

**Coal Combustion Residual
Surface Impoundment
History of Construction
Documentation**

**Basin Electric Power Cooperative
Leland Olds Station**

April 2018

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Purpose

The purpose of this document is to demonstrate compliance with 40 CFR § 257.73(c) for Ash Pond 2 and Pond 3 at Leland Olds Station (LOS). LOS is a lignite coal-fired power plant consisting of two units that generate about 669 megawatts (MW) combined. The power plant, owned and operated by Basin Electric Power Cooperative (Basin Electric), is located approximately four miles southeast of Stanton in Mercer County, North Dakota.

The owner or operator is required to compile a history of construction for existing Coal Combustion Residual (CCR) surface impoundments. The history of construction shall contain, to the extent feasible, the information specified in paragraphs (c)(1)(i) through (xi) of 40 CFR § 257.73. The history of construction presented herein was compiled based on existing documentation, to the extent that it is reasonably and readily available and Basin Electric's site experience.

Inactive Status

A temporary bottom ash handling system consisting of above-ground concrete weirs and bottom ash collection and dewatering areas was placed into operation ending the transport of CCRs to the surface impoundments prior to effective date of the CCR Rule (October 19, 2015).

Accordingly, the LOS surface impoundments are considered "inactive" under the federal regulations. A "Notification of Intent to Initiate Closure of CCR Surface Impoundment" for Ash Pond 2 and Pond 3 was completed on December 15, 2015, in accordance with § 257.100. On April 18, 2016 the U.S. Environment Protection Agency (EPA) filed a motion to remand and vacate the provisions of the CCR Rule exempting inactive surface impoundments from the CCR Rule requirements. The DC Circuit Court of Appeals issued an order approving the motion on June 14, 2016. Since the exemption for inactive surface impoundments was no longer effective, EPA issued the "Extension Rule" on August 5, 2016. The Extension Rule became effective on October 4, 2016 providing a timeline for inactive units to comply with CCR Rule requirements.

Ash Pond 2 was partially closed in 2017. Approximately 23 acres in the south and southwest areas of the pond were closed in accordance with the design standards specified in 40 CFR § 257.102 and North Dakota Department of Health (NDDoH) permit requirements. The remainder of the pond complex is scheduled to be closed in 2019.

Previous Studies

Previous studies for Ash Pond 2 and Pond 3 at LOS include an EPA-sponsored site specific assessment of dam safety for CCR impoundments by GEI Consultants (GEI) dated June 2011. Based on the recommendations in the GEI Report, a follow-up study was conducted by AECOM Technical Services (AECOM) in 2012. The AECOM work included Hydrologic and Hydraulic (H&H) studies as well as a geotechnical investigation and structural stability analysis of the Ash Pond 2 and Pond 3 dikes. AECOM recommended flattening the slopes of some of the Pond dikes in order to improve structural stability. Basin Electric implemented these recommendations in 2012 and 2013.

Information regarding the engineering properties of foundation and embankment materials presented in this document is largely derived from the aforementioned GEI and AECOM reports.

Operator Contact Information and State Identification Number

LOS CCR surface impoundments are owned and operated by Basin Electric Power Cooperative, located at 1717 East Interstate Avenue, Bismarck, ND 58503. LOS CCR units were first regulated under the North Dakota Department of Health's solid waste management rules in 1982 as Permit SU-038 (later designated as SP-038 and more recently as 0038).

Location of CCR Unit(s) on USGS map

The locations of the LOS surface impoundments are identified on the map presented in Appendix I.

Purpose and Use of CCR units

Ash Pond 2 contains CCRs (bottom ash) placed in the unit prior to October 19, 2015. Ash Pond 2 currently receives water from the temporary bottom ash handling system and other wastewater flows from the plant. Ash Pond 2 discharges into Pond 3 to allow for the additional removal of suspended solids. Effluent from Pond 3 is conveyed to North Dakota Pollution Discharge Elimination System (NDPDES) Outfall 003 for eventual discharge.

CCR Unit Watershed

Ash Pond 2 and Pond 3 are located on a terrace deposit of the Missouri River. Accordingly, the CCR surface impoundments are located within the Missouri River watershed, which has an area of approximately 529,000 square miles.

Foundation and Abutment Materials

The ash pond complex is situated on a terrace of the Missouri River alluvial plain. Near-surface deposits consist of Quaternary alluvial silts and clays, observed to depths to approximately 18 feet in site geotechnical borings. The alluvial silts and clays are underlain by more than 100 feet of sand and gravel, interpreted to be of glaciofluvial origin. Local bedrock, the Paleocene Sentinel Butte Formation, is present at or near the surface just south of the site. Bedrock was not encountered at a depth of 120 feet in the vicinity of the ash ponds, likely due to a period of erosion that occurred prior to the deposition of the sand and gravel.

