

# CONSTRUCTION PLANS FOR IOWA DNR IN PARTNERSHIP WITH POLK COUNTY CONSERVATION POLK COUNTY, IOWA

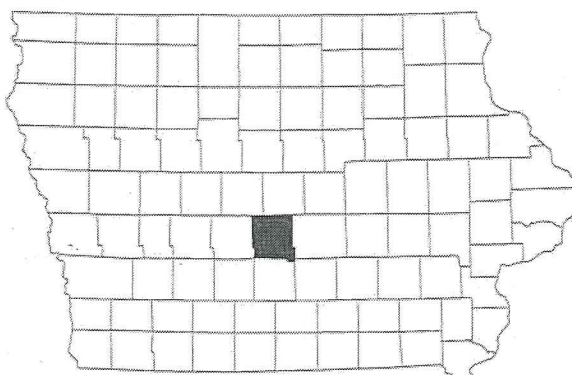
## EASTER LAKE RESTORATION CONTRACT 3

### (LAKE GRADING, FISH HABITAT, SHORELINE RESTORATION)

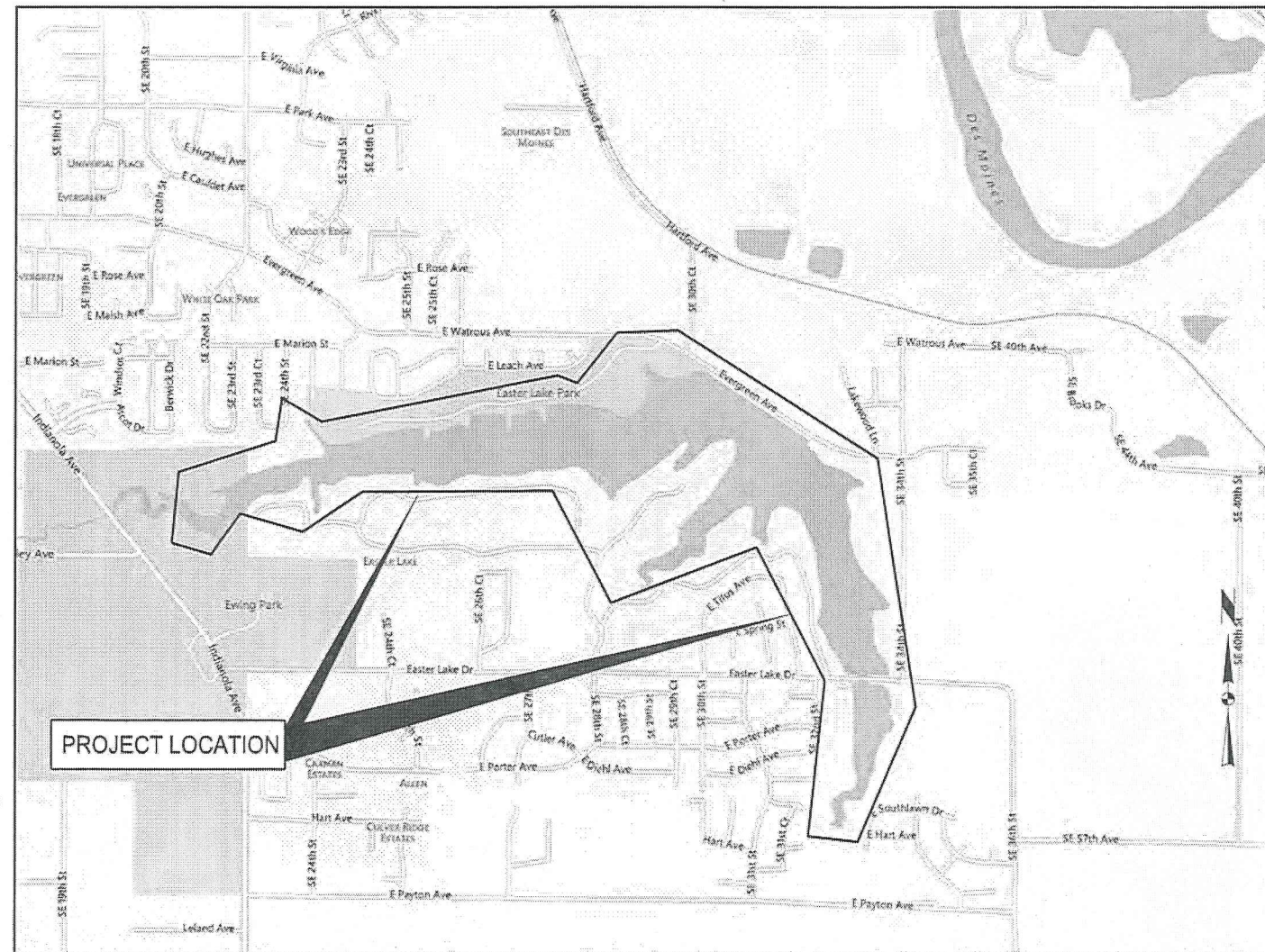
**DNR PROJECT # 14-06-77-08**

#### LEGEND

Survey	Found	Set
Section Corner 1/2" Rebar, Cop = 11579 (Unless Otherwise Noted)	▲	△
ROW Marker	○	○
ROW Rail	■	■
Control Point	CP	CP
Bench Mark	BM	BM
Plotted Distance	pp	pp
Measured Bearing & Distance	MR	MR
Recorded As	RD	RD
Deed Distance	DC	DC
Calculated Distance	CDC	CDC
Minimum Protection Elevation	MPE	MPE
Centerline	---	---
Section Line	---	---
1/4 Section Line	---	---
1/4 Section Line	---	---
Easement Line	---	---
<b>Features</b>	<b>Existing</b>	<b>Proposed</b>
Spot Elevation	93.0	93.0
Contour Elevation	93	93
Fence (Barbed, Field, Hog)	---X---	---X---
Fence (Chain Link)	---X---	---X---
Fence (Wood)	---X---	---X---
Fence (Slit)	---X---	---X---
Tree Line	---X---	---X---
Tree Stump	○	○
Deciduous Tree or Shrub	○	○
Coniferous Tree or Shrub	○	○
Communication	---	---
Overhead Communication	OC(x)	OC
Fiber Optic	FO(x)	FO
Underground Electric	UE(x)	UE
Overhead Electric	OE(x)	OE
Gas Main with Size	4" G(x)	4" G
High Pressure Gas Main with Size	4" HPG(x)	4" HPG
Water Main with Size	8" W(x)	8" W
Sanitary Sewer with Size	8" S(x)	8" S
Duct Bank	DUCT(x)	DUCT
Test Hole Location for SUE w/ID	81	81
(x) Denotes the survey quality service level for utilities		
Sanitary Manhole	12" ST	12" ST
Storm Sewer with Size	12" ST	12" ST
Storm Manhole	12" ST	12" ST
Single Storm Sewer Intake	12" ST	12" ST
Double Storm Sewer Intake	12" ST	12" ST
Fire Hydrant	12" ST	12" ST
Fire Hydrant on Building	12" ST	12" ST
Water Main Valve	12" ST	12" ST
Water Service Valve	12" ST	12" ST
Well	12" ST	12" ST
Utility Pole	12" ST	12" ST
Guy Anchor	12" ST	12" ST
Utility Pole with Light	12" ST	12" ST
Utility Pole with Transformer	12" ST	12" ST
Street Light	12" ST	12" ST
Yard Light	12" ST	12" ST
Electric Box	12" ST	12" ST
Electric Transformer	12" ST	12" ST
Traffic Sign	12" ST	12" ST
Communication Pedestal	12" ST	12" ST
Communication Manhole	12" ST	12" ST
Communication Handhole	12" ST	12" ST
Fiber Optic Manhole	12" ST	12" ST
Fiber Optic Handhole	12" ST	12" ST
Gas Valve	12" ST	12" ST
Gas Manhole	12" ST	12" ST
Gas Apparatus	12" ST	12" ST
Fence Post or Guard Post	12" ST	12" ST
Underground Storage Tank	12" ST	12" ST
Above Ground Storage Tank	12" ST	12" ST
Sign	12" ST	12" ST
Satellite Dish	12" ST	12" ST
Mailbox	12" ST	12" ST
Soil Boring	12" ST	12" ST



POLK COUNTY, IOWA



VICINITY MAP  
NOT TO SCALE

#### INDEX OF SHEETS

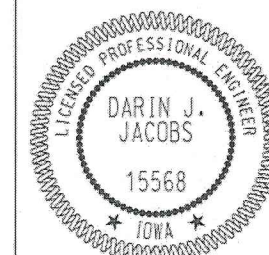
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- A.02 GENERAL NOTES AND QUANTITIES
- A.03-A.04 TABULATIONS & REFERENCE NOTES
- B.01 CONSTRUCTION ACCESS
- C.01 GRADING SITE IMPROVEMENTS - OVERALL MAP
- C.02-C12 GRADING SITE PLANS
- C.13 GRADING DETAILS
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#### AUTHORIZATION TO BID

*Math Ball* 10/25/17  
 AUTHORIZATION - LAKE RESTORATION PROGRAM DATE

*Luvs Ball* 10/25/17  
 LAND AND WATERS BUREAU CHIEF DATE

NOTE:  
 ELEVATIONS SHOWN IN THESE PLANS ARE IN NAVD88 DATUM.  
 TO CONVERT TO DES MOINES DATUM, SUBTRACT 773.94' FEET.



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.

*Darin J. Jacobs* 10/25/17  
 Darin J. Jacobs, P.E. Date

License Number 15568  
 My License Renewal Date is December 31, 2018

Pages or sheets covered by this seal:  
 ALL SHEETS

**EASTER LAKE RESTORATION - CONTRACT 3**

TITLE SHEET

**SNYDER & ASSOCIATES, INC.**

POLK COUNTY, IOWA

2727 S.W. SNYDER BLVD.  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
Engineer: DJJ <td>Checked By: ARB <td>Scale: 1" = 1' <td>Field Bk: Pg.</td> </td></td>	Checked By: ARB <td>Scale: 1" = 1' <td>Field Bk: Pg.</td> </td>	Scale: 1" = 1' <td>Field Bk: Pg.</td>	Field Bk: Pg.
Technician: DFM <td>Date: 10/25/2017 <td></td> <td></td> </td>	Date: 10/25/2017 <td></td> <td></td>		
Project No: 1140546	Sheet: A.01		



