# idi 200 Architectural Drafting

## Course Syllabus – 12 Week

CLASS FORMAT:

1. Lecture to interpret and explain drawings.
2. Answer student questions.
3. Students work on project with individual instruction to complete three sheets of working drawings for a residence along with exercises that develop skills in hand lettering, scaled drawing, field measuring, and other project communication techniques.
4. Students are tested on reading a drawing set and drawing interior elevations.

OBJECTIVES:

1. To demonstrate abilities in the creation of **INTERIOR DESIGN CONSTRUCTION DOCUMENTS**.
2. To develop skills in **DRAFTING** and **LETTERING** techniques used in **PROJECT COMMUNICATION**.
3. To increase awareness of the process of interior design and how it relates to **CONSTRUCTION METHODS**.
4. To demonstrate an ability to **READ A SET OF WORKING DRAWINGS**.

SCOPE OF WORK: (Subject to change at discretion of instructor – Student should verify)

| | |
|---|---|
| Week 1 | **Introduction and Lettering** |
| Week 2 | **Scaling, Line Quality, Dimensioning and Title Blocks** |
| | **DUE WEEK 2 – HOMEWORK EXERCISE #1 & #2** |
| Week 3 | **Maneuvering Through a Set of Drawings** |
| | **DUE WEEK 3 – HOMEWORK EXERCISE #3 & #4** |
| Week 4 | **Reading and Drawing a Floor Plan – Sheet 3** |
| Week 5 | **Drawing a Floor Plan (con't.) – Sheet 3** |
| Week 6 | **Reading and Drawing Architectural Details – Sheet 12** |
| | **DUE WEEK 6 – FLOOR PLAN – Sheet 3** |
| Week 7 | **Drawing Architectural Details (con't.) – Sheet 12** |
| Week 8 | **Reading and Drawing Interior Elevations - Sheet 9** |
| | **Review of Drawing Set & Quiz prep** |
| | **DUE WEEK 8 – ARCHITECTURAL DETAILS – Sheet 12** |
| Week 9 | **Quiz – Reading and Locating Information Within a Drawing Set** |
| | **Drawing Interior Elevations (con't.) – Sheet 9** |
| Week10 | **Field Measuring Exercise - Assignment in class** |
| | **DUE WEEK 10 - INTERIOR ELEVATIONS - Sheet 9** |
| | **DUE WEEK 10 – MEASURING EXERCISE #5** |
| Week 11 | **Interior Elevation – IN CLASS EXERCISE #6** |
| Week 12 | **Final - Interior Elevation – Assignment in class** |

# idi 200 Architectural Drafting

## Course Supply List

All of these supplies should be purchased at the beginning of the Architectural Drafting course. **YOU ARE EXPECTED TO BRING ALL OF THE SUPPLIES TO EVERY CLASS.**

Supplies that were provided to you in your Certificate class including the following - Review these supplies and supplement if needed:

- Flimsy (12" or 18" roll is okay)
- Drafting tape or dots
- Leads 2H, H, HB, and F with lead holders for each (3 leads to a tube is best)
- Architectural scale
- Lead pointer
- Soft eraser
- Template with small hexagons, squares, circles and triangles
- Bath fixture template (1/4" scale)
- Drafting brush
- Erasing shield

Supplies that can be purchased at Art Supply Warehouse, Huntington Beach (artsupplywarehouse.com) or similar type store:

- 24" x 18" sheets of vellum (3 or 4 sheets will be needed)
  - 1000H erasable grid (called Fade Out)
  - 8 squares to an inch
  - **No** borders on the vellum
- 8 1/2" x 11" pad of vellum (erasable grid or plain)
- Prismacolor pen, French Grey 70%

Other supplies:

- Downloads from IDI website:
  - 200 Drafting Syllabus
  - 200 Drafting 11x17 Reduced Partial Plans (for reference only)

**NOTE: PLEASE KEEP ALL SUPPLIES, CLASS NOTES AND MATERIALS FROM THIS CLASS, AS THEY WILL BE USED IN OTHER CLASSES**

## Course Policies

**SCHOOL POLICY:**

**ATTENDANCE IS MANDATORY**

Students are expected to remain in class for the ENTIRE PERIOD – Leaving earlier than 15 minutes prior to class end will be marked as tardy.

15 min. Breaks are allotted every hour.

Desks and parallel bars must be CLEANED at the end of every class period.

All homework, sheet assignments and the final are due at the specified times and there will be **no personal extensions of due dates.** If your homework or your sheet assignment is not finished on time, turn it in the next week and your grade will be reduced by 3 points. If you turn it in 2 weeks late, 6 points will be taken off. After 3 weeks late, 10 points will be deducted. **You must eventually complete and turn in ALL sheets (including homework) to pass the class.**

**MY POLICY:**

Class starts on time and if you are tardy you are responsible for getting the class information from another student

**CELL PHONES ARE TO BE TURNED OFF DURING CLASS**. No phone calls or texting in class or during lab time.

Every student is **required** to draft in class and are expected to bring all of their supplies to work during the lab time. **STUDENTS ARE NOT ALLOWED TO WORK ON OTHER CLASSES IN THIS CLASS TIME.** Students who leave prior to 15 minutes before the end of class will be marked as tardy. Twice tardy counts as an absence. I reserve the right to fail any student who has more than two absences.

