



**yaf**  
EASTERN OKLAHOMA

**2010 ARE  
STUDY SESSIONS**

AIA EASTERN OKLAHOMA  
YOUNG ARCHITECTS FORUM

# SITE PLANNING & DESIGN

2010 ARE Study Session




# Introduction

Speakers

Study Materials

Test Tips

- 
- Ron Rosebrook, AIA
  - John Bean, PE, RLA
  - Carol Henderson, Associate AIA

# Study Materials



- NCARB ARE 4.0 Exam Guide – [www.ncarb.org/en/ARE/Preparing-for-the-ARE.aspx](http://www.ncarb.org/en/ARE/Preparing-for-the-ARE.aspx)
- Kaplan AEC Education-[www.kaplanaecarchitecture.com](http://www.kaplanaecarchitecture.com)
- Prof. Norman Dorff-[www.nalsa.com/the-architect-registration-exam](http://www.nalsa.com/the-architect-registration-exam)
- The Power To Pass-[www.ppi2pass.com](http://www.ppi2pass.com)
- ARE Forum-[www.areforum.org](http://www.areforum.org)
- Architectural Graphic Standards

# Test Tips



- ❑ Read Carefully!
- ❑ Keep it Simple
- ❑ Follow Instructions
- ❑ Stick to the plan
- ❑ Practice, practice, practice
- ❑ Focus on the task
- ❑ Believe in yourself

John Bean, PE, RLA





# Graphic Vignette

2 Vignettes

Site Grading & Site Design -2 Hours For  
Both Exams

# Graphic Vignette – Site Grading



- Analyze the Site
- Read the program more than once
- Majority of work is manipulating swales
- Practice modifying swales
- Stay away from tree drip lines
- Place elements parallel to contours
- Water flows perpendicular to contour lines

# Modify Swales

The screenshot displays the NCARB A.R.E. software interface. The main workspace shows a site plan with several swales (blue lines) and various features. The swales are labeled with elevations ranging from 100' to 114'. The site plan includes a 'PROPERTY LINE' (dashed line), a 'BUILDING LIMIT LINE' (dashed line), a 'SMOKESTACK' (circular feature), and 'ROCKS' (shaded area). The software interface includes a toolbar on the left with icons for 'draw', 'set elevation', 'move, adjust', 'rotate', 'sketch', 'ortho', 'zoom', 'cursor', 'undo', 'erase', 'id', 'calc', 'task info', 'start over', and 'REVIEW VIGNETTES'. A north arrow is located in the bottom right corner. A text box at the bottom of the software window reads: "Click on the element you want to move or adjust. To cancel this action, select another icon."

# Modify Swales

The screenshot displays a CAD software interface for site plan editing. The main workspace shows a site plan with contour lines labeled from 103' to 114'. A cyan rectangular box highlights a feature labeled 'Locomotive' with a 'display' icon and 'Elev ?'. A pink crosshair cursor is positioned over the 'Locomotive' feature. The site plan includes a 'PROPERTY LINE' at the top, a 'BUILDING LIMIT LINE' at the bottom, and features labeled 'SMOKESTACK' and 'ROCKS'. A vertical dimension line on the left indicates a distance of 250'. A horizontal dimension line at the top indicates a distance of 300'. The interface includes a toolbar on the left with icons for 'draw', 'set elevation', 'move, adjust', 'rotate', 'sketch', 'ortho', 'zoom', 'cursor', 'undo', 'erase', 'id', 'calc', 'task info', 'start over', and 'REVIEW VIGNETTES'. A status bar at the bottom left shows 'Contour: 108'' and a message: 'Click again when the element is adjusted to its desired shape. To cancel this action, select another icon.' A north arrow is located in the bottom right corner.

NCARB A.R.E.

draw  
set elevation  
move, adjust  
rotate

sketch ortho  
zoom cursor  
undo erase  
id calc  
task info start over  
REVIEW VIGNETTES

Contour: 108'

Click again when the element is adjusted to its desired shape. To cancel this action, select another icon.

