

SWCAP

Dodgeville Food Pantry Drainage and Parking Lot Assessment



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PREPARED BY:

JEWELL
associates engineers, inc.

Engineers - Architects - Surveyors

560 Sunrise Drive
Spring Green, WI 53588

PREPARED FOR:

SWCAP
Southwestern Wisconsin Community Action Program, Inc.

149 North Iowa Street
Dodgeville, WI 53533

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Summary

Jewell Associates Engineers was retained by SWCAP to prepare a drainage and parking lot assessment for the SWCAP Food Pantry in Dodgeville. The work was broken out into four smaller projects for budgeting purposes. Recommendations for each project are presented in this report along with cost estimates for engineering and construction. Table 1 presents a summary of the study and estimated costs.

Table 1: SWCAP improvements cost summary

Project	Recommendations	Cost Estimate
1. Concrete Work	Option 1: Dumpster Pads and 6" Concrete Truck Dock	\$40,500
	Option 2: Dumpster Pads and 4" Concrete Loading Area	\$35,300
2. East Parking Lot Drainage and Pavement Replacement	Option 1: Full Parking Lot Replacement and Storm Drain Layout	\$93,600
	Option 2: Half Parking Lot Replacement and Storm Drain Layout	\$62,600
3. Aliant Run 3-Phase Electric Service	Option 1: Add 3-Phase Electric Service to Shed for Lights and Refrigerated Trucks	\$14,500
4. Asphalt Replacement for West Parking Lot	Option 1: Full Lot Replacement	\$66,900
	Option 2: East Lot Replacement	\$50,200

Introduction

The purpose of the evaluation is to provide SWCAP with cost estimates to use when making decisions regarding future projects.

Stormwater drainage issues on the SWCAP Dodgeville Food Pantry site have resulted in stormwater runoff flowing toward and occasionally into the building. Poor drainage has also led to asphalt pavement deterioration in the parking lots. SWCAP would like to repave the parking lots and mitigate these existing stormwater issues to extend the longevity of the building and the pavement. Photos of the areas needing improvement are included in the appendix. The proposed recommendations and cost estimates in this report are preliminary. Additional design work will be necessary prior to implementation of some of the options presented. It may be determined that some of the recommendations are not feasible after further investigation. Variations of the recommendations may also be incorporated as the final designs are developed.

Cost estimates were determined using preliminary design quantities and recent bid prices. A 15% contingency was added to each estimate and 10% was added for engineering design costs. Engineering costs will vary depending on overall project scope. The larger the project scope, the closer the engineering cost will be to 10% of the construction cost. Small projects will have a higher percentage of engineering costs. Construction services, such as staking and inspection, are not included in the estimates. An itemized cost estimate spreadsheet is included in the appendix.

Study Area Evaluation

Four locations on the site were identified as areas that require improvements. The following evaluations include a description of problems in each specified area, proposed recommendations for improving, and a preliminary cost estimate for the improvements.

1. Concrete Improvements and Additions

The existing concrete area on the west side of the SWCAP Food Pantry building is cracked and worn in many areas. Additionally, the concrete allows water to drain from the existing parking lot toward the building rather than away from it. This occasionally leads to stormwater runoff entering the building. The concrete is also currently used by vehicles for delivery and pickup at the backdoor. In the future, it may be desired to have refrigerated trucks drive up to this same door. Lastly, dumpsters are currently sitting on the southern portion of asphalt parking lot west of Montgomery Street. SWCAP would like to add designated concrete pads for those to sit on.



Option 1: Remove existing concrete pavement west of the food pantry building. Install new base course as needed and install 6 – inch concrete to allow for trucks to make deliveries on concrete. The newly installed concrete should be sloped so that water is directed toward the road instead of toward the building. Install new concrete pads in southern portion of west parking lot for dumpsters to be placed on.

Option 2: Remove existing concrete pavement west of the food pantry building. Install new base course as needed and install 4 – inch concrete. Trucks would not be allowed to drive on concrete. The newly installed concrete should be sloped so that water is directed toward the road instead of toward the building. Install, new concrete pads in southern portion of west parking lot for dumpsters to be placed on.

Costs: Option 1 - \$40,500
Option 2 - \$35,300

2. Parking Lot Drainage & Pavement Replacement North Parking Lot

The parking lot on the north side of the Food Pantry is shared with the neighbor to the north. The parking lot drains south toward the Food Pantry building. It appears that the original design intent was for the runoff from the parking lot to drain to Montgomery Street. Currently, the slope in the southwest portion of the parking lot is too flat to drain the lot completely and water tends to sit in the parking lot and freeze in the winter. The asphalt is in poor condition. To add to the problem, the neighboring building to the north has a downspout that drains to this parking lot as well, adding to the amount of surface runoff. The grades at the southwest corner of the parking lot, near the northwest corner of the Food Pantry building, are not sufficient to prevent water from turning the corner and heading south towards the west wall and the back door of the Food Pantry. Two options were evaluated to improve the drainage from the north parking lot.