If anyone is caught cheating, (tracing another student's work) both students will fail the class.

Printing must be done at a facility that will reproduce your work with a **digital scanner**. Consolidated Reprographics (CR), C2 Reprographics, Coastal Blue and Orange County Blueprint (OCB) have Ose machines that will do this. Ask for a PPC (plain paper copy) on bond. Do not go to printers that use a large size Xerox machine such as Kinkos.
**No large vellum sheet originals will be accepted as homework** – you must have those reproduced. The 8-1/2" x 11" exercises may be turned in on vellum, however, a copy is preferred.

## Course Policies

STUDENT EVALUATION: Criterion-based method of grading which means the grade is independent of other student scores.

POINT DISTRIBUTION:

| | |
|---|---|
| 10 points | Attendance and attitude (2 points deducted for each absence and 1 point for each tardy and leaving class early) |
| 15 points | Homework Exercise #1 & 2 |
| 15 points | Homework Exercise #3 & 4 |
| 25 points | Floor Plan - Sheet 3 |
| 25 points | Architectural Details - Sheet 12 |
| 25 points | Quiz #1 |
| 25 points | Interior Elevations – sheet 9 |
| 15 points | Measuring Exercise # 5 |
| 15 points | In Class Exercise #6 |
| 30 points | Final Exam (No Show Fails Class) |
| 200 TOTAL POSSIBLE POINTS | |

25 POINT BREAKDOWN:

| | |
|---|---|
| LN | 10 points for line quality and neatness |
| S | 5 points for scaling |
| D | 5 points for directions and specifications met |
| L | 5 points for lettering |

| GRADE | POINTS | STANDARD |
|---|---|---|
| A | 200 -179 | Very superior achievement and high quality work |
| B | 178 -159 | Highly satisfactory achievement and above average work |
| C | 158 -139 | Competent achievement and average work |
| D | 138 -119 | Poor achievement — work is late or incomplete |
| F | 118 - 0 | Very low achievement — work is late or incomplete and attendance is poor |

Reminder: All assignments must be turned in to pass the class!

## Lettering

Legible lettering on a drawing fulfills an important requirement. Information that cannot be revealed by graphic shapes and lines alone must be included in the form of notes, title, dimensions and identifications to make the drawing informative and complete. The lettering can either enhance the drawing by making it simple to interpret and pleasant to look at or ruin an otherwise good drawing by making it difficult to read and unsightly in appearance.

The basic block letter is the foundation of a variety of alphabets. It has the great advantage of being a pure and neutral style, easily adaptable later on to your own personality or that of any architecture office.

IT IS VERY IMPORTANT THAT A STUDENT THOROUGHLY LEARN THE BASIC BLOCK ALPHABET

Select an "F" drafting lead for lettering and keep the point medium sharp at all times. Rotate the pencil continually between strokes to maintain a uniform pencil point. A point that is too sharp is difficult to control and it breaks. A pencil that becomes too dull produces ragged strokes.

ALL LETTERING IS DONE WITH THE AID OF PENCILED GUIDELINES. Even experienced drafters carefully draw horizontal and vertical guidelines for their lettering. In pencil lettering, the guidelines are always left on the drawing; therefore, care should be taken in placing the lines neatly and lightly on the paper with a sharp "2H" lead or a non-photo pencil.

USE A TRIANGLE FOR DRAWING ALL VERTICAL STROKES. Simply slide the triangle along the parallel bar with your left hand as you letter; when a vertical stroke is needed, quickly set the triangle into place and draw a perfect vertical stroke. All other strokes are made freehand. Do not use the parallel bar for horizontal lines.

The beginning and ending of each stroke are important — emphasize them with a slight pressure of the pencil to bring the strokes to sharp and clean-cut terminations. Eliminate careless gaps in lettering by carefully intersecting the strokes. Make each vertical stroke definite and firm and each curve smooth and quick. Going over a stroke twice ruins the appearance of the letter.

Capitals are used for the majority of the lettering done on architectural drawings. One-eighth inch letters are good for notes and one-fourth inch letters are used for titles. Three-sixteenth inch letters can be used for minor titles such as room names. It is useful to think of block letters as being the same size and approximately square.

LETTERING - page 2

Because each letter has a different profile and width, the spacing of characters within each word becomes a visual problem rather than one of mechanical measurement between letters. The spaces between letters should be nearly identical in area if the word is to appear uniform in tone. This can be done only by the eye. The perceived area between letters is what determines spacing, not the measured distance between extremities. Straight-line letters need more area between them and round letters need less area between them. Leave the space of a fat "O" between words. Leave the space of two or three fat "O's" between sentences.

