


Comparison of Alignment				
S.No.	Description	Widening & Improvement of Existing Alignment	Option on LHS of Existing Highway	Option on RHS of Exiting Highway
Technical Aspects				
1	Length in Kms	114.800	120.500	126.300
2	Terrain	Plain/Rolling/Hilly		
3	Design Speed in KMPH	80-100	80	100
4	Railway Crossing	Nil	Nil	Nil
5	Major & Minor Bridge	4 Major & 38 Nos	5 Major & 40 Minor	5 Major & 44 Minor
Safety Aspects				
6	Horizontal alignment as per IRC SP:73:2018 “Two Laning Manual)	For improvement of Horizontal alignment		
7	Vertical Geometric as per IRC SP:73:2018 “Two Laning Manual)	For improvement of Vertical alignment		
Environmental Aspects				
8	Forest Area (Sarguja & Balrampur)			
A	Reserve Forest	6.376	9.10	11.30
B	Protected Forest	88.261	93.30	98.50
C	Revenue Forest	7.687	8.94	7.85
9	Forest diversion to be Required	102.234	111.34	117.65
10	Tree felling	29636 Nos	33465 Nos	35543 Nos
11	Protected Areas involved	Nil	Nil	Nil
	(WLS, NP, BR etc.)			
12	Merits / Demerits of Alignment	1. Horizontal geometric will be as per IRC SP:73 i.e. 80-100KMPH	1. Horizontal geometric will be as per IRC SP:73 i.e. 80-100KMPH	1. Horizontal geometric will be as per IRC SP:73 i.e. 80-100KMPH
		2. Vertical geometric will be achieved as per IRC SP:73 i.e. 3.3%	2. Vertical geometric may not be achieved as per IRC SP:73 i.e. 3.3%	2. Vertical geometric may not be achieved as per IRC SP:73 i.e. 3.3%
		3. Less cutting & filling will be required	3. Huge cutting & filling will be required	3. Huge cutting & filling will be required
		4. Forest diversion required as per 30m ROW	4. Forest diversion required more than to other option	4. Forest diversion required more than to other option
		5. Traffic Diversion not possible during construction.	5. Traffic Diversion possible during construction.	5. Traffic Diversion possible during construction.
13	Tentative cost in Crores	1. Civil Construction - 617.23	1. Civil Construction - 638.13	1. Civil Construction - 642.123
		2. Forest Diversion cost - 30.87	2. Forest Diversion cost - 31.90	2. Forest Diversion cost - 32.11
		Total - 648.10	Total - 670.03	Total - 674.23
14	Conclusion	Most Feasible alignment as per Technical, Safety & Environmental aspects	The alignment on LHS side is not feasible due to Maximum Hill cutting & Forest Area	The alignment on RHS side is not feasible due to Maximum Hill cutting & Forest Area


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 Ambikapur

No. F44F7

Scale 1:50,000

F44F2 (64M/2)	F44F6 (64M/6)	F44F10 (64M/10)
F44F3 (64M/3)	F44F7 (64M/7) Surguja CHHATTISGARH	F44F11 (64M/11)
F44F4 (64M/4)	F44F8 (64M/8)	F44F12 (64M/12) Jashpur CHHATTISGARH

1 Garhwa, JHARKHAND.

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

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CONVENTIONAL SYMBOLS

Express highway, with toll; with bridge with distance stone	
Roads, metalled, according to importance	
Roads, double carriageway, according to importance	
Unmetalled road, Cart-track, Pack-track with pees, Foot path	
Streams: with track in bed, underlined, Canal, Foot path	
Dams: masonry or rock-filled, earthenwork, Weir	
River: dry with water channel, with island & rocks, tidal river	
Submerged rocks, Shoal, Swamp, Reeds	
Wells: lined, unlined, Tube-well, Spring, Tanks: permanent, dry	
Embankment, road or rail, bank, broken ground	
Railways, broad gauge, double, single with station, under construction	
Railways, other gauges, double, single with distance stone, do.	
Mineral line or tramway, Kin, Cutting with tunnel	
Contours with sub-features, Rocky slopes, Cliffs	
Sand features: (1) flat, (2) sand-hill, (3) dunes, (4) shifting	
Towns or Villages: inhabited, deserted, Fort	
Hills: permanent, temporary, Tower, Antiquities	
Temples, Chhatris, Church, Mosque, Sigh, Tomb, Graves	
Lighthouse, Lightship, Buoy, lighted, unlighted, Anchorage	
Mine: Vene on trestle, Grass, Scrub	
Palms: palmyra, other, Plantain, Coffer, Bamboo, Other trees	
Areas: cultivated, wooded, Surveyed tree	
Boundary, international	
State, demarcated, undemarcated	
District, sub-division, taluk or tehsil, forest	
Boundary pillars: surveyed, uncoloured	
Height, triangulation, spot, approximate	
Border mark, garrison, station, post, approximate	
Post office, Telegraph office, Overhead tank	
Rail house or inspection hump, Signal house, Police station	
Camping ground, Forest: reserved, protected	
Spaced names: administrative, locality or tribal	
Hospital, Dispensary, Veterinary Hospital, Dispensary	
Aerodrome, Heliport, Tourist site	
Power line: with pylons surveyed, with poles unsurveyed	

