Campus: UCSF
Building Name: Community Center Parking Garage
CAAN ID: 3031
Auxiliary Building ID: NA

UNIVERSITY OF CALIFORNIA

Date: 8/16/2019

FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL
☒ **UC-Designed & Constructed Facility**
☐ **Campus-Acquired or Leased Facility**

BUILDING DATA
Building Name: Community Center Parking Garage
Address: 1625 Owens St. San Francisco
Site location coordinates: Latitude 37.7682 Longitudinal -122.3939

UCOP SEISMIC PERFORMANCE LEVEL (OR "RATING"): III

ASCE 41-17 Model Building Type:

a. Longitudinal Direction: C1 and C2: Concrete Moment Frames and Concrete Shear Walls
b. Transverse Direction: C1 and C2: Concrete Moment Frames and Concrete Shear Walls

Gross Square Footage: 209,000
Number of stories *above* grade: 0
Number of basement stories *below* grade: 9

Year Original Building was Constructed: 2005
Original Building Design Code & Year: CBC- 1998
Retrofit Building Design Code & Code (if applicable): NA

SITE INFORMATION
Site Class: F Basis: (Walker, 8/23/2002, GS0.1)
Geologic Hazards:
Fault Rupture: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Liquefaction: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Landslide: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)

ATTACHMENT
Original Structural Drawings: (Parking Structure Building 21A, Walker, 8/23/2002, GS0.1) or
Seismic Evaluation: NA
Retrofit Structural Drawings: NA

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CERTIFICATION & PRESUMPTIVE RATING VERIFICATION STATEMENT

I, Maryann T. Phipps, a California-licensed structural engineer, am responsible for the completion of this certificate, and I have no ownership interest in the property identified above. My scope of review to support the completion of this certificate included both of the following ("No" responses must include an explanation):

a) the review of structural drawings indicating that they are as-built or record drawings, or that they otherwise are the basis for the construction of the building: ☑ Yes ☐ No
b) visiting the building to verify the observable existing conditions are reasonably consistent with those shown on the structural drawings: ☑ Yes ☐ No

Based on my review, I have verified that the UCOP Seismic Performance Level (SPL) is presumptively permitted by the following UC Seismic Program Guidebook provision (choose one of the following):

☑ 1) Contract documents indicate that the original design and construction of the aforementioned building is in accordance with the benchmark design code year (or later) building code seismic design provisions for UBC or IBC listed in Table 1 below.

☐ 2) The existing SPL rating is based on an acceptable basis of seismic evaluation completed in 2006 or later.

☐ 3) Contract documents indicate that a comprehensive[1] building seismic retrofit design was fully-constructed with an engineered design based on the 1997 UBC/1998 ***or later*** CBC, and (choose one of the following):

☐ the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1E (or BSE-R) and BSE-2E (or BSE-C) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 CBC ***or later*** for EXISTING buildings, and is presumptively assigned an SPL rating of IV.
☐ the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1 (or BSE-1N) and BSE-2 (or BSE-2N) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 ***or later*** CBC for NEW buildings, and is presumptively assigned an SPL rating of III.
☐ the retrofit project was not completed by the UC campus following UC policies, and is presumptively assigned an SPL rating of IV.

[1] A comprehensive retrofit addresses the entire building structural system as indicated by the associated seismic evaluation, as opposed to addressing selective portions of the structural system.

