

Triton College Drafting Standards Manual

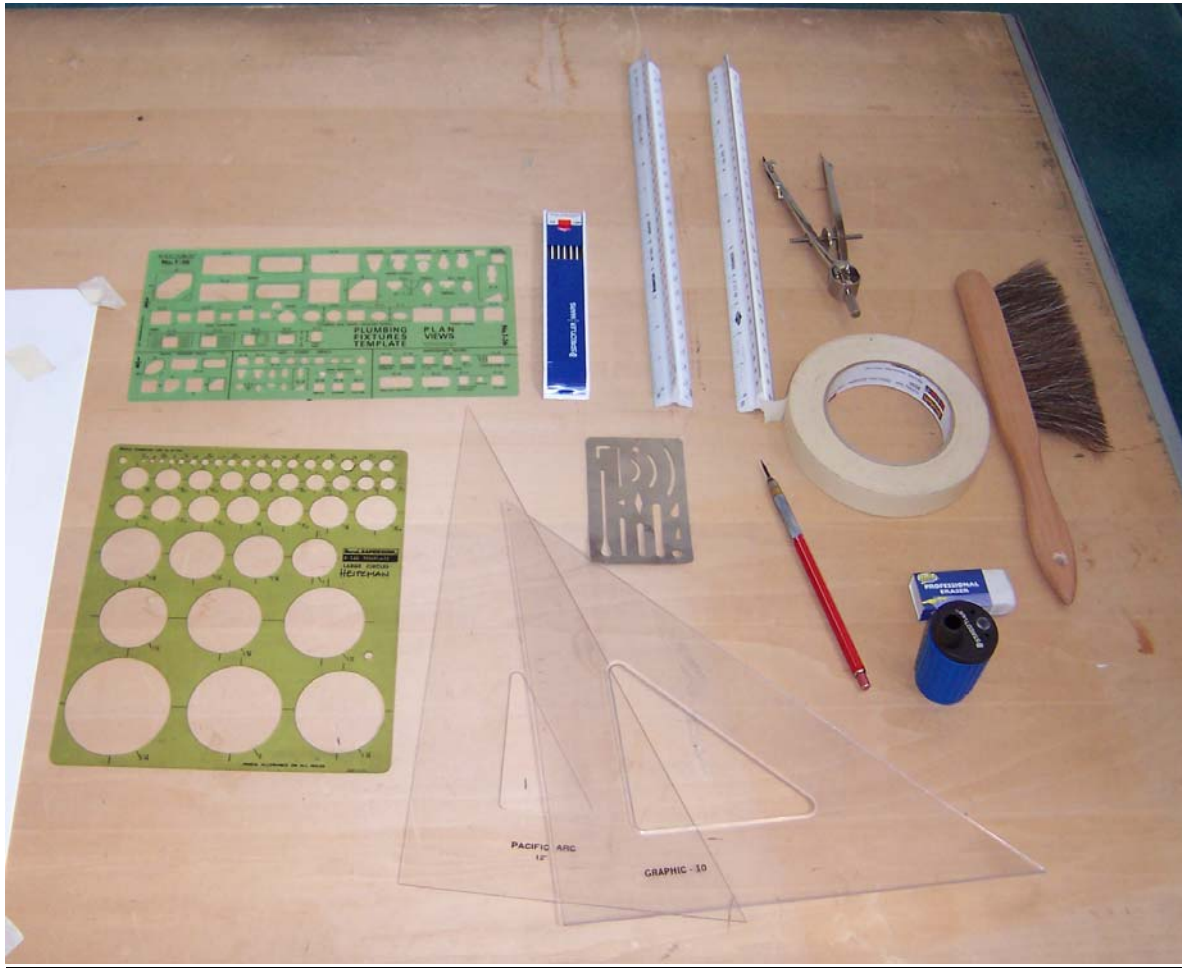
Architecture
Interior Design
Construction Management

August, 2005

Triton College Drafting Standards Manual

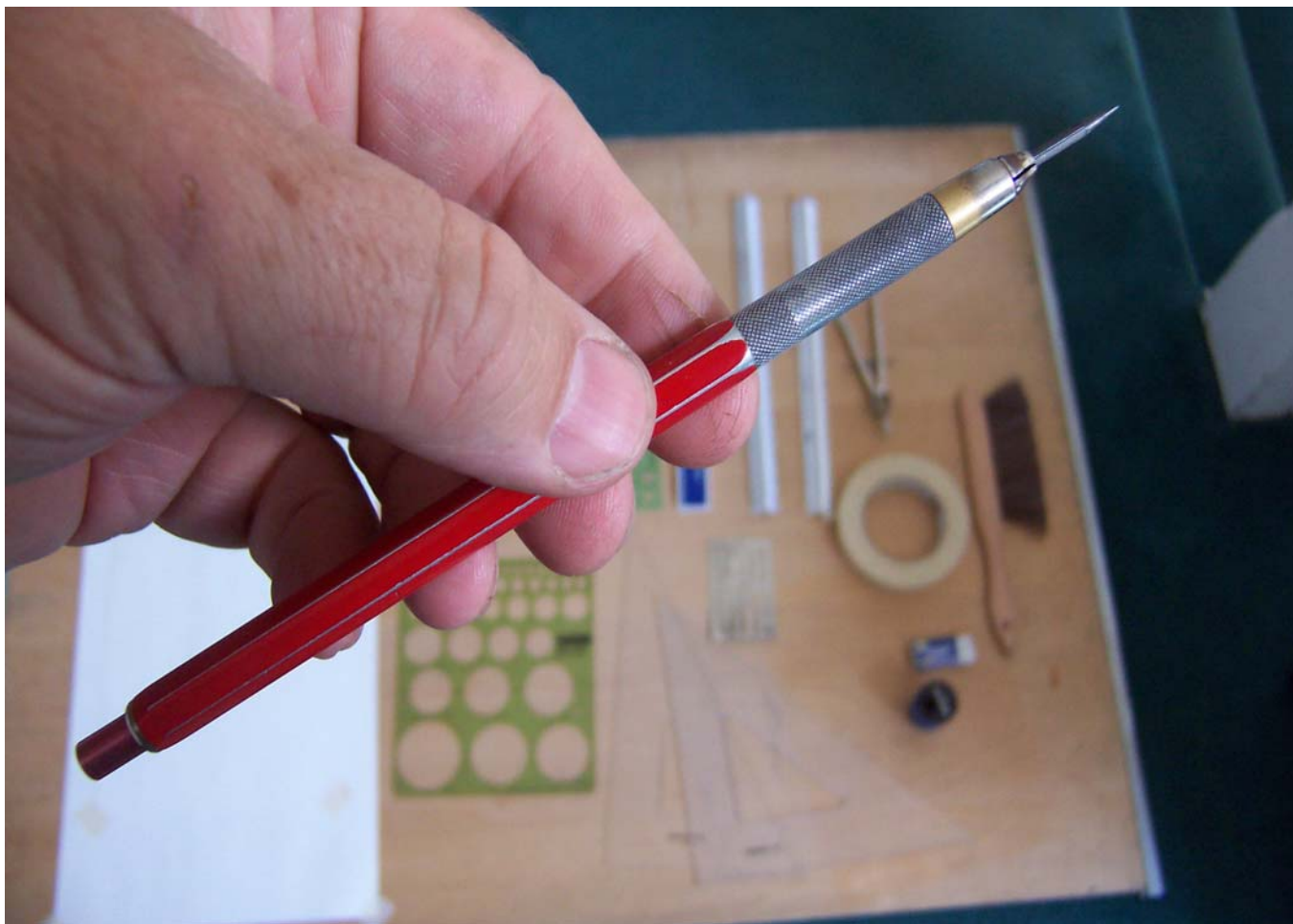
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Drafting Techniques:

Drafting tools left to right:

- Circle and toilet templates
- 30-60 and 45 degree triangles
- Eraser shield
- Packet of leads
- Architectural scale
- Engineering scale
- Compass
- Roll of drafting tape
- Mechanical lead holder
- White eraser
- Lead pointer
- Board brush



The Mechanical Lead Holder to use for drafting

- One such is sufficient, but use 3 different hardness of lead:
 - 4H for guidelines, construction lines and texture lines
 - H for object, profile and base lines
 - F for lettering



Start of a horizontal line

Start at the left and pull the pencil toward the right

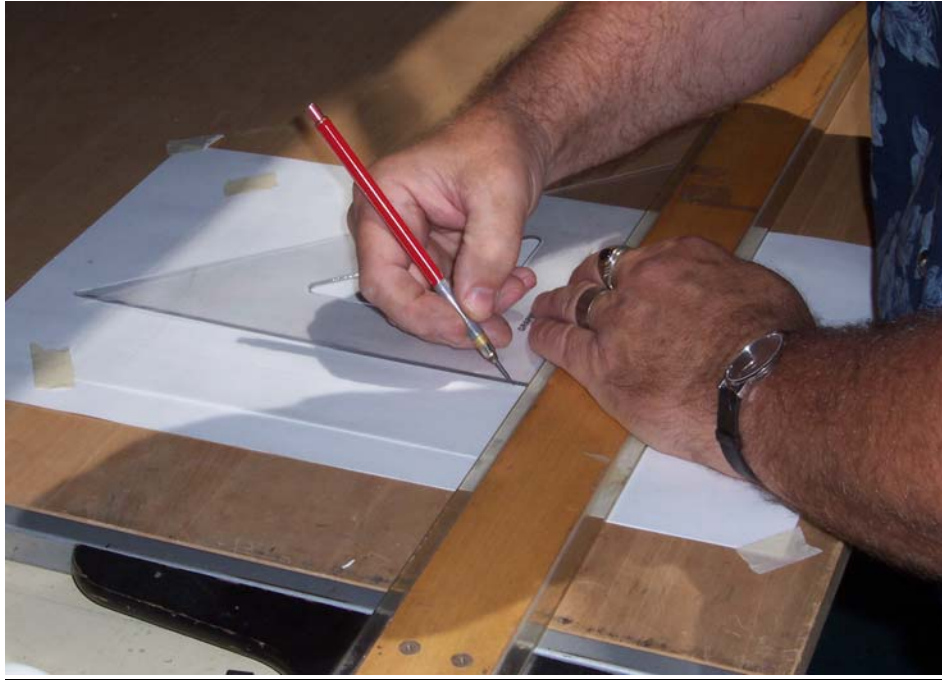
Keep the pencil vertical but lean it slightly in the direction you are drawing



End of a horizontal line

Keep the pencil vertical but lean in the direction you are drawing

Rotate the pencil to keep lead uniformly sharp



Start of a vertical line

Place the triangle to the right

Start at the bottom and pull the pencil up

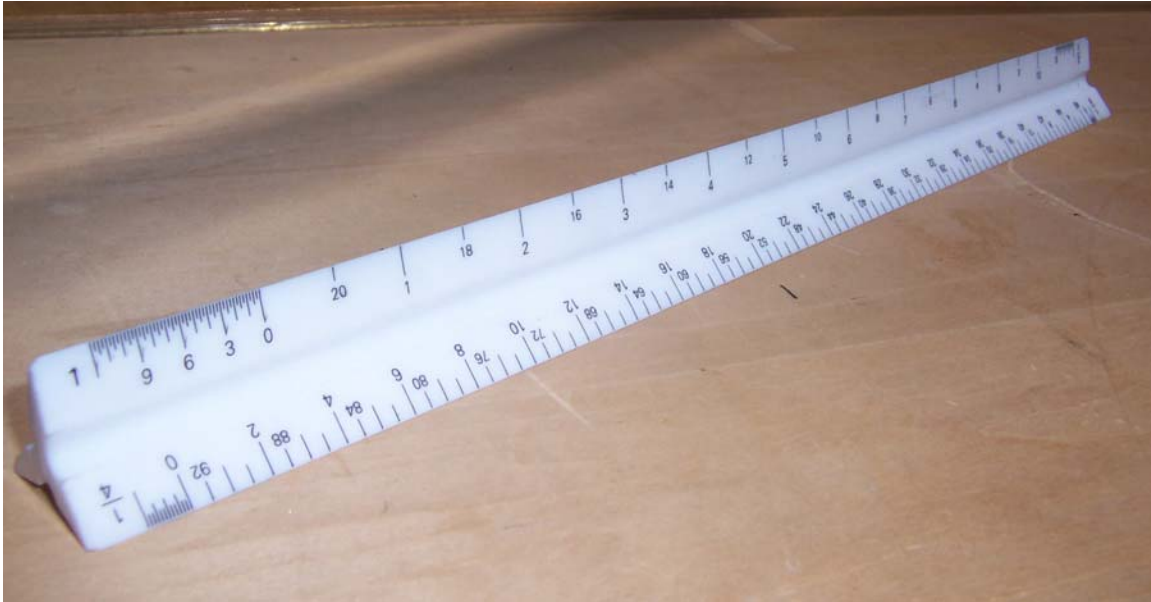
Keep the pencil vertical but lean it slightly in the direction you are drawing



End of a vertical line

Keep the pencil vertical but lean in the direction you are drawing

Rotate the pencil to keep lead uniformly sharp



The Architect's scale

There are six sides with two scales on each side except the sixth side which is a ruler

$$3/32" = 1'-0"$$

$$3/16" = 1'-0"$$

$$1/8" = 1'-0"$$

$$1/4" = 1'-0"$$

$$1/2" = 1'-0"$$

$$1" = 1'-0"$$

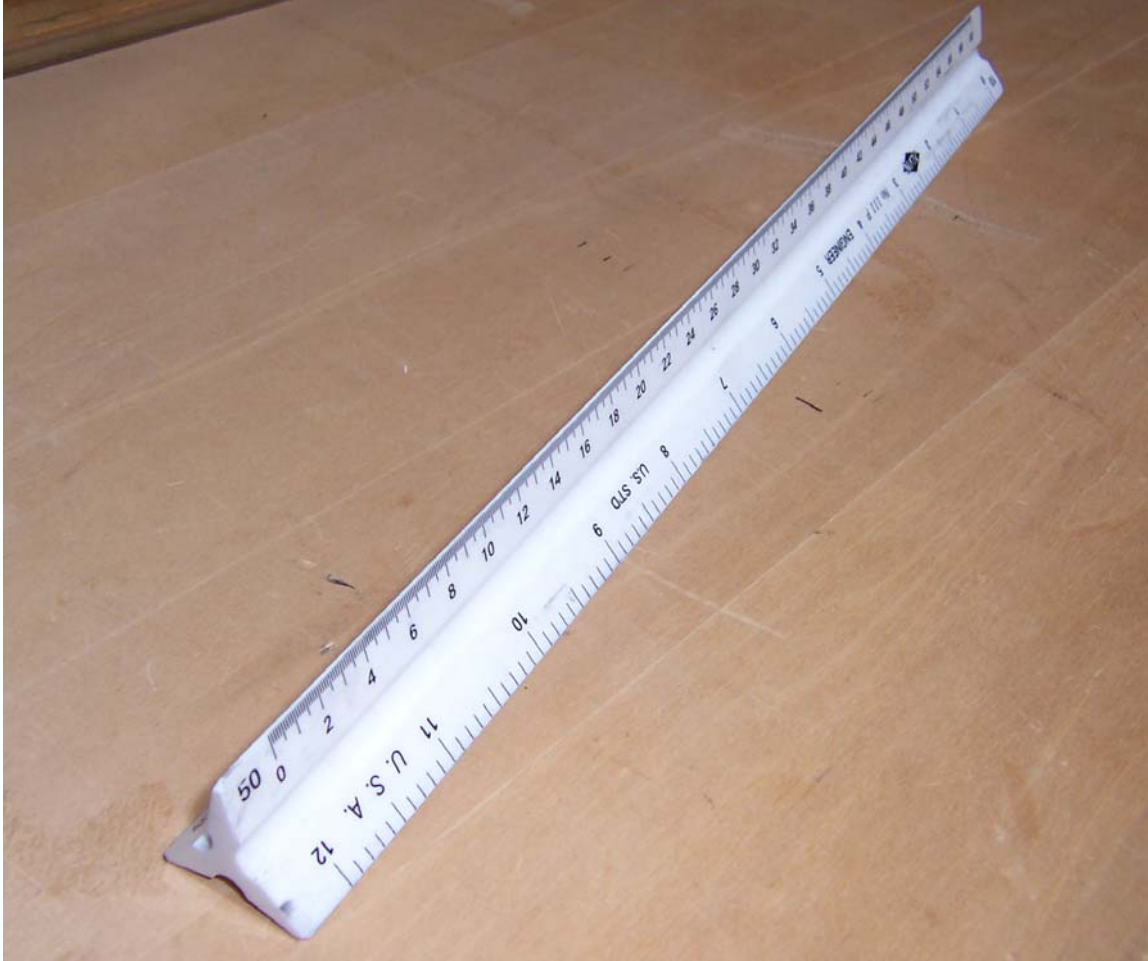
$$3/8" = 1'-0"$$

$$3/4" = 1'-0"$$

$$1 \frac{1}{2}" = 1'-0"$$

$$3" = 1'-0" \text{ (also called "quarter size")}$$

On the sixth side is not a scale but a "ruler" which can measure things full size – it is marked with a "16" because each inch is divided into 16 divisions or 1/16" spacing



The Engineer's scale

There are six sides with one scale on each side

Side marked with a 10: 1" = 10'-0" (also can be used for 1" = 100'-0" or 1" = 1000'-0")

Side marked with a 20: 1" = 20'-0" (also can be used for 1" = 200'-0" or 1" = 2000'-0")

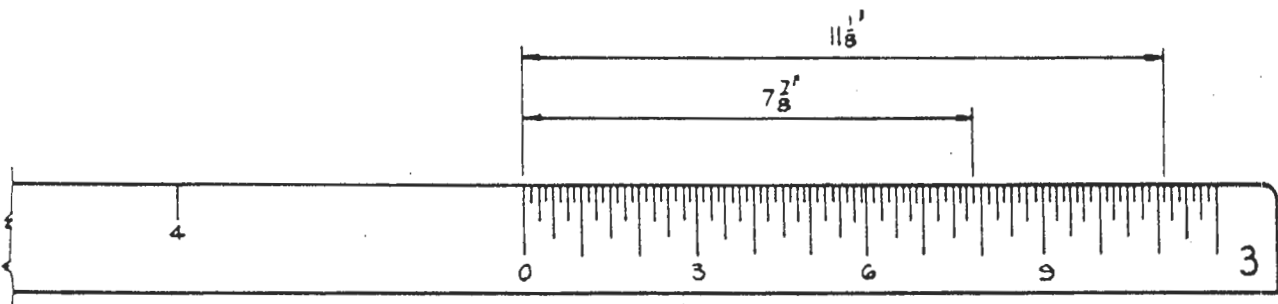
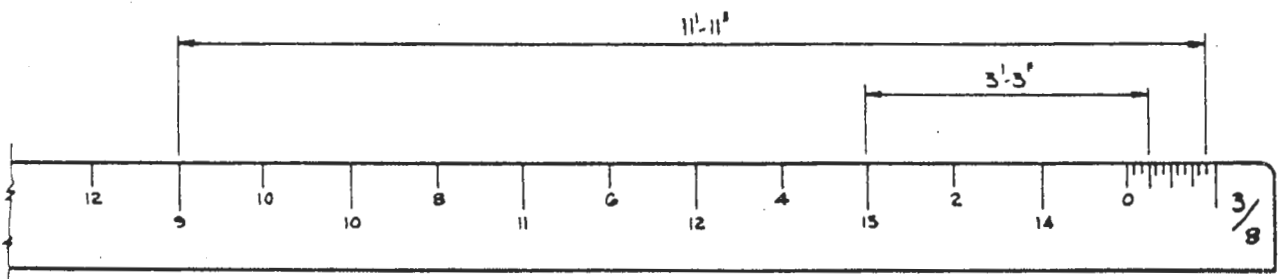
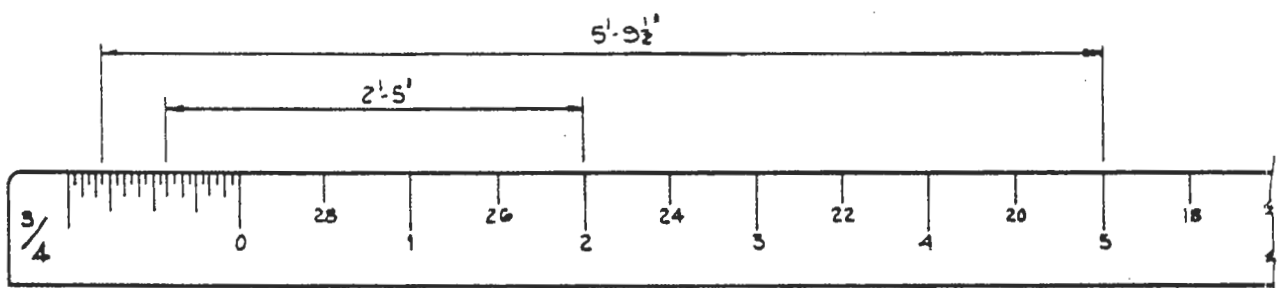
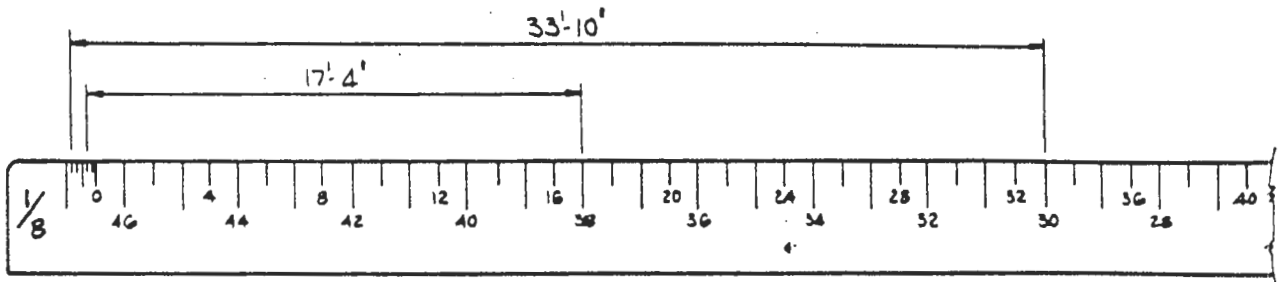
Side marked with a 30: 1" = 30'-0" (also can be used for 1" = 300'-0" or 1" = 3000'-0")

Side marked with a 40: 1" = 40'-0" (also can be used for 1" = 400'-0" or 1" = 4000'-0")

Side marked with a 50: 1" = 50'-0" (also can be used for 1" = 500'-0" or 1" = 5000'-0")

Side marked with a 60: 1" = 60'-0" (also can be used for 1" = 600'-0" or 1" = 6000'-0")

READING THE ARCHITECTS SCALE



Lineweight

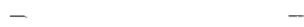
Your drawings must exhibit a variety of line weights in every drawing as below from lightest to darkest

1. Guidelines and construction lines (use 3H lead)
2. Texture and material lines, poché (use 2H lead)
3. Object lines (edge of surface, change of plane) (use H lead)
4. Profile lines (cut through walls, doors, and windows in plan and section, edge of any surface which is adjoined by "air" in elevations and roof plans) (use H lead)
5. Base lines (line at ground in elevations and sections) (use H lead)

Use crossed lines at all corners

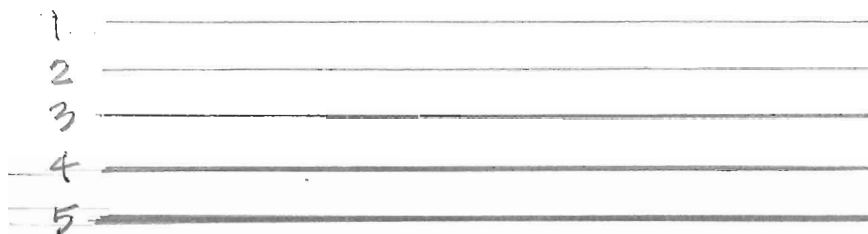


Slightly darken the ends of lines ("hit-go-hit")



Be consistent in quality and darkness for each lineweight

All lines must be dark, shiny, and sharp – no "fuzzy" lines!



