URS

REPORT

GEOTECHNICAL INVESTIGATION

PALOMAR MEDICAL CENTER WEST ACUTE CARE FACILITIES

SW of Citracado Parkway and Vineyard Avenue Escondido, California

Prepared for

Palomar Pomerado Health
15255 Innovation Drive
Suite 204
Poway, California 92128-3410

April 27, 2006

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URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, California 90017
Project No. 29401967

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April 21, 2006

Palomar Pomerado Health
15255 Innovation Drive
Suite 204
San Diego, CA 92128-3410

Attention: Mr. Michael Shanahan
Director, Facilities, Planning and Development

Subject: Report
Geotechnical and Geological Investigation
Palomar Medical Center West Acute Care Facilities
SW of Citracado Parkway and Vineyard Avenue, Escondido, California

Dear Mr. Shanahan:

URS Corporation is pleased to present our Report, "Geotechnical and Geological Investigation, Palomar Medical Center West Facility – OSHPD Buildings, Southwest of Citracado Parkway and Vineyard Avenue, Escondido, California". This report summarizes the results of our investigation and contains our conclusions and geotechnical recommendations for design and construction of the project.

If you have any questions regarding this report, please contact us. We look forward to being of further assistance as the project progresses.

Very truly yours,

URS

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

This report presents the results of a series of geotechnical investigation and geologic hazards review performed by URS Corporation (URS) for the proposed Hospital at Palomar Medical Center West to be located to the southwest of Citracado Parkway and Vineyard Avenue in the City of Escondido, California, approximately as shown on Figure 1. The site is located at approximately 33.1229 N and 117.1186 W° (NAD83). The proposed new medical center will consist of a new hospital building, a hospital support building, a central plant, a women's center, a nursing tower, a outpatient service building, and four parking structures, which will be constructed in multiple phases as shown on the Site Plan, Figure 2A. This geotechnical investigation was prepared to address the geologic/geotechnical conditions at the location of the acute care facilities, including the main hospital building, the hospital support building, the women's center, the nursing tower (hereafter referred to "hospital buildings"), and the central plant, as these buildings are under OSHPD regulation. Other buildings associated with the medical center development will be addressed in a separate report. The site has been previously graded under the purview of GEOCON in 1999 and was mass-graded under the purview of Geotechnical Exploration Incorporated (GEI) in 2005. The estimated thickness of cut and fill across the entire site as a result of the previous grading is shown on Figure 2B.

1.2 REPORT OBJECTIVE

The purpose of this study was to provide geotechnical recommendations for the design of the proposed hospital structures and to evaluate the potential geologic hazards that could impact the buildings. The geologic hazard evaluation was performed to meet the requirements of the California Code of Regulations, which mandate that properties to be developed for hospital facilities must be evaluated for potential geologic hazards. Requirements for the performance of such geologic hazard reviews are provided in the California Code of Regulations Title 24. As discussed in the aforementioned regulations, geologic hazards evaluation for potential hospital building sites need to address the potential impact from:

- Fault rupture
- Seismic ground motion
- Liquefaction
- Subsidence

3.0 REGIONAL AND SITE GEOLOGIC CONDITIONS

3.1 REGIONAL AND LOCAL GEOLOGY

The proposed site is located in the City of Escondido, California within the Peninsular Ranges geomorphic province of California. The Peninsular Ranges geomorphic province is one of the largest geologic units in western North America, extending from the Los Angeles Basin southward to the tip of Baja California in Mexico. The Peninsular Ranges are characterized by northwest-southeast trending structural blocks separated by similarly trending faults (Norris and Webb, 1990).

Within the Peninsular Ranges, the site is located approximately four miles north of the northeastern boundary of the San Diego Embayment. The San Diego Embayment is characterized by a sequence of Eocene age marine sedimentary deposits bound on the north and east by highlands composed primarily of Cretaceous aged igneous rocks (Kennedy, 1975). The hills forming the highlands within the vicinity of the site are characterized by a complex sequence of Cretaceous aged igneous intrusive rocks. Relatively recent alluvial deposits derived from surrounding mountain ranges are found primarily within the active drainages.

The site is located entirely within a series of hills composed of granitic rocks of the Cretaceous age southern California batholith. The Escondido Valley is located east of the site and is underlain by Quaternary age alluvium. Figure 3 shows the general geologic setting for the site and surrounding area.

3.2 SITE SURFACE CONDITIONS

The site is a relatively flat rough graded building pad at an elevation of approximately 750 feet above mean sea level (msl). The pad was constructed by cutting down a previous hill consisting of granitic rock and filling the adjacent low areas surrounding the hill with soil and rock pieces broken down from the intact rock. The resulting cut/fill transition line forms an uneven ring around the center of the site as shown in Figures 2A and 2B. There are descending 2:1, horizontal to vertical (H:V) fill slopes on the northeastern and southwestern portions of the site. The northeastern slope at the location of the proposed central plant is about 80 feet in height. The site is currently vacant, however there are numerous soil and rock debris piles left on the site surface.

3.3 SITE SUBSURFACE CONDITIONS

The subsurface geologic materials at the site consist of artificial fill (Af) underlain by granitic rocks (Kg), as shown on the Geologic Map, Figure 3. The subsurface distributions of the fill and bedrock with respect to the proposed development are shown on the North-south and East-west Cross-sections, Figures 4A and 4B. The locations of the cross-sections are shown on the Site Plan, Figure 2A.

During our investigation, the subsurface along the cut/fill transition line was found to have thickness of fill ranging from approximately 0.5 to 7.5 feet around the general trend of the cut/fill transition line. In the area of the proposed hospital buildings, the fill is relatively shallow, i.e., about five feet or less. However, in the area of the proposed central plant, the maximum fill thickness is about 30 to 35 feet. The fill consists of mostly a mixture of sands, gravels, cobbles, and boulders to 4 feet in size, according to the compaction report by GEI. Our field exploration revealed that the fill has abundant large voids as evidenced by borehole caving and lose of drilling fluid in the borings in fill. Further, our review of the site grading history indicates that large boulders in the rock fill was not placed in the typical windrow manner, therefore the quality of the rock fill is considered substandard. For this reason, all hospital buildings and the central plant should be supported on bedrock as recommended in Section 5 of the report.

Immediately below the fill was varying thicknesses of weathered bedrock, which graded to harder and less weathered rock at depth. These materials are the igneous granitic rocks of the Green Valley Tonalite (Kgr). The rocks were found to be mostly light gray to brownish gray, with steep joints and fractures. The RQD of the rock is about 10 percent near surface, and increases with depth. Our shear-wave velocity measurements indicate that the first 100 feet of rock below the ground surface can be classified as "Hard Rock".

3.4 GROUNDWATER

According to the California Department of Water Resources (DWR) Well Data Records, no depth to groundwater data is available for the immediate site area. Groundwater data for Well No. 12S02W21N001S (approximately 9 feet below ground surface recorded in 1987), Well No. 120S2W29H001S (approximately 18 feet below ground surface recorded in 1987), and Well No. 120S2W29H001S (approximately 7 feet below ground surface recorded in 1987) does exist, however these wells are approximately five miles southeast of the site in the Escondido valley,

and the top of the wells are around an elevation of approximately 650 feet above msl (DWR, 2006).

Additionally, considering the site is within the granitic hills surrounding the Escondido valley, true groundwater table is not expected within the upper 100 feet. However, perched groundwater was encountered in the borings to depth of about 56 feet, which was suspected to be resulted of water seepage from the last storm through the fills.

3.5 FAULTS AND SEISMICITY

The site is located within a seismically active region that is well known for its many active faults and historic seismicity. Because the site is in a seismically active region, it follows that it will be subjected to future seismic shaking that will occur along local or regional faults. The location of the site with respect to known active or potentially-active faults and epicenters of earthquakes with magnitudes of 4 or greater is shown on the Regional Fault and Epicenter Map, Figure 5. The geoseismic characteristics of some of the faults considered as potential seismic sources considered to be closest to the site are listed in Table 3.1, including an estimate of the maximum earthquake magnitude that might be generated by each fault. In general, the distances noted in Table 3.1 are the closest distance from the site to the surface trace or surface projection of the fault.

TABLE 3.1
SUMMARY OF POTENTIAL SEISMIC SOURCES

Fault or Fault Segment	Fault Type[1]	Approx. Fault Length (km)[2]	Approx. Closest Distance to Site (km)[3]	Approximate Maximum Magnitude, Mw[4]
Rose Canyon Fault Zone	RL	55	24	7.2
Elsinore – Julian	RL	80	27	7.1

Notes: (1) RL = Right Lateral Strike-Slip Fault; N = Normal
(2) Fault length from California Geological Survey (2003)
(3) Distances noted are the closest distance to the surface trace or surface projection of the fault as measured from International Conference of Building Officials (1998) or Jennings (1994).
(4) Maximum credible earthquake values reported as maximum moment magnitude by the California Geological Survey (2003)

The closest known active fault to the proposed project that is considered by the CGS as a potential seismic source is the Rose Canyon Fault Zone (RCFZ), located approximately 14 miles (24 kilometers) southwest of the site. The RCFZ fault is a complex array of en-echelon

northwest trending fault segments that bifurcate into several north-south trending splays in the region of San Diego Bay. A segment of the RCFZ fault in the La Jolla-Mission bay area and a short segment near downtown San Diego are considered a Holocene fault, indicating displacement during the past 10,000 years (Jennings, 1994). Another active fault relatively close to the site is the Elsinore Fault Zone (EFZ), located approximately 16.5 miles (27 kilometers) northeast of the site. The EFZ is a right lateral strike slip fault and is one of the largest in southern California.

Seismic activity in the project area has been minimal relative to other areas of southern California. Estimated magnitude 6 1/2 and 6 earthquakes occurred in the San Diego region on November 11, 1800, and on May, 27, 1862 (Ellsworth, 1990). Additional details regarding faulting and seismicity in the project vicinity are provided in "Report, Seismic Ground-motion Hazard Analysis, Palomar Medical Center West Facility, Escondido, California", by URS, dated March 2006.

4.0 GEOLOGIC AND SEISMIC HAZARDS

4.1 SURFACE FAULT RUPTURE

The "Alquist-Priolo Earthquake Fault Zoning Act" is a state law that regulates development projects near active faults to mitigate the hazard of surface fault rupture. The act requires that development permits for projects within "Earthquake Fault Zones" be withheld until geologic investigations demonstrate that the sites are not threatened by surface displacement from future fault rupture. To be zoned under the Alquist-Priolo Fault Zoning Act, a fault must be considered either active or both sufficiently active and well-defined. The California Geological Survey (CGS) defines an active fault as one that has had surface displacement within Holocene time (about 11,000 years), and a sufficiently active fault as one that has evidence of Holocene surface displacement along one or more of its segments or branches. The CGS considers a fault to be well-defined if its trace is clearly detectable as a physical feature at or just below the ground surface (CDMG, 1997).

No known active, sufficiently active, or well-defined fault traces have been recognized as crossing the proposed site, and the CGS does not delineate any part of the site as being within an Earthquake Fault Zone. As noted in section 3.5, the closest Earthquake Fault Zones to the site are segments of both the Rose Canyon Fault Zone located approximately 14 miles (24 kilometers) southwest of the site, and the Elsinore Fault Zone located approximately 16.5 miles (27 kilometers) northeast. Therefore the potential for surface fault rupture to occur at the site is considered to be minimal.

4.2 SEISMIC GROUND MOTION

Strong seismic ground motion is the most significant geologic hazard for the proposed project. As indicated by the numbers and distribution of recorded earthquake epicenters shown on Figure 5, the site will continue to be subjected to periodic seismic shaking. Proper building design in accordance with the 2001 California Building Code (CBC) should mitigate the effect of strong ground motions from future earthquakes.

4.3 LIQUEFACTION

Liquefaction is defined as significant and relatively sudden reduction in stiffness and shear strength of saturated sandy soils caused by a seismically induced increase in pore water pressures. Potential for seismically induced liquefaction exists whenever relatively loose, sandy

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 GENERAL

The proposed acute care facilities and the central plant are recommended to be founded on bedrock. The majority of the areas for the hospital buildings are located in rock cut zones, and this requirement is met. However, the north portion of the nursing tower and the central plant is located in fill zones, therefore, these buildings should have basement levels to ensure that the bottom of the foundation are founded on rock only. Further, existing fills surrounding the basement levels should be excavated and replaced with new engineered fill.

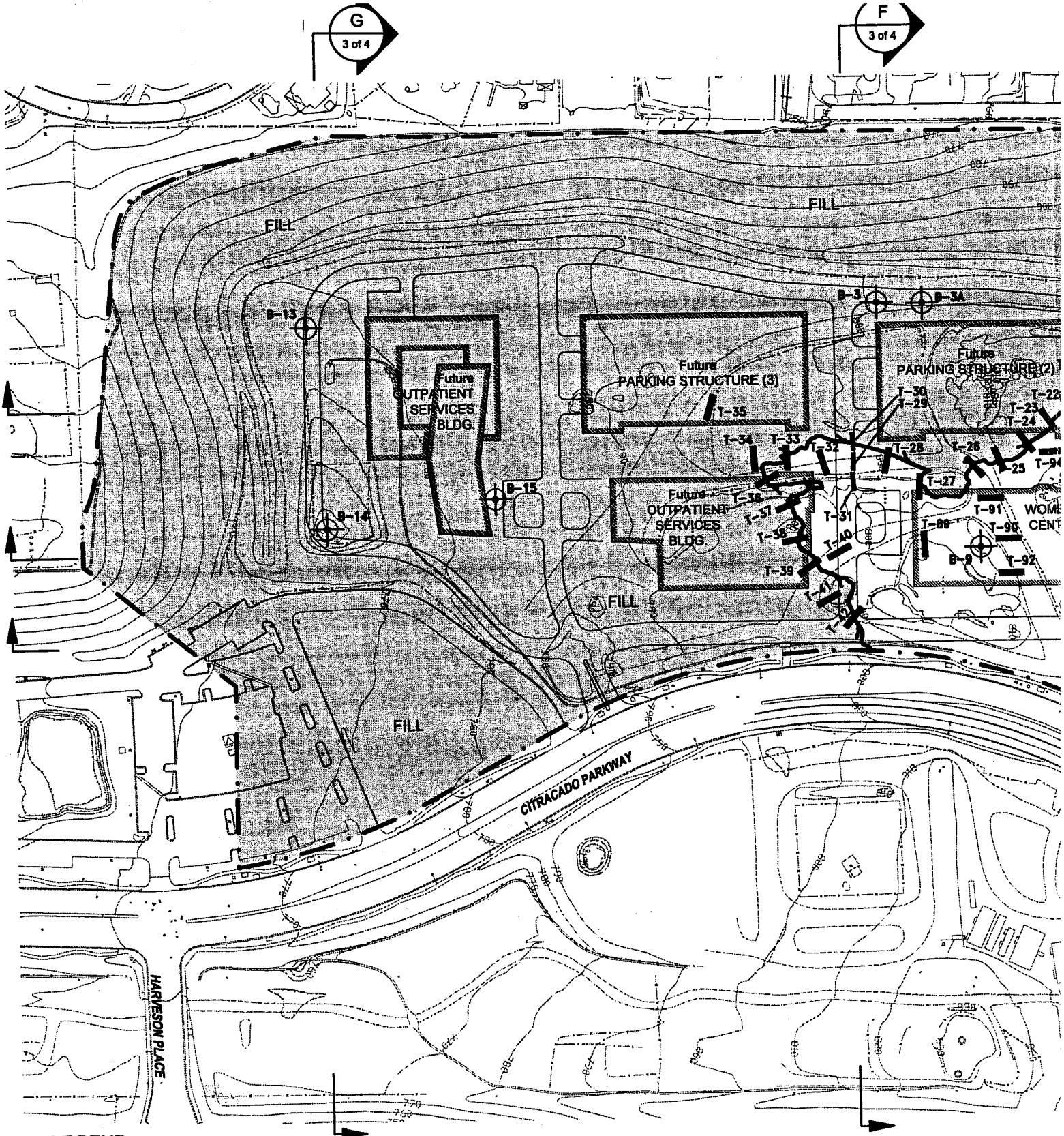
5.2 EARTHQUAKE GROUND MOTIONS AND RELATED PARAMETERS

5.2.1 California Building Code

Ground motions at the site were determined on the basis of the 2001 California Building Code (CBC) procedures (California Building Standards Commission, 2001). In this deterministic approach, the distance to known faults is measured and the fault type is obtained from the "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada," (International Conference of Building Officials, 1998). Using the distance to and the type of faulting, along with the site soil type, the peak ground acceleration at the site can be computed.

Based on the overall type and consistency of the subsurface materials encountered, as shown by the shear-wave velocity measurements (see Appendix B) in rock and averaged over the subsurface borings herein, the site corresponds to the "Hard Rock" (Type S_A) for the purpose of ground motion evaluation. The corresponding seismic design parameters from the 2001 CBC are as follows:

Controlling Fault Source		Rose Canyon
Soil Type		S_A
Seismic Source Definition		B
Closest Distance to Site (km)		24
Seismic Zone		4
Seismic Zone Factor	Z	0.4
Near Source Factor	N_a	1.0
	N_v	1.0
Seismic Coefficient	$C_a = 0.32\ N_a$	0.32
	$C_v = 0.32\ N_v$	0.32



LEGEND

PROPOSED HOSPITAL BUILDING

ROCK CUT/FILL CONTOUR LINE

T-1 TEST PITS, URS

B-1 BORING, URS

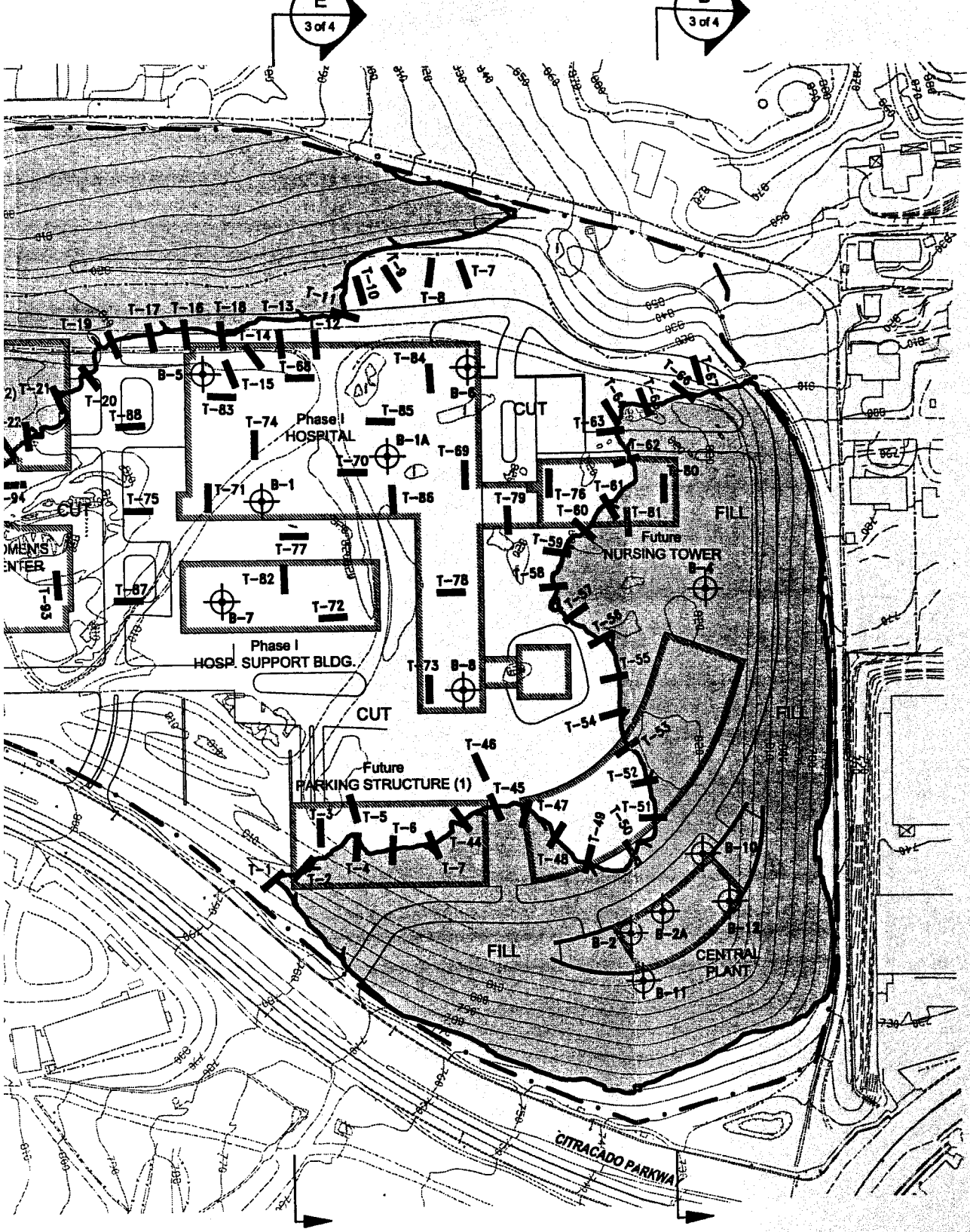
FILL AREAS

URS

915 WILSHIRE BOULEVARD
SUITE 700
LOS ANGELES, CA 90017
TEL: (213) 996-2200
FAX: (213) 996-2290

URS PROJECT NO. 29401967.60000

NO.	DATE	DRAWN	REVISIONS –	DATE	APP'D	NO.	DATE	DRAWN	REVISIONS –



PLAN
SCALE: 1" = 100'

