

Madison, Wisconsin

# CITY OF MADISON

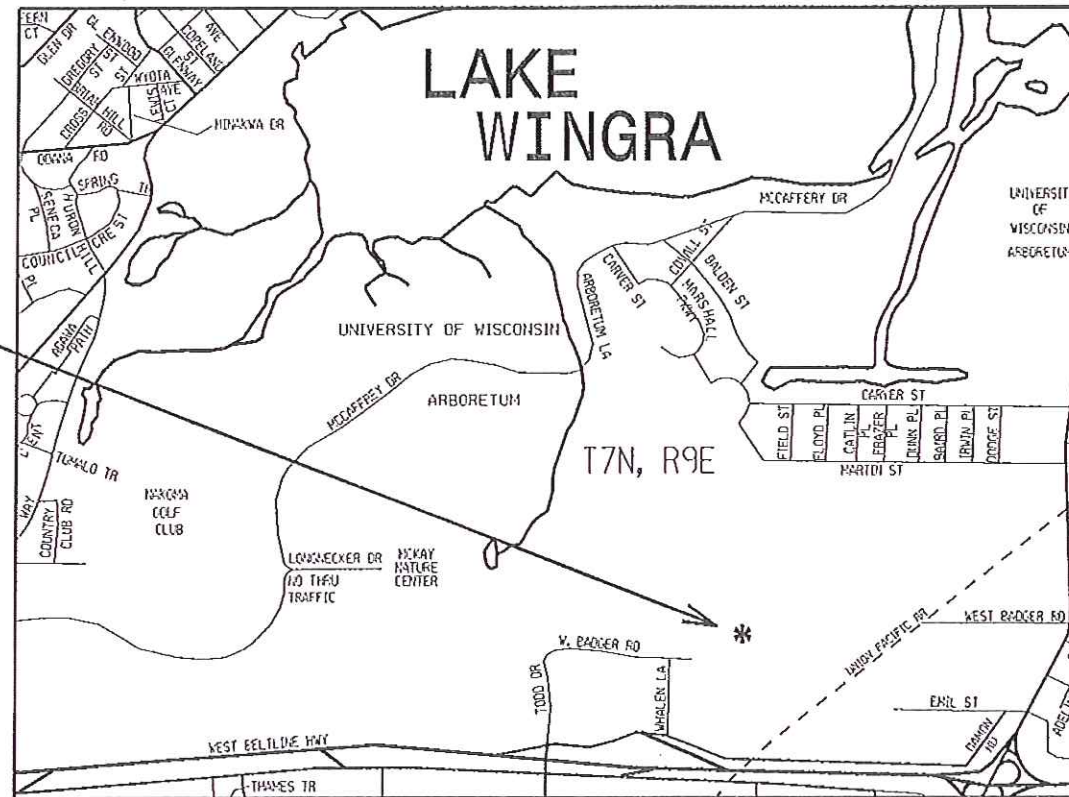
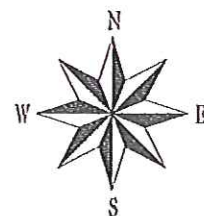
CITY ENGINEERING DIVISION  
DEPARTMENT OF PUBLIC WORKS  
PLAN OF PROPOSED IMPROVEMENT

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## ARBORETUM POND #3

PROJECT LOCATION



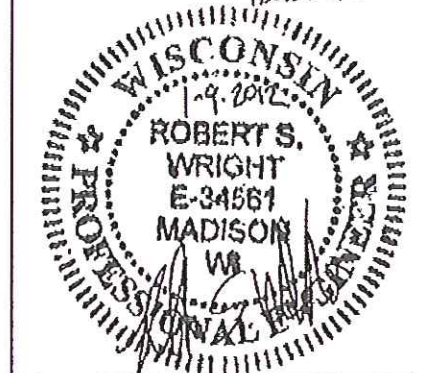
PUBLIC IMPROVEMENT PROJECT APPROVED  
BY THE COMMON COUNCIL  
OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN  
APPROVED BY:

*[Signature]* 2/20/12  
City Engineer Date

DESIGNED BY:

*[Signature]*  
Revised 2-22-2012



SHEETS 12-15  
DESIGNED BY:



SHEETS 2-9 Revised 11/15/12 JR

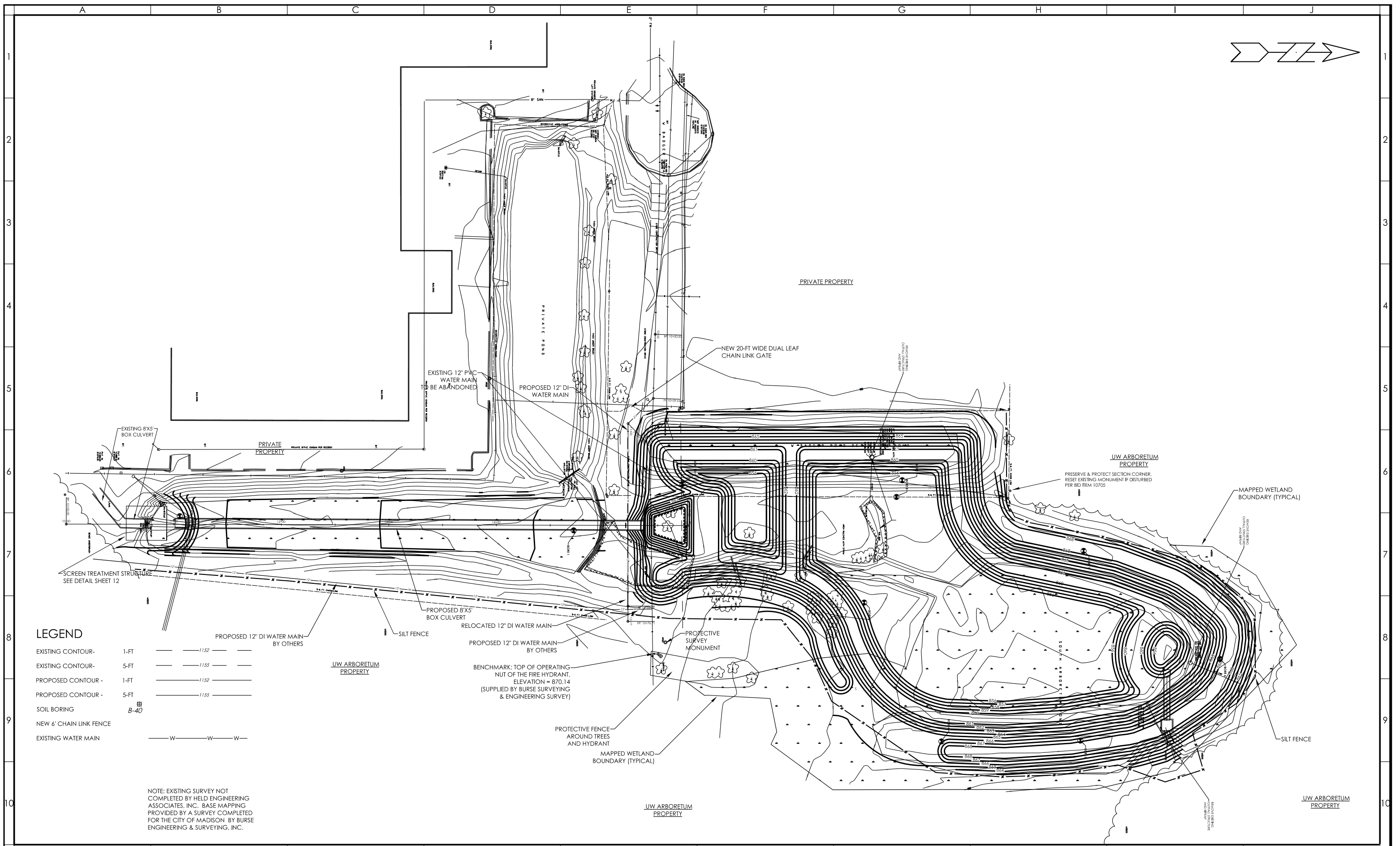
UTILITIES SHOWN ARE BASED ON AVAILABLE RECORDS AND ARE SHOWN FOR REFERENCE ONLY. LOCATIONS MAY VARY IN FIELD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND TAKE EVERY PRECAUTION TO AVOID EXISTING UTILITIES.

CITY PROJECT NO. 53W1035

CITY CONTRACT NO. 6855

DRAWING NUMBER 70-1689





**LEGEND**

|                         |      |         |       |     |
|-------------------------|------|---------|-------|-----|
| EXISTING CONTOUR -      | 1-FT | ---     | 11.52 | --- |
| EXISTING CONTOUR -      | 5-FT | ---     | 11.55 | --- |
| PROPOSED CONTOUR -      | 1-FT | ---     | 11.52 | --- |
| PROPOSED CONTOUR -      | 5-FT | ---     | 11.55 | --- |
| SOIL BORING             | B-40 | ⊞       |       |     |
| NEW 6' CHAIN LINK FENCE |      | —x—x—x— |       |     |
| EXISTING WATER MAIN     |      | —W—W—W— |       |     |

NOTE: EXISTING SURVEY NOT COMPLETED BY HELD ENGINEERING ASSOCIATES, INC. BASE MAPPING PROVIDED BY A SURVEY COMPLETED FOR THE CITY OF MADISON BY BURSE ENGINEERING & SURVEYING, INC.

**HELD ENGINEERING ASSOCIATES, INC.**  
MADISON, WISCONSIN  
(608) 833-7373 FAX (608) 833-3527

| NO. | DATE     | REVISION:     | INIT. |
|-----|----------|---------------|-------|
| 1   | 1-6-12   | CITY COMMENTS | RSW   |
| 2   | 1-22-12  | WATER MAIN    | RSW   |
| 3   | 11-15-12 | POND CONFIG.  | JRR   |

**CITY OF MADISON**  
C/O TIM TROESTER  
210 MARTIN LUTHER KING JR. BLVD ROOM 210  
608-267-1995

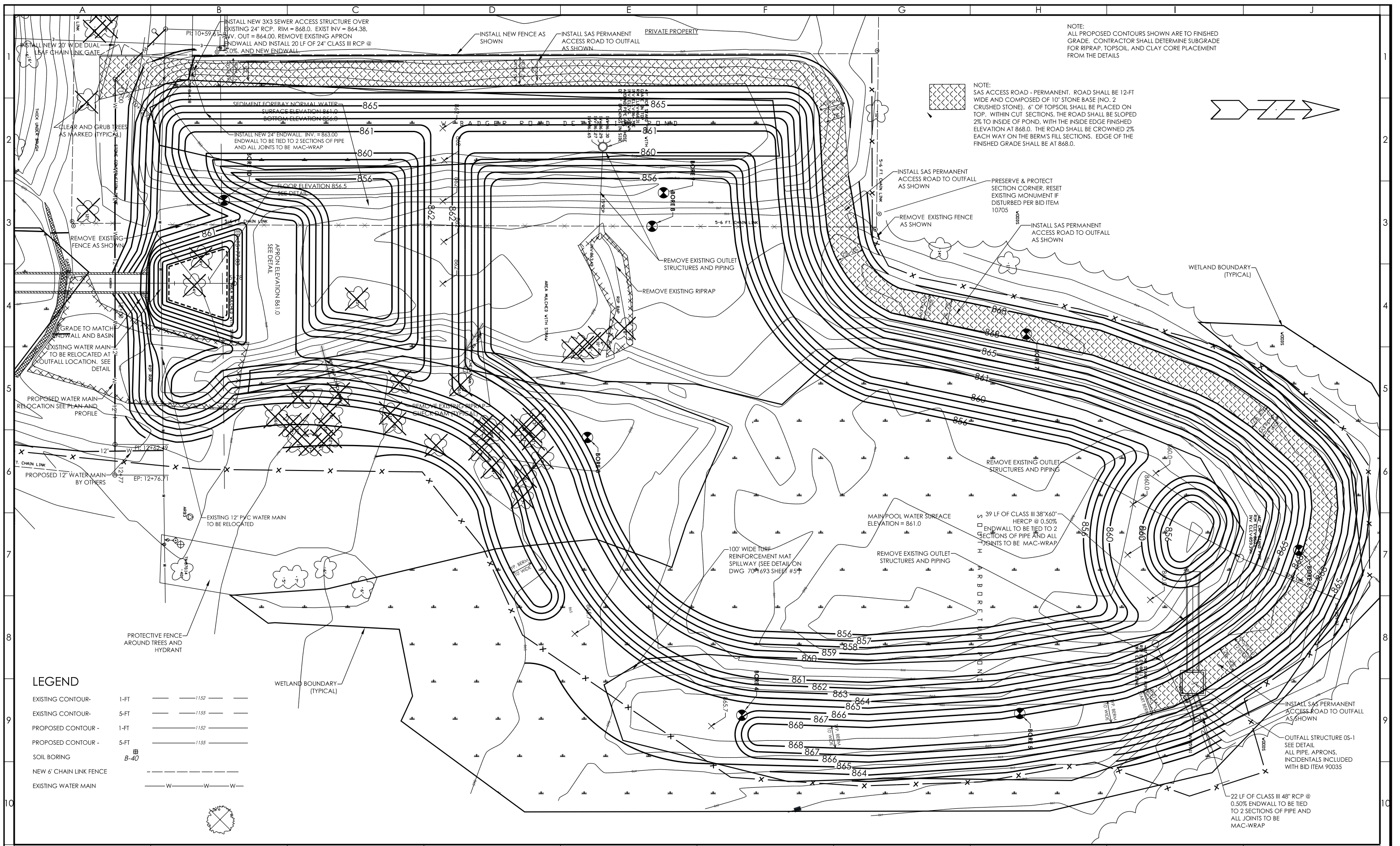
**POND 3 - UW ARBORETUM**  
CITY OF MADISON, WISCONSIN

SCALE:  
HOR.: 1" = 80'  
VER.:  
DATE: 6-24-11

BENCHMARK: TOP OF OPERATING NUT OF THE FIRE HYDRANT AS SHOWN ELEVATION = 870.14 (SUPPLIED BY BURSE SURVEYING & ENGINEERING SURVEY)

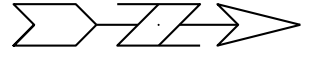
**POND 3 IMPROVEMENTS SITE OVERVIEW**

SHEET NO: 2 OF 11  
DRAWING NO: 70-1690



NOTE:  
ALL PROPOSED CONTOURS SHOWN ARE TO FINISHED GRADE. CONTRACTOR SHALL DETERMINE SUBGRADE FOR RIPRAP, TOPSOIL, AND CLAY CORE PLACEMENT FROM THE DETAILS

NOTE:  
SAS ACCESS ROAD - PERMANENT. ROAD SHALL BE 12-FT WIDE AND COMPOSED OF 10\"/>



**LEGEND**

|                         |      |      |
|-------------------------|------|------|
| EXISTING CONTOUR - 1-FT | ---  | 1152 |
| EXISTING CONTOUR - 5-FT | ---  | 1155 |
| PROPOSED CONTOUR - 1-FT | ---  | 1152 |
| PROPOSED CONTOUR - 5-FT | ---  | 1155 |
| SOIL BORING             | B-40 |      |
| NEW 6\"/>               |      |      |
| EXISTING WATER MAIN     | W    |      |

