

# USC AIKEN GREENHOUSE REPACKAGING

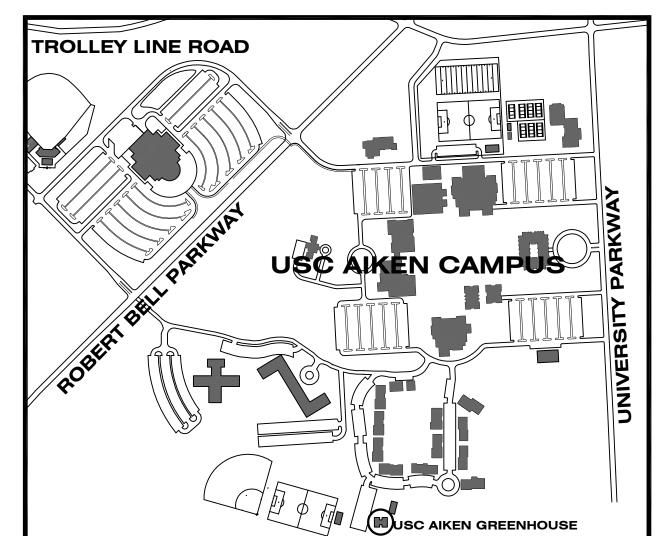
State Project #H29-I337 A/E Project #12036.02 **JUNE 10, 2014 OWNER REVIEW** 

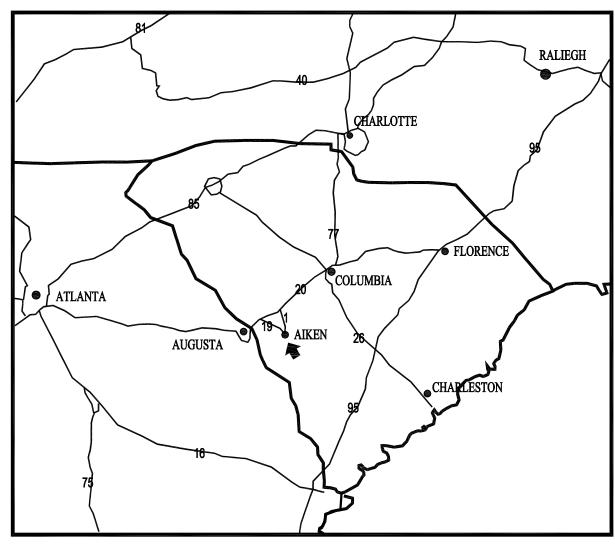
Prepared by:



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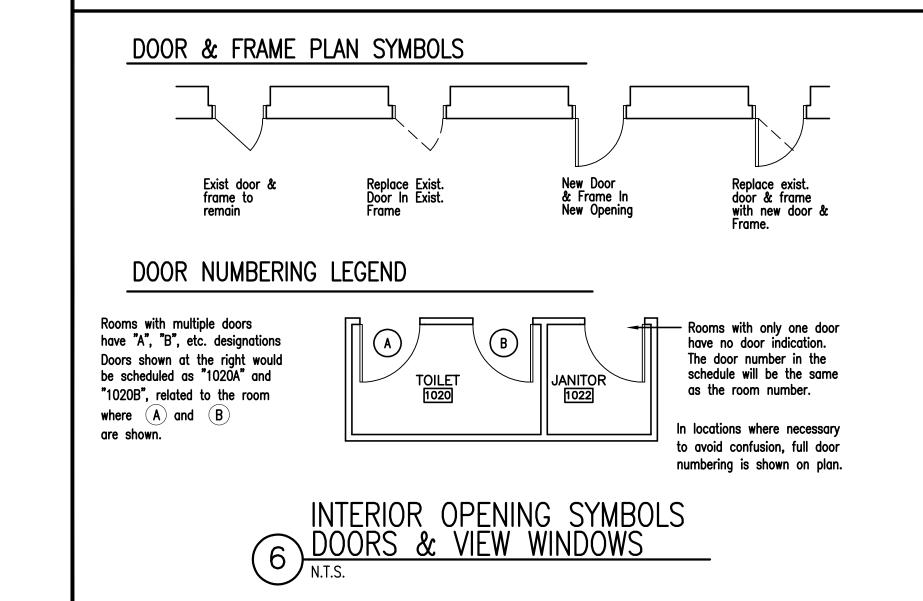
**LOCATOR MAPS** 





### NOTIFY THE ARCHITECT IMMEDIATELY UPON DISCOVERY OF EXISTING 7. CONDITIONS THAT ARE CONTRARY TO THOSE REPRESENTED WITHIN . WALL ASSEMBLIES SHALL BE MAINTAINED AT ALL RECESSED FIRE EXTINGUISHER CABINETS AND ALL RECESSED EQUIPMENT. REFER TO FLOOR PLANS (A2 SERIES) FOR LOCATIONS. ALL NEW VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUITS, ETC. (WHETHER SHOWN OR NOT) IN FINISHED ROOMS OR AREAS SUPPLY BLOCKING AT ALL WALL HUNG EQUIPMENT (I.E., GRAB BARS, THROÙGH OUT BUILDING, NOT EŃCASED IN MASONRY, METAL CASEWORK MEDICAL EQUIPMENT. ETC.) OR WOOD CONSTRUCTION SHALL BE FURRED IN, THE FURRING FINISHED TO MATCH ROOM FINISH. 10. THE FIRE RATINGS OF ALL FIRE RATED WALLS SHALL BE STENCILED ABOVE CEILINGS, EACH SIDE OF WALL, BOTH SIDES OF CORRIDORS AND AS REQ'D ALL NEW PARTITIONS, UNLESS OTHERWISE SHOWN OR DETAILED, SHALL BE METAL STUDS OF THICKNESS TO ADEQUATELY COVER PROVIDE AN EDGE STRIP, AS DETAILED, UNDER ALL DOORS WHERE NEW OR EXISTING FINISHES AND ADJACENT FLOOR ARE AT DIFFERENT LEVELS AND WHERE ADJACENT FLOOR FINISHES ARE OF DIFFERENT MATERIALS. SEE DETAIL 6/A0.0. OFFSET ALL DOORS IN METAL STUD WALLS 6" FROM ADJACENT WALLS 8" IN CMU WALLS UNLESS OTHERWISE NOTED. PROVIDE ACCESS PANELS, 24" X 24", OR OF SIZES REQUIRED, WHERE PLUMBING AND HEATING VALVES, WATER SWITCHES, OXYGEN PRESSURE SWITCHES, VENTILATION SPLITTER DAMPERS, ETC. ARE SHOWN ON PLUMBING, HEATING, AND VENTILATION DRAWINGS. SUCH ACCESS PANELS TO BE INSTALLED IN THE (A) SUSPENDED PLASTER OR GYPSUM WALLBOARD CEILINGS (B) METAL STUD OR MASONRY PARTITIONS The reference system uses item on a sheet combined with the sheet number on which it is located. Each detail or item on a sheet will be numbered. up of plan area ELEVATION SYMBOL ROOM IDENTIFICATION (LOOKING IN DIRECTION OF ARROW) name elevation No.25 25 A6.0 On sheet — A6.0 ALUMINUM ENTRANCE **SYMBOLS** OR SLIDING DOOR SYMBOI 2 REFERENCE SYSTEM **NEW PARTITION TO REMAIN** (3) PARTITION SYMBOLS 4 DIMENSION CONVENTIONS N.T.S.

(5) NOT USED



### **DRAWING INDEX**

C-101 STAKEOUT AND WATER PLAN C-102 GRADING, DRAINAGE AND UTILITY PLAN

### **ARCHITECTURAL**

A2.1 FLOOR PLAN, ROOF PLAN, ELEVATIONS AND TYPICAL WALL SECTION

#### **PLUMBING**

P1.0 GREENHOUSE PLAN PLUMBING PIPING, SCHEDULES, NOTES, SYMBOLS AND ABBREVIATIONS

#### **ELECTRICAL**

E2.0 GREENHOUSE SCHEDULES, POWER AND LIGHTING PLANS

DRAWINGS AS SHOWN ON SHEET E2.0, V1.0, V2.0 AND V3.0.

#### **VENDOR - INFORMATION ONLY**

**ALTERNATES** 

V1.0 GOTHIC GREENHOUSE SHOP DRAWINGS V2.0 GOTHIC GREENHOUSE SHOP DRAWINGS V3.0 GOTHIC GREENHOUSE SHOP DRAWINGS

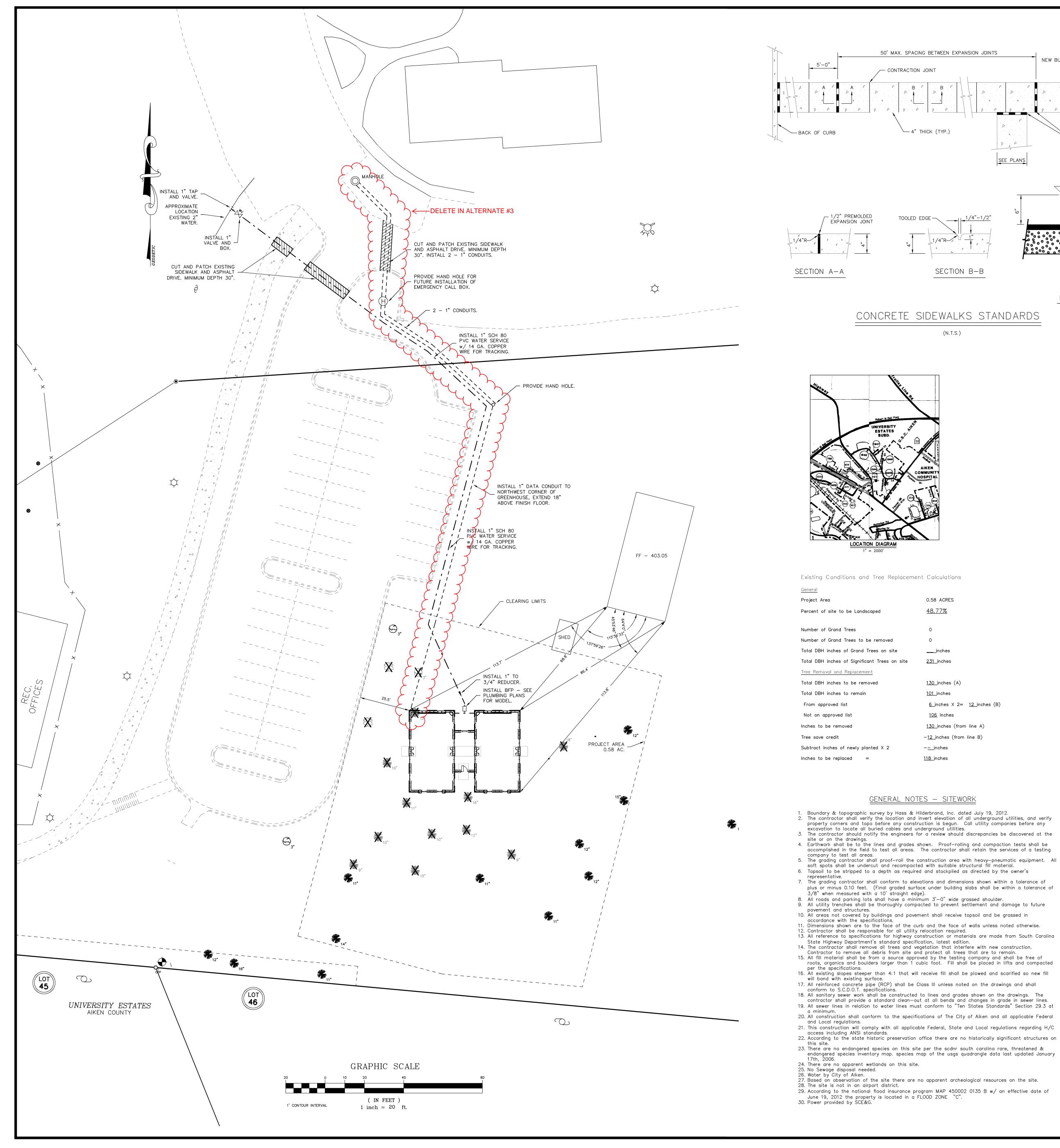
THE FOLLOWING ALTERNATES WILL BE DEDUCTIVE ALTERNATES. THE DRAWINGS AS SHOWN ARE THE BASE BID.

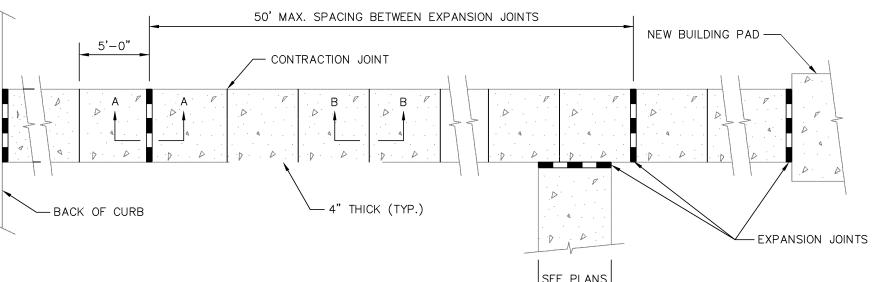
THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING ALL ELECTRICAL ELEMENTS AS SHOWN IN WEATHERHEAD DETAIL 2/E2.0 AND POWER RISER DIAGRAM AS SHOWN ON SHEET E2.0. THIS SHALL INCLUDE AND NOT BE LIMITED TO 225A PANEL "P1" AND ALL CIRCUIT BREAKER'S, CT METER, WEATHERHEAD AND ALL ASSOCIATED CONDUIT AND WIRE REQUIRED FOR A COMPLETE INSTALLATION.

