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GBQC Manual of Practice

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Welcome

to GBQC. We have prepared this manual of practice for your personal use and hope that it will speed your familiarity with the firm and serve you as an ongoing guide. A standing committee is responsible for continuous evaluation of the manual. Revisions and additions will be issued periodically. Your comments or participation in the committee will be appreciated.

We seek to achieve the highest standards of planning, design and documentation. Our quest for excellence includes seeking out the best professional staff members that we can find. We are very proud to have you with us and hope that you will soon feel an integral part of the firm.

Robert Geddes

Melvin Brecher

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1.1 History of the Firm

	1950	1951	1952	1953	1954
People				**2 people** Bob Geddes and Mel Brecher form Geddes Brecher Architects in Philadelphia	**3 people**
Projects					Fotteral Square, City of Philadelphia; Wagner House, Gwynedd, PA; Geddes Residence, Radnor, PA
Awards					Fotteral Square, City of Philadelphia: Philadelphia AIA, Progressive Architecture Design Award
Events					

Events	Awards	Projects	People	
	Carson-Pirie-Scott Chicago City Planning Competition: Honorable Mention	Lawncrest Center, Philadelphia, PA	**5 people**	1955
Second Place: Sydney Opera House Competition	Schaeffer House: Design Award, Progressive Architecture	Wister Playground, Philadelphia, PA; Beachcomber Swim Club, Gwynedd, PA; Bentman Residence, Lancaster, PA; Schaeffer Residence, Rydal, PA	**6 people** Warren Cunningham associates with firm	1956
		Roosevelt Playground, City of Philadelphia, PA	**7 people**	1957
	Dolphin Swim Club, Philadelphia: Philadelphia AIA; Public Housing, Delaware County: First Design Award, Progressive Architecture; Moore School of Electrical Engineering: Gold Medal, Philadelphia AIA, Silver Medal, PSA	Moore School of Electrical Engineering, U of P, Philadelphia, PA	**9 people** George Qualls becomes principal in firm	1958
	F.J. Cooper Jewelry Shop, Philadelphia: Benjamin Franklin Medal	Development Proposal, Eastwick Urban Renewal Area, Philadelphia, PA	**10 people** Roland Gallimore joins firm	1959

Events	Awards	Projects	People	
AIA National Honor Award	Eastwick Development Proposal: Design Award, Progressive Architecture; Moore School, U of P: AIA National Honor Award	Undergraduate Men's Housing Program, U of P, Philadelphia, PA	**12 people** Barney Cunningham becomes principal in firm	1960
			8 people Wesley Heilman and Helen Sochacki join firm	1961
	Master Plan for Penn's Landing, Philadelphia, PA: Outstanding Proposed Building, Philadelphia AIA	Police Administration Building, Philadelphia, PA; Cooper Residence, Bryn Athyn, PA	**10 people**	1962
	Temple Beth Sholom: Philadelphia AIA	N. E. Regional Library, Philadelphia, PA; Temple Beth Sholom, Manchester, CT	**12 people**	1963
	N. E. Regional Library: Silver Medal, Philadelphia AIA, Honorable Mention, PSA	Holiday Inn, Philadelphia, PA; Master Plan, University City Science Center, Philadelphia, PA	**15 people** Hamilton Ross, Robert Brown join firm	1964

Events	Awards	Projects	People	
Bob Geddes named Dean, Princeton University School of Architecture; GBQC opens Princeton office	Police Administration Building: Exhibition of Modern Architecture, Museum of Modern Art, New York, NY	Master Plan, Peddie School, Hightstown, NJ; Development Plan, Cluster Housing and Recreational Facilities, Reston, VA	**22 people** Neville Epstein joins firm	**1965**
	West Chester Public Housing, West Chester, PA: First Honor Award, HUD	Master Plan, Rockville Town Center, Rockville, MD; Unitarian Church, Springfield, PA; West Chester Public Housing, West Chester, PA; Geddes Residence, Princeton, NJ	**22 people** Hamilton Ross, Eric Van Der Water, Ben Kitchen, Roland Gallimore named associates of firm; Jim Dill joins firm	**1966**
First Prize, Birmingham-Jefferson Civic Center Competition, Birmingham, AL		Headquarters, Philadelphia Chapter, AIA; Residence and Dining Hall, U of Delaware, Newark, DE	**24 people** Alan Fishman joins firm	**1967**
	Town Center, Rockville, MD: First Honor Award, HUD; Moore School Graduate Center, U of P: Gold Medal, Philadelphia AIA, Silver Medal, PSA; U of Delaware Dormitories: First Honor Award, HUD	Fine Arts Complex, Beaver College, Glenside, PA; Holmcrest Houses, Philadelphia, PA	**32 people** Robert Brown, Wesley Heilman, Neville Epstein named associates of firm; William Dix, John DeBello join firm	**1968**
		Development Plan, Beaver College, Glenside, PA; J. G. Furniture Showroom, New York, NY	**32 people**	**1969**

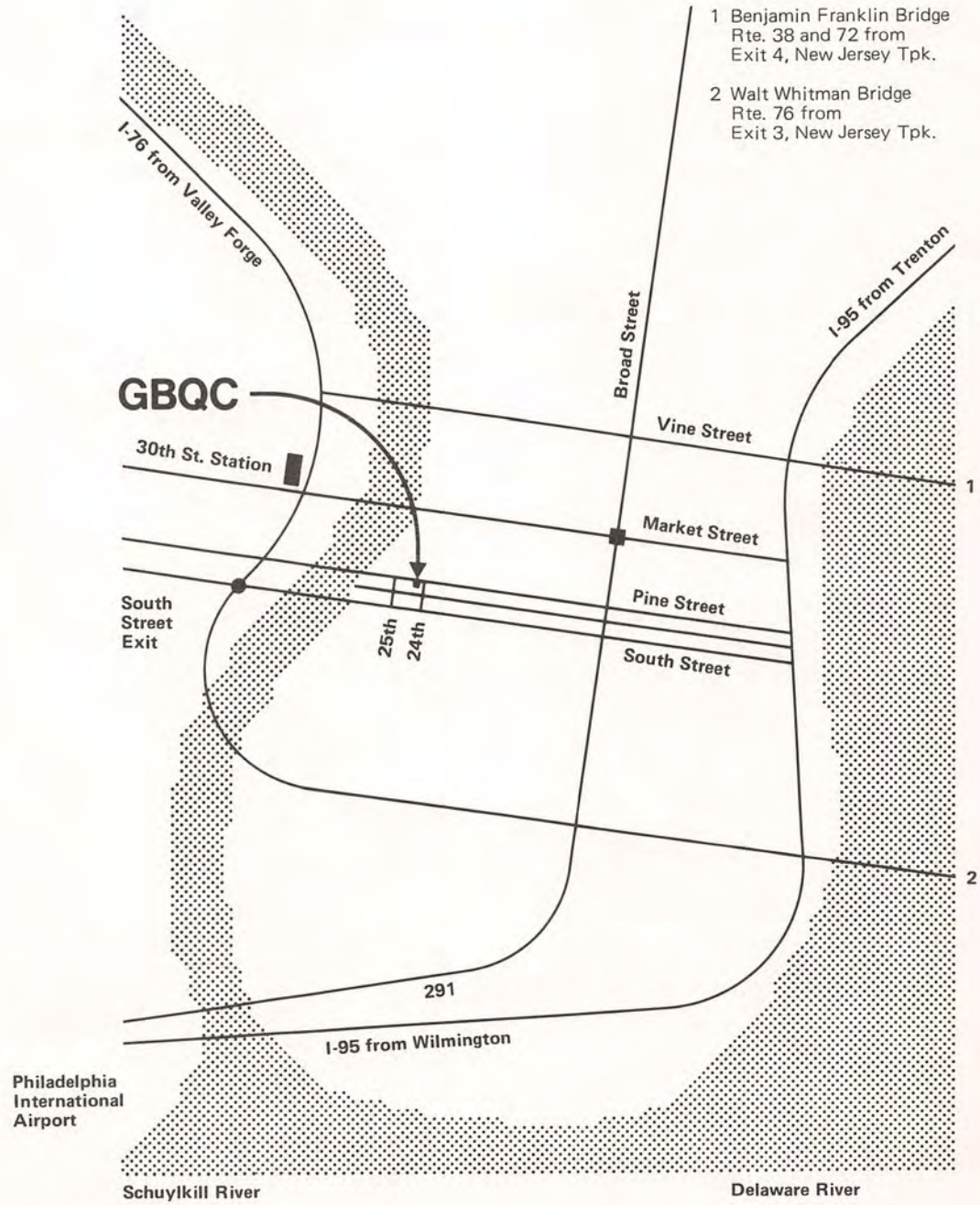
Events	Awards	Projects	People	
	Birmingham-Jefferson Civic Center, Birmingham, AL: Silver Medal, Philadelphia AIA	Classroom/Office Building, Rutgers, Newark, NJ	**34 people** Jim Dill named associate of firm	**1970**
First Prize: Vienna International Town Planning Competition	Master Plan, Stockton State College, Pomona, NJ: Award, NJSA	U. S. Embassy Compound, Islamabad, Pakistan; Expansion Study, Philadelphia Museum of Art; Master Plan, Haile Sellassie University, Addis Ababa, Ethiopia	**35 people** Alan Fishman named associate of firm; Eric Van Der Water, Ben Kitchen leave firm; Steven Yarnall joins firm	**1971**
GBQC becomes a professional corporation	Classroom/Office Building, Rutgers: Design Award, NJSA	Downtown Restoration Plan, Corning, NY; IBM Branch Office Building, Bethlehem, PA; Museum Restaurant, Philadelphia Museum of Art	**48 people** Peter Piven joins firm as associate; Fred Brecher, Ron Kobelin, Ed Ford join firm	**1972**
	Institute for Advanced Study, Princeton, NJ: Design Award, NJSA	Fine Arts Building, Rutgers, Camden, NJ; Housing for the Elderly, West Orange, NJ; St. Thomas More Catholic Church Cherry Hill, NJ	**45 people**	**1973**
	Science/Academic Building, Beaver College, Glenside, PA: Design Award, NJSA	University Hilton Hotel, Philadelphia, PA; Psychology Building, Rutgers, New Brunswick, NJ; Housing for the Elderly, Trenton, NJ	**39 people** Fred Brecher named associate of firm; Michael Kihn, Jim Snyder join firm	**1974**

	Events	Awards	Projects	People
1975			Humanities and Social Sciences Building, Southern Illinois University, Carbondale, IL; Trenton Commons Garage, Trenton, NJ	**41 people** Steven Gatschet joins firm
1976		Stockton State College, Pomona, NJ: Silver Medal, PSA, Design Award, NJSA, Philadelphia AIA	Rodin Museum, Historical Restoration, Philadelphia, PA; Memorial Hall Dome, Historical Restoration, Philadelphia, PA	**32 people** Hamilton Ross, Robert Brown, Wesley Heilman, Fishman, Peter Piven, Fred Brecher become principals in GBQC
1977	AIA National Honor Award	Humanities and Social Sciences Building, SIU: Honor Award, National AIA, Bartlett Award	Master Plan, Howell Farm, Mercer County, NJ; Forrestal Center, Princeton, NJ	**48 people** John DeBello, William Dix, Michael Kihn named associates of firm; Roland Gallimore, deceased
1978		Market Street Renewal and Restoration, Corning, NY: Silver Medal, PSA, Design Award, Philadelphia AIA	United States Embassy, Islamabad, Pakistan; U. S. Navy Recreation Facility, Earle, NJ; Medical Education Building/ Silverstein Pavilion, U of P	**61 people** Steven Gatschet, Ron Kobelin named associates of firm
1979	AIA Architectural Firm Award; Liberty Park Exhibition, Museum of Modern Art, NY	Radnor Corporation Buildings 2 & 3, Radnor, PA: Design Award, Philadelphia AIA; U. S. Navy Recreation Facility, Earle, NJ: Design Award, Philadelphia AIA	CNJ Terminal Restoration, Liberty State Park, Jersey City, NJ; Corporate Office Expansion, Columbian Mutual Life Insurance Co., Binghamton, NY; Library/ Learning Center, Penn State University, Media, PA	**70 people**

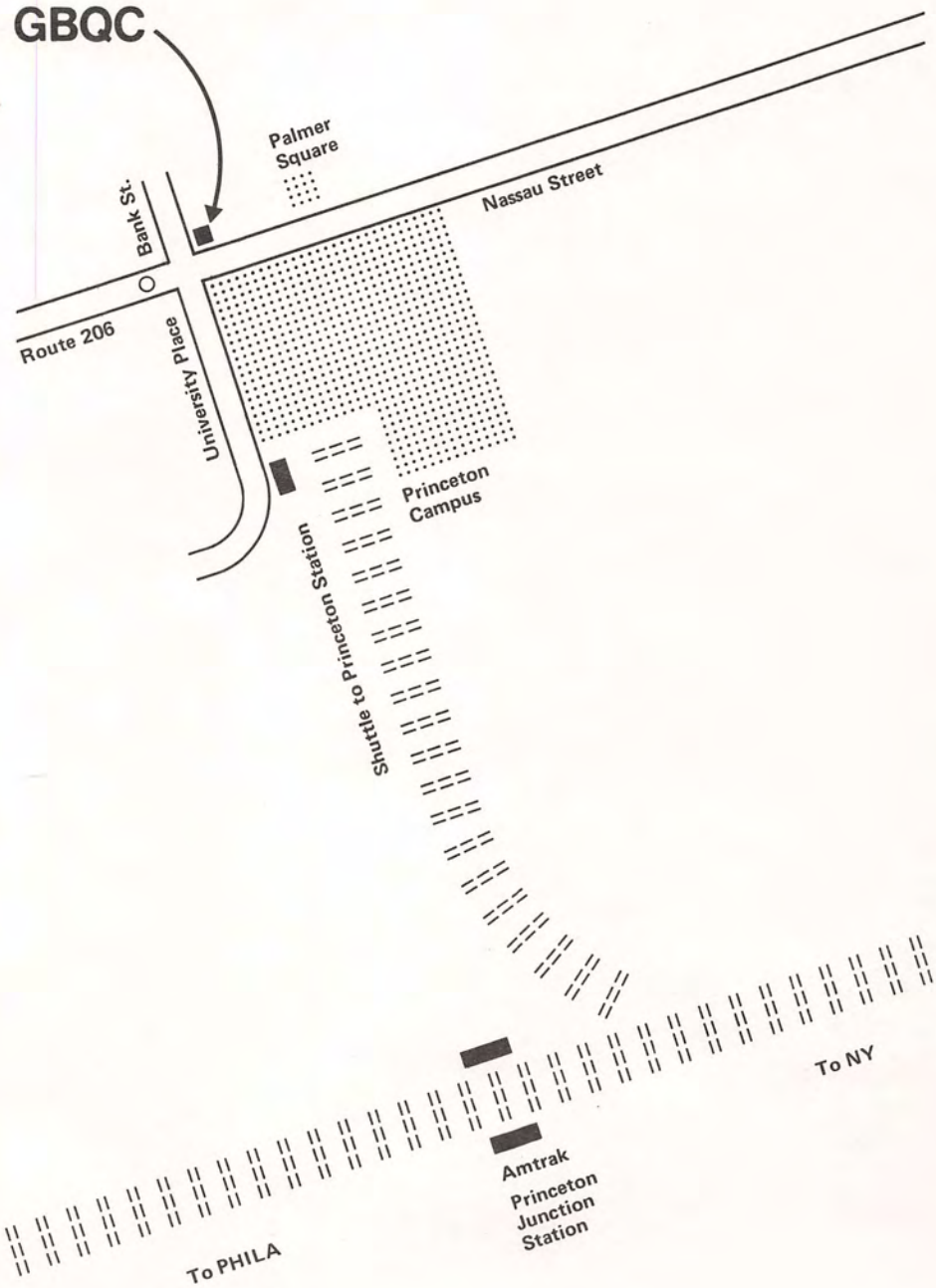
	People	Projects	Awards	Events
1980	**87 people** Jim Snyder, Ed Ford, Steve Yarnall named associates of firm	Franklin Plaza Hotel, Smith-Kline Office Building, Phila., PA; Harleysville Life Insurance Company Office Building, Harleysville, PA; General Motors Office Building, Chesterbrook, PA; Soc. Sec. Adm. Computer Center, Woodlawn, MD.	U.S. Navy Recreation Facility Earle, N.J. First Honor Award, AIA/NAFAC.	Finalist, Pioneer Courthouse Square Competition, Portland, OR.
1981				
1982				
1983				
1984				

1.2 Office Locations

2410 Pine Street
Philadelphia, Pennsylvania 19103
(215) 732-4000



12 Nassau Street
Princeton, New Jersey 08540
(609) 924-7770



1.3 Personnel

Geddes Brecher Qualls Cunningham is a professional corporation comprised of multi-disciplinary professional activities and appropriate supporting activities. Services offered are in architecture, structural engineering, planning, interior design, graphic design and architectural research.

1.3.1 Professional Staff Groups

Architecture comprises principals-in-charge, project managers, project designers, project architects, design architects, production architects and assistant production architects. These project functions are described in greater detail in Section 1.5.1.

Structural engineering comprises a chief structural engineer, design engineers and production engineers.

Interior design comprises a chief interior designer and a full staff of interior designers.

Graphic design comprises an art director and a full staff of graphic designers.

1.3.2 Principals and Associates

Principals are the owners of the firm. They establish policy for the firm through the Board of Directors. In addition, the principals take active project roles and work closely with employees on all projects.

Associates are persons who have been specially recognized for their contributions and have managerial responsibilities beyond those of the rest of the staff.

1.3.3 Management

General manager directs the day-to-day operations of the firm's professional and administrative activities. Responsibilities also include overall financial management and participation in new business development as well as administration of business management functions.

1.3.3 Management, continued

Operations/personnel manager directs project staffing, hiring of personnel and staff performance evaluations. Responsibilities also include directing physical plan improvements.

Director of new business development oversees all of the firm's activities related to securing new commissions.

Marketing coordinator assists the director of new business development, maintains stock of public relations materials, photographic records of the firm's work, writes and edits copy in the development of proposals and arranges in-house programs.

Writer/editor prepares direct and indirect promotional material including letters, press releases, project descriptions and other text materials describing the firm's projects.

1.3.4 Administrative Services

Office manager/bookkeeper oversees the work of the administrative staff, the daily activities of the firm's accounts, time records and payroll.

Assistant bookkeeper assists the office manager/bookkeeper.

Computer services operator operates the computer terminal in the production of specifications and time reports.

Secretaries produce and maintain records of all typewritten materials; receive, distribute and send all mail.

Reprographics clerk, by contract with Xerox Corporation, produces and maintains all reproduction activities as well as maintaining and dispensing all drafting supplies.

Receptionist/telephone operator coordinates all communication activities in the firm, including the telephone switchboard, personnel location, mail logging and reception of guests.

Clerk messenger assists the reprographics clerk, acts as messenger and conducts light building maintenance.

File clerk files correspondence, files new information and refiles all returning library materials; also assists receptionist.

1.5 Organization of Architectural Projects

There are nine categories of project activities, some or all of which may be employed on any project:

1. Pre-design
2. Site analysis
3. Schematic design
4. Design development
5. Construction documents
6. Bidding or negotiation
7. Construction contract administration
8. Post construction
9. Additional

See Section 4.2 for detailed listing of services.

1.5.1 Project Functions

See Section 4.6 for typical assignment scenarios.

(PIC) **Principal-in-charge:** A principal of the firm who carries ultimate responsibility for the project.

(PM) **Project manager:** Minimum of ten years professional experience. Responsibilities include primary liaison with the client and consultants, overall organization of the project, staff advisories, scheduling, staffing budget, construction cost budget, program and design intentions.

(PD) **Project designer:** Minimum of ten years professional experience. Responsibilities include establishment of project design concept, materials and techniques of construction, synthesis of code requirements and synthesis of all building sub-systems.

(PA) **Project architect:** Minimum of five years professional experience. Responsibilities include organization of design development and construction documents and administration of the construction contract.

(D1) **Design architect:** Minimum of five years professional experience. Responsibilities include assisting the project designer and organizing the schematic design documents and other presentation materials.

(D2) **Assistant design architect:** Fewer than five years professional experience. Assists the design architect and project designer.

1.5.1 Project Functions, continued

(P1) **Production architect:** Minimum of five years professional experience. Responsibilities include assisting the project architect through design development and administration of the contract.

(P2) **Assistant production architect:** Fewer than five years professional experience. Assists the production architect and the project architect.

2.0 Employment Practices

2.1 Equal Opportunity

Policy

Geddes Brecher Qualls Cunningham is an equal opportunity employer. All decisions on recruitment, hiring, training, promotion, transfer and termination will be made without regard to race, color, creed, sex, religion, national origin or age.

Equal Opportunity Officer

GBQC has designated an Equal Opportunity Officer. Responsibilities include personnel management comprising personnel interviews, hiring/firing, personnel review and evaluation, and wage and salary administration. The Officer is empowered to act for GBQC in all matters regarding equal opportunity employment and is personally committed to its principles.

Employment

GBQC will promote its policy of equal opportunity employment throughout the firm through personal contact, staff meetings and written memoranda to ensure familiarity with that policy.

In advertising for employment, GBQC will note its policy of equal opportunity employment and advertising will be done so as to achieve broad circulation. Special effort will be made to advertise in publications reaching minority groups and women so as to broaden the employment pool from which GBQC draws.

Recruitment interviews will be conducted on a personal basis and employees will be encouraged to refer minority group and women applicants for employment.

Annual personnel reviews to evaluate salaries and progress will be conducted so as to adjust any inequities that may exist and insure implementation of EEO policy.

Other

GBQC will actively participate in and contribute to minority programs in the profession, both locally and nationally, so as to encourage the

2.1 Equal Opportunity, continued

development of qualified minority and women professionals. GBQC's employees now serve as 1) trustees of the Huckel Fund, a minority scholarship program administered by the Philadelphia Chapter AIA; 2) a member of the AIA Committee on Personnel Practices, whose subcommittee on Women in Architecture is currently developing criteria for equal opportunity employment for women; and 3) trustee of the Philadelphia Architects' Charitable Trust.

2.2 Working Hours

For professional and technical staff, the normal working day is 8 hours. These employees are expected to work 8 hours per day beginning no later than 9:00 am. The regular work week is five full days (40 hours).

For secretarial and clerical employees, the regular hours are from 9:00 am to 5:30 pm with one hour for lunch. The standard work week is five days (37.5 hours).

2.3 Overtime

Clerical and administrative personnel paid on an hourly basis shall be paid at the rate of time-and-one-half for authorized overtime hours in excess of 40 hours per week.

For professional salaried personnel, a bonus shall be paid for hours in excess of 40 per week calculated on the basis of 1.0 x salary rate. This will occur only when authorized in advance by the project manager.

2.4 Time Records

Time records are the basic documents for billing clients, payroll records, cost control, employee's pay and the firm's historical data base. Each employee is expected to record time expended on a daily basis on the time sheet provided for that purpose. This information is coded for direct input into our computerized management information system and care should be taken to insure accuracy.

2.5 Pay Periods

GBQC operates on a semi-monthly pay period ending on the 15th and last day of each calendar month. Under State and Federal law, money will be withheld from your paycheck for Federal and State Income Tax, Social Security Tax, and Philadelphia Wage Tax. Any additional taxes will be levied as legislation occurs. The amount withheld is in conformance with the law and may be reviewed with the management at any time.

2.6 Trial Period

The first 3 months of employment shall be considered a trial period and either the firm or employee may terminate employment without further obligation.

2.7 Termination

For persons employed between one and eight years, ten working days notice or ten days severance pay in lieu of notice will be given an employee laid off for lack of work or discharge for other than disciplinary reasons. Employees with more than eight years service will be given ten working days notice plus ten days severance pay. For persons employed less than one year, five days notice or severance pay in lieu thereof will be given upon termination. In addition, all terminated staff members receive compensation for accrued vacation if the term of employment has been for more than six months. If an employee is discharged for cause, the employee will forfeit all accrued benefits and be paid only for time actually worked.

Severance pay may be granted for voluntary withdrawal at the discretion of the management. The firm expects an employee leaving the firm voluntarily to give a minimum of ten working days notice.

2.8 Leaves of Absence

Leaves of absence for appropriate reasons (including maternity) shall be granted at the discretion of the General Manager. Benefits will continue during leaves up to 90 days and may be continued beyond that at the individual's cost. Vacation and sick leave benefits do not accrue during

2.8 Leaves of Absence, continued

periods of leave and staff members are not entitled to payment for holidays which occur during a leave period. Please make leave requests at least four weeks in advance.

GBQC recognizes the responsibilities of its citizens for military service and will grant leaves for that purpose, reimbursing the difference in pay for periods up to two weeks per year.

2.9 Outside Practice

Recognizing that our collective abilities are a direct function of our individual contributions, the firm expects employees who engage in architectural work outside the firm to insure that such activities will not compromise their own or the firm's efforts and to notify the General Manager of their plans in advance.

We expect that our staff will be interested in the firm's future and will be alert to opportunities for the firm outside their normal responsibilities.

2.10 Williams Steiger Act

GBQC complies with the Williams Steiger Occupational Safety and Health Act of 1970. The Act requires that each employer furnish his employees a place of employment free from recognized hazards that might cause serious injury or death; and the Act requires that employers comply with the specific safety and health standards issued by the Department of Labor.

2.11 Promotions

It is the firm's objective to provide a climate favorable to individual growth. As new job openings occur, first consideration will be given to employees to determine if opportunities for promotion exist.

Promotions are based on merit of performance as determined by creativity, technical ability, efficiency, compatibility with other staff and dedication.

2.12 Teaching

GBQC encourages staff members to contribute to the profession and the firm by accepting outside teaching assignments when appropriate, at the discretion of the principals. Recognizing that the time and energy expended in teaching have a direct effect on the activities of the firm, individuals desiring to teach should discuss the situation with the General Manager and establish a mutually agreeable schedule and salary adjustment.

2.13 Honoraria

GBQC encourages employees to become not only fully qualified professionals but nationally recognized ones, as well. In this regard, employees are encouraged to participate in local, regional and national conferences, address organizations, contribute papers and articles to publications and become otherwise recognized. We expect that such recognition will bring distinction to both the individual and the firm, and, since GBQC will be contributing salary and expenses, it is expected that any honoraria received be turned over to the firm.

2.14 Wage and Salary Policy

GBQC makes every attempt to maintain wage and salary levels in conformance with current conditions. We will endeavor to recognize, by means of merited increased compensation, the growth, effort, performance and contribution of individual employees. This will be accomplished by regularly scheduled merit wage and salary reviews which will be conducted as part of a comprehensive employee performance and progress review in September of each year. At the same time, the firm will endeavor to recognize adjustments in wages and salaries which may be justified by cost of living increases.

2.15 Confidentiality

All members of the firm should recognize the nature of privileged information and the confidences placed in us by our clients. These confidences must be carefully guarded. Information about projects or potential projects for the press, contractors, construction reporting agencies, other professionals or the public should not be released without

2.15 Confidentiality, continued

the proper authorization.

Information to be released must be authorized by the client and approved by either the appropriate project manager or the General Manager.

3.0 Employment Benefits

3.1 Profit Sharing and Pension Plan

GBQC maintains an IRS-approved pension plan to which contributions are required and an IRS-approved profit sharing plan to which contributions are discretionary. All employees who have been employed for the entire fiscal year are automatically eligible for participation in both plans. Summary plan descriptions describing the plans in greater detail are available from the general manager.

GBQC's fiscal year begins on 1 October and ends on 30 September of the following calendar year. At the end of the fiscal year, a general accounting of the year's business is undertaken and profit or loss is determined. It is GBQC's policy to assign a portion of net profits for distribution to the staff as determined by subjective analysis of our current financial status, analysis of prospective business and recognition of the size and contribution of the staff. After the required contribution to the GBQC pension plan, profits are usually allocated to both direct payment (bonus) and to the GBQC profit sharing plan. Bonuses are allocated on the basis of tenure, responsibility, and contribution to the firm's success.

3.2 Insurance

GBQC has contracted for the following types of insurance coverage for its employees:
Major medical and life insurance
Travel accident insurance
Disability income insurance

Major Medical and Life Insurance

All permanent employees may join the firm's comprehensive medical insurance program. Currently underwritten by the General American Life Insurance Company, the plan provides reimbursement of reasonable and customary hospitalization and professional medical expenses after a modest deductible. The plan also provides life insurance and accidental death and dismemberment coverage.

Travel Accident Insurance

This insurance provides a substantial benefit in the unlikely event of

accidental death while traveling for the firm.

Disability Income Protection

This is provided by GBQC for all employees through the Mutual Benefit Life Insurance Company. It provides 75% of an employee's salary.

Employees are enrolled in these insurance programs three months after their date of employment. GBQC will pay all of the employee's premiums. The employee's dependents may be covered for major medical and/or life insurance at the employee's option and expense.

3.3 Vacations

GBQC recognizes the benefit and need for regular periods of relaxation for all staff members. Employees are encouraged to plan regular vacations and, to emphasize this, GBQC will not compensate employees for vacation time not taken except in cases of termination or special conditions as determined by the general manager.

Annual vacation is accrued at the rate of 10 days per year, but no vacation is permitted until an individual completes six months service. Vacation accrues on the basis of 15 days per year in the fiscal year after 5 years of service and 20 days per year in the fiscal year after 8 years.

(Accruals are at the rate of 5/6 day per month after the first six months up to five years, 5/4 day per month up to eight years, and 5/3 day per month thereafter. Vacations are annualized to concide with the firm's fiscal year which begins on 1 October.)

Vacation does not accumulate for more than one year and, at the end of the fiscal year, any excess unused vacation is forfeited, except by special arrangement with the general manager. Accumulated vacation is paid at termination providing termination is for reasons other than discharge for cause.

Vacations may be taken at any time after the first six months of service, but should be scheduled and coordinated in advance with the general manager.

3.4 Holidays

GBQC observes seven paid holidays per year: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas and one floater, usually the day after Thanksgiving. Holidays falling on Saturday will be observed on Friday and those falling on Sunday will be observed on Monday. Leave for observation of religious holidays will be granted upon notification to the general manager.

3.5 Sick Leave

GBQC grants leave for bona fide illness on the basis of 8 days per year, accumulated at the rate of 2/3 day per month after the first six months of service. Unused sick leave may be accrued as insurance against major illness.

Staff members should try to schedule appointments for doctors and dentists so that they cause the least disruption to the normal work schedule. Reasonable time for such appointments should be charged to sick leave.

3.6 Jury Duty

GBQC recognizes the need for employees to fulfill civic responsibilities and will grant leave for jury duty, reimbursing employees the difference between remuneration received and normal office wages.

3.7 Personal Time (Absent with Pay)

GBQC recognizes the need for occasional time off for personal reasons, with the approval of the general manager.

3.8 Professional Licensing Examination

GBQC encourages all staff members to become fully-qualified professionals and will grant one leave with pay for the purpose of attending licensing examinations to all staff members who have completed six months employment.

3.9 Professional Activities

GBQC is concerned with the welfare of our profession and supports the American Institute of Architects and related professional organizations. We encourage members of the firm to join and actively participate and will grant leave for professional activities at the discretion of the general manager. For associates, GBQC will pay membership dues.

3.10 Civic Activities

GBQC recognizes the need for personal commitment regarding participation in organized political and civic activities. The firm will consider granting leave for such activities and requests should be made of the general manager.