In architectural practice, numerals are as important as letters. The two should harmonize in style. Numerals to go with basic block letters should be neat, straight, equal in size and approximately square. They are the same height as block letters or slightly taller. Fractions will be slightly larger than the whole numbers.

It is hard to overestimate the importance of suitable well executed lettering to a student's success. It is not only part of skillful presentation, but can provide a valuable entree into a professional office.

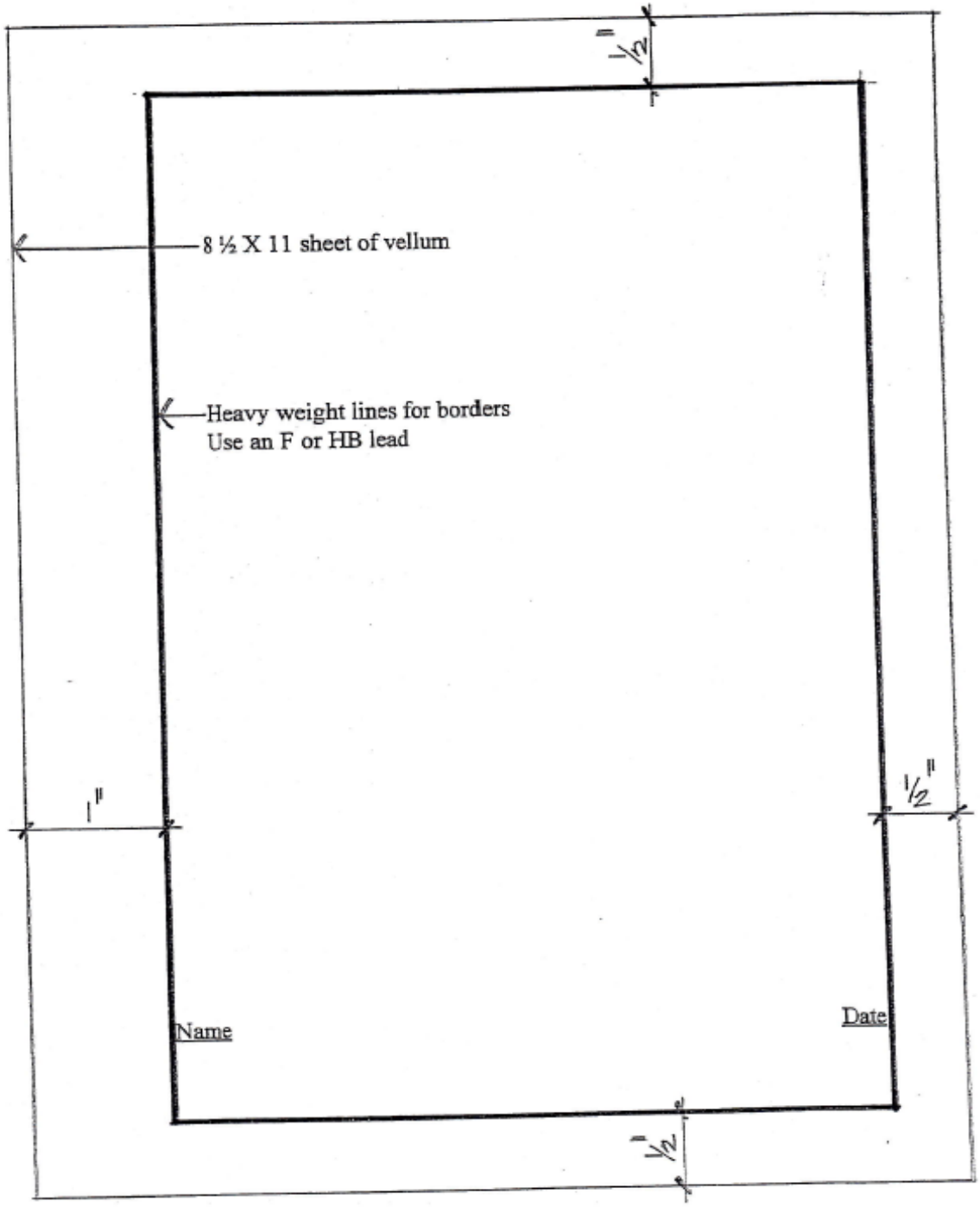
Develop perfection of the letters before attempting speed.

THERE IS NO SUBSTITUTE FOR DILIGENT PRACTICE.


PRACTICE — PRACTICE — PRACTICE

## Borders

All homework exercises will be done on 8 ½ X 11 sheets of vellum (plain or grid) with borders as shown and the student's name and date at the bottom of the sheet underlined.



## Exercise #1

**LETTERING**

On 8 ½ x 11 sheet of vellum with a border and your name and date, copy the following using guidelines and all capital letters. Letters should be 1/8" high with 1/8" space between each of the lines and 1/4" between each paragraph.

