

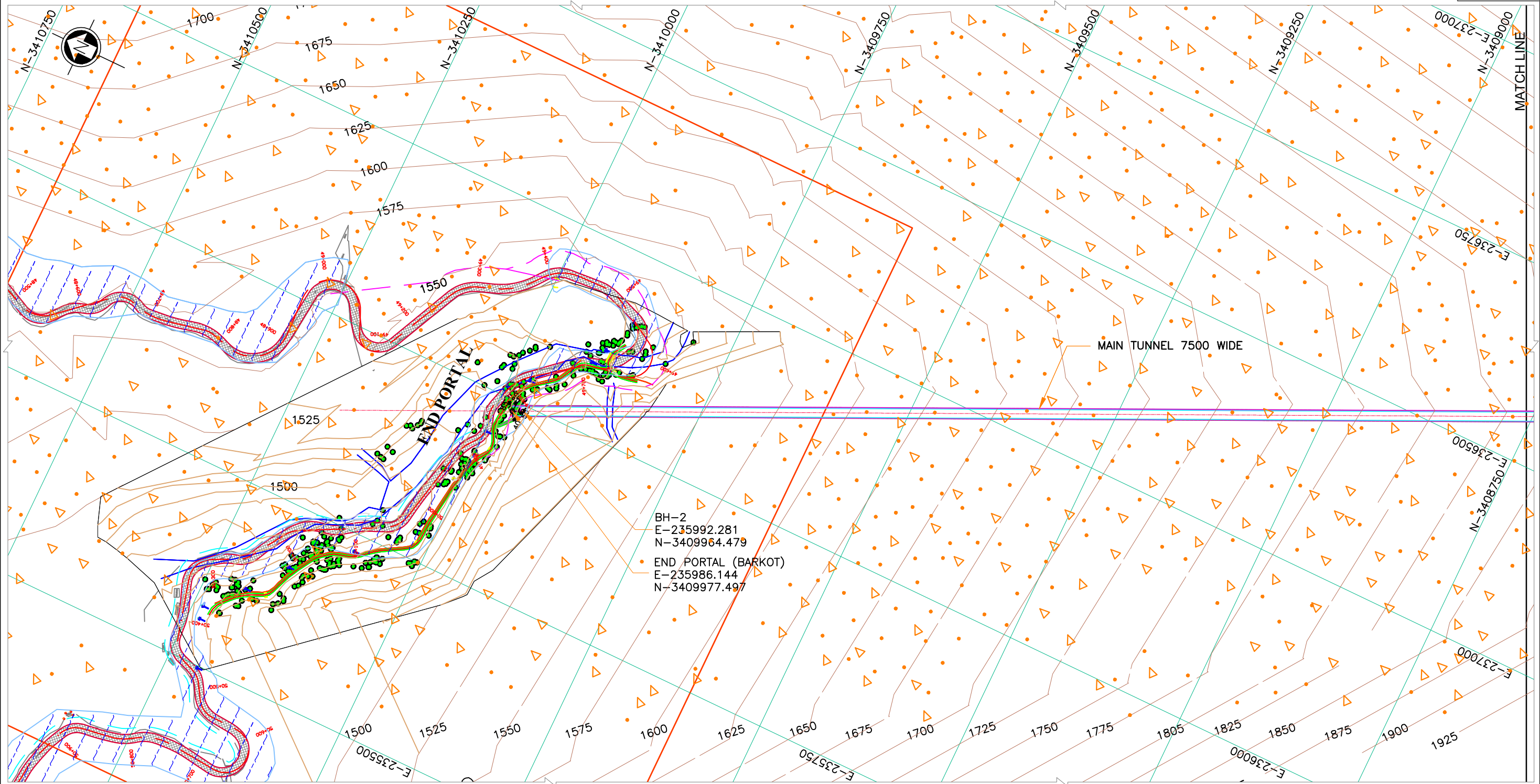
**National Highways & Infrastructure Development Corporation Limited**  
(A Government of India Undertaking)

**“CONSTRUCTION, OPERATION AND MAINTENANCE OF 2-LANE BI-DIRECTIONAL SILKYARA BEND – BARKOT  
TUNNEL WITH ESCAPE PASSAGE INCLUDING APPROACHES ON DHARASU-YAMUNOTRI SECTION BETWEEN  
CH. 25.400 KM AND CH. 51.000 KM FALLING ALONG NH-134 (OLD NH-94) IN THE STATE OF UTTARAKHAND”**