REFERENCE

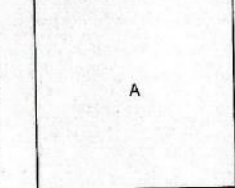
PWD: Public Works Department.

NOTES

Heights are in metres and above Indian mean sea level.
Contours are approximate.
A relative height, e.g. 10, represents the approximate height, in metres, between the top and bottom of a steep slope.
Tanks shown dry, in this area usually contain water from July to December.
Unmetalled roads and cart tracks in this sheet are generally not shown in dry season.
The inscribed heights and contours in this sheet have not been adjusted to the heights of the spot levelled bench-marks and may not be strictly in accordance with them.
The exterior boundaries of areas of Reserved or Protected Forests are shown with green ribbons.

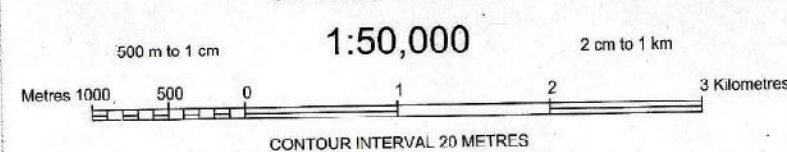
COMPILATION INDEX

A. Surveyed during 1969-70. Updated for major details during 2005-06.



Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1/2° West in 2005.
(Decreasing by about 1' annually).



CONTOUR INTERVAL: 20 METRES

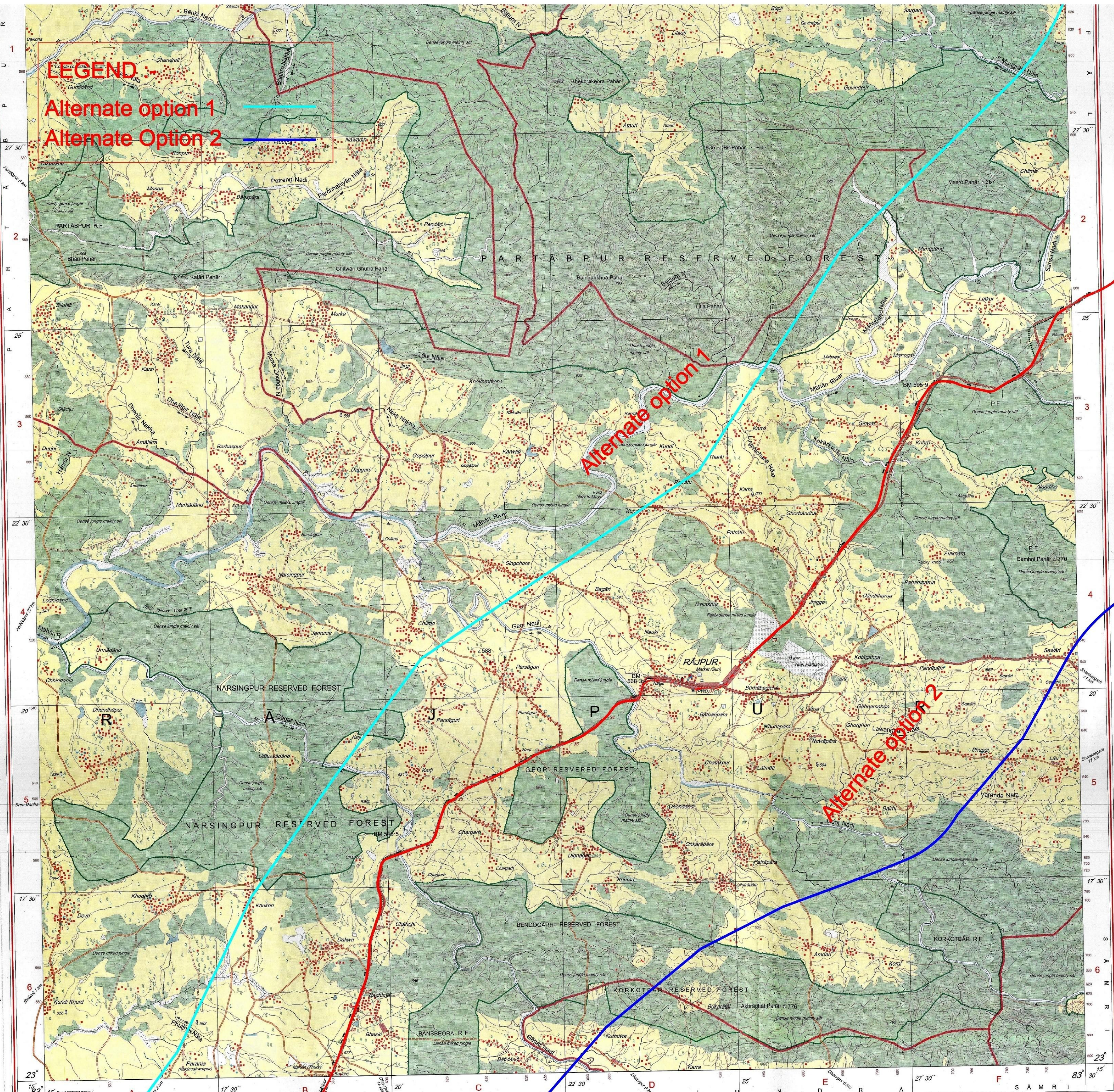
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Chhattisgarh Geo-Spatial Data Centre

