Original Drawing Size A1

Project :

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

Subject :

KD 6 : Draft Detailed Project Report

Volume-IX

Drawings

PRELIMINARY

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	SIXTH DRAFT (KD-6)	PRa	RMe	AKg
E	DEC 2015	FIFTH DRAFT (KD-5)	RMe	RMe	AKg
D	SEP 2015	FOURTH DRAFT (KD-4)	ABa	RMe	AKg
C	AUG 2015	THIRD DRAFT (KD-3)	ABa	RMe	AKg
B	AUG 2015	SECOND DRAFT (KD-2)	ABa	RMe	AKg
A	JULY 2015	FIRST DRAFT (KD-1)	ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	-	-	22.07.15
Name	ABa/PRa	RMe	-	-	AKg/FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

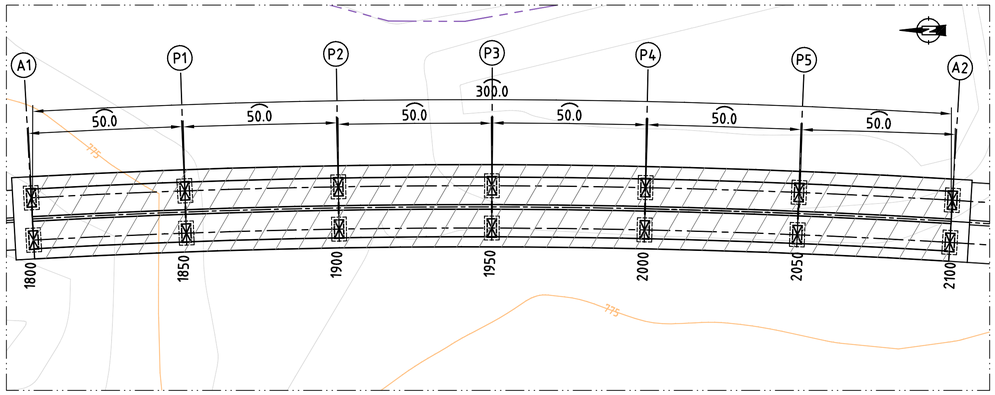
CLIENT :

सड़क परिवहन और राजमार्ग मंत्रालय
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
भारत सरकार Government of India

Karnataka
Public Works, Ports &
Inland Water Transport Department

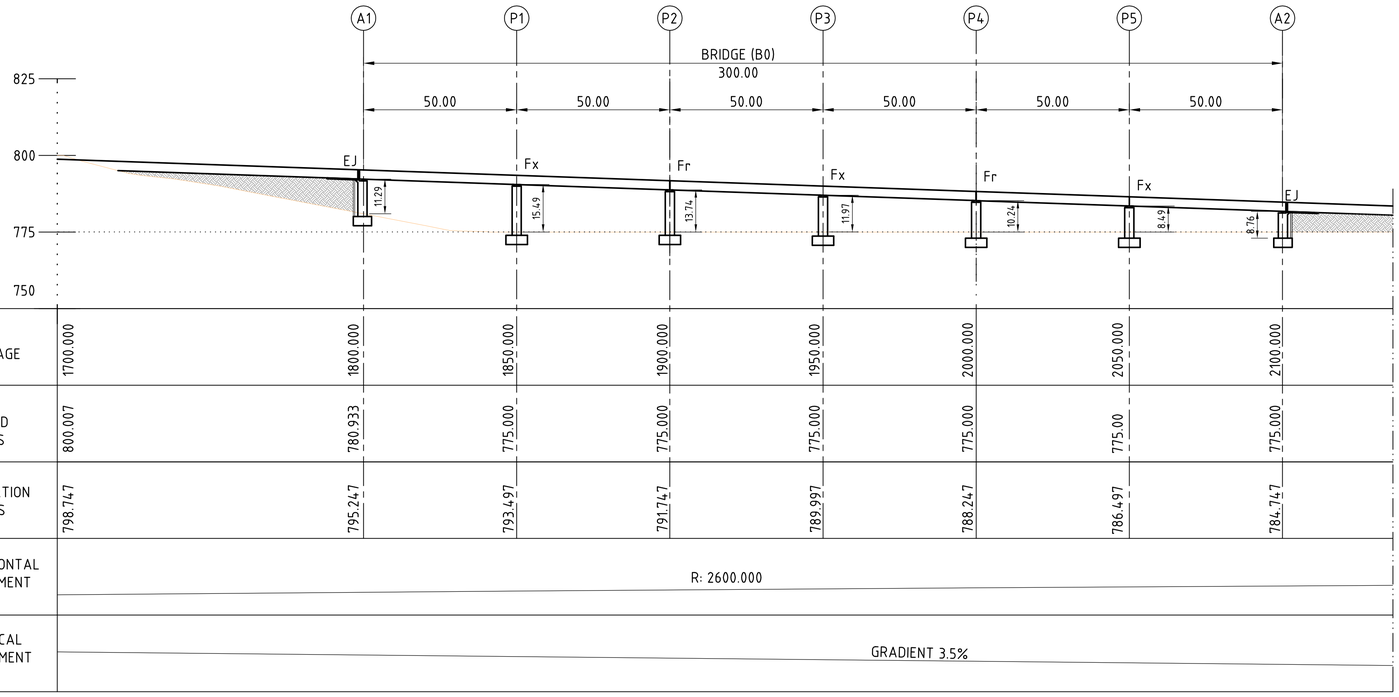
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

Original Drawing Size A1



GENERAL ARRANGEMENT PLAN

SCALE 1:1000



GENERAL ARRANGEMENT L-SECTION

SCALE 1:1000

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN mm AND LEVELS ARE SHOWN IN METERS UNLESS OTHERWISE SPECIFIED.
2. DO NOT SCALE THE DIMENSIONS.
3. THE FOUNDATION LEVELS SHOWN IN THE DRAWING ARE TO BE VERIFIED AT SITE BASED ON CONFIRMATORY SUBSOIL INVESTIGATION PRIOR TO COMMENCEMENT OF WORK.
4. THIS DRAWING SHALL BE READ ALONG WITH RELATED REFERENCE DRAWINGS.

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-015 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND SUBMISSION (KD-6)	ABa/PRa	RMe	AKg
A	DEC 2015	FIRST SUBMISSION (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	PRa/RMe	RMe	ADh/AKg	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR0-1505_B.dwg, 2015-12-18

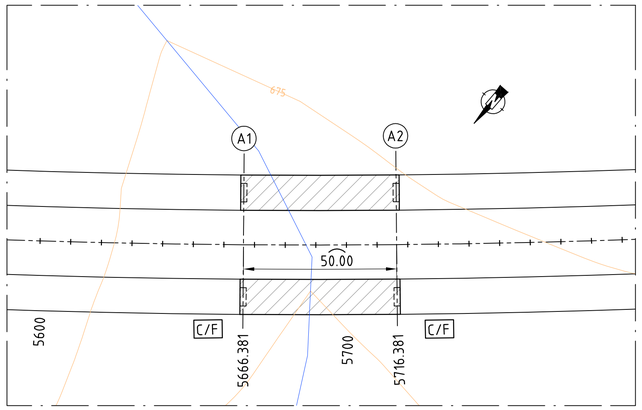
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE 'B0 '
GENERAL ARRANGEMENT PLAN & SECTION

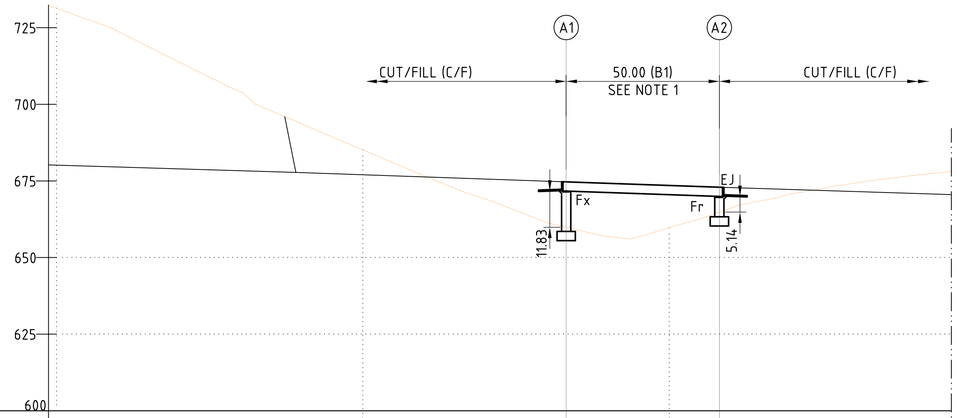
DRAWING NUMBER	REV
SHGA-FS-BR0-1505	B

SCALE	MONTH (Current Issue)
1:1000	DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:1000



CHAINAGE	5500.000	5600.000	5666.381	5700.000	5716.381	
GROUND LEVELS	731.342	685.122	659.877	659.730	664.823	
FORMATION LEVELS	680.145	677.035	677.4712	673.535	672.962	
HORIZONTAL ALIGNMENT	R: 3000.000 L: 617.427					

LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

NOTES:

1. SPAN ARRANGEMENTS, EXTENT OF CUT/FILL SHOWN IN DRAWING ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-015, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-015 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
C	DEC 2015	THIRD SUBMISSION (KD-6)	ABa/PRa	RMe	AKg
B	DEC 2015	SECOND SUBMISSION (KD-5)	ABa/PRa	RMe	AKg
A	SEP 2015	FIRST DRAFT	ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15	
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa, R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR1-1511_C.dwg, 2015-12-18

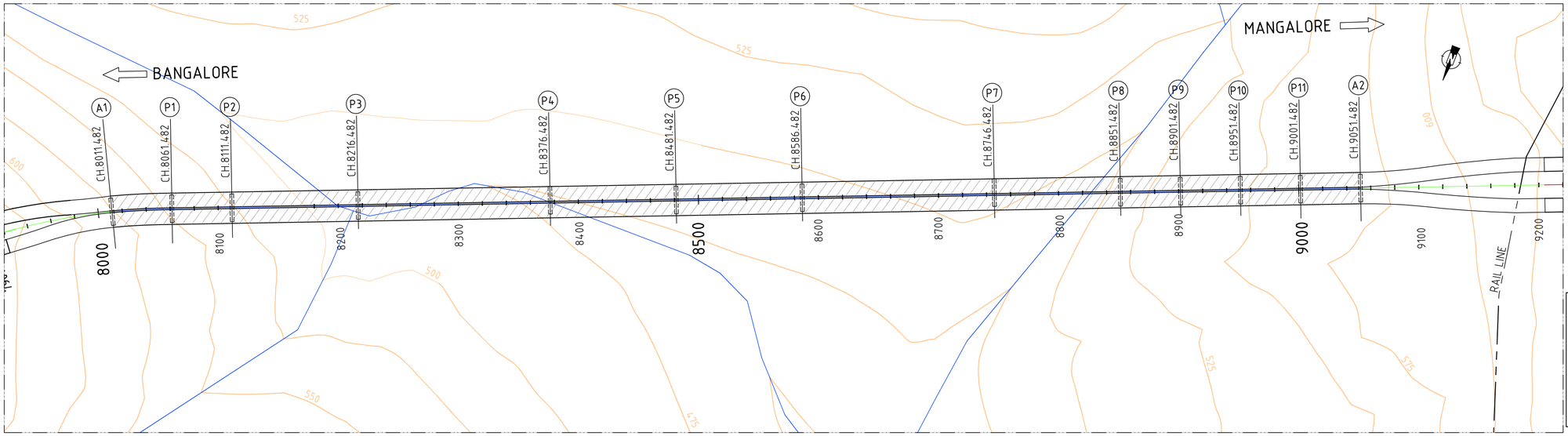
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE No. B1
GENERAL ARRANGEMENT PLAN AND L-SECTION

DRAWING NUMBER: SHGA-FS-BR1-1511
REV: C

SCALE: 1:1000
MONTH (Current Issue): DEC 2015

Original Drawing Size A1

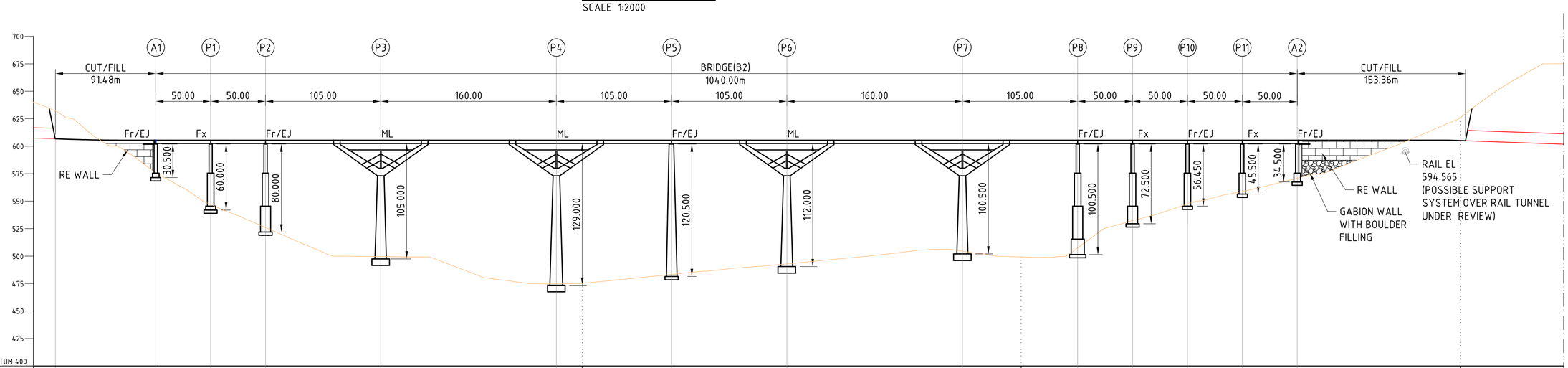


PLAN-BRIDGE 'B2'

SCALE 1:2000

NOTES:

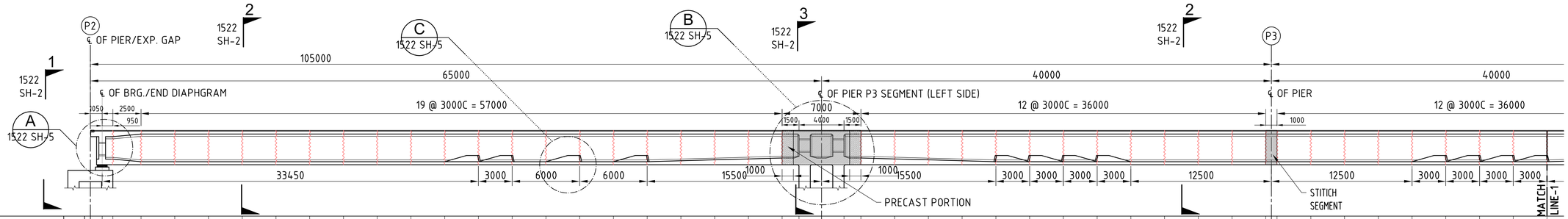
1. SPAN ARRANGEMENTS, CUT/FILL OR TUNNEL EXTENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-013,SHGA-FS-BR2-1522 & 1523 FOR GENERAL PIERS SECTIONS ADAPTABILITY .



| | | |

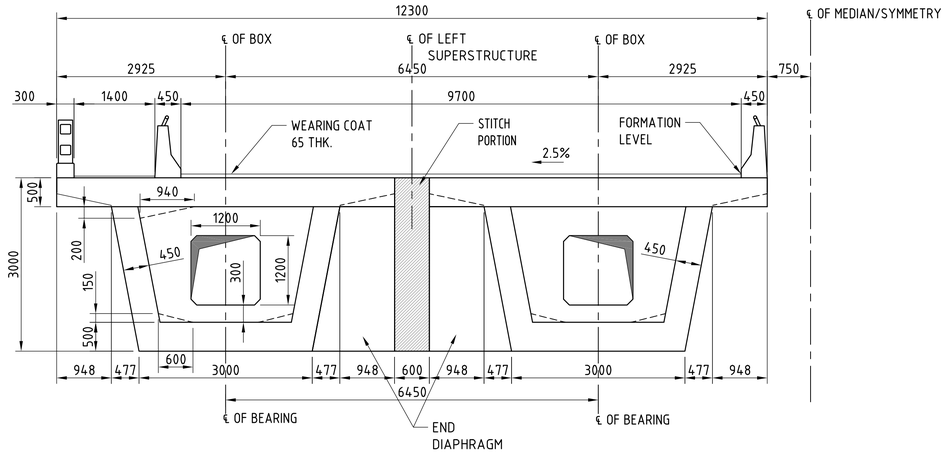
Original Drawing Size A1

MANGALORE ⟸ BANGALORE ⟹

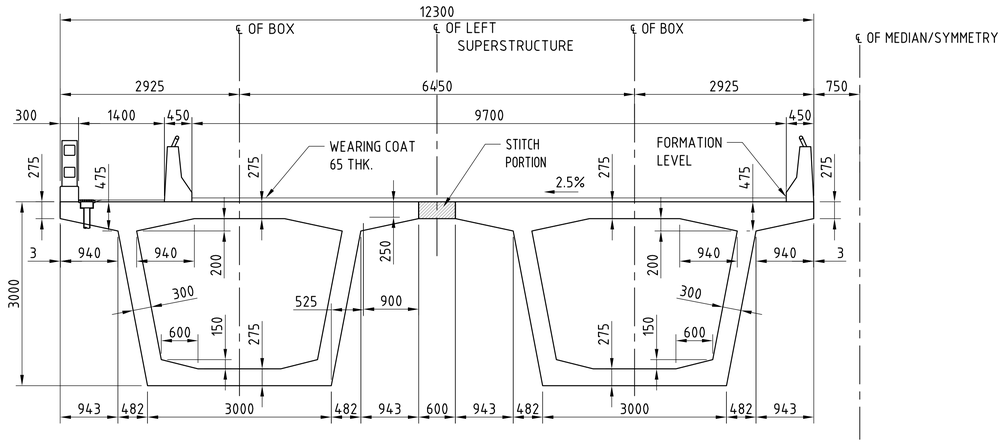


| | | |

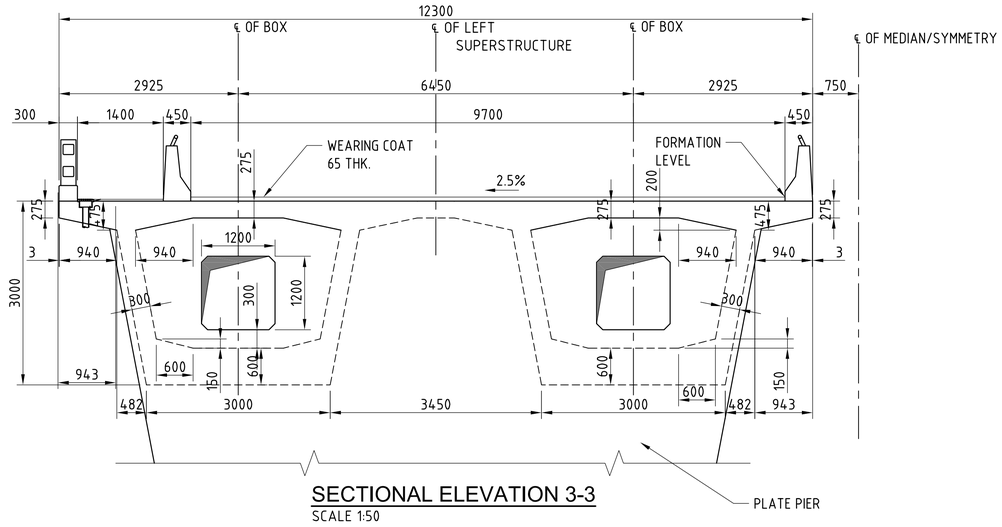
Original Drawing Size A1



SECTION ELEVATION 1-1
SCALE 1:50



CROSS SECTION 2-2
SCALE 1:50



SECTIONAL ELEVATION 3-3
SCALE 1:50

SCALE 1 : 50

1m 0 1m 5m

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC2015	SECOND DRAFT(KD6)	ABa	RMe/ADh	AKg
A	DEC2015	FIRST DRAFT(KD5)	ABa	RMe/ADh	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC15	DEC 15	DEC 15	DEC 15	DEC 15
Name	ABa	RMe	ADh	ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa; R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR2-1522_B-4 SHEETS.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE NO.'B2 '
DIMENSION DETAILS OF SUPERSTRUCTURE BETWEEN PIERS P2 TO P5 (SHEET-2)

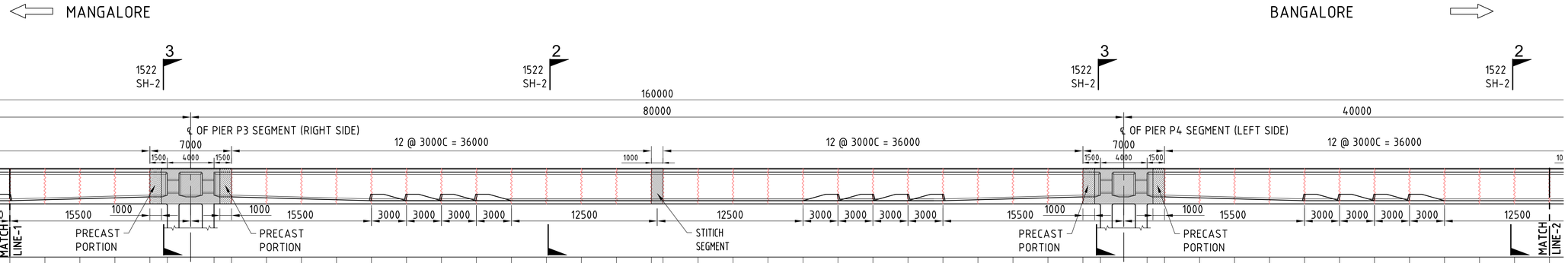
DRAWING NUMBER
SHGA-FS-BR2-1522

REV
B

SCALE
1:50

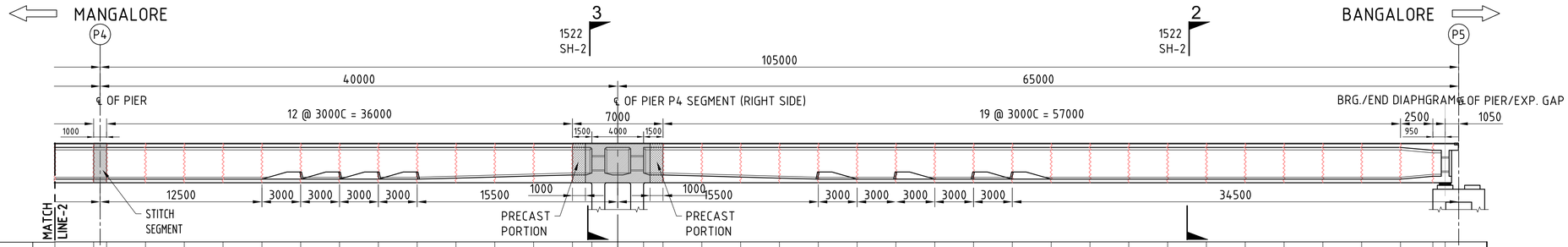
MONTH
(Current Issue) DEC 2015

Original Drawing Size A1



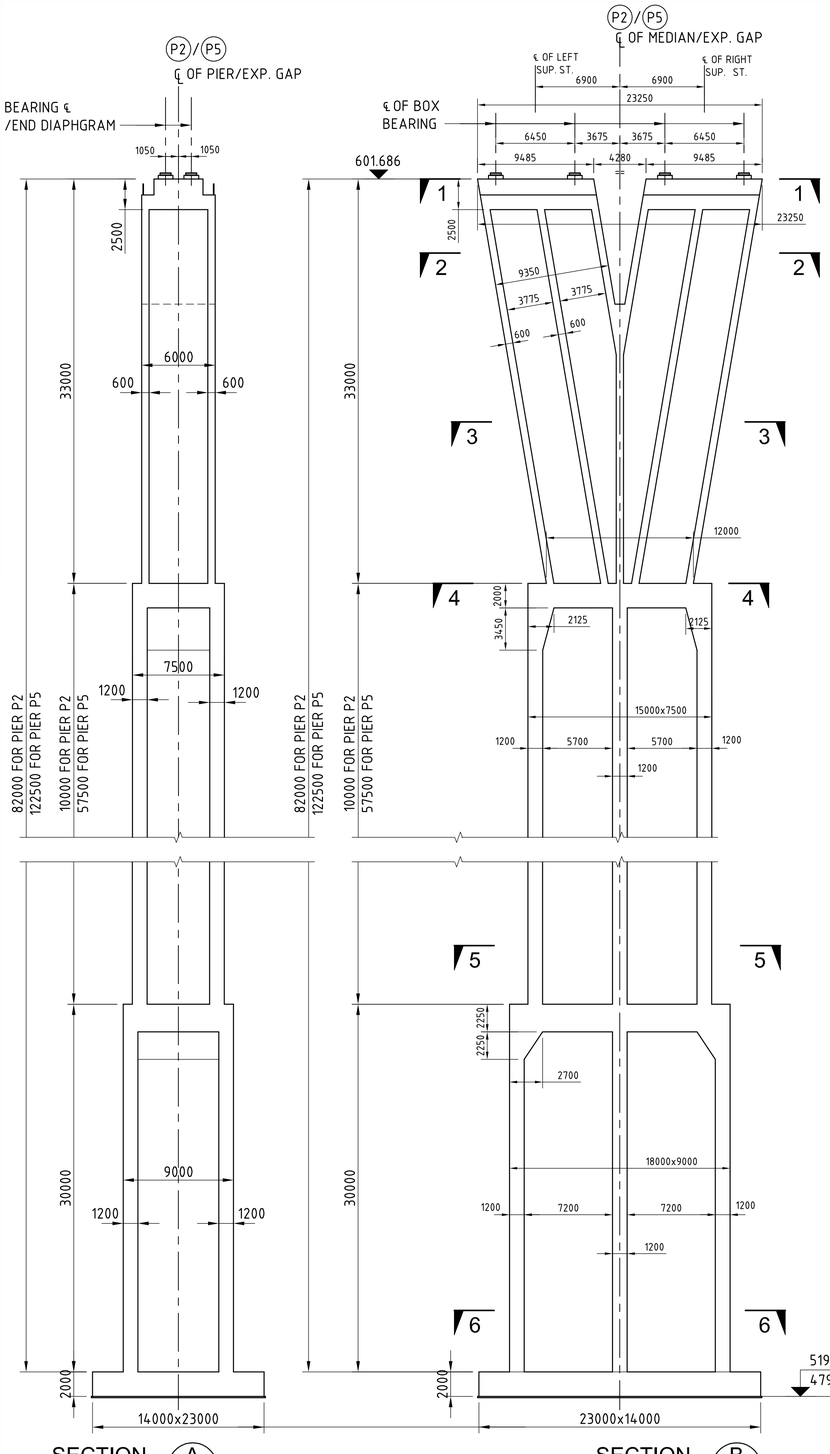
| | | |

Original Drawing Size A1



| | | |

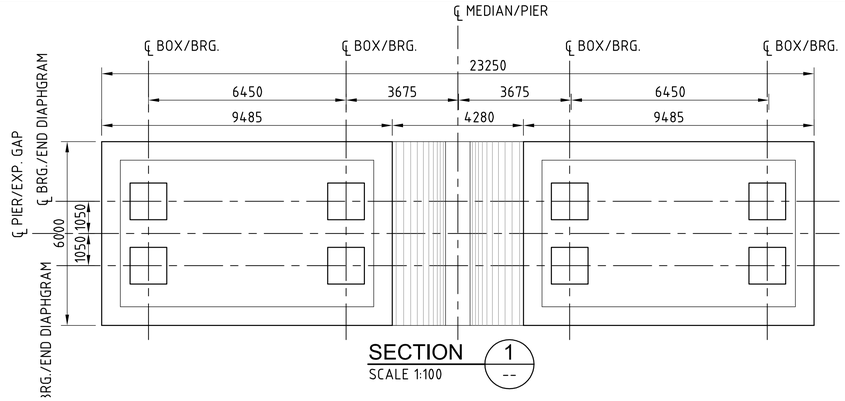
Original Drawing Size A1



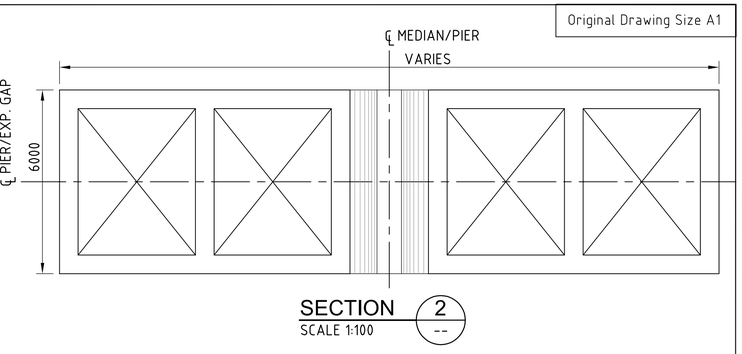
SECTION A
SCALE 1:250

DIMENSION DETAILS OF PIER P2 AND P5

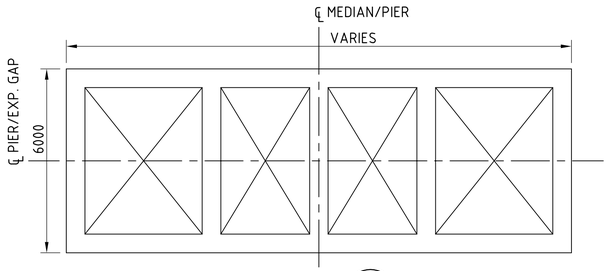
SECTION B
SCALE 1:250



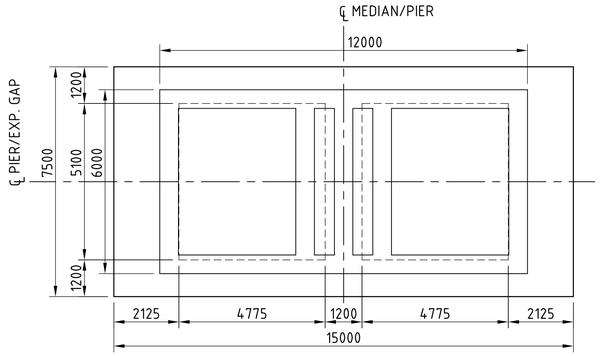
SECTION 1
SCALE 1:100



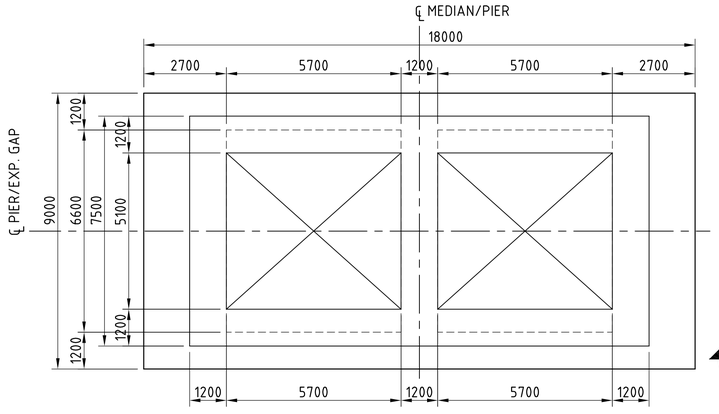
SECTION 2
SCALE 1:100



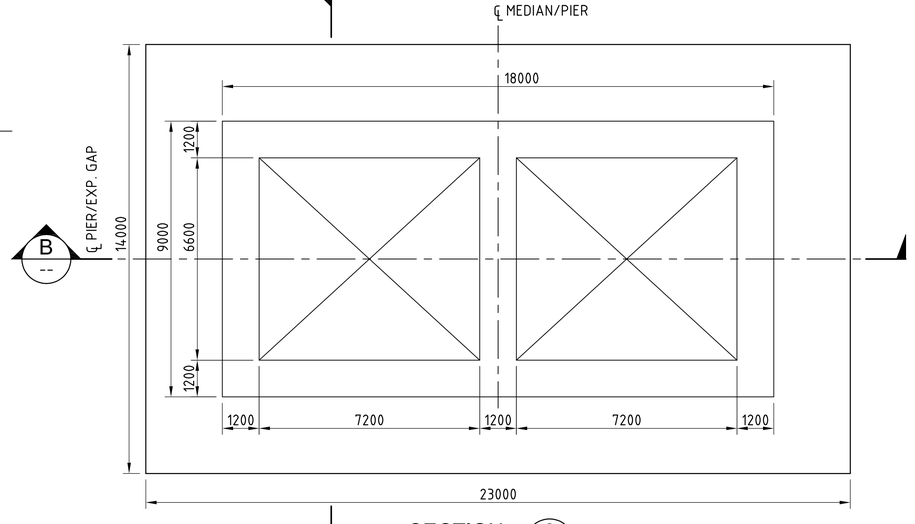
SECTION 3
SCALE 1:100



SECTION 4
SCALE 1:100



SECTION 5
SCALE 1:100



SECTION 6
SCALE 1:100

SCALE 1 : 250
10m 0 10m 20m 25m

SCALE 1 : 100
5m 0 5m 10m

PRELIMINARY

NOTES:

1. ALL DIMENSIONS ARE IN mm. AND LEVELS IN METERS UNLESS STATED OTHERWISE.
2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. CONCRETE GRADE FOR SUBSTRUCTURE SHALL BE M50.
4. DIMENSION AND LEVELS GIVEN IN THE DRAWING MUST BE VERIFIED AT SITE BEFORE STARTING THE WORK FOR FEASIBILITY.
5. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SHEET 2 OF 3 AND 3 OF 3 OF THIS DRAWING.

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND SUBMISSION (KD-6)	PRa	RMe	AKg
A	DEC 2015	FIRST SUBMISSION (KD-5)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	PRa	RMe	ADh	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; P:Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR2-1523_B-3 SHEETS.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE 'B2 '
DIMENSION DETAILS OF PIERS P2 , P3, P4 AND P5- SHEET 1

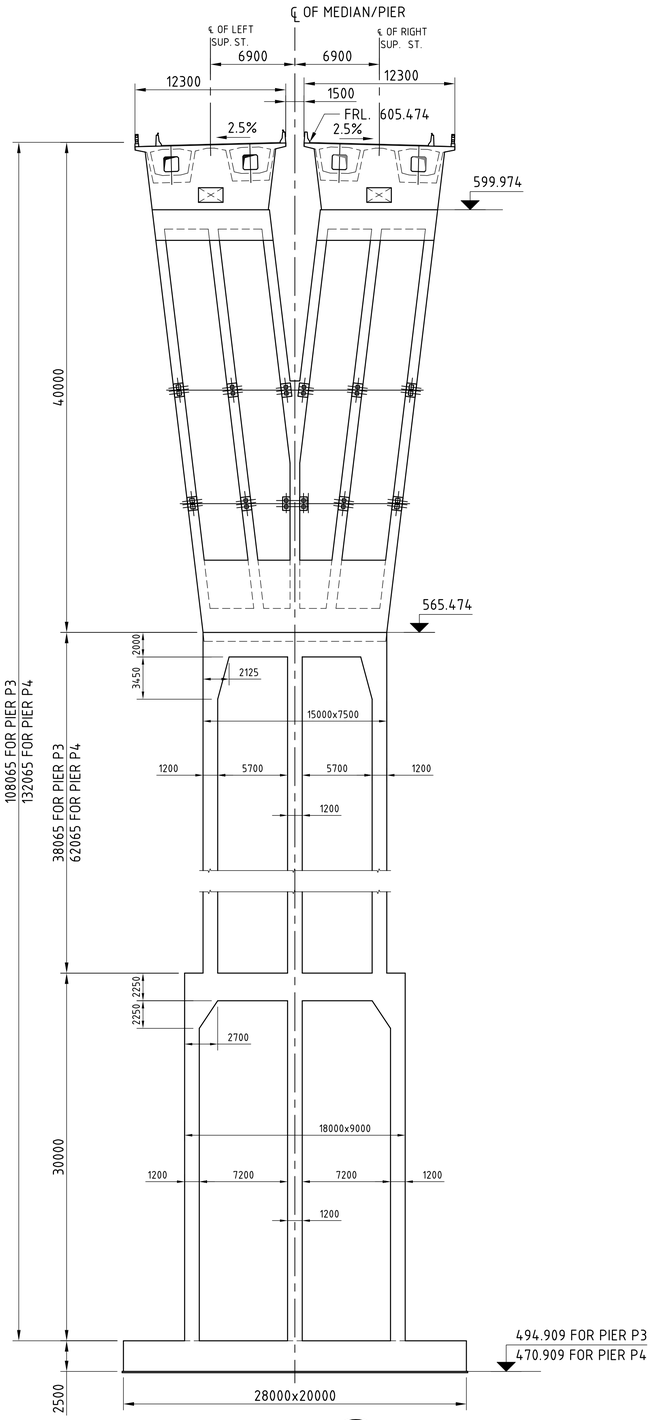
DRAWING NUMBER
SHGA-FS-BR2-1523

REV
B

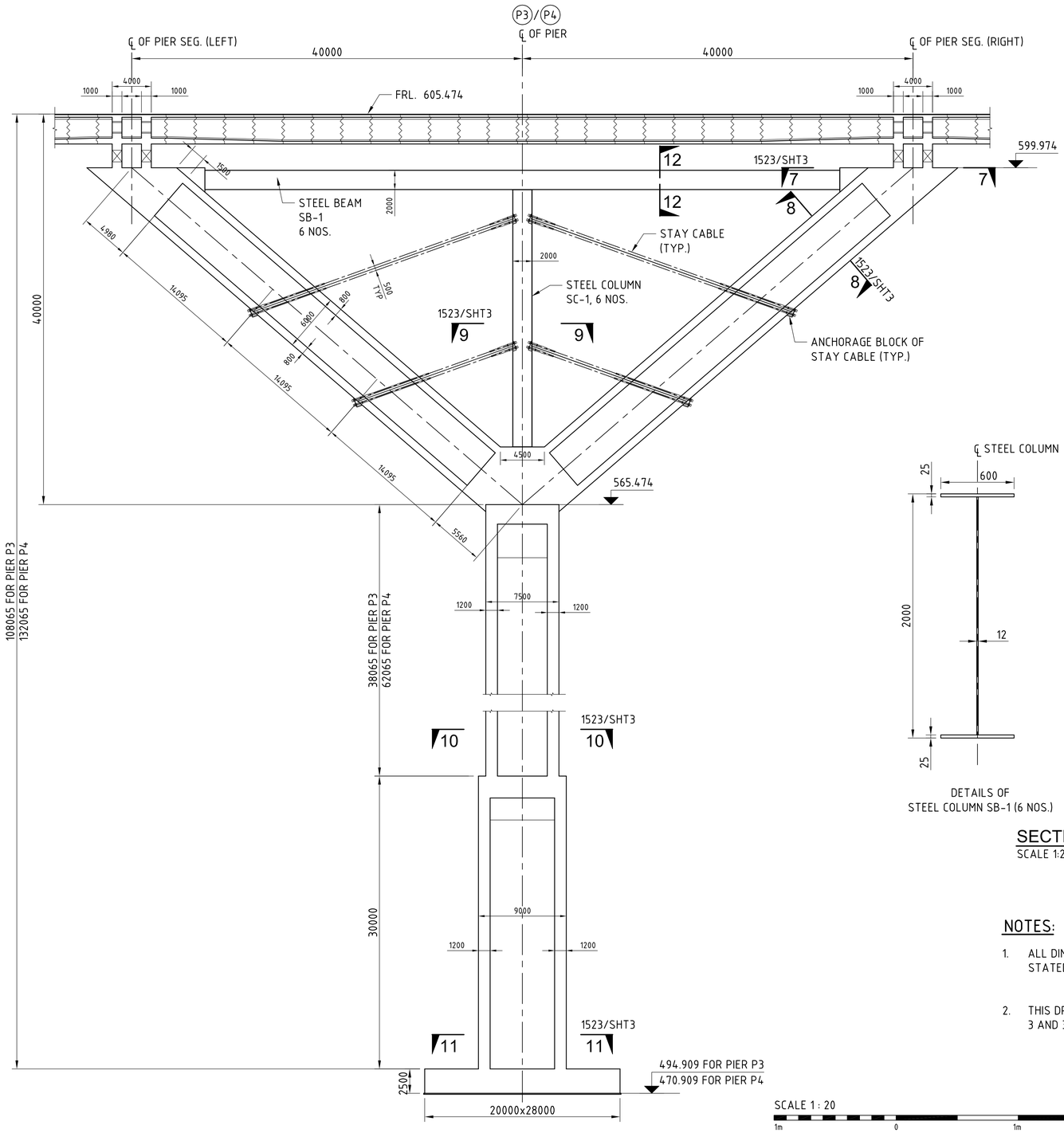
SCALE
1:250, 1:100

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1

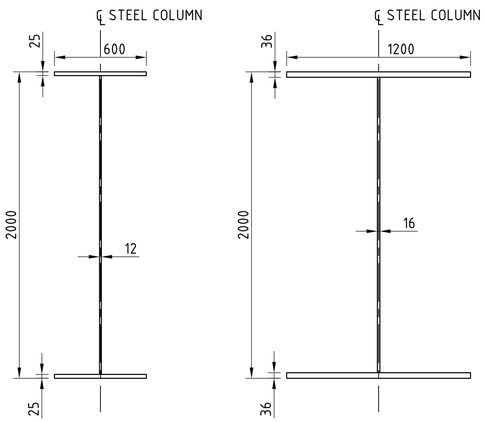


SECTION D (1523 SHT3)
SCALE 1:250



SECTION C (1523 SHT3)
SCALE 1:250

DIMENSION DETAILS OF PIER P3 AND P4



DETAILS OF STEEL COLUMN SB-1 (6 NOS.)