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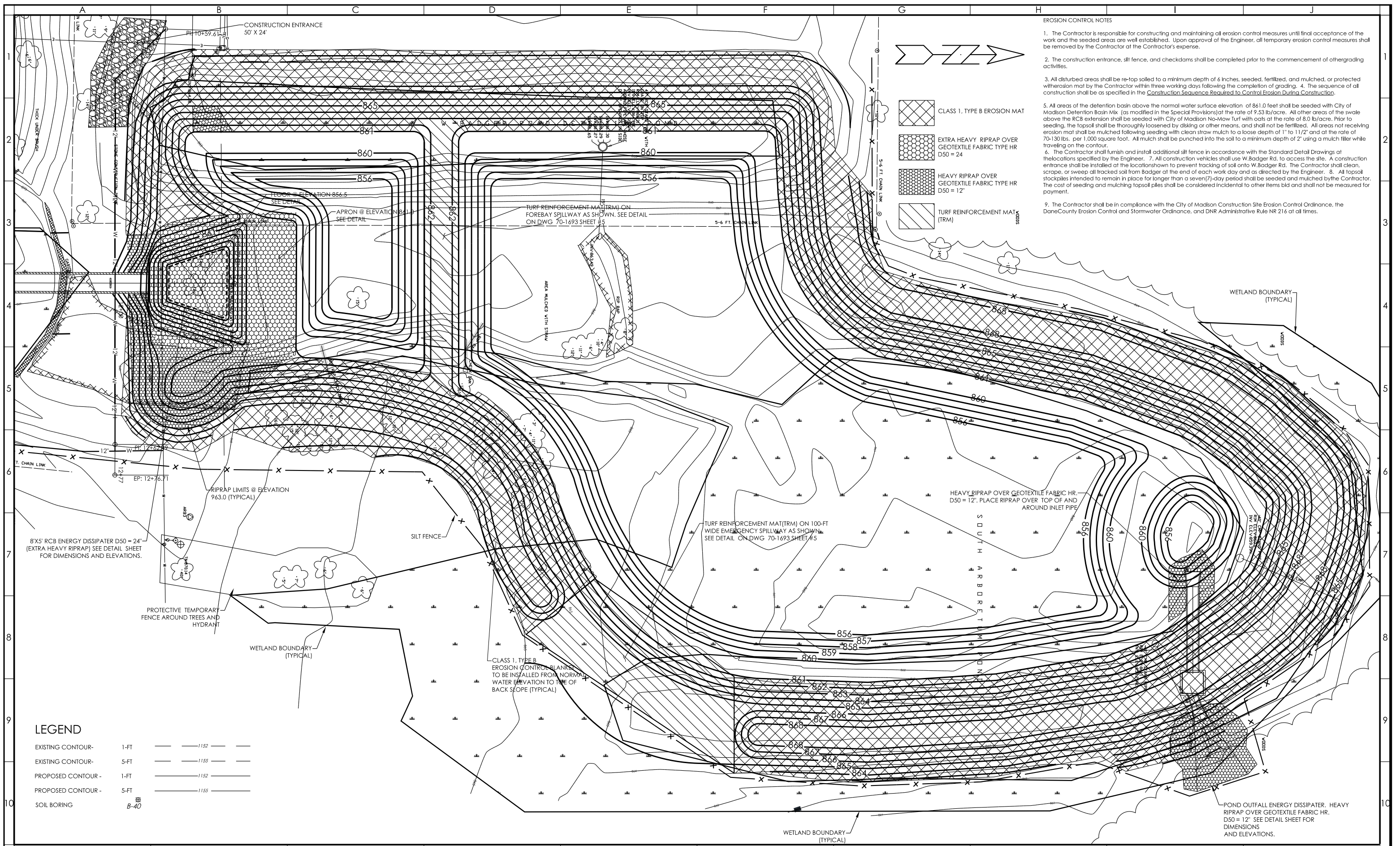
SCALE:  
HOR.: 1" = 40'  
VER.: 1" = 4'  
DATE: 6-24-11

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ELEVATION = 870.14  
(SUPPLIED BY BURSE SURVEYING & ENGINEERING SURVEY)





POND 3  
IMPROVEMENTS  
GRADING PLAN

SHEET NO: 3 OF 11  
DRAWING NO: 70-1691

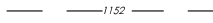
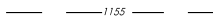
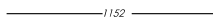
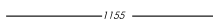





- EROSION CONTROL NOTES**
1. The Contractor is responsible for constructing and maintaining all erosion control measures until final acceptance of the work and the seeded areas are well established. Upon approval of the Engineer, all temporary erosion control measures shall be removed by the Contractor at the Contractor's expense.
  2. The construction entrance, silt fence, and checkdams shall be completed prior to the commencement of other grading activities.
  3. All disturbed areas shall be re-top soiled to a minimum depth of 6 inches, seeded, fertilized, and mulched, or protected with erosion mat by the Contractor within three working days following the completion of grading. 4. The sequence of all construction shall be as specified in the Construction Sequence Required to Control Erosion During Construction.
  5. All areas of the detention basin above the normal water surface elevation of 861.0 feet shall be seeded with City of Madison Detention Basin Mix (as modified in the Special Provisions) at the rate of 9.53 lb/acre. All other areas of the swale above the RCB extension shall be seeded with City of Madison No-Mow Turf with cuts at the rate of 8.0 lb/acre. Prior to seeding, the topsoil shall be thoroughly loosened by disking or other means, and shall not be fertilized. All areas not receiving erosion mat shall be mulched following seeding with clean straw mulch to a loose depth of 1" to 1 1/2" and at the rate of 70-130 lbs. per 1,000 square foot. All mulch shall be punched into the soil to a minimum depth of 2" using a mulch tiller while traveling on the contour.
  6. The Contractor shall furnish and install additional silt fence in accordance with the Standard Detail Drawings at the locations specified by the Engineer. 7. All construction vehicles shall use W. Badger Rd. to access the site. A construction entrance shall be installed at the location shown to prevent tracking of soil onto W. Badger Rd. The Contractor shall clean, scrape, or sweep all tracked soil from Badger at the end of each work day and as directed by the Engineer. 8. All topsoil stockpiles intended to remain in place for longer than a seven(7)-day period shall be seeded and mulched by the Contractor. The cost of seeding and mulching topsoil piles shall be considered incidental to other items bid and shall not be measured for payment.
  9. The Contractor shall be in compliance with the City of Madison Construction Site Erosion Control Ordinance, the Dane County Erosion Control and Stormwater Ordinance, and DNR Administrative Rule NR 216 at all times.

-  CLASS 1, TYPE B EROSION MAT
-  EXTRA HEAVY RIPRAP OVER GEOTEXTILE FABRIC TYPE HR D50 = 24
-  HEAVY RIPRAP OVER GEOTEXTILE FABRIC TYPE HR D50 = 12
-  TURF REINFORCEMENT MAT (TRM)

**LEGEND**

|                    |      |   |      |
|--------------------|------|---|------|
| EXISTING CONTOUR - | 1-FT |  | 1152 |
| EXISTING CONTOUR - | 5-FT |  | 1155 |
| PROPOSED CONTOUR - | 1-FT |  | 1152 |
| PROPOSED CONTOUR - | 5-FT |  | 1155 |
| SOIL BORING        |      |  | B-40 |

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| 3   | 11-15-12 | POND CONFIG.  | JRR   |

**CITY OF MADISON**  
C/O TIM TROESTER  
210 MARTIN LUTHER KING JR. BLVD ROOM 210  
608-267-1995

**POND 3 - UW ARBORETUM**  
CITY OF MADISON, WISCONSIN

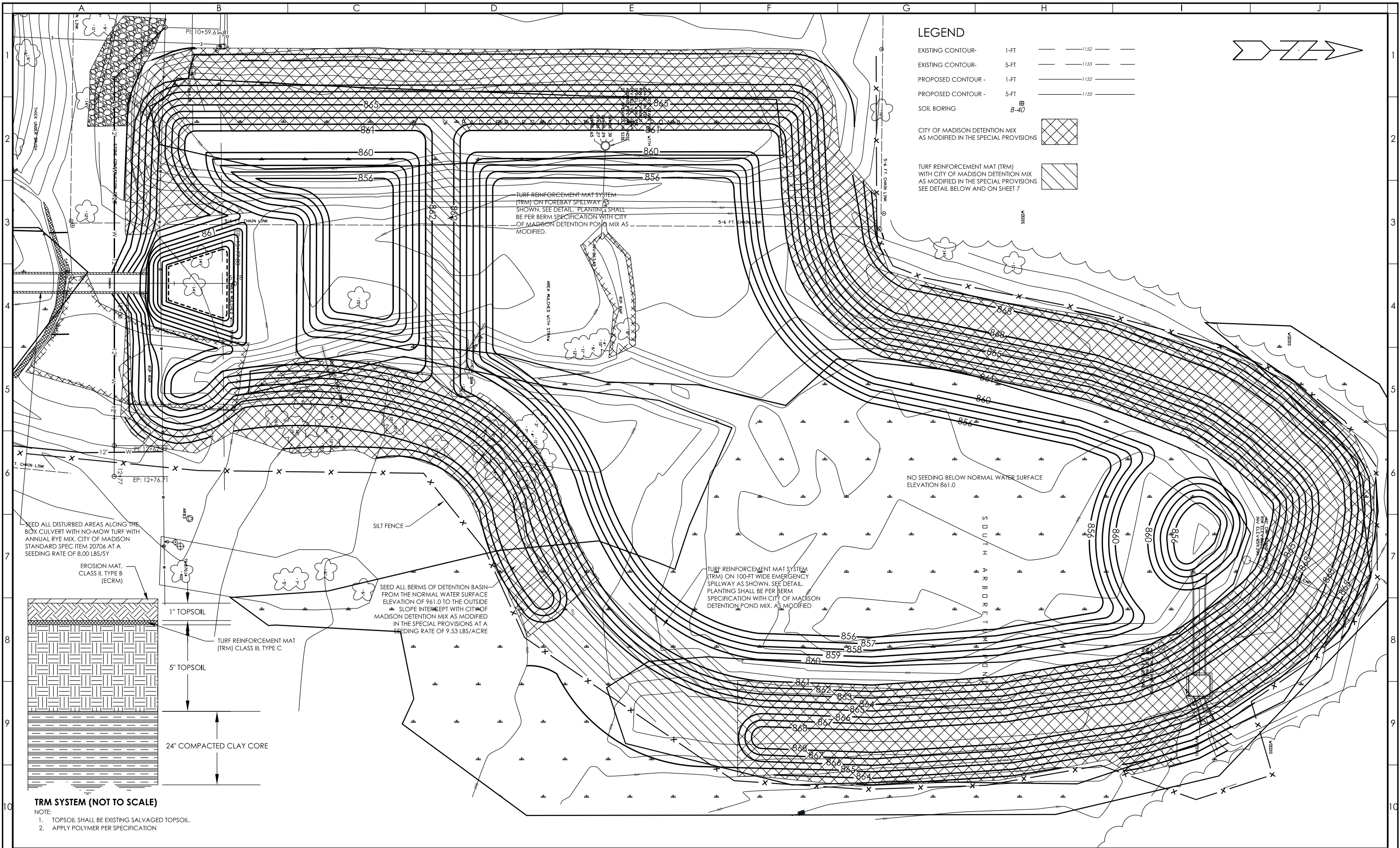
SCALE:  
HOR.: 1" = 40'  
VER.:  
DATE: 5-24-11

BENCHMARK: TOP OF OPERATING NUT OF THE FIRE HYDRANT AS SHOWN  
ELEVATION = 870.14  
(SUPPLIED BY BURSE SURVEYING & ENGINEERING SURVEY)

**POND 3 IMPROVEMENTS**  
**EROSION CONTROL PLAN**

SHEET NO: 4 OF 11  
DRAWING NO: 70-1692



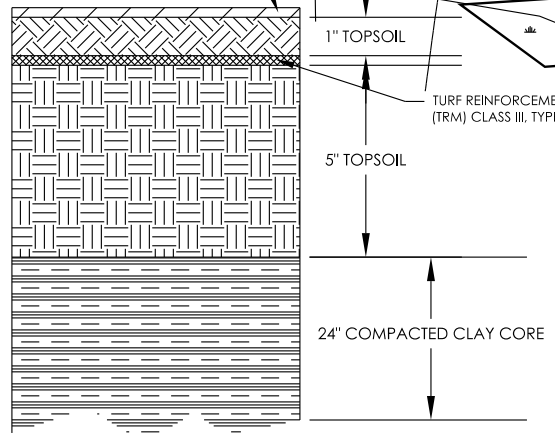


**LEGEND**

|   |     |      |
|---|-----|------|
| EXISTING CONTOUR - 1-FT   | --- | 1152 |
| EXISTING CONTOUR - 5-FT   | --- | 1155 |
| PROPOSED CONTOUR - 1-FT   | --- | 1152 |
| PROPOSED CONTOUR - 5-FT   | --- | 1155 |
| SOIL BORING   | ⊕   | B-40 |
| CITY OF MADISON DETENTION MIX AS MODIFIED IN THE SPECIAL PROVISIONS   |     |      |
| TURF REINFORCEMENT MAT (TRM) WITH CITY OF MADISON DETENTION MIX AS MODIFIED IN THE SPECIAL PROVISIONS SEE DETAIL BELOW AND ON SHEET 7 |     |      |

SEED ALL DISTURBED AREAS ALONG THE BOX CULVERT WITH NO-MOW TURF WITH ANNUAL RYE MIX. CITY OF MADISON STANDARD SPEC ITEM 20706 AT A SEEDING RATE OF 8.00 LBS/SY

EROSION MAT, CLASS II, TYPE B (ECRM)



**TRM SYSTEM (NOT TO SCALE)**

- NOTE:
1. TOPSOIL SHALL BE EXISTING SALVAGED TOPSOIL.
  2. APPLY POLYMER PER SPECIFICATION

SEED ALL BERMS OF DETENTION BASIN FROM THE NORMAL WATER SURFACE ELEVATION OF 961.0 TO THE OUTSIDE SLOPE INTERCEPT WITH CITY OF MADISON DETENTION MIX AS MODIFIED IN THE SPECIAL PROVISIONS AT A SEEDING RATE OF 9.53 LBS/ACRE

TURF REINFORCEMENT MAT SYSTEM (TRM) ON 100-FT WIDE EMERGENCY SPILLWAY AS SHOWN. SEE DETAIL. PLANTING SHALL BE PER BERM SPECIFICATION WITH CITY OF MADISON DETENTION POND MIX. AS MODIFIED

