



Public Works Department, Govt. of Chhattisgarh



DGPS Survey report of Raigarh-Hamirpur Road (Road length- 23.20 km)

Survey & Demarcation of Forest area proposed for
diversion of forest land



May 2020

DGPS SURVEY AND GIS MAPPING DONE BY:
Geotrax International Services
Raipur, Chhattisgarh.



Table of Contents

1. Introduction and Background	3
1.1 Background	3
1.2 Introduction	3
1.3 Location of Raigarh-Hamirpur Road	4
1.4 Geotrax Empanelment Certificate in Chhattisgarh- from CGCOST	6
2. Scope of Work	8
3. Deliverables	9
4. Brief description of the Technical approach	9
4.1 Input Data	9
4.2 Base Station DGPS Surveyed Coordinates (Fixed by CMPDI)	9
4.3 Letter From APCCF (LM)	10
4.4 Establishment of Temporary control Benchmark (TBM) points	13
4.5 Field Photographs of TBM Stations	14
4.6 DGPS Survey Procedure	15
4.7 Forest Compartment Pillar Photographs taken during DGPS Survey	16
4.8 Creation of Road Corridor Right of way boundary map	17
4.9 Specification of DGPS Equipment	19
5. DGPS Survey and Mapping Results	21
6. Background of Organization	23
7. Annexure	25
7.1 Annexure – 1: Patch wise Forest area statement	25
7.1.1 PF&RF Forest Compartment Patch wise area statement	25
7.1.2 Revenue Forest Patch wise area statement	25
7.2 Annexure-2: Forest Patches DGPS Surveyed Coordinates	27
7.3 Annexure-3: Georeferenced Maps- SOI & Forest Stock Map	40
7.3.1 Raigarh-Hamirpur Road Alignment on Survey of India Toposheet	40
7.3.2 Raigarh-Hamirpur Road Alignment on Forest Stock Map	42



1. Introduction and Background

1.1 Background

The Ministry of Road, Transport & Highways (MRD) Government of India vide Job No-CRF-2017-18-CG 57 to 63 gave technical and financial sanction to the project for strengthening and widening of Raigarh-Hamirpur road in Raigarh District of Chhattisgarh.

The MRD sanctioned the project to Public Works Department, Govt. of Chhattisgarh under the Central Road Fund (State Roads) Rules, 2014. The government of Chhattisgarh is to implement the project of "Widening & Strengthening of Raigarh Hamirpur road of approx. length 23.20 km".

As per the guideline given by Govt. of Chhattisgarh to Public Works department (CGPWD), the office of Executive Engineer PWD division Raigarh, Dist. Raigarh is to implement the project.

1.2 Introduction

The existing Raigarh-Hamirpur road is an old road initially constructed prior to year 1980. The existing road contains forest patches, which the Chhattisgarh PWD proposes to use for non-forest use.

The Raigarh-Hamirpur road falls under the Raigarh Forest division. The DGPS Survey is proposed to carry out to estimate the forest and non-forest area along the entire road corridor from Raigarh to Hamirpur.

The CG PWD proposes to apply for Forest clearance from Ministry of Environment, Forest & Climate Change (MoEF&CC) for the entire route of approx. 23.20 km. The proposed road contains Reserve Forest, Protected Forest and Revenue forest patches along the route.

Ministry of Environment and Forests, Govt. of India vide their circular No.F.No.-11-9/98-FC, dated 08-07-2011 have stipulated that to ensure accurate delineation of forest area proposed to be diverted for non-forestry purposes under Section-2 of Forest Conservation Act, 1980 the diversion proposal under Forest Conservation Act shall be accompanied by DGPS/ETS surveyed reports of the forest land proposed for



diversion as per guidelines laid down in the circular issued by ministry of forest and environment, Government of India from time to time.

While submitting proposal for diversion of forest land for non-forest purpose, the user agency has to submit the Georeferenced boundary, using DGPS in shape file containing maps along with hard copy authenticated by Divisional Forest Officer (DFO) concerned.

The conventional methods of survey to delineate and demarcate the forest land with reference to the earlier Cadastral/Forest Compartment/compartment base map are time consuming. Further, the conventional surveys are "Unprojected" Surveys, hence linking them to geospatial domain is a challenging task.

The modern survey technique using Differential Global Positioning System (DGPS) with Georeferenced high resolution satellite image bring efficacy in survey in shorter time span compared to old method of survey and record preparation. High-resolution space-borne remote sensing image data show a high level of detail and provide many opportunities to be used as base for Cadastral/Forest Compartment map generation. The combination of GIS and GPS activities play a crucial role in developing the survey of the forest boundary points and making forest Cadastral/Forest Compartment maps. Area, length other measures in the GIS numerical database are considerably easy to compute and correlate with already available data with line department.

Geotrax is empaneled for DGPS Survey and mapping by Chhattisgarh Council of Science and Technology (CGCOST), Raipur, Chhattisgarh and also empaneled by Ministry of Rural Development, Department of Land Resources, Govt. of India.

1.3 Location of Raigarh-Hamirpur Road

The Raigarh-Hamirpur Road falls in two Tehsils of Raigarh District. The passes through various villages in Raigarh and Tamnar Tehsils. The approximate length of road is 23.20 km. The road starts from outskirts of Raigarh municipality and follows North-East direction towards Hamirpur village, which is close to Odisha state border. The Raigarh-Hamirpur road can be seen in the Survey of India Toposheet No. 64

O/5, 64 N/8, and 64 N/12. The road is bounded by Latitude $21^{\circ}54'38.76''$ N to $22^{\circ}02'10.50''$ N and Longitude $83^{\circ}25'46.20''$ E to $83^{\circ}30'14.96''$ E.

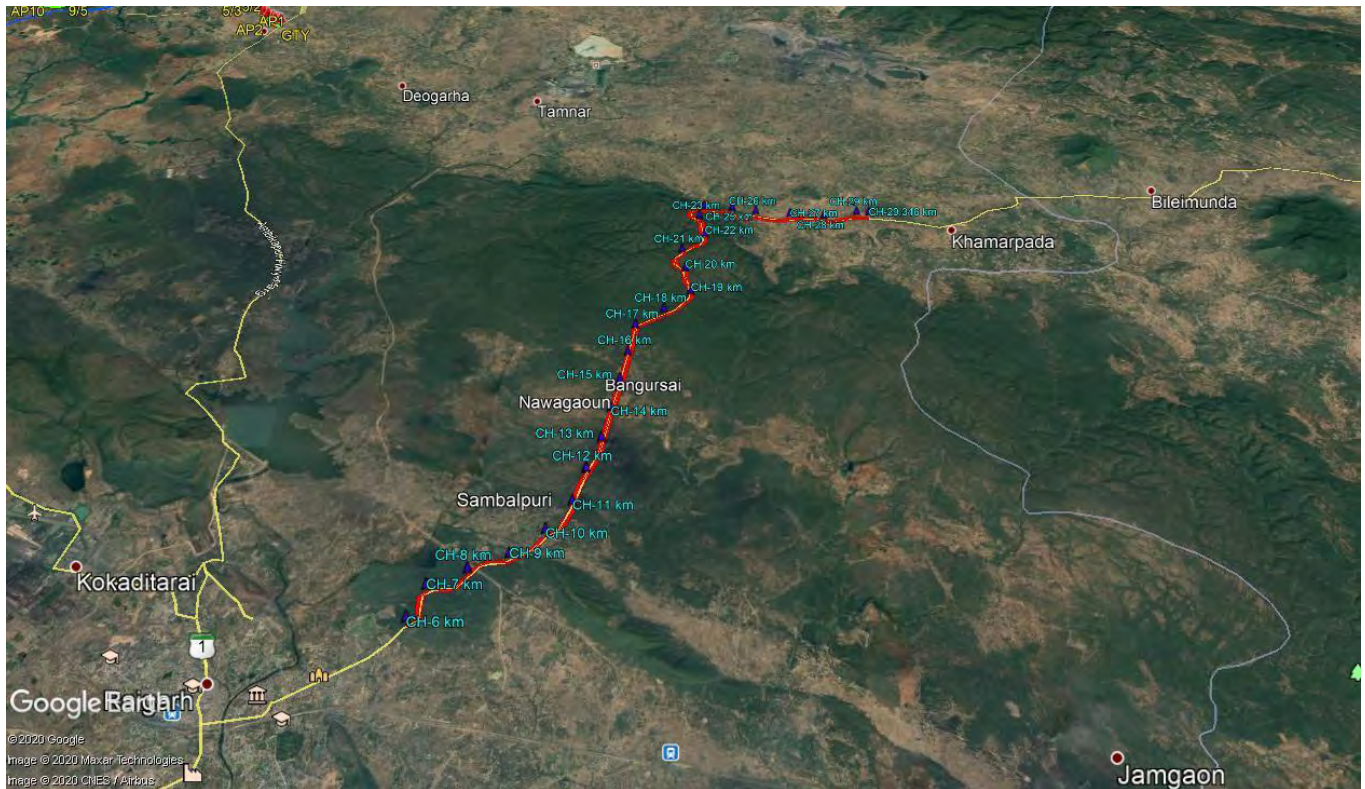
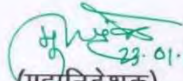


Fig-1: Raigarh Hamirpur Road alignment on Satellite Imagery



1.4 Geotrax Empanelment Certificate in Chhattisgarh- from CGCOST

	छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद एम.आई.जी. 25, इन्द्रावती कॉलोनी, रायपुर, (छ.ग.) 492 001 Chhattisgarh Council of Science & Technology MIG – 25, Indravati Colony, Raipur, (C.G.) 492 001 Tel : 0771-2434569 Fax : 2434093 E-mail : dgccost@gmail.com Web : www.cgcost.nic.in
Prof. M.M. Hambarde Director General	No. <u>2470</u> /CCOST/2026 Date: <u>23/01</u> /2016
प्रति	
Geotrax International Services (Survey and Mapping Consultancy), H/o. 23-88A, Krishnavan Nagar, Kothipat, Hyderabad (A.P.) 500 058, Email: info@geotrax.in , Web: www.geotrax.in	
विषय :- DGPS / GIS Services प्रदान करने हेतु Empanelment के संबंध में।	
परिषद द्वारा पूर्व में DGPS / GIS Services प्रदान करने हेतु firms के empanelment हेतु EOI (Expression of Interest) बुलाये गये थे। जिसके संदर्भ में आपके द्वारा आवेदन प्रस्तुत किया गया था।	
दिनांक 28.12.2015 को आपके द्वारा विषय विशेषज्ञ समिति के समक्ष दिये गये प्रस्तुतिकरण के आधार पर समिति द्वारा डीजीपीएस सर्वे कार्य हेतु आपकी संस्था का empanelment किया जाता है।	
कृपया अपनी सहमति परिषद को प्रदान करने का कष्ट करें।	
 (महानिदेशक)	



खनिज साधन विभाग
मंत्रालय, महानदी घवन, नया रायपुर

नया रायपुर, दिनांक 5 जून 2014

क्रमांक एफ 7-14/2013/12.—राज्य शासन एतद्वारा चीफ कंट्रोलर आफ माईन्स, भारतीय खान ब्यूरो, नागपुर के परिषद् क्रमांक N-1101373/MP/90/CCOM Vol-VII, Circular No. 2/2010, दिनांक 06-04-2010 के पैरा-02 के बिन्दु क्रमांक-02 के तारतम्य में Differential Global Positioning System (डीजीपीएस) का उपयोग करते हुए सर्वेक्षण करने के लिए नीचे तालिका के कालम नंबर-02 में दर्शित संस्थान को कालम नंबर-03 में दर्शित खनिज से संबंधित खनिज रियायतों के लिए अधिमान्यता प्रदान करता है :—

तालिका

क्र.	एजेन्सी का नाम एवं पता	अधिमान्यता का विवरण
1.	छत्तीसगढ़ विज्ञान एवं प्रौद्योगिकी परिषद्, एम.आई.जी.-25 इन्द्रावती कॉलोनी, रायपुर-492001 (छत्तीसगढ़)	राज्य में समस्त खनिजों की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
2.	स्टील अथॉरिटी आफ इंडिया लिमिटेड, भिलाई इस्पात संयंत्र, भिलाई-490001, जिला-दुर्ग (छत्तीसगढ़)	राज्य में स्थित स्वयं की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
3.	भारतीय सर्वेक्षण विभाग, छत्तीसगढ़ जियो-स्पेशल डाटा सेंटर, सर्वे आफ इंडिया, रीना अपार्टमेंट 3गं फ्लोर, पंचपेढ़ी नाका, धमतरी रोड, रायपुर-492001 (छत्तीसगढ़)	राज्य में समस्त खनिजों की खनिज रियायतों से संबंधित डीजीपीएस सर्वे कार्य हेतु.
2.	अधिमान्यता प्राप्त संस्थान के लिये शर्तें :—	
1.	Coordinates of boundry pillars shall be established in the World Geodetic System 1984 (WGS-84) Datum.	
2.	Each boundry pillar shall be surved using DGPS, at least 2-Hours observation, for its ground position.	
3.	The maximum distance between any two successive pillars should not be more than 100 meter.	
4.	All corner pillar should be of pyramid shaped whith base of 1 meter and height of 2 meter and should be placed 1 meter above the ground and 1 meter below the ground.	
5.	Distance and bearing to the forward and backward pillars and latitudes and longitudes should be market on all the corner pillars.	
3.	उपरोक्त शर्तों के अतिरिक्त निम्नलिखित शर्तों को भी शामिल किया जाना होगा :—	
1.	उपरोक्त बिन्दु से अंशित कार्य के लिए खनिज रियायतधारी द्वारा अधिमान्यता प्राप्त संस्थान को भुगतान करना होगा. डीजीपीएस सर्वे कार्य हेतु पारिक्लमिक का निर्धारण अधिमान्यता प्राप्त संस्थान एवं खनिज रियायतधारी के मध्य आपसी समन्वय से किया जाएगा.	
2.	डीजीपीएस सर्वे के संबंध में भारतीय खान ब्यूरो/राज्य शासन द्वारा समय-समय पर जारी निर्देशों का चलन अधिमान्यता प्राप्त संस्थान को करना होगा.	
3.	यह अधिमान्यता इस आदेश के जारी होने से आठवीं अक्टूबर पर्यंत प्रभावशाली होगी.	

छत्तीसगढ़ के राज्यपाल के नाम से तथा आदेशानुसार,
डी.डी. कोंडाध, उप-सचिव



2. Scope of Work

1. Using the CMPDI established base station as reference, Geotrax will establish one or more temporary benchmark control points near/inside the Raigarh-Hamirpur road alignment.
2. DGPS Survey for collection of ground coordinates of the forest boundary pillars and road boundary (left, Right corridor) points.
3. Assessment of total forest area proposed for non-forest use along the road corridor. The forest area includes Protected Forest area, Reserve Forest area, and Revenue forest area.
4. Preparation of village wise non-forest area statement.
5. Review of revenue forest Khasras together with revenue records (P-II) and revenue maps.
6. DGPS Survey to collect coordinates of forest compartment boundary pillar points.
7. Data processing and interpretation: -
 - a. Creation of road alignment boundary vector map using the DGPS Surveyed data
 - b. Superimposition of road alignment boundary polygon layer on Georeferenced forest maps, SOI Toposheet and Satellite imagery.
 - c. Computation of road alignment Right of Way (ROW) area – including Forest patches area and Non-Forest khasra area in the Right of Way of the road corridor.
 - d. Preparation of Geo-referenced forest map on 1:15000 scale, Cadastral map on 1:4000 scale, SOI Toposheet on 1:50000 scale and Satellite imagery map.
 - e. Preparation of DGPS survey report along with soft copy of – maps in shapefile format and kml file
8. Printing of DGPS Survey report and Georeferenced maps.



3. Deliverables

The deliverables envisaged for the assignment are described below

1. DGPS Reports – The details of the primary and Temporary Bench mark Control Points.
2. Geo-referenced SOI maps & forest block maps based on DGPS observations – Hard and Soft Copy (SHP and KML formats).
3. Road alignment ROW Forest and Non-Forest area statement as per DGPS Survey
4. DGPS Survey and mapping report

4. Brief description of the Technical approach

4.1 Input Data

Office of the Executive Engineer, Raigarh Division of PWD assisted in obtaining the village maps and khasra B1/PII details of the revenue forest and non-forest khasras that are intersecting the Raigarh-Hamirpur road corridor. Geotrax obtained the Survey of India & Forest maps which will be geo-referenced and forest patches digitization. PWD Assistant Engineer also provided the tentative road corridor land schedule to Geotrax.