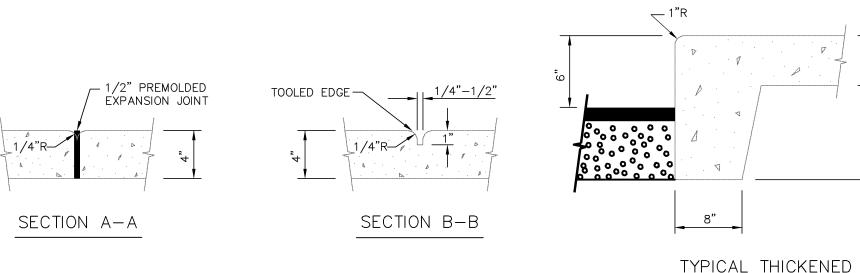
THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING ALL THE ELECTRICAL ELEMENTS AS SHOWN IN WEATHERHEAD DETAIL 2/E2.0 AND POWER RISER DIAGRAM AS SHOWN ON SHEET E2.0. THIS SHALL INCLUDE AND NOT BE LIMITED TO 225A PANEL "P1" AND ALL CIRCUIT BREAKERS, CT METER, WEATHERHEAD AND ALL ASSOCIATED CONDUIT AND WIRE REQUIRED FOR A COMPLETE INSTALLATION. THE ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL MATERIALS AND LABOR TO UPFIT GREENHOUSE #2 AND THE CONNECTOR GREENHOUSE STRUCTURE AS WELL. THIS SHALL INCLUDE AND NOT BE LIMITED TO ALL LIGHT FIXTURE NOT INCLUDED IN THE GREENHOUSE KIT, LIGHT SWITCHES, RECEPTACLES, DISCONNECT SWITCHES, JUNCTION BOXES AND ALL ASSOCIATED CONDUIT AND WIRING REQUIRED FOR A COMPLETE INSTALLATION PER THE DESIGN AS INDICATED ON THE ELECTRICAL

ALL LABOR AND MATERIALS ASSOCIATED WITH THE INSTALLATION OF THE TWO 1" DATA CONDUITS INDICATED ON DRAWING C-101 SHALL BE DELETED FROM THE SCOPE OR WORK INCLUDING THE TRENCHING, ASPHALT PATCHES, HANDHOLES, CONDUIT, ETC.

SET NO. \_\_\_\_

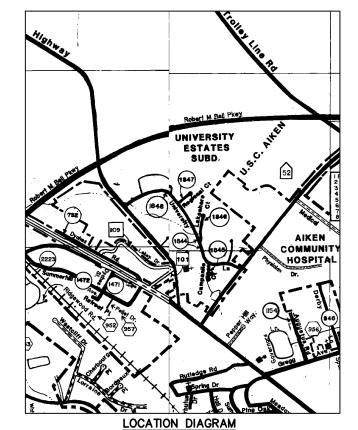


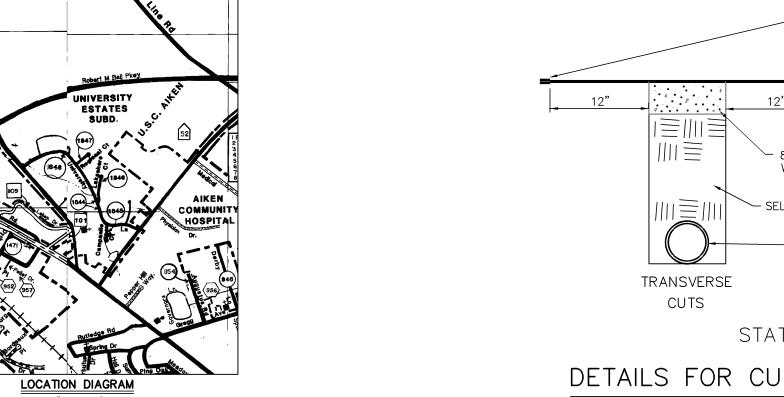




### CONCRETE SIDEWALKS STANDARDS

(N.T.S.)





EDGE AT PARKING LOT

#### Existing Conditions and Tree Replacement Calculations

Project Area

0.58 ACRES <u>48.77%</u>

Number of Grand Trees Number of Grand Trees to be removed Total DBH inches of Grand Trees on site <u>231\_inches</u>

Tree Removal and Replacement Total DBH inches to be removed

<u>130 i</u>nches (A) Total DBH inches to remain 101\_inches

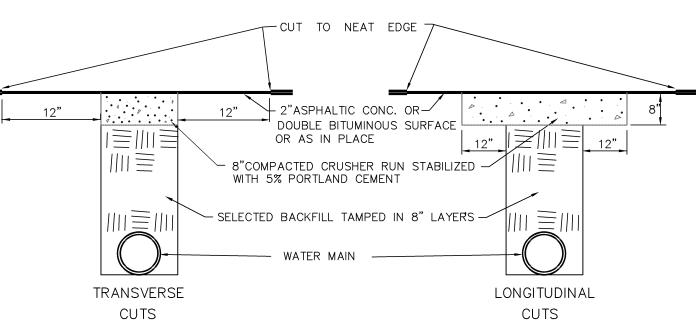
6 inches X 2= 12 inches (B) From approved list <u>106</u> inches Not on approved list

130 inches (from line A) Tree save credit -<u>12</u>inches (from line B) Subtract inches of newly planted X 2 -<u>-\_</u>inches

Inches to be replaced <u>118\_inches</u>

### GENERAL NOTES - SITEWORK

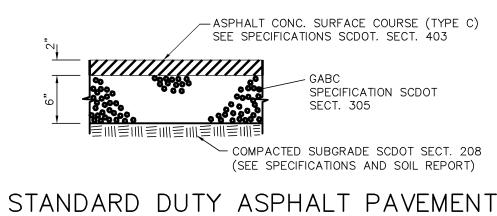
- Boundary & topographic survey by Hass & Hilderbrand, Inc. dated July 19, 2012.
   The contractor shall verify the location and invert elevation of all underground utilities, and verify property corners and topo before any construction is begun. Call utility companies before any excavation to locate all buried cables and underground utilities. 3. The contractor should notify the engineers for a review should discrepancies be discovered at the site or on the drawings.
- 4. Earthwork shall be to the lines and grades shown. Proof—rolling and compaction tests shall be accomplished in the field to test all areas. The contractor shall retain the services of a testing
- soft spots shall be undercut and recompacted with suitable structural fill material. 6. Topsoil to be stripped to a depth as required and stockpiled as directed by the owner's 7. The grading contractor shall conform to elevations and dimensions shown within a tolerance of
- plus or minus 0.10 feet. (Final graded surface under building slabs shall be within a tolerance of 3/8" when measured with a 10' straight edge). 8. All roads and parking lots shall have a minimum 3'-0" wide grassed shoulder. 9. All utility trenches shall be thoroughly compacted to prevent settlement and damage to future
- accordance with the specifications. 11. Dimensions shown are to the face of the curb and the face of walls unless noted otherwise. 12. Contractor shall be responsible for all utility relocation required. 13. All reference to specifications for highway construction or materials are made from South Carolina State Highway Department's standard specification, latest edition.
- 14. The contractor shall remove all trees and vegetation that interfere with new construction. Contractor to remove all debris from site and protect all trees that are to remain. 15. All fill material shall be from a source approved by the testing company and shall be free of roots, organics and boulders larger than 1 cubic foot. Fill shall be placed in lifts and compacted
- 16. All existing slopes steeper than 4:1 that will receive fill shall be plowed and scarified so new fill will bond with existing surface. 17. All reinforced concrete pipe (RCP) shall be Class III unless noted on the drawings and shall conform to S.C.D.O.T. specifications. 18. All sanitary sewer work shall be constructed to lines and grades shown on the drawings. The
- contractor shall provide a standard clean—out at all bends and changes in grade in sewer lines. 19. All sewer lines in relation to water lines must conform to "Ten States Standards" Section 29.3 at a minimum. 20. All construction shall conform to the specifications of The City of Aiken and all applicable Federal and Local regulations.
- 21. This construction will comply with all applicable Federal, State and Local regulations regarding H/C access including ANSI standards. 22. According to the state historic preservation office there are no historically significant structures on
- 23. There are no endangered species on this site per the scdnr south carolina rare, threatened & endangered species inventory map. species map of the usgs quadrangle data last updated January 17th, 2006. 24. There are no apparent wetlands on this site.
- 27. Based on observation of the site there are no apparent archeological resources on the site. 28. The site is not in an airport district. 29. According to the national flood insurance program MAP 450002 0135 B w/ an effective date of June 19, 2012 the property is located in a FLOOD ZONE "C".



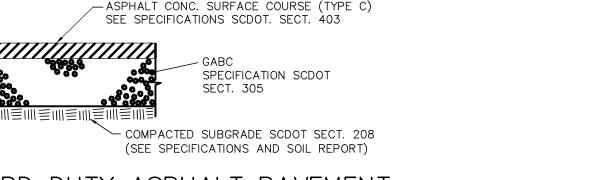
STATE SECONDARY HIGHWAY

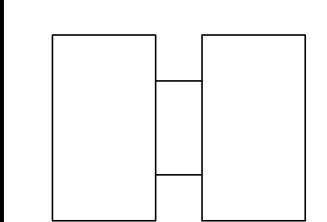
DETAILS FOR CUTTING AND REPLACING PAVEMENT

(N.T.S.)



PARKING AREAS







sheet title

checked by HTH

STAKEOUT & WATER

sheet number





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ARCHITECT WILL BE SUBJECT TO LEGAL ACTION.

UNIVERSITY OF AIKEN

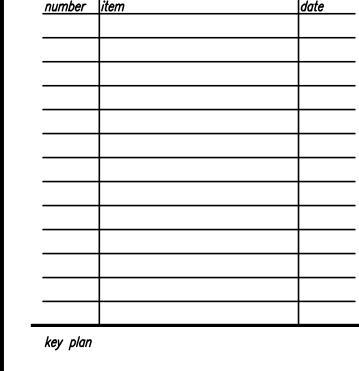
**USC AIKEN** 471 UNIVERSITY PARKWAY AIKEN, SOUTH CAROLINA 29801 project name

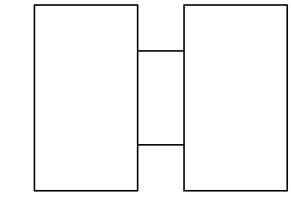
USC AIKEN GREENHOUSE REPACKAGING STATE PROJECT #H29-I337 project number