The stability of the foundations was evaluated by AECOM using soil data from field investigations and reviewing design drawings, operational and maintenance procedures, and conditions observed in the field. Additionally, slope stability analyses were performed to evaluate slip surfaces passing through the foundations. AECOM determined slope stability exceeds the criteria listed in §257.73(e)(1) for slip surfaces passing through the foundation.

Ash Pond 2 is effectively incised on three sides and has an earthen internal divider dike on its fourth. Therefore, Ash Pond 2 does not have abutments. Pond 3 is a ring dike structure and does not have abutments.

Engineering Properties of Construction Materials

LOS CCR facilities were constructed in the 1960s and 1970s and are permitted by the North Dakota Department of Health (NDDoH) under Dakota Administrative Code (NDAC) 33-20. The impoundment dikes have been constructed by excavating locally derived materials from the impoundment basins and placing the excavated materials (silts and clays) along the perimeter of the basins to form the impoundment dikes.

The CCR impoundments have not been expanded since being constructed. Based on AECOM's recommendations, however, both the divider dike between Ash Pond 2 and Pond 3 and the

north dike of Pond 3 were reconstructed in 2012-2013. The top 6 to 8 feet of the dikes were excavated, replaced, and recompact. The dikes were widened to 20 feet and regraded to approximately 3H:1V slopes. Cabled concrete erosion protection was added to the interior slopes between the low and high water operating elevations of the pond.

The CCR unit dikes are generally comprised of granular fill materials that are underlain by native granular or cohesive soil deposits. The granular fill consists of varying materials, including silty clay (CL, CH) and silty sand (SM, SP-fly/bottom ash). The fill material is underlain by layers of silty clay (CL, CH), silty sand (SM), clayey-silt (CL-ML), and silt (ML). The impoundment dike fill soils were similar in texture to the underlying native geologic deposits (described above), supporting the notion that the impoundment dikes were constructed using locally derived material. The relative density of the granular fill soils was typically in the medium dense to very dense range with some intermittent deposits of loose material, based on Standard Penetration Test (SPT) results.

Detailed Dimensional Drawings

No original design drawings are available for Ash Pond 2 and Pond 3, given the dates of construction (mid-1960s and -1970s). Based on a supplementary geotechnical evaluation completed after the initial GEI assessment, AECOM recommended several measures to improve the structural stability of the surface impoundments. Basin Electric implemented the recommendations in 2012-2013. Drawings 0CY-0019, 0CY-0020, 0CY-0021, 0CY-0022, 0CY-23, and 0CY-0026 show details associated with the recent construction and generally reflect current conditions at the site. These drawings are included in Appendix II. Based on the review of the drawings listed above, no natural or manmade features that could adversely affect operation of these CCR units due to malfunction or mis-operation were identified.

Existing Instrumentation

Instrumentation at the LOS surface impoundments includes staff gauges to measure pool elevation in each of the ponds and a water level indicator at the Pond 3 pump house. No other instrumentation is present.

Area-capacity Tables

The area-capacity table for the surface impoundment complex was prepared by AECOM in 2018 and reflects current conditions at the site.

Table 1. Stage-Storage Relationship

Elevation NGVD29 (feet)	Surface Area (acres)	Storage (acre-feet)	Cumulative Storage (acre-feet)
1,670.0	30.6	0.0	0
1,672.0	31.5	62	62
1,674.0	32.4	64	126
1,676.0	33.4	66	192
1,678.0	34.4	68	260
1,680.0	35.3	70	329
1,682.0	36.2	71	401
1,684.0	37.2	73	474
1,686.0	38.1	75	549
1,688.0	38.9	77	626
1,690.0	39.5	78	705
1,692.0	39.8	79	784

Spillways and Diversion Features

Spillways and diversion structures are not present since the surface impoundments have adequate capacity to contain expected flows. In 2018, the storage capacity of the impoundments was evaluated by AECOM for a 24-hour duration design storm for the 1,000-year Inflow Design Flood (IDF) using an AutoCAD Civil3D computer model. The computer model evaluated the ability of the ponds to collect and control the 1,000-yr IDF under existing operational and maintenance procedures. The Civil3D model results for the impoundments indicate that the all CCR units have sufficient storage capacity to adequately manage inflows during peak discharge conditions created by the 1,000-yr IDF. Therefore, the spillway requirements in § 257.73(d)(1)(v)(A) and (B) are not applicable to the impoundments at LOS.

Construction Specifications for Maintenance and Repair

Construction specifications for any maintenance or repair of the CCR units would be developed if and when necessary. If necessary, construction specifications would be prepared to meet current design, engineering, and industry standards in accordance with applicable rules and

regulatory guidance. At a minimum, the CCR surface impoundments are visually inspected on a weekly basis in accordance with 40 CFR § 257.83.

