



SEALED BID; WV State Parks New Aerial Tramway

BUYER: Josh Hager

SOLICITATION NO: CRFQ 0310 DNR2300000003

BID OPENING DATE: October 27, 2022

BID OPENING TIME: 1:30 PM ET

FAX NUMBER: 304-558-3970

Submitted by:

Doppelmayr USA Inc.  
3160 West 500 South  
Salt Lake City, UT 84104

10/26/22 10:27:07  
WV Purchasing Division



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October 20, 2022

Mr. Josh Hager  
Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130  
Joseph.E.HagerIII@wv.gov

Solicitation No. CRFQ 0310 DNR2300000003

Dear Mr. Hager:

Doppelmayr USA is pleased to respond to your new Request for Quotation as it relates to the Hawks Nest and Pipestem Tramways.

West Virginia has magnificent natural beauty highlighted through the opportunities provided at the multiple State Parks and Resorts. For decades tourists have been treated to the aerial tramways at Hawks Nest and Pipestem facilities. Each of these sites have allowed for countless guests who have thrilled to the memorable ride and the amenities that await them below. We are pleased to help reestablish the two facilities with specially designed gondolas that will provide reliable service for visiting tourists for years to come. We look forward to this opportunity to help advance the Hawks Nest and Pipestem State Parks into an era which includes a wonderful nature experience together with a unique attraction of an aerial gondola.

As quality, technology and market leader in ropeway engineering, the Doppelmayr group has built more than 15,100 installations for customers in 96 nations. Flexibility, know-how and pioneering spirit make us ideally equipped to meet the unique requirements of these two iconic systems. We are confident that the Pulse and Jig Back technology and the Doppelmayr Connect control system provide the perfect solution to achieve the performance goals while the Omega IV cabins will provide unrivaled passenger safety and comfort.

Aside from Doppelmayr's demonstrated decades-long experience in the US market, we are proud of our manufacturing and assembly facility in Salt Lake City, Utah where structural steel items as well as the control systems for the new pulse and jig back gondolas will be produced.

Doppelmayr is extremely happy to have the opportunity to bid on the two projects. If both projects are chosen, we will help create a synergy between the two of them with world quality installations. If only Pipestem is chosen, it will undoubtedly become a prime attraction in West Virginia.

We stand ready to respond to any of your questions and thank you for the opportunity.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Katharina Schmitz', with a long, sweeping underline.

Katharina Schmitz  
President – Doppelmayr USA

West Virginia Division of Natural Resources  
SAA0003381 Hawks Nest 2x2x8 MGFJ  
SAA0003382 Pipestem 4x3x8-MGFP

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October 24, 2022

Prepared by:  
Ted Blazer  
Doppelmayr USA, Inc.  
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518-524-6554

West Virginia Division of Natural Resources Solicitation Number CRFQ 0310 DNR2300000003



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# Hawks Nest Ropeway Specification

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## Profile Specifications

Horizontal Length (ft) .....	949
Vertical Rise (ft) .....	456
Slope Length (ft) .....	1061
Walk Under Clearance: .....	One tower out from bottom station

## General Ropeway Specifications

Lift Type .....	2x2x8 MGFJ
Lift Model .....	Monocable Gondola Fixed Jig Back
Rotation .....	CCW
Line Gauge (ft) .....	15.75
Rope speed (fpm) .....	1000
Trip time (min) .....	2.57
Uphill/Downhill Capacity – Initial (p/h) .....	330
Uphill/Downhill Capacity – Design (p/h) .....	330
Number of Carriers – Initial .....	4
Number of Carriers – Design .....	4
Carrier Interval – Initial (sec) .....	174
Carrier Interval – Design (sec) .....	174
Cluster Spacing – (ft) .....	1155
Carrier Spacing – (ft) .....	12
Downhill capacity (%) .....	100
Drive Location .....	Bottom
Tension Location .....	Bottom
Mid Station .....	No
Parking System .....	No
Installation Type .....	Turnkey

## Bottom Station

Station Type .....	Moveable Drive / Tension
Station Model .....	Jigback Moveable Drive / Tension
Bullwheel Diameter (ft) .....	15.75
Tension equipment .....	Hydraulic Tensioning Unit
Tension Travel (ft) .....	34.5
Operators Enclosure .....	L (9' 4" x 20' 0")

## Top Station

- Station Type.....Fixed Return
- Station Model..... Jigback Fixed Return
- Bullwheel Diameter (ft) ..... 15.75
- Operators Enclosure..... M (9' 4" x 14' 8")

## Drive Equipment

- Primary Drive Type..... Conventional Drive
- Electric Drive Equipment<sup>1</sup>..... ABB AC Digital Drive w/ Regen
- Electric Motor<sup>1</sup>.....AC
- Main Disconnect and Distribution Panel ..... Included
- Drive Gear Reducer ..... Lohmann GPW-190 Series III
  
- Secondary Drive Type..... Genset
- Transmission Type..... Via Electric Motor
- Drive Speed ..... 100%
- EPA Rating ..... Tier III – Emergency Use Only
- Fuel Tank Size (gal) .....24-hour Tank
  
- Evacuation Power Unit – (EPU) ..... Diesel Power Unit
- Drive Speed.....25%
- Transmission Type..... Pulley and V-Belt Transmission
- Fuel Tank Size (gal) .....25
  
- Service Brake ..... Disc/Caliper on Gearbox Input Shaft – Spring Applied
- Bullwheel Backstop..... Caliper on Bullwheel Brake Disc – Spring Applied
- Emergency Brake ..... Caliper on Bullwheel Brake Disc – Spring Applied

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<sup>1</sup> Digital drive and motor sized to fit the application of the lift at 110% of the designed theoretical load

## Line Equipment

• Tower Quantity .....	4
• Tower Tube Design .....	Tubular
• Tower Finish .....	Painted <input type="checkbox"/> Primed Only <input type="checkbox"/> Galvanized <input checked="" type="checkbox"/>
• Ladder Ascenders .....	Included
• Crossarm Walkways and Lifting Frames .....	Included – Galvanized
• Grip .....	QC A145/QCSA
• Haul Rope .....	45mm
• Haul Rope Finish .....	Galvanized
• Haul Rope Manufacturer .....	Fatzer
• Sheaves .....	Doppelmayr 401 Dual Snap Ring
• Sheave Liners .....	Doppelmayr 401
• Sheave Access Assemblies .....	Wave Walkway
• Anemometer .....	One
• Communication Line .....	50 Pair
• Communication Line Install Type .....	Aerial
• Aerial Fiberoptic Line .....	Single Mode
• Fiberoptic Cable Strand Quantity .....	144

## Carriers

• Contract Carrier Quantity .....	3 + 1 Freight Carrier
• Carrier Model .....	Omega IV-8
• Galvanized Work Platform for freight with Grip .....	Included

## Electrical & Controls

• Doppelmayr Connect Ropeway Controls .....	Yes
• Interior Operation Locations per terminal .....	2
• Exterior Operation Locations per terminal .....	4
• Station Wi-Fi .....	No
• Failsafe Handpacks .....	No
• Tablets .....	No
• Automatic Announcements .....	Yes
• Deactivation Concept .....	No
• Tower Speakers .....	None
• Station Speakers .....	Yes
• RFID System .....	No
• Lightning Protection .....	Yes

## Other Items

- Rescue System Equipment..... No
- Basic Terminal Set Up Tools ..... Yes
- Hydraulic Sheave press ..... No



# Pipestem Ropeway Specification

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## Profile Specifications

· Horizontal Length (ft) .....	3013
· Vertical Rise (ft) .....	1105
· Slope Length (ft) .....	3236
· Walk Under Clearance: .....	One tower out from bottom station

