

Madison, Wisconsin

CITY OF MADISON

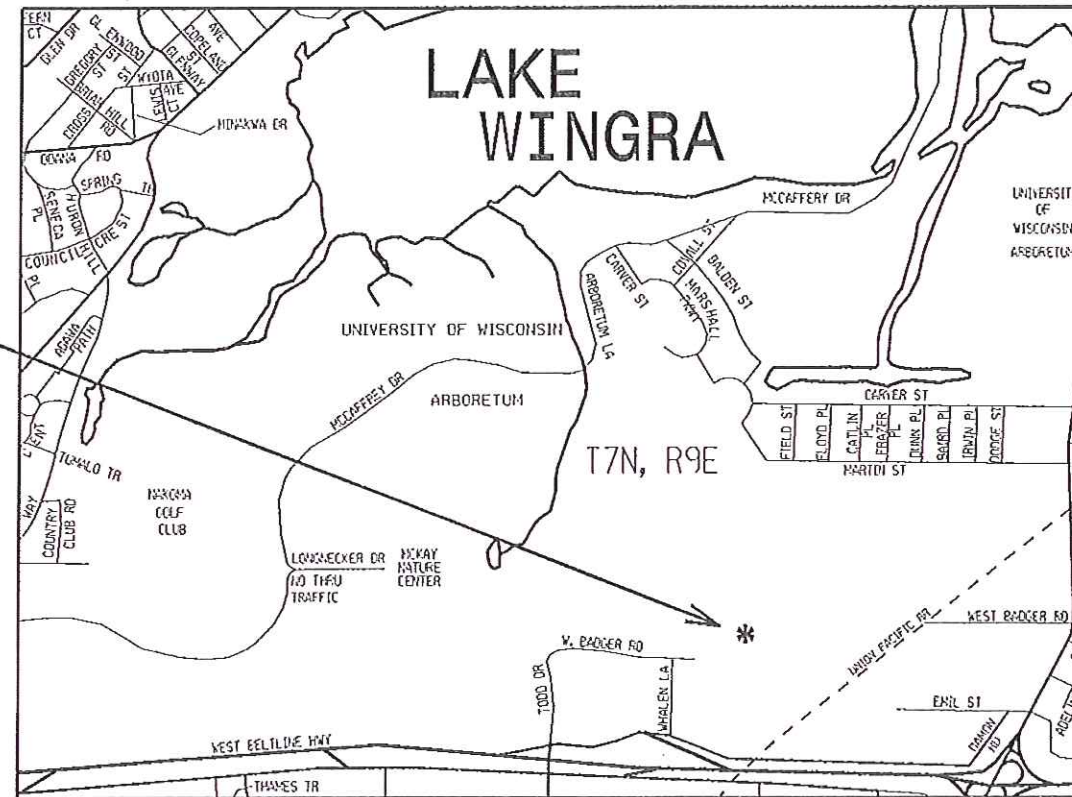
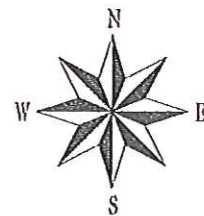
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
PLAN OF PROPOSED IMPROVEMENT

INDEX OF SHEETS

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1	PROJECT OVERVIEW
2	GRADING PLAN
3	EROSION CONTROL PLAN
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9	TOPOGRAPHIC SURVEY - BURSE SURVEY & ENGINEERING INC. 1 OF 2
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11	TREATMENT STRUCTURE PLAN VIEW
12	TREATMENT STRUCTURE DETAILS
13-15	CHAIN LINK FENCE AND GATE DETAILS

ARBORETUM POND #3

PROJECT LOCATION



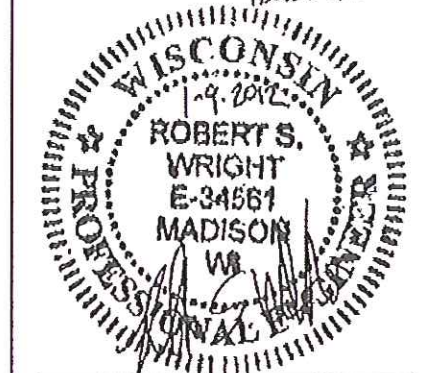
PUBLIC IMPROVEMENT PROJECT APPROVED
BY THE COMMON COUNCIL
OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN
APPROVED BY:

[Signature] 2/20/12
City Engineer Date

DESIGNED BY:

[Signature]
Revised 2-22-2012



SHEETS 12-15

DESIGNED BY:

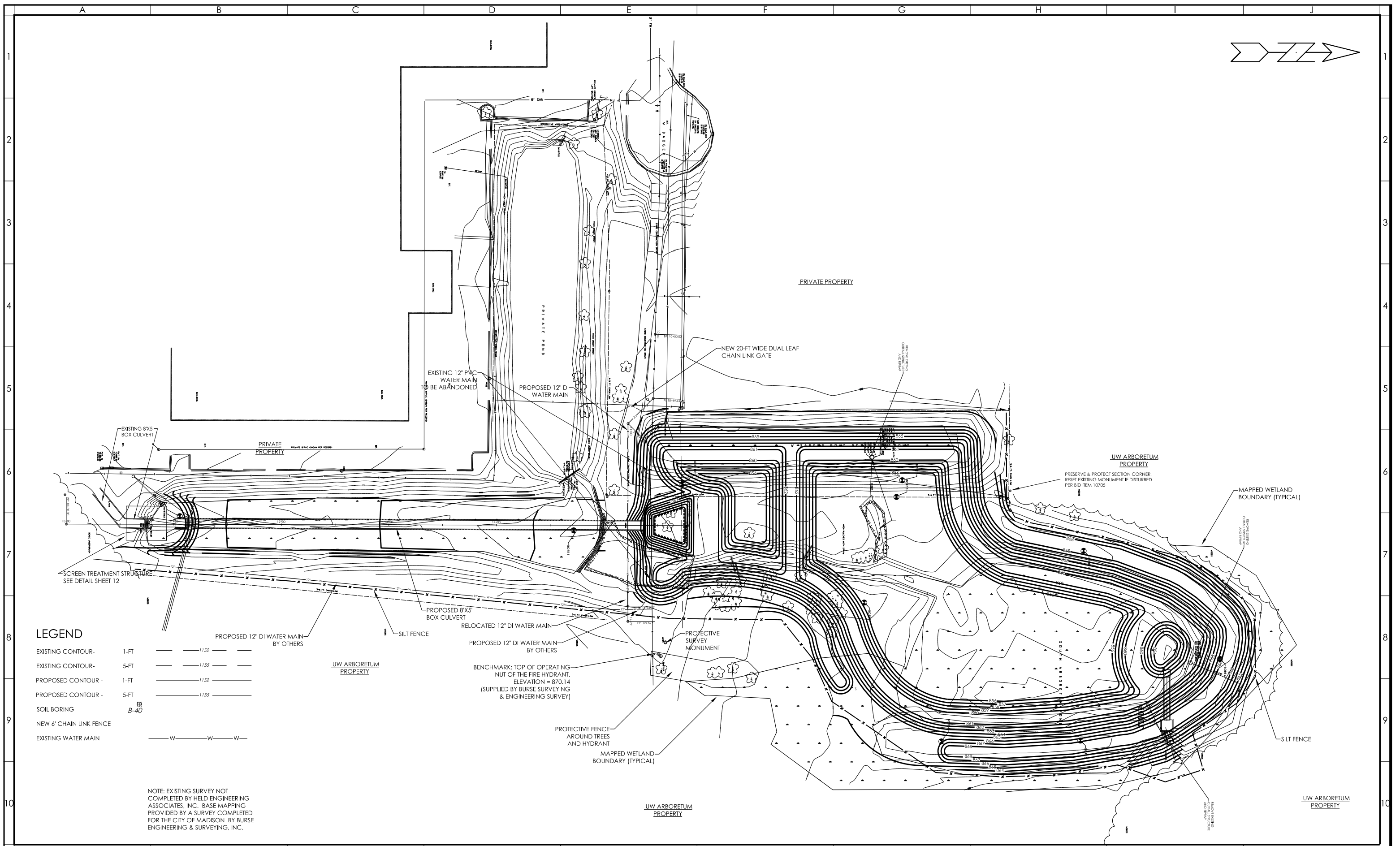


SHEETS 2-9 Revised 11/15/12 JR

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



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

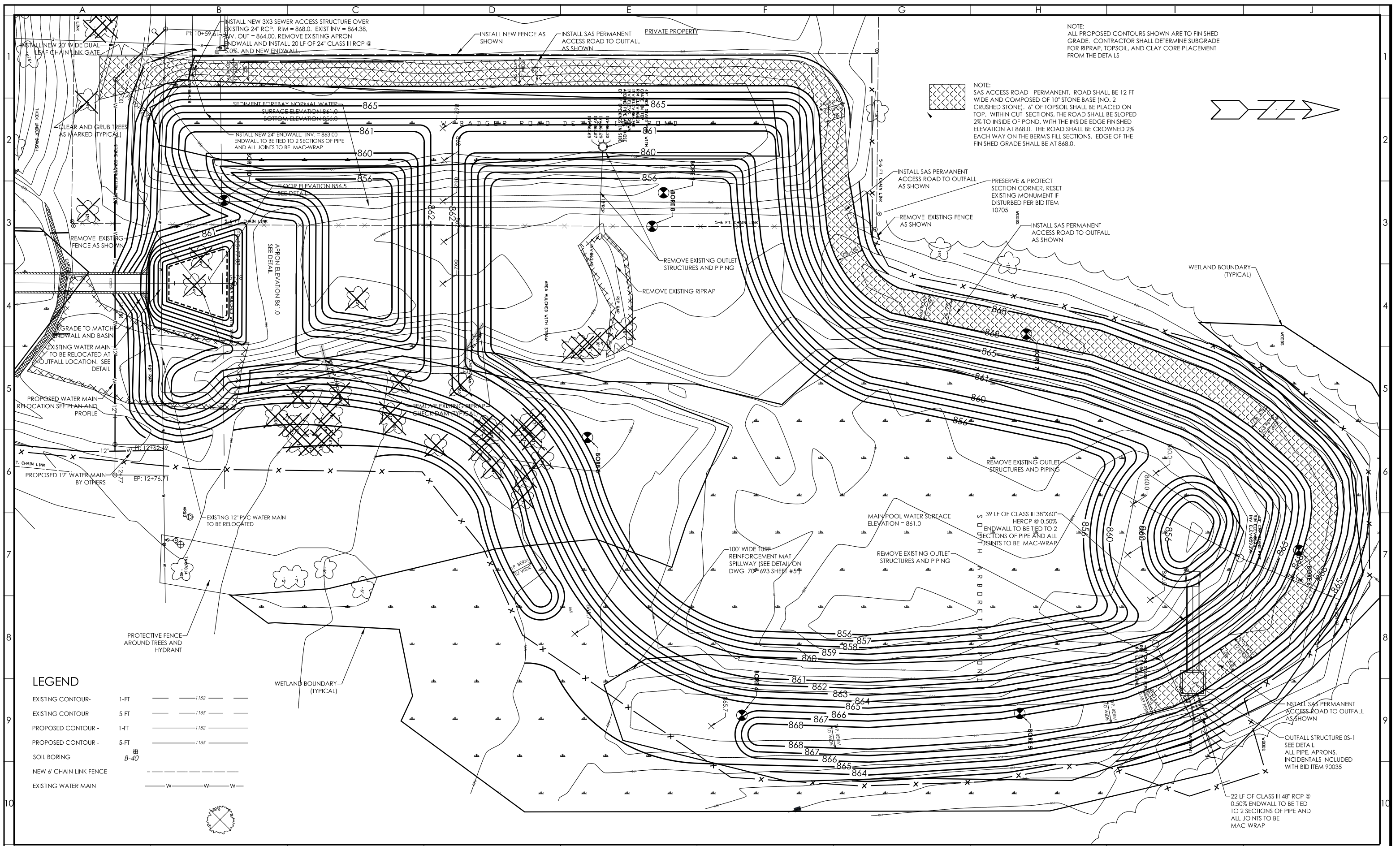
POND 3 - UW ARBORETUM
CITY OF MADISON, WISCONSIN

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	---	1:152
EXISTING CONTOUR - 5-FT	---	1:155
PROPOSED CONTOUR - 1-FT	---	1:152
PROPOSED CONTOUR - 5-FT	---	1:155
SOIL BORING	B-40	
NEW 6\"/>		

