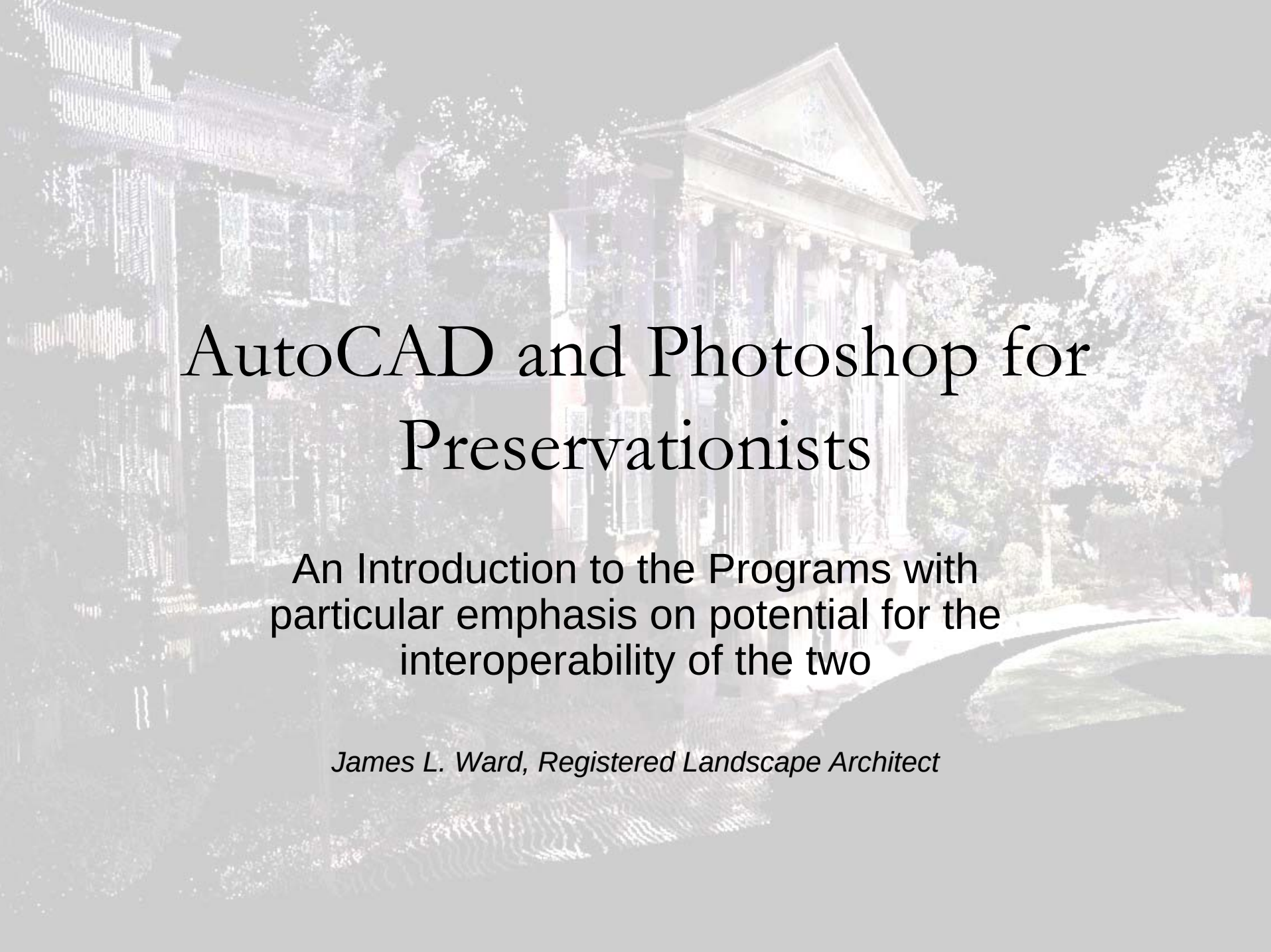






AutoCAD and Photoshop for Preservationists

An Introduction to the Programs with
particular emphasis on potential for the
interoperability of the two

James L. Ward, Registered Landscape Architect

Syllabus

- This course is an introduction to the use of AutoCAD and Photoshop programs for preservation applications. Initially, we will review the setup and command structure of each program and work on daily tutorials to develop beginner's skills. Then we will work on a team based research project specifically geared to demonstrate the capabilities of these tools. Some out of class research is required. Class time will be devoted to using the programs and getting feedback on techniques and practical aspects of using these programs to develop neater, more time efficient, and more thoughtful projects.

***TEXTS RECOMMENDED: BIBLE SERIES FOR WHICHEVER
VERSION OF THE PROGRAM YOU ACQUIRE
AVAILABILITY OF SOFTWARE-COMPUSULT***

On line Tutorials

- <http://www.fbe.unsw.edu.au/learning/autocad/ad/ad2/T1/>
 - Introduction to AutoCAD
 - Editing & model-space limits
 - Offset, Array & Mirror
 - Paper space, view ports & plotting
- <http://www.cadtutor.net/>
 - Commands

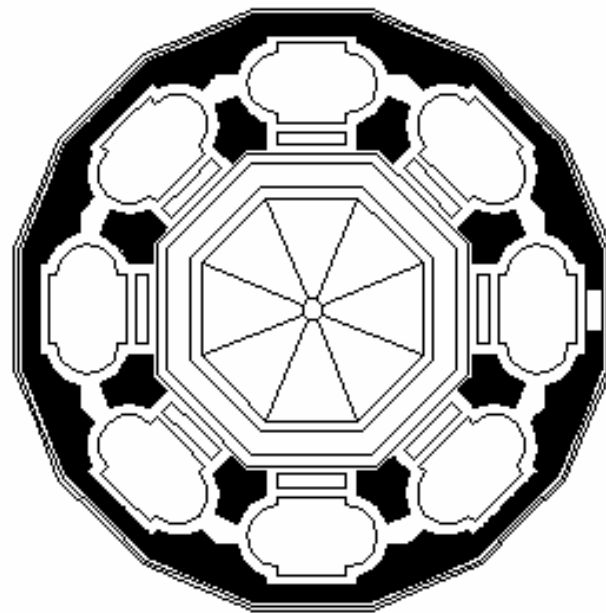
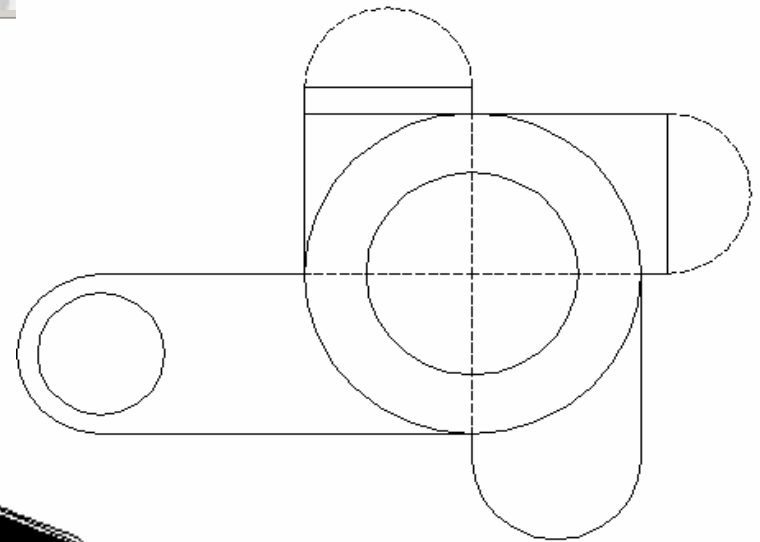
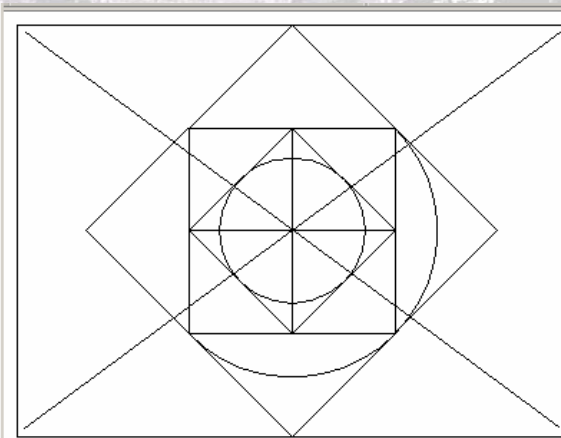
Resources

- Delicious Site (<https://secure.del.icio.us/login>)

Under “HPCP340”. I have initially listed sites where you may download free trial versions for work on your own computer.

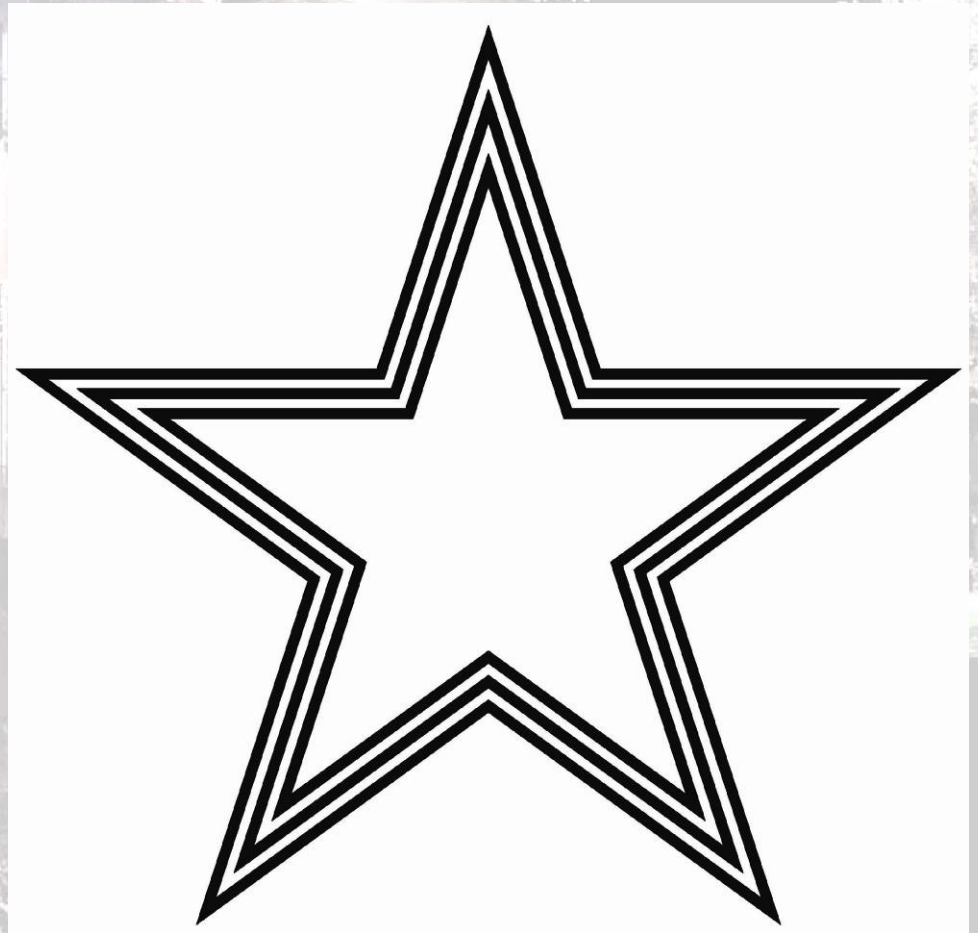
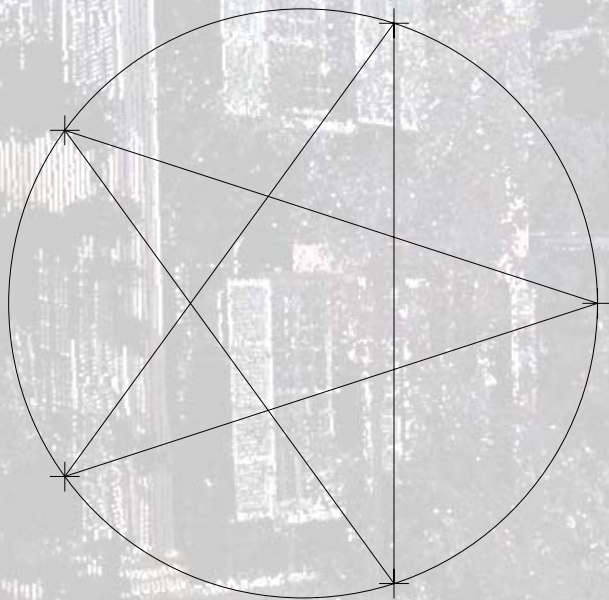
- My Box site (<http://www.box.net/logout>) which will enable us to exchange files (in the absence of a network for student file sharing)

AutoCAD Tutorials



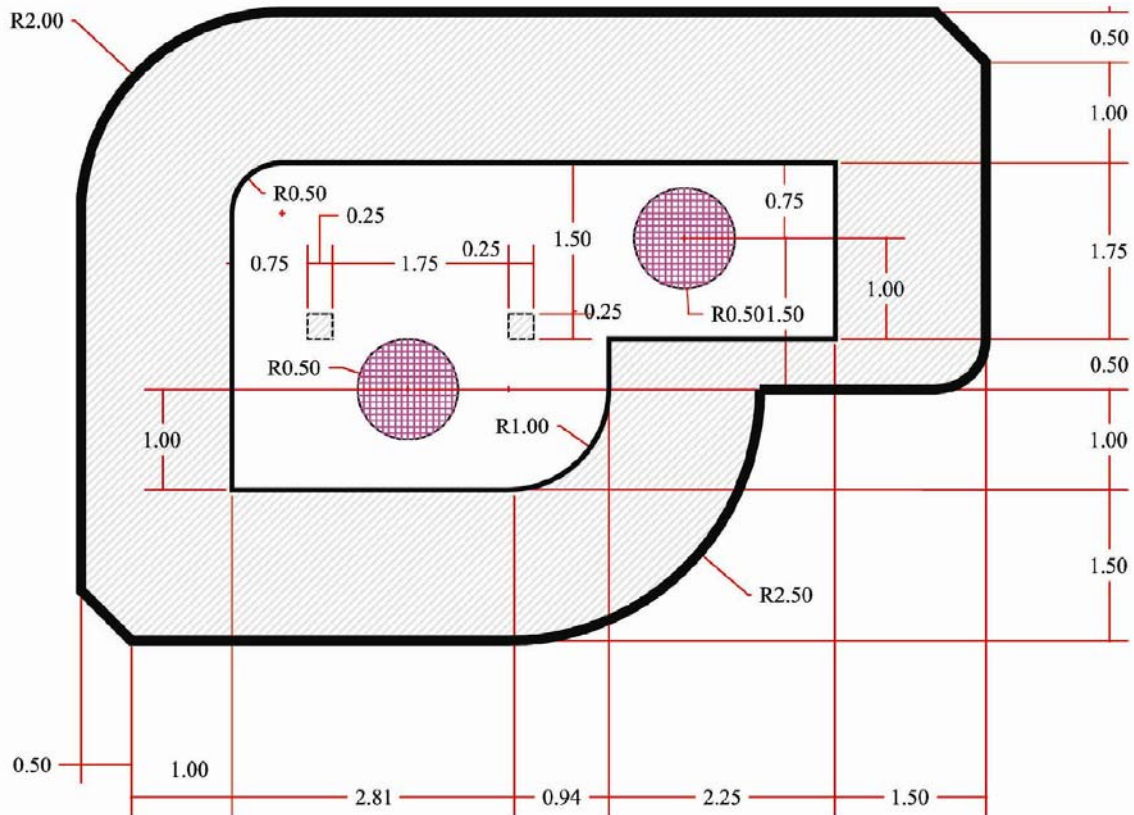
AutoCAD Quick Exercises

The star



AutoCAD Final Exercise:

The Widget



WIDGET
JAMES WARD
5/17/06

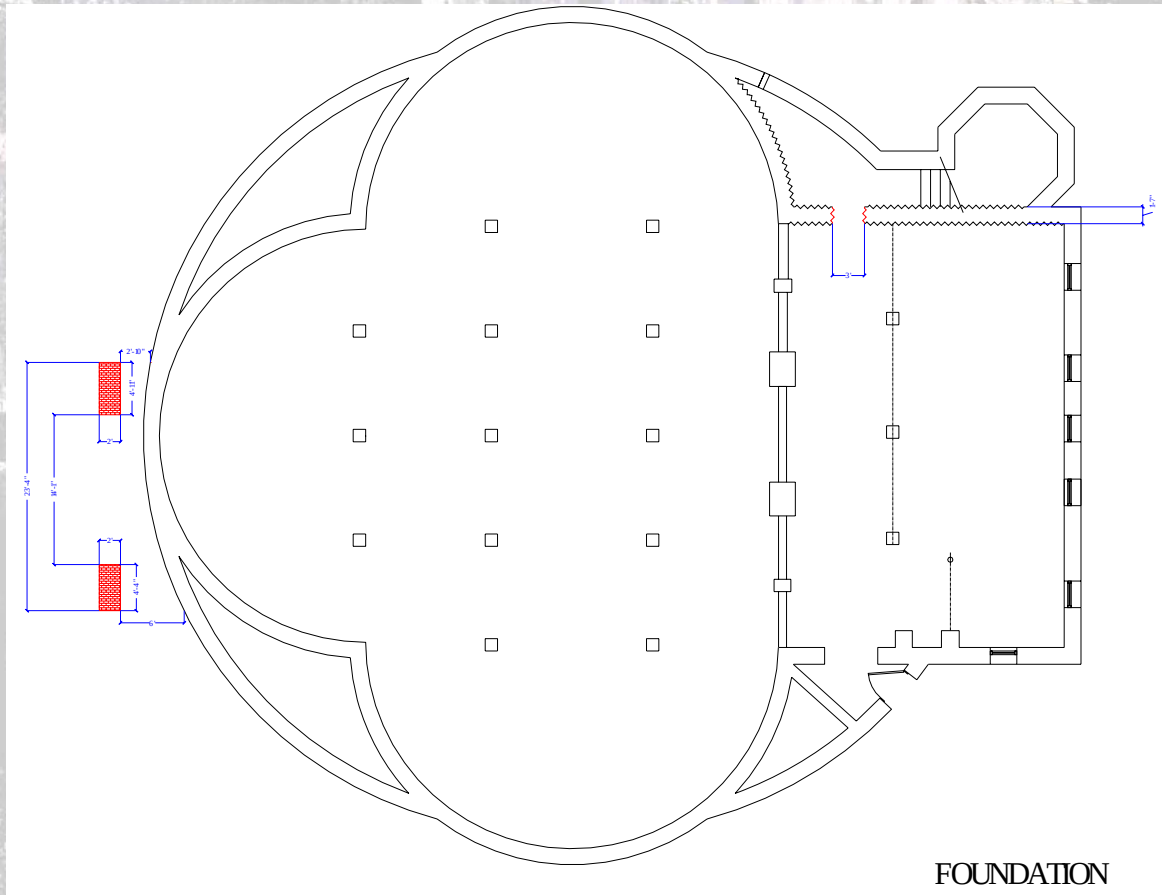
GRAPHIC SCALE



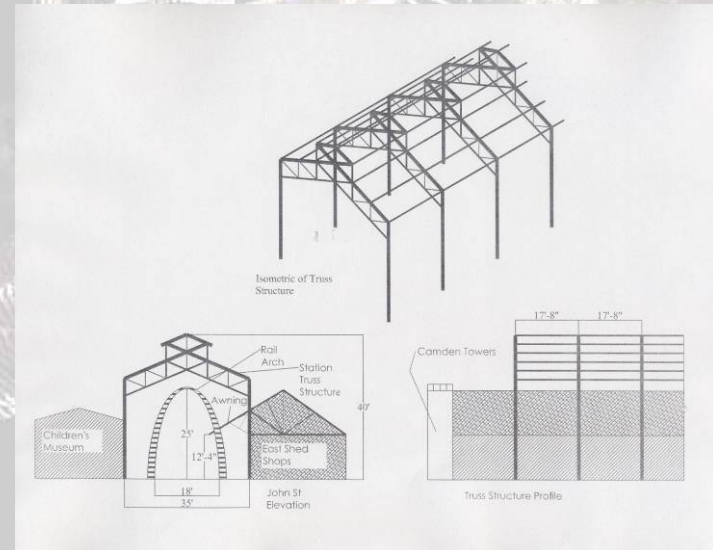
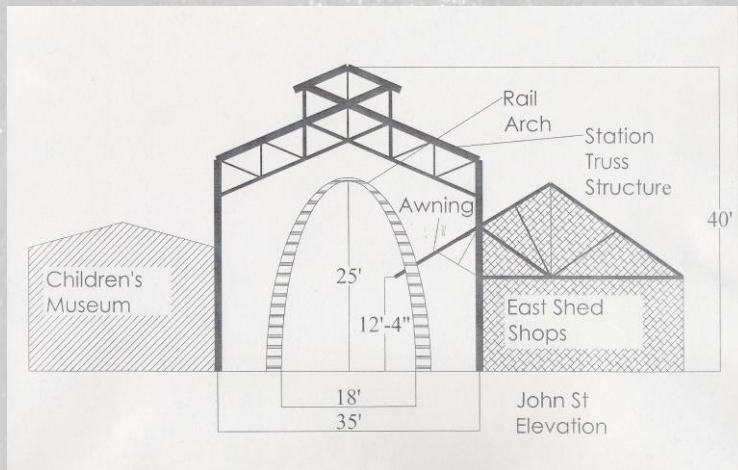
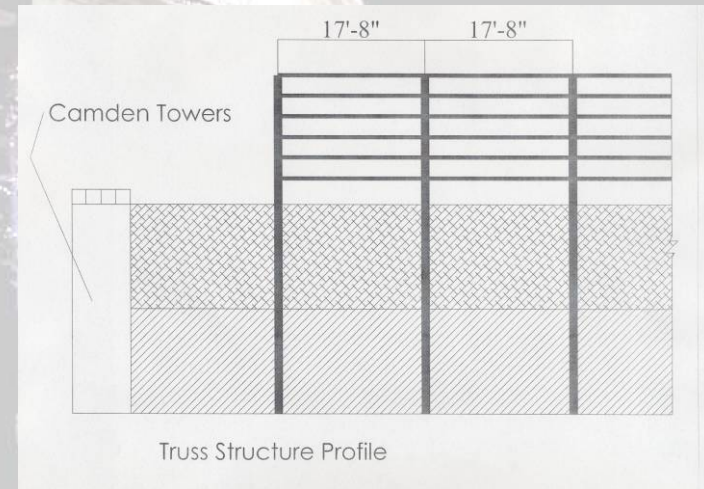
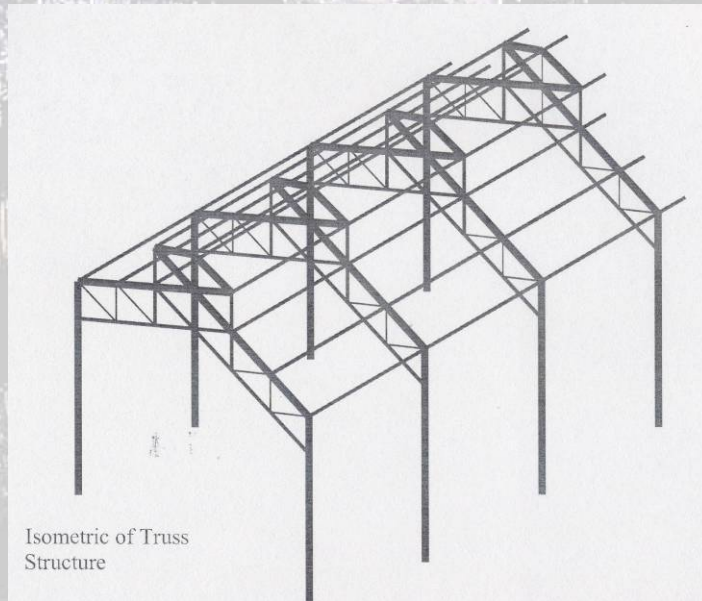
Using AutoCAD for your Project

- Recording and documenting
- Quick Drawings
- Tracing a Photo with CAD
- Architectural Drawings
- Convert vector based programs to raster based programs for presentations
- Transparencies

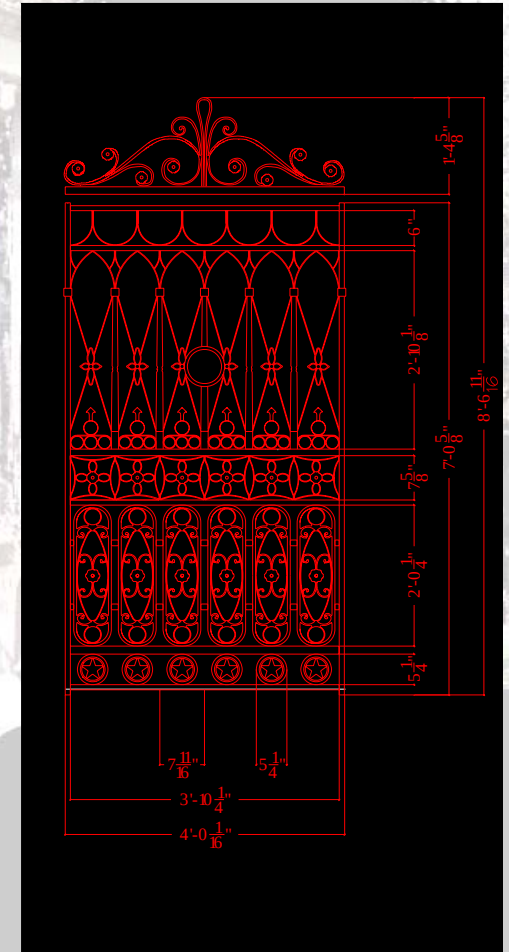
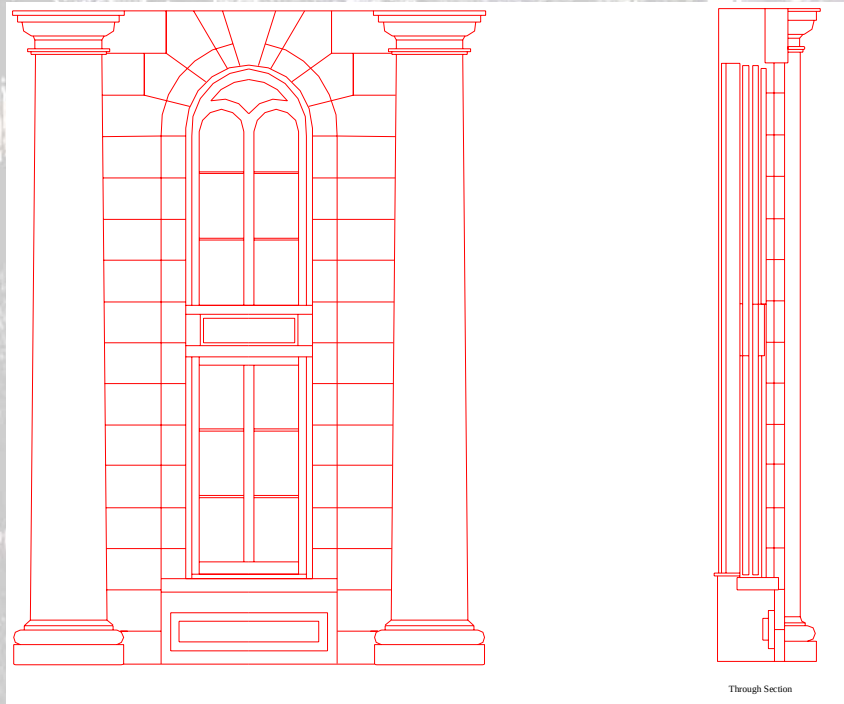
Using it for Research: Recording and Documenting