12036.02 seals/signature

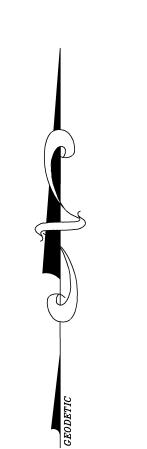
CONSTRUCTION DOCUMENTS

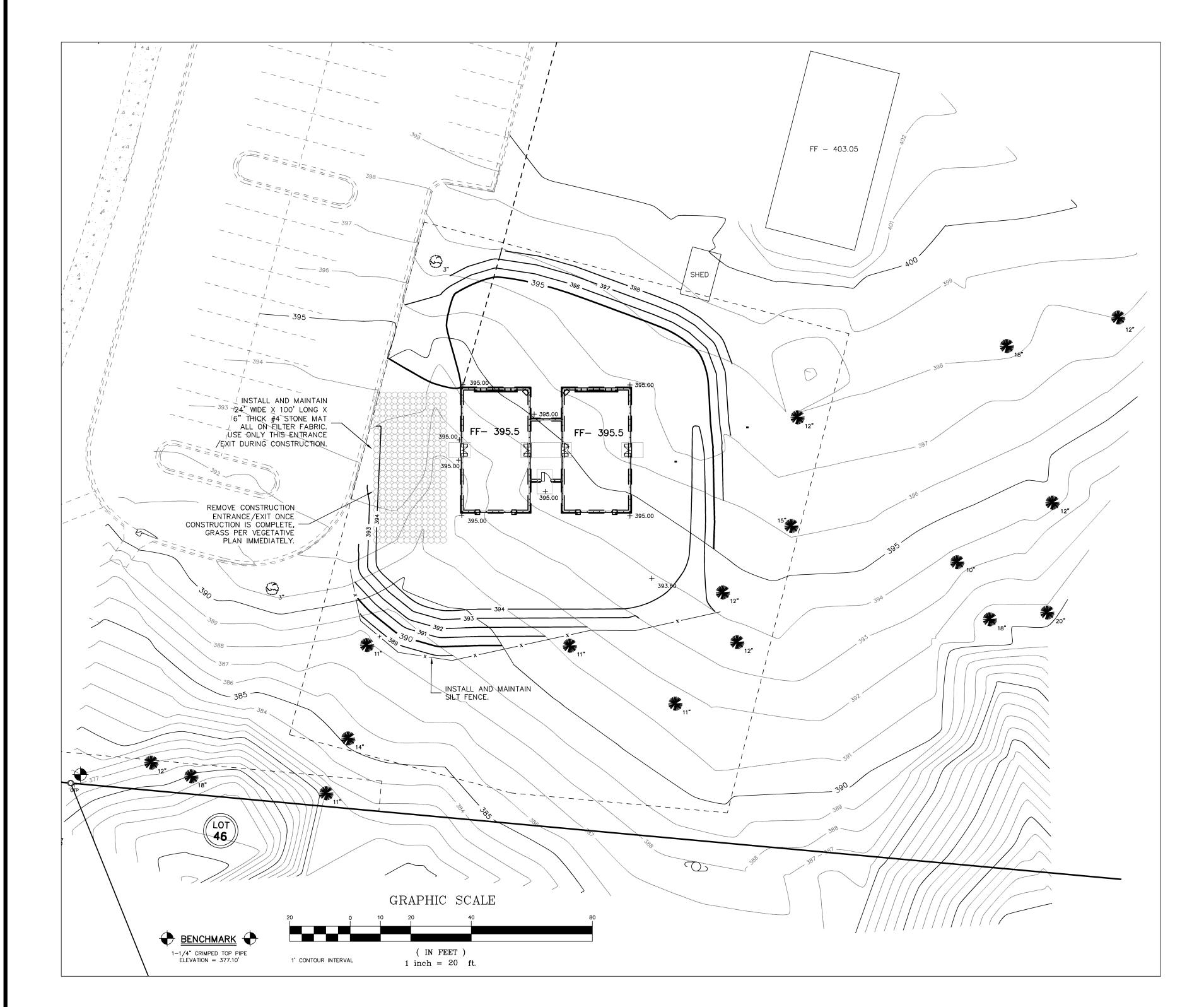
JANUARY 17, 2014











#### CONSTRUCTION SCHEDULE

1 Day

1 Week

1 Weeks

1 Weeks

1 Weeks

1 Week

1 Week

12 Weeks

Construction Start: February 2013 Final Stabilization: May 2013

SCHEDULE OF WORK:

1. Receive NPDES coverage from DHEC Install construction entrance . Clear & grub only as necessary to install perimeter controls

4. Install silt fence and any other perimeter controls 5. Clear & grub area for pond 6. Install pond (outlet structures must be completely installed as shown on the details before proceeding to next stop; areas draining to these structures cannot be disturbed until the structure is completely installed)

7. Rough grade the site 8. Install utilities 9. Install building, and pavement 10. Fine grading

of temporary structures)

11. Final grassing and permanent stabilization (mulch and fertilize per vegetative plan) 12. Remove temporary sediment & erosion control measures after entire area draining the the structure is finally stabilized (The Department recommends that the Project Owner/Operator have the SWPPP Preparer or registration equivalent approve the removal

A. Installation of some permanent water quality devices should occur after the site is Stabilized. Clean—out of other permanent water quality devices that were used during construction should occur after site stabilization B. The control of sediment shall be the responsibility of the contractor and/or his grading contractor. Total time for site development is contingent upon weatherand/or upon building construction. Therefore, the schedule shown is notcumulative but represents the total time involved for development of the site.

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is

2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below. Ø Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable. Ø Where construction activity on a portion of the Site is temporarily ceased, and earth—disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the Site.

All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been inappropriately or incorrectly installed, the Permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification.

4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any waters of the

5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.

6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required. 7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C Reg. 72—300 et

8. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upslope runoff and/or to divert sediment—laden water to

9. All waters of the State (WoS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WoS. A 10-foot buffer should be maintained between the last row of silt fence and all WoS. 10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm

11. A copy of the SWPPP, inspections records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is

12. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land—disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar

13. Minimize soil compaction and, unless infeasible, preserve topsoil. 14. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

15. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.). 16. The following discharges from sites are prohibited:

☐ Wastewater from washout of concrete, unless managed by an appropriate control;
☐ Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

□ Soaps or solvents used in vehicle and equipment washing.

EDGES SHALL BE TAPERED OUT TOWARDS ROAD TO PREVENT TRACKING OF MUD ON THE EDGES

COARSE AGGREGATE -

AVERAGE STONE DIAMETER OF 2" TO 3" WITH A 6"

FABRIC UNDER STONE

MINIMUM DEPTH

INSTALL NON-WOVEN GEOTEXTILE -

#4 STONE

17. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the

18. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's Water Quality Standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be

19. A Pre-Construction Conference must be held for each construction site with an approved On-Site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the Department has approved otherwise.

NOTES:

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

POSITIVE DRAINAGE.

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE

DIVERT ALL SURFACE RUNOFF AND DRAINAGE

FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING

NOTES: APPLICABLE AT ALL POINTS OF

THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

INGRESS & EGRESS UNTIL SITE IS

STABILIZED, FREQUENT CHECKS OF

WHEN AND WHERE TO USE IT:

INSPECTION AND MAINTENANCE:

REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION

INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR

THE ENTRANCE SHALL CONSIST OF 1" TO 3" D50 STONE PLACED AT A MINIMUM DEPTH OF

THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24

HOURS AFTER EACH RAINFALL EVENT SEVENT SEVENT (\*) CALCEURAR DATS AND WITHIN 24\* HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES (\*) OR MORE OF PRECIPITATION, OR AFTER HEAVY USE. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

#### VEGETATIVE PLAN

All areas disturbed during construction shall be grassed according to the following specifications.

PLAN 1 PLAN 2 Planting Dates Mar. 15—Aug. 14 Aug. 15-Mar. 14 Lime 2.0 Tons/Ac 2.0 Tons/Ac 10-10-10 Fertilizer 10-10-10 0.5 Tons/Ac 0.5 Tons/Ac Temp. Cover Browntop Millet Rye Grass 40 lbs/Ac 40 lbs/Ac Perm. Cover Common Bermuda Unhulled Bermuda 30 lbs/Ac 60 lbs/Ac

\* Must be anchored with a disk harrow to prevent blowing.

1.5 Tons/Ac

Any variation from this plan must be approved by the local Soil Conservation Service Representative.

1.5 Tons/Ac

Mulch\*

DISTURBED AREA- +/-0.30 ACRES PROVIDE A TEMPORARY STONE SPLASH PAD AT ALL FIRE HYDRANTS OR OTHER POINTS OF DISCHARGE DURING TESTING ON THE WATER DISTRIBUTION SYSTEM.

PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.

ALL STONE PROVIDED FOR SEDIMENT AND EROSION CONTROL IS TO BE SIZED AND INSTALLED PER SCDOT SPECIFICATIONS (SECTION 800) LATEST EDITION. FILTER FABRIC IS TO BE NONWOVEN POLYESTER OR POLYPROPYLENE AND IS TO MEET ALL ASTM STANDARDS AND HAVE A MINIMUM THICKNESS OF 60 MILS. SITE IS COMPOSED OF VAUCLUSE SOIL.

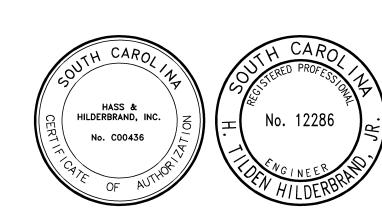
> 3" DIA. METAL POST-✓ WIRE FABRIC

> > - SUPAC (5NP) OR APPROVED GEOTEXTILE FABRIC

FABRIC AND WIRE FABRIC SHOULD EXTEND TO BOTTOM OF DITCH

- BACKFILL AND COMPACT DITCH └1' MIN. DEPTH UPSLOPE SIDE SIDE VIEW METAL PICKET

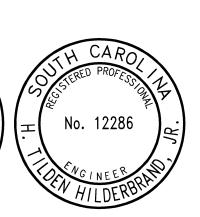
DETAIL OF SILT FENCE



10'-0" (MAX) - SUPAC (5NP) OR APPROVED 🗖 <del>┼┤┼┦┤┤╎╎╎╎╎╎╎╎╎╎╎╎╎╎╎╎╎</del>╫╫┼┼ FRONT VIEW

(N.T.S.)

1. INSTALL SILT FENCE BEFORE CONSTRUCTION IS BEGUN.
2. CONSTRUCT SILT FENCE AS ABOVE OR USE PREFABRICATED SILT FENCE (METROMONT 24-100X) OR APPROVED EQUAL. 3. SEDIMENT TO BE REMOVED FROM SILT FENCE WHEN DEPTH IS ABOUT 0.5 FEET AT THE FENCE.





ASSOCIATES, INC.

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AIKEN **USC AIKEN** 

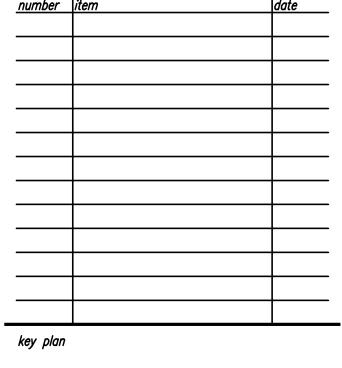
471 UNIVERSITY PARKWAY AIKEN, SOUTH CAROLINA 29801 project name USC AIKEN GREENHOUSE REPACKAGING STATE PROJECT #H29-I337

