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**Baltic & Bohemian Rail Assumptions for the railway route project from Świnoujście to Prague**

**Abstract:** The key factor in the development of the Świnoujście seaport is gaining a strong position in handling Czech marine transit, which has been dominated for years by German seaports, with Hamburg at the forefront. Therefore, the announced construction of a modern reloading infrastructure, with a container hub capable of receiving and handling large cargo ships, is an obvious asset here - necessary to take up such competition, but far from sufficient. It is necessary to launch comprehensive measures that would include investments associated with both seaport infrastructure and necessary communication routes that lead to the said port, ensuring its efficient communication with the land facilities - the main suppliers and recipients of cargo. An important element - although not sufficient - of these activities is the construction of the S3 expressway, which is nearing completion, but for effective competition, it is necessary to create a dedicated railway route with the highest possible parameters adopted for trans-European routes. It should be noted that without said railway artery, it is impossible to eliminate the competitive advantages of German ports that provide efficient supply chain with the area, especially the western Czech Republic. Until such route is created, the competition will be doomed from the start, and the considerable funds invested in the development of the Świnoujście seaport will remain largely unused.

**Keywords:** Railway connections; Czech marine transit; Transport network

**Introduction**

The concept outlined here for creating a railway route from the ports in Świnoujście and Szczecin to Prague in the Czech Republic is a response to the implementation of the largest program since the war to expand the port in Świnoujście and the waterway leading to it. The rapid increase in the port's handling capacity must be accompanied by a corresponding increase in transport capacity on the connections with the main generator and recipient of this port's cargo, which naturally is the area of western Czechia. This material is not only a proposal to utilize the increased potential of the port complex, but also to achieve additional benefits in the area of military logistics and passenger transport.

**Strategic investment in the port of Świnoujście**

On May 18 of this year, the government's list of legislative work published information on a draft government resolution regarding the establishment of a multi-year program called "Construction and expansion of access infrastructure to the port of Świnoujście," which is to be completed by 2029. The estimated cost of the investments planned under this program exceeds PLN 10.3 billion. The project includes the construction of infrastructure ensuring access to the external port, in the form of a new approach fairway (the eastern route), as well as

a deep-water container terminal with an annual handling capacity of up to 2 million TEU. Thanks to this investment, the port of Świnoujście can become a transshipment hub serving the largest vessels capable of navigating the Baltic Sea.

The port of Świnoujście is the closest deep-sea port at the entrance to the Baltic Sea from the Danish Straits. Thanks to its access to a navigable river, the port of Świnoujście has an inland connection to the entire Western European river system, and due to its proximity to Germany, it is a natural transit point for European Union countries. Alongside Szczecin, it is also the nearest and best-connected seaport to Berlin. However, inland navigation will not be able to serve another natural market for the Szczecin-Świnoujście port complex—the area of western Czechia. Importantly, the Czechs themselves have long preferred the ports in Szczecin and Świnoujście for their maritime exports, actively advocating for projects that improve rail connections to these ports. In light of this major port investment, taking action to increase transport capacity—i.e., to streamline the rail connections linking the port of Świnoujście to its hinterland—becomes crucial. It is urgent to address the issue of improving the parameters of these routes, which would open the possibility for Świnoujście to effectively compete for Czech cargo with German ports and railways. This requires substantial investments in existing lines, as well as certain additions and adjustments to lines in the planned route of the Baltic&Bohemian Rail. Without the implementation of this project—and given the weak offering of our rail connections from the Czech Republic to these ports—German ports, led by Hamburg, will remain the natural hinterland for our southern neighbors, and the expanded handling capacity of the port of Świnoujście will not be fully utilized.

#### **A new container hub project in the western Baltic**

At the end of January, Deputy Minister of Infrastructure Marek Gróbarczyk stated that cargo handling in Polish ports in 2022 increased by 18%, to 133 million tons. A year earlier, they handled 113 million tons of goods. At that time, Vice President of the Szczecin and Świnoujście Seaports Authority, Daniel Stachiewicz, reported that in 2022, these ports handled a total of 36.8 million tons of goods. This represents an increase of 10.8% compared to 2021. In the container segment, in 2019, Poland handled 3.05 million TEU—the best result among countries located in the Baltic Sea basin. The next positions were held by Russia (2.54), Finland (1.61), Sweden (1.60), Denmark (0.87), Lithuania (0.70), Latvia (0.47), and Estonia (0.22). These figures testify to both the size and strength of the Polish economy as well as the modernity of our container terminals. It should be noted that this success is solely the work of the Tri-City terminals, as Gdańsk alone handled as many as 2,073 thousand TEU, and Gdynia 897 thousand TEU. Together, these two ports account for as much as 97.5% of all container handling in Polish ports. Bearing this in mind, it can be assumed that there is enough room for a terminal that would fill the gap between Hamburg and Gdańsk and provide convenient access to the extensive hinterland of western Poland, eastern Germany, and further areas in southern Europe, especially the heavily industrialized region of western Czechia. Considering the projected potential of the terminal in Świnoujście, the threat of competition from German Baltic ports—Rostock or Lübeck—can be ruled out. Strategic investment in the Seaport of Świnoujście will strengthen and stabilize the market position of the Szczecin-Świnoujście port complex and increase its competitiveness.



1. Proposed deep-water container terminal in Świnoujście [1]

### **The Planned Terminal**

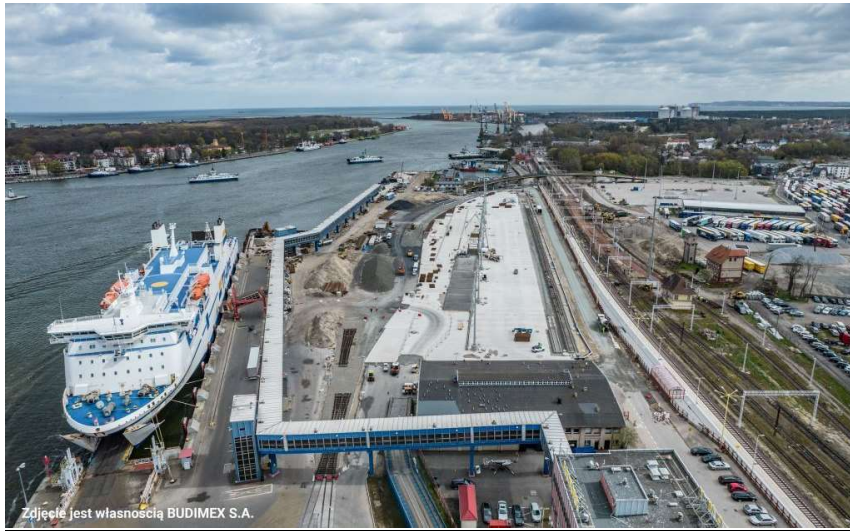
The planned terminal is to be located in the external port, ensuring unhindered service for the largest container ships entering the Baltic Sea. The deep-water container terminal will enable a change in the model of container handling in the Szczecin–Świnoujście port complex. Instead of relying on a feeder system—where only containers transshipped from ocean services onto smaller feeder vessels at one of the North Sea ports are handled—Świnoujście Port could become a base port that receives ocean-going ships in direct intercontinental services. At this port, part of the containers unloaded from ocean-going vessels would then be reloaded onto feeder ships serving the Baltic Sea basin. It should be emphasized that a container terminal with a handling capacity of 2 million TEU requires corresponding investments in the access infrastructure to the port of Świnoujście: expanding the navigational potential of the Odra River and developing road and rail connections with Silesia, the Czech Republic, Austria, and Hungary. This would enable the full development and functionality of the deep-water terminals in the External Port in Świnoujście, making it a key hub port—a transit gateway for the entire hinterland along the Baltic–Adriatic–Mediterranean transport routes.