CERTIFICATION SIGNATURE

AFFIX SEAL HERE

Maryann T. Phipps	President
Print Name	Title
S2995	6/30/2020
CA Professional Registration No.	License Expiration Date
Maryann T. Phipps	8/16/2019
Signature	Date

9/4/2019

Estructure, (510) 235-3116, 1144 65th St Suite A, Oakland
Firm Name, Phone Number, and Address

Table 1: Benchmark Building Codes and Standards

Building Type[a,b]	Building Seismic Design Provisions	
	UBC	IBC
Wood frame, wood shear panels (Types W1 and W2)	1976	2000
Wood frame, wood shear panels (Type W1a)	1976	2000
Steel moment-resisting frame (Types S1 and S1a)	1997	2000
Steel concentrically braced frame (Types S2 and S2a)	1997	2000
Steel eccentrically braced frame (Types S2 and S2a)	1988[g]	2000
Buckling-restrained braced frame (Types S2 and S2a)	[f]	2006
Metal building frames (Type S3)	[f]	2000
Steel frame with concrete shear walls (Type S4)	1994	2000
Steel frame with URM infill (Types S5 and S5a)	[f]	2000
Steel plate shear wall (Type S6)	[f]	2006
Cold-formed steel light-frame construction—shear wall system (Type CFS1)	1997[h]	2000
Cold-formed steel light-frame construction—strap-braced wall system (Type CFS2)	[f]	2003
Reinforced concrete moment-resisting frame (Type C1)[i]	1994	2000
Reinforced concrete shear walls (Types C2 and C2a)	1994	2000
Concrete frame with URM infill (Types C3 and C3a)	[f]	[f]
Tilt-up concrete (Types PC1 and PC1a)	1997	2000
Precast concrete frame (Types PC2 and PC2a)	[f]	2000
Reinforced masonry (Type RM1)	1997	2000
Reinforced masonry (Type RM2)	1994	2000
Unreinforced masonry (Type URM)	[f]	[f]
Unreinforced masonry (Type URMa)	[f]	[f]
Seismic isolation or passive dissipation	1991	2000

Note: This table has been adapted from ASCE 41-17 Table 3-2. Benchmark Building Codes and Standards for Life Safety Structural Performed at BSE-1E.

Note: UBC = *Uniform Building Code*. IBC = *International Building Code*.

[a] Building type refers to one of the common building types defined in Table 3-1 of ASCE 41-17.

[b] Buildings on hillside sites shall not be considered Benchmark Buildings.

[c] not used

[d] not used

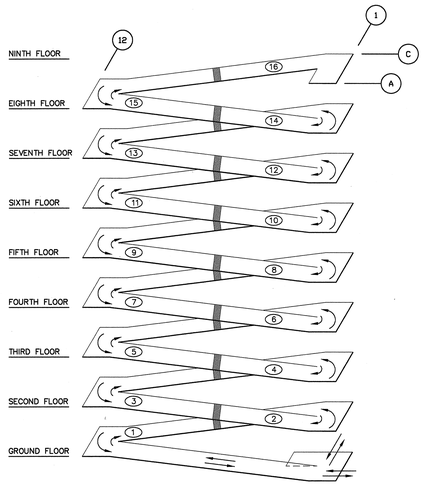
[e] not used

[f] No benchmark year; buildings shall be evaluated in accordance with Section III.J.

[g] Steel eccentrically braced frames with links adjacent to columns shall comply with the 1994 UBC Emergency Provisions, published September/October 1994, or subsequent requirements.

[h] Cold-formed steel shear walls with wood structural panels only.

[i] Flat slab concrete moment frames shall not be considered Benchmark Buildings.



ISOMETRIC

SUGGESTED POUR SEQUENCE

GENERAL NOTES

I. GENERAL

A. Construction

1. Construction shall be in accordance with all applicable Federal, State of California and City of San Francisco codes and ordinances, UBC 1997, CBC 1998, including Fire Codes.
2. The subcontractor shall check all plans, sections and details shown on the Structural Drawings for conformance with the Architectural Drawings. The Structural Drawings show only the structural elements of the building including all framed floors and roof construction and all bearing and shear walls. See Architectural Drawings for wall and column layout dimensions, size and location of wall openings, floor elevations and depressions. Discrepancies, if any, between the Drawings shall be reported to the Engineer for clarification or adjustments before proceeding with work.
3. In the event that certain features of the construction are not shown on the Drawings, or called for in the specifications, then their construction shall be of the same general character as similar conditions that are shown or specified.