Structural Stability Information

No indications of structural instability have been observed to date for any of the CCR units at LOS. AECOM conducted initial structural stability and Hydrologic and Hydraulic (H&H) analyses in 2012. The AECOM work included a geotechnical investigation and structural stability analysis of the Ash Pond 2 and Pond 3 dikes. AECOM recommended flattening the slopes of some of the Pond dikes in order to improve structural stability. Basin Electric implemented these recommendations in 2012-2013. The results from structural stability and factors of safety assessments for each of the CCR surface impoundments at LOS are presented in documents prepared by AECOM to meet the requirements of 40 CFR § 257.73(d).

Recordkeeping and Reporting

A copy of this document will be placed into the facility's operating record in accordance with 40 CFR § 257.105 (Recordkeeping Requirements) and will be posted to Basin Electric Power Cooperative's CCR Web site in accordance with 40 CFR § 257.107 (Publicly accessible internet site requirements). Notification will be sent to the relevant State Director in accordance with 40 CFR § 257.106 (Notification Requirements).

Certification Statement

In accordance with the requirements of 40 CFR § 257.73 as specified in the *Standards for the Disposal of Coal Combustion Residuals in Landfills and Impoundments*, I certify the documentation regarding LRS CCR surface impoundment History of Construction is accurate.

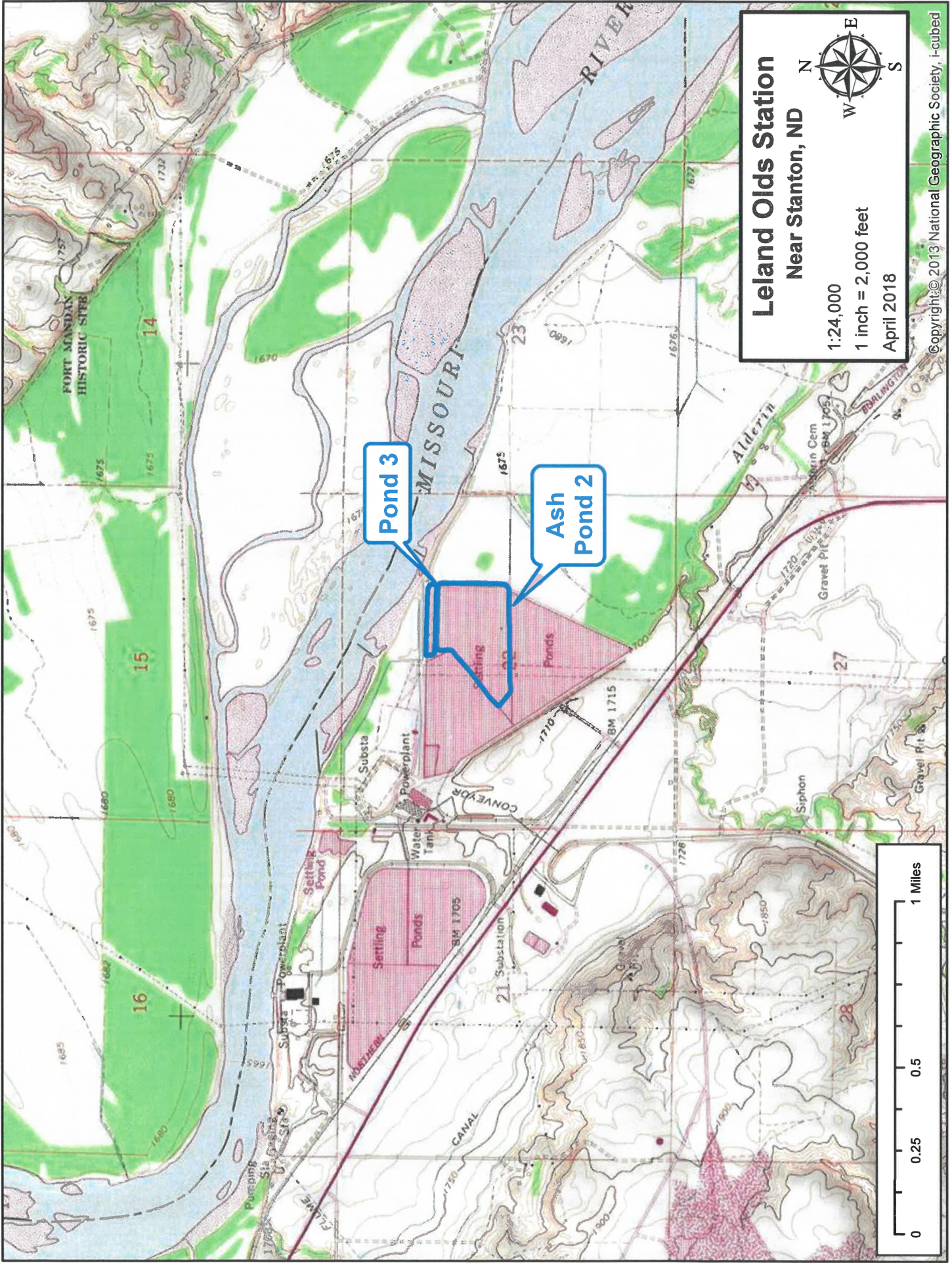


Kevin L. Solie, ND-9488

April 17, 2018



Appendix I



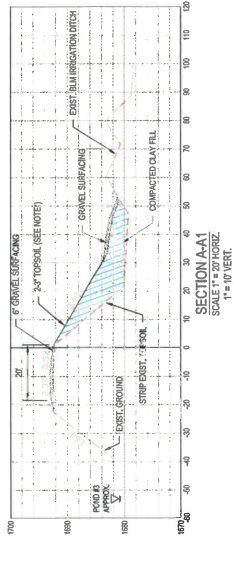
Leland Olds Station
 Near Stanton, ND

1:24,000
 1 inch = 2,000 feet
 April 2018

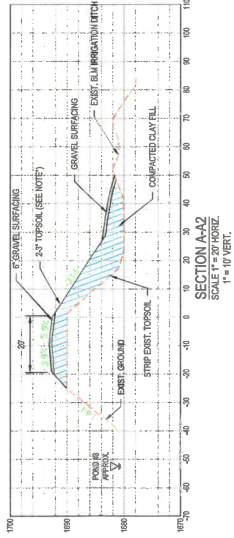


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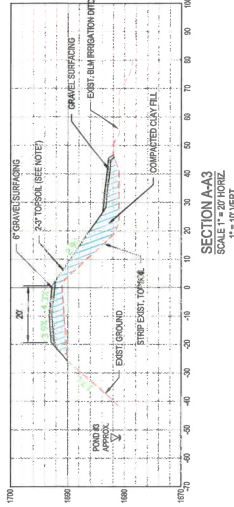
Appendix II



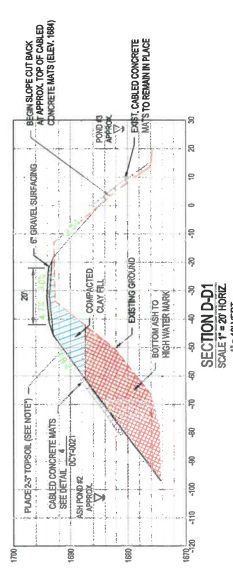
SECTION AA1
SCALE 1" = 20' HORIZ.
1" = 10' VERT.



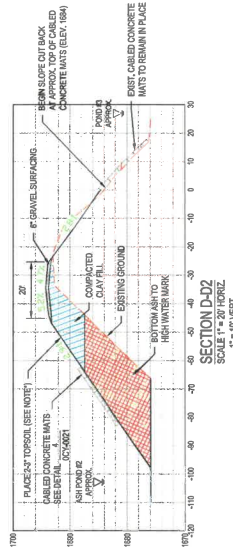
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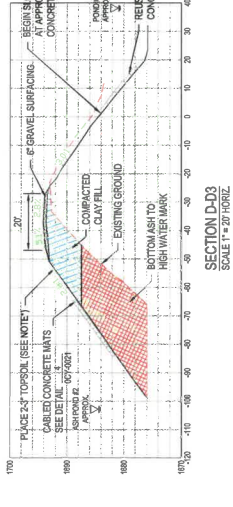
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1" = 10' VERT.



SECTION D-D1
SCALE 1" = 20' HORIZ.
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SECTION D-D2
SCALE 1" = 20' HORIZ.
1" = 10' VERT.

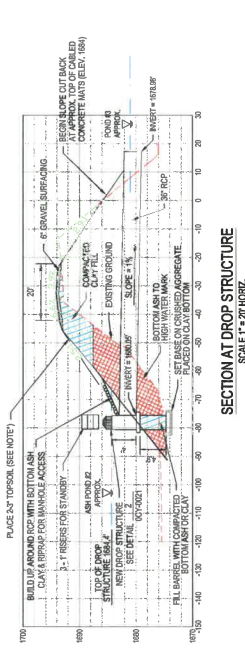


SECTION D-D3
SCALE 1" = 20' HORIZ.
1" = 10' VERT.