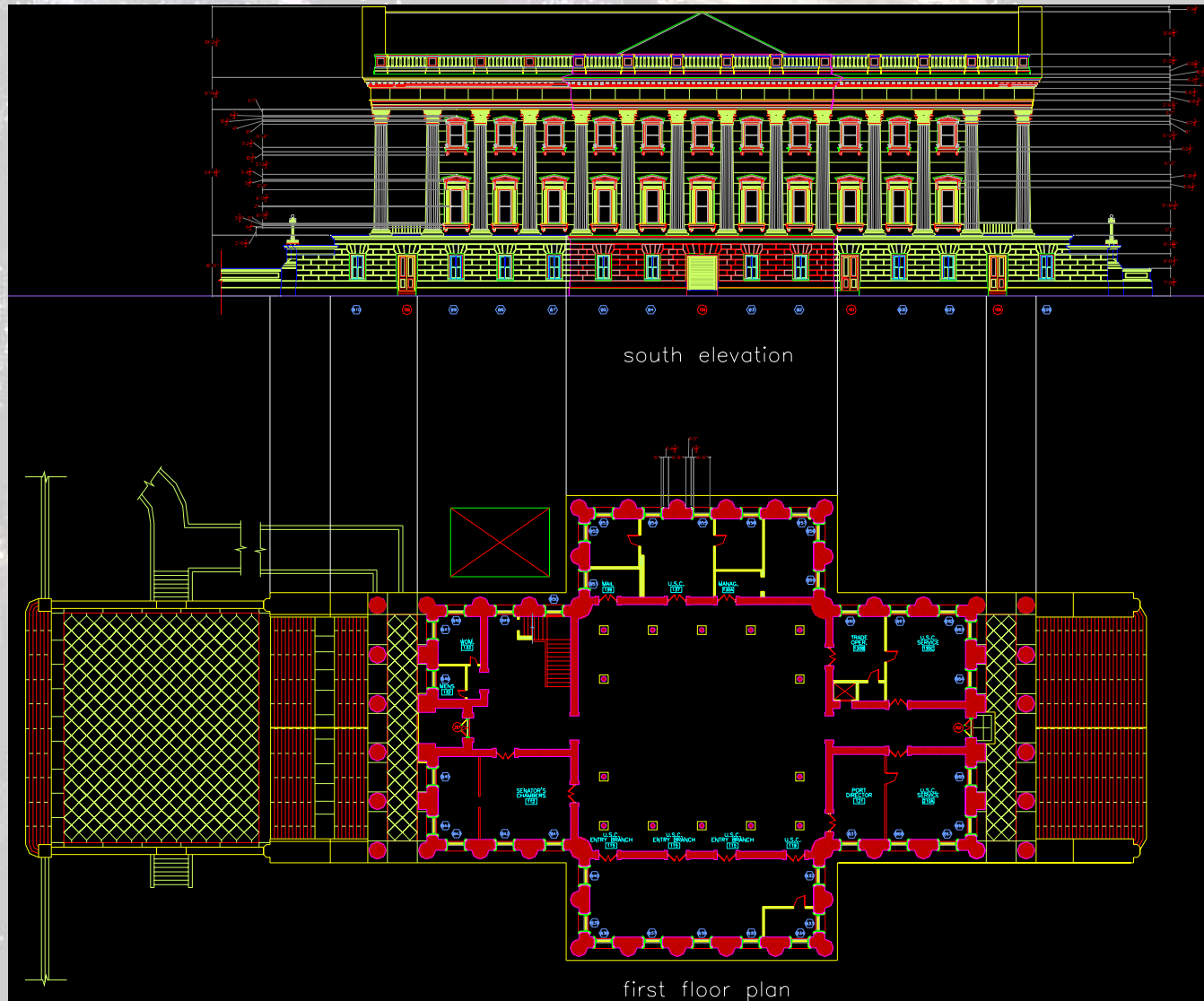
Quick Drawings



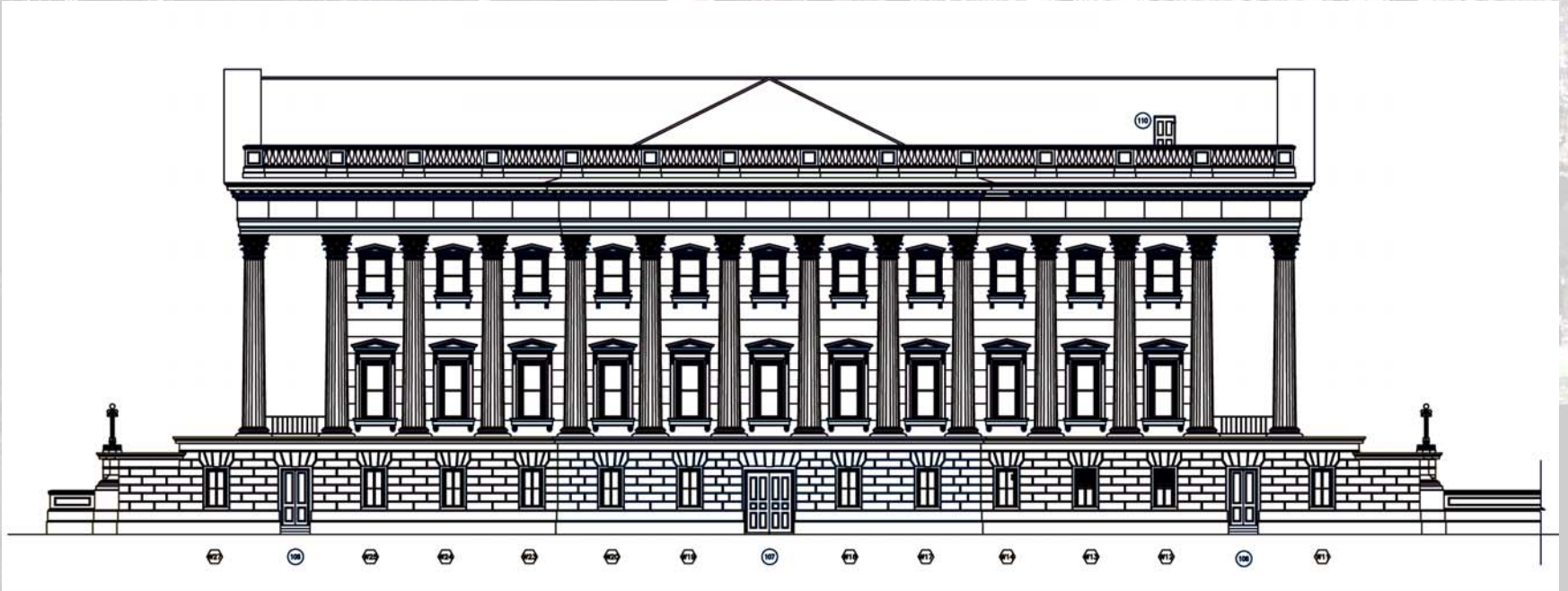
Tracing a photo with CAD



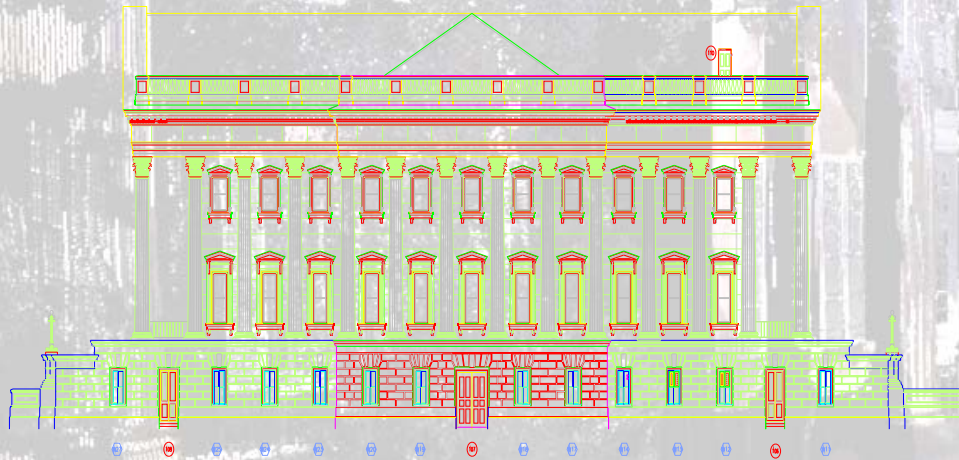
Architectural Drawings for Accuracy



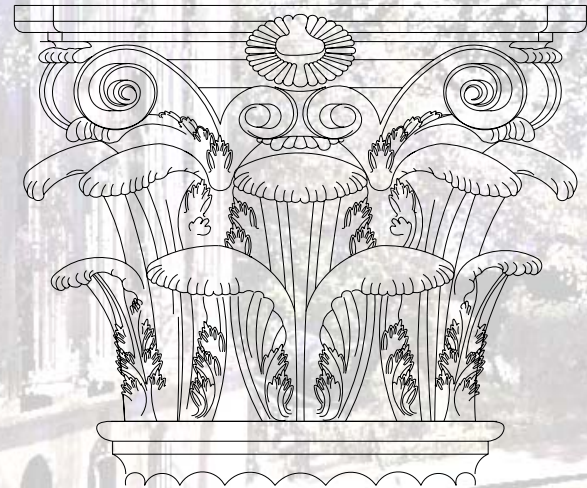
Convert architectural drawings to Raster Files for Presentations



A Transparent Presentation



north elevation



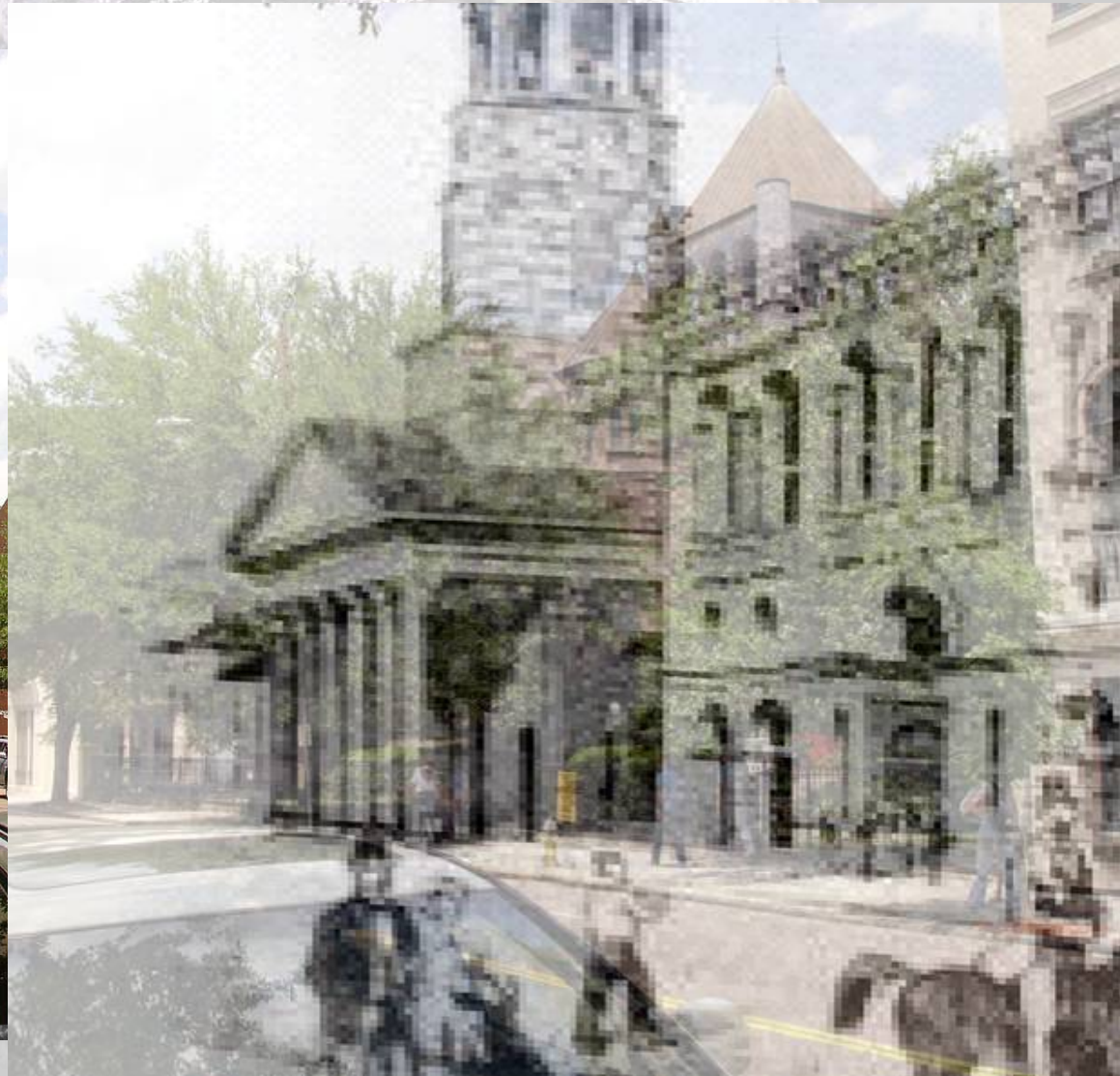
Photoshop Preliminaries

- Overall layout
- Object Selection Tools
- Drawing and Special effects
- Layers
- Putting it together

Cutting, Pasting, and Cropping



Overlays and Transparencies 1



Overlays and transparencies 2



Maps and Aerial Photos



Interoperability Fun:

Stitching and Combining Programs



Rendering AutoCAD drawings

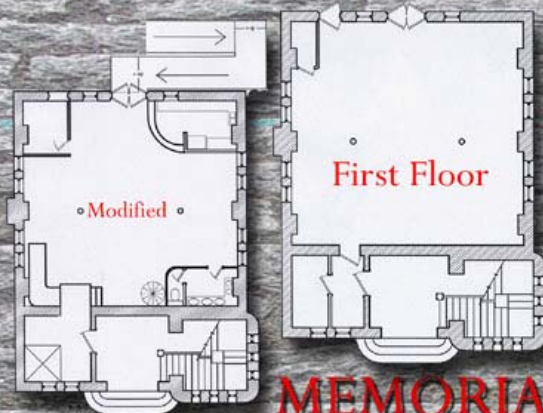


Rendering AutoCAD Drawings 2



Class Projects

- This year's class project is to begin to define the role of computer technologies in the continuing development of our curriculum here at the College. We will develop this theme together on the first day and proceed with the development of interpretive panels based on that theme. In year's past, themes included
- *"Shadows, Footprints, and Hidden Geometries: New Approaches to Interpretation" in 2005*
- *"Keeping Buildings Alive, Keeping Buildings Understood: from Maintenance to Renewed Usefulness" in 2006*
- *"Changing Landscapes: The View from Charleston" in 2007*
- So far this year in studio, we have concentrated on the 19th Century changes both to the Buildings and Landscape of Charleston. Perhaps we can investigate that!



MEMORIAL HALL AT ENSTON HOMES

William Enston Homes: Memorial Hall Historical Report

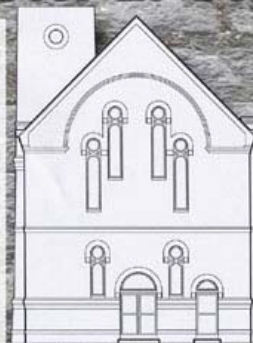
Location: 900 King Street, Charleston, South Carolina.
Its location is at the center of the Enston property in a circle found at the crossing of the cobblestone streets of Canterbury and Colerworth Street. The entrance to the memorial hall faces southwest onto King Street.

Present Owner: The Board of Trustees of the William Enston Home (Charleston Housing Authority).

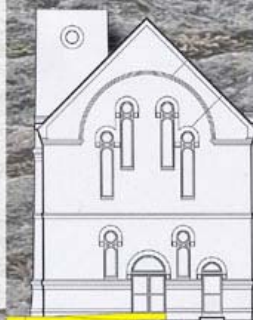
Present Use: The building is currently being used as a storage facility.

Historical Info:

- By 1882 the grounds at the center of the lot had officially been reserved for some sort of memorial to the homes' founder, William Enston. Original plans asked for a simple statue of W. Enston. The official erection of the Memorial Hall was in 1888, and was dedicated on February 22, 1889 by the City of Charleston. The architect responsible for the design of the Memorial Hall is unknown; however the style is closely related to the property's double cottages which were originally designed by Mr. Howe and Colin M.K. Grant.
- Earlier documentation for the original builder of Memorial Hall implied that local contractor, Colin M. K. Grant, was responsible for its construction. The buildings original and subsequent uses were a community room, superintendent's office, a downstairs library, and a non-denominational chapel on the second floor.
- Included in one of Howe's project documents are descriptions and details for cement, mortar, lime mortar, brick, carpenter's work, plasterer, painter, trimmer, and plumber. The building itself holds a gable rooftop and a tall bell tower. The majority of the structure is made of red brick, with concrete trim and stained glass windows.



North Elevation



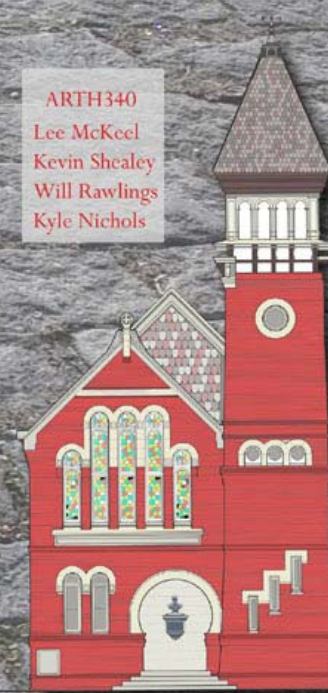
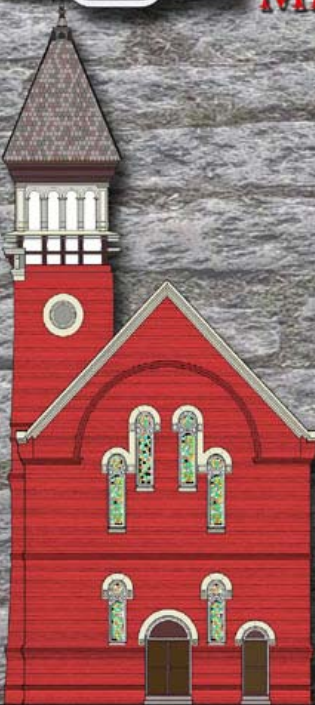
Memorial Hall Proposal

In hopes of creating a useful family facility for Enston community members, Memorial Hall will be recreated into a daycare center on the first floor and an assembly hall on the second floor, as well as the addition of handicap accessibility. The original hardwood floors and stained glass windows will be refurbished and reused. Many areas will have to be recreated from imagination due to severe termite damage. The electric capabilities, plumbing, and central heat and air will be updated.