B. Design Live Loads:

Description	Load
1. Roof, stair/elevator towers	20 psf
2. Supported parking and drive areas	
a. Slabs	50 psf
b. Beams (reduced)	30 psf
c. Columns (reduced)	30 psf
3. Concentrated wheel load (on 20 sq. inches)	2000 lb.
4. Bumper impact load, over 1 foot square, located 18 inches above finished floor, ultimate	10,000 lb.
5. Slabs on grade	50 psf
6. Stairs, landings and lobbies	100 psf
7. Elevator machine room	150 psf
8. Basic wind speed UBC Figure 16-1	70 mph
9. Earthquake loads	
V = C_V I W/R T where:	
Seismic Zone	= 4.0
Seismic Zone Factor, Z	= 0.4
Occupancy Category, I	= 1.0
Structural Systems, Rx (Dual System)	= 8.5
Ry (Dual System)	= 8.5
Soil Profile Type (Table 16-J)	= SF
Seismic Source (Table 16-U)	= A
Near Source Factors	
Na(Table 16-S)	= 1.0
Nv(Table 16-T)	= 1.08
Seismic Coefficients	
Ca(Table 16-Q)	= 0.44 Na
Cv(Table 16-R)	= 1.27 Nv
Building Period, T(UBC formula)	= 30-10
10. Per PCI Design Handbook (5TH Edition)	
a. Design temperature differential	30 degrees F.
b. Annual average ambient relative humidity	80%

C. The degree of fire resistance measured in terms of satisfactory performance complying with the conditions of acceptance of UBC 1997 and CBC 1998 is:

Structural Element	Hours Provided	Hours Required
1. Post-tensioned concrete slabs	2	1
2. Post-tensioned concrete beams	2	1
3. Concrete columns	2	1
4. Stair/elevator towers	2	1
5. 8" C.M.U. wall @ Line 12	4	4
6. Concrete Shear walls (non-load bearing)	2	2

D. Future Expansion

This parking facility is not designed for future expansion.

E. Existing Construction:

Prior to fabrication and erection of any material or placement of concrete for new construction, FIELD VERIFY ALL EXISTING elevations, dimensions, and conditions shown on the Drawings. Report all discrepancies to the Engineer immediately.

II. FOUNDATION WORK

A. Foundations, retaining walls, basement walls, foundation drainage and slabs on grade have been designed in accordance with the recommendations of Treadwell & Rollo, Report #2625.07 Dated Dec. 20, 2001 For additional information see Division 2 of the Specifications.

B. Foundation Design

Recommended Pile Capacity – See Schedule on GS1.4

Pile Size	Estimated Pile Tip Elevation (feet)	Qultimate (tons)	Q[11] allowable Dead Plus Live Load (tons)	Qallowable Total Design Load (tons)	Qallowable Uplift (tons)	Qdowndrag[12,13] (tons)	Notes
14" square	20-35	500	190	250	75	40	Downdrag will be developed in ramp area plus 10 feet beyond.

11 The dead plus live load capacity is based on the strength of soil, the structural capacity of the pile may govern.

12 Dead plus live load plus downdrag load should not exceed the structural capacity of the pile for end bearing piles.

13 If more than 0.5 feet of fill is placed at the site of the ramp fill is increased, downdrag loads should be reevaluated.

C. Retaining Wall Design

1. Design equivalent fluid pressure 60 psf/ft(triangular) behind basement type walls laterally supported top and bottom.
2. Design equivalent fluid pressure 40 psf/ft (triangular) behind cantilevered retaining walls.
3. Coefficient of sliding friction tan(delta) =0.40
4. Passive Resistance = 80 psf/ft + 250 psf above water table
   = 40 psf/ft + 250 psf below water table
5. Walls shall be backfilled with clean compacted granular material such as aggregate sub-base with minimum R value of 40. Backfill material shall be placed against mirodrain or similar filter fabric installed per manufacturers recommendations.