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210 MARTIN LUTHER KING JR. BLVD ROOM 210
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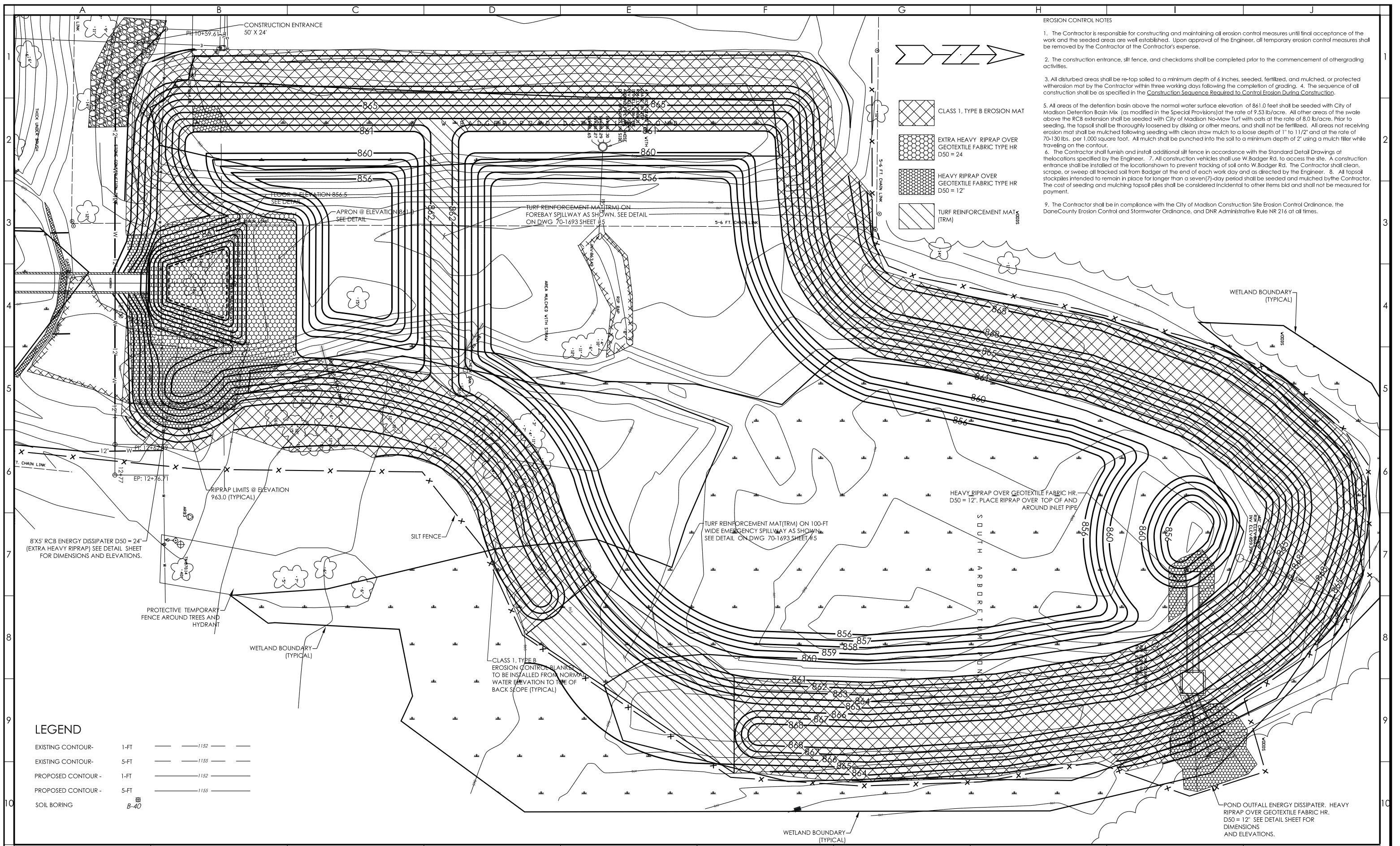
POND 3 - UW ARBORETUM
CITY OF MADISON, WISCONSIN

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 IMPROVEMENTS GRADING PLAN

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

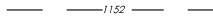
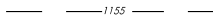
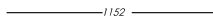
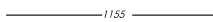



EROSION CONTROL NOTES

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

HELD ENGINEERING ASSOCIATES, INC.
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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

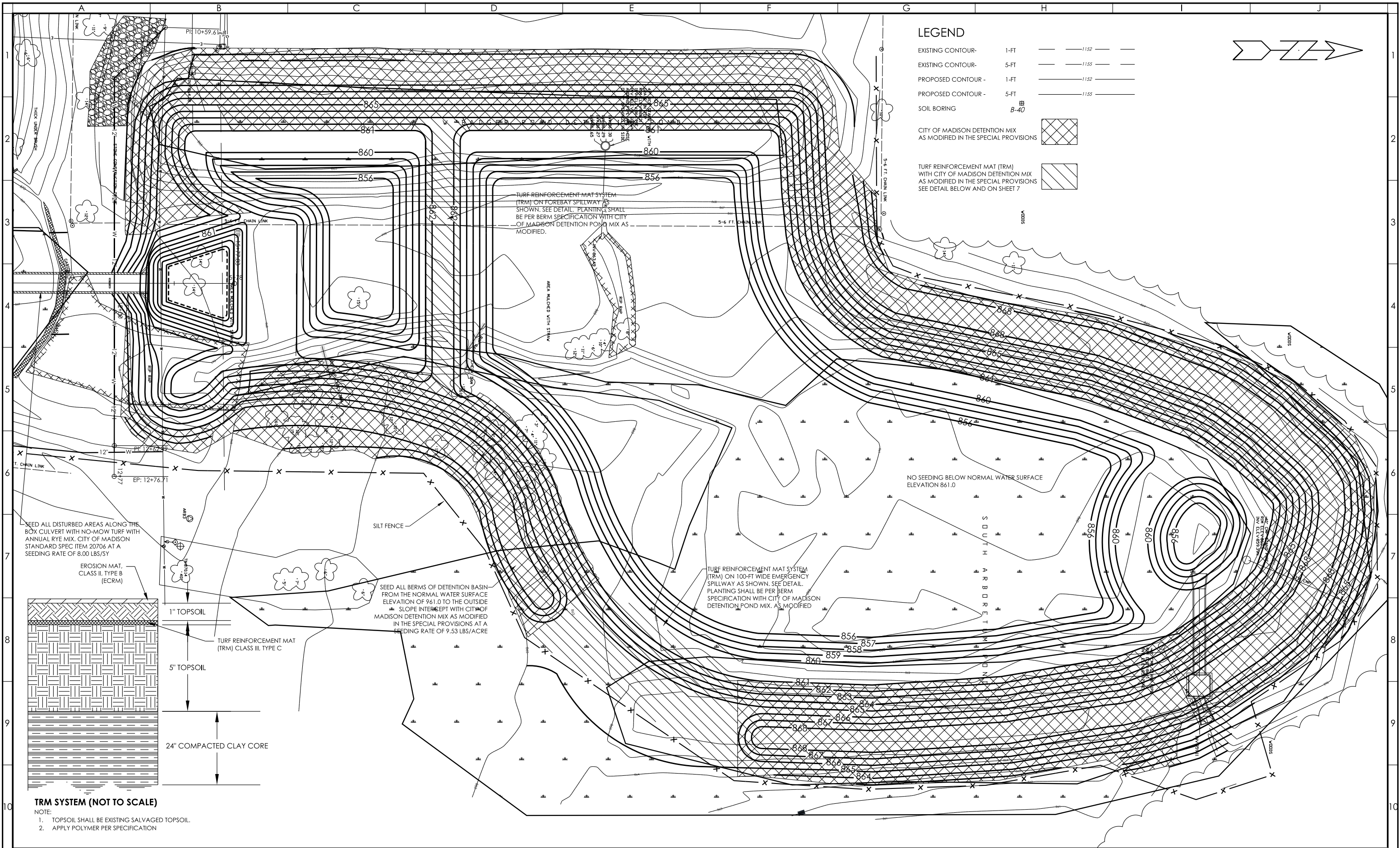
POND 3 - UW ARBORETUM
CITY OF MADISON, WISCONSIN

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

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

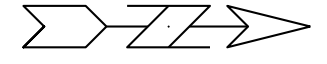
POND 3 IMPROVEMENTS EROSION CONTROL PLAN

