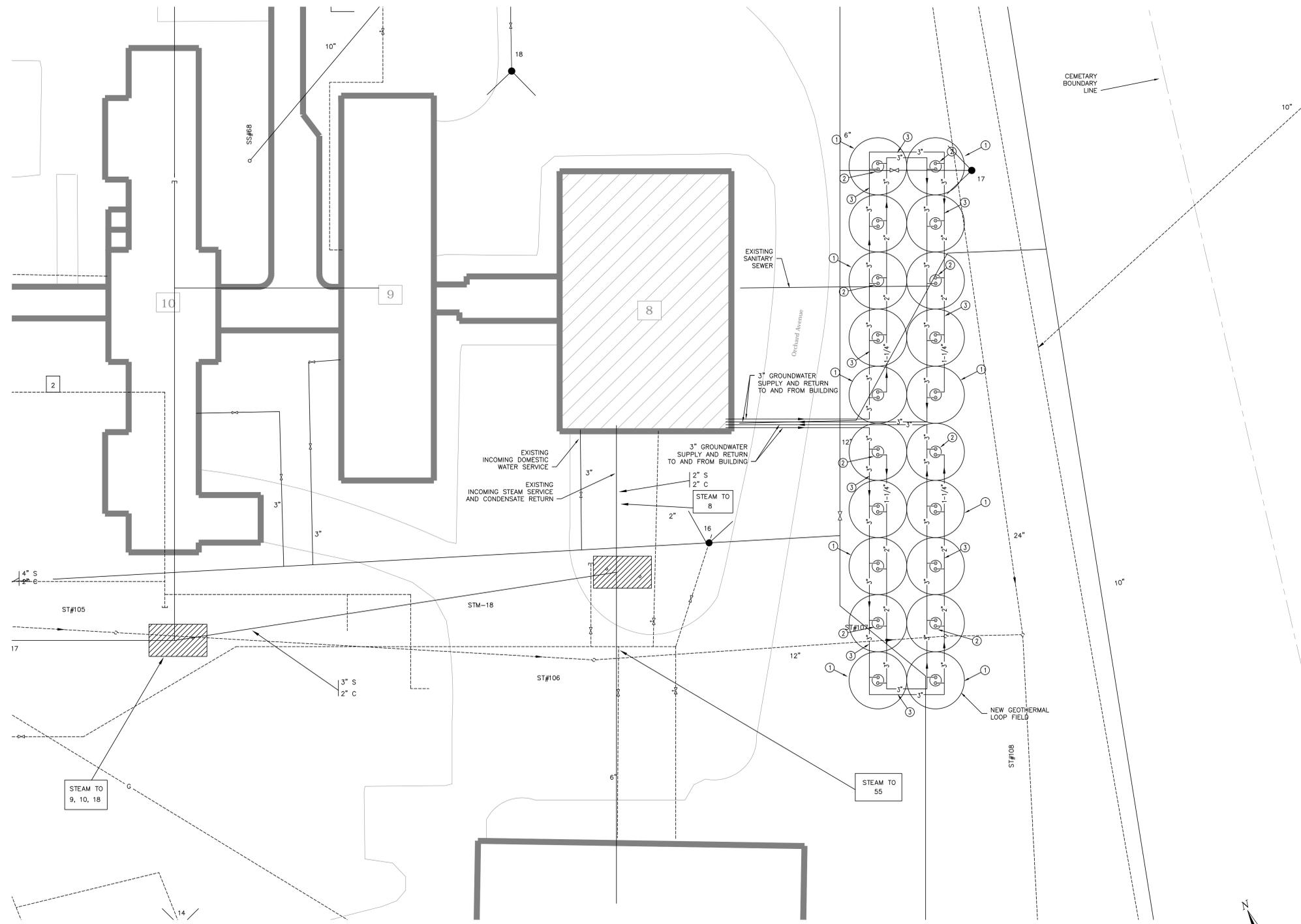


three inches = one foot
 one and one-half inches = one foot
 one inch = one foot
 three-quarters inch = one foot
 one-half inch = one foot
 three-eighths inch = one foot
 one-quarter inch = one foot
 one-eighth inch = one foot