D. See Sections of Division 2 of the Specification and Recommendations of the Geotechnical report for excavation, dewatering and compaction.

III. CONCRETE

A. Material Properties – Concrete:

	f'c,psi at 28 days	Max. W/C Ratio	Max. Slump,* Inches ±1"	Air ±1 1/2%
1. Cast-in-place concrete				
Piles (Precast)	6000	0.35	4	
Footings, Pilecaps	4000	0.40	4	
Grade beams	4000	0.40	4	
Columns	6000	0.45	4	
Walls	5000	0.45	4	
Superstructure slabs, beams	5000**	0.45	4	4%
Slab on grade	4000	0.45	4	4%
Stairs, landings,	3000	0.45	4	
lobbies	3000	0.45	4	
All other	4000	0.45	4	
2. Other concrete				
Masonry wall grout fill	3000			
N.S.N.S. grout	8000			

* Prior to adding water reducer.

** Aggregate used for post-tensioned concrete slabs contain hardrock aggregate that will produce concrete with a maximum 28 day shrinkage rate equal to or less than 0.04%.

3. All concrete is Normal Weight: 150 pcf. All cement shall be Type I or II, Unless noted. All cement for concrete in contact with ground Shall be modified type II.

B. Material Properties – Reinforcing and Connection Steel:

	Fy,psi	ASTM
All bars, U.N.	60,000	A615
All bars in Shear Walls	60,000	A706
All Chord bars	60,000	A706
Welded bars	60,000	A706
Welded wire fabric (Smooth)	65,000	A185
Prestressing strand	270,000 (fpu)	A416
Post-tensioning strand	270,000 (fpu)	A416
Coil bolts and coil rods	65,000, U.N.	
Deformed bar anchors	70,000	A496
Headed anchor studs	60,000 (fs)	A108
Welding for steel reinf. bars*		AWS D1.4-91

* with proper preheat per AWS standards.

C. General Notes for Cast-in-Place

1. Column reinforcing to be continuous, or to be spliced according to UBC 97, section 1912.14
2. Provide extra reinforcing around all openings, see 3/GS0.2.
3. Where shown hooked, provide standard 90 degree bar hooks unless noted otherwise on the Drawings, see 5/GS0.2
4. When reinforcement is lap spliced, provide Class B splice typical, unless noted.
5. Provide a 3/4 inch chamfer on all exposed corners of concrete. Top edges of walls may be tooled.
6. Provide control/construction joints as shown on the Drawings. For additional information, see Section 03300 of the Specifications.
7. All inserts and coil rods shall be galvanized or epoxy coated. See sections of Division 3 of the Specifications for additional information.
8. Backup bars for P/T anchor plates shall not be placed in contact with the plates. Allow one inch between anchor plate and rebar.
9. Do not bundle more than two slab tendons in a single bundle without prior written permission of Engineer.
10. For shoring calculations, account for construction loads and assume that beams and slabs below will support a live load of 30 psf when concrete reaches its 28-day compressive strength.
11. For post-tensioning, stress slab tendons parallel to beams first, then tendons perpendicular to beams, and then stress beams. Do not change the order of stressing.
12. Shore beams to stressed tiers below as required.
13. All plates or inserts required for connections to post-tensioned members shall be cast in the post-tensioned member. Use of power propelled fasteners or drilled-in anchors is prohibited, unless approved in writing by the Engineer.
14. All post-tensioned slabs shall be stressed within 3 days after concrete is placed.

D. Concrete Protection for Reinforcement:

The minimum concrete protection for reinforcement shall be per Uniform Building Code Section 1907.7.

For prestressed and non-prestressed reinforcement in prestressed/precast concrete beams, the minimum concrete protection at top of members shall be 1 1/2". For prestressed concrete piles, the minimum concrete protection of reinforcement shall be 2".