Linetypes

Solid lines: all visible objects



Dashed lines: hidden objects or objects that are above the cutting plane



Long dash – short dash – long dash: column and beam and object centerlines



Long dash – two short dashes – long dash: property lines



Lettering

Use standard lettering heights $\frac{3}{32}$ " for notes, $\frac{1}{8}$ " for special notes, and $\frac{1}{4}$ " for titles

Use visible guidelines for all freehand lettering – do not erase the guidelines, they contribute to the visual interest of the lettering and help make it neater and more readable.

Use a triangle to guide vertical strokes of letters. Place the triangle on the left side of the pencil and at the bottom edge of the parallel bar.



Place the triangle under the parallel bar and point it to the left **only** when using it to draw vertical strokes of lettering

Give horizontal strokes of letters a slight upward angle

Make horizontal strokes darker than vertical strokes

Use F lead for lettering and 3H lead for guidelines

Chisel the point of the F lead when doing lettering to allow for thicker strokes for horizontal lines and thinner lines for vertical strokes.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 0

Scale of Drawings

Floor plans, reflected ceiling plans, exterior elevations and building sections:
 $\frac{1}{4}'' = 1'-0''$ for houses or $\frac{1}{8}'' = 1'-0''$ for most commercial buildings

Kitchen and bathroom plans: $\frac{1}{2}'' = 1'-0''$

Wall sections: $\frac{3}{4}'' = 1'-0''$

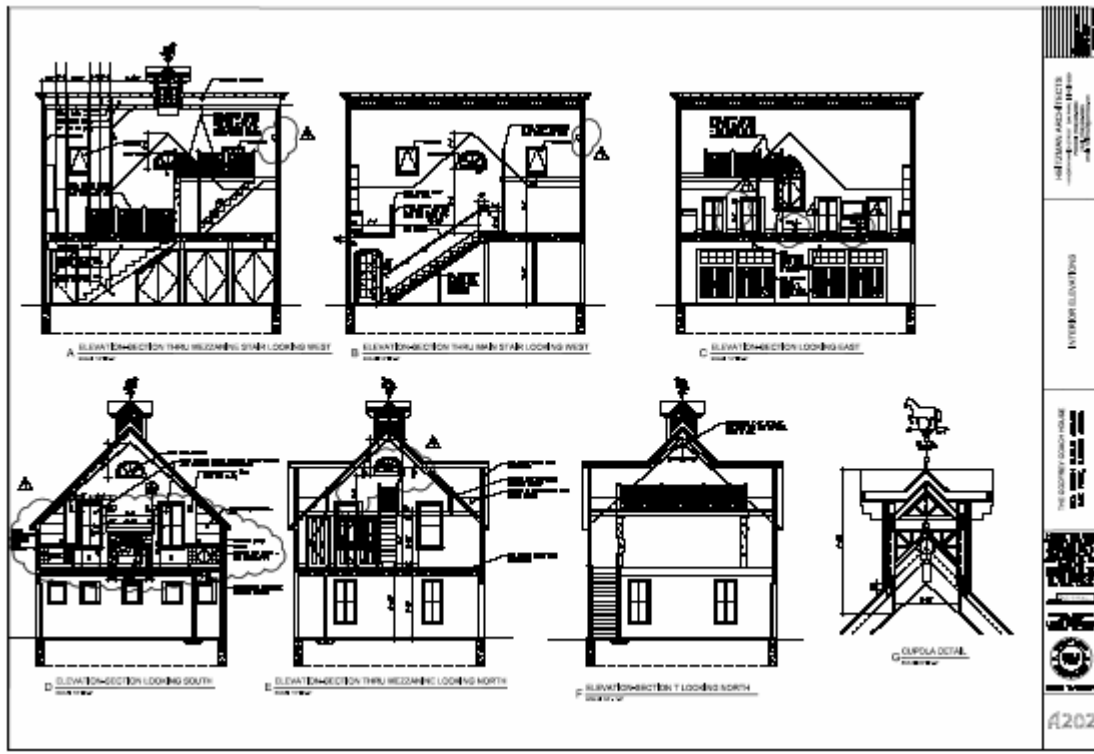
Details: $1 \frac{1}{2}'' = 1'-0''$ or $3'' = 1'-0''$

Drawing Titles and North Arrows

Every drawing on a drawing sheet must have the following information centered under the drawing:

- Capital letter to identify the drawing – start in the upper left corner of the drawing with the letter **A** and continue horizontally across. The next drawing to the right will be lettered drawing **B**. After the top line is filled, move to the next line below. The first drawing on that line will be the next letter in sequence.
- Name of the drawing
- Scale
- North arrow for plans

Sheet Titles And Numbering



Typical Drawing Sheet

I CERTIFY THAT THESE DRAWINGS WERE MADE UNDER OUR DIRECT SUPERVISION AND IN OUR OFFICES, AND COMPLY WITH ALL THE RULES AND REGULATIONS OF THE BUILDING DEPARTMENT OF THE VILLAGE OF OAK PARK, ILLINOIS

SIGNED: *Frank E. Heitzman*

FRANK E. HEITZMAN
ARCHITECT
ILLINOIS REGISTRATION
NUMBER: 01-8290

STATE OF ILLINOIS
FRANK E. HEITZMAN
1-2886
LICENSED ARCHITECT

EXPIRES 11/30/2004

A202

Lower right hand corner of drawing sheet showing the drawing number

The following standards for sheet numbering comes from “The Uniform Drawing System” published by the Construction Specifications System Institute (CSI) in 1997 and incorporated into the National Institute of Building Sciences (NIBS) United States National CAD Standard, 2005.

1. All drawings must be assigned a sheet number. The sheet number should appear in the lower right corner of the drawing.
2. The first letter of a sheet number indicates the discipline name. Immediately after this is a three-digit number indicating the type of drawing and its sequence in the set. Thus, a typical drawing sheet number would look like this: A101. This would be the first architectural plan, usually the site plan or the basement floor plan. Sheets should be numbered consecutively within a series from 01 to 99.
3. Sheets are bound into “sets” and should be organized in the following sequence of disciplines:

C = Civil (earthworks, cut and fill, retaining walls, ponds, parking lots, streets, sidewalks, sewer and water outside of building, electrical power and lighting and telecommunications outside of building)

L = Landscape (topsoil, trees, shrubs, turf, ground cover, brick or stone paving benches, usually only outside of building)

A = Architectural

S = Structural

M = Mechanical (Heating, Ventilating and Air Conditioning)

P = Plumbing (inside building)

Q=Equipment (freezers, refrigerators, etc. - pre-manufactured items that are built-in and need to be connected to water, sewer, electricity or gas)

F = Fire Protection (fire sprinklers, standpipes, fire extinguishers)

E = Electrical (power and lighting)

T = Telecommunications (telephone, CCTV, cable TV, wired computer network, intercom, sound, security and other low-voltage equipment)

I = Interior Furnishings (furniture, sometimes carpet, and built-in custom or standard millwork and cabinets)

4. Drawings within a discipline are numbered sequentially with three-digit numbers according with the following system:

100 series: site plans, floor plans, and reflected ceiling plans, selective demolition plans – starting with A101, which is usually the site plan.

200 series: exterior elevations – starting with A201

300 series: building sections – starting with A301

400 series: large scale "blown up" plans, elevations and wall sections – starting with A401

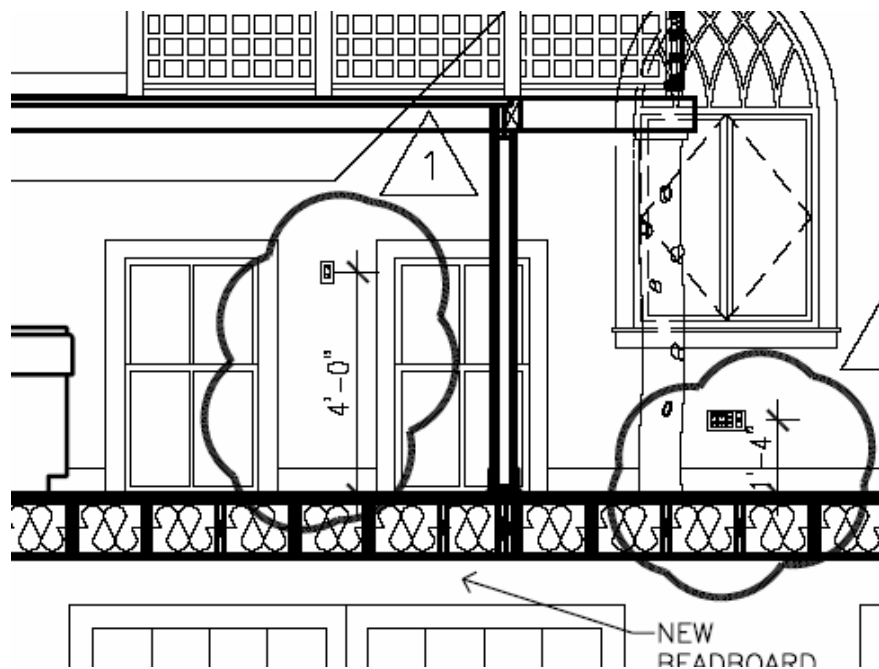
500 series: details and interior elevations – starting with A501

600 series: schedules (such as room finish schedules, door schedules, window schedules) and diagrams (plumbing riser diagrams, single line electrical diagrams) - on small projects, schedules and diagrams can be included on the plan sheets - starting with A601

Drawing Revision Format

Drawings are revised frequently. If a drawing is revised after it is issued for construction, the part that is changed must be “clouded” with a black grease pencil on the back of the drawing (so the cloud can be easily erased when it is revised again), a small triangle with a number in it is placed next to each cloud. The number corresponds to the revision number for that sheet, and it is noted in the “Issues and Revisions” block with a date after it. The triangles with numbers in them remain on the drawing throughout its life to memorialize the approximate location of each revision, however, only the last revision’s “clouds” remain on the drawing. See the example below and above. Not every sheet in the set will have the same revision dates but may have the same revision numbers, for instance, if the plan is changed on August 1, but the elevations are not changed until October 15, the plan revisions are clouded given the revision number 1 (and dated 1 AUG 2005). When the elevations are changed, those changes are clouded and are also given the revision number 1 (and dated 15 OCT 2005). Thus every sheet has its own sequence of revision numbers possibly with different dates.

If a drawing is revised prior to when it is issued for construction, there is usually no need to “cloud” and number the changes. If a drawing is changed during the bidding period, it is not clouded but it is dated and the date recorded in the “Issues and Revisions” block as per the following example: “24 JUL 2005 Addendum No. 2”

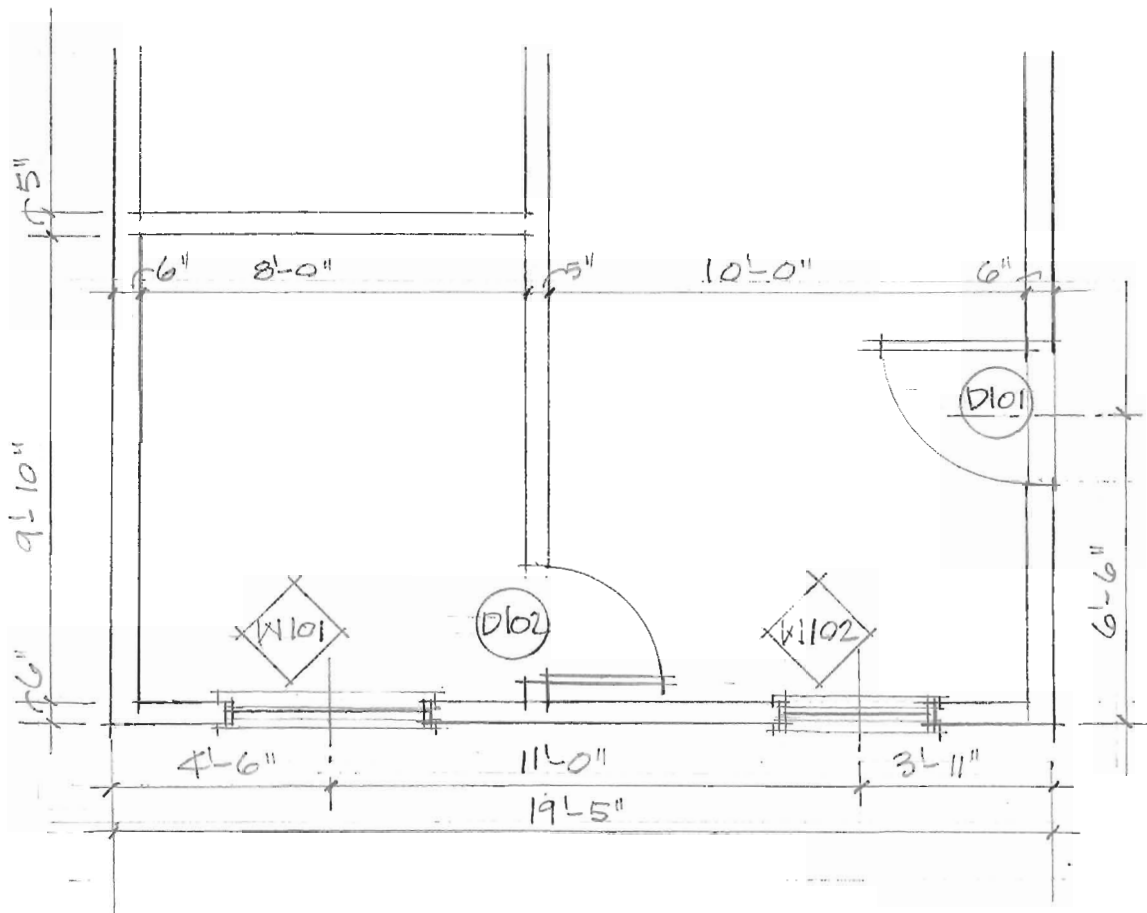


Example of a revised drawing that has been “clouded” indicating location of revision and given a revision number in a small triangle

Dimensioning standards

Dimensions are necessary for the contractor to construct the building. There are a few rules to remember:

1. Only dimension an object once, do not repeat its dimension on more than one drawing or sheet. This leads to errors.
2. Dimensions less than 12" are shown in inches only, such as 8 ½" Do not show this as 0'-8 ½" Zero feet is not expressed in standard architectural dimensioning.
3. Dimensions equal to or greater than 12" are always shown in both feet and inches with a dash separating the feet from the inches, such as 1'-0" or 12'-6"
4. Round off dimensions to the nearest 1/8" – for instance a dimension of 6 13/16" would not be used, instead it would be rounded to 6 ¾" or 6 7/8"
5. Horizontal dimensions are always placed above a horizontal dimension line and read from left to right
6. Vertical dimensions are always placed to the left of a vertical dimension line and are always read from the right side of the sheet.
7. If an object is placed on a center line of another object use a **CL** dimension symbol.
8. If an object is placed at equal dimensions along a line, use the symbol **EQ** rather than an actual number.
9. Use the bare minimum number of dimensions but do not leave any out.



A FIRST FLOOR PLAN
 SCALE: 1/4" = 1'-0"



Metric standards

The drawing unit type typically used in the United States is known as the "U.S. Customary System of Units. It originated in the United Kingdom as the "British Imperial" system of measurement - feet and inches. This type of measurement system is now used only in the United States and its dependencies.

Other countries, including the United Kingdom since 1965, use the "System International" (or "SI") for drawing units. This is based on the metric system where all dimensions are measured in millimeters. The metric system originated in France in 1795 after the French Revolution.

Since a millimeter is very small (about 1/32"), dimensions of buildings are shown in whole numbers with no suffix, such as mm after them. As an example, a dimension of 1'-0" would be noted in SI units as simply 300. Some parts of Europe still use the old European metric standard which uses centimeters and decimals of a centimeter. 1'-0" in that system would be noted as 30.00cm.

The United States is slowly "inching" toward using the SI system of measurement, but because our industrial base is so entrenched in the Imperial system, it will take many years to accomplish. The U.S. Government has mandated that all drawings made for federal construction projects use both systems beginning in 1993.



The Metric Scale

There are six scales on the metric scale:

- 20: 1 to 2 (half size)
1 to 20 (roughly equivalent to $3/4"=1'-0"$)
1 to 200 (roughly equivalent to $1/16"=1'-0"$)
- 25: 1 to 25 (roughly equivalent to $1/2"=1'-0"$)
1 to 250 (roughly equivalent to $1"=20'-0"$)
- 50: 1 to 5 (roughly equivalent to $3" = 1'-0"$)
1 to 50 (roughly equivalent to $1/4" = 1'-0"$)
1 to 500 (roughly equivalent to $1" = 40'-0"$)
- 75: 1 to 75 (roughly equivalent to $3/16" = 1'-0"$)
- 100: 1 to 1 (full size)
1 to 10 (roughly equivalent to $1 1/2"=1'-0"$)
1 to 100 (roughly equivalent to $1/8"=1'-0"$)
1 to 1000 (roughly equivalent to $1"=80'-0"$)
- 125: 1 to 125 (roughly equivalent to $1" = 10'-0"$)

There are three possible methods of creating metric (SI) type drawings:

1. The first method is to create the drawing in the metric system using metric sized materials right from the start. This is the simplest approach.

2. The second method is to create the drawings using the Imperial System (feet and inches) with a metric translation indicated in brackets after the Imperial dimension, as shown below: This is the system recommended by the U.S. Government for their projects.

3'-6" [1 067]
<----->

When noting a drawing, always indicate sizes in both Imperial units followed by SI units. An example of a note would be the following:

<----- 2x4 [50x100] STUDS @ 16" [40] O.C.

This approach and is usually called "SOFT METRIC" because standard American dimensions are used and metric dimensions are "rounded off" or approximated.

3. The third method would be to create a drawing in the metric SI system, using American materials with exact metric conversions. There are no feet and inch dimensions in this system. Thus it is usually called "HARD METRIC" conversion.

You will need to do some research to find out actual hard metric dimensions of materials. Some manufacturers have both Imperial-dimensioned materials and metric-dimensioned materials. For instance, ceiling tiles can be purchased in both 24" x 48" size and hard converted dimensions of 600x1200. Plywood sheets can be purchased as 1200x2400, and brick is 90x57x190. Other materials remain the precise equivalent of the Imperial size, such as actual drywall thickness (12,7 mm and 15,9 mm).

When noting a material dimension in millimeters, use the number with a decimal fraction, if fraction is non-zero, then a space, then the abbreviation mm (no periods after the abbreviation). Use either a comma or a period for decimal points. Like this:

<----- CERAMIC TILE 50,8 x 101,6 mm

Note that even in the SI system of metrication, civil engineering drawings (site plan, topography, roads, bridges, and dams) typically use meters to express

measurement, with 2 decimal-point precision, whereas all other drawings use millimeters. So that you do not confuse the two, meters should have an m after the numbers, as follows:

10 010,25 m
 <----->

Revise all notes to reflect proper metric dimensions, areas, forces, volumes, etc.

Interior area is measured in **m²** (square meter), site area is measured in **ha** (hectares -- 1 ha = 10 000 **m²**). To convert SF to **m²**, multiply by 0.09290304. To convert acres to ha, multiply by 0.404687.

Mass (what we usually loosely call "weight") is measured in **kg** (kilograms) or metric tons (a metric ton is 1 000 **kg**). To convert **Lb** to **kg**, multiply by 0.453592.

Force (for example, the amount of "force" required to open a door, which we usually measure in pounds) is measured in **N** (Newtons). To convert **Lb** to **N**, multiply by 4.44822. To convert **LBF** to **N/m**, multiply by 14.5939.

Pressure (as we would usually measure in pounds per square foot, or **PSF**) is measured in **Pa** (Pascals). To convert **PSF** to **Pa**, multiply by 47.8803. To convert **PSI** to **Pa**, multiply by 6.89476.

Temperature is measured in **°C** (degrees Celcius), or **°K** (degrees Kelvin). To convert degrees Farenheit to degrees Celcius, multiply by 5/9(°F-32).

Liquid volume (which we measure in gallons) is measured in **L** (liters, or 1 000 **cm³**). To convert gallons to **L**, multiply by 3.78541.

Heat energy (which we measure in **BTU**, or British Thermal Units) is measured in **J** (Joules). To convert **BTU** to **J**, multiply by 1055.056.

Some Imperial measurements may have to continue in use, for example, pennyweight for measuring nails, such as a **10d** nail, which is 76.2 mm long (3"). The meaning of the pennyweight is not convertible, since it related to the original cost in England in pennies (cents) of 100 nails of that size.

Another example is a "square" of roofing, which is 100 square feet. Most roofing is designated in pounds of weight per square. For instance, standard roofing felt used for a first course under an asphalt shingle roof on a house is called "15# roofing felt." That means that the material weighs 15 pounds per 100 square feet of area on the roof. However, a square would be equal to 9.29 **m²** of roofing, and the felt weight would be measured in kg, so you might logically say that you wanted 6.8 kg roofing felt, but the standard measurement area in the metric system is **m²**, so you would have to be more specific and say you wanted "0.73 kg/ **m²** roofing felt." Needless to say, this measurement is not normally used.

Note that most metric unit abbreviations are lower case, with the exception of **N** (Newton), **J** (Joule), **Pa** (Pascal), **A** (Ampere -- same as in English), **W** (Watt -- same as in English), because these are all derived from a famous scientist's name, and **L** (liter), which would be confused with the number **1** if used in lowercase. Never use a period after the abbreviation.