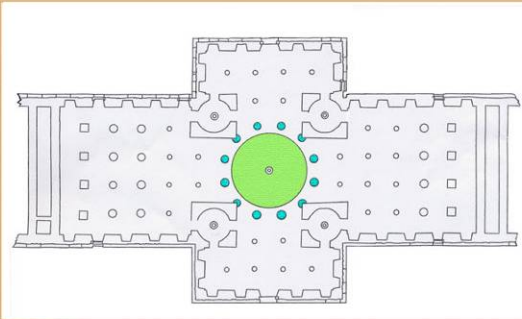
The daycare center will be used and operated by Enston dwellers. The assembly hall will be available for personal use or community meetings. The lot between Shuttlewood Ave. and Colerworth Ave. will become a park complete with a basketball court, merry-go-round, swing set, slide, and park benches.

An iron fence needed among ferns, trees, and shrubs will create a border for the park. Such a border will make the park secure for children to play and daycare use of the property. The foliage chosen is indigenous to the area and compliments the greenery that already occupies the area. Several Southern Magnolia trees would be added, two Live Oaks, and numerous Palmetto Fan ferns and Cast Iron Plant Ferns. Both types of ferns live year round without the need of constant attention. Therefore making the park low maintenance and beautiful. For added safety, crosswalks leading to Memorial Hall from the sidewalks will be added.

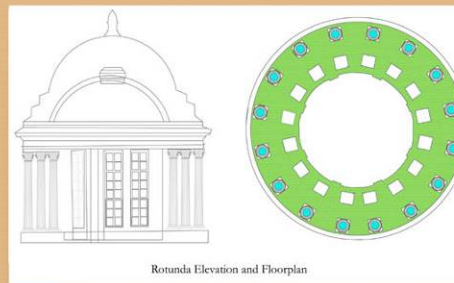
ARTH340
Lee McKeel
Kevin Shealey
Will Rawlings
Kyle Nichols



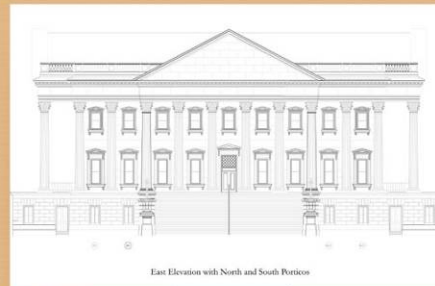
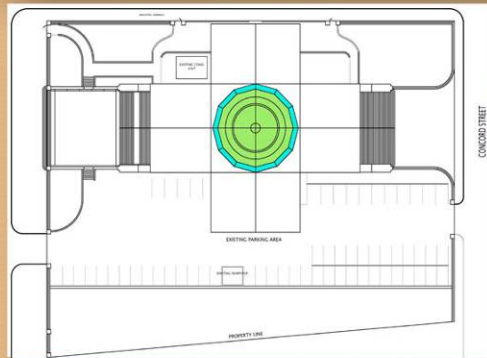
The U.S. Custom House Gettin' 'Round to It!



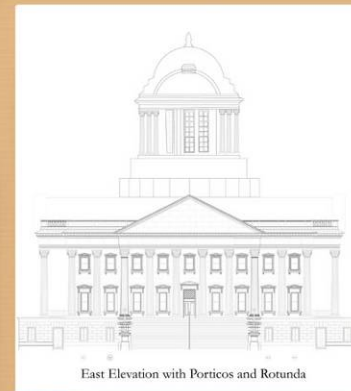
The United States Custom House in Charleston, South Carolina is an important Roman Corinthian-styled building owned by the Federal Government since its construction in the mid-1800's. Before construction began, in 1849, a competition for design ideas was held. The original drawing chosen was a "Gothic castle design" by E.C. Jones, which was later vetoed by government officials. The plan that was finally adopted came from a compilation of four submitted designs worked together by architect Ammi B. Young. The outbreak of the Civil War in 1861 caused work on the building to cease. During this construction hiatus all plans for the structure were lost. New plans were drawn after the War in order to complete the project. For this reason, along with budgetary concerns, the structure, as originally designed was changed and those changes are reflected in the current building. Construction of the uncompleted building began again in 1871 and ended in 1879. The structure as designed included a circular, central interior space topped with a dome and cupola.. In addition, the center of the building under the dome, extended through the upper two stories and was to be covered by a hemispherical vaulted ceiling. This ceiling was to be enriched with sunken panels and tracery, and supported with twelve marble Corinthian columns. The principal light to this area was to be provided from above through stained glass windows in the dome. Twin porticos on the North and South wings of the buildings were also omitted from the original design after construction was begun. These changes were made in order to reduce the overall cost of the building. Congress approved the changes and we see them in the current square central room with a coffered ceiling that originally housed several large skylights. The interior second floor is surrounded by a "gallery" and dotted with Corinthian columns on the first floor and Corinthian pilasters on the second floor. Our intent with this project is to recreate the designed elements through interpreting historical drawings in order to inform visitors about the site's varied past.



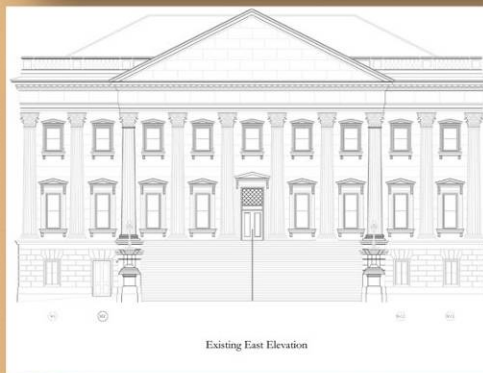
Rotunda Elevation and Floorplan



East Elevation with North and South Porticos



East Elevation with Porticos and Rotunda



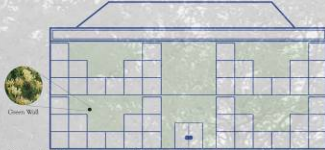
Existing East Elevation

College of Charleston
Historic Preservation and
Community Planning
ARTH 340
Prof. Ward
May 2006

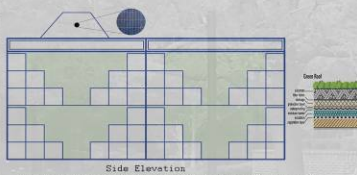
George Tozer, Marisa Cefalo-Cox
Jamie Zwolak, Jordon Eubanks, Sarah Lewis

Bull Street Studio

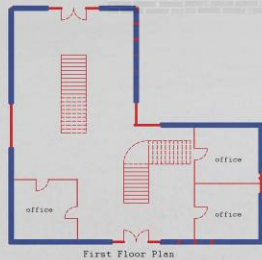
Proposed is a new edition to the Historical Preservation program at the College of Charleston- a sustainable studio for students and faculty to enjoy. This structure will include office space, studio space and a meeting area for the students and faculty of the College of Charleston. The building will be built with the Environment in mind. The new studio will use only sustainable materials in the construction of the building. With GREEN Architecture in mind the design of the structure will fit seamlessly into the New Bull Street Campus.



The Sustainable structure will include a local type of vine on the outside walls of the building to shade the walls during hot summer days. The windows will be energy efficient and have UV protection. Also the windows will allow large amounts of natural light in the cut down on lighting costs.

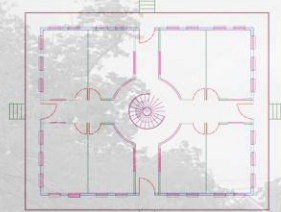


The roof of the building will include photovoltaics - solar panels, batteries and solar cells. A major part of the roof will be a Green roof with local plants and Sedum to help control heating and cooling cost as well as reduce storm water run off.



Ground Floor Plan

The floor plan was designed to house eight office rooms. Each corner room has six large windows and each middle room has four windows. The middle rooms have one large window that opens to the central staircase. The staircase is illuminated by natural light from the glass dome. There are four main entrances that lead to the porch. Each door opens to a hallway that brings your focus to the spiral staircase in the middle of the building.



Front Elevation

The front elevation includes a wrap around porch and a second story balcony that also wraps around the building. The roof holds 4 large solar panels on each side which run the buildings lights and air. There is a centralized dome constructed of glass to allow light into the central spiral staircase. The large semi-circular window also adds light to the staircase and corner offices. The entire building is raised off the ground by four feet for ventilation and maintenance space.

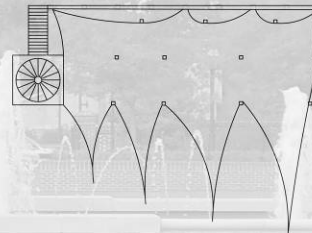
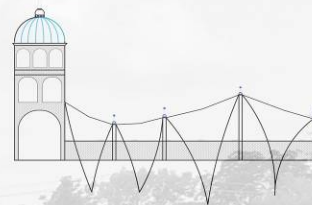


What makes it Green

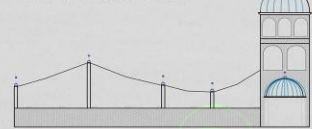
The main focus behind this design is to allow as much natural light as possible into the building. So many homes and offices require powered light during the day because of poor lighting. The 16 large solar panels provide the building with its electrical needs. The large windows also facilitate in providing heat during the mild winter months. This building will use geothermal heat pumps.

Greening the Green via Via Reclaimed Storm Water

Tower serves as a water supply for a gravity fed irrigation system. Electricity derived from the photovoltaic fabric on the awnings will power water pumps that move water from stormwater cisterns around campus to the water tower.



The structure would serve a variety of uses including a protected waiting area utilizing some of the Pitt street parking lot for bus and auto drop off and turn around. Additionally the area under the awnings would be ideal for an outdoor meeting area and serve as overflow space for functions at Blacklock House.



The Bull street campus is that area of the College of Charleston campus bordered to the north and south by Calhoun and Bull Streets with the east west border defined by Coaling and Pitt streets. The area is dominated by the Addison Library and is currently being studied for continued development. The College has an opportunity to create a space that is aesthetically pleasing and useful while fulfilling it's obligation as steward of several historic structures in the area and supporting the colleges continuing need for additional functional space.

In order to most effectively utilize the limited land available to the college, it will be necessary to remove some modern inappropriate structures in order to better utilize the space. When designing replacement structures it is hoped that the college consider utilizing Leadership in Environmental and Energy Design (LEED) standards. The LEED certification includes sustainable site development, water savings, energy efficiency, material selection and indoor environmental quality. Achieving a balance between building an eco-friendly structure within budgetary constraints and with an eye towards the stewardship of a historic campus is not without challenges. Green Buildings however offer several advantages over more traditional structures including:

1. **Lower operating costs**-Buildings are equipped with more efficient heating and cooling systems and use less water, resulting in lower monthly utility bills. Improved construction materials better protect structures from rain and ground water and reduce upkeep and replacement costs, while use of recycled materials helps conserve natural resources.
2. **Reduce maintenance issues**-Landscaping uses native or drought resistant plants and grasses. Use of synthetic materials that need no sealing or staining.
3. **Improve environmental quality**-volatile organic compounds and low VOC paints contribute to a more comfortable indoor environment, and efficient use of material helps conserve natural resources.

Some of the technologies and materials that will be considered:

Floors Use wood from a recycled, sustainable tree, bamboo or wood reclaimed from torn down structures.

Water Management Storm water drainage. Green water recycling, use of a cistern for use in irrigation.

Solar Panels Use of Solar Panels to transfer solar energy into power for the structure.

Roofing A Green roof is a roof that consists of a type vegetation that grows on the roof to enable the roof to stay cool. In turn this better stores the energy inside the structure which reduces the heating and cooling of the structure.

Local Materials When building, use as many local resources and products as possible.

Green Walls The use of vines, ivies or creepers to cover the outside walls protecting them from the sun. This will keep heating and cooling costs down.

Making Green, Green.

Courtney Barnwell, Matt Bowden, Brent Lhuillier
HPCP 290 Maymester 2007 Prof. James Ward

Changing Landscapes



Reconnecting Hampton Park to the River

Park History... Hampton Park currently exists as a shadow of its original vision. It has, however, great potential based on its history and its proximity to the Ashley River. Maximizing the site of the existing park and the adjacent Citadel Campus could create a civic space comparable to that of some of the great urban spaces of America.

The site of the park was owned by the Gibbes family throughout the 18th century. In 1836, the park land was purchased by the South Carolina Jockey Club and was used as the Washington Racecourse until the Civil War, when it was used as a prison for Union soldiers. After the war, the Jockey Club would not regain its antebellum popularity, and its lands were given to the Charleston Library Society, who sold them at auction. They would be used as the site of the Interstate and West Indian Exposition from December 1, 1901 until May 31, 1902. The event was grand, but its structures were temporary, and upon its conclusion its site was purchased by the city, which acquired 120 acres to create a park. In 1903, the city would name the park after Wade Hampton, the Civil War General, governor and US Senator from South Carolina. It was recommended as the most appropriate site for a monument to General Hampton, though that monument would eventually be placed in Marion Square. In 1905, John Charles Olmsted, the stepson of Frederick Law Olmsted visited Charleston and created a plan for Hampton Park. The primary component of the Olmsted design was the Ashley River Drive, which created access to the river for park goers beginning in 1908. In 1918, however, the river access was lost when this part of the park was given to the State of South Carolina for the construction of a new campus for the Citadel. Despite the lost land, Hampton Park remained a popular place to visit and enjoy until after the Second World War.



Plan of new park entrance

In an attempt to revitalize the park, a major renovation took place in the 1980's that included the reconstruction of the lagoon and the bandstand. Today, Hampton Park remains properly maintained and contains the legacy of two once-great city institutions, the Washington Racecourse and the West Indian Exposition.

River Reconnection... The creation of a connection to the Ashley River could help Hampton Park regain its former popularity. The connection would encourage more foot traffic to the site, while restoring a historic aspect of the park that existed in the Olmsted plan. The proposed pathway would connect to Hampton Park on its southwest corner, run through the Citadel campus, include a boardwalk over the Ashley River's marsh, and connect back to the city-owned Brittlebank Park. At the southwest corner of Hampton Park, the connection path would include a pedestrian-friendly traffic circle at the intersection of Moultrie Street and Elmwood Avenue, in front of the Citadel's Lesesne Gate.



New Traffic Circle

Through the Citadel, the pathway would run along the Avenue of Remembrance and proceed down Jenkins Avenue. This route would pass by some of the military college's main points of interest, including the Library, the Chapel, and the Summerall Field parade grounds. Tree planting and plaque placement would distinguish a clear foot path through the Citadel. Walkers would turn off of Jenkins Avenue, down Hammond Avenue, and continue on to the Ashley River connection just beyond the Washington Light Infantry Field. The pathway would proceed on a newly constructed boardwalk over the marsh, maximizing the river view. One section of the boardwalk would offer a widened portion with benches for resting and viewing. The new pathway would end with a land connection in the Brittlebank Park area.



Section of New Boardwalk over Marsh



Possible route of Boardwalk



Pathway through Citadel Campus

Future Implications... A new walkway connecting Hampton Park to the Ashley River could be a small part of something larger. The future development of a complete Peninsula River Walk would create recreational opportunities for residents and tourists alike. This walk would begin at the Aquarium Wharf and follow the edge of the peninsula all the way to Hampton Park, utilizing its new connection to the Ashley River. Along the way, pedestrians could appreciate the river views, as well as several points of interest. Brochures could give information about each of these sites. Appropriate signage and landscaping would be required to develop a distinguishable route.



HPCP 290
Autodad/Photoshop
Professor Ward
31 May 2007

Nathan Attard
Tipton Fowlkes
Erika Smith
Nicole Papst

Bull Street Campus



Blacklock House - North Elevation
(blue shading indicates modifications)



Bull Street Campus Plan



HABS Photo - Carriage House @ 18 Bull Street

Sanborn Fire Insurance Map - 1888
Carriage House @ 18 Bull Street

Mission Statement

Where the future welcomes the past by connecting new campus sites to the old across the College of Charleston campus, starting at the heart of the new campus, the Blacklock House.