For pre stressed and non-prestressed reinforcement in cast-in-place, post-tensioned concrete, the minimum concrete protection shall be as follows:

	Concrete Cover (inches)
Pilecaps	3
Footings	3
Slab top reinforcement	1
Slab bottom reinforcement	1
Beam top reinforcement, U.N.	2
Beam stirrups at sides and bottom of beam	1 1/2
Beam stirrups at top of beam	1 1/2
Column ties @ Interior Columns	1 1/2
Column ties @ Exterior Columns	1 1/2
Walls	1

IV. CONCRETE MASONRY

A. Material Properties

Compressive strength of masonry, f'm = 2500 psi., Unless noted otherwise Mortar type "M".

B. General Concrete Masonry Notes

1. Provide dowels between foundations and walls equal to size and pacing of the vertical wall reinforcing, unless noted otherwise.
2. Minimum reinforcement for masonry walls subject to bumper loads shall be #5 @ 16" each way o.c. and grout all block cores solid. Minimum reinforcement for masonry walls not subject to bumper loads shall be #5 @ 16" each way o.c. plus one #5 vertical at corners, edges of openings and ends of wall. Grout all cells full.

V. STRUCTURAL STEEL

	Fy,psi	ASTM
A. Structural shapes	50,000	A572
Angles, plates	36,000	A36
Bolts (1/2" dia. to 1" dia.),U.N.	92,000	A992
Bolts (1-1/8" dia. to 1-1/2" dia.), U.N.	81,000	A325F
Anchor bolts	36,000	A36
Welding electrodes	E70XX	AWS D1.1-91
Steel pipes	35,000	A53
Structural tubes (rounds & shapes)	46,000	A500

B. General Structural Steel Notes

Lintels shall have a minimum end bearing on masonry of 8 inches, but not less than 1 inch of such bearing for each foot of opening width.

VI TESTING & INSPECTION NOTES:

A. In addition to the inspection required by the building code, the owner shall employ one or more special inspectors who shall provide inspection during construction on the types of work listed below. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection.

B. Duties and Responsibilities of the Special Inspector: The special inspector shall observe the work assigned for conformance to the approved design drawings and specifications. The special inspector shall furnish inspection reports to the building official, the engineer of record and other designated persons. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority and to the building official. The special inspector shall submit a final signed report stating whether the work required special inspection was, to the best of the inspector's knowledge, in conformance to the approved plans and specifications and the applicable workmanship provisions of the building code.

Type of Work: Except as provided in UBC Section 1701.1, a special inspector shall inspect the types of work listed below.

1. Concrete: During the taking of test specimens and placing of reinforced concrete.
2. Bolts in Concrete: Prior to and during the placement of concrete around bolts when stress increases permitted by footnote 5 to to UBC Table 19-D, or section 1923 are utilized.
3. Special moment-resisting concrete frames: For moment frames resisting design seismic load in structures in seismic zones 3 and 4, the special inspector shall provide reports to the engineer of record and shall provide continuous inspection of the placement of the reinforcement and concrete.
4. Reinforcing steel and prestressing steel tendons: During all placing of reinforcing steel and prestressing tendons for all concrete required to have special inspection. During all stressing and grouting of tendons in prestressed/post-tensioned concrete. The special inspector need not be present continuously during the placing of reinforcing steel and prestress tendons, provided the special inspector has inspected for conformance to the approved plans prior to the closing of forms or the delivery of concrete to the jobsite.
5. a. Structural Welding: During the welding of any member or connection that is designed to resist loads and forces required by the building code. Welding done in a approved fabricator shop according to the UBC code section 1701.7 need not be inspected. The special inspector need not be continuously present during the welding of the following items, provided the materials, qualifications of welding procedures and welders and verified prior to the start of work. Periodic inspections are made of work in progress, and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding. During the welding of reinforcing steel.