Survey of India, Pachpedi Naka

Raipur.



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बलरामपुर
संयुक्त वनमंडलाधिकारी
बलरामपुर

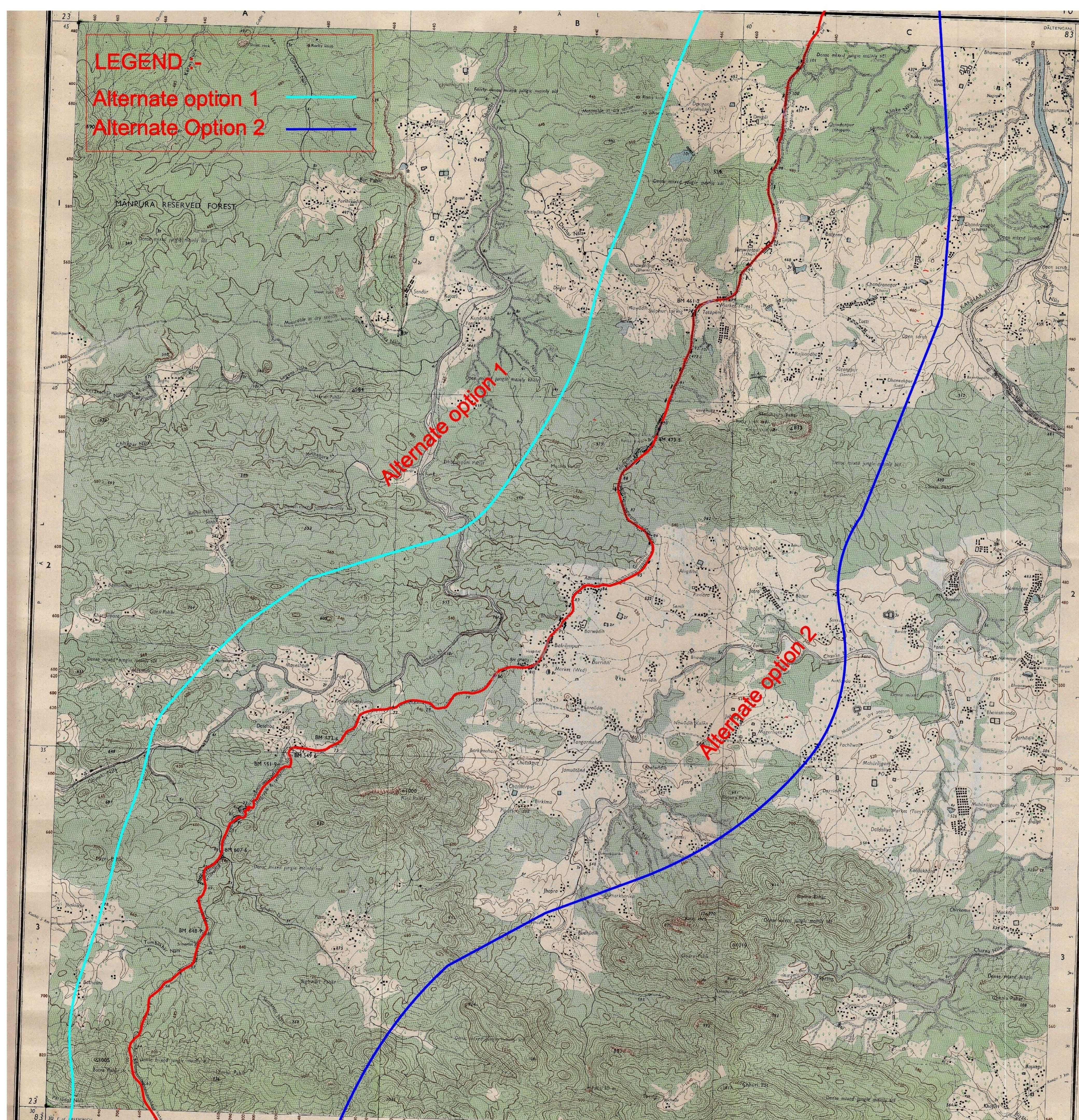


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संयुक्त वनमंडलाधिकारी
राजपुर

Sub Divisional Officer
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Ambikapur



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बलनगपुर
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बलनगपुर

संयुक्त कर्मचारी अधिकारी
जलपाटी

वन परियोजनाधिकारी
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Ambikapur



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OPEN SERIES
MAP

No. F44F11

Scale 1:50,000

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F44F7 (64M/7)	F44F11 (64M/11)	F44F15 (64M/15)
F44F8 (64M/8)	F44F12 (64M/12)	F44F16 (64M/16)

1. Lohar, JHARKHAND.

भारतीय सर्वेक्षण विभाग

SURVEY OF INDIA

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CONVENTIONAL SYMBOLS

Express highway: with toll, with bridge, with distance stone	
Roads, metalled: according to importance	
Unmetalled road: Cart-track: Track with pass: Road with	
Streams: with track in bed; underlined: Canal	
Dams: masonry or rock-filled; earthwork; Weir	
River: dry with water channel; with island of rocks; Tidal river	