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



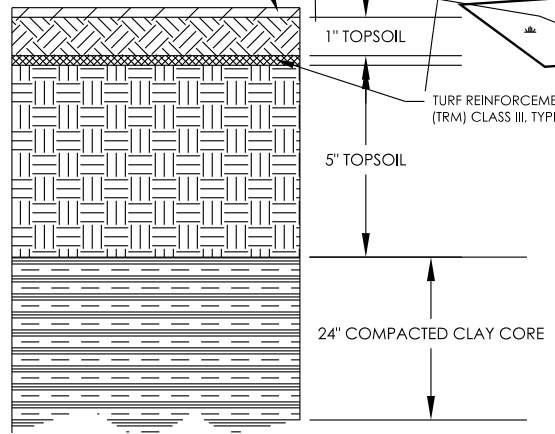
LEGEND

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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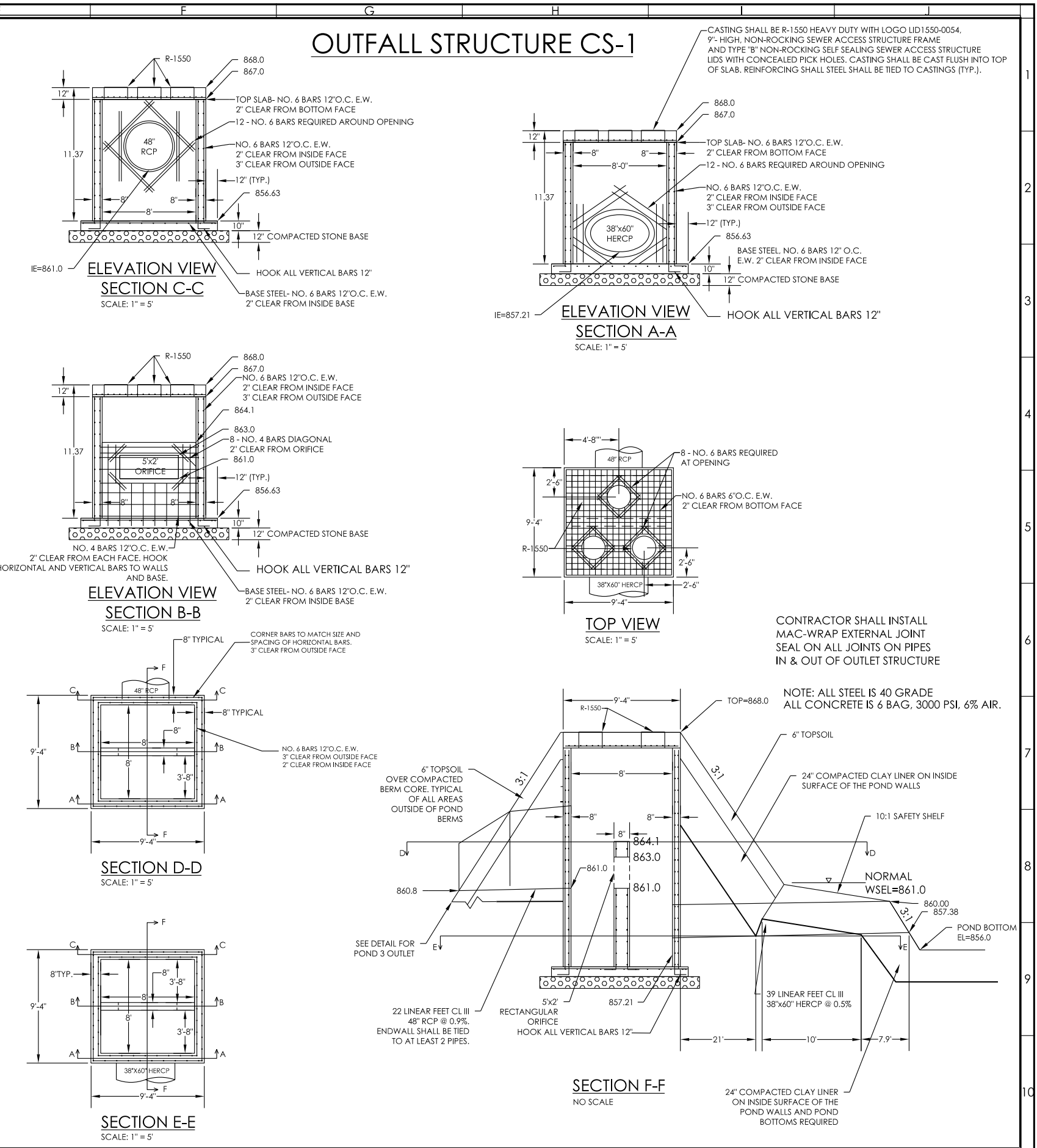
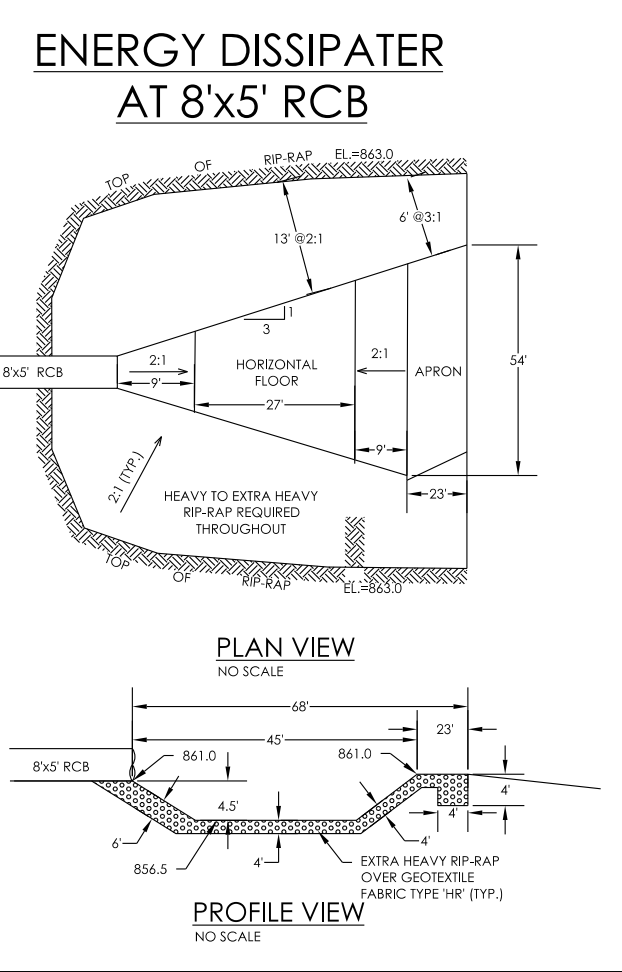
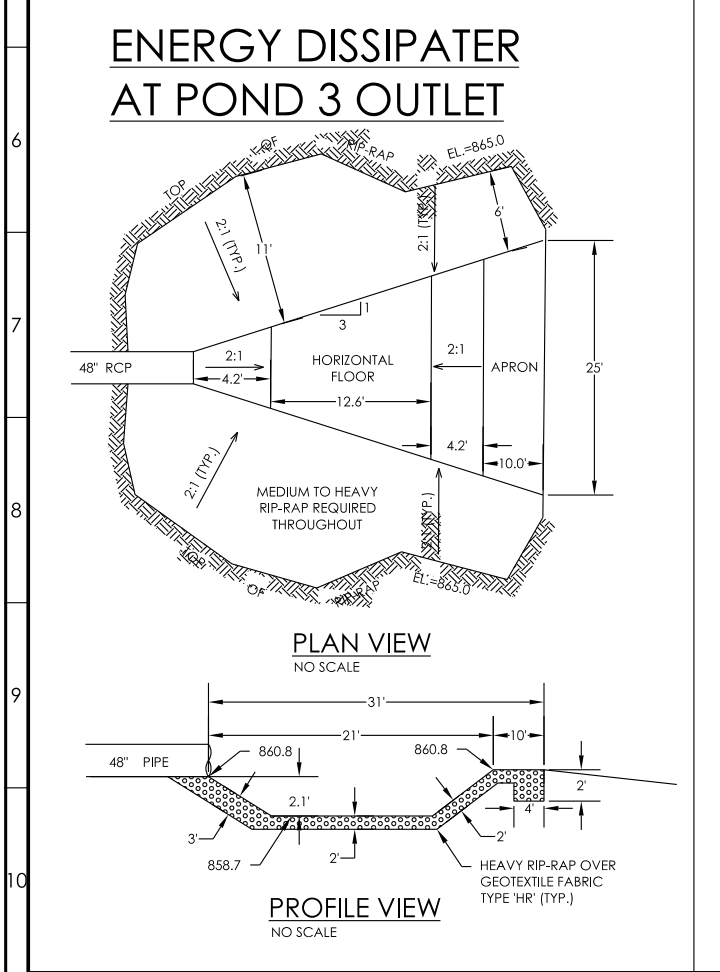
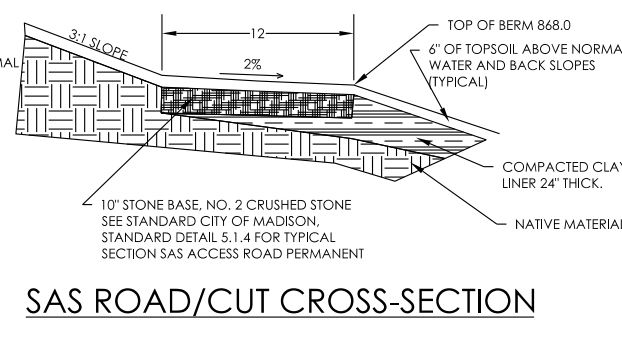
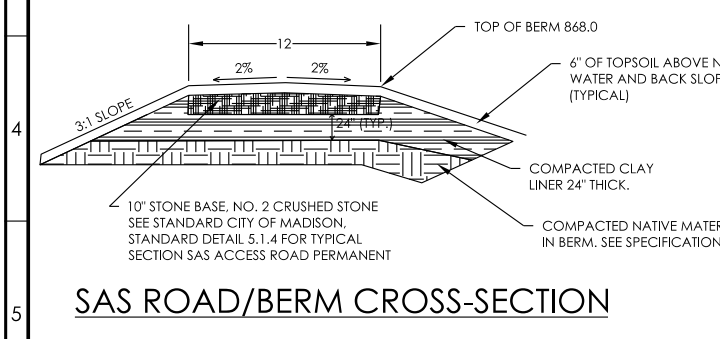
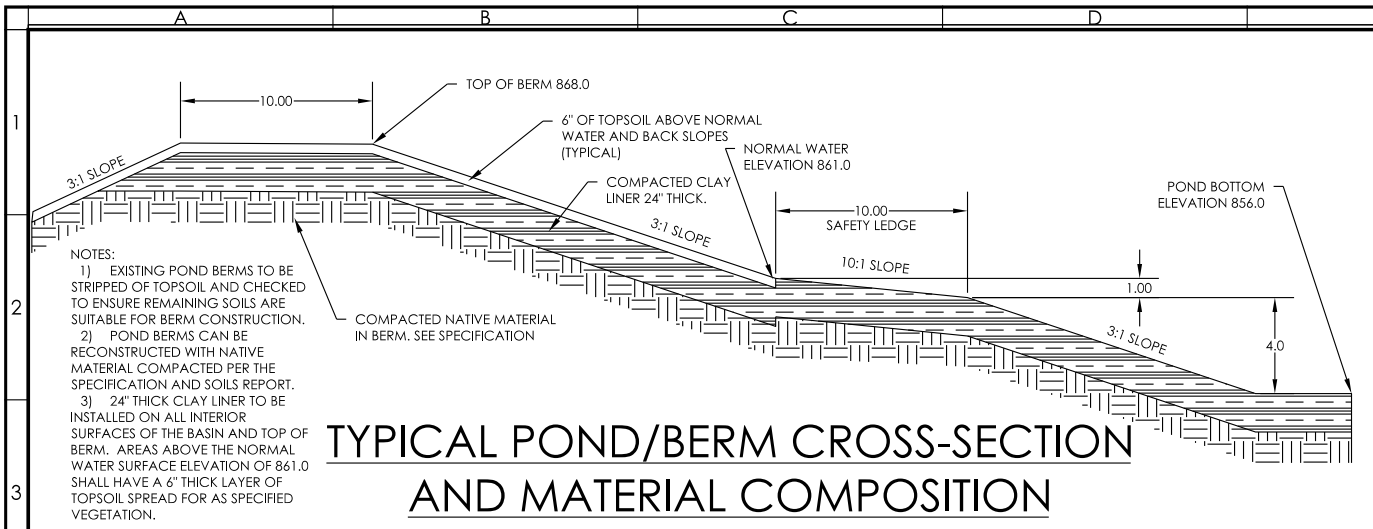
POND 3 - UW ARBORETUM
CITY OF MADISON, WISCONSIN

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



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

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

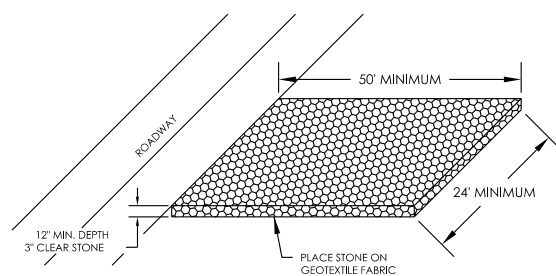
CITY OF MADISON
 C/O TIM TROESTER
 210 MARTIN LUTHER KING JR. BLVD ROOM 210
 608-267-1995

POND 3 - UW ARBORETUM
 CITY OF MADISON, WISCONSIN

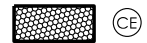
DATE: 6-24-11

POND 3
 OUTFALL AND RIPRAP DETAILS

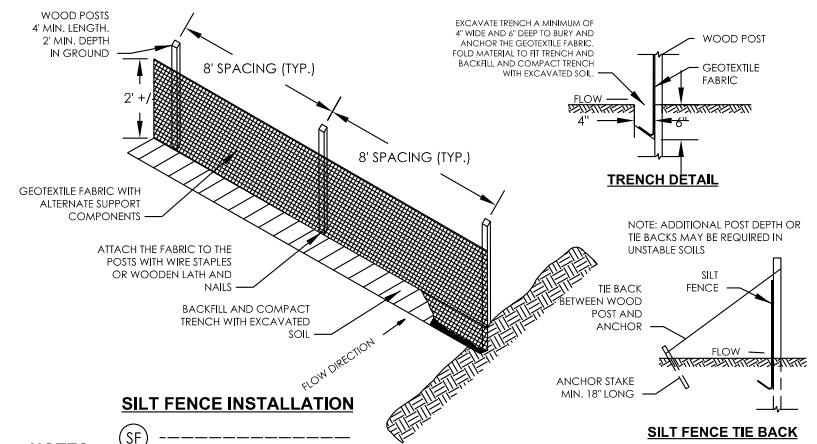
SHEET NO:
6 of 11
 DRAWING NO:
70-1694



STONE CONSTRUCTION ENTRANCE

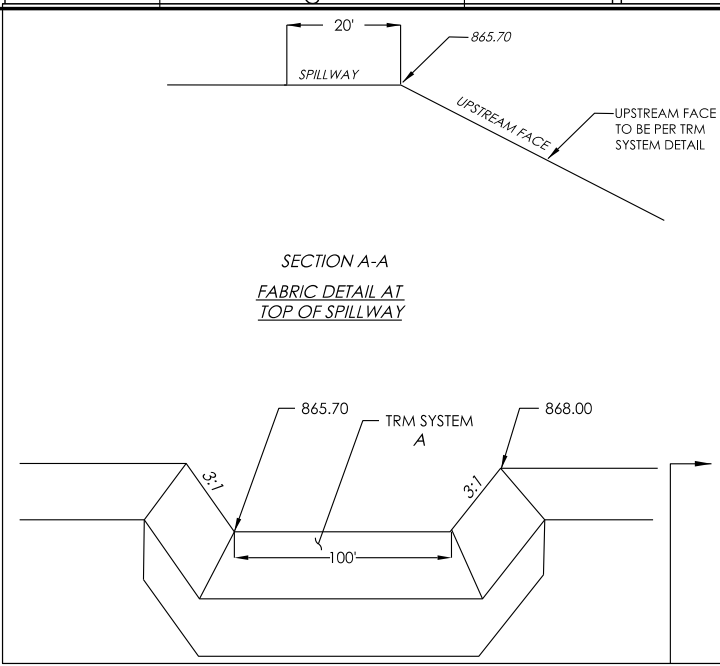


NOTE:
A CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLAN TO PREVENT TRACKING OF SOIL ONTO EXISTING STREETS AND ROADS. THE CONTRACTOR SHALL CLEAN, SCRAPE OR SWEEP ALL TRACKED SOIL FROM SAID ROADWAYS AT THE END OF EACH WORK DAY AND AS DIRECTED BY THE ENGINEER.

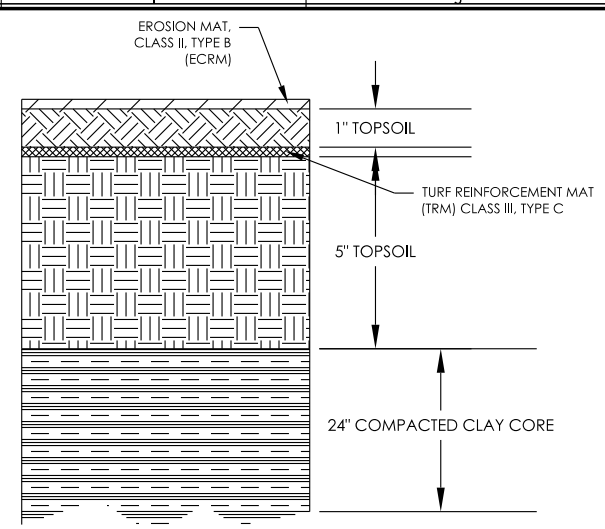


SILT FENCE INSTALLATION

- 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. 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.
 - 4.



