



City of Grand Island

Tuesday, June 14, 2016

Council Session

Item G-18

#2016-141 - Approving Bid Award for the Pavement Lifting & Stabilization with Polyurethane Foam – South Locust St from Lake St. to Diversion Bridge

Staff Contact: John Collins, P.E. - Public Works Director

Council Agenda Memo

From: Shannon Callahan, Street Superintendent

Meeting: June 14, 2016

Subject: Approving Bid Award for the Pavement Lifting & Stabilization with Polyurethane Foam – South Locust St from Lake St. to Diversion Bridge

Presenter(s): John Collins PW, Public Works Director

Background

This project consists of lifting/leveling the concrete pavement and filling voids underneath with polyurethane foam. This will reduce the unevenness of the pavement both laterally and longitudinally creating a smoother ride and better drainage; existing condition pictures shown in Attachment 2.

The existing concrete is in good enough condition that the treatment can be used on the entire stretch of roadway. We usually remove and replace only the damaged panels, which does little to correct the ride or the drainage. A full panel replacement project is estimated to cost over \$600,000.

Other benefits of pavement lifting with polyurethane foam include:

- Extending pavement life by reducing fractures caused by panel movement.
- Low traffic disruption since the work can be performed with lane closures.
- Short duration work compared to concrete removal and replacement. The entire pavement lifting project should take about the same amount of time as it takes for concrete to cure.
- The short work schedule reduces the need for traffic control and the use of existing pavement eliminates the need to re-stripe, further reducing costs.

Special provisions for this project state the work is to be completed by August 19, 2016. This completion date will avoid any work being performed during the Nebraska State Fair.

Discussion

On May 17, 2016 the Streets Division of the Public Works Department advertised for bids for the Pavement Lifting & Stabilization with Polyurethane Foam – South Locust St

from Lake St. to Diversion Bridge. The bid package was sent to nine (9) potential bidders for this project.

One (1) bid was received and opened on June 1, 2016. The bid submitted is in compliance with the contract, plans, and specifications.

<i>Bidder</i>	Thrasher Inc., LaVista, Nebraska
<i>Exceptions</i>	None
<i>Bid Section A – Northbound Lanes</i>	\$166,500
<i>Bid Section A – Southbound Lanes</i>	\$84,000
<i>Grand Total (Bid Section A + B)</i>	\$250,500

There are sufficient funds in Account No. 10033506-85547, 10033506-85351 & 10033506-85354 to fund this project.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the Council approve awarding a contract to Thrasher of LaVista, Nebraska in the amount of \$250,500.00 for Pavement Lifting & Stabilization with Polyurethane Foam – South Locust from Lake St. to Diversion Bridge.

Sample Motion

Move to approve the bid award.



Stacy Nonhof, Purchasing Agent

*Working Together for a
Better Tomorrow, Today*

BID OPENING

BID OPENING DATE: June 1, 2016 at 2:00 p.m.

FOR: Pavement Lifting & Stabilization with Polyurethane Foam

DEPARTMENT: Public Works

ESTIMATE: \$315,000.00

FUND/ACCOUNT: 10033503-85547 (Street Repair Materials)
10033506-85351 (Contract Concrete Repair)
10033506-85354 (Street Resurfacing)

PUBLICATION DATE: May 17, 2016

NO. POTENTIAL BIDDERS: 9

SUMMARY

Bidder: Thrasher
LaVista, NE

Bid Security: North American Specialty Ins. Co.

Exceptions: None

Bid Price:

Section A:	\$166,500.00
Section B:	<u>\$ 84,000.00</u>
Total:	\$250,500.00

cc: John Collins, Public Works Director
Marlan Ferguson, City Administrator
Stacy Nonhof, Purchasing Agent

Catrina DeLosh, PW Admin. Assist.
Renae Griffiths, Finance Director
Shannon Callahan, Street Supt.