NO SEEDING BELOW NORMAL WATER SURFACE ELEVATION 861.0

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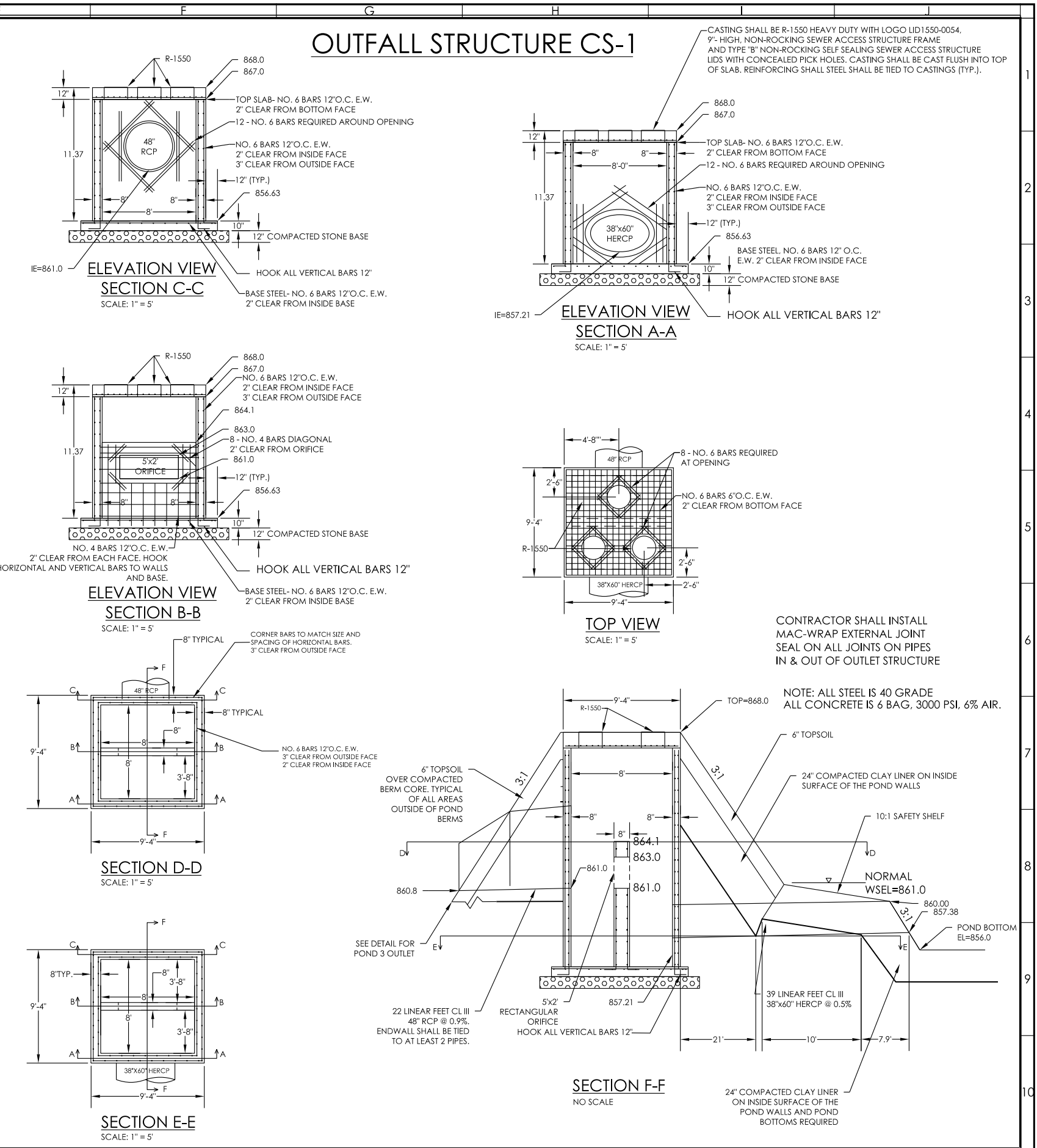
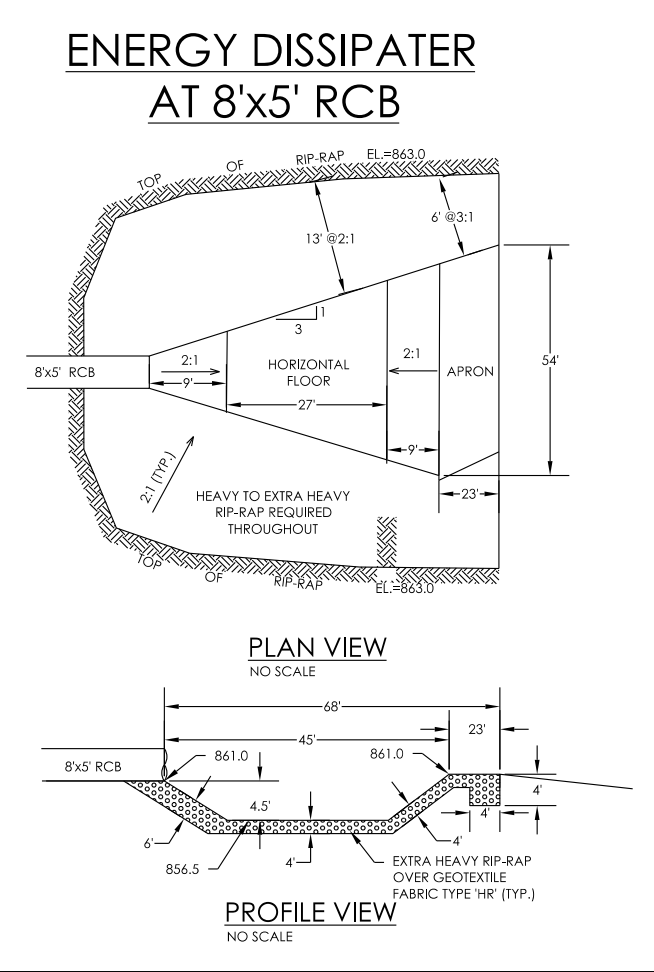
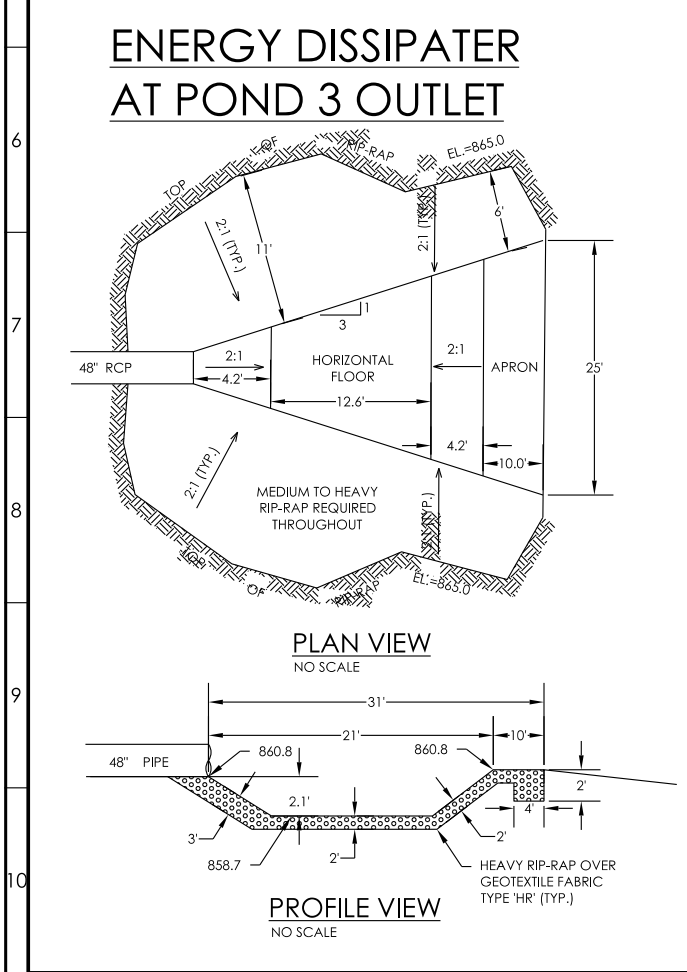
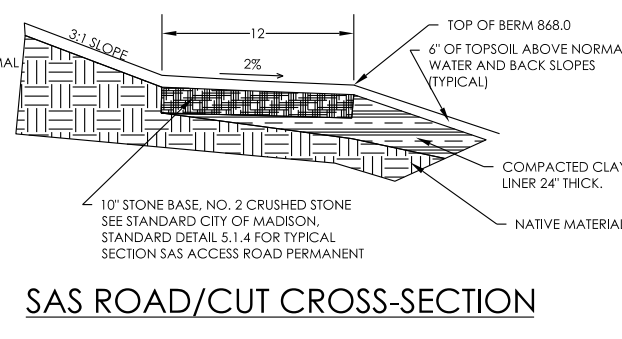
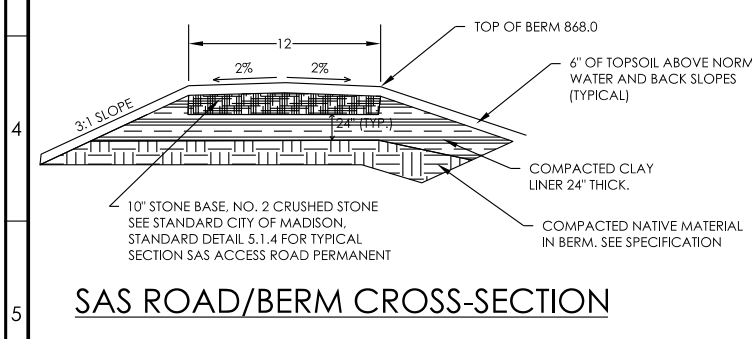
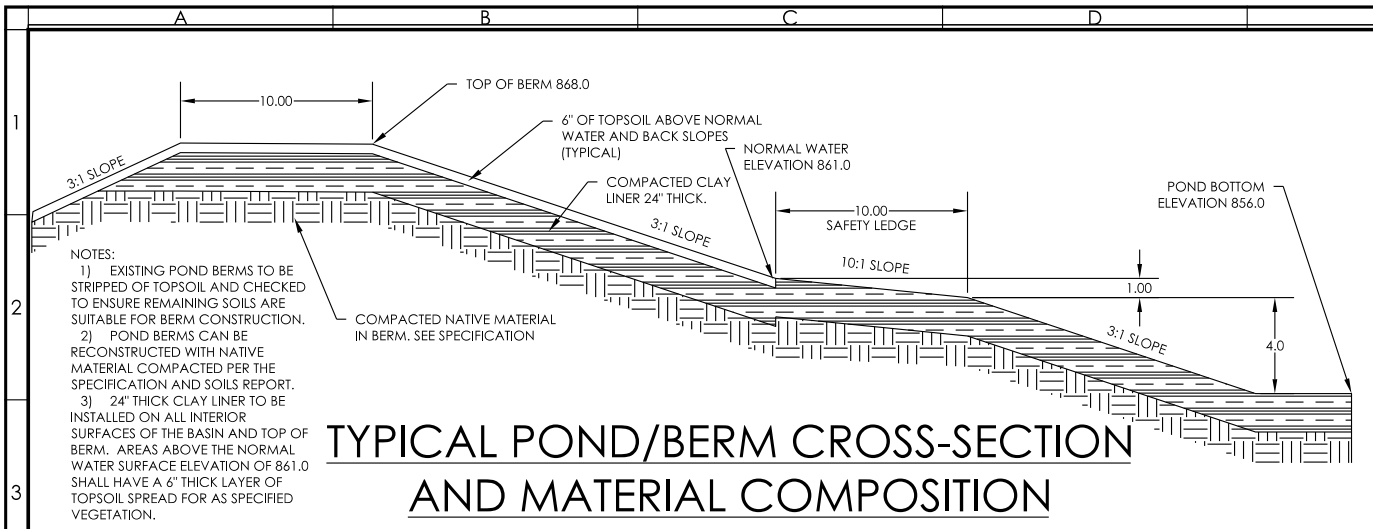
**POND 3 - UW ARBORETUM**  
CITY OF MADISON, WISCONSIN

SCALE:  
HOR.: 1" = 40'  
VER.:  
DATE: 6-24-11

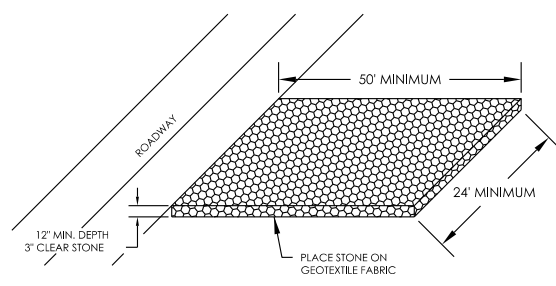
BENCHMARK: TOP OF OPERATING NUT OF THE FIRE HYDRANT AS SHOWN ELEVATION = 870.14 (SUPPLIED BY BURSE SURVEYING & ENGINEERING SURVEY)

**POND 3 IMPROVEMENTS PLANTING PLAN**

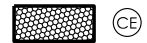
SHEET NO: 5 of 11  
DRAWING NO: 70-1693



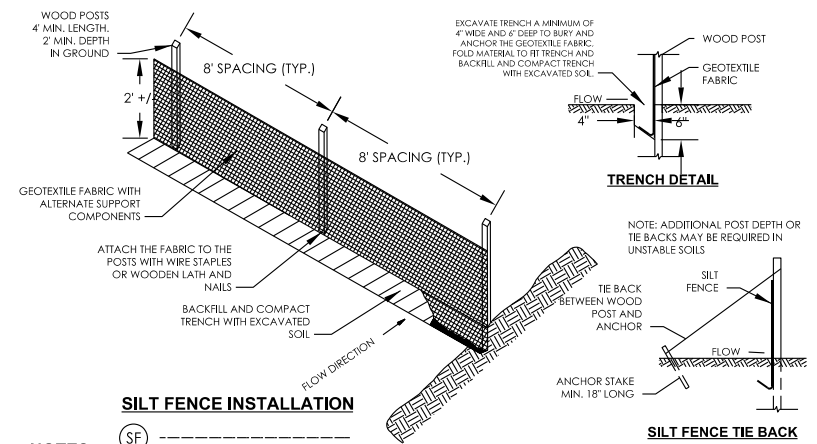
| NO. | DATE     | REVISION      | INIT. |
|-----|----------|---------------|-------|
| 1   | 7-6-12   | CITY COMMENTS | RSW   |
| 2   | 11-15-12 | POND CONFIG.  | JRR   |



**STONE CONSTRUCTION ENTRANCE**



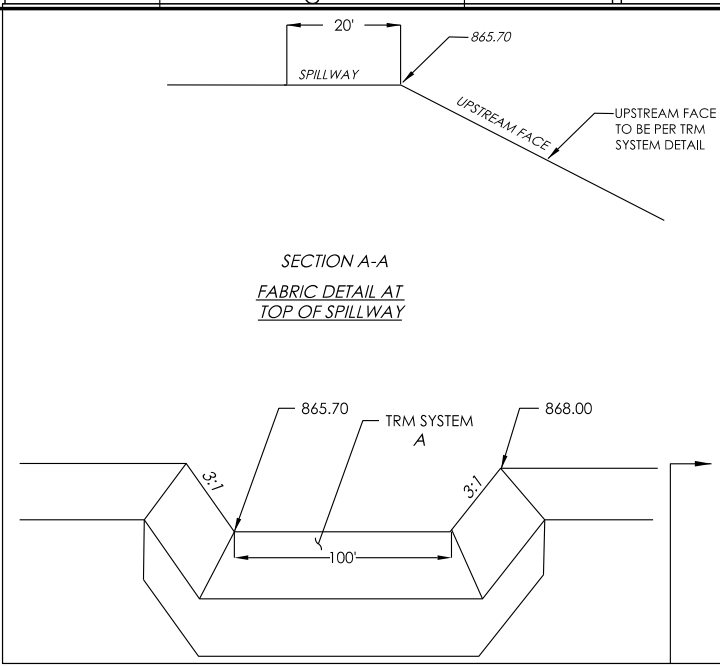
**NOTE:**  
A CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLAN TO PREVENT TRACKING OF SOIL ONTO EXISTING STREETS AND ROADS. THE CONTRACTOR SHALL CLEAN, SCRAPE OR SWEEP ALL TRACKED SOIL FROM SAID ROADWAYS AT THE END OF EACH WORK DAY AND AS DIRECTED BY THE ENGINEER.



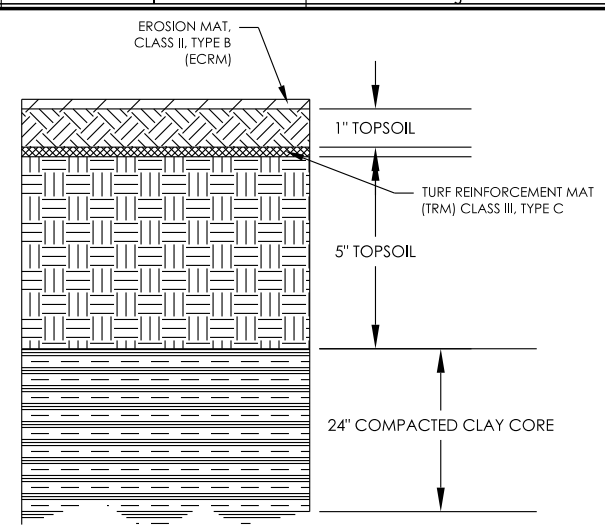
**SILT FENCE INSTALLATION**



- NOTES:**
1. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
  2. WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE WITH THE ENDS POINTING UP-SLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.
  3. EXCAVATE A TRENCH A MINIMUM OF 4' WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
  4. GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 3/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.



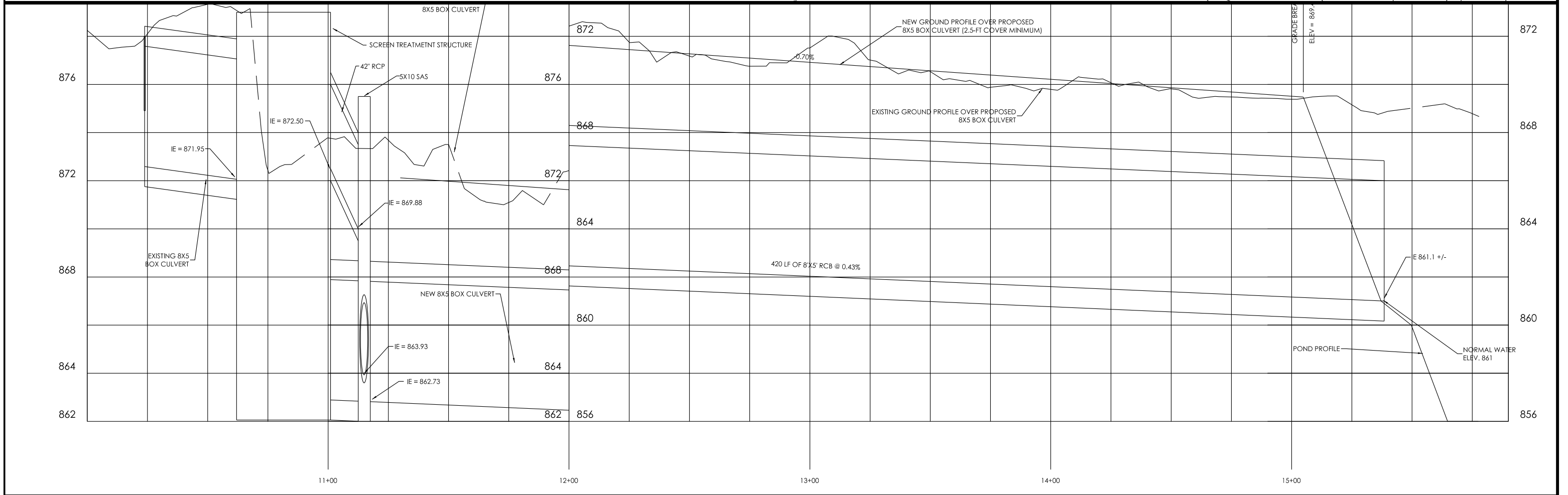
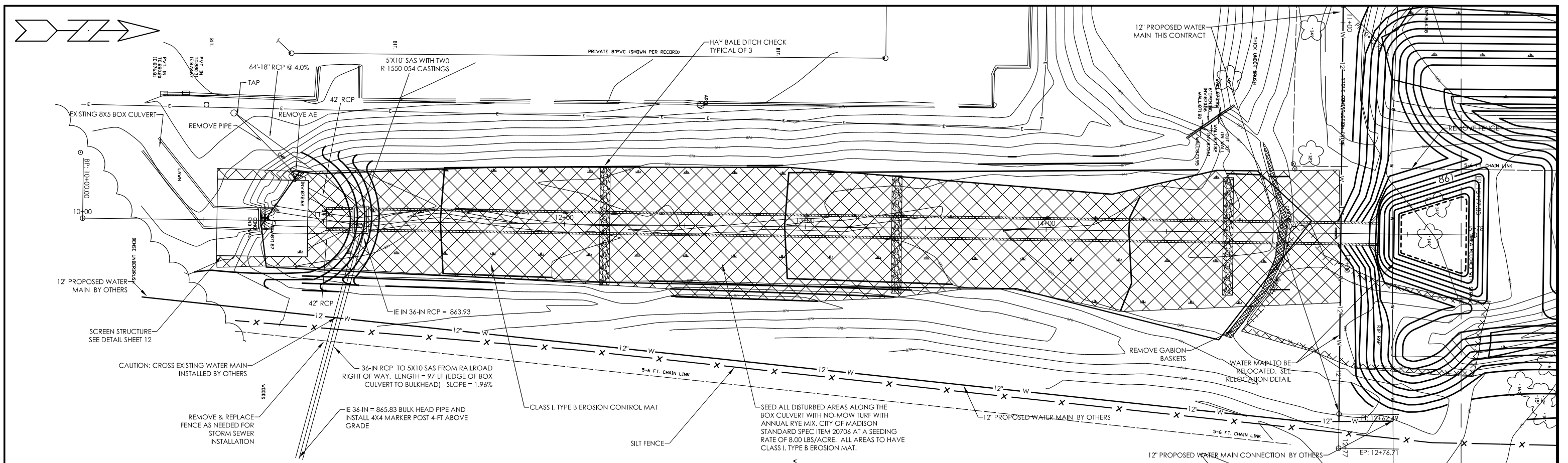
**SECTION A-A  
FABRIC DETAIL AT  
TOP OF SPILLWAY**