## General Ropeway Specifications

· Lift Type .....	2x2x8 MGFP
· Lift Model .....	Monocable Gondola Fixed Pulse
· Rotation .....	CCW
· Line Gauge (ft) .....	15.75
· Rope speed (fpm) .....	1000
· Trip time (min) .....	6.30
· Uphill/Downhill Capacity – Initial (p/h) .....	457
· Uphill/Downhill Capacity – Design (p/h) .....	457
· Number of Carriers – Initial .....	12
· Number of Carriers – Design .....	12
· Carrier Interval – Initial (sec) .....	189
· Carrier Interval – Design (sec) .....	189
· Cluster Spacing – (ft) .....	1655
· Carrier Spacing – (ft) .....	12
· Downhill capacity (%) .....	100
· Drive Location .....	Top
· Tension Location .....	Bottom
· Mid Station .....	No
· Parking System .....	No
· Installation Type .....	Turnkey

## Bottom Station

- Station Type ..... Moveable Drive / Tension
- Station Model ..... Pulse Gondola Drive Tension
- Bullwheel Diameter (ft) ..... 15.75
- Tension equipment ..... Hydraulic Tensioning Unit
- Tension Travel (ft) ..... 40.88
- Operators Enclosure ..... M (9' 4" x 14' 8")

## Top Station

- Station Type ..... Fixed Return
- Station Model ..... Pulse Gondola Fixed Return
- Bullwheel Diameter (ft) ..... 15.75
- Operators Enclosure ..... L (9' 4" x 20' 0")

## Drive Equipment

- Primary Drive Type ..... Conventional Drive
- Electric Drive Equipment<sup>1</sup> ..... ABB AC Digital Drive w/ Regen
- Electric Motor<sup>1</sup> ..... AC
- Main Disconnect and Distribution Panel ..... Included
- Drive Gear Reducer ..... Eurodrive Gearbox w/ CAT Planetary
  
- Secondary Drive Type ..... Genset
- Transmission Type ..... Via Electric Motor
- Drive Speed ..... 100%
- EPA Rating ..... Tier III – Emergency Use Only
- Fuel Tank Size (gal) ..... 24-hour Tank
  
- Evacuation Power Unit – (EPU) ..... Diesel Power Unit
- Drive Speed ..... 25%
- Transmission Type ..... Pulley and V-Belt Transmission
- Fuel Tank Size (gal) ..... 25
  
- Service Brake ..... Disc/Caliper on Gearbox Input Shaft – Spring Applied
- Bullwheel Backstop ..... Caliper on Bullwheel Brake Disc – Spring Applied
- Emergency Brake ..... Caliper on Bullwheel Brake Disc – Spring Applied

<sup>1</sup> Digital drive and motor sized to fit the application of the lift at 110% of the designed theoretical load

## Line Equipment

- Tower Quantity ..... 13
- Tower Tube Design ..... Tubular
- Tower Finish.....Painted  Primed Only  Galvanized
- Ladder Ascenders ..... Included
- Crossarm Walkways and Lifting Frames ..... Included – Galvanized
- Grip.....
- .....QC A145/QCSA
- Haul Rope.....45mm
- Haul Rope Finish ..... Galvanized
- Haul Rope Manufacturer ..... Fatzer
- Sheaves .....Doppelmayr 401 Dual Snap Ring
- Sheave Liners ..... Doppelmayr 401
- Sheave Access Assemblies ..... Wave Walkway
- Anemometer ..... One
- Communication Line .....50 Pair
- Communication Line Install Type ..... Aerial
- Aerial Fiberoptic Line ..... Single Mode
- Fiberoptic Cable Strand Quantity ..... 144

## Carriers

- Contract Carrier Quantity ..... 11 + 1 Freight Carrier
- Carrier Model .....Omega IV-8
- Galvanized Work Platform for freight with Grip..... Included

## Electrical & Controls

· Doppelmayr Connect Ropeway Controls .....	Yes		
· Interior Operation Locations per terminal .....	2		
· Exterior	Operation	Locations	Per
Terminal .....	4		
· Station Wi-Fi .....	No		
· Failsafe Handpacks .....	No		
· Tablets .....	No		
· Automatic Announcements .....	Yes		
· Deactivation Concept .....	No		
· Tower Speakers .....	None		
· Station Speakers .....	Yes		
· RFID System .....	No		
· Lightning Protection .....	Yes		

## Other Items

· Rescue System Equipment .....	No
· Basic Terminal Set Up Tools .....	Yes
· Hydraulic Sheave press .....	No

## Buyer Scope

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- Buyer will be responsible for removing old ropeways, clearing gondola alignments and for providing access to terminal locations
- Buyer shall provide ample lay down area for lift equipment, helicopter rigging, helicopter fueling, and vehicles required for installation
- Any underground or overhead electrical power or other utilities that is in location of any terminals shall be relocated by Buyer
- Road and bridge ratings for access roads will be provided to Seller
- Passenger platforms for gondola loading and unloading will be supplied by Buyer

# Project Responsibilities

Permits and Survey		Seller	Buyer
1.	An accurate topographical map (2' contours) showing terminal sites and preliminary survey		✓
2.	Legal property line surveys		✓
3.	For surveying purposes, provide a clear and clean sightline for the entire proposed lift line		✓
4.	Provide layout drawings for the terminal and tower locations	✓	
5.	Approve design profile and terminal layouts		✓
6.	Supply all permits and authorizations (including costs and fees)		✓
7.	Provide "as built" lift line survey	✓	
Engineering and Civil Installation		Seller	Buyer
8.	Survey tower and terminal locations for excavation	✓	
9.	Construction Engineering including certification as required under ANSI B77.1-2017 from a Qualified Engineer that the construction and installation have been completed in accordance with the final design criteria for such work	✓	
10.	Design Engineering including certification as required under ANSI B77.1-2017 from a Qualified Engineer that manufactured parts conform to the verifiable design criteria for the ropeway	✓	
11.	Provide concrete testing and reports	✓	
12.	Provide site engineering inspections	✓	
13.	Provide standard foundation designs for terminals and towers where soil bearing pressures are 4000 psf. or greater and rock anchors are not employed	✓	
14.	Cover expenses for site specific foundation designs for terminals and towers where Seller's standard design is unsuitable		✓
15.	Excavate for terminal and tower foundations – Note: If excavation requires hand work, additional charges will apply and will be Buyer's responsibility	✓	
16.	Install foundations for towers – supply labor, concrete, forms and rebar	✓	
17.	Install foundations for terminals – supply labor, concrete, forms and rebar	✓	

18.	Provide electrical conduit from terminal to control room and grounding wire for foundations per foundation drawings	✓	
19.	Install electrical conduit from terminal to control room		✓
20.	Perform pre-construction grading, cuts, or fills on the line as required by approved profile		✓
21.	For special excavations, provide any drilling, blasting, hydraulic rock removal, compaction material, labor, compaction equipment, and geo-technical engineering		✓
22.	Cover expenses for any lift re-engineering required by Seller as a result of revised ground conditions		✓
23.	Perform pre-construction grading, cuts, or fills at terminal sites as required for Seller's installation up to within 2 feet of Top of Concrete		✓
24.	Clear and grub lift line and terminal areas and remove slash.		✓
25.	Provide fill or grading at terminal or tower sites for crane pads to facilitate installation		✓
26.	Provide priority access for Seller's vehicle and equipment over other contractors during the construction season		✓
27.	Provide roads to terminals that are suitable for highway legal concrete trucks and equipment delivery trucks without being towed or otherwise assisted		✓
28.	Provide access to tower sites, where practical and / or preexisting, that are suitable for highway legal concrete trucks and equipment delivery trucks without being towed or otherwise assisted.		✓
29.	For tower sites that are not accessible, provide spider-hoe for excavation and helicopter for concrete placement.	✓	
30.	Clear and maintain access roads, provide dust abatement, remove and replace water bars as required		✓
31.	Provide suitable lift construction staging and equipment assembly areas		✓
32.	Provide suitable location for office and tool trailer connected to power and telephone services if required by Seller		✓
33.	Provide firefighting and fire suppression equipment as required by local authorities		✓
34.	Provide permanent drainage system at bottom or top terminal (if required)		✓
35.	Provide erosion control, BMPs, and Storm Water Pollution Prevention Plan (SWPPP)	✓	