P1883

PolyLEVEL System

The **Foundation Supportworks PolyLEVEL** system utilizes high-density polymers to stabilize and level concrete. With multiple formulations available, **PolyLEVEL** is able to fit the needs of any job, large or small. **PolyLEVEL** is a two-part urethane polymer that expands into rigid, structural foam to fill voids, stabilize and lift concrete, and offer solutions to a wide range of geotechnical and structural applications. Polyurethane has been used beneath slabs for decades, and it has proven to be a superior solution compared to traditional methods of grout injection and concrete replacement.



PolyLEVEL Advantages

Lightweight – **PolyLEVEL** weighs approximately 4-6 pounds per cubic foot when installed, which is significantly less than the 120 pounds per cubic foot of typical fill material. This means there is almost no additional load added to the supporting soils.

High Capacity – Lifting action is a result of the expansion of the polymer, allowing for lift on much higher loads than typical mudjacking that relies on hydraulic pressure being contained under a slab.

Accurate Lift – Calculated reaction time of the **PolyLEVEL** foam allows for a targeted, precise lifting operation.

Waterproof – **PolyLEVEL** is fully waterproof so it cannot washout. In addition, because it cannot take on water, it is not impacted by freeze/thaw cycles. Additionally, **PolyLEVEL** can be used to under-seal slabs and stop a variety of infrastructure leaks.

Non-Invasive – The equipment used to install **PolyLEVEL** can be used in extremely limited access areas, is far less messy than other methods, and can be installed more quickly.

Cure Time – Quick cure time allows for immediate loading, even heavy traffic, within 15 minutes after injection.

Compressive Strength – The in-place compressive strength of commercial grade **PolyLEVEL** material is minimally 11,000 pounds per square foot, and often exceeds 15,000 pounds per square foot.

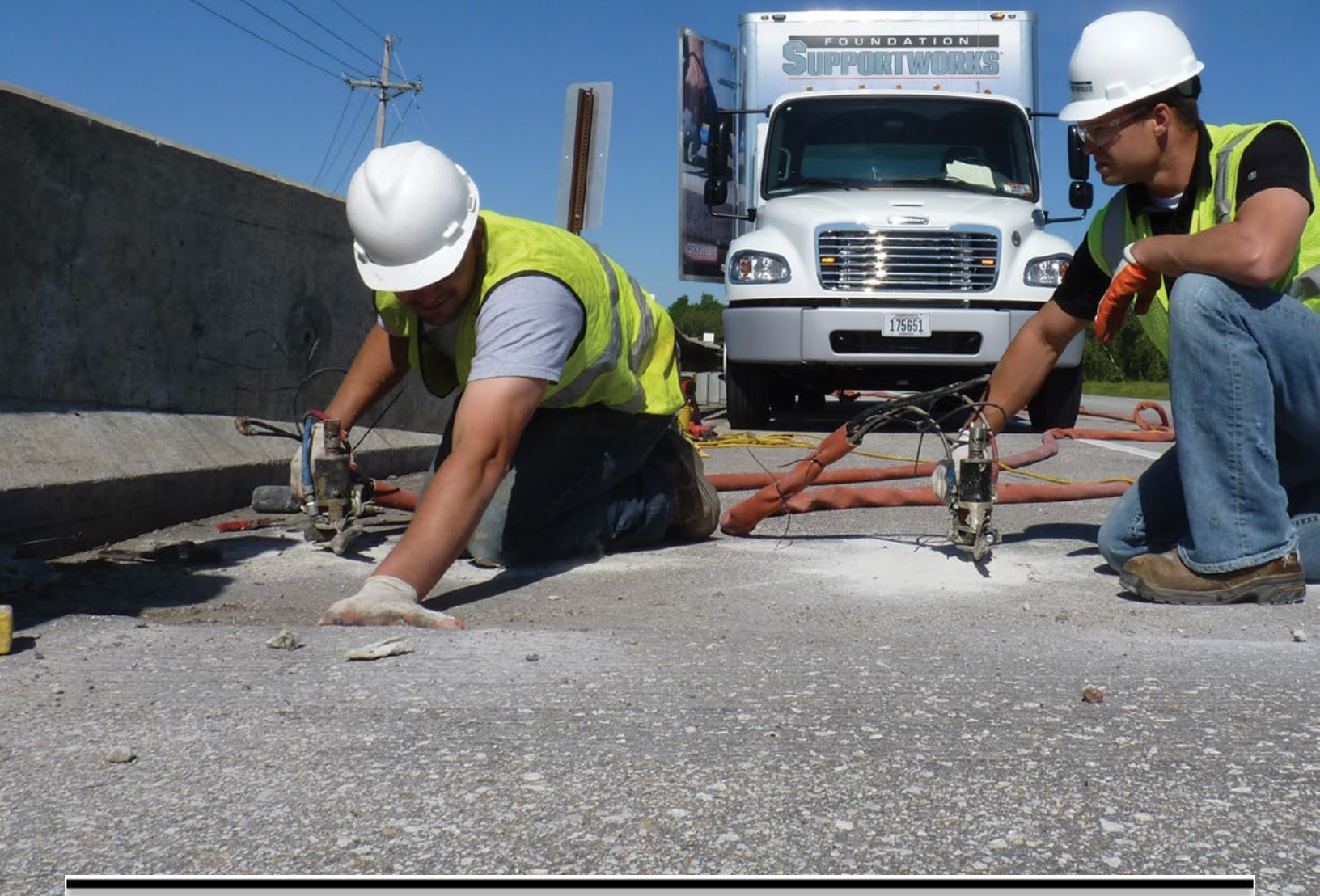
Consolidates Soil – As **PolyLEVEL** foam exerts the energy to lift a slab, it is placing an equal amount of pressure on the soil beneath the slab. This process not only fills the void and raises the slab, but also densifies the soil below.