A

100 50 0 100 200
1 INCH = 100 FEET
TYPICAL

	DATE	APP'D	SCALE:
			DRAWN: D. Luong
			CHECKED:
			DESIGNED:
			PROJ. MGR. BILL GATES

PALOMAR MEDICAL CENTER WEST – ESCONDIDO, CA

SITE PLAN

PALOMAR POMERADO HEALTH

DRAWING NUMBER
Figure 2A

LEGEND

- PROJECT LIMITS
- CUT/FILL DAYLIGHT LINE
- ORIGINAL SURFACE
- EXISTING SURFACE
- CONTOURS OF EXISTING CUT OR FILL THICKNESS

CONTOURS OF CUT OR FILL DEPTHS

- (+N) IS THICKNESS OF FILL BELOW EXISTING FINISHED GRADE
- (-N) IS THICKNESS OF ROCK SURFACE THAT WAS CUT AWAY TO FORM EXISTING FINISHED GRADE
- FILL AREAS

PLAN

SCALE: 1"

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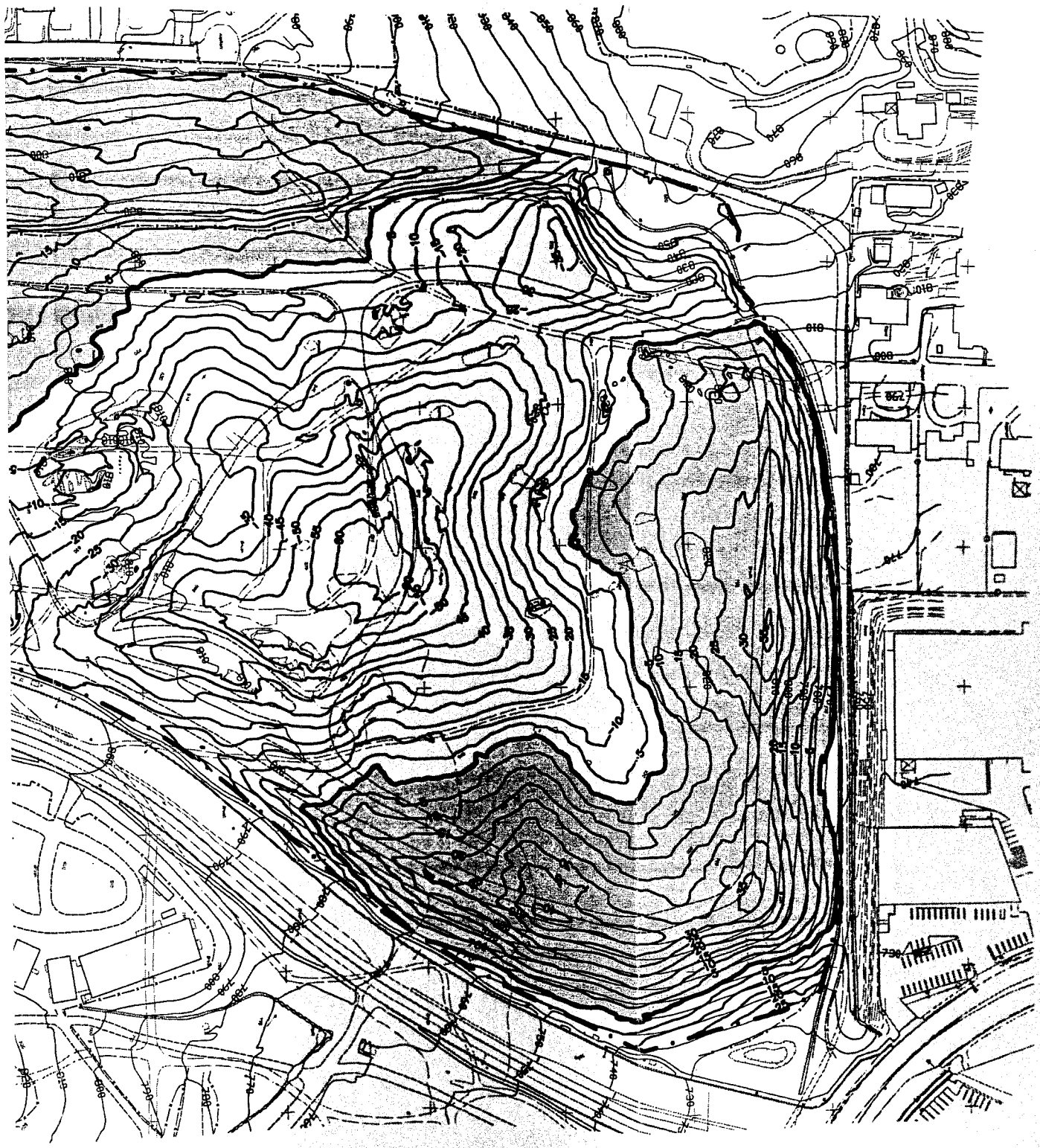
URS PROJECT NO. 29401967.60000

NO.	DATE	DRAWN	REVISIONS –	DATE	APP'D	NO.	DATE	DRAWN	REVISIONS –



A

100'

NOTE:
PLAN OF EXISTING SITE SURFACE CONTOURS AFTER GRADING AND ORIGINAL SITE CONTOURS PRIOR TO GRADING.

Site Volume Table: Unadjusted

Cut cu.yds	Fill cu.yds	Net cu.yds	Method
627846	1310412	682566 (F)	Grid

Site Area Table

Rock Cut Area sq. ft	Fill Area Area ft
768563	1683366

100 50 0 100 200

1 INCH = 100 FEET
TYPICAL

DATE	APP'D	SCALE:
		DRAWN: B. Lansing
		CHECKED:
		DESIGNED:
		PROJ. MGR.
		BILL GATES

PALOMAR MEDICAL CENTER WEST – ESCONDIDO, CA

EXISTING CUT AND FILL THICKNESS

PALOMAR POMERADO HEALTH

DRAWING NUMBER
Figure 2B

Appendix A

Field Investigation

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	*GRAVEL AND GRAVELLY SOILS* MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	*CLEAN GRAVELS* (LITTLE OR NO FINES)	GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	*CLEAN SANDS* (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SM	SILTY SANDS, SAND - SILT MIXTURES
			SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	*SILTS AND CLAYS*	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Dual symbols are used to indicate gravels or sand with 5-12% fines and soils with fines classifying as CL-ML. Symbols separated by a slash indicate borderline soil classifications.

Rock Material Symbols (examples)

Asphalt

Sampler and Symbol Descriptions

- Dames & Moore Type-U sample
- Standard Penetration Test
- No Recovery
- Bk Bulk sample
- Disturbed Type-U Sample
- Pitcher Tube Sample
- Shelby Tube Sample
- Rock Core Sample
- Approximate depth of perched water or groundwater

Note: Number of blows required to advance driven sample 12" (or length noted) is recorded; blow count recorded for seating interval (initial 6" of drive) is indicated by an asterisk.

Laboratory and Field Test Abbreviations

CBR	California Bearing Ratio(result in parentheses)
COMP	Compaction test
CORR	Corrosivity test
CON	Consolidation Test
DSCD	Consolidated drained direct shear test (normal pressure and shear strength results shown)
EI	Expansion Index(result in parentheses)
LL=29	Liquid limit (Atterberg limits test)
PERM	Permeability test
PI=11	Plasticity Index (Atterberg limits test)
R-value	R-Value Test(result in parentheses)
SA	Sieve Analysis (-200 result in parentheses)
SA/HA	Sieve and Hydrometer Analysis(-200 result in parentheses)
UC	Unconfined Compressive Strength test
(0,21.4,0,0)	(Methane/LEL in %,O2 in %,CO in ppm, H2S in ppm)
-200	Percent passing #200 sieve (test result in parentheses)

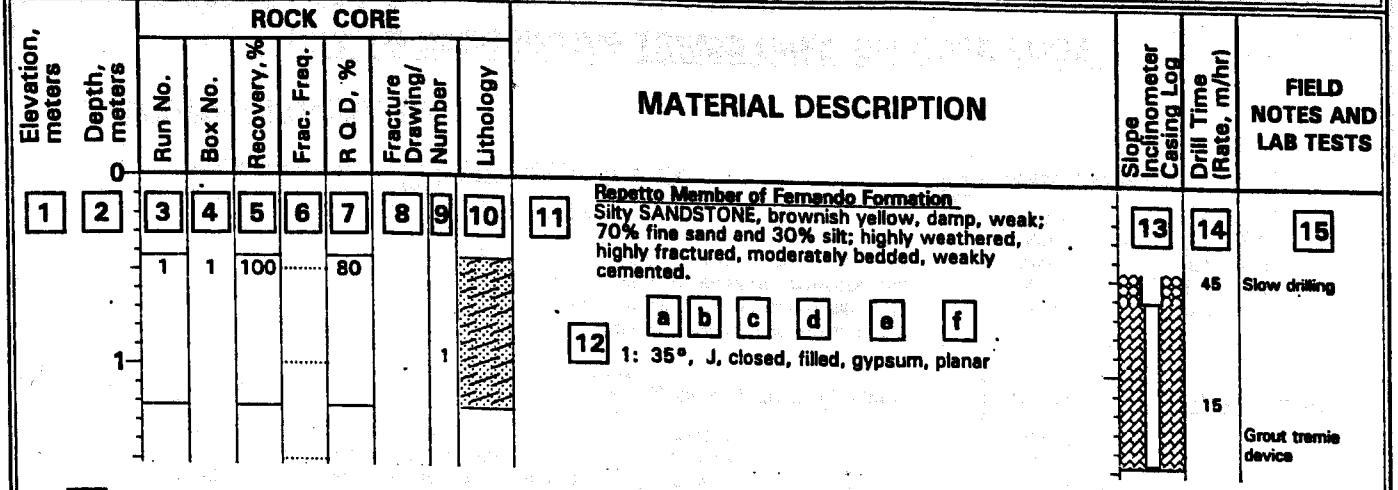
KEY TO LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

KEY TO ROCK CORE LOG

Sheet 1 of 2



1 **Elevation:** Elevation (in meters) relative to mean sea level (MSL).

2 **Depth:** Distance (in meters) from the collar of the borehole.

3 **Run No.:** Number of the individual coring interval, starting at top of wireline core drilling.

4 **Box No.:** Number of the core box that contains core from the corresponding run(s).

5 **Recovery:** Amount (in percent) of core recovered from the coring interval; calculated as the length of core recovered divided by the length of the run.

6 **Frac. Freq.:** (Fracture Frequency) The number of naturally occurring fractures in each half-meter of core; does not include mechanical breaks (M), which are considered to be induced by drilling.

7 **R Q D:** (Rock Quality Designation) Amount (in percent) of intact core (pieces of sound core greater than 100 mm in length) in each coring interval; calculated as the sum of the lengths of intact core divided by the length of the core run.

8 **Fracture Drawing:** Sketch of the naturally occurring fractures and mechanical breaks, showing the angle of the fractures relative to the cross-sectional axis of the core. "NR" indicates no recovery.

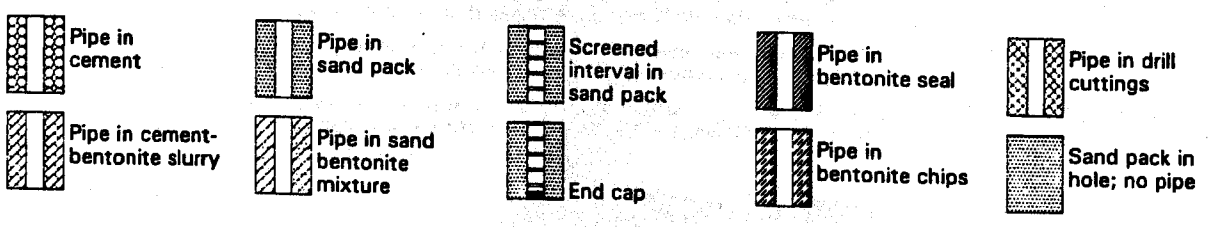
9 **Fracture Number:** Location of each naturally occurring fracture (numbered) and mechanical break (labeled "M"). Naturally occurring fractures are described in Column 11 (keyed by number) using terms defined on Sheet 2 (Items a - f). Representative bedding is also numbered and similarly described.

10 **Lithology:** A graphic log of material encountered using symbols to represent differing rock types; refer to Sheet 3 for an explanation of symbols.

11 **Description:** Lithologic description in this order: Soil/Rock Type, Color, Moisture Content, Consistency/Strength, Weathering, Grain Size (include percentages), Fracturing Conditions, Bedding Thickness, Miscellaneous (fossils, cementation, etc.). Refer to Sheet 2 for an explanation of terminology.

12 **Discontinuity Description:** Description of discontinuity corresponding to number listed in Column 9, using terms defined on Sheet 2 (Items a - f).

13 **Inclinometer Casing Log:** Graphic depiction of casing installation; symbols explained below.



14 **Drill Time (Rate):** Drill time reported in 24-hour clock at beginning and end of each core run. Rate (in feet per hour) of drilling advance for each core run is reported in parentheses.

15 **Field Notes:** Comments on drilling, including water loss, reasons for core loss, and use of drilling mud; also, laboratory tests performed on core.

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FIGURE A-1

KEY TO DESCRIPTIVE TERMS USED ON CORE LOGS

DISCONTINUITY DESCRIPTORS

a Dip of Discontinuity

b Type of Discontinuity:

B	Bedding
C	Contact
F	Fault (fracture with displacement)
J	Joint (fracture without displacement)
Sh	Shear (surfaces exhibiting strain but minor relative displacement)

c Separation (mm):

Closed	0.0
Very Narrow	0.0 - 0.1
Narrow	0.1 - 1.0
Wide	1.0 - 5.0
Very Wide	> 5.0

d Type of Fracture

Clean	No fracture filling
Stained	Discoloration of fracture
Lined	Lined with recognizable mineral
Filled	Filled with recognizable mineral
Wet	Filled with water

e Type of Fracture Infilling

Calcite
Chlorite
Clay
Gypsum
Iron Oxide
Quartz
Sand

f Surface Shape of Discontinuity

Planar
Wavy
Stepped
Irregular

ROCK WEATHERING

Grade	Symbol	Diagnostic Features
Fresh	F	No visible sign of decomposition or discoloration. Rings when struck by hammer.
Slightly Weathered	WS	Slight discoloration inward from open fractures; otherwise, similar to Fresh (F).
Moderately Weathered	WM	Discoloration throughout. Weaker minerals, such as feldspar, decomposed. Strength somewhat less than fresh rock, but core cannot be broken by hand or scraped by knife. Texture preserved.
Highly Weathered	WH	Most minerals somewhat decomposed. Specimens can be broken by hand with effort or shaved with knife. Core stones present in rock mass. Texture becoming indistinct, but fabric preserved.
Completely Weathered	WC	Minerals decomposed to soil, but fabric and structure preserved (saprolite). Specimens can be easily crumbled or penetrated.
Residual Soil	RS	Advanced state of decomposition resulting in plastic soils. Rock fabric and structure completely destroyed. Large volume change.

ROCK STRENGTH

Class	Strength	Field Test	Approximate Range of Uniaxial Compression Strength kg/cm^2 (tons/ft^2)
I	Extremely Strong	Many blows with geologic hammer required to break intact specimen.	>2000
II	Very Strong	More than one blow with geologic hammer required to break hand-held specimen.	2000 - 1000
III	Strong	Cannot be scraped or peeled with knife; hand-held specimen can be broken with single moderate blow with hammer.	1000 - 500
IV	Moderately Strong	Can just be scraped or peeled with knife. Indentations 1 mm to 3 mm show in specimen with moderate blow with pick.	500 - 125
V	Moderately Weak to Weak	Material crumbles under moderate blow with pick and can be peeled with a knife, but is too hard to hand trim for triaxial test specimen.	125 - 12

FRACTURE SPACING

Intensely Fractured	Less than 50 mm
Highly Fractured	50 mm to 300 mm
Moderately Fractured	300 mm to 1 m
Slightly Fractured	1 m to 3 m
Massive	Greater than 3 m

BEDDING THICKNESS

Laminated	Less than 20 mm
Very Thinly	20 mm to 50 mm
Thinly	50 mm to 300 mm
Moderately	300 mm to 1 m
Thickly	1 m to 3 m
Massively	Greater than 3 m

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FIGURE A-1

Date(s) Drilled	May 3 and 4, 2005	Logged By	J. Pyska
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-1

Sheet 1 of 3

Job Number	29401968
Total Depth Drilled (ft)	31.6
Approximate Ground Surface Elevation (ft)	815.0

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
815	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel	
	1									
	2									
	3									
	4	1		71	1020	46			**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
810	5									
	6									
	7		1							
	8									
	9									
805	10	2		100	1045	100			Grades with iron stains on fracture planes	
	11									
	12									
	13	3		100	1123	100			Grades with some light pinkish color	

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LOG OF BORING

Palomar Medical Center West Site

Escondido, California

FOR: Palomar Pomerado Health

Figure A-2

Palomar Medical Center West Site
FOR: Palomar Pomerado Health

BORING B-1
Sheet 2 of 3

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14									
800	15	4			1145	100				
	16									
	17		2						Grades more fractured	
	18									
	19									
795	20	5			1204	100			Grades with trace fractures	
	21									
	22									
	23									
	24									
790	25	6			1240	100				
	26		3							
	27									
	28								Grades gray and white, very hard, with trace staining and fractures	
	29									

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Figure A-2

Palomar Medical Center West Site

FOR: Palomar Pomerado Health

BORING B-1

Sheet 3 of 3

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
785	30	7	4		1006	100				
	31									
	32									
	33								1) Total depth: 31.6 feet below ground surface 2) No groundwater encountered 3) Shear wave velocity measurement conducted by Geovision 4) Boring backfilled with bentonite cement	
	34									
780	35									
	36									
	37									
	38									
	39									
775	40									
	41									
	42									
	43									
	44									
770	45									

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IDS

Figure A-2

Date(s) Drilled	June 27, 2005	Logged By	J. Pyska
Drilling Method	Percussion Hammer	Drill Bit Size/Type	6.75 inchesO.D.(0-12 ft), 6 inchesO.D.(below 12 ft)
Drill Rig Type	CME-75	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	27 feet, June 27, 2005		
Comments	None		

Boring B-1A

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	92.0
Approximate Ground Surface Elevation(ft)	820.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
820	0					SM	**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel			
810	10					Weathered Rock	**WEATHERED ROCK**			
							BEDROCK GRANITE			
800	20									
790	30									
780	40									
770	50									
760	60									
750	70									
740	80									
730	90									
720	100						1) Total depth: 92 feet below ground surface 2) Groundwater encountered at about 27 feet below ground surface 3) Shear wave velocity measurement conducted by Geovision 4) Boring grouted with bentonite cement			

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

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Figure A-3

Date(s) Drilled	June 28, 2005	Logged By	C. Shen
Drilling Method	Percussion Hammer	Drill Bit Size/Type	6.75 inchesO.D.(0-23 ft), 6 inchesO.D.(below 23 ft)
Drill Rig Type	CME-75	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-2
Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	89.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
815	0						**FILL** Mixture of SAND, GRAVEL, COBBLES and BOULDERS: Yellowish brown, moist			
810	10									
800	20						Hard drilling, shifting rocks grinding on casing **WEATHERED ROCK**			
790	30									
780	40									
770	50						**BEDROCK** GRANITE			Drill mud poured into the hole for geophysical measurement. Mud dissipating fast in fill
760	60									
750	70									
740	80									
730	90									
720	100						1) Total depth: 89 feet below ground surface 2) No groundwater encountered 3) Shear wave velocity measurement conducted by Geovision 4) Boring grouted with bentonite cement			