3.11 Voting

GBQC encourages all employees to vote and, where voting cannot be accomplished before or after the normal working day, will grant sufficient time off to do so.

3.12 Continuing Education

GBQC recognizes the additional benefit derived from continuing education and training. We encourage attendance at seminars and workshops and will consider contributing to their costs. Please make requests to the general manager well in advance.

0050.00	Vacation
0051.00	Holiday
0052.00	Sick
0053.00	Absent w/ pay
0054.00	Absent w/o pay
0055.00	Termination expense
0056.00	Work generation
0057.01	Publications
0057.02	Research writing
0058.00	Prof activities
0058.01	Teaching
0058.02	Continuing ed
0059.00	Service terminated job
0060.00	Overhead
0060.01	Management
0060.02	Accounting
0060.03	Secretarial
0060.04	Computing
0060.05	Committees
0060.06	Relocate/Phil off

5001.00	**Miscellaneous**
8107.00	**Alabama Power Co.**
8018.00	**Allstate**
	American Red Cross
7825.00	General
7825.01	Field Inspection
7825.02	Telephone LInk
7825.03	Bridge
7825.04	Lobby Redesign
7825.05	Tenant Improvement
7925.00	**Athos Steel**
	Baltimore
7518.00	Charles Center
7518.01	Design Panel
7928.00	**Center City Com Tun**
7936.00	**Chambersburg Hosp**
	Chesapeake Center
7717.00	General
7717.01	Garage
	Chestnut East
7817.01	Office Building
7817.02	Optional
7817.05	CA Services
8101.00	**Colonial Penn Group**
8111.00	**Dock St. Hotel**
7828.00	**Dntn Gov Ctr, Miami**
8026.00	**Eagleville Hospital**
	Einstein
8001.00	Zoning Documentation
8001.01	Ambulatory Care Ctr
8001.02	Parking Garage
8001.03	Renovations/Northern
8001.04	Renovations/Daroff
8001.05	Graphics
8001.06	Constr Admin
8001.07	Demo/Util Reloc
8001.08	City & State Reviews
8001.09	Site Devel/Northern
8001.10	Site Devel/Daroff
8001.11	Specifications
	Interim Moves/North
8103.00	In-patient Psychiatry
8103.01	BMA
8103.02	Medical Associates
8103.03	Camac St Paving
8103.04	Morgue
8103.05	Nuclear Med
8103.06	Accounting
8103.07	Nor Div Admin
8103.08	Elkins Parking
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7716.04	Levin Bldg, DD/CD/CA
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	Police Admin Bldg
7906.00	Roofing
7906.01	Additional Services
8014.00	**Posel Offices**
8028.00	**Princeton Comm Hsg**
7519.00	**PSU Library**
	Radnor Building 4
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7822.04	Rooftop Boiler
7822.05	Loading Dock
7913.00	**Radnor Building 5**
8011.00	**Radnor Building 6**
7931.00	**Rentex Brooklyn**
7908.00	**Rentex Laundry**
8020.00	**Roberts Residence**
8112.00	**Safeguard Industries**
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5145.00	**SSA Woodlawn Com Ct**
8104.00	**State Museum Bldg**
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7939.00	Labs
8024.00	Student Center
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7901.00	**Union Trust**
7937.00	**Walnut St Garage**
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4.1 Profit Sharing and Pension Plans

Summary Plan Description for Participants of Geddes Brecher Qualls Cunningham Profit Sharing Plan

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Section 1 Plan Information

Name of Plan	Geddes Brecher Qualls Cunningham Profit Sharing Plan
Name and Address of Employer	Geddes Brecher Qualls Cunningham 2410 Pine Street Philadelphia, PA 19103
Plan Effective Date	October 1, 1972
Plan Year	The Plan Year commences October 1st and ends September 30th
Plan Anniversary	September 30th
Employer Identification Number	23-1882991
Plan Number	The Company has assigned Number 501 to the Plan

Section 2 Type of Plan

This Plan is a Profit Sharing Plan. A Profit Sharing Plan is a Plan that permits Plan Participants to receive a share of the Company's profits as the profits are defined in the Plan. The contribution by the Company each year is determined by the Board of Directors prior to the end of each year. The contribution will be allocated among the Plan Participants based upon rate of compensation.

Section 3 Administration of the Plan

The Company will be responsible for the administration of the Plan. The Administrator will perform such duties as are required by the Employee Retirement Income Security Act of 1974 (ERISA) and the Plan. These duties include seeing that the Plan operates in an orderly, uniform manner and does not discriminate in favor of officers of the Company, stockholders and highly compensated employees.

The Administrator will notify employees when they are eligible to participate in the Plan (see Section 7 of this Summary Plan Description) and also when a Participant can begin to receive benefits. The Administrator will also have the right to make rules and decisions concerning the interpretation of the Plan.

The Administrator is also the agent for purpose of receiving service of Legal process. Such service of legal process may be served at 2410 Pine Street, Philadelphia, PA 19103. The Administrator's telephone is 215/732-4000.

Section 4 **Plan Trustee**

The Plan's assets are handled and invested through a Trust. The Trustee is appointed by the Company to safeguard the assets of the Trust and invest them according to the Plan.

The Trustee is Central Penn National Bank, Five Penn Center Plaza, Philadelphia, Pennsylvania 19101.

Section 5 **Collective Bargaining Agreements**

There are no collective bargaining agreements to effect the Plan.

Section 6 **Plan Rights and Request for Information**

As a Participant in this Plan you are entitled to certain rights and protections under the Employee Retirement Income Security Act of 1974 (ERISA). ERISA provides that all Plan Participants shall be entitled to:

a. Examine, without charge, at the Plan Administrator's Office, all Plan documents, including insurance contracts and copies of all documents filed by the Plan with the U.S. Department of Labor, such as detailed annual reports and Plan descriptions.

b. Obtain copies of all Plan documents and other Plan information upon written request to the Plan Administrator. The Administrator may make a reasonable charge for the copies.

c. Receive a summary of the Plan's annual financial report. The Plan Administrator is required by law to furnish each Participant with a copy of this summary annual report.

d. Obtain a statement telling you whether you have a right to receive a pension at Normal Retirement Age (age 65) and if so, what your benefits would be at Normal Retirement Age if you stop working under the Plan now. If you do not have a right to a pension, the statement will tell you how many more years you have to work to get a right to a pension. This statement must be requested in writing and is not required to be given more than once a year. The Plan must provide the statement free of charge.

In addition to creating rights for Plan Participants, ERISA imposes duties upon the people who are responsible for the operation of the employee benefit plan. The people who operate your plan, called "fiduciaries" of the Plan, have a duty to do so prudently and in the interest of you and other Plan Participants and Beneficiaries. No one, including your employer, or any other person, may fire you or otherwise discriminate against you in any way to prevent you from obtaining a pension benefit or exercising your rights under ERISA. If your claim for a pension benefit is denied in whole or in part you must receive a written explanation of the reason for the denial. You have the right to have the Plan review and reconsider your claim.

Under ERISA, there are steps you can take to enforce the above rights. For instance, if you request materials from the Plan and do not receive them within 30 days, you may file suit in a Federal Court. In such a case, the court may require the Plan Administrator to provide the materials and pay you up to $100 a day until you receive the materials, unless the materials were not sent because of reasons beyond the control of the Administrator. If you have a claim for benefits which is denied or ignored, in whole or in part, you may file suit in a State or Federal court. If it should happen that Plan fiduciaries misuse the Plan's money, or if you are discriminated against for asserting your rights, you may seek assistance from the U.S. Department of Labor, or you may file suit in a Federal court. The court will decide who should pay court costs and legal fees.

If you are successful, the court may order the person you have sued to pay these costs and fees. If you lose, the court may order you to pay these costs and fees, for example, if it finds your claim is frivolous.

If you have any questions about your Plan, you should contact the Plan Administrator. If you have any questions about this statement or about your rights under ERISA, you should contact the nearest Area Office of the U.S. Labor-Management Services Administration, Department of Labor.

Section 7 **When You Become a Plan Participant**

Each Employee of the Employer will become a Plan Participant and be eligible to have contributions set aside for his or her account in the plan on the first Plan Anniversary Date following employment commencement date.

Section 8 **Contributions**

Recognizing the value of your long-term continuous service, the Company pays the full cost of the Plan for you, depositing an amount, *when the company has a profit*, as defined in the Plan, as the Board of Directors determine at the end of each year.

Compensation shall mean your basic wages or salary and also shall include any overtime pay, bonuses and commissions.

Annual contributions for each Participant as outlined above will be made as of the Effective Date and as of subsequent Plan Anniversary Dates.

Section 9 **Break In Service**

A Break-In-Service will effect your right to have contributions set aside for you and vesting rights. A Break-In-Service will occur if you are not employed for 500 Hours of Service during a Plan Year. If a Break-In-Service occurs, you are no longer considered a Participant. For an explanation of your distribution rights in such a situation, see Sections 11 and 12 of this Summary Plan Description.

If you complete at least 500 Hours of Service, but less than 1,000 Hours of Service in any Plan Year, you remain a Participant in the Plan but will not receive a contribution for that year.

For purposes of vesting (see Section 12 of this Summary Plan Description) a Year of Service shall mean the completion of at least 1,000 Hours of Service within the Plan Year.

You will receive credit with Hours of Service, based upon a forty hour week or a pro-rata portion, during which you are on vacation, sick or disability leave, jury duty or temporary absence due to military duty as required by Federal law.

Section 10

Rehiring Provisions

Should you return to employment after a Break-In-Service, upon completion of 1,000 Hours of Service in the next Plan Year, the following rules shall apply:

a. If you did not have a vested interest in your account and your break of employment is longer than the time you worked for us before your break in employment, all previous Years of Service will be disregarded and you will be treated as a new employee.

b. If you had vested interest in your account or your break of employment is shorter than the time you worked for us before your break in employment then your previous Years of Service will be counted for vesting purposes.

Section 11

Termination Before Retirement (Other than Disability)

Upon your termination, your vested amount will be distributed as follows:

a. If the amount is less than $1,750 it will automatically be paid to you within a reasonable time after termination of employment.

b. If the amount is between $1,750 and $5,000, you may elect at the time of your termination, to have it paid to you within a reasonable time.

c. If the amount is more than $5,000, or if the amount is between $1,750 and $5,000, and you do not elect to have it paid to you with a reasonable time, the amount will be held for you in an interest bearing account until you reach Normal Retirement Date, become disabled, or elect, from the Plan Administrator, an early retirement date.

d. If you have a distribution as described above and are rehired before the end of the next Plan Year, you may, within two years of re-employment, repay the amount of distribution, or, if a separate account is being maintained, request immediate reinstatement.

Upon such repayment, you shall immediately become a Participant again and you shall be credited with all years of previous service, for purposes of vesting, and your account shall be credited with all of the amounts which were non-vested at the time of termination. No additional year of service for vesting and contributions shall be credited, however, until you have put in 1,000 Hours of Service in the twelve consecutive month period, starting with the first of the month immediately following the month in which your last Year of Service ended.

Section 12 **Vesting**

You will be credited with a non-forfeitable right to your account as follows:

a. 10% after the completion of one Year of Service, with 10% additional for each succeeding Year of Service. After ten Years of Service 100% vesting occurs, and from that time forward you are fully vested in your Plan Account, including all contributions made in the future on your behalf.

Section 13 **Voluntary Contributions**

While you are a Participant in the plan you may elect, by written direction to the Plan Administrator, to voluntarily contribute up to 10% of your annual compensation which will be held in your Plan Account. You may, at any time, withdraw up to 100% of the value of voluntary

contributions, including earnings, by a written notice to the Plan Administrator. Within 45 days of your request, payment will be made to you. If you make a withdrawal of your voluntary contributions until the Anniversary Date that next follows six months after your withdrawal. The value of your voluntary contributions are always 100% vested.

Section 14 **Normal Retirement**

The normal retirement date will be when you reach 65 years of age. At that time, regardless of Years of Service, you are 100% vested.

Section 15 **Retirement Benefit Options**

If you have been married for a full year prior to your retirement date, and *unless you elect otherwise*, by filing a written election with the Plan Administrator prior to retirement, you will receive an annuity contract providing a lifetime income to you and 50% of such lifetime income to your spouse upon your death if the spouse survives you. The amount of the lifetime income will depend on the amount of funds available at your retirement, your age and the age of your spouse. This is called a 50% Joint and Survivor Annuity.

You may elect in writing to the Plan Administrator prior to retirement to select any of the following options instead of the 50% Joint and Survivor Annuity:

a. A single lump sum of your account balance.

b. Monthly payments from a separate interest bearing account for a period of years not to exceed your life expectancy.

c. Another form of an annuity available from an insurance company.

d. United States Government Retirement Bonds.

Section 16 **Early Retirement**

The Plan provides for early retirement of any Participant who wishes at age 62 and fifteen Years of Service. The same type of retirement options

and election requirements apply as in normal retirement.

Section 17 **Disability Benefits**

If you should become totally disabled, as determined by a physician satisfactory to the Plan Administrator, you will receive the full balance of your Plan account, regardless of the vesting schedule.

Section 18 **Death Benefits**

Upon your death, your designated beneficiary will receive the full balance of your Plan Account, if immediately prior to your death you were participating in the Plan or were receiving monthly payments from an interest bearing account.

You should file a beneficiary designation with the Plan Administrator on a form provided by the Plan Administrator. You may change the beneficiary at any time.

If you fail to file a beneficiary form with the Plan Administrator, or if all or some of the designated beneficiaries have predeceased you, then the undisposed amounts payable shall be paid to your spouse or your estate.

Section 19 **Benefit Claim Procedure**

A claimant who wishes to claim benefits under the Plan should notify the Plan Administrator. The Plan Administrator will furnish such help, advice and forms that may be necessary to process the claim.

If a claim is denied, the Plan Administrator will notify the claimant giving the reason for denial, a description of any additional information the claimant can supply and an explanation of the review procedure.

A claimant may appeal a denial of claim within a reasonable time after receiving the denial. Any appeal should be made to the Plan Administrator.

This Plan is a Defined Contribution Plan and, as such, the benefits under the Plan are not insured under Title IV of ERISA.

Summary Plan Description for the Geddes Brecher Qualls Cunningham, P.C. Pension Plan and Trust Agreement

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This document is a brief and relatively non-technical description of a retirement plan in which you are a participant. The description reflects the plan provisions in effect on October 11, 1979. In the event of any material modifications to the plan, all active participants will receive a summary of such modifications within 210 days after the end of the plan year in which such modifications occur. If you have any questions about the information included in this description you may contact the plan administrator. If any provision of the plan is at variance with anything in this description, the provision of the plan shall be followed, unless it is contrary to the law. In all events the plan shall be administered to conform to the requirements of law.

1. Identifying Information

a. *Name.* The name of the plan is the Geddes Brecher Qualls Cunningham, P.C. Pension Plan and Trust Agreement.

b. *Employer.* The name of the employer maintaining the plan is Geddes Brecher Qualls Cunningham, P.C. The address of the employer is 2410 Pine Street, Philadelphia, PA 19103. The telephone number of the employer is 215/732-4000.

c. *Identification Numbers.* The federal employer identification number for the employer is 23-1882991. The plan number assigned by the employer is 002.

d. *Type of Plan.* The type of pension plan is a defined benefit pension plan.

e. *Plan Year.* The plan's fiscal year begins on October 1st and ends on September 30th.

f. *Type of Administration.* The plan is self administered.

g. *Plan Administrator.* The plan administrator is Geddes Brecher Qualls Cunningham, P.C.

h. *Service of Process.* Melvin Brecher is the agent of the plan for the purpose of service of legal process. Such process may be served at the address of the employer. Also, service of legal process may be made upon any of the plan trustees or upon the plan administrator. Service of legal process is a term used to describe a formal notification to a party that legal action has been instituted.

i. *Insurer.* No portion of the assets of the plan is presently invested in life insurance contracts.

j. *Plan Trustees.* The name, address, and business telephone number of the plan trustee is as follows:
Central Penn National Bank
5 Penn Center Plaza
Philadelphia, PA 19102
215/854-3900

2. Eligibility for Participation

An employee begins participation in the plan on the first day of the plan year in which their compensation exceeds the Wage Base Table set forth below, provided further that they had not attained the age of 60 on the date on which they commenced employment with the company.

Calendar Year of 65th Birthday	Wage Base Amount
1978	$ 8,400
1979-1980	9,000
1981	9,600
1982-1983	10,200
1984-1986	10,800
1987-1988	11,400
1989-1992	12,000
1993-1994	12,600
1995-1996	13,200
1997-1998	13,800
1999	14,400
2000-2001	15,000
2002-2003	15,600
2004-2005	16,200
2006-2007	16,800
2008-2012	17,400
2013 and later	17,700

3. Participant Contributions

A participant is not required or permitted to contribute to this plan.

4. Employer Contributions

The employer shall make such contributions as are actuarially determined to be necessary to pay for the benefits provided by the plan.

All contributions made by the employer shall be made to the trustees of the plan who shall invest the trust fund in accordance with the provisions of the plan and related trust agreement. Insurance contracts may be acquired by the trustees as plan investments.

5. Entitlement to Benefits

Normal Retirement. The plan provides that each participant in the plan who retires on the normal retirement date shall be entitled to receive a pension for a single life, payable monthly for the life of the participant.

The normal retirement date is the participant's 65th birthday. A participant may postpone his normal retirement date if the employer agrees.

The amount of the pension, if received in the form of a single life annuity, shall be equal to:

> 0% of his or her average annual compensation for his or her last ten consecutive years of participation plus 20% of such compensation in excess of his or her integration level.
>
> However, if any participant does not complete 15 years of service by the normal retirement date, the excess retirement benefit shall be reduced by 1/15 for each year of service less than 15. There is a minimum monthly pension of $20.00.
>
> The integration level is based on the year in which the participant attains age 65, as shown in the table below.

Calendar Year of 65th Birthday	Integration Level
1978	$ 8,400
1979-1980	9,000
1981	9,600
1982-1983	10,200
1984-1986	10,800
1987-1988	11,400
1989-1992	12,000
1993-1994	12,600
1995-1996	13,200
1997-1998	13,800
1999	14,400
2000-2001	15,000
2002-2003	15,600
2004-2005	16,200
2006-2007	16,800
2008-2012	17,400
2013 and later	17,700

Early Retirement. The Early Retirement Date occurs when a participant has reached his or her 62nd birthday and has had 15 years of service with the Company. The participant will have a 100% ownership right in his or her accrued benefit. However, the participant's benefit will

be less than a normal retirement benefit with the amount of reduction depending on 1) the number of years he or she participated in the Plan in comparison with the number of years he or she could have participated in the Plan had he or she continued participation until normal retirement age; and 2) the number of years by which the starting date of the benefit precedes the normal retirement date.

Late Retirement. In the case of late retirement, the participant's monthly benefit will be adjusted upward to take into account that he or she commences receiving benefits at a later age than normal.

Disability Retirement. A participant may retire as a result of total and permanent disability on the first day of the next plan year subsequent to the date the disability commenced at which time the participant has a 100% ownership right to his or her benefit. The Plan Administrator has the option to defer payment until the Normal Retirement Date. If payment is deferred until the Normal Retirement Date the amount of the benefit will be the Participant's Accrued Benefit as of his Disability Retirement Date. If payment commences prior to the Normal Retirement Date, the amount of the Participant's Accrued Benefit shall be reduced based upon the number of years by which the starting date of the benefit precedes the Normal Retirement Date.

Death Benefits. If no insurance is purchased or in force, in the event of the death of a Participant prior to retirement, his or her death benefits shall be the present value of his or her accrued benefit as of the next valuation date.

If the insurance is purchased, as may be done by the trustee, the death benefit if the Participant dies prior to his retirement shall be the greater of:

a. The proceeds of the life insurance or annuity contracts on his or her life; or
b. The sum of:
   i) the cash value of the life insurance of annuity contracts, and
   ii) the participant's actuarially determined share of the fund account, as of the next valuation date; or

c. The sum of:
   i) the proceeds of the life insurance or annuity contracts, and
   ii) the participant's actuarially determined share of the fund account as of the next valuation date.

However, in no event may the death benefit under subparagraph (c) exceed 100 times the participant's anticipated monthly retirement benefit.

If insurance is purchased in accordance with an alternative method in which less than 50% of the contributions are allocated to insurance, in the event of the death of a participant prior to retirement, the death benefits shall be the actuarially determined share of the fund account as of the next valuation date, and the proceeds of any insurance.

Instead of the death benefit provided above a participant who is eligible for early retirement may elect to have a survivor annuity paid to his or her spouse if he or she dies after the early retirement date while still employed by the employer. The right to make this election is required by law, but the actual value of the survivor annuity would be substantially less than the amount of the death benefit provided if the election is not made.

Termination Benefits. If your employment is terminated before you reach normal or early retirement age and termination is not due to total and permanent disability, death, or retirement, you will be entitled only to the following ownership percentage of your accrued benefit.

Vesting Schedule

Years of Service	Percent Vested
less than 4 years	0%
completion of 4 years	40%
completion of 5 years	45%
completion of 6 years	50%
completion of 7 years	60%
completion of 8 years	70%
completion of 9 years	80%
completion of 10 years	90%
completion of 11 years	100%

A year of service is a plan year in which an employee is credited with 1,000 hours of service or more. If an employee is not credited with at least 1,000 hours of service, he or she will not be given any credit for that year for purposes of vesting. If an employee is not credited with more than 500 hours of service in a plan year, he has incurred a break in service and will forfeit the unvested portion of his account.

In determining years of service for the above vesting schedule, all years of service with the employer are counted except:

Service prior to any one year break in service until the participant has served for one year after the break,

Pre-break service prior to any one year break if the Participant was not vested at that time and his period of absence equals or exceeds his pre-break service.

In the event that an employee terminates his employment before he is 100% vested and is paid his vested benefit and returns to work, he should consult with the employer to determine how long he or she has the right to repay the distribution made to him or her and what the consequences would be of such repayment. It would generally be to the advantage of a participant who has the right to repay a distribution to make such repayment, since it would result in restoring the non-vested portion of his or her accrued benefit. The amount to be repaid shall include a charge for interest on the amount distributed. The interest charge is set at 5% per year or whatever lesser amount may be required by regulation.

6. Time of Payment of Benefits

When a participant retires at normal retirement age, early retirement age, or as a result of total and permanent disability, the payment of benefits to which he or she is entitled shall commence not later than the first day of the second month after the normal retirement date, or the date the participant terminates his service with the Company, if later.

In the event of the death of a participant, the payment of benefits to which a participant's beneficiary is entitled shall commence not later than 60 days following the last day of the year in which death occurs.

If a participant terminates his employment for reasons other than those stated above and he or she has a vested benefit under the plan, he or she may request the Plan Administrator to pay him or her the vested benefit, although the Plan Administrator is not required to make payment before normal retirement date. If the vested benefit is not worth more than $1,750, the Plan Administrator may make payment of the amount due, even if this former employee does not request it. In any event, the Plan Administrator cannot defer paying benefits beyond the normal retirement date.

7. Method of Payment of Retirement Benefits

Even though the amount of retirement benefits to which a participant is entitled is calculated in terms of a pension for the life of the participant only, retirement benefits actually will be paid in the form of a joint and survivor annuity, unless the participant elects otherwise. A joint and survivor annuity is one which is payable for the life of the participant with payments being continued to the participant's spouse if the spouse outlives the participant. This joint and survivor annuity will be in an amount which is actuarially equivalent to the single life pension discussed above. The actual amount of the annuity, which will be less per month than a single life annuity will depend on the ages of the participant and his or her spouse.

If the participant has elected not to receive a joint and survivor annuity, the Plan Administrator shall then determine the method of payment of benefits, upon consultation with the participant, or his beneficiary. Such payment of benefits shall be in one, or a combination, of several alternative methods, including a lump sum payment, installmetn payments, or a single life annuity contract.

8. Claims Procedure

The burden of knowing when a benefit is due to you as a participant is not entirely yours since the Plan Administrator has some responsibility

to inform you of when you are due a benefit. So, the claims procedure is essentially in two parts:

> The Plan Administrator will notify you of benefits due upon termination of employment or termination of the plan. He will explain options available and he will answer your questions. Also, upon your death, he shall notify beneficiaries of values due to them.
>
> You or your beneficiary may submit a claim for benefits whenever you think benefits are due to you. If you feel that one of the actions that would cause notificaiton of a benefit has been overlooked by the Plan Administrator, you should file a claim.

Notification of benefits due or a claim filed by you must be in writing. If you file a claim with the Plan Administrator it should be clearly written and signed and it must state the reasons that you feel you are due a benefit from the plan. You should refer to such written material with regard to the plan as has been distributed to you. If you are notified that benefits are due to you, you should study carefully the options for payment of benefits. Within 90 days you shall receive a response from the Plan Administrator indicating approval or denial of the claim. If your claim is denied you will be given specific reasons why it is denied. If you feel that those reasons are invalid or if you feel that you can furnish additional information that will validate your claim, you have 60 days to appeal your claim to the Plan Administrator, in writing, furnishing all information pertinent to your claim. You will then be given a response within 60 days.

9. Amendment and Termination

The employer reserves the right to amend or even to terminate the plan. If the plan is terminated a participant will be fully vested regardless of the vesting schedule. However, it is possible that the plan's assets may not be sufficient to pay for all your vested accrued benefit at time of termination.

Benefits under this plan are insured by the Pension Benefit Buaranty Corporation (PBGC) if the plan terminates. Generally, the PBGC guarantees most vested normal age retirement benefits, early retirement

benefits, and certain disability and survivor's pensions. However, PBGC does not guarantee all types of benefits under covered plans, and the amount of benefit protection is subject to certain limitations. Only benefits vested prior to termination are guaranteed.

The PBGC guarantees vested benefits at the level in effect on the date of plan termination. However, if a plan has been in effect less than five years before it terminates, or if benefits have been increased within the five years before plan termination, the whole amount of the plan's vested benefits or the benefits increase may not be guaranteed. In addition, there is a ceiling on the amount of monthly benefit that PBGC guarantees, which is adjusted periodically.

For more information on the PBGC insurance protection and its limitations, ask your plan administrator or the PBGC. Inquiries to the PBGC should be addressed to the Office of Communications, PBGC, 2020 K Street, NW, Washington, DC 20006. The PBGC Office of Communications may also be reached by calling 202/254-4817.

10. Statement of Participant's Rights

As a participant in this plan you are entitled to certain rights and protection under the Employee Retirement Income Security Act of 1974 (ERISA). ERISA provides that all plan participants shall be entitled to:

Examine, without charge, at the plan administrator's office and at other specified locations, all plan documents, including insurance contracts, and copies of all documents filed by the plan with the U.S. Department of Labor, such as detailed annual reports and plan descriptions.

Obtain copies of all plan documents and other plan information upon written request to the plan administrator. The administrator may make a reasonable charge for the copies.

Receive a summary of the plan's annual financial report. The plan administrator is required by law to furnish each participant with a copy of this summary annual report.

Obtain a statement telling you whether you have a right to receive a pension at normal retirement age and if so, what your benefits would be at normal retirement age if you stop working under the plan now. If you do not have a right to a pension, the statement will tell you how many more years you have to work to get a right to a pension. This statement must be requested in writing and is not required to be given more than once a year. The plan must provide the statement free of charge.

In addition to creating rights for plan participants ERISA imposes duties upon the people who are responsible for the operation of the employee benefit plan. The people who operate your plan, called "fiduciaries" of the plan, have a duty to do so prudently and in the interest of you and other plan participants and beneficiaries. No one, including your employer, or any other person, may fire you or otherwise discriminate against you in any way to prevent you from obtaining a pension benefit or excercising your rights under ERISA. If your claim for a pension benefit is denied in whole or in part you must receive a written explanation of the reason for denial. You have the right to have the plan reviewed and your claim reconsidered. Under ERISA, there are steps you can take to enforce the above rights. For instance, if you request materials from the plan and do not receive them within 30 days, you may file suit in a federal court. In such a case, the court may require the plan administrator to provide the materials and pay you up to $100 a day until you receive the materials, unless the materials were not sent because of reasons beyond the control of the administrator. If you have a claim for benefits which it denied or ignored, in whole or in part, you may file suit in a state or federal court. If it should happen that plan fiduciaries misuse the plan's money, or if you are discriminated against for asserting your rights, you may seek assistance from the U.S. Department of Labor, or you may file suit in a federal court. The court will decide who should pay court costs and legal fees. If you are successful the court may order the person you have sued to pay these costs and fees. If you lose, the court may order you to pay these costs and fees, for example, if it finds your claim is frivolous. If you have any questions about your plan, you should contact the plan administrator. If you have any questions about this statement or about your rights under ERISA, you should contact the nearest Area Office of the U.S. Labor-Management Services Administration, Department of Labor.

4.2 List of Services

Department Code

A Architecture
S Structure
G Graphics

Project Phase

1 Pre-design
2 Site analysis
3 Schematic design
4 Design development
5 Construction documents
6 Bidding/negotiations
7 Construction administration
8 Post-construction
9 Supplemental

Task Number

.00 General
.01 Project administration
.02 Disciplines coordination/ document checking
.03 Agency consulting/ review/approval
.04 Owner-supplied data coordination
.05 Programming
.06 Space schematics/ flow diagram
.07 Existing facilities surveys
.08 Marketing studies
.09 Economic feasibility studies
.10 Project financing
.11
.12
.13 Site analysis & selection
.14 Site development planning
.15 Detailed site utilization studies
.16 On-site utility studies
.17 Off-site utility studies
.18 Environmental studies & reports
.19 Zoning processing assistance
.20
.21 Architectural design/ documentation
.22 Structural design/ documentation
.23 Mechanical design/ documentation
.24 Electrical design/ documentation
.25 Civil design/ documentation
.26 Landscape design/ documentation
.27 Interior design/ documentation
.28 Materials research/ specifications
.29 Project development scheduling
.30 Special bidding documents/scheduling
.31 Project budgeting
.32 Statement of probable construction cost
.33 Presentations
.34 Bidding materials
.35
.36 Addenda
.37 Analysis of alternatives/ substitutions
.38 Special bidding services
.39 Bid evaluation
.40 Construction contract agreements
.41 Office construction administration
.42 Construction field observation
.43 Project representation
.44 Inspection coordination
.45 Supplemental documents
.46 Quotation requests/ change orders
.47 Project schedule monitoring
.48 Construction cost accounting
.49 Project closeout
.50 Maintenance & operational programming
.51 Start-up assistance
.52 Record drawings
.53 Warranty review
.54 Post-construction evaluation
.55
.56
.57
.58
.59
.60
.61 Special studies
.62 Renderings
.63 Model construction
.64 Life cycle cost analysis
.65 Value analysis
.66 Quantity surveys
.67 Detailed construction cost estimates
.68 Energy studies
.69 Environmental monitoring
.70 Tenant-related services
.71 Graphic design
.72 Fine arts and crafts services
.73 Special furnishings design
.74 Non-building equipment selection
.75 Project promotion/ public relations
.76 Leasing brochures
.77 Expert witness
.78 Computer applications
.79 Materials & systems testing
.80 Demolition services
.81 Mock-up services
.82 Still photography
.83 Motion pictures & videotape
.84 Coordination with non-design professionals
.85 Special disciplines consultation
.86 Special building type consultation
.87
.88
.89
.90
.91
.92

4.3 Sample Time Sheet

Geddes Brecher Qualls Cunningham: Architects — Employee No.: 772 — Name: JOHN DOE — Period Ending: 31 DEC 79

Project No.: 7717.00

Date			Amount
16/DC/79	Travel	910	92.75
17/DC/79	Meals	911	41.80
/ /	Hotel	912	39.00
/ /	Other	960	3.85
	Project Total		$ 177.40

Project No.:

Date			Amount
/ /	Travel	910	.
/ /	Meals	911	.
/ /	Hotel	912	.
/ /	Other	960	.
	Project Total		$.