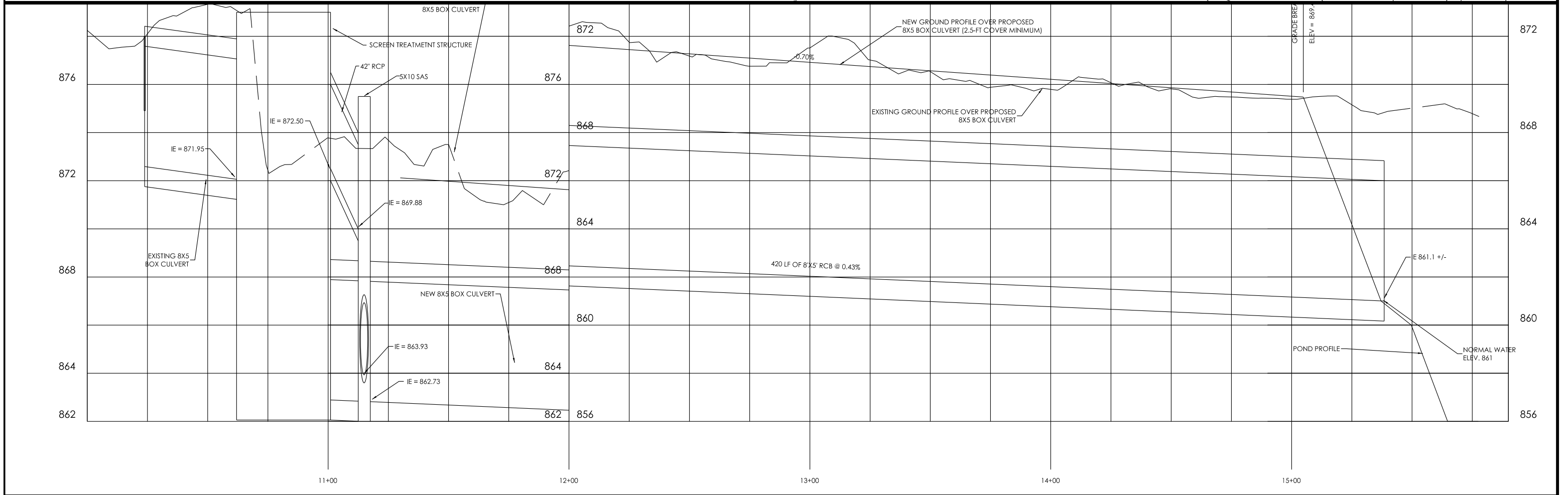
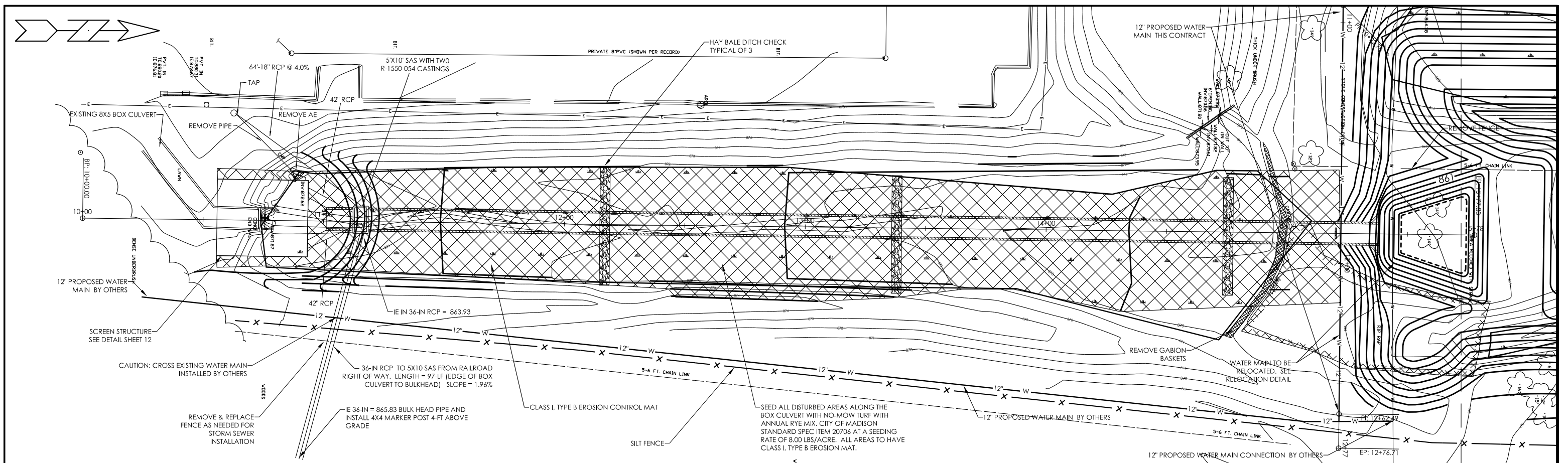
**SECTION A-A
FABRIC DETAIL AT
TOP OF SPILLWAY**



TRM SYSTEM (NOT TO SCALE)

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

HELD ENGINEERING ASSOCIATES, INC. MADISON, WISCONSIN (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	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	DATE: 6-24-11	POND 3 DROP STRUCTURE DETAILS	SHEET NO: 7 OF 11 DRAWING NO: 70-1695
NO.	DATE	REVISION	INIT.																
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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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 OF THE FIRE HYDRANT AS SHOWN
 ELEVATION = 870.14
 (SUPPLIED BY BURSE SURVEYING &
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**POND 3
 CONVEYANCE & EROSION
 CONTROL IMPROVEMENTS**

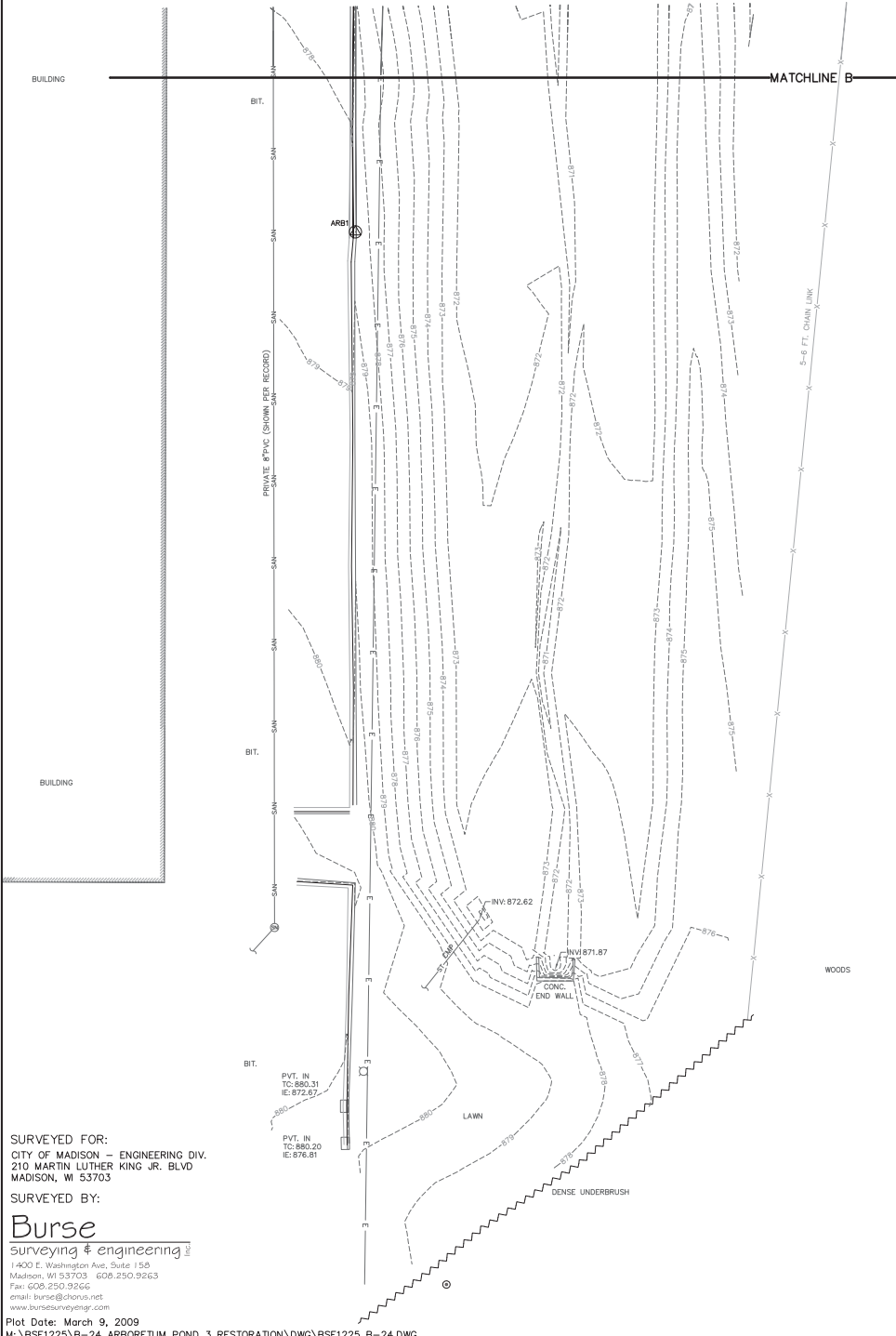
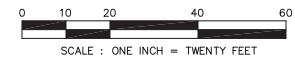
SHEET NO: 8 OF 11
 DRAWING NO: 70-1696

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

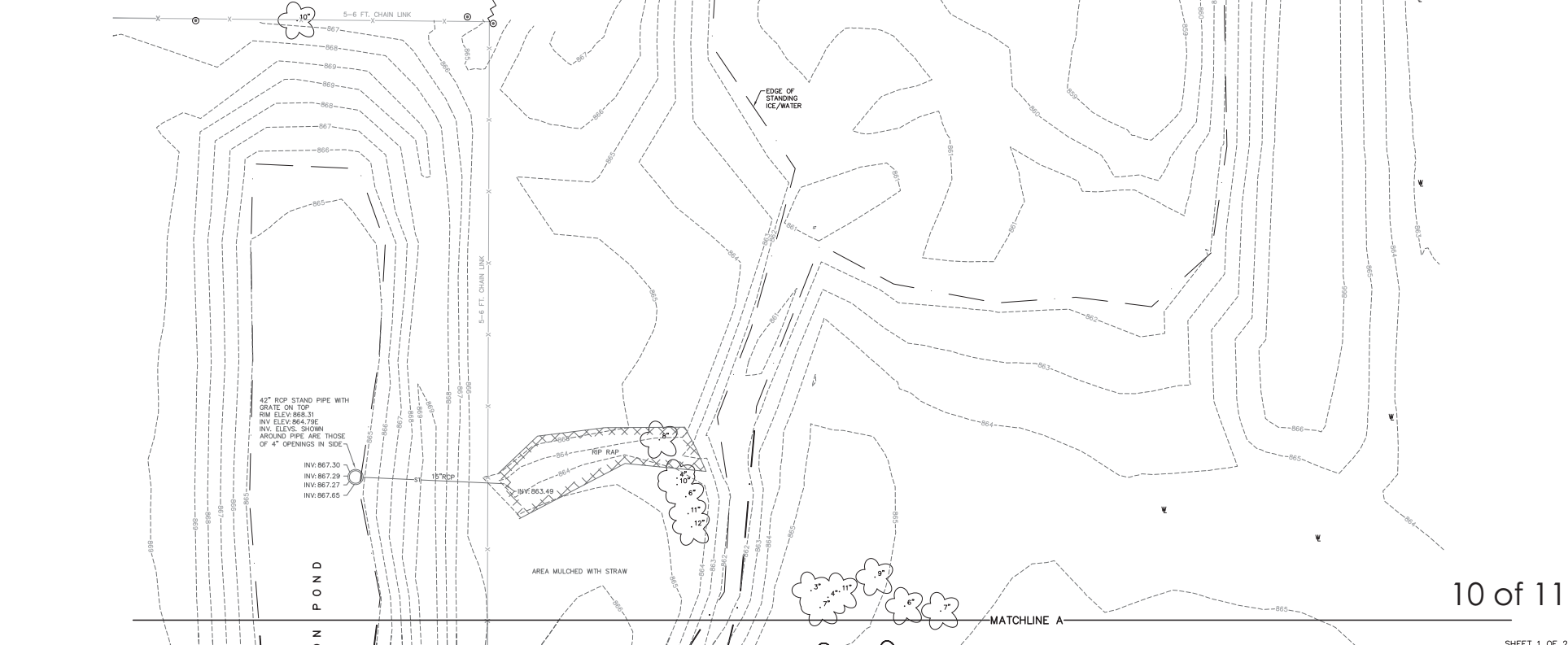
LEGEND			
—○—	OVERHEAD UTILITY	⊙	FIRE HYDRANT
—○—	BURIED GAS MAIN	⊙	IRON PIPE OR STAKE FOUND
—W—	WATER MAIN	□	STORM SEWER STRUCTURE
—SAN—	SANITARY SEWER	□	CATCH BASIN
—ST—	STORM SEWER	□	STORM SEWER INLET
—TEL—	BURIED TELEPHONE	⊙	ELECTRIC MANHOLE
—E—	BURIED ELECTRIC	⊙	TELECOMM. MANHOLE
—TV—	BURIED CABLE 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