Note that commas are never used in metric numbers as thousands separators. Instead, a space is used for this purpose. That is because a comma is "commonly" used in Europe as a decimal point. Therefore, where we would write 10,000.00, in metric would be written 10 000,00. It is also acceptable to use the period as a decimal point in the SI system.

For decimal numbers less than one, always use a zero before the decimal point.

Standard metric drawing sheet sizes in millimeters are as follows:

A4: 297x210 (11.7" x 8.3")
A3: 420x297 (16.5" x 11.7")
A2: 594x420 (23.4" x 16.5")
A1: 841x594 (33.1" x 23.4")
A0: 1189x841 (46.8" x 33.1")

Elements to show in each type of drawing:

Title Sheet

Name and address of project

General Notes

Index of drawings

Material symbols

Legend of symbols

Abbreviations

Perspective rendering of building (optional)

Site Plan (scale 1" = 20'-0")

Property lines with dimensions and angles
Building setback lines with dimensions and angles
Easements with dimensions and angles
North arrow showing true north and "plan" north

Note that plan north should always be up throughout the drawing set – never change orientation of any plan in the set for convenience – it is very confusing

If the plan is very long in the north-south direction, it may fit the sheet better by rotating north so that it is to the left

Location of the bench mark and its elevation
The "bench mark" is the location from which all vertical elevations are measured – it is usually the top of a fire hydrant in the vicinity or the top of a street curb.

Outline of the building (s)
Elevation of the first floor with relation to the bench mark
First floor elevation is usually set at 0'-0" for convenience

Topographic contours
Existing
Cut and fill
New

Stoops

Streets
Existing
Removed
New

Sidewalks
Existing
Removed
New

Driveways

Parking lots

Curb cuts

Retaining walls

Walls

Fences

Exterior steps

Slopes of hard surfaces

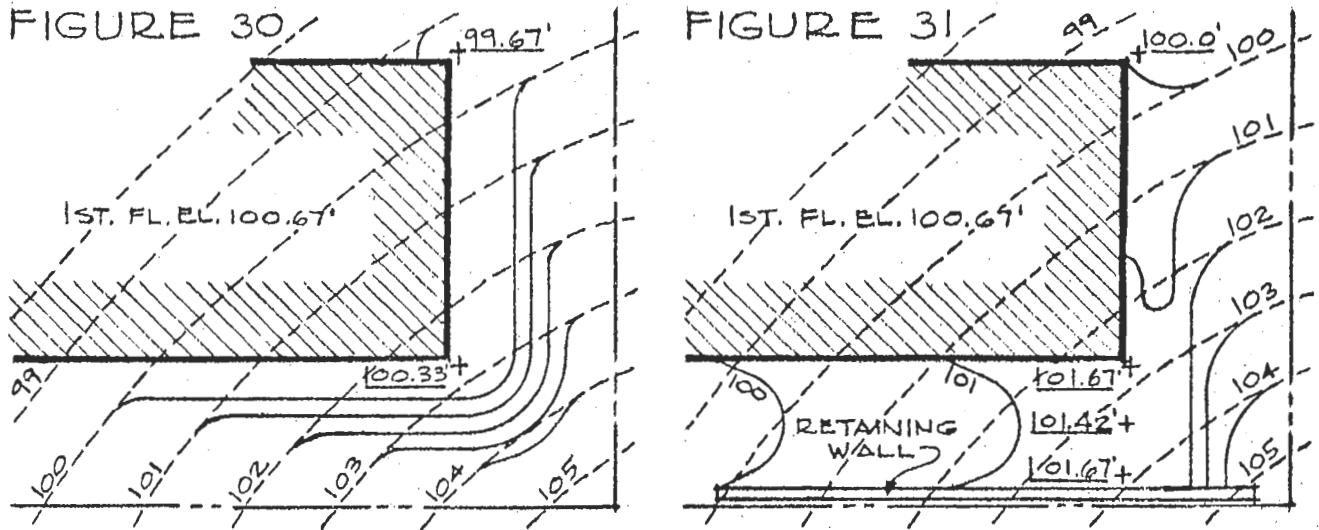
Air conditioner condensing unit

Trees and large shrubs
Existing
Removed
New

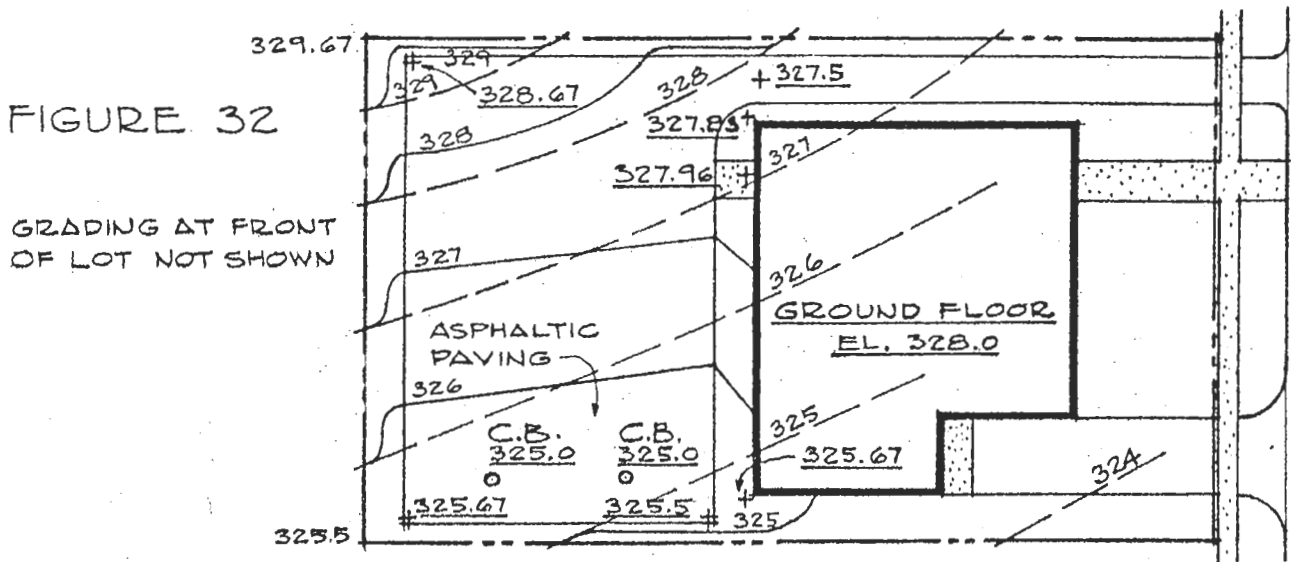
Manholes

- Catch basins
- Yard drain inlets
- Fire hydrants
- Yard sprinkler locations
- Power poles
- Street lights
- Signs
- Lawn drain tiles
- Drainage ditches
- Site utilities
 - Sewer
 - Water
 - Gas
 - Power
 - Telephone
 - Cable
 - Water Meter
 - Gas meter
 - Power meter

In the development of the site, changes in grades should not jeopardize adjacent land. Grading should be planned so that neighboring property is neither undermined nor encroached upon. Figure 30 shows how new contours should return to the existing contours within the property lines with the angle of repose of the earth such that adjacent land will not slide. Figure 31 shows an alternate method where a retaining wall is designed to hold the adjacent land when new contours cannot be returned to the existing ones at the property lines.



The natural drainage from one lot to another may be maintained, but grades should not be changed so that runoff is discharged in a concentrated area of a new pattern. If large permeable surface areas are replaced by impermeable paving, the additional runoff, not absorbed into the ground, should not be directed onto neighboring property. In Figure 32 catch basins are installed to prevent flooding of adjacent land.



Basement Plan (scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Foundation walls
Footings (show with dashed lines)
Stoop arms (show with dashed lines)
Steel beams supporting floor structure above (show with centerlines)
Steel columns
Column footings (show with dashed lines)
Interior partition walls and doors
Stairs
Furnace
 Furnace flue
Hot water heater
 Hot water heater flue
Power panel board
Floor drains
Sump pump location
Window wells
Escape window
Dimensions

Floor Plans (scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Walls in plan

Walls are cut 3'-0" above floor

Overhead objects

Hidden objects

Receptacles

Power

Telephone

Cable TV

Network wiring

Hose bibs

Floor registers

Doors

Swing doors

Single

Pair

Bifold doors

Pocket doors

Bypass doors

Double-acting doors

Garage overhead doors

Different appearance of doors depending on scale:

1/8" = 1'-0" scale

1/4" = 1'-0" scale

Windows

Double hung windows

Casement windows

Awning windows

Hopper windows

Sliding windows

Pivoting windows

Fixed windows

Different appearance of windows depending on scale:

1/8" = 1'-0" scale

1/4" = 1'-0" scale

Stairs

Minimum width:

36" for one and two family dwellings or where serving
an occupant load of 50 or less

44" for all other stairs

Handrails:

On at least one side for one and two family dwellings

On both sides for all other stairs

Minimum Headroom:

6'-8" clear

Minimum riser height:
7 $\frac{3}{4}$ " for one and two family dwellings
7" for all other buildings

Maximum tread width:
10" for one and two family dwellings
11" for all other buildings

Maximum height between landings:
12'-0"

Show direction of each stair with an arrow that points in the upward or downward direction – label arrows UP or DN

Show thicker interior walls where plumbing riser sewer or vent pipes are located (usually 2x6 walls instead of 2x4)

Fireplaces

Kitchen cabinets and appliances

Plumbing fixtures

Fireplace

Hearth

Flue

Heating registers

Slope of garage floor slab

Area drains

Basement window wells and drains

Downspouts

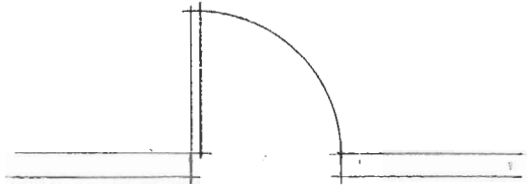
Splashblocks

Dimensions

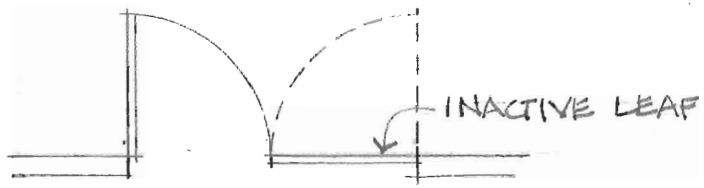
Face of finished walls

Centerlines of doors

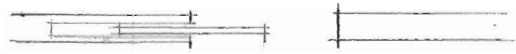
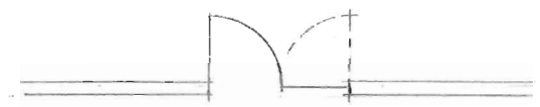
Centerlines of windows



SINGLE SWING



PAIR



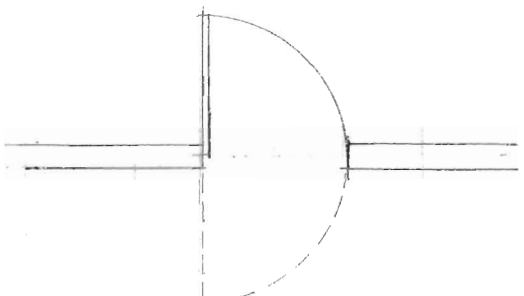
POCKET



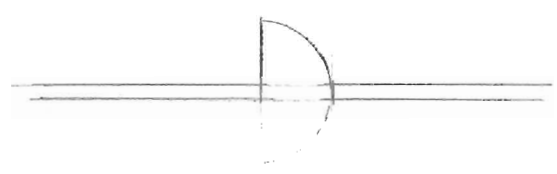
SLIDING



BIFOLD

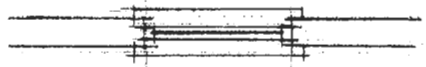


DOUBLE SWING



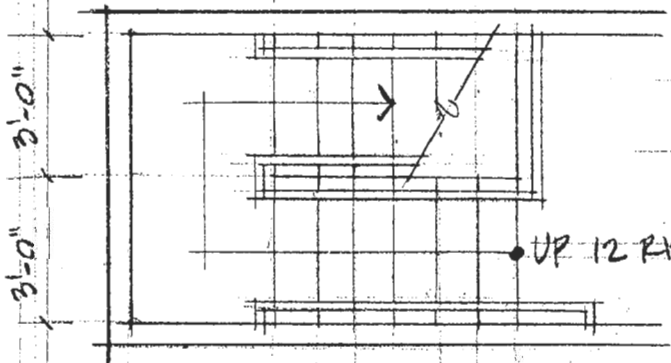
1/4" = 1'-0" SCALE

1/8" = 1'-0" SCALE

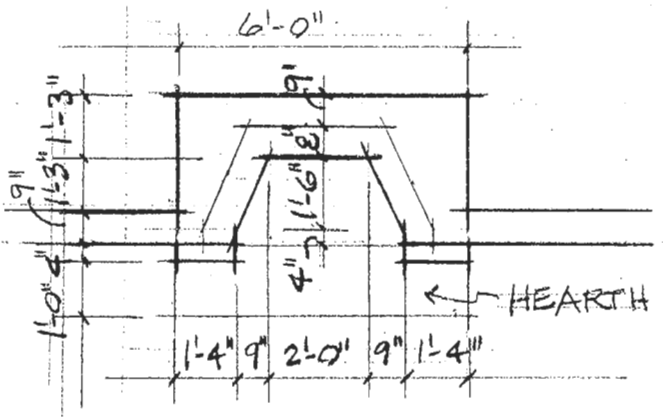
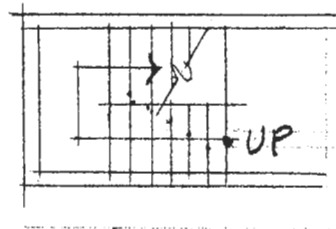


WINDOW

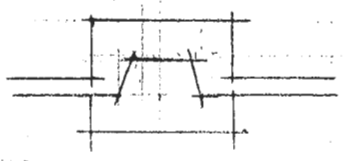
3'-0" 6 T @ 10" = 5'-0"



STAIRS

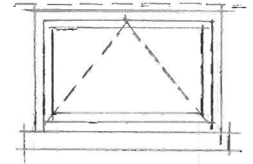
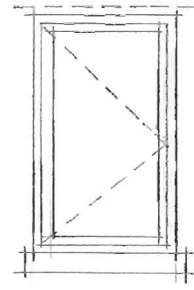
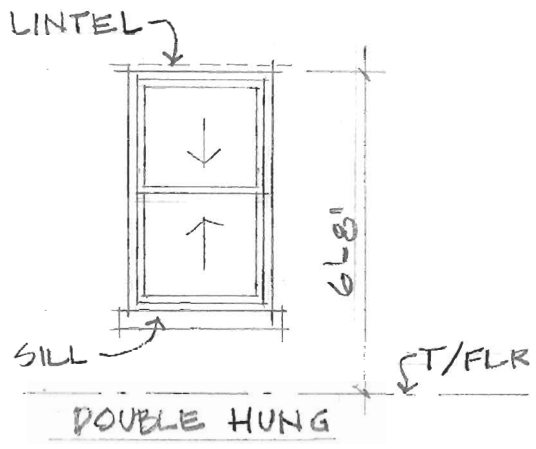


FIREPLACE



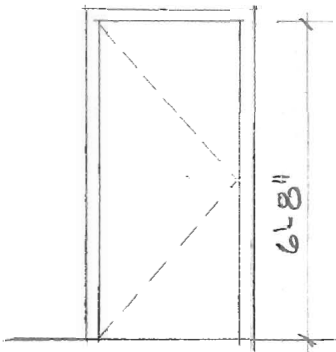
1/4" = 1'-0" SCALE

1/8" = 1'-0" SCALE

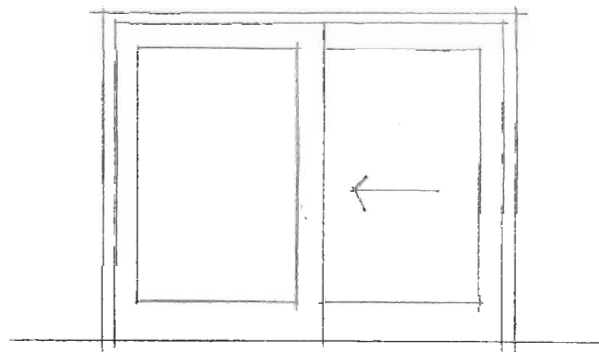


CASEMENT

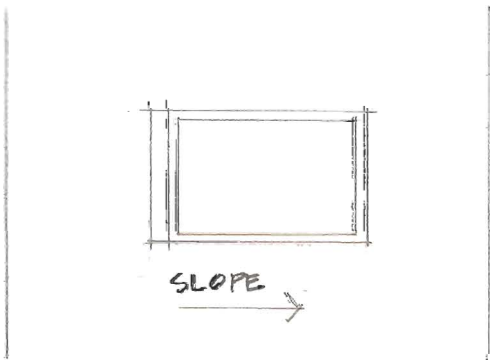
HOPPER



SWING DOOR



PATIO DOOR



SKYLIGHT

Roof Plan (scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Slopes

Materials

Gutters and downspouts

Parapets

Skylights

 Dimensions

 Operation

Reflected Ceiling Plan

(scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Lights

Switches and conduit runs

Ceiling tile pattern

Identification of ceiling changes of plane

Heads of doors

Door swings

Exterior Elevations

(scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Doors

Show hinge side

Windows

Show hinge side on casements, awnings, hoppers and pivoting windows

Show arrows depicting double hung, single hung, and sliding sash direction

Show the letter F for fixed glazing

Wall materials

Roofing materials

Change of plane

Light fixtures

Hose bibs

Mailboxes

House numbers

Vertical dimensioning

Floor elevation levels

Interior Elevations (scale 1/4" = 1'-0")

Doors

 Show hinge side

Baseboard

Moldings

 Chair rail

 Crown molding

 Plate rail

Wainscotting

Millwork

Light fixtures

Vertical dimensioning

Wall Section (scale 3/4" = 1'-0")

Vertical dimensions

Floor elevation marks

Materials

Sheathing

Exterior finish

Interior finish

Insulation – show minimum R-value

Floor deck

Finish flooring

Baseboard

Wall moldings

Roof sheathing

Roof underlayment

Roofing

Roof ventilation

Structural information

Foundation and footing

Wall structure

Floor joists

Ceiling joists

Roof rafters

Bridging

Reinforcing bars in foundation walls

Drainage bed of gravel under concrete floor slab

Vapor retarder under concrete floor slab

Welded wire fabric mesh reinforcing in concrete floor slab

Dampproofing

Details (various large scales)

Plan and Section of a fireplace (1 ½" = 1'-0")



Riser and tread of a stair (1 ½" = 1'-0")

Section detail of a lintel above a window or other opening
(3" = 1'-0")


Section and plan of cabinets (1" = 1'-0")


Threshold detail (1 ½" = 1'-0")


Column cladding (3" = 1'-0")


BM 280.00 CCD
 BENCH MARK AT 280.00 FEET ABOVE CHICAGO CITY DATUM ELEVATION
 3/16" CIRCLE 

+201.00
 EXISTING SPOT ELEVATION

+201.00
 NEW SPOT ELEVATION

MH EL RIM+280.00
 MAN HOLE WITH RIM ELEVATION

CB RIM+280.00 INV+275.00
 CATCH BASIN WITH RIM AND INVERT ELEVATION


INLET RIM+280.00 INV+275.00
 YARD DRAIN INLET WITH RIM AND INVERT ELEVATION

FH
 FIRE HYDRANT

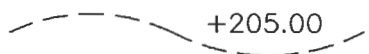
 STREET LIGHT

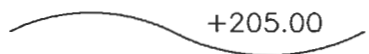
 POWER POLE

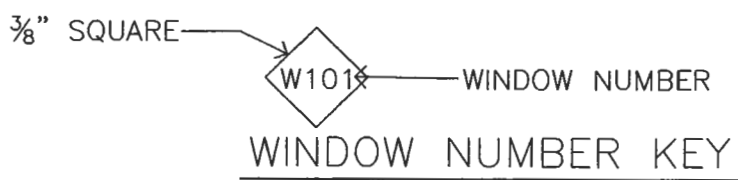
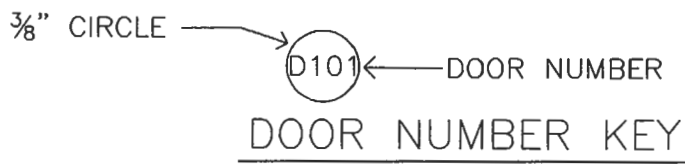
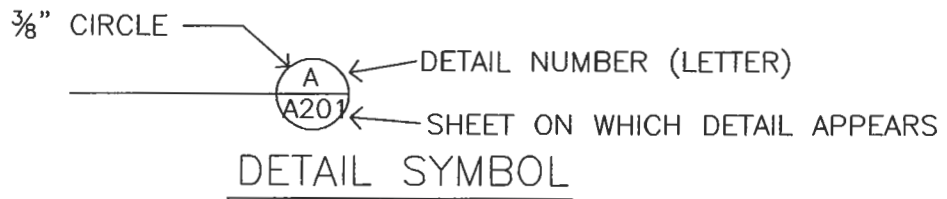
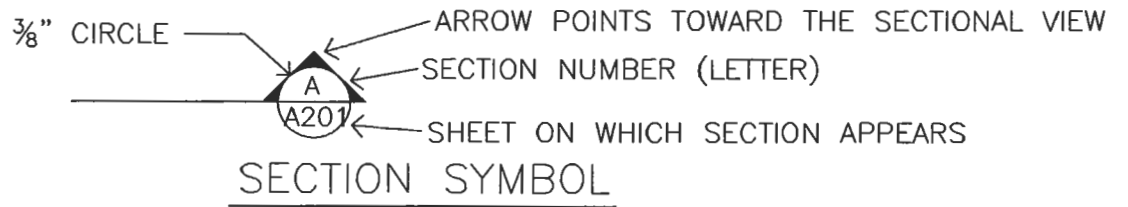
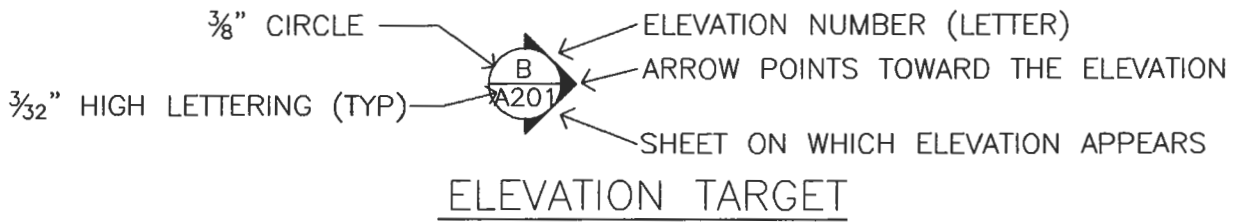
8" OAK
 EXISTING TREE TO REMAIN