**GENERAL NOTES**

- ALL OF THE WORK TO BE DONE UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS, THE GENERAL REQUIREMENTS OF DIVISION ONE, THE GENERAL CONDITIONS, THE SPECIFICATIONS, AND ANY ADDENDA THERETO.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUAINT THEMSELVES AND ALL SUPERVISORY PERSONNEL WITH THE ABOVE-NAMED DRAWINGS AND DOCUMENTS.
- THE LOCATION OF EXISTING UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES SHOWN ARE FROM AVAILABLE SURVEYS AND RECORDS. THESE LOCATIONS SHOULD BE CONSIDERED AS APPROXIMATE ONLY, WITH THE POSSIBILITY OF OTHER UTILITIES OR UNDERGROUND FEATURES EXISTING. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO BEGINNING CONSTRUCTION.
- NOTIFY UTILITY COMPANIES PRIOR TO COMMENCING WORK. AVOID DAMAGE TO UTILITIES AND UNDERGROUND FEATURES DURING CONSTRUCTION. REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR'S CARELESSNESS AT THE CONTRACTOR'S EXPENSE.
- COORDINATE THE CONSTRUCTION OPERATIONS AND COOPERATE WITH UTILITY COMPANIES WITH RESPECT TO RELOCATING ANY CONFLICTING FACILITIES, AS REQUIRED. THE COSTS FOR LOCATING EXISTING UTILITIES, COORDINATING RELOCATION WORK, PROVIDING TEMPORARY SUPPORTS, AND STAGING CONSTRUCTION TO ACCOMMODATE THE RELOCATION OF UTILITIES IS CONSIDERED INCIDENTAL TO CONSTRUCTION.
- PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETED.
- THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS BEFORE CONSTRUCTION BEGINS.
- COORDINATE THE CONSTRUCTION WITH POLK COUNTY CONSERVATION TO MINIMIZE THE DISRUPTIONS TO DAILY OPERATIONS AT THE FACILITY.
- ANY AREAS DISTURBED BY CONSTRUCTION OUTSIDE OF THE CONSTRUCTION LIMITS WILL BE REPAIRED AND RESTORED AT THE CONTRACTOR'S EXPENSE.
- PROTECT ALL EXISTING DRAINAGE STRUCTURES. THE CONTRACTOR IS FULLY LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN THE HANDLING OF STORM WATER FLOWS DURING CONSTRUCTION.
- PROTECT EXISTING TREES, SHRUBS, FENCES, AND LANDSCAPING UNLESS SPECIFICALLY NOTED OR DESIGNATED OTHERWISE ON THE PLANS. REPLACEMENT OF ANY OF THESE ITEMS DAMAGED DURING CONSTRUCTION WILL BE AT THE CONTRACTOR'S EXPENSE.
- PROTECT AND SAVE ALL PROPERTY CORNER MONUMENTS UNLESS OTHERWISE NOTED.
- DIMENSIONS, PAVEMENT LOCATIONS, UTILITIES, AND GRADING ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THE PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
- IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
- CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCING AROUND ANY TRENCH LEFT OPEN OVERNIGHT. (INCIDENTAL TO CONSTRUCTION).
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE SITE OF THE PROPOSED WORK TO SATISFY THEMSELVES AS TO THE EXISTING CONDITIONS RELATIVE TO THE CONTRACT.
- IF CONFLICTS ARE FOUND BETWEEN DETAILS OR DIMENSIONS SHOWN ON STRUCTURAL PLANS OR OTHER DISCIPLINE'S PLANS, NOTIFY ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PERFORMING WORK.
- IN ANY CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- CONSTRUCTION LIMITS ARE SHOWN ON THESE PLANS. CONFINE ALL CONSTRUCTION ACTIVITY TO WITHIN THE CONSTRUCTION LIMITS UNLESS OTHERWISE AUTHORIZED BY THE OWNER. ALL EASEMENT LIMITS SHALL BE CLEARLY MARKED IN THE FIELD AND PROTECTED BY THE CONTRACTOR.
- IT IS THE OWNER'S INTENT TO PRESERVE AS MANY TREES AS POSSIBLE, ONLY CLEAR THE MINIMUM NUMBER OF TREES NEEDED TO COMPLETE THE CONSTRUCTION. TREE CLEARING IS INCIDENTAL IF NOT INCLUDED AS A SEPARATE BID ITEM.
- DO NOT STORE EQUIPMENT AND/OR MATERIALS WITHIN PUBLIC RIGHT OF WAY ON STREETS OPEN TO TRAFFIC.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL TO RETAIN ANY MATERIAL REMOVED FROM THE PROJECT AREA. IF DIRECTED, THE CONTRACTOR SHALL DELIVER THESE TO THE OWNER AT A LOCATION DESIGNATED. DISPOSE OF NON-SALVAGEABLE MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- LIMIT THE GRADING AND CONSTRUCTION OPERATIONS TO THE MINIMUM REQUIRED TO COMPLETE THE PROJECT.
- COORDINATE THE CONSTRUCTION TO MINIMIZE THE DISRUPTIONS TO THE ADJACENT PROPERTIES. ANY AREAS DISTURBED BY CONSTRUCTION OUTSIDE OF THE CONSTRUCTION LIMITS WILL BE REPAIRED AND RESTORED AT THE CONTRACTOR'S EXPENSE.
- DO NOT RESTRICT DRAINAGE CHANNELS AND PROTECT ALL EXISTING DRAINAGE STRUCTURES. THE CONTRACTOR IS FULLY LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN THE HANDLING OF STORM WATER FLOWS DURING CONSTRUCTION. EXTRA GRADING WORK NEEDED TO MAINTAIN POSITIVE DRAINAGE WITHIN THE CONSTRUCTION LIMITS IS CONSIDERED INCIDENTAL TO CONSTRUCTION.
- REPAIR ALL FIELD/DRAIN TILES THAT ARE ENCOUNTERED DURING CONSTRUCTION AS SPECIFIED. THE CONTRACTOR SHALL RECORD THE EXISTING TYPE, SIZE, LOCATION AND DEPTH OF ALL FIELD/DRAIN TILES ENCOUNTERED AND REPAIRED DURING CONSTRUCTION. THIS DATA WILL BE PROVIDED TO THE ENGINEER FOR INCORPORATION INTO THE RECORD DRAWINGS.
- PROTECT AND KEEP DEBRIS DEPOSITED BY THE CONSTRUCTION OFF OF ADJACENT PROPERTIES OUTSIDE THE EASEMENT AREA AND STREETS. REMOVE AND REPAIR ANY DAMAGE WITHOUT ADDITIONAL COMPENSATION.
- PROTECT EXISTING TREES, SHRUBS, FENCES, AND LANDSCAPING UNLESS SPECIFICALLY NOTED OR DESIGNATED OTHERWISE ON THE PLANS. REPLACEMENT OF ANY OF THESE ITEMS DAMAGED DURING CONSTRUCTION WILL BE AT THE CONTRACTOR'S EXPENSE.

- COMPLETELY REMOVE AND DISPOSE OF THE TREES, SHRUBS AND VEGETATION DESIGNATED FOR REMOVAL ON THE PLANS. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- CONTRACTORS SHALL SATISFY THEMSELVES PRIOR TO SUBMISSION OF BIDS AS TO THE SOIL CONDITIONS. NO ADDITIONAL COMPENSATION FOR UNSATISFACTORY SOIL CONDITIONS.
- CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR ALL ROAD SURFACES AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
- STRIPPING OF TOPSOIL SHALL BE IN ACCORDANCE WITH SPECIFICATIONS. REFER TO DRAWINGS FOR LIMIT OF WORK.
- PROTECT AND SAVE ALL PROPERTY CORNER MONUMENTS UNLESS OTHERWISE NOTED.
- ASSIST THE ENGINEER'S FIELD REPRESENTATIVE WITH DAILY RECORD KEEPING INCLUDING ALL NECESSARY FIELD LOCATIONS AND MEASUREMENTS. THE CONTRACTOR WILL BE REQUIRED TO ATTEND FINAL AND INTERMEDIATE INSPECTIONS OF THE PROJECT, AND WILL BE RESPONSIBLE FOR OPENING ALL MANHOLES FOR INSPECTION.
- ALL TRAFFIC CONTROL WILL BE IN ACCORDANCE WITH THE CURRENT STATE OF IOWA APPROVED MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- BLADING, SHAPING OR MAINTENANCE OF TEMPORARY CONNECTIONS, CROSSINGS, DETOURS OR TEMPORARY ACCESSES SHALL BE INCIDENTAL TO THE PROJECT.
- CONSTRUCTION STAKING TO BE PROVIDED BY THE OWNER. REFER TO PROJECT SPECIFICATIONS FOR COORDINATION REQUIREMENTS UNLESS INCLUDED AS A SEPARATE BID ITEM.
- EMERGENCY ACCESS NEEDS TO BE MAINTAINED ON ALL OF THE STREETS AND TO ALL AFFECTED PROPERTIES AT ALL TIMES.
- ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED.

**ESTIMATED PROJECT QUANTITIES**

ITEM	DESCRIPTION	UNIT	QUANTITY	FINAL QUANTITY
1	CLEARING AND GRUBBING	LS	1	
2	EXCAVATION, CLASS 10	BCY	211,000	
3	STORM SEWER, TRENCHED, RCP, 18 IN	LF	224	
4	STORM SEWER, TRENCHED, RCP, 24 IN	LF	216	
5	PIPE APRON, RCP, 18 IN	EA	1	
6	PIPE APRON, RCP, 24 IN	EA	1	
7	MANHOLE ADJUSTMENT, MAJOR	EA	3	
8	OVERLAY, HMA, 2 IN	SY	3,550	
9	REMOVAL OF SHARED USE PATH	SY	120	
10	SHARED USE PATH, PCC, 6 IN	SY	120	
11	FULL DEPTH PATCHES	SY	150	
12	SEEDING, NATIVE MIX	AC	3.0	
13	SEEDING, EROSION CONTROL MIX	AC	23.0	
14	SEEDING, OFFSITE	AC	7.0	
15	RELOCATE TREE	EA	3	
16	SWPPP MANAGEMENT	LS	1	
17	FILTER SOCK, INSTALL	LF	6,000	
18	FILTER SOCK, REMOVAL	LF	6,000	
19	SILT FENCE, INSTALL	LF	2,000	
20	SILT FENCE, REMOVAL	LF	2,000	
21	TEMPORARY RECP, TYPE 2B	SY	1,800	
22	TRM, TYPE 2	SF	120	
23	CHECK DAM, ROCK	TON	90	
24	RIP RAP, CLASS D	TON	430	
25	RIP RAP, CLASS E	TON	55	
26	RIP RAP, RECYCLED CONCRETE	TON	50	
27	SHORELINE TREATMENT, TYPE 1, RIP RAP	LF	10,230	
28	SHORELINE TREATMENT, TYPE 2, FLEXAMAT	LF	6,765	
29	SHORELINE TREATMENT, TYPE 3, FIBER LOG	LF	7,130	
30	REPURPOSED GRANITE STONE FEATURE	EA	8	
31	REPURPOSED SANDSTONE FEATURE	EA	25	
32	STABILIZED CONSTRUCTION ENTRANCE	TON	140	
33	STABILIZED CONSTRUCTION ENTRANCE, REMOVAL	EA	4	
34	CRUSHED ROCK, ACCESS ROAD	TON	350	
35	ACCESS ROAD REMOVAL	LS	1	
36	MOBILIZATION	LS	1	
37	TYPE A FISH HABITAT	EA	2	
38	TYPE B FISH HABITAT	EA	19	
39	TYPE C FISH HABITAT	EA	17	
40	TYPE E FISH HABITAT	EA	30	
41	TYPE F FISH HABITAT	EA	9	
42	TYPE G FISH HABITAT	EA	19	
43	TYPE H FISH HABITAT	EA	14	
44	TYPE J FISH HABITAT	EA	4	
45	IMPOUNDMENT DISCHARGE	LS	1	
46	OFFSITE WASTE DISPOSAL	TON	375	

**UTILITY CONTACTS**



**UTILITY QUALITY SERVICE LEVELS**

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESSES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI/ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

**UTILITY WARNING**

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

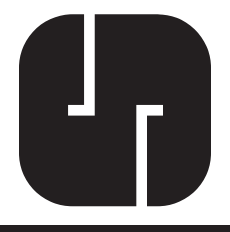
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Engineer: DJJ	Checked By: ARB	Scale: 1"=	
Technician: DJM	Date: 10/25/2017	Field Bk:	
Project No:	1140546	Sheet	A.02