**On Engineering, Procurement & Construction (EPC) Mode**

**Appendix –AI**

**January, 2018**




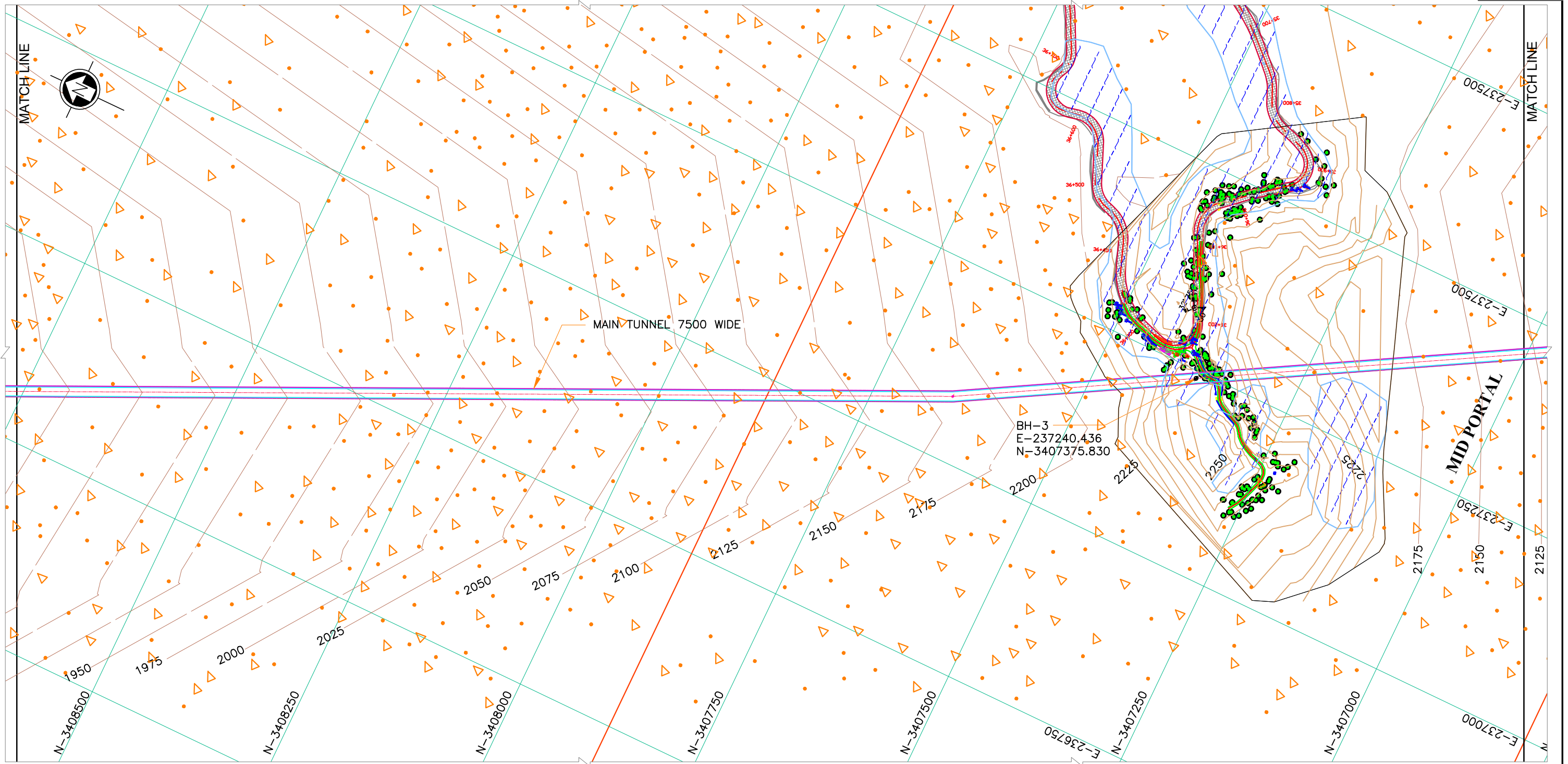
**LEGEND**

	SLOPE WASH MATERIAL		LITHOLOGICAL CONTACT
	SLATE		DRILL HOLE
	AMPHIBOLITE		FOLIATION & JOINT

**GEOLOGICAL ROAD TUNNEL LAYOUT PLAN**  
(SCALE 1:5,000)

SCALE: - 1:5,000  
0 50 100 150 200 250m

<div>Project Title</div> <div>:Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend – Barkot Tunnel With Escape Passage Including Approaches On Dharasu-Yamunotri Section Between Ch. 25.400 Km And Ch. 51.000 Km Falling Along NH-134 (OLD NH-94)in the State Of Uttarakhand on EPC mode”</div>	<div>CLIENT</div> <div></div> <div>MINISTRY OF ROAD TRANSPORT &amp; HIGHWAYS</div>	<div>Drawing Title: GEOLOGICAL ROAD TUNNEL LAYOUT PLAN</div>			