> The first known people to develop a system of characters similar to the ones we use for the purpose of communication were the Phoenicians. Through the ages, these original characters have been embellished and refined but their basic strokes and shapes have remained. We, in this country, have become accustomed to seeing and reading a style of letter understandable to us. To change these shapes and develop a new system of communication would create confusion. Therefore, it is better for the drafter to learn the basic lettering styles. This will also allow him or her to have a similar style to others working on the same project.
>
> As a beginning or junior drafter, your job will generally consist of making corrections to drawings that have been drawn by others. There may not be a lot of mental stimulation to making changes but it is a very necessary job. It is also a good introduction to the procedures and quality standards within an office.
>
> As your line and lettering quality improve, your responsibilities will expand. As you gain an understanding of the drawings that you are making and confidence in your ability, sketches will be given to you for drafting. The sketches will become simpler as time goes by and your knowledge increases. Eventually you will be referred to similar drawings and will be expected to make necessary adjustments to fit these drawings to the new application.
>
> To advance as a drafter, you will need to spend time at the construction sites observing the buildings being built. Understanding what a craftsman must do as a result of what you have drawn is necessary if you are to advance as a drafter. Never forget that your drawings are a set of instructions for the builder to follow.

Using guidelines and all capital letters, copy the following using 1/4" high letters and 3/16" spaces between each line.

FLOOR PLAN
EAST ELEVATION
SECOND LEVEL FLOOR PLAN
MECHANICAL PLAN
FINISH, DOOR AND WINDOW SCHEDULES
SECTIONS

# EXERCISE #2

**LETTERING**

On 8 ½ x 11 sheet of vellum with a border and your name and date, copy the following using guidelines and all capital letters. Letters for titles should be 1/4" and letters in the text should be 1/8" high. Spaces between the lines should be 1/8" and 1/4" between the paragraphs.

LETTERING

In architectural drafting, as in mechanical drafting, hand-lettered working drawings may not always be a reality. A variety of different types of mechanical devices have been coming on the market in recent years and large engineering and aircraft firms have been using the computer.

However, the interior design industry is and may always be a small crafts industry. Interior Design firms usually contain three to six employees and consequently cannot afford the expense to computerized drafting and lettering machines. For this reason it is important that each design student be proficient in lettering. In fact, good lettering and good line quality help obtain the first job for the student.

SCALE

Most plans, elevations and sections are drawn at a very small scale. Details are usually drawn at a large scale, such as the following:

3/4" = 1'-0"
1" = 1'-0"
1 1/2" = 1'-0"
3" = 1'-0" (quarter size)
6" = 1'-0" (half size)
Full Size

Listed below are suggested typical scales for use in detailing:

| | |
|---|---|
| Footings | 3/4" = 1'-0" |
| | 1" = 1'-0" |
| Intersections of roof to wall | 1 1/2" = 1'-0" |
| | 3" = 1'-0" |
| Window and door details | 3" = 1'-0" |
| Cabinet details | 3" = 1'-0" |
| Others | 3/4" = 1'-0" |

## EXERCISE #3

### ARCHITECTS SCALE

On 8 ½ x 11 sheet of vellum with a border and your name and date, draw the following lines horizontally on the page with the first line at the top of the page. Begin each line 1/2" in from the left hand border. Use the scale indicated

| LINE | SCALE | LENGTH & LOCATION OF THE LINE |
|---|---|---|
| 1 | 1/4" = 1'-0" | 24'-0" long, 1'-0" below top border |
| 2 | 1/4" = 1'-0" | 20'-0" long, 1'-6" below line 1 |
| 3 | 1/4" = 1'-0" | 18'-6" long, 1'-0" below line 2 |
| 4 | 1/4" = 1'-0" | 11'-3" long, 1'-6" below line 3 |
| 5 | 1/2" = 1'-0" | 10'-2" long, 1'-6" below line 4 |
| 6 | 1/2" = 1'-0" | 9'-1" long, 1'-8" below line 5 |
| 7 | 1/2" = 1'-0" | 12'-5" long, 0'-9" below line 6 |
| 8 | 3/4" = 1'-0" | 6'-6" long, 0'-7" below line 7 |
| 9 | 3/4" = 1'-0" | 8'-2 1/2" long, 0'-9 1/2" below line 8 |
| 10 | 1" = 1'-0" | 4'-0" long, 0'-8" below line 9 |
| 11 | 1" = 1'-0" | 5'-4 1/4" long, 0'-7 1/2" below line 10 |
| 12 | 1 1/2" = 1'-0" | 2'-3 1/2" long, 0'-5 1/2" below line 11 |
| 13 | 1 1/2" = 1'-0" | 3'-8" long, 0'-2 1/2" below line 12 |
| 14 | 3" = 1'-0" | 1'-10 1/2" long, 0'-2 1/2" below line 13 |
| 15 | 3" = 1'-0" | 0'-11" long, 0'-1" below line 14 |
| 16 | 1/8" = 1'-0" | 44'-6" long, 1'-4" below line 15 |
| 17 | 1/8" = 1'-0" | 32'-4" long, 1'-10" below line 16 |
| 18 | 1/8" = 1'-0" | 15'-8" long, 0'-10" below line 17 |
| 19 | 1/8" = 1'-0" | 41'-2" long, 1'-0" below line 18 |
| 20 | 1/4" = 1'-0" | 17'-11" long, 0'-5" below line 19 |

## EXERCISE #4

### LINE WORK EXERCISE

Draw the following on two sheets of 8 ½ x 11 vellum. Put borders, name and date on both sheets. The drawing in #8 will go on the second sheet.