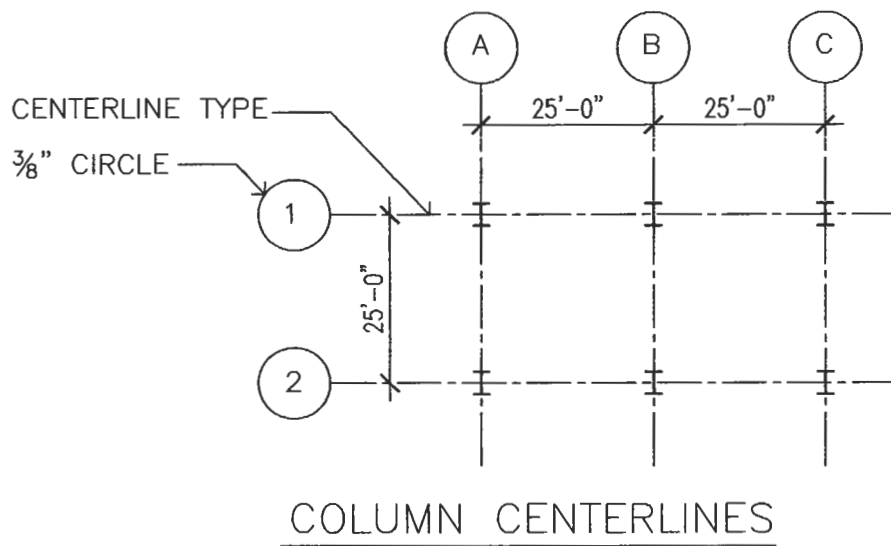
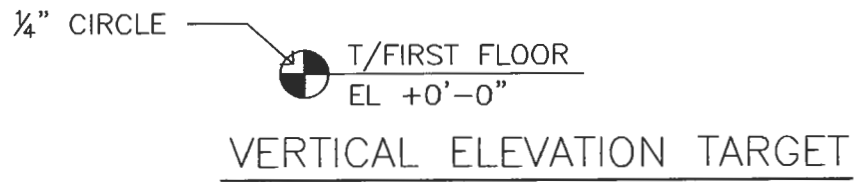
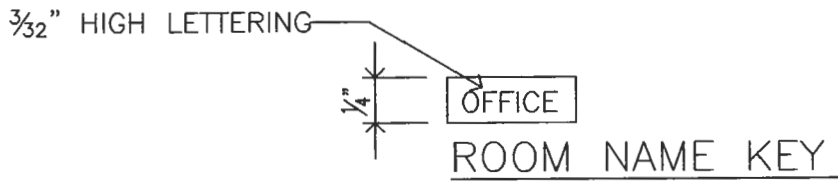
10" ELM
 EXISTING TREE TO BE REMOVED





- W— WATER LINE
- G— GAS LINE
- T— TELEPHONE LINE (OVERHEAD)
- -T - - TELEPHONE LINE (UNDERGROUND)
- P— POWER LINE (OVERHEAD)
- - -P - - - POWER LINE (UNDERGROUND)
- S— SEWER LINE
- ST— STORM SEWER LINE
- - - - - PROPERTY LINE
- X-X- FENCE








 +205.00 EXISTING CONTOUR





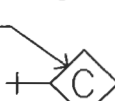
 +205.00 NEW CONTOUR

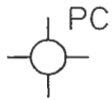




-  SWITCH
-  DIMMER SWITCH
-  3-WAY SWITCH
-  3-WAY DIMMER SWITCH

- $\frac{3}{16}$ " CIRCLE  DUPLEX RECEPTACLE
-  DUPLEX RECEPTACLE WEATHERPROOF
-  DUPLEX RECEPTACLE GROUND FAULT INTERRUPTED
-  DUPLEX RECEPTACLE W/ONE LEG SWITCHED
-  QUADRAPLEX RECEPTACLE (NUMBER INDICATES HEIGHT ABOVE FINISHED FLOOR)
-  DUPLEX FLOOR RECEPTACLE
-  FLOOR JUNCTION BOX

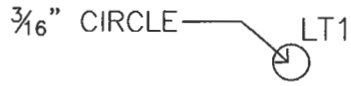
- $\frac{1}{4}$ " TRIANGLE  TELEPHONE OUTLET
-  COMPUTER NETWORK OUTLET
- $\frac{1}{4}$ " TRIANGLE  FLOOR TELEPHONE OUTLET
- $\frac{9}{32}$ " CIRCLE  FLOOR COMPUTER NETWORK OUTLET
- $\frac{3}{16}$ " SQUARE  COAXIAL CABLE RECEPTACLE



PORCELAIN SOCKET WITH PULL-CHAIN SWITCH



PORCELAIN SOCKET



RECESSED DOWNLIGHT FIXTURE TYPE LT1



JUNCTION BOX



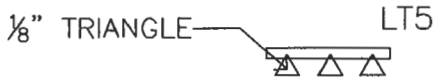
WALL SCONCE LIGHT FIXTURE TYPE LT2



SPOTLIGHT TYPE LT3



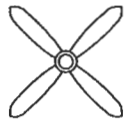
RECESSED WALL WASHER LT4



TRACK LIGHT FIXTURE LT5



CEILING EXHAUST FAN-LIGHT



CEILING FAN



2' X 4' FLUORESCENT LIGHT FIXTURE



1' X 4' FLUORESCENT LIGHT FIXTURE



EMERGENCY BATTERY POWERED LIGHT FIXTURE



EXIT SIGN LIGHT FIXTURE

$\frac{5}{16}$ " HEXAGON



HARD-WIRED SMOKE DETECTOR

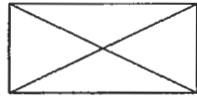


HARD-WIRED CARBON MONOXIDE DETECTOR

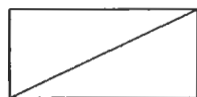
$\frac{3}{16}$ " CIRCLE



THERMOSTAT



SUPPLY DUCTWORK



RETURN DUCTWORK

$\frac{3}{16}$ " CIRCLE



FLOOR DRAIN

$\frac{1}{8}$ " TRIANGLE



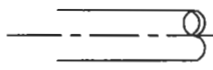
VALVE



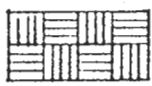
CHECK VALVE



FREEZE-PROOF HOSE BIB



THIS SYMBOL INDICATES THAT PIPE CONTINUES



EARTH



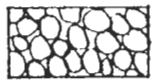
WOOD BLOCKING



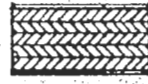
SAND



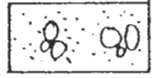
PLASTIC LAM. ON PARTICLE BOARD



GRAVEL / GRANULAR FILL



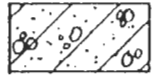
WOOD VENEER ON PLYWOOD



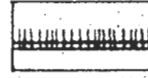
CONCRETE



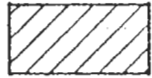
FINISHED WOOD



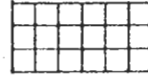
CMU



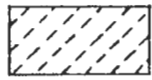
CARPET



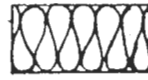
BRICK



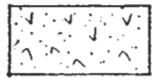
RIGID INSULATION



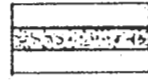
ARCH. STONE (GRANITE, MARBLE, LIMESTONE)



LOOSE / BATT INSULATION



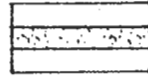
TERRAZZO



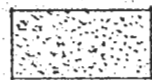
DRYWALL



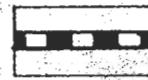
PLYWOOD



PLASTER CEMENT PLASTER



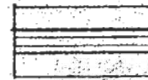
MORTAR SETTING BED



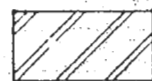
MEMBRANE ROOFING / WATERPROOFING



GASKET



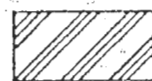
BUILT-UP ROOFING



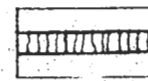
STEEL / SS



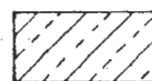
SEALANT & BACKER ROD



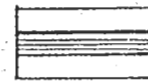
ALUMINUM



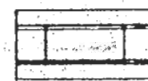
ACOUSTICAL TILE



BRONZE



GLASS



GLASS BLOCK

ROOM FINISH SCHEDULE

| LEVEL | ROOM NUMBER | ROOM NAME | FLOOR | BASE | WALL | CEILING | CEILING HT | REMARKS |
|-----------|-------------|-------------|-------------|------------|------|---------|------------|---------------------|
| BASEMENT | B01 | STORAGE | CONC | EXP | EXP | EXP | 7'-0" | |
| | B02 | FURNACE RM | CONC | EXP | DW | DW | 7'-0" | TYPE "X" DRYWALL |
| 1ST FLOOR | 101 | VESTIBULE | VCT | WOOD - S&S | DWP | DWP | 10'-6" | |
| | 102 | LIVING ROOM | WOOD | WOOD - S&S | DWP | DWP | 9'-0" | SEE ELEVATIONS |
| | 103 | STUDY | WOOD | WOOD - S&S | DWP | DWP | VARIES | "CATHEDRAL" CEILING |
| | 104 | KITCHEN | SHEET VINYL | WOOD - PTD | DWP | DWP | 9'-0" | |
| | 105 | CLOSET #1 | SHEET VINYL | WOOD - PTD | DWP | DWP | 10'-6" | |
| | 106 | STAIR | CPT | WOOD - S&S | DWP | DWP | VARIES | |
| 2ND FLOOR | 201 | HALL | CPT | WOOD - S&S | DWP | DWP | 8'-0" | |
| | 202 | BEDROOM #1 | CPT | WOOD - S&S | DWP | DWP | 8'-0" | |
| | 203 | BATHROOM | CT | CT | DWP | DWP | 8'-0" | |

ROOM FINISH ABBREVIATIONS:

CONC: CONCRETE, SEALED

CPT: CARPET

CT: CERAMIC TILE

DW: DRYWALL, UNPAINTED

DWP: DRYWALL, PAINTED

EXP: EXPOSED CONSTRUCTION

SHEET VINYL: SHEET VINYL FLOORING OVER 1/2" PLYWOOD UNDERLAYMENT

VCT: VINYL COMPOSITION TILE OVER 1/2" PLYWOOD UNDERLAYMENT

WOOD: STRIP RED OAK, SANDED, STAINED & SEALED

WOOD-S&S: RED OAK TRIM, STAINED & SEALED

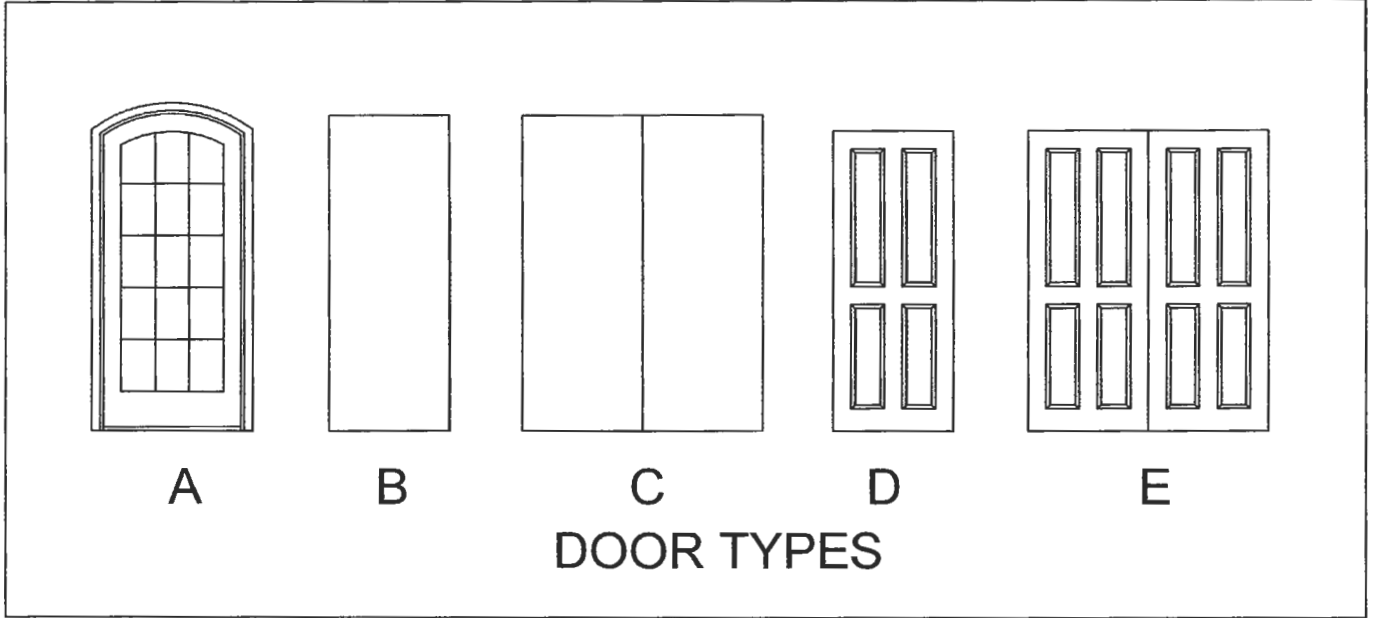
DOOR SCHEDULE

| LEVEL | DOOR NO | SIZE | TYPE | DOOR MATERIAL | FRAME MATERIAL | HARDWARE | LABEL | REMARKS |
|--------------|---------|----------------------------------|------|---------------|----------------|----------|-------|---|
| BASEMENT | DB01 | 3'-0" x 6'-8" x 1 3/4" | A | HM-P | HM-P | SET 1 | | |
| | DB02 | 3'-0" x 6'-8" x 1 3/4" | A | WDSC-P | WD-P | SET 2 | | |
| | DB03 | 3'-0" x 6'-8" x 1 3/4" | A | WDSC-P | WD-P | SET 2 | | |
| FIRST FLOOR | D101 | 3'-0" x 6'-8" x 1 3/4" | B | WDSC-P/GL-T | WD-P | PREHUNG | | MARVIN DOOR 3080 W/GLASS LITE GL-T |
| | D102 | PR 3'-0" x 6'-8" x 1 3/4" | D | WDPAN-SS | WD-SS | SET 3 | | |
| | D103 | 3'-0" x 6'-8" x 1 3/4" | C | WDPAN-SS | WD-SS | SET 4 | | |
| | D104 | BIFOLD 2'-6" x 6'-8" x 1 3/8" | E | WDHC-SS | WD-SS | SET 5 | | |
| SECOND FLOOR | D201 | 3'-0" x 6'-8" x 1 3/4" | C | WDPAN-P | WD-P | SET 5 | | |
| | D202 | 3'-0" x 6'-8" x 1 3/4" | C | WDPAN-P | WD-P | SET 5 | | |
| | D203 | PR BIFOLD 2'-6" x 6'-8" x 1 3/8" | F | WDPAN-P | WD-P | SET 5 | | |
| | D204 | 3'-0" x 6'-8" x 1 3/4" | C | WDPAN-P | WD-P | SET 7 | | |

DOOR SCHEDULE ABBREVIATIONS:

GL-T: TEMPERED GLASS
 HM-P: HOLLOW METAL, PAINTED
 WD-P: POPLAR OR BIRCH WOOD, PAINTED
 WD-SS: RED OAK, STAINED & SEALED
 WDSC-P: SOLID CORE WOOD, PAINTED

WDSC-SS: SOLID CORE WOOD, STAINED & SEALED
 WDHC-P: HOLLOW CORE WOOD, PAINTED
 WDHC-SS: HOLLOW CORE WOOD, STAINED & SEALED
 WDPAN-P: PANELLED WOOD, PAINTED
 WDPAN-SS: PANELLED WOOD, STAINED & SEALED



THESE DOOR TYPES ARE REFERENCED TO DOOR SCHEDULE

WINDOW SCHEDULE

| LEVEL | WINDOW NO. | FRAME SIZE (W X H) | WINDOW MATERIAL | OPERATION | MANUFACTURER'S NUMBER | REMARKS |
|--------------|------------|--------------------|-----------------|-------------|-----------------------|---------------|
| BASEMENT | WB01 | 3'-0" X 3'-0" | WD-P | HOPPER | H-3030 | |
| | WB02 | 3'-0" X 3'-0" | WD-P | HOPPER | H-3030 | |
| | WB03 | 3'-0" X 4'-6" | WD-P | SLIDING | S-3046 | ESCAPE WINDOW |
| FIRST FLOOR | W101 | PR 3'-0" X 5'-0" | WD-P | CASEMENT | C-3050 | |
| | W102 | PR 3'-0" X 5'-0" | WDPAN-SS | CASEMENT | C-3050 | |
| SECOND FLOOR | W201 | 3'-0" X 3'-6" | WDPAN-P | FIXED | F-3036 | GL-T |
| | W202 | 3'-0" X 5'-0" | WDPAN-P | DOUBLE-HUNG | D-3050 | |

WINDOW SCHEDULE ABBREVIATIONS:

GL-T: TEMPERED GLASS
 WD-P: WOOD, PAINTED
 WD-SS: WOOD, STAINED & SEALED

Abbreviations

Historically, abbreviations were used frequently in construction documents as part of standard practice. They were part of the drawing symbology, but can sometimes lead to errors of interpretation by contractors. Every set of drawings that use abbreviations should have an abbreviation list to prevent such errors.

If you use abbreviations, you should follow these rules:

- Use upper case lettering, without periods
- Do not use spaces within an abbreviation
- Use same abbreviations for singular or plural

The abbreviations listed below are compiled from *Architectural Graphic Standards*, 1912, 1951, and 1956, *Time Saver Standards*, 1966, Skidmore, Owings and Merrill Drafting Standards, 1986, Holabird & Root Drafting Standards, 1987, Nagle Hartray & Associates Standards, 1989, Murphy/Jahn Office Reference Manual, 1973, Braun/Skiba Standards Manual, 1990, *Recommended Standards on Production Procedures* (the so-called "POP Manual"), Northern California Chapter AIA, 1980, *Graphic Communication in Architecture*, William J. O'Connell, 1972, *Interior Graphic and Design Standards*, S.C. Reznikoff, 1986. Note that there are many differences between abbreviation standards between firms as well as between authors.

Small *Italic type* indicates old or archaic abbreviation which is not currently recommended.

| | | | |
|----------------|--|---------------|--|
| 2-PSS: | Two-Part Polysulfide Sealant | ADD: | Addendum; Addition |
| 2-PUMS: | Two-Part Polyurethane Modified Sealant | <i>ADDL:</i> | <i>Additional</i> |
| @ | At (the rate of) | <i>ADH:</i> | <i>Adhesive</i> |
| & | And | ADJ: | Adjust, Adjustable, Adjacent |
| A | Inch; Ditto (which means "same as above") | <i>AF:</i> | <i>Above the Floor</i> |
| # | Number. or Pound | AFF: | Above Finished Floor |
| ∅ | Diameter, Round, Phase | AGA: | American Gas Association |
| A: | Area, Ampere; Acre; Alcove; Compressed Air Line | AGG: | Aggregate |
| AB: | Anchor Bolt; <i>Asbestos Board</i> | <i>AGGR:</i> | <i>Aggregate</i> |
| ABV: | Above | AIA: | American Institute of Architects, American Insurance Association |
| AC: | Air Conditioning, Alternating Current, Acoustical | <i>AIC:</i> | <i>Amperes Interrupting Circuit</i> |
| <i>ACC:</i> | <i>Access</i> | <i>AIEE:</i> | <i>American Institute of Electrical Engineers</i> |
| ACF: | Architectural Concrete Finish | AISC: | American Institute of Steel Construction |
| ACFL: | Access Floor | <i>AL:</i> | <i>Aluminum</i> |
| ACI: | American Concrete Institute | <i>ALM:</i> | <i>Alarm</i> |
| <i>ACL:</i> | <i>Across the Line</i> | ALT: | Alternate, <i>Alteration; Altitude</i> |
| <i>ACOUST:</i> | <i>Acoustical</i> | ALUM: | Aluminum |
| <i>ACPL:</i> | <i>Acoustical Plaster</i> | ALS: | Acrylic Latex Sealant |
| <i>ACR:</i> | <i>Acrylic</i> | <i>AMB:</i> | <i>Ambient</i> |
| <i>ACST:</i> | <i>Acoustic</i> | AMP: | Ampere, Ampacity |
| ACT: | Acoustical Tile; Actual | <i>AMPY:</i> | <i>Ampere</i> |
| <i>AD:</i> | <i>Access Door, Area Drain</i> | <i>AMT:</i> | <i>Amount</i> |
| ADA: | Americans with Disabilities Act of 1992 | <i>AN:</i> | <i>Anode</i> |
| ADAAG: | Americans with Disabilities Act Architectural Guidelines | <i>ANCH:</i> | <i>Anchor, Anchorage</i> |
| | | ANN: | Annunciator |
| | | ANOD: | Anodized |
| | | ANT: | Antenna |
| | | AP: | Access Panel |
| | | APPD: | Approved |
| | | APPROX: | Approximate |
| | | <i>APRVD:</i> | <i>Approved</i> |
| | | APT: | Apartment |

