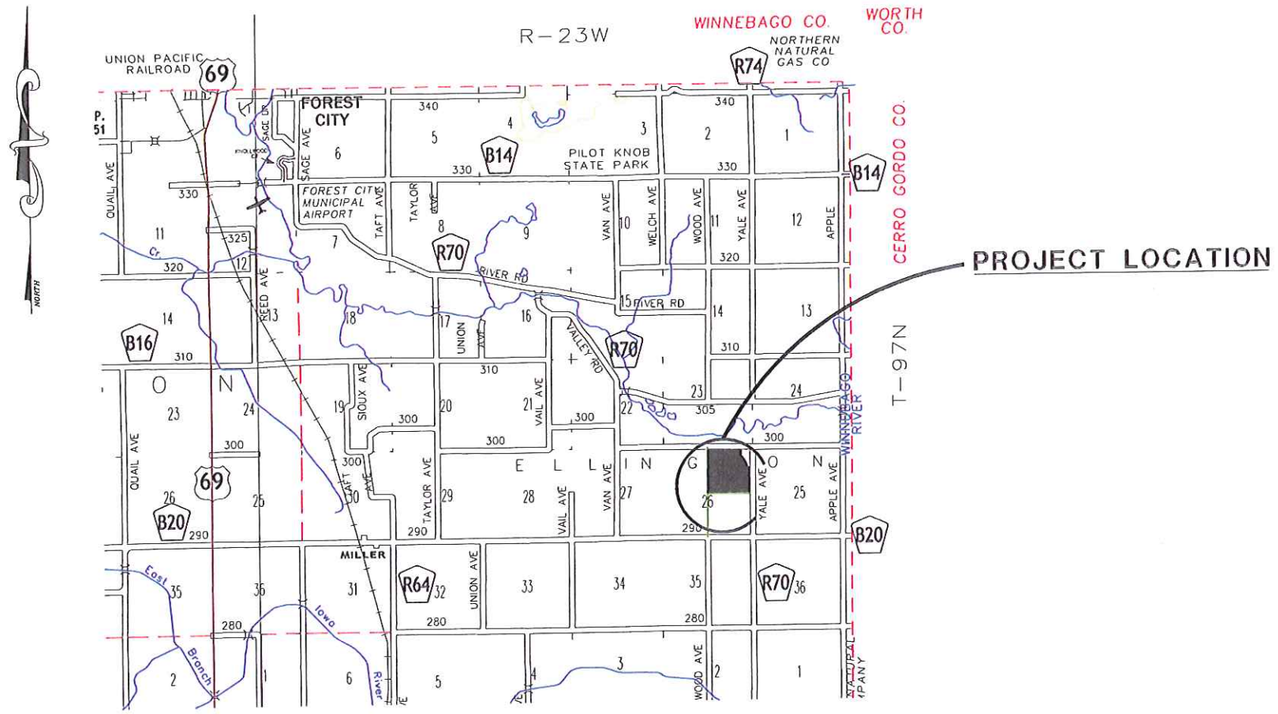
CREP WETLAND PROJECT
Han 972326A

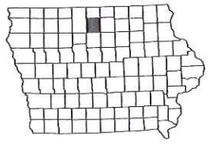
HANCOCK COUNTY, IOWA



LOCATION MAP

NOT TO SCALE

SECTION 26, T97N, R23W, HANCOCK COUNTY, IOWA



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1	TITLE SHEET / LOCATION MAP
2	SITE PLAN
3	CROSS SECTION A-A
4	CROSS SECTION B-B
5	CROSS SECTION C-C
6	CORE TRENCH CROSS SECTION
7	RIP-RAP & IN LINE CONTROL STRUCTURE DETAIL
8	DETAIL

LICENSED PROFESSIONAL ENGINEER
DALLAS L. HEIKENS
17550
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa

Dallas L Heikens Date 10/11/12

Dallas L. Heikens, PE
License number 17550
My license renewal date is December 31, 2012
Pages or sheets covered by this seal 1-8 OF 8

JACOBSON-WESTERGARD & ASSOCIATES, INC.
105 S. SIXTH ST. ESTHERVILLE, IOWA
PHONE: (712) 362-2647 Toll Free (866) 215-2298
E-MAIL: jacobsonwestergard@mchsi.com
Web Site: www.jacobson-westergard.com
CONSULTING ENGINEERS LAND SURVEYING

