RTD

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

Owner: CATELLUS DEVELOPMENT CORPORATION 800 North Alameda Street, Suite 100 Los Angeles, California 90012 (213) 625-5865

Owner: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT 425 South Main Street Los Angeles, California 90013 (213) 972-4718

Architect: McLARAND, VASQUEZ & PARTNERS, INC. 695 Town Center Drive, Suite 300 Costa Mesa, California 92626 (714) 549-2207

Planner: EHRENKRANTZ & ECKSTUT, ARCHITECTS 3780 Wilshire Boulevard Los Angeles, California 90010 (213) 252-9465

Construction Manager: CHARLES PANKOW BUILDERS 2476 North Lake Avenue Altadena, California 91001 (213) 684-2320

Structural: MARTIN & HUANG INTERNATIONAL, INC. 1800 Wilshire Boulevard Los Angeles, California 90057 (213) 483-4916

Mechanical: TSUCHIYAMA & KAINO 2010 Main Street #450 Irvine, California 92714 (714) 756-0565

Electrical: LEVINE SEEGEL ASSOCIATES 2601 Ocean Park Boulevard Santa Monica, California 90405 (213) 450-19[illegible]

Civil: MOLLENHAUER, HIGASHI & MOORE 411 West Fifth Street Los Angeles, California 90013 (213) 624-2661

26750486

McLarand,
Vasquez &
Partners, Inc.

CATELLUS DEVELOPMENT CORPORATION
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

RTD HEADQUARTERS
Los Angeles, California

MV&P

100% SCHEMATIC DESIGN PACKAGE
INDEX

Carl McLarand, A.I.A.
Ernesto M. Vasquez, A.I.A.
Arthur C. Eckner, A.I.A.

December 20, 1991

EXHIBIT A **GENERAL INFORMATION**

1. Project Directory
2. Preliminary C.D. Drawing Index

EXHIBIT B **PROJECT DATA**

1. Area Tabulation
2. Parking Tabulation
3. General Description
4. General Information
5. Preliminary Outline Specifications

EXHIBIT C **ARCHITECTURAL SCHEMATIC DESIGN**

1. RTD Headquarters' Rendering
2. Architectural Drawings
   a. Floor Plans
   b. Building Elevations
   c. Building Sections

EXHIBIT D **STRUCTURAL SCHEMATIC DESIGN**

1. Structural Drawings
   a. Typical Details
   b. Building Framing Plans

EXHIBIT E **PROGRAM INFORMATION**

1. Program Analysis Questions
2. Vertical Tansportation Analysis

Architecture & Planning
695 Town Center Drive
Suite 300
Costa Mesa, CA 92626
FAX: 714. 549. 5297
714. 549. 2207

PROJECT DIRECTORY

RTD HEADQUARTERS
METRO PLAZA AT GATEWAY CENTER
PHASE I

December 20, 1991

PROJECT:
Metro Plaza - Phase I
RTD Headquarters & Gateway Center Parking Structure
Los Angeles, California

DESCRIPTION:
MV&P Project: #91-400

OWNERS:

Catellus Development Corporation
800 North Alameda Street, Suite 100
Los Angeles, California 90012
(213) 625-5865
(213) 617-8483 - FAX

Ted Tanner (Melodee)
Liz Harrison (Melodee)
Robert Vogel
Dick Cutler (Metro Rail)

and

Southern California Rapid Transit District
425 South Main Street
Los Angeles, California 90013
(213) 626-4455 - General Operator
(213) 972-4732 - FAX

President	Nick Patsaouras	(213) 478-7403
Real Estate & Development	Gary Spivack	(213) 972-4880
Real Estate & Development	John Bollinger	(213) 972-4867
Facilities Engineering (Building Design)	Arturo Santiago	(213) 972-4718
Planning	Robin Blair	(213) 972-4846
Construction Management	Vasan Srinivasan	(213) 972-3829
Facilities Engineering	John Anaya	(213) 972-4705
Facilities Engineering	Phil Meyers	(213) 972-4710
Facilities Engineering (Interior Design)	Tobi Allen	(213) 972-4720
Telecommunications Data	Larry Fordon	(213) 972-6612
Facility Management	Anita Allen	(213) 972-4780
Schedule and Operations	Russ Wilson	(213) 972-6979
Customer Relations	Tom Longsden	(213) 972-7010
Child Care	Pat Padilla	(213) 972-7163
Transit Police	Jim Wilson	(213) 972-7729
Bus Operations Control Center	Larry Cosner	(213) 972-4634
Management Information System (M.I.S.) - Computer	Marty Conway	(213) 972-4468
Printing Services	Al Moore	(213) 972-4450

CONSTRUCTION MANAGER:

Charles Pankow Builders
2476 North Lake Avenue
Altadena, California 91001
(213) 684-2320
(818) 794-1539 - FAX

Norm Husk
Bob Law
Todd Whitlock
Dean Stephan
Joseph Sanders
Jim Dick

ARCHITECTS:

McLarand, Vasquez & Partners, Inc. (MV&P)
695 Town Center Drive, Suite 300
Costa Mesa, California 92626
(714) 549-2207
(714) 549-5297 - FAX

Carl McLarand
Ernie Vasquez
Ron Nestor
Mark Rohling
Steve Gaffney

ARCHITECTS/ PLANNERS:

Ehrenkrantz & Eckstut, Architects
225 Arizona Avenue
Santa Monica, California 90401
(310) 319-6511
(310) 319-6516 - FAX

Steven Nakada
Mark Engberg
Luis Hoyos

also
23 East 4th Street
New York, New York 10003
(212) 353-0400
(212) 228-3928 - FAX

Stanton Eckstut
Allen Terry
Bill Donahoe
Malcom Plett
Anthony Tan

CONSULTANTS:

Transit Interface & Art Consultant:
Escudero & Fribourg Architects
3701 Wilshire Boulevard, Ste. 535
Los Angeles, California 90010-2812
(213) 381-6400
(213) 381-5333 - FAX

Art Fribourg (Penny)
Dan Escudero

Soils Engineer:
Law/Crandall, Inc.
200 Citadel Drive
Los Angeles, California 90040
(213) 889-5300
(213) 721-6700 - FAX

Mervin Johnson
Marshall Lew
Mark Kirkgard

CONSULTANTS CONT.:

Soils Engineer: (Environmental Analysis)
Levine Fricke — Steve Torres
1920 Main Street, Suite 750
Irvine, California 92714
(714) 955-1390
(714) 955- 0683 - FAX

Civil Engineer: (Off-Site Roadway Engineer & Traffic Analysis)
Korve Engineering, Inc. — J. Michael Bates
80 South Lake Avenue, Suite 511 — Patrick Wright
Pasadena, California 91101 — Tom Sorrentino
(818) 568-9181 — Bill Zimmerman
(818) 568-9560 - FAX

Civil Engineer: (Site Survey) — Robert Mollenhauer
Mollenhauer, Higashi & Moore — John Reed (Maps & Research)
411 West Fifth Street — Mary Zuris
Los Angeles, California 90013 — Robert De Jernett (Land Planning)
(213) 624-2661 — Eli Yomtov
(213) 614-1863 - FAX — Eugene Gagne

Structural:
Martin & Huang International, Inc. — Jack Martin (213) 493-6490
1800 Wilshire Boulevard — King Huang
Los Angeles, California 90057 — James Lai
(213) 483-4916
(213) 483-9757 - FAX

Mechanical:
Tsuchiyama & Kaino — Victor Tsuchiyama
2010 Main Street #450 — Tom Kaya
Irvine, California 92714 — Larry Sun
(714) 756-0565
(714) 756-0927 - FAX

Electrical Engineer:
Levine/Seegel Associates — Bud Seegel
2601 Ocean Park Boulevard — Mark Seegel
Santa Monica, California 90405
(310) 450-1990
(310) 450 -0830 - FAX

CONSULTANTS CONT.:

Security:
Paul Alan Magil & Associates — Paul Magil
275 Baker Street East, Suite B
Costa Mesa, California 92626
(714) 751-7262
(714) 751-7526 FAX

Landscape:
Hanna/Olin, LTD. — Laurie Olin
421 Chestnut Street
Philadelphia, Pennsylvania 19106
(215) 440-0030
(215) 440-0041 - FAX

also

Fong & Associates — Allen Fong
930 West 16th Street, Unit A-2
Costa Mesa, California 92627
(714) 645-9444
(714) 645-1605 - FAX

Parking Consultant:
HNA/California — Scott Herman
100 South Catalina Avenue, Suite B
Redondo Beach, California 90277
(213) 318-3411
(213) 318-3413 - FAX

Central Parking Systems — Jerry Skillette
11500 Olympic Boulevard, Suite 420
Los Angeles, California 90064
(213) 444-9061
(213) 444-4926- FAX

Cost Consultant:
Iskander Associates — Iskander Abdullah
1540 East First Street
Santa Ana, California 92701
(714) 953-0633
(714) 953-3119 - FAX

CONSULTANTS CONT.:

Life Safety Consultant:
Rolf Jensen & Associates
Three Point Drive, Suite 204
Brea, California 92621
(714) 256-1718
(714) 256-1729 - FAX

Raymond Grill
Ed Fixen

Specifications:
Consruction Specifiers, Inc.
10929 South Street, Suite 205B
Cerritos, California 90701
(213) 402-2102
(213) 860-9850 - FAX

Bruce Dinwiddie

Vertical Transprotation:
Lerch, Bates & Associates, Inc.
2953 Honolulu Avenue
La Crescenta, California 91214
(818) 957-4524
(213) 957-4528 - FAX

Michael Farris
Michelle Baratta

CITY OF LOS ANGELES:

Department of Building and Safety:
Room 422, City Hall
Los Angeles, California 90012
(213) 485-2321
(213) 237-0639- FAX

Richard Holguin (213) 237-1911
Robert Harder
Cliff Kajiwara
Art Wong (213) 485-2322

Disabled Access Division:
Room 417, City Hall
Los Angeles, California 90012
(213) 485-5109

Jim Usui

Fire Department:
Bureau of Fire Prevention
Building Standards Unit
200 North Main Street
Los Angeles, California 90012
(213) 485-5990

Wayne Martin (213) 237-2806
Addison Berdine (213) 485-5966

Charlie Justice (213) 485-5964

MKR/mmc

MV&P

DRAWING INDEX

JOB NAME: METRO PLAZA – PHASE I
RTD HEADQUARTERS – TOWER & PARKING STRUCTURE

JOB PATH : \MVP\RTD\HQ\
MVP JOB NO. : 91–400

SCH DES	DES DEV	C.D. & SHEET NO	SHEET INDEX SHEET CONTENT:	SCALE
2	3	3	GENERAL INFORMATION	
*	*		COVER SHEET	NONE
*	*	G–0.01	DRAWING INDEX	NONE
	*	G–0.02	GENERAL NOTES	NONE
2	7	7	SERIES 000	
*	*	A–0.01	METRO PLAZA & RTD HQS' COMPOSITE SITE PLAN	1"=100'
*	*	A–0.02	METRO PLAZA & GATEWAY CENTER SITE PLAN	1"=40'
	*	A–0.11	COMPOSITE PLAN, LEVEL P4	1/32"=1'–0"
	*	A–0.12	COMPOSITE PLAN, LEVEL P3	1/32"=1'–0"
	*	A–0.13	COMPOSITE PLAN, LEVEL P2	1/32"=1'–0"
	*	A–0.14	COMPOSITE PLAN, LEVEL P1 (STREET LEVEL)	1/32"=1'–0"
	*	A–0.15	COMPOSITE PLAN, METRO PLAZA	1/32"=1'–0"
11	12	18	SERIES 100	
*	*	A–1.01	FLOOR PLAN, SEGMENT 'D', LEVEL P4	1/8"=1'–0"
*	*	A–1.02	FLOOR PLAN, SEGMENT 'D', LEVEL P3	1/8"=1'–0"
*	*	A–1.03	FLOOR PLAN, SEGMENT 'D', LEVEL P2	1/8"=1'–0"
*	*	A–1.04	FLOOR PLAN, SEGMENT 'D', LEVEL P1 (VIGNES STREET LEVEL)	1/8"=1'–0"
		A–1.05	SLAB PLAN, SEGMENT 'D', LEVEL 1 (METRO PLAZA LEVEL)	1/8"=1'–0"
*	*	A–1.06	FLOOR PLAN, SEGMENT 'D', LEVEL 1 (METRO PLAZA LEVEL)	1/8"=1'–0"
*	*	A–1.07	FLOOR PLAN, SEGMENT 'D', LEVEL 2 (MEZZANINE LEVEL)	1/8"=1'–0"
*	*	A–1.08	FLOOR PLAN, SEGMENT 'D', LEVEL 3 (PODIUM LEVEL)	1/8"=1'–0"
*	*	A–1.09	FLOOR PLAN, SEGMENT 'D', LEVEL 4 (LOW RISE LEVEL)	1/8"=1'–0"
*	*	A–1.10	FLOOR PLAN, SEGMENT 'D', LEVEL 5 THRU 15 (MID RISE LEVELS)	1/8"=1'–0"
		A–1.11	FLOOR PLAN, SEGMENT 'D', LEVEL 16 (HIGH RISE LEVELS)	1/8"=1'–0"
		A–1.12	FLOOR PLAN, SEGMENT 'D', LEVEL 17 (HIGH RISE LEVELS)	1/8"=1'–0"
*	*	A–1.13	FLOOR PLAN, SEGMENT 'D', LEVEL 18 THRU 22 (HIGH RISE LEVELS)	1/8"=1'–0"
		A–1.14	FLOOR PLAN, SEGMENT 'D', LEVEL 23 (HIGH RISE LEVELS)	1/8"=1'–0"
		A–1.15	FLOOR PLAN, SEGMENT 'D', LEVEL 24 (HIGH RISE LEVELS)	1/8"=1'–0"
*	*	A–1.16	FLOOR PLAN, SEGMENT 'D', LEVEL 25 (HIGH RISE LEVELS)	1/8"=1'–0"
	*	A–1.17	FLOOR PLAN, SEGMENT 'D', MECH. P.H. & TOWER ROOF	1/8"=1'–0"
		A–1.18	FLOOR PLAN, SEGMENT 'D', MECH. P.H. ROOF	1/8"=1'–0"
4	4	8	SERIES 200	
*	*	A–2.01	EXTERIOR ELEVATION, SOUTH ELEVATION	1/8"=1'–0"
*	*	A–2.02	EXTERIOR ELEVATION, WEST ELEVATION	1/8"=1'–0"
*	*	A–2.03	EXTERIOR ELEVATION, NORTH ELEVATION	1/8"=1'–0"
*	*	A–2.04	EXTERIOR ELEVATION, EAST ELEVATION	1/8"=1'–0"
		A–2.05	EXTERIOR ELEVATION, ENLARGED PARTIAL ELEVATIONS	1/4"=1'–0"
		A–2.06	EXTERIOR ELEVATION, ENLARGED PARTIAL ELEVATIONS	1/4"=1'–0"
		A–2.07	EXTERIOR ELEVATION, ENLARGED PARTIAL ELEVATIONS	1/4"=1'–0"
		A–2.08	EXTERIOR ELEVATION, ENLARGED PARTIAL ELEVATIONS	1/4"=1'–0"
		A–2.09	EXTERIOR ELEVATION, ENLARGED PARTIAL ELEVATIONS	1/4"=1'–0"
2	5	9	SERIES 300	
*	*	A–3.01	BUILDING SECTIONS, SEGMENT 'D', EAST/WEST	1/16"=1'–0"
		A–3.02	BUILDING SECTIONS, SEGMENT 'D', EAST/WEST	1/16"=1'–0"
*	*	A–3.03	BUILDING SECTIONS, SEGMENT 'D', NORTH/SOUTH	1/16"=1'–0"
		A–3.04	BUILDING SECTIONS, SEGMENT 'D', NORTH/SOUTH	1/16"=1'–0"
	*	A–3.11	WALL SECTIONS, TYPICAL EXTERIOR WALLS	1/4"=1'–0"
	*	A–3.12	WALL SECTIONS, TYPICAL EXTERIOR WALLS	1/4"=1'–0"
		A–3.13	WALL SECTIONS, TYPICAL EXTERIOR WALLS	1/4"=1'–0"
	*	A–3.21	RAMP SECTIONS & PLANS	1/4"=1'–0"
		A–3.22	RAMP SECTIONS & PLANS	1/4"=1'–0"

MV&P

DD No	DES DEV	C.D. & SHEET NO	SHEET INDEX SHEET CONTENT:		SCALE
0	4	14	SERIES 300 (CONTINUED)		
	*	A-3.31	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
	*	A-3.32	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
	*	A-3.33	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
		A-3.34	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
		A-3.35	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
		A-3.36	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
		A-3.37	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
		A-3.38	DETAILS, EXTERIOR WALL CONDITIONS		1 1/2" = 1'-0"
	*	A-3.41	DETAILS, CURTAIN WALL		1 1/2" = 1'-0"
		A-3.42	DETAILS, CURTAIN WALL		1 1/2" = 1'-0"
		A-3.43	DETAILS, CURTAIN WALL		1 1/2" = 1'-0"
		A-3.51	DETAILS, PLAZA SLAB & FINISHES		1 1/2" = 1'-0"
		A-3.52	DETAILS, PLAZA SLAB & FINISHES		1 1/2" = 1'-0"
		A-3.53	DETAILS, PLAZA SLAB & FINISHES		1 1/2" = 1'-0"
0	15	53	SERIES 400		
		A-4.01	ENLARGED PLANS, ELEV. LOBBY, P.S. SHUTTLE	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
		A-4.02	ENLARGED PLANS, ELEV. LOBBY, P.S. SECURED	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
	*	A-4.03	ENLARGED PLANS, ELEV. & BLDG. LOBBIES	(LVL P1 - MACY ST.)	1/4" = 1'-0"
	*	A-4.04	ENLARGED PLANS, ELEV. & BLDG. LOBBIES	(LVL 1 - METRO PLAZA)	1/4" = 1'-0"
		A-4.05	ENLARGED PLANS, ELEV. & BLDG. LOBBIES	(LVL 2 - MEZZANINE)	1/4" = 1'-0"
		A-4.06	ENLARGED PLANS, ELEV. & BLDG. LOBBIES	(LVL 3 - PODIUM)	1/4" = 1'-0"
		A-4.07	ENLARGED PLANS, ELEV. & BLDG. LOBBIES	(LVL 4 - CHILD CARE)	1/4" = 1'-0"
	*	A-4.09	ENLARGED PLANS, CORE, MID RISE	(LVL'S 5 TO 15, TYP.)	1/4" = 1'-0"
		A-4.10	ENLARGED PLANS, CORE, HIGH RISE	(LVL 16)	1/4" = 1'-0"
		A-4.11	ENLARGED PLANS, CORE, HIGH RISE	(LVL 17)	1/4" = 1'-0"
	*	A-4.12	ENLARGED PLANS, CORE, HIGH RISE	(LVL'S 18 TO 25, TYP.)	1/4" = 1'-0"
		A-4.13	ENLARGED PLANS, MECHANICAL PENTHOUSE	(LVL 26)	1/4" = 1'-0"
		A-4.14	ENLARGED PLANS, SPECIAL FUNCTIONS	(LVL'S P1 THRU P4)	1/4" = 1'-0"
		A-4.15	ENLARGED PLANS, SPECIAL FUNCTIONS	(LVL 1)	1/4" = 1'-0"
		A-4.16	ENLARGED PLANS, SPECIAL FUNCTIONS	(LVL 2)	1/4" = 1'-0"
		A-4.17	ENLARGED PLANS, SPECIAL FUNCTIONS	(LVL 3)	1/4" = 1'-0"
		A-4.18	ENLARGED PLANS, SPECIAL FUNCTIONS	(LVL 4)	1/4" = 1'-0"
		A-4.21	ENLARGED PLANS, STAIRS	(TOWER)	1/4" = 1'-0"
		A-4.22	ENLARGED PLANS, STAIRS	(TOWER)	1/4" = 1'-0"
		A-4.23	ENLARGED PLANS, STAIRS	(LOW RISE)	1/4" = 1'-0"
		A-4.24	ENLARGED PLANS, STAIRS	(LOW RISE)	1/4" = 1'-0"
		A-4.31	PAVING PLANS, ELEV. LOBBY, P.S. SHUTTLE	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
		A-4.32	PAVING PLANS, ELEV. LOBBY, P.S. SECURED	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
	*	A-4.33	PAVING PLANS, ELEV. & BLDG. LOBBIES	(LVL P1 - MACY ST.)	1/4" = 1'-0"
	*	A-4.34	PAVING PLANS, ELEV. & BLDG. LOBBIES	(LVL 1 - METRO PLAZA)	1/4" = 1'-0"
	*	A-4.35	PAVING PLANS, ELEV. & BLDG. LOBBIES	(LVL 2 - MEZZANINE)	1/4" = 1'-0"
		A-4.36	PAVING PLANS, ELEV. & BLDG. LOBBIES	(LVL 3 - PODIUM)	1/4" = 1'-0"
		A-4.37	PAVING PLANS, ELEV. & BLDG. LOBBIES	(LVL 4 - CHILD CARE)	1/4" = 1'-0"
	*	A-4.38	PAVING PLANS, CORE, MID RISE	(LVL'S 5 TO 15, TYP.)	1/4" = 1'-0"
		A-4.39	PAVING PLANS, CORE, HIGH RISE	(LVL 16)	1/4" = 1'-0"
		A-4.40	PAVING PLANS, CORE, HIGH RISE	(LVL 17)	1/4" = 1'-0"
	*	A-4.41	PAVING PLANS, CORE, HIGH RISE	(LVL'S 18 TO 25, TYP.)	1/4" = 1'-0"
		A-4.42	PAVING PLANS, SPECIAL FUNCTIONS	(LVL'S P1 THRU P4)	1/4" = 1'-0"
		A-4.43	PAVING PLANS, SPECIAL FUNCTIONS	(LVL 1)	1/4" = 1'-0"
		A-4.44	PAVING PLANS, SPECIAL FUNCTIONS	(LVL 2)	1/4" = 1'-0"
		A-4.45	PAVING PLANS, SPECIAL FUNCTIONS	(LVL 3)	1/4" = 1'-0"
		A-4.46	PAVING PLANS, SPECIAL FUNCTIONS	(LVL 4)	1/4" = 1'-0"
		A-4.51	REFL. CLG. PLANS, ELEV. LOBBY, P.S. SHUTTLE	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
		A-4.52	REFL. CLG. PLANS, ELEV. LOBBY, P.S. SECURED	(LVL'S 1,P1 THRU P4)	1/4" = 1'-0"
	*	A-4.53	REFL. CLG. PLANS, ELEV. & BLDG. LOBBIES	(LVL P1 - MACY ST.)	1/4" = 1'-0"
	*	A-4.54	REFL. CLG. PLANS, ELEV. & BLDG. LOBBIES	(LVL 1 - METRO PLAZA)	1/4" = 1'-0"
	*	A-4.55	REFL. CLG. PLANS, ELEV. & BLDG. LOBBIES	(LVL 2 - MEZZANINE)	1/4" = 1'-0"
		A-4.56	REFL. CLG. PLANS, ELEV. & BLDG. LOBBIES	(LVL 3 - PODIUM)	1/4" = 1'-0"
		A-4.57	REFL. CLG. PLANS, ELEV. & BLDG. LOBBIES	(LVL 4 - CHILD CARE)	1/4" = 1'-0"
	*	A-4.58	REFL. CLG. PLANS, CORE, MID RISE	(LVL'S 5 TO 15, TYP.)	1/4" = 1'-0"
	*	A-4.59	REFL. CLG. PLANS, CORE, HIGH RISE	(LVL 16)	1/4" = 1'-0"
		A-4.60	REFL. CLG. PLANS, CORE, HIGH RISE	(LVL 17)	1/4" = 1'-0"
	*	A-4.61	REFL. CLG. PLANS, CORE, HIGH RISE	(LVL'S 18 TO 25, TYP.)	1/4" = 1'-0"
		A-4.62	REFL. CLG. PLANS, SPECIAL FUNCTIONS	(LVL'S P1 THRU P4)	1/4" = 1'-0"
		A-4.63	REFL. CLG. PLANS, SPECIAL FUNCTIONS	(LVL 1)	1/4" = 1'-0"
		A-4.64	REFL. CLG. PLANS, SPECIAL FUNCTIONS	(LVL 2)	1/4" = 1'-0"
		A-4.65	REFL. CLG. PLANS, SPECIAL FUNCTIONS	(LVL 3)	1/4" = 1'-0"
		A-4.66	REFL. CLG. PLANS, SPECIAL FUNCTIONS	(LVL 4)	1/4" = 1'-0"

MV&P

SCH DES	DES DEV	C.D. & SHEET NO	SHEET INDEX SHEET CONTENT:		SCALE
0	0	8	SERIES 400 (CONTINUED)		
		A-4.71	SECTIONS, STAIRS	(TOWER)	1/4" = 1'-0"
		A-4.72	SECTIONS, STAIRS	(TOWER)	1/4" = 1'-0"
		A-4.73	SECTIONS, STAIRS	(LOW RISE)	1/4" = 1'-0"
		A-4.74	SECTIONS, STAIRS	(LOW RISE)	1/4" = 1'-0"
		A-4.75	SECTIONS, ELEVATOR SHAFTS	(P.S. & LOW RISE)	1/4" = 1'-0"
		A-4.76	SECTIONS, ELEVATOR SHAFTS	(MID & HIGH RISE)	1/4" = 1'-0"
		A-4.81	DETAILS, STAIRS		1 1/2" = 1'-0"
		A-4.82	DETAILS, STAIRS		1 1/2" = 1'-0"
0	4	18	SERIES 500		
	*	A-5.01	INTERIOR ELEVATIONS, BUILDING LOBBY,	MACY STREET	1/4" = 1'-0"
		A-5.02	INTERIOR ELEVATIONS, BUILDING LOBBY,	MACY STREET	1/4" = 1'-0"
	*	A-5.03	INTERIOR ELEVATIONS, BUILDING LOBBY,	METRO PLAZA	1/4" = 1'-0"
		A-5.04	INTERIOR ELEVATIONS, BUILDING LOBBY,	METRO PLAZA	1/4" = 1'-0"
		A-5.05	INTERIOR ELEVATIONS, BUILDING LOBBY,	METRO PLAZA	1/4" = 1'-0"
	*	A-5.06	INTERIOR ELEVATIONS, ELEVATOR LOBBY,	TYP. CORE	1/4" = 1'-0"
		A-5.07	INTERIOR ELEVATIONS, ELEVATOR LOBBY,	TYP. CORE	1/4" = 1'-0"
		A-5.08	INTERIOR ELEVATIONS, ELEVATOR LOBBY,	TYP. CORE	1/4" = 1'-0"
	*	A-5.11	INTERIOR ELEVATIONS, TYPICAL RESTROOMS		1/4" = 1'-0"
		A-5.12	INTERIOR ELEVATIONS, TYPICAL RESTROOMS		1/4" = 1'-0"
		A-5.13	INTERIOR ELEVATIONS, TYPICAL LOCKER ROOMS		1/4" = 1'-0"
		A-5.21	INTERIOR ELEVATIONS, MISC. SPECIAL FUNCTIONS		1/4" = 1'-0"
		A-5.22	INTERIOR ELEVATIONS, MISC. SPECIAL FUNCTIONS		1/4" = 1'-0"
		A-5.31	INTERIOR DETAILS		1 1/2" = 1'-0"
		A-5.32	INTERIOR DETAILS		1 1/2" = 1'-0"
		A-5.33	INTERIOR DETAILS		1 1/2" = 1'-0"
		A-5.34	INTERIOR DETAILS		1 1/2" = 1'-0"
		A-5.35	INTERIOR DETAILS		1 1/2" = 1'-0"
0	12	18	SERIES 600		
		A-6.01	WALL TYPES, TYPICAL PARTITIONS		3" = 1'-0"
		A-6.02	WALL TYPES, TYPICAL PARTITIONS		3" = 1'-0"
		A-6.03	WALL TYPES, MISC. DETAILS		1 1/2" = 1'-0"
	*	A-6.11	SCHEDULES, INTERIOR FINISHES	PRKG. STRUCT. LEVELS	NONE
	*	A-6.12	SCHEDULES, INTERIOR FINISHES	PRKG. STRUCT. LEVELS	NONE
	*	A-6.13	SCHEDULES, INTERIOR FINISHES	LOW RISE LEVELS	NONE
	*	A-6.14	SCHEDULES, INTERIOR FINISHES	LOW RISE LEVELS	NONE
	*	A-6.15	SCHEDULES, INTERIOR FINISHES	MID & HIGH RISE LEVELS	NONE
	*	A-6.16	SCHEDULES, INTERIOR FINISHES	MID & HIGH RISE LEVELS	NONE
	*	A-6.21	SCHEDULES, DOORS	PRKG. STRUCT. LEVELS	NONE
	*	A-6.22	SCHEDULES, DOORS	PRKG. STRUCT. LEVELS	NONE
	*	A-6.23	SCHEDULES, DOORS	LOW RISE LEVELS	NONE
	*	A-6.24	SCHEDULES, DOORS	LOW RISE LEVELS	NONE
	*	A-6.25	SCHEDULES, DOORS	MID & HIGH RISE LEVELS	NONE
	*	A-6.26	SCHEDULES, DOORS	MID & HIGH RISE LEVELS	NONE
		A-6.31	DOOR DETAILS, TYPICAL HEAD, JAMB, & SILL DETAILS		3" = 1'-0"
		A-6.32	DOOR DETAILS, TYPICAL HEAD, JAMB, & SILL DETAILS		3" = 1'-0"
		A-6.33	DOOR DETAILS, TYPICAL HEAD, JAMB, & SILL DETAILS		3" = 1'-0"
0	3	12	SERIES 700		
	*	A-7.01	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.02	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.03	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.04	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
	*	A-7.11	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.12	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.13	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
		A-7.14	MISCELLANEOUS DETAILS		1 1/2" = 1'-0"
	*	A-7.21	MISCELLANEOUS DETAILS	SECURITY DESK	3/4" = 1'-0"
		A-7.22	MISCELLANEOUS DETAILS	SECURITY DESK	3/4" = 1'-0"
		A-7.23	MISCELLANEOUS DETAILS	ELEVATOR CABS	3/4" = 1'-0"
		A-7.24	MISCELLANEOUS DETAILS	ELEVATOR CABS	3/4" = 1'-0"
21	69	169	TOTAL SHEETS		

MV&P

RTD HEADQUARTERS
AT GATEWAY CENTER – PHASE I
LOS ANGELES, CALIFORNIA

BUILDING AREA TABULATION: 18,482 S.F. TOWER PLAN
MV&P JOB NO.: 91-400
DATE: DECEMBER 20, 1991

FLOOR I.D.			BUILDING TABULATION:					SINGLE TENANT:				RTD "COMMON & AUXILIARY AREA"				CORE AREA: (L.A.N. & C.E. RMS. NOT INCLUDED)					
FL. TO FL HEIGHT	LEVEL		LA. ZNG. GROSS AREA	LA. BLDG. GROSS AREA	RTD GROSS AREA	RTD RNTBL AREA	R/G	RTD USABLE AREA	U/G	R/U	RNTBLE EFFCY U/R	SHAFT AREAS: ELEV SHFT	STAR SHFT	MECH SHFT	BLDG. LOBBY	ELEV. LOBBY	SERV. VEST.	REST RMS.	JAN. CLS.	ELEC. ROOM	MECH. ROOM
	PARKING STRUCTURE AREA:																				
9.17	LVL	P4			0																
9.17	LVL	P3			0																
10.33	LVL	P2	22,850	22,850	22,850	22,850	100.0%	22,850	100.0%	1.00	100.00%										
18.33	LVL	P1	31,500	31,500	31,500	31,500	100.0%	31,500	100.0%	1.00	100.00%										
46.99	SUBTTL		54,350	54,350	54,350	54,350	100.0%	54,350	100.0%	1.00	100.00%	0	0	0	0	0	0	0	0	0	0
	LOW RISE AREA:																				
14.33	LVL	1	50,270	53,000	53,000	50,270	94.8%	43,110	81.3%	1.17	85.76%	790	1,940	0	8,680	350	130	0	0	0	0
14.33	LVL	2	37,460	40,800	40,800	37,460	91.8%	35,900	88.0%	1.04	95.84%	1,680	1,680	0	0	150	480	860	70	0	0
20.00	LVL	3	38,220	41,000	41,000	38,220	93.2%	30,500	74.4%	1.25	79.80%	1,660	1,120	0	5,370	1,160	120	1,070	0	0	0
18.00	LVL	4	23,310	27,350	27,500	23,600	85.8%	22,940	83.4%	1.03	97.20%	1,500	2,250	150	0	200	90	0	80	70	220
86.66	SUBTTL		149,260	162,150	162,300	149,550	92.1%	132,450	81.6%	1.13	88.57%	5,610	6,990	150	12,050	1,860	820	1,930	150	70	220
	MID RISE AREA:																				
13.33	LVL	5	18,631	20,377	20,500	18,918	92.3%	17,654	86.1%	1.07	93.32%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	6	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	7	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	8	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	9	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	10	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	11	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	12	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	13	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	14	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
13.33	LVL	15	18,613	18,359	18,482	16,900	91.4%	15,636	84.6%	1.08	92.52%	1,059	400	123	0	265	97	518	97	70	217
146.66	SUBTTL		184,761	203,967	205,320	187,918	91.5%	174,014	84.6%	1.08	92.60%	11,649	4,400	1,353	0	2,915	1,067	5,698	1,067	770	2,387
	HIGH RISE AREA:																				
13.33	LVL	16	15,672	16,359	16,482	15,959	86.3%	14,697	79.5%	1.09	92.09%	1,800	600	123	0	265	97	550	83	70	217
13.33	LVL	17	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	18	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	19	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	20	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	21	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	22	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	23	17,112	18,359	18,482	17,399	94.1%	16,137	87.3%	1.08	92.75%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	24	16,112	16,359	16,482	15,399	93.4%	14,137	85.8%	1.09	91.80%	560	400	123	0	265	97	550	83	70	217
13.33	LVL	25	15,112	16,359	16,482	15,399	93.4%	14,137	85.8%	1.09	91.80%	560	400	123	0	265	97	550	83	70	217
133.33	SUBTTL		166,680	179,590	180,820	168,550	93.2%	155,930	86.2%	1.08	92.51%	6,840	4,200	1,230	0	2,650	970	5,500	830	700	2,170
	BUILDING SUMMARY:																				
346.66	TOTAL		554,051	600,057	602,790	560,368	93.0%	516,744	85.7%	1.08	92.22%	24,099	15,590	2,733	12,050	7,425	2,857	13,128	1,847	1,540	4,777

AREA DEFINITIONS:

L.A. ZONING GROSS: REPRESENTS ALL AREAS WITHIN THE EXTERIOR WALLS EXCLUDING EXTERIOR WALLS, STAIRS, SHAFTS, BUILDING OPERATING EQUIPMENT OR MACHINERY, PARKING AREAS, AND BASEMENT STORAGE AREAS. (REF: L.A. ZONING CODE '91)

L.A. BLDG. CODE GR.: REPRESENTS ALL AREAS INCLUDED W/ THE SURROUNDING EXTERIOR WALLS EXCLUDING VENT SHAFTS AND COURTS. (REF: L.A. BUILDING CODE '91)

RTD GROSS AREA: REPRESENTS ALL AREAS WITHIN THE BUILDING GLASS LINE, INCLUCING ALL VERTICAL PENETRATIONS, EXCLUDING ALL PARKING AREAS. (REF: RTD'S SPACE NEEDS ASSESSMENT '89)

RTD RENTABLE AREA: REPRESENTS THE RTD GROSS AREA MINUS ALL ELEVATOR, STAIR, AND MECHANICAL SHAFTS. (REF: RTD'S SPACE NEEDS ASSESSMENT '89)

RTD USABLE AREA: REPRESENTS THE RTD GROSS AREA MINUS ALL SHAFT AND CORE AREAS. (REF: RTD'S SPACE NEEDS ASSESSMENT '89)

L.A. AREA DEDUCTIONS:

1. TOTAL SHAFT AREA:
   SHAFTS W/O BLDG LOBBIES: 42,422
   % OF GROSS AREA: 7.0%
2. TOTAL CORE AREA:
   CORE AREA W/ BLDG LOBBIES: 43,624
   % OF GROSS AREA: 7.2%
3. TOTAL SHAFT & CORE AREA:
   TOTAL OF NO.'S 1 AND 2 ABOVE 86,046
   % OF GROSS AREA: 14.3%

RTD AREA DEDUCTIONS:

1. TOTAL COMMON & AUXILIARY AREA:
   SHAFTS W/ BLDG LOBBIES: 54,472
   % OF GROSS AREA: 9.0%
2. TOTAL CORE AREA:
   CORE AREA W/O BLDG LOBBIES: 31,574
   % OF GROSS AREA: 5.2%
3. TOTAL SHAFT & CORE AREA:
   TOTAL OF NO.'S 1 AND 2 ABOVE: 86,046
   % OF GROSS AREA: 14.3%

RTD HEADQUARTERS
AT GATEWAY CENTER – PHASE I
LOS ANGELES, CALIFORNIA

PARKING STRUCTURE AREA TABULATION
MV&P JOB NO.: 91–400
OATE: OECEMBER 20, 1991

FLOOR I.O.		PARKING STRUCTURE TABULATIO				SHAFT AREAS:				CORE AREAS:						RTD SPEC. FUNC.
HEIGHT FL. TO FL	LEVEL	GROSS PRKG AREA	GSF PER CAR	NET PRKG. AREA	NSF PER CAR	ELEV SHAFT	STAIR SHAFT	MECH SHAFT	BLDG. LOBBY	ELEV LOBBY	LOADG & SRV.VST.	REST ROOMS	JAN. & STOR	TEL & ELEC.	MECH. ROOM	
9.17	LVL P4	110,000	431	102,105	400	870	585	0	0	540	125	0	0	0	5,975	0
9.17	LVL P3	110,000	431	103,355	405	870	585	3,725	0	540	125	0	0	0	1,000	0
10.17	LVL P2	100,320	662	59,604	509	876	1,430	2,517	820	575	7,100	350	650	2500	1,048	22,850
17.50	LVL P1	73,500	737	32,833	576	1,007	910	3,550	820	580	100	2200	0	0	0	31,500
46.01	TOTAL	393,820	496	297,897	436	3,223	3,510	9,792	1,640	2,235	7,450	2,550	650	2,500	8,023	54,350

RTD HEADQUARTERS
AT GATEWAY CENTER – PHASE I
LOS ANGELES, CALIFORNIA

PARKING TABULATION
MV&P JOB NO.: 91–400
OATE: OECEMBER 20, 1991

FLOOR I.O.		PARKING ALLOCATION PER LEVEL:											TOTALS:					
	LEVEL	PUBLIC						SECURED					TOTAL STD \LVL	TOTAL COMP \LVL	TOTAL PRM \LVL	TOTAL TDM \LVL	TOTAL PRKG \LEV	SQ. FT. PER CAR
		PRIME		TANDEM		HC	SUB	PRIME		TANDEM		SUB						
		STD	COMP	STD	COMP	STD	TOTAL	STD	COMP	STD	COMP	TOTAL						
	LVL P4	108	85	0	62	0	255	0	0	0	0	0	108	147	193	62	255	431
	LVL P3	6	28	0	10	0	44	102	57	0	52	211	108	147	193	62	255	431
	LVL P2	10	7	0	7	6	30	39	14	12	22	87	67	50	76	41	117	662
	LVL P1	10	7	0	9	6	32	24	0	0	1	25	40	17	47	10	57	737
TOTAL		134	127	0	88	12	361	165	71	12	75	323	323	361	509	175	684	498
PERCENTAGE		19.6%	18.6%	0.0%	12.9%	1.8%	52.8%	24.1%	10.4%	1.8%	11.0%	47.2%	47.2%	52.8%	74.4%	25.6%	100.0%	

NOTE: THE RTD PARKING TABULATION INCLUDES ALL OF THE AREA IN THE GATEWAY PARKING STRUCTURE TO THE NORTH OF COLUMN LINE 10, EXCLUDING THE AREA BETWEEN COLUMN LINES A.3 AND C TO THE SOUTH OF COLUMN LINE 8.