4.2 Base Station DGPS Surveyed Coordinates (Fixed by CMPDI)

Station Name	Observed Geographic Co-ordinates (WGS-84)		UTM Co-ordinates (Zone 44 N)	
	Latitude	Longitude	Northing	Easting
INC1	22°10'36.84758N	83°31'33.94548E	2454576.194	760481.886



4.3 Letter From APCCF (LM)



कार्यालय प्रधान मुख्य वन संरक्षक, छत्तीसगढ़

अरण्य भवन, सेक्टर-19, अटल नगर, रायपुर - 492002

(अपर प्रधान मुख्य वन संरक्षक - भू-प्रबंध)

कार्यालयीन टीप

नस्ती क्र./भू-प्रबंध/विविध/115-785/

रायपुर, दिनांक /09/2019

वन

विषय:- Construction of Raigarh - Hamirpur Road (MDR)

Proposal No. : FP/CG/ROAD/39866/2019

User Agency Name: EE RAIGARH JAMGAON ROAD PWD RAIGARH

Name of Project for which Forest Land is required : Construction of Raigarh - Hamirpur Road (MDR)

Short narrative of the proposal and Project/scheme for which the forest land is required: Construction of Raigarh - Hamirpur Road (MDR)

Category of the Proposal : Road

Shape of forest land proposed to be diverted : Linear

Area of forest land proposed for diversion(in ha.): 10.915

Non-forest land required for this project(in ha.): 0 (उक्त जानकारी को सही करें।)

Division Name: Raigarh

दिनांक 05.09.2019 को User Agency से प्राप्त आपत्तियों का निराकरण इस प्रकार है:-

क्र.	दिनांक 16.06.2019 को ली गई आपत्तियाँ	दिनांक 05.09.2019 को User Agency से प्राप्त आपत्तियों का निराकरण																																				
1	आनलाईन आवेदन फार्म में A-3(i) में जो नाम - श्री अजय कुमार दीवान दिया गया है वह आवेदन फार्म के बिन्दु क्रमांक A-3 (xvii) में अपलोड किये गये पी.डी.एफ फाईल से मिलान होना जरूरी है। श्री अजय कुमार दीवान को पी.डब्लू डी के वरिष्ठ अधिकारी से वन संरक्षण अधिनियम प्रस्ताव में आवेदन करने के लिए अधिकृत कराने का पत्र (Authority Letter) A-3 (xvii) में अपलोड करें।	उक्त बिन्दु की जानकारी सही कर अपलोड कर दिया गया है।																																				
2	C-(ii) b (1): Upload .kml के attribute में विवरण (जैसे RF / PF along with Compartment no. and area in ha./ Revenue Forest Land along with Khasra no. and area in ha. आदि) जानकारी के साथ अपलोड करें। प्रत्येक वन भूमि एवं गैर वन भूमि का पालीगान अपलोड करें।	उक्त बिन्दु की जानकारी सही नहीं किया गया है एवं के.एम.एल के जोच में क्षेत्रफल में अंतर पाया गया जो निम्नानुसार है:- <table border="1"> <thead> <tr> <th>चैक क</th><th>अपलोड के.एम. एल क्षेत्रफल (हे.)</th><th>जोच पश्चात् के.एम. एल क्षेत्रफल (हे.)</th></tr> </thead> <tbody> <tr><td>1</td><td>0.545</td><td>0.955</td></tr> <tr><td>2</td><td>0.489</td><td>1.624</td></tr> <tr><td>3</td><td>1.972</td><td>3.924</td></tr> <tr><td>4</td><td>1.778</td><td>3.735</td></tr> <tr><td>5</td><td>0.323</td><td>1.461</td></tr> <tr><td>6</td><td>0.392</td><td>0.762</td></tr> <tr><td>7</td><td>2.681</td><td>5.017</td></tr> <tr><td>8</td><td>0.095</td><td>0.187</td></tr> <tr><td>9</td><td>0.14</td><td>0.477</td></tr> <tr><td>10</td><td>0.383</td><td>0.780</td></tr> <tr><td>11</td><td>2.116</td><td>4.317</td></tr> </tbody> </table> सुधार करें।	चैक क	अपलोड के.एम. एल क्षेत्रफल (हे.)	जोच पश्चात् के.एम. एल क्षेत्रफल (हे.)	1	0.545	0.955	2	0.489	1.624	3	1.972	3.924	4	1.778	3.735	5	0.323	1.461	6	0.392	0.762	7	2.681	5.017	8	0.095	0.187	9	0.14	0.477	10	0.383	0.780	11	2.116	4.317
चैक क	अपलोड के.एम. एल क्षेत्रफल (हे.)	जोच पश्चात् के.एम. एल क्षेत्रफल (हे.)																																				
1	0.545	0.955																																				
2	0.489	1.624																																				
3	1.972	3.924																																				
4	1.778	3.735																																				
5	0.323	1.461																																				
6	0.392	0.762																																				
7	2.681	5.017																																				
8	0.095	0.187																																				
9	0.14	0.477																																				
10	0.383	0.780																																				
11	2.116	4.317																																				



④



अरण्य भवन, सेक्टर-19, अटल नगर, रायपुर - 492002

(अपर प्रधान मुख्य वन संरक्षक - मू-प्रबंध)

कार्यालयीन टीप

वन विभाग

3	कालॅम C(iii): टोपोशीट यूजर एंजेसी के अधिकृत अधिकारी के हस्ताक्षर सहित अपलोड करें। आपके द्वारा अहस्ताक्षरित टोपोशीट अपलोड की गई है। मैप के इन्डेक्स में आर.एफ/पी.एफ/राजस्व वन क्षेत्र/राजस्व गैर वन क्षेत्र/निजी क्षेत्र कितना प्रभावित हो रहा है यह जानकारी भी दें।	सत्यापित नक्शा अपलोड किया गया है परन्तु मैप के इन्डेक्स में आर.एफ/पी.एफ/राजस्व वन क्षेत्र/राजस्व गैर वन क्षेत्र/निजी क्षेत्र कितना प्रभावित हो रहा है यह जानकारी को ठीक नहीं किया गया है। सुधार करें।
4	C(iv): Geo-referenced map के स्थान पर डी.जी.पी.एस रिपोर्ट अपलोड किया गया है। ठमव. तममितमदबमक उंच अपलोड करें जिसमें यूजर एंजेसी के अधिकृत अधिकारी हस्ताक्षर हो। इन्डेक्स में आर.एफ/पी.एफ/राजस्व वन क्षेत्र/राजस्व गैर वन क्षेत्र/निजी क्षेत्र कितना प्रभावित हो रहा है यह भी दें।	सत्यापित नक्शा अपलोड किया गया है परन्तु मैप के इन्डेक्स में आर.एफ/पी.एफ/राजस्व वन क्षेत्र/राजस्व गैर वन क्षेत्र/निजी क्षेत्र कितना प्रभावित हो रहा है यह जानकारी को ठीक नहीं किया गया है। सुधार करें।
5	D-1: प्रस्तावित कार्य हेतु वन क्षेत्र का चयन किया जाना अपरिहार्य एवं अनिवार्य है। इसका औचित्य केवल इस कार्य लिए बताएं। आपके द्वारा औचित्य बताने के बजाय एक नक्शा अपलोड किया गया है।	औचित्य अपूर्ण है। सुधार करें।
6	D-1: (i, ii & iii) में तीन विकल्पों को अलग-अलग रंगों में 1:50000 के Resolution के नक्शे में दिखायें। प्रमाणित करें कि तीनों विकल्प वायेबल हैं। प्रमाणित करें कि तीनों में से जो एक विकल्प आपके द्वारा प्रस्तावित किया गया है उसमें सबसे कम वन क्षेत्र व्यपवर्तित होगा। अगर आपके द्वारा प्रस्तावित विकल्प में सबसे कम वनक्षेत्र व्यपवर्तित नहीं होना पाया जा रहा है तो यह प्रमाणित करें कि आपके द्वारा प्रस्तावित विकल्प ही एक मात्र विकल्प है तथा इसके अलावा अन्य कोई विकल्प नहीं है।	जानकारी अपूर्ण है। सुधार करें।
7	वेब पर अतिरिक्त जानकारी (additional information) में 1. वनडलाधिकारी द्वारा सत्यापित डी.जी.पी.एस रिपोर्ट संलग्न करें। 2. आर.एफ/पी.एफ/राजस्व वन	1. सत्यापित डी.जी.पी.एस रिपोर्ट अपलोड किया गया है।



अरण्य भवन, सेक्टर-19, अटल नगर, रायपुर - 492002

(अपर प्रधान मुख्य वन संरक्षक - भू-प्रबंध)

कार्यालयीन टीप

5

| वन विभाग

क्षेत्र/राजस्व गैर वन क्षेत्र/निजी क्षेत्र कितना प्रभावित होगा, इसका रकबा है, में देवें। आपके द्वारा निरंक जानकारी दी गई है। 3. पंजीयन एवं प्रसंस्करण शल्क हेतु छ.ग. शासन के संलग्न पत्र क्रमांक/एफ. -7/22/2009/10-2 रायपुर दिनांक 30.06.2012 अनुसार वनमंडलाधिकारी, रायगढ़ वनमंडल के नाम से डी.डी बनवाकर अपलोड करें। आपके द्वारा निरंक जानकारी दी गई है। 4- यदि आवेदित वन क्षेत्र में राजस्व वन क्षेत्र सम्मिलित है तो पंजीयन हेतु संबंधित कलेक्टर की अनापत्ति अतिरिक्त जानकारी के रूप में अपलोड करें। आपके द्वारा निरंक जानकारी दी गई है जो उचित नहीं है।	2. उक्त बिन्दु की जानकारी अपलोड नहीं की गई है। अपलोड करें। 3. उक्त बिन्दु की जानकारी अपलोड नहीं की गई है। अपलोड करें। 4. उक्त बिन्दु की जानकारी अपलोड नहीं की गई है। अपलोड करें।
---	--

for CSS

Adtl. Principal Chief Conservator of Forests
(Land Management)
and
Nodal Officer - Forest Conservation Act.
Chhattisgarh, Raipur

A.P.

4.4 Establishment of Temporary control Benchmark (TBM) points

The Temporary Control Point are established in Real Time Kinematic (RTK) Mode using DGPS Instrument with reference to the INC04 and other CMPDI established base stations

Below table lists the coordinates of TBMs:

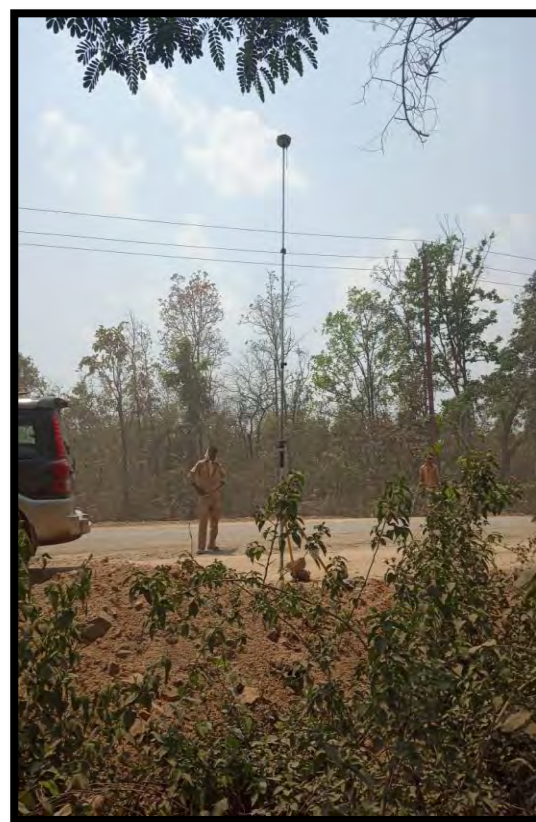
BaseStation/TBM	Latitude	Longitude	Easting	Northing	Ellipsoid Height(m)	Location
TBM-1	21°54'40.15816"N	83°25'48.29375"E	751045.695	2424980.612	235.69	Road marker
TBM-2	21°54'55.86012"N	83°25'55.39758"E	751241.982	2425466.928	229.449	Road
TBM-3	21°55'10.41071"N	83°26'16.73497"E	751847.425	2425924.314	238.201	Road
TBM-4	21°55'26.42375"N	83°26'31.29479"E	752257.557	2426423.622	239.985	Road
TBM-5	21°55'36.50992"N	83°27'03.04188"E	753163.952	2426748.474	240.563	Road
TBM-6	21°56'01.14830"N	83°27'31.19803"E	753959.747	2427519.133	184.395	Road
TBM-7	21°56'37.99177"N	83°27'42.69578"E	754271.887	2428658.581	205.583	Road
TBM-8	21°57'10.74283"N	83°27'57.48140"E	754680.06	2429672.751	202.399	Road
TBM-9	21°57'41.57489"N	83°28'02.59981"E	754811.68	2430623.715	211.009	Road
TBM-10	21°58'13.26561"N	83°28'09.21569"E	754985.825	2431601.795	214.749	Road
TBM-11	21°58'44.99679"N	83°28'14.93435"E	755134.174	2432580.709	216.587	Road
TBM-12	21°59'12.82350"N	83°28'19.87380"E	755262.079	2433439.137	230.866	Road
TBM-13	21°59'36.92886"N	83°28'26.14325"E	755429.979	2434183.692	240.183	Road
TBM-14	21°59'54.64831"N	83°28'58.13663"E	756339.117	2434743.747	272.342	Road
TBM-15	22°00'14.81870"N	83°29'12.87917"E	756752.017	2435371.207	282.158	Road
TBM-16	22°00'31.70079"N	83°29'08.78797"E	756626.186	2435888.71	293.569	Road
TBM-17	22°00'53.84143"N	83°28'58.88869"E	756331.102	2436565.295	311.672	Road
TBM-18	22°01'13.30619"N	83°29'06.82883"E	756549.152	2437167.874	327.04	Road
TBM-19	22°01'26.81578"N	83°29'25.65323"E	757082.406	2437592.324	337.733	Road
TBM-20	22°01'55.18284"N	83°29'24.65365"E	757039.495	2438464.632	364.372	Road
TBM-21	22°02'16.31599"N	83°29'19.09483"E	756869.435	2439112.24	367.618	Road
TBM-22	22°02'15.28770"N	83°29'38.30781"E	757421.065	2439089.599	324.819	Road
TBM-23	22°02'03.46670"N	83°30'07.69609"E	758270.02	2438739.697	273.857	Road

4.5 Field Photographs of TBM Stations

TBM-01



TBM-02



TBM-03



TBM-07



4.6 DGPS Survey Procedure

Geotrax started the DGPS Survey using the above mentioned CMPDI Base station control points. The coordinate of the Base Station is as follows:

Point ID	Latitude (d:m:s)	Longitude (d:m:s)	Ellipsoidal Height(m)
INC1	22°10'36.84758N	83 31'33.94548E °	NA



Fig-3: Images showing CMPDI Base Station

DGPS survey was carried out using a pair of DGPS instrument. One DGPS Instrument was used as Base Station (INC1). With reference to Base station other TBM are established which are spread out through-out the Raigarh-Hamirpur Road corridor. The forest pillar coordinates are collected with reference to TBM base stations. The distance between the TBM Base Station and rover was always less than 5km.

The survey was conducted in Real Time Kinematic (RTK) mode. The Survey team collected DGPS coordinates of road corridor @ 50m interval & at every turn and bends of the road. At each section the coordinates were taken at left corridor, centerline and right corridor.

4.7 Forest Compartment Pillar Photographs taken during DGPS Survey





4.8 Creation of Road Corridor Right of way boundary map

The road corridor right of way coordinates, forest pillars etc., surveyed points captured through DGPS were plotted in the GIS Software and the road corridor left, centerline, and right corridor boundary line was created by joining the surveyed points. A single polygon is hence created from the left and right corridor centerline.

The length of the surveyed road is approximately 23.20 km, the maximum width of the road in the total corridor is around 17 meters, and the minimum width of the road is around 9 meters.

Road chainage points are created starting from Raigarh START location and ending at Hamirpur. The chainage points are labeled, and shown in the map layout.

The Forest pillars are also plotted on the geo-referenced map road corridor map. Using the Geo-referenced forest stock maps the forest compartment boundary of the intersecting forest compartment is digitized.

The forest map and Survey of India map are geo-referenced to the WGS 84 datum and UTM Projection system. The village maps are also geo-referenced and mosaicked to the same datum (WGS 84) and UTM Projection system (UTM Zone 44N).

The Cadastral map is geo-referenced and all khasras that intersect the road corridor are digitized. Each khasra type (Private/Govt.) is identified from the revenue records available with patwari and Bhu-Abhilekh records in the collectorate. The B1/PII records of the revenue forest khasras is downloaded from the CG Bhunaksha portal. The khasra patch intersecting the road polygon clipped and its area is computed.

After digitization and some editing of the boundary of the revenue Khasra, a village wise land schedule showing the total private land, and total Govt. land including the revenue forest is prepared.



Similarly, the forest compartment area intersecting the road corridor and proposed for forest diversion is computed.

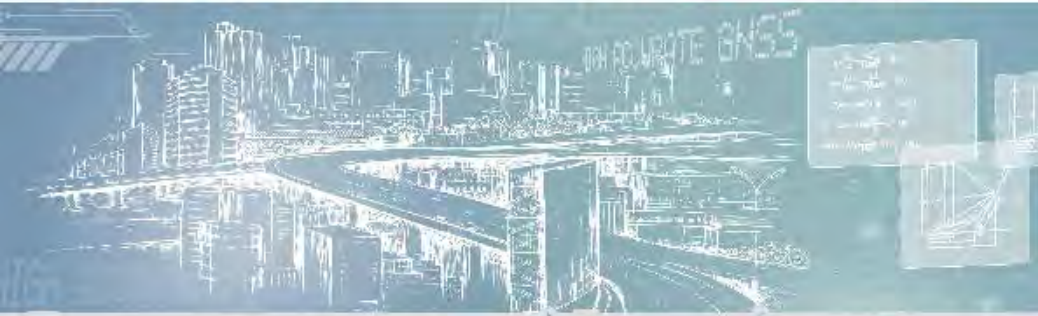
The forest compartment boundary layer and revenue forest Khasra layer is superimposed on survey of India Map and Forest stock map.