### **Ferry Terminal and Prospects for Its Development**

Another significant and forward-looking source of cargo for the proposed B&BR route is the ferry terminal. The terminal in Świnoujście is one of four Polish ferry terminals. In operation practically since the end of the war, it is continuously being modernized and expanded. Recently, the Szczecin and Świnoujście Seaports Authority (ZMPSiŚ SA) increased its port land in Świnoujście by nearly 10 hectares, purchasing the plot from PKN Orlen. ZMPSiŚ SA plans to use the newly acquired area for expanding the ferry terminal's facilities, including the construction of parking lots. This is expected to improve access to the terminal and ease the burden on nearby streets, especially in situations where truck traffic headed for the ferries is congested. The terminal's reconstruction began in the autumn of 2019, and although it has been delayed, it is nearing completion (the original investment schedule assumed that all work would be finished by the end of 2021). Thanks to the modernization of its infrastructure, the terminal will gain the ability to handle intermodal transport, including ferries up to 265 meters in length. It will also be adapted to provide a new type of transshipment service involving rail transport.

The PLN 185 million project is part of a global initiative aimed at optimizing logistics chains between Scandinavia and Southern Europe.

The key cargo in these relations increasingly consists of road semi-trailers, which are more and more often transported by rail. This shift is the result of transformations observed in the international transport market across the continent. The rapid growth in the number of semi-trailers transported by rail and sea requires adapting to large-scale trailer transport; this will necessitate significant investments in rail infrastructure. Equally important is the choice of an optimal technical and operational solution that enables rapid, large-scale transshipment of trailers directly from ship to rail cars. One such solution may be a project (presented below) developed by the Military University of Technology. It should be noted that the logistics system chosen by port operators for transporting semi-trailers by rail should become an interoperable standard for all transshipment infrastructure along the entire B&BR route.



2. The container terminal in Świnoujście. Rapid changes in the European transport market and a sharp increase in the number of semi-trailers transported by rail and sea necessitate the implementation of solutions capable of handling large-scale semi-trailer traffic. This will require necessary investments in the terminal's rail infrastructure [2]

### **A Dual-Use Line – An Investment with a Double Application**

The line outlined in this way—beyond its peaceful (civilian and commercial) purpose—would also have significant military importance. This is evidenced by the funding from the Ministry of National Defense (PLN 360 million) for the comprehensive modernization of a 44-kilometer section of Line 283 from Żagań to Zebrzydowa, which provides access to garrisons and services the training grounds located along this line. Considering the proposed route of B&B Rail, it would serve numerous tasks crucial to our defense objectives, connecting:

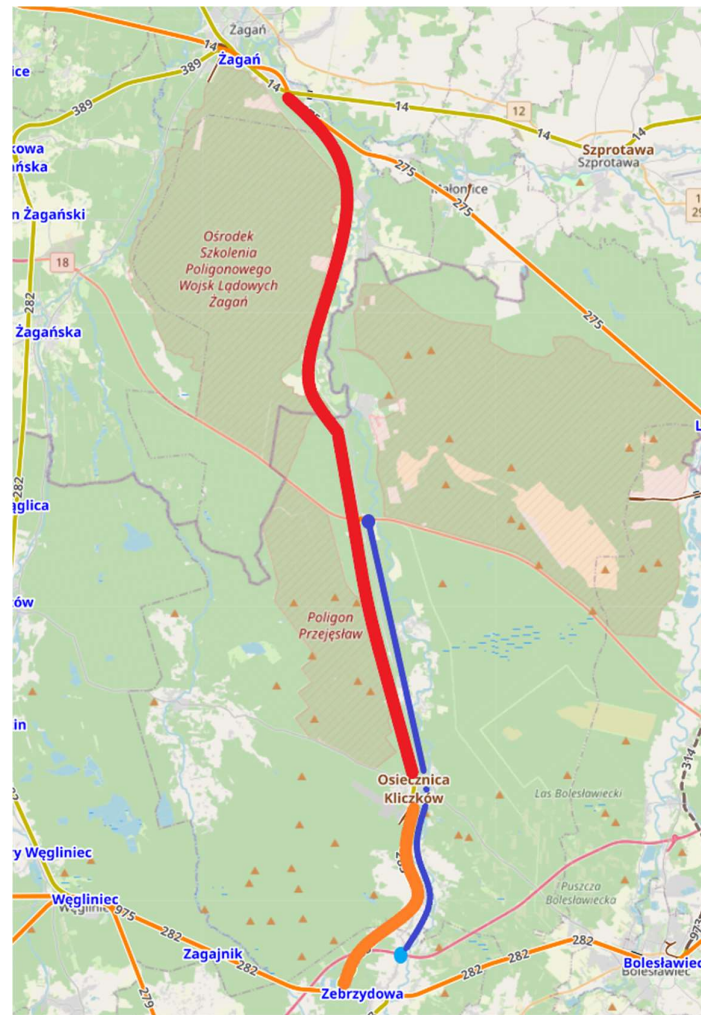
- **The only secure port for wartime supplies** – the port of Świnoujście. After the NATO investment completed 20 years ago, it is intended to function as a safe point of delivery for war materials in the event of a conflict with Russia. Świnoujście's location—its distance from Russian missile and air bases—enhances the security of these deliveries. Ports in the Tri-City area do not meet these security requirements, partly due to their proximity to the Kaliningrad exclave.
- **Poland's largest "barracks-and-training-ground cluster,"** located in the Lower Silesian Forests (Bory Dolnośląskie). This is a secure area for training reserves, restoring the combat readiness of units, and carrying out repairs and replenishments of

equipment. Like Świnoujście, due to its distance from the eastern border, it is relatively safe.

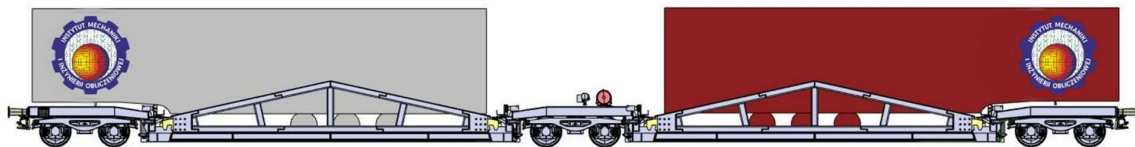
- **Czech defense industry enterprises**, which represent a natural support base for Poland in the event of a war with Russia. The Czech Republic's reliability as an ally, its proximity to Lower Silesia, and its significant production capacities (weapons, equipment, ammunition, and repairs of damaged or worn equipment) should serve as a key incentive to establish efficient rail connections linking the Lower Silesian training grounds with Czech defense industry centers.

In addition to the aforementioned national budget resources for building dual-use infrastructure, special NATO funds can be applied for. Meanwhile, in the recently announced budget of the EU's "Connecting Europe Facility," a special allocation has been designated for civil-military dual-use investments. Projects that enhance military mobility can secure a total of EUR 790 million (about PLN 3.55 billion) in funding. This opens the possibility of obtaining additional resources for implementing a dual-use route project, naturally involving dual-use infrastructure—particularly the planned transshipment facilities. When designing its transshipment terminals, the military should account for their use in normal civilian operations by a partner such as PKP CARGO SA. This approach is practiced in NATO countries, which have developed procedures for executing such projects in partnership with civilian entities. Constructing purely military terminals that would be little used in peacetime—yet require continuous staffing and equipment—would only impose additional and unnecessary burdens on the military budget. For a civilian logistics operator, such a project would offer the opportunity to gain modern transshipment infrastructure adapted to handling containers and road semi-trailers without having to invest its own funds—since the military cannot profit from renting out the infrastructure built for its own needs. Of course, the location of such terminals would not be fully optimal for the civilian side. However, because the terminal would not have to generate revenue to repay any construction-related debt, it could offer far more advantageous terminal fees, offsetting any greater distance from the serviced areas.