		<div>Drawing No. :- MC-ROADS/MISC/ 21</div>			<div>Sheet : (1 OF 3)</div>
		<div>Scale :- NTS</div>			
		<div>Drn</div>	<div>Dgn.</div>	<div>Appd</div>	<div>Date</div>
		<div>M.R.</div>	<div>M.K.S.</div>	<div>A.K.S.</div>	<div>Sept - 2015</div>



GEOLOGICAL ROAD TUNNEL LAYOUT PLAN  
(SCALE 1:5,000)

SLOPE WASH MATERIAL

LITHOLOGICAL CONTACT

SLATE

DRILL HOLE

AMPHIBOLITE

FOLIATION & JOINT

SCALE: – 1: 5,000  
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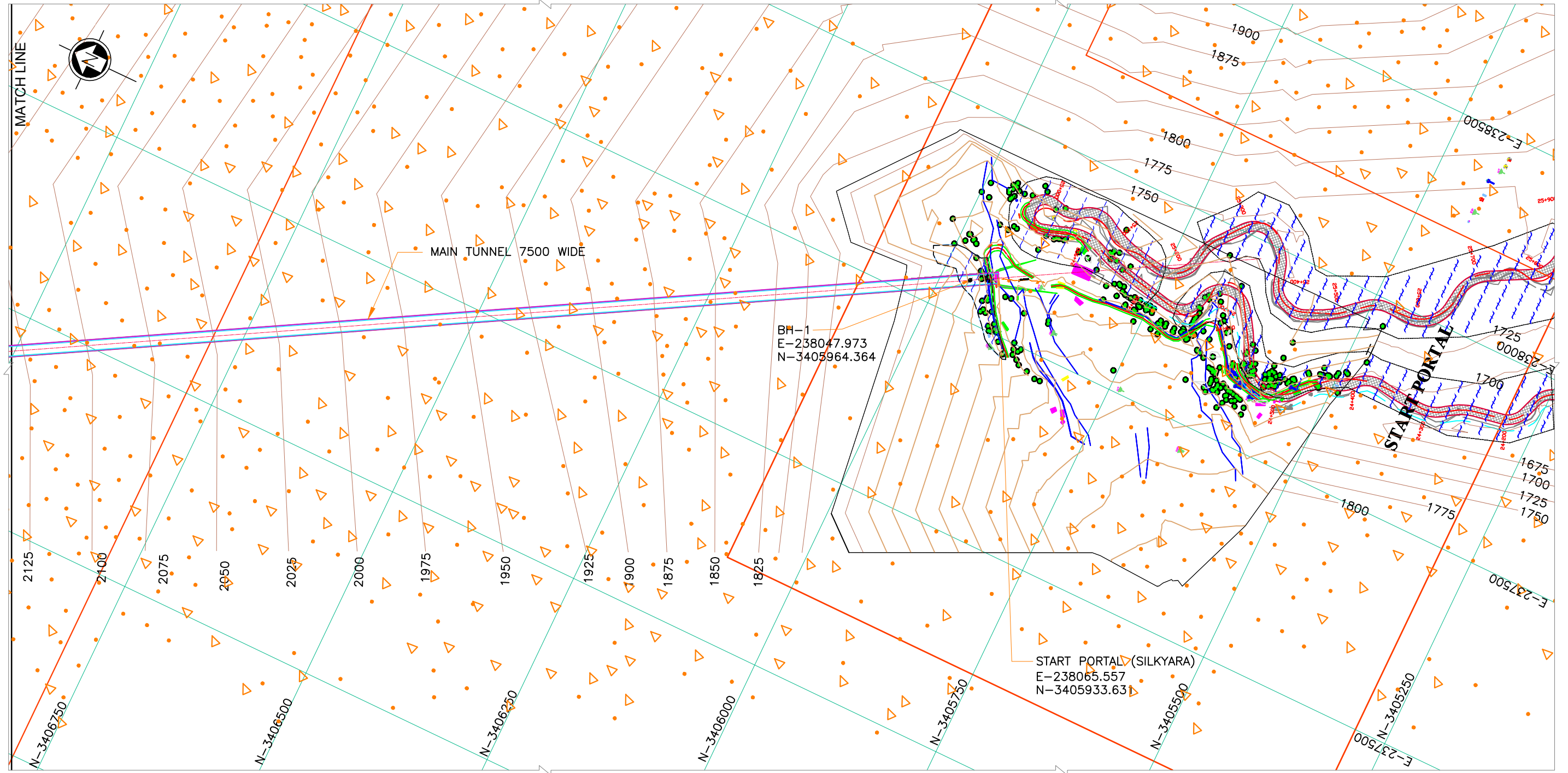
**Project Title**  
Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend – Barkot Tunnel With Escape Passage Including Approaches On Dharasu-Yamunotri Section Between Ch. 25.400 Km And Ch. 51.000 Km Falling Along NH-134 (OLD NH-94)in the State Of Uttarakhand on EPC mode"