1. Using an H lead, draw a series of short line dashes across the page. With an F lead draw a series of long line dashes across the page.

2. Draw five arrows with an H lead for the line and HB lead for the arrowhead.

3. Using an HB, draw three horizontal lines. Make these very dark as if they were for a border.

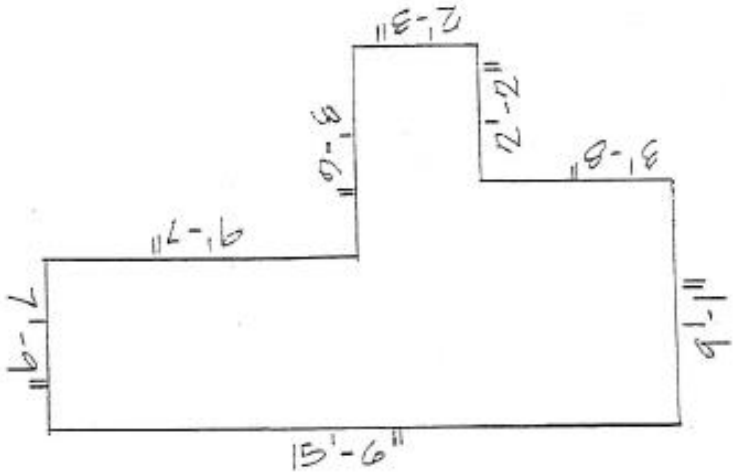
4. Draw four lines (one line with each of the leads 2H, H, F & HB) rolling the lead as you draw.

5. With an HB lead draw a property line.

6. With an H lead draw a center line.

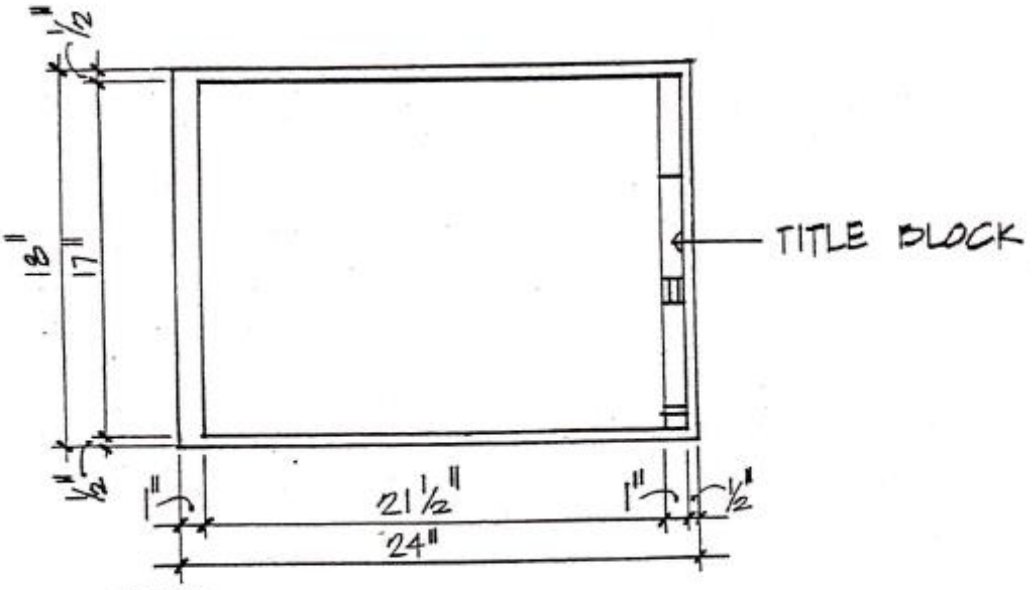
7. Using an H lead, draw two break lines.

8. Draw the box shown below at 1/4" = 1'-0" scale using an F lead. Draw this on a separate sheet of vellum. Dimension all four sides using extension and dimension lines. Use a 2H sharp for the dimension and extension lines and an HB for the hatch marks. Use an F for the numbers. The length of the lines is stated on the individual lines, but this box is not drawn to scale.