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

Figure A-4

Date(s) Drilled	May 4, 2005	Logged By	J. Pyska
Drilling Method	Hollow Stem	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	CME-75	Hammer Data	140 lbs Hammer/30 inches drop, Downhole hammer
Sampling Method(s)	SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-2A

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	7.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0					Rock	Rock and gravel			Refusal for 1st attempt; moved 8 feet east for 2nd attempt, still refusal; moved 10 feet east for 3rd attempt
			BK-1							
810	5		1	50/3"			Mixture of SAND, GRAVEL, COBBLES and BOULDERS: Grayish brown, moist, fine to coarse grained, with gravel and broken granite, loose rocks grinding on casing			
	10						1) Total depth: 7 feet below ground surface (Refusal) 2) No groundwater encountered 3) Boring grouted with bentonite cement			Refusal again; moved 18 feet north for 4th attempt, refusal at 1.5 feet; tried 5th attempt, refusal at 3 feet; collected bulk sample
800	15									
	20									
790	25									
	30									
780	35									
	40									

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

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Figure A-5

Date(s) Drilled	June 29, 2005	Logged By	C. Shen
Drilling Method	Percussion Hammer	Drill Bit Size/Type	6.75 inchesO.D.(0-18 ft), 6 inchesO.D.(below 18 ft)
Drill Rig Type	CME-75	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	62.6 feet, June 29, 2005		
Comments	None		

Boring B-3

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	62.8
Approximate Ground Surface Elevation(ft)	800.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
800	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
790	10						Hard drilling, shifting rocks grinding on casing			
780	20						**BEDROCK** GRANITE			
770	30									Drill mud poured into the hole for geophysical measurement. Mud dissipating fast in fill
760	40									
750	50									
740	60									
730	70						1) Total depth: 62.8 feet below ground surface 2) Groundwater encountered at 62.6 feet below ground surface 3) Shear wave velocity measurement conducted by Geovision 4) Boring grouted with bentonite cement			
720	80									
710	90									
700	100									

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

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Figure A-6

Date(s) Drilled	May 5, 2005	Logged By	J. Pyska
Drilling Method	Air Drilling	Drill Bit Size/Type	10 inches (O.D.)
Drill Rig Type	Tram T660	Hammer Data	Casing Hammer
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-3A

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	18.0
Approximate Ground Surface Elevation(ft)	800.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
800	0						Mixture of sand, gravel, cobbles and boulders			Very slow and difficult drilling, shifting rocks pushing casings to the side
	5									
790	10									
	15									
							1) Total depth: 18 feet below ground surface (Refusal) 2) No groundwater encountered 3) Boring grouted with bentonite cement			
780	20									
	25									
770	30									
	35									
760	40									

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

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Figure A-7

Date(s) Drilled	June 30, 2005	Logged By	C. Shen
Drilling Method	Percussion Hammer	Drill Bit Size/Type	6.75 inchesO.D.(0-8 ft), 6 inchesO.D.(below 8 ft)
Drill Rig Type	CME-75	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	56 feet, June 30, 2005		
Comments	None		

Boring B-4
Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	76.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
810	0					SM	**FILL** Mixture of SAND, GRAVEL, COBBLES and BOULDERS: Yellowish brown, moist			
800	10									
790	20						Hard drilling, shifting rocks grinding on casing			
						eathered Rock	**WEATHERED ROCK**			
	30						**BEDROCK** GRANITE			
780										
770	40									Caving at 40 feet
760	50									
750	60									
740	70									Hole caving at 63 feet, re-drilled
730	80						1) Total depth: 76 feet below ground surface 2) Groundwater encountered at 56 feet below ground surface 3) Boring grouted with bentonite cement			
720	90									
	100									

LOG OF BORING
Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

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Date(s) Drilled	February 6, 2006	Logged By	Tharma
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-5

Sheet 1 of 2

Job Number	29401968
Total Depth Drilled (ft)	24.5
Approximate Ground Surface Elevation (ft)	810.0

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
810	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel and cobbles	
	1									
	2									
	3									
	4	1	B3	55	13:15	10			**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
805	5									
	6									
	7									
	8									
	9	2	B3	30	13:45	10				
800	10									
	11									
	12									
	13	3	B3	100	13:55	90				

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LOG OF BORING

Palomar Medical Center West Site

Escondido, California

FOR: Palomar Pomerado Health

Figure A-9

Palomar Medical Center West Site
FOR: Palomar Pomerado Health

BORING B-5
Sheet 2 of 2

Elevation (ft)	Depth (ft)	Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14									
795	15	4	B3 B4	100	14:15	90				
	16									
	17									
	18									
	19									
790	20	5	B4	100	15:00	90				
	21									
	22									
	23									
	24									
785	25								1) Total depth: 24.5 feet below ground surface 2) No groundwater encountered 3) Boring backfilled with bentonite cement	
	26									
	27									
	28									
	29									

ROCK CORE

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IRS

Date(s) Drilled	February 6, 2006	Logged By	Tharma
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-6

Sheet 1 of 3

Job Number	29401968
Total Depth Drilled (ft)	29.0
Approximate Ground Surface Elevation (ft)	815.0

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
815	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel, cobbles, and boulders	
	1									
	2									
	3									
	4									
810	5									
	6									
	7									
	8									
	9	1	B1	29	10:00	10			**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
805	10									
	11									
	12									
	13									

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LOG OF BORING

Palomar Medical Center West Site

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FOR: Palomar Pomerado Health

Palomar Medical Center West Site

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BORING B-6

Sheet 2 of 3

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14	2	B1	100	10:20	10				
800	15									
	16									
	17									
	18									
	19	3	B1 B2	100	10:40	90				
795	20									
	21									
	22									
	23									
	24	4	B2	100	11:15	90				
790	25									
	26									
	27									
	28	5	B2	100	12:40	90				
	29									

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IDS

Figure A-10

Palomar Medical Center West Site

FOR: Palomar Pomerado Health

BORING B-6

Sheet 3 of 3

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
785	30								1) Total depth: 29 feet below ground surface 2) No groundwater encountered 3) Boring backfilled with bentonite cement	
	31									
	32									
	33									
	34									
780	35									
	36									
	37									
	38									
	39									
775	40									
	41									
	42									
	43									
	44									
770	45									

Date(s) Drilled	February 7, 2006	Logged By	Tharma
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-7

Sheet 1 of 2

Job Number	29401968
Total Depth Drilled (ft)	23.5
Approximate Ground Surface Elevation (ft)	815.0

Elevation (ft)	Depth (ft)	ROCK CORE Run No.	Box No.	Recovery,%	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
815	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel, cobbles, and boulders	
	1									
	2									
	3									
	4	1	B7	60	11:17	10			**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
810	5									
	6									
	7									
	8									
	9	2	B7	33	11:25	5				
805	10									
	11									
	12	3	B7	100	11:35	10				
	13									

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LOG OF BORING

Palomar Medical Center West Site

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Palomar Medical Center West Site
FOR: Palomar Pomerado Health

BORING B-7
Sheet 2 of 2

Elevation (ft)	Depth (ft)	Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14	4	B7 B8	100	13:15	90				
800	15									
	16									
	17									
	18									
	19	5	B8	100	14:08	90				
795	20									
	21									
	22									
	23									
	24								1) Total depth: 23.5 feet below ground surface 2) No groundwater encountered 3) Boring backfilled with bentonite cement	
790	25									
	26									
	27									
	28									
	29									

ROCK CORE

IDS

Date(s) Drilled	February 7, 2006	Logged By	Tharma
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-8

Sheet 1 of 2

Job Number	29401968
Total Depth Drilled (ft)	24.0
Approximate Ground Surface Elevation (ft)	815.0

Elevation (ft)	Depth (ft)	ROCK CORE Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
815	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel, cobbles, and boulders	
	4	1	B6	90	08:20	10			**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
810	5									
	9	2	B5	100	08:40	10				
805	10									
	13									

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LOG OF BORING

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Palomar Medical Center West Site
FOR: Palomar Pomerado Health

BORING B-8
Sheet 2 of 2

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14	3	B6	100	09:30	85				
800	15									
	16									
	17									
	18									
	19	4	B6	100	10:00	90				
795	20									
	21									
	22									
	23									
	24									
790	25								1) Total depth:24 feet below ground surface 2) No groundwater encountered 3) Boring backfilled with bentonite cement	
	26									
	27									
	28									
	29									

Date(s) Drilled	February 7, 2006	Logged By	Tharma
Drilling Method	HQ-3 Wireline	Drill Bit Size/Type	8 inches O.D.(0-4 ft), 3.8 inches O.D.(below 4 ft)
Drill Rig Type	CME-75	Diameter of Borehole (in.)	3.8 inches (O.D.)
Drilling Contractor	Tri-County	Core Type/ Diameter (in.)	HQ
Depth to Water and Date Measured	No groundwater encountered	Size and Type of Casing	
Type and Depths of Backfill	Bentonite cement entire borehole		
Comments	None		

BORING B-9

Sheet 1 of 2

Job Number	29401968
Total Depth Drilled (ft)	22.5
Approximate Ground Surface Elevation (ft)	805.0

Elevation (ft)	Depth (ft)	ROCK CORE Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
805	0								**FILL** Silty SAND: Yellowish brown, moist, fine to coarse grained, with abundant gravel, cobbles, and boulders	
	1									
	2	1	B9	60	15:09	10				
	3								**BEDROCK** GRANITE: Black, white, and brownish yellow, hard, slightly weathered to intact	
800	4									
	5									
	6									
	7									
	8	2	B9	100	15:33	10				
	9									
795	10									
	11									
	12									
	13	3	B9	100	15:51	80				

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URS

LOG OF BORING

Palomar Medical Center West Site

Report: DMG10CALABASAS; Project File: G:\GINTW\PROJECTS\ERTC.GPJ; Data Template:DMLA.GDT Printed: 3/16/06

Palomar Medical Center West Site

FOR: Palomar Pomerado Health

BORING B-9

Sheet 2 of 2

Elevation (ft)	Depth (ft)	ROCK CORE: Run No.	Box No.	Recovery, %	Drill Time	R Q D, %	Fracture Drawing	Lithology	MATERIAL DESCRIPTION	FIELD NOTES
	14									
790	15									
	16									
	17									
	18	4	B9	100	16:25	90				
	19									
785	20									
	21									
	22									
	23								1) Total depth: 22.5 feet below ground surface 2) No groundwater encountered 3) Boring backfilled with bentonite cement	
	24									
780	25									
	26									
	27									
	28									
	29									

Report: DMG10CALABASAS; Project File: G:\GINTW\PROJECTS\ERTC.GPJ; Data Template:DMLA.GDT Printed: 3/16/06

Date(s) Drilled	January 25, 2006	Logged By	J. Gratzer
Drilling Method	Odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-10

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	18.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
810	5									
	10						Hard drilling, shifting rocks grinding on casing			
800	15									
	20						1) Total depth: 18 feet below ground surface (Refusal) 2) Boring grouted with bentonite cement			
790	25									
	30									
780	35									
	40									

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-14

Report: DMG4; Project File: G:\GINTW\PROJECTS\ERTC.GPJ; Data Template:DMLA.GDT Printed: 3/16/06

Date(s) Drilled	January 23, 2006	Logged By	J. Gratzer
Drilling Method	Air Rotary, Tricore, Pneumatic downhole, odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-11

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	30.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			Started with Air Rotary hammer
810	5									
							Hard drilling, shifting rocks grinding on casing			Switched to Tricore hammer from 7 to 20 feet
	10									
800	15									
	20									Switched to Pneumatic Downhole hammer
790	25									Lost circulation Switched to Odex hammer
	30						1) Total depth: 30 feet below ground surface (Refusal) 2) Boring grouted with bentonite cement			
780	35									
	40									

LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-15

Date(s) Drilled	January 23 and 24, 2006	Logged By	J. Gratzer
Drilling Method	Odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-12

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	23.0
Approximate Ground Surface Elevation(ft)	815.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
810	5									
	10						Hard drilling, shifting rocks grinding on casing			
800	15									
	20									
							1) Total depth: 23 feet below ground surface (Refusal)			
790	25						2) Boring grouted with bentonite cement			
	30									
780	35									
	40									

Report: DMG4; Project File: G:\GINTW\PROJECTS\ERTC.GPJ; Data Template:DMLA.GDT Printed: 3/16/06

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-16

Date(s) Drilled	January 25, 2006	Logged By	J. Gratzer
Drilling Method	Odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-13

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	16.5
Approximate Ground Surface Elevation(ft)	788.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
	5									
780										
	10						Hard drilling, shifting rocks grinding on casing			
	15									
770							1) Total depth: 16.5 feet below ground surface (Refusal) 2) Boring grouted with bentonite cement			
	20									
	25									
760										
	30									
	35									
750										
	40									

Report: DMG4; Project File: G:\GINTW\PROJECTS\ERTC.GPJ; Data Template:DMLA.GDT Printed: 3/16/06

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-17

Date(s) Drilled	January 25, 2006	Logged By	J. Gratzer
Drilling Method	Odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-14
Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	20.0
Approximate Ground Surface Elevation(ft)	770.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
770	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
	5									
760	10						Hard drilling, shifting rocks grinding on casing			
	15									
750	20						1) Total depth: 20 feet below ground surface (Refusal) 2) Boring grouted with bentonite cement			
	25									
740	30									
	35									
730	40									

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LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-18

Date(s) Drilled	January 25, 2006	Logged By	J. Gratzer
Drilling Method	Odex	Drill Bit Size/Type	8 inches (O.D.)
Drill Rig Type	Schramm T660W	Hammer Data	N/A
Sampling Method(s)	N/A		
Approximate Groundwater Depth and Date Measured	No groundwater encountered		
Comments	None		

Boring B-15

Sheet 1 of 1

Job Number	29401968
Total Depth Drilled (ft)	20.0
Approximate Ground Surface Elevation(ft)	785.0

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per 6-inches	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0						Mixture of yellowish brown sand, gravel, cobbles and boulders			
780	5									
	10						Hard drilling, shifting rocks grinding on casing			
770	15									
	20						1) Total depth: 20 feet below ground surface (Refusal) 2) Boring grouted with bentonite cement			
760	25									
	30									
750	35									
	40									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Palomar Medical Center West Site
Escondido, California
FOR: Palomar Pomerado Health

URS

Figure A-19

Table A-1

SUMMARY OF TEST PIT INVESTIGATIONS

TEST PIT #	Total Depth of Test Pit (feet)	Depth to Bedrock (feet)	COMMENTS
1	5	1	Flat graded surface
2	3	1	Flat graded surface
3	5	4	Debris pile aprox. 2'
4	7	6	Debris pile approx. 3'
5	2.5	2	Flat graded surface
6	6	4.5	Debris pile approx. 2'
7	1.5	1	Flat graded surface
8	3	1	Flat graded surface
9	4	1.5	Flat graded surface
10	2	1	Flat graded surface
11	3	0.5	Flat graded surface
12	4	2.5	Flat graded surface
13	3	0.5	Flat graded surface
14	3	1	Debris pile approx. 1'
15	3	1.5	Debris pile approx. 1.5'
16	2	0.5	Flat graded surface
17	3	0	Flat graded surface
18	3	2	Flat graded surface
19	3	1	Flat graded surface
20	4	2.5	Debris pile approx. 2'
21	3	2	Debris pile approx. 2'
22	4	2.5	Debris pile approx. 2.5'
23	4	2	Debris pile approx. 2'
24	4	2.5	Debris pile approx. 2.5'
25	4	2	Debris pile approx. 2'
26	2	0.5	Flat graded surface
27	2	0.5	Flat graded surface
28	2	0	Flat graded surface
29	5.5	4	Flat graded surface
30	5	5	Flat graded surface
31	3	0	Flat graded surface
32	3	0.5	Flat graded surface
33	4	2	Debris pile approx. 2'
34	4	2	Debris pile approx. 2'
35	5	5	Flat graded surface
36	4	0.5	Flat graded surface
37	4	2	Flat graded surface

Table A-1 continued

TEST PIT #	Total Depth of Test Pit	Depth to Bedrock	COMMENTS
38	3	0.5	Flat graded surface
39	5.5	5	Flat graded surface
40	3	1	Flat graded surface
41	3	0.5	Flat graded surface
42	3.5	1	Flat graded surface
43	4	2	Debris pile approx. 2.5'
44	4	2	Debris pile approx. 2'
45	5	4	Debris pile approx. 2.5'
46	5	2	Debris pile approx. 2'
47	6	4.5	Debris pile approx. 4'
48	8.5	7.5	Debris pile approx. 3'
49	6.5	6	Debris pile approx. 3'
50	6	5.5	Debris pile approx. 3'
51	4	3	Debris pile approx. 2'
52	5	3	Debris pile approx. 2'
53	5	3	Debris pile approx. 2'
54	4	3	Debris pile approx. 2'
55	7	6	Debris pile approx. 3'
56	5	4	Debris pile approx. 3'
57	7	6	Debris pile approx. 3'
58	6.5	5.5	Debris pile approx. 3'
59	6.5	4.5	Debris pile approx. 3'
60	5	5	Debris pile approx. 3'
61	7	6	Debris pile approx. 2'
62	6	5	Debris pile approx. 2'
63	7	6	Flat graded surface
64	5	3	Debris pile approx. 3'
65	5	3	Debris pile approx. 3'
66	3	1	Flat graded surface
67	5	3	Flat graded surface
68	4	1	Flat graded surface
69	5	4	Debris pile approx. 3'
70	4	2	Debris pile approx. 2'
71	3	1	Debris pile approx. 1.5'
72	7	4	Debris pile approx. 3.5'
73	3	1	Flat graded surface
74	6	3	Debris pile approx. 3'
75	3	2.5	Debris pile approx. 2.5'

Table A-1 continued

TEST PIT #	Total Depth of Test Pit	Depth to Bedrock	COMMENTS
76	4	3.5	Debris pile approx. 2.5'
77	6	3	Debris pile approx. 2'
78	3	2	Debris pile approx. 2'
79	5	3.5	Debris pile approx. 2'
80	9	8.5	Debris pile approx. 2.5'
81	10	9.5	Debris pile approx. 2.5'
82	6	4	Debris pile approx. 3.5'
83	3.5	3	Debris pile approx. 2'
84	4	1.5	Debris pile approx. 1.5'
85	0.5	0.5	Flat graded surface
86	3	1	Flat graded surface
87	3.5	1.5	Debris pile approx. 1.5'
88	3.5	2	Debris pile approx. 2'
89	4	1	Debris pile approx. 0.5'
90	4	2.5	Debris pile approx. 2.5'
91	2	0.5	Flat graded surface
92	3	2.5	Flat graded surface
93	4	2	Debris pile approx. 2'
94	4	2	Debris pile approx. 2'

SUSPENSION RESULTS

Suspension R1-R2 P- and S_H-wave velocities are plotted in Figures 4 through 7. The suspension velocity data shown in these figures are presented in Tables 3 through 6. P- and S_H-wave velocity data from R1-R2 analysis and quality assurance analysis of S-R1 data are plotted together in Figures A1 through A4 to aid in visual comparison. It must be noted that R1-R2 data is an average velocity over a 3.28 ft segment of the soil column; S-R1 data is an average over 10.3 ft, creating a significant smoothing relative to the R1-R2 plots. S-R1 data are presented in Tables A1 through A4. Good correspondence between the shape of the P- and S_H-wave velocity curves is observed for both all these data sets. The velocities derived from S-R1 and R1-R2 data are in good agreement, providing verification of the higher resolution R1-R2 data.

Calibration procedures and records for the suspension measurement system are presented in Appendix B.

SUMMARY

Discussion of Suspension Results

Both P- and S_H-wave velocities were measured using the OYO Suspension Method in four uncased land borings at depths up to 73.8 ft below grade at the site of the Palomar West Medical Center in Escondido, California. All borings were located in a suburban environment, and no significant signal contamination from cultural vibration was observed.