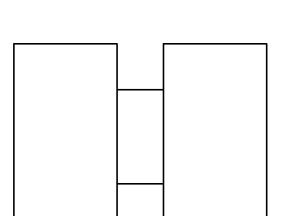
12036.02 seals/signature

project number

CONSTRUCTION DOCUMENTS

JANUARY 17, 2014

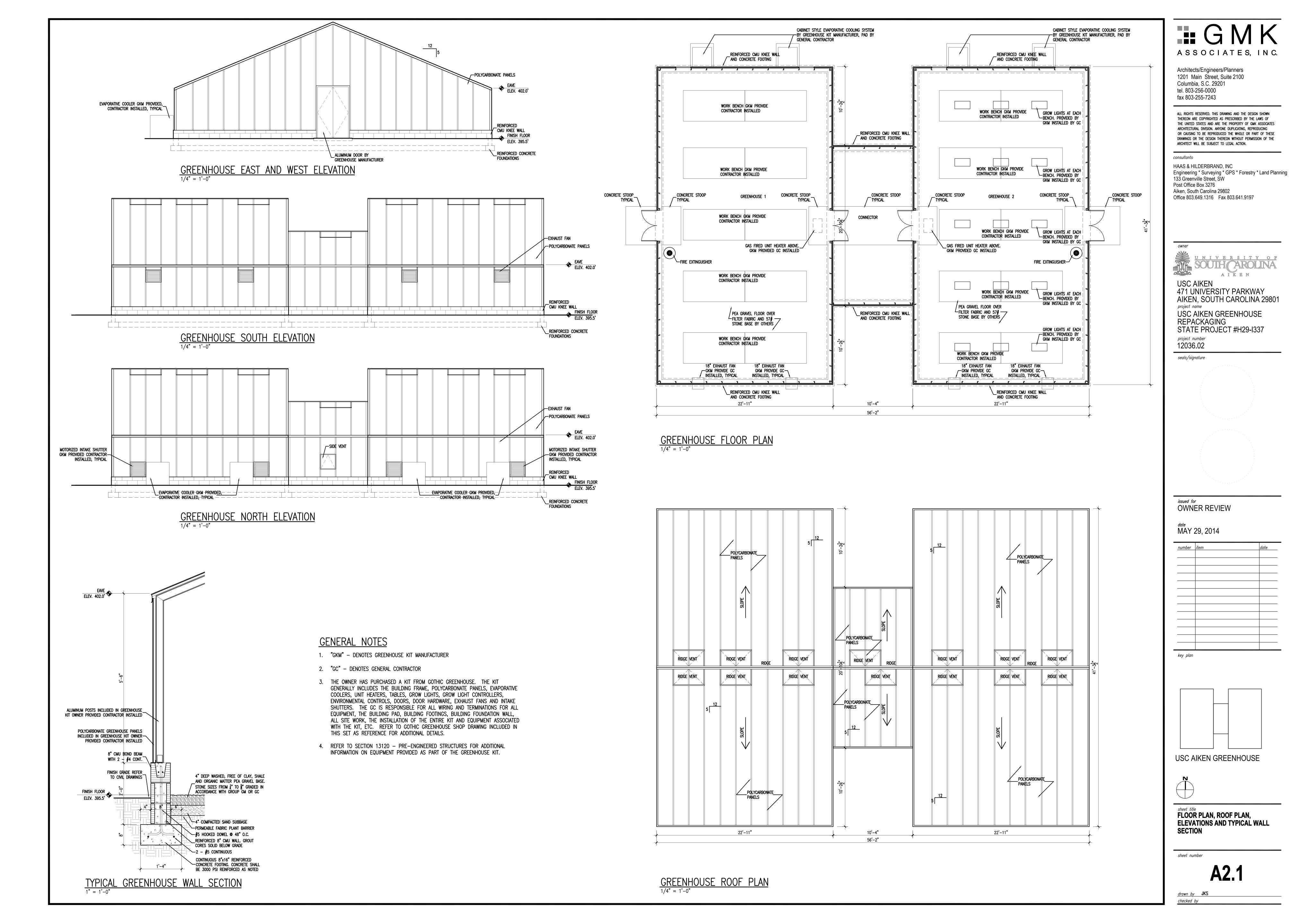


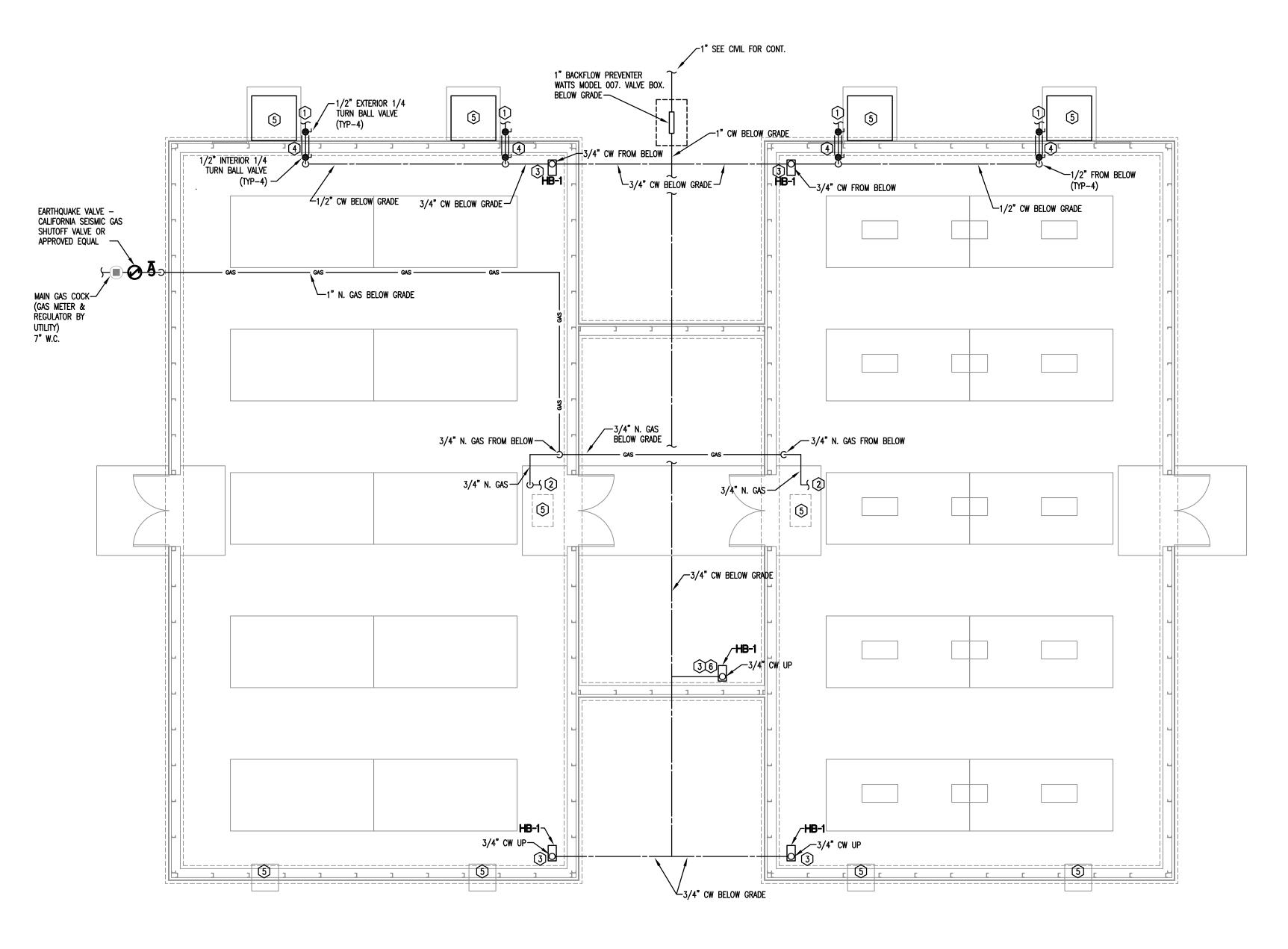


**USC AIKEN GREENHOUSE** 



**GRADING, DRAINAGE &** UTILITY PLAN





GREENHOUSE PLAN — PLUMBING PIPING

1) Provide 1/2" domestic water supply for evaporative cooler. PC shall make final connection. Provide interior SHUT OFF BALL VALVE AND EXTERIOR DRAIN VALVE BEFORE EQUIPMENT CONNECTION. REFER TO DETAIL #3 THIS SHEET FOR EXTERIOR SUPPLY DRAIN DETAIL. EVAPORATIVE COOLERS VENDOR SUPPLIED.

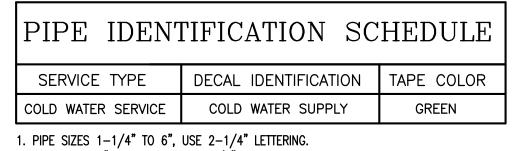
2) provide 3/4" natural gas supply to vendor supplied unit heater. PC shall make final gas connection. Ensure supply SIDE GAS COCK AND SEDIMENT TRAP AT UNIT CONNECTION. PROVIDE UNIT HEATER VENT AND METAL THIMBLE AT GREENHOUSE WALL PENETRATION. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR CONTINUATION.

(3) INSTALL WATER HYDRANTS ACCORDING TO MANUFACTURERS RECOMMENDATIONS. ENSURE APPROVED BACKFLOW PREVENTION DEVICE AT HOSE CONNECTION.

(4) EXTERIOR WALL PENETRATION TO BE SLEEVED AS NECESSARY. SEAL EXTERIOR WALL PENETRATION TO GREENHOUSE MANUFACTURER'S RECOMMENDATIONS.

GC SHALL BE RESPONSIBLE FOR COORDINATION OF INSTALLATION FOR VENDOR SUPPLIED EQUIPMENT. INSTALLATION TO INCLUDE BUT NOT LIMITED TO CUTTING, CLEARANCE, PATCHING, SECURING, SEALING AND SUPPORTS. REFER TO VENDOR DRAWINGS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ALL EQUIPMENT.

6 ENSURE INSTALLATION OF WATER HYDRANT LOCATION TO AVOID CONFLICT WITH VENTS, CONDUIT OR CONTROL PANELS.



2. PIPE SIZES 1" OR LESS, USE 1-1/4" LETTERING.

## PLUMBING LEGEND SYMBOL DESCRIPTION COLD WATER LINE - (CW) \_\_\_\_\_ NATURAL GAS LINE — (N. GAS) ——— GAS ——— PIPE DOWN OR DROP (DN OR DROP) $\overline{\phantom{a}}$ PIPE BREAK OR CONTINUATION BALL VALVE ——X—

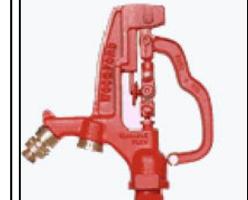
HB-1; HOSE BIB / YARD HYDRANT (FROST PROOF)

A. WOODFORD #Y2 BACKFLOW PROTECTED HYDRANT

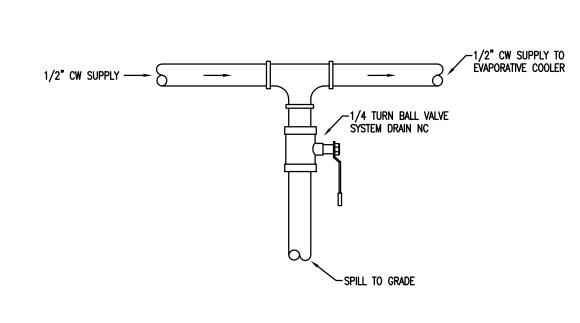
A. GALVANIZED 3. HANDLE

A. LEVER HANDLE

B. BACKFLOW PREVENTER



- CONTRACTOR SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS INSOFAR AS THEY APPLY: NFPA 54, 2012
- LOCATE SHUT-OFF VALVES IN LOCATIONS ACCESSIBLE FOR SERVICE. LOCATION SHALL COMPLY WITH THE REQUIREMENTS OF
- PLUMBING FIXTURES, EQUIPMENT AND MATERIALS.
- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EXACT LOCATIONS OF FIXTURES AND EQUIPMENT. ALL OFFSETS AND FITTINGS FOR COMPLETE INSTALLATION MAY NOT BE DEFINED ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXACT DIMENSIONS AT THE BUILDING AND ANY NECESSARY CHANGES MADE IN ACCORDANCE WITH
- IN CONNECTION THEREWITH.
- ALL MATERIALS SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME AND BE U.L. LABELED IF REQUIRED. UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. ALL EQUIPMENT OF A SIMILAR TYPE SHALL BE OF THE SAME MANUFACTURER.
- CONTRACTOR SHALL PROVIDE AND LOCATE SLEEVES AND INSERTS REQUIRED BEFORE THE FLOOR AND WALLS ARE BUILT OR SHALL BE RESPONSIBLE FOR THE COST OF CUTTING AND PATCHING REQUIRED FOR PIPES WHERE SLEEVES AND INSERTS WERE NOT INSTALLED OR WHERE THEY WERE INCORRECTLY LOCATED.
- INDICATED ON THE DRAWINGS. THERE ARE TO BE NO POTABLE WATER CONNECTIONS TO THE COLD WATER SERVICE THROUGHOUT THE STRUCTURE.



| FIXTURE SIZE SCHEDULE  |       |      |      |    |
|--|-------|------|------|----|
| MARK   | WASTE | VENT | CW   | HW |
| HB-1   |       |      | 3/4" |    |
|  |       |      |      |    |
| NOTE: USE THIS SIZE FOR FIXTURE CONNECTIONS UNLESS NOTED OTHERWISE |       |      |      |    |

# PLUMBING FIXTURE SCHEDULE

GROUND LEVEL-

2 HYDRANT DETAIL

NTS

Access Door

Column Line

Connection Cold Water

Backflow Preventer

Electrical Contractor

Emergency Eyewash

General Contractor

Gallons Per Minute

Gallons Per Hour

Hot Water Return

Mechanical Contractor

Male Pipe Thread Mop Sink Basin

Not Applicable

Invert Elevation

Electric Water Cooler

Expansion Tank

Floor Drain

Hot Water

Lavatory

Medical Air

Maximum

Minimum

Floor

EW-#

MSB-#

COMPRESSED AIR

ABBREVIATIONS \*

Normally Closed

Natural Gas

Not in Contract

Normally Open

National Pipe Thread Not To Scale

Over Flow Storm Drain

Plumbing Contractor

Pressure Reducing Valve

Pounds Per Square Inch

Pump – No.

Shock Absorber

Stainless Steel

Storm Drain

Top of Steel

Vacuum Breaker

Sanitary Vent

Sanitary Waste

Water Tight Sleeve

Water Closet

Vent Thru Roof

Standard Temperature

Typical

Urinal

Vacuum

Wall Box

\* Not All Abbreviations Used

Roof Drain

Shower

SH-#

SK-#

WB-#

- A. 3/4" CW. 5. OUTLÉT A. 3/4" HOSE.
- 6. MOUNTING A. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION AND DEPTH OF BURY. B. HOSE OUTLET 28-1/2" AFG

# PLUMBING GENERAL NOTES

- INTERNATIONAL BUILDING, GAS AND PLUMBING CODES.
- CONTRACTOR SHALL REFERENCE PLANS AND THE SPECIFICATIONS SHOWN ON THIS SHEET AND EQUIPMENT SCHEDULE FOR

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE.

