CONSTRUCTION COMMITTEE AGENDA

August 20, 2018

7:00 PM

304 E. Grand River, Conference Room 4, Howell, MI 48843

Pages

1.	CALL N	CALL MEETING TO ORDER					
2.	APPROVAL OF MINUTES 2						
	Minute	es of meeting dated: August 13, 2018					
3.	APPRO	VAL OF AGENDA					
4.	CALL T	O THE PUBLIC					
5.	REPORTS						
6.	ACTIO	N ITEMS					
	a.	J.S. Vig Change Order #2	8				
		Remove & Replace Poor Soils: \$124,193.00					
	b.	J.S. Vig Change Order #3	46				
		Locate Existing Utilities: \$11,234.00					
7.	NEW B	USINESS					

8. ADJOURNMENT

CONSTRUCTION COMMITTEE

MEETING MINUTES

August 13, 2018 6:30 PM 304 E. Grand River, Conference Room 1, Howell, MI 48843

Members Present: G. Childs, D. Helzerman

Members Absent: D. Dolan

1. CALL MEETING TO ORDER

The meeting was called to order by Commissioner Gary Childs at 6:30 p.m.

2. APPROVAL OF MINUTES

Minutes of meeting dated: July 9, 2018

Motion to approve the minutes as presented.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

3. APPROVAL OF AGENDA

Motion to approve the Agenda as presented.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

4. CALL TO THE PUBLIC

None.

5. **REPORTS**

5.a East Complex Mud Room Renovation

Jim Rowell, Building Department

Jim Rowell introduced the project and explained the purpose of the renovations for an outdated and underutilized area of the East Complex. This project should be done by the end of year if it is passed by all committees. Chris Folts added that the contractor will be able to complete the project easily. Cindy Catanach mentioned that this was in the budget, but additional funds will require an amendment, all costs are being paid from the Building Fund.

5.b Sheriff Storage Facility Budget Update

Lindhout Architects and JS Vig

Brad Alvord passed out the Budget update. Brad explained they were able to reduce the budget by about \$100K.

There are two contingencies in the budget totaling a 10% contingency that is what puts them over \$800K.

Cindy Catanach added that \$800K has been authorized by the Board of Commissioners. This would have to go back to the Board to approve additional funds. Any additional costs would come from capital replacement or general fund.

The increase of price was due to the steel prices increasing.

Changes include single pitch roof and one overhead door to the South was eliminated. Asphalt and paving was reduced with that elimination.

The Sheriff said it will still function without the door on the South side.

Motion to proceed with a resolution for the Public Safety & Infrastructure and Development Committee to request additional funds.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

5.c County Fiber Plan

Rich Malewicz, Information Technology

Ken Langley introduced John from Amcomm Telecommunications, Inc. and distributed a copy of the fiber plan drawings and quote dated 8/7/2018.

John explained that the existing infrastructure varies and was installed about 15 to 20 years ago. There are distance limitations, the old technology will not handle the capacity. They all run through the Asset Building that will be demolished.

Discussion on route plans.

Rich Malewicz explained that this would be done next year. IT will continue working on this plan and come back in 1-2 months.

6. ACTION ITEMS

6.a Envision Invoice #1948

East Complex Wall Repairs: \$88,000.00

Chris Folts gave an update on the project.

Motion to approve payment.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

6.b Allied Pay Application #7

East Complex Parking Lot: \$49,805.00

Mike Kennedy gave a status update on the parking lot, retainage is being held, and some work is still remaining. There will be one more pay app.

Motion to approve payment.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

6.c Allied Change Order #CP004

Carport Footings: \$20,340.00

Mike Kennedy explained the changes to the footings.

Motion to approve change order.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

6.d Lindhout Associates Architects Invoice #2018-0732

911 Central Dispatch Facility: \$22,059.38

Brad Alvord explained this is for most of the bid work.

Motion to approve payment.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

6.e Lindhout Associates Architects Invoice #2018-0746

911 Central Dispatch Facility: \$25,621.36

Motion to approve payment.

Moved By G. Childs Seconded By D. Helzerman

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

6.f 911 Central Dispatch Fiber Upgrades

Quote Dated 8/7/2018: \$27,286.51

This quote has been withdrawn by IT as the quote will need to be revised.

6.g J.S. Vig Change Order #1

911 Central Dispatch Facility

Brad Alvord explained the change order as an internal switch of funds from supervision to contingency.

Motion to approve the change order.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

6.h J.S. Vig Pay Application #1

911 Central Dispatch Facility: \$287,330.95

Brad Alvord explained this is for majority of site work that has taken place and preconstruction services.

Motion to approve payment.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

7. NEW BUSINESS

General progress on 911 - commissioner Helzerman requested.

Valerie working on mass excavation and utilities. The block is in-hand now, and will be on-site soon. The foundation will start on the 27th of August. Footings were supposed to start 13th, we have lost about 2 weeks.

7.a Next Meeting

Tentative: September 10, 2018 at 6:30 p.m.

Natalie Hunt will confirm this schedule with Commissioner Dolan and send out the appointment upon confirmation.

8. ADJOURNMENT

Motion to adjourn the meeting at 7:17 p.m.

Moved By D. Helzerman Seconded By G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

Motion Carried (2-0-1)

Respectfully submitted by:

Natalie Hunt, Recording Secretary

REQUEST FOR CHANGE ORDER



RFCO Number	2			Description &		n for
Date:	August 10, 2018			Scope Change	:	
Project Name:	Livingston County 911 - Dispatch Center			Remove and	Replace	Poor Soils
IS Vig Project #:	1673					
Owner Project #:						
Го:	Brad Alvord - Lindhout Associates					
	Stad Arrona - Enteriour Associates					
Subcontractors Scope SI Code	CSI Description	Contractor	Quantity	Unit Cost		Cost
	Remove and replace poor soils with engineered, compacted fill below 902.00'	Joe Raica Excavating			\$	116,744.00
					\$	-
					\$	-
					\$	-
					\$	-
					\$	
					\$	-
					\$	-
					\$	-
1					\$	-
ubtotal					\$	116,744.00
General Contractors S						
-010	CSI Description		Quantity	Unit Cost	1	Total Cost
-020	Project Management Superintendent				\$	-
-024	Builder's Risk				\$	-
-025	Insurance		0.004		\$	-
-030	Laborers		0.8%		\$	933.95
					\$	-
the set of			1 0001			
-125	Bund		1.00%			1,167.44
						-
1-070 1-125 Subtotal	Clean Up Bond		1.00%			\$ \$ \$ \$
owable Fee			4.50%		\$	118,845 5,348
Subcontractor + Gene	eral Contractor Total				\$	124,193
			Total Propo	osed Time Increase:	Ľ	
CONTRACTOR J.S. Vig Construction Cor	mpany DATE ARCHITECT	DATI	Ē	En III	A	D & IL

Attach detailed description and subcontractor bids

25282	Out	40					
25283	Out	40					
25322	Out	40					
26631	Out	25					
ıt		325					
25226	Out	40					
25227	Out	40					
25228	Out	40					
25229	Out	40					
25273	Out	40					
25274	Out	40	7/24	25238	IN	15	
25275	Out	40	7/24	25239	IN	15	
25284	Out	40	7/24	25240	IN	15	
25285	Out	40	7/24	25241	IN	15	
25286	Out	40	7/24	25242	IN	15	
25287	Out	40	7/24	25243	IN	15	
25288	Out	40	7/24	25244	IN	15	
25289	Out	40	7/24	25245	IN	15	
25290	Out	40	7/24	25246	IN	15	
25323	Out	40	7/24	25247	IN	15	
25324	Out	40	7/24	25248	IN	15	
25325	Out	40	7/24	25249	IN	15	
26576	Out	40	7/24	25250	IN	15	
26577	Out	40	7/24	25291	IN	20	
26578	Out	40	7/24	25292	IN	20	
26579	Out	40	7/24	25293	IN	20	
26580	Out	40	7/24	25294	IN	20	
26581	Out	40	7/24	25295	IN	20	
26601	Out	40	7/24	25296	IN	20	
26602	Out	40	7/24	25297	IN	20	
26603	Out	40	7/24	25298	IN	20	
26604	Out	40	7/24	25299	IN	20	
26626	Out	25	7/24	25300	IN	20	
26627	Out	25	7/24	26568	IN	15	
26628	Out	25	7/24	26569	IN	15	
26629	Out	25	7/24	26570	IN	15	
26630	Out	25	7/24	26571	IN	15	
26632	Out	25	7/24	26572	IN	15	
			7/24	26573	IN	15	
ıt		1230	7/24	26583	IN	20	
			7/24	26584	IN	20	
26574	Out	40	7/24	26585	IN	20	
26575	Out	40	7/24	26586	IN	20	
26679	Out	40	7/24	26587	IN	20	
26680	Out	40	7/24	26588	IN	20	
It		160	7/24	26589	IN	20	
			7/24	26590	IN	20	
26661	Out	40	7/24	26591	IN	20	
26662	Out	40	7/24	26613	IN	20	
26663	Out	40	7/24	26614	IN	20	
26664	Out	40	7/24	26615			e 9 of 52
26665	Out	40	7/24	26616	IN	20	5 5 51 52
26666	Out	40	7/24	26617	IN	20	

26688	Out	40	7/25	25402	IN	40	
26670	Out	40	7/25	25402	IN	40	
25341		40	7/25	25403	IN	40	
25341	Out Out	40	7/25	25404	IN	40	
25342	Out	40	7/25	25405	IN	40	
25545 It	Out	1280	7/25	25406	IN	40	
		1200	7/25	25420	IN	40	
			7/25	25427	IN	40	
26671	Out	40	7/25	25428	IN	40	
26672	Out	40	7/25	25430	IN	40	
26673	Out	40	7/25	26655	IN	40	
26674	Out	40	7/25	26656	IN	40	
26675		40		26657	IN	40	
25377	Out Out	40	7/25	26658	IN	40	
		40			IN	40	
25378 25379	Out	40	7/25	26659	IN	40	
	Out		7/25	25331	IN		
25349	Out	40	Total I	V		880	
25348	Out	40	0/1	25100	INI	40	
25347	Out	40	8/1	25109	IN	40	
25345	Out	40	8/1	25439	IN	40	
25346	Out	40	8/1	25438	IN	40	
25344	Out	40	8/1	25437	IN	40	
26689	Out	40	8/1	25436	IN	40	
26690	Out	40	8/1	25435	IN	40	
26691	Out	40	8/1	25434	IN	40	
26692	Out	40	8/1	25433	IN	40	
26693	Out	40	8/1	25432	IN	40	
26694	Out	40	8/1	25081	IN	40	
26695	Out	40	8/1	25082	IN	40	
26696	Out	40	8/1	25083	IN	40	
26697	Out	40	8/1	25080	IN	40	
26698	Out	40	8/1	25387	IN	40	
26699	Out	40	8/1	25386	IN	40	
25101	Out	40	8/1	25385	IN	40	
it		1040	8/1	25384	IN	40	
			8/1	25383	IN	40	
			8/1	25382	IN	40	
			8/1	25381	IN	40	
			8/1	25380	IN	40	
			8/1	25079	IN	40	
			8/1	25108	IN	40	
			8/1	25107	IN	40	
			8/1	25106	IN	40	
			8/1	25105	IN	40	
			8/1	25104	IN	40	
			8/1	25103	IN	40	
			8/1	25102	IN	40	
			8/1	25078	IN	40	
			8/1	25084	IN	40	
			8/1	25076	IN	40	
			8/1	25077	IN	40	
			Total II	N		1320	
					Agenc	la Page	10 of 52
			8/2	25442	IN	40	
			R/2	25441	IN	40	