REVISIONS	BY	DATE

CREP WETLAND PROJECT
Han 972326A
HANCOCK COUNTY, IOWA

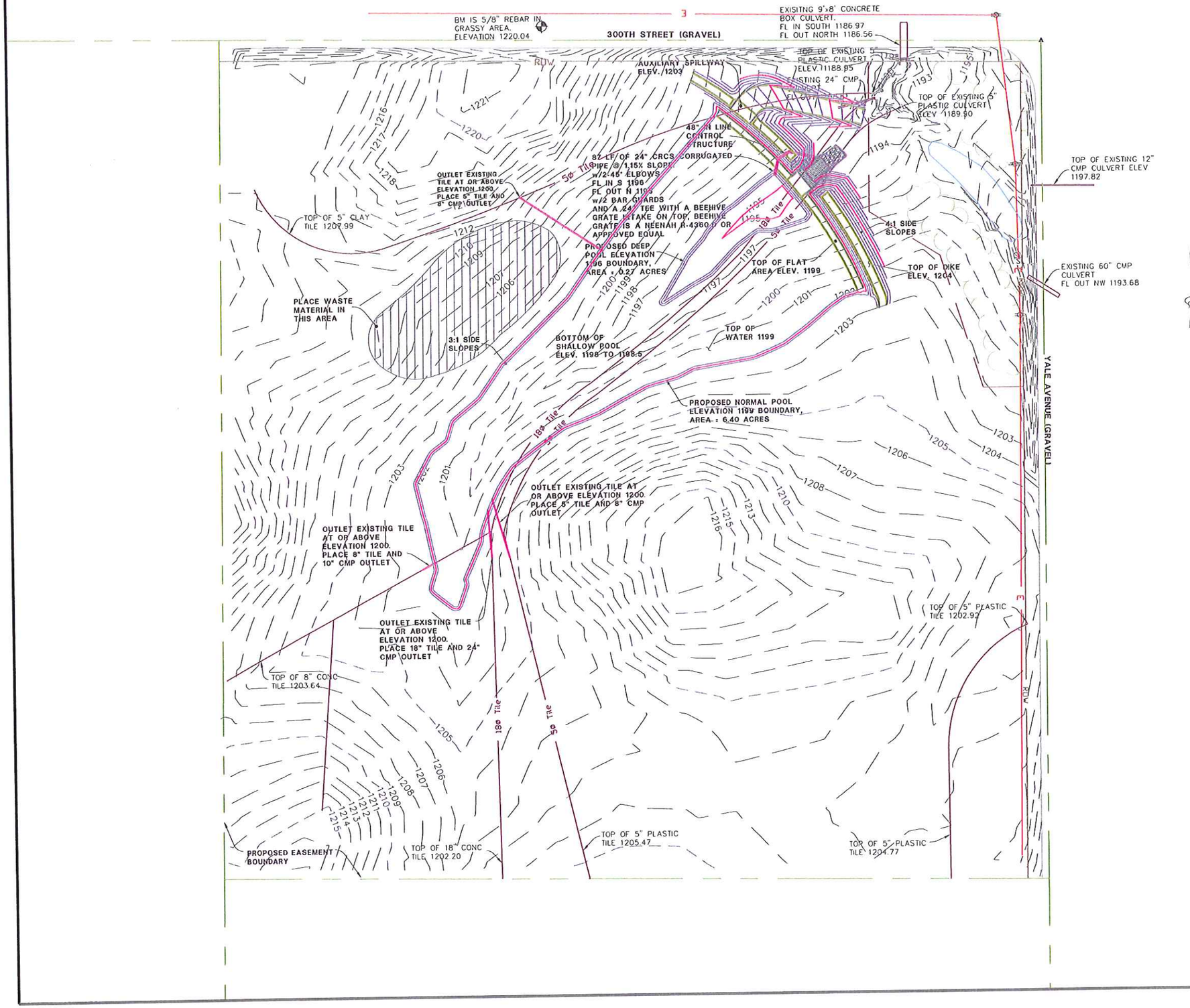
TITLE

Date	8-28-12	
Designer	DLH	
Draftsman	CLH	
Checker	DLH	

Project Number
E10204

Sheet
1 OF 8

LAND PROJECTS R3\2010\E10204\DWG\10204-3.DWG



CONSTRUCTION NOTES

1. REMOVE ALL TILE LINE UNDER EMBANKMENT FROM 15' UPSTREAM TO 15' DOWNSTREAM OF THE EMBANKMENT FOOTPRINT. PERFORM EXPLORATORY EXCAVATION WITHIN CORE EXCAVATION.
2. ALL RIP RAP LAYERS SHALL BE PLACED 18" THICK OVER GEOTEXTILE FABRIC, UNLESS NOTED OTHERWISE.
3. ALL EXPOSED SURFACES TO BE REVEGETATED, INCLUDING SHALLOW POOL AREAS SHALL BE TOPSOILED WITH A MINIMUM DEPTH OF 6", UNLESS OTHERWISE SPECIFIED.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS, CODES, AND O.S.H.A. STANDARDS.
5. CONTRACTOR SHALL CONTACT IOWA ONE CALL @ 1-800-292-8989 FOR LOCATION OF ALL UTILITIES, AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION AS REQUIRED BY STATE LAW.
6. SUITABLE EXCAVATED MATERIAL FROM THE CORE TRENCH EXCAVATION WILL BE USED FOR CONSTRUCTION OF THE CORE TRENCH w/THE REMAINING VOLUME NEED TO BE CONSTRUCTED WITH SUITABLE MATERIAL FROM THE BORROW AREA.
7. CENTER 8' OF BERM MUST BE CONSTRUCTED w/SUITABLE MATERIAL FROM EXCAVATION AREA.
8. VEGETATIVE STRIPPING AND TOPSOIL STRIPPING SHALL EQUAL A MINIMUM OF 12" WHEN COMBINED.

GENERAL DESIGN NOTES

DRAINAGE AREA = 758.3 ACRES
PERMANENT POOL ELEVATION 1199
PERMANENT POOL AREA = 6.40 ACRES
DEEP WATER AREA = 0.27 ACRES
TOP OF DIKE ELEVATION 1204
EASEMENT BOUNDARY AREA = 35.39 ACRES
PERCENT POOL TO DRAINAGE AREA = 0.84%
PERCENT DEEP WATER = 4.22%
BUFFER RATIO = 4.53 ACRES
APPROXIMATED DIKE LENGTH = 483 FEET

GRAPHIC SCALE

80 0 40 80
(IN FEET)
1 inch = 80 ft

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CREP WETLAND PROJECT
Han 972326A
HANCOCK COUNTY, IOWA

