Land Use Academy
Fundamentals of Reading Plans
Welcome!
CAZEO Site Plan Review

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UConn
Dept. of Extension
Center for Land Use Education & Research

University of Connecticut
CAHNRC Dept. of Extension, CANHR Dept of Natural Resources, Connecticut Sea Grant

Climate Adaptation Academy
Connecticut NEMO
National NEMO Network
Geospatial Training Program
Land Use Academy
Lab for Earth Resource Info Systems

Water
Land & Climate
Mapping & Geospatial

Website: clear.uconn.edu
Important Information

• Plans and Handouts
• Discussion is encouraged but beating a dead horse is not
• Exits
• Restrooms
• Have fun
Maps, Plans...What’s the Difference?

* **Maps** show physical features of the natural or built environment at established scale and orientation.

* **Plans** are engineered drawings made to scale showing existing physical features of a site and **proposed changes** to accommodate development.
Different levels of maps

- Parcel level
- Town wide maps
- USGS Quad map
- State
- Country
- Continent
A map may not represent what is on the ground at one point in time!

Maps are 2-dimensional representations of complex landscapes...
Help is on the Plans

- Location Map
- List of Drawings
- Orientation
- Title Block
- Legend
- Scale
- Zoning Table
- Notes
- And More…. 
LIST OF DRAWINGS:

COVER SHEET

SITE

SHEET 1  SITE BOUNDARY AND EXISTING CONDITIONS

LANDSCAPE

L-0.0  OVERALL SITE PLAN
L-1.0  UTILITY DEMOLITION PLAN PHASE 2
L-1.1  SITE DEMOLITION PLAN PHASE 2
L-1.2  SITE DEMOLITION PLAN PHASE 2
L-1.3  SITE LAYOUT PLAN
L-1.4  SITE LAYOUT PLAN
L-1.5  SITE GRADING PLAN
L-1.6  SITE GRADING PLAN
L-1.7  SITE SCORING & SIGNAGE PLAN
L-1.8  SITE SCORING & SIGNAGE PLAN
L-1.9  SITE PLANTING PLAN
L-1.10  SITE PLANTING PLAN
L-1.11  DETAILED ENTRANCE LAYOUT & GRADING
L-1.12  DETAILED HANDICAP SPACE LAYOUT & GRADING
L-1.13  SITE DETAILS
L-1.14  SITE DETAILS

SITE / CIVIL

C-0.0  CIVIL ABBREVIATIONS, LEGEND AND GENERAL NOTES
C-0.1  SITE DEMOLITION, EROSION AND SEDIMENTATION CONTROL PLAN
C-1.0A  SITE UTILITY PLAN
C-1.0B  SITE UTILITY PLAN
C-1.1A  SITE LIGHTING AND SECURITY PLAN
C-1.1B  SITE LIGHTING AND SECURITY PLAN
C-1.2  SITE GRADING PLAN PHASE I
C-2.0A  SITE DRAINAGE PLAN
C-2.0B  SITE DRAINAGE PLAN
C-3.0A  SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE I)
C-3.0B  SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE II)
C-3.0C  SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE III)
C-3.0D  SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE IV)
C-3.1  EROSION CONTROL SPECIFICATIONS AND NARRATIVE
C-3.2  EROSION PROTECTION AND SEDIMENT CONTROL DETAILS
C-4.0  SITE DETAILS
C-4.1  SITE DETAILS

ARCHITECTURAL

A-1.1  FIRST FLOOR PLAN
A-1.2  SECOND FLOOR PLAN
A-2.1  BUILDING ELEVATIONS
Orientation

North Arrow
When is North Not Really North

Curved surface not represented

16°30’ W difference
Magnetic Declination for the U.S. 2004
<table>
<thead>
<tr>
<th>YEAR</th>
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<td>1750</td>
<td>6 31 WEST</td>
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<td>11 35</td>
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<td>12 21</td>
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<td>1970</td>
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<td>1980</td>
<td>14 1</td>
</tr>
<tr>
<td>1990</td>
<td>14 20</td>
</tr>
<tr>
<td>2000</td>
<td>14 43</td>
</tr>
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</table>
Orientation----Stonehenge
Manhattanhenge
Title Block

EXCAVATION PLAN
PREPARED FOR

Cartography Road
Mapville, CT

JUNE 01, 2004

XYZ GROUP/
ABC ASSOCIATES
500 Longitude Boulevard
Mapville, Connecticut 06001
860-555-5555