All of these borings were drilled in variable rock conditions, with rotary air methods. Due to the variable nature of the material being drilled, a great deal of boring collapse was observed. In B-2 the boring was filled with bentonite grout during the logging run to prevent boring collapse and loss of the boring probe. In several instances, the boring would not remain open, and as a result, sections of the boring were not logged.

PALOMAR MEDICAL CENTER WEST

NEW HOSPITAL + CENTRAL PLANT

DESIGN DEVELOPMENT
BASIS OF DESIGN

CO Architects Project No:
Hospital 24009.100
Central Plant 24009.600

PPH Project No:
Hospital 201000-120489
Central Plant 201000-120486

CO ARCHITECTS

CONCEPT

The concept which underpins the design philosophy for the entire project is that of a garden hospital set within a campus master plan framework. The resulting vertical gardens architectural concept is the major exterior architectural element because of its presence and prominence at the center of the south façade. This *conservatory* element is augmented by the provision of similar smaller exterior vertical terrace gardens at the east and west ends and centrally on the north side of the patient tower to reinforce the garden hospital concept.

Site planning, landscaping, non-institutional architectural expression and materials selection (to convey a welcoming and comfortable impression) have all been strongly influenced by the garden hospital concept with each aspect in turn informing the other to create a unified whole.

INNOVATIONS

The PPH leadership has charged the Design Team with creating a facility that will meet current needs of the organization as well as those well into the future. The plans incorporate innovative planning solutions and design that consider current best practices as well as the way healthcare may be delivered in the future. The creation of a healing environment that considers the impact of buildings on the environment and human health is also of the utmost importance to PPH.

DIAGNOSTIC AND TREATMENT SERVICES

Integrated Interventional Platform

The Second Level of the Diagnostic and Treatment Facility houses what has been labeled the Integrated Interventional Platform; a large contiguous space that accommodates a continuum of procedures (Invasive Surgery, Cardiac Catheterization and Electrophysiology, Interventional Radiology, and a variety of Clean Procedures).

As traditional surgery is becoming less invasive and Interventional Radiology is becoming more interventional, the departmental lines between Surgery and Imaging are beginning to blur. The operational model that is being developed at the Palomar Medical Center West is one that locates all of the invasive procedures on the same floor where the sharing of common support spaces is possible:

- Centralized Scheduling
- Pre-op Staff and space
- Post-op staff and space
- Anesthesiology
- Lab Services
- Pharmacy
- Environmental Services
- Biomedical Engineering

The sharing of these resources avoids expensive duplication of space and staff, yielding significant economies.

Another aspect to the plan is again one of flexibility – to allow for the ability to change the use and the equipment of the procedure rooms as needs and technology changes over time.

The plan identifies three procedure "pods" – each pod containing six procedure rooms. With modular planning each of the pods will be generically designed (the pod for Interventional Radiology will be similar to the pods for Surgery). The Procedure Rooms will have a common size and configuration (same-handed design), the support spaces in the pods will be similarly sized and configured but the uses will vary between pods (i.e. Sterile Core for Surgery will be a Team Work Room for Interventional Radiology).

The modular planning approach coupled with the systems infrastructure design (long-span structural bays, high floor to floor heights with interstitial capacity and unencumbered, open "loft space") will provide a platform that can readily accommodate changes brought on by evolving technology.

Because the surgeons and radiologists are on the same floor and will be working side by side, there is an opportunity to develop a more collaborative, interdisciplinary approach to the patient's care as converging techniques start to blur the traditional lines of service.

Lastly, the plan has incorporated open courts in the middle of the deep floor plate in order to provide natural light with views of gardens that will offer respite for patients and staff. The courts will have a direct impact to the pre and post-operative positions, giving patients awareness of nature. The courts will provide orientation features along the major service oriented corridor to promote clear wayfinding.

Emergency Department

The First Level of the Diagnostic and Treatment facility houses the Emergency Department and Diagnostic Imaging. The character of the space is similar to that described for the Interventional Platform (systems infrastructure designed for maximum flexibility).

The ED's program is built around a universally sized, equipped and configured exam/treatment room. This universal room can be used for Prompt Care, General Treatment and Observation. The ED's 56 Treatment Positions have been planned with a modular approach allowing for future flexibility of assignment or use.

The ED will have two courtyards that punctuate the deep plan and will introduce environmental qualities that are rare for this service. Natural light, garden views and orientation along the circulation patterns will provide a calming feature to this stressful area of the Medical Center.

NURSING / PATIENT CARE SERVICES

The planning of the nursing units at Palomar Medical Center West represents a non-traditional approach to the programming and design of Acute, Step-Down and Critical Care nursing facilities.

The primary objective that steered the design was flexibility. Obviously patient safety, quality of care and quality of environment are important issues – but the Team could have addressed these issues even in a traditional plan. The design of the Acuity Re-assignable Units offers flexibility in two ways:

1. The ability to reassign/license groupings of bed units to any level of acuity over time without incurring the burden or cost of renovation. As patient demographics change and push against the currently programmed bed mix, PPH will have the "built-in" ability to adjust to those needs.

2. The ability to operate an Acuity Adaptable Model of Care – assigning a patient to a room for the length of their stay. The patient rooms and units will have the capacity to support the full spectrum of care (Acute, Step-Down and Critical Care).

Operationally this approach brings many challenges that will need to be worked through (nurse training/education, reimbursement mechanisms and Licensing's approval). The evidence from other institutions which have adopted this approach is that not moving a patient from room to room has a positive impact to patient safety and satisfaction, general quality of care and operational efficiencies.

Both the Acuity Re-assignable and Medical/Surgical Units are planned utilizing the distributed work and storage area concept (locating these facilities outside of every patient room will maximize the time the care givers can devote to monitoring and caring for the patients).

SUSTAINABILITY

PPH established a Champion Team to study and make recommendations about Sustainability. They recognized the benefits of a sustainable hospital and drafted the PPH mission statement:

"Palomar Pomerado Health is creating a sustainable healing environment that comforts and promotes health by honoring the relationship of the individual to the environment. Our new facilities will harmoniously blend innovative technology with our community's cultural needs and transform the healing experience. Design and construction will reflect a commitment to the hallmarks of sustainable buildings – healthy indoor air quality, a soothing and healing environment, and continual recognition of life cycle impacts of materials and methods employed."

The recommendations of the Champion Team were approved by the Executive Steering Committee and the Board of Directors and have been integrated into the Design Development documents.

Studies show that patients treated in a facility that employs sustainable design strategies heal faster and can expect improved medical outcomes. Caregivers tend to be healthier, more content and find pride in these types of environments. This leads to increased productivity and improved delivery of service, which leads to greater patient satisfaction. The organization can also expect cost savings in the operation of the building over its lifetime.

There are two main principles of sustainable healthcare design. The first is to reduce the environmental impact of healthcare facilities in their construction and operation. This involves reducing resource consumption and waste generation. The second principle is to create healing environments. A healing environment addresses the physical, emotional, and spiritual needs of the patients, family, and staff that inhabit a hospital.

Providing connections to nature and access to daylight is part of a sustainable hospital and are important themes of Palomar Medical Center West. Research shows that there is a definitive correlation between a view to nature and human well-being. There are multiple external garden terraces at every level of the patient tower, a green roof above and open courtyards within the D&T wing, and skylights that provide light to the occupied areas of the Lower Level. These elements contribute to the healing environment and to the conservation of natural resources.

Many other elements of the building design satisfy both of the main goals of sustainable healthcare design; to create a healing environment and to conserve energy and water. The landscape provision includes healing gardens, storm water management, water efficient irrigation, native planting, green landscaped roofs, and interior courts and gardens to protect natural water sources and to offer connections to nature for staff, visitors and patients.

Building orientation is important because it informs daylighting strategies, energy consumption, and determines views. The building is oriented on the site so that the main exposures are to the north and south, minimizing heat gain while allowing the maximum use of daylighting. Sunshades on the

façades control solar gain and glare from the sun and allow the use of natural light during the day, instead of artificial lights. The orientation also provides the best possible views for patients from their rooms.

A green roof is another design strategy that is multi-faceted. It both provides a view of nature from above and conserves energy consumption of the building by reducing heat gain through the roof. Green roofs also filter and reduce storm water run off, protecting the natural waters into which storm drain systems flow.

Studies show that individual control over one's immediate environment directly impacts health, quality of experience, and satisfaction. The sense of loss of control that patients and families feel in a hospital can be stressful; every effort should be made to allow individual control over as many environmental elements as possible, including temperature, ventilation, lighting, and privacy. Studies also show that when an individual has control over his or her environment, he or she tends to be more tolerant of warmer indoor air in summer and cooler indoor air in winter, reducing energy use and cost. Proper lighting controls in work areas will stimulate work performance and improve alertness. The quality of the indoor air will be protected by sufficient ventilation, filtration, and selection of materials that do not release toxic compounds.

Material selection is also part of both creating a healing environment and reducing the negative impact of construction on the environment. The use of recycled, reused, and renewable materials reduces the need to extract virgin natural resources, saves energy, and reduces emissions associated with new material production. The use of sustainably farmed and harvested wood reduces the negative environmental effects of timber clearcutting.

Planning for future flexibility, durability, and maintainability supports sustainable principles by extending the life of the building. If a building can adapt to new technologies and healthcare delivery methods, it will eliminate the need to rebuild. Planning for acuity adaptable nursing units in a linear configuration, as described in the Patient Care section above, will provide flexibility and the ability to adapt over time. Clinical spaces will be planned for operational flexibility as described in the Diagnostic and Treatment Section above, and will also be planned without obstructions such as shafts, elevators, and utility rooms to maximize the potential to reconfigure the spaces in the future. Pulling the D&T functions out from under the nursing tower will allow one part to be renovated or expanded in the future with minimal impact on the other.

To minimize the impact on the environment, design to conserve water in both building use and process use will include low flush fixtures, low flow lavatories and showers, and efficient equipment and systems. Reclaimed water is available from the City and will be used in the cooling tower and cycled through for irrigation. Condensate will be collected and used as make-up water.

Most of the energy used in buildings comes from fossil fuels, the burning of which contributes to acid rain, global warming, and air pollution. Reducing energy use and the use of clean fuels helps mitigate these affects. Energy efficient measures at Palomar Medical Center West include a robust energy management system, capturing waste heat for reuse, efficient lighting strategies, daylight controls, variable air volume air handling, efficient equipment, and building commissioning. Medical equipment uses a great deal of energy, and will be chosen carefully.

The design team has reviewed the design using a sustainable design rating system developed specifically for healthcare projects - *Green Guide for Health Care* (GGHC™). The GGHC follows the credit numbering scheme and credit outline structure of the US Green Building Council (USGBC) LEED® family of products, with some modifications. The team has used the Pilot version of GGHC, Version 2.1. The proposed GGHC checklist highlights topics or measures that appear desirable and achievable for the Palomar Medical Center West project. The checklist shows 32 credits as included in the base design, 22 credits as very likely, and another 20 credits as worth considering. If the first two categories are achieved, the project will score a total 54 points. GGHC has not determined the thresholds for certification yet, as it is in a pilot stage, but it is expected that Palomar Medical Center West will achieve a certified level, at least.

The project has been registered in the GGHC Pilot Program. Participation in the Pilot brings positive recognition and possible fundraising opportunities, and allows Palomar Medical Center West to help shape the future of sustainable hospital design.

SITE LOCATION

The Facility Master Plan development process determined that the development of a new tertiary care medical center on a second campus in the vicinity of Palomar Medical Center was the most economically and operationally viable solution for the healthcare needs of the community. The location for the second campus is the Escondido Research and Technology Center (ERTC) in Escondido.

The greenfield site, part of a 186-acre business park currently under development is bounded on its west by residential; by light industrial development to its north; by Citracado Parkway and an adjacent Sempra power plant to the east; and future business park development to the south. The shape of the site is long in the north-south axis and narrow in the east-west axis with the narrowest point on the site at its center which is also the high point of Citracado Parkway. The site slopes approximately 35 feet over its length.

The project site consists of a 34.64 acre buildable pad on a total of 56.24 acres including hillside slope. The site has sufficient area to support the initial hospital development, a Central Plant and associated surface parking. The site is able to accommodate both subsequent growth for the hospital's services over time, as well as the potential development of adjunct medical services such as:

- Outpatient Services/Medical Office Buildings
- Ambulatory Care facilities
- Central Resource Services
- Related parking structures

The ERTC development is approximately 4 miles west of Palomar Medical Center located strategically to support the existing patient catchment area but also recognize future population growth potentials.

All site access originates at Citracado Parkway to the east. Various entrances and internal campus roads allow for clear and distinct on-site circulation patterns for the patients, staff, emergency and service vehicles.

Located atop a hill southwest of the Interstate 15 and Highway 78 interchange the site is physically accessible by both freeways and city streets. The Nordahl Street exit of Highway 78 provides access to the site via Citracado Parkway from the North and the Valley Street exit from Interstate 15 provides access via Autopark Way and Vineyard from the east. The

potential extension of Citracado Parkway to the south of the site would provide not only direct access from the southeast, but additionally an Interstate 15 freeway address for the medical center. Existing bus routes and the proposed Sprinter light rail stop adjacent to the site would provide local and regional transportation in close proximity.

The prominent location atop a hill at the freeway interchange creates an opportunity for the medical center to become a visual icon and provides the community with a clear awareness of the medical center's presence.

MASTER PLAN

The concept which underpins the site master planning approach is that of a campus. This typological approach is usually associated with higher education and research facilities but is nevertheless considered to be most appropriate and relevant to the new Palomar Medical Center West and its selected location.

The campus concept organizes the siting and orientation of the buildings, pedestrian and vehicular circulation, and landscape, which is used to create and define a series of "outdoor rooms" to give the site its garden hospital character whilst allowing for future flexibility and expansion of the various programs.

The anticipated energy of the buildings' employees, other users, visitors, and the important clinical work which will be undertaken on this site all contribute towards the notion of a vibrant healthcare campus.

The Palomar Medical Center West will be organized physically by service types. The planning diagrams identify the medical center as being comprised of the following major facilities:

- Diagnostic and Treatment Building (core ancillary services)
- Patient Towers (acute and critical care units)
- Women and Children's Center
- Hospital Support Building (housing non-essential acute care functions)
- Central Plant
- Building footprints are shown that identify areas that are reserved for future hospital growth, subsequent ambulatory care, medical office development and parking structures

One of the prerequisites for the master plan is that each service group (diagnostic and treatment, inpatient units, and support facilities) has the ability to grow incrementally over time.

The campus is organized around clear zones of use (inpatient, ancillary, outpatient and service). Access to the various zones of use is also intended to be as clear and distinct as possible – to minimize crossover of incompatible traffic and to avoid congestion. Dedicated internal campus roads accessed from the city arterials are planned for the public (patients and visitors accessing the hospital and outpatient facilities); the Emergency related vehicles (ambulance and walk-in patients); and the service related traffic (supply delivery, dietary deliveries, lab courier, and waste removal).

Two public entrances to the site are located to the north and south of the high point of Citracado Parkway, with the northern entrance being the main entrance to the hospital and support building and the southern entrance providing access to the future Outpatient

buildings. A service entrance at the northeast end of the site provides access to the Central Plant and another service road at the southeast end of the site provides access for service deliveries and ambulance.

An internal road running perpendicular to Citracado Parkway provides access to the various drop-offs for the Hospital, Women and Children's Center and the future Hospital Support and Outpatient Buildings and connects to the various parking structures beyond.
The master plan positions the hospital at the north end of the site, where there is the greatest width to accommodate all of the various access points and circulation. The hospital is organized into four quadrants which relate to the various uses as follows: high tech clinical spaces (ED, Imaging and Integrated Interventional Platform) at the southwest; Hospital Support/Outpatient at the southeast; and the northwest quadrant is reserved for future expansion. At the center of these quadrants is the main entrance lobby above which sits the nursing tower.

The tower is oriented facing north and south for optimal solar orientation. The central lobby/garden space acts as a spine that physically and visually connects public gardens to the north and south and continues vertically through the first three floors of the nursing tower allowing light into a strong public center which organizes circulation and way finding. The garden acts as a pedestrian spine connecting all of the elements on the site, allowing one to circulate between the hospital, Outpatient buildings and parking within a garden setting. The major elevator and stair cores will be located along this spine for the vertical transportation of public, patient and service related traffic.

Special attention has been given to creating a "healing environment" – development of courts and gardens; control of traffic/disruption around the patient care units; exploitation of natural light and views; and control of architectural scale to avoid an "institutional" image.

HOSPITAL STACKING AND MASSING

The hospital is an eleven story facility consisting of 8 stories of inpatient units stacked over a mechanical floor at level 3 and levels 2 and 1 that include a Diagnostic and Treatment west wing, and predominantly public or other non-clinical spaces in the east wing. There is a sub-grade Lower Floor Level.

LOWER LEVEL

The lower level is the "general service" floor of the Palomar Medical Center West. Departments requiring little or no public/patient access are located at this level:

- Loading Dock
- Material Management
- Central Sterile
- Morgue
- Housekeeping / EVS
- Food service
- Laboratory

The service access as well as the lateral distribution of incoming and outgoing material occurs at this level. Service corridors provide access to the various departments as well as access to the major elevator cores permitting vertical distribution of supplies to the medical center. These service corridors have been designed with sufficient width to accommodate an Automated Guided Vehicle System (robots) for the transport and delivery of supplies and waste if appropriate in the future.

The consolidation of the service related departments at the lower level of the hospital

will minimize the commingling of this traffic with the more public areas on the levels above. The Central Utility Plant is located at the northeast corner of the site.

FIRST LEVEL

The First Level is the "entry level" comprising the main entry to the hospital, the entries related to the Emergency Department, and the Outpatient Diagnostic Center. Through the main entry the visitor or patient will encounter a three story lobby space. This central space will act as a major organizing and orientation element for the whole facility. This space will physically and visually link the gardens to the north and south. Located adjacent to this central lobby are predominantly public spaces such as the retail / coffee shop unit which has indoor and outdoor casual seating, and access to the other wings of the hospital and the future Hospital Support Building. There are two main public circulation spines, both glazed along the entire length, that lead to the Diagnostic & Treatment wing to the south and the Conference Center to the east.

The ground floor of the Diagnostic & Treatment wing will primarily house the functions with highest public use and turnover. Program elements on this floor include Emergency Services, Imaging and the Outpatient Diagnostic Center (Non-invasive Cardiodiagnostics, Pulmonary Testing, and Laboratory blood draw).

The main consideration for the D&T design was to be the "hospital of the future". To achieve that goal, it is important to create a flexible environment that can accommodate any future changes/advances in medicine generated by new technologies, changes in the market share, and/or changes in the delivery of care. Emphasis was placed on the importance of innovation and adaptability of all spaces. Also, the building design is intended to provide clear wayfinding, as much natural light as possible and creation of a healing environment that helps reduce stress to patients, family, and staff. Two interior courtyards provide access to natural light and create more relaxing environments for staff that work in the large-footprint of the D&T wing.

The Emergency/Observation Unit and Diagnostic Imaging Departments will be adjacent to one another permitting rapid diagnosis of the ED patient. The Outpatient Diagnostic Center will also be located adjacent to Diagnostic Imaging. The ground level is designed in a linear configuration with a main staff/patient corridor towards the rear of the plan, connecting between emergency and imaging, and a public corridor that connects the emergency waiting room to the main hospital lobby. This public corridor follows the exterior wall, bringing natural light and views of this pathway, which facilitates wayfinding.

Emergency Department

The Emergency Department (ED) is designed in a modular configuration, with two main entry points: a walk-in entrance and an ambulance entrance. The walk-in entrance is located closer to the parking areas and is separated from the ambulance entry. As mentioned above, this entrance has a corridor connection to the main hospital lobby. From this entrance, patients are triaged and brought to the treatment areas.

The treatment area consists of three pods of 16 treatment bays each. These pods have a modular layout, so the treatment areas are interchangeable (prompt care versus emergency care). Also, all treatment bays are same - handed. There is an ambulance entrance centrally located that allows easy and clear access to Trauma, ED treatment areas, observation unit and ED imaging.

The Observation Unit consists of 12 treatment rooms, designed similar to the ED pods, allowing for ED overflow or future expansion.

The ED has a dedicated CT scan and two General Radiology rooms. These rooms are located between emergency and imaging.
There are two major expansion concepts planned for this department: a "soft space" concept and a building expansion. The first suggests that another ED pod could be designed in the ED administration area (located at the southwest end of the department). The second alternative is to expand the building with new construction to either the southerly or westerly directions.

