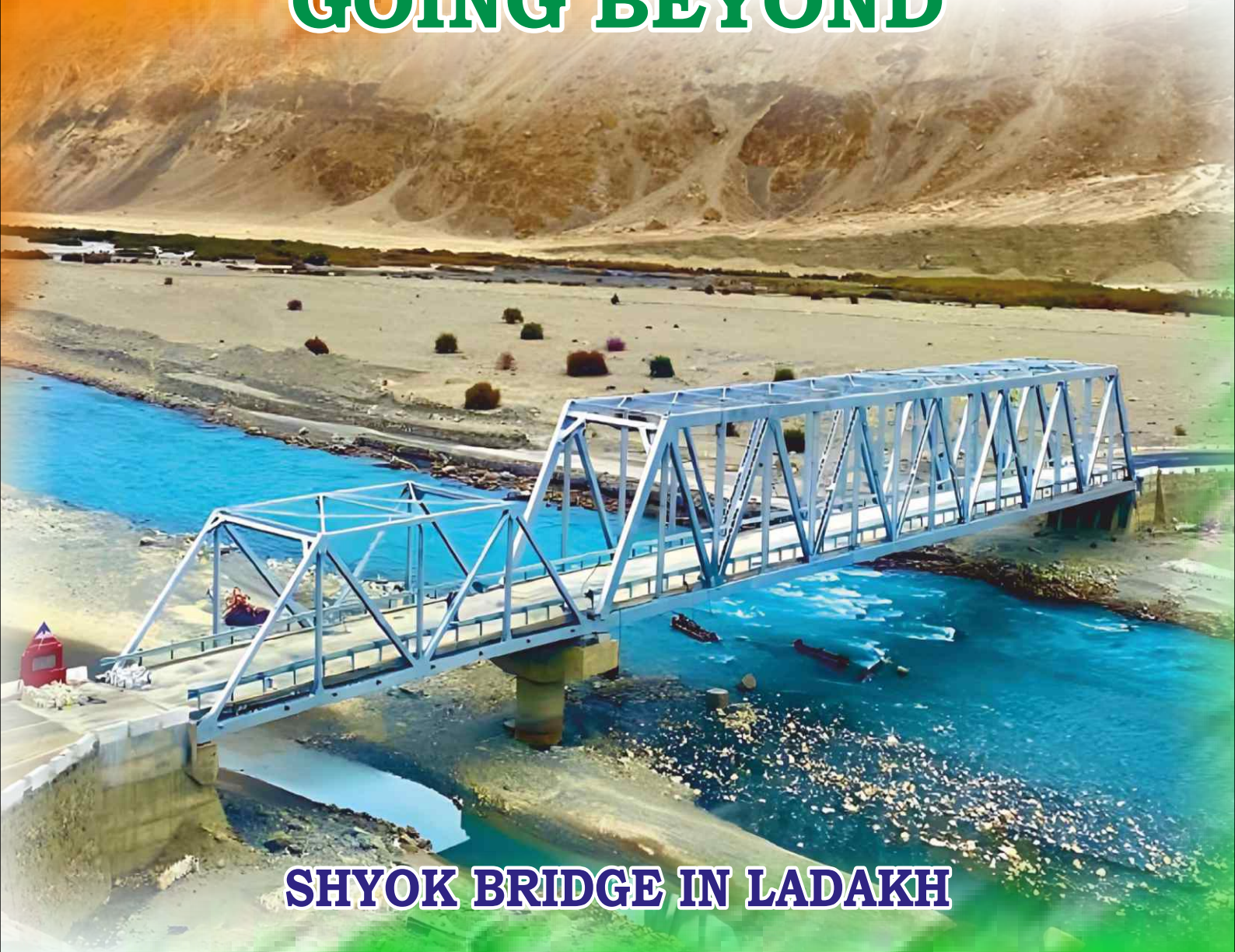


NATION'S BRO

LOOKING AHEAD
GOING BEYOND



SHYOK BRIDGE IN LADAKH

...WE WILL EITHER FIND A WAY OR MAKE ONE...



श्रमेण सर्वम् साध्यम्

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श्रमेण सर्वम् साध्यम्

INDEX

1. Accelerated Pace of Work

2

2. Budget Expenditure

28

3. Connectivity Along Borders

30

4. Major Initiatives

42

**5. Adoption of New Technologies
in Construction**

52

6. GeM & Surge in Automation

66

7. Adventure & Cohesiveness

72



श्रमेण सर्वम् साध्यम्

INDEX

8. Women Empowerment

76

9. Welfare Measures

82

**10. Major Rescue & Recovery
Operations**

92

11. Training & Courses

98

12. Coverage of Good Works

102

13. Pride of BRO

140

14. Conclusion

146



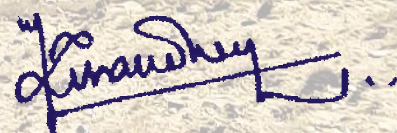
MESSAGE

Lt Gen Rajeev Chaudhry, VSM DGBR & Col Comdt BRO

Since its raising in 1960, BRO has been instrumental in Nation Building through infrastructure development in border areas. This has resulted in strengthening our defence preparedness and socio-economic development of the border regions. BRO remains committed to contribute towards Government impetus of accomplishing strategic objectives in the region.

The expectations of the environment from BRO have grown exponentially. Therefore, the highest levels of professionalism need to be maintained and I am confident that BRO shall overcome all challenges through dedicated team effort. In the past three years, BRO has achieved many remarkable feats and achieved accolades in every domain, making the Nation proud. This document endeavours to summarise some of them and I am sure, will make an interesting reading, besides instilling a sense of pride in anyone who has been associated with us.

Jai Hind! Jai BRO!!



**(Rajeev Chaudhry)
Lieutenant General
DGBR & Col Comdt BRO**

Introduction

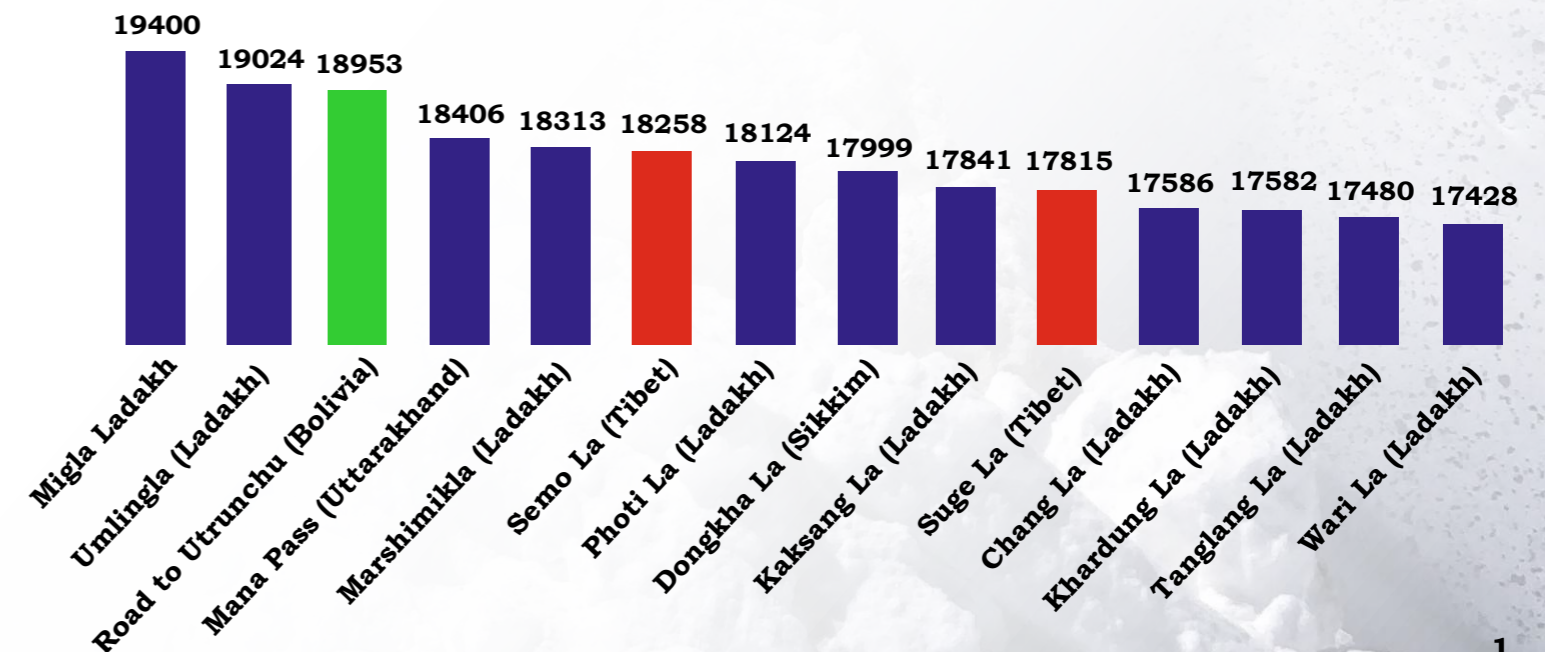
Border Roads Organisation is a premier road construction executive force which provides support to, and is an integral part of the Indian Armed Forces under the MoD. BRO primarily meets the defence requirement towards infrastructure development of remote border areas of Northern & North-Eastern States. The infrastructure development includes Roads, Bridges, Highways, Airports, Tunnels, Buildings and other structures. Apart from strategic/defence requirements, these infrastructure also cater for the socio-economic development of the Nation. BRO has contributed immensely in socio economic development of Northern & North-Eastern Regions and people living in border areas have tremendous faith on BRO for maintenance of lifelines leading to these areas.

BRO has been rendering yeoman service to the Nation for more than six decades. Over the past 63 years, the organization has constructed more than 61,500 Km of roads, 979 permanent bridges with a total length of over 69,000 metres, 06 Tunnels and 21 airfields under adverse climatic

and geographical conditions. BRO has its presence in 11 states and three Union Territories (including Andaman and Nicobar Islands) and Bhutan. The organisation has to its credit some of the most challenging roads, highest bridges and state of the art airfields and tunnels in the most difficult terrain across the country.

BRO is the only Government agency in the country which has the inherent capability of undertaking road infrastructure projects through departmental execution which gives it a unique advantage over its competitors.

BRO takes great pride in the fact that roads over 11 out of the 14 highest Motorable Passes in the World have been made by BRO.

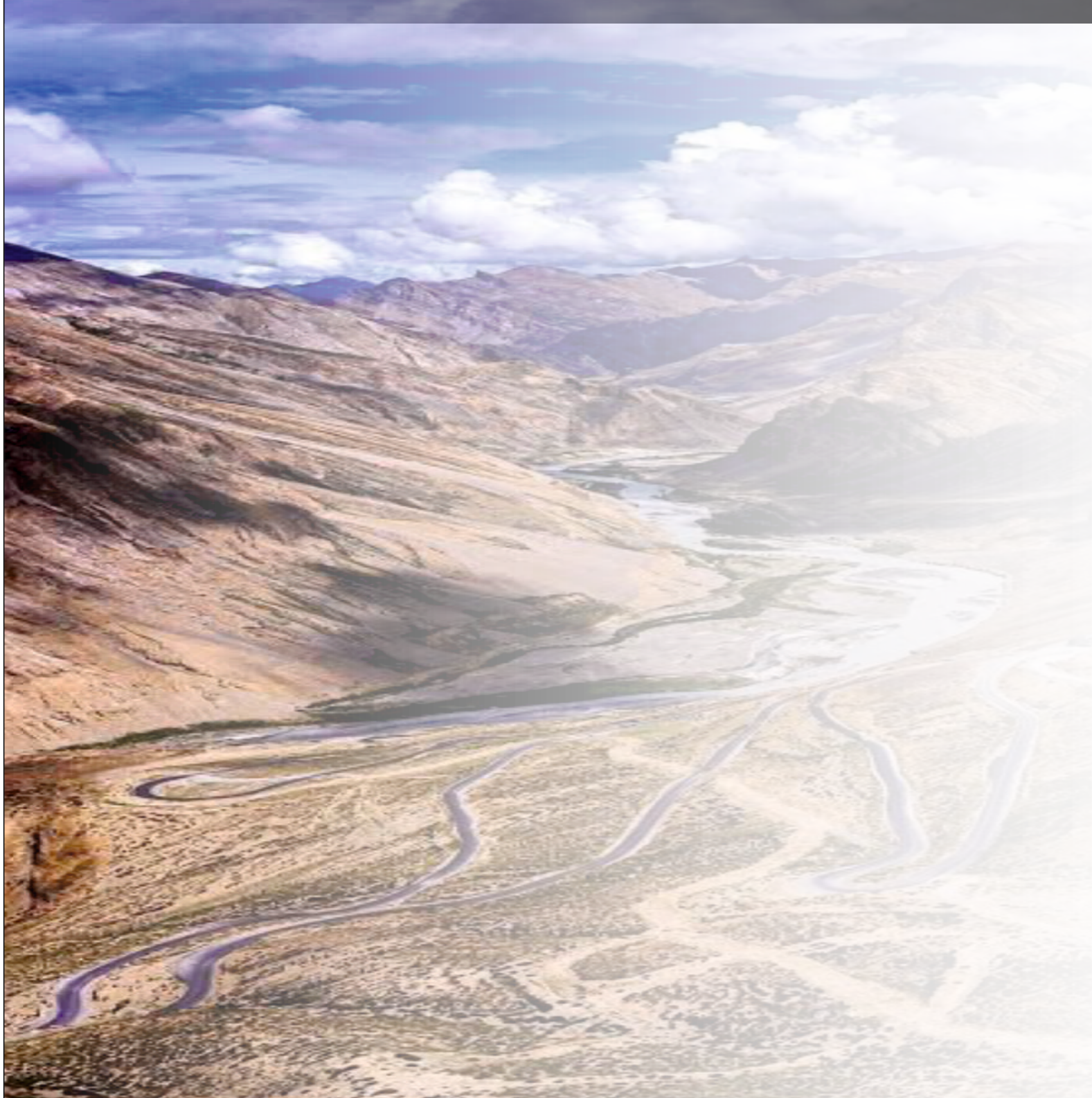




ACCELERATED PACE OF WORK

Dedication of 102 Infrastructure Projects to the Nation in the year 2021

State	Roads	Bridges	Total
UT of J & K	01	13	14
UT of Ladakh	03	16	19
Himachal Pradesh	-	08	08
Uttarakhand	-	09	09
Sikkim	01	-	01
West Bengal	-	09	09
Arunachal Pradesh	10	30	40
Mizoram	-	01	01
Nagaland	-	01	01
Total	15	87	102



Inauguration of 12 Roads on 17 June 2021



Inauguration of 03 Roads & 24 Bridges on 28 Dec 2021



Inauguration of 63 Bridges on 28 June 2021

As part of Azadi Ka Amrit Mahotsav, in the year 2021, BRO delivered a total of 102 Projects (87 Bridges and 15 Roads) and dedicated them to the Nation.

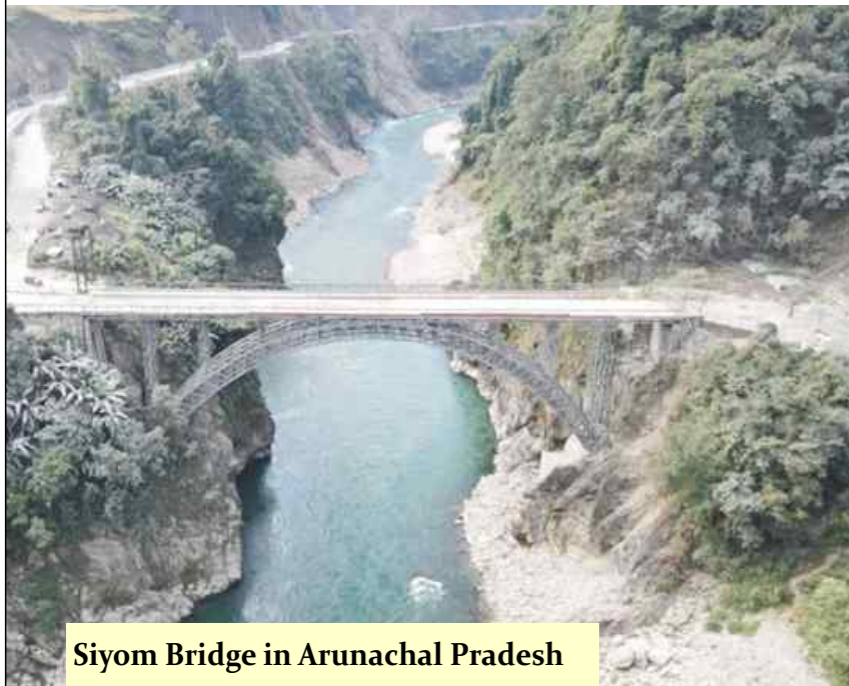
Dedication of 103 Infrastructure Projects to the Nation in the year 2022

In the year 2022, BRO delivered a total of 103 Projects (67 Bridges, 30 Roads, two Helipads, one Carbon Neutral Habitat and three Projects for enhancement of defence Potential) and dedicated them to the Nation. These Infrastructure Projects were constructed under challenging weather conditions in the most inhospitable terrain locations and completed in record time frame. Many of these Projects were constructed in a single working season using state-of-the-art technology.



Inauguration of 75 Infrastructure Projects on 28 Oct 2022

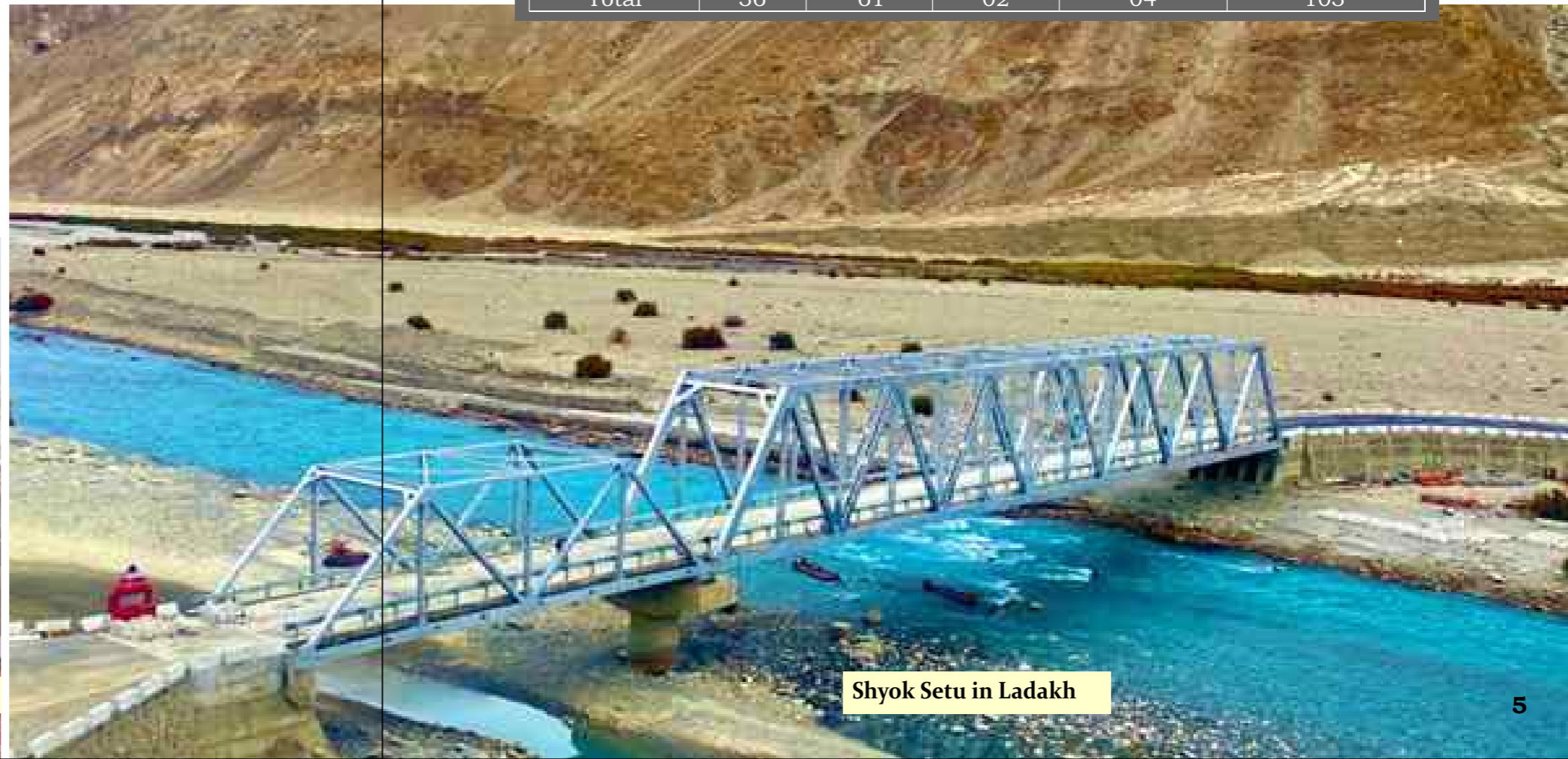
State	Roads	Bridges	Helipads	Misc	Total
Rajasthan	06	-	-	02	08
Punjab	01	2	-	01	04
UT of J & K	08	16	-	-	24
UT of Ladakh	08	15	02	01	26
Himachal Pradesh	-	03	-	-	03
Uttarakhand	01	07	-	-	08
Sikkim	06	-	-	-	06
West Bengal	01	-	-	-	01
Arunachal Pradesh	05	18	-	-	23
Total	36	61	02	04	103



Siyom Bridge in Arunachal Pradesh



Inauguration of 28 Infrastructure Projects on 03 Jan 2023



Shyok Setu in Ladakh

Completion & Dedication of 90 Infrastructure Projects in the year 2023 (till Sep 2023)

In the year 2023 (till Sep 2023), a total of 90 Projects (61 Bridges, 24 Roads, two Helipads, two Airfields & one Tunnel) have been completed & dedicated to the Nation on 12 Sep 2023.



Inauguration of 90 Infrastructure Projects on 12 Sep 2023



500 m long Nechiphu Tunnel on Balipara Charduar Tawang Road

State	Roads	Bridges	Helipads	Runways	Tunnels	Misc	Total
Rajasthan	-	-	-	-	-	01	01
Punjab	01	-	-	-	-	-	01
UT of J & K	02	09	-	-	-	-	11
UT of Ladakh	08	17	01	-	-	-	26
Himachal Pradesh	01	02	-	-	-	-	03
Uttarakhand	-	01	-	-	-	-	01
Sikkim	-	02	-	-	-	-	02
West Bengal	-	-	-	02	-	-	02
Arunachal Pradesh	08	27	-	-	01	-	36
Nagaland	01	-	-	-	-	-	01
Mizoram	03	02	-	-	-	-	05
Andaman & Nicobar Islands	01	-	-	-	-	-	01
Total	61	24	01	02	01	01	90



422.90 m Long Devak Bridge on Bishnah-Kaulpur-Phulpur Road



Bagdogra Runway in West Bengal

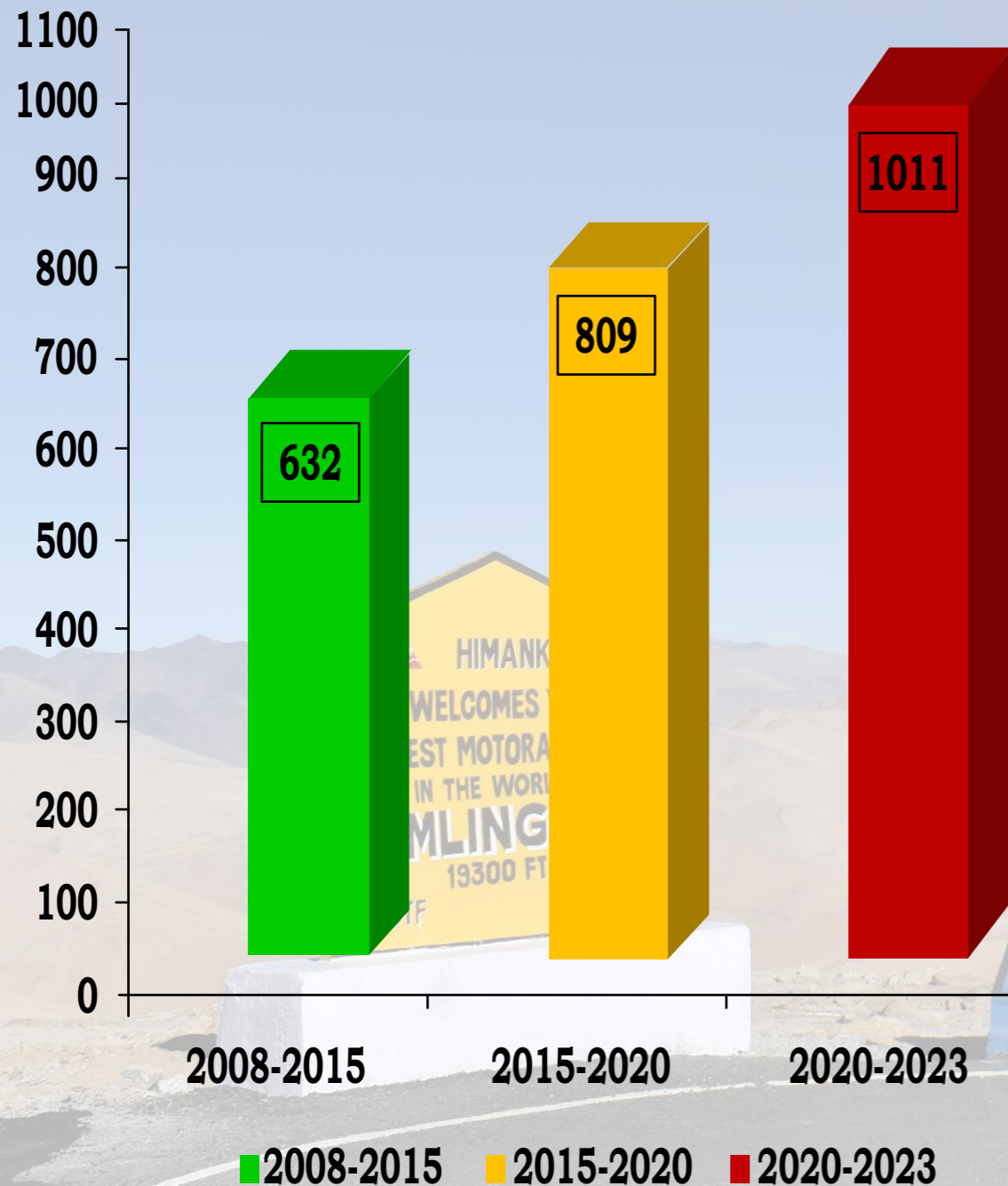


Barrackpore Runway in West Bengal

Accelerated Work on Roads in Forward Areas

In the past few years, there has been an enormous surge in the construction of roads in BRO with an average of 1011 kms of roads being constructed every year between 2020 to 2023 compared to 809 kms between 2015 to 2020 and just 632 Kms between 2008 to 2015.

Average Road Length Constructed (Km/Year)



Road over Umling La.

BRO has constructed the Highest Motorable Road in the World over Umling La in Southern Ladakh at 19024 feet, on the 52 Km long Chisumle-Demchok Road. The road has enabled faster induction of forces in this sector and has given a major boost to tourism and socio-economic conditions of the locals in this region. This road has been recognised as the World's Highest Road by Guinness World Records on 16 Nov 2021.



Hon'ble Prime Minister Shri Narendra Modi at Mana in Uttarakhand

Blacktopping of Hapoli Sarli-Huri Road in Arunachal Pradesh

The 278 Km Hapoli-Sarli-Huri Road leading to Huri, one of the remotest places in Kurung Kumey District of Arunachal Pradesh has been blacktopped for the first time since independence. The locals have expressed their gratitude for constructing this road. This road will not only assist the security forces but will act as a lifeline for the local populace. Its completion by BRO has successfully initiated a trend of reverse migration of locals towards the border and created a positive strategic environment. It is a matter of great pride for BRO that the blacktopping of this road has also received accolades from all quarters including the Hon'ble Prime Minister, Shri Narendra Modi who has commended the feat.



Tweet by Hon'ble PM Shri Narendra Modi

Stay of Hon'ble PM at Mana

During a Mega event on 22 Oct 2022, Hon'ble Prime Minister, Shri Narendra Modi laid the Foundation Stone for widening of two roads i.e. Mana to Mana Pass (NH-07) and Joshimath to Malari (NH-107B) in Uttarakhand to be undertaken by BRO at a cost of Rs 997 Cr. Widening of these roads will boost defence preparedness and socio-economic development in these areas.



Construction of TCC-Taksing Road in Arunachal Pradesh.

This entire road having a length of 44.50 Km has been black topped, with 90% of the black topping completed in the last one year alone. The travel time from Limeking to Taksing has been reduced by more than half. A 2.5 Ton vehicle that earlier used to take more than eight hours to reach Taksing, now reaches in less than four hrs, whereas a light vehicle can now reach Taksing in less than three hours.

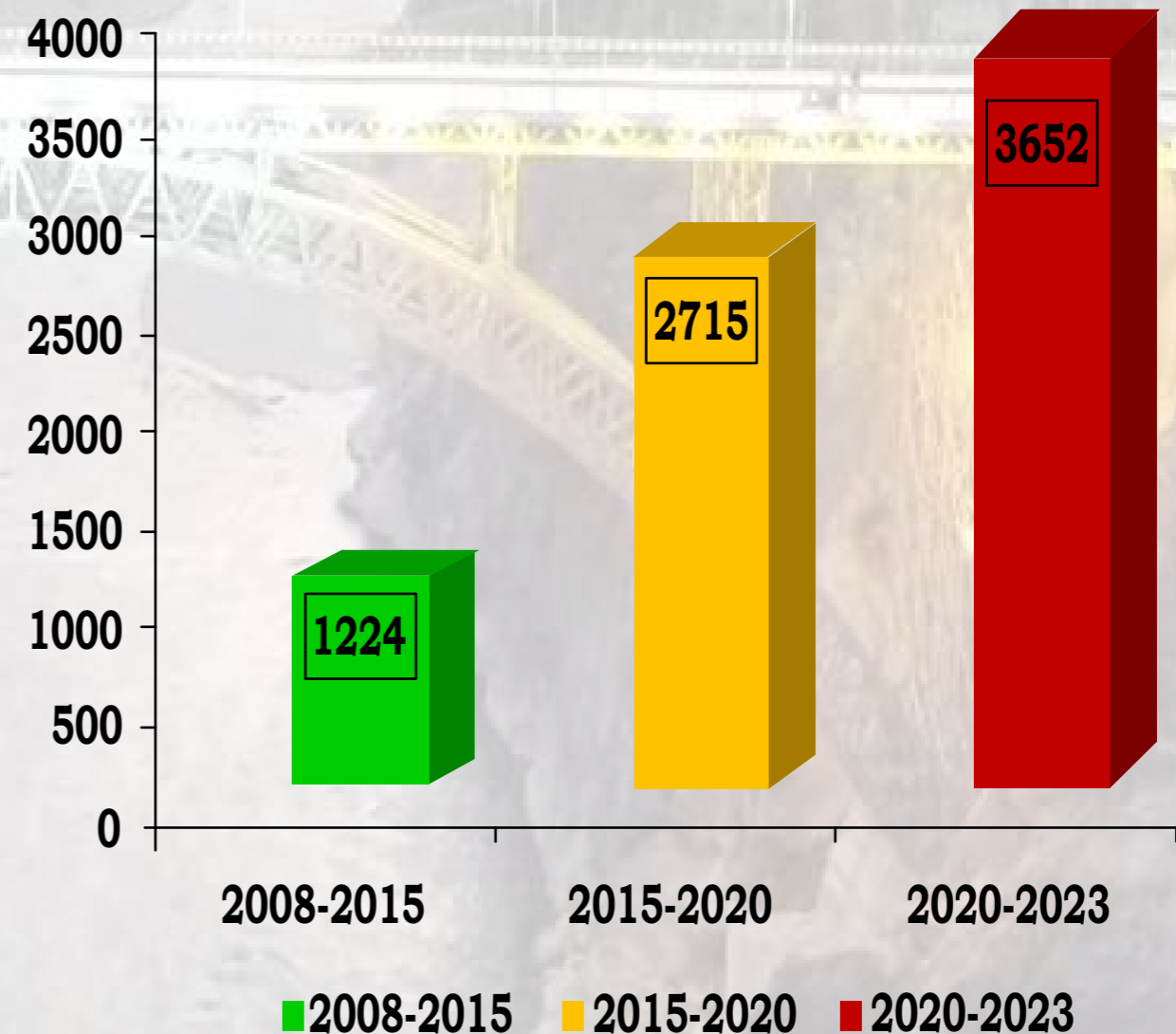


TCC-Taksing Road

Accelerated Work on Bridges

In the past few years, there has also been an enormous surge in the construction of bridges in BRO with an average of 3652 m of bridges being constructed between 2020 to 2023 as compared to 2715 m between 2015 to 2020 and just 1224 m between 2008 to 2020.

Average Bridge Length Constructed (m/Year)





250 m long Tarnah-II Bridge on Parmanand-Kathlaur-NJS-Parol Road



30 m long Lai Bridge completed in 240 days



45 m long Simar Bridge completed in 180 days



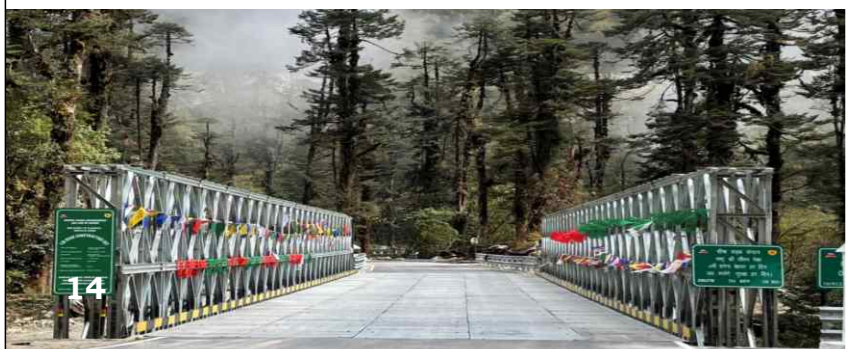
181.2 m long Pakka Kotha Bridge completed in 212 days



110 m long Bhairabkund Bridge on O-K-S-R-T Road



30.2 m long Benadi Bridge completed in 90 days

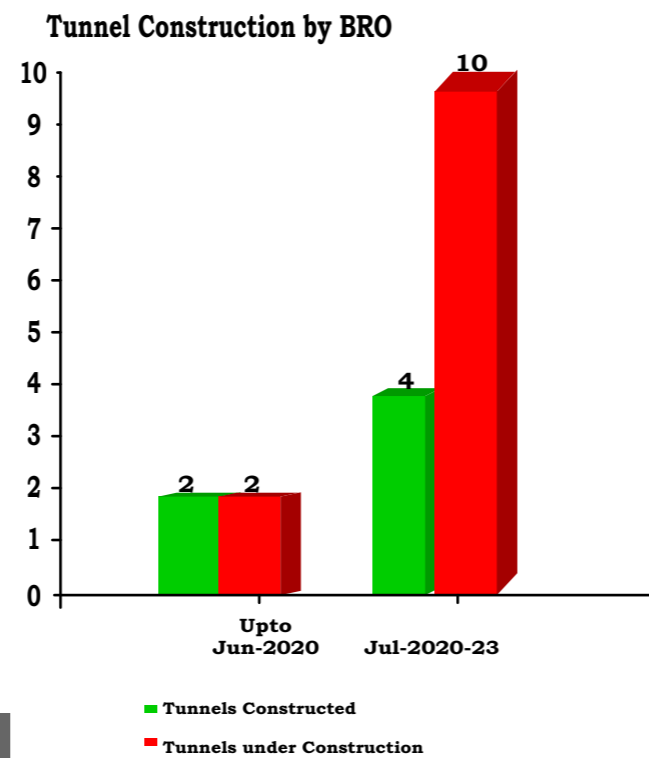


45 m long Sarak Korang Bridge completed in 270 days

Accelerated Work on Tunnels

The Border Roads Organisation has given impetus to construction of tunnels in the past few years to ensure all weather connectivity to the most remote parts of the Nation harnessing inclusiveness like never before. This can be gauged from the facts that three out of six tunnels completed till date, being completed in the last three year alone. Presently, BRO is constructing 10 tunnels and eight tunnels are under planning.

Surge in Construction of Tunnels in BRO



Completed Tunnels:-

Sonapur Tunnel on Shillong-Jowai-Badarpur-Churaibari Road in Meghalaya completed in 2008.

Theng Tunnel on Chunghang-Mangan Road in Sikkim completed in 2018.

Atal Tunnel, Rohtang on Manali-Leh Road in Himachal Pradesh completed in 2020.

Chamba Tunnel on Rishikesh-Dharasu Road in Uttarakhand completed in 2021.

Nechiphu Tunnel on Balipara-Charduar-Tawang Road in Arunachal Pradesh completed in 2023.

Sela Tunnel on Balipara-Charduar-Tawang Road in Arunachal Pradesh completed in 2023.



Hon'ble Prime Minister at Atal Tunnel



Sonapur Tunnel



Nechiphu Tunnel

Under Construction Tunnels:-

Sela-Chhabrela Tunnel on Sela-Chhabrela-BJ Gompa Road in Arunachal Pradesh (First Departmental Tunnel)

Two Cut & Cover Tunnel on Taliha-Nacho Road in Arunachal Pradesh

Cut & Cover Tunnel on Hapoli-Sarli-Huri Road (Huri Axis) in Arunachal Pradesh

Sungal Tunnel on Akhnoor-Poonch Road in UT of J&K

Naushera Tunnel on Akhnoor-Poonch Road in UT of J&K

Bhimber Gali Tunnel on Akhnoor-Poonch Road in UT of J&K

Kandi Tunnel on Akhnoor-Poonch Road in UT of J&K

Cut & Cover Tunnel on D-S-DBO Road in UT of Ladakh

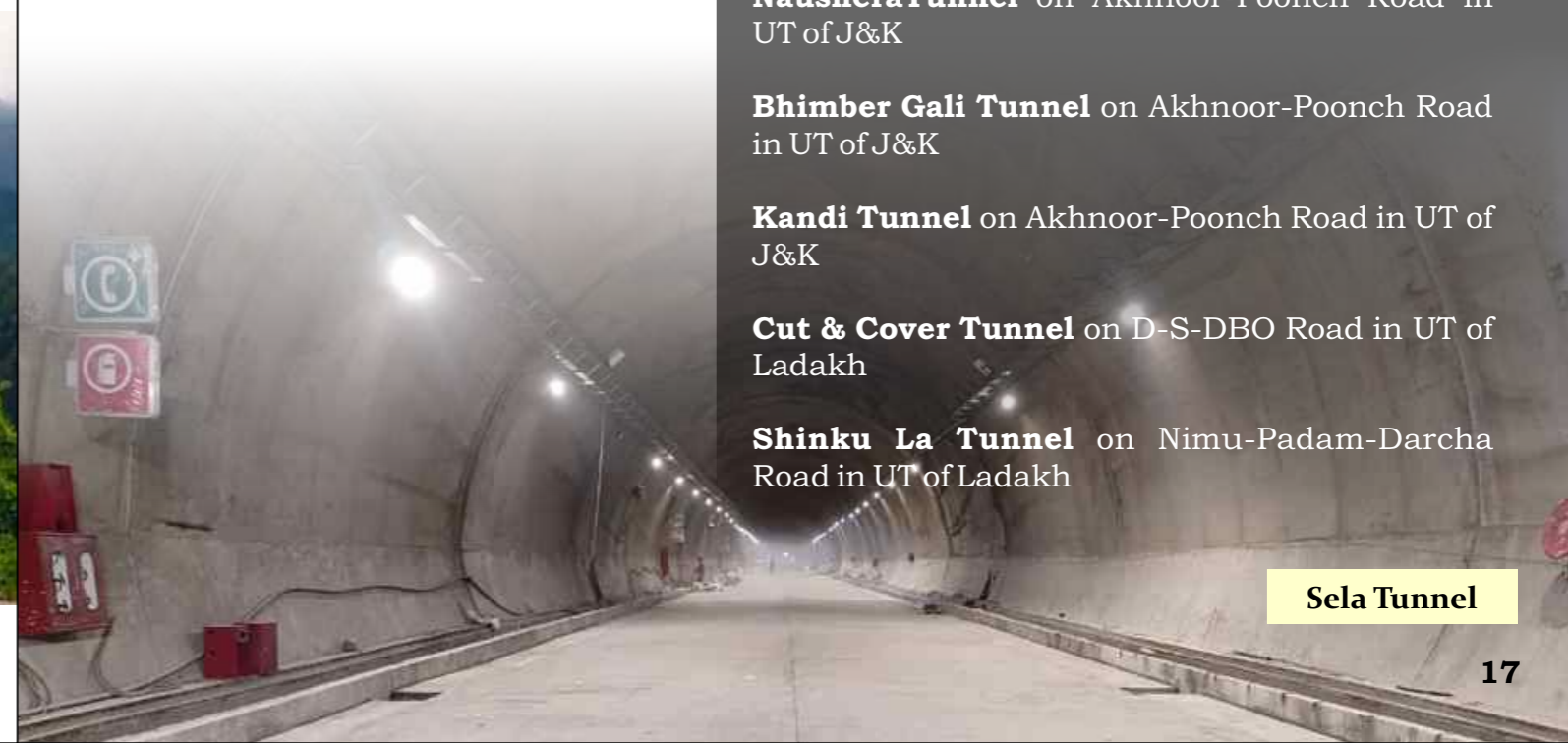
Shinku La Tunnel on Nimu-Padam-Darcha Road in UT of Ladakh



Chamba Tunnel



Theng Tunnel



Sela Tunnel

Allotment of Works by other Agencies.