Project No.:

Date			Amount
/ /	Travel	910	.
/ /	Meals	911	.
/ /	Hotel	912	.
/ /	Other	960	.
	Project Total		$.

Submitted By: John Doe

Out-of-Pocket $ 9.10

Total Expenses $ 177.40

Project No.	Description	Code	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
771700	CHESAPEAKE CTR/ADMIN	A501		8	8	8									7.5			0.5	32
782203	RAD4 EQUIP ENCL/SCHEM	A321					8	8					8	8	0.5			7.5	40
5000	VACATION	A000									8								8
5100	HOLIDAY	A000										8							8
				8	8	8	8	8			8	8	8	8	8			8	88

1 Employee number

2 Name in full

3 Date as day, month, year

4 Commission numbers

5 Project name and task

6 Department code (See page 4.2a)

7 Project phase (See page 4.2a)

8 Task number (See page 4.2a)

9 Daily total hours

10 Project total hours

11 Check total

12 Half hours entered as decimal

13 Expenses as transferred from expense sheet (See page 4.4a)

14 Signature

4.4 Sample Expense Sheet

1

Geddes Brecher Qualls Cunningham: Architects

2410 Pine Street, Philadelphia, PA 19103
Telephone 215 / 732-4000

12 Nassau Street, Princeton, NJ 08540
Telephone 609 / 924-7770

Attach receipts for plane, train, rent-a-car, hotel, meals and entertainment.

Project No.: 7717.00
Project Title: CHESAPEAKE CTR

Date	Travel To	Plane	Train	Auto	Parking	Toll	Taxi	Meals	Hotel	Other	Description
17 DEC 79	PHL - BLTO		32.00		2.75			41.80 A			A ENTERTAINMENT
18 DEC 79	BLTO - PHL		32.00	23.50	1.50	1.00			39.00	3.85 B	B FILM
	Totals ▶		64.00	23.50	4.25	1.00		41.80	39.00	3.85	177.40 ▲ Total Expense

Project No.:
Project Title:

Date	Travel To	Plane	Train	Auto	Parking	Toll	Taxi	Meals	Hotel	Other	Description
	Totals ▶										▲ Total Expense

Project No.:
Project Title:

Date	Travel To	Plane	Train	Auto	Parking	Toll	Taxi	Meals	Hotel	Other	Description
	Totals ▶										▲ Total Expense

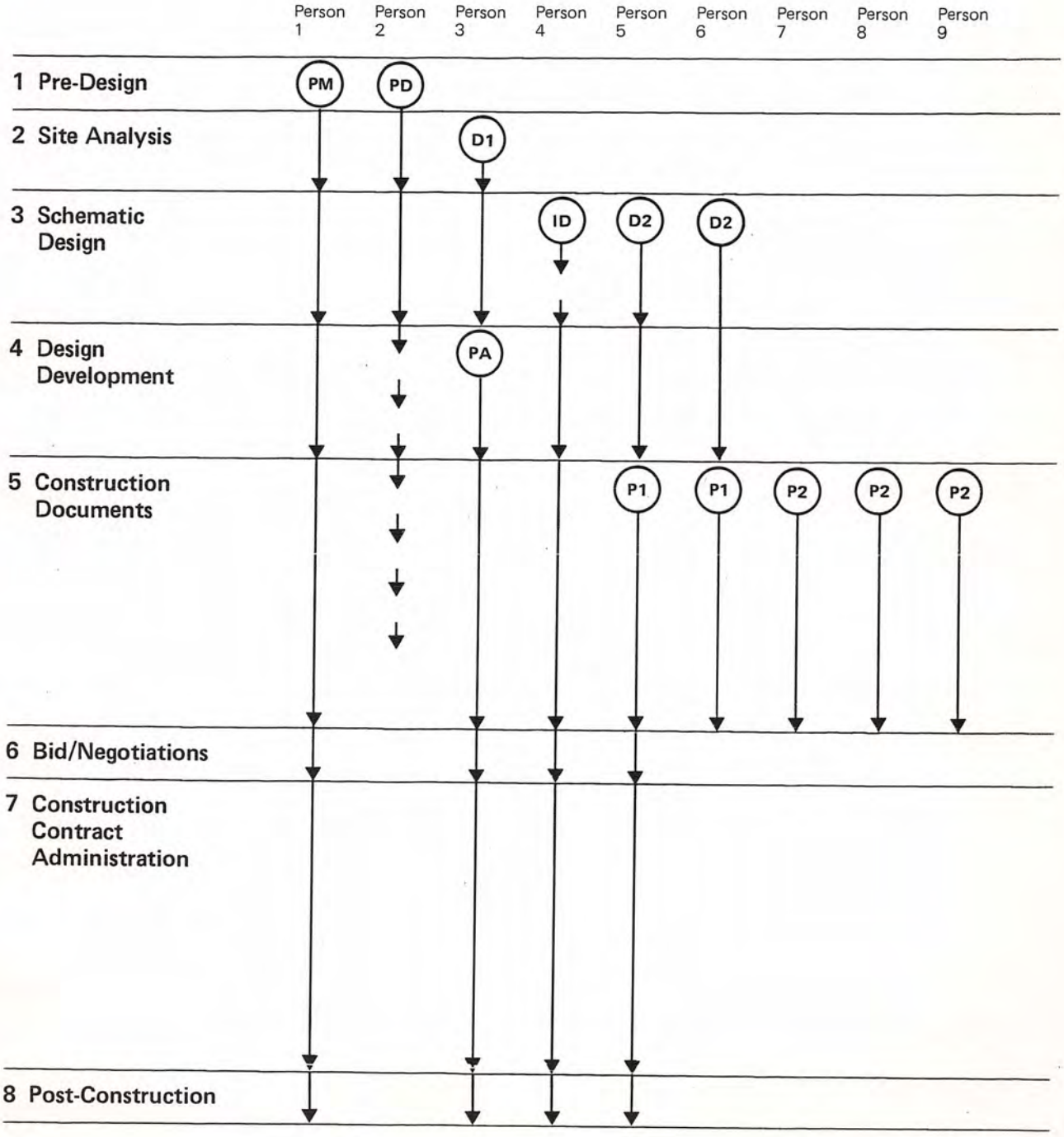
1 Circle cash expenditures

4.6 Typical Assignment Scenarios

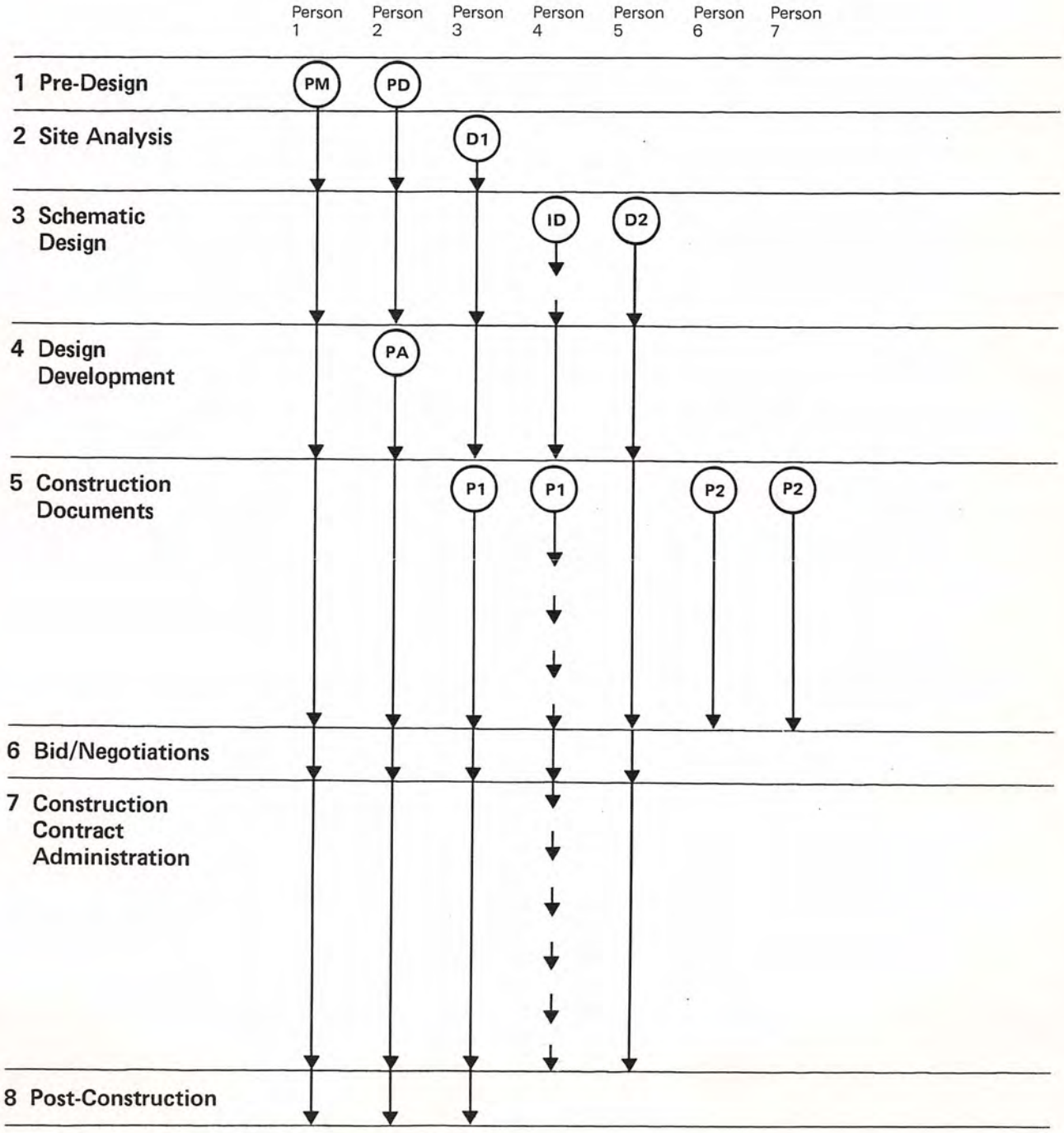
The scenarios depicted on the following pages are typical for a range of projects of various size and complexity. Obviously these examples are not the only models possible. They are simply intended to show a variety of function arrangements according to the definitions and qualifications listed in 1.5.1.

Multiple functions are assigned to an individual on the basis of the interests and capabilities of the individual, as well as the scheduling requirements of the entire office work load.

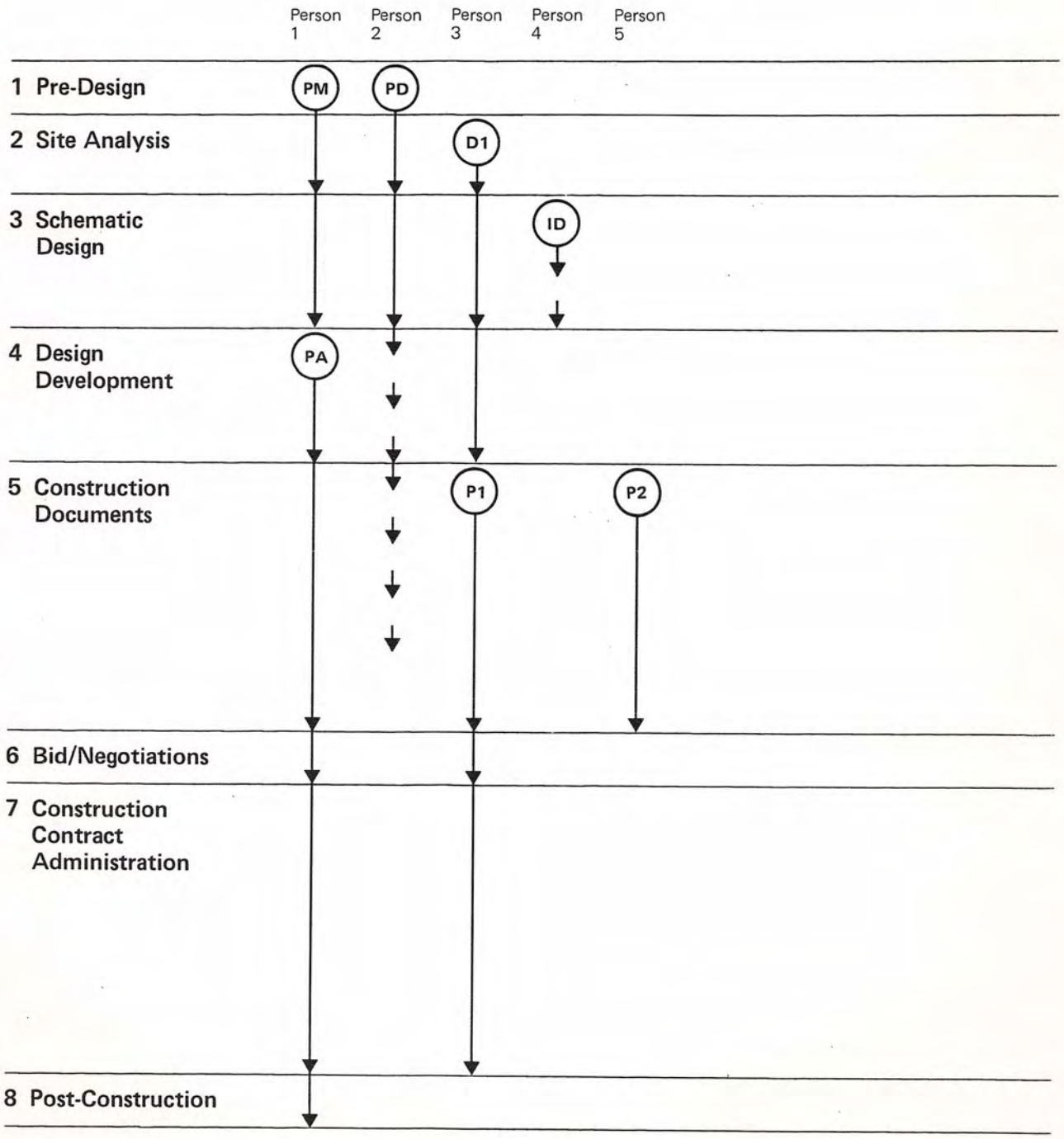
4.6.1 Example: Large Project



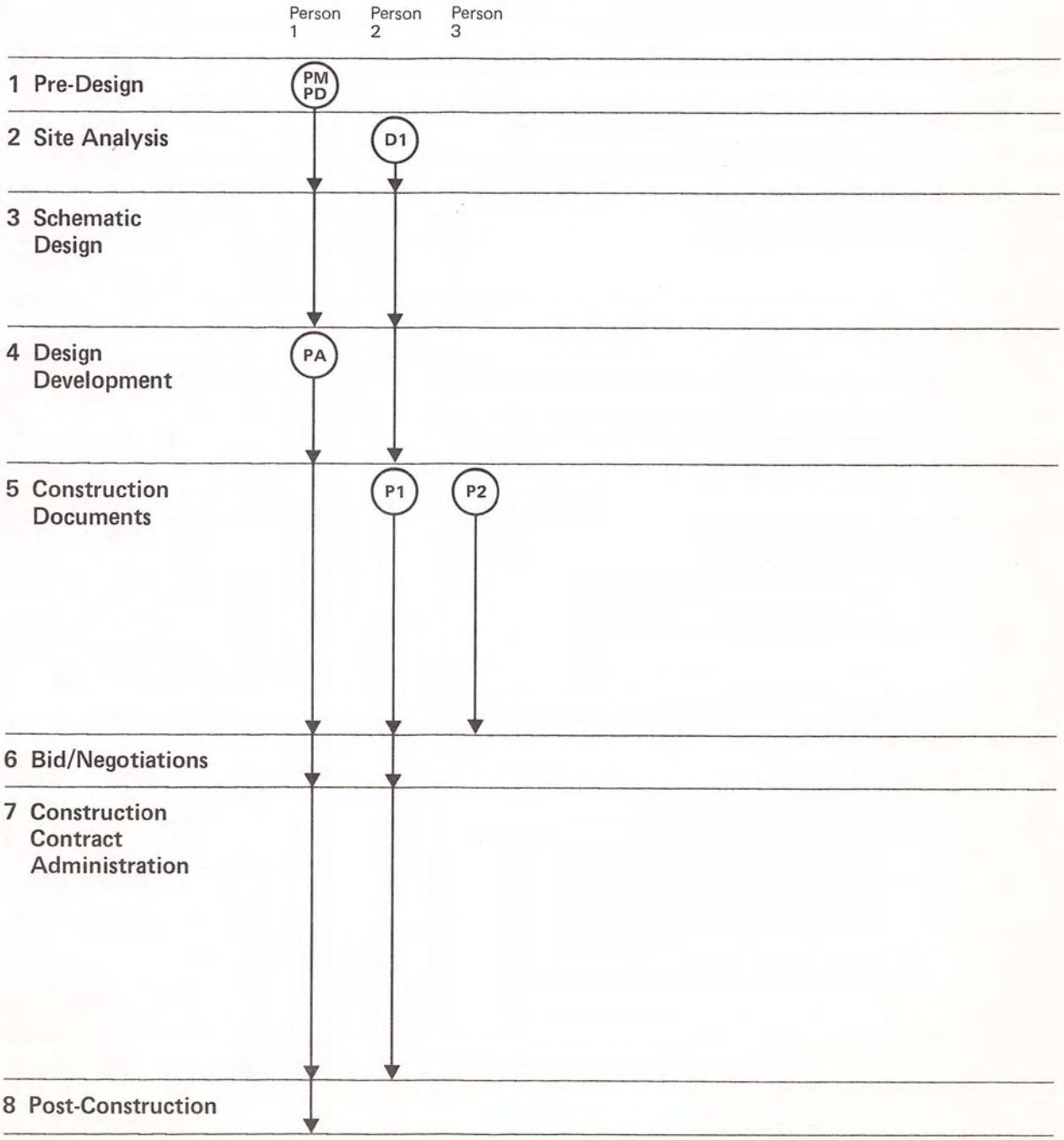
4.6.2 Example: Medium Project



4.6.3 Example: Small Project

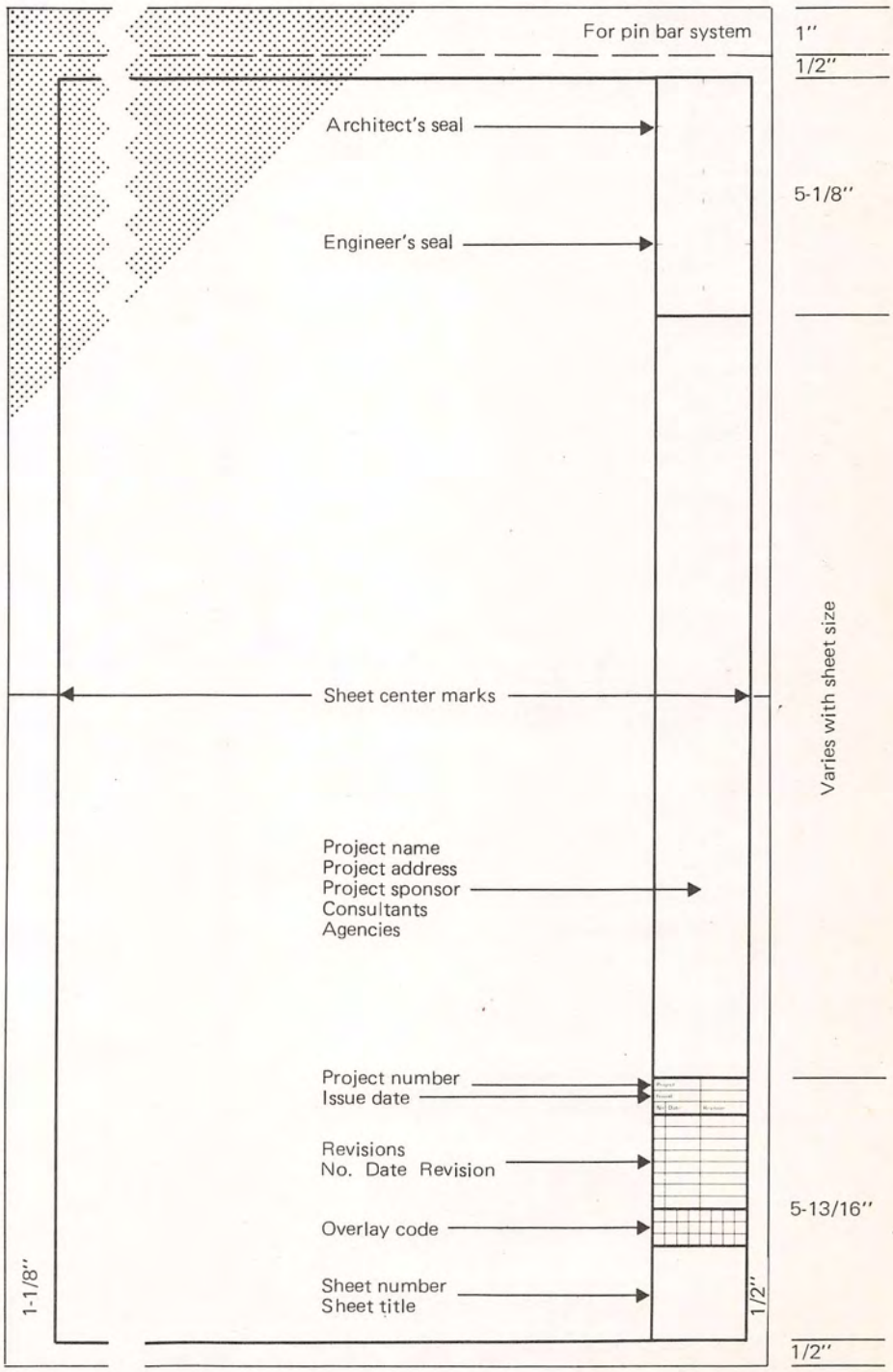


4.6.4 Example: Very Small Project

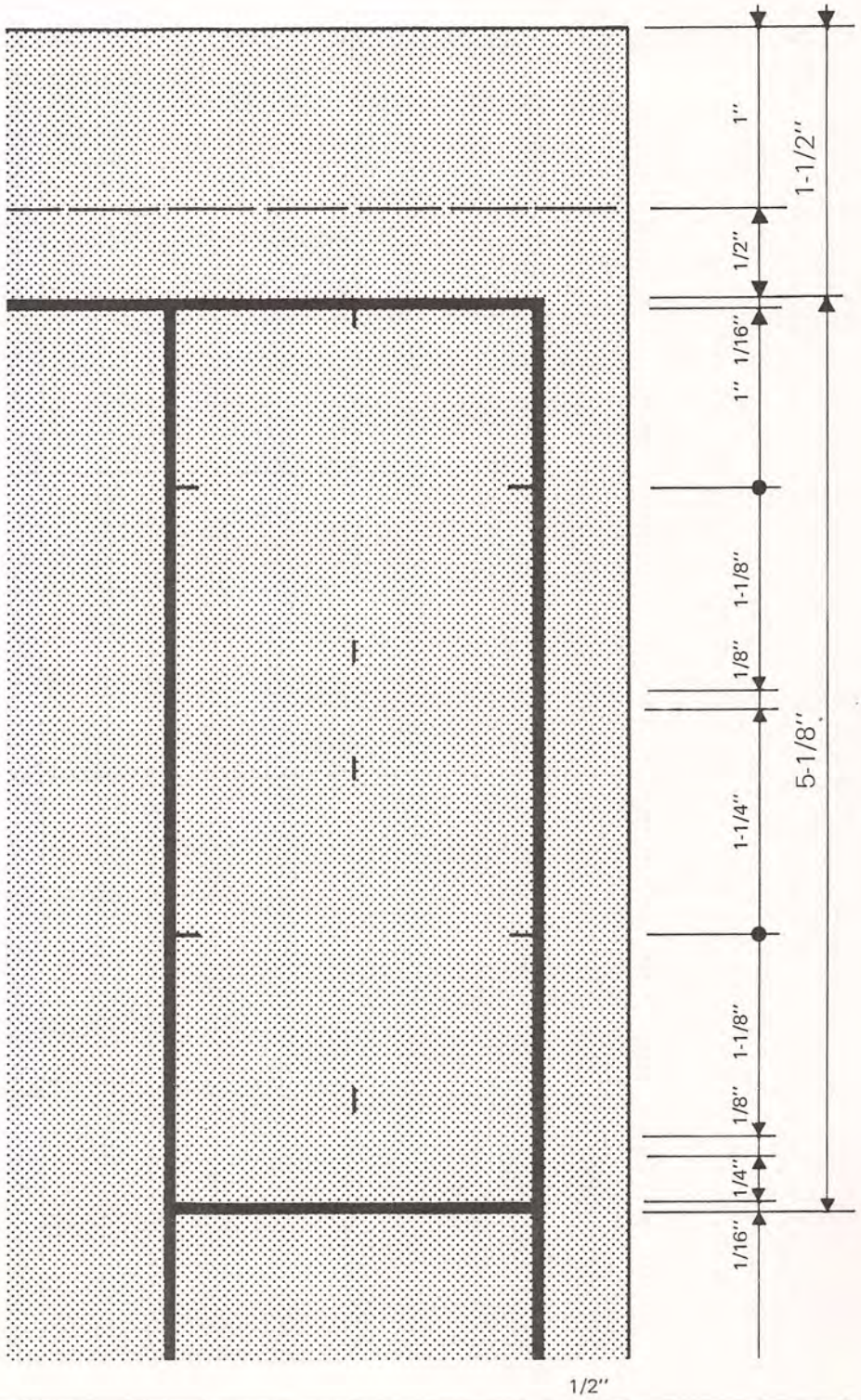


6.1 Sheet Design

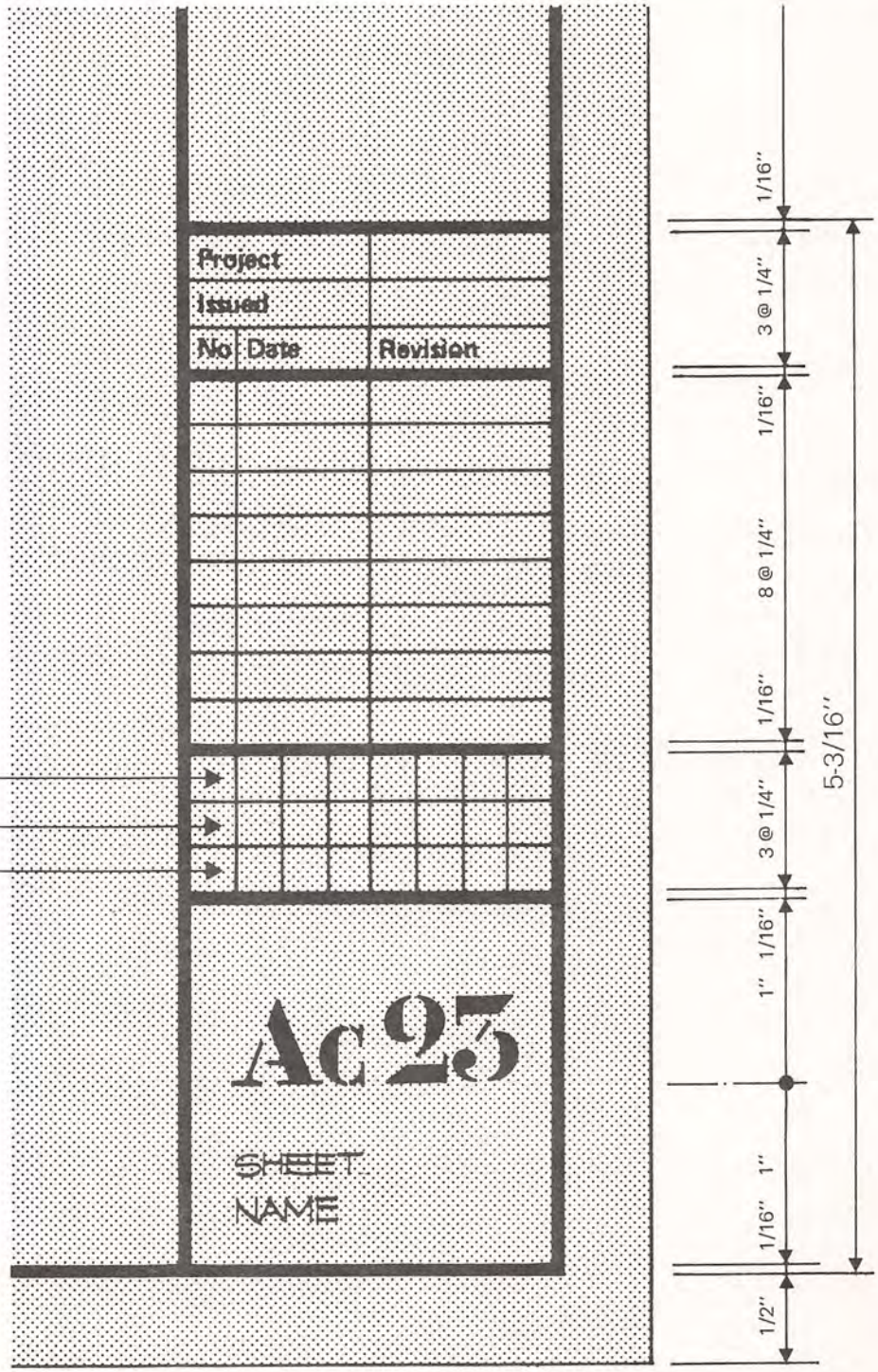
Title Block



Title Block, continued



Title Block, continued

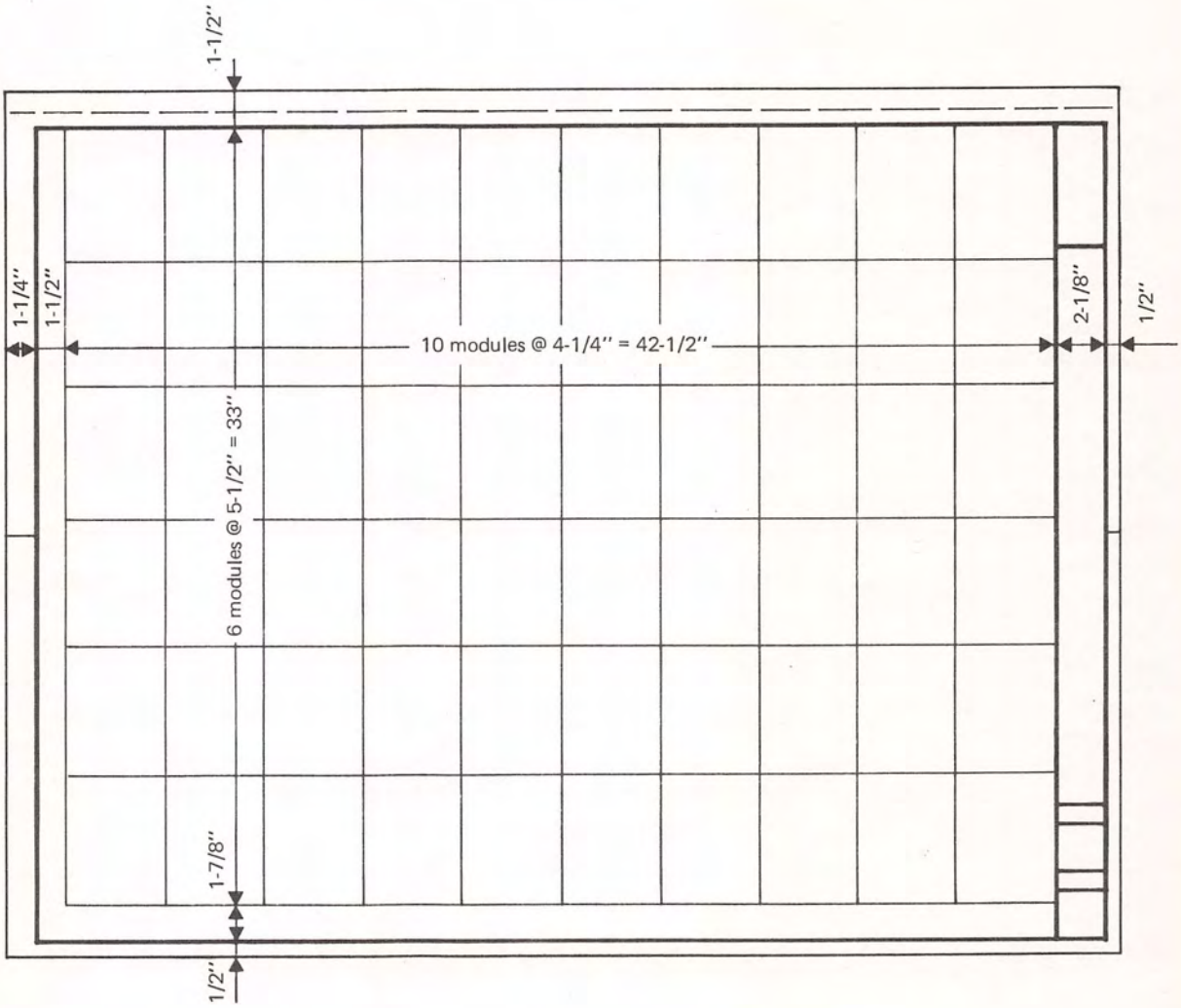


Sheet Layout

60 modules @
4-1/4" x 5-1/2"