RTD HEADQUARTERS DECEMBER 23, 1991
PROGRAM AREA ANALYSIS

MV&P

LEVEL		DEPT. DESCRIPTION	RTD PROGRAM RSF	MV&P ACTUAL RSF
LVL P4		PARKING AREA		
		PUMP ROOM		
		WATER STORAGE		
		MECHANICAL		
		COMMON & AUXILIARY AREAS		
		TOTAL		
LVL P3		PARKING AREA	0	0
		FIRE PUMP ROOM		
		FUEL PUMP ROOM		
		COMMON & AUXILIARY AREAS	0	0
		TOTAL	0	0
LVL P2	9948	TIME TABLE STOR.	1,803	1,800
	9915	JANITOR OFF. & STOR.	644	650
	9812	PRINT SHOP INCL STOR.	8,651	8,350
		STAGING	0	565
		RECEIVING OFF. AND STOR.	0	425
		COMP. RECEIVING	300	300
		DWP AND SWITCH GREAR RM.	0	0
		RESTROOMS	0	350
	9910	LOADING DOCK	3,520	3,745
		LOBBY (MACY ST.)	0	750
		SUBTOTAL	14,918	16,935
		PARKING AREA		
		COMMON & AUXILIARY AREAS		
		TOTAL	14,918	16,935
LVL P1	9925	BUILDING ENGINEER	2,430	2,560
	9804	MAIL SERVICES	1,947	2,000
	9660	STOPS AND ZONES	1,790	2,000
	1800	TRANSIT POLICE	SEE LEV 1	9,174
		PISTOL RANGE	0	2,200
		HOLDING FACILITY	0	1,235
	9947	TICKET STORAGE	1,352	1,680
	9936	BUILDING SERVICES	2,190	2,200
		SUBTOTAL	9,709	23,049
		PARKING AREA		
		COMMON & AUXILIARY AREAS		
		TOTAL	19,418	46,098
PARKING STRUCTURE TOTAL			34,336	63,033

MV&P

LEVEL	DEPT.	DESCRIPTION	RTD PROGRAM RSF	MV&P ACTUAL RSF
LVL 1	1800	TRANSIT POLICE	21,000	10,000
	9783	CUSTOMER CENTER	4,300	4,600
	9786	REDUCED FARE OFF.	SEE 9783	SEE 9783
		TENANT MAIL SERV.		300
	9789	LOST & FOUND	SEE 9783	SEE 9783
	9811	PRINTING ADMIN.	1,606	1,700
		RETAIL SPACE	14,950	8,000
	4803	CUSTOMER RELATIONS	5,197	6,300
	4800	DIR.CUSTOMER RELATN.	612	600
		RESTROOMS		500
	9510	EMPLOYMENT	7,262	7,175
		MACY LOBBY	0	
		PLAZA LOBBY	1,000	
		SUBTOTAL	55,927	39,175
		SHARED SERVICES		
		COMMON & AUX. AREAS		
		TOTAL	55,927	39,175
LVL 2	9774	DATA CENTER	14,477	20,000
	9781	TELECOM ADMIN	1,905	SEE ABOVE
	9782	TELECOM PBX	4,560	SEE ABOVE
		BUS DISPATCH CNTR	12,320	13,150
		SUBTOTAL	33,262	33,150
		SHARED SERVICES		
		COMMON & AUX. AREAS		
		TOTAL	33,262	33,150
LVL 3	9935	SECURITY CENTER	386	300
		RETAIL	0	675
	9759	BOARD ROOM	6,968	4,690
	9762	PRESS ROOM	463	450
	9756	CAFETERIA	13,997	9,000
	9765	CNTRL.CONF.FACILITY	4,000	4,262
	1200	DIST. SECTY. / BOARD SUITE	5,170	6,800
		SUBTOTAL	30,984	26,177
		SHARED SERVICES		
		COMMON & AUX. AREAS		
		TOTAL	30,984	26,177
LVL 4	9840	CHILD CARE CTR (INDOOR)	7,600	7,900
	9800	CREDIT UNION	3000	3300
	9801	EMPLOYEE ACTIVITY	2152	2500
	0	HEALTH/ FITNESS	6,000	6,000
		SUBTOTAL	18,752	19,700
		SHARED SERVICES		
		COMMON & AUX. AREAS		
		TOTAL	18,752	19,700
LOW RISE TOTAL			138,925	118,202

MV&P

LEVEL	DEPT. DESCRIPTION	RTD PROGRAM RSF	MV&P ACTUAL RSF
LVL 5		18,918	18,918
LVL 6 THRU LVL15	TYPICAL MID RISE FLOOR	16,900	16,900
MID RISE TOTAL		187,918	187,918
LVL 16		15,959	15,959
LVL17 THRU LVL23	TYPICAL HIGH RISE FLOOR	17,399	17,399
LVL 24 LVL 25		15,399	15,399
HIGH RISE TOTAL		168,550	168,550
TOTAL RNTB'L SQUARE FEET		529,729	537,703

RENTABLE AREA:
REPRESENTS THE USABLE AREA PLUS A 12% CIRCULATIC
ELEVATOR LOBBIES, RESTROOMS, COLUMNS, UTILITY/JAI
AND BUILDING MECHANICAL SPACES.
THE MAIN LOBBY , LOADING DOCK, AND BUILDING ENGIN
HAVE A 0% CIRCULATION FACTOR IN THEIR RENTABLE AF

RTD SHARED SERVICES:
9806 COPIER & MAIL STATIONS
9808 COFFEE STATIONS

COMMON & AUXILIARY AREAS:
ELEVATOR SHAFTS, PITS, & EQUIP.
STAIR SHAFTS
MECH. & ELEC. ROOMS
LOBBY AREAS

McLarand,
Vasquez &
Partners, Inc.

CATELLUS DEVELOPMENT CORPORATION/
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

RTD HEADQUARTERS
Los Angeles, California

PRELIMINARY OUTLINE SPECIFICATION

December 20, 1991

MV&P

Carl McLarand, A.I.A.
Ernesto M. Vasquez, A.I.A.
Arthur C. Eckner, A.I.A.

I. General Description:

A. Project Description

Site: Gateway Center is a portion of the Alameda District mixed use commercial development in the city of Los Angeles, California. Gateway Center is approximately 8.4 acres located directly to the east of Union Station in downtown Los Angeles and is bordered by Macy Street on the north, a realigned Vignes Street to the east, the El Monte Busway and Hollywood Freeway to the south, and the Amtrack train yard to the west.

Project: Phase I Gateway Center is comprised of four separate contract elements, including:

1. The RTD Headquarters' office tower and subterranean parking as outlined in the project description below.
2. The Gateway Center Parking Structure with four levels of subterranean public parking for approximately 1100 cars. The elevations of these levels correspond to those of the RTD subterranean levels. The Gateway Center parking levels and the RTD Headquarters' parking levels also are structurally, electrically and mechanically linked together and share a common automobile circulation pattern without obstruction.
3. Metro Plaza is a landscaped bus plaza that serves as the roof for the Gateway Center subterranean parking structure.

Architecture & Planning
695 Town Center Drive
Suite 300
Costa Mesa, CA 92626
FAX: 714. 549. 5297
714. 549. 2207

4. The East Portal serves as a point of access to an existing subterranean Metro Rail station on the east side of the project site. It includes a Plaza level and one subterranean level that are contiguous with Metro Plaza and the upper level of the Gateway Center parking structure.

MV&P

RTD Headquarter's: The site for this portion of work is located on approximately 2.0 acres at the extreme north end of the Gateway Center site bordered by a widened Macy Street on the north, a realigned Vignes Street on the east, the new Metro Plaza and the Gateway Center Parking Structure on the south, and the existing Amtrack train yard on the west. The office tower provides approximately 600,000 square feet of BOMA gross area in a 25 story building with four levels of subterranean parking for approximately 800 cars. The building is segmented vertically into four portions which are identified as four subterranean parking levels, four lowrise levels, eleven midrise levels, and ten highrise levels.

II. General Information:

A. PROJECT DATA (PRELIMINARY)

1. **PROJECT ADDRESS:**
Corner of Macy and Vignes Streets at Union Station
Los Angeles, California

2. **LEGAL DESCRIPTION:**
To be Determined

3. **PROJECT BENCH MARK:**
B.M. No. 12-04270 City of Los Angles datum. Wire spike in north curb Macy Street 5.5 feet east of beginning of curve curb return east of Alameda Street west end catch basin.

4. **PROJECT DATUM POINT:**
Elevation = 278.352 feet (1980 Adjustment)

5. **ZONING CLASSIFICATION:** (Reference: Proposal Guidelines of April 16, 1991)

Current: (Q)M3	Heavy Industrial
Allowable Uses:	Government Support
Floor Area Ratio:	3:1 Density

MV&P

Proposed:	Union Station Specific Plan
Allowable Uses:	Government Support, Private Offices, Hotel and Retail
Floor Area Ratio:	4:1 Average Density

6. **SITE AREA:**
The RTD Headquarters Building occupy a portion of the Gateway Center Project Site of approximately 2.5 acres (107,400 s.f.) in area.

B. CODE ANALYSIS:

1. **Code Authorities:**
City of Los Angeles Building Code, 1991 Edition
City of Los Angeles Mechanical Code, 1991 Edition
City of Los Angeles Plumbing Code, 1991 Edition
City of Los Angeles Electrical Code, 1991 Edition
City of Los Angeles Bureau of Engineering Standards
California State Accessibility Standard
Americans with Disability Act, Titles II, III, & V
State of California Energy Conservation Standards (Title 24)
State of California Occupational Safety & Health (OSHA)
U.S. Department of Justice, Department of Corrections (Article 15)

2. **OCCUPANCY CLASSIFICATIONS:**
RTD Headquarters Tower: B2 - Mixed Use Including:

- General Offices
- Assembly Facilities (Maximum 200 Occupants)
- Cafeteria Facilities (Maximum 600 Occupants plus Staff)
- Classroom Facilities (Maximum 12 Occupants per Classroom)
- Day Care Facilities (Maximum 80 Children plus Staff)

MV&P

RTD Subterranean Parking Structure: B1 Mixed Use Including:

- Public and Secured Parking
- Limited Vehicular Service
- Office
- Retail
- Printing Facilities
- Public Station
- Workshops
- Storage facilities
- Building Mechanical/Electrical

3. **CONSTRUCTION TYPE CLASSIFICATION:**
Type I, Fire resistive, High Rise
Parking Structure and Tower are defined as one structure

4. **FIRE DISTRICT:**
City of Los Angeles District No. 2

5. **FIRE PROTECTION:**
Combination Standpipe and Fire Sprinkler System:
- All Public areas

Portable Fire extinguishers:
- F.E.C. Throughout Building Corridors

Halon System (with abort capabilities):
- Computer Room
- Telecom PBX Room
- Tape Storage Room

6. **HIGH-RISE FIRE/LIFE SAFETY EQUIPMENT:**
- Two Diesel Fire Pumps and One Electrical Fire Pump
- 105,000 Gallon Freeboard Water Storage Tank for 90,000 Gallon Usable Water Storage
- Emergency Generator Power and Back-up Generator for Special Functions
- Roof Top Emergency Helipad
- Break Out Panels for Smoke Evaluation

7. **FIRE SEPARATION:**
- Two hour for typical vertical shafts
- One hour between Tower and Parking Levels at floors and shaft penetrations
- One hour between special function spaces
- One hour between typical tower floors

MV&P

C. BASIC BUILDING CONSTRUCTION:

1. The parking levels P4 thru P1 will be of precast, prestressed concrete beams/columns and poured-in-place concrete. Portions of the Plaza outside of the building footprint to be poured-in-place concrete. Portions of the Plaza level within the building footprint to be structural steel and metal deck.

2. The office levels will be of structural steel framing. It is anticipated that the structural steel columns will start at the P1 level. Metal decking will start at the Plaza level.

D. SCHEMATIC DESIGN BUILDING STATISTICS:

Floor Levels	Gross Area	Fl. - Fl. Height
P4 (El. 248.00'±)	110,000 S.F. *	9'-2"
P3 (El. 257.17'±)	110,000 S.F. *	9'-2"
P2 (Macy St., El. 266.33'±)	100,320 S.F. *	10'-4"
P1 (Vignes St., El. 276.66'±)	73,500 S.F.	18'-4"
P1 (Mezzanine, El. 282.00'+)	-	-
Parking Structure Gross Subtotal	393,820 S.F.	47'-0"
1 (Plaza Level, El. 295.00'±)	53,000 S.F.	14'-4"
2 (Mezzanine El. 309.33'±)	40,800 S.F.	14'-4"
3 (Podium Level, El. 323.66'±)	41,000 S.F.	20'-0"
4 (El. 343.66'+)	27,500 S.F.	18'-0"
Low Rise Gross Subtotal	162,300 S.F.	66'-8"
5-15 (Mid-Rise Levels) @ 18,482 s.f. ea.	205,320 S.F.	13'-4 Typ. = 146'-8"
16-25 (High-Rise Levels)	180,820 S.F.	13'-4 Typ. = 133'-4"
Tower Gross Subtotal	548,444 S.F.	280'-0"
Parking Structure Special Functions Subtotal	54,350 S.F.	
Total Gross Building Area (P.S. N/I)	602,790 S.F.	

APPROXIMATE BUILDING HEIGHT:

From Macy Street	374.50'
From Vignes Street	364.33'
From Plaza Street **	350.17'

* This area includes 15,000 s.f. below Vignes Street, north of Column Line 8 and east of Column Line P.5.

** The building height from the plaza includes an additional 4'-0" high plinth.

E. SCHEMATIC DESIGN PARKING TABULATION

PROGRAM PARKING REQUIRED:(Ref: Headquarter Space Needs Assessment, Executive Summary August, 1989)

City of Los Angeles Requirements: N/A
RTD Requirements:

MV&P

• Police Fleet	46
• Police Officials	99
• Official Parking	204
• Public Parking	433
• Child Care Drop Off	6
• Handicap Parking	12
Total	800

PARKING PROVIDED:

	Prime Standard	Prime Compact	Tandem Standard	Tandem Compact	Total
Level P4	111	85	0	62	258
Level P3					
Public	9	28	0	10	47
Secured (RTD Fleet)	102	57	0	52	211
Total	111	85	0	62	258
Level P2					
Public	* 16	7	0	7	* 30
Secured (Police Office & Police Car)	39	14	12	22	87
Total	55	21	12	29	117
Level P1					
Public	* 16	7	0	9	*32
Secured (Police)	24	0	0	1	25
Total	40	7	0	10	57
TOTAL PROVIDED	317	198	12	163	690

Prime/Tandem Ratio:			Parking Totals:	
Prime =	515	(75%)	Secured Parking	323
Tandem =	175	(25%)	Public Parking	367
Standard =	329	(48%)	Handicap Parking	12
Compact =	361	(52%)		

* Includes 12 Handicap Parking Stalls.

III. **Specifications**

CONDITIONS OF CONTRACT

Not issued.

Division 1 - GENERAL REQUIREMENTS

MV&P

Not issued.

Division 2 - SITEWORK

DIV. 2 General Systems

A. Specific soil preparation shall be per the recommendation in the Preliminary Geotechnical Report by Law/Crandall & Associates dated December 13, 1991.

B. Excavation will be required with perimeter shoring as necessary on three sides for Levels P1 through P4 of the parking . The P4 level building pad is at approximately elevation 248.0 ±. Excavation will be required to approximate elevation 246.5 ± not including footings.

C. The geotechnical report has provided preliminary information indicating that the project will require a spread footing foundation supporting building columns with an allowable soil pressure of 10,000 lbs/sq.ft. Preliminary maximum dead plus live column load is to be approximately 4,500 kips under the tower, 3,000 kips elsewhere.

D. Excavation for footings, grade beams at shear frames and parking areas.

E. Over excavation as required by the geotechnical engineer.

F. Perimeter subsoil drainage system as required by the building department.

G. Utility systems including electrical, fire protection, storm and sanitary sewers, gas, and domestic water.

H. Landscaping and planting under separate specification.

I. Shoring is anticipated along the perimeter of the subterranean levels of the Gateway Center site along Macy Street, Vignes Street and the western property line adjacent to existing Amtrak track #8.

Sitework Testing and Inspection

Refer to Division 1, Quality Control

02150 Shoring and underpinning

Refer to preliminary soils report prepared by Law/Crandall & Associates #L91291.ADEO dated December 13, 1991.

MV&P

02276 Earth Retainage

Refer to soils report prepared by Law/Crandall & Associates #L91291.ADEO dated December 13, 1991.

Division 3 - CONCRETE

Div. 3 General Systems

A. Footings: Not applicable.

B. Slab-on-Grade 13" thick mild steel reinforced concrete. Slab design to be as required to sustain the anticipated 5 feet of hydrostatic for the P4 level slab on grade.

C. Below grade perimeter walls: Poured-in-place reinforced concrete. Alternate - Shot-Crete at shoring walls.

D. The above grade office levels and that portion of Parking Level P1 below the office tower shall be framed of structural steel supports with 3" deep composite metal decking (see Division 5) with 3-1/4" light concrete topping (thickness to be as required for the structural design).

E. The parking levels beneath the office tower shall be framed with precast- prestressed concrete beams, girders, and columns. The beams are to be spaced at 10' to 15' on center. Slab to be 5" thick mild steel reinforced concrete. The loading criteria shall be:

Load Type	Load
Dead Load	As Required
Parking Areas	50 psf Reducible
Loading Dock	250 psf
Transformer Area	250 psf
Mechanical Equipment Rooms	125 psf or Equipment Weight
Office Floors	80 psf reducible
Storage Areas	150 psf

Concrete Testing and Inspection

Refer to Division 1, Quality Control.

03100 Forms

A. Construct formwork in accordance with ACI 301 and 347.

B. Lumber: WCLIB "construction" grade or better, WWPA No. 1 or better.

C. Plywood: PS I-74, Group 1, Exterior B-B Plyform or better, minimum 5-ply and 5/8" thick.

D. Minimum Time of Form Removal:

1. Beam sides but not shoring - 3 days.
2. Column Forms and Wall Forms - 2 days.
3. Forms for slabs but not shoring - 7 days.

03200 Reinforcing Steel

A. Deformed Bars: ASTM A615 Grade 60.

B. Welded Wire Fabric: ASTM A185, 60 KSI minimum tensile strength.

C. Tie Wire: Annealed steel, 16 gage minimum.

D. Welding Electrodes: AWS D5.1, 80 or 90 Series, low hydrogen type per AWS D1.4.

03300 Concrete General

A. Aggregate: ASTM C-33 (Hardrock) and ASTM C330 (Lightweight).

B. Cement: ASTM-150 Type I or II, low alkali.

C. 28-day compressive strengths:

1. All structural concrete f'c = 4,000 psi U.N.O.
2. Concrete columns and walls f'c = 5,000 psi.
3. Concrete over steel deck f'c = 3,000 psi.
4. Concrete footings and slab-on-grade f'c = 3,000 psi.

D. Placement and Protection: Comply with ACI standards.

03345 Concrete Finishes

A. Formed Surfaces:

1. Unexposed Rough Form Finish
2. Exposed Sacked (except for interior levels of the parking structure)

MV&P

B. Slabs:

1. Rough Slab Finish: Floors to receive deferred setting beds or cementitious toppings or slabs.
2. Monolithic Trowel Finish: For slabs not indicated or specified to receive another finish.
3. Steel Float Finish: Floors to receive the following - carpet, resilient flooring, elastomeric coatings, thin set tile, roof slabs and floor slabs to receive membrane waterproofing.
4. Broom Finish (light): Parking area slabs.

C. Curing - Sealer - Hardener: Two application Type; apply to the following surfaces:

1. Exterior concrete walking slabs.
2. Exterior vehicle traffic slabs.
3. Concrete loading dock slab.
4. Interior slabs to remain exposed including all vehicle and walking areas inside parking structure.

03350 Site Concrete (Hardscape)

Under separate Specification.

Division 4 - MASONRY

Div. 4 General Systems

A. Exterior Cladding: Stone (to be specified), 3cm secured to steel stud backing - two types minimum.

B. Lobby Flooring: Stone (to be specified) 2cm on conventional setting bed.

C. Lobby Walls and Column Facing: Stone (to be specified), 2cm secured to steel stud backing. Custom ceramic tile accents.

D. Lavatory Countertops: Granite, with backsplash.

E. Restroom Walls: Ceramic Tile thinset to gypsum board backing. See division 9.

F. Interior Parking Area Partitions: Reinforced and fully grouted concrete masonry units (8x8x16).

04220 Concrete Unit Masonry

MV&P

A. Concrete Masonry Units: Shall conform to ASTM C-90 with a minimum compressive strength of 1,500 psi Grade N-1.

B. Site Sample: Provide mock-ups for:

1. Interior stone wall veneer area about 60 s.f. in size.
2. Stone flooring area about 200 s.f. in size.
3. Complete stone countertop, installed in designated toilet room.
4. Restroom tile area about 50 s.f. in size.
5. Exterior Stone:

a) Three (3) complete column bases conditions.
b) Entry veneer area about 60 s.f. in size.

C. Granite:

To be determined.

D. Marble:

To be determined.

E. Joints:

1. Interior Stonework - 3/32".
2. Exterior Stonework - Minimum grout joint.

F. Stone Veneer Anchoring:

1. Interior Veneer - Spot and tie.
2. Exterior Veneer - Mechanically Fastened.

Division 5 - METALS

Div. 5 General Systems

A. Structural steel framing and metal composite decking for that portion of the Plaza Level, and on all elevated floor and roof levels. Floor loading criteria shall be:

Load Type	Load
Dead Load	As Required
Office Partitions	20 psf
Live Loads:	
* Office Areas	80 psf **R**educible
Core Areas	100 psf **R**educible w/o partitions
Plaza & Level 2	100 psf Unreducible
Mechanical Rooms	125 psf Unreducible or wt. of equip.
Loading Dock	250 psf Unreducible
Roof	20 psf Unreducible
Mechanical Penthouse	125 psf Unreducible or wt. of equip.
Helipad	100 psf Unreducible or 18 kips impact
Elevator Mech. Room	100 psf Unreducible or wt. of equip.

MV&P

* This is an increased design criteria over the code minimum of a 50 lbs/sq. ft. live load which can be reduced to 30 pounds. MV&P's experience over the past 10 years has found that the higher design criteria gives a greater quality and design flexibility during tenant improvement work than does the minimum criteria for a nominal added expense.

Structural steel beams to have shop fabricated 8" round unreinforced openings for the passage of fire sprinkler lines and electrical conduits and rectangular reinforced openings for mechanical ducts at specific locations, size to be determined.

Exterior Wall Attachment: Structure to be designed to support stone panel assemblies to accommodate gravity and lateral loads of the total assembly. The structural design for the Exterior Wall Panel assemblies and their attachment to the building shall be the responsibility of the design-build contractor furnishing these assemblies. The design-build contractor shall also be responsible for the design, fabrication and installation of any additional bracing or reinforcing of the building as a result of the design of the exterior wall assemblies. This includes lateral loads as well as gravity loads.

05065 Welded Stud Connectors

A. Conforming to ASTM A-108, typically 3/4" dia. x 5-1/4" U.N.O..

MV&P

05120 Structural Steel

A. Framing:

Shapes & Plates	ASTM A36, A572 - GR. 50
Pipe Columns	ASTM A53, GR. B
Tube Columns	ASTM A500, GR. B46

B. High Strength Bolts: Typical ASTM A325F, where specified ASTM A490F.

C. Unfinished Bolts: ASTM A307

05330 Metal Floor and Roof Decking

A. Composite Metal Decking: ASTM A446 Grade A, fy = 33,000 psi, 3" deep, galvanized: U.N.O., provide 'vented' type decking at all areas to receive roofing.

05500 Metal Fabrication

A. Steel plate, bar, shapes, and gratings for miscellaneous systems not specified elsewhere including, but not limited to:

1. Supports for lavatory and stone shelves.
2. Elevator pit ladders and machine room platforms.
3. Steel access ladders.
4. Gratings and frames.
5. Steel pipe railing.
6. Elevator threshold angles and guide rails supports.
7. Cast angles and embeds for exterior skin connection.
8. Embed tie backs and davit plates for window washing equipment.
9. Steel curb thresholds.
10. Guard posts.
11. Duct protectors.
12. Column/corner guards at parking area.
13. Loading dock edge angle and bumpers.
14. Miscellaneous stairs at roof to elevator equipment room and mechanical equipment.

05510 Pre-Engineered Steel Stairs

A. Pre-engineered, pre-fabricated stair assemblies with steel plate treads and landings, channel stringers and pipe rail assemblies. All metal to be primed and painted. (Non-slip treads). Rail assemblies to be designed to prevent the passage of a $" sphere through open areas.

MV&P

05700 Ornamental Metal

A. Interior Lobby:

1. Louvers and Grilles: Floors and wall grilles to be bronze with custom pattern. Ceiling grilles to be brushed aluminum, clear.
2. Panels and Accent Trim: Brushed bronze.
3. Lobby Area Railings: Oil rubbed and bright bronze panel rail system with custom bronze panel design and satin stainless steel 3-1/2" dia. top rail - Livers Bronze Company, Inc. (816) 833-2828 or approved equal.
4. Elevator Doors: Bronze panels with custom etched or bonded metal finishes.

B. Exterior Accents: #4 Satin Stainless steel.

C. Elevator Cabs: #4 Satin Bronze, doors and front panels. Exotic wood veneer (alternate, marble venire), sides and rear panels. Stone floors. #4 satin bronze ceiling, with an alternate for exotic wood. Satin stainless steel cornice, ceiling and bar grille. Alternate brushed aluminum, clear. Satin stainless steel, 1-1/4" dia. railings. Bronze cab and main lobby thresholds for level 1 and 3 lobbies, aluminum brushed thresholds at typical office level lobbies.

Division 6 - WOOD

Div. 6 General Systems

A. Miscellaneous (fire-treated) wood blocking and nailers.
B. Backing for countertops.
C. Telephone backboards.
D. Hardwood veneer wood paneling.

06100 Rough Carpentry

A. Standard Grade Douglas Fir: Non-structural wood furring, blocking, stripping, grounds, and miscellaneous nailings and backing.

1. Pressure preservative treated.
2. Fire-retardant treated.

MV&P

06400 Architectural Woodwork

A. Wood Paneling:

To be determined.

Division 7 - THERMAL & MOISTURE PROTECTION

Div. 7 General Systems

A. Roofing: Elastomeric, direct to concrete with traffic topping for helipad and equipment maintenance circulation. Type of roofing to be suitable for use over light-weight concrete aggregate.

B. Mechanical Penthouse: Elastomeric traffic topping.

C. Plaza Level Waterproofing: Protected fluid applied membrane.

D. Below grade Exterior Walls: Bituthene with protection board and drainage mat.

E. Water Tank Coating: Polyurethene type applied waterproofing.

F. Exterior Wall Insulation: Batt type fiber insulation with foil faced (fire-rated) vapor barrier equal to R-11.

G. Roof Insulation: Batt type fiber insulation with foil faced (fire-rated) vapor barrier equal to R-19, suspend on metal pins through metal deck.

H. Fire Safing: "Dow Corning" #790 or equal shall be used at exterior walls and all floor/ceiling penetrations.

I. Fireproofing: Spray-on type "Monocote" as required for Type I Construction on all steel supports and decking, unless encased in concrete with minimum coverage per Code. use "Topkrete Overcoat" at all parking area exposed fireproofing.

J. Sealant: Silicon sealant as required for particular joint performance. Sealant chemistry shall be compatible with exterior finish system and materials.

MV&P

K. Anti-Graffiti Sealer: Non-toxic sealer compatible with standard polymer type caulking and sealing materials, conforming to local AQMD requirements, and certified by the manufacturer as suitable to receive oil, alkyd, or water base paint. System must be approved by the City of Los Angeles.

07115 Fluid Applied Waterproofing

A. Over Horizontal Surfaces:

Fluid applied membrane (Liquid Membrane 6125 by American Hydrotech, Inc.) Concrete poured-in-place plaza paving reinforced with #4's at 24" each way. Alternate, mortar set precast pavers.

B. Over Vertical Surfaces:

Fluid applied membrane (Liquid Membrane 6125 by American Hydrotech, Inc.).

C. Protection Board:

Horizontal surfaces: 1/8" asphaltic hardboard "Apoc Protection Panels".

Vertical surfaces: Amocor PB4 protection board (1/4" min. thickness by Amoco Foam Products Co. (800)241-4402).

D. Drainage mat: At both horizontal and vertical surfaces: J-Drain, Miradrain or approved equal.

07120 Water Tank Coating

A. Polyurethene liquid applied type waterproofing specifically designed for water tanks, (Mult-I-Tuff 8800 by Multi-Chemical Products or approved equal), 80 mils minimum.

07175 Water Repellent Sealer

A. Ven-Chem, Inc., "Deep Seal" or approved equal.

07210 Building Insulation

A. Thermal Batt Insulation: ASTM C665, Type III (foil faced).

MV&P

B. Safing Insulation: UL and City of Los Angeles approved by USG, Tremco or equal with Code approved galvanized steel closures, clips and ties.

C. Hanger Wire: 12 gage galvanized annealed steel wires with matching retainer washers installed through metal decking.

07255 Cementitious Fireproofing

A. Cementitious spray-on, as required for Type I Construction "Monocote" W.R. Grace Company MK-6.

B. "Topkrete" overcoat at all exposed fireproofing within parking areas, loading dock areas, electrical utility vaults and mechanical rooms.

07220 Firestopping

A. Firestopping or smoke seals (firestop mortar, firestop sealant, firestop sleeve).

1. Dow Corning Corporation
2. 3M Contractor Products

07420 Composite Building Panels

A. Penthouse Enclosure: Brushed aluminum louver panels, custom color in aluminum storefront system.

B. Aluminum Products: Clark Metals, Inc. or approved equal.

07550 Elastomeric Roofing

A. Multi-Chemical Products, Inc., Mult-I-Thane System 4556-75 mils or approved equal by Tremco or Neogard.

1. Caulking: MC-283 or MC-284 two component polyurethane compounds.
2. Flashing: Uncured Uroprene 60 mils minimum.
3. Primer: MP-607 CAL
4. Base: Mult-I-Thane 4000
5. Membrane: Mult-I-Thane 5000
6. Topping: Mult-I-Thane 6000
7. Aggregate: Equal to or finer than #3 Monterey Sand.
8. Color: Custom color as selected by Architect.
9. Acceptability: Suitable for use over light weight concrete aggregate roof deck.
10. Guarantee: Minimum 5 years with a two year unconditional guarantee.

MV&P

07600 Sheet Metal

A. Galvanized Steel: ASTM A525, coating G90, 24 gage U.O.N..

B. Reglets and Counterflashing: Fry Reglet corporation, 24 gage galvanized steel or approved equal.

C. Wall Louvers: 18 gage galvanized steel with bird screens.

D. Splash Pans and pitch Pockets: 20 gage galvanized steel.

E. Provide galvanized metal louvers for the following areas:

1. Parking level fan rooms: intake openings.
2. Intake and exhaust openings in pump rooms.
3. Parking level storage rooms or service rooms or areas.
4. Elevator equipment rooms and elevator shaft vents.
5. Building equipment rooms located on the roof.
6. Stair intake and relief openings.
7. Electrical equipment rooms.
8. Telephone equipment rooms.

07900 Caulking & Sealants

A. Typical Exterior Joints:

1. One part silicone sealant by Dow Corning Corporation or General Electric Corporation or approved equal.

a) Non-porous surfaces such as glass and metal: Dow "Silicone Rubber Sealant" or GE "Silglaze".

b) Porous surfaces such as masonry or concrete, Dow 780 or GE "Sulpruf".
c) Custom color as selected by Architect.

Division 8 - DOORS & WINDOWS

Div. 8 General Systems

MV&P

A. Window Wall: The exterior window wall assemblies are to be a design-build assembly and the specialty contractor will be responsible for the structural design assembly as well as the structural design and implementation of attachment of the exterior wall assembly to the building.

1. A curtain wall type assembly shall be used from Plaza Level to the top of the building. The curtain wall system is to be unitized with the glass being captured on 2, 3 and 4 sides by aluminum closures. The nominal dimension for the system is 2-1/2" by 5-1/2" deep. Gypsum board extension closures are to be provided at the sill sections.

For all four exterior elevations of the lowrise and for the east and west exterior elevations of the tower, provide curtain wall assembly systems with a painted finish U.O.N.; all members exposed to view from the outside of the building shall receive a Kynar or equivalent finish of an "exotic" color. All members exposed to view from inside the building shall be painted with a silicone-polyester type paint of black color.

For the north and south exterior bowed tower elevations, provide a curtain wall assembly system with #4 Satin Stainless Steel finish U.O.N. All members exposed to view from inside the building shall be painted with a silicone-polyester type paint of black color.

The head sections shall be designed to provide a collection gutter with appropriate provisions for weeping condensate water to the outside of the building, likewise with the sill sections. The head section shall also be designed to allow up to 1/2" deflection of the spandrel or floor above without transferring loads to the glass.

The head section shall include provisions for a concealed drapery track.

B. Glass:

1. Starting at grade and for the entire height of the lowrise elevation at the Macy Street Lobby curtain wall assembly and the Plaza Lobby curtain wall assembly: Insulating, dual pane clear glass (shading coef. 0.95) with metal spandrel panels.
2. All other curtain wall assemblies beginning at grade through level 2 (except for the Transit Police): Insulating, dual pane clear glass (shading coef. 0.95).
3. Infill panel at the Transit Police only: Glass brick.
4. The remaining lowrise curtain wall assemblies, and all highrise curtain wall assemblies: "Thermopane" insulating, dual pane, low 'E' vision glass on bronze (shading coef. 0.33) by Spectrum Glass Products, Inc.. Alternate - green glass (shading coef. 0.34).

C. Doors:

1. Exterior Entry Levels: Satin Bronze or equal balanced narrow stile at building entries all other doors to be wide stile painted to match window wall system, 2'-6" kickplate.
2. Revolving: 3 wing round 8'-0" dia. x 8'-0" high, Satin Bronze, door panels to match side doors.
3. Elevator Doors: See Division 5.
4. Typical Interior Core Doors: Stained solid core wood veneer doors in hollow metal frames 3'-0" x 8'-10" nominal.
5. Typical Service Area & Parking Area Doors: Painted hollow metal doors and frames 3'-0" x 7'-0" nominal.
6. Roll Down: 3 hour fire-rated roll down doors at parking area.
7. Install Mirrors in all Toilet Rooms, full length of lavatory countertop extending from backsplash to ceiling.

08100 Metal Doors and Frames

A. Frames:

Exterior: Minimum 16-gage
Interior: Minimum 18-gage

B. Doors: Flush seamless type, minimum 18-gage one piece face panel.

C. Finish: Doors and frames to be painted - Satin finish over baked-on manufacturer standard rust inhibitive primer.

MV&P

D. Lobby Entry Doors: "Ellison Balance Doors" Ellison Bronze Company, Satin Finish Bronze narrow stile 2'-6" ± kickplate with custom bronze pulls, Satin Bronze frames.

E. Revolving Doors: Ellison Bronze Company, three wing, 8'-0" dia. x 8'-0" high to match entry doors.

F. Retail Entry Doors: Narrow stile 2'-6" ± kickplate Kynar finished aluminum to match storefront window wall system.

08210 Wood Doors

A. Solid Core, Face veneer: To be determined.

B. Finish: To be determined.

08330 Overhead Doors

A. Fire rated coil doors, automatic closing per Code, three-hour rated, chain hoist operator - located at top of ramp on Levels P2, P3, an P4. Paint accent color.

08331 Overhead Coiling Grill

A. Fabricate grill curtain with aluminum hold rods and hinged vertical connecting links (9" o.c. max.). "Cookson Company" - "Heavy Design" No. G-5015 or equal. Electric Door Operators, located at entries to loading dock and parking area and interconnected to the security system, anodized dark bronze.

08710 Finish Hardware

A. Basic Locksets: Mortise type locks, heavy duty commercial quality, lever handle (Schlage - 03 or equal) 6 Pin C Keyway brushed chrome or equal, 626 finish at service and parking areas U.O.N..

B. Hinges: Butt hinges, five knuckle flush barrel type with steel pins and flush bearings. US32 finish at painted doors, brushed chrome at wood doors. 1-1/2 pair to 7'-0" high, add one hinge for every two feet of additional height. Pivot hinges at narrow stile doors typical mont-hard BB 1079 or equal.

C. Electric Locks: Von Duprin L9080 or equal.

MV&P

D. Surface Door Closers: Full rack and pinion type LCN closers or equal.

E. Panic hardware: Touch bar type.

F. Provide kickplates (#4 Satin Bronze) stops, seals, etc., as required for complete project.

G. Floor Closures: Hydra-Cushion 2600 Series or equal stone filled pan cover at stone floors, threshold cover at all others.

08902 Window Wall, Curtain Wall and Entrances

A. Design Responsibility: This is a performance specification and all criteria for the solution of a watertight and structurally sound, self-draining window wall and curtain wall system as detailed on the Drawings and herein specified is for the sole purpose of defining the design intent and performance requirements. The wall system shall have no water penetration, other than condensation on the indoor face of any part. The details shown are intended to emphasize the preferred profiles and performance requirements for this project. To avoid any misunderstanding or lack of interpretation, the Contractor is hereby advised that the responsibility for the window wall is totally his and that all designs and resolutions proposed in the Contractor's Shop Drawings, structural calculations and related documentation and certification must be demonstrated not only in the field water leakage test procedures, as approved by the Architect but also through special guarantee periods.

1. Supplementary Parts: Provide and install all supplementary parts necessary to complete the work as described on the Drawings and herein specified, though not definitely shown or specified. Unless otherwise noted or specified to be furnished or installed by another Subcontractor, this work shall include type and thickness and temper of all glass, the design and sizing of all wall

sections and section assemblies to meet the performance, design requirements and the furnishing and installation of all inserts, fasteners, clips, bracing, and steel framework as required even if not shown for the proper anchorage of the window wall and cladding elements to the structure.

2. Systems: Window wall, curtain wall, and storefront areas as detailed on the Drawings are to be designed to accommodate the performance requirements herein specified, including, but not limited to, the accommodation of shear stresses and movement in sealant joints and the opening of joinery during dynamic movements. All metal joinery within, adjacent and common to the window wall systems must maintain structural, weathering, and watertight integrity when subjected to the performance criteria.

MV&P

B. Performance Requirements: All components, assemblies, and completed work included in and pertinent to the work of this Section shall conform to the following minimum performance standards and comply with applicable sections of the City of Los Angeles Building Code 1991, California Title 24, Division 4, Section 4.1.6 Air Leakage requirements of Division, except Herculite entrance doors, and codes and regulations of all governing agencies having jurisdiction. Except when applicable codes make other provision, or as otherwise noted herein, all loads shall act in combinations that provide the most unfavorable conditions. Wind loading need not be considered as additive to seismic loading. The performance requirements shall include, but not necessarily be limited to the following items:

1. Thermal Movement: Provide and/or make all allowances for free and noiseless vertical and horizontal thermal movement due to the contraction and expansion of component parts, for an external surface metal temperature range of from plus 20 degrees Fahrenheit to plus 180 degrees Fahrenheit. Buckling, opening of joints, glass breakage, undue stress on fasteners, failure of sealants or any other detrimental effects due to the thermal movement of component parts will not be permitted. Fabrication, assembly, and erection procedures can take into account the ambient temperature range at the time of the respective operation.

MV&P

2. Air Infiltration shall comply with the most restrictive (1) Title 24, test for air infiltration, and shall not exceed 0.04 cfm per square foot of wall area when tested in accordance with ASTM E283-84, Standard Method of Test for Rate of Air Leakage Through Exterior Windows, Curtainwalls, and Doors or with the pressure differential of 1.567 lb/sq. ft., equivalent to a 25 MPH wind.

3. Water Penetration and Moisture Control: It is the responsibility of the Contractor to furnish and install a totally watertight window wall and storefront assemblies.

   a) Water penetration in this Section is defined as the appearance of water, other than condensation, on the roomside of any part of the assembly offering protection from the exterior elements in the interior building space which cannot be drained to the exterior.
   b) Provision shall be made to drain to the exterior of the wall any water entering at joints or glazing reveals within unit. Weep slots shall be baffled or staggered.
   c) Stone Masonry Veneer: The window wall shall have a continuous gutter at the head, weeped through the mullions to drain infiltrated water from the stone masonry veneer. Integrate the window wall and curtain wall drainage system with the stone system to insure continuity.
   d) No water infiltration under static pressure shall occur when the wall is tested in accordance with ASTM E331-86 at a differential static pressure of 8.00 psf (1.54 inches water).
   e) Field water test in accordance with AAMA 501.2-83 will be performed on completed portion of the wall at the Architect's direction. In the event that such testing should result in uncontrolled leakage, eliminate the causes of such leakage at no additional cost to the Owner. Remedial measures must maintain standards of quality and durability and are subject to approval. Provide powered scaffold or lift, hose, and sufficient personnel to operate scaffold or lift and hose.

MV&P

4. Wind Loads:

a) Window wall assemblies herein specified shall be designed for flexural, shear and torsional stresses for the following positive and negative wind pressures acting normal to the plane of the assemblies.

b) Design: Loads will be reviewed with the structural engineer.

c) No wall element and wall framing, including sealants and sealed joints, shall sustain permanent deformation of failure under loading equivalent to 1.5 times the design wind pressures herein specified.

d) For the above pressures and loads, limit framing member stresses and deflections as follows:

1) Normal to the plane of the wall, deflection of framing members, including cantilevers, shall not exceed 1/175 of span length or 3/4", whichever is less. The top and bottom of ribbon window vertical mullions shall not deflect more than 1/8". Where a sealant joint occurs between a framing member and a relatively stiff building element, deflection of the framing member shall not exceed 1/2 of the joint width, or less if required by sealant manufacturer.

2) In the plane of the wall, deflection of framing members shall not reduce the glass or panel bite below 75% of the design dimension, and shall not reduce the glass or panel edge clearance below 25% of the design dimension or 1/4", whichever is greater. Restrict deflection further if required for assembly and fit of components.

3) At connection points of framing members to anchors, anchor deflection in any direction shall not exceed 1/16". Where connection points are not clearly defined, maximum anchor deflection shall not exceed 1/16".

4) Special care must be employed in the analyses, selection, design, and sizing of the wall framing, glass and sealant joints in order to ensure the functional and structural integrity of both the glass and the glazing sealant and to accommodate building and window wall

dynamics herein specified.

MV&P

5) Contributing Loads: Window wall assemblies, including the glass and related components, shall be designed to withstand loading conditions imposed by window washing equipment. Design loading for window washing equipment shall meet the requirements of CAL/OSHA.
6) Dead or live loads are to be included in all applicable components where required.

MV&P

C. Seismic Forces:

1. Seismic lateral force requirements shall comply with the minimum requirements as established by the City of Los Angeles Code, 1991 Edition, and other applicable City, County, and State Codes or regulations. The seismic forces shall be assumed to come for any direction including vertical components but do not have to be considered as acting simultaneously with the wind load forces.
2. Connections anchoring the window wall units to the building structure shall be designed using a force factor (Cp) of 1.2 in any direction. The window wall system must accommodate a story drift of not less than 0.005 times the story height in inches.
3. At design displacement or seismic loading (1/2% of the story height in each direction) no failure or deterioration of any kind may occur including glass to metal in each direction from normal contact.
4. At two time design displacement or seismic loading (1% of the story height) gaskets may disengage and sealants may split or lose adhesion, but no other failures or deterioration of any kind may occur, including glass to metal contact. Structural silicone seals may not fail.