MHA. Work for preparation of DPR for 13 roads of length 274 Km along Indo-Myanmar Border to connect COBs of Assam Rifles at an estimated cost of Rs 13.70 Cr has been entrusted to BRO and the works are also likely to be entrusted to BRO. Further, works for preparation of DPR for Construction of Road and Erection of a Fence of length of 98 Km along Indo-Myanmar Border at an estimated cost of Rs 4.90 Cr have also been entrusted to BRO.

Coast Guard Works. Works amounting to Rs 210 Cr for construction of roads, habitats and other allied infrastructure under HQ Andaman & Nicobar Command/Op Works/ Indian Coast Guard have been sanctioned or are under various stages of construction. In addition, works worth Rs 70 Cr are also under sanction in AWP 2023-24. Further, works worth Rs 1700 Cr are in pipeline for AWP 2024-25 as committed by HQ ANC/ICG. These include extension of Diglipur Runway, construction of jetties and defence married accomodation.

UT of Ladakh Package. The Administration of UT of Ladakh has entrusted Rs 4970 Cr worth infrastructure development works (five roads and two tunnels) to BRO on 16 Aug 2021. Work on most of the projects has commenced which includes construction of 26.50 Km long Hanuathang-Handanbroke-Zingpal-Turtuk Road, 78 Km long Batalik-Khalste Road, 50 Km long Kargil-Dumgil Road, 70.15 Km long Khaltsar-Agham-Shyok Road and 31 Km long Tangste-Lukung Road. Similarly, construction of 2.20 Km long tunnel across Hamboting Lam Pass on Road Kaltse-Kargil and 8.20 Km long Key-La tunnel on Road Zingral-Key La Tso-Tangste have also been planned and their DPRs are under preparation.

Frontier Highway. The development and maintenance of Huri-Tali-Taliha-Tato-Bile-Migging-Tuting Road of length 531 Km has been entrusted to BRO on 20 Mar 2023 and DPR preparation is under progress.

Under Planning Tunnels:-

Name of Tunnel **Key La Tunnel** on Zingral-Kela Tso-Tangtse Road in UT of Ladakh

Hamboting La Tunnel on Khaltse-Kargil Road in UT of Ladakh

Saser La Tunnel on Sasoma-Saserla Road in UT of Ladakh

Tanglang La Tunnel on Manali-Sarchu-Leh Road in UT of Ladakh

Lachung La Tunnel on Manali-Sarchu-Leh Road in UT of Ladakh

Baralacha La Tunnel on Manali-Sarchu-Leh Road in Himachal Pradesh

Donkyala Tunnel on Lachung-Tso Lhamo Lake Road in Sikkim

Chhiyalekh Tunnel on Ghatiabagarh - Lipulekh Road in Uttarakhand

Under construction Sela-Chhabrela Tunnel

Sungal Tunnel



Formation Work on Huri-Tapa Foot Track

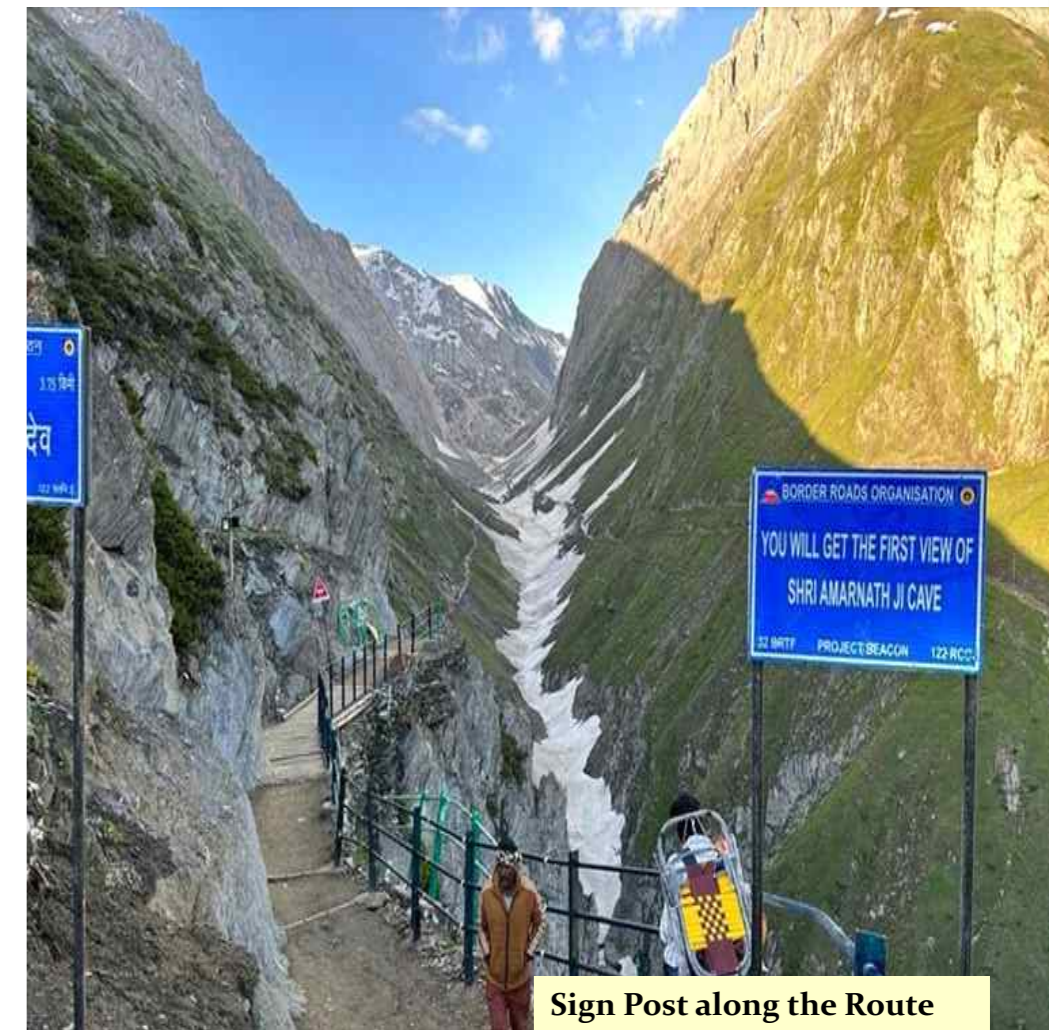
Transfer of Tracks Leading to Shri Amarnathji Holy Cave to BRO

Govt of Jammu & Kashmir, Public Works (R&B) Department accorded the transfer of twin tracks leading to holy cave shrine of Shri Amarnath Ji i.e. Chandanwari-Sheshnag-Panchtarni-Holy Cave track in Anantnag district and Baltal-Holy Cave track in Ganderbal district to the BRO for development & maintenance on 25 Sep 2022. The scope of work involved snow clearance, widening of the track, restoration of all foot bridges, fixing of handrails, construction of walls etc. BRO's Project Beacon shifted equipment using Chinook helicopters from Sonamarg to Panchtarni to expedite the allocated task. Due to relentless efforts of BRO's Karmyogis, restoration works on tracks could be completed well before the commencement of Yatra in 2023 and the renovated tracks have been appreciated by all Yatris. The Government has also approved transfer of road stretch from Ranga to Baltal including Nilgrath to Y-Junction to the BRO for development and maintenance .

Air Lifting of Equipment from Sonamarg to Panchtarni



Construction of Protection/Retaining Walls & Handrails on Yatra Tracks



Sign Post along the Route



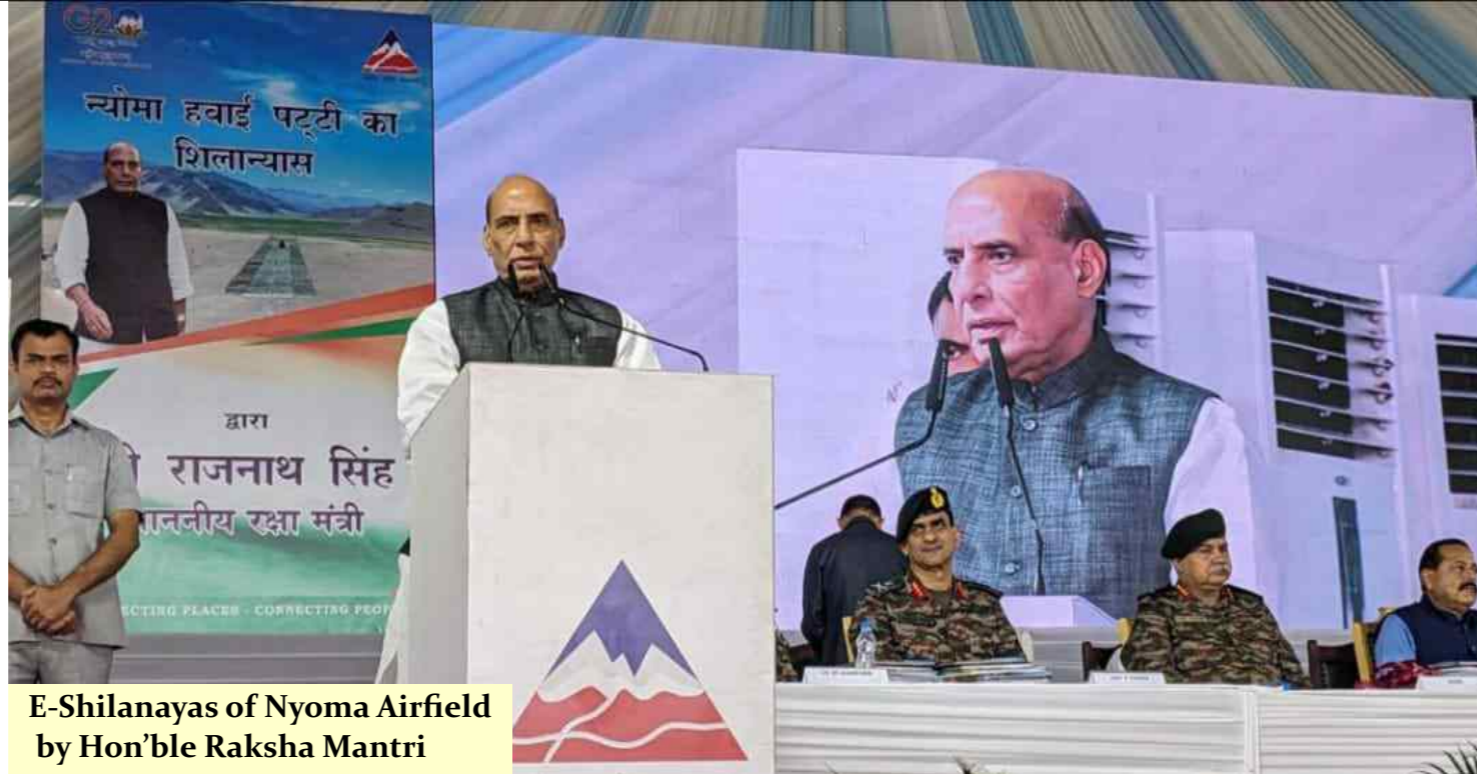
Rain Shelter at Km 2.5



DGBR Inspecting Works on Baltal-holy Cave Track

Airfield at Nyoma in Ladakh

Work for construction of Airfield and allied Services at Nyoma, Ladakh was entrusted to BRO and sanctioned on 31 Mar 2023. Shilanyas of the Airfield was done by Hon'ble Raksha Mantri on 12 Sep 2023. The work is likely to be completed by Jul 2025. On completion, this Airfield will be one of the Highest Fighter Bases in the World.



E-Shilanyas of Nyoma Airfield by Hon'ble Raksha Mantri



Schematic Layout of Nyoma Airfield



Connecting Remote Locations & Reverse Migration.

BRO's surge in road and bridge construction over the last few years has led to completion of many critical and strategic projects which has bolstered our defence preparedness. The BRO has also connected the farthest and most remote villages of the country like Demchok in Ladakh, Jolinkong in Uttarakhand and Huri Village in Arunachal Pradesh to the mainland. This connectivity has triggered reverse migration in these areas and population increase is being witnessed with the commencement of basic amenities like schooling facilities, Primary Health Care Centres, electric supply and employment opportunities.



Jolinkong (Uttarakhand)



Indira Point in Great Nicobar Island

Pema Khandu @PemaKhanduBJP

Happy to hear from BRO officials about how good connectivity is resulting in reverse migration here.

Earlier due to poor connectivity & less facilities, the dist faced migration which led to thinning of population in the area, not a good sign from security perspective. 3/3

Tweet by Hon'ble CM Arunachal Pradesh



Demchok (Ladkah)



Huri (Arunachal Pradesh)

Opening of Strategic Passes.

Taking ahead our commitment towards assisting the Armed Forces through enhanced infrastructure development in the forward areas to the next level, while also providing connectivity to the areas cut off from the rest of the country, the BRO has been setting new records in keeping passes open for longer durations and clearing them post winter closure in the fastest possible timeframe. In the year 2023, breaking all previous records, BRO has opened the Zojila, Baralachala, Nakeela, Lachungla, Tanglangla, Razdhan & Shinkula passes much ahead of schedule. This has received a lot of praise from all quarters and has been widely recognised by the media as a major achievement of BRO in its service to the Nation. All other major passes in the Himalayas were also either kept open throughout the year or opened much ahead of schedule, thereby enabling easier logistics build-up for the troops deployed ahead. The details are as given in the following paras:-



Opening of Zojila on Srinagar Kargil-Leh Road by DGBR

Zojila Pass BRO kept the crucial Zojila axis open through relentless snow clearance operations amidst tough weather conditions and relatively higher snowfall. This is the first time that the axis was kept open till Jan providing much needed connectivity to the forces deployed in Ladakh. This is also the first time in history that the Zojila Pass was opened for traffic on 16 March 2023, setting up an all-time record of the pass being opened after just 68 days of its closure. Early opening of the Zojila pass facilitated augmentation of supply of essential goods and services for the Armed Forces as also the people of Ladakh.

BRO kept the crucial Razdhan Pass open till 16 Jan 2023 through relentless snow clearance operations amidst tough weather conditions and relatively higher snowfall and opened it for traffic again on 16 March 2023, setting up an all-time record of the pass being opened after just 58 days of its closure in 2023 as compared to 60 days in 2022 and 90-120 days in the yester years. Razdhan Pass provides the only road connectivity between the Gurez sector and the Kashmir Valley. The reopening of the road also boosts the local economy by facilitating the movement of goods and people between Bandipora and Gurez. Other important passes in UT of Jammu & Kashmir such as Sadhna, Pharkiyani Gali and Zamindar Gali have been kept open by BRO throughout the winter season.



Opening of Razdhan Pass on Bandipora-Gurez Road

THE TIMES OF INDIA

All 3 Leh routes opened in record time this year, to ease troop movements
27 Mar 2023



NEW DELHI: The Border Roads Organisation (BRO) has cleared for vehicular traffic Ladakh's lifelines via Srinagar and Manali in record time, supplementing the benefit of the Atal tunnel in Himachal and underlining the government's push to bore through two more mountains for all-weather access to the strategic region.

The 439km Srinagar route opened on March 16 after 68 days, a far cry from the time when the 11,540ft Zoji La, 100 km from Srinagar, used to be closed for months. The pass was kept open till January 6. The 427km Manali-Leh road via the Atal tunnel opened on Saturday after 138 days, against May/June earlier. The 16,561ft Shinku La (pass) on the Nimmu-Padam-Darcha (NPD) road opened on Thursday after a gap of 55 days. This road is being built as a third axis to Ladakh and yet to be blacktopped.

Early resumption of traffic will allow the forces to space out - instead of squeezing in 3-4 months - the annual rotation of larger-than-usual number of troops deployed in the region since the May 2020 Galwan border clashes with the Chinese army.

It will also allow trucking of civil and fresh supplies instead of costly air freight. Homebound Ladakh is and guest workers will have a cheaper travel option than the prohibitively expensive flights that remain the only means when heavy snow cuts of road connectivity.

The short closures of the difficult passes has demonstrated BRO's snow-clearing capability. The government aims to capitalise on this by boring two tunnels - one under Zoji La, which will be completed soon, and the other under Shinku La - to ensure all-weather connectivity to Ladakh, which will have a major bearing on defence preparedness and quality of life in the region.

The Shinku La tunnel will allow traffic to avoid the four high, avalanche-prone narrow passes, desolate wind-swept landscape and extreme cold on the Manali-Leh route during winters.

Article on Times of India, 27 Mar 2023



Opening of Manali-Sarchu-Leh Axis

Manali-Sarchu-Leh Axis. The Manali-Sarchu-Leh axis was kept open by BRO till 06 Nov 2022 and again opened on 25 Mar 2023 in a record time of 138 days. This has brought down the closure period of this road to an average of 160-180 days compared to an average of 200-230 days in the yesteryears. This 427 Km long strategic highway connects Ladakh to the rest of India via Manali and has tremendous strategic importance for the movement of the Armed Forces and their supplies to the forward areas in Ladakh, as well as for connecting the people of Ladakh to India. The entire 427 Km road was cleared of snow by Project Himank in Ladakh and Project Deepak in Himachal Pradesh working in extremely challenging conditions, braving snowstorms and high-altitude difficulties and negotiating four important high-altitude passes, the Baralacha La (15910 ft), Nakee La (15547 ft), Lachung La (16616 ft) and Tanglang La (17482 ft).



BUDGET EXPENDITURE

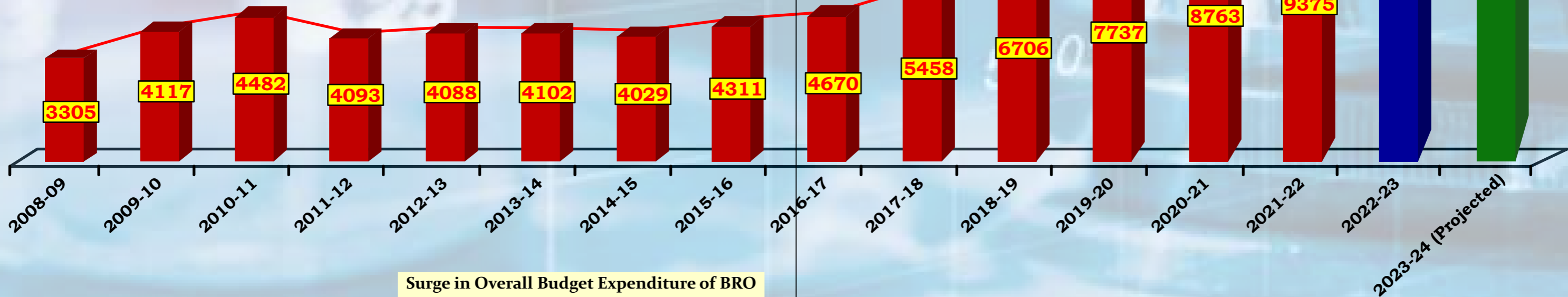
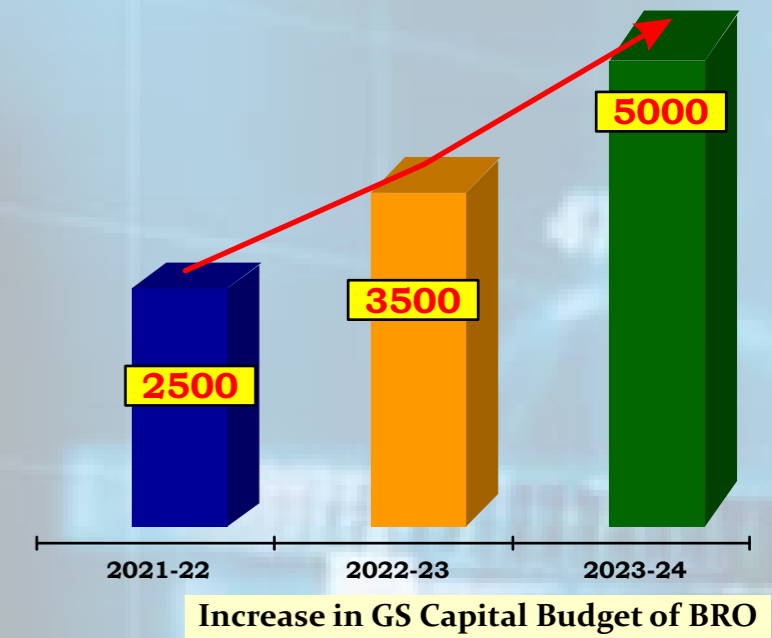
BRO has incurred the highest ever record breaking expenditure of Rs 12,340 Cr for development of road infrastructure along our Borders. The Budget of BRO has seen an exponential growth in recent years, resulting in an unprecedented pace of infrastructure development giving a major impetus to our defence preparedness. The fund allocated to the BRO around 5 years back used to be in the range of Rs 4500 Cr. This went up to Rs 12340 Cr in the FY 2022-23 which is a major jump. This milestone reflects our commitment to enhancing infrastructure development in the most challenging terrains and, in doing so, serving our Nation with pride. In our pursuit of excellence, we have taken several crucial steps that have contributed to this significant budget boost:-

Streamlining Processes and Embracing Technology. Old and archaic system of working, sub optimal utilisation of departmental resources, antiquated planning processes, lack of modernization and automation, procedural and bureaucratic delays lead to frequent time and cost over runs. Procurement and administrative processes have been modernized, leveraging technology to ensure efficiency and transparency. The adoption of the Government e-Marketplace (GeM) for procurement has not only reduced corruption but has also increased transparency and accountability in operations.

Motivating and Empowering the Karmyogis. BRO's greatest asset are its dedicated Karmyogis. BRO has invested in their motivation, training, and well-being. Recognizing their efforts, awards and recognitions that celebrate their commitment to our mission have been instituted. By fostering a culture of excellence and recognizing outstanding contributions, our team has been further inspired to reach new heights.

Delegation of Financial Powers. Realizing the importance of swift decision-making at the ground level, ground executives have been empowered with greater financial autonomy. This delegation of financial powers has not only reduced bureaucratic hurdles but has also facilitated faster road construction. BRO teams on the ground can now respond swiftly to the dynamic challenges they encounter.

Funds allocated to the BRO under GS Capital Head in financial year 2021-22 was Rs 2500 Cr. Based on the BRO's enhanced and increased pace of construction, the Ministry of Finance has allotted Rs 5000 Cr under GS Capital Head for FY 2023-24. This jump of 100% within a span of just two years under the GS Capital Head is unprecedented and reflects the tremendous faith of the Govt and the Army on BRO.





CONNECTIVITY ALONG BORDERS



Formation Cutting on Ghatiabagarh-Lipulekh Road

There has been a rapid pace of Road infrastructure development in the forward areas by BRO in support of the Armed Forces. These infrastructure projects have not only enhanced the military capability of our country but have also played a major role in improving the living standards of locals of far flung regions of our country by providing much needed medical & educational facilities and employment opportunities.

UT of Ladakh.

Sasoma-Saser La Road (52.4 Km). Improvement of curves has been completed Geo Cells are being laid as per requirement. Preparation of DPR for construction of tunnel across Saser La is under progress.

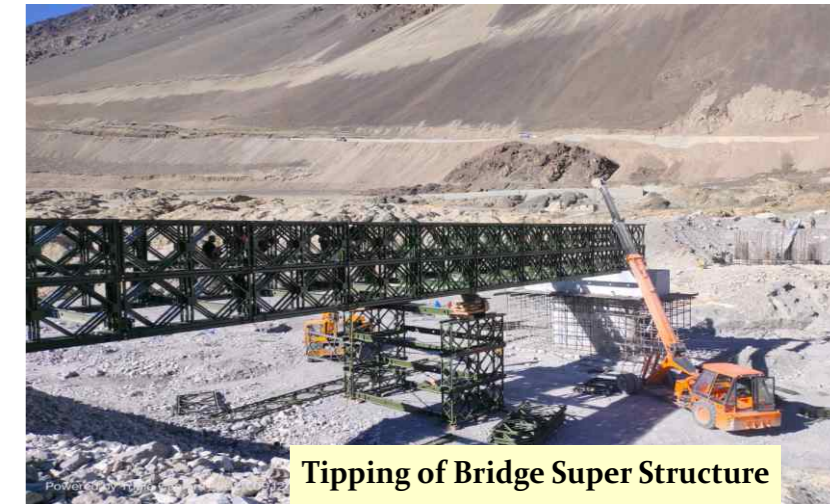


Geo Cells being laid (Km 43-46)



Connectivity Achieved & Widening under Progress

Bridge at Saser Brangsa. Contract for construction of 345 m CI-70R Bridge over Shyok River was concluded on 27 Mar 2023 and work commenced on 30 Apr 2023. Work has been undertaken under severe freezing condition as to achieve early completion giving the strategic importance of the Bridge. Bridge is likely to be completed by November 2023.



Tipping of Bridge Super Structure

Saser Brangsa-Morgo Road (14.95 Km). Work on this road is progressing well and connectivity was established on 04 Oct 2022. 10.50 Km of black topping in some stretches is balance and work these stretches is in progress Work for improvement of gradients at certain locations is currently underway and the balance surfacing works will commence shortly.



Connectivity Achieved & 10.50 Km Black Topping Completed

Saser Brangsa-Gapshan Road (42 Km). With a view to provide early alternate connectivity to DBO, work on the 42 Km strategic Saser Brangsa-Gapshan Road in Eastern Ladakh recommenced on 17 Mar 2023. Till last year, work was undertaken from Gapshan side only and in the current working season, work has commenced from both Gapshan & Saser Brangsa side with 21 Km of formation, Granular Sub base surfacing & 1.9 Km of black topping already completed. Camps have also been established at both ends and efforts are being made to achieve connectivity by Oct 2023.



Establishment of Camps at both Gapshan & Saser Brangsa Sides

Shyok Re-alignment and Mandir Morh Re-alignment. Connectivity on Shyok Re-alignment having a length of 6.50 Km between Km 9.95 and Km 21.20 on D-S-DBO Road was achieved on 02 Nov 2022. Thus, overall length has been reduced from 11.25 Km to only 6.5 Km which has resulted in reduction of induction time by 20 minutes. Further, Connectivity on Mandir Morh Re-alignment having a length of 4.10 Km between Km 153 and Km 157.50 on D-S-DBO Road was also achieved on 07 Nov 2022.



Shyok Re-alignment



Recommencement of Work from both Gapshan & Saser Brangsa Sides in 2023



Phobrang-Marsimikla-Hot Spring Road

Phobrang-Marsimikla-Hot Spring Road. Surfacing works on this 73 Km road have been completed and 10 out of 12 Bailey Bridges have been completed.

Chusul-Dungti-Fukche-Demchok Road. On the auspicious Occasion of 74th Republic Day, work on strategically important Chusul-Dungti-Fukche-Demchok Road, known as CDFD Road having a length 121 Kms running almost alongside the Indus River and virtually parallel to LAC commenced on 26 Jan 2023. Construction of this road to NHSL specifications will be a game changer in times to come for the Armed Forces and border area villages in the region. All out efforts are being made to ensure the timely completion of this strategically important road.



Chusul-Dungti-Fukche-Demchok Road.

Nimu-Padam-Darcha Road Connecting Zaskar Valley in Ladakh to Lahul - Spiti Valley in Himachal Pradesh.

This road of length 298 Km is being constructed in a mission mode by resorting to work in extended hours and also continuing the work during winter season, which has resulted in accelerated progress. Approx 150 Km of the road has been blacktopped and only 12 Km are balance for connecting which we aim to achieve by the end of this year. Heavily loaded vehicles carrying up to 18 MT load have started plying up to Kuru via Shinku-La top for the first time. In addition, successful trial of minibus from Keylong to Padam has also been carried out by Himachal Road Transportation Corporation (HRTC) giving a major boost to the much-needed connectivity in the remote villages of the Zaskar Valley.



Fmn Cutting in Progress between Chilling & Niraq and Kilima & Niraq

UT of Jammu & Kashmir.

Melyal-Pharkiyani Gali-Dat Bridge Road. This 36 Km long road has been developed to CI-9 specifications in Jun 2023. The road sector falls in High Altitude and Snow Bound Area. The highest point in the sector is Pharkiyani Gali at 9,790 feet above MSL. Completion of the black top road will facilitate speedy induction of troops to the LoC.



Melyal-Pharkiyani Gali-Dat Bridge Road



Machhal-T-Santwari Road. This 9.32 Km long road has been developed to NHSL specifications in Jul 2023. The construction of this road is intended to connect the Border Outposts along the LOC in Kupwara district of Jammu & Kashmir.



Machhal-T-Santwari Road

Dayalchak-Ramkot Road. This road having a length of 25.42 Km is being upgraded from C1-9 to NHDL specifications. Upgradation of this road was sanctioned in May 2022 with PDC of Mar 2025. Formation and surfacing works on this road are under prog.



Surfacing Works on Dayalchak-Ramkot Road

Basholi-Bani Road. This road having a length of 89 Km is being upgraded from C1-9 to NHDL specifications. The road has been black topped till Bani.



Surfacing Works on Basholi-Bani Road

Uttarakhand

Sumla-Thangla and Sumna-Lapthal Road. Construction of 17 Km long Sumla-Thangla Road passing through treacherous mountains with heights above 15000 ft and Thangla at 17000 ft was started on 01 Aug 2022 and BRO team was able to achieve connectivity to Thangla on 08 Oct 2022 in just over two months despite the extreme weather and inhospitable conditions. Similarly, connectivity on Sumna-Lapthal Road having a length of 27.5 Km at an altitude between 11000-15000 ft has been achieved in a single working season in 2022.



Connectivity achieved on Sumla-Thangla Road



Connectivity achieved on Sumna-Lapthal Road

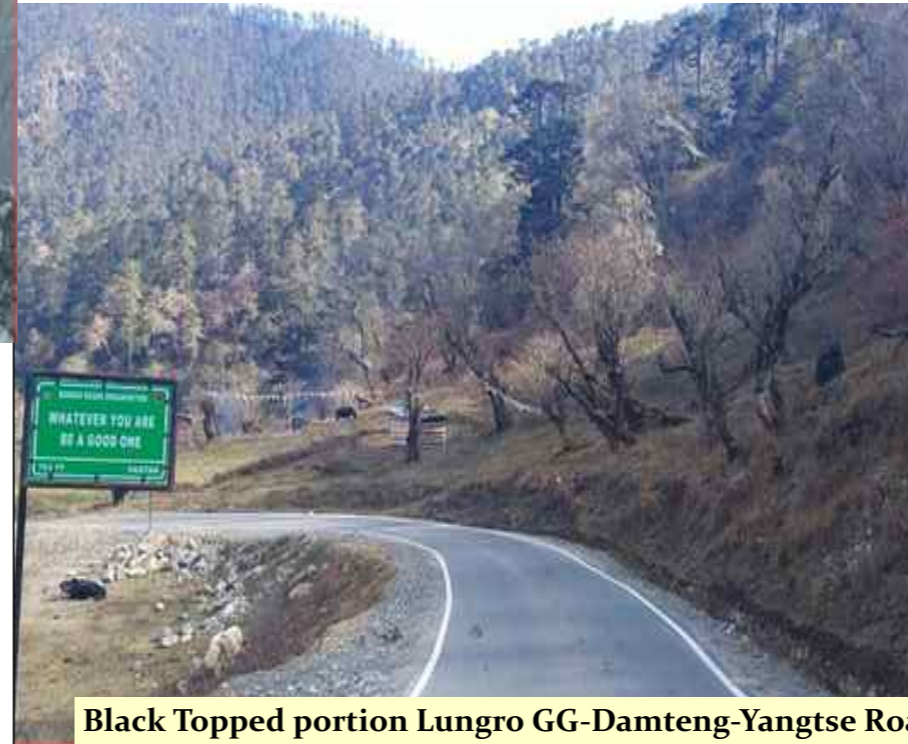
Geldung-Niti Pass Road. Formation Cutting has been completed on this 17 Km long road despite severe weather and challenging topography. BRO is committed towards ensuring the achievement of connectivity till Niti Pass in the shortest possible time frame.



Formation Works on Geldung-Niti Pass Road

Arunachal Pradesh

Lungro GG-Damteng-Yangtse (LDY) Road. Connectivity on this road having a length of 52 Km was achieved upto Yangtse in 2021. Improvement of road geometrics has been completed for a length of 52 Km and surfacing for a length of 30 Km has also been completed. Surfacing work on balance stretches is under progress.



Black Topped portion Lungro GG-Damteng-Yangtse Road

Jang Bypass Road. The 5.45 Km long Jang Bypass Road has been constructed to bypass Jang town on the Balipara-Charduar-Tawang axis.



Road Jang Bypass

Munsiari-Bugdiar-Milam Road in Uttarakhand. Formation cutting works are under progress from four attack points to connect the balance 6.75 Km stretch of green field alignment in steep & snow bound hard rock strata. In the last one year, the length of uncut portion has reduced from 12.5 Km to 6.75 Km despite the fact that the stretch passes through steep valleys and avalanche prone areas. The difficulty of the task can be gauged from the fact that five detachments on this road are air maintained.



Fmn Cutting in Hard Rock Portion on M-B-M Road

LGG-Mukto-Teli Road. Development of this 45 Km long road from C1-5 to C1-9 specifications has been completed in Mar 2023. This is the alternate route towards Bomdir and Lumla. People from Khet, Mukto and Teli are also connected through this road to Lumla and Tawang along with direct route from Bomdir to Lumla.



Road LGG-Mukto-Teli



Surfacing Works on BJG-LGG Road

BJG-LGG Road. Formation cutting on this road having a length of 31 Km has already been completed and surfacing works for a length of 14 Km have also been completed. The road is planned to be completed by Mar 2024.

TCC-Maza Road. After conquering the hard rock stretch on 31 Oct 2022 by movement of equipment through Tsari Chu river and jungles, all out efforts were made to cut the balance 5 Km to achieve connectivity to Maza which was achieved on 28 Dec 2022. Presently surfacing work is in progress, and we intend to complete the road by 2024.



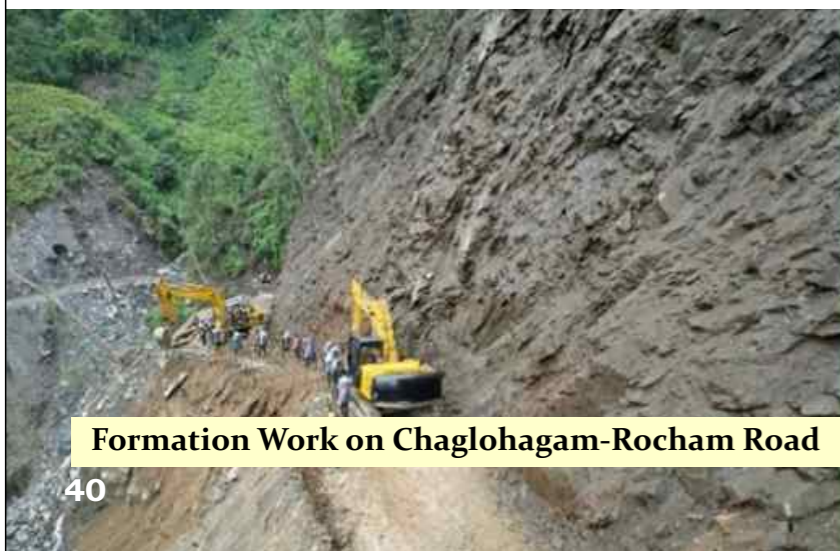
Connectivity on TCC-Maza Road Achieved

Mipi-Andrathang Road (Package-I). Connectivity on Mipi-Andrathang Road (Package-I from Km 0 to Km 10) was achieved on 14 Jan 2023. Connectivity on this 10 Km stretch of this Greenfield alignment was achieved in just 10 months.



Connectivity on Mipi-Andrathang Road

Chaglohagam-Rocham Road. In order to expedite construction of this 29.25 Km long road, an air-maintained detachment was established at Tapatuwi and critical earth moving plants were airlifted to establish two attack points. Connectivity upto air maintained Detachment of Tapatuwi was established on 18 May 2023. This connectivity will fast track the construction of the road ahead.



Formation Work on Chaglohagam-Rocham Road

Andaman & Nicobar Island

Road Brahmkund Arrowa. This road having a length of 19.5 Km has been constructed to NHDL specifications for induction to the Dau Delai/ Lohit valleys. Construction of this road has been completed on 31 Mar 2023. Brahmakund-Arrowa Road is the alternate axis to Tohangam-Hayuliang Road which is prone to landslides and will connect the population of Anjaw District and troops deployed along the Indo-China border.



Brahmkund-Arrowa Road

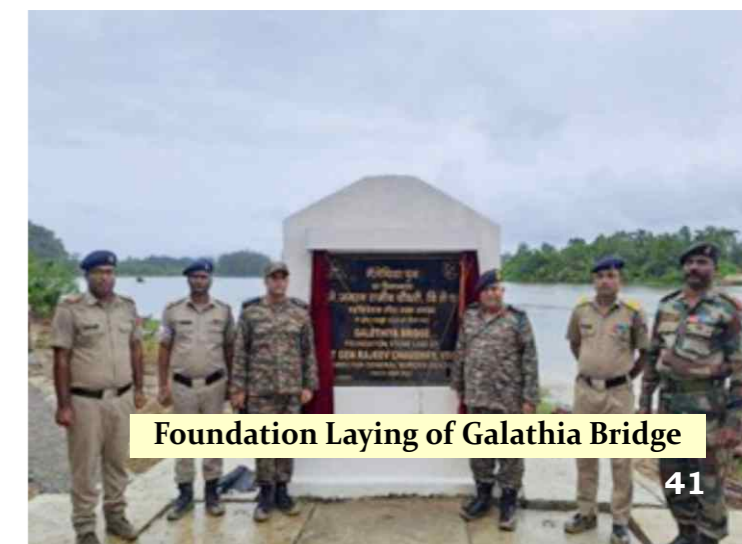
Connectivity Achieved to Indira Point at Great Nicobar Island. The North-South Road from Campbell Bay (Km 0.00) to Indira Point (Km 60.385) in Great Nicobar Island is of tremendous strategic importance. In 2021, applying a lot of ingenuity, brave BRO Karmyogis constructed a 216 m temporary crossing over the mighty Galathia River using Hume Pipes. The BRO finally connected Indira Point to Shastri Nagar on 24 Jan 2023. The BRO now takes pride in connecting the Southern most point of India as also the Northern most point of India. Construction of 216 m long Permanent Bridge over Galathia River has also commenced which will pave the way for more development in the region.