		/	Cĭ	\$10/C1	(\$112)	
tra as of 8/02/2018				\$116,744		
nd = ((90' x 85')/27)*0.58 = 164 CY			/			
nd = ((90'-7" x 120')/27)*0.18)= 7 (СҮ			

BOSS ENGINEERING

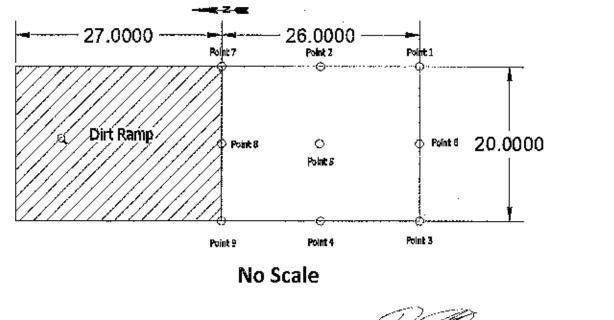
DAILY INSPECTION REPORT

PROJECT: Li	Vingston County 911 Dispatch Center	JOB #;	17-413 and 18-272
CONTRACTOR:	J. S. Vig Construction	DATE:	7/20/2018

Arrived: 9:40 am Left: 11:09 am Temperature: 74 °F Weather: Cloudy (Chance of Rain) Foreman: Joe Recka Number of Workers: 2 (+1 Soll Inspector)

On Arrival, digging was underway for the footing of the building. Hole was dug on the proposed southeast part of the building location. Benchmark was set up on the lron rod on a power pole on the northern part of the site which has an elevation of 903.50. Elevations in the chart below signify the points shown in the hole to obtain bottom of hole elevation. The figure on the bottom shows the location of these points relative to the hole that was dug. Soil inspector (Mike) was on site inspecting the soll at the bottom of the hole. Around 11:00 am, Joe Recka shut down the project for the day. The hole that was dug was not filled.

Benchmark Elevation 903.50	Units: Feet
Point Identifier	Elevation
1	898.33
2	898.25
3	897.28
4	897,79
5	897.73
6	898.01
7	898.03
8	897.78
9	897.73



INSPECTOR



BOSS ENGINEERING

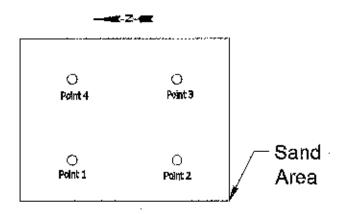
DAILY INSPECTION REPORT

PROJECT:	Livingston County 911 Dispatch Center	JOB #:	17-413 and 18-272
CONTRACTOR	;; J. S. Vig Construction	DATE:	7/26/2018

Arrived: 2:45 am Left: 3:15 am Temperature: 80 °F Weather: Partly Cloudy Contact: Matt (313)-215-6210 (J. S. Vig Construction) Number of Workers: 1

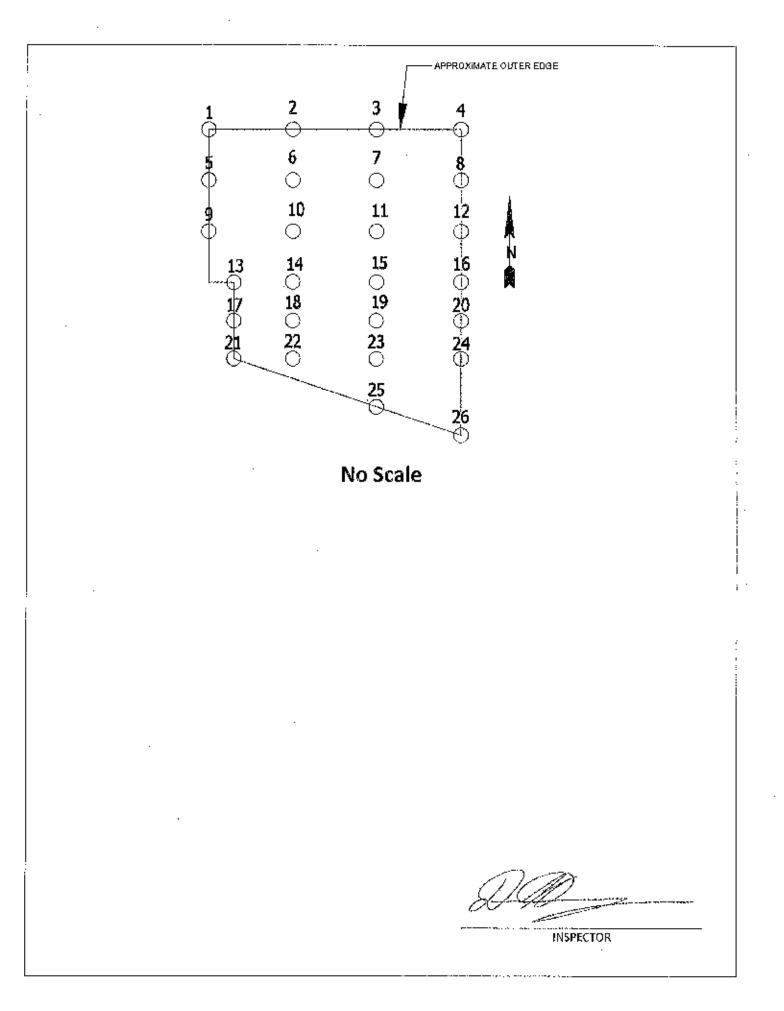
On Arrival, site was done with construction for the day with no workers present. Matt approached me and instructed me to take clovation shots on a sand filled area to determine the elevation of the sand surface. This sand filled area was the same area that was previously dug on 7/20/18. Matt proceeded to stake the area with four different locations and wanted the elevations of these spots. Using the bench mark that was located to the north of the site on a power pole, the elevation of the surface at these stakes were measured (which is stated below). These elevations were then written on the stakes. Matt explained that the elevation of this area should be around 900 ft, so around 2.5 ft of sand needs to be removed.

Benchmark Elevation 903.50	Units: Feet
Point identifier	Elevation
1	902.38
2	902.52
3	902.75
4	902.67



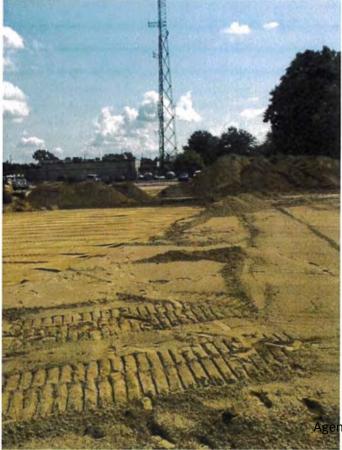
No Scale

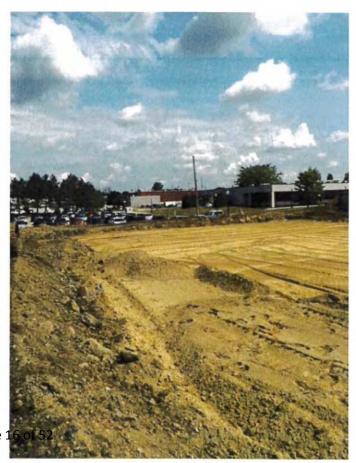
INSPECTOR











nda Page



Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Matt
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe

G2 Project No.:	183323
Date:	July 23, 2018
Weather:	81°F, Partly Cloudy
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 perform field testing. Upon arrival on site at 8:30 am, G2 observed Joe Raica Excavating, Inc. beginning to excavate for the undercut to remove the underground layer of organic material. Excavation operations were performed with a CAT 328D excavator. The undercut was cut approximately 2.5 to 5 feet below existing grade elevation, and approximately 90 feet long by 84 to feet wide, with an additional 19 feet by 24 feet section coming north in the north west corner. Please see attached document for undercut location.

The fill soils removed from this undercut consists of varying layers of sand and clay, along with an approximately 1-1/2 foot layer of black organic material. There was also a small amount of rocks and concrete debris that was removed. No groundwater was encountered within the fill material during excavation operations today. The undercut was performed until the layer of black organic material was completely removed, leaving a stiff native gray clay exposed in most areas.

The contractor placed three lifts of backfill into the undercut area using 6 inch lifts. The material used for the backfill appeared to be a mix of light brown sand and silt, with trace gravel that was imported from off-site. A Bomag vibratory roller was used to compact the soil. The first lift was lightly compacted as to avoid pumping from the clay below. The second lift was more heavily compacted, and a density test of 12 inches was used to check both lifts. The final lift of the day was 6 inches and compacted and tested normally.

In-place density tests were performed at select locations using an Instrotek nuclear moisture/density gauge. Test results indicate the backfill is compact from 98.0 percent to 99.0 percent of the maximum density of 121.4 pcf as determined by the T-99 Field test. Moisture contents at the evaluated test locations ranged from 7.0 percent to 7.4 percent. Please refer to the attached Field Density Test Report for complete test results and additional density information. G2 informed the contractor representative of today's test results. G2 departed the job site at 6:20 pm.

G2 Field Representative: Tyler Wolschlager

	DO LO
	SRC
	B
	Ē
	SUI
	NO
1	21
1	

Project No: 183323 Date: July 23, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report

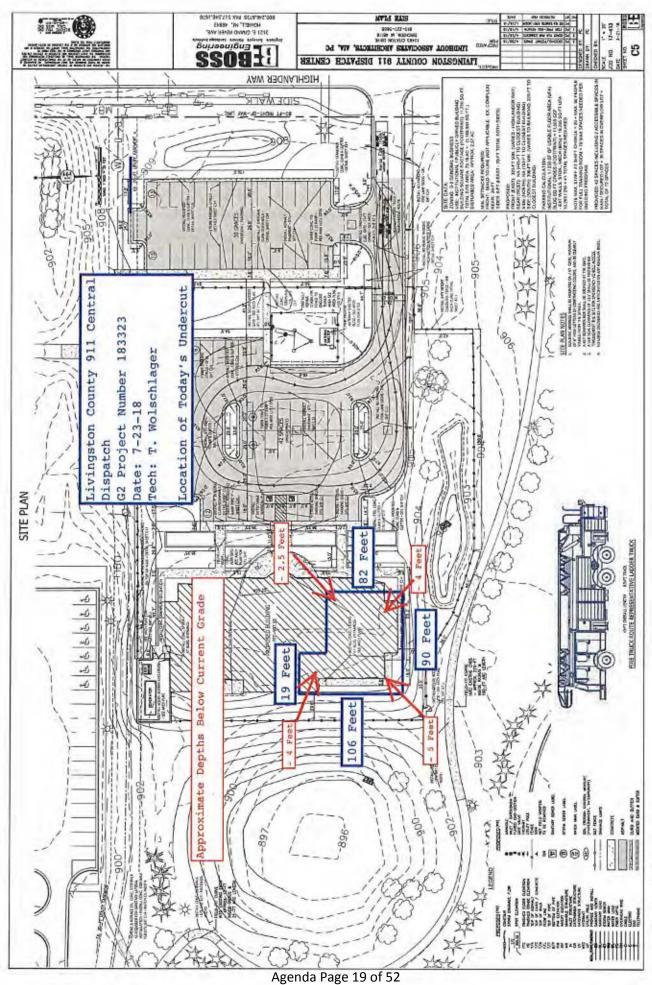
Test No.	Test Elevation	ation	Probe Depth	Density Count	Wet Density PCF	Moisture Count		Moisture	Moisture Moisture Dry Density Maximum PCF Percent PCF Density	Maximum Density PCF	-	Percent Location of Density Tests	Remarks
4	4' Below Current Grade	ant Grade	12	314.0	127.7	314.0	8.8	7.4	119.0	121.4	98.0	A	
2 3.	3.5' Below Current Grade	rent Grade	4	1864.0	128.6	1864.0	8.4	7.0	120.2	121.4	99.0	B	
Material: Lig	Material: Light Brown Clay/Sand Mix	Jay/Sand	Mix	Man	kimum De	Maximum Density: 121.8 PCF	21.8 PC	#	ō	Optimum Moisture %:	sture %:	Minimum Spi	Minimum Specified Comp: 98 %
T-99 No:			T-99 No:										
Moisture:	8.1	%	Moisture:		%								
Volume	0.0333	ਤੋਂ ਦ	Valume		19 E								
Soil/Mold	Soil/Mold 6260.0	6	Soil/Mold		0								
Mold	4282.0	0	Mold		0								
Wet Soil	1986.0	5	Wet Soil		6								
A Comp Soil	121.4 PCF		Comp Soil		PCF								