D. Curtain Walls: Identical to those furnished under this Section shall have been tested. If such tests are not available, mock-ups shall be constructed and tests performed. In either case, tests shall be conducted by an independent laboratory approved by the Architect. Test results shall meet or exceed the preceding values.

MV&P

E. Building Dynamics:

1. Building Dynamics are defined as any building movements or deflections caused by the singular or combined effects of wind, or seismic, thermal, live, impact and/or concentrated loads, including kinetic deflections resulting from the dead load of materials, and live load of personnel and equipment. The design, fabrication, assembly and installation of the window wall and entrance assemblies herein specified shall accommodate all inherent building dynamics, including the fabrication, assembly, and installation tolerances of related work not included in this Section, without the loss of, or any detrimental effect to, the performance requirements herein specified. The Contractor shall verify and accommodate such movements, deflections, and tolerances.
2. Window Wall Components and Systems shall accommodate a live load floor deflection of not less than plus or minus 3/8". This is in addition to any erection, fabrication, and thermal expansion deflections which shall be accommodated. Live load deflection shall be assumed to occur on individual floors but not on floors simultaneously.
3. Structural Design Loads: The allowable stresses for aluminum window wall elements shall conform to the minimum standards as published in the Aluminum Association's "Aluminum Construction Manual - Specification for Aluminum Structures", dated 1989, and other applicable Codes or regulations. The minimum design loads herein specified shall comply with the City of Los Angeles Building Code 1991 Edition, and other applicable codes and regulations.
4. Anchorage and Structural Support Framing: Unless otherwise noted on the Drawings, all anchor assemblies and components and support framing, including related connections and/or fasteners for window wall/entrance assemblies shall be designed, furnished and/or installed as required for full compliance with the specified performance criteria. All such items indicated and/or noted on the Drawings are schematic and do not necessarily indicate the exact and/or required scope, type, shape, or profile. Additional anchorage and structural support framing shall be added, or complemented as required. Bracing shall not be laterally supported to bottom flanges of the structural framing.

MV&P

Anchorage and structural supports shall not spall or weaken the integrity of the structural support system. All structural steel to be primed. Repair prime coating after weldments.

5. Points of Support for the assemblies shall be properly braced in the three orthogonal directions (vertical, transverse, and longitudinal) to resist loads from all directions, but not necessarily limited to, the positive and negative wind pressures, seismic forces, etc.
6. Anchorage and Support Framing shall be designed to accommodate wind load, thermal, seismic and building movements without any harmful effects to the assemblies as herein specified, including glass and glazing and sealant applications.
7. Coordination With Concrete Trade: Furnish Contractor with a dimensioned placement drawing showing location of embedded anchors. Verify correct placement of anchors before and after concrete is placed.
8. Glass Performance: The maximum overall size, minimum thickness and type of glass shall conform to the applicable glass manufacturer's recommendation for the openings or sizes indicated on the Drawings and the performance requirements as herein specified. Glass shall also conform to governing Codes and regulations. Glass shall be designed to perform to a specified safety factor of 2.5 and sustain at maximum wind loading at a statistical glass breakage of no more than 8 lights per 1000 lights. Provide heat strengthening or tempering when conditions of thermal breakage may occur.
9. Reference Standards: Published specifications, standards, tests, or recommended methods of trade, industry or governmental organizations apply to work of this Section where cited by abbreviations noted below or in Division 1.

AA	Aluminum Association
AAMA	American Architectural Aluminum Manufacturer's Association
AIA	American Institute of Architects
AISI	American Iron and Steel Institute
CSI	Construction Specifications
FCJI	Flat Glass Jobbers Institute
FGMA	Flat Glass Marketing Association
ICBC	International Conference of Building Officials
OSHA	Occupational Safety and Health Association
RMA	Rubber Manufacturers' Association

SSPC	Structural Steel Painting Council
UBC	Uniform Building Code
ASTM	American Society for Testing and Materials

F. Extrusions: Alloy and temper for aluminum extrusions shall be 6063 - T5 or T6. Typical size, 2-1/2" x 5-1/2" nominal with glazing hold towards outside surface of mullions. Provide additional sizes and shapes including snap covers as indicated on drawings.

MV&P

G. Finish:

1. Exterior:

a) Typical curtain wall assemblies: Factory painted custom Kynar finish, to be selected by the Architect.

b) North and south tower elevations, bowed curtain wall assemblies: #4 Satin Stainless Steel.

2. Interior:

a) Typical: Factory painted, black with matching gypsum board closure at sills.

b) Grade level and public lobbies: Factory painted custom Kynar finish, to be selected by the Architect.

H. Miscellaneous Materials: Provide and install as required:

1. Fasteners, hot-rolled shapes, inserts for anchorage in concrete, shims, spaces washers, tempered glass indicators, window washing attachments. Integral mini blind packet at head and gypsum board closure at sill.

I. Window Wall Testing, see Section 01450.

J. Prepare and install at the site a visual mock-up, full scale for review by Ownership prior to final approval of shop drawings. Mock-up to include typical building conditions. See also Division 3, mock-up to be installed in conjunction with precast concrete mock-up.

Division 9 - FINISHES

Div. 9 General Systems

A. Typical Wall Construction

1. The primary building component for the non-bearing partitions shall be 3-5/8", 25 gauge studs. All exterior walls and parking area walls to be of structural studs (3 5/8", 16 gauge) unless noted otherwise.
2. Shaft Walls: Two-hour fire-rated assembly, USG shaft wall. 2-1/2" or 4" studs for height requirements with sound insulation. Minimum STC 50.
3. Corridor Walls: 3-5/8" metal studs (25 ga) with 5/8" type "X" on both sides with sound attenuation blanket insulation (STC 51 minimum).
4. Toilet Room Walls: 3-5/8" metal studs (20 gage) with 5/8" M.R. gypsum board and sound attenuation blankets.
5. All interior columns in lease space to be protected by gypsum board enclosure to 9'-6" above finish floor.

B. Finishes

1. Main Lobby:

Floor	Stone on conventional setting bed.
Base	Stone
Walls	Stone at pilaster/columns. Infill Walls to be determined.
Ceiling	Gypsum board with 1/8" veneer plaster with ceiling details of G.F.R.G.
Tenant Doors	Bronze or equal wide stile doors and hardware - floor closures, clear glazing.
Ceiling Height	See plans.
Guard Station	Stone, custom designed to be determined.

MV&P

2. Parking Level Elevator Lobby:

Floor	Carpet
Base	Stone
Walls	Interior: Gypsum board - painted. Exterior: Concrete/Masonry - painted.
Ceiling	Gypsum board ceiling with recessed lights.
Doors	Hollow metal - painted.
Elevator Doors	Painted - 7'-0" high. 8'-0" at Plaza Level
Glazing	Clear; fire rated as required.
Ceiling Height	See plans.

3. Office Level Elevator Lobby:

Floor	Carpet
Base	Stone
Walls	Gypsum board - painted.
Ceiling	Gypsum board - painted articulated with light cove.
Doors	Wood
Elevator Doors	Painted - metal 8'-0" high.

4. Tenant Area - Street Level and Office Levels:

Floor	Structural slab.
Base	Not in Contract.
Core Walls	Full height gypsum board tape and spackled ready for future finish.
Columns	Perimeter columns: Gypsum board acoustically sealed to window wall/precast system to 9'-6" above finish floor, tape and spackled for future finish with thermal R-11 insulation. Interior Columns: Gypsum board to 9'-6" above finish floor (1'-10" x 1'-10" minimum) taped and spackled for future finish.
Ceiling	2' x 2' exposed tee suspension system (not in Contract).
Ceiling Height	9'-0" finish, 13'-4" floor to floor.

MV&P

5. Parking Areas - General:

Floor	Concrete - broom finish (see Division 3), concrete wheel stops, painted stall striping.
Walls	Exterior: Concrete/Masonry Interior: Core, and Stair: Concrete/masonry - painted.
Ceiling	Exposed structure/spray-on fireproofing (where applicable).
Misc. Metal	Painted.
Columns	Concrete (to 8'-0" minimum)
Doors	Hollow metal - painted.

6. Loading Area, Transformer, Trash, Miscellaneous Mechanical, Maintenance Rooms, and Storage:

Floor	Sealed concrete.
Base	Top set rubber.
Walls	Concrete/Masonry - sealed. Others: Gypsum board - painted.
Ceiling	Exposed structure
Doors	Hollow metal - painted.

7. Stairway Enclosures:

Floor	Sealed concrete.
Walls	Gypsum board - painted. Concrete/masonry - painted.
Ceiling	Exposed structure.
Stairs and Rails	Painted metal.
Ceiling Height	7'-0" minimum.
Doors	Hollow metal - painted at parking levels; wood stained at Plaza - Level 16.

8. Toilet Rooms: (Typical)

Floors	2" x 2" and 1" x 2" mosaic ceramic tile. Provide leveling topping prior to installation and install with waterproof adhesive compound for thin-set installation. Tile to have 5 colors maximum, see plans for pattern.

MV&P

Walls	2" x 2" ceramic tile, full-height, thin-set over moisture resistant gypsum board. Alternate - vinyl wall fabric within toilet stalls.
Ceiling	Moisture resistant gypsum board - painted.
Lavatories	Granite countertop with china lavatories set below stone. Lever handle type faucets installed in countertop.
Water Closets	Wall mounted, flush valve, water conservation type.
Toilet Accessories	Recessed type.
Toilet Partitions	Overhead ceiling mounted type, hollow metal with baked enamel factory finish (custom color).
Lights	Recessed down lights. Lights to be fluorescent type. PL7 or PL9 reflector type.
Doors	Wood.

9. Tenant Corridors: (Not in Contract)

Floors	Carpet
Base	Top-set rubber.
Walls	Gypsum board, taped and spackled ready for future finish. Alternate Upgrade - wall fabric.
Ceiling	Gypsum board - painted, round recessed downlights.
Ceiling Height	9'-0"±
Corridor Doors	Wood.

10. Telephone and Electric Rooms:

Floors	Sealed concrete.
Base	Top-set rubber.
Walls	3/4" plywood over gypsum wallboard.
Ceiling	Exposed structure/fireproofing.
Doors	Wood.

11. Janitor:

Floors	Vinyl tile.
Base	Top-set rubber.
Walls	Gypsum board, full height, painted (water resistant to 8'-0") laminated plastic sink guard to 48".
Ceiling	Exposed structure/fireproofing.
Doors	Metal - painted.
Sink	Floor mounted Levels 5, 9, 13, 17, 21, and 25.
Accessories	Mop handle holders above each sink, each janitor closet to contain two shelves, one at 48" and one at 74" A.F.F.

12. Elevator Machine Room:

Floors	Painted concrete
Base	None
Walls	Gypsum board - painted.
Ceiling	Exposed structure.
Doors	Hollow metal - painted.

13. Fire Control Room, Miscellaneous Building Operation Offices, Service Vestibule and Service Corridor.

Floors	V.C.T.
Base	Top-set rubber.
Walls	Gypsum wallboard - painted.
Ceiling	Gypsum wallboard - painted.

14. Mechanical Fan Rooms and Penthouse

Mechanical	
Floors	Elastomeric.
Base	Elastomeric over raised concrete curb.
Walls	Water resistant gypsum wallboard (painted).
Ceiling	Exposed structure (painted). See Section 09900 - Painting.

09100 Metal Support Systems

A. As required for gypsum wallboard partitions and ceilings. Stud and spacing as required for listed maximum deflections at 5psi lateral uniform pressure.

09200 Lathing and Plastering.

MV&P

A. Provide lathing and plastering as indicated, specified, and required. Furnish and install all steel stud framing for walls to receive on one or both sides, including framing for soffits and all exterior plastering. Where applicable, EIFS System shall receive integral color finish. Finish to be smooth fine sand finish. Provide expansion joints consistent with Industry Standards.

09250 Drywall Work

A. Provide drywall construction work as indicated, specified, and required. Furnish and install all metal studs, furring, framing, accessories, drywall, etc., to complete the work as shown on the Drawings. Drywall to be 5/8" Type "X" at all walls except at toilet rooms, mechanical rooms and janitor closets where type "X" water resistant gypsum wallboard will be used.

09261 Preformed G.F.R.G. Systems

A. Prefabricated high density reinforced as required G.F.R.G. ceiling panels at main lobbies. Provide heavy duty grid suspension system by Dow Products or equal to support ceiling panels with deflections not exceeding L/360 conforming to UBC Table 47-A.

09270 Gypsum Shaft Systems

A. Cavity Shaftwall: ANSI/ASTM C840 fire rated as indicated with design deflection for L/240 maximum at 10 pcf positive or negative pressure - "C-H" type framing.

09300 Tile

A. Ceramic Tile - thinset over waterproofing at plaza through Roof levels.

Floors: 2" x 2", manufacturer and colors to be determined.

Walls: 2" x 2", manufacturer and color to be determined.

Accents: Colors, sizes and locations to be determined.

09650 Resilient Flooring

A. Provide resilient flooring as indicated, specified, and required.

MV&P

Vinyl Tile: 12" x 12" x 1/8" Armstrong Cork Co. "Excelon Imperial Modern" or Architect approved substitution.

Rubber Base: Cover top set and straight carpet types, 4" high unless otherwise specified with premolded inside and outside corners and end stops. Color to be selected by Architect.

09682 Carpet

A. Main Lobbies: To be determined.

B. Typical Floor Elevator Lobbies/Tenant Corridors: To be determined.

C. Corridors: To be determined.

D. Garage Level Elevator Lobbies & Garage Shuttle Elevators: To be determined.

09830 Elastomeric Coating

A. Manufacturer: Tremco Manufacturing Company, or approved equal.

Materials: 70 mils total thickness.

Application: In accordance with manufacturer's instruction.

09900 Painting

A. Exterior:

1. Sheet Metal, Miscellaneous Iron, and Steel: Primer and one coat of exterior enamel - do not paint steel which receives fireproofing.

2. Concrete, Exterior Cement Plaster, and Drywall: Two coats 100% acrylic.

3. Roof; Paint all visible items on the roof, including roof mounted equipment, piping, brackets, construction, etc., except specific items which are factory finished with a weatherproof coating.

B. Interior:

MV&P

1. Concrete and Drywall: Two coats of flat or enamel as scheduled.

2. Cabinet Work and Wood Finish: Five coats satin lacquer finish consisting of stain, paste wood filler, sanding sealer satin lacquer on fourth and fifth coats.

3. Metal Handrails, Stairs, Etc.: Primer and two coats industrial enamel.

4. Stair Treads: Non-slip painted surfaces.

C. Miscellaneous:

In Mechanical and Electrical, etc. areas, paint all surfaces not factory finished, primed or galvanized.

09950 Fabric Wall Covering

A. Alternate Upgrade for Corridors, Mailroom and Telephone Alcove: To be determined.

Division 10 - SPECIALTIES

Div. 10 Building Specialties

A. Dock Bumpers: Model 8412-36 by Durable Mat Company or equal.

B. Mail Boxes: Supreme Series Cuter - Federal, Inc., or equal, front loading.

C. Recessed Telephone Housing: Model BPG - R fully recessed by Acoustic Development Corporation, or equal.

D. Fire Extinguisher Cabinets: Potter-Roemer 7060-DV, or equal.

E. Access Panel: As required, typically flush type.

F. Building Directory: Black-out type, illuminated, size to be determined.

G. Flagpoles: See exterior elevations; minimum of 3, 40' high, anodized aluminum, internal halyards.

10800 Toilet Accessories

MV&P

A. Accessories as schedules on Drawings, satin stainless steel products by Bobrick.

B. Toilet room mirrors: 1/4"polished plate, ground edges.

Division 11 - EQUIPMENT

Div. 11 Window Washing Equipment

A. Davit type window washing system by Titan Staging & Equipment Company or equal, to provide for total coverage or building exterior glass not accessible from the ground level.

Division 12 - FURNISHINGS

(Not Used)

Division 13 - SPECIAL CONSTRUCTION

(Not Used)

Division 14 - CONVEYING SYSTEMS

(Attached)

Division 15 - MECHANICAL

(Attached)

TRACTION ELEVATORS

OUTLINES OF ELEVATOR EQUIPMENT

LOW-RISE TOWER ELEVATORS

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14200 - ELEVATORS

PRELIMINARY
Lerch, Bates & Associates, Inc.

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Passenger Low-Rise Elevators:

NUMBER:	5, ELEVATOR NOS. 1-5
CAPACITY:	3500#
SPEED:	700 F.P.M.
ROPING:	1:1 OR 2:1
SUPERVISORY CONTROL:	DOVER TRAFLOMATIC IV FUJITEC FLEX 8830 MITSUBISHI OS 2100 MONTGOMERY MIPROM 21 OTIS ELEVONIC 411 SCHINDLER MICONIC V
MOTOR CONTROL:	DC, VARIABLE VOLTAGE WITH CLOSED LOOP FEEDBACK AND AUTOMATIC LEVELING (A.C. MOTOR CONTROL UNACCEPTABLE)
POWER CHARACTERISTICS:	VERIFY ON DRAWINGS

STOPS:	12 STOPS IN LINE
OPENINGS:	12 OPENINGS IN LINE
FLOORS SERVED:	PODIUM (3), 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
TRAVEL:	166'-8" ± VERIFY ON DRAWINGS
PLATFORM SIZE:	7'-0" WIDE X 6'-2" DEEP
ENTRANCE SIZE:	3'-6" WIDE X 8'-0" HIGH
ENTRANCE TYPE:	SINGLE-SPEED, CENTER OPENING
DOOR OPERATION:	HIGH-SPEED, HEAVY-DUTY, MASTER DC DOOR OPERATOR (MINIMUM OPENING SPEED 2-1/2 F.P.S.)
DOOR PROTECTION:	INFRARED, OPTICAL FULL SCREEN DEVICES WITH DIFFERENTIAL TIMING FEATURE, AND NUDGING
MACHINE:	GEARLESS OVERHEAD
SAFETY:	FLEXIBLE GUIDE CLAMP - CAR AND COUNTERWEIGHT (TYPE "B" ONLY)
GUIDE RAILS:	PLANED STEEL TEES
BUFFERS:	OIL, SPRING RETURN
COMPENSATION:	WIRE ROPE WITH TIE DOWN
CAR ENCLOSURE:	CAB SHELL PLUS $25,000 ALLOWANCE EACH FOR INTERIOR FINISHES. CAB HEIGHT TO CANOPY 10'-0"
ENTRANCES:	SATIN BRONZE DOOR WITH BAKED ENAMEL SUBFRAMES AT PODIUM (3) LEVEL; BAKED ENAMEL DOORS AND FRAMES AT TYPICAL
SIGNALS:	
REGISTRATION LIGHTS:	CAR AND CORRIDOR PUSHBUTTONS, DUAL RISER - DUAL CAR STATIONS
POSITION INDICATORS:	CAR (DUAL), FIRE CONTROL ROOM PANEL, LOBBY CONTROL PANEL

HALL LANTERNS:	AT ALL FLOORS WITH ELECTRONIC CHIME OR TONE (TWICE FOR DOWN DIRECTION)
COMMUNICATION SYSTEM:	INTERCOM WITH DISTRESS SIGNAL
FIXTURE SUBMITTALS:	SUBMIT BROCHURES DEPICTING MANUFACTURER'S PROPOSED DESIGNS WITH BID
ADDITIONAL FEATURES:	
	CAR AND COUNTERWEIGHT ROLLER GUIDES
	CAR TOP INSPECTION STATION
	EMERGENCY CAR LIGHTING - BATTERY PACK
	EMERGENCY OPERATION [CCR, TITLE 8, RULE 3041(C) FIREMAN'S SERVICE, INCLUDING ALTERNATE FLOOR RETURN]
	STANDBY POWER TRANSFER (AUTOMATIC TO MAIN FLOOR) WITH MANUAL OVERRIDE
	HANDICAPPED ACCOMMODATIONS (NO STICK-ON OR RIVETED PLATES); PROVIDE RECESSED REAR MOUNTED PLATES AS MANUFACTURED BY NORDHAMMER FOUNDRY, OR APPROVED EQUIVALENT
	DUAL CAR OPERATING PANELS
	HINGED CAB FRONT RETURN PANELS FOR APPLICATION OF INTEGRAL CAR STATIONS
	HOISTWAY ACCESS SWITCHES
	INDEPENDENT SERVICE FEATURE
	PLATFORM ISOLATION
	LOAD WEIGHING DEVICE
	ANTI-NUISANCE FEATURE
	LOBBY CONTROL PANEL AND REMOTE WIRING

FIRE CONTROL PANEL AND REMOTE WIRING

EXTRUDED BRONZE CAR SILLS

MOUNT ALL FIXTURE FACEPLATES WITH TAMPER-RESISTANT SCREWS

ANGLE SILL SUPPORTS - FURNISH AND INSTALL

12-MONTH MAINTENANCE WITH 24-HOUR CALL-BACK SERVICE

SOUND POWERED CAB EMERGENCY TELEPHONE JACKS AND PAGING SPEAKERS

MACHINE AND MOTOR GENERATOR SOUND ISOLATION

SEISMIC DESIGNS AND OPERATIONS

INDIVIDUAL FLOOR LOCKOFF SWITCHES

CARD READER PROVISIONS IN ALL ELEVATOR CARS

WIRING DIAGRAMS, OPERATING INSTRUCTIONS, AND PARTS ORDERING INFORMATION

ALL SPECIFIED ENGRAVING SHALL BE FILLED WITH BLACK PAINT UNLESS OTHERWISE NOTED

NO VISIBLE COMPANY NAME OR LOGO

ALTERNATES -
(ELEVATOR NOS. 1-5):

NO. 1: PROVIDE 500 F.P.M. IN LIEU OF 700 F.P.M. SPECIFIED

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual and local Code Enforcing Authority. Comply with requirements of Owner's consultant.

TRACTION ELEVATORS

OUTLINES OF ELEVATOR EQUIPMENT

HIGH-RISE TOWER ELEVATORS

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14210 - ELEVATORS

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Passenger High-Rise Elevators:

NUMBER:	5, ELEVATOR NOS. 6-10
CAPACITY:	3500#
SPEED:	800 F.P.M.
ROPING:	1:1 OR 2:1
SUPERVISORY CONTROL:	DOVER TRAFLOMATIC IV FUJITEC FLEX 8830 MITSUBISHI OS 2100 MONTGOMERY MIPROM 21 OTIS ELEVONIC 411 SCHINDLER MICONIC V
MOTOR CONTROL:	DC, VARIABLE VOLTAGE WITH CLOSED LOOP FEEDBACK AND AUTOMATIC LEVELING (A.C. MOTOR CONTROL UNACCEPTABLE)
POWER CHARACTERISTICS:	VERIFY ON DRAWINGS

STOPS:	11 STOPS IN LINE
OPENINGS:	11 OPENINGS IN LINE
FLOORS SERVED:	PODIUM (3), 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
TRAVEL:	320'-0" ± VERIFY ON DRAWINGS
PLATFORM SIZE:	7'-0" WIDE X 6'-2" DEEP
ENTRANCE SIZE:	3'-6" WIDE X 8'-0" HIGH
ENTRANCE TYPE:	SINGLE-SPEED, CENTER OPENING
DOOR OPERATION:	HIGH-SPEED, HEAVY-DUTY, MASTER DC DOOR OPERATOR (MINIMUM OPENING SPEED 2-1/2 F.P.S.)
DOOR PROTECTION:	INFRARED, OPTICAL FULL SCREEN DEVICES WITH DIFFERENTIAL TIMING FEATURE, AND NUDGING
MACHINE:	GEARLESS OVERHEAD
SAFETY:	FLEXIBLE GUIDE CLAMP - CAR AND COUNTERWEIGHT (TYPE "B" ONLY)
GUIDE RAILS:	PLANED STEEL TEES
BUFFERS:	OIL, SPRING RETURN
COMPENSATION:	WIRE ROPE WITH TIE DOWN
CAR ENCLOSURE:	CAB SHELL PLUS $25,000 ALLOWANCE EACH FOR INTERIOR FINISHES. CAB HEIGHT TO CANOPY 10'-0"
ENTRANCES:	SATIN BRONZE DOORS WITH BAKED ENAMEL SUBFRAMES AT PODIUM (3) LEVEL; BAKED ENAMEL DOORS AND FRAMES AT TYPICAL
SIGNALS:	
REGISTRATION LIGHTS:	CAR AND CORRIDOR PUSHBUTTONS, DUAL RISER - DUAL CAR STATIONS
POSITION INDICATORS:	CAR (DUAL), FIRE CONTROL ROOM PANEL, LOBBY CONTROL PANEL

HALL LANTERNS:	AT ALL FLOORS WITH ELECTRONIC CHIME OR TONE (TWICE FOR DOWN DIRECTION)
COMMUNICATION SYSTEM:	INTERCOM WITH DISTRESS SIGNAL
FIXTURE SUBMITTALS:	SUBMIT BROCHURES DEPICTING MANUFACTURER'S PROPOSED DESIGNS WITH BID
ADDITIONAL FEATURES:	
	CAR AND COUNTERWEIGHT ROLLER GUIDES
	CAR TOP INSPECTION STATION
	EMERGENCY CAR LIGHTING - BATTERY PACK
	EMERGENCY OPERATION [CCR, TITLE 8, RULE 3041(C) FIREMAN'S SERVICE, INCLUDING ALTERNATE FLOOR RETURN]
	STANDBY POWER TRANSFER (AUTOMATIC TO MAIN FLOOR) WITH MANUAL OVERRIDE
	HANDICAPPED ACCOMMODATIONS (NO STICK-ON OR RIVETED PLATES); PROVIDE RECESSED REAR MOUNTED PLATES AS MANUFACTURED BY NORDHAMMER FOUNDRY, OR APPROVED EQUIVALENT
	DUAL CAR OPERATING PANELS
	HINGED CAB FRONT RETURN PANELS FOR APPLICATION OF INTEGRAL CAR STATIONS
	HOISTWAY ACCESS SWITCHES
	INDEPENDENT SERVICE FEATURE
	PLATFORM ISOLATION
	LOAD WEIGHING DEVICE
	ANTI-NUISANCE FEATURE
	LOBBY CONTROL PANEL AND REMOTE WIRING

FIRE CONTROL PANEL AND REMOTE WIRING

EXTRUDED BRONZE CAR SILLS

MOUNT ALL FIXTURE FACEPLATES WITH TAMPER-RESISTANT SCREWS

ANGLE SILL SUPPORTS - FURNISH AND INSTALL

12-MONTH MAINTENANCE WITH 24-HOUR CALL-BACK SERVICE

SOUND POWERED CAB EMERGENCY TELEPHONE JACKS AND PAGING SPEAKERS

MACHINE AND MOTOR GENERATOR SOUND ISOLATION

SEISMIC DESIGNS AND OPERATIONS

INDIVIDUAL FLOOR LOCKOFF SWITCHES

CARD READER PROVISIONS IN ALL ELEVATOR CABS

WIRING DIAGRAMS, OPERATING INSTRUCTIONS, AND PARTS ORDERING INFORMATION

ALL SPECIFIED ENGRAVING SHALL BE FILLED WITH BLACK PAINT UNLESS OTHERWISE NOTED

NO VISIBLE COMPANY NAME OR LOGO

ALTERNATES -
(ELEVATOR NOS. 6-10):

NO. 2: PROVIDE 700 F.P.M. IN LIEU OF 800 F.P.M. SPECIFIED

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual and local Code Enforcing Authority. Comply with requirements of Owner's consultant.

TRACTION ELEVATORS

OUTLINES OF ELEVATOR EQUIPMENT

GARAGE SHUTTLE ELEVATORS

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14220 - ELEVATORS

PRELIMINARY
Lerch, Bates & Associates, Inc.

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Passenger Garage Shuttle Elevators:

NUMBER:	4, ELEVATOR NOS. 11-14
CAPACITY:	3500#
SPEED:	350 F.P.M.
ROPING:	1:1
SUPERVISORY CONTROL:	DOVER TRAFLOMATIC IV FUJITEC FLEX 8830 MITSUBISHI OS 2100 MONTGOMERY MIPROM 21 OTIS ELEVONIC 411 SCHINDLER MICONIC V
MOTOR CONTROL:	DC, VARIABLE VOLTAGE WITH CLOSED LOOP FEEDBACK AND AUTOMATIC LEVELING (A.C. MOTOR CONTROL UNACCEPTABLE)
POWER CHARACTERISTICS:	480 VOLTS, 3-PHASE, 60 HERTZ

STOPS:	7 STOPS IN LINE
OPENINGS:	7 OPENINGS IN LINE
FLOORS SERVED:	P4, P3, P2, P1, PLAZA (1), PODIUM (3), 4
TRAVEL:	92'-8" ±
PLATFORM SIZE:	7'-0" WIDE X 6'-2" DEEP
ENTRANCE SIZE:	3'-6" WIDE X 7'-0" HIGH
ENTRANCE TYPE:	SINGLE-SPEED, CENTER OPENING
DOOR OPERATION:	HIGH-SPEED, HEAVY-DUTY, MASTER DC DOOR OPERATOR (MINIMUM OPENING SPEED 2-1/2 F.P.S.)
DOOR PROTECTION:	INFRARED, OPTICAL FULL SCREEN DEVICES WITH DIFFERENTIAL TIMING FEATURE, AND NUDGING
MACHINE:	GEARED OVERHEAD
SAFETY:	FLEXIBLE GUIDE CLAMP - CAR (TYPE "B" ONLY)
GUIDE RAILS:	PLANED STEEL TEES
BUFFERS:	OIL, SPRING RETURN
COMPENSATION:	ENCAPSULATED CHAIN WITH TIE DOWN
CAR ENCLOSURE:	AS HEREIN SPECIFIED. CAB SHELL PLUS $25,000 ALLOWANCE EACH FOR INTERIOR FINISHES. CAB HEIGHT TO CANOPY 8'-0"
ENTRANCES:	SATIN BRONZE DOORS WITH BAKED ENAMEL SUBFRAMES AT PODIUM (3) LEVEL; BAKED ENAMEL DOORS AND FRAMES AT TYPICAL
SIGNALS:	
REGISTRATION LIGHTS:	CAR AND CORRIDOR PUSHBUTTONS, DUAL RISER - DUAL CAR STATIONS
POSITION INDICATORS:	CAR (DUAL), FIRE CONTROL ROOM PANEL, LOBBY CONTROL PANEL

HALL LANTERNS:	AT ALL FLOORS WITH ELECTRONIC CHIME OR TONE (TWICE FOR DOWN DIRECTION)
COMMUNICATION SYSTEM:	INTERCOM WITH DISTRESS SIGNAL
FIXTURE SUBMITTALS:	SUBMIT BROCHURES DEPICTING MANUFACTURER'S PROPOSED DESIGNS WITH BID
ADDITIONAL FEATURES:	
	CAR AND COUNTERWEIGHT ROLLER GUIDES
	CAR TOP INSPECTION STATION
	EMERGENCY CAR LIGHTING - BATTERY PACK
	EMERGENCY OPERATION [CCR, TITLE 8, RULE 3041(C) FIREMAN'S SERVICE, INCLUDING ALTERNATE FLOOR RETURN]
	STANDBY POWER TRANSFER (AUTOMATIC TO MAIN FLOOR) WITH MANUAL OVERRIDE
	HANDICAPPED ACCOMMODATIONS (NO STICK-ON OR RIVETED PLATES); PROVIDE RECESSED REAR MOUNTED PLATES AS MANUFACTURED BY NORDHAMMER FOUNDRY, OR APPROVED EQUIVALENT
	DUAL CAR OPERATING PANELS
	HINGED CAB FRONT RETURN PANELS FOR APPLICATION OF INTEGRAL CAR STATIONS
	HOISTWAY ACCESS SWITCHES
	INDEPENDENT SERVICE FEATURE
	PLATFORM ISOLATION
	LOAD WEIGHING DEVICE
	ANTI-NUISANCE FEATURE
	LOBBY CONTROL PANEL AND REMOTE WIRING

FIRE CONTROL PANEL AND REMOTE WIRING

EXTRUDED BRONZE CAR SILLS

PROVIDE EXTENDED FASCIA BETWEEN EXPRESS FLOORS AS REQUIRED

MOUNT ALL FIXTURE FACEPLATES WITH TAMPER-RESISTANT SCREWS

ANGLE SILL SUPPORTS - FURNISH AND INSTALL

12-MONTH MAINTENANCE WITH 24-HOUR CALL-BACK SERVICE

SOUND POWERED CAB EMERGENCY TELEPHONE JACKS AND PAGING SPEAKERS

MACHINE AND MOTOR GENERATOR SOUND ISOLATION

SEISMIC DESIGNS AND OPERATIONS

PROVIDE HOOKS AND VINYL COVERED PADS FOR ONE ELEVATOR

INDIVIDUAL FLOOR LOCKOFF SWITCHES

CARD READER PROVISIONS IN ALL ELEVATOR CARS

WIRING DIAGRAMS, OPERATING INSTRUCTIONS, AND PARTS ORDERING INFORMATION

ALL SPECIFIED ENGRAVING SHALL BE FILLED WITH BLACK PAINT UNLESS OTHERWISE NOTED

NO VISIBLE COMPANY NAME OR LOGO

ALTERNATES -
(ELEVATOR NOS. 11-14):

NO. 3: PROVIDE 450 F.P.M. IN LIEU OF 350 F.P.M. SPECIFIED.

NO. 4: PROVIDE 4000 LBS. CAPACITY CARS (PASSENGER-SHAPED PLATFORMS) AT 350 F.P.M. IN LIEU OF 3500 LBS. SPECIFIED

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual and local Code Enforcing Authority. Comply with requirements of Owner's consultant.

TRACTION ELEVATORS

OUTLINES OF ELEVATOR EQUIPMENT

SERVICE ELEVATORS

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14230 - ELEVATORS

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Service Elevators:

NUMBER:	2, ELEVATOR NOS. 15-16
CAPACITY:	5000#
SPEED:	700 F.P.M.
ROPING:	1:1 OR 2:1
SUPERVISORY CONTROL:	DOVER TRAFLOMATIC IV FUJITEC FLEX 8830 MITSUBISHI OS 2100 MONTGOMERY MIPROM 21 OTIS ELEVONIC 411 SCHINDLER MICONIC V
MOTOR CONTROL:	DC, VARIABLE VOLTAGE WITH CLOSED LOOP FEEDBACK AND AUTOMATIC LEVELING (A.C. MOTOR CONTROL UNACCEPTABLE)
POWER CHARACTERISTICS:	VERIFY ON DRAWINGS

STOPS:	29 STOPS IN LINE
OPENINGS:	29 OPENINGS IN LINE
FLOORS SERVED:	P4, P3, P2, P1, PLAZA (1), MEZZANINE (2), PODIUM (3), 4-25
TRAVEL:	392'-4" ±
PLATFORM SIZE:	6'-0" WIDE X 9'-10" DEEP
ENTRANCE SIZE:	4'-6" WIDE X 8'-0" HIGH
ENTRANCE TYPE:	TWO-SPEED, SIDE OPENING
DOOR OPERATION:	HIGH-SPEED, HEAVY-DUTY, MASTER DC DOOR OPERATOR (MINIMUM OPENING SPEED 2-1/2 F.P.S.)
DOOR PROTECTION:	INFRARED, OPTICAL FULL SCREEN DEVICES WITH DIFFERENTIAL TIMING FEATURE, AND NUDGING
MACHINE:	GEARLESS OVERHEAD
SAFETY:	FLEXIBLE GUIDE CLAMP - CAR (TYPE "B" ONLY)
GUIDE RAILS:	PLANED STEEL TEES
BUFFERS:	OIL, SPRING RETURN
COMPENSATION:	WIRE ROPE WITH TIE DOWN
CAR ENCLOSURE:	CAR SHELL PLUS $25,000 ALLOWANCE EACH FOR INTERIOR FINISHES. CAB HEIGHT TO CANOPY 10'-0". EXTEND REAR PORTION OF BOTH CARS TO MAXIMUM HEIGHT, WIDTH, AND DEPTH REINFORCED PLATFORMS AND SILLS TO CARRY CONCENTRATED LOADS UP TO 25% OF THE RATED CAPACITY
ENTRANCES:	RIGIDIZED STAINLESS STEEL DOORS WITH STAINLESS STEEL BULL NOSE JAMBS
SIGNALS:	

REGISTRATION LIGHTS:	CAR AND CORRIDOR PUSHBUTTONS, SINGLE CORRIDOR RISER - DUAL CAR STATIONS
POSITION INDICATORS:	CAR (DUAL), FIRE CONTROL ROOM PANEL, LOBBY CONTROL PANEL
HALL LANTERNS:	AT ALL FLOORS WITH ELECTRONIC CHIME OR TONE (TWICE FOR DOWN DIRECTION)
CORRIDOR CAR POSITION INDICATORS:	AT PLAZA (1), MEZZANINE (2), AND PODIUM (3)
COMMUNICATION SYSTEM:	INTERCOM WITH DISTRESS SIGNAL
FIXTURE SUBMITTALS:	SUBMIT BROCHURES DEPICTING MANUFACTURER'S PROPOSED DESIGNS WITH BID
ADDITIONAL FEATURES:	
	CAR AND COUNTERWEIGHT ROLLER GUIDES
	CAR TOP INSPECTION STATION
	EMERGENCY CAR LIGHTING - BATTERY PACK
	EMERGENCY OPERATION [CCR, TITLE 8, RULE 3041(C) FIREMAN'S SERVICE, INCLUDING ALTERNATE FLOOR RETURN]
	STANDBY POWER TRANSFER (AUTOMATIC TO MAIN FLOOR) WITH MANUAL OVERRIDE
	HANDICAPPED ACCOMMODATIONS (NO STICK-ON OR RIVETED PLATES); PROVIDE RECESSED REAR MOUNTED PLATES AS MANUFACTURED BY NORDHAMMER FOUNDRY, OR APPROVED EQUIVALENT
	DUAL CAR OPERATING PANELS
	HINGED CAB FRONT RETURN PANELS FOR APPLICATION OF INTEGRAL CAR STATIONS
	HOISTWAY ACCESS SWITCHES
	INDEPENDENT SERVICE FEATURE

PLATFORM ISOLATION

LOAD WEIGHING DEVICE

ANTI-NUISANCE FEATURE

LOBBY CONTROL PANEL AND REMOTE WIRING

FIRE CONTROL PANEL AND REMOTE WIRING

EXTRUDED ALUMINUM CAR SILLS

MOUNT ALL FIXTURE FACEPLATES WITH TAMPER-RESISTANT SCREWS

ANGLE SILL SUPPORTS - FURNISH AND INSTALL

12-MONTH MAINTENANCE WITH 24-HOUR CALL-BACK SERVICE

SOUND POWERED CAB EMERGENCY TELEPHONE JACKS AND PAGING SPEAKERS

MACHINE AND MOTOR GENERATOR SOUND ISOLATION

SEISMIC DESIGNS AND OPERATIONS

PROVIDE HOOKS AND VINYL COVERED PADS FOR BOTH ELEVATORS

PRIME FINISH TEMPORARY FRONT CAR DOORS DURING CONSTRUCTION ON BOTH ELEVATORS

INDIVIDUAL FLOOR LOCKOFF SWITCHES

CARD READER PROVISIONS IN ALL ELEVATOR CARS

WIRING DIAGRAMS, OPERATING INSTRUCTIONS, AND PARTS ORDERING INFORMATION

CAR DROP CEILINGS DESIGNED FOR EASY REMOVAL. PROVIDE AUXILIARY CAR LIGHTING MOUNTED TO CAR CANOPY WITH

SEPARATE LIGHT SWITCH IN SERVICE CABINET

ALL SPECIFIED ENGRAVING SHALL BE FILLED WITH BLACK PAINT UNLESS OTHERWISE NOTED

NO VISIBLE COMPANY NAME OR LOGO

ALTERNATES -
(ELEVATOR NOS. 15-16):

NO. 5: PROVIDE 500 F.P.M. IN LIEU OF 700 F.P.M. SPECIFIED

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual and local Code Enforcing Authority. Comply with requirements of Owner's consultant.

TRACTION ELEVATORS

OUTLINES OF ELEVATOR EQUIPMENT

SECURE ELEVATORS

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14240 - ELEVATORS

PRELIMINARY
Lerch, Bates & Associates, Inc.