36.	Provide interface with existing utilities or permanent structures		✓
37.	Locate underground services (if required)	✓	
38.	Relocate any underground services that interfere with the new lift foundations		✓
39.	Perform soils engineering including independent foundation soil inspection (if required) & related design/engineered fill		✓
<b>Mechanical Installation</b>		<b>Seller</b>	<b>Buyer</b>
40.	Install, align, and grout towers	✓	
41.	Install and align terminals and machinery	✓	
42.	Provide unfettered access to terminal sites at all times, provide monitoring and control of general public and other contractors in vicinity of terminal and tower sites		✓
43.	Install and align sheave assemblies	✓	
44.	Install and splice haul rope, re-splice haul rope within six months from date of Acceptance Test if remaining carriage travel is less than five percent (5%) of terminal design carriage travel	✓	
45.	Install and tension communication cables to Seller's specifications	✓	
46.	Bury communication cables to Seller's specification	✓	
47.	Provide required labor for haul rope splice	✓	
48.	Provide all required crowd and traffic control during haul rope splice		✓
49.	Provide all required crowd and traffic control during helicopter work, the area under the helicopter flight path must remain clear at all times while the helicopter is in flight		✓
50.	Provide insulation in terminal enclosures (if required)		✓
51.	Install motor room or terminal enclosures on drive stations	✓	
52.	Provide fuel storage and handling equipment		✓
53.	Assemble and install carriers	✓	
<b>Electrical Installation</b>		<b>Seller</b>	<b>Buyer</b>
54.	Provide transformers and harmonic filter (if required)		✓
55.	Supply AC electrical utility power with frequency of 60 Hertz and allowable voltage variation of $\pm 5\%$		✓
56.	Install and test electrical controls	✓	

57.	Install batteries and chargers	✓	
58.	Supply and install lights for passenger platforms		✓
59.	Provide main electrical disconnects and transformer distribution panels (EDP's) for drive and return operators enclosures	✓	
60.	Provide and install operators' enclosures if supplied as part of the Contract	✓	
61.	Install and commission motor controller and motor	✓	
62.	Install and commission APU and evacuation drives if supplied as part of the Contract	✓	
63.	Provide power to and energize EDP's at both terminals		✓
64.	Install communication cable connections at towers	✓	
65.	Install and tension fiber optics line (if required)	✓	
66.	Terminate fiber optics line on both ends for connection to lift controls, spare fiber optic strands, or strands slated for Buyer use will not be terminated	✓	
67.	Provide adequate power supply up to main electrical distribution panel including any modifications to existing power supply		✓
<b>Completion and Testing</b>		<b>Seller</b>	<b>Buyer</b>
68.	Provide construction certificates	✓	
69.	Provide splice certificate	✓	
70.	Final preoperational alignment and testing	✓	
71.	Perform acceptance test complete with data acquisition based on Buyer meeting the critical dates as set forth in the Contract	✓	
72.	Schedule all Authorities Having Jurisdiction for acceptance test based on Seller's confirmation of an acceptance test date		✓
73.	Provide signs and towers pads		✓
74.	Provide evacuation equipment, except as stated		✓
75.	Provide loading/Unloading ramps and platforms except for moving platforms which are provided by Seller		✓
76.	Provide labor and ballast for acceptance test	✓	
77.	Provide final compacted fill and grading at both terminals, repair any damages caused by poor soil compaction or inadequate retaining walls		✓
78.	Arrange to have two lift technicians attend the new lift operation and training class provided by the Seller. Any additional on-site		✓



	training will be provided to the Buyer based on published service rates and is not part of this Contract		
79.	Provide two qualified representatives to assist with operating and adjusting the lift during the commissioning and testing		✓
80.	Provide initial haul rope MRT for lifts running 3 m/s and faster or as required by ANSI B77.1-2017	✓	

## Terms, Delivery and Payment

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### Delivery

Completion to be determined based on Contract signing date and receipt of payments as specified under Terms of Payment shown below. Delivery dates, and critical milestone dates will be determined at the time of Contract signing.

### Terms of Payment - Turnkey

A schedule of values will be established and mutually agreed after the project is awarded. The schedule of values will be used to determine the percentage of project completion and value of work to be invoiced and paid after each milestone is completed.

This quote is based on information supplied by the Buyer. Price is subject to revision based on final line profile design and acceptance of equipment by Buyer. **All pricing and information contained in this document shall remain confidential and shall not be distributed without the express consent of Doppelmayr USA, Inc.**

Applicable State/local taxes: Business and Occupancy tax for Hawk's Nest is included in the price. It is Doppelmayr's understanding that as a general rule, a West Virginia local unit of government is exempt from paying sales or use taxes; therefore no other taxes are include in the price. If any other taxes are applicable, they will be billed to the Buyer as an additional item on the project invoices. The calculation of tax is generally based on actual costs, not estimated costs, and is subject to internal audit at completion and audit by State/local authorities.

## Warranty

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### Turnkey

When used and maintained in accordance with the maintenance and operation manual provided by Seller to Buyer, Seller warrants that the Lift when delivered to Buyer, shall be of merchantable quality and free from defect in materials and workmanship for two (2) years from the date of completion of the Work by Seller or its authorized dealer or 2,400 hours of operation, whichever comes first (the "Warranty Period"). During the first year of the Warranty Period or the first 1,200 hours of operation, whichever comes first, Seller agrees to supply Buyer with replacement parts for any part of the Lift that is defective as to material or workmanship free of charge. During this period, replacement parts shall be installed at Seller's cost and expense. During the second year of the Warranty Period or 1,201 – 2,400 hours of operation, whichever comes first, Seller agrees to supply Buyer replacement parts for any part of the Lift that is defective as to material or workmanship free of charge. During this period, all replacement parts shall be installed at Buyer's cost and expense except in the case that Seller chooses to repair a component on site in lieu of providing a replacement. Notwithstanding the foregoing, under no circumstances shall Seller be under any obligation to contribute to the cost for normal maintenance and repairs to the Lift or non-defective items requiring replacement as a result of ordinary use or wear and tear during the Warranty Period.

