

REFERENCE

On financial resources necessary for construction of Sisian-Kajaran (exit of tunnel) section of North-South Road Corridor Investment Program and on PPP project opportunity.

Total length of the existing road – 148 km. Passing time is more than 4 hours.

Length of the road to be constructed – 74 km. Passing time will be less than 1 hour.

Reduction of length – 74 km. Reduction of passing time is more than 3 hours.

Existing traffic: 2,500 units per day. Forecast traffic till 2037: 5,000 units per day with opportunity to be increased up to 10,000 units per day.

By World Bank's HDMI program Estimated Internal Rate of Return (EIRR) is calculated for more than 14.5%.

Estimated investment – 1,040.00 million USD including VAT and land acquisition cost; estimated return till 2037 – up to 1,300.00 million USD.

All this section can be implemented as PPP project. State co-financing will be VAT and land acquisition cost – around 200.00 million USD. Privat investment - up to 840.00 million USD. At the same time, Republic of Armenia is already financing the construction of 32km road section from Agarak (border of Iran) to Kajaran tunnel with the cost around 200.00 million USD including VAT and land acquisition. It means that more than 30% of investments is going to be co-financed by State.

The following types of concession are envisaged based on preference:

- Build-Own-Operate-Transfer,
- Build-Operate-Transfer,
- Build-Transfer-Operate,
- Build-Own-Operate,
- Buy-Build-Operate.

The mentioned options are subject to discussion, and preference will be given merely to the interested organizations upon submission of properly developed and well-justified price offer.

A relevant legislative regulation may set up the State's commitment towards the return of funds/compensation of difference in regard to the planned activities by the end of operating.

Total construction estimated cost of Sisian - Kajaran (exit of tunnel) section - about 840 million USD without VAT and land acquisition cost, but included contingencies and consultancy services. From which:

- The cost of section with total length of 58km of only the roads (48km) and bridges (4km) as well as the available small tunnels (0.1-0.7km length - 6 in total and all 2.4 km) and the approaching roads (12 X 0.3km = 3.6km) is about 490 million USD.
- The cost of section with total length of 10km of Bargushat tunnel (8.6km) and approaching roads (1.4km) is about 220 million USD.
- The cost of section with total length of 6km of Kajaran tunnel (4.8km) and the approaching roads (1.2km) is about 130 million USD.