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Passenger Security Elevators:

NUMBER:	2, ELEVATOR NOS. 17-18
CAPACITY:	3500#
SPEED:	350 F.P.M.
ROPING:	1:1 OR 2:1
SUPERVISORY CONTROL:	DOVER TRAFLOMATIC IV FUJITEC FLEX 8830 MITSUBISHI OS 2100 MONTGOMERY MIPROM 21 OTIS ELEVONIC 411 SCHINDLER MICONIC V
MOTOR CONTROL:	DC, VARIABLE VOLTAGE WITH CLOSED LOOP FEEDBACK AND AUTOMATIC LEVELING (A.C. MOTOR CONTROL UNACCEPTABLE)
POWER CHARACTERISTICS:	VERIFY ON DRAWINGS

STOPS:	6 STOPS IN LINE
OPENINGS:	6 OPENINGS IN LINE
FLOORS SERVED:	P3, P2, P1, PLAZA (1), MEZZANINE (2), PODIUM (3) - VERIFY ON DRAWINGS
TRAVEL:	63'-6" ± VERIFY ON DRAWINGS
PLATFORM SIZE:	7'-0" WIDE X 6'-2" DEEP
ENTRANCE SIZE:	3'-6" WIDE X 7'-0" HIGH
ENTRANCE TYPE:	SINGLE-SPEED, CENTER OPENING
DOOR OPERATION:	HIGH-SPEED, HEAVY-DUTY, MASTER DC DOOR OPERATOR (MINIMUM OPENING SPEED 2-1/2 F.P.S.)
DOOR PROTECTION:	INFRARED, OPTICAL FULL SCREEN DEVICES WITH DIFFERENTIAL TIMING FEATURE, AND NUDGING
MACHINE:	GEARED OVERHEAD
SAFETY:	FLEXIBLE GUIDE CLAMP
PIT:	WALK-IN AT P4
GUIDE RAILS:	PLANED STEEL TEES
BUFFERS:	OIL, SPRING RETURN
CAR ENCLOSURE:	CAB SHELL PLUS $25,000 ALLOWANCE EACH FOR INTERIOR FINISHES. CAB HEIGHT TO CANOPY 8'-0". EXTEND REAR PORTION OF BOTH CARS TO MAXIMUM HEIGHT, WIDTH, AND DEPTH
ENTRANCES:	RIGIDIZED STAINLESS STEEL DOORS WITH BULL NOSE SATIN STAINLESS STEEL
SIGNALS:	
REGISTRATION LIGHTS:	CAR AND CORRIDOR PUSHBUTTONS, SINGLE CORRIDOR RISER - DUAL CAR STATIONS

POSITION INDICATORS:	CAR (DUAL), FIRE CONTROL ROOM PANEL, LOBBY CONTROL PANEL
CORRIDOR CAR POSITION INDICATORS:	AT ALL FLOORS WITH DIRECTION ARROWS
COMMUNICATION SYSTEM:	INTERCOM WITH DISTRESS SIGNAL
FIXTURE SUBMITTALS:	SUBMIT BROCHURES DEPICTING MANUFACTURER'S PROPOSED DESIGNS WITH BID
ADDITIONAL FEATURES:	
	CAR AND COUNTERWEIGHT ROLLER GUIDES
	CAR TOP INSPECTION STATION
	EMERGENCY CAR LIGHTING - BATTERY PACK
	EMERGENCY OPERATION [CCR, TITLE 8, RULE 3041(C) FIREMAN'S SERVICE, INCLUDING ALTERNATE FLOOR RETURN]
	STANDBY POWER TRANSFER (AUTOMATIC TO MAIN FLOOR) WITH MANUAL OVERRIDE
	HANDICAPPED ACCOMMODATIONS (NO STICK-ON OR RIVETED PLATES); PROVIDE RECESSED REAR MOUNTED PLATES AS MANUFACTURED BY NORDHAMMER FOUNDRY, OR APPROVED EQUIVALENT
	DUAL CAR OPERATING PANELS
	HINGED CAB FRONT RETURN PANELS FOR APPLICATION OF INTEGRAL CAR STATIONS
	HOISTWAY ACCESS SWITCHES
	INDEPENDENT SERVICE FEATURE
	PLATFORM ISOLATION
	LOAD WEIGHING DEVICE
	ANTI-NUISANCE FEATURE

LOBBY CONTROL PANEL AND REMOTE WIRING

FIRE CONTROL PANEL AND REMOTE WIRING

EXTRUDED ALUMINUM CAR SILLS

MOUNT ALL FIXTURE FACEPLATES WITH TAMPER-RESISTANT SCREWS

ANGLE SILL SUPPORTS - FURNISH AND INSTALL

12-MONTH MAINTENANCE WITH 24-HOUR CALL-BACK SERVICE

SOUND POWERED CAB EMERGENCY TELE-PHONE JACKS AND PAGING SPEAKERS

MACHINE AND MOTOR GENERATOR SOUND ISOLATION

SEISMIC DESIGNS AND OPERATIONS

PROVIDE HOOKS AND VINYL COVERED PADS FOR BOTH ELEVATORS

INDIVIDUAL FLOOR LOCKOFF SWITCHES

CARD READER PROVISIONS IN ALL ELEVATOR CABS

WIRING DIAGRAMS, OPERATING INSTRUC-TIONS, AND PARTS ORDERING INFORMA-TION

CAR DROP CEILING DESIGNED FOR EASY REMOVAL. PROVIDE AUXILIARY CAB LIGHTING MOUNTED TO CAB CANOPY WITH SEPARATE LIGHT SWITCH IN SERVICE CABINET

ALL SPECIFIED ENGRAVING SHALL BE FILLED WITH BLACK PAINT UNLESS OTHERWISE NOTED

NO VISIBLE COMPANY NAME OR LOGO

ALTERNATES -
(ELEVATOR NOS. 17-18):

NO. 6:	PROVIDE 450 F.P.M. IN LIEU OF 350 F.P.M. SPECIFIED
NO. 7:	PROVIDE 4000 LBS. (PASSENGER-SHAPED CARS) IN LIEU OF 3500 LBS. SPECIFIED

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual and local Code Enforcing Authority. Comply with requirements of Owner's consultant.

ESCALATORS

OUTLINES OF ESCALATOR EQUIPMENT

DIVISION 14 - CONVEYING SYSTEMS

SECTION 14300 - ESCALATORS

PRELIMINARY
Lerch, Bates & Associates, Inc.

PART 1 - GENERAL

A. Quality Assurance: All work shall be performed in accordance with the "American Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" (ANSI A17.1), including published supplements; "National Electrical Code"; "OSHA"; "NFPA"; "BOCA"; California Titles 8 and 24; and such state and local codes as may be applicable.

PART 2 - PRODUCTS

2.01 SUMMARY

A. Escalators:

NUMBER:	TWO, ESCALATOR NOS. 1 & 2
FLOORS SERVED:	PLAZA TO PODIUM(3)
RISE:	17-8_ ±
SIZE:	48" WIDE
SPEED:	100 F.P.M.
MANUFACTURERS:	OTIS 510 MONTGOMERY CRYSTAL 2000 FUJITEC PLS-22 MITSUBISHI JSS-A SCHINDLER SWE O AND K TRANSLIGHT
ARRANGEMENT:	PARALLEL
OPERATION:	REVERSIBLE, TRAVEL UP OR DOWN
BALUSTRADES:	TEMPERED GLASS WITHOUT MULLIONS
DECK BOARDS:	STAINLESS STEEL, SATIN FINISH

MOLDING AND TRIM:	STAINLESS STEEL, SATIN FINISH
SKIRT PANELS:	STAINLESS STEEL, SATIN FINISH
HANDRAIL COLOR:	BLACK
STEP RISER:	CLEATED
POWER SUPPLY:	480 VOLTS, 3-PHASE, 60 HERTZ
ADDITIONAL EQUIPMENT:	DEMARCATION LIGHTING - TOP AND BOTTOM
	NARROW COMBPLATES
	HINGED FLOOR PANS
	ANTI-SLIDE KNOBS AND FLOOR INTERSECTION BARRIERS
	TRUSS EXTENSIONS AS REQUIRED TO MEET STRUCTURAL SUPPORTS - VERIFY ON STRUCTURAL DRAWINGS
	INTERMEDIATE SUPPORTS SHALL BE PROVIDED AT MEZZANINE FLOOR LEVEL ± 13'-4" FROM PLAZA LEVEL; ARRANGE TRUSS AND LOADS ACCORDINGLY.

PART 3 - EXECUTION

A. Installation: Comply with applicable codes, manufacturer's instructions, shop drawings and recommendations. Comply with National Electrical Code (ANSI C1 by NFPA) for electrical work required during construction.

B. Final Inspection and Test: Comply with ANSI A17.2, latest edition including supplements, Inspector's Manual. Comply with requirements of Owner's consultant.

Division 15 - MECHANICAL

Div. 15 General

All work shall be in strict accordance with the City of Los Angeles Plumbing Code, City of Los Angeles Mechanical Code, City of Los Angeles Building Code, State Industrial Safety Orders, City of Los Angeles Fire Department Regulations, City of Los Angeles requirements and all other jurisdiction having authority.

15400 Plumbing

A. System Requirements

1. Principal Items to be Included:

a. Domestic hot and cold water, sanitary sewer, roof and area drainage, sub-soil relief piping, fuel oil systems, irrigation supply main with sub-meter, and connections to plumbing fixtures and other equipment supplied under other sections of the specifications.

b. Alternate: Provide separate construction costs for under slab sub-soil drainage systems.

2. General System Description:

a. Domestic cold water supply will be from the street water main. Pressure booster pumps will be provided.

b. Domestic hot water will be supplied from natural gas-fired storage type water heaters located in the penthouse.

c. The sanitary sewer system will be connected to the street sewer.

d. Fuel gas system, consisting of piping and connections to domestic water heaters and HVAC equipment.

e. Fuel oil system consisting of tank, pumps, vent, supply and return piping to emergency generator, and fire pump day tanks.

f. The storm drain system will be connected to the street storm drainage system.

g. Domestic water meter will be located in underground vault.

h. Gas meter will be located above grade in parking area.

i. Duplex sewage ejector system with alarms.

j. Duplex sump system with alarms.

k. Wet columns consisting of 4" waste, 3' vent and 1" cold water with shut-off valve will be centrally located throughout building for future tenant fixture connections.

3. Equipment and Materials:

a. Soil, waste, vent, and storm drain lines below floor and to 5 ft. outside building: Service weight no-hub cast-iron pipe and fittings with 20 mil wrap to resist corrosive soil corrosion. Provide cathodic protection.

b. Soil, waste, and vent piping above ground: Service weight no-hub cast-iron pipe and fittings.

c. Roof and area drainage above ground: Service weight no-hub cast-iron pipe and fittings.

d. Hot and cold and irrigation water piping above ground: Type L hard-drawn copper tube, ASTM B88, and wrot copper fittings, ANSI B16.22. All hot water supply and return piping shall be insulated with 1" thick fiberglass insulation.

e. Cold water piping below ground and outside the building:

(1) 3 In. and smaller: Type K hard-drawn copper tubing, ASTM B88, and wrot copper fittings ANSI B16.22, silver soldered joints.

(2) 4 In. and larger: Bell and Spigot Class 50 ductile Iron pipe cementlined inside, ANSI A21.51 and ANSI A21.4 with cementlined cast-iron, 150 lb. fittings, ANSI A21.10 and ANSI A21.4. Provide cathodic protection.

(3) Wrap all pipe and fittings with 20 mil wrap to resist hot soil corrosion.

f. Sub-soil drainage pipe and fittings: Schedule 40 PVC perforated pipe and fittings with solvent cemented joints.

g. Indirect Drains: Type M copper tube, ASTM B88 and wrot copper fittings, ANSI B16.22, solder joint type. Insulate with Manville Micro-Lok 650 AP.

h. Gas Piping:

(1) 2 In. and smaller: Schedule 40 black steel pipe with 300 lbs. OWG black banded malleable-iron screwed fittings.

(2) 2-1/2 in. and larger: Schedule 40 black steel pipe, ASTM A120 with standard tube-turn welded fittings.

(3) Wrap all underground piping with 20 mil wrap to resist hot soil corrosion. Provide cathodic protection.

l. Fuel Oil Piping:

(1) Above ground: Schedule 80 black steel pipe, ASTM A120, with 300 lbs. black malleable iron screwed fittings, ASTM A197. All joints shall be made with "SWAK" anaerobic pipe thread sealant with TFE. All fuel oil piping outside of two (2) hour enclosure shall be insulated with two (2) inch thick calcium silicate with FRP jacketing.

(2) Below ground: A.O. Smith Inland or Bondstrand double wall fuel oil pipe system.

j. Fixtures, Trim, and Accessories shall be equal to the following:

(1) Water Closets:

American Standard 2257.103, 1.5 gpm flush, elongated bowl, wall-hung; Olsonite 95CC heavy duty, open front white seat with check hinge. Sloan Royal 111-1-YB flush valve. At each toilet with a floor drain provide one flush valve with Sloan F-72A-2 trap primer with piping to floor drain trap adaptor. Install for physically handicapped where required.

(2) Urinals:

a) American Standard 6540.017 "Allbrook," wall-hung Sloan Royal 180-YB flush valve. Install for physically handicapped where required.

(3) Lavatories:

American Standard 0470.013 under counter mounted. Kohler K-13338, 8" center faucet with 2 gpm flow restrictor, blade handle with chrome-plated grid drain and tailpiece. Speedway 1/2" supplies; 1-1/2", 17 gauge C.P. P-trap. Insulate piping under lavatory accessible to the physically handicapped with Plumberex Specialty Products P-trap and hot water piping preformed insulation.

(4) Service Sinks:

American Standard 7740.020 "Florwell" with rim guard; 8344.111 sink faucet.

(5) Drinking Fountains and Electrical Water Coolers:

a) Drinking fountain: Haws Model 1110RF all bronze with #4 finish mounted for physically handicapped.

b) Remote cooler Haws #66A remote refrigeration unit, 1/4 hp, 115V., 60 cycles.

(6) Floor Drains:

a) Smith Fig. 2010-B floor drain with cast-iron body, adjustable strainer and 5 inch square nickel bronze top. Smith 2697 trap primer inlet fitting.

b) Smith Fig. 2230Y cast-iron body, double drainage flange, sediment bucket, bottom outlet, cast-iron strainer. Smith 2697 trap primer inlet fitting.

(7) Floor Sinks:

a) Indoor: Smith Fig. 3150 indirect floor sink waste receptor. 12 inches square by 8 inches deep, acid-resisting enamel inside. Smith 2697 trap primer inlet fitting.

b) Outdoor: Smith Fig. 3980 with 2 inch high water dam. Smith 2697 trap primer inlet fitting.

(8) Roof Drains:

Smith 1010 RE-UDC general purpose roof drain with cast body, drain body sump receiver under deck clamp. Flashing ring and gravel stop, and 8 inch high cast-iron dome strainer.

(9) Overflow Drains:

Smith 1080 RE-UDC overflow drain with 2 inch water dam with strainer.

(10) Trench Drains:

Smith Fig. 2710F cast-iron body with nickel bronze top complete with sediment bucket flashing clamp and flanged body.

(11) Planter Drains:

a) Smith Fig. 2671 cast-iron body, bronze flashing clamp with stainless steel mesh screen.

b) Smith Fig. 2680Y cast-iron body, flashing clamp stainless steel standpipe cover with stainless steel mesh. Modify standpipe as required.

(12) Area Drains:

a) Smith Fig. 2010-B floor drain with cast-iron body, adjustable strainer and polished bronze square top.

b) Smith 1450-Y cast-iron body, double drainage flange, secured polished bronze square heelproof grate, sump receiver and underdeck clamp.

(13) Emergency Drains:

Smith 2210 cast-iron drain and grate.

k. Miscellaneous Equipment:

(1) Water Heaters:

Two (2) A.O. Smith natural gas-fired storage type, State of California approved.

(2) Pressure Booster Pumps:

Paco triplex horizontal end suction package complete with 200 gallon hydro tank ASME stamp for 200 PSI with pump located in penthouse.

(3) Duplex Sewage Ejectors:

Weil series 2981 pumps complete with mercury floats, control panel, Fail-Safe alarm panel, cast-iron basin set on floor and U.L. listed control panel.

(4) Duplex Sump Pumps:

Weil series 1600 submersible pumps complete with mercury floats, control panel, high water alarm, reinforced fiberglass basin and U.L. listed control panel.

(5) Hot Water Circulating Pumps:

a) B & G all bronze close-coupled centrifugal type, high zones.

b) Paco series "C" close-coupled regenerative turbine pump bronze and stainless steel, low zones.

c) Automatic temperature controls and seven-day time clock with carryover and interlock with pumps.

(6) Fuel Oil Pumping System (Emergency Generator):

Duplex Viking rotary pumps complete with strainers, relief valves, valves, piping, control panel and accessories.

(7) Fuel Oil Pumping System (Fire Pump):

Two (2) Red Jacket submersible pumps and control panel.

(8) Fuel Oil Leak Alarm Panel:

Veeder-roof TLS250I alarm panel and probes.

(9) Remote Fuel Oil Fill Alarm Panel:

Warrick Special modified SBO899-1D4 alarm panel and Worchester Electric 22-75X solenoid valve, explosion-proof.

(10) Fuel Oil Tank:

Joor double wall plasteel tank with saddles.

15500 Fire Protection

A. System Requirements

1. Principal Items to be Included:

a. Hydraulically calculated combined automatic fire sprinkler and Class III standpipe systems, complete with detector check in vault below grade, piping, sprinklers, fire department connections, sprinkler assemblies, hose valve test drain piping and connections, electric gong, shut-off valves, flow and tamper switches, fire extinguishers, two diesel and one electric fire pump, fuel oil day tanks, alarms, jockey pump, fire pump test, tank accessories for a complete installation.

2. System Design:

a. Sprinkler system for the office areas shall be considered light hazard.

b. Sprinkler system for equipment, storage and parking structure areas shall be ordinary hazard Group 1.

3. Equipment and Materials:

a. Piping:

(1) Sprinklers:

ASTM A120 schedule 40 black steel pipe with cast-iron, screwed sprinkler fittings for branch piping and schedule 10 for mains with Victaulic couplings Style 77 or equal with Grade E gaskets and fittings.

(2) Underground Piping:

Class 50, mechanical joint, cementlined, ductile iron ANSI A21.5. Fittings shall be cementlined cast-iron, 250 pounds, ANSI A21.10. All pipe and fittings shall be U.L. listed with 20 mil wrap to resist soil corrosion. Provide cathodic protection.

(3) Engine Exhaust:

Schedule 40 black steel seamless pipe, ASTM A-53 with welded standard fittings. Insulate with 2" thick calcium silicated with a aluminum jacketing.

b. Valves and Specialties:

(1) Control Valves:

Up to 175 psi working pressure shall be Crane No. 467, Jenkins No. 825, Walworth No. 731F, or equal; above 175 psi, Stockham F-667.

(2) Drain Valves:

Up to 175 psi working pressure shall be Crane No. 2, Powell No. 651. Stockham No. B-126, or equal.

(3) Check Valves: Up to 175 psi working pressure shall be Crane No. 375, Jenkins No. 629, Stockham No. G-939, or equal; above 175 psi, Stockham No. F-947.

(4) Detector Check Meter:
City and U.L. approved.

(5) Tamper Switches:

U.L. approved, double pole, double throw, approved enclosure for wet and dry installation.

(6) Fire Department Connections:

Standard S315H-4, 4-way, with caps and chains. Label "Standpipe and Fire Sprinkler."

(7) Fire Alarm Bell:

F.M. and U.L. approved by Potter Roemer 6230.

(8) Pump Test: Standard 290 TM-5.

(9) Solenoid Valve: Cla-Val 136-01.

(10) Flow Indicators:

Potter Roemer 6200 or equal.

(11) Roof Connections:

Standard S295 and V6L hose valves with caps chains. Pressure gauge and pet cock.

(12) Hose Valves:

Standard V6L with caps and chains. Over 100 psig Standard Z3000.

(13) Sprinkler heads shall be Underwriters' Laboratories, Inc., approved for use intended.

a) Type: Standard pendant, standard upright, standard side wall types, and flush type. All piping for pendant, flush, and sidewall heads shall be concealed.

b) Location and Finish:

1) Pendant heads shall be similar to Reliable Model G1 (concealers - color as selected by Architect) in all lobby areas with suspended wallboard ceilings and chrome-plated Model G recessed in all other finished areas.

2) Upright heads shall be installed in all areas without suspended ceilings. Heads shall be bronze similar to Star Model E Upright.

c) Extra Heads: Provide extra heads of each type, enclosed in suitable receptacle, and one head wrench for each type. Receptacle shall be mounted where directed by the Architect. Number of extra heads in accordance with NFPA-13.

d) Guards shall be provided where required by Code.

e) Acceptable Manufacturers: Sprinkler heads shall be Star, or equal by Grinnell or Viking.

(14) Pressure Gauges:

Bourdon tube type, 4-1/2 inches diameter, corrosion-resistant movement, with recalibrating casing, J.P. Marsh, or equal. All gauges shall be installed with shut-off cock.

(15) Identification Signs:

Drain valves, test valves, control valves, and alarm valves shall be fitted with approved enamel signs indicating their use including signage on doors and access panels, coordinate with Architect.

(16) Three Fire Pumps, one Electric and two Diesel:

Peerless, Peabody Floway or Patterson with fuel oil day tank for diesel fire pumps, remote status panel for each pump in firemen's control room. Provide transfer switch for electric fire pump.

(17) Jockey Pump:

Paco, Burkes.

(18) Water Storage Tank:

Poured in place concrete tank, 105,000 gallon capacity.

(19) Floor Control Valves (over 175 psig):

Standard Z3004-IL MSA.

(20) Tank Fill and Alarm Panel:

Equivalent by Lumenite or Sentronics. Alarm panel in firemen's control room.

15800 Heating, Ventilating and Air Conditioning

A. System Requirements

1. Principal Items to be Included:

a. Summer-Winter air conditioning for entire occupied areas.

b. A mechanical supply and exhaust air system for all toilet rooms, janitor rooms, electrical and telephone equipment rooms, and mechanical equipment rooms.

c. Air conditioning for elevator equipment rooms.

d. Mechanical supply and relief air system for each stairwell.

e. Mechanical ventilation and smoke evacuation system for each parking level.

2. General System Description:

a. Factory furnished fan-coil units, one per floor, will provide cold supply air with supply mains looped throughout each floor. Multiple fan-coil units will be provided on mixed-use lower floors.

b. Variable volume boxes with branch mains to main floor loop, branch ducts downstream of boxes, diffusers and return air grilles, thermostat installation, and testing and balancing will be under tenant improvement work.

c. Three centrifugal water chillers and one rotary water chiller located in the Penthouse Chiller Room will supply chilled water to the cooling coils of the fan-coil units. The chilled water at each fan-coil unit will be controlled by a two-way control valve with cold plenum controller reset from return air temperature. Three-way control valves will be provided to meet minimum chiller flow requirements.

d. Hot water will be supplied from five (5) gas-fired boilers located in the Penthouse Boiler Room. Hot water will be pumped to each floor with piping extended throughout each floor for connection to exterior zone variable volume boxes under tenant improvement work. A three-way valve, reset from outdoor temperature, will be provided at the boilers.

e. Outside air fans will be provided to supply fresh air to each fan-coil unit.

f. The attic space on each floor will be used as a return air plenum.

g. Building and toilet exhaust air fans will be provided.

h. Cold water make-up piping shall be piped from plumbing point of connection downstream of backflow preventer to equipment.

i. Air distribution equipment will be provided complete for the core areas on each floor with supply ducts extended for connection to variable volume boxes under tenant improvement work. Air distribution equipment for 1st Floor lobby entry shall be complete with variable volume boxes.

j. A supply air fan and relief air system will be provided for each stairwell.

k. Exhaust fans and supply air fans will be provided for the parking levels. Exhaust ductwork will be extended to provide sufficient coverage on each level. Automatic dampers shall be provided at each main exhaust and supply duct entering the fan rooms or duct shafts for smoke evacuation control.

3. Equipment and Materials:

a. Centrifugal Water Chillers:

Three (3) Trane, Carrier or York, centrifugal, 42° F leaving chilled water temperature. 460V., 3 phase, 60 Hz.

b. Rotary Water Chiller:

Trane or York, 42° F leaving chilled water temperature. 460V., 3 phase, 60 Hz.

c. Cooling Towers:

Four (4) Evapco or BAC, axial fan, 74° FWB ambient, 85° F leaving condenser water temperature. 2-speed fan motors, 460V., 3 phase, 60 Hz.

d. Boilers:

Five (5) Ajax or Rite, steel tube, electronic controls, high-low fire.

e. Air Handling Units:

Pace horizontal and vertical draw-thru with variable speed drives. 460V., 3 phase, 60 Hz. Internally spring isolated, 2" deflection.

f. Building and Toilet Exhaust Fans:

Cook or Greenheck, centrifugal roof ventilator, upblast, belt drive, 460V., 3 phase, 60 Hz.

g. Stairwell Supply Fans:

Cook or Greenheck, in-line centrifugal, belt drive, 460V., 3 phase, 60 Hz.

h. Parking Level Exhaust and Supply Fans:

Joy vane-axial controllable pitch fans, 460V., 3 phase, 60 Hz.

i. Water Pumps:

Peerless, Allis Chalmers or Bell & Gossett, end suction centrifugal, flexible-coupled, mechanical seals. Three (3) each for chilled water and condenser system, two (2) for hot water system. Parallel operation, 460V., 3 phase, 60 Hz.

j. Filters:

Farr or Cambridge, pleated disposable type, 30-35% efficiency.

k. Elevator Equipment Room Heat Pumps:

York, Trane or Carrier, complete with filters and thermostat. 460V., 3 phase, 60 Hz.

l. Diffuser and Return Air Grilles:

Krueger or Titus, flush with ceiling, modular, perforated type with metal frame. Air distribution equipment installed in ceilings shall be furnished in factory finished enamel of color to match tile.

m. Sound Traps:

IAC Model 5Ms, at discharge of each air handling unit and 5Ms at return air opening at each fan room, and at suction and discharge of parking level exhaust fans.

n. Variable Air Volume Boxes:

Krueger or Titus single inlet pressure independent without heat for interior zones and with 1-row hot water coil for exterior zones.

o. Diffuser and Return Air Grilles:

Krueger or Titus, flush with ceiling, modular, perforated type with metal frame. Air distribution equipment installed in ceilings shall be furnished in factory finished enamel of color to match tile.

p. Ductwork:

(1) All ductwork shall be constructed, erected and tested in accordance with the most restrictive of local regulations, procedures detailed in the ASHRAE Handbook of Fundamentals or the applicable standards adopted by the Sheet Metal Air Conditioning Contractors National Association (SMACNA).

(2) Connections to main cold supply ducts shall be made with low loss fittings.

(3) Distribution ductwork downstream of variable air volume boxes shall be rectangular ducts of galvanized steel and prefabricated spiral lockseam ducts and fittings.

(4) Final connections to ceiling diffuser boxes (3 ft. minimum, 6 ft. maximum) shall be made with flexible glass fiber duct as manufactured by glas-flex or fiberglass. Connections of flexible duct to round ducts shall be made with 1/2 inch wide positive locking steel straps.

q. Piping:

(1) Chilled Water and Condenser Water:

Schedule 40 black steel pipe and fittings.

(2) Hot Water:

Schedule 40 black steel pipe and fittings or type L hard-drawn copper tubing and wrought copper fittings in Boiler Room and main riser. Type L hard-drawn copper tubing and wrought copper fittings over occupied areas to reheat coils.

(3) Necessary valves and piping accessories shall be provided for system control and isolation of equipment for servicing or replacement.

r. Insulation:

(1) Ductwork:

All concealed supply air and outside air ducts shall be insulated with 1-1/2" thick foil-faced fiberglass insulation. All exposed VAV cold supply air ducts in Fan Room shall be lined with 1" thick 1-1/2 pound density fiberglass insulation. All main VAV cold supply air duct on each floor to 10 ft. outside of fan room shall be lined with fiberglass insulation.

(2) Piping:

Chilled water and hot water will be insulated with heavy density fiberglass with vapor barrier jacket. Insulation for outdoor piping shall be covered with aluminum jacket.

s. Water Treatment:

Chem-Pro or Nalco, non-acid for flushing and pre-start clean-up and continued treatment and protection of systems for one year.

t. Vibration Isolation:

M.W. Sausse or Mason installed to prevent transmission of vibration to structure including seismic restraints.

u. Temperature Controls:

Direct Digital Controls with pneumatic actuators.

(1) Air Compressor:

Duplex with refrigerated air dryer, sized for 33-1/2% run time. Main control air loop shall be provided on each office tower floor.

(2) Room Thermostats:

Blank metal covers with concealed adjustment.

(3) Main VAV cold supply air shall be reset from return air temperature.

(4) All control interlock wiring and conduit by mechanical contractor.

Division 16 - ELECTRICAL

Div. 16 - General

A. Electrical work will include, but not be limited to the following items:

MV&P

1. Primary service ducts and vault facilities for Department of Water and Power transformer installation.

2. Main switchgear and metering facilities for 480Y/277 volt services.

3. Distribution systems for lighting and power; including bus ducts, feeders and panelboards.

4. Branch circuit conduit; wiring and outlets for lighting, convenience outlets and special power.

5. Motor control centers and power wiring for motor operated and other power consuming equipment.

6. Power wiring for elevators.

7. Lighting fixture sand lamps.

8. Wiring devices and plates.

9. Telephone raceway system, including service ducts, distribution conduits and outlets.

10. Emergency power and lighting systems, including engine generators, auto transfer switches, feeders, lighting outlets, power wiring and exit signs.

11. Building security system.

12. Fire safety system.

13. Exterior lighting for pedestrian areas and landscaping.

14. Raceway system for televisions antenna.

15. Control conduit and wiring.

16. Complete grounding system for electrical equipment.

17. Excavation and backfill for underground electrical installation.

18. Testing of electrical installation.

MV&P

Codes and Regulations

A. Entire electrical installation shall comply with the requirements of the City of Los Angeles and all other authorities having jurisdiction. Contractor shall obtain and pay for all required permits.

Electrical System Characteristics

A. Service voltage will be 480Y/277 volts, 3 phase, 4 wire.

B. Fluorescent lighting will be served at 277 volts.

C. Motors 1.2 horsepower and larger will be served at 480 volts, 3 phase.

D. Incandescent lighting will be served at 120 volts.

E. Small power equipment will be served at 120 volts, single phase or 208 volts, single or 3 phase.

PRODUCTS

Materials

A. 277/480 Volt Service Switchgear: Floor standing metal enclosed, with Westinghouse Type PCCG main breakers. Feeder breakers 1,600 a,p and larger shall be Type PCC; feeder breakers smaller than 1,600 amp shall be current limiting type. All breakers shall be fixed mounted and rear connected. Each main breaker shall have ammeter and voltmeter. Facilities shall be provided by Power Company metering. Main and feeders shall be provided with ground fault protection.

B. Bus Duct: Totally enclosed, continuously insulated and weatherproofed, plug-in type; with aluminum conductors, full neutral bus and ground bus. Tap-off devices shall be plug-in fusible switches with current limiting fuses. Westinghouse Pow-R-Way or approved equal.

C. Distribution Switchboards: Floor standing metal enclosed, fully bussed for entire height; with molded case circuit breakers rated minimum 14,000 amp at 480 volts or higher, as noted in the drawings.

D. Panelboards: Wall mounted, metal enclosed with hinged door and bolt on type molded case breakers. Provide main breaker where indicated on the Drawings.

1. 277/480 Volt Panelboards: Branch circuit breakers rated 14,000 amp interrupting.

2. 120/208 Volt Panelboards: Branch circuit breakers rated 10,000 amp interrupting.

E. Dry Type Transformer: 480-208/120 volts, 3 phase, Class "H" insulation, standard taps. Install transformers on vibration isolation pads. Conduit connections to transformers shall be made with flexible conduit or neoprene isolation.

F. Motor Control Centers: Floor standing, metal enclosed with plug-in type combination starter and motor circuit protector units. Control wiring shall be Type 1B, and each starter unit shall have H-O-A switch, pilot light and 120 volt control transformer.

G. Wire and Cable: 600 volt conductors shall be copper with Type THWN insulation in sizes No. 4 AWG or larger and Type THHN or THWN insulation in sizes No. 6 AWG or smaller.

H. Wiring Devices: Specification grade, color as selected by the Architect.

I. Conduit Systems:

1. Rigid threaded steel, aluminum or IMC conduit for all power feeders and conduits larger than 2" size.

2. EMT with steel connectors for branch circuits, telephone raceways and conduits 2" and smaller.

3. Flexible steel conduit for connections to motors and vibrating equipment, weathertight in damp locations.

4. Schedule 40, PVC for conduit runs outside the building in earth.

MV&P

5. All conduit feeds to motorized equipment shall be run exposed overhead, not in concrete slabs.

J. Lighting Fixtures and Lamps:

1. Recessed fixtures shall be suitable for installation in the proper ceiling construction and shall be furnished complete with all mounting hardware, attachment devices, and junction boxes where required.

2. Ballasts shall be high power factor, reduced wattage type, Universal SLH or approved equal.

3. Lenses and diffusers shall be 100% virgin acrylic.

4. Fluorescent lamps shall be 40 watt, rapidstart type, 3000 Kelvin.

Div.16 EXECUTION

Power Services

A. Transformer Installation:

1. Work provided by DWP: Furnish and install primary and secondary conductors, transformers and primary switches.

2. Work by Contractor: Furnish and install primary service conduits from property line to transformer vault and required work on vault. Primary service conduits shall be rigid steel, concrete enclosed.

Telephone System

A. Service: Provide metallic ducts from property line into main terminal room.

B. Distribution System: Provide distribution conduits from main telephone rooms to telephone rise locations.

C. Telephone Outlets: Provide 4" square box at each outlet location and conduit from outlet to telephone terminal backboard.

D. Pull Lines: Provide nylon pull line in all telephone conduits.

MV&P

Wiring for Equipment

A. Motorized Equipment: Provide conduit and power conductors to each unit. Provide disconnect switches as required by Code.

B. Elevators: Provide overcurrent devices in Machine Room and power conduit and wiring to Elevator Controllers. Provide lighting, switches and receptacles in all Machine Rooms, secondary levels and pits. Provide cab lighting circuits to elevator controller locations. Provide telephone conduits to elevator controller locations. Provide control conduits as required from Fire Control Station to elevators for fire safety operation. Provide wiring from automatic transfer switches to elevator controllers for emergency power operation.

C. Motorized Doors, Gates, Etc.: Provide power conduit and wiring to controllers and motors. Provide and disconnect switches, as required. Provide control conduit and wiring to all control devices.

Emergency Power and Lighting System

A. Engine Generator: Diesel engine driven, 277/480 volt, 3 phase, 4 wire output.

1. Engine: 1,800 rpm, 2 or 4 cycle, electronic speed control, radiator cooled; with 24 volt starter, charging generator, immersion heater, overspeed device, alarms for oil pressure, water temperature, overcrank and overspeed; and with automatic starting controls. Engine shall be capable of producing rated kW output for **6** hours without overheating.

MV&P

2. Generator: Single ball bearing type, bolted to engine flywheel, rated as indicated on the Drawings at 0.8 power factor; direct connected exciter.

3. Starting Battery: Lead acid type, 24 volt; in seismic designed steel rack with charger capable of charging batteries from fully discharged condition in 6 hours.

4. Fuel System: Day tank with 1 hour capacity and float switches to control 2 pumps and to provide high and low level alarms. Engine driven fuel pump to transfer fuel from day tank to engine. Provide auxiliary hand pump to transfer fuel into day tank.

5. Exhaust System: Three chamber residential muffler with stainless steel flexible connections to engine.

6. Control Panel: Unit mounted wit hinged door and the following devices:

   a) Gauges for water temperature, oil pressure, oil temperature.

   b) Meters for output volts, amps, kW and frequency; battery charging rate; running time.

   c) 24 volt panel lights.

   d) Voltage regulator.

   e) Field rheostat.

   f) Emergency start switch.

   g) Automatic "cool-down" controls.

   h) Alarm lights and horn.

   i) Automatic cranking controls.

   j) Output circuit breaker.

   k) ON/OFF/AUTO control switch with alarm contacts.

   l) Relays for remote status indication.

7. Installation: Unit shall be mounted on vibration pads, as required.

8. Testing: Unit shall be load tested after installation for 2 hours at 100% loads. Provide adequate load bank for testing.

MV&P

B. Automatic Transfer Switches: Floor or wall mounted, metal enclosed, sized as shown on the Drawings and rated for available fault current; with full automatic controls, manual test switch and engine starting contacts; ASCO, Russelectric or approved equal.

Fire Safety System

A. General Requirements: Fire Safety System work will include, but not be limited to, furnishing and installing the following items:

1. Fireman's Control Panel incorporating the following:

a) Graphic annunciator for all alarms.

b) Provisions for selective zone paging.

c) Fireman's telephone system.

d) Control for elevators.

e) Controls for fan systems.

f) Control for smoke evacuation system.

g) Status indication for emergency generator and fire pumps.

h) Control for unlocking stair doors.

2. Waterflow alarms and valve supervision.

3. Manual pull stations.

4. Smoke detection in elevator lobbies, mechanical and electrical equipment rooms, and in fan systems.

5. Fireman's telephone system.

6. Evacuation paging system.

7. Controls for air conditioning, smoke evacuation, and stair pressurization systems.

B. Codes and Regulations: Entire system shall comply with the requirements of the City of Los Angeles Fire Department, and any other authorities having jurisdiction.

MV&P

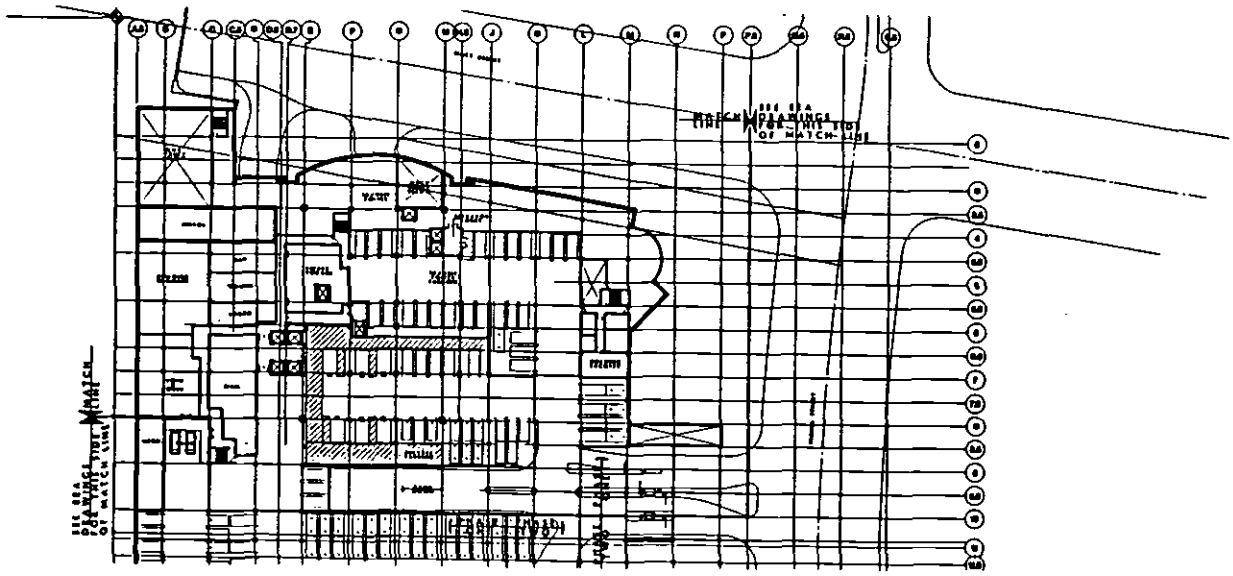
C. System Description: System shall be Class A, fully supervised with all materials listed by U.L. and State Fire Marshall. System shall be microprocessor based with addressable devices connected to loops. Provide CRT and printer in Fire Control Room. All wiring shall be installed in conduit.