**TRM SYSTEM (NOT TO SCALE)**

- NOTE:**
1. TOPSOIL SHALL BE EXISTING SALVAGED TOPSOIL.
  2. APPLY POLYMER PER SPECIFICATION

| <b>HELD ENGINEERING ASSOCIATES, INC.</b><br>MADISON, WISCONSIN<br>(608) 833-7373 FAX (608) 833-3527 |          | <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION</th> <th>INIT.</th> </tr> <tr> <td>1</td> <td>7-6-12</td> <td>CITY COMMENTS</td> <td>RSW</td> </tr> <tr> <td>2</td> <td>11-15-12</td> <td>POND CONFIG.</td> <td>JRR</td> </tr> </table> | NO.   | DATE | REVISION | INIT. | 1 | 7-6-12 | CITY COMMENTS | RSW | 2 | 11-15-12 | POND CONFIG. | JRR | <b>CITY OF MADISON</b><br>C/O TIM TROESTER<br>210 MARTIN LUTHER KING JR. BLVD ROOM 210<br>608-267-1995 | <b>POND 3 - UW ARBORETUM</b><br>CITY OF MADISON, WISCONSIN | DATE: 6-24-11 | <b>POND 3<br/>DROP STRUCTURE DETAILS</b> | SHEET NO:<br>7 OF 11<br>DRAWING NO:<br>70-1695 |
|---|----------|---|-------|------|----------|-------|---|--------|---------------|-----|---|----------|--------------|-----|--|--|---------------|--|--|
| NO.   | DATE     | REVISION  | INIT. |      |          |       |   |        |               |     |   |          |              |     |  |  |               |  |  |
| 1   | 7-6-12   | CITY COMMENTS   | RSW   |      |          |       |   |        |               |     |   |          |              |     |  |  |               |  |  |
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**CITY OF MADISON**  
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 210 MARTIN LUTHER KING JR. BLVD ROOM 210  
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**POND 3 - UW ARBORETUM**  
 CITY OF MADISON, WISCONSIN

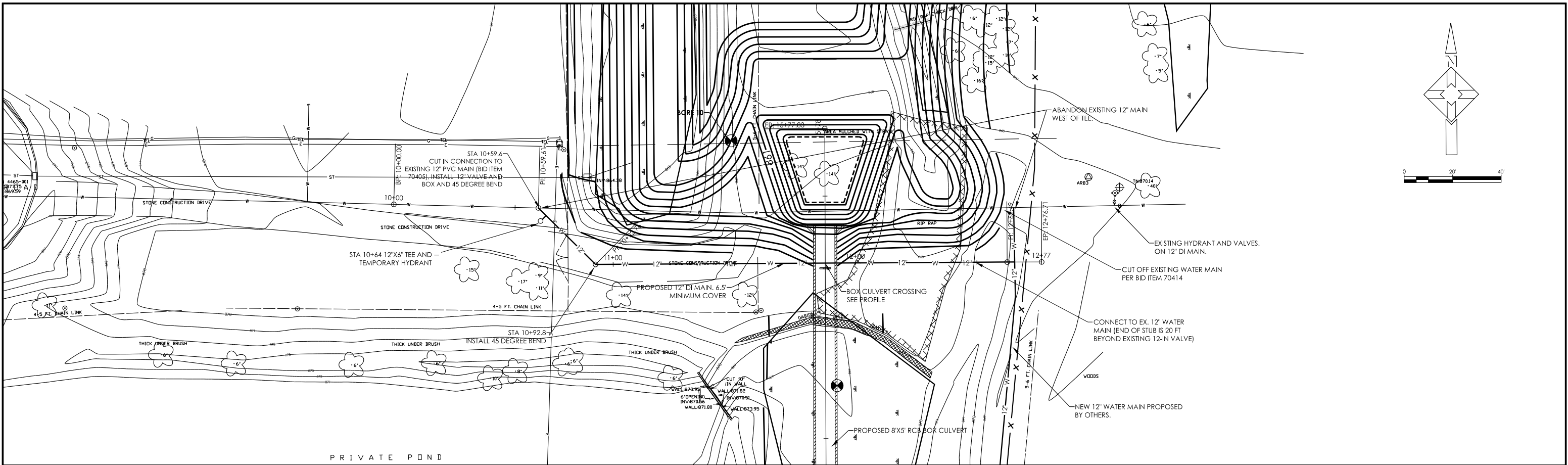
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BENCHMARK: TOP OF OPERATING NUT  
 OF THE FIRE HYDRANT AS SHOWN  
 ELEVATION = 870.14  
 (SUPPLIED BY BURSE SURVEYING &  
 ENGINEERING SURVEY)

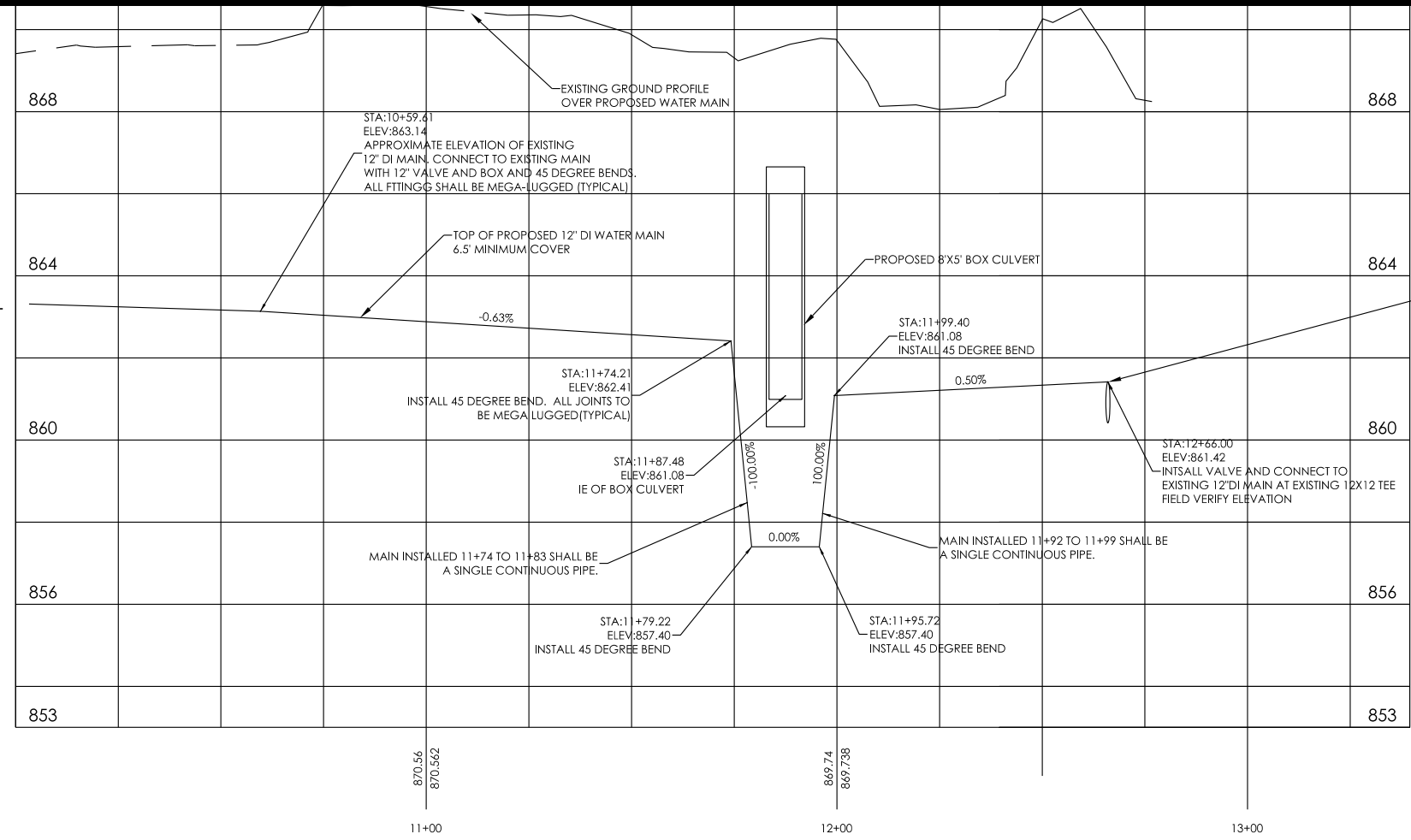
**POND 3  
 CONVEYANCE & EROSION  
 CONTROL IMPROVEMENTS**

SHEET NO: 8 OF 11  
 DRAWING NO: 70-1696





NOTE: RELOCATED WATER MAIN WILL NEED TO BE FLUSHED. INSTALL & REMOVE TEMPORARY HYDRANT PER BID ITEM 90160 IN ORDER TO TEST THE NEW WATER MAIN A 12"x6" TEE AND TEMPORARY HYDRANT SHALL BE REMOVED AND THE TEE SHALL BE PLUGGED WITH A 6" MECHANICAL JOINT PLUG. ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE.



HELD ENGINEERING ASSOCIATES, INC.  
MADISON, WISCONSIN  
(608) 833-7373 FAX (608) 833-3527

| NO. | DATE     | REVISION      | INIT. |
|-----|----------|---------------|-------|
| 1   | 1-6-12   | CITY COMMENTS | RSW   |
| 2   | 1-22-12  | WATER MAIN    | RSW   |
| 3   | 11-15-12 | POND CONFIG.  | JRR   |

CITY OF MADISON  
C/O TIM TROESTER  
210 MARTIN LUTHER KING JR. BLVD ROOM 210  
608-267-1995

POND 3 - UW ARBORETUM  
CITY OF MADISON, WISCONSIN

SCALE:  
HOR.: 1" = 40'  
VER.: 1" = 4'  
DATE: 6-24-11

BENCHMARK: TOP OF OPERATING NUT OF THE FIRE HYDRANT AS SHOWN  
ELEVATION = 870.14  
(SUPPLIED BY BURSE SURVEYING & ENGINEERING SURVEY)

POND 3  
WATER MAIN RELOCATION

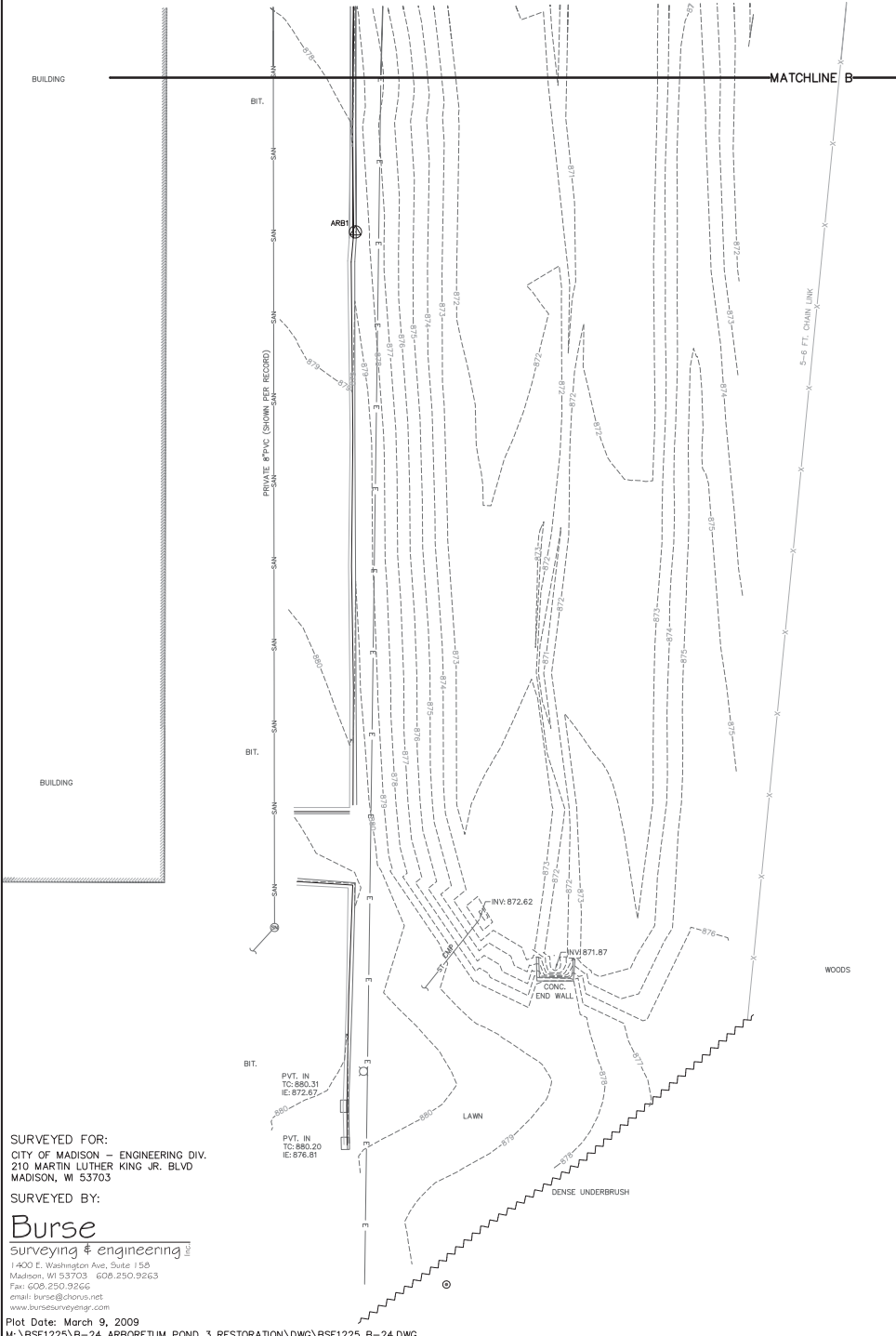
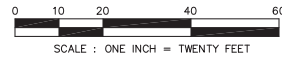
SHEET NO.: 9 OF 11  
DRAWING NO.: 70-1697

**GRID NORTH**  
 BEARINGS ARE BASED ON THE  
 WISCONSIN COUNTY COORDINATE  
 SYSTEM DATE ZONE 03 1987

| LEGEND |                    |   |                           |
|--------|--------------------|---|---------------------------|
| —○—    | OVERHEAD UTILITY   | ⊙ | FIRE HYDRANT              |
| —○—    | BURIED GAS MAIN    | ⊙ | IRON PIPE OR STAKE FOUND  |
| —W—    | WATER MAIN         | □ | STORM SEWER STRUCTURE     |
| —SAN—  | SANITARY SEWER     | □ | CATCH BASIN               |
| —ST—   | STORM SEWER        | □ | STORM SEWER INLET         |
| —TEL—  | BURIED TELEPHONE   | ⊙ | ELECTRIC MANHOLE          |
| —E—    | BURIED ELECTRIC    | ⊙ | TELECOMM. MANHOLE         |
| —TV—   | BURIED CABLE TV    | ⊙ | STORM SEWER MANHOLE       |
| —FO—   | BURIED FIBER OPTIC | ⊙ | SANITARY SEWER MANHOLE    |
| ●      | WATER VALVE        | ⊙ | WATER UTILITY MANHOLE     |
| ●      | GAS VALVE          | ⊙ | 3" DECIDUOUS TREE         |
| TV     | CABLE TV PEDESTAL  | ⊙ | 3" CONIFEROUS TREE        |
| E      | ELECTRIC PEDESTAL  | ⊙ | CONTROL POINT             |
| TEL    | TELEPHONE PEDESTAL | ⊙ | BENCHMARK (TOP NUT HYD.)  |
| U      | UTILITY POLE       | ⊙ | BIT BITUMINOUS PAVEMENT   |
| L      | LIGHT POLE         | ⊙ | CONC CONCRETE PAVEMENT    |
| M      | MAILBOX            | ⊙ | PIN FLAG MARKED "WETLAND" |
| S      | SIGN               |   |                           |