NOTES:
1. PLACE 2 1/2" TOPSOIL & PERFORM SURFACE ROUGHING
2. PLACE CLASS III HYDRO MULCH

SITE GRADING GENERAL NOTES

- SURFACE CONTROL: THE OWNER WILL PROVIDE CONTROL POINTS FOR THIS SITE. FOR LOCATIONS OF THESE POINTS CONTACT THE OWNER.
- FINAL SURFACING AND FINISHED GRADES: GENERAL NOTES: THE FINAL CONTIGUOUS AND CONTROL POINT ELEVATIONS SHOWN ON THE DRAWINGS REPRESENT THE FINISHED SURFACE TO THE TOPSOIL, GRAVEL SURFACING, CATCH BASINS, ETC. THE CONTRACTOR SHALL MAKE ALLOWANCES AS REQUIRED TO ACCOUNT FOR GRAVEL SURFACING WHEN COMPLETING THE SITE GRADING.
- SOIL GRADING: THE CONTRACTOR SHALL CLEAR, GRUB AND STRIP ALL WEEDS WITHIN THE CONSTRUCTION LIMITS. ALL ORGANICS FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF ON-SITE AT A LOCATION DESIGNATED BY PLANT PERSONNEL. ALL TOPSOIL WITHIN THE LIMITS OF THE GRADING SHALL BE STRIPPED TO A DEPTH OF SIX INCHES. THE TOPSOIL SHALL BE STOCKPILED ON-SITE AT A LOCATION APPROVED BY THE OWNER. FOLLOWING COMPLETION OF THE GRADING OPERATIONS THE TOPSOIL SHALL BE REAPPLIED TO ALL EXPOSED SURFACES NOT BEING GRADED OR RECOVERING SURFACES. MEDICAL ANY SURPLUS TOPSOIL SHALL BE PLACED ON FILL SLOPES. ALL MATERIALS SHALL BE PLACED FROM TOE TO HEEL AND MULCHED APPROPRIATELY.
- ANY SURPLUS MATERIALS SHALL BE PLACED ON FILL SLOPES. ALL SURPLUS MATERIALS SHALL BE PLACED FROM TOE TO HEEL AND IN THE SAME ENERGY AND MOISTURE REQUIREMENTS AS SPECIFIED IN THE SITE GRADING.
- ALL FILL MATERIALS SHALL BE PLACED TO A MINIMUM OF 18" ABOVE THE FINISHED GRADE AND COMPACTED. ALL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT INCHES LOOSE THICKNESS. ALL FILL SHALL BE COMPACTED TO A MINIMUM DRY DENSITY AT A MOISTURE CONTENT OF 2.0% OF OPTIMUM MOISTURE AS DETERMINED BY ASTM D-1556.
- WEEDS: ALL WEEDS REQUIRED FOR BEST CONTROL, AND COMPACTION REQUIREMENTS SHALL BE PROVIDED BY THE PLANT.
- SEEDING, MULCHING AND FERTILIZING: ALL AREAS THAT ARE DISTURBED BY THE CONTRACTOR, EXCEPT THOSE TO BE GRADED OR RECEIVING FUTURE SURFACING MATERIAL, SHALL BE SEED, FERTILIZED AND MULCHED FOR EROSION CONTROL IMMEDIATELY FOLLOWING COMPLETION OF THE GRADING OPERATIONS. THE SEEDING, FERTILIZING, AND MULCHING SHALL BE DONE IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES (BMP) ATTACHED TO THE PERMIT APPLICATION AND ANY OTHER APPLICABLE REGULATIONS.
- GOODFIDELITY: THE CONTRACTOR SHALL BE A MESH 200X OR OTHER APPROVED EQUIVALENT. THE FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND OWNER'S SPECIFICATIONS.
- GRAVEL SURFACING: THE GRAVEL SURFACING SHALL CONFORM TO THE NORTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 816.02B, CLASS 13 - AGRICULTURE SURFACING. THE GRAVEL SURFACING TO BE PROVIDED IS 1 1/2" IN SIZE.
- NEW TOPSOIL: NEW TOPSOIL SHALL BE PLACED TO A MINIMUM OF 18" ABOVE THE FINISHED GRADE AND COMPACTED. ALL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT INCHES LOOSE THICKNESS. ALL FILL SHALL BE COMPACTED TO A MINIMUM DRY DENSITY AT A MOISTURE CONTENT OF 2.0% OF OPTIMUM MOISTURE AS DETERMINED BY ASTM D-1556.
- EXISTING UTILITIES: THE CONTRACTOR SHALL MAINTAIN A REASONABLE WORKING DISTANCE AROUND ALL EXISTING UTILITIES. ANY REMAINS TO DAMAGED FACILITIES RESULTING FROM CONSTRUCTION OPERATIONS IS AT THE CONTRACTOR'S RISK.
- A GEOLOGICAL EXPLANATION WAS COMPLETED BY ACDON FOR A COPY OF THE TECHNICAL REPORT CONTACT THE OWNER.