Overlay size:
37" x 48"

Standard size:
36" x 48"

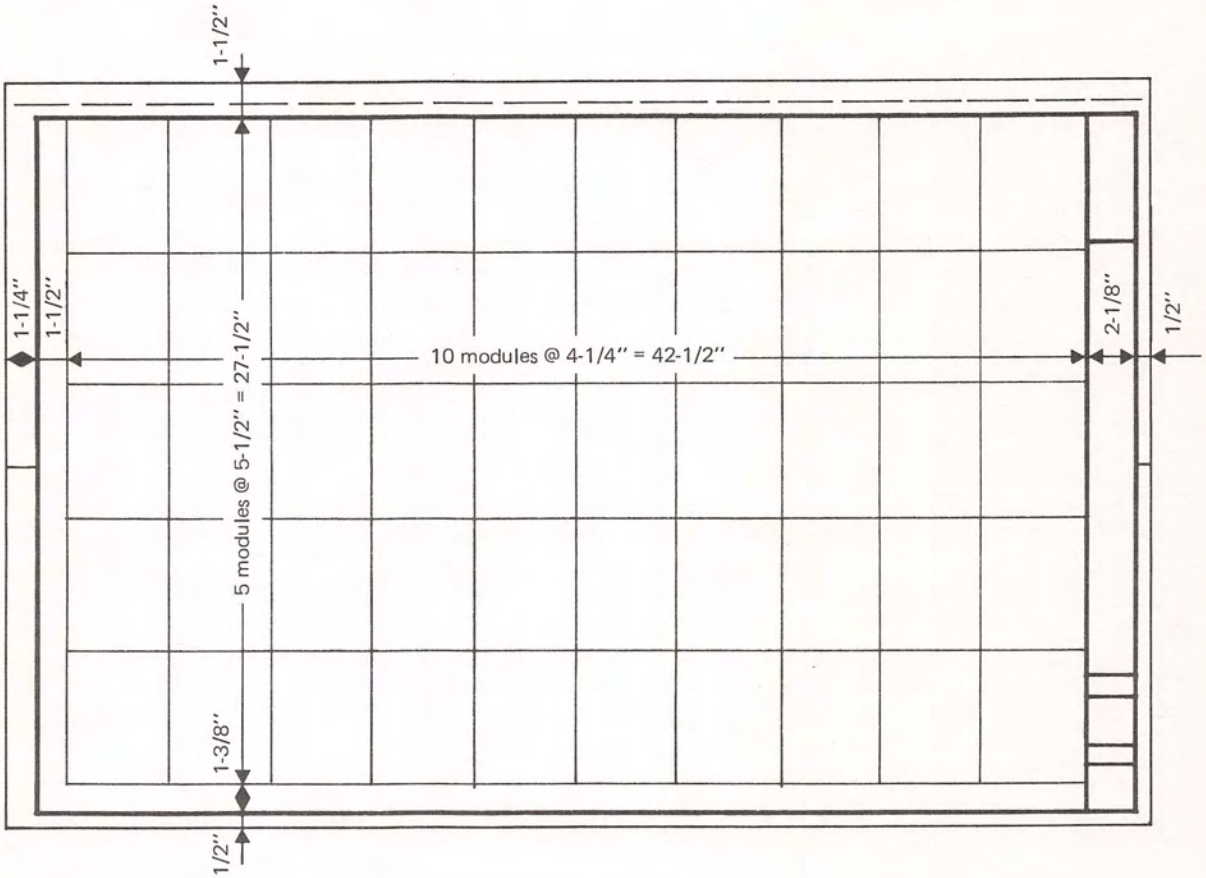


Sheet Layout, continued

50 modules @ 4-1/4" x 5-1/2"

Overlay size: 31" x 48"

Standard size: 30" x 48"

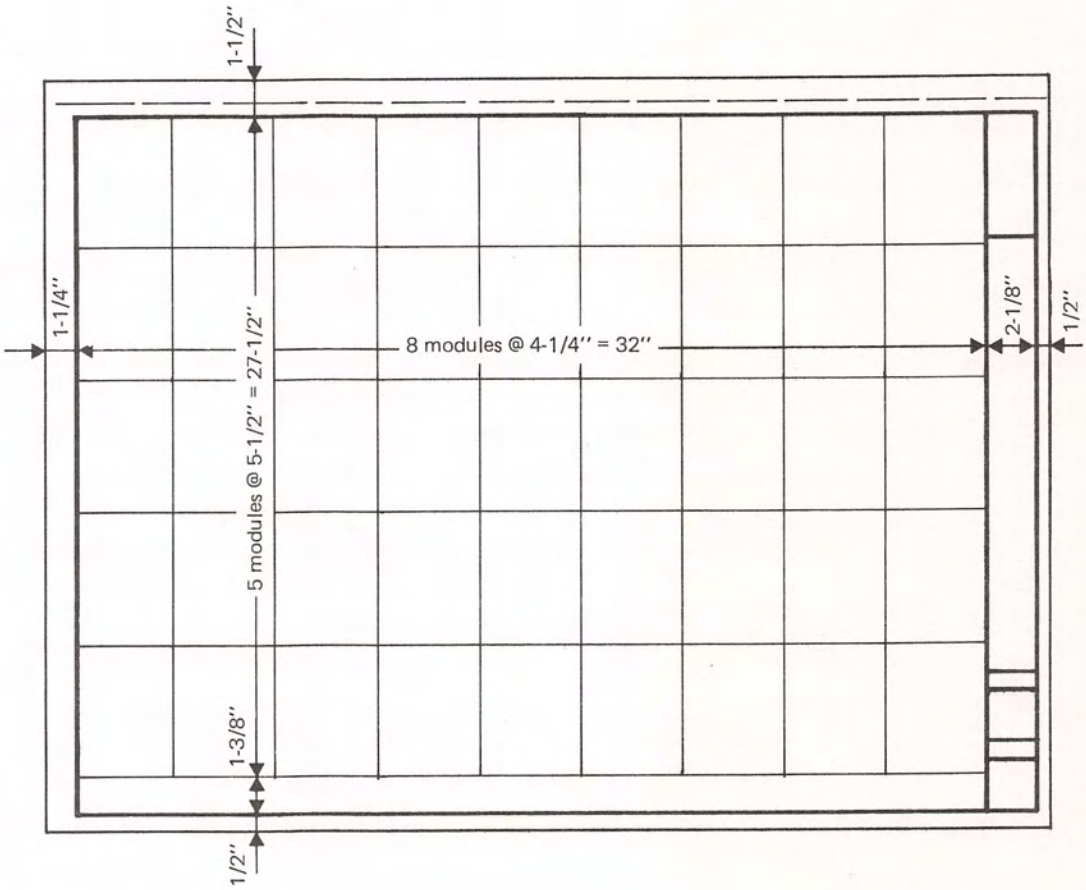


Sheet Layout, continued

40 modules @ 4-1/4'' x 5-1/2''

Overlay size: 31'' x 42''

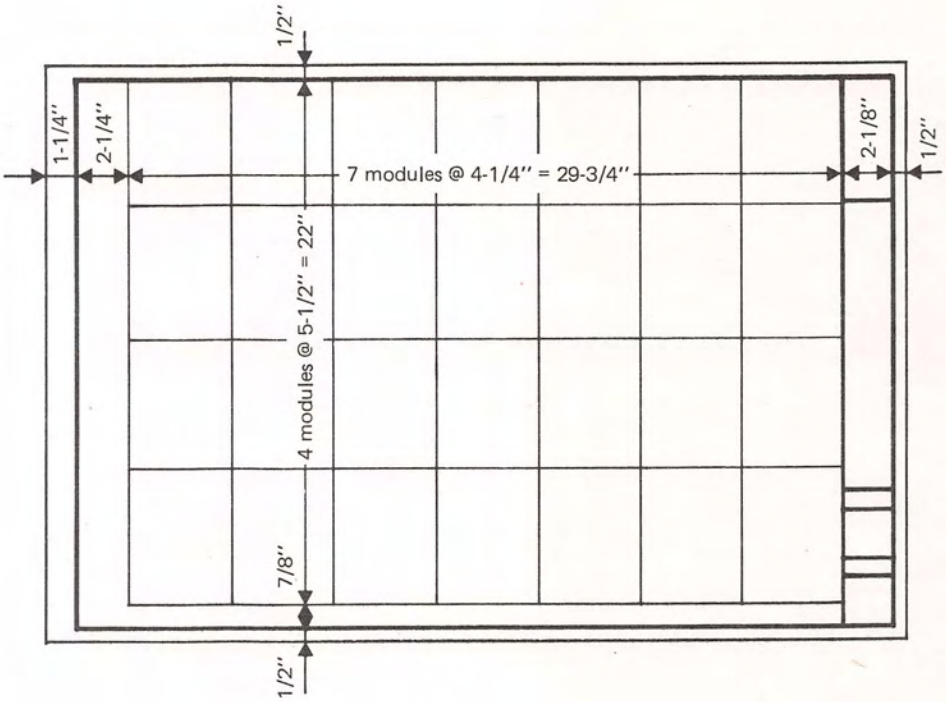
Standard size: 30'' x 42''



Sheet Layout, continued

28 modules @ 4-1/4" x 5-1/2"

Standard size: 24" x 36"



6.2 Drawing Numbering

Two alternative numbering systems are used: one for large projects and one for small projects.

Small Projects

This is the traditional sequential system.

Architectural Drawings

A1 Index, Symbols Abbreviations, Location Map
A2 Site Plan & Details
A3 Floor Plans
A4 Roof Plan
A5 Building Sections
A6 Exterior Elevations
A7 Exterior Details
A8 Window & Louver Schedule, Details
A9 Interior Elevations
A10 Ceiling Plan & Details
A11 Toilet Plans & Details
A12 Stairways
A13 Elevators
A14 Partition Schedule & Details; Hollow Metal Details
A15 Room Material Schedule; Door Schedules, Details
A16 Casework Schedule, Details

Structural Drawings

S1 Foundation Plan, Typical Details and General Notes
S2 Floor Framing Plans
S3 Wall Elevation and Slab Sections
S4 Wall Sections & Details
S5 Steel Stairs – Plans & Details
S6 Schedules

Plumbing Drawings

P1 Site Plan
P2 Single Line Diagram Supply and Waste
P3 Riser Diagram
P4 Schedules & Details
P5 Fire Protection System

Mechanical Drawings

M1 Mechanical Site Plan
M2 Floor Plans
M3 Roof Air Conditioning & Ventilating Units
M4 Mechanical Equipment Room Plan & Sections
M5 Miscellaneous Details

Electrical Drawings

E 1 Site Plan
E2 Single Line Diagram, Bus Riser Details
E3 Power Plans
E4 Lighting Plans
E5 Section & Details
E6 Elevations & Details
E7 Communication Plan

Large Projects

Drawing *Group Numbers* are assigned permitting additions of sheets during production without disrupting the numbering of the entire set.

Architectural

000 Index & Symbols
100 Plans
200 Elevations
300 Building Sections
400 Wall Sections, Exterior Details, Exterior Standard Details
500 Schedules
600 Stairs, Elevators, etc.
700 1/4" Plans, Interior Elevations
800 Interior Details & Interior Standard Details
900 Reflected Ceiling Plans

Structural

S000 General Notes, Abbreviations, Graphic Symbols
S100 1/8" Scale Foundation Plan, Framing Plans
S200 Elevations
S300 Building Framing Sections
S400 Footing & Framing Details
S500 Stair, Elevator & Escalator Structures
S600 Secondary Structures (Balconies, Canopies, etc.)
S700 Schedules & Details - Concrete
S800 Schedules & Details - Masonry
S900 Schedules & Details - Steel or Timber

Plumbing

P000 General Notes, Abbreviations, Graphic Symbols, Site Plan
P100 1/8" Scale Plans - Supply
P200 1/8" Scale Plans - Waste
P300 Riser Diagrams
P400 Emergency Protection Systems - Diagrams
P500 Piping Flow Diagrams
P600 Equipment Room Layout, Large Scale Drawings
P700 Schedules & Details
P800 Special Process Systems
P900 Controls

Mechanical

M000 General Notes, Abbreviation, Graphic Symbols, Site Plan
M100 1/8" Scale Floor Plans, Roof Plan
M200 Alternative Energy Systems Diagrams
M300 Riser Diagrams
M400 Emergency Protection Systems Diagrams
M500 Piping Flow Diagrams
M600 Equipment Room Layout, Large Scale Drawings
M700 Schedules & Details
M800 Material Handling Systems
M900 Controls

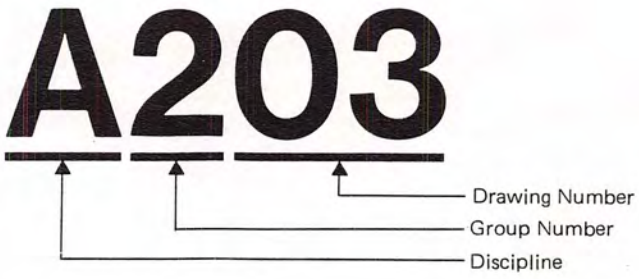
Electrical

E000 General Notes, Abbreviations, Graphic Symbols, Site Plan
E100 1/8" Scale Floor Plans - Lighting
E200 1/8" Scale Floor Plans - Power Distribution
E300 Riser Diagrams
E400 Emergency Protection Systems Diagrams
E500 Reserved
E600 Equipment Room Layout, Large Scale Drawings
E700 Fixture & Panel Schedules
E800 Special Process Systems
E900 Controls

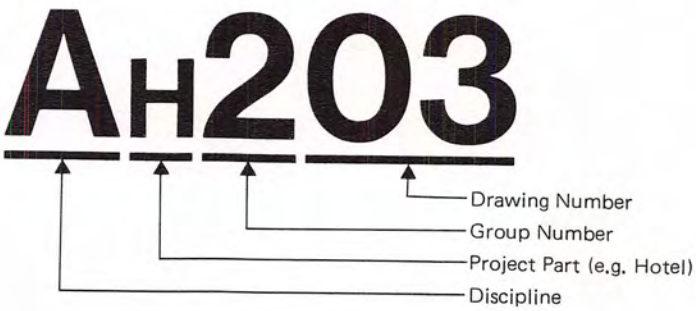
Sequence of Drawings:

C	Civil
L	Landscape
A	Architectural
K	Kitchen or Food Service
T	Transportation Conveying Systems
S	Structural
P	Plumbing
F	Fire Protection
M	Mechanical – HVAC
E	Electrical
I	Interior Design
G	Graphics

Single Project Example:



Multi-part Project Example:



6.3 Graphic Symbols

Graphic Organization

Reference:	Drawing title Building section Wall section Detail section Detail enlargement Exterior elevations Interior elevations	P7
Location and structure:	Column grid Structural components North arrow Datum elevation Match line Test boring Work point Lintel type	
Materials (optional):	Site Building Exterior finish	
Space designation:	Room name Room number	
Exterior components:	Windows Louvers Panels	
Space components:	Door number Door mark Hardware group Partition types Door opening	
Interior components:	Casework Specialties Equipment Furnishings Special construction	
Revisions:	Revison numbers	

Reference, Alternate A

Drawing title
Building section
Wall section
Detail section
Detail enlargement
Exterior elevations
Interior elevations

P7

Drawing title:
Do not label sheet number

4 TYPICAL DOOR JAMB
1½" = 1'-0"

Building section:
Label alphabetically

G
AH 57

Wall section:
Label numerically

7
AH 52

Detail section:
Label numerically

6
AH 71

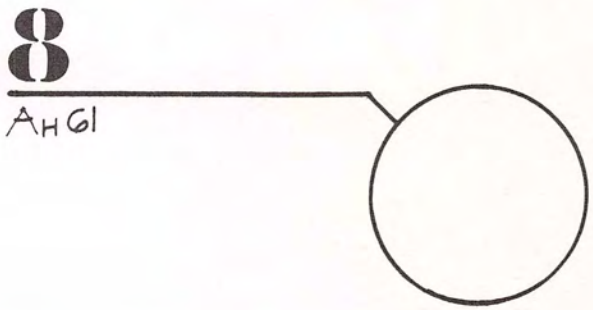
Detail enlargement

4
AH 62

Reference, Alternate A, continued

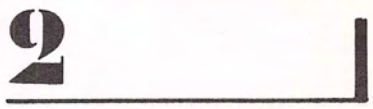
Detail enlargement:

All angles should be 30, 45 or 60 degrees



Detail taken and shown on same sheet:

Do not label sheet number



Exterior elevations:

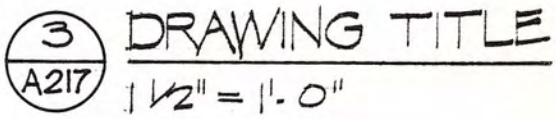
"N" for north elevation, etc.

Interior elevations:

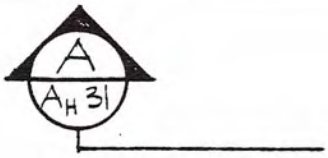
Sheet number in center box; elevations labeled alphabetically and clockwise

Reference, Alternate B

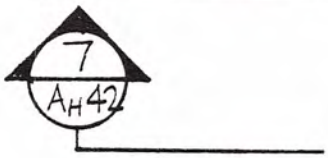
Drawing title



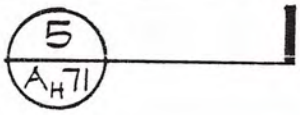
Building section:
Letter identification



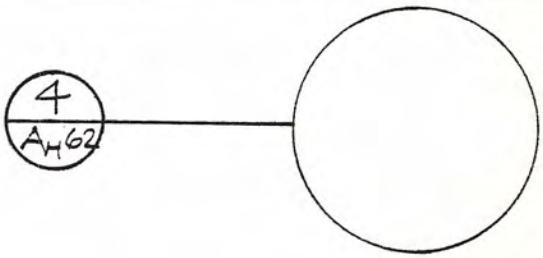
Wall section:
Number



Detail target, section

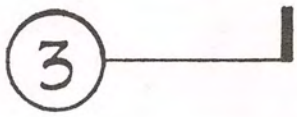


Detail target, enlargement



Reference, Alternate B, continued

Detail target, detail drawn on same sheet as detail cut



Exterior elevation:

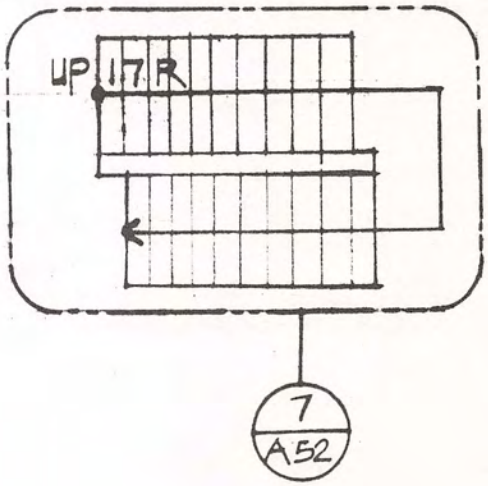
Use "N" for north elevation, etc.

Interior elevation

Stair direction and size indication

Detail enlargement:

Only location, overall size and general information occur at small scale; detail information occurs at enlargement



Location and Structure

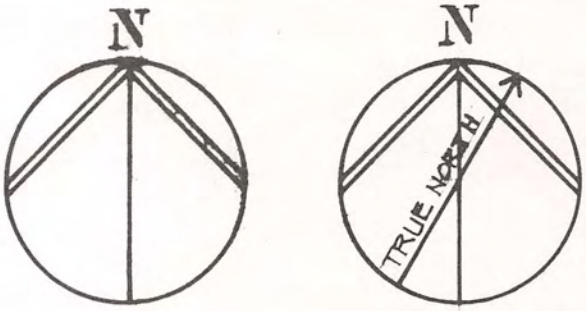
Column grid
Structural components
North arrow
Datum elevation
Match line
Test boring
Work point
Lintel type

Column lines:

1/2" diameter

Project and magnetic north:

Use only one indication if both are same

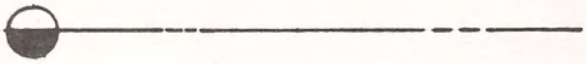


Datum elevation:

3/16" diameter for scales 1/4" and less; 1/4" diameter for scales 3/8" or larger

Match line:

1/4" diameter; shaded side indicates drawing side



Location and Structure, continued

Test boring (TB), work point (WP), control point (CP), datum point (DP):
1/4" diameter

Lintel type:
See schedule

Materials, (optional)

Site
Building
Exterior finish

Site materials:
See typical list

B

Building materials:
See typical list

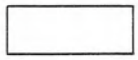
23

Finish type:
Typically concrete

CF3

Space Designation

Room name
Room number



Room name:

One word where possible; do not use "room"; it is implied

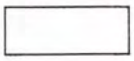
OFFICE
373B

Room number:

First number indicates level; second and third numbers indicate space; letter designation indicates space that is a part of or off another space

Space Designation

Room name
Room number
Room finish code
Color code

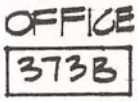


Room name:

One word where possible; do not use "room"; it is implied

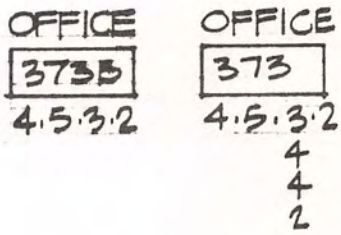
Room number:

First number indicates level; second and third numbers indicate space; letter designation indicates space that is a part of or off another space



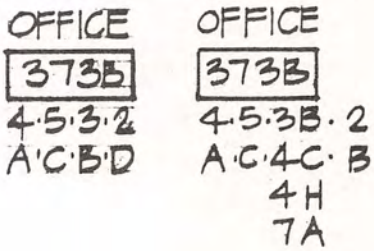
Finish schedule:

Number code for each finish of each surface in the following order from left to right: floor, base, wall, ceiling. Where two or more finishes occur in the same space, finish schedule numbers will appear one below the other beginning with the north wall and reading clockwise.



Color code:

Alphabetical code for each finish for each surface will occur directly below each finish code. Where two or more finishes occur in the same space, the color code will appear to the right of each finish.



Exterior Components

Windows
Louvers
Panels

Window type:
See schedule

Louver type:
See schedule

Panel type:
Precast, stone, insulated metal, special

Space Components

Door number
Door mark
Door opening
Hardware group
Partition types

Door number:

See schedule type 1

Door mark:

See schedule type 2

Door mark (number)/door opening (letter)
Hardware

Partition type:

See schedule

Interior Components

Casework
Specialties
Equipment
Furnishings
Special construction

Casework component:
See schedule

Specialties:
See schedule

Equipment:
See schedule

Furnishings:
See schedule

Special construction:
See schedule

Interior Components

Casework
Specialties
Equipment
Furnishings
Special construction

Casework component:
See schedule

Specialties:
See schedule

Equipment:
See schedule

Furnishings:
See schedule

Special construction:
See schedule

Revisions

Revision numbers

Revision cloud around revision:
3/8" triangle

Line Types

Primary outline, cut line, profiles

Secondary elevations, material outline

Grid layout, textures, lines on planes

Line of construction or material above, below or beyond

Keep small space between dashes

Center line, structural grid

Center line, floor elevations

Boundary or property lines

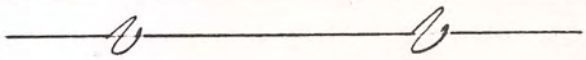
Match contract limit (PL, ML, CLL)

Line Types, continued

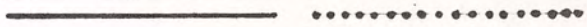
Easement or right of way lines

Utility lines

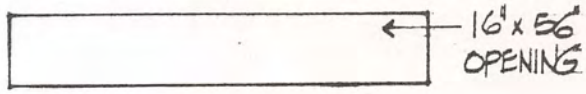
Break lines:
Unnecessary; leave open space between



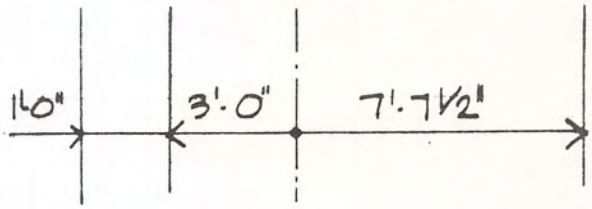
Solid line indicates new; dotted line indicates existing or removed



Dimension openings:
Do not "x" out; draw only that which exists

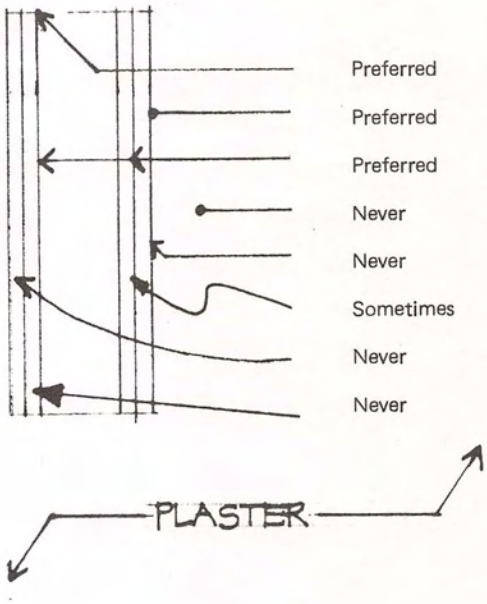


Dimension lines:
1/16" dot at column center lines; arrows to dimension limits; avoid two arrows pointing together



Line Types, continued

Arrows and arrowheads for notation



		Existing	New
Site	Tree or shrub		
	Existing tree or shrub to be removed		
	Contour	32	32
	Curb		
	Fence		
	Existing structure to be removed		
	Structure		
	New finish grade: Drawn at 45 degree angle Existing grade: Drawn horizontally		37.5' 34.0'

		Existing	New
Site, continued	Top of curb		T.C. 12.5'
	Top of wall		T.W. 13.7'
	Top of pavement		T.P. 12.8'
	High point		H.P. 11.7
	Low point		L.P. 10.67

		Existing	New
Utilities	Light and pole		
	Site light and type designation		C
	Parking meter	PM	PM
	Sign pole		
	Bench mark		
	Monument		
	Manhole		
	Clean out		
	Gas	G	G
	Electric	E	E
	Telephone	T	T
	Television	TV	TV

		Existing	New
Utilities, continued	Computer or communications	—— C ——	—— C ——
	Overhead wire	—— OW ——	—— OW ——
	Fire alarm	—— FA ——	—— FA ——
	Police alarm	—— PA ——	—— PA ——
	Water	—— W ——	—— W ——
	High temperature water	—— HTW ——	—— HTW ——
	Steam line	—— SL ——	—— SL ——
	Sanitary sewer	—— SS ——	—— SS ——
	Storm drain	—— SD ——	—— SD ——
	Combined sewer	—— CS ——	—— CS ——
	Foundation drain	—— FD ——	—— FD ——
	Roof drain	—— RD ——	—— RD ——

		Existing	New
Utilities, continued	Under drain	UD	UD
	Expansion loop		
	Size change	6" 8"	6" 8"
	Abandoned utility		
	Unconnected utility		
	Fire hydrant	FH	FH
	Catch basin	CB	CB
	Drain inlet	DI	DI
	Power pole	PP	PP
	Water box	WB	WB
	Sewer vent	SV	SV
	Gas valve	GV	GV

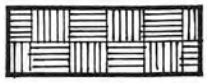
		Existing	New
Utilities, continued	Telephone booth		

6.4 Material Indications

Avoid use of material indications whenever possible. Note materials with words and arrows whenever practical.

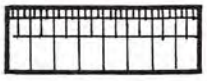
Where material indications are required, limit the extent of poché to those areas where materials commence or terminate.