Imaging Department
The design of the Imaging Department consists of separate outpatient and inpatient areas, while allowing for all modalities to be used by both. Therefore, two main corridors running perpendicular to all modalities are created. The outpatient corridor is accessed directly from the Outpatient Diagnostic Center's waiting room, while the inpatient corridor is located closer to the patient elevators. The modalities are grouped in pods with a central work core. The courtyard brings natural light to circulation, as well as to some modalities and work core areas.
As in the ED, there are two major expansion concepts planned for this department: a "soft space" concept and a building expansion. The first option proposes extending imaging into the outpatient diagnostic center area. (This department would then be relocated.) The second alternative is to expand the building with new construction to the north.

Outpatient Diagnostic Center
The Outpatient Diagnostic Center (ODC) is comprised of three groups (cardio, pulmonary and lab). Due to the mix of outpatient and inpatient populations it was important to locate this department close to the main hospital lobby, as well as to the nursing tower patient elevators. Most of the groups are located close to waiting, since there is a larger number of outpatient visits. Cardiology is located close to the imaging inpatient corridor, since most of its patient visits are inpatient, and needs direct connection to nuclear medicine.

Respiratory Therapy
The Respiratory Therapy Department will centralize staff work areas and equipment cleaning and supply storage functions on the first floor. Located with convenient access to the service elevators, staff will bring soiled ventilator equipment to this department for cleaning. Additional clean ventilators will be stored on inpatient units. Staff workstations, conference/meeting space and staff lounge and locker facilities are located adjacent to the equipment areas for staff convenience.

Public Spaces
The east wing of the first floor level contains (in addition to the retail / coffee shop unit) a Business Center and the first phase of the Conference Center.

SECOND LEVEL

Along the public corridor to the west is the second level of the Diagnostic and Treatment wing.
Diagnostic & Treatment
The second level contains the Integrated Interventional Platform including:

- Surgical Services
- Interventional Cardiology & Radiology
- Clean Procedures
- Perioperative Care Unit
- Pre-admission Testing

The planning of this floor prioritizes future adaptability. All spaces are flexible and can change over time with minor renovations. Also, as on the first floor, there is a design consideration to provide natural light (courtyards) and clear circulation. The floor is divided by a center staff/patient corridor that is located adjacent to the courtyards. This corridor separates the Interventional Platform (OR/IR) and the Perioperative services.

Integrated Interventional Platform

The Interventional Platform is designed to allow maximum flexibility. For that, a few innovative ideas are implemented:

- Modularity
- Easy adaptability between OR and IR, with as minimal renovation as possible
- All rooms are single-handed.
- No structural columns in the entire 96' span of this area.
- No shafts in the area.

The layout consists of modular pods of 6 rooms around a central area and with adjacent support spaces surrounding it.

The Operating rooms (OR) are grouped in 2 pods. Each pod has a sterile core, sub-sterile and support rooms.

There are dedicated Trauma, Cardiovascular and Cysto Procedure rooms. For the remaining 9 OR's, PPH is exploring a planning option for a "Universal OR" which can accommodate the specific requirements for Ortho/Neuro as well as general procedures.

The interventional radiology and cardiology (IR) are also located in a pod of 6. This pod has a work core, electronic equipment rooms, and control areas.

The layout and sizes of the OR and IR pods are the same, creating maximum flexibility. The difference between pods is the use of each space (e.g., OR versus IR, support versus control, sub-sterile versus electronic-equipment), but the space configuration is modular, therefore it is very easy to adapt one room or pod to another.

Separated patient and supplies circulation is provided. There is a dedicated elevator between ED/trauma and interventional platform, a dedicated Trauma elevator connecting the helipad to all critical services and there are dedicated elevators from sterile processing. The clean procedure area is located adjacent to the OR/IR pods. All circulation around the pods is organized around exterior wall or courtyards bringing natural light into all areas, creating a better environment for the staff.

The critical care beds are in the nursing tower located one floor above the Procedure Rooms. Access to that unit is through the patient elevators (general cabs as well as two dedicated trauma sized cabs). The pre-op clinic is located close to the main public elevators and serves as the patient control/waiting room into the interventional platform.
The expansion plan for the Interventional Platform is to expand the building, with new construction, to the north.

Pharmacy

The Pharmacy Department will be centrally located within the east wing on this level to serve both general inpatient and specific outpatient requirements via a patient pick-up / consult window. The Pharmacy is located adjacent to the east wing service elevators. Storage of all medicines shall be accommodated and distributed at this location.

Inpatient Rehabilitation Unit

The Inpatient Rehabilitation Unit will provide for the treatment of post-surgical, primarily orthopedic and neurology/neurosurgery patients. The administrative function of this department is located on Level Two. This area provides the Rehabilitative Staff a place to access computers and phones as well as a place to hold team meetings.

Patient therapies will be performed in the patient rooms as much as possible - taking advantage of the larger, 100% private room accommodations. There are however Therapy Rooms located on three of the patient floors (to support the needs of the orthopedic and neurological patients). Each of the three gym spaces have direct access to an outdoor terrace where additional therapy space can be utilized.

Public Spaces
The Resource Center / Library, Meditation Room / Chaplaincy office are located within the east wing of Level 2. It is anticipated that a future pedestrian bridge will connect the east end of Level 2 with a future parking structure.

THIRD LEVEL

The third level of the facility primarily houses the mechanical systems that serve the facility. The only other program element is the main dining / cafeteria and servery which is located centrally between the two wings of mechanical rooms. The main dining space faces south towards the central garden and main entrance drop off and opens out onto a landscaped outdoor terrace adjacent to the green roof over the D&T wing, which provides the opportunity for *al fresco* dining.

The air handling units that serve the nursing tower and the lower levels are housed in the west and east wings of the tower on this level. The air handing units for the D&T wing and the Women and Children's Center are integrated into the green roofs of those wings and are housed in individual penthouse structures.

FOURTH THROUGH ELEVENTH LEVELS

There are eight floors of nursing care included in the project (with 100% single care patient rooms).

Levels 4-9 in the Patient Care Tower accommodate a total of 54 beds per floor.

The West Wing houses the Acuity Re-assignable Units. There are two suites of 12 beds each designed to the standards of Critical Care.
The East Wing houses the 30 bed Medical/Surgical Units.

Level 10 accommodates two 12 bed Acuity Re-assignable Units.

Level 11 accommodates a 24 bed Medical/Surgical Unit.

There are a total of 168 Acuity Re-assignable Beds and 204 Medical/Surgical Beds. Initially 48 Acuity Re-assignable Beds and 24 Medical/Surgical Beds will be shelled.

For all levels of the Patient Care Tower there are very clear and distinct patterns of circulation (dedicated service and public elevators and corridors). The primary movement of patients and supplies will occur via service elevators that are located within each nursing unit – thus keeping this traffic out of the more public areas. There is a centrally located greeter station located close to the elevator lobby for control and offering of directions.

The main public waiting areas are located centrally on the south side of the building and each opens out onto an external landscaped

terrace which, when combined vertically, form the *Conservatory* element. These terraces also overlap vertically to create a variety of outdoor spaces and landscaping treatments and will bring natural light and views to the center of the floor to provide amenity for patients, visitors and staff alike.

Shell space is provided on the west wing of the ninth, tenth and eleventh floors.

There is provision for the creation of a multi-purpose double height Community Room at Level 10 (with its own exterior roof garden space) although this is currently designated as shell space on the DD drawings.

BUILDING SECTIONS

The Lower Level and First through Third floors of the building are planned with an 18'-0" floor to floor dimension, allowing sufficient room for services and 10'-0" ceilings within the D&T wing. As the third level of the building houses mechanical systems, an 18'-0" floor height is required there as well. The floors of the tower that include patient rooms are 16'-0" floor to floor.

The section cut through the tower (illustrated below) highlights the significance of the central double height lobby space and its role of linking the north and south gardens.

The green roof over the D&T wing acts as a gentle undulating raised ground plane and will provide attractive views from several vantage points within the patient tower.

MATERIALS

The selection of exterior and interior materials have been carefully considered to reflect the intent of incorporating nature into the building and the importance of conserving natural resources and protecting human health. The exterior skin is a unitized curtain wall system that combines different types of glass panel (depending upon function and location), fiber reinforced cement panels (frcp), aluminum louvers and panels, and stainless steel. The interior finishes will (as much as possible) also be of natural and recycled products, such as wood, stone, glass, and various metals. Please refer to the Interior Design narrative in Section 2.2 for a more detailed description.

CENTRAL PLANT

The design approach for the Central Plant requires integrating a highly functional and accessible building within a hillside site without distracting from the overall Hospital Campus design.

The Central Plant is a two story structure with a linear organization. In order to minimize its visual impact from both the hospital and Citracado Parkway, the building massing is contoured to follow the shape of the hillside. It will be partially embedded into the slope and will include a site retaining wall which defines a lower service yard along the north-east edge of the site. The position of the Central Plant, parallel to the access road and future parking structure/Hospital Support Building site lends definition to a two sided building. One side - the campus side - will serve as an embankment for landscaping. The other side - the service yard side - will allow for full access of the plant functions while creating a separate and secure area which out of public view.

The Central Plant will be a poured-in-place concrete structure, and will include a semi-transparent envelope intended to conceal the necessary openings and equipment from view-creating a neutral backdrop for landscape. The utility yard has been located closest to Citracado Parkway for ease of utility connection

and access. The cooling tower / medical gas yard has been located furthest away to minimize the visual impact. Both yards include an overhead trellis which provides additional screening of views from the hospital.

The program has been organized to maintain the highest degree of flexibility and access from the service yard side of the building. The first floor level will accommodate the main electrical room as well as all of the large equipment rooms including the boiler room, partial plumbing room and chiller room. Each equipment room will have direct access to the exterior service yard via removable louvers and roll-up doors. The second floor level will house the parallel gearing room, the remaining plumbing equipment and the MDF room as well as facilities offices and shop space. Underground fuel storage tanks and emergency generators have been located within the service yard. Addition space has been provided for future expansion to the full capacity of the proposed Master Plan.

SITE

The site design recognizes and addresses contextual issues such as building orientation, relationship to adjacent buildings, exterior expression, locations of major and minor building entries, pedestrian and service circulation, as well as the relationship to main campus roadways and parking.

LANDSCAPE CONCEPT AND PROGRAM

The character and function of the site can contribute to the image and the use of the facility for patients, visitors and staff. There are several major concepts for the landscape in supporting the goals and functions of the facilities.

One major goal for the landscape is to aid in creating a sustainable healthcare design. The landscape will be integrated with the architecture to provide a connection to the natural world and increase environmental quality. Several sustainable practices are proposed for the Palomar Hospital site:

Reduce Heat Island effect:

- Location of trees and planting to provide shade and create cool micro-climates.
- Use of Green Roofs and on-structure planting.
- Use of light colored materials.

Water Efficiency:

- Employ a native and naturalized drought tolerant planting scheme.
- Employ centralized irrigation system and irrigation monitoring technology to provide water efficiency.

Stormwater Management:

- Use of bio-swales, retention and detention areas.
- Treatment / filtration of stormwater on-site.

Use of recycled and sustainable materials:

- Use of certified sustainable wood and materials for site furnishings.
- Use of recycled materials for hardscape, landscape materials, and site furnishings.

In addition to creating a sustainable site, another major aspect for Palomar Hospital is the design of a healing environment. Healing or therapeutic environments can take many forms and they have a growing relevance to a wide range of health care facilities. Outdoor healing environments can range from physical therapy and sports medicine facilities—designed to accommodate very specific functions—to natural environments which provide contact with ecological process, plants and wildlife. Other types of healing gardens can create a sense of well-being to speed healing by heightening awareness and engagement with sensory and natural phenomena. A very important aspect of any healing environment and the overall landscape is the sense of care represented in both the design and maintenance. An impression of thought for the facility and in the garden can provide a sense of comfort and care to a patient that dramatically reduces anxiety.

LANDSCAPE ZONES FOR PHASE I:

A hierarchy of landscape zones have been identified and classified for costing purposes. The zones relate to the function and program of the site. The following discussion outlines the various zones and identifies criteria and materials anticipated for the zones.

SLOPE/ EDGE LANDSCAPE:
Slope and edge zones of landscape for the site will primarily be comprised of planting and irrigation which has been installed by the Escondido Research and Technology Center developer. Site work will include grading of these areas will be necessary to meet new improvements such as the driveways as well as repair and extension of irrigation, replacement of disturbed planting and some additional planting.
The replacement of up to 20% of existing landscape area shrubs and groundcovers to match on-site plantings will be required. Plans also include the addition of 200 trees at 36" box size.

PHASE I PARKING AREA LANDSCAPE:
Streetscape planting zones are the landscapes adjacent to internal vehicular access roads and phase I parking lots. A unified planting scheme will be used to provide shade to parking areas and access roads. Hardscape will consist primarily of pedestrian sidewalks from the parking areas to the Hospital

area. Note that curbs around parking islands and at edges will incorporate flush areas to allow runoff into planting.

- Trees are 36" box size as shown, except for the trees along the main east-west drives which will be 48" box.
- Walkways as shown
- Perimeter and connector walks are natural grey concrete with recycled and on-site rock.
- Washed aggregate finish and saw-cut score joints on walkway of central mall.
- Bioswales in parking islands and at edges of parking areas will consist of 8" of crushed rock at surface over retention basins and drainage defined by Civil Engineer. Crushed rock will be edged with metal headers.

ENHANCED ENTRY LANDSCAPE:

Enhanced planting zones are landscapes at the entrance to the Main Nursing Tower, the Emergency Arrival Area and the Central Plant. The planting will be permanent in these areas and will incorporate closer spacing of plants and larger container stock. The hardscape will have enhanced finishes such as exposed aggregate concrete with integral color, pre-cast pavers and stone or ceramic paving to match building lobbies. Enhanced Planting Zones will contain the healing and therapeutic gardens for areas outside and adjacent to the facilities.

- Higher proportion of hardscape and pedestrian circulation. 80% hardscape / 20% planting.
- Site furnishings: High quality wood, cast concrete and/or metal furniture: Benches, Trash and Ash, Outdoor Dinning Furniture, Bike Racks, Drinking Fountains. Incorporate a premium for sustainable and recycled materials.
- Shade structures, canopies and arbors for drop-off, seating areas and garden areas at the entries are incorporated.
- Children's playground is provided at the Emergency Arrival Area. The Playground will be a landscaped area that provides opportunities for children to play, but will not include manufactured play structures. It will include 600 SF of resilient play surface, up to 40 boulders and 5' to 7' Long, 8 custom benches, concrete curbing and low stone walls. Lighting for evening use as well as decorative lighting. Play area will include two architectural features such as a recycled wood play deck and a wood and metal trellis.
- Central Mall at Drop off: This is the walkway at the drop-off to the Nursing Tower and is an extension of the mall from the parking areas to the south. It also extends through the Tower Lobby and into the Central Garden to the north. The lobby paving will extend outside to define an indoor/outdoor lobby. Planting areas will be defined by concrete or stone curbs and built-in seat walls. 20% of planter perimeter will be flush to allow excess run off water to enter a various planter detention basins. 20% of the landscaped areas will have seat walls with wood seating surface.

GARDEN LANDSCAPE ON GRADE:

Garden areas in Phase I are the central, park-like area between the Nursing Tower and the Phase I Parking lot to the north and east. Part of this area to the north and west is temporary landscape in an area anticipated to be used for expansion of the hospital in the future. Areas identified as gardens will incorporate a level of detail and furnishing similar to resort landscape, as well as sustainable design features. All gardens have decorative and functional lighting, functional bioswale drainage and custom drain grates, interpretive signage, detailed low walls, stairs, railings, screens and other structures. Finishes will be sustainable surfaces and materials, features such as recycled materials, solar collectors and computerized irrigation control equipment. This area of the site is over an existing rock formation which may be near the surface of the garden and interfere with both planting of trees and drainage of planting areas. In addition some parts of the site have unconsolidated fills that may experience subsidence when irrigation water is introduced. These situations are currently not well defined and may require either additional fill or use of special drainage treatment. Requirements will be finalized once Geotech Report is completed.

- Garden Gates: Allow for a "gate" at three places entering to the central garden that defines an entry and incorporates signage. Include a 20' long, 4' high stone wall and a wood and metal trellis, two benches and stone paving.
- Maze Garden: Detailed stonework and paving over 2,500 SF, including low stone and concrete walls, benches, small wood or metal arbor entry.
- Sensory garden: Natural stone paving and defined planting area over 1,500 SF. Water feature, bark mulch, very detailed perennial planting, wind chime, 200 SF wood trellis area with built-in seating, two additional benches.
- Central Mall at Central Garden: This area is an extension of the Mall to the south of the Nursing Tower at the drop-off area and has a similar hardscape and planting treatment. It also incorporates a trellis area that is similar in design to the canopy at the drop-off, but with wood slats rather than a glass canopy. It incorporates a stone wall with built-in wood benches. Other furniture will be moveable benches, tables and chairs. A shallow pool is incorporated. It will be 12" deep with a stone cobble bottom and a 12" high by 18" wide stone edge. The source will be a channel that spills into the pool. (see Overlook Garden). Portion of hardscape or landscape areas will be designated as fire lane access to the Central Garden which will have either thicker paving sections with reinforcing per Geotech report or Grasscrete pavers to allow fire truck access.
- Café Terrace: A 1500 SF café terrace and garden overlooks the Central Lawn. It includes a concrete paver surface, and 18" high stone wall around 30% of the perimeter, special lighting and moveable tables and chairs.
- Conference Patio: A 600 SF patio extended to the south side of entrance to Conference room will include 18" high stone wall around 30% of the perimeter and special lighting. It includes stone paving and will extend through the interior to Conference Garden Terrace on north side to create an indoor/outdoor break-out space.
- Conference Garden Terrace: A 1300 SF of garden terrace at north side of conference room sits in the central garden space. It includes stone paving and 18" high stone wall around 30% of the perimeter, special lighting and moveable tables and chairs.
- Small Seating and Meditation Areas: Areas indicated with benches will incorporate more detail paving, furniture and seat walls. Plans include concrete pavers or colored concrete, two benches or tables, and a 2' high by 10' stone wall.
- Central Lawn: A 20,000 SF area will be a lawn area designed for events such as receptions, parties, quiet concerts or gatherings. Turf will be reinforced with Netlon and include underdrainage to an infiltration sump. Utilities for power and sound equipment for events will be required. A 1,000 SF paved terrace is provided to be used as a stage or areas for tables and chairs when not in use. Provide for permanent lighting at edges and temporary lighting for events.
- Overlook Garden: This area is at the north edge of the site and incorporates a fill mound, walls, sloping walkways with seating areas, a cascading water feature, terraced areas with moveable furniture and naturalized gardens. A cast concrete retaining wall at the top of the knoll defines the overlook. It retains 4' H on one side and incorporates a steel trellis with wood slate and a built in wood bench. Stone 18" high walls with built-in wood benches are at each switch back and also defining seating area to the north. Steps and walkway are sand-finish concrete with metal railings. Landings are concrete pavers. The water feature is cast-in-place concrete with board finish.
- Orchard Garden: This area is at the north-west side of Central Garden which will be temporary landscape anticipated to be used for expansion of the hospital in the future. Higher portion of the area will be decomposed granite paving with 40% of

planting. Connector walks are natural grey concrete with recycled and on-site rock along walkways. Two small patio spaces, each 300 SF, will incorporate more detail paving, seat walls and two benches or tables.

BIO-SWALES/ DETENTION:
Bio-swales and detention areas will be located in the landscaped areas through the site to reduce the peak flow from the site. Best Management and Storm Water Management Practices will be employed. Sustainability is a major focus for the site design. Parking lots will contain bioswales that will hold run off from paved surfaces. Detention swales will be located throughout the site to accommodate access road run off and run off from facility roofs.

- Parking lot Bio-Swales: Minimum 5' wide depressed planted strips. Curbs will provide cut out areas to allow paving run-off. Raised catch basins to allow overflow run-off from the site. Include cobble and gravel mulch with boulders.
- Detention areas / Swales: Series of planted or gravel lined swales to hold and detain storm water run-off. Design of detention areas will blend and conform to the site landscape character.
- Regular spacing of trees 25' o.c. in Bio-swales.

VEHICULAR PAVING:
Sustainable vehicular paving should be employed for the hospital campus. Incorporation of recycled aggregate for cast-in-place concrete or the base of asphalt pavement will be explored. Enhanced concrete with integral color with exposed aggregate will be used at passenger drop-offs and turn-arounds.