Option 1: Remove existing asphalt pavement from both SWCAP's portion of the parking lot and the neighbor's portion of the parking lot. Install storm inlets along the south edge of the parking lot and tie into the existing storm sewer mainline along Montgomery Street. Connect the downspout from the building to the north to the new storm sewer. Install new base course as needed and repave the north parking lot. Replace the existing concrete sidewalk along the north side of the Food Pantry building with new 4 – inch concrete sidewalk. Paint parking stalls.



Option 2: Remove existing asphalt pavement from just SWCAP's half of the north parking lot. Install storm inlets along the south edge of the parking lot and tie into the existing storm sewer mainline along Montgomery Street. Install new base course as needed and repave SWCAP's portion of the north parking lot. Replace the existing concrete sidewalk along the north side of the Food Pantry building with new 4 – inch concrete sidewalk. Paint parking stalls.



Costs: Option 1 - \$93,600
 Option 2 - \$62,600

3. Run 3-Phase Electric Service to Existing Shed

The parking lots on the west side of Montgomery Street do not have lighting and there is no electrical service to the lot. SWCAP would also like to provide receptacles to plug in their refrigerated trucks.

Option 1: Install a new 3-phase electric service to the shed. An electrical panel would be installed in the shed and receptacles to be used for plugging in the refrigerated trucks would be installed in designated parking stalls. A new light pole with security lights would be installed to the north of the shed to light both areas of the west parking lot



Costs: **Option 1 - \$14,500**

4. Parking Lot Replacement – West Parking Lot

The parking lot on the west side of Montgomery Street shows extensive cracking and wear and is in need of replacement.

Option 1: Remove existing asphalt pavement from both the west side and east side of the parking lot. Install new base aggregate as needed. Place new asphalt and new pavement markings.

Option 2: Remove existing asphalt pavement from the eastern side of the parking lot only. Install new base aggregate as needed. Place new asphalt and new pavement markings.

Costs: Option 1 - \$66,900

Option 2 - \$50,200



Photos



Photo 1: Concrete area west of SWCAP building. Asphalt patching was placed in an attempt to correct drainage issues.

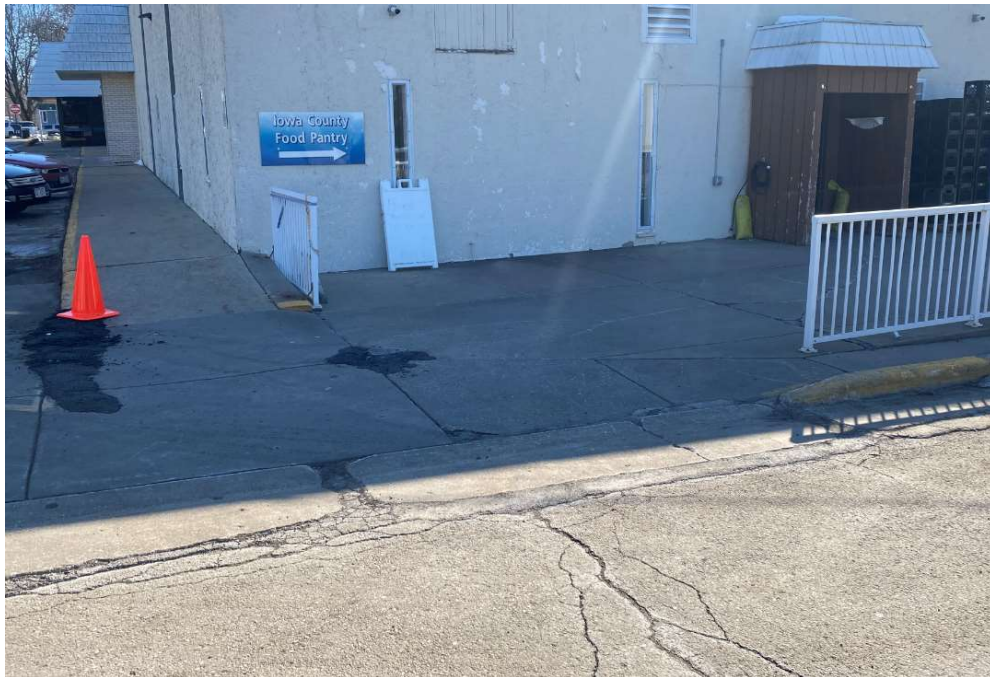


Photo 2: View of Concrete area looking East toward building.



Photo 3: View of dumpsters currently sitting in western parking lot.



Photo 4: View of asphalt problems in north parking lot.



Photo 5: View of north parking lot from Main Street.



Photo 6: View of shed the electric service should be run to.



Photo 7: View of poor asphalt conditions in the west parking lot (east side of lot).



Photo 8: View of western side of west parking lot.