Հատված Զաջարան-Ագարակ
 Участок Каджаран-Агарак
 Section Kajaran-Agarak

Զաջարան
 Каджаран
 Kajaran

1757.00
 КМ 327+000

Պորտալ 6
 Тоннель 6
 Tunnel 6
 L=1750M

Լիճր
 Личк
 Lichk

Ճամբար 28
 Мост 28
 Bridge 28
 L=225 M

Ճամբար 29
 Мост 29
 Bridge 29
 L=200 M

Ճամբար 30
 Мост 30
 Bridge 30
 L=350 M

Ճամբար 31
 Мост 31
 Bridge 31
 L=175 M

Ճամբար 32
 Мост 32
 Bridge 32
 L=275 M

Ճամբար 33
 Мост 33
 Bridge 33
 L=250 M

Ճամբար 34
 Мост 34
 Bridge 34
 L=350 M

Մեղրի
 Мегри
 Meghri

КМ 379+000

Ագարակ
 Агарак
 Agarak

КМ 384+000

Պայմանական նշաններ
 Условные обозначения
 Legends

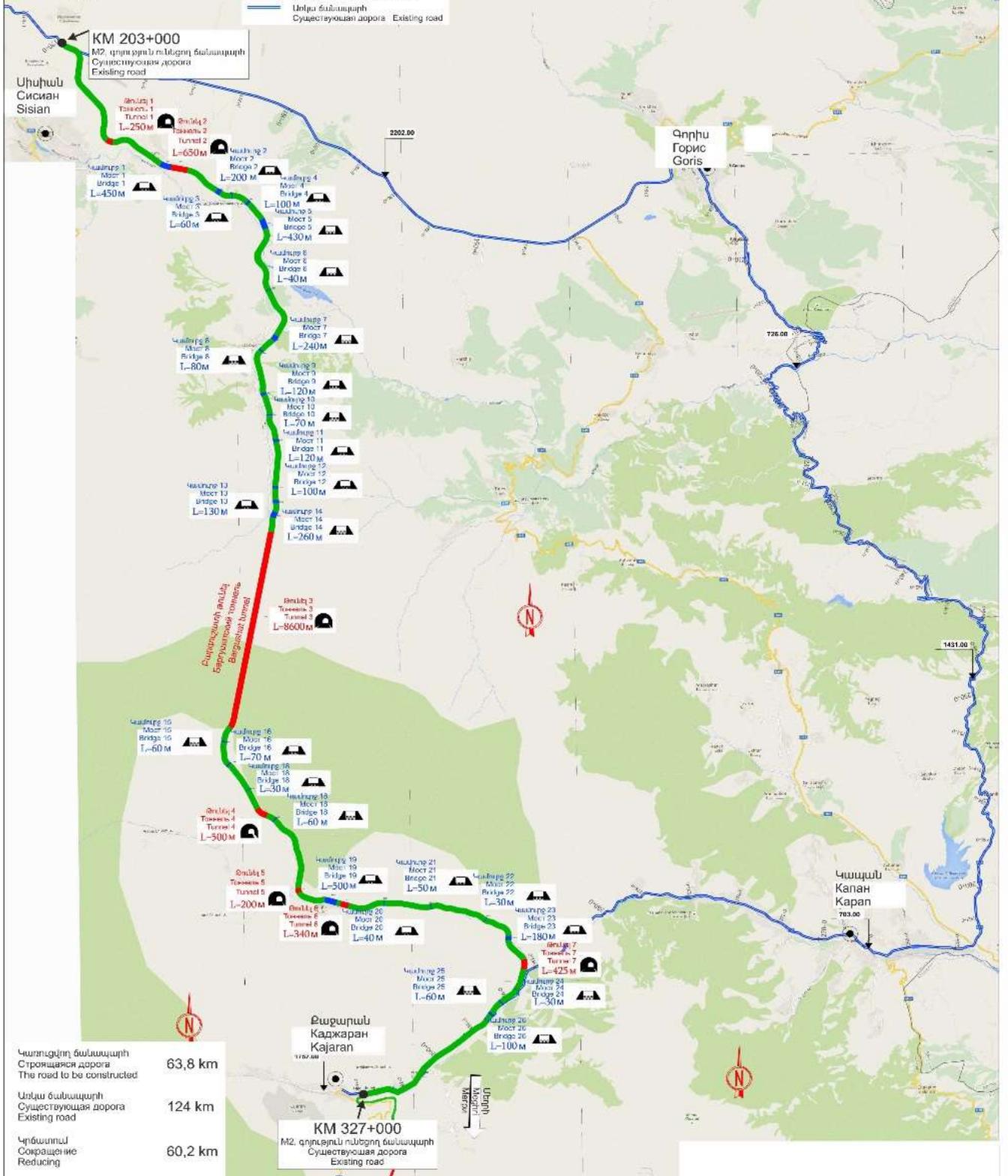
- █ Զանգվածային և բարձր խորանցիկներ
 Участки с выемкой и насыпью
 Sections with excavation and embankment
- █ Ճամբարներ
 Мосты
 Bridges
- █ Պորտալներ
 Тоннели
 Tunnels
- █ Սկզբնական ճանապարհ
 Существующая дорога
 Existing road

Շինարարական ճանապարհ Строющаяся дорога The road to be constructed	42 km
Սկզբնական ճանապարհ Существующая дорога Existing road	56 km
Չրվածություն Сокращение Reducing	14 km