Connecting Lakshmi Nagar in Great Nicobar Island



Connectivity Achieved to Indira Point



Foundation Laying of Galathia Bridge



अमेण सर्वम् साध्यम्

MAJOR INITIATIVES



CL-70 Double Lane Modular Bridges on Flag Hill-Dokala Road

MoU with GRSE.

Border Roads Organisation and Garden Reach Shipbuilders & Engineers (GRSE) Ltd signed a Memorandum of Understanding (MoU) for two-year for fabrication, supply, erection and launching of 60 double lane galvanised modular bridges of 7.5 meters carriage way with IRC Load Class 70. One of the most important and critical advantages of the MoU will be the time factor as these bridges can be launched within 10 days of handing over the site by the units. This will certainly be a game-changer in road infrastructure development in the country.



MoU with GRSE for Indigenous CL-70 Double Lane Modular Bridges



Inauguration of Three Telemedicine Nodes by Hon'ble RM

MoU for Establishment of SATCOM Telemedicine Nodes. A landmark MoU was signed between Development and Educational Communication Unit (DECU) ISRO and Border Road Organisation (BRO) at DECU, ISRO Ahmedabad on 06 Sep 2022 for establishment of three SATCOM Telemedicine Nodes. These three Telemedicine nodes, two in Ladakh and one in Mizoram were inaugurated by Hon'ble Raksha Mantri Shri Rajnath Singh on 03 Jan 2023. These Telemedicine Nodes are connected with service hospitals through Very Small Aperture Terminal (VSAT) satellite communication system. This is one of the unique achievements for BRO in providing medical services to its personnel in remote border locations through use of space technology. Three more such nodes are being established shortly.

MoU between BRO and Defence Innovation Organisation (DIO).

A MoU was signed between BRO and Defence Innovation Organisation (DIO) on 15 Feb 2023 at Aero India 2023 under Innovations for Defence Excellence (iDEX) initiative. The iDEX is the flagship initiative of the Department of Defence Production to encourage start-ups and other such entities engaged in defence innovation. Through iDEX, BRO will explore the feasibility of adopting space technology for monitoring its assets and enhancing the pace and quality of preparation of DPRs. BRO has identified 50 Problem Statements related to various activities involved in the field of road construction and disaster relief operations as a Defence India Start-up challenge (DISC). This is a unique and inclusive effort at BRO's end to synergise the efforts of academia, industry and R&D establishments to nurture homegrown technologies to transform BRO into a contemporary force. A Compendium on these 50 problem statements was shared with iDEX in the presence of Hon'ble Raksha Rajya Mantri paving the way for collaborations and innovative solutions towards Nation Building on 07 May 2023.



MoU between BRO and DIO

MoU between BRO Project Dantak & Green Bhutan Corporation Limited. A historic Memorandum of Understanding was signed in Oct 2022 between Project Dantak of BRO in Bhutan & Green Bhutan Corporation Limited to employ environment friendly techniques for landslide mitigation on Damchu-Chukha Road in Bhutan. This will not only provide safety to travelers but will also aid in afforestation & reforestation efforts in Bhutan thereby contributing to their National Climate Change mitigation efforts. Project Dantak has become the torchbearer in employing green initiatives for slope stabilisation.



MoU between Project Dantak & Green Bhutan Corporation Limited

MoU with Major OEMs. BRO has signed a MoU with all major OEMs to supply spares on priority and at discounted cost being a major customer. This shall not only incur savings to the exchequer but also improve the availability of spares and reliability of V/E/P.



Mechanised Maintenance Team in Project Brahmkank in Arunachal Pradesh

Mechanised Maintenance Teams. With BRO's quest for providing pothole free roads for commuters, all Projects of BRO are in the process of constituting fully mechanised Road Maintenance Teams. The mechanised team consists of a total of six equipment and vehicles and four specialized fitment and small equipment such as pothole repair machine, mixer, broomer, drain bucket etc.

MoU with UT of Ladakh. As an effort towards technology upgradation and effective utilisation of plastic waste for road construction, Project Himank signed a MoU with the UT of Ladakh for procurement of plastic waste for road construction on 02 Mar 2023. This historic MoU will effectively address the challenge of proper disposal of waste plastic in Ladakh, thereby taking another step towards Carbon Neutrality in the UT of Ladakh.

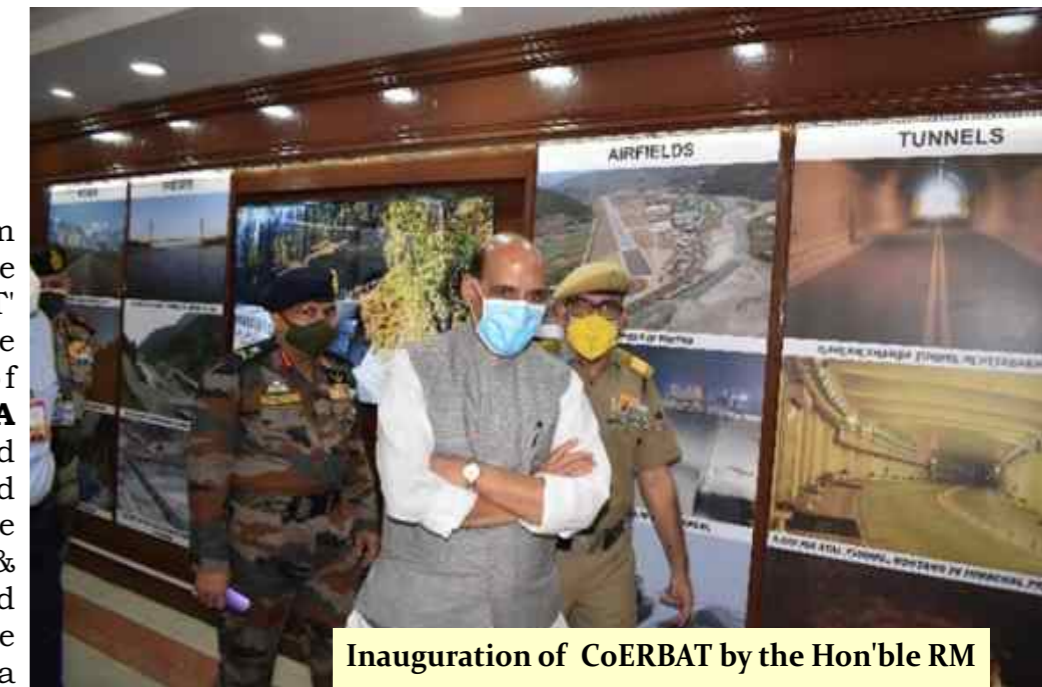


MoU with UT of Ladakh

Centres of Excellences

Taking inspiration from Hon'ble PM's message during 'MANN KI BAAT' and developing an in-house expertise, two centers of excellence namely **CoERSA** (Centre of Excellence for Road Safety and Awareness) and **CoERBAT** (Centre of Excellence for Roads, Bridges, Airfields & Tunnels) have been established by the BRO which were inaugurated by Hon'ble Raksha Mantri Shri Rajnath Singh on 11 Jun 2021.

CoERBAT has been involved in knowledge consolidation, undertaking studies and exchanging advisories on Innovative Technologies and construction in High Altitude Areas. A comprehensive audit of all 608 Bridges under BRO has been completed and works to rectify shortcomings are being undertaken. Based on research carried out by CoERBAT, the value of maximum Silt Factor for Bouldery Bed has been revised from 2.42 to 9. This will significantly reduce the scour depth and the depth of bridge foundations in gravelly and bouldery streams resulting in huge savings. IRC has also amended its relevant code in IRC:5-2015. This is an example of the technical expertise of BRO which has made its contribution to the entire Engineering fraternity.



Inauguration of CoERBAT by the Hon'ble RM

CoERSA aims towards capacity building through training & seminars and institutionalisation of road safety in the organisation and deliberate campaigns being executed as part of public outreach programme at the National level. Major progress has been made by CoERSA towards capacity building and institutionalisation of road safety. An extensive audit has been carried out of roads constructed by BRO. Road Safety audit of 15231 Kms in four Phases has been done by our trained Officers. RSA in Phase V (4782 Km) & Phase VI (4084 Km) has been planned for new roads being constructed and existing roads being improved /widened respectively. Black spots for approx 5555 Km roads have been eliminated under maintenance. Works worth Rs 334.60 Cr were sanctioned in FY 2022-23 and works worth Rs 1040.91 Cr are being executed in 2023-24 for enhancing safety aspects on our roads. In addition, a large number of public outreach programmes were also undertaken from time to time. As part of capacity building, 87 BRO Officers successfully completed training on Road Safety in collaboration with IIT-Delhi so far. Numerous training courses are also being planned to ensure road safety is imbibed by BRO down at the grassroot level.



Inauguration of CoERSA by the Hon'ble RM

Development of Roads as “Zero Fatality Corridors”.

With an aim to provide “Zero Fatality Corridors” to users, numerous initiatives have been undertaken by BRO's Eastern & North-Western Projects, which include curve improvement, installation of various road safety measures, cautionary road markings, installation of dynamic caution boards, chevron sign boards with retro reflective materials and slope stabilisation. In the year 2022, BRO had initially planned to develop 1181 Km of road as “Zero Fatality Corridors” in its AoR, which has been increased to 3810 Km in the year 2023. Some of the Roads developed as “Zero Fatality Corridors” are highlighted below:-

A long-Kaying Road in Arunachal Pradesh. In order to enhance road safety on the 44.50 Km long Along-Kaying Road, provision of various road safety elements was made to eliminate Black Spots and thus, this road has been developed as a “Zero Fatality Corridor” and completed in Mar 2023. Appreciating construction of this Road, Hon'ble CM of Arunachal Pradesh Shri Pema Khandu felicitated team 44 BRTF of Project Brahmanak with the CM's appreciation.

Jawahar Lal Nehru Marg (JNM) Road. With an aim to provide a “Zero Fatality Corridor” to users of the 47 Km long Jawahar Lal Nehru Marg Road in Sikkim, numerous initiatives have been undertaken by BRO's Project Swastik, which includes curve improvement, installation of various road safety measures, cautionary road markings, installation of dynamic caution boards and resurfacing work. Development works are being undertaken in two phases. As part of Phase-I, the 27 Km of road stretch between the Tashi viewpoint and Mandakini Waterfall has been completed and balance work under Phase-II, between Madakini Waterfall and Sherathang stretch have commenced in full swing.

Kohima-Pedi-Peren Road The road stretch of Kohima-Pedi-Peren between Km 6.75 to Km 20.00 upto Khonoma i.e. India's first 'Green Village' has been developed as a “Zero Fatality Corridor” for promoting Eco-tourism in Nagaland. Work on this stretch incorporating the desired road geometries and safety guidelines, road furniture and basic amenities for the users has recently been completed.



Along-Kaying Road



Jawahar Lal Nehru Marg (JNM) Road in Sikkim.



Kohima-Pedi-Peren Road in Nagaland

Joram-Koloriang Road in Arunachal Pradesh. Project Arunank with dedicated efforts has developed 20 Km long Joram-Koloriang Road in Lower Subansiri district of Arunachal Pradesh as “Zero Fatality Corridor”. Hon'ble Home Minister of Arunachal Pradesh has appreciated the work of BRO in development of infrastructure projects in Arunachal Pradesh and felicitated BRO with the Home Minister's Commendation.



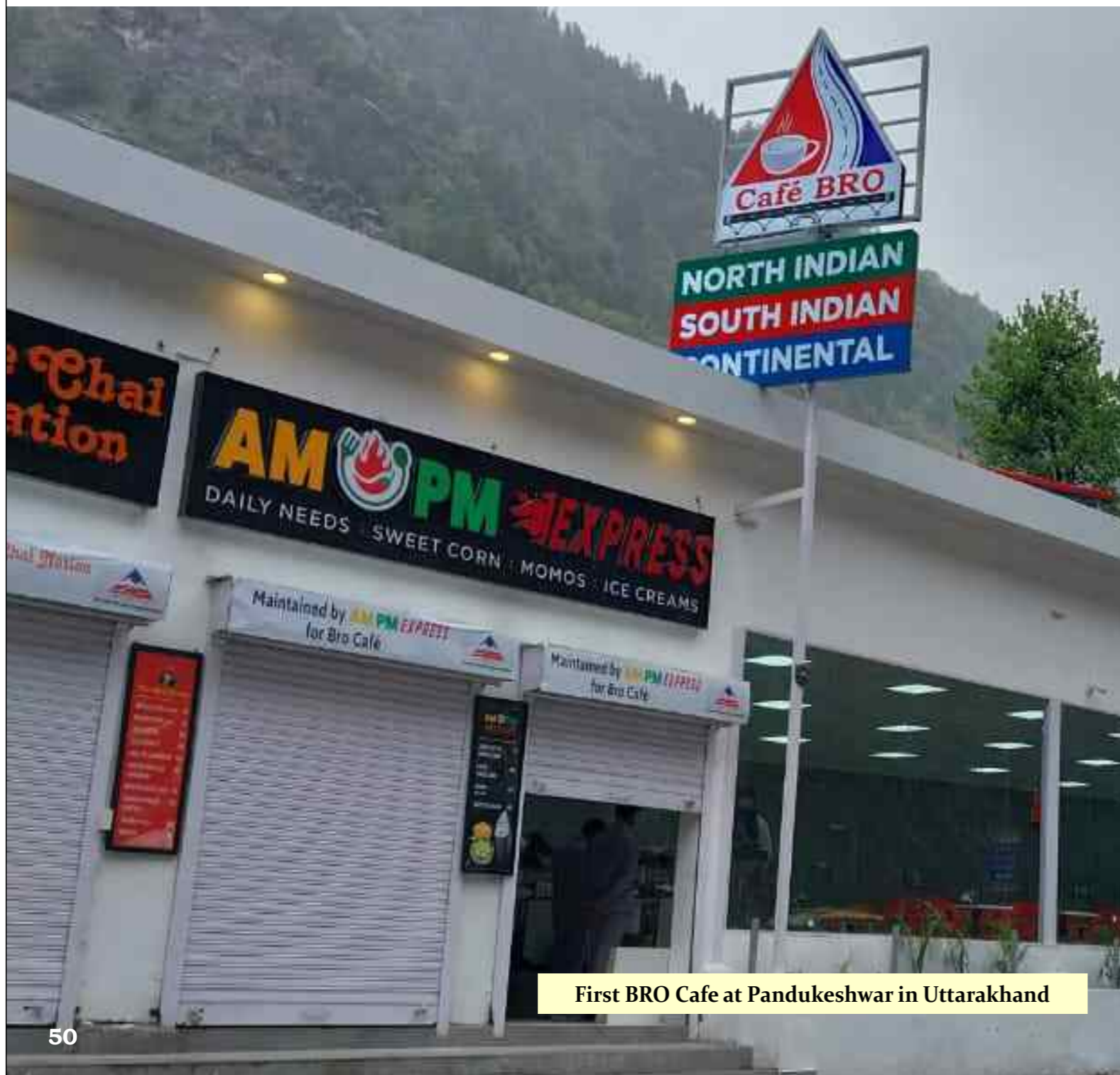
Joram-Koloriang Road

Establishment of Wayside Amenities 'BRO Cafes'.

MoD approved setting up of wayside amenities at 75 locations in 12 States/Union Territories on different sections of roads with BRO on 22 Jun 2022. These are intended to provide basic amenities and comfort to the tourists and lead to boosting economic activities in border areas, besides generating employment for the local people. These wayside amenities will be branded as 'BRO Cafes'. The Hon'ble Raksha Rajya Mantri virtually inaugurated the first BRO Cafe at Pandukeshwar in Uttarakhand on Rishikesh-Badrinath Highway (NH-58) on 07 May 2023. Work on another Café at Manali, Himachal Pradesh has been completed and operations have commenced.



BRO Cafe at Manali in Himachal Pradesh



First BRO Cafe at Pandukeshwar in Uttarakhand



ADOPTION OF NEW TECHNOLOGIES IN CONSTRUCTION

Over the past few years, despite the remote and inaccessible areas where the BRO is deployed, BRO has been successful in implementing some of the new construction technologies across various projects. Some of the areas of modernisation and use of new technologies and innovative ideas by the BRO are highlighted in the ensuing paragraphs.

Cementitious Sub-Base/Base Courses. Construction of 240 Km of roads is being undertaken in Ladakh, Uttarakhand, Sikkim & Arunachal Pradesh using this technology.

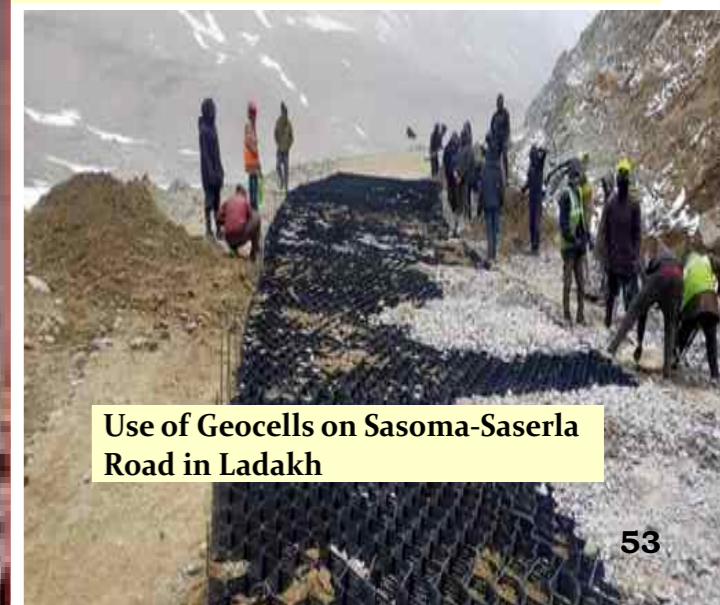


Construction of Cementitious Base Course on TCC-Taksing and TCC-Maza Roads in Arunachal Pradesh

Use of Geo Cells. In certain stretches of BRO roads like Hapoli-Sarli-Huri Road in Arunachal Pradesh and Sasoma-Saserla Road in Ladakh, Geo Cells have been utilised to enhance the speed of construction and provide stability to the formation.



Use of Geo Cells on Hapoli-Sarli-Huri Road in Arunachal Pradesh



Use of Geocells on Sasoma-Saserla Road in Ladakh



Construction of Sumna-Rimkhim Road in Uttarakhand with Cementitious Base

Use of Non-Frost Susceptible Sub-Base. To prevent the uneven settlement on Chisumle-Demchok Road due to frost heaving and freeze thawing, layer composition here was chosen as Non-Frost Susceptible Sub-Base (NFSSB) (larger particles with no sand) rather than GSB which is normally used at lower altitudes.

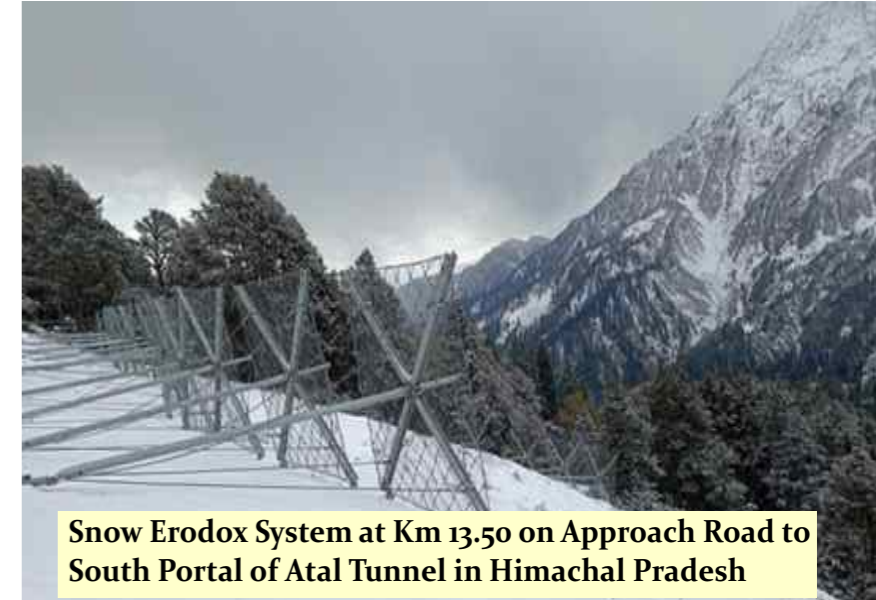


Chisumle-Demchok Road constructed using NFSSB in Ladakh

Avalanche Protection Structures.

The following snow protection structures have been constructed by BRO on approach road to South Portal of Atal Tunnel:-

Snow Erdox. The Snow Erdox structures are protection measures that are placed in the zones of avalanche initiation and stabilize the snowpack. It features a cruciform facing panel structure made with steel beams which are hot dip zinc coated and suitably shaped to enable rapid jointing.



Snow Erdox System at Km 13.50 on Approach Road to South Portal of Atal Tunnel in Himachal Pradesh

Snow Galleries are direct defence measures for roads or highways in the middle zone of Avalanches. They protect roads against the effect of avalanches by bypassing them.



Snow Gallery at Km 4.14 on Approach Road to South Portal of Atal Tunnel in Himachal Pradesh

Slope Stabilisation to Mitigate Landslides. Slope stabilisation is being carried out using various suitable methods throughout the projects of BRO to alleviate the triggering of landslides causing severe damage to the roads.

Slope Stabilisation with Geotextile Material on Road Kyachee GG- Nasar GG-Lungro GG in Arunachal Pradesh

M-50 Inter-Locking Concrete Blocks. Inter-Locking Concrete Blocks (ILCBs) have been used in BRO where heavy snowfall takes place and snow clearance operations by tracked Dozers causes to damages on bituminous layers. The technology will enhance the speed of construction of high altitude roads and dependence of adequate working season for construction of roads will diminish.



ILCB Pavement on Balipara-Charduar-Tawang Road (Sela Top) in Arunachal Pradesh

Use of Waste Plastic. As an initiative to reuse plastic waste, BRO has carried out trials to extensively use this technology in bituminous road construction not only in India but also in Bhutan. The technology has been successfully used in:-

4.5 Km resurfacing on Phuentsholing-Thimphu Road under Project Dantak in Bhutan.

2.5 Km resurfacing on Balipara-Charduar-Tawang Road under Project Vartak and 1.0 Km resurfacing on Roing-Koronu-Paya Road under Project Udayak in Arunachal Pradesh.

5.22 Km resurfacing on Hnathial-Sangau-Saiha Road under Project Pushpak in Mizoram.

2.0 Km resurfacing on Hapoli-Sarli-Huri Road under Project Arunank in Arunachal Pradesh.

Resurfacing on Ramban-Gul Road under Project Beacon in UT of J&K.

5.0 Km resurfacing on Along-Kayling Road under Project Brahmank in Arunachal Pradesh.



ILCB work at Changla Pass on Karu-Tangtse Road in Ladakh

State-of-the-Art Sub-Surface Drainage System. In the runway at Barrackpore, a state-of-the-art sub-surface drainage system has been constructed. There are not many runways across the country with such a comprehensive sub-surface drainage system.



Sub-Surface Drainage System at Barrackpore



Resurfacing using Shredded Waste Plastic on Along-Kayling Road in Arunachal Pradesh



Laying Precast Concrete Drains on Along-Yingkiong Road in Arunachal Pradesh

Precast Cut & Fit Technology. In order to overcome the challenges of limited working season and enhance the pace of construction of the roads, BRO has started incorporating Cut & Fit techniques in road construction. BRO has executed a pilot project on Along-Yingkiong Road in Arunachal Pradesh and in Ladakh.



Virtually Flagging off first Railway Rack of Steel Slag by Hon'ble MoS for Science & Technology, Dr Jitender Singh on 02 Nov 2022



Use of Steel Slag. BRO has undertaken construction of a pilot road stretch in Arunachal Pradesh using steel slag on Joram-Koloriang Road in Arunachal Pradesh using steel slag in technical consultation with CRRI & Steel Slag from Tata Steel. The project has received accolades from all quarters including the office of the Hon'ble Prime Minister.

Border Roads Organisation Retweeted



Narendra Modi @narendram... · 05 Nov : Infra creation and circular economy, both will get an impetus. Compliments to all those involved with this effort.

Border Roads Organisati... · 02 Nov

Committed to embrace construction practices which are eco-friendly and promotes sustainable development. In a first BROIndia has undertaken construction of road Joram-Koloriang, A... Show this thread



Border Roads Organisation Retweeted



Jyotiraditya M. Scindia @JM... · 03 Nov : Terrific! Congratulations @TataSteelLtd on dispatching steel slag to @BROIndia for road construction in Arunachal Pradesh - a one of a kind initiative!



The deployment of steel slag brings durability of roads, cost savings & promotes circular economy.

291 2,879 10K

Tweet by Hon'ble PM



moneycontrol.com
Tata Steel supplies 1,200-tonne slag to BRO for road construction in Arunachal

12 95 388

Tweet by Hon'ble Minister of Steel



Road Stretch of Joram-Koloriang Road constructed using Steel Slag

Carbon Neutral Habitats. BRO has taken this initiative as a pilot project at various locations in Eastern and Western Ladakh. These habitats entail decentralized energy production mainly from renewable energy sources coupled with energy efficient buildings, optimized water cycle coupled with recycling wastewater and waste management. Based on the terrain in Ladakh, three models of habitats have been designed:-

Model-1: Semi Permanent Integrated Insulated Habitats.

Model-2: Container Based & Transportable Integrated Insulated Mobile Habitats.

Model-3: Heated and Insulated Tents for Short Duration and Transportable Habitats.

BRO's first Carbon Neutral Habitat at Hanle was inaugurated by Hon'ble Raksha Mantri on 28 Oct 2022. This Carbon Neutral Habitat will result in major savings and recover the entire cost of construction over the next 12 years.



Carbon Neutral Habitats in Ladakh

Energy Efficient Habitats. BRO has taken an initiative to construct energy efficient accommodation for BRO Karmyogis as per Energy Conservation Building Code (ECBC) and Eco-Niwas Samhita 2018 for Residential buildings. This will result in reduction in the energy required for heating and lighting by 60% leading to savings to the State.



Conceptual View of Himank Air Despatch (HAD) Complex at Chandigarh



Proposed Layout of Building

3D Printed Buildings. The BRO Museum at Leh and Complex for Himank Air Despatch (HAD) unit at Chandigarh are being constructed using 3D printing technology and these buildings will be the world's highest 3D printed building and world's largest 3D printed complex respectively once completed. The Hon'ble Raksha Mantri carried out "e-Shilanyas of these building/complex on 28 Oct 2022.



Conceptual View of BRO Museum at Leh

White Topping Technology. A pilot project of white topping for rehabilitation of pavement has been undertaken by BRO on Tuting-Bona Road in Arunachal Pradesh which experiences heavy rainfall.



Rehabilitation of Existing Bituminous Pavement using White Topping Technology

Sensor Based Route Guidance System. BRO has conducted successfully NCNC trials at Zojila pass using sensor-based Route Guidance System, in which GPS server fed with road alignment data is attached to snow clearance equipment to obtain precise location of the road. This will provide the operators with enhanced safety while undertaking this extremely risky snow clearance task.



Use of Sensor Based Route Guidance System on Zojila Pass

Integrated Underground Facility. Project Himank of BRO has come up with Integrated Underground Facility constructed with precast concrete culverts of M50 grade to provide protection against enemy attacks. The facility has the following amenities: -

Office cum Living Shelter (8 m x 1.5 m x 2m). The shelter provides a secure space inside M50 grade concrete for living as well as office/ mini operations room to be used during operations.

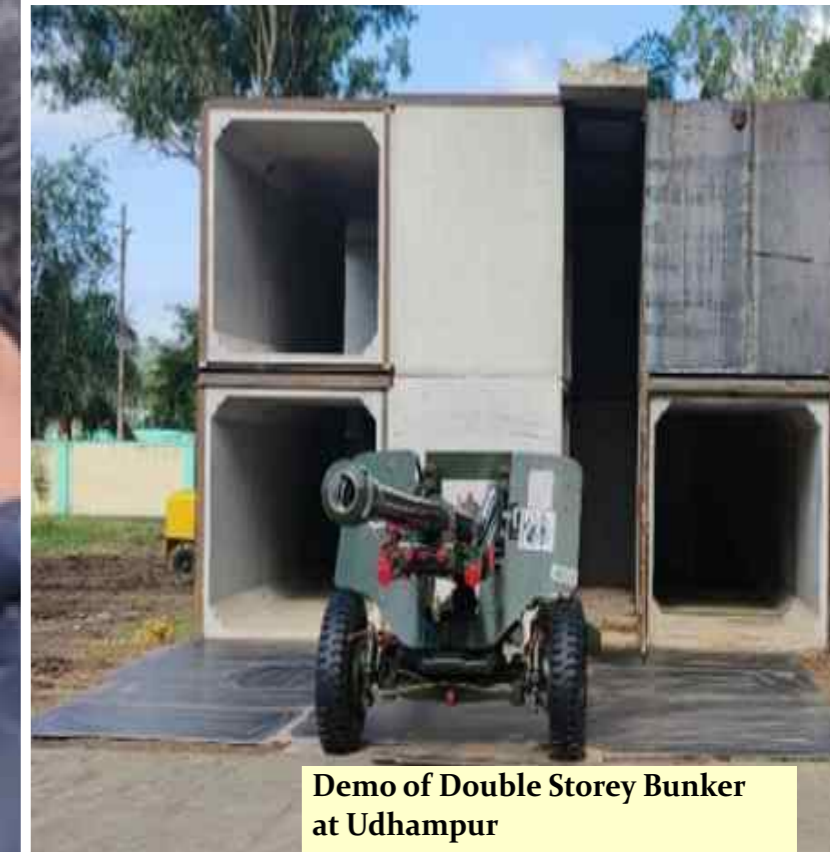
Ammunition Bunker (8m x 1.5m x 2m). The bunker provides adequate space for storage of ammunition for an Infantry Company.

Multi Utility Space (8 m x 2 m x 2m). The space has been created between the two concrete bunkers with overhead protection and can be used for living/ storage.

Overhead Protection. It is provided in shelters by using M50 Grade Concrete and over the shelters, structural steel members covered with 90 cm of earth provide protection against a direct hit of medium artillery shells.



Hon'ble RM at Integrated Underground Facility



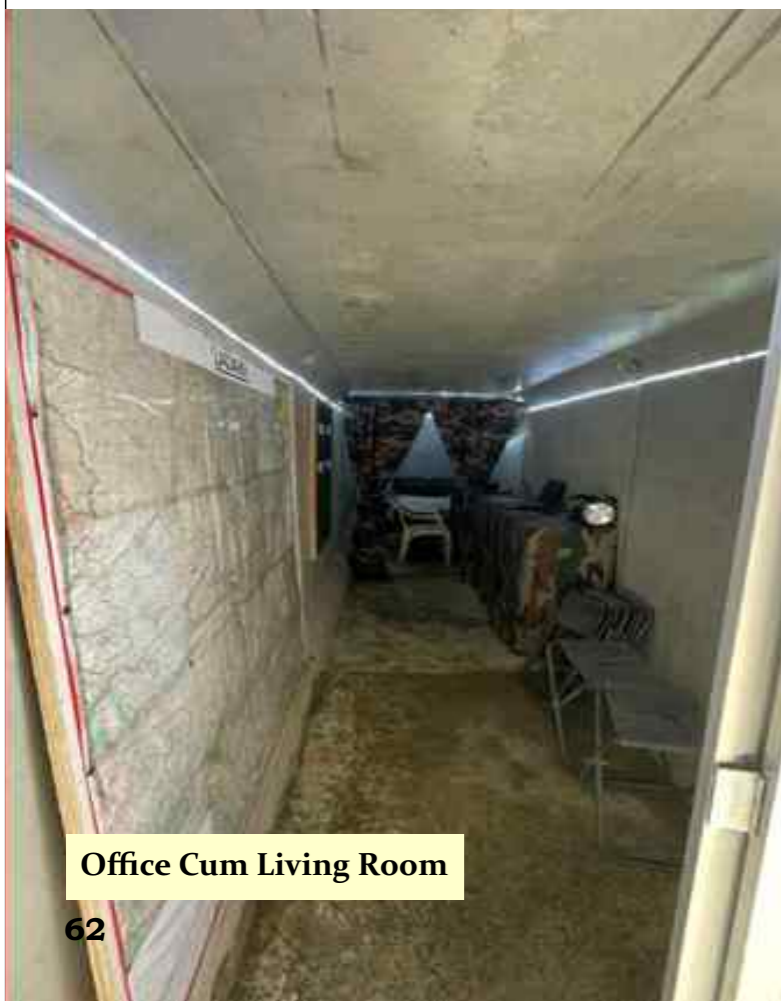
Demo of Double Storey Bunker at Udhampur

Double Storey Under Ground Bunker. BRO has undertaken Proof of Concept (PoC) for constructing a Double Storey Under Ground Bunker at HQ Northern Command at Udhampur by using precast culverts. The bunker was appreciated by all and would be a game changer for force preservation/ ammunition storage.

Prourement of Super Long Front (SLF) Excavators. BRO with its concerted modernisation drive has inducted 12 Super Long Front (SLF) 65 Ton Excavators with 23.5 m boom, one of its kind in the country and specially made for BRO. The equipment will help us to address all defence preparedness requirements on the Western front.



Super Long Front Excavator deployed on DCB in Punjab



Office Cum Living Room

Products under Consideration for Introduction in BRO.

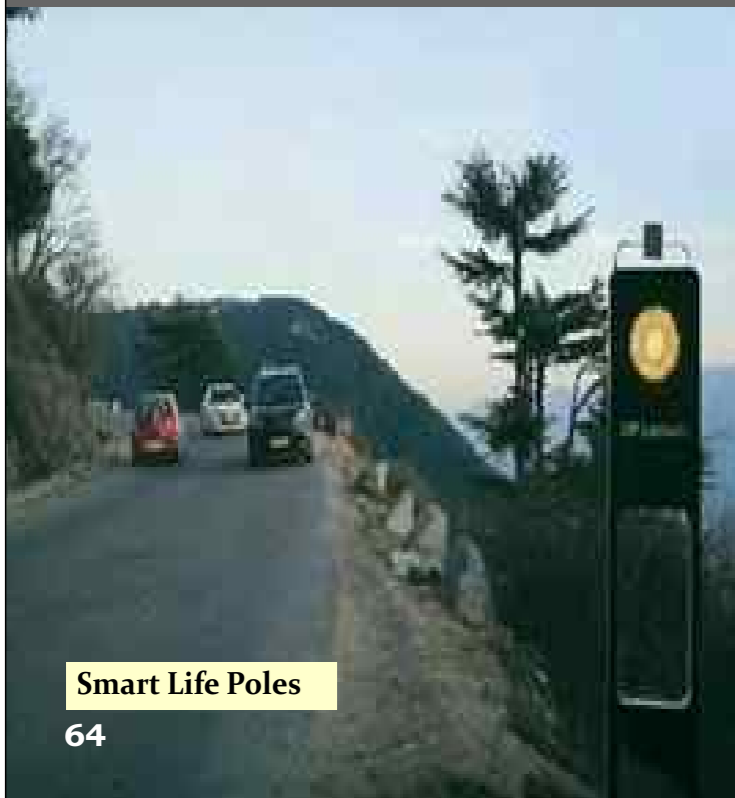
In collaboration with IOC R&D Centre, Faridabad, BRO has taken a lead to test certain concepts/products/technologies such as CRMB, Polybag Bitumen, Xtra Green Diesel, Smart Life Poles etc.



Crumb Rubber Modified Bitumen (CRMB)



Polybag Bitumen



Smart Life Poles



Induction of New Generation Equipment.

Keeping pace with technological advancements in the construction industry we are working on a detailed plan for seamless transition towards modernizing our inventory as well as processes/procedures of engineering support. In alignment with our policy, we have been able to induct 106 new generation equipment with technologically advanced V/E/P in various categories for construction activities. Some of the new initiatives/ inductions are as shown.

- LIDAR Drones.
- Self-Propelled Auto Batch Mixer.
- Automated Mining Tools.
- Mobile Concrete Sprayers.
- Double Boom Automatic Drills.
- Electric Vehicles.
- Super Long Front (SLF) Excavators.
- Spider Excavators.
- Falling Weight Deflectometer.
- Snow Cutter.

Other Multitasking Eqpt. Following equipment have been trial evaluated and are being inducted in BRO:-

- Multi Utility Tractors.
- Spider Excavators.
- Flat Bed truck of Ashok Leyland.
- AJEX ARGO Self Loading Concrete Mixer Model 4000.
- Backhoe loader with concrete mixture.
- Road Condition is being monitored using Artificial Intelligence which provides high accuracy in road defect detection at an early stage and helps in reduction of maintenance cost upto 30%.
- **Network Survey Vehicle.** NCNC trials for preparation of DPR using Network Survey Vehicle has been completed in the AoR of Project Himank and is also planned on Indo-Tibet Road under Project Deepak in Himachal Pradesh.
- **Foot Bridge for Mountains.** BRO is inducting light weight and low-cost foot bridges in border areas to cover gaps of upto 36 m.
- **Taper Turning Machine.** The trial of this machine supplied by M/s ACME Technologies has been successfully completed in Project Vartak and is being inducted in BRO.
- **Quick Coupler Attachment for 20 Ton Excavator.** This attachment will save time in replacing bucket with rock breaker and vice versa.
- **Drum Cutter.** The trial of Drum Cutter attachment has been conducted on NPD Road under Project Yojak and is being inducted in BRO.
- In addition, NCNC trials of following other advanced V/E/P have been planned and will be conducted soon:-
 - 60 m Steel Bridge of M/s GRSE.
 - Road Marking Machines.
 - Heavy Duty Propelled Crawler Mounted Rock Drill.
 - Snow Depth Measurement system.
 - Mobile Cold Emulsion Spray Injection Pothole Patching Machine.



GeM & SURGE IN AUTOMATION



Silver Medal & Gold Standard Certification for Excellence on GeM



DGBR giving a Talk on BRO's GeM Experience at Anti-Corruption Working Group Meeting of G20 Nations

GeM Procurement.

The Government e-Marketplace, popularly known as GeM, was launched as part of the Hon'ble Prime Minister's of Digital India initiative on August 9, 2016 with the objective of creating an open and transparent procurement platform for government buyers. In synergy with this vision, BRO's journey in GeM, ever since its inception has been remarkable, to say the least and BRO has completely switched over to GeM with almost 100% procurement of goods and services on GeM Portal.

In a world where transparency and accountability are of paramount importance, the BRO has set a remarkable example by adopting GeM as our preferred platform for procurements. By choosing GeM, we have not only simplified our procurement procedures but have also ushered in a new era of accountability and fairness. The GeM platform has made it possible for us to make informed decisions, reduce the scope for malpractice, and ensure that taxpayer funds are used judiciously.

These efforts have led to reduction in timelines for acquisition by about 33% with approx 20%

price reduction. This decision reflects our unwavering commitment to upholding the highest standards of integrity and efficiency in all our operations.

