



DIGGERLAND
Buckets of Fun for Everyone!

DiggerlandUSA.com

February 8, 2022

Township of Berlin
Engineering Department
135 Route 73 South
West Berlin, NJ 08091

Attn: Mr. Charles J. Riebel Jr., P.E., P.L.S., P.P., C.M.E., Township Engineer
municipalengineer@berlintwp.com

RE: Diggerland USA 1, LLC.
Diggerland Adventure Park
Amended Site Plan for New Attraction
Block 2601, Lot 1, & 5
Property address: 100 Pinedge Drive
Township of Berlin, Camden County, New Jersey

Dear Mr. Riebel:

We are requesting an administrative approval to our existing site plan under resolution 2017-13, which was the last resolution we received approval on. Currently, we have signed and sealed plans from our professionals ready for Building department submission for the installation of a crane ride. As you will see in the attachments presented based on our initial email submission and your follow-up questions, we have presented the following:

1. There are 4 min cranes being presented.
2. The 4 cranes are affixed to a foundation (a foundation designed by a NJPE)
3. The 4 cranes run off a custom-built hydraulic power connected to the existing electrical service. A NJPE with an electrical license has designed the electrical system. Once approval is granted, an electrical permit will be obtained by our certified electrical contractor. We already have a custom-built power pack that operates another ride and is being designed and fabricated by the same OEM.
4. The 4 cranes have a max rotation of 45 degrees
5. The 4 cranes have a max height 17' whereas the existing building behind it has a ridge height of 21'-8"
6. The existing soils will be stripped and a 4" concrete slab and 2" of asphalt will be installed under the entire attraction. The total area with queuing lines and the attractions is 2,058 SF
7. Fencing and gates just as we currently have throughout the park will be used to separate the ride, operator walkway and guest queuing.
8. There is negligible stormwater from the surface run-off from the total impervious area of 2,058 SF. I will have Greg Fusco PE of Key Engineers provide calculations showing you the same.
9. The steel or aluminum hollow blocks the crane is picking up are not and cannot be dropped once they hooked. They can only unhook once the block reaches the surface.
10. There will be a concrete bin block on the outside of the attraction.

I believe we have satisfied your inquiry to obtain this minor administrative approval.

DiggerlandUSA.com - 100 Pinedge Drive, West Berlin, NJ 08091 - 856.768.1110

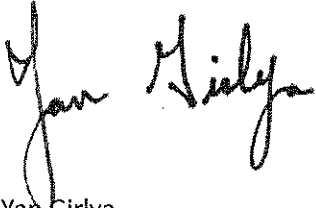
Township of Berlin

Attn: Mr. Charles J. Riebel Jr., P.E., P.L.S., P.P., C.M.E., Township Engineer

February 8, 2022

Page 2 of 2

Sincerely,

A handwritten signature in black ink that reads "Yan Girlya". The signature is written in a cursive style with a large initial "Y" and "G".

Yan Girlya
Co-President

Enclosures

Attachment #1

Attachment #2

Attachment #3

Key Engineers Cover

Key Engineers Calculations

cc:

Mr. Craig DeGeorge, Planning Board Chairperson(degecr@yahoo.com)

Ms. Kelley Shendock, Planning Board Secretary (Landuse@berlintwp.com)

Mr. Ilya Girlya, Diggerland USA (ilya@diggerlandusa.com)

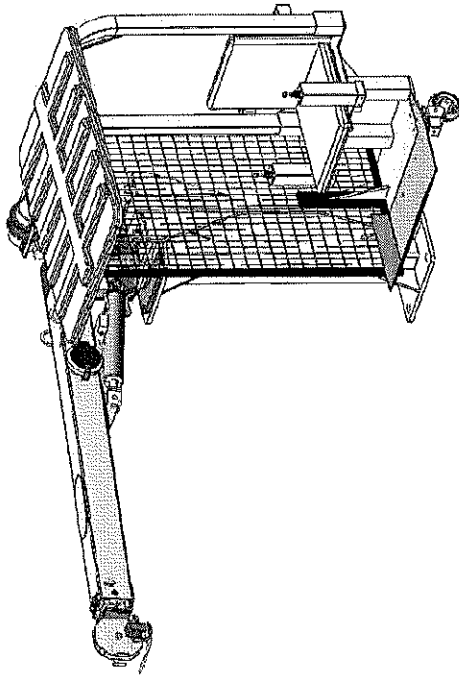
File

Yan Giriya

From: Yan Giriya
Sent: Wednesday, February 2, 2022 1:10 PM
To: Chuck Ribbal - Township of West Beira (municipalengineer@berlinwp.com)
Subject: Discontinued New Stationary Ride
Attachments: 2022-01-24_Diggerland-2022Canes.pdf

Hello Chuck,

As discussed, this is a new ride which we will need a foundation and electrical work. The ride will be installed behind the existing pavilion building (Block 2601, Lot1). Below is an aerial plan indicating the 4 rides. The total area of the green and purple blocks 24.5' x 84' = 2,058 SF. Looking forward to hearing from you. Thank you.





