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October 6, 2021

Livingston County Fiscal Services
Attn: Mr. Chris Folts
304 E. Grand River Ave., Suite 204
Howell, MI 48843

RE: RFQ-LC-21-04
Reconstruction Services For
County Parking Lots

Dear Mr. Folts,

On Thursday, 9/30/21 upon starting this work we reviewed with you on-site the existing asphalt at the Law Center parking lot which averaged 6.5" thick whereas 4" was quoted / contracted. After discussions with you we attempted to only remove the surface 4" of asphalt to allow for the new 4" asphalt paving but upon proof rolling the remaining ~2.5" of asphalt broke up and also required removal. The trucks hauling off the asphalt were significantly rutting up the grade and getting stuck in the unstable sub-grade soils. The added costs incurred for the greater depth of asphalt removal are included in our undercutting pricing / costs quoted below. No gravel base exists under the asphalt and sub-grade soils witnessed have been wet, silty sands with buried topsoil noted in one of 4 test holes. These soils are unstable and unsuitable for paving over. We cannot in any manner pave over these soils without significant subgrade remediation.

G2 Consulting Engineers have witnessed the proof roll and recommend 10" undercutting with Tensar TX 140 geogrid and 21AA backfill. A copy of the G2 inspection report accompanies this letter. Once completed we will fine grade, and 4" asphalt pave.

Our contracted price for undercutting with 21AA crush concrete backfill is \$49.00 per ton of 21AA crush concrete backfill. Based upon G2's recommendation for 10" undercutting, approximately 3,110 tons will be required for a total estimated cost of \$152,390.00. Tensar TX 140 geogrid will be installed at no additional cost on the subgrade where needed. The price above is based on 3,110 tons of 21AA CC. If we can use less and achieve a stable sub base we will credit back at \$49.00 per ton.

Per your direction we have not included the catch basin repairs which we have noted to you in the field are required.

On Friday, 10/1/21 the asphalt on the NE portion of the ring road was also found to be thicker than the 4" quoted. Fortunately, a fairly stable 22A road gravel base was encountered under the asphalt at this location. At the approach to Highlander Way asphalt up to 13" thick was encountered and reviewed with Mr. Kevin Eggston who provided us approval for 21AA crush concrete to bring the gravel base up to grade. A total of 146.83 tons of 21AA was imported and placed at \$49.00 per ton totaling \$7,194.67.

TOTAL: Law Center Lot - Undercut with Tensar Geo Grid	\$152,390.00
NE Ring Road - Undercut completed on 10/1/21	\$ 7,194.67 - From Contingency
Total additional	\$159,584.67

No work can progress until authorization is given for these unknown ground conditions. The costs above are predicated on material availability which can fluctuate. If 21AA Limestone has to be used for instance the due to 21AA CC not being locally available at time of construction expect a \$6.00 per ton increase. As we near the end of the asphalt paving season, a timely decision is crucial. We are at a stand still with completing this work until a decision is reached.

Best regards,

F. ALLIED CONSTRUCTION CO., INC.

Kenneth A. Frenger, Jr.
Resident Engineer

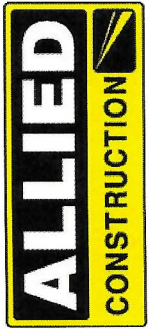
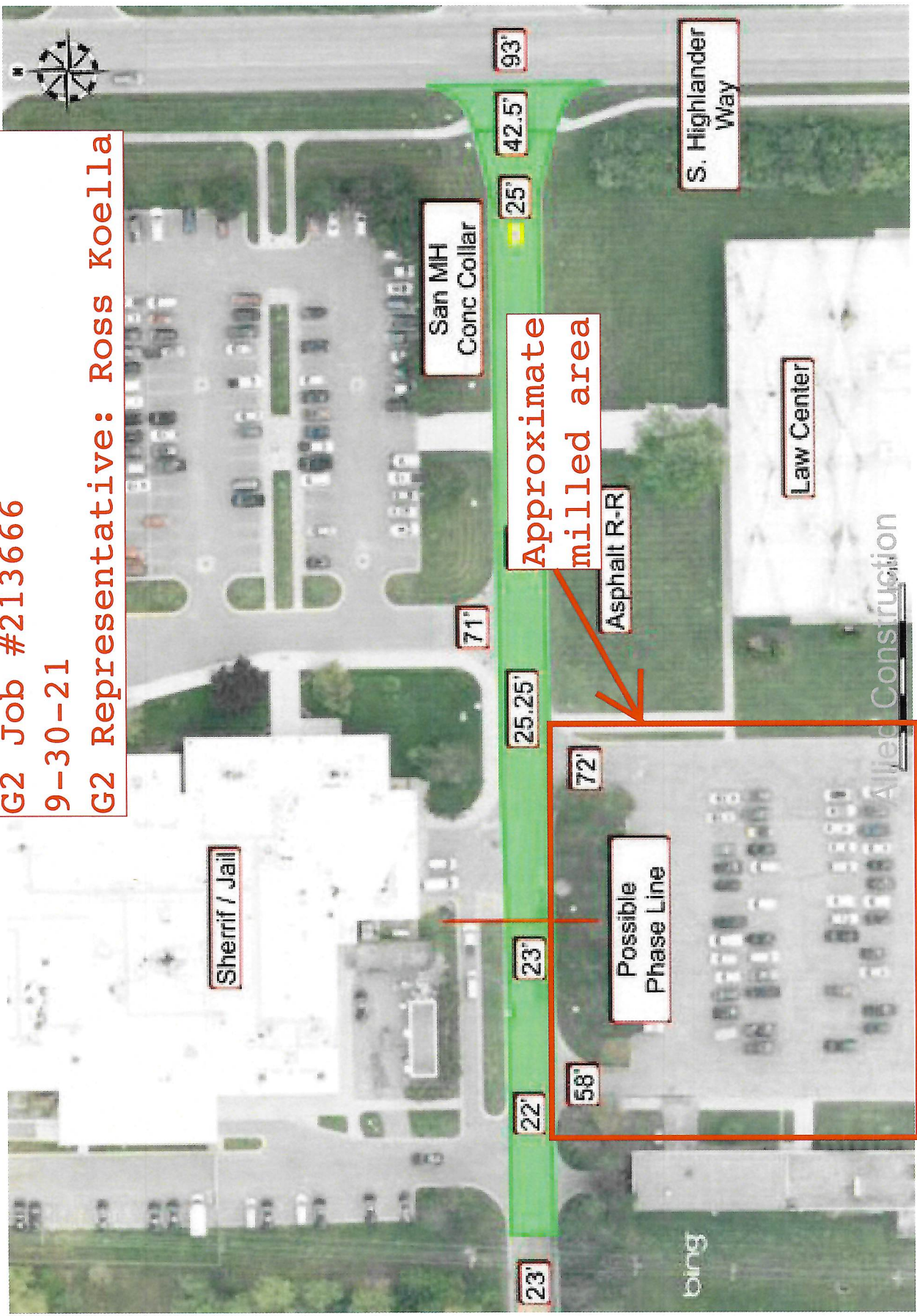