END OF SECTION

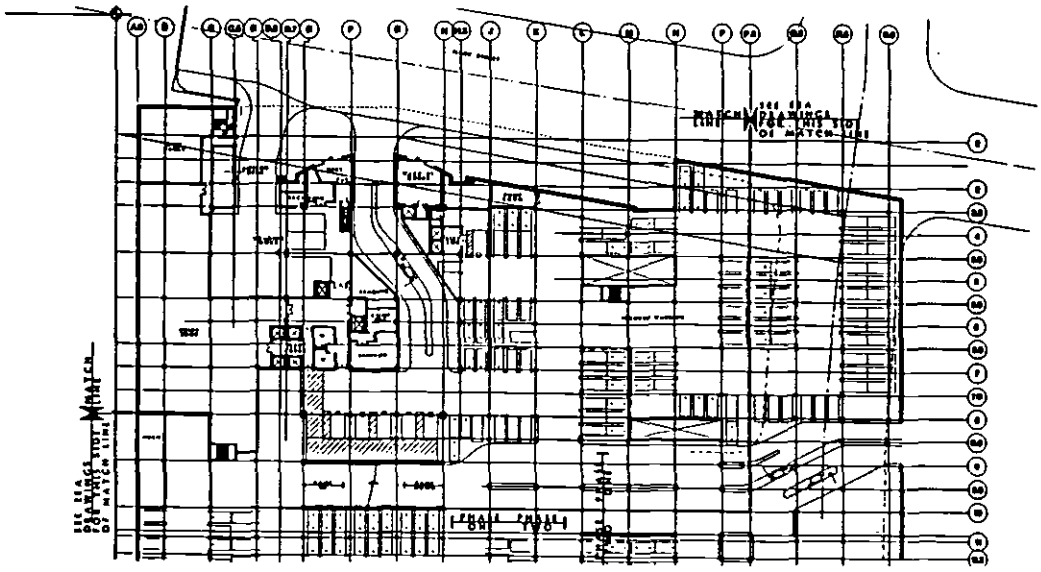
END OF OUTLINE SPECIFICATION

MKR/rc
91-400

Attachments



LEVEL P1



LEVEL P2

McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

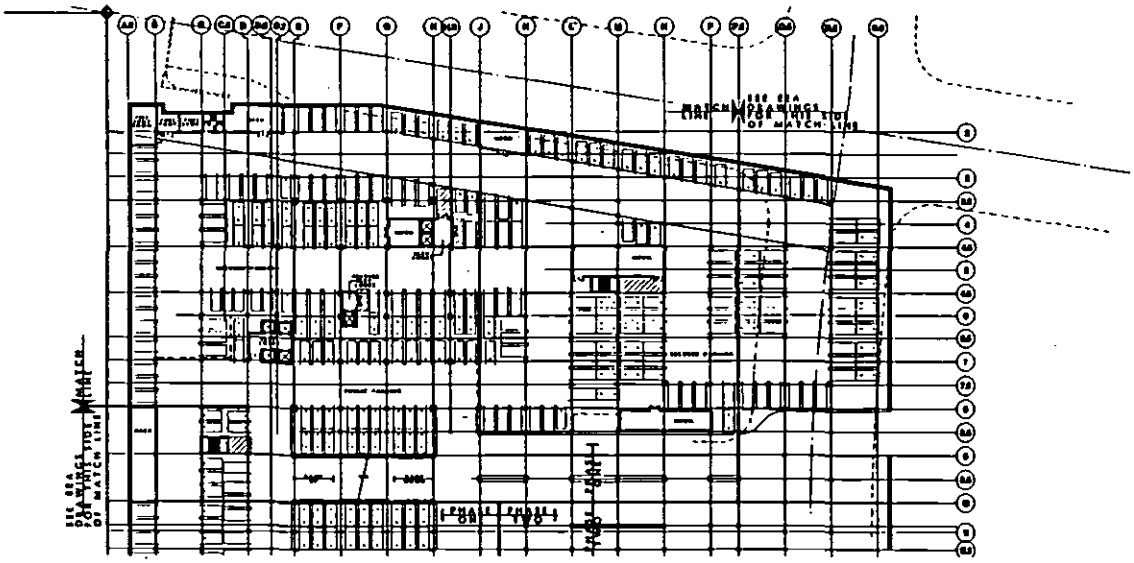
R T D

HEADQUARTERS

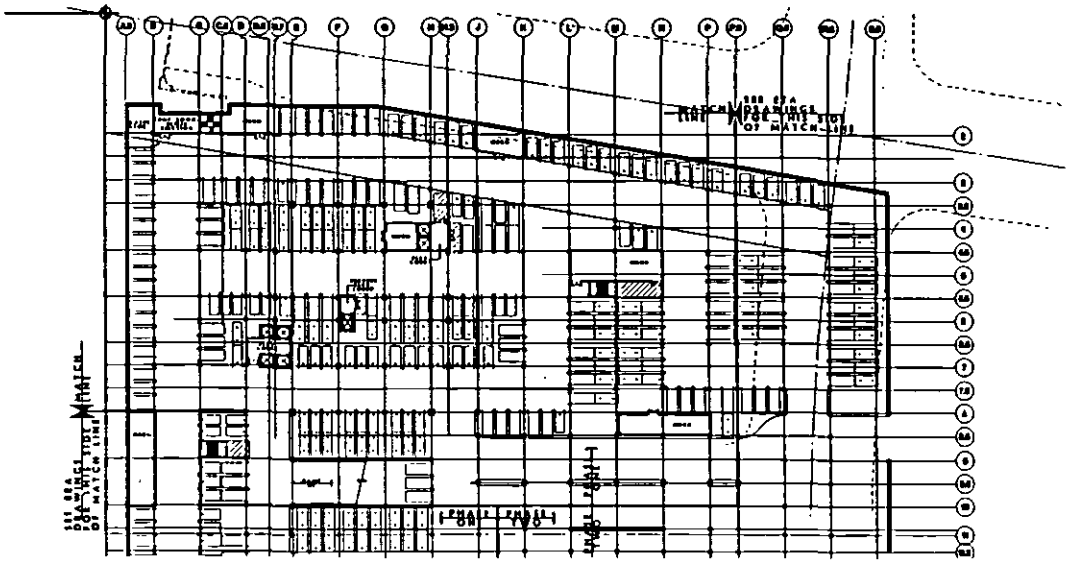
GATEWAY CENTER AT UNION STATION

PARKING LEVELS

PS-1



LEVEL P3



LEVEL P4

McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

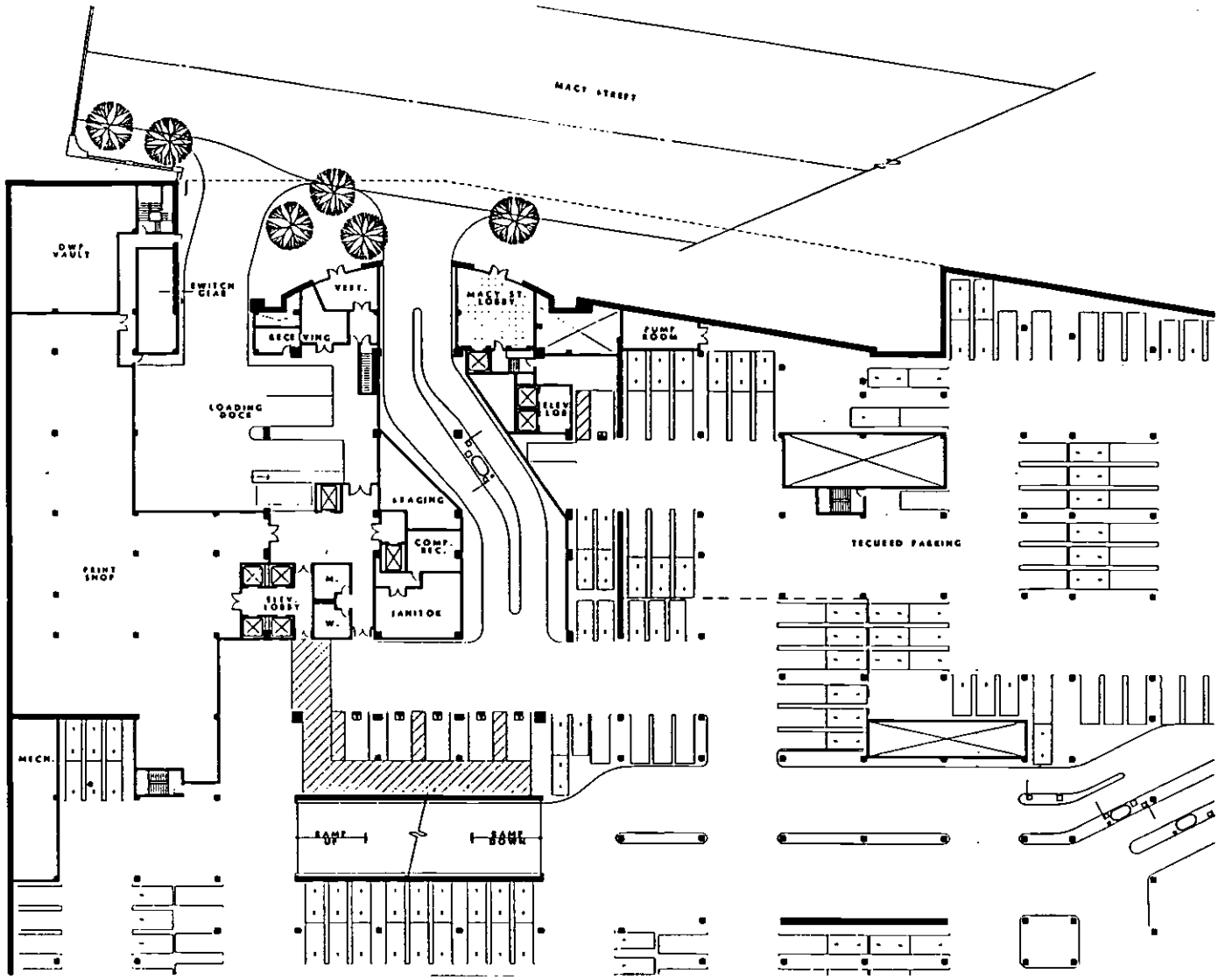
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

PARKING LEVELS

PS-2



McLARAND, VASQUEZ & PARTNERS, INC.
(314) 549 2207

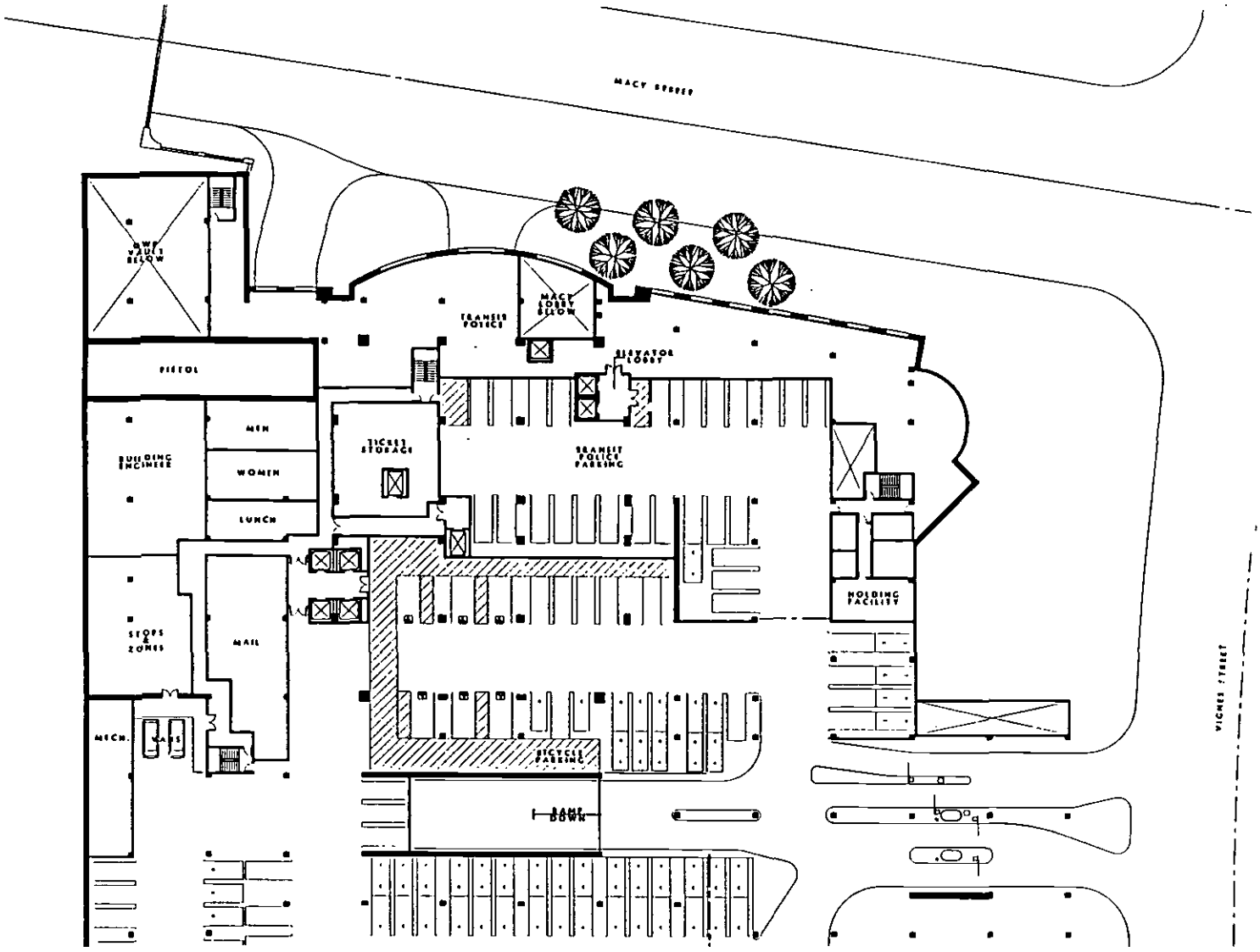
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

PARKING LEVEL P2

A-1



McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

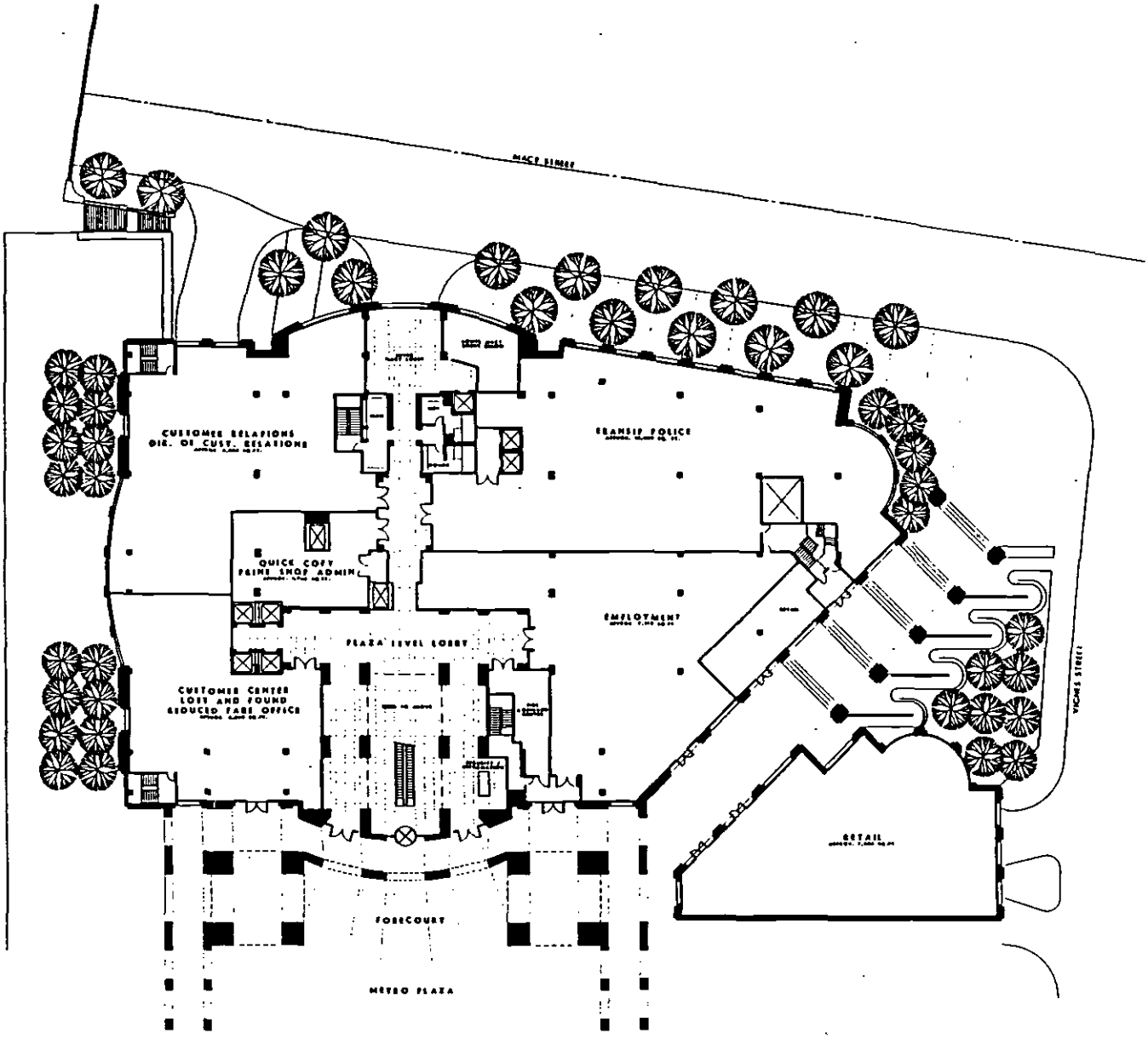
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

PARKING LEVEL P1

A-2



McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

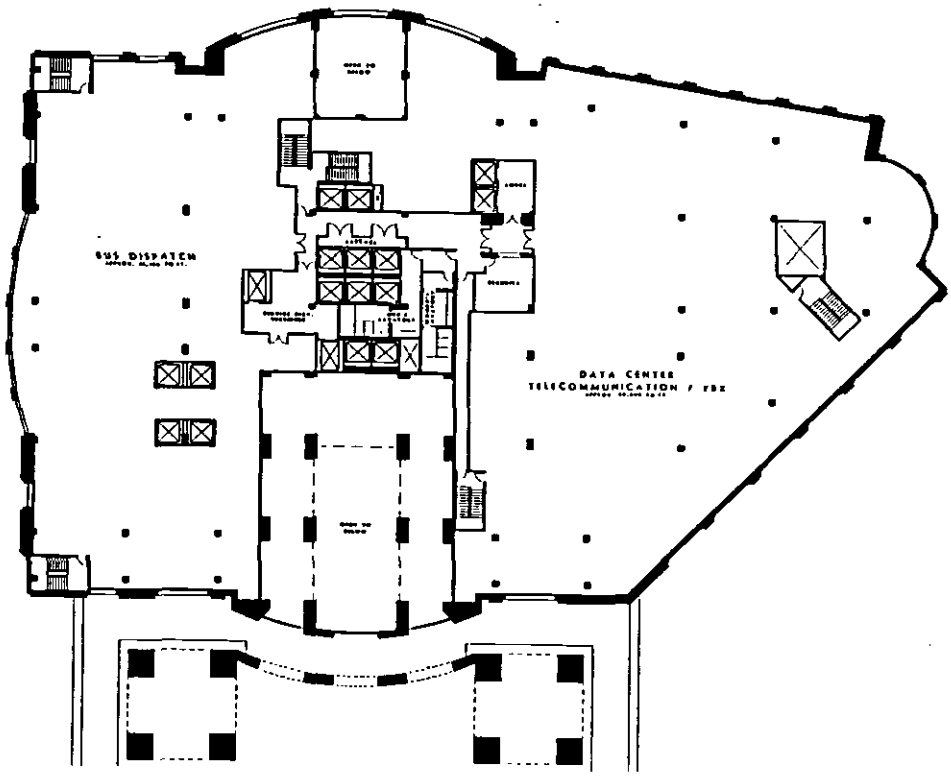
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

LEVEL 1
PLAZA

A-3



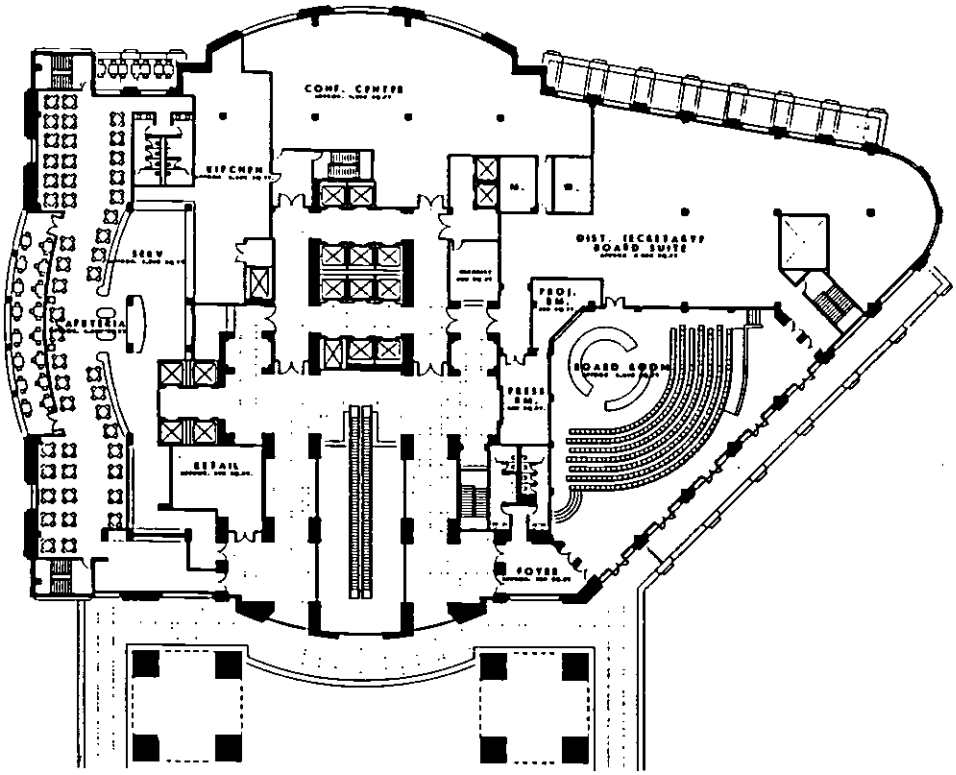
McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

LEVEL 2
SECURED
FUNCTIONS
A-4



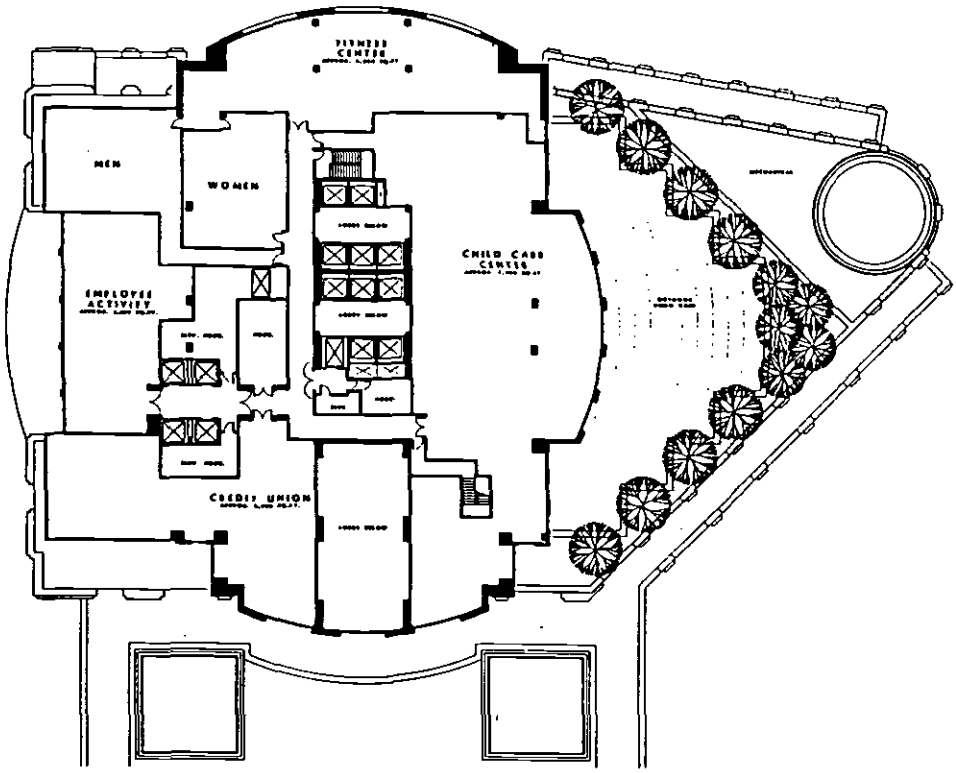
McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

LEVEL 3
MAIN LOBBY
PODIUM LEVEL
A-5



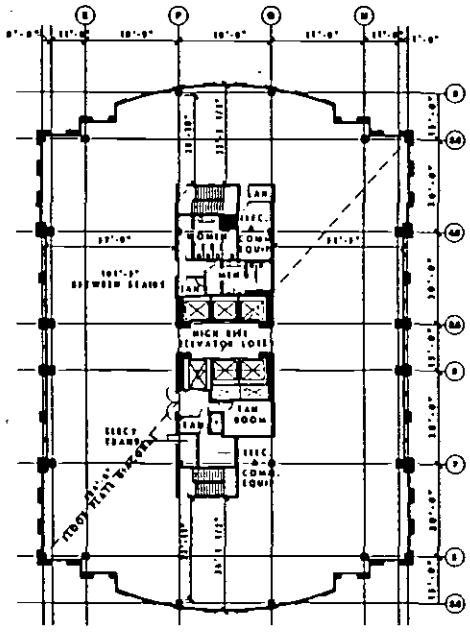
McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

R T D

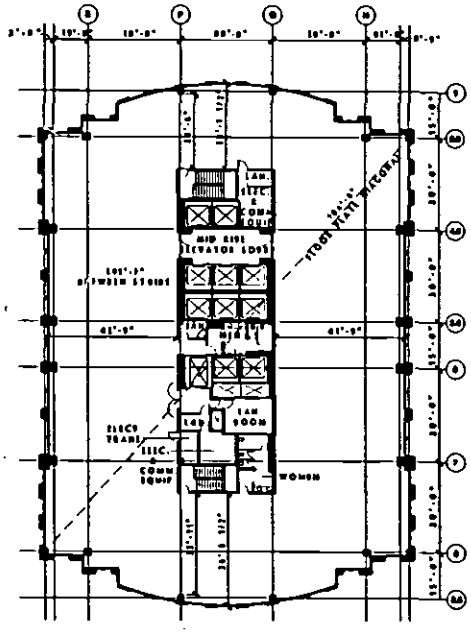
HEADQUARTERS

GATEWAY CENTER AT UNION STATION

LEVEL 4
SPECIAL FUNCTIONS
A-6



HIGH RISE FLOOR PLATE



MID RISE FLOOR PLATE

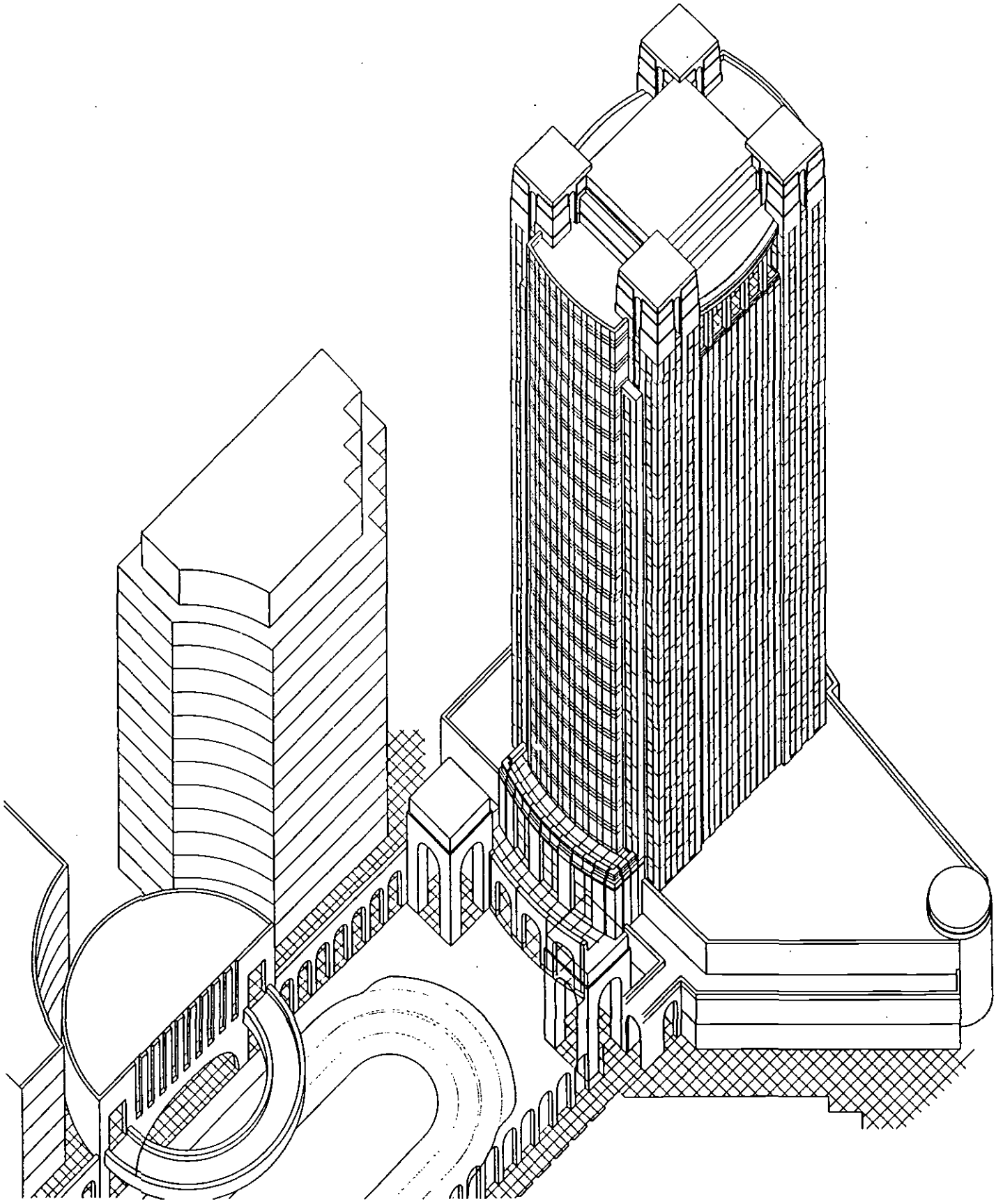
McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

HIGH-RISE PLAN
MID-RISE PLAN
TYPICAL FLOORS
A-7



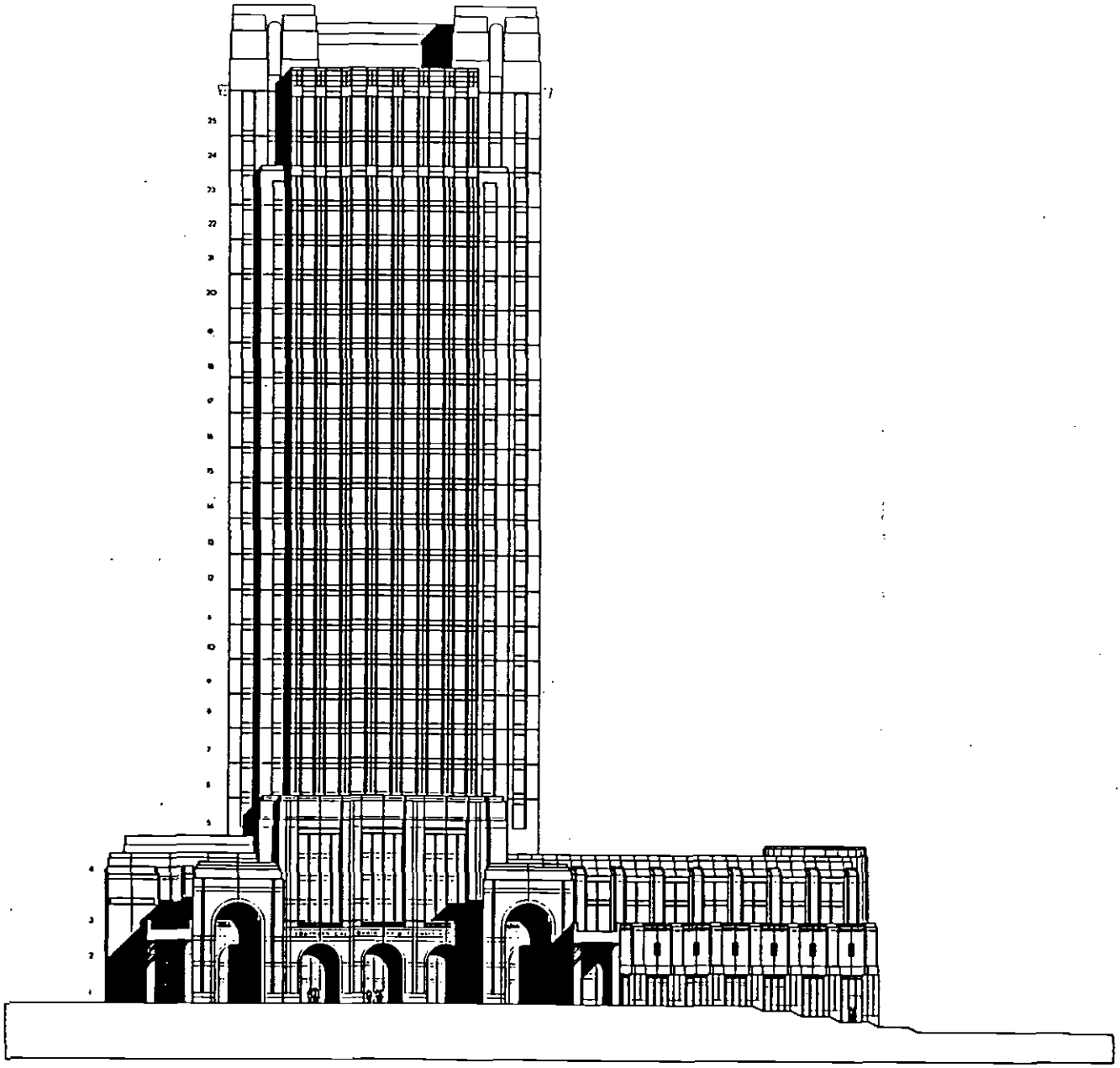
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

CONCEPTUAL
AXONOMETRIC
VIEW
A-8



McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

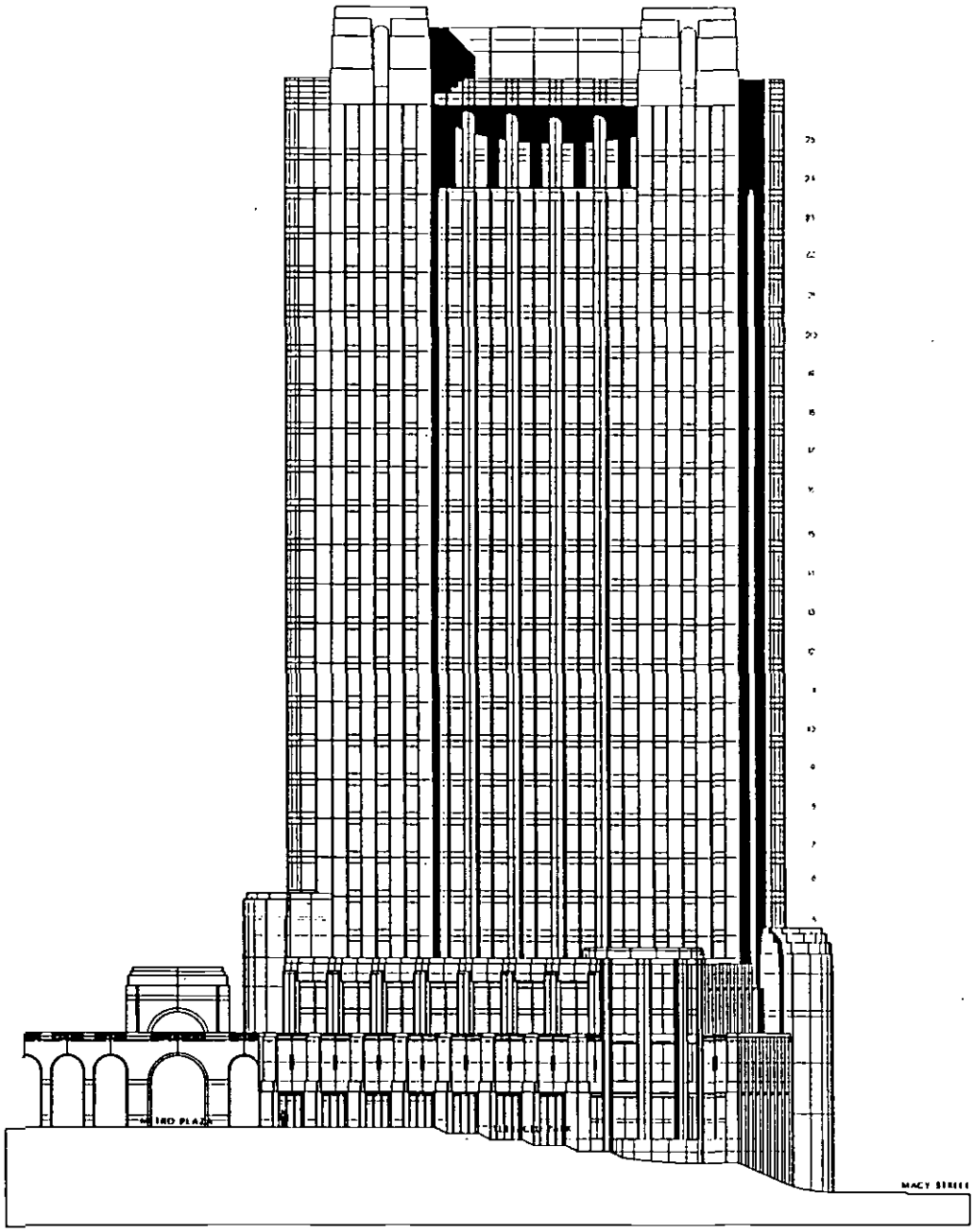
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

METRO PLAZA
ELEVATION

A-9



R T D

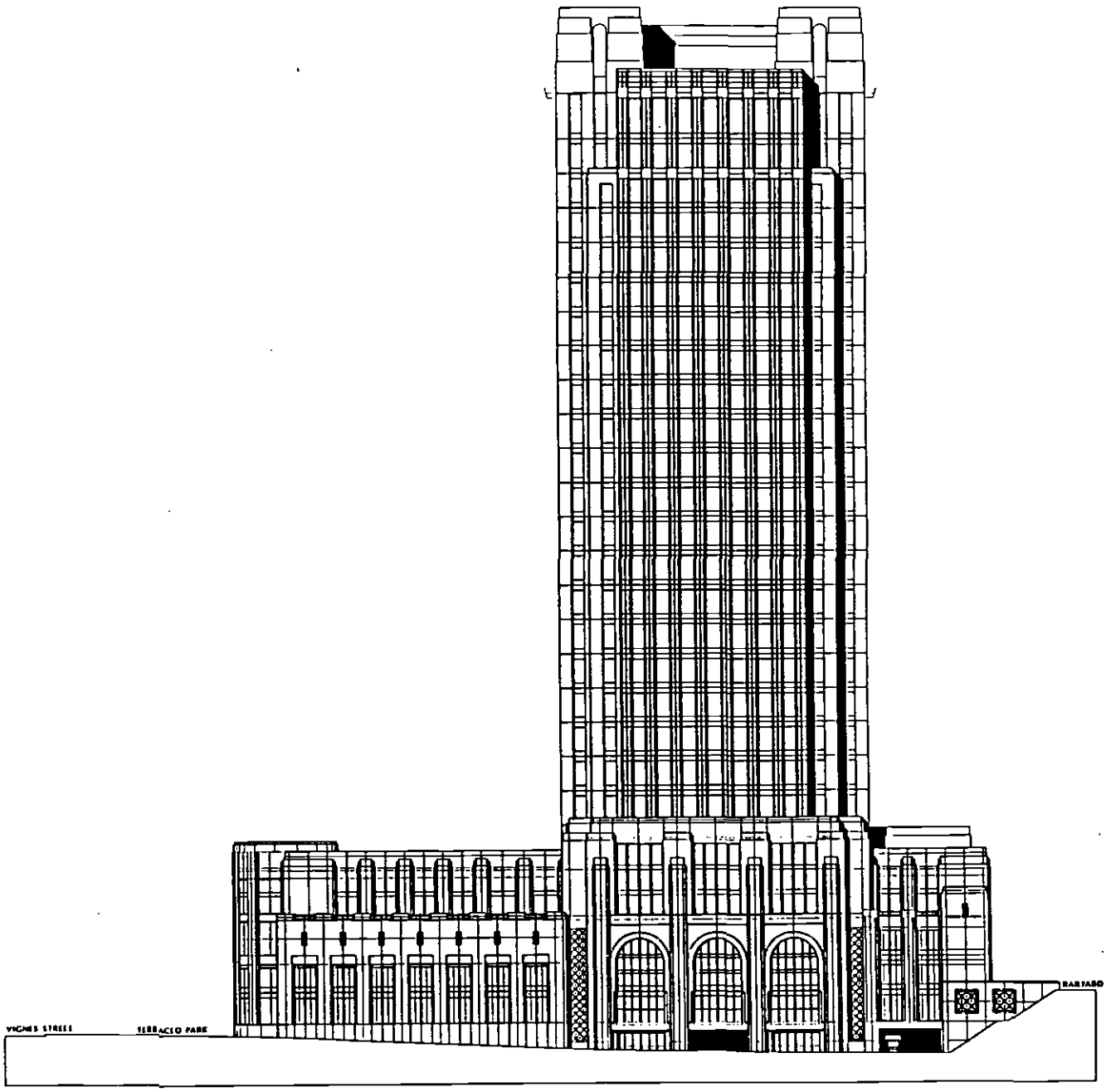
HEADQUARTERS

GATEWAY CENTER AT UNION STATION

McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

VIGNES STREET ELEVATION

A-10



McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

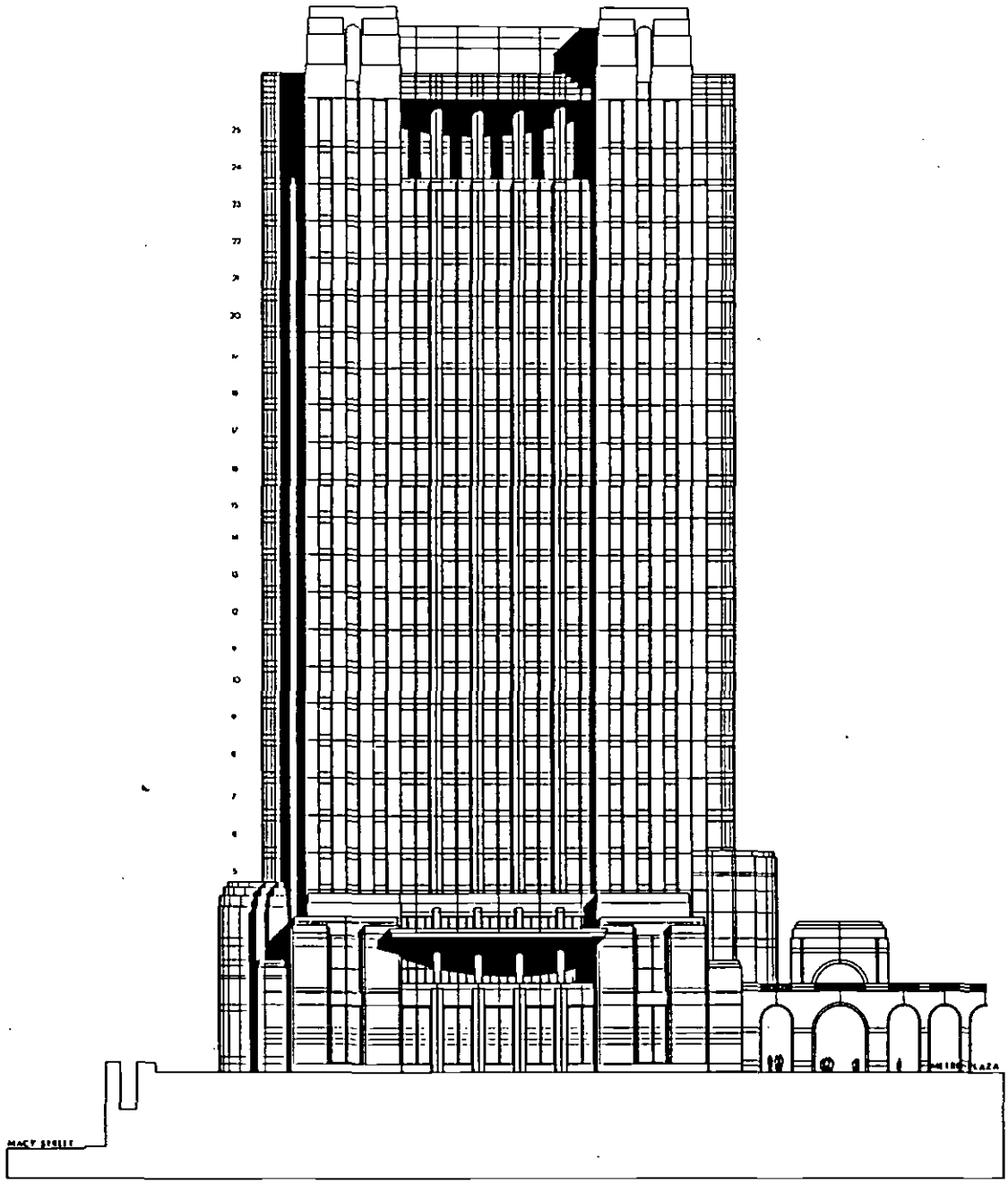
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