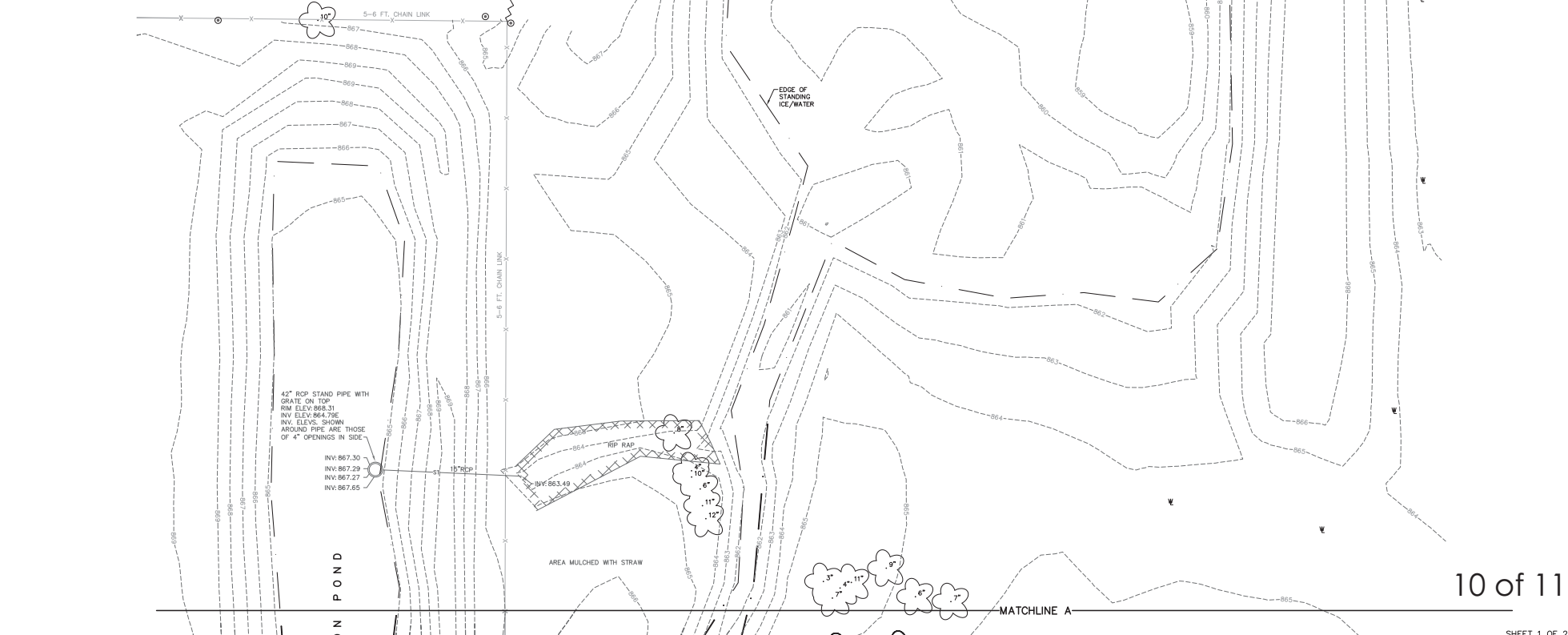
# TOPOGRAPHIC SURVEY

B-24: ARBORETUM POND: AT WEST BADGER ROAD  
 LOCATED IN THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE NORTHEAST  
 1/4 OF THE SOUTHWEST 1/4, SECTION 34, TOWNSHIP 07 NORTH, RANGE 09 EAST,  
 CITY OF MADISON, DANE COUNTY, WISCONSIN



**NOTES:**

- 1) FIELD SURVEY CONDUCTED FEBRUARY 27, 2009.
- 2) LOCATION OF PUBLIC UTILITIES, AS SHOWN HEREON, IS BASED ON THE FOLLOWING:
  - I) DIGGER'S HOTLINE TICKET NO. 20090900482. MEMBER FACILITIES WERE MARKED AS FOLLOWS:
    - TELECOMMUNICATION FACILITIES WERE APPARENTLY MARKED.
    - CITY OF MADISON ENGINEERING FACILITIES WERE MARKED.
    - CITY OF MADISON WATER UTILITY FACILITIES WERE MARKED.
    - MADISON GAS & ELECTRIC COMPANY FACILITIES WERE APPARENTLY MARKED.
  - II) UTILITY RECORDS PROVIDED BY CITY OF MADISON ENGINEERING DIVISION AND MADISON GAS & ELECTRIC CO.
  - III) APPURTENANCES, SUCH AS MANHOLES, UTILITY POLES, PEDESTALS, AND PULL BOXES.
- 3) VERTICAL LOCATION BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88), AS PROVIDED BY CITY OF MADISON.
- 4) THIS IS NOT A BOUNDARY SURVEY. THIS TOPOGRAPHIC SURVEY IS NOT INTENDED TO COMPLY WITH WISCONSIN ADMINISTRATIVE CODE A-47. THIS SURVEY AND ANY INFORMATION DERIVED HEREFROM IS INTENDED FOR THE SOLE BENEFIT AND USE OF THE CITY OF MADISON.



SURVEYED FOR:  
 CITY OF MADISON - ENGINEERING DIV.  
 210 MARTIN LUTHER KING JR. BLVD  
 MADISON, WI 53703

SURVEYED BY:  
**Burse**  
 surveying & engineering  
 1400 E. Washington Ave., Suite 150  
 Madison, WI 53703 608.250.9263  
 Fax: 608.250.9266  
 email: burse@bourse.net  
 www.bursesurveying.com

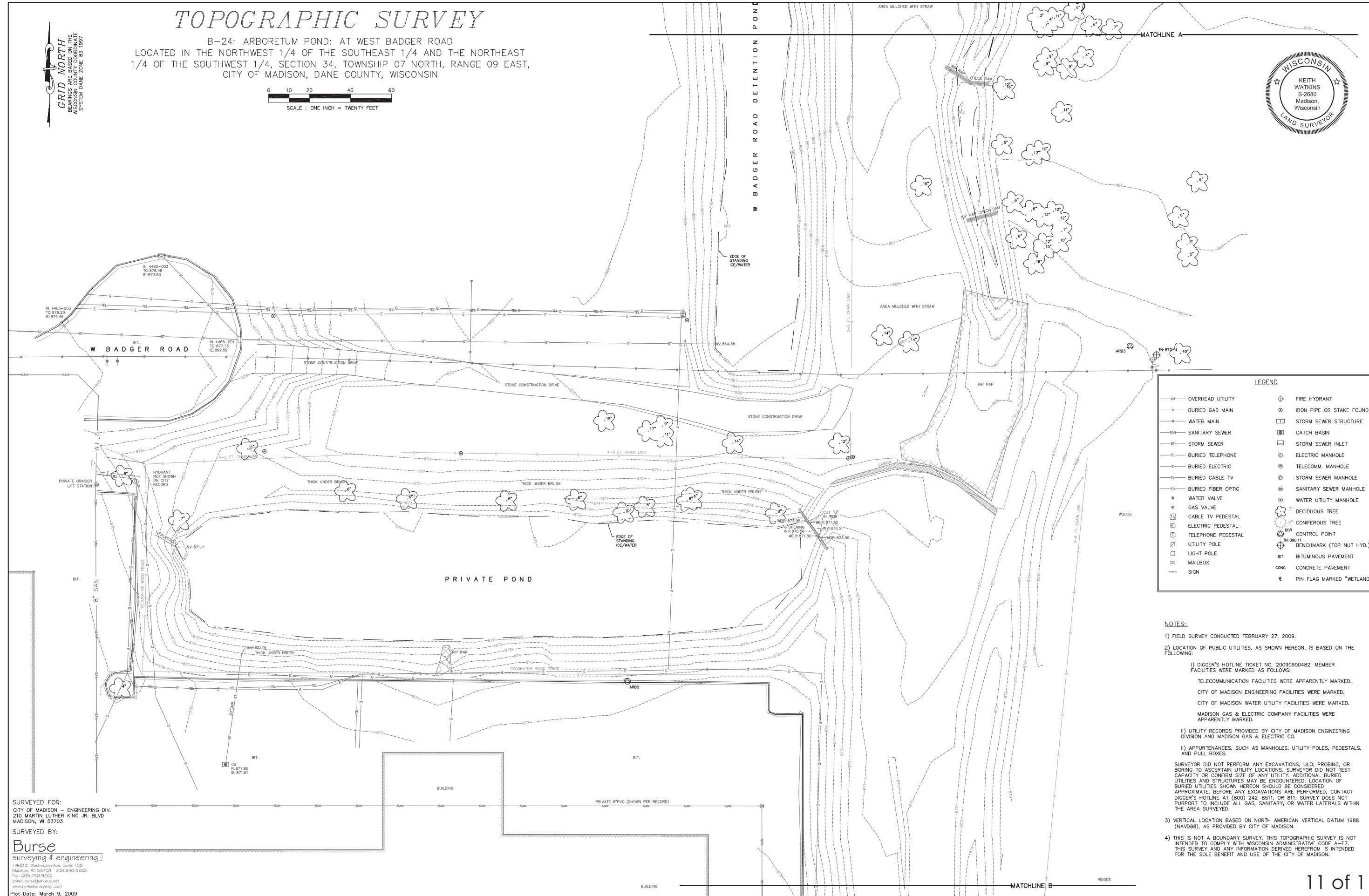
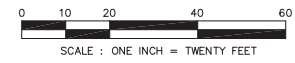
Plot Date: March 9, 2009  
 M:\BSE1225\B-24 ARBORETUM POND 3 RESTORATION\DWG\BSE1225 B-24.DWG



# TOPOGRAPHIC SURVEY

B-24: ARBORETUM POND: AT WEST BADGER ROAD  
 LOCATED IN THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE NORTHEAST  
 1/4 OF THE SOUTHWEST 1/4, SECTION 34, TOWNSHIP 07 NORTH, RANGE 09 EAST,  
 CITY OF MADISON, DANE COUNTY, WISCONSIN

GRID NORTH  
 BEARINGS ARE BASED ON THE  
 WISCONSIN COUNTY COORDINATE  
 SYSTEM DATE JUNE 05 1987



| LEGEND |                    |   |                           |
|--------|--------------------|---|---------------------------|
| —○—    | OVERHEAD UTILITY   | ⊗ | FIRE HYDRANT              |
| —○—    | BURIED GAS MAIN    | ⊗ | IRON PIPE OR STAKE FOUND  |
| —W—    | WATER MAIN         | □ | STORM SEWER STRUCTURE     |
| —SAN—  | SANITARY SEWER     | □ | CATCH BASIN               |
| —ST—   | STORM SEWER        | □ | STORM SEWER INLET         |
| —TEL—  | BURIED TELEPHONE   | ⊗ | ELECTRIC MANHOLE          |
| —E—    | BURIED ELECTRIC    | ⊗ | TELECOMM. MANHOLE         |
| —TV—   | BURIED CABLE TV    | ⊗ | STORM SEWER MANHOLE       |
| —FO—   | BURIED FIBER OPTIC | ⊗ | SANITARY SEWER MANHOLE    |
| ●      | WATER VALVE        | ⊗ | WATER UTILITY MANHOLE     |
| ●      | GAS VALVE          | ⊗ | DECIDUOUS TREE            |
| □      | CABLE TV PEDESTAL  | ⊗ | CONIFEROUS TREE           |
| □      | ELECTRIC PEDESTAL  | ⊗ | CONTROL POINT             |
| □      | TELEPHONE PEDESTAL | ⊗ | BENCHMARK (TOP NUT HYD.)  |
| □      | UTILITY POLE       | ⊗ | BIT                       |
| □      | LIGHT POLE         | ⊗ | CONC                      |
| □      | MAILBOX            | ⊗ | CONC                      |
| —      | SIGN               | ⊗ | PIN FLAG MARKED "WETLAND" |

**NOTES:**

- FIELD SURVEY CONDUCTED FEBRUARY 27, 2009.
- LOCATION OF PUBLIC UTILITIES, AS SHOWN HEREON, IS BASED ON THE FOLLOWING:
  - I) DIGGER'S HOTLINE TICKET NO. 20090900482. MEMBER FACILITIES WERE MARKED AS FOLLOWS:
    - TELECOMMUNICATION FACILITIES WERE APPARENTLY MARKED.
    - CITY OF MADISON ENGINEERING FACILITIES WERE MARKED.
    - CITY OF MADISON WATER UTILITY FACILITIES WERE MARKED.
    - MADISON GAS & ELECTRIC COMPANY FACILITIES WERE APPARENTLY MARKED.
  - II) UTILITY RECORDS PROVIDED BY CITY OF MADISON ENGINEERING DIVISION AND MADISON GAS & ELECTRIC CO.
  - III) APPURTENANCES, SUCH AS MANHOLES, UTILITY POLES, PEDESTALS, AND PULL BOXES.
- SURVEYOR DID NOT PERFORM ANY EXCAVATIONS, ULO, PROBING, OR BORING TO ASCERTAIN UTILITY LOCATIONS. SURVEYOR DID NOT TEST CAPACITY OR CONFIRM SIZE OF ANY UTILITY. ADDITIONAL BURIED UTILITIES AND STRUCTURES MAY BE ENCOUNTERED. LOCATION OF BURIED UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE. BEFORE ANY EXCAVATIONS ARE PERFORMED, CONTACT DIGGER'S HOTLINE AT (800) 242-8511, OR 811. SURVEYOR DOES NOT PURPORT TO INCLUDE ALL GAS, SANITARY, OR WATER LATERALS WITHIN THE AREA SURVEYED.
- VERTICAL LOCATION BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88), AS PROVIDED BY CITY OF MADISON.
- THIS IS NOT A BOUNDARY SURVEY. THIS TOPOGRAPHIC SURVEY IS NOT INTENDED TO COMPLY WITH WISCONSIN ADMINISTRATIVE CODE A-67. THIS SURVEY AND ANY INFORMATION DERIVED HEREFROM IS INTENDED FOR THE SOLE BENEFIT AND USE OF THE CITY OF MADISON.

SURVEYED FOR:  
 CITY OF MADISON - ENGINEERING DIV.  
 210 MARTIN LUTHER KING JR. BLVD  
 MADISON, WI 53703

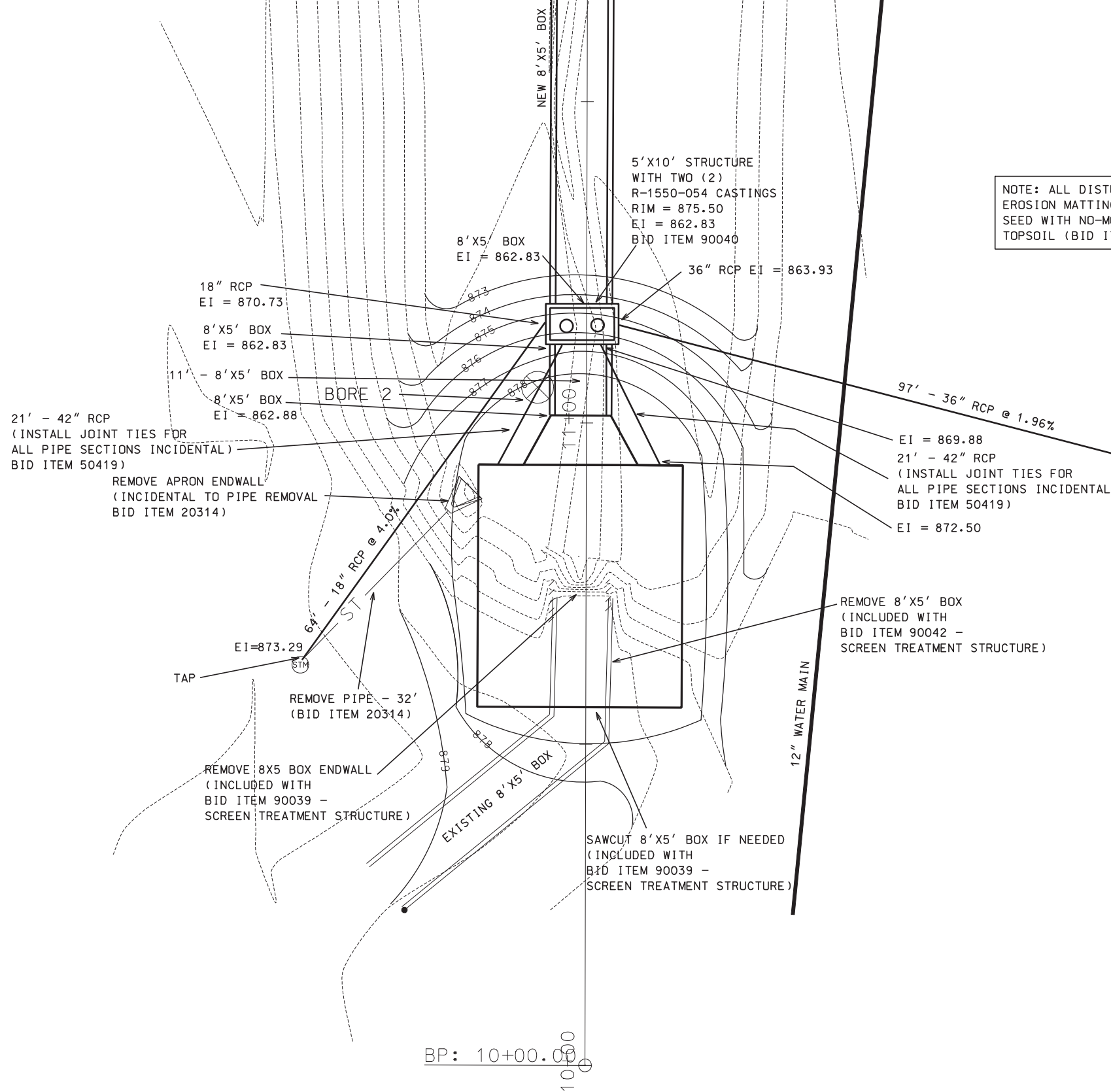
SURVEYED BY:  
**Burse**  
 surveying & engineering inc.  
 1400 E. Washington Ave., Suite 150  
 Madison, WI 53703 608.250.9263  
 Fax: 608.250.9266  
 email: burse@burseinc.net  
 www.burseinc.com

Plot Date: March 9, 2009  
 M:\BSE1225\B-24 ARBORETUM POND 3 RESTORATION\DWG\BSE1225 B-24.DWG



SCALE: 1" = 20'

PLOT SCALE: .....  
PLOT NAME: .....  
REV. DATE: .....