Submerged rocks, Shoal, Swamp, Reeds	
Wells: lined, unlined; Tube-well; Spring; Tank; perennial; dry	
Embankments: road or rail; tank; Broken ground; do	
Railways: broad gauge; double; single with distance stone; do	
Mineral line or tramway: Kin. Cutting with tunnel	
Contours with sub-features: Rocky slopes; Cliffs	
Sand features: (1) flat; (2) sand-hill; (3) dune; (4) shifting	
Towns or Villages: inhabited; deserted; Fort	
Huts: permanent; temporary; Tower; Antiquities	
Temples, Chhatra, Church, Mosque, Jain, Tomb, Graves	
Lighthouse; Lightship; Buoy; lighted; unlighted; Anchorage	
Mine: Vine on trellis; Grass; Scrub	
Palm: palmyra; other; Plantain; Conifer; Bamboo; Other trees	
Areas: cultivated; wooded; Surveyed tree	
Boundary: international	
state: demarcated; undemarcated	
district: subdivision; taluk or taluk; forest	
Boundary pillars: surveyed; unlocated	
Heights: triangulated; station; point; approximate	
Bench-mark: geodetic; tertiary; canal	
Post office: Telegraph office: Overhead tank	
Rest house or inspection bungalow; Circuit house; Police station	
Camping ground; Forest: reserved; protected	
Spaced names: administrative; locality or tribal	
Hospital; Dispensary; Veterinary; Hospital/Dispensary	
Aerodrome: Helped; Tourist site	
Power line: with pylons surveyed; with poles unsurveyed	