- STRUCTURAL CONDITIONS, EQUIPMENT TO BE INSTALLED AND COORDINATE WITH OTHER SYSTEMS. IF CONFLICTS CANNOT BE RESOLVED THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
- CONTRACTOR SHALL SECURE ALL PERMITS, INSPECTIONS, LICENSES AND TESTS REQUIRED FOR THIS WORK AND PAY ALL FEES
- 9. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR OR OF THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE WORK OF THE CONTRACTOR. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO PERFORM THE CONSTRUCTION WORK IN ACCORDANCE WITH THE DRAWINGS.
- 10. IT IS THE INTENT AND MEANING OF THE DRAWINGS TO PROVIDE COMPLETE AND OPERABLE PLUMBING SYSTEM.
- 11. ALL PLUMBING LINE SIZE REDUCTIONS SHALL BE MADE WITH REDUCERS AND/OR REDUCING FITTINGS.
- 12. COORDINATION WITH VENDOR DRAWINGS AND OTHER DISCIPLINES IS MANDATORY.
- 13. THERE SHALL BE NO CONNECTIONS TO THE COLD WATER SERVICE PIPE THROUGHOUT THE STRUCTURE OTHER THAN WHAT IS



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**USC AIKEN** 471 UNIVERSITY PARKWAY AIKEN, SOUTH CAROLINA 29801

project name USC AIKEN GREENHOUSE REPACKAGING STATE PROJECT #H29-I337

project number 12036.02

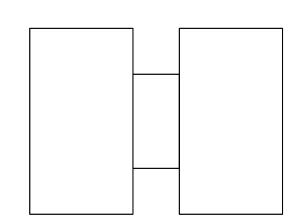
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**OWNER REVIEW** 

MAY 29, 2014

number ite

key plan



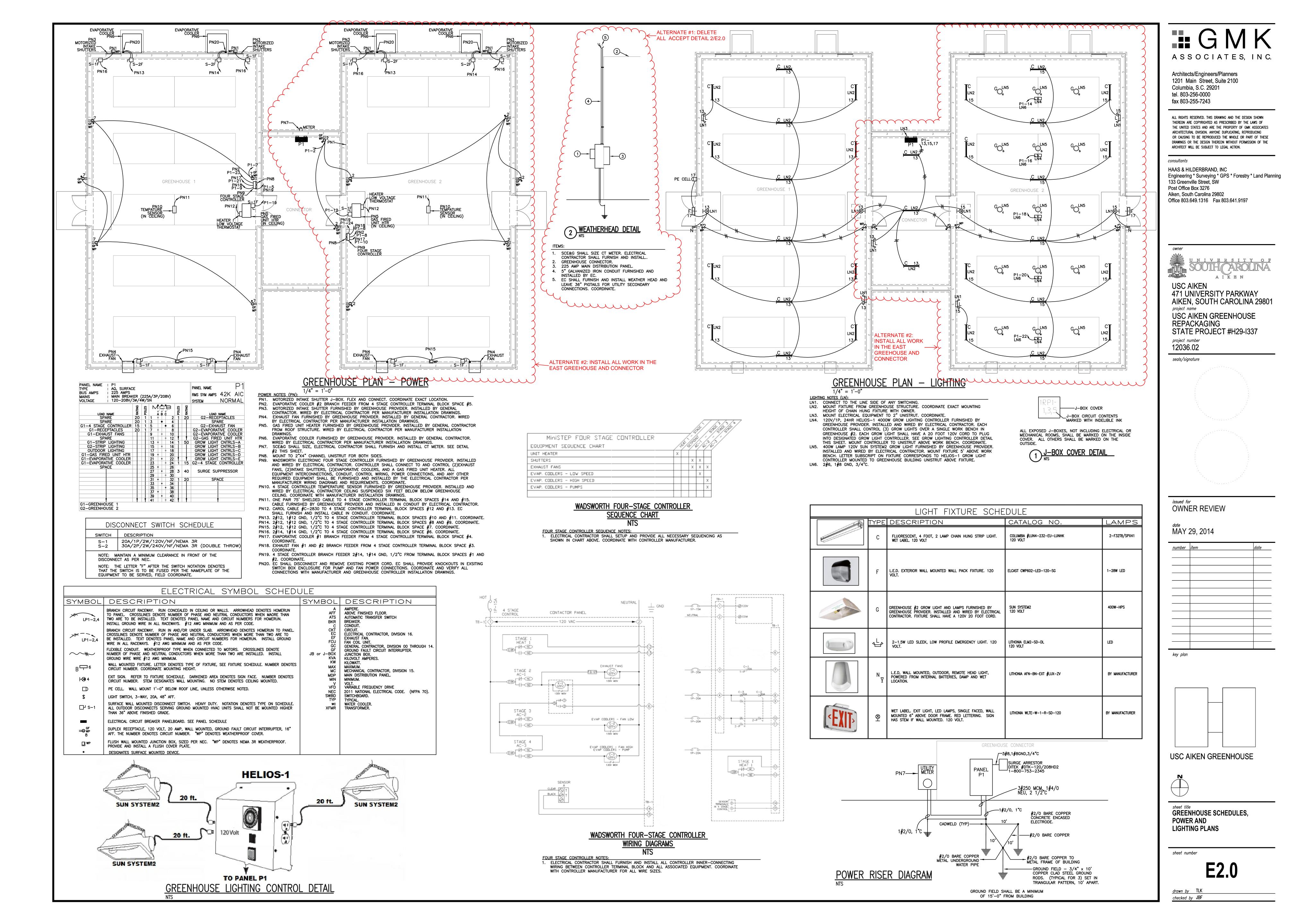
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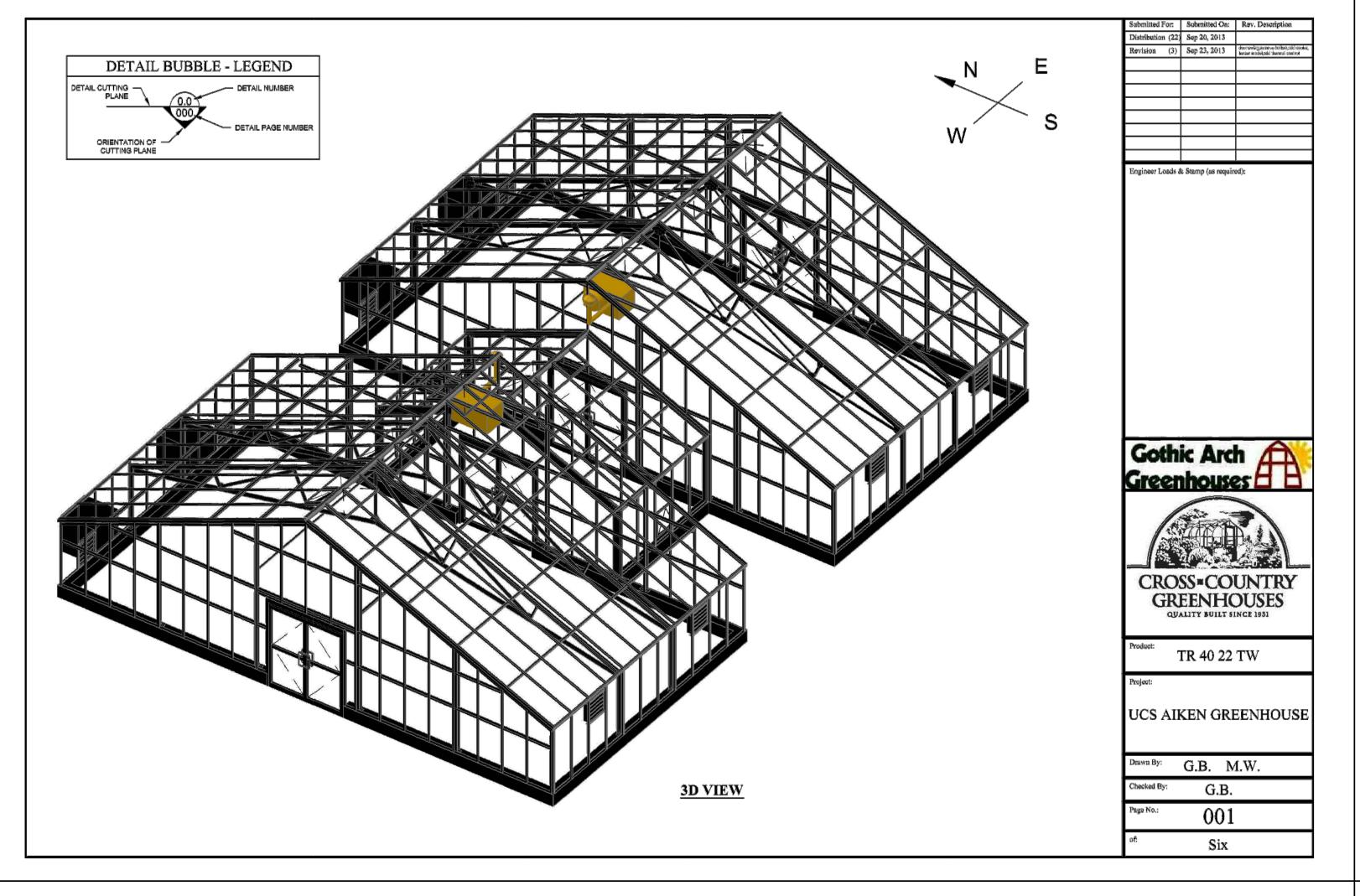


