to me. I



Peterson don't know quite how to respond to that. I am inclined to think that the Commission, if it wishes, should go ahead and entertain testimony. I don't know if the City Attorney's office . .

McQuillan: You see, my point is, I think we should have a definitive legal opinion, in writing, not an oral statement that "I think", but a legal opinion in writing, stating that this is a different project and why it is a different project. Theoretically, according to what Mr. Beam said, if Dr. Bloom wished to make 50 square foot less of sports arena, this would be a different project. How different is different? I think we need a legal opinion on this prior to having a public hearing and considering anything in relation to this project, including a so-called supplemental environmental impact report.

Beam: First, Mr. Chairman, if I might, I'd like to state that this particular objection was never raised with our office prior to tonight. I think if it would have been raised we would probably have had a written opinion for you tonight. But I think, notwithstanding that, that the Commission at this time is not prohibited from going forth and considering testimony on the EIR. Now if you wish a written opinion from the Attorney's office I assure you it will be forthcoming but you should direct that request to the City Council because we do not, unfortunately, have the power to respond to requests outside of the Council for written opinions. But we would be most happy to come forward with a written opinion if we are so directed by our Council.

McQuillan: As I understand it then, whether or not the project can be discussed, an EIR for that project may be discussed.

Beam: I feel, as I've said before, that public testimony may be taken on the adequacy of the EIR before the Planning Commission tonight. That's my legal opinion, Mr. McQuillan.

McQuillan: No reason, just opinion.

Beam: Well, frankly, I don't feel constrained to justify my legal opinion at this time.

McQuillan: All right. While I am up here I'll go ahead and make some comments concerning this report. I find it is very difficult to understand the report. Is this report a complete document, or are there other outstanding reports which are part of this which are not incorporated? What I have in my hand which has been checked out from the City Library.

Reid: The document is complete in and of itself as far as legal requirements are concerned. It is, of course, as we are going over the same territory again, as I said previously, is based on base reports contained in EIR-73-1.

Rudolph: Mr. Chairman, there is also an economic report. I don't know whether he has it or not.

McQuillan: I do not have an economic report. For this reason--there are apparently a large number of reports which pertain to the environmental effect of this project, and I feel that the existence of so many different reports make it very, very difficult for a member of the public to adequately consider the environmental effects of this project. I think we should have one document in which all of these considerations are spelled out.

Reid: As far as the effects of the project are concerned, they are contained in this document.

McQuillan: Allright. I would really feel that the City should be obligated to prepare one document for the public to inspect prior to adaptation, as I understand it now, tonight is the last night for the public to make available its opinion to the Planning Commission concerning the adequacy of this report. If we find there is information concerning the project in a report that was a year old, which never was collated--I was never able to get a copy of report 1-73, which was one document. There was an original document, there was supplements 1 through 6 or 7, I believe. These were in existence only for the use, I believe, of the Planning staff, however, I was unable to get any, there was never one delivered in the library, so that between that and this, my feeling is that the public has not yet been adequately appraised of the environmental effect of the project, and this hearing should be continued.

Chandler: I would like to interrupt. I'm sure there were documents in the library, the big thick one you're talking about. I was around at that time and long before that; I know they were available, I don't know how many and I don't know who took advantage of them, but there certainly must have been at least one over there.

McQuillan: No, that's not what I'm saying, Mr. Chandler. There was a large thick document and then there were several supplements, and there might be a page 3-6 in the original document and then three or four of the different supplements, and each of these pages may have had different factual material contained therein. Which one was correct? In other words, there never was really one document which stated the whole thing.

Chandler: Of course there were a great number of changes going on all the time, that thing was hard to keep up with.

McQuillan: Between that and this, my point is, the public has not had a chance to adequately inspect this document, and I would like to have the hearing at least continued for two to four weeks so that the public may be able to have adequate time to inspect this, the other document, the economic analysis, the market study and all those other things.

Reid: The final report as adopted by this Commission was available in my office immediately after its adoption. Several people came in to inspect it at that time and it was, of course, presented to the decision makers on the project.

McQuillan: What I find in the report generally continues the philosophy that was contained in the report submitted roughly a year ago, notably that they're not really trying to make an objective study, what they're trying to do is make a justification for the project. One very definite thing which carries over is, they like to say, concerning the traffic to the shopping center, that only 25% of this traffic will be original trips, that 75% of that traffic would have gone through Chula Vista anyway. But then, later on, when we talk about the economic impact of the project, we find that 72% of the money spent in this shopping center is to come from outside of Chula Vista, but only 25% of the smog. So, again, we're maximizing the economic goodies and we're minimizing the smog. Again, in the noise consideration, they consider on Lynwood Drive that no trucks will be using Lynwood Drive. I don't know if the City of Chula Vista has one single street in existence right now on which trucks are prohibited from using. I don't know if the County has very many. But, in stating that no trucks will be allowed on Lynwood Drive they are able to reduce the normally unacceptable noise boundary down to about 95 feet. I think if you put trucks on there it would probably go up to about 150 or so. Again, this is a minimalization of the adverse effects of the project. Again,

McQuillan they use 65 decibels on the A weighted scale as normally acceptable. I understand this is based on criteria by the Department of Housing and Urban Development, but this is a department which is primarily concerned with housing and urban development in large cities. I submit that this area of Chula Vista is not a large city and what might be acceptable in New York or Chicago is not acceptable noise background in Chula Vista. Somewhat over a year ago I presented a federal study to the City Council which showed that one of the larger shopping centers in the Los Angeles area had an average decibel count of roughly 62 to 64 dBA's during the maximum shopping hours. This would be normally acceptable, according to HUD standards, and this would be normally acceptable right about where I live according to HUD standards but not to me. I, therefore, find the philosophy of the document such as to be a justification rather than a study, a factual study, and I find so many differences here, and the staff has found so many, that I really feel that the public should have an additional opportunity beyond tonight to comment, because there are going to be so many changes made in it, that if you present something like this, which is terribly inadequate, you are not really given a fair chance to investigate or comment upon the environmental effect of a project. I therefore request that you continue the hearing for two to four weeks, or at least take some type of action which will allow the public the right to make further comments on the environmental effect of the project.

Valensky: I'm Mrs. Valensky and I'd like to add that I agree with what the gentleman said, that we should have more information on this EIR report and that the homeowners association at Hilltop would like to have this information also.

Velugo: I'm Ed Velugo, 211 East Millan Street. This is supposed to be a supplemental report that you are considering tonight. I'd like to know the date that you considered the original report. I'm not a lawyer, I'm just an accountant but a supplement is 1A, so I must have come before it. If this is a different project, I'd like to know what the title of number 1 was and the date that you considered it. I don't think you've ever considered this number 1 for this project, if it's a different project.

Watry: My name is Peter Watry, I live at 81 Second Avenue. (Text of comments submitted. I'd also like to take a moment to express my disappointment in Mr. Beam's answer to Mrs. Smith's question. These procedures, including the EIR, has taken a great many hours of staff time and public time, if these hearings are illegal they should be ceased as soon as possible to save time and money. If these hearings are not illegal, they certainly are immoral and beneath the dignity of the Planning Commission.

Plaza Del Rey E.I.R.

statement before the Planning Commission, June 12, 1977

by Peter Watry  
81 Second Avenue

I wish to speak very briefly to just two issues in this version of the EIR, the Market Study and the Cost/Revenue Study.

The validity of the market study is important for at least three reasons: (1) in determining the effect of this shopping center on other businesses in Chula Vista, and therefore the resulting positive or negative impact on other parts of the City; (2) in determining how many square feet should eventually be approved; and (3) in making the necessary calculations in the cost/revenue study, and evaluating other statements presently in the EIR.

This is not the time or place to go into a thorough discussion of the market study, but it would be helpful to point out to you some of the questionable assumptions of the market study in order to ask for corrections in the EIR and in the cost/revenue portion of the EIR particularly.

First, as to the assumed Trading Area. I would like to use a transparency, if I may, to illustrate several of these points. This is transparency I used before the City Council last year. The map is only approximately accurate. The green dashed line indicates my estimate of the limits of their potential trading area. I would agree with the staff's opinion that Lemon Grove and Spring Valley should not be included in the Trading Area. Incidentally, the Wellwell Banker market study for the proposed May Co. in National City also excluded Lemon Grove and Spring Valley. The May Co. study concluded that 90% of its business would come from within six miles, and page 46 of this EIR notes that "current traffic studies indicate that an average one way trip length of five miles is representative of a regional shopping center similar to this (Plaza Del Rey's) project." I agree.

A second key assumption of the market study was that people now living in their assumed Trading Area currently spend one-half of their Shoppers Dollars

outside the Trading Area. Well, the Trading Area line was drawn just barely on this side of at least two regional shopping centers, so again including Lemon Grove and Spring Valley has distorted the analysis. Also, there was no supporting real data for such an assumption.

The market study assumes that Plaza Del Rey would capture 45% of whatever shopping is being done at Mission Valley-Fashion Valley by area residents. But that would require an instant center equal to Mission Valley-Fashion Valley in quality. That is unlikely, as I will demonstrate in a moment.

The market study failed to address the problem of the distribution of income in their Trading Area. The distribution is important in two respects--geographically and as to income levels.

The red or purple numbers on the transparency indicate how much the average income in that sector is below or above the San Diego County average. Except for Chula Vista, which is just about average, and the Sweetwater sector, which only involves a relatively small number of people, the projected center is entirely surrounded by areas of significantly below-average incomes. Not the kind of population that could support a high-quality center. Those kinds of incomes are found in north county.

And in terms of 1970 incomes, whereas 23.2% of all families in San Diego County had incomes over \$15,000, only 17.1% of the families in the cities of National City, Chula Vista, and Imperial Beach had incomes of over \$15,000. And whereas the cities of National City, Chula Vista, and Imperial Beach had 9.7% of the total County population, they only had 7.2% of the County families with incomes of over \$15,000. Hardly the kind of income distribution to support a shopping center on par with Mission Valley and Fashion Valley.

With those facts in mind, let me now suggest a couple of changes in the body of the EIR. On page 15, in the fourth sentence down, it says that the center is "readily supportable by the population base and available dollar volume potential for shoppers' goods." I urge that that sentence be toned down considerably--it is not so readily supportable.

And on page 105, fourth sentence from the bottom, it says that the market study "clearly indicates adequate support within the Primary Trading Area for the proposed Plaza Del Rey." I again urge that it is not clear at all.

Perhaps the most important aspect of this EIR is the Cost/Revenue analysis, and the resulting effects on the taxpayers of Chula Vista. I will only make two brief comments at this time, as the staff has indicated it has yet to make its full evaluation.

First, as to COSTS. The EIR simply assumes that the current total cost per acre and cost per person for all of Chula Vista will apply equally to Plaza Del Rey. This is totally insufficient for two reasons: (1) The cost per acre or per person for an entirely new development may be significantly higher or lower than for existing Chula Vista. This point is so important that it deserves careful analysis of the actual expectations, and not just blindly applying some past average. And (2), the City's budget figures do not reflect depreciation accounting, that is the cost of existing capital structures. A large new development would require a great deal of capital outlay and this cannot be calculated from the City's budget.

And secondly, as to REVENUES. Particularly, the all-important sales tax revenues. The projected sales tax revenues to the City are grossly exaggerated for three reasons: (1) It assumes that the market study is accurate. (2) It assumes that the shopping center operates at full capacity from the very first year. And (3) it does not give a net sales figure--that is, it does not indicate the loss of sales tax income to the City because of business taken away from other businesses in Chula Vista. On page 47 of the EIR,

when discussing pollution, it indicates that this shopping center will contribute very little new pollution because "75% (of the trips) would have been to another commercial shopping facility in the Chula Vista trade area." Likelise, only new sales made in the city will contribute any new sales tax revenue.

One last minor correction in the Cost/Revenue Analysis. On page 7 it indicates that Phase II of the residential development will have a total of 1,110 dwelling units. And on page 14 it shows an ultimate population for Phase II residential of only 1,080 -- that is less than one person per dwelling unit.

I conclude my presentation with a request: in view of the importance of this project to Chula Vista, and in view of the recent controversy over Sports World, and in view of the critical importance of the economics of the project, I urgently request that the public hearing be continued so that citizens may speak to the final version of the EIR, and not merely to a draft of it. The changes that must be made in the EIR are so important that the public should not be denied the opportunity to speak to them.

Thank you.

Lassman: My name is Esther Lassman. I live at 264 Rogan Road in the City of Chula Vista. I don't want to reiterate or repeat the many things that have been said here tonight and particularly by Mr. Reid, which I had intended to do. But I do want to point out, and forgive me if there is a small repetition here. The supplemental draft of the environmental impact report of Sports World opens by stating that this draft will confine itself to only the western 450 acres of the 1400 acre Sports World General Plan. However, in speaking to traffic figures, as Mr. Reid pointed out, air quality and noise pollution, which are the prime consequences of land use, it expands the report to include the impact from the entire 1400 acres. Let us briefly consider some of the traffic figures in the draft report. It pointed out that the entire project after full development results in no significant difference in the impact of traffic. In fact, there is shown to be less than 4% increase in the average daily trips of two way traffic over the entire project. Yet the draft supplement shows that on the 450 acres in question, that the size of the regional shopping center has been increased by 33%, the amount of residential units has been increased by 35%, 33% for the shopping center, and though there is a decrease by approximately 25% in the area devoted to recreational commercial professional use, there is still a marked increase, 17% in the traffic in that area. These computations come from figures in the EIR of Sports World and in the draft supplement; and though the sports arena is deleted, the EIR for Sports World stated that it contributed only 2.5% of the traffic to this entire project. There is a questionable gap in the impact resulting from the development of the 450 acres considered in the draft supplement as compared to the impact of the yet undefined development of the full 1400 acres. The draft supplement states that changes in land use and density designations may occur before the full development can take place. It circumvents what will happen on the 450 acres development only to emphasize the impact on the full development, which may be subject to change. This is so stated on the first page of the draft supplement. This draft supplement provides at best only an incomplete and confusing and conflicting evaluation of the impact of traffic, air pollution and noise pollution. I won't go into any other points; Mr. Reid pointed these out. But, there are two other areas that have been either briefly touched on or not touched on at all in the draft supplement. The first item deals with drainage. Mr. Reid, again, did speak to some degree with reference to drainage. But we recognize that the water that flows down from the project, Plaza Del Rey project, and the enlarged project stops at Edgemere Drive and there is no established accommodations for these waters beyond this point. This is west of I-805. The construction of a flood control channel to carry the flow to the coastline is questionable; it has yet to even be funded. This aspect is not touched on in the draft supplement. The possible addition of more water at this point if the May Company fills in the holding pond on the Bonita Golf Course will further endanger the area. Serious drainage problems are created by the Plaza Del Rey and the greater project, yet this draft supplement provides no solution. Another egregious omission in the draft supplement is the subject of the handling and disposal of the waste products generated by the enlarged commercial, residential, recreation area. This must be spoken to in the draft supplement. All in all, again I will be repeating myself, I think what I have to say, what we have all had to say, independently, suprizingly so, is most important, that this draft supplement is incomplete, fragmented and totally lacking in through comprehensive survey of all the environmental impacts of the Plaza Del Rey. If this is



in fact, a new project with substantial changes, then it requires a new Environmental Impact Report of its own. There are too many unconsidered facts, the application of city Hillside Ordinance, the application of the indirect sources ruling of EPA and unbiased market analysis and many other, to render this draft supplement a comprehensive and applicable document. I do also request that the hearing be continued and the consideration of the particular draft supplement, because it is incomplete and though I along with a few other whom I know, have given it the greatest scrutiny, we still have not had in our hands all the elements that make up this draft supplement, they're still haven't been written I understand.

Chandler: Thank you. Any one else?

Robbins: Text of comments submitted:

Robbins: Mr. Chairman, members of the Commission, I'm Darryl Robbins. I represent Friends Of Rice Park, a recently formed volunteer citizens group, made up of citizens throughout Chula Vista, and the greater South Bay area, with the purpose of encouraging sensible land use planning and responsive local government and public park use with open space planning of the Rice Canyon watershed. I'm before you tonight to address myself to a point found lacking in the Environmental Impact Report Supplement where alternatives to the project planned for this site are discussed. Among the alternatives I fail to see mention of is the potential and public need of a regional type of multi-use recreation park. A majority of this 1400 acre region could be managed in its natural condition, while scattered areas already damaged beyond recovery as a result of off-road vehicle activity, could be planted and landscaped for recreational camping areas. Upon acquisition and city annexation for a regional type park, it could be developed and maintained by the City Park and Recreation Department. Development of the Park's recreational assets could proceed in phase implementation. The possibilities: 1) The scarred and denuded slopes of the Lower Rice Canyon near I-805 could be planted during the rainy season with adaptable types of shrubbery: eucalyptus, pepper tree and Acacia. This landscaping could compliment and beautify the area and this would be best for light use camping or picnicing, site provisions for

tenting and small trailer or campers could be provided at this locality. Necessary sanitary facilities could be constructed in simple design and a minimum of cost. Water at this site could be easily obtained from existing water lines or possibly pumped from the ground water table. The earlier mention of trees could provide much enjoyed shade for lawns and picnic areas. 2) At some future date for this site, possibly a swimming pool and tennis court could be considered. 3) Weaving through the hills and canyons of this land, is a present network of equestrian trails. These could be provided with small guideposts at the intersections. 4) Other scarred and denuded areas adjacent to the camp site could be cordoned off and designated as off-road vehicle use areas, which would still provide a host of downhill and uphill thrills and challenges as they always have in the past. The committee of which I have mentioned, the Friends Of Rice Park, oppose the plan as outlined in the EIR, for the following reasons: The objective uniqueness of the area. In the Rice Canyon watershed, we find a chaparral form, wildlife habitat and regional park potential unique to our rapidly urbanizing South Bay area. In view of the ever-increasing social pressure brought about by urban stress in our area, it is compelling of preservation of the Rice Canyon watershed in an essentially natural state. Air Quality Degradation. In its present natural state, the chaparral-covered mesas and canyons of Rice Canyon watershed provide an oxygen replenishment to the inversion-plagued atmosphere over our South Bay basin. Attractions serving to affect the concentration of vehicular traffic including a percentage of vehicles from Mexico,

where there are no controls over vehicle emissions by the Mexican government, would only turn the Rice Canyon watershed into a smog producer instead of an air replenisher. Abundance of Endemic Flora. Two varieties of cactus found in the Rice Canyon watershed, the Serpentine Cholla and the Velvet Cactus are seriously threatened with elimination by urban development in its restricted southwest San Diego County growth range. As current urban development trends continue, the Rice Canyon watershed will provide the last livable habitat for these unique plants. Abundance of Endemic Fauna. Inhabiting the dense stands of cactus in Rice Canyon and throughout the watershed, including the 450 acres we're talking about, is the Cactus Wren normally found in desert regions. Also, the Coast Horned Lizard, or Horned Toad as many are familiar with, Cooper's Hawk and Sparrow Hawk or the Kestrel, have frequently been observed on or near the project site. Finally under consideration is the paleontology. The 450 acres under consideration for Plaza Del Rey are a unique geologic asset. A field survey found an abundant occurrence of fossils in the Pliocene San Diego Formation which is 2.7 million years old. This soft sandstone formation yields layers bearing fossil sea shells and bone fragments. However there are the numerous beds of strongly cemented, coarse to medium grain sandstone which offer some difficulty in removing the enclosed fossils, although this is surrounded by softer material easily yielding whole fossils. All these sites occur west of the La Nacion Fault, thus directly involving the project site. The organization I'm with has done a study of regional park concepts pursued in other counties. To Jim Peterson, I've submitted

a copy of the Monterey County Study and document which details the acquisition of the Toro Regional Park. It includes a statement of funding resources used to acquire the land for this park. Possible funding resources to be investigated include the Land Trust Institute, they investigate the potential of an area for regional park use, and could fund money. The Federal Housing and Urban Development, under Title 7 of the Housing Act, Monterey County received nearly \$675,000 for Toro Regional Park. This same park received additional funding amounting to \$496,500 approved by the State of Calif., Dept. of Parks and Recreation, under the State Park Open Space and Historical Bond Act of 1964. Monterey County's share of this acquisition cost was \$200,700, total cost of Toro Regional Park was \$1,369,750. The area size of Toro Regional Park, 4,800 acres, is considerably larger than what we are confronted with here in the 1,400 acre parcel; so that the cost of Toro of course is greater than what we may encounter. In closing, I'd like to state as a reflection of my own personal observation regarding the similar request of others tonight, that it would be desirable as a matter of proper procedure that this public hearing be continued to a later date of 4 weeks or possibly 6 weeks. There are a great percentage of the population of Chula Vista whom do not have the adequate background and training to quickly analyze EIR's, stating from my own experience and limited background, it has taken a great deal of effort to understand and study the content of this report. Such a continuance of this hearing would give the people of Chula Vista a fair shake at being better equipped to address this issue. Thank you for your time.

- Chandler; Thank you Mr. Robbins. Any body else wishes to give some testimony for or against.
- McMurrey: I am Cathrine McMurrey, 760 Nacion. We have just recently moved into the area. I have not had time to study the environmental report of the, the previous environmental report of Dr. Bloom's project. I have not had time to study the now supplemental report, I would like to propose that the hearing be continued so that people, possibly that have moved into the area, are considering making this area their home, be able to study the environmental report. Thank you.
- Chandler: Any body else? -----Mr. Reid, Mr. Peterson, what are your feelings on the ending of the public hearing or a continuance.....
- Peterson: I'm inclined myself, Mr. Chairman that in view of the strong interest that has been expressed tonight, and the lack of time on the part of some people to review and respond to the report, that a continuance would be in order to allow them additional time to review that matter.
- Chandler: What would you set as a date?
- Rice: Mr. Chairman, while they are deciding on that time I would like to comment that I would wholeheartedly agree, I think that the scope and therefore the scope of the EIR here is substantial that I think perhaps there are a great number of people here who would perhaps like to digest this information and make input that perhaps haven't been able to do so, because others might have kept the reports out a little longer in order to have the time to go through them so, I would like to see the thing continued for a little longer to give these people a chance to have the opportunity to do so.
- Mudolph: Mr. Chairman, I would also like to make a comment, it has been in the posting period for some time the way it is now, but I think there have been considerable staff revisions proposed that I think should be available to be public for discussion, I also think that perhaps it might be valuable since is considered an amendment if a copy of the previous EIR could also be put in the library so that the information that is not included in here that is referred to, could be available. Would that be possible?
- Peterson: Yes, I think that that could be made available, it wouldn't be really the subject of the hearings as Mr. Reid just pointed out to me. As to the length of the continuance, I don't have any feelings myself, one choice would be if the decision is made something on the order of 4 weeks would be necessary for adequate review, would be July 10th, if people think they could respond more rapidly it could be continued to June 26th. One of the other of those two dates I think would be appropriate.
- Floto: Mr. Chairman, when will the completed revisions be available to the people .....
- Chandler: That is entirely up to the two gentlemen sitting to your left there.
- Harner: Mr. Chairman, I represent DLB, the corporation that is sponsoring the report, we have met, If I can check with Mr. Beam, the filing requirements and the posting requirements when people did have availability to the report, there were 25 copies of the report provided to Mr. Reid, how many?, 40 copies of the report, ample number, ample time has passed, continuation is really not going to result, and any major changes is insofar as requiring that kind of additional time for consideration, and it seems to me, that we have met the

requirements, from a legal standpoint, we are at a point in the hearings that the information has been provided, there has been ample for comment to the staff of the City, there has been obviously, very little input to the City staff by the people who have raised objection to the report before tonight and it seems to me that we're dealing with a delaying tactic in so far as holding off the resolution of the problem with the EIR. Now we are not talking about the project per se, in terms of its approval, we are talking about the EIR.

Chandler: I would like to state the public hearing becomes a part of the overall EIR, the input that is given by the public so therefore those items are added to what they already have.

Harnér: It would seem to me it would not require all that time to digest the input that these people have they obviously are very well prepared, they are obviously ready to make their input to the EIR people in the city department, I don't see any reason the input could not be received and digested by your own department in a lesser period than 4 to 6 weeks. You know these people are obviously well prepared, their incorporation of the material in the report is simply up to these people to digest and incorporate, I just don't understand why that kind of additional time is required.

Chandler: I thank you for your information.

Beam: Mr. Chairman, I think its probably incumbent on me now to lay the issue out as clearly as I can before the Commission. I think that it is correct to say there has been the adequate legal period required for review of the draft EIR. However, that does not mean that the Commission's powerless, if they so chose to continue the public hearing to some future time, I think however though, if you chose to continue the public hearing, you should do so specifically because you do not feel that the information incorporated in the draft EIR isn't late and there's additional time needed to either take further testimony as to the completeness of the EIR or to incorporate the recommendations that the staff has made in your staff report. But you are free to either close the public hearing at this time and ordered it continued based upon what your feelings are as to what the record indicates in terms of the completeness of the EIR. That's essentially your decision.