**EASTER LAKE RESTORATION - CONTRACT 3**

**GENERAL NOTES AND QUANTITIES**

**SNYDER & ASSOCIATES, INC.**

2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



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ESTIMATED REFERENCE NOTES	
ITEM NO.	DESCRIPTION
1	CLEARING AND GRUBBING (LS) Lump Sum price includes clearing and grubbing as shown on the Plans, including, but not limited to removal and proper disposal of trees and vegetation either standing or previously felled. Payment will be made based on the percent completion of the work as estimated by the Engineer.
2	EXCAVATION, CLASS 10 (BCY) Unit price includes excavation and placement of suitable material as shown on the Plans, including, but not limited to site preparation, excavation, hauling where required, fill placement, compaction, and finishing soil surface. Item also includes topsoil stripping and replacement where feasible, and required compaction testing. Bidders shall review quantities and satisfy themselves for all conditions of earthwork requirements in submittal of bid. Refer to Earthwork Summary on Sheet C.01 for additional quantity information. Payment will be made based on bank cubic yards (undisturbed material) of volume moved and the percent completion of the excavation work as estimated by the Engineer. Final payment will be determined by post-construction survey and electronic measurement of cut volume.
3 4	STORM SEWER, TRENCHED, RCP, 18 IN (LF) STORM SEWER, TRENCHED, RCP, 24 IN (LF) Unit price includes installation of storm sewer as shown on the Plans, including, but not limited to trench excavation, dewatering, bedding and backfill, joint wrapping, pipe connections and associated work. Item also includes removal of existing pipe apron and connection to existing pipe with concrete collar. Payment will be made based on lineal feet of storm sewer installed as measured in the field. Measurement to be from end of pipe to end of pipe not including pipe aprons where applicable.
5 6	PIPE APRON, RCP, 18 IN (EA) PIPE APRON, RCP, 24 IN (EA) Unit price includes installation of culvert pipe aprons as shown on the Plans, including, but not limited to trench excavation, dewatering, bedding and backfill, pipe connections and associated work. Item also includes concrete footings with reinforcing steel. Payment will be made based on number of aprons installed as counted in the field.
7	MANHOLE ADJUSTMENT, MAJOR (EA) Unit price includes grade adjustment of existing manholes where shown on the Plans, including, but not limited to removal of existing casting, adjustment rings, top sections, and risers; excavation; precast concrete sections; new infiltration barrier; replacement of existing casting; backfill; compaction; and associated work. Payment will be made based on number of manholes adjusted to grade as counted in the field.
8	OVERLAY, HMA, 2 IN (SY) Unit price includes HMA overlay of existing roads and parking lots as directed by the Owner to repair construction damage, including, but not limited to pavement cleaning, asphalt binder, milling or removals to match grades at end of overlay, tack coats, construction zone protection, quality control, and associated work. HMA mix shall be in accordance with SUDAS Table 7020.01 in Section 7020, 1.04. Asphalt binder shall be Low Traffic (LT), 1/2", PG 58-28 S. Payment will be made based on square yards in of HMA overlay installed as measured in the field.
9	REMOVAL OF SHARED USE PATH (SY) Unit price includes removal of shared use path as necessary for construction access, including, but not limited to sawcutting, hauling and disposal of materials removed, and associated work. Maximum width of path removal is 20 feet unless authorized by Owner. Sawcut full depth at removal limits. Payment will be made based on square yards of pavement removed as measured in the field. No additional payment will be made for variances in pavement depth.
10	SHARED USE PATH, PCC, 6 IN (SY) Unit price includes replacement paving of shared use path removed for construction access, including, but not limited to 12" subgrade preparation, concrete placement and finishing, jointing, surface curing, pavement protection, sampling and testing, and associated work. Payment will be made based on square yards of pavement placed as measured in the field.
11	FULL DEPTH PATCHES (SY) Unit price includes full depth patches as necessary for repair of pavement damaged due to construction access, including, but not limited to sawcutting, hauling and disposal of materials removed, restoring subgrade, tie bars and dowel bars, patch material, integral curbs where necessary, surface curing, pavement protection, jointing, testing, and associated work. Construct in accordance with SUDAS Section 7040. Sawcut full depth at removal limits. Curb shall be poured integral to the PCC full depth patch. Curb and gutter removal and replacement shall not be measured separately for payment. Payment will be made based on square yards of full depth patches installed as measured in the field.
12 13	SEEDING, NATIVE MIX (AC) SEEDING, EROSION CONTROL MIX (AC) Unit price includes seeding of all disturbed areas as specified, including, but not limited to seedbed preparation, repairing rills and washes, removing all rock and other debris in seeding area, seeding by hydraulic means with the specified seed mix, fertilizer, mulching, furnishing water and other care during the core period, and associated work. Item also includes re-seeding if necessary. All damaged areas outside of construction limits will be seeded as specified at no additional cost to the Owner. Payment will be made based on acres of seeding for each type of seeding completed.
14	SEEDING, OFFSITE (AC) Unit price includes seeding of disturbed areas as specified, including, but not limited to seedbed preparation, repairing rills and washes, removing all rock and other debris in seeding area, seeding by hydraulic means with the specified seed mix, fertilizer, mulching, furnishing water and other care during the core period, and associated work. Item also includes re-seeding if necessary. Seed will be provided by Owner. All damaged areas outside of construction limits will be seeded as specified at no additional cost to the Owner. Payment will be made based on acres of seeding for each type of seeding completed.
15	RELOCATE TREE (EA) Unit price includes relocation of trees where noted on the plans, including, but not limited to preparation of trees and new location, spading, re-planting, watering and maintenance, and associated work. Payment will be made based on number of trees relocated as counted in the field.
16	SWPPP MANAGEMENT (LS) Lump sum price includes implementation and management of Storm Water Pollution Prevention Plan (SWPPP) and all work required to comply with the administrative provisions of the Iowa DNR NPDES General Permit No. 2, including, but not limited to record keeping, documentation, updating the SWPPP, filing the Notice of Discontinuation, and associated work. Item also includes weekly inspections required to satisfy the General Permit provisions. Payment will be made based on percent completion of the work as estimated by the Engineer.
17	FILTER SOCK, INSTALL (LF) Unit price includes installation and maintenance of filter sock as shown on the plans, as recommended by erosion control inspections, or as directed by the Engineer or Owner. Includes, but is not limited to filter sock, wood anchoring stakes, cleaning of silt or replacement upon undermining or reduction in capacity greater than 50%, and associated work. Payment will be made based on lineal feet of filter sock properly installed as measured in the field.
18	FILTER SOCK, REMOVAL (LF) Unit price includes removal of filter sock upon stabilization of disturbed area, including, but not limited to, removal and proper disposal of filter sock, stakes and accumulated silt, restoration of area to finish grade, and associated work. Payment will be made based on lineal feet of filter sock removed as measured in the field.
19	SILT FENCE, INSTALL (LF) Unit price includes installation and maintenance of silt fence as shown on the plans, as recommended by erosion control inspections, or as directed by the Engineer or Owner. Includes, but is not limited to excavation of anchoring slot, fence fabric, steel anchoring posts, cleaning of silt or replacement upon reduction in capacity greater than 50%, and associated work. Payment will be made based on lineal feet of silt fence properly installed as measured in the field.

ESTIMATED REFERENCE NOTES	
ITEM NO.	DESCRIPTION
20	SILT FENCE, RMEQVAL (LF) Unit price includes removal of silt fence upon stabilization of disturbed area, including, but not limited to, removal and proper disposal of fence, posts and accumulated silt, restoration of area to finish grade, and associated work. Payment will be made based on lineal feet of silt fence removed as measured in the field.
21	TEMPORARY RECP, TYPE 2B (SY) Unit price includes installation of temporary erosion control matting, including, but not limited to excavation, staples, anchoring devices, and material for anchoring slots, matting material, and associated work. Payment will be made based on square yards of erosion control matting properly installed as measured in the field. Additional yardage required for seams, overlaps, and anchoring slots are incidental to the item and will not be measured for payment.
22	TRM, TYPE 2 (SF) Unit price includes installation of permanent turf reinforcement matting, including, but not limited to excavation, staples, anchoring devices, and material for anchoring slots, matting material, and associated work. Payment will be made based on square feet of turf reinforcement matting properly installed as measured in the field. Additional footage required for seams, overlaps, and anchoring slots are incidental to the item and will not be measured for payment.
23	CHECK DAM, ROCK (TON) Unit price includes installation of rock check dams where shown on the Plans or where directed by the Engineer or Owner, including, but not limited to excavation, geotextile underlayment, erosion stone, and associated work. Payment will be made based on tons of rock placed as measured by certified weight tickets.
24 25	RIP RAP, CLASS D (TON) RIP RAP, CLASS E (TON) Unit price includes placement of rip rap where shown on the Plans, including, but not limited to excavation, geotextile underlayment, specified rip rap, and associated work. Payment will be made based on tons of rip rap placed as measured by certified weight tickets.
26	RIP RAP, RECYCLED CONCRETE (TON) Unit price includes placement of recycled concrete rip rap where shown on the Plans, including, but not limited to excavation, geotextile underlayment, loading, hauling, and placement of rip rap provided by Owner, and associated work. Recycled PCC pavement or broken concrete is acceptable only below normal water level or where specified or approved by the Owner. Recycled concrete to be obtained from adjacent stockpile location at abandoned trailer court below the Easter Lake dam and across Evergreen Avenue. Payment will be made based on truck counts and typical load weight as determined by the Engineer.
27	SHORELINE TREATMENT, TYPE 1, RIP RAP (LF) Unit price includes stabilization of shoreline with rip rap as shown on the Plans, including, but not limited to excavation along shoreline to conform to specified grades, geotextile underlayment, specified rip rap, finish grading and topsoil respreading along perimeter, and associated work. Payment will be made based on lineal feet of shoreline stabilized with rip rap as measured in the field.
28	SHORELINE TREATMENT, TYPE 2, FLEXAMAT (LF) Unit price includes stabilization of shoreline with tied-concrete block erosion control mat (Flexamat) as shown on the Plans, including, but not limited to excavation along shoreline to conform to specified grades, subgrade and seedbed preparation, specified matting, finish grading and topsoil respreading along perimeter, and associated work. Payment will be made based on lineal feet of shoreline stabilized with Flexamat as measured in the field. Additional footage required for seams and overlaps are incidental to the item and will not be measured for payment.
29	SHORELINE TREATMENT, TYPE 3, FIBER LOG (LF) Unit price includes stabilization of shoreline with fiber log as shown on the Plans, including, but not limited to excavation along shoreline to conform to specified grades, subgrade and seedbed preparation, specified matting, finish grading and topsoil respreading, and associated work. Payment will be made based on lineal feet of shoreline stabilized with fiber log as measured in the field.
30 31	REPURPOSED GRANITE STONE FEATURE (EA) REPURPOSED SANDSTONE FEATURE (EA) Unit price includes installation of repurposed rock shoreline features where shown on the Plans or as directed by the Engineer, including, but not limited to excavation, geotextile underlayment, granular subbase, hauling of selected stones from Owner's stockpile at abandoned trailer court below the Easter Lake dam and across Evergreen Avenue, placement of stones as specified, and associated work. Payment will be made based on number of stone features properly installed as counted in the field.
32	STABILIZED CONSTRUCTION ENTRANCE (TON) Unit price includes installation of rock construction entrance where shown on the Plans or as directed by the Engineer, including, but not limited to subgrade stabilization fabric, specified rock, and associated work. Payment will be made based on tons of rock placed as measured by certified weight tickets.
33	STABILIZED CONSTRUCTION ENTRANCE, REMOVAL (EA) Unit price includes removal of rock construction entrance where installed upon project completion, including, but not limited to removal and disposal of rock and fabric, restoration of area to finish grade, and associated work. Payment will be made based on number of construction entrances removed as counted in the field.
34	CRUSHED ROCK, ACCESS ROAD (TON) Unit price includes installation of temporary crushed rock access road on geotextile underlayment as required for construction, including, but not limited to subgrade preparation, subgrade stabilization fabric, specified rock, and associated work. Payment will be made based on tons of granular material properly installed as measured by certified weigh tickets.
35	ACCESS ROAD, REMOVAL (LS) Lump sum price includes removal of rock access road where installed upon project completion, including, but not limited to removal and disposal of rock, culverts and fabric, restoration of area to finish grade, and associated work. Payment will be made based on percent completion of the work as estimated by the Engineer.
36	MOBILIZATION (LS) Lump Sum price includes preparatory work and operations for all items under the contract, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to and around the project site, and for the establishment of all offices, buildings, and other facilities, which must be performed or costs incurred prior to beginning work on the various items on the project site. Also includes temporary project signage, construction of internal haul roads, and temporary culverts for accessing various portions of the project site. Progress payments for mobilization will be paid in accordance with the following schedule: 1. When 5% of the original bid amount is earned, either 25% of the contract price for mobilization or 2.5% of the bid amount, whichever is less, may be paid. 2. When 10% of the original bid amount is earned, either 50% of the contract price for mobilization or 5% of the bid amount, whichever is less, may be paid. 3. When 50% of the original bid amount is earned, either 100% of the contract price for mobilization or 10% of the bid amount, whichever is less, may be paid. 4. Upon completion of all work on the project required by the contract, full payment will be made for mobilization, including any amount not paid as a progress payment.
37 38	TYPE A FISH HABITAT (EA) TYPE B FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to geotextile underlayment, rip rap, hauling of concrete anchors from stockpile locations around the lake, placement of concrete anchors, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.
39	TYPE C FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to hauling of concrete anchors from stockpile locations around the lake, placement of concrete anchors, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.