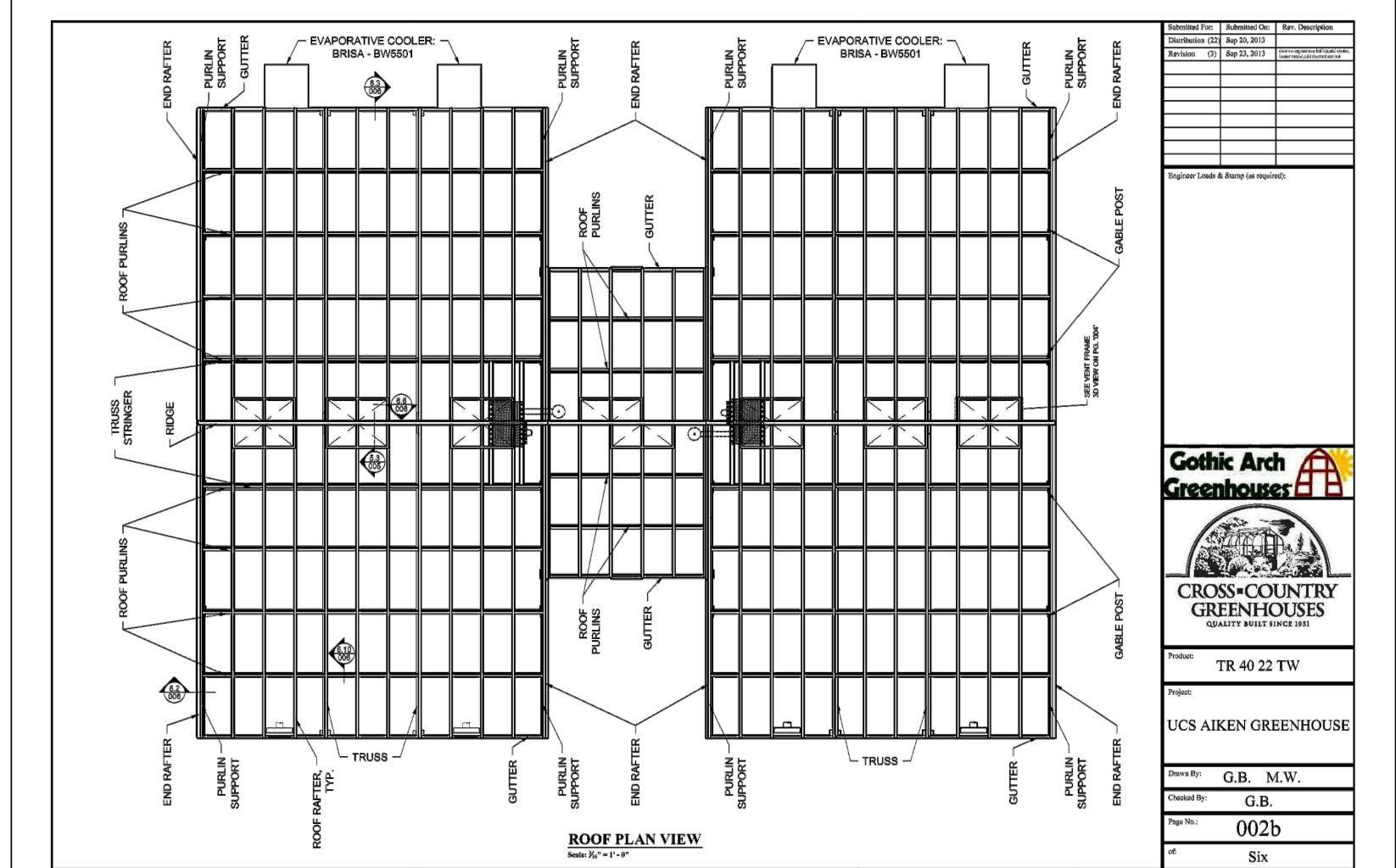
**GREENHOUSE PLAN** PLUMBING PIPING SCHEDULES, NOTES, SYMBOLS AND ABBREVIATIONS

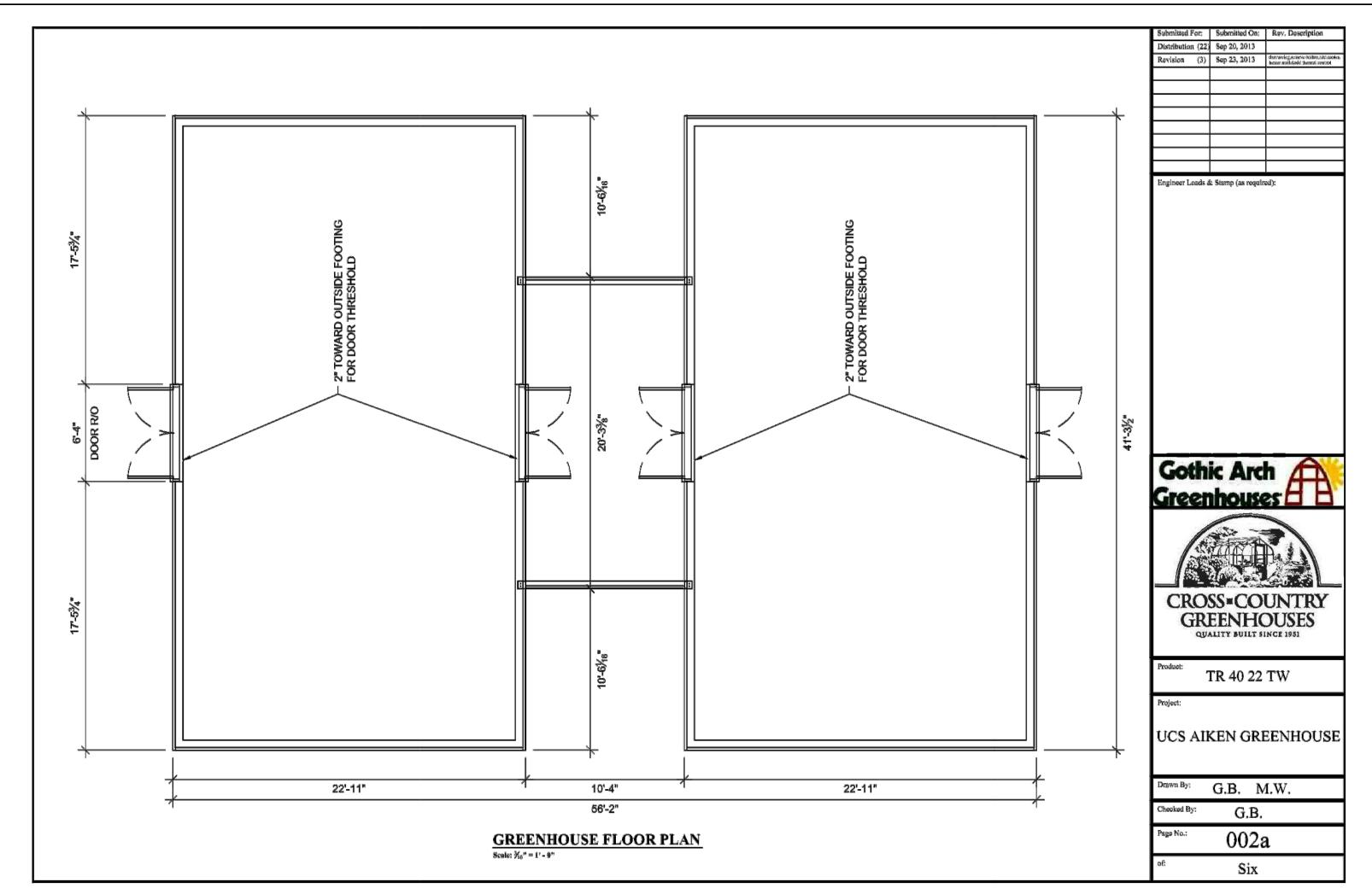
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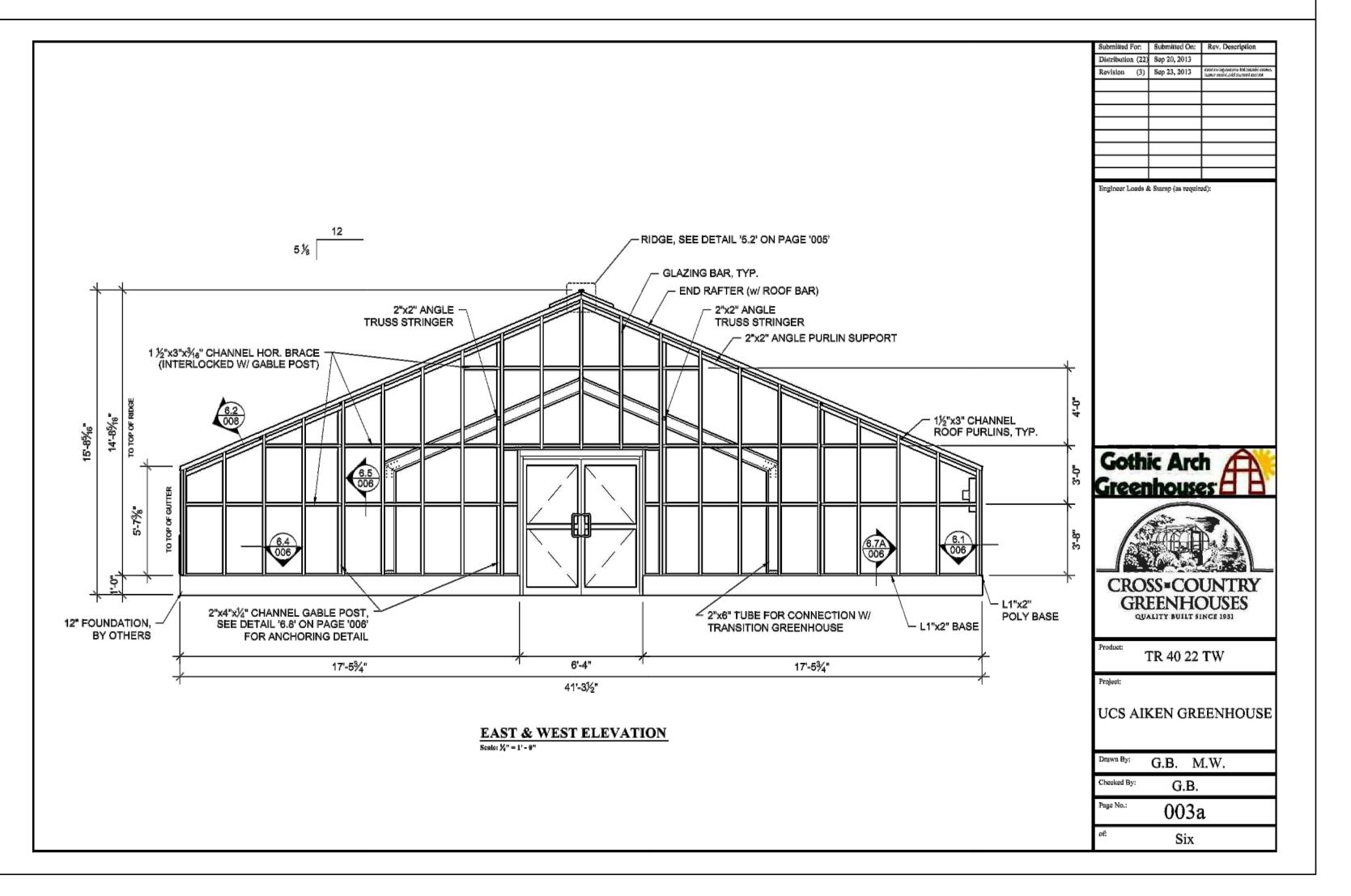
checked by RLW, JWB











# ASSOCIATES, INC.

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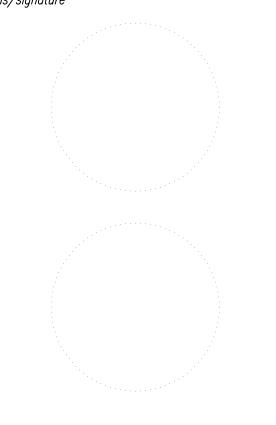
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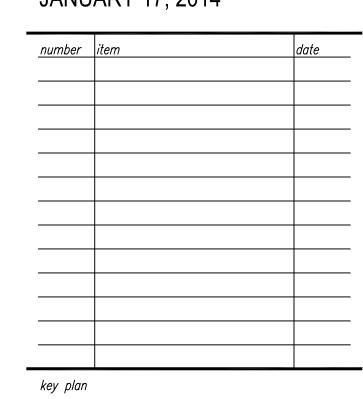
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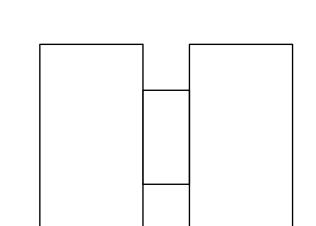
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date JANUARY 17, 2014