McQuillan: Mike McQuillan again. I would like to point out that the, what the public wishes is to comment, not on the incomplete, inaccurate, sketchy, justification document, but the right to comment on something prepared by the Planning staff. More time to comment on this might not be really appropriate. While sitting back here I crossed another obvious error, you actually did mention it somewhat, they talk about the traffic coming up from Mexico, where they are going to get 20% of the money for the shopping center from Mexico. As I read the document, they make the air pollutions assumptions based on 1977 standards if we're going to have 80% of the cars on 1977 standards and 20% on no standards at all in Mexico, this would have a really serious effect on the air pollution calculations and it would take some time to really consider this, what effect this would have. The gentlemen who prepared the report says that the public has had enough time, to analyze this, well that might possibly be true, that the public has had enough time to analyze this, but the report is so inadequate and inaccurate that the public needs more time to comment on the facts, not on what has been presented here. Thank you.

- Walling: I'd just like to repeat that we think the facts are there, we're prepared to respond to all the points that were raised and even if you do continue it, I think it might be helpful in terms of modifying the report to whatever extent the staff sees fit, but some statements have been made that we don't agree with, based on the facts we were able to gather, and if it's the wish of the Commission we would be happy to respond.
- Chandler: We would be happy to hear what you have to say.
- Walling: I'm going to defer to my colleagues on most of it, however the item of regional park, I happen to have some personal experience with as a planner and working for the County of San Diego about 2 or 3 years ago we did a development plan study for the Sweetwater Regional Park, I'm sure you're familiar with. And like many areas of San Diego and other Counties, sure it would be nice to keep it all open and make it all park land, but there are some real constraints on this, not the least of which is that this property is not designated on the regional park system, we don't think the referendum repealed the city's general plan and we feel that the land uses basically conform to the general plan which is the official planning policy of the City. Now the matters of traffic and air quality I will defer to my colleagues on, and maybe the air quality first, Dave Parkinson.
- Parkinson: My name is David Parkinson, my address is 1520 State Street, San Diego. Mr. Chairman and members of the Commission, it seems like we've been here before. I don't know whether this is the second annual meeting, or not. I guess it is. I would like to address my comments to what I consider are the pertinent points that were raised with regard to the issues of air quality and noise for your consideration. Firstly, let me point out, that this report in its distribution went to the San Diego Air Pollution Control District for comment. Comment was received from the Air Pollution Control District and they took no exception with the report nor the findings of the report. So, the official body in this County responsible for air pollution control reviewed it and apparently found it acceptable. The issue was raised with regard to the percentage of traffic coming from Mexico and what that would do in terms of air pollution. There is no question, of course, that Mexican vehicles are unregulated in terms of emissions and that their emissions generally are much greater than the U. S. cars which are under stringent control system. However, I think it's worthwhile to consider, No. 1, that the economic projections show that about 10% of the traffic at the shopping center, at a maximum, will be coming from Mexico. So, at the maximum, we could possibly have a 10% incremental increase in the numbers that we projected. However, secondly, I would like to point out that many of these trips made by the Mexican shopper, were they not to go to the Plaza Del Rey Center, would pass right on through Chula Vista to Fashion Valley or other regional centers, and so, the net effect in terms of air pollution may be the same or greater. The issue was raised with regard to the fact that we stated in our supplemental EIR that 25% of the trips would be, in effect, the net incremental pollution addition to your Chula Vista area of influence because of this project. It was pointed out that this was incongruous with the economic consultant's findings wherein he said that 72% of the shoppers would come from outside of Chula Vista. I think it's important to understand that these are two different factors that we're talking about. We're looking at an impact on the localized area from the air pollution point of view, which includes Chula Vista and communities which are in--areas which are in approximately 5 to 6 miles of the project site.



Parkinson

The economic study is looking at Chula Vista as a census tract, plus these other outlying areas. Therefore, we don't feel that there is a discrepancy here. This is a very complex problem, air pollution from shopping centers. It's so complex, as a matter of fact, at this point in time, the Environmental Protection Agency does not have an approved procedure for analyzing this problem. They're working on it and they expect to come up with something. We wrestled with this problem last year for, I would say, three to four months, with the City staff. We arrived at a number of 25% based on a traffic study that was done. We presented this data to the staff and said if this is not--if you have other information that would indicate other than this, please show us and we'll amend our findings. We have never seen that. It may be 50%, I'm not sure. The important thing as far as air pollution is concerned is, there are two elements. No. 1, the emission controls that are on the automobiles now are beginning to have a marked effect as far as cleaning up the air in this region. Today the air quality in the San Diego region is about equivalent to what it was in 1961 to '62. It reached its worst in 1968. So the improvement is there; now the fact is, however, that we are not going to meet the Federal standards in 1977, for the simple reason that the emission devices that we've got are inadequate and we don't have the mass transit systems yet that are going to allow us to make this final step and meet the Federal standards. But the fact that we don't have the adequate emission standards on our automobiles, nor do we have mass transit, are neither--neither one of these are the type of problem that can be solved by Plaza Del Rey.

I think with regard to noise, I would like to make two comments. Firstly, the point was raised again, this time as it was last year, that the use of HUD noise standards was inappropriate to a residential area such as the area surround the Plaza Del Rey property. The HUD standard of 65 db is not unique to the Department of Housing and Urban Development. The State of California has adopted this same standard in an equivalent form, as has the Environmental Protection Agency. What all these agencies have said, at both the Federal and State level, is that noise levels greater than 65 db on a daytime/nighttime average are unacceptable for residential areas; at 65 or below they're acceptable. This is what we've measured our study on, this is the facts that we've given you in the report.

With regard to distorting the truck traffic on Lynwood Drive, I'd like to point out that there is a projected grade of 10% on that street, which does not lend itself to the use of heavy trucks. I will be extremely surprised if any heavy truck traffic uses that thoroughfare. Of course, there will be a major interchange at 805 and H Street, so there really is not basic reason--now, whether or not the City decides to prohibit heavy truck traffic on that street is a question for the City. However, here again I would like to point out our conservativeness in this study. We assume 5% truck traffic for the shopping center. Quite recently, in order to verify this, we took an actual count of heavy duty trucks at a comparable shopping center in the San Diego region. What we found out was that at a shopping center such as this, which is comparable to Fashion Valley in terms of types of stores and types of services and goods offered, there is a very inflow of heavy truck traffic--something on the order of 100 trucks a day, which we counted over a period of two days into the shopping center with an equivalent square footage of feet. We're talking about a beginning average daily traffic in here of something around 40,000, 100 trucks compared to 40,00 is 1/4 of 1%. We've assumed 5%, so it's very difficult for me to see how we've distorted the facts in favor of anybody but trying to do a very objective analysis here.

- Rice: Mr. Chairman, I would like to ask Mr. Parkinson, when you talk about the HUD requirement, State requirement and so on, of 65 db, again this is predicated on an amount over a given number of hours, an average over an 8 hour period or something like that.
- Parkinson: Well, the HUD, here again, we have a problem. We've got a problem just as we have in the case of air quality, in that many agencies, different agencies are using different criteria right now. Now it's my understanding that some time within the next two months the Environmental Protection Agency will come out with a standard for noise which, hopefully, everybody can then use, and we can get away from right now maybe a half a dozen different measurements that are available.
- Rice: Yeah, but what I was addressing myself to was the fact that anything over 65 db would be objectionable in the housing areas, but only if it averaged over 65 db, it could for a period of time exceed 65 db, if in turn it would average 65 or below over a period of X number of hours. Is that correct?
- Parkinson: My understanding is that the new standards when they come out will call for residential areas to be 65 db or below averaged over a 24 hour period with an increased weighting given to the periods of nighttime between 10 p.m. in the evening and 7 a.m. in the morning, so that even though you have a lower reading in that hour there will be a, it will be given an increased weighting because of the sleeping hours, but it will basically be over 24 hour period.
- Rice: So, in other words, you could have 90 or 100 db, as an example, and still average out to 65 or below during this 24 hour period.
- Parkinson: That's right, if as long as the 90 or 100 were for a fairly short duration. Are there any other questions; if not, I'll--thank you, very much.
- Sweet: Carroll Sweet, Real Estate Research Corporation, my address is 5452 Caminito Herminia in La Jolla. A question has been raised about the trading area in the marketability study for the shopping center. We selected as a trading area, economic statistical areas set by the County in order to have statistics that are readily assembled to work from. The further we go out from the center in terms of accessibility, rather than in terms of mileage, the less we expect to draw shoppers. However, this also is conditioned by the factor or what we call cumulative attraction. That is, where there is a larger number of shopping facilities, instead of defeating each other, the experience is that they draw from a farther distance. This is particularly true with respect to shoppers' goods; those are goods of more occasional trade, people are looking for bargains more and they are going further afield. Now it's true that the historical orientation of Spring Valley and Lemon Grove is to centers in the eastern part of the County. There will be some shoppers from Lemon Grove and we have included those, but made an adjustment in the amount we expect to realize from residents from those areas. If we eliminated Jamul entirely, it would make a difference of only 1.5%, and if our estimates in Spring Valley and Lemon Grove were excluded it would be only 7.5%; the entire adjustment would be only 9% in the entire finding of gross income to the center.

While the tape was being changed, the Commission raised a question about continuing this public hearing as earlier requested.

**Peterson:** Under the normal procedure, following the testimony received tonight, the Commission would close the public hearing. The staff would then prepare the final EIR and that would come back to you two to four weeks from now, but there wouldn't be any public testimony. Part of the message that I'm hearing tonight is that people in the audience want not only a continuance of this draft EIR, they also want to have an opportunity to comment on the staff prepared EIR. In our normal procedures there is no provision for that. This is something I think maybe I need to discuss with Mr. Beam and Mr. Reid, but I think of the possibility of continuing the hearing, say for a period of four weeks; during the first two weeks of that the staff would try to prepare the final EIR, make it available to people for the remaining two weeks, then we'd have a continued hearing. I don't know if that's even legal, but it's a possible compromise.

**Beam:** Well, I see some problems with that, mainly because the purpose of allowing public input, and it doesn't necessarily have to be in the form of a public hearing, to my knowledge, is to take the draft EIR and to incorporate revisions that are deemed necessary. This body is the body that really determines what revisions should be made. Now, there is nothing that can be done logically with the final EIR, that should at that time incorporate all revisions which the Planning Commission feels is necessary to have a complete document. You should do that by saying that the draft EIR has revisions which you feel are appropriate in it; then the staff, working on the direction of the Commission, incorporates those and comes forward with the final document. But there is no provision for review of a final EIR. The final EIR is, by its very nature, something which incorporates all necessary revisions. I don't know, Mr. Reid might want to comment on that.

**Rudolph:** Could it be a revised draft? A staff revised draft, that would be available two weeks from now, and the public would comment on that?

**Beam:** I don't want to determine Mr. Reid's workload for him, but I think the staff can, at this time, work on and I think they probably will, some revisions, but what you call it I think is really irrelevant.

**Reid:** The only thing that concerns me with this type of process is being put in a position where you rewrite a draft for final report, whatever you call it, get input and be forced into the position of rewriting again and get more input, it would just be a continual process. I wouldn't want to invest that much staff time in that particular process. It could just be a never ending thing.

**Rice:** Mr. Chairman, I reiterate my statement I made earlier. I would repeat my earlier statement, I said I would opt for a three week continuation on this thing. I think that should give the public an adequate time to make input to this, and because of the scope of this particular project and the EIR supporting it, I think that perhaps we should make an effort to get all possible, reasonable input to it, although we have met the legal requirements certainly, and I would like to see us give them, say to the first week in July, or something like this.

- Beam: Mr. Chairman, Mr. Reid, am I correct in assuming that if it's the Commission's pleasure to continue it, this for some time, that you will in the interim attempt to lay forth and incorporate changes that you may think appropriate based upon this testimony and represent those?
- Reid: If that's the wish of the Commission, yes.
- Peterson: One more point on the time of the continuance, if that's your wish, it should be either two weeks or four, because you normally would not meet on the first Wednesday of the month.
- Walling: Just a brief word, Mr. Chairman, in case you're not aware, quite a few changes have already been made and incorporated in here. There's been quite a lot of staff input made and I realize it doesn't incorporate the public inputs, but it's not as if this document has just arrived fresh. Of course, we're faced with following the procedures that the City gives us and we realize the enormity of the project and all that and I'm not really saying that you shouldn't continue it. All I'm saying is that the procedures should be equitable in terms of different projects.
- Rice: Mr. Chairman, I think in effect we're trying to strike a happy medium here by trying not to, certainly to delay or hold things up, but at the same time trying to give all possible due consideration to the input into the EIR.
- Krier: Mr. Chairman and members of the Commission, my name is Al Krier, I'm regional manager for Allan M. Voorheis and Associates, transportation planning firm; our offices are at 5252 Balboa Avenue in San Diego. I want to reassure you that the analysis that we performed here is not merely a tack on from the project that came to the Planning Commission and the Council last year. This, at least in my own mind, this is a completely different project and required a completely different analysis from the traffic standpoint and we have done that. From the day we started to work on this particular project we have been working with the City staff. We received their input, we resolved some disagreements as to what would be used in terms of trip generation and traffic assignment, and we have furnished all of the information to the staff that they have requested along the way. As a matter of fact, we furnished some information that they didn't request--we furnished it in more detail because we wanted to be sure there was no misunderstanding. As late as Monday of this week we met again with the staff to go over some particular items that had not quite been resolved or were not quite clear and I think we have resolved them. I think also that it's been mentioned before that we portrayed what we think are the maximum traffic conditions. We plan now for what we know now and what we know now is what we've learned in the past. We don't think that the vehicle miles of travel are going to increase. I'm not going to go into the number of factors that either immediate or on the horizon that's going to change this, but I think we've seen some of them already and there are many more; one of them is financing. So we have not discounted any of the private vehicle travel in favor of public transportation, but we think it's coming and, obviously, there will be some impact. I think there will be some reduced travel, but we have not discounted that. If that doesn't come we plan for a road system to accommodate the private vehicle. As in any project, of course, of this magnitude, all of the improvements are phased and as the project moves forward, if we have miscalculated to some large extent because of something we were not able to foresee, then, of course, additional facilities can be incorporated. On the other hand, if we have planned for more facilities

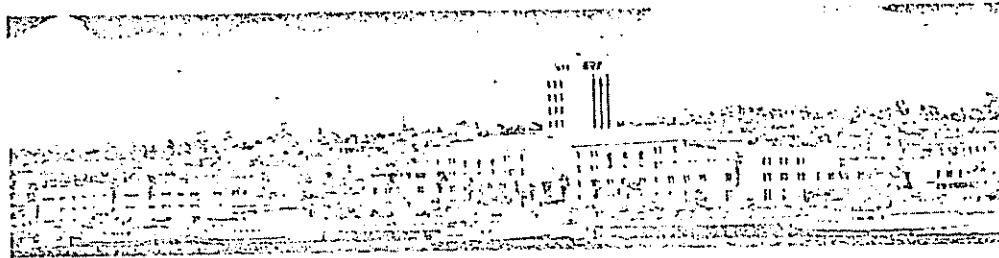
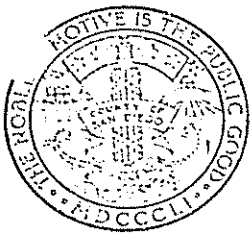
- Krier: than what are necessary, and that certainly may be the case, in past years it has not been the case but in past years we have not had the conditions that we have now--then those revisions can also be made. So, I just--one last word, the regional traffic figures for full development of the area were not furnished by us, they were furnished by the County of San Diego, some work that was done by the County Engineer Department at the request of the City, and we have worked with those numbers and we have planned a transportation, a road system, that will accommodate that maximum traffic. So I think that's a very important point and we have cleared these matters with the staff and I think we are in agreement that the system as proposed and the improvements that are proposed will accommodate the traffic that is projected. That's about all I have to say, but I'd be happy to answer any questions if you might have any.
- Moore: I'm Katherine Moore, 1134 Tobias Drive, Chula Vista. I only have one comment to make, Mr. Chandler, to you and to the Commission. What these gentlemen are saying to me, and I have had both of the EIR's for the Rancho del Rey center and also for the Bonita center; and it states in the Rancho del Rey center EIR, this revised edition, that whoever gets the show on the road first is the one who will have the center, and what these gentlemen are saying to me is, let's get the show on the road first. And I think that the other center will be defeated. I think this center is the best place for a shopping center, but I do think that due consideration should be given to the EIR and I hope you will make that recommendation. Thank you.
- Watry: Mr. Chairman, I agree with what Mrs. Moore said. I'd like to make one comment or point out one example why the public hearing should continue. The cost-revenue study, I think, is the most important part of the EIR, and from what's been going on in the Council they'll think it's the most important thing, too, and it's entirely wrong. I can briefly outline why it's wrong; there's not a single cost figure in there correct. It all has to be redone; on the revenue side, some of the figures are right, property tax, and so on, but the sales revenue figures are off by a factor of 2 or 3 or 4. I didn't go through, this is the draft copy, so there's no use responding to this except to say the whole thing has to be redone. I would like a chance to respond to the real cost-revenue study and not the draft one, because this is not even close to being right. Comments about public works have to be done, about schools have to be done, about correct revenues, and so on, and that can't be done with this copy because it's of no value. It has to be redone, so I think the public ought to have a chance to look at the real EIR and not just this thing, especially this portion of it that has to be completely redone, Thank you.
- Harner: Mr. Chandler, I don't want to get into a debate with Mr. Watry, but I would like to say that since I did those cost figures, I have a different opinion about them than he has. I'd be more than happy to sit down with him after the meeting tonight, or tomorrow, and by Friday have a revised cost input. We don't need two weeks or four weeks to do that; that can be done tomorrow or the next day.
- Otto: My name is Gail Otto, I live at 570 Twin Oaks. I wonder in your EIR report have you given any consideration to the people of this city, whether we want this or whether we don't, or are you simply just railroading this through.

- Beam: I would like to comment on the vein that Mr. Rice has previously taken. If you do feel that you need to continue, I think it should first only be because you do not have adequate information, including public input, as to the adequacy of the draft EIR. I think, secondly, that you should continue for a time period at your conclusion that will allow the inadequacies as you see them to be reappraised, but hopefully, no longer than the time period that's necessary for that. I would admonish you to consider that if you have the pleasure of entertaining a motion to continue this for some time.
- Rice: Mr. Chairman, I think at this point I would like to hear Mr. Reid's comments about how long it might take him to incorporate the input that was made this evening.
- Reid: I think a two week period would be adequate to incorporate everything in. It involves making a transcript of this evening's meeting and then taking the input from that and responding to it or modifying the report in some fashion.
- Chandler: Then you're saying at the end of that two week period there would be an updated draft, so to speak, available to look at. Is that what you're saying? If we continued the hearing for a period of time, two weeks from now you would have a so-called revised draft available?
- Rice: Would that be a revised draft, or would you just have the information? Would you have it prepared in a form that would be available to the public?
- Reid: Oh, yes. It may take some time for members of the public to review that, of course. That's an additional problem.
- Chandler: What I am saying, if that were available, then a period two weeks later for a review of the additional input, then we would continue the hearing to that point, say 4 weeks from tonight, and at that time we would conclude the public hearing. Does that sound fair with you people?
- Beam: You might ask Mr. Reid what new information he feels will be incorporated, just to give the Commission an idea.
- Chandler: Just roughly what would we probably have incorporated in addition to what we've heard tonight and what not?
- Reid: First of all the revisions that we outlined in the staff report. I have just taken a few notes here that we should respond to, I am going to say that most of them have already been responded to by the testimony from the consultants, such as the acceptability of the 65 dbA, the comparison of the smog, an economic analysis, discussion of the truck routes in the area. We do intend to sit down with Dr. Watry and the applicant who worked on the cost-revenue analysis. I believe I outlined in the staff report problems of drainage and waste production. It was also requested from the Department of Health.
- Chandler: I feel, based on that, that it would be well worth the continuation and have that information available for consumption at the end of two weeks and four weeks from tonight we will have the final portion of the public hearing. I would entertain a motion to that effect if it's agreeable to Mr. Peterson and Mr. Reid.

- ph: Mr. Chairman, I'll move
- Rice: Just a moment, let's go back over that last statement that you made, I'm not sure that I
- Chandler: We would continue the public hearing to the 10th of July. In the interim Doug has said that he can have the information based on what has transpired tonight available at the end of two weeks from now for the public to look at prior to the July 10th meeting.
- Rice: At that time they would then be allowed to make their final input, is that what you're proposing.
- Chandler: Yes, and we would close the public hearing on that night.
- Rudolph: They could make input prior to July 10th, also.
- Chandler: Well, true. They can make input any time they want to. We're talking about whatever would come from here to go out to them. Okay? So, I'll still entertain a motion.
- Rudolph: I'll move that the public hearing be continued to July 10th.
- Rice: I'll second it.

(The motion carried unanimously.)

## County of San Diego



## DEPARTMENT OF PUBLIC HEALTH

1600 PACIFIC HIGHWAY SAN DIEGO, CA 92101

J. B. ASKEW, M. D., M. P. H.  
DIRECTOR OF PUBLIC HEALTH

RECEIVED

May 29, 1974

BY.....

MAY 31 1974

Douglas D. Reid  
Environmental Review Coordinator  
276 Fourth Avenue  
Chula Vista, Ca. 92010

ENVIRONMENTAL DEPARTMENT  
LA VISTA, CALIFORNIA

Dear Mr. Reid:

Plaza Del Ray

A review has been made by the Division of Sanitation, the Air Pollution Control District, and Health Engineering for Plaza Del Ray draft EIR. The following comments apply:

No evaluation of waste generation was made. This includes solid and liquid waste as well as water consumption. It is recommended that the California-American Water Co. and the City of San Diego be consulted on this matter.

If the proposed project is not started prior to January 1, 1974, a permit to construct will have to be obtained from the Environmental Protection Agency (EPA), Region Nine. If the aforementioned is anticipated, it would be prudent to begin coordination with the EPA at the earliest possible date.

Sincerely,

NORMAN E. SCHELL  
Deputy Air Pollution Control Officer

NES:RJSovch  
Encl:



EIR-74-5  
Plaza Del Rey - Dr. Leonard Bloom

This EIR basically represents the environmental impact of development of 450 acres with single family and multiple family dwelling units and apartments along with the regional shopping center/entertainment center complex.

There is a potential for 1270 students to be generated on the site. The EIR indicates that present schools are at capacity and further schools are needed. It would seem imperative that new schools be generated in phase with this development to avoid problems which are yet impacting other county areas.

The shopping center proposed is a major aspect of the development; yet there is a proposed regional shopping complex which would be in National City and in direct competition with this proposal. No mention of this factor is made in the report.

"According to the figures in the Revenue/Expenditure Analysis", we cannot expect much in the way of low cost housing and even moderate-cost will be hard to come by. While this does not represent sufficient cause to reject the EIR, it does show the basic trend of the development as proposed.

I recommend revision of the EIR on three counts:

- (1) It does not indicate any way by which the projected student overload may be ameliorated (such as a joint agreement between the developer and the school districts to phase school construction into the development plan).
- (2) It does not deal with the potential juxtaposition of another regional shopping center next to one in National City as proposed. The economic impact of such a move deserves careful scrutiny.
- (3) Traffic congestion and concomitant pollution levels are not dealt with relative to the revised development plan adequately.

COMMENTS BY: ALLEN C. MILLER, MEMBER  
ENVIRONMENTAL CONTROL COMMISSION

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGIONMISSION GORGE ROAD, SUITE 205  
SAN DIEGO, CALIFORNIA 92120

27.



JUNE 12, 1974

ENVIRONMENTAL REVIEW COORDINATOR  
CHULA VISTA CIVIC CENTER  
276 FOURTH AVENUE  
CHULA VISTA, CALIFORNIA 92010

DEAR SIR:

THIS WILL ACKNOWLEDGE RECEIPT OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR DR. LEONARD BLOOM'S "SPORTS WORLD" (PLAZA DEL REY), LOCATED EAST OF I-805 NEAR THE H STREET INTERCHANGE. THE PROPOSED PROJECT WILL CONSIST OF A SHOPPING CENTER, OFFICE AREA, COMMERCIAL AREA AND 1,454 DWELLING UNITS. THE DWELLING UNITS ALONE WOULD HOUSE APPROXIMATELY 4,350 PERSONS.

WE HAVE REVIEWED THE REPORT AND BELIEVE THAT THE ENVIRONMENTAL IMPACT OF SEWAGE DISPOSAL WAS NOT ADEQUATELY DISCUSSED. THE FOLLOWING SUBJECTS SHOULD BE COVERED IN DETAIL:

1. ANTICIPATED SEWAGE FLOWS FROM THE COMPLETED PROJECT.
2. PRESENT TREATMENT CAPACITY OF THE SEWAGE TREATMENT FACILITIES.
3. PRESENT FLOWS TO THE SEWAGE TREATMENT FACILITIES.
4. WHAT ASSURANCES CAN BE OFFERED TO INDICATE THAT ADEQUATE TREATMENT CAPACITY WILL BE AVAILABLE AT THE COMPLETION OF THE PROJECT?