INTERIOR LANDSCAPE/ GARDENS:
The interior landscape zone is classified as on-grade planting and hardscape between buildings or in interior courtyards. These will be highly visible spaces that will incorporate enhanced planting and hardscape. Corridors between buildings will be used as primary circulation routes and serve as public entrances to the site. Interior courtyards will be highly visible and are intended to bring light, air and nature into the facilities. Interior Landscape zones my also contain healing and therapeutic gardens.

- Higher proportion of enhanced paved or permeable surfaces. 30% paved / 70% planted.
- Site furnishings: benches, Ash / Trash, tables and chairs.
- Trellises, arbors, and "Green-Screen"
- Artistic elements and high level of design

ON-STRUCTURE PLANTING:
On structure planting is comprised of two categories, Green-Roofs and On-Structure Planters. For Palomar Hospital, Green Roofs will be classified as non-accessible planted roofs. On-structure planting will consist of accessible roof gardens, terraces, or planters that support larger plant material. The intent of both is to provide sustainable and ecological functions as well as connecting interior spaces with the natural world. Further criteria and classification are noted below:

Green roofs, also called "vegetated roof covers," "living roofs," or "eco-roofs," are thin layers of living plants that are installed on top of conventional roofs with advanced materials and technology. Properly designed, they are stable, living ecosystems that replicate many of the processes found in nature.

Green roofs can provide many ecological, aesthetic, and financial benefits, including:

- Controlling stormwater runoff, erosion, and pollution.
- Improving water quality.
- Mitigating urban heat-island effects, cooling and cleaning the air.
- More than doubling the service life of the roof, reducing both costs and landfill,
- Conserving energy.
- Reducing sound reflection and transmission.
- Creating wildlife habitat.
- Improving the aesthetic environment in both work and home settings.

1. Green Roof profile criteria and materials:

- An Extensive Green Roof consists of a soil cover (under 6") and supports a limited lower growing and hardier plant pallet.

- Restricted plant palette including: perennials, grasses, and succulents. Such plants must be capable of withstanding harsher growing conditions.
- Basic elements comprising a Green Roof system from roof deck up: surface conditioner, waterproofing membrane, root barrier protection, insulation, water retention, drainage/aeration element, filter fabric, growing medium, vegetation.
- Base level irrigation system such as 'capillary and trickle' system.
- Greenroof system manufacturers for reference: "Roofscapes" and "Hydro-tech"

II. On-Structure profile criteria and materials:

On-Structure Planting Type I (Planter depth to support low shrubs, perennials, vines and grasses)

Planter Components:

- 2-8" depth + Structural Slab
- Subsurface Drainage
- Lightweight Soil
- Drainage Medium
- Water Proofing Membrane

Plant Types / Planter Sizes:

- Turf: 8-12" (min.) depth x width varies
- Small Shrubs: 18-24" (min.) depth x width varies
- Groundcover: 10-18" (min.) depth x width varies
- Vines: 18-24" (min.) depth x width varies

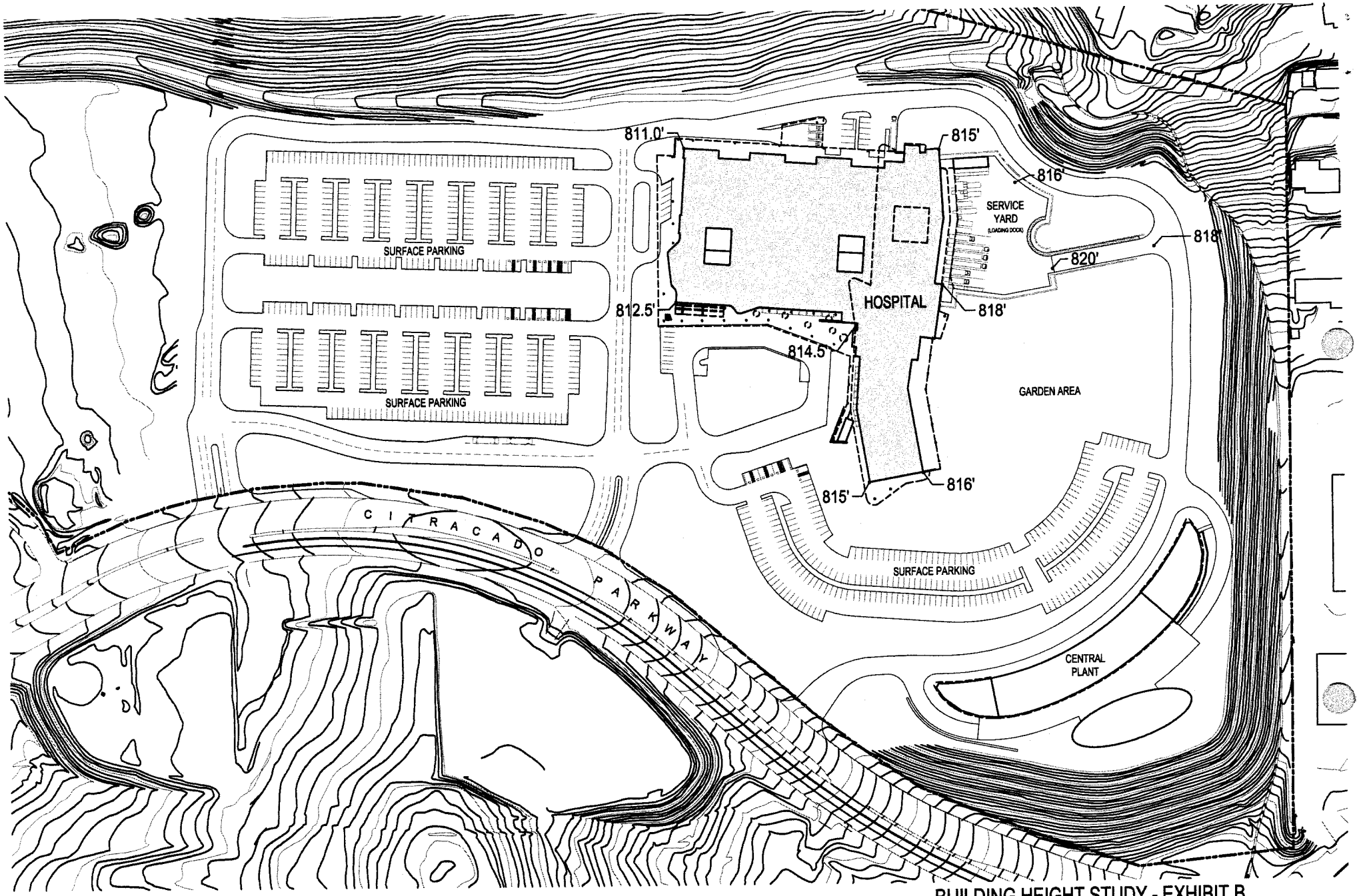
On-Structure Planting Type II. (Planter depth to support large shrubs and small trees)

Planter Components:

- 4-8" depth + Structural Slab
- Subsurface Drainage
- Lightweight Soil
- Drainage Medium
- Water Proofing Membrane
- Styrofoam Blocks (optional)

Plant Types/ Planter Sizes:

- Large Shrubs: 24" – 30" (min.) depth x width varies
- Small Trees: 30-42" (min.) depth x width varies
- Large Trees: 42" – 60" (min.) depth x width varies



818' LEGEND
EXISTING SITE ELEVATION

BUILDING HEIGHT STUDY - EXHIBIT B

PALOMAR MEDICAL CENTER WEST

DATE: July 11, 2007

PROJECT NO: 24009.110

N

ESCONDIDO
City of Choice

Jonathan H. Brindle, AICP
Director of Community Development
201 North Broadway, Escondido, CA 92025
Phone: 760-839-4671 Fax: 760-839-4313

July 3, 2007

Richard L. Miller
Metro Plan, LLC
2411 Second Avenue
San Diego, CA 92101

RE: Palomar Pomerado Health (PPH) Phase 1 Application – Compliance Review
(Case File #2007-10-PPL)

Dear Mr. Miller:

The City of Escondido deemed your Application for Phase 1 of the Palomar Pomerado Health (PPH) Project complete on May 3, 2007. This letter now addresses the next step of the process which is the City's 60-day review for compliance with the standards delineated in the approved Escondido Research and Technology Center (ERTC) Specific Plan before it can proceed through the advisory design review and public input procedures. Based on the submittals received from PPH, staff has determined that the project does not comply with the ERTC Specific Plan, since the building exceeds the specified height limits, and is therefore not granting the "Notice to Proceed."

The development standards for Planning Area 4 of the ERTC Specific Plan limit building heights to 120 feet. In relying upon the zoning code definition "building height" is defined as: "the vertical distance measured from the average level of the highest and lowest point of that portion of the lot covered by the building to a point midway between the highest and lowest point on the roof." The ERTC Specific Plan further states that: "Parapets extending to form tower or signage elements, architectural monuments and features, rooftop equipment and screening shall be allowed to extend 10 feet above the specified height limit." It should be noted that the application of this definition to establish the hospital height results in a large variation in elevation between the building elements for which the appropriateness will be evaluated during the Design Review phase.

The average level of the highest and lowest portion of the lot covered by the hospital building is elevation 808 (midway between floors "0" and "1'). The point midway between the highest and lowest point on the roof is elevation 928 (midway between elevations 851 and 1005). This establishes the building height as 120 feet (928-808=120). However, rooftop features extend up to 19 feet higher, to elevation 1024, which exceeds the 10 limit prescribed in the Specific Plan. Upon receipt of a building design that limits rooftop features to heights identified in the Specific Plan the City would be in a position to issue the "Notice to Proceed."

The following issues will require additional attention as the project commences the next phase of design but will not require resolution prior to granting the "Notice to Proceed."

Grading/Drainage/Storm Water Standards

The City continues to work with the ERTC project manager to establish consistency between the tentative map grading design and as-built conditions. At issue is the trail alignment around the PPH site, and the installation of berms along the building pad edge intended to screen views from adjacent properties. We will continue to work with the ERTC project manager and PPH to coordinate these issues.

PPH will be required to submit for a grading permit, including submittal of rough and precise grading plans. Compliance with all grading/drainage and storm water standards must be demonstrated for the PPH project. Although the project's Water Quality Technical Report and SUSMP agreement have been deferred to the fine grading submittal, we will need to finalize them prior to commence of construction. Please continue to work with Homi Nomdari (City Engineering Department) to insure that the proposed grading conforms to the grading approved at the tentative subdivision map level for the Escondido Research and Technology Center (ERTC) and that all Grading/Drainage/Storm Water Standards are met.

Sewer Treatment Facilities

Additional information will also be necessary regarding the hospital's Industrial Waste Permit Application (Section F) pertaining to the final effluent from the hospital. We understand this information will be provided by PPH in the next several weeks. As you know, the more detailed version of Section F on the Industrial Waster Permit Application will include:

1) Lab
2) Laundry
3) Food processing areas
4) Boilers
5) Cart and Equipment wash area
6) RO Units
7) Cooling Tower **

** Cooling tower water is being proposed as landscape irrigation and would be removed from the wastewater discharge if approved (6 to 8 months out on a final decision).

A Food Service Permit and Industrial Waste Permit are required prior to occupancy. It is necessary that all of the sections of the Industrial Waster Permit Application left "to be determined" or estimated be completed within a few months. A final draft of the Industrial Waste Permit Application will need to be presented to the City as soon as possible.

NCTD Coordination

As the site plan is further refined, PPH will need to indicate the alignment of an accessible path of travel from the transit drop-off/pick-up site to the hospital buildings pursuant to Title 24 requirements. Based on our review of the transit drop-off/pick-up site such a path can be easily accommodated.

Hospital Lighting

The City has received initial indications that the Palomar Observatory supports a mix of approximately 2/3 low-pressure sodium lighting interspersed with 1/3 metal halide lighting. To the extent that signed documentation on official letterhead stationery from Palomar Observatory can be provided, the City will accept the lighting system subject to final design approval by Observatory officials.

Following the of the "Notice to Proceed," the next steps involve consideration by the Hospital Design Advisory Committee (HDAC) to finalize aesthetic topics involved in the development of the medical campus prior to conducting two public workshops with the City's Design Review Board. We look forward to working with you in resolving the remaining issues as well as facilitating the design review and public input processes. If you have any questions, or need additional information regarding this letter, please do not hesitate to call me at (760) 839-4543.

Sincerely,

Jonathan Brindle
Director of Community Development

Cc: Clay Phillips, City Manager
Jeffrey Epp, City Attorney
Charles Grimm Assistant City Manager
Patrick Thomas, Director of Public Works
Mary Ann Mann, Utilities Manager
Michael Lowry, Division Fire Chief
Barbara Redlitz, Assistant Planning Director
Joe Russo, Assistant Building Director/Building Official
Angela Morrow, Principal Engineer
Homi Namdari, Principal Engineer
Michael Shanahan, PPH
Tom Chessum, CoArchitects

file

ESCONDIDO
City of Choice

Jonathan H. Brindle, AICP
Director of Community Development
201 North Broadway, Escondido, CA 92025
Phone: 760-839-4671 Fax: 760-839-4313

May 3, 2007

Richard L. Miller
Metro Plan, LLC
2411 Second Avenue
San Diego, CA 92101

RE: Palomar Pomerado Health (PPH) Phase 1 Application – Third Submittal
(Case File #2007-10-PPL)

Dear Mr. Miller:

The City of Escondido has reviewed your revised application received April 24, 2007 for the Palomar Pomerado Health (PPH) Phase 1 project, which included responses to the City comment letter dated March 16, 2007. Based on these submittals, the City considers the Site Plan application to be complete.

We are continuing to expedite our review of the submittals as part of the 60-day compliance review phase, to determine compliance with the designated sections of the Specific Plan. Your response letter has already adequately addressed many of the compliance issues. While our compliance review is ongoing, we want to provide you with advance notification of the following issues that will require additional attention prior to the City of Escondido issuing a Notice to Proceed on the PPH project:

Grading/Drainage/Storm water Standards

The project will be required to submit for a grading permit, including submittal of rough and precise grading plans. Compliance with all grading/drainage and storm water standards must be demonstrated for the PPH project. The City has received your rough grading plans and concurs that the Water Quality Technical Report and SUSMP agreement would be deferred to the fine grading submittal. The request for cross-sections for bio-swales and information on trash enclosures has been met. Please work with Homi Nomdari (City Engineering Department) to insure that the proposed grading conforms to the grading approved at the tentative subdivision map level for the Escondido Research and Technology Center (ERTC) and that all Grading/Drainage/Storm Water Standards are met.

Compliance with City Lighting Ordinance

Your letter indicates that "Lighting shall conform to the City's Dark Sky Ordinance except for circumstances involving the health and safety of the public." It goes on to specify that the use of low-pressure sodium (LPS) lights for hospital parking lots would be a significant mistake due to the hospital being a 24-hour use and the existence of evening shifts and nighttime visitors. The City would like you to consider use of LPS lighting on the west side of the site adjacent to

residential properties and/or the use of a dual light system whereby the metal halide would shut off and the LPS come on in the later hours of the evening. Also, perhaps only employee parking areas would require the metal halide. The overall concern is to lessen lighting impacts on adjacent residential properties and upon the Palomar Observatory.

NCTD Coordination

Please clarify the requirement to have an accessible path of travel from public transportation to the hospital buildings pursuant to Title 24 requirements. In previous meetings PPH has indicated that a transit drop-off/pick-up site would be located on-site. If on-site transit drop-off/pick-up areas are proposed, please show these locations on the site plan. If a public transit site is to be located off-site, please solicit North County Transit District (NCTD) input and show the proposed accessible path of travel on the site plan.

Fire Department Issues

Please ensure that fire hydrant locations match up with those shown on the conceptual utility plan. The Fire Department requires one hydrant every 300-feet which is not indicated on the plans. Please work with the Fire Department to clarify proposed and preferred fire hydrant locations on this site.

The City of Escondido appreciates your timely response to our March 16, 2007 letter and will continue our compliance review of all additional information requested in an expedited manner. If you have any questions or need additional information regarding this letter please do not hesitate to call me at (760) 839-4546.

Sincerely,

Jonathan Brindle
Director of Community Development

Cc: Engineering Division
Fire Department
Building Division
Water Utilities Division
Wastewater Utilities Division

Michael Shanahan, PPH

Tom Chessum, CoArchitects

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metroplan@san.rr.com

April 16, 2007

Jon Brindle, AICP
Director of Community Development
City of Escondido
201 N. Broadway
Escondido, CA 92025

Subject: Palomar Pomerado Hospital (PPH) Phase I Application (Case File #2007-10-PPL)

Dear Jon:

The purpose of this letter is to provide a response to the City of Escondido's comments regarding PPH's second submittal.

Site Plan

The EIR addendum prepared for the Specific Plan Amendment had an extensive description of the proposed helistop and a full evaluation of the potential for environmental impacts. Although the helistop has been relocated approximately 239 feet to the north and east, the basic operations will remain the same. Attached is a letter from PBS&J indicating that no additional studies are necessary for the proposed ministerial project because of possible noise impacts or conflicts with the existing utility lines or the Palomar Power Plant exhaust stacks.

The helistop will also be subject to the review of federal and state governments:

- FAA-The project owner is required by Part 157 of the Federal Aviation Regulations to ask the Federal Aviation Administration (FAA) to study issues regarding the use of airspace needed to fly to and from the site. FAA's study results in an "airspace determination" letter. The letter is not an approval. Instead it contains the wording that FAA "does not object to use of the airspace to operate to and from the site". FAA has no approval over the physical development of the helistop.
- State Licensing Authority-Caltrans' Division of Aeronautics issues two permits as the state licensing authority. The "Heliport Site Approval Permit", which approves the proposed helistop design before construction is issued after all approvals. The

"Heliport Permit ", which is issued upon a post-construction inspection, authorizes start–up of flight operations.

- Airport Land Use Commission-The California Public Utilities Code mandates Airport Land Use Commission (ALUC) review for all heliport proposals. ALUC concerns normally focus on consistency with the County's adopted Comprehensive Airports Land Use Plan including noise and safety impacts to nearby land uses. As you are aware, the Regional Airport Authority functions as the ALUC in San Diego County.

Federal, state and regional levels of government will have the final review authority which further safeguards that the helistop will comply with prior project approvals.

Signage Plan

The attached signage exhibit provides additional information based on your request. The size of the entry monument sign has been reduced. As noted in the Specific Plan Amendment, signage in Planning Area 4 may comply with the requirements of the Specific Plan or the standards established by the CG zone, whichever is less.

Grading/Drainage/Storm Water Standards

The City's letter indicates that several items will be required ***prior to issuance of the grading permit.***

a) Soils Report- Attached are two URS geotechnical reports, in advance of the grading permit submittal.
b) Hydrology/Hydraulics Study-As noted, on the attached meeting notes, it was agreed by the City and PPH that the Drainage Report, Water Quality Technical Report and SUSMP agreement would be deferred to the fine grading submittal. PPH's engineer has forwarded a memo describing the design concept for stormwater detention and treatment for the City's review.
c) Water Quality-See response to (b).
d) Drainage & Erosion Control Report-A report will be included as part of the rough grading package. The measures contained in the report will replace the current mitigation being provided by the Master Developer for Planning Area 4.
e) Cross sections-The requested cross-sections for bio-swales may be found on the revised conceptual utility plan.
f) Trash Enclosures- The proposed hospital will not have the type of trash enclosures commonly found in industrial, commercial or multi-family projects. All trash will be compacted in waste rooms that are located within closed buildings in the service yard.

Noise Ordinance

The City's correspondence appears to assume that significant noise impacts will occur without mitigation, citing several possible sources. In fact, five of the six noise mitigation measures identified in the addendum are related to temporary activities related to

construction. As discussed in the Environmental Compliance Program, the City will be able to implement mitigation through notes on the grading plan or by monitoring reports.

The sixth mitigation measure is a site-specific acoustical report for the central plant which will be prepared in conjunction with the final design. Typically, the City would require this study in conjunction with building permits not a discretionary or ministerial approval. PPH, as required by the EIR addendum will provide this report to the City prior to the completion of the Office of Statewide Health and Planning Development (OSHPD) building permit process and OSHPD for its part, will not grant a building permit without verification from the City that planning conditions are satisfied.