Subsurface


Earth

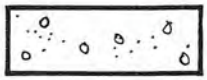
Sand fill

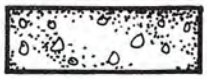
Porous fill


Asphaltic concrete

Concrete

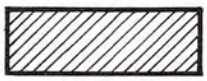
Structural concrete

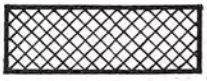

Lightweight concrete

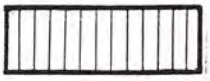

Cast stone precast concrete

Precast concrete with aggregate surface

Masonry


Brick

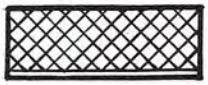

Concrete masonry unit


Clay tile

Cut stone

Masonry, continued

Marble


Glazed face CMU

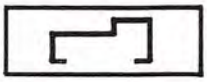
Slate, flagging, blue stone, soap stone

Stone rubble

Metal

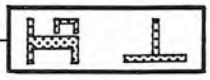
Steel: large scale

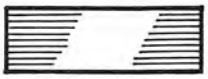
Metal: small scale

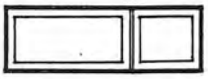

Hollow metal

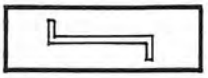
Prismacolor Poché

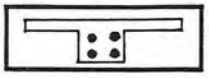
Aluminum: large scale


Aluminum: small scale

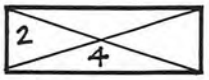

Metal elevation: large


Metal elevation: small


Intermittent metal section


Reinforcing steel

Wood



Rough wood: continuous

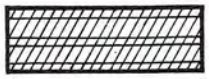
Wood, continued

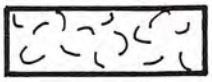
Rough wood: intermittent

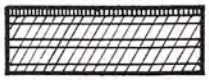
Finish wood

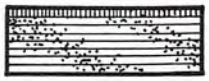
Prismacolor Poché

Plastic sections


Plywood

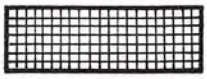

Particleboard

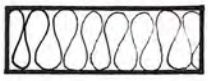

Plywood with plastic laminate

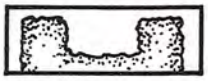

Particleboard with plastic laminate

Glue laminated sections

Insulation

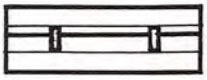

Rigid insulation

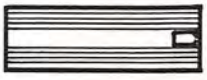

Batt insulation

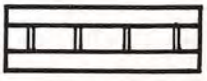

Sprayed fireproofing

Glass

Glass: large scale

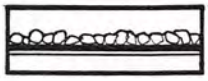

Glass: small scale

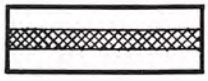

Insulated glass


Glass block

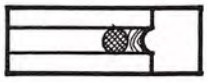
Moisture Protection

Flashing

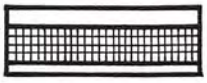

Built up roof with gravel


Compressible filler

Hardboard


Sealant

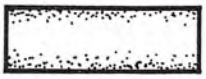
Neoprene gasket


Insulated metal panel

Fluid applied waterproofing

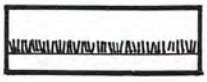
Finishes

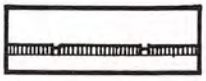
Plaster


Cement
Gypsum wallboard

Acoustical tile

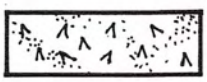
Resilient tile


Carpet


Ceramic, quarry, mosaic tile

Fluid applied flooring

Finishes, continued



Terrazzo

Gypsum block

6.5 Abbreviations

Above finish floor	AFF
Absorbing	ABS
Access door	AC DOOR
Acoustical	ACOUS
Acoustical tile	ACOUS TILE
Additional	ADDL
Adhesive	ADH
Adjacent	ADJCT
Adjustable	ADJ
Aggregate	AGG
Air conditioning	AC
Alternate	ALT
Aluminum	ALUM
Anchor bolt	AB
Anodize	ANDZ
Apartment	APT
Approximate	APPROX
Architectural	ARCH
Asphalt	ASPH
Automatic	AUTO
Average	AVG
Balance	BAL
Balled and bagged	B & B
Basement	BSMT
Beam	BM
Bearing	BRG
Bedroom	BR
Between	BTW
Beveled	BEV
Bituminous	BITUM
Block	BLK
Blocking	BLKG
Board	BRD
Bottom	BOT
Bracing	BRCG
Bracket	BRKT
Brick	BRK
Built-up roofing	B U RFG
Cabinet	CAB
Casework	CSWK
Casing bead	CASING BD
Ceiling	CLG
Ceiling diffuser	CLG DIFF
Ceiling height	CLG HGT
Cement	CEM
Center	CTR
Ceramic	CER
Ceramic tile	CER TL
Clear or clearance	CLR
Column	COL
Combination	COMB
Company	CO
Composite	COMP
Concrete	CONC
Conference	CONF
Construction	CONSTR
Continuous	CONT
Control joint	CNTR JT
Dampproofing	DMPR
Department	DEPT
Diagonal	DIAG
Diameter	DIA
Diffuser	DIFF
Dimension	DIM
Dispenser	DISP
Division	DIV
Door	DR
Double	DBL
Double acting	DBL ACT
Down	DN
Dustproof	DPF
Each	EA
East	E
Elastomeric	ELAS
Electric cabinet	ELEC CAB
Electric water cooler	EWC
Elevation	EL
Elevator	ELEV
Emergency	EMER
Enclosure	ENCL
Entrance	ENTR
Equal	EQ
Establish	ESTB
Exhaust	EXH
Existing	EXST
Expansion	EXPAN

Exposed	EXP
Exterior	EXT
Extrusion	EXTRU
Fluorescent	FLUOR
Feet	FT
Footing	FTG
Foundation	FDTN
Frame	FRM
Full size	FS
Furnish	FURN
Furring	FUR
Gauge	GA
Gallon	GAL
Galvanized	GALV
Glass	GL
Glaze	GLZ
Glue laminated	GLU LAM
Grade	GR
Grade beam	GR BM
Ground	GND
Gypsum	GYP
Gypsum wallboard	GWB
Handrail	HNDRL
Hardboard	HDBD
Hardware	HDW
Hardwood	HDWD
Head	HD
Height	HGT
Heating, ventilating and air conditioning	HVAC
Highway	HWY
Hollow core	HOL CORE
Horsepower	HP
Hour	HR
Hydrant	HYD
Inches	IN
Include	INCLU
Inside diameter	ID
Insulation	INSUL
Insulated panel	INSUL PNL
Interior	INTR
Invert	INVT
Invert elevation	INVT EL
Janitor	JTR
Joint	JT
Janitor closet	JTR CLOS
Kiln dried	KD
Kitchen	KIT
Knockout	KO
Kick plate	KPL
Laminated	LAM
Lavatory	LAV
Lead coated	LEAD CTD
Left	L
Length	LG
Lighting	LTG
Lightweight	LWT
Lightweight concrete	LWT CONC
Linoleum	LINOL
Living room	LR
Louver	LVR
Low point	LP
Machine	MACH
Maintenance	MAINT
Manufacturer	MFR
Masonry	MSNRY
Masonry opening	MO
Material	MATL
Maximum	MAX
Membrane	MEMB
Metal	MTL
Metallic	MTLC
Mezzanine	MEZZ
Millwork	MLWK
Minimum	MIN
Mirror	MIR
Miscellaneous	MISC
Modified	MOD
Molding	MLDG
Monument	MON
Mortar	MTR
Mounted	MTD

Mullion	MULL
Natural	NAT
Natural grade	NAT GR
Nominal	NOM
North	N
Not in contract	NIC
Not to scale	NTS
Number	NO
Obscure	OB
Obscure glass	OB GL
Office	OFF
On center	OC
Opening	OPNG
Opposite	OPP
Ounce	OZ
Outside diameter	OD
Out to out	O TO O
Oval head wood screw	OHWS
Overall	OA
Overhead	OVHD
Painted	PTD
Pair	PR
Panel	PNL
Partition	PTN
Pavement	PVMT
Perforated	PERF
Phillip's head screw	PHS
Plant	PLT
Plaster	PLAS
Recessed	REC
Rectangular	RECT
Reference	REF
Refrigerator	REFR
Register	RGTR
Reinforcing	REINF
Reinforcing bar	REBAR
Relief	RLF
Removable	RMV
Required	REQD
Return	RETN
Revision	REV
Right hand	RH
Roof drain	RD
Roofing	RFG
Room	RM
Rough opening	RO
Round	RND
Round head machine screw	RHMS
Sanitary	SAN
Schedule	SCHED
Scored joint	SCD JT
Section	SECT
Sheathing	SHTHG
Sheet	SHT
Similar	SIM
Softwood	SFTWD
Sound transmission classification	STC
South	S
Spaces	SPCS
Specification	SPEC
Square	SQ
Square foot	SQ FT
Staggered	STAG
Standard	STD
Steel	STL
Stainless steel	ST STL
Storage	STOR
Straight	STR
Surface	SUR
Suspended	SUSP
Switch	SW
Temperate	TEMP
Terrazzo	TER
Textured finish	TEX FIN
Temperature	TEMP
Thermal	THERM
Threshold	THRESH
Tongue and groove	T & G
Top of wall	TW
Transom	TR
Tread	TRD
Typical	TYP

Unfinished	UNFIN
Utility	UTIL
Value	VAL
Veneer	VEN
Ventilating	VENT
Vertical	VERT
Vinyl asbestos tile	VAT
Volume	VOL
Wainscot	WA
Water closet	WC
Waterproofing	WPFG
Weight	WT
West	W
Wide flange	WF
Window	WDW
With	W/
Without	W/O
Wood	WD
Yard	YD

6.6 Lettering

Standard

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

Chisel

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

Helvetica Medium

ABCDEFGHIJKLMNOP
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Corbusier Stencil

ABCDEFGHIJKLMNO
1234567890

IBM Selectric Composer Type Fonts

Univers Eleven Bold
Univers Eleven Medium
Univers Eleven Med. Italic
Univers Eleven Light
Univers Ten Bold
Univers Ten Medium
Univers Ten Light
Univers Eight Bold
Univers Eight Medium
Univers Eight Light

Press Roman Eleven Bold
Press Roman Eleven Bold Italic
Press Roman Eleven Medium
Press Roman Eleven Italic

Aldine Roman Twelve Bold
Aldine Roman Twelve Medium
Aldine Roman Twelve Italic
Aldine Roman Ten Italic

6.6 Lettering

Standard

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4
ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

Chisel

ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4
ABCDEFGHIJKLMNOPQRRS
1234567890 1/2 3/4

Helvetica Medium

ABCDEFGHIJKLMNOP
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Stencil

ABCDEGHJKLMN
1234567890

Corbusier Stencil

ABCDEFGHIJKLMNO
1234567890

6.7 Preferred Terminology

Note: Capitalized terms denote recommended usage. Lower case terms denote undesirable or misleading variants which should be avoided in drawings and specifications.

ACCESS DOOR
Use only for small doors included in door schedules. Prefabricated assembly including frame and door.

ACCESS FLOOR
Not "pedestal floor", "free access floor", or "computer floor".

ACCESS PANEL
A section of finish which can be opened.

ACOUSTICAL PANEL
ACOUSTICAL TILE
Not "acoustic" or "acoustic board".

ACOUSTICAL SEALER
Non-hardening calking or sponge tape used to seal partitions to structural ceiling, walls and floor to reduce sound transmission. Not "sound calking".

acoustical underlayment
Use SOUND DEADENING BOARD.

ADHESIVE
Do not use "glue" unless the particular adhesive is commonly called "glue" (such as for wood). Do not use "cement", "paste" or "mastic".

AGGREGATE BASE
Not "crushed rock", "gravel", "rock sub-base".

ALTER
ALTERATION
Not "remodel".

ALTERNATE
Use for pricing. Use OPTION when there is a choice.

ANCHOR BOLT
A bolt that is embedded in masonry or cast-in-place in concrete. Do not use to describe an expansion bolt or a bolt in an expansion shield.

ANODIZE
Not "alumilite", "alodize", "kalcolor" or "duranodic", etc. Avoid use on drawings.

apply
Use INSTALL. Avoid use on drawings.

asbestos cement
Use MINERAL FIBER.

AS-BUILT DRAWING
A drawing or print marked by the contractor to show actual conditions as constructed. For architect's drawing, see RECORD DRAWING.

ASPHALT CONCRETE
Not "bituminous concrete" or "asphalt paving".

asphalt roofing
Use BUILT-UP ROOFING.

BACKING
A continuous material behind entire area of finish; as opposed to intermittent or edge support.

bar joists
Use STEEL JOISTS.

BASE FLASHING
"Composition", "synthetic" or "built-up" flashing bonded to roofing membrane where a roof or membrane meets a vertical surface.

BATT INSULATION
Use for roll type insulation for installation between studs or joists, either pressed fit or stapled. See also BLANKET INSULATION.

bituminous
Do not use.

blackboard
Use CHALKBOARD.

BLANKET INSULATION
Roll type insulation for installation over suspended ceiling or on plane wall surfaces. Either laid loose or secured with stick clips. See also BATT INSULATION.

borrow light
Use GLAZED OPENING.

BUILDING PAPER
Sheathing paper or felt.

BUILT-UP ROOFING
Not "tar and gravel", "asphalt roofing", etc.

bulkhead
Do not use.

bulletin board
Use TACKBOARD.

butyl membrane
Use WATERPROOFING. Specifications define types.

CALK, CALKING
Use only for non-elastomeric fillers and joints subject to little movement, generally indoors. If purpose is acoustical, use ACOUSTICAL SEALER.

CASEWORK
Not "cabinet" or "case".

CASING BEAD
A plaster stop. Do not use for gypsum wallboard trim. See also METAL TRIM.

CEMENT
Use for "Portland cement". Do not use for "glue" or "adhesive".

CEMENT FIBER PANEL
Not "wood fiber", "tectum", etc.

CEMENT PLASTER
Not "stucco". Use to describe all Portland cement plasters.

CERAMIC TILE
Not "wall tile", "mosaic tile", etc. See also QUARRY TILE.

CHALKBOARD
Not "blackboard".

chipboard
Use PARTICLE BOARD.

COLD JOINT
Use where the material on one side of the joint is to be set or hard before the other side is installed and no particular bonding is expected.

computer floor
Use ACCESS FLOOR.

concrete block
Use CONCRETE UNIT MASONRY.

CONCRETE UNIT MASONRY
Not "concrete block", "cinder block", etc.

CONSTRUCTION JOINT
Use where it is desirable to show exact location of a joint which is necessary to the construction process but continuity or bonding is required.

corkboard
Use TACKBOARD.

cor-ten
Use WEATHERING STEEL.

DAMPPROOFING
A coating intended to resist vapor transmission and dampness, but not designed to resist a head of water. See also VAPOR BARRIER.

DELETE
Something to be taken out by intention. For something to be left out, use OMIT.

DOWNSPOUT
A rain water conduit made of sheet metal or plastic. Do not use LEADER unless it is made of pipe or tubing.

DRAWING
Do not use "sheet".

DRYWALL
Use only for wall and ceiling finish systems. See also GYPSUM WALLBOARD.

earth
Use SOIL. See also TOPSOIL.

ELASTOMERIC
A material which is inherently rubbery. Use in connection with sealant, flashing, membrane, etc.

EXPANSION BOLT
Single unit bolt with integral anchoring device, such as Wej-it or Kwik Bolt. Do not use "anchor bolt" for these.

EXPANSION JOINT
A joint designed for movement, both expansive and contractive. Do not use to describe a CONSTRUCTION JOINT or a CONTROL JOINT.

EXPANSION SHIELD
Use for devices that receive a separate screw or bolt and also note type of screw or bolt. Do not use "anchor bolt" for these. Not "cinch anchor".

felt
In built-up roofing, use PLY. For sheathing, use BUILDING PAPER.

FIBER GLASS
Not "fiberglas", "glass fiber".

FIREPROOFING PLASTER
Not "vermiculite", "perlite", etc.

flakeboard
Use PARTICLEBOARD.

FLOOR SINK
Use for sink recessed, flush, in floor. See also SERVICE SINK.

formica
Use PLASTIC LAMINATE.

free access floor
Use ACCESS FLOOR.

FURRED CEILING
Any ceiling not directly attached to the floor or roof framing above except suspended acoustical ceiling.

FURRING
Not "stripping".

FURRING CHANNEL
Cold rolled steel channel. For hat-shaped 25 gage steel channels see METAL FURRING.

GAGE
Not "gauge" or "guage".

GLASS STOP
Not "glazing bead".

GLAZED OPENING
Used at interior partitions. Not "borrow light", "vision panel".

glue
See ADHESIVE.

GROOVE
A long, narrow indentation. In wood, use only when parallel to the grain. See also RABBET.

GROUT
Any cementitious material used to fill, level or set other materials. Do not use "sulphur", "por-rock", etc. to describe such materials.

GYPSUM WALLBOARD
Use for wall and ceiling finish material. See also DRYWALL.

HANDRAIL
Use for a single rail. For protective barricade type rails use RAILING.

HANGER
Any suspended structural member by which other members are attached.

HARDBOARD
Use instead of "pressed wood", "masonite", etc. For flake type boards, use PARTICLE-BOARD.

hat channel
Use METAL FURRING and detail "hat shape".

HOISTWAY
Use for elevators and dumbwaiters. Not "shaft".

HOISTWAY BEAM
Beams supporting guide rails between multiple hoistways. Not "separator beams".

HOLLOW METAL
Use to describe hollow metal doors and panels. Do not use for extruded shapes. For Pressed Metal Frames see METAL FRAME.

HUNG CEILING
Use SUSPENDED CEILING.

INSTALL
Use instead of "apply", "lay", "hang", "place", etc. For "furnish and install", use PROVIDE.

INSULATING CONCRETE
Not "vermiculite concrete", "foam concrete", etc. Do not use for other LIGHTWEIGHT AGGREGATE CONCRETE which is not intended to provide insulation.

JOINT BACKER
Material behind sealant. Not "form", "rod", etc. Generally shown on drawings but not noted.

JOINT FILLER
Material which fills entire joint. Not "bituminous filler", "fiber filler", etc. May also be used with sealant.

kick space
Use TOE SPACE.

laminated plastic
Use PLASTIC LAMINATE.

LEADER
A rain water conduit made of pipe or tubing. See also DOWNSPOUT.

LIGHTGAGE FRAMING
Weldable loadbearing type metal studs and joists, 20 gage and heavier. For non-loadbearing 25 gage framing for gypsum wallboard, use METAL STUD and METAL FURRING.

LIGHTWEIGHT AGGREGATE CONCRETE
Concrete of lightweight aggregates not designed to provide insulation. See INSULATING CONCRETE.

masonite
Use HARDBOARD.

mastic
Do not use. Use ADHESIVE, CALKING.

METAL FRAME
Pressed Metal Frames used with doors and panels or glazed openings.

METAL FURRING
Hat-shaped, 25 gage steel channels used to furr out walls and for furring ceilings. For cold rolled steel channels see FURRING CHANNEL.

METAL LATH
Not "diamond mesh", "chicken wire", etc.

METALLIC WATERPROOFING
Not "iron grout", "ferrous waterproofing", etc.

METAL STUD
The 25 gage non-loadbearing interior framing assemblies. For weldable loadbearing assemblies use LIGHTGAGE FRAMING. Not "screw stud", "C stud", etc.

METAL TRIM
Edge trim used for drywall construction. Do not use "casing bead".

MINERAL FIBER
Not "asbestos".

moisture barrier
Use DAMPPROOFING or VAPOR BARRIER.

OMIT
To leave out by intention. See also DELETE.

open-web joists
Use STEEL JOISTS.

OPTION
Use when there is a choice. See also ALTERNATE.

PANELING
Sheet or board material for interior use.

PANELS
Sheet material, with some sort of joint or trim for exterior or interior use.

PARTICLEBOARD
Not "chipboard", "Novoply". See also HARDBOARD.

PARTITION
Non-loadbearing vertical panel subdividing interior spaces, either rated or non-rated. For loadbearing see WALL.

PATCH
Replacement or repair of material or finish to match existing conditions.

pedestal floor
Use ACCESS FLOOR.

PLASTER
Specifications define type, i.e., gypsum plaster, Keenes Cement, etc.

plaster stop
Use CASING BEAD.

PLASTIC LAMINATE
Not "Formica", "laminated plastic".

plastic membrane
Use DAMPPROOFING. Not "visqueen". See also VAPOR BARRIER.

PLYWOOD
If several types of plywood are used within a drawing, coordinate with specifications and identify consistently.

PRECAST CONCRETE PANELS
Not "exposed aggregate panels", "architectural precast", "Mo Sai panels". Not just "precast".

PROTECTIVE BOARDS
Show on wall sections to help delineate scope of waterproofing and serve as reminder to trades.

PROVIDE
Denotes furnish and install. Not "supply", "deliver", "erect".

QUARRY TILE
Use for paver tile. See also CERAMIC TILE.

RABBET
Groove at edge of member only.

RAILING
Not "balustrades", "rails", "handrails".

rainwater leader
Use LEADER if made of pipe or tubing. Use DOWNSPOUT if made of sheet metal or plastic.

rebate
Use RABBET.

RECORD DRAWING
Drawings revised to include construction changes. Do not use AS-BUILT DRAWING unless referring to such drawings prepared by the contractor.

REFINISH
To put a finish back into its original condition. Do not use "refurbish", "rehabilitate", "remodel", "renew" or "renovate".

RELOCATE
To move from one location and install in another location.

remodel
Use ALTER or ALTERATION.

REPLACE
To provide a substitute, or equivalent, for.

RESILIENT BASE
Not "rubber base", "vinyl base", etc.

RESILIENT FLOORING
See also RESILIENT TILE, SHEET FLOORING, SEAMLESS FLOORING.

RESILIENT TILE
Not "vinyl tile", "V.A.T.", "linoleum", etc.

RIGID INSULATION
Not "fiberboard", "board insulation", "cellular insulation".

ROOF HATCH
Not "scuttle". If specifically for venting smoke indicate SMOKE VENT.

RUNNER CHANNEL
The familiar 1-1/2 inch cold rolled steel channel.

SCREED
Metal or wood strip placed at intervals to gage thickness of applied materials.

SCRIBE STRIP
Strip to make tight closure to adjoining surfaces. Not a "filler".

SEALANT
Use only for elastomeric materials and at all joints subject to movement or weather penetration outdoors or indoors. If purpose is acoustical use ACOUSTICAL SEALER.

SEAMLESS FLOORING
Sheet material with joints field welded or sealed, or field installed materials finished to provide a homogenous flooring material.

SECTION
Drawing showing cut through an object. Not a rolled steel shape.

SELF-EDGE
Application to edge of plywood or particle-board of plastic laminate of same pattern as face surface.

separator beams
Use HOISTWAY BEAMS.

SERVICE SINK
Wall or floor mounted sink. Not "janitor's sink", "slop sink". See also FLOOR SINK.

SHEATHING
Not "sheeting", "diaphragm", "plyscore".

SHEET
Thin construction material, not a drawing.

SHEET FLOORING
Resilient flooring installed in lengths, generally wall to wall with joints depending upon manufactured widths of roll material.

SHEET METAL
Use general term on drawings. Specifications should define particulars.

SMOKE VENT
Use for a ROOF HATCH specifically for venting smoke.

SOIL
Not "earth", "dirt", etc. See also TOPSOIL.

sound calking
Use ACOUSTICAL SEALER.

SOUND DEADENING BOARD
High density wallboard, wood fiber or gypsum, not suitable for painting or finishing.

SOUND RETARDANT
Not "soundproof".

SPRAYED FIREPROOFING
Use general term since asbestos is generally outlawed.

STAGGER
To offset building elements in a horizontal or vertical plane as stagger studs, stagger joints.

STEEL JOISTS
Not "open-web joists", "bar joists".

STOCK
Raw material, i.e., 2x4 stock. Not standard item, i.e., "standard size".

STONE
Not "granite", "slate", "marble", etc. Specifications should define type, quality, etc.

stripping
Use FURRING.

structural studs
Use LIGHTGAGE FRAMING.

stucco
Use CEMENT PLASTER.

STUD
Upright framing member of wood or metal. See LIGHTGAGE FRAMING and METAL STUD.

SUBFLOORING
Usually of different grade and thickness than used for wall or roof sheathing. Not "sheathing", "sub-floor".

TACKBOARD
Not "bulletin board", "corkboard".

THRU
Acceptable short version of THROUGH on drawings only.

TOE BOARD
Raised protective edge at balconies, landings, etc.

TOE SPACE
Recess at base of cabinets. Not "kick space".

TOPSOIL
Use only in landscape construction. See also SOIL.

transite
Use CEMENT ASBESTOS.

TYPICAL
Representative example, characteristic of a kind.

UNDERLAY
Roofing felt applied over sheathing, before shingling.

UNDERLAYMENT
A smooth, hard sheet material, placed over rougher substrates to achieve a surface suitable for the application of such finishes as resilient tile. Not "underlay".

VAPOR BARRIER
Not "sub slab dampproofing", "visqueen", "plastic film", "waterproof layer", "waterproofing".

WAINSCOT
Finish on the lower part of a partition when it differs from that of the upper wall.

WALL
Vertical panel enclosing a building or that serves as an occupancy separation. Generally loadbearing.

wallboard
Use SOUND DEADENING BOARD.

WATERPROOFING
Designed to resist a head of water. Not "membrane", "dampproofing", "waterproof", etc.

WEATHERING STEEL
Not "Cor-Ten", "rusting steel", "self-protecting steel".

WOOD
Use only for solid stock softwoods. See also HARDWOOD.

6.8 Notes and Specifications

Notes on the drawings and technical specifications in the project manual are two different forms of the same thing: that part of the contract documents that is written rather than drawn. Like the drawings, notes and specifications must express ideas clearly. They must be definitive, consistent, precise and complete in essential details.

Brevity and readability are desirable attributes which provide clarity to the written word. Clarity in notes and specifications is achieved with:
Proper vocabulary
Correct grammar
Proper sentence construction
Proper style

Vocabulary:

The use of words in notes and specifications is critical. Words which appear to have the same meaning have exact definitions which could produce results altogether different from the intent. One should carefully select and use each word in its precise meaning. Within a note or specification, a word should be used for only one meaning and the same word should be used whenever the particular meaning is intended.

Some common vocabulary problems:

ANY/ALL: The word "any" is a limited number selected at the discretion of the reader, while "all" is the entire extent. "Repair any cracks" could mean the cracks as designated by the contractor, while "Repair all cracks" definitely means every crack.

FLAMMABLE/INFLAMMABLE: These words have exactly the same meaning, even though they sound opposite. The word "flammable" is preferred.

AMOUNT/QUANTITY: The word "amount" should be used when writing about money. The term "quantity" should be used when writing about volume, yardage and gallonage.

BALANCE/REMAINDER: The word "balance" should be used when writing about money. The term "remainder" is preferred for "that which is left."

SHALL/WILL: "Shall" is used with reference to the work of the contractor. "Will" is used in connection with acts of the owner or architect/engineer. The words "must" and "is to" should be avoided.

PROVIDE FOR/PROVIDE: There is a definite difference in how these terms are used. Use is determined by the form of the verb.

Intransitive: To prepare (for or against), to furnish the means of support, e.g. "Concrete work to provide for the installation of wall fixtures" or "General contractor to provide for the safety of all persons on sidewalks, driveways and parking lots on the project property."

Transitive: To supply or make available, e.g. "Owner to provide special light fixtures. Installation by electrical contractor." or "HVAC contractor to provide minimum of ten air changes per hour in all project areas identified for temporary ventilation." or "Provide and install new aluminum windows."

Grammar:

AGREEMENT: The subject and verb must always agree in number. Singular verbs should be used with singular subjects and plural verbs should be used with plural subjects. An error in number is easy to make when a sentence is long and complicated. The singular subject of a sentence can be confused with a modifier that is plural. The subject of a sentence cannot be contained in a prepositional phrase, yet the wording of many sentences is such that the object of a preposition may be mistaken for the subject of the sentence.

Preferred language: "Bolt one elongated central fastener to panel eye."

Correct: "One of the elongated central fasteners shall be placed around the eye of the panel and bolted."

Incorrect: "One of the elongated central fasteners are to be placed around the eye of the panel and bolted."

The incorrect example uses a singular subject "one" with a plural verb "are." The correct example has number agreement between subject and verb, but is an involved, verbose sentence structure. The preferred language example indicates number agreement and a simple, direct statement of instruction.

PARALLEL CONSTRUCTION: Good grammar requires the use of identical style in both parts of a compound subject or predicate. The use of identical style in a series of nouns, adverbs or prepositional phrases is also recommended.

Preferred language: "Perform tests to determine strength and to establish quality."

Correct: "Tests shall be performed to determine strength and to establish quality."

Incorrect: "Tests shall be performed to determine strength and establishing qualities."

Preferred language: "Heating, Ventilating and Air Conditioning."

Incorrect: "Heating, Ventilation and Air Conditioning."

PRONOUN REFERENCE: The use of pronouns should be avoided or minimized. It is better to repeat the noun than risk possible misunderstanding.

Correct: "Apply coating only when ambient temperature is above 40° F."

Correct: "Maintain pneumatic equipment above 40° F."

Incorrect: "Apply coating with pneumatic equipment when it is above 40° F."

PREPOSITIONAL PHRASES: Sentences may be shortened by using modifiers in place of prepositional phrases.

Preferred language: "Platform top."

Correct: "Top of platform."

Preferred language: "Within manufacturer's recommended time limit."

Correct: "Within the time limit recommended by manufacturer."

CAPITALIZATION: Capitals are used to refer to specific nouns and proper names. These particular nouns and proper names are defined in the standard General Conditions chosen for a project. Examples of words that would be capitalized: Agreement, Architect, Article (in the specification), Contract, Engineer, General Conditions, Owner, Paragraph (in the specification), Project, Subparagraph (in the specification), Work.

No capitalization is required when the above examples are used in the general sense. Directions such as "east" or "northwest" are not capitalized unless they form part of a proper noun. The words "subcontract" or "subcontractor" are not capitalized because the words do not apply to a specific party defined in the contract agreement.

PUNCTUATION: Notes and specifications are legal documents and should be punctuated formally. Commas should be used after each item in a series, including the item preceding

Grammar, continued:

a conjunction, and in other locations where the clarity of the statement is improved. All sentences and clauses should be constructed so that punctuation that is misplaced or eliminated does not change the intended meaning.

Sentence Construction:

There are three basic sentence structures that can be used to convey specification requirements clearly and concisely: the imperative mood, the indicative mood, and streamlining. Each has applications to which it is particularly suited. Each can reduce verbiage, improve clarity and avoid the monotony that invites reader apathy.

IMPERATIVE MOOD: The simple imperative mood may be used to advantage, effecting an economy in words. This style is well suited for instructions covering installation of products and equipment. The verb is the first word of the sentence which clearly defines the action to be performed. This style is concise and readily understandable.

"Spread adhesive with notched trowel."

"Install equipment plumb and level."

"Apply two coats of paint to each exposed surface."

INDICATIVE MOOD: The traditonal language of specification sentences is the indicative mood, passive voice. This requires the use of "shall" in nearly every statement, which may cause unnecessary wordiness and monotony.

"Adhesive shall be spread with notched trowel."

"Equipment shall be plumb and level."

"Two coats of paint shall be applied to each exposed surface."

STREAMLINING: Every attempt to reduce verbiage in a specification sentence is commendable, if the meaning can be clearly conveyed without loss of force or content. Streamlining is used to list products, materials, reference standards and other itemized specifications. It is difficult to adapt this form to descriptions or instructions, however.

"Portland cement: ASTM C150, Type I."

"Aggregate: ASTM C 33."

"Air-entraining agent: More-Air Brand, X Manufacturing Company."

Proper Style:

Style is an essential part of writing notes and specifications. A good style will insure accuracy, brevity and clarity. Two styles of writing which cause problems in specifications are involved sentences and stilted language. Some simple rules for good style are:

Use short sentences.

Maintain the sentence structure in simple declarative statements.

Avoid complicated sentences whose meanings are so dependent on punctuation that inadvertent omission or insertion of punctuation changes the meaning or creates ambiguity.

Do not use adverbs such as herein, hereinbefore, hereinafter and wherein.

Avoid using the following words and expressions: and/or, etc., as per, in a workmanlike

Proper Style, continued:

manner, to the satisfaction of the architect/engineer.

Choose words and terms that are plain and well understood to convey the information. Avoid any pompous or highly embellished language.