Notwithstanding anything in this Contract to the contrary, the warranty period for any component parts and equipment included in the Lift that are supplied by third party vendors not affiliated with Seller, shall be limited to the applicable terms and limitations of the warranty provided by such third party vendors to Seller. Further, Seller shall not be liable for breach of its warranties as set forth in this Contract, if such breach is caused by: (a) force majeure or any other cause beyond Seller's reasonable control; (b) alteration, modification or change in the Work or Lift and/or use of component parts or equipment supplied by parties other than Seller, except when done according to plans and specifications specifically referring to such additional work and warranted by Seller in writing; (c) improper maintenance, operation or use of the Lift; (d) abnormal wind conditions; (e) damages caused by abrasives, dirt or corrosion; (f) improper cable alignment or lubrication; or (g) any error in any geographical investigation or estimate of snow depth or in any engineering or other information supplied by Buyer or its agents to Seller. The right to require the replacement of a defective part shall be Buyer's sole remedy for any breach of the warranties as set forth in this Contract. Seller specifically disclaims any other obligation, expressed or implied. **EXCEPT AS SPECIFICALLY DESCRIBED IN THIS PARAGRAPH, THERE ARE NO OTHER WARRANTIES EXPRESS OR IMPLIED. ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED.**



DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Katharina Schmitz, President  
(Name, Title)

Katharina Schmitz, President  
(Printed Name and Title)

3160 West 500 South, Salt Lake City, UT 84104  
(Address)

(801) 973-7977 / (801) 973-9580  
(Phone Number) / (Fax Number)

Katharina.schmitz@doppelmayrusa.com  
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

Doppelmayr USA  
(Company)

  
(Authorized Signature)

Katharina Schmitz - President  
(Representative Name, Title)

Katharina Schmitz, president  
(Printed Name and Title of Authorized Representative) (Date)

(801)973-7977  
(Phone Number) (Fax number)

ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO: CRFQ 0310 DNR2200000007

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input checked="" type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Company Doppelmayr USA

Authorized Signature



Date

10/20/2022

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.



Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Centralized Request for Quote  
 Construction

<b>Proc Folder:</b> 1088764		<b>Reason for Modification:</b>	
<b>Doc Description:</b> WV State Parks New Aerial Tramway		Addendum #1 issued to publish pre-bid sign in sheet, extend Q&A deadline and extend bid due date.	
<b>Proc Type:</b> Central Purchase Order			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-09-13	2022-10-06 13:30	CRFQ 0310 DNR2300000003	2

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

**Vendor Customer Code:**

**Vendor Name :** Doppelmayr USA  
**Address :** 3160 W 500 S  
**Street :**  
**City :** Salt Lake City  
**State :** UT **Country :** USA **Zip :** 84104

**Principal Contact :** Katharina Schmitz  
**Vendor Contact Phone:** 801-973-7977 **Extension:** 141

**FOR INFORMATION CONTACT THE BUYER**  
 Joseph E Hager III  
 (304) 558-2306  
 joseph.e.hageriii@wv.gov

**Vendor Signature X**  **FEIN#** 41-2030626 **DATE** 10/20/22

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION**

The West Virginia Purchasing Division is soliciting bids on behalf of The West Virginia Division of Natural Resources to establish a contract for the construction of the replacement of tramways at Pipestem Resort State Park and Hawks Nest State Parks. per the attached specifications and terms and conditions.

INVOICE TO		SHIP TO	
DIVISION OF NATURAL RESOURCES		STATE OF WEST VIRGINIA	
PARKS & RECREATION-PEM SECTION		JOBSITE - SEE SPECIFICATIONS	
324 4TH AVE			
SOUTH CHARLESTON	WV	No City	WV
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Heavy construction services				

Comm Code	Manufacturer	Specification	Model #
72140000			

**Extended Description:**

Aerial Tramway

**SCHEDULE OF EVENTS**

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
-------------	--------------	-------------------





Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Centralized Request for Quote  
 Construction

<b>Proc Folder:</b> 1088764			<b>Reason for Modification:</b> Addendum #2 issued to publish agency responses to all vendor submitted questions and extend Q&A and bid close date.
<b>Doc Description:</b> WV State Parks New Aerial Tramway			
<b>Proc Type:</b> Central Purchase Order			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-09-30	2022-10-27 13:30	CRFQ 0310 DNR2300000003	3

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

**Vendor Customer Code:**

**Vendor Name:** Doppelmayr USA

**Address:** 3160 W 500 S

**Street:**

**City:** Salt Lake city


**State:** UT **Country:** USA **Zip:** 84104

**Principal Contact:** Katharina Schmitz

**Vendor Contact Phone:** 801-973-7977 **Extension:** 141

**FOR INFORMATION CONTACT THE BUYER**

Joseph E Hager III  
 (304) 558-2306  
 joseph.e.hageriii@wv.gov

**Vendor Signature X**  **FEIN#** 41-2030626 **DATE** 6/20/22

All offers subject to all terms and conditions contained in this solicitation



Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Centralized Request for Quote  
 Construction

<b>Proc Folder:</b> 1088764		<b>Reason for Modification:</b>	
<b>Doc Description:</b> WV State Parks New Aerial Tramway		Addendum #3 issued to publish agency responses to additionally submitted vendor questions.	
<b>Proc Type:</b> Central Purchase Order			
<b>Date Issued</b>	<b>Solicitation Closes</b>	<b>Solicitation No</b>	<b>Version</b>
2022-10-11	2022-10-27 13:30	CRFQ 0310 DNR2300000003	4

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

**Vendor Customer Code:**

**Vendor Name:** Doppelmayr USA

**Address:** 3160 W 500 S

**Street:**

**City:** Salt Lake city


**State:** UT **Country:** USA **Zip:** 84104

**Principal Contact:** Katharina Schmitz

**Vendor Contact Phone:** 801-973-7977 **Extension:** 141

**FOR INFORMATION CONTACT THE BUYER**

Joseph E Hager III  
 (304) 558-2306  
 joseph.e.hageriii@wv.gov

**Vendor Signature X**  **FEIN#** 41-2030626 **DATE** 10/20/22

All offers subject to all terms and conditions contained in this solicitation

EXHIBIT A – PRICING PAGE  
**Hawks Nest State Park and Pipestem  
Resort State Park Tramway Replacement  
Project Contract #3**

Name of Vendor: Doppelmayr USA Inc

Address of Vendor: 3160 West 500 South  
Salt Lake City, UT 84104

Phone Number of Vendor: (801) 973-7977

We, the undersigned, having examined the site and being familiar with the local conditions affecting the cost of the work and being familiar with the general conditions to vendors, drawings, and specifications, hereby proposes to furnish all materials, equipment, and labor to complete all work in a workmanlike manner, as described in the Bidding documents.

**“A” Base Bid**

The Base Bid shall consist of construction of the facility and related work described in the drawings and specifications. **Total Base Bid** shall be indicated in the space below.

**Total Base Bid:** Lump sum for all labor, materials, and equipment as stipulated in the Bidding Documents, *written in figures.*

\$8,370,000

**Total Base Bid:** Lump sum for all labor, materials, and equipment as stipulated in the Bidding Documents, *written in words.*

Eight Million three hundred seventy thousand dollars

**Additive Alternates**

The Alternate Bid shall consist of all the work described in the Project Manual.

**“B” Alternate No. 1** - Provide a lump sum cost to Construct a Tramway at Hawks Nest State Park in accordance with the plans and project manual.

EXHIBIT A – PRICING PAGE  
**Hawks Nest State Park and Pipestem  
Resort State Park Tramway Replacement  
Project Contract #3**

**Total Alternate No. 1 Bid:**

**“B”** Provide a lump sum cost to Construct a Tramway at Hawks Nest State Park in accordance with the plans and project manual.

**Written in numbers.**

\$6,020,000

**Total Alternate No. 1 Bid:**

**“B”** Provide a lump sum cost to Construct a Tramway at Hawks Nest State Park in accordance with the plans and project manual.