FOR YOUR INFORMATION, THE POINT LOMA TREATMENT PLANT OF THE METROPOLITAN SEWERAGE SYSTEM HAS A PRESENT DESIGN CAPACITY OF 88 MILLION GALLONS PER DAY (MGD) AND THE PRESENT FLOWS ARE IN EXCESS OF 105 MGD. ALTHOUGH THE CITY OF SAN DIEGO HAS PLANS TO UPGRADE THE TREATMENT CAPACITY, THERE IS NO ASSURANCE THAT CAPACITY WILL BE AVAILABLE IN THE FUTURE.

WE APPRECIATE THIS OPPORTUNITY TO COMMENT ON THE PROPOSED PROJECT. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ME AT (714) 286-5114.

VERY TRULY YOURS,

JOSEPH N. BARRY  
ENVIRONMENTAL SPECIALIST

RECEIVED

BY \_\_\_\_\_

JNB:LVR

JUN 13 1974

PLANNING DEPARTMENT  
CHULA VISTA, CALIFORNIA



# CITY OF NATIONAL CITY, CALIFORNIA

1243 NATIONAL AVE. • NATIONAL CITY, CA 92050 • (714) 477-1181

MALCOLM C. GERSCHLER  
Planning Director

June 12, 1974

Mr. Doug Reid  
Chula Vista Planning Department  
276 4th Avenue  
Chula Vista, California 92010

RE: Supplementary E.I.R. for "Sports World."

Dear Mr. Reid:

Thank you for the opportunity to review the Supplemental E.I.R. for "Sports World" dated May 17, 1974.

The report is somewhat lacking in detail and does not furnish enough information to determine accurately what impacts the project will have on National City. Impacts which we would be most concerned with would be the project's effect on the traffic, air quality, and economic base of National City.

We have not received a copy of any E.I.R. material for the 1400-acre Sports World project. Perhaps that E.I.R. covers our areas of concern. We will be pleased to review it accordingly.

Respectfully,

NATIONAL CITY PLANNING DEPARTMENT

DON L. ROSE, ENVIRONMENTAL PLANNER

APPROVED:

MALCOLM C. GERSCHLER, DIRECTOR

DLR:MCG:abc

RECEIVED

BY.....

JUN 12 1974

PLANNING DEPARTMENT  
CHULA VISTA, CALIFORNIA

RECEIVED

June 12, 1974  
Chula Vista Ca.

To: Doug Reid, Environmental Coordinator  
City of Chula Vista, Ca.

JUN 12 1974

29.

From: Kathryn S. Moore, Chairman, South Bay Citizens Planning Committee, Inactive.

Subject: Draft EIR, #2; Rancho del Rey, Dr Leonard Bloom's - "Sports World".

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It is hard to evaluate this EIR since so much has gone before and these revised plans and maps of the newly proposed development look as though the old ideas were removed from the maps and the new ones dubbed in. These plans somehow seem sketchy.

Not enough attention has been paid to the impact that this development will have on the downtown re-development of Chula Vista, Ca. This was noted on pages 14 - 15 of this report and in the supplemental financial report.

There is not enough information on how the people in the surrounding already developed areas will be protected from this tremendous earth moving task which it appears will be going on for years.

Since the density of the housing has been increased it seems that more attention would have been paid to the placement of this housing and the traffic circulation around it. It also appears that nothing was mentioned in the report about bicycle paths even though they were sketched on a map in the back of the report. It seems very important that children and adults would be able to get from the housing to the recreation area via bike, and more attention should be paid on how this will be accomplished. What about the location of the schools?

This appears to be a good location for a regional shopping center, rather than the Bonita Valley, but this EIR tells a lot about air quality which you already know, and that's about all it tells. It does not convince one that the removal of the natural habitat will be replaced with a living and shopping environment that man will enjoy.



# Real Estate Research Corporation

~~655 SOUTH HOPE STREET LOS ANGELES 90017 PHONE 213-620-0100~~

CARROLL F. SWEET, JR.  
VICE PRESIDENT

1380 Garnet, Suite G  
San Diego, Ca. 92109

June 10, 1974

Mr. James L. Harner,  
Suite 220,  
Plaza International Hotel,  
1515 Hotel Circle South,  
San Diego, Calif. 92108

Dear Mr. Harner:

We are in receipt of a copy of the Planning Staff Report on EIR-74-5, regarding Plaza Del Rey, regional shopping center and note the questions raised regarding the including of the statistical areas of Jamul, Spring Valley and Lemon Grove in the Trading Area of this center. We acknowledge the facts presented by the Planning Staff as to the "historical orientation" of these areas to the East County; however, we believe that the improved accessibility of this site to these areas, which will occur when I-805 is completed, plus the considerably increased drawing power of Chula Vista, which would occur if three or four additional department stores are added to the three already there (plus the discount stores in the vicinity) would alter somewhat the "historical orientation" and attract a number of shoppers from these areas to Chula Vista. To be more specific:

JAMUL - We ourselves debated at some length whether or not this area should be included and finally decided that, since large developable parts already have good access to Chula Vista via Telegraph Canyon and Otay Lakes Road and since it is possible that some development may take place in this area in the next 5 to 10 years, the area should be included and some income therefrom for Shoppers Goods indicated. However, should this not occur and should there be no purchases whatsoever at Plaza Del Rey by Jamul residents, this would diminish our estimated gross by only 1.5 percent, which, of course, is so little that it would not affect our marketability conclusions.

SPRING VALLEY AND LEMON GROVE - With the completion of I-805 these communities will be less than 15 minutes via South Bay Freeway and I-805 from Chula Vista. Despite the fact that the College Grove Center and the Grossmont Center may be closer to most parts of Spring Valley and Lemon Grove, the much broader shopping opportunities available in the enclosed

Mr. James L. Harner - Page 2

mall, three or four department store Plaza Del Rey Center, reinforced by the existing complex in Chula Vista, will constitute a very strong cumulative attraction, which will draw people past closer but smaller centers, such as the Mission Valley complex does now. This factor, combined with the added convenience, will, we believe draw shoppers to Chula Vista who have been oriented to other centers. This is particularly true of Shoppers Goods, which is what are principally considering, since these are items of occasional purchase, representing significant expenditures, for which people will "shop" more widely to find the best "bargain".

However, should our estimates in this regard prove over optimistic and should Plaza Del Rey realize only half of the projected amounts from Spring Valley and Lemon Grove, the impact on the projected total would be only about \$6.3 million or about 7.5 percent of the gross we projected. This amount, combined with the elimination of Jamul, would diminish our projections by about 9 percent. This somewhat more conservative viewpoint would still indicate a 1980 gross annual potential of \$76 million and a justification for 925,000 to 1.2 million square feet of store space - depending upon the dollar per square foot of floor area factor used. If a factor of about \$65 per square foot is used, which is about what the stores in an average center are achieving, then some 1.17 million square feet of center is indicated - if a factor of \$82 per square foot is achieved, which is more comparable to what the stores prefer to use for planning purposes, then 925,000 square feet is justified. Under any circumstances it would take some time to achieve the full potential of penetration and consequently a phased development is indicated.

It is hoped that the foregoing comments explain satisfactorily the questions raised by the city Planning Staff in these matters.

Very sincerely yours,

Real Estate Research Corporation

By

  
Carroll F. Sweet

# WILSEY & HAM

Earl P. Wilsey (1892-1957)

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JAMES A. HUTCHISON  
Associate

File No. 8-2104-0109-50

June 12, 1974

Mr. Doug Reid  
Environmental Review Coordinator  
City of Chula Vista  
276 Fourth Avenue  
P. O. Box 1087  
Chula Vista, California 92012

Subject: School Facilities - Plaza del Rey

Dear Doug:


As discussed during our meeting yesterday, this letter is to inform you the status of discussions relative to the elementary school site proposed in Plaza del Rey. The planned site is a 10 acre parcel located on street "B" within the initial 450 acre development.

The Chula Vista Elementary School District owns a 10 acre site adjacent to the West end of "H" Street and El Rancho del Rey Unit 2. Together with representatives of Doctor Bloom, we have had discussions with Mr. Joe Odenthal of the Chula Vista Elementary School District relative to a swap of these two sites. The net effect would be to provide a more usable site in an area of expected need and to allow extension of "H" Street across the site which is no longer needed because of construction of the school site in El Rancho del Rey Unit 1 on Buena Vista Way.

Negotiations are still in the preliminary stage. The ground rules related to appraisals, time schedules and access have been discussed and appear agreeable to both parties. If you have further questions relative to this matter, please let me know.

Very truly yours,

WILSEY & HAM

  
James A. Hutchison, P.E.  
Associate

RECEIVED

BY.....

JAH:sh

cc: Doctor Bloom  
Jim Harner  
Phil Walling  
Joe Odenthal

JUN 14 1974

PLANNING DEPARTMENT  
CHULA VISTA, CALIFORNIA

Testimony from the July 10, 1974  
Public Hearing on  
EIR-74-5

ry: Text Submitted.

C O S T / B E N E F I T S T U D Y

Plaza Del Rey -- Phases I, II, and III

Peter J. Watry Jr.  
July 10, 1974

I. INTRODUCTION

One of the important factors in evaluating the impact of a large proposed development is a study estimating the expected financial benefits and financial costs to the citizenry involved. The referendum election concerning Sports World demonstrated the importance attached to cost/benefit studies by people. The following represents one attempt at a reasonable estimate of costs and benefits to be expected from the complete Plaza Del Rey development.

There is one particular problem that always plagues economic data over time. Any economic measurements over time involved two fundamentally different variables: (1) the real changes, such as more buildings, more sales, more policemen, etc., and (2) the monetary changes, i.e., inflation. The developer and the City have chosen to include an inflationary factor in every time series. It is difficult, therefore, to examine any cost or revenue series and to differentiate between real changes and inflationary ones. I have chosen to exclude any inflationary factor until the very last table. Therefore, except for the last table, all of my series show only expected real changes. For comparability I have included the same inflationary factor as the others at the end.



## II. POPULATION

A great deal of the analysis to follow depends upon the growth rate of population in the Plaza Del Rey development. Table 1 on the following page shows the assumed population changes. The source of the housing units figures are the "bar graphs" of the Projected Development Schedule shown on pages 10 and 11 of the developer's "Revenue/Expenditure Analysis." I then applied the City factors of 3.7 people per single-family DU, 3.5 per townhouse DU, and 2.2 per apartment DU.

In trying to interpret the Projected Development Schedule bar graphs I may have interpreted some developments slightly earlier or slightly later than the actual Schedule, but the totals are correct.

Please turn to page 3 for Table 1:

TABLE 1

Development Schedule - Housing and Population

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	TOTAL
<u>HOUSING</u>												
<u>PHASE I</u>												
SF	100	79										179
Townhouses	100	68	80	170	90	166						674
Apartments	-	130	100	140	110	120						600
<u>Phase II</u>												
SF	-	-	167	102	40	115	114					538
Townhouses	-	-	-	-	-	42	100	110	76	100	144	572
<u>Phase III</u>												
SF	-	-	-	-	200	200	200	107	127	400	390	1624
Apartments	-	-	-	-	-	-	-	60	160	110	110	440
<u>TOTALS</u>												
SF	100	79	167	102	240	315	314	107	127	400	390	2,341
Townhouses	100	68	80	170	90	208	100	110	76	100	144	1,246
Apartments	-	130	100	140	110	120	-	60	160	110	110	1,040
TOTALS	200	277	347	412	440	643	414	277	363	610	644	4,627

POPULATION

SF x 3.7	370	292	618	377	888	1166	1162	396	470	1480	1443	8,662
Townhouses x 3.5	350	238	280	595	315	728	350	385	266	350	504	4,361
Apts. x 2.2	-	286	220	308	242	264	-	132	352	242	242	2,288
TOTAL	720	816	1118	1280	1445	2158	1512	913	1088	2072	2189	15,311
CUMULATIVE	720	1536	2654	3934	5379	7537	9049	9962	11,050	13,122	15,311	15,311

### III. REVENUES

A. Property tax revenues. This study simply accepts the developer's schedule of expected revenues to the City. Table 2 repeats the total property tax revenues shown on page 22 (Table 0) of the developer's "Revenue/Expenditure Analysis." The second column "uncorrects" for the 5% inflationary factor.

TABLE 2

Year	Expected Property Tax Revenue	
	(1) Per Developer With Inflationary Factor	(2) Column (1) Without an Inflationary factor
1975	\$ 32,300	\$ 31,300
1976	212,590	202,467
1977	254,090	230,467
1978	343,510	296,737
1979	459,450	377,990
1980	557,790	437,043
1981	681,200	508,322
1982	783,410	556,755
1983	870,110	588,925
1984	987,220	636,370
1985	1,217,450	747,409

B. Sales tax revenue. The only area where I really vehemently disagree with the estimates made by the developer/City cost/benefit analysis is in the area of expected sales tax revenue to the City. The developer/City analysis assumes that taxable sales by the shopping center will be \$52,500,000 from the very first year (= \$525,000 sales tax revenue). I believe that that is wrong because (1) it assumes sales at 100% capacity from the very first moment of operation, (2) it does not allow a single dollar for non-taxable items, and (3) it does not admit that a single dollar of those sales would have been spent elsewhere in Chula Vista anyway. Even the developer's own market study is not that extreme.

Estimates of sales tax revenues to the City should be based on (1) a realistic sales forecast, (2) only the net new sales tax to the City after offsetting sales taken away from other Chula Vista businesses, and (3) should exclude non-taxable items. It should also be recognized that if Plaza Del Rey is a high-quality center, then its volume will be low in this area of below-average incomes; if Plaza Del Rey is an average-quality center, then it will in large measure just shift away sales from existing businesses. But it is absurd to assume it is going to be a high-quality center, operate at 100% capacity from the very beginning, and not take away business from any other existing stores.

Perhaps the most important estimate to be made concerns the amount of new sales made by this center that would not otherwise have been made by someone else in the area. The developer's market study assumes that only about 20% (\$10 million) of its sales will come from other area businesses, and therefore about 80% of its sales will represent sales that are now being made outside its trade area. The pollution section of the developer's EIR assumes that 25% of its business is unique--the other 75% "would have been made to another commercial shopping facility in the Chula Vista trade area." The market study for the proposed May Co. in Bonita assumed that 34% of its trade would come from sales now being made outside the area.

If you accept the \$10 million of sales taken away from other Chula Vista businesses (per the developer's market study) plus 34% of its trade coming from outside the area (a la May Co.), then that would be an additional \$18 million of sales ( $34\% \times \$52,500,000$ ), or a total of \$28 million in sales the first year.

To be "generous," I am assuming first-year sales of Phase I of \$35 million (which would equal 67% of capacity) and then a 15% gain in real sales every year until capacity is reached, in 3 years, at \$53 million.

Incidentally, it is often said that sales in Chula Vista increase an average of 10% per year. That was true, for instance, from 1966 through 1972. But about 4% of that was inflation, so real sales increased about 6% per year in Chula Vista.

Phase II of the shopping center will be an additional 450,000 square feet, which, at \$70 per square foot, means an additional \$31.5 million sales capacity. I am assuming that this second phase will begin at 50% capacity with 15% real growth per year until capacity, in 5 years, at \$32 million per year.

Next I subtract out (1) the new sales that would otherwise have gone to other Chula Vista businesses, and (2) the non-taxable items. I assume that (1) 15% of the center's sales would have otherwise been sold elsewhere in Chula Vista, and (2) that 10% of its sales are non-taxable, for a total of a 25% subtraction.

TABLE 3

Increase in Real Taxable Sales in Chula Vista  
due to Plaza Del Rey, and Sales Tax Revenue

(millions of dollars)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Phase I	\$ 35	40	46	53	53	53	53	53	53	53
Phase II	-	-	-	-	16	18	21	24	28	32
TOTAL	35	40	46	53	69	71	74	77	81	85
less 25%	-9	-10	-11	-13	-17	-17	-18	-19	-20	-21
NET	26	30	35	40	52	54	56	58	61	64
1% Sales Tax	\$ 260,000	\$ 300,000	\$ 350,000	\$ 400,000	\$ 520,000	\$ 540,000	\$ 560,000	\$ 580,000	\$ 610,000	\$ 640,000

C. Other City tax revenues. The following figures are taken from pages xi to xix of the 1973-74 City Budget. They exclude property taxes and sales taxes (which have already been discussed), bond funds and federal revenue sharing funds (which are taken to be uncertain).

General Fund:	
Licenses & Permits	\$316,500
Other local (excl. sales)	998,050
Fines, etc.	106,000
Use of Money & Property	50,200
From other Agencies	1,071,010
Charges	131,790
Park & Recreation Fund:	
From Other Agencies (excl. charges)	87,650
Golf Course Fund:	
Excluded	
Planning Fund:	
From Other Agencies	39,730
Library Fund:	
Fines	18,330
From Other Agencies	47,060
Sewer Service Charges	437,500
Parking Meter Fund:	
Excluded	
Gas Tax Fund	912,180
Total	\$4,216,000 ÷ 73,800 people = <u>\$57.13</u> per person

TABLE 4

"Other" City Revenues

Year	Population	@ \$57.13 each
1975	720	\$ 41,100
1976	1536	87,800
1977	2654	151,600
1978	3934	224,700
1979	5379	307,300
1980	7537	430,600
1981	9049	517,000
1982	9962	569,100
1983	11,050	631,300
1984	13,122	749,700
1985	15,311	874,700

D. Revenues to School Districts. Table 5 below shows the amount of tax revenue accruing to the school districts from the Plaza Del Rey development. It assumes the assessed valuations shown by the developer and a tax rate of \$3.053 per \$100 for the elementary school district and a tax rate of \$1.933 per \$100 for the high school district.

TABLE 5

Revenues to School Districts

<u>Year</u>	<u>Chula Vista City Schools</u>	<u>Sweetwater Union High Schools</u>
1975	\$ 65,900	\$ 41,700
1976	426,300	269,900
1977	485,200	307,200
1978	624,800	395,600
1979	795,900	503,900
1980	920,200	582,600
1981	1,070,300	677,600
1982	1,172,200	742,200
1983	1,240,000	785,000
1984	1,340,000	848,300
1985	1,573,700	996,300

IV. COSTS

A. Police. Using last year's Sports World cost/revenue study as a guide, I appropriated police costs primarily on the basis of 1.1 policemen per 1,000 population plus an appropriate number of cars and their operating expense plus a 25% additional amount to allow for both (1) support personnel and equipment and (2) protection of commercial properties. It might be noted that 23% of the Police Department are non-officers.

Table 6 on the following page shows the estimates for police services.

TABLE 6

Cost of Police Services

Yr.	POPULATION	POLICEMEN x \$18,796*	Salary Cost	No. of Cars	Cost of Cars**	Sub-Total	*** + 25% =	TOTAL POLICE COST
1975	720	0	0	0	0	0		0
1976	1536	1	\$18,796	0	0	\$18,796		23,495
1977	2654	2	37,592	1	\$7,000	44,592		55,740
1978	3934	3	56,388	1	7,000	63,388		79,235
1979	5379	5	93,980	1	7,000	100,980		126,225
1980	7537	7	131,572	2	14,000	145,572		181,965
1981	9049	8	150,368	2	14,000	164,368		205,460
1982	9962	9	169,164	2	14,000	183,000		228,750
1983	11,050	11	206,756	2	14,000	220,756		275,945
1984	13,122	13	244,348	3	21,000	265,348		331,685
1985	15,311	16	300,736	3	21,000	321,736		402,170

\*\$13,923 average salary + 35% fringe factor = \$18,796.  
 \*\*\$6,000 cost divided by 2 years = \$3,000 per year + \$4,000 operating cost = \$7,000 per year per car.  
 \*\*\*"+25%" for (1) support personnel and equipment and (2) protection of commercial properties.

B. Fire Protection. The following information is taken from the Revised Draft of the Plaza Del Rey EIR. The cost represents the cost of one new company and one new station.

1977

Yearly expense:

3 Captains @ \$16,912	= \$50,736	
3 Engineers @ \$14,964	= 44,892	
6 Firemen @ 13,786	= 82,716	
(sub-total)	(178,344)	
+ 35% Fringe factor	62,420	
Vehical maintenance	4,862	
Building maintenance	608	
		\$246,234

One-time expense:

Capital equipment	84,971	
Personal equipment	1,823	
Fire station	120,000	
		206,794

1977 Total costs

\$453,028

1978 - 1985 yearly cost: \$246,234



C. Building & Housing Cost. This study simply accepts the information from the Revised Draft EIR:

<u>1975:</u>	1 Assistant Plan Checker + FRinge factor	= \$20,201
	Capital outlay	500
	1 Building Inspector + Fringe (1 quarter)	3,341
	Capital outlay	3,300
		<u>\$27,342</u>

<u>1976 - 1985:</u>	(per EIR less inflationary factor)	
	1 Assistant Plan Checker	} \$34,766
	1 Building Inspector	
	Operations	

D. Parks & Recreation Costs. I assume that the parks would not be developed until 1976. See page 184 of Revised Draft EIR.

Yearly after 1976:  $\$5500 \times 7.4 \text{ acres} = \underline{\$40,700 \text{ per year.}}$

E. Public Works Cost. The Revised Draft EIR shows estimated expenditures for Public Works for Phase I (page 187). Here are the figures discorrected for the inflationary factor:

<u>Year</u>	<u>With inflationary factor (p. 187)</u>	<u>Without inflationary factor</u>
1976	\$ 7,513	\$ 6,490
1977	17,008	13,993
1978	21,942	17,193
1979	25,655	19,144
1980	48,249	34,210
1981	63,329	42,865

To estimate the Public Works figure for Phases II and III, consider the following:

- The 1973-4 Budget for Public Works is \$1,500,610 which divided by 74,000 people = \$20 per person.
- The Sports World cost/revenue study (Thomson's) showed a total for public works of \$346,080 (p. V-149) which divided by 12,000 people = \$29 per person.
- The Revised Draft EIR shows a 1981 Public Works cost of \$42,865 (disinflated) which divided by 4,350 people = \$10 per person.

To be conservative, and to somewhat match the Sports World totals, I am adding \$15 per person for Phases II and III to the above Revised EIR's costs for Phase I. See Table 7 on the following page.

TABLE 7

Cost of Public Works

<u>Year</u>	<u>Phase I*</u>	<u>Phases II &amp; III**</u>	<u>Total</u>
1976	\$ 6,490	--	\$ 6,490
1977	13,993	\$ 9,270	23,263
1978	17,193	14,925	32,118
1979	19,144	28,245	47,389
1980	34,290	47,925	82,215
1981	42,865	70,605	113,470
1982	43,000	84,285	127,285
1983	43,000	100,605	143,605
1984	43,000	131,685	174,685
1985	43,000	164,520	207,520

\*From page 187 of Revised Draft EIR disinflated.

\*\* \$15 per person of Phases II and III.

F. "Administrative Overhead" Costs. These costs refer to all the other City department costs not already discussed. The methodology is the same as that used by the Revised Draft EIR, which adds 1% of the current "administrative overhead" budget for every 1% increase in the City's population.

TABLE 8

"Administrative Overhead" Costs

<u>Year</u>	<u>Population</u>	<u>Per cent of 74,000</u>	<u>Adm. Overhead Cost*</u>
1975	720	1.0%	\$ 39,353
1976	1,536	2.1%	82,641
1977	2,654	3.6%	141,671
1978	3,934	5.3%	208,571
1979	5,379	7.3%	287,277
1980	7,537	10.2%	401,400
1981	9,049	12.2%	480,107
1982	9,962	13.4%	527,330
1983	11,050	14.9%	586,360
1984	13,122	17.7%	696,548
1985	15,311	20.7%	814,607

\*1% of current "administrative overhead" = \$39,353 (see page 185 of Revised Draft EIR).

G. Costs of Schools. Table 9 first shows the estimated number of elementary, junior high, and senior high students that will be generated by the Plaza Del Rey development. The Table uses the housing information found in Table 1 and then applies a factor of .6 per DU for single-family and townhouses and a factor of .5 per DU for apartments to arrive at the number of expected elementary school students. A factor of .3 was used for all housing units to derive the junior high pupils, and .2 for all housing units to derive the senior high students. These are City standards.

The local share of the cost of education for the elementary district (\$344) was derived as follows: According to the "Annual Report of Financial Transactions of the School Districts of San Diego County" (published by the County Department of Education), the share of "Local Income" of the total income of the Chula Vista Elementary School District was 42.79% (page 49). According to the City standard, the cost of elementary education per student is \$860. Therefore it is estimated that the "local share" of the cost of education for an elementary student is 40% X \$860, or \$344.

Similarly, the "Local Income" share of the Sweetwater Union High School District was 44.02%. The estimated cost of education is estimated to be \$950 by the City standard. Therefore, it is estimated that the "local share" of the cost of education for a high school district student is 40% X \$950, or \$380.

Please turn to the following page for Table 9.