3. Route of Line 283 between Zebrzydowa and Żagań: The segment currently in operation is marked in orange, and the segment out of service in red. The dark blue line indicates the roads DW 357 (Zebrzydowa–Osiecznica) and No. 2271 D (Osiecznica, A18 motorway junction at Luboszów), running parallel to Line 283. The proposed Zebrzydowa junction on the A4 motorway is shown in light blue



4. Six-axle WAT-designed railcar for transporting semi-trailers. This design meets the expectations of the logistics and shipping industries: enabling fast, large-scale transshipments, straightforward “flat” loading, and the handling of any standard trailer type, all while maintaining a permissible 40-ton load and relatively low operating costs.



5. The car carrier Morning Cherry in Świnoujście, en route to Szczecin for military equipment from the “Brilliant Jump 2016” exercise—a test deployment of the so-called spearhead forces to our country. The ability to utilize the transport capacity of such vessels depends on a logistical solution that ensures the efficient transshipment of vehicles in the port and swift rail dispatch into the country’s interior.

For the military, a civilian partner would guarantee the ongoing maintenance of terminals and their constant readiness (with fully staffed and trained personnel as well as fully operational transshipment equipment) to smoothly transition to defense tasks. Naturally, in peacetime, the operator would handle military transshipments (treated as a priority), ensuring efficient transport support for the garrisons and training grounds in the Lower Silesian Forests. At the same time, the civilian port infrastructure in Świnoujście allows for large-scale transshipments of military equipment. The most common maritime transport for military units’ equipment consists of Ro-Ro, RoPax vessels, or large car carriers, and the ferry terminal in Świnoujście—which can serve six such vessels simultaneously—is ideally suited to this role. The prerequisite is to create an efficient logistics system that ensures the rapid transshipment of vehicles in the port and their swift dispatch by rail deeper into the country. In addition, this system must be a standard, widely used technical and operational solution that, in the event of a threat of armed conflict, can be scaled up to the capacity needed to carry out transport plans and concentrate support forces from allied countries.

One possible solution could be a system based on a railcar designed for transporting semi-trailers (and motor vehicles), developed by the Faculty of Mechanical Engineering at the Military University of Technology (WAT). Currently, this is the only design of its kind that fully meets the freight industry’s expectations: the ability to load flatbed trailers onto the railcar using just the tractor unit, without transshipment devices, and without weight or structural limitations for the trailer itself. The railcar can pivot a loaded trailer sideways (allowing it to disembark anywhere there is a rail siding and space for the truck to maneuver). This means no hydraulic actuator is needed to lift and rotate the railcar. The mechanism is located on the railcar itself, making it independent and mobile. The railcar platform enables a truck to drive on quickly, detach the trailer, and drive off. In wartime transport conditions, this design offers the capability to unload at any suitably prepared temporary location.

Another key advantage of this design—from the point of view of handling large-scale flows in port terminals—is the ability to perform transshipments on all railcars in the train simultaneously. A similar solution, found in the Modalohr system, allows an entire train to be transhipped in about 45 minutes (in the case of the WAT-designed railcar, this process would take slightly less time).

### **Benefits for the Development of Passenger Connections**

In addition to creating a modern freight corridor connecting the ports of Szczecin and Świnoujście with Prague in the Czech Republic, the investment should significantly improve travel from Wrocław to Lubań Śląski and Świeradów-Zdrój. The proposed investments should have a favorable impact on both regional traffic and long-distance travel to this region. These proposals shorten and simplify the journey from Wrocław to Lubań Śląski and Gryfów Śląski, and especially to Świeradów-Zdrój—the largest health resort in Lower Silesia and a major tourist center.



6. The technical and operational assumptions of the WAT-designed railcar perfectly align with the requirements for cooperation with maritime

The proposed route, which bypasses the stations in Zebrzydowa and Węgliniec via Nowogrodziec to Lubań, is not only 15 km shorter than the current connection through Legnica but also eliminates the need to change the direction of travel at the station in Węgliniec. As a result, travel time to the aforementioned localities could be reduced by 20–30 minutes. Compared to the connection via Wałbrzych and Jelenia Góra, this proposed variant shortens the distance to Gryfów Śląski and Świeradów-Zdrój by 6 km, and to Lubań Śląski by 22 km. It should also be noted that the entire stretch from Wrocław to Węgliniec allows speeds of up to 160 km/h, while on Line 274, the speed is significantly lower. Additionally, on the route to Świeradów-Zdrój, trains traveling on Line 274 will also have to change direction at the station in Gryfów Śląski.

The benefit of this proposed solution is not limited to improving the connection between the western part of Lower Silesia and Wrocław. It also has value for enhancing long-distance connections, which is especially important for Świeradów-Zdrój. Spa guests and tourists would



thus gain convenient (including direct) rail links, undoubtedly providing a significant developmental boost to the resort.

**Tab. 1.** Distances in the connections from Lubań Śląski, Gryfów Śląski, and Świeradów-Zdrój to Wrocław. The left column shows the variant via Line 274 through Wałbrzych and Jelenia Góra; the middle column shows the variant via Lines 275 and 282 through Legnica and Węgliniec; the right column shows the same lines after implementation of the proposed investments under the B&BR route.

Wrocław Główny- Jelenia Góra - Gryfów Śląski – Lubań Śląski / Świeradów Zdrój		Wrocław Główny - Legnica - Węgliniec – Lubań Śląski - Gryfów Śląski-Świeradów Zdrój		Wrocław Główny- Legnica- Nowogrodziec–Lubań Śląski- Gryfów Śląski-Świeradów Zdrój	
Jelenia Góra	127 km	Legnica	63 km	Legnica	63 km
Gryfów Śląski	165 km	Węgliniec	136 km	Nowogrodziec	131 km
Lubań Śląski	179 km	Lubań Śląski	157 km	Lubań Śląski	142 km
Świeradów Zdrój	181 km	Gryfów Śląski	171 km	Gryfów Śląski	156 km
		Świeradów Zdrój	186 km	Świeradów Zdrój	171 km