MACY STREET
ELEVATION

A-11



McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

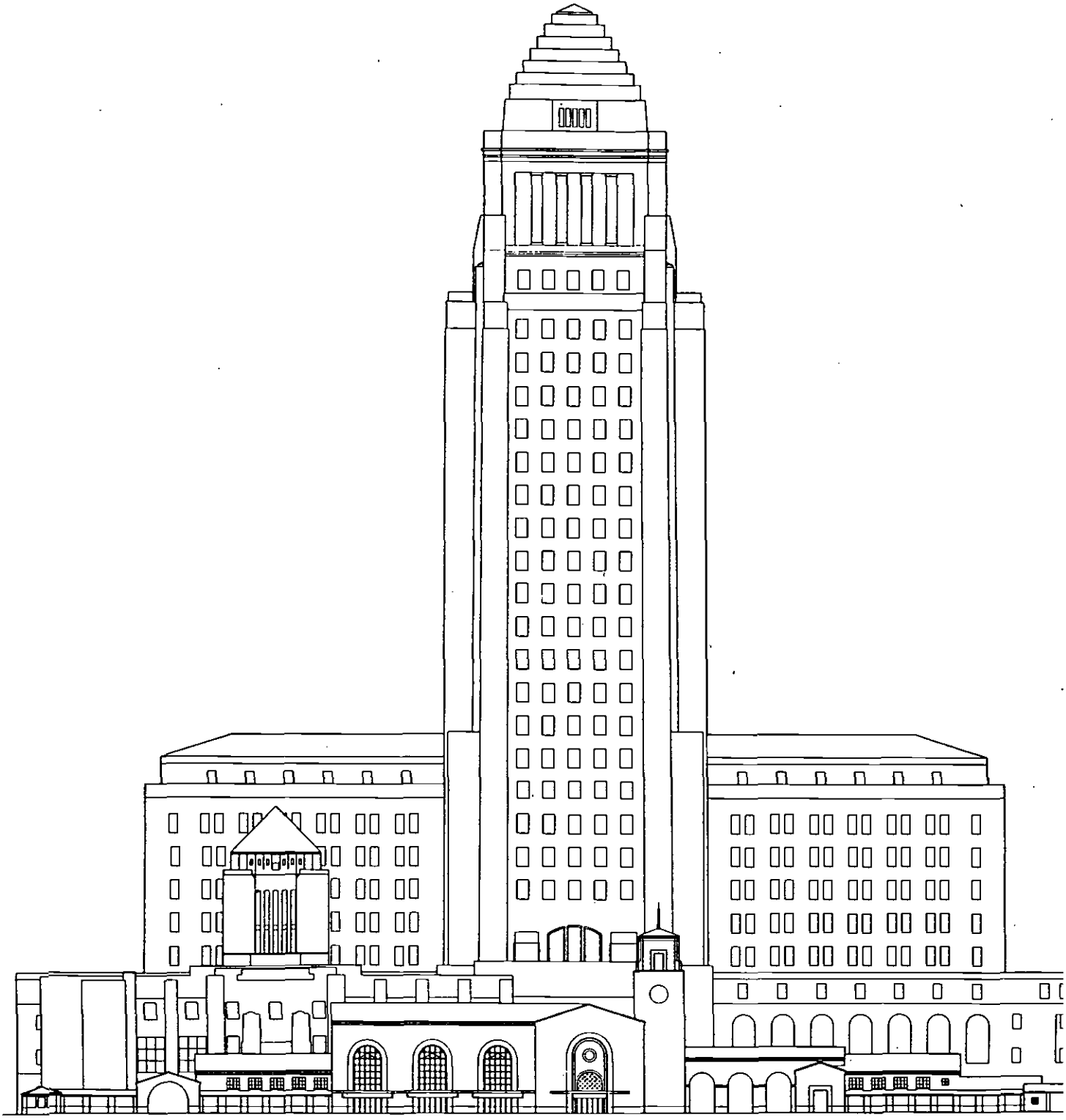
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

RAILYARD
WEST ELEVATION

A-12



CENTRAL LIBRARY UNION STATION CITY HALL

COMPARISON OF SCALE

McLARAND,
VASQUEZ &
PARTNERS, INC.
(714) 549-2207

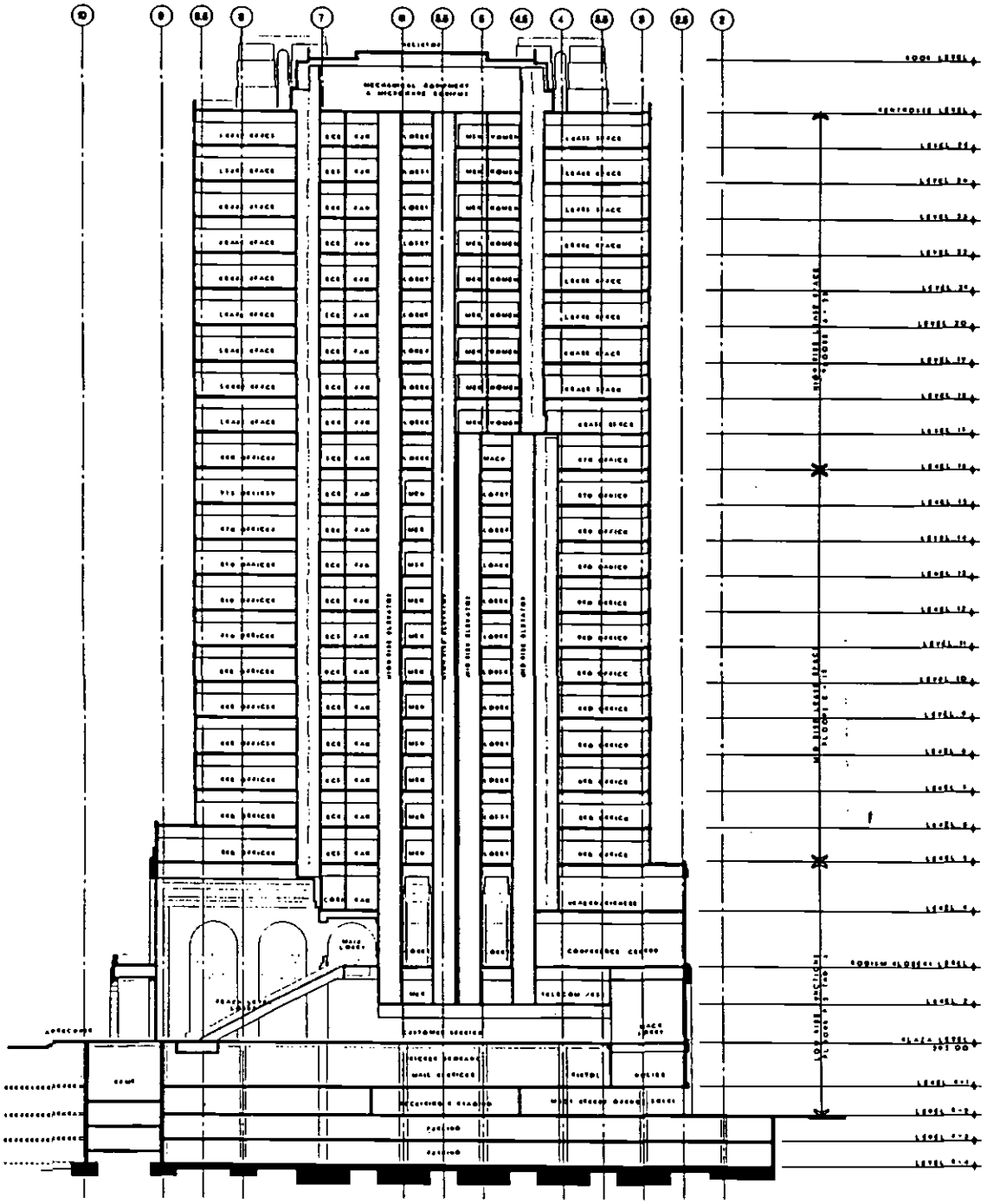
R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

SCALE
COMPARISON

A-13



R T D

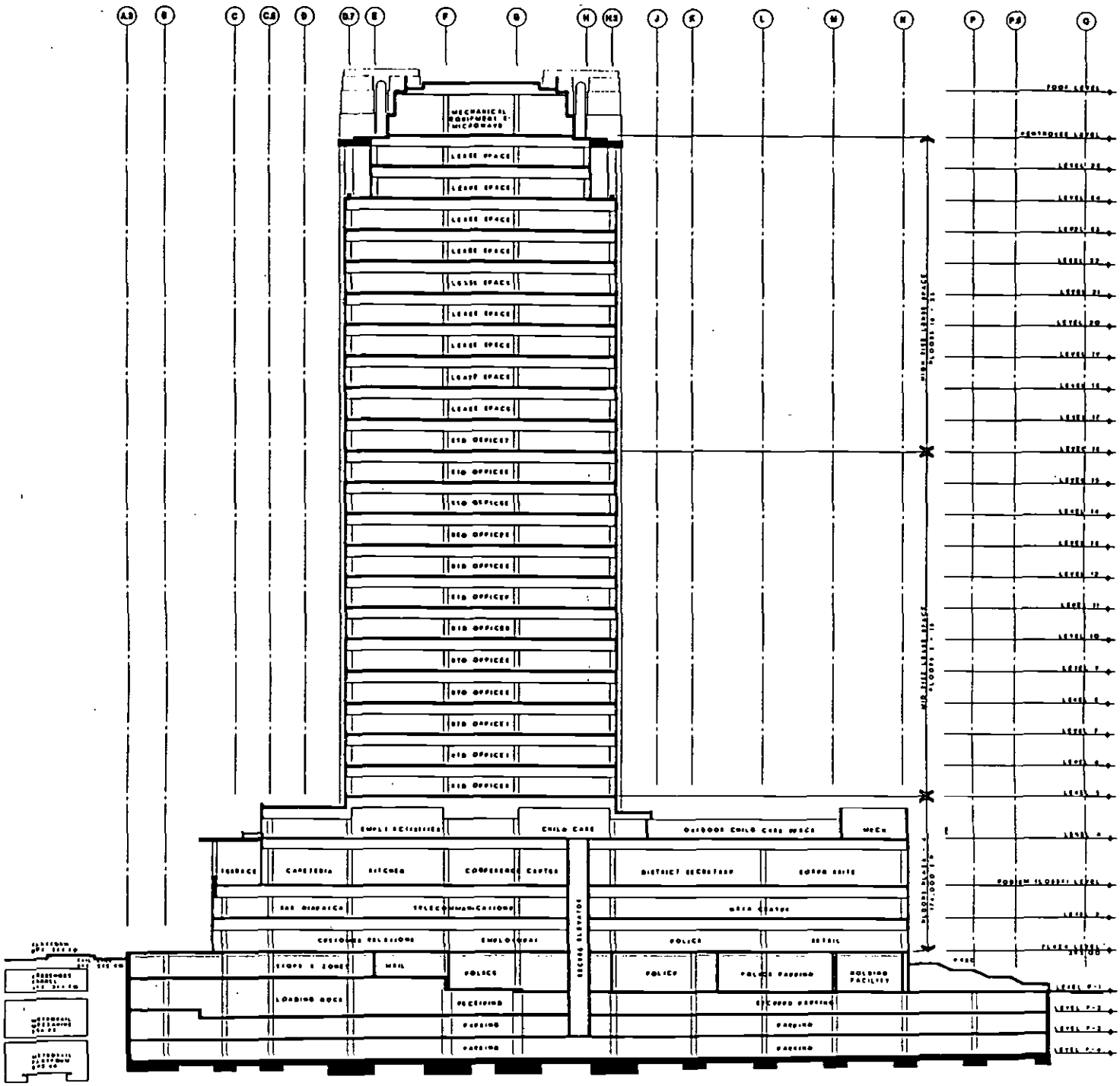
HEADQUARTERS

GATEWAY CENTER AT UNION STATION

McLARAND, VASQUEZ & PARTNERS, INC.
(714) 549-2207

BUILDING SECTION
NORTH/SOUTH

A-14



McLARAND, VASQUEZ & PARTNERS, INC.
(718) 549-2207

R T D

HEADQUARTERS

GATEWAY CENTER AT UNION STATION

BUILDING SECTION
EAST/WEST

A-15

GENERAL NOTES

GENERAL

1. THE PROJECT SPECIFICATIONS FORM A PART OF THESE GENERAL NOTES.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
3. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DRAWINGS.
4. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NOTES AND DETAILS ON DRAWINGS AND THESE GENERAL NOTES AND TYPICAL DETAILS ARE IN CONFLICT WITH THE PROJECT SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
5. ALL WORK SHALL CONFORM TO THE STANDARDS OF THE FOLLOWING CODE:

   CITY OF LOS ANGELES BUILDING CODE, 1998 EDITION AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THE CONTRACT DOCUMENTS.
6. MANUFACTURED MATERIALS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO THEIR USE. ALL REQUIREMENTS OF THOSE APPROVALS SHALL BE FOLLOWED.
7. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
   A. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS.
   B. SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS.
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
   D. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS.
   E. STAIR FRAMING AND DETAILS.
   F. DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
8. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
   A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL, ROOF AND FLOOR OPENINGS, ETC., NOT SHOWN OR NOTED.
   B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
   C. ANCHORAGE AND BRACING FOR ELECTRICAL, MECHANICAL OR PLUMBING EQUIPMENT.
   D. ANCHOR BOLTS FOR MOTOR MOUNTS.
   E. SIZE AND LOCATION OF MACHINE AND EQUIPMENT BASES.
9. MECHANICAL AND ELECTRICAL LOADS MAY BE SUPPORTED FROM BEAMS. LIGHT MECHANICAL AND ELECTRICAL LOADS ANCHORED INTO METAL DECK ASSEMBLY MUST BE ANCHORED INTO STRUCTURAL CONCRETE ABOVE. SEE STEEL DECKING NOTES IF NO CONCRETE IS USED.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
11. OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
12. SPECIFICATIONS, CODES AND STANDARDS NOTED IN THE CONTRACT DOCUMENTS SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS OTHERWISE NOTED. MATERIAL SPECIFICATIONS ARE ASTM LATEST EDITION UNLESS NOTED OTHERWISE (U.N.O.). EDITIONS MUST HAVE L.A. CITY APPROVAL.
13. THE CONTRACTOR SHALL INVESTIGATE SITE FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
14. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH OR WHERE OVERLOAD IS ANTICIPATED.
15. DESIGN CRITERIA:

A. LIVE LOAD:		
AREA	DESIGN LIVE LOAD	REMARKS
PARKING LEVELS	50 PSF	REDUCIBLE
BUS PLAZA	250 PSF	

B. STRUCTURAL SYSTEM
   BUILDING SYSTEM - CONCRETE SHEAR WALLS
   SEISMIC ZONE 4
   RESPONSE COEFF. Rw=8

SPECIAL INSPECTION

1. SPECIAL INSPECTION BY A REGISTERED DEPUTY BUILDING INSPECTOR, APPROVED BY THE ARCHITECT AND THE CHECKING AGENCY, SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
   A. ALL CONCRETE.
   B. REINFORCING STEEL GRADE, PLACEMENT AND WELDING.
   C. ALL REINFORCED, GROUTED CONCRETE MASONRY.
   D. PRESTRESS STRAND PLACEMENT AND STRESSING OPERATIONS.
   E. ALL HIGH STRENGTH BOLTS AND EXPANSION TYPE ANCHOR BOLTS.
   F. ALL FIELD WELDING (EXCEPT METAL STUDS, FURRING CHANNELS, ETC.).
   G. SHOP WELDING FOR PROCEDURES AND MULTIPLE PASS WELDS.
   H. PILING, DRILLING OR TIE-BACKS AND CAISSONS (UNDER SEPARATE CONTRACT).

FOUNDATION

1. FOUNDATION DESIGN BASED ON SOIL REPORT BY THE FOLLOWING COMPANY: LAW/CRANDALL ASSOCIATES DATED DEC. 13, 1991 COPIES ARE AVAILABLE FOR REVIEW AT THE ARCHITECT'S OFFICE.
2. FOOTING DESIGN BASED ON ALLOWABLE SOIL PRESSURE OF 13,000 PSF. BOTTOM OF FOOTINGS SHALL BE A MINIMUM OF ONE FOOT INTO DENSE NATURAL SOIL AND AT LEAST TWO FEET BELOW ADJACENT FLOOR LEVEL.
3. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, IF REQUIRED.
4. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.
5. EXCAVATION AND COMPACTING (AS REQUIRED) FOR FOOTINGS SHALL BE APPROVED BY THE SOIL ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. SEE SPECIFICATIONS.
6. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
7. FOOTINGS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE SOILS ENGINEER, FOOTING ELEVATIONS WILL BE ALTERED BY CHANGE ORDER.
8. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS, IN ACCORDANCE WITH SOILS REPORT. FLOODING WILL NOT BE PERMITTED.
9. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
10. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS UNLESS OTHERWISE NOTED.
11. ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH SOILS REPORT RECOMMENDATIONS.

CONCRETE

1. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318-89 WITH MODIFICATIONS AS NOTED IN THE CONTRACT DOCUMENTS.
2. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTHS & TYPES:

LOCATION IN STRUCTURE	STRENGTH PSI	TYPE
FOOTINGS AND GRADE BEAMS	3000	NORMROCK
SLAB-ON-GRADE	3000	NORMROCK
SHEAR WALLS (Above 2nd Floor)	4000	NORMROCK
SLAB AND BEAMS	4000	NORMROCK
COLUMN	5000	NORMROCK
PRECAST BEAMS	5000	NORMROCK

3. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR TYPE II, LOW ALKALI.
4. AGGREGATE FOR NORMROCK CONCRETE - C-33, LIGHTWEIGHT - ASTM C-330.
5. FORMS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS SHOWN ON THE DRAWINGS.
6. THE CONTRACTOR SHALL MAINTAIN A LOG OF STRUCTURAL SLAB ELEVATIONS BASED ON THE ARCHITECTURAL DRAWINGS PLUS THE ADDITION OF ANY CAMBERS INDICATED ON THE CONSTRUCTION DOCUMENTS. THIS LOG SHALL BE USED TO ESTABLISH SCREED ELEVATIONS PRIOR TO THE CONCRETE POUR, AND TOP OF CONCRETE SLAB.
7. THE MINIMUM CONCRETE SLAB THICKNESS SHALL BE MAINTAINED UNLESS OTHERWISE SHOWN.
8. PROVIDE DRY PACK OR NON SHRINK GROUT UNDER BASEPLATES, TILL PLATES, ETC., SEE CONTRACT DOCUMENTS.
9. CONCRETE PUMPING OPERATION, ETC., SHALL CONFORM TO C-94.
10. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 304 AND CONTRACT DOCUMENTS. SANDBLAST ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
11. IF WALLS ARE PLACED WITH FLOOR, TWO HOURS MUST ELAPSE BETWEEN END OF COLUMN OR WALL POUR AND BEGINNING OF FLOOR POUR.
12. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT.

	MINIMUM COVER, INCHES
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND (FORMED)	
BEAMS, COLUMNS: PRIMARY REINFORCEMENT	2
TIES, STIRRUPS AND SPIRALS:	1 1/2
#3 THROUGH #11	1 1/2
#14 AND #18 BARS	2 1/2

13. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
14. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
15. CONDUIT OR PIPE SIZE (O.D.) SHALL NOT EXCEED ONE THIRD OF SLAB THICKNESS AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING, UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF CONDUITS OR PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED.
16. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 IN. CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
17. CURING COMPOUNDS USED ON CONCRETE TO RECEIVE A FINISH SHALL BE APPROVED BY THE ARCHITECT BEFORE USE.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI-318 1989 EDITION), OR MODIFIED BY THE CONSTRUCTION DOCUMENTS AND THE 1998 EDITION OF THE L.A. CITY CODE.
2. REINFORCING BARS - ASTM A-615 GRADE 60 AND A-706.
3. WELDING OF REINFORCEMENT SHALL BE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, ETC.," AMERICAN WELDING SOCIETY, AWS-D1.4.
4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
5. WELDED WIRE FABRIC - A-185.
6. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES, OR ONE FULL MESH PLUS TWO INCHES, WHICHEVER IS GREATER.
7. REINFORCING SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS.
8. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS NOTED OTHERWISE.
9. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
10. CONTRACTOR SHALL PROVIDE FOR AN ALLOWANCE OF 30 TONS OF TYPICAL REINFORCING TO BE FABRICATED AND PLACED DURING PROGRESS OF WORK AS MAY BE DIRECTED BY THE STRUCTURAL ENGINEER.

PRECAST PRESTRESSED CONCRETE

1. THE YIELD STRENGTH OF CONCRETE AT TRANSFER OF PRESTRESS SHALL BE A MINIMUM OF 3500 PSI. CONCRETE SHALL BE NOT LESS THAN 9 DAYS OLD.
2. ALL POST-TENSIONING SHALL BE 1/2" DIAMETER SEVEN WIRE STRANDS, AND CONFORM TO THE FOLLOWING:

ASTM DESIGNATION (SEVEN-WIRE STRAND)	A-416
ULTIMATE STRENGTH	270 KSI
TEMPORARY STRESS TO OVERCOME FRICTION	216 KSI
ANCHOR STRESS	183 KSI

3. DIMENSIONS LOCATE THE CENTER OF GRAVITY OF THE TENDON OR GROUP OF TENDONS. LOW POINTS ARE AT MIDSPAN UNLESS OTHERWISE SHOWN OR NOTED.
4. GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.
5. FIELD TESTS SHALL BE MADE WITH JACKS OR OTHER INSTRUMENTS ON STRANDS WHILE JACKING TO DETERMINE BEHAVIOR OF THE STRANDS. FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY MORE THAN 5% FROM CALCULATED REQUIRED VALUES.
6. RECORDS OF ALL JACKING FORCES AND ELONGATIONS SHALL BE KEPT BY A CERTIFIED PRESTRESS INSPECTOR USING A CALIBRATED GAUGE AND SHALL PROMPTLY BE SUBMITTED TO THE ARCHITECT AND ENGINEER.
7. ALL ANCHORAGES, COUPLERS AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY GOVERNING AGENCIES AND ENGINEER.
8. ONE (1) SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS SHALL BE SUBMITTED TO THE ARCHITECT AND BUILDING DEPARTMENT BEFORE STRESSING. MILL TEST WILL BE ACCEPTABLE AS ALTERNATE.
9. SUPPLIER SHALL SUBMIT SHOP DRAWINGS AS PER SPECIFICATIONS.
10. TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE SHALL NOT BE PERMITTED.
11. TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO INSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF CONCRETE, BUT SHALL BE SUPPORTED AT A MAXIMUM OF 4'-0" O.C.
12. ALL POCKETS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOF SO AS TO ELIMINATE WATER LEAKAGE THROUGH THE POCKET.
13. ALL END BEARING ANCHORAGES AND BEAD-END ANCHORAGES SHALL CONFORM TO ASTM A-36 AS A MINIMUM.
14. BEAMS AND GIRDERS SHALL BE SHORED FOR SLAB WEIGHT AND CONSTRUCTION LOADS UNLESS OTHERWISE NOTED.
15. SUPPLIER SHALL SUBMIT CALCULATIONS FOR ALL LOSSES FOR SPECIFIC STRESSING LENGTHS TO ENSURE MINIMUM FINAL EFFECTIVE FORCE IS MAINTAINED.
16. THE SUPPLIER SHALL BASE ALL ELONGATION CALCULATIONS UPON THE MODULUS OF ELASTICITY SHOWN ON THE MILL CERTIFICATES FOR THE STRANDS BEING FURNISHED TO THE SITE. ALL STRANDS SHALL HAVE THEIR HEAT NUMBER MARKED ON THE TAG ATTACHED TO THE STRANDS.
17. PRE-TENSIONING FORCES SPECIFIED ON THE DRAWINGS ARE REQUIRED EFFECTIVE FORCES AFTER APPROPRIATE LOSSES ARE TAKEN INTO ACCOUNT. CALCULATIONS SUBMITTED WITH THE PRE-TENSIONING MATERIAL SHOP DRAWINGS SHALL INDICATE VALUES FOR ALL LOSSES APPROPRIATE TO THIS PROJECT FOR THE MATERIALS PROPOSED. CERTIFIED TEST DATA SUBSTANTIATING LOSS PROPERTY ASSUMPTIONS SHALL ALSO BE SUBMITTED. NOTE SPECIFICALLY: SUBMITTALS INDICATING EFFECTIVE FORCES DIFFERENT FROM THOSE SHOWN ON THE CONTRACT DRAWINGS (SUPPLIER REDESIGN) WILL BE RETURNED NOT REVIEWED AS NOT RESPONSIVE TO CONTRACT REQUIREMENTS. PRE-TENSIONING CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED BY CONTRACTOR TO DEPT. OF BUILDING AND SAFETY AND TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO START OF PRE-TENSIONING CONSTRUCTION.
18. EMBEDDED ITEMS, SLEEVES, AND INSERTS FOR HANGERS OR OTHER SUPPORTS MUST BE CAST-IN-PLACE DURING CONSTRUCTION. POWDER-DRIVEN OR DRILLED-IN FASTENERS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
19. LOW-RELAXATION STRAND MAY BE USED FOR PRESTRESSING PROVIDED THAT THE PRESTRESSING FORCE IS THE SAME AS FOR CONVENTIONAL STRAND.
20. MAXIMUM EFFECTIVE PRESTRESS PER TENDON AFTER ALL LOSSES HAVE BEEN CONSIDERED SHALL NOT EXCEED 0.60 f_u FOR BEAMS. LOWER EFFECTIVE FORCES SHALL BE USED IF SUCH LOSSES ARE FOUND BY CALCULATION.
21. GROUNDING OF EQUIPMENT TO PRESTRESSING STRANDS IS NOT PERMITTED.

GATEWAY CENTER

R T D

HEADQUARTERS

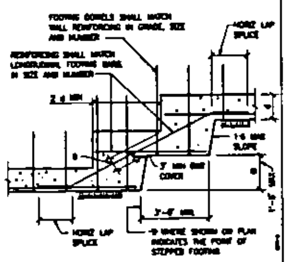
Los Angeles, California

MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers
SCHEMATIC

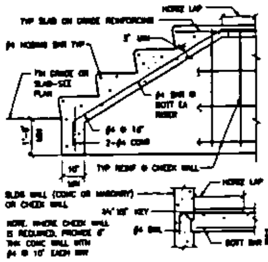
TYPICAL DETAILS

S-1.1

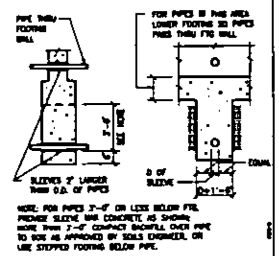
Mclarand, Vasquez & Partners, Inc.
Architecture & Planning
714 549 2207
695 Town Center Drive
Suite 300
Costa Mesa, ca 92626



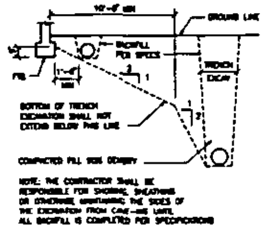
STEPPED FOOTING (1)



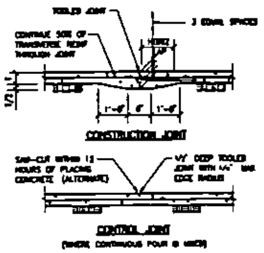
CONCRETE STAIR ON GRADE (2)



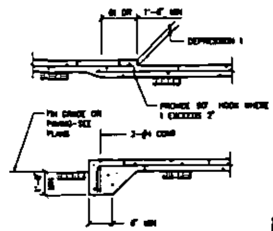
EXCAVATION PERPENDICULAR TO FOOTING (3)



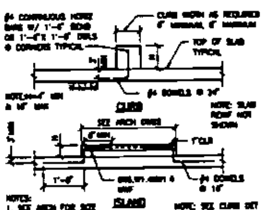
EXCAVATIONS PARALLEL TO FOOTING (4)



JOINTS IN SLAB ON GRADE (5)



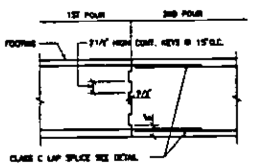
DEPRESSED SLAB AND SLAB EDGE (6)



NOTES:
1. SEE ARCH FOR SIZE AND LOCATION OF CURBS
2. PROVIDE INSERTS AS REQ'D BY ARCH & MECH DRAWINGS

NOTE: SEE CURB DET FOR #4 HORIZ BAR REQUIREMENTS

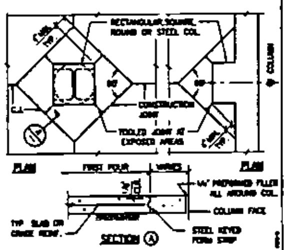
CONCRETE CURBS AND ISLANDS (7)



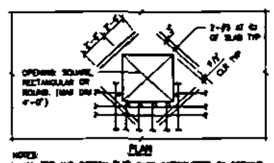
CLASS C LAP SPLICE SEE DETAIL

NOTE: WELDED SPLICES REQ'D FOR #14 & LARGER BARS. WHERE CONT. FOOTING IS UNDER A WALL, LOCATE CONSTRUCTION JOINT AT 1/4 OF THE CLEAR OPENING SHOWN ABOVE FROM FACE OF OPENING, OR IN MIDDLE 1/3 OF THE DISTANCE BETWEEN COLUMNS.

CONTINUOUS FOOTING CONSTRUCTION JT. (8)



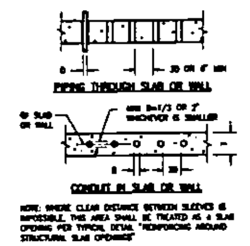
CONSTRUCTION JOINTS AT COLUMN SLAB ON GRADE (9)



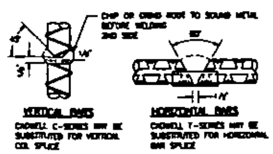
PLAN

NOTES:
1. ALL TOP AND BOTTOM SLAB BARS INTERRUPTED BY OPENING SHALL BE REPLACED BY ADDITIONAL REINFORCING EQUAL TO THAT INTERRUPTED.
PLACE HALF OF THE ADD'L REINFORCING ON EACH SIDE OF OPENING AND EXTEND SAME LENGTH AS REQUIRED FOR BAR LAP OF INTERRUPTED REINFORCING.
2. BOXED OUT OPENINGS, BOXED RECESSES AND PIPE SLEEVE CLUSTERS SHALL BE TREATED AS FRAMED SLAB OPENINGS.

REINFORCING AROUND STRUCTURAL SLAB OPENINGS (10)



PIPING AND CONDUIT IN OR THROUGH SLAB OR WALL (11)

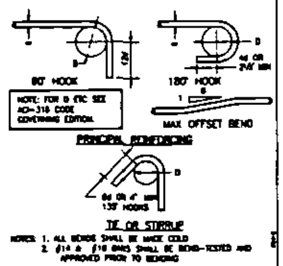


VERTICAL BARS
CADWELD C-SERIES MAY BE SUBSTITUTED FOR VERTICAL COL SPLICE

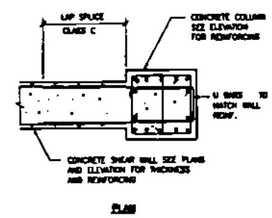
HORIZONTAL BARS
CADWELD T-SERIES MAY BE SUBSTITUTED FOR HORIZONTAL BAR SPLICE

NOTE: A PRE-QUALIFICATION TENSION TEST SHALL BE MADE BY AN APPROVED TESTING LABORATORY ON SAMPLES OF EVERY SIZE BAR BEING WELDED.
MATERIALS, CONDITIONS AND WELDING PROCEDURES UTILIZED SHALL COMPLY WITH THE CURRENT APPLICABLE BUILDING CODE AND THE REQUIREMENTS OF THE GOVERNING INSPECTION AGENCY.
ALL COSTS INCURRED FOR OBTAINING APPROVALS SHALL BE BORNE BY THE GENERAL CONTRACTOR.

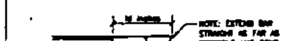
BUTT WELDED REINFORCING BARS (12)



BAR BENDS (13)



COLUMN-WALL SECTION (14)



NOTE: EXTEND BAR STRAIGHT AS FAR AS POSSIBLE AND BEND

TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR

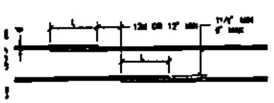
BAR DEVELOPMENT LENGTH (ld) SCHEDULE						
BAR SIZE	f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	13	13	13	12	13	12
#4	17	17	17	15	17	15
#5	21	21	21	16	21	16
#6	27	25	25	22	25	22
#7	37	28	32	25	29	22
#8	48	39	42	30	38	27
#9	62	44	54	38	48	34
#10	78	56	68	49	61	43
#11	96	69	83	60	75	53
#14	131	93	113	81	101	72
#18	192	137	166	119	149	106

BAR DEVELOPMENT LENGTH (15)

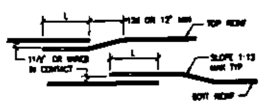
SCHEDULE I											
LOCATION IN STRUCTURE	CONC f'c PSI	STEEL GRADE KSI	BAR SIZE								
			3	4	5	6	7	8	9	10	11
			L = LAP SPLICE IN INCHES								
BOTTOM BARS OF BEAMS, JOISTS, SLAB BARS AND SPANDRELS	3000	60	16	16	20	25	34	45	57	72	89
	4000	60	16	16	20	24	30	39	49	63	77
	5000	60	16	16	20	24	27	35	44	56	69
VERTICAL WALL STEEL	3000	60	21	28	35	41	48	55	62	72	89
	4000	60	16	24	30	36	42	48	54	63	77
	5000	60	16	22	27	32	38	43	48	56	69

SCHEDULE II											
LOCATION IN STRUCTURE	CONC f'c PSI	STEEL GRADE KSI	BAR SIZE								
			3	4	5	6	7	8	9	10	11
			L = LAP SPLICE IN INCHES								
TOP BARS* OF BEAMS, JOISTS AND SPANDRELS & SLAB TOP BARS	3000	60	16	22	27	35	46	63	80	101	124
	4000	60	16	22	27	33	41	55	69	88	108
	5000	60	16	22	27	33	38	49	62	78	96
HORIZONTAL WALL STEEL	3000	60	30	39	49	58	68	77	87	96	108
	4000	60	25	34	42	50	58	67	75	83	92
	5000	60	23	30	38	45	52	60	67	75	82

NOTES:
1. THE SCHEDULES SHOWN ON THIS DETAIL APPLY TO REGULAR WEIGHT CONCRETE @ 140 TO 150 PCF.
2. ALL SPLICES SHALL BE STAGGERED AS SHOWN. IF MORE THAN 50% OF THE REINFORCING IS LAP SPLICED WITHIN THE DISTANCE SHOWN, THE LAP SPLICE LENGTH SHALL BE INCREASED 33% (EQUAL TO CLASS C LAP). SPLICES MUST BE STAGGERED IN WALLS
3. LAP SPLICES LISTED IN THE SCHEDULE ARE CLASS B LAPS (EXCEPT WALL STEEL)
4. THE SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZE BARS.
5. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF THE LAP LENGTHS SCHEDULED.
6. THE CONTRACTOR, AT HIS OPTION, MAY USE A BUTT WELDED SPLICE IN LIEU OF THE LAP SPLICE SHOWN—SEE DETAIL
7. * TOP BARS ARE HORIZONTAL BARS PLACED SO THAT 12" OR MORE OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. USE SCHEDULE II FOR LAP LENGTHS FOR TOP BARS IN SLABS WHERE MORE THAN 12" OF CONCRETE IS CAST BELOW THEM.
8. ALL DETAILING AND PLACING OF REINFORCING SHALL COMPLY WITH THE LAP SPLICE SCHEDULES AND DETAILS, UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE DRAWINGS.
9. BUNDLED BAR SPLICES
   a) INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL NOT OVERLAP EACH OTHER.
   b) INCREASE LAP LENGTH 20% AT THREE BAR BUNDLES.
   c) INCREASE LAP LENGTH 33% AT FOUR BAR BUNDLES
10. ALL WALL BAR SPLICES SHALL BE STAGGERED
11. JAMB BARS MAY BE LAPPED 100% AT ONE POINT IF LAPS ARE INCREASED 33%
12. CHORD AND DRAG BARS SHALL BE LAPPED AS WALL STEEL WITH BOTTOM AND TOP BARS CORRESPONDING TO VERTICAL AND HORIZONTAL BARS RESPECTIVELY.
13. STANDARD HOOKS IN LIGHTWEIGHT CONCRETE SHALL HAVE TAILS 25% LONGER THAN SCHEDULED.

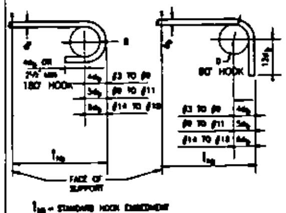


WALL OR SLAB SPLICE DETAIL



BEAM SPLICE DETAIL

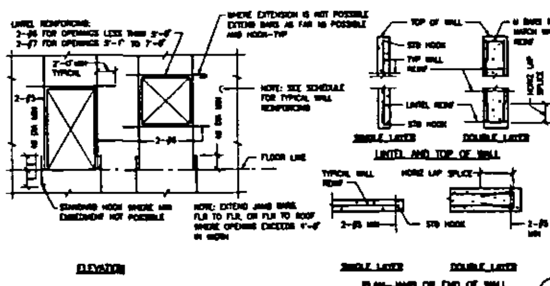
REGULAR WEIGHT CONCRETE REINFORCING LAP SPLICE SCHEDULE (16)



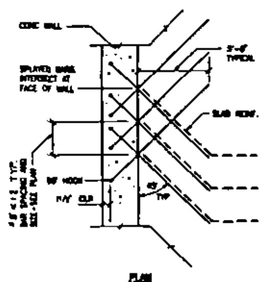
l_{hb} = STANDARD HOOK EMBEDMENT

l_{hb} STANDARD HOOK EMBEDMENT			
BAR SIZE	60 ksi		
	3 ksi	4 ksi	5 ksi
#3	8	8	7
#4	11	10	9
#5	14	12	11
#6	17	15	13
#7	20	17	15
#8	22	19	17
#9	25	22	19
#10	28	24	22
#11	31	27	24
#14	38	32	29
#18	50	44	39

STANDARD HOOK EMBEDMENT (17)



MINIMUM REINFORCING AT CONCRETE WALL (18)



SPLAYED WALL DOWELS (19)

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

MARTIN & HUANG

MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers

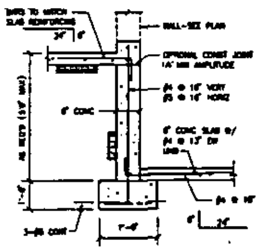
SCHEMATIC

TYPICAL DETAILS
CONCRETE

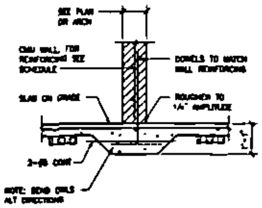
S-1.2

Mclarand, Vasquez & Partners, Inc.