**CLIENT**  
  
MINISTRY OF ROAD TRANSPORT & HIGHWAYS

Drawing Title: GEOLOGICAL ROAD TUNNEL LAYOUT PLAN			
Drawing No. :- MC-ROADS/MISC/ 22			Sheet : (2 OF 3)
Scale :- NTS			
Drm	Dgn.	Appd	Date
M.R.	M.K.S.	A.K.S.	Sept - 2015

**CONSULTANT**





GEOLOGICAL ROAD TUNNEL LAYOUT PLAN  
(SCALE 1:5,000)

**LEGEND**

SLOPE WASH MATERIAL

SLATE

AMPHIBOLITE

LITHOLOGICAL CONTACT

DRILL HOLE

FOLIATION & JOINT

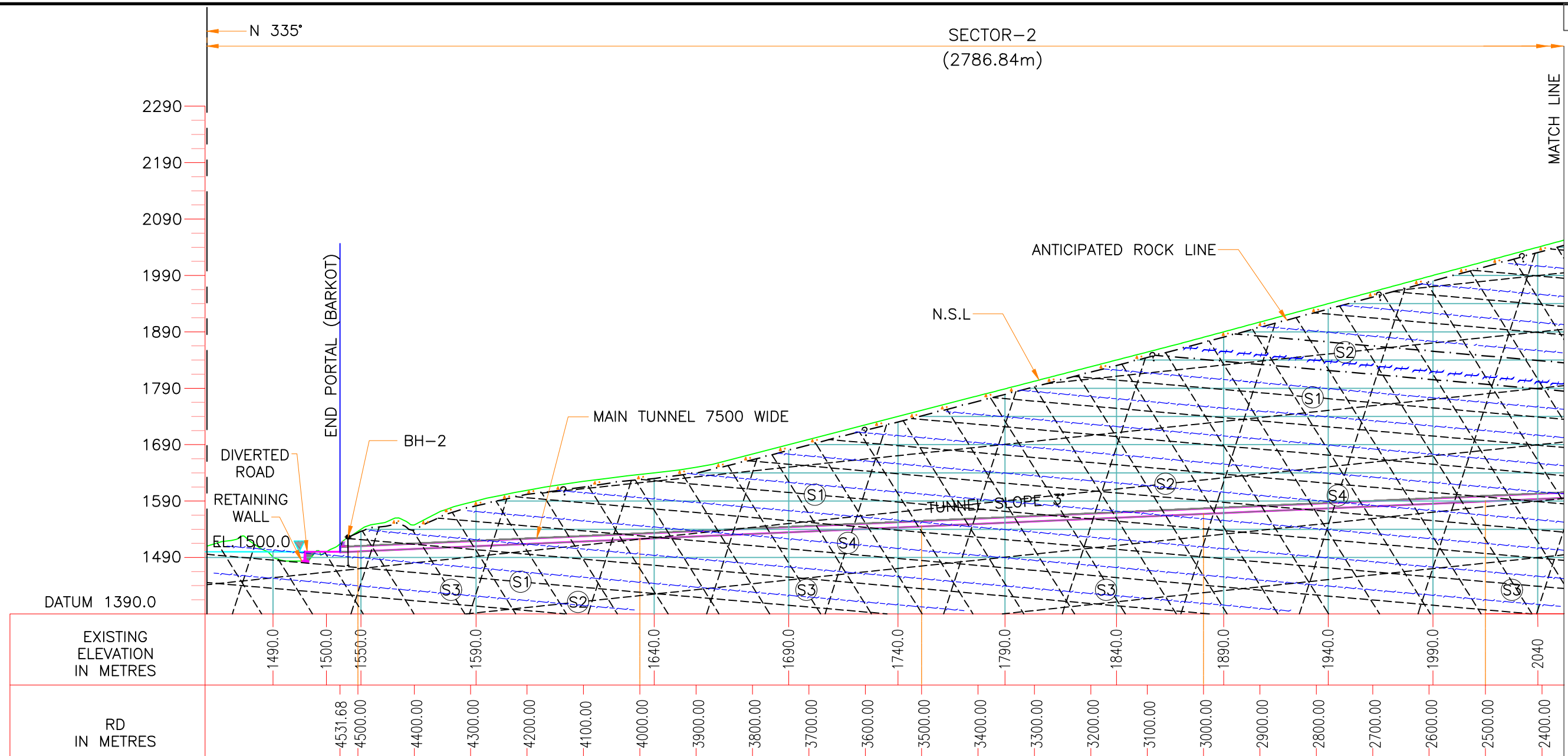
SCALE: – 1:5,000  
0 50 100 150 200 250m