DETAILS OF STEEL COLUMN SC-1 (6 NOS.)

SECTION 12 (1523 SHT2 & 3)
SCALE 1:20

NOTES:

1. ALL DIMENSIONS ARE IN mm. AND LEVELS IN METERS UNLESS STATED OTHERWISE.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SHEET 1 OF 3 AND 3 OF 3 OF THIS DRAWING.

SCALE 1 : 20
1m 0 1m 2m

SCALE 1 : 250
10m 0 10m 20m 25m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND SUBMISSION (KD-6)	PRa	RMe	AKg
A	DEC 2015	FIRST SUBMISSION (KD-5)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	PRa	RMe	ADh	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR2-1523_B-3 SHEETS.dwg, 2015-12-18

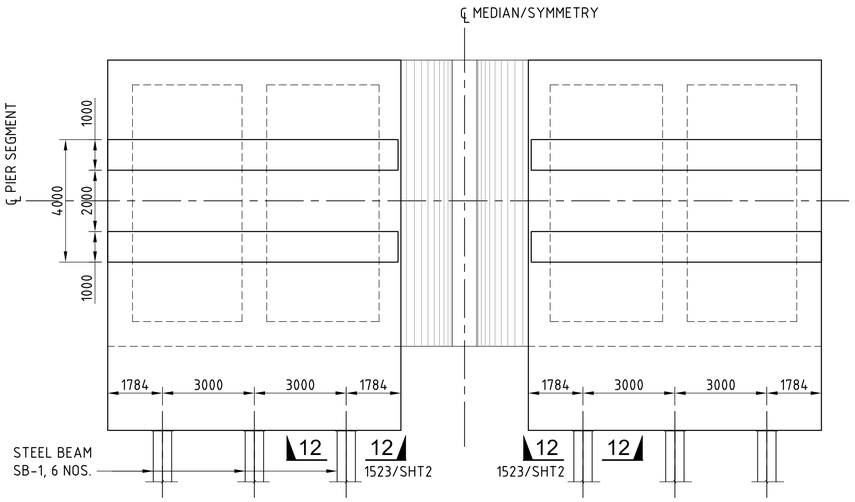
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE 'B2 '
DIMENSION DETAILS OF PIERS P2 , P3, P4 AND P5- SHEET 2

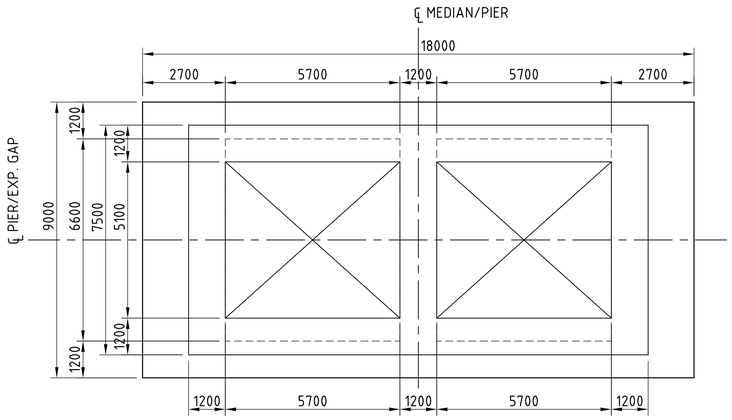
DRAWING NUMBER: SHGA-FS-BR2-1523
REV: B

SCALE: 1:250, 1:20
MONTH (Current Issue): DEC 2015

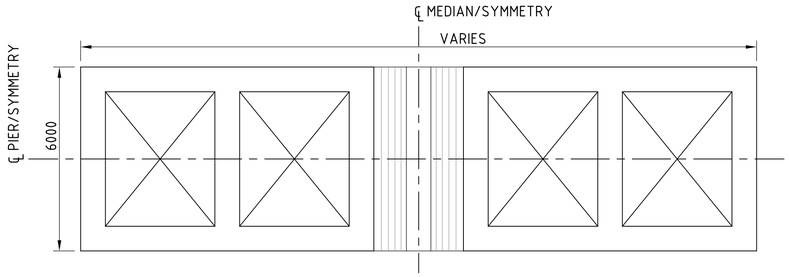
Original Drawing Size A1



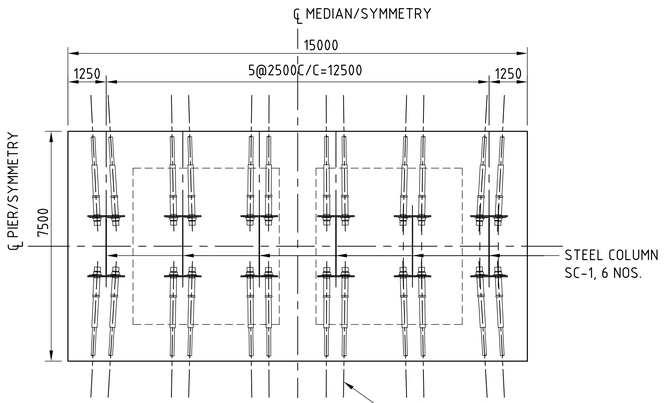
SECTION 7 — SCALE 1:100 — 1523 SHT2



SECTION 10 — SCALE 1:100 — 1523 SHT2



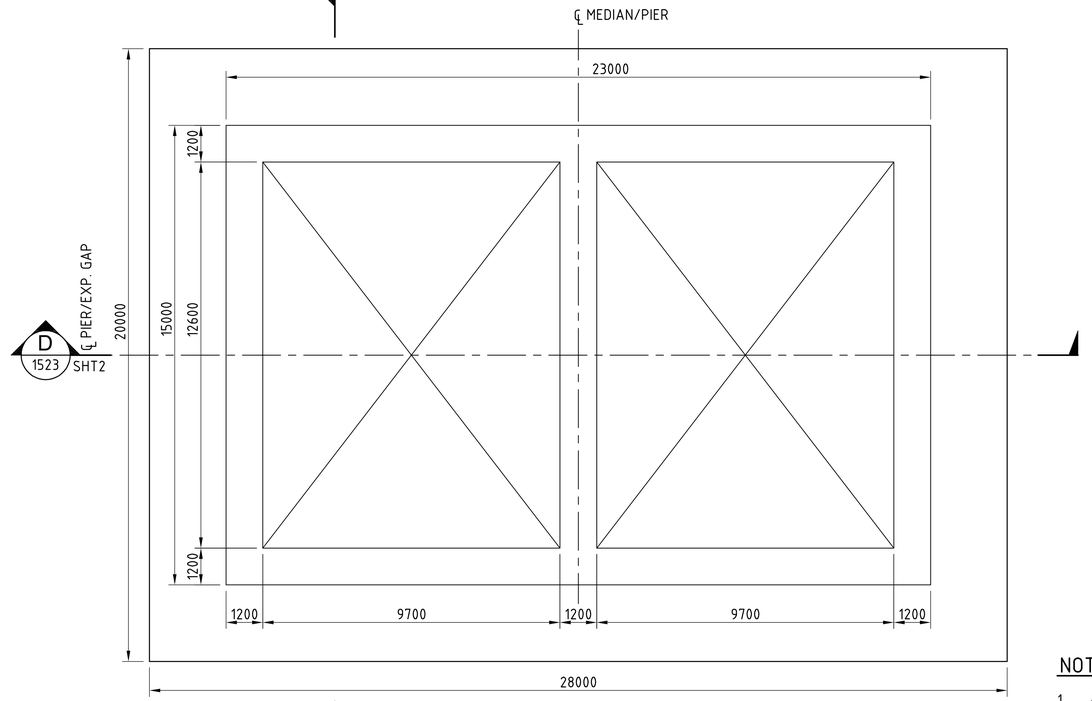
SECTION 8 — SCALE 1:100 — 1523 SHT2



SECTION 9 — SCALE 1:100 — 1523 SHT2

C — 1523 SHT2

D — 1523 SHT2



SECTION 11 — SCALE 1:100 — 1523 SHT2

SCALE 1 : 100

5m 0 5m 10m

NOTES:

1. ALL DIMENSIONS ARE IN mm. AND LEVELS IN METERS UNLESS STATED OTHERWISE.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SHEET 1 OF 3 AND 2 OF 3 OF THIS DRAWING.

PRELIMINARY

REFERENCE DRAWINGS:

.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND SUBMISSION (KD-6)	PRa	RMe	AKg
A	DEC 2015	FIRST SUBMISSION (KD-5)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	PRa	RMe	ADh	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

\\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR2-1523_B-3 SHEETS.dwg, 2015-12-18

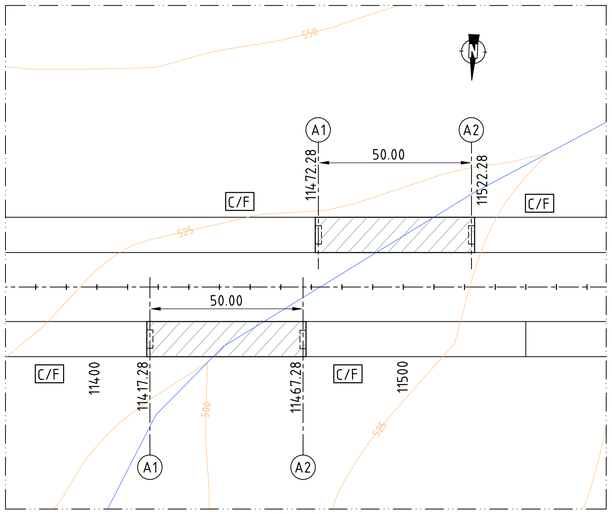
CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: BRIDGE 'B2 ' DIMENSION DETAILS OF PIERS P2 , P3, P4 AND P5- SHEET 3

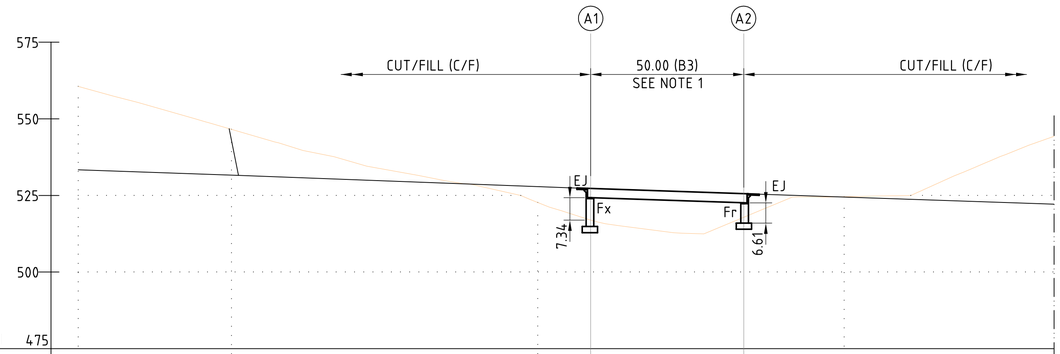
DRAWING NUMBER: SHGA-FS-BR2-1523 — REV: B

SCALE: 1:100 — MONTH (Current Issue): DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:1000



DATUM 475

CHAINAGE	11250.000	11300.000	11400.000	11417.280	11467.280	11500.000	
GROUND LEVELS	560.583	546.577	522.692	516.930	517.886	524.564	
FORMATION LEVELS	533.378	531.628	527.880	527.275	525.586	524.480	
HORIZONTAL ALIGNMENT			L =1229.645				

LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

NOTES:

1. SPAN ARRANGEMENTS, CUT/FILL & TUNNEL EXTENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-015, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-015 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▭ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
C	DEC 2015	BRIDGE LOCATION MODIFIED (KD-6)	PRa	RMe	AKg
B	DEC 2015	SECOND SUBMISSION (KD-5)	ABa/PRa	RMe	AKg
A	SEP 2015	FIRST DRAFT	ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	ABa/PRa	RMe	ADh	AKg	Frk
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR3-1531_C.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE-B3
GENERAL ARRANGEMENT
PLAN & SECTION

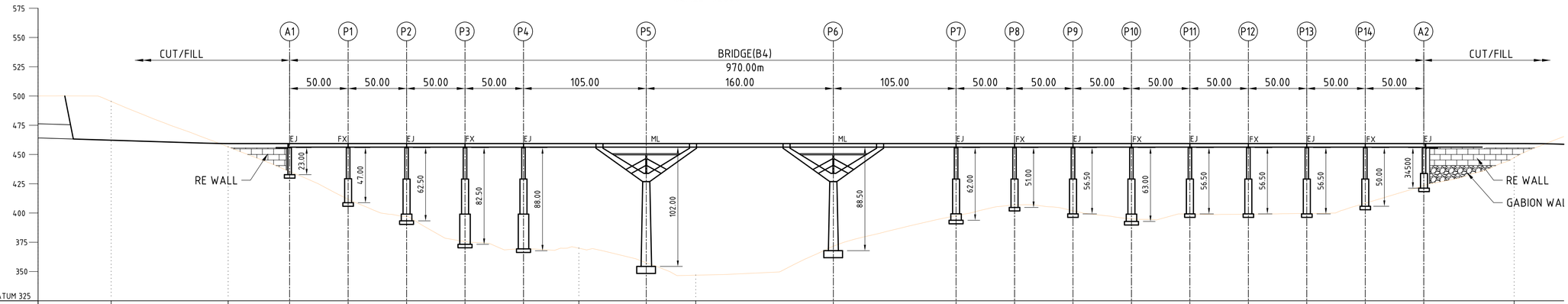
PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING NUMBER: SHGA-FS-BR3-1531
REV: C
SCALE: 1:1000
MONTH (Current Issue): DEC 2015

Original Drawing Size A1

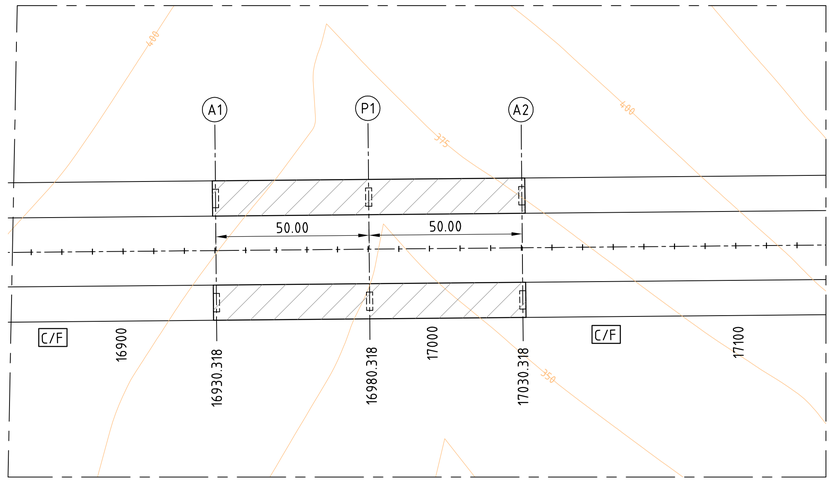
PLAN (BRIDGE 'B4')

SCALE 1:2000

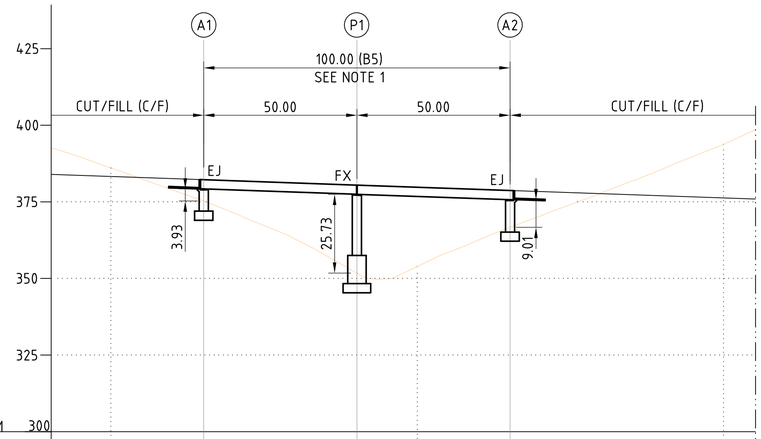


| | | |

Original Drawing Size A1



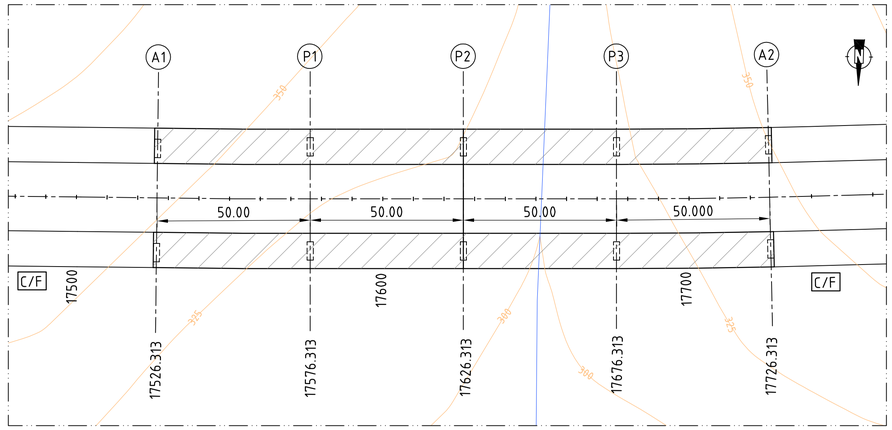
PLAN
SCALE 1:1000



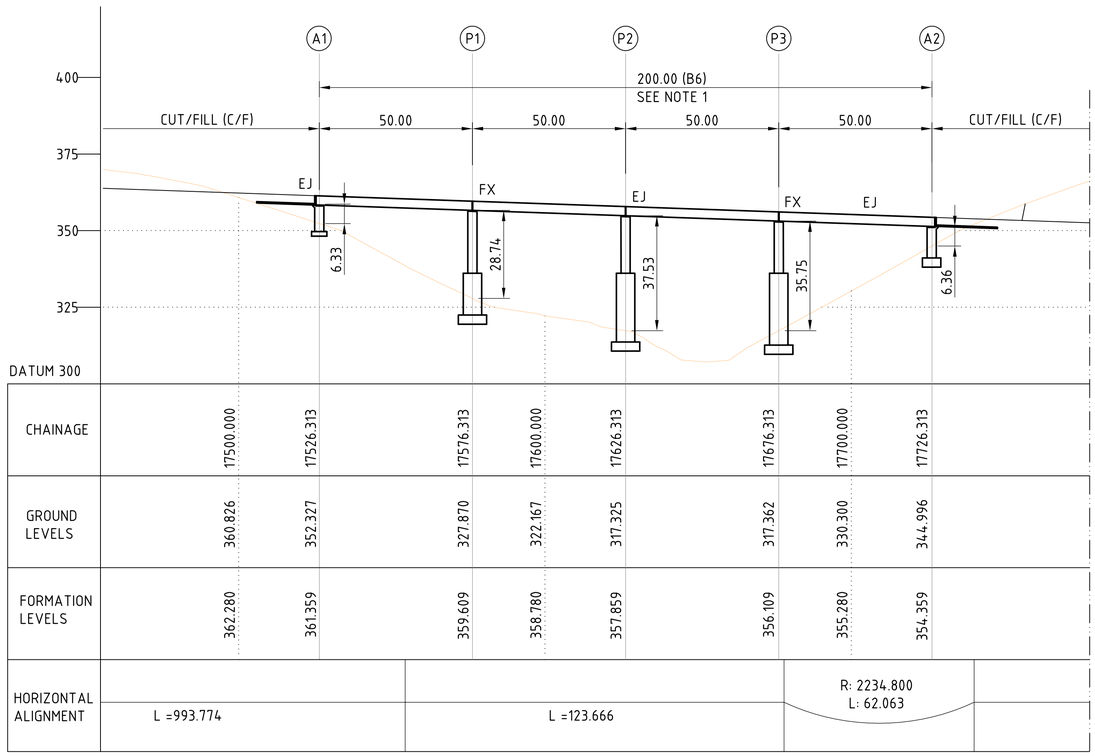
DATUM 300

| | | |

Original Drawing Size A1



PLAN
SCALE 1:1000



LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

NOTES:
1. SPAN ARRANGEMENTS, CUT & FILL/TUNNEL EXTENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-015, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000
SHGA-FS-GEN-015 (TYPICAL CROSS-SECTION)

LEGEND:
EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▭ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
C	DEC 2015	MINOR CORRECTIONS / THIRD SUBMISSION (KD-6)	ABa/PRa	RMe	AKg
B	DEC 2015	SECOND SUBMISSION (KD-5)	ABa/PRa	RMe	AKg
A	SEP 2015	FIRST DRAFT (INCEPTION STAGE)	ABa	RMe	AKg

QUALITY ASSURANCE
The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa	RMe	ADh	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

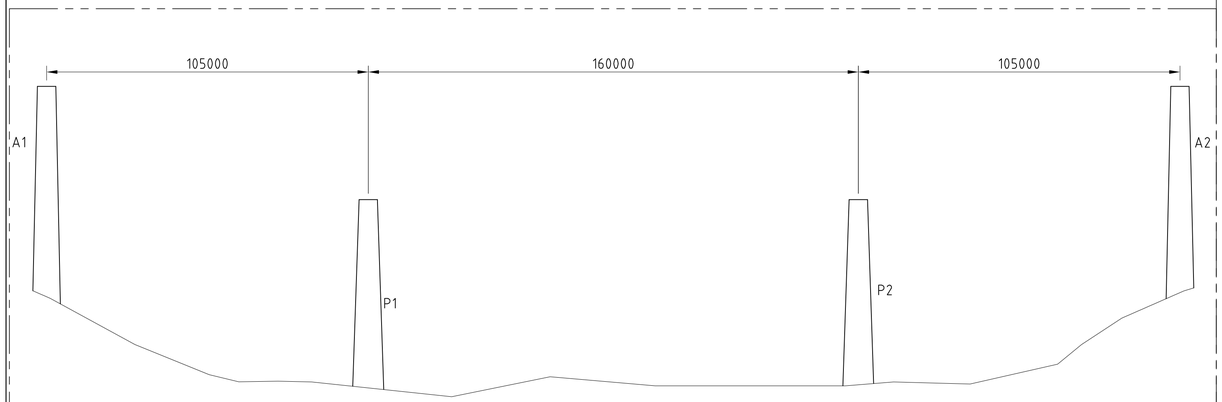
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; PRa; R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-BR6-1561_C.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
BRIDGE 'B6 '
GENERAL ARRANGEMENT PLAN & SECTION

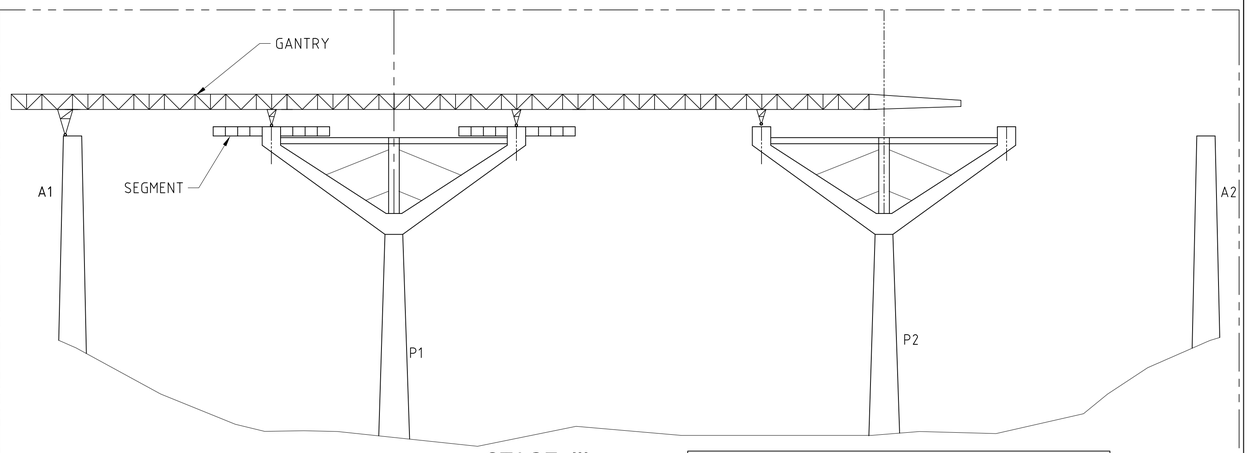
DRAWING NUMBER: SHGA-FS-BR6-1561
REV: C
SCALE: 1:1000
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



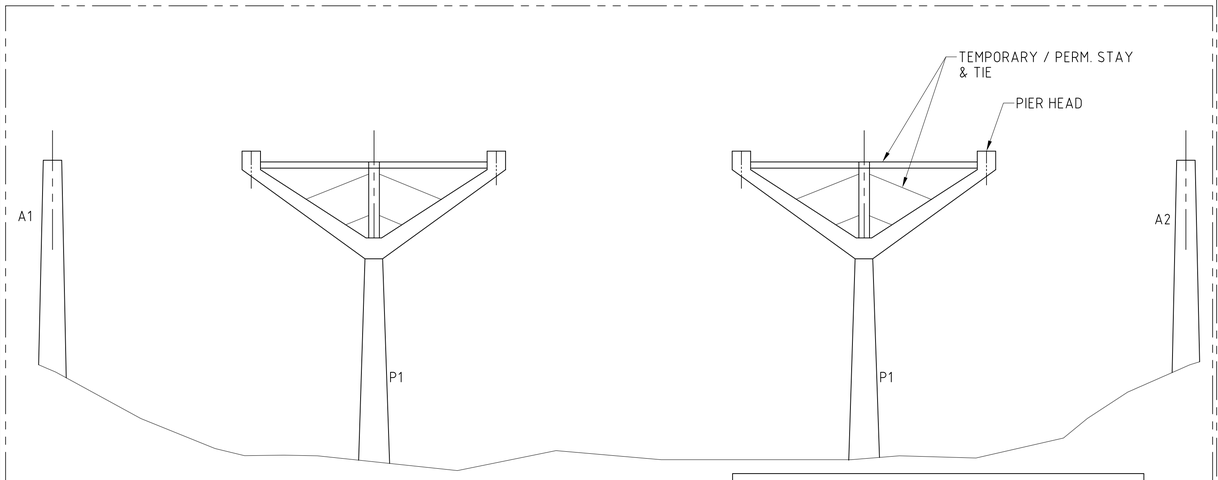
STAGE -I

1. CONSTRUCTION OF PIER



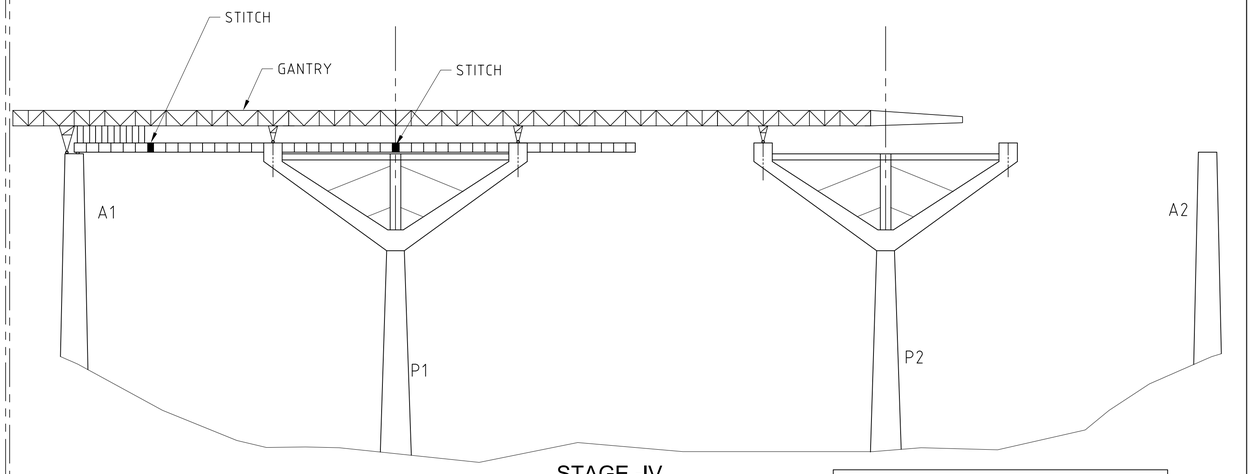
STAGE -III

1. LAUNCHING OF GANTRY
2. ERECTION OF CANTILEVER SEGMENTS AT P1 IN SEQUENCE



STAGE -II

1. CONSTRUCTION OF PIER & PIER HEAD WITH TEMPORARY / PERMANENT STAY & TIES ETC.



STAGE -IV

1. ERECTION OF SPAN SEGMENTS AT A1-P1
2. STITCHING OF SEGMENTS AND ESTABLISHING DECK CONTINUITY
3. SHIFT GANTRY LATERALLY AND REPEAT SEGMENT ERECTION FOR ADJACENT BOX
4. PRESTRESS TWIN BOXES LATERALLY FOR EACH CARRIAGEWAY

PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	ABa	RMe	FKr
A	DEC 2015	FIRST DRAFT (KD-5)	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	ABa	RMe	ATd	ATd	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-CNS-1701_1702_B.dwg, 2015-12-18

CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: Y-PIER OPTION CONSTRUCTION SCHEME SHEET 1

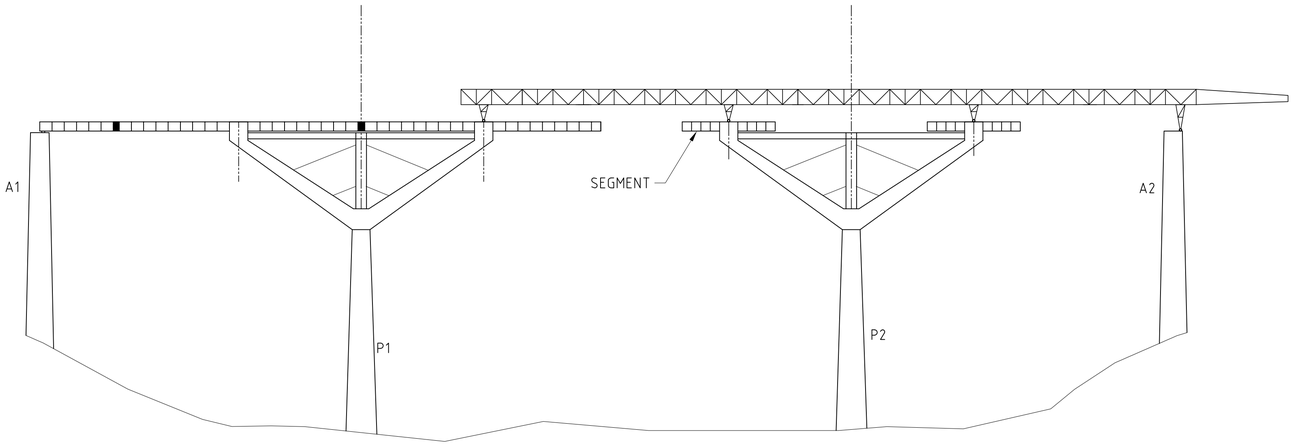
DRAWING NUMBER: SHGA-FS-CNS-1701

REV: B

SCALE: NTS

MONTH (Current Issue): DEC-2015

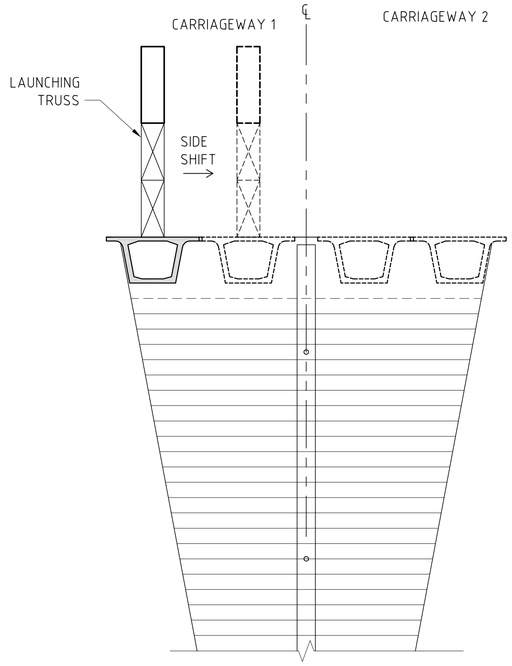
Original Drawing Size A1



STAGE -V

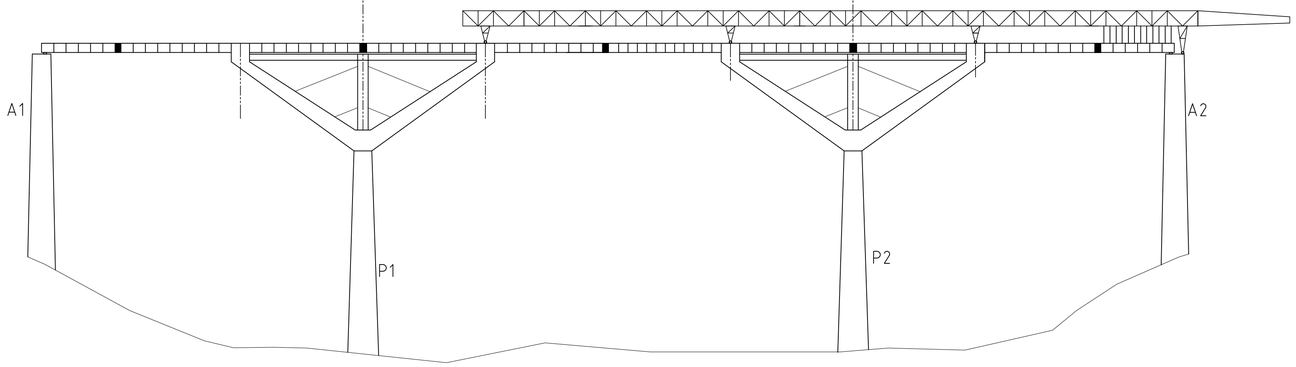
-

1. LAUNCHING OF GANTRY AT P2
2. ERECTION OF CANTILEVER SEGMENTS AT P2 IN SEQUENTIAL MANNER



TYPICAL SECTION

-



STAGE -VI

-

1. ERECTION OF SEGMENTS AT SPAN 5 (P2-A2) AND ESTABLISHING DECK CONTINUITY & STITCHING OF SEGMENTS.
2. SHIFT GANTRY LATERALLY AND REPEAT SEGMENT ERECTION FOR ADJACENT BOX .
3. RCC JOINING OF TWIN BOXES LATERALLY.

PRELIMINARY

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	ABa	RMe	FKr
A	DEC 2015	FIRST DRAFT (KD-5)	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	ABa	RMe	ATd	ATd	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; Aba; R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-CNS-1701_1702_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
Y-PIER OPTION
CONSTRUCTION SCHEME
SHEET-2

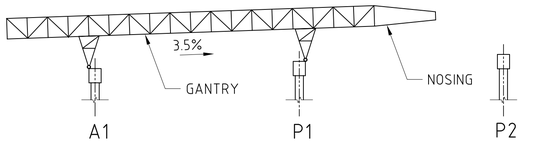
DRAWING NUMBER
SHGA-FS-CNS-1702

REV
B

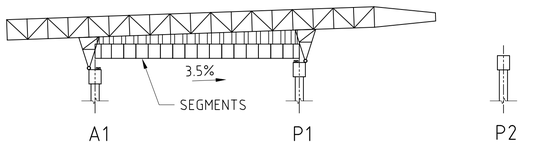
SCALE
-

MONTH (Current Issue)
DEC-2015

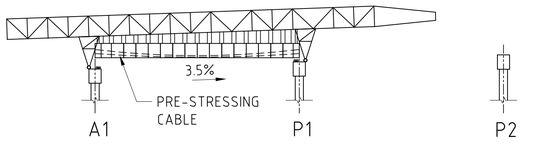
Original Drawing Size A1



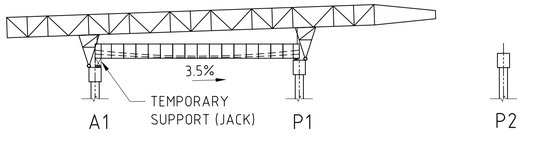
STAGE-I
LAUNCHER AT SPAN 1.



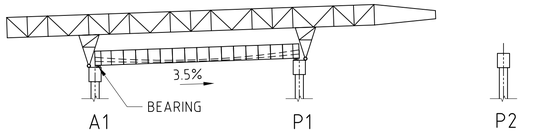
STAGE-II
ASSEMBLY OF SEGMENTS.



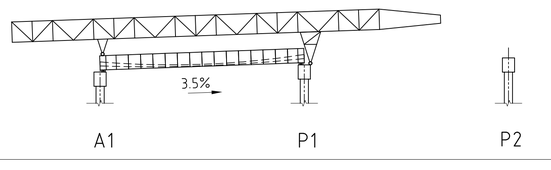
STAGE-III
STRESSING OF PRE-STRESSING CABLES.



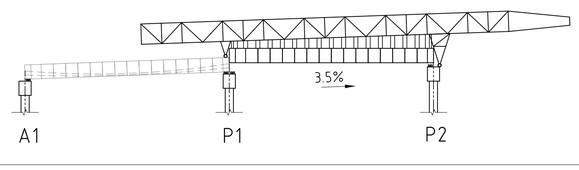
STAGE-IV
LOWERING OF BOX SPAN.



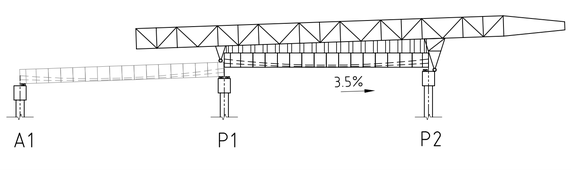
STAGE-V
JACKING DOWN OF BOX SPAN & REMOVAL OF
TEMPORARY SUPPORT AT ABUTMENT A1.



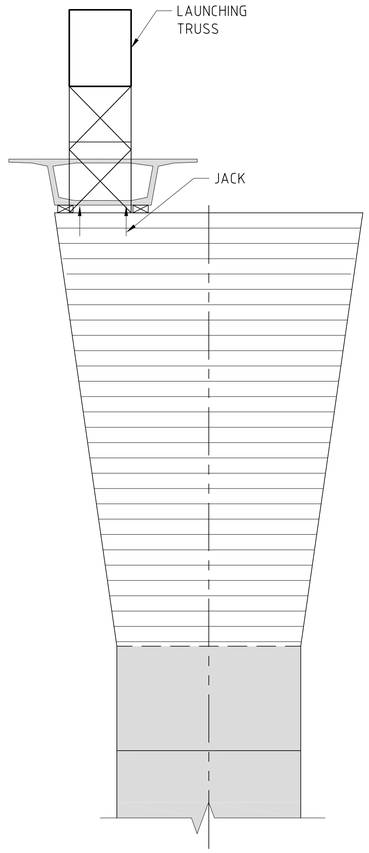
STAGE-VI
SPAN 1 AT FINAL POSITION.



STAGE-VII
ADVANCEMENT OF GANTRY TO SPAN 2.



STAGE-VIII
STRESSING OPERATION. REPEAT OPERATION
STAGES SAME AS IV TO VI.