4.9 Specification of DGPS Equipment

Geotrax deployed the most advance and hi-precision devices to carry out the DGPS survey. The DGPS performance specifications are given below. The corresponding fact sheets are placed below for ready reference.

COMNAV

T300 GNSS Receiver





RTK robust enough for challenging environments, in a device that is light and easy to carry

With decades of experience in the surveying GNSS receiver, the T300 is a product which combines lots of market proved advantages together. It can track all the working GNSS constellations. By using ComNav's unique QUAN™ algorithm technology, it can function in RTK mode with all the GNSS constellations or by using any single GNSS constellation such as GLONASS or BeiDou. The strong anti-interference ability of the receiver makes it possible to work in any environment.

Design driven to improve user experience

Our R&D people are always thinking about how to improve the physical experience of users and workflow in the field. With this in mind, the T300 integrates a cutting edge GNSS board, Bluetooth®, UHF (Rx&Tx) into a compact board. Smart design makes the T300 the lightest and smallest (volume) receiver in the world.

Hot swap battery design

Extending the field working time is also a passion for our R&D people. They do lots of tests and analysis to reduce the power consumption, and make the whole system work more efficiently. In parallel, they've designed in the capability to hot swap the battery source. When the warning sounds and LED flashes, put your second battery in place. Then recharge the first while you keep working.

Consumer grade batteries... always available

Losing power in the field is significantly inconvenient for users, as the batteries for GNSS receivers are often unusual types and not readily available. Once again our R&D people developed a solution so that the T300 runs on normal consumer batteries.

Features

- *Ultra small*
- *Super light*
- *Many user-friendly conveniences built in*
- *GPS L1/L2/L5, BeiDou B1/B2/B3, GLONASS L1/L2*
- *Low power consumption*
- *Support long baseline E-RTK¹*

Technical Specifications

T300

Signal Tracking

- 256 channels with simultaneously tracked satellite signals
- GPS: L1 C/A, L1 C, L2 P, L5
- BeiDou: B1, B2, B3
- GLONASS: L1, L2
- SBAS: WAAS, EGNOS, MSAS, GAGAN

Performance Specifications

- Cold start: <50 s
- Warm start: <30 s
- Hot start: <15 s
- Initialization time: <10 s
- Singal re-acquisition: <2 s
- Initialization reliability: >99.9%

Positioning Specifications

- Post Processing Static
 - Horizontal: 2.5 mm + 0.5 ppm RMS
 - Vertical: 5 mm + 0.5 ppm RMS
- Real Time Kinematic
 - Horizontal: 8 mm + 1 ppm RMS
 - Vertical: 15 mm + 1 ppm RMS
- E-RTK¹ (baseline<100 km)
 - Horizontal: 0.2 m + 1 ppm RMS
 - Vertical: 0.4 m + 1 ppm RMS
- Code differential GNSS positioning
 - Horizontal: 0.25 m + 1 ppm RMS
 - Vertical: 0.5 m + 1 ppm RMS
- SBAS: Typically <1 m 3D RMS
- Standalone: <1.5 m 3D RMS

Communications and Memory

- 1 Serial port (7 pin Lemo).
- Baud rates up to 921,600 bps.
- Radio modem: Tx/Rx with full frequency range from 410-470 MHz²
 - Transmit power: 0.5-2W adjustable
 - Range: 1-4 km
- Position data output rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz
- 5 LEDs (indicating Power, Satellite Tracking, Bluetooth[®] and Differential Data)
- Bluetooth[®]: V 2.X protocol, work compatible with Windows 7, Windows mobile and Android

Data Format

- Correction data I/O:
 - RTCM 2.x, 3.x, CMR (GPS only), CMR+ (GPS only).
- Position data output:
 - ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST, PJK, PTNL
 - ComNav Binary update to 20 Hz

Physical

- Size(WxH): 15.8 cm x 7.5 cm
- Weight: 0.95 kg (include 2 batteries)

Environmental

- Operating temperature: -40 °C to +65 °C (40 °F to 149 °F)
- Storage temperature: -40 °C to +85 °C (40 °F to 185 °F)
- Humidity: 100% condensation
- Waterproof and dust proof: IP67 protected from temporary immersion to depth of 1 meter, floats
- Shock: survives a 2 meter drop on to concrete

Electrical

- Input Voltage: 5-27 VDC
- Power consumption: 2.85 W (3 constellations)³
- Li-ion battery capacity: 2 x 1800 mAh, up to 8 hours typically
- Memory: 256 MB internal with up to 16 GB pluggable memory card

Software

- ComNav field data collection software CGSurvey
- Carlson's SurvCE field data collection software (optional)
- MicroSurvey's FieldGenius field data collection software (optional)

¹ E-RTK, BeiDou B3 signal used in RTK calculate engine; concern the current situation, this mode can be used in APAC.

² 410-470 MHz, 3 frequency range, 410-430, 430-460, 460-470, need to clarify when place the order.

³ Power consumption will increase if using internal radio modem transmitter.

Specifications subject to change without notice.

© 2014, ComNav Technology Ltd. All rights reserved. ComNav is the trade mark of ComNav Technology Ltd., registered in People's Republic of China. All other trademarks are the property of their respective owners. (September, 2014).

ComNav Technology Ltd.
Building E, No.50 Alley 2080 Lianhua Road
201103 Shanghai - China

Tel: +86 21 64056796

Fax: +86 21 54309582

Email: sales@comnavtech.com

www.comnavtech.com

5. DGPS Survey and Mapping Results

The total forest area inside the Raigarh-Hamirpur road corridor proposed for forest diversion is approximately 17.523 Ha. Out of this, the Protected and Reserved forest area is 15.137 Ha and Revenue forest area is 2.386 Ha.

There are total of 12 forest compartments touching the Road corridor boundary. Out of the 12 forest compartments, 10 compartments are of Reserved Forest (RF) Category and 2 of them are of Protected Forest (PF) Category.

The total Reserved Forest area is 13.835 Ha, and the Protected Forest area is 1.302 Ha. The total non-forest area is approximately ...Ha

The patch wise forest area statement is herewith annexed and marked as **Annexure-1**. DGPS Survey coordinates of forest patch boundary points are herewith annexed and marked as **Annexure-2**. The geo-referenced Survey of India map at 1:50000 scale and Forest stock map at 1:15000 scale are herewith annexed and marked as **Annexure -3**.

Raigarh-Hamirpur Road (length 23.20 km)- Land Schedule of the Protected Forest and Reserved Forest in the Road Right-Of-Way (ROW)

SI No	Compartment No	Forest Type	Forest Division	Forest Range	Forest Circle	Beat	Proposed Area (in Ha)
1	RF 967	Reserve Forest	Raigarh	Raigarh	Barkachhar	Boirdadar	3.315
2	RF 966	Reserve Forest	Raigarh	Raigarh	Barkachhar	Boirdadar	0.191
3	RF 968	Reserve Forest	Raigarh	Raigarh	Barkachhar	Kotarliya	0.171
4	PF 949	Protected Forest	Raigarh	Raigarh	Bangursiya Paschim	Sambalpuri	0.988
5	RF 927	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	0.535
6	PF 941	Protected Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	0.314
7	RF 909	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	0.944
8	RF 919	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Barkachhar	2.698
9	RF 913	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Parhigaon	1.839
10	RF 917	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Barkachhar	0.283
11	RF 916	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Bangursiya Purba	0.497
12	RF 914	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Parhigaon	3.361
Total PF&RF Area in Hectares							15.137

वन परिक्षेत्र अधिकारी
रायपुर (उ.प्र.)

Geotrax 2020

Executive Engineer
P.W.D. Raigarh Division



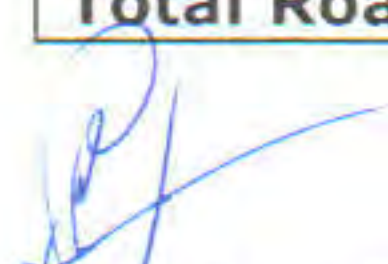
Raigarh-Hamipur Road (length 23.20 km)- Land Schedule of the revenue forest khasras

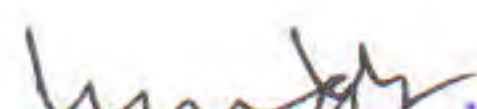
SI No	District	Tehsil	Village Name	Khasra No	Land Type	Kul Rakba (Ha.)	Geotrax Proposed Area (Ha.)
1	Raigarh	Raigarh	Sambalpuri	251/1	BJJ	1.505	0.044
2	Raigarh	Raigarh	Sambalpuri	254	BJJ	3.116	0.207
3	Raigarh	Raigarh	Sambalpuri	242/1	BJJ	7.009	0.106
4	Raigarh	Raigarh	Sambalpuri	107/1	CJJ	1.749	0.289
5	Raigarh	Raigarh	Sambalpuri	106	CJJ	10.603	0.327
6	Raigarh	Raigarh	Sambalpuri	116	CJJ	3.516	0.044
7	Raigarh	Raigarh	Bangursiya	34	CJJ	14.443	0.014
8	Raigarh	Raigarh	Nawagaoun	126	BJJ	3.12	0.151
9	Raigarh	Tamnar	Joboro	329/1 क	CJJ	6.292	0.015
10	Raigarh	Tamnar	Hamirpur	178/2,180/4	CJJ	18.085	0.495
11	Raigarh	Tamnar	Hamirpur	18/2 क	CJJ	12.956	0.592
12	Raigarh	Tamnar	Hamirpur	18/2 इ	CJJ	0.405	0.045
13	Raigarh	Tamnar	Hamirpur	18/2 ज	CJJ	2.023	0.057
Total Revenue Forest Area in Hectares						84.822	2.386

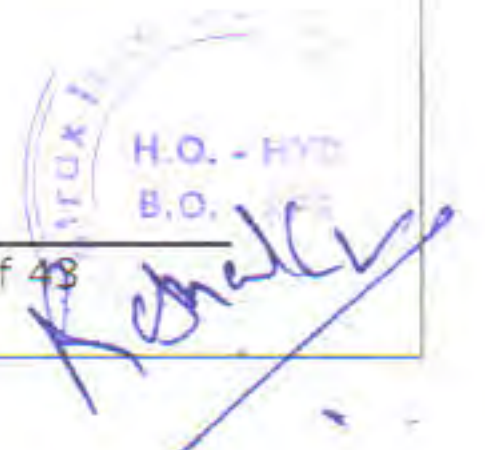
Total Proposed PF/RF Area (Ha.)	15.137
Total Proposed Revenue Forest Area (Ha.)	2.386
Total Proposed Forest Area for diversion (Ha.)	17.523

District	Tehsil	Village Name	Non Forest Area (Pvt + Govt) in Ha
Raigarh	Raigarh	Sambalpuri	3.556
Raigarh	Raigarh	Nawagaoun	0.831
Raigarh	Raigarh	Bangursiya	1.638
Raigarh	Tamnar	Joboro	0.469
Raigarh	Tamnar	Pali	0.16
Raigarh	Tamnar	Hamirpur	1.296
Raigarh	Tamnar	Chandrashekarapur (masati village) Un-surveyed Private land	1.015
Total Non Forest Area (Ha.)			8.965

Total Road Corridor Area (Forest + Non Forest land)	26.488 Ha.
Total Road Corridor Centerline Length in km	23.200 km


 वन परियोजना अधिकारी
 Geotrax 2020
 रायगढ़ (छ.ग.)


 Executive Engineer
 P.W.D. Raigarh Division


 H.O. - HYD
 B.O.

6. Background of Organization

Geotrax International Services (www.geotrax.in) is a Professional Land Mapping and Services provider across India established in the year 1999. During the last 15+ years, we had an opportunity to execute a variety of surveying jobs all over India and in the Middle East to various customer specifications for RIS, LIS, and Municipal GIS oriented jobs. Cadastral Surveys using ETS/DGPS and Provision of Ground control conforming to stringent accuracy standards using high end instruments as RTK/GPRS DGPS is our speciality. We also have a UAV (Drone) and Ground Penetrating Radar (on Roaster).

Geotrax is headed by Mr. V.V.S Bandhakavi (Ex-Survey of India employee) who has more than 40+ years' experience in the field of surveying in India and abroad.

Some of our major clients include:

- Odisha Space Application Centre (ORSAC)
- Steel Authority of India (SAIL)
- National Thermal Power Corporation (NTPC)
- Survey Settlement and Land Records Department (Govt. Of Gujarat)
- Survey Settlement and Land Records Department (Govt. Of Madhya Pradesh)
- Irrigation Dept. (Govt. of Jammu and Kashmir)
- National Remote Sensing Agency (Hyderabad)
- Meinhardt India Private Limited (Delhi),
- Nagarjuna Construction Company (NCC, Hyderabad)
- Consulting Engineering Services (CES, New Delhi)
- Lee Associates of South Asia (LASA, Delhi)
- Power development Corporation (Govt. of Jammu and Kashmir)



Geotrax expertise covers:

- ❖ DGPS Surveys for Mining lease boundary, and Forest Diversion
- ❖ Consultancy services for Mining Plan & EIA
- ❖ Boundary and cadastral surveys using DGPS and Total station;
- ❖ Topographic surveys.
- ❖ Ground control surveys for photogrammetric projects, including Airborne GPS.
- ❖ Only one of the two companies in India who are empanelled by NRSA for DGPS survey for ground control point collection
- ❖ Route and alignment surveys combining conventional and photogrammetric methods.
- ❖ Construction and cross-section surveys (from road design to precision layout and quality control).

Being a client focused organization, Geotrax's combination of survey equipment, personnel, and computer resources allow for the tailoring of the project approach to match the orders of accuracy and precision requirements for each project. Geotrax's equipment resources include 250 DGPS, 33 hand-held GPS units, theodolites, electronic digital and automatic levels, 19 Electronic Total Stations, and data collectors.

On the mapping side, our CAD and GIS professionals assist the survey projects by creating accurate maps. We have dedicated CAD experts who have extensive experience with different CAD software.

7. Annexure

7.1 Annexure – 1: Patch wise Forest area statement

7.1.1 PF&RF Forest Compartment Patch wise area statement

Proposed PF RF Land Area								
SI No	Patch No	Compartment No	Forest Type	Division	Range	Circle	Beat	Proposed Area (Ha.)
1	Patch No 1	RF 967	Reserve Forest	Raigarh	Raigarh	Barkachhar	Boirdadar	3.506
2		RF 966	Reserve Forest	Raigarh	Raigarh	Barkachhar	Boirdadar	
3	Patch No 6	RF 968	Reserve Forest	Raigarh	Raigarh	Barkachhar	Kotarliya	0.171
4	Patch No 9	PF 949	Protected Forest	Raigarh	Raigarh	Bangursiya Paschim	Sambalpuri	0.988
5	Patch No 10	RF 927	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	0.535
6	Patch No 13	PF 941	Protected Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	9.937
7		RF 909	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Bangursiya Paschim	
8		RF 919	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Barkachhar	
9		RF 913	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Parhigaon	
10		RF 917	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Barkachhar	
11		RF 916	Reserve Forest	Raigarh	Raigarh	Bangursiya Purba	Bangursiya Purba	
12		RF 914	Reserve Forest	Raigarh	Raigarh	Bangursiya Paschim	Parhigaon	
Total PF & RF Area in Hectares (A)								15.137

7.1.2 Revenue Forest Patch wise area statement

Proposed Revenue Forest Land Patch wise Area Statement							
SI No	Patch No	Khasra No	Forest Type	District	Tehsil	Village	Proposed Area (Ha.)
1	Patch No 2	242/1	BJJ	Raigarh	Raigarh	Sambalpuri	0.009
2	Patch No 3	251/1	BJJ	Raigarh	Raigarh	Sambalpuri	0.044
3	Patch No 4	242/1	BJJ	Raigarh	Raigarh	Sambalpuri	0.097
4	Patch No 5	254	BJJ	Raigarh	Raigarh	Sambalpuri	0.207
5	Patch No 7	107/1	CJJ	Raigarh	Raigarh	Sambalpuri	0.616
		106	CJJ	Raigarh	Raigarh	Sambalpuri	
6	Patch No 8	116	CJJ	Raigarh	Raigarh	Sambalpuri	0.044
7	Patch No 11	126	BJJ	Raigarh	Raigarh	Nawagaoun	0.151

Proposed Revenue Forest Land Patch wise Area Statement

SI No	Patch No	Khasra No	Forest Type	District	Tehsil	Village	Proposed Area (Ha.)
8	Patch No 12	34	CJJ	Raigarh	Raigarh	Bangursiya	0.014
9	Patch No 14	329/1k	CJJ	Raigarh	Tamnar	Joboro	0.015
10	Patch No 15	18/2/k	CJJ	Raigarh	Tamnar	Hamirpur	0.637
		18/2/Jha	CJJ	Raigarh	Tamnar	Hamirpur	
11	Patch No 16	18/2/j	CJJ	Raigarh	Tamnar	Hamirpur	0.057
12	Patch No 17	178/2,180/4	CJJ	Raigarh	Tamnar	Hamirpur	0.013
13	Patch No 18	178/2,180/4	CJJ	Raigarh	Tamnar	Hamirpur	0.482
Total Revenue Forest Area in Hectares (B)							2.386


वन परिक्षेत्र अधिकारी
रायगढ़ (छ.ग.)