Introduction

The Bull Street Campus is comprised of several properties that run along the North side of Bull Street on Charleston's peninsula. These properties abut the grounds on the south side of the College of Charleston's new Addlestone Library. There is, however, little connectivity with one of the most important properties the Blacklock House located at 18 Bull Street. Not only is the Blacklock House architecturally significant as a Federal Style structure (built in 1800), it is on the National Register of Historic Places. These are significant attributes in their own right, but the College of Charleston has a special attachment to the Blacklock House for another reason - it is the college's Alumni House. As such, it is important to join the Bull Street Campus to the Addlestone Library grounds so future students can welcome past alumni.

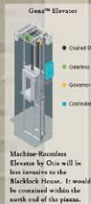


Rehabilitation Projects

One of the most important rehab projects will be to reinstall the two-story piazza that once graced the north facade of the Blacklock House. The piazza will also need to be extended on the west end for three reasons: first, it is historically significant because prior to World War I a German Consul to the United States who had lived in the house had the piazza extended to add a semicircular end; second, this extended section would be used to house an elevator which would make the house handicap accessible; and third, it would allow easy access for catering events located inside the house which is not currently the case.

Currently, the Smokehouse which is located on the north green of the Blacklock House is under utilized. The windows have a quaint Gothic arch; however, they lack the tracery found in the Carriage House windows and should be rehabilitated to include similar tracery. Presently it is used for storage; however, it would best serve the Alumni House as functional space as a wet bar/gelato bar. This would better use the open green by redirecting event attendees to the yard, and avoiding over utilization of a delicate historic structure.

The Carriage House will be rehabilitated into a multi-function space while maintaining the exterior and restoring an east wing with a rounded pediment. There is photographic evidence as well as the 1888 Sanborn Fire Insurance Map footprint evidence of this wing. This one-story wing will house a fully functional kitchen for catering events that will be accessible to an outdoor kitchen on the Carriage House's north side patio. Offices will be on the second floor with load bearing limits while the ground floor will become functional event and/or seating space. Restrooms will also be located on the ground floor for ease of access for event goers.



Activities

By creating one contiguous space between the Bull Street Campus and the Addlestone Library more/larger functions can be accommodated including alumni functions, rental events (private parties, weddings, receptions, etc.), meetings, and other varied types of gatherings. Through other modifications to the space (i.e. green buildings, landscape changes, parking area redesign) the adjacent space will be more inviting by forming Commons where students will enjoy gathering to study or meet with friends and perhaps have the occasional outdoor class for small groups. In addition, offices, classrooms, and studios would be accommodated in the Lucas House, the Blacklock House's Carriage House, and other new buildings (i.e., new construction on the site of the greenhouse currently on the north side of the Cameron House lot).



Pineapple Fountain
Near Pineapple Gate



Connections

The way a space flows, as any good architect, urban planner, or landscape architect will tell you, is very important in making that space functional. To avoid congested pedestrian areas, or worse, under utilized space, the Bull Street Campus Project was undertaken. By widening gates, including a handicap accessible ramp at the Pineapple Gate, reconfiguring the landscape and include a pineapple water fountain near the gate, and install additional pathways this space can become a campus within a campus with continuous flow throughout the area.

Suggestions

- ❑ Parking lot on Pitt Street becomes Alumni House parking
- ❑ Convert dorms to office space in the north wing of the Lucas House, and install steps and a door to allow access to the Blacklock House green
- ❑ College of Charleston should purchase 30 Bull Street to complete Bull Street Campus
- ❑ Install better/more seating on the Addlestone Library green
- ❑ Lower the plant boxes on the Addlestone Library green so they may be used as seating
- ❑ Install granite block in the unpaved area to the east of the parking lot to conform with the east end of the library green
- ❑ Reduce heavy vegetation to the north of the Carriage House
- ❑ Redesign landscaping to include a water feature at the north end of the Blacklock House green near the Pineapple Gate
- ❑ Install outdoor lighting to emphasize landscaping and pathways which would allow for nighttime events
- ❑ Install natural gas lines to be used with gas lamps, an outdoor kitchen area, and in the rehabilitated Smokehouse wet bar/gelato bar

- Changing Landscapes -

Bull Street Campus: Where the future welcomes the past
Elizabeth Barnes - Chris Hankula - Stefan Lianakis - Jane Taylor
HPCP 100-01, ST, HPCP & Photography
Professor James Ward
Maymester 2017



Pineapple Welcome Gate @ North End of 18 Bull Street
(handicapped ramp & steps)

Objective

- The overall objective is to demonstrate to the department, college, and potential future grants benefactors not only that our students can develop sufficient computer software skills in only two weeks to improve their presentation skills and marketability to potential employers but also that the use of such technologies is an important and useful tool for more traditional art historical and preservation tasks. We wish to tell meaningful stories that fill our hearts with the presence of the past and to enable us to discover and interpret those stories to others inside and out of the academic community.

Goals

- The goals of the individual student are to demonstrate a beginning awareness of the potential of these tools by several means. Each team should attempt to show in plan and elevation some aspect of each site utilizing newly found skills. They should **utilize both AutoCAD and Photoshop presentations** on their drawing. The size restrictions are loose here, but as a minimum, students should be printing final copies on a 24"X36" format with title information as provided by their instructor. Finals will be printed in color at 24" X 36" at the department's expense. In addition, an electronic copy of each team's work shall be provided to the Instructor. It is understood that the Instructor shall assist each team in their research and presentation and that their work (with appropriate credit) shall join a larger body of work that the Instructor is working on dealing with this topic.

Grades

- Grades are given based on demonstrated abilities using the software as well as the students' abilities to use this technology to further the role of the preservationists in interpreting places. Assignments are due on exam day. The Instructor will be available during class times and immediately afterwards for up to two hours each day (depending on conflicts) that teams may sign up for his assistance either on site or in the lab.
- Scoring Breakdown:
 - Individual assignments (AutoCAD and Photoshop) printed and submitted for 50%
 - Team assignment (1) printed in both B&W (as a test) and Color (for final) and team evaluations of individual contributions for 50%

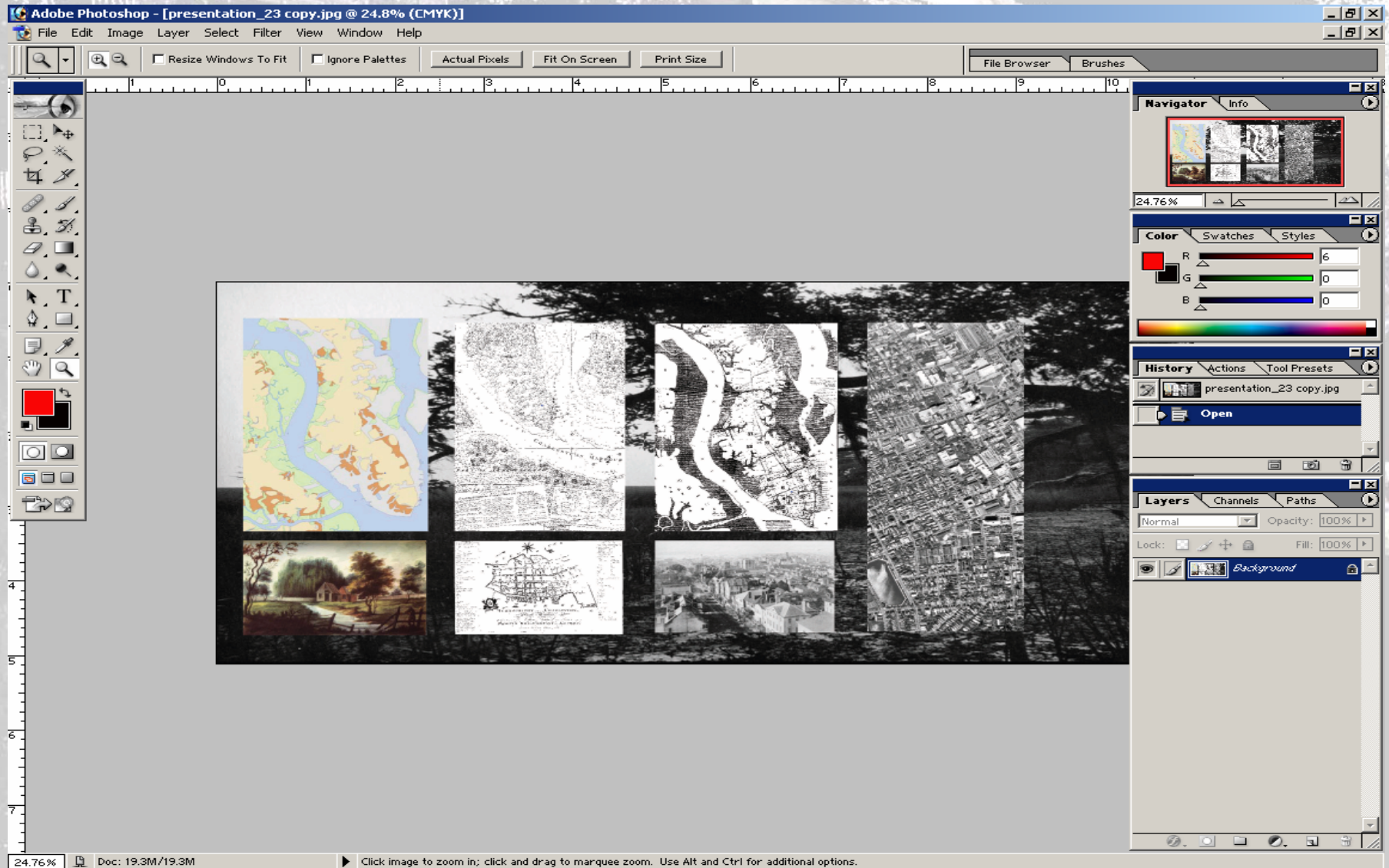
Schedule

- **WEEK ONE** - May 13-16
- T - Intro and ACAD START UP
 - Power point review of basics of course, background requirements, and application.
- W – ACAD/PSHOP
 - CAD Tutorials
 - Photoshop - Layering and File types, Managing the files and file sizes
- H – ACAD/PSHOP
 - CAD Tutorials
 - Photoshop Command structure
- F- ACAD/PSHOP
 - Finalize Tutorials
 - Introduction to Review of scaling in paper space
- **WEEK TWO** - May 19-23
- M - ACAD/PSHOP
 - Photoshop: Fat Baby level controls and Doll Man exercises in layering
 - AutoCAD: Introduction to detail drawing and first “from scratch” drawing
 - CAD Tutor Tutorials and scrapbook
- T - ACAD/PSHOP
 - Photoshop-review of putting together photos in panorama or elevation
 - CAD Tutor tutorials and scrapbook
 - Review of scaling in paper space
- W - ACAD/PSHOP
 - Review of scaling in paper space
 - CAD Tutor Tutorials and scrapbook
 - Introduction to dimensioning
 - Scrapbook format provided, tabs and their making/changing/deleting reviewed
- H - ACAD/PSHOP
 - “The Star” Practice
 - Reading new drawings into the scrapbook – insert drawings and making blocks
 - Reading photos into AutoCAD
 - CAD Tutor Tutorials and scrapbook
 - Turn in proposal
- F – ACAD/PSHOP – Final In class practicum
 - WIDGET CHALLENGE
 - Turn in personal notebook with tutorials and scrapbook
 - Field time/research allowed as required (Use the lab as your office – I can bring in a scanner, go to library, take photos of site, etc)
- **WEEK THREE** - May 26-30
- M –Memorial Day (time to think)
- T - FINAL DRAWINGS
- W - FINAL DRAWINGS
- H - Turn Posters and present to class (Lunch at a place to be chosen)

Preliminaries

- FIRST SET UP A FILE MENU ON THE DESKTOP, USE THIS TO STORE YOUR WORK.
- **AT THE END OF EACH DAY SAVE THIS TO A MEMORY STICK OR CD**
- **AUTOCAD OR PHOTOSHOP FIRST?**