Yan Griya
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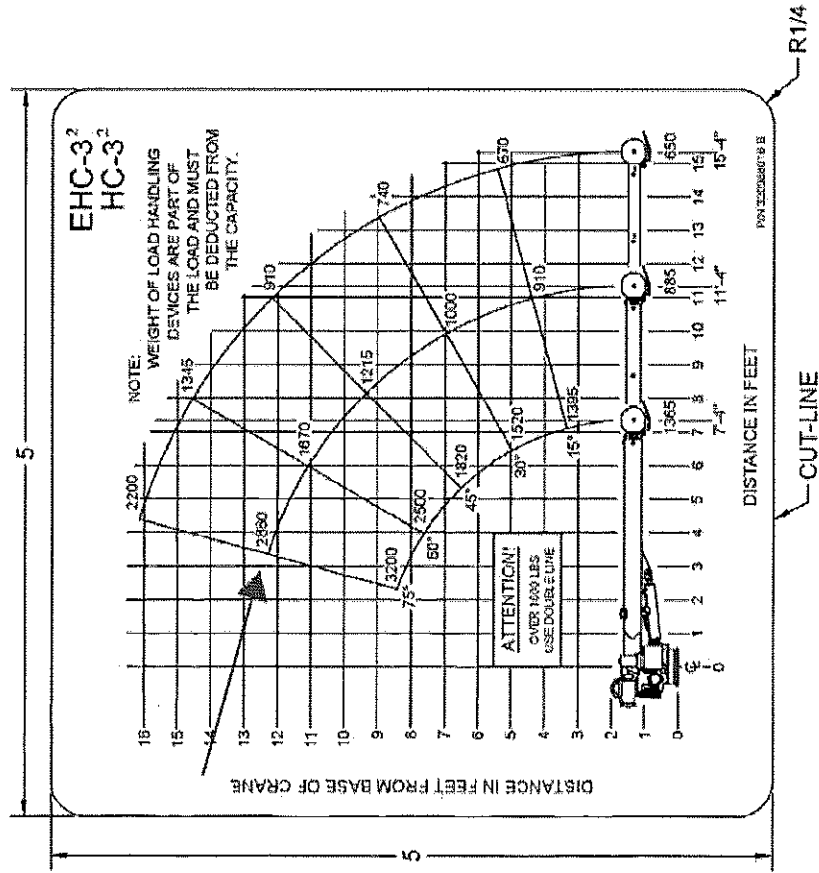