Architecture & Planning
714.549.2207
695 Town Center Drive
Ste 300
Costa Mesa, ca 92626



SECTION AT PIT (1)

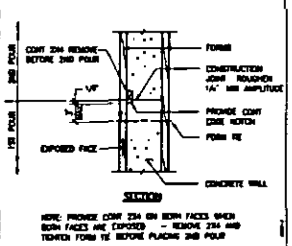


NON-BEARING CMU FOOTING (2)

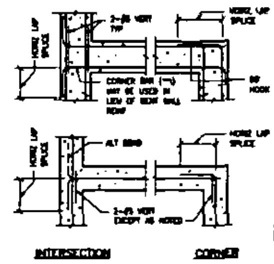
CMU WALL REINFORCING SCHEDULE				
WALL THICKNESS (INCHES)	BAR SIZE & SPACING EACH WAY			MINIMUM HEIGHT
	HORIZ	VERT	REMARKS	
6	#4 @ 32	#4 @ 32	SINGLE MAT	12'-0"
8	#5 @ 32	#5 @ 32	SINGLE MAT	12'-0"
8	#5 @ 24	#5 @ 24	SINGLE MAT	18'-0"
* 8	#5 @ 24	#7 @ 16	SINGLE MAT	25'-0"

NOTES:
1. * INDICATES CONTINUOUS INSPECTION REQUIRED
2. THE ABOVE IS MINIMUM REINFORCING FOR ALL CONCRETE MASONRY ELEMENTS
3. SINGLE MAT REINFORCING SHALL BE IN CENTER OF WALL UNLESS OTHERWISE DETAILED
4. ALL CELLS SHALL BE GROUTED SOLID UNO

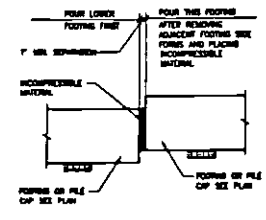
INTERIOR NON-BEARING CONCRETE MASONRY WALL MINIMUM REINFORCING SCHEDULE (3)



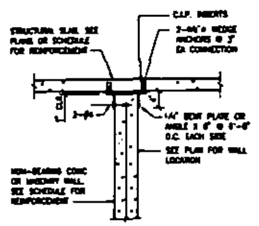
HORIZONTAL WALL CONSTRUCTION JOINT (4)



REINFORCING AT WALL INTERSECTIONS (5)



FOOTING SEPARATION (6)

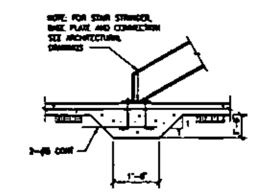


NON-BEARING CONC. & MASONRY WALL CONNECTION TO POST-TENSIONED SLAB (7)

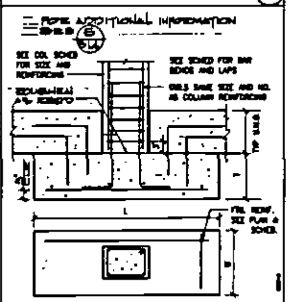
CMU WALL REINFORCING SCHEDULE				
WALL THICKNESS (INCHES)	BAR SIZE & SPACING EACH WAY			MINIMUM HEIGHT
	HORIZ	VERT	REMARKS	
6	#4 @ 32	#4 @ 32	SINGLE MAT	12'-0"
8	#5 @ 32	#5 @ 32	SINGLE MAT	12'-0"
8	#5 @ 24	#5 @ 24	SINGLE MAT	18'-0"
* 8	#5 @ 24	#7 @ 16	SINGLE MAT	25'-0"

NOTES:
1. * INDICATES CONTINUOUS INSPECTION REQUIRED
2. THE ABOVE IS MINIMUM REINFORCING FOR ALL CONCRETE MASONRY ELEMENTS
3. SINGLE MAT REINFORCING SHALL BE IN CENTER OF WALL UNLESS OTHERWISE DETAILED
4. ALL CELLS SHALL BE GROUTED SOLID UNO

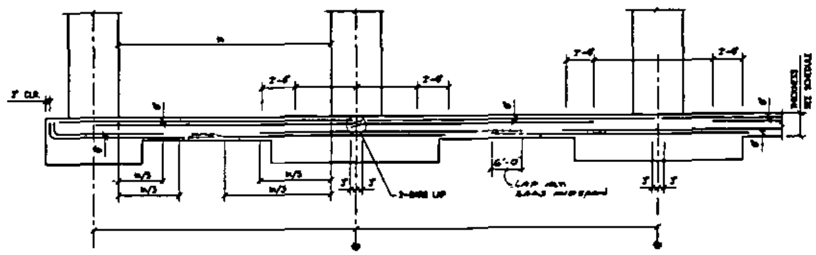
INTERIOR NON-BEARING CONCRETE MASONRY WALL MINIMUM REINFORCING SCHEDULE (8)



STAIR STRINGER FOOTING (9)



CONCRETE COLUMN-SPREAD FOOTING (10)



NOTE: FOR REINFORCING SEE SCHEDULE

SLAB ON GRADE REINFORCING SCHEDULE				
MAX BAY SIZE	INTERIOR BAY - TOTAL BARS		END BAY - TOTAL BARS	
	LONG DIRECTION	SHORT DIRECTION	LONG DIRECTION	SHORT DIRECTION
40'-10" x 37'-4"	TOP 60-#8 BOTT 40-#8	TOP 60-#7 BOTT 44-#8	TOP 60-#8 BOTT 40-#8	TOP 40-#8 BOTT 44-#7
37'-4" x 37'-4"	TOP 45-#7 BOTT 36-#8	TOP 45-#7 BOTT 30-#8	TOP 30-#8 BOTT 36-#7	TOP 30-#8 BOTT 38-#7
40'-10" x 37'-4"	TOP — BOTT —	TOP — BOTT —	TOP 40-#8 BOTT 30-#8	TOP 40-#8 BOTT 44-#7

FLAT SLAB REINFORCING DETAILS (11)

GATEWAY CENTER
R T D HEADQUARTERS

Los Angeles, California

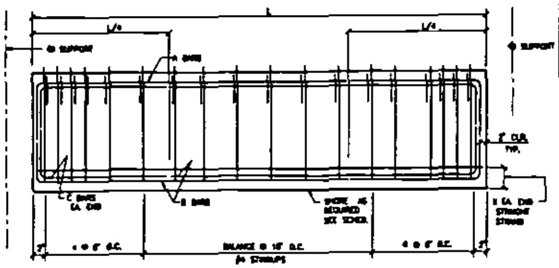
MARTIN & HUANG
MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers

SCHEMATIC

TYPICAL DETAILS
CONCRETE & MASONRY

S-1.3

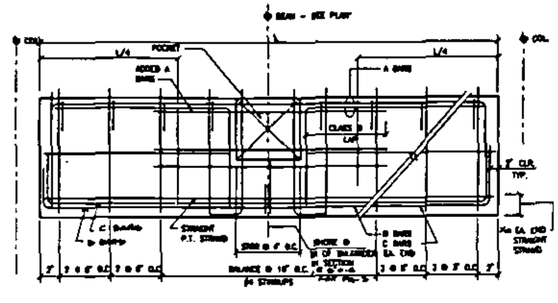
Mclarand, Vasquez & Partners, Inc.
Architecture & Planning
714 549.2207
695 Town Center Drive
Suite 300
Costa Mesa, ca 92626



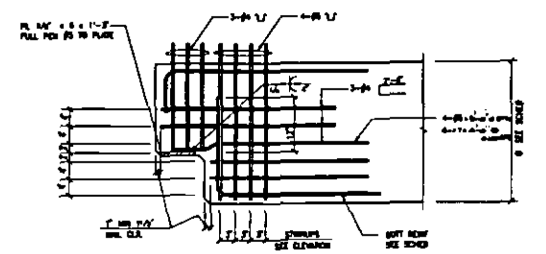
TYPICAL BEAM ELEVATION

MARK NO.	SIZE b x d	"A" BARS	"B" BARS	"C" BARS	1/2" DIA. 270K STRANDS NO.	e	X	SHORED	STIRRUPS
PRECAST BEAM SCHEDULE									
PB-1	18x19½	2-#7	2-#8	2-#8	8	4½	–	L/2	–
PB-2	18x19½	2-#7	2-#8	2-#8	10	4½	–	L/2	–
PB-3	18x19½	2-#7	2-#8	2-#8	8	4½	–	L/2	–
PB-4	18x19½	2-#7	2-#8	2-#7	6	4½	–	L/2	–
PRECAST GIRDER SCHEDULE									
PG-1	24x19½	2-#8	4-#8	2-#8	12	4½	–	SEE ①	–
PG-2	24x19½	2-#8	4-#8	2-#8	12	4½	–	SEE ①	–
PG-3	24x19½	4-#8	4-#8	2-#8	18	4½	–	SEE ①	–
PG-4	24x19½	2-#8	4-#8	4-#8	18	4½	–	SEE ①	–

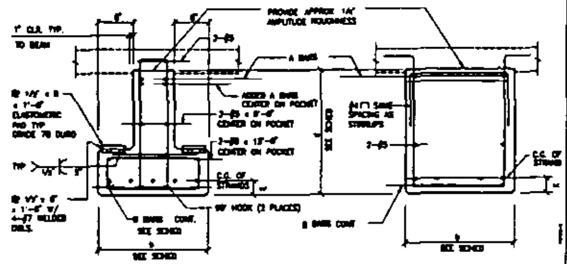
⑥



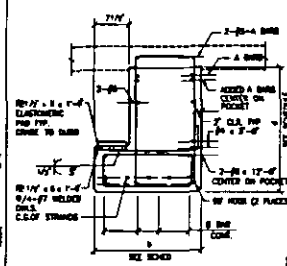
TYPICAL GIRDER ELEVATION ①



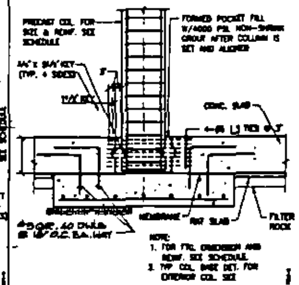
DAPPED END DETAIL ②



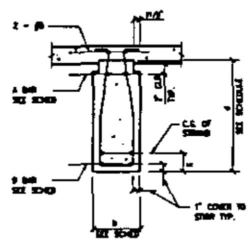
SECTION @ MID SPAN   SECTION @ END ③



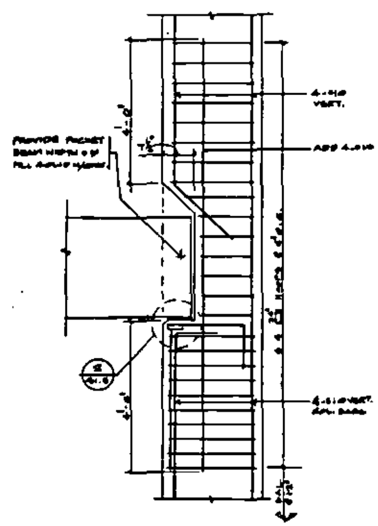
SECTION ④



PRECAST COLUMN PAD FOOTING ⑤



TYPICAL BEAM SECTION ⑦



CORBEL IN CIP WALL/PILASTER ⑧

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

MARTIN & HUANG

MARTIN & HUANG INTERNATIONAL, INC. Structural Engineers

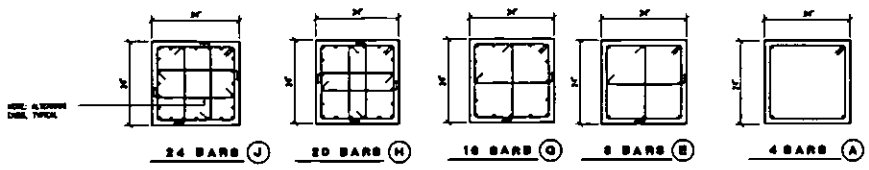
SCHEMATIC

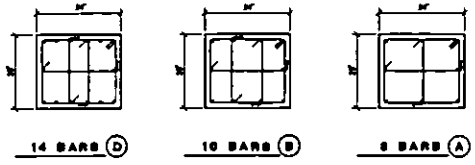
TYPICAL DETAILS
PRECAST CONCRETE

S-1.4

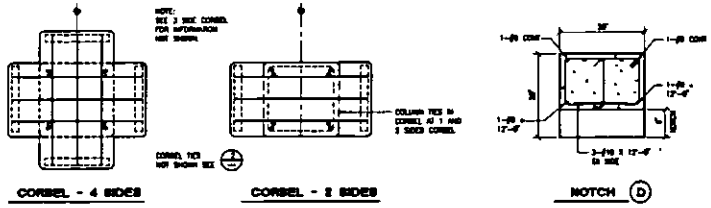
Mclarand, Vasquez & Partners, Inc.

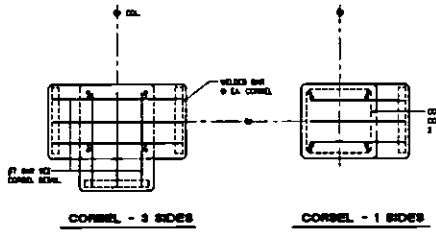
Architecture & Planning
714.546.2207
695 Town Center Drive
Suite 300
Costa Mesa, CA 92626

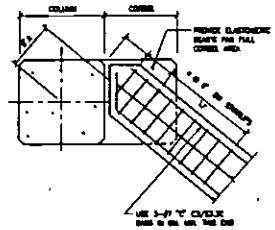


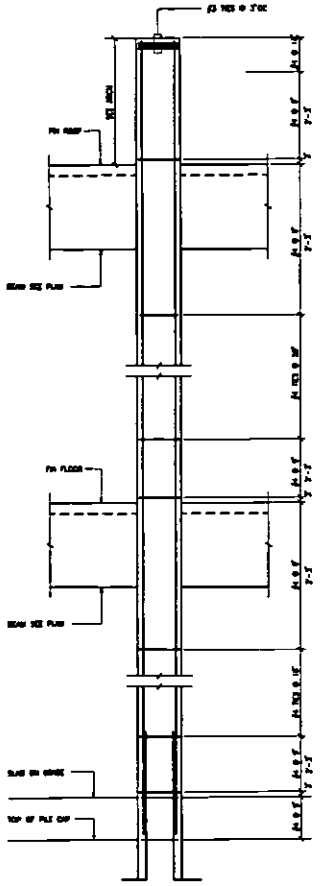


COLUMN SECTIONS









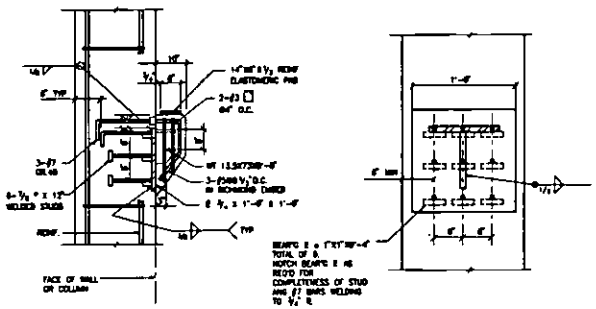
COLUMN SCHEDULE

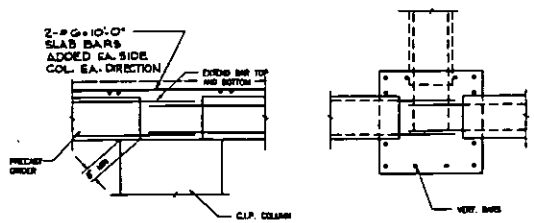
PRECAST CONCRETE COLUMN

COLUMN MARK	SIZE WIDE	VERT. REINF.	RANGE STIRR SPACE	CONC. STRENGTH	REMARKS
PC-1	24 x 24	8-#9	#3 @ 12	5 ksi	
PC-2	24 x 36	6-#9	#3 @ 12	5 ksi	
PC-3	24 x 24	12-#9	#3 @ 12	5 ksi	

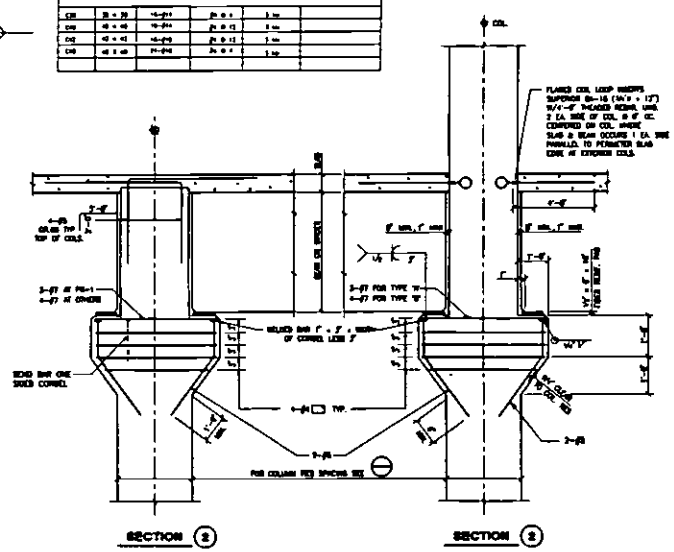
C. I. P. CONCRETE COLUMN

C20	20 x 20	4-#9	#3 @ 6	3 ksi	
C40	40 x 40	16-#9	#3 @ 12	3 ksi	
C42	42 x 42	16-#9	#3 @ 12	3 ksi	
C48	48 x 48	24-#9	#3 @ 6	3 ksi	





FOR TOP OF CAST IN PLACE COL. SEE (3/C-5)



GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

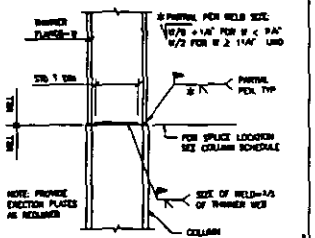
MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers
Los Angeles, Calif.
Phone (213) 483-1010
Fax (213) 483-0787

SCHEMATIC

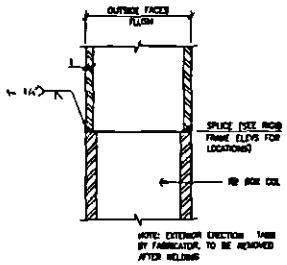
TYPICAL DETAILS

S-1.5

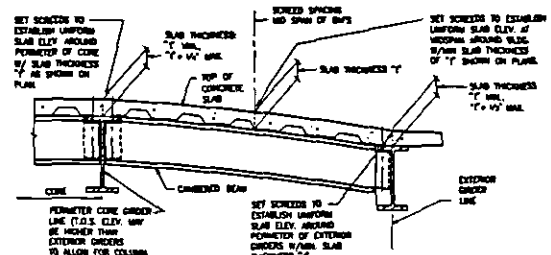
Mclarand, Vasquez & Partners, Inc.
Architecture ◆ Planning
714.549.2207
895 Town Center Drive
Suite 300
Costa Mesa, ca 92626



COLUMN SPLICE 1



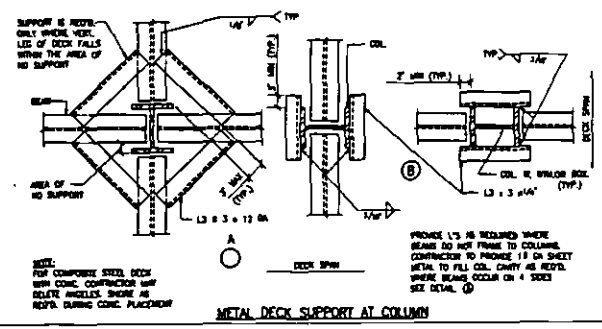
BOX COLUMN SPLICE 2



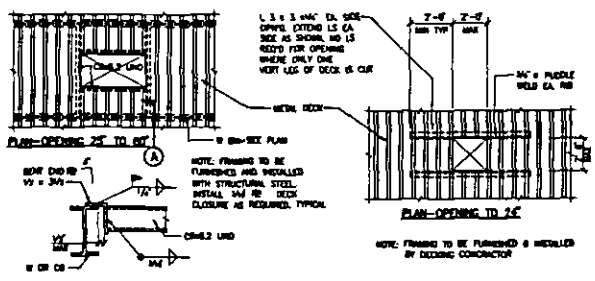
SLAB ON CAMBERED STEEL BEAMS 3

PROCEDURE FOR CONSTRUCTION OF FLOOR SLABS

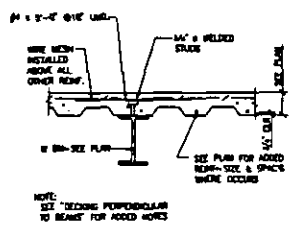
1. PROVIDE UPWARD CAMBER AT MID SPAN FOR ALL BEAMS WHERE INDICATED. BEAMS NOT CAMBERED HAVE TO HAVE MILL CAMBER PLACED IN UPWARD POSITION.
2. AFTER STEEL ERECTION, SURVEY THE TOP ELEVATION OF THE STRUCTURAL STEEL. SET ADJUSTABLE SCREEDS TO APPROVED FINISHED SLAB ELEVATION & MIN. SLAB THICKNESS AT SUPPORTS AND TO MIN. SLAB THICKNESS AT MID-SPAN OF CAMBERED BEAMS.
3. AS CONCRETE IS PLACED, ADJUST SCREEDS, BY A LASER OR TRANSIT, TO PRODUCE A FLAT FINISHED CONCRETE SURFACE FROM THE CORE TO THE PERIMETER (SLAB NOT NECESSARILY LEVEL) BETWEEN SUPPORTS AND MID-SPAN CONTROL POINTS. AT A MINIMUM TOP OF SLAB SHALL NOT BE OUT OF LEVEL BY MORE THAN ALLOWED BY ACI AND SPECIFICATIONS.
4. UPON COMPLETION OF THE SLAB POUR AND AFTER ANY SLAB SHORES ARE REMOVED, THE GENERAL CONTRACTOR SHALL FURNISH TO THE OWNER A COPY OF THE ORIGINAL APPROVED TOP OF CONCRETE ELEVATION DRAWINGS WITH THE AS-BUILT SURVEYED TOP OF CONCRETE ELEVATIONS NOTED AT ALL CONTROL POINTS.



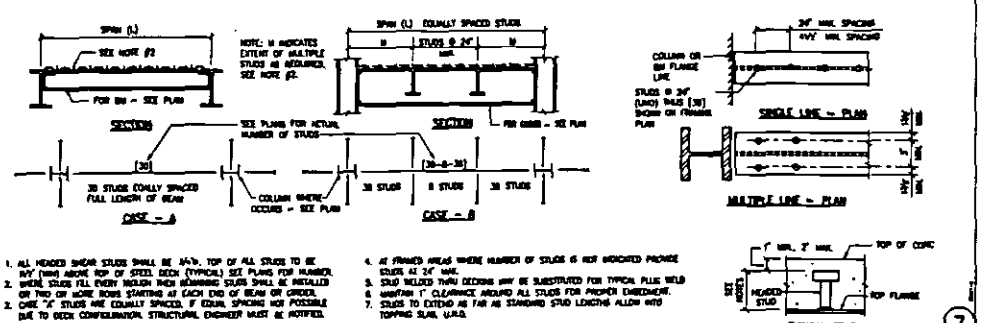
METAL DECK SUPPORT AT COLUMN 4



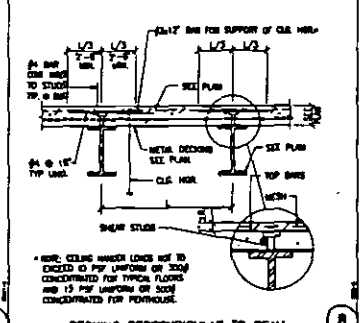
TYPICAL CONNECTION (A) OPENINGS IN METAL DECK 5



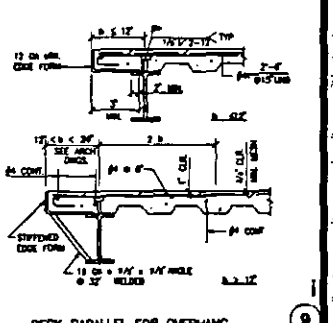
DECKING PARALLEL TO BEAM 6



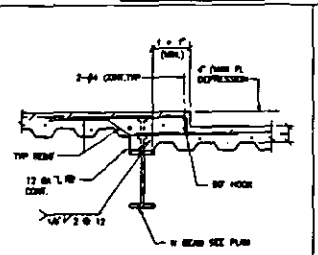
WELDED STUD LAYOUTS 7



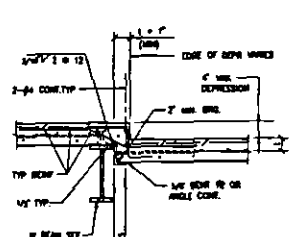
DECKING PERPENDICULAR TO BEAM 8



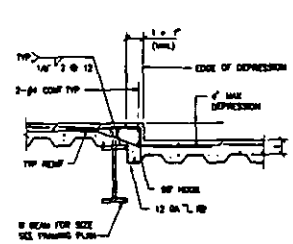
DECK PARALLEL FOR OVERHANG 9



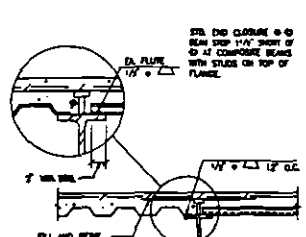
DECK ELEVATION IS ABOVE TOP BEAM SUPPORT 10



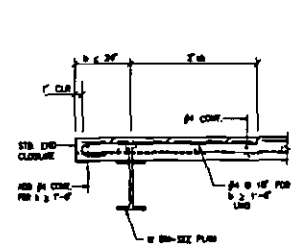
DECK FLUTES PERPENDICULAR TO BEAM SUPPORT 11



DECK FLUTES PARALLEL TO BEAM SUPPORT 12



METAL DECK DIRECTION CHANGE ON CENTER LINE BEAM 13



DECK PERPENDICULAR FOR OVERHANG 14

GATEWAY CENTER

R T D HEADQUARTERS

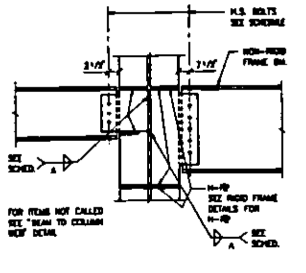
Los Angeles, California

MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers
SCHEMATIC

TYPICAL DETAILS
METAL DECK

S-1.6

Mclarand, Vasquez & Partners, Inc.
Architecture & Planning



BEAM TO MOMENT COLUMN WEB W/STIFFENER (1)

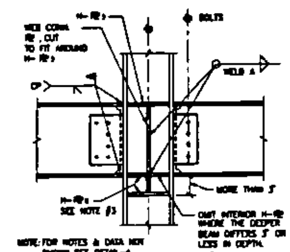
RIGID BEAM CONNECTION SCHEDULE

BEAM (DEPTH)	NO. OF 7/8" BOLTS A325F (ALT.A490F)	CONN. PL t	WELD SIZE A	WELD SIZE B

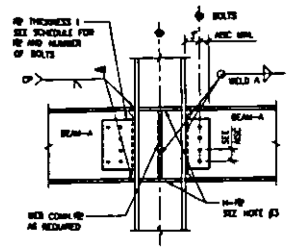
(H)

NOTES:

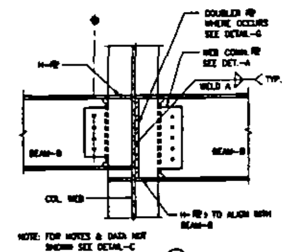
1. SEE PLANS AND SCHEDULE FOR BEAM & COLUMN SIZES AND COLUMN ORIENTATION. A TRIANGLE AT THE END OF SINGLE STEEL BEAMS & GIRDERS (▶——) INDICATES RIGID CONNECTION CENTERED ON COLUMN CENTERLINE U.N.O.
2. ABBREVIATIONS: H-PL : HORIZONTAL COLUMN STIFFENER PLATES
   CP : COMPLETE PENETRATION BUTT WELD
   U.N.O.: UNLESS OTHERWISE NOTED
   tw : BEAM WEB THICKNESS
3. H-PL : U.N.O., HORIZONTAL & WEB CONNECTION PLATES SHALL BE THE SAME GRADE MATERIALS AS THE CONNECTING BEAM. COLUMN HORIZONTAL STIFFENER PLATES (H-PL) TO BE AS THICK AS THE THICKEST BEAM FLANGE BEING RIGIDLY CONNECTED TO THE COLUMN FLANGE LESS 1/4". WHERE RIGIDLY CONNECTED BEAMS FRAME INTO THE COLUMN WEB, HORIZONTAL PLATE THICKNESS IS TO BE AT LEAST THE THICKNESS OF THE BEAM FLANGES. PLATES TO BE MINIMUM 1/2" FOR COLUMN DEPTH UP TO 18", 3/4" THICK FOR DEPTHS IN EXCESS OF 18". WHERE THE BEAM FLANGE THICKNESS EXCEEDS 1 3/4", SUBMIT SPECIAL WELDING PROCEDURES FOR FLANGE & WEB WELDINGS PRIOR TO PROCEEDING.
4. FILLET WELD SIZES SHALL BE AS SHOWN UNLESS A GREATER SIZE IS REQUIRED BY A.I.S.C. TABLE 1.17. 2A.
5. WHERE DOUBLE ROW OF BOLTS ARE REQUIRED, USE MAXIMUM NUMBER POSSIBLE IN FIRST ROW AND BALANCE IN SECOND ROW.
6. a. FULL ULTRASONIC INSPECTION SHALL BE PROVIDED ON ALL COMPLETE PENETRATION GROOVE WELDS CONTAINED IN JOINTS AND SPLICES (TESTED 100 PERCENT).
   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 COMPLETED WELDS FOR A JOB SHALL BE MADE FOR SUCH REDUCTION EVALUATION. REJECT RATE IS DEFINED AS THE NUMBER OF WELDS CONTAINING REJECTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED. FOR EVALUATING THE REJECT RATE OF CONTINUOUS 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.
   b. PARTIAL PENETRATION GROOVE WELDS, WHEN USED IN COLUMN SPLICES, SHALL BE TESTED EITHER BY ULTRASONIC TESTING OR RADIOGRAPHY.
   c. BASE METAL THICKER THAN 1 1/2" INCHES, WHEN SUBJECTED TO THROUGH THICKNESS WELD SHRINKAGE STRAINS, SHALL BE ULTRASONICALLY INSPECTED FOR DISCONTINUITIES, AND SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF THE DEFECT RATING IN ACCORDANCE WITH THE (LARGER REFLECTOR) CRITERIA OF U.B.C. STANDARD NO. 27-6.
7. DOUBLER PLATES REQUIRED WHERE [ ] IS SHOWN ON FRAME ELEVATIONS. NUMBER INSIDE BOX INDICATES PLATE THICKNESS IN INCHES, AND PLATES TO BE SAME GRADE AS THE COLUMNS.
8. WHERE DOUBLER PL THICKNESS EXCEEDS 3/4", USE ONE PL EA. SIDE OF WEB EQUAL TO HALF THE THICKNESS SCHEDULED.
9. WHERE BEAM FRAMES INTO COLUMN ON ONE SIDE ONLY, PLACE DOUBLER PLATE ON OPPOSITE SIDE OF COLUMN.



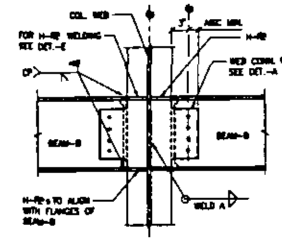
BEAM TO COLUMN FLANGE (B)



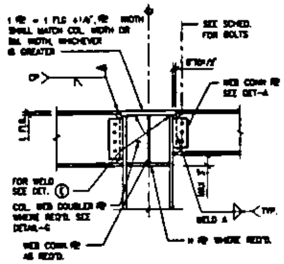
BEAM TO COLUMN FLANGE (A)

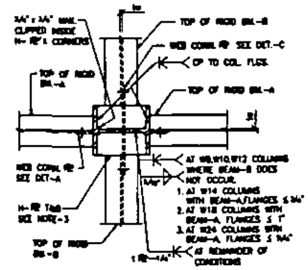


BEAM TO COLUMN WEB (D)

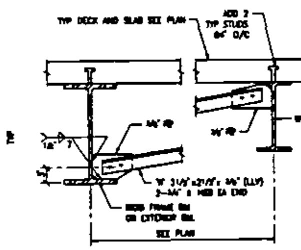


BEAM TO COLUMN WEB (C)

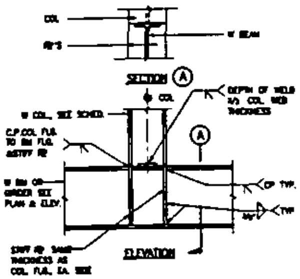


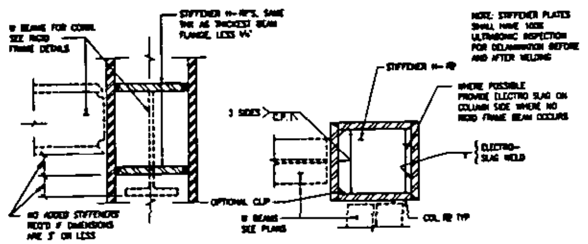


RIGID FRAME LATERAL BRACING (J)

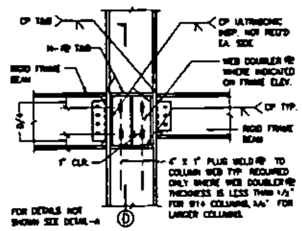


CARRIED COLUMN CONNECTION (2)





MOMENT CONNECTION AT BOX COLUMN (3)

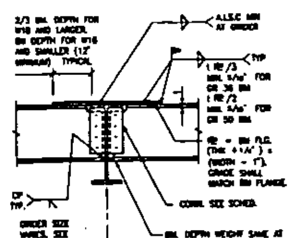


DOUBLER PLATE DETAIL (C)

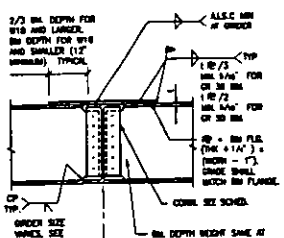
RIGID BEAM TO TOP OF COLUMN (F)

PLAN AT COLUMN CONNECTION (E)

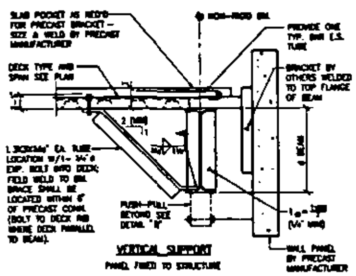
RIGID FRAME DETAILS (4)



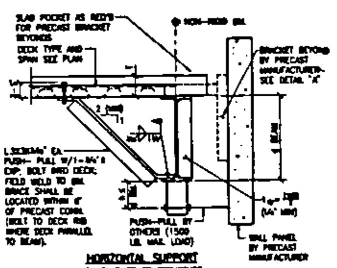
MOMENT CONNECTION BEAM TO BEAM (5)



MOMENT CONNECTION BEAM TO BEAM (6)



TYPICAL EDGE BEAM AT WALL PANEL (A)



TYPICAL EDGE BEAM AT WALL PANEL (B)

NOTES:

1. WHERE VERTICAL PANEL SUPPORTS, HORIZONTAL PANEL SUPPORTS, AND/OR LATERAL BRACING OF RIGID BEAM BOTTOM FLANGE OCCURS WITHIN 6" OF EACH OTHER, ONLY THE HEAVIEST LATERAL BRACING ANGLE(S) NEED BE PROVIDED. DUPLICATION OR OVERLAPPING OF BRACING ANGLES IS NOT NECESSARY.
2. EXPANSION BOLTS TO BE HILT KWIK-BOLTS (RR #23272), PHILLIPS RED HEAD WEDGE ANCHORS (RR #23886), OR APPROVED EQUAL.

(7)

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

MARTIN & HUANG INTERNATIONAL, INC. Structural Engineers

SCHEMATIC

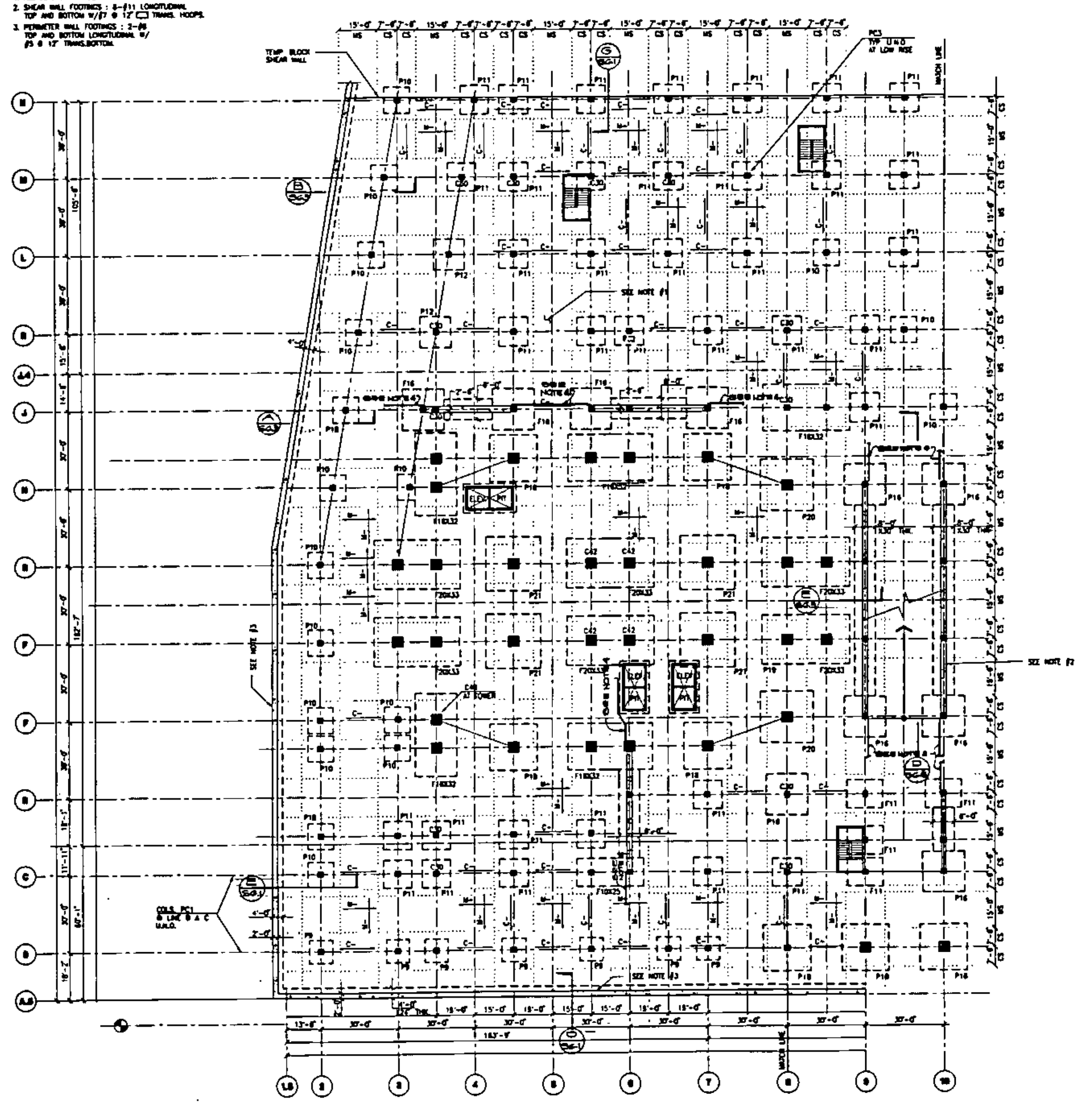
TYPICAL DETAILS
RIGID FRAME

S-1.7

Mclarand, Vasquez & Partners, Inc.
Architecture & Planning

SPECIAL NOTES THIS SHEET:

1. ALL SLAB ON-GRADE 14" THICK SLAB.
2. SHEAR WALL FOOTINGS : 8-#11 LONGITUDINAL TOP AND BOTTOM W/#7 @ 12" ▭ TRANS. HOOPS.
3. PERIMETER WALL FOOTINGS : 2-#8 TOP AND BOTTOM LONGITUDINAL W/ #5 @ 12" TRANS.BOTTOM.



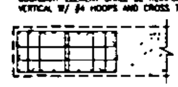
SQUARE FOOTING SCHEDULE				
FOOTING TYPE	SIZE	THICKNESS	REINFORCING BARS	REMARKS
P6	6'-0" SQUARE	26"	7-#7 E.W.	
P7	7'-0" SQ.	28"	8-#7 E.W.	
P8	8'-0" SQ.	32"	8-#9 E.W.	
P9	9'-0" SQ.	34"	10-#8 E.W.	
P10	10'-0" SQ.	38"	12-#8 E.W.	
P11	11'-0" SQ.	42"	12-#9 E.W.	
P12	12'-0" SQ.	44"	14-#9 E.W.	
P13	13'-0" SQ.	48"	14-#10 E.W.	
P14	14'-0" SQ.	52"	16-#10 E.W.	
P15	15'-0" SQ.	54"	17-#10 E.W.	
P16	16'-0" SQ.	56"	19-#10 E.W.	
P17	17'-0" SQ.	60"	22-#10 E.W.	
P18	18'-0" SQ.	64"	24-#10 E.W.	
P19	19'-0" SQ.	68"	24-#11 E.W.	
P20	20'-0" SQ.	70"	28-#11 E.W.	
P21	21'-0" SQ.	72"	30-#11 E.W.	

RECTANGULAR FOOTING SCHEDULE				
FOOTING TYPE	SIZE (WxL)	THICKNESS	REINFORCING BARS	REMARKS
F10	10'-0"X13'-0"	42"	13-#10 LONG 18-#8 TRANS.	
F11	11'-0"X13'-0"	44"	13-#11 LONG 18-#9 TRANS.	
F12	12'-0"X13'-0"	48"	13-#11 LONG 14-#10 TRANS	
F13	13'-0"X13'-0"	50"	14-#11 LONG 14-#11 TRANS	
F18	16'-0"X16'-0"	56"	19-#10 LONG 17-#8 TRANS.	
F16	18'-0"X18'-0"	64"	24-#10 LONG 20-#8 TRANS.	
F20	20'-0"X20'-0"	70"	28-#11 LONG 22-#8 TRANS.	
F10X24	10'-0"X24'-0"	64"	[illegible] BOT LONG [illegible] BOT TRANS [illegible] TOP LONG	
F16X32	16'-0"X32'-0"	48"	[illegible] BOT LONG [illegible] BOT TRANS [illegible] TOP LONG	
F20X33	20'-0"X33'-0"	56"	[illegible] BOT LONG [illegible] BOT TRANS [illegible] TOP LONG	

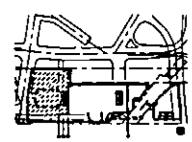
SHEAR WALL SCHEDULE		
WALL THICKNESS	REINFORCEMENT	REMARKS
12"	#5@12" O.C. E.W.E.F.	
18"	#8@12" O.C. E.W.E.F.	
24"	#7@12" O.C. E.W.E.F.	PERIMETER SHOTCRETE
24"	#8@12" O.C. E.W.E.F.	
30"	#8@12" O.C. E.W.E.F.	