NORTH

# Graphic Vignette – Site Design



- Review Program and take notes
- Look at the Site Plan
- Review the Program again
- Verify North Arrow
- Be aware of Easements, Setbacks and Distance Requirements
- Place Large Components to Understand Scale
- Utilize sketch lines to establish drive layout

# Graphic Vignette – Site Design

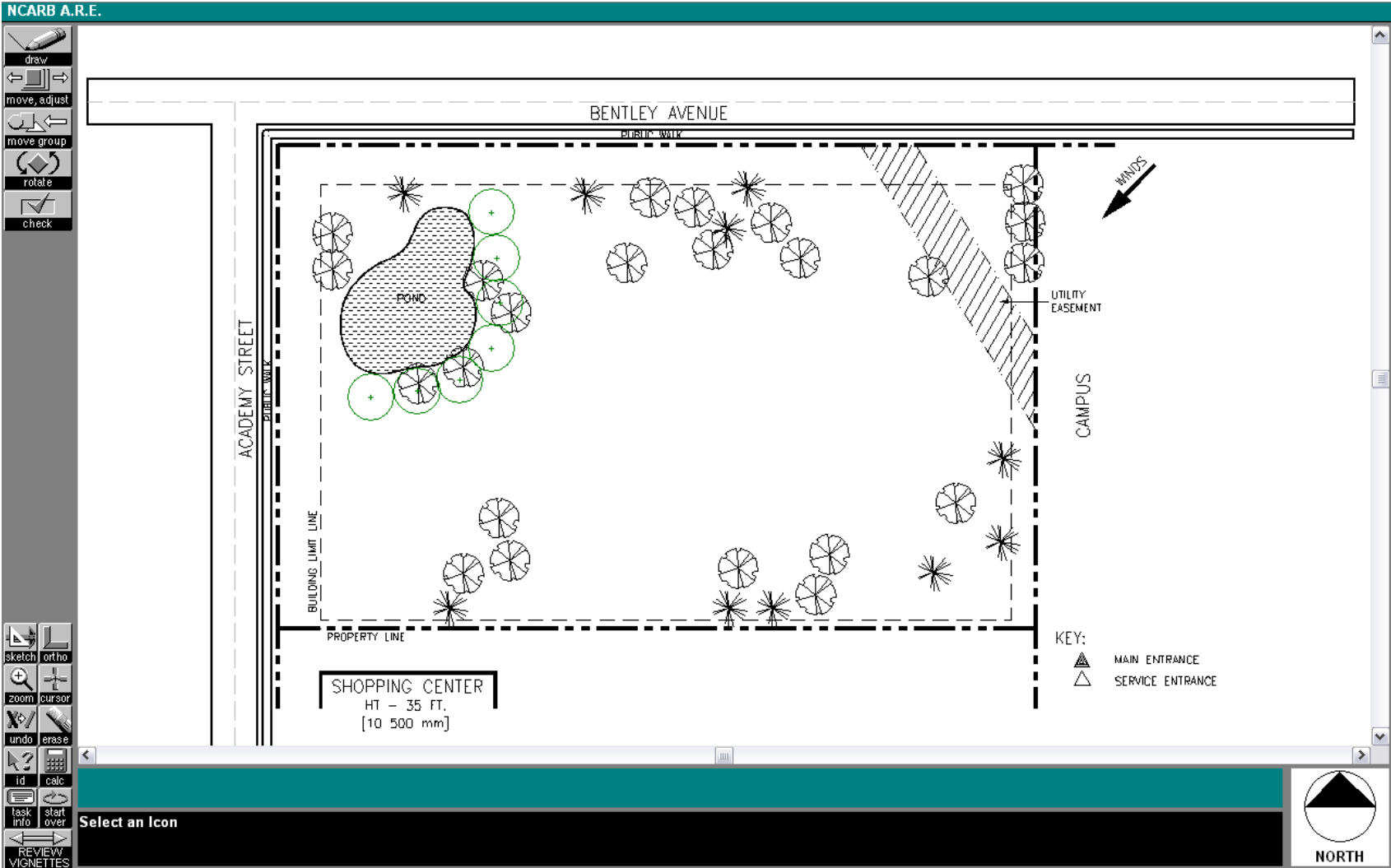


- Be aware of trees
- Establish Plaza location
- Determine Wind Direction
- Locate Parking
  - Utilize 90 Degrees Parking
- Universally Accessible Parking
- Sidewalk Locations
- Verify distances
- Practice, Practice, Practice