TAB. C 9

Schools: Students and Operating Costs

STUDENTS*	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Elementary	120	88	148	163	198	314	248	130	122	300	320
SF Tenhour (.6)	-	65	50	70	55	60	-	30	80	55	55
Appt. Trts (.5)	120	153	198	233	253	374	248	160	202	355	375
TOTAL	120	273	471	704	957	1,331	1,579	1,739	1,941	2,296	2,671
Cumulative	\$4,300	\$93,900	\$162,000	\$242,200	\$329,200	\$457,900	\$543,200	\$598,200	\$667,700	\$789,800	\$918,800
X 344 "local share"											

Juniat High	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Students (.3)	60	83	104	124	132	193	124	83	109	183	193
Cumulative	60	143	247	371	503	696	820	903	1012	1195	1388

Senior High	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Students (.2)	40	55	69	82	88	129	83	55	73	122	129
Cumulative	40	95	164	246	334	463	546	601	674	796	925

Total Cumulative Jr. & Sr. High	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total Cumulative	100	238	411	617	837	1159	1366	1504	1686	1991	2313
X 380 "local share"	\$38,000	\$90,400	\$156,200	\$234,500	\$318,000	\$440,400	\$519,100	\$571,500	\$640,700	\$756,600	\$878,900

\* Refer to Table 1 for housing data.

School Construction Costs. In addition to operating expenses, several schools will have to be built to accommodate the Plaza Del Rey students. It is assumed that the average elementary school has about 600 students, the average junior high 1,000 students, and the average senior high about 1,500 students.

From Table 9 it can be seen that some 2,600 elementary students are expected which divided by 600 students per school means 4 additional elementary schools. It is assumed that new elementary schools will cost \$2 million each.

Table 9 shows 1,388 additional junior high school students, which means 1 1/2 new junior highs, at an assumed cost of \$4 million each.

And Table 9 shows 925 additional senior high students, which means the equivalent of one-half new senior high, at an assumed cost of \$8 million for a full high school.

The construction schedule is assumed to be as follows:

<u>Year</u>	<u>School</u>	<u>Cost</u>
1977	Elementary school	\$2 million
1979	Elementary school	2 "
1980	Junior High School	4 "
1982	Elementary school	2 "
1983	1/2 High School	4 "
1984	Elementary school	2 "
1985	1/2 Junior High	2 "

II. Environmental costs. The environmental impacts as described in the EIR are real costs and should be included. While most of these costs are very difficult to measure or even estimate, these real costs should at least be noted and recognized. The following is an incomplete list as an example.

Health. The additional costs to people because of increases in air pollution, for instance, are well known. Higher medical and other costs result from higher incidences of respiratory diseases, such as

emphysema and allergies, greater eye damage, pre-mature deaths, and an increase in absenteeism.

Plant and material damage. The damage to plants, trees, agricultural products, paint, metals and other materials are also well documented.

Growth costs. This quote is from the last issue of "Lite Lines," published by San Diego Gas & Electric Company: "There is another important fact. Our other costs continue to rise as we meet the needs of our rapidly growing territory. As a result we have been forced, as much as dislike to do so, to apply to the California Public Utilities Commission for some additional relief." This is a cost imposed on all residents of Chula Vista.

Congestion. Assuming that peoples' time is valuable, then the delays caused by the increases in traffic is another cost of development. The 11,400 additional cars per day using "H" Street into Chula Vista, for instance, will cause a predictable slowing in the flow of traffic. As an example, let's say that an average of 20,000 Chula Vista motorists are delayed an average of 3 minutes per day in their driving time due to increased traffic flows from Plaza Del Rey. That is a total of 1,000 hours. If peoples' time is worth, say, \$2 per hour, then that is a total of \$2,000 additional cost per day; some \$600,000 per year.

Token calculation. This study does not include a definitive analysis of environmental costs. However, I am including at least a token figure to insure its recognition. Federal standards in 1968 placed an amount of \$138 per person for all environmental costs.

To plug in a value for the incremental impact of various forms of pollution due to the subject development I am making the simplifying assumption that 50,000 people will be adversely affected in one way or another, and by progressively greater amounts.. The low dollar value of \$1 per person the first year, and growing by \$1 per year, represents a

net value recognizing that there may also be positive side effects of the development such as the convenience of a near-by shopping center.

TABLE 10

Environmental costs (token)

<u>Year</u>	<u>Token environmental costs*</u>
1975	\$ 50,000
1976	100,000
1977	150,000
1978	200,000
1979	250,000
1980	300,000
1981	350,000
1982	400,000
1983	450,000
1984	500,000
1985	550,000

\*50,000 people affected times \$1 per 1975, times \$2 per 1976, times \$3 per 1977, etc.

TABLE 1

TOTAL REVENUES AND COSTS  
1975 - 1985

(THOUSANDS OF DOLLARS)

REVENUES	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	TOTALS (DOLLARS)
Property Taxes	31	203	230	297	378	437	508	557	589	636	747	4,613,000
Sales Taxes	-	260	300	350	400	520	540	560	580	610	640	4,760,000
Other Taxes	41	88	152	225	307	451	517	569	631	750	875	4,586,000
School-elementary	66	426	485	625	796	920	1070	1172	1240	1340	1574	9,714,000
School-high	42	270	307	396	504	583	678	742	785	848	996	6,151,000
Totals	180	1247	1474	1893	2385	2891	3313	3600	3825	4184	4832	29,824,000
Totals with 5% annual inflation	180	1309	1625	2191	2899	3690	4440	5066	5651	6491	7871	41,413,000
<b>COSTS</b>												
Police	-	24	56	79	126	182	205	229	276	332	402	1,911,000
Fire	-	-	453	246	246	246	246	246	246	246	246	2,421,000
Bldg. & Housing	27	35	35	35	35	35	35	35	35	35	35	377,000
Parks & Rec.	-	41	41	41	41	41	41	41	41	41	41	419,000
Public Works	-	6	23	32	47	82	113	127	144	175	208	957,000
Adm. Ovd.	39	83	142	209	287	401	480	527	586	697	815	4,266,000
School-ops.-elem.	41	94	162	242	329	458	543	598	668	790	919	4,844,000
School-ops.-high	38	90	156	235	318	440	519	572	641	757	879	4,645,000
School-Construction	-	-	2000	-	2000	4000	-	2000	4000	2000	2000	18,000,000
Token environ- mental costs	50	100	150	200	250	300	350	400	450	500	550	3,300,000
Totals	195	473	3218	1319	3679	6185	2532	4775	7087	5573	6095	41,131,000
Totals with 5% annual inflation	195	497	3548	1527	4472	7894	3393	6719	10471	8645	9928	57,289,000



Coleman:

My name is Coleman, I live 1670 Gotham St. I apologize for not having gotten the information to Mr. Reid, consequently to you, earlier, but somehow the days seem to get shorter, either that or I'm covering less ground.

First, briefly mention drainage, this came up earlier in the hearing, I think its critical, and I think it needs to be discussed more than it has. The EIR does mention the fact that a drainage problem will be created. The solutions offered in channeling it past the project, I'm not sure if those of you hear have had an opportunity to go out now and take a look at the development, but H Street now effectively is in the form of a dike, an earth filled dike, across Rice Canyon, I'm guessing, 35 to 50 feet high, across the base, I'm not certain. But Rice Canyon is now dammed. That's d-a-m-m-e-d. The Division of Highways, as a part of the construction of I-805, have placed under H Street, the H Street fill, 2 84 inch drain pipes. Into those drain pipes will go all of the runoff from the entire Rice Canyon drainage basin, plus the runoff from both northbound-southbound lanes of I-805, when complete. The feeder tubes are in position now. You can see along the fill where this collection will occur, and into these two 84 inch pipes. The CalTrans engineers state, that these drainage pipes consider development in that basin, that they are based on funneling the results of the 100 year rain fall, on this -----you're familiar with the 100 year flood, 50 year flood, and so forth, they are attempting to, or not attempting to, they say that they have, made provisions for a 100 year rain. Well, I always remember the plight of the statistician, who drowned attempting to walk across the river that had an average depth of 3 feet. Go back into history, 1916 flood, is the Sweetwater Valley, in this area, San Diego County, was considered a 1000 year flood. 1000 year rainfall, in the 1916, 1915-16 rainfall year, That's from the first of July 1915 to the 30th of June 1916. The rainfall was 12½ inches. That's the average that was recorded at Lindberg Field for that year. So a 1000 year rain is only 12 inches depending how it falls. 1965-66, much more recent history, Lindberg Field received somewhere in the neighborhood of 16½ inches, and certainly we had had nothing resembling a 1916 condition, and it was not because the damms were built, reservoirs created, it was simply that the rainfall was spread out more across a longer period of time. So I think that the public record should show that at least somebody questioned the wisdom of attempting to channel that, and that perhaps some point in time the public will be required to pick up the tab for an underwater portion of Chula Vista that is now is Rice Canyon.

Downstream, this was mentioned earlier, in an earlier hearing hear tonight, at this point, as near as I can determine, the Sweetwater River flood control channel is no closer than it was when it was first proposed, several years ago. We are channeling more and more water, as these little development occur, certainly this will only increase the average runoff by X number of cubic feet per second of water, and so on and so on. But so will Bonita Ridge and so will Corky McMilliam, and so will each of these. Their only contributing a little. The lower valley of the Sweetwater River is also effectively diked, by railroad right of way and by I-5. So there can be

some very serious problems if these developments continue without provisions made for drainage, and the engineers say that they are doing it, fine, but I'd like this public record show that somebody questioned it.

More on the question of sewage, which has also been brought up here tonight several times, this is a topic of extensive discussion in the area, unfortunately the media does not pass it on. Last year the City of San Diego who operates the Metropolitan Sewer District, went to the Regional Coastal Commission, and asked permission to construct two additional sedimentation tanks on Point Loma. These would have been tanks, basins #6 and #7, there are already 5 in existence. The reason was, the figures states in the EIR that an 88 million gallon per day facility has been running over 100 million gallons per day and the result is a poorly treated effluent going into the Pacific Ocean, considerably below State standards. The San Diego Coastal Commission approved the request the City of San Diego to construct the two basins, subject to certain conditions. The approval was appealed to the State Coastal Zone Commission, San Francisco, and public hearings were held in March of this year in Burlingame. March 15th, I believe, I'm not certain of the exact date. And the State Commission approved the request over the appeal, after the appellant and the applicant resolved some differences of their own, the State Commission saw fit to approve it. But also imposing some conditions. What I'd like to do at this point is read to you some of the information that was given in testimony to the San Diego Commission at the time this was being heard.

The Regional Quality Control Board staff in commenting on complaints from the public that this was a growth inducing factor, made this statement: "Much of the growth in the City of San Diego, for which the basins would provide capacity, has already occurred. In addition, inclusion of the existing flows from the Lakeside, Santee area, necessary to correct existing public health hazards, and discharge from Navy ships moored in San Diego Bay, will require large portions of the capacity of one of the basins. The original four sedimentation basins provide treatment for approximately 88 million gallons per day. Addition to the two proposed basins should provide capacity for another 40 million gallons per day. However, existing dry weather flows have been 105, and I'll abbreviate mgd from hereon, with your permission, treatment of 25 mgd existing excess flow will require all of the sedimentation basin 5, and 25% of basin 6. 8 mgd flow expected from the Lakeside, Santee area, and that was approved. The Lakeside, Santee, Alpine area are now in the process of hooking into the Metropolitan Sewer System. And from Navy ships moored in San Diego Bay will require 40% of the capacity of basin 6 which leaves only 5 mgd of unallocated, available capacity. The 5 mgd available capacity would be required to provide adequate treatment for a flow from units under construction or already approved for construction. To summarize, construction of sedimentation basins 5 and 6 is desperately needed to treat existing flows. (No closed quote given)

The staff of the San Diego Regional Coastal Commission has some comments. made some recommendations, according to the Regional Water Quality Control Board, the Point Loma waste water treatment plant is currently operating under a chronic overload condition. The overload conditions creates a high

flow velocity that cuts down detention time. Reduction and detention time in effect, shortcircuits the effectiveness of the plant which results in increased suspended solids carryover and ultimate violation of the State water quality standards for ocean discharge. Waste water plants can be overloaded slightly and still meet the standards of the Water Quality Control Board. For instance, the current design capacity of the Point Loma plant is 88 mgd and with a flow of 90 mgd the plant probably not be operating at a violation condition. However, the daily flows of the plant now exceed the average of 100 mgd with peak flow up to 127 mgd. During 1972, the plant exceeded its capacity 329 days, or 90% of the time. And for 100 days, or 27% of the time, sewage treatment did not meet State standards. It could be safely assumed, taking into account current growth rates, that the same statistics for 1973 have increased. The conditions imposed by the Regional Coastal Commission were these: That the applicant in cooperation with CPO and users of the Metro System agrees that before submitting any further requests to the Commission or its successor, for expansion of the capacity of the Point Loma facility will:

- a. Arrive at decisions regarding regional growth and the ultimate population to be served by the Metropolitan District.
- b. Develop a firm program for siting and constructing facilities necessary to meet existing or new federal and state ocean discharge standards.
- c. Study in depth the social, economic and environmental cost and benefits of alternate methods for water reclamation in the San Diego basin.
- d. Consider alternatives to the siting, adjacent to the shore line of sewage treatment plants.

I'll shorten this down and simply give you the conditions imposed by the State Commission when San Diego was given permission to build two sedimentation basins, now these are two, as I pointed out, to try to bring current treatment up to minimum standards. These are the conditions:

The approval is subject to the following conditions:

1. Applicant will use its best efforts to obtain secondary treatment at the present additional or alternative sites by 1977, including but not limited to urging the State of California Water Resources Control Board and the Federal Environmental Protection Agency, to give high priority for fundings that secondary treatment facilities as required by law.
2. Applicant will assess all feasible sites for secondary treatment within the coastal zone, including sites proposed by the applicant and the public. The final list of any sites located within the coastal zone will be presented to the Coastal Zone Commission for approval, no later than Feb 1, 1975. Prior to submission of this list, the public will be notified in an appropriate manner. Siting alternatives will include satellite siting as a means of conserving energy.
3. By February 1, 1975, applicant will present to the Coastal Commission for approval, a determination of the ultimate growth to be serviced by the Metropolitan Sewage System. Such determination will include public input.
4. Prior to seeking any permit for expansion of sewage treatment facilities to accommodate greater capacity, applicant must demonstrate the existence

of an effective regional water conservation program that includes disincentives for the waste of water. Such a program will include a restructuring of water rates to eliminate discounts rates for increased water use.

5. By January 1, 1976, applicant will present to the Coastal Commission plans for the reuse of sewage effluent and considering the high priority use of Mission Bay Park, plans for alternative sites for drying sludge generated by sewage treatment.

These are the conditions imposed by the State on the City of San Diego as the operator of the Metropolitan Sewer System. To my knowledge nothing has yet been proposed, or any action taken to determine the maximum growth, has this Commission received any guidance for approving projects? We're obviously at this point, overusing existing facilities. The result is a quality of sewage being discharged into the ocean that is unacceptable. What solution, I don't know, its frustrating to see little developments, big developments, one at a time, piece meal, continue to go, when we continue to degrade our environment by doing it. I suppose the ultimate solution is, at some point every city in the county is going to have to draw the line and say, "Sorry, after we get the facilities, we will approve further development, but in the mean time you have a problem on your hands. And I think that within your own conscience you're going to have to give some very careful thought to what you do in here in the future."

My personal recommendation, and this an emotional thing with me, disapprove, disapprove not only the EIR, refuse to accept it but disapprove the plans as they come in. Because the facts are out in the open, there is nothing hidden about it, we are overtaxing what we have. How far to we go?

Chandler: Any questions?

Rice: Yes, I have a question I'd like to ask about this, is the first part of his testimony there. When you talked about the drainage, with reference to the 100 year flood. Were you talking, was any reference made as whether or not that with the drain in the existing condition or after the proposed development?

Coleman: No. the CalTrans engineer with whom I discussed this, stated that, development was considered and there are formulas for determining increase runoff based on whether or not its residential, commercial, industrial, assuming that, I suppose, that each of those will add so much black top to the surface. So It definitely is a part of their decision.

Chandler: I have a question. You mentioned the two 84 inch lines, that would obviously coming down into the valley somewhere.

Coleman: That's right.

Chandler: You didn't mention that but there isn't any place else for them to go.

Coleman: Fortunately, for those of us who have to traverse Bonita Rd., Mr. Chandler, it will go under it in the future, in the past Rice Canyon has done a pretty good job, occasionally, on Bonita Rd. but it will now discharge at a point just west of Bonita Mesa RD. and will parallel or, not parallel I suppose it the word, it will follow, very closely the countour of the freeway fill around the Bonita Golf Course and then down, on down towards Edgemere from

there.

Chandler: That would be on the east side of the golf course, so between there and Bonita Mesa, I gather.

Coleman: These lines will discharge west of Bonita Mesa Rd. ultimately.

Floto: Mr. Chairman, that brings to mind a question that I have, it says in the drainage and flood control section, that there will be a small length of unimproved natural drainage between the Plaza del Rey channel and the inlet under the I-805 - H Street interchange. The applicant has indicated his willingness to insure adequate flow through this area to the CalTrans inlet. However, because this area is under State ownership, no substantiation of the provision of any such facilities can be offered at this time.

I'm just kind of curious to know just what this natural drainage area means, I mean what's involved here.

Chandler: Speak to Mr. Reid, or Mr. Jim Hutchinson from the developer.

Hutchinson: Jim Hutchinson, Wilsey & Ham. 1400 6th Avenue, San Diego. The natural drainage channel that was referred to, of course, is Rice Canyon as it exists right now. The property line, as you can see on the map behind you, the westerly limits does not go over to the freeway. However, the State has purchased all of that land in there, which was a little bit larger parcel than they needed. Between the off ramp coming northerly, the north bound off ramp from I-805, which intersects H Street, approximately 200 feet west of that line. They have a bank that comes down to the channel, we'll say its about elevation 90, and they'll be about elevation 150, about 60 feet higher. From there over to the west property line is another 100-150 feet and that area is under State ownership and we have no rights to go in there. Because the Federal funds were used in the purchase of right of way, they cannot sell or negotiate with adjoining owners for the land until after the freeway has been built. There is no way that the owner can build anything in there. Now, as far as what will happen, if we could not purchase or acquire that land, the channel that is built, or would be built on the south side of the frontage road on the south side of the shopping center, that would outlet at an elevation fitting existing, there would be velocity reducing structures that the reduce the velocity below erosion velocities and they would just continue on to the twin 84's which have an entrance structure designed to handle the flow quite well.

Floto: That sounds good but I can also envision a mess there, myself, personally, not knowing anything about it, but to take this channel and just pour it into this area and expect it all to go into these inlets, real nice and easy like, it might happen, but I envision problems.

Hutchinson: Say the channel if it were to be left natural would be approximately 60 feet, 50-60 feet deep and 100-150 wide, so say it was maximum flow of 2100 cfs the flow would probably be no more than 3-4 feet deep at peak stage. I don't anticipate a problem there. By the way, on the design flow there's approximately 1400-1600 acres that drains to this point where the twin 84's are, roughly 2100 cfs in there is our design flow and this is based on the peak flow of a rain, at the peak period that it takes water to go from the upper portion of the basin near Otay Lakes Road, to that point which is, say between 30 minutes and ½ hour. The design flows are based on that sort of a calculation of runoff and rain fall, rather than how much occurs in a year.

Its what occurs at the peak hour during the year, not the average rain fall during the year.

edler: Thank you Mr. Hutchinson

Coleman: I want to correct the previous gentleman, I believe that drainage basin instead of being 1400 acres, would be probably in excess of 4000.

McQuillan: My name is Mike McQuillan, I live at 4425 Vista Nacion, Lynwood Hills area, which is outside the city limits, but is in an area which would be substantially affected by the Plaza del Rey project.

And to start out with, I would like to assure the Commission that I do not intend to read into the record all the information that I have in front of me. I'd like to make a comment however, one of the comments Mr. Coleman made reminded me of something that Mark Twain said, about 70 years ago, that there three types of liars in this world, there's liars, there's damned liars, and there's statistitions. With those in mind, I'll start reading you some numbers. Bear in mind there are numbers concerned, contained in the draft EIR submitted by the developer also. I'd like to give a few preliminary comments; roughly a year ago, or a year and one half ago, when I first started making part of this series, of my regular appearances in front of the Planning Commission, Dr. Bloom, the developer got up and made a statement to the effect that whereas there are perhaps a very talented group of individuals who are opposed to his project, that the Commission and the City Council should bear in mind that his group of experts are professionals, whereas we are in fact, amateurs. I think it should be read into the record of the Planning Commission at least, that what it takes to become a professional Environmental Analyst in the City of Chula Vista is a net worth of \$25.00 and that I have deposited this sum of \$25.00 into the City treasury and have become a licenced Environmental Analyst, recognized by the City of Chula Vista as such and therefore entitled to practice the profession of analyzing the environment effect of developments.

Mr. Beam would you care to comment?

Beam: We don't license standards Mr. McQuillan, we just do it for revenue.

McQuillan: I recognize that the City did not reject the payment of \$25.00 but the fact is that there are no State requirements that I could find, I contacted the County of San Diego, the City of San Diego and the City of Chula Vista to find out what requirements one needed to have to be able to become an Environmental Analyst and the only thing that I could find was that it cost \$25.00.

In general, I don't intend to read all these things into the record. However, I object to the EIR as it is on a number of grounds and would prefer that, or would like to see the City's version, modified substantially.

Concerning the effect of the traffic and air pollution, I find nothing in this document, on the table there, which computes the effect of traffic on H Street west of I-805, or on Bonita Road or on J Street. I don't know what the effects will be, I haven't tried to calculate them, they are simply not included. I think they should be included. I really don't think I'm going to argue too much on the numbers and the figures concerned with air pollution at this time, but I would like to point out that if I were

to explode the largest hydrogen bomb that has ever been exploded in history, on this site right here, that the number of pounds or the mass of matter that would be deposited in the atmosphere would be substantially less than would be deposited in the atmosphere by this project. Admittedly, the hydrogen bomb would be some what more lethal, but the fact of the matter is that the amount of matter deposited in the atmosphere will be substantial and high. I prefer to put the main part of my discussion on the subject of noise, primarily because I think that it will hit me the hardest, or my neighborhood the hardest, in Lynwood Hills.

It has been constantly asserted by the developer and unfortunately, accepted by the City, that the sum of 65 decibels, or the figure of 65 dBA, is a normally acceptable amount of noise, or shall we say that, that amount of noise which does not exceed 65 dBA for a period of more than 8 hours in a 24 hour period would be normally acceptable. Now I hate to boor all of us who are here, and who have been here for a year and a half, with a lecture of the physics of sound and noise measurement, but we do have a couple of new members of the Planning Commission who may not have heard my standard lecture on noise measurement in the past.

And that is that, sound itself is a function of a pressure disturbance in the atmosphere and this term decibels that was used to measure the noise, is not a linear term, in other words, 40 decibels is not twice as loud as a noise as 20 decibels and 100 decibels is not twice as loud a noise as 50 dicebels. In fact, a decibel is 10 times the logarithm of the intensity of the measured sound divided by the intensity of a reference sound which is usually the sound which is considered the threshold of hearing, and the effect is that if we double the intensity of a sound we increase the decibel reading by somewhat greater than three, so that a sound, if I take a reference sound and I take another sound at twice the intensity of the reference sound it is somewhat more than 3 decibels higher than the reference sound. Now, loudness that is perceived by the ear is not proportional directly to the intensity of the sound. It takes more than a doubling of the intensity to produce a doubling of the loudness, but nevertheless, 50 decibels is much more than twice as loud as 25 decibels. It's pretty hard to really get down to grips with this thing.

Okay, the developer and, unfortunately, the city, in the past have accepted the fact that 65 dB on the A scale amounts to approximately what would be normally acceptable for residential purposes. Now, decibels are noise. They are measured over the sum total of sound which can be experienced by the human ear. The A scale is only a portion of the total hearing in range. A more precise measurement of the total hearing range is what is called perceived noise decibels or PN DB. I have to mention this because I am going to cite a case from the Ninth District Court of Appeals which comes to a conclusion concerning sound levels, but they use PNDB or perceived noise decibels. Now, on the average, something in PNDB or perceived noise decibel level the number will be 13 higher than the number in dBAs. Now throughout this Environmental Impact Report as submitted by the developer dBA is used so that 65 dBA is the equivalent, roughly, of 78 PNDBs.

I have a document here put out by the United States Environmental PROtection Agency in Washington, dated December 31, 1971, the number of the document is HTID which would be November Tango India Delta 300.3. On page 90 they come across a different conclusion after having made an exhaustive study of noise levels, they state that, "Areas in which the daytime outdoor median noise level exceeds the range of 56-60 dBA are categorized as very noisy,

McQuillan

urban, not well suited to detached residential housing, since normal voice conversation outdoors is limited to distances of less than 6 to 10 feet between talker and listener. Also, when the noise level is above this range it is not possible to have relaxed conversation in the living room at a distance of less than 10 feet with windows or sliding glass doors fully opened."