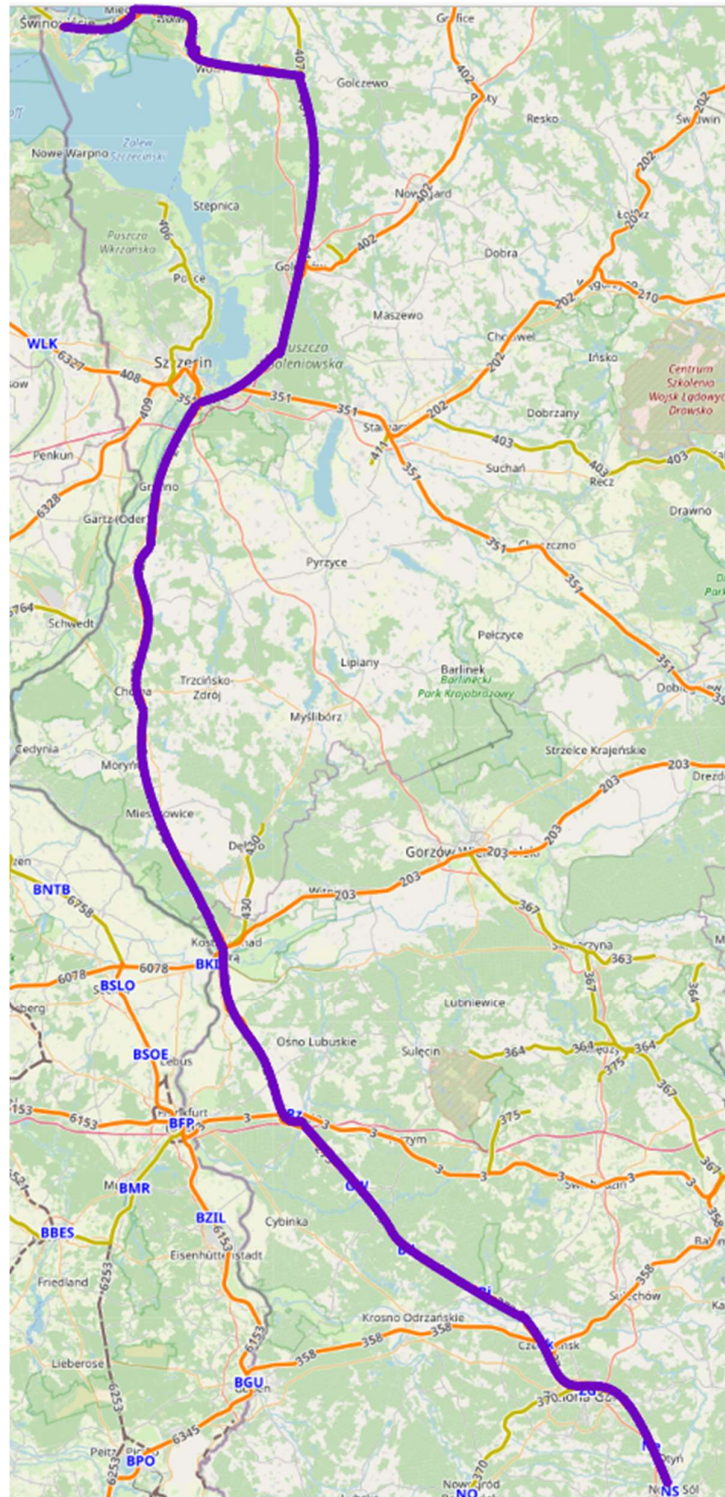
### Proposed route on the Polish side

The line in the proposed layout should guarantee high operational parameters, ensuring high capacity and traffic flow, meeting the technical and operational parameters of the TEN-T core network: the route should be fully electrified, with a maximum freight train speed of 120 km/h, an axle load of 221 kN, and a permissible train length of 740 m. In its final form, the line should be double-track, guaranteeing high capacity and smooth operation of freight traffic.

The proposed route would consist of two parts:

- **Northern part**, commonly referred to as “Naodrzancka,” covering the section from Świnoujście to Nowa Sól, which today entirely forms part of the C59 transport corridor.
- **Southern part**, covering the section from Nowa Sól to the border at Mirsk–Pobiedna, taking over the role of the existing corridor C 59/1 from Nowa Sól to Zawidów and Czech Frýdlant.

The entire northern section of the route from Świnoujście to Nowa Sól is electrified and, except for 6.4 km of Line No. 428 between the stations Szczecin Dąbie and Szczecin Podjuchy, it is double-track. A favorable design profile of the line, which translates into high modernization potential, enabled—following modernization conducted since 2010—an increase in the maximum freight train speed to 120 km/h. Currently, it does not exceed 70 km/h (and even that with numerous restrictions, especially on Line 273). Restoring the parameters achieved during the modernization will require periodic maintenance work.



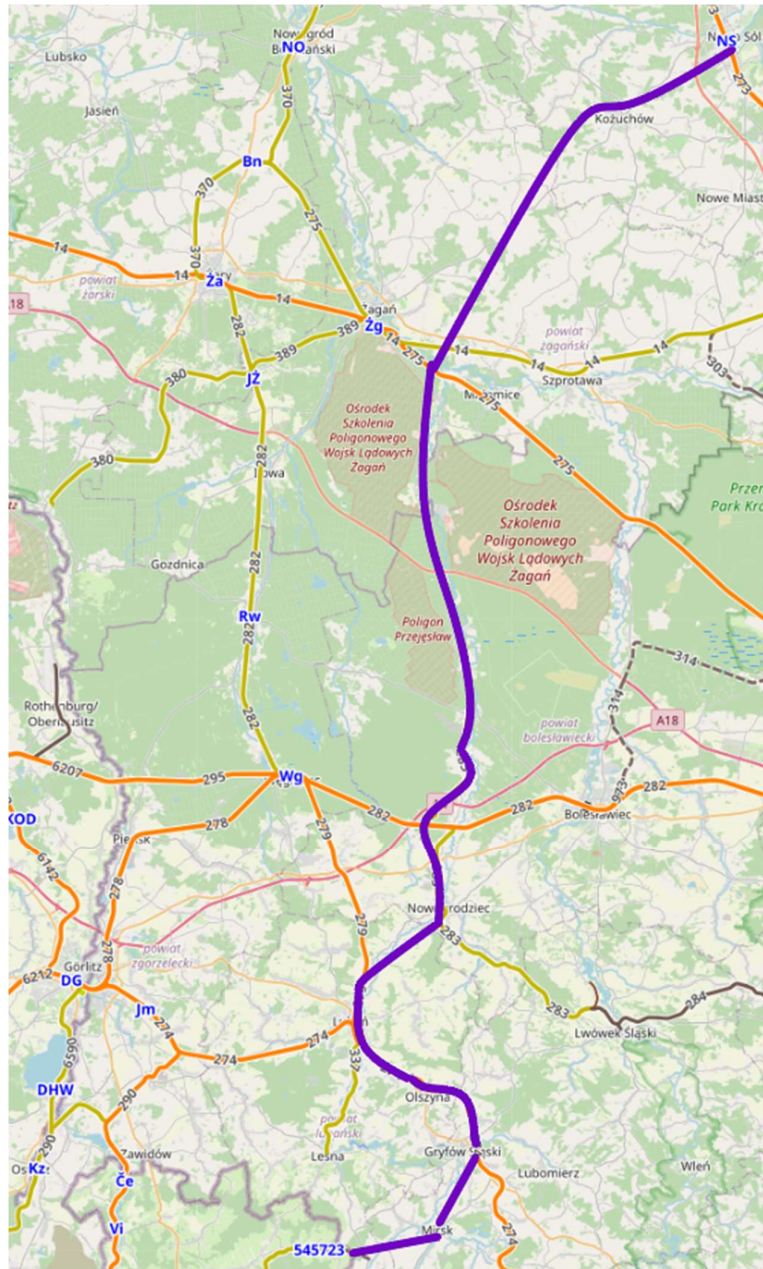
7. Proposed alignment of the B&B Rail route on the Polish side—northern section from Świnoujście to Nowa Sól.

Although the line is dedicated to freight traffic (forming the entire CE-30 route), operating intensive freight traffic on it is hindered by the outdated architecture of some of its stations. In the most extreme cases, the train length that can be accommodated at these stations is limited to just 450 meters. These constraints must be removed: without increasing the length

of the usable tracks, the usefulness of the entire route will be severely restricted, which in turn will have a disastrous effect on the competitiveness of both ports. It should be noted that removing these shortcomings has broader implications—it concerns improving the efficiency of transport along the entire Nadodrze (Nadodrzancka) line, which is crucial for servicing the economic centers of Lower and Upper Silesia.