**Project Title**  
Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend – Barkot Tunnel With Escape Passage Including Approaches On Dharasu-Yamunotri Section Between Ch. 25.400 Km And Ch. 51.000 Km Falling Along NH-134 (OLD NH-94)in the State Of Uttarakhand on EPC mode”

**CLIENT**

MINISTRY OF ROAD TRANSPORT & HIGHWAYS

Drawing Title: GEOLOGICAL ROAD TUNNEL LAYOUT PLAN			
Drawing No. :- MC-ROADS/MISC/ 23			Sheet : (3 OF 3)
Scale :- NTS			Date
Drm	Dgn.	Appd	Sept - 2015
M.R.	M.K.S.	A.K.S.	



GEOLOGICAL ROAD TUNNEL LONGITUDINAL SECTION  
(SCALE 1:7500)

**LEGEND**

SLOPE WASH MATERIAL

LITHOLOGICAL CONTACT

SLATE

DRILL HOLE


AMPHIBOLITE

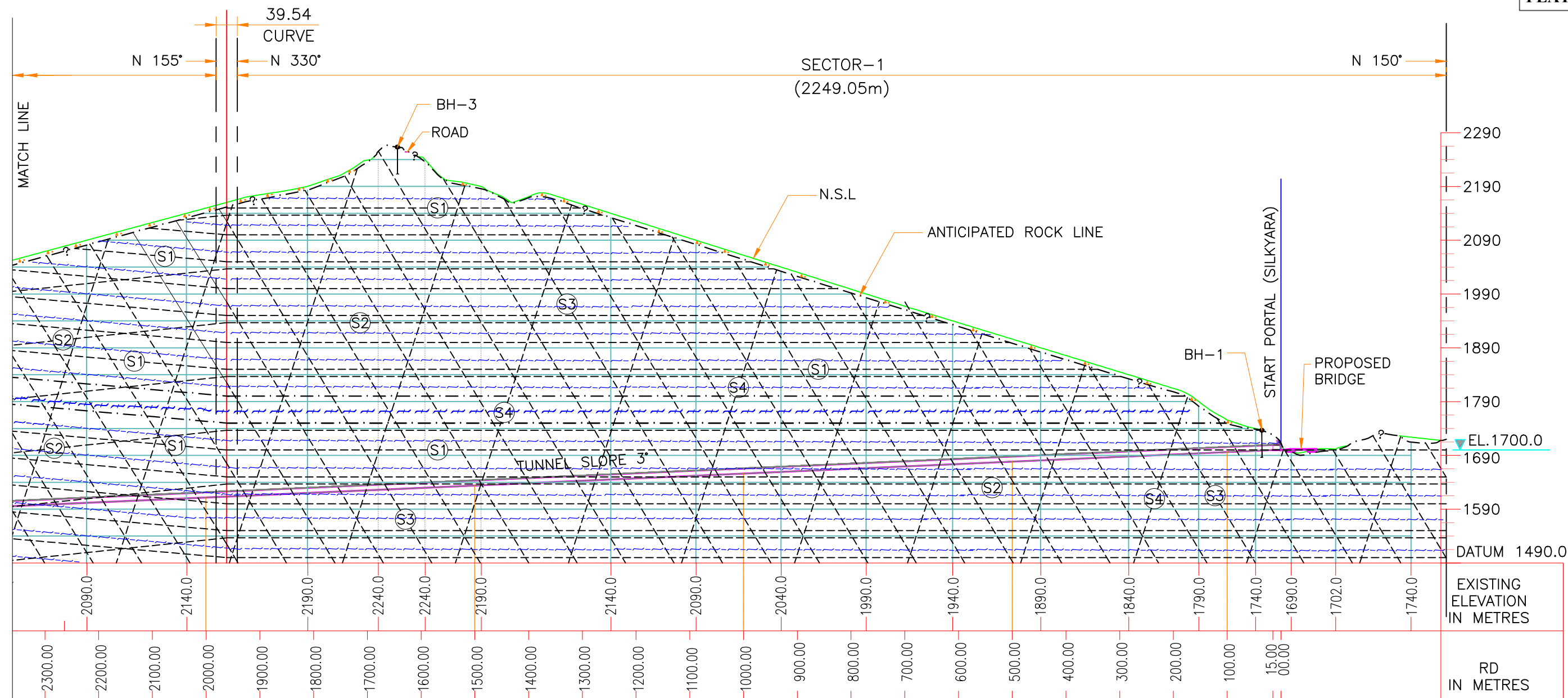
JOINTS (SCHEMATIC)