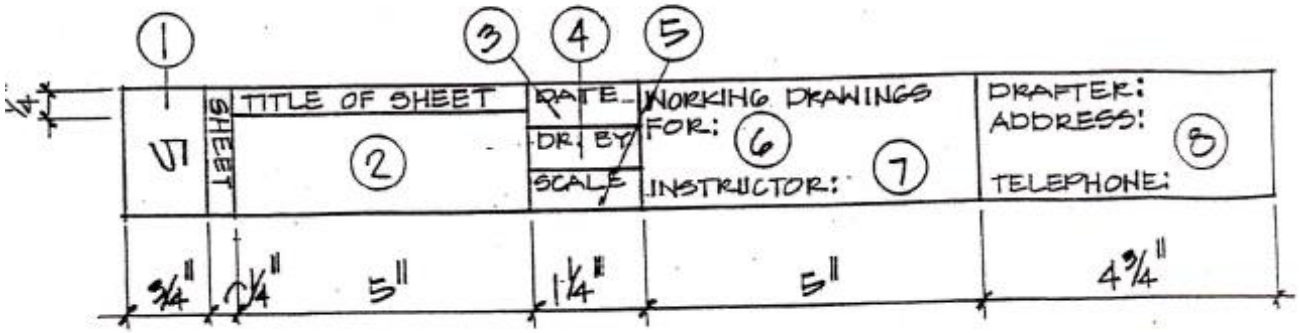


## Title Block

Each drawing has a descriptive title, project information, scale and sheet number in the title block. The overall general appearance of all title blocks within a set of drawings should be uniform. The title block extends from the bottom to the top on the right hand part of the sheet and is constructed as indicated below with the appropriate borders.




1. SHEET: Number of the sheet.
2. TITLE OF SHEET: Describe what is on the sheet. For example: Interior Elevations or Details. This should be the same as stated in the Sheet Index.
3. DATE: Write the date the final assignment is due.
4. DR. BY: Write your initials only.
5. SCALE: If you have one or more drawings on the sheet with same scale, write the scale (EX. 1/4"=1'-0"). More than one drawing on the sheet with different scales, write "AS NOTED". If scale is not applicable write "N/A".
6. WORKING DRAWINGS FOR: Write New Residence'
7. INSTRUCTOR: Write the name of the instructor teaching the course.
8. DRAFTER, ADDRESS AND TELEPHONE: Write your name, address and telephone number.



## Fixture and Appliance Schedule / Lumber sizes

**FIXTURE AND APPLIANCE SCHEDULE**

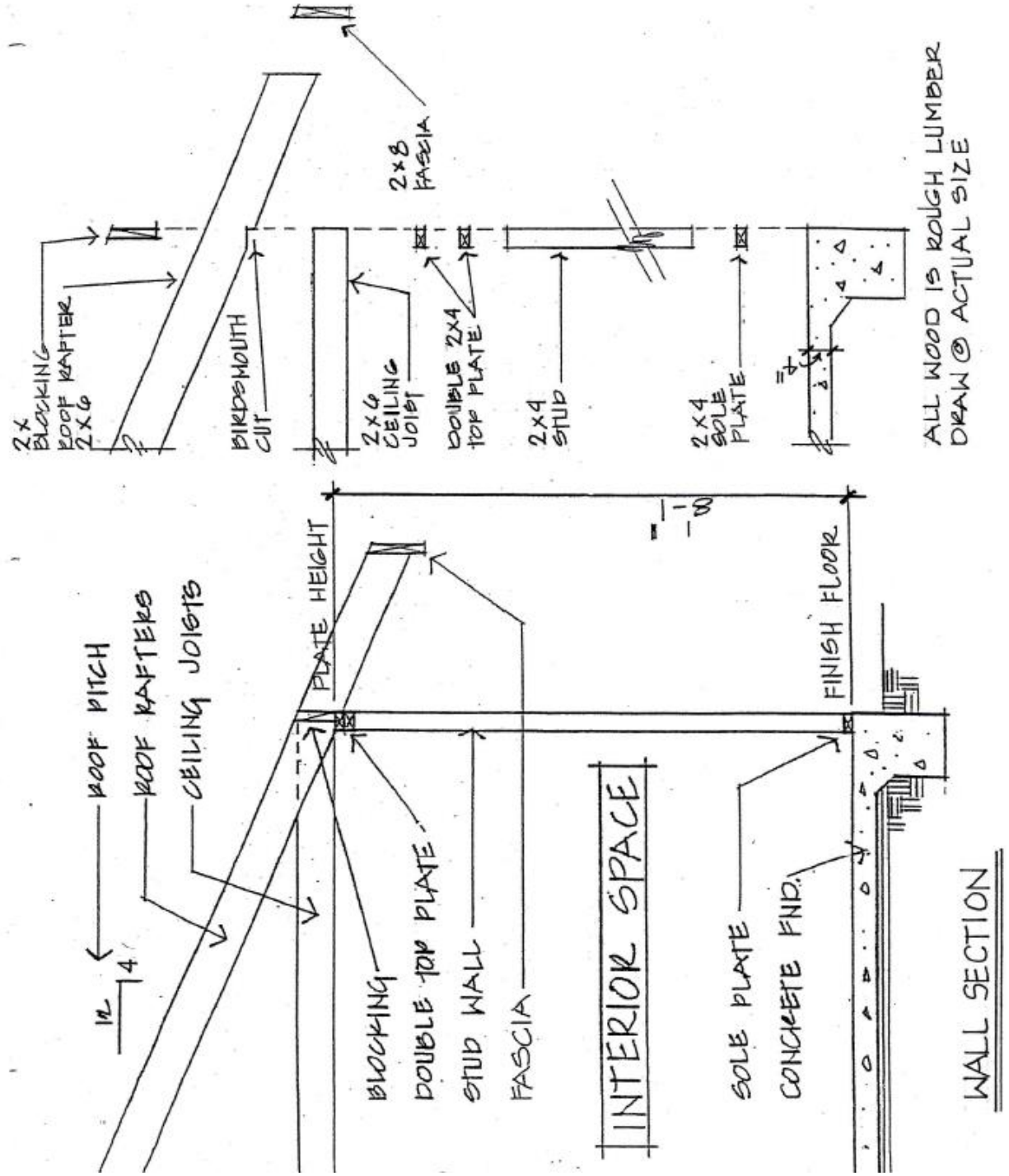
| | |
|---|---|
| REFRIGERATOR | 36"W 30"D 6'-0"H |
| RANGE | 30"W 22"D |
| RANGE HOOD | 30"W 9"H |
| DISHWASHER | 24"W 24"D |
| WASHER & DRYER | 30"W 26"D 36"H |
| BATH TUB | 2'-9"W 1'-3"H |
| LAV COUNTER (Bath #2) | 2'-0"D 2'-9"W |
| KITCHEN SINK | 22"D 30"W |
| WATER HEATER | 2'-0" Diameter |
| F.A.U. | 1'-2"W 1'-9"D |