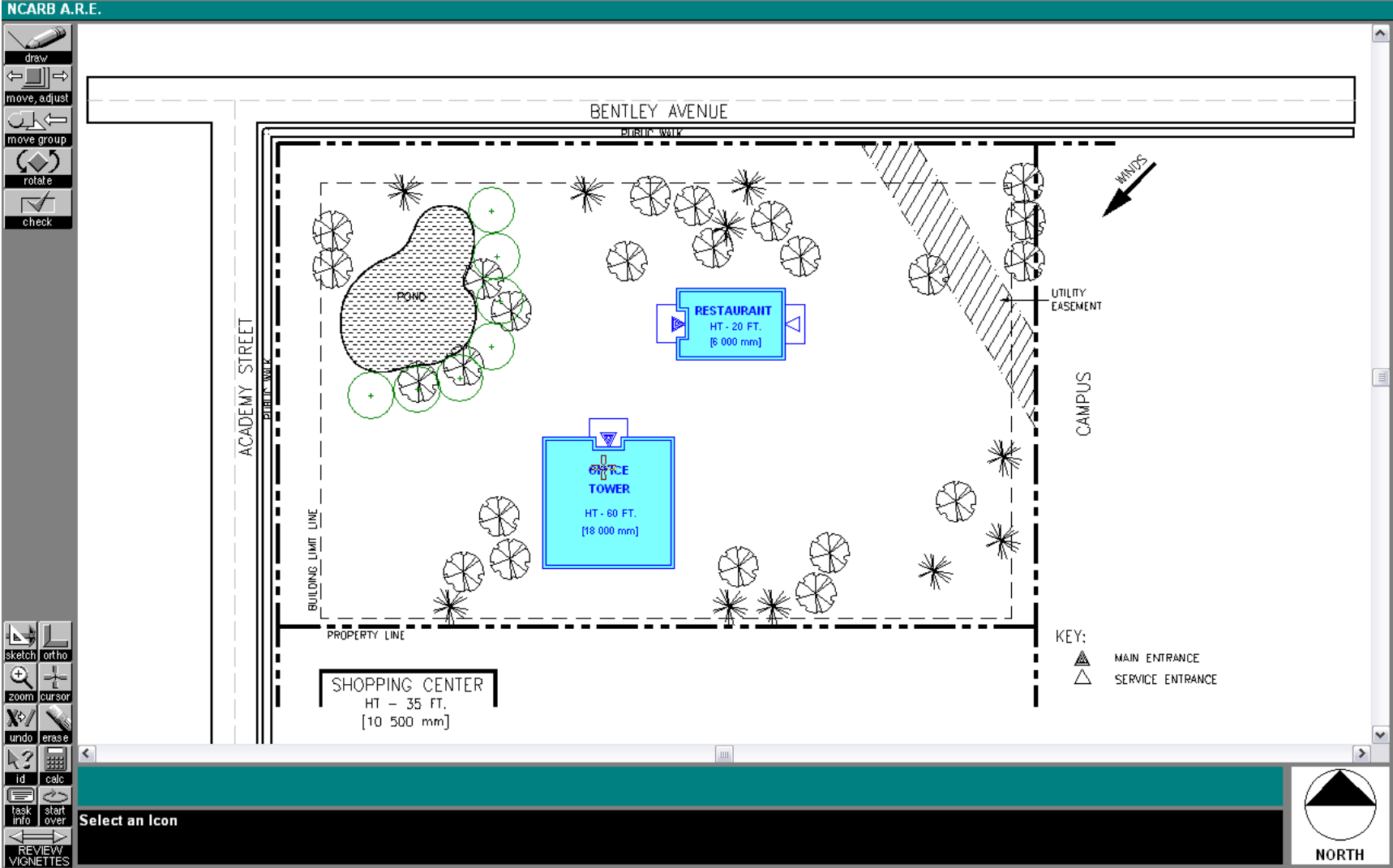
# Easements & Setbacks

NCARB A.R.E.	
Index	Task Information
6.	<p>The main entrance of the Restaurant shall receive the noonday summer sun.</p> <ul style="list-style-type: none"><li>Assume a 45° solar altitude angle.</li></ul>
7.	<p>The Pedestrian Plaza shall be blocked from the prevailing winter winds.</p> <ul style="list-style-type: none"><li>The wind shall be blocked by buildings and/or trees, as appropriate.</li></ul>
8.	<p>Draw a total of 33 parking spaces.</p> <ul style="list-style-type: none"><li>30 standard (9 ft x 18 ft) parking spaces are required.</li><li>3 universally accessible (12 ft x 18 ft) parking spaces are required.</li><li>Locate the universally accessible parking spaces within 100 ft of the main entrance of the Office Tower.</li><li>All parking spaces shall be perpendicular to the traffic aisles.</li><li>No parallel parking is permitted.</li></ul>
9.	<p>Draw all traffic aisles and drives required to connect parking to the street.</p> <ul style="list-style-type: none"><li>Drive-through circulation is required.</li><li>Dead-end parking is prohibited.</li><li>Parking along the service drive is prohibited.</li><li>All drives and traffic aisles are automatically drawn at a width of 24 ft.</li><li>The intersection of the access drive with the street must be perpendicular to the street for at least the first 20 ft of the drive.</li></ul>