Photoshop

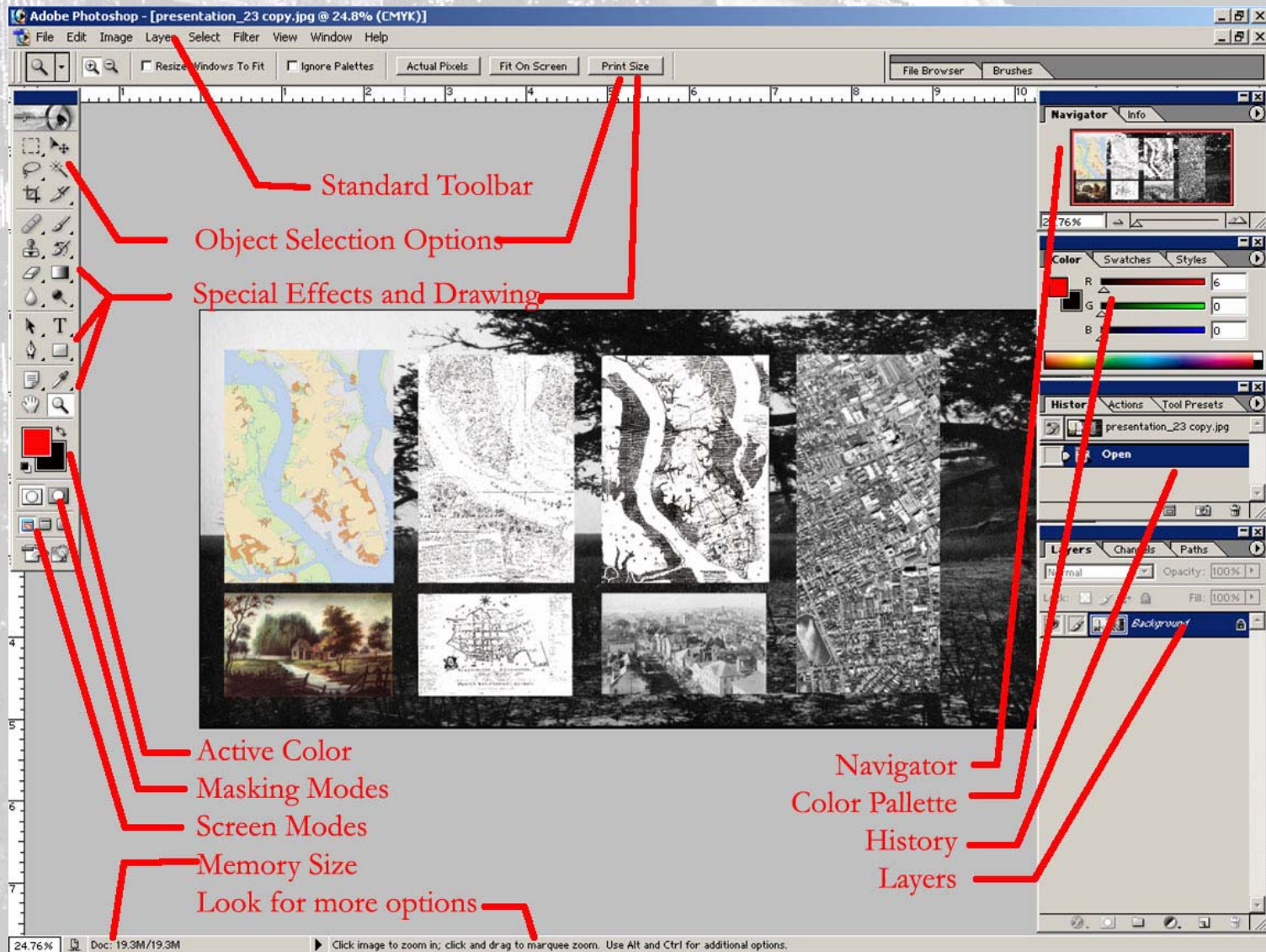


- **Basic outline**

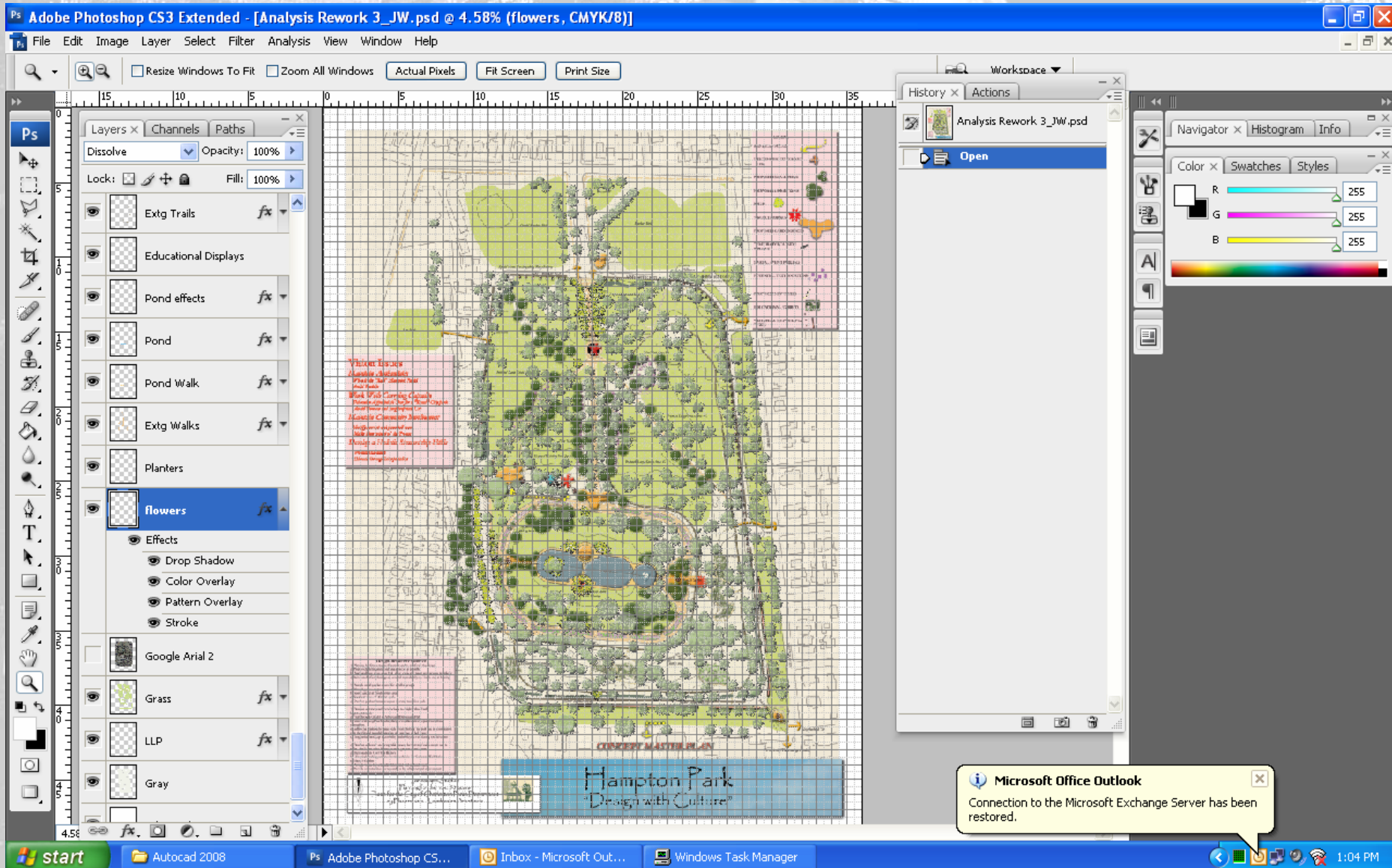
- Overall layout
- Layers
- Object Selection Tools
- Drawing and Special effects
- Putting it together

- **The Project**

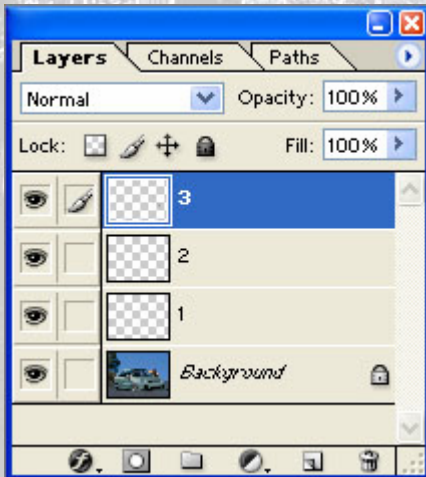
Screen Overview



Layers



Layers

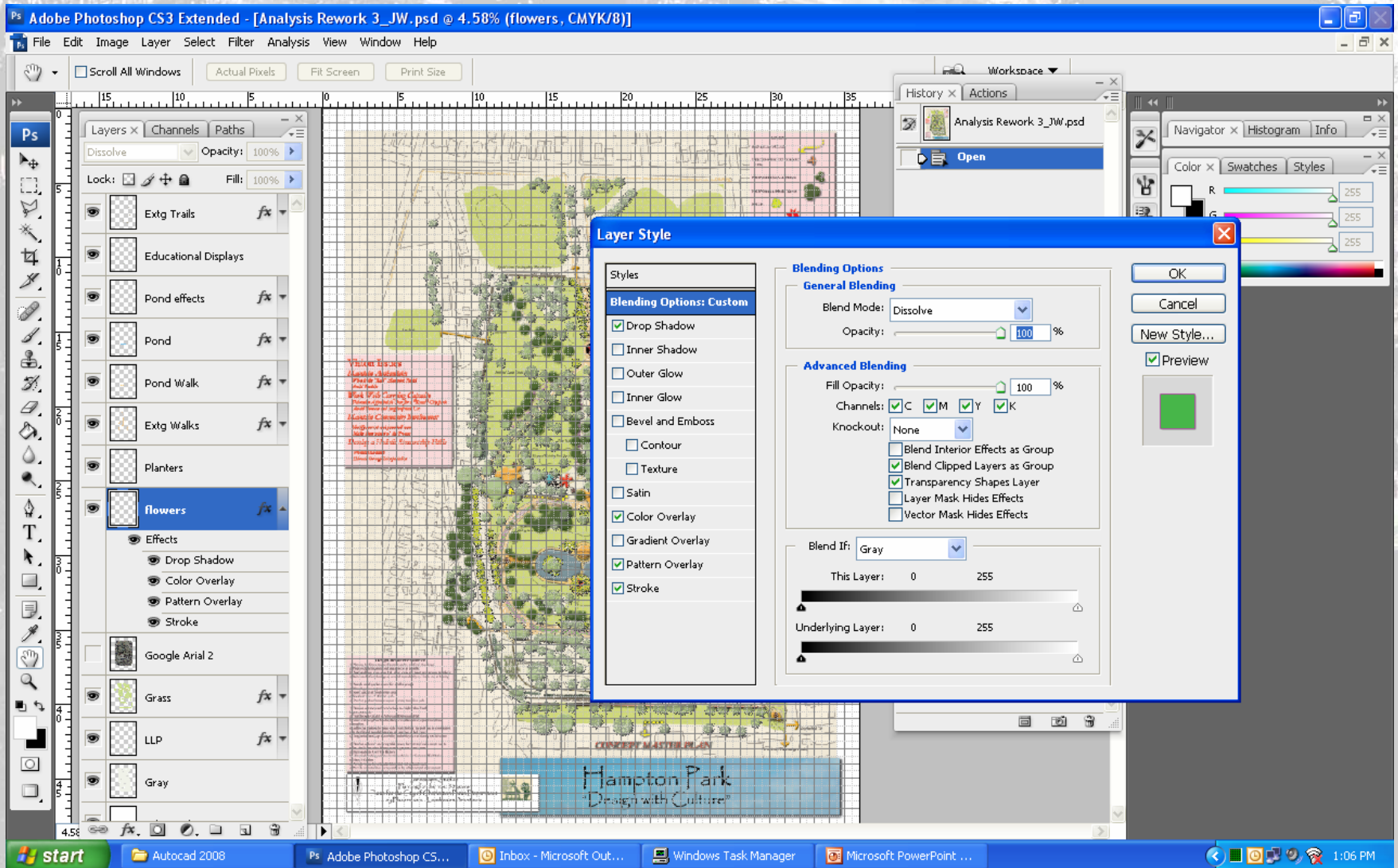


- Layers, like the name suggests, are a way to keep parts of images separate from each other. So in the example on the left, we can see 4 layers. You can think of the layers palette as a way of managing a collage. A picture from a magazine might be in a layer, a clipping from a newspaper in another and some typewritten text in a third. Layers allow you layout these parts in a collage without having them interfere with each other.
- <The order of the layers are *background*, 1, 2 and 3. (3 been on top).
- Ok.. Each of the layers can be moved about (using the move tool) and positioned and edited separately from the main image.
- Also there is the ability to switch between the layers for different parts of the image All you need to do it click on the relevant layer. To hide the layers, click on the small eye icon to the left of the layer boxes.
- You can flatten the layers using Ctrl+Shift+E. A new layer is created when you paste something on, so be aware of this!
- Usually if your trying to edit a section of the picture and it won't work, it is in a different layer to the one currently selected.
- Most of the time you're working in Photoshop, you're in one layer. This is what the layers palette calls the background. It's always there and you can't throw it out.

When you first make a layer, it is completely empty. It is not filled with white like the background, but it is transparent. Photoshop denotes transparency with a checkerboard pattern. If you hide the background, notice that layer 1 really is empty!

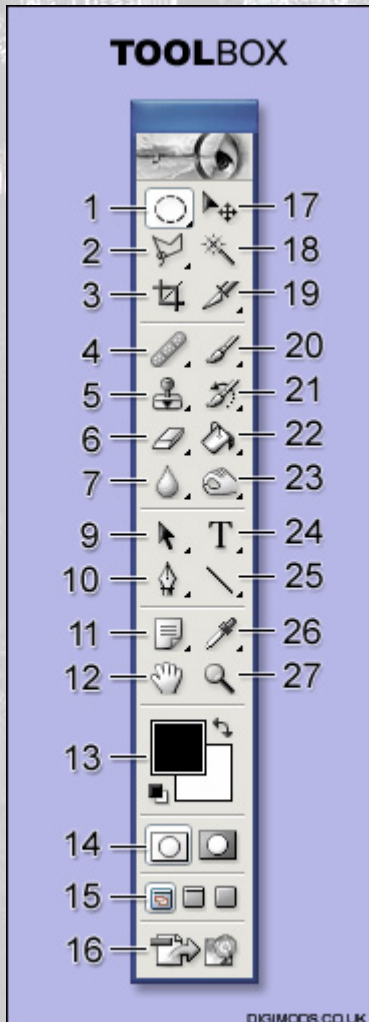
The key point here is that erasing and deleting in layers erases and deletes to transparency, not to the background color. So, whatever is on layers underneath will peek through.

Layers Special Features



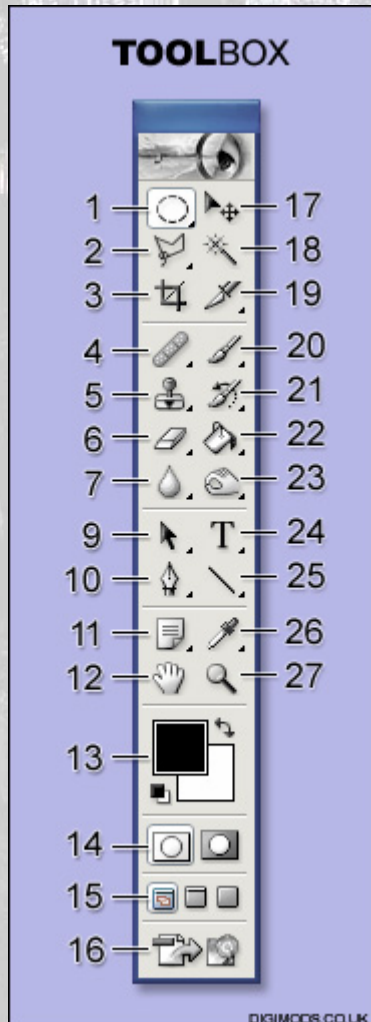
Photoshop Tools

Object Selection 1



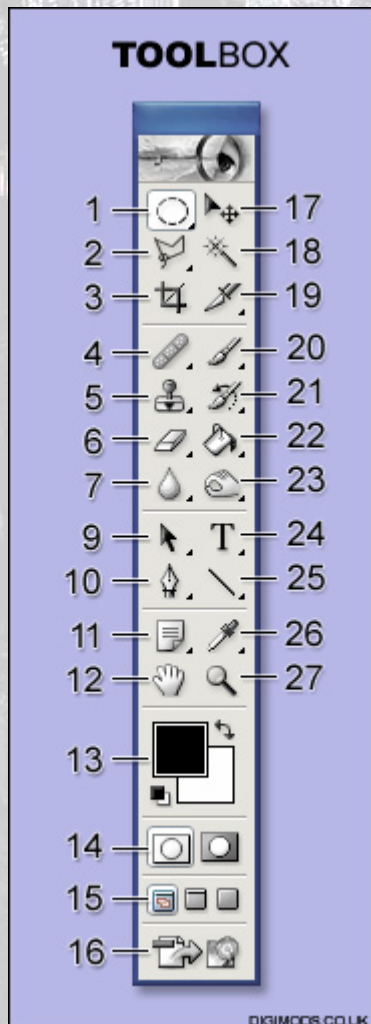
- **1) Marquee tools.** This allows selections to be made - in the form of rectangles, ellipses, single rows or single columns. We only mainly use rectangle and ellipses. The selections made by this tool can be altered in size or skewed easily by using the Select > Transform Selection feature.
- **2) Lasso tools.** This tool is much like the Marquee tool above, but the lasso version is ideal for making more freehand selections rather than a set circle or rectangle. There are three tools in this group. The normal lasso tool is a basic click down and drag. The selections are wavy, so you really to need a steady hand. The more recommended lasso tool is the Polygon one. Your selections are made up of a series of lines, which are ended by a click in different areas. This makes long straight selections much easier. The final lasso tool is the magnetic one but is good if you are lazy. It automatically clings onto different areas, making easy selections with very little concentration.
- **3) Crop tool.** This cuts away any unwanted parts of the image. Basically select the area you want to keep, and then press enter.
- **17) Move Tool.** Allows you to move layers or selections about the screen.
- **18) Magic Wand Tool.** This selects similarly colored areas.
- **19) Slice Tool.** This creates slices in the image. When converted to ImageReady the image can as a html document, and used for website layouts and designs. Very good if you want to create a website.