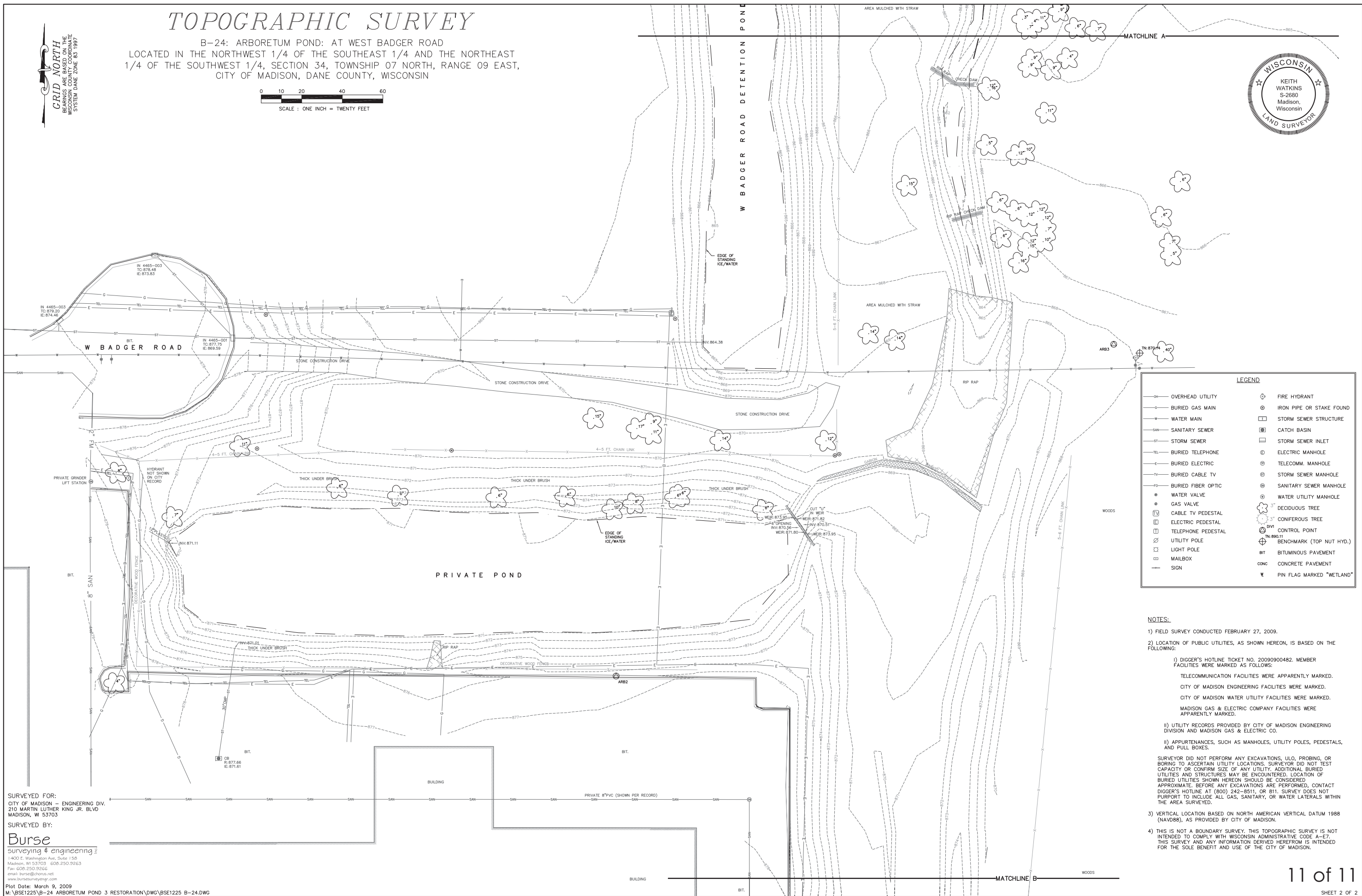
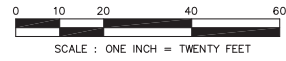
SURVEYED BY:
Burse
 surveying & engineering
 1400 E. Washington Ave., Suite 150
 Madison, WI 53703 608.250.9263
 Fax: 608.250.9266
 email: burse@bourse.net
 www.bursesurveying.com

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

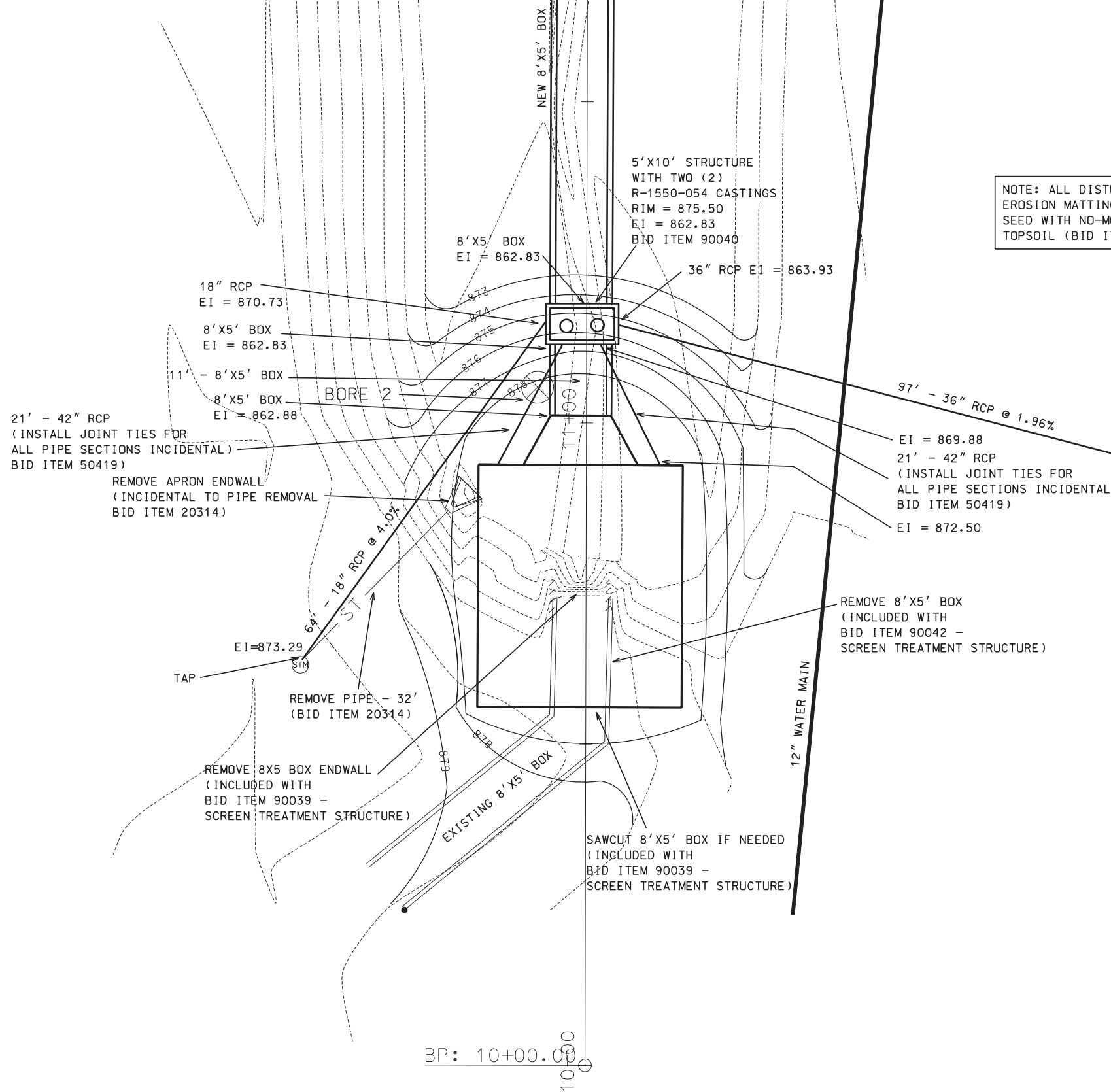
SURVEYED BY:
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 1400 E. Washington Ave., Suite 150
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 www.bursesurveying.com

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



SCALE: 1" = 20'

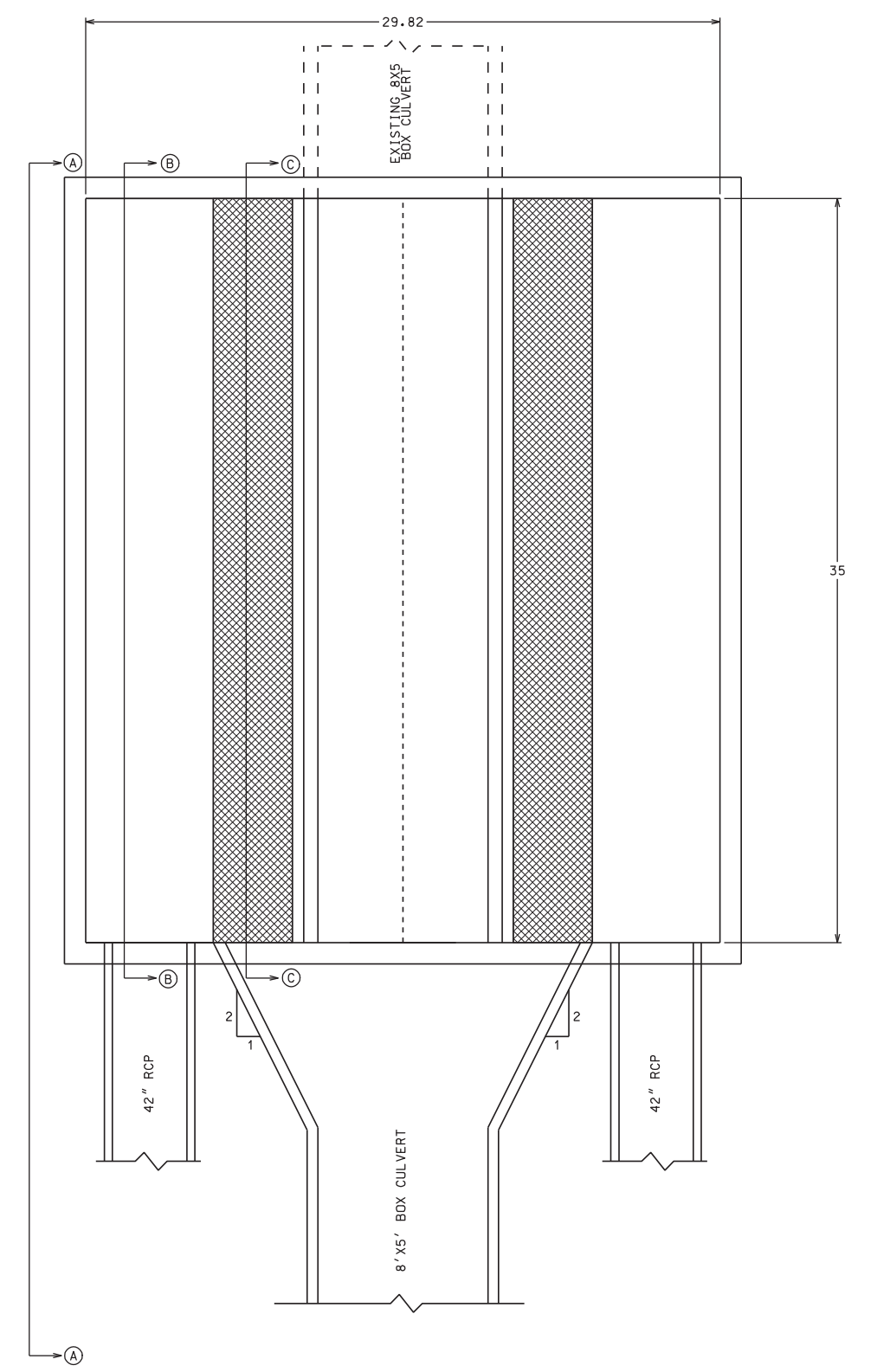
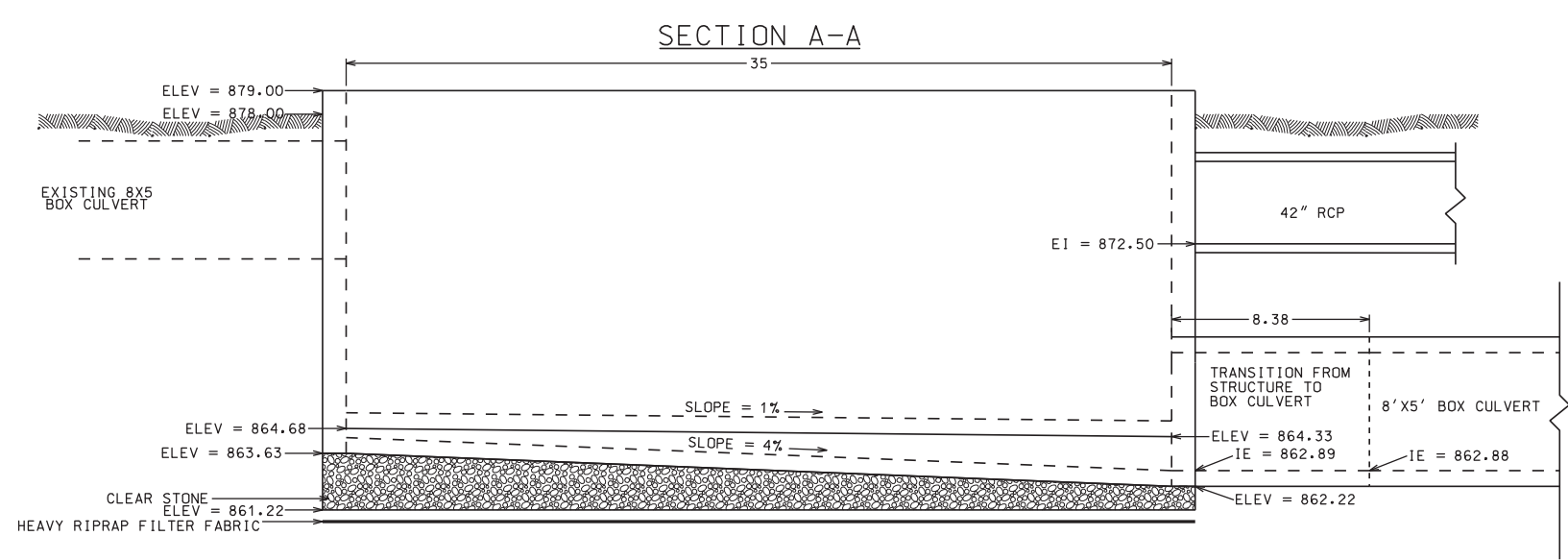
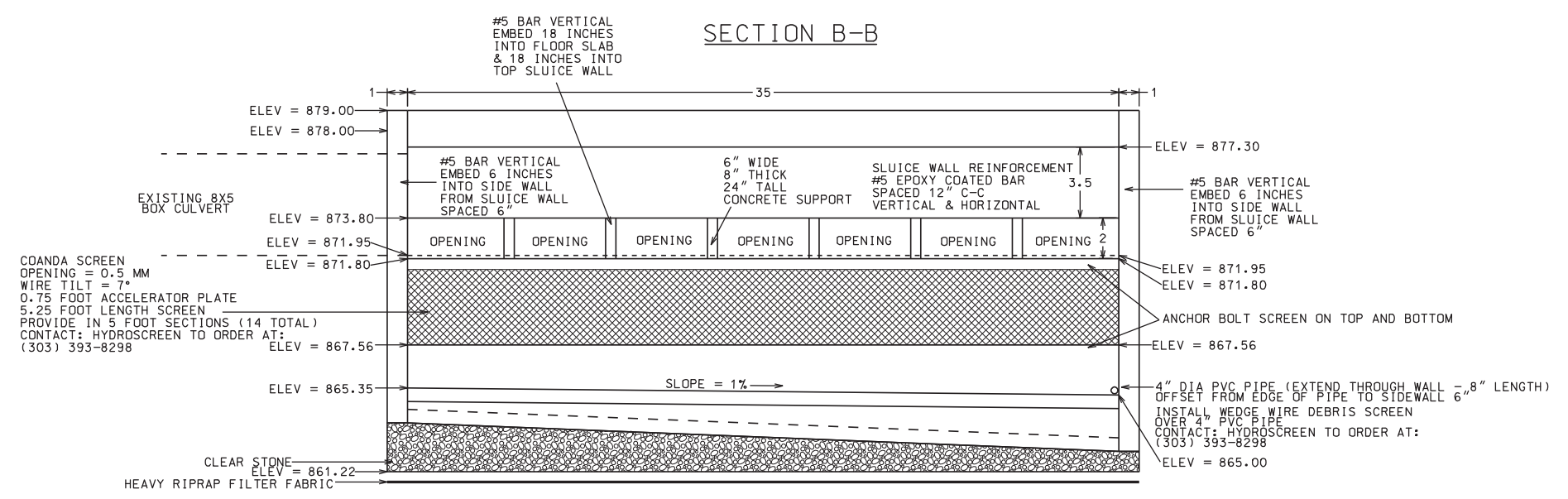
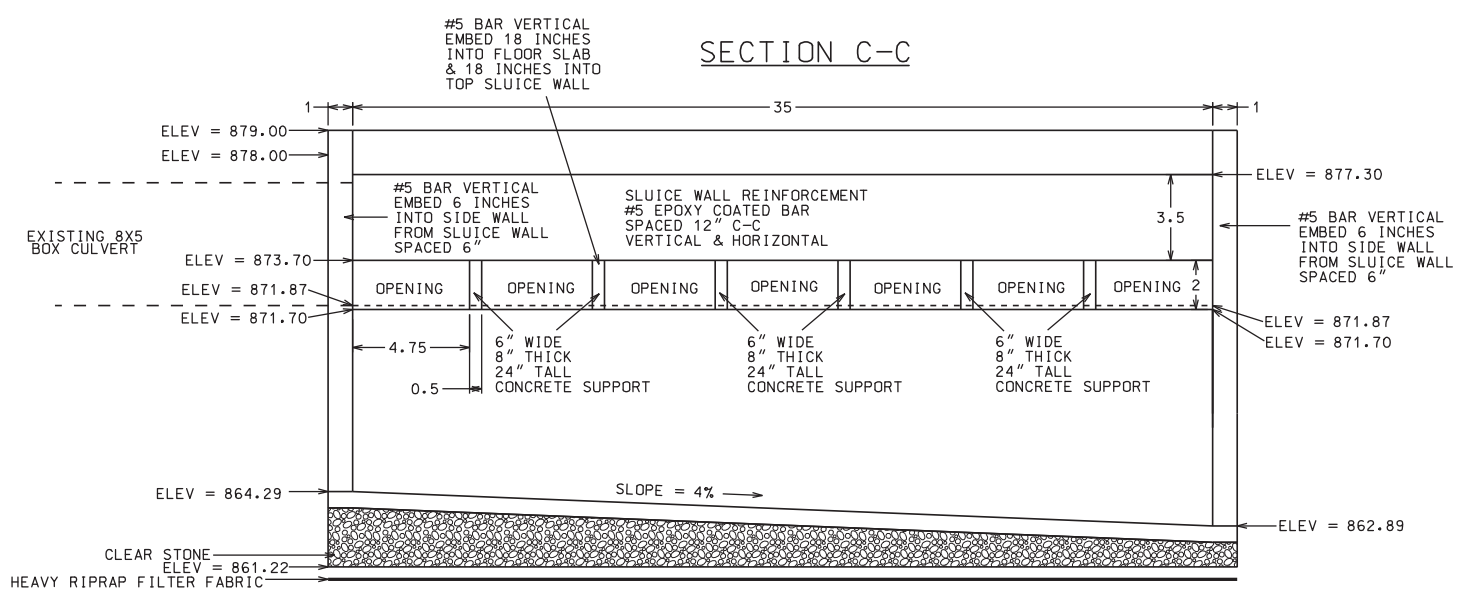
PLOT SCALE:
PLOT NAME:
REV. DATE:



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

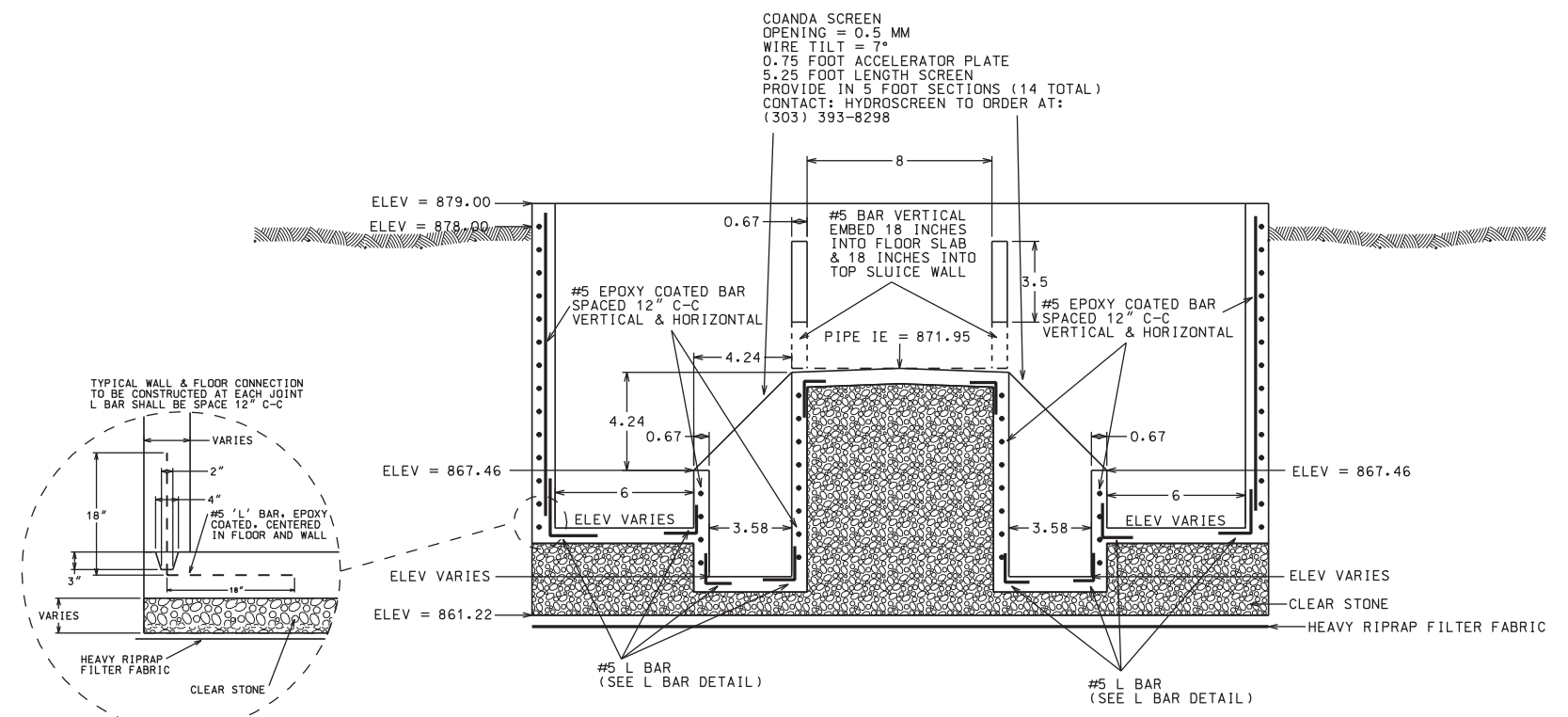


NOTE: DIMENSIONS ARE IN UNITS OF FEET

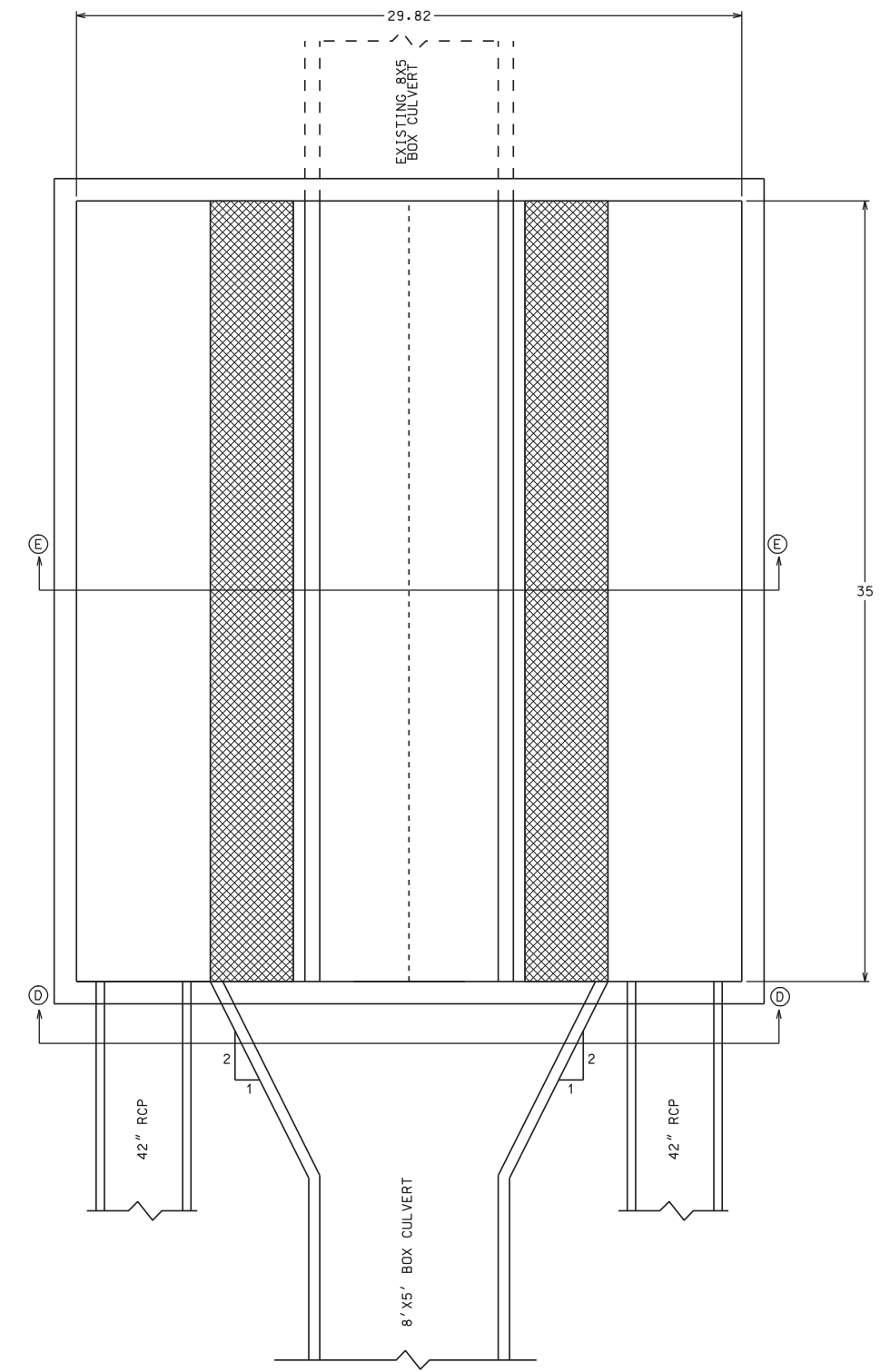
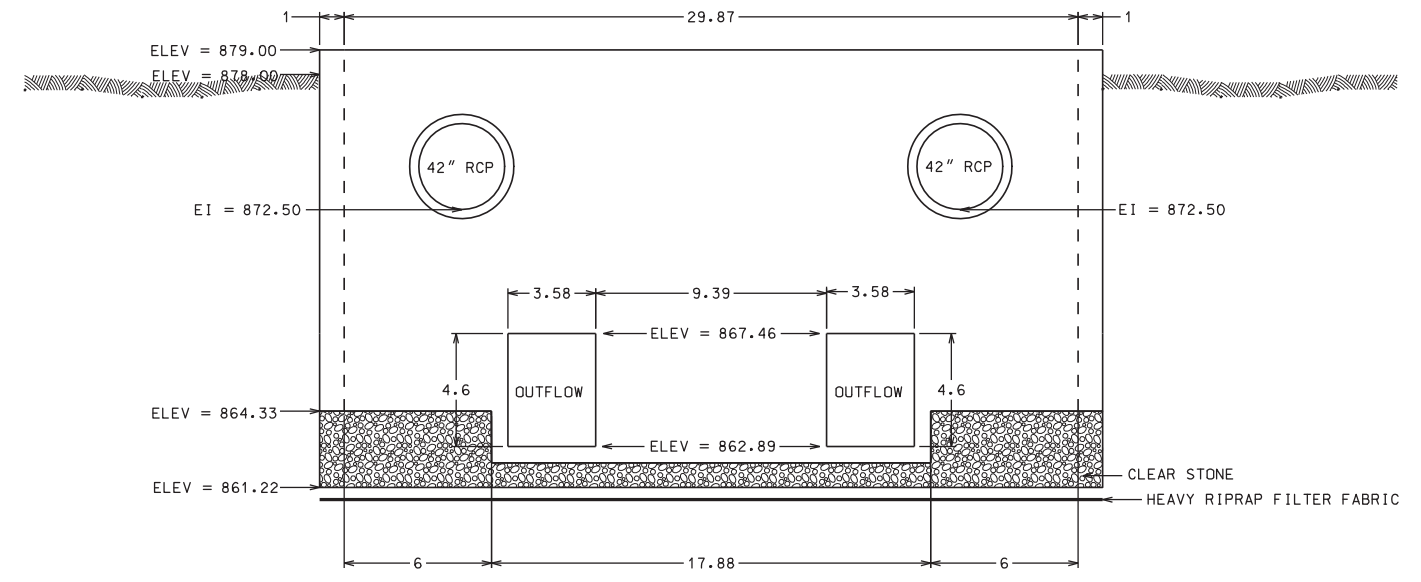
PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