NOTES

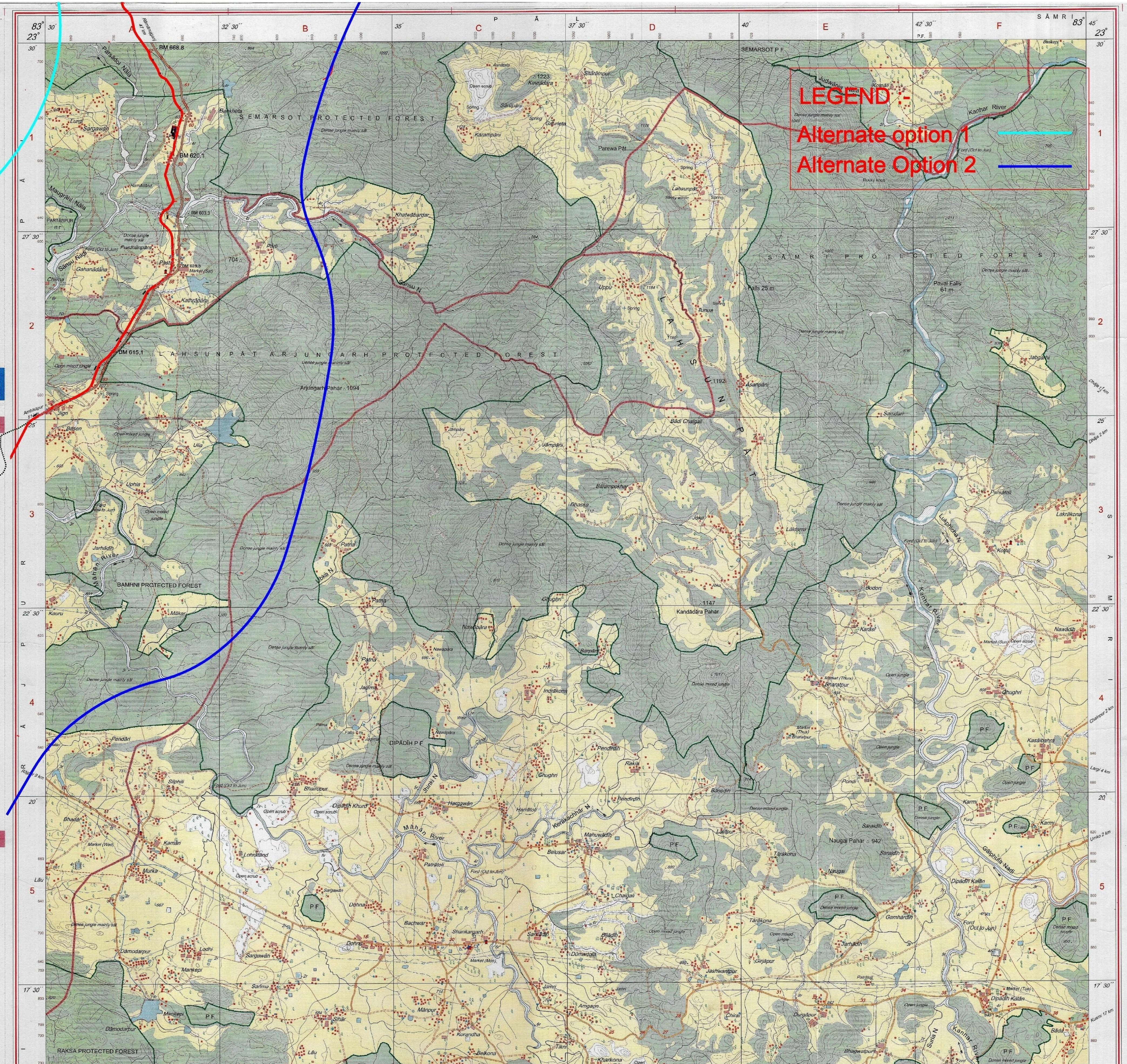
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COMPILATION INDEX

A. Surveyed during 1969-70. Updated for major details during 2005-06.

Projection - UTM Datum - WGS 84

Magnetic Variation from True North about $\frac{1}{2}^{\circ}$ West in 2005.
(Increase by about $\frac{1}{2}^{\circ}$ annually.)