Executive Engineer
P.W.D. Raigarh Division


वन मण्डलाधिकारी
रायगढ़ तालुका

7.2 Annexure-2: Forest Patches DGPS Surveyed Coordinates

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
1	Patch No 1	P1	751041.284	2424993.490	21°54'40.57891"	83°25'48.14726"
2		P2	751088.987	2425007.015	21°54'40.99386"	83°25'49.81590"
3		P3	751170.128	2425029.101	21°54'41.66978"	83°25'52.65371"
4		P4	751173.344	2425031.340	21°54'41.74088"	83°25'52.76694"
5		P5	751211.898	2425058.178	21°54'42.59314"	83°25'54.12433"
6		P6	751258.725	2425117.104	21°54'44.48384"	83°25'55.78755"
7		P7	751264.247	2425154.895	21°54'45.70903"	83°25'56.00070"
8		P8	751246.590	2425280.236	21°54'49.79113"	83°25'55.45501"
9		P9	751241.234	2425324.143	21°54'51.22066"	83°25'55.29273"
10		P10	751225.419	2425491.992	21°54'56.68311"	83°25'54.83464"
11		P11	751222.182	2425580.395	21°54'59.55747"	83°25'54.77071"
12		P12	751219.809	2425683.852	21°55'02.92056"	83°25'54.74519"
13		P13	751221.850	2425713.097	21°55'03.86983"	83°25'54.83242"
14		P14	751222.859	2425727.548	21°55'04.33890"	83°25'54.87553"
15		P15	751243.965	2425756.011	21°55'05.25294"	83°25'55.62625"
16		P16	751255.422	2425771.462	21°55'05.74913"	83°25'56.03379"
17		P17	751329.774	2425835.854	21°55'07.80325"	83°25'58.65867"
18		P18	751401.226	2425897.765	21°55'09.77823"	83°26'01.18122"
19		P19	751442.738	2425913.999	21°55'10.28436"	83°26'02.63586"
20		P20	751601.806	2425919.589	21°55'10.38396"	83°26'08.17856"
21		P21	751790.375	2425921.379	21°55'10.34479"	83°26'14.74654"
22		P22	751851.355	2425926.206	21°55'10.47015"	83°26'16.87286"
23		P23	751903.668	2425949.367	21°55'11.19575"	83°26'18.70750"
24		P24	751985.105	2426058.590	21°55'14.70289"	83°26'21.60407"
25		P25	752068.869	2426177.984	21°55'18.53932"	83°26'24.58735"
26		P26	752175.219	2426324.203	21°55'23.23572"	83°26'28.37213"
27		P27	752250.012	2426437.388	21°55'26.87498"	83°26'31.03964"
28		P28	752260.880	2426451.185	21°55'27.31769"	83°26'31.42579"
29		P29	752269.749	2426463.119	21°55'27.70090"	83°26'31.74128"
30		P30	752303.342	2426510.710	21°55'29.22999"	83°26'32.93760"
31		P31	752353.092	2426542.994	21°55'30.25331"	83°26'34.68813"
32		P32	752380.291	2426555.670	21°55'30.65113"	83°26'35.64239"
33		P33	752385.281	2426547.058	21°55'30.36869"	83°26'35.81143"
34		P34	752386.885	2426544.291	21°55'30.27795"	83°26'35.86574"
35		P35	752358.472	2426531.077	21°55'29.86328"	83°26'34.86889"
36		P36	752358.440	2426531.046	21°55'29.86229"	83°26'34.86775"
37		P37	752314.611	2426502.436	21°55'28.95529"	83°26'33.32547"
38		P38	752279.407	2426455.777	21°55'27.45732"	83°26'32.07356"
39		P39	752270.453	2426443.775	21°55'27.07195"	83°26'31.75507"
40		P40	752262.338	2426428.595	21°55'26.58287"	83°26'31.46404"
41		P41	752186.160	2426314.909	21°55'22.92805"	83°26'28.74801"
42		P42	752079.640	2426169.590	21°55'18.26098"	83°26'24.95781"
43		P43	751996.269	2426048.736	21°55'14.37691"	83°26'21.98740"
44		P44	751912.117	2425937.028	21°55'10.79043"	83°26'18.99491"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
45		P45	751854.231	2425910.179	21°55'09.94787"	83°26'16.96415"
46		P46	751789.493	2425905.997	21°55'09.84540"	83°26'14.70731"
47		P47	751602.694	2425904.605	21°55'09.89659"	83°26'08.20120"
48		P48	751443.984	2425899.498	21°55'09.81250"	83°26'02.67124"
49		P49	751407.446	2425885.715	21°55'09.38346"	83°26'01.39117"
50		P50	751338.547	2425825.310	21°55'07.45610"	83°25'58.95837"
51		P51	751265.496	2425760.969	21°55'05.40296"	83°25'56.37882"
52		P52	751236.791	2425725.179	21°55'04.25475"	83°25'55.35940"
53		P53	751234.484	2425682.940	21°55'02.88336"	83°25'55.25574"
54		P54	751236.848	2425581.092	21°54'59.57256"	83°25'55.28184"
55		P55	751242.154	2425490.731	21°54'56.63352"	83°25'55.41673"
56		P56	751255.786	2425325.077	21°54'51.24351"	83°25'55.80001"
57		P57	751260.178	2425280.989	21°54'49.80860"	83°25'55.92861"
58		P58	751278.834	2425157.794	21°54'45.79572"	83°25'56.51028"
59		P59	751271.267	2425109.845	21°54'44.24150"	83°25'56.22030"
60		P60	751221.834	2425046.848	21°54'42.21985"	83°25'54.46409"
61		P61	751174.698	2425013.287	21°54'41.15355"	83°25'52.80413"
62		P62	751130.044	2425001.629	21°54'40.79771"	83°25'51.24269"
63		P63	751092.817	2424991.910	21°54'40.50105"	83°25'49.94095"
64		P64	751049.051	2424981.162	21°54'40.17431"	83°25'48.41093"
65		P65	751045.711	2424986.457	21°54'40.34809"	83°25'48.29754"
66	Patch No 2	P66	752912.331	2426635.546	21°55'32.97095"	83°26'54.21592"
67		P67	752916.295	2426635.747	21°55'32.97543"	83°26'54.35408"
68		P68	752931.694	2426641.005	21°55'33.13830"	83°26'54.89330"
69		P69	752910.785	2426625.073	21°55'32.63145"	83°26'54.15625"
70		P70	752911.441	2426630.224	21°55'32.79848"	83°26'54.18195"
71	Patch No 3	P71	752975.247	2426661.330	21°55'33.77616"	83°26'56.42140"
72		P72	753005.568	2426683.946	21°55'34.49531"	83°26'57.48998"
73		P73	753007.420	2426673.856	21°55'34.16648"	83°26'57.54884"
74		P74	753009.170	2426671.256	21°55'34.08110"	83°26'57.60835"
75		P75	752980.811	2426650.240	21°55'33.41292"	83°26'56.60900"
76	Patch No 4	P76	753020.052	2426694.748	21°55'34.83883"	83°26'58.00042"
77		P77	753030.405	2426702.470	21°55'35.08437"	83°26'58.36526"
78		P78	753064.819	2426723.307	21°55'35.74361"	83°26'59.57537"
79		P79	753071.968	2426727.636	21°55'35.88057"	83°26'59.82678"
80		P80	753108.268	2426749.616	21°55'36.57595"	83°27'01.10322"
81		P81	753100.790	2426730.902	21°55'35.97171"	83°27'00.83236"
82		P82	753056.201	2426703.716	21°55'35.11147"	83°26'59.26435"
83		P83	753039.369	2426699.357	21°55'34.97855"	83°26'58.67571"
84	Patch No 5	P84	753117.735	2426754.889	21°55'36.74237"	83°27'01.43587"
85		P85	753165.583	2426778.481	21°55'37.48415"	83°27'03.11537"
86		P86	753236.689	2426822.551	21°55'38.87926"	83°27'05.61631"
87	Patch No 5 & Patch No 6	P87	753256.484	2426833.471	21°55'39.22382"	83°27'06.31180"
88		P88	753259.776	2426826.401	21°55'38.99236"	83°27'06.42250"
89		P89	753262.610	2426820.297	21°55'38.79254"	83°27'06.51779"
90	Patch No 5	P90	753243.638	2426810.004	21°55'38.46793"	83°27'05.85134"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
91		P91	753171.302	2426769.359	21°55'37.18476"	83°27'03.30947"
92		P92	753120.054	2426742.647	21°55'36.34337"	83°27'01.50980"
93		P93	753109.620	2426736.285	21°55'36.14206"	83°27'01.14287"
94		P94	753113.748	2426746.269	21°55'36.46433"	83°27'01.29221"
95	Patch No 6	P95	753301.004	2426858.031	21°55'39.99875"	83°27'07.87596"
96		P96	753307.065	2426862.108	21°55'40.12808"	83°27'08.08932"
97		P97	753353.268	2426895.465	21°55'41.18801"	83°27'09.71701"
98		P98	753356.483	2426892.796	21°55'41.09961"	83°27'09.82750"
99		P99	753361.278	2426890.028	21°55'41.00717"	83°27'09.99293"
100		P100	753365.937	2426887.337	21°55'40.91731"	83°27'10.15373"
101		P101	753306.955	2426844.356	21°55'39.55129"	83°27'08.07560"
102	Patch No 7	P102	753808.898	2427394.555	21°55'57.16871"	83°27'25.86381"
103		P103	753893.505	2427434.331	21°55'58.41715"	83°27'28.83271"
104		P104	753933.604	2427470.421	21°55'59.56899"	83°27'30.24944"
105		P105	753958.685	2427526.998	21°56'01.39437"	83°27'31.15455"
106		P106	753993.136	2427610.636	21°56'04.09419"	83°27'32.40116"
107		P107	754037.526	2427711.151	21°56'07.33725"	83°27'34.00336"
108		P108	754044.480	2427728.801	21°56'07.90716"	83°27'34.25543"
109		P109	754057.711	2427729.014	21°56'07.90716"	83°27'34.71636"
110		P110	754047.770	2427704.218	21°56'07.10662"	83°27'34.35627"
111		P111	754005.593	2427606.495	21°56'03.95314"	83°27'32.83270"
112		P112	753970.244	2427512.529	21°56'00.91818"	83°27'31.54906"
113		P113	753958.006	2427487.165	21°56'00.10038"	83°27'31.10867"
114		P114	753945.865	2427462.003	21°55'59.28906"	83°27'30.67176"
115		P115	753901.028	2427421.623	21°55'58.00029"	83°27'29.08762"
116		P116	753814.285	2427381.055	21°55'56.72724"	83°27'26.04389"
117	Patch No 8	P117	754166.895	2428028.281	21°56'17.57479"	83°27'38.68645"
118		P118	754170.329	2428036.711	21°56'17.84691"	83°27'38.81075"
119		P119	754185.600	2428085.790	21°56'19.43374"	83°27'39.37009"
120		P120	754192.306	2428082.839	21°56'19.33435"	83°27'39.60199"
121		P121	754174.211	2428025.256	21°56'17.47266"	83°27'38.93954"
122	Patch No 9	P122	754265.987	2428632.534	21°56'37.15797"	83°27'42.47584"
123		P123	754271.467	2428663.426	21°56'38.15893"	83°27'42.68398"
124		P124	754315.497	2428804.607	21°56'42.72355"	83°27'44.29660"
125		P125	754382.786	2428971.773	21°56'48.12037"	83°27'46.73394"
126		P126	754398.324	2429013.111	21°56'49.45551"	83°27'47.29830"
127		P127	754503.258	2429257.069	21°56'57.32795"	83°27'51.08998"
128		P128	754532.413	2429328.230	21°56'59.62505"	83°27'52.14539"
129		P129	754538.659	2429311.738	21°56'59.08588"	83°27'52.35371"
130		P130	754514.056	2429251.761	21°56'57.14983"	83°27'51.46312"
131		P131	754411.439	2429007.443	21°56'49.26448"	83°27'47.75194"
132		P132	754393.756	2428966.501	21°56'47.94333"	83°27'47.11309"
133		P133	754328.699	2428797.609	21°56'42.48925"	83°27'44.75252"
134		P134	754285.058	2428659.531	21°56'38.02527"	83°27'43.15519"
135		P135	754277.891	2428630.086	21°56'37.07220"	83°27'42.88909"
136	Patch No 10	P136	754698.327	2429849.854	21°57'16.48811"	83°27'58.21705"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
137		P137	754699.102	2429858.742	21°57'16.77652"	83°27'58.24902"
138		P138	754705.439	2429962.953	21°57'20.15948"	83°27'58.52821"
139		P139	754739.972	2430220.070	21°57'28.49625"	83°27'59.87537"
140	Patch No 10 & Patch No 11	P140	754744.794	2430248.750	21°57'29.42566"	83°28'00.05943"
141		P141	754754.633	2430254.997	21°57'29.62350"	83°28'00.40566"
142		P142	754756.843	2430256.470	21°57'29.67020"	83°28'00.48348"
143		P143	754759.588	2430258.298	21°57'29.72819"	83°28'00.58014"
144	Patch No 10	P144	754757.394	2430245.603	21°57'29.31680"	83°28'00.49657"
145		P145	754752.761	2430218.799	21°57'28.44826"	83°28'00.32015"
146		P146	754722.836	2429988.927	21°57'20.99438"	83°27'59.14879"
147		P147	754719.373	2429962.322	21°57'20.13168"	83°27'59.01323"
148		P148	754710.833	2429858.840	21°57'16.77357"	83°27'58.65770"
149		P149	754709.981	2429848.862	21°57'16.44979"	83°27'58.62243"
150		P150	754698.734	2429849.819	21°57'16.48677"	83°27'58.23120"
151	Patch No 11	P151	754747.608	2430265.487	21°57'29.96805"	83°28'00.16685"
152		P152	754767.802	2430375.899	21°57'33.54525"	83°28'00.93224"
153		P153	754779.148	2430376.114	21°57'33.54629"	83°28'01.32761"
154		P154	754760.620	2430264.267	21°57'29.92159"	83°28'00.61942"
155	Patch No 12	P155	755212.376	2433140.605	21°59'03.14908"	83°28'17.97401"
156	Patch No 12 & Patch No 13	P156	755214.203	2433153.227	21°59'03.55825"	83°28'18.04476"
157		P157	755227.284	2433147.015	21°59'03.34952"	83°28'18.49701"
158	Patch No 12	P158	755226.239	2433140.042	21°59'03.12350"	83°28'18.45670"
159	Patch No 13	P159	757296.570	2439145.965	22°02'17.18530"	83°29'34.00090"
160		P160	757358.609	2439137.757	22°02'16.88567"	83°29'36.15845"
161		P161	757396.074	2439121.670	22°02'16.34307"	83°29'37.45505"
162		P162	757439.042	2439070.024	22°02'14.64208"	83°29'38.92319"
163		P163	757449.992	2439015.226	22°02'12.85571"	83°29'39.27361"
164		P164	757461.708	2439002.839	22°02'12.44699"	83°29'39.67489"
165		P165	757486.100	2439010.327	22°02'12.67734"	83°29'40.52928"
166		P166	757592.729	2439061.555	22°02'14.28526"	83°29'44.27476"
167		P167	757651.296	2439080.703	22°02'14.87632"	83°29'46.32688"
168		P168	757663.793	2439083.901	22°02'14.97358"	83°29'46.76427"
169		P169	757732.900	2439103.712	22°02'15.58057"	83°29'49.18409"
170		P170	757746.528	2439109.162	22°02'15.75041"	83°29'49.66220"
171		P171	757794.153	2439130.328	22°02'16.41286"	83°29'51.33413"
172		P172	757833.814	2439128.260	22°02'16.32456"	83°29'52.71523"
173		P173	757879.405	2439088.945	22°02'15.02283"	83°29'54.28176"
174		P174	757917.254	2439044.155	22°02'13.54733"	83°29'55.57534"
175		P175	757976.343	2438932.232	22°02'09.87915"	83°29'57.57085"
176		P176	758004.394	2438878.800	22°02'08.12804"	83°29'58.51798"
177		P177	758020.832	2438873.052	22°02'07.93252"	83°29'59.08760"
178		P178	758056.020	2438894.058	22°02'08.59635"	83°30'00.32596"
179		P179	758097.091	2438903.210	22°02'08.87186"	83°30'01.76260"
180		P180	758140.064	2438892.719	22°02'08.50810"	83°30'03.25430"
181		P181	758166.715	2438860.321	22°02'07.44119"	83°30'04.16464"
182		P182	758193.631	2438791.956	22°02'05.20546"	83°30'05.06366"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