4 LANE TWIN BOX VIADUCT ERECTION

NTS

PRELIMINARY

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD6)	ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD5)	ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	Dec 15	Dec 15	Dec 15	Dec 15	Dec 15
Name	ABa	RMe	DSu	ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; Aba, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-CNS-1751_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TYPICAL LAUNCHING SCHEME FOR VIADUCT IN GRADIENT

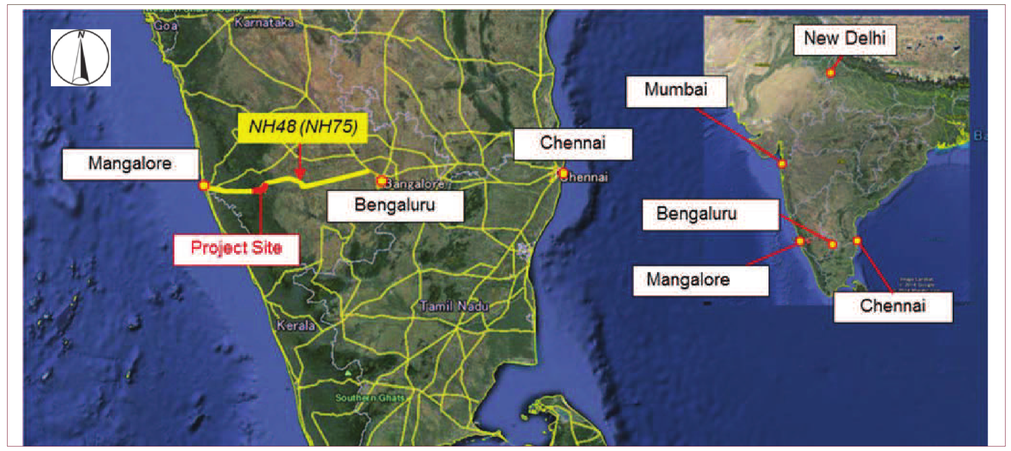
DRAWING NUMBER
SHGA-FS-CNS-1751

REV
B

SCALE
NTS

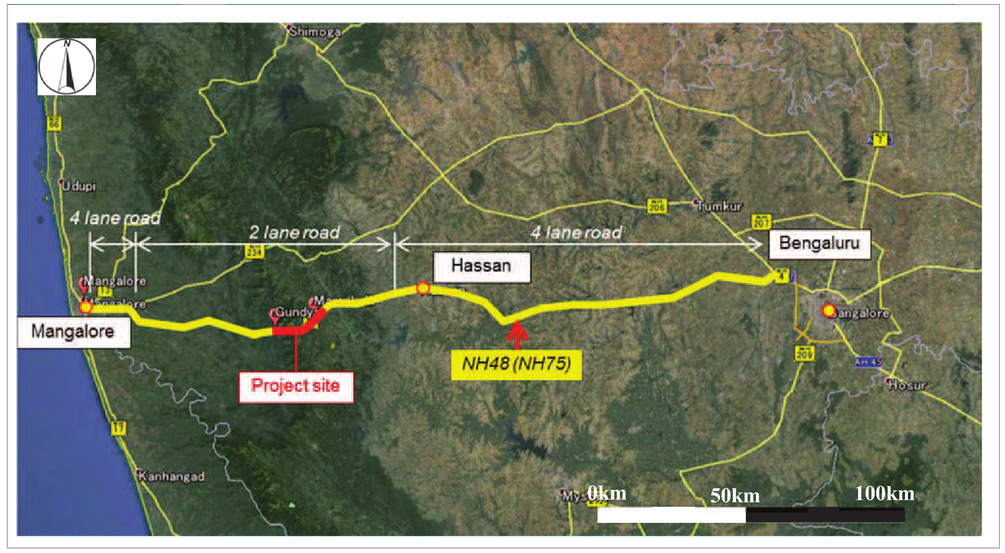
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



PROJECT LOCATION MAP

- Source : METI STUDY TEAM



PROJECT ROAD

-

Source : METI STUDY TEAM

PRELIMINARY

REFERENCE DRAWINGS:

-

-

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	RESUBMITTED (KD6)	ABa	RMe	AKg
C	DEC 2015	RESUBMITTED (KD5)	ABa	RMe	AKg
B	SEP 2015	RESUBMITTED (KD4)	ABa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	GCi	RMe	-	-	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

#GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-001_D.dwg, 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

DRAWING TITLE

INDEX MAP
AND PROJECT LOCATION
-

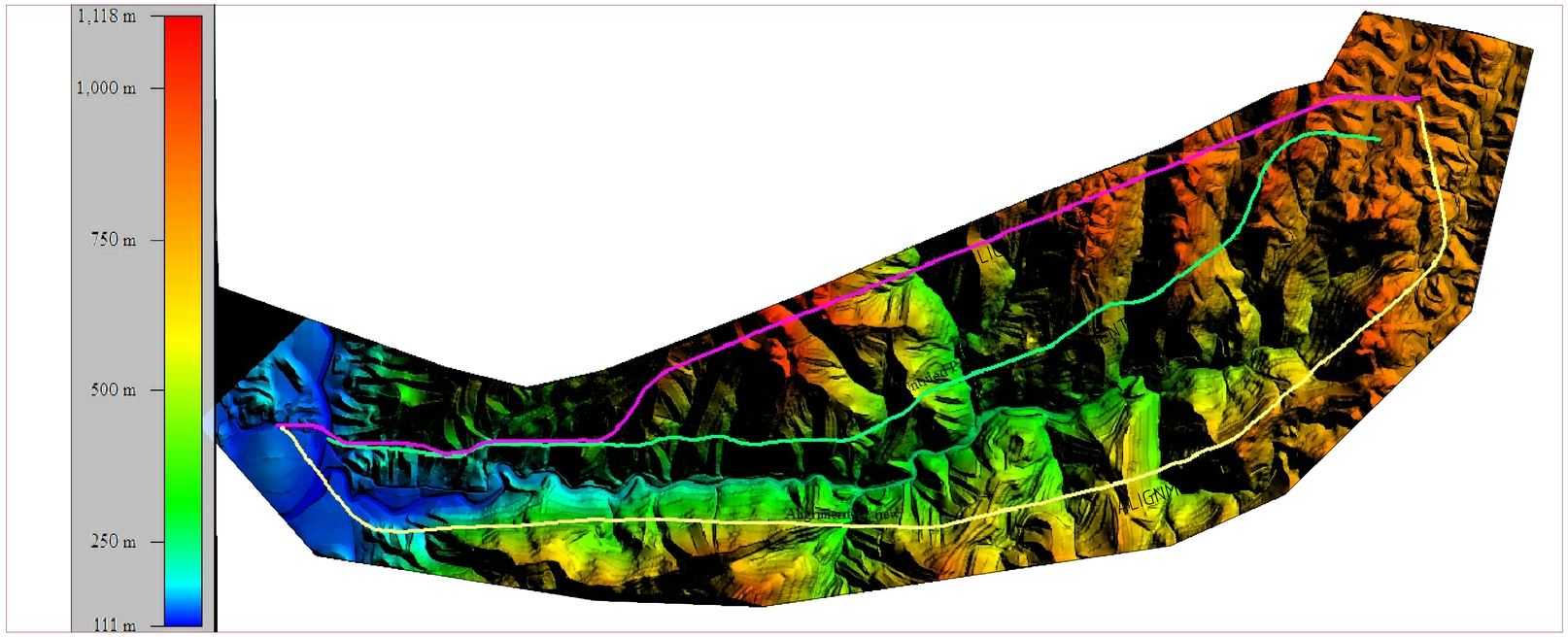
DRAWING NUMBER: SHGA-FS-GEN-001

REV: D

SCALE: AS MARKED

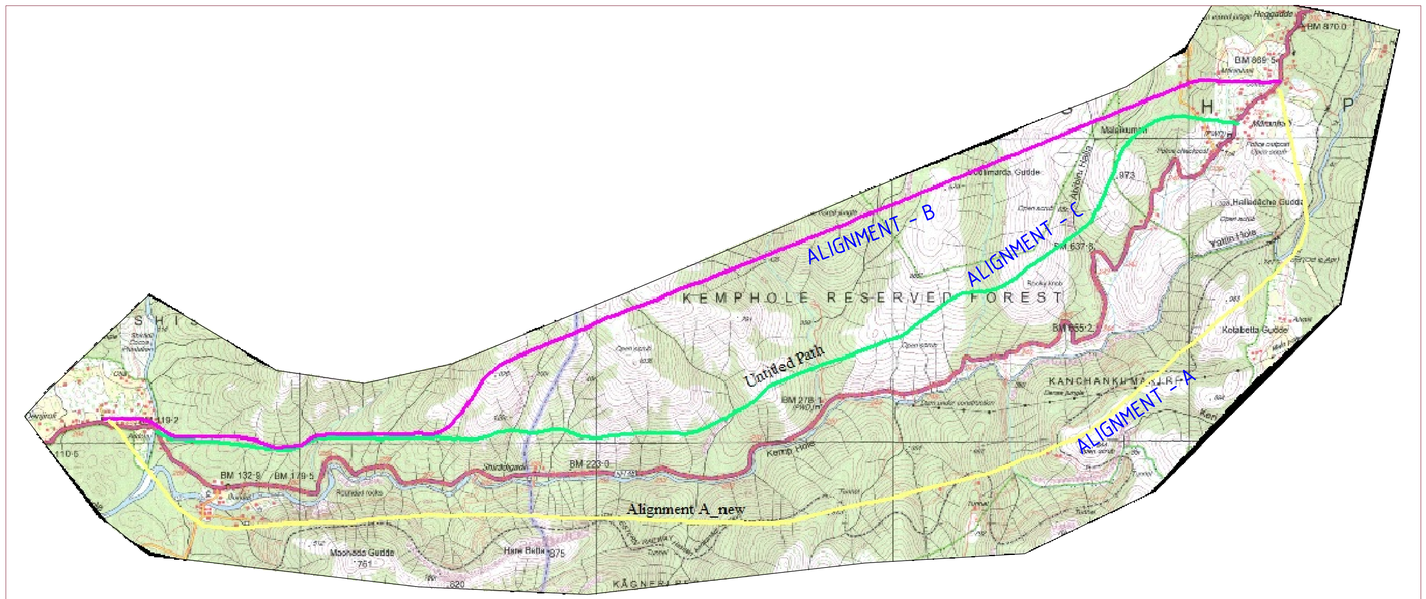
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



ALTERNATIVES A , B & C ON DTM MODEL

- NOTE : ALIGNMENTS AS SUBMITTED IN THREE ALIGNMENT REPORT



ALTERNATIVES A,B,& C ON TOPOGRAPHIC MAP

-

NOTE : ALIGNMENTS AS SUBMITTED IN THREE ALIGNMENT REPORT

PRELIMINARY

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	SEP 2015	RESUBMITTED (KD6)	ABa	RMe	AKg
C	SEP 2015	RESUBMITTED (KD5)	ABa	RMe	AKg
B	SEP 2015	RESUBMITTED (KD4)	ABa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	ABa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	ABa/RMe	RMe	-	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

\GEOCONSULT; PRa; R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-002_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT A,B & C
MARKED ON
DTM IMAGE & TOPOGRAPHIC MAP

DRAWING NUMBER
SHGA-FS-GEN-002

REV
D

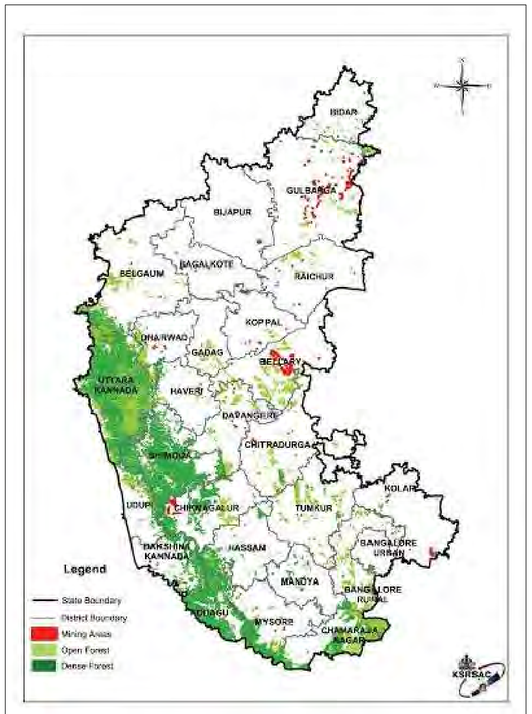
SCALE
NTS

MONTH
(Current Issue) DEC 2015

Original Drawing Size A1

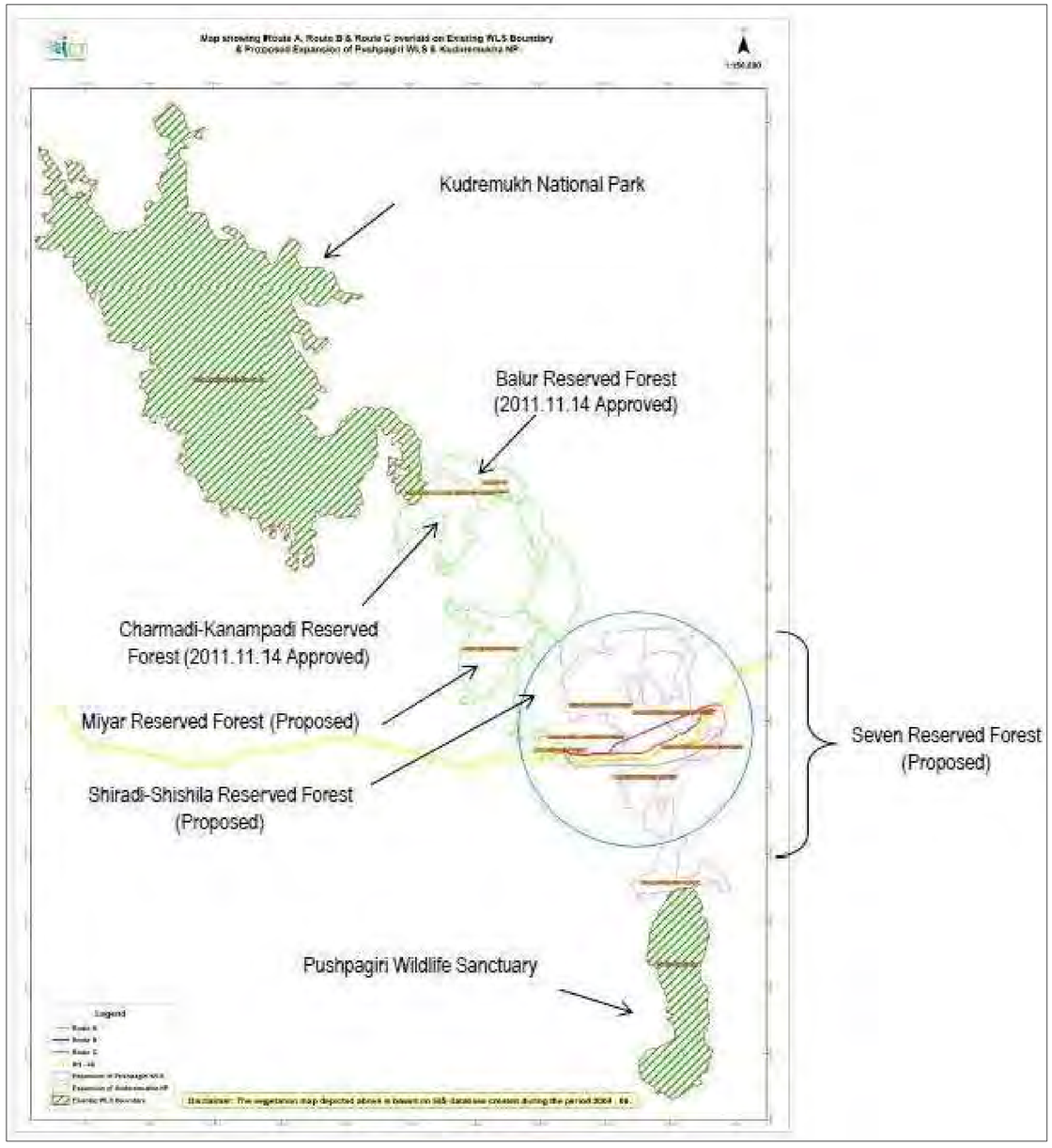
NATIONAL PARKS

Source : METI STUDY TEAM



FOREST MAP

Source : METI STUDY TEAM



EXPANSION OF PROJECTED AREAS AND PROPOSED ALIGNMENTS

Source : METI STUDY TEAM

PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	RESUBMITTED (KD6)	PRa	AKg	AKg
C	DEC 2015	RESUBMITTED (KD5)	PRa	AKg	AKg
B	SEP 2015	RESUBMITTED (KD4)	PRa	AKg	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa	AKg	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	GCi	-	-	-	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRa\ R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-003_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

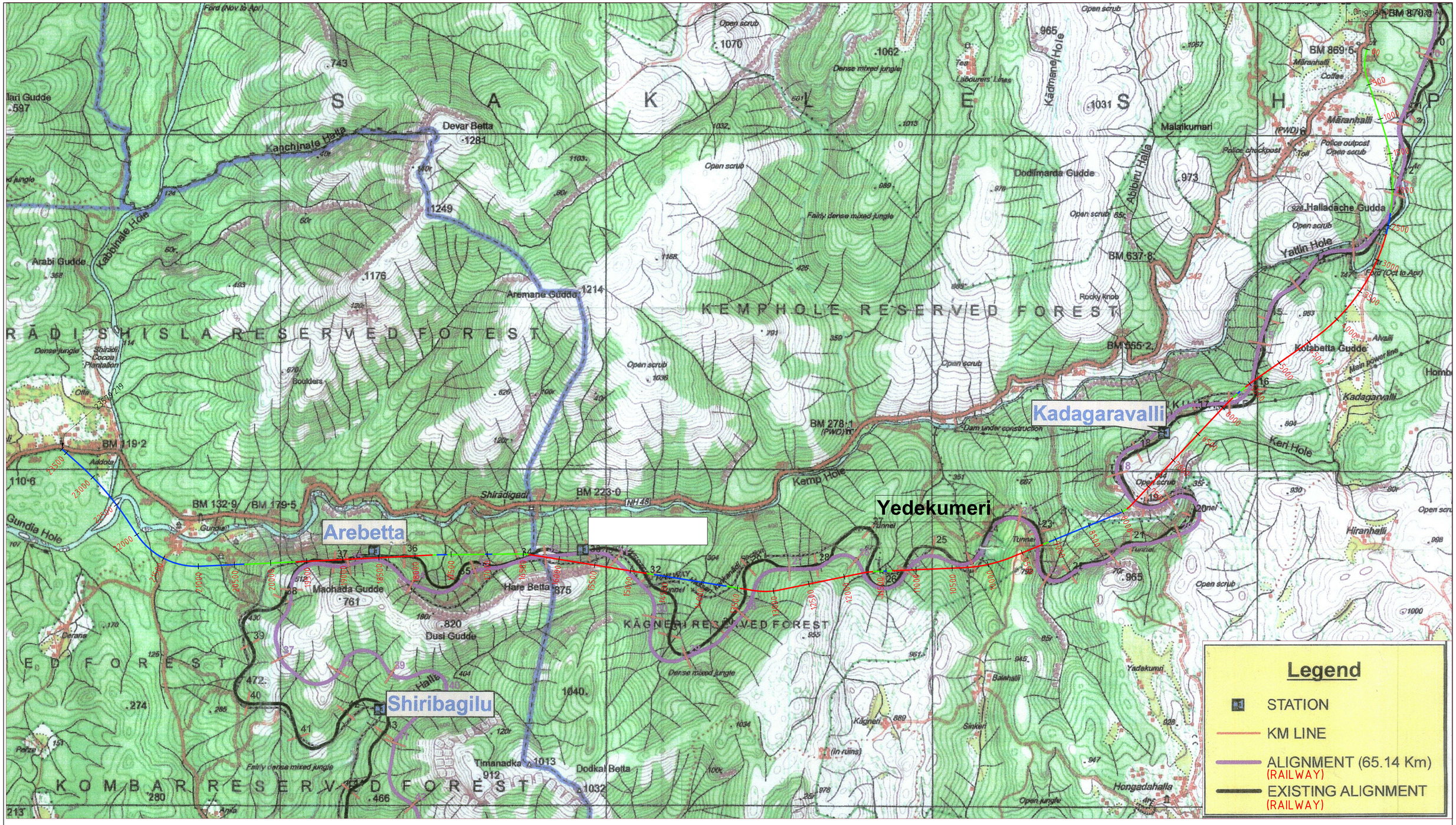
DRAWING TITLE
FOREST MAP
AND NATIONAL PARKS
OF KARNATAKA

DRAWING NUMBER
SHGA-FS-GEN-003

REV
D

SCALE
AS MARKED

MONTH (Current Issue)
DEC 2015



PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	RMe	AKg	AKg
A	DEC 2015	FIRST DRAFT (KD-5)	RMe	AKg	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	RMe	RMe	-	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-004_B.dwg, 2015-12-18

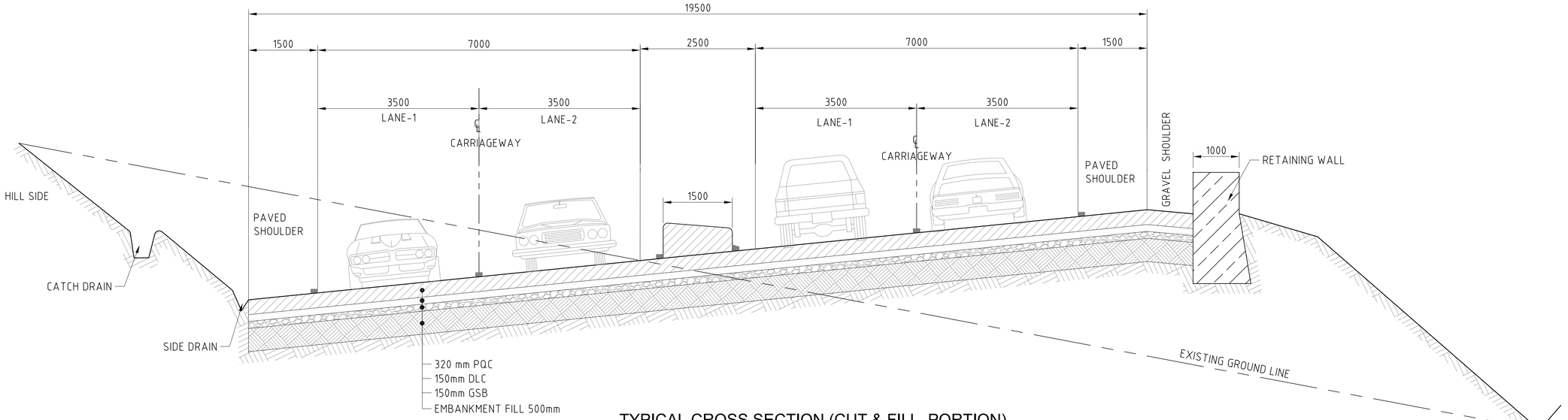
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
LAYOUT PLAN
PROPOSED ALIGNMENT AND RAILWAY ALIGNMENT PLAN

DRAWING NUMBER	REV
SHGA-FS-GEN-004	B

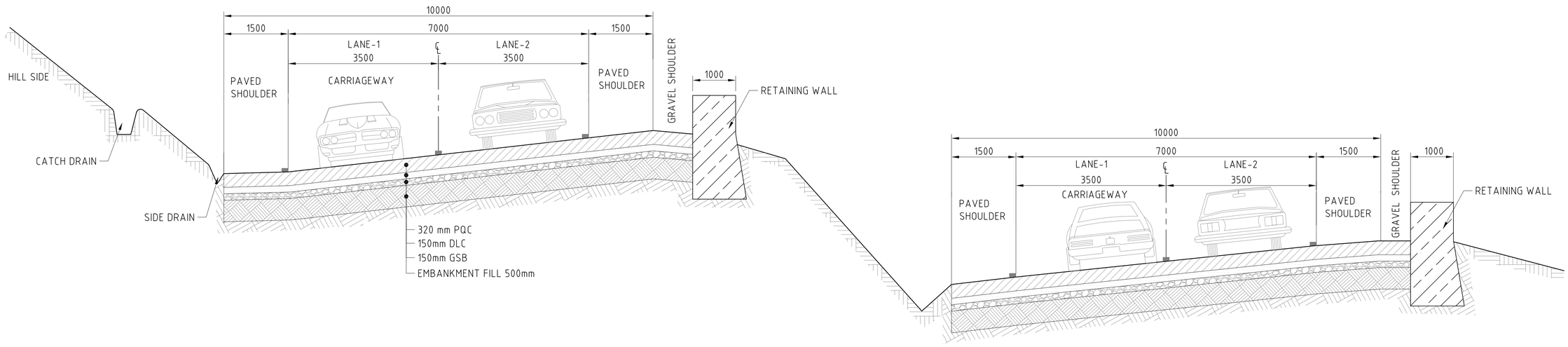
SCALE	MONTH (Current Issue)
1:25000	DEC 2015

Original Drawing Size A1



TYPICAL CROSS SECTION (CUT & FILL PORTION)

SCALE 1:50



TYPICAL CROSS SECTION ON HILLY TERRAIN

SCALE 1:50

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.

SCALE 1 : 50

1m 0 1m 5m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1001 TO 1016 (16 SHEETS)

SHGA-FS-LAY-1061 TO 1098 (38 SHEETS)

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
E	DEC 2015	RESUBMITTED (KD-6)	ABa	RMe	FKr
D	DEC 2015	PQC REVISED TO 320 mm	ABa	RMe	FKr
C	SEP 2015	RESUBMITTED (KD-4)	ABa	RMe	FKr
B	AUG 2015	RESUBMITTED (KD-3)	ABa	RMe	FKr
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.2015	22.07.2015	22.07.2015	22.07.2015	22.07.2015
Name	ABa	RMe	AKg	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\GEOCONSULT; PRs; R:\16000 Projects\16066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-011_E.dwg; 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

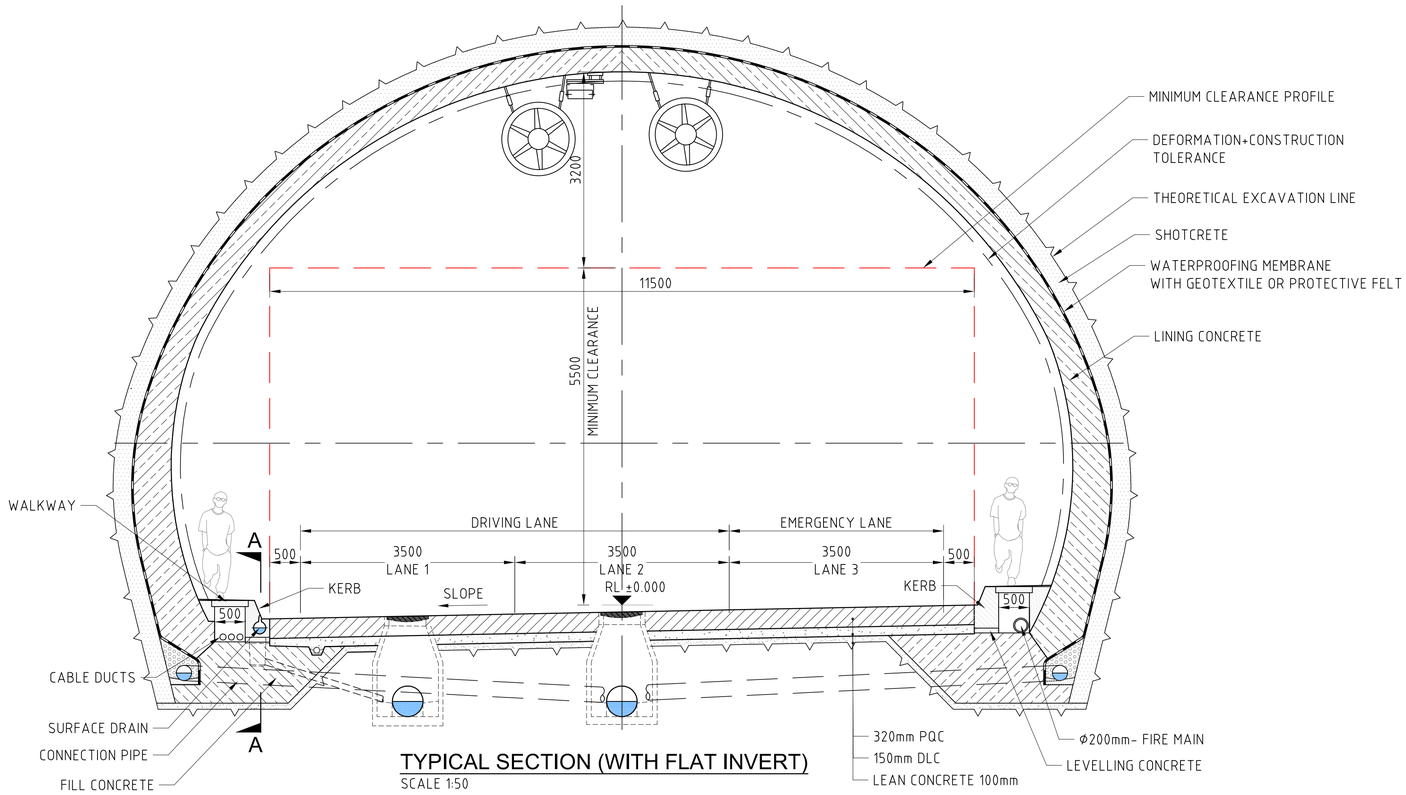
DRAWING TITLE

4 LANE ROAD
TYPICAL CROSS SECTION AND PAVEMENT DETAILS

DRAWING NUMBER: SHGA-FS-GEN-011 | REV: E

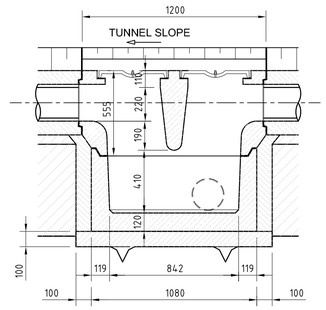
SCALE: 1:50 | MONTH (Current Issue): DEC 2015

Original Drawing Size A1



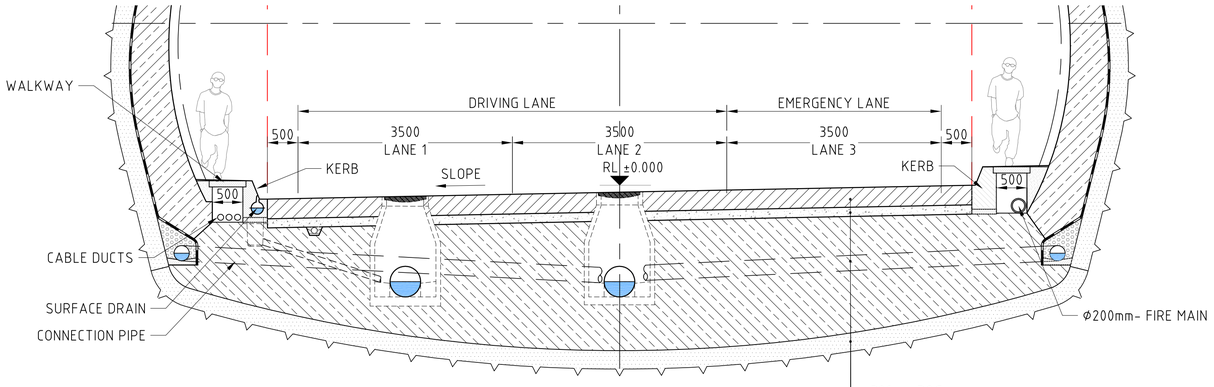
TYPICAL SECTION (WITH FLAT INVERT)

SCALE 1:50



SECTION A-A

NTS



TYPICAL SECTION (WITH ARCH INVERT)

SCALE 1:50

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.

SCALE 1 : 50

1m 0 1m 5m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1001 TO 1016 (16 SHEETS)

SHGA-FS-LAY-1061 TO 1098 (38 SHEETS)

LEGEND:

- LINING / INVERT CONCRETE
- PAVEMENT QUALITY CONCRETE (PQC)
- DRY LEAN CONCRETE (DLC)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
E	DEC 15	MINOR CORRECTIONS / RESUBMITTED (KD-6)	RMe	BRs	FKr
D	DEC 15	SECTION WITH ARCH INVERT ADDED (KD-5)	RMe	BRs	FKr
C	SEP 15	CP HEIGHT MODIFICATION & RESUBMISSION (KD-4)	PRa	BRs	FKr
B	AUG 15	MINOR MODIFICATION	PRa	BRs	FKr
A	JULY 15	FIRST DRAFT (INCEPTION STAGE)	RMe	BRs	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	RMe	RMe	BRs	FKr	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; P:\Ra, R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-012_E.dwg, 2015-12-18

CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: MAIN TUNNEL
REGULAR CROSS SECTION
2 DRIVING LANES+ 1 EMERGENCY LANE

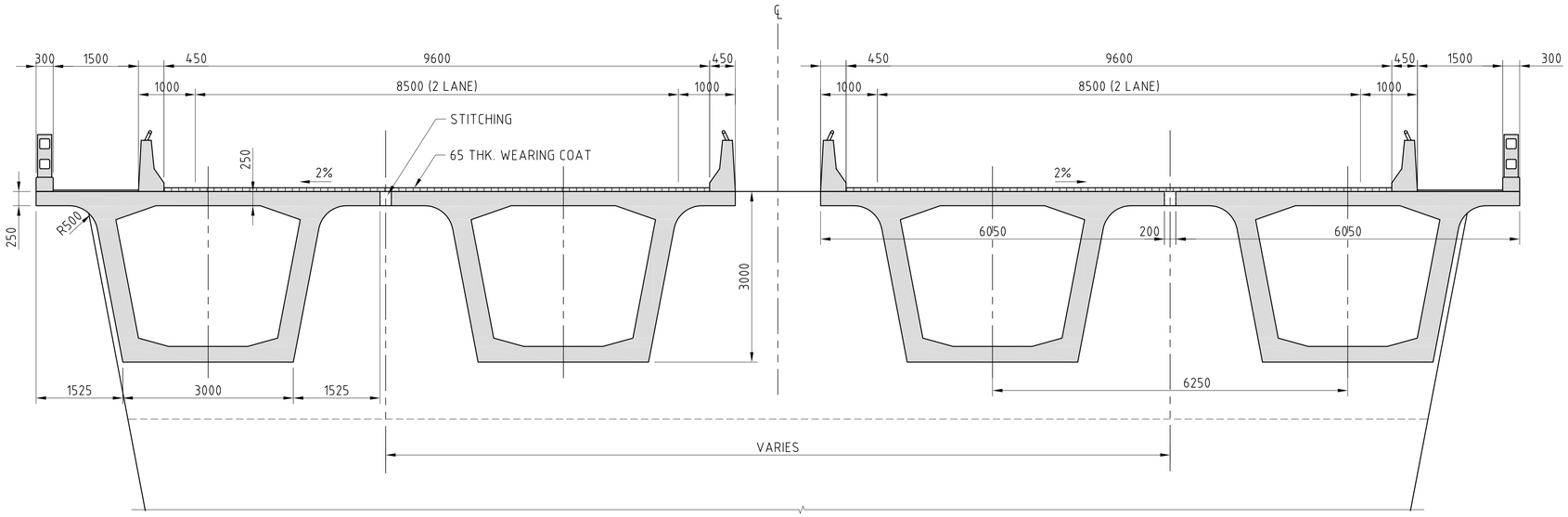
DRAWING NUMBER: SHGA-FS-GEN-012

REV: E

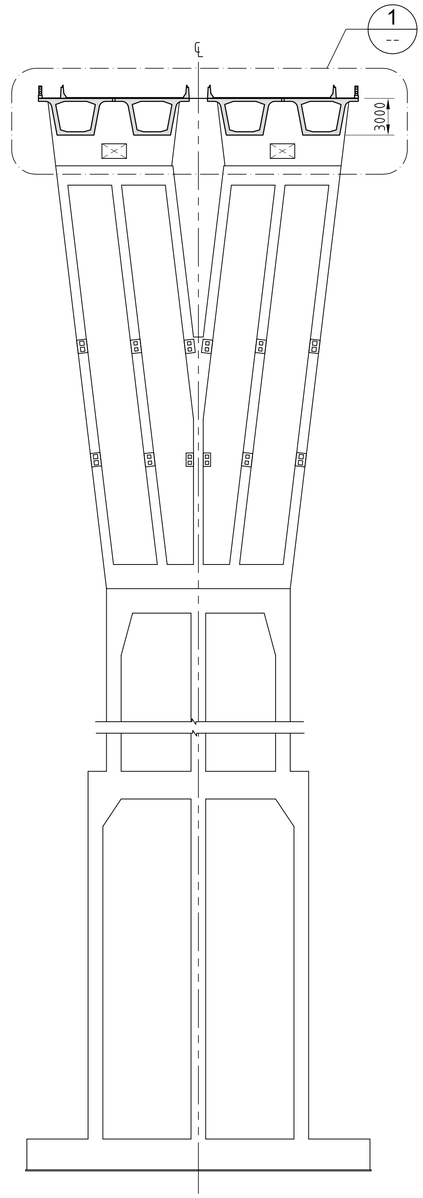
SCALE: 1:50

MONTH (Current Issue): DEC 15

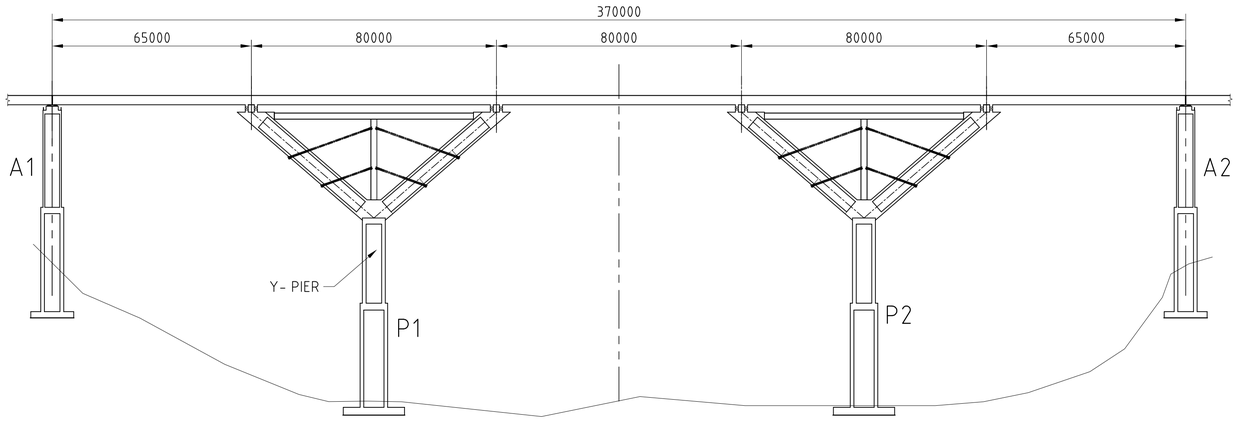
Original Drawing Size A1



DETAIL 1
SCALE 1:50



4 LANE -Y- PIER OPTION - TWIN BOX STRUCTURE
SCALE 1:250



LONGITUDINAL SECTION -Y PIER OPTION- TWIN BOX STRUCTURE
SCALE 1:1000

APPLICABLE AT Y-PIERS IN LONG SPAN BRIDGES.

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.

SCALE 1 : 50
1m 0 1m 5m

SCALE 1 : 250
10m 0 10m 20m 25m

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
E	DEC 2015	PIER SHAPE MODIFIED (KD-6)	ABa	RMe	FKr
D	DEC 2015	BOX GIRDER & PIER SHAPE MODIFIED (KD-5)	PRa	RMe/ADh	FKr
C	SEP 2015	PIER ELEVATION MODIFIED AND RESUBMITTED (KD-4)	ABa	RMe	FKr
B	SEP 2015	RESUBMITTED INTERIM PROGRESS (KD-3)	ABa	RMe	FKr
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	ABa/RMe	RMe	DSu	ADh	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-013_E.dwg, 2015-12-18

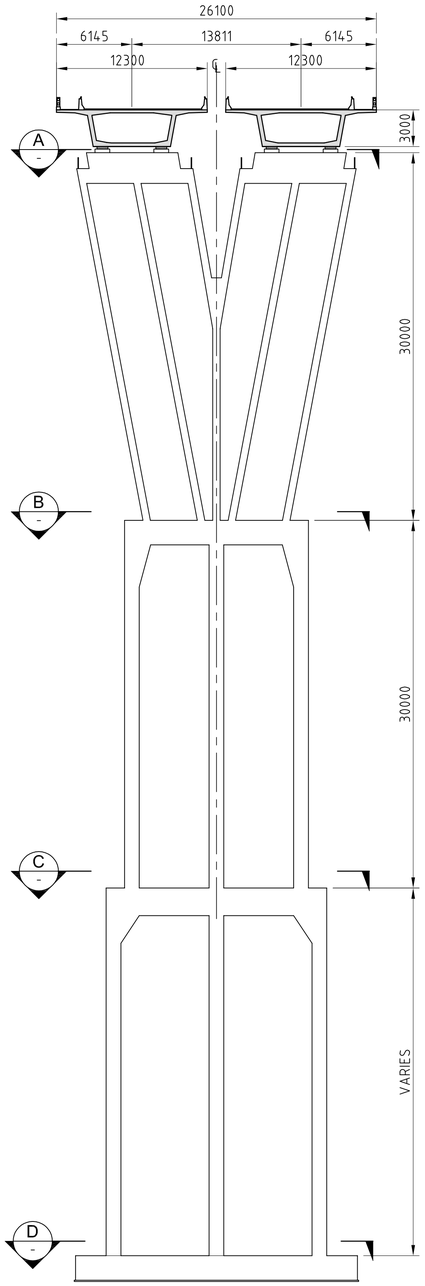
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
4 LANE MAJOR BRIDGE
GENERAL SECTIONS
PSC BOX GIRDER WITH Y-PIERS

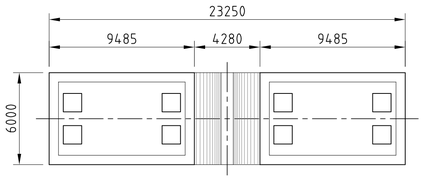
DRAWING NUMBER: SHGA-FS-GEN-013
REV: E

SCALE: AS SHOWN
MONTH (Current Issue): DEC 15

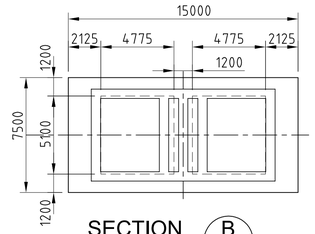
Original Drawing Size A1



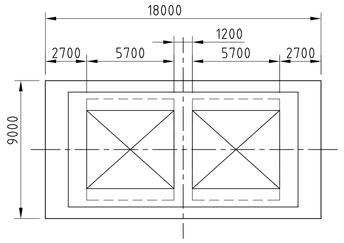
TYPICAL SECTION OF PIER (HIGHEST VARIANT)
SCALE 1:250



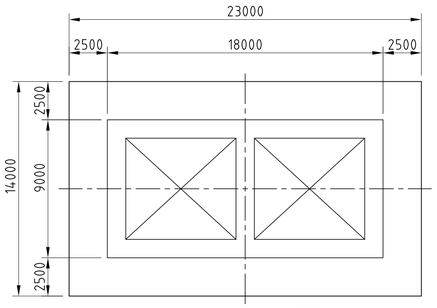
SECTION A
SCALE 1:200



SECTION B
SCALE 1:200



SECTION C
SCALE 1:200



SECTION D
SCALE 1:200

VALID FOR VIADUCTS LOCATION

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.