So, we are talking here about noise intensities, or dB readings, of 56-60 dBA which are categorized by the Environmental Protection Agency as being not acceptable for single family detached residences.

They go on to state that "Areas in which the daytime outdoor median level exceeds 66 dBAs are not suited to apartment living." Not suited, even, to apartment living. "Unless the buildings are air conditioned, so that the windows may be kept closed to enable relaxed conversation indoors. If the outdoor median level exceeds, or is above, 71 dBAs special soundproofing is necessary in addition to air conditioning to preserve the indoor noise environment, even with the windows closed."

Now this is Environmental Protection Agency document dated December 31, 1971.

I have another document here, page 223, I believe it is. This is U. S. Environmental Protection Agency Document No. November Tango India Delta 300.13 dated December 31, 1971. The title of the document reads, "The Transportation Noise and Noise from Equipment powered by internal combustion engines." It states on page 223 of the document that the criterion value for widespread complaints of noise is the function of the residual noise level of the community. Consequently, a more accurate figure of noise impact would require assessing the number of people actually living within the noise equivalent 65 boundary, which, in effect, is the 65 dBA. In urban residential areas, or the number of people in areas where the noise equivalent level exceeds 60 in suburban areas, or the number of people living within the noise equivalent level of 55 dBA in quiet suburban and rural areas. Now, the effect of both of these documents is to show that the use of the figure 65 dBA for computing that noise level which is normally acceptable to people is not appropriate to the area of Chula Vista. We are not an urban area, we are somewhere-- we're really a suburban area, and parts of the area we are talking about developing might even be considered suburban to rural. So that the normally acceptable area in this case, in this environment, would be somewhere between 55 and 60 dBA, which is not nearly--let's assume 57½--the relationship between 57½ and 65 is not something like 10%. We're really talking about a noise level of roughly half, because of the logarithmic scale that we use in measuring noise. We're really talking about a noise level of about half of what the 65 dBA would be.

Now to get on with that, I want to quote again from the first document on "Community Noise" in which extensive surveys were made of noise levels in representative communities around the United States. One representative community I would like to use to demonstrate these noise levels would be the intersection of 125th Street and Lenox Avenue in the burrough of Manhattan in the City of New York. This is the major intersection of Harlem, not what we would generally associate with being a desirable area in which to live. The average sound level in Harlem was approximately 70 dBA on a 24 hour period, half the time the sound level exceeded 70, half the time it was less than 70. But 70 is a lot higher than 65. But, Harlem is not what I would call normally acceptable area.



McQuillan

The second area I would like to discuss is a major shopping center in the Los Angeles area in Torrance, California. A 24 hour survey, not one of these 2 minute surveys that Westec Services conducted, but a 24 hour survey continuous, showed that the average noise level was less, over a 24 hour period, it was less than 65 dBA for more than three quarters of the time, which is a sound level or noise level that meets the criteria the developer proposes that we should accept. In other words, the sound level in a Torrance shopping center, in the major crossroads of the shopping center, was 65 dBA with less than 65 dBA for more than three quarters of the day. It did not exceed 65 dBA for more than 8 hours. I propose that the sound level in the middle of a major urban shopping center is not an acceptable sound level in a residential area. What I propose, therefore, is that the City in preparing the final Environmental Impact Report on this project should compute the distance from the roadway, since the roadways provide the major source of the noise in the project, the City should compute the distance from the roadways to that point where the sound does not exceed 57.5 dBA for more than 8 hours in one day, and that this noise intensity or noise level should be used, or this distance should be used as the distance to the normally acceptable area in an area where the houses are single family detached. That we use 60 dBA in the area of apartments, not 65. 65 may be acceptable in Manhattan, or it may be acceptable in the Loop section of Chicago, or in downtown Los Angeles, but I don't think it's acceptable in San Diego, no less in Chula Vista.

That's all I have to say on the sound problems. Are there any questions? I hope I haven't put you all to sleep on this talk.

Tarr:

Mr. Chairman, I have a question. You may know, Mr. McQuillan, or someone else in the audience, but isn't there an established sound level or a recorded sound level of an average freeway within reasonable distance. What I'm getting at, isn't the freeway itself going to generate much more noise than the shopping center is?

McQuillan:

The freeway itself will generate a lot more noise. In this same document on Community Noise, the noisiest environment they found in the United States was at an apartment which had a separation of like 2½ feet from one window of the apartment to the boundary of the Hollywood Freeway in Los Angeles, and the Hollywood Freeway is the busiest road in the whole world. This was the noisiest environment they could find. It actually exceeded the noise level in Harlem, so freeways are very loud, admittedly, but the intensity of the sound would decrease with the square of the distance. The loudness doesn't, it takes a little longer, it doesn't decrease that rapidly. Admittedly, the freeway itself will cause a great deal of noise build up in the area, nevertheless, the area I am more directly concerned with is the area in Lynwood Hills, and if you will look over your shoulder on a map you will see the revised alignment of Lynwood Drive, directly abuts the property of several people in Lynwood Hills, and that the developer's figures show that the boundary from the roadway edge of Lynwood Drive to the point of the normally acceptable--they're using 65 dBAs normally acceptable range--will vary from 70 to 90 feet. It will be 90 feet during the rush hour type traffic, or 70 feet on the average. It's my impression that if we were to drop the noise intensity or the noise level from 65 to about 57½ that these numbers would at least double, that it would go from roughly 140 to 180 feet and it would encompass the homes of about 20 to 30 households, instead of apparently about 10 households. So, saying that even using the developer's figures that people will be subject to environmental degradation, that's really not a criticism of the EIR, that's a criticism of the development itself.

McQuillan But, I criticize the EIR in that it substantially underestimates the noise effect in the Lynwood Hills area, and consequently underestimates the noise effect of the traffic in all of the areas because they are using this 65 dBA figure which really, according to the latest research available, is applicable not to single family detached housing, but to apartment dwellings which are air conditioned so that you don't have to have the windows open. I submit that this is not the way we want to live in Chula Vista, with our windows closed and the air conditioners on.

Chandler: Thank you, Mr. McQuillan. At this point in time before we take any more testimony, we'll take a five minute break.

Chandler: Come to order again, we'll be pleased to hear from the next individual who would care to give us some input on the EIR and I might say that from now on I think we're going to confine it to 5 minutes.

Parkinson: Mr. Chariman, My name is David Parkinson, I represent WESTEC Services, the preparer of the draft EIR. My address is 1520 State Street, San Diego. I'd like to keep my comments very brief, but I do feel inclined to respond to Mr. McQuillan's dissertation on noise. I think its fine for Mr. McQuillan to suggest that new standards are appropriate based on research, but in fact these standards have not been adopted for use, there not even standards, they're research at this point. The fact is that 65 dB contours is what is being used throughout the State, in aircraft noise studies, to determine satisfactory residential land uses surrounding the airports in this State. Comprehensive Planning Organization has done a noise study for the entire San Diego region concerning ground transportation, this was based on the 65 dB contour, so while there certainly is a great deal of research going on, 65 dB is the number that we're given as a standard throughout the State and that's what we should use, till its changed by some appropriate authority. Moreover, the calculation methods for this suggested 57½ and 60 dB levels are not available. The point was made and I'd like to reiterate, the primary source of noise in this area is not going to be the Plaza del Rey shopping center, its Interstate 805, and that's because there's going to be a very large traffic flow on that highway. If in fact, corrective measures need to be taken, not just with Plaza del Rey, but in the entire community, that is the place to start at I-805 because that's where your main noise source will emanate from, as well as through traffic on H Street. I have sent a letter to Mr. Reid, which I believe you may have copies of, addressing his revised air quality analysis in the City's draft report. I don't intend to read this letter but I would like it entered into the record because I think there have been some rather erroneous assumptions made as with regard to air quality impacts of the project. That's the sum of what I have to say unless there are some questions.

Chandler: Any questions of Mr. Parkinson? Thank you.

McQuillan: My name is McQuillan, 4425 Vista Nacion in Chula Vista. Mr. Parkinson is greatly in error when assumes dBa or 65 dBa are in use in conjunction with airport noise levels. Being an airline pilot and having been subjected to the other end of these complaints on noise level, I think I'm far more familiar with that than Mr. Parkinson will be, or probably ever will be. And the fact is that they don't use the term dBa around airports, they use the term "perceived noise decibels" and they generally use the term 80 perceived noise decibels, and generally people who have been in an area around an airport before the airport started flying jet aircraft, who have

subsequently subjected to 80 pndb's have been able to collect damages from the operator's of the airport and along the lines I might suggest, I would probably be very interested in collecting damages from whoever tries to build a road, should the noise intensity levels in my home exceed that level.

Chandler: Somebody else?

Velenski: I'm Patricia Velenski, from 93 East Shasta. I'd like to mention the adverse growth inducing impact. It will bring about overcrowding in a essentially residential community, and a House of Ice is not going to keep an over-crowded community happy. I think it would be much preferable to have space and fresh air. Motels and apartments don't belong in this area nor are they needed. I'd like to suggest a postponment until November when the project can be introduced by the law. As to air pollution and noise, Federal emission standards of 1977 cannot be met because of the emission devises which are inadequate and also we have no mass transit and neither are the type of problem that can be solved by Plaza del Rey. Along with this reasoning then would not the Plaza be compounding our problems, why not put off this expansion until our initial problems are under better control, and mass transit can be incorporated into this area. Thank you.

Chandler: Thank you. -----Miss Lassman?

Lassman: Mr. Chairman, my name is Ester Lassman, I live on Roben Rd. in the City of Chula Vista. I would like to expand on something briefly touched on by Mr. McQuillan, and that's traffic. On page 102 of this present Environmental Impact Report, the County long range traffic assignment is listed as one of the source materials, as information used in making traffic assigments to the present project. Now these County projections, and I don't know whether you, some of you may well remember with large maps that we projected up on the screen and the great details we went into in reference to these projected traffic figures. On the main east-west Chula Vista streets of Bonita, E, F, H, I, J and L, and the north-south streets of Hilltop, First, and Third, and they showed increases in traffic of from 100-400% over the next 15 years as a consequence of the Sports World project under 4 alter-natives in conjunction with the development of the greater area. And part of those 4 alternatives, 2 of those alternatives were without a Sports Arena, a regional shopping center plus the commercial and residential areas.

Now, nowhere in the present EIR is there any reference of the impact of traffic generated by the project on the major streets of Chula Vista. Now the EIR speaks only to the traffic figures and impacts on roadways directly in the project or immediately adjacent to the project, the freeway itself, and it completely ignores Chula Vista streets currently in existance. And it is these streets that will receive the greatest brunt of the impact of this traffic. Mr. Rice, you brought up the cost of maintaining streets that are inundated with traffic. Think of the cost that will be necessitated to maintain a Bonita Road with in increase of from 10,000 cars per day up to 55,000 cars per day. This may be County, but Bonita Road also ends up in Chula Vista. Or an L Street where there was a 300 and I think 64 percent increase in traffic over a 10 year period.

Now before you adopt the final EIR, I feel that the traffic figures, all the computations and the impact on existing Chula streets, must be incorporated into the Environmental Impact Report. I would also like to touch on another subject briefly, and this is the oversight of the EIR in mentioning a lack of mitigating measures in reference to the solid waste disposal. They devote

only two sentences on page 154 to this. Now this short sighted, long range planning of solid waste disposal for the Plaza del Rey project, extends at most only 10-12 years and it deals only with the Otay Land fill. Now contrary to popular belief, open land as a natural resource, is exhaustable there are other alternatives available to us for the disposal of solid waste. And we must consider these today, we must plan for 25 and 50 years hence. Governor McCall of Oregon called us the stewards of our land, we're only here for a short period, we must look to the future and that future is not 10 years, it is not 15 years hence, it is 25 years hence, 50 years hence and if your willing to be magnamouus, 100 years hence. I think the EIR should consider the mitigating measures in reference to the disposal of solid waste. There are a number of measures being utilized throughout the United States today, one of them here in El Cajon. Thank you.

Chandler: Thank you. Somebody else? Does the applicant have any further question or input at this time? Before we close the public hearing.

Walling: My name is Phillip Walling, Mr. Chairman, I'm also with WESTEC Services, 1520 State St. San Diego. Just a couple of things, solid waste disposal like sewage, it seems to us, are regional problems and not that these matters shouldn't be addressed, but we don't think its reasonable to expect a single project to speak fully to regional issues and that why we done it the way we did, and we think it goes a little beyond the scope of the project. Thank you.

Chandler: Thank you. -----Anybody else?

Velenski: And on behalf of the Hilltop Homeowners Association, I'd like to register a protest of this Environmental Impact Report, also one member asked me if I would ascertain as to whether on H Street there would be a six lane or a four lane street.

Chandler: That question, I think you might want to direct to Mr. Peterson.

Peterson: What leg of H Street, I think it varies, six lane in some portions and 8 actually in some. Bill----- in front of the shopping center. Between Hilltop and 805, that's just 4, yes its a 4 lane street with 72 feet between curbs, so its a wider curb to curb distance than normally occurs in an undivided street.

Chandler: Anybody else?

Lassman: With Mr. Walling, I disagree with you wholeheartedly, I think when it comes time to plan you cannot consider your immediate project. The project of the Plaza del Rey is one segment of a larger project involving 3,4,5,6,7000 acres, I don't know exactly how many, Mr. Reid can perhaps tell us, and unless we take the first step, and the first step happens to be the Bloom project, then who's to take the first step? If he says its not I, the next man will say, well its not I and the next man will say its not I, and before we know it those 7000 acres will be developed without any foresight, and hindsight is no foresight.

Chandler: Thank you.

Hutchinson: James Hutchinson, Wilsey and Ham, 1400 6th Ave. Mr. Chairman, if I might comment briefly on the sanitation system and the solid waste relative to what the regional studies are doing and what is being planned to take care of the regional problem. On the metro system the City of San Diego, as the

Hutchinson major agent in the metro system, is planning a study of the complete area related to federal funding for inland plants which will relieve the coastal station and this is related to reclaimed water facilities and other means of reducing the demand of the Point Loma station. Also, there are studies being made as far as reducing cost of treatment at facilities such as the Point Loma plant. Unfortunately, they are all tied to very expensive projects and funding is not immediate but it is a regional problem.

On the solid waste there is a pilot plant right now that the County of San Diego is participating in. It is a 2-ton a day study related to compaction of solid waste to help lengthen the time or the capacity of our present land fills. The 200 ton a day plant which is proposed for El Cajon has not been built yet; it is an extension of this original grant. It has run into some shaky ground as far as continuation of the project, but something is being done in the San Diego basin to take care of these two problems, and it is not something that this project can do or the City of Chula Vista can do, but we are all interested in it and we hope to see a future solution.

Smith: My name is Carol Smith, 87 F Street, Chula Vista. I'm here really just to make a point because I've heard the statement so many times, I'd like to go like this every time I hear it, the freeway is the major culprit. Yes, we have the freeway, and yes, there isn't much we can do about it, and people who ask me where I was when they planned it, I don't know and I'm sorry I wasn't there. However, when you talk about over a million square feet of shopping center and literally thousands and thousands and thousands of homes, you cannot tell me that you are not astronomically compounding the environmental results that come from that freeway being there, and don't tell me it's a necessity to build off a freeway because I know of places who haven't, I know it's not a necessity, and if you're going to talk about environment let's not put the blame on a freeway for what you're willing to do when you compound that geometrically, probably 400 times worse by putting a high shopping center and thousands of homes next to it. Thank you.

Rice: I think we are getting a little afield here. We're starting to refer more to the development than we are to the EIR and really the EIR is the thing we should be concentrating on right now, and then the development will come later.

Chandler: That is true. Anybody else? If not, the public hearing is closed. I'll reiterate what Mr. Rice just said, that really the approval of an EIR is not the approval of a development. It's the approval that all of the input that you have received up to that time is about as much as you are going to get and it's based on that that you can then use that information for future decisions. What is your pleasure, any discussion?

Beam: Mr. Chairman, before the Commission takes action by way of directing staff-- it doesn't necessarily have to be now, but at some time prior to that, I'd like to make some comments relative to the obligations of the Commission under the California Environmental Quality Act so you know what framework you're talking about and what your responsibilities are.

Chandler: Be our guest.

Beam: Briefly, what I'd like to note is CEQA California Environmental Quality Act



WESTEC Services, Inc. / 1520 State Street, San Diego, California 92101 / (714) 233-7572

74-407  
July 10, 1974

Mr. Douglas D. Reid  
Environmental Review Coordinator  
City of Chula Vista  
276 Fourth Avenue  
Chula Vista, CA 92010

Re: Plaza Del Rey EIR-74-5

Dear Mr. Reid:

We have reviewed the City's Final Draft EIR for the Plaza Del Rey project which was based in part on the WESTEC Services, Inc. Draft EIR. There is a major aspect of the revised environmental analysis with which we take exception and which we desire to go on record as not concurring with your findings. This is the issue of air quality and the project's absolute and relative impacts on the Chula Vista planning area. Your analysis provides that 25-50% of regional shopping automobile trips are classified as "unique". This factor (25-50%) is also applied to Mexican auto trips. The net result of this assumption is that you predict as much as 21-46% of the Chula Vista areas's air pollution in 1980 (depending on the specific pollutant) could be a result of this project. We think this finding is highly unrealistic and not in keeping with what will actually occur. In support of the predicted air quality impacts we calculated in our draft report (p. 57, 9-16%) we offer the following facts:

1. The Economic Study indicates that the shopping center can recapture about \$40,000,000 annual business currently being lost from the market area. The estimated total current annual market potential for the center is \$55,000,000. Thus about 73% of the volume is business now being lost to other areas. Only 27% is new business being brought into the trade area. This is consistent with the 25% unique trip factor which we used.

2. Our air pollution impact estimates are highly conservative (i.e. reflect worst case impacts) because we have not calculated a net benefit in terms of the shortened length of trip associated with the recaptured business which is 73% of the total trips. The average one way commute distance to Fashion/Mission Valley from the Chula Vista planning area is 11 miles. The new average one-way commute will be about 5 miles, based on the primary trade area for this center.

Mr. Douglas D. Reid  
July 10, 1974  
Page 2

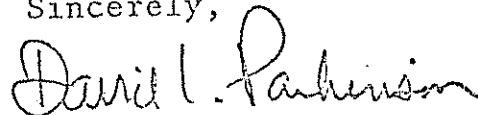
3. The assumption that up to 50% of the Mexican auto trips will be unique because of this project does not reflect current Mexican shopping habits. The Economic Analysis presumes that Mexicans will come to shop in the San Diego trade area because of the nature of goods available regardless of the existence of Plaza Del Rey. If such is the case, as seems reasonable, then Plaza Del Rey can capture an estimated 15% of this market. As such a net air quality benefit will accrue to both the Chula Vista planning area and the Regional air basin because of the reduced length of some of the shopping trips. Again no benefit was taken for this factor. Thus a 25% unique Mexican trip factor is considered highly conservative.

4. The estimate of relative planning area impacts did not consider the fact that I-805, exclusive of Plaza Del Rey traffic, will contribute over one-half million vehicle miles per day of auto travel to the Chula Vista planning area in 1980.

5. The average daily traffic (ADT) used for shopping center air quality calculations is the roadway design maximum (50 per 1000 square feet of floor space per day). Actual estimates for a similar shopping center (Fashion Valley) indicate a year-around average of 34 trips per 1000 square feet of floor space per day. Thus actual year-around traffic levels are likely to be 68% of those indicated in the traffic analysis.

For the above reasons it is our considered opinion that the estimates made by WESTEC Services in its draft EIR of May 17, 1974 and the air quality impacts predicted, both relative and absolute, are in fact much closer to the situation that will result if Plaza Del Rey is approved.

Sincerely,



David L. Parkinson  
President

DLP:nb

XV. RESPONSE TO INPUT

The Public Hearing of June 12, 1974.

Mrs. Al. Valensky, 93 E. Shasta St.

Notification of the availability of the Draft of this EIR was published in the Star News, a Notice of Completion was sent to the Secretary of Resources Agency, and published on June 3, 1974. A notice was filed with the City Clerk and the property was posted in accordance with the Manual of Environmental Review.

East H Street, east of I-805 is planned for 8 lanes to the interchange with the loop street and six lanes to the east of that point. The problems associated with the installation of East H Street from Hilltop to I-805 were presented in EIR-73-11. Subsequently the number of travel lanes were reduced, landscaping added and noise attenuating barrier included.

Carol Smith, 87 F Street

The discussion of the referendum has been revised in the introduction to properly reflect the issue before the voters.

The reason that a supplement to EIR-73-1 is being processed with this project is because this project is substantially different than that presented in EIR-73-1. Where new environmental analysis has not been provided, sections of the previous EIR have been incorporated into this EIR.

Mike McQuillan, 4425 Vista Nacion

Many sections of EIR-73-1 have been incorporated into this document when the supplemental report offers no analysis and the draft of this document relied on EIR-73-1. Mr. McQuillan raised issues regarding the estimation of unique traffic associated with this center as compared to the market analysis, traffic noise and the use of the 65 dBA standard. Extensive modifications of the air quality analysis have been incorporated into the text and the testimony of Mr. Parkenson responding to these issues is reproduced in this section.



The issue was raised with regard to the fact that we stated in our supplemental EIR that 25% of the trips would be, in effect, the net incremental pollution addition to your Chula Vista area of influence because of this project. It was pointed out that this was incongruous with the economic consultant's findings wherein he said that 72% of the shoppers would come from outside of Chula Vista. I think it's important to understand that these are two different factors that we're talking about. We're looking at an impact on the localized area from the air pollution point of view, which includes Chula Vista and communities which are in--areas which are in approximately 5 to 6 miles of the project site.

The economic study is looking at Chula Vista as a census tract, plus these other outlying areas. Therefore, we don't feel that there is a discrepancy here. This is a very complex problem, air pollution from shopping centers. It's so complex, as a matter of fact, at this point in time, the Environmental Protection Agency does not have an approved procedure for analyzing this problem. They're working on it and they expect to come up with something. We wrestled with this problem last year for, I would say, three to four months, with the City staff. We arrived at a number of 25% based on a traffic study that was done. We presented this data to the staff and said if this is not--if you have other information that would indicate other than this, please show us and we'll amend our findings. We have never seen that. It may be 50%, I'm not sure. The important thing as far as air pollution is concerned is, there are two elements. No. 1, the emission controls that are on the automobiles now are beginning to have a marked effect as far as cleaning up the air in this region. Today the air quality in the San Diego region is about equivalent to what it was in 1961 to '62. It reached its worst in 1968. So the improvement is there; now the fact is, however, that we are not going to meet the Federal standards in 1977, for the simple reason that the emission devices that we've got are inadequate and we don't have the mass transit systems yet that are going to allow us to make this final step and meet the Federal standards. But the fact that we don't have the adequate emission standards on our automobiles, nor do we have mass transit, are neither--neither one of these are the type of problem that can be solved by Plaza Del Rey.

I think with regard to noise, I would like to make two comments. Firstly, the point was raised again, this time as it was last year, that the use of HUD noise standards was inappropriate to a residential area such as the area surround the Plaza Del Rey property. The HUD standard of 65 db is not unique to the Department of Housing and Urban Development. The State of California has adopted this same standard in an equivalent form, as has the Environmental Protection Agency. What all these agencies have said, at both the Federal and State level, is that noise levels greater than 65 db on a daytime/nighttime average are unacceptable for residential areas; at 65 or below they're acceptable. This is what we've measured our study on, this is the facts that we've given you in the report.

With regard to distorting the truck traffic on Lynwood Drive, I'd like to point out that there is a projected grade of 10% on that street, which does not lend itself to the use of heavy trucks. I will be extremely surprised if any heavy truck traffic uses that thoroughfare. Of course, there will be a major interchange at 805 and H Street, so there really is not basic reason-- now, whether or not the City decides to prohibit heavy truck traffic on that street is a question for the City. However, here again I would like to point out our conservativeness in this study. We assume 5% truck traffic for the shopping center. Quite recently, in order to verify this, we took an actual count of heavy duty trucks at a comparable shopping center in the San Diego region. What we found out was that at a shopping center such as this, which is comparable to Fashion Valley in terms of types of stores and types of services and goods offered, there is a very inflow of heavy truck traffic--something on the order of 100 trucks a day, which we counted over a period of two days into the shopping center with an equivalent square footage of feet. We're talking about a beginning average daily traffic in here of something around 40,000, 100 trucks compared to 40,00 is 1/4 of 1%. We've assumed 5%, so it's very difficult for me to see how we've distorted the facts in favor of anybody but trying to do a very objective analysis here.

It should be noted that the HUD method of noise assessment with the addition of an evaluation of peak traffic noise, is the adopted standard of the City of Chula Vista.

Peter Watry, 81 Second Avenue

The Cost/Revenue Analysis has been revised with the assistance of Dr. Watry and the DLB, Inc. staff. Remarks concerning the inclusion of various tracts in the trade area have been added to the report. The specific revisions requested by Dr. Watry have been incorporated into the text.