SECTION AT DROP STRUCTURE
SCALE 1" = 20' HORIZ.
1" = 10' VERT.

AS BUILT

DESIGN NUMBER:	PROJECT NAME:	DATE:
LELAND OLDS STATION	LELAND OLDS STATION	12/3
REVISIONS:	DATE:	BY:
1. AS BUILT	12/3	MB
2. REVISED SECTION FOR DROP STRUCTURE	1/2013	MB
3. UPDATED AS BUILT	9/2013	MB
4. AS BUILT	8/2013	MB
5. AS BUILT	4/2013	MB
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AS BUILT

LELAND OLDS STATION
ASH PONDS - DIKE MODIFICATIONS
CROSS SECTIONS & NOTES

DESIGNED BY: J. BURKHARDT
DRAWN BY: J. BURKHARDT
CHECKED BY: J. BURKHARDT
DATE: 12/3

PROJECT NO.: 00-020
SHEET NO.: 3

REVISIONS:

1. AS BUILT
2. REVISED SECTION FOR DROP STRUCTURE
3. UPDATED AS BUILT

DATE: 12/3, 1/2013, 9/2013

BY: MB, MB, MB

DESCRIPTION:

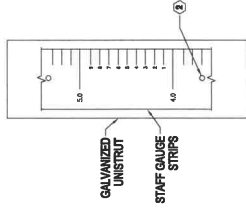
REVISIONS:

1. AS BUILT
2. REVISED SECTION FOR DROP STRUCTURE
3. UPDATED AS BUILT

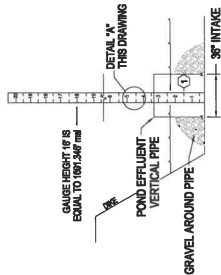
DATE: 12/3, 1/2013, 9/2013

BY: MB, MB, MB

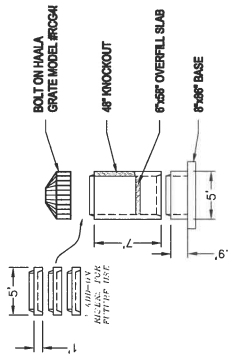
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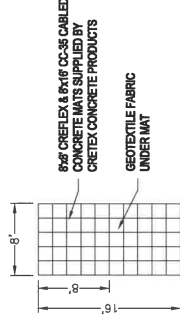
DETAIL - STAFF GAUGE
NO SCALE
05C-0021



ELEVATION - STAFF GAUGE
NO SCALE
05C-0021



DROP STRUCTURE DETAIL
NO SCALE
05C-0021



CABLED CONCRETE MATS
NO SCALE
05C-0021

- NOTES:**
1. FASTEN UNISTRUT STAND TO EXISTING POND OUTLET PIPE WITH SCREWS IN AT LEAST 8 PLACES.
 2. ATTACH STAFF GAUGE STRIPS TO UNISTRUT WITH STAINLESS STEEL TECH SCREWS. USE GROMMETTED HOLES ONLY. DO NOT DRILL THRU STAFF GAUGE.
 3. GAUGE HEIGHT SURVEY DATA ON 1/20/13 BASED ON NAD83, NORTH DAKOTA STATE PLANE COORDS. SOUTH ZONE. VERTICAL DATUM: NAVD 83

AS BUILT

PROJECT:	LELAND OLDS STATION	DATE:	04/23
CONTRACT/ORDER:	1 2 3	DRAWN BY:	M. BARBUJOUT
REVISIONS:		CHECKED BY:	M. BARBUJOUT
DESIGNED BY:		DATE:	
PROJECT ORIGINATOR:	LELAND OLDS STATION	PROJECT ORIGINATOR PHONE:	
PROJECT ORIGINATOR:	ASH PONDS - DIKE MODIFICATIONS DETAILS	PROJECT ORIGINATOR FAX:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR EMAIL:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR WEBSITE:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR ADDRESS:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR CITY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR STATE:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR ZIP:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR COUNTY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR COUNTRY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT NO.:	OCY-0021
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT NAME:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT ADDRESS:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT CITY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT STATE:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT ZIP:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT COUNTRY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT COUNTY:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT TOWN:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT RANGE:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT SECTION:	
PROJECT ORIGINATOR:		PROJECT ORIGINATOR PROJECT SHEET NO.:	2

REV.	DESCRIPTION	DATE	APP.	CHK.	MB	MB	MB	MB
2	Updated As Built	9/2013		CLK	MB	MB	MB	MB
1	As Built	8/2013		CLK	MB	MB	MB	MB
0B	Field Completion as of Jan. 2013	4/2013		CLK	MB	MB	MB	MB