SCALE 1 : 250
10m 0 10m 20m 25m

SCALE 1 : 200
5m 0 10m 20m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH DRAFT (KD-6)	ABa	ADh/RMe	AKg
C	DEC 2015	THIRD DRAFT (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT (KD-4)	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT (KD-3)	ABa	ADh/RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-014_D.dwg, 2015-12-18

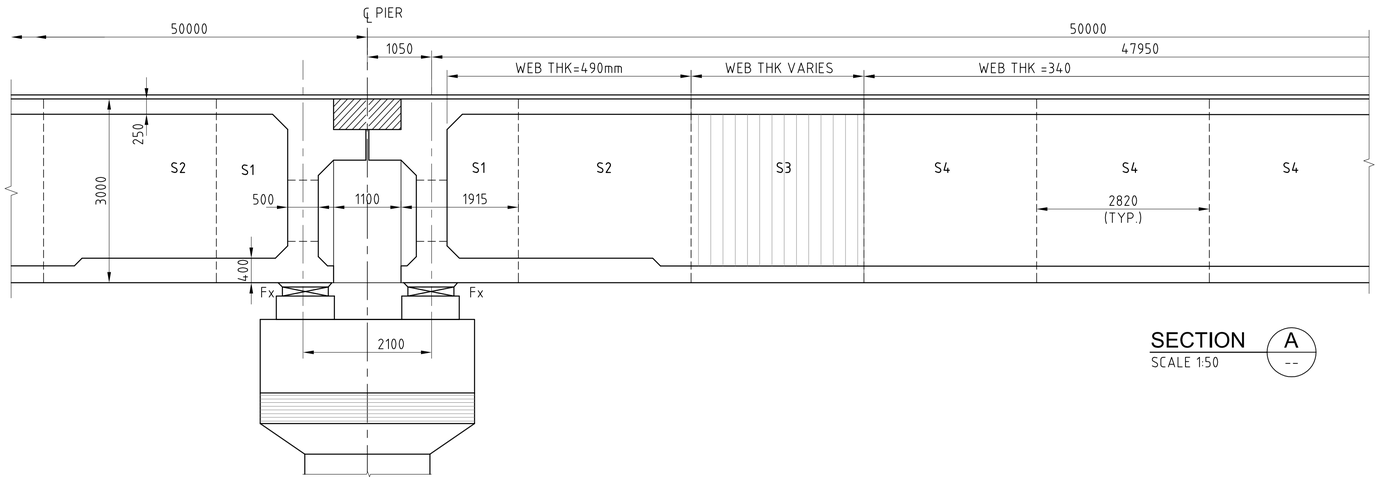
CLIENT
GOVERNMENT OF KARNATAKA

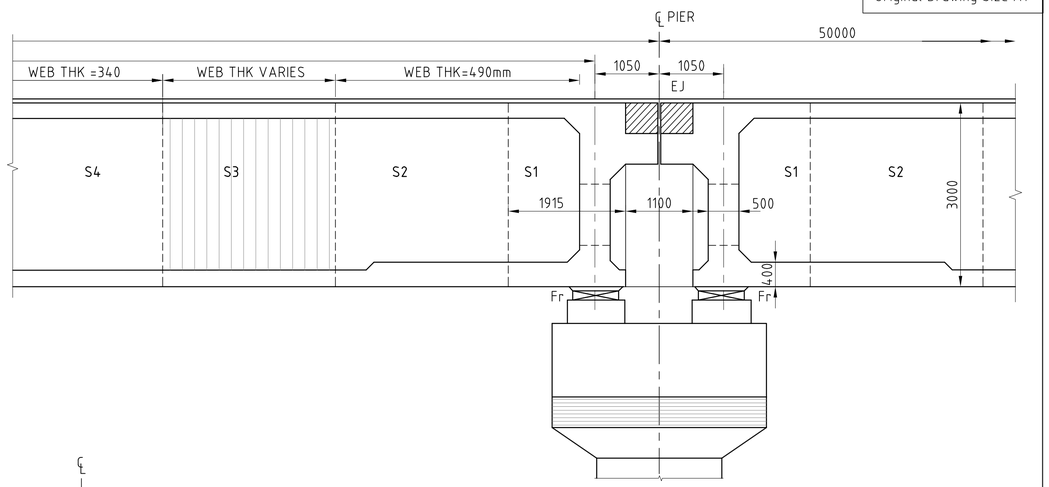
DRAWING TITLE
4 LANE MAJOR BRIDGE- GENERAL SECTIONS
PIERS UP TO 90M HIGH
PILE FOUNDATION AND OPEN FOUNDATION

DRAWING NUMBER	REV
SHGA-FS-GEN-014	D

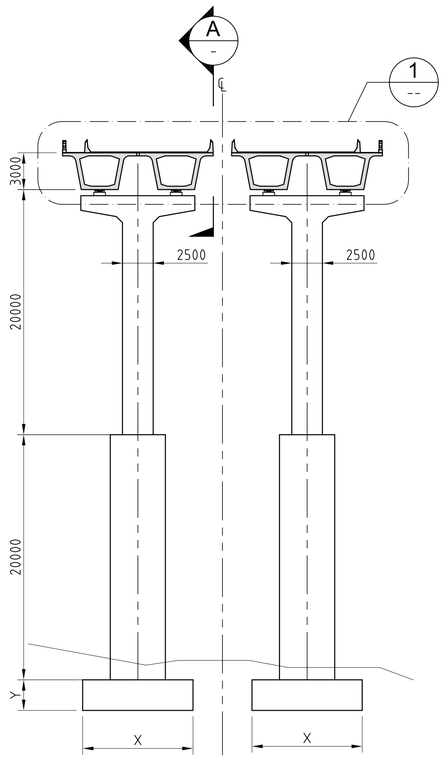
SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

Original Drawing Size A1



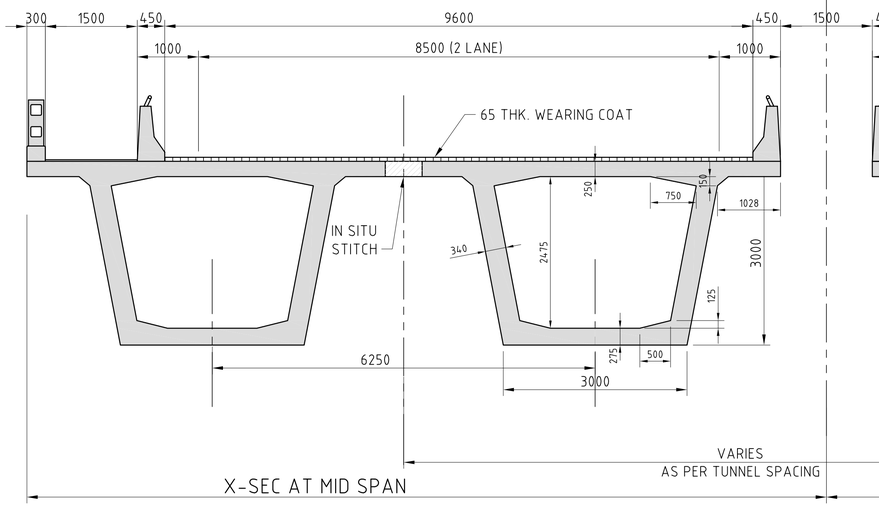


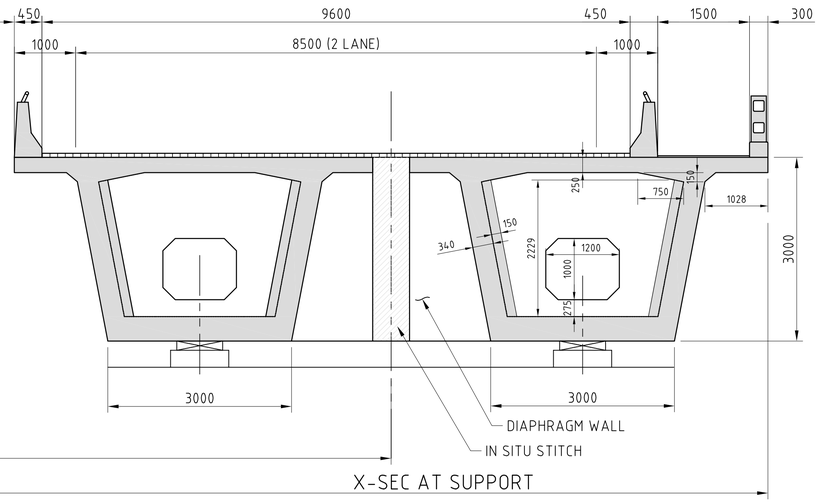
SECTION A
SCALE 1:50



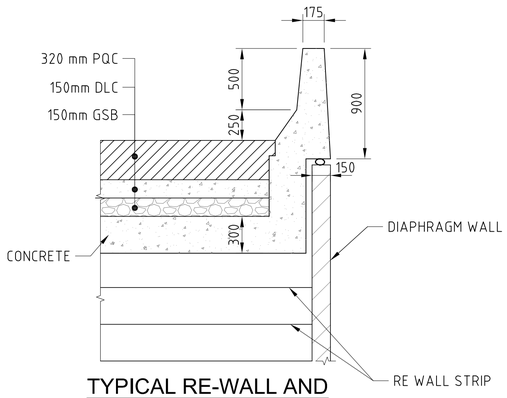
4 LANE - TWIN BOX STRUCTURE - MINOR BRIDGES
SCALE 1:250

DIMENSIONS AND SIZES SHOWN ARE PRELIMINARY AND SHALL BE FINALIZED AFTER DETAILED GEOLOGICAL/ GEOTECHNICAL INVESTIGATION

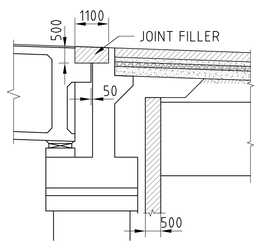




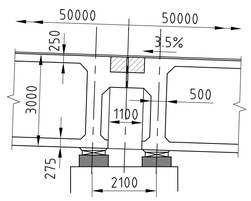
DETAIL 1
SCALE 1:50



TYPICAL RE-WALL AND CRASH BARRIER ARRANGEMENT
SCALE 1:25



TYPICAL DETAIL AT ABUTMENT JUNCTION
SCALE 1:100



TYPICAL DETAIL AT PIER TO PIER JUNCTION
SCALE 1:100

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. THIS DRAWING SHALL BE READ ALONG WITH RELATED GENERAL ARRANGEMENT DRAWINGS.

SCALE 1 : 50
1m 0 1m 5m

SCALE 1 : 25
1m 0 1m 2m 2.5m

SCALE 1 : 100
5m 0 5m 10m

SCALE 1 : 250
10m 0 10m 20m 25m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
C	DEC 2015	MINOR CORRECTIONS/RESUBMITTED (KD-6)	PRa/RMe	RMe	FKr
B	DEC 2015	GEOMETRY REVISED/DETAILS ADDED (KD-5)	PRa/RMe	RMe	FKr
A	SEP 2015	FIRST DRAFT	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	19.09.15	19.09.15	19.09.15	19.09.15	19.09.15
Name	ABa/RMe	RMe	DSu	ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-GEN-015_C.dwg, 2015-12-18

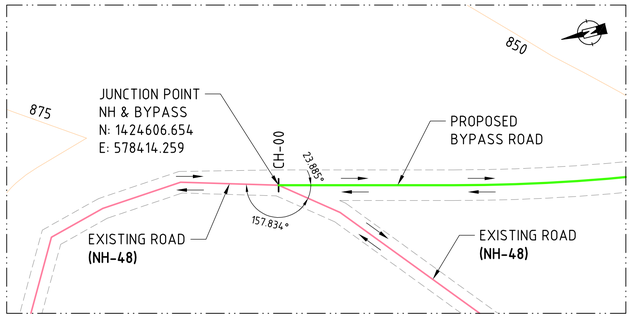
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
4 LANE MINOR BRIDGES
GENERAL SECTIONS
PSC BOX GIRDER WITH PIERS UP TO 40m HIGH

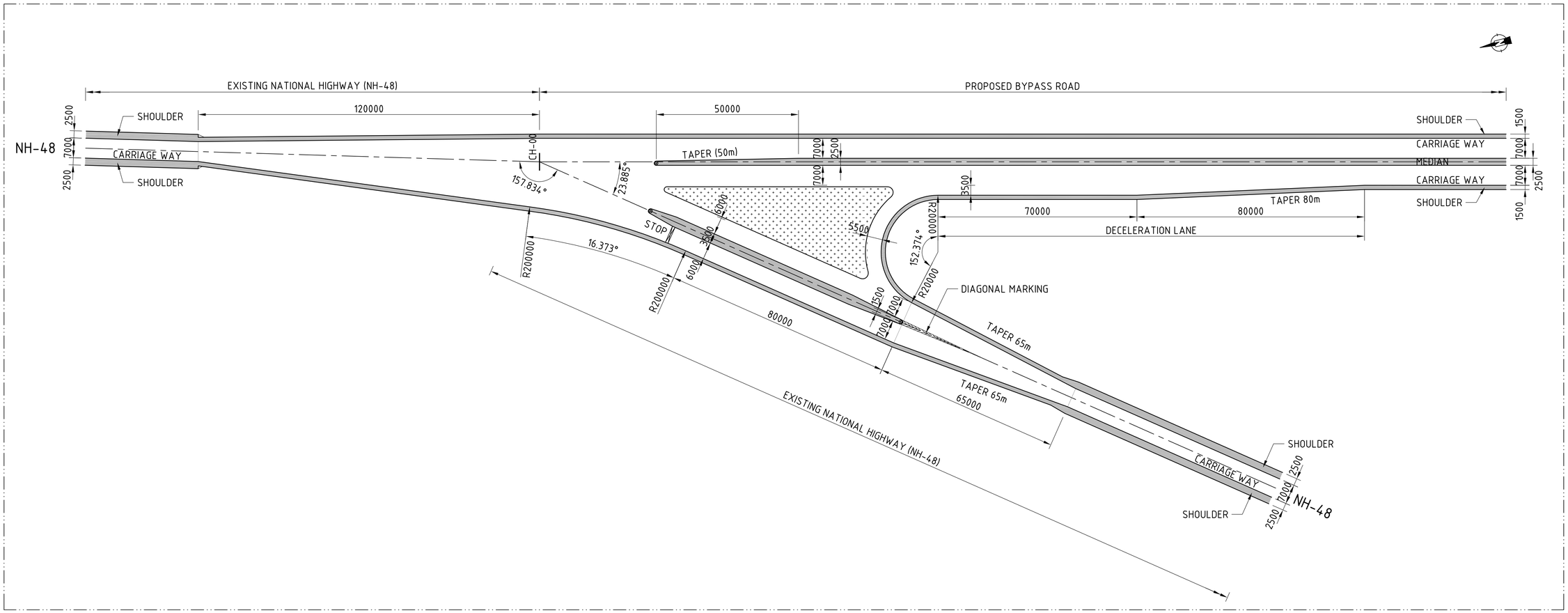
DRAWING NUMBER: SHGA-FS-GEN-015
REV: C

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



KEY PLAN
NTS



PLAN
SCALE 1:750

INTERSECTION WILL BE MATCHED WITH FOUR LANE NH-48, AFTER GETTING PLAN AND PROFILE DRAWINGS OF THE RELEVANT SECTION FROM NHAI.

SCALE 1 : 750
25m 0 25m 50m 75m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

NOTES :
1. ALL DIMENSIONS ARE IN mm.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	RESUBMITTED (KD6)	MKu	RMe	AKg
C	DEC 2015	RESUBMITTED (KD5)	MKu	RMe	AKg
B	SEP 2015	SECOND DRAFT (KD4)	MKu	RMe	AKg
A	AUG 2015	FIRST DRAFT (INTERIM PROGRESS-KD3)	MKu	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	MKu	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRs\ R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-JNC-1611_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
Y-JUNCTION AT CH:- 0+00
AT NH & BYE PASS CROSSING
GENERAL PLAN

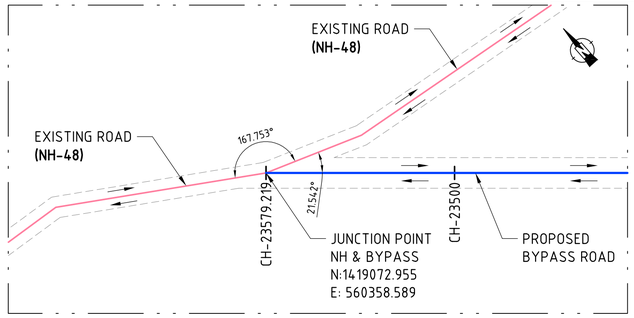
DRAWING NUMBER
SHGA-FS-JNC-1611

REV
D

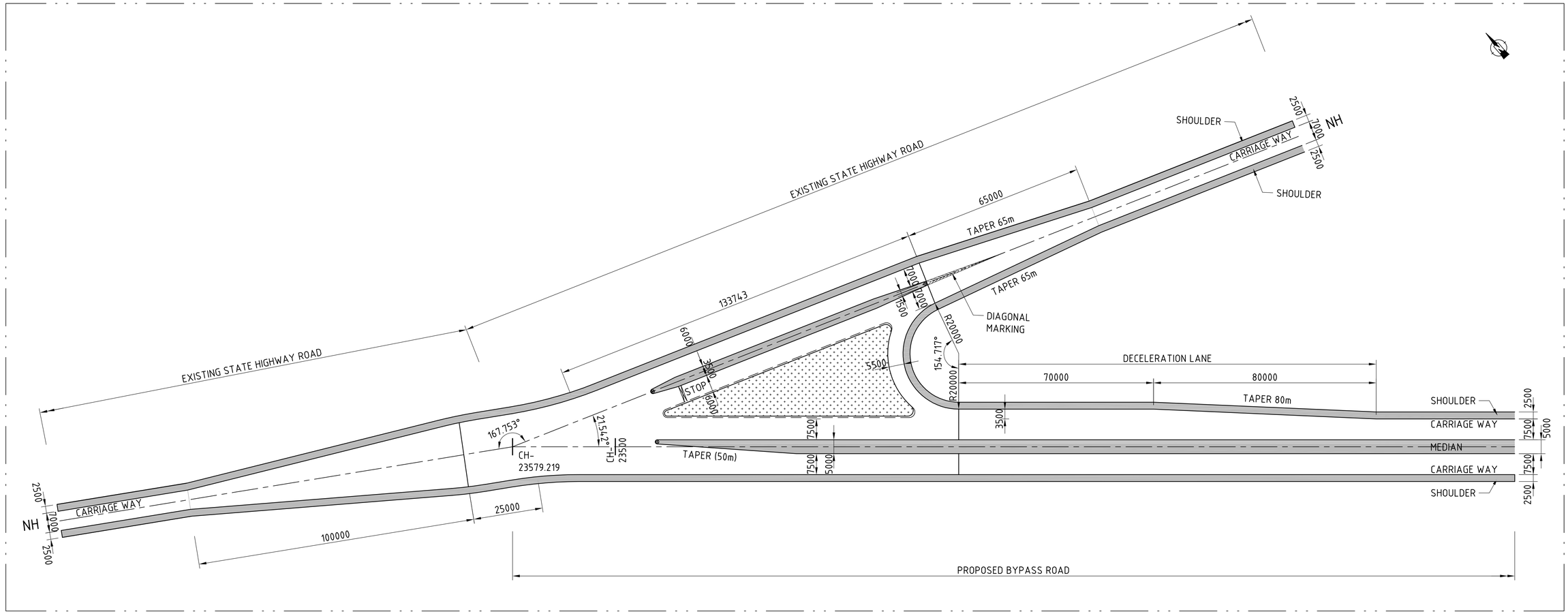
SCALE
1:750

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



KEY PLAN
NTS



PLAN
SCALE 1:750

INTERSECTION WILL BE MATCHED WITH FOUR LANE NH-48, AFTER GETTING PLAN AND PROFILE DRAWINGS OF THE RELEVANT SECTION FROM NHAI.

SCALE 1 : 750
25m 0 25m 50m 75m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	SEP 2015	RESUBMITTED (KD6)	MKu	RMe	AKg
C	SEP 2015	RESUBMITTED (KD5)	MKu	RMe	AKg
B	SEP 2015	SECOND DRAFT (KD4)	MKu	RMe	AKg
A	AUG 2015	FIRST DRAFT (INTERIM PROGRESS-KD3)	MKu	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	MKu	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

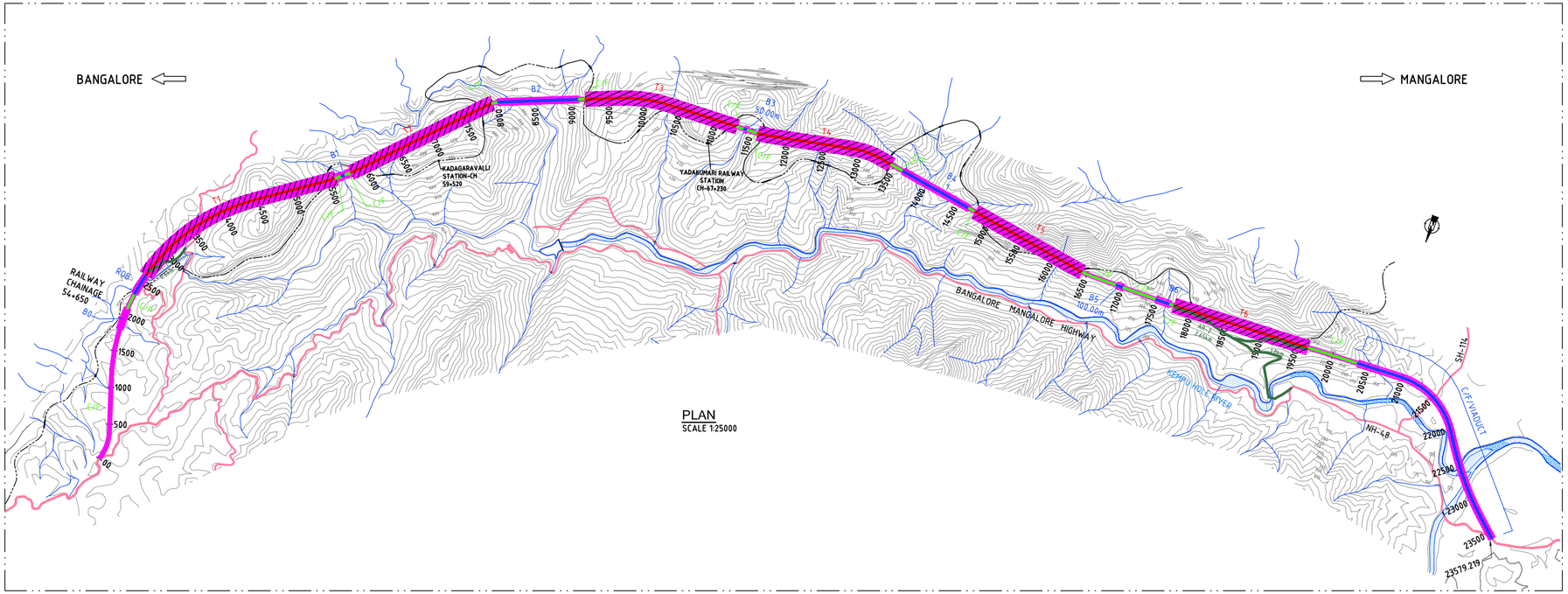
©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-JNC-1615_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
Y-JUNCTION AT CH:- 23+579.219 AT NH & BYE PASS CROSSING GENERAL ARRANGEMENT PLAN

DRAWING NUMBER: SHGA-FS-JNC-1615
REV: D
SCALE: 1:750
MONTH (Current Issue): DEC 2015

Original Drawing Size 1200x600mm



TOTAL LAND ACQUISITION AREA = 344.64 Hectares	
TEMPORARY LAND AQUISITION AREA =252.58 Hectares (TUNNELS)	
PERMANENT LAND AQUISITION AREA (344.64-252.58)= 92.06 Hectare	
LAND AQUISITION - BRIDGES	= 68 Hectare
LAND AQUISITION - CUT/FILL (92.06-68)	= 24.06 Hectare
CONSTRUCTION ROADS AND APPROACH	= 5 Hectares

NOTES:-

1. ALL DIMENSIONS ARE SHOWN IN mm AND LEVELS ARE SHOWN IN METERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSIONS TO BE MEASURED FROM DRAWING. WRITTEN DIMENSIONS TO BE FOLLOWED.
3. LAND AREA SHOWN IS BASED ON PRELIMINARY ALIGNMENT DESIGN AND MAY CHANGE IF ANY MODIFICATION IS DONE IN THE ALIGNMENT AT A LATER STAGE.

SCALE 1 : 25000 (HORIZONTAL)

1000m 0 1000m 2000m 2500m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

LEGEND:

- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	RMe	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD-5)	RMe	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	22.07.15
Name	RMe	RMe	AKg	AKg	AKg
	Drawn	Draffing Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

M:\GEOCONSULT_PRs_K\1600 Projects\1650-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAQ_2011_B.dwg, 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

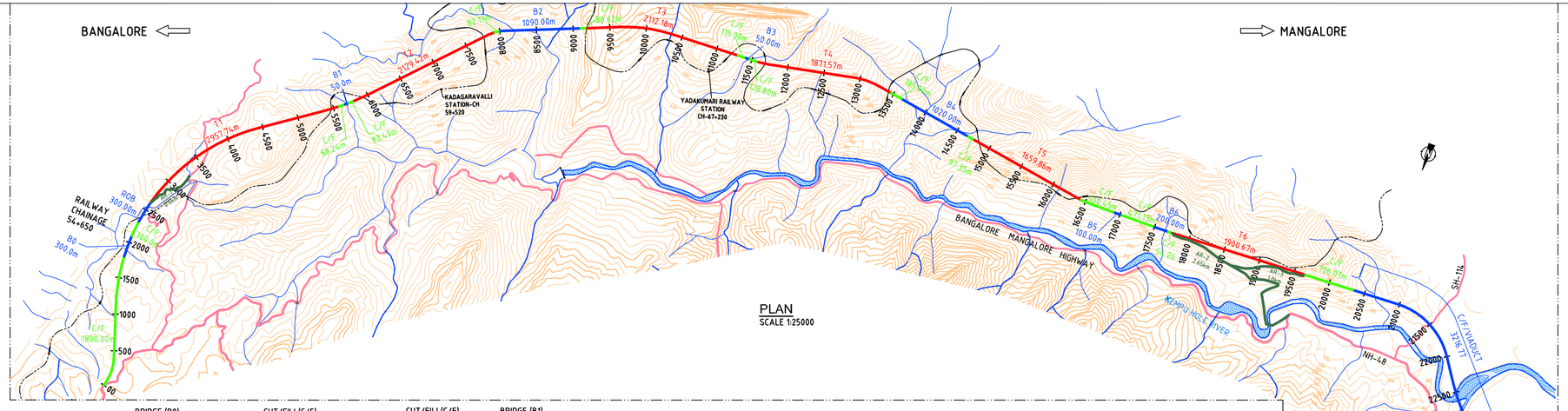
DRAWING TITLE

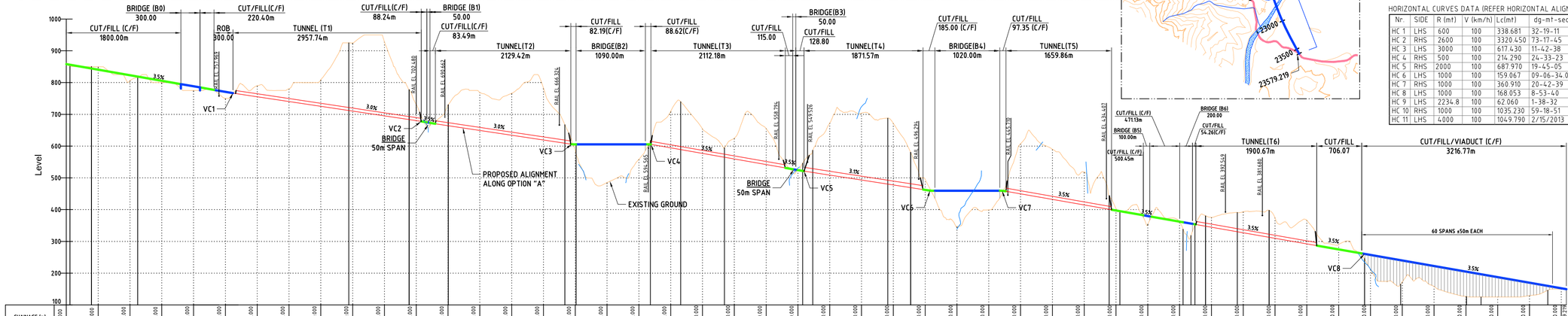
ALIGNMENT OPTION "A"
LAND AQUISITION AREA
PLAN

DRAWING NUMBER	REV
SHGA-FS-LAQ-2011	B

SCALE	MONTH (Earliest Issue)
AS SHOWN	DEC 2015

Original Drawing Size 1200x600mm





CONSTRUCTION TYPE DETAILS

S Nr.	CONSTRUCTION TYPE	CHAINAGE (m) FROM	CHAINAGE (m) TO	LENGTH 'Ls' (m)
1	CUT/FILL (C/F)	0.00	1800.00	1800.00
2	BRIDGE (B0)	1800.00	2100.00	300.00
3	CUT/FILL (C/F)	2100.00	2320.40	220.40
4	ROB	2320.40	2620.40	300.00
5	TUNNEL (T1)	2620.40	5578.14	2957.74
6	CUT/FILL (C/F)	5578.14	5666.38	88.24
7	BRIDGE (B1)	5666.38	5716.38	50.00
8	CUT/FILL (C/F)	5716.38	5799.87	83.49
9	TUNNEL (T2)	5799.87	7929.29	2129.42
10	CUT/FILL (C/F)	7929.29	8011.48	82.19
11	BRIDGE (B2)	8011.48	9101.48	1090.00
12	CUT/FILL (C/F)	9101.48	9190.10	88.62
13	TUNNEL (T3)	9190.10	11302.28	2112.18
14	CUT/FILL (C/F)	11302.28	11417.28	115.00
15	BRIDGE (B3)	11417.28	11467.28	50.00
16	CUT/FILL (C/F)	11467.28	11596.08	128.80
17	TUNNEL (T4)	11596.08	13467.65	1871.57
18	CUT/FILL (C/F)	13467.65	13652.65	185.00
19	BRIDGE (B4)	13652.65	14672.65	1020.00
20	CUT/FILL (C/F)	14672.65	14770.00	97.35
21	TUNNEL (T5)	14770.00	16429.86	1659.86
22	CUT/FILL (C/F)	16429.86	16930.31	500.45
23	BRIDGE (B5)	16930.31	17030.31	100.00
24	CUT/FILL (C/F)	17030.31	17501.44	471.13
25	BRIDGE (B6)	17501.44	17701.44	200.00
26	CUT/FILL (C/F)	17701.44	17755.70	54.26
27	TUNNEL (T6)	17755.70	19656.37	1900.67
28	CUT/FILL (C/F)	19656.37	20362.44	706.07
29	C/F+VIADUCT	20362.44	23579.21	3216.77

VERTICAL CURVES DATA (REFER VERTICAL ALIGNMENT TABLE)

Nr.	TYPE OF CURVE	CHAINAGE (mt) FROM	CHAINAGE (mt) TO	LENGTH OF CURVE (MT)	VALUE OF K	PVI CH & RL PVI NO.	PVI CH & RL CHAINAGE	PVI CH & RL RL	VALUE OF A	DESIGN SPEED (KM)
VC 1	SUMMIT	14560	14860	300	85.714	1	14710	459.333	3.5	100
VC 2	VALLEY	13503	13653	150	48.387	2	13578	459.805	3.1	100
VC 3	VALLEY	11446	11746	300	45.455	3	11596	521.117	6.6	100
VC 4	SUMMIT	9090	9290	200	57.143	4	9190	605.474	3.5	100
VC 5	VALLEY	7871	8021	150	50	5	7946	605.474	3	100
VC 6	VALLEY	5650	5950	300	46.154	6	5800	670.305	6.5	100
VC 7	SUMMIT	5553	5603	50	100.000	7	5578	677.8	0.5	100
VC 8	VALLEY	2470	2770	300	46.154	8	2620	766.533	6.5	100

HORIZONTAL CURVES DATA (REFER HORIZONTAL ALIGNMENT TABLE)

Nr.	SIDE	R (mt)	V (km/h)	Lc(mt)	dg-mt-sec	Ls.(mt)	e(%)	
HC 1	LHS	600	100	338.681	32-19-11	80	5.000	5.000
HC 2	RHS	2600	100	3320.450	73-17-45	NR	1.709	2.500
HC 3	LHS	3000	100	617.430	11-42-38	NR	2.500	1.481
HC 4	RHS	500	100	214.290	24-33-23	95	5.000	5.000
HC 5	RHS	2000	100	687.970	19-45-05	NR	2.222	2.500
HC 6	LHS	1000	100	159.067	09-06-34.0	50	4.444	4.444
HC 7	RHS	1000	100	360.910	20-42-39	50	4.444	4.444
HC 8	LHS	1000	100	168.053	8-53-40	50	4.444	4.444
HC 9	LHS	2234.8	100	62.060	1-38-32	NR	2.500	1.989
HC 10	RHS	1000	100	1035.230	59-18-51	50	4.444	4.444
HC 11	LHS	4000	100	1049.790	2/15/2013	NR	2.500	1.111

NOTES:-

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSIONS TO BE MEASURED FROM DRAWING. WRITTEN DIMENSIONS TO BE FOLLOWED.
3. ALIGNMENT DESIGN AND STRUCTURES, RAIL INTERFERENCES SHOWN IN THE DRAWING ARE BASED ON PRELIMINARY DATA ONLY AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.
4. THIS DRAWING SHALL BE READ ALONG WITH RELATED REFERENCE DRAWINGS.

LONGITUDINAL SECTION
SCALE HOR. 1:25000, VERT. 1:5000

SCALE 1 : 5000 (VERTICAL)
100m 0 100m 500m

SCALE 1 : 25000 (HORIZONTAL)
1000m 0 1000m 2000m 2500m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1001 TO 1016 (16 SHEETS)

SHGA-FS-LAY-1061 TO 1098 (38 SHEETS)

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	BRIDGE 'B3' LOCATION MODIFIED AND RELATED MODIFICATIONS (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa/RMe	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa/RMe	RMe	AKg
C	AUG 2015	ROW AND OTHER DETAILS ADDED AND DRAWING RESUBMITTED	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No, 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

W:\GEOCONSULT_PRa_R\1600 Projects\1650-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1000_F.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 0+000 TO 23+579.22Km

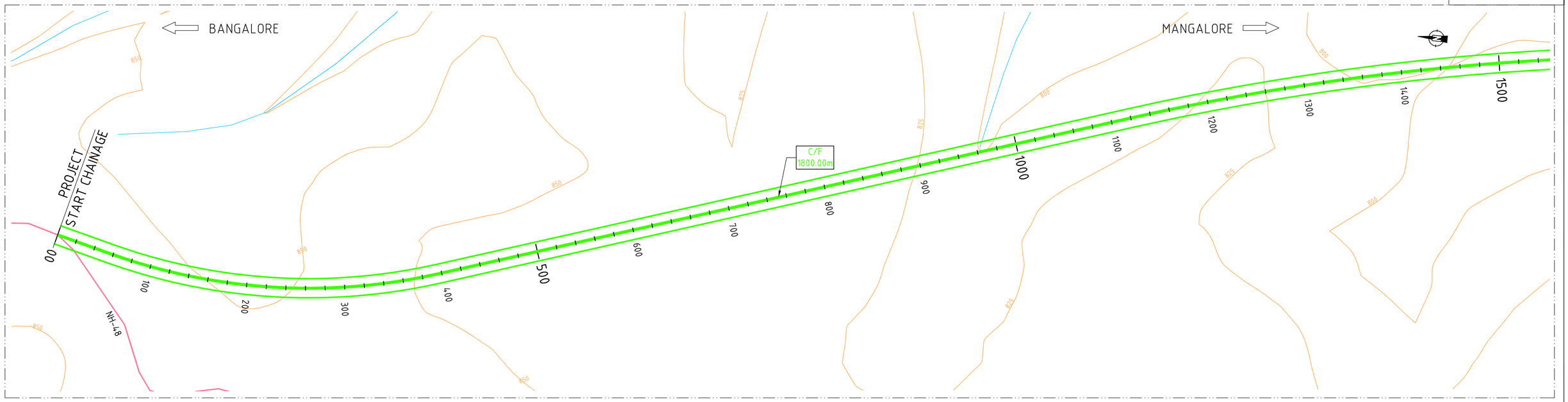
DRAWING NUMBER
SHGA-FS-LAY-1000

REV
F

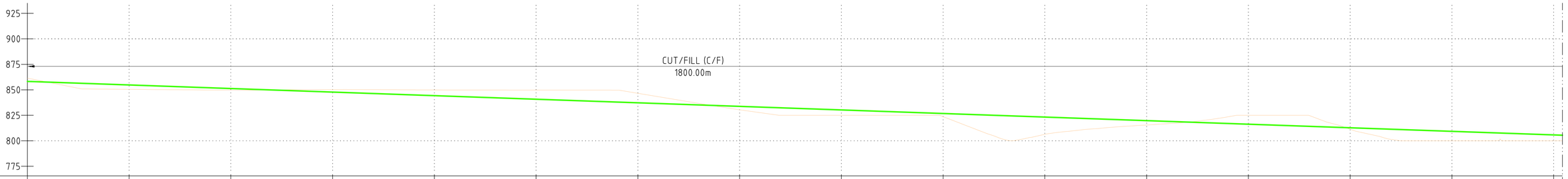
SCALE
AS SHOWN

MONTH (Earliest Issue)
DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	00.000	100.000	200.000	300.000	400.000	500.000	600.000	700.000	800.000	900.000	1000.000	1100.000	1200.000	1300.000	1400.000	1500.000
GROUND LEVELS	861.432	850.449	849.679	850.263	849.897	849.780	846.620	830.424	825.045	823.663	806.362	815.406	825.005	811.353	799.985	799.948
FORMATION LEVELS	858.247	854.747	851.247	847.747	844.247	840.747	837.247	833.747	830.247	826.747	823.247	819.747	816.247	812.747	809.247	805.747
HORIZONTAL ALIGNMENT	L =57.116	R: 600.000 L: 338.681				L =724.204							R: 2600.000 L: 3320.446			
VERTICAL ALIGNMENT	GRADIENT 3.5%															

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

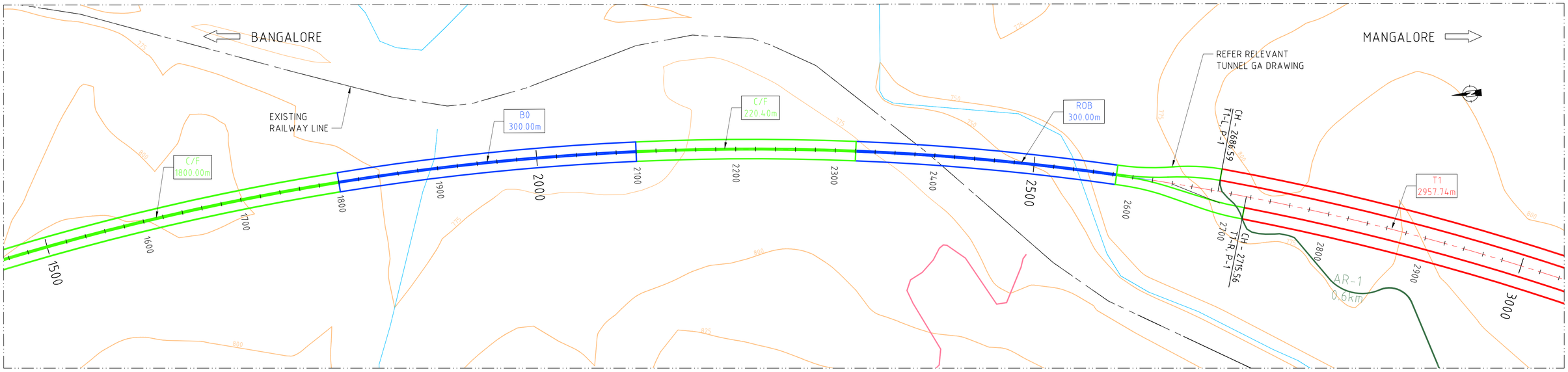
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 0+000 TO 1+500 Km

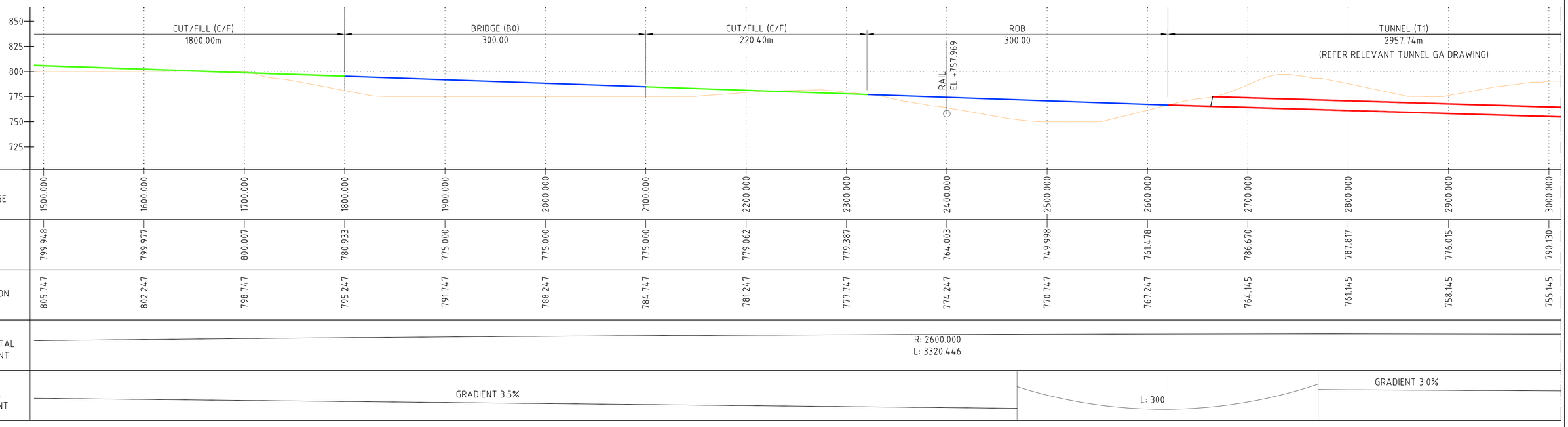
DRAWING NUMBER: SHGA-FS-LAY-1001
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1

