



**JACOBSON-WESTERGARD
& ASSOCIATES, INC.**

Consulting Engineers & Land Surveyors

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"Bettering Iowa since 1970"

DRAINAGE DISTRICT NO. 61, LATERAL "B"

JWA PROJECT NO: E14097

PROJECT COST SUMMARY

<u>DESCRIPTION</u>	<u>TOTAL COST</u>	<u>COST/ACRE</u>
New Open Ditch	\$2,290,711	\$641.30
Waterway Restoration and Parallel Tile of Original Size	\$1,512,171	\$423.34
New 1/2" Coefficient Tile	\$3,350,243	\$937.92

DRAINAGE DISTRICT NO. 61, LATERAL "B"
JWA PROJECT NO: E14097

**REVISED COST ESTIMATE
(EXTENDED TO 530TH AVENUE)**

NEW OPEN DITCH

DATE PREPARED: 02/05/16

ITEM NO.	ITEM DESCRIPTION	QUANTITY & UNIT	UNIT PRICE	TOTAL PRICE
1.	Excavation	178,008 C.Y.	\$ 3.50	\$ 623,028.00
*2.	72" RCP Culvert	80 L.F.	\$ 190.00	\$ 15,200.00
*3.	90" RCP Culvert	40 L.F.	\$ 310.00	\$ 12,400.00
*4.	96" RCP Culvert	40 L.F.	\$ 350.00	\$ 14,000.00
5.	Field Crossing Driveways:			
	A. 66" CMP Culvert	40 L.F.	\$ 150.00	\$ 6,000.00
	B. 78" CMP Culvert	40 L.F.	\$ 200.00	\$ 8,000.00
	C. 84" CMP Culvert	40 L.F.	\$ 220.00	\$ 8,800.00
	D. 96" CMP Culvert	40 L.F.	\$ 300.00	\$ 12,000.00
6.	Outlet Repair (replaced 20'):			
	A. 12" x 20' CMP	3 Each	\$ 600.00	\$ 1,800.00
	B. 15" x 20' CMP	1 Each	\$ 700.00	\$ 700.00
	C. 18" x 20' CMP	2 Each	\$ 900.00	\$ 1,800.00
	D. 21" x 20' CMP	1 Each	\$ 1,200.00	\$ 1,200.00
	E. 30" x 20' CMP	2 Each	\$ 1,500.00	\$ 3,000.00
	F. Miscellaneous Field Tile Outlets	60 Each	\$ 1,000.00	\$ 60,000.00
7.	Surface Drain	35 Each	\$ 2,500.00	\$ 87,500.00
8.	Granular Surfacing	280 Ton	\$ 25.00	\$ 7,000.00
*9.	8" HMA Pavement	80 S.Y.	\$ 85.00	\$ 6,800.00
10.	Seeding & Fertilizing	28 Acre	\$ 2,500.00	\$ 70,000.00
ESTIMATED SUBTOTAL CONSTRUCTION COST				\$ 939,228.00

ESTIMATED TOTAL DISTRICT CONSTRUCTION COST	\$ 883,828.00
CONTINGENCIES	\$ 88,383.00
ENGINEERING, LEGAL, PUBLICATION	\$ 120,000.00
CLASSIFICATION	\$ 17,500.00
WETLANDS (29.6 Acres @ \$15,000/ac. X 50%)	\$ 222,000.00
PERMANENT R-O-W FOR DITCH (20.1 Acres @ \$10,000/ac.)	\$ 201,000.00
PERMANENT R-O-W FOR ACCESS (15' each side-14.4 acres @ \$5000/ac.)	\$ 72,000.00
TEMPORARY EASEMENT (50' each side-48.0 acres @ \$2,500/ac.)	\$ 120,000.00
SEVERANCE PAYMENT	\$ 500,000.00
INTEREST	\$ 66,000.00
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<i>ESTIMATED TOTAL DISTRICT PROJECT COST</i>	<u>\$2,290,711.00</u>

AVERAGE COST PER ACRE (based on 3572 acres) = \$641.30

*Secondary Roads cost

DRAINAGE DISTRICT NO. 61, LATERAL "B"

JWA PROJECT NO: E14097

COST ESTIMATE

PARALLEL TILE

DATE PREPARED: 11/2/15

(same size as existing tile)

ITEM NO.	ITEM DESCRIPTION	QUANTITY & UNIT	UNIT PRICE	TOTAL PRICE
1.	30" RCP Apron with splash blocks, guard and riprap	1 Each	\$ 3,500.00	\$ 3,500.00
*2.	30" RCP 2000D	198 L.F.	\$ 52.00	\$ 10,296.00
3.	30" RCP, 1500D	12,834 L.F.	\$ 42.00	\$ 539,028.00
*4.	24" RCP 2000D	66 L.F.	\$ 43.00	\$ 2,838.00
5.	24" RCP, 1500D	5,468 L.F.	\$ 33.00	\$ 180,444.00
6.	Junction Boxes	6 Each	\$ 5,000.00	\$ 30,000.00
7.	Tile Connections	30 Each	\$ 250.00	\$ 7,500.00
*8.	8" HMA Pavement	80 S.Y.	\$ 85.00	\$ 6,800.00
9.	Granular Surfacing	90 Ton	\$ 18.00	\$ 1,620.00
10.	Exploratory Excavation	24 Hours	\$ 200.00	\$ 4,800.00
11.	Trench Stabilization	80 Ton	\$ 25.00	\$ 2,000.00
12.	36" Intake	4 Each	\$ 2,500.00	\$ 10,000.00
13.	Area Drain	12 Each	\$ 1,650.00	\$ 19,800.00
ESTIMATED SUBTOTAL CONSTRUCTION COST				\$818,626.00
ESTIMATED TOTAL DISTRICT CONSTRUCTION COST				\$798,692.00
CONTINGENCIES				\$ 79,869.00
ENGINEERING, LEGAL, PUBLICATION				\$140,000.00
CLASSIFICATION				\$ 17,500.00
WETLANDS (29.6 Acres @ \$15,000/ac. X 50%)				\$222,000.00
CROP LOSS (20.7 Acres @ \$900/ac.)				\$ 18,630.00
INTEREST				\$ 75,000.00
ESTIMATED TOTAL DISTRICT PROJECT COST				<u>\$1,351,691.00</u>