**LUMBER SIZES**

Standard lumber sizes are defined as nominal size and actual (or surfaced) size. The nominal size is the dimensional size of the rough lumber. The surfaced size is the actual size after the rough lumber has been planed and finished. When designating the sizes of wood members in a specific detail, the nominal size is used, but the actual size is drawn on the detail. For example, the call out for wood studs may be 2 x 4 while the actual size is 1 1/2" X 3 1/2".

| NOMINAL SIZE in inches | ACTUAL SIZE in inches |
|---|---|
| 1 | 3/4" |
| 2 | 1 1/2" |
| 3 | 2 1/2" |
| 4 | 3 1/2" |
| 5 | 4 1/2" |
| 6 | 5 1/2" |
| 8 | 7 1/4" |
| 10 | 9 1/4" |
| 12 | 11 1/4" |
| 14 | 13 1/4" |

## Drawing Details



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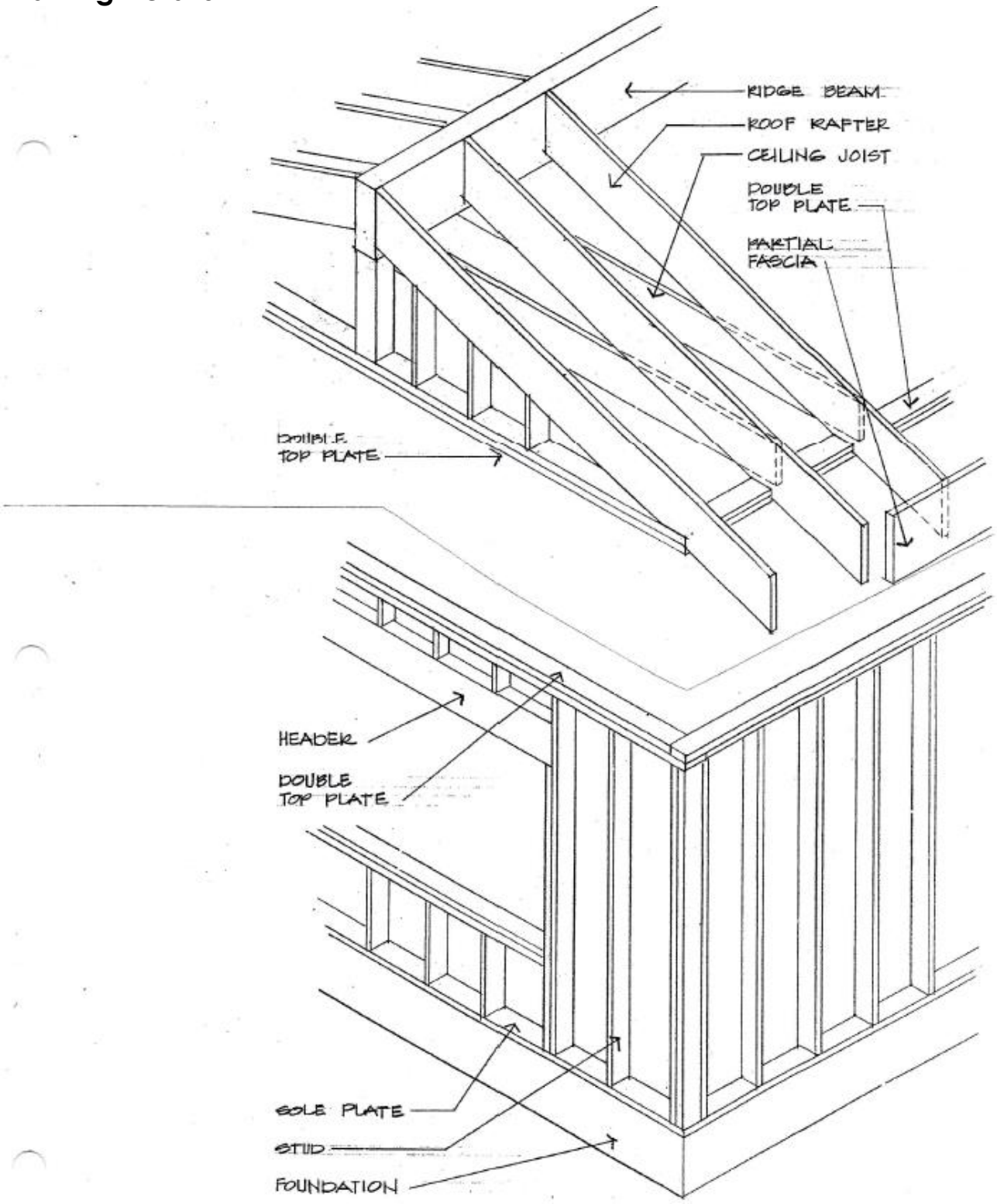