JOINT DETAILS

JOINTS SETS	STRIKE		DIP DIRECTION		DIP AMOUNT	
	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
S1	140°-160°	150°	230°-250°	240°	20°-65°	43°
S2	130°-170°	150°	040°-080°	060°	40°-65°	52°
S3	025°-060°	042°	115°-150°	132°	40°-80°	60°
S4	230°-250°	240°	320°-340°	330°	60°-85°	72°

SCALE: - 1:7500  
0 75 150 225 300 375m

<div>Project Title</div> <div>Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend – Barkot Tunnel With Escape Passage Including Approaches On Dharasu-Yamunotri Section Between Ch. 25.400 Km And Ch. 51.000 Km Falling Along NH-134 (OLD NH-94)in the State Of Uttarakhand on EPC mode”</div>	<div>CLIENT</div> <div></div> <div>MINISTRY OF ROAD TRANSPORT &amp; HIGHWAYS</div>	<div>Drawing Title: GEOLOGICAL ROAD TUNNEL LONGITUDINAL SECTION</div>			
		<div>Drawing No. :- MC-ROADS/MISC/ 24</div>		<div>Sheet : (1 of 2)</div>	
		<div>Scale :- NTS</div>			
		<div>Drn</div>	<div>Dgn.</div>	<div>Appd</div>	<div>Date Sept - 2015</div>
		<div>M.R.</div>	<div>M.K.S.</div>	<div>A.K.S.</div>	



GEOLOGICAL ROAD TUNNEL LONGITUDINAL SECTION  
(SCALE 1:7500)

**LEGEND**

SLOPE WASH MATERIAL

SLATE

AMPHIBOLITE

JOINTS (SCHEMATIC)

LITHOLOGICAL CONTACT

DRILL HOLE

JOINT DETAILS

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0 75 150 225 300 375m

<b>Project Title</b> Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend – Barkot Tunnel With Escape Passage Including Approaches On Dharasu-Yamunotri Section Between Ch. 25.400 Km And Ch. 51.000 Km Falling Along NH-134 (OLD NH-94)in the State Of Uttarakhand on EPC mode”	<b>CLIENT</b> 	<b>Drawing Title:</b> GEOLOGICAL ROAD TUNNEL LONGITUDINAL SECTION			<b>Sheet :</b> (2 of 2) <b>Date</b> Sept - 2015
		<b>Drawing No. :-</b> MC-ROADS/MISC/ 24			
		<b>Scale :-</b> NTS			
	<b>MINISTRY OF ROAD TRANSPORT &amp; HIGHWAYS</b>		<b>Drn</b> M.R.	<b>Dgn.</b> M.K.S.	<b>Appd</b> A.K.S.