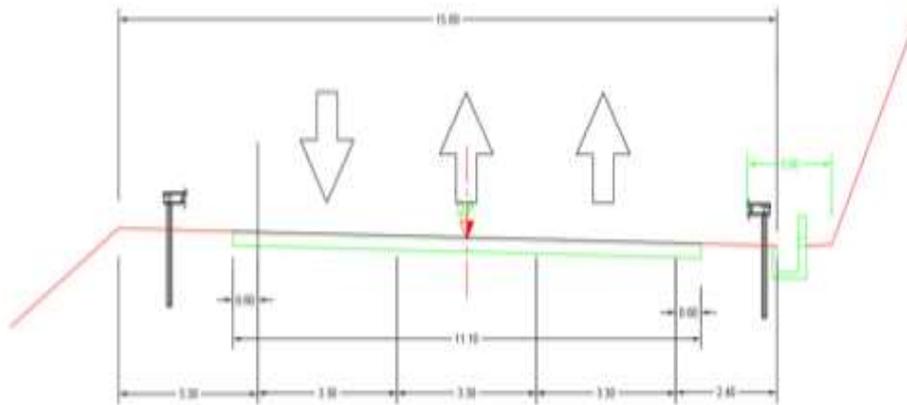
Հատված Սիսիան-Բաջարան
 Участок Сисиан-Каджаран
 Section Sisian-Kajaran

Փայմանական նշաններ
 Условные обозначения
 Legends

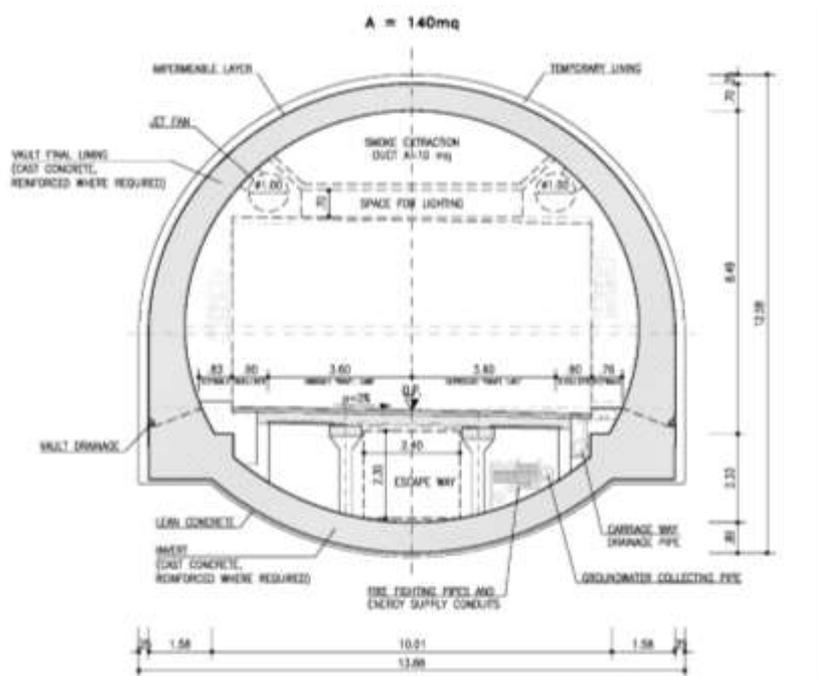
- Բնակարանի շինարարական աշխատանքներ
 Участки с выемкой и насыпью
 Sections with excavation and embankment
- Կամուրջներ
 Мосты
 Bridges
- Թունելներ
 Тоннели
 Tunnels
- Ստորոգյալ ճանապարհ
 Существующая дорога
 Existing road



A typical longitudinal section of a two-lane carriageway section, and overtaking lane, where necessary. Alignment and all the necessary technical indicators of the 1st category, with the possibility of reaching up to 4 lane in future.



A longitudinal section of tunnel with the length of more than 1km.



A longitudinal section of tunnel with the length shorter than 1km.