Lighting Ordinance

Page 37 of the Specific Plan notes that, "Due to the public nature of the hospital and medical related uses, the lighting used in Planning Area 4 may differ from other ERTC lights. A lighting plan for Planning Area 4 shall be submitted for review and approval by the Director of Planning. Lighting shall conform to the City's Dark Sky Ordinance except for circumstances involving the health and safety of the public. "

The use of low-pressure sodium lights for hospital parking lots would be a significant mistake. Hospitals are open 24-hours a day. Use of low-pressure sodium lights in parking lots presents significant security risks for employees, who work evening shifts, patients and visitors. In recognition of this circumstance, it is our understanding that many jurisdictions such as the County of San Diego have a specific exemption for hospitals from having to use low pressure sodium lights.

A mitigation measure in the EIR addendum states, "All automobile parking areas and access roads will be illuminated via full cut off ceramic metal halide fixtures at a mounting height not to exceed 25 feet above finish grade. Internal back shields will be utilized to prevent light trespass onto the building and adjacent properties where available." It should also be noted the height of the proposed fixtures for Planning Area 4 are significantly lower than allowed by the Specific Plan.

The target illuminance listed in the ministerial permit drawings is based on guidelines established by the Illuminating Engineering Society of North America (IESNA), Ninth Edition Handbook. It should also be noted that the general illumination in parking and roadway areas on the hospital campus will be provided by fixtures which have an International Dark-Sky Association (IDA) rating – Fixture Seal of Approval (FSA). For additional information, please see: http://www.darksky.org/programs/fixture-seal-of-approval.php

NCTD Coordination

It is our understanding the Transportation Demand Management (TDM) Provisions would come into effect, only if a reduction in the number of parking spaces was being requested. Although PPH is not asking for a reduction, it would be their intent to implement many of

the suggested practices contained in the TDM list contained in the Specific Plan. Representative of PPH will provide a more detailed program and meet with the North County Transit District, in the future.

According to Page 5 of the Specific Plan, bus turnouts/rail linkage and commuter seating centers are part of community level improvements which are the responsibility of the Master Developer.

Fire Protection Requirements

The Fire Department Access Plan contains notes that require that all turning radii comply with municipal requirements. To assist, the City's review, the turning radius at the main Drop-off/Pickup area has been dimensioned in a new detail to demonstrate compliance.

PPH has met with the Fire Department on several occasions and pledged continuing cooperation in selecting an acceptable 800 MHz radio system. PPH is proposing to use the Innerwireless DAS system. The attached information refers to the first responder system which is the emergency radio system. This DAS antenna system will distribute the emergency radio signals throughout the Central Plant and the rest of the campus so the emergency radios will have a strong signal in all the buildings. The DAS also supports WIFI, Cellular, PCS, two way radio, and Telemetry wireless systems.

Conclusion

Accompanying this letter are the following:

- Correspondence and an exhibit from PBS&J regarding the helistop
- Meeting Minutes from kpff (March 14, 2007)
- Revised Site Entrance Sign Exhibit (Full & Reduced Sizes)
- Geotechnical Investigation (August 23, 2006)
- Geotechnical Investigation (April 23, 2006)
- Revised Conceptual Utilities Plan (Full & Reduced Sizes)
- Revised Fire Department Access Plan (Full & Reduced Sizes)
- Information regarding the Innerwireless radio system.

If you have any questions, please feel free to call me.

Sincerely,

Richard L. Miller
Principal

C: Barbara Redlitz, City of Escondido
Jay Petrek, City of Escondido
Michael Shanahan, Palomar Pomerado Health

Jonathan H. Brindle, AICP
Director of Community Development
201 North Broadway, Escondido, CA 92025
Phone: 760-839-4671 Fax: 760-839-4313

March 16, 2007

Richard L. Miller
Metro Plan, LLC
2411 Second Avenue
San Diego, CA 92101

RE: Palomar Pomerado Health (PPH) Phase 1 Application – Second Submittal
(Case File #2007-10-PPL)

Dear Mr. Miller:

The City of Escondido has reviewed your application received March 5, 2007 for the Palomar Pomerado Health (PPH) Phase 1 project, which included responses to the initial review City comment letter (dated January 5, 2007) and a revised set of exhibits. The following are comments and requests for additional and more specific information in response to your recent March 2, 2007 letter & submittal package, received by the City of Escondido on March 5, 2007. This additional information is necessary for the City of Escondido to issue a Notice to Proceed on the PPH project:

Grading/Drainage/Storm water Standards

The project will be required to submit for a grading permit, including submittal of rough and precise grading plans. Compliance with all grading/drainage and storm water standards must be demonstrated for the PPH project. In order to determine compliance the following reports and information will be required:

a) Soils Report
b) Hydrology/Hydraulics Study
c) Water Quality Technical Report
d) Drainage & Erosion Control Report
e) Cross sections provided for parking lot area bioswales (parking lot & parking islands). Also discussion of how drainage from this phase I site will be handled when the parking structure planned for phase II displaces this parking area.
f) All trash enclosures should be designed to meet the City of Escondido Trash Enclosure design criteria, including solid roofs on all trash enclosures.

Project Signage

Please provide additional detail with regard to signage materials, color and lighting for proposed entrance/monument and building signage. The entry monument appears to be larger than necessary based upon the initial designs shown on the plans submitted. Low scale monument signs which aesthetically pleasing and which address traffic lines-of-site at intersections should be considered.

Helipad Use

A detailed description of the helipad use should be provided, and should specifically address its compliance with EIR assumptions and mitigation measures with regard to noise issues, routes, frequency of use etc. Also, please describe how the flight paths will be affected by large overhead utility lines and steam plumes in the vicinity.

Compliance with City Noise and Lighting Ordinance

Lighting - The plans submitted show Metal Halide lighting throughout the parking lot, loading dock and general project area. The City Lighting Ordinance requires Low Pressure Sodium lighting in parking lot areas. All proposed lighting should be addressed with regard to compliance with the City Lighting Ordinance and designed to observe the "dark sky" objective.

Noise – A Noise Report specific to the proposed project and uses should be prepared and submitted for review and compliance with the City of Escondido Noise Ordinance and with the EIR assumptions and mitigation measures. The "Environmental Compliance Program Matrix" submitted does not provide the level of detail necessary to determine noise issues specific to the proposed project, nor does it delineate specific mitigation measures proposed to mitigate significant noise impacts (i.e. helicopter/helipad use, generators, sirens etc.).

NCTD Coordination

Please address coordination with the North County Transit District with regard to public transit routes and stops which will serve the PPH project. Correspondence with NCTD regarding transit serving this site should be shared with the City of Escondido. The submitted plans should show bus stop locations and proposed turn-out and shelter designs which conform to NCTD and City requirements. The NCTD transit stop location will require the architect to show compliance for an accessible path of travel from that public transportation stop and the hospital entrance(s).

Fire Department Issues

The site plan is required to show turning radii which comply with Fire Department requirements, especially at the main Drop-off/Pick-up area. Also, please work with the Fire Department to specify the system proposed for the 800 MHz radio system requirement.

The City of Escondido appreciates your timely response to our initial letter and will continue to review all additional information requested in an expedited manner. If you have any questions or need additional information regarding this letter please do not hesitate to call me at (760) 839-4546.

Sincerely,

Jonathan Brindle
Director of Community Development

Cc: Engineering Division
Fire Department
Building Division
Water Utilities Division
Wastewater Utilities Division

Michael Shanahan, PPH

Tom Chessum, CoArchitects

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Phone: 760-839-4671 Fax: 760-839-4313

March 16, 2007

Richard L. Miller
Metro Plan, LLC
2411 Second Avenue
San Diego, CA 92101

RE: Palomar Pomerado Health (PPH) Phase 1 Application – Second Submittal
(Case File #2007-10-PPL)

Dear Mr. Miller:

The City of Escondido has reviewed your Palomar Pomerado Health (PPH) Phase 1 application received March 5, 2007, which included responses to the initial review City comment letter (dated January 5, 2007) and a revised set of exhibits. Additional and more specific information pertaining to the Site Plan and Signage Plan is needed at this time for the application to be considered complete and to commence the 60-day review period:

Site Plan
A detailed description of the helipad use should be provided, and should specifically address its compliance with EIR assumptions and mitigation measures with regard to noise issues, routes, frequency of use etc. Also, please describe how the flight paths will be affected by large overhead utility lines and steam plumes in the vicinity.

Signage Plan
Please provide additional detail with regard to signage materials, color and lighting for proposed entrance/monument and building signage. The entry monument appears to be larger than necessary based upon the initial designs shown on the plans submitted. Low scale monument signs which aesthetically pleasing and which address traffic lines-of-site at intersections should be considered.

Prior to issuing a Notice to Proceed, the following information will be required to adequately determine that the project complies with specified standards:

Grading/Drainage/Storm Water Standards
Grading plans issued by the City will require compliance with all grading/drainage and storm water standards. In order to determine compliance the following reports and information will be required prior to issuance of the grading permit:

a) Soils Report
b) Hydrology/Hydraulics Study
c) Water Quality Technical Report
d) Drainage & Erosion Control Report
e) Cross sections provided for parking lot area bio-swales (parking lot & parking islands). It should be noted that alternative locations for parking lot bio-swales would need to be considered at the time of constructing the parking structure planned for Phase II.
f) Details of all trash enclosures to ensure conformance with the City of Escondido Trash Enclosure design criteria, including solid roofs on all trash enclosures.

Noise Ordinance
A Noise Report specific to the proposed project and uses should be prepared and submitted for review and compliance with the City of Escondido Noise Ordinance and with the EIR assumptions and mitigation measures. The "Environmental Compliance Program Matrix" submitted does not provide the level of detail necessary to determine noise issues specific to the proposed project, nor does it delineate specific mitigation measures proposed to mitigate significant noise impacts (i.e. helicopter/helipad use, generators, sirens etc.).

Lighting Ordinance
All proposed lighting should be addressed with regard to compliance with the City Lighting Ordinance and designed to observe the "dark sky" objective. The plans submitted show Metal Halide lighting throughout the parking lot, loading dock and general project area. The City Lighting Ordinance requires Low Pressure Sodium lighting in parking lot areas.

NCTD Coordination
The submitted plans should show bus stop locations and proposed turn-out and shelter designs that conform to North County Transit District (NCTD) and City requirements. The NCTD transit stop location will require the architect to show compliance for an accessible path of travel from that public transportation stop and the hospital entrance(s). Correspondence with NCTD regarding transit serving this site should be shared with the City of Escondido.

Fire Protection Requirements
The site plan is required to show turning radii which comply with Fire Department requirements, especially at the main Drop-off/Pick-up area. Also, please work with the Fire Department to specify the system proposed for the 800 MHz radio system requirement.

The City of Escondido appreciates your timely response to our initial letter and will continue to review all additional information requested in an expedited manner. If you have any questions or need additional information regarding this letter please do not hesitate to call me at (760) 839-4546.

Sincerely,

Jonathan Brindle
Director of Community Development

Cc: Engineering Division
Fire Department
Building Division
Water 5Utilities Division
Wastewater Utilities Division
Michael Shanahan, PPH
Tom Chessum, CoArchitects

Plan, llc.

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April 16, 2007

Jon Brindle, AICP
Director of Community Development
City of Escondido
201 N. Broadway
Escondido, CA 92025

Subject: Palomar Pomerado Hospital (PPH) Phase I Application (Case File #2007-10-PPL)

Dear Jon:

The purpose of this letter is to provide a response to the City of Escondido's comments regarding PPH's second submittal.

Site Plan

The EIR addendum prepared for the Specific Plan Amendment had an extensive description of the proposed helistop and a full evaluation of the potential for environmental impacts. Although the helistop has been relocated approximately 239 feet to the north and east, the basic operations will remain the same. Attached is a letter from PBS&J indicating that no additional studies are necessary for the proposed ministerial project because of possible noise impacts or conflicts with the existing utility lines or the Palomar Power Plant exhaust stacks.

The helistop will also be subject to the review of federal and state governments:

- FAA-The project owner is required by Part 157 of the Federal Aviation Regulations to ask the Federal Aviation Administration (FAA) to study issues regarding the use of airspace needed to fly to and from the site. FAA's study results in an "airspace determination" letter. The letter is not an approval. Instead it contains the wording that FAA "does not object to use of the airspace to operate to and from the site". FAA has no approval over the physical development of the helistop.
- State Licensing Authority-Caltrans' Division of Aeronautics issues two permits as the state licensing authority. The "Heliport Site Approval Permit", which approves the proposed helistop design before construction is issued after all approvals. The

"Heliport Permit ", which is issued upon a post-construction inspection, authorizes start–up of flight operations.

- Airport Land Use Commission-The California Public Utilities Code mandates Airport Land Use Commission (ALUC) review for all heliport proposals. ALUC concerns normally focus on consistency with the County's adopted Comprehensive Airports Land Use Plan including noise and safety impacts to nearby land uses. As you are aware, the Regional Airport Authority functions as the ALUC in San Diego County.

Federal, state and regional levels of government will have the final review authority which further safeguards that the helistop will comply with prior project approvals.

Signage Plan

The attached signage exhibit provides additional information based on your request. The size of the entry monument sign has been reduced. As noted in the Specific Plan Amendment, signage in Planning Area 4 may comply with the requirements of the Specific Plan or the standards established by the CG zone, whichever is less.

Grading/Drainage/Storm Water Standards

The City's letter indicates that several items will be required ***prior to issuance of the grading permit.***

a) Soils Report- Attached are two URS geotechnical reports, in advance of the grading permit submittal.
b) Hydrology/Hydraulics Study-As noted, on the attached meeting notes, it was agreed by the City and PPH that the Drainage Report, Water Quality Technical Report and SUSMP agreement would be deferred to the fine grading submittal. PPH's engineer has forwarded a memo describing the design concept for stormwater detention and treatment for the City's review.
c) Water Quality-See response to (b).
d) Drainage & Erosion Control Report-A report will be included as part of the rough grading package. The measures contained in the report will replace the current mitigation being provided by the Master Developer for Planning Area 4.
e) Cross sections-The requested cross-sections for bio-swales may be found on the revised conceptual utility plan.
f) Trash Enclosures- The proposed hospital will not have the type of trash enclosures commonly found in industrial, commercial or multi-family projects. All trash will be compacted in waste rooms that are located within closed buildings in the service yard.

Noise Ordinance

The City's correspondence appears to assume that significant noise impacts will occur without mitigation, citing several possible sources. In fact, five of the six noise mitigation measures identified in the addendum are related to temporary activities related to

construction. As discussed in the Environmental Compliance Program, the City will be able to implement mitigation through notes on the grading plan or by monitoring reports.

The sixth mitigation measure is a site-specific acoustical report for the central plant which will be prepared in conjunction with the final design. Typically, the City would require this study in conjunction with building permits not a discretionary or ministerial approval. PPH, as required by the EIR addendum will provide this report to the City prior to the completion of the Office of Statewide Health and Planning Development (OSHPD) building permit process and OSHPD for its part, will not grant a building permit without verification from the City that planning conditions are satisfied.

Lighting Ordinance

Page 37 of the Specific Plan notes that, "Due to the public nature of the hospital and medical related uses, the lighting used in Planning Area 4 may differ from other ERTC lights. A lighting plan for Planning Area 4 shall be submitted for review and approval by the Director of Planning. Lighting shall conform to the City's Dark Sky Ordinance except for circumstances involving the health and safety of the public. "

The use of low-pressure sodium lights for hospital parking lots would be a significant mistake. Hospitals are open 24-hours a day. Use of low-pressure sodium lights in parking lots presents significant security risks for employees, who work evening shifts, patients and visitors. In recognition of this circumstance, it is our understanding that many jurisdictions such as the County of San Diego have a specific exemption for hospitals from having to use low pressure sodium lights.

A mitigation measure in the EIR addendum states, "All automobile parking areas and access roads will be illuminated via full cut off ceramic metal halide fixtures at a mounting height not to exceed 25 feet above finish grade. Internal back shields will be utilized to prevent light trespass onto the building and adjacent properties where available." It should also be noted the height of the proposed fixtures for Planning Area 4 are significantly lower than allowed by the Specific Plan.

The target illuminance listed in the ministerial permit drawings is based on guidelines established by the Illuminating Engineering Society of North America (IESNA), Ninth Edition Handbook. It should also be noted that the general illumination in parking and roadway areas on the hospital campus will be provided by fixtures which have an International Dark-Sky Association (IDA) rating – Fixture Seal of Approval (FSA). For additional information, please see: http://www.darksky.org/programs/fixture-seal-of-approval.php

NCTD Coordination

It is our understanding the Transportation Demand Management (TDM) Provisions would come into effect, only if a reduction in the number of parking spaces was being requested. Although PPH is not asking for a reduction, it would be their intent to implement many of

the suggested practices contained in the TDM list contained in the Specific Plan. Representative of PPH will provide a more detailed program and meet with the North County Transit District, in the future.

According to Page 5 of the Specific Plan, bus turnouts/rail linkage and commuter seating centers are part of community level improvements which are the responsibility of the Master Developer.

Fire Protection Requirements

The Fire Department Access Plan contains notes that require that all turning radii comply with municipal requirements. To assist, the City's review, the turning radius at the main Drop-off/Pickup area has been dimensioned in a new detail to demonstrate compliance.

PPH has met with the Fire Department on several occasions and pledged continuing cooperation in selecting an acceptable 800 MHz radio system. PPH is proposing to use the Innerwireless DAS system. The attached information refers to the first responder system which is the emergency radio system. This DAS antenna system will distribute the emergency radio signals throughout the Central Plant and the rest of the campus so the emergency radios will have a strong signal in all the buildings. The DAS also supports WIFI, Cellular, PCS, two way radio, and Telemetry wireless systems.

Conclusion

Accompanying this letter are the following:

- Correspondence and an exhibit from PBS&J regarding the helistop
- Meeting Minutes from kpff (March 14, 2007)
- Revised Site Entrance Sign Exhibit (Full & Reduced Sizes)
- Geotechnical Investigation (August 23, 2006)
- Geotechnical Investigation (April 23, 2006)
- Revised Conceptual Utilities Plan (Full & Reduced Sizes)
- Revised Fire Department Access Plan (Full & Reduced Sizes)
- Information regarding the Innerwireless radio system.

If you have any questions, please feel free to call me.

Sincerely,

Richard L. Miller
Principal

C: Barbara Redlitz, City of Escondido
Jay Petrek, City of Escondido
Michael Shanahan, Palomar Pomerado Health

PBS&J

An employee-owned company

April 20, 2007

Mr. Jonathan H. Brindle, AICP
Director of Community Development
City of Escondido
201 North Broadway
Escondido, CA 92025

Subject: Palomar Pomerado Health Phase 1 Application - Helistop Relocation Issues (Case File #2007-10-PPL)

Dear Mr. Brindle:

This letter has been prepared on behalf of Palomar Pomerado Health (PPH) in response to your inquiry regarding the relocation of the helistop at the Palomar Medical Center West (PMCW) site in the Escondido Research and Technology Center (ERTC). The helistop was included as a project feature in the ERTC Environmental Impact Report (EIR) Addendum (December 2005) prepared for the PMCW development. In the ERTC EIR Addendum, the helistop was proposed to be located on the rooftop of the southern hospital tower. The helistop is now proposed to be relocated to the rooftop of the northern hospital tower, approximately 239 feet northwest of the location that was identified in the ERTC EIR Addendum. Both the north and south hospital towers would have a similar number of floors and be essentially the same height. The attached exhibit shows both the original and relocated helistop locations and associated no fly zones over the Palomar Power Plant. The relocation of the helistop would not change the established no fly zone over the power plant. The new location of the helistop would actually be farther from the Palomar Power Plant exhaust stacks and the overhead power lines located to the east. In addition, the ultimate approval of helistop flight paths would come from the Federal Aviation Administration and Caltrans Division of Aeronautics based on standard obstruction clearance safety regulations including glide slopes.

The relocated helistop may result in a slight increase in single event helicopter noise at a few residences located to the northwest of the hospital site (ie: along Ross Drive and Ginger Way); however, it would also result in slightly reduced single event helicopter noise at a larger number of residences located in the neighborhood adjacent to the western hospital property boundary (Allenwood Lane, Live Oak Road, Chardonnay Way). This is because the helistop would be approximately 239 feet closer to the residences to the northwest and 239 feet farther from the residential neighborhood to the west. Single noise events are not regulated by the City of Escondido and would not be considered significant under CEQA. In addition, single event noise at nearby residences would be reduced through the preparation of a Pilot's Information Sheet for the helistop, which would include information advising pilots to avoid flying over adjacent homes to the north and northwest of the hospital site, to the extent practicable.