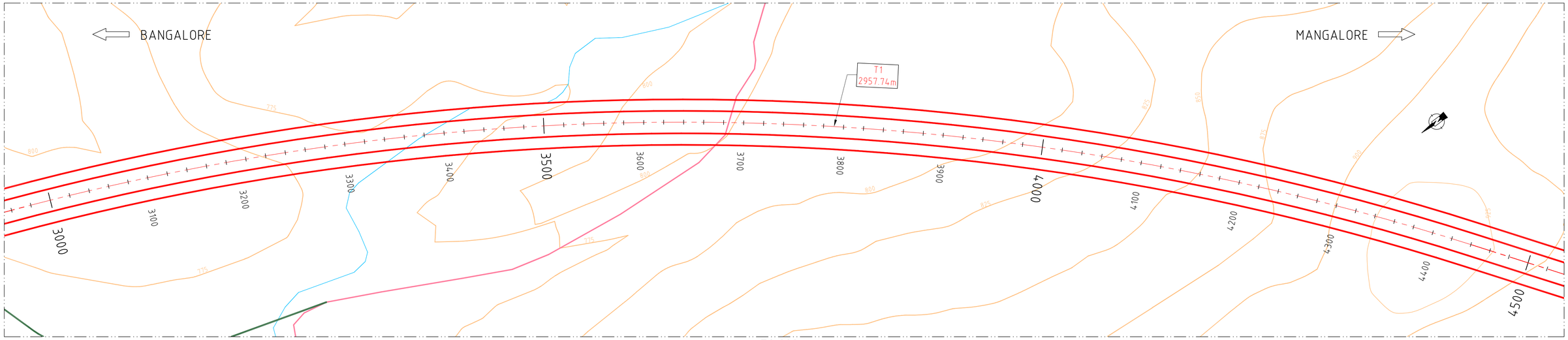


PLAN
SCALE 1:2000

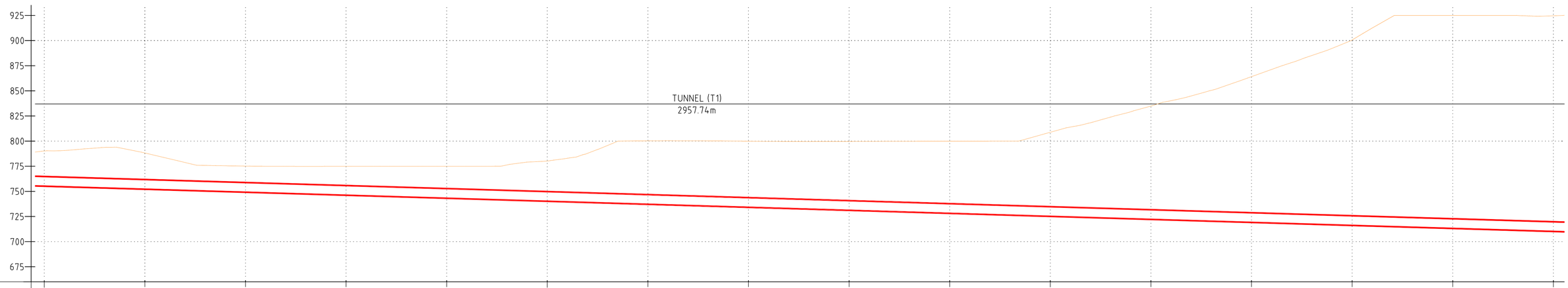


| | | |

Original Drawing Size A1

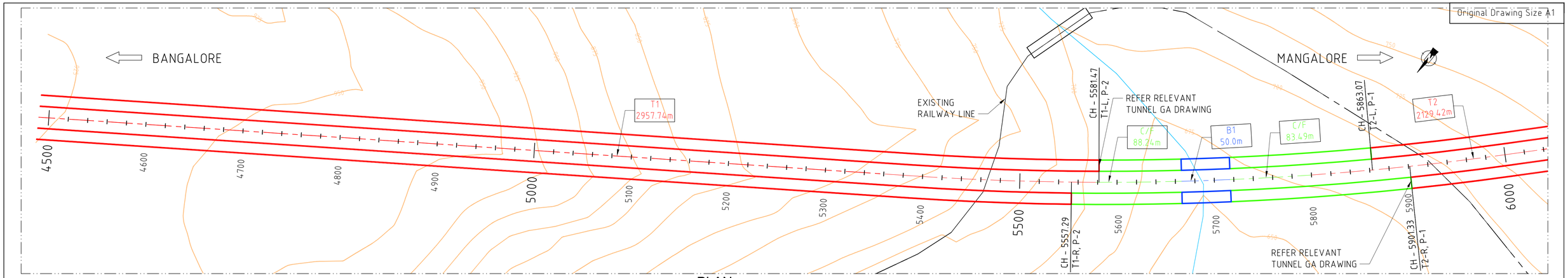


PLAN
SCALE 1:2000

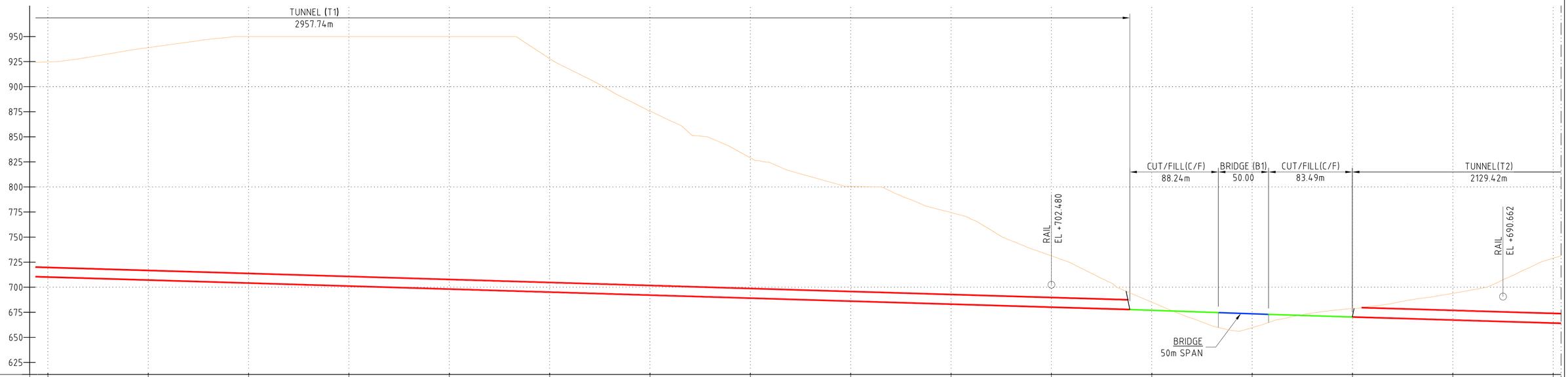


| | | |

Original Drawing Size A1

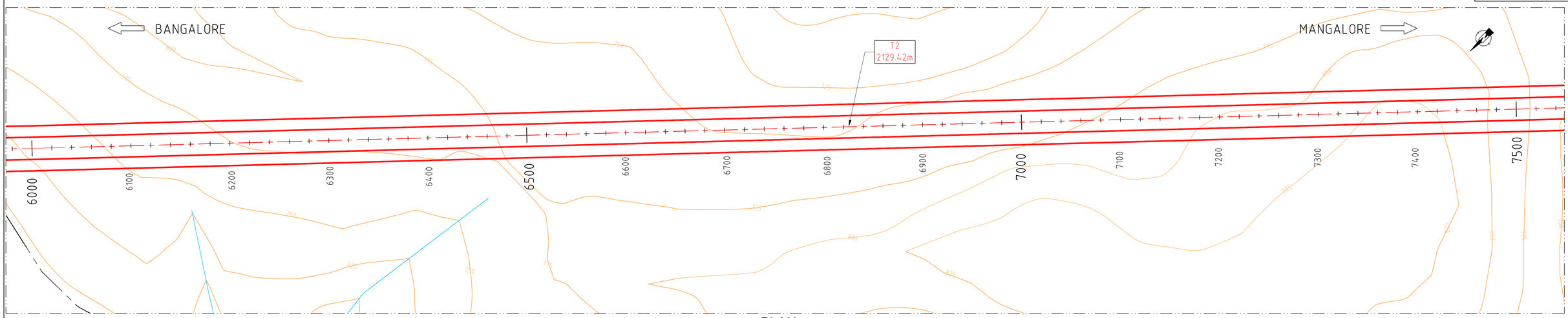


PLAN
SCALE 1:2000

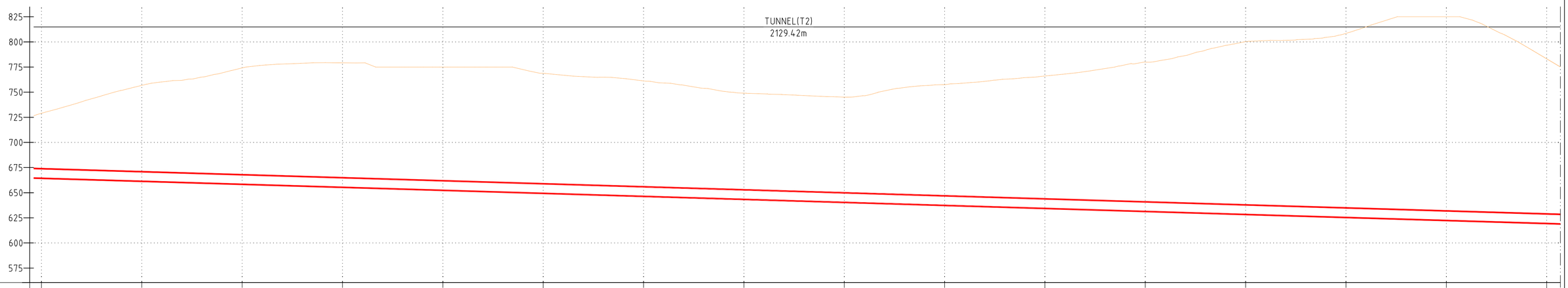


| | | |

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	6000.000	6100.000	6200.000	6300.000	6400.000	6500.000	6600.000	6700.000	6800.000	6900.000	7000.000	7100.000	7200.000	7300.000	7400.000	7500.000
GROUND LEVELS	729.035	756.779	774.138	779.148	775.014	768.830	761.218	749.020	745.102	757.570	766.062	779.933	800.209	808.488	825.000	783.176
FORMATION LEVELS	664.302	661.302	658.302	655.302	652.302	649.302	646.302	643.302	640.302	637.302	634.302	631.302	628.302	625.302	622.302	619.302
HORIZONTAL ALIGNMENT	L =1832.763															
VERTICAL ALIGNMENT	GRADIENT 3.0%															

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

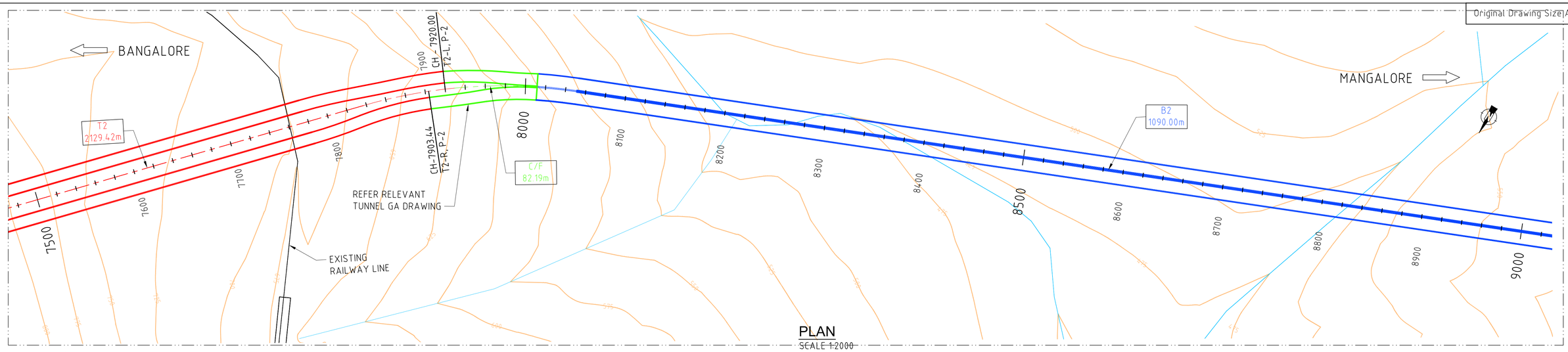
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 6+000 TO 7+500 Km

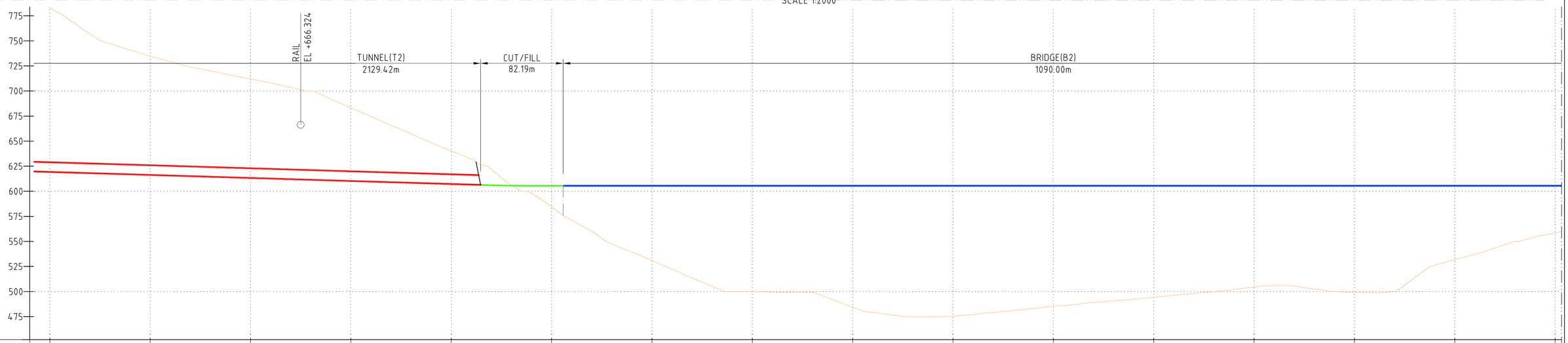
DRAWING NUMBER: SHGA-FS-LAY-1005
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size:A1



PLAN
SCALE 1:2000



CHAINAGE	7500.000	7600.000	7700.000	7800.000	7900.000	8000.000	8100.000	8200.000	8300.000	8400.000	8500.000	8600.000	8700.000	8800.000	8900.000	9000.000
GROUND LEVELS	783.176	734.716	712.025	683.232	640.069	584.267	531.053	499.780	484.419	475.210	485.301	494.181	504.570	499.201	531.841	558.449
FORMATION LEVELS	619.302	616.302	613.302	610.302	607.302	605.474	605.474	605.474	605.474	605.474	605.474	605.474	605.474	605.474	605.474	605.474
HORIZONTAL ALIGNMENT	L =1832.763				R: 500.000 L: 214.295		L =1129.043									
VERTICAL ALIGNMENT	GRADIENT 3.0%				L: 150	GRADIENT 0.0%										

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)

SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa, R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

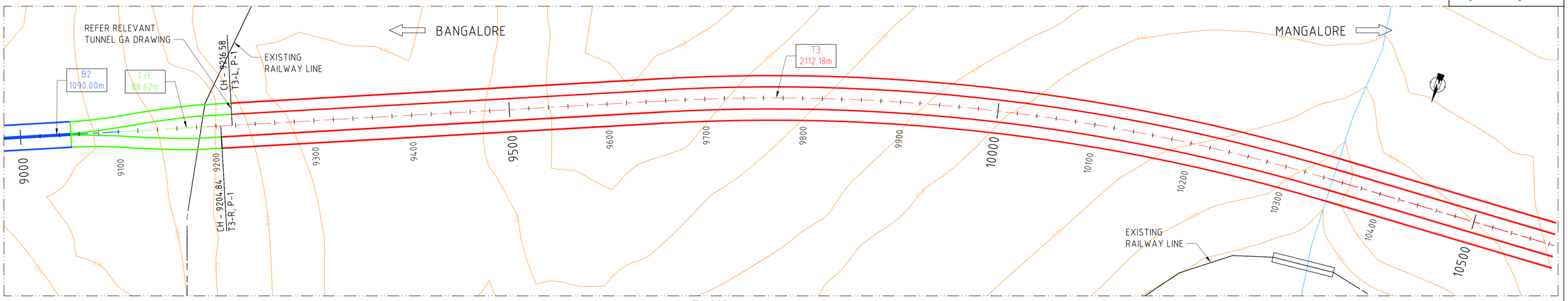
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 7+500 TO 9+000 Km

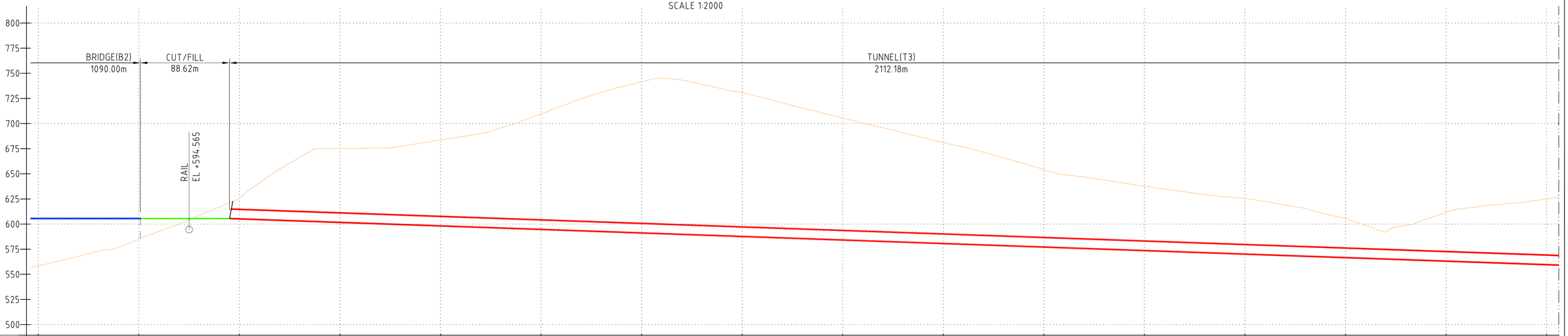
DRAWING NUMBER: SHGA-FS-LAY-1006
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	9000.000	9100.000	9200.000	9300.000	9400.000	9500.000	9600.000	9700.000	9800.000	9900.000	10000.000	10100.000	10200.000	10300.000	10400.000	10500.000									
GROUND LEVELS	558.449	584.894	625.833	675.184	683.616	709.600	741.498	730.938	705.499	681.096	654.081	637.665	625.307	605.540	611.646	624.905									
FORMATION LEVELS	605.474	605.474	605.128	601.628	598.128	594.628	591.128	587.628	584.128	580.628	577.128	573.628	570.128	566.628	563.128	559.628									
HORIZONTAL ALIGNMENT	L =476.426										R: 2000.000 L: 687.974														
VERTICAL ALIGNMENT	GRADIENT 3.5%		L: 200														GRADIENT 3.5%								

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15	
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 9+000 TO 10+500 Km

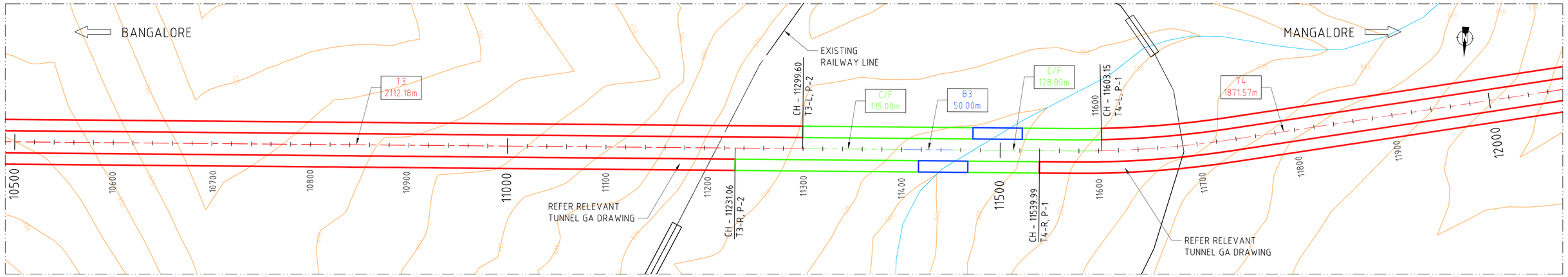
DRAWING NUMBER
SHGA-FS-LAY-1007

REV
F

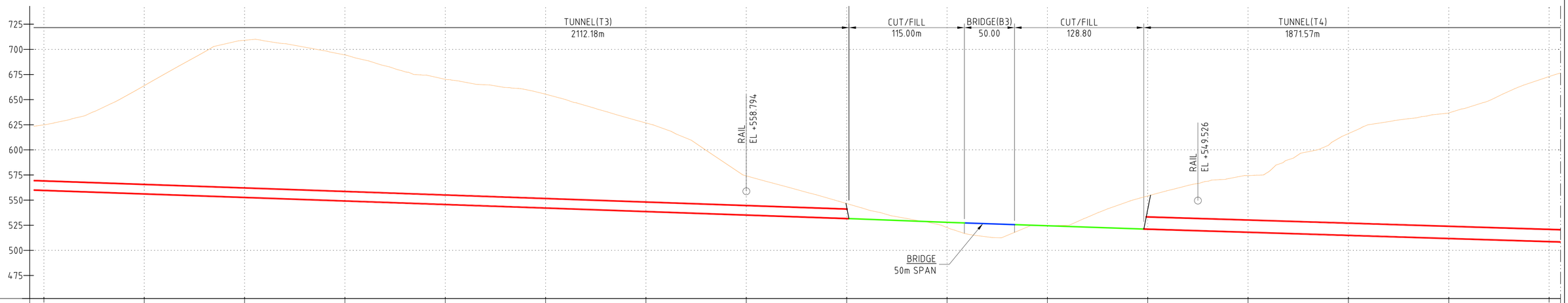
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	10500.000	10600.000	10700.000	10800.000	10900.000	11000.000	11100.000	11200.000	11300.000	11400.000	11500.000	11600.000	11700.000	11800.000	11900.000	12000.000
GROUND LEVELS	624.905	663.875	709.047	694.465	670.196	655.371	626.784	574.077	546.577	522.692	524.564	554.147	574.343	616.230	636.730	672.930
FORMATION LEVELS	559.628	556.128	552.628	549.128	545.628	542.128	538.628	535.128	531.628	527.880	524.480	521.112	518.012	514.912	511.812	508.712
HORIZONTAL ALIGNMENT	L =1229.645											R: 1000.000 L: 159.067		L =1178.033		
VERTICAL ALIGNMENT	GRADIENT 3.5%										L: 300			GRADIENT 3.1%		

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	"BRIDGE 3" LOCATION MODIFIED/RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY__1001-1016__F.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 10+500 TO 12+000 Km

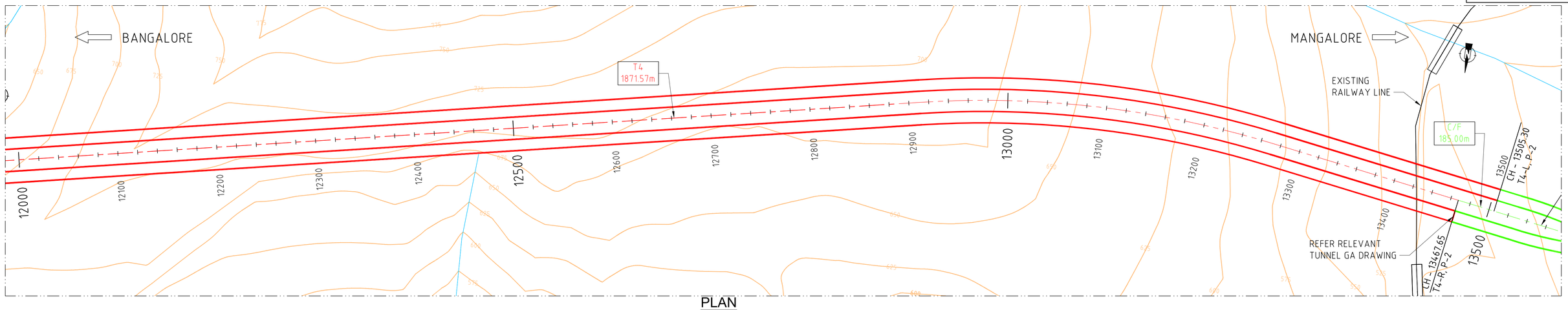
DRAWING NUMBER
SHGA-FS-LAY-1008

REV
F

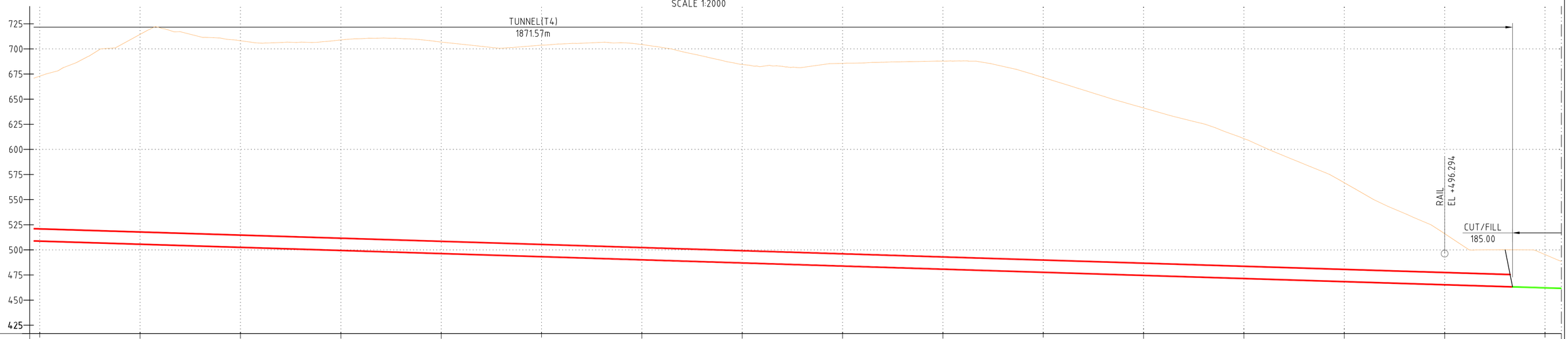
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	12000.000	12100.000	12200.000	12300.000	12400.000	12500.000	12600.000	12700.000	12800.000	12900.000	13000.000	13100.000	13200.000	13300.000	13400.000	13500.000
GROUND LEVELS	672.930	714.496	708.071	708.928	706.838	703.757	704.400	684.546	685.649	687.861	671.583	641.261	610.705	566.854	516.157	495.344
FORMATION LEVELS	508.712	505.612	502.512	499.412	496.312	493.212	490.112	487.012	483.912	480.812	477.712	474.612	471.512	468.412	465.312	462.212
HORIZONTAL ALIGNMENT	L =1178.033										R: 1000.000 L: 360.906			L =3120.069		
VERTICAL ALIGNMENT	GRADIENT 3.1%															

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

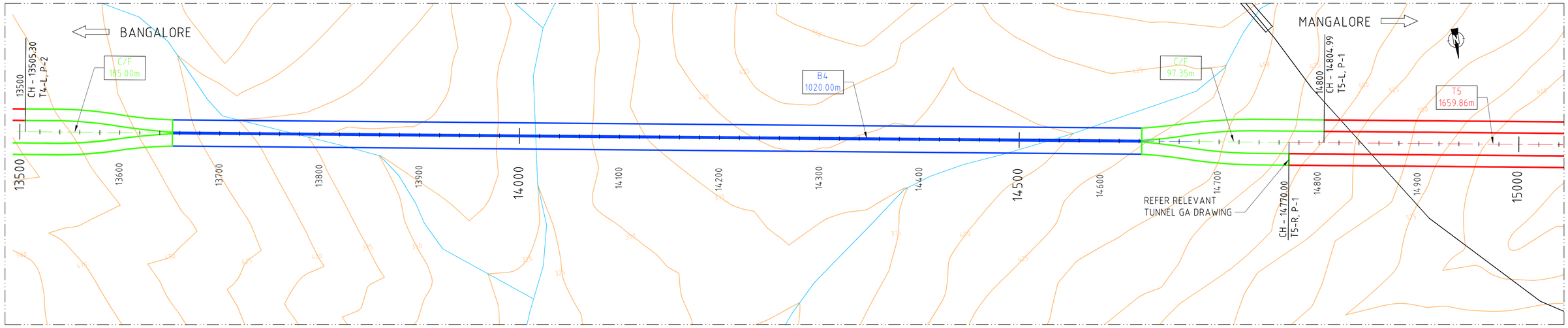
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 12+000 TO 13+500 Km

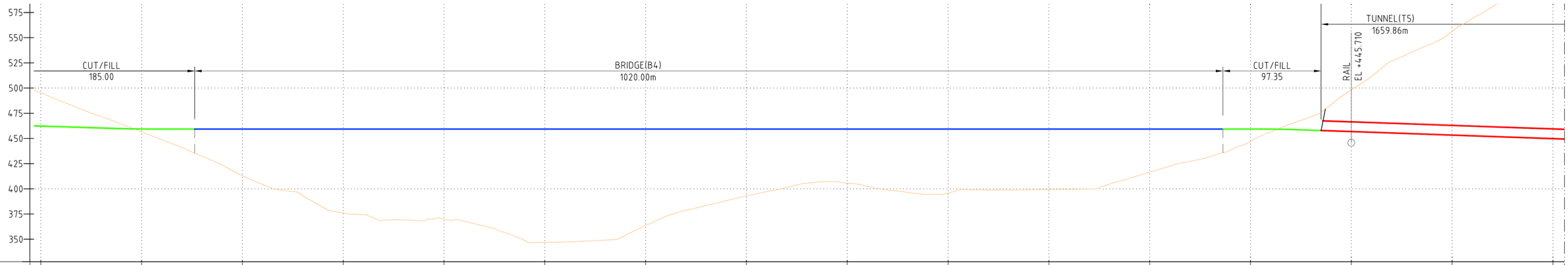
DRAWING NUMBER: SHGA-FS-LAY-1009 | REV: F

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	13500.000	13600.000	13700.000	13800.000	13900.000	14000.000	14100.000	14200.000	14300.000	14400.000	14500.000	14600.000	14700.000	14800.000	14900.000	15000.000
GROUND LEVELS	495.344	456.516	413.052	376.026	369.907	346.878	363.496	392.947	405.520	395.710	399.365	416.510	447.211	498.276	556.298	607.246
FORMATION LEVELS	462.212	459.367	459.333	459.333	459.333	459.333	459.333	459.333	459.333	459.333	459.333	459.333	459.333	459.333	456.780	453.280	449.780
HORIZONTAL ALIGNMENT	L =3120.069																
VERTICAL ALIGNMENT	L: 150	GRADIENT 0.0%											L: 300	GRADIENT 3.5%			

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15	
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY__1001-1016__F.dwg, 2015-12-18

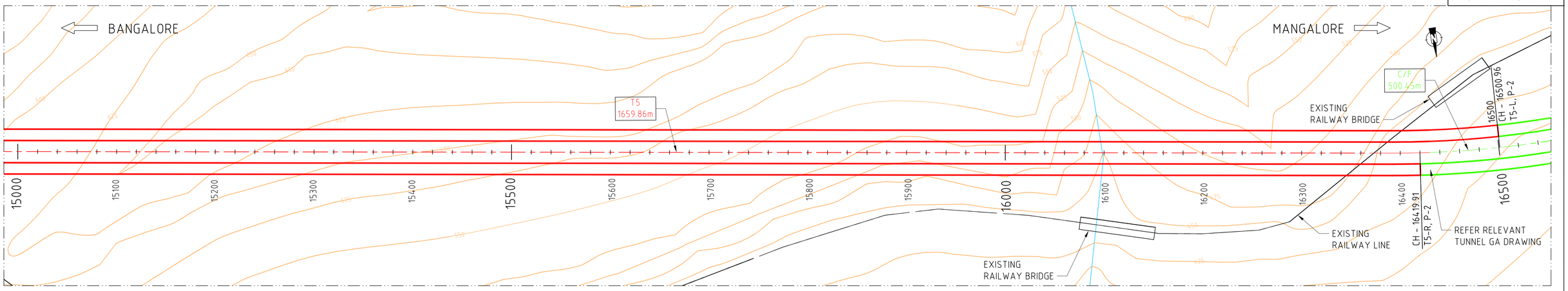
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 13+500 TO 15+000 Km

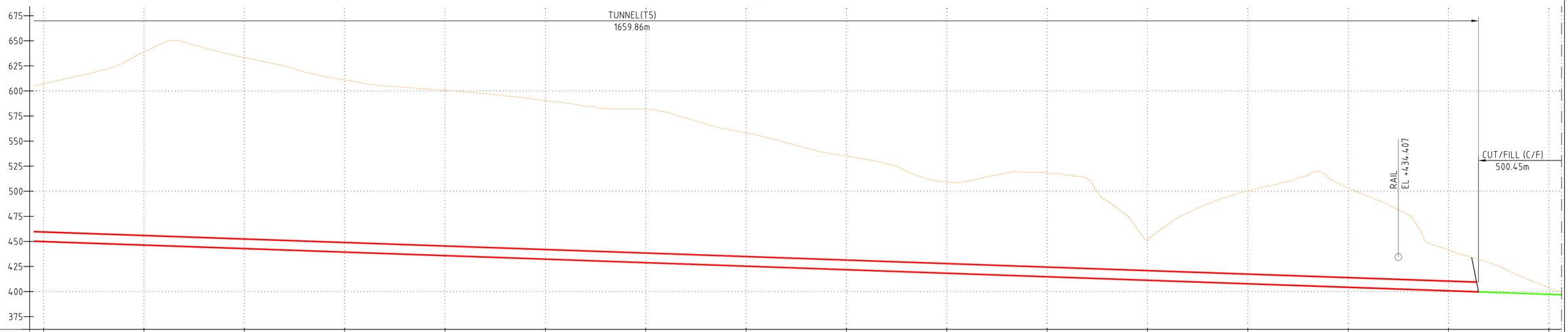
DRAWING NUMBER: SHGA-FS-LAY-1010 | REV: F

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	15000.000	15100.000	15200.000	15300.000	15400.000	15500.000	15600.000	15700.000	15800.000	15900.000	16000.000	16100.000	16200.000	16300.000	16400.000	16500.000	
GROUND LEVELS	607.246	638.923	633.318	610.912	600.678	590.225	581.784	558.174	535.042	509.155	518.398	451.803	500.414	503.456	441.417	403.867	
FORMATION LEVELS	449.780	446.280	442.780	439.280	435.780	432.280	428.780	425.280	421.780	418.280	414.780	411.280	407.780	404.280	400.780	397.280	
HORIZONTAL ALIGNMENT	L =3120.069															R: 1000.000 L: 168.053	
VERTICAL ALIGNMENT	GRADIENT 3.5%																

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 15+000 TO 16+500 Km

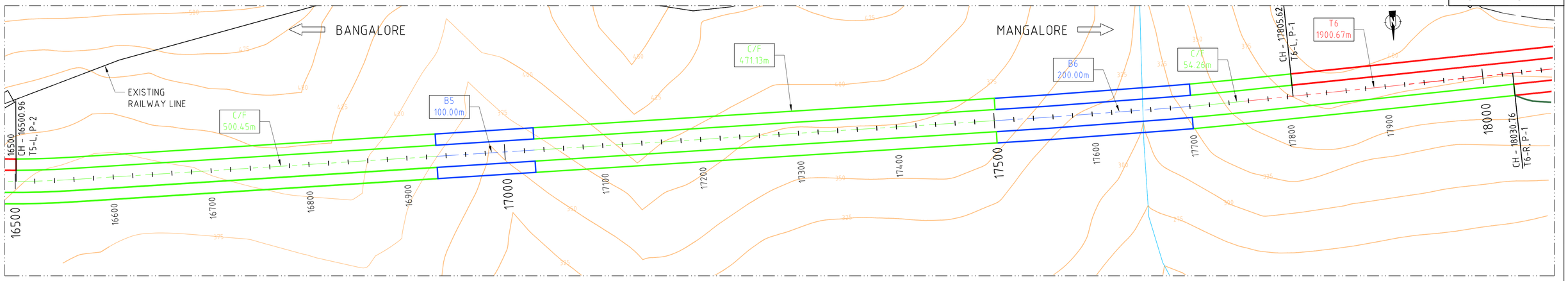
DRAWING NUMBER
SHGA-FS-LAY-1011

REV
F

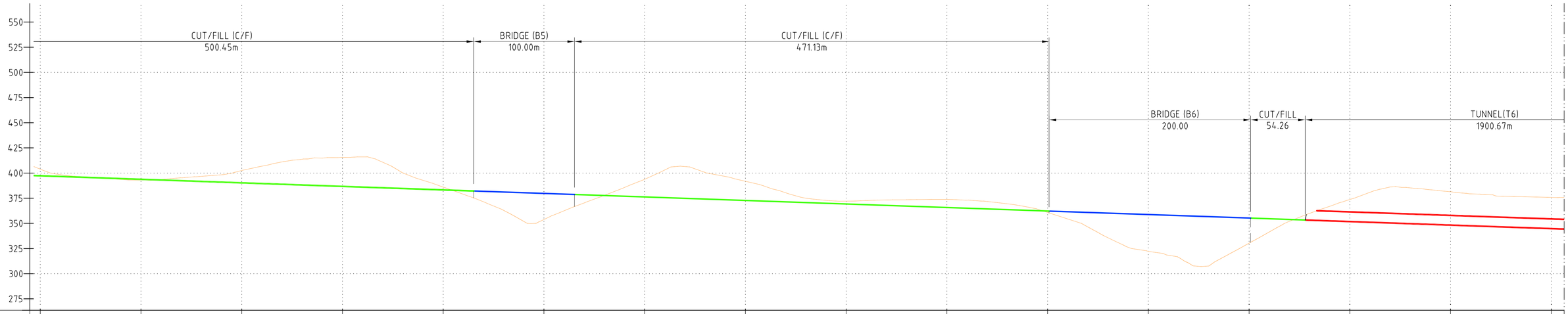
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	16500.000	16600.000	16700.000	16800.000	16900.000	17000.000	17100.000	17200.000	17300.000	17400.000	17500.000	17600.000	17700.000	17800.000	17900.000	18000.000		
GROUND LEVELS	403.867	393.040	402.534	415.651	386.037	353.866	393.762	391.857	372.069	373.801	360.826	322.167	330.300	373.738	381.408	375.832		
FORMATION LEVELS	397.280	393.780	390.280	386.780	383.280	379.780	376.280	372.780	369.280	365.780	362.280	358.780	355.280	351.780	348.280	344.780		
HORIZONTAL ALIGNMENT		L =993.774										L =123.666	R: 2234.800 L: 62.063	L =167.036		L =500.000		
VERTICAL ALIGNMENT	GRADIENT 3.5%																	

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15	
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

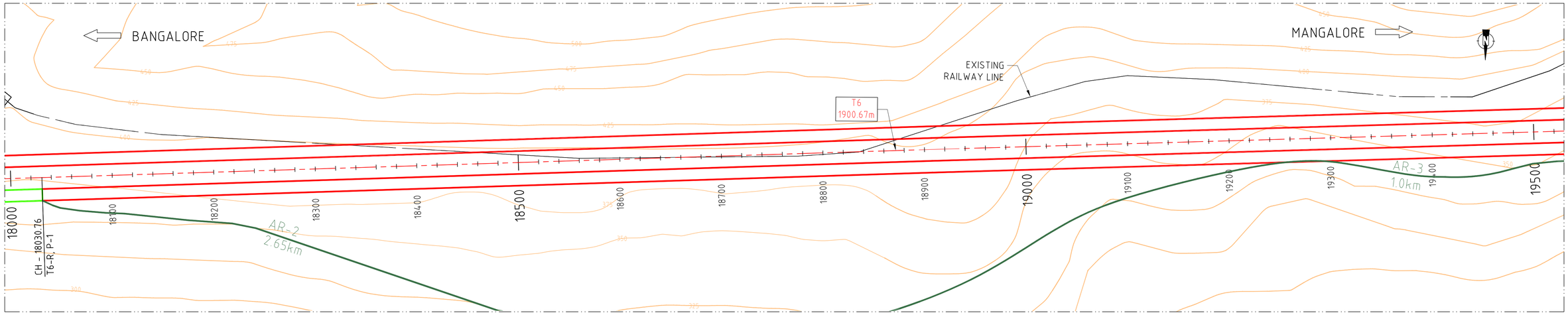
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 16+500 TO 18+000 Km