DATE	BY	REVISION	MARK
10/25/2017	ARB	1	DJJ
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Date:	10/25/2017	Field Bk:	1140546
Project No:	1140546	Sheet	A.03

**EASTER LAKE RESTORATION - CONTRACT 3**

**TABULATIONS & REFERENCE NOTES**

**SNYDER & ASSOCIATES, INC.**

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Project No: 1140546  
Sheet A.03



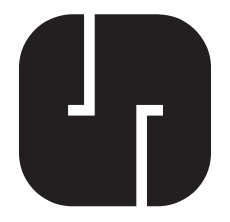
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ESTIMATED REFERENCE NOTES

ITEM NO.	DESCRIPTION
40	TYPE E FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to furnishing and placing catfish spawning tubes, and associated work. Payment will be made based on number of spawn tubes properly installed as counted in the field.
41	TYPE F FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to geotextile underlayment, rip rap, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.
42	TYPE G FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to hauling of concrete anchors from stockpile locations around the lake, placement of concrete anchors, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.
43	TYPE H FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to geotextile underlayment, rip rap, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.
44	TYPE J FISH HABITAT (EA) Unit price includes installation of fish habitat components as shown on the Plans, including, but not limited to excavation, geotextile underlayment, rip rap, pea gravel, and associated work. Payment will be made based on number of fish habitat locations with components properly installed as counted in the field.
45	IMPOUNDMENT DISCHARGE (LS) Unit price includes controlled discharge of Ewing Park pond for use as a fill site, including, but not limited to excavation, pumping, sediment control measures required to prevent discharge of sediment downstream, and associated work. Payment will be made based on percent completion of the work as estimated by the Engineer.
46	OFFSITE WASTE DISPOSAL (TON) Unit price includes removal and offsite disposal of all waste encountered during excavation work, including, but not limited to removing debris and trash, temporary stockpiling, loading, hauling, disposal, and associated work. Also includes efforts to clean debris of soil and sediment prior to disposal. Waste is required to be mostly clean of any soil and sediment prior to disposal. Payment will be made based on tons of debris properly disposed as measured by certified weigh tickets.

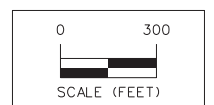
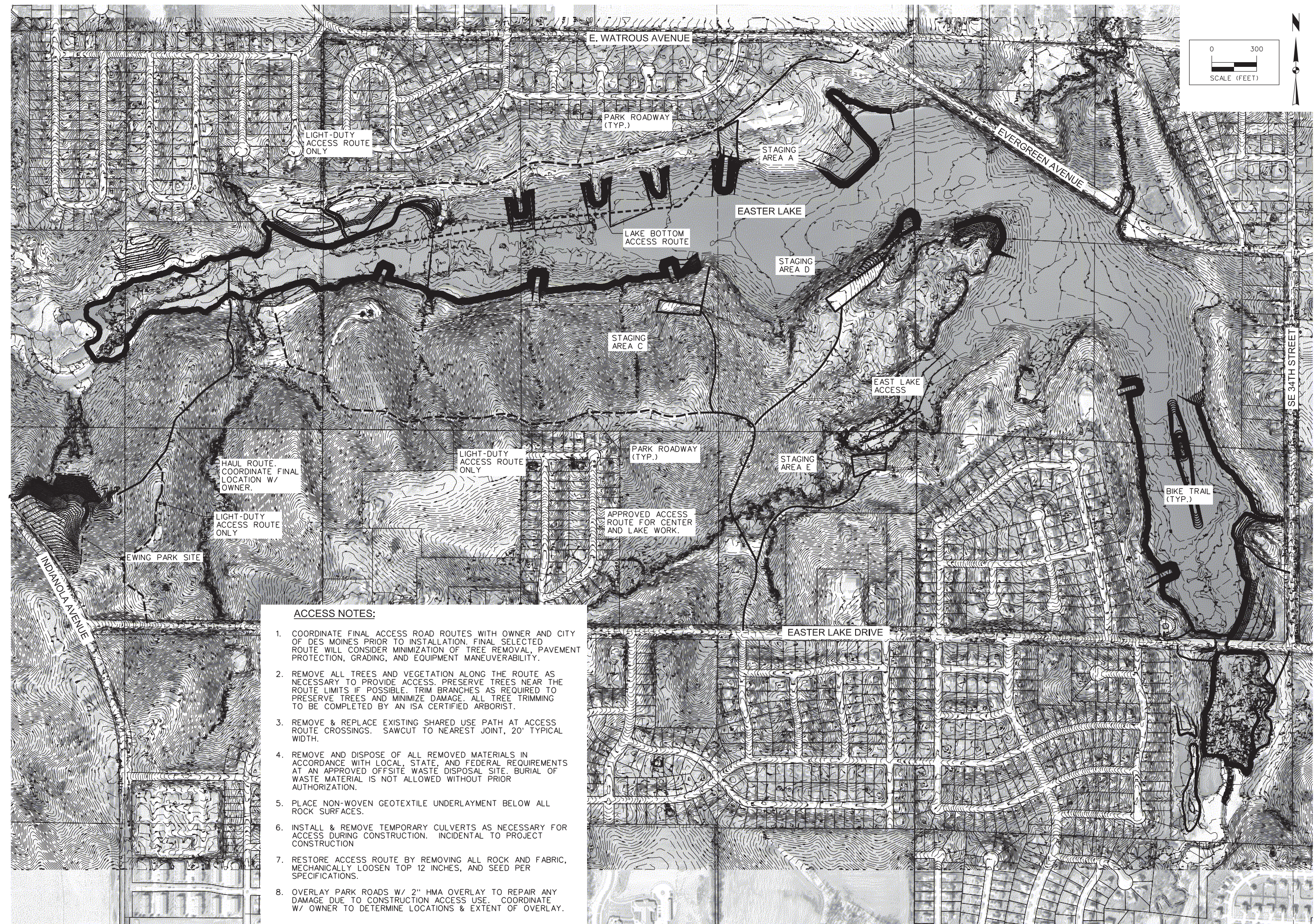
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Technician: DFM	Date: 10/25/2017	Field Bk:	Pg:
Project No: 1140546		Sheet	A.04

**EASTER LAKE RESTORATION - CONTRACT 3**  
**TABULATIONS & REFERENCE NOTES**  
**POLK COUNTY, IOWA**  
**SNYDER & ASSOCIATES, INC.**  
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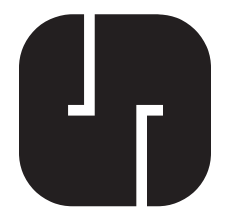
**ACCESS NOTES:**

1. COORDINATE FINAL ACCESS ROAD ROUTES WITH OWNER AND CITY OF DES MOINES PRIOR TO INSTALLATION. FINAL SELECTED ROUTE WILL CONSIDER MINIMIZATION OF TREE REMOVAL, PAVEMENT PROTECTION, GRADING, AND EQUIPMENT MANEUVERABILITY.
2. REMOVE ALL TREES AND VEGETATION ALONG THE ROUTE AS NECESSARY TO PROVIDE ACCESS. PRESERVE TREES NEAR THE ROUTE LIMITS IF POSSIBLE. TRIM BRANCHES AS REQUIRED TO PRESERVE TREES AND MINIMIZE DAMAGE. ALL TREE TRIMMING TO BE COMPLETED BY AN ISA CERTIFIED ARBORIST.
3. REMOVE & REPLACE EXISTING SHARED USE PATH AT ACCESS ROUTE CROSSINGS. SAWCUT TO NEAREST JOINT, 20' TYPICAL WIDTH.
4. REMOVE AND DISPOSE OF ALL REMOVED MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS AT AN APPROVED OFFSITE WASTE DISPOSAL SITE. BURIAL OF WASTE MATERIAL IS NOT ALLOWED WITHOUT PRIOR AUTHORIZATION.
5. PLACE NON-WOVEN GEOTEXTILE UNDERLAYMENT BELOW ALL ROCK SURFACES.
6. INSTALL & REMOVE TEMPORARY CULVERTS AS NECESSARY FOR ACCESS DURING CONSTRUCTION. INCIDENTAL TO PROJECT CONSTRUCTION
7. RESTORE ACCESS ROUTE BY REMOVING ALL ROCK AND FABRIC, MECHANICALLY LOOSEN TOP 12 INCHES, AND SEED PER SPECIFICATIONS.
8. OVERLAY PARK ROADS W/ 2" HMA OVERLAY TO REPAIR ANY DAMAGE DUE TO CONSTRUCTION ACCESS USE. COORDINATE W/ OWNER TO DETERMINE LOCATIONS & EXTENT OF OVERLAY.

**EASTER LAKE RESTORATION - CONTRACT 3**  
**CONSTRUCTION ACCESS**  
**SNYDER & ASSOCIATES, INC.**

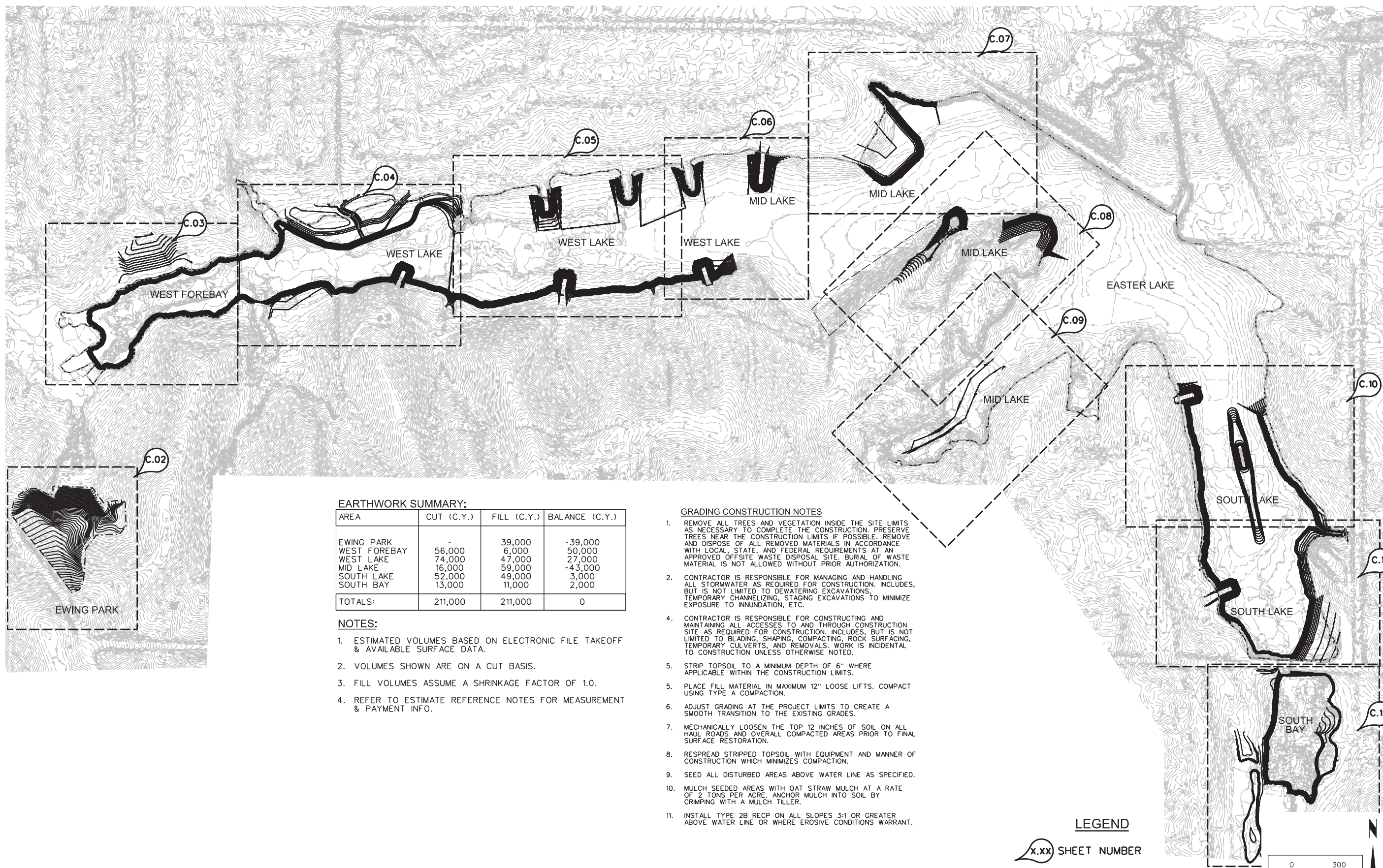
POLK COUNTY, IOWA  
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Engineer: DJJ	Checked By: ARB	Scale: 1" = 300'	Field Bk:
Technician: DFM	Date: 10/25/2017	Project No: 1140546	Sheet B.01