**Written in words.**

Six million twenty thousand dollars

**Total Bid Amount is the TOTALS of A + B =**

**\$ 14,390,000 (forteen million three hundred ninety thousand dollars)**

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, DOPPELMAYR USA, INC.  
of Salt Lake City, Utah, as Principal, and ARCH INSURANCE COMPANY  
of Jersey City, New Jersey, a corporation organized and existing under the laws of the State of Missouri  
with its principal office in the City of Jersey City, as Surety, are held and firmly bound unto the State  
of West Virginia, as Obligee, in the penal sum of Five Percent (5%) of Bid (\$                    ) for the payment of which,  
well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the  
Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for  
WV State Parks New Aerial Tramway at Hawks Nest State Park and Pipestem Resort State Park

**NOW THEREFORE,**

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal  
attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform  
the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in  
full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no  
event, exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no  
way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby  
waive notice of any such extension.

WITNESS, the following signatures and seals of Principal and Surety, executed and sealed by a proper officer of Principal and  
Surety, or by Principal individually if Principal is an individual, this 22nd day of September, 2022.



Principal Seal

DOPPELMAYR USA, INC.  
(Name of Principal)  
By [Signature]  
(Must be President, Vice President, or  
Duly Authorized Agent)  
President  
(Title)

Surety Seal

ARCH INSURANCE COMPANY  
(Name of Surety)  
By [Signature]  
Attorney-in-Fact Douglas J. Rothey

**IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance, must affix its seal, and must attach a power of attorney with its seal affixed.**



*This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Note, Loan, Letter of Credit, Currency Rate, Interest Rate or Residential Value Guarantees.*

**POWER OF ATTORNEY**

**Know All Persons By These Presents:**

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

**Cynthia M. Burnett, Douglas J. Rothey, Erik Ulibarri and Kimberly Payton of Littleton, CO**

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed: Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.00).

This authority does not permit the same obligation to be split into two or more bonds In order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

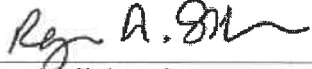
This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on December 10, 2020, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

“VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process.”

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on December 10, 2020:

**VOTED**, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on December 10, 2020, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company. **In Testimony Whereof**, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 9<sup>th</sup> day of May, 2022.

**Attested and Certified**

  
\_\_\_\_\_  
Regan A. Shulman, Secretary

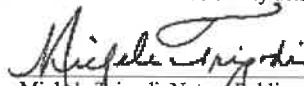


Arch Insurance Company  
  
\_\_\_\_\_  
Stephen C. Ruschak, Executive Vice President

STATE OF PENNSYLVANIA SS  
COUNTY OF PHILADELPHIA SS

I, **Michele Tripodi**, a Notary Public, do hereby certify that Regan A. Shulman and Stephen C. Ruschak personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.



  
\_\_\_\_\_  
Michele Tripodi, Notary Public  
My commission expires 07/31/2025

**CERTIFICATION**

I, **Regan A. Shulman**, Secretary of the Arch Insurance Company, do hereby certify that the attached **Power of Attorney** dated May 9, 2022 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said **Stephen C. Ruschak**, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

**IN TESTIMONY WHEREOF**, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this 22<sup>nd</sup> day of September, 20 22.

  
\_\_\_\_\_  
Regan A. Shulman, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

**PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:**

Arch Insurance – Surety Division  
3 Parkway, Suite 1500  
Philadelphia, PA 19102



**To verify the authenticity of this Power of Attorney, please contact Arch Insurance Company at [SuretyAuthentic@archinsurance.com](mailto:SuretyAuthentic@archinsurance.com)  
Please refer to the above named Attorney-in-Fact and the details of the bond to which the power is attached.**



**State of West Virginia**  
**DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT**  
**West Virginia Code §21-1D-5**

I, KS after being first duly sworn, depose and state as follows:

1. I am an employee of Doppelmayr USA ; and,  
(Company Name)
2. I do hereby attest that Doppelmayr USA  
(Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with **West Virginia Code §21-1D**.

The above statements are sworn to under the penalty of perjury.

Printed Name: Katharina Schmitz

Signature: [Handwritten Signature]

Title: President

Company Name: Doppelmayr USA

Date: 10/20/2022

STATE OF ~~WEST VIRGINIA~~, Utah

COUNTY OF Salt Lake City, TO-WIT:

Taken, subscribed and sworn to before me this 20 day of October, 2022

By Commission expires 09-12-2025

(Seal)

[Handwritten Signature: Michelle Fournier]

(Notary Public)





MICHELLE JOY FOURNIER  
Notary Public  
State of Utah  
My Commission Expires 7/12/2028  
Commission Number 71977