NONDESTRUCTIVE TESTING

b. Welded connections between the primary members of special moment-resisting frames, indicated on the plans shall be tested by nondestructive methods for compliance with approved standards and job specifications.

As a minimum, this program shall include the following:

All complete penetration groove welds contained in joints and splices shall be tested 100 percent either by ultrasonic testing or by radiography.

EXCEPTION: when approved, the nondestructive testing rate for an individual welder or welding operator may be reduced to 25 percent, provided the reject rate is demonstrated to be 5 percent or less of the welds tested for the welder or welding operator. a sampling of at least 40 complete welds for a job shall be made for such reduction. Reject rate is defined as the number of welds containing reject able defects divided by the number of welds completed. For evaluating the rejects rate of continuos welds over 3 feet in length where the effective throat thickness is 1 inch or less, each 12-inch increment or fraction thereof shall be considered as one weld. For evaluating the reject rate on continuous welds over 3 feet in length where the effective throat thickness is greater than 1 inch, each 6 inches of length or fraction thereof shall be considered one weld. For complete penetration groove welds on materials less than 5/16 inch thick, nondestructive testing not required: For this welding, continuos inspection is required. When approved by the engineer of record, this nondestructive ultrasonic testing may be performed in the shop of approved fabricator utilizing qualified test techniques in the employment of the fabricator.

6. High-strength bolting: The inspection of high-strength A325 bolts shall be in accordance with approved nationally recognized standards and the requirements of the building code.
7. Structural Masonry: For all masonry during preparation and taking of any required prisms, or test specimens, placing if all masonry units, placement of reinforcement, Inspection of grout space, Immediately prior to closing of clean-outs, and during all grouting operations.
8. Spray-applied fire-resistive materials: As required by UBC Standard 7-6.
9. Piling, drilled piers and caissons: During the driving and testing of piles and construction of cast-in-place drilled piers or caissons. See items 1 and 4 for concrete and reinforcing steel inspection. During earthwork excavation, grading and filling operations inspection to satisfy requirements of code chapter 18 and Appendix chapter 33.
10. Continuous and Periodic Special Inspection: Continuous special inspection means that the special inspector is on site at all times observing the work requiring special inspection. Some inspection may be made on a periodic basis and satisfy the requirements of continuous inspection, provided this periodic scheduled inspection is performed as outlined in the project plans and specifications and approved by the building official.

INSPECTION REQUIREMENT

REINFORCED CONCRETE, GUNITE, GROUT & MORTAR					STRUCTURAL STEEL/WELDING
CONCRETE	GUNITE	GROUT	MORTAR		
				AGGREGATE TESTS	___ SAMPLE AND TEST (LIST SPECIFIC MEMBERS BELOW)
				REINFORCING TESTS	___ SHOP MATERIAL IDENTIFICATION
X				MIX DESIGNS	X WELDING INSPECTION X SHOP X FIELD
X		X	X	REINF. PLACEMENT	X ULTRASONIC INSPECTION X SHOP ___ FIELD
				BATCH PLANT INSP.	X HIGH-STRENGTH BOLTING
X		X	X	INSPECT PLACING	INSPECTION ___ SHOP ___ FIELD
X		X	X	CAST SAMPLES	X A325
X		X	X	PICK-UP SAMPLES	___ A490 X N ___ X ___ F
X		X	X	COMPRESSION TESTS	X METAL DECK WELDING INSPECTION
X				REINF. WELDING	___ REINFORCING STUD WELDING INSPECTION
					X METAL STUD WELDING INSPECTION
* FIRST BATCHES FOR EACH P/T SLAB POUR					___ CONCRETE INSERT WELDING INSPECTION
PRECAST/PRESTRESSED CONCRETE					FIREPROOFING
PILES	POST-TENS	PRE-TENS	CLAD-DING		___ PLACEMENT
				AGGREGATE TESTS	___ DENSITY TESTS
				REINFORCING TESTS	___ THICKNESS TESTS
				TENDON TESTS	___ INSPECT BATCHING
X	X			MIX DESIGNS	INSULATING CONCRETE
X	X			REINF. PLACEMENT	___ SAMPLE AND TEST
				INSERT PLACEMENT	___ PLACEMENT INSPECTION
	X*			CONCRETE BATCHING	___ UNIT WEIGHTS
X	X			CONCRETE PLACEMENT	FILL MATERIAL
X	X			INSTALLATION INSP.	X ACCEPTANCE TESTS
X	X			CAST SAMPLES	X PLACEMENT INSPECTION
X	X			PICK-UP SAMPLE	X FIELD DENSITY
X	X			COMPRESSION TESTS	
MASONRY					STRUCTURAL WOOD
X SPECIAL INSPECTION					___ SHEAR WALL NAILING INSPECTION
___ PRELIMINARY ACCEPTANCE TESTS (MASONRY UNITS, WALL PRISMS)					___ INSPECTION OF GLU-LAM FAB.
					___ INSPECTION OF TRUSS JOINT FAB.
X SUBSEQUENT TESTS (MORTAR, GROUT)					___ SAMPLE AND TEST COMPONENTS
X PLACEMENT INSPECTION OF UNITS					
OTHER TEST, INSPECTIONS, OR SPECIAL INSTRUCTIONS					
X EPOXY GROUTED REBAR AND EXPANSION ANCHORS WHEN REQUIRED FOR FIELD CONDITIONS					