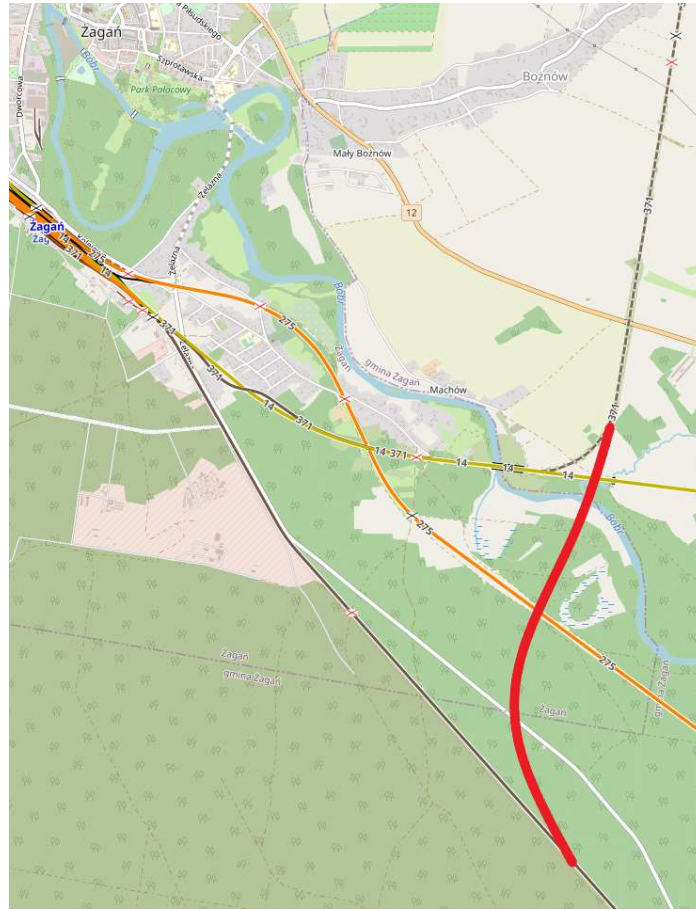
The **southern section**—between Nowa Sól and the state border—is entirely single-track. Except for a short section between Lubań Śląski and Gryfów Śląski, it is completely non-electrified. Compared to the northern section, the southern part of the route requires a substantial overhaul to adapt its parameters to the standards defined for TEN-T lines. At the same time, it is worth considering whether to expand the line from Nowa Sól to the Czech border to a two-track layout right from the first stage of modernization. Given the negligible amount of anticipated passenger traffic on this section of the B&BR route, it may not be necessary to add a second track immediately. However, in the longer term—when the expected increase in freight volumes occurs, and the need for greater capacity arises—an optimal approach to expanding the route will need to be designed.

Instead of a costly variant that involves adding a second track along the entire segment, one could consider the option of activating a **parallel corridor** running from the Bober stop on Line 371 (near Żagań) via upgraded lines 371, 14, 389, 282, 278, 778, 274, 779, 290, 344 to the border crossing at Zawidów. Freight traffic heading south to the Czech Republic would use this corridor, while the original corridor would handle return traffic only. Such a solution—two single-track routes—should be cheaper while still providing high capacity. This approach also offers significant benefits in the event of armed conflict, substantially reducing the risk of the entire route being shut down.



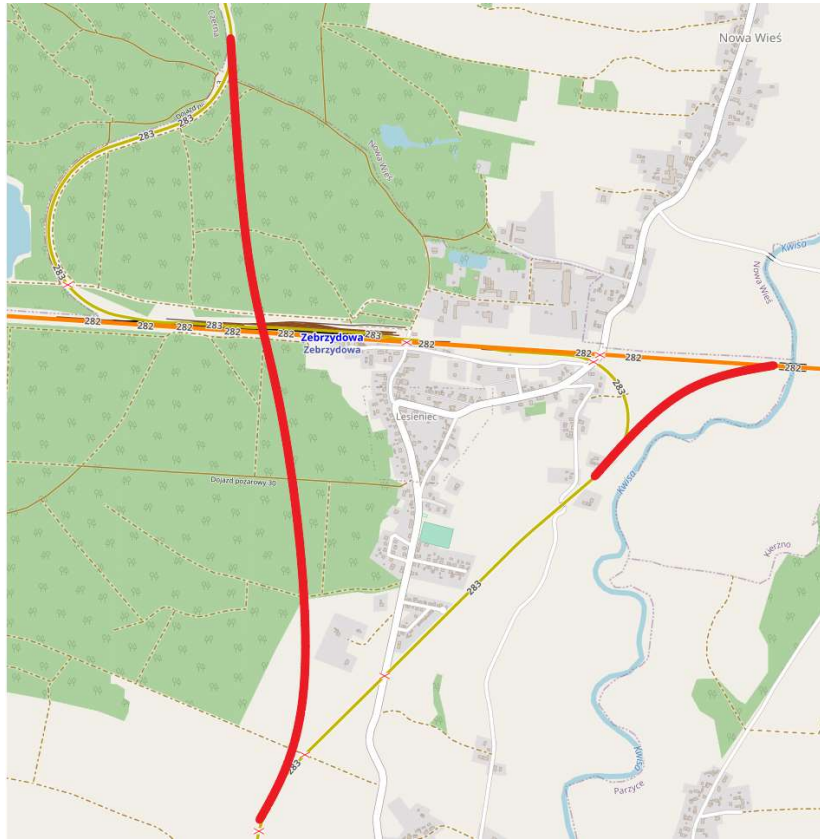
8. Proposed alignment of the B&B Rail route on the Polish side—southern section from Nowa Sól to the PL/CZ border—in the initial single-track variant.



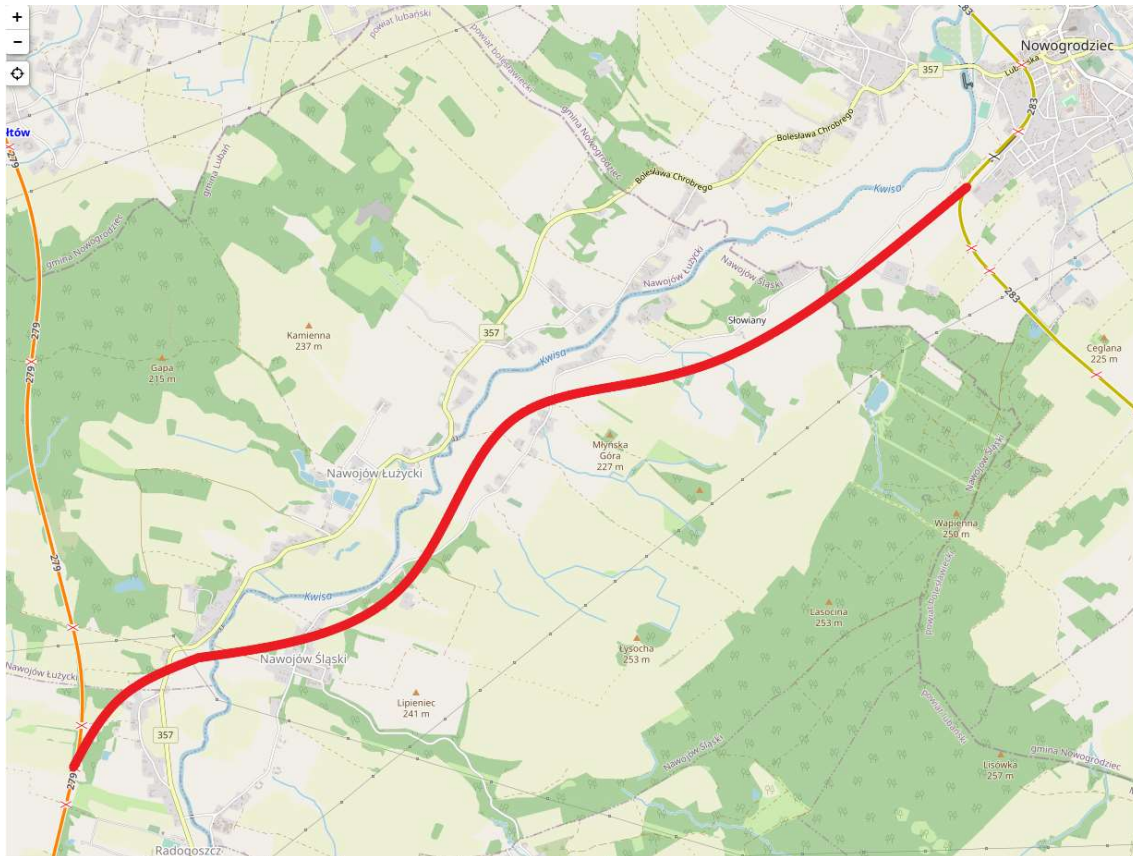


**9.** Proposed connector bypassing the Żagań station in traffic between Lines 371 and 283, aimed at enabling a smooth flow of trains from the ports of Świnoujście and Szczecin to the Czech Republic without passing through the Żagań railway junction or changing direction at Żagań station. As a result, a significant reduction in travel time along this section—by at least 30 minutes—can be expected. Such a solution should also positively affect the capacity of this segment of the route, given that restoring Żagań’s role as an important railway junction makes it reasonable to eliminate through-transit trains from passing through it.