9275 Sky Park Court, Suite 200 • San Diego, California 92123 • Telephone: 858.874.1810 • Fax: 858.514.1001 • www.pbsj.com

The new helistop location would not affect the hospital's ability to meet the City's noise ordinance requirements since they are based on the 24-hour average (CNEL) and the existing hospital is averaging less than one flight per day (23 per month). The noise of one flight per day (or less) spread out over a 24-hour period is far below the allowable noise levels at neighboring residences, which is 45 dB CNEL for interior and 60 dB CNEL for exterior noise. The number of flights per month is not anticipated to change from the existing Palomar Hospital helicopter operations; therefore, the project would not exceed the City's noise ordinance. Please refer to the Environmental Noise Assessment (Pacific Noise Control, 2005) provided as Attachment 4 of the ERTC EIR Addendum for additional discussion and specific helicopter noise measurements.

Based on this information, no increased or substantially different impacts are anticipated from the change in location of the helistop on the project site.

Should you have any questions about the information provided in this letter, please give me a call.

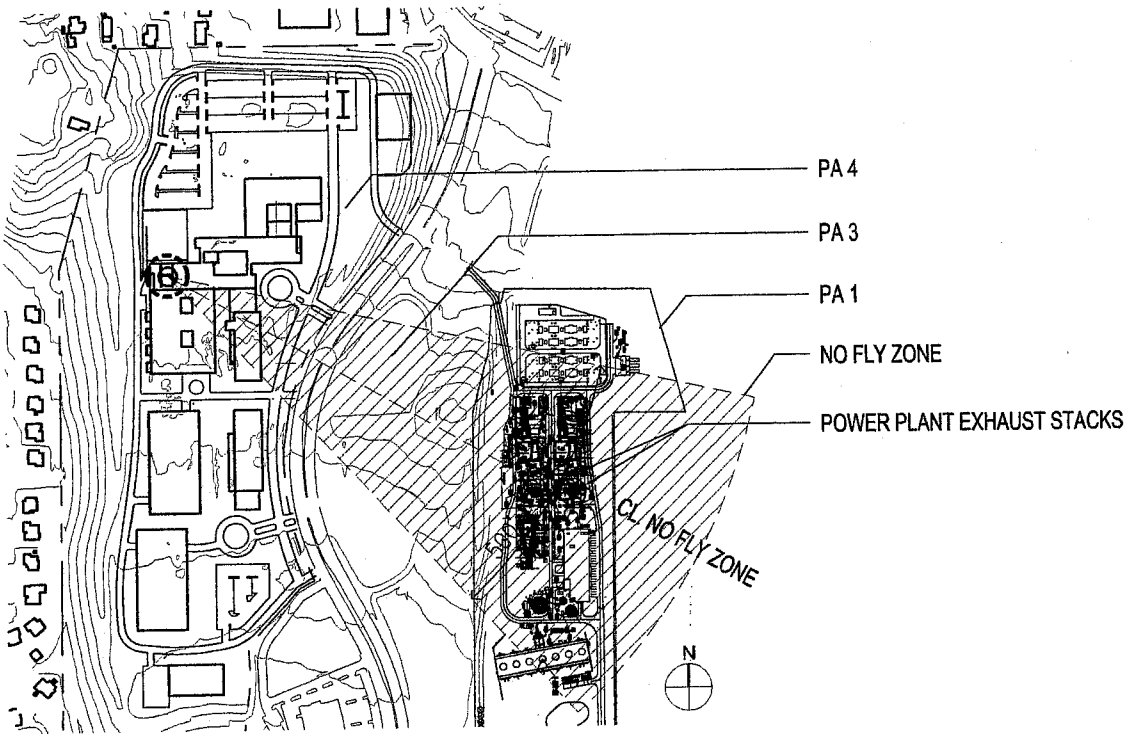
Sincerely,

Diane M Catalano

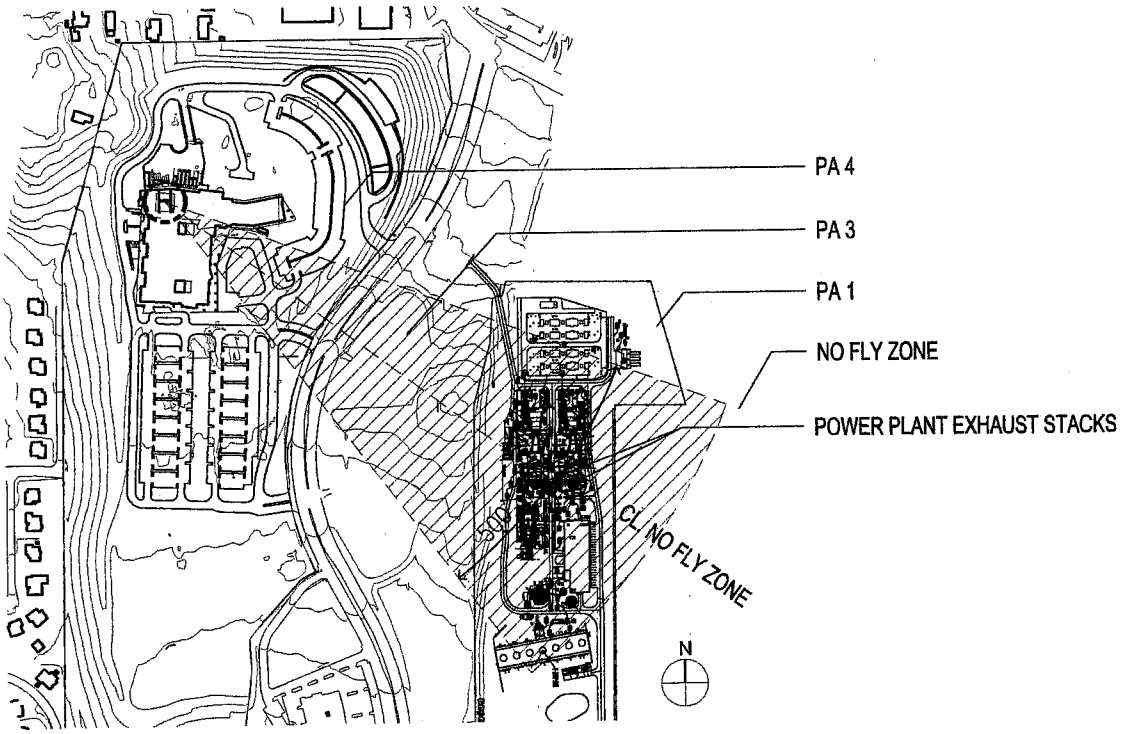
Diane M. Catalano
Project Manager

c. Michael Shanahan, PPH
Richard Miller, MetroPlan
Allen Haynie, Latham & Watkins
Jeff Wright, Heliplanners

PBS&J



SITE PLAN: ORIGINAL LOCATION



SITE PLAN: PROPOSED LOCATION

HELISTOP LOCATION COMPARISON

NO SCALE

kpff Consulting Engineers
6080 Center Drive, Suite 750
Los Angeles, CA 90045
310 / 665-1536 (main phone)
310 / 665-9075 (Civil Fax)

MEETING MINUTES

PROJECT	JOB #	FILE #
Palomar Medical Center West (PMCW)	105118	1.8
CLIENT	**DATE OF MEETING**	
Co Architects	March 7, 2007	
MEETING LOCATION	**DATE PREPARED**	
City of Escondido – Public Works / Engineering Division	March 14, 2007	

ATTENDEES

INDIVIDUAL	COMPANY
Ed Domingue	City of Escondido Public Works/Engineering Division
Barbara Redlitz	City of Escondido Planning Division
Dan Higbee	City of Escondido Engineering Field Office
Patrick Thomas	City of Escondido Public Works
Homi Namdari	City of Escondido Public Works/Engineering Division
Raymond Yang	Co Architects
Yu-Ju Liu	Spurlock Poirier Landscape Architects
Ida Giannini	Spurlock Poirier Landscape Architects
Brian Powers	KPFF Consulting Engineers – Civil Division

ITEM NO.	ITEM	ACTION BY
1.	Phase 1 of the Palomar Medical Center West (PMCW) project is currently in design. The purpose of this meeting was to discuss the City of Escondido permitting process for the portion of the project that will be plan-checked and permitted by the City of Escondido.	Info
2.	Phase 1 of the PMCW Project includes the Main Hospital Building, Central Plant, and site work including site grading, site retaining walls and/or structures, site paving, site utilities, and landscaping. The buildings, including structural elements and mechanical systems, will be plan-checked and permitted by OSHPD. The site work including site grading, site paving, site utilities, and landscaping will be plan-checked and permitted by the City of Escondido.	Info
3.	The intent of the project team is to submit the site design for permit with the City in four (4) separate packages/permits. The intent to separate the site work into packages was discussed and is acceptable to the City. These packages will be submitted in the following order to facilitate the construction schedule: 1. Rough Grading and Excavation to Engineering Division 2. Site Utilities to Engineering Division 3. Fine Grading, Structures, Paving, and Drainage to Engineering Division 4. Site Landscaping to Planning Division	Info
4.	The timeframe for plan-check review of each package will be in the order of 3 months. This will include 2 to 3 back-check reviews. The City requested that the project team notify them approximately 1 week prior to submittal for scheduling purposes.	Info

ITEM NO.:	ITEM:	ACTION BY:	DATE DUE:
5.	Plan formatting was discussed and grading plans will be on the City of Escondido 24" x 36" title block and contain City standard grading and erosion control notes. Rough grading plans may be 40 scale and Fine grading and utility plans may be 40 scale. Landscape plans may be on 30" x 42" architectural title block.	Info	
6.	The City of Escondido submittal checklist for grading plans was discussed for the rough grading submittal. It was agreed that the Drainage Report, Water Quality Technical Report and SUSMP agreement would be deferred to the fine grading submittal. However, a memo describing the design concept for stormwater detention and treatment will be submitted for the City's review.	KPFF	
7.	Stormwater detention was discussed and the City indicated that the project will be required to implement detention to limit post-development runoff so as not to exceed the pre-developed 100 year 6 hour runoff rate. Additional detention may be required at Central Plant due some drainage diversion to the north. Curb drains are acceptable for release of runoff into Citracado Parkway provided the flow does not exceed 10 cfs.	KPFF	
8.	The use of reclaimed water for irrigation was discussed and there will not be reclaimed water available for irrigation. The use of recycled water from the central plant will need to be coordinated with the State of California Regional Water Quality Control Board and the San Diego County Department of Health	SPLA	
9.	Erosion Control during the rough grading phase was discussed and the City indicated that the project will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and that the contractor will be required to have a project engineer certify erosion control BMP's on a weekly basis.	KPFF/R&S	
10.	City will review on-grade landscape plans and defer to OSHPD to review on-structure landscape plans.	Info	
11.	City recognized that specific plan review process may potentially run concurrent with rough grading plan review and specific plan review comments should not significantly affect the rough grading design.	Info	

COPIES TO

INDIVIDUAL	COMPANY
Tom Chessum	Co Architects
Eyal Perchik	Co Architects
Frances Moore	Co Architects
David Johnson	Co Architects
Christophe Bornand	KPFF Consulting Engineers – Civil Division
Soma Ambadapudi	KPFF Consulting Engineers – Civil Division

PREPARED BY:
Brian Powers – KPFF

NOTE: These meeting minutes represent our understanding of the issues, which were discussed. Any changes should be submitted in writing within 5 working days of the distribution of these minutes.

Environmental Compliance Program for the Addendum to the Escondido Research and Technical Center Specific Plan Final EIR

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
Transportation/Circulation			
Contribute a fair share toward the City planned widening of Nordahl Road between SR-78 westbound ramps and East Mission Road to six lanes. A joint City/Caltrans project study report is on-going at the interchange that will lead to the eventual improvement of the interchange.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the City planned improvements of the Nordahl Road/East Mission Road intersection. The improvements are part of a City Capital Improvement Project (CIP).	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards the widening of Vineyard Avenue between Country Club Drive and Andreasen Drive to four lanes (Collector Road standards).	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Improve the Hale Avenue/Auto Parkway intersection to include (1) right-turn lane, (1) shared through/left lane, and (1) left-turn lane on the southbound approach with split phasing on the north /south approaches. The additional intersection capacity mitigates the segment impact on Auto Park Way between Hale Avenue and Valley Parkway.	Payment for this improvement has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards upgrading Harmony Grove Road from Enterprise Street to Hale Street to four lanes (Collector standards).	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards upgrading Hale Avenue from Harmony Grove Road to West 9th Street to Local Collector standards and upgrading unimproved sections of Hale Avenue immediately north of Harmony Grove Road and south of West 9th	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated	City	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
Street.	February 8, 2006.		
Contribute a fair share towards upgrading West 9th Street from Hale Avenue to Home Depot Driveway to Local Collector standards.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards restriping the eastbound approach on West 9th Street at Auto Parkway to a right-turn lane, a shared through/right lane, and a left-turn lane, and provide right-turn overlap phasing on the eastbound approach This intersection improvement would mitigate the segment impact on West 9th Street from Auto Park Way to I-15.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards the widening of Valley Parkway between Via Rancho Parkway and 11th Avenue to four lanes.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the future improvement of the SR 78/Nordahl Road interchange. A joint City/Caltrans PSR is on-going at the interchange that will lead to the eventual improvement of the interchange.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the City planned widening of Nordahl Road between SR 78 and East Mission Road to six lanes. In addition to the City planned improvements, other additional turn lanes are needed to meet City LOS standards. The improvements are part of a past City CIP.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Provide an additional northbound through lane, a dedicated northbound right-turn lane, and a dedicated eastbound right turn lane (with an overlap phase) at the Del Dios Highway/Via Rancho Parkway intersection.	Payment for this improvement has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the future signalization of the Citracado Parkway/Country Club Drive intersection. This	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined	City	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
improvement is part of the City CIP.	in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.		
Signalize the Citracado Parkway/Vineyard Avenue intersection and provide the following geometry: • Northbound – dual left-turn lanes and one right-turn lane with overlap phase; • Westbound – dual left-turn lanes and two through lanes; • Eastbound – two through lanes and one right-turn lane with overlap phase.	Payment for this improvement has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards installing a traffic signal at the Enterprise Street/Vineyard Avenue intersection.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share towards installing a traffic signal at the Howard Avenue/Auto Parkway South intersection.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Signalize the Harmony Grove Road/Enterprise Street intersection and provide dedicated left-turn lanes on each approach and provide a northbound right turn lane with overlap phase.	Payment for this improvement has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Signalize the Harmony Grove Road/Hale Avenue intersection and provide dedicated left-turn lanes on each approach.	Payment for this improvement has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward restriping the eastbound approach on West 9th Street at Auto Park Way to a right-turn lane, a shared through/right lane, and a left-turn lane, and the provision of right-	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of	City	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
turn overlap phasing on the eastbound approach. The intersection improvement would mitigate the segment impact on West 9th Street from Valley Parkway to Auto Park Way.	Escondido and Palomar Pomerado Health dated February 8, 2006.		
Contribute a fair share toward the future improvements of the Valley Parkway/I-15 interchange. The additional interchange capacity would mitigate the cumulative segment impact on Valley Parkway from Auto Park Way to I-15 and the cumulative ramp meter impact at the I-15/Valley Parkway ramp meter.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the future improvement of the SR 78/Nordahl Road interchange. A joint City/Caltrans PSR is on-going at the interchange that will lead to the eventual improvement of the interchange.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Contribute a fair share toward the signalization of the Harmony Grove Road/Howard Avenue intersection with dedicated left-turn lanes.	Fair share payment has been satisfied through the $13,000,000 Public Benefit Payment, as defined in the Development Agreement between City of Escondido and Palomar Pomerado Health dated February 8, 2006.	City	City
Air Quality			
All active sites shall be watered at least twice daily. Multiple applications of water shall occur during grading between dozer/scraper passes.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
All grading activities shall cease during second-stage smog alerts and periods of high winds (i.e., greater than 25 mph) if dust is being transported to offsite locations and cannot be controlled by watering.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
All trucks hauling dirt, sand, soil, or other loose materials offsite shall be covered or wetted or shall maintain at least 2 feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer).	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Sweepers or water trucks shall be used to remove "track out" at any	City Engineer to review and approve grading	Owner/Operator	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
point of public street access. Streets shall be swept hourly if visible soil material has been carried onto adjacent public paved roads. (Reclaimed water shall be used if available.)	plans. Applicant's Construction Manager to provide weekly verification to City Engineers.		
Water or nontoxic soil stabilizers shall be applied, according to manufacturers' specifications, as needed to reduce offsite transport of fugitive dust from all unpaved staging areas and unpaved road surfaces.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Traffic speeds on all unpaved roads shall not exceed 15 mph.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Paving, chip sealing or chemical stabilization shall be applied to internal roadways after completion of grading activities.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Dirt storage piles shall be stabilized through implementation of chemical binders, tarps, fencing or other erosion control measures.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
The contractor shall use reduced-VOC-content paints and solvents to the maximum extent feasible. Additionally, use of soot filters, low-sulfur diesel fuel, monitoring dust emissions, and installation of low-VOC architectural coverings will be required.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
The applicant will be required to provide verification that construction activities will offset PM_{10} emissions to the City Planning Director.	City Engineer to review and approve grading plans. Applicant's construction manager to provide verification to the City Engineer.	Owner/Operator	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
Noise			
All construction equipment shall be in proper operating condition and fitted with standard factory noise attenuation features. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Stockpiling and vehicle staging areas shall not be located within 200 feet of existing residences.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Approved offsite haul routes shall be used to minimize exposure of sensitive receptors to potential adverse noise levels from hauling operations.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
The proposed project is responsible for conducting noise monitoring during construction activities (one hour each day whenever construction is occurring within 200 feet of occupied residences) and insuring that mitigation measures are enforced to the degree feasible.	Applicant shall retain a noise monitor to conduct noise monitoring during construction. Noise monitor will provide weekly report to the City.	Owner/Operator	City
Upon completion of final design for the building, a site-specific acoustical report shall be submitted to verify that adjacent residential uses are adequately buffered such that noise levels do not exceed City thresholds.	Applicant is to provide a site-specific acoustical report to the City Planning Director for verification.	Owner/Operator	City
Limit the use of noise-producing signals (horns, whistles, bells, alarms, etc.) to safety warning purposes only. Use hand-held devices rather than public address systems for worker communication.	City Engineer to review and approve grading plans. Applicant's Construction Manager to provide weekly verification to City Engineers.	Owner/Operator	City
Biological Resources			
Facility lighting shall be shielded such that no direct lighting falls within the adjacent natural habitat.	City engineering to verify that facility lighting meets this specification.	Owner/Operator	City

Mitigation Measures and Project Features to be Implemented	Demonstration of Compliance	Party Responsible for Implementation	Party Responsible for Verification
Public Services and Utilities			
Fire Protection Services Structures shall be protected by fire sprinkler systems or an equivalent system.	Applicant to provide Fire Marshal with location of fire sprinklers in each structure to verify locations.	Owner/Operator	City/Fire Marshal
Lighting			
All automobile parking areas and access roads will be illuminated via full cut off ceramic metal halide fixtures at a mounting height not to exceed 25 feet above finish grade. Internal back shields will be utilized to prevent light trespass onto the building and adjacent properties where available.	Applicant shall identify measures on project plans.	Owner/Operator	City
Site steps shall be lit via louvered compact fluorescent fixtures recessed into the site walls.	Applicant shall identify measures on project plans.	Owner/Operator	City
Low wattage ceramic metal halide accent lights shall be mounted strategically to provide accent lighting and provide general illumination.	Applicant shall identify measures on project plans.	Owner/Operator	City
The water features shall be lit via submersible tungsten halogen fixtures.	Applicant shall identify measures on project plans.	Owner/Operator	City
Signage shall be illuminated using either in grade low wattage ceramic metal halide fixtures or above grade linear fluorescent sign lighters appropriately shielded.	Applicant shall identify measures on project plans.	Owner/Operator	City
The loading dock shall utilize low wattage ceramic metal halide full cut off wall mount fixtures.	Applicant shall identify measures on project plans.	Owner/Operator	City
Fixtures shall be strategically located to provide an added layer of light for security patrol. These fixtures shall have the capability of being controlled separately or be controlled via time-clock and/or photocell.	Applicant shall identify measures on project plans.	Owner/Operator	City