10.	<p>Provide only one 24 ft wide curb cut located no closer than 120 ft from the intersection of the centerlines of the two existing public streets.</p>
11.	<p>Draw vehicular circulation to access the parking and service entrance.</p> <ul style="list-style-type: none"><li>A service drive shall attach to the service entrance of the Restaurant.</li><li>A turnaround or drive-through circulation is not required for the service drive.</li></ul>
12.	<p>Connect the Pedestrian Plaza, the universally accessible parking spaces, and the main entrances of the two buildings to each other and to the existing public walk with a continuous walkway system.</p> <ul style="list-style-type: none"><li>The Pedestrian Plaza may be considered part of the walkway system.</li></ul>
13.	<p>Adhere to the following general conditions:</p> <ul style="list-style-type: none"><li>Paving on the site shall be minimized.</li><li>Drives, traffic aisles, and parking spaces shall be no closer than 5 ft to a building.</li><li>Buildings must be separated by a minimum of 20 ft.</li><li>Provide a 30 ft setback from the Pond for all construction or built improvements.</li><li>No more than 6 existing trees may be removed or disturbed.</li><li>No construction or built improvements of any kind shall occur over any other existing site feature.</li><li>No construction or built improvements of any kind shall occur outside the building limit line except for direct vehicular and pedestrian access.</li><li>Buildings shall not overlap the Pedestrian Plaza or parking.</li></ul>