SITE PLAN

Date	8-31-12	
Designer	DLH	
Draftsman	CLH	
Checker	DLH	

Project Number
E10204
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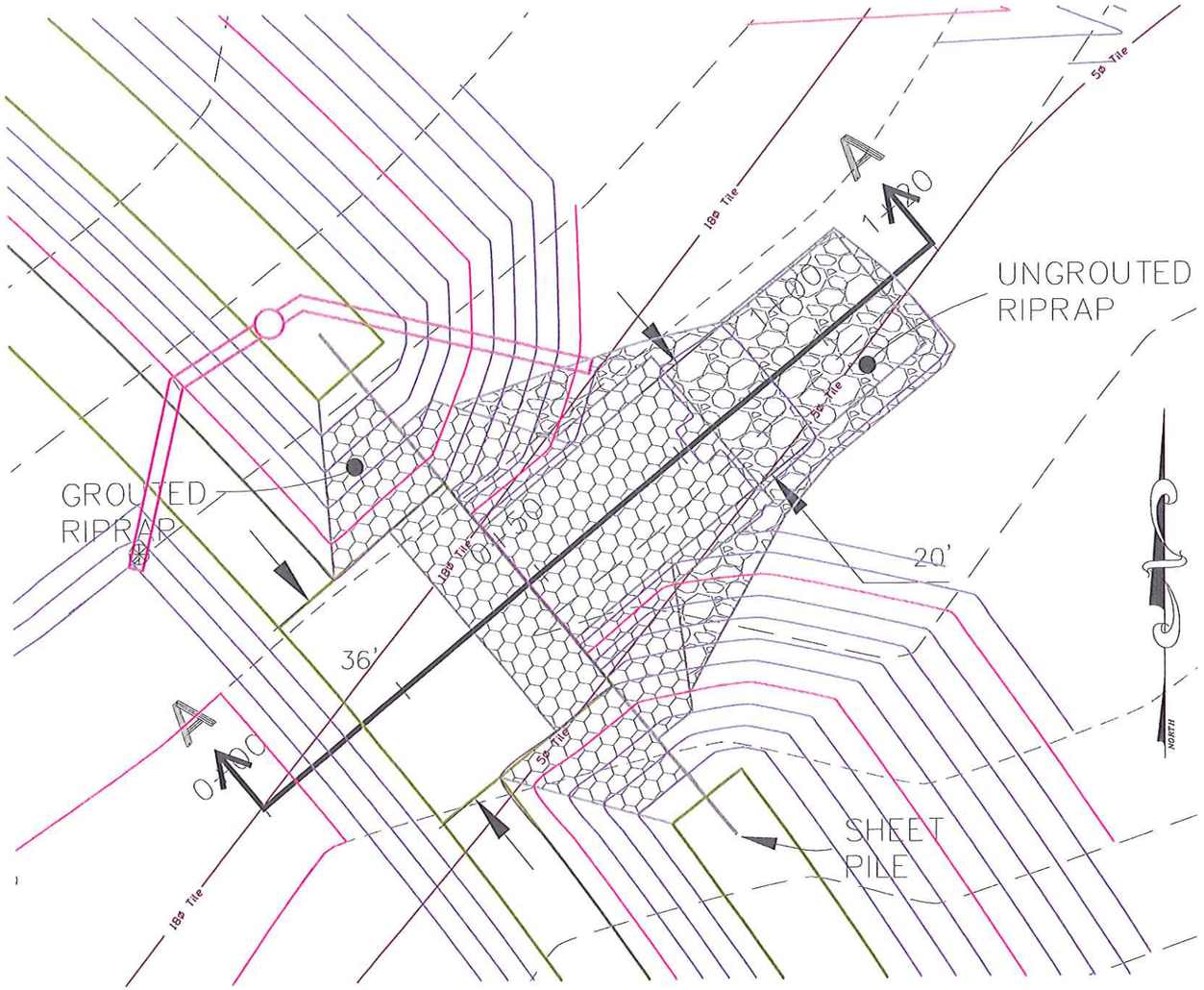

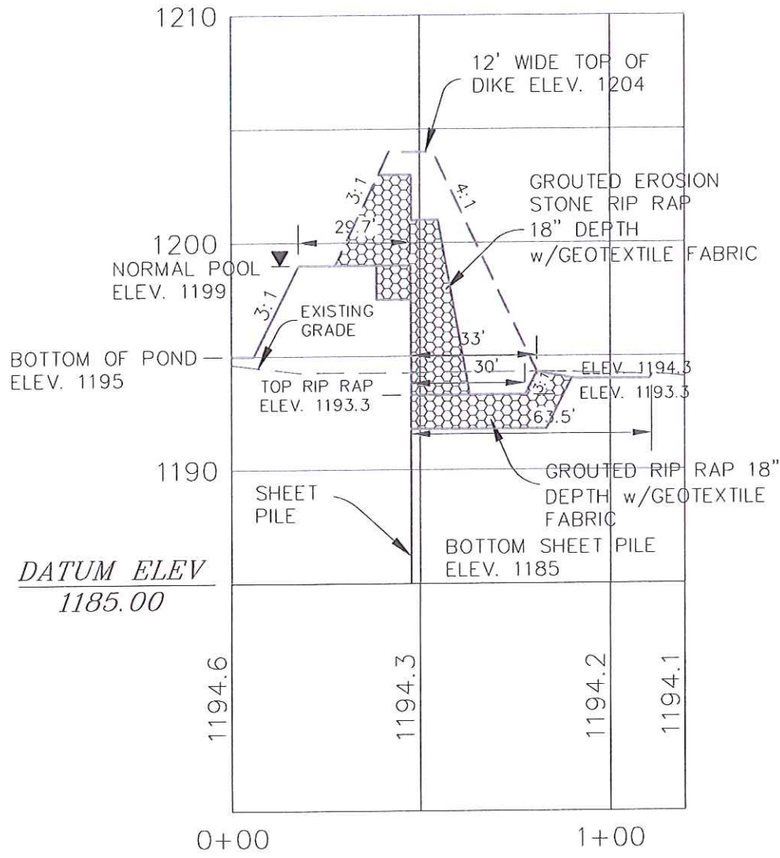

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Han 972326A
HANCOCK COUNTY, IOWA

CROSS SECTION A-A

Date 8-28-12
Designer DLH
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Checker DLH