**10.** Proposed route section connecting Lines 283 and 279 between Nowogrodzic and Lubań Śląski, serving as a functional part of the concept for shortening distance and travel time on the Wrocław–Lubań passenger route, as well as optimizing the alignment of the B&B Rail route in the Czech border region.



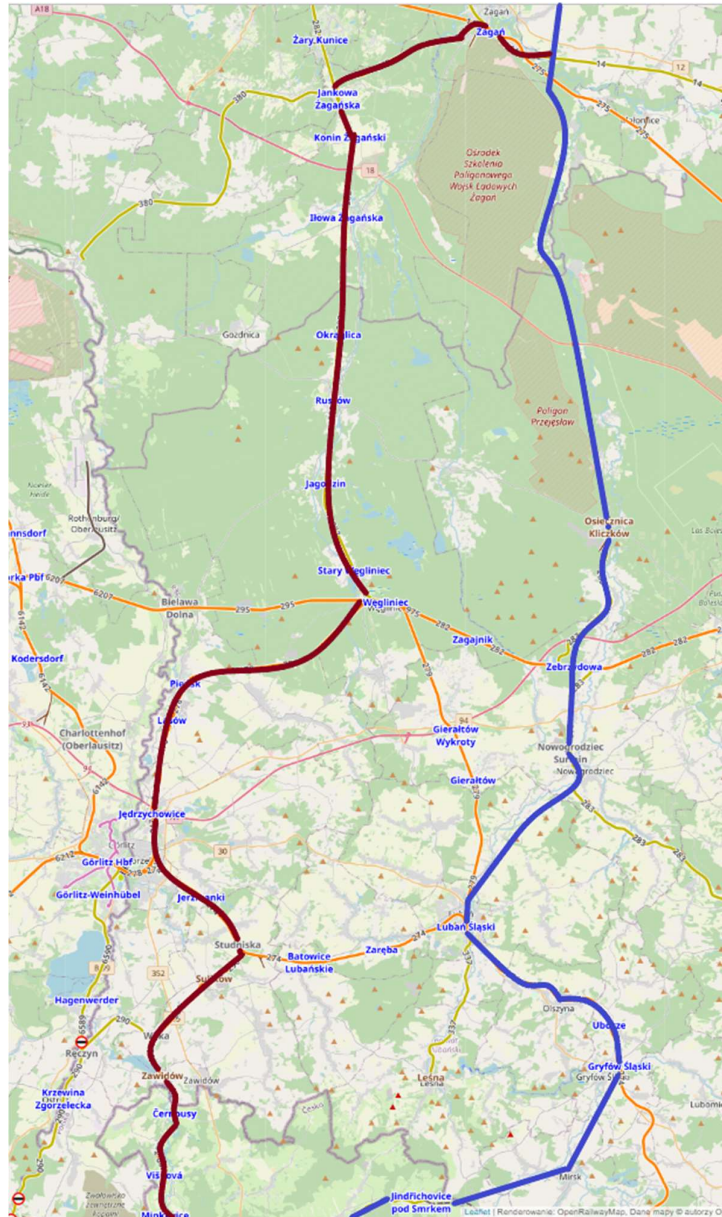
**11.** Proposed bypass connectors avoiding the Zebrzydowa station, serving as part of the concept to shorten distance and travel time for passenger services on the Wrocław–Lubań route, as well as to optimize the B&B Rail route in the Czech border area. On the left, a freight bypass on Line 283 eliminates the crossing of high traffic volumes from two directions in Zebrzydowa. On the right, a descending connector from Line 282 to Line 283. As a result, a significant reduction in travel time can be expected for trains using the B&BR route, as well as for passenger trains running to Lubań Śląski, Gryfów Śląski, and Świeradów-Zdrój.

Summary, the route from Świnoujście to the border in Pobiedna would measure 454.7 km. To implement it in the first (initial) stage (from the Żagań Bober stop to Pobiedna, with a single-track line), the following is required:

1. **Revitalization** of 88.2 km of railway lines, of which 45.7 km are already in advanced stages of preparation (37 km of Line Lk 283 funded by the Ministry of National Defense, and 8.7 km of Line Lk 317 funded by the Lower Silesian Marshal's Office).
2. **Modernization** of 17.9 km of railway lines (Lk 279 and Lk 274).
3. **Construction** of three new sections with a total length of 13.5 km, including two bridges over the Bóbr and Kwisia rivers. It should be noted that the additional planned connector from Line 282 to Line 283 toward Nowogrodziec (bypassing Zebrzydowa station and eliminating the need to reverse direction) is an auxiliary, accompanying task. Its sole purpose is to improve both long-distance and regional connections from Wrocław to Lubań Śląski and Świeradów-Zdrój.
4. **Electrification** of 105.7 km of railway lines.

The final layout of the route—with the entire line being double-track—can be carried out in two alternative ways:

1. **Expanding** the southern section from the Żagań Bober stop to Pobiedna—adding a second track over 98.1 km and electrifying 80.2 km of the line.
2. **Using** the existing C59/1 corridor from the Żagań Bober stop through Węgliniec and Zgorzelec to the border crossing in Zawidów. This would require the modernization and electrification of a total of 69 km of lines and would yield almost the same capacity as the first option. In this arrangement, traffic from the Czech Republic toward the ports would pass through the border crossing in Pobiedna, while traffic in the opposite direction from the Żagań Bober stop would be directed toward the crossing in Zawidów. Given the projected low passenger volume on both routes, it would ensure good operational parameters of the line at significantly lower financial costs.



12. Proposed final traffic layout of the B&B Rail route from Żagań to the Czech border after the route's expansion. The route to be implemented in the first (initial) stage is marked in blue; the corridor from Żagań to the Zawidów crossing via lines 14, 389, 282, 278, 778, 274, 779, 290, 344—planned for the subsequent stage—is marked in brown.



**Tab. 2.** Proposed B&B Rail Routes from Świnoujście to the PL/CZ Border  
(Northern Section: Świnoujście–Żagań)

**Proponowane przebiegi szlaku Baltic&Bohemian Rail ze Świnoujścia do granicy PL/CZ**

**Odcinek Północny (Świnoujście – Żagań)**

Odcinek	Linia	Dł. odcinka/narastająco	Parametry linii
<b>Świnoujście Port - Szczecin Dąbie</b>	401	100 km/ 100 km	Dwutorowa, zelektryfikowana klasy D3/C3; dopuszczalny nacisk 221 kN, v max 70 km/h (13 km 80 km/h; 4 km 50 km/h)
Szczecin Dąbie - Szczecin Podjuchy	428	6,4 km/ 106,4 km)	Dwutorowa, zelektryfikowana klasy D3/C3; dopuszczalny nacisk 221 kN v max 60/80 km/h
Szczecin Podjuchy – Nowa Sól	273	217,5/ 323,9 km	Dwutorowa, zelektryfikowana klasy D3/C3; dopuszczalny nacisk 221 kN (na 68 km szlaku do 196 kN), v max 70 km/h z ograniczeniami: do 30km/h (40,0 km), do 40km/h (66,5 km), do 50 km/h (60,3km), na 7-3 km toru 100 km/h
Nowa Sól – <b>Żagań p.o. Bober</b>	371	36,4 km/ <b>359,3 km</b>	Jednotorowa, niezelektryfikowana, aktualnie wyłączona z eksploatacji.