Diagram For Livingston County Fiscal Services

G2 Job #213666
9-30-21

G2 Representative: Ross Koella





Daily Field Report

Project Name: Pro. Livingston County Lots
Location: 150 & 210 Highlander Way, Howell, MI
Client: Allied Construction
Client Rep: Ken Frenger
Contractor: Allied Construction
Contractor Rep: Jeremy

G2 Project No.: 213666
Date: September 30, 2021
Weather: Sunny 69°
Page: 1 of 1

Progress of Work:

A visit was made to the above-referenced job site to observe the contractor's construction operations and provide recommendations. Upon arrival to the site at approximately 2:15 pm, G2 observed the contractor milling pavement from a parking lot using a Wirtgen W 210 Fi cold milling machine. Dump trucks commissioned by Culver Excavating were hauling away the millings.

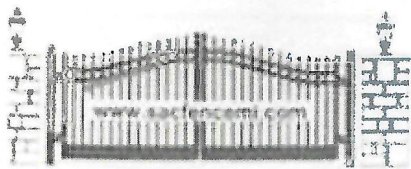
The contractor/client representatives informed G2 that the milling process had exposed the subgrade in multiple spots of the parking lot. There appears to be one existing aggregate base below the asphalt pavement. The exposed subgrade appears to consist of a brown silty sand. G2 recommended that the sub-grade should be undercut to one foot below the finished top of pavement grade, then proof rolled under the supervision of a G2 representative and subsequently backfilled in an engineered manner with 8 to 10 inches of 21AA limestone and the design 4 inches of asphalt. If the subgrade is unstable after cutting to the design grade, a tensor tri-ax geogrid could be placed atop the subgrade prior to placing the 21AA dense-graded aggregate base. The client representative also informed G2 that they would likely remove all of the remaining pavement from the lot as it seemed unstable in most areas.

G2 observed the contractor utilize a CAT 135H motor grader and a Hamm H 10i smooth drum roller to improve the exposed subgrade. A Deere 544L wheel loader was used to pick up loose material.

G2 informed the client/contractor representatives of our observations and recommendations, completed the Daily Field Report, and departed the site at approximately 3:00 pm.

G2 Field Representative: Ross Koella

Reviewer: JBS, P.E.



Justice Fence Acquisitions LLC
1276 E Columbia Avenue
Battle Creek MI 49014
Phone: 269-964-1596
Fax: 269-964-0425



Invoice	0002778
Date	10/12/2021
Page	1

Bill To:**Ship To:**

Livingston County Sheriff Dept Admin
150 S. Highlander Way
Howell MI 48843

Livingston County Sheriff Dept Admin
150 S. Highlander Way
Howell MI 48843

Purchase Order No.	Customer ID	Site Number	Reference Number	Payment Terms	Due Date	
	LIVINGST CTY	HW			10/12/2021	
Services	Description			Quantity	Rate	Ext. Price
ACCESS ENTRY - COMMERCIAL - HW	Access Entry - Commercial - HW installed (3) burial loops in subgrade beneath new asphalt			1.0000	\$1,500.0000	\$1,500.00

Subtotal	\$1,500.00
Misc	\$0.00
Tax	\$0.00
Freight	\$0.00
Amount Received	\$0.00
Trade Discount	\$0.00
Total	\$1,500.00

NOTE: All balances are due within 7 days of invoice date. A 4% fee is added to all credit card payments. A Finance charge of 2 ½ % per month shall apply to all overdue balances owed

Deduct from Contingency