Esther Lassman, 264 Rogan Road

There are significant differences between the traffic analysis of this report and EIR-73-1 due to changes in circumstances under which the project is to be undertaken. A case in point is the timing of the project which means the implementation of the project will occur after completion of I-805. Thus the adverse effects of traffic on a temporary connector to Bonita Rd, East J Street, Telegraph Canyon Rd. or Otay Lakes Rd. will not result.

The reason the EIR emphasizes full development, is because the design of the circulation system is based on full regional development.

The report now identifies the long range problem of providing flood protection/management in the lower Sweetwater Valley and the limitations that development in the upper Sweetwater Valley will place on that development.

Darrel Robbins

The alternative suggested in this input has been incorporated into the final text.

Mike McQuillan

An analysis of uncontrolled Mexican vehicles mixed- into the total vehicle count has been added. This accounts for 10-12% of the total vehicles not the 20% identified in the input.

Written Input

Dept. of Public Health

Consideration of solid and liquid waste generation and water consumption has been added to the report.

Environmental Control Commission

1. The applicant has supplied a letter indicating that they are currently negotiating with the school district to exchange land to provide the school district with an acceptable school site. City and school district policy also requires that adequate facilities be available prior to approval of tentative subdivision maps. The build-out period for residential areas are quite long which will permit phasing of development with schools.
2. The market analysis, modified by some of the assumptions previously identified, does identify the market for one regional shopping facility of some scale. This is in conformance with the findings of the market analysis for the proposed center in the City of National City. If one of the center attracts one or two major department stores, it is very unlikely that the second center would be able to attract any further major tenants.  
At this point in the development process, it is likely that some type of improvements would be underway, development of the property would be irreversible and alternative land uses would have to be examined.
3. Traffic congestion that would cause the level of service to drop to an unacceptable level will occur only at one location. The EIR contains several methods that could be utilized to mitigate this problem, including the provision of a grade separated intersection at this location.  
The analysis of air quality impacts has been substantially changed.

Water Quality Control Board

Most of the modifications requested by the Water Quality Control Board have

been added. However, it must be noted that no assurances that adequate treatment capacity will be available to this project and the region are beyond the scope of this project.

#### City of National City

Traffic. The primary effect of traffic on the City of National City will be on Bonita Rd., near the Lynwood Drive intersection. Peak p.m. traffic in this area will be 630 north bound and 1170 south bound, while at full regional development the total ADT will be 27,000. These traffic flows will be with the capacity of a normal intersection design. The impact of this project on air quality of National City will be very similar to that shown for Chula Vista because of the proximity of the two City's within the air basin.

Economic. South Bay Plaza is the oldest center in the area, it lacks aesthetic appeal of the newer centers and suffers from obsolescence and congested access. It is not believed that this center can withstand strong competition located nearby on I-805. If this project were to proceed with, no other competitive centers in National City, there will be a considerable shift of shopping dollars from National City to Chula Vista.

#### Kathryn S. Moore

The development of the project will make it very difficult to locate major tenants and specialty shops that are normally found in a shopping center for the downtown Chula Vista area if it is redeveloped. The grading operation for the project will cause noise vibration and create dust that will effect adjacent residences for years. The mitigating measures section has been expanded to outline methods to reduce this impact. Specific plans for development will be reviewed later.

Peter Watry

NOTE: The numbers refer to the numbered items as indicated on Mr. Watry's Outline of Presentation.

- I. The cost/benefit section (actually cost/revenue section) of the EIR addressed only Phase I, because there is but one phase to the project under discussion in this EIR. The total project proposed is that 450<sup>+</sup> acres described in the EIR. While additional acreage in the general area is under the ownership and/or control of the same owner, there are no developments proposed at this time which could be evaluated in the EIR. The City of Chula Vista is processing a revision to the General Development Plan covering the El Rancho del Rey P-C zone and some associated properties with different zone designations.

With no proposed projects on adjacent properties it is impossible to prepare a meaningful cost/revenue analysis, as the basic parameters are unknown, i.e. future population, number of dwelling units, urban support requirements, etc. Any figures developed absent these basic criteria would be purely speculative, with no real basis in fact.

Some analysis of environmental prospects in this vicinity have been addressed in the recently adopted EIR for the implementation of the Hillside Modifying District Ordinance. (EIR-74-2) While this EIR lacked specificity sufficient to prepare a detailed cost/revenue study, it achieved the level of specificity possible with the information then available.

Future possible developments for this general area were also developed for the Sports World project (EIR-73-1) which was never implemented. Reference to these previous EIR's is permissible under Section 15068 which states in part "... the lead agency may use an earlier EIR prepared in connection with an earlier project to apply to a later project, if the circumstances of the project are essentially the same..." The similarity in circumstances in this case is that future development of surrounding properties is presently uncertain.

As to the addressal of cumulative effects on costs and revenues of the development of future projects nearly in conjunction with the effects of this project, it has been determined that cumulative effects shall consider only the effects of the project interacting upon one another. This effectively precludes from consideration the cumulating effects of different projects on one another.

- II. a. The allocation of the costs of the new fire station to this project alone is not considered appropriate. The existing fire station at East J Street is obsolescent and approaching the end of its economic life. Long range plans of the fire department envision replacement of this station in order to maintain effective fire suppression capability and to accommodate growth throughout the area serviced by this station, only a small percentage of which is encompassed by the 450 acres presently under consideration. It is considered unfair to charge to the account of this project maintenance of the general health, safety and welfare of the City generally. The enlargement of the personnel and equipment account occasioned by this development is considered reasonably realistic as presented in the cost/revenue study.

b. The projected costs and revenues of education have in large measure already been included in the cost/revenue study on Table T on page 197. This table has been expanded in the final EIR to reflect the building construction costs for the elementary school included within this project site. The costs of land acquisition for this school site are not considered appropriate as it appears that the site will be deeded to the elementary school district by means of a land exchange presently under negotiation between the developer and the Chula Vista City Elementary School District. (See page 32 of Input Section of this EIR)

It might well be argued that the benefits of the school to be provided in this project will redound to many residents outside of this project site. The elementary schools in the school district typically have a capacity of some 600-900 students. As indicated on page 62, the project may develop as many as 880 students, but is more likely to generate approximately 545 elementary students, which would provide excess capacity for use of residents outside this project.

c. The City participation costs of developing H Street from this project easterly to connect with the completed segment of H Street near Otay Lakes Road has been reflected in revisions to Tables F, L, M, and U (pages 164, 187, 188 and 198.)

d. The impact of the development on the sewage treatment facility could be reduced through the reduction of liquid waste from the facility. A small treatment facility could be located on site to give some of the liquid waste enough treatment so it could be used for landscape irrigation, this would also reduce water consumption. The long range solution to this problem is the development of adequate treatment facilities. (See Mr. Coleman's testimony in the input section of the report for further information.)

e. It is generally accepted in most circles that values and amenities cannot be adequately quantified. While it is also generally acknowledged that there are social costs and to a lesser degree economic costs attributable to pollution, no satisfactory dollar value is assignable to these costs. The testimony given by the respondent admitted that the value assigned was arbitrary and search of a considerable volume of literature on this subject has revealed no generally acceptable criteria or quantitative measure which would be applicable in a situation such as this. The gentleman has arrived at a figure he deems appropriate, but provides no basis therefor; it might well be asked why not a figure double that value; or half of that value; or five or ten-fold or even 1/5 or 1/10 the value presented. Due consideration of social and economic costs of pollution and environmental impacts in the decision making process is certainly necessary and appropriate. However, to assign monetary values to these impacts will do nothing but dilute the value of economic costs/revenues where they are able to be projected with some measure of objectivity.

f. An addition to the EIR has been made in this regard. Experience in La Mesa/El Cajon has given some indication of what may be expected in this area, although there are number of differences so that it is not a parallel situation. Parkway Plaza Shopping Center was opened in El Cajon in late 1972, approximately 4 1/2 miles from the existing Grossmont Center regional shopping center in La Mesa. The Grossmont Center has not had a reduction in gross sales volume, however, the rate of growth in sales volume has been reduced to approximately 1% per annum, substantially lower than theretofore.

g. Tables Q, S, and U have been revised to eliminate the double counting of sales tax revenues.

h. The Sports World EIR used 25% increase in taxable sales in Chula Vista for both the proposed 1.5 million square foot and the approved 800,000 square foot center (A new cost/revenue study was done for the approved project). This was because the impact would be most strongly felt in the first year or two of operation, even well before full development of the total larger center. The same rationale would apply in this instance of a two-phased shopping center.

In justification of the use of the 25% additional taxable sales in the City as a factor in projecting sales tax revenues, the following experiences are presented:

1. Chula Vista Shopping Center. In the year subsequent to the opening of the Chula Vista Shopping Center in 1962, taxable sales for the entire City increased by 40%. This figure is considered excessive for use in this instance because there was no existing regional center in the area at that time, and there was a much smaller base level.

2. Grossmont Shopping Center, La Mesa. This center opened in 1962 also, and that year La Mesa sales tax revenue increased 24.6% and in 1963, the first full year of operation, it increased again by 30.1%. This presented a similar situation to the Chula Vista Center, but had greater competition from College Grove Center 4 miles distant and Mission Valley Center 10 miles distant.

3. Parkway Plaza Center, El Cajon. The Parkway Plaza Center opened in late 1972, and in that year taxable sales in El Cajon increased 29%, and in the subsequent year increased 22.5%. This large recent center is perhaps the closest parallel to the Plaza del Rey, as there was an existing center 4.5 miles distant, while Plaza del Rey's nearest competing center is 3 miles distant. Unfortunately it is impossible to carry the parallel further as in Parkway Plaza the competing center is in a different tax jurisdiction.

In light of the experience of the above three existing shopping centers, the use of 25% does not seem inappropriate. It is further noteworthy that the figures generated by use of this 25% figure are not grossly at variance with the figures produced in the market analysis, developed by one of the foremost research firms in the region.

i. The Cost/Benefit Study submitted by Mr. Watry has been included in the Input Section of the EIR, with appropriate footnotes appended to the text materials to invite attention of users to the existence of an alternative presentation elsewhere in the document. It is noted that the study should more properly be designated a cost/revenue study rather than a cost/benefit study, as no particular evaluation of benefits other than revenues has been made.

III. At the time of preparation of these responses, no direction has been given the staff by the Commission relative to retention of an economic expert as consultant.

IV. The aforementioned Cost/Benefit Study has been incorporated in the Input Section of the final EIR. The same comments as in II i. above apply.



Eugene Coleman

Drainage

1. Mr. Coleman discussed the use of average rain falls over a year period and the effects peak rain fall would have. Mr. Coleman also detailed the drainage facilities Cal Trans is installing and the history of rainfall in this area. As Mr. Hutchinson pointed out, the drainage calculations not only took into consideration the development of the drainage basin but also were based on peak flow conditions not average runoff. (See Mr. Hutchinson's testimony for more details.)

2. Mr. Coleman pointed out all the development that was occurring in the Sweetwater River drainage basin and that while each project was insignificant the total of all projects could be significant. The purpose of EIR's is generally to reveal the environmental impacts of the subject project, however, this EIR does reveal the limitation of long range cumulative development in the Sweetwater drainage basin in Section VIII. Also the drainage projections are based on the development of the entire drainage basin.

Sewage Treatment

Mr. Coleman presented a detailed background report on the Metropolitan Sewer System, the Point Loma Treatment facility and the processing of permits by the Coastal Commission. This testimony has been referenced in appropriate section of the final EIR.

Concerning the adequacy of the two 84 inch drains under the freeway, Cal-Trans engineers have taken into consideration the ultimate flow from the entire Rice Canyon drainage basin, and have projected flows for the peak hour runoff. This procedure reveals that the drainage facilities are adequate in accordance with good engineering practice. Mr. Hutchinson's testimony at the hearing further addresses this problem area.

The concern expressed about the increased runoff of this project is also responded to by Mr. Hutchinson, in that all computations for runoff have been based on full development of the entire drainage basin.

In regard to the capacity of the sewage system, this EIR has been presented to the Regional Water Quality Control Board, and their letter commenting on the EIR requested additional information be included, but made no recommendations concerning approval or disapproval of this project on grounds of sewerage processing capability.

As to the conditions imposed on the City of San Diego by the Regional and State Coastal Commissions, these have deadline dates in the future, and it seems reasonable to assume that the City of San Diego will meet its responsibility in meeting these deadlines. In the interim, no moratoria have been

imposed on jurisdictions participating in the metro system by the City of San Diego or by the Regional Water Quality Control Board for additional connections.

The testimony indicates that permission to construct sedimentation tanks #6 and #7 has been requested and approved by the Coastal Commission. The testimony then goes on and explains that the capacity of basins #5 and #6 is already committed, but does not address basin #7.

It is worthy of note that the Comprehensive Water Quality Control Plan Report for the San Diego Basin has been promulgated. This plan calls for ultimate development of two water reclamation plants in the Chula Vista area. Each would have a 2 mgd capacity. One would be located in the Sweetwater River Valley, a short distance below Sweetwater Dam and would process effluent generated in the presently undeveloped area east of Otay Lakes Rd. The second water reclamation plant would be in the Sweetwater Valley somewhere near the outfall of Rice Canyon, and would provide reclaimed water for irrigation of the two golf courses in the Bonita area. The Comprehensive Water Quality Plan also discusses in some detail the ramifications of the excess load being placed on the Point Loma Treatment Plant, and concludes that while the effluent is not up to standards, it is of no major consequence to the overall environment, and is not economically justified to resolve. (page I-6-10)

At this point in the testimony, a question was raised by a Commissioner concerning a short section of natural drainage area between this project and freeway I-805. It should be noted that even though federal regulations preclude disposal of this remnant piece of land until the freeway is built, it seems that freeway completion should precede completion of this project. The ultimate completion of the drainage facilities might well be completed after I-805 is finished, and negotiation with adjacent property owners is possible.

Mr. Mike McQuillan

In response to Mr. McQuillan's request on analysis of the proposed vehicular traffic has been made utilizing a methodology developed by Myle Laboratories of El Segundo, CA. The technique, which fulfills all the legislative requirements of the State Planning Law, yields an average day-night noise level (Ldn) utilizing input parameters of traffic flow, highway configuration, speed limit and sideline terrain data.

With references to the State's 65 dBA level, 21% of the street segments exceed the standard prior to corrections for roadway elevation and sideline terrain which further reduces the propagation of traffic noises. Ten segments in residential areas were selected for application of a 55 dBA day-night equivalent level. The distance from the roadbed before 55 dBA noise levels prevail ranged from 90 feet to 1000 feet. Homes closer to the roadbed would experience higher sound levels than are normally considered to be compatible with optimum enjoyment of residential property. These calculations do not consider any man made barrier adjustments. During precise planning of development sections line-of-sight barrier techniques will be utilized to protect existing and proposed developments. Attached are work sheets keyed to the calculation points on page 142 and 145 of this report.

HIGHWAY NOISE ANALYSIS WORKSHEET

Wyle Laboratories Job No. \_\_\_\_\_

1976

Route 0 1 55 2  
Map Sheet \_\_\_\_\_

Ref.	Segment	Lanes/ Median	A.D.T.	Average Hourly Flow		% Truck	L <sub>eq</sub>		L <sub>dn</sub> at 50 ft	% Grade	Roadway		Sideline		L <sub>dn</sub> , ft at 65 dB	SOUND LIMIT	Notes
				Day	Night		Day	Night			E	L	D	Lt			
1		3	11.4	1663	1066	5%	66.5	60.5	68.2	3	✓				60		
2		3	38.0	2204	649	5%				6					35		
3		4	18.4	1047	246	3%	65.0	59.5	67.5	3	✓				50		
4		4	6.2	360	690	3%	60.5	58.0	64.8	3	✓				45		
5		4 (S)	1.3	1675	1019	3%	55.0	53.0	60.0	3	✓				40		
6		2 (S)	2.5	1319	1079	5%	63.2	58.0	65.5	6		✓			50		
7		3	64.0	3712	224	3%	74.0	69.0	75.7	3	✓				70		
8		3	53.0	342	852	3%	73.8	67.8	75.2	3	✓				70		

Prepared By: \_\_\_\_\_



HIGHWAY NOISE ANALYSIS WORKSHEET

1980

Route

Map Sheet P 1 of 3

Wyle Laboratories Job No. \_\_\_\_\_

Ref.	Segment	Lanes/ Median	A.D.T.	Average Hourly Flow		% Truck	L <sub>eq</sub>		L <sub>dn</sub> at 50 ft	% Grade	Roadway			Sideline		L <sub>dn</sub> , ft at 65 dB	Notes
				Day	Night		Day	Night			E	L	D	Rt	Lt		
1			12.3	.713	.178	5	67.5	61.8	69.7	3	✓					dn	
2			40.9	2.372	.591	5				3	✓						
3			27.4	1.589	.396	5	66.2	61.2	67.8	3	✓					65	
4			13.4	.777	.194	5	63.8	58.2	65.0	3	✓					50	
5			6.7	.388	.097	5	61.0	55.0	63.0	3	✓					40	
6			24.4	1.415	.352	5	68.2	62.8	70.4	3	✓					80	
7	new station	4	9.6	.557	.139	-	60.7	54.2	62.0	3	✓					40	25 mph
8	new station	4	12.4	719	179	-	61.8	55.7	64.2	-	✓					48	

Prepared By: \_\_\_\_\_



FIG. 1 MAY NOISE ANALYSIS WORKSHEET

Wyle Laboratories Job No. \_\_\_\_\_

1980

Route \_\_\_\_\_

Map Sheet Q 6 NE 3

Ref.	Segment	L <sub>dn</sub> ft.					L <sub>dn</sub> ft. at 60 dB	L <sub>dn</sub> ft. at 55 dB	L <sub>dn</sub> ft. at 50 dB	Notes
		at 50 ft.	at 70 db	at 65 db	at 60 db	at 55 db				
1		69.7	dna	dna	95		560			
6		70.4	58	80	95		240			
7		62.0	-	40	75		380			
8		64.2	-	48	110		240			
9		65.0	-	50	85		95			
10		78.0	90	480	420		760			

Prepared By: \_\_\_\_\_

Ms. Vilensky

The comment was made that this is a residential community. The locale is presently vacant and unoccupied. The completion of the freeway is changing the land use, and will exert long range pressures for changes in the future. These land uses will be directed in general terms to those planned in the Chula Vista General Plan 1990. This plan envisions a retail shopping area in the site proposed in this project. Similarly, medium and high density residential uses are allocated in the General Plan for the general vicinity of the sites proposed in this project.

The air pollution and noise impacts of the project are adequately discussed in the basic EIR text and tables, and in other input comments and responses thereto.

Mrs. Lassman

The existing traffic on many of the City streets will be reduced upon completion of I-805, with much of the traffic now transiting the city to gain access to I-5 diverted to the new freeway. As regional development proceeds subsequent to opening of the freeway, traffic congestion will again increase causing a deterioration in the service of the circulation system and attendant inconvenience to the public. In the subsequent discussions, as in the text of the EIR, traffic generation and loads are predicated on full development of the area; not just the traffic generated by this project.

The major north-south traffic carrier serving the area will be I-805. Traffic from the subject project will have access to freeway interchanges at H Street and Bonita Rd., and also Telegraph Canyon Rd. It is expected that the subject project will contribute approximately 15,300 daily vehicle two-way trips to I-805 northerly of H Street. The County's daily two-way traffic desire projection for I-805 northerly of H Street with the area fully developed is 367,000, which means that subject project contributes only about 4% of the total traffic desire for this facility. The major east-west traffic carrier serving the area will be H Street. The impact of project traffic will vary with the location. On H Street westerly of I-805, the proposed development will generate 12,900 trips per day, or about 20% of the projected total of 66,000; on H Street westerly of Otay Lakes Rd., the subject project will generate 8,700 trips per day, or about 19% of the total projected traffic.

On Otay Lakes Rd, the major north-south carrier on the easterly edge of the subject area, a maximum of 7,900 daily trips will be generated from the proposed development. This represents approximately 30% of the total projected traffic. Traffic estimates show that the subject project will contribute 6,600 trips per day on Telegraph Canyon Rd. to the west, and 5,600 trips per day on the road to the east, for 24% and 47% respectively, of the total traffic.

The following tabulation shows the approximate existing daily traffic volumes on major roads westerly of proposed project area, the estimated traffic volumes added to these roads by the project, and the County's estimated daily traffic volumes on these roads for full regional development.



	<u>Approximate 1973 Daily Traffic (1)*</u>	<u>Daily Traffic Added By Project (2)</u>	<u>County's Estimated Daily Traffic For Full Regional Development (unref)</u>
Bonita Road	15,900	6,000 (3)	55,000
F Street	5,600	-	500
G Street	2,800	-	(4)
H Street	5,000	12,900	66,000 (5)
I Street	1,600	-	(4)
J Street	6,100	1,500	4,000 (6)
K Street	3,000	-	(4)
L Street	13,700	<u>6,000</u>	40,000
		26,400	

(1) At Hilltop Drive

(2) West of I-805

(3) East of I-805 is 15,000

(4) Not Included in County Network

(5) Adjusted on County Assignment to 57,000

(6) Adjusted on County Assignment to 13,000

The above tabulation shows that 26,400 daily trips from proposed project have been added to the City street system westerly of I-805. These trips have not been assigned to other north-south and east-west routes outside the project area. For instance, this traffic has not been dispersed to: Hilltop Drive, Third Avenue and other north-south routes; or F Street, G Street and other east-west routes. It can be seen from the above tabulation that the County analysis had no through traffic assigned to G Street, I Street, and K Street; the reason being that these streets are not part of the General Plan Circulation Element, and therefore were not included in the network, being considered instead as simply contributing traffic to the circulation element streets. The dissipation of traffic throughout the City's existing street system is difficult to assess. The greatest impact, of course, is from I-805 westerly to Hilltop where traffic would substantially begin to disperse. Assuming the project were fully developed by 1980, daily traffic volumes would be as follows:

Bonita Road	28,400
H Street	19,900
J Street	10,100
L Street	25,300

These volumes were obtained by increasing 1973 traffic volumes at 5% compounded annually (average annual traffic growth in San Diego County) and adding to them the traffic volumes generated by the project. Bonita Rd. is 3400 above the 25,000 daily traffic for which it will be designed, L Street is 300 above the traffic design volume, while J Street and H Street are within the capacity design limits. Some traffic may be diverted to these routes from existing streets, because of the improved traffic service which the new or improved streets can provide. As the area continues to develop beyond 1980, and the regional traffic growth takes place, appropriate measures will have to be taken if traffic capacity deficiencies are to be avoided. These deficiencies may occur on any of the above-mentioned streets, depending on the amount of growth and the accuracy of the base traffic forecast. According to traffic projections, they are more likely to occur on Bonita Rd. and H Street.

The traffic generated by the proposed development will, in some areas, have but a small effect on roads surrounding the project. However, the interchange of H Street with I-805, and H Street westerly of I-805 as now planned will begin to experience congestion as regional development progresses.

Concerning H Street westerly of I-805, the regional County traffic projection was 66,000 vehicles per day which included all traffic generated by the proposed development. With the reassignment to reflect better usage of the road system (specifically the north-south road connecting to Bonita Road and J Street), this volume was reduced to approximately 57,000. The 57,000 figure contains all regional traffic. There may be some reduction in the impact of this traffic volume due to the off-peak hour operation of the recreation-commercial area in the proposed development. Shopping center traffic may also tend to reduce peak hour travel below that which would normally be expected for strictly commuter travel.

Some congestion may still be expected during the afternoon commuter peak hours. An assessment of the individual deficiencies must be made as they occur, and appropriate action taken. This could include upgrading of traffic signals, street approach widenings, parking restrictions, one-way street operation, access control, reversible lanes, and other considerations.

At some point in discussion and/or the hearing on this project the question was raised concerning the effects of noise on this project by the possible future development of an international airport facility at Brown Field or vicinity. Even assuming a probable orientation of the landing strip to a  $110^{\circ}$  -  $290^{\circ}$  (approximate) axis, noise impacts on the locale of this project would be insignificant. The approach and departure patterns for such an airport configuration would be considerably east and west of this site and the airport proper some 6.5 miles south of this site. The greatest probable impact on this project from development of an international airport near Brown Field would be the noise and additional air pollution generated by an additional traffic increment added to I-805 adjacent to this project.