© 2003 The BSC Group, Inc.
SCALE: 1" = 40'

FILE: P:\proj\8302200\dwg\

REV. 8-23-04 TOWN REVIEW
REV. 8-16-04 WETLANDS MEETING

Title
Creation & Revision Dates
Source
Legends

Provide a guide to the symbols used

<table>
<thead>
<tr>
<th>Watershed Basins</th>
<th>Town</th>
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<tr>
<td>□ Basins</td>
<td>□ Town</td>
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<table>
<thead>
<tr>
<th>Migratory Fish Runs</th>
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<tr>
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<table>
<thead>
<tr>
<th>Tidal Wetlands</th>
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</thead>
<tbody>
<tr>
<td>□ Tidal Wetlands</td>
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</table>

<table>
<thead>
<tr>
<th>Eelgrass</th>
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</thead>
<tbody>
<tr>
<td>□ Eelgrass</td>
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<table>
<thead>
<tr>
<th>Water Features</th>
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<tbody>
<tr>
<td>□ Streams</td>
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<tr>
<td>□ Lakes</td>
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<tr>
<td>--- Water</td>
</tr>
<tr>
<td>--- Shore</td>
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<table>
<thead>
<tr>
<th>Urban Growth</th>
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<tr>
<td>□ Developed before 1985</td>
</tr>
<tr>
<td>□ Turf and Grass before 1985</td>
</tr>
<tr>
<td>□ Water</td>
</tr>
<tr>
<td>□ Undeveloped</td>
</tr>
<tr>
<td>□ Developed 1985-1990</td>
</tr>
<tr>
<td>□ Turf and Grass 1985-1990</td>
</tr>
<tr>
<td>□ Developed 1990-1995</td>
</tr>
<tr>
<td>□ Turf and Grass 1990-1995</td>
</tr>
<tr>
<td>□ Developed 1995-2002</td>
</tr>
<tr>
<td>□ Turf and Grass 1995-2002</td>
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<table>
<thead>
<tr>
<th>LEGEND</th>
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<tbody>
<tr>
<td>DTP LOCATION</td>
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<tr>
<td>PERC TEST LOCATION</td>
</tr>
<tr>
<td>WETLAND LINE PER FIELD INVESTIGATION</td>
</tr>
<tr>
<td>BUILDING LOT SETBACK</td>
</tr>
<tr>
<td>WETLAND FLAG NUMBER</td>
</tr>
<tr>
<td>SOIL TYPE DESIGNATION</td>
</tr>
<tr>
<td>APPROX. LIMIT OF SOIL TYPES</td>
</tr>
<tr>
<td>SOIL EROSION CONTROL BARRIER</td>
</tr>
</tbody>
</table>

| EXISTING CONTOURS |
| PROPOSED CONTOURS |
| EXISTING SPOT ELEVATION |
| PROPOSED SPOT ELEVATION |

| 100' REVIEW ZONE |
| LIMIT OF VEGETATION |
| EXISTING LEDGE OUTCROPPINGS |
| EXISTING 20% SLOPE |

| PROBE HOLE LOCATION |
| NO LEDGE TO 24" OR small/MEDIUM WATER TO 18" |
| ENCOUNTERED IN PROBE HOLES |
City of Groton - Site Plan Checklist

A complete Site Plan under Section 6.6 shall contain the following:

☐ A written statement of the proposed use of the building structure or use for which the application is made.

☐ A certificate by a registered engineer, qualified scientist, or other recognized authority as to his/her best estimate as to the impact of the proposed use from the standpoint of the standards set forth in Section 4.56 of these Regulations, and what, if any, environmental protection measures will be taken.

☐ Building plans, floor plans, and elevations for all proposed buildings and structures on the site or for alterations of existing buildings and structures on the site, where appropriate.

☐ A location sketch showing the approximate locations and use of structures in any residential zone contiguous to or lying immediately across the street from the site of the proposed use and within 100 feet thereof and the approximate distance of any street intersections within 500 feet of the site of the proposed use.

☐ All applications shall include an accurate Class A-2 survey of the property prepared by a land surveyor registered in the State of Connecticut. All plans shall be prepared, signed, and sealed by a Connecticut registered engineer, architect, or landscape architect, whichever is appropriate.

☐ Scale of not more than 40 feet to 1 inch.