PolyLEVEL Applications | Roads & Bridge Approaches

Settlement of highways and roadways is a problem that Departments of Transportation across the country are tasked with correcting on a regular basis. As expansion joint materials break down over time and allow water to penetrate below the slab, and the subgrade below the concrete compresses as a result of heavy traffic flow, sags often form in the roadway. These sags create difficult and unsafe driving conditions to the general public.

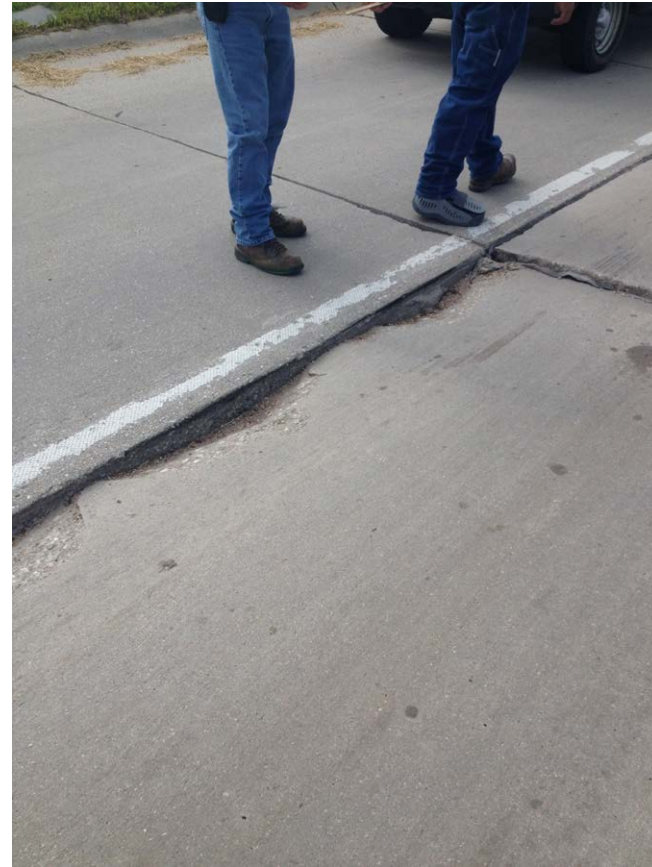
Bridge authorities face similar issues when dealing with the settlement and misalignment of bridge approach slabs. Often, these approach slabs are supported with backfill material which is both loose and poorly compacted. The stress and constant vibration the slab encounters during daily traffic compresses this fill material, thus creating voids below the concrete. As a result, many bridge approaches settle to the point where they are no longer within tolerance of what is considered a safe and acceptable gradient.