# CONTRACTOR LICENSE

AUTHORIZED BY THE  
West Virginia Contractor  
Licensing Board

NUMBER: **WV059615**

CLASSIFICATION:  
GENERAL ENGINEERING

DOPPELMAYR USA INC  
DBA DOPPELMAYR USA INC  
3160 W 500 S  
SALT LAKE CITY, UT 84104

DATE ISSUED

MARCH 30, 2023

EXPIRATION DATE

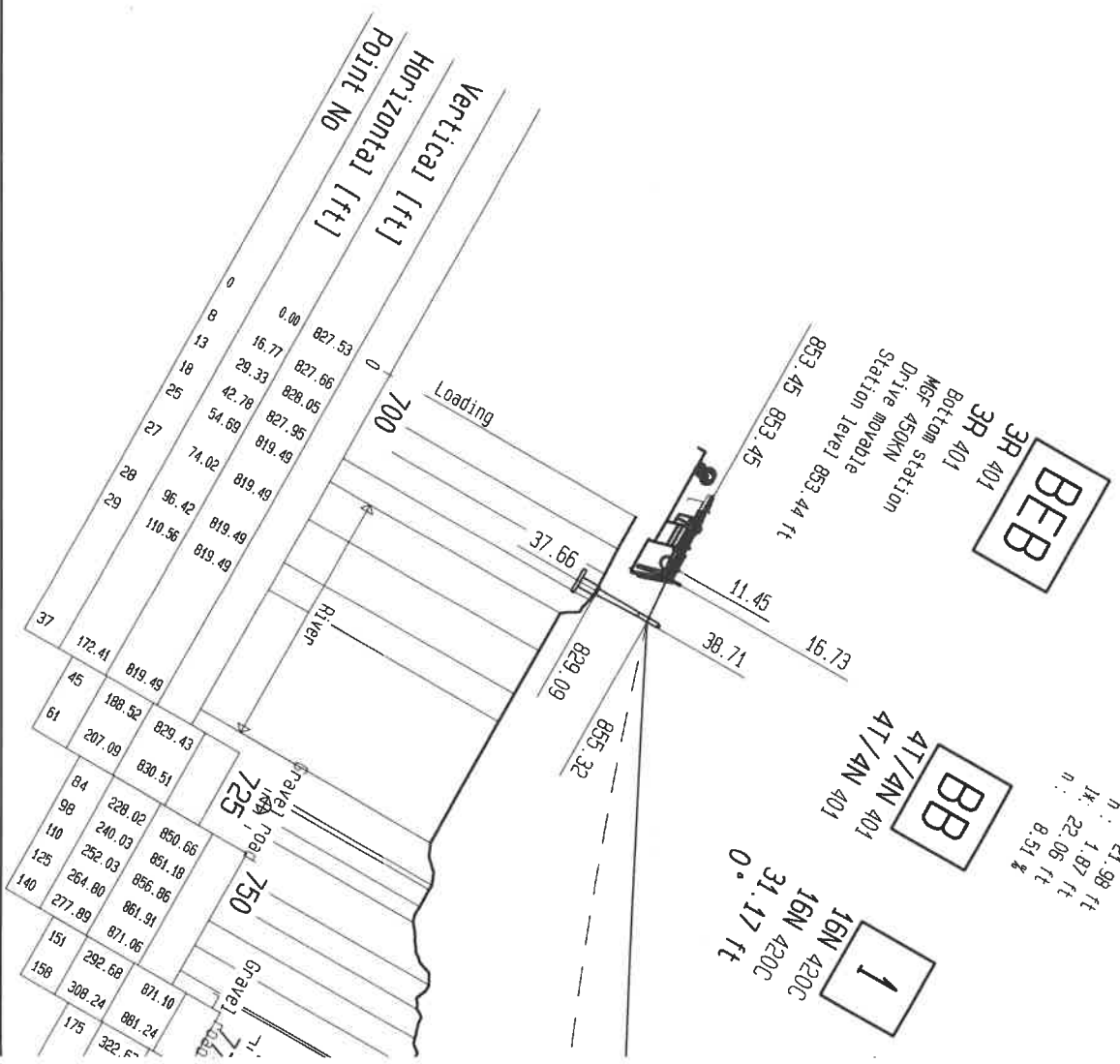
MARCH 30, 2025

Authorized Signature

Chair, West Virginia Contractor  
Licensing Board



A copy of this license must be readily available for inspection by the Board on every job site where contracting work is being performed. This license number must appear in all advertisements, on all bid submissions, and on all fully executed and binding contracts. This license is non-transferable. This license is being issued under the provisions of West Virginia Code, Chapter 30, Article 42.

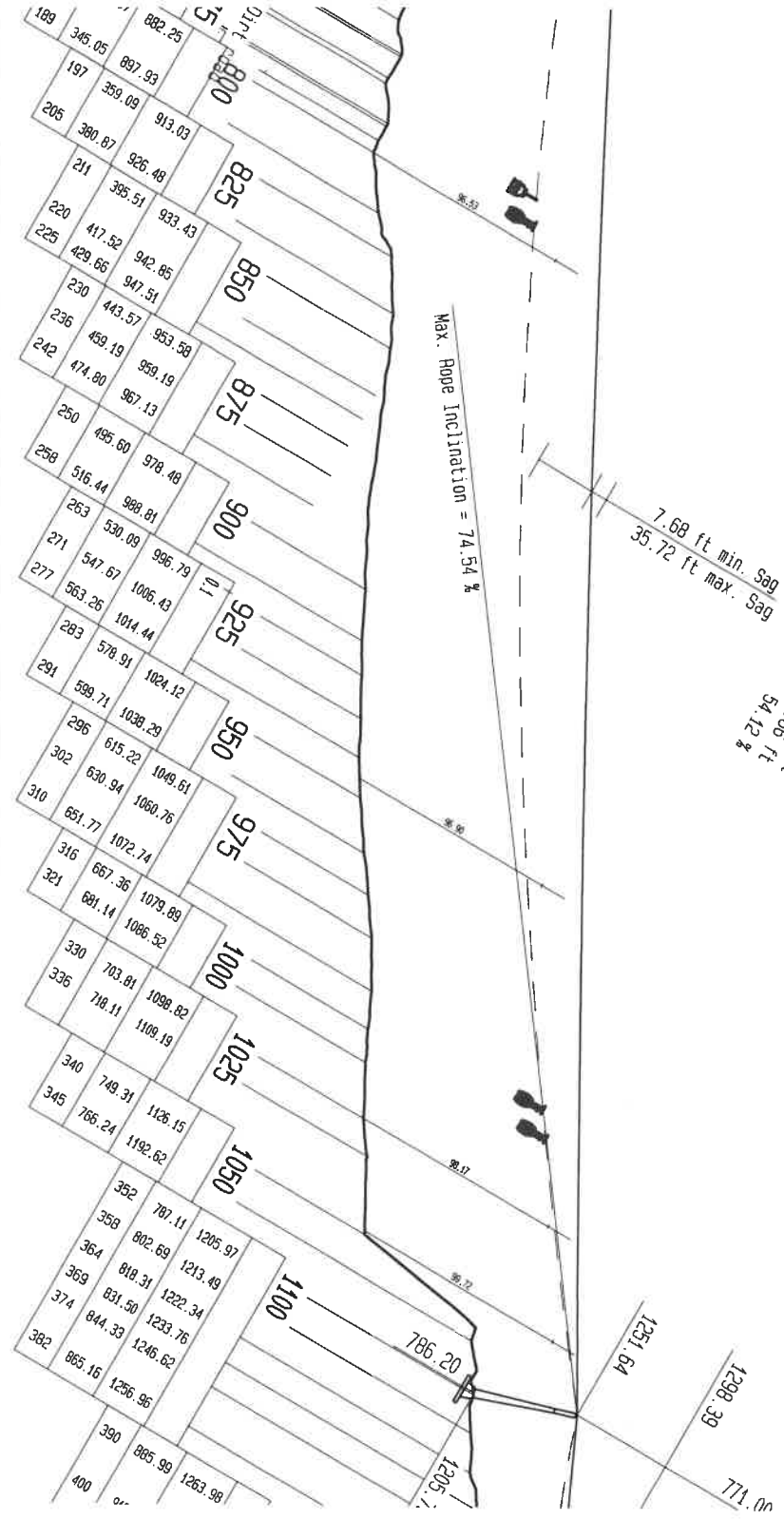


**BEB**  
3R 401

**BB**  
4T/4N 401

**1**  
16N 420C  
31.17 ft

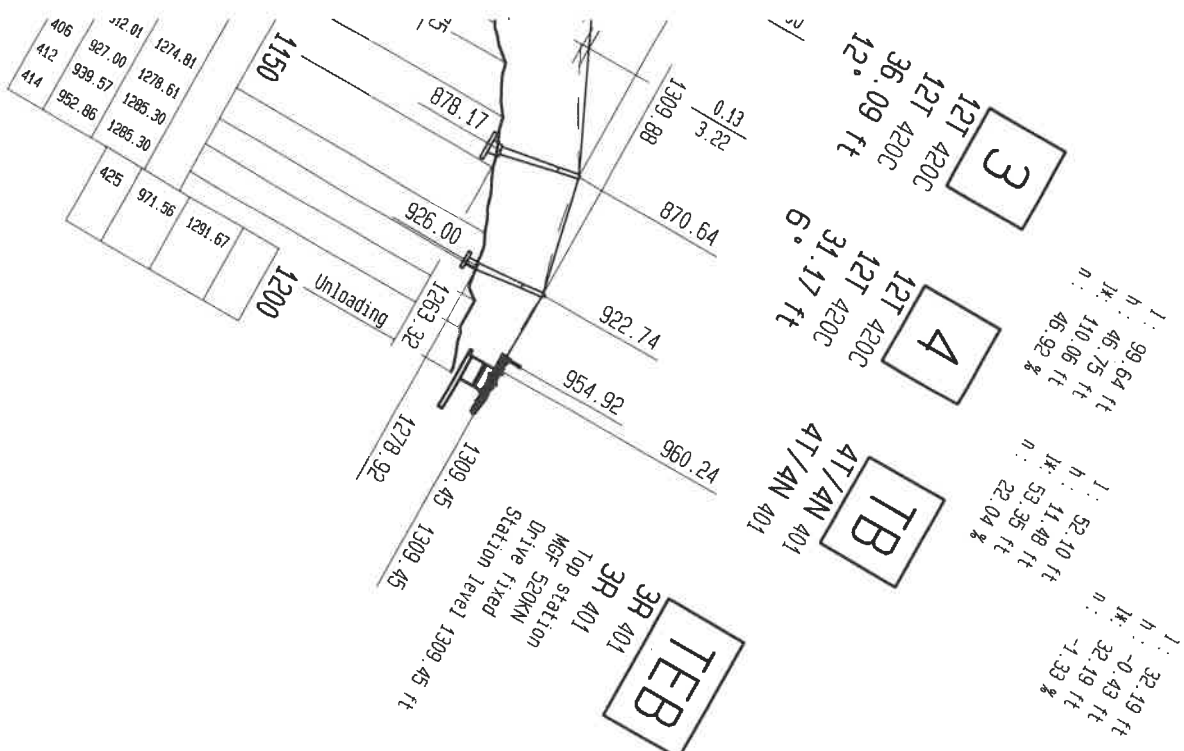
h : 21.98 ft  
k : 1.87 ft  
n : 22.06 ft  
8.91 %