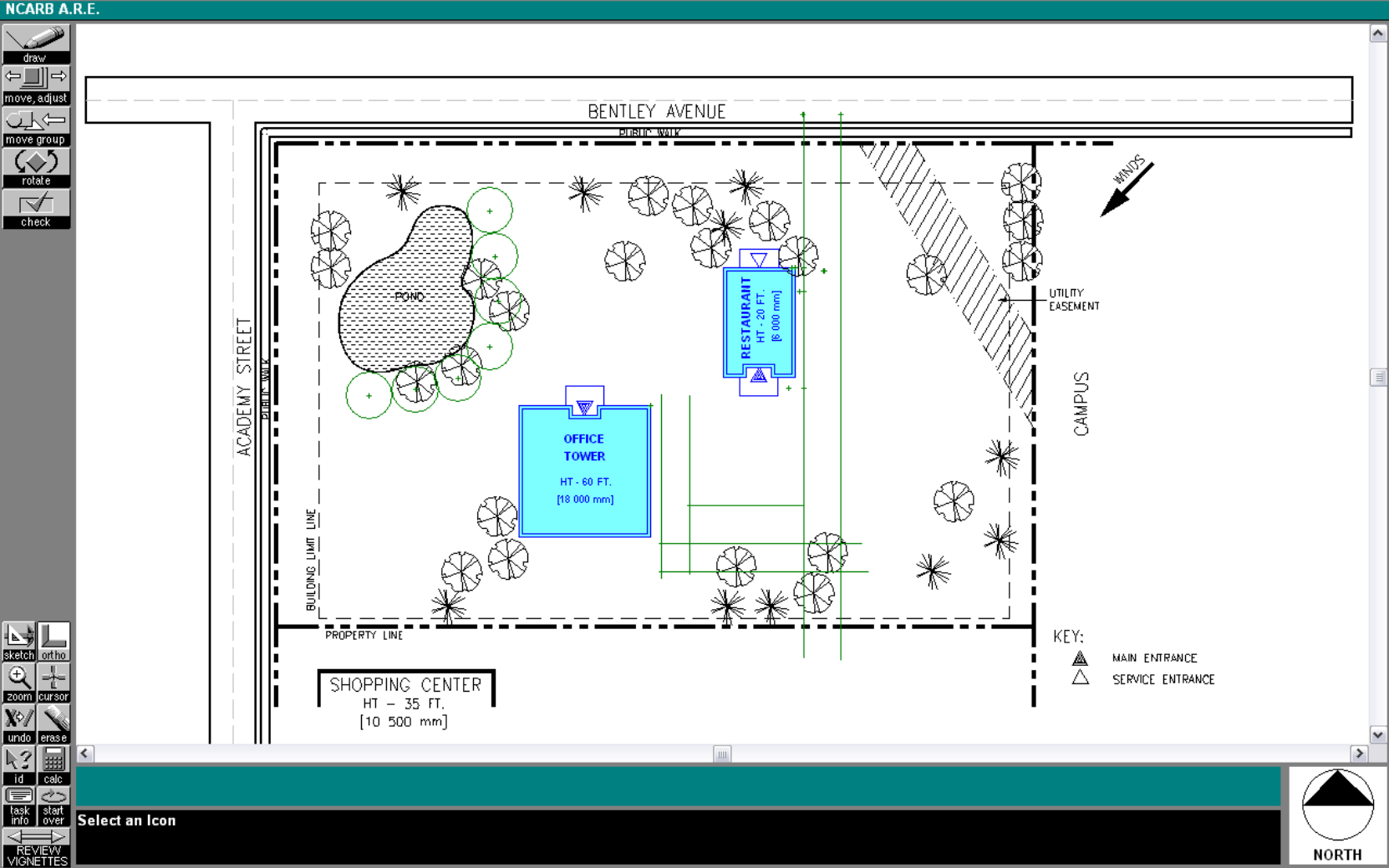
# Easements & Setbacks



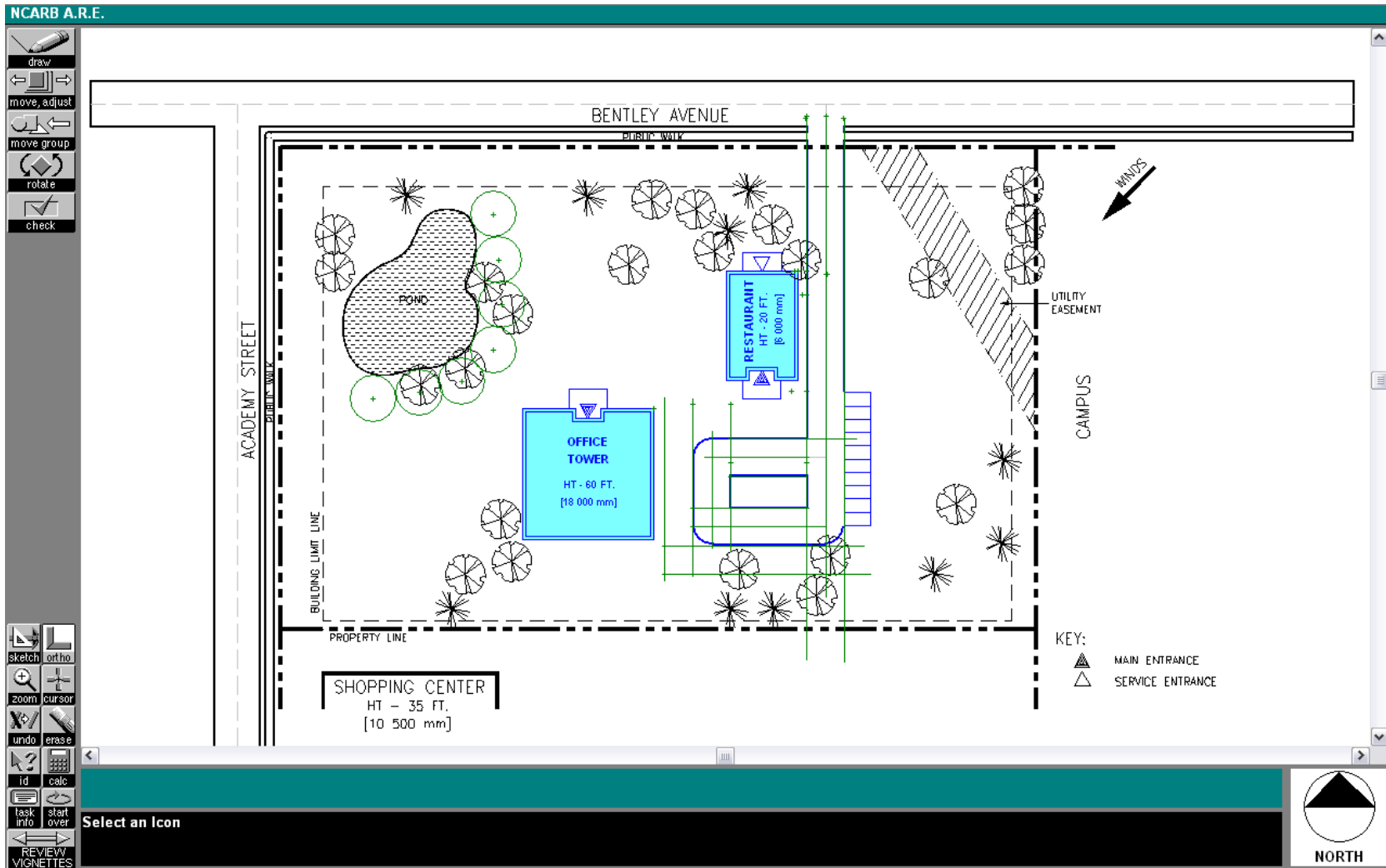
# Establish Scale



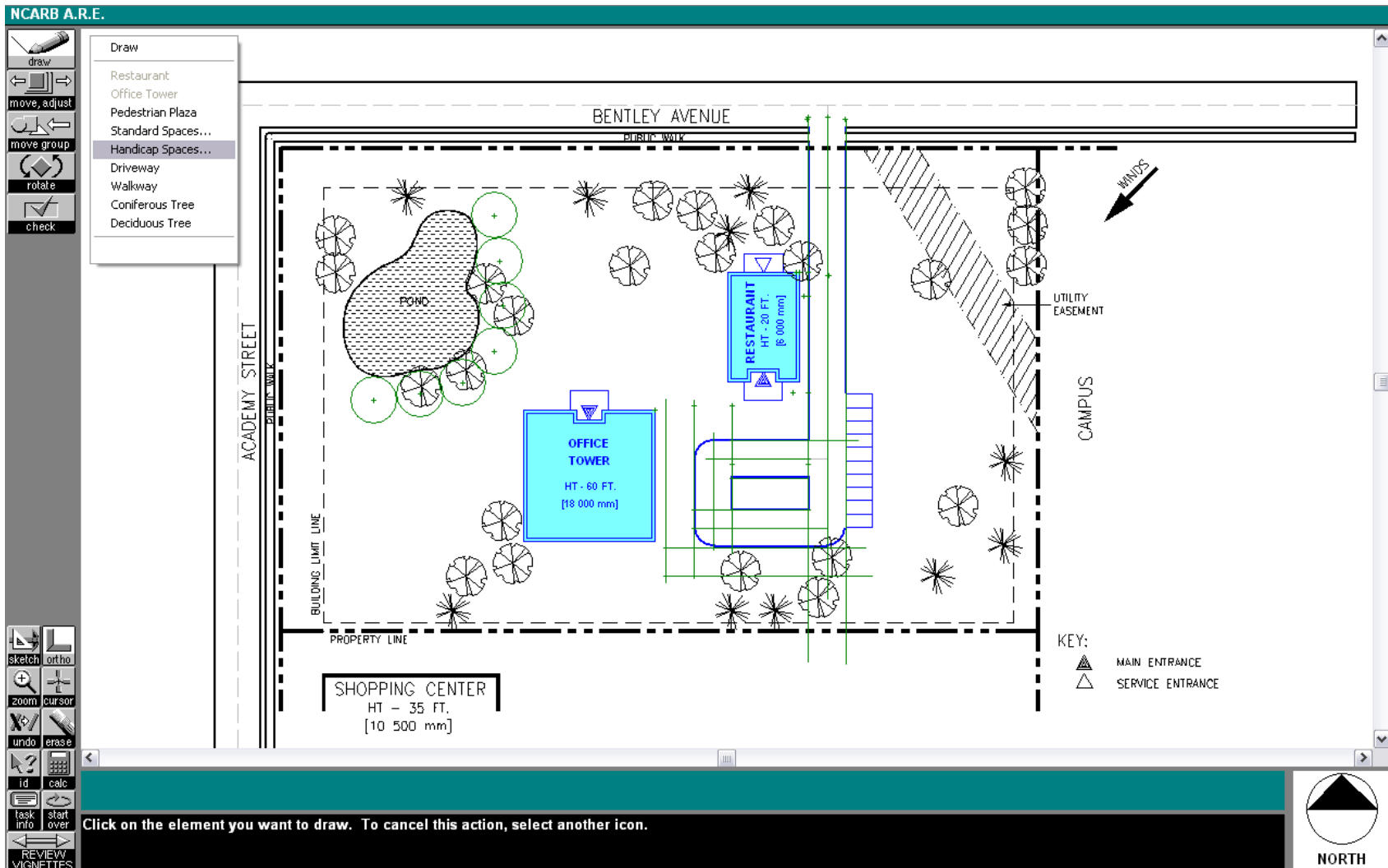
# Sketch Lines



# 90 Degree Parking



# Universally Accessible Parking Spaces





# Multiple Choice Exam

65 Questions

1 hour, 30 minutes

# Multiple Choice Content Areas



## □ Principles

- Grade Slopes, Survey Terminology, Historical Precedents/Influences

## □ Environmental Issues

- Sustainability, LEED, Personal Space Concepts

## □ Codes & Regulations

- ADAAG, Zoning Ordinances

## □ Materials & Technologies

- Soils, Remediation Techniques, Parking Design

## □ Project & Practice Management

- Development Funding, Location Factors, Construction Sequencing



# Final Thoughts

# Final Thoughts



- Utilize sketch lines
- This is not a “Design” exam
- Practice the vignettes
- Only once you are familiar with the vignettes, begin timing yourself
- Be prepared to be distracted
- Practice, Practice, Practice