SECTION E-E



SECTION D-D



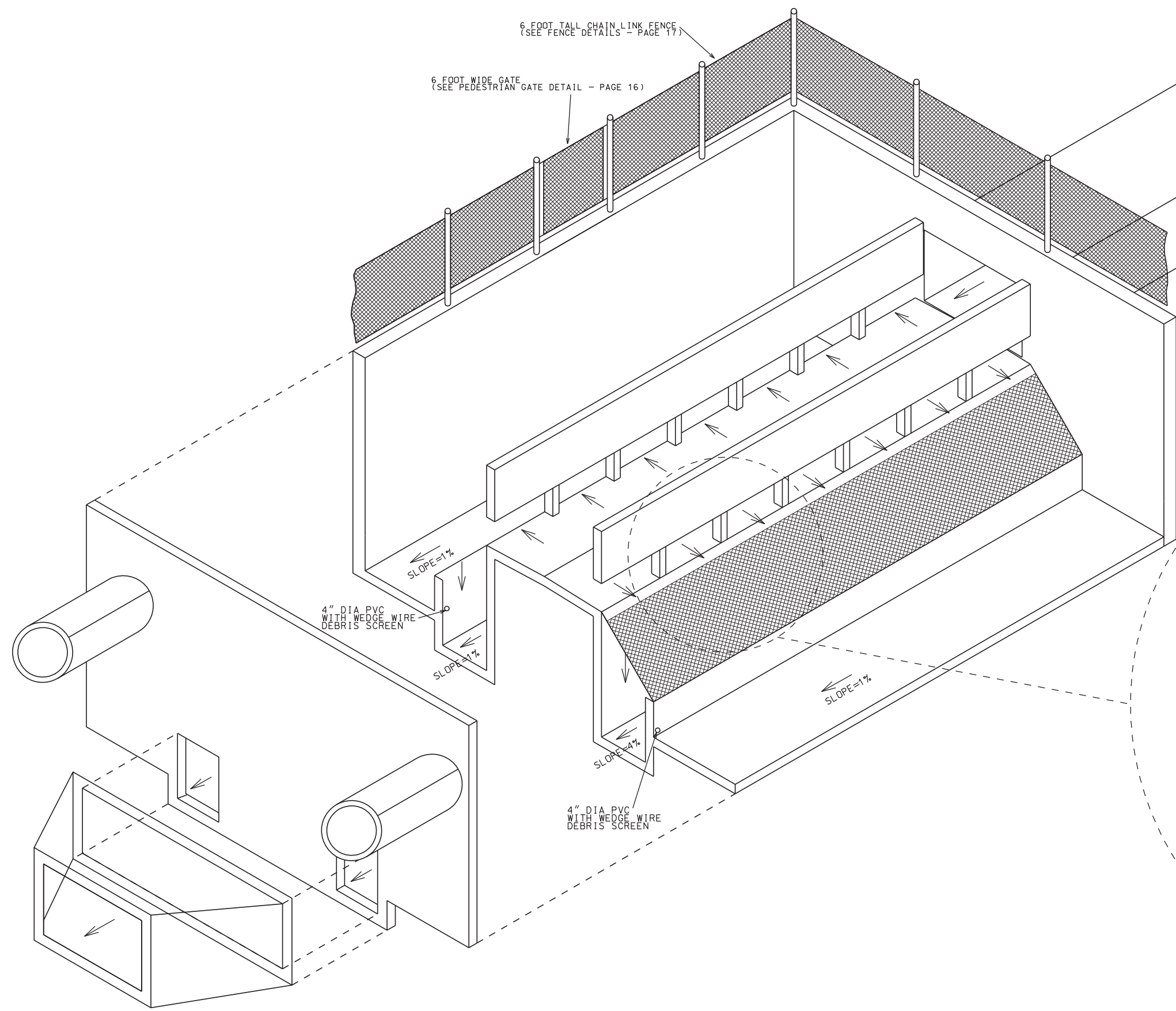
NOTE: DIMENSIONS ARE IN UNITS OF FEET

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

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

DETAIL

SCREEN TREATMENT CITY OF MADISON



6 FOOT TALL CHAIN LINK FENCE
(SEE FENCE DETAILS - PAGE 17)

6 FOOT WIDE GATE
(SEE PEDESTRIAN GATE DETAIL - PAGE 16)

4" DIA PVC WITH WEDGE WIRE
DEBRIS SCREEN

4" DIA PVC WITH WEDGE WIRE
DEBRIS SCREEN

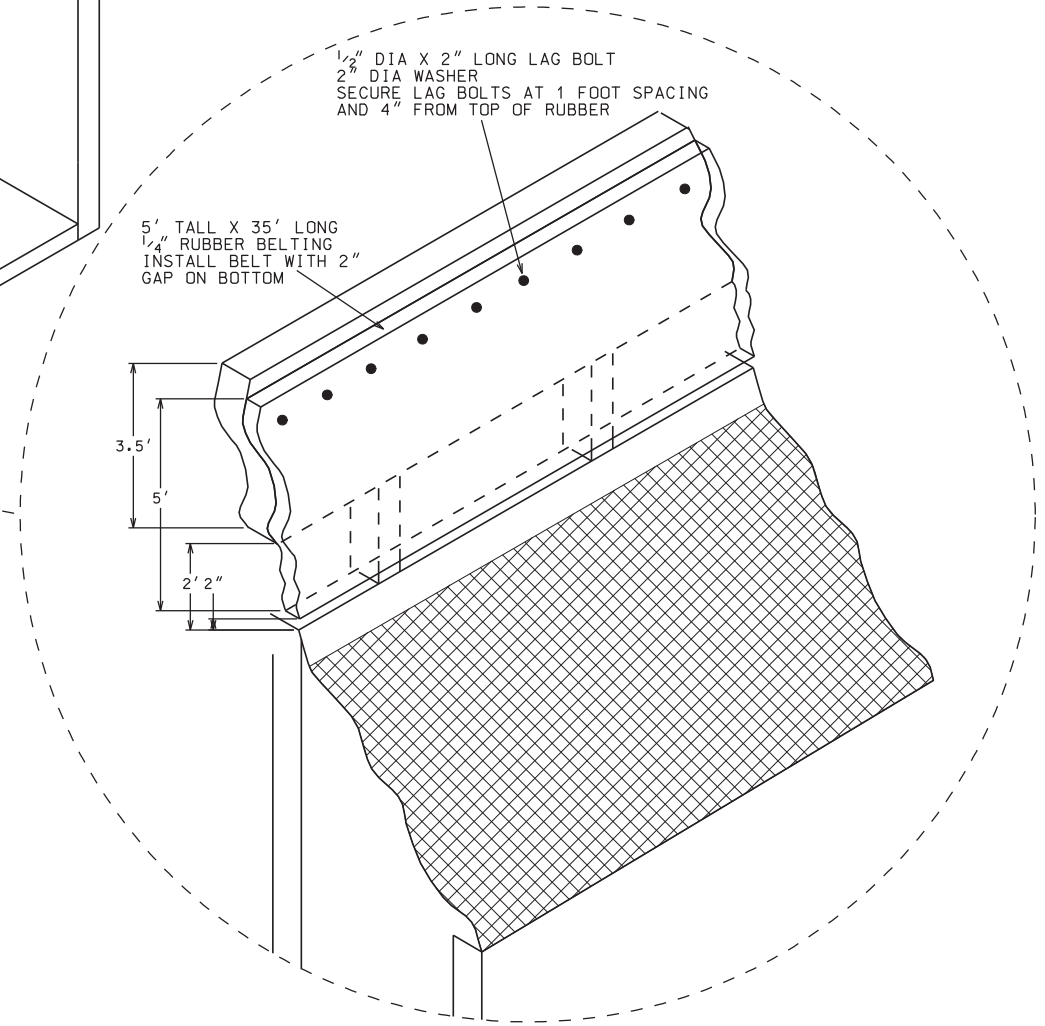
SLOPE=1%

SLOPE=1%

SLOPE=4%

SLOPE=1%

RUBBER BELTING DETAIL



1/2" DIA X 2" LONG LAG BOLT
2" DIA WASHER
SECURE LAG BOLTS AT 1 FOOT SPACING
AND 4" FROM TOP OF RUBBER

5' TALL X 35' LONG
1/4" RUBBER BELTING
INSTALL BELT WITH 2"
GAP ON BOTTOM

3.5'

5'

2' 2"