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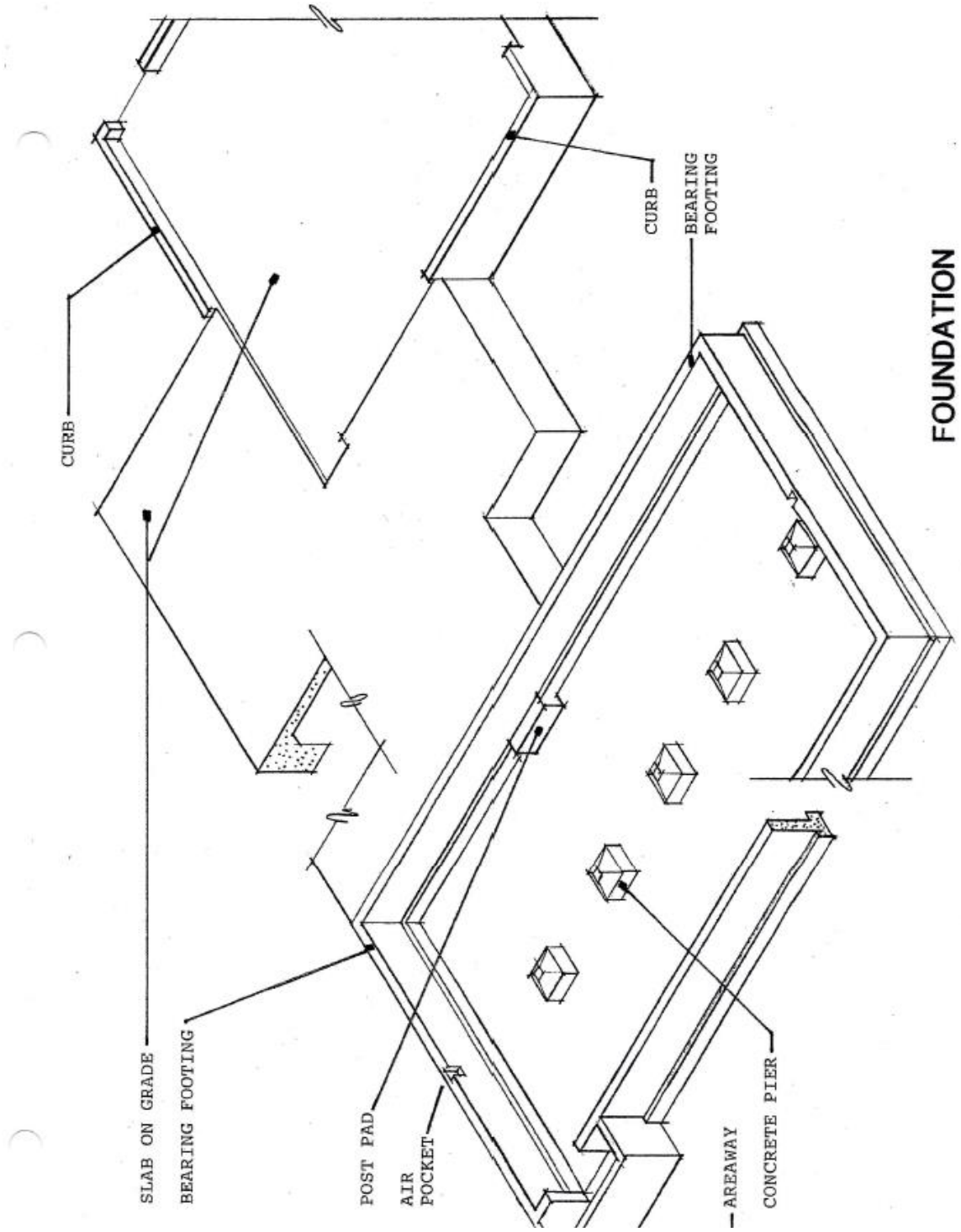

## Drawing Details