Chart StandardsOperating Standards:Density:1633-1666Density:1653Moisture:644-670Moisture:644	Gauge No:	15991	Calibration Date: 05-18-2018	05-18-2018
66 Density: Moisture:	Chart Standard	s	Operating Stand	ards:
Moisture:	Density:	1633-1666	Density:	1653
	Moisture:	644-670		644

Tyler Wolschlager

G2 Field Representative:

1 of 1





Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Matt
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323
Date:	July 24, 2018
Weather:	Cloudy/Sunny, 66°F- 78°F
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 perform field testing. Upon arrival on site at 7:00 am, G2 observed Joe Raica Excavating proceeding to place sand in the undercut areas. The contractor placed and compacted approximately 10-inch lifts of brown sand with trace clay on top of the other previously placed and compacted sand layers already in the undercut. After the undercut was filled, the contractor brought in imported brown sand material to place on top for the remainder of the building pad. They placed and compacted an approximately 10-inch lift on top of the undercut backfill. A CAT Dozer was utilized for placement operations, and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the sand is compact from 97.3 percent to 100.4 percent of the maximum density of 112.5 pcf as determined by the One Point Michigan Cone Test. Moisture content readings at the test locations ranged from 7.0 percent to 9.9 percent today. Test results also indicate the imported brown sand is compact from 95.6 percent to 99.4 percent of the maximum density of 114.8 pcf as determined by the One Point Michigan Cone Test. Moisture content readings at the test locations ranged from 3.4 percent to 5.1 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 6:00 pm.



Project No: 183323 Date: July 24, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture	Moisture	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	
-	- approx 8'1" from top of building 8 inches pad	8 inches	1583.0	119.5	98.0	8.5	12	110.9	112.5	98.6	Site Plan #1	
N	- approx 8'1" from top of building pad	8 inches	1529.0	120.9	97.0	8.4	7.5	112.5	112.5	100.0		1.1.1
0	- approx 8'1" from top of building 8 inches pad	8 inches	1528.0	121.0	95.0	8.2	7.3	112.7	112.5	100.2		
4	- approx 8'1" from top of building 8 inches pad	8 inches	1675.0	117.1	89.0	9'1	0'2	109.5	112.5	6.79		10.7
ŝ	- approx 8'1" from top of building 8 inches pad	8 inches	1521.0	121.1	97.0	8.4	7.5	112.7	112.5	100.2		
φ	- approx 8'1" from top of building 8 inches pad	8 inches	1493.0	121.9	109.0	9.7	8.6	112.2	112.5	2.66		
2	- approx 8'1" from top of building 8 inches pad	8 inches	1528.0	120.9	102.0	8.9	8.0	112.0	112.5	9'66		
8	- approx 7'3* from top of building 8 inches pad	8 inches	1535.0	120.8	94.0	8.1	7.2	112.6	112.5	100.1		-
01	- approx 7'3* from top of building 8 inches 1485.0 pad	8 inches	1485.0	122.1	104.0	9.2	8.1	113.0	112.5	100.4		
10	- approx 7'3" from top of building 8 inches pad	8 inches	1450.0	123.0	123.0	11.1	6.6	111.9	112.5	99.5		
:	- approx 7'3" from top of building 8 inches pad	8 inches	1554.0	120.2	100.0	8.7	7.8	111.5	112.5	99.1		-
12	- approx 7'3" from top of building B inches pad	8 inches	1569.0	119.8	100.0	8.7	6.7	111.1	112.5	98.8		-
13	- approx 7'3" from top of building 8 inches pad	8 inches	1470.0	122.5	108.0	9,6	8.5	113.0	112.5	100.4		
14	- approx 7'3" from top of building pad	8 inches	1551.0	120.3	108.0	9.6	8.6	110.7	112.5	98.4		-

 Troxler Nuclear Gauge Information

 Gauge No:

 33279
 Calibration Date:

 Calibration Date:

 OPerating Standards:

 Operating Standards:

 Density:
 2138-2181
 Density:
 2120

 Moisture:
 585-609
 Moisture:
 587

Michael Hume

G2 Field Representative:

1 of 3



Project No: 183323 Date: July 24, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report (Continued)

Moisture Count Moisture PCF Dry Density Density Maximum Percent Decent Density Tests 108.0 9.6 8.6 111.2 112.5 98.8 Location of Density Tests 108.0 9.6 8.6 111.2 112.5 98.1 Location of Density Tests 108.0 9.6 8.6 111.5 112.5 98.1 E 107.0 9.5 8.5 111.5 112.5 99.1 E 107.0 9.7 8.6 111.5 112.5 99.1 E 107.0 9.4 7.5 111.6 112.5 99.1 E E 107.0 8.4 7.5 111.5 112.5 99.1 E E 105.0 9.3 8.3 111.5 112.5 99.4 E E E 105.0 9.7 8.6 112.5 99.4 E E E E E E E E E E E E E E<	116.5 61.0
Moisture Percent Dry Density PCF Maximum Density Percent 8:6 111.2 112.5 98.8 8:3 111.5 112.5 99.1 8:5 111.5 112.5 99.1 8:5 111.5 112.5 99.1 8:5 111.5 112.5 99.1 7.5 111.6 112.5 99.1 7.5 111.5 112.5 99.1 8:6 112.9 112.5 99.1 8:3 111.5 112.5 99.1 8:3 111.5 112.5 99.1 8:3 111.5 112.5 99.1 8:4 112.9 112.5 99.1 8:5 112.5 110.4 99.4 5:1 114.1 114.8 99.4 3:8 109.7 114.8 99.3 4.0 114.0 114.8 99.3 4.3 112.2 114.8 99.3	61.0 4.8
Dry Density PCF Maximum PCF Percent ompaction 111.2 112.5 99.1 111.5 112.5 99.1 111.6 112.5 99.1 111.9 112.5 99.1 111.9 112.5 99.1 111.9 112.5 99.1 111.9 112.5 99.4 111.9 112.5 99.4 111.6 112.5 99.4 112.9 112.5 99.4 112.9 112.5 99.4 114.1 114.8 99.4 108.7 114.8 99.4 108.7 114.8 99.4 108.7 114.8 99.4 114.0 114.8 99.4 114.1 114.8 99.4 114.1 114.8 99.4 114.1 114.8 99.5 114.1 114.8 99.3 114.1 114.8 99.3	4.3
Percent 99.1 99.1 99.1 100.4 99.5 99.4 99.4 99.3 95.6 99.3	111.7
	114.8
	97,3
Kemarks	

Michael Hume

G2 Field Representative:

JBS, P.E.

6						
CONSULTING GROUP	ROUP	Project No: 183323 Date: July 24,	183323 July 24, 2018	2018	Project Name: Livingston Location: Howell, MI	Livingston Howell, MI
					Contractor:	Joe Raica
Field Density Test Report	port	(Continued)				
Material: Imported brown sand with trace clay	th trace	Maximum Density: 112,5 PCF	112.5	PCF	Optimum Moisture %:	ure %: 14.3
Material: Imported brown sand		Maximum Density: 114.8 PCF	114.8	PCF	Optimum Moisture %: 13.5	ure %: 13.5
MI Cone 1 No:	MI Cone No:	1	MI Cone No:			

oject Name:	Livingston County 911 Central Dispatch
cation:	Howell, MI
ontractor:	Joe Raica Excavating, Inc.

-	8
10	ß
	Minimum apecilied Comp.
	0.41
the balance of a	UIL MOISTUR 70.

	%	
	56	
	um Specified Comp:	
	Minim	
ï		Ì

% cu.ft.

Volume Moisture:

S t *

5.1

Moisture:

%

1.7

Moisture:

Volume	Volume 0.0444 cu.	H G	Volume	Volume 0.0444 cu.	g 4
Soil/Mold	4385.0	6	Soil/Mold 4357.0	4357.0	0
Mold	1961.0	6	Mold	1958.0	6
Wet Soil	2424.0	6	Wet Soil	2399.0	Б
Comp Soll	120.4		PCF Comp Soil 119.1	119.1	PCF

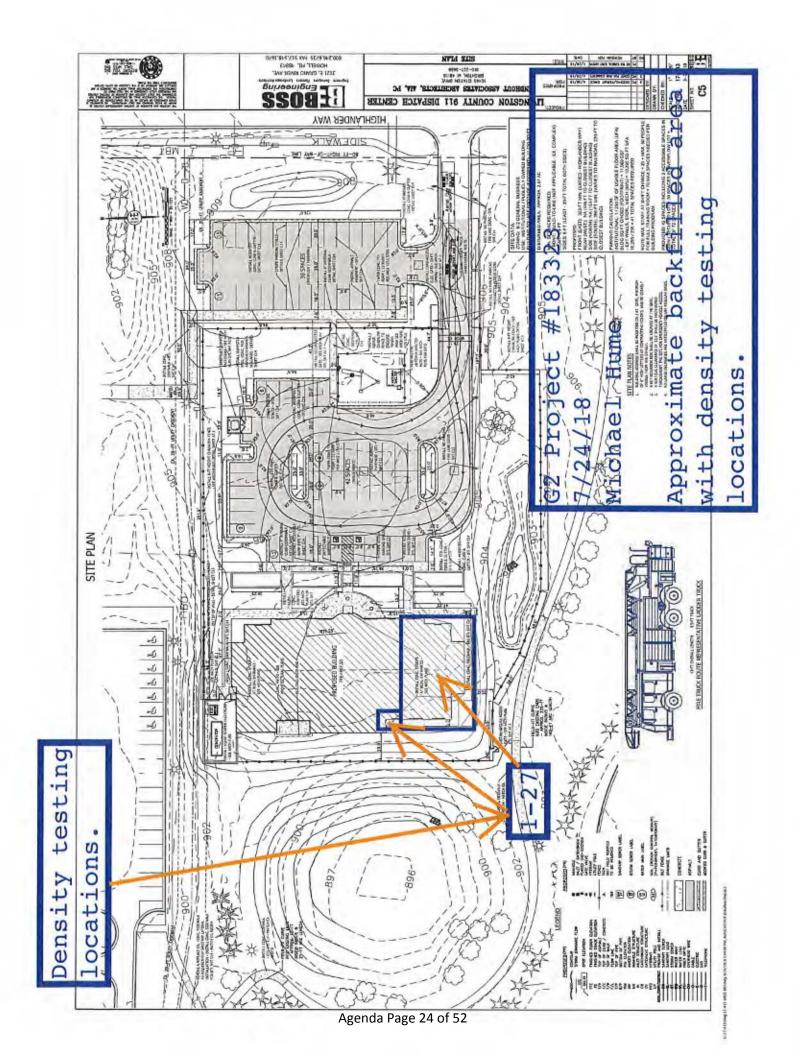
PCF 8 0

Wet Soil

Comp Soil

Mold Soil/Mold

Reviewed By:





Project Name:	Livingston County 911 Central Dispatch	
Location:	300 S. Highlander Way, Howell, MI 48843	
Client:	J.S. Vig Construction	
Client Rep:	Matt Sangster	
Contractor:	Joe Raica Excavating, Inc.	
Contractor Rep:	Joe Raica	

G2 Project No.:	183323
Date:	July 25, 2018
Weather:	Cloudy/Sunny, 63°F-86°F
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 perform field testing. Upon arrival on site at 7:45 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 10-inch lifts of imported brown sand on top of the other previously placed and compacted sand layers already in the building pad area. A CAT Dozer was utilized for placement operations, and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.7 percent to 99.5 percent of the maximum density of 114.8 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 3.0 percent to 5.5 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 3:30 pm.



Project No: 183323 Date: July 25, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report

Test No.	Test Elevation	Probe	Density Count	Wet Density PCF	Moisture Count	Moisture	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
-	- approx 4'9" from top of building 8 inches pad	8 inches	1808.0	115.0	54.0	3.9	3.5	1.111	114.8	96.8	Site Plan #1	-
~	- approx 4'9" from top of building 8 inches pad	8 inches	1813.0	114.9	57.0	4.2	3.8	110.7	114.8	96.4		
63	- approx 4'9" from top of building 8 inches pad	8 inches	1738.0	116.7	55.0	4.0	3.6	112.7	114.8	98.2		-
4	- approx 4'9" from top of building 8 inches pad	8 inches	1745.0	116.5	54.0	3.9	3.5	112.6	114.8	98.1		1
ŝ	 approx 4'9" from top of building 8 inches pad 	8 inches	1750.0	116.4	59.0	4.4	3.9	112.0	114.8	97.6		4
0	- approx 4'9" from top of building 8 inches pad	8 inches	1654.0	118.8	61.0	4.6	4.0	114.2	114.8	39.5		
1	- approx 4'9" from top of building 8 inches pad	8 inches	1852.0	114.0	48.0	3.3	3.0	110.7	114.8	96.4		-
	- approx 4'9" from top of building 8 inches pad	8 inches	1764.0	116.0	61.0	4.6	4.1	111.4	114.8	0'26		
a,	 approx 3'11" from top of building pad 	8 inches	1759.0	116.2	61.0	4.6	4.1	111.5	114.8	1.79		
9	 approx 3'11" from top of building pad 	8 inches	1659.0	118.6	0.77	6.2	5.5	112.4	114.8	87.9		_
11	 approx 3'11" from top of building pad 	8 inches	1779.0	115.7	52.0	3.7	3.3	112.0	114.8	97.6		_
12	 approx 3'11* from top of building pad 	8 inches	1730.0	116.8	69.0	5.4	4.8	111.4	114.8	97.0		
13	 approx 3'11* from top of building pad 	8 inches	1790.0	115.4	70.0	5.5	5.0	109.9	114.8	95.7		_
4	- approx 3'11" from top of building pad	8 inches	1739.0	116.6	68.0	5,3	4.8	111.3	114.8	0'16	State and	4

 Troxler Nuclear Gauge Information

 Gauge No:
 33279
 Calibration Date:
 03-16-2018

 Chart Standards
 Operating Standards:
 03-16-2018

 Density:
 2138-2181
 Density:
 2169

 Moisture:
 585-609
 Moisture:
 605

G2 Field Representative: Michael Hume

1 of 2

JBS, P.E.

Reviewed By:

CONSULTING GROUP

July 25, 2018 Project No: 183323 Date:

Livingston County 911 Central Dispatch Joe Raica Excavating, Inc. Howell, MI Project Name: Contractor: Location:

> (Continued) Field Density Test Report

Density We Count PCI s 1826.0 114. s 1671.0 118. s 1671.0 118. s 1767.0 115. s 17836.0 115. s 1785.0 115. s 1785.0 115. s 1785.0 116. s 1789.0 116.	Density We Count PCI s 1826.0 114. s 1671.0 118. s 1671.0 118. s 1767.0 115. s 17836.0 115. s 1785.0 115. s 1785.0 115. s 1785.0 116. s 1789.0 116.	Density PCCF Wet PCF Moisture Count Moisture PC Moisture Moisture	Density Count Wet PCF Moisture S9.0 Moisture PCF 1826.0 114.6 59.0 4.4 1671.0 118.4 57.0 4.2 1691.0 118.4 57.0 4.5 1691.0 118.4 57.0 4.5 1767.0 116.0 60.0 4.5 1787.0 115.5 51.0 3.6 1785.0 115.6 51.0 3.6 1785.0 115.6 55.0 4.0 1785.0 115.6 55.0 4.0 1785.0 115.6 55.0 4.0 1789.0 115.6 55.0 4.0 1789.0 116.0 50.0 3.5 Maximum Density: 144.8 PC	Density PCF Wet PCF Moisture PCF Moisture PCF Density PCF Density Density <th< th=""><th>Density PCF Wet PCF Moisture PCF Moisture PCF Density PCF Density <th< th=""><th>Density PCC Wet PCC Moisture PCC Moisture PCC Moisture PCC PCF Density PCC Density PCC DE</th><th>Density Wet Moisture Moisture Moisture Moisture Moisture Moisture PCF Density Maximum 1826.0 114.6 59.0 4.4 4.0 110.2 114.8 PCF Density PCF PCF</th><th>Test Test Elevation Probe No.</th><th>15 - approx 3'11" from top of 8 inches building pad</th><th>16 - approx 3'1" from top of 8 inches building pad</th><th>17 - approx 3'1" from top of 8 inches building pad</th><th>18 - approx 3'1" from top of 8 inches building pad</th><th>19 - approx 3'1* from top of 8 inches building pad</th><th>20 - approx 3'1" from top of 8 inches building pad</th><th>21 - approx 31* from top of 8 inches building pad</th><th>22 - approx 3'1" from top of 8 inches building pad</th><th>Bed Material: Imported brown sand</th><th>Cone No: Cone No:</th><th>Moisture: % Moisture:</th><th></th></th<></th></th<>	Density PCF Wet PCF Moisture PCF Moisture PCF Density PCF Density Density <th< th=""><th>Density PCC Wet PCC Moisture PCC Moisture PCC Moisture PCC PCF Density PCC Density PCC DE</th><th>Density Wet Moisture Moisture Moisture Moisture Moisture Moisture PCF Density Maximum 1826.0 114.6 59.0 4.4 4.0 110.2 114.8 PCF Density PCF PCF</th><th>Test Test Elevation Probe No.</th><th>15 - approx 3'11" from top of 8 inches building pad</th><th>16 - approx 3'1" from top of 8 inches building pad</th><th>17 - approx 3'1" from top of 8 inches building pad</th><th>18 - approx 3'1" from top of 8 inches building pad</th><th>19 - approx 3'1* from top of 8 inches building pad</th><th>20 - approx 3'1" from top of 8 inches building pad</th><th>21 - approx 31* from top of 8 inches building pad</th><th>22 - approx 3'1" from top of 8 inches building pad</th><th>Bed Material: Imported brown sand</th><th>Cone No: Cone No:</th><th>Moisture: % Moisture:</th><th></th></th<>	Density PCC Wet PCC Moisture PCC Moisture PCC Moisture PCC PCF Density PCC Density PCC DE	Density Wet Moisture Moisture Moisture Moisture Moisture Moisture PCF Density Maximum 1826.0 114.6 59.0 4.4 4.0 110.2 114.8 PCF Density PCF	Test Test Elevation Probe No.	15 - approx 3'11" from top of 8 inches building pad	16 - approx 3'1" from top of 8 inches building pad	17 - approx 3'1" from top of 8 inches building pad	18 - approx 3'1" from top of 8 inches building pad	19 - approx 3'1* from top of 8 inches building pad	20 - approx 3'1" from top of 8 inches building pad	21 - approx 31* from top of 8 inches building pad	22 - approx 3'1" from top of 8 inches building pad	Bed Material: Imported brown sand	Cone No: Cone No:	Moisture: % Moisture:	
PCIP PCIP 114. 118. 118. 119. 119. 119. 119. 8. 116. 116. 8. 116. 116. 8. 116. 116.	PCIP PCIP 114. 118. 118. 119. 119. 119. 119. 8. 116. 116. 8. 116. 116. 8. 116. 116.	Wet Moisture Moisture Moist PCF 59.0 4.4 114.6 59.0 4.5 118.4 57.0 4.5 117.8 67.0 5.2 115.5 51.0 3.6 115.5 51.0 3.6 115.6 55.0 4.0 115.6 55.0 4.0 115.6 55.0 3.6 115.6 55.0 3.6 115.6 55.0 3.5 115.6 50.0 3.5 116.0 50.0 3.5 116.0 50.0 3.5 *** *** 4.0	Wet PCF Moisture 59.0 Moisture PCF 114.6 59.0 4.4 118.4 57.0 4.2 118.4 57.0 4.5 117.8 67.0 5.2 115.5 51.0 3.6 115.6 51.0 3.6 119.2 70.0 5.5 115.6 55.0 4.0 115.6 55.0 3.6 115.6 55.0 3.6 115.6 55.0 3.5 116.0 50.0 3.5 116.0 50.0 3.5 116.0 50.0 3.5 116.0 50.0 3.5 116.0 50.0 3.5 ximum Density: 114.8 PCI	Wet PCF Moisture PCF Moisture Pcreatt Moisture PCF Dy Density Pcreatt 114.6 59.0 4.4 4.0 110.2 118.4 57.0 4.2 3.7 114.1 118.4 57.0 4.2 3.7 114.1 118.4 57.0 4.2 3.7 114.1 116.0 60.0 4.5 4.0 111.5 116.1 57.0 3.6 3.2 111.9 115.5 51.0 3.6 3.2 111.9 115.6 55.0 4.0 3.6 3.1 115.6 55.0 4.0 3.6 111.5 115.6 55.0 3.5 3.1 112.4 116.0 50.0 3.5 3.1 112.4 ximum Density: 114.8 PCF % moisture 3.5 3.1 112.4	Wet PCF Moisture PCF Moisture Pcreatt Moisture PCF Dy Density Pcreatt 114.6 59.0 4.4 4.0 110.2 118.4 57.0 4.2 3.7 114.1 118.4 57.0 4.2 3.7 114.1 118.4 57.0 4.2 3.7 114.1 116.0 60.0 4.5 4.0 111.5 116.1 57.0 3.6 3.2 111.9 115.5 51.0 3.6 3.2 111.9 115.6 55.0 4.0 3.6 3.1 115.6 55.0 4.0 3.6 111.5 115.6 55.0 3.5 3.1 112.4 116.0 50.0 3.5 3.1 112.4 ximum Density: 114.8 PCF % moisture 3.5 3.1 112.4	Wet Wot Moisture Moisture Moisture Procent Percent Per	Wet PCF Moisture PCF Moisture PCF Moisture PCF Moisture PCF Moisture PCF Location of Density PCF Location of Density Location of Density <thlocation density<="" of="" th=""> Location of Densin</thlocation>	10000						8 inches 1636.0		1. Contract 1.	Ma			
	Moisture Count 59.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0	Moisture Moist Pci 59.0 4.4 59.0 4.4 57.0 4.5 67.0 5.2 67.0 5.3 60.0 4.5 51.0 3.6 70.0 5.5 70.0 5.5 70.0 3.5 55.0 4.0 56.0 3.5 nsity: 114.8 nsity: 114.8 Moisture: Moisture:	Moisture Count Moisture PCF 59.0 4.4 57.0 4.2 57.0 4.2 57.0 4.5 57.0 5.2 60.0 4.5 70.0 5.5 56.0 4.0 55.0 4.0 56.0 3.5 nsity: 114.8 PCI Noisture:	Moisture Count Moisture PCF Percent Propression 59.0 4.4 4.0 110.2 57.0 4.2 3.7 114.1 57.0 4.2 3.7 114.1 57.0 4.5 4.6 110.2 57.0 4.5 4.6 111.6 67.0 5.2 4.6 111.5 51.0 3.6 3.2 111.9 70.0 5.5 4.8 113.7 70.0 5.5 4.8 113.7 55.0 4.0 3.6 111.5 70.0 5.5 4.8 113.7 55.0 4.0 3.6 111.5 56.0 3.5 3.1 112.4 151.4 DCF 111.5 50.0 3.5 3.1 112.4 151.4 PCF 111.5 50.0 3.5 3.1 112.4 151.4 PCF 111.5 50.0 3.5 <	Moisture Count Moisture PCF Percent Propression 59.0 4.4 4.0 110.2 57.0 4.2 3.7 114.1 57.0 4.2 3.7 114.1 57.0 4.5 4.6 110.2 57.0 4.5 4.6 111.6 67.0 5.2 4.6 111.5 51.0 3.6 3.2 111.9 70.0 5.5 4.8 113.7 70.0 5.5 4.8 113.7 55.0 4.0 3.6 111.5 70.0 5.5 4.8 113.7 55.0 4.0 3.6 111.5 56.0 3.5 3.1 112.4 151.4 DCF 111.5 50.0 3.5 3.1 112.4 151.4 PCF 111.5 50.0 3.5 3.1 112.4 151.4 PCF 111.5 50.0 3.5 <	Moisture Count Moisture PCF Moisture PCF Moisture PCF Pcreatt Percent 59.0 4.4 4.0 110.2 114.8 96.0 57.0 4.2 3.7 114.1 114.8 96.0 57.0 4.2 3.7 114.1 114.8 99.4 67.0 5.2 4.6 112.6 114.8 99.1 67.0 5.2 4.6 111.5 114.8 97.1 51.0 3.6 3.2 111.9 114.8 97.5 70.0 5.5 4.8 113.7 114.8 97.5 70.0 5.5 4.8 113.7 114.8 97.5 50.0 3.5 3.1 112.4 114.8 97.5 50.0 3.5 3.1 112.4 114.8 97.5 50.0 3.5 3.1 112.4 114.8 97.5 50.0 3.5 3.1 112.4 114.8 97.5 50.0 <t< td=""><td>Moisture Count Moisture PCF Moisture PCF Moisture PCF Moisture PCF Location of Density PCF Location OFF Location</td><td></td><td>114</td><td>118</td><td>117.</td><td>-</td><td>115.</td><td></td><td>115</td><td>116</td><td></td><td></td><td>%</td><td></td></t<>	Moisture Count Moisture PCF Moisture PCF Moisture PCF Moisture PCF Location of Density PCF Location OFF Location		114	118	117.	-	115.		115	116			%	