Special effects and Drawing 2



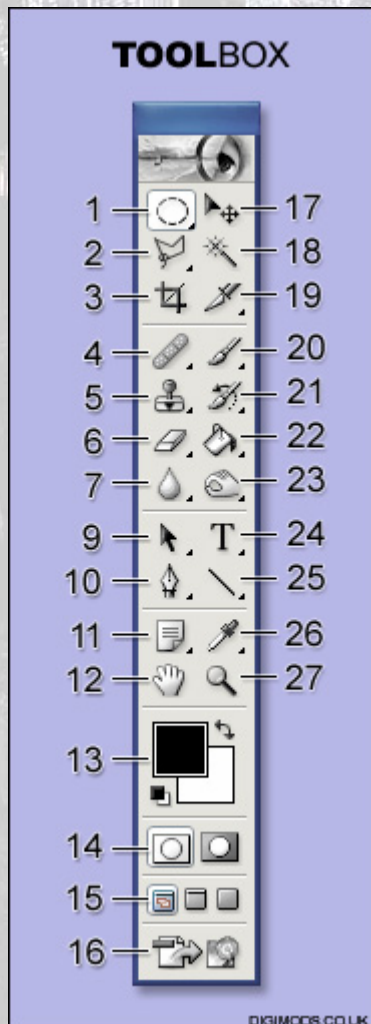
- **4) Healing tools.** The healing tool is much like the Clone tool, and, like it says on the tin it heals parts of your image that are damaged looking. For example, a small blip on a bodywork can be removed by this. First you need a reference part of the drawing, you do this by holding ALT and then clicking on it. You then just rub over the imperfection and Photoshop automatically fixes it and adjusts the balance etc to make it all look spot on! The Patch tool, within this tool set is also the same but works with patterns.
- **5) Clone Stamps.** This allows part of an image to be cloned somewhere else on it. You again use ALT click as a reference point. The more you paint, and the wider the area you brush, the more of you reference point will be brushed on. Pretty much like the Clone stamp is the Pattern stamp, however it paints a pattern which can be chosen from the in-program patterns, or if your brave you can make your own.
- **6) Eraser tools.** Think of this as an eraser in real life, you can basically rub out sections from your layer. The Background Eraser erases to a background color rather than simply to the layer behind. The Magic Eraser tool erases pixels similar to the ones selected.
- **7) Smudge, Blur and Sharpen tools.** Smudge tool is pretty useful for distorting and dragging around part of the image. The blur tool is great for blurring sharp edges and taking away any detail, this is useful for making nice smooth edges. The exact opposite to this is the Sharpen tool, this makes blurred edges more sharp and increases detail.

Special effects and Drawing 2



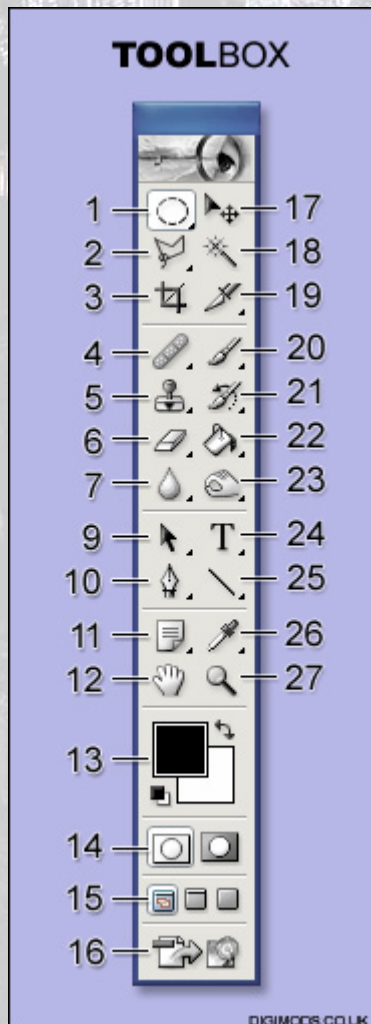
- **20) Brush and Pencil Tools.** Brush tool is used for creating strokes of colour with smooth edges and is ideal for making soft body parts from scratch. The Pencil tool is a bit more harsher, so you can make freehand sharp edged lines of color with it.
- **21) History brushes.** If you have made a bit of a mess up, providing you are on the same layer, you can brush out your mistakes to revert back to how it was originally.
- **22) Paint and gradient fill.** Fill similar areas with the single foreground color, or the gradient tool also in this toolset can be used to make seamless blends of two colors (foreground to background, as well as some built in gradient designs).
- **23) Dodge, Burn and Sponge Tools.** This toolset is very good, and I often use it. The Dodge tool makes the image lighter with every stroke. This is great for increasing brightness of areas and making highlights. The burn tool simply makes the image darker with every stroke, this is good for darkening area of drawing, and creating shadows. The sponge tool can have two modes - either saturation or desaturation. So with every stroke, dependant on the mode, the image color with either increase or decrease in intensity

Special effects and Drawing 3



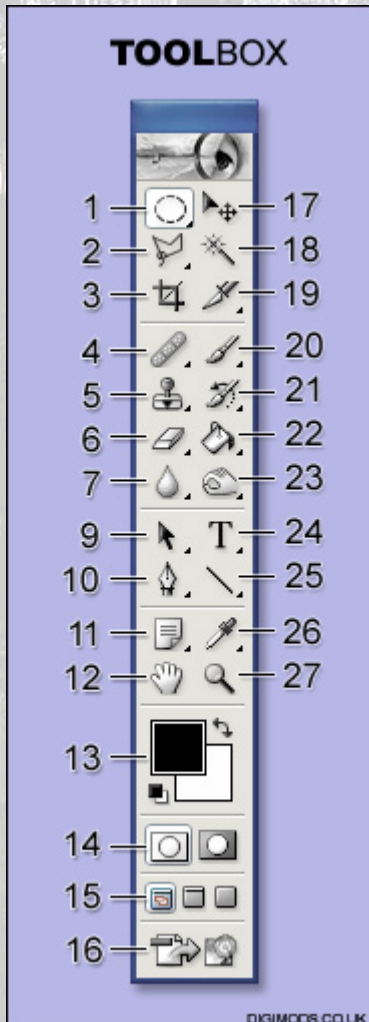
- **9)** Path selection tool. Used to make shapes and selections showing anchor points and direction lines etc.
- **10)** Pen tool. This is an awesome very under used tool - think of it like the lasso tool, but much more smoother and less pixely. You can use it to make good selections and make smooth non jaggedly edges for additions. Other tools in this set are used to add and remove anchor points.
- **24)** Text Tools. This tool is great to add text layers. You can change the font, size and color too by hitting Ctrl+T while typing on the layer - this will bring up a text box. The Text Mask tool creates selections in the shape of the text.
- **25)** Shape tools. Create custom shapes and fill them with the foreground color. Within this toolset is the useful line tool - a must for creating cartoons!

Special effects and Drawing 4



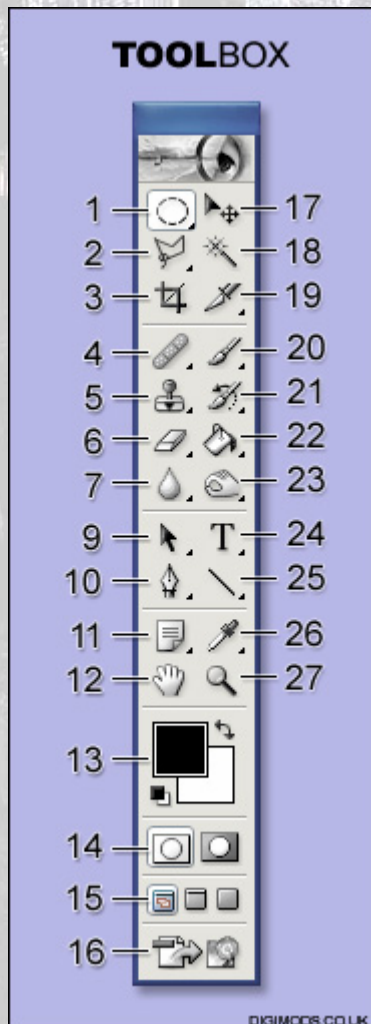
- **11)** Notes tool. With this you can add your own written or audio notes. Its a good idea to use this so you can remember to do certain tasks if you you have a bad memory like me! Just select and click on the area where you want your note to be.
- **12)** Hand tool. This allows the image to be move around very easily. This is great to maneuver yourself around the image from corner to corner or top to bottom.
- **26)** Color Sampler, Eyedropper, and Measure Tools. Color sampler is basically a tool which displays the color details and values on the Info Palette. The Eye Dropper tool sucks up and selects color - this is used as the new foreground color.. this is great for referencing colors off another section of the drawing. The measure tool just measures lengths and angles etc.
- **27)** Zoom Tool. Allows you to zoom in and out to get real close for fine detailed work. There are other options such as predefined % zoom levels and also a fit on screen option to see you whole car on your monitor.

Active Color



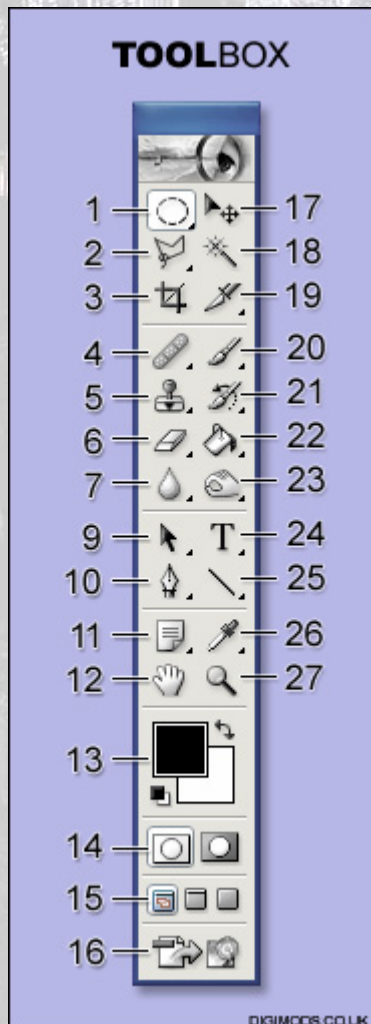
- **13)** Foreground and background colors. This shows you the current foreground and background colors that you have selected. You can flip between these using the arrow on there, or revert back to default colors using the little black and white boxes on there.

Masking Modes



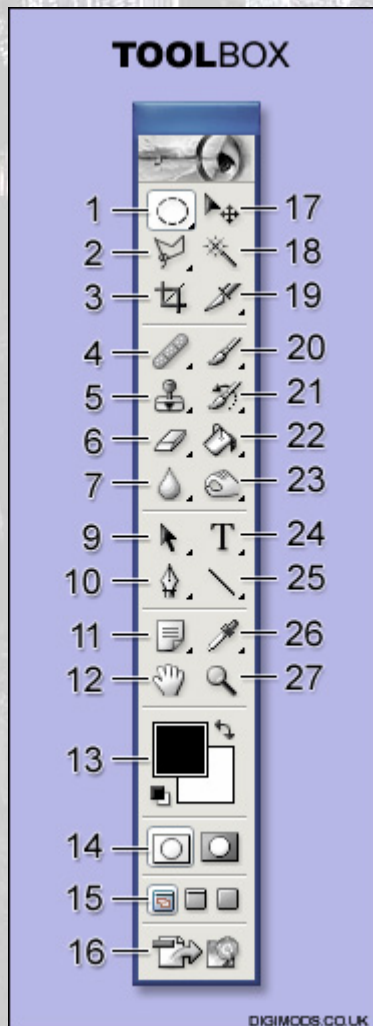
- **14)** The Quick Mask mode lets you edit any selection as a mask. The mask can be modified using almost any Photoshop tool or filter. You can toggle between editing with or without the quick mask in use.

Screen Modes



- **15)** This allows you view your image normal, at full screen with the menu bar, or at full screen. This is useful when working with a large image so you can see it as a whole on your monitor.

ImageReady



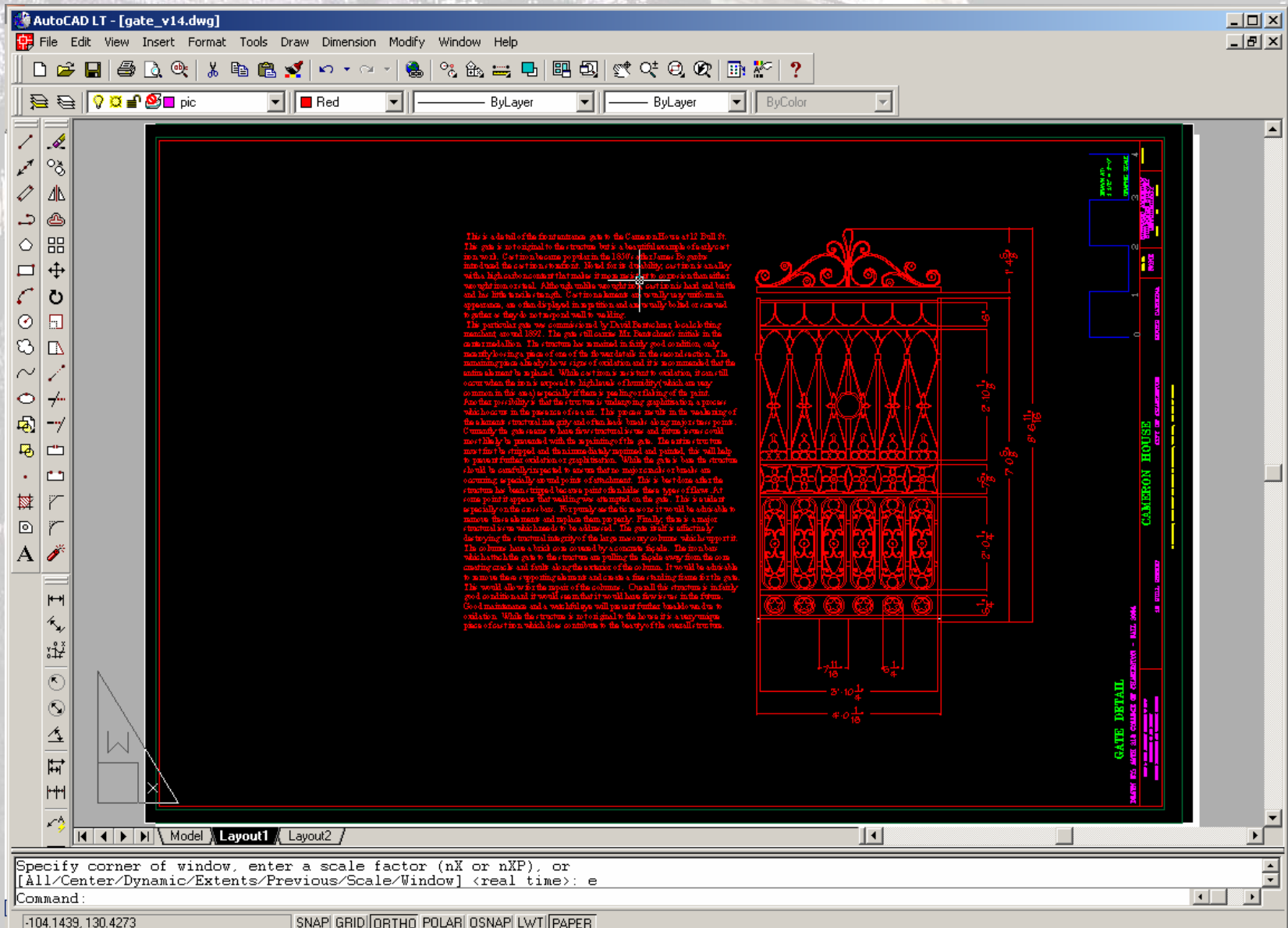
16) This handy link loads up your current work in ImageReady ready to be edited. ImageReady is another package that comes with Photoshop and is ideal for making animated images from layers. I'm sure there are tutorials on Google to help you with all this.