LEGEND :-

Alternate option 1

Alternate Option 2

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भारत सरकार

Sub Divisional Officer
P.W.D. S. Division
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संयुक्त वन परिक्षेत्राधिकारी
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F44E16 (64/16)	F44F4 (64/14) Surguja CHHATTISGARH.	F44F8 (64/18)
F44K13 (64/13)	F44L1 (64/11)	F44L5 (64/15)

1 Korba, CHHATTISGARH.
2 Raigarh, CHHATTISGARH.
3 Korba, CHHATTISGARH.

भारतीय सर्वेक्षण विभाग

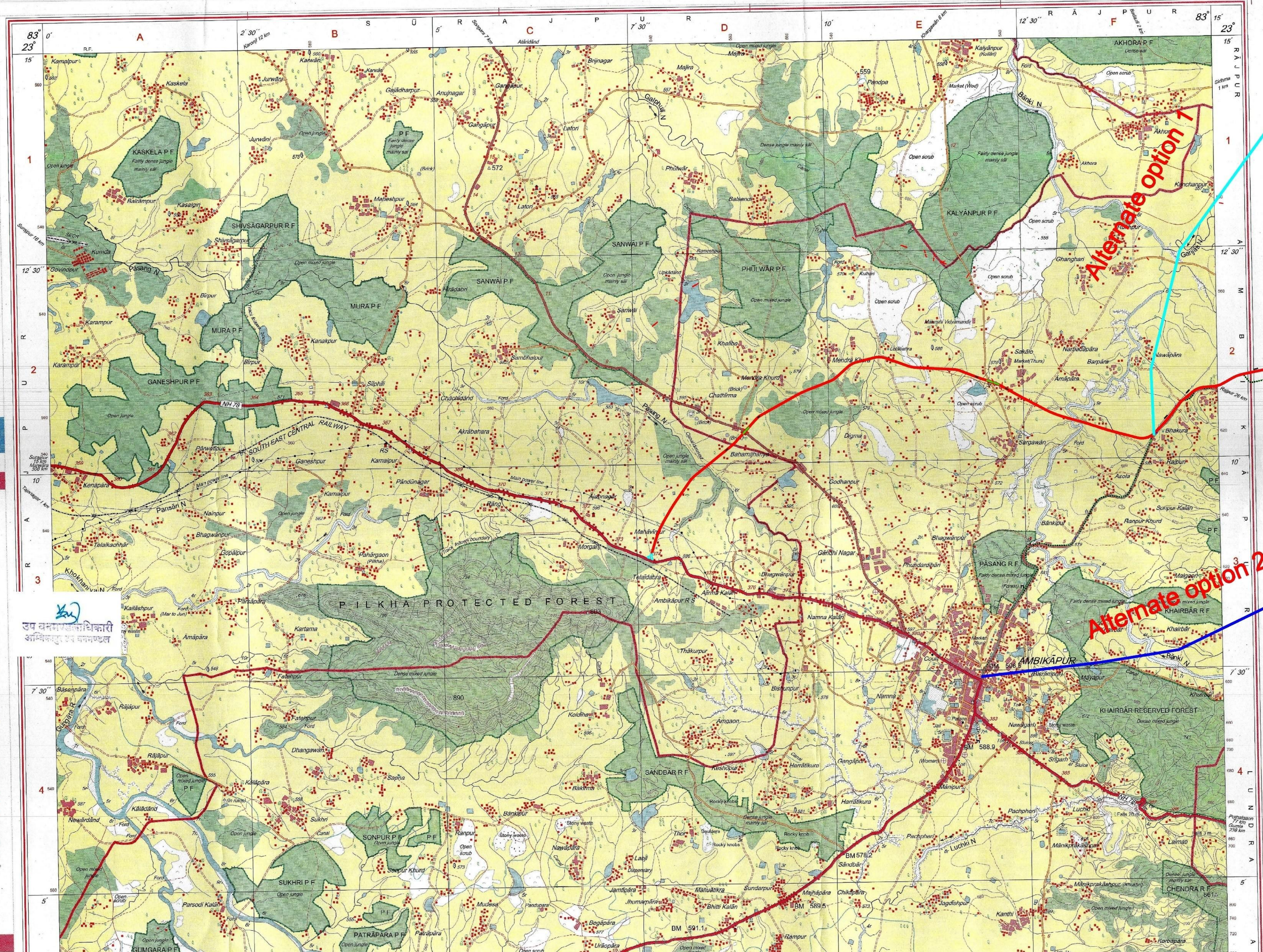
SURVEY OF INDIA

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CONVENTIONAL SYMBOLS

Express Highway, with toll, with bridge, with distance stone	
Roads, metalled, according to importance	
Roads, double cartway, according to importance	
Unmetalled road, Cart-track, Pack-track with pass, Foot-path	
Streams, with track in bed, undefined, Canal	
Dam, masonry or rock-filled, earthwork, Weir	
River, dry with water channel, with island & rocks, Tidal river	
Submerged rocks, Shoal, Swamp, Reeds	
Water level, unfilled, Tube-well, Spring, Tanks, perennial, dry	
Embankments, road or rail, tank, Broken ground	
Railways, broad gauge, double, single with distance stone, do.	
Railways, other gauges, double, single with distance stone, do.	
Mineral line or tramway, Kib, Cutting with tunnel	
Contours with sub-contours, Rocky slopes, Cliffs	
Bound features (Yam, Ganga, etc.) (Shifting)	
Towns or Villages, inhabited, deserted, Fort	
Temples, Chhatra, Churn, Monas, Idols, Tomb, Graves	
Lighthouses, Lightships, Buoys, lighted, unlighted, Anchorage	
Mine, Vene on hills, Grass, Scrub	
Paints, patryna, silver, Plantain, Conifer, Bamboo, Other trees	
Areas, cultivated, wooded, Surveyed tree	
Boundary, international	
State, demarcated, undemarcated	
District, subdivision, taluk or tehsil, forest	
Boundary pillars, surveyed, uncalculated	
Height, triangulated, station, point, approximate	
Bench-mark, geodetic, tertiary, canal	
Post office, Telegraph office, Overhead tank	
Rest house or inspection bungalow, Circuit house, Police station	
Camping ground, Forest, reserved, protected	
Spaced names, administrative, locality or tribal	
Hospital, Dispensary, Veterinary, Hospital / Dispensary	
Aerodrome, Helipad, Tourist site	
Power line, with pylons surveyed, with poles unsurveyed	



B.F.O.
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अम्बिकापुर

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Sub Divisional Officer