Despite the peculiar connectivity challenges due to deployment in far flung and remote areas, BRO has been able to ensure 100% of all its procurement through GeM Portal including Cement & Steel. Despite holding a miniscule share of the procurement budget as compared to other Central Government Organisations like the Army and Railways, BRO was awarded the 'Silver Medal' in Order Value among the Central Government buyers in FY 2020-21. BRO was rewarded with "Gold Standard Certification" for timely payment in Central Government Category with overall second position in FY 2021-22. For the first time in the history of BRO, 100% of items approved in Annual Procurement Plan (APP) for FY 2020-21 and FY 2021-22 were procured through GeM. A major milestone was achieved by BRO on 02 Mar 2023 by achieving Rs 1600 Cr Gross Merchandise Value (GMV) on GeM in just 11 months in the Financial Year 2022-23. Earlier, BRO took six years to achieve the first Rs 1600 Cr GMV. In FY 2022-23, BRO has been awarded both the "Gold Certification for Timely Payment" and "Silver Certification for Order Value" with total order value of Rs 1853 Cr under the Central Govt category. GeM has developed a utility for MoD users to process IFA concurrence in online mode to enable expeditious and transparent procurement. As part of Phase-I, IFA (BR) commenced according concurrence for procurement cases of HQ DGBR online on GeM Portal wef 25 May 2022.

Talk by DGBR on BRO's GeM Experience at Anti-Corruption Working Group Meeting of G20 Nations. DGBR shared BRO's experience on GeM and how the BRO used it as a Force Multiplier to enhance transparency, inclusivity & promote efficiency in BRO; at the Anti-Corruption Working Group (ACWG) meeting of the G20 Nations at Gurugram on 01 Mar 2023 as the only representative of the Armed Forces. The meeting was attended by over 90 delegates from 20 Member Countries, 10 Invitee Countries and nine International Organisations.

Kreta-Vikreta Gaurav Samman 2023. GeM organized Kreta-Vikreta Gaurav Samman Samaroh 2023 at Vanijya Bhawan, New Delhi on 26 Jun 2023. The event aimed to recognise the outstanding performance of government buyers and sellers in the public procurement process through GeM in FY 2022-23. DGBR received Kreta-Vikreta Gaurav Samman 2023 in GeM Star Buyers Category on behalf of BRO. The award was given by the Hon'ble Union Minister of Textile, Commerce and Industry Shri Piyush Goyal for his remarkable devotion to instill an honest and transparent public procurement landscape in BRO and innovatively using GeM for maximizing the utility of public purchases.



DGBR Receiving Kreta-Vikreta Gaurav Samman 2023

Automation in BRO

BRO has been in sync with contemporary technologies being used by other government agencies including armed forces and is aligned to the Digital India roadmap. BRO has developed the following 13 major software and one website with the help of BISAG-N and NICSI related to management of works, HR, automation and for disseminating information and facilitating booking for visits to Atal Tunnel, Rohtang:-

Works Management System. It's an online tool to monitor the progress of works and captures static and dynamic information for all the jobs executed by BRO. The data can be accessed by stake holders and it also facilitates auto generation of reports and returns for the next higher HQ.

Digitization of Road Infrastructure in Border Areas. Digitisation of land used for BRO roads has been done to increase the efficiency and transparency of the organisation with the aim of better utilising all assets.

Inventory Management System. The software has automated the entire procedure of procurement of resources. This is an application which will enable effective utilization of resources and decision making by integrating all field workshops with Base Workshops including HQs CE Project, HQs ADGBR and HQ DGBR.

Resources Management System. The software has automated the distribution and utilization of BRO Resources leading to enhanced efficiency and timely completion of projects.

Budget Management System. The software has automated the distribution and utilization of BRO budget and has also automated generation of MER.

Electronic Measurement Book Application. An electronic Measurement Book (e-MB) offers several benefits compared to traditional paper-based measurement books as it provides better accuracy, data integrity, better data analysis alongwith an option of backup and recovery. One of the most important advantage of this platform is the enhanced security of data.

Macro Level Works Management System (WMS). This software is an improved version of WMS already in place in BRO. This platform has further improved efficiency by better collaboration among various HQs and centralized information. This platform also facilitates real-time tracking of critical projects and resource optimization.

GRAF Human Resource Management Suite (GHRMS). This platform has been developed to handle the functions relating to Human Resources (HR) management at Unit level of Border Roads Organisation. As on date, Part II order for 82 X HQs/Units have been shifted to GHRMS.

Recruitment Management System. This software has been developed for recruitment activities in BRO including online registration of candidates, auto generation of Call Letters based on cut off percentage, validation of documents on reporting by candidates and generation of Board of Officers for Physical & Practical Exams.

Border Roads Automated Human Resource Management Application (BRAHMA). The BRAHMA Software for GREF Records is on similar lines to HRMS. The software will automate the functions of GREF Records Office. This software enables online generation and submission of Payment Documents, online updation of database at BRO Records and Pay & Allowances Section leading to faster resolution of pay and allowance related issues.

Posting Management System. The software is for automating posting of GREF Officers. This software enables automatic calculation of vacancies and has incorporated all the criteria for posting enabled in the software e.g. Medical condition, seniority, posting profile & ACR.

Mail Management System (e-Office). This software provides a platform for electronic file creation, management, movement and handling. Most of the correspondence between the Dtes in HQ DGBR is being done through e-Office. Regular efforts are being made to increase the use of e-Office.

Recruitment Management System Web Portal (RMS). A web portal of the already incorporated Recruitment Management System has also been developed so as to enhance its accessibility to all the units upto Platoon level.

Other Initiatives

Establishment of IT Infrastructure. LAN with Firewall and other IT equipments for better Cyber Security and intra office connectivity has been installed in HQ DGBR.

Installation of Maya OS. Maya OS has been obtained from CIRA for installation in all the internet facing computers of BRO in a phased manner, it will help in reducing cyber breach cases.

BRO Tourism Website. A website to facilitate the online information and booking facility for students and tourists across the country to visit the engineering marvels constructed and maintained by the BRO in of the most challenging terrains.



सीमा सड़क संगठन
Border Roads Organisation Our Mission

Atal Tunnel

Booking Ticket for : Guided Tour for Local Tourists (2 Hours)

Booking Type : Guided Tour for Local Tourists (2 Hours)

Ticket No. : ATATKJxdSA000001

Reference No. : ATATKJxd0001

Slot Booking : 8:00 AM to 10:00 AM

Booking Date : Nov 20 2021

Total no. of Individuals : 4

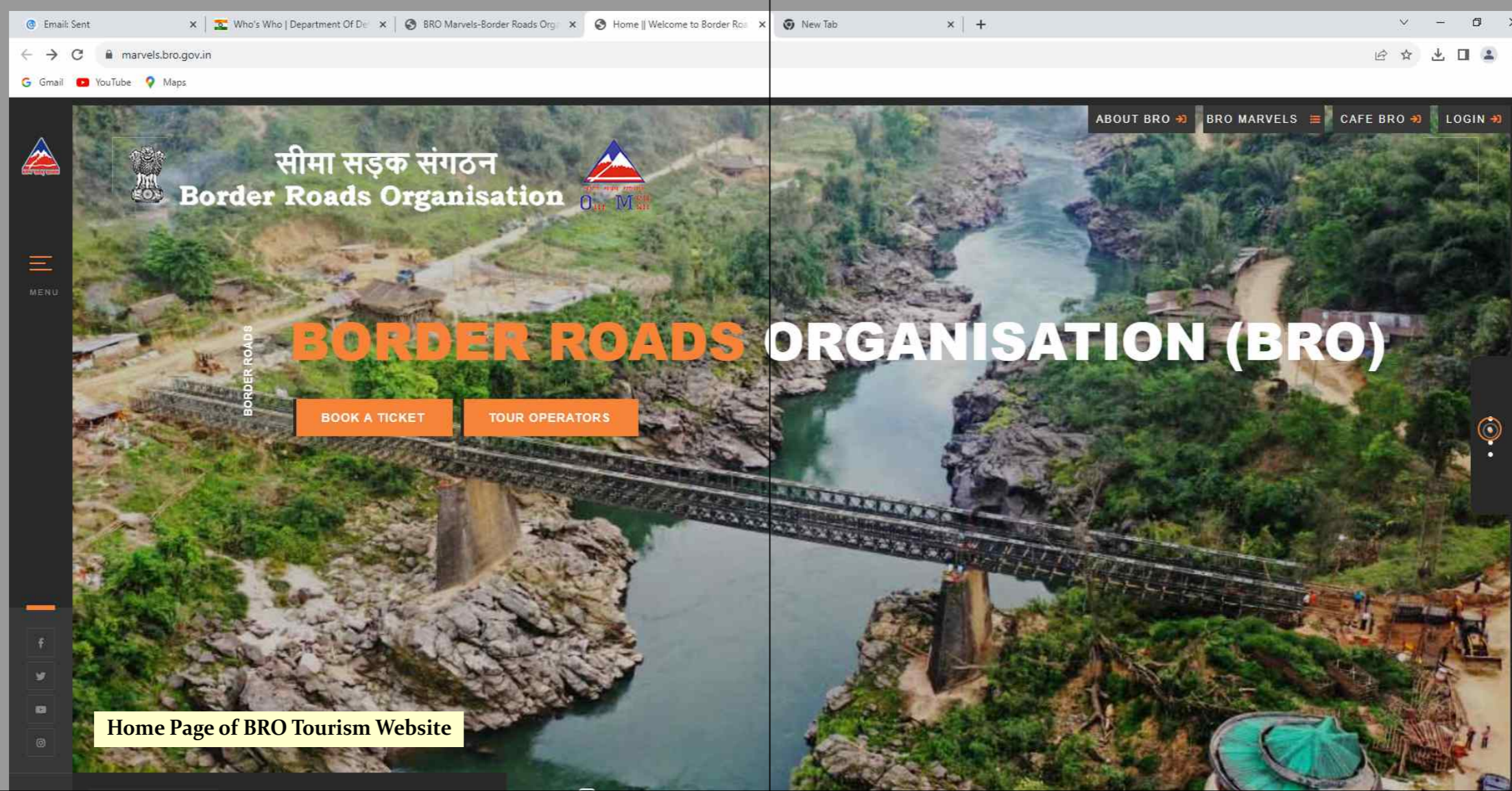
Amount : 375

Total Amount : 375

Payment Status : Pending

Category	No. of Person(s)	Rate	Amount (in Rs.)
Above 18 yrs	3	100	300
12 to 18 yrs	1	75	75

Sample Ticket booked on BRO Tourism Website



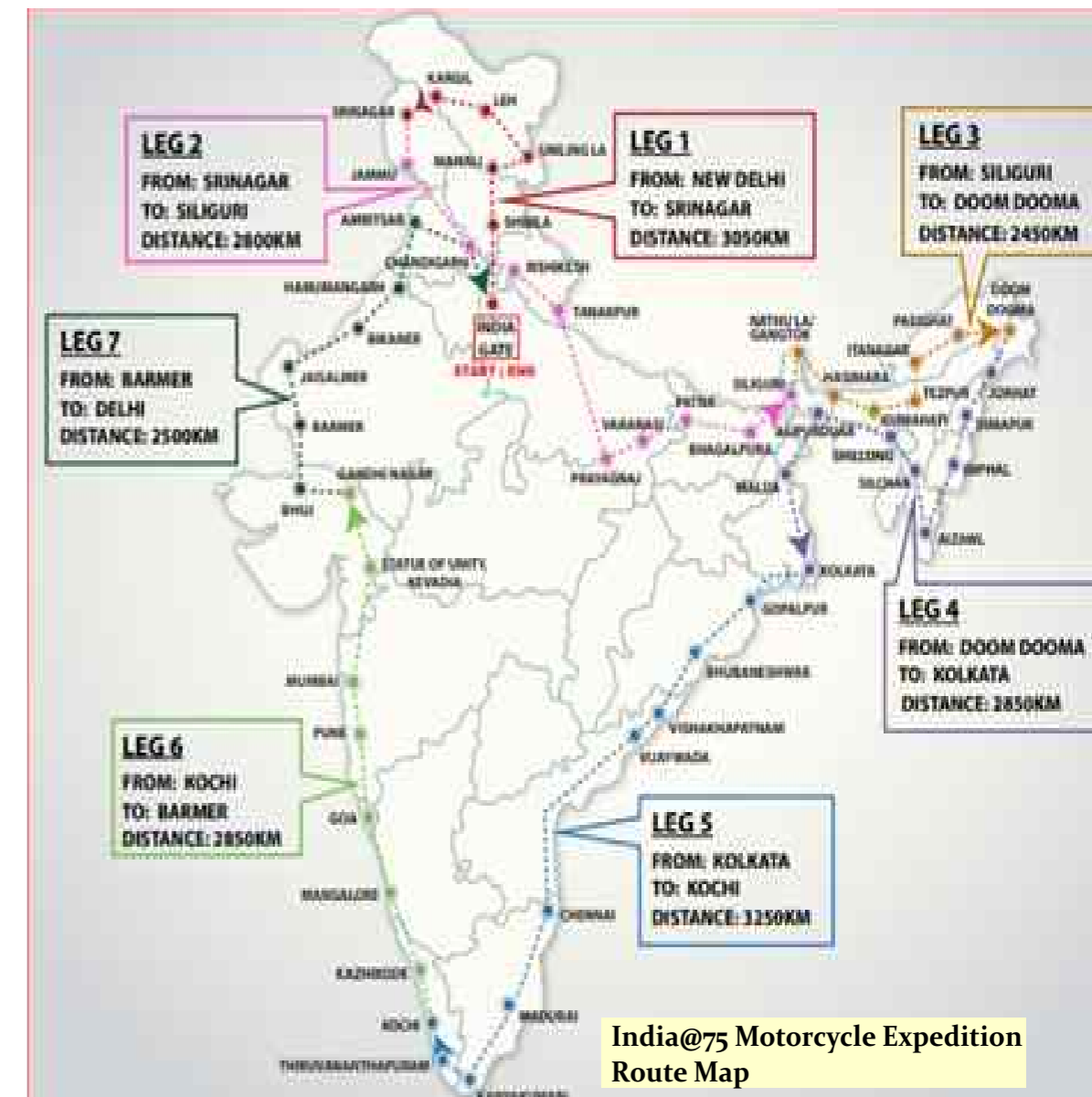


ADVENTURE & COHESIVENESS

Cycle & Motorcycle Rallies in 2021. Celebrating 75 years of Independence and 62nd BRO Day, nine Cycle Rallies in North-Western sector and eight Motorcycle rallies in North-Eastern sector were conducted by the BRO in the month of May 2021. The rallies covered 4322 Km on Cycles and 5600 Km on Motorcycles.



Motorcycle Expedition by Projects of North-Eastern Sector



India@75 Motorcycle Expedition Route Map

India@75 Motorcycle Expedition. Celebrating India's 75 Years of Independence, as part of "Azadi Ka Amrit Mahotsav" a Motorcycle Expedition was flagged-off by Def Minister Shri Rajnath Singh on 14 Oct 2021. 75 Riders from the BRO covered approximately 20000 Kms over 75 Days traversing through the length and breadth of the country.



Flagging Off by Hon'ble RM

BRO@63 All Women Electric Vehicle Rally. Raksha Mantri Shri Rajnath Singh flagged-off 'BRO @ 63-All Women Electric Vehicle Rally' on the eve of 63rd Raising Day on 07 May 2022. A team of 10 women officers and all ranks of BRO traversed approximately 750 Kilometres on Electric Cars through the National Capital Region, Uttar Pradesh and Uttarakhand and same was flagged-in on 09 May 2022 at HQ DGBR.

BRO@63 Multi-Dimensional Expedition. BRO commenced an adventure filled Multi-Dimensional Expedition as part of its 63rd Raising Day celebrations which was flagged-off by the Hon'ble Governor of Uttarakhand, Lt Gen Gurmit Singh, PVSM, AVSM, UYSM, VSM, (Retd) on 26 Apr 2022. The expedition included four distinct activities to include a mountaineering trek to the 15000 feet Pangarchula Peak covering a distance of approx 50 km, river rafting in the rapids of River Ganga for 35 Km, cyclothon from Dehradun to Delhi covering a distance of 591 Km and a 'Fit BRO' endurance run from Roorkee to Delhi covering a distance of 190 Km.



Flagging-in the BRO@63 Multi-Dimensional Expedition by Hon'ble Raksha Mantri



Flagging-in of Ekta Evam Shradhanjali Abhiyaan by Hon'ble RRM

Ekta Evam Shradhanjali Abhiyaan. To commemorate the sacrifices and contribution of its Karmyogis in Nation Building (Rashtra Nirman) BRO organised a "Ekta Evam Shradhanjali Abhiyan". The expedition commenced from 10 April 2023 and was organised as part of 64th BRO Day celebrations. During the expedition, teams from various Border States and UTs collected 108 samples of soil, 108 samples of water from rivers/ lakes/ water bodies and local saplings and culminated at BRO School & Centre, Pune after passing through various HQs including HQ DGBR. The expedition team comprised of 500 participants including 15 women and traversed 15000 Km over the period of approx 45 days. The Hon'ble Raksha Rajya Mantri flagged-in the "Ekta Evam Shradhanjali Abhiyan" at BRO School & Centre, Pune on 07 May 2023.

Enduring Friendship Mountain Bike Challenge in Bhutan. Project Dantak organised 10th Mega Edition at Thimphu in Bhutan on 30 Apr 2023 in coordination with Bhutan Olympic Committee (BOC) and attracted more than 150 cyclists from all over Bhutan, making it the highest-ever participation. The Hon'ble Prime Minister Shri Narendra Modi praised this initiative of BRO's Project Dantak.



Narendra Modi @narendramodi · May 5
Praiseworthy initiative.

Border Roads Organisation @BROIndia · May 3
@BROIndia Project Dantak to commemorate 64th Raising Day of #BRO organised 10th mega edition of the Enduring Friendship Mountain bike challenge at Thimphu in Bhutan.

The event was jointly conducted by Project Dantak and the Bhutan Olympic Committee and attracted more than 150... [Show more](#)



Tweet by Hon'ble PM Shri Narendra Modi



WOMEN EMPOWERMENT



BRO firmly believes that women will always be active participants in the endeavour of Nation building. The multi-faceted approach of BRO towards Women Empowerment includes variety in employment roles, avenues for higher education, access to proper healthcare, opportunities for adventure, sports and encouragement to develop holistically, as they play the lead roles in all walks of life.

For the first time in the history of the BRO, a woman officer was given the command of a unit. EE (Civ) Ms Vaishali S Hiwase was appointed as Officer Commanding 83 Road Construction Company (RCC) History on 28 Apr 2021. EE (Civ) Ms Obing Taki was appointed as the Officer Commanding 105 RCC on 26 Jul 202.

An **All Women RCC** was established at Pipalkoti in Chamoli District and Major Aaina took over as Officer Commanding of 75 RCC on 30 Aug 2021 becoming the first Army Woman Officer to command an RCC. In addition, Col Navneet Duggal, Officer Commanding 1053 Field

Workshop at Srinagar was also a Woman Officer leading from the front.

Taking this ahead, Col Archana Sood has taken over as the First ever Commander 756 BRTF (P) Arunank on 24 Feb 2023 in one of the toughest sectors of BRO and very recently, Col Ponung Doming has taken over as Commander 755 BRTF (P) Himank on 10 Jun 2023 in the strategically important sector along LAC under the union territory of Ladakh and she will be commanding the **First Ever All Women BRTF**. Her team has also been tasked to construct Nyoma Airfield at 13,800 ft which will be one of the Highest Airforce Bases in the World as also the Chusul-Dungti- Fukche- Demchok (CDFD) Road which is one of the most strategically important roads running parallel to the LAC.



Col Archana Sood , First Woman Commander, 756 BRTF



Col Ponung Doming, First Woman Commander, 755 BRTF



EE (Civ) Ms Vaishali S Hiwase



Major Aaina



EE (Civ) Ms Obing Taki

It is not only Women Officers who are working shoulder to shoulder with their male counterparts, but even Women workers at the grass root level to include Junior Engineers, Clerks, Pioneers and Casual Paid Labourers (CPLs). All Women teams of BRO have also constructed bridges and de-launched Bailey Bridges.

Road Construction Companies First Women Officers Commanding

On the occasion of "Engineers Day 2021", at a National Seminar organised in Delhi by Institute of Civil Engineers (ICE), three Women Officers of BRO, Col Navneet Duggal, EE Civ Vaishali Hiwase and Maj Aaina Rana were felicitated by MoS (WCD) Dr Munjpara Mahendrabhai for their outstanding contribution in the field of Infrastructure Development and have been named as one of "75 Prominent Women Engineers of India".



BRO Women Officers honoured on Engineer's Day 2021



EE (Civil) Obing Taki and Capt Sania as part of BRO's All Women Team de-launching a Bailey Bridge in Arunachal Pradesh



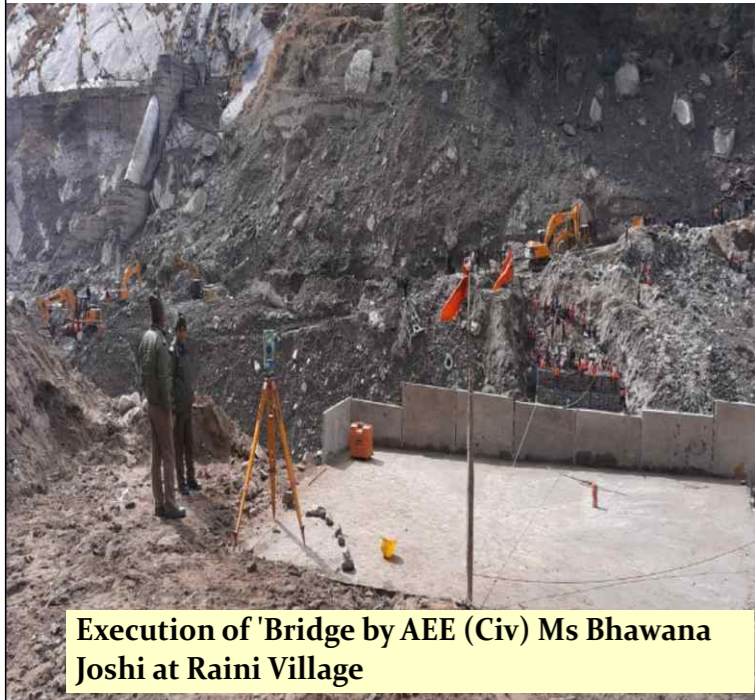
BRO Women Officers felicitated on International Women's Day 2022

On the occasion of International Women's Day on 08 Mar 2022, Delhi Commission for Women (DCW) felicitated four women officers from Border Roads Organisation who have set exemplary standards in being inspirational leaders by bestowing them with the "International Women's Day Award" in New Delhi. In the year 2023, five Women Officers of BRO have also been felicitated by DCW for their untiring efforts in contributing to Nation Building on 11 Mar 2023 as part of International Women's Day 2023.



BRO Women Officers felicitated on International Women's Day 2023

Women officers and CPLs have been working under extreme weather conditions to construct roads in high altitude and inaccessible areas, not connected hither-to-fore and keeping critical passes open.



Execution of 'Bridge by AEE (Civ) Ms Bhawana Joshi at Raini Village



AEE (Civ) Ms Nikita Choudhary Monitoring Progress of Sela Tunnel



Lt Col Snigdha Sharma interacting with Junior Women Workers at HQ DGBR, New Delhi



Inspection of Works by EE (Civil) Ms Vaishali Hiwase on a Frontline Road



Major Aaina Rana interacting with Civil Administration on Critical Road Connectivity



The Healing Touch.

Women Doctors in BRO have also been performing their duties with utmost sincerity and dedication, while providing a 'Healing Touch' to not only the BRO Karmyogis to include CPLs, but also to their families in the most remote areas. In addition to providing regular medical services to locals, medical camps are organized time to time by all Projects for all age groups of the local population.



BRO Women Doctors Providing the Healing Touch



WELFARE MEASURES

Improvement in Living Conditions of Casual Paid Labourers (CPLs).

While working towards the cause of “Nation Building”, the living conditions of BRO Karmyogis to include approximately 70,000 Casual Paid Labourers (CPLs) had been neglected for long. The plight of the selfless and dedicated CPLs working selflessly, but enduring personnel discomfort led to a resolve to improve their living conditions. A beginning has now been made for upliftment of their living conditions which will further pave the way for inclusive growth and ensure prosperity for all.

Improvement in Accommodation. Some of the initiatives taken so far towards improvement of CPL's accommodation by BRO Projects are highlighted below:-

- Renovation/upgradation of existing accommodation.
- Erection of new Prefabricated Shelters.
- Provision of Containerized Shelters.
- Provision of PUF/Rock wool insulated shelters at specific locations.
- Provision of Snow Huts in snow bound areas.
- Construction of new toilets and bathrooms.
- Construction of rest rooms and urinals.
- Provision of Bio Toilets.
- Provision of beds in certain areas.
- Provision of Solar Panels for lighting purposes in some areas.
- Provision of Generator facility for lighting purpose in some Projects.
- Provision of potable water, storage facility and water purifiers/ filters.
- Provision of sports items like Volleyball, Cricket & Gymnasium equipment for recreation and overall well-being.
- Provision of TV with DTH connection for recreation in some Projects.
- Providing clothing items such as sleeping bags, mattresses, coats, gloves, sunglasses, blankets, boots and balaclavas etc in some high-altitude areas.
- Providing Desert Coolers in hot areas.
- Arrangements of Bukharies in extreme cold climatic areas.

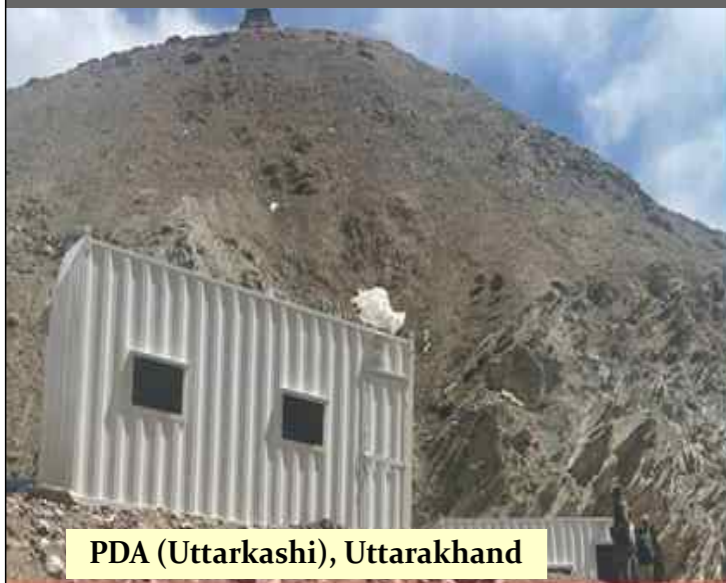




Sarchu, Eastern Ladakh



Chumathang, Eastern Ladakh



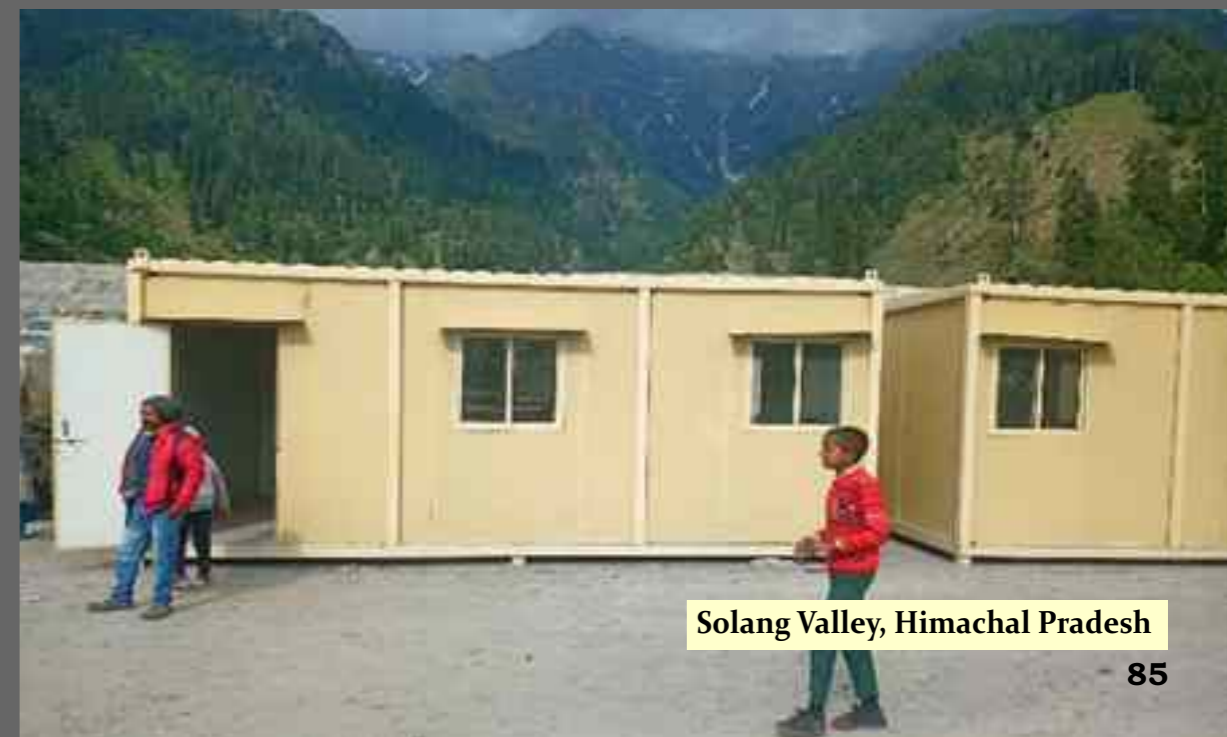
PDA (Uttarkashi), Uttarakhand



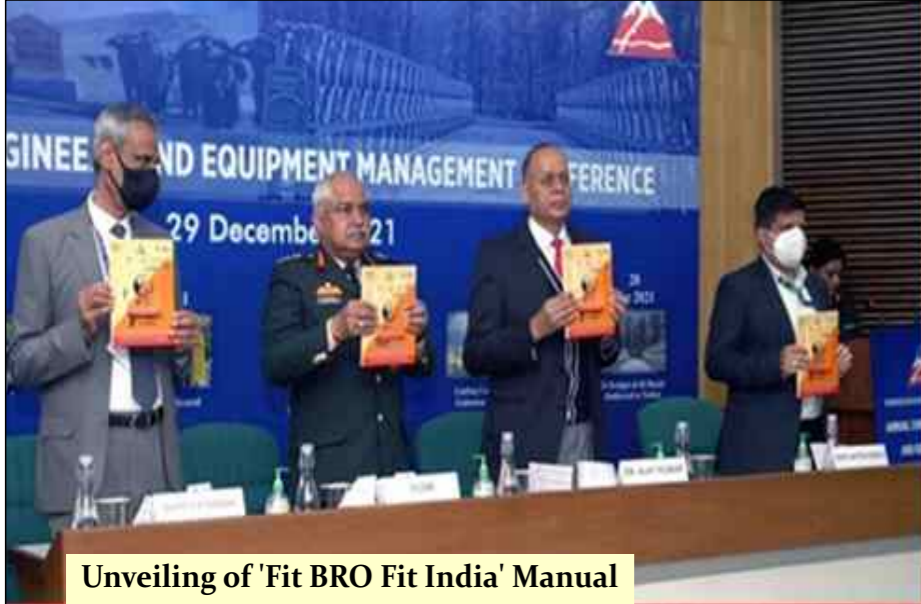
Ragma Range, Sikkim



Drass, Western Ladakh



Solang Valley, Himachal Pradesh



Unveiling of 'Fit BRO Fit India' Manual

Enhanced Health Care. A comprehensive analysis on health care system/medical infrastructure has been conducted in all BRO Projects and health awareness/medical checkup camps for CPLs and their dependents, periodic lectures/workshops on lifestyle diseases/alcoholism/communicable diseases, First Aid classes are being regularly conducted by doctors and paramedical staff of BRO.

A fitness manual "Fit BRO Fit India" for the Karmyogis of BRO has also been published and unveiled by Defence secretary on 27 Dec 2021. The book contains fitness guidelines and protocols which has been prepared for holistic development of body and mind of all BRO Karmyogis.

Medical Camps at Remote Locations. The BRO has been regularly conducting medical camps for the local populace in the area of deployment right up to Platoon level. These camps are well received by the locals as they serve the dual purpose of improving the health of the local population, while at the same time, increasing the interaction of the locals with the BRO, thereby resulting in overall goodwill for the Organisation.



Medical Camps at Remote Locations



Health Awareness Lectures

Rational and Clothing. Rations on Govt rates are being provided to these labourers. BRO distributed a total of 11098 winter jackets and 800 winter shoes to its CPLs deployed in high altitude areas during the year 2021, through sponsorship from IOCL and HPCL. Supply of safe drinking water in CPLs Camp is being provided regularly. Warming facilities for CPLs working above 8000 ft height is also being catered for in some Projects. Amenities like LED TVs, DTH, Bukharies, Generator sets, Raincoats, Boots, Goggles, Cap Balaclava, Blankets and Carrom Boards etc have also been provided as a welfare measure.



Hon'ble Raksha Mantri in New Delhi



Hon'ble Raksha Mantri in Ladakh & New Delhi



Transport Facilities to Work Sites. As a welfare measure, buses and modified trucks fitted with seats have been provided for transportation of casual labourers from residence to work sites and back to protect them from climatic effects and other health hazards.



Special Winter Clothing



Improvements in Seema Sadak Bhavan.

Some of the initiatives taken towards improving the quality of life of personnel posted in HQ DGBR and increasing the efficiency of the BRO are highlighted in the succeeding paragraphs.

Improvement of Main Gate and Main Entrance. The Main Gate, boundary walls, staircase and the Entrance Gallery have been renovated and given a major facelift.

Front Lawn. The front lawn has been done up and now presents a refreshing green look to the contrasting red façade of the HQ Building.



Roll of Honour



Front Lawn

Roll of Honour. A Roll of Honour of all the Award Winners along with Formation Signs of all Projects has been displayed in the Ground Floor Entrance Gallery so as to act as a source of motivation for everyone to emulate.

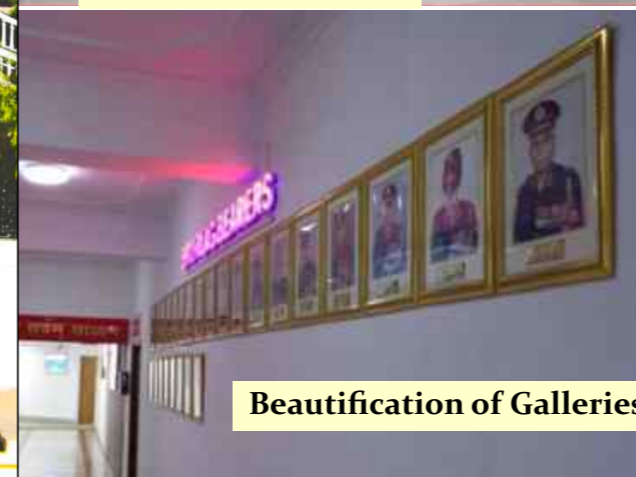
Beautification of Galleries and Main Staircase. The galleries and main staircase leading to the offices have been beautified with electronic boards displaying captions and illuminated photo frames of the latest works completed/ under construction by the BRO.



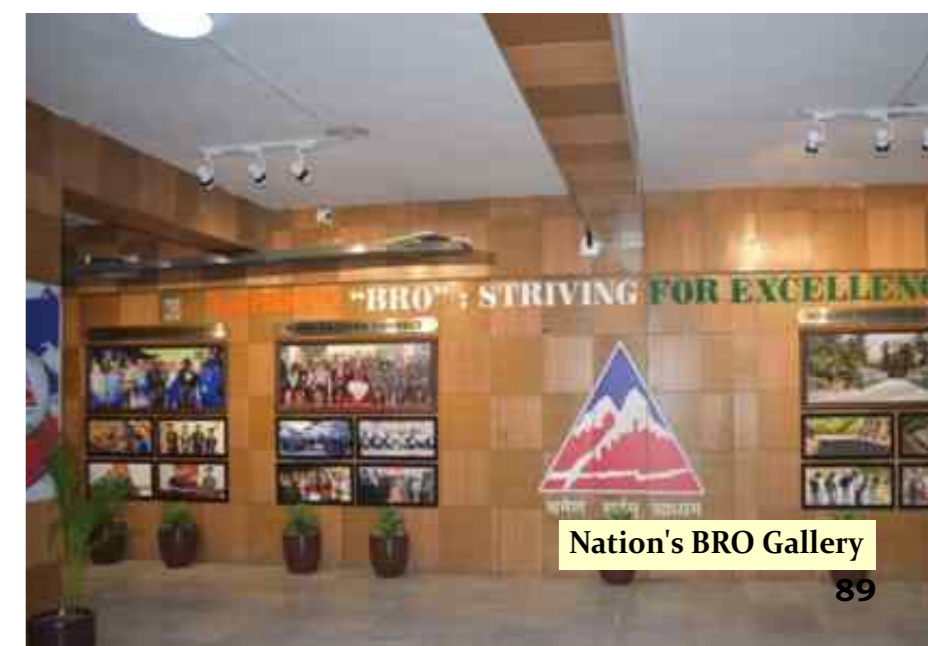
Main Staircase



BRO Milestones Gallery



Beautification of Galleries



Nation's BRO Gallery



Entrance HQ DGBR

Pride of BRO Gallery. In our attempt to honour dedicated and hard-working individuals, and keep the staff motivated, monthly awards have been instituted. The photos of the winners are displayed in the Pride of BRO Gallery and serve as a source of motivation for everyone.



Pride of BRO Gallery

Improvements to Other Ranks Dining Hall and Kitchen. The cookhouse for Other Ranks has been upgraded with modern cooking appliances and the dining hall has been renovated so as to offer a comfortable and hygienic environment.



Visitors' Room



Renovated BRO Karamyogis' Mess

Karma Café. A cafeteria for all ranks has been opened in the Subordinate Staff residential complex to meet basic requirements of the supervisors and other ranks in-house, especially during COVID-19 restrictions.



MI Room Complex. A medical Inspection (MI) Room has been established at HQ DGBR to address the immediate medical needs and emergency care of the BRO personnel posted with HQ DGBR and their families.

G+3 Light Gauge Steel Frame (LGSF) Building has been constructed at OTM Complex. Centralized AC at HQ DGBR, Seema Sadak Bhawan has been commissioned so as to provide a comfortable working environment for every individual. LED panels for motivational quotes have also been installed.

In addition, a Multi Level Car Parking and a New Office Complex have also been set up to ease the problem of Parking in HQ DGBR Complex and to decongest Office Space in the main HQ Building.



G+3 Light Gauge Steel Frame (LGSF) Building



MAJOR RESCUE & RECOVERY OPERATIONS

Several rescue and recovery operations were carried out by the BRO Karmyogis in various projects over the course of past three years.



Bridge of Assistance (Kela Bridge, Jammu-Srinagar Highway)

Bridge of Assistance (Kela Bridge, Jammu-Srinagar Highway). 110 ft Bailey Bridge at Kela Morh near Ramban on Jammu-Srinagar Highway constructed in a record time of 60 hrs on 08 Jan 2021 to restore connectivity to Kashmir valley, which was disrupted for six days after the 90 ft long bridge wall had collapsed at Ramban.