☐ Name and address of the applicant, owner of record and all adjoining property owners, as listed on the City's tax rolls.

☐ Date, north arrow, and numerical and graphical scale.

☐ The words “Approved by City of Groton Planning and Zoning Commission” with designated places for the title and signature of the Commission Chairperson and the date.

☐ Location, width, and purpose of all existing and proposed easements, building setback lines, yard requirements, and dedicated areas on and within 100 feet of the site within the zone.

☐ A complete outline of all existing and proposed deed restrictions or covenants applying to the site.

☐ Location of all existing wooded areas, watercourses, wetlands, rock outcrops, and other significant physical features on and within 100 feet of the site within the zone.

☐ Existing trees with a diameter of 12 inches or more, as measured at the base located on the site.

☐ Existing contours with intervals of 5 feet or less referred to USGS MLW Datum.

☐ Location, design, and height of all existing and proposed structures, including buildings, signs, fences, and walls on the site.

☐ Areas for rubbish containers and recyclable containers surrounded with complete visual screening from abutting streets and residential zones.

☐ Location and design of all existing and proposed uses on the site not requiring a structure.

☐ Location and design of all existing and proposed parking and loading areas with the number of stalls thereof, paved areas, streets, curbs, sidewalks, and driveways on the site.

☐ Location and design of all existing and proposed sanitary sewer, storm drainage, and water supply facilities, as well as other underground and above-ground utilities on the site.

☐ Location and design of all existing and proposed external lights, lighting facilities, and lighted areas on the site.

☐ A landscaping and open space plan indicating:
    - the location, design, arrangements, and use of open space areas on the site, including a description of facilities and equipment;
    - the location, design, type, and size of plant material, fencing, screening devices, or other materials proposed;
    - Grading plans, as appropriate.

☐ Other agency/official approval as required by the Planning and Zoning Commission.
Key Elements of Plans

Scale

Written Scale

1:12,000  (ratio)

1” = 1,000’  (equivalent)

Graphical Scale

Graphic scales are the most reliable!

Beware of Xerox Distortion
### Measuring Distances

#### Engineering Scales

<table>
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<tr>
<th>Map Scale</th>
<th>Meaning</th>
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<tr>
<td>10</td>
<td>1 inch = 10 ft</td>
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<tr>
<td>20</td>
<td>1 inch = 20 ft</td>
</tr>
<tr>
<td>30</td>
<td>1 inch = 30 ft</td>
</tr>
<tr>
<td>40</td>
<td>1 inch = 40 ft</td>
</tr>
<tr>
<td>50</td>
<td>1 inch = 50 ft</td>
</tr>
<tr>
<td>60</td>
<td>1 inch = 60 ft</td>
</tr>
</tbody>
</table>

![Diagram of a ruler showing distances in feet]
Measuring Distances
Measure the length of the lines at the scale shown:

92' .................................................. 30

95' .................................................. 40

42' .................................................. 10

84' .................................................. 20

123' .................................................. 60
### Zoning Compliance Chart

#### Zone District: R-40

<table>
<thead>
<tr>
<th>Flag Lot</th>
<th><strong>Lot 6</strong></th>
<th><strong>Lot 7</strong></th>
<th><strong>Lot 9</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lot Area</strong></td>
<td>40,000 S.F.</td>
<td>47,407 S.F.</td>
<td>62,094 S.F.</td>
</tr>
<tr>
<td><strong>Lot Width</strong></td>
<td>125 FT.</td>
<td>127 FT.</td>
<td>150 FT.</td>
</tr>
<tr>
<td><strong>Frontage</strong></td>
<td>25.00 FT.</td>
<td>25.00 FT.</td>
<td>25.00 FT.</td>
</tr>
<tr>
<td><strong>Side Yard Setback</strong></td>
<td>25 FT.</td>
<td>38 FT.</td>
<td>49 FT.</td>
</tr>
<tr>
<td><strong>Front Yard Setback</strong></td>
<td>50 FT.</td>
<td>150 FT.</td>
<td>184 FT.</td>
</tr>
<tr>
<td><strong>Rear Yard Setback</strong></td>
<td>50 FT.</td>
<td>184 FT.</td>
<td>243 FT.</td>
</tr>
<tr>
<td><strong>Minimum Square</strong></td>
<td>125 FT.(^2)</td>
<td>125 FT.(^2)</td>
<td>125 FT.(^2)</td>
</tr>
<tr>
<td><strong>Access Strip Area</strong></td>
<td>125 FT.(^2)</td>
<td>2,052 S.F.</td>
<td>9,296 S.F.</td>
</tr>
<tr>
<td><strong>Minimum Buildable Square</strong></td>
<td>50 FT.(^2)</td>
<td>50 FT.(^2)</td>
<td>50 FT.(^2)</td>
</tr>
<tr>
<td><strong>Minimum Buildable Area</strong></td>
<td>2,500 S.F.</td>
<td>45,355 S.F.</td>
<td>52,798 S.F.</td>
</tr>
</tbody>
</table>
NOTES:

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20–300b–1 THRU 20–300b–20 OF THE REGULATIONS FOR STATE AGENCIES "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.

   A. TYPE OF SURVEY: BOUNDARY & TOPOGRAPHIC SURVEY
   B. BOUNDARY DETERMINATION CATEGORY: RESURVEY
   C. HORIZONTAL ACCURACY: CLASS A–2
      VERTICAL ACCURACY: CLASS V–2
      TOPOGRAPHIC ACCURACY: CLASS T–2
   D. INTENT: PROVIDE BASE MAP FOR FUTURE DEVELOPMENT

2. FIELD WORK PERFORMED IN MARCH 2004 BY CLA ENGINEERS INC.

3. HORIZONTAL AND VERTICAL DATUM ARE BASED ON TOWN OF WATERFORD MONUMENTS, TOW 264–W AND TOW 265–W.

4. SUBJECT LOT IS IN ZONE DISTRICT R–20.

5. WETLANDS WERE DELINEATED BY ROBERT RUSSO AND LOCATED IN THE FIELD.

6. SUBSURFACE AND ENVIRONMENTAL CONDITIONS EXCEPT FOR WETLANDS DELINEATION WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.

7. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVEGROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.

8. NO FLOOD HAZARD AREAS AS PER FIRM 090107 0015F, TOWN OF WATERFORD, CT., NEW LONDON COUNTY, REVISED SEPT. 6, 1995.

9. SURVEY IS VALID ONLY IF PRINT OR MYLAR HAS THE EMBOSSED SEAL AND LIVE SIGNATURE OF THE SURVEYOR.
Topography

Contours: an imaginary line that connects points of equal elevation
Cross-sections are sometimes used to represent 3-D objects in 2 dimensions.
Topography

Cross-sections are sometimes used to represent 3-D objects in 2 dimensions.

Vertical scale sometimes exaggerated to better show change
Vertical Scale is Sometimes Exaggerated

Elevation Profile of Bike Route

- Total Elevation Gain: 629 ft.
- Total Elevation Loss: -628 ft.
- Net Elevation Change: 1 ft.
- Minimum Elevation: 7 ft.
- Maximum Elevation: 211 ft.

Revised on 5/18/2009
Contours always connect, but not always within the map boundaries...

This could be the edge of a presented map
**Topography**

**Slope** direction is calculated perpendicular to the contour lines.

Water flows downhill...

...so the direction of flow is always perpendicular to the contour lines, since this is the steepest slope.
Every 5th contour is an index contour shown in bold.

Contours far apart show a gentle slope.

A series of concentric contours ending in a small closed circle or oval shows a local hilltop.

Contour lines of a ridge are in a “U” that always points downhill.

Contours at a stream form a “V” that always points uphill.

Contours close together show a steep slope.

Contours very close together show a cliff.

A spot elevation is a point of known elevation used as a pt of reference for surveys.

A benchmark (BM): point of known position & elevation used as a pt of reference for surveys.

A contour interval is the vertical distance b/w contours. 10’ on topos; 2-5’ on site plans.
Slope direction is calculated perpendicular to the contour lines.

... But how do you measure it?
STEEPNESS GRAPH

Vertical

Step ladder

Sand pile (angle of repose)

House stairs

MARICOPA COUNTY PARKS & REC TRAILS

Competitive tracks
Secondary trails
Primary trails
Barrier-free trails
Flat
40-45 degrees
Slope

Change of elevation between two points, over a given distance...
Percent Slope = \frac{\text{Change in Elevation}}{\text{Distance}} \times 100

(10' / 20') \times 100 = 50\% \text{ slope}
Why is Slope Important?

If too Steep:
- potential erosion
- soil stability
- safety
Why is Slope Important?