Preliminary Cost Estimates
 SWCAP Dodgeville Food Pantry

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 1 - Concrete Work - Option 1: Dumpster Pads and 6" Concrete Truck Dock					
1	Concrete Removal	1	LS	\$8,000.00	\$8,000
2	6" Concrete Pavement - Dock Area	1040	SF	\$14.00	\$14,560
3	4" 1-1/4" Base Aggregate	13	CY	\$15.00	\$195
4	6" Concrete Pavement - Dumpster Pads	330	SF	\$14.00	\$4,620
5	New Railing Replacement	1	LS	\$5,000.00	\$5,000
Subtotal =					\$32,375
Contingency (15%)					\$4,856
Engineering (10%)					\$3,237.5
Total =					\$40,469

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 1 - Concrete Work - Option 2: Dumpster Pads and 4" Concrete Loading Area					
1	Concrete Removal	1	LS	\$8,000.00	\$8,000
2	4" Concrete Pavement - Dock Area	1040	SF	\$10.00	\$10,400
3	4" 1-1/4" Base Aggregate	13	CY	\$15.00	\$195
4	6" Concrete Pavement - Dumpster Pads	330	SF	\$14.00	\$4,620
5	New Railing Replacement	1	LS	\$5,000.00	\$5,000
Subtotal =					\$28,215
Contingency (15%)					\$4,232
Engineering (10%)					\$2,821.5
Total =					\$35,269

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 2 - East Parking Lot Drainage and Pavement Replacement - Option 1: Full Parking Lot Replacement and Storm Drain Layout					
1	Asphalt	165	TON	\$120.00	\$19,800
2	Asphalt (Neighbors to North)	135	TON	\$120.00	\$16,200
3	12" HDPE	135	LF	\$50.00	\$6,750
4	48" Dia. Sanitary Sewer MH	1	EA	\$3,000.00	\$3,000
5	Inlet Special No. 1	3	EA	\$1,600.00	\$4,800
6	4" 1-1/4" Base Aggregate	145	CY	\$15.00	\$2,175
7	30" Curb and Gutter	70	LF	\$50.00	\$3,500
8	4" Yellow Pavement Markings	500	LF	\$10.00	\$5,000
9	4" Concrete Sidewalk	1360	SF	\$10.00	\$13,600
Subtotal =					\$74,825
Contingency (15%)					\$11,224
Engineering (10%)					\$7,482.5
Total =					\$93,531

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 2 - East Parking Lot Drainage and Pavement Replacement - Option 2: Half Parking Lot Replacement and Storm Drain Layout					
1	Asphalt	165	TON	\$120.00	\$19,800
2	12" HDPE	55	LF	\$50.00	\$2,750
3	48" Dia. Sanitary Sewer MH	1	EA	\$3,000.00	\$3,000
4	Inlet Special No. 1	2	EA	\$1,600.00	\$3,200
5	4" 1-1/4" Base Aggregate	80	CY	\$15.00	\$1,200
6	30" Curb and Gutter	70	LF	\$50.00	\$3,500
7	4" Yellow Pavement Markings	300	LF	\$10.00	\$3,000
8	4" Concrete SIDEWALK	1360	SF	\$10.00	\$13,600

Subtotal =	\$50,050
Contingency (15%)	\$7,508
Engineering (10%)	\$5,005.0
Total =	\$62,563

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 3 - Aliant Run 3-Phase Electric Service - Option 1: Add 3-Phase Electric Service to Shed for Lights and Refrigerated Trucks					
1	Electrical Service	1	EA	\$4,500.00	\$4,500
2	E. Panel & Refrigerator Truck Receptacles	1	EA	\$2,500.00	\$2,500
3	New Light Pole With Security Lights	1	EA	\$3,000.00	\$3,000

Subtotal =	\$10,000
Contingency (15%)	\$1,500
Engineering (10%)	\$3,000.0
Total =	\$14,500

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 4 - Asphalt Replacement for West Parking Lot - Option 1: Full Lot Replacement					
1	Asphalt	380	TON	\$120.00	\$45,600
6	4" 1-1/4" Base Aggregate	190	CY	\$15.00	\$2,850
8	4" Yellow Pavement Markings	500	LF	\$10.00	\$5,000
Subtotal =					\$53,450
Contingency (15%)					\$8,018
Engineering (10%)					\$5,345.0
Total =					\$66,813

ITEM NO.	ITEM DESCRIPTION	QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL
Project 4 - Asphalt Replacement for West Parking Lot - Option 1: East Lot Replacement					
1	Asphalt	260	TON	\$120.00	\$31,200
6	4" 1-1/4" Base Aggregate	375	CY	\$15.00	\$5,625
8	4" Yellow Pavement Markings	330	LF	\$10.00	\$3,300
Subtotal =					\$40,125
Contingency (15%)					\$6,019
Engineering (10%)					\$4,012.5
Total =					\$50,156