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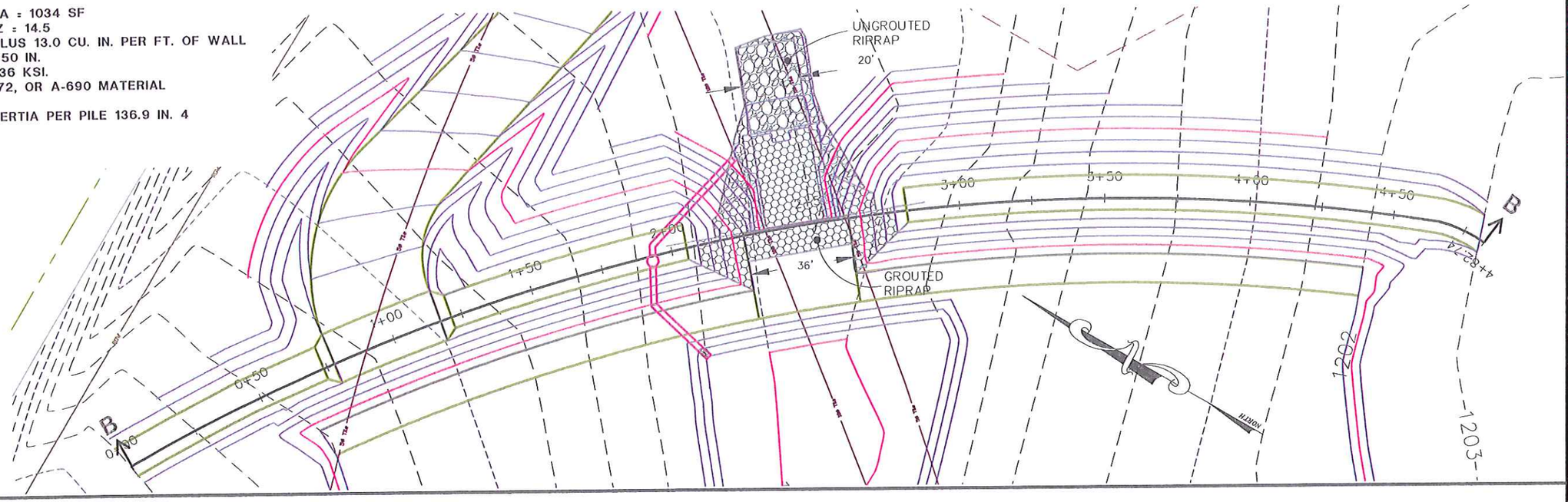
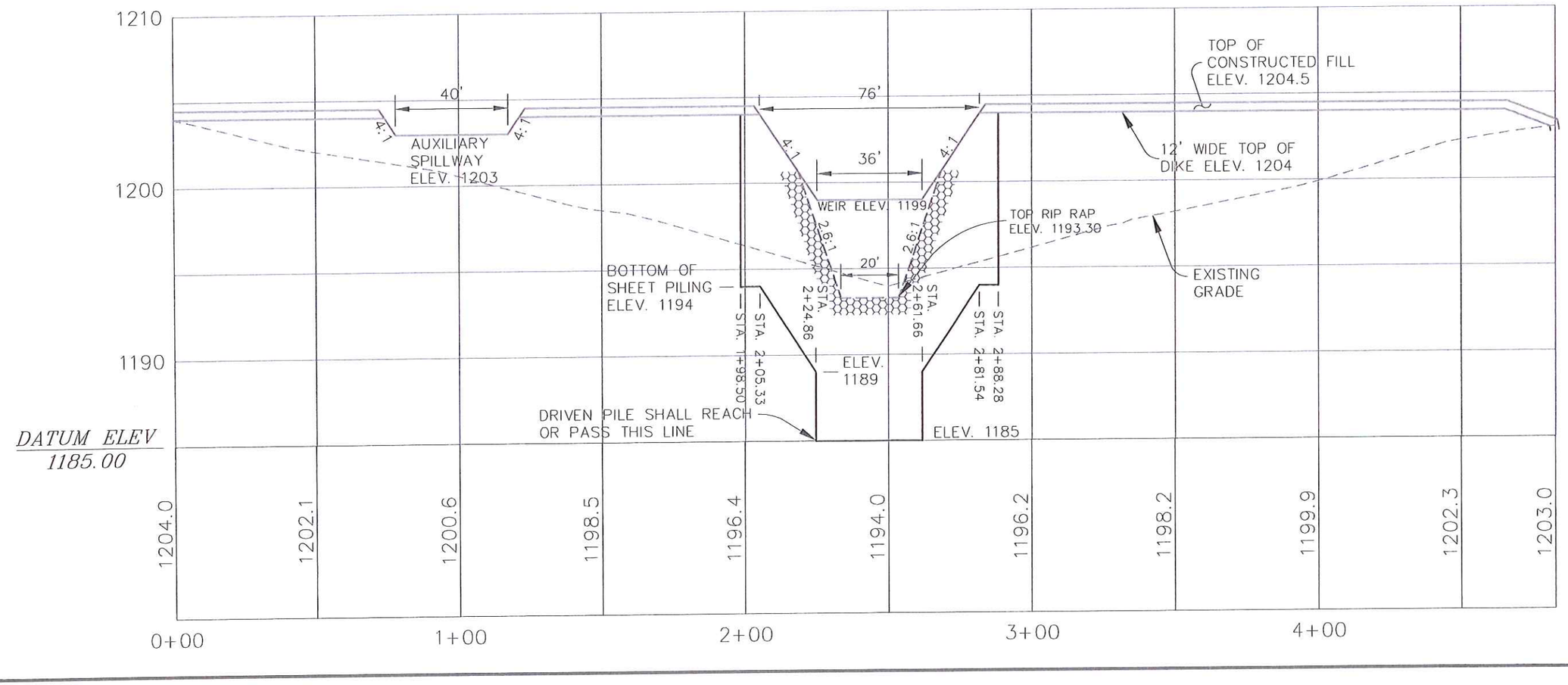
DESIGN NOTES:
DESIGN SHEET PILE AREA = 1034 SF
SHEET PILE: MINIMUM SZ = 14.5
MINIMUM SECTION MODULUS 13.0 CU. IN. PER FT. OF WALL
MINIMUM THICKNESS 0.250 IN.
MINIMUM STEEL GRADE 36 KSI.
MEET ASTM A-328, A-572, OR A-690 MATERIAL SPECIFICATION
MINIMUM MOMENT OF INERTIA PER PILE 136.9 IN. 4





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Han 972326A
HANCOCK COUNTY, IOWA

CROSS SECTION B-B

Date 8-28-12
Designer DLH
Draftsman CLH
Checker DLH

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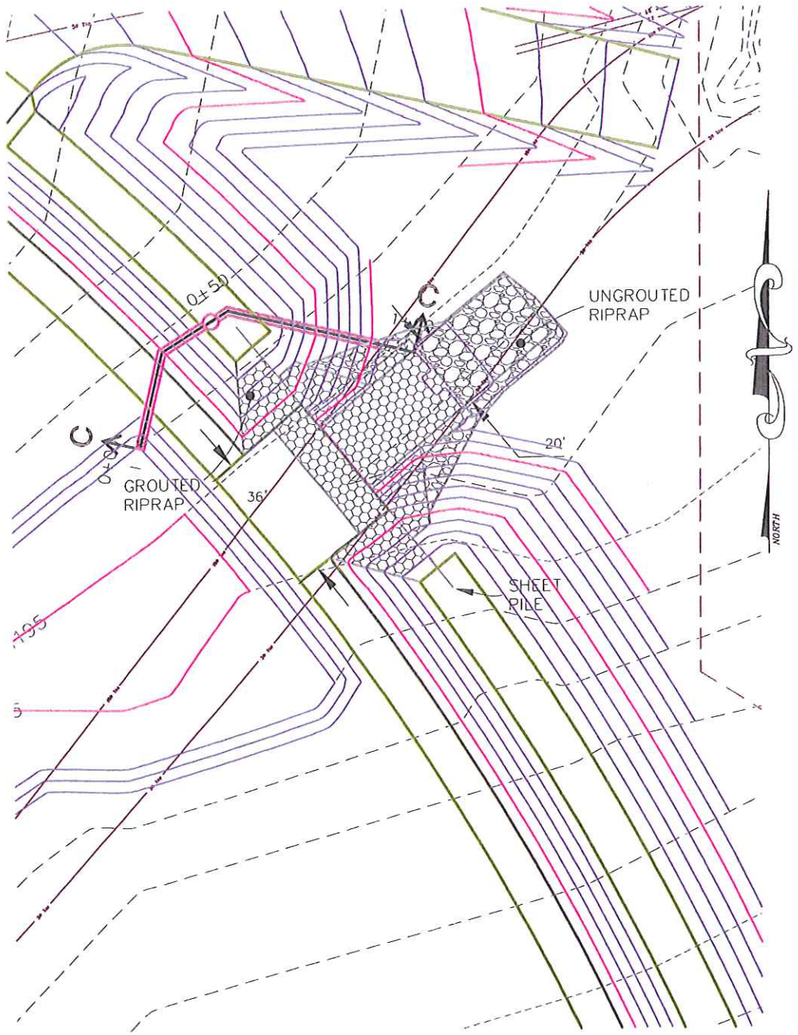