Use:	Do not use:
may	at his option
salvageable material	any material worth salvaging
in accordance with, as shown	as per
payment will	payment shall be made
meet the requirements of	conform to
shall	must, it is intended, it shall be incumbent upon, it shall be the duty
may	is hereby authorized
the contractor may	if the contractor so elects, he may
architect/engineer will	architect/engineer shall
means	shall be interpreted to mean
by	by means of
to	in order to

Masterformat
Broadscope Section Titles:

Division 0
Bidding and Contract Requirements

00010 Pre-Bid Information
00100 Instructions to Bidders
00200 Information Available to Bidders
00300 Bid/Tender Forms
00400 Supplements to Bid/Tender Forms
00500 Agreement Forms
00600 Bonds and Certificates
00700 General Conditions of the Contract
00800 Supplementary Conditions
00950 Drawings Index
00900 Addenda and Modifications

Division 1
General Requirements

01010 Summary of Work
01020 Allowances
01030 Special Project Procedures
01040 Coordination
01050 Field Engineering
01060 Regulatory Requirements
01070 Abbreviations and Symbols
01080 Identification Systems
01100 Alternates/Alternatives
01150 Measurement and Payment
01200 Project Meetings
01300 Submittals
01400 Quality Control
01500 Construction Facilities and Temporary Controls
01600 Material and Equipment
01650 Starting of Systems
01660 Testing, Adjusting and Balancing of Systems
01700 Contract Closeout

Division 2
Sitework

02010 Subsurface Investigation
02050 Demolition
02100 Site Preparation
02150 Underpinning
02200 Earthwork
02300 Tunnelling
02350 Piles, Caissons and Cofferdams
02400 Drainage
02440 Site Improvements
02480 Landscaping
02500 Paving and Surfacing
02590 Ponds and Reservoirs
02600 Piped Utility Materials and Methods
02700 Piped Utilities
02800 Power and Communication Utilities
02850 Railraod Work
02880 Marine Work

Division 3
Concrete

03050 Concreting Procedures
03100 Concrete Formwork
03150 Forms
03180 Form Ties and Accessories
03200 Concrete Reinforcement
03250 Concrete Accessories
03300 Cast-in-Place Concrete
03350 Special Concrete Finishes
03360 Specially Placed Concrete
03370 Concrete Curing
03400 Precast Concrete
03500 Cementitious Decks
03600 Grout
03700 Concrete Restoration and Cleaning

Division 4
Masonry

04050 Masonry Procedures
04100 Mortar
04150 Masonry Accessories
04200 Unit Masonry
04400 Stone

Masterformat
Broadscope Section Titles, continued:

04500 Masonry Restoration and Cleaning
04550 Refractories
04600 Corrosion Resistant Masonry

Division 5
Metals

05010 Metal Materials and Methods
05050 Metal Fastening
05100 Structural Metal Framing
05200 Metal Joists
05300 Metal Decking
05400 Cold-Formed Metal Framing
05500 Metal Fabrications
05700 Ornamental Metal
05800 Expansion Control
05900 Metal Finishes

Division 6
Wood and Plastics

06050 Fasteners and Supports
06100 Rough Carpentry
06130 Heavy Timber Construction
06150 Wood-Metal Systems
06170 Prefabricated Structural Wood
06200 Finish Carpentry
06300 Wood Treatment
06400 Architectural Woodwork
06500 Prefabricated Structural Plastics
06600 Plastic Fabrications

Division 7
Thermal and Moisture Protection

07100 Waterproofing
07150 Dampproofing
07200 Insulation
07250 Fireproofing
07300 Shingles and Roofing Tiles
07400 Preformed Roofing and Siding
07500 Membrane Roofing
07570 Traffic Topping
07600 Flashing and Sheet Metal
07800 Roof Accessories
07900 Joint Sealants

Division 8
Doors and Windows

08100 Metal Doors and Frames
08200 Wood and Plastic Doors
08250 Door Opening Assemblies
08300 Special Doors
08400 Entrances and Storefronts
08500 Metal Windows
08600 Wood and Plastic Windows
08650 Special Windows
08700 Hardware
08800 Glazing
08900 Glazed Curtain Walls

Division 9
Finishes

09100 Metal Support Systems
09200 Lath and Plaster
09230 Aggregate Coatings
09250 Gypsum Wallboard
09300 Tile
09400 Terrazzo
09500 Acoustical Treatment
09550 Wood Flooring
09600 Stone and Brick Flooring
09650 Resilient Flooring
09680 Carpeting
09700 Special Flooring
09760 Floor Treatment
09800 Special Coatings
09900 Painting
09950 Wall Covering

Division 10
Specialties

10100 Chalkboards and Tackboards

Masterformat
Broadscope Section Titles, continued:

10150 Compartments and Cubicles
10200 Louvers and Vents
10240 Grilles and Screens
10250 Service Wall Systems
10260 Wall and Corner Guards
10270 Access Flooring
10280 Specialty Modules
10290 Pest Control
10300 Fireplaces and Stoves
10340 Prefabricated Steeples, Spires and Cupolas
10350 Flagpoles
10400 Identifying Devices
10450 Pedestrian Control Devices
10500 Lockers
10520 Fire Extinguishers, Cabinets and Accessories
10530 Protective Covers
10550 Postal Specialties
10600 Partitions
10650 Scales
10670 Storage Shelving
10700 Exterior Sun Control Devices
10750 Telephone Enclosures
10800 Toilet and Bath Accessories
10900 Wardrobe Specialties

Division 11
Equipment

11010 Maintenance Equipment
11020 Security and Vault Equipment
11030 Checkroom Equipment
11040 Ecclesiastical Equipment
11050 Library Equipment
11060 Theater and Stage Equipment
11070 Musical Equipment
11080 Registration Equipment
11100 Mercantile Equipment
11110 Commercial Laundry and Dry Cleaning Equipment
11120 Vending Equipment
11130 Audio-Visual Equipment
11140 Service Station Equipment
11150 Parking Equipment
11160 Loading Dock Equipment
11170 Waste Handling Equipment
11190 Detention Equipment
11200 Water Supply and Treatment Equipment
11300 Fluid Waste Disposal and Treatment Equipment
11400 Food Service Equipment
11450 Residential Equipment
11460 Unit Kitchens
11470 Darkroom Equipment
11480 Athletic, Recreational and Therapeutic Equipment
11500 Industrial and Process Equipment
11600 Laboratory Equipment
11650 Planetarium and Observatory Equipment
11700 Medical Equipment
11780 Mortuary Equipment
11800 Telecommunication Equipment
11850 Navigation Equipment

Division 12
Furnishings

12100 Artwork
12300 Manufactured Cabinets and Casework
12500 Window Treatment
12550 Fabrics
12600 Furniture and Accessories
12670 Rugs and Mats
12700 Multiple Seating
12800 Interior Plants and Plantings

Division 13
Special Construction

13010 Air Supported Structures
13020 Integrated Assemblies
13030 Audiometric Rooms
13040 Clean Rooms

Masterformat
Broadscope Section Titles, continued:

13050 Hyperbaric Rooms
13060 Insulated Rooms
13070 Integrated Ceilings
13080 Sound, Vibration and Seismic Control
13090 Radiation Protection
13100 Nuclear Reactors
13110 Observatories
13120 Pre-Engineered Structures
13130 Special Purpose Rooms and Buildings
13140 Vaults
13150 Pools
13160 Ice Rinks
13170 Kennels and Animal Shelters
13200 Seismographic Instrumentation
13210 Stress Recording Instrumentation
13220 Solar and Wind Instrumentation
13410 Liquid and Gas Storage Tanks
13510 Restoration of Underground Pipes
13520 Filter Underdrains and Media
13530 Digestion Tank Covers and Appurtenances
13540 Oxygenation Systems
13550 Thermal Sludge Conditioning Systems
13560 Site Constructed Incinerators
13600 Utility Control Systems
13700 Industrial and Process Control Systems
13800 Oil and Gas Refining Installations and Control Systems
13900 Transportation Instrumentation
13940 Building Automation Systems
13970 Fire Suppression and Supervisory Systems
13980 Solar Energy Systems
13990 Wind Energy Systems

Division 14
Conveying Systems

14100 Dumbwaiters
14200 Elevators
14300 Hoists and Cranes
14400 Lifts
14500 Material Handling Systems
14600 Turntables
14700 Moving Stairs and Walks
14800 Powered Scaffolding
14900 Transportation Systems

Division 15
Mechanical

15050 Basic Materials and Methods
15200 Noise, Vibration and Seismic Control
15250 Insulation
15300 Special Piping Systems
15400 Plumbing Systems
15450 Plumbing Fixtures and Trim
15500 Fire Protection
15600 Power or Heat Generation
15650 Refrigeration
15700 Liquid Heat Transfer
15800 Air Distribution
15900 Controls and Instrumentation

Division 16
Electrical

16050 Basic Materials and Methods
16200 Power Generation
16300 Power Transmission
16400 Service and Distribution
16500 Lighting
16600 Special Systems
16700 Communications
16850 Heating and Cooling
16900 Controls and Instrumentation

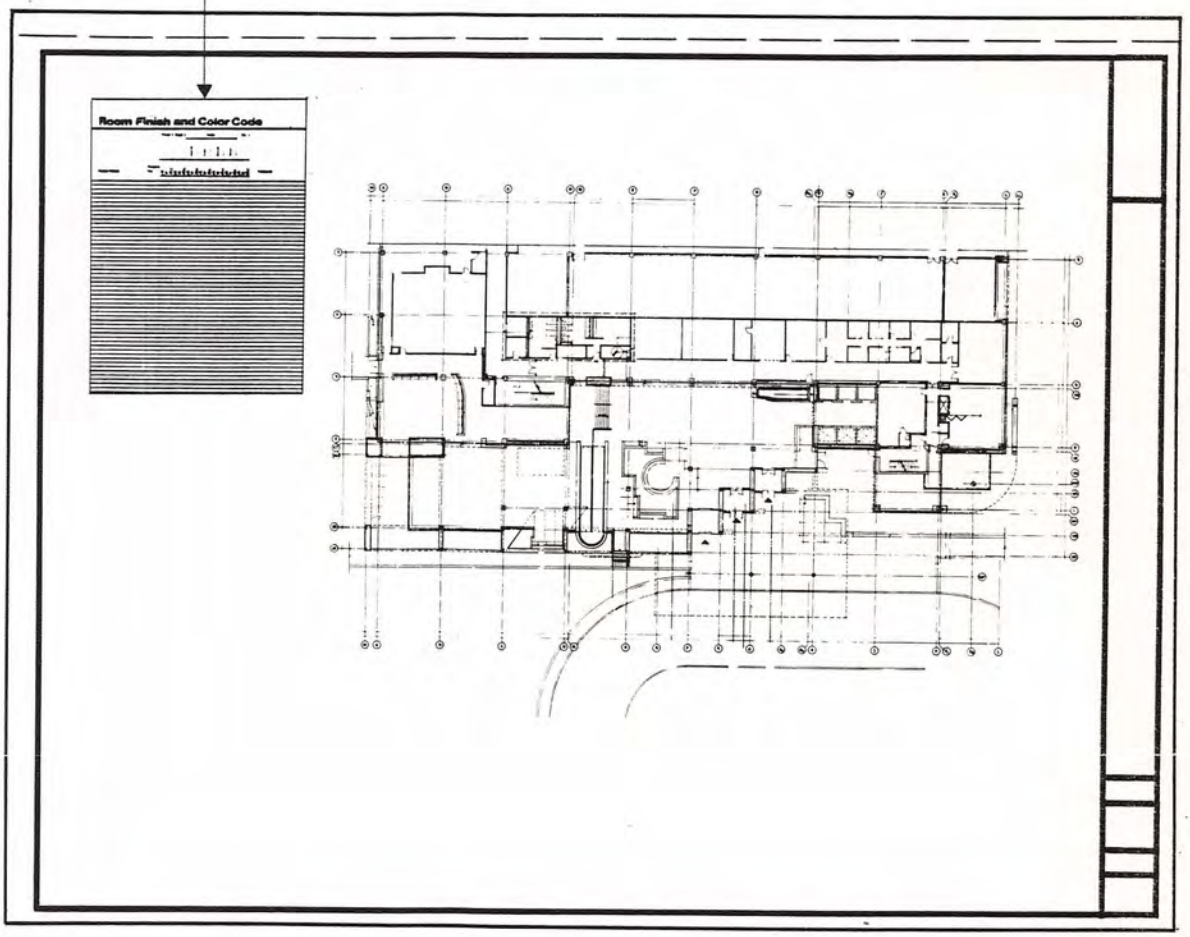
6.9 Finish and Color Schedule

One of two formats is used depending on whether the project is large and complex or small and simple.

For large and complex projects a mark system composed of a Room Finish and Color ***Code*** and a Room Finish and Color ***Schedule*** is used. See examples on pages 6.9b and 6.9e. This system serves several purposes: 1) It permits the entry and correction of scheduled items directly on floor plan sheets; 2) it permits preliminary finish and color decisions to be formated in a way that can easily become the final schedule; 3) it provides a format that integrates the broadest range of information from basic architectural materials to the most detailed identification of a finish.

For small or simple projects a Room Finish Schedule of finishes only is provided. See example on 6.9h. Detailed identification of colors is left to the appropriate sections of the specifications.

See examples on pages 6.9c and 6.9d



The Room Finish and Color *Code* is a list of marks. The list remains at a predictable length on each floor plan sheet even though the Room Finish and Color *Schedule* may change in scope throughout the course of production.

Preliminary

Room Finish and Color Code

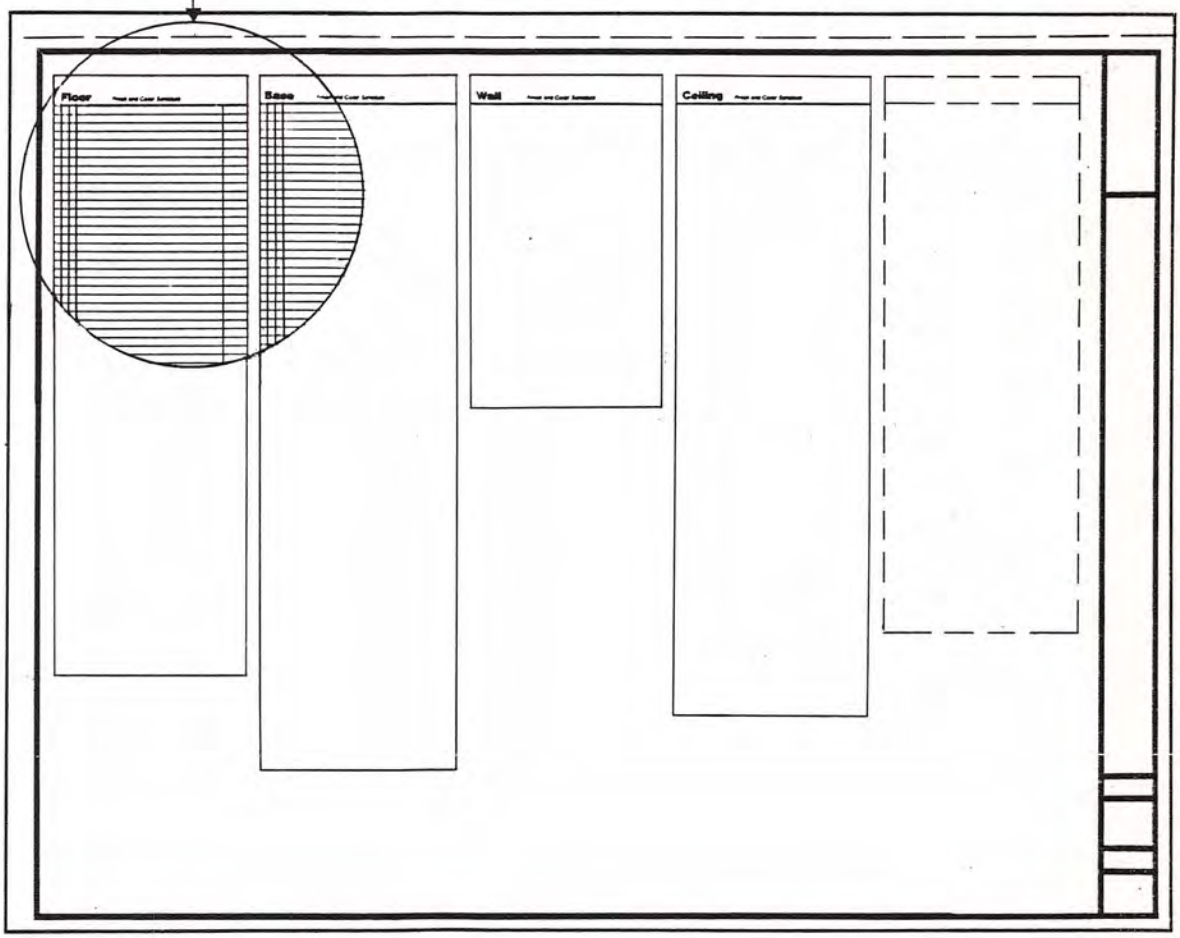
Room Name	Room No.	Floor			Base			Walls												Clg			Remarks
								North			East			South			West						
		Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	
LOBBY	100	B	-		B	-		B	-		B	-		B	-		B	-		B	-		
RECEPTION	101	C	1		C	1		C	2		C	2		C	2		C	2		C	1		
VESTIBULE	102	D	1		D	1		D	1		D	1		D	1		D	1		D	1		
SECURITY	103	E	1		E	1		F	1		F	1		F	1		F	1		F	1		
COAT ROOM	104	E	2		E	1		F	1		F	1		F	1		F	1		F	2		
ANTE ROOM	105	E	3		E	2		C	1		C	1		C	1		C	1		F	2		
SECRETARY	106	E	3		E	2		C	1		C	1		C	1		C	1		C	1		
OFFICE	107	E	3		E	2		C	1		C	1		C	1		C	1		C	1		
KITCHEN	108	E	4		E	4		F	1		F	1		F	1		F	1		F	2		
TOILET ROOM	109	E	4		E	2		F	3		F	3		F	3		F	3		F	3		
STAFF ROOM	110	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
SECRETARY	111	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
ADMIN. ASSIST.	201	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
BRIEFING ROOM	202	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	203	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	204	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	205	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	206	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	207	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	208	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
OFFICE	209	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
CONFERENCE 'A'	210	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
CONFERENCE 'B'	211	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
LOUNGE	212	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
KITCHEN	213	E	4		E	2		F	3		F	3		F	3		F	3		F	2		
MEN'S TOILET	214	E	4		E	2		F	3		F	3		F	3		F	3		F	3		
WOMENS TOILET	215	E	4		E	2		F	3		F	3		F	3		F	3		F	3		
CORRIDOR	216	E	1		E	1		F	2		-	-		F	2		-	-		F	2		
BOOKEEPING	217	E	1		E	1		F	1		F	1		F	1		F	1		F	2		
DATA PROC.	218	E	1		E	1		F	1		F	1		F	1		F	1		F	2		
LIBRARY	219	E	3		E	3		F	1		F	1		F	1		F	1		F	2		
VAULT	220	E	-		E	-		A	-		A	-		A	-		A	-		F	2		
OFFICE	221	E	1		E	1		F	1		F	1		F	1		F	1		F	2		
PASSAGE	222	E	1		E	1		F	1		-	-		F	1		-	-		F	3		
VIEWING ROOM	223	E	4		E	2		F	3		F	3		F	3		F	3		F	3		
COMMUNICATIONS	224	E	1		E	1		F	1		F	1		F	1		F	1		F	3		
STORAGE 'A'	225	E	-		E	1		F	1		F	1		F	1		F	1		F	3		
STORAGE 'B'	226	E	-		E	1		F	1		F	1		F	1		F	1		F	3		
STORAGE 'C'	227	E	-		E	1		F	1		F	1		F	1		F	1		F	3		
HOLDING	228	E	4		E	2		F	1		F	1		F	1		F	1		F	3		
DORMITORY	301	E	3		E	1		F	1		F	1		F	1		F	1		F	3		
SAUNA	302	A	-		A	-		A	-		A	-		A	-		A	-		A	-		SEE SEC. 13131
EXERCISE ROOM	303	E	2		E	1		F	1		F	1		F	1		F	1		F	3		
SHOWER	304	E	4		E	4		F	3		F	3		F	3		F	3		F	3		
MEN'S LOCKERS	305	E	4		E	2		F	3		F	3		F	3		F	3		F	3		
WOMEN'S LOCKERS	306	E	4		E	2		F	3		F	3		F	3		F	3		F	3		

Final

Room Finish and Color Code

Room Name	Room No.	Floor			Base			Walls												Clg			Remarks
								North			East			South			West						
		Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	Sub	Fin	Color	
LOBBY	100	B	–	–	B	–	–	B	–	–	B	–	–	B	–	–	B	–	–	B	–	–	
RECEPTION	101	C	1	–	C	1	–	C	2	–	C	2	–	C	2	–	C	2	–	C	1	–	
VESTIBULE	102	D	1	–	D	1	–	D	1	–	D	1	–	D	1	–	D	1	–	D	1	–	
SECURITY	103	E	1	b	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	1	a	
COAT ROOM	104	E	2	a	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
ANTE ROOM	105	E	3	a	E	2	a	C	1	–	C	1	–	C	1	–	C	1	–	F	2	a	
SECRETARY	106	E	3	a	E	2	a	C	1	–	C	1	–	C	1	–	C	1	–	C	1	–	
OFFICE	107	E	3	a	E	2	a	C	1	–	C	1	–	C	1	–	C	1	–	C	1	–	
KITCHEN	108	E	4	b	E	4	c	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
TOILET ROOM	109	E	4	a	E	2	b	F	3	b	F	3	b	F	3	b	F	3	b	F	3	a	
STAFF ROOM	110	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
SECRETARY	111	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
ADMIN. ASSIST.	201	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
BRIEFING ROOM	202	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	203	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	204	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	205	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	206	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	207	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	208	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
OFFICE	209	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
CONFERENCE 'A'	210	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
CONFERENCE 'B'	211	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
LOUNGE	212	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
KITCHEN	213	E	4	a	E	2	b	F	3	a	F	3	a	F	3	a	F	3	a	F	2	a	
MEN'S TOILET	214	E	4	a	E	2	b	F	3	b	F	3	b	F	3	b	F	3	b	F	3	a	
WOMEN'S TOILET	215	E	4	b	E	2	b	F	3	a	F	3	a	F	3	a	F	3	a	F	3	a	
CORRIDOR	216	E	1	a	E	1	a	F	2	a	–	–	–	F	2		–	–	–	F	2	a	
BOOKKEEPING	217	E	1	a	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
DATA PROC	218	E	1	a	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
LIBRARY	219	E	3	b	E	3	b	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
VAULT	220	E	–	–	E	–	–	A	–	–	A	–	–	A	–	–	A	–	–	F	2	a	
OFFICE	221	E	1	c	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	2	a	
PASSAGE	222	E	1	a	E	1	a	F	1	a	–	–	a	F	1	a	–	–	a	F	3	a	
VIEWING ROOM	223	E	4	a	E	2	b	F	3	b	F	3	b	F	3	b	F	3	b	F	3	a	
COMMUNICATIONS	224	E	1	c	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
STORAGE 'A'	225	E	–	–	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
STORAGE 'B'	226	E	–	–	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
STORAGE 'C'	227	E	–	–	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
HOLDING	228	E	4		E	2	b	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
DORMITORY	301	E	3	b	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
SAUNA	302	A	–	–	A	–	–	A	–	–	A	–	–	A	–	–	A	–	–	A	–	–	SEE SEC. 13131
EXERCISE ROOM	303	E	2	a	E	1	a	F	1	a	F	1	a	F	1	a	F	1	a	F	3	a	
SHOWER	304	E	4	b	E	4	c	F	3	a	F	3	a	F	3	a	F	3	a	F	3	a	
MEN'S LOCKERS	305	E	4	b	E	2	b	F	3	b	F	3	b	F	3	b	F	3	b	F	3	a	
WOMEN'S LOCKERS	306	E	4	b	E	2	b	F	3	a	F	3	a	F	3	a	F	3	a	F	3	a	

See examples on pages 6.9f and 6.9g



The Room Finish and Color *Schedule* is a detailed listing of ***substrates, finishes*** and ***colors.*** This schedule is placed on a sheet in that part of the drawing set devoted to schedules, with individual columns assigned to floor, base, walls, and ceiling.

Floor *Finish and Color Schedule*

A			Special - See Arch. Floor Plans	
B			Existing to remain as is	01031
C			Existing to be restored	01031
	1		Quarry tile	09330
D			Match adjacent existing	01031
	1		Quarry tile	09330
	2		Stone	04400
E			Concrete	03300
	1		Vinyl asbestos tile	09660
		a	Armstrong - Imperial, no. 51851 - sand	
		b	Armstrong - Texturite, no. 51839 - white	
		c	Armstrong - Scuffless, no. 51463 - wheat	
	2		Sheet vinyl	09665
		a	Armstrong - Seagate, no. 86501 - beige	
	3		Carpet	09680
		a	Antron - Tufline, no. 13524 - white	
		b	Antron - Tufline, no. 79680 - straw	
	4		Quarry tile	09330
		a	American Olean - brown	
		b	American Olean - camel beige	

Color
Finish
Substrate

Master Format Reference (Optional)

Base *Finish and Color Schedule*

A			Special - See Arch. Interior Elevations	
B			Existing to remain as is	01031
C			Existing to be restored	01031
	1		Wood	06220
D			Match adjacent existing	01031
	1		Wood	06220
	2		Stone	04400
E			Gypsum wallboard	09260
	1		Vinyl	09660
		a	Armstrong - black	
	2		Wood	06220
		a	Millskil - shape no. 6 - natural oak	
		b	Millskil - shape no. 8 - natural oak	
	3		Carpet	09680
		a	Antron - Tufline, no. 13524 - white	
		b	Antron - Tufline, no. 79680 - straw	

Color
Finish
Substrate

Master Format Reference (Optional)

Wall *Finish and Color Schedule*

A			Special - See Arch. Interior Elevations	
B			Existing to remain as is	01031
C			Existing to be restored	01031
	1		Wood	06220
	2		Lath & plaster	09220
D			Match adjacent existing	01031
	1		Architectural woodwork - paneling	06420
E			Lath & plaster	09200
	1		Paint	09220
		a	Sherwin Williams, no. 1844 - white	
		b	Sherwin Williams, no. 1850 - brown	
F			Gypsum wallboard	09260
	1		Paint	09220
		a	Sherwin Williams, no. 1845 - white	
	2		Vinyl wallcovering	09952
		a	Wal-Tex, G-419 - greybeard	
	3		Ceramic tile	09310
		a	American Olean - oyster pearl	
		b	American Olean - bordeaux	

Color
Finish
Substrate

Master Format Reference (Optional)

Ceiling *Finish and Color Schedule*

A			Special - See Arch. Reflected Clg. Plans	
B			Existing to remain as is	01031
C			Existing to be restored	01031
	1		Ornamental plaster	09200
D			Match adjacent existing	01031
	1		Ornamental plaster	09200
E			Integrated ceiling	13070
	1		Acoustical panels	09511
		a	Armstrong - glacial fissured	
F			Acoustical ceiling	09510
	1		Acoustical panels	09511
		a	Armstrong - glacial fissured	
	2		Acoustical tile - concealed spline	09512
		a	Armstrong - random perforated	
	3		Acoustical tile - exposed spline	09512
		a	Armstrong - random perforated	
G			Linear metal ceiling system	09513
	1		Manufacturer's standard finish	
		a	Alcan - white	

Color
Finish
Substrate

Master Format Reference (Optional)

Example: Small or Simple Project

Room Finish Schedule

Room Name	Room No.	Floor				Base		N. Wall				E. Wall				S. Wall				W. Wall				Clg			Remarks
		CONCRETE	CERAMIC TILE	VAT	RUBBER MAT	CARPET	4" VINYL	CERAMIC TILE	GPDW. PTD.	CERAMIC TILE	GLASS	VINYL W.C.	GPDW. PTD.	CERAMIC TILE	GLASS	VINYL W.C.	GPDW. PTD.	CERAMIC TILE	GLASS	VINYL W.C.	GPDW. PTD.	CERAMIC TILE	WOOD PNLG	SUSP. ACOUS. TILE	GPDW. PTD.	EXP. CONST.	
LOBBY	100			●			●				●				●				●				●		●		
RECEPTION	101				●		●					●	●				●				●			●			
WAITING	102		●				●		●				●				●				●			●			
SECRETARY	103					●	●		●				●				●				●			●			
OFFICE	104					●	●		●				●				●				●			●			
OFFICE	105					●	●		●				●				●				●			●			
SECRETARY	106					●	●		●				●				●				●			●			
OFFICE	107					●	●		●				●				●				●			●			
MEN'S TOILET	108		●					●		●				●				●				●			●		
WOMEN'S TOILET	109		●					●		●				●				●				●			●		
JANITOR	110	●						●	●				●				●				●					●	
STORAGE	111	●					●		●				●				●				●					●	
CORRIDOR	112			●			●					●								●					●		

Predetermine number of material headings required or allow extra spaces for additional headings during production.