**Odcinek Południowy (Żagań – Pobiedna granica PL /CZ) korytarz wschodni (podstawowy)**

Odcinek	Linia	Dł. odcinka/narastająco	Parametry linii
<b>Żagań p.o. Bober – p.o. Trzebów</b>	<b>brak</b>	2,0 km/ 361,3 km	Odcinek projektowany
p.o. Trzebów - p.o. Zembrzydowa Północ	283	36,4 km/ 397,7 km	Jednotorowa, niezelektryfikowana; PKP PLK podpisał umowę na rewitalizację (zakończenie robót do 2026 roku)
p.o. Zembrzydowa Północ - p.o. Zembrzydowa Wies	<b>brak</b>	2,0 km/ 399,7 km)	odcinek projektowany
p.o. Zembrzydowa Wies - Nowogrodzic	283	6,5 km / 406,2 km	Jednotorowa, niezelektryfikowana, dopuszczalny nacisk 196 kN v-max 50 km/h
Nowogrodzic - Radogoszcz	<b>brak</b>	8,5 km/ 414,7 km	odcinek projektowany
Radogoszcz – Lubañ Śląski	279	3,5 km/ 418,2 km	Jednotorowa, zelektryfikowana, dopuszczalny nacisk 211 kN v-max 60 km/h
Lubań Śląski - Gryfów Śląski	274	14,4 km/ 432,6 km	Jednotorowa, zelektryfikowana, dopuszczalny nacisk 211 kN v-max 50 km/h
Gryfów Śląski – Mirsk	317	8,7 km/ 441,3 km	W trakcie rewitalizacji
Mirsk – <b>Pobiedna (granica PL/CZ)</b>	284B	6,1 km/ <b>457,4 km</b>	Jednotorowa, niezelektryfikowana, wyłączona z eksploatacji.

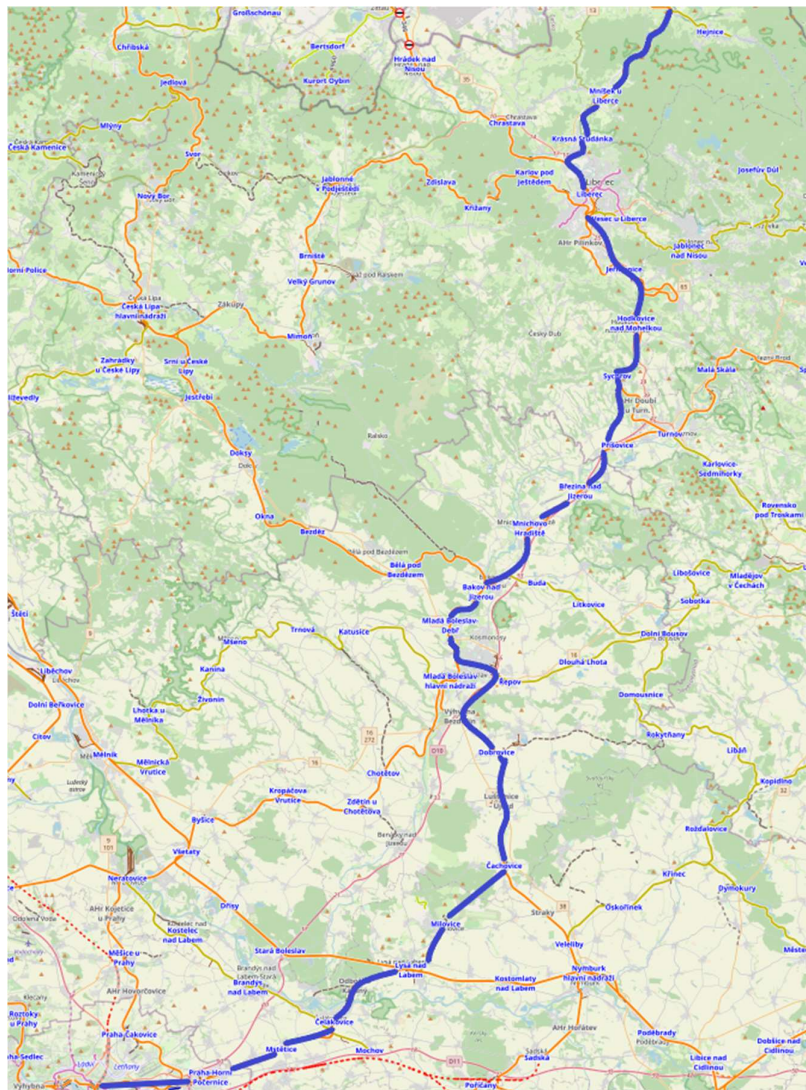
**Odcinek Południowy (Żagań – Zawidów granica PL /CZ) korytarz zachodni (alternatywny)**

Odcinek	Linia	Dł. odcinka/ Dł. trasy narastająco	Parametry linii
<b>Żagań p.o. Bober – Żagań</b>	371	3,7 km/ 363,0 km	Jednotorowa, niezelektryfikowana, aktualnie wyłączona z eksploatacji.
Żagań - Jankowa Żagańska	389	11,1 km/ 374,1 km)	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 196 kN v-max 30 km/h
Jankowa Żagańska - Węglińiec	282	32,5 km / 406,6 km	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 196 kN v-max 30 km/h (13 km), 50 km/h (17 km), 60 km/h (11 km)
Węglińiec – Zgorzelec R1	278	25,1 km/ 431,7 km	Dwutorowa, zelektryfikowana, dopuszczalny nacisk 221 kN, v max 80 km/h
Zgorzelec R1 - Zgorzelec R11	778	1,7 km/ 433,4 km	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 221 kN v-max 40 km/h
Zgorzelec R11 - Studniska	274	6,8 km/ 440,2 km	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 196 kN v-max 50 km/h
Studniska - Las	779	0,8 km/ 441,0 km	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 196 kN v-max 40 km/h
Las-Wilka	290	7,5 km/ 448,5 km	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 211 kN v-max 40-50 km/h
Wilka – <b>Zawidów (granica PL/CZ)</b>	344	4,9 km/ <b>453,4 km</b>	Jednotorowa, niezelektryfikowana dopuszczalny nacisk 196 kN v-max 60 km/h

### Condition of Infrastructure and Implementation of Infrastructure Modernization Processes on the Czech Side of the Proposed Railway Route

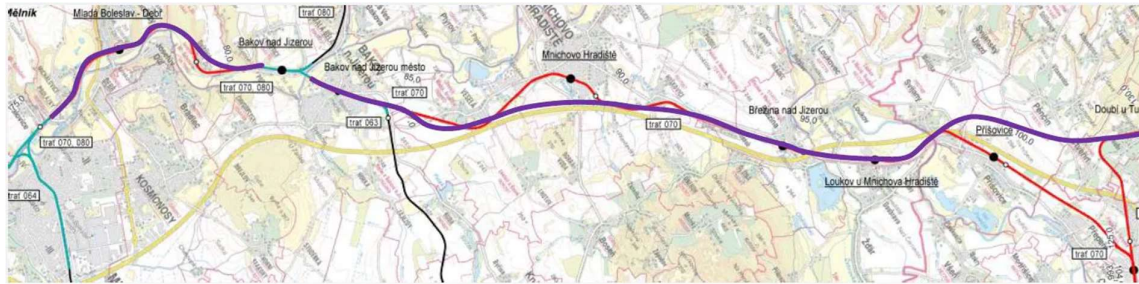
A key issue regarding the feasibility of the proposed route is the stance of the Czech partner. Currently, the infrastructure on the Czech side of the proposed route lags significantly behind the standards of modern international connections. However, after years of analyses and studies, this situation is set to change fundamentally. A feasibility study for the modernization (or rather the deep reconstruction) of the entire connection from Prague to Liberec was recently completed.