Photoshop Exercises

- Background image
- Importing AutoCAD drawings (PDF to the rescue)
- Import multiple images, work on special layer effects
- Paste up and stitch
- Text entering and editing
- File format and size options
- Special Consideration for printing

- Need to get a team together
- Research and photograph what you want to include
- Develop accurate AutoCAD drawings

AutoCAD Preliminaries



On line Tutorials

- FOR EXERCISES

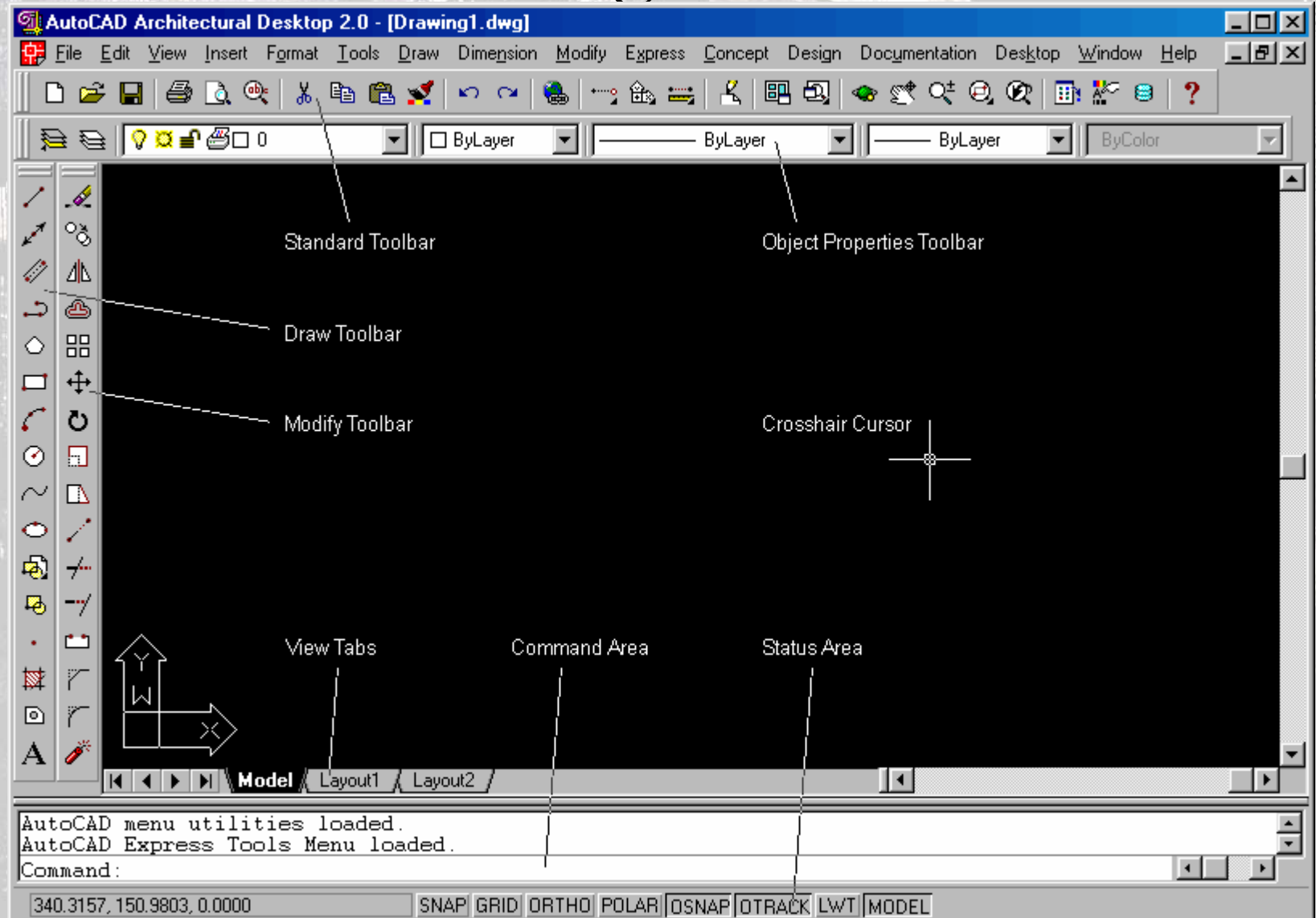
- <http://www.fbe.unsw.edu.au/learning/autocad/ad2/T1/>

- Introduction to AutoCAD
 - Editing & model-space limits
 - Offset, Array & Mirror
 - Paper space, view ports & plotting

- FOR PRACTICE ON ALL THE COMMANDS

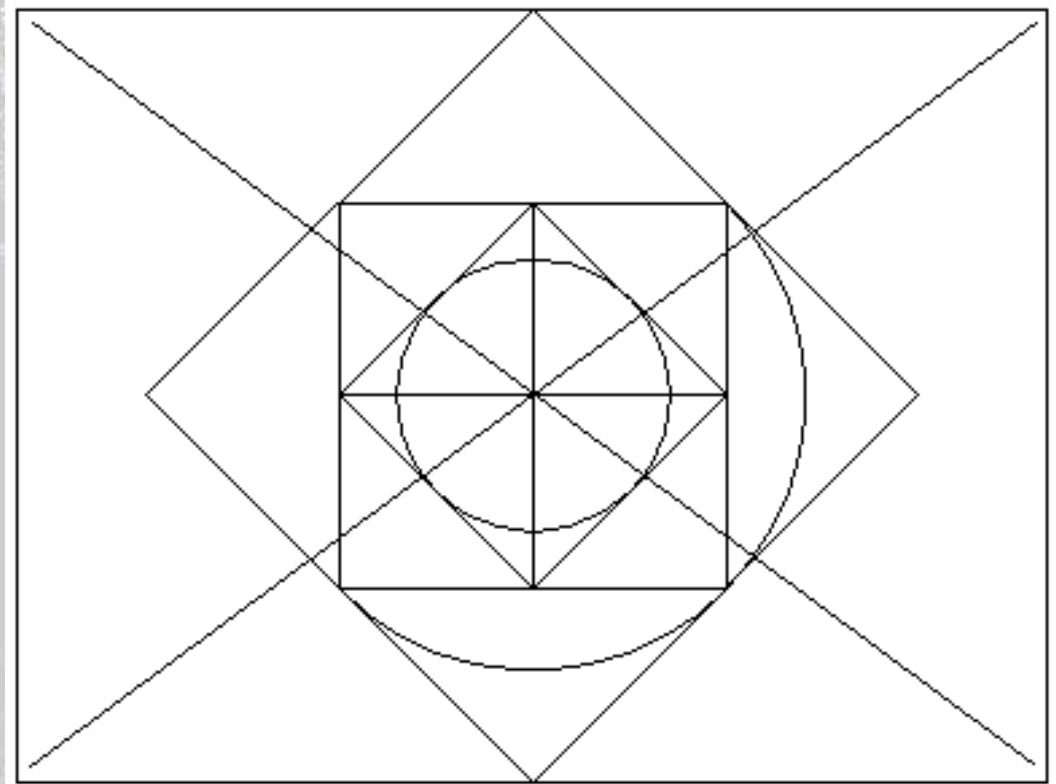
- <http://www.cadtutor.net/>

Getting started



Starting Tutorial 1 to be turned in

- Opening a drawing and saving
- Limits
- Input Numbers
 - Absolute – Cartesian and Polar
 - Absolute and Relative
- Pline
- Rectangle
- Zoom
- Object Snap Settings
- Line
- Circle
- Arc

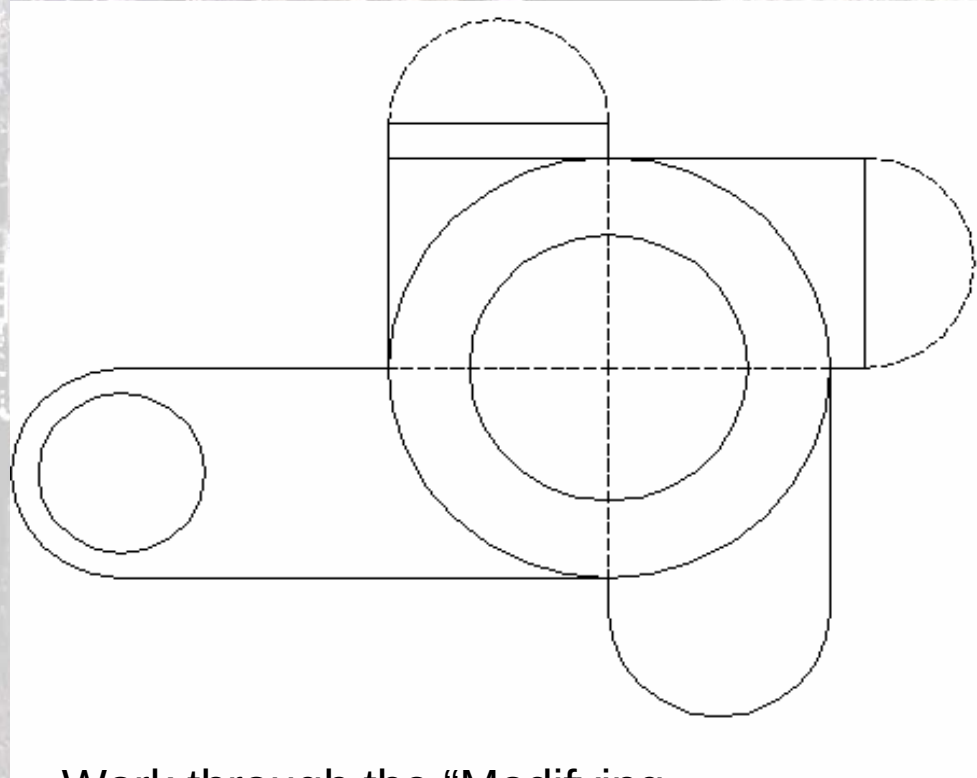


Work through the “Drawing Objects”
and “Direct Distance Entry” Sections of
CAD tutor

Put your name on it and print it!

Starting Tutorial 2 to be turned in

- Limits and drawing units/precision
- Circle
- Rectangle
 - Object Snap settings
- Arc
- Copy and Rotate
- Array
 - Polar and Rectangular
- Explode
 - Object Selection Options
- Erasing
 - Trim
- Stretch
- Line Type and scale (2500)



Work through the “Modifying Objects” and “Drawing Aids” Chapters in CAD tutor

Put your name on it and print it!

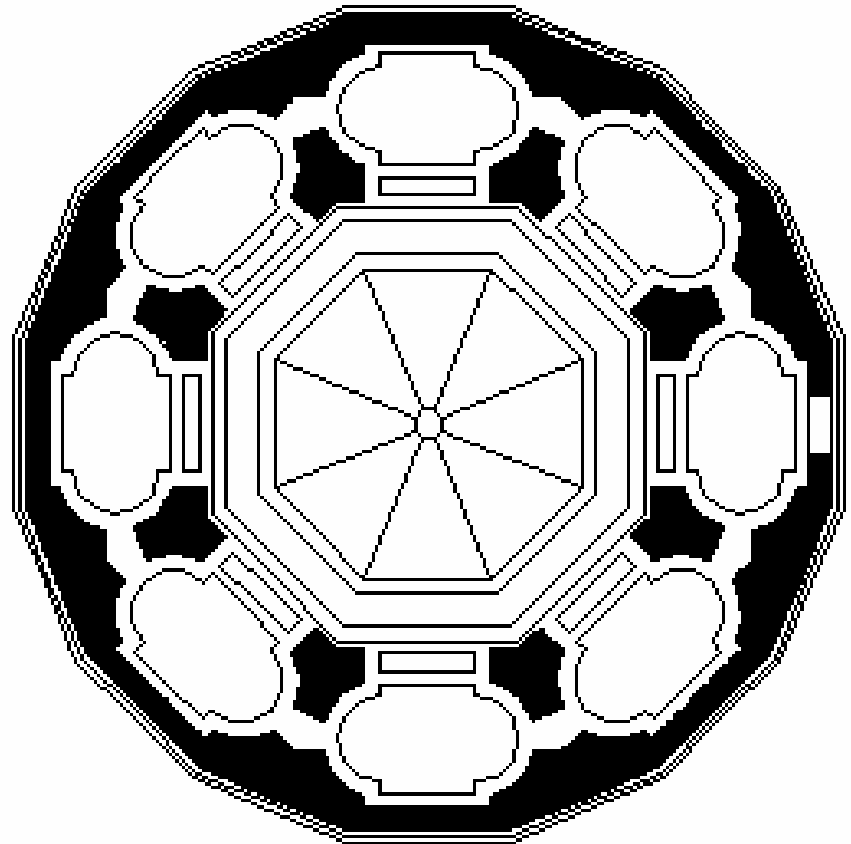
“UCSICON”

Starting Tutorial 3 to be turned in

SNAP AND
GRID

This tutorial introduces a number of AutoCAD **construction** commands:
offset, and
mirror, and a number of AutoCAD **editing** commands:
fillet,
trim,
break, and
extend.

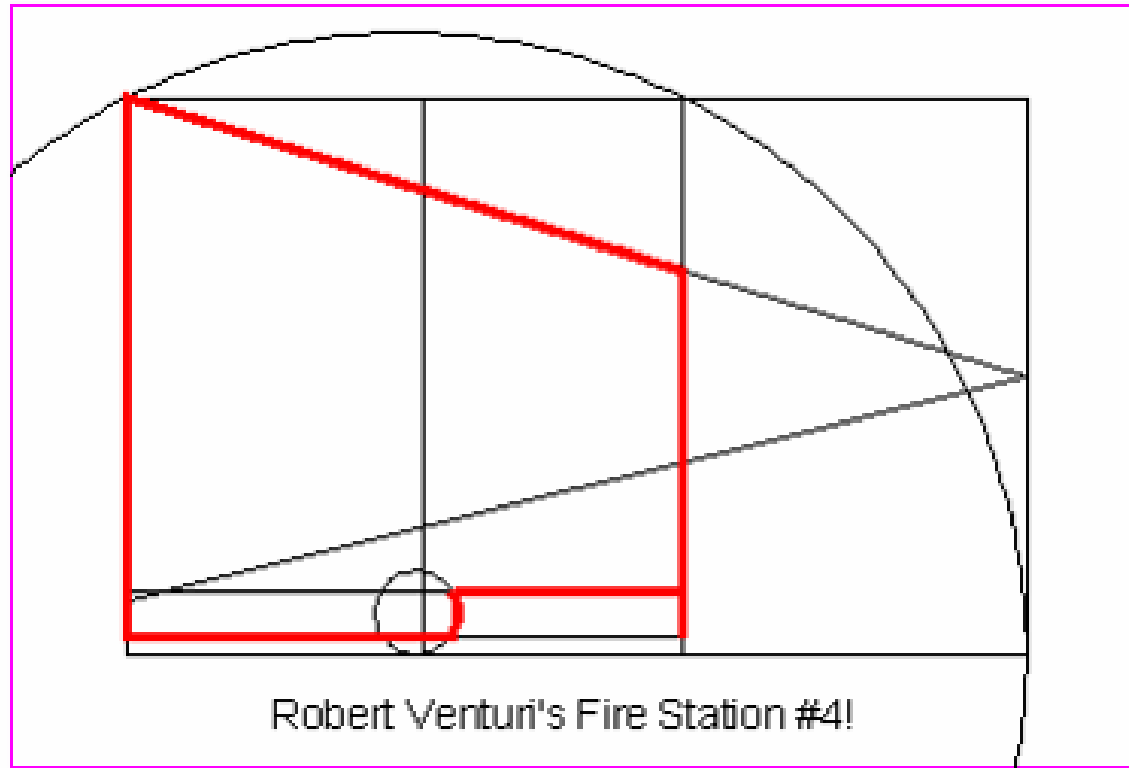
In case all that isn't enough for you, you will also learn about **layers, hatching, and grip** editing.



Work through “Site Layout Exercises” in
CAD tutor

Put your name on it and print it!

Starting Tutorial 4 to be turned in



Widget

to be turned in