Horizontal Length 1 : 732.28 ft  
 Vertical Rise h : 396.33 ft  
 Inclined Length Lk : 832.66 ft  
 Average Grade n : 54.12 %  
 7.68 ft min. Sag  
 35.72 ft max. Sag

Sheaves Up **8T** 420C  
 Sheaves Down **8T** 420C  
 Tube Length **47.57 ft**  
 Tube Angle **18°**

**2**



Profile origin:  
 Profile file: Hawk's Nest terrain R01.gel  
 Ropeway file: SAA0003381rev4.mgf  
 Program: Seiba 1.68.3    CIN:1649424133

Index	Rev.

This draw!  
 It must no



# Profile

## 2x2x8-MGFJ Hawks Nest


Customer: Division of Natrural Resources

Location: West Virginia

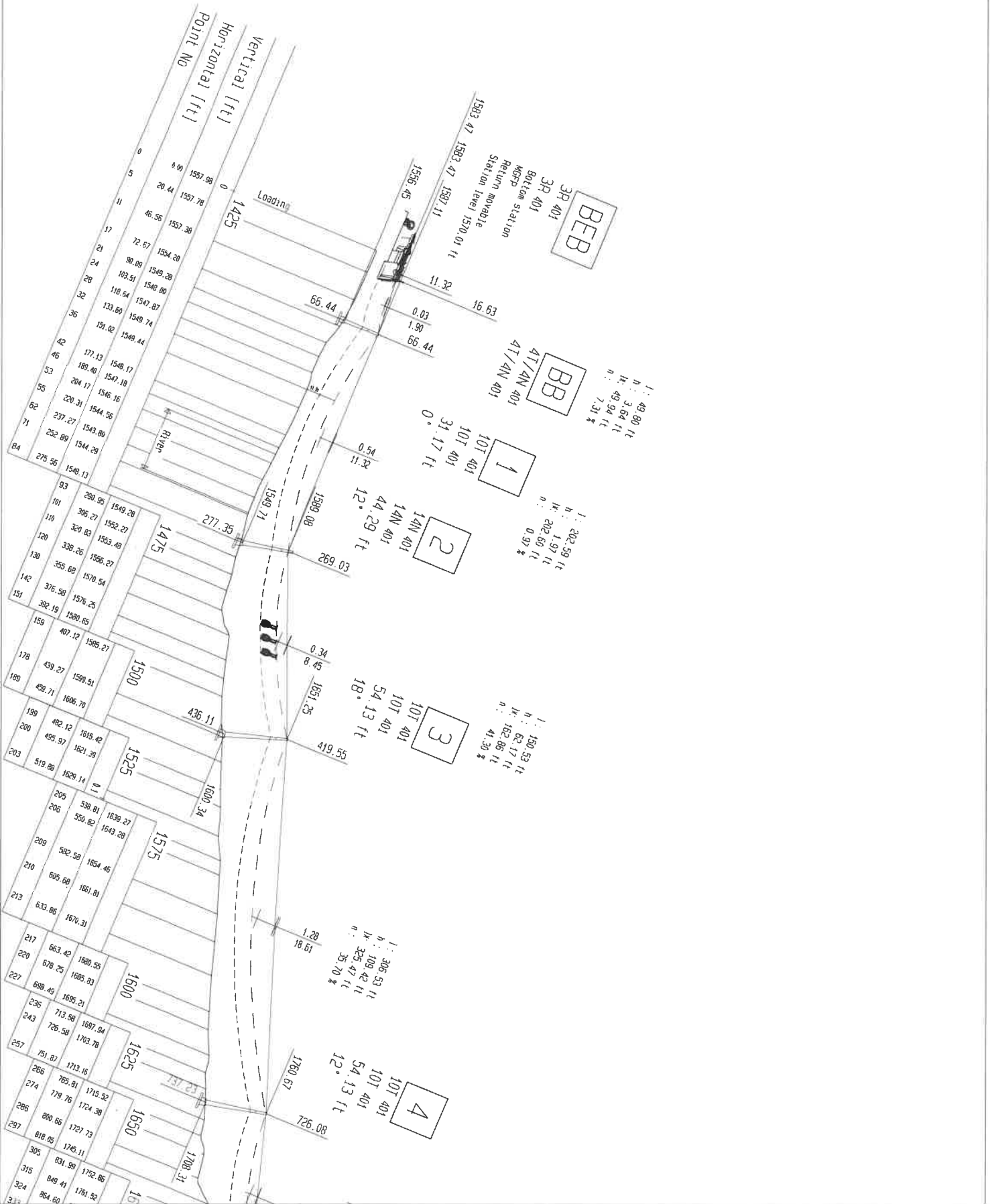
### Technical Data:

Uphill Side	Right	∅ Haul Rope	1.77 in
Drive Station	Bottom	Minimum Breaking Strength	289104 lb
Tension Station	Bottom	∅ Drive Bullwheel	15.75 ft
Return Station	Top	∅ Return Bullwheel	15.75 ft
Horizontal Length	948.79 ft	Rope Gauge on Line	15.75 ft
Vertical Rise	456.00 ft	Drive Output Continuous	176 HP
Average Grade	48.06 %	Drive Output Starting	221 HP
Max. Rope Inclination	74.54 %	Elevation of Drive Station	853 ft
Inclined Length	1060.91 ft	Uphill Transportation	100 %
Spliced Rope Length	2318.41 ft	Downhill Transportation	100 %

	Initial	Final
Drive Speed	1000 fpm	1000 fpm
Capacity	240 pph	240 pph
Number of Carriers	4	4
Carrier Spacing	12.47 ft	12.47 ft
Carrier Interval	174.19 s	174.19 s
Trip Time	2.57 min	2.57 min


	Division	Date	Name
	Drawn	2022-03-29	PM
	Scale <b>1"=80'</b>	Project No. <b>SAA0003381</b>	
Drawing No. <b>SAA0003381rev4</b>		Index	

This drawing is the intellectual property of Doppelmayr and should not be copied nor utilized in whole or in part without permission and is subject to return upon request.