P.W.D.N.H. Sub-Division
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Executive Engineer
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Ambikapur (C.G.)



No. F44F8
Scale 1:50,000

F44F3 (64M/3)	F44F7 (64M/7)	F44F11 (64M/11)
F44F4 (64M/4)	F44F8 (64M/8)	F44F12 (64M/12)
F44L1 (64M/1)	F44L5 (64M/5)	F44L9 (64M/9)

1. Raigarh, CHHATTISGARH.

भारतीय सर्वेक्षण विभाग
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CONVENTIONAL SYMBOLS

Excess highway, with toll, with bridge, with distance stone	
Roads, metalled, according to importance	
Roads, double cartway, according to importance	
Unmetalled road, Cart-track, Pock-track with pass, Foot-path	
Streams with track in bed, unmetalled, Canal	
Dams, masonry or rock, flood, earthwork, Weir	
River, dry with water channel, with island & rocks, Tide mark	
Swampy ground, Shrub, Swamp, Reeds	
Water, fresh, unmetalled, Tube-well, Spring, Tank, perennial, dry	
Embankment, road or rail, Bank, Broken ground	
Railways, broad gauge, double, single with station, under construction	
Railways, other gauges, double, single with station, under construction	
Mineral line or tramway, Kin, Cutting with tunnel	
Contours with sub-features, Rocky slopes, Cliffs	
Sand features, (Tide, (Zaonchil) permanent, (Zykan) shifting)	
Towns or Villages, established, deserted, Fort	
Hill, permanent, temporary, Tower, Annapurna	
Temples, Chhatra, Mosque, Jaina, Tomb, Dargah	
Lighthouse, Lightship, Buoy, lighted, unlighted, Anchorage	
Mine, Veneer on hill, Glass, Scar	
Palms, palm, other, Plantain, Coffee, Bamboo, Other trees	
Areas cultivated, wooded, Surveyed tree	
Boundary, International	
State, demarcated, undemarcated	
District, subdivision, taluk or block, forest	
Boundary pillars, surveyed, unsurveyed	
Height, triangulated station, point, approximate	
Bench mark, geodetic, tertiary, canal	
Post office, Telegraph office, Overhead tank	
Rest house or inspection bungalow, Circuit house, Police station	
Camp, garrison, Forest, military, proposed	
Spaced names, administrative, locality or village, KGR	
Hospital, Dispensary, Veterinary Hospital, Dispensary	
Aerodrome, Helipad, Tourist site	
Power line, with pylons surveyed, with poles unsurveyed	

REFERENCE

Map 79 National Highway No. 75.

NOTES

Heights are in metres and above Indian mean sea level.
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Projection - UTM Datum - WGS 84

Magnetic Variation from True North about 1/2° West in 2005.
(Decreasing by about 1' annually).