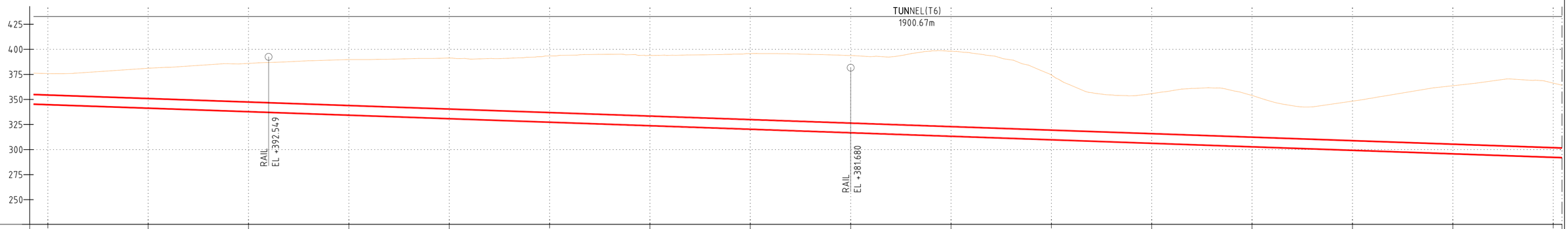
DRAWING NUMBER: SHGA-FS-LAY-1012
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	18000.000	18100.000	18200.000	18300.000	18400.000	18500.000	18600.000	18700.000	18800.000	18900.000	19000.000	19100.000	19200.000	19300.000	19400.000	19500.000									
GROUND LEVELS	375.832	381.115	385.943	389.770	391.329	393.361	393.942	395.714	393.832	398.233	374.423	355.765	353.998	348.313	363.696	366.345									
FORMATION LEVELS	344.780	341.280	337.780	334.280	330.780	327.280	323.780	320.280	316.780	313.280	309.780	306.280	302.780	299.280	295.780	292.280									
HORIZONTAL ALIGNMENT	L =500.000					L =500.000					L =1500.959														
VERTICAL ALIGNMENT	GRADIENT 3.5%																								

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 18+000 TO 19+500 Km

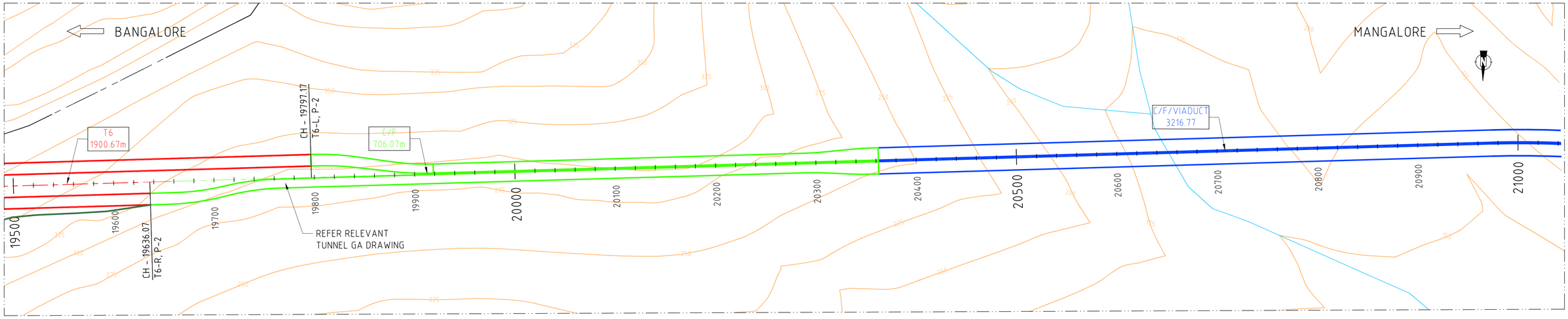
DRAWING NUMBER
SHGA-FS-LAY-1013

REV
F

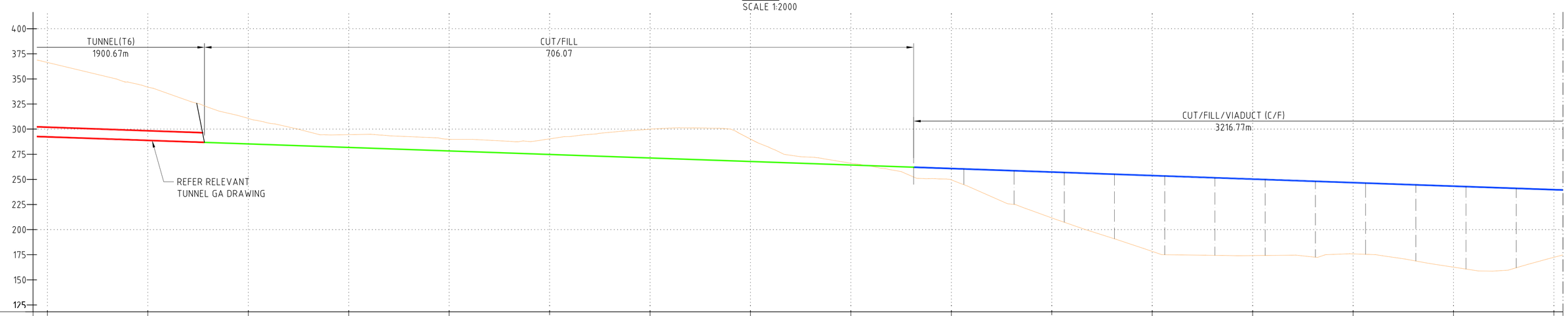
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	19500.000	19600.000	19700.000	19800.000	19900.000	20000.000	20100.000	20200.000	20300.000	20400.000	20500.000	20600.000	20700.000	20800.000	20900.000	21000.000
GROUND LEVELS	366.345	341.811	310.658	294.476	289.909	290.277	299.946	290.115	265.968	249.519	211.653	178.314	174.133	175.867	162.623	172.456
FORMATION LEVELS	292.280	288.780	285.280	281.780	278.280	274.780	271.280	267.780	264.280	260.780	257.280	253.780	250.280	246.780	243.280	239.780
HORIZONTAL ALIGNMENT	L =1500.959										L =565.911					
VERTICAL ALIGNMENT	GRADIENT 3.5%															

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

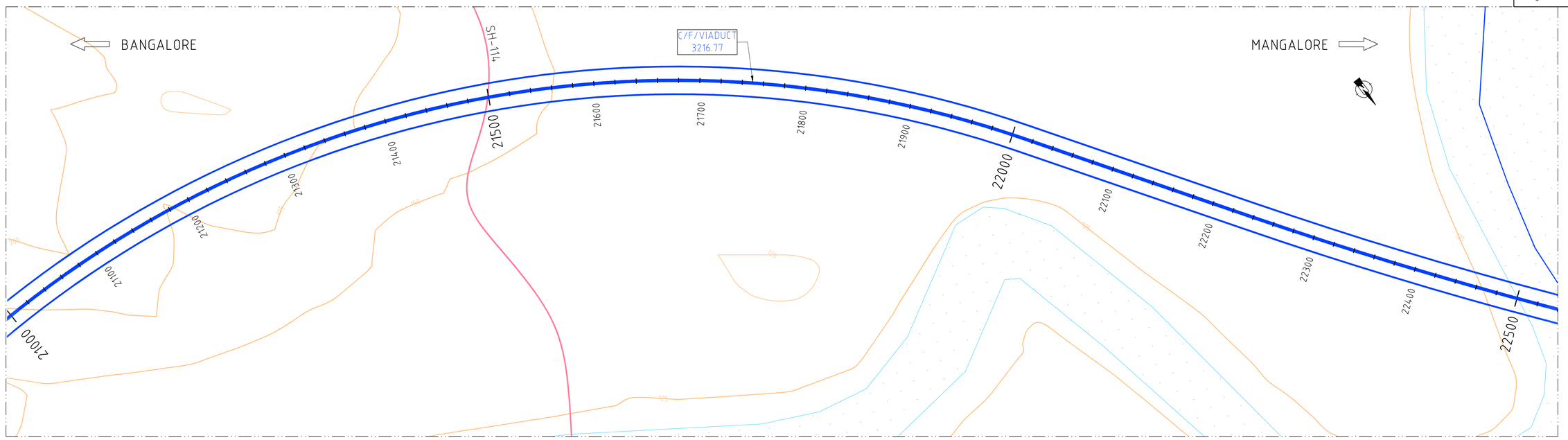
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 19+500 TO 21+000 Km

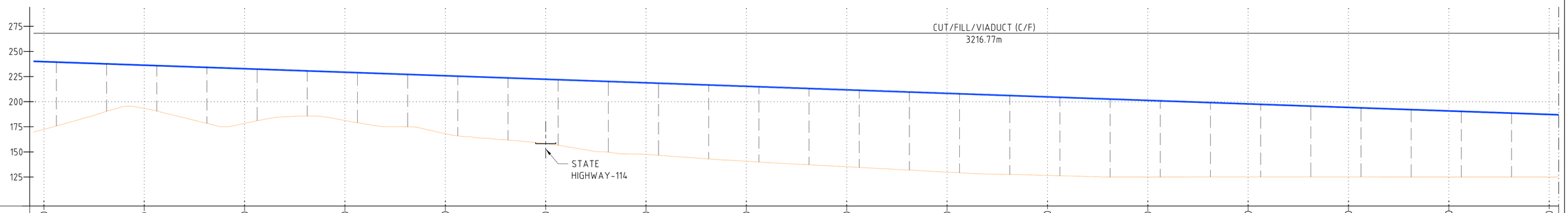
DRAWING NUMBER: SHGA-FS-LAY-1014
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1

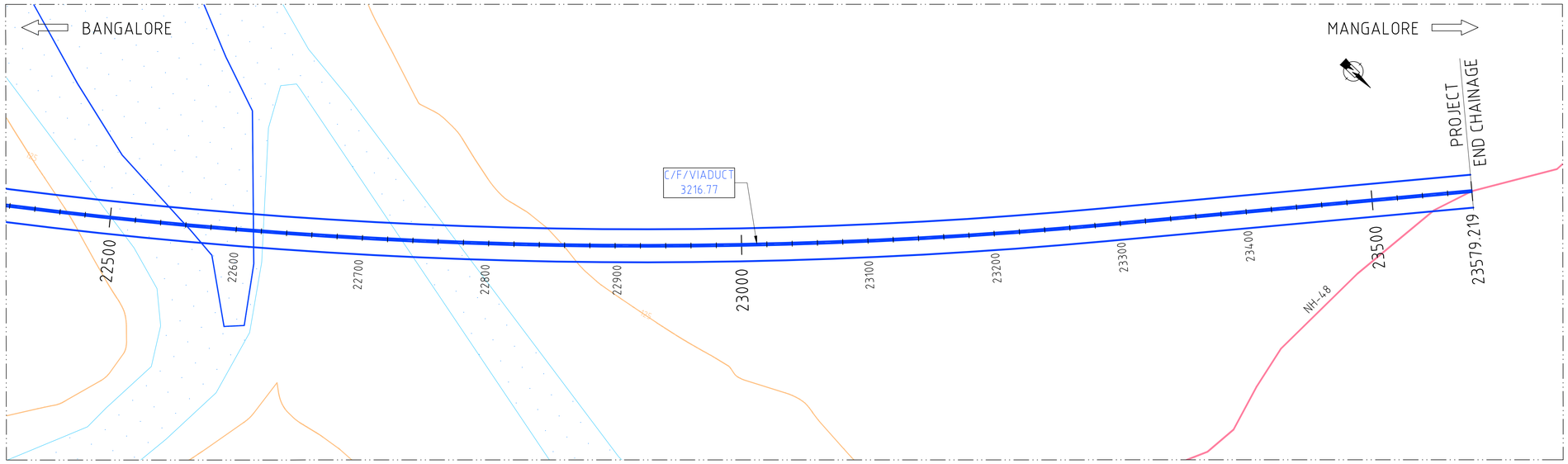


PLAN
SCALE 1:2000

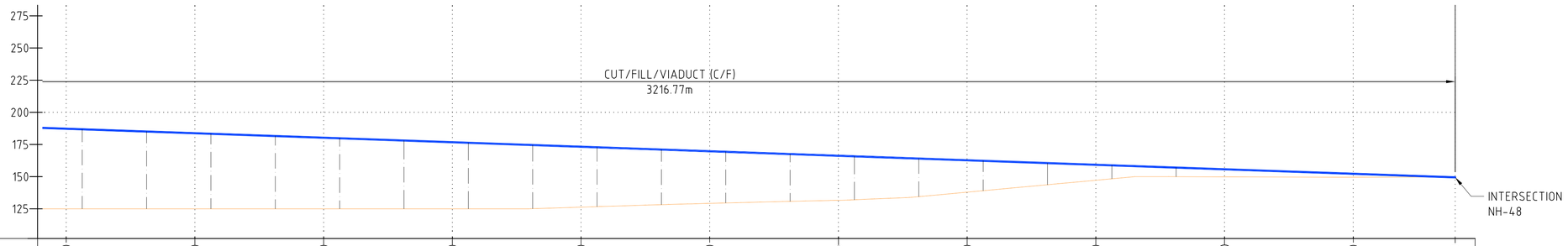


| | | |

Original Drawing Size A1



PLAN
SCALE 1:2000



CHAINAGE	22500.000	22600.000	22700.000	22800.000	22900.000	23000.000	23100.000	23200.000	23300.000	23400.000	23500.000	23579.219
GROUND LEVELS	125.000	125.000	125.000	125.000	126.300	129.246	131.635	137.941	147.206	149.869	149.602	149.688
FORMATION LEVELS	187.280	183.780	180.280	176.780	173.280	169.780	166.280	162.780	159.280	155.780	152.280	149.507
HORIZONTAL ALIGNMENT	R: 4000.000 L: 1049.786								L =291.136			
VERTICAL ALIGNMENT	GRADIENT 3.5%											

LONGITUDINAL SECTION (AT PROJECT CENTER LINE)
SCALE 1:2000

ALIGNMENT SHOWN HERE MAY VARY, AFTER DETAILED TOPOGRAPHIC SURVEY/GEOLOGICAL INVESTIGATION.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.
2. NO DIMENSION TO BE MEASURED FROM DRAWING ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

LEGEND:
- EXISTING ROAD
- RIVER
- NALA
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)
- ACCESS ROAD

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
F	DEC 2015	RESUBMITTED (KD-6)	PRa	RMe	AKg
E	DEC 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
D	SEP 2015	ALIGNMENT IMPROVEMENT AND RELATED MODIFICATIONS	PRa	RMe	AKg
C	AUG 2015	INTERIM PROGRESS	PRa	RMe	AKg
B	AUG 2015	MINOR MODIFICATIONS AND RESUBMISSION	PRa	RMe	AKg
A	JULY 2015	FIRST DRAFT (INCEPTION STAGE)	PRa/ABa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	22.07.15	22.07.15	22.07.15	22.07.15	22.07.15
Name	PRa/RMe	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1001-1016_F.dwg, 2015-12-18

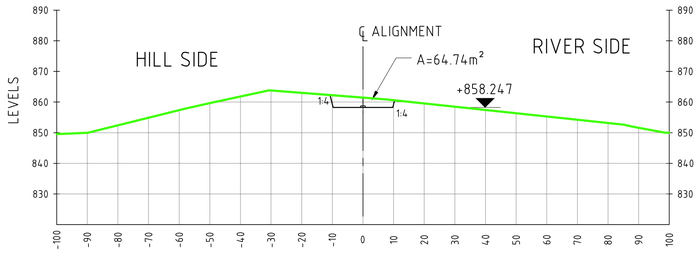
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
PLAN AND PROFILE
CHAINAGE 22+500 TO 23+579.219Km

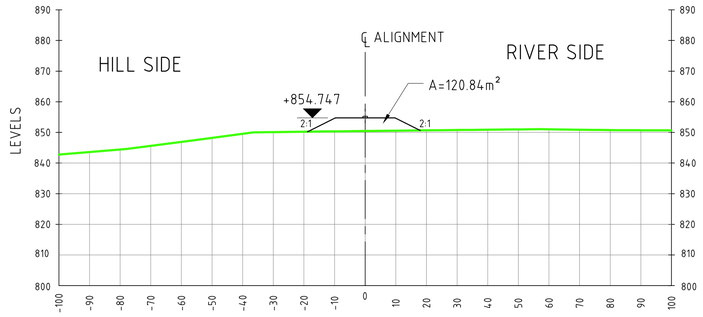
DRAWING NUMBER: SHGA-FS-LAY-1016
REV: F

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

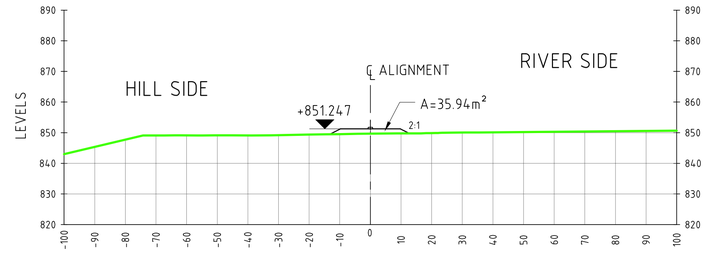
Original Drawing Size A1



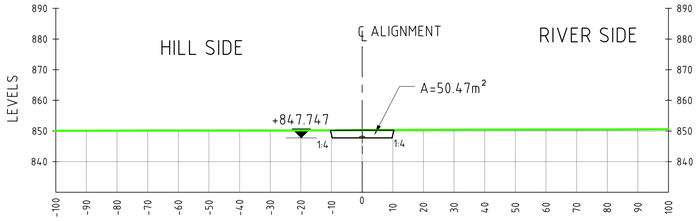
X-SEC AT CH: 0+000
SCALE 1:1000



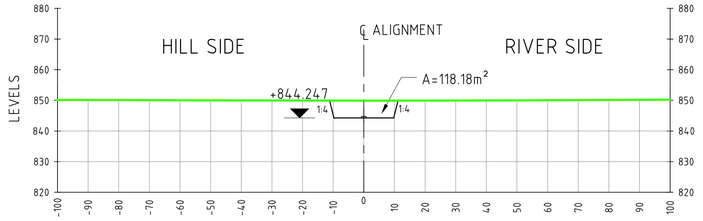
X-SEC AT CH: 0+100.00
SCALE 1:1000



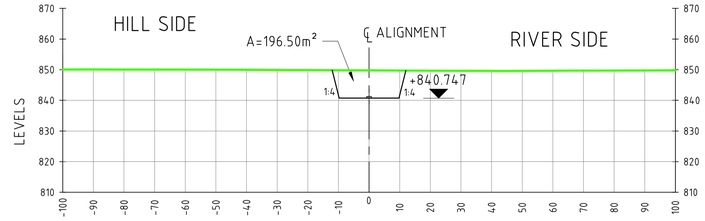
X-SEC AT CH: 0+200.00
SCALE 1:1000



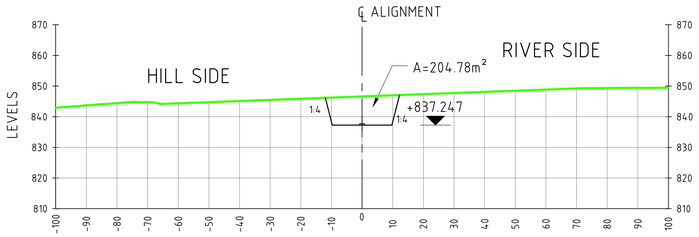
X-SEC AT CH: 0+300.00
SCALE 1:1000



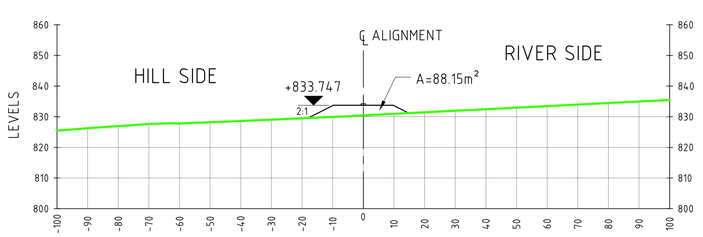
X-SEC AT CH: 0+400.00
SCALE 1:1000



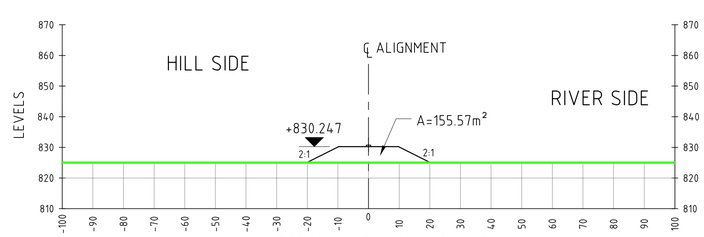
X-SEC AT CH: 0+500.00
SCALE 1:1000



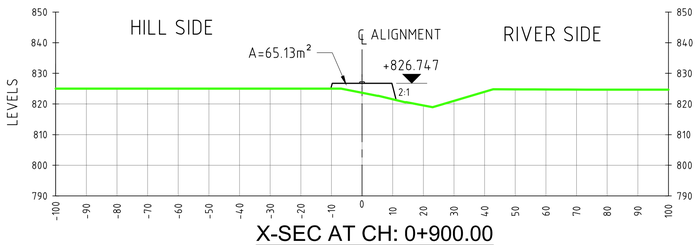
X-SEC AT CH: 0+600.00
SCALE 1:1000



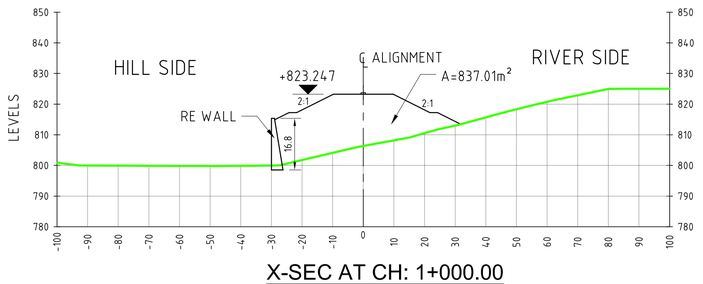
X-SEC AT CH: 0+700.00
SCALE 1:1000



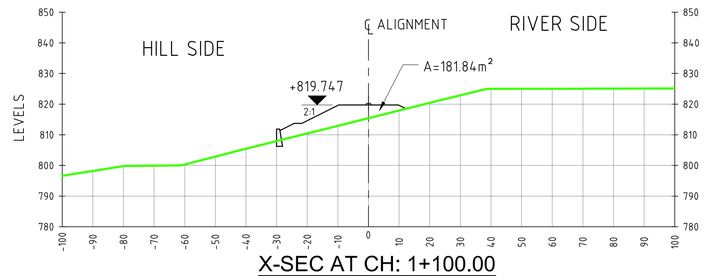
X-SEC AT CH: 0+800.00
SCALE 1:1000



X-SEC AT CH: 0+900.00
SCALE 1:1000



X-SEC AT CH: 1+000.00
SCALE 1:1000



X-SEC AT CH: 1+100.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	MINOR CORRECTIONS / SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

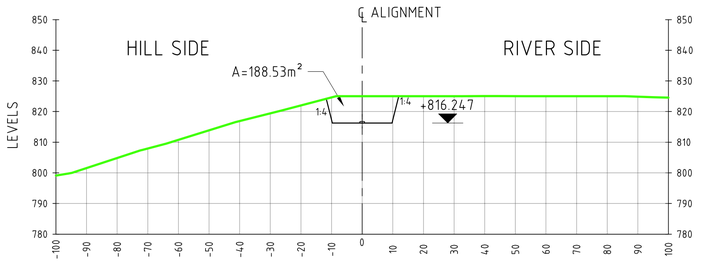
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH; 0+000 TO 1+100

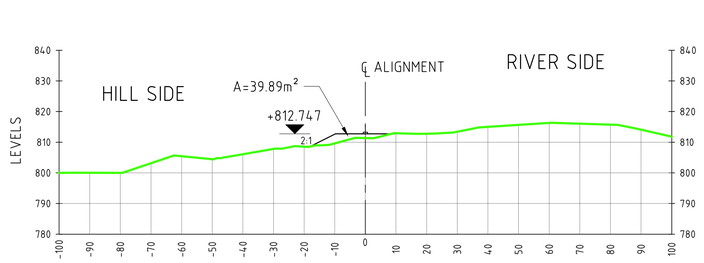
PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING NUMBER: SHGA-FS-LAY-1061 | REV: B
SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

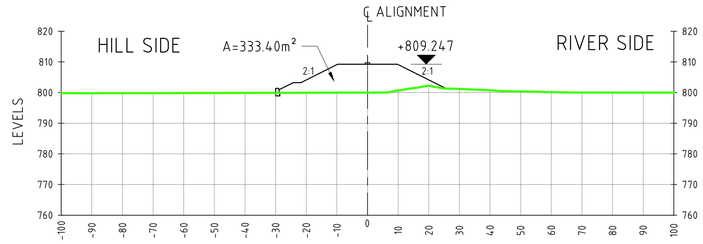
Original Drawing Size A1



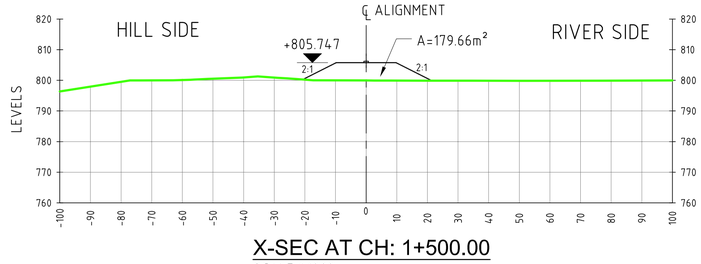
X-SEC AT CH: 1+200.00
SCALE 1:1000



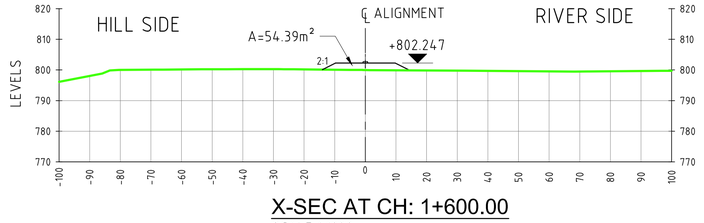
X-SEC AT CH: 1+300.00
SCALE 1:1000



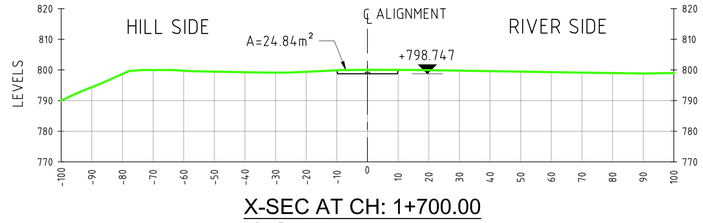
X-SEC AT CH: 1+400.00
SCALE 1:1000



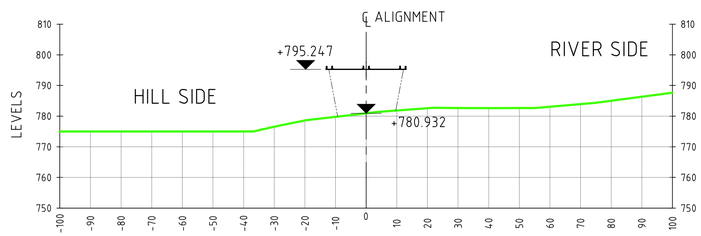
X-SEC AT CH: 1+500.00
SCALE 1:1000



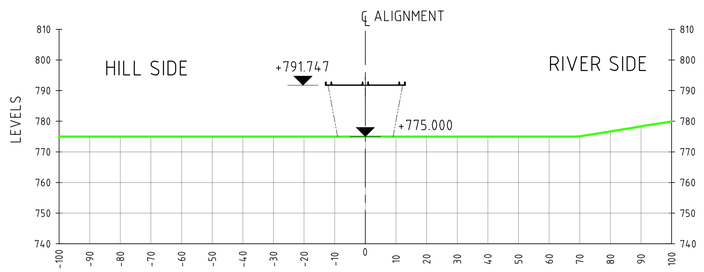
X-SEC AT CH: 1+600.00
SCALE 1:1000



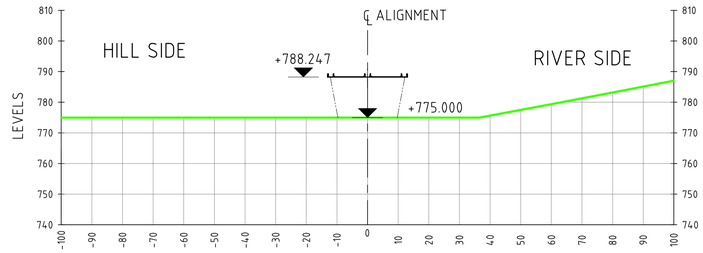
X-SEC AT CH: 1+700.00
SCALE 1:1000



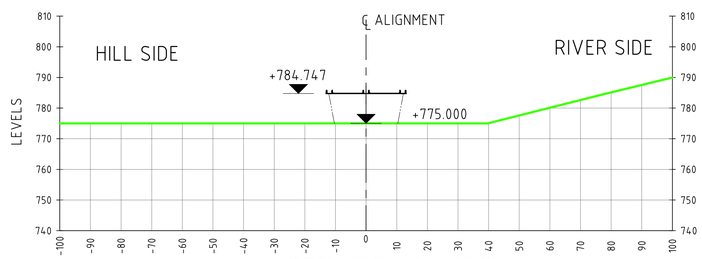
X-SEC AT CH: 1+800.00
SCALE 1:1000



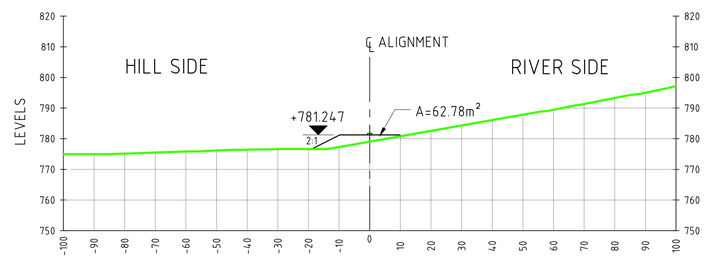
X-SEC AT CH: 1+900.00
SCALE 1:1000



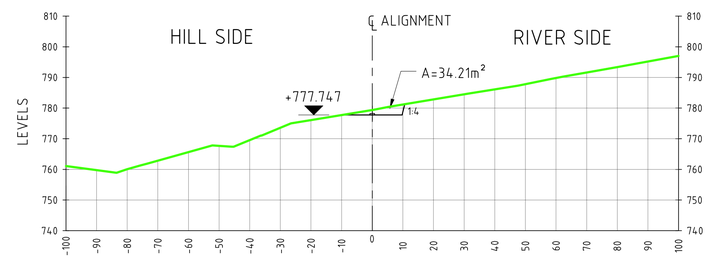
X-SEC AT CH: 2+000.00
SCALE 1:1000



X-SEC AT CH: 2+100.00
SCALE 1:1000



X-SEC AT CH: 2+200.00
SCALE 1:1000



X-SEC AT CH: 2+300.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

\\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

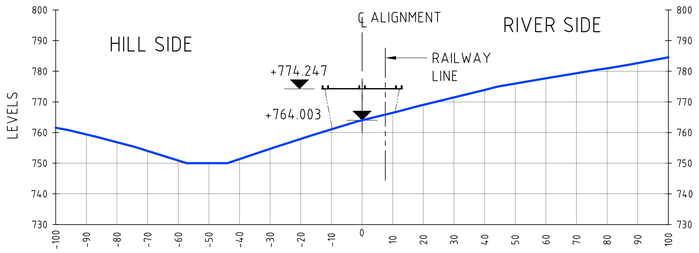
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH; 1+200 TO 2+300

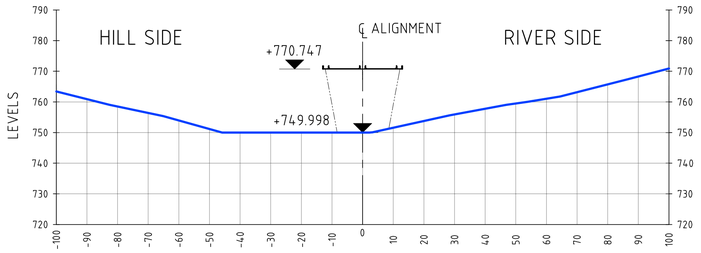
DRAWING NUMBER: SHGA-FS-LAY-1062
REV: B

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

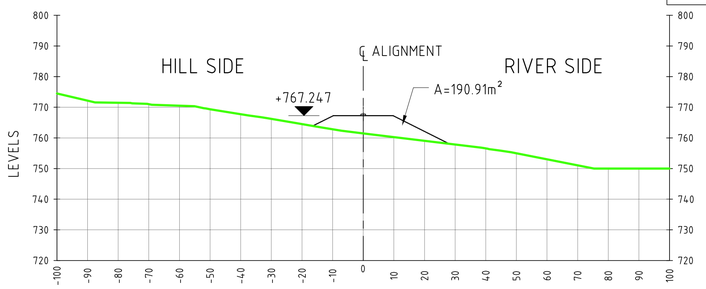
Original Drawing Size A1



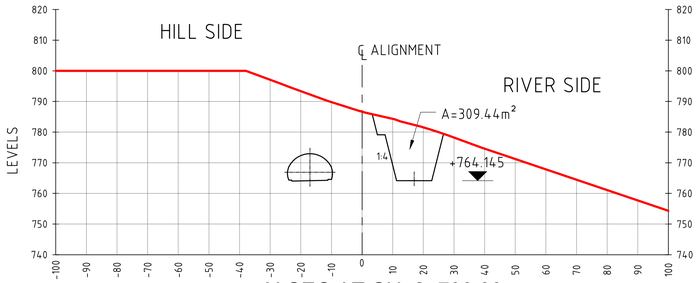
X-SEC AT CH: 2+400.00
SCALE 1:1000



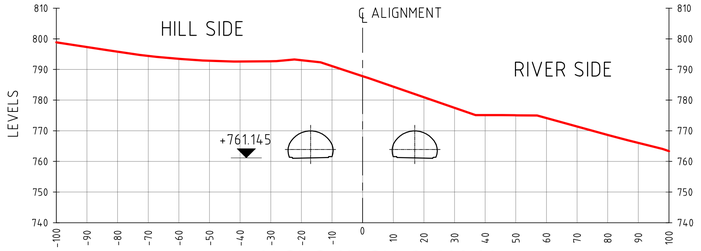
X-SEC AT CH: 2+500.00
SCALE 1:1000



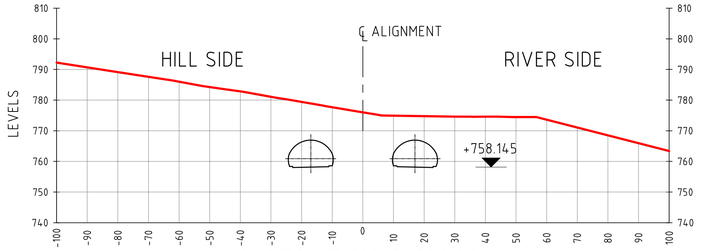
X-SEC AT CH: 2+600.00
SCALE 1:1000



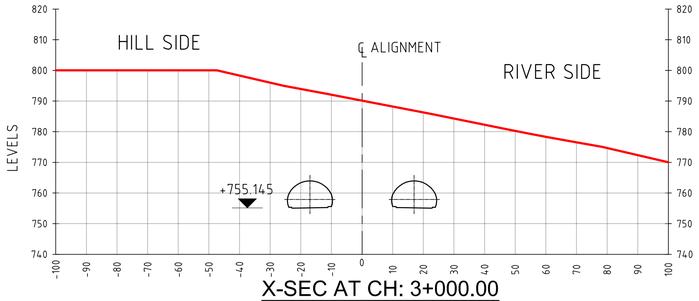
X-SEC AT CH: 2+700.00
SCALE 1:1000



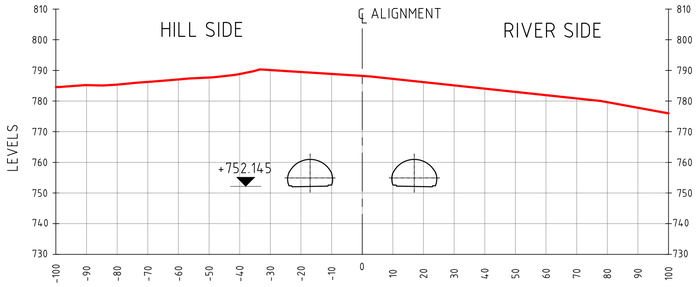
X-SEC AT CH: 2+800.00
SCALE 1:1000



X-SEC AT CH: 2+900.00
SCALE 1:1000

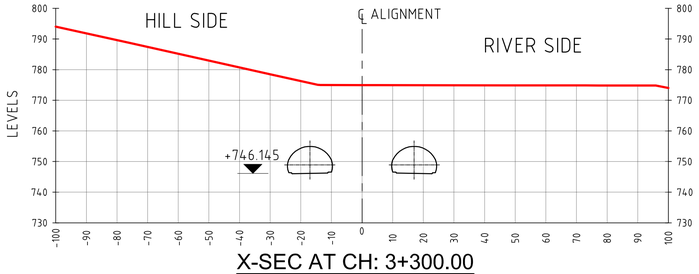


X-SEC AT CH: 3+000.00
SCALE 1:1000

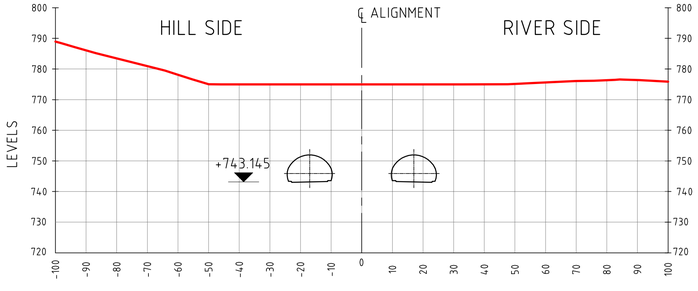


X-SEC AT CH: 3+100.00
SCALE 1:1000

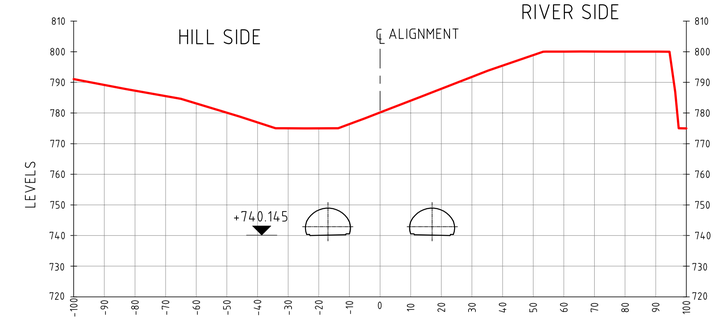
X-SEC AT CH: 3+200.00
SCALE 1:1000



X-SEC AT CH: 3+300.00
SCALE 1:1000



X-SEC AT CH: 3+400.00
SCALE 1:1000



X-SEC AT CH: 3+500.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

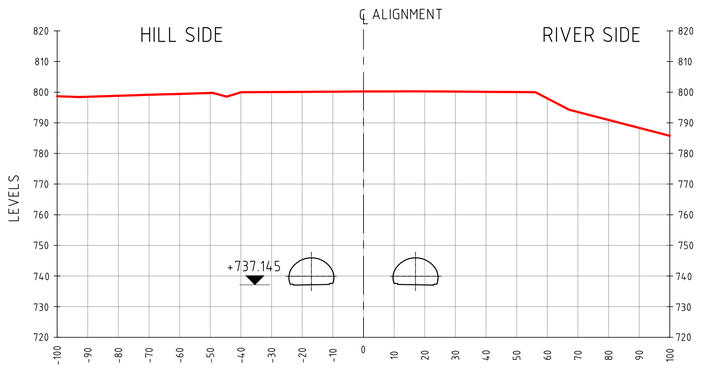
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 2+400 TO 3+500