Bridge of Compassion (Raini Bridge, Uttarakhand)

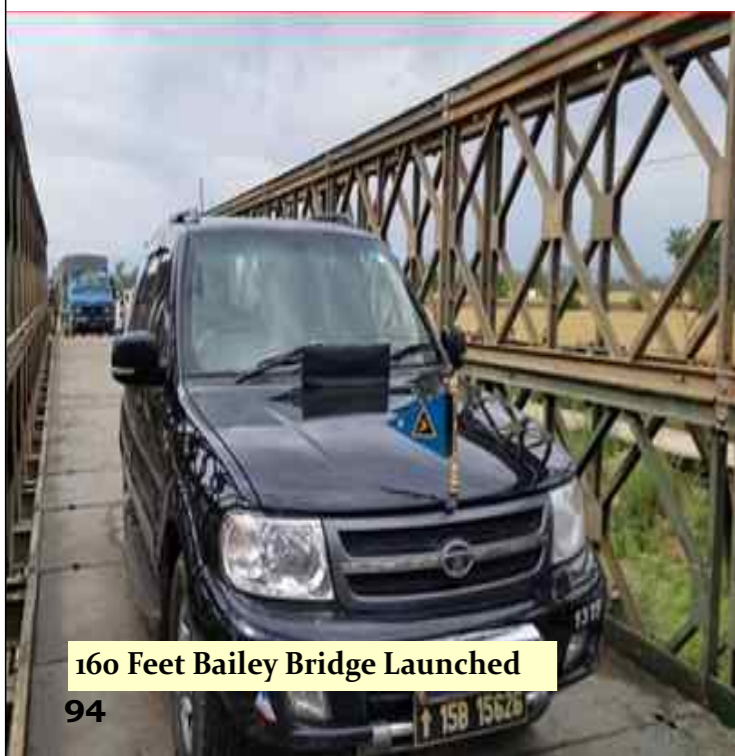
Bridge of Compassion (Raini Bridge, Uttarakhand). Connectivity to the 13 border villages in Uttarakhand's Chamoli district which was affected on 07 Feb 2021 due to Glacial Lake Outburst Flood (GLOF) was restored after the BRO constructed a 200 ft Bailey Bridge on Joshimath-Malari Road across the Rishiganga River in a record time of 26 days.

Bridge of Support (Barapani Bridge, Shillong). BRO launched an important bridge on the highway connecting Shillong and Silchar. BRO commenced launching of the bridge on 11 Mar 2021 and completed it on 15 Mar 2021, within five days, which was envisaged to be launched in 15 days.



Bridge of Support (Barapani Bridge, Shillong)

Bridge of Hope (Tarnah Bridge, Punjab). BRO launched an important 160 feet Bailey bridge on 21 Apr 2021 on the Road Chadwal-Sanjimore-Paharpur-Simbal Highway to facilitate the movement of traffic throughout the year replacing Pantoon Bridges which had to be de launched every year before the onset of monsoons.



160 Feet Bailey Bridge Launched



Rescue Works by BRO in Uttarakhand

Rescue Works in Uttarakhand. Two cars with passengers were rescued on 18 Oct 2021, in two separate incidents on the Badrinath National Highway Ghatiabagad-Lipulekh Road of Pithoragarh.

Avalanche Rescue near Sadhna Pass in UT of J&K. 30 civilians in seven vehicles were rescued on the night of 17/18 Jan 2022 between Km 24 and Km 28 on Road Chamkot-Tangdhar near Sadhna Pass.



Creation of Bund and assisting the ARV in Pulling Out Tanks

Recovery of Tanks on D-S-DBO Road. Two army T-72 Tanks were recovered on 10 and 11 Aug 2022.



Rescue Work by BRO at Razdan Pass in UT of J&K

Rescue at Razdhan Pass in UT of J&K. Four drivers along with their vehicles stuck in a snowstorm at Razdan Pass on Gurez-Bandipora Road were rescued on 22 Oct 2021.

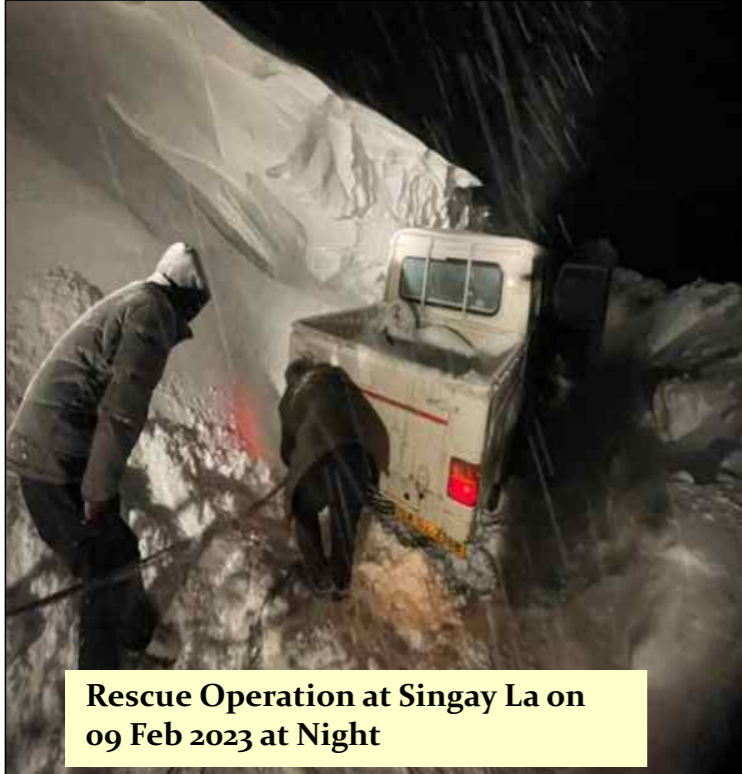


Avalanche Rescue at Chamkot-Tangdhar Road in UT of J&K

Aid to Civil Authorities of Yinkiong town in Arunachal Pradesh. A team of 60 pers along with 3 x water bowzers doused a fire in the Upper Market of Yinkiong town on 21 Apr 2022.



BRO Karmyogis Dousing Fire in Yinkiong Town in Arunachal Pradesh



Rescue Operation at Singay La on 09 Feb 2023 at Night



Rescue of Tourists, Locals & Recovery of Army Vehicles in Sikkim



Rescue Operation in Sikkim



Rescue of Vehicle from Changla Top on 10 Jul 2023

Rescue Operation at Singay La in Ladakh. Four people (three Adults and one Child) were rescued on 10 Feb 2023.

Rescue and Recovery Operation in Sikkim. 70 tourists and locals were rescued on 31 Aug 2022.

Rescue Operation in Sikkim. 40 tourists and locals were rescued on 01 May 2023.

Rescue Operation at Changla Top in Ladakh. A vehicle & Tourist were rescued on 12 Jul 2023 at an altitude of 17700 ft.



Stranded Tourists Rescued and Accommodated in BRO Camp on 16 Mar 2023 in Sikkim



Avalanche Rescue Operation in Sikkim



Rescue of Tourists Chandratul in Himachal Pradesh.

Rescue of Stranded Tourists in Sikkim. More than 10000 tourists were rescued in Mar 2023.

Avalanche Rescue Operation in Sikkim. 15 tourists were rescued during an avalanche on 04 Apr 2023.

Rescue of Tourists at Chandratul in Himachal Pradesh. 300 tourists were rescued on 13 Jul 2023.



Rescue of Vehicle on Khalsar-Agham-Shyok Road

Rescue Operation at Changla Top in Ladakh. Tourist and civilian traffic were rescued on 11 Apr 2023 at an altitude of 17700 ft.



Rescue of Truck and Opening of Road at Changla Top

Rescue Operations in Ladakh. A local Vehicle carrying tourists and an 18 month old baby rescued near Agham on Khalsar-Agham-Shyok Road on 09 Jul 2023.



अमेण सर्वम् साध्यम्

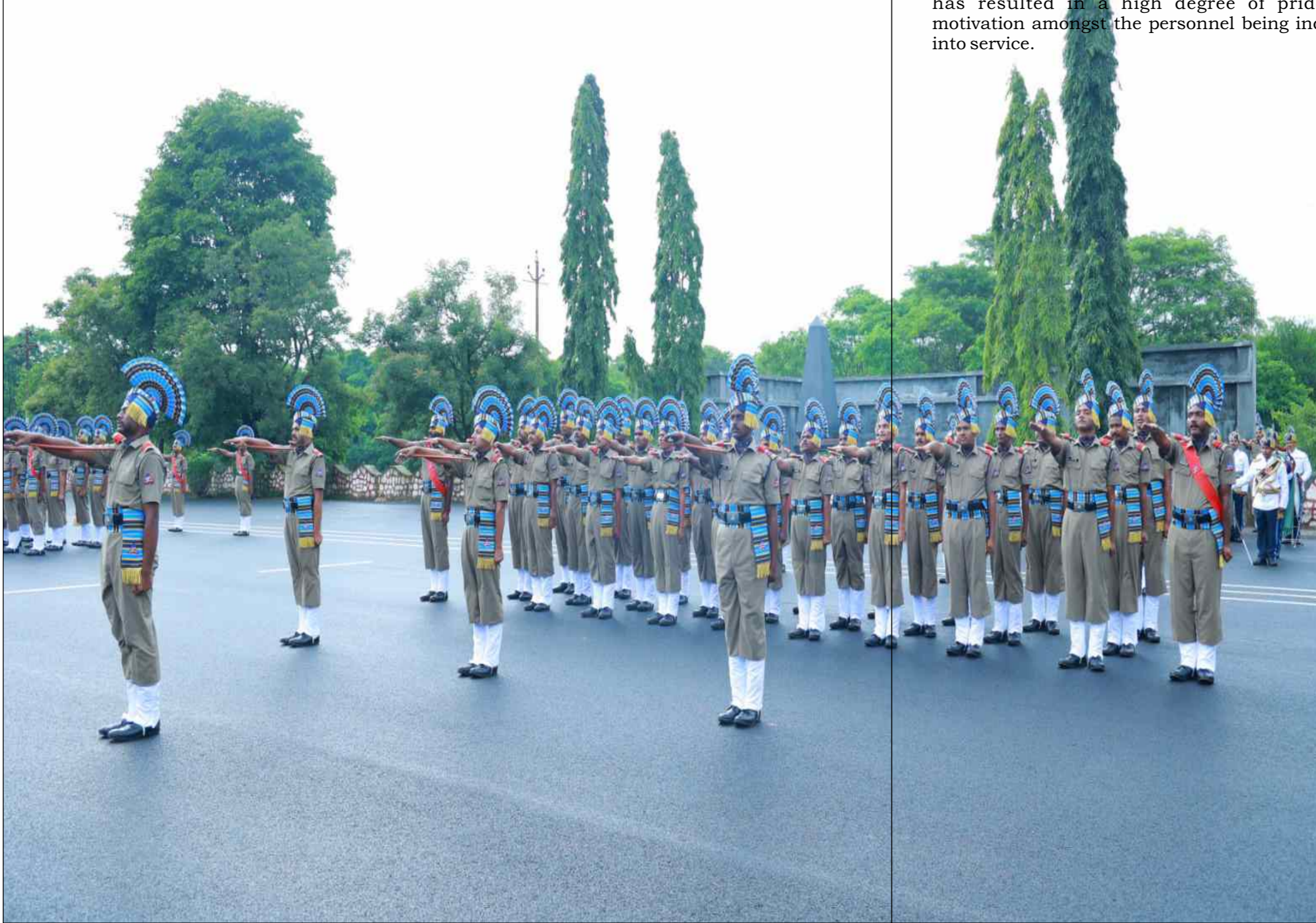
TRAINING & COURSES

Renaming of GREF Centre as “**BRO School & Centre**”. The Faculty of Highway Engineering shifted from College of Military Engineering to Dighi Camp, Pune in the premises of GREF Centre wef 01 Aug 2022 and has been renamed as '**BRO School & Centre**'. Training for both Officers and Subordinates is being carried out in an more efficient and cohesive manner with better utilization of resources and savings to the exchequer.

Introduction of Ceremonial Dress in Training of Officers and Recruits. Ceremonial Dress has been introduced for the passing out parade and the same has resulted in a high degree of pride and motivation amongst the personnel being inducted into service.



Passing Out Parade in Ceremonial Dress



Training at BRO School & Centre

Training Courses

Training on Tunnels. As part of our endeavor for in-house capacity building for tunnels construction, the following initiatives have been taken:-

- Tunnel Orientation and Training Course for officers and JEs.
- Site visits to Sela and Nechiphu tunnels.
- Virtual Training session by Tunnelling Association of India (TAI) for Officers and JEs of BRO.

Non-Destructive Testing and Evaluation of Concrete Structures. Online Training program by NCB's (CCE) at NCB-Ballabgarh was carried out on Non-Destructive Testing of Concrete.

Table Top Exercise (TTE) & Mock Exercise (Mex). Organised in Sikkim to exercise the Incident Response System (IRS) for tasks like land slide clearance, casualty evacuation etc in coordination with NDMA & SDMA Sikkim.

Training of BRO Officers in Petroleum Technology and Management. A new course "Training of BRO Officers in Petroleum Technology & Management" has been included in the BRO training programme. The training of the first batch of BRO Officers was conducted at IOCL Mumbai from 14 Nov 2022 to 23 Nov 2022. Twenty Officers from various Projects attended the Course.

Diploma School. Diploma School has been inaugurated in the premises of BRO School & Centre on the occasion of 64th BRO Day on 07 May 2023, which will give an unprecedented opportunity to GREF personnel to hone their technical skills and also provide them promotion avenues.



Integrated Training Area. The Hon'ble Raksha Rajya Mantri inaugurated the Integrated Training Area which includes an Automated Driving Track at BRO School and Centre on 07 May 2023. One of the salient features of the training area is a 2.2 Km long automated driving track with integrated sensors, making it one of the best in the country.



Inauguration of Integrated Training Area by Hon'ble RRM



COVERAGE OF GOOD WORKS

Social Media

Narendra Modi @narendramodi

These are important projects which will go a long way in enhancing infrastructure in the border areas!

Rajnath Singh @rajnathsingh · 14h
Dedicated to the nation 90 infrastructure projects constructed by the Border Roads Organisation (BRO), worth over Rs 2,900 crore and spread across 11 States/Union Territories.



21:36 · 12 Sep 23 · 1.7M Views

7,947 Reposts 89 Quotes 57.7K Likes

Rajnath Singh @rajnathsingh

Dedicated to the nation 90 infrastructure projects constructed by the Border Roads Organisation (BRO), worth over Rs 2,900 crore and spread across 11 States/Union Territories.

The BRO has done excellent work in the recent years and it has emerged as a shining example of civil-military fusion.

pib.gov.in/PressReleasePa...



Border Roads Organisation @BROIndia · 03 Jul
Lt Governor Jammu and Kashmir @manojsinha_ appreciating the efforts of @BROIndia in maintaining the tracks for Shri Amarnath Yatra.

Jai Hind! Jai BRO!!

KNS @KNSKashmir · 02 Jul
Lt Governor @manojsinha_ visits Baltal Base Camp, Reviews arrangements for Shri Amarnath Yatra.

@OfficeOfLGJandK @diprjk @ByYatishYa...



4 11 52 2,990

KNS @KNSKashmir · 04 Jul
#AmarnathJiYatra2023 of 62 days, & the tireless efforts of executing bodies to ensure safe & smooth Yatara. Also listen in the key work carried out by BRO over to the tracks leading to Amamarnath Holy Cave.

@narendramodi @AmitShah @OfficeOfLGJandK @diprjk @ByYatishYadav...
Show more



1 14 22 1,627

Kashmir News Zone-KNZ @KNZKashmirOffice

Amarnath Yatra: Pilgrims are very happy to walking on amarnath track via baltal domain in Ganderbal. Pilgrims thanks to UT and District administration especially BRO fb.watch/ly1te3Kmb5/?mi...
@ShriSasb @amarnathdham @dcganderbal @BROIndia @OfficeOfLGJandK @diprjk @Shyambir_IAS



Aaqib Rasool عاقب رسول
9:55 · 03 Jul 23 · 1,308 Views

Pema Khandu @PemaKhanduBJP

Congratulations to @BROIndia for taking up the extraordinary challenge of completing the project in tough terrains.



17:21 · 12 Sep 23 · 1,031 Views

IndiaToday @IndiaToday · May 7

Defence Minister @RajnathSingh described @BROIndia as a shining example of unity, discipline, dedication and devotion to duty. (By @manjeetneglive)



indiatoday.in
Rajnath Singh asks Border Roads Organisation to strengthen infrastru...
Defence minister Rajnath Singh on Saturday asked the Border Roads Organisation (BRO) to further enhance its capability and work at ...

Rajnath Singh @rajnathsingh · 16h

MoD is committed towards infrastructure strengthening in the Border Areas, particularly the Northern Borders. Accordingly, the Capital Budget of Border Roads Organization (BRO) has increased by 43% to Rs 5,000 crore in FY 2023-24 as against Rs 3,500 crore in FY 2022-23.

Border Roads Organisation Retweeted

Rajnath Singh @rajnathsingh · Oct 28

Dedicated to the nation 75 BRO infrastructure projects, spread across six States & two UTs in Ladakh today.

These projects will bolster India's defence preparedness & ensure economic development of border areas.

pib.gov.in/PressReleasePa...



Rajnath Singh @rajnathsingh · Mar 5

Excellent work by BRO.

These infra projects are testament to PM Shri @narendramodi led Government's firm resolve towards border area development for enhanced defence preparedness & socio-economic progress.

Border Roads Organisation @BROIndia · Mar 4

In yet another yeoman service for people of Arunachal Pradesh, the Karmyogis of @BROIndia Project Vartak have constructed Jung Bypass Road, bypassing the crowded Jung Town. This will offer faster yet safer passage towards Tawang. The bypass is yet another infrastructure that(1/2)



14.2K views 0:41 / 0:58

Rajnath Singh @rajnathsingh · 44m

Dedicated to the nation 28 BRO infrastructure projects worth Rs 724 crore, in 7 border States/UTs during an event in Arunachal Pradesh.

Infrastructure development transforms lives of people living in Border areas, it is a game changer for the region.

pib.gov.in/PressReleasePa...



रक्षा मंत्री कार्यालय/ RMO India @DefenceMinIndia

अधिकतर लोग यह समझते हैं, कि BRO केवल Armed Forces के लिए काम करता है। पर मुझे लगता है कि BRO इससे कहीं आगे, "Connecting Places, Connecting People" की philosophy के साथ देशवासियों को एक-दूसरे से जोड़ रहा है: रक्षा मंत्री

Ajay Kumar @drajy Kumar_ias · 10h

BRO recognized for timely payment of vendors on GeM Congratulations DG BRO and team



Prasar Bharati News Services पी.बी.एन.ए. @PBNS_In_ · May 7

In pictures: Defence Minister @rajnathsingh attends @BROIndia Raising Day celebrations at Seema Sadak Bhawan, New Delhi.



Prasar Bharati News Services पी.बी.एन.ए. @PBNS_In_ · May 7

MOS Defence & Tourism @AjaybhattBJP4UK, Defence Secretary @drajy Kumar_ias and COAS General Manoj Pande are also present at the occasion.



Ajay Bhatt @AjaybhattBJP4UK

Today marks the 63rd raising day of @BROIndia. BRO provides road connectivity in India's border areas to meet the strategic requirements of the Indian Army.

BRO's relentless efforts for decades have paved a new tactical and strategic advantage for India in harsh terrains.



Extending my best wishes to **Border Roads Organisation** on their 63rd raising day

Ajay Bhatt Union Minister of State for Defence & Border, 2022-2023, Member of Parliament

President of India @rashtrapatibhvn · Jun 11

The 9.02-km tunnel providing all-weather connectivity between Himachal Pradesh & Ladakh offers great opportunities for the region's growth. The President studied a scaled model of the whole project, and congratulated people & organisations that made this remarkable feat possible.

38 143 1,244

President of India @rashtrapatibhvn · Jun 11

The President today travelled through the Atal Tunnel, an incredible marvel of engineering that's in perfect harmony with nature. The world's longest highway tunnel above 10K-ft, it bears testimony to human perseverance to overcome the challenges that seemed insurmountable.



122 474 4,667

Ajay Kumar @drajy Kumar_ias · Jun 11

Kudos to 4 young bright lady officers of BRO & District Administration leading the Chardham Development works at Badrinath. Greatly impressed!!
Maj Aaina Raina OC, 75 Road Construction Company; AEE Vishnumaya Platoon Cdr; Capt Anjana, Platoon Cdr & Kumkum Joshi SDM Joshimath



Border Roads Organisation and 3 others

10 91 594

IndSamachar News @Indsamachar · Jul 10

In Pictures | Air lift sorties by the IAF's Chinooks give BRO Karmyogis, Project Shivalik the edge as they surmount the challenges of terrain.

@BROIndia



India in Tajikistan @IndEmbDushanbe · 12h

Ambassador @VirajSinghIFS received Lt Gen Rajeev Chaudhry, Director General, Border Roads on June 29th and discussed progress and way forward of the Dushanbe-Chortut By-Pass, a Government of India Grant-in-Aid project.

@MEAIndia @BROIndia



Ajay Kumar @drajaykumar_as · 10:13

World lauds BRO for Atal Tunnel Work!!
 FIDIC Fédération Internationale Des Ingénieurs-Conseils (International Federation of Consulting Engineers) chooses Atal Tunnel among 28 best infra projects across all the continents in 2022.
 Congratulations @BROIndia @DefencePROTvm @dprohyd

FIDIC announces shortlist for prestigious 2022 Project Awards
 14 Jul 2022



After considering all the awards submissions, the awards judging panel (listed below) agreed a shortlist comprising 28 projects for the FIDIC Project Awards 2022. The projects are an international selection drawn from China, USA, Australia, Mexico, Nicaragua, Brazil, France, India, Mongolia, Somalia and Vietnam.

Atal Tunnel (India)
 Client: Border Roads Organisation. Engineer: Intercontinental Consultants and Technocrats.

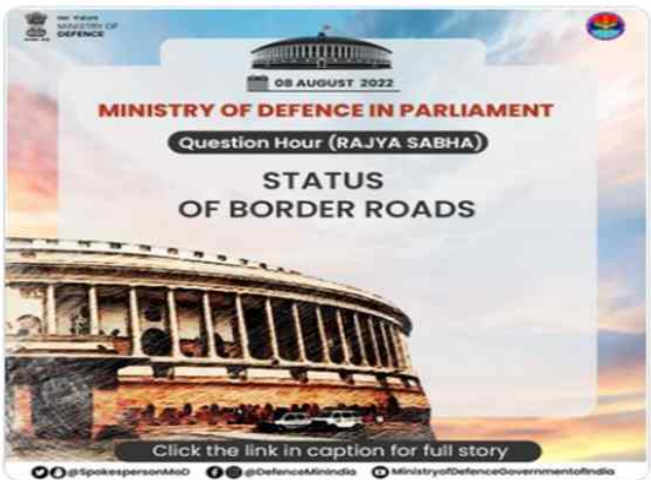
PO Nagmani Yadav (Retd.), Indian Navy @NagmaniYadav_In · Jul 19
 Replying to @BROIndia
 I recently had a trip to Pangong Tso lake by bike. And I was amazed to see the work of BRO, the quality of roads were simply amazing. Even, in plain fields, it's quite rare. The slogans written on the road side were superb, heart touching. Sharing some of them. Saluting u all....



Jamyang Tsering Namgyal @jtnladakh · Sep 1
 Hon'ble PM Sh. @narendramodi Ji is committed to strengthen the border infrastructures alongwith the LAC with China in Ladakh through strategically important roads from Pangong towards Hotspring completed in a record time by @BROIndia



A. Bharat Bhushan Babu @SpokespersonMoD · Aug 8
 3,595 kms of roads have been constructed by @BROIndia since 2017-18, in line w/ Government's unwavering commitment to strengthen border areas for enhanced national security. 6,195 kms of roads are under construction. Click on the link below for details: pib.gov.in/PressReleasePa...



Radio News Kargil @radionews_kargil · 23h
 55 RCC of Project Vijayak @BROIndia Hoisted the National Flag at Hombotlingla Pass at 4024 Mtrs & Celebrated #76thIndependenceDay #1DayWithAIR
 @prasarbharti @ddnewsaladakh @DDNewsLive @airnewsalerts @PBNS_India @LadakhSecretary



Konchok Stanzin @kstanzinladakh · Sep 1
 I appreciate HIMANK's Chief Engineer, CO, OC, AE, JEs and entire @BROIndia officials for completing the strategic road #LukungtoHotSpring, from Lukung to Phobrang distance in a record time. It took hardly 2 & a half years to complete this strategic road.
 @rajnathsingh @g_ladakh



Office of Kiren Rijju @RijjuOffice · 23h
 चार परियोजनाओं-अरुणाचल, ब्राह्मण, उदयक और वर्तक को अरुणाचल प्रदेश को समर्पित करके @BROIndia ने सीमावर्ती क्षेत्रों में सड़क संपर्क को बड़ा बढ़ावा दिया है। माननीय प्रधानमंत्री श्री @narendramodi जी का कुशल नेतृत्व यह सुनिश्चित करता है कि राज्य में कोई भी क्षेत्र असंबद्ध नहीं रहे।

Pema Khandu @PemaKhanduBJP
 Happy to hear from BRO officials about how good connectivity is resulting in reverse migration here.
 Earlier due to poor connectivity & less facilities, the dist faced migration which led to thinning of population in the area, not a good sign from security perspective. 3/3



Pema Khandu @PemaKhanduBJP · Dec 16
 Incredible work @BROIndia!
 BRO is constructing 1 Km road from Joram-Koloriang using steel slag provided by @TataSteelLtd, Jamshedpur, with assistance from @CSIRCRRRI, setting example of converting waste to wealth.
 Keep up the good work.

Border Roads Organisation @BROIndia · Dec 16
 #WastetoWealth... @BROIndia constructs road from steel slag, a waste byproduct of steel manufacturing. 1 Km long Joram- Koloriang Road in Arunachal Pradesh has been constructed using 1200 MT steel slag provided by TATA Steel Jamshedpur with assistance from CRRRI-CSIR. (1/2)
 Show this thread

Manish Prasad @manishindiatv
 "Difficult Roads Often Lead To Beautiful Destinations". Road to #Lipulekh and #AdiKailash is not easy but its beautiful. Good work @BROIndia #Pithoragarh #Uttarakhand



Pema Khandu @PemaKhanduBJP
 An engineering marvel!!
 Met @BROIndia officials at Pangin, where first iconic Steel Arch bridge over Siyom river on Aalo-Yingkiang Road is coming up.



Pema Khandu @PemaKhanduBJP · 1h
 The Central govt under visionary guidance of Hon PM Shri @narendramodi ji is committed to strengthening border infra.
 Hon @DefenceMinIndia Shri @rajnathsingh ji inaugurated Siyom bridge in Arunachal along with 27 other infra projects of @BROIndia Rs 724 cr. 1/2

SIYOM BRIDGE
 A boost to LAC INFRASTRUCTURE
 100-meter Class 70 steel arch superstructure double-lane bridge
 Facilitates faster induction of troops, heavy equipment in Tuting, Yingkiang and other front line regions of Arunachal
 Will improve ease of travel, giving a boost tourism
 Going to have long-term impact on local economy

Dr Jitendra Singh @DrJitendraSingh
 Thanks #BRO for #Basohli-Bani-#Bhaderwah road which offers a vital link and after construction of Chhatergalla Tunnel, it will be all weather connectivity. Under PM Sh @narendramodi, #JammuAndKashmir getting high priority.



Ajay Kumar @drajaykumar_jas
 Zojila Pass kept open til today- Jan 6 this year by BRO!!! Few years back, the pass would be closed by late Oct or so. In last 4 years BRO has delayed closing of the pass. Great example of overcoming challenges despite extreme weather conditions. Hats off to you Team @BROIndia



LAHDC LEH @LAHDC_LEH · 18h
 CEC @tashi_gyalson lauded the efforts of Team 114 RCC, #ProjectYojak of @BROIndia for opening Singay-La pass despite heavy snowfall in the month of January, as committed.
 This pass connects remote villages of Yulchung, Nyerags, Skumpata & Lingshed of Leh.
 @DC_Leh_Official



PRO Nagpur, Ministry of Defence @PRODefNgp · 7h
 Chinook of @IAEMCC airlifted heavy equipments of @BROIndia & GREF to inaccessible terrain in Arunachal Pradesh on 15 Feb 23 to augment road connectivity & Infrastructure in the NE.
 PC: @EAC_IAF



Ajay Bhatt @AjaybhattBJP4UK · 19h
 Honoured the Karmyogis of @BROIndia from border states today. It was heartening to see their enthusiasm and devotion towards the nation. They were specially invited to Delhi to witness the #77thIndependenceDay



PMO India and 2 others
 2 293 292 683

Pema Khandu @PemaKhanduBJP · Mar 13
 His Holiness The Dalai Lama entered India in March, 1959 via Khinzemane to Zemithang route in Tawang, Arunachal Pradesh.
 Gratitude to @BROIndia for developing the road from Khinzemane to Zemithang. It will ensure smooth travel for the people to the holy site of Khinzemane.

Border Roads Organisation @BROIndia · Mar 12
 @BROIndia Project Vartak has developed the Road from Khinzemane to Zemithang into a bustling all weather axis, dedicating another marvel to the people of Tawang in Arunachal Pradesh.
 This road will not only aid security forces but will also bring the historic holy site of (1/2)
 Show this thread



AIR News Gangtok @airnews_gangtok · Mar 29
 #sikkim: @BROIndia rescues over 10,000 tourists and 3,000 vehicles stranded in snow and landslides in March. Pics/Videos: PRO Defence



Prasar Bharati News Services & Digital PL... @PBNS_I... · Mar 11
 @DCWDelhi felicitated five women officers of @BROIndia today at Indian Habitat Centre, New Delhi
 The officers were felicitated to acknowledge their contribution in infrastructure development along the border areas.
 @edgpi @SpokespersonMoD



Ajay Bhatt @AjaybhattBJP4UK
 श्री अरजुन देवसू के अवसर पर मुख्य अतिथि व उपकरण प्रबंधन सम्मेलन 2023 में भाग लिया और संबोधित किया
 #BRORaisingDay
 Translate Tweet



GeM @GeM_India · Mar 3
 Border Roads Organisation achieved a major milestone today! BRO took 6 years to achieve the first ₹1600Cr GMV but the next ₹1600Cr has come in just 11 months of the current FY! BRO is working through its motto of Shramena Sarvam Sadhyam (everything is possible through hard work)

Border Roads Organisation Retweeted
GeM @GeM_India · Apr 6
 From building nationwide road networks that reach every location to ensuring smooth & safe transportation, BRO takes care of it all. @BROIndia placed significant orders helping boost the GeM GMV and made a total procurement of ₹1,853 Crore during Financial Year 2022-23.

Ajay Bhatt @AjaybhattBJP4UK

स्थापना दिवस समारोह के अवसर पर बीआरओ मुख्यालय पुणे में बीआरओ के उपकरणों को प्रदर्शित करने वाले विभिन्न स्टालों का दौरा किया।

Pema Khandu @PemaKhanduBJP

Salute the extraordinary challenges taken up by @BROIndia team everyday to build strategic bridges, roads, tunnels to strengthen our border infrastructure.

Their great work is not only augmenting our defence capabilities but also generating livelihood opportunities, bringing ease of living & empowering people.

On 64th Raising Day of Border Road Organisation, I congratulate all the personnel for their spectacular work and also pay tribute to Karmayogis who have made supreme sacrifice in line of duty.

Jai Hind, Jai BRO!

Chowna Mein @ChownaMeinBJP

I would like to thank all the BRO personnel who have worked round the clock through heavy rains, tough terrain, and dangerous working conditions to connect border areas in Arunachal and other border areas of our country. Your extreme dedication is what makes our country safe and secure and well-connected for development.

Wishing all the BRO personnel a happy 64th Raising Day.

Greetings to The Karmyogis of Border Road Organisation On its 64th Raising Day 7th May

ChownaMeinBJP | DCMChownaMein | chownamein

RAJ BHAVAN MANIPUR @RajBhavManipur - Apr 26

Governor of Manipur Ms. Sushri Anusuiya Uikhey today inspected Indo-Myanmar Border fencing in Moreh. Governor visited Assam Rifles Forward Post at Chavangphai. Governor also interacted with workers of BRTF and thanked them for their relentless efforts to complete the fencing work.

Pema Khandu @PemaKhanduBJP - 1h

The terrain could be treacherous, but its timid in front of human will!

Admire grit & determination of @BROIndia for constructing Sela Tunnel on Bailpara Charduar Tawang Road in Arunachal Pradesh by challenging the tough conditions.

The project nearing completion under Sela...

Border Roads Organisation Retweeted

Pema Khandu @PemaKhanduBJP

Sunday Positive!

We are now connected to hard, rocky Tapatuwi, which was earlier stiff, unyielding owing to tough strata portion.

As always, @BROIndia has achieved the incredible feat of conquering the mountain by building link to Tapatuwi on Chaglohagam-Rocham Road in Arunachal Pradesh.

The team airlifted critical earth moving plants to pierce into rocky terrain. The result, after three years of sustained efforts, is for everyone to see.

Great work, dear BRO team.

Border Roads Organisation @BROIndia - May 21

@BROIndia Project Udayak achieved an important milestone by establishing connectivity up to Tapatuwi on the Chaglohagam-Rocham Road in Arunachal Pradesh.

The hard rocky strata portion on the road necessitated the establishment of an air maintained detachment at Tapatuwi in... [Show more](#)

5:00 PM · May 21, 2023 · 5,298 Views

IDEX DIO @India_IDEX - May 8

IDEX was honoured to be a part of the 64th foundation day celebrations of @BROIndia at Pune on 7th May 23 graced by the presence of RRM Shri @AjaybhattBJP4UK

BRO shared problem statements with IDEX, paving the way for collaborations & innovative solutions towards nation-building.

EasternCommandJA @easterncmd

#IndianArmy #TransformationTuesday

Indian Army's operational capability to be enhanced on completion of Sela Tunnel project. It will provide all weather connectivity to the border areas in #ArunachalPradesh

@adgpi @SpokespersonMoD

Ajay Bhatt @AjaybhattBJP4UK

Had a productive visit to @BROIndia's Project Sampark HQ in Jammu, where I had the opportunity to interact with the dedicated BRO officers and troops. Their commitment and hard work in ensuring connectivity and infrastructure development in the region is commendable. #BRO #Jammu

PRO Defence Dehradun @PRODefDehradun - 27m

Hon'ble #Governor of #Uttarakhand Lt Gen Gurmit Singh (Retd) visited the forward areas. He appreciated the work done by the Karmyogis of @BROIndia on the Lipulekh axis and the Gunji-Kutti-Jolingkong axis in the AoR of Project #Hirak. The visit was conducted by Cdr 765 BRTF. 1/2

WORLD BOOK OF RECORDS @WBRLONDON - May 9

A proud day for BRO (Border Roads Organisation, 50 BRTF / PROJ HIMANK / BRO, Durbuk (Ladakh UT) as on this auspicious day of its 64th Year of Raising, was awarded with the "World Book of Records" certification for constructing World's Highest Bailey Suspension Bridge.

@BROIndia

Ajay Bhatt @AjaybhattBJP4UK - 12h

Visited the dedicated team of BRO Karmayogis at Project Shivalik. Their relentless efforts in constructing and maintaining vital infrastructure in challenging terrains is commendable.

Pema Khandu @PemaKhanduBJP

The incredible work of @BROIndia is contributing immensely in building robust infrastructure, enhancing connectivity in #ArunachalPradesh.

Appreciate the speed with which the BRO team repaired 300-mt long Byrun Suspension Bridge in challenging terrain of Upper Siang district with minimum inconvenience to people.

Commendable effort!

4:11 PM · Jun 24, 2023 · 2,602 Views

News Articles



Manali-Spiti road: BRO ने हटाया बर्फ का पहाड़, पहली बार मई के पहले सप्ताह में ही खुल गई मनाली-स्पीती रोड, देखें तस्वीरें
03 May 2022



1 5000 फीट ऊंचाई पर कुंजुम दर्रा ग्रामफू-काजा राजमार्ग जो मनाली और लाहौल वैली को ऊंची स्पीति के 15000 फीट ऊंचे कुंजुम दर्रा से जोड़ती है, 6 महीने के अंतराल के बाद फिर से खोल दी गई है।



12 Jul 2022
BRO heralds new hopes in high altitude Arunachal village



24 Jun 2022
Nagaland Governor flags off Jotsoma-Khonoma BRO road
31 Jul 2022

Nagaland governor Prof. Jagdish Mukhi on Saturday flagged off the rehabilitation work for Jotsoma-Khonoma BRO road at Khonoma village, covering approximately 20 kms.



सीमा सड़क संगठन का 63वां स्थापना दिवस
आज, रक्षा मंत्री राजनाथ सिंह बोले- BRO मित्र राष्ट्रों को हमसे जोड़ने का काम कर रहा
07 May 2022

रक्षा मंत्री राजनाथ सिंह ने सीमा सड़क संगठन (BRO) के 63वें स्थापना दिवस के अवसर पर दिल्ली में आयोजित कार्यक्रम में हिस्सा लिया। इस दौरान उन्होंने कहा कि आज BRO मित्र राष्ट्रों में भी अपनी सेवाएं देकर उन्हें हमसे जोड़ने का काम भी कर रहा है। पिछले 6 दशकों से BRO सीमावर्ती क्षेत्रों में बुनियादी ढांचे के विकास का एक मजबूत स्तंभ बना हुआ है। 1960 में 2 प्रोजेक्ट से बढ़कर अब ये 18 प्रोजेक्ट तक पहुंच गया है



Defence ministry approves setting up of 'BRO Cafes' at 75 border locations across 12 states/UTs
23 Jun 2022



New Delhi: Ministry of Defence has approved setting up of wayside amenities under the brand of 'BRO Cafes' at 75 locations on different sections of roads with Border Roads Organisation across 12 states and Union territories. These are intended to provide basic amenities and comfort to tourists and lead to boosting of economic activities in border areas, besides generating employment for the local people, the ministry said in a statement on Wednesday.

L&T Dispatches Special Construction Equipment to Border Roads Organization
11 Aug 2022



L&T Construction Equipment Limited, a subsidiary of [Larsen & Toubro](#) has dispatched the first batch of 25 special variant Wheel Loaders, the company said in a statement on Thursday.

The equipment units are suitable for operation in harsh terrains such as high altitudes and extreme weather conditions to the Border Roads Organisation (BRO). BRO which plays a pivotal role in constructing and maintaining operational road infrastructure is responsible for road construction in inhospitable, and far-flung border areas. BRO had invited bids for this project. This is L&T's single largest order of supplying equipment for road construction.

Strategic Importance Of The Nechipu Tunnel In Arunachal Pradesh 12 Sep 2023



The Nechipu Tunnel in Arunachal Pradesh, along with 90 other infrastructures was inaugurated by the Union Defence Minister Rajnath Singh on September 12.

The Border Roads Organisation-that has constructed 205 Infrastructure projects in the last two years, organised a ceremony at Devak Bridge on Bishnah-

Kaulpur-Phulpur Road in Jammu and Kashmir.



Nyoma airfield will be a game changer, says Rajnath Singh; inaugurates 90 BRO projects
12 Sep 2023



Defence Minister Rajnath Singh on Tuesday said that the Nyoma airfield in eastern Ladakh will be a game-changer for the armed forces as he virtually laid the foundation stone of the upcoming airfield that will be located less 50 km from the Line of Actual Control – the disputed boundary between the two neighbours.

India has begun preparing a 10,000 ft runway and other infrastructure at Nyoma in a Rs 200 crore project so that the Indian Air Force can launch its MiG-29 or Su-30 MKI fighter aircraft from a position close to the LAC.



Rajnath Singh inaugurates 90 border infrastructure projects
12 Sep 2023



JAMMU: Aiming to bolster India's security and promote socio-economic development in border areas, Defence Minister Rajnath Singh dedicated 90 infrastructure projects of the Border Roads Organisation (BRO), with a total value exceeding Rs 2,900 crore on Tuesday. The inauguration ceremony took place in Jammu.



Rajnath Singh inaugurates 90 infra projects in Jammu
12 Sep 2023



JAMMU: Defence Minister Rajnath Singh on Tuesday inaugurated 90 infrastructure projects of the Border Roads Organisation, completed at a cost of Rs 2,941 crore, in Samba district of Jammu and Kashmir. Singh,

accompanied by Minister of State in the Prime Minister's office Jitendra Singh, was received at the Jammu airport by Lt Governor Manoj Sinha and senior Army and Indian Air Force (IAF) officers.