1:50,000

500 m to 1 cm
2 cm to 1 km
Kilometres

CONTOUR INTERVAL 20 METRES

For further details about this map, please contact
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Chhattisgarh Geo-Spatial Data Centre
Survey of India, Pachgodi Naka
Raipur - 492001
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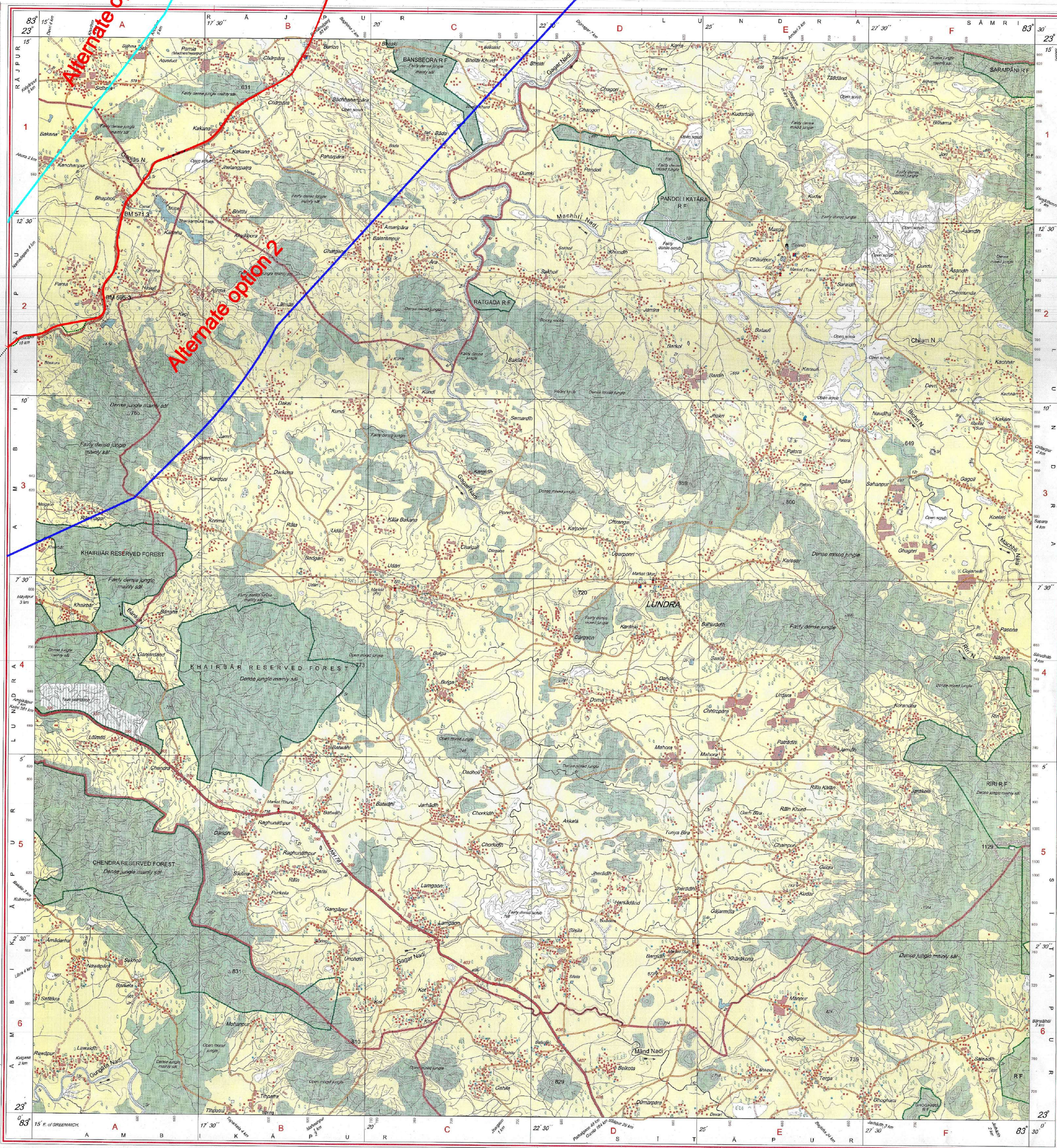
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LEGEND :-

Alternate option 1

Alternate Option 2



REG. No. 8674-SPC D/99 (Chhattisgarh) GDC/150/900/1015.

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बलरामपुर

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Bilaspur Division, Bilaspur

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Executive Engineer
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