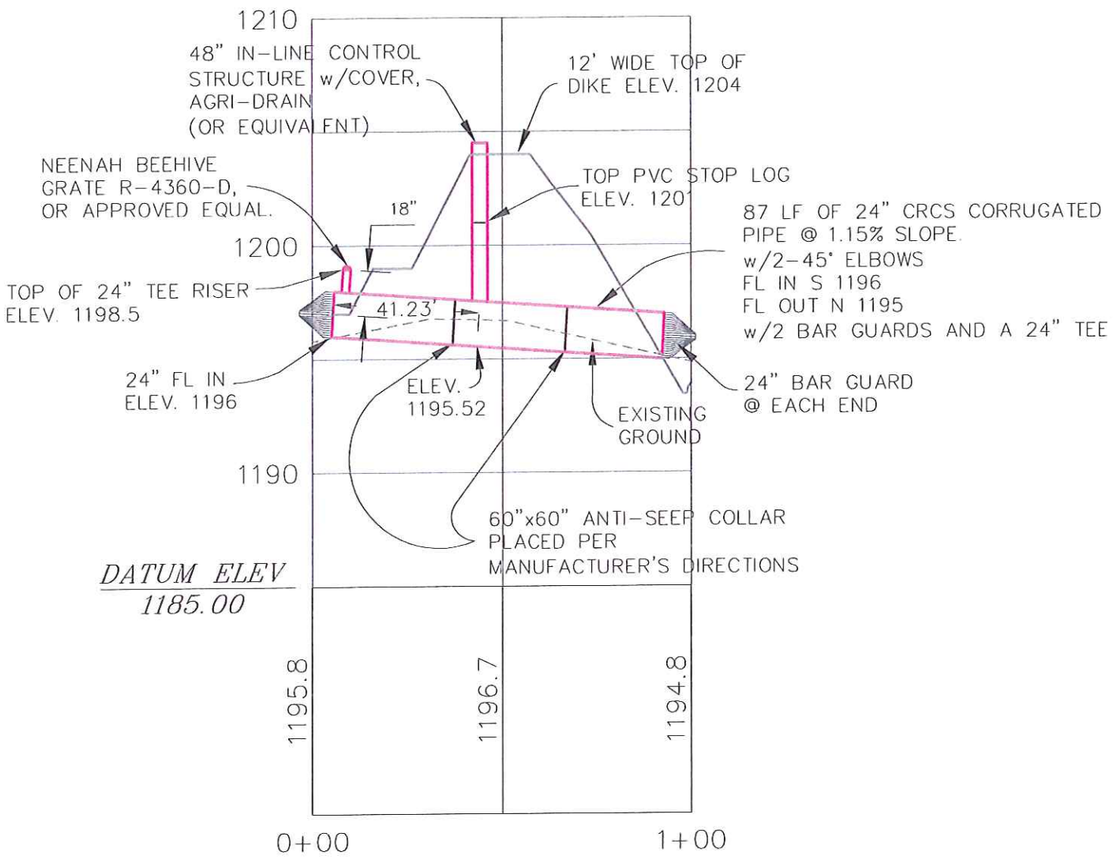

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CROSS SECTION C-C

Date	8-28-12	
Designer	DLH	
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Checker	DLH	