The **PolyLEVEL** system offers a long-lasting solution to repair sinking highways, roadways, and bridge approaches, while also providing many benefits that alternate options fail to achieve. While traditional methods of repair such as diamond grinding or removal and replacement of the concrete have been used in the past, these solutions are often temporary, cost prohibitive, time consuming, and fail to address the underlying cause of the problem - the soil beneath the slab. With the **PolyLEVEL** system, city and state agencies are able to correct the problem quickly, effectively, and with little inconvenience to the public. With its quick cure time, high compressive strength, and efficient installation, **PolyLEVEL** is often installed without having to completely shut down the roadway or bridge, allowing traffic to continue to flow without any major disruptions.





- Northbound looking North at Lake St



- Northbound looking East
- Joints between outside thru lane and right turn lane

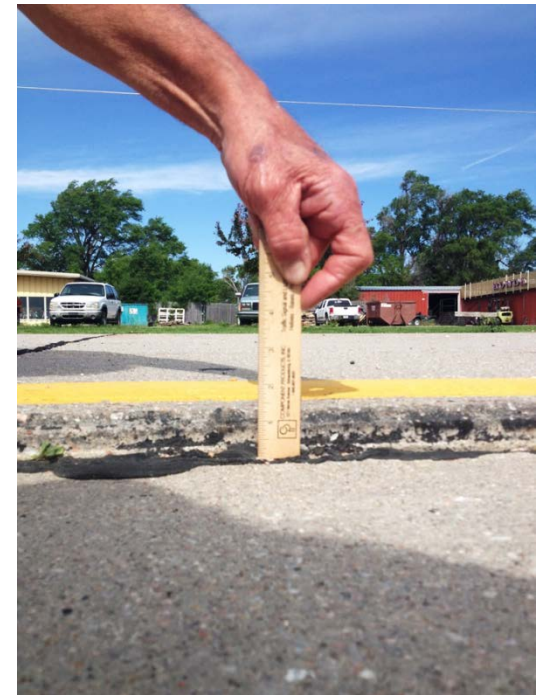
South Locust St approximately 900 feet south of Lake St (south Walmart entrance)



- Northbound looking South
- Transverse joint of outside thru lane
- 1in



- Northbound looking East
- Longitudinal joint between outside thru lane and right turn lane
- 2in



- Northbound looking West
- Longitudinal joint between inside thru lane and center turn lane
- 1.5 in

South Locust St approximately 900 feet south of Lake St (south Walmart entrance)

RESOLUTION 2016-141

WHEREAS, the City of Grand Island invited sealed bids for Pavement Lifting & Stabilization with Polyurethane Foam – South Locust St from Lake St. to Diversion Bridge, according to plans and specifications on file with the City Engineer/Public Works Director; and

WHEREAS, on June 1, 2016 bids were received, opened, and reviewed; and

WHEREAS, Thrasher, Inc. of LaVista, Nebraska submitted a bid in accordance with the terms of the advertisement of bids and plans and specifications and all other statutory requirements contained therein, such bid being in the amount of \$250,500.00; and

WHEREAS, Thrasher, Inc.'s bid was below the estimate for the project; and

WHEREAS, funds are available in the Fiscal Year 2015/2016 budget for this project.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the bid of Thrasher, Inc. of LaVista, Nebraska in the amount of \$250,500.00 for Pavement Lifting & Stabilization with Polyurethane Foam – South Locust St from Lake St. to Diversion Bridge is hereby approved as the lowest responsible bid.

BE IT FURTHER RESOLVED, that the Mayor is hereby authorized and directed to execute a contract with such contractor for such project on behalf of the City of Grand Island.

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Adopted by the City Council of the City of Grand Island, Nebraska, June 14, 2016.

Jeremy L. Jensen, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	☐ _____
June 10, 2016	☐ City Attorney