Singh inaugurated the state-of-the-art 422.9 metre Devak bridge on the Bishnah-Kaulpur-Phulpur Road in Samba district besides 89 other projects virtually.

The Devak bridge is of strategic importance to the defence forces and will facilitate speedy induction of troops, heavy equipment and mechanised vehicles to forward areas and will also boost the socio-economic development of the region, a spokesperson of the BRO said.



Rajnath Inaugurates 90 Infra Projects In Jammu
13 Sep 2023

Samba: Defence Minister Rajnath Singh on Tuesday inaugurated 90 infrastructure projects of the Border Roads Organisation, completed at a cost of Rs 2,941 crore, in Samba district.



Rajnath Singh inaugurates 90 BRO infrastructure projects worth Rs 2,900 crore
12 Sep 2023



Defence Minister Rajnath Singh on September 12 dedicated 90 infrastructure projects of Border Roads Organisation (BRO), worth over Rs 2,900 crore, to the nation. The projects are spread across 11 states and union territories.

These include Nechipu Tunnel in Arunachal Pradesh; two airfields in West Bengal; two helipads; 22 roads and 63 bridges. Of these 90 projects, 36 are in Arunachal Pradesh; 26 in Ladakh; 11 in Jammu & Kashmir; five in Mizoram; three in Himachal Pradesh; two each in Sikkim, Uttarakhand & West Bengal and one each in Nagaland, Rajasthan and Andaman & Nicobar Islands.



World's highest fighter airfield among 90 defence projects worth Rs 2,941 cr inaugurated in J&K 12 Sep 2023



Defence Minister Rajnath Singh inaugurated 90 infrastructure projects of the Border Roads Organisation (BRO) on Tuesday in the Samba district of Jammu and Kashmir. These projects, with a total cost of Rs 2,941 crore, mark a significant development for the region.



Arunachal Pradesh: Defence Minister Rajnath Singh dedicates strategic Nechipu Tunnel to nation
12 Sep 2023



NE India Broadcast

500 m long Nechipu Tunnel on Balipara-Charduar-Tawang Road in Arunachal Pradesh by Project Vartak
12 Sep 2023



बस्पास और लद्दाख में BRO के प्रोबेक्ट का राजनाथ सिंह ने किया उद्घाटन, पीएम मोदी बोले- सीमावर्ती इलाके में काफी मदद मिलेगी
12 Sep 2023



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India's Multi Lingual News Agency

अपने कामों से लोगों के दिलों को जोड़ें बीआरओ, राजनाथ ने किया आह्वान
12 Sep 2023



जम्मू 12 सितंबर (वार्ता) रक्षा मंत्री राजनाथ सिंह ने मंगलवार को सीमा सड़क संगठन (बीआरओ) से आह्वान किया कि वह अपने कामों से लोगों के दिलों को भी जोड़ें। श्री सिंह ने आज यहां बीआरओ की 11 राज्यों और केंद्र शासित प्रदेशों में 2,900 करोड़ रुपये से अधिक की लागत वाली 90 बुनियादी ढांचा परियोजनाओं को राष्ट्र को समर्पित किया। श्री सिंह ने विशाख-कोलपुर-फुलपुर रोड पर देवक ब्रिज पर आयोजित कार्यक्रम में बीआरओ की 90 बुनियादी

ढांचा परियोजनाओं को राष्ट्र को समर्पित करने के बाद कहा, "आपका काम केवल एक स्थान को दूसरे स्थान से जोड़ना ही नहीं बल्कि अपने कामों से लोगों के दिलों को जोड़ना भी है। निर्माणों को लोगों के दिलों के द्वारा और लोगों द्वारा की भावना का प्रतिनिधित्व करना चाहिए।" उन्होंने बीआरओ से आह्वान किया कि वह स्थानीय निकायों और लोगों की जरूरतों के मुताबिक सीमावर्ती क्षेत्रों में परियोजनाओं के लिए इनुएट लेकर उन्हें शामिल करें। उन्होंने बीआरओ को सख्त बलों के 'ब्रदर (भाई)' के रूप में वर्णित किया और कहा कि अपनी बुनियादी ढांचा परियोजनाओं के माध्यम से वह न केवल भारत की सीमाओं को सुरक्षित कर रहा है, बल्कि दूर-दराज के क्षेत्रों के सामाजिक-आर्थिक विकास में भी महत्वपूर्ण भूमिका निभा रहा है। उन्होंने इन परियोजनाओं के समय पर पूरा होने का श्रेय अपने कर्मियों की कड़ी मेहनत और समर्पण के साथ-साथ प्रधानमंत्री नरेंद्र मोदी के नेतृत्व में सरकार की प्रतिबद्धता को दिया। रक्षा मंत्री ने कहा, " हम बीआरओ के साथ मिलकर यह सुनिश्चित कर रहे हैं कि देश सुरक्षित रहे और सीमावर्ती क्षेत्रों का विकास हो। दूर-दराज के क्षेत्रों में बुनियादी ढांचा परियोजनाओं को समय पर पूरा करना अब नए भारत की नयी सामान्य बात बन गयी है।" उन्होंने कहा कि अक्षांश 422.9 मीटर लंबा कास 70 आरसीसी देवक पुल रणनीतिक महत्व का है क्योंकि यह सख्त बलों की परिचालन तैयारियों को बढ़ाएगा और क्षेत्र के सामाजिक-आर्थिक विकास को बढ़ावा देगा।

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राजनाथ सिंह ने बीआरओ की सेवाओं की सराहना की, कहा, "परियोजना को समय पर पूरा करना अब सामान्य हो गया"
12 Sep 2023

जम्मू-कश्मीर (एएनआई): रक्षा मंत्री राजनाथ सिंह ने मंगलवार को सीमा सड़क संगठन (बीआरओ) की सेवा की सराहना की और कहा कि किसी परियोजना को समय पर पूरा करना प्रतिबद्धता के कारण सीमावर्ती क्षेत्रों के लोगों के लिए एक 'नया सामान्य' बन गया है। संगठन "आपकी अमनी उपलब्धि यह है कि आपने अपने प्रयास से सुस्थिर की भी आसान बना दिया। देश के नागरिकों ने सीमा क्षेत्र के विकास को एक उपलब्धि के रूप में लेना बंद कर दिया है, लेकिन यह उनके लिए सामान्य हो गया है। एक महत्वकांक्षी परियोजना शुरू करना और उसे समय पर पूरा करना नए भारत की नई सामान्य बात है। मंगलवार को कहा।



राजनाथ सिंह ने जम्मू-कश्मीर, लद्दाख में 90 बीआरओ बुनियादी ढांचा परियोजनाओं का उद्घाटन किया
13 Sep 2023

रक्षा मंत्री राजनाथ सिंह ने मंगलवार को जम्मू-कश्मीर, लद्दाख और उत्तर पूर्व में 90 सीमा सड़क संगठन का उद्घाटन किया।

एक रक्षा बयान में कहा गया है कि रक्षा मंत्री ने आज 11 राज्यों/केंद्र शासित प्रदेशों में फैली 2,900 करोड़ रुपये से अधिक की सीमा सड़क संगठन (बीआरओ) की 90 बुनियादी ढांचा परियोजनाओं को राष्ट्र को समर्पित किया।

"परियोजनाओं का उद्घाटन रक्षा मंत्री द्वारा 12 सितंबर, 2023 को जम्मू में एक कार्यक्रम में किया गया था। इनमें अरुणाचल प्रदेश में नेचिफू सुरंग शामिल है; पश्चिम बंगाल में दो हवाई क्षेत्र; दो हेलीपैड; 22 सड़कें और 63 पुल। इन 90 परियोजनाओं में से 36 अरुणाचल प्रदेश में हैं; 26 लद्दाख में; जम्मू-कश्मीर में 11; मिजोरम में पांच; हिमाचल प्रदेश में तीन; सिक्किम, उत्तराखंड और पश्चिम बंगाल में दो-दो और नागालैंड, राजस्थान और अंडमान और निकोबार द्वीप समूह में एक-एक।

पंजाब केसरी

लद्दाख में एयरबेस का काम शुरू, सशस्त्र बलों के लिए गेम चेंजर : रक्षा मंत्री राजनाथ सिंह
12 Sep 2023

सीमा सड़क संगठन ने हवाई क्षेत्र पर काम करना शुरू कर दिया है। यह उन सैनिकों के लिए एक खास जगह होगी जो लद्दाख में तैनात हैं। यह दुनिया के सबसे ऊंचे हवाई अड्डों में से एक होगा, जिससे हमारी सेना को काफी मदद मिलेगी। बॉर्डर रोड ऑर्गेनाइजेशन ने मंगलवार को पूर्वी लद्दाख के न्योमा में एयरफील्ड का काम शुरू किया। रक्षा मंत्री राजनाथ सिंह के मुताबिक इसे लद्दाख में अग्रिम चौकियों पर तैनात सैनिकों के लिए स्टेजिंग ग्राउंड के रूप में विकसित किया जाएगा। यह दुनिया के सबसे ऊंचे हवाई क्षेत्रों में से एक होगा, जो हमारे सशस्त्र बलों के लिए एक गेम चेंजर जैसा होगा।



राजनाथ सिंह ने बीआरओ की 2,900 करोड़ रुपये से अधिक की 90 बुनियादी ढांचा परियोजनाएं समर्पित कीं
13 Sep 2023



नई दिल्ली (एएनआई): रक्षा मंत्री राजनाथ सिंह ने 11 राज्यों/केंद्र शासित प्रदेशों में फैली 2,900 करोड़ रुपये से अधिक की सीमा सड़क संगठन (बीआरओ) की 90 बुनियादी ढांचा परियोजनाओं को राष्ट्र को समर्पित किया है। रक्षा मंत्री ने मंगलवार को जम्मू में एक कार्यक्रम में परियोजनाओं का उद्घाटन किया। अपने संबोधन में, राजनाथ सिंह ने बीआरओ को सशस्त्र बलों का 'ब्रदर (भाई)' बताया और कहा कि, अपनी बुनियादी ढांचा परियोजनाओं के माध्यम से, बीआरओ न केवल भारत की सीमाओं को सुरक्षित कर रहा है, बल्कि सामाजिक-आर्थिक विकास में भी महत्वपूर्ण भूमिका निभा रहा है। दूर-दराज के इलाके. राजनाथ सिंह ने इन परियोजनाओं के समय पर पूरा होने का श्रेय अपने कर्मियों की कड़ी मेहनत और समर्पण के साथ-साथ प्रधान मंत्री नरेंद्र मोदी के नेतृत्व में सरकार की प्रतिबद्धता को दिया।

केवल भारत की सीमाओं को सुरक्षित कर रहा है, बल्कि सामाजिक-आर्थिक विकास में भी महत्वपूर्ण भूमिका निभा रहा है। दूर-दराज के इलाके. राजनाथ सिंह ने इन परियोजनाओं के समय पर पूरा होने का श्रेय अपने कर्मियों की कड़ी मेहनत और समर्पण के साथ-साथ प्रधान मंत्री नरेंद्र मोदी के नेतृत्व में सरकार की प्रतिबद्धता को दिया। "बीआरओ के साथ मिलकर, हम यह सुनिश्चित कर रहे हैं कि देश सुरक्षित रहे और सीमावर्ती क्षेत्रों का विकास हो। दूर-दराज के क्षेत्रों में बुनियादी ढांचा परियोजनाओं को समय पर पूरा करना अब नए भारत की नई सामान्य बात बन गई है, "उन्होंने कहा।

इंडिया पब्लिक खबर

Jammu-Kashmir: रक्षा मंत्री ने अरुणाचल की नेचिफू सुरंग सहित 90 परियोजनाओं का किया शुभारंभ
12 Sep 2023

नई दिल्ली: रक्षा मंत्री राजनाथ सिंह (Rajnath Singh) ने मंगलवार को अरुणाचल प्रदेश में बालीपारा-चार द्वार-तवांग (बीसीटी) सड़क पर 500 मीटर लंबी 'नेचिफू सुरंग' का उद्घाटन किया। इसके साथ ही उन्होंने जम्मू के देवक ब्रिज से सीमा सड़क संगठन (बीआरओ) की 90 बुनियादी ढांचा परियोजनाएं राष्ट्र को समर्पित कीं। ये सभी परियोजनाएं देश के 8 सीमावर्ती राज्यों और 3 केंद्र शासित प्रदेशों में हैं। इसके साथ ही उन्होंने दुनिया का सबसे ऊंचा लडाकू हवाई क्षेत्र बनाने के लिए लद्दाख में न्योमा एयरबेस के उन्नयन का भी उद्घाटन किया।



बीआरओ ने 900 दिनों में 300 परियोजनाएं देश को समर्पित की : रक्षामंत्री राजनाथ सिंह
13 Sep 2023

जम्मू। रक्षामंत्री राजनाथ सिंह ने मंगलवार को जम्मू के सांबा जिले में सीमा सड़क संगठन (बीआरओ) की 90 परियोजनाओं का उद्घाटन किया। इस मौके पर उन्होंने बताया कि पिछले नौ सौ दिनों में बीआरओ ने तीन सौ परियोजनाएं देश को समर्पित की हैं।

रक्षामंत्री ने कहा कि एक समय था, जब बीआरओ के किसी प्रोजेक्ट की शुरुआत करने में ही काफी लंबा समय लग जाता था। प्रोजेक्ट शुरू होने के बाद भी उसमें ऐसी काजगी अड़चनें आती थीं कि उन्हें खत्म होने में बहुत लंबा समय लग जाता था। अब तो मुझे आए दिन यह सुनने को मिल जाता है कि बीआरओ ने फलों जगह पर प्रोजेक्ट शुरू किया है, तो वही फलों जगह पर प्रोजेक्ट पूरा कर दिया है। उन्होंने कहा कि प्रोजेक्ट का इतनी तेजी से पूरा होना, आप सभी कर्मयोगियों की मेहनत, लगन और हमारी सरकार की प्रतिबद्धता का परिणाम है।



State News: राज्य के विकास के लिए नेचिफू सुरंग सहित 36 सड़क और पुल परियोजनाओं का उद्घाटन
12 Sep 2023



ईटानगर। केंद्रीय रक्षा मंत्री राजनाथ सिंह ने मंगलवार को अरुणाचल प्रदेश में 36 सड़क और पुल परियोजनाओं का ऑनलाइन उद्घाटन किया।

इन परियोजनाओं में तवांग को असम के बालीपारा से जोड़ने वाली, सामरिक रूप से अहम नेचिफू सुरंग भी शामिल है।

राष्ट्र को समर्पित की ये परियोजनाएं

रक्षा मंत्री ने जम्मू से ऑनलाइन माध्यम से देश भर में कुल 90 प्रमुख सीमा बुनियादी ढांचा परियोजनाएं राष्ट्र को समर्पित कीं।

चीन के साथ वास्तविक नियंत्रण रेखा (एलएसी) पर सीमा सड़क संगठन (बीआरओ) की यह परियोजनाएं 2,941 करोड़ रुपये की लागत की हैं।

The Statesman

Defence Minister launches 90 BRO projects worth Rs 2,900 cr
12 Sep 2023



Defence Minister Rajnath Singh on Tuesday dedicated to the nation 90 infrastructure projects of Border Roads Organisation (BRO), worth over Rs 2,900 crore, spread across 11 States and Union Territories, at a ceremony in Jammu.

The projects included Nechiphu Tunnel in Arunachal Pradesh; two airfields in West Bengal; two helipads; 22 roads and 63 bridges.

Of the total projects, 36 are in Arunachal Pradesh; 26 in Ladakh; 11 in Jammu & Kashmir; five in Mizoram; three in Himachal Pradesh; two each in Sikkim, Uttarakhand & West Bengal and one each in Nagaland, Rajasthan and Andaman & Nicobar Islands.



Rajnath Singh inaugurates 90 infra projects, including Arunachal's Nechiphu Tunnel, J&K's Devak bridge
12 Sep 2023



THE TIMES OF INDIA

India completes 90 new border infrastructure projects to reduce huge differential with China
12 Sep 2023



NEW DELHI: Continuing with the massive ongoing effort to reduce the huge border infrastructure differential with China, as many as 90 projects including the crucial Nechiphu tunnel on the road to Tawang in Arunachal Pradesh, two revamped airfields in West Bengal, two helipads, 22 roads and 63 bridges were formally inaugurated by defence minister Rajnath Singh on Tuesday.

The foundation stone for the upgrade of the critical Nyoma advance landing ground barely 50-km from the Line of Actual Control in eastern Ladakh, which will ensure it can also handle fighter jet operations, was also "virtually" laid by Singh, at the ceremony to inaugurate the 423-meter Devak bridge built by the Border Roads Organization (BRO) in Jammu.

The Rs 230 crore upgrade work at the Nyoma ALG located at an altitude of over 13,400-feet -- which includes extending and strengthening the existing airstrip into a 2.7-km "rigid pavement" runway for all kinds of fixed-wing aircraft for "defensive as well as offensive operations" -- will be completed around mid-2025, as was reported by TOI in February.

"Nyoma will be developed as a staging ground for troops deployed at forward posts in Ladakh. It will be one of the highest airfields in the world, which will be a game-changer for our armed forces," Singh said.



Focus On China Border, Defence Minister Inaugurates 90 Infra Projects
13 Sep 2023



Jammu: Defence Minister Rajnath Singh has dedicated to the nation 90 infrastructure projects of Border Roads Organisation (BRO) worth over ₹ 2,900 crore spread across 11 States/Union Territories.

The projects were inaugurated by the Defence Minister at an event in Jammu on Tuesday.

In his address, Rajnath Singh described the BRO as the 'bro (brother)' of the Armed Forces, asserting that, through its infrastructure projects, BRO is not only securing India's borders but also playing a key role in the socio-economic development of the far-flung areas.

Rajnath Singh credited the timely completion of these projects to the hard work and dedication of its personnel as well as the commitment of the government under the leadership of Prime Minister Narendra Modi.

"Together with BRO, we are ensuring that the nation is secure and border areas are developed. Timely completion of infrastructure projects in far-flung areas has now become the new normal of New India," he said.



LAC focus as Rajnath Singh inaugurates 90 border infrastructure projects
13 Sep 2023



As many as 90 border infrastructure projects -- from the Nechiphu tunnel that will provide all-weather connectivity to the strategic Tawang region of Arunachal Pradesh to the foundation stone for a key military airfield in eastern Ladakh's Nyoma -- across 11 states and Union Territories were inaugurated Tuesday by Defence Minister Rajnath Singh.

Of the 90 projects of the Border Roads Organisation, 64 are in Arunachal Pradesh, Ladakh and Sikkim. These projects will help in faster mobility of troops and equipment to the Line of Actual Control in case of a contingency while also improving overall connectivity for the population.

Magazine Articles

INTERVIEW LT. GEN. RAJEEV CHAUDHRY

On constructing the world's highest motorable road, what makes the BRO special and the next big projects.

What does 'Living La' mean for the Border Roads Organisation (BRO)?
Living La is a road project in the Himalayas. It is a road that is built on a high altitude of 19,300ft. The height of Living La is higher than the base camp of Mount Everest and even higher than the height of the world's highest glacier. So, you can imagine how difficult it must be to construct a road that high.

The oxygen level at Living La is 40-50 percent of that at the plains. Atmospheric pressure is 0.45-0.5 bar, and there's a wind chill that can give you nose bleeding, high blood pressure and hypoxia. There are a whole lot of physical issues. So, we had to change the shift of the construction workers every two hours because it is extremely difficult to work there for longer.

Also, the working shifts are only three to four months, within which we had to finish this complete road. So, we really had to plan it well.

What does this road mean for the people of Ladakh?

This 52km long road primarily connects the villages of Chumate to Demchok. Earlier, people from Demchok used to take two-and-a-half days, on horseback, to reach the village of Hrale and meet their relatives or seek medical aid. But with this road, they take only 3-3.5 hours to reach here. That is a big boost to their life and the socio-economic standards in the region.

What is the special formula that allows BRO to construct



BRO's magic is neither in the construction techniques, nor the machines, but in the hearts of our people.

such high quality roads at such high altitudes?
The magic is neither in the construction techniques, nor in the machines, but in the hearts of our people. All our people are dedicated to building the nation. Our central philosophy is that we are not only making roads between places, but we are also connecting people, and that gives us the biggest high.

What can we expect from BRO in the coming years?

BRO is not only working to strengthen the road network on the borders with its northern adversaries, but also laying roads to boost tourism, especially in Ladakh, Arunachal and the central sector. We are connecting certain religious places like for instance, the Char Dham Road in Uttarakhand is being made by BRO. The next challenge, however, is the Sela Tunnel in Arunachal. The proposed completion date is December next year, but we are working day and night to complete this tunnel exactly when the nation completes 75 years, in 2022.

Next year, we are also planning to start construction of the Shinku La Tunnel, which is an alternate access to Leh. Then, we were planning a tunnel under Brahmaputra river. That will make it the longest tunnel under any river in the world and will have three tubes - two for road and one for rail.

Moreover, we have been nominated as a coordinating agency. Any road, or any other infrastructure, coming up on the borders has to go through us. Once it is cleared, then it can be executed.

Will we see a road higher than Living La in the future which BRO will build?
Yes, I don't think this is the last point where we are stopping. Today, this is the highest point where the Indian flag unfurls itself and Indians are proud of this achievement. But if there is a call and we have to make a road higher than this, BRO is always ready. So that is required, we are always there.

Is breaking records something that comes naturally to the BRO and is just part of the job?

Yes, you can say that, and we feel very happy to break records every year. Recently, the honorable Defence Minister Rajnath Singh dedicated 12 roads and 63 bridges to the nation, which is a record of sorts. We have never seen so many projects dedicated to the nation in one go.

With such expertise under its belt, is there scope for the BRO to take such expertise to other parts of the country?

One of our honourable MPs has mentioned that coastal regions are also borders, so the BRO must also work there. I say that I am very much ready - 'yocalias, and n'ta there. But that's a decision the government has to make. If it expands us, then we can come to the coastal region, and to some difficult places where there are no roads to venture. The BRO is always ready.

HORMAZD SONARJEE
BRO AT ABOUT ONE FIVE DRIVE UP TO THE 19,300 FT. A LADAKHIAN DRIVE IN 1960

NOVEMBER 2021 AUTOGRAPHIA.COM 37

BRO: TRULY A GAMA IN THE LAND OF LAMA

"BRO has contributed immensely towards enhancing security preparedness and socio-economic development of border areas"

Border Roads Organisation (BRO) has had a memorable year in the construction sphere where in 2021, a total of 102 major infrastructure projects were completed. And not just in 2021, if one sees what BRO used to be 10 years back and what it is now, it will be possible to see a sea-change in terms of their functioning and speed, and in the overall motivation of the force. Lt Gen Rajeev Chaudhry, Director General, BRO, spoke to Vivek

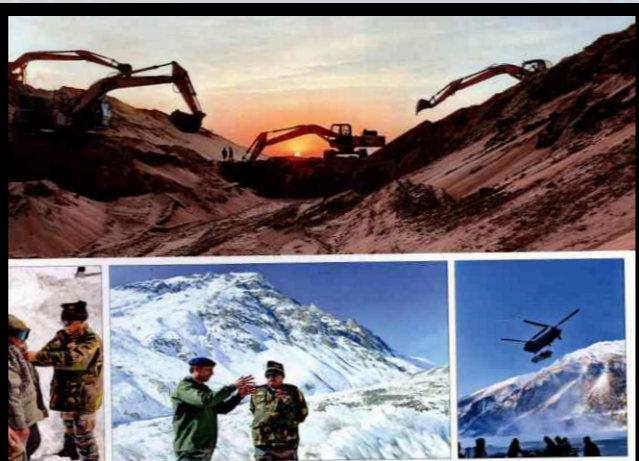
Shukla, Editor, Defence Watch, in detail about what has changed. Read the excerpts:
BRO has been doing tremendous work since its inception but in past few years, the speed is visibly high. What is the motivation behind it?
Since BRO's inception in 1960, it has acquired a leading role in infrastructure development in Border areas. BRO has contributed immensely towards enhancing security preparedness and socio-economic development



of border areas. Today, we are a premier Organization and regarded as a symbol of Nation building and National Integration. With the changing security scenario of the country and competition with other construction agencies, our role has become far more vibrant. Our organisation has witnessed tremendous surge in our Budget allotment which



DEFENCE WATCH 41



increase. The increased allocation of funds has enabled the BRO to execute more works and exploit maximum of its resources. This year, breaking all previous records, we are expecting to such an expenditure of Rs 15000 Cr with a 40% increase in the capital budget for 65 roads from Rs 2500 Cr to Rs 3500 Cr. We have also been able to simplify some archaic procedures which were impeding the progress of works. This, coupled with the delegation of enhanced Financial Powers to the DGBR, has been a major game changer allowing faster sanction of projects and related issues. Further, we have been assured that availability of funds will not be a constraint for development of critical road infrastructure along our borders.

BRO has signed an agreement with ORSE for the construction of 27 double-lane class 70 modular bridges in border areas. How is

BRO contributing to making the Defence Sector self-reliant by entering into such agreements?
BRO and GRSE signed a MoU on March 15, 2022 at New Delhi worth Rs 60 Cr for two-year for fabrication, supply, erection and launching of 27 double lane galvanneal modular bridges of 7.5 meters carriageway with IRC Load Class 70 over a period of two years. These bridges can be launched within 45 days of handing over the site by the units. This will certainly be a game-changer in road infrastructure development in the country. **The forces need to be technology-driven'** is quite a buzz word these days. What are the new techniques that have been adopted by BRO?

BRO has been in the forefront of introducing latest technologies which are not only environment friendly but also cost effective. We are the pioneers in the use

of cementitious base for road construction. The process reduces carbon footprints and impact of construction on the environment. Construction of 240 Kms of road is being undertaken in Ladakh, Uttarakhand, Sikkim & Arunachal Pradesh using this technology. We are also taking up a pilot project on construction of road using steel slag in Arunachal Pradesh, which can withstand heavy rains and adverse climatic conditions. BRO is working on Cut & Fit technique where the basic idea is to precast all the elements of road in a casting yard under ideal quality environment while the formation cutting is done parallelly. BRO has executed a pilot project in Arunachal Pradesh and the efficacy of the technique has been established. We are working in the scorching heat of Rajasthan

>>>sector focus: construction

Outlook of Border Roads Organisation

"BRO challenges and measures to overcome challenges while executing tunnel works"

The Border Roads Organisation (BRO) has been executing tunnel projects in some of the most difficult terrains of the country. Despite dealing with challenges such as extreme temperatures and difficult geographic conditions, the organisation has successfully completed four tunnel projects in India including Atal Tunnel, Sonapur Tunnel, Theng Tunnel and Chamba Tunnel. At a recent India Infrastructure conference, Lt. General Rajeev Chaudhry, VSM, Director General, Border Roads, discussed the ongoing progress of BRO's tunnelling projects, the construction challenges, the measures to mitigate challenges and the key lessons learnt. Excerpts...

Story so far

The BRO is a premier road construction executive force which provides support to, and is an integral part of the Indian Armed Forces under the MoD. It is predominantly involved in development of road infrastructure in border regions of the country which not only enhances the operational capability of our Armed Forces but also provides last mile connectivity by integrating our unconnected border villages with the heartland. BRO has its presence in 11 states and three union territories including Andaman & Nicobar Islands) and friendly foreign countries such as Bhutan. Over a span of 63 years, BRO has constructed more than 60,000 km of roads and is currently maintaining about 23,000 km of roads, of which 15,000 km of roads are under maintenance and 8,000 km of roads are being upgraded. A further 14,000 km of roads under construction while about 3,000 km are under planning. Of the 13 highest roads in the world, 10 have been constructed and are being maintained by BRO at present. The budgetary allocations for BRO have surged, especially in the last two to three years. In 2022-23, it stands at Rs 135 billion, up from Rs 93.75 billion in 2021-22 and Rs 87.63 billion in 2020-21. In 2023-24, the Ministry of Finance approved an allocation of Rs 50 billion against the capital head, which is a twofold increase from the budget estimate (BE) for 2021-22. This is an unprecedented jump of 100 per cent within a span of two years, which is a reward for good work done by BRO.



BRO has undertaken a fourfold process to train key personnel so as to enhance their expertise in tunnel project execution. Selected engineers are sent abroad for tunnel-specific courses, after which they conduct in-house training to train the staff. In addition to this, site visits to completed projects are also conducted so as to provide hands-on knowledge regarding the complexities of executing tunnel projects in harsh conditions.

So far, BRO has completed four tunnel projects that include Atal Tunnel in Uttarakhand in 2020. It is a 9.02 Km-long tunnel and is recognised as

the world's longest highway tunnel, at an altitude above 10,000 feet. It is a single-tube, double-lane, horseshoe-type tunnel with a design speed of 80 km per hour. Last year, BRO has also constructed Chamba Tunnel, which is 440 m long and has been constructed under the town of Bhatnagar, Dhanu road in Uttarakhand. It entailed an investment of Rs 0.86 billion. It is a horse shoe-shaped tunnel. The completion of this tunnel has helped increase connectivity to far-off places in the Garwal region of Uttarakhand. Apart from this, BRO has completed the construction of the 578 m-long Theng Tunnel on the Chungthang-Mangan highway in North Sikkim. This is directional tunnel is the longest in Sikkim. It has improved connectivity to the border regions. Similarly, the 120 m-long cut-and-cover Sonapur Tunnel in Meghalaya has improved movement by enabling all-weather connectivity between Meghalaya and the Barak Valley District in Assam.

At present, BRO is constructing 11 tunnels in the State of Arunachal Pradesh, Sikkim and UT of Jammu & Kashmir and of Ladakh. These 11 ongoing tunnels are Sanga Tunnel (2,790 m), Nauharu Tunnel (700 m), Bander Gali Tunnel (1,100 m), Kandi Tunnel (260 m),

"Over a span of 63 years, BRO has constructed more than 60,000 km of roads and is currently maintaining about 23,000 km."

38 | Indian Infrastructure | January 2023

Editorial

BRO: Playing a Pivotal Role in Nation Building

India is well on its path to becoming a developed nation with a USD 5 trillion economy in the next two years. India is also entering into an era of infrastructure-led economic growth. The structural reforms carried out in the country in the last few years have given a boost to development of all kinds of infrastructure in the country. Border Roads Organisation (BRO) is a premier organisation which is constructing and maintaining infrastructure along India's borders that have the most challenging terrain and experience extreme weather conditions.

BRO was set up on 7th May 1960 to secure India's borders and develop infrastructure in remote areas of the North and North-Eastern states of the country. Initially, two projects were raised in BRO, first for the Northern Sector, Project Deacon at Srinagar in the Union Territory (then State) of J&K, and second for the Eastern Sector, Project Tusker (now Vartak) at Tezpur in the State of Assam.

Today, BRO has grown to 18 projects, including one in Bhutan. These projects are working in 11 Border States and three Union Territories (including Andaman and Nicobar Islands).

Since inception, BRO has been playing a leading role in infrastructure development in border areas, and is contributing immensely towards enhancing our security preparedness and socio-economic development of the border areas. Today, we are regarded as a symbol of Nation Building and National Integration. In the last few years, our role has become far more vibrant and is growing bigger. We are doing our best to live up to the expectations of the Government, the Armed Forces, and the People of the great Nation. We have been succeeding in our endeavours only because of our resilient and committed Karmyogis.

In the last two years, we have completed 205 infrastructure projects constructed at a cost of Rs 5,126 cr. These projects have been constructed under challenging weather conditions and in the most inhospitable terrains, and completed in record time. Many of these projects have been constructed in a single working season using state-of-the-art technology.

BRO's surge in road and bridge construction in the last two years has led to completion of many critical and strategic projects, which has bolstered our defence preparedness vis-a-vis that of our adversaries. In addition to roads and bridges, BRO has also gained expertise in the construction of tunnels and airfields. We are presently working on 11 tunnels, while 9 are in the planning stage. BRO is also working on Bagdogra and Barrackpore Airfields, which are nearing completion.

We are working in the scorching heat of Rajasthan

14

NBM&CW MARCH 2023

construction :sector focus<<<



zone of each length (587.5 m) had never been encountered in a single stretch of any highway tunnelling project in the world before, and took almost four years to overcome. From change 1,387 onwards, the quality of rock started deteriorating, and at change 1,950, the condition of the face became devoid of rock. Muck, along with water, started flowing from the face inside the tunnel due to the weathering caused by Seri Naha's discharge from its natural course to the South Part of Atal Tunnel.

Construction challenges and remedies
BRO has faced many challenges in the execution of tunnel works because of the location and the geographic complexities of the projects undertaken by the organisation. The key challenges include limited and risky working spaces, complex and unknown geological conditions, areas prone to frequent landslides, steep slopes with unstable strata, and the constant risk of calamities. Apart from this, a pertinent challenge faced in tunnelling in these geographies is the supply of material and equipment. Owing to the rugged and difficult terrain, it is extremely difficult to induct the equipment to the project location.

Another big challenge faced is the lack of trained manpower. Further, out of the organisation's 31,000-strong workforce, nearly 88 per cent are deployed at higher altitude areas every three to four years, thereby affecting their health. The temperature reaches as low as -40°Celsius. Working under such harsh conditions, the organisation has nearly 250 casualties on a yearly basis.

During the course of execution of Atal Tunnel, the most difficult challenge was the Seri Naha Fault Zone, encountered between change 1,887 and change 2,474.5. A shear

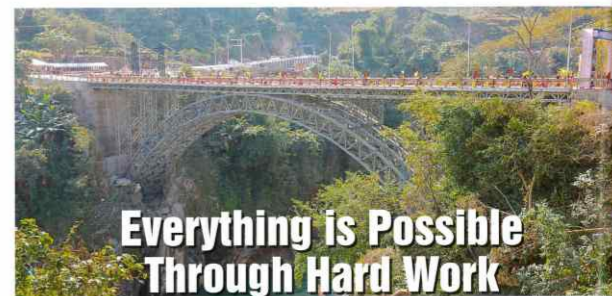
and waterproofing of membrane. The roof was required to be strengthened to carry out excavation underneath. The strengthening was carried out using large-diameter seamless perforated pipes of long length (12-15 m). An umbrella of long length (20 m) was installed on the face to provide additional support. Remedial measures included three different types of treatment/structures by NHP Limited for diverting Seri Naha's discharge from its natural course to the South Part of Atal Tunnel.

The way ahead
BRO is the pioneer in the construction and maintenance of tunnels in some of the most difficult areas across the world and has made persistent efforts in providing all-weather connectivity to the remotest parts of the nation.

The trust with such sustainable connectivity is not yet over and projects such as Shinku La tunnel for connectivity to Leh, Sela and Nechphu tunnels for connecting Tawang, and an underwater tunnel under the Brahmaputra river are in the offing. The high quality of work in the Atal Tunnel executed by BRO has been recognised, with the tunnel being awarded many prestigious awards. With BRO's foray into the departmental construction of tunnels, there is no doubt that BRO will emerge as one of the leading agencies worldwide in the field of tunnel construction.

Source: Border Roads Organisation

January 2023 | Indian Infrastructure | 39



Everything is Possible Through Hard Work

Siyom Bridge over Siyom River in Arunachal Pradesh



BRO has been at the forefront of adopting the latest technologies, which are both environment-friendly and cost-effective, and have resolved many construction problems, while facilitating speedy execution of projects. The organisation has not only constructed strategic infrastructure along India's border areas but also created them at extremely high altitudes, in difficult climates, and in record time. BRO is truly living up to its motto 'Shramen Sarvam Sadhyam' which means 'everything is possible through hard work'.

Lt Gen Rajeev Chaudhry, Director General, Border Roads Organisation, shares with S.A.Faridi & Maria R. the intensive and extensive projects being undertaken and completed successfully by the 'karmyogis' of the organization.

Undoubtedly, Border Roads Organisation is 'BRO' not only to the Armed Forces but also to the country and its people. What does it take to manage such a huge responsibility and what significance does it hold for the BRO?

Since its inception in 1960, BRO has played a leading role in infrastructure development in our country's border areas. BRO has contributed immensely towards enhancing security preparedness and socio-economic development of the border areas. Today, we are a premier organization and regarded as a symbol of Nation-building and National Integration, and in the last few years our role has become far more vibrant.

During the last few decades, BRO has constructed more than 60,647 km of roads, over 900 bridges, 19 airfields, 4 tunnels, and numerous road-side furniture and miscellaneous projects in remote areas of the country. We are continuously working hard to ramp up infra development at critical places. In the last two years itself, we have completed and inaugurated 205 infrastructure projects constructed at a cost of Rs 5,126 cr in remote areas bordering our country. We have strived to live up to the expectations of the government, our security forces, and the people of our country; we have succeeded in our endeavours only because of our resilient and committed Karmyogis who work day and night amidst the vagaries of weather and in harsh terrain in very high altitude areas. The success achieved hasn't come easy. It is an outcome of a number of procedural reforms that we have done within the organisation. We have shortened the decision-making process by simplifying and streamlining our procedures and we have regular interactions with the C&E Engineers of the projects, plus we have increased site visits. Moreover, timely approval of Annual Works Plan and the Annual Procurement from delegation of financial powers, prioritising of work and automation of our office functioning, has accelerated the pace of work significantly.

Our resilient and committed Karmyogis who work day and night amidst the vagaries of weather and in harsh terrain in very high altitude areas. The success achieved hasn't come easy. It is an outcome of a number of procedural reforms that we have done within the organisation. We have shortened the decision-making process by simplifying and streamlining our procedures and we have regular interactions with the C&E Engineers of the projects, plus we have increased site visits. Moreover, timely approval of Annual Works Plan and the Annual Procurement from delegation of financial powers, prioritising of work and automation of our office functioning, has accelerated the pace of work significantly.

38

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Since 1909

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In This Issue

SCO Defence Ministers' Meeting 04

RM Meets China's Minister of National Defence 06

Army Commanders' Conference 08

7. RM and his Russian Counterpart
10. International Conference on Defence Finance...
11. Interview with, DG OS
20. BRO Connects India Point
21. BRO's Gem Experience
22. Environment Friendly Construction in BRO
26. Indian Army Introduces Army Martial Arts Routine
27. ICG Regional Pollution Response Exercise...
28. Culmination of Exercise Cape India-2023
29. IIS Office Trainees Meet
31. Armed Forces Panorama
34. PhotoCall

Tunnel Construction by BRO 13

DGRB's Interview 15

Empowering Women in BRO 18

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BRO Always Ready to Find a Way Or Make One

On top of the world

Extreme machines need extreme roads and there's no more extreme environment than the Umling La pass, the highest motorable road in the world. Shapur Kotwal goes where even eagles don't dare.

PHOTOGRAPHY GAURAV TROMBEE

BRO Day "Continuously Working Hard to Ramp Up Infra Development at Critical Places"
Lt Gen Rajeev Chaudhry, DGRB tells Mrs Pratima V. Singh, E-in-C in an interview to Sainik Samachar

BRO has been doing tremendous work since its inception but in the past few years, the speed has been visibly high. What is the motivation behind this? Please elaborate.

Government of India has given a tremendous impetus to the development of highway and other infrastructure in the far flung areas along the borders of the country. In the last two years, BRO has increased the pace of construction of road infrastructures along the borders in an unprecedented manner, resulting in enhanced defence potential and socio-economic development in border region. BRO delivered a total of 103 Projects in 2022 and dedicated them to the Nation in which, BRO dedicated 75 infra projects across 7 States and 2 UTs to the Nation on October 28, 2022 and 28 infra projects across 5 States and 2 UTs on January 3, 2023. These Infrastructure Projects have been constructed under challenging weather conditions in the most inhospitable terrain locations and completed in record time frame and many of these projects have been constructed in a single working season using state-of-the-art technology. In 2021, BRO dedicated 102 Infrastructure projects to the Nation. We are continuously working hard to ramp up infra development at critical places, since largely our work is carried out in border areas in high and super high altitudes, we have to keep pace with the latest technology and have to be innovative at work.