The analyses show that three efficient variants are economically justified, two of which assume adapting the route to a speed of 200 km/h for passenger traffic. These variants concern the section from Mladá Boleslav město – Liberec – state border. Part of the proposed solution includes new line segments, some of which would run through tunnels. The process of selecting the recommended variant is currently underway. The goal is to reduce travel time from the Czech capital to Liberec to 70 minutes; at present, it takes over 130 minutes. Until a final choice has been made, the Ministry of Transport does not wish to disclose the estimated costs.

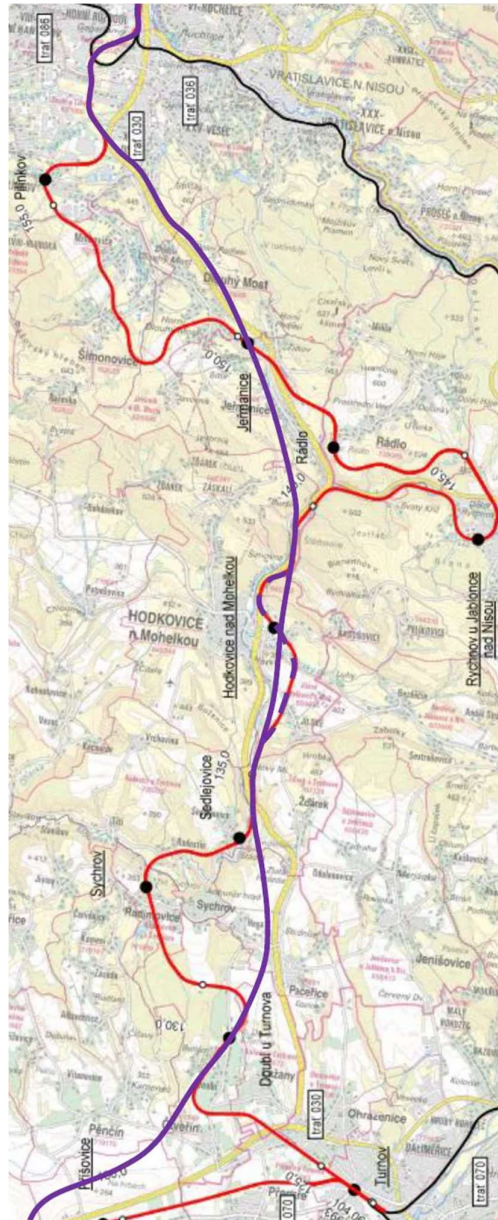


13. Route of the B&B Rail on the Czech side from Prague to Raspenava near Liberec on the Frýdlant–Liberec line.





14. Proposed alignment of the Mladá Boleslav–Turnov section as part of the modernization of the Prague–Liberec connection [3]



15. Proposed alignment of the section from Turnov to Liberec within the modernization of the Prague–Liberec connection [4]

At the same time, an update is being carried out for projects aimed at speeding up the Prague–Mladá Boleslav connection. The first involves the Lysá nad Labem–Čachovice section, covering the modernization of the existing Lysá nad Labem–Milovice line and the construction of a new segment from Milovice to Čachovice. This investment is set to begin in June 2027 and be completed by the end of 2030. The costs are estimated at CZK 11.94 billion. Another project involves the modernization of the Nymburk–Mladá Boleslav railway line, which, on the Čachovice–Mladá Boleslav segment, is to become a double-track main line adapted to speeds of up to 160 km/h. The planned implementation period for this investment is from May 2027 to December 2029.

The final elements of the project pertain to the reconstruction of the Mladá Boleslav railway junction. The first concerns the reconstruction of the Mladá Boleslav město–Mladá Boleslav hl. n. railway section, including a comprehensive redevelopment of Mladá Boleslav město station and the line between Mladá Boleslav město and Mladá Boleslav hl. n. Work is currently underway on the project plan and documentation needed for the zoning decision. The expected implementation period is from August 2028 to February 2031.

The second involves the construction of a railway bypass of Mladá Boleslav station from the Bezděčín junction to the planned Mladá Boleslav East station. The project envisions building a new double-track line (running east of the D10 motorway) that will connect Bezděčín station with Mladá Boleslav město station (beyond which a connector will be built to allow trains to head in the Liberec direction). Work is currently in progress on the documentation for the zoning decision. Construction is slated to begin in August 2026 and end by late 2028. The estimated cost of this investment is CZK 6.71 billion.



**16.** Proposed scope of reconstruction and modernization of the route section on the Czech side from the PL/CZ border in Pobiedna to Raspenava near Liberec on the Frýdlant–Liberec line, in view of implementing the B&BR route along its proposed alignment on the Polish side.

The tracks on the new alignment are marked in red.

### Summary

Forecasts from analysts indicate that over the next 15–20 years, container handling in Polish ports could increase to 8 million TEU, a 167% rise compared to the current level. According to

Professor Dariusz Zarzecki from the University of Szczecin, the port complex at the mouth of the Oder—which currently starts from a very low base but has a modern deep-water container terminal in Świnoujście—has the potential for exceptionally dynamic growth. This terminal, meeting market demands, should contribute to a radical boost in the position of the Szczecin–Świnoujście port complex in container handling in the Baltic Sea region, thereby strengthening the region’s economy and increasing Poland’s attractiveness for investment.

A key factor in the development of the port in Świnoujście (and partly also in Szczecin) is establishing strong ties with the Czech market—or rather, restoring the position that both ports held before 1989. Achieving this requires competitive advantages over the largest German ports, which have long dominated this market; it will take significant effort and comprehensive actions to succeed. These ports will certainly not relinquish such a large market and the substantial profits from serving maritime transit for an economically robust region without a fight. Naturally, building modern infrastructure featuring a container hub capable of accommodating the largest ships is an undeniable asset—indeed, a prerequisite for competing successfully. However, by itself, it is far from sufficient. Without modern railway lines ensuring efficient links between the port and its hinterland—the main originators and recipients of cargo—this struggle would be doomed from the start, and much of the considerable funding invested in the development of our Oder-region ports would be largely wasted.

The obvious conclusion, therefore, is the need to prepare a comprehensive plan: a logistics project covering both port investments and the essential railway infrastructure investments leading to the port. This process should also incorporate an additional factor—armed forces, with their logistical requirements in both peacetime and wartime. The synergy and complementarity of the civilian and military objectives outlined here can elevate the priority level of the project, open up additional funding sources, and ultimately enable its faster and more optimal implementation.

#### **Source materials**

- [1] <https://www.gospodarkamorska.pl/glebokowodny-terminal-kontenerowy-w-swinoujsciu-w-przyszlym-roku-poznamy-wykonawce-61270#lg=1&slide=0>
- [2] <https://builderpolska.pl/2021/05/28/cemex-uczestniczy-w-modernizacji-terminala-w-swinoujsciu/>
- [3] <https://zdopravy.cz/detailne-tri-nove-tunely-200-km-h-a-castecne-jednokolejka-jak-se-ma-zmenit-cestovani-mezi-prahou-a-libercem-163073/>
- [4] <https://zdopravy.cz/detailne-tri-nove-tunely-200-km-h-a-castecne-jednokolejka-jak-se-ma-zmenit-cestovani-mezi-prahou-a-libercem-163073/>