If too flat:
- storm water may not drain
- may flood

0 ft

20 ft
Typical Set of Plans May Contain:

- Cover Sheet
- Existing Conditions Plan
- Demolition Plan
- Utilities Plan
- Site Plan
- Landscape Plan
- Detail Sheets
- Drainage
- E&S Control
- Building Elevations
- Floor Plans
Let’s go through this set of plans, page by page.
Plan Reading

who?  what?  where?  when?

TAKE IT APART & START ASKING

Where is it?

What’s the project name?

Where’s north?

What’s the scale?

When drawn?

What kind of plan?

What’s it all Mean?

Who prepared the plan?

Are they qualified?

03/12/05

Are they qualified?

What’s the project name?

Where’s north?

What’s the scale?

When drawn?

What kind of plan?

What’s it all Mean?

Who prepared the plan?

Are they qualified?
Plan Reading
Question: Where’s the steepest and the flattest areas?
Question: Where are the high and low points?
Question: What direction does the water flow on the road?
Plan Reading

Is this a copy?

Is that really the scale?
What's the lot size?

Regulations: 1 ac.

Lot is 1.34 ac.
Is that enough frontage? Regulations: 100’ min.

Double Frontage
Plan Reading

Is the building within setbacks? Regulations: 40’ front, 10’ side.
Plan Reading

How many parking spaces?  Regulations: 41 + 2

34 + 2
Plan Reading

What's the distance from the intersection?

Regulations: 75'

62'
108'
Plan Reading

**Grading Legend**

- **Property Lines**
- **Existing Contours**
- **Existing Spot Elevations** (602.2)
- **Proposed Spot Elevations** (610.40)
- **Proposed Contour** (608)
Plan Reading
Grade changes MUST be within property boundary.

**Original grade is shown as dashed line 610.**

**Proposed Grade is shown as a solid line and as 610.**
Grade changes MUST be within property boundary

Original grade is shown as dashed line 610

Proposed Grade is shown as a solid line and as 610

New Spot Elevations are indicated with an arrow to the exact spot

B C Bottom of Curb
T C Top of Curb
T S Top of Stair
B S Bottom of Stair
Grade changes MUST be within property boundary.

Original grade is shown as dashed line 610.

Proposed grade is shown as a solid line and as 610.

New Spot Elevations are indicated with an arrow to the exact spot.

B C Bottom of Curb
T C Top of Curb
T W Top of Wall
B W Bottom of Wall
Question: How can you ‘see’ the change from the original topo to the proposed?
Look at the site in section
Site Plan Review – Changing Topo
Is there the right amount of soil to smooth the site out?
Question: Why should you be concerned with the amount of cut and fill?
Site Plan Review

Stormwater System

STORM SEWER SCHEDULE

<table>
<thead>
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<th></th>
<th>TF</th>
<th>INV</th>
<th>OUT</th>
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<tbody>
<tr>
<td>CB #1</td>
<td>609.10</td>
<td>604.95</td>
<td>603.95</td>
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<td>CB #2</td>
<td>609.30</td>
<td>604.95</td>
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<td>607.4</td>
<td>603.68</td>
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<td>609.9</td>
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<tr>
<td>CB #7</td>
<td>605.5</td>
<td>602.25</td>
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</table>

TF  Top of Flange, or aka Rim or CBR

Bottom of Invert pipe usually is even with top of Outlet pipe

INV  or Invert where storm water enters catch basin

OUT  or Outlet where storm water leaves catch basin
System Schematic

Question: What does this mean?
Utility connections
“Existing 15” ACCMP underneath proposed building addition. The applicant said it was his own building and if he didn’t care, why should the Town? We convinced him to move it.”
# Landscaping/Planting Plan

## Plant List

### Trees:

<table>
<thead>
<tr>
<th>KEY</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>QTY.</th>
<th>Size</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>MA</td>
<td>Acer saccharum 'Green Mountain'</td>
<td>Green Mountain Sugar Maple</td>
<td>13</td>
<td>2 1/2-3' CAL</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>PP</td>
<td>Picea pungens 'Foxtail'</td>
<td>Foxtail Spruce</td>
<td>24</td>
<td>4'-6' HT.</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>PG</td>
<td>Pinus patula 'Glaucia'</td>
<td>Japanese White Pine</td>
<td>23</td>
<td>6'-7' HT.</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>PS</td>
<td>Prunus serrulata 'Kwanzan'</td>
<td>Kwanzan Flowering Cherry</td>
<td>24</td>
<td>2 1/2-3' CAL</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>PC</td>
<td>Pyrus calleryana 'Chanticleer'</td>
<td>Chanticleer Flowering Pear</td>
<td>9</td>
<td>3' 3 1/2' CAL</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>AR</td>
<td>Thuja plicata x standishii</td>
<td>Green Giant Arborvitae</td>
<td>43</td>
<td>6'-7' HT.</td>
<td>b&amp;b</td>
</tr>
<tr>
<td>ZS</td>
<td>Zeikova serrata 'Green Vase'</td>
<td>Green Vase Zeikova</td>
<td>11</td>
<td>2 1/2-3' CAL</td>
<td>b&amp;b</td>
</tr>
</tbody>
</table>