It is pertinent to mention that roads across 10 of the top 13 Highest Passes in the World have been constructed by BRO. In spite of all the odds, BRO is continuously working with the spirit of "We Will Either Find a Way or Make One". One such example is road

over Umling La pass at an altitude of 19224 feet making it the highest motorable pass in the world. This road has reduced travel time from erstwhile three days on horseback to only a few hours for the locals as also for the Armed Forces.

There has been a spurt in tunnel construction by BRO in the recent past & shows a lot of promise. What is the significance of this increased focus on construction of tunnels?

BRO is now looking forward to construction of tunnels to ensure all weather connectivity to the most remote parts of the nation harnessing inclusiveness like never before. Imbued with an hands experience with tunnels like Atal Tunnel, Theng Tunnel, Chamba, Nechiphu and Sela Tunnels, BRO is now very well equipped to take on any Tunnel projects across the nation. Recently, BRO has completed the 500 m long Nechiphu tunnel on Balipara-Charduar-Tawang road in Arunachal Pradesh and Sela Tunnel, which once completed, will be the longest bi-lane tunnel in the World at an altitude of above

13000 ft. The BRO has recently been assigned for construction of motorable pass in the world. This 4.1 Km long Shinkula tunnel at an estimated cost of Rs 1681.51 Cr on Nimmu-Padam-darcha road, an alternate connectivity to Leh which connects Lahaul Valley in Himachal Pradesh to Zaskar Valley in Ladakh and will provide all weather connectivity to Ladakh and will be a major game changer for our Armed Forces and the people of Ladakh. Presently, BRO is constructing 12 tunnels and eight tunnels are under planning including under-water tunnel under the mighty Brahmaputra.

There has been a visible infusion of new technologies in the BRO in the last 2-3 years. What are these new technologies that BRO has implemented in border areas to speed up infrastructure development?

In recent times, road infrastructure sector has witnessed a huge growth in the country, which has resulted in faster & multifold socio-economic development in the region. This has become possible due to infusion of latest technologies

...WE WILL EITHER FIND A WAY OR MAKE ONE...

01-15 May 2023 Sainik Samachar

BRO's Gem Experience

Information and communication technology (ICT) is undoubtedly one of the most powerful tools for fighting corruption as it cuts down on human interaction and increasingly uses technology to fill up the voids. Therefore, all countries today are increasingly using ICT to increase efficiency, improve public delivery and enhance public participation. The Government e-Marketplace, popularly known as GeM, was launched as part of the Prime Minister's e-Digital India initiative on August 9, 2016 with the objective of creating an open and transparent procurement platform for government buyers. The use of GeM for public procurement is now mandatory. In synergy with this vision, BRO's journey in GeM, ever since its inception has been remarkable, to say the least and BRO has completely switched over to GeM with almost 100% procurement of goods and services on GeM Portal. It is against this backdrop that Lt Gen Rajeev Chaudhry, DGRB was invited to share BRO's experience on GeM and how BRO has used it as a Force Multiplier to enhance transparency, inclusivity & promote efficiency at the Anti-Corruption Working Group (ACWG) meeting of the G20 Nations at Gurugram on 01 Mar 2023 as the only representative of the Armed Forces. The meeting was attended by over 90 delegates from 20 Member Countries, 10 Invited Countries and nine International Organisations.

BRO has tripled its GeM procurement from last year thereby increasing transparency and fairness in procurement system. IFA integration and Online approvals has resulted in seamless and contactless payment disbursement to vendor/ firm. It is pertinent to mention that BRO initiated first time availability of steel & cement on GeM. Earlier steel & cement PSUs

were not inclined to come on GeM. BRO insisted on procurement only through GeM and ultimately was successful in getting all major Steel and Cement manufacturers on GeM. Today, BRO is one of the largest buyers of Cement on GeM. BRO also initiated first time availability of Bailey Bridges on GeM. Further, BRO has moved a step further by utilizing the BOQ feature on GeM for hiring of vehicles, equipment and plant and procurement of raw construction materials. As a result of persistent efforts, this year BRO has achieved Rs 1600 Cr GMV in just 11 months against its first Rs 60 years to achieve.

Some of the benefits are reduction in timelines for acquisition by about 33%, approx 20% price reduction Vs average original L1 bid-price using GeM on account of reverse auction leading to Savings. Overall reduction in cost by close to 15-18% and lastly, reinvesting the money saved on this account back into the economy by constructing more projects, thereby ushering in prosperity. Recognising BRO's hard work towards bringing in transparency, BRO was awarded the Silver Certificate for GeM procurement in FY 2022-23 for being one of the leaders for procurement through GeM. Last year, BRO was awarded with 'Gold Standard Certification' for timely payment in Central Govt Category. This year breaking all records, BRO gave a significant boost to the GeM Gross Merchandise Value (GMV) and made a record procurement of Rs 1853 Cr. BRO has been awarded both the "Gold Certification for Timely Payment" & "Silver Certification for Order Value" under the Central Govt category in FY 2022-23. These Awards have only emboldened BRO to strive towards greater transparency and efficiency.

01-15 May 2023 Sainik Samachar

SHOURYA CHAKRA RCC
WISH YOU SAFE & HAPPY JOURNEY

and still we see. From after breakfast after meals, round and around, like a fish of grey riding a treadmill. Upward and downward, higher and higher, every loop heavy hand, every straight taking us into slant and slantier air. Cool, wobbly, ridge, wavy, we drive there all, and sometimes, you have to go down to go up. Not the road keeps twisting. Endlessly.

HEAVEN AND HELL
This is an ordinary driving environment. No easy. Everything feels detached, otherworldly, surreal. Dangling blue dots, orange brown raindrops and a narrow black ribbon of road, nothing else. Everything you see is choppy, dead and void. Like it's been robot-coded for Instagram.

One here to this tangled space, there are no 'reasons'. No clear gaps, no speed cameras, no speed limits. This is a part of place where a regular car is not allowed.

With no visual cues and no points of reference, it's also easy to get up to only depends on the straight line. The best of driving has been, and as the finally bid farewell, I just want to share my fun on the floor every single drive you get. While doing 100-mph in the corner of the straight line in no way, I have to keep my wife about the annual return.

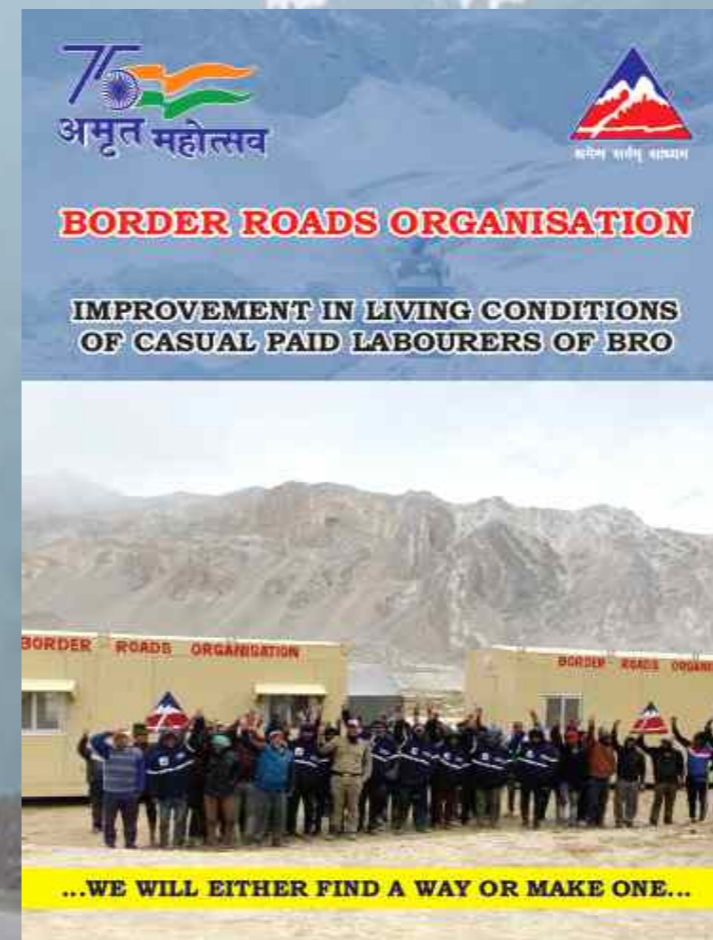
Speed and fuel consumption apart, I also can't keep my eyes away from the driver's eye. The use we are making in our many old cars that right now in 2023 we have around 30,000. It's a car that has a lot. I can't get my head around the fact that we are around 5-6km where we level. Imagine looking up and seeing an 'O' on the road. It's not a car. And a few kilometers above us in the atmosphere. This isn't a meaning, it's a situation.

While we are away from the 'death zone' that starts right in front of us, conditions here are not too good. Oxygen levels are only 10 percent of that at sea level, which means you have to breathe twice as hard. Twice as hard when you are driving, twice as hard when you are not. It's not just the air, it's the heat. Temperature ranges between -5 and -10 deg C when it's warm, and after that, it's not just the heat, it's the wind. And after that, it's not just the heat, it's the wind. And after that, it's not just the heat, it's the wind. And after that, it's not just the heat, it's the wind.

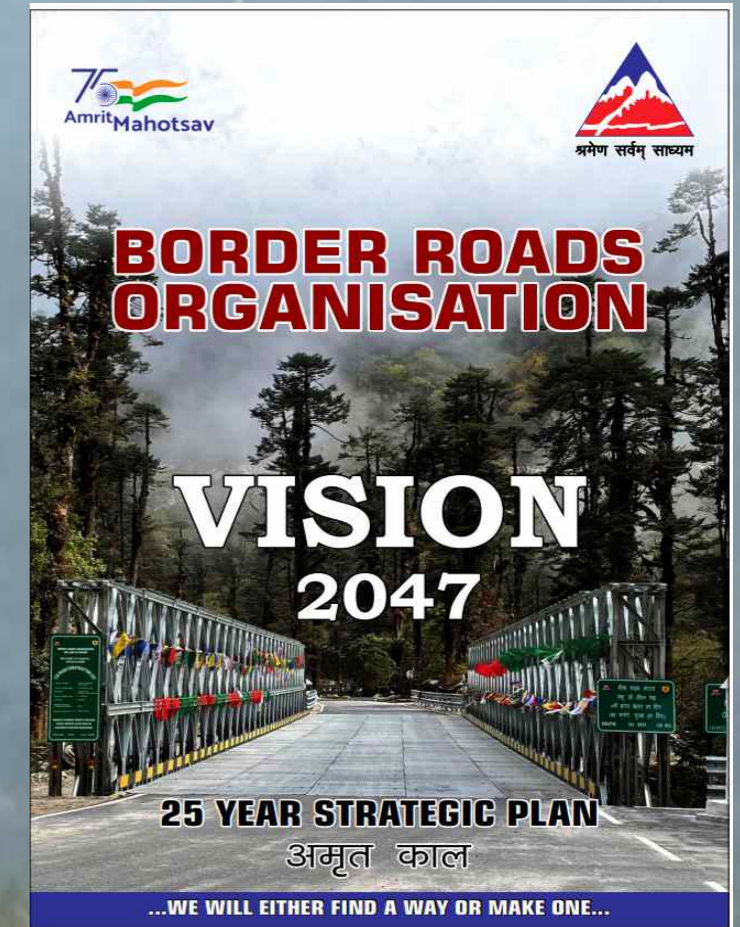
Roads in the high Himalayas are normally built by the BRO.

01-15 May 2023 Sainik Samachar

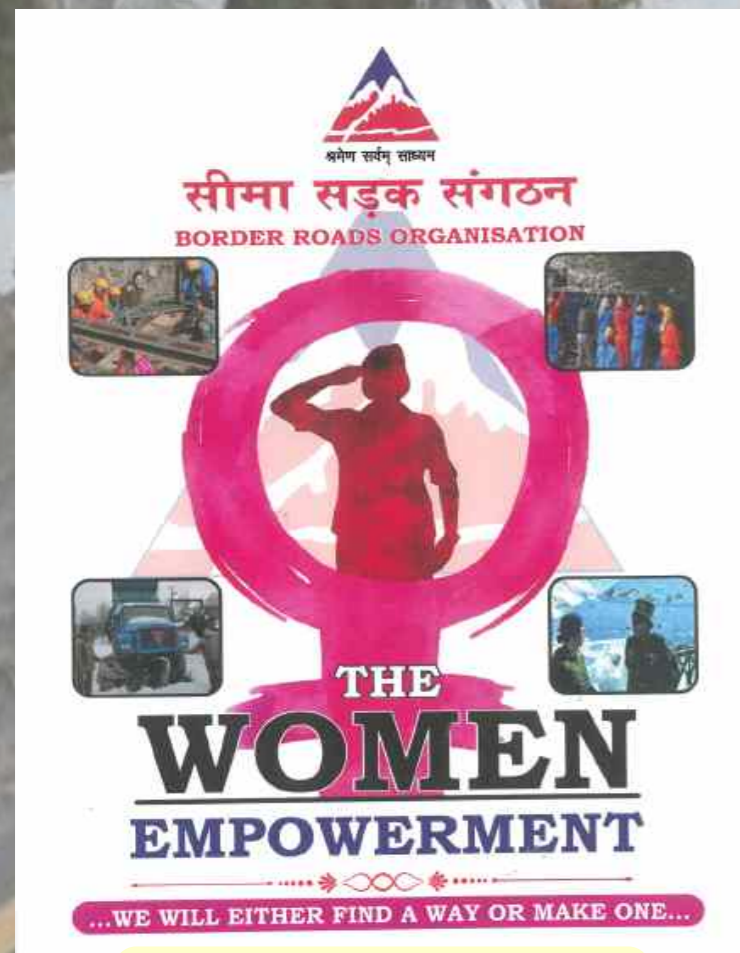
Publications



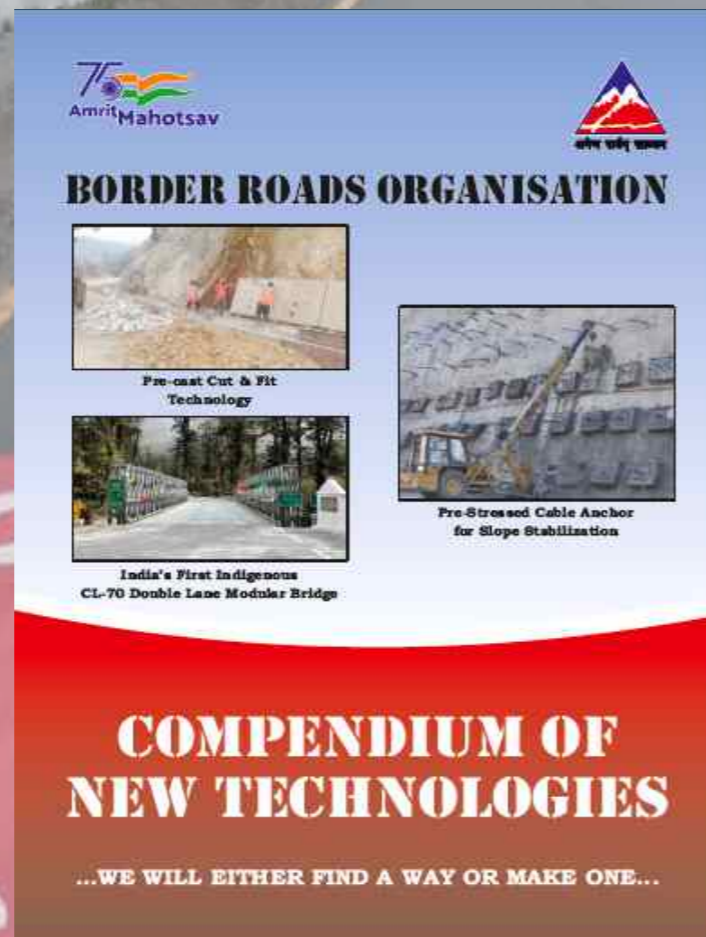
C ompendium of Improvement in Living Conditions of CPLs of BRO



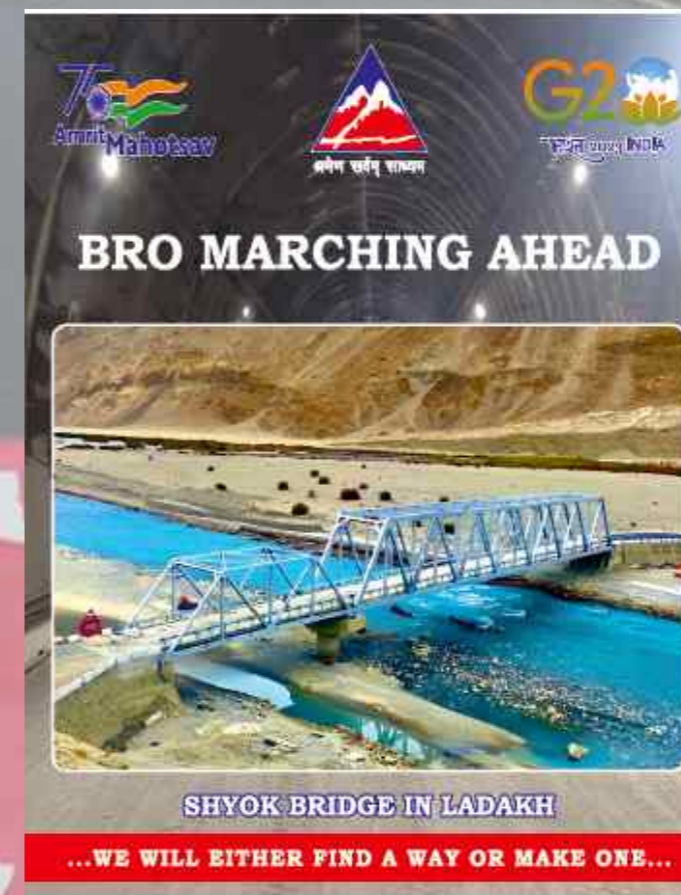
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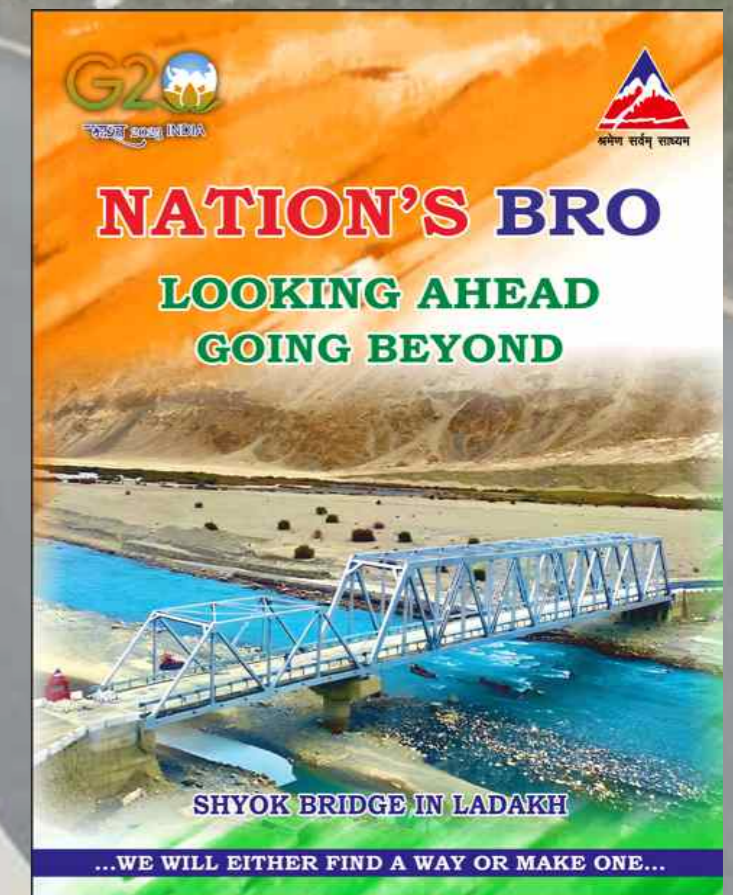
The Women Empowerment: Empowering Women in BRO



C ompendium of New Technology in BRO



C ompendium of Major Achievements of BRO in the last three years



COMPENDIUM OF BRIDGES

PRESTRESSED CONCRETE SUPERSTRUCTURE



BORDER ROADS ORGANISATION

...WE WILL EITHER FIND A WAY OR MAKE ONE...

Compendium of Bridges

COMPENDIUM OF BRIDGES

STEEL SUPERSTRUCTURE SPAN 30M TO 60M : VOL-I



BORDER ROADS ORGANISATION

...WE WILL EITHER FIND A WAY OR MAKE ONE...

Compendium of Bridges

CONNECTING PLACES-CONNECTING PEOPLE



श्रमेण सर्वम् साध्यम्

Quality Roads
Unified Approach
Ethical Route (No Corruption)
Speedy Steps
Technological Gateway for Excellence

BORDER ROADS ORGANISATION

BRIDGE COMPENDIUM

2nd EDITION
VOL-I
EASTERN PROJECTS



PERIOD APR 1998 TO MAR 2022
TP DIRECTORATE

...WE WILL EITHER FIND A WAY OR MAKE ONE...

Bridge Compendium Eastern Projects: 2nd Edition

CONNECTING PLACES-CONNECTING PEOPLE



श्रमेण सर्वम् साध्यम्

Quality Roads
Unified Approach
Ethical Route (No Corruption)
Speedy Steps
Technological Gateway for Excellence

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STEEL SUPERSTRUCTURE SPAN 65M TO 90M : VOL-II



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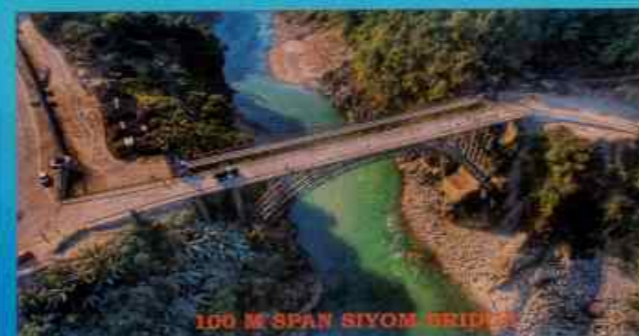
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COMPENDIUM OF STANDARD DESIGN

PSC SUPERSTRUCTURE BRIDGES OF SPAN 55M



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Compendium of Standard Design

DIRECTORATE GENERAL BORDER ROADS



TECHNICAL INSTRUCTION NO 27



GUIDELINES FOR ROAD TUNNELS

...WE WILL EITHER FIND A WAY OR MAKE ONE...

TI No 27: Guidelines for Road Tunnels (New Publication of 2022)

DIRECTORATE GENERAL BORDER ROADS



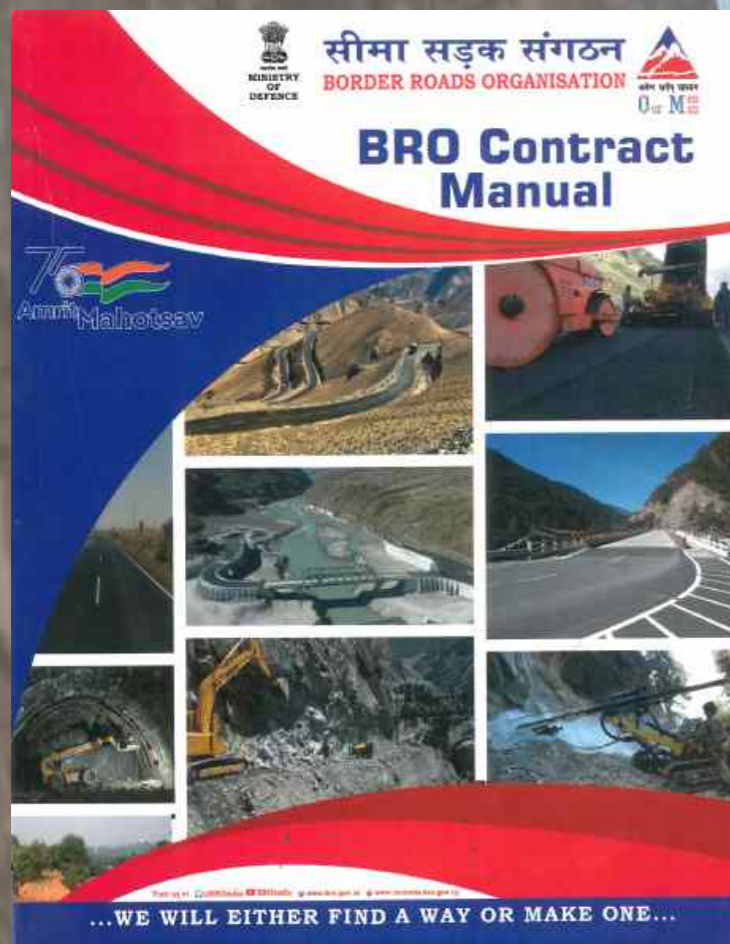
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(REVISION - 2022)