REFERENCE DRAWINGS

05C-0018 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 3 & PLAN VIEW

05C-0019 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 4 & PLAN VIEW

05C-0020 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 5 & PLAN VIEW

05C-0021 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 6 & PLAN VIEW

05C-0022 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 7 & PLAN VIEW

05C-0023 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 8 & PLAN VIEW

05C-0024 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 9 & PLAN VIEW

05C-0025 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 10 & PLAN VIEW

05C-0026 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 11 & PLAN VIEW

05C-0027 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 12 & PLAN VIEW

05C-0028 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 13 & PLAN VIEW

05C-0029 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 14 & PLAN VIEW

05C-0030 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 15 & PLAN VIEW

05C-0031 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 16 & PLAN VIEW

05C-0032 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 17 & PLAN VIEW

05C-0033 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 18 & PLAN VIEW

05C-0034 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 19 & PLAN VIEW

05C-0035 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 20 & PLAN VIEW

05C-0036 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 21 & PLAN VIEW

05C-0037 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 22 & PLAN VIEW

05C-0038 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 23 & PLAN VIEW

05C-0039 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 24 & PLAN VIEW

05C-0040 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 25 & PLAN VIEW

05C-0041 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 26 & PLAN VIEW

05C-0042 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 27 & PLAN VIEW

05C-0043 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 28 & PLAN VIEW

05C-0044 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 29 & PLAN VIEW

05C-0045 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 30 & PLAN VIEW

05C-0046 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 31 & PLAN VIEW

05C-0047 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 32 & PLAN VIEW

05C-0048 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 33 & PLAN VIEW

05C-0049 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 34 & PLAN VIEW

05C-0050 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 35 & PLAN VIEW

05C-0051 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 36 & PLAN VIEW

05C-0052 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 37 & PLAN VIEW

05C-0053 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 38 & PLAN VIEW

05C-0054 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 39 & PLAN VIEW

05C-0055 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 40 & PLAN VIEW

05C-0056 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 41 & PLAN VIEW

05C-0057 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 42 & PLAN VIEW

05C-0058 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 43 & PLAN VIEW

05C-0059 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 44 & PLAN VIEW

05C-0060 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 45 & PLAN VIEW

05C-0061 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 46 & PLAN VIEW

05C-0062 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 47 & PLAN VIEW

05C-0063 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 48 & PLAN VIEW