183		P183	758226.751	2438759.033	22°02'04.11805"	83°30'06.19915"
184		P184	758265.640	2438747.224	22°02'03.71363"	83°30'07.54775"
185		P185	758322.301	2438779.905	22°02'04.74535"	83°30'09.54115"
186		P186	758363.630	2438811.497	22°02'05.74985"	83°30'10.99960"
187		P187	758377.059	2438850.850	22°02'07.02139"	83°30'11.49012"
188		P188	758383.950	2438906.255	22°02'08.81800"	83°30'11.76195"
189		P189	758391.315	2438914.622	22°02'09.08594"	83°30'12.02344"
190		P190	758393.161	2438910.489	22°02'08.95067"	83°30'12.08540"
191		P191	758395.066	2438906.607	22°02'08.82350"	83°30'12.14958"
192		P192	758392.719	2438903.969	22°02'08.73905"	83°30'12.06626"
193		P193	758387.144	2438849.104	22°02'06.95929"	83°30'11.84060"
194		P194	758372.500	2438806.853	22°02'05.59422"	83°30'11.30608"
195		P195	758325.897	2438771.169	22°02'04.45957"	83°30'09.66149"
196		P196	758269.029	2438738.064	22°02'03.41418"	83°30'07.66063"
197		P197	758220.711	2438751.446	22°02'03.87474"	83°30'05.98431"
198		P198	758186.636	2438785.426	22°02'04.99701"	83°30'04.81615"
199		P199	758157.280	2438858.100	22°02'07.37405"	83°30'03.83454"
200		P200	758135.987	2438884.383	22°02'08.23940"	83°30'03.10745"
201		P201	758095.016	2438893.998	22°02'08.57364"	83°30'01.68502"
202		P202	758061.579	2438886.272	22°02'08.34040"	83°30'00.51526"
203		P203	758021.134	2438861.627	22°02'07.56113"	83°29'59.09160"
204		P204	757998.178	2438869.253	22°02'07.82114"	83°29'58.29589"
205		P205	757967.846	2438929.217	22°02'09.78570"	83°29'57.27299"
206		P206	757909.623	2439038.247	22°02'13.35942"	83°29'55.30601"
207		P207	757872.522	2439082.759	22°02'14.82549"	83°29'54.03834"
208		P208	757829.211	2439115.446	22°02'15.91062"	83°29'52.54748"
209		P209	757799.114	2439113.461	22°02'15.86215"	83°29'51.49741"
210		P210	757743.221	2439088.987	22°02'15.09663"	83°29'49.53542"
211		P211	757635.027	2439065.642	22°02'14.39559"	83°29'45.75127"
212		P212	757596.264	2439052.713	22°02'13.99608"	83°29'44.39292"
213		P213	757490.078	2439001.894	22°02'12.40122"	83°29'40.66311"
214		P214	757461.279	2438992.226	22°02'12.10237"	83°29'39.65389"
215		P215	757441.596	2439012.603	22°02'12.77494"	83°29'38.97950"
216		P216	757424.596	2439060.128	22°02'14.32821"	83°29'38.41407"
217		P217	757385.900	2439106.100	22°02'15.84252"	83°29'37.09161"
218		P218	757352.166	2439121.644	22°02'16.36552"	83°29'35.92473"
219		P219	757260.607	2439144.453	22°02'17.15527"	83°29'32.74663"
220		P220	757237.917	2439121.016	22°02'16.40576"	83°29'31.94248"
221		P221	757207.866	2439068.400	22°02'14.71204"	83°29'30.86517"
222		P222	757172.049	2439035.274	22°02'13.65466"	83°29'29.59800"
223		P223	757134.387	2439012.950	22°02'12.94926"	83°29'28.27268"
224		P224	757108.173	2439014.087	22°02'13.00011"	83°29'27.35970"
225		P225	757063.455	2439045.477	22°02'14.04379"	83°29'25.81902"
226		P226	757005.992	2439085.813	22°02'15.38492"	83°29'23.83922"
227		P227	756973.065	2439097.760	22°02'15.79057"	83°29'22.69841"
228		P228	756891.287	2439095.804	22°02'15.77036"	83°29'19.84711"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
229		P229	756854.168	2439084.338	22°02'15.41746"	83°29'18.54689"
230		P230	756792.709	2439061.826	22°02'14.71852"	83°29'16.39207"
231		P231	756788.644	2439060.337	22°02'14.67230"	83°29'16.24955"
232		P232	756754.170	2439032.143	22°02'13.77444"	83°29'15.03202"
233		P233	756738.695	2438998.834	22°02'12.70031"	83°29'14.47375"
234		P234	756725.539	2438924.971	22°02'10.30720"	83°29'13.97327"
235		P235	756698.836	2438901.703	22°02'09.56529"	83°29'13.02939"
236		P236	756695.611	2438879.253	22°02'08.83751"	83°29'12.90424"
237		P237	756702.320	2438839.397	22°02'07.53890"	83°29'13.11543"
238		P238	756715.675	2438810.144	22°02'06.58130"	83°29'13.56427"
239		P239	756758.593	2438761.262	22°02'04.97022"	83°29'15.03229"
240		P240	756777.869	2438737.407	22°02'04.18488"	83°29'15.69055"
241		P241	756813.074	2438665.028	22°02'01.81439"	83°29'16.87640"
242		P242	756836.988	2438634.428	22°02'00.80742"	83°29'17.69246"
243		P243	756922.528	2438583.032	22°01'59.09207"	83°29'20.64447"
244		P244	756933.628	2438576.363	22°01'58.86948"	83°29'21.02754"
245		P245	756984.114	2438537.880	22°01'57.59228"	83°29'22.76518"
246		P246	756999.808	2438521.351	22°01'57.04687"	83°29'23.30274"
247		P247	757015.622	2438503.547	22°01'56.46000"	83°29'23.84376"
248		P248	757024.997	2438489.480	22°01'55.99792"	83°29'24.16252"
249		P249	757035.713	2438469.636	22°01'55.34745"	83°29'24.52469"
250		P250	757042.460	2438452.967	22°01'54.80224"	83°29'24.75035"
251		P251	757044.047	2438445.427	22°01'54.55638"	83°29'24.80139"
252		P252	757044.940	2438427.213	22°01'53.96410"	83°29'24.82215"
253		P253	757043.446	2438416.885	22°01'53.62928"	83°29'24.76419"
254		P254	757041.931	2438401.176	22°01'53.11965"	83°29'24.70245"
255		P255	757039.896	2438352.003	22°01'51.52293"	83°29'24.60359"
256		P256	757034.376	2438233.845	22°01'47.68649"	83°29'24.34404"
257		P257	757029.317	2438142.830	22°01'44.73178"	83°29'24.11599"
258		P258	757031.396	2438106.034	22°01'43.53505"	83°29'24.16753"
259		P259	757050.813	2438059.520	22°01'42.01336"	83°29'24.81778"
260		P260	757070.865	2438007.798	22°01'40.32210"	83°29'25.48720"
261		P261	757081.765	2437965.901	22°01'38.95494"	83°29'25.84325"
262		P262	757086.000	2437965.986	22°01'38.95547"	83°29'25.99089"
263		P263	757097.637	2437966.220	22°01'38.95690"	83°29'26.39657"
264		P264	757137.201	2438000.960	22°01'40.06474"	83°29'27.79514"
265		P265	757164.010	2437990.499	22°01'39.71062"	83°29'28.72350"
266		P266	757147.532	2437936.107	22°01'37.95197"	83°29'28.11830"
267		P267	757127.904	2437858.874	22°01'35.45279"	83°29'27.39034"
268		P268	757124.602	2437845.881	22°01'35.03237"	83°29'27.26789"
269		P269	757118.791	2437816.736	22°01'34.08843"	83°29'27.04880"
270		P270	757112.890	2437787.140	22°01'33.12988"	83°29'26.82633"
271		P271	757113.612	2437754.172	22°01'32.05826"	83°29'26.83274"
272		P272	757119.345	2437706.166	22°01'30.49534"	83°29'27.00525"
273		P273	757119.507	2437704.810	22°01'30.45119"	83°29'27.01012"
274		P274	757107.493	2437645.676	22°01'28.53609"	83°29'26.55782"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
275		P275	757085.434	2437598.386	22°01'27.01116"	83°29'25.76219"
276		P276	757073.139	2437578.904	22°01'26.38464"	83°29'25.32264"
277		P277	757059.295	2437556.968	22°01'25.67920"	83°29'24.82772"
278		P278	757005.871	2437466.021	22°01'22.75231"	83°29'22.91426"
279		P279	757000.643	2437457.120	22°01'22.46587"	83°29'22.72700"
280		P280	756972.667	2437422.848	22°01'21.36707"	83°29'21.73259"
281		P281	756957.415	2437423.013	22°01'21.38053"	83°29'21.20115"
282		P282	756926.770	2437423.346	22°01'21.40756"	83°29'20.13340"
283		P283	756856.308	2437430.186	22°01'21.66713"	83°29'17.68174"
284		P284	756824.822	2437424.776	22°01'21.50801"	83°29'16.58141"
285		P285	756796.444	2437402.905	22°01'20.81237"	83°29'15.58005"
286		P286	756698.202	2437327.189	22°01'18.40408"	83°29'12.11343"
287		P287	756599.536	2437241.642	22°01'15.67655"	83°29'08.62650"
288		P288	756591.991	2437235.100	22°01'15.46796"	83°29'08.35984"
289		P289	756569.712	2437208.528	22°01'14.61632"	83°29'07.56837"
290		P290	756560.000	2437184.846	22°01'13.85196"	83°29'07.21648"
291		P291	756540.401	2437137.060	22°01'12.30957"	83°29'06.50639"
292		P292	756508.696	2437064.514	22°01'09.96905"	83°29'05.36038"
293		P293	756493.604	2437032.951	22°01'08.95143"	83°29'04.81656"
294		P294	756475.308	2437012.510	22°01'08.29691"	83°29'04.16738"
295		P295	756468.147	2437004.510	22°01'08.04074"	83°29'03.91330"
296		P296	756432.522	2436977.622	22°01'07.18588"	83°29'02.65658"
297		P297	756336.946	2436904.330	22°01'04.85485"	83°28'59.28440"
298		P298	756293.879	2436870.363	22°01'03.77389"	83°28'57.76435"
299		P299	756287.126	2436848.324	22°01'03.06133"	83°28'57.51654"
300		P300	756293.662	2436814.349	22°01'01.95390"	83°28'57.72505"
301		P301	756297.582	2436793.969	22°01'01.28961"	83°28'57.85012"
302		P302	756321.721	2436673.828	22°00'57.37303"	83°28'58.62326"
303		P303	756332.781	2436590.891	22°00'54.67226"	83°28'58.96169"
304		P304	756338.662	2436568.074	22°00'53.92775"	83°28'59.15370"
305		P305	756429.403	2436487.880	22°00'51.27401"	83°29'02.27035"
306		P306	756505.651	2436423.570	22°00'49.14405"	83°29'04.89093"
307		P307	756562.125	2436377.298	22°00'47.61065"	83°29'06.83265"
308		P308	756584.363	2436345.760	22°00'46.57411"	83°29'07.58969"
309		P309	756584.793	2436341.907	22°00'46.44869"	83°29'07.60250"
310		P310	756602.707	2436181.495	22°00'41.22685"	83°29'08.13579"
311		P311	756603.156	2436177.132	22°00'41.08485"	83°29'08.14897"
312		P312	756607.138	2436138.442	22°00'39.82554"	83°29'08.26580"
313		P313	756613.591	2436075.748	22°00'37.78499"	83°29'08.45511"
314		P314	756617.666	2436045.931	22°00'36.81397"	83°29'08.58020"
315		P315	756631.035	2435918.323	22°00'32.66045"	83°29'08.97372"
316		P316	756637.071	2435881.492	22°00'31.46049"	83°29'09.16317"
317		P317	756662.325	2435833.495	22°00'29.88754"	83°29'10.01595"
318		P318	756669.814	2435821.777	22°00'29.50282"	83°29'10.27027"
319		P319	756701.785	2435771.754	22°00'27.86049"	83°29'11.35595"
320		P320	756715.827	2435746.976	22°00'27.04793"	83°29'11.83120"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
321		P321	756742.030	2435700.738	22°00'25.53164"	83°29'12.71804"
322		P322	756750.655	2435661.613	22°00'24.25576"	83°29'12.99639"
323		P323	756753.840	2435593.050	22°00'22.02622"	83°29'13.06849"
324		P324	756757.719	2435449.533	22°00'17.36078"	83°29'13.12227"
325		P325	756760.402	2435343.606	22°00'13.91739"	83°29'13.15570"
326		P326	756761.041	2435318.395	22°00'13.09787"	83°29'13.16366"
327		P327	756758.376	2435286.385	22°00'12.05916"	83°29'13.05265"
328		P328	756754.400	2435279.098	22°00'11.82449"	83°29'12.90998"
329		P329	756740.740	2435254.063	22°00'11.01822"	83°29'12.41981"
330		P330	756626.870	2435098.781	22°00'06.03273"	83°29'08.36407"
331		P331	756610.968	2435079.250	22°00'05.40650"	83°29'07.79892"
332		P332	756515.022	2434953.942	22°00'01.38547"	83°29'04.38479"
333		P333	756437.836	2434855.659	21°59'58.23265"	83°29'01.63969"
334		P334	756356.716	2434759.267	21°59'55.14333"	83°28'58.75862"
335		P335	756335.222	2434739.723	21°59'54.51962"	83°28'57.99863"
336		P336	756225.598	2434679.235	21°59'52.61198"	83°28'54.14474"
337		P337	756126.883	2434622.409	21°59'50.81755"	83°28'50.67305"
338		P338	756010.368	2434553.229	21°59'48.63105"	83°28'46.57419"
339		P339	755987.470	2434539.572	21°59'48.19935"	83°28'45.76864"
340		P340	755887.876	2434477.757	21°59'46.24321"	83°28'42.26356"
341		P341	755777.623	2434405.817	21°59'43.96367"	83°28'38.38140"
342		P342	755697.558	2434353.476	21°59'42.30506"	83°28'35.56216"
343		P343	755664.246	2434332.163	21°59'41.63004"	83°28'34.38946"
344		P344	755561.999	2434267.348	21°59'39.57775"	83°28'30.79033"
345		P345	755480.227	2434215.802	21°59'37.94582"	83°28'27.91211"
346		P346	755460.056	2434202.580	21°59'37.52681"	83°28'27.20185"
347		P347	755438.625	2434188.533	21°59'37.08162"	83°28'26.44722"
348		P348	755427.111	2434182.082	21°59'36.87806"	83°28'26.04241"
349		P349	755401.950	2434163.025	21°59'36.27206"	83°28'25.15499"
350		P350	755368.270	2434137.517	21°59'35.46089"	83°28'23.96713"
351		P351	755357.294	2434103.465	21°59'34.36017"	83°28'23.56551"
352		P352	755356.202	2434100.077	21°59'34.25066"	83°28'23.52555"
353		P353	755349.012	2434022.615	21°59'31.73739"	83°28'23.23138"
354		P354	755338.694	2433908.583	21°59'28.03745"	83°28'22.80762"
355		P355	755338.098	2433901.997	21°59'27.82376"	83°28'22.78314"
356		P356	755334.602	2433872.320	21°59'26.86127"	83°28'22.64461"
357		P357	755326.891	2433796.753	21°59'24.40986"	83°28'22.33337"
358		P358	755317.522	2433704.938	21°59'21.43133"	83°28'21.95521"
359		P359	755300.659	2433592.530	21°59'17.78759"	83°28'21.30436"
360		P360	755294.792	2433562.723	21°59'16.82213"	83°28'21.08315"
361		P361	755278.541	2433470.841	21°59'13.84504"	83°28'20.46520"
362		P362	755274.305	2433433.942	21°59'12.64827"	83°28'20.29683"
363		P363	755262.809	2433367.891	21°59'10.50806"	83°28'19.85911"
364		P364	755245.302	2433267.302	21°59'07.24869"	83°28'19.19250"
365		P365	755236.580	2433209.075	21°59'05.36123"	83°28'18.85584"
366		P366	755222.326	2433209.354	21°59'05.37779"	83°28'18.35937"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