Volume Wet Soil Mold Soil/Mold Cone No: Moisture: Comp Soil POF ë ≓ % 6 5 6 Volume Mold Cone No: Soil/Mold Moisture: Wet Soil Comp Soil PCF 19 G. * 0 8 0 PIOW Cone No: Soil/Mold Moisture: Wet Soil Comp Soil Volume

0 0 PCF

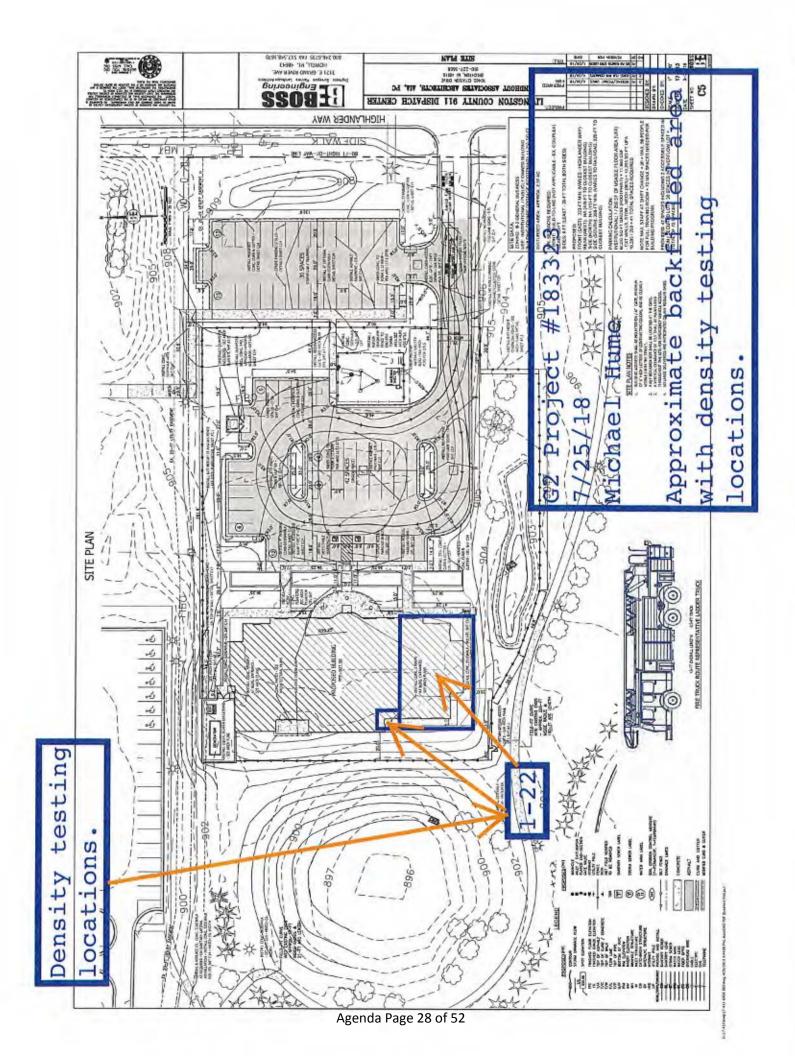
0

Michael Hume

G2 Field Representative:

Reviewed By:

JBS, P.E.





Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Matt Sangster
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323
Date:	July 26, 2018
Weather:	Cloudy/Sunny, 66°F
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 perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable/fill material within the old parking lot area. However, the client and contractor informed G2 that proper contracts and authorization for the project still weren't finalized per the county, and contractor pay items for operations weren't finalized so until further notice, the project is on hold. G2 prepared field reports and departed site at 8:15 am.

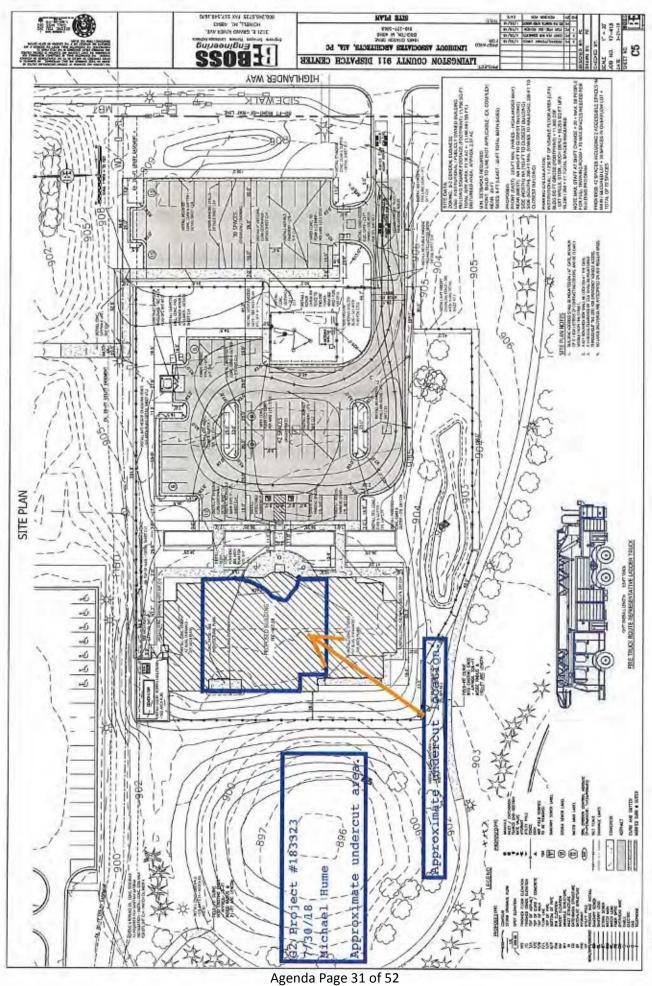
Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Matt Sangster/ Darryl
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323
Date:	July 30, 2018
Weather:	Cloudy/Sunny, 56°F- 77°F
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 perform field testing. Upon arrival on site at 7:15 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable fill material within the old parking lot area. Excavation operations were performed with a CAT 328D excavator and 3 quad axle dump trucks.

The fill soils removed from this undercut consists of approximately 3 to 6 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. No groundwater seepage was encountered within the undercut during excavation operations. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered. However, some undercut areas were not yet fully excavated by the end of field operations for today. The client and contractor representatives were informed of G2's observations today. G2 prepared field reports and departed site at 5:30 pm.