Yan Giriya

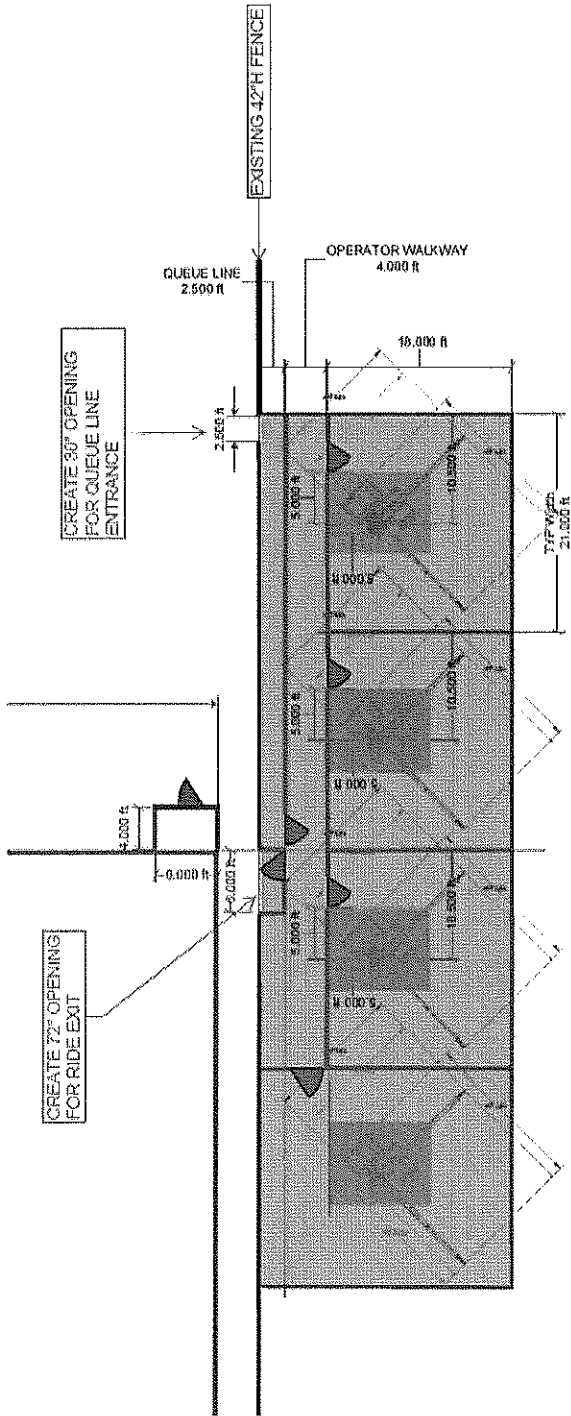
From: Yan Giriya
Sent: Wednesday, February 2, 2022 2:08 PM
To: 'Charles Riébel Jr.'
Subject: RE: Diggerland New Stationary Ride

Chuck, below are the answers to your questions. Please let me know if you need anything else. Thank you.

1. Maximum height of crane
 - a. The ride sits 4' off the grade on a pedestal. Per the chart below, we are only having a 2 stage boom, thereby with it being extended at the 75 degree angle and on a 4' pedestal, it will top out at 13' plus 4' = 17'. The building behind it to the ridge is 21'8".
 - b. Chart