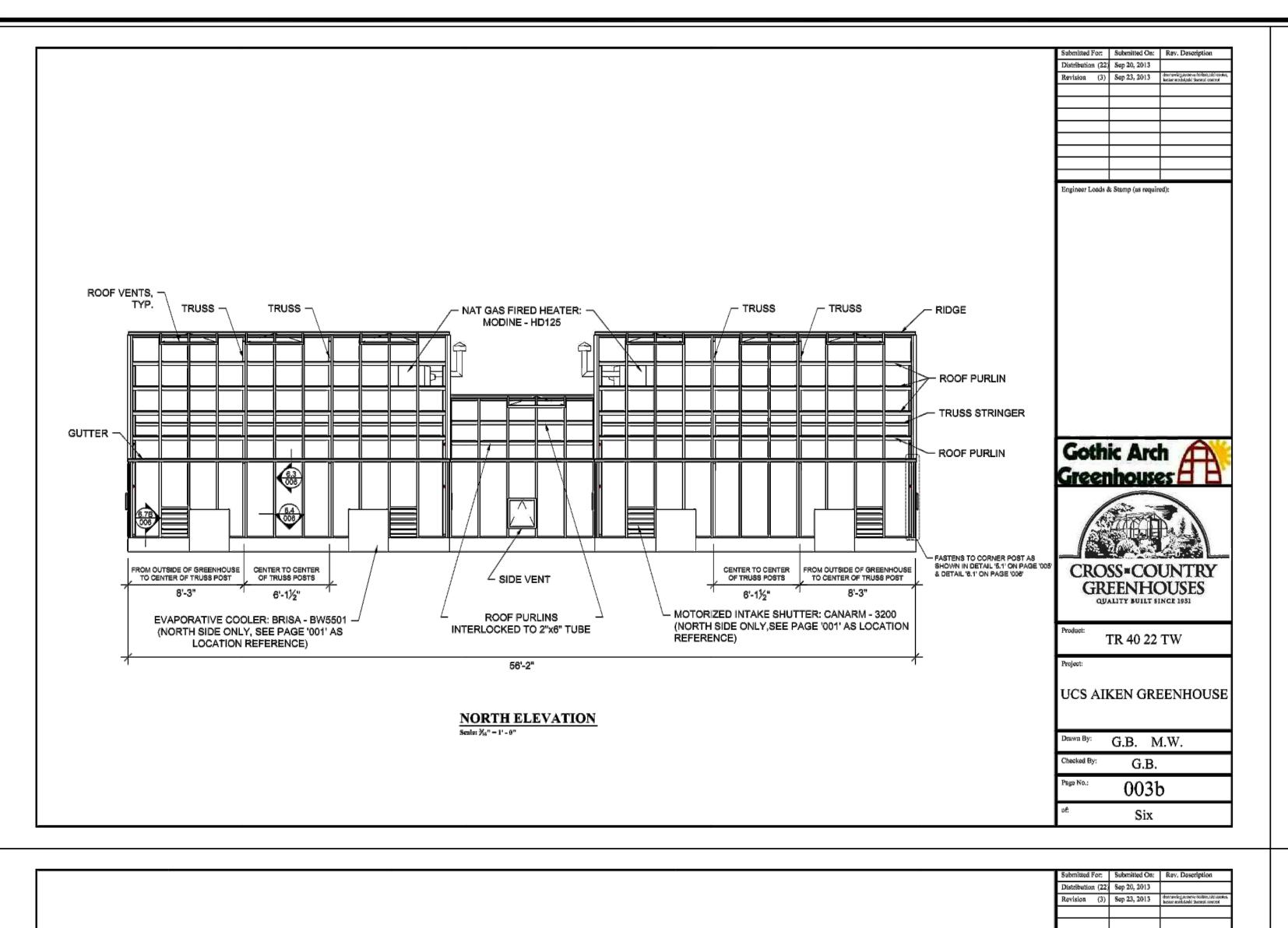


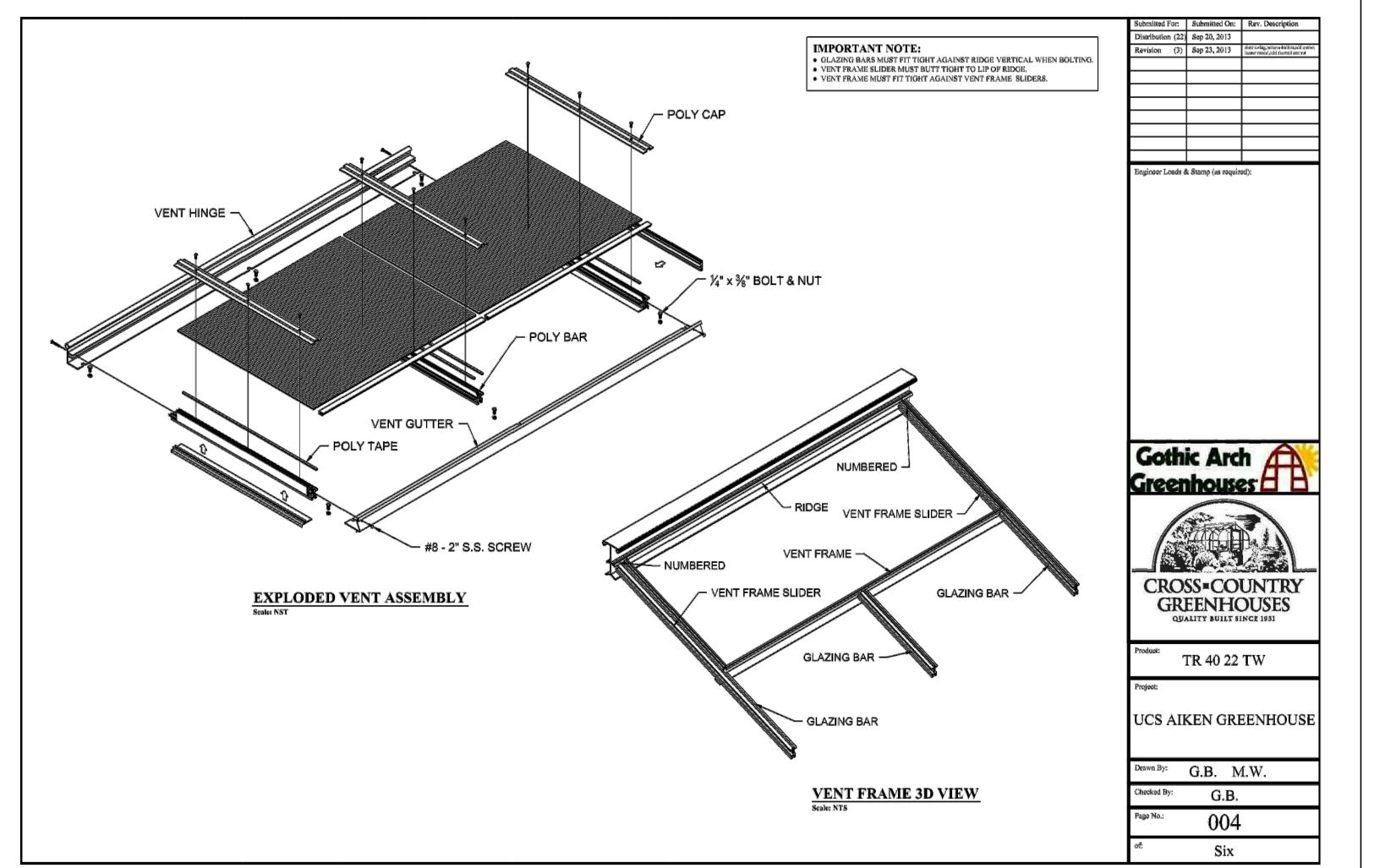


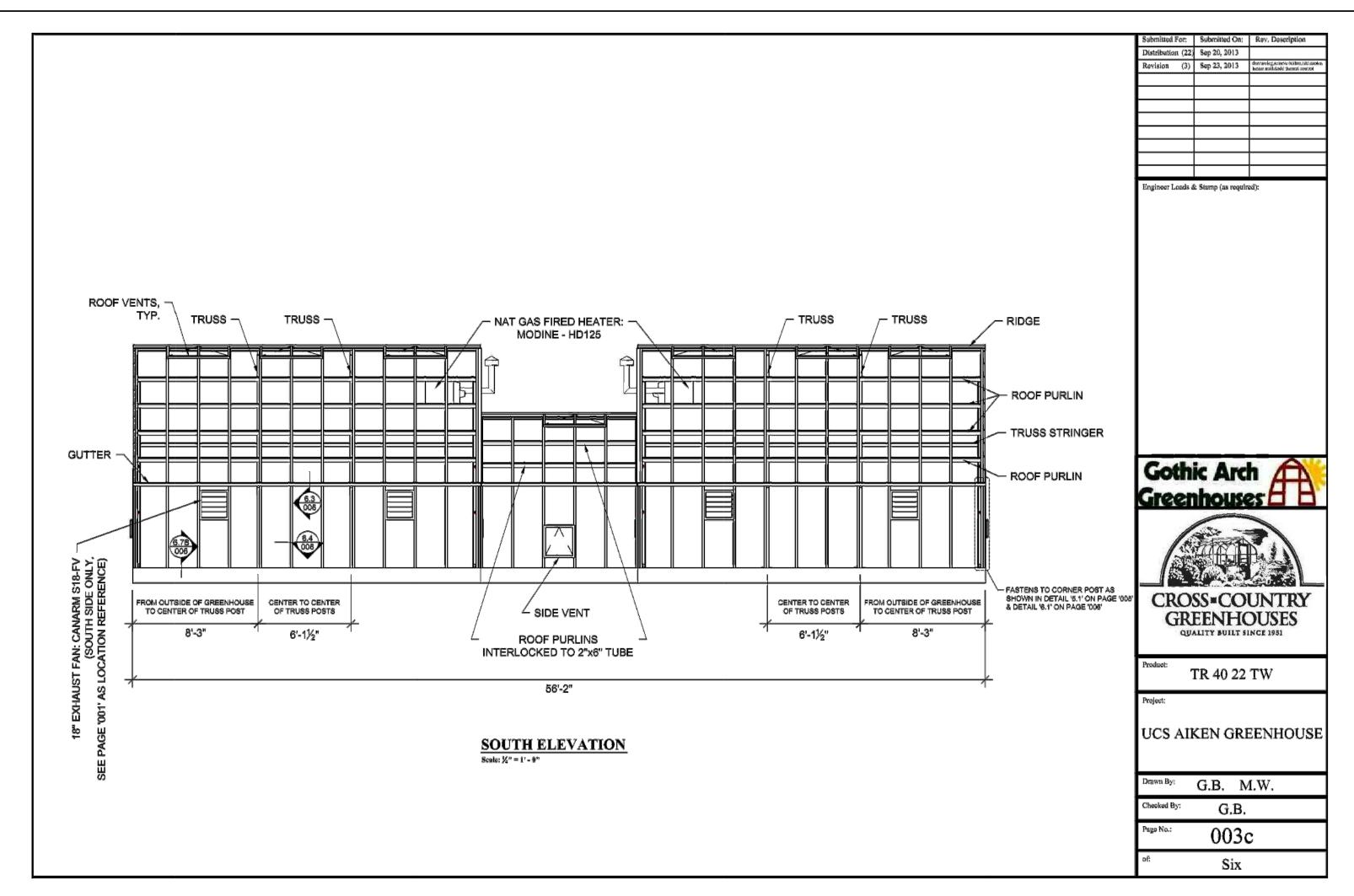
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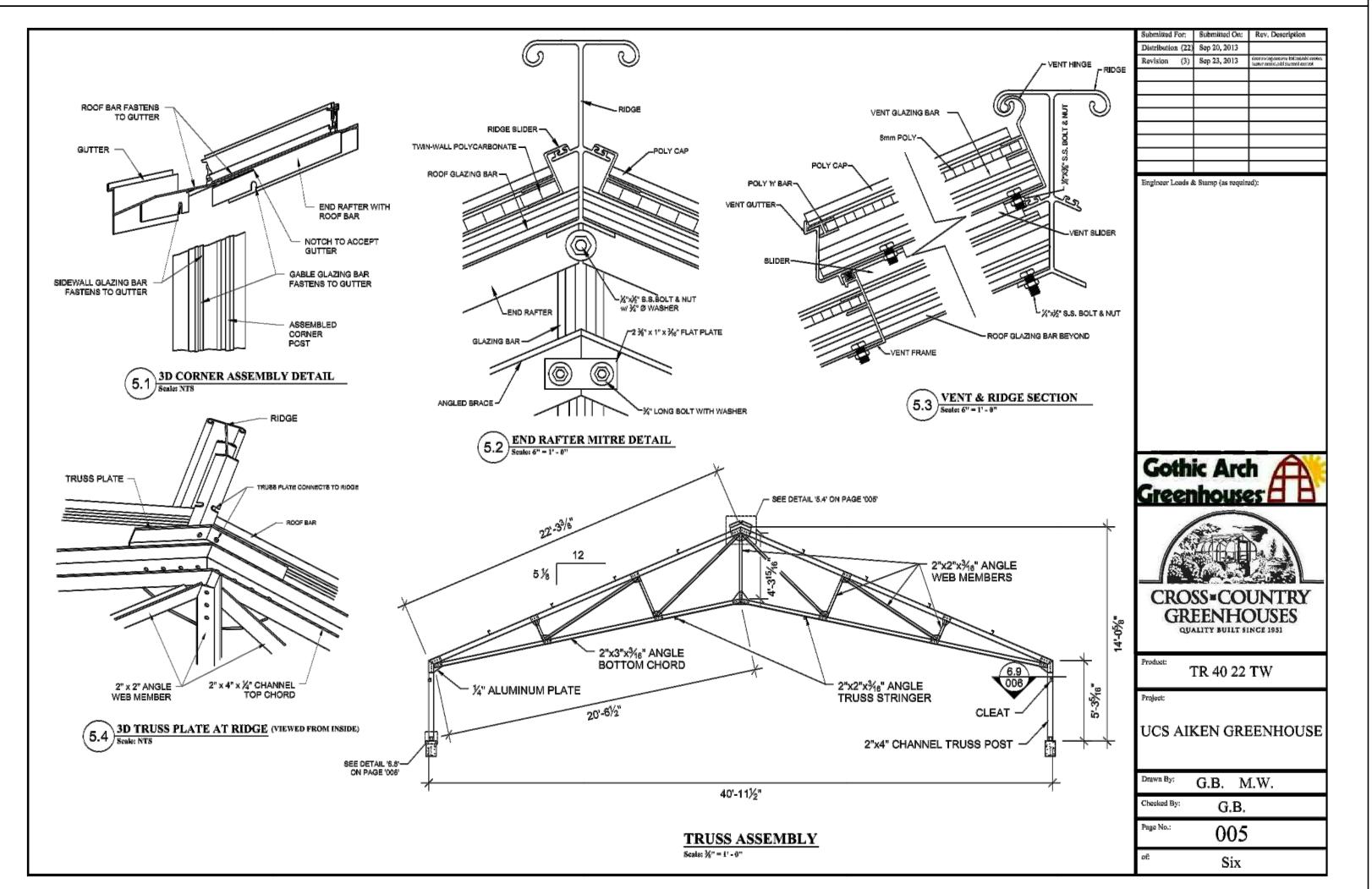


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GOTHIC GREENHOUSE SHOP
DRAWINGS











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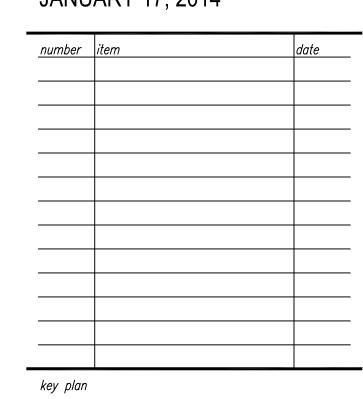
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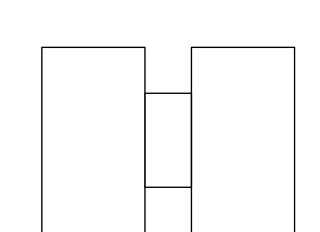
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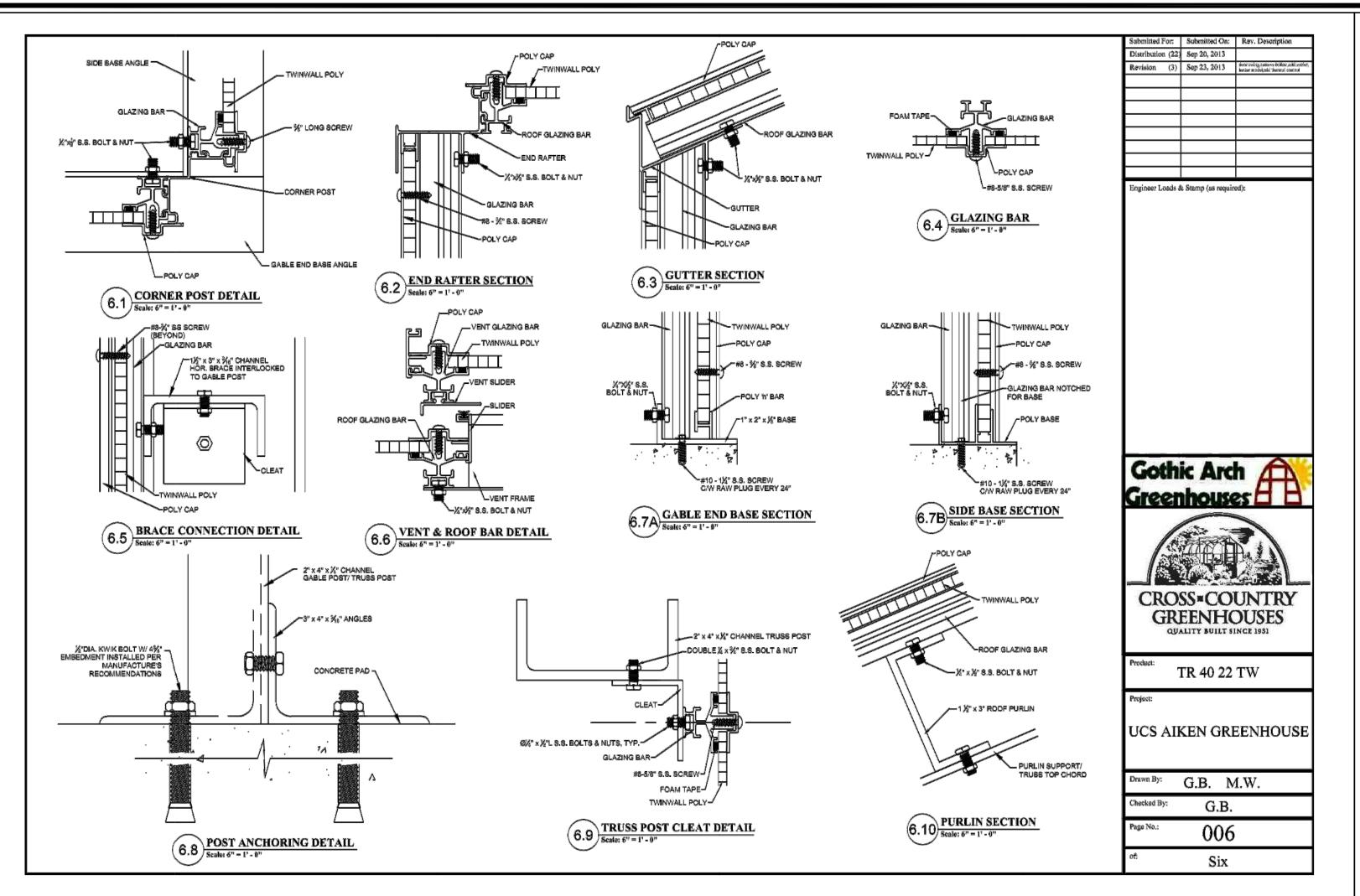