CONSULTING GROUP

Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Darryl
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

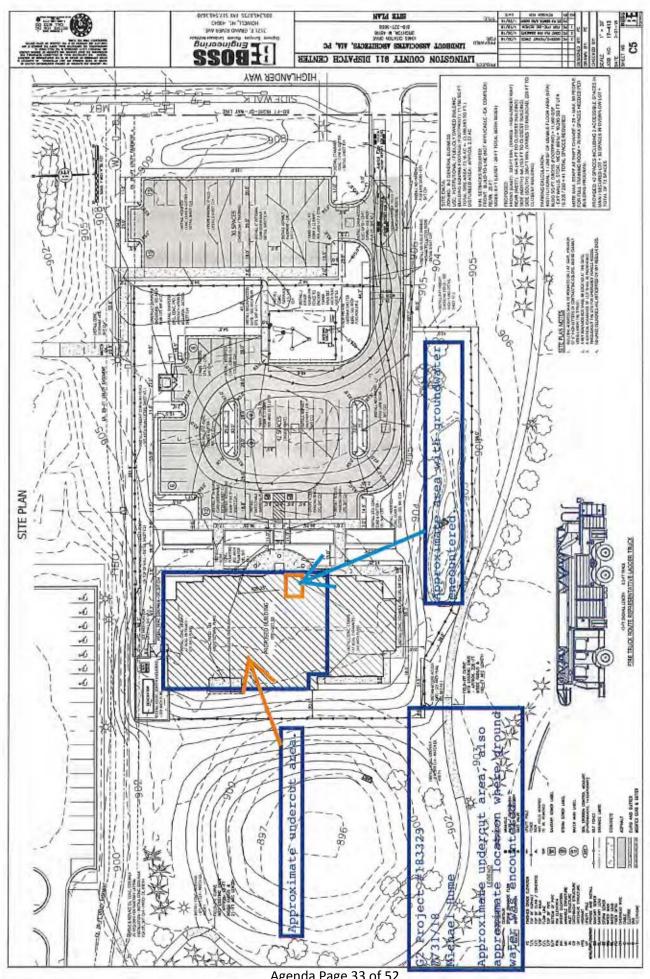
G2 Project No.:	183323
Date:	July 31, 2018
Weather:	Cloudy/ Sunny/ Rainy 58°l
Page:	1 of 1

Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable fill material within the old parking lot area. Excavation operations were performed with a CAT 328D excavator and 4 quad axle dump trucks. G2 was not on site from 12:45pm to 3:15pm.

The fill soils removed from this undercut consists of approximately 3 to 6 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. After excavating operations, the undercut was cut approximately 3 to 8 feet below proposed existing grade elevation, and approximately 132 feet long by 83 feet wide. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered.

Groundwater seepage was encountered during excavation operations within one undercut area of approximately 10 feet by 6 feet which extended to a depth of 8 feet below existing grade. This area was temporarily filled with sand and compacted in order to prevented additional water from permeating into the undercut. G2 informed the contractor to backfill the area with 6A open graded aggregate. The contractor said this would be re-excavated and backfilled with 6A open graded aggregate at a later date when stone was acquired. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered. The client and contractor representatives were informed of G2's observations today. G2 prepared field reports and departed site at 6:45 pm.



Agenda Page 33 of 52



Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Darryl
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323
Date:	August 1, 2018
Weather:	P. Cloudy/Rainy, 68°F-70°F
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 perform field testing. Upon arrival on site at 7:00 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 12 inch lifts of imported brown sand on top of native soils in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.3 percent to 99.8 percent of the maximum density of 118.0 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 4.8 percent to 7.4 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 5:30 pm.

G2 Field Representative: Michael Hume

Reviewer: JDC, P.E.



Project No: 183323 Date: August 1, 2018

Project Name: Livingston County 911 Central Dispatch Location: Howell, MI Contractor: Joe Raica Excavating, Inc.

Field Density Test Report

Test No.	Test Elevation	Probe	Density Count	Wet Density PCF	Moisture Count	Moisture	Moisture	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
-	 approx 9 feet from top of building pad area 	10	965.0	119.9	78.0	6.5	5.7	113.4	118.0	96.1		
-	 approx 9 feet from top of building pad area 	10	957.0	120.2	78.0	6.5	5.7	113.7	118.0	96.4		
-	 approx 9 feet from top of building pad area 	10	972.0	119,6	0.77	6.4	5.6	113.3	118.0	96.0		
-	 approx 9 feet from top of building pad area 	10	856.0	124.2	85.0	7.2	6.1	117.1	118.0	99.2		
10	 approx 9 feet from top of building pad area 	10	862.0	124.0	82.0	6.9	5.9	117.1	118.0	99.2		
12	 approx 9 feet from top of building pad area 	10	960.0	120.1	83.0	0.7	6.2	113.1	118.0	95.8		
13	 approx 8 feet from top of building pad area 	10	888.0	122.9	85.0	7.2	6.2	115.7	118.0	98.1		
1.1	 approx 8 feet from top of building pad area 	10	931.0	121.2	0.77	6.4	5.5	114.9	118.0	97.4		
5	 approx 8 feet from top of building pad area 	10	864.0	123.9	81.0	6.8	5.8	117.2	118.0	6.66		
-	 approx 8 feet from top of building ped area 	10	0.798	122.6	80.0	6.7	5.7	115.9	118.0	98.2		
-	 approx 8 feet from top of building ped area 	10	920.0	121.7	72.0	5.9	5.1	115.8	118.0	98.1		
-	 approx 8 feet from top of building pad area 	6	906.0	122.2	79.0	6.6	5.7	115.6	118.0	98.0		
	 approx 8 feet from top of building pad area 	10	936.0	121.0	81.0	8.8	5.9	114.2	118.0	96.8		_
	 approx 7 feet from top of building pad area 	10	1008.0	118.3	72.0	5.9	5.2	112.5	118.0	95.3		

 Troxler Nuclear Gauge Information

 Gauge No:
 33279
 Calibration Date:
 03-16-2018

 Chart Standards
 Operating Standards:
 03-16-2018

 Density:
 2134-2177
 Density:
 2171

 Moisture:
 585-609
 Moisture:
 591

 Reviewed By:
 JBS, P.E.

Michael Hume

G2 Field Representative:

1 of 2



August 1, 2018 Project No: 183323 Date:

Livingston County 911 Central Dispatch Joe Raica Excavating, Inc. Howell, MI Project Name: Contractor: Location:

> (Continued) Field Density Test Report

Test Test Elevation Probe Density Wet Moisture Moisture No. No.	21 - approx 7 feet from top of building ped area 10 947.0 120.6 79.0 6.6	22 - approx 7 feet from top of 10 930.0 121.3 69.0 5.6 building pad area	23 - approx 7 feet from top of building pad area 10 927.0 121.4 79.0 6.6	24 - approx 7 feet from top of building pad area 10 866.0 123.8 88.0 7.5	25 - approx 7 feet from top of 10 865.0 123.9 76.0 6.3 building pad area	26 - approx 7 feet from top of 10 884.0 123.1 80.0 6.7 building pad area	27 - approx 6 feet from top of building pad area 10 888.0 122.9 91.0 7.8	28 - approx 6 feet from top of 10 809.0 126.4 100.0 8.7 building pad area area area area area area building pad area area area area area area building pad area area building pad	d 29 - approx 6 feet from top of 10 818.0 125.8 96.0 8.3 00 building ped area 10 818.0 125.8 96.0 8.3	Maximum Density: 118.0	Maximum Density:	Maximum Density:	
	.6 5.8	.6 4.8	.6 5.7	.5 6,4	.3 5.3	.7 5.7	.8 6.8	.7 T.A	.3 7.0	PCF	PCF	PCF	
Moisture Dry Density	114.0	115.7	114.8	116.3	117.6	116.4	115.1	117.8	117.6	Opti	Opti	Opt	
Maximum Percent Density Compaction PCF	118.0 96.6	118.0 98.1	118.0 97.3	118.0 98.6	118.0 99.7	118.0 98.6	118.0 97.5	118,0 99,8	118.0 99.7	Optimum Moisture %:	Optimum Moisture %:	Optimum Moisture %:	
Location of Density Tests										12.5 Minimum Spe	Minimum Spe	Minimum Spe	
Remarks										Minimum Specified Comp: 95 %	Minimum Specified Comp: 95 %	Minimum Specified Comp: 95 %	

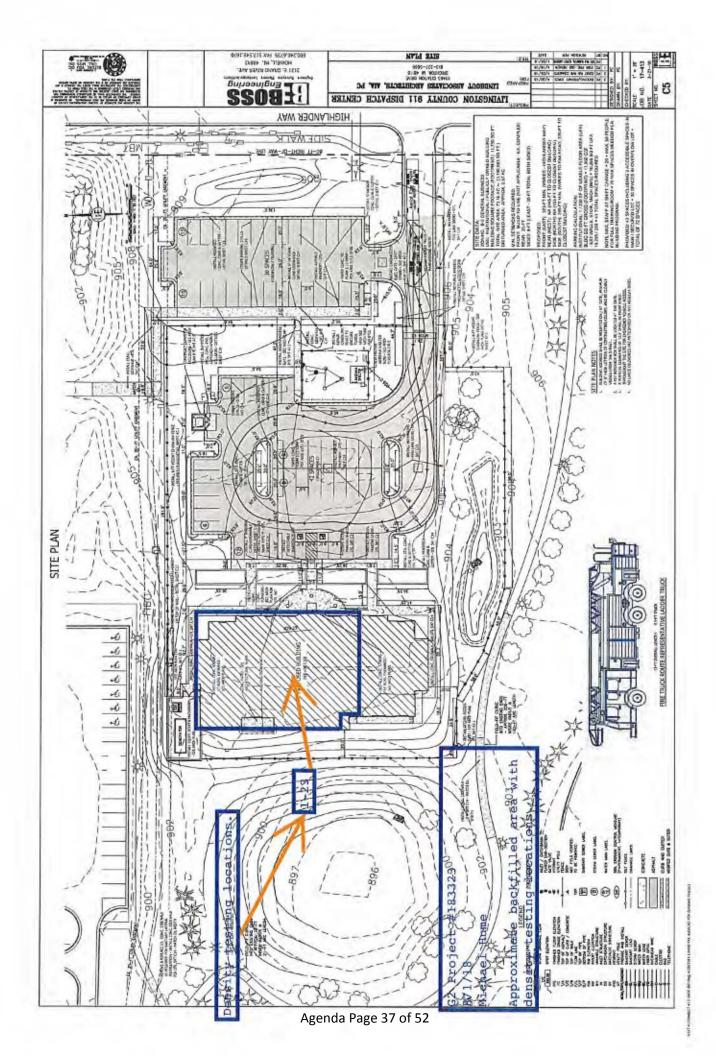
Material:				Maximum Density:	nsity:	PCF	
MI Cone No:	٢		MI Cone No:		MI Cone No:		
Moisture:	5.6	%	Moisture:	%	Moisture:		%
Volume	0.0444	ਤੋਂ ਦ	Volume	ц. Ц.	Volume		cu.ft.
Soil/Mold 4442.0	4442.0	5	Soil/Mold	6	Soil/Mold		5
Mold	Mold 1961.0	6	Mold	6	Mold		6
Wet Soil	2481.0	6	Wet Soil	6	Wet Soil		6
Comp Soil	123.2 PCF	PCF	Comp Soil	PCF	PCF Comp Soil		PCF

JBS, P.E.

G2 Field Representative: Michael Hume

Reviewed By:

2 of 2



Daily Field Report



Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Darryl
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323
Date:	August 2, 2018
Weather:	Cloudy/Sunny, 65*F
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 perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted 12-inch lifts of imported brown sand overlying native soils in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand backfill at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.1 percent to 100.1 percent of the maximum density of 121.3 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 4.4 percent to 7.0 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information.

In addition, G2 observed Joe Raica Excavating undercut three areas and move out unsuitable fill material within the building pad area. Excavation operations were performed with a CAT 328D excavator. One of the undercut areas included the previously backfilled undercut performed on July 31, 2018, where groundwater was encountered. This area was re-excavated to backfill with open aggregate to the measured groundwater depth.