| | | | |
|---------|--|---------|---|
| APX: | <i>Approximate</i> | BLDG: | Building |
| AR: | <i>Acid Resisting</i> | BLK: | Block |
| ARCH: | Architect, Architectural | BLKG: | Blocking |
| ARS: | <i>Asbestos Roof Shingles</i> | BLO: | <i>Blower</i> |
| AS: | Acoustic Sealant | BLR: | Boiler |
| ASB: | <i>Asbestos</i> | BLT: | <i>Borrowed Lite, Bullet Tips (Hinges)</i> |
| ASC: | <i>Above Suspended Ceiling</i> | BLT-IN: | <i>Built-In</i> |
| ASCE: | American Society of Civil Engineers | BM: | Beam, Bench Mark |
| ASME: | American Society of Mechanical Engineers | BMT: | Butyl Mastic Tape Sealant |
| ASPH: | Asphalt | BN: | Bullnose |
| ASSEM: | <i>Assemble</i> | BNDG: | Bending (re-bars) |
| ASSOC: | Association; Associate | BNT: | <i>Bent</i> |
| ASSY: | <i>Assembly</i> | BO: | <i>Blow Off</i> |
| ASTM: | American Society for Testing and Materials | BOT: | Bottom |
| AT: | <i>Acoustical Tile; Asphalt Tile</i> | BP: | Base Plate, <i>Blueprint, Bypass</i> |
| ATC: | <i>Acoustical Tile Ceiling</i> | BPL: | <i>Bearing Plate</i> |
| ATTEN: | <i>Attenuation</i> | BR: | Bedroom, Brick, <i>Brass, Boiler Room</i> |
| ATM: | Automatic Teller Machine; <i>Atmospheric</i> | BRDG: | <i>Bridge, Bridging</i> |
| AUTH: | Authorized | BRG: | Bearing |
| AUTO: | <i>Automatic</i> | BRK: | Brick |
| AVG: | Average | BRKR: | Breaker |
| AW: | <i>Acid Waste</i> | BRKT: | <i>Bracket</i> |
| AWG: | American Wire Gauge | BRS: | Butyl Rubber Sealant, <i>Brass</i> |
| AWM: | <i>Automatic Washing Machine</i> | BRZ: | Bronze |
| AWS: | American Welding Society | BRZG: | <i>Brazing</i> |
| AWWA: | <i>American Water Works Association</i> | BS: | Both Sides, Backset, <i>Bluestone</i> |
| AX: | <i>Axis</i> | BSMT: | Basement |
| B: | <i>Boiler, Bathroom, Bidet</i> | BT: | <i>Bath tub, Bolt</i> |
| B TO B: | Back to Back | BTR: | Better |
| B & B: | Balled and Burlapped, <i>Bell and Bell</i> | BTU: | British Thermal Units |
| B & F: | <i>Bell and Flange</i> | BTUH: | British Thermal Units per Hour |
| B & S: | <i>Bell and Spigot, Brown & Sharp</i> | BUR: | Built-up Roof |
| B/: | Bottom (of) | BUZ: | <i>Buzzer</i> |
| BBD: | <i>Bulletin Board</i> | BV: | Butterfly Valve |
| BA: | <i>Bulb Angle</i> | BVL: | Bevelled |
| BAL: | Balance, Ballast | BW: | Both Ways |
| BAF: | <i>Baffle</i> | BWV: | Back Water Valve |
| BB: | Buffalo Box, <i>Ball Bearing,, Bulletin Board</i> | BYP: | By Pass |
| BBL: | <i>Barrel</i> | C: | Courses, Curb, Channel, <i>Degrees Celsius, Clock Outlet, Calcimine</i> |
| BC: | <i>Broom Closet</i> | C/C: | <i>Center to Center</i> |
| BD: | Board, <i>Blow Down (pipe)</i> | C TO C: | <i>Center to Center</i> |
| BDL: | <i>Bundle</i> | CA: | Compressed Air |
| BDY: | <i>Boundary</i> | CAB: | Cabinet |
| BDRM: | Bedroom | CAD: | Cadmium, Computer-Aided Drafting |
| BEL: | Below | CAIS: | Caisson |
| BET: | Between | CAP: | Capacity |
| BETW: | <i>Between</i> | CAR: | Carpet |
| BEV: | Bevel | CARP: | <i>Carpenter</i> |
| BF: | Board Foot, Back Face, Bottom Face, Both Faces, <i>Boiler Feed</i> | CAT: | Catalog |
| BG: | <i>Bag (e.g., of cement)</i> | CAV: | Cavity |
| BHP: | <i>Brake Horsepower</i> | CB: | Catch Basin, <i>Concrete Block, Cast Brass, Coal Bin</i> |
| BHD: | <i>Bulkhead</i> | CBL: | <i>Concrete Block</i> |
| BIT: | <i>Bituminous</i> | CBX: | <i>Cast Box Strike</i> |
| BJF: | Bituminous Joint Filler | CC: | Cubic Centimeter |
| BKR: | Breaker | CCT: | Circuit |
| BL: | Base Line, Building Line, Block | | |

| | | | |
|----------|--|----------|--|
| CCW: | Counter Clockwise | CO & DP: | Cleanout & Deck Plate |
| CCTV: | Closed Circuit TV | COEF: | Coefficient |
| CD: | Cold Drawn, Cadmium | COL: | Column |
| CDS: | Cold Drawn Steel | COM: | Common |
| CEL: | Cellar | COMB: | Combination, Combustion |
| CEM: | Cement | COML: | Commercial |
| CEM AB: | Cement Asbestos Board | COMM ED: | Commonwealth Edison |
| Cem P: | Cement Water Paint | COMP: | Composition, Compressed |
| CER: | Ceramic | COMPO: | Composition |
| CF: | Cubic Feet | COMP T: | Compartment |
| CFL: | Counterflashing | CON: | Construction |
| CFM: | Cubic Feet per Minute | CONC: | Concrete |
| CFS: | Cubic Feet per Second | CONCP: | Concrete Painted |
| CFT: | Cubic Foot | COND: | Condenser, Conduit |
| CG: | Corner Guard | CONN: | Connection |
| CH: | Coat Hook | CONST: | Construction |
| CHB: | Chalk Board | CONSTR: | Construction |
| CHR: | Chilled Water Return | CONT: | Continuous, Continue, Control |
| CHAM: | Chamfer | CONTR: | Contractor |
| CHAN: | Channel | CONV: | Convactor, Convenience |
| CHBD: | Chalkboard | COP: | Copper |
| CHS: | Chilled Water Supply | COR: | Corner, Corridor |
| C.I.: | Cast Iron | CORR: | Corridor, Corrugate |
| CI: | Cast Iron | COV: | Cover |
| CIN BL: | Cinder Block | CP: | Cathodic Protection, Clothes Pole, Cesspool |
| CIP: | Cast Iron Pipe, Cast-in-Place | CPE: | Chlorinated Polyethylene |
| CIR: | Circle, Circular, Circuit | CPL: | Cement Plaster |
| CIRC: | Circumference | CPP: | Cement Plaster Painted |
| CISP: | Cast Iron Soil/sewer Pipe | CPR: | Copper |
| CITG: | Clear Insulating Tempered Glass | CPT: | Carpet |
| CJ: | Control Joint | CR: | Chromium (plated), Curtain Rod |
| CJF: | Cork Joint Filler | CRPT: | Carpet |
| CK: | Caulking | CRS: | Course, Cold Rolled Steel |
| CKT: | Circuit | CS: | Countersink, Cast Steel, Cast Stone, Commercial Standard |
| CL: | Centerline, Clearance, Closing, Closure, Class, Closet | CSG: | Casing |
| CLG: | Ceiling | CSK: | Countersink |
| CLKG: | Caulking | CSMT: | Casement |
| CLH: | Clothes Line Hook | CSN: | Caisson |
| CLL: | Contract Limit Line | CSS: | Countersunk Screw |
| CLO: | Closet | CSTG: | Casting |
| CLP: | Clamp | CT: | Ceramic Tile, Cork Tile, Cone Tip (hinges) |
| CLR: | Clear | CTD: | Coated |
| CLR OPG: | Clear Opening | CTR: | Center, Counter |
| CLS: | Closure | CTSC: | Communications Systems Terminal Cabinet |
| CM: | Circular Mil (1/1000 inch), Center Matched | CTSK: | Countersunk |
| CMP: | Corrugated Metal Pipe | CTWT: | Counterweight |
| CMT: | Ceramic Mosaic Tile | CU: | Copper, Cubic, Coefficient of Utilization |
| CMU: | Concrete Masonry Unit | CU. FT.: | Cubic Feet |
| CMUP: | Concrete Masonry Unit Painted | CU. YD.: | Cubic Yard |
| CND: | Condition, Conduit | CUR: | Current |
| CNDS: | Condensate | CV: | Check Valve |
| CNTR: | Center, Counter | CW: | Clockwise, Cold Water |
| CNVR: | Conveyor | CWP: | Circulating Water Pump |
| COAX: | Coaxial | CWR: | Condensate Waste Return |
| C.O.: | Cased Opening | CWS: | Condensate Waste Supply |
| CO: | Company, Cleanout, Cased Opening, Cut Out | CY: | Cubic Yard, Cycle |
| COD: | Cleanout Door | | |

| | | | |
|---------|---|----------|--|
| CYL: | Cylinder | EC: | Exposed Construction |
| CYL L: | Cylinder Lock | ECC: | Eccentric |
| D: | Deep, Depth, Drop, Drain | ECP: | Exposed Construction Painted |
| D & M: | Dressed & Matched | EDR: | Equivalent Direct Radiation |
| DA: | Double Acting | EE: | Each End |
| DB: | Decibel | EF: | Each Face |
| DBL: | Double | EFTS: | Expanding Foam Tape Sealant |
| DBT: | Drybulb Temperature | EG: | Edge Grain |
| DC: | Direct Current | EIFS: | Exterior Insulation and Finish System |
| DCV: | Detector Check Valve | EJ: | Expansion Joint |
| DD: | Driveway Drain, Deck Drain | EJECT: | Ejector |
| DEG: | Degree | EL: | Elevation, Elevator |
| DEGC: | Degree Celcius | ELB: | Elbow |
| DEGF: | Degree Fahrenheit | ELEC: | Electrical |
| DEM: | Demolish | ELECT: | Electrical |
| DEMO: | Demolition | ELEV: | Elevator, Elevation |
| DEP: | Dressed | ELP: | Emergency Lighting Panel |
| DEPT: | Department | EM: | Emergency |
| DET: | Detail | EMER: | Emergency |
| DF: | Drinking Fountain | ENAM: | Enamel |
| DH: | Double Hung | ENCL: | Enclosure |
| DIAG: | Diagonal | ENG: | Engineer |
| DIA: | Diameter | ENGR: | Engineer |
| DIAM: | Diameter | ENJF: | Expanded Neoprene Joint Filler |
| DIFF: | Diffuser | ENT: | Entrance |
| DIM: | Dimension | ENTR: | Entrance |
| DISL: | Disposal | EP: | Electrical Panelboard, Explosion Proof |
| DISP: | Dispenser | EPDM: | Ethylene Propylene Diene Monomer |
| DIV: | Division | EPJF: | Expanded Polyethelene Joint Filler |
| DL: | Dead Load | EQ: | Equal |
| DMH: | Drop Manhole | EQP: | Equipment |
| DMT: | Demountable | EQPT: | Equipment |
| DN: | Down | EQUIP: | Equipment |
| DO: | Ditto, or Door Opening | ERP: | Emergency Receptacle Panel |
| DP: | Dampproofing, Dew Point, Distribution Panel | ESC: | Escalator |
| DPDT: | Double Pole Double Throw | EST: | Estimate |
| DPST: | Double Pole Single Throw | EVAP: | Evaporator |
| DPR: | Damper | EW: | Each Way |
| DR: | Door, Drain, Dining Room | EWC: | Electric Water Cooler |
| DRBD: | Drainboard | EW & C: | Electric Wiring and Communication |
| DS: | Downspout, Disconnect Switch, Door Switch | EWH: | Electric Water Heater |
| DSP: | Dry Standpipe | EX: | Exposed Construction, Exit |
| DT: | Drain Tile | EXC: | Excavate |
| DTL: | Detail | EXCAV: | Excavate |
| DVTL: | Dovetail | EXEC: | Executive |
| DW: | Dumbwaiter, Distilled Water | EXG: | Existing |
| DWG: | Drawing | EXH: | Exhaust |
| DWGS: | Drawings | EXH AIR: | Exhaust Air |
| DWL: | Dowel | EXIST: | Existing |
| DWP: | Drywall, Painted | EXP: | Expansion, Exposed |
| DWR: | Drawer | EXPN: | Expansion |
| DS: | Downspout | EXPP: | Existing Patched and Painted |
| DSP: | Dry Standpipe | EXS: | Extra Strong |
| DX: | Direct Expansion, Duplex | EXT: | Exterior, Extinguish |
| E: | East, Enamel, Exhaust | EXTR: | Extrude |
| E TO E: | End to End | F: | Degrees Fahrenheit, Fuse |
| EA: | Each | F TO F: | Face to Face |
| EB: | Expansion Bolt | | |

| | | | |
|--------------|---|----------------|--|
| FA: | Fire Alarm, Fresh Air | FPL: | Fireplace |
| <i>FAB:</i> | <i>Fabricate</i> | FPM: | Feet per minute |
| FABR: | Fabricate | FPRF: | Fireproof |
| FACP: | Fire Alarm Control Panel | FPS: | Feet per Second |
| FAG: | Fire Alarm Gong | FR: | Frame, Front, Fire Riser |
| <i>FAO:</i> | <i>Finish All Over</i> | <i>FRG:</i> | <i>Forged</i> |
| FAR: | Floor Area Ratio | <i>FRM:</i> | <i>Frame</i> |
| FAST: | Fastener, Fasten | <i>FRPF:</i> | <i>Fireproof</i> |
| FB: | Flat Bar, Face Brick, Floor Box | <i>FRT:</i> | <i>Fire Retardant</i> |
| <i>FBD:</i> | <i>Fiberboard</i> | FS: | Full Size, Far Side, Federal Standards, Fused Switch, Floor Sink |
| FBM: | Foot Board Measure | FSCW: | Flush Solid Core Wood |
| FBP: | Fabric Panel | FT: | Foot, Feet, Fully Tempered |
| <i>FBRK:</i> | <i>Fire Brick</i> | FTG: | Footing, Fitting |
| FC: | File Cabinet, Foot Candle, <i>Fault Current</i> | FUR: | Furred |
| FD: | Floor drain | FURN: | Furnish, Furniture |
| FDC: | Fire Department Connection | <i>FURR:</i> | <i>Furring</i> |
| FDN: | Foundation | FUT: | Future |
| <i>FDTN:</i> | <i>Foundation</i> | <i>FVC:</i> | <i>Fire Valve Cabinet</i> |
| FE: | Fire Extinguisher | G: | Gas, Girder, Gutter, Gram |
| FEC: | Fire Extinguisher Cabinet | GA: | Gauge, Gage |
| FF: | Far Face, Finished Floor, <i>Factory Finish</i> | GAGE: | Gauge |
| <i>FFE:</i> | <i>Finished Floor Elevation</i> | GAL: | Gallon |
| FF&E: | Fixtures, Furnishings & Equipment | GALV: | Galvanized |
| <i>FFL:</i> | <i>Finished Floor Line</i> | GB: | Grab Bar, Glass Block, Gypsum Board |
| FGL: | Fiberglass | GC: | General Contractor |
| FGR: | Fiberglass reinforced | GCMU: | Glazed Concrete Masonry Unit |
| FH: | Flat Head, <i>Fire Hose</i> | GD: | Guard, Grade, Gutter Drain |
| FHC: | Fire Hose Cabinet | GEN: | General, Generator |
| FHMS: | Flat head machine screw | <i>GENL:</i> | <i>General</i> |
| <i>FHR:</i> | <i>Fire Hose Rack</i> | <i>GF:</i> | <i>Ground Face</i> |
| <i>FHS:</i> | <i>Fire Hose Station</i> | <i>GFCI:</i> | <i>Ground Fault Circuit Interrupted</i> |
| FHWS: | Flat Head Wood Screw | GFI: | Ground Fault Interrupted |
| FHY: | Fire Hydrant | GFRC: | Glass Fiber Reinforced Concrete |
| <i>FIL:</i> | <i>Fillet</i> | GI: | Galvanized Iron |
| FIN: | Finish, finished | <i>GKT:</i> | <i>Gasket</i> |
| <i>FITG:</i> | <i>Fitting</i> | GL: | Glass |
| FIX: | Fixture | <i>GL BLK:</i> | <i>Glass Block</i> |
| <i>FIXT:</i> | <i>Fixture</i> | <i>GLB:</i> | <i>Glass Block</i> |
| FL: | Floor, Fire Line | <i>GLVA:</i> | <i>Globe Valve</i> |
| FLASH: | Flashing | <i>GLZ:</i> | <i>Glaze</i> |
| FLG: | Flooring | GMU: | Glazed Masonry Unit |
| FLEX: | Flexible | GND: | Ground |
| FLG: | Flange, Flashing, Flooring | GOVT: | Government |
| FLR: | Floor | GP: | Galvanized Pipe |
| FLUOR: | Fluorescent | GPDW: | Gypsum Drywall |
| FLX: | Flexible | GPH: | Gallons Per Hour |
| FM: | Fire Main, Factory Mutual Company | <i>GPL:</i> | <i>Gypsum Lath</i> |
| FND: | Feminine Napkin Dispenser, <i>Foundation</i> | GPM: | Gallons Per Minute |
| FO: | Finished Opening | GPP: | Gypsum Plaster Painted |
| FOB: | Free On Board | <i>GPPL:</i> | <i>Gypsum Plaster</i> |
| FOC: | Face of Concrete | GPS: | Gallons Per Second |
| FOF: | Face of Finish | GR: | Grade, Grille, Granite |
| FOS: | Face of Studs | GRAN: | Granular, Granite |
| FP: | Fireproof | GRND: | Ground |
| | | GRTG: | Grating |
| | | GSS: | Galvanized Sheet Steel |

| | | | |
|---------|--|---------|--|
| GSU: | Glazed Structural Unit | HWY: | Highway |
| GT: | Grout | HYD: | Hydraulic |
| GV: | Galvanized | HYDRO: | Hydrostatic |
| GVA: | Gate Valve | HZ: | Hertz (Cycles Per Second) |
| GVL: | Gravel | I: | Iron, Current (electrical) |
| GYP: | Gypsum | IBV: | Indicating Butterfly Valve |
| GYP BD: | Gypsum Board | IC: | Interrupting Capacity |
| H: | High | ID: | Inside Diameter |
| HA: | Hectare | IE: | Invert Elevation |
| HB: | Hose Bib | ILK: | Interlock |
| HBD: | Hardboard | IMH: | Inlet Manhole |
| HC: | Hollow Core, Handicapped (better called AAccessible") | IN: | Inch |
| HCT: | Hollow Clay Tile | INC: | Incandescent |
| HD: | Head, Heavy Duty | INCAND: | Incandescent |
| HDCP: | Handicapped (better called "Accessible") | INCIN: | Incinerator |
| HDN: | Harden | INCL: | Incline, Include |
| HDR: | Header | INCR: | Increase |
| HDW: | Hardware | INFO: | Information |
| HDWD: | Hardwood | INS: | Insulate, Insulation |
| HDWE: | Hardware | INSP: | Inspect |
| HEX: | Hexagonal | INSTL: | Install |
| HGR: | Hanger | INSUL: | Insulation |
| HGT: | Height | INT: | Interior, Internal |
| HH: | Handhole | INTERM: | Intermediate |
| HHMB: | Hex Head Machine Bolt | INTM: | Intermediate |
| HID: | High Intensity Discharge | INV: | Invert |
| HK: | Hook or Hooks | IP: | Iron Pipe |
| HKD: | Hooked (re-bars) | IPS: | Iron Pipe Size |
| HL: | Hydrant Line | IW: | Indirect Waste |
| HM: | Hollow Metal | J: | Joist |
| HMP: | Hollow Metal, Painted | J-BOX: | Junction Box |
| HNCG: | Hollow Neoprene Compression Gasket | JAN: | Janitor |
| HOR: | Horizontal | JB: | Junction Box |
| HORIZ: | Horizontal | JC: | Janitor's Closet |
| HOSP: | Hospital | JCT: | Junction |
| HP: | High Point, High Pressure, Horse Power | JF: | Joint Filler |
| HPS: | High Pressure Sodium, High Pressure Steam | JST: | Joist |
| HR: | Hour | JT: | Joint |
| HRS: | Hot Rolled Steel, Hours | K: | Kilopound (1000 pounds), Kelvin (temperature) |
| HS: | Heat Strengthened | KAL: | Kalamein |
| HSG: | Housing | KCP: | Keene's Cement Plaster |
| HT: | Height, Heat, High Tension Duct | KG: | Kilogram |
| HTG: | Heating | KIP: | Kilopound (1000 pounds) |
| HTR: | Heater | KIT: | Kitchen |
| HTW: | High Temperature Water | KM: | Kilometer |
| HV: | High Voltage | KO: | Knockout |
| HVAC: | Heating, Ventilating & Air Conditioning | KP: | Kickplate |
| HVY: | Heavy | KPL: | Kickplate |
| HW: | Hot Water, Heavy Wall | KS: | Kitchen Sink |
| HWC: | Hot Water Circulating, Heavy Wall Conduit | KVA: | Kilovolt-Ampere |
| HWD: | Hardwood | KW: | Kilowatt |
| HWH: | Hot Water Heater | KWH: | Kilowatt Hour |
| HWR: | Hot Water Recirculating Return | KWHR: | Kilowatt Hour |
| HWS: | Hot Water Supply | L: | Angle, Left, Length, Lighting Panel, Long, Line |
| | | LA: | Landscape Architect, Lightning Arrester |

| | | | |
|-----------------|---|----------|---|
| LAB: | Laboratory, Labor | ME: | Mechanical Engineer |
| LAD: | Ladder | MECH: | Mechanical |
| LAM: | Laminate, Laminated | MED: | Medium |
| LAT: | Lateral | MED CAB: | Medicine Cabinet |
| LAV: | Lavatory | MEMB: | Membrane |
| LB: | Pound (weight), Lag Bolt | MERC: | Mercury Vapor |
| LBL: | Label | MET: | Metal |
| LBR: | Lumber | MEZZ: | Mezzanine |
| LC: | Light Control, Lead Covered | MFD: | Manufactured, Metal Floor Deck |
| LCD: | Liquid Crystal Diode | MFG: | Manufacturer, Manufacturing |
| LCL: | Linen Closet | MFR: | Manufacture, Manufacturer |
| LCM: | Lead Coated Metal | MH: | Manhole |
| LD: | Leader Drain | MI: | Malleable Iron, Miles |
| LH: | Left Hand | MIKE: | Microphone |
| LIB: | Library | MIN: | Minimum |
| LIBR: | Library | MIR: | Mirror |
| LIN: | Linear | MISC: | Miscellaneous |
| LINO: | Linoleum | MK: | Mark |
| LIQ: | Liquid | ML&P: | Metal Lath & Plaster |
| LKR: | Locker | MLD: | Molding |
| LL: | Live Load | MLDG: | Molding |
| LMS: | Limestone | MM: | Millimeter |
| LN: | Length | MMB: | Membrane |
| LNDG: | Landing | MO: | Masonry Opening |
| LNTL: | Lintel | MOD: | Module |
| LOC: | Locate | MONO: | Monolithic |
| LOCS: | Locations | MOV: | Movable |
| LP: | Low Point, Low Pressure, Lighting Panel, Light Proof | MP: | Metal Acoustal Panel |
| LPS: | Low Pressure Sodium, Low Pressure Steam | MPS: | Medium Pressure Steam |
| LR: | Living Room | MR: | Mop Receptor |
| LS: | Limestone, Loud Speaker | MRD: | Metal Roof Deck |
| LT: | Light, Low Tension Duct, Laundry Tray | MT: | Mount, Mounted |
| LTG: | Lighting | MTD: | Mounted |
| LTL: | Lintel | MTL: | Material, Metal |
| LT WT: | Lightweight | MTR: | Motor |
| LV: | Low Voltage | MUL: | Mullion |
| LVR: | Louver | MULL: | Mullion |
| LW:Light Weight | | MV: | Mercury Vapor |
| LWC: | Light Weight Concrete | MWP: | Maximum Working Pressure |
| LWDP: | Louvered Wood Door, Painted | MWK: | Millwork |
| M: | Meter, Motor, Thousand (brick), Bending Moment | N: | North, Nitrogen |
| MACH: | Machine | NAP: | Napkin |
| MAINT: | Maintenance | NAT: | Natural |
| MAN: | Manual | NATL: | Natural |
| MAR: | Marble | NB: | "Nota Bene" Latin phrase for "Take Special Note" |
| MARB: | Marble | NC: | Normally Closed, Noise Criteria |
| MAS: | Masonry | NEC: | National Electrical Code |
| MAT: | Material | NEUT: | Neutral |
| MATL: | Material | NF: | Near Face |
| MAX: | Maximum | NFWH: | Non-freeze Wall Hydrant |
| MB: | Mail Box, Machine Bolt, Mop Basin | NI: | Nickel |
| MC: | Medicine Cabinet, Mineral Core | NIC: | Not In Contract |
| MCC: | Motor Control Center | NK: | Neck |
| MCM: | Thousand Circular Mils (electrical wire size) | NMT: | Non-Metallic |
| | | NO: | Number, Normally Open |
| | | NOM: | Nominal |
| | | NR: | Noise Reduction |