Project Number
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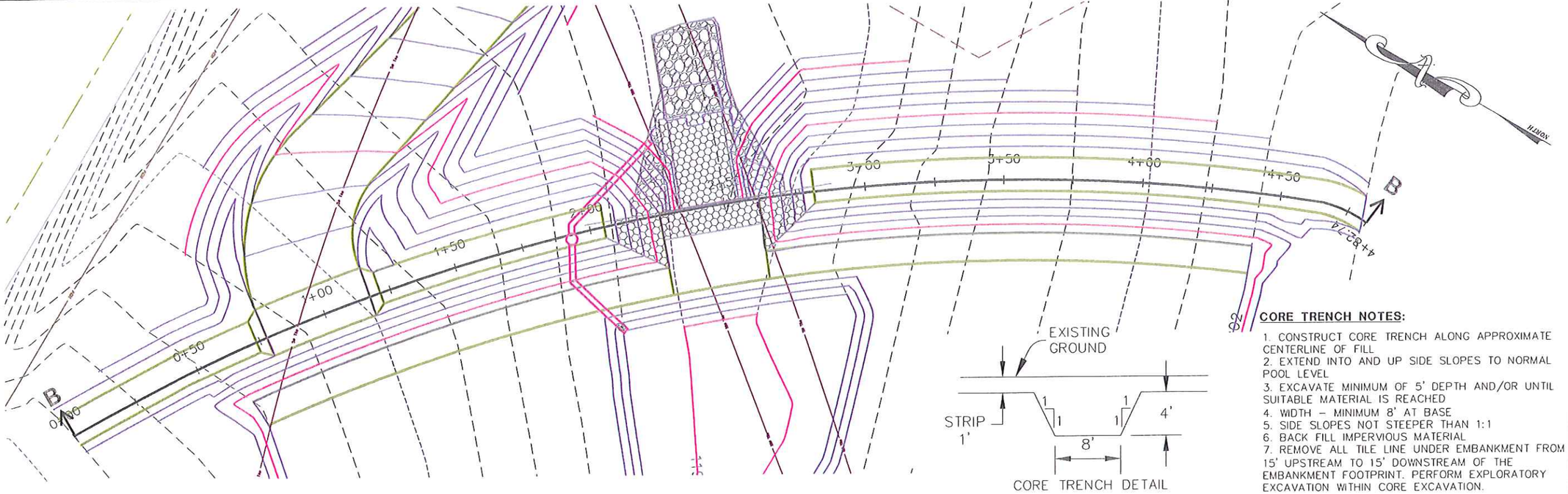
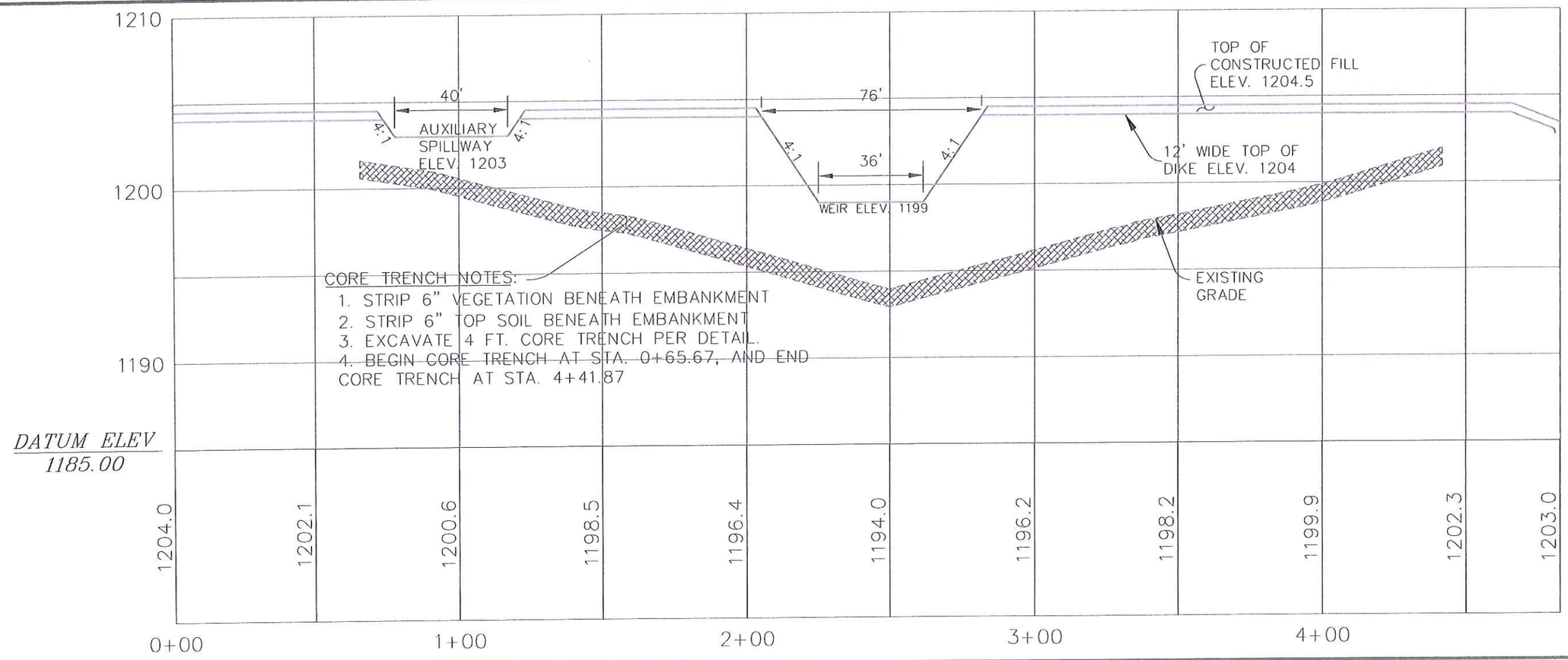


CORE TRENCH DETAIL

CORE TRENCH NOTES:

1. CONSTRUCT CORE TRENCH ALONG APPROXIMATE CENTERLINE OF FILL
2. EXTEND INTO AND UP SIDE SLOPES TO NORMAL POOL LEVEL
3. EXCAVATE MINIMUM OF 5' DEPTH AND/OR UNTIL SUITABLE MATERIAL IS REACHED
4. WIDTH – MINIMUM 8' AT BASE
5. SIDE SLOPES NOT STEEPER THAN 1:1
6. BACK FILL IMPERVIOUS MATERIAL
7. REMOVE ALL TILE LINE UNDER EMBANKMENT FROM 15' UPSTREAM TO 15' DOWNSTREAM OF THE EMBANKMENT FOOTPRINT. PERFORM EXPLORATORY EXCAVATION WITHIN CORE EXCAVATION.



CORE TRENCH NOTES:

1. STRIP 6" VEGETATION BENEATH EMBANKMENT
2. STRIP 6" TOP SOIL BENEATH EMBANKMENT
3. EXCAVATE 4 FT. CORE TRENCH PER DETAIL.
4. BEGIN CORE TRENCH AT STA. 0+65.67, AND END CORE TRENCH AT STA. 4+41.87

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CORE TRENCH
CROSS SECTION

Date 8-28-12
Designer DLH
Draftsman CLH
Checker DLH

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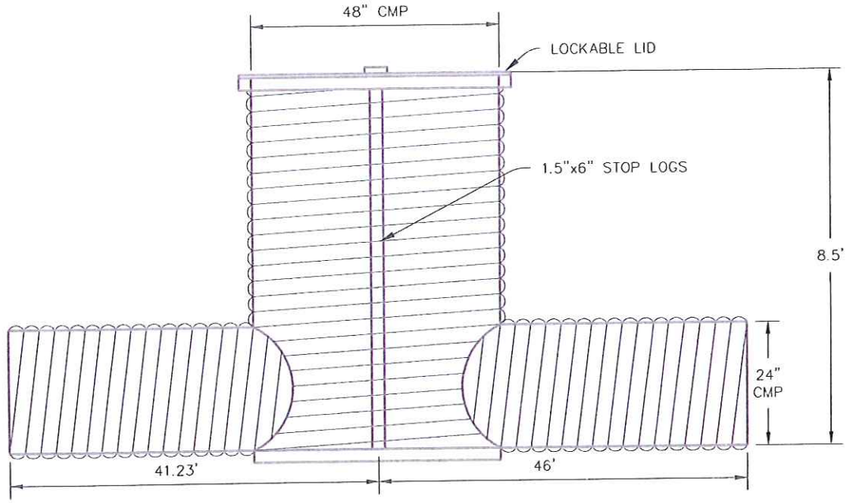