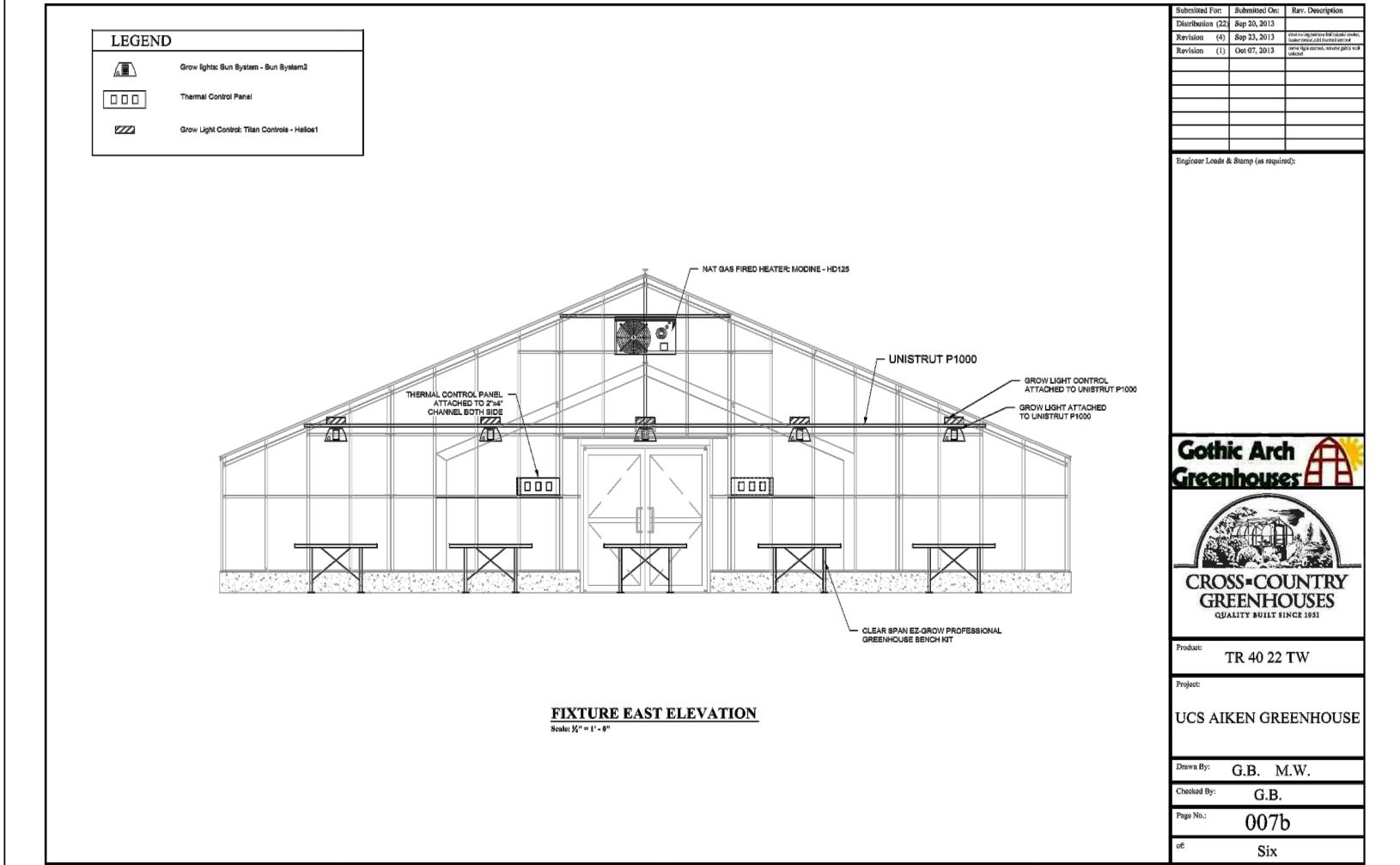


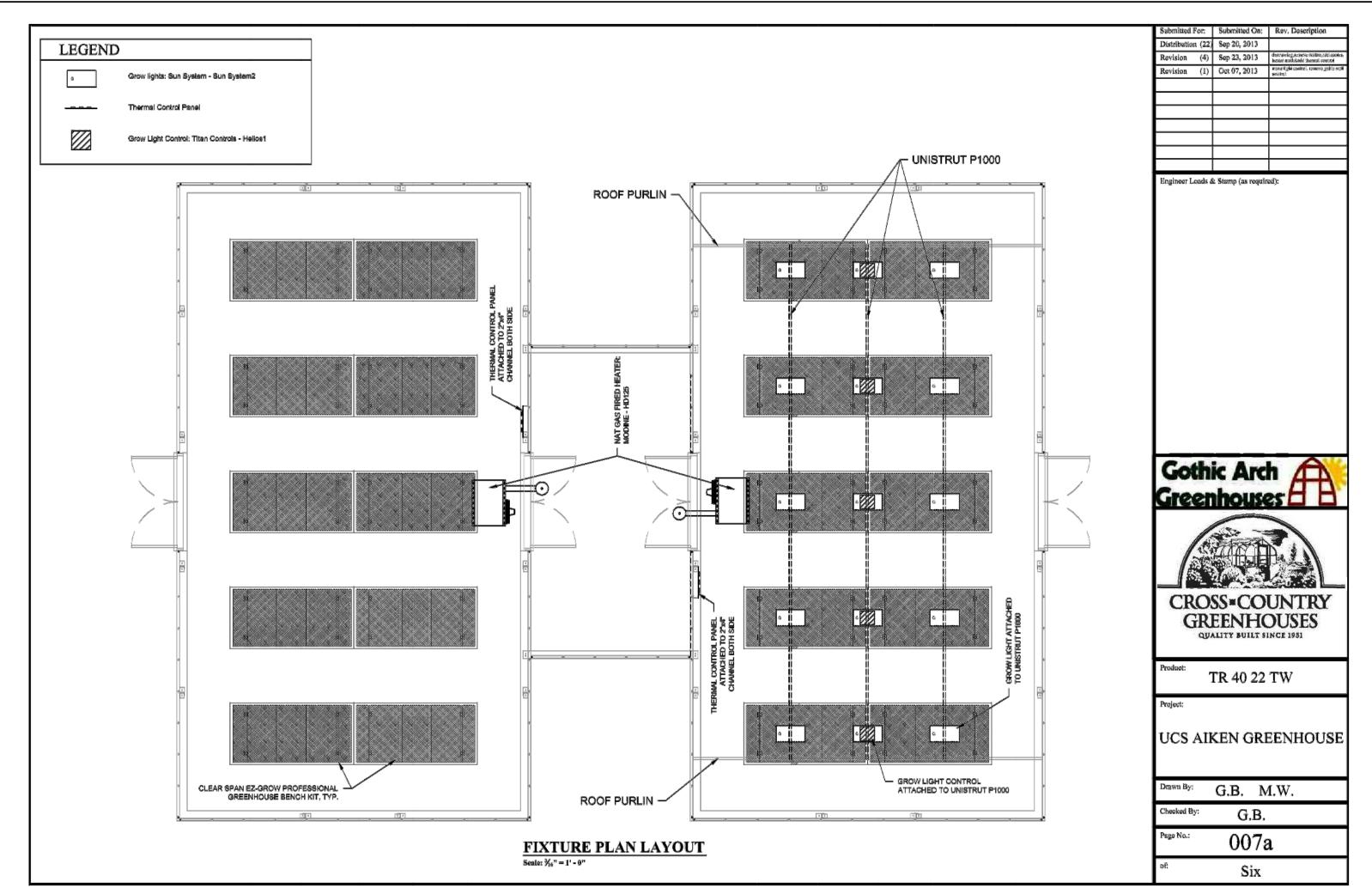
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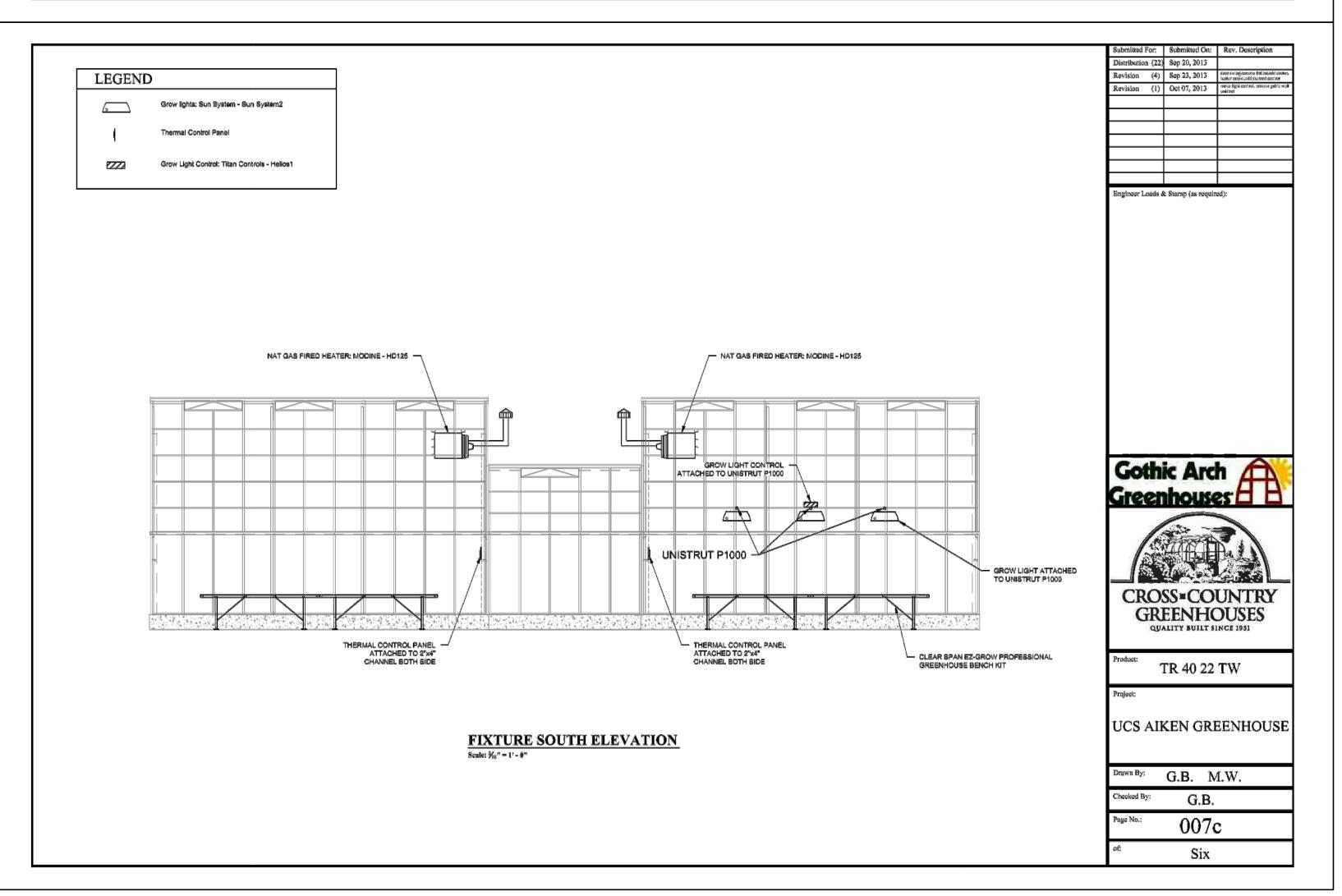


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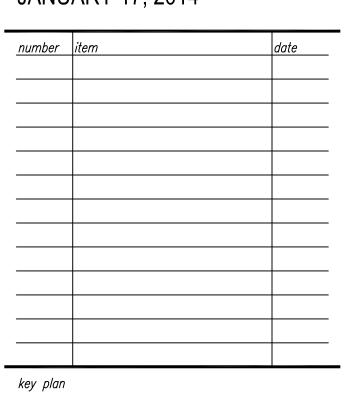
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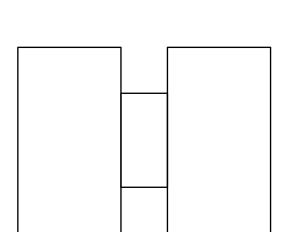
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