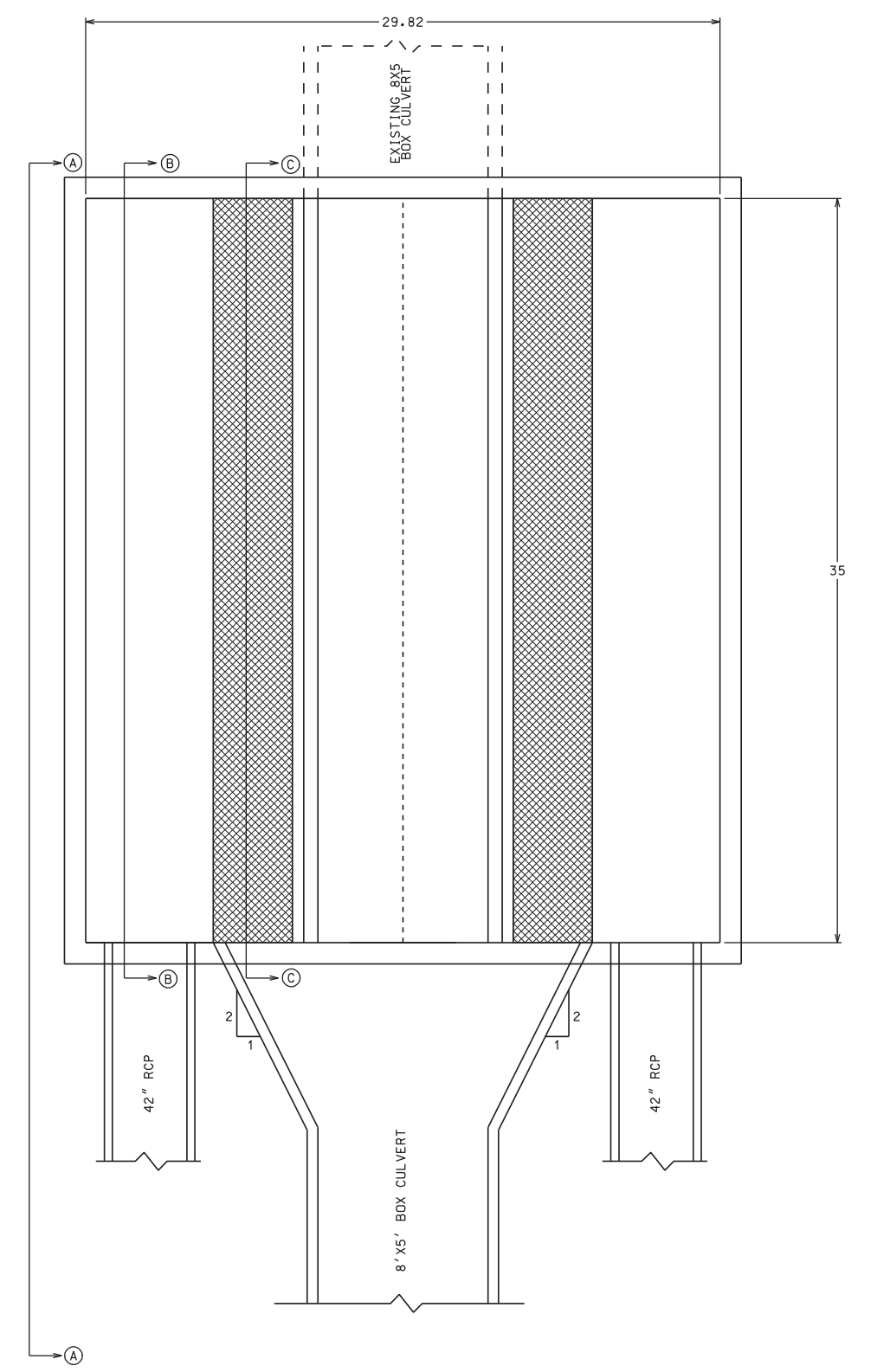
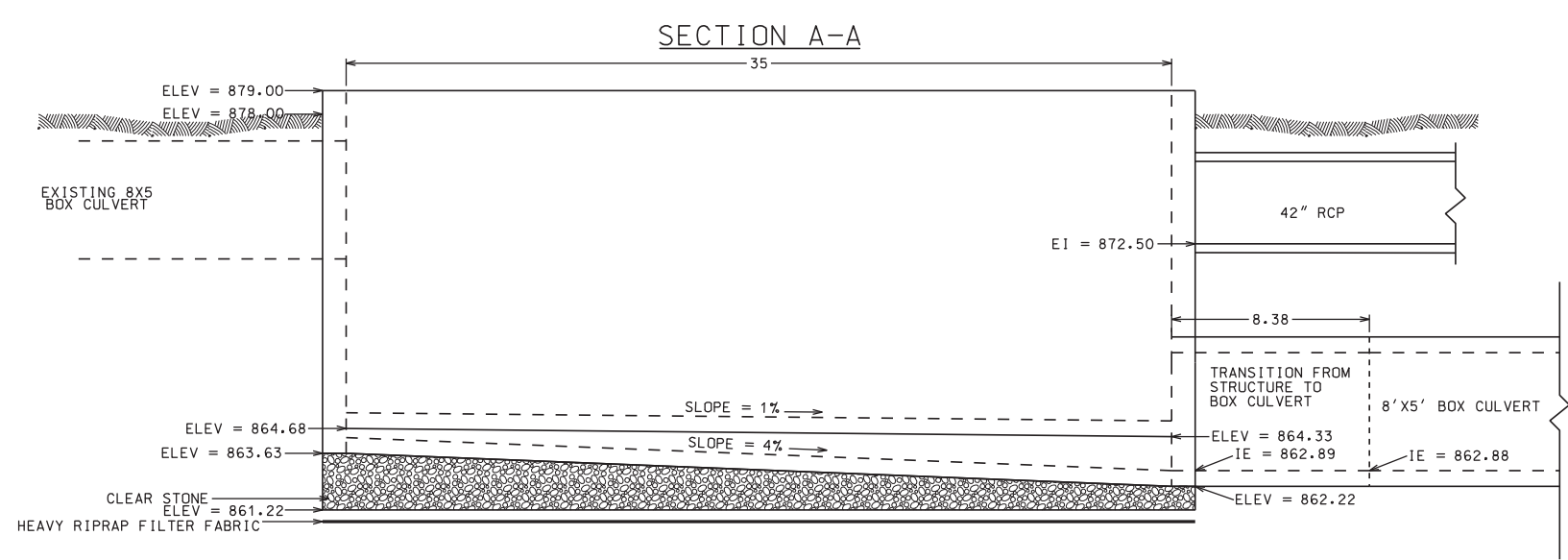
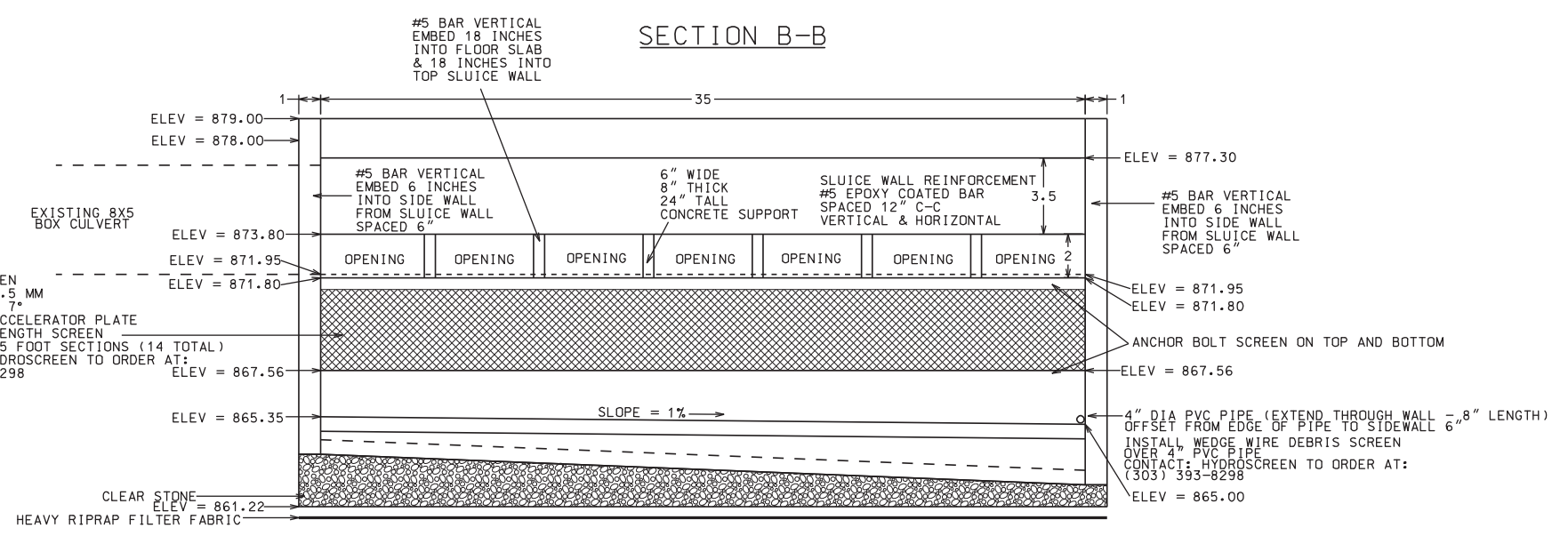
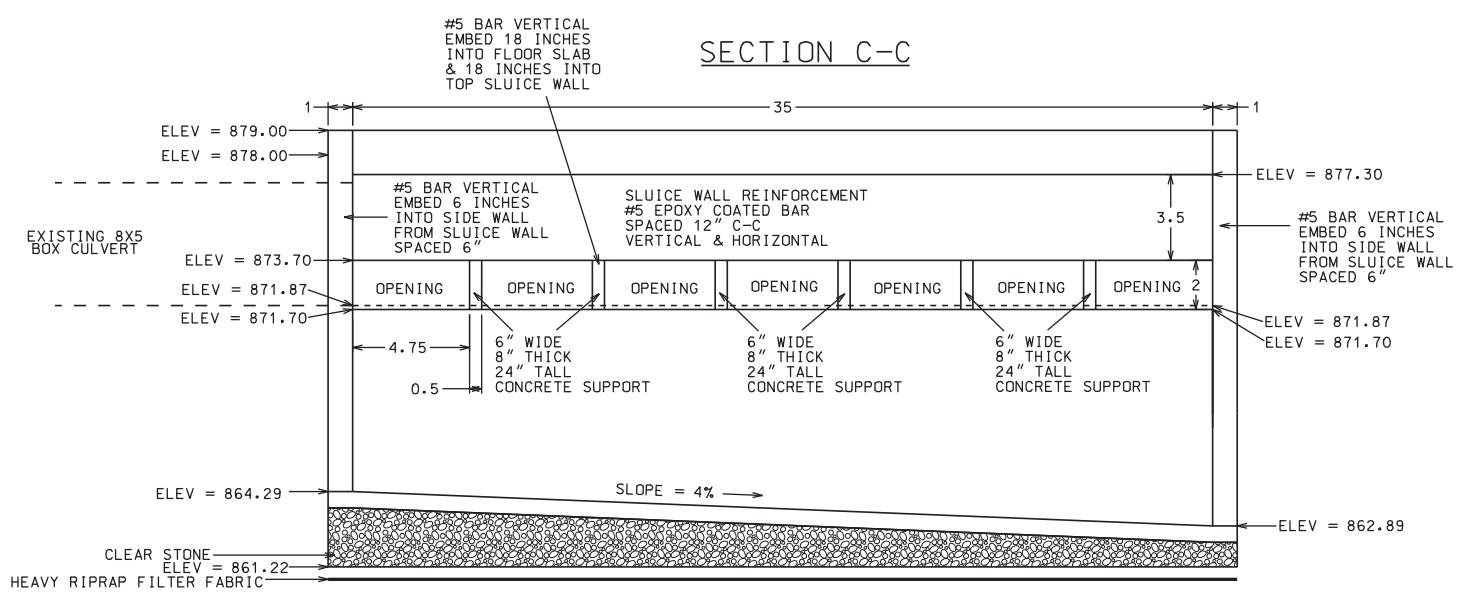


NOTE: ALL DISTURBED AREA AROUND TREATMENT STRUCTURE SHALL HAVE:  
EROSION MATTING CLASS I, TYPE B URBAN (BID ITEM 21072)  
SEED WITH NO-MOW SEEDING MIX AT RATE OF 8 LBS/SY (BID ITEM 20706)  
TOPSOIL (BID ITEM 20221)