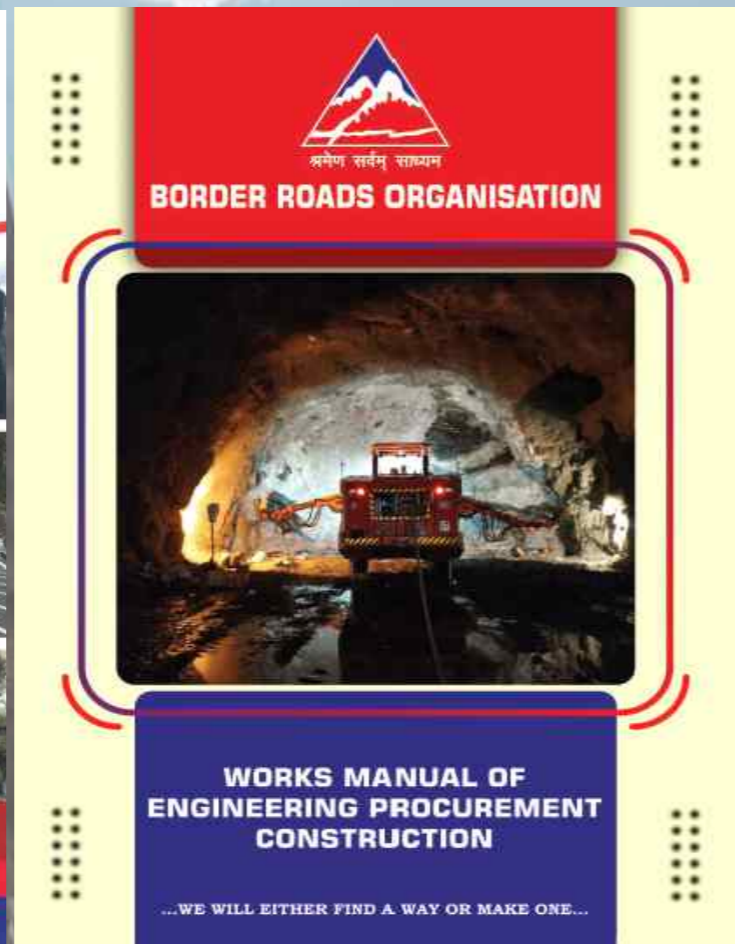
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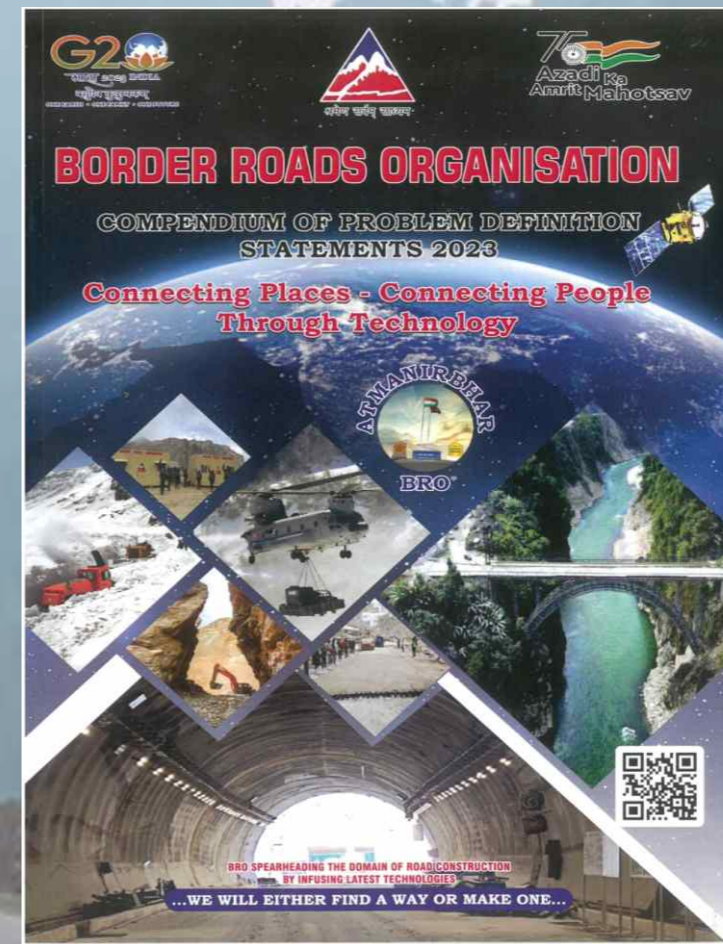
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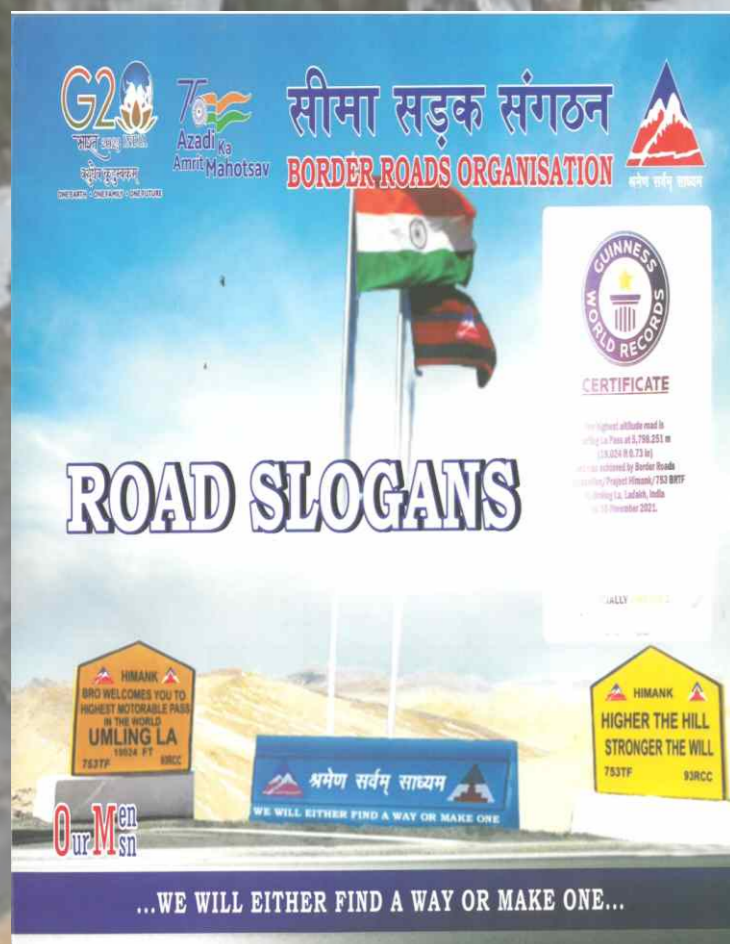
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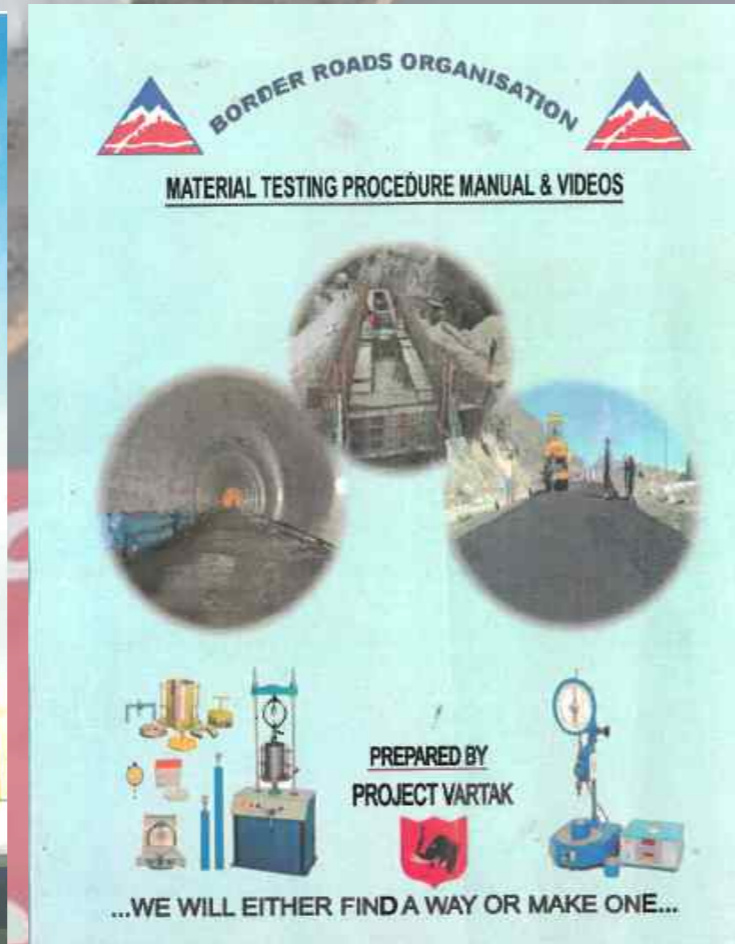
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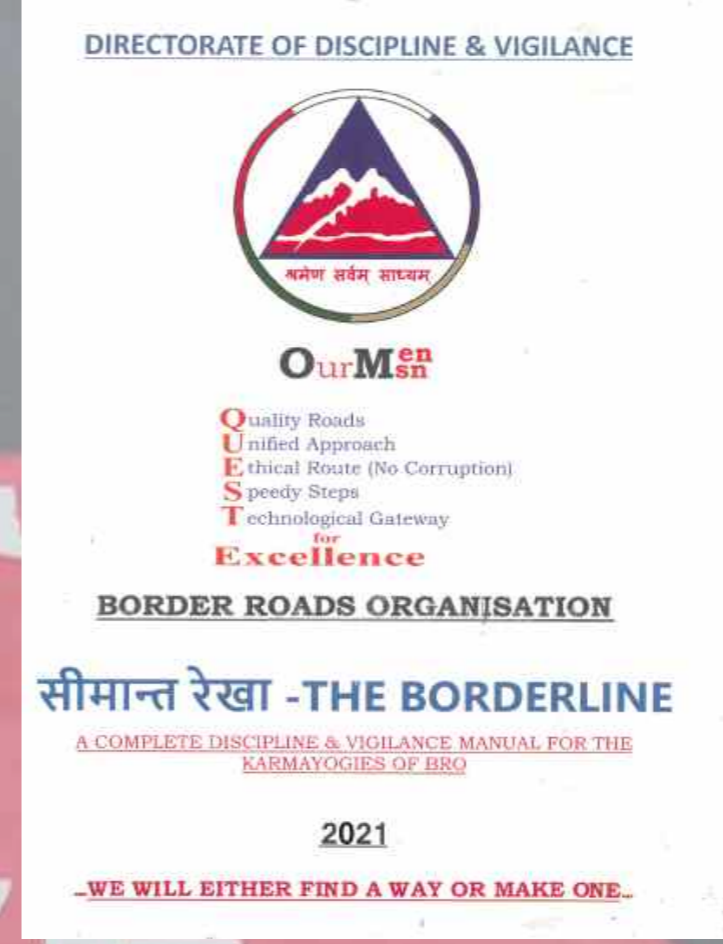
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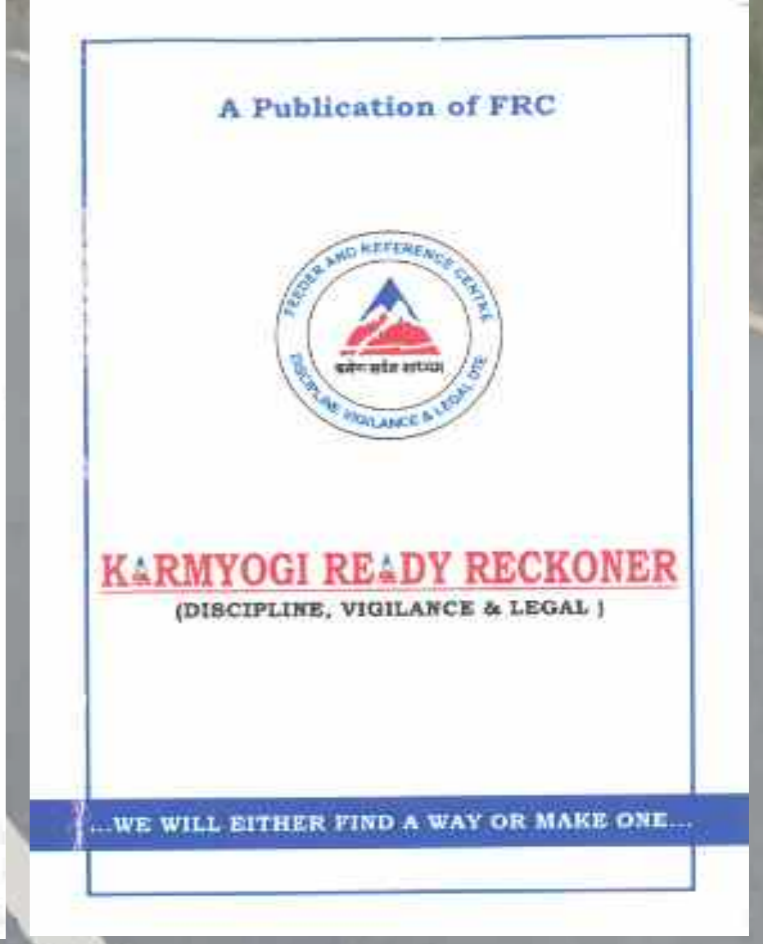
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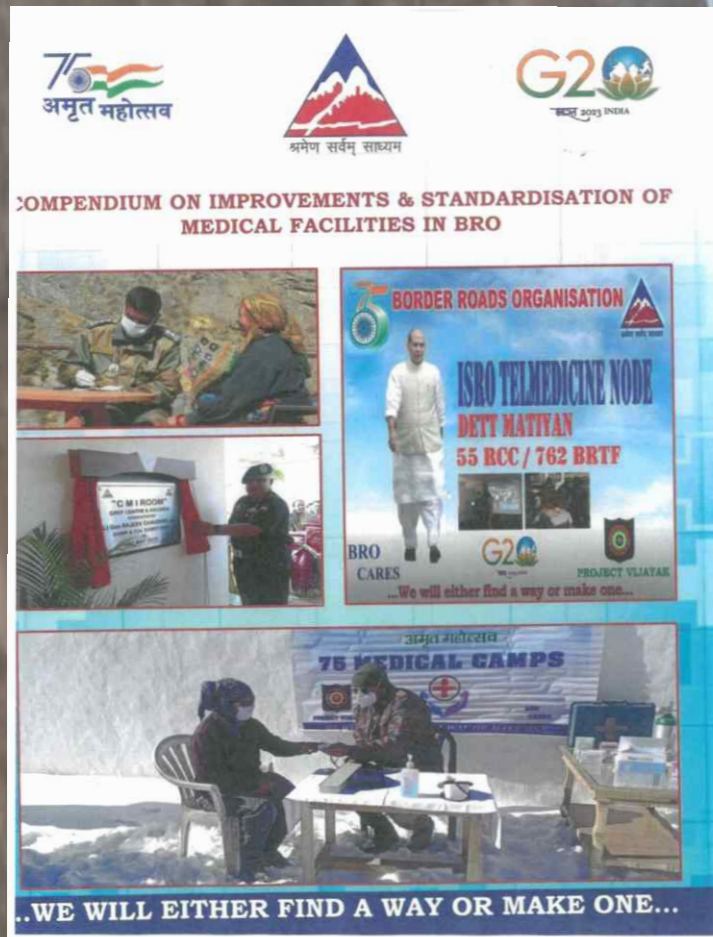
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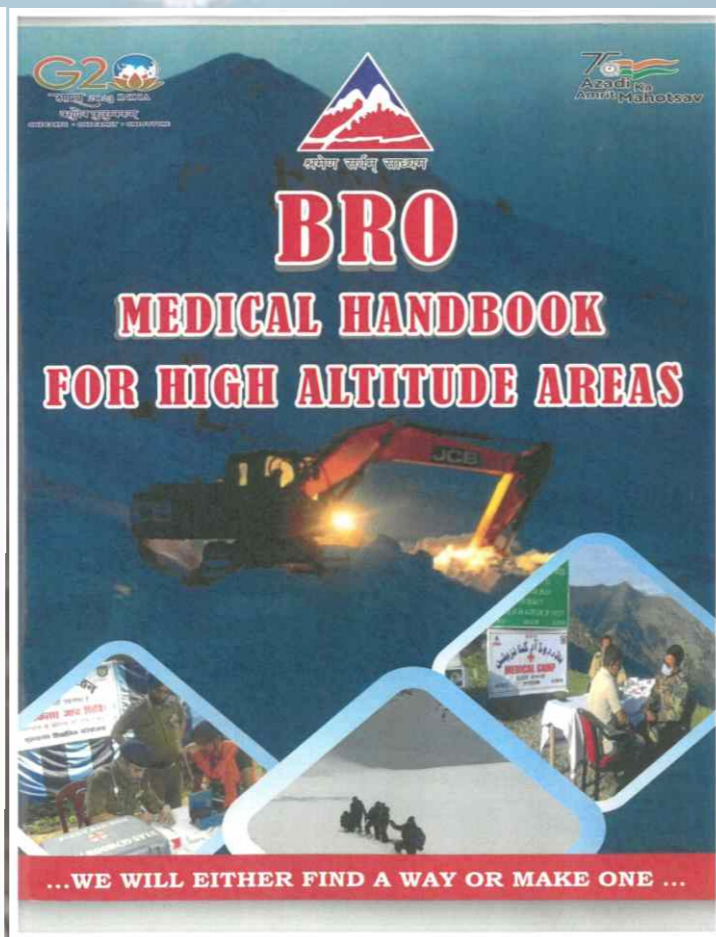
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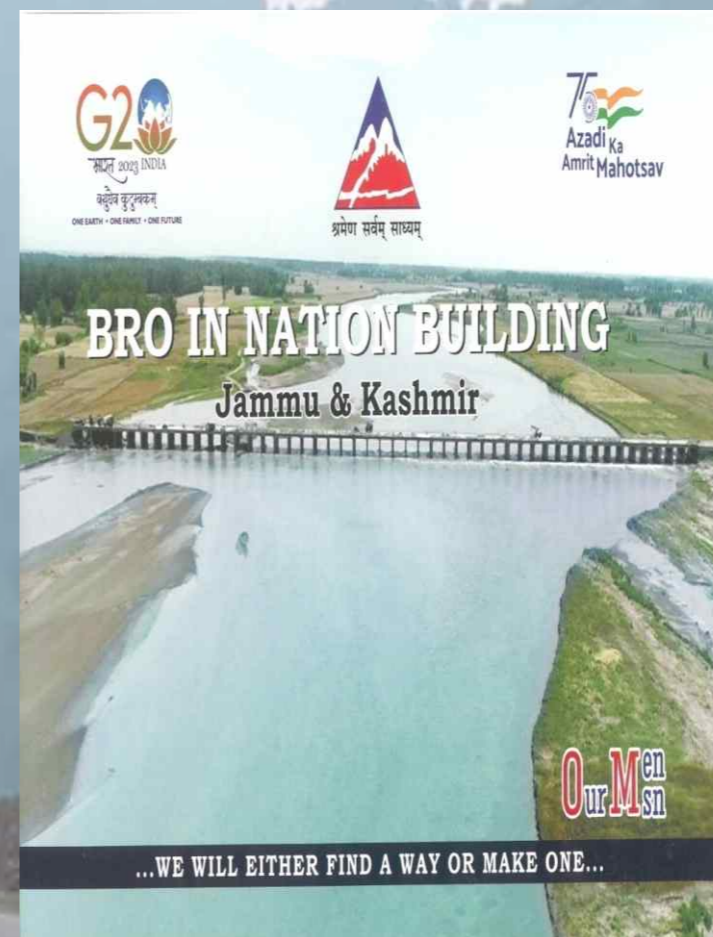
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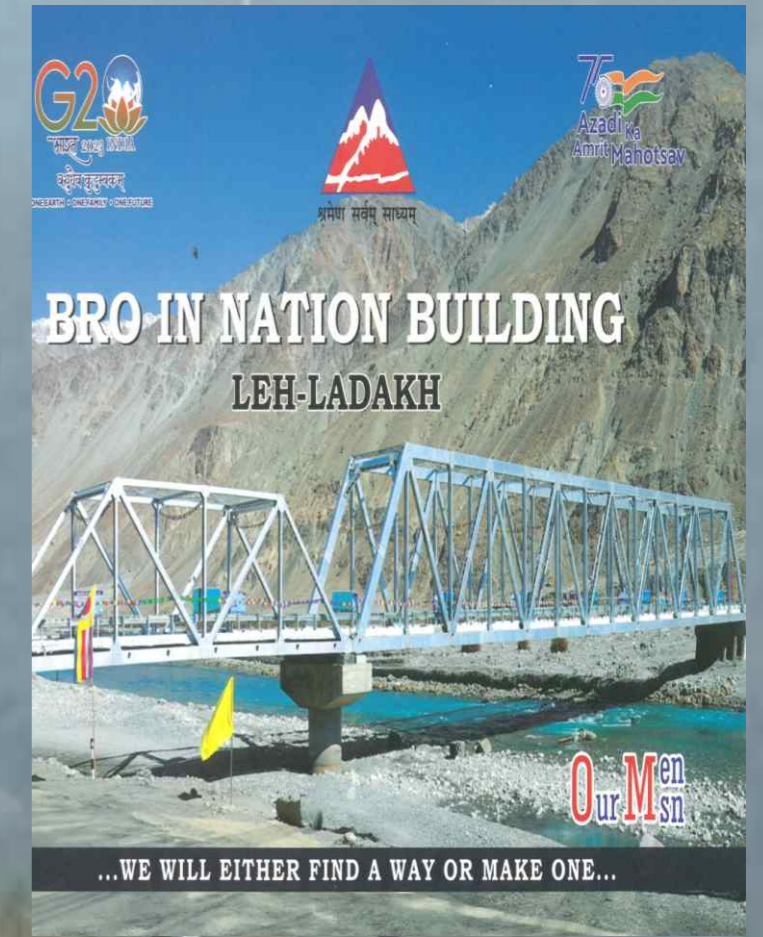
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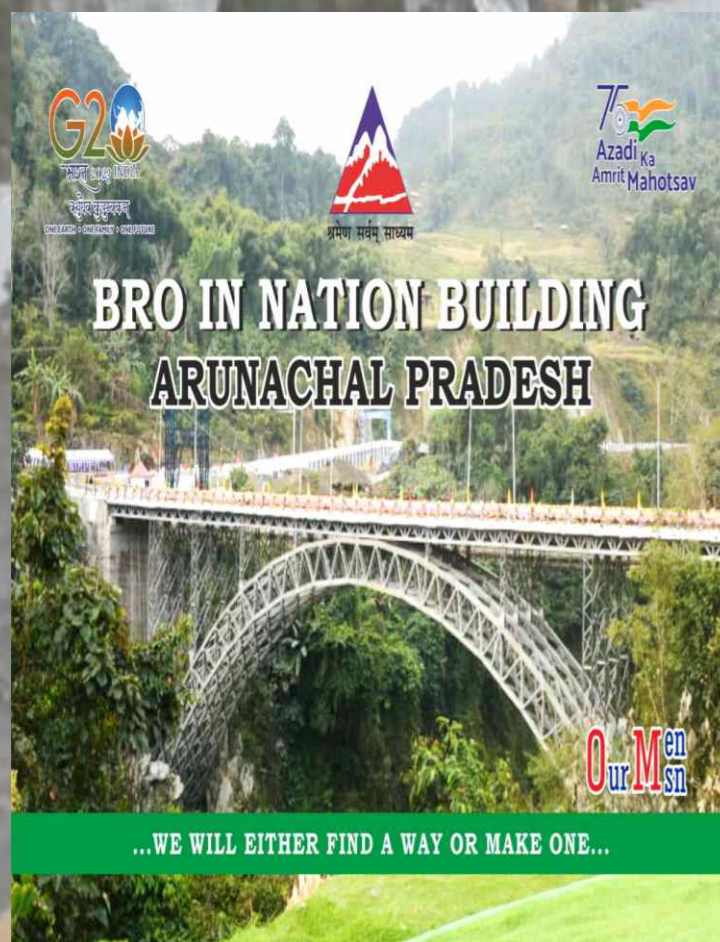
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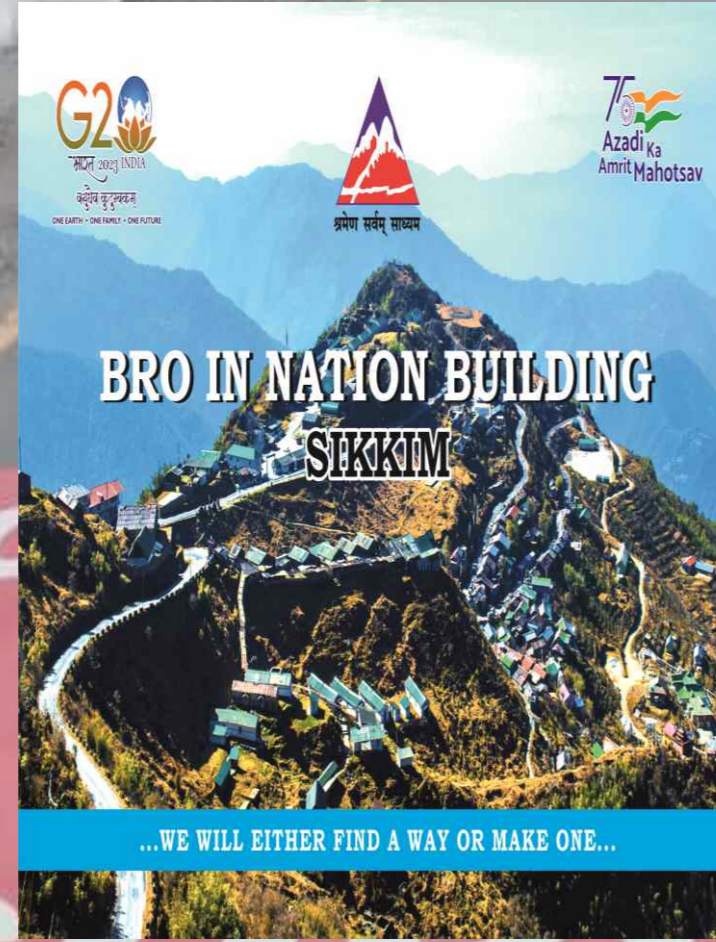
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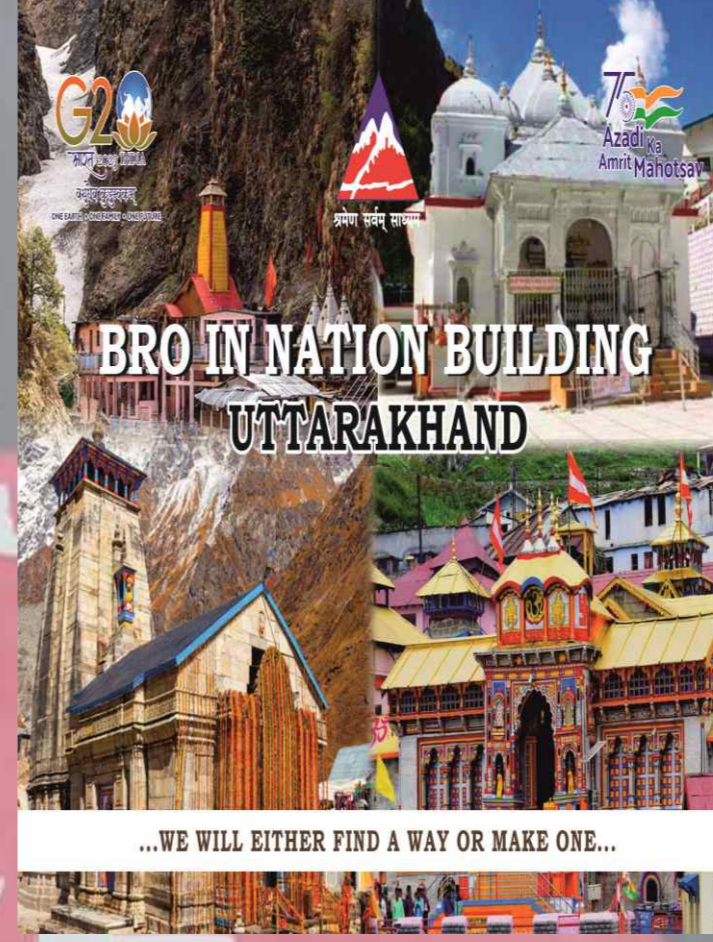
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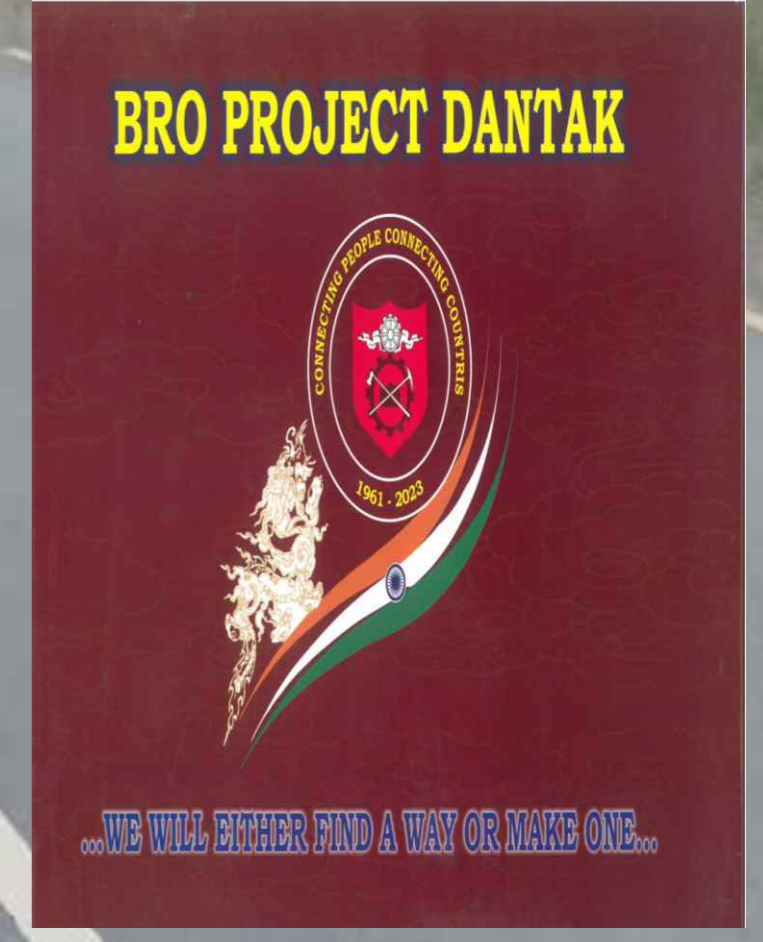
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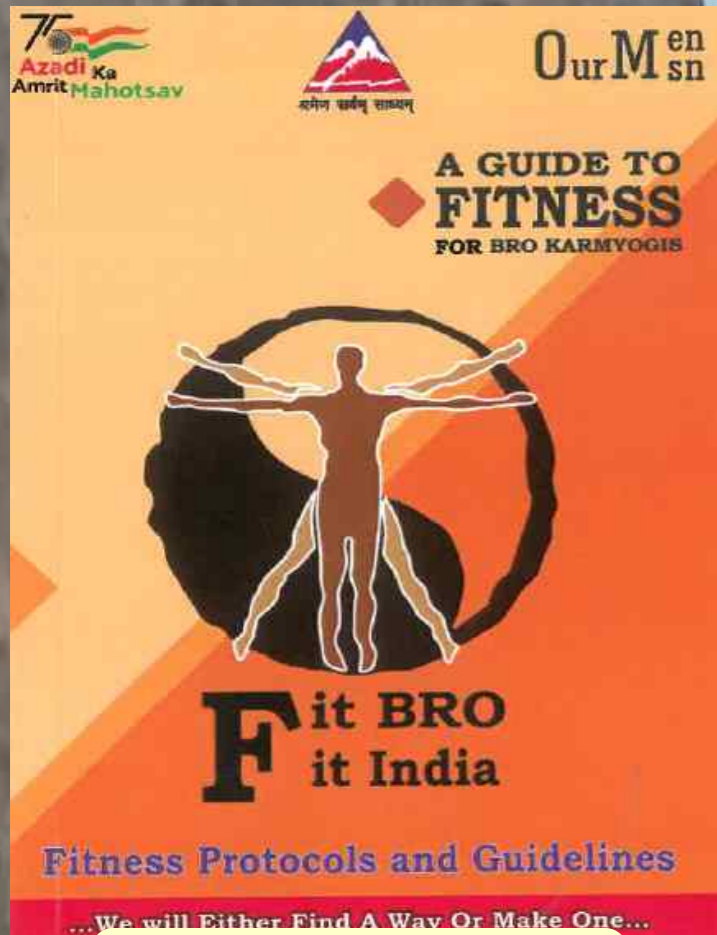
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Compendium of BRO Works Uttarakhand



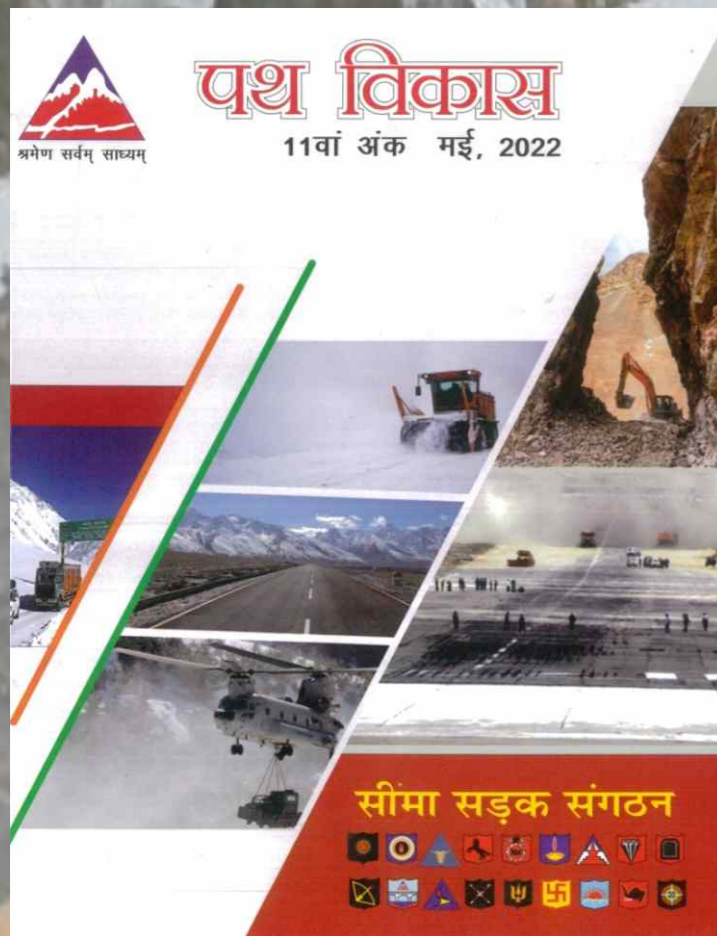
Compendium of BRO Works in Bhutan



Fitness Guidelines for BRO Karmyogis



Annual Technical Magazine of BRO



Annual Technical Magazine of BRO in Hindi



Annual Technical Magazine of BRO



Inspirational Quotes by DGBR

Lt Gen Rajeev Chaudhry, VSM, DGBR has taken a unique initiative of posting his hand written quotes/thoughts on Twitter. These quotes are easy to apprehend and easily resonates with our Karmyogi's to enhance their credibility, hone their leadership skills and to provide them a holistic view of life. These quotes contain insight and wisdom in condensed form in few words.

Varied nature of quotes have indeed been very motivational and inspirational to the masses. These quotes have the power to motivate, inspire and encourage BRO Karmyogi's to continue in their "Persuit for Excellence". The inspirational quotes by the DGBR resonate deeply with the BRO Karmyogis. They serve as a source of motivation, reminding the dedicated men and women that their work goes far beyond building roads; it is about connecting people, enabling progress, and safeguarding the Nation's borders. These quotes encapsulate the spirit of the BRO and inspire its personnel to continue their relentless pursuit of excellence in the face of adversity, ultimately shaping a brighter future for India.

Sha
Yu
Bha
Mu
KTI

Should be "4" milestones
in Our LIFE to make
it meaningful...

RC

जिसने आना है वह आयेगा,
जिसने जाना है वह जायेगा।
जो होना है, वो होगा ॥
तुम्हारा धर्म अपने कर्म
में लीन रहना है।
साधक का जीवन ही सार्थक है ॥

BRO
RC
FOCUS ON YOUR KARMA...

वृद्धों का आदर करना
हमारी पारम्परिक संस्कृति
का प्रतीक है :

- आयु वृद्ध ।
- ज्ञान वृद्ध ।
- पद वृद्ध ।
- कर्म वृद्ध ।

BRO वृद्धों का आदर करें ..
RC

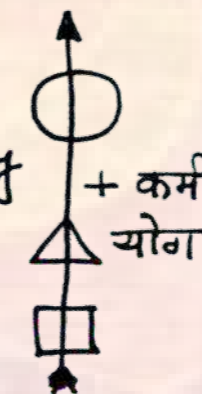
$$\frac{\text{Karma}(100\%)}{\text{Expectations}(0\%)} = \text{Sat(hit)/Anand}(oc)$$

BRO
RC
FOLLOW THE FORMULA

Service
(प्रेम)

↑
Spirituality
(ज्ञान)

↑
Religion
(भक्ति)



BRO
RC
CHOOSE THE PATH WITH CARE

Essence of all Religions
is SPIRITUALITY...
Essence of all Spirituality
is H appiness
ealth
armony...

BRO
RC
REMAIN HAPPY & HEALTHY

शिक्षा देना,
शासन करना एवं
समाज को शुद्ध करना
मनुष्य के सर्वोपरि
कर्म हैं जो पुण्य के
रूप में फलीभूत होते हैं...

BRO RC

LET'S CHANGE THINGS FOR LARGER GOOD

Accept
cknowledge
ppreciate...

* Recipe for Integrated &
simple Life...

BRO RC

LIVE SIMPLE

Ego = $\frac{\text{Materialistic Success}}{\text{Spiritual Progress}}$

* Strive to Keep **RHS < 1**

॥ तत् त्वम असि ॥

BRO RC

ॐ गणेशाय नमः ॥

A GOOD LEADER
has to be Visible,
Share base with his
people, talk to them
& once in while put
his SHOULDER to
Wheel...
He is no GOOD
passing instructions
from his cabin...

BRO LEAD FROM FRONT RC

What We feed our Body
does not determine our
HEALTH...
A little depends on how
active we keep it (-Action)...
Beyond this it depends ^{more} on
what you feed your
Mind (ज्ञान)
Heart (प्रेम) &
Soul (भक्ति)...

RC

SIMPLIFY

We need to simplify life
every moment, every day...
Complexity breeds Misery
Simplification leads to Happiness!

BRO be simple RC

THINK
SAY
ACT **SIMPLE**

विरोध होगा, प्रतिरोध होगा।
सत्य का मार्ग दुर्गम होगा ॥
निडर रहो, अडिग रहो।
बढ़े चलो, बढ़े चलो ॥

Let Obstacles be the Way.

BRO RC

चरैवती चरैवती...

श्रम, प्रतिभा एवं संयम
आध्यात्मिकता के
प्रमुख मार्ग सूचक हैं।

RC

BRO

FOCUS ON YOUR WORK

Path is a tough Choice
 Destination is non-essential
 Consequence...
 चरैवति चरैवति।

BRO RC
 MAKE MEANS YOUR ENDS

I observe
 I understand
 but
 I don't say **EVERYTHING**

BRO RC
 BE IN CONTROL

Path to
 SPIRITUAL KINGDOM
 passes through
 GATES of GRATITUDE

BRO RC
 REMAIN IN GRATITUDE FOR EVERYTHING
 IT'S ALL HAPPENING WITH A PURPOSE

निर्भकि जलधारा परम
 शक्तिशाली पर्वतों को
 भी झुकने पर मजबूर
 कर देती है।
 जल की तरह चलायमान
 रहो रास्ते खुद
 निकल आयेगे।

BRO RC
 STOP NOT TILL THE GOAL IS REACHED

Everything
 surges &
 thrinks
 on LEADERSHIP...

BRO RC
 STRENGTHEN THE LEADERSHIP CHAIN

Any Organisation
 will be as Efficient
 & Good as its
 LEADER...

BRO RC
 LEAD YOUR MEN TO SUCCESS

SELF ACTUALISATION
 REALISATION
 TOWARDS
 MATERIAL DEVELOPMENT
 SPIRITUAL DEVELOPMENT
 IN THIS
 EVER CHALLENGING CHANGING WORLD
 is the only way to attain
 SALVATION...
 Strive for Excellence

BRO RC
 CONTINUE EVOLVING

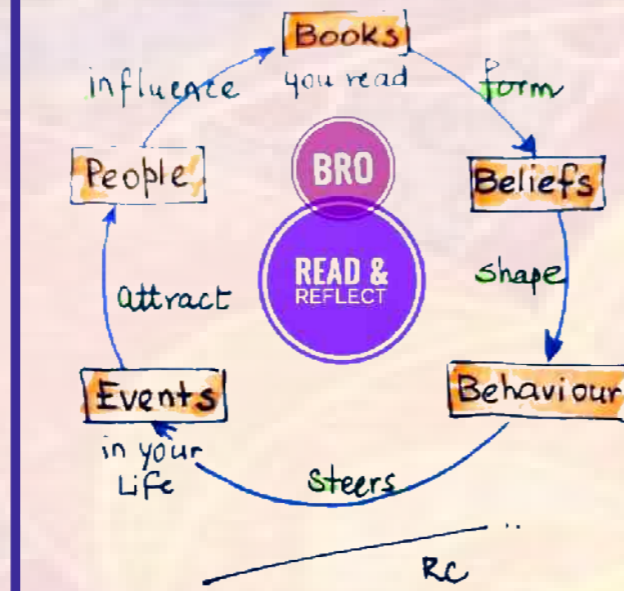
...CELEBRATING INDIA...
 अगर हम सभी आपसी मतभेदों
 एवं नकारात्मक सोच त्याग कर
 अपनी यथाशक्ति ऊर्जा भारत
 की अखंड अस्मिता हेतु राष्ट्र
 निर्माण में लगा दें तो हम सच्ची
 भारतीय हैं और असली देशभक्त भी।

॥धन्यः अस्मि भारतत्वेन॥

BRO
 MAKING INDIA PROUD

प्रभु तुझे केवल
शक्ति प्रदान करेंगे।
अपनी लड़ाई तुझे
स्वयं लड़नी पड़ेगी ॥

BRO RC
CHOOSE YOUR BATTLES CAREFULLY



जो मिल रहा है
उसे प्रसाद की
तरह ग्रहण करो।
जो दे रहे हो
उसे दान भावना
से दो ॥

BRO RC
SYNG WITH DIVINE

Only निष्काम कर्म can
liberate you and take
you to the highest level
of your POTENTIAL...

BRO RC
॥ योग: कर्मसु कौशलम् ॥

RIGHT vs WRONG

जो सरल है,
जो सहज है,
वही सही भी है।

- RC
- * Uncomplicate
 - * Unclutter

Success is short-lived,
Struggle remains forever...

BRO RC
कर्मयोगी सदैव संघर्षरत रहो...

बंधो मत, बिको मत।
जियो अपनी सांसों पर।
फिर जहाँ पहुँचो, उसी
को मुकाम समझ लो अपना ॥

BRO RC
अपना रास्ता खुद बनाओ...

Courage is mother of
all traits. If Optimism
& Gratitude get
fused with it, then
one can win any
Battle of life...

BRO RC
FIGHT WITH FULL MIGHT



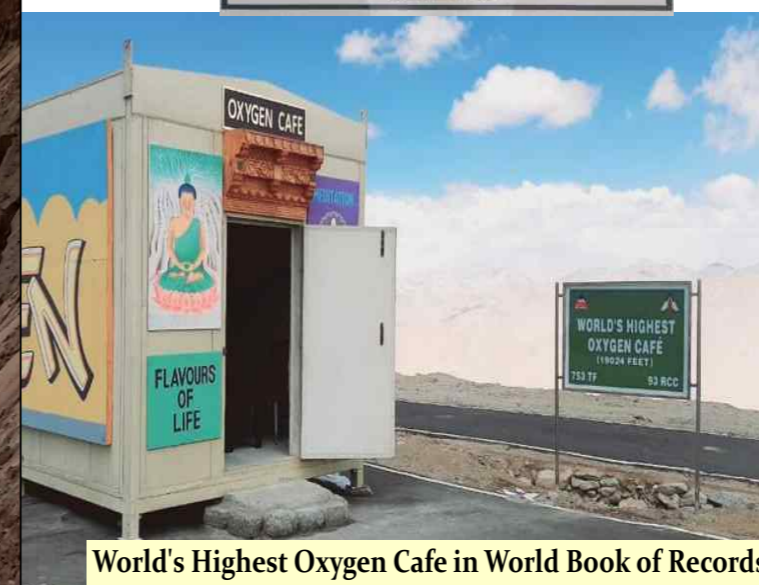
PRIDE OF BRO

BRO has six World Records in its name i.e. World's highest Motorable Road at Umling La in Ladakh, World's Longest Tunnel above 10,000 ft at Rohtang in Himachal Pradesh, World's first highest Oxygen Cafe at Umling La in Ladakh, the World's Highest Bailey Suspension Bridge on Darbuk-Shoyk-Daulat Beg Oldie Road in Ladakh, Highest MI Room on Chisumle-Demchok Road and Highest Workshop in the World on Darbuk-Shoyk-Daulat Beg Oldie Road in Eastern Ladakh. Prides of BRO are highlighted in succeeding paras.

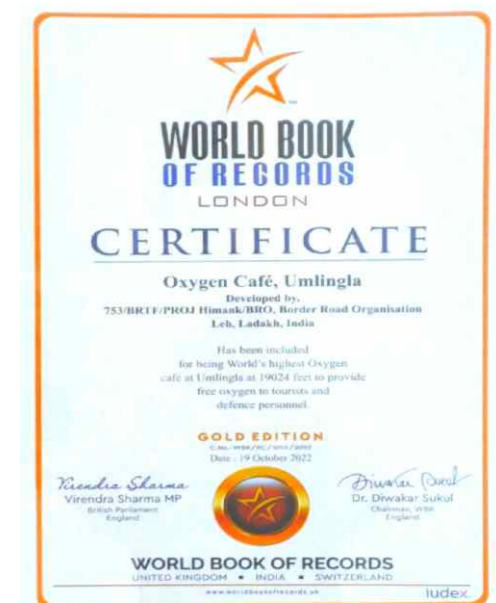
World's Highest Motorable Road over Umling La. The construction of road at Umling La has brought in many accolades and has also placed India on the World Map as World's Highest Motorable Road by Guinness Book of World Records on 16 Nov 2021.



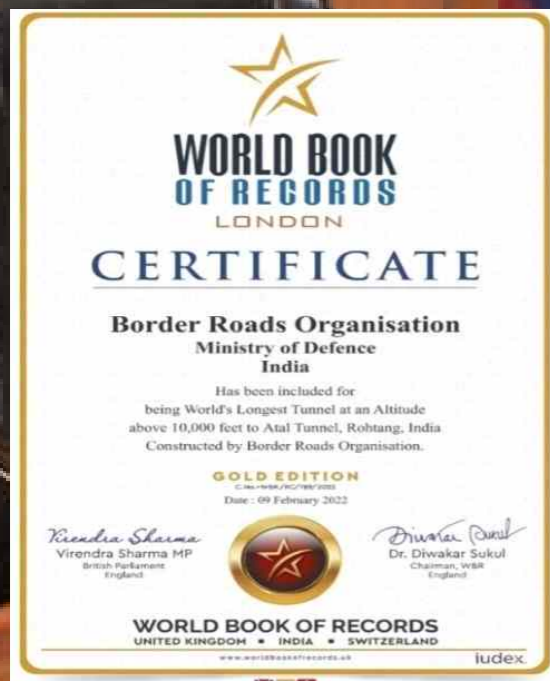
Road over Umlingla in Guinness World Records



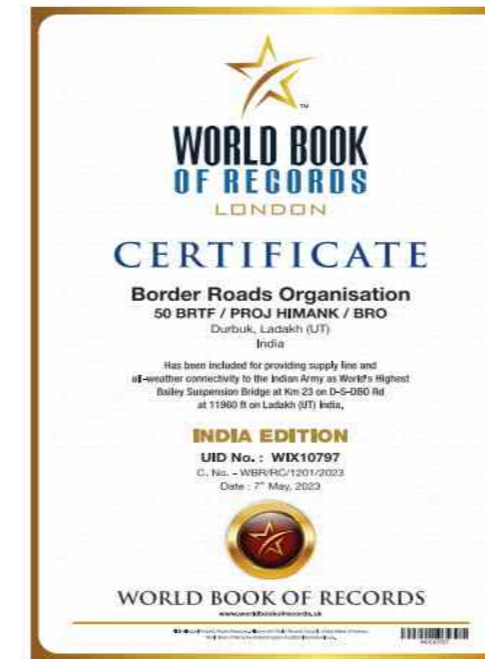
World's Highest Oxygen Cafe in World Book of Records



World's Highest Oxygen Café at Umling La. Recently, the Oxygen Café at Umlingla developed by BRO has been Certified by World Book of Records, London as the 'World's Highest Oxygen Café at 19024 ft' on 18 Oct 2022, which aims to provide essential oxygen to the tourists and defence personnel at that altitude, in case they feel the need for it on account of rarified air.



World Highest Bailey Suspension Bridge on D-S-DBO Road. On the occasion of 64th BRO Day on 07 May 2023, the World Book of Records felicitated BRO for construction of the Highest Bailey Suspension Bridge in the World at Km 23 on Darbuk-Shoyk-Daulat Beg Oldie Road over Shyok river in Eastern Ladakh at a height of 11960 feet.



World Book of Records for Construction of the Highest Bailey Suspension Bridge on D-S-DBO Road in Ladakh

World Book of Records for Highest MI Room
The World Book of Records felicitated BRO for establishing the Highest MI Room in the World at Umling La on Chisumle-Demchok Road at a height of 19024 feet.



World's Highest MI Room

The Atal tunnel, Rohtang has received the following awards and has set new records in Engineering in the last two years:-

- TAI Tunnelling Project of the Year Award on 27 Jun 2022.
- Highly Commended Award for 2022 by FIDIC on 12 Sep 2022.
- ACECC Civil Engineering Project Award on 22 Sep 2022.
- Best Project of the Year Award by the Centre for Excellence in Project Management (CEPM) on 14 Dec 2022.
- 12th CIDC Vishwakarma Award on 02 Mar 2021.
- Certified by World Book of Records, London as the 'World's Longest Highway Tunnel above 10,000 Feet' on 09 Feb 2022.
- IBC Best Infrastructure Project Award on 28 Apr 2022.



World's Highest Workshop

Highest Workshop in the World. Workshop at Km 148 (Sultan Chushku) on Darbuk-Shoyk-Daulat Beg Oldie Road in Eastern Ladakh has been certified as Highest Workshop in the World at a height of 15561 feet by The World Book of Records.

Construction World Global Person of the Year. Lt Gen Rajeev Chaudhry, VSM, DGBR was honoured with the prestigious Award of Construction World Global Person of the Year-2021 (Public Sector) on 22 Oct 2021 by the Construction World Magazine for his immense contribution in the construction sphere. He is the first Army officer to receive this award which was instituted 19 years ago.

PMA National Project Leader Award 2022. Construction of the World's highest motorable road at an altitude of 19024 ft over Umling La in Ladakh by the Border Roads Organisation has been awarded PMA National Project Leader Award 2022 on 22 Aug 2022 by Project Management Associates.

GeoSmart Infrastructure Excellence Award. BRO conferred with the prestigious GeoSmart Infrastructure Excellence Award by Geospatial World for excellence in tunnel projects on 05 Sep 2022.

13th CIDC Vishwakarma Award. Lt Gen Rajeev Chaudhry, VSM, DGBR was awarded the prestigious 13th Construction Industry Development Council (CIDC) Vishwakarma Achievement Award-2022 (From Govt and Public Sector) on 08 Apr 2022 for his outstanding contribution in the field of infrastructure development in India.



Construction World Global Person of the Year

753 BRTF under Project Himank was awarded the prestigious **CIDC Vishwakarma Achievement Award** on 08 Apr 2022 for Best Construction Project for constructing World's highest road over Umlingla Pass, the Chisumle-Demchok road which crosses the pass at 19024 ft connecting Chisumle-Demchok in Southern Ladakh and has thus put India on the Global Map.



13th CIDC Vishwakarma Awards 2022
Upon the Recommendation of Jury
The Trophy & Scroll of Commendation are hereby presented to
Lt Gen Rajeev Chaudhry, VSM
Director General Border Roads
Border Roads Organisation, New Delhi
For Category
Achievement Award for Public Officer
(From Govt of Public Sector)
8th April 2022
New Delhi
Dr. P. S. Rana
Chairman, CIDC

13th CIDC Vishwakarma Award 2022



14th CIDC Vishwakarma Award 2023

ASSOCHAM India Award. BRO's engineering marvel "Atal Tunnel, Rohtang" and the Strategic "Darbuk-Shyok-DBO Road" have been conferred Strategically Important Tunnel and Road Projects Award respectively by Associated Chambers of Commerce & Industry of India (ASSOCHAM) on 17 May 2023.



BRO Conferred with ASSOCHAM India Award

PVSM	-	01
AVSM	-	03
SM	-	02
VSM	-	11
UJRP	-	01
Govt CC	-	135
COAS CC	-	48
Chief of Air Staff CC	-	01
VCOAS CC	-	88
GOC-in-Cs CC	-	121
CISC CC	-	02
VCNS CC	-	09
CINCAN CC	-	15
DGBR CC	-	1598

In past two years, BRO Karmyogis have been conferred with the following awards/commendations for their distinguished services:-

CONCLUSION

The BRO plays a vital role in the inaccessible border area. Its role in the security and development of border areas cannot be neglected for long. As India intends to strengthen itself and wants to play a greater role in regional and global affairs, it must be wary of traditional and new threats to its ambitions and its territorial integrity. In this context, BRO becomes an important organization to look up to.

Capacity building is the need of the hour and true to our Motto “**WE WILL EITHER FIND A WAY OR MAKE ONE**”, the BRO is ready and well poised to take on additional & new challenges to ensure that this growth is inclusive of the population residing in the remote border areas of the Nation. More needs to be done to be successful in our journey to move towards a healthier work force with the Motto “**Shramena Sarvam Sadhyam**”.

We are sure, that together we can, and together we will !