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 Project No: 1140546  
 Sheet C.01



**EARTHWORK SUMMARY:**

AREA	CUT (C.Y.)	FILL (C.Y.)	BALANCE (C.Y.)
EWING PARK	-	39,000	-39,000
WEST FOREBAY	56,000	6,000	50,000
WEST LAKE	74,000	47,000	27,000
MID LAKE	16,000	59,000	-43,000
SOUTH LAKE	52,000	49,000	3,000
SOUTH BAY	13,000	11,000	2,000
<b>TOTALS:</b>	<b>211,000</b>	<b>211,000</b>	<b>0</b>

- NOTES:**
- ESTIMATED VOLUMES BASED ON ELECTRONIC FILE TAKEOFF & AVAILABLE SURFACE DATA.
  - VOLUMES SHOWN ARE ON A CUT BASIS.
  - FILL VOLUMES ASSUME A SHRINKAGE FACTOR OF 1.0.
  - REFER TO ESTIMATE REFERENCE NOTES FOR MEASUREMENT & PAYMENT INFO.

- GRADING CONSTRUCTION NOTES**
- REMOVE ALL TREES AND VEGETATION INSIDE THE SITE LIMITS AS NECESSARY TO COMPLETE THE CONSTRUCTION. PRESERVE TREES NEAR THE CONSTRUCTION LIMITS IF POSSIBLE. REMOVE AND DISPOSE OF ALL REMOVED MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS AT AN APPROVED OFF-SITE WASTE DISPOSAL SITE. BURIAL OF WASTE MATERIAL IS NOT ALLOWED WITHOUT PRIOR AUTHORIZATION.
  - CONTRACTOR IS RESPONSIBLE FOR MANAGING AND HANDLING ALL STORMWATER AS REQUIRED FOR CONSTRUCTION. INCLUDES, BUT IS NOT LIMITED TO DEWATERING EXCAVATIONS, TEMPORARY CHANNELIZING, STAGING EXCAVATIONS TO MINIMIZE EXPOSURE TO INUNDATION, ETC.
  - CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING ALL ACCESSES TO AND THROUGH CONSTRUCTION SITE AS REQUIRED FOR CONSTRUCTION. INCLUDES, BUT IS NOT LIMITED TO BLADING, SHAPING, COMPACTING, ROCK SURFACING, TEMPORARY CULVERTS, AND REMOVALS. WORK IS INCIDENTAL TO CONSTRUCTION UNLESS OTHERWISE NOTED.
  - STRIP TOPSOIL TO A MINIMUM DEPTH OF 6" WHERE APPLICABLE WITHIN THE CONSTRUCTION LIMITS.
  - PLACE FILL MATERIAL IN MAXIMUM 12" LOOSE LIFTS. COMPACT USING TYPE A COMPACTION.
  - ADJUST GRADING AT THE PROJECT LIMITS TO CREATE A SMOOTH TRANSITION TO THE EXISTING GRADES.
  - MECHANICALLY LOOSEN THE TOP 12 INCHES OF SOIL ON ALL HAUL ROADS AND OVERALL COMPACTED AREAS PRIOR TO FINAL SURFACE RESTORATION.
  - RESPREAD STRIPPED TOPSOIL WITH EQUIPMENT AND MANNER OF CONSTRUCTION WHICH MINIMIZES COMPACTION.
  - SEED ALL DISTURBED AREAS ABOVE WATER LINE AS SPECIFIED.
  - MULCH SEEDING AREAS WITH OAT STRAW MULCH AT A RATE OF 2 TONS PER ACRE. ANCHOR MULCH INTO SOIL BY CRIMPING WITH A MULCH TILLER.
  - INSTALL TYPE 2B RECP ON ALL SLOPES 3:1 OR GREATER ABOVE WATER LINE OR WHERE EROSION CONDITIONS WARRANT.

**LEGEND**

x.xx SHEET NUMBER

<b>MARK</b>	<b>REVISION</b>	<b>DATE</b>	<b>BY</b>
<b>Engineer:</b> DJJ	<b>Checked By:</b> ARB	<b>Scale:</b> 1" = 300'	<b>Field Bk:</b>
<b>Technician:</b> DFM	<b>Date:</b> 10/25/2017	<b>Project No:</b> 1140546	<b>Sheet:</b> C.01

**EASTER LAKE RESTORATION - CONTRACT 3**

**GRADING SITE IMPROVEMENTS - OVERALL MAP**

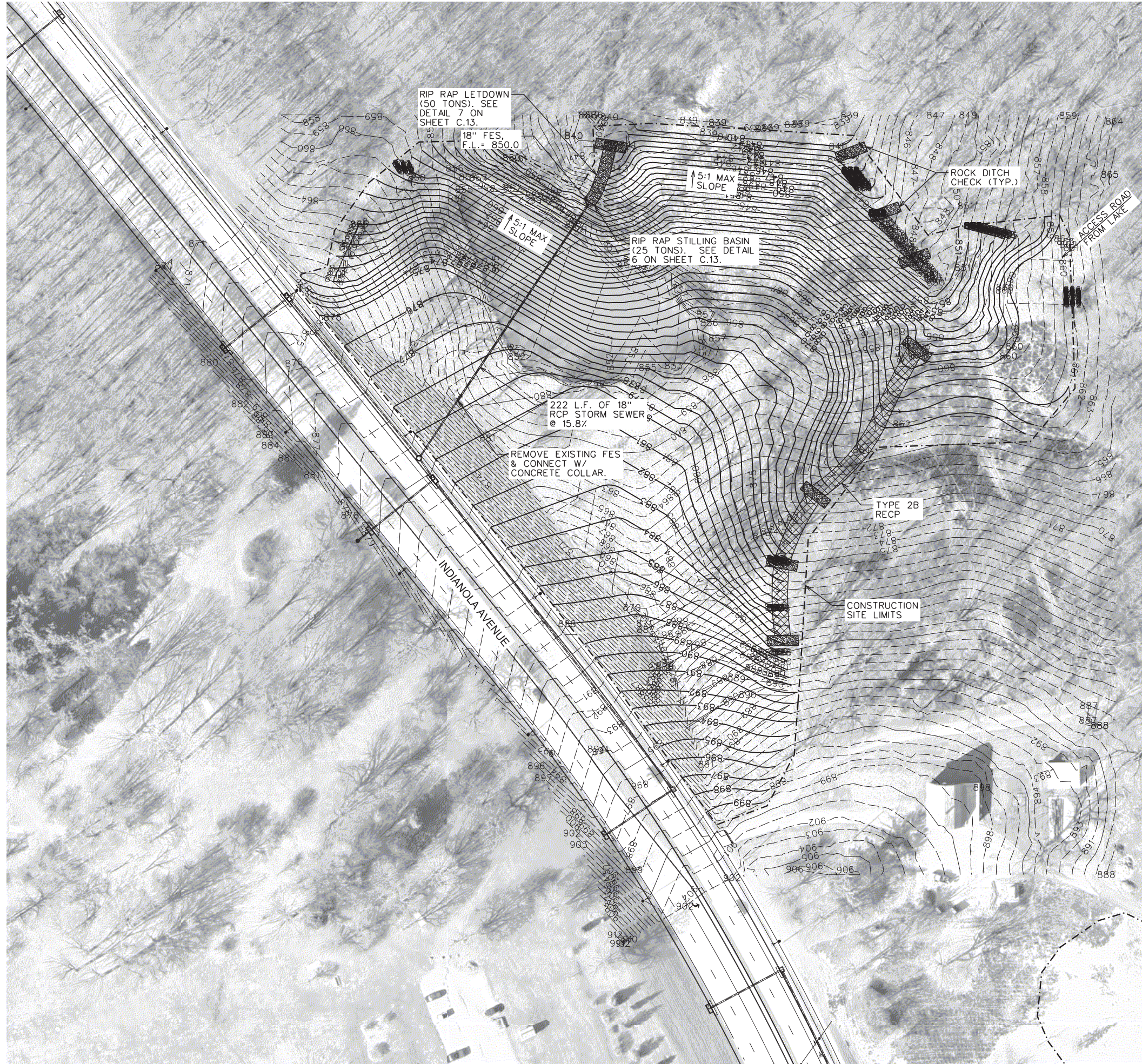
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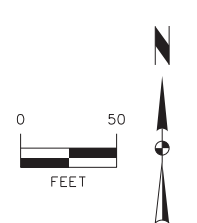
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- EWING SITE CONSTRUCTION NOTES**
1. RELOCATE THREE (3) OAK TREES, 4" MAX DBH TO THE AREA NOTED. COORDINATE RELOCATION WITH CITY OF DES MOINES PARKS AND RECREATION.
  2. SLOWLY DRAIN AND BACKFILL EXISTING IMPOUNDMENT WITHOUT DISCHARGING SEDIMENT OFFSITE. USE OF FILTERS OR CONSTRUCTION OF TEMPORARY CUT OFF BERMS OR DAMS AS REQUIRED ARE INCIDENTAL TO THE CONSTRUCTION.
  3. SEED ALL DISTURBED AREAS AND ACCESS ROADS WITH SEED MIX PROVIDED BY OWNER.