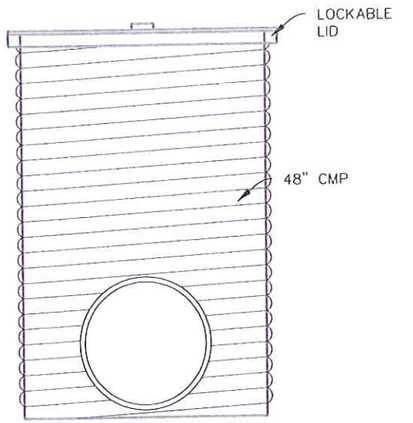

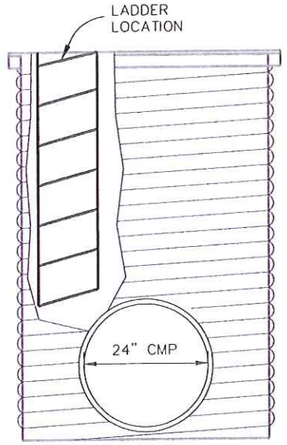

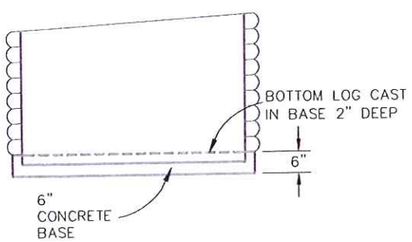

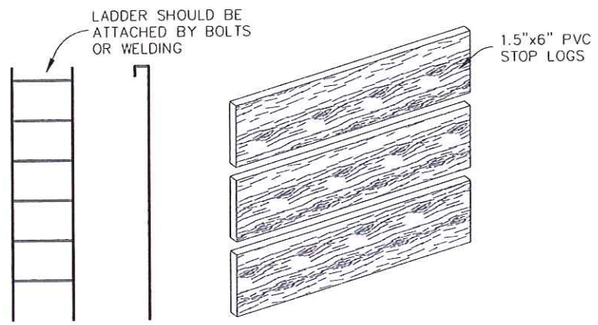

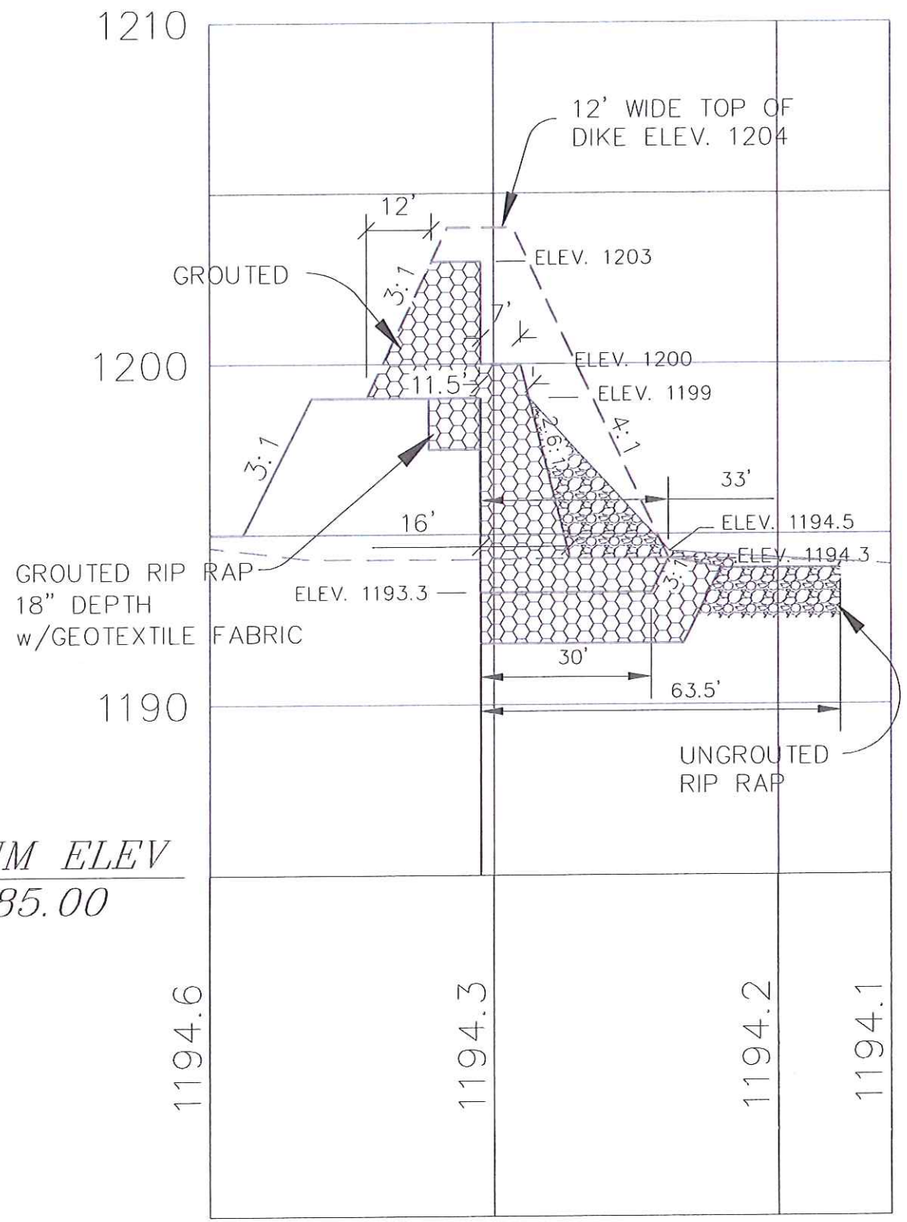

DATUM ELEV
1185.00

48" IN-LINE CONTROL STRUCTURE DETAIL

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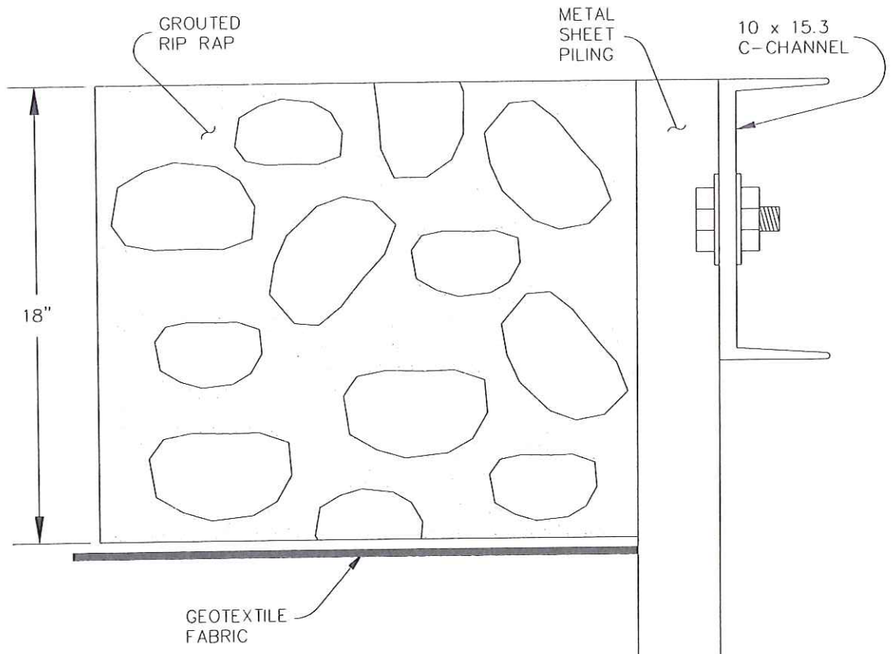
RIP-RAP & IN LINE CONTROL STRUCTURE DETAIL