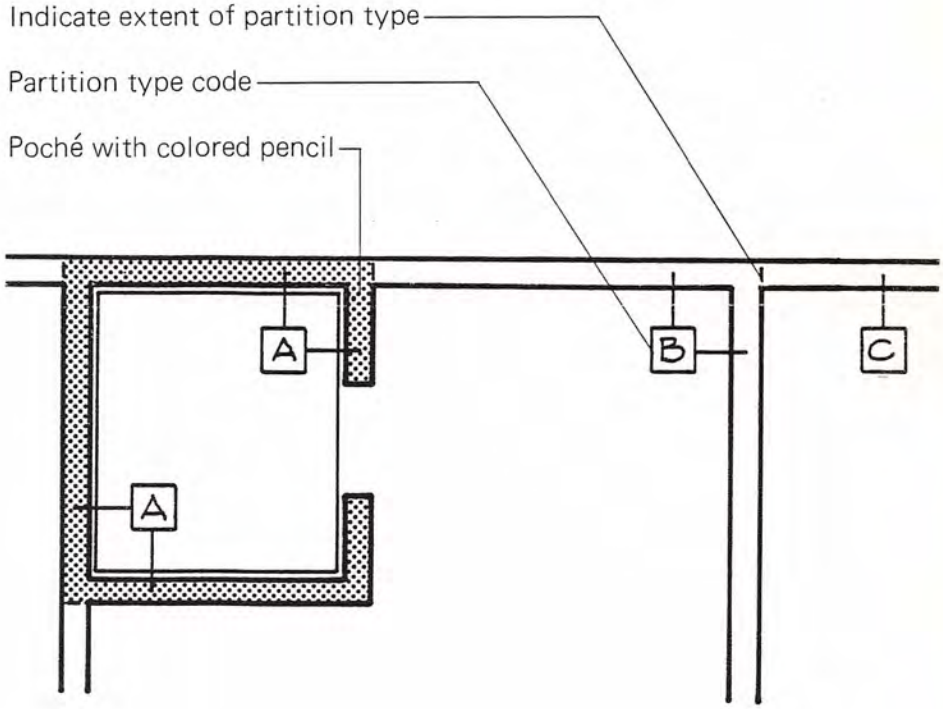
6.10 Partition Schedule

Partition Type Plan Indications

Fire rated

Non-fire rated

Partition Type Reference



Partition Schedule

Diagram each partition and wall furring type. Include the following:

1 Dimension partition thickness

2 Indicate ceiling or construction above

3 Indicate all partition components

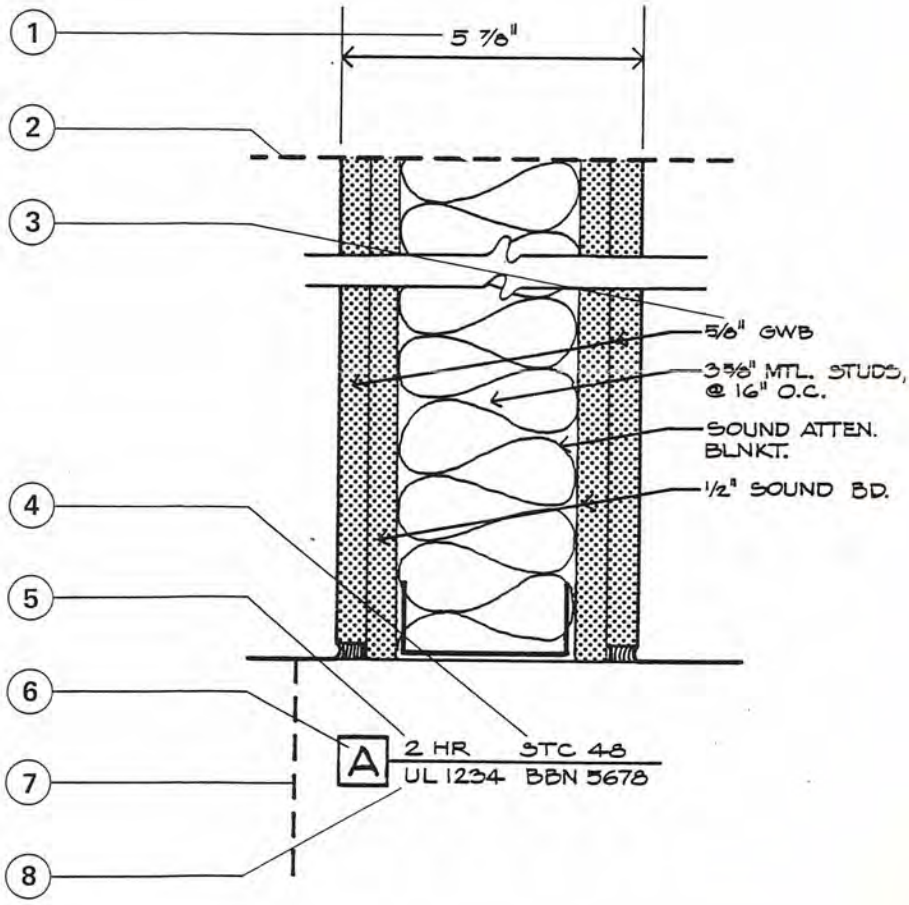
4 Identify sound rating

5 Identify fire rating

6 Partition type code (alphabet)

7 Indicate shaft side of partition

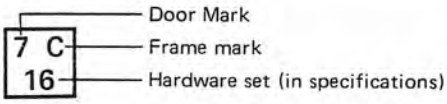
8 Identify test numbers



6.11 Door and Frame Schedule

A *Door Mark System* is used. These marks indicate sets of construction types for doors and frames, not quantities or sequential plan locations. The mark system serves to simplify scheduling by reducing the number of entries required. Submittal requirements in specifications for doors and frames require that shop drawings include a door and frame schedule with locations identified and door and frame marks cross-referenced. The door and frame schedule codes are located on the floor plan drawings.

Plan Indication



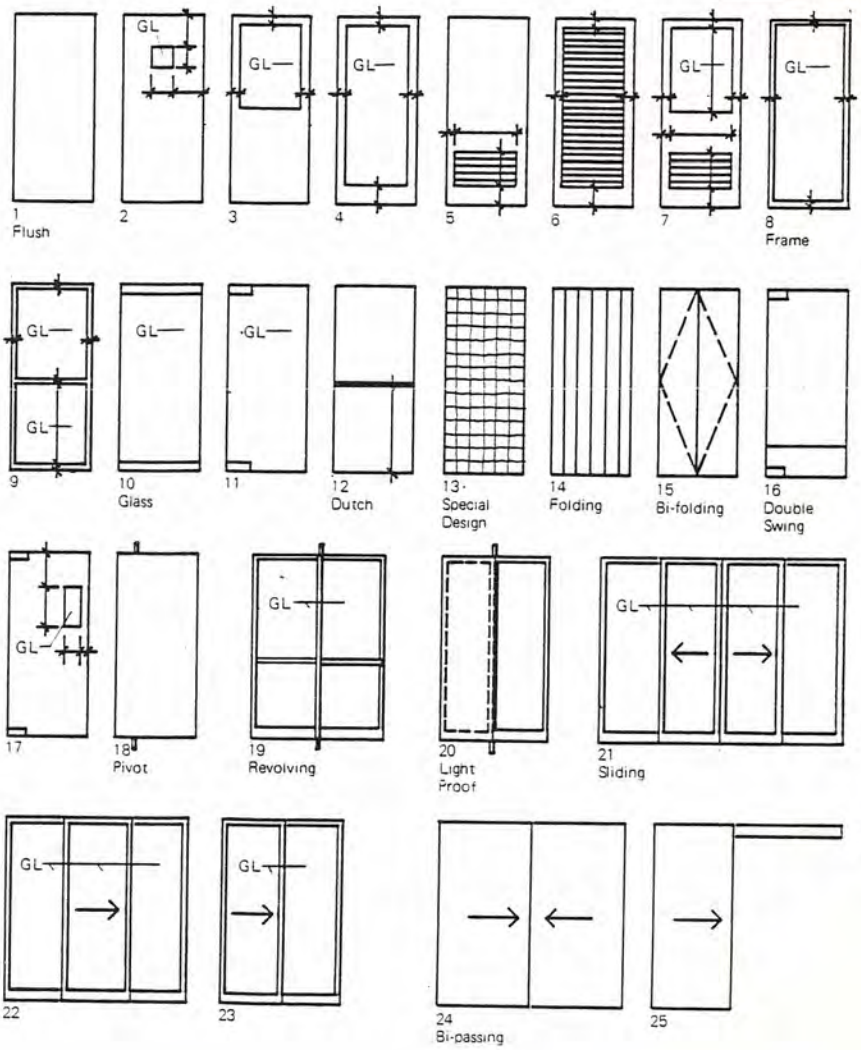
Door and Frame Schedule Codes

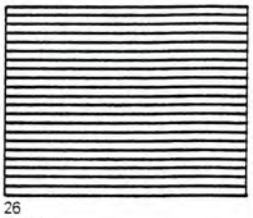
Door and Frame Code

1. Door or frame mark
2. Nominal door size or frame opening size
3. Door or frame type
4. Material:
   - SC = Solid core
   - HC = Hollow core
   - HM = Hollow metal
   - Al = Aluminum
   - GL = Glass
   - WD = Wood
   - STL = Steel
   - SP = Special
5. Finish:
   - TR = Transparent finish
   - OP = Opaque finish
   - PL = Plastic laminate
   - AN = Anodic
   - SP = Special
6. Glass:
   - CP = Clear plate
   - SG = Sheet glass
   - CW = Clear wire
   - TP = Tempered plate
   - PB = Leaded glass
   - OG = Obscure glass
   - BR = Bullet resistant
   - LG = Laminated glass
7. Fire rating value in hours
8. Reference number for details of frame and threshold on sheet A____
9. Remarks

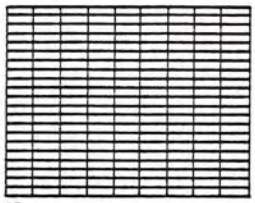
Door Schedule

Mark (1)	Size (2)	Type (3)	Mat (4)	Fin (5)	Glass (6)	Rating (7)	Thresh (8)	Remarks (9)
1	3-0X6-8	1	HM	OP	—	—	19	
2	6-0X6-8	1(PR)	HM	OP	—	—	19	
3	3-0X7-0	2(PR)	HM	OP	CW	2	23	
4	3-0X7-0	1	SC	TR	—	—	6	
5	5-0X7-0	1(PR)	GL	—	TP	—	12	
6	6-0X6-8	17(PR)	HM	SP*	—	—	19	* STAINLESS STEEL, No. 3 FIN.
7	3-0X6-8	6	WD	TR	—	—	18.	
8	—	—	SP*	—	—	—	—	* WROUGHT IRON GATE, SEE 16/A-23

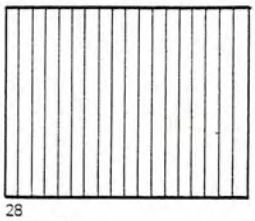




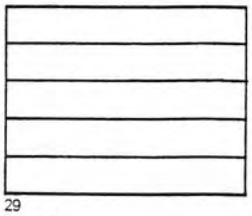
26
Rolling



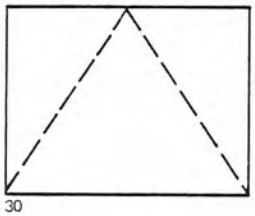
27
Rolling
Grille



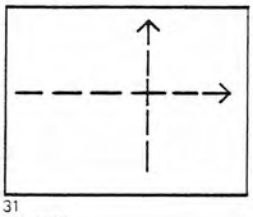
28
Sliding or
Coiling



29
Sectional



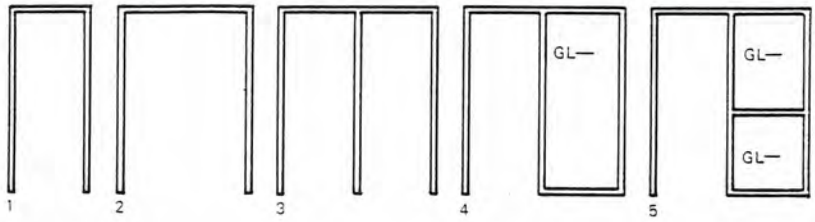
30
Upward
Acting

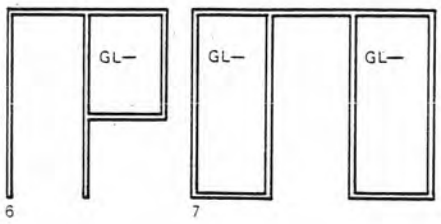


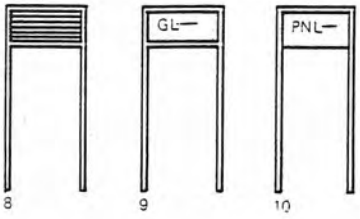
31
Industrial

Frame Schedule

Mark (1)	Size (2)	Type (3)	Mat (4)	Fin (5)	Glass (6)	Rating (7)	Jambs Head (8)	Remarks (9)
A	3-0X6-8	1	HM	OP	—	—	26 26 27	
B	6-0X6-8	2	HM	OP	—	—	26 26 27	
C	3-0X7-0	1	HM	OP	—	2	26 26 27	
D	3-0X7-0	1	SC	TR	—	—	31 31 32	
E	3-0X7-0	2	AL	AN	—	—	53 53 54	
F	6-0X6-8	2	HM	SP*	—	—	22 23 24	* STAINLESS STEEL, NO. 3 FIN.
G	3-0X6-8	5	WD	TR	TP	—	60 61 63	
H	3-0X7-0	7	HM	OP	WG	2	79 79 81	



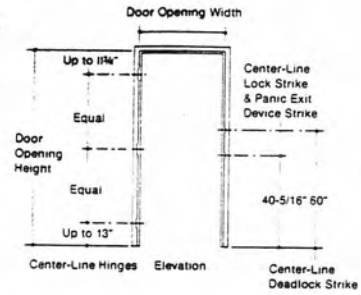




11
Double
Egress

Notes

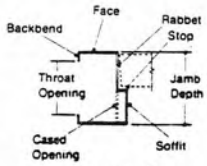
Hardware Locations



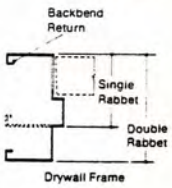
*Center Hinge Omitted on 6'8", 1⅜" Doors, Unless Specified

3 Hinges must be used on fire doors up to 7'6" high

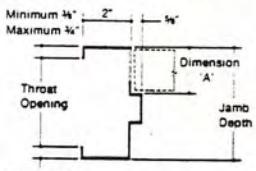
Standard Profiles



Single Rabbet Frame



Drywall Frame

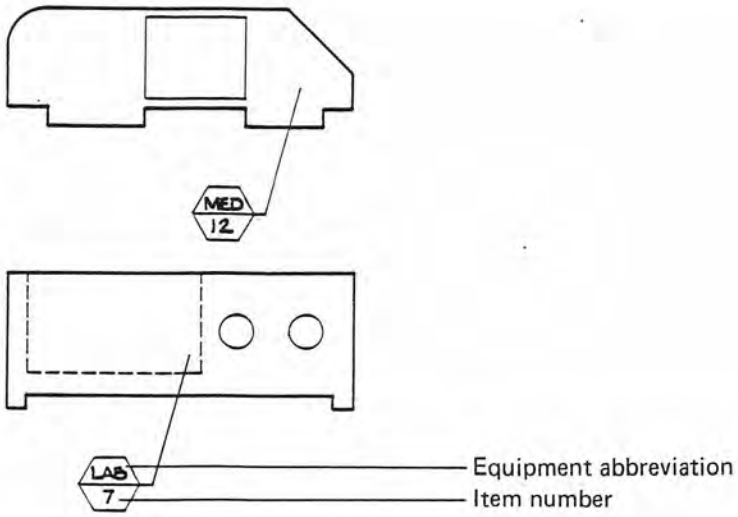


Double Rabbet Frame

6.14 Equipment Schedule

Select headings appropriate to the project. Obtain owner's approval of final schedule.

Equipment Plan Indication



Headings for Schedule

1. Group number
2. Item number
3. Quantity
4. Manufacturer
5. Model number
6. Item description
7. Specification reference
8. Dimensions (LxDxH)
9. Room number
10. Relocated from (renovation)
11. Utility requirements

Format

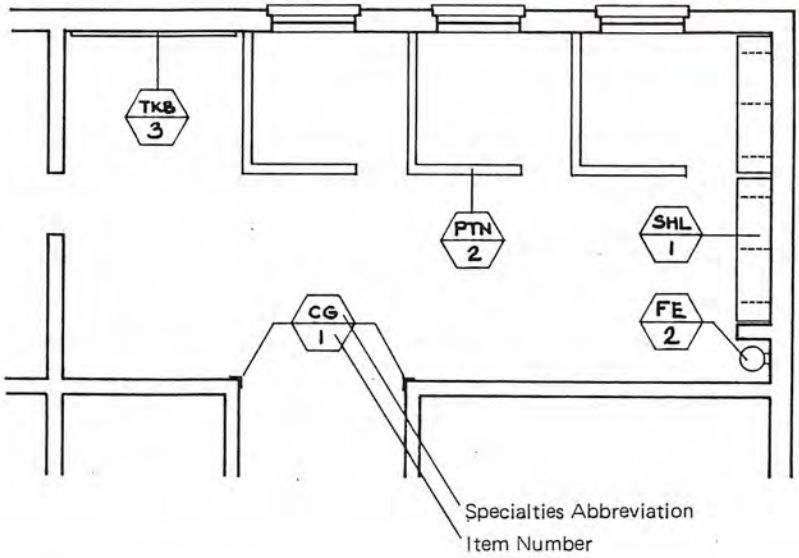
1 Group	2 Item No.	3 Qty.	4 Manufacturer	5 Model No.	6 Description	7 Spec. No.	8 Dimensions	9 Room No.	10 From Room	11 Utility Requirements
1	3/8	3/8	2	3/4	2	1	2	2	2	3

Equipment Abbreviations

Athletic and Theraputic	ATH
Audio-Visual	A-V
Checkroom	CHK
Darkroom	DRK
Detention	DET
Ecclesiastical	ECL
Fluid Waste Disposal and Treatment	FW
Food Service	FS
Industrial and Process	IND
Laboratory	LAB
Laundry and Dry Cleaning	LND
Library	LIB
Loading Dock	LDK
Maintenance Equipment	MNT
Medical	MED
Mercantile	MER
Mortuary	MOR
Musical	MUS
Navigation	NAV
Observatory and Planetarium	OBS
Parking	PRK
Recreational	REC
Registration	REG
Residential	RES
Security	SEC
Service Station	SER
Special Systems	SPS
Telecommunications	TEL
Theater and Stage	THR
Vault	VLT
Vending	VEN

6.18 Specialties Schedule

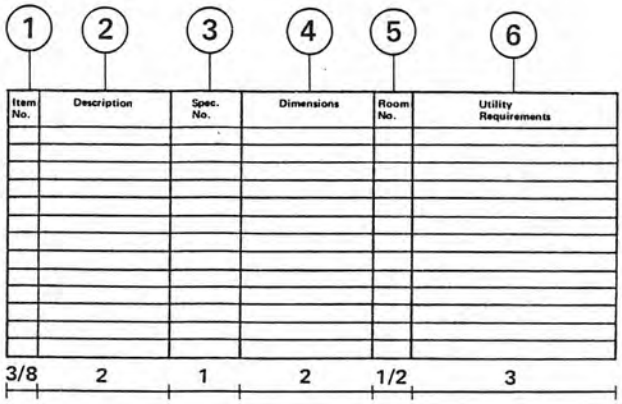
Specialties Plan Indication



Headings for Schedule

1. Item number
2. Item description
3. Specification reference
4. Dimensions
5. Room number
6. Utility requirements

Format

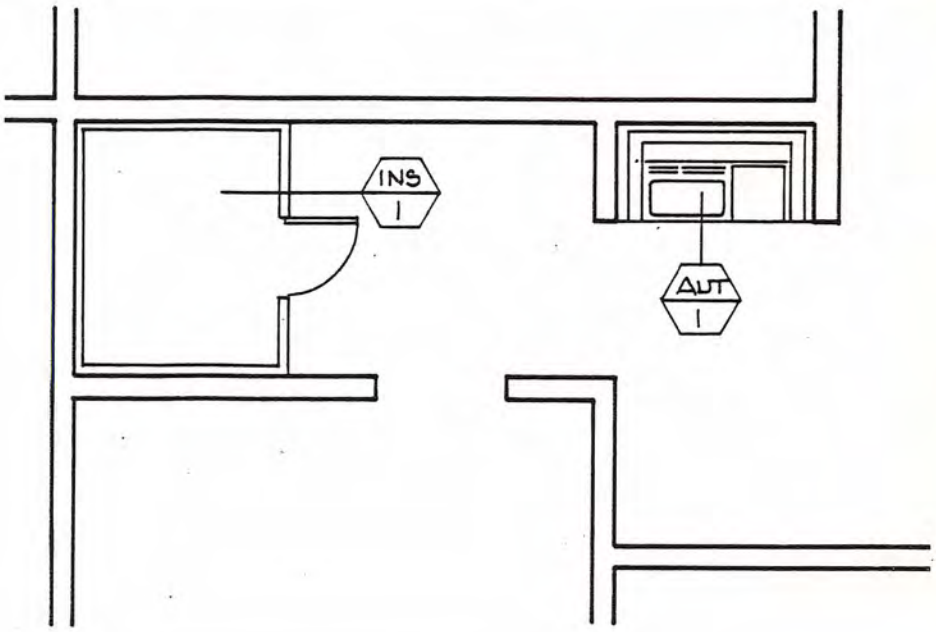


Specialties Abbreviations

Access Flooring	AF
Chalkboard	CHB
Compartments and Cubicles	CUB
Corner Guard	CG
Cupola	CUP
Fire Extinguisher	FE
Fire Extinguisher Cabinet	FEC
Fireplace	FP
Flagpole	FLP
Grille	GRL
Identifying Devices	ID
Locker	LCK
Louver	LVR
Partition	PTN
Pedestrian Control	PED
Pest Control	PC
Postal	PTL
Protective Covers	PRO
Scales	SCL
Screen	SCN
Service Wall System	SWS
Shelving	SHL
Spire	SPR
Specialty Modules	SPM
Steeple	SPL
Stove	STV
Sun Control Device	SUN
Tackboard	TKB
Telephone Enclosure	TEL
Toilet and Bath	TA
Vent	VNT
Wallguard	WG
Wardrobe	WRD

6.20 Special Construction Schedule

Special Construction Plan Indication



Format

Special Construction Type

The generic type of special construction as listed in the specifications. See abbreviation list, 6.20b

Item Number

The individual special construction item described in detail in the specifications.

Special Construction Abbreviations

Air Supported Structures	AIR
Assemblies, Integrated	ASS
Audiometric Rooms	AUD
Automated Building Systems	AUT
Ceilings, Integrated	CLG
Clean Rooms	CLN
Fire Supression and Supervisory Systems	FSS
Geothermal Systems	GEO
Hyperbaric Rooms	HYP
Ice Rinks	ICE
Instrumentation	INT
Insulated Rooms	INS
Kennels and Animal Shelters	KEN
Observatories	OBS
Pools	POO
Pre-Engineered Structures	PRE
Radiation Protection	RAD
Solar Energy Systems	SOL
Special Purpose Rooms and Buildings	SPL
Vaults	VLT
Vibration, Sound and Seismic Control	VIB
Wind Energy System	WIN

7.3 Project Data Format

1.0 Name of Building

1.1 Building type
1.2 Official project name
1.3 Other name or associated names

2.0 Location

2.1 Address
2.2 Name of nearest nationally known city

3.0 Client

3.1 Client type (individual, private company, institution, public agency)
3.2 Client's name and address
- Names and addresses of individuals in client group

3.3 Project user's name and address
- Names and addresses of individuals in project user group

4.0 Quality Level and Costs

4.1 Quality level (low, medium, high)
4.2 Budgeted price
4.3 Bid price or GMP
4.4 Final price
- Per sq ft
- Per cubic ft

5.0 Credits

5.1 Project manager
5.2 Project designer
5.3 Project architect
5.4 Landscape architect
5.5 Interior designer
5.6 Structural engineer
5.7 Mechanical engineer
5.8 Electrical engineer
5.9 Other consultants
5.10 Construction manager
5.11 General contractor

6.0 Systems

6.1 Structural system
6.2 Mechanical system
6.3 Electrical system emergency power system
6.4 Major materials

7.0 Materials and Equipment Manufacturers

7.1 Foundation
7.2 Structure
- 7.2.1 Frame
- 7.2.2 Walls
- 7.2.3 Floors
- 7.2.4 Roof

7.3 Wall surfaces
- 7.3.1 Exterior
- 7.3.2 Interior

7.4 Floor surfaces
7.5 Ceiling surfaces
7.6 Roof surfaces
7.7 Waterproofing and dampproofing
7.8 Insulation
7.9 Roof drainage
7.10 Partitions
7.11 Windows
7.12 Doors
- 7.12.1 Interior
- 7.12.2 Overhead
- 7.12.3 Elevator
- 7.12.4 Entrance

7.13 Hardware
- 7.13.1 Lock sets
- 7.13.2 Door closers
- 7.13.3 Hinges
- 7.13.4 Casement
- 7.13.5 Rolling door
- 7.13.6 Panic exit

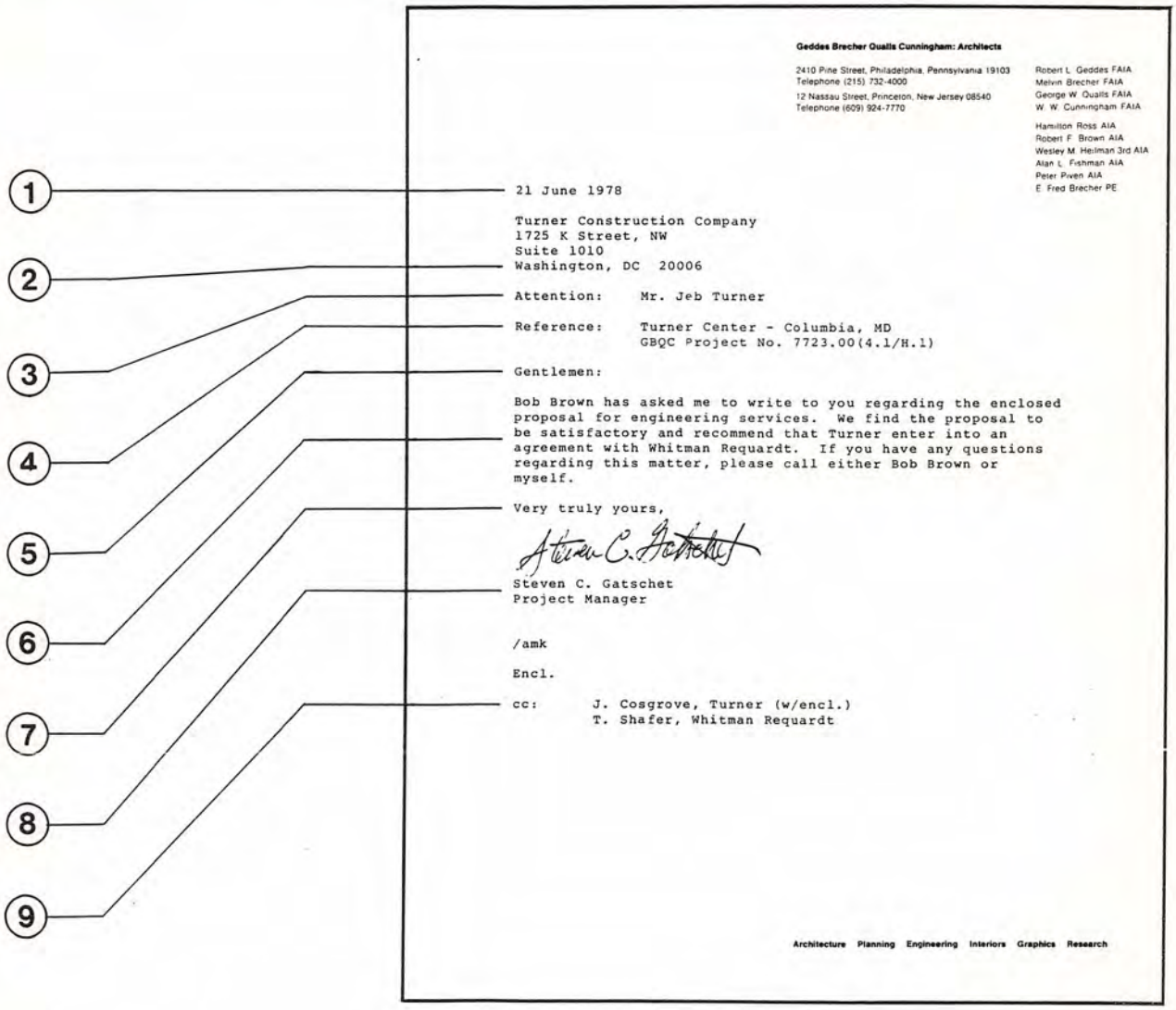
7.14 Paint and stain
- 7.14.1 Exterior
- 7.14.2 Interior

7.15 Equipment and services
- 7.15.1 Kitchen
- 7.15.2 Laundry
- 7.15.3 Intercom

7.0 Materials and Equipment Manufacturers, continued

7.15.4 Raised floor
7.15.5 Public address
7.15.6 Public seating
7.15.7 Special
7.16 Elevators
7.17 Moving stairs
7.18 Lighting fixtures
7.18.1 Exterior
7.18.2 Interior
7.19 Electrical distribution
7.20 Plumbing and sanitary
7.20.1 Toilets
7.20.2 Tubs and lavatories
7.20.3 Flush valves
7.20.4 Industrial
7.20.5 Pipe
7.20.6 Sprinklers
7.21 Heating system
7.22 Air conditioning system

7.4 Letter Writing



1 Write date as day, month, year

2 Company Address

3 Directive to individual

4 Project name, GBQC project number and file code

5 Salutation as "Gentlemen", "Dear Sir or Madam", "Dear Mr. or Ms. (Surname)", "Dear (First Name)"

6 Text

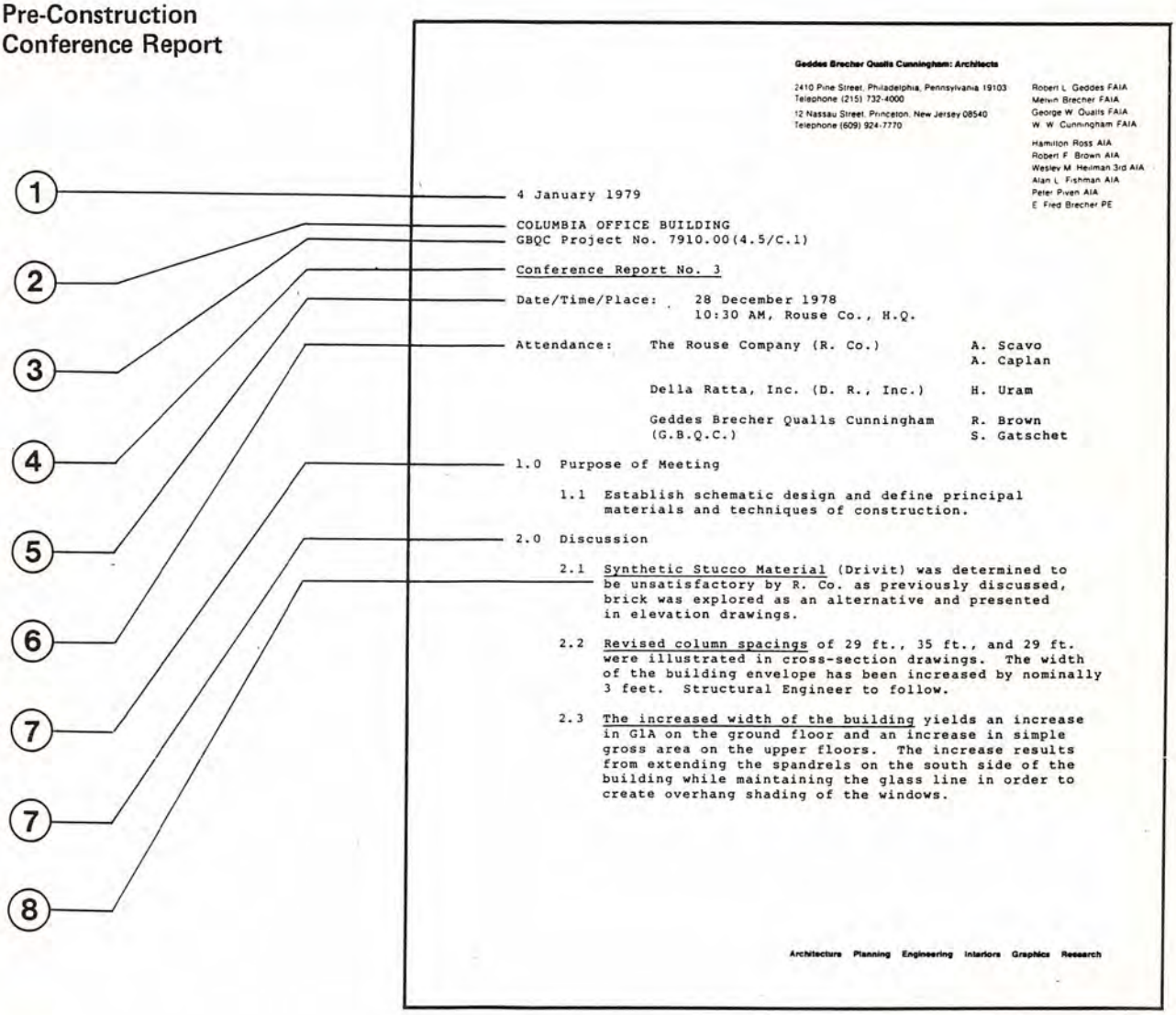
7 Closing as "Sincerely" or "Very Truly Yours"

8 Writer's name and title

9 Noted copies

7.5 Meeting Minutes

Pre-Construction Conference Report



Geddes Brecher Qualls Cunningham: Architects

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Robert L. Geddes FAIA
Melvin Brecher FAIA
George W. Qualls FAIA
W. W. Cunningham FAIA
Hamilton Ross AIA
Robert F. Brown AIA
Wesley M. Heilman 3rd AIA
Alan L. Fishman AIA
Peter Piven AIA
E. Fred Brecher PE

4 January 1979

COLUMBIA OFFICE BUILDING
GBQC Project No. 7910.00(4.5/C.1)

Conference Report No. 3

Date/Time/Place: 28 December 1978
10:30 AM, Rouse Co., H.Q.