MARK	REVISION	DATE	BY
Engineer: DJJ	Checked By: ARB	Scale: 1"=50'	Field Bk:
Technician: DFM	Date: 10/25/2017	Project No: 1140546	Sheet C.02

**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - EWING PARK SITE**  
**SNYDER & ASSOCIATES, INC.**

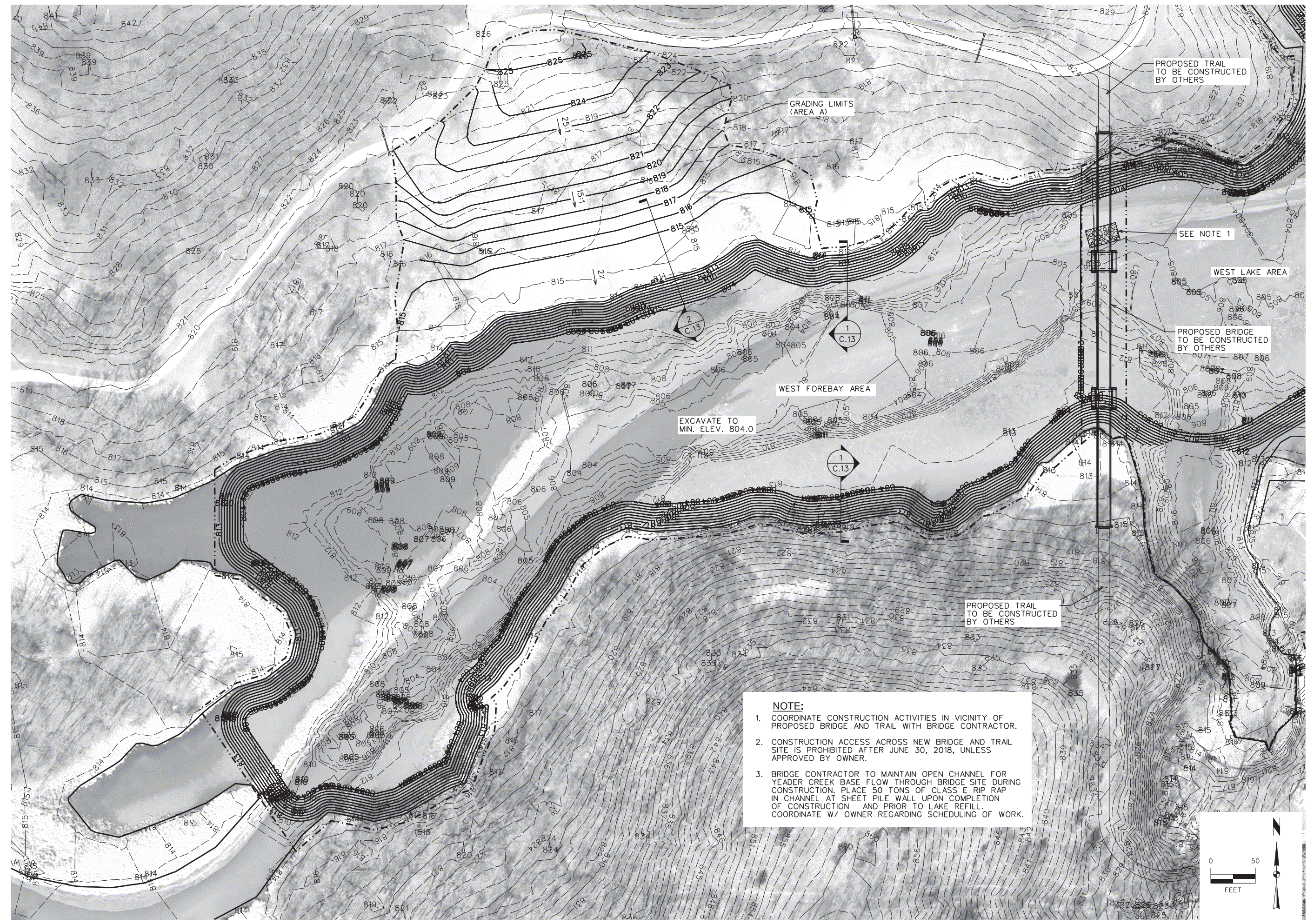
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Project No: 1140546

Sheet C.02

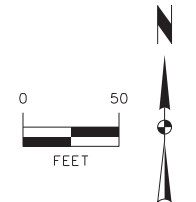


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**NOTE:**

- COORDINATE CONSTRUCTION ACTIVITIES IN VICINITY OF PROPOSED BRIDGE AND TRAIL WITH BRIDGE CONTRACTOR.
- CONSTRUCTION ACCESS ACROSS NEW BRIDGE AND TRAIL SITE IS PROHIBITED AFTER JUNE 30, 2018, UNLESS APPROVED BY OWNER.
- BRIDGE CONTRACTOR TO MAINTAIN OPEN CHANNEL FOR YEADER CREEK BASE FLOW THROUGH BRIDGE SITE DURING CONSTRUCTION. PLACE 50 TONS OF CLASS E RIP RAP IN CHANNEL AT SHEET PILE WALL UPON COMPLETION OF CONSTRUCTION AND PRIOR TO LAKE REFILL. COORDINATE W/ OWNER REGARDING SCHEDULING OF WORK.



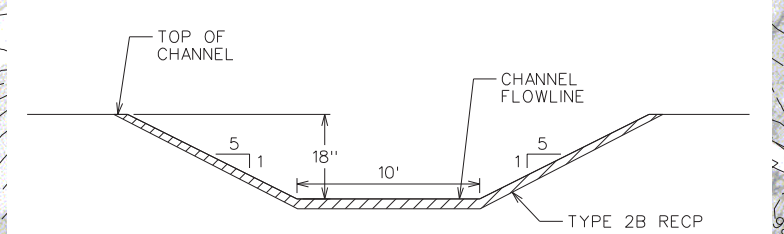
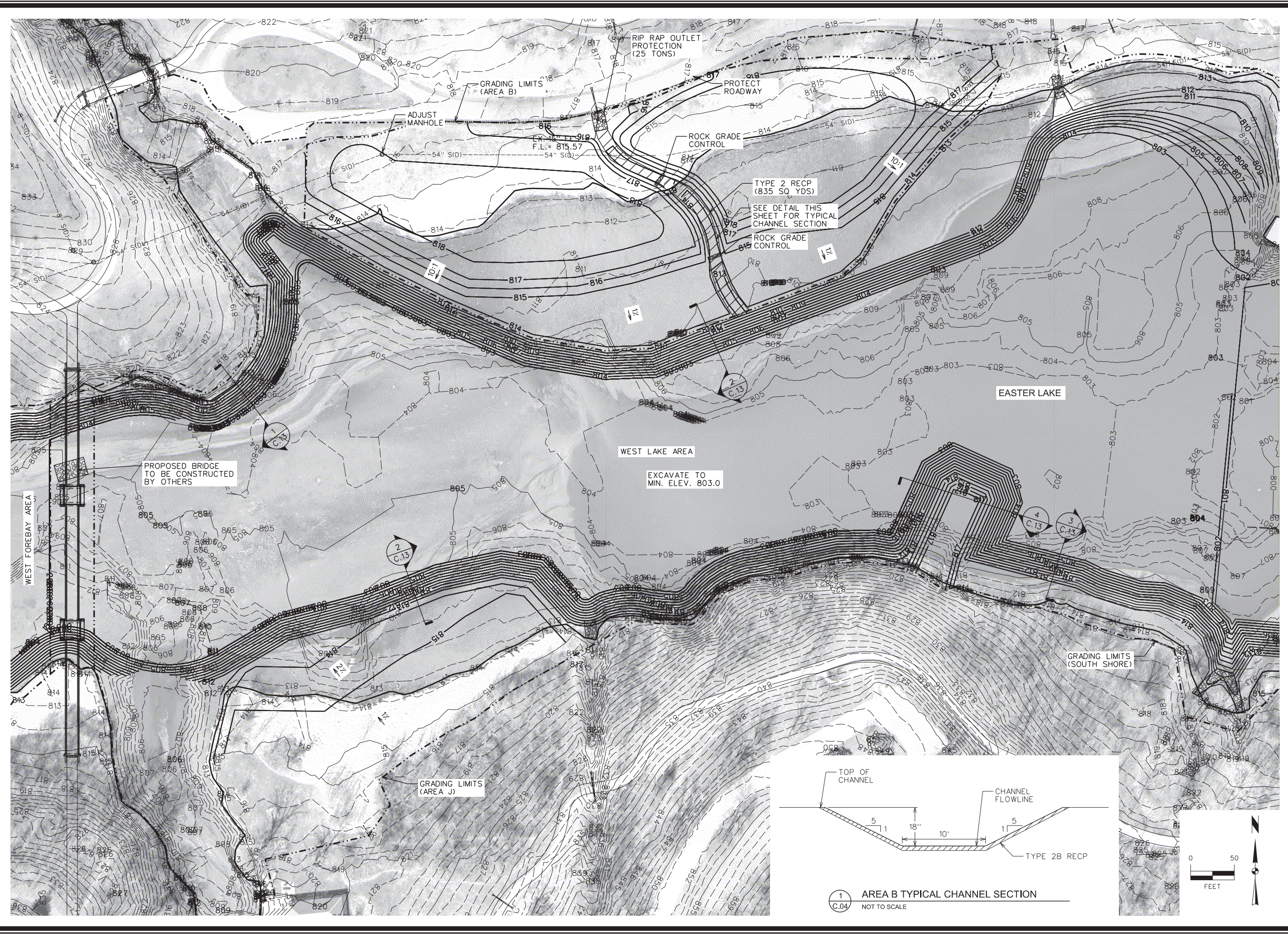
**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - WEST FOREBAY AREA**  
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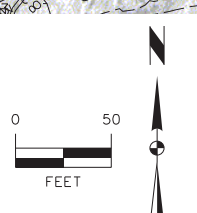
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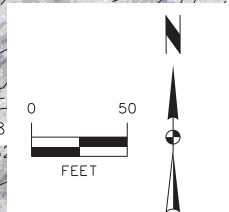
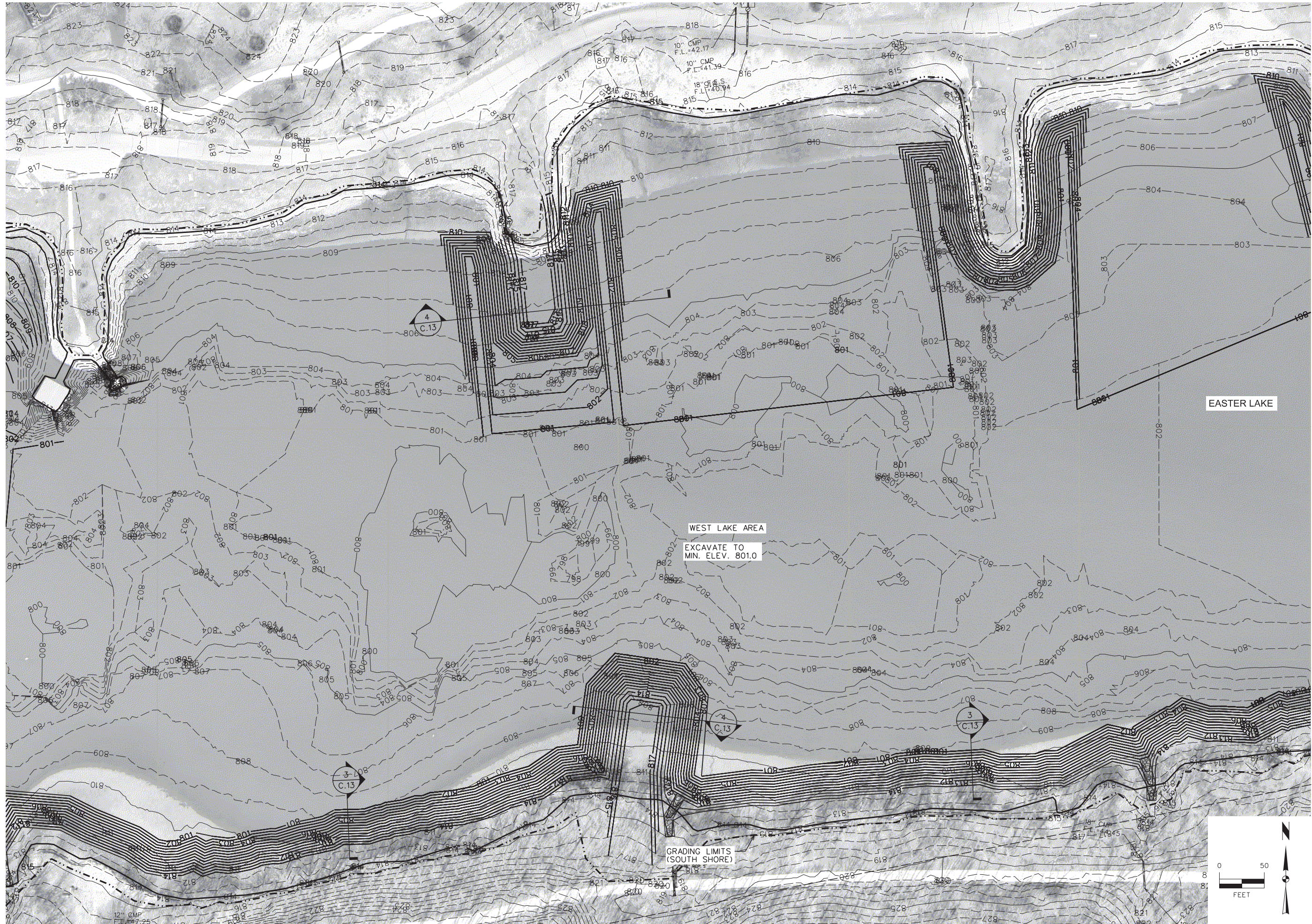