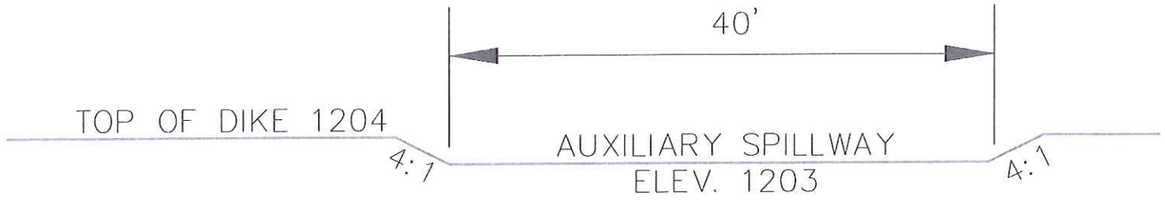
Date 8-28-12
Designer DLH
Draftsman CLH
Checker DLH

Project Number E10204
Sheet 7 OF 8

LAND PROJECTS R:\2010\E10204\DWG\10204-3.DWG



GROUTED RIP RAP DETAIL



SPILLWAY DETAIL

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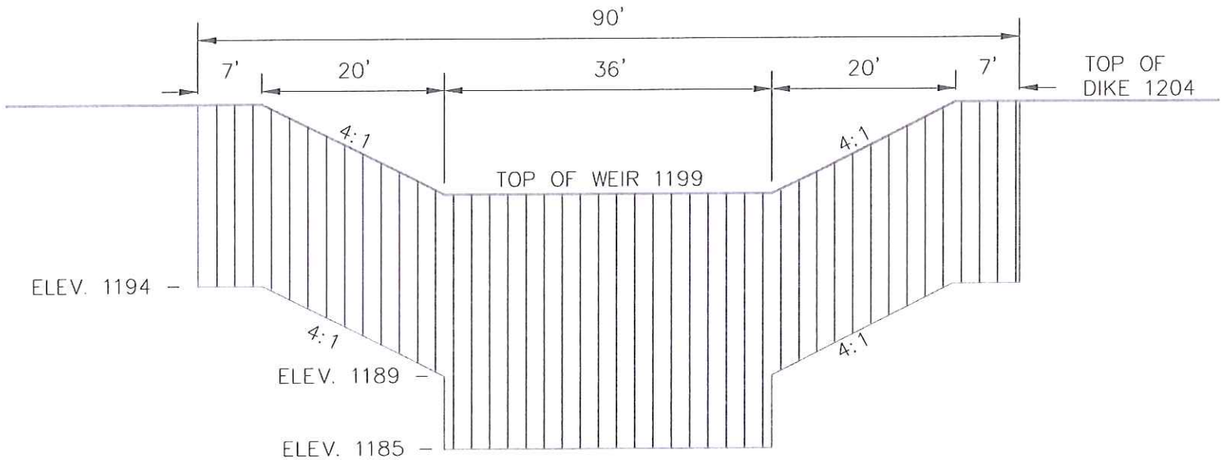
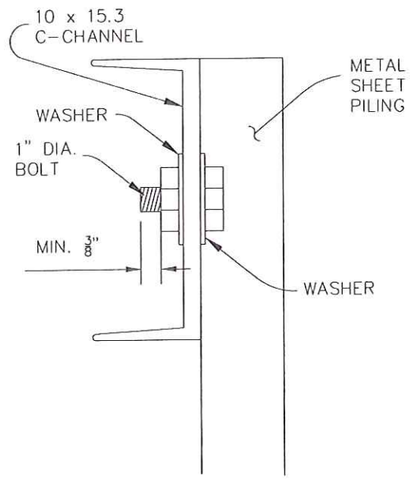


TYPICAL SHEET PILE ELEVATION

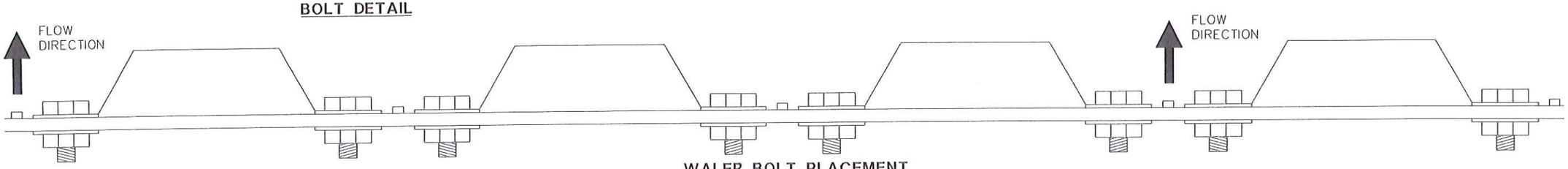
NOT TO SCALE



NOTES:

1. ALL BOLTS WILL BE 1" DIA. w/2 WASHERS. BOLT SHALL EXTEND AT MINIMUM 3/8" BEYOND NUT.
2. ALL HOLES SHALL BE FIELD DRILLED 1/16" DIA. LARGER THAN THE BOLTS
3. TWO BOLTS REQUIRED WHEN THE WALER IS PLACED AGAINST THE SPLICE. ONE BOLT REQUIRED WHEN THE WALER IS PLACED OPPOSITE THE SPLICE.
4. THE WALER SHALL BE PLACED ON THE DOWNSTREAM SIDE OF THE WEIR

BOLT DETAIL



WALER BOLT PLACEMENT

(WALER AGAINST SPLICES SHOWN. IF WALER PLACED OPPOSITE SPLICES REQUIRES ONE BOLT PER CURRUGATION.)

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