| | | | |
|----------------|--|---------------|--|
| NRC: | Noise Reduction Coefficient | PFN: | Prefinished |
| NRP: | Non-Removable Pin | PG: | Pressure Gauge |
| NRS: | Non Rising Steam Valve | PH: | Phase, Preheat, Phone |
| NS: | Near Side | PIV: | Pivoted, Post Indicator Valve |
| NTS: | Not To Scale | PJF: | Preformed Joint Filler |
| O: | Oxygen | PKG: | Parking |
| <i>O TO O:</i> | <i>Out to Out</i> | PKWY: | Parkway |
| OA: | Outside Air, Overall | PL: | Plate, Plan, Property Line, Plastic Laminate, Plastic |
| <i>OB:</i> | <i>Obscure</i> | PLAS: | Plaster, Plastic |
| OBS: | Obscure | PLAS LAM: | Plastic Laminate |
| OC: | On Center | PLBG: | Plumbing |
| OD: | Outside Diameter | PLF: | Pounds Per Lineal Foot |
| OF: | Outside Face | <i>PLG:</i> | <i>Plumbing</i> |
| OFF: | Office | <i>PLMBG:</i> | <i>Plumbing</i> |
| OH: | Overhead | <i>PLTF:</i> | <i>Platform</i> |
| OHD: | Overhead Door | PLWD: | Plywood |
| OHMS: | Oval Head Machine Screw | <i>PLYWD:</i> | <i>Plywood</i> |
| OHWS: | Oval Head Wood Screw | PLUMB: | Plumbing |
| OI: | Ornamental Iron | PNEU: | Pneumatic |
| OP: | Opaque | PNL: | Panel |
| <i>OPG:</i> | <i>Opening</i> | PNT: | Paint |
| OPNG: | Opening | POL: | Polish, Polished |
| OPP: | Opposite | PORC: | Porcelain |
| OPP H: | Opposite Hand | PORT: | Portable |
| OR: | Outside Radius | POT W: | Potable Water |
| ORN: | Ornamental | PP: | Plaster, Painted, Power Panel, Precast Panel |
| OSD: | Open Sight Drain | PR: | Pair |
| OS&Y: | Outside Screw & Yoke (valve) | PRC: | Precast |
| <i>OUT:</i> | <i>Outlet</i> | <i>PRCST:</i> | <i>Precast</i> |
| OVFL: | Overflow | <i>PRE:</i> | <i>Prefinished</i> |
| OW: | Open Waste | PREFAB: | Prefabricated |
| OZ: | Ounce | PRES: | Pressure |
| P: | Pitch, Power Panel, Paint | <i>PRESS:</i> | <i>Pressure</i> |
| P. LAM: | Plastic Laminate | PRF: | Preformed |
| P SL: | Pipe Sleeve | <i>PRFMD:</i> | <i>Preformed</i> |
| PA: | Public Address | PRI: | Primary |
| PAF: | Powder Actuated Fasteners | PRMLD: | Premolded |
| PAR: | Parallel | PROT: | Protection, Protective |
| PARTN: | Partition | PRSTR: | Prestressed |
| PASS: | Passage, Passenger | PRTN: | Partition |
| PB: | Pull Box, Push Button, Panic Bar | PRV: | Pressure Reducing Valve |
| PBD: | Particle Board | PS: | Plumbing Stack |
| PBMT: | Preshimmed Butyl Mastic Sealant Tape | PSC: | Prestressed Concrete |
| PB STA: | Push Button Station | PSF: | Pounds per square foot |
| PC: | Pull Chain, Piece, Precast Concrete | PSI: | Pounds per square inch |
| PCF: | Pounds per cubic foot | PSIG: | Pounds per square inch gage |
| PCPL: | Portland Cement Plaster | PT: | Paint, Point, Part, Potential Transformer |
| PD: | Pump Discharge, Plaza Drain | PTC: | Post-Tensioned Concrete |
| PDP: | Paneled Door, Painted | PTD: | Painted, Paper Towel Dispenser |
| PE: | Porcelain Enamel, Professional Engineer | PTD/R: | Combination Paper Towel Dispenser/Receptacle |
| PED: | Pedestal, Pedestrian | PTN: | Partition |
| PERF: | Perforate, Performance | PTR: | Paper Towel Receptacle |
| PERIM: | Perimeter | PV: | Paving |
| PERP: | Perpendicular | PVC: | Polyvinyl Chloride |

| | | | |
|-----------|---|--------|--|
| PVF: | <i>Polyvinylidene Finish</i> | RM: | Room |
| PVG: | Paving | RMS: | Root Mean Squared |
| PVMT: | Pavement | RMV: | Remove |
| PVT: | Private | RN: | Riser Nipple |
| PW: | <i>Pass Window</i> | RO: | Rough Opening |
| PWR: | Power | ROB: | Rod Out Basin |
| QUAL: | Quality | ROW: | Right of Way |
| QUANT: | <i>Quantity</i> | RPM: | Revolutions Per Minute |
| QT: | Quarry Tile, Quart | RPT: | Repeat (like "Ditto") |
| QTR: | Quarter | RR: | Railroad |
| QTY: | Quantity | RT: | Rubber Tile, Right |
| R: | Riser, Radius, Resistance, Relay Panel | RTR/RR | <i>Rubber Tread/Rubber Riser</i> |
| R & S: | Rod and Shelf | RVS: | Reverse Side |
| RA: | Return Air, Registered Architect | RVT: | Rivet |
| RAD: | Radius, Radiator | RW: | <i>Redwood</i> |
| RADN: | Radian | RWC: | <i>Rain Water Conductor</i> |
| RB: | Rubber, Rubber Base, Resilient Base | RWD: | Redwood |
| RBC: | Rubber Base (Coved), <i>Rubberized Bituminous Compound</i> | RWL: | <i>Rain Water Leader</i> |
| RBS: | Rubber Base (Straight) | S: | South, Sealant, Supply, Sink |
| RBT: | Rabbet | S4S: | Surfaced 4 Sides |
| RCF: | Raised Computer Floor | S&M: | <i>Surfaced & Matched</i> |
| RCP: | Reflected Ceiling Plan, Reinforced Concrete Pipe | S&S: | Stained & Sealed |
| RD: | Roof Drain, Round, Receptacle Distribution Panel | S&V: | <i>Stain & Varnish</i> |
| REBAR: | Reinforcing Bar | SACT: | <i>Suspended Acoustical Tile</i> |
| REC: | Receiver | SALV: | Salvage |
| RECEP: | Receptacle | SAN: | Sanitary |
| RECP: | <i>Receptacle</i> | SB: | <i>Setting Basin, Splash Block</i> |
| RED: | <i>Reducer</i> | SC: | Solid Core, Short Circuit, Self Closing, Sill Cock |
| REF: | Refer, Reference, Refrigerator | SCD: | <i>Seat Cover Dispenser</i> |
| REFL: | Reflected, Reflector | SCFT: | Structural Clay Facing Tile |
| REFR: | Refrigerate, Refrigerator | SCH: | <i>Schedule</i> |
| REG: | Register, Regular | SCHED: | Schedule |
| REINF: | Reinforcement, or Reinforce | SCR: | Screen |
| REM: | Remove, Removable | SCUP: | <i>Scupper</i> |
| REQ: | Require, Required | SCWD: | Solid Core Wood |
| REQD: | <i>Required</i> | SD: | <i>Soap Dispenser</i> |
| RES: | <i>Resilient</i> | SE: | Structural Engineer |
| RESIL: | Resilient | SEAL: | Sealant |
| REST: | <i>Resistance</i> | SEC: | Second, Section, Secondary, Security System |
| RET: | Return, Retaining | SECT: | Section |
| RETG: | <i>Retaining</i> | SECY: | Secretary |
| REV: | Reverse, Revise, Revision | SED: | <i>Sewage Ejector Discharge</i> |
| REV DR: | <i>Revolving Door</i> | SEL: | Select |
| RF: | <i>Roof</i> | SERV: | Service |
| RFG: | Roofing | SEV: | <i>Sewage Ejector Vent</i> |
| RGTR: | Register | SF: | Square Foot |
| RGH: | <i>Rough</i> | SFGL: | Safety Glass |
| RGH OPNG: | <i>Rough Opening</i> | SGG: | Structural Glazing Gasket |
| RH: | Right Hand, Reheat, Relative Humidity | SGS: | Silicone Glazing Sealant |
| RHC: | Reheat Coil | SH: | Shelf, Sheet, Shower |
| RHMS: | Round Head Machine Screw | SHR: | <i>Shower</i> |
| RHR: | Right Hand Reverse, <i>Reheater</i> | SHT: | Sheet |
| RHWS: | Round Head Wood Screw | SHTH: | <i>Sheathing</i> |
| | | SHTHG: | Sheathing |
| | | SHWR: | <i>Shower</i> |
| | | SIG: | Signal |
| | | SIM: | Similar |

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|---------|--|---------|--|
| SJS: | Silicone Joint Sealant | SUR: | Surface |
| SK: | Sink | SUSP: | Suspended, Suspend |
| SKL: | Skylight | SV: | Safety Relief Valve |
| SL: | Siamese Line | SW: | Switch |
| SLOT: | Slotted | SWBD: | Switchboard |
| SLV: | Sleeve | SWGR: | Switchgear |
| SND: | Sanitary Napkin Dispenser | SY: | Square Yard |
| SNGG: | Sponge Neoprene Glazing Gasket | SYM: | Symmetrical |
| SNR: | Sanitary Napkin Receptacle | SYN: | Synthetic |
| SNT: | Sealant | SYS: | System |
| SP: | Soil Pipe, Standpipe, Soundproof, Single Pole | T: | Tread, Thermostat, Tee |
| SPC: | Spacer | T/: | Top |
| SPD: | Sump Pump Discharge | T&B: | Top and Bottom |
| SPDT: | Single Pole Double Throw | T&G: | Tongue & Groove |
| SPEC: | Specification, Specifications | T&P: | Temperature & Pressure Relief Valve |
| SPECS: | Specifications | TAN: | Tangent |
| SPK: | Speaker | TB: | Towel Bar |
| SPL: | Special | TC: | Top of Curb, Terracotta |
| SPLR: | Sprinkler | TCLO: | Telephone Closet |
| SPM: | Sprinkler Main | TCS: | Terne Coated Stainless Steel |
| SPP: | Skim Coat Plaster Painted | TD: | Trench Drain |
| SPST: | Single Pole Single Throw | TEL: | Telephone |
| SQ: | Square | TEL CL: | Telephone Closet |
| SS: | Stainless Steel, Set Screw, Soil Stack, Service Sink, Slop Sink | TEMP: | Temporary, Tempered, Temperature |
| SSD: | Sub-soil Drain | TEN: | Tenant |
| SSGS: | Silicone Structural Glazing Sealant | TER: | Terrazzo |
| SSK: | Service Sink | TERR: | Terrazzo |
| SSS: | Silicone Sanitary Sealant | TERM: | Terminal |
| SST: | Stainless Steel | TGL: | Toggle |
| ST: | Straight, Storm Water | TH: | Thermostat |
| STA: | Station | THK: | Thick, Thickness |
| STC: | Sound Transmission Class | THKNS: | Thickness |
| STD: | Standard | THR: | Threshold |
| STG: | Storage, Seating | THRESH: | Threshold |
| STGG: | Structural Glazing Gasket | THRM: | Thermal |
| STGR: | Stagger | THRMST: | Thermostat |
| STIFF: | Stiffener | THRU: | Through |
| STK: | Stack | TKBD: | Tackboard |
| STL: | Steel | TL: | Twist Lock (receptacle) |
| STM: | Steam | TLT: | Toilet |
| STO: | Storage | TOL: | Tolerance |
| STOR: | Storage | TP: | Top of Pavement |
| STP: | Standard Temperature & Pressure, Standpipe | TPD: | Toilet paper Dispenser |
| STR: | Straight (re-bars), Strainer, Structural, Starter | TPH: | Toilet Paper Holder |
| STRL: | Structural | TPTN: | Toilet Partition |
| STRT: | Straight | TR: | Tread, Transom |
| STRUC: | Structural | TRANS: | Transformer, Translucent |
| STRUCT: | Structural | TRAV: | Travertine |
| ST W: | Storm Water | TRD: | Tread |
| STWY: | Stairway | TS: | Time Switch |
| SUCT: | Suction | TSL: | Top of Slab |
| SUPP: | Supplementary, Supplement | TST: | Top of Steel |
| SUPT: | Superintendent | TSTAT: | Thermostat |
| | | TT: | Terrazzo Tile, Traffic Topping |
| | | TTC: | Telephone Terminal Closet |
| | | TV: | Television |

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|--------|--|--------|--|
| TW: | Top of Wall, Thin Wall (conduit), Tempered Water | VR: | Vapor Retarder, Vacuum Return, Vertical Riser |
| TYP: | Typical | VRM: | Vermiculite |
| TZ: | Terrazzo | VS: | Vent Stack |
| UC: | Undercut | VT: | Vinyl Tile |
| UH: | Unit Heater | VTR: | Vent Through Roof |
| UL: | Underwriters' Laboratories | VWC: | Vinyl Wall Covering |
| UNEX: | Unexcavated | W: | West, Width, Wide, Watt, Waste, Water, Water Main |
| UNEXC: | Unexcavated | W/: | With |
| UNF: | Unfinished | W/O: | Without |
| UNFIN: | Unfinished | W&M: | Washburn & Moen Gauge |
| UNO: | Unless Noted Otherwise | WAINS: | Wainscot |
| UON: | Unless Otherwise Noted | WB: | Wood Base |
| UP: | Unpainted | WC: | Watercloset |
| UR: | Urinal | WD: | Wood |
| USG: | United States Gauge, <i>United States Gypsum Company</i> | WDP: | Wood, Painted |
| USS: | United States Standard | WDSS: | Wood, Stained & Sealed |
| UT: | Utility | WDW: | Window |
| V: | Volt, Valve, Vinyl, Vent, Ventilator | WF: | Wide Flange (structural steel) |
| VA: | Volt Ampere | WFS: | Water Flow Switch |
| VAC: | Vacuum | WG: | Wired Glass |
| VACBR: | Vacuum Breaker | WGL: | Wire-Glass |
| VAR: | Varnish, Varies | WH: | Water Heater, Wall Hung, Wall Hydrant |
| VAT: | Vinyl Asbestos Tile | WI: | Wrought Iron |
| VB: | Vapor Barrier, Valve Box, Vinyl Base, Vacuum Breaker | WIN: | Window |
| VBC: | Vinyl Base (Coved) | WM: | Wire Mesh, Water Meter |
| VBS: | Vinyl Base (Straight) | WP: | Waterproof, Working Point, Working Pressure, Weatherproof |
| VC: | Varnished Cambric | WPR: | Waterproofing |
| VCP: | Vitrified Clay Pipe | WPT: | Working Point |
| VCT: | Vinyl Composition Tile | WR: | Water Resistant, Water Repellant, Waste Receptacle |
| VENT: | Ventilate, Ventilator | WRSTP: | Weatherstripping |
| VERT: | Vertical | WS: | Weatherstripping, Water Stop |
| VEST: | Vestibule | WSCT: | Wainscot |
| VF: | Vinyl Fabric | WT: | Weight, Water Table, Watertight |
| VFGT: | Vinyl Foam Glazing Tape | WVNR: | Wood Veneer |
| VIF: | Verify In the Field | WW: | Window Wall |
| VIN: | Vinyl | WWF: | Welded Wire Fabric |
| VIT: | Vitreous | XH: | Extra Heavy |
| VLT: | Vault | X HVY: | Extra Heavy |
| VNR: | Veneer | X STR: | Extra Strong |
| VOL: | Volume | YD: | Yard |
| VP: | Vapor Proof, Vent Pipe | YR: | Year |

Terms Commonly used in Architecture, Interior Design, and Construction Management

ACCESS PANEL: A small metal or wood door flush with a wall or ceiling surface which provides a closure over a valve or other operable device which is recessed into the wall or located above a ceiling. The access door may be keyed and lockable.

ACCESS FLOOR: Removable metal or concrete floor panels about 18" to 24" square which are supported on short steel pedestals so that wiring and ductwork may be installed, changed and maintained below the floor. The raised floor may be carpeted or tiled to create a finished floor surface.

ACOUSTICAL TILE, ACOUSTICAL PANEL: A ceiling or wall tile finishing material with an inherent property to absorb sound; usually made of mineral, fiber or insulated metal materials. Not "Acoustic Tile" or "Acoustical Board."

ACRYLIC (PAINT), ACRYLIC LATEX - A paint composed of acrylic resins, thinned with water.

ADDENDUM- Written or graphic instruments issued prior to the execution of the Contract which modify or interpret the bidding documents, including Drawings and Specifications, by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed. (Plural-"Addenda".)

ADHESIVE: A sticky substance to bond one material to another. Use the term "Adhere" instead of "Glue." Do not use "Glue," "Cement," or Mastic."

ADMIXTURE - A chemical which is added to concrete to accelerate or retard the setting process or to create air bubbles in the concrete, called "accelerators," or "air entraining agents."

ADVERTISEMENT FOR BIDS- Published public notice soliciting bids for a construction project. Most frequently used to conform to legal requirements pertaining to projects to be constructed under public authority, and usually published on newspapers of general circulation in those districts from which the public funds are derived.

AGGREGATE- Any of various hard, inert materials, like sand, gravel, crushed stone, or pebbles added to cement to make concrete, mortar, or plaster.

AGREEMENT- (1) A legally enforceable promise or promises between two or among several persons. (2) On a construction project, the document stating the essential terms of the Construction Contract which incorporates by reference the other Contract Documents. (3) The document setting forth the terms of the Contract between the Architect and a consultant.

AIR CONDITIONING SYSTEM- The process of treating air for simultaneous control of temperature, humidity, cleanliness, and distribution.

ALKYD (PAINT)- A paint composed of a chemically synthesized, alkyd derived base, thinned with mineral spirits. The current version of "oil" based paints.

ALTERATION: A planned or executed change to an existing building, short of complete demolition of the building. See also DEMOLITION and SELECTIVE DEMOLITION.

ALTERNATE: Mechanism used in Bid Documents to seek separate bids for a different design than the "Base Bid" design. May be "Additive" or "Deductive" alternates.

APPROVE: The term "approved," when used in conjunction with the Architect's action on the Contractor's submittal, applications, and requests, is limited to the Architect's duties and responsibilities as stated in General and Supplementary Conditions.

APRON- (1) A finish strip applied below the stool of a window to cover the rough plaster or dry wall edge. (2) A paved or hard packed area abutting a garage door or other opening.

AREAWAY- An uncovered space next to the fountain walls of a building, for entrance of light and air to the basement.

ARRIS: Sharp edge of a finished member.

AS-BUILT DRAWING: A drawing or print marked by the Contractor to show actual conditions of a project as constructed after construction.

ASHLAR- A rectangular pattern of stone used in a wall.

ASPHALTIC CONCRETE: This is the term used for paving for roads and driveways. Not "Asphalt" or "Bituminous" Concrete.

ASTRAGAL- A small molding attached to one or both meeting stiles of a double door, used to provide a tight, draft-free fit.

AWARD- The acceptance of a bid or negotiated proposal by an owner.

BACKFILL- The material (earth, gravel, or sand) used for refilling around a foundation wall.

BACKUP- The inner portion of a masonry wall, usually finished with face brick, stone ashlar, stucco, or other decorative or protective veneer on the outside.

BALUSTER- Any of a number of closely spaced vertical supports for a railing or balustrade.

BATT INSULATION - A preformed section of flexible fiberglass or mineral wool insulation with or without a vapor barrier covering on one side (either kraft paper or aluminum foil) sized to fit snugly in a framed cavity between studs or joists.

BATTEN- A narrow strip of wood or metal used to cover vertical joints between boards or panels.

BAY- An opening in a wall; a horizontal area division of a building, usually defined as the space between two columns or piers.

BEAM- A horizontal load-supporting member of a building which directly supports a floor; may be of wood steel, or concrete; transmits load horizontally to vertical columns or bearing walls. Normally beams are larger and are spaced further apart than "joist."

BEARING WALL- A wall which supports any vertical load in a building (such as floors, roofs, joist, beams or girder) as well as its own weight.

BEARING- The area of contact between a structural member (beam, girder, footing) and its underlying support (column, bearing wall, load bearing ground).

BELT- A horizontal course of decorative stone or brick exposed to the exterior face and encircling a masonry building.

BEVELED WOOD SIDING- Horizontal wood boards of varying widths, (usually 4", 6", 8", or 10") with lower edge thicker than upper edge.

BID- A complete and signed proposal to do the construction work or designated portion thereof for the dollar amount stated in the bid.

BIDDER- One who submits a bid for a prime contract with the Owner, as distinct from a sub-bidder who submits a bid to another bidder. Technically, a bidder is not a contractor on a specific project until a contract exists between him and the Owner.

BIDDING DOCUMENTS- The advertisement or invitation to bid, instructions to Bidders, the bid form the drawings, the specifications, and any Addenda issued prior to receipt of bids.

BLANKET INSULATION - Roll type fiberglass insulation for installation over ceilings or on wall surfaces either laid flat or secured with impaling pins.

BOARD FOOT- A unit of measure represented by a board one foot long, one foot wide and nominally one inch thick, or 144 cubic inches.

BOARD MEASURE- A system of cubic measurement for lumber; the basic unit is a board foot.