367		P367	755231.859	2433275.225	21°59'07.51320"	83°28'18.72860"
368		P368	755249.145	2433369.938	21°59'10.58175"	83°28'19.38421"
369		P369	755261.316	2433436.622	21°59'12.74218"	83°28'19.84579"
370		P370	755267.050	2433472.491	21°59'13.90469"	83°28'20.06577"
371		P371	755282.580	2433565.252	21°59'16.91072"	83°28'20.65910"
372		P372	755287.325	2433593.782	21°59'17.83528"	83°28'20.84049"
373		P373	755304.933	2433707.462	21°59'21.51995"	83°28'21.51801"
374		P374	755321.992	2433853.987	21°59'26.27218"	83°28'22.19494"
375		P375	755322.244	2433856.153	21°59'26.34242"	83°28'22.20494"
376		P376	755324.202	2433872.967	21°59'26.88776"	83°28'22.28262"
377		P377	755326.884	2433905.030	21°59'27.92820"	83°28'22.39413"
378		P378	755338.850	2434023.362	21°59'31.76700"	83°28'22.87773"
379		P379	755345.055	2434103.328	21°59'34.36216"	83°28'23.13899"
380		P380	755359.822	2434143.292	21°59'35.65299"	83°28'23.67603"
381		P381	755423.923	2434190.877	21°59'37.16552"	83°28'25.93629"
382		P382	755432.060	2434194.923	21°59'37.29271"	83°28'26.22208"
383		P383	755463.308	2434215.912	21°59'37.95829"	83°28'27.32266"
384		P384	755475.909	2434224.376	21°59'38.22670"	83°28'27.76650"
385		P385	755557.976	2434275.498	21°59'39.84469"	83°28'30.65476"
386		P386	755659.362	2434341.496	21°59'41.93588"	83°28'34.22455"
387		P387	755691.915	2434362.482	21°59'42.60067"	83°28'35.37063"
388		P388	755773.687	2434414.480	21°59'44.24724"	83°28'38.24915"
389		P389	755881.708	2434486.486	21°59'46.53010"	83°28'42.05358"
390		P390	755982.358	2434549.479	21°59'48.52396"	83°28'45.59612"
391		P391	756004.305	2434562.691	21°59'48.94170"	83°28'46.36829"
392		P392	756120.676	2434630.837	21°59'51.09468"	83°28'50.46154"
393		P393	756220.909	2434686.998	21°59'52.86670"	83°28'53.98575"
394		P394	756329.190	2434748.888	21°59'54.82061"	83°28'57.79364"
395		P395	756350.006	2434766.540	21°59'55.38320"	83°28'58.52893"
396		P396	756429.603	2434861.674	21°59'58.43244"	83°29'01.35623"
397		P397	756507.313	2434960.608	22°00'01.60614"	83°29'04.11996"
398		P398	756604.865	2435085.273	22°00'05.60543"	83°29'07.58968"
399		P399	756620.629	2435105.935	22°00'06.26849"	83°29'08.15067"
400		P400	756733.460	2435258.324	22°00'11.16053"	83°29'12.16856"
401		P401	756748.310	2435290.531	22°00'12.19920"	83°29'12.70426"
402		P402	756751.708	2435317.664	22°00'13.07905"	83°29'12.83804"
403		P403	756748.512	2435450.286	22°00'17.39011"	83°29'12.80188"
404		P404	756744.067	2435593.389	22°00'22.04240"	83°29'12.72814"
405		P405	756741.287	2435659.960	22°00'24.20701"	83°29'12.66902"
406		P406	756733.528	2435697.036	22°00'25.41584"	83°29'12.41968"
407		P407	756694.063	2435766.114	22°00'27.68131"	83°29'11.08368"
408		P408	756653.497	2435830.172	22°00'29.78423"	83°29'09.70645"
409		P409	756628.391	2435876.798	22°00'31.31255"	83°29'08.85804"
410		P410	756621.672	2435916.995	22°00'32.62225"	83°29'08.64670"
411		P411	756608.123	2436045.512	22°00'36.80540"	83°29'08.24743"
412		P412	756604.206	2436073.827	22°00'37.72753"	83°29'08.12699"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
413		P413	756591.444	2436180.797	22°00'41.21012"	83°29'07.74292"
414		P414	756575.162	2436341.216	22°00'46.43133"	83°29'07.26649"
415		P415	756554.682	2436371.591	22°00'47.42915"	83°29'06.57005"
416		P416	756506.558	2436410.831	22°00'48.72965"	83°29'04.91532"
417		P417	756500.726	2436415.587	22°00'48.88726"	83°29'04.71478"
418		P418	756421.177	2436481.308	22°00'51.06481"	83°29'01.97997"
419		P419	756347.295	2436549.726	22°00'53.32699"	83°28'59.44415"
420		P420	756331.771	2436564.102	22°00'53.80232"	83°28'58.91132"
421		P421	756322.271	2436589.156	22°00'54.62144"	83°28'58.59446"
422		P422	756309.878	2436673.263	22°00'57.36093"	83°28'58.21024"
423		P423	756287.503	2436791.895	22°01'01.22754"	83°28'57.49771"
424		P424	756276.289	2436849.965	22°01'03.12037"	83°28'57.13982"
425		P425	756286.877	2436875.305	22°01'03.93817"	83°28'57.52314"
426		P426	756331.540	2436913.367	22°01'05.15135"	83°28'59.10113"
427		P427	756426.000	2436983.887	22°01'07.39290"	83°29'02.43286"
428		P428	756462.493	2437011.169	22°01'08.26010"	83°29'03.72004"
429		P429	756484.164	2437038.435	22°01'09.13462"	83°29'04.49070"
430		P430	756499.937	2437070.038	22°01'10.15317"	83°29'05.05828"
431		P431	756530.572	2437142.622	22°01'12.49550"	83°29'06.16702"
432		P432	756561.613	2437213.771	22°01'14.79097"	83°29'07.28911"
433		P433	756585.584	2437242.216	22°01'15.70257"	83°29'08.14060"
434		P434	756601.044	2437255.712	22°01'16.13293"	83°29'08.68702"
435		P435	756692.364	2437335.429	22°01'18.67491"	83°29'11.91465"
436		P436	756821.382	2437436.483	22°01'21.89023"	83°29'16.46818"
437		P437	756857.789	2437441.381	22°01'22.03011"	83°29'17.73971"
438		P438	756927.770	2437433.292	22°01'21.73021"	83°29'20.17390"
439		P439	756967.536	2437430.727	22°01'21.62580"	83°29'21.55825"
440		P440	756992.471	2437460.660	22°01'22.58522"	83°29'22.44422"
441		P441	757051.496	2437562.888	22°01'25.87570"	83°29'24.55929"
442		P442	757076.882	2437605.605	22°01'27.25027"	83°29'25.46826"
443		P443	757097.681	2437646.232	22°01'28.55936"	83°29'26.21619"
444		P444	757109.475	2437705.836	22°01'30.48984"	83°29'26.66109"
445		P445	757106.718	2437752.227	22°01'31.99871"	83°29'26.59138"
446		P446	757102.488	2437789.428	22°01'33.20974"	83°29'26.46512"
447		P447	757116.529	2437849.445	22°01'35.15246"	83°29'26.98857"
448		P448	757118.508	2437857.768	22°01'35.42184"	83°29'27.06227"
449		P449	757138.318	2437941.073	22°01'38.11822"	83°29'27.80002"
450		P450	757153.620	2437984.467	22°01'39.52012"	83°29'28.35797"
451		P451	757141.032	2437991.629	22°01'39.75952"	83°29'27.92335"
452		P452	757102.341	2437958.994	22°01'38.71961"	83°29'26.55640"
453		P453	757087.300	2437957.910	22°01'38.69236"	83°29'26.03161"
454		P454	757073.992	2437956.951	22°01'38.66825"	83°29'25.56727"
455		P455	757062.451	2438006.087	22°01'40.27096"	83°29'25.19299"
456		P456	757043.201	2438055.503	22°01'41.88686"	83°29'24.55021"
457		P457	757021.487	2438103.460	22°01'43.45666"	83°29'23.82073"
458		P458	757019.934	2438144.554	22°01'44.79277"	83°29'23.78996"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
459		P459	757024.836	2438233.892	22°01'47.69307"	83°29'24.01159"
460		P460	757029.813	2438352.722	22°01'51.55164"	83°29'24.25259"
461		P461	757031.418	2438397.163	22°01'52.99484"	83°29'24.33380"
462		P462	757031.399	2438404.554	22°01'53.23498"	83°29'24.33734"
463		P463	757026.188	2438436.298	22°01'54.26924"	83°29'24.17378"
464		P464	757018.647	2438456.936	22°01'54.94383"	83°29'23.92271"
465		P465	757003.776	2438484.590	22°01'55.85028"	83°29'23.42015"
466		P466	756983.259	2438514.681	22°01'56.83893"	83°29'22.72221"
467		P467	756961.033	2438538.975	22°01'57.64010"	83°29'21.96138"
468		P468	756948.334	2438549.606	22°01'57.99228"	83°29'21.52487"
469		P469	756927.560	2438568.236	22°01'58.60862"	83°29'20.81144"
470		P470	756868.236	2438603.989	22°01'59.80180"	83°29'18.76421"
471		P471	756846.331	2438617.191	22°02'00.24237"	83°29'18.00827"
472		P472	756830.237	2438626.890	22°02'00.56606"	83°29'17.45289"
473		P473	756826.167	2438632.124	22°02'00.73828"	83°29'17.31400"
474		P474	756803.503	2438661.265	22°02'01.69718"	83°29'16.54069"
475		P475	756770.336	2438732.030	22°02'04.01415"	83°29'15.42496"
476		P476	756750.836	2438756.330	22°02'04.81407"	83°29'14.75914"
477		P477	756708.384	2438803.849	22°02'06.38061"	83°29'13.30659"
478		P478	756692.189	2438838.975	22°02'07.53055"	83°29'12.76210"
479		P479	756685.418	2438877.395	22°02'08.78254"	83°29'12.54794"
480		P480	756691.417	2438909.232	22°02'09.81386"	83°29'12.77510"
481		P481	756717.087	2438929.554	22°02'10.46060"	83°29'13.68130"
482		P482	756729.644	2439002.633	22°02'12.82854"	83°29'14.16046"
483		P483	756745.949	2439037.847	22°02'13.96413"	83°29'14.74874"
484		P484	756776.398	2439062.434	22°02'14.74693"	83°29'15.82393"
485		P485	756785.086	2439069.450	22°02'14.97029"	83°29'16.13072"
486		P486	756850.768	2439092.686	22°02'15.69051"	83°29'18.43313"
487		P487	756889.202	2439105.429	22°02'16.08421"	83°29'19.77991"
488		P488	756972.982	2439106.903	22°02'16.08770"	83°29'22.70072"
489		P489	757012.809	2439093.213	22°02'15.62175"	83°29'24.08102"
490		P490	757064.917	2439056.197	22°02'14.39134"	83°29'25.87608"
491		P491	757111.293	2439023.253	22°02'13.29629"	83°29'27.47366"
492		P492	757132.396	2439022.585	22°02'13.26339"	83°29'28.20877"
493		P493	757166.726	2439042.135	22°02'13.88042"	83°29'29.41639"
494		P494	757201.270	2439074.749	22°02'14.92184"	83°29'30.63890"
495		P495	757229.407	2439124.818	22°02'16.53382"	83°29'31.64804"
496		P496	757259.755	2439154.023	22°02'17.46668"	83°29'32.72238"
497	Patch No 14	P497	758676.993	2438908.501	22°02'08.73470"	83°30'21.97636"
498		P498	758751.528	2438888.723	22°02'08.05230"	83°30'24.56270"
499		P499	758751.522	2438886.634	22°02'07.98440"	83°30'24.56132"
500		P500	758749.565	2438886.074	22°02'07.96727"	83°30'24.49280"
501		P501	758740.680	2438888.301	22°02'08.04437"	83°30'24.18442"
502		P502	758728.330	2438892.053	22°02'08.17286"	83°30'23.75611"
503		P503	758704.865	2438899.049	22°02'08.41271"	83°30'22.94234"
504	Patch No 15	P504	759225.446	2438800.676	22°02'04.93820"	83°30'41.02909"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
505		P505	759246.312	2438798.448	22°02'04.85466"	83°30'41.75503"
506		P506	759283.172	2438800.094	22°02'04.88843"	83°30'43.04060"
507		P507	759552.707	2438840.872	22°02'06.06921"	83°30'52.45770"
508		P508	759740.747	2438863.723	22°02'06.71099"	83°30'59.02430"
509		P509	759702.638	2438858.877	22°02'06.57394"	83°30'57.69335"
510		P510	759671.316	2438847.393	22°02'06.21758"	83°30'56.59516"
511		P511	759662.626	2438846.252	22°02'06.18516"	83°30'56.29162"
512		P512	759630.081	2438846.977	22°02'06.22615"	83°30'55.15780"
513		P513	759607.643	2438843.839	22°02'06.13621"	83°30'54.37400"
514		P514	759579.689	2438839.820	22°02'06.02057"	83°30'53.39747"
515		P515	759560.569	2438836.737	22°02'05.93063"	83°30'52.72932"
516		P516	759553.524	2438831.931	22°02'05.77825"	83°30'52.48104"
517		P517	759391.633	2438807.369	22°02'05.06679"	83°30'46.82481"
518		P518	759360.755	2438806.160	22°02'05.04404"	83°30'45.74798"
519		P519	759332.440	2438801.739	22°02'04.91555"	83°30'44.75860"
520		P520	759294.890	2438798.353	22°02'04.82560"	83°30'43.44799"
521		P521	759295.431	2438792.773	22°02'04.64399"	83°30'43.46364"
522		P522	759282.903	2438790.872	22°02'04.58893"	83°30'43.02594"
523		P523	759247.114	2438788.938	22°02'04.54522"	83°30'41.77753"
524		P524	759227.336	2438791.264	22°02'04.63137"	83°30'41.08958"
525		P525	759226.093	2438796.918	22°02'04.81575"	83°30'41.04950"
526		P526	759769.445	2438869.290	22°02'06.87650"	83°31'00.02768"
527		P527	759759.143	2438866.004	22°02'06.77524"	83°30'59.66676"
528		P528	759760.256	2438859.067	22°02'06.54927"	83°30'59.70154"
529		P529	759809.165	2438874.498	22°02'07.02444"	83°31'01.41497"
530		P530	759811.102	2438865.742	22°02'06.73889"	83°31'01.47744"
531		P531	759868.938	2438882.335	22°02'07.24705"	83°31'03.50265"
532		P532	759903.834	2438887.846	22°02'07.40741"	83°31'04.72199"
533		P533	760025.586	2438902.140	22°02'07.80660"	83°31'08.97344"
534		P534	760037.893	2438900.911	22°02'07.76005"	83°31'09.40166"
535		P535	760092.240	2438900.421	22°02'07.71496"	83°31'11.29547"
536		P536	760091.896	2438898.246	22°02'07.64447"	83°31'11.28220"
537		P537	760065.701	2438897.670	22°02'07.63982"	83°31'10.36895"
538		P538	759903.553	2438878.099	22°02'07.09086"	83°31'04.70660"
539		P539	759870.031	2438873.477	22°02'06.95865"	83°31'03.53565"
540	Patch No 16	P540	760277.602	2438888.959	22°02'07.24305"	83°31'17.74899"
541		P541	760343.545	2438848.957	22°02'05.90789"	83°31'20.02416"
542		P542	760322.680	2438851.233	22°02'05.99304"	83°31'19.29829"
543		P543	760278.260	2438878.159	22°02'06.89179"	83°31'17.76571"
544	Patch No 17	P544	761077.144	2438862.916	22°02'05.96695"	83°31'45.59899"
545		P545	761094.796	2438865.523	22°02'06.04216"	83°31'46.21569"
546		P546	761106.123	2438868.017	22°02'06.11711"	83°31'46.61187"
547		P547	761125.555	2438871.361	22°02'06.21530"	83°31'47.29104"
548		P548	761076.933	2438857.311	22°02'05.78496"	83°31'45.58840"
549	Patch No 18	P549	761133.413	2438883.690	22°02'06.61167"	83°31'47.57203"
550		P550	761379.092	2438954.740	22°02'08.78785"	83°31'56.17529"