VII. MISCELLANEOUS

A. For exact sizes and locations of mechanical and electrical items and openings, consult respective subcontractors.

B. See Specifications for additional information.

C. Inserts called out on Drawings shall be as designated below for diameters indicated. Nomenclature is for Richmond Screw Anchor Company, Inc.

1. 1/2 inch diameter, Type I.
2. 3/4 inch diameter, Type EC-2, 2 Strut
3. 1 inch diameter, Type EC-4, 4 Strut
4. 1-1/4 inch diameter, Type EC-4, 4 Strut

Provide coil bolts and rods with the necessary penetration into inserts to develop their full strength per the manufacturer's recommendations.

D. Abbreviations

A.B.	=	anchor bolt
C.I.P.	=	cast-in-place concrete
C.J.	=	control joint/construction joint
CLR.	=	clear
C.M.U.	=	concrete masonry unit
D.B.A.	=	deformed bar anchor
D.P.	=	drilled pier
E.F.	=	each face
E.J.	=	expansion joint
E.T.F.	=	elevation top of footing
E.T.S.	=	elevation top of steel
E.T.W.	=	elevation top of wall
E.W.	=	each way
E.W.E.F.	=	each way, each face
E.W.P.	=	elevation working point
F.D.	=	floor drain
G.C.	=	general contractor
H.A.S.	=	headed anchor studs
N.S.N.S.	=	non-shrink, non-stain
O.C.	=	on center
P/C	=	precast concrete
P/T	=	post-tensioned concrete
R.D.	=	roof drain
S.O.G.	=	slab on grade
U.N.	=	unless noted
W.W.F.	=	welded wire fabric

E. DO NOT SCALE THE DRAWINGS

VIII. FIELD VISITS

A. The Structural Engineer of Record shall be retained by the Owner to provide occasional observation during construction. The Engineer shall report his observations to the Owner and Contractor. All work not conforming to the approved plans shall be reported to the owner and Building Official. The Engineer shall submit a letter to to the Building Official upon substantial completion, stating that all work related to the structural drawings has been completed according to the approved plans. Occasional Observation means the visual observation at infrequent intervals of the structural system. Structural observation does not include or waive the responsibility for the inspection required by UBC Section 108, 1702 or other sections of the Uniform Building Code.