BOND- The arrangement of bricks in certain overlapping patterns to give the finished structural unit additional strength and to allow the individual elements to act together as a cohesive, integrated unit. Commonly used bonds are Running, common, English, and Flemish bonds.

BORROWED LIGHT (OR "LITE")- An interior window between rooms which allows light from one room to enter another - use instead "Glazed opening."

BRACE- A structural member which reinforces a column, beam, or truss.

BRACKET- A horizontally projecting support for an overhanging weight such as cornice.

BRIDGING- A method of bracing wood or steel floor joists by providing lateral members between the joists. Cross-bridging forms an "x" shape between joists. The purpose of bridging is to distribute loading to several joists.

BUDGET- The sum established by the Owner as available for the entire Project, including the construction budget, land costs, equipment costs, financing costs, compensation for professional services, contingency allowance, and other similar established or estimated costs.

BUILDING PERMIT- A permit issued by a village, town, city, county, state or federal governmental authority allowing construction of a project in accordance with approved Drawings and Specifications.

BUILDING TYPE- A classification of a building according to principal activities or uses for which it was constructed, such as housing, jail, shopping center. This is not the same as an "occupancy type" of building codes.

BUILT-UP ROOFING - roofing system used on relatively flat surfaces - hot asphalt or coal tar pitch mopped on with several plies (3 to 4) of roofing felts. May be smooth surfaced, painted with fibrated aluminum paint, or graveled on top.

BUTT JOINT- The cut ends of sheet or boards placed adjacent to one another with no overlap.

BUTTRESS- An external structure usually brick or stone, built against a wall to support or reinforce it.

BY OWNER: The term "by Owner" means that work shown or described in the contract documents and labeled with this designation is not included in the General Contractor's contract, but will be completed under a separate contract with another contractor by the Owner. Coordination and scheduling of the work thus described shall be the responsibility of the General Contractor.

BY OTHERS: The term "by others" means that work shown or described in the contract documents and labeled with this designation is not included in the specific sub-trade's contract, but will be required to be done within the General Contractor's contract.

CAISSON- A deep foundation type which is constructed by boring a large diameter hole in the ground and filling it with concrete.

CAMBER-A slight upward arching given to a beam, girder, or truss to prevent sagging due to weight.

CANT STRIP- A slanted or angled board laid at roof-wall intersection or in back of a parapet, to transition from horizontal to vertical for a roof membrane.

CANTILEVER- A structural member projecting horizontally well beyond its vertical support.

CASE WALL- A partition to enclose mechanical and plumbing systems.

CASEMENT- A type of window having a sash with hinges on one side allowing the window to open. Most contemporary casement windows swing outward.

CASING- The exposed trim molding, around a door or window; may be either flat or molded.

CASING BEAD - A plaster stop - do not use for gypsum wallboard trim.

CAULK- An archaic term meaning to fill small cracks with a linseed oil and whiting compound called "caulk" which is not very flexible and will not provide a water tight joint -- use the term "seal" or "sealant" instead.

CEMENT - Portland Cement for use in concrete, grout, mortar, cement plaster and stucco.

CEMENT PLASTER - Material made from Portland cement sand and water for use on exterior walls and soffits, and on high use interior surfaces or in high humidity interior spaces. "Stucco" is cement plaster.

CERTIFICATION FOR PAYMENT- A signed statement from the Architect to the Owner confirming the amount of money due the Contractor for Work accomplished and/or materials and equipment suitably stored.

CHALKBOARD - Do not use the term "Blackboard" which is archaic since contemporary chalkboards are not normally black.

CHAMFER - To bevel or round off a right angle corner.

CHANGE ORDER - A written order to the Contractor signed by the Contractor, Owner, and the Architect, issued after the execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

CHIPBOARD - Use the term "particle board" instead.

CLERESTORY WINDOW - A window or series of windows in a wall above the eye line, for lighting and/or ventilation of the building.

CMU - Concrete Masonry Unit - Do not use "Cement Block" or "Cinder Block."

CODES - Regulations, ordinances or statutory requirements of a village, town, city, county, state, or federal government relating to building construction, adopted and administered for the protection of the public health, safety, and welfare.

COLUMN - A vertical load-carrying structural member supporting horizontal members (beams, girders, etc.).

COMPLETE - The term "complete" means all surfaces or areas of a construction item.

CONCRETE - A mixture of Portland cement, large and small aggregate, water and admixture.

CONDUCTOR - See "down spout".

CONDUIT - A protective metal tube for electric wiring.

CONSTRUCTION DOCUMENTS - The term "Construction Documents" means the Scope of Work list and reference drawings contained within the Volume by that name.

CONSTRUCTION JOINT - A joint in concrete flatwork or walls which is necessary for stopping the pour for the day - do not use "cold joint."

CONSTRUCTION MANAGEMENT - The combined operations for the authorization, purchasing, supervision, accomplishment, and acceptance of a construction project.

CONSTRUCTION DOCUMENTS - Working Drawings and Specifications.

CONSULTANT - An individual or organization engaged by the Owner or Architect to render professional consulting services, supplementing the Architect's services. Types of consultants could be Engineers, acoustical, energy, or cost consultants.

CONTRACT DOCUMENTS - The term "Contract Documents" means all of the documents which make up the Contract between Owner and Contractor, including the Contract itself, the General and Special Conditions, the Technical Specifications, the Construction Documents (Scope of Work and Drawings), all Addenda issued prior to signing of the Contract and Change Orders issued by the Owner and agreed to by the Contractor after the signing of the Contract.

CONTRACT ADMINISTRATION - The duties and responsibilities of the Architect during the Construction Phase, which includes observation of construction, checking shop drawings, and approving pay requests.

CONTRACT DOCUMENTS - The Owner-Contractor Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications, and all addenda issued prior to execution of the contract.

CONTRACTOR - In construction terminology, the person or organization responsible for performing the Construction Work and identified as such in the Owner-Contractor Agreement.

CONTROL JOINT - A groove which is formed, sawed, or tooled in a concrete or masonry structure to regulate the location and the amount of cracking and separation resulting from the dimensional change of different parts of the structure, thereby avoiding the development of high stresses.

COPING - Top of a parapet, usually stone or metal, to prevent water from getting into the parapet.

COR-TEN - Proprietary name for a brand of weathering steel made by the Inland Steel Company - use the generic term "weathering steel" instead.

CORBEL - Masonry which is stepped out from each course to project from a wall.

CORNICE - A horizontal molding along the top of the wall or ceiling.

COURSE - A continuous horizontal layer of masonry.

CRAWL SPACE - An unfinished, accessible space below the first floor, generally less than full story height, but at least 1'-6" high clear under the joists or beams.

CRICKET - A small saddle on a roof used to divert water around a chimney or other small projection (see saddle).

CRIPPLE - A short supplemental wall framing member used between the door or window header (or window sill) and sill plate.

CURB - (1) The stone or concrete edging of a side walk or paved street;
(2) the raised edge of a floor or well opening.

CURTAIN WALL - An exterior wall which encloses but does not support the structural frame of the building.

DAMP-PROOFING - An impermeable coat or coats of asphalt brushed or sprayed on the foundation basement wall to prevent the passage of moisture.

DATUM - A reference elevation to which other elevations are measured.

DEAD LOAD - The part of the total building load contributed by the structural building elements and materials.

DEFLECTION - The displacement in a structural member that occurs when a load is applied to the structure.

DELETE - To take something out of the building or contract - do not confuse with "omit" which means not to install something in the first place.

DEMISING WALL- An interior wall or partition used to sub-divide tenant spaces from one another.

DEMOLITION- Removal of an entire building -- see also "alteration" and "selective demolition."

DETAIL- A drawing, at a larger scale, of a part of another drawing, indicating in detail the design, location, composition and correlation of the elements and materials shown. (Usually referring to a plan detail.)

DIRECTED: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect," "requested by the Architect," and similar phrases.

DIVISION (OF THE SPECIFICATIONS)- One of the sixteen organizational subdivisions used in the specifications and in construction information filing. (List them).

DOUBLE HUNG WINDOW- A type of window containing two movable sash sections which slide open vertically.

DOWNSPOUT- A pipe to carry rainwater from the gutter or roof to the ground or the sewer -- can be sheet metal, plastic, or other type of piping material.

DRAWING- do not use "print," "blueprint," or "sheet"

DRIP- A projecting part of a sill or cornice that sheds rain water and protects structural parts below.

DRYWALL- Gypsum board for interior wall and ceiling finish material.

DUCT- A rectangular or round sheet metal or fiberglass pipe used to convey warm or cooled air.

DUMBWAITER- an elevator too small for a person - used for vertically transporting food, mail, dishes, trays, etc.

EAVES- The lower or outer edge of a roof which overhangs the side wall of a building.

ELASTOMERIC- A material which is inherently rubbery for sealants, flashings, and waterproof membranes.

ELEVATION-(1) A drawing of the front, side, or rear of the building drawn to scale. (2) The height above surface of the earth or the vertical distance from a given reference elevation.

ENGLISH BASEMENT- A basement with half its height above grade level.

EVACUATION- The removal of earth from its natural position, or the depression resulting from the removal of earth.

EXPANSION JOINT- A joint in concrete, masonry, or metal designed for movement - expansion and contraction -- not a "control joint," or "construction joint."

EXPANSION SHIELD- a drilled-in lead shaft, into which a bolt is screwed, expanding the shaft tight against the hole -- used for anchoring materials onto concrete or masonry surfaces.

FACADE- The front of a building.

FACE BRICK- A good grade of brick used to finish the exterior of building walls.

FASCIA: (1) Any relatively broad flat vertical surface like that on the outside of a cornice.

(2) A finishing board used to conceal rafter ends.

FEASIBILITY STUDY- A detailed investigation and analysis conducted to determine the financial, economic, technical or other advisability of a proposed project.

FEE- A term used to denote payment for a professional service, (not including compensation for reimbursable expenses, such as travel, long distance telephone calls, photo copy, printing or mailing).

FELT PAPER- Archaic term - an asphalt-impregnated used as a covering for wall sheathing or for plies of built-up roofing, usually weighing 15 lbs. per 100 square feet -- use the term "building paper" for use over wall sheathing, and "ply" for roofing felts.

FENESTRATION- The design and disposition or arrangement of windows or other openings in a building wall.

FIBERBOARD- A building board of wood or other plant fibers compressed and bonded into a sheet, usually 4'-0" x 8'-0" x 2" thick.

FIBERGLASS- Finespun filaments of glass made into a yarn, used in blankets as insulation; or it may be added to gypsum or concrete products to increase tensile strength -- do not use the term "glass fiber."

FILL- Soil, gravel, or sand used to equalize or raise the surface of the earth.

FINISHED FLOOR- The top or wearing surface of a floor system, of hardwood, vinyl, terrazzo, or ceramic tile.

FIRE RESISTANCE- The ability of a wall or floor assembly to maintain structural stability and act as an effective barrier to the transmission of heat for a stipulated period of time. Measured in hours, such as 2 hr, 1hr, 2hr, 3hr, or 4hr.

FIRE STOPPING- Solid wood members placed between studs to retard the spread of flame within the framing cavity.

FIREPROOFING- The use of incombustible materials to protect steel structured membrane of a building so it can withstand a fire without losing structural integrity, for a stipulated period of time. Measured in hours, such as 1 hr, 2hr, 3hr, or 4hr.

FLAKE BOARD- use the term "particle board" instead.

FLAME SPREAD CLASSIFICATION- A standard measurement of the relative surface burning characteristics of a building material when tested by ASTM E 84. Classes are A, B, or C.

FLASHING- The strips of sheet metal, copper, lead, or tin used to cover and protect structural angles and joints, to prevent water seepage or leaks.

FLOAT FINISH- The surface of concrete finished by a continuous spreading of the material with a flat board.

FLUE- The duct or open space within a chimney through which combustion gasses and smoke are allowed to escape.

FOOTING- The projecting course at the base of a foundation wall which distributes the building load over a wider area of the soil.

FOYER- The entrance hall of a house or other building type.

FURNISH: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

FURRING- The strips of wood or metal applied to wall or other surface to make it plumb or true to line, which will provide a fastening surface for a finish covering -- be more precise by using the terms "wood furring" or "metal furring."

FURRING CHANNEL- cold rolled steel channel for suspension of plaster or drywall ceilings - usually 3/4" or 1 2" deep.

GABLE- The triangular-shaped wall at the end of a building between the slopes of a roof.

GAGE- Same as "gauge" -- thickness of metal.

GAMBREL ROOF- A ridged roof, with sides having two pitches or slopes.

GENERAL CONTRACT-(1) Under the single contract system, the Contract Between the Owner and the Contractor for construction of the entire Work. (2) Under the separate contract system, that Contract between the Owner and a Contractor for construction of architectural and structural Work.

GENERAL CONDITIONS (OF THE CONTRACT FOR CONSTRUCTION)- That written part of the Contract Documents which sets forth many of the rights, responsibilities and relationships of the parties involved.

GIRDER- A Horizontal load supporting member of a building which supports a beam or beams.

GIRT- A secondary horizontal framing member extending between columns or studs to stiffen the framing system; also to provide support for the siding or sheathing.

GLAZED OPENING- glass window in an interior wall or partition -- do not use the term "window," "vision panel," "light," "lite," or "borrowed light."

GRADE BEAM - A horizontal load-bearing foundation member but end-supported on piles, piers, or caissons like a standard beam; not ground-supported like a foundation wall.

GRADE- Level of the earth's surface.

GREEN – Process of selection of materials and systems that use materials that are made from renewable resources, are affordable and contain low amounts of embodied energy.

GRILLAGE- A system of beams, laid crosswise to form a foundation to evenly distribute the load.

GROSS AREA- The total enclosed floor area of all floors of a building measured from the outside surface of the exterior walls.

GROUNDS- The strips of wood or metal placed around a wall opening to establish the finished plane for the palter or concrete.

GROUT- A thin, fluid mortar mixture of Portland cement, fine aggregate and water used to fill small joints and cavities in masonry work -- do not use mortar in place of grout.

GUARD RAIL- A protective railing around an open raised platform.

GYP BOARD- See gypsum wallboard.

GYPSUM WALLBOARD- A prefabricated sheet used in drywall construction made of gypsum covered with paper which can be painted, or wall papered -- use the term "drywall" instead.

HANDRAIL- Single railing on wall at stair -- use "railing" for a protective barrier.

HANGER- Any suspended structural member to which other members are attached.

HARDBOARD- manufactured flat wood panel used for interior finish material -- do not use the terms "Masonite," or "pressed board."

HARDWOOD- wood obtained from deciduous trees, mainly used for finished wood trim, doors, panels, and furniture -- no specific species, could be oak, birch, ash, poplar, teak, mahogany, butternut, etc.

HEAD ROOM- The distance between the top of a finished floor and the lowest part of the floor above.

HEADER- In masonry, a brick laid across the thickness of a wall with one end toward the face of wall. In carpentry, a wood beam set at right angles to joists at a floor opening to provide a support for joist which are interrupted by the opening.

HEARTH- The floor of a fire place, and the projection of noncombustible flooring material in front of the fireplace.

HIP ROOF- A roof whose four sides slope to a common point or to ridge; has no gabled ends.

HOISTWAY- shaft for elevators and dumbwaiters.

HOLLOW METAL- break-formed sheet metal used for doors, windows and frames.

HVAC – Heating, Ventilating and Air Conditioning

IN KIND: The term "in kind" means of the same type, size, material, etc. as the existing item.

INDICATED: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.

INSTALL- The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."

INSTALLER: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application, and similar operations.

INSULATION- Any material used to slow down the transfer of heat.

JACK RAFTER- The diagonal sloping ridge rafter of a hip roof.

JALOUSIES- Adjustable glass louvers in doors or windows to regulate light and air or exclude rain.

JAMB- The side framing or finish of a doorway or window.

JOINT FILLER- material which fills the entire depth of a joint and in itself does not form a waterproof joint -- may be topped with sealant to provide water tightness.

JOIST- A horizontal closely spaced framing member supporting a floor or ceiling.

KERF- A narrow slot cut in to the face of a material such as wood or metal.

KEystone- The central topmost stone or brick of an arch.

KING POST- The vertical member at the center of a triangular truss.

KNEE- A brace placed diagonally at the center of a triangular truss.

LALLY COLUMN - A steel pipe column which is encased in concrete and another steel jacket on the outside to provide fire proofing.

LATH- Strips of wood (in older existing construction) or expanded metal used as base for plaster walls.

LATTICE- Any openwork panel of crossed strips, rods, or bars of wood or metal, used as a screen.

LEADER- archaic term -- use "down spout" instead.

LIEN- See "mechanic's lien".

LIGHT (OR "LITE")- A window pane or section of a window sash for a single pane of glass.

LIGHTWEIGHT CONCRETE- concrete which uses lightweight aggregate such as expanded shale or clay instead of crushed stone -- normally weighs about 110 pcf.

LIGHT WELL- A n open area within a building or in a subsoil space around a basement window, which provides light and air.

LINTEL- A piece of wood, stone, or steel placed horizontally across the top of door and window openings to support the wall above the opening.

LITE- See "light".

LIVE LOAD- That part of the total load on structural members that is not a permanent part of the structure. it may be variable, as in the case of loads contributed by people, furniture, wind, snow or earthquake loads.

LOAD-BEARING PARTITION - A vertical structural interior wall supporting a floor or roof.

LOFT-

- (1) An attic-like space below the roof of a house or barn;
- (2) any of the upper stories of a warehouse or factory,
- (3) A type of apartment unit which is usually built within an old factory and which provides the occupant with large, open, high-ceiling spaces. Usually only a bathroom is enclosed and plumbing is minimal. Interiors are finished by occupant.

LOUVER- A slatted ventilator pitched to keep out rain or snow.

LVL – “Laminated Veneer Lumber” a type of “engineered wood” used for structural headers, columns and beams – it is stronger, straighter, and more uniform than typical sawn lumber and is easy to handle and use, but won't warp, twist, bow, or shrink. LVL is created by using engineering technology to laminate several layers of lumber together.

MANSARD ROOF- A roof with two slopes or pitches on each of the four sides, the lower slopes steeper than the upper.

MASONRY- Brick, concrete block, or stone.

MECHANIC'S LIEN- A legal charge on property in favor of persons supplying labor or materials for a building for the value of labor or materials supplied by them. Clear title to the claim for the labor, materials or professional services is settled through the "release of liens" which is accomplished through a form given to the owner by the contractor.

METAL- used to denote products fabricated from thin sheet steel.

METAL LATH- Expanded metal used for plaster lath -- do not use the terms "mesh" or "chicken wire."

METAL TRIM - edge trim for drywall -- do not use the term "casing bead" which is for plaster.

MEZZANINE- An intermediary floor having less than 1/3 of the area than the floor below.

MILL CONSTRUCTION- A type of "slow-burning" construction made of masonry walls, heavy timber framing, and planked or laminated wood floors.

MILLWORK- Doors, windows and door frames, mantels, panel work, stairways, and woodwork.

MITER- A joint formed by two pieces of material cut to meet at an angle.

MOLDING- A finishing piece to cover construction joists or edges, usually a long narrow strip of plain or curved wood; may be ornamented.

MONITOR- A raised rectangular and roofed structure on a roof having windows or louvers for ventilating or lighting the building.

MOP BASIN- Floor mounted sink for building maintenance purposes -- do not use terms "slop sink" or "service sink," which are wall-mounted sinks.

MORTAR- A bonding agent in masonry work, made of lime, sand, and cement mixed with water.

MUD- A common term for joist compound products.

MULLION- Vertical framing which divides windows into major sections.

MUNTIN- The vertical or horizontal bars which divide lights (panes of glass) in a window.

NEWEL- The vertical post around which the steps of a winding staircase turn; the post at the top or bottom of a staircase, supporting the handrail or a balustrade.

NOSING- The rounded projecting edge of a stair tread or landing.

OAKUM- A loose fiber from hemp or rope, used as a backing for caulking joints in cast iron drain piping.

OFFSET- A ledge formed by a difference in the thickness of a wall.

OMIT- to leave something out by intention.

ON CENTER (O.C.)- The distance from the center of one structural member to the center of another, term used for spacing studs, joists, rafters.

OPTION- term used in construction documents to indicate that contractor may use one of several products at his or her choice.

OSB – "Oriented Strand Board" – inexpensive wood panels made from wood chips and glue, with chips oriented in the long direction of the board – they come in 4'-0" x 8'-0" sheets usually ½" thick, but also other sizes, and are used for wall and roof sheathing.

PARAPET- An exterior low wall along the edge of a roof, balcony, ridge, or terrace.

PARGING- A coating of cement mortar (Portland cement, sand, and water mix), on a masonry wall, used to waterproof the outside surface of an exterior wall or masonry foundation.

PARQUET FLOOR- A hardwood floor laid in small rectangular or square patterns, not in long strips.

PARTY WALL- A wall built along the dividing line between adjoining buildings for their common use.

PATCH: The term "patch" means to remove any damaged or defective material within the area to be patched, and to replace it with new material, fitted in a workmanlike manner so as to provide a continuous plumb, level, and/or true to line surface, uninterrupted by flaws, defects, or blemishes.

PARTICLE BOARD - A wood and glue composite panel for sheathing, underlayment, subflooring, and substrate for veneers and plastic laminate for millwork.

PARTITION- A non-bearing wall which divides space and supports only its own weight.

PENTHOUSE- A building on the roof of a building to enclose mechanical or elevator equipment; also, an apartment on the roof of a high-rise apartment.

PERFORMANCE BOND- An insurance document purchased by the contractor from a bidding company (a "surety") which guarantees that the work will be performed in accordance with the Contract Documents.

PERMEABILITY- The property of material to permit a fluid (or gas) to pass through it; in construction, commonly refers to water vapor permeability of a sheet material or assembly and is defined as Water Vapor Permeance per unit thickness.

PERMIT- A document issued by a local, state, county, or federal governmental authority having jurisdiction to authorize specific work on a building.

PIER- A column; a foundation type shaped like a column underground, created by drilling a hole and filling it with concrete.

PILASTER- Half-column attached to or projecting from a wall.

PILE- A timber, steel, or concrete pole which is driven into the ground to serve as support for the foundation.

PITCH- The slope or incline of a roof, expressed in inches of rise per foot of length, or by the ratio of the rise to the total roof span.

PLANK- A piece of unfinished structural lumber 2 to 4 inches thick and at least 8 inches wide.

PLASTER- A mixture of gypsum, sand, and water, used as a finished surface for walls and ceilings, applied over gypsum, metal or wood lath.

PLASTIC INSULATION- Generic term for polystyrene ("Styrofoam") or urethane insulation.

PLASTIC LAMINATE- Thin sheet material of plastic composition used for finishing of interior millwork - do not use the terms "Formica," or "Melamine."