### Shrubs:

<table>
<thead>
<tr>
<th>KEY</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>QTY.</th>
<th>Size</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>BM</td>
<td>Caryopteris x clandonensis 'Blue Mist'</td>
<td>Bluebeard</td>
<td>43</td>
<td>18'-24' SPD.</td>
<td></td>
</tr>
<tr>
<td>CA</td>
<td>Clethra alnifolia</td>
<td>Summersweet</td>
<td>62</td>
<td>18'-24' SPD.</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>Cornus alba 'Sibirica'</td>
<td>Siberian Dogwood</td>
<td>17</td>
<td>2'-2.5' HT.</td>
<td></td>
</tr>
<tr>
<td>YT</td>
<td>Cornus sericea 'Flaviramea'</td>
<td>Yellow Twig Dogwood</td>
<td>28</td>
<td>2'-2.5' HT.</td>
<td></td>
</tr>
<tr>
<td>JP</td>
<td>Juniperus procumbens 'Nana'</td>
<td>Dwarf Japanese Garden Juniper</td>
<td>107</td>
<td>18'-24' SPD.</td>
<td>4' O.C.</td>
</tr>
<tr>
<td>JH</td>
<td>Juniperus horizontalis 'Wiltoni'</td>
<td>Wiltoni Juniper</td>
<td>164</td>
<td>18'-24' SPD.</td>
<td>4' O.C.</td>
</tr>
<tr>
<td>KL</td>
<td>Kalmia latifolia</td>
<td>Hybrid Mountain Laurel</td>
<td>4</td>
<td>30'-36' SPD.</td>
<td></td>
</tr>
<tr>
<td>LF</td>
<td>Leucothoe fontanesiana 'Rainbow'</td>
<td>Rainbow Leucothoe</td>
<td>20</td>
<td>18'-24' SPD.</td>
<td></td>
</tr>
<tr>
<td>PJ</td>
<td>Pieris japonica 'Mountain Fire'</td>
<td>Mountain Fire Andromeda</td>
<td>14</td>
<td>24'-30' SPD.</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>Pinus mugho 'Pamillo'</td>
<td>Dwarf Mugho Pine</td>
<td>58</td>
<td>24'-30' SPD.</td>
<td></td>
</tr>
<tr>
<td>VD</td>
<td>Viburnum dentatum</td>
<td>Arrowwood Viburnum</td>
<td>12</td>
<td>4'-5' HT.</td>
<td></td>
</tr>
</tbody>
</table>

### Wetland Plants:

<table>
<thead>
<tr>
<th>KEY</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>QTY.</th>
<th>Size</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>Carex comosa</td>
<td>Bearded Sedge</td>
<td>36</td>
<td>1 QT.</td>
<td>2' O.C.</td>
</tr>
<tr>
<td>CL</td>
<td>Carex lupulina</td>
<td>Hop Sedge</td>
<td>45</td>
<td>1 QT.</td>
<td>2' O.C.</td>
</tr>
<tr>
<td>LC</td>
<td>Lobelia cardinalis</td>
<td>Cardinal Flower</td>
<td>50</td>
<td>1 QT.</td>
<td>2' O.C.</td>
</tr>
<tr>
<td>VH</td>
<td>Verbena hastata</td>
<td>Blue Vervain</td>
<td>112</td>
<td>1 QT.</td>
<td>3' O.C.</td>
</tr>
<tr>
<td>JE</td>
<td>Juncus effuses</td>
<td>Soft Rush</td>
<td>35</td>
<td>1 QT.</td>
<td>4' O.C.</td>
</tr>
<tr>
<td>MG</td>
<td>Myrica gale</td>
<td>Sweetgale</td>
<td>127</td>
<td>18'-24' SPD.</td>
<td>4'-6' O.C.</td>
</tr>
<tr>
<td>PF</td>
<td>Potentilla fruticosa</td>
<td>Bush Cinquefoil</td>
<td>324</td>
<td>15'-18' SPD.</td>
<td>3' O.C.</td>
</tr>
<tr>
<td>SL</td>
<td>Spiraea latifolia</td>
<td>Meadowsweet</td>
<td>68</td>
<td>18'-24' SPD.</td>
<td>4'-6' O.C.</td>
</tr>
</tbody>
</table>