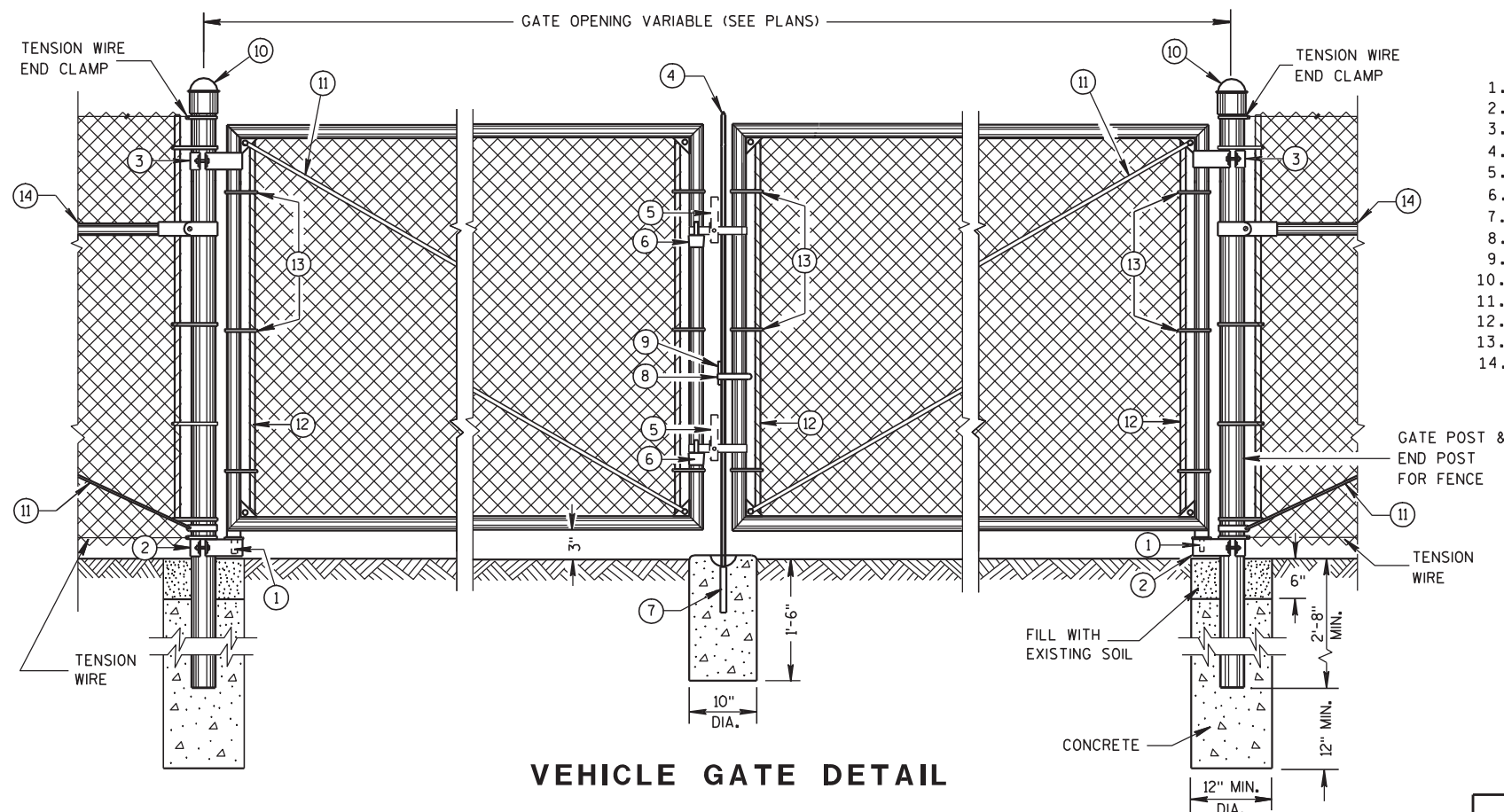
NOTE: DIMENSIONS ARE IN UNITS OF FEET

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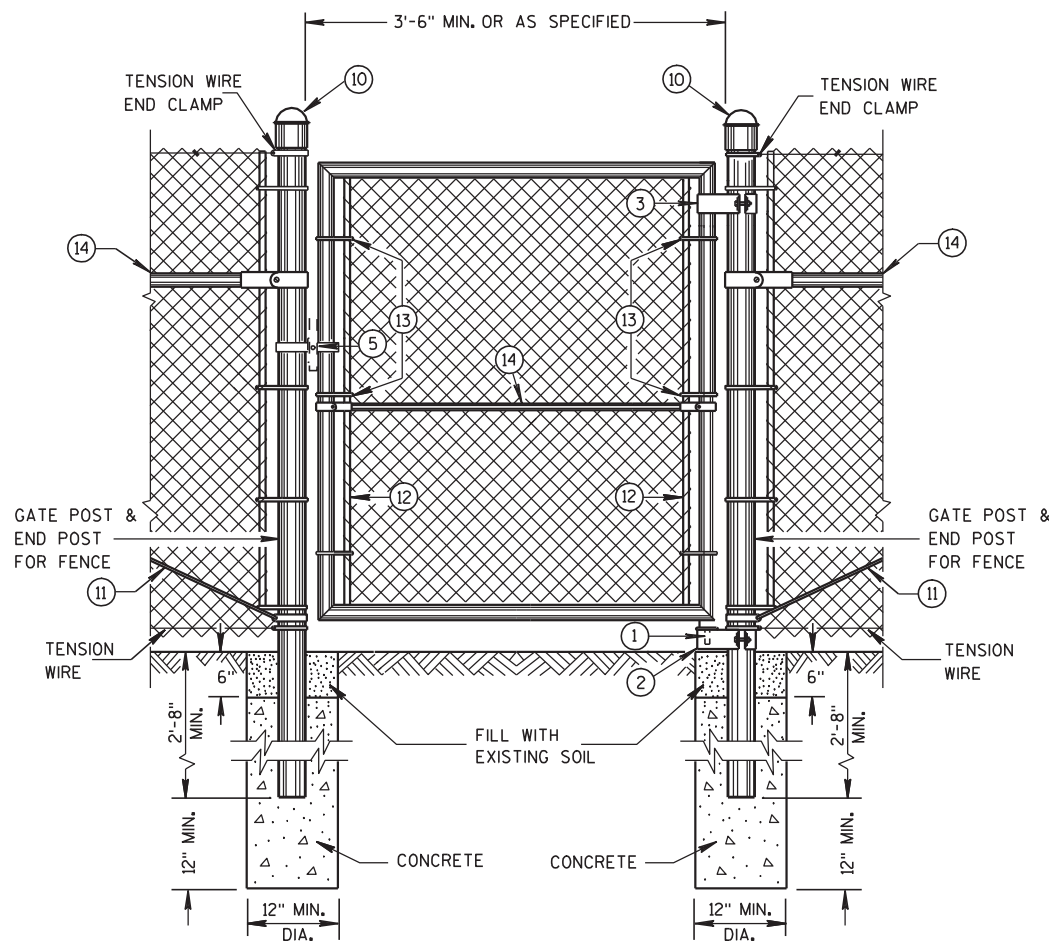
PLOT NAME:

REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PING
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

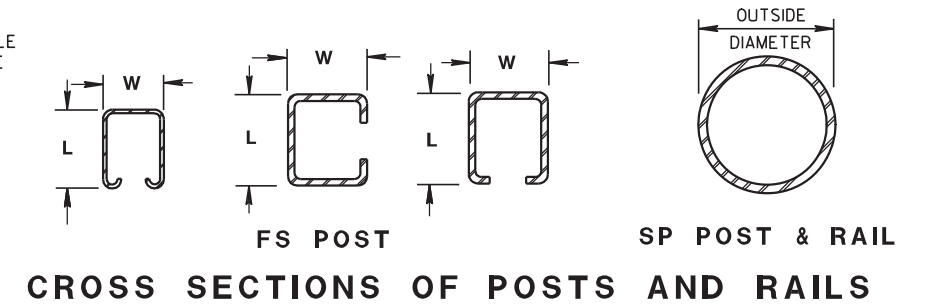
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

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 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

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

BRACE RAIL TYPES

USE	TYPE
BRACE RAIL	SP1 OR FS1

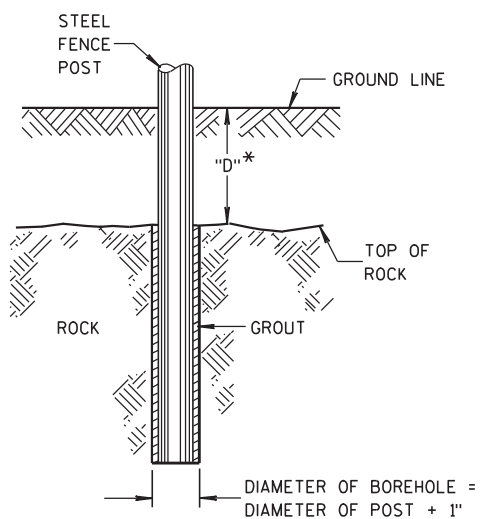
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

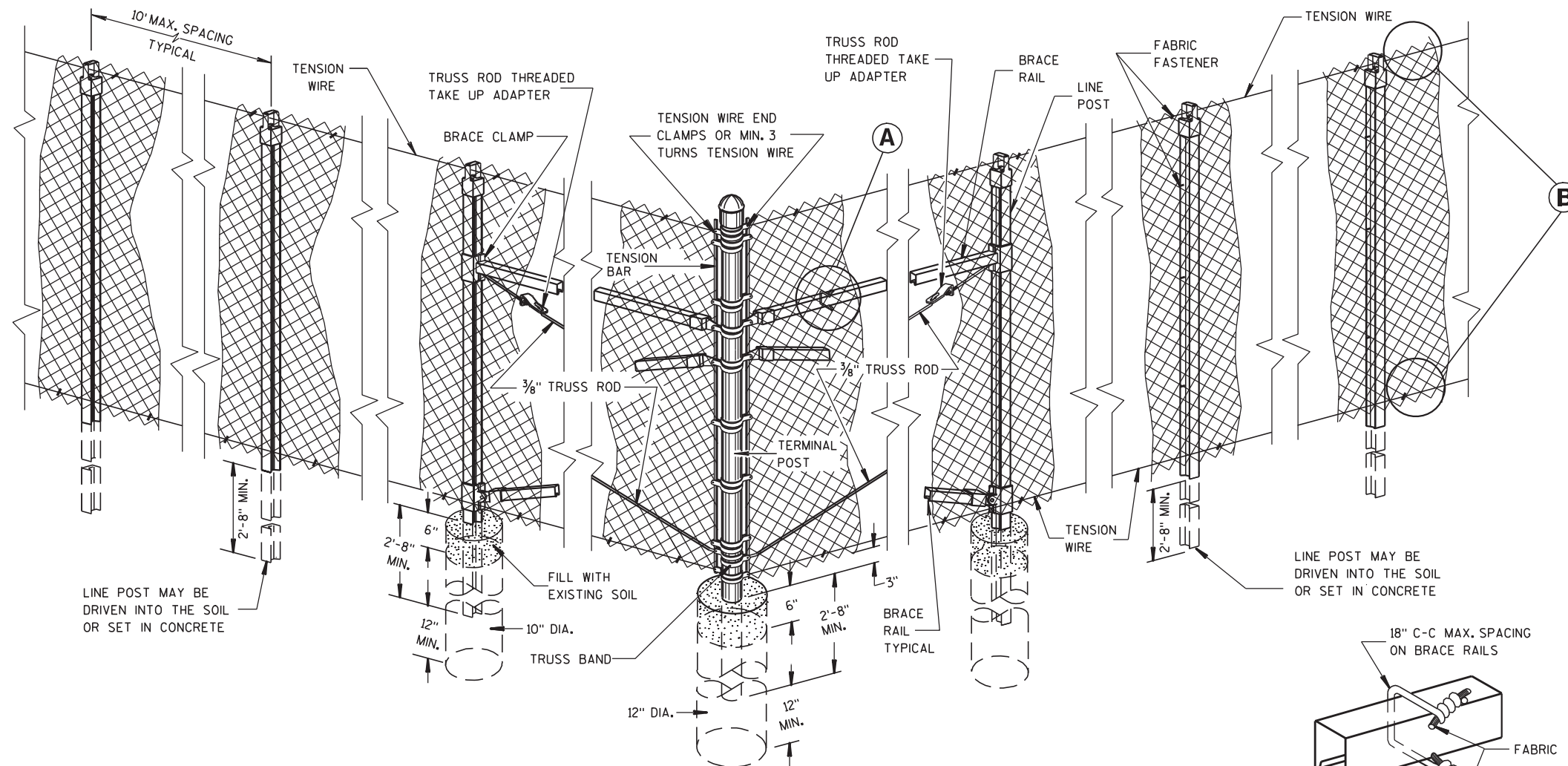
6

6

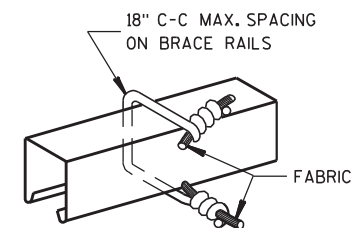


* IF "D" IS LESS THAN 2'-6",
DRILL ROCK AND INSTALL GROUT

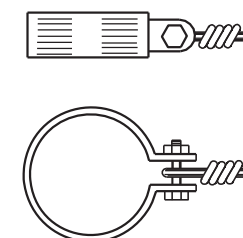
**ROCK INSTALLATION
OF LINE POST**



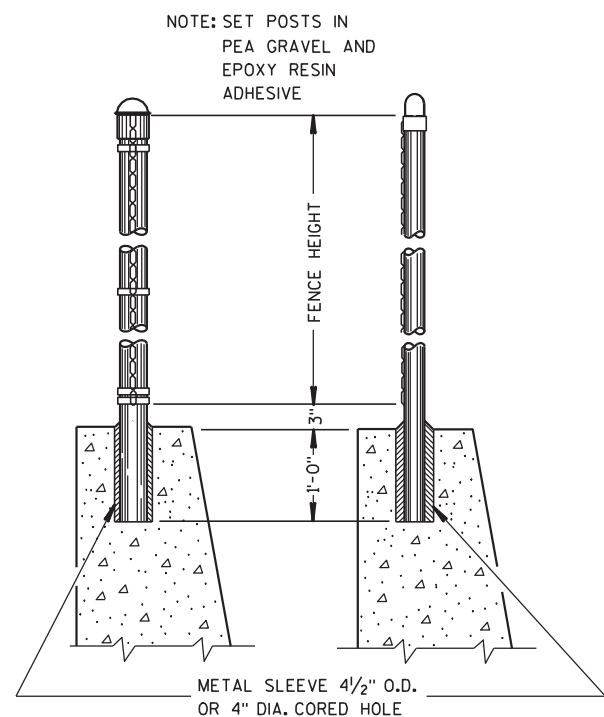
**END, CORNER, ANGLE
INTERSECTION & INTERMEDIATE
BRACED POSTS**



**BRACE RAIL
FABRIC FASTENER**
A

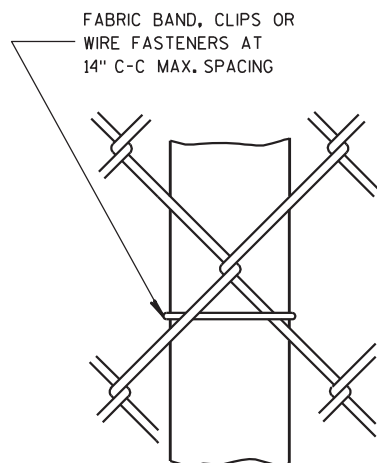


TENSION WIRE END CLAMP

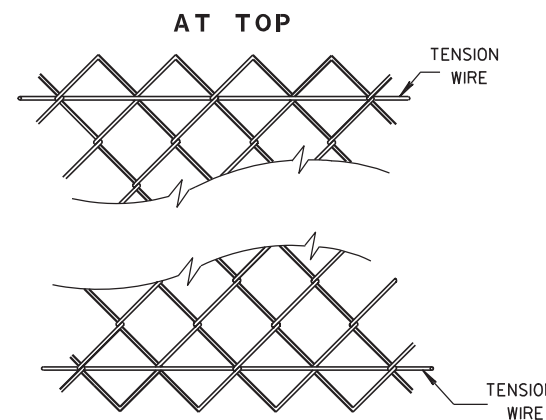


END POST & CORNER POST **LINE POST**

DETAILS OF FENCE ON WALL



**LINE POST
FABRIC FASTENER**



B

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