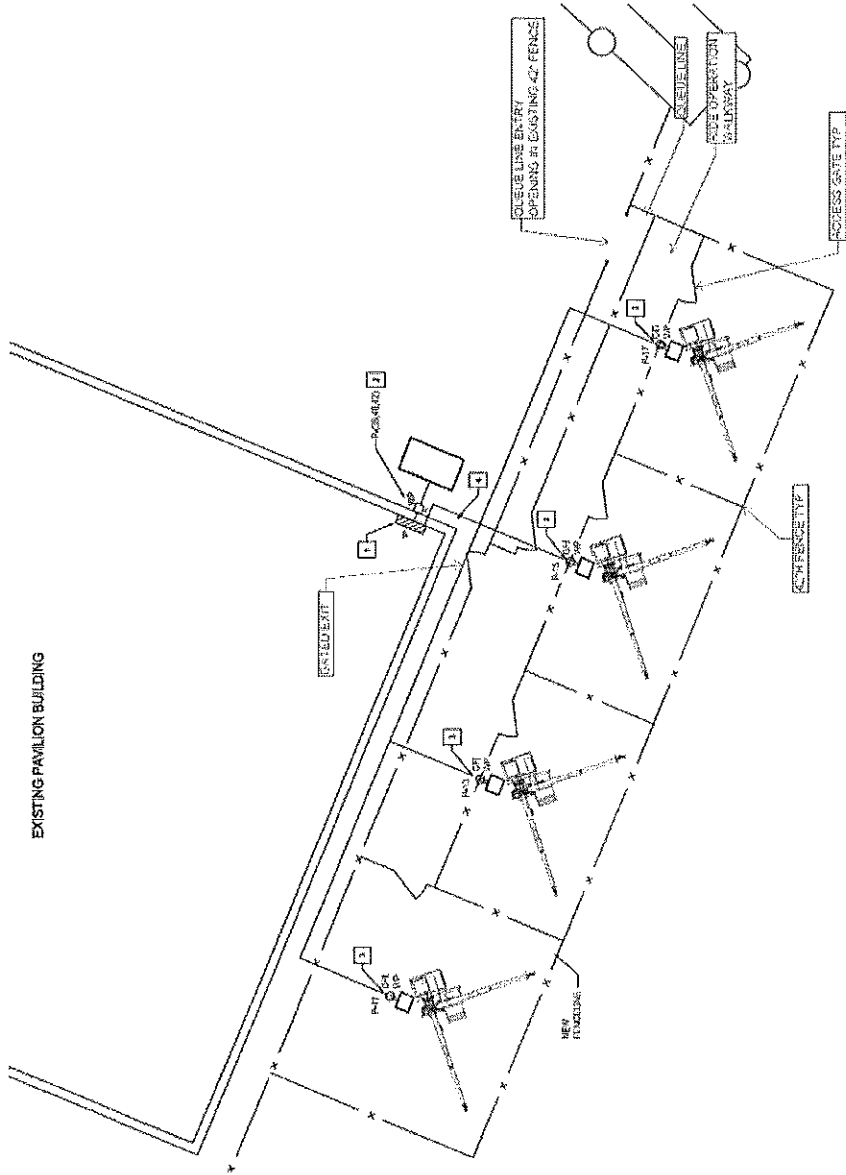


2. Ground surface material?
 - a. Under the crane is a 4" concrete slab and around the slab will be asphalt.
 - b. Concrete & Paving Plan



- 2" Paving over 4" DGA (229 SY) - Pads (36 SY) = 193 SY
- Concrete Pad 10' x 8' (4 TYP)
- New 42" Fence = 323.5 LF
- 30"W x 42"H Gate = 7 EA

3. Access route to the amusement ride?
 - a. Each ride is contained in a fence and gate area with the ride operator controls
 - b. Access plan

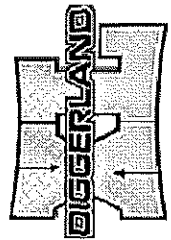


4. What does the crane pick up and where will these items be placed?
- We are making custom hollow steel blocks weighing no more than 35 lbs. and they are contained with the area only. From the plan above, the crane can only swing 45 degrees so you can see in each block the max rotation and that is being limited by the manufacturer.
 - Below is the original concept from Europe, but they cannot import into the USA, so we came up with our own concept based on a USA manufacture. As you can see, the blocks are hollow aluminum blocks.



5. Since it appears to be encroaching into the limits of the existing ride, will there be modifications to the limits of the existing ride? What prevents a rider, within the existing ride, from crashing into the proposed crane ride?
- a. The only ride it encroaches is the military truck and that is an employee driven attraction. There will be concrete bin blocks that will be moved as well.

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From: Charles Riebel Jr. <municipalengineer@berlntwp.com>

Sent: Wednesday, February 2, 2022 1:31 PM

To: Yan Giriya <yan@diggerlandusa.com>

Subject: RE: Diggerland New Stationary Ride

[EXTERNAL SENDER]

Hello Yan,

Please provide the following information:

1. Maximum height of crane
2. Ground surface material?
3. Access route to the amusement ride?
4. What does the crane pick up and where will these items be placed?
5. Since it appears to be encroaching into the limits of the existing ride, will there be modifications to the limits of the existing ride? What prevents a rider, within the existing ride, from crashing into the proposed crane ride?

Sincerely,

Chuck

Yan Giriya

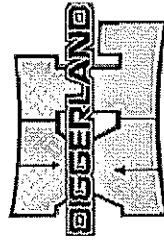
From: Yan Giriya
Sent: Thursday, February 3, 2022 9:58 AM
To: 'Charles Riebel Jr.'
Subject: RE: Diggerland New Stationary Ride

Hello Chuck,

I offer you the following reply to your answers:

1. You will need to demonstrate that conformance with the stormwater management regulations for the additional impervious surfaces.
 - a. The area where is going drains into the main basin. The surface area of 2,058 SF is insignificant considering the basin area storage area is over 70,000 SF in most cases extensively deep. We are most likely on of a few property owners who monitor and main our basin. Granted we have only been on this property since 2014, but the rainfall through the years and tropical depressions we have had caused little to no issues. Also, we know that the soils we have drain extremely well.
 - a. Can the hollow steel blocks be dropped onto the pavement? If so, what level of noise is generated from this action?
 - a. The steel or aluminum cannot be dropped onto the pavement once they are hooked. The release on the activity does not permit it to be dropped until the box is on the ground. The up/down/side-to-side motion is very slow. Therefore no noise is really generated.
 - a. Just like all other locations, the bin block will be a min of 12" above the existing grade of the military truck ride. As indicate below that is the only attraction next this ride and it is driven by an employee with a top speed on 7 mph. Also, unlike any other vehicle, because it ride on that sugar sand, there is quite a bite of friction, which means the operator needs to have his right foot on the heavy string accelerator and if release going to the incline where this attract is located, the truck stops.
3. You will need to depict the location and height of the concrete barrier block.
 - a. Just like all other locations, the bin block will be a min of 12" above the existing grade of the military truck ride. As indicate below that is the only attraction next this ride and it is driven by an employee with a top speed on 7 mph. Also, unlike any other vehicle, because it ride on that sugar sand, there is quite a bite of friction, which means the operator needs to have his right foot on the heavy string accelerator and if release going to the incline where this attract is located, the truck stops.
4. I will be meeting with the Chairperson, tomorrow. I will ask if this matter will require a formal amended site plan application or if it can be handled administratively.
 - a. I really hope this can be done administratively. With the property already zone amusement and the modification is really minor at best. If there is anymore I can offer your please let me know. We have always been transparent and forth coming with anything we have done within the township. Thank you.