**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - WEST LAKE**  
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**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - WEST LAKE**  
**SNYDER & ASSOCIATES, INC.**

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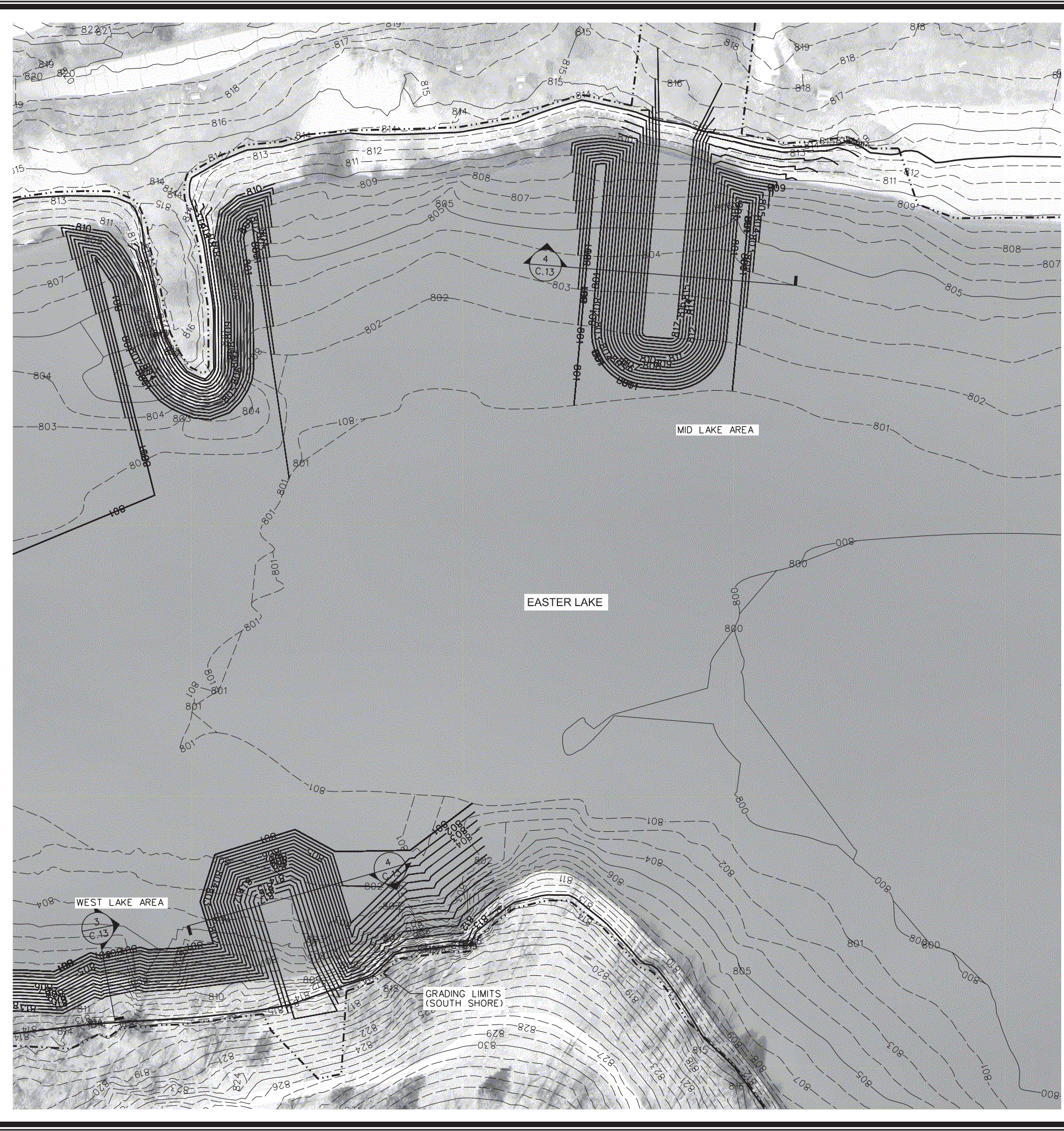
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POLK COUNTY, IOWA  
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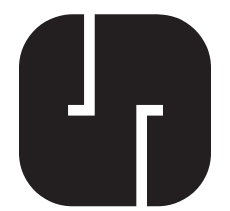
# EASTER LAKE RESTORATION - CONTRACT 3

## GRADING SITE PLAN - WEST LAKE AND MID LAKE

POLK COUNTY, IOWA

# SNYDER & ASSOCIATES, INC.

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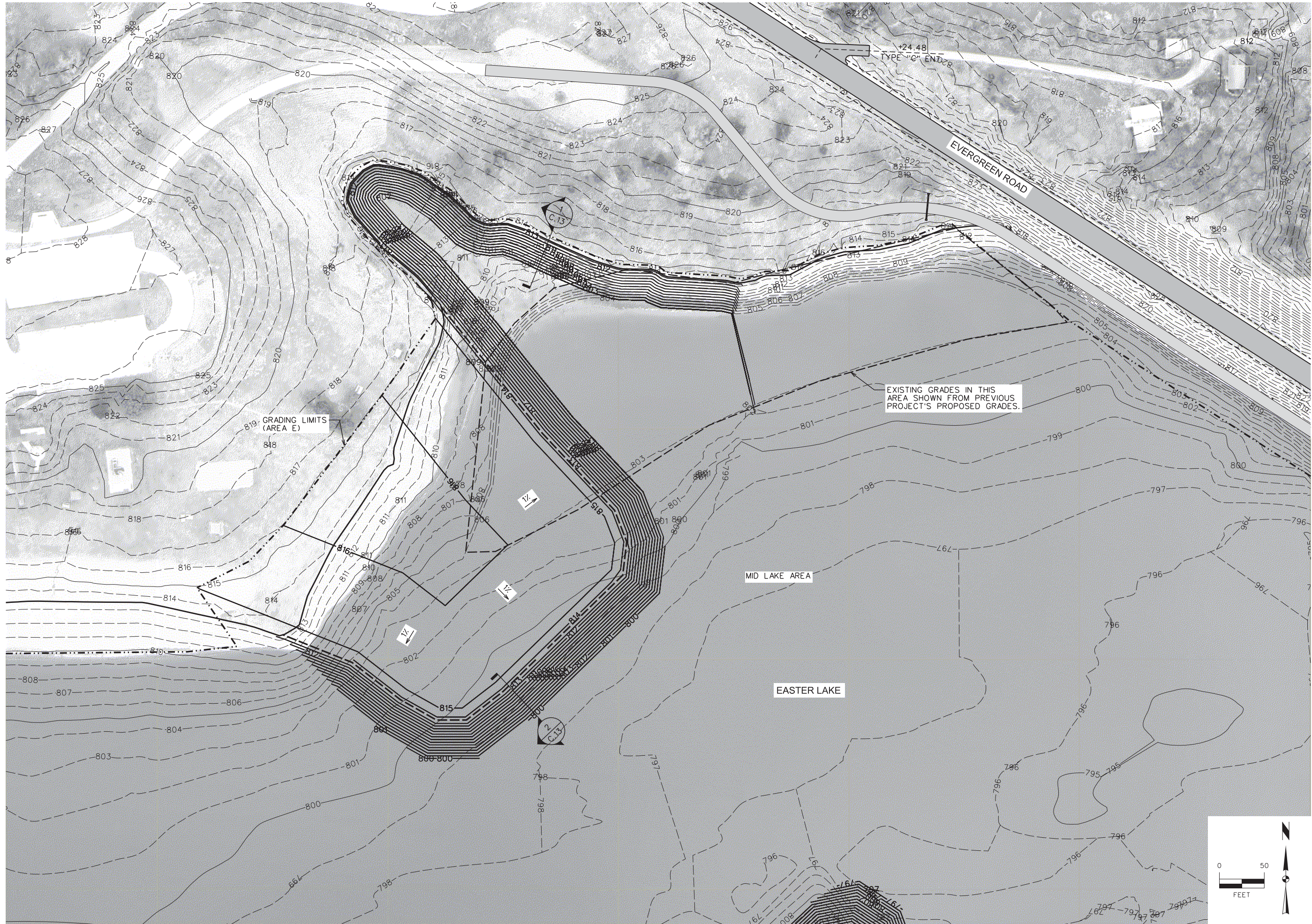


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# EASTER LAKE RESTORATION - CONTRACT 3

## GRADING SITE PLAN - MID LAKE

POLK COUNTY, IOWA

2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

# SNYDER & ASSOCIATES, INC.

MARK	REVISION	DATE	BY
Engineer: DJJ	Checked By: ARB	Scale: 1"=50'	Field Bk:
Technician: DFM	Date: 10/25/2017	Project No: 1140546	Sheet C.07

Project No: 1140546  
Sheet C.07



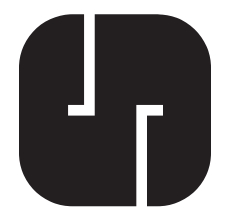


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**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - MID LAKE**  
**SNYDER & ASSOCIATES, INC.**

MARK	REVISION	DATE	BY
Engineer: DJJ	Checked By: ARB	Scale: 1"=50'	Field Bk:
Technician: DJJ	Date: 10/25/2017	Field Bk:	Project No: 1140546
			Sheet C.08

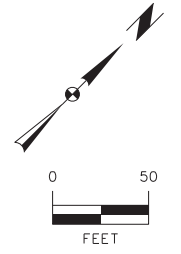
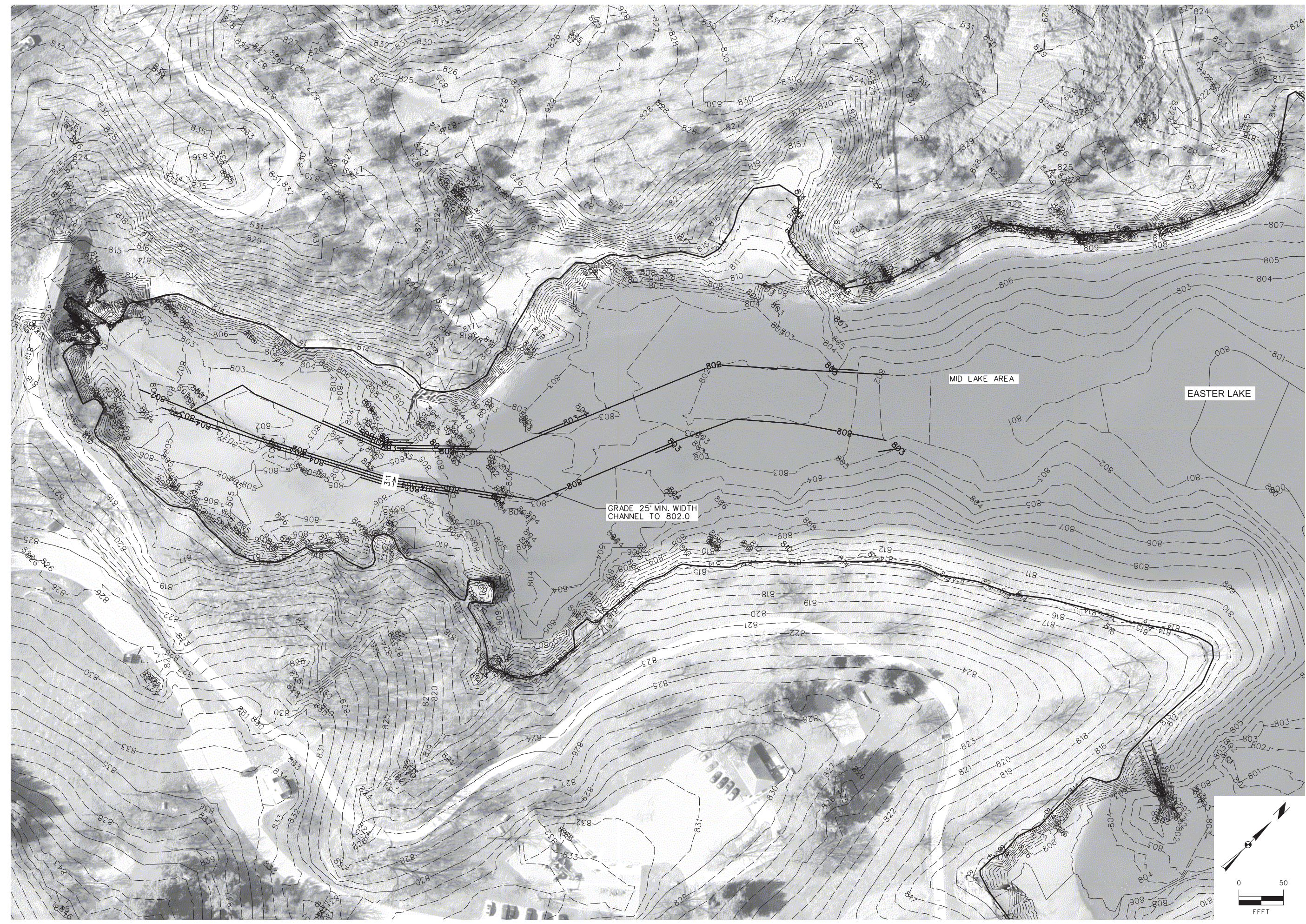