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



DETAIL  
SCREEN TREATMENT CITY OF MADISON

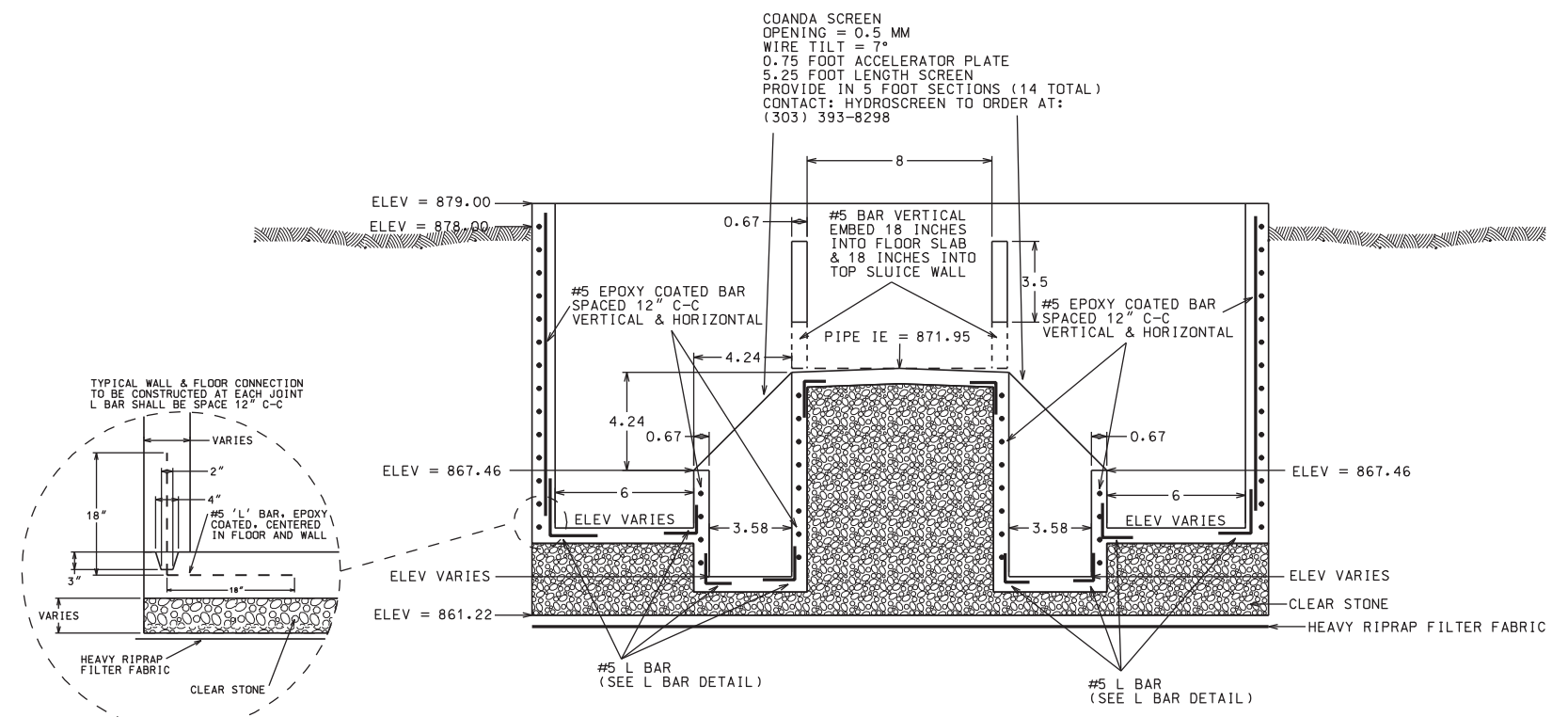


NOTE: DIMENSIONS ARE IN UNITS OF FEET

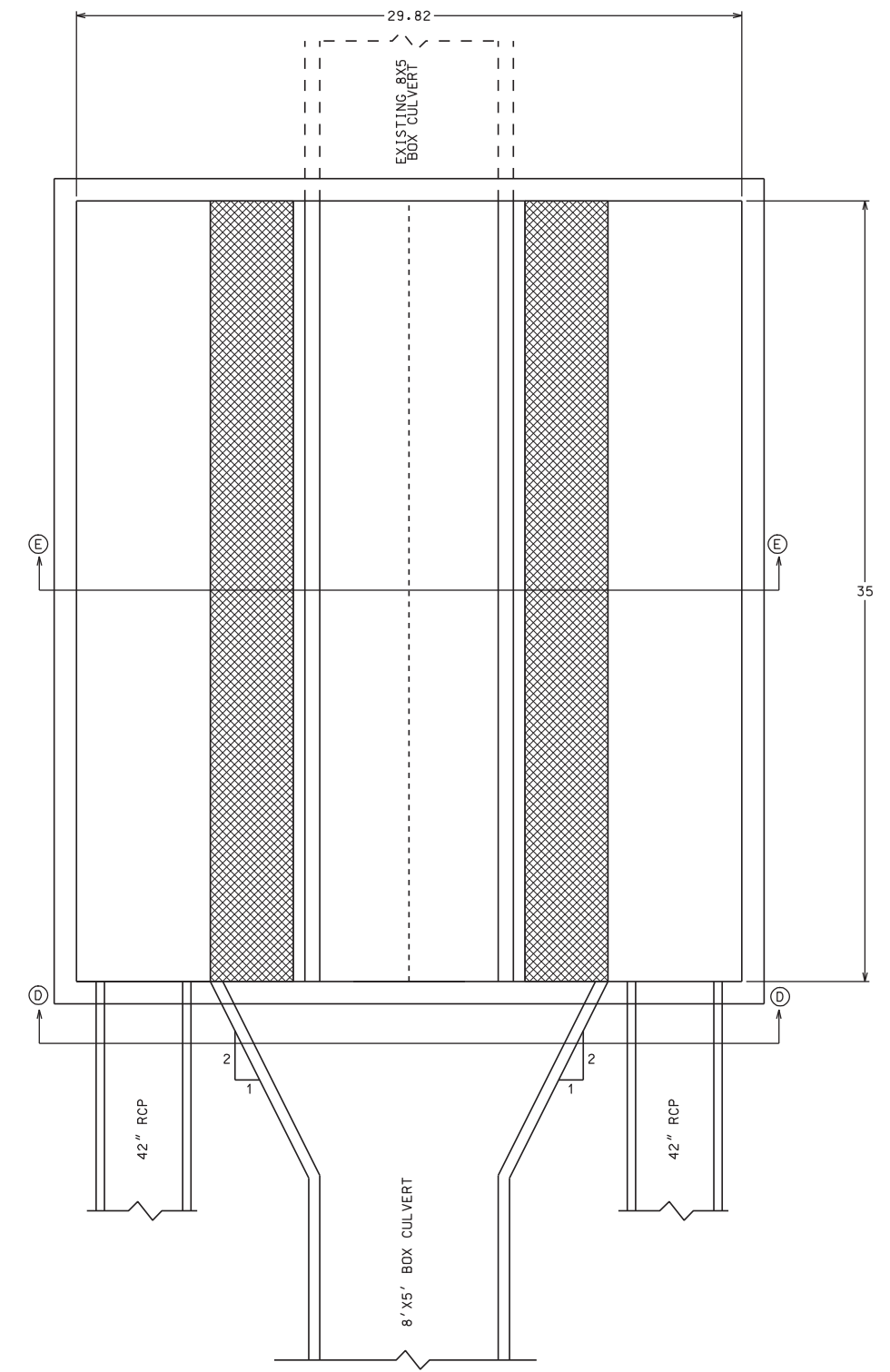
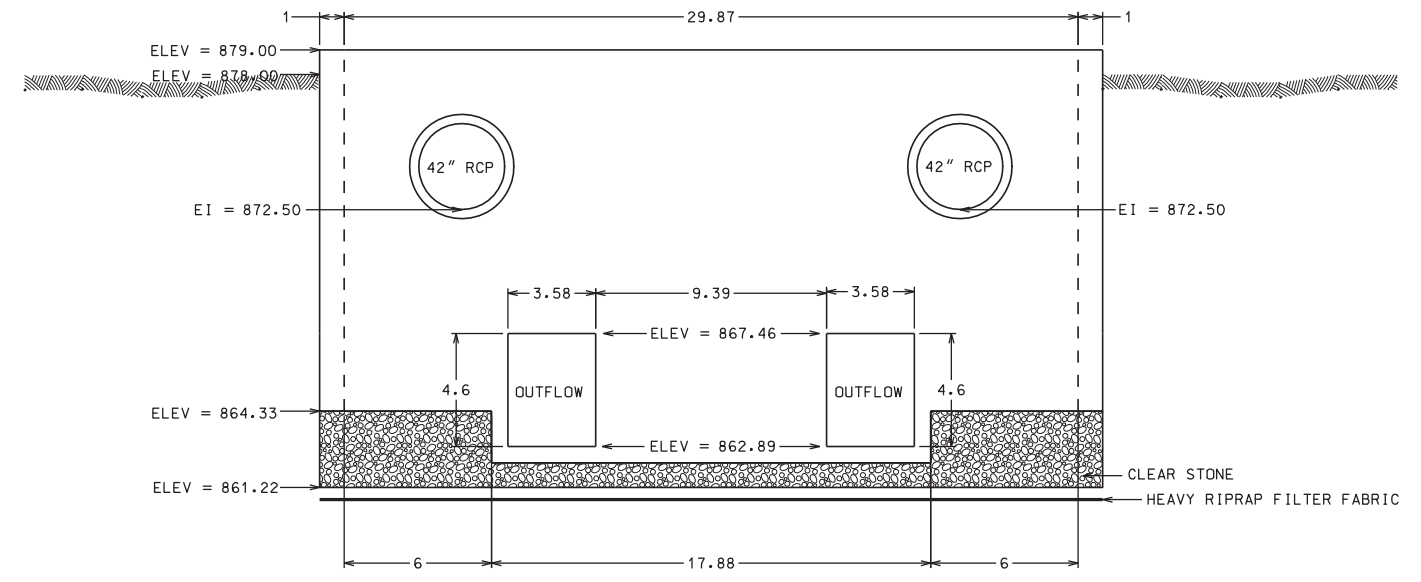
PLOT SCALE: \_\_\_\_\_  
PLOT NAME: \_\_\_\_\_  
REV. DATE: \_\_\_\_\_

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

SECTION E-E



SECTION D-D



NOTE: DIMENSIONS ARE IN UNITS OF FEET

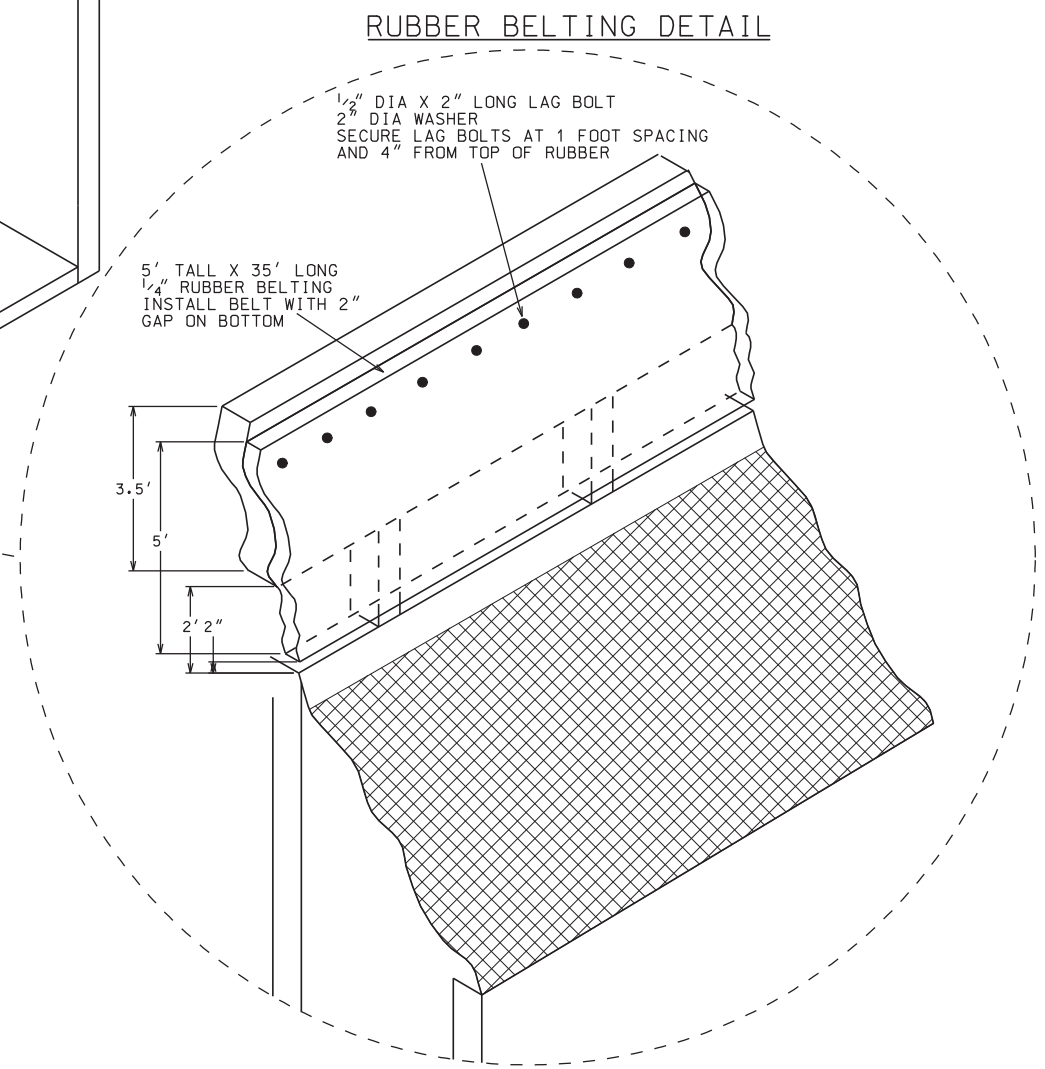
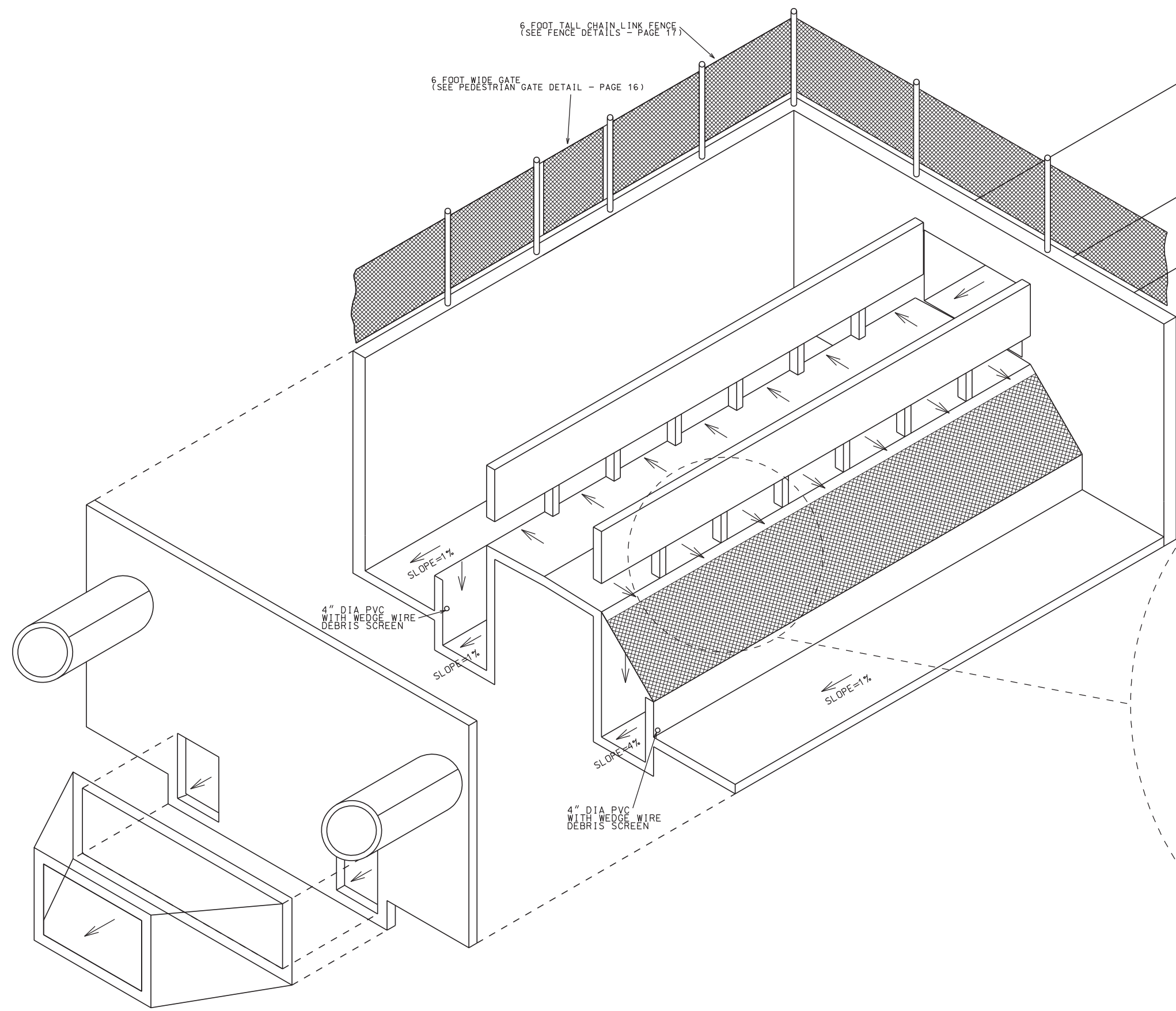
PLOT SCALE: .....  
PLOT NAME: .....  
REV. DATE: .....

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



DETAIL

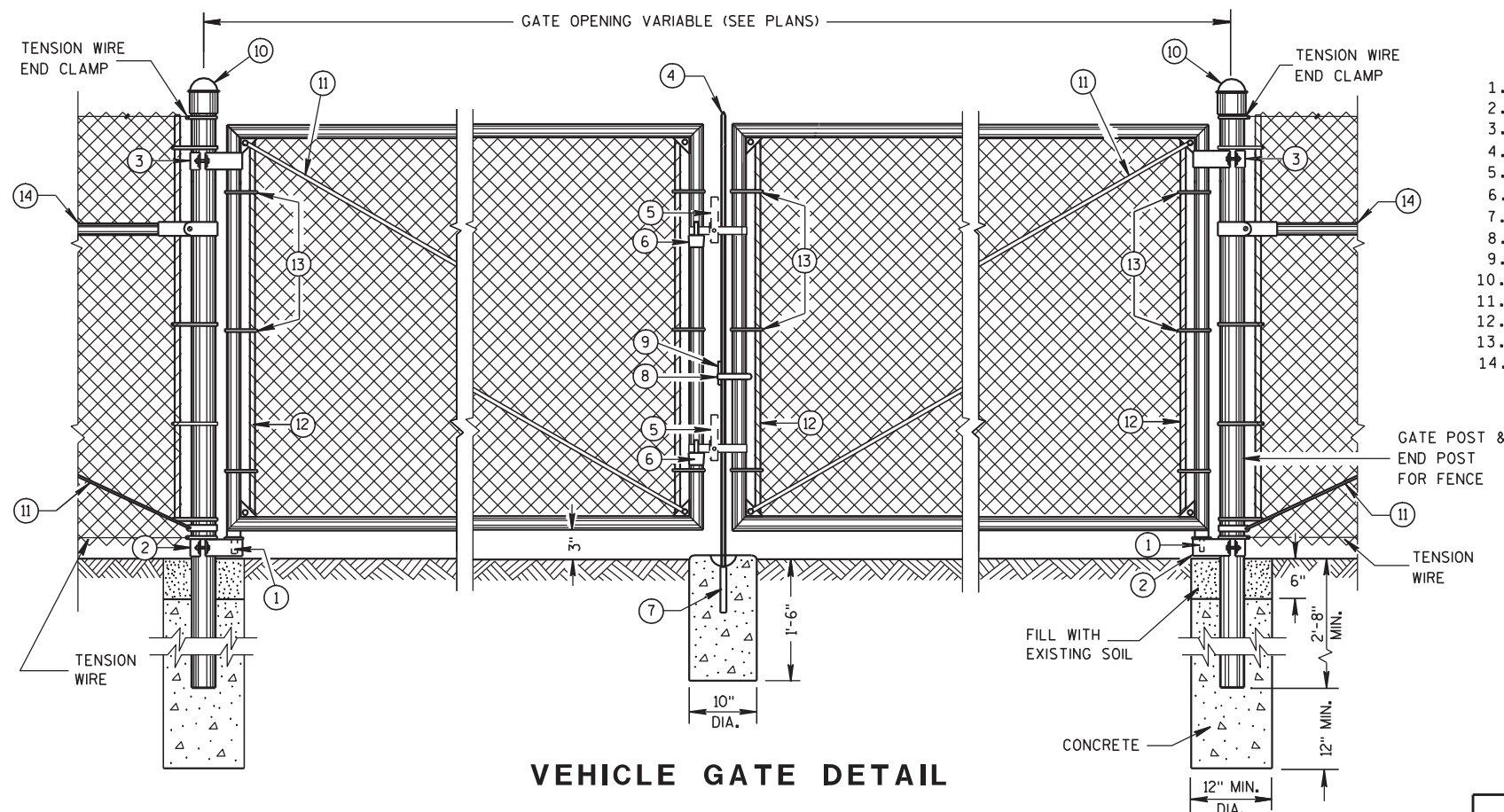
SCREEN TREATMENT CITY OF MADISON



NOTE: DIMENSIONS ARE IN UNITS OF FEET

PLOT SCALE:  
PLOT NAME:  
REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