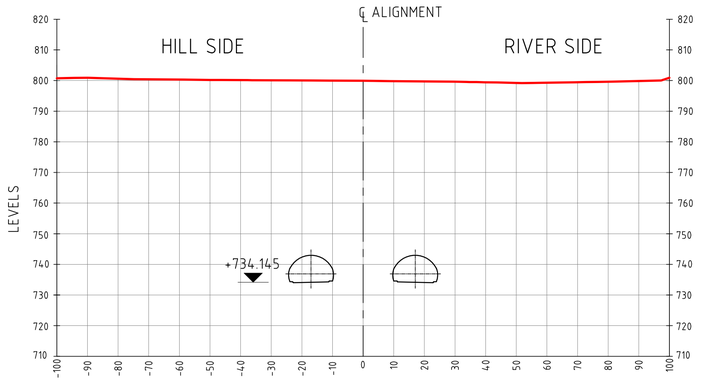
DRAWING NUMBER: SHGA-FS-LAY-1063
REV: B

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

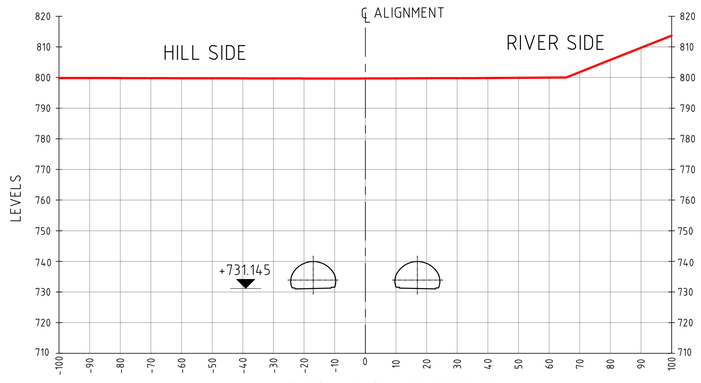
Original Drawing Size A1



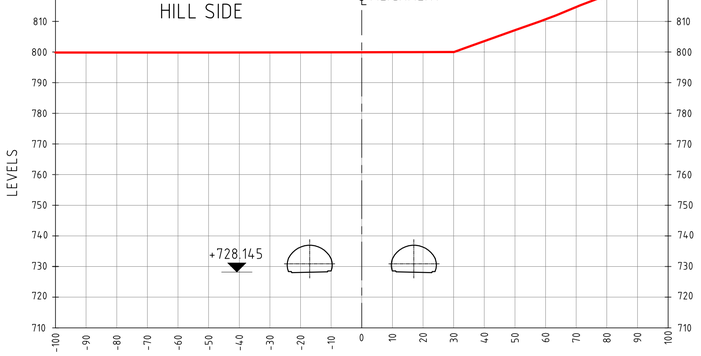
X-SEC AT CH: 3+600.00
SCALE 1:1000



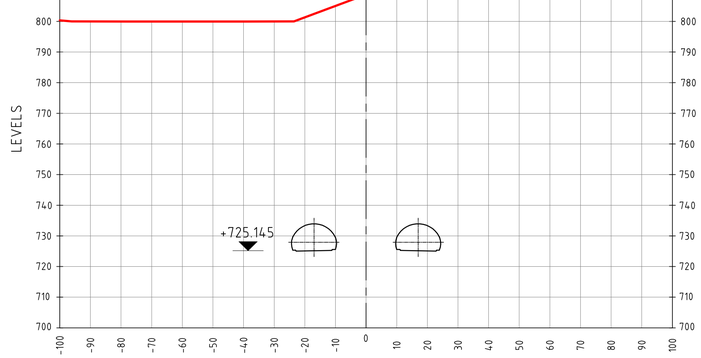
X-SEC AT CH: 3+700.00
SCALE 1:1000



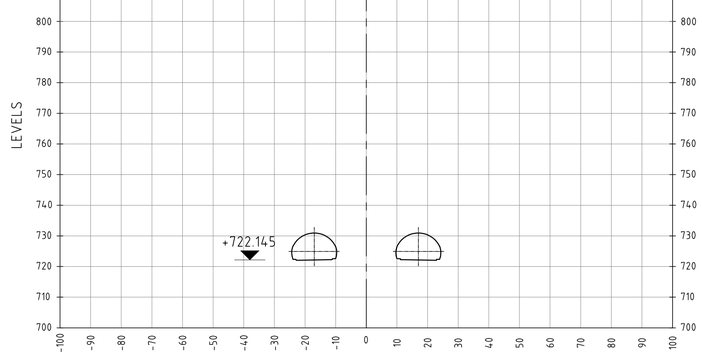
X-SEC AT CH: 3+800.00
SCALE 1:1000



X-SEC AT CH: 3+900.00
SCALE 1:1000



X-SEC AT CH: 4+000.00
SCALE 1:1000



X-SEC AT CH: 4+100.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\GEOCONSULT; PRa; R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: ALIGNMENT OPTION "A" CROSS SECTIONS CH: 3+600 TO 4+100

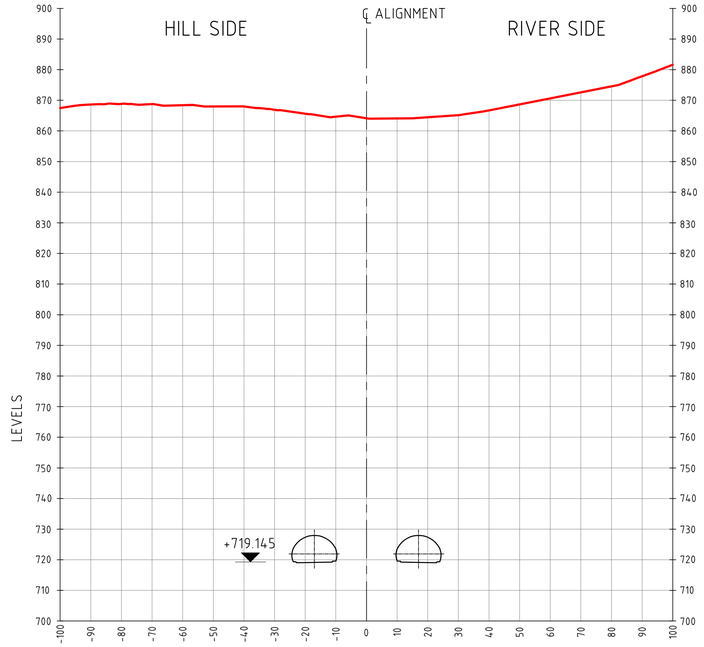
DRAWING NUMBER: SHGA-FS-LAY-1064

REV: B

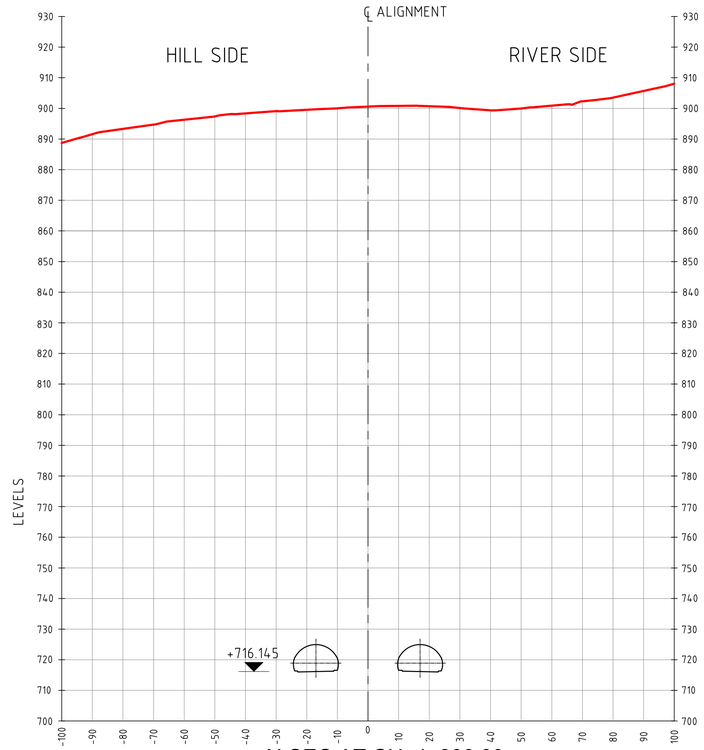
SCALE: AS SHOWN

MONTH (Current Issue): DEC 2015

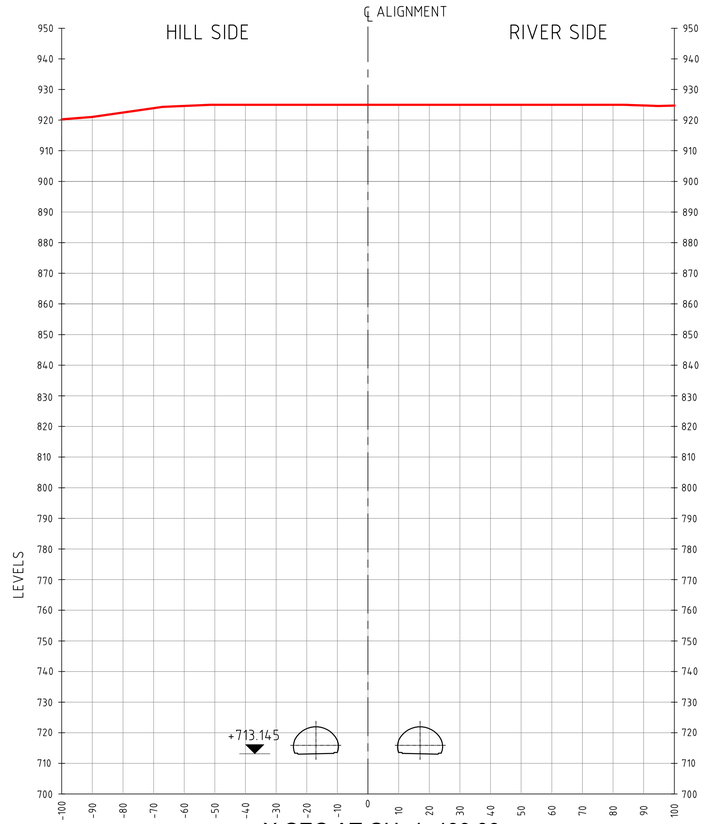
Original Drawing Size A1



X-SEC AT CH: 4+200.00
SCALE 1:1000



X-SEC AT CH: 4+300.00
SCALE 1:1000



X-SEC AT CH: 4+400.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 4+200 TO 4+400

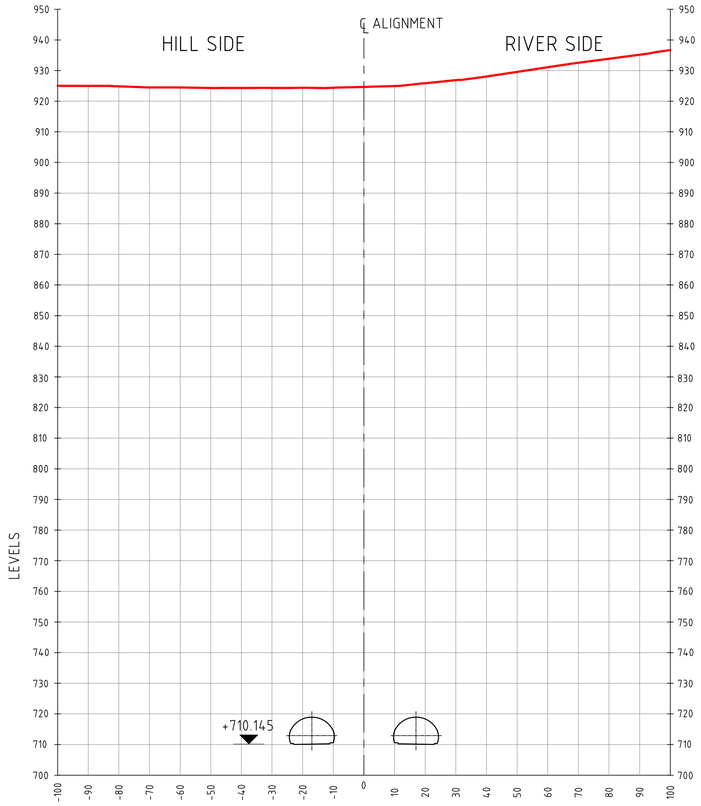
DRAWING NUMBER
SHGA-FS-LAY-1065

REV
B

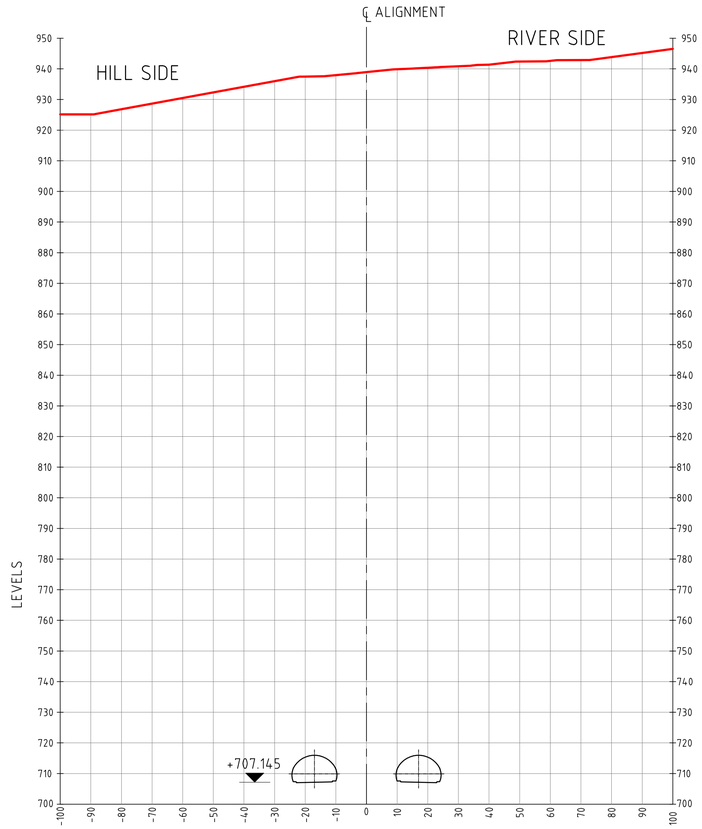
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

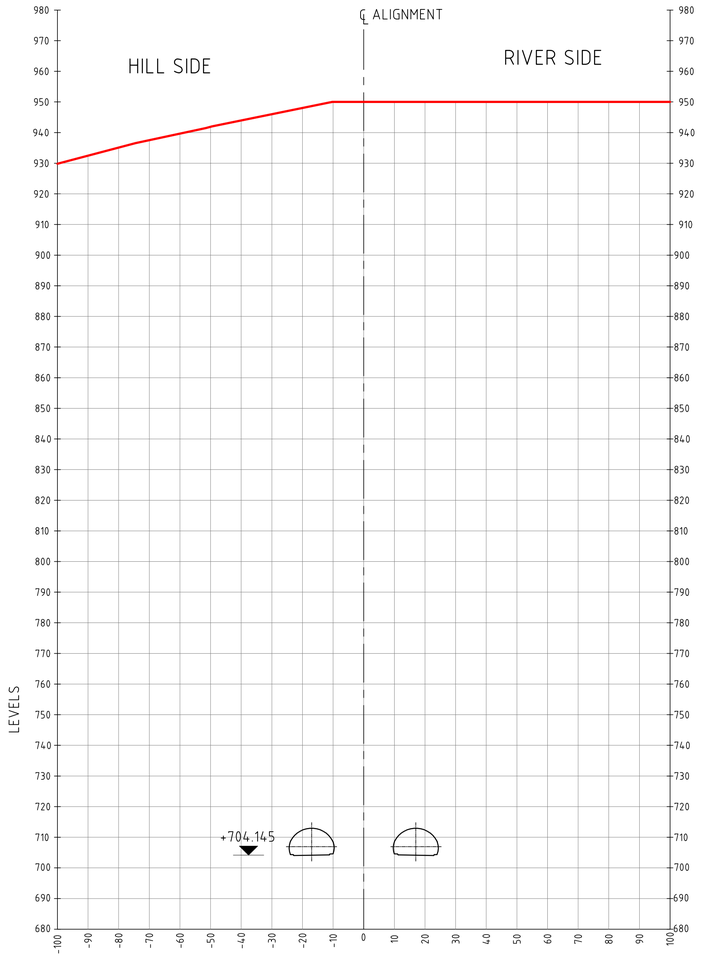
Original Drawing Size A1



X-SEC AT CH: 4+500.00
SCALE 1:1000



X-SEC AT CH: 4+600.00
SCALE 1:1000



X-SEC AT CH: 4+700.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

RAILWAY LINE

CUT/FILL (C/F)

BRIDGES (B)

TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 4+500 TO 4+700

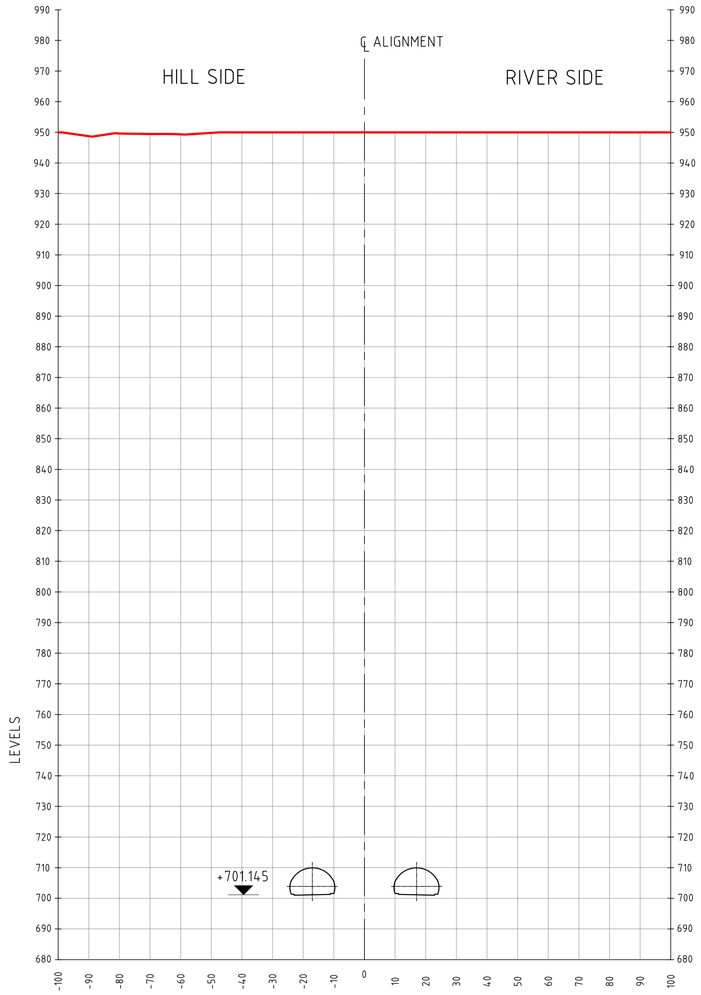
DRAWING NUMBER
SHGA-FS-LAY-1066

REV
B

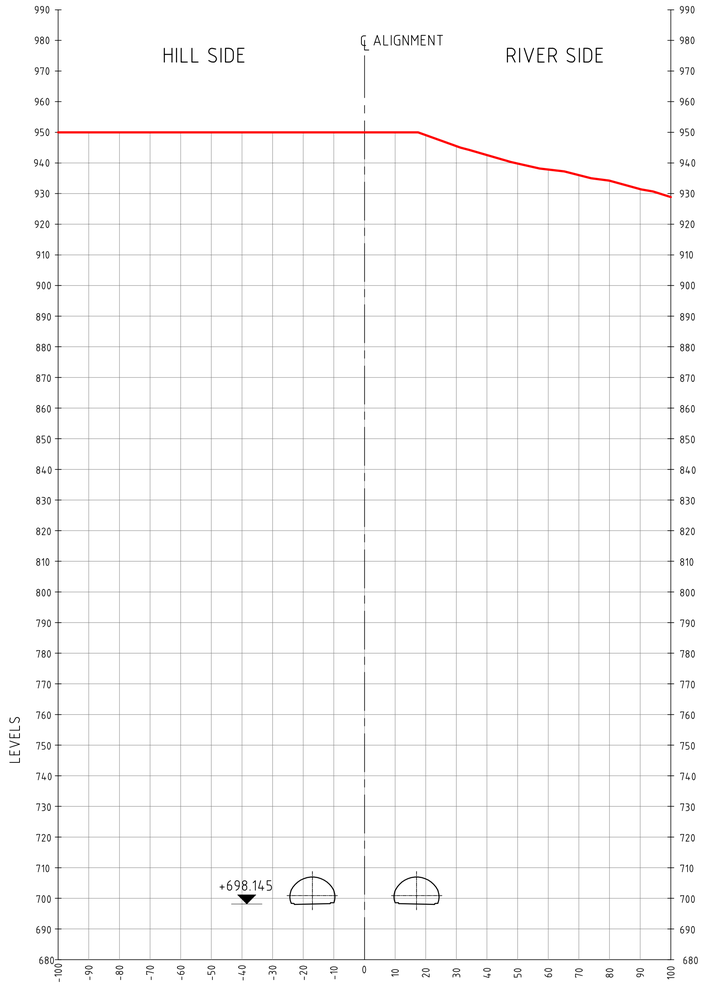
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

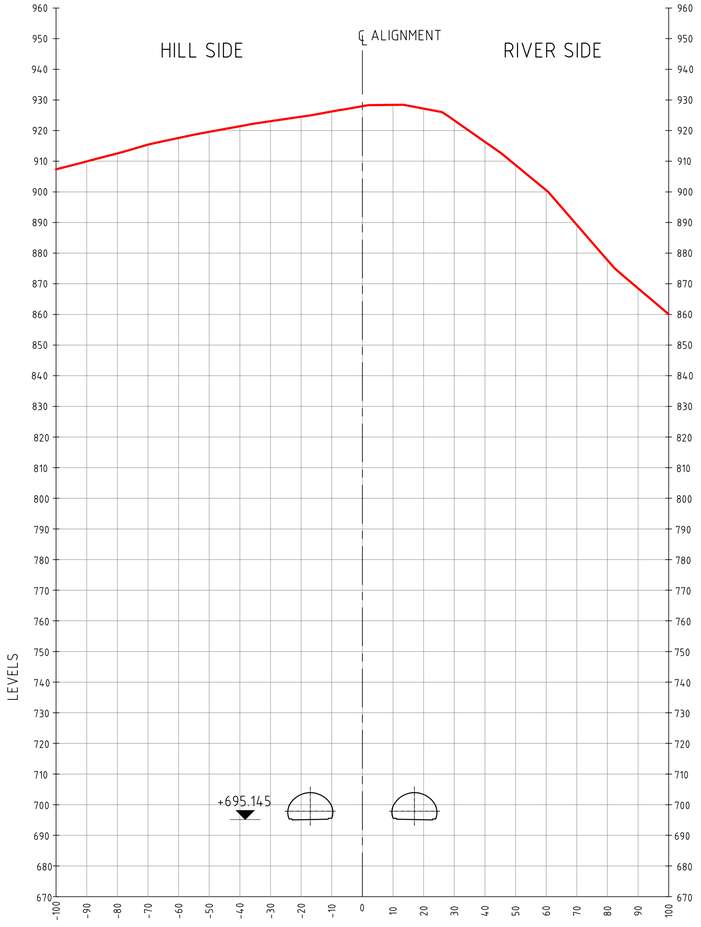
Original Drawing Size A1



X-SEC AT CH: 4+800.00
SCALE 1:1000



X-SEC AT CH: 4+900
SCALE 1:1000



X-SEC AT CH: 5+000
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

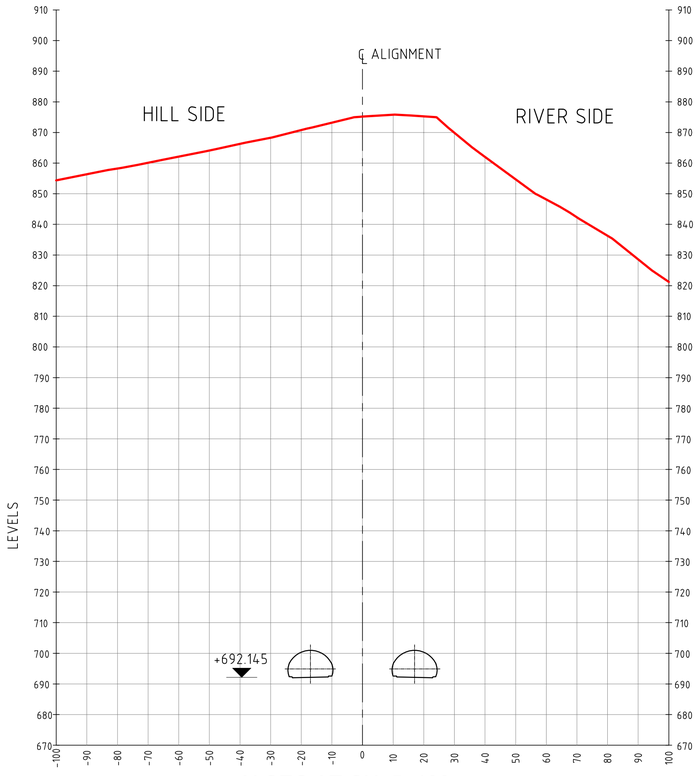
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 4+800 TO 5+000

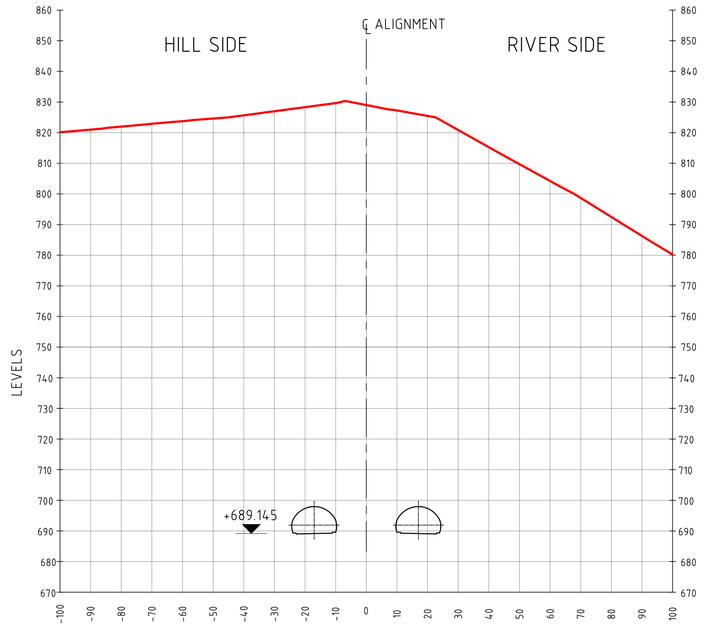
DRAWING NUMBER	REV
SHGA-FS-LAY-1067	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

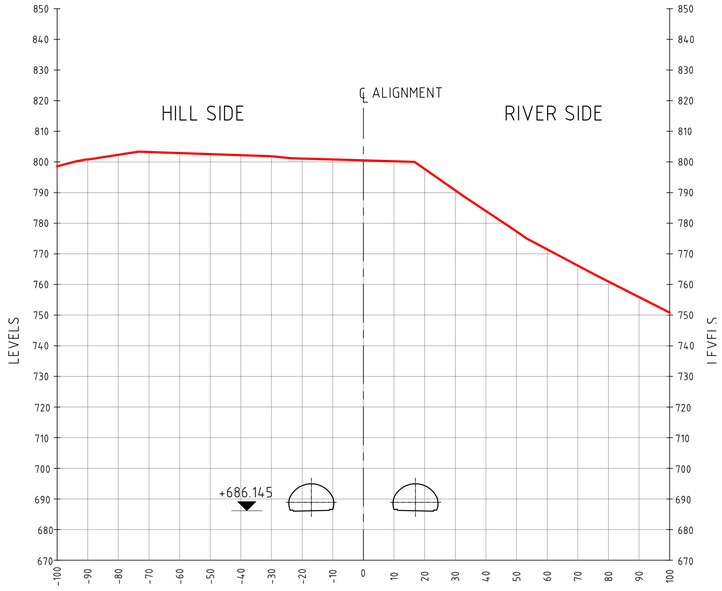
Original Drawing Size A1



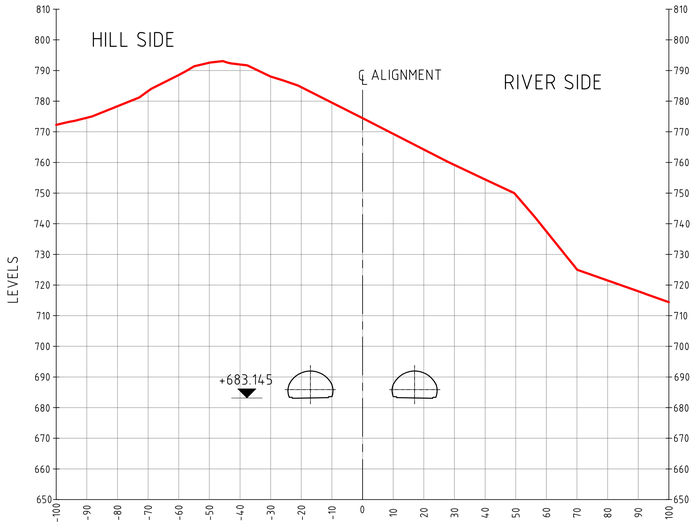
X-SEC AT CH: 5+100
SCALE 1:1000



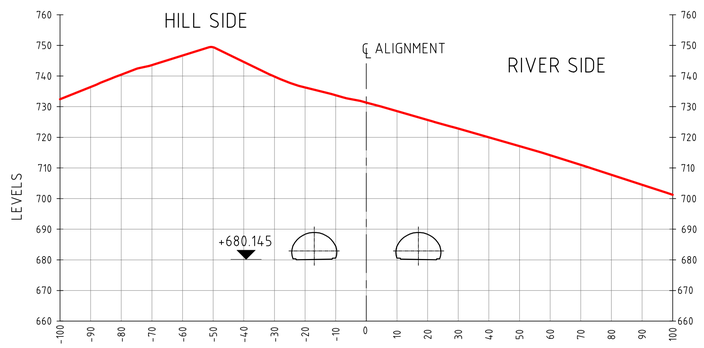
X-SEC AT CH: 5+200
SCALE 1:1000



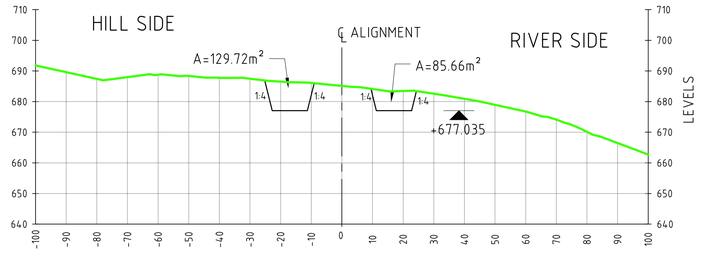
X-SEC AT CH: 5+300
SCALE 1:1000



X-SEC AT CH: 5+400
SCALE 1:1000



X-SEC AT CH: 5+500
SCALE 1:1000



X-SEC AT CH: 5+600
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

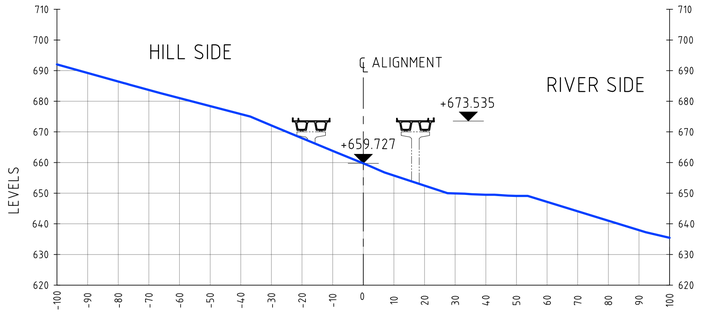
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 5+100 TO 5+600

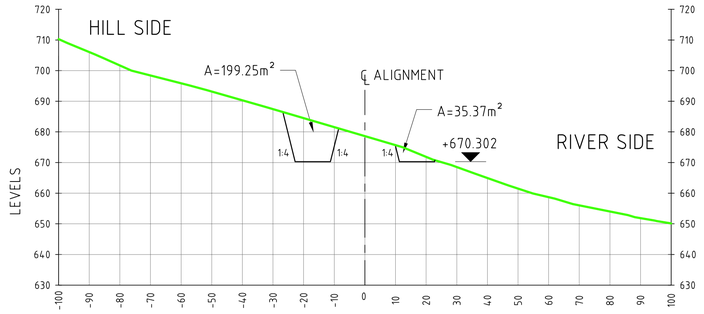
DRAWING NUMBER	REV
SHGA-FS-LAY-1068	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

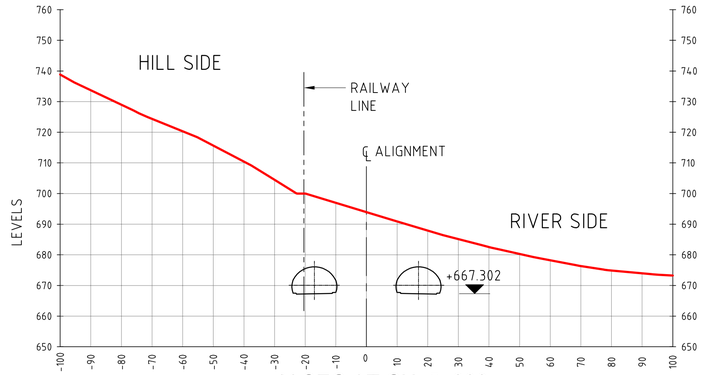
Original Drawing Size A1



X-SEC AT CH: 5+700
SCALE 1:1000

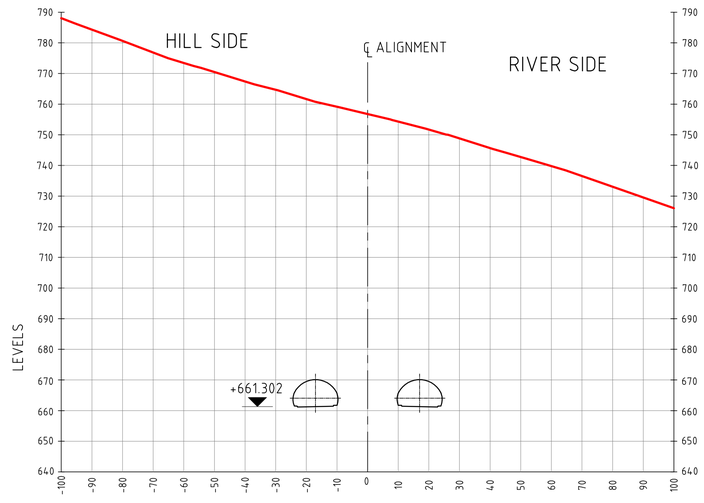


X-SEC AT CH: 5+800
SCALE 1:1000

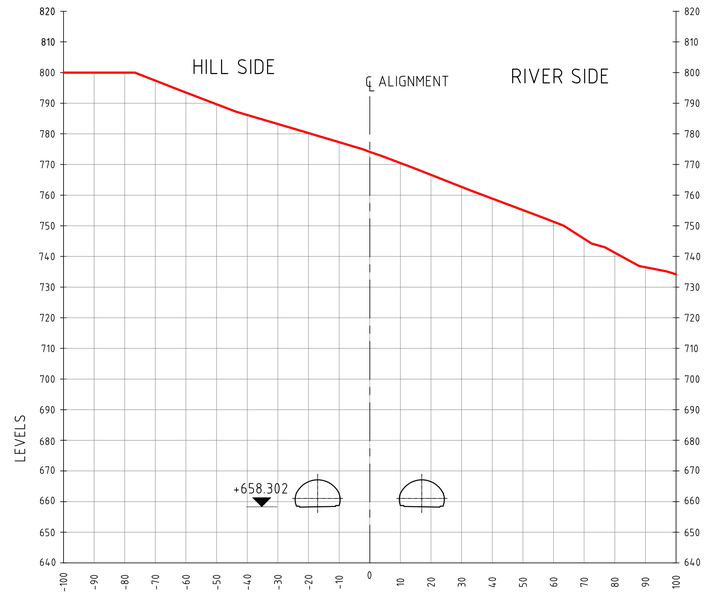


X-SEC AT CH: 5+900
SCALE 1:1000

X-SEC AT CH: 6+000
SCALE 1:1000



X-SEC AT CH: 6+100
SCALE 1:1000



X-SEC AT CH: 6+200
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; P:Ra; R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY__1061 TO 1070_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 5+700 TO 6+200

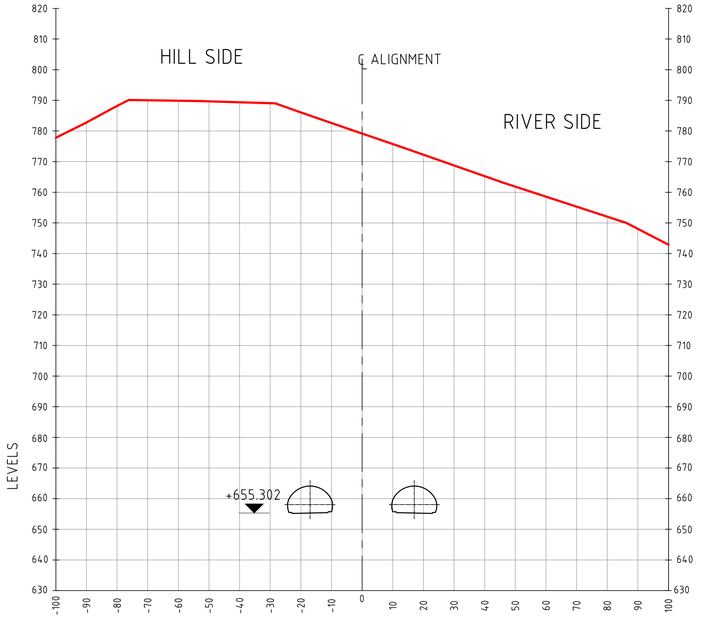
DRAWING NUMBER
SHGA-FS-LAY-1069

REV
B

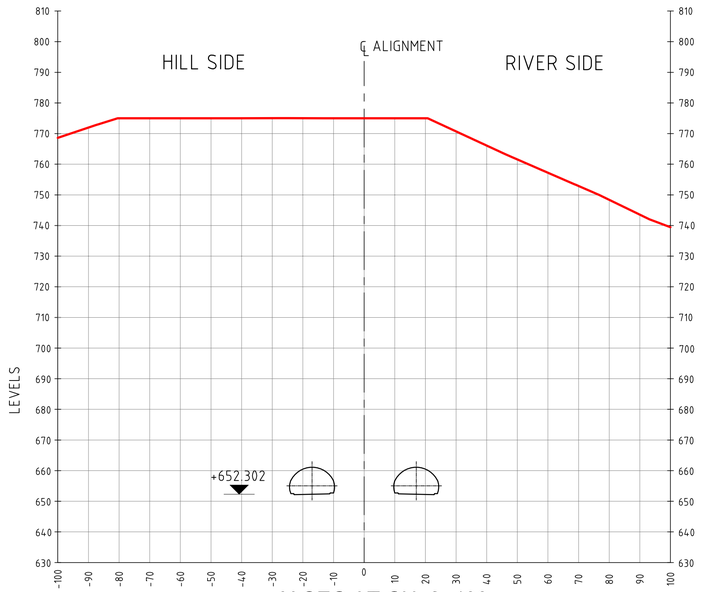
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

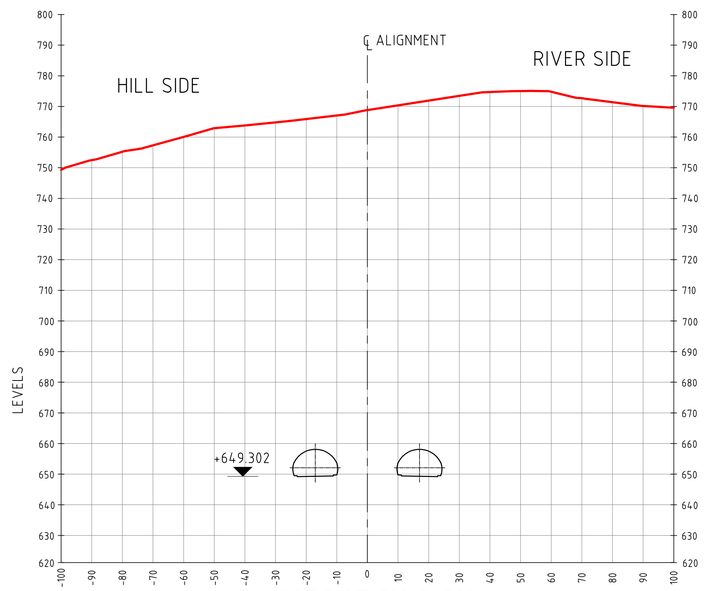
Original Drawing Size A1



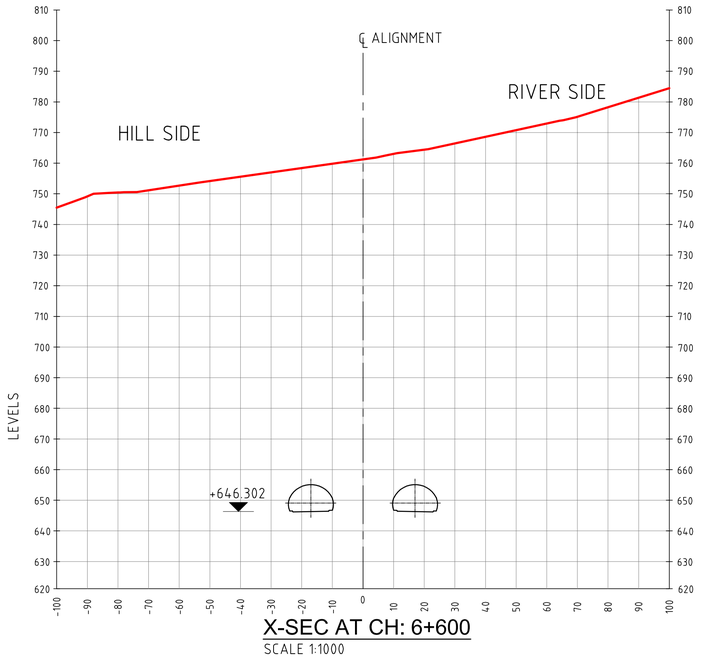
X-SEC AT CH: 6+300
SCALE 1:1000



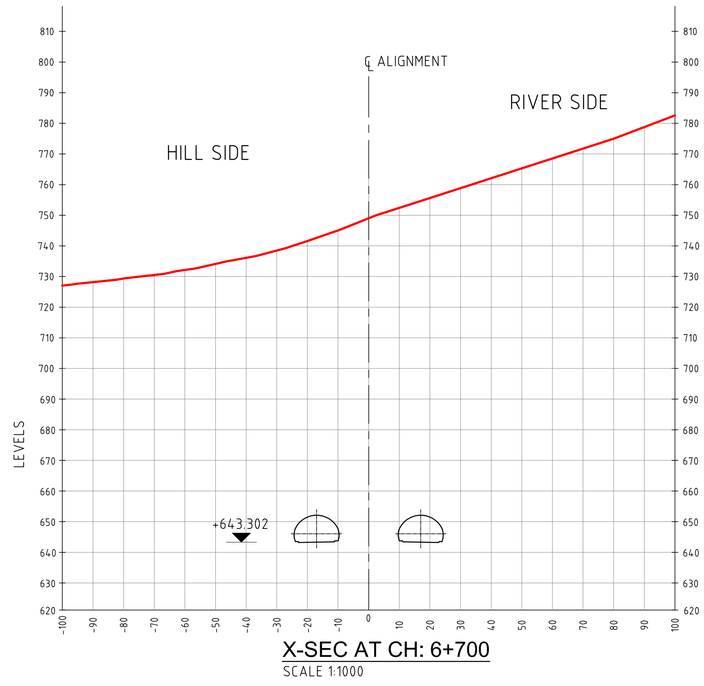
X-SEC AT CH: 6+400
SCALE 1:1000



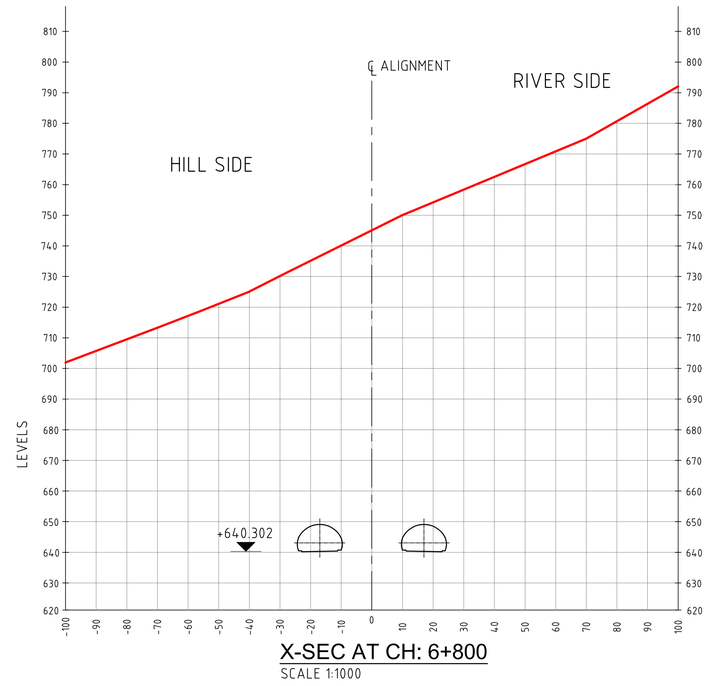
X-SEC AT CH: 6+500
SCALE 1:1000



X-SEC AT CH: 6+600
SCALE 1:1000



X-SEC AT CH: 6+700
SCALE 1:1000



X-SEC AT CH: 6+800
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT: P:\Ra, R \16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1061 TO 1070_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 6+300 TO 6+800