Attendance: The Rouse Company (R. Co.) — A. Scavo, A. Caplan
Della Ratta, Inc. (D. R., Inc.) — H. Uram
Geddes Brecher Qualls Cunningham (G.B.Q.C.) — R. Brown, S. Gatschet

1.0 Purpose of Meeting

1.1 Establish schematic design and define principal materials and techniques of construction.

2.0 Discussion

2.1 Synthetic Stucco Material (Drivit) was determined to be unsatisfactory by R. Co. as previously discussed, brick was explored as an alternative and presented in elevation drawings.

2.2 Revised column spacings of 29 ft., 35 ft., and 29 ft. were illustrated in cross-section drawings. The width of the building envelope has been increased by nominally 3 feet. Structural Engineer to follow.

2.3 The increased width of the building yields an increase in GlA on the ground floor and an increase in simple gross area on the upper floors. The increase results from extending the spandrels on the south side of the building while maintaining the glass line in order to create overhang shading of the windows.

Architecture Planning Engineering Interiors Graphics Research

1. Typing date as day, month, year
2. Project name
3. GBQC project number and file code
4. Conference report number
5. Date, time and place of conference
6. Attendees with company names abbreviated
7. Four part format:
   1.0 Purpose of meeting
   2.0 Discussion
   3.0 Next actions
   4.0 Transmittals

Pre-Construction Conference Report, continued

Page 2
COLUMBIA OFFICE BUILDING
Conference Report No. 3
4 January 1979

Geddes Brecher Qualls Cunningham: Architects

8

2.4 The site plan will require the change of showing the wider building, with the additional width being taken out of the area of the drive-in bank. The additional width should not be taken out of the sidewalk in front of the commercial spaces.

2.5 Window heads at the south side to be secured to deep joist rather than steel stud frame.

2.6 Windows being considered are Marmet.

2.7 Column covers at south side to be in the order of 2 ft. wide with second material enclosing sides of column to extend back entirely to the glass line. D. R., Inc. expressed preference that such second material be one that would be provided and installed by the same party as the sloped sill.

9

2.8 Soffits, column side covers and sills are not to be wood.

2.9 Construction joints in masonry between windows to be horizontal at head and sill. Other joints to be determined.

2.10 Masonry units to have thru-color and an allowance of approximately $170/M.

2.11 Colored mortar shall not be used in this project.

2.12 Glass color for windows on typical floor to be determined in conjunction with other material color selections. Ground floor glazing to be clear all-around.

2.13 Feature stripe, windows and column side covers to be metal with baked acrylic finish.

2.14 Sloped sills at south side of building to possibly be standing-seam metal.

7

3.0 Next Actions

3.1 GBQC to develop ground floor plan illustrating no public toilets. Theoretical and actual tenant toilet arrangements to be shown.

3.2 GBQC to revise site drawing as a sketch and transmit it to A. Scavo with copy to H. Uram.

8 Each subject of discussion to be a separately numbered paragraph. First words of each paragraph are to identify the subject and be underlined.

9 Refer to attendees by company abbreviation

Pre-Construction Conference Report, continued

Page 3 Geddes Brecher Qualls Cunningham: Architects
COLUMBIA OFFICE BUILDING
Conference Report No. 3
4 January 1979

3.3 GBQC to refine design of elevations and floor plans and advise precisely about additional square footage.

(7) 4.0 Transmittals

4.1 From GBQC to D. R., Inc. Alan brochure and elevation prints.

4.2 From D. R., Inc. to GBQC sepia line set of approved site plan drawings.

(10) This report represents the Architect's summation of the proceedings and is not a transcript. Unless written notice of any corrections or clarifications is received by the Architect within ten (10) days of issue, this report shall be considered factually correct and become part of the official project record.

(11) Submitted by:

(12) Steven C. Gatschet
Project Manager

/amk

(13) Distribution: Those Present

10 Notice for corrections

11 Closing

12 Writer's name and title

13 Noted copies; also others as required by arrangement

Construction Conference Report

Geddes Brecher Qualls Cunningham: Architects

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Peter Piven AIA
E. Fred Brecher PE

(1) 26 March 1980

(2) LIBERTY STATE PARK
Phase Two Restoration
Jersey City Terminal

(3) DBC P147-03

(4) GBQC Project No. 7505.16

(5) CONSTRUCTION CONFERENCE REPORT NO. 22

(6) Date/Time: 12 March 1980/9:30 A.M.

(7) Location : Liberty State Park
Jersey City Terminal

Attendance:

(8)

Division of Building and Construction (DBC)	Victor Sarte Terry Pollin
Department of Environmental Protection (DEP)	John Kent Jim LaCour Paul Sedor
Hall Construction Co., Inc. (HCC)	John Hall Ed Clayton
Geddes Brecher Qualls Cunningham (GBQC)	William Dix
John Milner Associates (JMA)	F. Neal Quenzel

(9) 1.0 CONTRACT ADMINISTRATION

GENERAL REQUIREMENTS

01041 Project Coordination

(10) 1.1 Stabilization of Damaged Bulkheads and removal of storm-related debris from the perimeter of the site are to be performed under separate contract by Ottilio & Sons, Inc. GBQC and HCC both emphasized the need for prompt performance of this work so that seeding operations in that area can be completed this Spring.

(11)

1 Typing date as day, month, year

2 Project name

3 Owner's project number (if any)

4 GBQC project number

5 Conference report number

6 Date and time of conference

7 Location of conference

8 Attendees with company names abbreviated

Construction Conference Report, continued

Geddes Brecher Qualls Cunningham: Architects

PAGE 2
LIBERTY STATE PARK
CONSTRUCTION CONFERENCE REPORT NO. 22
26 March 1980

01060 Regulatory Requirements

1.2 DBC-12 Forms are still required for a number of materials including those for landscaping, glazing and grout.

01340 Shop Drawings and Certifications

1.3 Architectural Woodwork: Drawings for items within the toilet room area have been approved. Drawings for most items within the waiting room area have yet to be submitted.

1.4 Certification from the lumber supplier will be acceptable for permanent framing, blocking and nailers.

01390 Subcontractor and Materials Approvals

1.5 Diamond M. Lumber was proposed by HHC as supplier of finished wood flooring. A DBC-12 will be required for this firm.

1.6 The painting subcontractor, No Concepts, Inc., was noted as having gone out of business. HCC proposed using Fromkin Bros., Inc. for work in the toilet room area. HCC will solicit bids for completion of work in other areas.

01410 Testing

1.7 Compaction: The Architect reported that he had reviewed all compaction tests to date and noted that the information submitted does not comply with the specifications.

1.8 Topsoil: In order to complete the topsoil testing, the Architect requested that several tests be performed after topsoil has been spread and prepared.

9 Four part format:
1.0 Contract administration
2.0 Divisions of the work
3.0 Project status
4.0 Next meeting notice

10 Discussion: each subject of discussion to be a separately numbered paragraph. First words of each paragraph are to identify the subject and be underlined.

11 Refer to attendees by company abbreviation

Construction Conference Report, continued

Geddes Brecher Qualls Cunningham: Architects

Page 3
LIBERTY STATE PARK
CONSTRUCTION CONFERENCE REPORT NO. 22
26 March 1980

9 — 2.0 DIVISIONS OF THE WORK

12 — SITEWORK

02072 Demolition

2.1 Selective demolition is essentially complete except for removal of miscellaneous doors, windows, and ornamental metal as required to perform restoration within the waiting room.

13 — 02210 Site Grading

2.2 All borrow fill is reported as delivered, spread and compacted except in the small area where the fence is to be removed.

12 — MASONRY

04510 Masonry Cleaning

2.3 Masonry cleaning is not complete. The east face of the west wall, Room 120, remains to be cleaned.

2.4 Tests for removal of spilled epoxy have not been completed pending warmer weather.

04520 Masonry Restoration

2.5 Replacement of glazed brick is proceeding where possible, but is essentially limited to removal of damaged existing brick.

12 — METALS

05120 Structural Steel

2.6 Steel trusses have been painted.

05700 Ornamental Metal

2.7 Treads on the main stairway were determined to consist of three sections each, varying from 5' to 7', in order to match the locations of joints existing in the risers.

12 Organize minutes of part two according to the 16 divisions of masterformat. (The actual course of discussion may have been different.)

13 Masterformat section number (optional)

Construction Conference Report, continued

Geddes Brecher Qualls Cunningham: Architects

Page 4
LIBERTY STATE PARK
CONSTRUCTION CONFERENCE REPORT NO. 22
26 March 1980

2.8 Floral work at balcony brackets was proposed by JMA to be constructed out of fiberglass.

9 — 3.0 PROJECT STATUS

The Architect has observed the following list of conditions in the status of the work.

3.1 Work in the toilet room area is proceeding satisfactorily. A few items are behind schedule due to changes in strategy, but they should be complete by 4 June 1980.

3.2 Historic restoration work is 14 to 15 weeks behind schedule.

3.3 Plumbing work is proceeding satisfactorily since the arrival of the fixtures.

14 — 3.4 Summary

Award Date:	11 April 1979
Notice to Proceed:	11 April 1979
Adjusted Completion Date:	4 June 1980
Adjusted Contract Time:	420 calendar days
Elapsed Time:	336 calendar days
Percentage Complete:	
Elapsed Time	75%
Authorized Payments	54%
Progress:	
Sitework	Behind schedule
General Construction	Behind schedule
Plumbing	Satisfactory
Electrical	Satisfactory

9 — 4.0 Next Meeting

Wednesday, 2 April 1980
9:30 A.M, Project Site

14 Summary statistics

7.10 Basic Code Considerations

1.0 Type of occupancy

2.0 Type of construction

3.0 Gross and net areas

4.0 Height and area limitations

5.0 Area populations

6.0 Travel distances to exits

7.0 Corridor widths

8.0 Exit door and exit stair widths

9.0 Plumbing fixture counts

10.0 Requirements of occupancy type

11.0 Requirements of construction type

12.0 Fire resistive requirements of structural and architectural components

Code Submission Checklist:

Always refer to local codes in force.

1.0 General Requirements

1.1 Architect's and/or engineer's seal
1.2 Name, address and phone number of architect and engineering consultants
1.3 Completeness of door schedule and finish schedule

2.0 Building Construction Classification

2.1 Value of all floors and roofs
2.2 Value of exterior wall construction
2.3 Value of all partitions
2.4 Protection of structural members

3.0 Occupancy

3.1 Use or occupancy type indicated for all spaces on plans or index

4.0 Maximum Permitted Areas

4.1 In accordance with type of construction
4.2 In accordance with number of stories
4.3 Reduction in certain fire zones
4.4 Increases based on streets and courts
4.5 Increases based on fire supression systems
4.6 In accordance with use of building

5.0 Maximum Permitted Height (Stories and Feet)

5.1 In accordance with type of construction
5.2 In accordance with use of building

6.0 Separation Requirements

6.1 Values of separations
6.2 Extent of separations
6.3 Openings through and at ends of walls
6.4 Parapets required

7.0 Demising Partition Requirements

7.1 Values of separations
7.2 Extent of separations
7.3 Openings through and at ends of walls

8.0 Requirements for Fireproof Openings In Exterior Walls

9.0 Population

9.1 All spaces
9.2 Building total

10.0 Exit Requirements

10.1 Number of exits required
10.2 Number of stairways required
10.3 Width of doors
10.4 Width of stairways
10.5 Stairway landings
10.6 Distance of travel and dead-end corridors
10.7 Swing of doors
10.8 Handrails for stairs and ramps
10.9 Riser and tread dimensions

11.0 Stairway Enclosure Requirements

11.1 Value of enclosure
11.2 Extent of enclosure
11.3 Smoke-proof stairway requirements
11.4 Value of openings into enclosure

12.0 Value of Public Corridor Walls and Doors

Code Submission Checklist, continued:

13.0 Exit Lighting Requirements

13.1 Interior and exterior exit doors
13.2 Exit pathway

14.0 Roof Covering Type

14.1 In accordance with construction type
14.2 In accordance with roof pitch

15.0 Ceiling Height Requirements

16.0 Construction of Temporary Partitions

17.0 Furnace and Boiler Room Enclosure Requirements

17.1 Value of walls, floor and ceiling
17.2 Protection of openings
17.3 Ventilation of room
17.4 Equipment clearances
17.5 Location in relationship to stairways
17.6 Exits from room

18.0 Chimney Construction Requirements

18.1 Materials
18.2 Size of flue
18.3 Height above roof

19.0 Fireplace Construction Requirements

20.0 Range Hood and Vent Installation Requirements

21.0 Window Requirements

21.1 Minimum area of light
21.2 Minimum area of operable portion

22.0 Shaft Construction

22.1 Value of shaft
22.2 Permitted contents

23.0 Penthouse Construction Requirements

24.0 Access to Roof Requirements

24.1 Stairway
24.2 Roof hatch

25.0 Balcony, Roof Terrace and Mezzanine Requirements

25.1 Maximum areas permitted
25.2 Exit requirements

26.0 Marquee and Platform Construction Requirements

27.0 Arcade and Bridge Construction Requirements

28.0 Incinerator and Enclosure Requirements

Handicapped Requirements:

Always refer to local codes in force.

1.0 Requirements for Sites and Exterior Facilities

1.1 Parking and passenger loading zones
1.2 Curbs and ramps

2.0 Requirements for Route Into and Through Buildings

2.1 Ramps
2.2 Entrances
2.3 Stairs
2.4 Elevators
2.5 Corridors
2.6 Doors

3.0 Space Type Requirements

3.1 Toilet rooms
3.2 Assembly areas
3.3 Dwelling units

4.0 Spatial Allowances and Reach Ranges

4.1 Drinking fountains
4.2 Water closets
4.3 Toilet stalls
4.4 Urinals
4.5 Lavatories and mirrors
4.6 Bathtubs
4.7 Shower stalls
4.8 Storage
4.9 Controls and operating mechanisms
4.10 Alarms
4.11 Telephones
4.12 Seating tables and work surfaces

5.0 Information Devices

5.1 Ground and floor surfaces
5.2 Signage

Zoning Code Checklist:

Always refer to local code in force.

1.0 Survey and Legal Description

1.1 Correctness of legal description of plans
1.2 Dimensions of lot on plot plan in agreement with maps
1.3 Survey stakes indicated at all corners on plot plan
1.4 Proper street and alley positions on plot
1.5 Locations of accessory buildings

2.0 Vehicle Accommodation

2.1 Off-street parking and screening requirements
2.2 Proper surfacing and drainage
2.3 Approval of driveways, curbcuts and other encroachments over public spaces

3.0 Area and Height Limitations

3.1 Coverage permitted on lot not exceeded by building area
3.2 Building height permitted in stories and feet
3.3 Yard compliance at front, side, rear
3.4 Minimum lot size limitations

4.0 Building Use

4.1 Property zoned for use as indicated on application
4.2 Minimum distances of certain uses from residential zones
4.3 Certain uses within enclosed or completely enclosed building
4.4 Uses or conditions requiring variance submitted for hearing

7.11 Pin-Registered Drafting

Applications:	Site Plans	Utilities Landscape Survey Test Borings Topography Site Demolition Civil Engineering Urban Design Components
	Floor Plans	Architectural Structural Plumbing Fire Protection Mechanical Electrical Interior Design Graphics Tenant Work Developing Record Documents

Advantages:

Photographic drafting techniques are facilitated.

Improves coordination of design disciplines.

Less repetitive drafting.

Design development drawings can be used in working drawings.

Faster response to design changes.

Checking process improved by composite inspection of drawings.

Screened backgrounds are facilitated.

8-1/2" x 11" negatives are easily handled and stored.

Multiple copies of reproducibles are easily produced.

Images can easily be changed photographically.

Off-set printing and half-size sets are readily produced.

Consultants "originals" can be created in multiple copies.

Costomized drawings for regulatory agencies can be easily developed, (e.g. exitways of mixed-use occupancies can be highlighted).

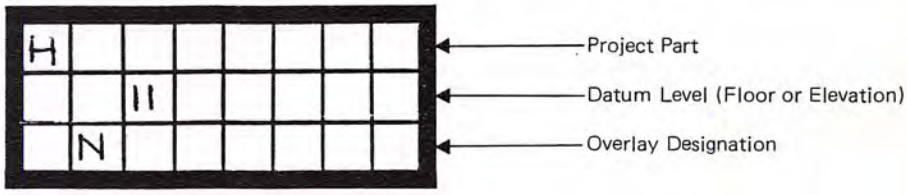
English language text and measurements can easily be translated to foreign language notation and metric nomenclature.

Codification of Overlays:

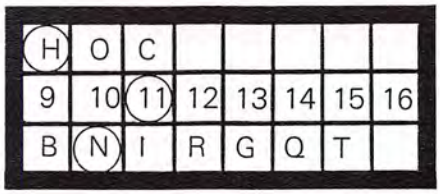
Each sheet must be rationally codified in order to facilitate writing of printing instructions, as well as day-to-day identification and filing. See, MOP 6.1

A three part project in which there is a hotel tower, a convention center and an office tower.

Example: Hotel, 11th floor, Notes & Dimensions Sheet.



or circle pre-printed designations.



Overlay Designations:

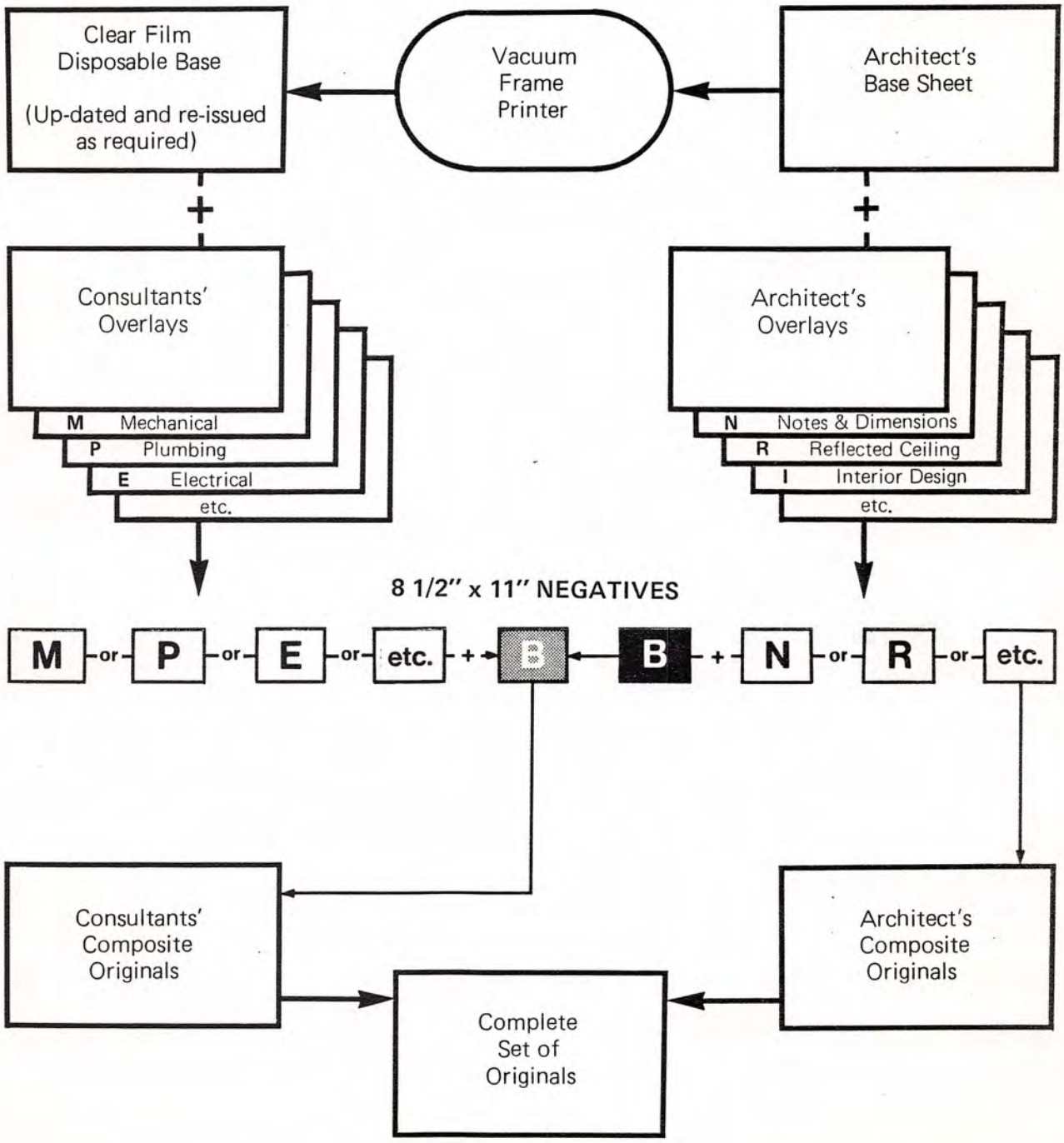
Architect

B Base (Floor Plan Template)
N Notes, Dimensions and Column Grid
I Interior Design
R Reflected Ceiling Plan
G Graphics
Q Equipment
X Authority Review Information
T Tenant Work

Design Consultants

M Mechanical (HVAC)
P Plumbing
W Soil Waste
F Fire Protection
E Electrical Power
L Lighting
C Communication or Controls

The Process


Clear Film
Disposable Base
(Up-dated and re-issued as required)
Vacuum
Frame
Printer
Architect's
Base Sheet
+
+
Consultants'
Overlays
M Mechanical
P Plumbing
E Electrical
etc.
Architect's
Overlays
N Notes & Dimensions
R Reflected Ceiling
I Interior Design
etc.
8 1/2" x 11" NEGATIVES
M or P or E or etc. + B
B + N or R or etc.
Consultants'
Composite
Originals
Architect's
Composite
Originals
Complete
Set of
Originals

Notes on the Process:

Architect's base sheet to contain sheet title and border formats, pre-printed on wash-off mylar.

If possible specify wash-off mylar to be matte one side only. This facilitated clarity in printing check sets. (Note: surface-one-side mylar will not permit drafting on reverse side.)

If colored pencil poche is anticipated for partition type designation, either apply it directly to the front surface or use a solid black poche on an overlay sheet and specify that it be screened.

When issuing revised clear film base sheets to consultants, accompany them with instructions to compare the new and old sheets for changes or make a print of the new sheet, and mark the changes on it. Always instruct the consultant to discard obsolete base sheets. Mark the issue date of revised base sheets in large numerals in the sheet number box.

If a revision to a base sheet is minor enough in scope so as to make the issuance of a whole new clear film sheet questionable, make a sepia print of the affected area only. Instruct the consultant to fix it to the back side of the clear film base sheet with mylar tape. After enough small changes have occured, issue a new clear film base sheet as described above.

Check prints for in-house use should be produced by hand-held registration of overlay sheets. This will result in a slight progressive misalignment of the overlays in the print but is adequate for most purposes. Check prints for use by consultants or others should be produced by vacuum frame pin-registered printing. If significant quantities of prints are required, time can be saved by making a vacuum frame pin-registered sepia reverse and using it as an "original" for diazo printing in the usual way.

8 1/2" x 11" negatives used in producing the final composite originals should be entered in the project file.

Printing Instructions

Example: Single Part Project

PRINTING INSTRUCTIONS PIN-REGISTERED DRAFTING

PROJECT _____ GBQC NO. _____

SHEET NO. PRINTING CODE ( ) INDICATES SCREEN FOR BACKGROUND

Arch. Floor Plans

A-3	1B + 1N
A-4	2B + 2N
A-5	3B + 3N
A-6	4B + 4N

Reflected Clg. Plans

A-17	1B + 1R
A-18	2B + 2R
A-19	3B + 3R
A-20	4B + 4R
A-21	5B + 5R

HVAC Floor Plans

Note: Parentesis indicating that base drawings are to be screened.

M-3	(1B) + 1M
M-4	(2B) + 2M
M-5	(3B) + 3M
M-6	(4B) + 4M
M-7	(5B) + 5M

Lighting Floor Plans

L-3	(1B + 1R) + 1L
L-4	(2B + 2R) + 2L
L-5	(3B + 3R) + 3L
L-6	(4B + 4R) + 4L

Example: Multiple Part Project

PRINTING INSTRUCTIONS PIN-REGISTERED DRAFTING

PROJECT _____ GBQC NO. _____

SHEET NO. PRINTING CODE ( ) INDICATES SCREEN FOR BACKGROUND

Arch. Floor Plans

AH-117	H11B + H11N
AH-118	H12B + H12N
AH-119	H13B + H13N
AH-120	H14B + H14N

Reflected Clg. Plans

AH-817	H11B + H11R
AH-818	H12B + H12R
AH-819	H13B + H13R
AH-820	H14B + H14R
AH-821	H15B + H15R

HVAC Floor Plans

Note: Parenthesis indicating that base drawings are to be screened.

MH-117	(H11B) + H11M
MH-118	(H12B) + H12M
MH-119	(H13B) + H13M
MH-120	(H14B) + H14M
MH-121	(H15B) + H15M

Lighting Floor Plans

EH-117	(H11B) + H11L
EH-118	(H12B) + H12L
EH-119	(H13B) + H13L
EH-120	(H14B) + H14L

7.13 Area and Volume of Buildings

Architectural Area of Buildings:

The Architectural Area of a building is the sum of the areas of the several floors of the building, including basements, mezzanine and intermediate floored tiers and penthouses of headroom height. These areas are measured from the exterior faces of exterior walls or from the centerline of walls separating buildings. Discretion is advised in calculating areas of interstitial space.

> Covered walkways, open roofed-over areas that are paved, porches and similar spaces shall have the architectural area multiplied by an area factor of 0.50.
>
> The architectural area does not include such features as pipe trenches, exterior terraces or steps, chimneys, roof overhangs, etc.

Architectural Volume of Buildings:

The Architectural Volume (cube or cubage) of a building is the sum of the products of the areas defined above (using the area of a single story for multistory portions having the same area on each floor) and the height from the underside of the lowest floor construction system to the average height of the surface of the finished roof above for the various parts of the building.

AIA Standard Net Assignable Area:

The Standard Net Assignable Area is that portion of the area which is available for assignment or rental to an occupant, including every type of space usable by the occupant.

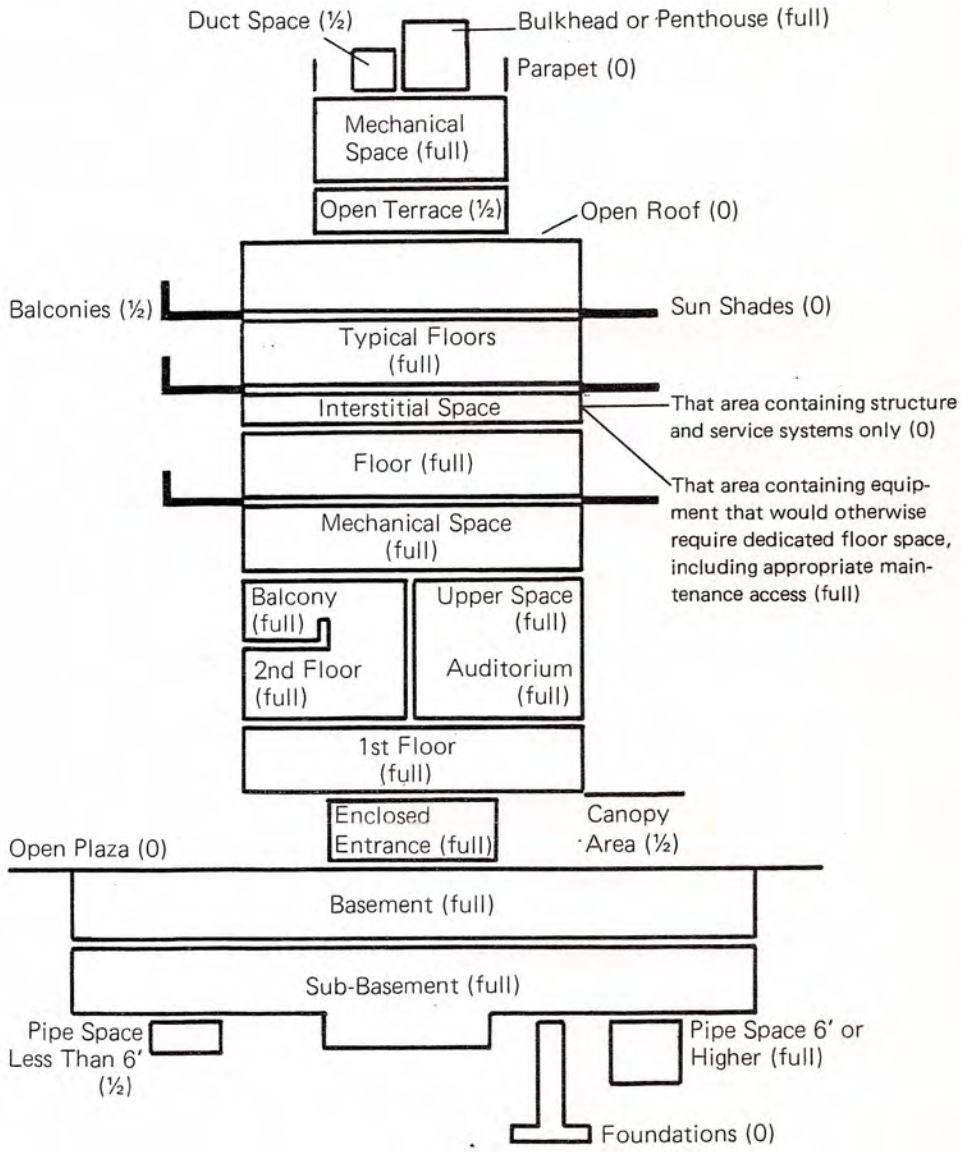
The Standard Net Assignable Area should be measured from the predominant inside finish of permanent outer walls to the office side of corridors or permanent partitions and from center line of adjacent assigned spaces. Where there are interior spaces surrounded by corridors, measurement shall be from the inside face of enclosing walls. Included should be space subdivisions for occupant use; i.e., offices, file rooms, office storage rooms, etc. Deductions should not be made for columns and projections necessary to the building or for partitions subdividing space.

Note: There are two variations of the Net Area which may be useful:

1 Single Occupant Net Assignable Area includes the space from the inside finish of exterior walls to the office side of permanent partitions and including toilets. The Single Occupant Net Assignable Area is different from the Standard Net Assignable Area by the addition of corridors and toilets, but excludes elevator shafts, elevator lobbies, stair enclosures, mechanical equipment rooms and electrical closets.

2 Store Net Assignable Areas are from the exterior front face of the building or store front line through to the exterior rear face of the building and from center line of walls between adjacent spaces.

Area Diagram



Credits

Design:
Rebecca Rose
GBQC Graphics

Binders:
Creative Book Manufacturing
Vinyl finish: Suede
Vinyl color: Charcoal

Divider pages:
Pomco Graphics
Paper: Appleton Tough Check
Bristol Cover, 3 ply
Color: Red

Text pages:
Replica Copycraft
Paper: 70 lb white offset