The fill soils removed from undercutting operations consists of approximately 4 to 8 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. These areas were excavated roughly 4 to 8 feet until native soils were encountered and backfilled with imported sand in lifts of approximately 12 inches. Groundwater seepage was encountered within one undercut excavation which extended to a depth of 7 feet below existing grade. This area, along with the undercut area where groundwater was encountered on July 31, was backfilled with 6A open graded aggregate to the observed groundwater seepage depth. Imported brown sand was placed on top of the aggregate in lift sizes of approximately 12 inches. G2 prepared field reports and departed the job site at 6:15 pm.

G2 Field Representative: Michael Hume

Reviewer: JDC, P.E.



Project No: 183323 Date: August 2, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report

Wet M PCF 126.0 126.0 126.6 124.5 124.0 124.9 124.9 124.9 124.9 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8 128.8	Wet pensity Moisture Count Moisture PCF Moisture Sount Moisture PCF	Wet Moisture Percent 126.6 90.0 7.5 6.3 5.5 6.3 126.7 85.0 7.0 6.0 5.5 126.7 85.0 7.0 5.1 4.8 126.7 85.0 7.0 5.9 126.7 85.0 7.0 5.1 4.8 126.9 5.9 4.4 126.8 85.0 7.0 5.9 4.4 128.5 4.6 128.5 4.6 128.5 4.6 128.5 4.6 128.5 4.6 128.5 4.6 128.5 4.5 128.5 4.5 128.5 4.5 128.5 4.5 128.5 4.5 128.5 4.5 128.5 4.5 128.5 128.5 4.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5 128.5	Wet Density PCF Moisture PCF Moisture PCF Moisture PCF Dra Density 126.0 90.0 7.5 6.3 5.5 126.6 81.0 6.6 5.5 5.5 126.6 85.0 7.0 6.0 5.5 126.7 85.0 7.0 6.0 5.9 126.7 85.0 7.0 5.9 4.8 126.7 85.0 7.0 5.9 7.4 128.8 89.0 7.0 5.9 4.4 128.8 89.0 7.4 6.1 1 128.8 89.0 7.4 6.1 1 128.8 89.0 7.4 6.1 1 128.8 89.0 5.2 4.4 1 128.8 98.0 5.3 4.6 1 120.9 68.0 5.3 4.6 1 122.6 72.0 5.3 4.6 1 122.1 70.0 8.3 7.0 1	Wet PCF Moisture PCF Moisture PCF	Probe Density Depth Count	10 812	10 798	10 847	10 860	10 797	10 838	10 751	10 873.0	10 937	10 892	10 775	10 906.0	10 904.0	
	Moisture Count 20.0 90.0 85.0 85.0 85.0 85.0 85.0 85.0 85.0 8	Moisture Count Moisture PCF Moisture PCF Moisture PCF 90.0 7.5 6.3 91.0 6.6 5.5 81.0 6.6 5.5 81.0 6.6 5.5 85.0 7.0 6.0 72.0 5.7 4.8 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 5.7 4.4 67.0 5.3 4.6 72.0 5.7 4.9 72.0 5.3 4.6 88.0 8.3 7.0 98.0 8.3 7.0 98.0 6.1 5.3 83.0 6.8 5.9	Molisture Count Molsture PCF Moisture Percent 90.0 7.5 6.3 91.0 6.6 5.5 81.0 6.6 5.5 85.0 7.0 6.0 72.0 5.7 4.8 72.0 5.7 4.8 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.0 5.9 85.0 7.4 6.1 85.0 7.4 6.1 89.0 5.2 4.4 67.0 5.2 4.9 89.0 5.3 4.6 72.0 5.3 4.6 72.0 5.3 4.6 72.0 5.3 4.9 73.0 5.3 4.9 73.0 5.3 4.9 75.0 6.1 5.3 83.0 6.1 5.3 <t< td=""><td>Molsture Count Molsture PCF Molsture Pcreent Pry Density PCF 90.0 7.5 6.3 118.5 91.0 6.6 5.5 120.0 85.0 7.0 6.0 117.5 85.0 7.0 6.0 117.5 85.0 7.0 6.0 117.5 85.0 7.0 5.9 118.3 85.0 7.0 5.9 118.3 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.4 118.2 85.0 7.4 118.2 85.0 5.3 4.6 115.5 98.0 8.3 7.0 119.3 76.0 8.3 7.0 119.3 83.0 6.1 5.3 115.3 98.0 6.1 5.9 115.3 83.0</td><td>Concernance of the second second</td><td>812.0 126.0</td><td>798.0 126.6</td><td>847.0 124.5</td><td>860.0 124.0</td><td>797.0 126.7</td><td>838.0 124.9</td><td>751.0 128.8</td><td></td><td>937.0 120.9</td><td>892.0 122.6</td><td>775.0 127.8</td><td></td><td></td><td>0</td></t<>	Molsture Count Molsture PCF Molsture Pcreent Pry Density PCF 90.0 7.5 6.3 118.5 91.0 6.6 5.5 120.0 85.0 7.0 6.0 117.5 85.0 7.0 6.0 117.5 85.0 7.0 6.0 117.5 85.0 7.0 5.9 118.3 85.0 7.0 5.9 118.3 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.0 5.9 117.8 85.0 7.4 118.2 85.0 7.4 118.2 85.0 5.3 4.6 115.5 98.0 8.3 7.0 119.3 76.0 8.3 7.0 119.3 83.0 6.1 5.3 115.3 98.0 6.1 5.9 115.3 83.0	Concernance of the second second	812.0 126.0	798.0 126.6	847.0 124.5	860.0 124.0	797.0 126.7	838.0 124.9	751.0 128.8		937.0 120.9	892.0 122.6	775.0 127.8			0
	Molsture PCF 7.5 6.6 5.7 7.0 7.0 7.0 7.0 7.0 7.4 7.4 5.2 5.3 5.3 5.3 6.1 6.1 6.1	Moisture Percent 6.3 5.5 5.5 5.9 5.9 5.9 5.9 4.4 4.4 4.5 7.0 7.0	Moisture Percent 6.3 5.5 5.5 5.9 5.9 5.9 6.1 4.4 4.5 4.9 7.0 7.0	Moisture Percent Dry Density PCF 6.3 118.5 5.5 120.0 6.0 117.5 4.8 118.3 5.9 117.5 6.0 117.5 6.1 117.5 6.2 118.3 6.1 118.3 5.9 117.8 6.1 121.4 4.6 118.2 4.6 115.5 4.9 116.9 7.0 119.3 5.3 115.9 5.3 115.9 5.3 115.3 5.3 115.3		90.0	81.0	85.0	72.0	85.0	85.0	89.0	67.0	68.0	72.0	98.0	76.0	83.0	0.05
Dry Density Maximum PCF 118.5 121.3 Con 117.5 121.3 120.0 117.5 121.3 121.3 118.3 121.3 121.3 118.7 121.3 121.3 118.7 121.3 121.3 118.7 121.3 121.3 117.8 121.3 113.3 117.8 121.3 121.3 118.2 121.3 115.3 116.9 121.3 115.3 116.9 121.3 115.3 116.9 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 115.3 115.3 121.3 121.3	Maximum Density PCF 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.3 121.		Percent 97.7 98.9 97.5 97.4 97.4 97.4 96.4 96.4 96.4 96.4		Location of Density Tests	Site Plan #1													
Dry Density Maximum Percent Percent 118.5 121.3 97.7 118.5 121.3 97.5 117.5 121.3 98.9 117.5 121.3 98.9 118.7 121.3 97.5 118.7 121.3 98.7 118.7 121.3 97.5 118.7 121.3 97.1 118.7 121.3 97.1 117.8 121.3 97.4 117.8 121.3 97.4 118.2 121.3 97.4 118.2 121.3 97.4 118.2 121.3 97.4 116.9 121.3 97.4 116.9 121.3 97.4 116.9 121.3 96.4 116.9 121.3 96.4 116.3 121.3 96.4 116.3 121.3 96.4 116.3 121.3 96.5 116.3 121.3 96.1 115	Maximum Percent Percent 121.3 97.7 121.3 97.5 121.3 97.5 121.3 97.5 121.3 97.5 121.3 97.5 121.3 97.5 121.3 97.4 121.3 97.4 121.3 97.4 121.3 97.4 121.3 97.4 121.3 97.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.5 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4 121.3 96.4	Percent Compaction 98.9 97.5 97.4 97.1 100.1 100.1 96.4 96.4 96.4 96.4 96.4		Location of Density Tests Site Plan #1	Remarks														

Calibration Date: 03-16-2018 **Operating Standards:** 2168 602 Troxler Nuclear Gauge Information Moisture: Density: JBS, P.E. 2134-2177 585-609 33279 **Chart Standards** Density: Moisture: Gauge No: Reviewed By:

: Michael Hume

G2 Field Representative:

1 of 2

	a.	
	NO	
	GR	
	BNI	
	ULT	
	NS	
	8	
1	1	1
	N)
1	-	/

Project No: 183323 Date: August 2, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report (Continued)

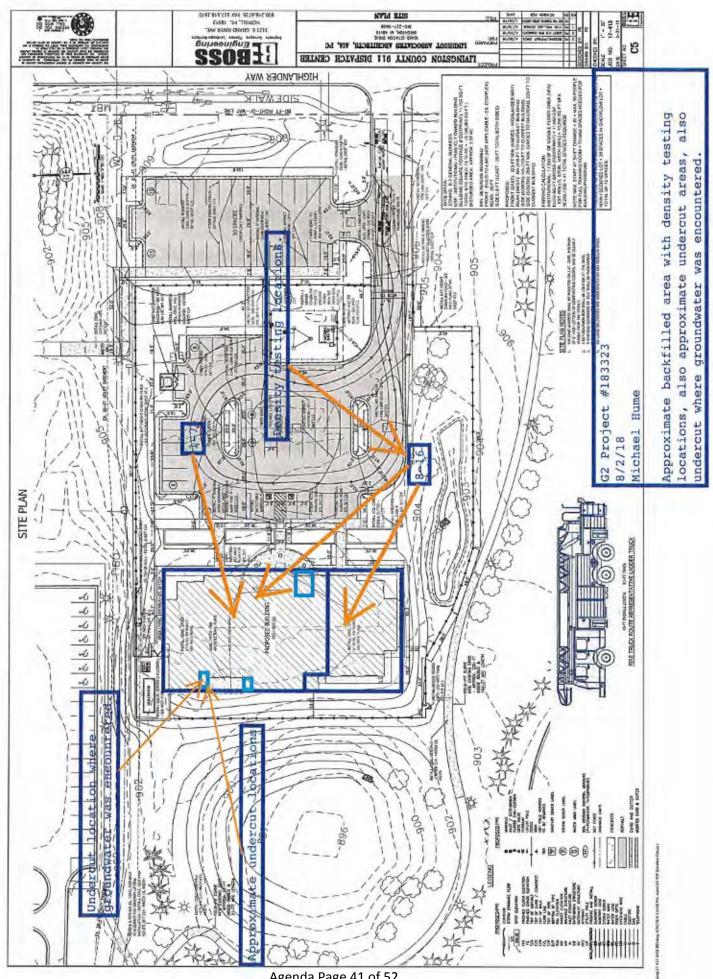
Test No.	Test Elevation	ion	Probe	Probe Density Depth Count	Met Density PCF	Moisture Count	PCF	Percent	Percent PCF	Density	Compaction	Location of Density Tests	Remarks		
15	 approx 4 feet from top of building pad area 	or top of area	10	884,0	122.9	78.0	6.3	5.4	116.6	121.3	96.1				
16	- approx 4 feet from top of building pad area	om top of area	10	928.0	121.2	68.0	5,3	4.6	115.9	121.3	95.5				
Material	Material: Imported brown sand	sand		Max	cimum Der	Maximum Density: 121.3 PCF	21.3 PC	ų,	ō	otimum Moi	Optimum Moisture %: 11.5		Minimum Specified Comp:	95	8
Material:				May	Maximum Density:	nsity:	PCF	LL.	ō	Optimum Moisture %:	sture %:	Minimum Spe	Minimum Specified Comp:	95	*
Material:				Max	Maximum Density:	nsity:	PCF	ц.	ō	Optimum Moisture %:	sture %:	Minimum Spe	Minimum Specified Comp:	95	*
MI Cone No:	one 1 No:	~	MI Cone No:			MI Cone No:	e ::								
Moisture:	6.3	% W	Moisture:		%	Moisture:	ä	%							
Volume	0.0444	Eu.	Volume		GU.	Valume	æ	cu.ft.							
Solum	Soil/Mold 4538.0	S B	Soil/Mold		0	Soil/Mold	p	6							
N	Mold 1962.0	8	Mold		6	Mold	p	8							
Wets	Wet Soil 2576.0	л В	Wet Soil		6	Wet Soil	10	6							
Comp 8	Comp Soil 127.9	PCF CO	Comp Soil		PCF	Comp Soil	lie	PCF							