PLATE- A horizontal wood framing member which provides bearing and anchorage for wall, floor, ceiling, and roof framing.

PLENUM- An enclosed chamber for horizontal distribution of ventilation air, such as the space between a suspended finished ceiling and the floor above.

PLINTH- A square block at the base of a column, pedestal, or door casing.

PLY- A term to denote the number of thickness or layers as "3-ply"; for roofing felt, veneers, etc.

PLYWOOD- A fabricated wood product constructed of three or more layers of veneer joined with glue, laid with grain or adjoining plies at right angles.

PORTALS- A door, gate, or entrance, especially one of imposing appearance.

POST- A vertical wood structural column.

PRESTRESSED CONCRETE- A method of giving tensile strength by stressing the reinforcing in the concrete before it sets, then releasing the tension after the concrete has hardened.

PRIMER- A first base coat of paint to seal the surface of the finished material and equalize suction differences.

PROJECT SITE: The term "Project Site" is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

PROJECT MANUAL- The 8 1/2"x 11" paper size bound book of written documents prepared by the Architect for a Project, including the bidding requirements, Conditions of the Contract and technical Specifications, used by the Contractor in bidding & building the project.

PROPRIETARY PRODUCT- A product produced by only one manufacturer to his own design, and not available from competing manufactures.

PROSCENIUM- In a theater, the front area of the stage still visible to the audience when the curtain is lower; the curtain and the opening that surrounds it.

PROVIDE: The term "provide" means "to furnish and install, complete and ready for the intended use."

PURLIN- A structural roof framing member laid horizontally across the roof beams to support a roof deck.

QUANTITY SURVEY- Detailed analysis and listing of all items of material and equipment and quantities of each necessary to construct a Project.

QUARRY TILE- Thick type of ceramic tile which is composed of fired clays and shales used for floors and bases.

QUEEN POST- Either of two vertical members of a triangular truss, each being equidistant from the apex.

QUOIN- The external corner of a building; any of the large square stones by which the corner is marked.

RABBET (ALSO REBATE)- A longitudinal channel, groove, or recess cut out of the edge or face of a member to receive another member, or one to receive a frame inserted in a door or window opening; the recess into which glass is installed in a window sash.

RACKING- Lateral stress exerted on an assembly. See test Procedure ASTM E 72.

RAFTER- A closely spaced sloping framing member supporting a roof.

RAIL- The cross of horizontal piece of a door, window sash, or panel. The top horizontal member of a balustrade.

RAKE- A board or molding placed along the sloping sides of a frame gable to cover the ends of the siding.

RANDOM- Without uniformity of dimension or design; e.g., masonry wall with stones placed irregularly, not in a straight course.

REBUILD: The term "rebuild" means to reconstruct a portion or portions of the building completely and properly using new or salvaged materials acceptable to the Owner and Architect.

RECORD DRAWINGS- Sometimes called "as-built" drawings, these are normally modified from the construction documents to conform to all changes made during construction.

REFINISH- To put finish back into its original condition -- do not use the terms "refurbish," "rehabilitate," "remodel," "renew," or "renovate."

REGULATION: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

REINFORCEMENT- A system of steel rods or mesh cast into concrete for accepting stresses.

RELOCATE- To move an item from one location and install in another location.

REMODEL- use the term "alter" instead.

REPAIR: The term "repair" means to fix and restore a portion or portions of the building to a sound, acceptable state of operation and serviceability or appearance. Repairs will be expected to last approximately as long as a replacement.

REPLACE: The term "replace" means to remove an existing element or elements from the building and install a new element of like kind or a salvaged element acceptable to the Owner and Architect, completely and properly anchored to the substrate and surrounding materials; also the term can mean to provide a substitute or replacement for an item.

RESET: The term "Reset" means to remove an existing element or elements from the building and reinstall it completely and properly anchored to the substrate and surrounding materials.

RESILIENT BASE- wall base material -- use this term generically instead of "vinyl base," or "rubber base."

RESILIENT FLOORING- Either tile or sheet goods for flooring material made from vinyl or rubber.

RESILIENT TILE- Floor tile -- use this term generically instead of "vinyl composition tile," "vinyl tile" or "rubber tile."

RETAINING WALL- A wall built to keep a bank of earth from sliding.

RIDGE- The top horizontal edge or peak of a roof.

RIGID INSULATION- High density fiberglass or cellular glass insulation.

RISER- The vertical part of a stair step; a vertical HVAC, plumbing, or electrical run or extension.

ROLL ROOFING- A roofing material made of compressed fibers saturated with asphalt, and coated with small gravel supplied in rolls.

ROOF HATCH- use this term instead of the archaic term "scuttle."

ROOFING FELT- See "felt paper".

RUNNER CHANNEL- Cold rolled steel channel 1 2" deep used for suspended ceiling framing.

SADDLE- A roof crossing between two adjoining roofs to the ends of the valley.

SANITARY SEWER- A sewer designed to carry sewage from bathroom, toilet room, and kitchen waste, not usually storm water.

SASH- The framework which holds the glass in a window or door.

SAWTOOTH ROOF- A roof composed of a series of single-pitch roofs whose shorter or vertical side has windows for light and air.

SCORE- To cut a surface of a material part way through with a sharp blade before braking; glass and ceramic tile are cut using this method.

SCRATCH COAT- The first coat of plaster applied to a wall, scratched or scored to provide a bond for the second coat.

SCREED- (1) A metal or wood strip placed at intervals on a wall or floor to gauge thickness of plaster or concrete.

(2) To level, as in pulling a straight edge across a concrete slab within the formwork.

SCRIBE- To score or mark along a cutting line.

SCUTTLE- A framed opening in a ceiling or roof, fitted with a lid or a cover.

SEAL COAT- A fine thin coating of asphalt paving with bituminous material to provide water resistance.

SEAL- (1) An embossing device or stamp used by a design professional on his Drawings and Specifications as evidence of his registration in the state where the Work is to be preformed.

(2) To provide sealant at a joint to make it water tight.

SEALANT- A semi-liquid or "elastomeric" water proofing material placed in a joint between materials to create a water tight joint or to fill small openings in wall or ceiling systems to prevent leakage of sound or to create a finished appearance and seal between dissimilar materials.

SEALER- A base coating of paint to seal and equalize suction differences and prevent absorption of subsequent coats.

SEAMLESS FLOORING- Sheet flooring material with joints field welded or sealed.

SECTION (DRAWING)- A drawing of a surface revealed by an imaginary plane cut through the project, or portion thereof, in such a manner as to show the composition of the surface as it would appear if the part intervening between the cut plane and the eye of the observer were removed.

SECTION (MATERIAL)- Sometimes loosely used to describe a rolled steel shape, such as "W section" -- use the term "W member" instead.

SELF-EDGE- Plastic laminate edging in which the horizontal surface overlaps the vertical edge surface and is cut off flush with the vertical surface -- this will expose a dark brown edge of the plastic laminate material and will be visible.

SEPTIC TANK- A covered tank in which waste matter is decomposed by natural bacterial action, draining into a drainage field.

SERVICE SINK- Wall-mounted sink for building maintenance purposes -- do not use the terms "slop sink" or "mop basin."

SEWER- An underground system of pipes which carry off waste matter or storm water to a sewage treatment plant or to an area of natural drainage.

SHAKE- A shingle formed by splitting a short log into a number of tapered sections.

SHEATHING- The first covering of boards, plywood, or wallboard placed over exterior wall studding or roof rafters -- not "sheeting."

SHEET FLOORING- Resilient linoleum, vinyl or rubber flooring installed wall to wall.

SHEET METAL- Usually thin steel sheets.

SHEET PILING- Planking or steel plates driven close together vertically, to form a temporary wall around an excavation.

SHIM- To build up low areas; to level or adjust height.

SHINGLE- A roofing type using tapered pieces of cedar or asphalt composition pieces nailed one overlapping the other.

SHOP DRAWINGS- Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work will be fabricated and/or installed.

SHORING- Structural bracing used as temporary support for a building during construction.

SILL- A horizontal piece forming the bottom frame of a door or window.

SITE- Geographical location of the Project, usually defined by legal boundary lines.

SLEEPER- A strip of wood anchored to a concrete floor or nailed to subflooring and to which the finishes floor is nailed.

SLUMP- A concrete test method to evaluate water/cement ratio consistency.

SOFFIT- The undersurface of a building member, as of a cornice, arch or stairway.

SOFTWOOD- Type of lumber from conifer evergreen trees, such as pine, fir, larch, cedar, and redwood.

SOIL- Use this term instead of "earth" or "dirt."

SPAN- The horizontal clear distance between supports, as those of a bridge, or between two piers.

SPANDREL BEAM- A beam which lies in the same vertical plane as the exterior wall.

SPANDREL- A portion of an exterior wall between a window on one floor and a window on the floor above.

SPECIFICATIONS-

(1) A detailed description of requirements, composition and materials for a proposed building;
(2) Apart of the Contract Documents contained in the Project Manual consisting of written descriptions of a technical nature of materials, equipment construction systems, standards and workmanship. Under the Uniform System, the Specifications comprise sixteen Divisions.

SPRAYED FIREPROOFING- Mineral fiber composition applied to structural steel members by spraying with an applicator gun used to obtain a specific fire rating for the structure to comply with building code requirements.

SQUARE- (1) 100 Square feet of roofing surface;
(2) edges of an object which are at a right angle to each other.

STAGGER- To offset building members or fasteners in a horizontal or vertical plane in alternating sequence.

STAGING- A temporary scaffolding to support workers and materials during construction.

STANDARD- An approved criterion governing the quality of a construction material, operation, functional requirement, or method of assembly.

STICK BUILT- Constructed by means of building stud-by-stud and joist-by-joist in the field from raw materials.

STICK BUILDING- Light weight wood framed building -- type 5 construction by the BOCA/National Building Code.

STILE- The upright or vertical outside piece of a sash, door, or panel.

STOCK- Standard size raw building materials or standard equipment.

STONE- Granite, marble, limestone, slate used for fabricated interior or exterior finishes.

STORM SEWER- A sewer carrying only storm water (but never sanitary waste).

STORY (A CODE TERM)- A horizontal division of a building; that portion between one floor and the floor above.

STRETCHER- A brick laid lengthwise in a wall.

STRIKE- In stone setting or bricklaying, to finish a mortar joint with a stroke of the trowel, simultaneously removing extruding mortar and smoothing the surface of the mortar remaining in the joint; strike off.

STRINGER- The inclined structural framing member supporting the treads and risers of a stair.

STUCCO- Plaster made from Portland cement, sand, and water used as an exterior wall surface finish; usually applied over a galvanized metal lath or wood lath base.

STUD- A vertical wood or metal framing member to which sheathing and finished surfaces are nailed, as the supporting elements in walls and partitions.

SUB STRUCTURE- That part of a building structure below the ground.

SUBCONTRACTOR- A person or organization who has a direct Contract with a prime Contractor to perform a portion of the Work at the site.

SUBFLOOR- A floor laid on top of the floor joists, to which the finished floor is fastened.

SUBSOIL DRAIN- Also called a "footing drain". A perforated 4" diameter pipe which is installed on the outside of the footing surrounded by pea gravel, which allows storm water in the soil to drain into it and be carried off to the sewer system or to a sump pit inside the basement, and from there pumped out back to the gravel surface or into the sewer.

SUBSTANTIAL COMPLETION: The term "Substantial Completion" means the date on which the Architect issues a Certificate of Substantial Completion based on an inspection of the Work, by which it can be determined that the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for the use for which it is intended. A Certificate of Substantial Completion may be issued for each individual building as it is completed, if this is in the Owner's best interests.

SUPERSTRUCTURE- That part of a building structure above the foundation or ground level.

SUPPLIER- A person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

SURVEY- Boundary and/or topographic mapping of a site.

TACKBOARD- A bulletin board made of cork or other resilient tackable surface.

TERRA COTTA- A hard, brown-red fired, clay product, typically used as exterior ornament. Can be glazed, or unglazed.

TERRAZZO- A durable floor finish made of small chips of colored stone or marble, embedded in cement and polished in place to a high glaze.

TESTING LABORATORIES - A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

THERMAL BRIDGE- A thermally conducive area of an exterior enclosure which will allow heat to transfer from the interior of the building to the exterior at a greater rate than the other parts of the enclosure.

THERMAL BREAK- A separation between exterior and interior materials by an insulation material. Typically refers to a feature of a window wall system.

THRESHOLD- A strip of wood, stone, or metal placed beneath a door to cover a change in floor materials, to receive weather-stripping and, sometimes, an automatic door closer.

THRU- Short version of the word "Through" as used in drawings.

TOEBOARD- Raised protective edge (usually 4" high) at edges of landings, balconies, mezzanines, etc. where there is no wall or knee wall, but only a guard rail.

TOE SPACE- Recess at base of cabinets.

TONGUE AND GROOVE- A factory formed notch and mating projection on wood flooring or deck.

TOPSOIL- Soil used for planting trees, shrubs, ground cover, or grasses.

TRADES: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

TRUSS- Triangular structural framing members formed into a single plane for supporting loads over long spans, in wood or steel, or both.

TYPICAL- Means that the item referred to is repeated several times in similar circumstances and locations.

UNDERLAYMENT- A smooth, hard sheet material, such as hardboard, cement board, plywood, or particle board, placed over rougher substrates to achieve a surface suitable for application of finishes such as resilient flooring or ceramic tile.

UNDISTURBED EARTH- Soil which has not previously been excavated.

VAPOR RETARDER- A plastic sheet used to retard condensation in walls, floors, and ceilings, applied on the warm-in-winter side of the wall or ceiling structure or over the ground surface in a crawl space -- do not use the term "vapor barrier."

VERMICULITE- An inorganic mineral product that expands several times its initial volume when exposed to a high temperature (about 1000 degree F).

VITRIFIED TILE- A pipe made of clay, baked hard, then glazed so it is impervious to moisture; used particularly for underground drainage.

WAINSCOT- The lower part of an interior wall when its surface finish is different from that of the upper.

WAIVER OF LINEN- An instrument by which a person or organization who has or may have a right of mechanic's lien against the property of another relinquishes such right. Waivers of linen are provided to the owner by the general contractor and his sub-contractors & suppliers, at the time a pay request is submitted.

WALL- Vertical enclosure of a building or occupancy separation, usually load bearing.

WALL BEARING CONSTRUCTION- A structural system in which the floor and roof systems are carried directly by the masonry walls rather than by structural framing system.

WALLBOARD- A manufactured fibrous compressed material cut into sheets, used for sheathing (may be particle board, hardboard, or similar product).

WARM AIR SYSTEM- A heating system in which furnace-heated air moves to living space through a series of ducts, circulated by natural convection (gravity system) or by a fan blower in the ductwork (forced system) to registers in the floor, walls or ceilings.

WATERPROOFING- A procedure to make a material impervious to water or dampness, designed to resist a head of water (water pressure). Any of the material used to waterproof -- do not use the terms "roofing," "membrane," or "dampproofing."

WEATHERING STEEL- Steel designed to rust to a certain extent on its surface, then stop rusting -- Cor-Ten is one manufacturer's trade name for weathering steel.

WEATHERSTRIP- A thin strip of metal, felt, wood, etc., used to cover the joint between a door or window sash and the jamb, casing, or sill; to keep out air, dust, rain, etc.

WINDOW WELL- See "light well".

WOOD- Use the term for solid softwoods only, otherwise use the terms "hardwood," "plywood," or "particle board."

WROUGHT IRON- A soft, pure form of iron easily molded into bars and worked into ornamental shapes; widely used for decorative railings, gates and panels.

ZONING ORDINANCE- The control by a municipality of the use of land and buildings, the height and bulk of buildings, the density of population, the relation of a lot's building coverage to open space, the size and location of yards and setbacks, and the provision of any ancillary facilities such as parking. Zoning, established through the adoption of a municipal ordinance, is a principal instrument in implementing a master plan.

CSI (“Construction Specifications Institute”) Format for Organization of Specifications and Materials:

Division 1: General Requirements
Division 2: Existing Conditions
Division 3: Concrete
Division 4: Masonry
Division 5: Steel
Division 6: Wood
Division 7: Roofing & Insulation
Division 8: Doors and Windows
Division 9: Finishes (interior finishes)
Division 10: Specialties (for example, signs, toilet accessories)
Division 11: Equipment (for example, kitchen equipment)
Division 12: Furniture
Division 13: Special Construction (for example, greenhouses)
Division 14: Conveying Equipment (elevators, escalators, lifts)
Division 21: Fire Suppression
Division 22: Plumbing
Division 23: Heating, Ventilating and Air Conditioning
Division 26: Electrical
Division 27: Communications
Division 28: Electronic Safety and Security
Division 31: Earthwork
Division 32: Exterior Improvements
Division 33: Utilities

Green (Sustainable) Products and Systems:

Green building materials are composed of renewable, rather than nonrenewable resources. Green materials are environmentally responsible because impacts are considered over the life of the product. Depending upon project-specific goals, an assessment of green materials may involve an evaluation of one or more of the criteria listed below.

Green building material/product selection criteria:

1. **Resource Efficiency** can be accomplished by utilizing materials that meet the following criteria:

- **Recycled Content:** Products with identifiable recycled content, including postindustrial content with a preference for postconsumer content.
- **Natural, plentiful or renewable:** Materials harvested from sustainably managed sources and preferably have an independent certification (e.g., certified wood) and are certified by an independent third party.
- **Resource efficient manufacturing process:** Products manufactured with resource-efficient processes including reducing energy consumption, minimizing waste (recycled, recyclable and or source reduced product packaging), and reducing greenhouse gases.
- **Locally available:** Building materials, components, and systems found locally or regionally saving energy and resources in transportation to the project site.
- **Salvaged, refurbished, or remanufactured:** Includes saving a material from disposal and renovating, repairing, restoring, or generally improving the appearance, performance, quality, functionality, or value of a product.
- **Reusable or recyclable:** Select materials that can be easily dismantled and reused or recycled at the end of their useful life.
- **Recycled or recyclable product packaging:** Products enclosed in recycled content or recyclable packaging.
- **Durable:** Materials that are longer lasting or are comparable to conventional products with long life expectancies.

2. **Indoor Air Quality (IAQ)** is enhanced by utilizing materials that meet the following criteria:

- **Low or non-toxic:** Materials that emit few or no carcinogens, reproductive toxicants, or irritants as demonstrated by the manufacturer through appropriate testing.
- **Minimal chemical emissions:** Products that have minimal emissions of Volatile Organic Compounds (VOCs). Products that also maximize resource and energy efficiency while reducing chemical emissions.
- **Low-VOC assembly:** Materials installed with minimal VOC-producing compounds, or no-VOC mechanical attachment methods and minimal hazards.
- **Moisture resistant:** Products and systems that resist moisture or inhibit the growth of biological contaminants in buildings.
- **Healthfully maintained:** Materials, components, and systems that require only simple, non-toxic, or low-VOC methods of cleaning.
- **Systems or equipment:** Products that promote healthy IAQ by identifying indoor air pollutants or enhancing the air quality.

3. **Energy Efficiency** can be maximized by utilizing materials and systems that meet the following criteria:

- Materials, components, and systems that help reduce energy consumption in buildings and facilities.
- Passive design strategies can dramatically affect building energy performance. These measures include building shape and orientation, passive solar design, and the use of natural lighting.
- Develop strategies to provide natural lighting. Studies have shown that it has a positive impact on productivity and well being.
- Install high-efficiency lighting systems with advanced lighting controls. Include motion sensors tied to dimmable lighting controls. Task lighting reduces general overhead light levels.
- Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Maximize light colors for roofing and wall finish materials; install high R-value wall and ceiling insulation; and use minimal glass on east and west exposures.
- Minimize the electric loads from lighting, equipment, and appliances.
- Consider alternative energy sources such as photovoltaics and fuel cells that are now available in new products and applications. Renewable energy sources provide a great symbol of emerging technologies for the future.
- Computer modeling is an extremely useful tool in optimizing design of electrical and mechanical systems and the building shell.

4. Water Conservation can be obtained by utilizing materials and systems that meet the following criteria:

- Products and systems that help reduce water consumption in buildings and conserve water in landscaped areas.
- Design for dual plumbing to use recycled water for toilet flushing or a gray water system that recovers rainwater or other nonpotable water for site irrigation.
- Minimize wastewater by using ultra low-flush toilets, low-flow shower heads, and other water conserving fixtures.
- Use recirculating systems for centralized hot water distribution.
- Install point-of-use hot water heating systems for more distant locations.
- Use a water budget approach that schedules irrigation using the California Irrigation Management Information System data for landscaping.
- Meter the landscape separately from buildings. Use micro-irrigation (which excludes sprinklers and high-pressure sprayers) to supply water in nonturf areas.
- Use state-of-the-art irrigation controllers and self-closing nozzles on hoses.

5. Affordability can be considered when building product life-cycle costs are comparable to conventional materials or as a whole, are within a project-defined percentage of the overall budget.

Three basic steps of green product selection

Product selection can begin after the establishment of project-specific environmental goals. The environmental assessment process for building products involves three basic steps.

1. Research. This step involves gathering all technical information to be evaluated, including manufacturers' information such as Material Safety Data Sheets (MSDS), Indoor Air Quality (IAQ) test data, product warranties, source material characteristics, recycled content data, environmental statements, and durability information. In addition, this step may involve researching other environmental issues, building codes, government regulations, building industry articles, model green building product specifications, and other sources of product data. Research helps identify the full range of the project's building material options.

2. Evaluation. This step involves confirmation of the technical information, as well as filling in information gaps. For example, the evaluator may request product certifications from manufacturers to help sort out possible exaggerated environmental product claims. Evaluation and assessment is relatively simple when comparing similar types of building materials using the environmental criteria. For example, a recycled content assessment between various manufacturers of medium density fiberboard is a relatively straightforward "apples to apples" comparison. However, the evaluation process is more complex when comparing different products with the same function. Then it may become necessary to process both descriptive and quantitative forms of data.

A life cycle assessment (LCA) is an evaluation of the relative "greenness" of building materials and products. LCA addresses the impacts of a product through all of its life stages. Although rather simple in principle, this approach has been difficult and expensive in actual practice (although that appears to be changing).

One tool that uses the LCA methodology is BEES (**B**uilding for **E**nvironmental and **E**conomic **S**ustainability) software. It allows users to balance the environmental and economic performance of building products. The software was developed by the National Institute of Standards and Technology's Building and Fire Research Laboratory and can be downloaded free on their Web site. [<http://www.bfrl.nist.gov/oa/software/bees.html>]

3. Selection. This step often involves the use of an evaluation matrix for scoring the project-specific environmental criteria. The total score of each product evaluation will indicate the product with the highest environmental attributes. Individual criteria included in the rating system can be weighted to accommodate project-specific goals and objectives.