AVERAGE COST PER ACRE (based on 3572 acres) = \$378.41

*Secondary Roads cost

DRAINAGE DISTRICT NO. 61, LATERAL "B"
JWA PROJECT NO: E14097

COST ESTIMATE

WATERWAY RESTORATION

DATE PREPARED: 11/2/15

ITEM NO.	ITEM DESCRIPTION	QUANTITY & UNIT	UNIT PRICE	TOTAL PRICE
1.	Excavation	40,980 C.Y.	\$ 2.95	\$ 120,891.00
	CONTINGENCIES (10%)			\$ 12,089.10
	ENGINEERING, LEGAL, PUBLICATION			\$ 27,500.00
<i>ESTIMATED TOTAL</i>				<u>\$ 160,480.10</u>
<i>DISTRICT PROJECT COST</i>				

AVERAGE COST PER ACRE (based on 3572 acres) = \$44.93

TOTAL COST FOR COMBINED WATERWAY RESTORATION AND PARALLEL TILE **\$1,512,171.10**

AVERAGE COST PER ACRE (based on 3572 acres) = \$423.34

DRAINAGE DISTRICT NO. 61, LATERAL "B"

JWA PROJECT NO: E14097

REVISED COST ESTIMATE (EXTENDED TO 530TH AVENUE)

1/2" DRAINAGE COEFFICIENT

DATE PREPARED: 07/21/16

ITEM NO.	ITEM DESCRIPTION	QUANTITY & UNIT	UNIT PRICE	TOTAL PRICE
1.	48" RCP Apron with splash blocks, guard and riprap	2 Each	\$ 4,500.00	\$ 9,000.00
*2.	66" RCP 2000D	153 L.F.	\$ 175.00	\$ 26,775.00
3.	66" RCP, 1500D	4,871 L.F.	\$ 155.00	\$ 755,005.00
*4.	60" RCP 2000D	66 L.F.	\$ 135.00	\$ 8,910.00
5.	60" RCP, 1500D	4,886 L.F.	\$ 115.00	\$ 561,890.00
*6.	48" RCP, 2000D	160 L.F.	\$ 95.00	\$ 15,200.00
7.	48" RCP, 1500D	12,609 L.F.	\$ 75.00	\$ 945,675.00
8.	36" RCP, 1500D	3,585 L.F.	\$ 55.00	\$ 197,175.00
9.	18" RCP, 1500D	83 L.F.	\$ 35.00	\$ 2,905.00
10.	12" RCP, 1500D	10 L.F.	\$ 30.00	\$ 300.00
11.	13' x 4.5' Junction Box	2 Each	\$ 6,500.00	\$ 13,000.00
12.	84" Junction Box	1 Each	\$ 10,500.00	\$ 10,500.00
13.	72" Junction Box	1 Each	\$ 6,000.00	\$ 6,000.00
14.	60" Junction Box	1 Each	\$ 4,000.00	\$ 4,000.00
15.	Tile Connections	31 Each	\$ 250.00	\$ 7,750.00
*16.	8" HMA Pavement	80 S.Y.	\$ 85.00	\$ 6,800.00
17.	Granular Surfacing	90 Ton	\$ 18.00	\$ 1,620.00
18.	Exploratory Excavation	24 Hours	\$ 200.00	\$ 4,800.00
19.	Trench Stabilization	80 Ton	\$ 25.00	\$ 2,000.00
20.	36" Intake	4 Each	\$ 2,500.00	\$ 10,000.00
21.	Area Drain	12 Each	\$ 1,650.00	\$ 19,800.00
ESTIMATED SUBTOTAL CONSTRUCTION COST				\$2,609,105.00

ESTIMATED TOTAL DISTRICT CONSTRUCTION COST	\$2,480,195.00
CONTINGENCIES	\$ 248,020.00
ENGINEERING, LEGAL, PUBLICATION	\$ 140,000.00
CLASSIFICATION	\$ 17,500.00
WETLANDS (29.6 Acres @ \$15,000/ac. X 50%)	\$ 222,000.00
CROP LOSS (23.7 Acres @ \$900/ac.)	\$ 21,303.00
INTEREST	\$ 150,000.00
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<i>ESTIMATED TOTAL DISTRICT PROJECT COST</i>	<u>\$3,350,243.00</u>

AVERAGE COST PER ACRE (based on 3572 acres) = \$937.92

*Secondary Roads cost