Michael Hume

G2 Field Representative:

Reviewed By:

JBS, P.E.



Agenda Page 41 of 52

Daily Field Report

Project Name:	Livingston County 911 Central Dispatch
Location:	300 S. Highlander Way, Howell, MI 48843
Client:	J.S. Vig Construction
Client Rep:	Darryl
Contractor:	Joe Raica Excavating, Inc.
Contractor Rep:	Joe Raica

G2 Project No.:	183323	
Date:	August 3, 2018	
Weather:	Cloudy/Sunny, 64°F- 75°F	
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 perform field testing. Upon arrival on site at 7:45 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 12 inch lifts of imported brown sand on top of other previously placed and compacted sand layers already in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill. G2 was not on site from 11:15am to 11:45am.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.9 percent to 100.2 percent of the maximum density of 120.8 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 5.1 percent to 9.0 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 3:00 pm.



Project No: 183323 Date: August 3, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report

 Test Elevation - approx 3 feet from top of	Probe Depth	Density Count 877.0	Wet Density PCF	Moisture Count 82.0	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Locat	Location of Density Tests
building pad area		769.0	0.001	0.20	40.0	10	0.511	0.051	0.05	# UBL 900	
 - approx a reet from top of building pad area	DL.	/53.0	128.8	121.0	10.6	9.0	118.2	120.8	97.8		
 - approx 3 feet from top of building pad area	05	875.0	123.6	78.0	6.4	5.4	117.2	120.8	97.0		
 - approx 3 feet from top of building pad area	10	920.0	121.8	74.0	6.0	5.1	115.8	120.8	95.9		
 - approx 3 feet from top of building pad area	10	754.0	128.9	93.0	7.8	6,5	121.1	120.8	100.2		
 approx 3 feet from top of building pad area 	10	842.0	124.9	0.02	7.5	6,4	117.9	120.8	97.6		
 approx 3 feet from top of building pad area 	10	715.0	130.7	114.0	9,9	8.2	120.8	120.8	100.0		
 approx 3 feet from top of building pad area 	10	752.0	129.0	94.0	7.9	6.6	121.1	120.8	100.2		
 approx 2 feet from top of building pad area 	10	890.0	123.0	83.0	6.9	5.9	116.1	120.8	96.1		
 approx 2 feet from top of building pad area 	10	772.0	128.1	88.0	7.3	6.1	120.7	120.8	6'66		
 approx 2 feet from top of building pad area 	10	806.0	126.5	96.0	8.1	6.9	118.3	120.8	97.9		
 approx 2 feet from top of building pad area 	10	830.0	125.4	0.99.0	8,4	7.2	117.0	120.8	96.9		
 approx 2 feet from top of building pad area 	10	775.0	128.0	88.0	7.3	6.1	120.8	120.8	100.0		
- approx 2 feet from top of building pad area	10	783.0	127.5	102.0	8.7	7.4	118.8	120.8	98.3		

 Troxler Nuclear Gauge Information

 Gauge No:
 33279
 Calibration Date:
 03-16-2018

 Chart Standards
 Operating Standards:
 03-16-2018

 Density:
 2134-2177
 Density:
 2185

 Moisture:
 585-609
 Moisture:
 599

G2 Field Representative: Michael Hume

1 of 2

JBS, P.E.

Reviewed By:

	GROUP	
	NSULTING	
1	100	-
C	1	

Project No: 183323 Date: August 3, 2018

 Project Name:
 Livingston County 911 Central Dispatch

 Location:
 Howell, MI

 Contractor:
 Joe Raica Excavating, Inc.

Field Density Test Report (Continued)

No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture	Moisture Dry Dene Percent PCF	Dry Density PCF	Maximum Density PCF	Maximum Percent Density Compaction PCF	Moisture Moisture Dry Density Maximum Percent Location of Density Tests Count PCF Percent PCF Density Compaction	Remarks
15	 approx 2 feet from top of building pad area 	10	745.0	129.3	98.0	8.3	6.9	121,0	120.8	100.2		
16	 approx 2 feet from top of building pad area 	10	774.0	128.0	88.0	7.3	6.3	120.6	120.8	8.66		
12	 approx 2 feet from top of building pad area 	10	775.0	1279.0	91.0	2.6	6.4	120.3	120.8	9.66		
ateria	Material: Imported brown sand		Max	Maximum Der	Density: 120.8 PCF	20.8 PC	щ	do	timum Mois	Optimum Moisture %: 11.6		Minimum Specified Comp: 95 %

Material: Material:				Maximum Density.	msity:	PCF	
Matchial.				ואפאושחננו הפ	msny.	2	
MI Cone No:	-		MI Cone No:		MI Cone No:		
Moisture:	6.5	%	Moisture:	%	Moisture:		%
Volume	0.0444	÷ G	Volume	а. А	Volume		cu.ft.
Soil/Mold 4531.0	4531.0	0	Soil/Mold	в	Soil/Mold		0
Mold	1962.0	0	Mold	6	Mold		6
Wet Soil	2569.0	6	Wet Soil	8	Wet Soil		6
Comp Soil	127.6	PCF	Comp Soil	PCF	Comp Soil		PCF

Optimum Moisture %: 11.6 Optimum Moisture %: Optimum Moisture %:

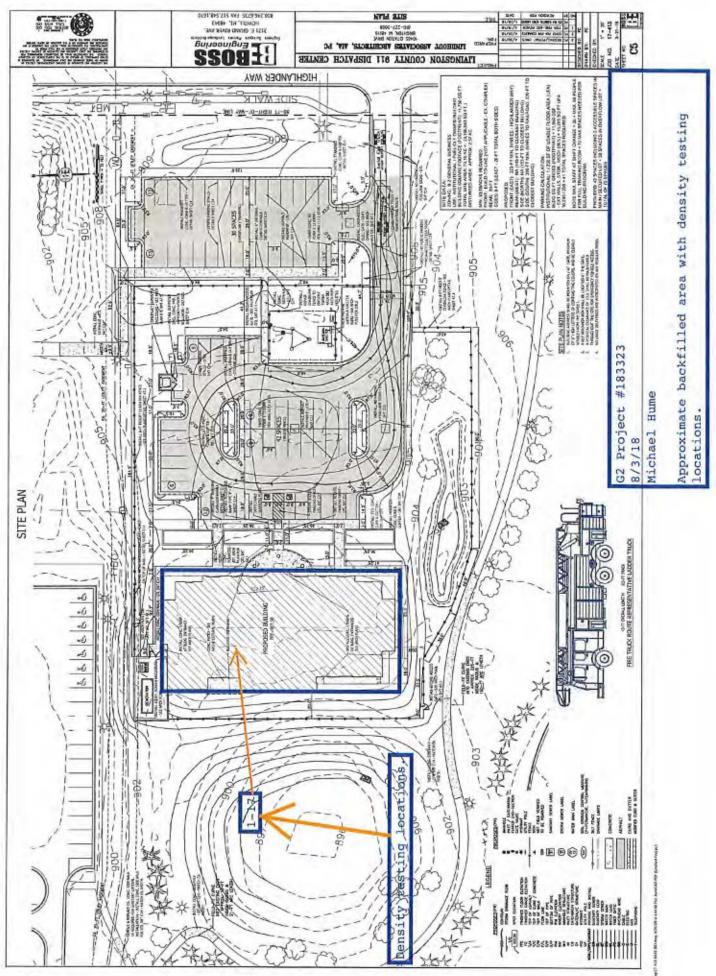
Minimum Specified Comp: 95 % Minimum Specified Comp: 95 % Minimum Specified Comp: 95 %

JBS, P.E.

Michael Hume

G2 Field Representative:

2 of 2



Agenda Page 45 of 52

REQUEST FOR CHANGE ORDER



RFCO Number Date:	3 August 10, 2018			Description & Scope Change		n for
Project Name: JS Vig Project #: Owner Project #:	Livingston County 911 - Dispatch Center 1673			Explora		ging
Го:	Brad Alvord - Lindhout Associates					
Subcontractors Scope	e Change					
CSI Code	CSI Description	Contractor	Quantity	Unit Cost		Cost
	Exploratory digging for locating existing utilities	Joe Raica Excavating			\$	10,560.00
					\$	-
					\$	-
					\$	-
					\$	-
					\$	•
					\$	· · ·
					\$	
					э \$	
iubtotal					\$	10,560.00
General Contractors	Scope Change CSI Description		Quantity	Upit Cost		Total Cost
-010	Project Management		Quantity	Unit Cost	\$	Total Cost -
-020	Superintendent				<u>₽</u> \$	
-024	Builder's Risk				\$	-
-025	Insurance		0.8%		\$	84.48
-030	Laborers				\$	-
-070	Clean Up				\$	-
-125	Bond		1.00%		\$	105.60
					\$	-
					\$	÷
Subtotal					\$	10,750
Novable Fee			4.50%		\$	484
	eral Contractor Total		1.5070		\$	11,234
			Total Prop	osed Time Increase:	1	
	-14. 8-15-18	DAT		Bit	Ay	7 8-16-, DAT
CONTRACTOR J.S. Vig Construction Co	DATE ARCHITECT	DAT	Ē	OWNER	/ M	

Attach detailed description and subcontractor bids

3640 Nicholson Rd Fowlerville, Mi 48836 jenn@joeraicaexc.com Phone 517-521-4508 Fax 517-521-4393

Field Work Order 02

August 10, 2018 Livingston County 911 Central Dispatch Center Howell, Mi

Exploratory Digging for Locating Existing Utilities 7/19/2018- Vac trailer w/ operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/20/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/23/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/24/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00

Total

\$10,560.00

Approved by JS VIG for payment

Date

Thank You

Jennifer Raica Joe Raica Excavating, Inc