SI No	Patch No	Pillar Id	Easting(m)	Northing(m)	Latitude(°N)	Longitude (°E)
551		P551	761435.184	2438963.882	22°02'09.05465"	83°31'58.13545"
552		P552	761480.900	2438963.368	22°02'09.01330"	83°31'59.72841"
553		P553	761620.831	2438950.446	22°02'08.51793"	83°32'04.59768"
554		P554	761617.384	2438941.101	22°02'08.21616"	83°32'04.47216"
555		P555	761481.165	2438953.698	22°02'08.69895"	83°31'59.73205"
556		P556	761434.903	2438954.021	22°02'08.73440"	83°31'58.11995"
557		P557	761381.741	2438945.391	22°02'08.48265"	83°31'56.26221"
558		P558	761131.672	2438873.129	22°02'06.26944"	83°31'47.50525"


वन परिक्षेत्र अधिकारी
रायगढ़ (उ.ग.)


Executive Engineer
P.W.D. Raigarh Division

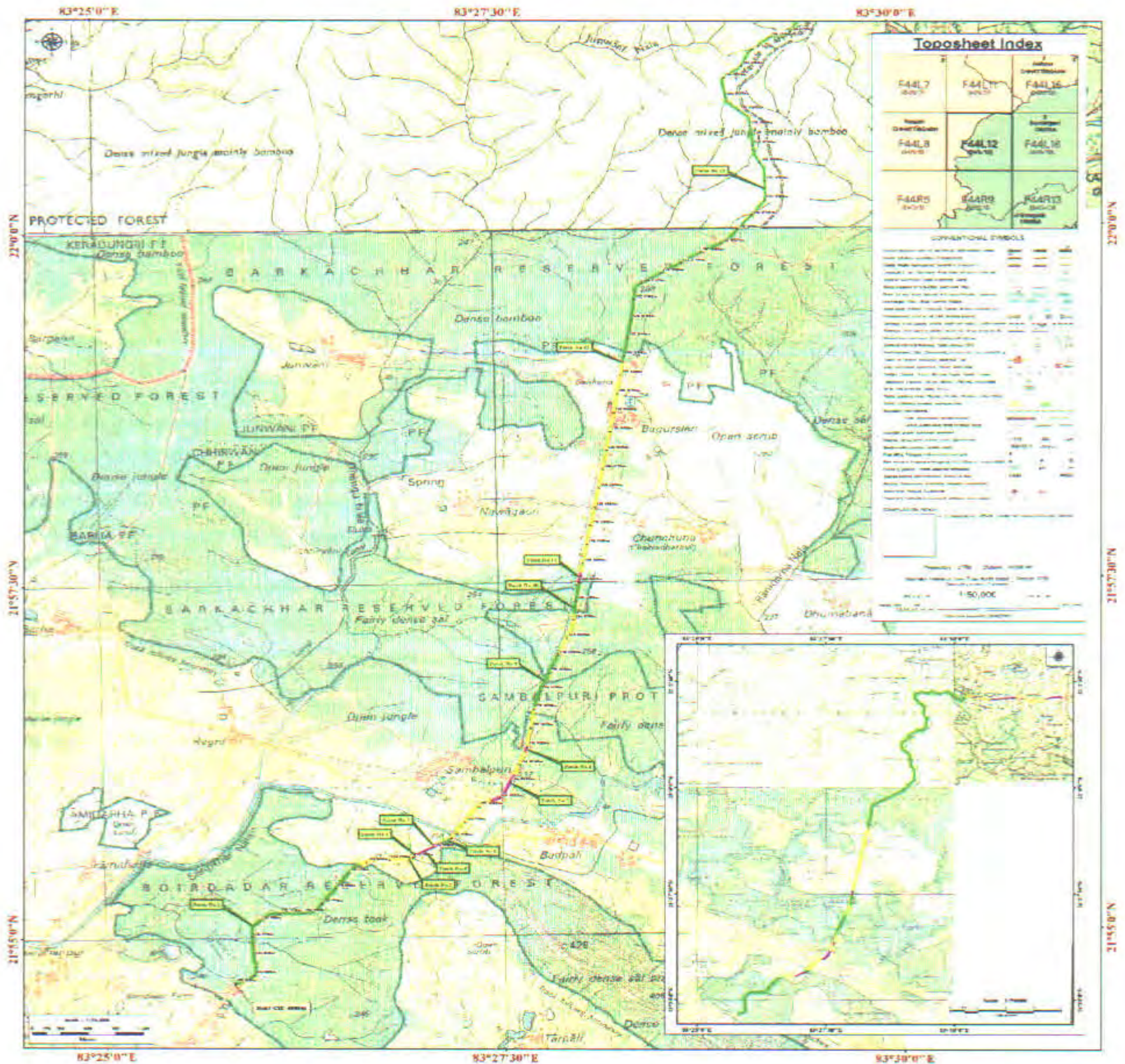

वन मण्डलाधिकारी
रायगढ़, वनमण्डल



7.3 Annexure-3: Georeferenced Maps- SOI & Forest Stock Map

7.3.1 Raigarh-Hamipur Road Alignment on Survey of India Toposheet

SOI Toposheet Showing Forest Patches Proposed for Diversion along the Raigarh -Hamipur Road, District-Raigarh, C.G

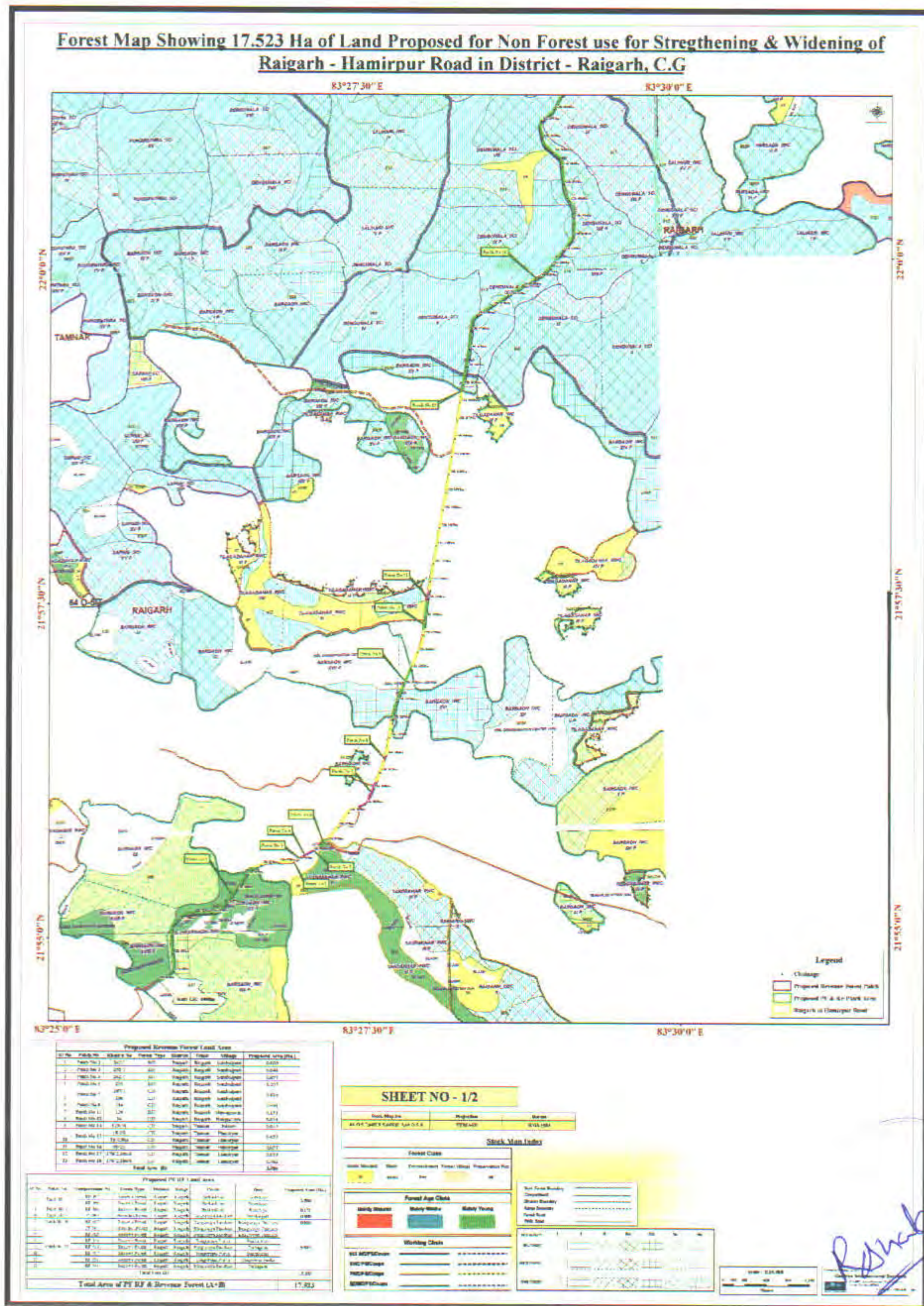


SHEET NO - 1/2

Proposed Map No.	Programme	Home
RAJASIMH (1/2/1/2)	1/2/1/2/1/2	1/2/1/2/1/2

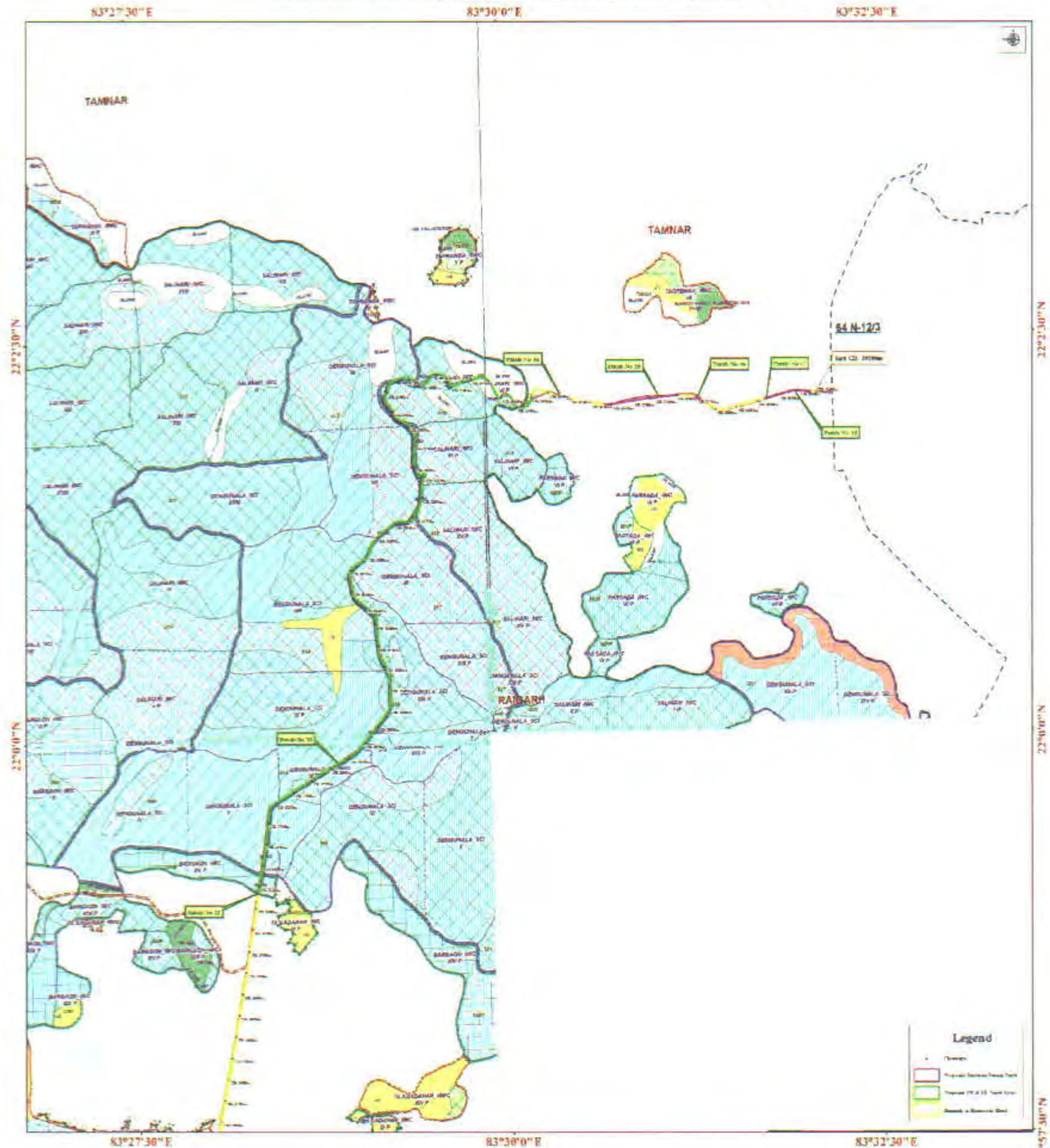
Proposed PF RF Land Area	Proposed Area (Ha.)	Proposed Revenue Forest Land Area	Proposed Area (Ha.)							
No.	Serial No.	Compartment No.	Forest Type	Location	Area	No.	Serial No.	Forest Type	Location	Area
1	1	101	Reserved Forest	Raigarh	1.786	1	1	101	Reserved Forest	1.786
2	2	102	Reserved Forest	Raigarh	1.786	2	2	102	Reserved Forest	1.786
3	3	103	Reserved Forest	Raigarh	1.786	3	3	103	Reserved Forest	1.786
4	4	104	Reserved Forest	Raigarh	1.786	4	4	104	Reserved Forest	1.786
5	5	105	Reserved Forest	Raigarh	1.786	5	5	105	Reserved Forest	1.786
6	6	106	Reserved Forest	Raigarh	1.786	6	6	106	Reserved Forest	1.786
7	7	107	Reserved Forest	Raigarh	1.786	7	7	107	Reserved Forest	1.786
8	8	108	Reserved Forest	Raigarh	1.786	8	8	108	Reserved Forest	1.786
9	9	109	Reserved Forest	Raigarh	1.786	9	9	109	Reserved Forest	1.786
10	10	110	Reserved Forest	Raigarh	1.786	10	10	110	Reserved Forest	1.786
11	11	111	Reserved Forest	Raigarh	1.786	11	11	111	Reserved Forest	1.786
12	12	112	Reserved Forest	Raigarh	1.786	12	12	112	Reserved Forest	1.786
13	13	113	Reserved Forest	Raigarh	1.786	13	13	113	Reserved Forest	1.786
14	14	114	Reserved Forest	Raigarh	1.786	14	14	114	Reserved Forest	1.786
15	15	115	Reserved Forest	Raigarh	1.786	15	15	115	Reserved Forest	1.786
16	16	116	Reserved Forest	Raigarh	1.786	16	16	116	Reserved Forest	1.786
17	17	117	Reserved Forest	Raigarh	1.786	17	17	117	Reserved Forest	1.786
18	18	118	Reserved Forest	Raigarh	1.786	18	18	118	Reserved Forest	1.786
19	19	119	Reserved Forest	Raigarh	1.786	19	19	119	Reserved Forest	1.786
20	20	120	Reserved Forest	Raigarh	1.786	20	20	120	Reserved Forest	1.786
21	21	121	Reserved Forest	Raigarh	1.786	21	21	121	Reserved Forest	1.786
22	22	122	Reserved Forest	Raigarh	1.786	22	22	122	Reserved Forest	1.786
23	23	123	Reserved Forest	Raigarh	1.786	23	23	123	Reserved Forest	1.786
24	24	124	Reserved Forest	Raigarh	1.786	24	24	124	Reserved Forest	1.786
25	25	125	Reserved Forest	Raigarh	1.786	25	25	125	Reserved Forest	1.786
26	26	126	Reserved Forest	Raigarh	1.786	26	26	126	Reserved Forest	1.786
27	27	127	Reserved Forest	Raigarh	1.786	27	27	127	Reserved Forest	1.786
28	28	128	Reserved Forest	Raigarh	1.786	28	28	128	Reserved Forest	1.786
29	29	129	Reserved Forest	Raigarh	1.786	29	29	129	Reserved Forest	1.786
30	30	130	Reserved Forest	Raigarh	1.786	30	30	130	Reserved Forest	1.786
31	31	131	Reserved Forest	Raigarh	1.786	31	31	131	Reserved Forest	1.786
32	32	132	Reserved Forest	Raigarh	1.786	32	32	132	Reserved Forest	1.786
33	33	133	Reserved Forest	Raigarh	1.786	33	33	133	Reserved Forest	1.786
34	34	134	Reserved Forest	Raigarh	1.786	34	34	134	Reserved Forest	1.786
35	35	135	Reserved Forest	Raigarh	1.786	35	35	135	Reserved Forest	1.786
36	36	136	Reserved Forest	Raigarh	1.786	36	36	136	Reserved Forest	1.786
37	37	137	Reserved Forest	Raigarh	1.786	37	37	137	Reserved Forest	1.786
38	38	138	Reserved Forest	Raigarh	1.786	38	38	138	Reserved Forest	1.786
39	39	139	Reserved Forest	Raigarh	1.786	39	39	139	Reserved Forest	1.786
40	40	140	Reserved Forest	Raigarh	1.786	40	40	140	Reserved Forest	1.786
41	41	141	Reserved Forest	Raigarh	1.786	41	41	141	Reserved Forest	1.786
42	42	142	Reserved Forest	Raigarh	1.786	42	42	142	Reserved Forest	1.786
43	43	143	Reserved Forest	Raigarh	1.786	43	43	143	Reserved Forest	1.786
44	44	144	Reserved Forest	Raigarh	1.786	44	44	144	Reserved Forest	1.786
45	45	145	Reserved Forest	Raigarh	1.786	45	45	145	Reserved Forest	1.786
46	46	146	Reserved Forest	Raigarh	1.786	46	46	146	Reserved Forest	1.786
47	47	147	Reserved Forest	Raigarh	1.786	47	47	147	Reserved Forest	1.786
48	48	148	Reserved Forest	Raigarh	1.786	48	48	148	Reserved Forest	1.786
49	49	149	Reserved Forest	Raigarh	1.786	49	49	149	Reserved Forest	1.786
50	50	150	Reserved Forest	Raigarh	1.786	50	50	150	Reserved Forest	1.786
51	51	151	Reserved Forest	Raigarh	1.786	51	51	151	Reserved Forest	1.786
52	52	152	Reserved Forest	Raigarh	1.786	52	52	152	Reserved Forest	1.786
53	53	153	Reserved Forest	Raigarh	1.786	53	53	153	Reserved Forest	1.786
54	54	154	Reserved Forest	Raigarh	1.786	54	54	154	Reserved Forest	1.786
55	55	155	Reserved Forest	Raigarh	1.786	55	55	155	Reserved Forest	1.786
56	56	156	Reserved Forest	Raigarh	1.786	56	56	156	Reserved Forest	1.786
57	57	157	Reserved Forest	Raigarh	1.786	57	57	157	Reserved Forest	1.786
58	58	158	Reserved Forest	Raigarh	1.786	58	58	158	Reserved Forest	1.786
59	59	159	Reserved Forest	Raigarh	1.786	59	59	159	Reserved Forest	1.786
60	60	160	Reserved Forest	Raigarh	1.786	60	60	160	Reserved Forest	1.786
61	61	161	Reserved Forest	Raigarh	1.786	61	61	161	Reserved Forest	1.786
62	62	162	Reserved Forest	Raigarh	1.786	62	62	162	Reserved Forest	1.786
63	63	163	Reserved Forest	Raigarh	1.786	63	63	163	Reserved Forest	1.786
64	64	164	Reserved Forest	Raigarh	1.786	64	64	164	Reserved Forest	1.786
65	65	165	Reserved Forest	Raigarh	1.786	65	65	165	Reserved Forest	1.786
66	66	166	Reserved Forest	Raigarh	1.786	66	66	166	Reserved Forest	1.786
67	67	167	Reserved Forest	Raigarh	1.786	67	67	167	Reserved Forest	1.786
68	68	168	Reserved Forest	Raigarh	1.786	68	68	168	Reserved Forest	1.786
69	69	169	Reserved Forest	Raigarh	1.786	69	69	169	Reserved Forest	1.786
70	70	170	Reserved Forest	Raigarh	1.786	70	70	170	Reserved Forest	1.786
71	71	171	Reserved Forest	Raigarh	1.786	71	71	171	Reserved Forest	1.786
72	72	172	Reserved Forest	Raigarh	1.786	72	72	172	Reserved Forest	1.786
73	73	173	Reserved Forest	Raigarh	1.786	73	73	173	Reserved Forest	1.786
74	74	174	Reserved Forest	Raigarh	1.786	74	74	174	Reserved Forest	1.786
75	75	175	Reserved Forest	Raigarh	1.786	75	75	175	Reserved Forest	1.786
76	76	176	Reserved Forest	Raigarh	1.786	76	76	176	Reserved Forest	1.786
77	77	177	Reserved Forest	Raigarh	1.786	77	77	177	Reserved Forest	1.786
78	78	178	Reserved Forest	Raigarh	1.786	78	78	178	Reserved Forest	1.786
79	79	179	Reserved Forest	Raigarh	1.786	79	79	179	Reserved Forest	1.786
80	80	180	Reserved Forest	Raigarh	1.786	80	80	180	Reserved Forest	1.786
81	81	181	Reserved Forest	Raigarh	1.786	81	81	181	Reserved Forest	1.786
82	82	182	Reserved Forest	Raigarh	1.786	82	82	182	Reserved Forest	1.786
83	83	183	Reserved Forest	Raigarh	1.786	83	83	183	Reserved Forest	1.786
84	84	184	Reserved Forest	Raigarh	1.786	84	84	184	Reserved Forest	1.786
85	85	185	Reserved Forest	Raigarh	1.786	85	85	185	Reserved Forest	1.786
86	86	186	Reserved Forest	Raigarh	1.786	86	86	186	Reserved Forest	1.786
87	87	187	Reserved Forest	Raigarh	1.786	87	87	187	Reserved Forest	1.786
88	88	188	Reserved Forest	Raigarh	1.786	88	88	188	Reserved Forest	1.786
89	89	189	Reserved Forest	Raigarh	1.786	89	89	189	Reserved Forest	1.786
90	90	190	Reserved Forest	Raigarh	1.786	90	90	190	Reserved Forest	1.786
91	91	191	Reserved Forest	Raigarh	1.786	91	91	191	Reserved Forest	1.786
92	92	192	Reserved Forest	Raigarh	1.786	92	92	192	Reserved Forest	1.786
93	93	193	Reserved Forest	Raigarh	1.786	93	93	193	Reserved Forest	1.786
94	94	194	Reserved Forest	Raigarh	1.786	94	94	194	Reserved Forest	1.786
95	95	195	Reserved Forest	Raigarh	1.786	95	95	195	Reserved Forest	1.786
96	96	196	Reserved Forest	Raigarh	1.786	96	96	196	Reserved Forest	1.786
97	97	197	Reserved Forest	Raigarh	1.786	97	97	197	Reserved Forest	1.786
98	98	198	Reserved Forest	Raigarh	1.786	98	98	198	Reserved Forest	1.786
99	99	199	Reserved Forest	Raigarh	1.786	99	99	199	Reserved Forest	1.786
100	100	200	Reserved Forest	Raigarh	1.786	100	100	200	Reserved Forest	1.786
101	101	201	Reserved Forest	Raigarh	1.786	101	101	201	Reserved Forest	1.786
102	102	202	Reserved Forest	Raigarh	1.786	102	102	202	Reserved Forest	1.786
103	103	203	Reserved Forest	Raigarh	1.786	103	103	203	Reserved Forest	1.786
104	104	204	Reserved Forest	Raigarh	1.786	104	104	204	Reserved Forest	1.786
105	105	205	Reserved Forest	Raigarh	1.786	105	105	205	Reserved Forest	1.786
106	106	206	Reserved Forest	Raigarh	1.786	106	106	206	Reserved Forest	1.786
107	107	207	Reserved Forest	Raigarh	1.786	107	107	207	Reserved Forest	1.786
108	108	208	Reserved Forest	Raigarh	1.786	108	108	208	Reserved Forest	1.786
109	109	209	Reserved Forest	Raigarh	1.786	109	109	209	Reserved Forest	1.786
110	110	210	Reserved Forest	Raigarh	1.786	110	110	210	Reserved Forest	1.786
111	111	211	Reserved Forest	Raigarh	1.786	111	111	211	Reserved Forest	1.786
112	112	212	Reserved Forest	Raigarh	1.786	112	112	212	Reserved Forest	1.786
113	113	213	Reserved Forest	Raigarh	1.786	113	113	213	Reserved Forest	1.786
114	114	214	Reserved Forest	Raigarh	1.786	114	114	214	Reserved Forest	1.786
115	115	215	Reserved Forest	Raigarh	1.786	115	115	215	Reserved Forest	1.786
116	116	216	Reserved Forest	Raigarh	1.786	116	116	216	Reserved Forest	1.786
117	117	217	Reserved Forest	Raigarh	1.786	117	117	217	Reserved Forest	1.786
118	118	218	Reserved Forest	Raigarh	1.786	118	118	218	Reserved Forest	1.786
119	119	219	Reserved Forest	Raigarh	1.786	119	119	219	Reserved Forest	1.786
120	120	220	Reserved Forest	Raigarh	1.786	120	120	220	Reserved Forest	1.786
121	121	221	Reserved Forest	Raigarh	1.786	121	121	221	Reserved Forest	1.786
122	122	222	Reserved Forest	Raigarh	1.786	122	122	222	Reserved Forest	1.786
123	123	223	Reserved Forest	Raigarh	1.786	123	123	223	Reserved Forest	1.786
124	124	224	Reserved Forest	Raigarh	1.786	124	124	224	Reserved Forest	1.786
125	125	225	Reserved Forest	Raigarh	1.786	125	125	225	Reserved Forest	1.786
126	126	226	Reserved Forest	Raigarh	1.786	126	126	226	Reserved Forest	1.786
127	127	227	Reserved Forest	Raigarh	1.786	127	127	227	Reserved Forest	1.786
128	128	228	Reserved Forest	Raigarh	1.786	128	128	228	Reserved Forest	1.786
129	129	229	Reserved Forest	Raigarh	1.786	129	129	229	Reserved Forest	1.786
130	130	230	Reserved Forest	Raigarh	1.786	130	130	2		