B. During field visits by Walker Representatives, Information communicated to the special inspection agency or general contractor is understood to be advisory only. It shall not be construed to supersede the responsibility of the Special Inspector and General Contractor to insure that the building is constructed accoording to the approved plans and specifications. This advisory information is generated from a cursory review of the job site, which shall not be construed as a complete or thorough review. No deviation from the plans and specifications shall be allowed without the prior written approval of the Engineer.

IX. NOTES FOR DESIGN BUILD ITEMS

A. Steel Stairs:
The contractor shall submit shop drawings and calculations stamped and signed by a Professional Engineer licensed in the State of California. Shop drawings shall indicate all member sizes, reinforcing steel, connections, embedded items, etc. necessary to construct and erect the stair. The stairs shall be designed according to the requirements of the California Building Code, latest edition. The stairs shall be capable of supporting their own weight plus 100 pound per square foot superimposed live load. The Engineer of Record shall review the shop drawings and calculations prepared by the contractor, prior to submitting to UCSF Mission Bay.

B. Architectural metal studs w/ EIFS finish
The contractor shall submit shop drawings and calculations stamped and signed by a Professional Engineer licensed in the State of California. Shop drawings shall indicate all member sizes, reinforcing steel, connections, embedded items, etc. necessary to construct and erect the metal stud wall panels. The wall shall be designed according to the requirements of the California Building Code, latest edition. The wall shall be capable of supporting their own weight plus the following superimposed load: wind and earthquake The Engineer of Record shall review the shop drawings and calculations prepared by the contractor, prior to submitting to UCSF Mission Bay.

C. Precast Concrete Piles:
The contractor shall submit shop drawings and calculations stamp and signed by a Professional Engineer licensed in the state of California. Shop drawings shall indicate all members sizes, reinforcing steel, prestressed tendons, connections, embedded items, etc. necessary to construct and install the precast concrete piles. The piles shall be designed according to the requirements of the California building Code, latest edition, and capable of supporting the design loads indicated on the structural drawings. See 2/GS1.4 The Engineer of Record shall review the shop drawings and calculations prepared by the contractor, prior to submitting to UCSF Mission Bay.

ARCHITECT OF RECORD
MBT Architecture
185 Berry Street
Suite 5700
San Francisco, CA 94107
(415) 896-0800

DESIGN ARCHITECT
Legorreta + Legorreta
Palacio Versalles 285-A
Lomas Reforma 11020
Mexico City, Mexico
(525) 251-9698

SEALS

REGISTERED PROFESSIONAL ENGINEER KENNETH E. NAPIOR No. 2669 Exp. 3/2004 STRUCTURAL STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPL01 104320
AC. A FLS SS
DATE

UNIVERSITY OF CALIFORNIA SAN FRANCISCO FIRE MARSHAL
CDF-OFFICE OF STATE FIRE MARSHAL
APPROVED 01/30/02
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available in the project site at all times.
Reviewed by:
Project #: M1407
Authorization #: S1010

CONSULTANTS

PARKING CONSULTANTS & STRUCTURAL ENGINEERS
WALKER Parking Consultants
150 Executive Park Suite 3750
San Francisco, CA 94134
(415) 330-1895

MECHANICAL / PLUMBING ENGINEERS
NBA Engineering
897 Hyde Street
San Francisco, CA 94109
(415) 202-9840

ELECTRICAL ENGINEERS
Glumac International
Embarcadero Center West Tower
275 Battery Street, Suite 220
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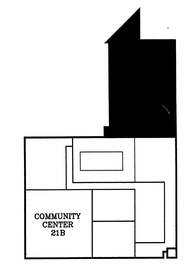
KEY PLAN



BID SET	23 AUGUST 2002
PERMIT SET	5 JUNE 2002
REVISIONS	
UCSF Project No. M1407	MBT JOB NO. M125
UCSF File No. 10691	DRAWN BY: AME
Contract No. CM0009	

PROJECT

UCSF Mission Bay

Parking Structure
Building 21A

SHEET TITLE

GENERAL NOTES

NO SCALE

SHEET NO.

GS0.1

333001