- MECHANICAL SITE PLAN NOTES:**
1. GEOTHERMAL LOOP CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL UTILITIES ON SITE, WHETHER SHOWN ON THIS PLAN OR NOT. ALL PIPING AND UNDERGROUND SYSTEMS SHOWN ON THIS PLAN, EXCEPT FOR NEW LOOP FIELD, ARE EXISTING TO REMAIN.
 2. GEOTHERMAL LOOP CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING SITE TO ORIGINAL CONDITION AFTER DRILLING WELL FIELD, INCLUDING BUT NOT LIMITED TO REPAIR OR REPLACEMENT OF GRASS, TREES, SHRUBBERY, ASPHALT, CONCRETE, ETC.
 3. GEOTHERMAL LOOP CONTRACTOR SHALL NOT ENCRUCH ON NEIGHBORING CEMETERY. CONTRACTOR'S WORK, EQUIPMENT AND STAGING SHALL NOT GO BEYOND THE BOUNDARY OF THE VA CAMPUS.
 4. GEOTHERMAL LOOP FIELD IN AREA SHOWN, 20 BORES TOTAL AT 20 FEET O.C. 2 ROWS OF 10. BORES TO BE CONSTRUCTED WITH 1-1/4" SDR11 TUBING WITH TURBULENT FLOW @400' DEEP EACH. PIPE RESISTANCE SHALL BE 0.104 H*FT**7/8 BTU OR BETTER. BOREHOLE DIAMETER TO BE 5.5 IN USING A GROUT WITH THERMAL CONDUCTIVITY OF 1.2 BTU/(H*FT**F). BOREHOLE THERMAL RESISTANCE TO BE 0.202 H*FT**F/BTU.
 5. ALL PIPING SHOWN ON THIS DRAWING IS TO BE A MINIMUM OF 60" DEEP. COORDINATE WITH SITE UTILITY FOR ANY DEVIATIONS TO THIS HEIGHT. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR DEPTH OF FOOTER IN PUMP BUILDING.
 6. GEOTHERMAL LOOP CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING FROM THE VA THE SOIL TEST DATA REPORT. CONTRACTOR SHALL SUBMIT COMPLETE LOOP DESIGN PLANS TO BE VERIFIED BY ENGINEER PRIOR TO ANY WORK BEING DONE ON SITE.
 7. IF ANY UNFORSEEN CIRCUMSTANCES ARISE DURING THE DRILLING OF THE WELL FIELD, FRACTURING, ETC. CONTRACTOR SHALL REVISE THEIR WELL FIELD DESIGN TO OVERCOME THESE FACTORS. ALTERNATE DESIGNS, IF NECESSARY, SHALL BE GIVEN TO THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION OF SAID DESIGN.

- GEOTHERMAL LOOP FIELD NOTES:**
- ① WELLS TO BE A MINIMUM OF 20' O.C.
 - ② REFER TO "TYPICAL BORE HOLE CONSTRUCTION DETAIL" FOR BORE HOLE CONSTRUCTION. (TYPICAL)
 - ③ REFER TO "TYPICAL TRENCH DETAIL" FOR TRENCH CONSTRUCTION. (TYPICAL)

1 MECHANICAL SITE PLAN
 M-201 SCALE: 1/16" = 1'-0"



100% CONSTRUCTION DOCUMENTS

| Revisions | Date |
|------------|----------|
| ADDENDUM 1 | 06/01/12 |

ENGINEERS:

APOGEE
 Consulting Group, PA
 8831 Keystone Crossing
 Indianapolis, IN 46240
 (317) 819-0200 Fax (919) 858-7423
 Apogee Project # 2011 135
 Apogee COA# PC60800089

Professional Stamp/Seal

ARCHITECT:

CSO Architects
 ARCHITECTURE • INTERIOR DESIGN
 8831 Keystone Crossing • Indianapolis, IN 46240
 Main 317.848.7800 • Fax 317.574.0957 • csotac.net



| | |
|--|-----------|
| Drawing Title MECHANICAL SITE PLAN | |
| Approved: Robert Nash, CO | Approved: |
| Approved: Andrew Mercker, COTR | Approved: |

| | |
|---|---|
| Project Title ENERGY IMPROVEMENTS & AIR CONDITIONING BUILDING #8, GYM | |
| Building No. 8 | Scale AS SHOWN |
| Drawn/Checked DMB/JWM | Location VA MEDICAL CENTER ENGINEERING BLDG #52, RM 201 1700 E. 38TH ST. MARION, IN 46953 |

| |
|-----------------------------|
| Date 09/19/11 |
| Project No. 610-10-100 |
| DRAWING NO. M-201 |
| Dwg. 2 of 7 |

VA NIHCS Engineering

Department of Veterans Affairs