05C-0064 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 49 & PLAN VIEW

05C-0065 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 50 & PLAN VIEW

05C-0066 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 51 & PLAN VIEW

05C-0067 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 52 & PLAN VIEW

05C-0068 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 53 & PLAN VIEW

05C-0069 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 54 & PLAN VIEW

05C-0070 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 55 & PLAN VIEW

05C-0071 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 56 & PLAN VIEW

05C-0072 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 57 & PLAN VIEW

05C-0073 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 58 & PLAN VIEW

05C-0074 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 59 & PLAN VIEW

05C-0075 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 60 & PLAN VIEW

05C-0076 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 61 & PLAN VIEW

05C-0077 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 62 & PLAN VIEW

05C-0078 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 63 & PLAN VIEW

05C-0079 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 64 & PLAN VIEW

05C-0080 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 65 & PLAN VIEW

05C-0081 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 66 & PLAN VIEW

05C-0082 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 67 & PLAN VIEW

05C-0083 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 68 & PLAN VIEW

05C-0084 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 69 & PLAN VIEW

05C-0085 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 70 & PLAN VIEW

05C-0086 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 71 & PLAN VIEW

05C-0087 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 72 & PLAN VIEW

05C-0088 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 73 & PLAN VIEW

05C-0089 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 74 & PLAN VIEW

05C-0090 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 75 & PLAN VIEW

05C-0091 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 76 & PLAN VIEW

05C-0092 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 77 & PLAN VIEW

05C-0093 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 78 & PLAN VIEW

05C-0094 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 79 & PLAN VIEW

05C-0095 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 80 & PLAN VIEW

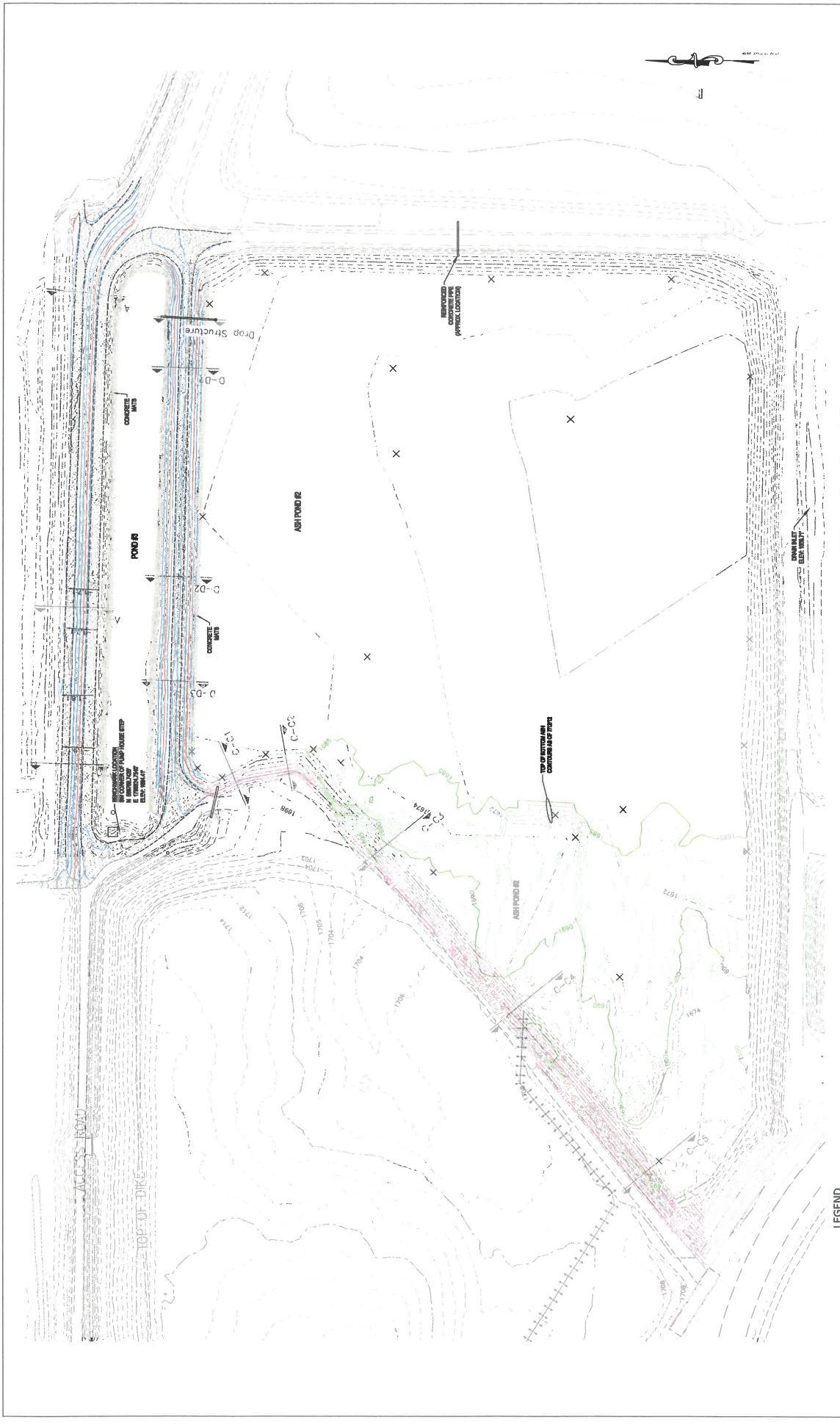
05C-0096 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 81 & PLAN VIEW

05C-0097 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 82 & PLAN VIEW

05C-0098 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 83 & PLAN VIEW

05C-0099 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 84 & PLAN VIEW

05C-0100 LELAND OLDS STATION ASH PONDS - DIKE MODIFICATIONS POND 85 & PLAN VIEW



LEGEND

- EXISTING GROUND CONTOURS
- EXISTING ASH TO BE REMOVED MAJOR CONTOURS
- EXISTING ASH TO BE REMOVED MINOR CONTOURS
- FINISHED GRADE MAJOR CONTOURS
- FINISHED GRADE MINOR CONTOURS
- AS BUILT MAJOR CONTOURS
- AS BUILT MINOR CONTOURS

OVERALL SITE VIEW
SCALE 1" = 40'

REFERENCE DRAWINGS

DATE: 12/13
 DRAWN BY: J. J. BURKHARDT
 CHECKED BY: J. J. BURKHARDT
 PROJECT: LELAND OLDS STATION 1 2 3
 CONTRACT NUMBER: LELAND OLDS STATION ASH POND DIKE MODIFICATION PROJECT & 24-141 NEW
 SHEET NUMBER: LELAND OLDS STATION ASH POND DIKE MODIFICATION PLAN VIEW

DESIGNER: J. J. BURKHARDT
ENGINEER: J. J. BURKHARDT
PROJECT MANAGER: J. J. BURKHARDT
CLIENT: BASIN ELECTRIC POWER COOPERATIVE
 A Truist Energy Cooperative

REV.	DESCRIPTION	DATE