Point No	Horizontal (ft)	Vertical (ft)
0	0	0
5	20.44	1557.78
11	46.56	1557.38
17	72.67	1554.20
24	90.09	1549.28
28	103.51	1540.00
32	118.64	1547.87
36	133.60	1549.74
42	151.02	1549.44
46	177.13	1549.17
53	189.40	1547.18
55	204.17	1546.16
62	220.31	1544.56
71	237.27	1543.00
84	252.89	1544.29
93	275.56	1548.13
101	290.95	1549.28
110	306.27	1552.27
120	320.83	1553.48
130	338.26	1556.27
142	355.68	1570.54
151	376.58	1576.25
159	392.19	1580.65
178	407.12	1586.27
188	439.27	1589.51
198	459.71	1606.70
200	482.12	1616.42
203	495.97	1621.39
205	519.86	1626.14
206	538.81	1636.27
209	550.82	1643.28
210	582.58	1654.46
213	605.68	1661.81
217	633.86	1670.31
220	663.42	1680.55
227	678.25	1685.83
235	698.49	1695.21
243	713.88	1697.94
257	726.58	1703.78
266	751.87	1713.16
274	765.81	1715.52
286	778.76	1724.38
297	800.66	1727.73
305	818.05	1746.11
315	831.89	1752.86
324	849.41	1761.52
324	864.60	1761.52

**BEB**  
3R 401  
3R 401  
Bottom station  
MORP  
Station moorage  
Station level 1570.01 ft

**BB**  
4T/4N 401  
4T/4N 401

**1**  
10T 401  
10T 401

**2**  
14N 401  
14N 401

**3**  
10T 401  
10T 401

**1**  
306 53 ft  
109.42 ft  
325.47 ft  
35.70 \*

**4**  
10T 401  
10T 401

1 : 49.80 ft  
h : 3.64 ft  
k : 49.94 ft  
n : 7.31 \*

1 : 202.59 ft  
h : 1.97 ft  
k : 202.60 ft  
n : 0.97 \*

1 : 150.53 ft  
h : 62.17 ft  
k : 182.86 ft  
n : 41.30 \*

1 : 306 53 ft  
h : 109.42 ft  
k : 325.47 ft  
n : 35.70 \*

10T 401  
10T 401  
54.13 ft  
54.13 ft  
12°

10T 401  
10T 401  
31.17 ft  
0°

14N 401  
14N 401  
44.29 ft  
12°

10T 401  
10T 401  
54.13 ft  
18°

1760.67  
726.08  
12°

16.63  
0.03  
1.90  
66.44

1589.08  
269.03  
1549.71

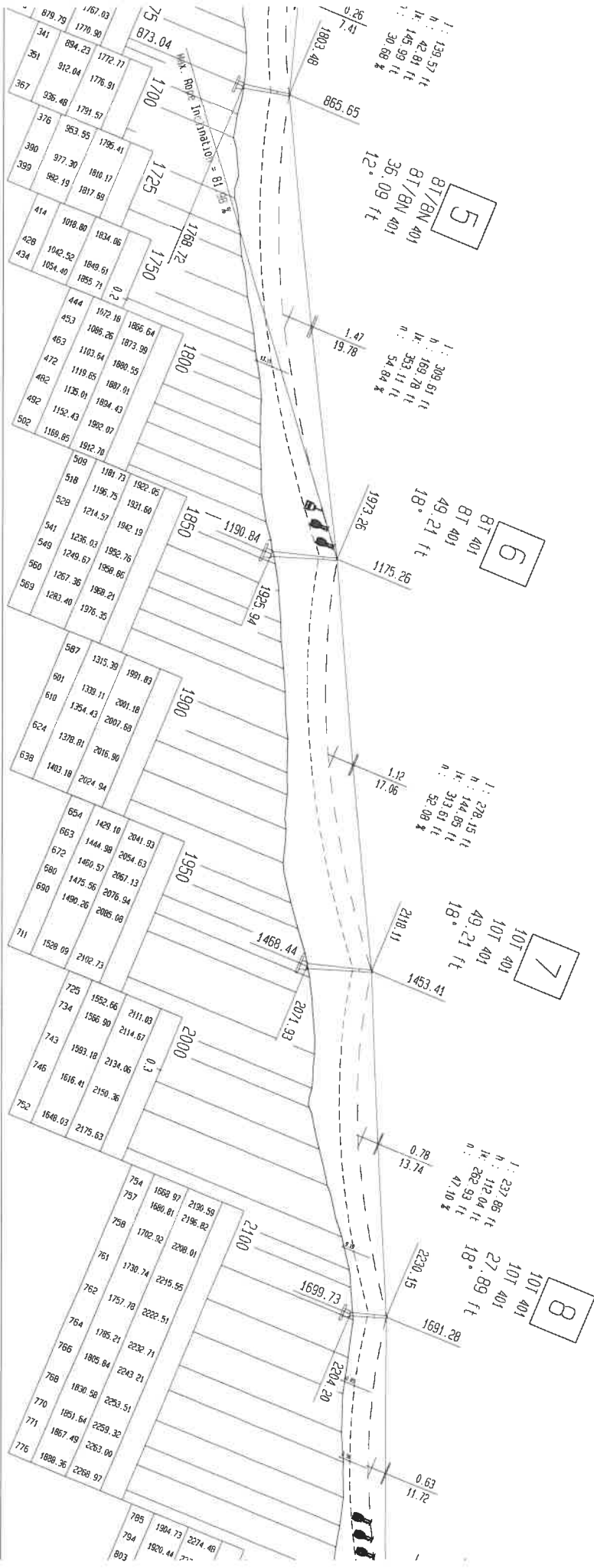
1551.25  
419.55  
1600.34

18.61  
1.28

1760.67  
726.08

1700.31  
1761.52

1572.86



1:  
h:  
n:



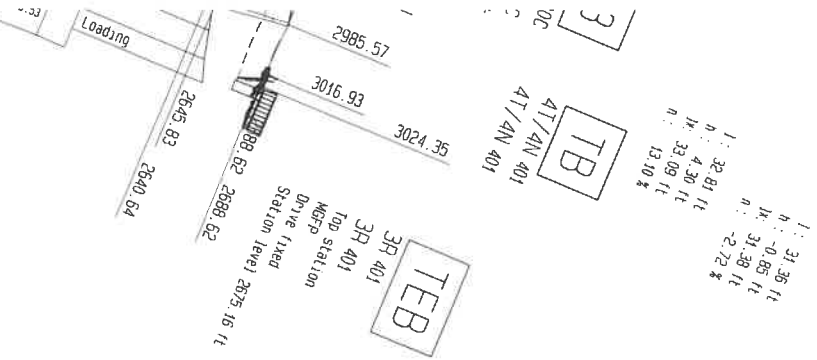


# Profile Pipestem 4X3X8-MGFP

Division of Natural Resources  
West Virginia

### Technical Data

Direction of rotation		Counter-clockwise
Uphill Side		Right
Drive Station		Top
Tension Station		Bottom
Return Station		Bottom
Horizontal Length		3013.02 ft
Vertical Rise		1105.15 ft
Average Grade		36.68 %
Max. Rope Inclination		81.98 %
Inclined Length		3236.07 ft
Transportation Length		3236.06 ft
Spliced Rope Length		6621.15 ft
Ø Haul Rope		1.77 in
Ø Drive Bullwheel		15.75 ft
Ø Return Bullwheel		15.75 ft
Rope Gauge on Line		15.75 ft
Drive Output Continuous		339 HP
Drive Output Starting		489 HP
Drive Output Braking		-343 HP
Elevation of Drive Station		2689 ft
Uphill Transportation		100 %
Downhill Transportation		100 %
Drive Speed	Initial	Final
Capacity	1000	1000 fpm
Number of Carriers	400	400 pph
Carrier Spacing	12	12
Carrier Interval	12.47	12.47 ft
Trip Time	188.88	188.88 s
	6.30	6.30 min



Profile origin:  
 Profile file: Pipestem terrain alternate rev1.gel  
 Rapeway file: SAA Pipestem short rev1 bottom tension.mgf  
 Program: Selba 1.68.3    CIN:16A9776015

This drawing is our intellectual property. It must not be copied nor utilized in whole or in part without permission and is subject to return upon request.

Date: 2022-04-7  
 Name: PM  
 Scale: 1" = 80'  
 Project No.: SAA000NFFPN  
 Drawing No.: Pipestem rev1