VEHICLE GATE DETAIL

- LEGEND**
1. STRAIGHT PLUG
  2. BOTTOM HINGE
  3. TOP HINGE
  4. PLUNGER ROD
  5. FULCRUM LATCH
  6. FORK CATCH \*
  7. PLUNGER ROD CATCH
  8. LOCK KEEPER GUIDE
  9. LOCK KEEPER
  10. DOME TOPS
  11. TRUSS RODS
  12. TENSION BAR
  13. TENSION BANDS
  14. BRACE RAIL
- \*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

**GENERAL NOTES**

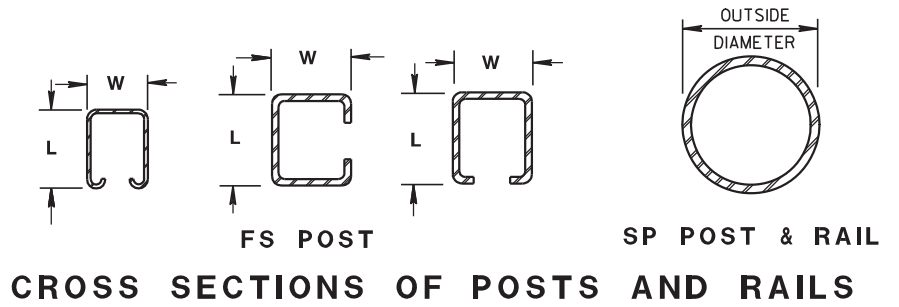
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



**SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST**

| POST TYPE | LENGTH (L) INCH | WIDTH (W) INCH | WEIGHT LBS/FT |
|-----------|-----------------|----------------|---------------|
| FS1       | 1.625           | 1.25           | 1.35          |
| FS2†      | 1.875           | 1.625          | 1.850         |
| FS2       | 1.875           | 1.625          | 2.400         |
| FS3       | 2.250           | 1.700          | 2.780         |

**SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST**

| POST TYPE | OUTSIDE DIMENSION INCH | WALL THICKNESS INCH | WEIGHT LBS/FT |
|-----------|------------------------|---------------------|---------------|
| SP1       | 1.660                  | 0.140               | 2.270         |
| SP2       | 1.900                  | 0.145               | 2.720         |
| SP3       | 2.375                  | 0.154               | 3.650         |
| SP4       | 2.875                  | 0.203               | 5.800         |
| SP5       | 4.000                  | 0.226               | 9.120         |
| SP6       | 6.625                  | 0.280               | 18.990        |
| SP7       | 8.625                  | 0.322               | 28.580        |

**REQUIRED FENCE POST SIZES**

| USE               | FABRIC HEIGHTS FEET            | POST TYPE   |
|-------------------|--------------------------------|-------------|
| TERMINAL POSTS ** | LESS THAN OR EQUAL TO 6 FT.    | SP3         |
|                   | GREATER THAN OR EQUAL TO 6 FT. | SP4         |
| LINE POSTS        | LESS THAN OR EQUAL TO 6 FT.    | SP2         |
|                   | LESS THAN OR EQUAL TO 8 FT.    | SP3         |
|                   | GREATER THAN OR EQUAL TO 8 FT. | SP4         |
|                   | LESS THAN OR EQUAL TO 8 FT.    | FS2 OR FS2† |
|                   | GREATER THAN OR EQUAL TO 8 FT. | FS3         |

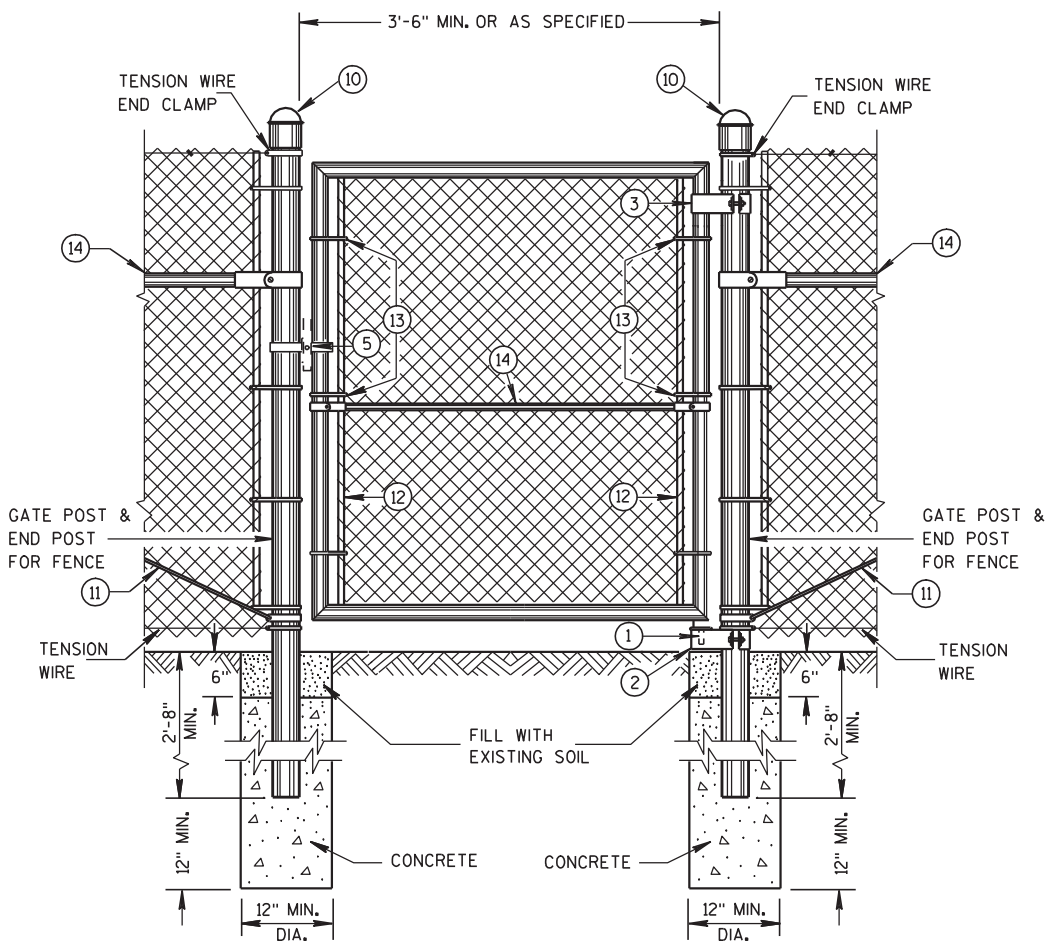
**REQUIRED POST SIZE FOR GATES**

| USE   | LEAF WIDTHS FEET             | POST TYPE |
|-------|------------------------------|-----------|
| GATES | LESS THAN OR EQUAL TO 6 FT.  | SP4       |
|       | LESS THAN OR EQUAL TO 13 FT. | SP5       |
|       | LESS THAN OR EQUAL TO 18 FT. | SP6       |
|       | LESS THAN OR EQUAL TO 23 FT. | SP7       |

**BRACE RAIL TYPES**

| USE        | TYPE       |
|------------|------------|
| BRACE RAIL | SP1 OR FS1 |

\*\* INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS



PEDESTRIAN GATE DETAIL

FENCE CHAIN LINK

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

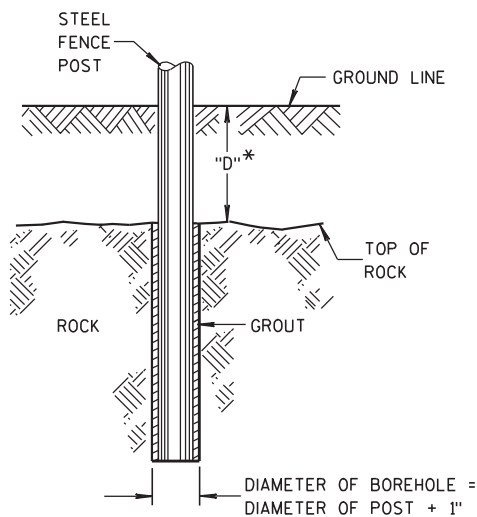
6

6

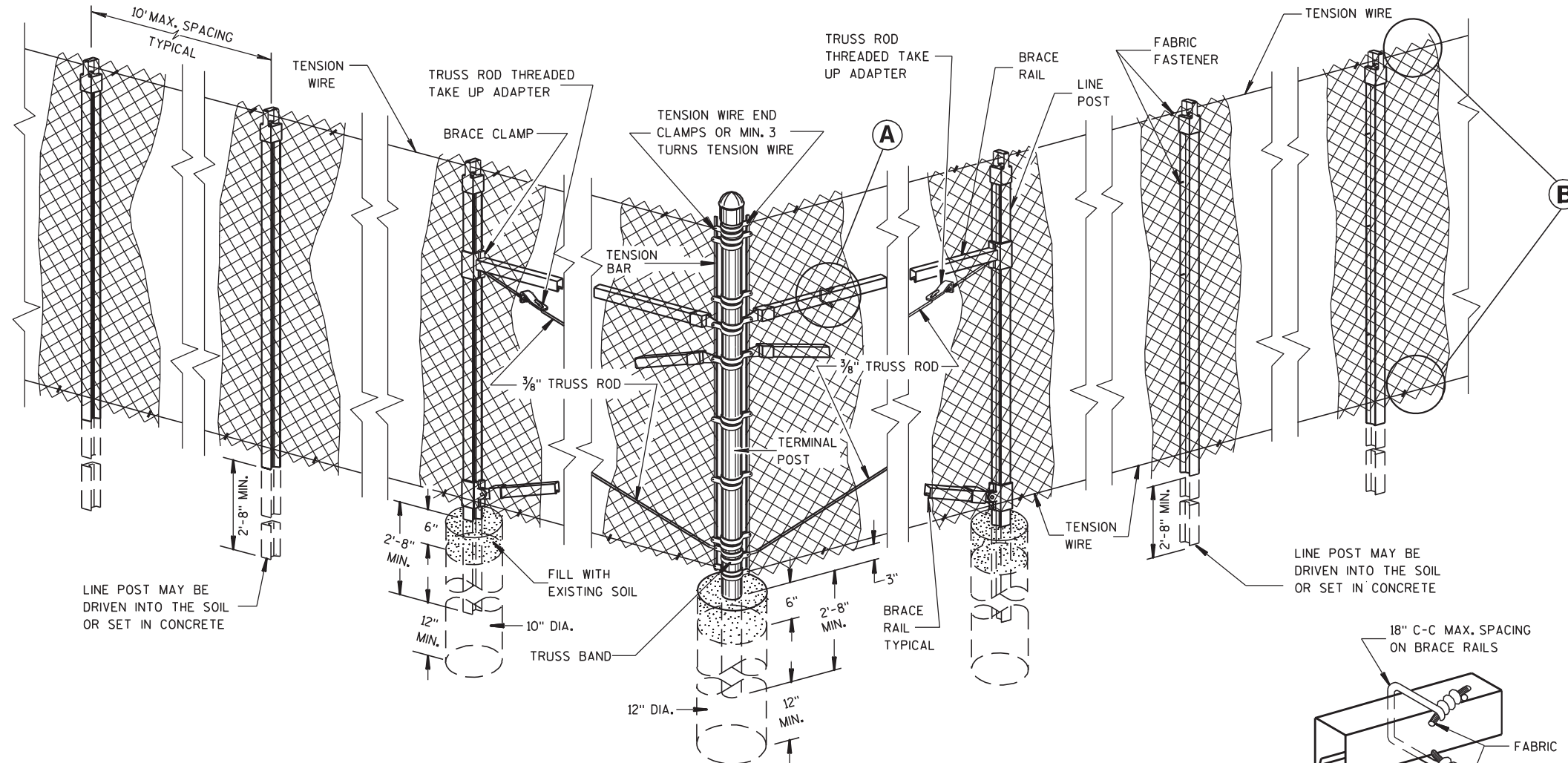
S.D.D. 15 B 3-12a

S.D.D. 15 B 3-12a

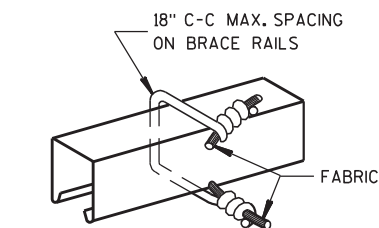




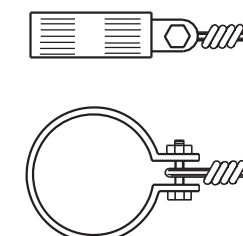
\* IF "D" IS LESS THAN 2'-6",  
DRILL ROCK AND INSTALL GROUT  
**ROCK INSTALLATION  
OF LINE POST**



**END, CORNER, ANGLE  
INTERSECTION & INTERMEDIATE  
BRACED POSTS**

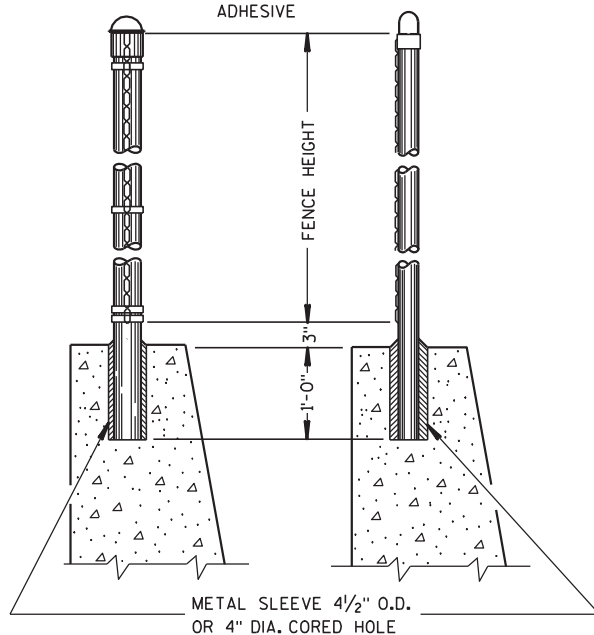


**BRACE RAIL  
FABRIC FASTENER**  
A

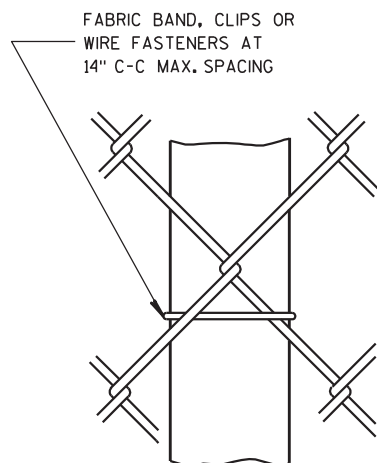


**TENSION WIRE END CLAMP**

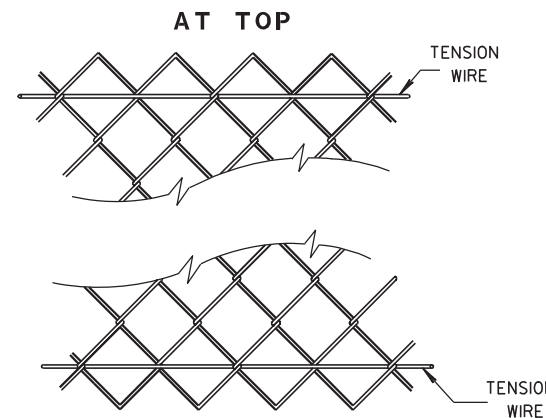
NOTE: SET POSTS IN  
PEA GRAVEL AND  
EPOXY RESIN  
ADHESIVE



**END POST &  
CORNER POST**      **LINE POST**  
**DETAILS OF FENCE ON WALL**



**LINE POST  
FABRIC FASTENER**



**AT BOTTOM  
SELVAGES**

B

6

6

|  |  |
|--|--|
| <b>FENCE CHAIN LINK</b>                            |  |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |  |
| APPROVED<br>3/19/2010<br>DATE                      | /s/ Jerry H. Zogg<br>ROADWAY STANDARDS DEVELOPMENT<br>ENGINEER |
| FHWA   |  |