7.3.2 Raigarh-Hamipur Road Alignment on Forest Stock Map



Note: The map when printed from this page should be treated as NOT TO SCALE

Forest Map Showing 17.523 Ha of Land Proposed for Non Forest use for Strengthening & Widening of Raigarh - Hamirpur Road in District - Raigarh, C.G



Proposed Revenue Forest Land Area

Sr No	Forest No	Block No	Forest Type	Location	Area (Ha)	Proposed Area (Ha)
1	1000/1	100	Sal	Sal	1.00	1.00
2	1000/2	101	Sal	Sal	1.00	1.00
3	1000/3	102	Sal	Sal	1.00	1.00
4	1000/4	103	Sal	Sal	1.00	1.00
5	1000/5	104	Sal	Sal	1.00	1.00
6	1000/6	105	Sal	Sal	1.00	1.00
7	1000/7	106	Sal	Sal	1.00	1.00
8	1000/8	107	Sal	Sal	1.00	1.00
9	1000/9	108	Sal	Sal	1.00	1.00
10	1000/10	109	Sal	Sal	1.00	1.00
11	1000/11	110	Sal	Sal	1.00	1.00
12	1000/12	111	Sal	Sal	1.00	1.00
13	1000/13	112	Sal	Sal	1.00	1.00
14	1000/14	113	Sal	Sal	1.00	1.00
15	1000/15	114	Sal	Sal	1.00	1.00
16	1000/16	115	Sal	Sal	1.00	1.00
17	1000/17	116	Sal	Sal	1.00	1.00
18	1000/18	117	Sal	Sal	1.00	1.00
19	1000/19	118	Sal	Sal	1.00	1.00
20	1000/20	119	Sal	Sal	1.00	1.00
21	1000/21	120	Sal	Sal	1.00	1.00
22	1000/22	121	Sal	Sal	1.00	1.00
23	1000/23	122	Sal	Sal	1.00	1.00
24	1000/24	123	Sal	Sal	1.00	1.00
25	1000/25	124	Sal	Sal	1.00	1.00
26	1000/26	125	Sal	Sal	1.00	1.00
27	1000/27	126	Sal	Sal	1.00	1.00
28	1000/28	127	Sal	Sal	1.00	1.00
29	1000/29	128	Sal	Sal	1.00	1.00
30	1000/30	129	Sal	Sal	1.00	1.00
31	1000/31	130	Sal	Sal	1.00	1.00
32	1000/32	131	Sal	Sal	1.00	1.00
33	1000/33	132	Sal	Sal	1.00	1.00
34	1000/34	133	Sal	Sal	1.00	1.00
35	1000/35	134	Sal	Sal	1.00	1.00
36	1000/36	135	Sal	Sal	1.00	1.00
37	1000/37	136	Sal	Sal	1.00	1.00
38	1000/38	137	Sal	Sal	1.00	1.00
39	1000/39	138	Sal	Sal	1.00	1.00
40	1000/40	139	Sal	Sal	1.00	1.00
41	1000/41	140	Sal	Sal	1.00	1.00
42	1000/42	141	Sal	Sal	1.00	1.00
43	1000/43	142	Sal	Sal	1.00	1.00
44	1000/44	143	Sal	Sal	1.00	1.00
45	1000/45	144	Sal	Sal	1.00	1.00
46	1000/46	145	Sal	Sal	1.00	1.00
47	1000/47	146	Sal	Sal	1.00	1.00
48	1000/48	147	Sal	Sal	1.00	1.00
49	1000/49	148	Sal	Sal	1.00	1.00
50	1000/50	149	Sal	Sal	1.00	1.00
51	1000/51	150	Sal	Sal	1.00	1.00
52	1000/52	151	Sal	Sal	1.00	1.00
53	1000/53	152	Sal	Sal	1.00	1.00
54	1000/54	153	Sal	Sal	1.00	1.00
55	1000/55	154	Sal	Sal	1.00	1.00
56	1000/56	155	Sal	Sal	1.00	1.00
57	1000/57	156	Sal	Sal	1.00	1.00
58	1000/58	157	Sal	Sal	1.00	1.00
59	1000/59	158	Sal	Sal	1.00	1.00
60	1000/60	159	Sal	Sal	1.00	1.00
61	1000/61	160	Sal	Sal	1.00	1.00
62	1000/62	161	Sal	Sal	1.00	1.00
63	1000/63	162	Sal	Sal	1.00	1.00
64	1000/64	163	Sal	Sal	1.00	1.00
65	1000/65	164	Sal	Sal	1.00	1.00
66	1000/66	165	Sal	Sal	1.00	1.00
67	1000/67	166	Sal	Sal	1.00	1.00
68	1000/68	167	Sal	Sal	1.00	1.00
69	1000/69	168	Sal	Sal	1.00	1.00
70	1000/70	169	Sal	Sal	1.00	1.00
71	1000/71	170	Sal	Sal	1.00	1.00
72	1000/72	171	Sal	Sal	1.00	1.00
73	1000/73	172	Sal	Sal	1.00	1.00
74	1000/74	173	Sal	Sal	1.00	1.00
75	1000/75	174	Sal	Sal	1.00	1.00
76	1000/76	175	Sal	Sal	1.00	1.00
77	1000/77	176	Sal	Sal	1.00	1.00
78	1000/78	177	Sal	Sal	1.00	1.00
79	1000/79	178	Sal	Sal	1.00	1.00
80	1000/80	179	Sal	Sal	1.00	1.00
81	1000/81	180	Sal	Sal	1.00	1.00
82	1000/82	181	Sal	Sal	1.00	1.00
83	1000/83	182	Sal	Sal	1.00	1.00
84	1000/84	183	Sal	Sal	1.00	1.00
85	1000/85	184	Sal	Sal	1.00	1.00
86	1000/86	185	Sal	Sal	1.00	1.00
87	1000/87	186	Sal	Sal	1.00	1.00
88	1000/88	187	Sal	Sal	1.00	1.00
89	1000/89	188	Sal	Sal	1.00	1.00
90	1000/90	189	Sal	Sal	1.00	1.00
91	1000/91	190	Sal	Sal	1.00	1.00
92	1000/92	191	Sal	Sal	1.00	1.00
93	1000/93	192	Sal	Sal	1.00	1.00
94	1000/94	193	Sal	Sal	1.00	1.00
95	1000/95	194	Sal	Sal	1.00	1.00
96	1000/96	195	Sal	Sal	1.00	1.00
97	1000/97	196	Sal	Sal	1.00	1.00
98	1000/98	197	Sal	Sal	1.00	1.00
99	1000/99	198	Sal	Sal	1.00	1.00
100	1000/100	199	Sal	Sal	1.00	1.00

Proposed PT RF Land Area

Sr No	Forest No	Block No	Forest Type	Location	Area (Ha)	Proposed Area (Ha)
1	1000/1	100	Sal	Sal	1.00	1.00
2	1000/2	101	Sal	Sal	1.00	1.00
3	1000/3	102	Sal	Sal	1.00	1.00
4	1000/4	103	Sal	Sal	1.00	1.00
5	1000/5	104	Sal	Sal	1.00	1.00
6	1000/6	105	Sal	Sal	1.00	1.00
7	1000/7	106	Sal	Sal	1.00	1.00
8	1000/8	107	Sal	Sal	1.00	1.00
9	1000/9	108	Sal	Sal	1.00	1.00
10	1000/10	109	Sal	Sal	1.00	1.00
11	1000/11	110	Sal	Sal	1.00	1.00
12	1000/12	111	Sal	Sal	1.00	1.00
13	1000/13	112	Sal	Sal	1.00	1.00
14	1000/14	113	Sal	Sal	1.00	1.00
15	1000/15	114	Sal	Sal	1.00	1.00
16	1000/16	115	Sal	Sal	1.00	1.00
17	1000/17	116	Sal	Sal	1.00	1.00
18	1000/18	117	Sal	Sal	1.00	1.00
19	1000/19	118	Sal	Sal	1.00	1.00
20	1000/20	119	Sal	Sal	1.00	1.00
21	1000/21	120	Sal	Sal	1.00	1.00
22	1000/22	121	Sal	Sal	1.00	1.00
23	1000/23	122	Sal	Sal	1.00	1.00
24	1000/24	123	Sal	Sal	1.00	1.00
25	1000/25	124	Sal	Sal	1.00	1.00
26	1000/26	125	Sal	Sal	1.00	1.00
27	1000/27	126	Sal	Sal	1.00	1.00
28	1000/28	127	Sal	Sal	1.00	1.00
29	1000/29	128	Sal	Sal	1.00	1.00
30	1000/30	129	Sal	Sal	1.00	1.00
31	1000/31	130	Sal	Sal	1.00	1.00
32	1000/32	131	Sal	Sal	1.00	1.00
33	1000/33	132	Sal	Sal	1.00	1.00
34	1000/34	133	Sal	Sal	1.00	1.00
35	1000/35	134	Sal	Sal	1.00	1.00
36	1000/36	135	Sal	Sal	1.00	1.00
37	1000/37	136	Sal	Sal	1.00	1.00
38	1000/38	137	Sal	Sal	1.00	1.00
39	1000/39	138	Sal	Sal	1.00	1.00
40	1000/40	139	Sal	Sal	1.00	1.00
41	1000/41	140	Sal	Sal	1.00	1.00
42	1000/42	141	Sal	Sal	1.00	1.00
43	1000/43	142	Sal	Sal	1.00	1.00
44	1000/44	143	Sal	Sal	1.00	1.00
45	1000/45	144	Sal	Sal	1.00	1.00
46	1000/46	145	Sal	Sal	1.00	1.00
47	1000/47	146	Sal	Sal	1.00	1.00
48	1000/48	147	Sal	Sal	1.00	1.00
49	1000/49	148	Sal	Sal	1.00	1.00
50	1000/50	149	Sal	Sal	1.00	1.00
51	1000/51	150	Sal	Sal	1.00	1.00
52	1000/52	151	Sal	Sal	1.00	1.00
53	1000/53	152	Sal	Sal	1.00	1.00
54	1000/54	153	Sal	Sal	1.00	1.00
55	1000/55	154	Sal	Sal	1.00	1.00
56	1000/56	155	Sal	Sal	1.00	1.00
57	1000/57	156	Sal	Sal	1.00	1.00
58	1000/58	157	Sal	Sal	1.00	1.00
59	1000/59	158	Sal	Sal	1.00	1.00
60	1000/60	159	Sal	Sal	1.00	1.00
61	1000/61	160	Sal	Sal	1.00	1.00
62	1000/62	161	Sal	Sal	1.00	1.00
63	1000/63	162	Sal	Sal	1.00	1.00
64	1000/64	163	Sal	Sal	1.00	1.00
65	1000/65	164	Sal	Sal	1.00	1.00
66	1000/66	165	Sal	Sal	1.00	1.00
67	1000/67	166	Sal	Sal	1.00	1.00
68	1000/68	167	Sal	Sal	1.00	1.00