APPENDIX A  
METEOROLOGICAL AND AIR QUALITY DATA

CONTENTS

<u>SECTION</u>	<u>SUBJECT</u>	<u>PAGE</u>
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A.4	Air Quality Effects of SDG&E's South Bay Plant	14
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A.1 Meteorological Data

The following tables are provided in support of information provided in Sections I and III concerning air quality conditions and impacts:

<u>Table</u>	<u>Subject</u>
A-1	Temperature Data
A-2	Precipitation Data
A-3	Wind Data (Ream Field)
A-4	Wind Data (Lindbergh Field)
A-5	Inversion Layer Data

TABLE A-1  
RECORD OF TEMPERATURES

Chula Vista: 1940-1970

Elevation: 9 feet

Temperature (°F)	J	F	M	A	M	J	J	A	S	O	N	D	Avg. 30-yr.
Highest	81	87	85	91	94	94	85	96	105	93	95	83	105
Mean Max.	62.2	62.7	63.5	64.9	66.5	67.9	71.3	72.7	72.8	70.2	68.0	64.7	67.3
Mean Temp.	52.1	53.4	55.2	58.1	60.8	63.1	66.9	68.0	66.7	62.5	57.7	54.4	59.9
Mean Min.	41.9	44.1	46.8	51.3	55.1	58.2	62.4	63.3	60.6	54.8	47.3	44.0	52.5
Lowest	26	30	32	36	43	46	50	54	47	37	33	30	26

Bonita: 1940-1970

Elevation: 105 feet

Temperature (°F)	J	F	M	A	M	J	J	A	S	O	N	D	Avg. 30-yr.
Highest	88	91	93	102	100	101	101	98	115	106	100	93	115
Mean Max.	66.3	66.7	68.4	70.8	72.7	74.4	79.1	80.2	80.5	76.8	74.0	69.1	73.3
Mean Temp.	53.2	54.3	56.2	59.7	62.7	65.2	69.4	70.3	69.1	64.3	59.1	55.3	61.6
Mean Min.	40.0	41.9	44.0	48.0	52.6	56.0	59.6	60.3	57.6	51.8	44.1	41.4	49.8
Lowest	21	28	30	33	38	43	47	49	39	36	28	24	21

Source: "Climates of San Diego County: Agricultural Relationships" (Nov. 1970), prepared by U.C. - Agricultural Extension in conjunction with the Environmental Science Services Administration, U.S. Weather Bureau.

TABLE A-2

RECORD OF ANNUAL PRECIPITATION

<u>Rainfall in Inches</u>	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>	<u>Avg./ Yr.</u>
<u>Chula Vista:</u> 1940-1970													
Elevation: 9 ft.	1.94	2.04	1.51	.85	.20	.04	.01	.09	.14	.49	.81	1.86	9.98
<u>Bonita:</u> 1940-1970													
Elevation: 105 ft.	2.13	2.26	1.76	.89	.29	.06	.01	.08	.16	.50	.93	2.05	11.12
<u>Lower Otay Reser- voir: 1946-1970</u>													
Elevation: 500 ft.	1.84	1.51	2.08	1.12	.27	.05	.01	.09	.15	.43	1.02	1.75	10.32
<u>San Ysidro (Ream Field): 1946-1970</u>													
Elevation: 27 ft.	1.85	.92	1.02	1.37	.23	.09	.16	.01	.10	.55	.27	.32	6.89

	<u>Highest Monthly Rainfall</u>	<u>Highest Annual Rainfall</u>
Chula Vista	- December 6.93 in.	24.85 in.
Bonita	- March 7.32 in.	24.43 in.
Lower Otay Reservoir	- March 7.86 in.	24.02 in.
San Ysidro	- Data not available	

Evaporation Loss in Chula Vista: 59-71 inches per year.

<u>Relative Humidity</u>	<u>Fall/Winter</u>	<u>Summer</u>
Coastal	50-70%	60-80%
Desert	40-60%	25%

Source: (same as p.2)



TABLE A-2 (Con't)

Rainfall Intensities Expected Once in 50 Years (inches)

<u>Time Period</u>	<u>Coastal</u>
30 min.	1.0
1 hr.	1.3
2 hrs.	1.6
3 hrs.	2.1
6 hrs.	3.0
12 hrs.	3.7
24 hrs.	4.5

Sunshine

3200 hours per year (70% of total available).

Source: "Climates of San Diego County: Agricultural Relationships" (Nov. 1970), prepared by U.C. - Agricultural Extension in conjunction with the Environmental Science Services Administration, U.S. Weather Bureau.

TABLE A-3

## WIND DATA (REAM FIELD)

<u>From Direction</u>	<u>Percent of Time</u>
Westerly	37
Easterly	13
Southwest	12
Northwest	11
Southerly	7
Other	20

<u>Speed (Knots)</u>	<u>Percent of Time</u>
0-2	13
3-7	44
8-12	35
13-20	7
21-30	1
30 +	Less than 1/2%

Most recurrent wind direction and speed

Westerly: 8-12 knots

Source: "Climates of San Diego County: Agricultural Relationships"  
(Nov. 1970), prepared by U.S. - Agricultural Extension in con-  
junction with the Environmental Science Services Administration,  
U.S. Weather Bureau.

TABLE A-4

## WIND DATA (RECORDED AT LINGBERGH FIELD)

<u>From Direction</u>	<u>Percent of Time</u>
Westerly (Includes WNW, WSW)	26
Northerly (Includes NNW, NNE)	21
Southerly (Includes SSW, SSE)	15
Easterly (Includes ENE, ESE)	9
Southwest	8
Northwest	8
Northeast	8
Other	5

<u>Speed (Knots)</u>	<u>Percent of Time</u>
0-3	28
4-7	38
8-12	28
13-18	6
19-24	Less than 1/2%
25-31	Less than 1/2%
32 +	Less than 1/2%

Most Recurrent Wind Direction and Speed

West-Northwest: 8-12 Knots

Source: "Climates of San Diego County: Agricultural Relationships" (Nov. 1970), prepared by U.S. - Agricultural Extension in conjunction with the Environmental Science Services Administration, U.S. Weather Bureau.

TABLE A-5

## INVERSION LAYER DATA

Percent of Time - Lindbergh Field (Elevation 13 Feet)

<u>Condition</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JULY</u>	<u>AUG</u>	<u>SEPT</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>YEAR</u>
Clear	42	39	39	30	29	30	42	52	53	48	50	45	42
Partly Cloudy	26	25	29	37	39	40	45	35	30	29	27	26	32
Cloudy	32	36	32	33	32	30	13	13	17	23	23	29	26

Source: "Climates of the States", U.S. Department of Commerce; through 1970.

Percent Frequency Inversion Bases are at or Below 1500 Feet

<u>Location/ Time</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JULY</u>	<u>AUG</u>	<u>SEPT</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
Montgomery Field (0400 PST)	81	72	61	57	37	38	51	47	55	64	79	88
Montgomery Field (1600 PST)	37	22	22	35	24	39	53	42	47	38	45	46
North Island (0700 PST)	65	64	44	19	27	28	47	56	54	56	68	69
North Island (1900 PST)	45	41	39	31	40	43	76	80	69	68	53	51

Source: "Meteorological Summaries Pertinent to Atmospheric Transportation in Southern California", U.S. Department of Commerce; 1970.

## A.2 EMISSIONS CALCULATION METHODOLOGY

### A.2.1 Motor Vehicles

The approach used to determine the motor vehicle emission rates from the project in 1976 and 1980 involved the following steps:

(1) Using the daily trip and milcage figures described in the text, an estimate of the miles driven annually by the following types of project - associated motor vehicles was made:

- (a) Domestic autos and light duty trucks
- (b) Foreign autos and light duty trucks
- (c) Gas powered heavy duty trucks
- (d) Diesel powered vehicles
- (e) Motorcycles

(2) The annual mileage figures for each category were then distributed over model year vehicles ranging downward from 1976 and 1980 for 12 years.<sup>1</sup>

(3) The yearly figures were then applied to the pollutant emission rates for each model year to determine the total annual pollutant contribution made by the motor vehicles associated with the proposed project. The emission rates were supplied by the State Air Resources Board and are based on 7-mode test procedures.<sup>1,2</sup>

A.2.2 Electrical Consumption

Total electrical consumption of the project was estimated using data supplied by the San Diego Gas & Electric Company.<sup>3,4</sup>

The annual consumption was then applied to air quality emission standards for electric power generation, specified by the Federal Environmental Protection Agency. Current planning estimates from San Diego Gas and Electric Company indicate that 94% of the electric power will be generated by fossil fuel plants in San Diego County in the year 1976 and 61.5% in 1980.<sup>5</sup> Using these estimates and the aforementioned conversion factors, the yearly and daily additions to the region's air were calculated.

A.2.3 Natural Gas Consumption

Using data supplied by the San Diego Gas & Electric Company an estimate of the total annual natural gas consumption by the project was made.<sup>3</sup> This estimate was then applied to the Federal Environmental Protection Agency conversion factors for air pollutant emissions from the combustion of natural gas, to obtain the total pollutant contribution of the project.

### A.3 Air Quality Effects of Interstate 805 Freeway

Interstate 805 is currently under construction and is scheduled to be completed in mid 1975. At that time it will be opened from San Ysidro to its existing junction with I-5 north of San Diego. During 1975 it is expected to carry approximately 59,000-64,000 vehicles per day in the vicinity of "H" Street.<sup>6</sup> However, that figure is expected to grow to around 100,000 vehicles per day within a year of its opening. Further growth beyond that is predicated on development in the area, but current estimates offered by the State indicate an ADT of 111,600 by 1990.<sup>6</sup>

When completed, I-805 will pass just to the west of the proposed shopping center and residential development. Considering the fact that the prevailing wind blows almost directly across its route toward the project site, I-805 will have a significant effect on the air quality in the area.

For purposes of this report, the highway was considered to be a continuously emitting infinite line source. In applying Gaussian plume modeling techniques (see A.5) the following assumptions, were made:

- (1) Peak hourly traffic volume - 11,000 vehicles per hour in 1976.
- (2) 1976 emission factors
- (3) Average vehicular speed - 50 mph. In 1976 traffic volumes on I-805 will not have built to the point where stop and go traffic normally occurs.

(4) Prevailing wind of 3.6 knots (4.1 mph) directed at a 90° angle across the freeway and into the site area. This corresponds to the actual prevailing wind condition.

(5) Stable atmosphere (stability Class F).

(6) Inversion at 1,500 feet.

(7) Topography will not restrict dispersion.

(8) A 5% mix of heavy-duty vehicles.

Deterioration of automotive emission control devices was considered when determining the vehicle mix by year in 1976. Using data supplied by the State Air Resources Board, it was estimated that the average motor vehicle passing a given point on I-805 in 1976 would emit 31.5 grams of carbon monoxide per mile.

As noted in Section III estimation of hydrocarbon concentrations by use of Gaussian Plume techniques is not considered valid. The concentration of nitrogen dioxide was not estimated because of the deficiency in consistent data concerning the effects of speed and deterioration on nitrogen oxides emissions...

Using the assumptions stated above, Gaussian Plume dispersion calculations indicate that the approximate pollutant levels shown in the following table will exist at the location indicated as a result of peak hour traffic on I-805. The Federal government's primary standard is also included for comparison:



	Carbón Monoxide <u>(mg/m<sup>3</sup>)</u>
Shopping Center Site	4.0
Eastern border of 1400 acre project site	.8
Southwestern Community College	.7
Federal Standard	40 (1 hour)

Because detailed traffic estimates for the two hours bordering the peak hour were not available, only peak hour estimates are shown above. As in the case of the shopping center estimates previously provided these are incremental concentrations which would be added to background ambient levels.

One assumption that was used in calculating the above pollutant concentrations was that topography would not restrict dispersion. Considering the existing terrain, such an assumption may not be totally valid. Conditions of irregular topography tend to invalidate the direct application of standard dispersion evaluations. Planned cut and fill operations will reduce the existing elevation difference of roughly 200-250 feet between the floor of Rice Canyon and the higher peaks to approximately 150-180 feet. Thus the potential for occasionally trapping pollutants in individual canyons will still exist. Because the shopping center site also represents the canyon side, it is estimated that the pollutant concentrations described in the preceding table for the site would

also approximate the concentration levels that would exist above the hillside under the same conditions. On the other hand, the uneven topography and building structures on and around the site would enhance turbulence, thus increasing the rate at which pollutants are dispersed into the atmosphere.

A.4 Air Quality Effects of SDG&E's South Bay Power Plant

The proximity of SDG&E's South Bay plant to the project site should be considered, inasmuch as its pollutant contribution will be cumulative in nature and it is considered to be the largest single source of sulfur dioxide emissions.<sup>7</sup> Its location at the foot of "L" Street in Chula Vista is roughly 3.5 miles west-southwest from the proposed project. The San Diego APCD in 1971 predicted the extent of sulfur dioxide concentrations downwind from the plant.<sup>7</sup> Their calculations were based on the assumption that the plant would be operating at maximum capacity in 1975 and used meteorological conditions typical of the area during an early morning in December.

Their calculations indicated that the maximum short-term (1 hr.) ground-level concentration of sulfur dioxide from the plant would be 0.22 parts per million roughly 6.2 miles northeast of the generating station. The concentration that would be experienced at the project site is roughly 0.14 ppm. For comparison, the Federal standard representing an acceptable level of sulfur dioxide over a 24-hour period is 0.14 ppm (primary).

## A.5 Description of Gaussian Plume Calculation

Pasquill's diffusion method using Gifford's conversion was used to estimate pollutant concentrations. The actual formula used was:

$$X = \frac{\theta}{\pi \sigma_y \sigma_z \mu} \exp \left[ -\frac{1}{2} \left( \frac{H}{\sigma_z} \right)^2 \right] \quad \text{where:}$$

X = pollutant concentration in micrograms per cubic meter ( $\mu\text{gm}^{-3}$ ),

$\theta$  = pollutant emission rate in grams per second ( $\text{g sec}^{-1}$ ),

$\sigma_y$  = standard deviation of Gaussian distribution of pollutant material in the plume across wind in the horizontal plane,

$\sigma_z$  = standard deviation of Gaussian distribution of pollutant material in the vertical plane,

$\mu$  = wind speed in meters per second ( $\text{m sec}^{-1}$ ),

H = effective height of emission in meters (M)

The following describes the evolution of pollutant dispersion methods over the last several years. This evolution led to the fairly widespread use of Pasquill's method with Gifford's conversion:

"For a number of years estimates of concentrations were calculated either from the equations of Sutton (1932) with the atmospheric dispersion parameters  $C_y$ ,  $C_z$ , and  $n$ , or from the equations of Bosanquet (1936) with the dispersion parameters  $p$  and  $q$ .

Hay and Pasquill (1957) have presented experimental evidence that the vertical distribution of spreading particles from an elevated point is related to the

standard deviation of the wind elevation angle,  $\sigma_E$ , at this point of release, Cramer (1957) derived a diffusion equation incorporating standard deviations of Gaussian distributions:  $\sigma_y$  for the distribution of material in the plume acrosswind in the horizontal, and  $\sigma_z$  for the vertical distribution of material in the plume. (see Appendix 2 for properties of Gaussian distributions.) These statistics were related to the standard deviations of azimuth angle,  $\sigma_A$ , and elevation angle,  $\sigma_E$ , calculated from wind measurements made with a bi-directional wind vane (bivane). Values for diffusion parameters based on field diffusion tests were suggested by Cramer, et al. (1958) (and also in Cramer 1959a and 1959b). Hay and Pasquill (1959) also presented a method for deriving the spread of pollutants from records of wind fluctuation. Pasquill (1961) has further proposed a method for estimating diffusion when such detailed wind data are not available. This method expresses the height and angular spread of a diffusing plume in terms of more commonly observed weather parameters. Suggested curves of height and angular spread as a function of distance downwind were given for several "stability" classes. Gifford (1961) converted Pasquill's values of angular spread and height into standard deviations of plume concentration distribution,  $\sigma_y$  and  $\sigma_z$ . Pasquill's method, with Gifford's conversion incorporated, is used in this workbook (see Chapter 3) for diffusion estimates.

Advantages of this system are that (1) only two dispersion parameters are required and (2) results of most diffusion experiments are now being reported in terms of the standard deviations of plume spread. More field dispersion experiments are being conducted and will be conducted under conditions of varying surface roughness and atmospheric stability. If the dispersion parameters from a specific experiment are considered to be more representative than those suggested in this workbook, the parameter values can be used with the equations given here."<sup>8</sup>

More recently, the U.S. Environmental Protection Agency has been pursuing the problem of correlating pollutant dispersion models and resultant concentration levels. Their efforts have resulted in at least a few computer-based models using more sophisticated techniques than Pasquill's. However, these models, although workable, have not yet been adopted by the EPA as being totally valid.

A.6 References

1. State of California, Air Resources Board, "Motor Vehicle Emissions Data," unpublished data; September 11, 1973.
2. Telephone conversation between F.O. Found, Jr., WESTEC Services and Howard W. Linnard, Senior Air Sanitation Engineer, State of California, Air Resources Board; December 11, 1973.
3. San Diego Gas & Electric Company; "Average Gas and Electric Usage Rates in Residences", unpublished data; 1973.
4. Environmental Quality Laboratory, California Institute of Technology, Implications of the Growth in Demand for Commercial and Industrial Electrical Energy in the South Coast Air Basin; November, 1971.
5. San Diego Gas & Electric Company, letter to William R. Eldredge of WESTEC Services dated August 23, 1973.
6. Telephone conversation between F. O. Round, Jr., WESTEC Services and Frank Batitus, State of California, Department of Transportation; January 29, 1974.
7. County of San Diego, Air Pollution Control District, Implementation Plan for Air Pollution Control in San Diego County; October 7, 1971.
8. Turner, D. Bruce, Workbook of Atmospheric Dispersion Estimates; 1970.

APPENDIX B

POPULATION, HOUSEHOLD, INCOME, AND  
AVAILABLE DOLLAR VOLUME POTENTIAL -  
PRIMARY RETAIL TRADING AREA

POPULATION, HOUSEHOLD AND INCOME DATA  
SELECTED SAN DIEGO AREAS

1970--1980

Subregional Area	April 1970	July 1972	July 1973	July 1975	July 1976	April 1980
04 NATIONAL CITY						
Total Population	44,224	39,481	43,780	47,500	48,000	53,000
Household Population	33,350	36,152	38,381	42,450	43,000	48,000
Pop. in Grp. Quarters	10,874	3,329	5,399	5,050	5,000	5,000
Number of Households	11,174-2.98	11,873-3.04	13,646-2.81	15,500-2.74	16,000-2.73	18,000-2.67
Number Families	9,000-3.48	9,600-3.52	10,000-3.47	11,000-3.45	11,300-3.44	12,500-3.40
Primary Individuals	2,174	2,278	3,646	4,500	4,700	5,500
Median Family Income	\$8,029	\$8,992	\$9,351	\$9,400	\$9,440	\$9,600
05 SOUTHEAST SAN DIEGO						
Total Population	85,137	86,361	86,943	88,400	88,900	90,500
Household Population	34,708	36,204	36,645	38,000	38,500	39,000
Pop. in Grp. Quarters	429	157	293	400	400	500
Number of Households	22,611-3.75	23,465-3.67	25,459-3.40	26,500-3.32	26,700-3.31	27,500-3.28
Number Families	19,700-4.15	20,400-4.08	22,200-3.76	22,400-3.75	22,500-3.74	23,100-3.70
Primary Individuals	2,911	3,065	3,259	4,100	4,200	4,400
Median Family Income	\$8,625	\$9,660	\$10,046	\$10,100	\$10,140	\$10,300
20 SWEETWATER						
Total Population	14,105	13,956	14,629	16,000	17,000	20,000
Household Population	14,105	13,956	14,629	16,000	17,000	20,000
Pop. in Grp. Quarters	-0-	-0-	-0-	-0-	-0-	-0-
Number of Households	3,550-3.97	4,133-3.38	4,406-3.32	4,850-3.30	5,150-3.30	6,200-3.23
Number Families	3,375-4.13	3,900-3.52	4,150-3.49	4,540-3.46	4,820-3.46	5,700-3.42
Primary Individuals	181	233	256	310	330	500
Median Family Income	\$13,622	\$15,257	\$15,867	\$16,000	\$16,100	\$16,500



(Continued)

Subregional Area	April 1970	July 1970	July 1973	July 1975	July 1976	April 1980
<b>21 CIPULA VISTA</b>						
Total Population	75,916	82,641	84,184	87,400	89,400	100,500
Household Population	75,616	82,311	83,823	87,000	89,000	100,000
Pop. in Grp. Quarters	300	330	361	400	400	500
Number of Households	25,103-3.01	27,406-3.00	28,231-2.96	29,300-2.92	30,700-2.90	35,700-2.80
Number Families	21,000-3.41	22,500-3.44	23,100-3.40	24,100-3.37	24,700-3.36	28,000-3.30
Primary Individuals	4,103	4,906	5,181	5,700	6,000	7,700
Median Family Income	\$10,533	\$11,796	\$12,203	\$12,500	\$12,550	\$12,800
<b>22 SOUTH BAY</b>						
Total Population	43,988	62,095	63,531	66,900	69,800	76,000
Household Population	47,672	61,272	62,651	66,000	68,900	75,000
Pop. in Grp. Quarters	1,316	823	880	900	900	1,000
Number of Households	13,190-3.61	17,079-3.59	18,122-3.46	20,000-3.30	21,000-3.28	25,000-3.00
Number Families	11,600-3.97	15,000-3.95	15,900-3.80	17,500-3.63	18,300-3.61	21,500-3.33
Primary Individuals	1,590	2,079	2,222	2,500	2,700	3,500
Median Family Income	\$8,314	\$9,312	\$9,684	\$9,750	\$9,800	\$10,000
<b>23 JARUL</b>						
Total Population	2,842	3,381	3,639	3,850	4,250	6,070
Household Population	2,776	3,335	3,588	3,800	4,200	6,000
Pop. in Grp. Quarters	66	46	51	50	50	70
Number of Households	846-3.28	1,052-3.17	1,128-3.18	1,230-3.09	1,370-3.07	2,000-3.00
Number Families	722-3.67	900-3.54	950-3.50	1,030-3.50	1,150-3.46	1,650-3.42
Primary Individuals	124	152	178	200	220	350
Median Family Income	\$9,830	\$11,000	\$11,450	\$11,500	\$11,550	\$11,800
<b>24 SPIRIT VALLEY</b>						
Total Population	30,464	32,835	34,113	36,400	37,300	41,400
Household Population	30,050	32,585	33,837	36,100	37,000	41,000
Pop. in Grp. Quarters	414	250	276	300	300	400
Number of Households	8,671-3.47	9,773-3.33	10,202-3.32	11,000-3.28	11,400-3.25	13,000-3.15
Number Families	7,800-3.74	8,600-3.65	8,875-3.66	9,500-3.64	9,800-3.61	11,000-3.55
Primary Individuals	871	1,173	1,327	1,500	1,600	3,000
Median Family Income	\$10,318	\$11,556	\$12,018	\$12,070	\$12,100	\$12,400

POPULATION, HOUSEHOLD AND VOCAL DATA - SELECTED SAN DIEGO AREAS  
(Continued)

Subregional Area	April 1970	July 1972	July 1973	July 1975	July 1976	April 1980
32 LEAN GROVE						
Total Population	23,259	24,043	24,479	25,300	25,600	27,700
Household Population	22,759	23,517	23,924	24,700	25,000	27,000
Pop. in Grp. Quarters	500	526	555	600	600	700
Number of Households	7,273-3.13	7,545-3.12	7,625-3.14	7,970-3.10	8,065-3.10	9,000-3.00
Number Families	6,000-3.58	6,187-3.58	6,237-3.61	6,550-3.55	6,615-3.56	7,300-3.47
Primary Individuals	1,273	1,358	1,388	1,420	1,450	1,700
Median Family Income	\$10,429	\$11,680	\$12,147	\$12,200	\$12,250	\$12,500

STUDY AREA TOTAL

Total Population	324,925	344,793	355,298	371,750	380,850	415,170
Household Population	311,036	339,332	347,478	364,050	373,200	407,000
Pop. in Grp. Quarters	13,889	5,461	7,820	7,700	7,650	8,170
Number of Households	92,424-3.37	102,331-3.32	108,869-3.19	116,850-3.12	120,385-3.10	136,400-2.98
Number Families	79,197-3.76	87,087-3.72	91,412-3.61	96,020-3.56	99,185-3.55	110,750-3.44
Primary Individuals	13,227	15,244	17,457	20,230	21,200	25,650
Median Family Income	\$9,544	\$10,673	\$11,032	\$11,183	\$11,267	\$11,489

COUNTY TOTAL (000)

Total Population	1,357.9	1,475.4	1,521.5	1,600.0	1,650.0	1,800.0
Household Population	1,246.5	1,377.8	1,435.0	1,510.0	1,559.0	1,707.0
Pop. in Grp. Quarters	111.3	97.6	86.5	90.0	91.0	93.0
Number of Households	423.5-2.94	477.7-2.88	507.7-2.83	539.0-2.80	559.0-2.79	620.0-2.75
Number Families	328.0-3.51	365.4-3.46	385.7-3.43	404.0-3.40	417.0-3.40	447.0-3.43
Primary Individuals	95.5	112.3	122.0	135.0	142.0	173.0
Median Family Income	\$10,133	\$11,350	\$11,800	\$12,000	\$12,100	\$12,500

NOTES:

1. Avg. number persons per household and per family given after total households and families
2. 1979 Family income is actually 1969 income data as provided in 1979. Estimates for 1972 and 1973 reflect 4% annual inflationary factor. Estimates for 1975-1980 are in terms of 1973 dollars and reflect no factor for inflation.