Project No: 1140546  
Sheet C.08

POLK COUNTY, IOWA  
2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



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**EASTER LAKE RESTORATION - CONTRACT 3**  
**GRADING SITE PLAN - MID LAKE**  
**SNYDER & ASSOCIATES, INC.**

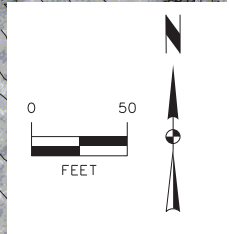
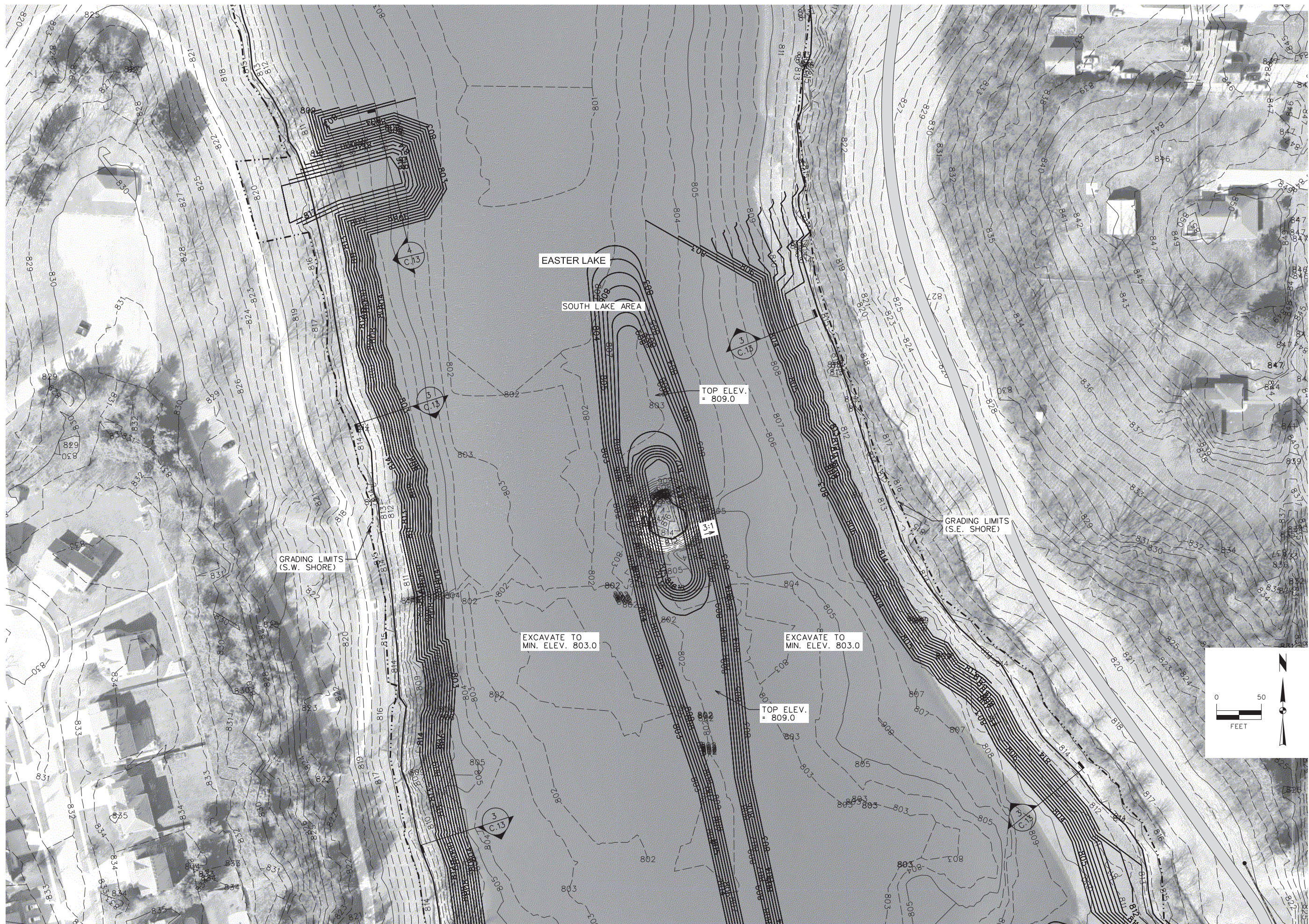
POLK COUNTY, IOWA  
2727 S.W. SNYDER BLVD.  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
Engineer: DJJ	Checked By: ARB	Scale: 1"=50'	
Technician: DFM	Date: 10/25/2017	Field Bk:	Pt:
Project No: 1140546		Sheet	C.09

Project No: 1140546  
Sheet C.09



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# EASTER LAKE RESTORATION - CONTRACT 3

## GRADING SITE PLAN - SOUTH LAKE

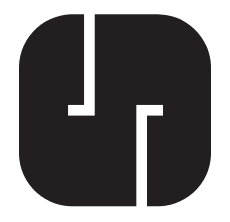
POLK COUNTY, IOWA

# SNYDER & ASSOCIATES, INC.

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ANKENY, IOWA 50023  
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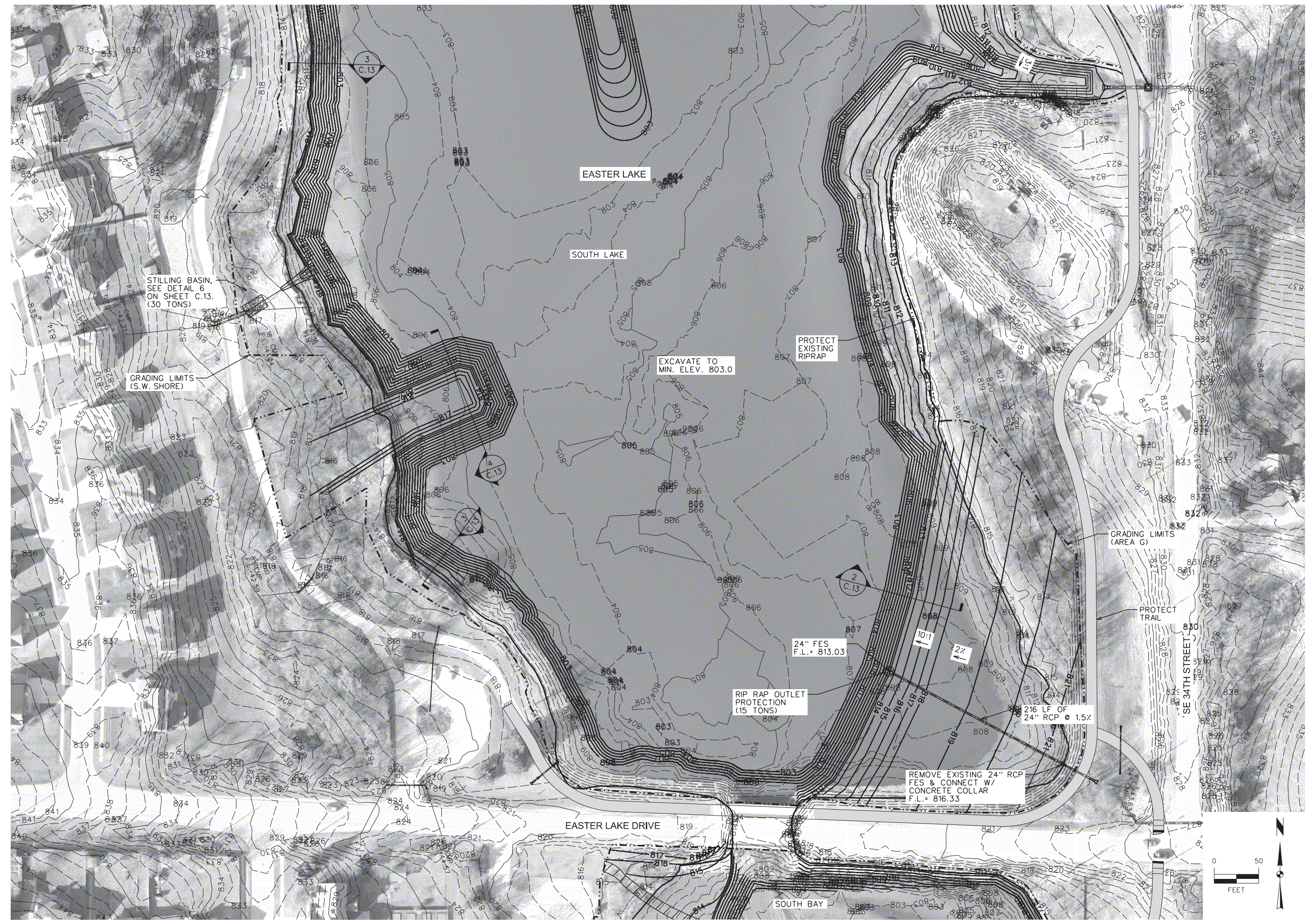
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Technician: DFM	Date: 10/25/2017	Field Bk:	Pt:
Project No: 1140546		Sheet	C.10

Project No: 1140546  
Sheet C.10





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# EASTER LAKE RESTORATION - CONTRACT 3

## GRADING SITE PLAN - SOUTH LAKE

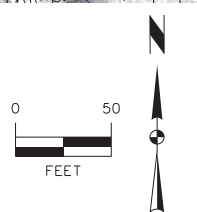
### SNYDER & ASSOCIATES, INC.

POLK COUNTY, IOWA

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ANKENY, IOWA 50023  
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Project No: 1140546  
Sheet C.11

MARK	REVISION	DATE	BY
DJM	Checked By:	ARB	Scale: 1"=50'
DFM	Date:	10/25/2017	Field Bk:
	Technician:	1140546	Sheet C.11





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# EASTER LAKE RESTORATION - CONTRACT 3

## GRADING SITE PLAN - SOUTH BAY

POLK COUNTY, IOWA

# SNYDER & ASSOCIATES, INC.

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Project No: 1140546

Sheet C.12

MARK	REVISION	DATE	BY
Engineer: DJJ	Checked By: ARB	Scale: 1"=50'	
Technician: DFM	Date: 10/25/2017	Field Bk:	
Project No:	1140546	Sheet	C.12