### Ornamental Grass:

<table>
<thead>
<tr>
<th>KEY</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>QTY.</th>
<th>Size</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM</td>
<td>Hakonechloa macra 'Aureola'</td>
<td>Japanese Forest Grass</td>
<td>96</td>
<td>18'-24' SPD.</td>
<td></td>
</tr>
</tbody>
</table>
Landscaping/Planting Plan

<table>
<thead>
<tr>
<th>PC</th>
<th>Pyrus calleryana 'Chanticleer'</th>
<th>Chanticleer Flowering Pear</th>
<th>9</th>
<th>3-3 1/2' CAL</th>
<th>b&amp;b</th>
</tr>
</thead>
</table>

| PS | Prunus serrulata 'Kwanzan' | Kwanzan Flowering Cherry | 24 | 2 1/2-3' CAL | b&b |
NOTES

1. If a discrepancy exists between the number of plants shown on the plan and the quantity in the plant list, the plan shall govern.

2. The Contractor shall seed to lawn all areas within the contract limits and seeding limits as shown on the plan and as specified. The Contractor is also responsible for any areas beyond these two limits which may have been disturbed by construction activities. If such disturbance has occurred, the area(s) shall be topsoiled and seeded to lawn as detailed and specified.

3. All plant materials are to be approved by the Landscape Architect prior to delivery to the site. See the Specification.

4. Refer to the Specification for acceptable planting season dates. Planting out-of-season will not be allowed without written approval from the Landscape Architect.

5. Shrub beds shall have a weed barrier fabric and a minimum of four inches (after settlement) of shredded pine bark mulch. Groundcover beds shall omit the weed barrier and have a minimum of four inches (after settlement) of shredded pine bark mulch. See details on sheet L-1.14 and the Specification.

6. Final plant locations shall be coordinated in the field so that no tree is planted within approximately 6 feet of any underground utility new or existing.

7. Erosion control mat locations shown on this plan are general, minimum areas to be covered. All slopes 4:1 or greater are to receive erosion control matting; coordinate with the Grading Plans, sheet L-1.5 and L-1.6. See the Specification for additional information.

8. Plantings within water quality swales may be adjusted before installation to allow spacing for inspection and maintenance, as directed by the Landscape Architect.
Bad Plans--Landscaping

- Would deliberately specifying Toxicodendron radicans as a ground cover to see if we were paying attention count?
Plan Review

Construction Activity
Site Plan Review Details

HAY BALE FILTER INSTALLATION AT CATCH BASIN AT LOW POINTS

STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.

CATCH BASIN EROSION CONTROL

SILT FENCE BARRIER
Site Plan Review

Construction Activity

Sediment and Erosion Control
Site Plan Review Details S&E

Silt Fence

Anti-Tracking Pad

Hay-Bales
GIS and Site Plan review

Use your town’s GIS to:
• Get an overview of the property
• Verify general location of improvements (if available)
• General idea of lot size
• Need stamped survey for review
And now—It’s your turn

Great Neck School, Waterford, CT
Dry Swale  L-1.5
FLUSH CONCRETE CURB

NOT TO SCALE
6' Taper
Turf Pavers L-1.3
Wet Swale

Wet Swale L-1.5
Swale to be over-excavated by 8 inches. 8 inches of organic rich topsoil, approved by the wetland scientist or soil scientist with a 48 hour notice, will be applied to bring the swale up to final grade.
Bad Plans

- Oh, the fun we will have! Let me see if I can get the cocktail napkin through the scanner!

- The most common error I see is the north arrow pointing the wrong way.

- The worst plans are the ones where important information is left out, unintentional or otherwise.

- The plans submitted to the New London PZC on behalf of the NLDC for the road infrastructure in Fort Trumbull. I recall the 13 page comment memo that I prepared.
Underground detention basin