SOURCE: Real Estate Research Corporation  
Compilation of Census Bureau and San Diego County Planning Department data with estimates and projections by Real Estate Research Corporation.

SUMMARY OF POPULATION BASE AND AVAILABLE DOLLAR VOLUME POTENTIAL  
PRIMARY RETAIL TRADING AREA  
1973

Zone	Geographic Area	Population	Families	Primary Individuals	Total Gross Income (000)	Shoppers Goods Expenditure (000)
04	National City	43,780	10,000	3,646	\$ 106,261	\$ 18,011
05	Southeast San Diego	86,943	22,200	3,259	236,146	40,027
20	Sweetwater	14,629	4,150	256	67,781	11,489
21	Chula Vista	84,184	23,100	5,181	309,342	52,433
22	South Bay	63,531	15,900	2,222	162,800	27,595
30	Jamul	3,639	950	178	11,679	1,780
31	Spring Valley	34,113	8,875	1,327	113,135	19,176
32	Lemon Grove	24,479	6,237	1,388	82,720	14,021
TOTALS		355,298	91,412	17,457	\$1,089,864	\$184,732

Sources: Population Estimates-San Diego County Planning Dept  
Number of families-Real Estate Research Corporation  
based on 1970 Census analysis  
Total Gross Income-Real Estate Research Corporation  
based on 1970 Census analysis  
Shoppers Goods Expenditures-Real Estate Research  
Corporation factoring, based on shopping habit  
analysis, as explained in text.

SUMMARY OF POPULATION BASE AND AVAILABLE DOLLAR VOLUME POTENTIAL  
PRIMARY RETAIL TRADING AREA

1976

<u>Zone</u>	<u>Geographic Area</u>	<u>Population</u>	<u>Families</u>	<u>Primary Individuals</u>	<u>Total Gross Income (000)</u>	<u>Shoppers Goods Expenditure (000)</u>
04	National City	48,600	11,300	4,700	\$ 123,122	\$ 20,869
05	Southeast San Diego	88,900	22,500	4,200	244,950	41,519
20	Sweetwater	17,000	4,820	330	80,077	13,573
21	Chula Vista	89,400	24,700	6,000	339,985	57,627
22	South Bay	69,800	18,300	2,700	190,140	32,229
30	Jamul	4,250	1,150	220	14,273	2,419
31	Spring Valley	37,300	9,800	1,600	126,580	21,455
32	Lemon Grove	<u>25,600</u>	<u>6,615</u>	<u>1,450</u>	<u>88,284</u>	<u>14,964</u>
	TOTALS	380,850	99,185	21,200	\$1,207,411	\$204,655

Source: Real Estate Research Corporation Projections

SUMMARY OF POPULATION BASE AND AVAILABLE DOLLAR VOLUME POTENTIAL  
PRIMARY RETAIL TRADING AREA

1980

<u>Zone</u>	<u>Geographic Area</u>	<u>Population</u>	<u>Families</u>	<u>Primary Individuals</u>	<u>Total Gross Income</u>	<u>Shoppers Goods Expenditure</u>
04	National City	53,000	12,500	5,500	\$ 140,900	\$ 23,883
05	Southeast San Diego	90,500	23,100	4,400	256,410	43,461
20	Sweetwater	20,000	5,700	500	98,050	15,263
21	Chula Vista	100,500	28,000	7,700	401,520	68,058
22	South Bay	76,000	21,500	3,500	230,750	39,112
30	Jamul	6,070	1,650	350	21,220	3,597
31	Spring Valley	41,400	11,000	2,000	148,400	25,154
32	Lemon Grove	<u>27,700</u>	<u>7,300</u>	<u>1,700</u>	<u>101,450</u>	<u>17,196</u>
	TOTALS	415,170	110,750	25,650	\$1,398,700	\$235,724

Source: Real Estate Research Corporation Projections

PROJECTED MARKET PENETRATION  
 PROPOSED REGIONAL SHOPPING CENTER - H STREET EAST OF INTERSTATE 805

Chula Vista, California

1973

<u>Zone</u>	<u>Geographic Area</u>	<u>Total Available Shoppers Goods Dollars (\$000)</u>	<u>Percent of Capture Subject Development</u>	<u>Annual Dollar Volume Subject Development (\$000)</u>
04	National City	18,011	25%	4,503
05	Southeast San Diego	40,027	20%	8,005
20	Sweetwater	11,489	35%	4,021
21	Chula Vista	52,433	30%	15,730
22	South Bay	27,595	35%	9,658
30	Jamul	1,980	30%	514
31	Spring Valley	19,176	25%	4,794
32	Lemon Grove	<u>14,021</u>	<u>25%</u>	<u>3,505</u>
	SUB TOTAL	184,732	27.5%	50,810
	Trade from Mexico	30,000	15%	<u>4,500</u>
	TOTAL			55,310

Source; Real Estate Research Corporation Estimates,

PROJECTED MARKET PENETRATION  
 PROPOSED REGIONAL SHOPPING CENTER - H STREET EAST OF INTERSTATE 805  
 Chula Vista, California  
 1976

<u>Zone</u>	<u>Geographic Area</u>	<u>Total Available Shoppers Goods Dollars (\$000)</u>	<u>Percent of Capture Subject Development</u>	<u>Annual Dollar Volume Subject Development (\$000)</u>
04	National City	20,689	25%	5,172
05	Southeast San Diego	41,519	20%	8,304
20	Sweetwater	13,573	35%	4,751
21	Chula Vista	57,267	30%	17,288
22	South Bay	32,229	35%	11,280
30	Jamul	2,419	30%	726
31	Spring Valley	21,455	25%	5,364
32	Lemon Grove	<u>14,264</u>	<u>25%</u>	<u>3,741</u>
	SUB TOTAL	204,655	27.7%	56,626
	Trade from Mexico	32,500	15%	<u>4,875</u>
	TOTAL			61,501

Source: Real Estate Research Corporation Estimates

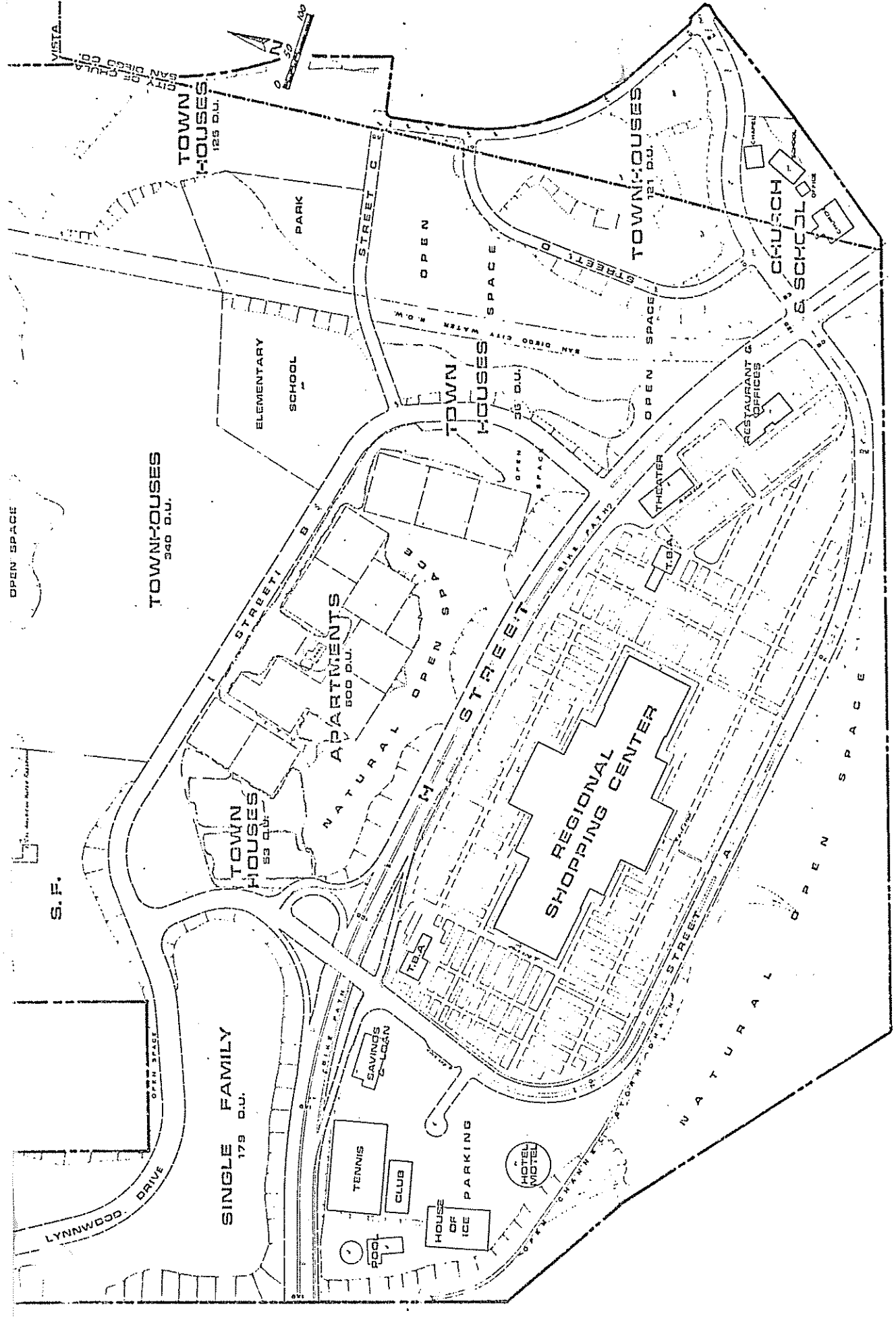
PROJECTED MARKET PENETRATION  
 PROPOSED REGIONAL SHOPPING CENTER - H STREET EAST OF INTERSTATE 805  
 Chula Vista, California

1980

<u>Zone</u>	<u>Geographic Area</u>	<u>Total Available Shoppers Goods Dollars (\$000)</u>	<u>Percent of Capture Subject Development</u>	<u>Annual Dollar Volume Subject Development (\$000)</u>
04	National City	23,383	25%	5,970
05	Southeast San Diego	43,461	25%	10,865
20	Sweetwater	15,263	35%	5,342
21	Chula Vista	68,058	35%	23,820
22	South Bay	39,112	40%	15,645
30	Jamul	3,597	35%	1,259
31	Spring Valley	25,154	30%	7,546
32	Lemon Grove	<u>17,196</u>	<u>30%</u>	<u>5,144</u>
	SUB TOTAL	235,724	32.1%	75,591
	Trade from Mexico	40,000	20%	<u>8,000</u>
	<b>TOTAL</b>			<b>83,591</b>

Source: Real Estate Research Corporation Estimates





**LAZA DEL REY RESIDENTIAL UNITS**

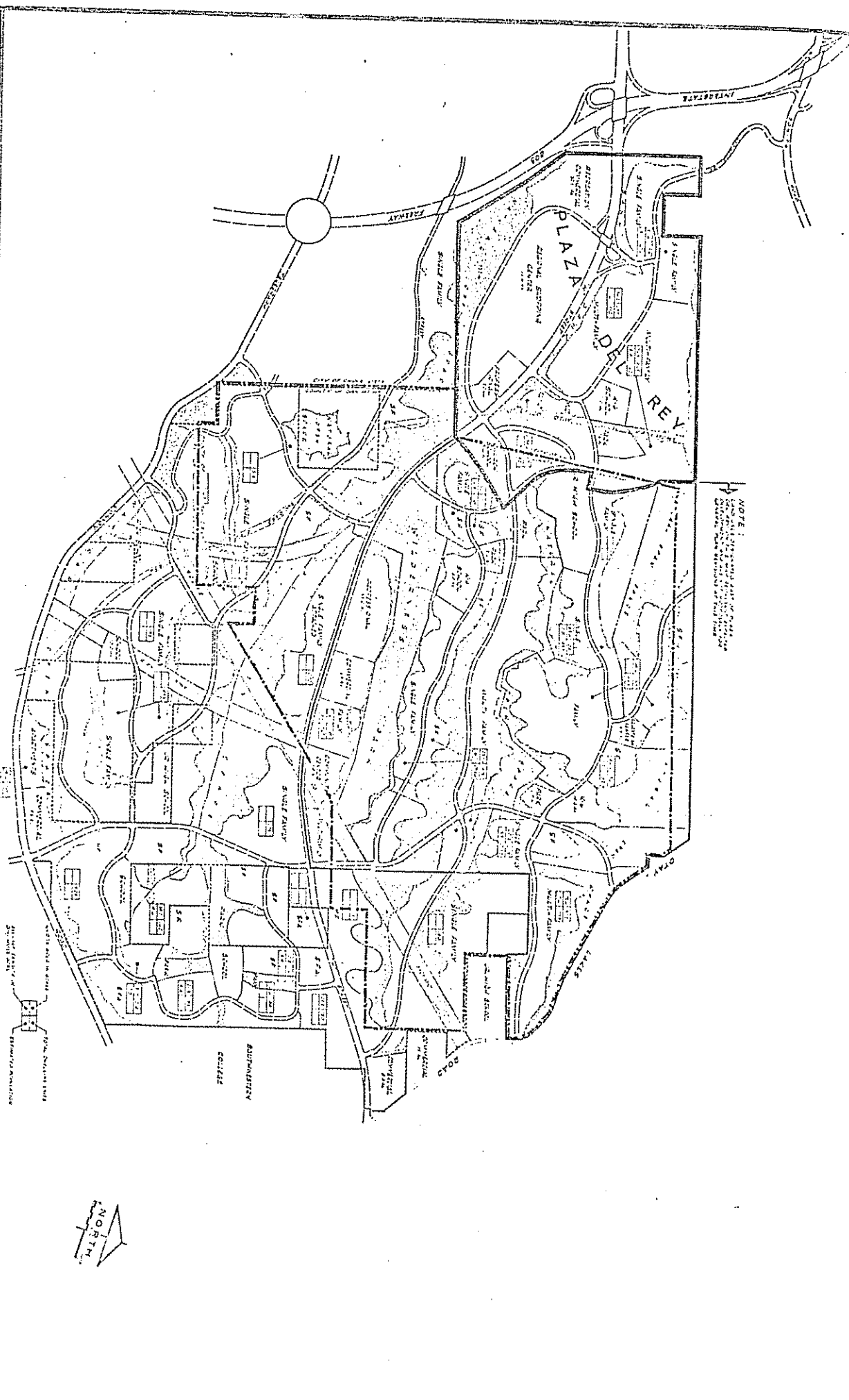
PREPARED FOR  
**DR. LEONARD BLOOM**  
 BY **WILKEY & SHAM**

<b>LAND USE PLAN</b>	
NO. 2018-0001-04	DATE: 7-7-60

# PLAZA DEL REY & RESIDENTIAL UNITS

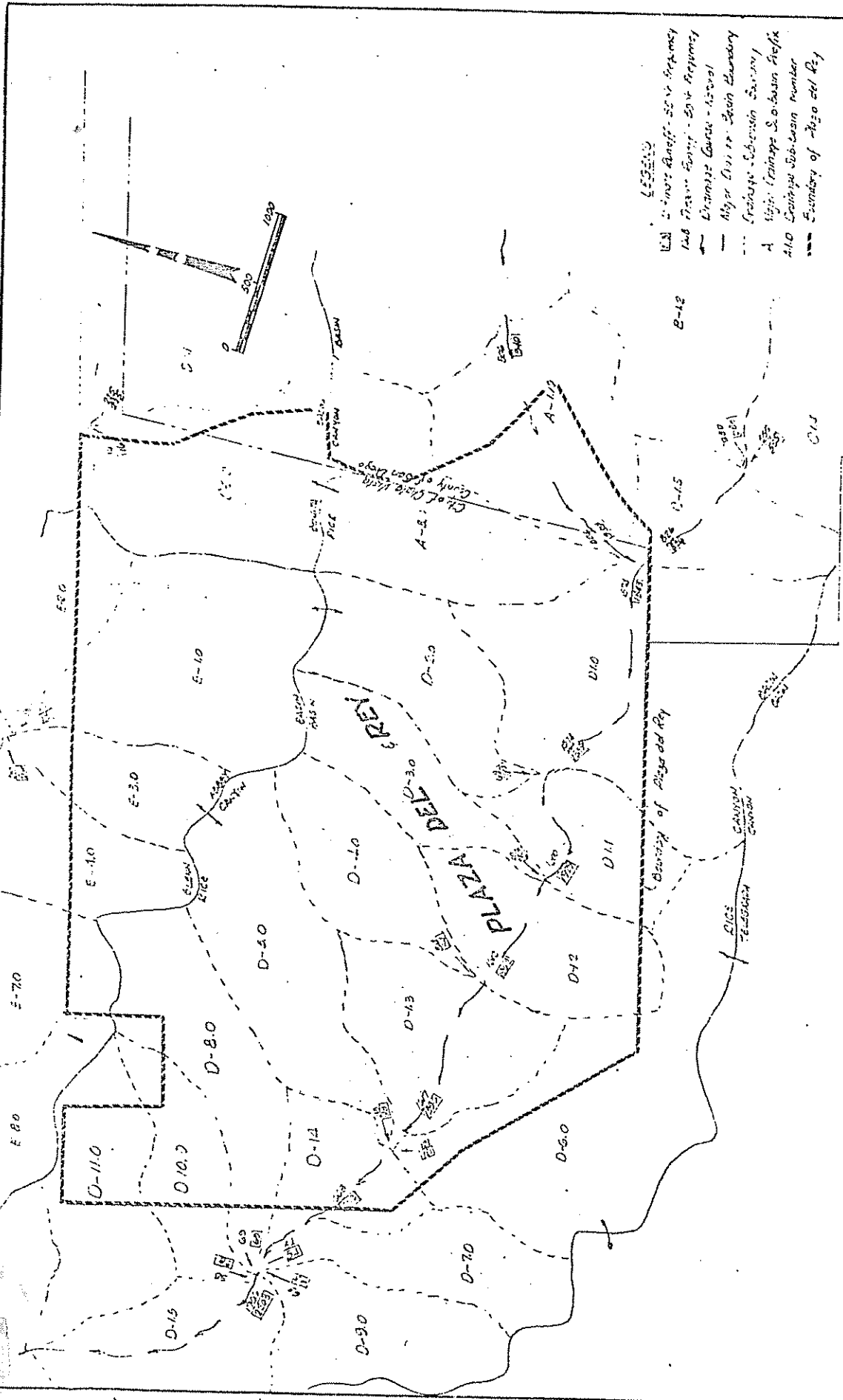
PREPARED FOR  
DR. LEONARDO CLODOM

REVISION TO CHULA VISTA P.C. PLAN  
GENERAL PLAN FOR ENVIRONMENTAL REVIEW



NOTE:  
1. THE PLANNING AND DESIGN OF THIS PROJECT IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT AND THE DESIGNER'S VISUAL SURVEY OF THE SITE. THE DESIGNER HAS CONDUCTED VISUAL SURVEYS OF THE SITE AND HAS OBSERVED THE SURROUNDING AREA. THE DESIGNER HAS CONDUCTED VISUAL SURVEYS OF THE SITE AND HAS OBSERVED THE SURROUNDING AREA.





**WILSEY & HAM**  
**DRAINAGE BASIN MAP**  
**PLAZA DEL REY & RESIDENTIAL UNITS**

<b>BY DATE</b>	<b>BY DATE</b>	<b>APPROVED</b>	<b>REVISIONS</b>
Drawn: _____	Checked: _____	_____	1. _____
Date: _____	Date: _____	_____	2. _____
City: _____	City: _____	_____	3. _____
Scale: _____	Scale: _____	_____	4. _____
Sheet: _____	Sheet: _____	_____	5. _____
Project: _____	Project: _____	_____	6. _____
Client: _____	Client: _____	_____	7. _____
Drawn by: _____	Drawn by: _____	_____	8. _____
Checked by: _____	Checked by: _____	_____	9. _____
Scale: _____	Scale: _____	_____	10. _____
Sheet: _____	Sheet: _____	_____	11. _____
Project: _____	Project: _____	_____	12. _____
Client: _____	Client: _____	_____	13. _____
Drawn by: _____	Drawn by: _____	_____	14. _____
Checked by: _____	Checked by: _____	_____	15. _____
Scale: _____	Scale: _____	_____	16. _____
Sheet: _____	Sheet: _____	_____	17. _____
Project: _____	Project: _____	_____	18. _____
Client: _____	Client: _____	_____	19. _____
Drawn by: _____	Drawn by: _____	_____	20. _____
Checked by: _____	Checked by: _____	_____	21. _____
Scale: _____	Scale: _____	_____	22. _____
Sheet: _____	Sheet: _____	_____	23. _____
Project: _____	Project: _____	_____	24. _____
Client: _____	Client: _____	_____	25. _____
Drawn by: _____	Drawn by: _____	_____	26. _____
Checked by: _____	Checked by: _____	_____	27. _____
Scale: _____	Scale: _____	_____	28. _____
Sheet: _____	Sheet: _____	_____	29. _____
Project: _____	Project: _____	_____	30. _____
Client: _____	Client: _____	_____	31. _____
Drawn by: _____	Drawn by: _____	_____	32. _____
Checked by: _____	Checked by: _____	_____	33. _____
Scale: _____	Scale: _____	_____	34. _____
Sheet: _____	Sheet: _____	_____	35. _____
Project: _____	Project: _____	_____	36. _____
Client: _____	Client: _____	_____	37. _____
Drawn by: _____	Drawn by: _____	_____	38. _____
Checked by: _____	Checked by: _____	_____	39. _____
Scale: _____	Scale: _____	_____	40. _____
Sheet: _____	Sheet: _____	_____	41. _____
Project: _____	Project: _____	_____	42. _____
Client: _____	Client: _____	_____	43. _____
Drawn by: _____	Drawn by: _____	_____	44. _____
Checked by: _____	Checked by: _____	_____	45. _____
Scale: _____	Scale: _____	_____	46. _____
Sheet: _____	Sheet: _____	_____	47. _____
Project: _____	Project: _____	_____	48. _____
Client: _____	Client: _____	_____	49. _____
Drawn by: _____	Drawn by: _____	_____	50. _____
Checked by: _____	Checked by: _____	_____	51. _____
Scale: _____	Scale: _____	_____	52. _____
Sheet: _____	Sheet: _____	_____	53. _____
Project: _____	Project: _____	_____	54. _____
Client: _____	Client: _____	_____	55. _____
Drawn by: _____	Drawn by: _____	_____	56. _____
Checked by: _____	Checked by: _____	_____	57. _____
Scale: _____	Scale: _____	_____	58. _____
Sheet: _____	Sheet: _____	_____	59. _____
Project: _____	Project: _____	_____	60. _____
Client: _____	Client: _____	_____	61. _____
Drawn by: _____	Drawn by: _____	_____	62. _____
Checked by: _____	Checked by: _____	_____	63. _____
Scale: _____	Scale: _____	_____	64. _____
Sheet: _____	Sheet: _____	_____	65. _____
Project: _____	Project: _____	_____	66. _____
Client: _____	Client: _____	_____	67. _____
Drawn by: _____	Drawn by: _____	_____	68. _____
Checked by: _____	Checked by: _____	_____	69. _____
Scale: _____	Scale: _____	_____	70. _____
Sheet: _____	Sheet: _____	_____	71. _____
Project: _____	Project: _____	_____	72. _____
Client: _____	Client: _____	_____	73. _____
Drawn by: _____	Drawn by: _____	_____	74. _____
Checked by: _____	Checked by: _____	_____	75. _____
Scale: _____	Scale: _____	_____	76. _____
Sheet: _____	Sheet: _____	_____	77. _____
Project: _____	Project: _____	_____	78. _____
Client: _____	Client: _____	_____	79. _____
Drawn by: _____	Drawn by: _____	_____	80. _____
Checked by: _____	Checked by: _____	_____	81. _____
Scale: _____	Scale: _____	_____	82. _____
Sheet: _____	Sheet: _____	_____	83. _____
Project: _____	Project: _____	_____	84. _____
Client: _____	Client: _____	_____	85. _____
Drawn by: _____	Drawn by: _____	_____	86. _____
Checked by: _____	Checked by: _____	_____	87. _____
Scale: _____	Scale: _____	_____	88. _____
Sheet: _____	Sheet: _____	_____	89. _____
Project: _____	Project: _____	_____	90. _____
Client: _____	Client: _____	_____	91. _____
Drawn by: _____	Drawn by: _____	_____	92. _____
Checked by: _____	Checked by: _____	_____	93. _____
Scale: _____	Scale: _____	_____	94. _____
Sheet: _____	Sheet: _____	_____	95. _____
Project: _____	Project: _____	_____	96. _____
Client: _____	Client: _____	_____	97. _____
Drawn by: _____	Drawn by: _____	_____	98. _____
Checked by: _____	Checked by: _____	_____	99. _____
Scale: _____	Scale: _____	_____	100. _____