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From: Charles Riebel Jr. <municipalengineer@berlintwp.com>
Sent: Thursday, February 3, 2022 9:04 AM
To: Yan Giriya <yan@diggerlandusa.com>
Subject: RE: Diggerland New Stationary Ride

[EXTERNAL-SENDER]

Hello Yan,

Thanks for the additional information. I offer the following:

1. You will need to demonstrate that conformance with the stormwater management regulations for the additional impervious surfaces.
2. Can the hollow steel blocks be dropped onto the pavement? if so, what level of noise is generated from this action?
3. You will need to depict the location and height of the concrete barrier block.
4. I will be meeting with the Chairperson, tomorrow. I will ask if this matter will require a formal amended site plan application or if it can be handled administratively.

Sincerely,

Chuck

Yan Girlya

From: Gregory B. Fusco, P.E., P.P., C.M.E. <gfusco@keyengineers.com>
Sent: Tuesday, February 8, 2022 9:33 AM
To: Yan Girlya
Subject: Additional Impervious dur to crane area
Attachments: Average Volume Storage Method Crane Area.pdf

[EXTERNAL SENDER]

Yan

I have investigated your request regarding the drainage impact from the additional 2,058 sf impervious area generated by the crane attraction on the Diggerland Site.

Attached please find a spreadsheet which illustrates that the volume of runoff generated by the new impervious area for the 100 year storm event is 1416 cubic feet.

Based on the as-built information provided by Land Dimensions, the runoff would be directed to the large infiltration basin located on the original Diggerland Site. This basin has an upper contour surface area before the spillway elevation of approximately 4000 sf. Therefore, the additional volume of runoff would result in an increase in water elevation of approximately 4" and the existing infiltration basin can store this additional volume of runoff.

Please let me know if you have any questions.

Thanks

Gregory B. Fusco, PE, PP, CME
President
Key Engineers, Inc.
80 South White Horse Pike
Berlin, New Jersey 08009
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856 753 1091 fax
856 296 4192 cell
gfusco@keyengineers.com

NJDEP Weighted Average Storage Volume Technique -Impervious Crane Area

Total Drainage Area (Ac) = 0.0472
 Grass Area (Ac) = 0 CN = 61
 Impervious Area (Ac) = 0.0472 CN = 98

$$S = \frac{1000}{CN} - 10$$

S, Grass = 6.39
 S, Impervious = 0.20

Precipitation (inches) = 1.25 Water Quality
 3.3 2 yr
 5.1 10 yr
 8.5 100 yr

Grass		Impervious	
$Q_{wq} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	0.00	$Q_{wq} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	1.03

$Q_{2yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	0.49	$Q_{2yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	3.03
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$Q_{10yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	1.43	$Q_{10yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	4.86
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$Q_{100yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	3.83	$Q_{100yr} = \frac{[P - 0.2(S)]^2}{P + 0.8(S)}$	8.26
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Grass		Impervious	
Volume wq =	0.00	Volume wq =	177.26
Volume 2yr =	0.00	Volume 2yr =	519.39
Volume 10yr =	0.00	Volume 10yr =	833.21
Volume 100yr =	0.00	Volume 100yr =	1,415.22

Total Volume wq 177.26
Total Volume 2yr 519.39
Total Volume 10yr 833.21
Total Volume 100yr 1,415.22

1.209183673	1.462125156	1.41	1
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1.209183673	1.462125156	1.41	1
-0.028688525	0.000823031	7.64	0

3.259183673	10.62227822	3.50	3
2.021311475	4.085700081	8.414754098	0

5.059183673	25.59533944	5.263265306	5
3.821311475	14.60242139	10.2147541	1

8.459183673	71.55778842	8.663265306	8
7.221311475	52.14733942	13.6147541	4