NOTES :

1. CONCRETE STRENGTH FOR SHEAR WALLS SHALL BE f'c=5000 psi. EXCEPT PERIMETER SHOTCRETE WALLS MAY BE f'c=4000 psi
2. ALL VERTICAL BAR SPLICES SHALL BE WELDED SPLICES.
3. PROVIDE 48" LONG X THICKNESS OF WALL BOUNDARY ELEMENT AT ENDS OF EACH SHEAR WALL. BOUNDARY ELEMENT SHALL BE REINFORCED WITH 24-#14 VERTICAL W/ #4 HOOPS AND CROSS TIES @ 4" O.C.



4. PROVIDE 12-#8 x 60'-0" DRAG BARS W/ #5 HOOPS @ 6" O.C. @ END OF ALL SHEAR WALLS.



KEY PLAN

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

MARTIN & HUANG

MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers
Los Angeles, Calif.
Phone (213) 483-[illegible]
Fax (213) 483-[illegible]

SCHEMATIC

P4 LEVEL AND FOUNDATION PLAN

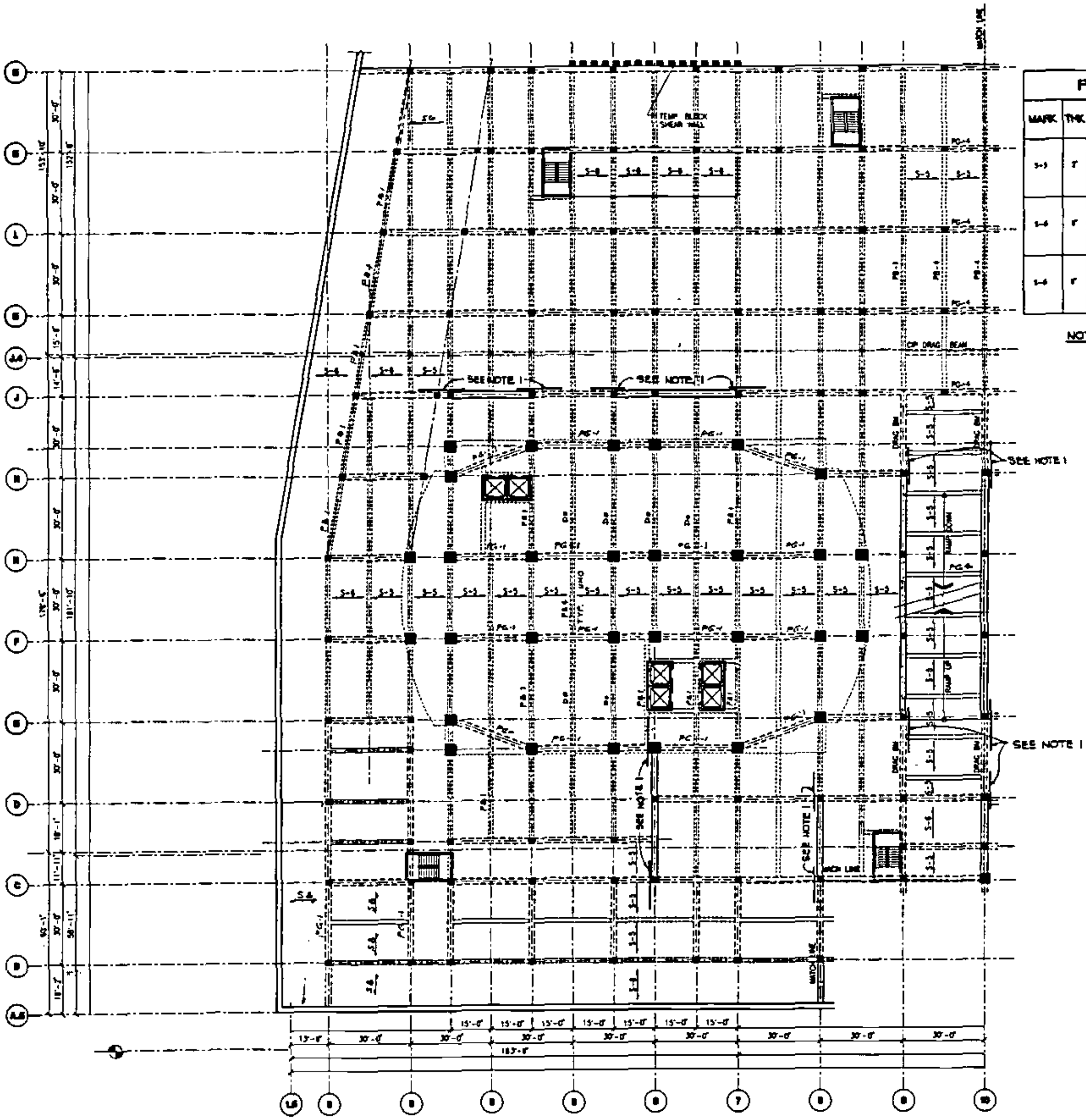
ZONE I

S-2.1

DATE : 30 DEC 1991
SCALE : 1/16"=1'-0"

Mclarand, Vasquez & Partners, Inc.

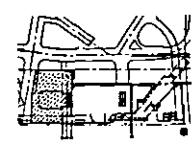
Architecture & Planning
714 540.2207
695 Town Center Drive
Suite 300
Costa Mesa, ca. 92626



PARKING LEVEL SLAB SCHEDULE

MARK	THK.	REINFORCEMENT (GR.60)			REMARKS
		TOP REINF.	BOTTOM REINF.	TEMP. REINF.	
S-5	5"	#4 @ 16"	#4 @ 12"	#4 @ 18"	
S-6	6"	#5 @ 12"	#4 @ 10"	#4 @ 18"	
S-6	6"	#5 @ 12"	#5 @ 12"	#4 @ 12"	

NOTE: 1. PROVIDE 12-#8×60' BARS W/ #3 HOOPS @ 6" O.C. AT ENDS OF ALL SHEAR WALLS.



GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

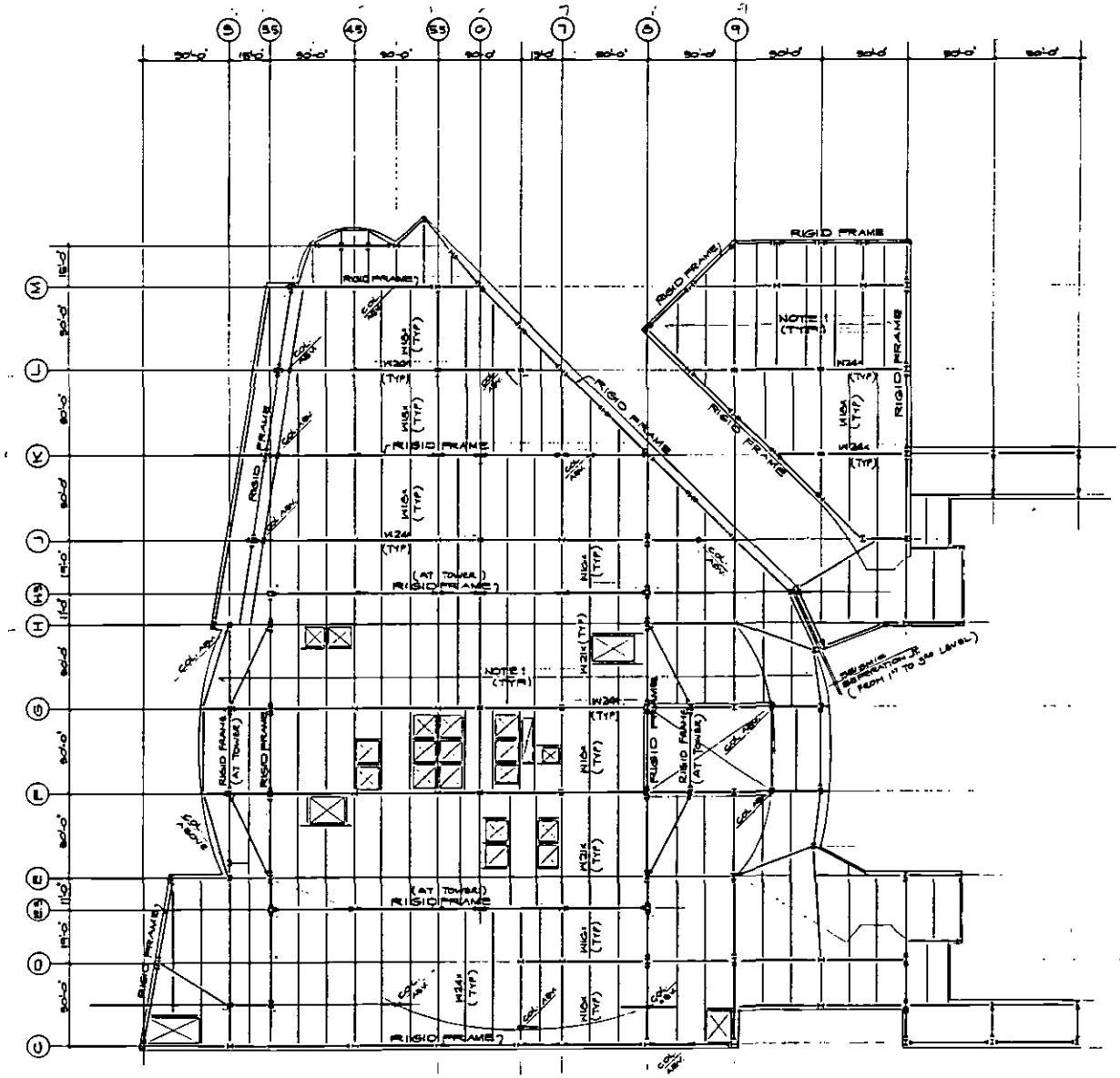
MARTIN & HUANG
MARTIN & HUANG INTERNATIONAL, INC.
Structural Engineers
Los Angeles, Calif.
Phone (213) 483-
Fax (213) 483-6737

SCHEMATIC

PS LEVEL
FRAMING PLAN
ZONE I

S-2.2

Mclarand, Vasquez & Partners, Inc.
Architecture & Planning
714.540.2207
695 Town Center Drive
Suite 300
Costa Mesa, ca 92626



3RD. LEVEL FRAMING PLAN
(SCHEMATIC)

SPECIAL FLOOR FRAMING NOTES:

1. 3¼" LIGHT WEIGHT CONCRETE OVER 3" W-20 ASC PACIFIC HI BOND METAL DECK, WITH 6x6-W2.1xW2.1 WWF.
2. ALL MEMBERS OVER 50 FEET SPAN SHALL BE CAMBERED SPAN/360, EXCEPT RIGID FRAME MEMBERS NEED NOT BE CAMBERED.
3. PROVIDE SEPARATOR BEAM BETWEEN ELEVATORS @ TS 8x4x 5/16.
4. EDGE BEAM AROUND OPENINGS SHALL BE W12x19 UNLESS OTHERWISE NOTED.
5. ALL RIGID FRAME GIRDERS SHALL HAVE 5/8" ø SHEAR STUDS AT 12" O.C. UNLESS OTHERWISE NOTED.
6. SEE TYPICAL TOWER FLOOR FRAMING PLAN (SCHEME-2) FOR ADDITIONAL BEAM & GIRDER SIZES.
7. SHEAR STUDS (S.C.: SHEAR CONNECTOR) SHALL BE ¾" ø x 5½".
8. [ ] INDICATES TYPE OF SHEAR STUD CONNECTOR WITH NUMBER PER BEAM SHOWN ON SCHEDULE.
9. ⟷ DENOTES DIRECTION OF DECKING SPAN.
10. ⊢ DENOTES MOMENT CONNECTION.
11. SEE RIGID FRAME ELEVATIONS FOR COLUMN & BEAM SIZES.

SHEAR STUD SCHEDULE

TYPE	NO. S.C.
A	12
B	16
C	20
D	24
E	28
F	32
G	36
J	40
K	44
L	48
M	52
N	56
P	60
Q	64
R	68
S	72
T	76

TYPE	NO. S.C.
AA	12-6+12
BB	16-6+16
CC	20+6+20
DD	24+6+24
EE	28+6+28
FF	32+6+32
GG	36+6+36
HH	40+8+40
JJ	44+8+44

GATEWAY CENTER
R T D
HEADQUARTERS
Los Angeles, California

CONSULTANT
MARTIN & HUANG

SCHEMATIC

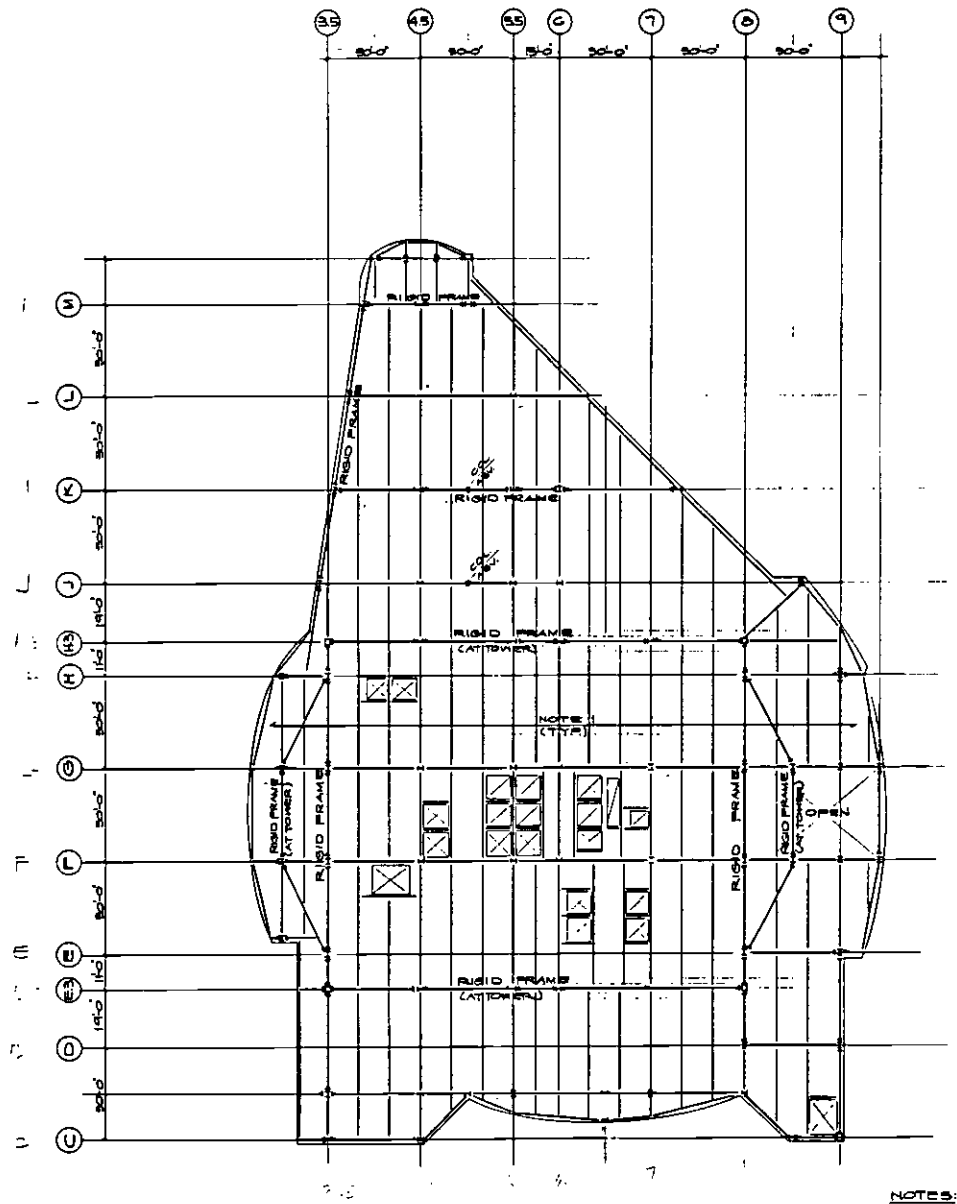
REVISIONS

No.	Date	Description

SHEET TITLE
THIRD FLOOR FRAMING PLAN

SHEET NUMBER
S-4.1
OF SHEETS

McLarand, Vasquez & Partners, Inc.
Architecture & Planning
714. 549. 2207
695 Town Centre Drive, Suite 300
Costa Mesa, CA 92626



4TH LEVEL FRAMING PLAN

NOTES:

1. SEE NOTES ON 3RD LEVEL FRAMING PLAN.
2. FOR RIGID FRAME BEAM & GIRDER SIZES SEE RIGID FRAME ELEVATIONS.
3. FOR NON-RIGID FRAME BEAM SIZES SEE 3RD LEVEL FRAMING PLAN.
4. FOR SHEAR STUD SCHEDULE SEE S-4.1.

GATEWAY CENTER

R. T. D. HEADQUARTERS

Los Angeles, California

CONSULTANT

Martin & Huang

SCHEMATIC

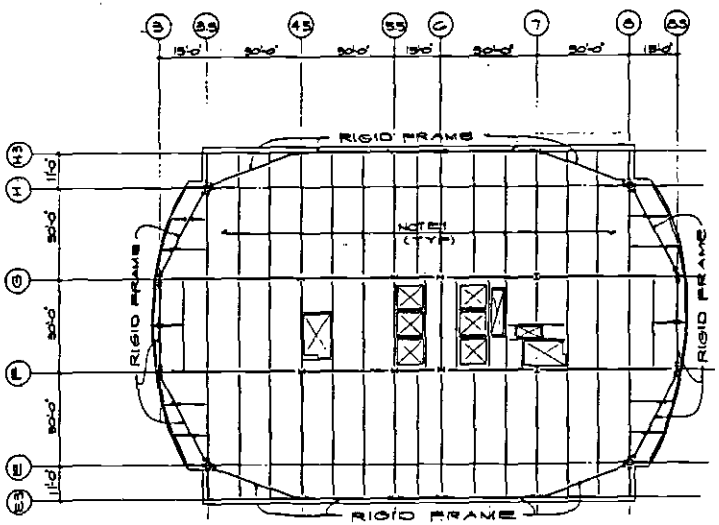
REVISIONS

No.	Date	Description

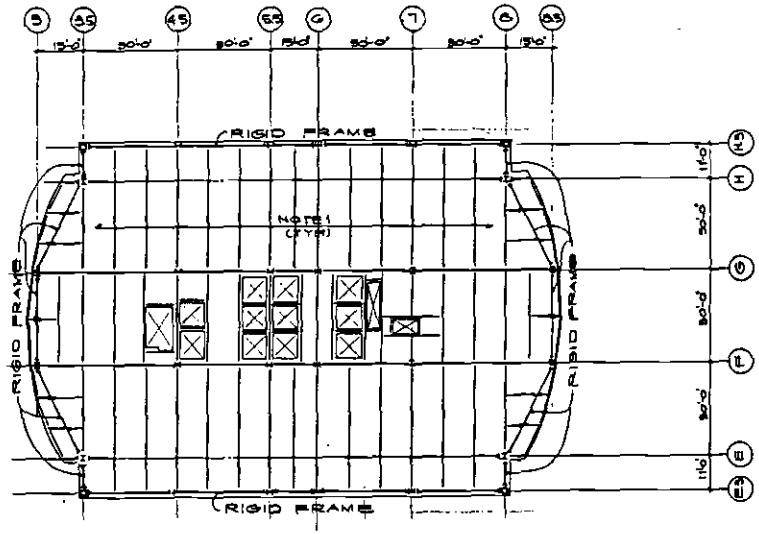
SHEET TITLE
FOURTH FLOOR FRAMING PLAN

SHEET NUMBER
S-4.2
OF SHEETS

McLarand, Vasquez & Partners, Inc.
Architecture & Planning
714.549.2207
695 Town Center Drive, Suite 300
Costa Mesa, CA 92626

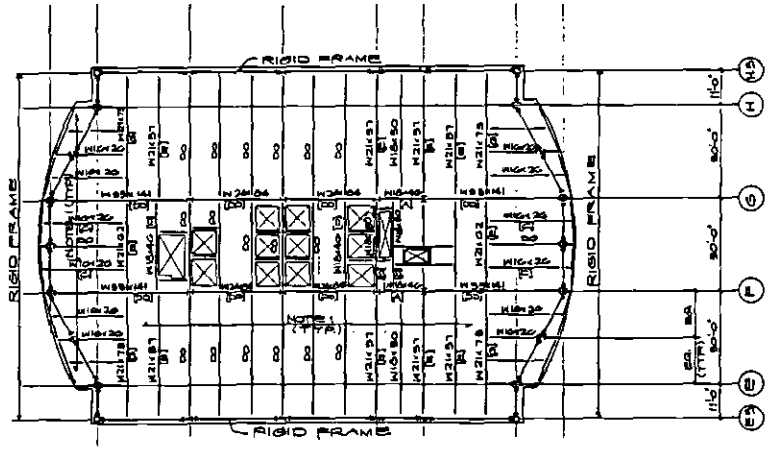


TYP. TOWER FLOOR FRAMING PLAN
(SCHEME-3)
See Scheme-2 for non rigid frame beam sizes



TYP. TOWER FLOOR FRAMING PLAN
(SCHEME-1)
See Scheme-2 for non rigid frame beam sizes

NOTES:
1. See notes on 3rd level framing plan, S4.1.
2. For rigid frame beam & girder sizes see rigid frame elevations in S4.4.
3. For shear stud schedule see S4.1.



TYP. TOWER FLOOR FRAMING PLAN
(SCHEME-2)

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

SCHEMATIC

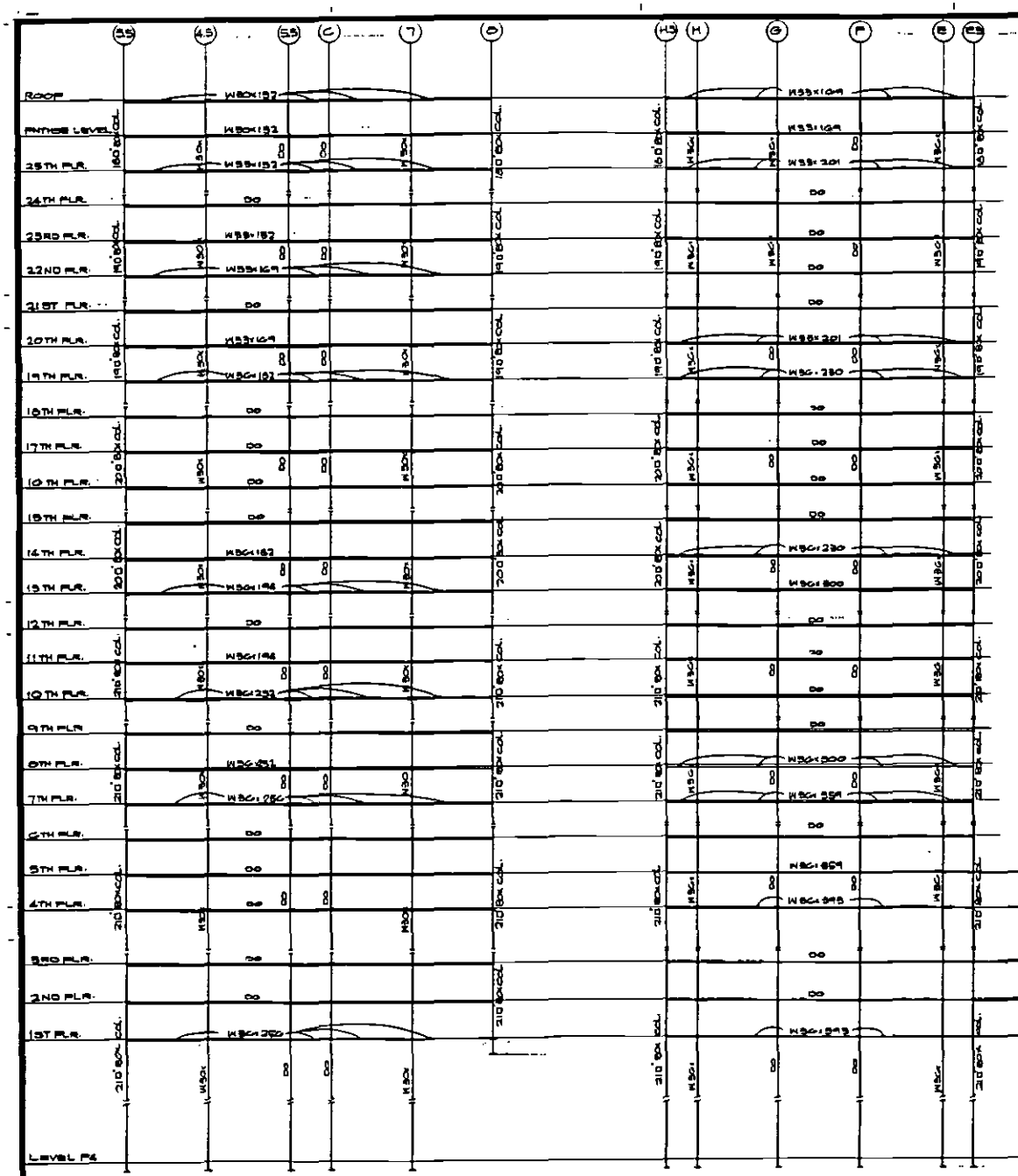
REVISIONS

No.	Date	Description

SHEET TITLE
TYPICAL FLOOR FRAMING PLAN

SHEET NUMBER
S-4.3
OF SHEETS

McLarand, Vasquez & Partners, Inc.
Architecture & Planning
714.549.2277
695 Town Center Drive, Suite 300
Costa Mesa, CA 92626



RIGID FRAME ELEVATION (LONGITUDINAL)
SCHEME-1

RIGID FRAME ELEVATION (TRANSVERSE)
SCHEME-1

GATEWAY CENTER

R T D HEADQUARTERS

Los Angeles, California

CONSULTANT
MARTIN & [illegible]

SCHEMATIC

REVISIONS

No.	Date	Description

SHEET TITLE
TYPICAL FRAME ELEVATIONS

SHEET NUMBER
S-4.4
OF SHEETS

McLarand, Vasquez & Partners, Inc.
Architecture & Planning
714.549.2207
695 Town Center Drive, Suite 300
Costa Mesa, CA 92626

McLarand,
Vasquez &
Partners, Inc.

CATELLUS DEVELOPMENT CORPORATION/
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

RTD HEADQUARTERS
Los Angeles, California

PROGRAM ANALYSIS
FUNCTIONAL REQUIREMENT PROGRAM QUESTIONS

December 20, 1991

MV&P

Carl McLarand, A.I.A.
Ernesto M. Vasquez, A.I.A.
Arthur C. Eckner, A.I.A.

The following unresolved questions were extracted from sections of the RTD Headquarter's Functional Requirement Program dated July 29, 1991, and issued to RTD in MV&P's 50% Schematic Package dated September 4, 1991. The number and item references below correspond to the original Functional Requirement Program. The RTD responses that have been received to date are highlighted below, but further elaboration is requested.

A. ARCHITECTURAL

4. Section 5.0, **BUILDING STRUCTURE**

The Storage Rooms require a live load of 150 pounds per square foot. Is this load necessary for all Storage Rooms? Does this account for the dynamic loading of mobile shelving systems or can stationery shelling systems be considered? Section 17.0.6 requests mobile shelving only for Management Information Systems.

RTD RESPONSE: SUBMIT RECOMMENDATION.

9. Section 17.0, **SPECIAL FACILITY REQUIREMENTS**

Item 2

A. A Microwave Room us requested in close proximity to the microwave dishes for Telecommunications. How much area is required for this room?

Architecture & Planning
695 Town Center Drive
Suite 300
Costa Mesa, CA 92626
FAX: 714. 549. 5297
714 549 2207

B. Three microwave dishes are requested for the roof area, two (2) eight foot and one (1) six foot. Assuming that these are the dimensions of their diameter, are additional specification available including depth, mounting height, weight, and required clearances?

MV&P **RTD RESPONSE: (FOR A & B) TO BE DETERMINED BY TELECOM CONSULTANT.**

11. Section 21.0.B, **TELECOMMUNICATIONS**

A. The program states the cable runs from the Communications Equipment and Wiring Room (CE&W) are not to exceed 250' in length. If this length can be maintained from one central CE&W Room and still serve an entire floor, then can the second CE&W Room be eliminated? We recommend that one of the CE&W Rooms will be combined with the typical floor Electrical Room?

RTD RESPONSE: TO BE RESOLVED BY TELECOM CONSULTANT.

B. The proposed CE&W Room layout represents an area of 150 s.f. each (approximately 5,000 s.f. of building area). As this area is not accounted for in the program, will it be considered an addition to the gross area or is it a part of the rentable area multiplier of 12%?

RTD RESPONSE: ANSWER UNKNOWN. IS THIS IMPORTANT?

12. Section 21.0.C, **TRS BUS DISPATCH CENTER**

The Bus Dispatch Center requires 19 dispatch consoles. Does this include any consoles for the Transit Police Dispatch and training or will additional consoles be necessary?

RTD RESPONSE: THE 19 DISPATCH CONSOLES IS FOR BUS DISPATCH CENTER ONLY. ADDITIONAL INFORMATION WILL BE PROVIDED.

13. Section 21.0.D, **PRINT SHOP**

A. The Print Shop requires special ventilation, humidity control, and plumbing. What are the specific requirements? What are the types and quantities of toxic materials used in the Print Shop and what are the desired methods of storage and disposal?

B. The plan dimensions and power requirements of the Print Shop equipment are listed. What is the height and weight of this equipment? How much heat does each piece of equipment generate?

RTD RESPONSE: (FOR A & B) INFORMATION WILL BE PROVIDED IN INTERIOR DESIGN WORK

MV&P

14. **GENERAL COMMENTS AND QUESTIONS**

A. What are the anticipated tenant uses in the retail spaces?

RTD RESPONSE: UNKNOWN AT THIS TIME.

B. STRUCTURAL

2. Sec. 5.0, **BUILDING STRUCTURE**

Item 1, Live Loads

B. Computer Room -- clarify the 100 lbs. per sq. ft. includes the weight of the raised floor if used.

C. File Storage Room -- clarify the 150 lbs. per sq. ft. includes allowance for mobile filing storage system noted under Sec. 17.0 Item 6.

D. Mechanical Equipment Areas -- clarify the 150 lbs. per sq. ft. includes weights of equipment and equipment pads.

C. PLUMBING

1. Section 8.0, **PLUMBING**

Item 4, Fire Protection Systems

5) Request requirements from Fire Insurance Underwriter, Factory Mutual, Industrial Risk Insurers, Insurance Services Office or design fire protection system per code?

D. MECHANICAL

1. Section 7.0, **MECHANICAL**

Item 1, System Description

MV&P

B. What type of built-up air handling system is desired, floor-by-floor or central? If floor-by- floor fan rooms are desired in conjunction with airside economizers, shafts and/or openings for outside air and exhaust air for the economizer cycle will need to be considered.

D. 72 degrees F is standard indoor design temperature for heating, is the minimum 65 degrees F desired for night setback?

Item 4, Cooling Tower

In the interest of design flexibility can other cooling towers such as centrifugal or axial fan types be considered?

Item 8, Air Conditioning Unit Firestats

A. Local codes require the use of smoke detectors for automatic shut-off of air conditioning units, are firestats required?

Item 19, Toilet Exhaust

In the interest of design flexibility can other exhaust fans such as utility set or in line centrifugal type be considered?

2. Section 17.0, **SPECIAL FACILITY REQUIREMENTS**

Item 1,Heating, Ventilation and Air Conditioning

A. Scheduling - Is additional ventilation adequate for typesetting machines or will additional air conditioning be required?

RTD RESPONSE: INFORMATION WILL BE PROVIDED DURING INTERIOR DESIGN.

C. Risk Management - What type of products will be exhausted through the ventilation hood.

RTD RESPONSE: INFORMATION WILL BE PROVIDED DURING INTERIOR DESIGN.

F. What occupancy and activity level is expected for the Central Conference and Training Facilities.

RTD RESPONSE: INTERIOR DESIGN WILL ESTABLISH ALL OF THESE.

MV&P

G. Data Center - Heat load and operating conditions for all equipment in this area will be required to assess the air conditioning and chilled water loads.

H. Similar to the Data Center, heat load and operating condition information for the Telecommunications PBX, Bus Dispatch Center, and Credit Union will be required to assess air conditioning loads.

I. Print Shop - What type of equipment will require exhaust? What types of chemicals will be present in this area? What is the desired humidity in this area?

J. Building Engineering - What type of welding process be performed in this area?

4. Section 17.0, **SPECIAL FACILITY REQUIREMENTS**

Item 8, Plumbing

A. Print Shop - Plumbing for solvents and photo processing chemicals. How much solvents to be stored and will need "Material Safety Data Sheets" for all solvents and chemicals to be used.

RTD RESPONSE: INFORMATION WILL BE PROVIDED.

B. Building Services - Sink required in Shop. Compressed air required?

RTD RESPONSE: INFORMATION WILL BE PROVIDED.

E. ELECTRICAL

1. Section 10.0, **ELECTRICAL**

Item 3, Electrical Lighting

High Pressure Sodium Lighting is requested for the parking structure. Will fluorescent lighting be considered if proven to be cost effective?

MV&P

Item 4, Power Distribution

A. Is it permissible to also include 1/2 HP motors at 480 volt?

Item 7, Grounding System

A. Lighting protection is not usually provided in this area, is it mandatory?

Item 9, Lighting System

A. Is site lighting to be separately metered?

Item 12, Master Clock/Security System

B. Is any card access required for building entrances or employee parking?

RTD RESPONSE: MAYBE - NEED HELP OF SECURITY CONSULTANTS.

2. Section 17.0, **SPECIAL FACILITY REQUIREMENTS,** Item 2, Electrical Cabling

A. Data System - Typical shell and core design includes conduit system only for LAN and Cable TV. Is this the case? Will there be an Audio/Visual Consultant?

RTD RESPONSE: THERE WILL BE AN AUDIO-VISUAL CONSULTANT INCLUDED IN INTERIOR DESIGN CONSULTANT.

3. Section 21.0, **SPECIAL FUNCTIONS**

Item A, Data Center

Are Data Cables included in the "Electrical" scope of work?

RTD RESPONSE: YES.

Item B, Telecommunications

Who is providing evaluation of different cabling schemes?

RTD RESPONSE: A TELECOMMUNICATION CONSULTANT WILL BE HIRED BY RTD OR ARCHITECT.

Lerch, Bates & Associates Inc.

Elevator Consulting Group

December 10, 1991

McLarand, Vasquez & Partners, Inc.
695 Town Center Drive, Suite 300
Costa Mesa, California 92626

Attn: Mr. Mark Rohling

Re: RTD HEADQUARTERS BUILDING
LOS ANGELES, CALIFORNIA
L.B.A. #41-NP131-91

Dear Mark:

We have analyzed your request for a revised analysis on the vertical transportation systems in RTD Headquarters. This report presents a preliminary analysis for your consideration. As with the original study, all data which was presented should be verified.

After review of this analysis, if you wish us to further pursue this alternate elevatoring scheme, we will be happy to do so.

Very Truly Yours,

LERCH, BATES & ASSOCIATES, INC.

Michelle S. Baratta
Project Consultant

MSB/crg
Encl.

2953 Honolulu Avenue • La Crescenta, CA 91214-3912 • 818 957-4524
FAX 818 957-4528

RTD HEADQUARTERS
L.B.A. #41-NP131-91
December 10, 1991

REVISED ANALYSIS STUDY

Criteria for Study

	Original Recommendations	Requested Revised
Shuttles	4 elevators serving: P4, P3, P2, P1, Plaza (1), Podium (3), 4; No stop at Mezzanine (2)	3 elevators serving: P4, P3, P2, P1, Plaza (1), Mezzanine (2), Podium (3), 4
Low-Rise	5 elevators serving: Podium (3), Express Non-Stop to 5; serves 5-15	5 elevators serving: Plaza (1), Mezzanine (2), Podium (3), 4-15
High-Rise	5 elevators serving: Podium (3), Express Non-Stop to 15; serves 16-25	5 elevators serving: Plaza (1), Mezzanine (2), Podium (3); serves 16-25
Service	2 elevators serving: all floors	1 elevator serving: all floors
Security	2 elevators serving: P3, P2, P1, PL (1), M (2), Podium (3)	2 elevators serving: P3, P2, P1, PL (1), M (2), Podium (3)
Escalators	2 escalators serving: Plaza to Podium	2 escalators serving: Plaza to Podium

Analysis

From a technical elevatoring approach, the original recommendation appears to be the most efficient elevatoring scenario for the following reasons:

1. The data center located on the second floor will no longer be a secured floor. All tenants and anyone in the parking structure (directly below the Plaza level) can gain access to this floor via any of the public shuttle elevators.

2. The original study created a main transition floor at the Podium (3) level. Anyone wishing to go to or from the parking structure up into the buildng or out of the building had to transfer at the Podium (3) level, walk across the Podium (3) lobby and then access the low-rise or high-rise elevators. This transition enhances security in that it forces persons entering or leaving the building or parking structure to pass by security personnel at Podium level. However, if the garage and the main building elevators stop at Plaza, Mezzanine, Podium, and fourth floors, four transition floors are created. Not only will security at the main data base floor be violated, but a main building security breach will be created. For example, a person entering the parking structure can gain access to any floor in the building through the elevators at four different floors.

3. Elevator service is judged by average interval and handling capacity.

   a. Average interval (quality of service) is measured by the anticipated frequency with which an elevator will return to the lobby. With additional stops being required at the Plaza, Mezzanine, and fourth floor, it will take each elevator longer to cycle through their designated floors, thereby decreasing the frequency an elevator returns to the lobby and increasing (degrading) the interval. Quality of service will deteriorate.

   b. Handling capacity (quantity of service) is the number of persons or percentage of building population that can be transported by the elevators. Because the population these three banks will be required to handle will increase - they must now all service the population at the three additional floors - the handling capacity will decrease. Quantity of service will deteriorate.

As a result of the additional stops, and deterioration of quality and quantity of service, an additional elevator in each bank will probably be required.

One additional elevator will require approximately 130 sq. ft. per floor (including lobby and shaft) for a total loss of

usable area of 3,250 sq. ft. in the office tower and a loss of 520 sq. ft. of usable area in the parking structure.

4. Service Cars:

In the original study we anticipated two service elevators would be provided for RTD Headquarters. In a single tenant office building there are considerations for service which do not necessarily exist in a diversified tenancy building:

a. Office Material Movements: Movements of office materials such as paper, stationary, etc., tend to be delivered and disseminated in bulk.

b. Inter-departmental Movements: Movement of departments from floor to floor are more frequent.

c. The lower floors will have concentrated demands created by the data center and kitchen. Buildings with data centers such as the one located on the Mezzanine second floor have special material delivery and disposal of materials needs. The cafeteria and kitchen will place demands on the service elevator for food delivery and trash removal. These floor demands could monopolize the elevator during the day, leaving the main building without a service elevator.

d. The most simple consideration is that if this elevator were out of service due to malfunctions or maintenance, the building would be left without a service elevator.

e. We still recommend that the service elevators be extended to the P4 level. This will meet the requirement, often imposed by fire marshals, that one elevator service all floors in the building.

5. Escalators:

In our original study, two escalators, one up and one down, were planned between the Plaza and the Podium levels. Escalators have the capability of moving large groups of people in a short period of time without waiting for vertical transportation service. Given that approximately 70% of the building population will enter the building at street level, the most efficient way to eliminate long waiting times will be to provide escalator access to the Plaza level. Escalators will provide immediate access for this population with virtually no perceived waiting. With the cafeteria, board rooms and conference rooms located in the Podium (3) level, large groups of people during a short period of time will require service to these areas, especially at lunch time. If the original study recommendations are followed, these escalators may eliminate a requirement for additional elevators, or perhaps an additional bank of elevators, to

service these floors. Finally, experience tells us that the more successful retail areas have good escalator access.

6. Secured Elevator:

As with the proposed revision, at this time two elevators appear adquate for this area. We noted in our original study that more information is required to properly study the level of service these elevators will provide. For example, what number of people will be requiring elevator service, how many parking spaces are located in this area, and do all those who park in the this section go up into the building?

Based on the drawings and information provided, the original study included the secured elevators providing vertical transportation to the Mezzanine (2) and the secured areas at the Plaza and the Podium. There is no service provided from the elevators to the fourth floor or above.

Summary

Based on the discussion presented, the original design recommended on September 26, 1991 appears to be the most efficient elevatoring scenario.

Long waiting times and decreased handling capacity may result in all three banks if the revised design were implemented. In order to overcome this, it appears an additional elevator, at a minimum, in each bank will be required. Even with the additional elevator main building security for the tower and the second floor will be breached due to the four transition floors which will be created under the revised scenario. If the escalators are eliminated, an additional bank of elevators may be required.

The revised scenario proposes one in lieu of two service elevators. Because of unique demands imposed on a service elevator from a single tenant building and because the kitchen, cafeteria, and data center are centrally located on the third floor, the original recommendation for two service elevators serving all floors should be given serious consideration.

Escalators appear to be the most efficient method of transporting people from the main Plaza level to the third floor. In either scenario (original or revised), large groups of people will be requiring access from the Plaza, from the cafeteria, and back to

Podium level. Escalator access may also enhance the retail areas located at the Plaza.

Two secured elevators will provide access to the high-security areas, especially at the second floor. RTD security and data center employees will use these elevators to access these floors. Additional information is still required in order to complete this analysis.