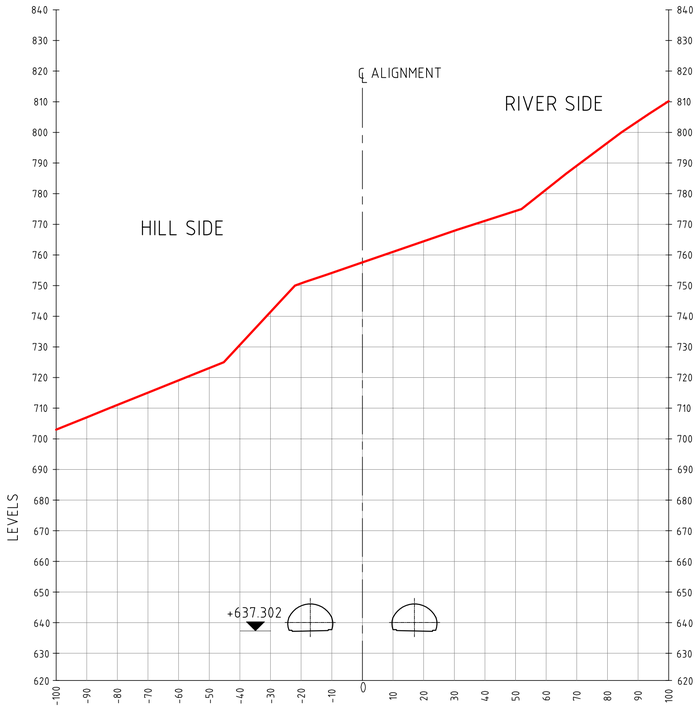
DRAWING NUMBER
SHGA-FS-LAY-1070

REV
B

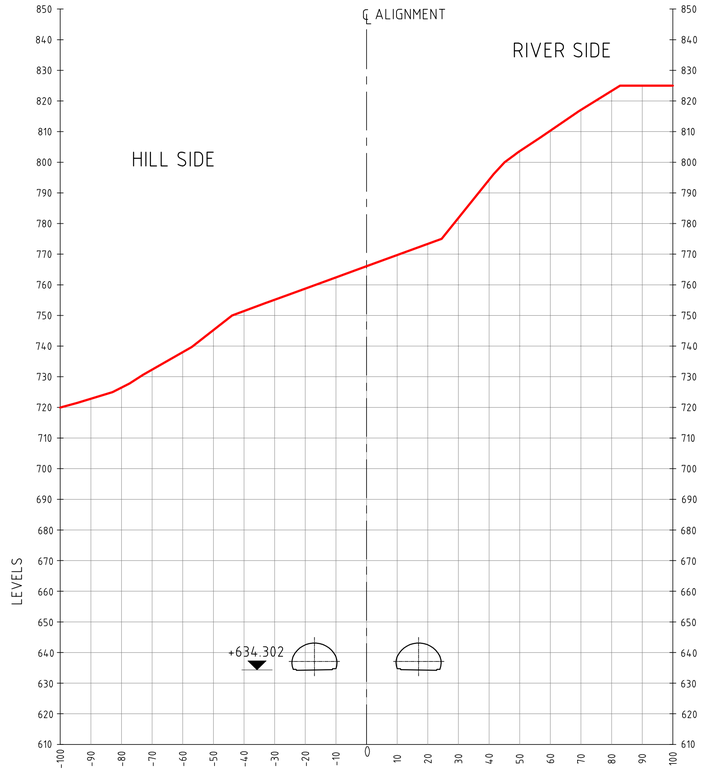
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

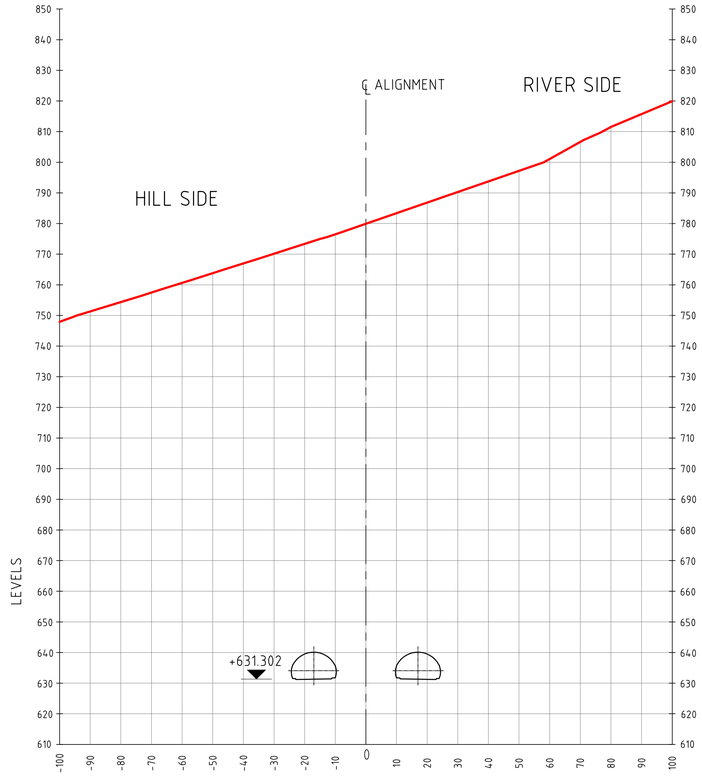
Original Drawing Size A1



X-SEC AT CH: 6+900
SCALE 1:1000



X-SEC AT CH: 7+000
SCALE 1:1000



X-SEC AT CH: 7+100
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

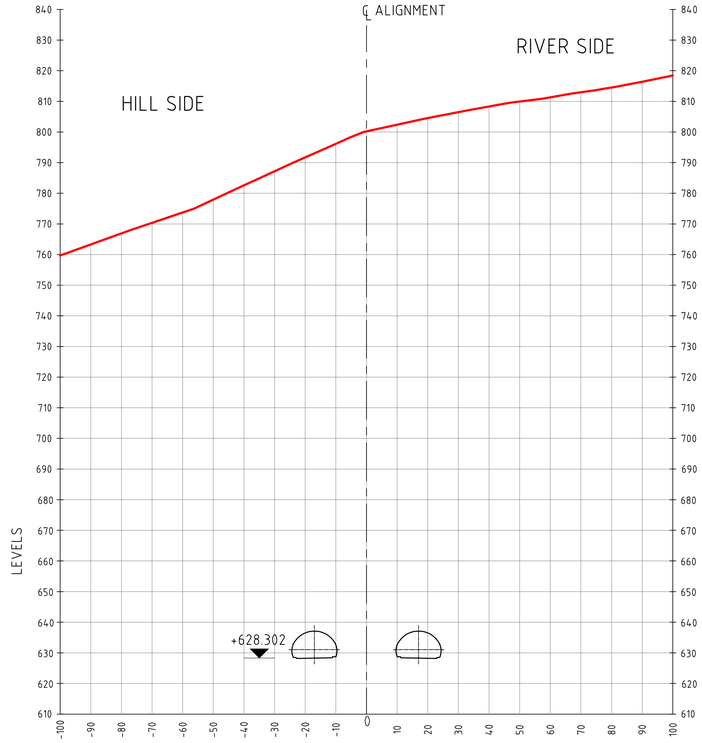
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

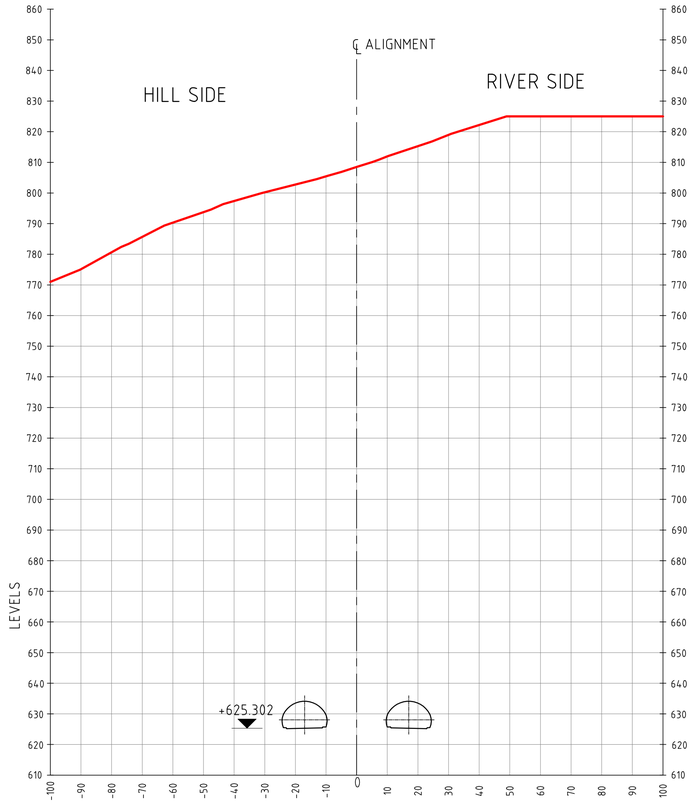
DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 6+900 TO 7+100

DRAWING NUMBER: SHGA-FS-LAY-1071
REV: B
SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

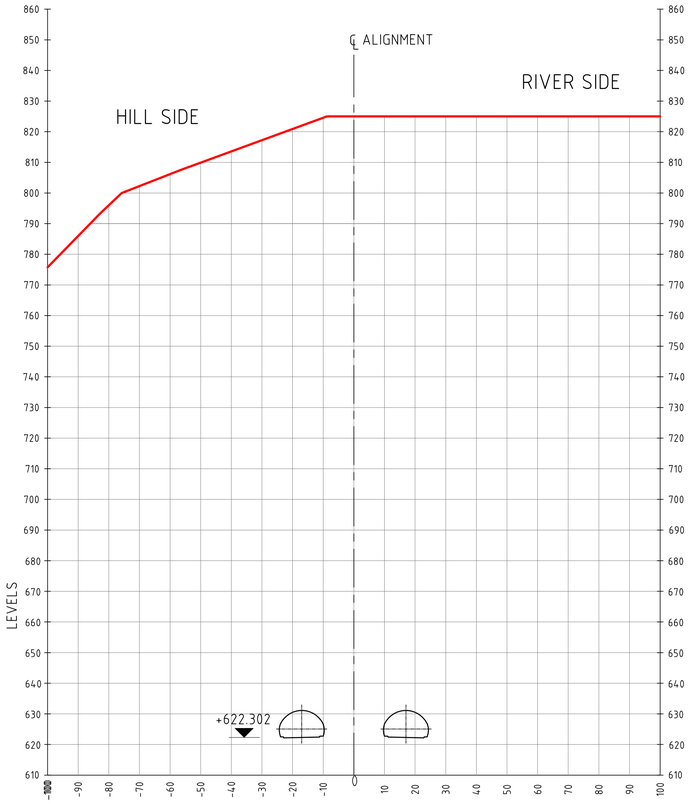
Original Drawing Size A1



X-SEC AT CH: 7+200
SCALE 1:1000



X-SEC AT CH: 7+300
SCALE 1:1000



X-SEC AT CH: 7+400
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_ 1071 TO 1080_B.dwg, 2015-12-18

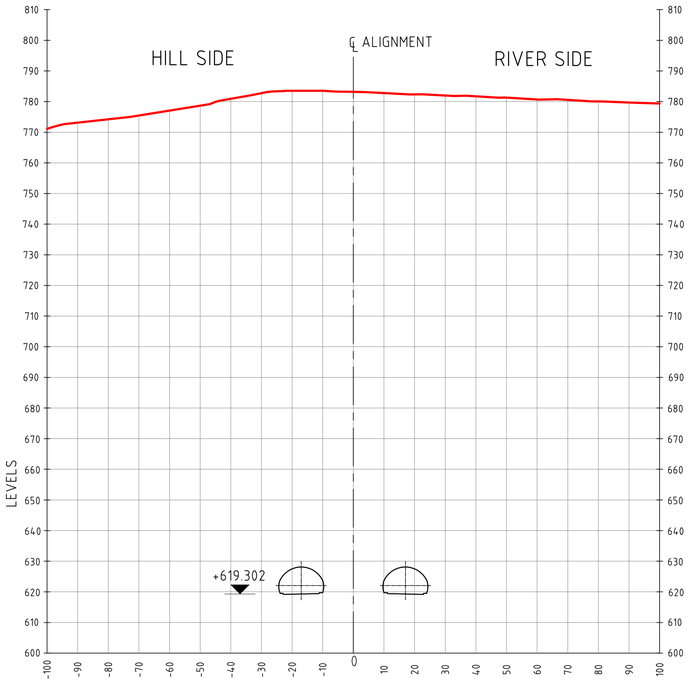
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 7+200 TO 7+400

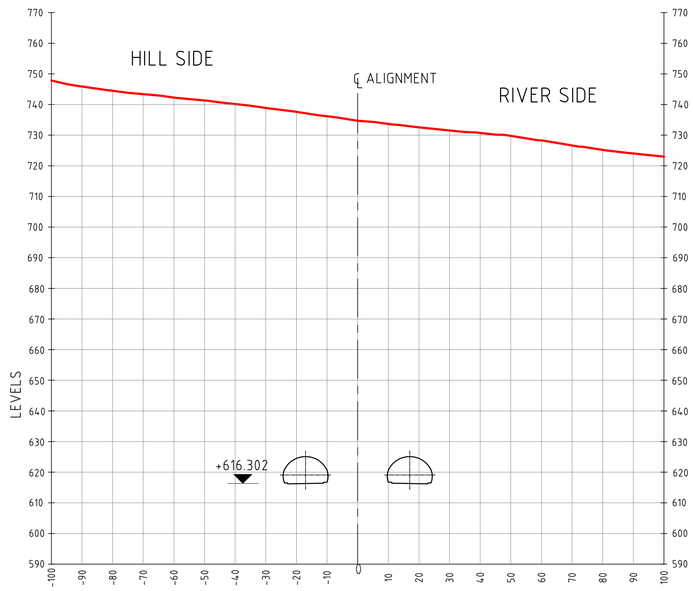
DRAWING NUMBER	REV
SHGA-FS-LAY-1072	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

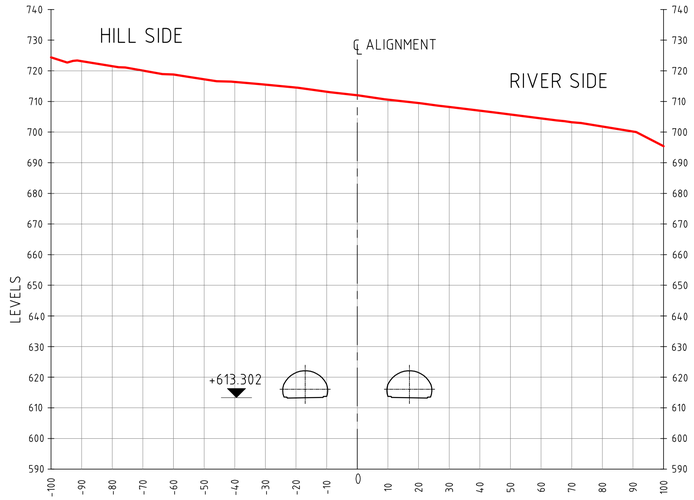
Original Drawing Size A1



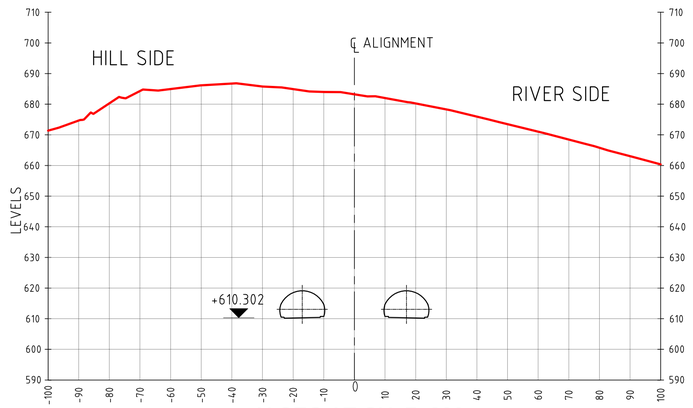
X-SEC AT CH: 7+500
SCALE 1:1000



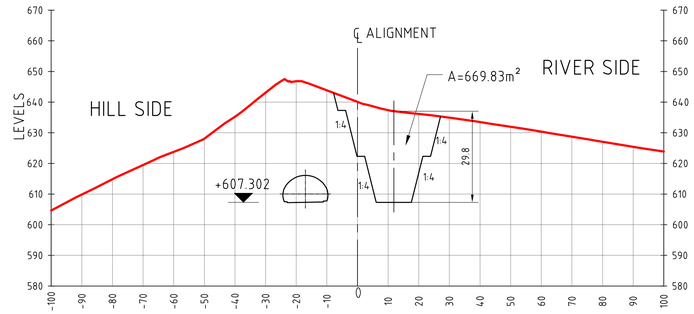
X-SEC AT CH: 7+600
SCALE 1:1000



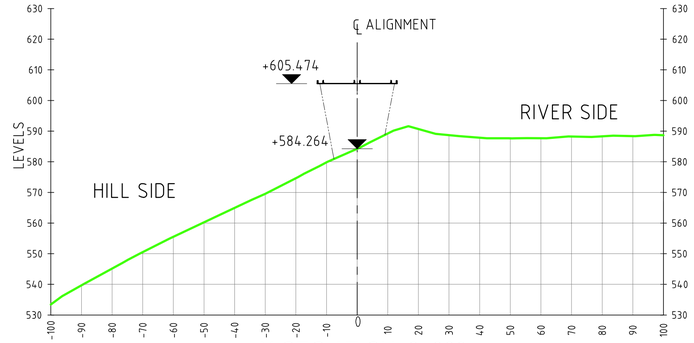
X-SEC AT CH: 7+700
SCALE 1:1000



X-SEC AT CH: 7+800
SCALE 1:1000



X-SEC AT CH: 7+900
SCALE 1:1000



X-SEC AT CH: 8+000
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	MINOR CORRECTIONS / SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

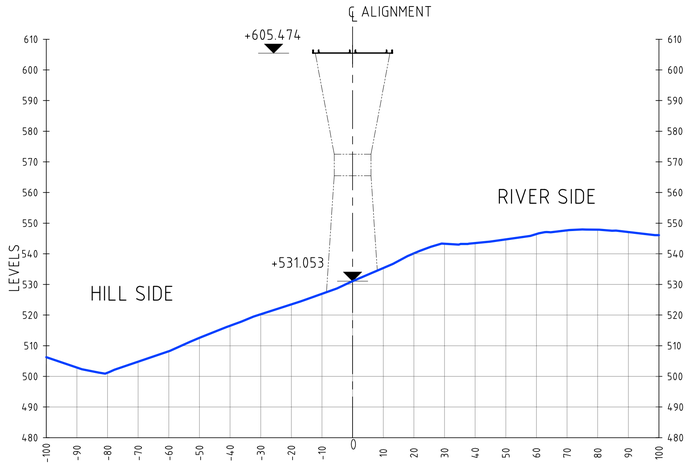
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 7+500 TO 8+000

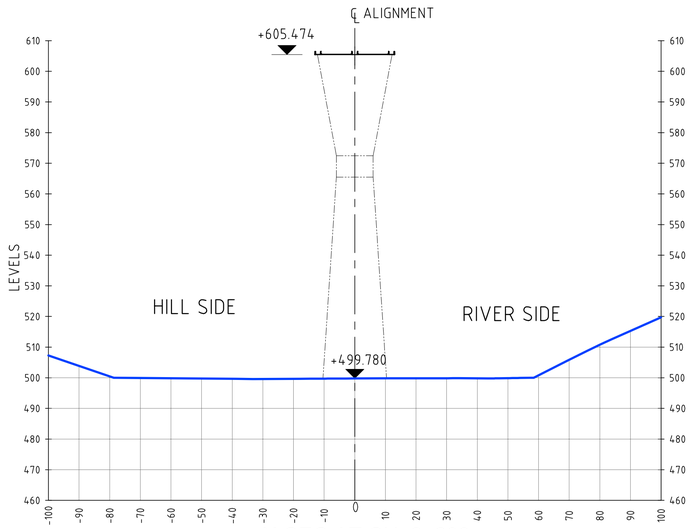
DRAWING NUMBER	REV
SHGA-FS-LAY-1073	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

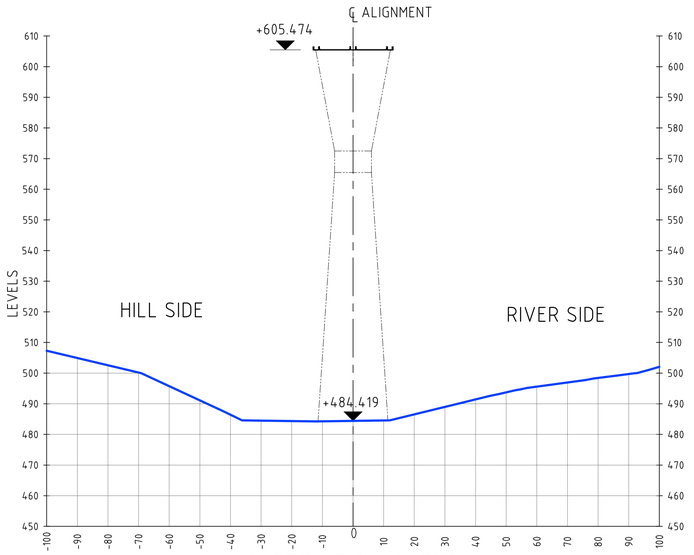
Original Drawing Size A1



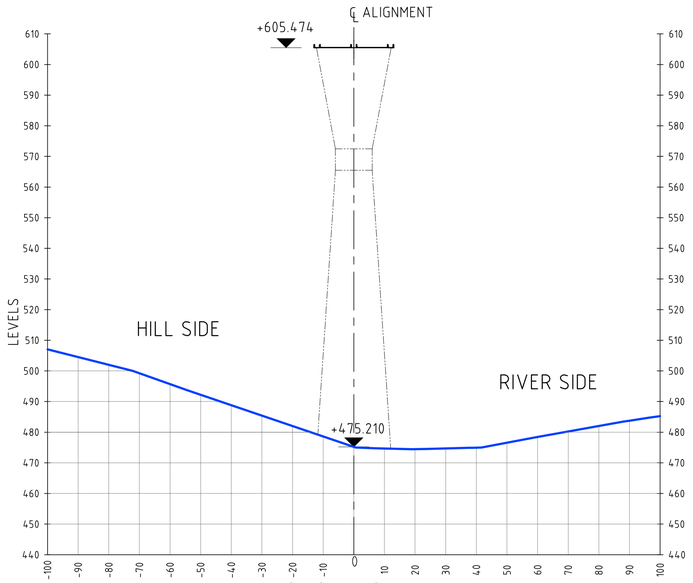
X-SEC AT CH: 8+100
SCALE 1:1000



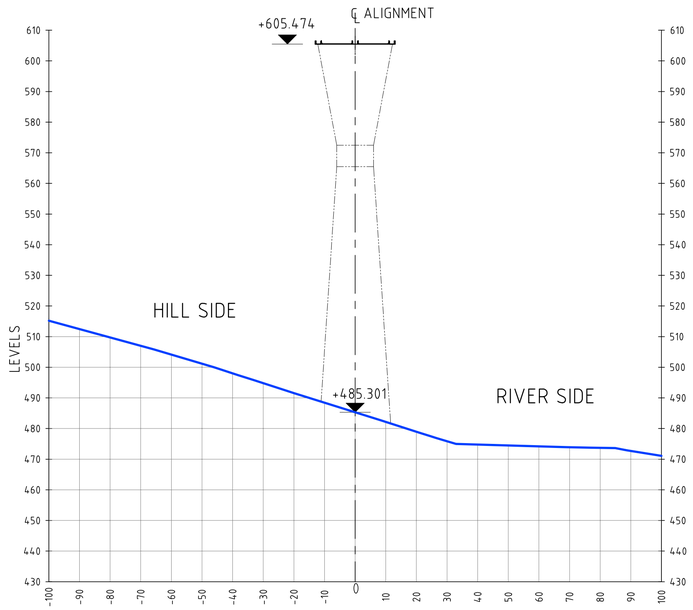
X-SEC AT CH: 8+200
SCALE 1:1000



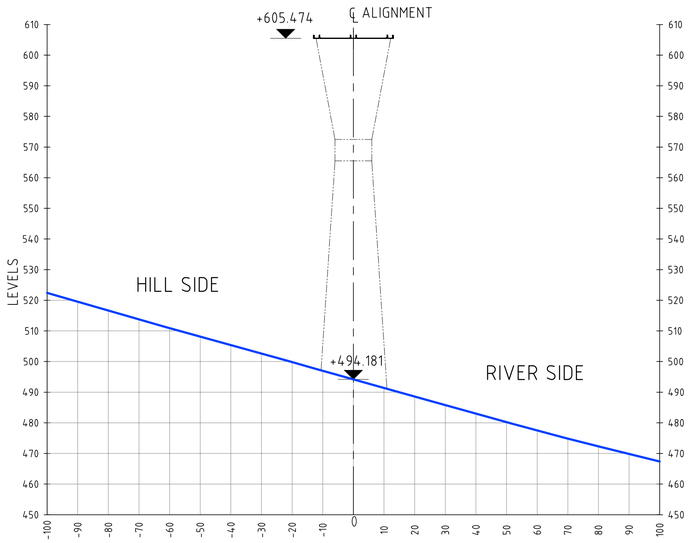
X-SEC AT CH: 8+300
SCALE 1:1000



X-SEC AT CH: 8+400
SCALE 1:1000



X-SEC AT CH: 8+500
SCALE 1:1000



X-SEC AT CH: 8+600
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY__1071 TO 1080__B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 8+100 TO 8+600

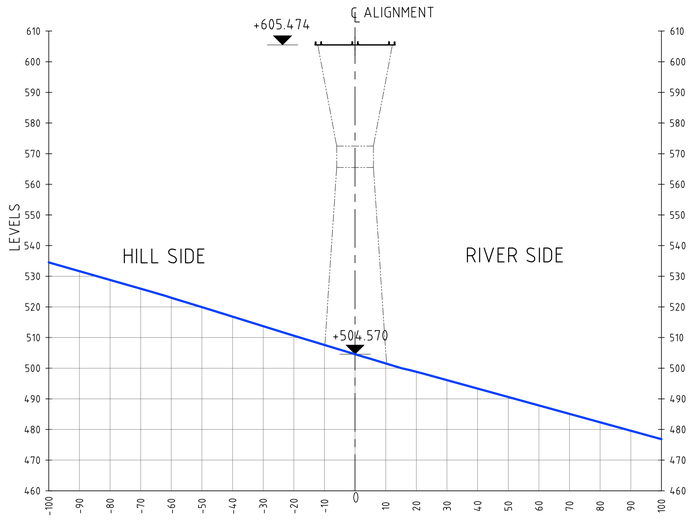
DRAWING NUMBER
SHGA-FS-LAY-1074

REV
B

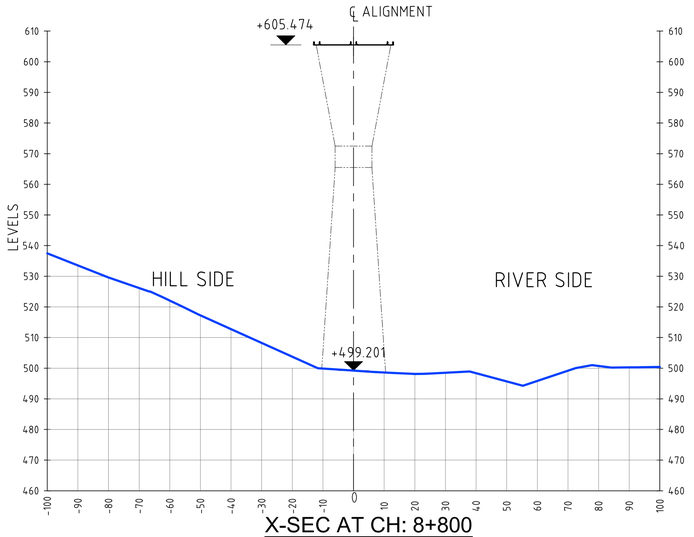
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

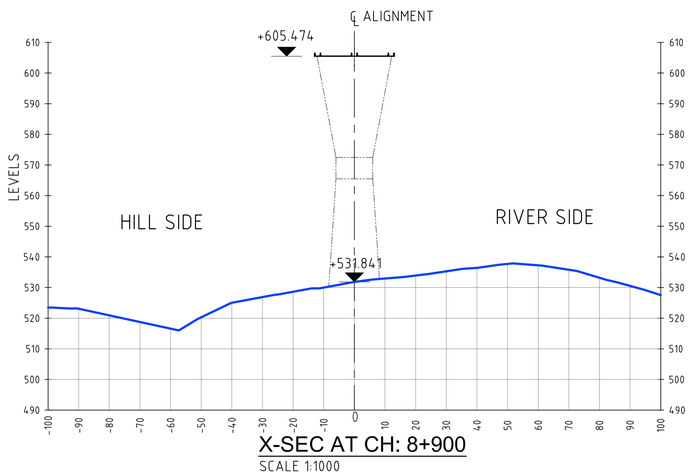
Original Drawing Size A1



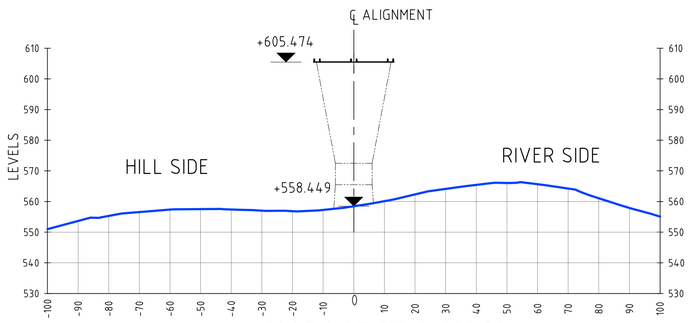
X-SEC AT CH: 8+700
SCALE 1:1000



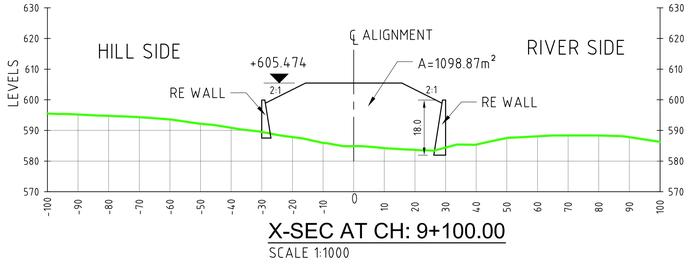
X-SEC AT CH: 8+800
SCALE 1:1000



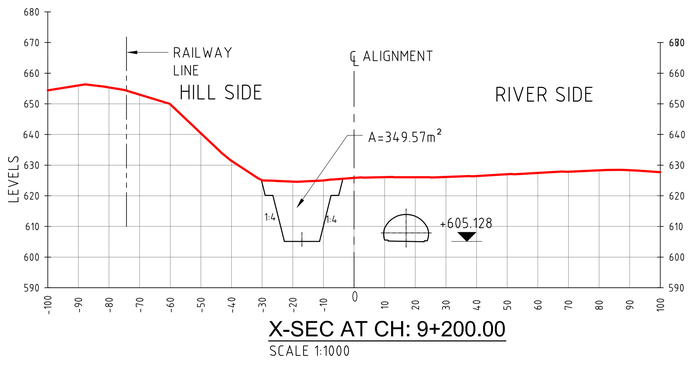
X-SEC AT CH: 8+900
SCALE 1:1000



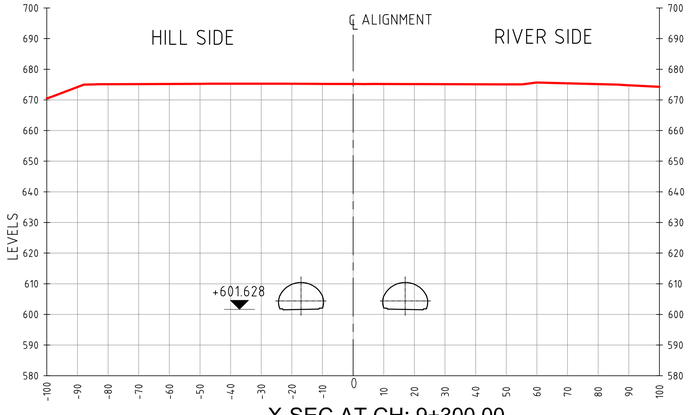
X-SEC AT CH: 9+000.00
SCALE 1:1000



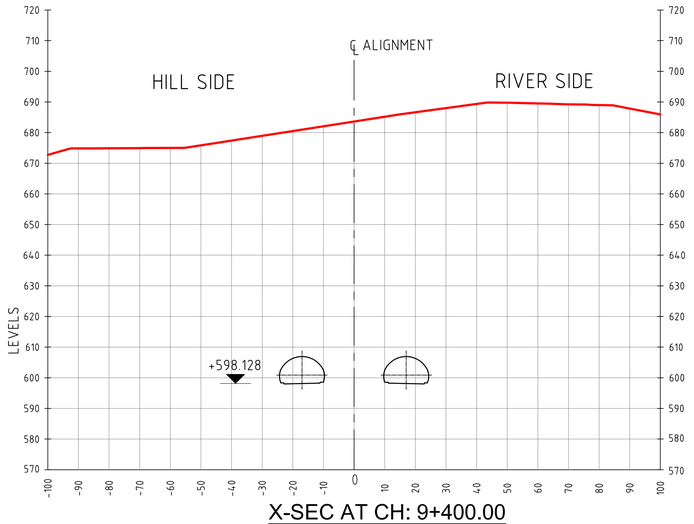
X-SEC AT CH: 9+100.00
SCALE 1:1000



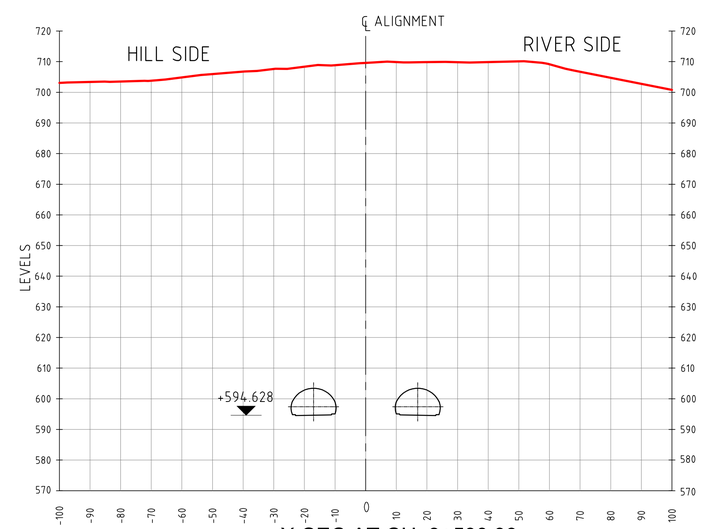
X-SEC AT CH: 9+200.00
SCALE 1:1000



X-SEC AT CH: 9+300.00
SCALE 1:1000



X-SEC AT CH: 9+400.00
SCALE 1:1000



X-SEC AT CH: 9+500.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba, R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 8+700 TO 9+500

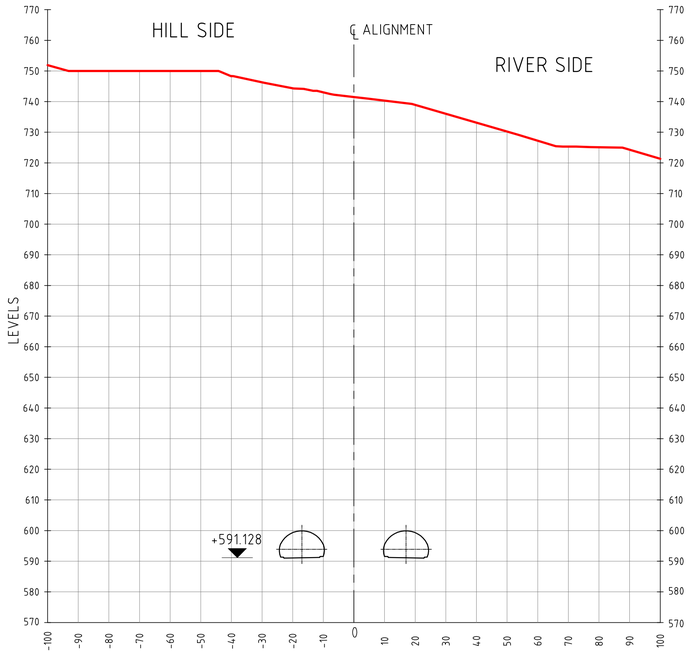
DRAWING NUMBER
SHGA-FS-LAY-1075

REV
B

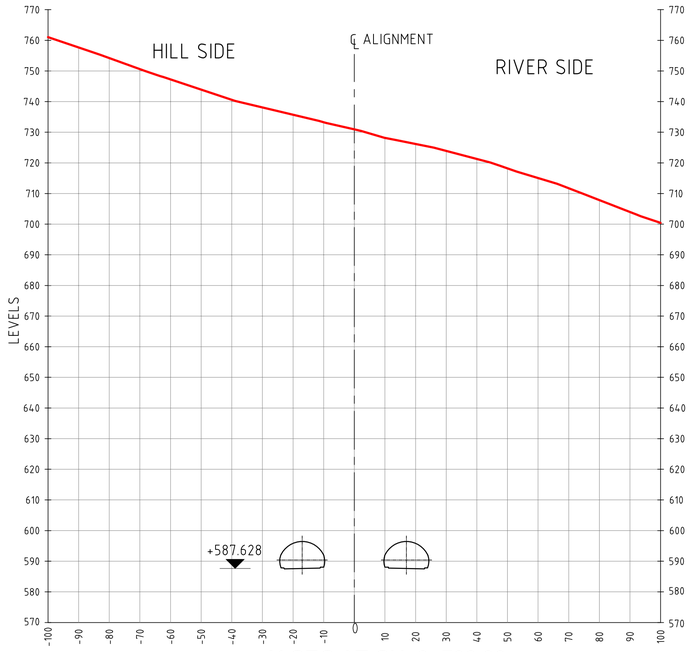
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

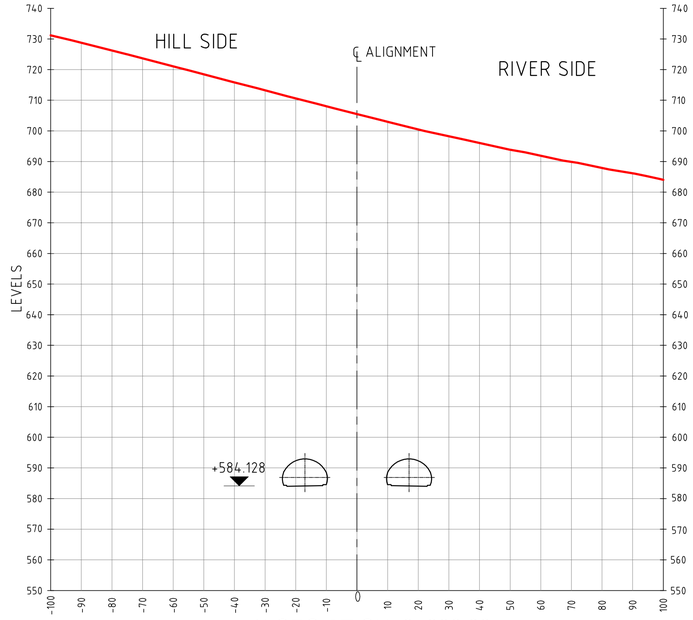
Original Drawing Size A1



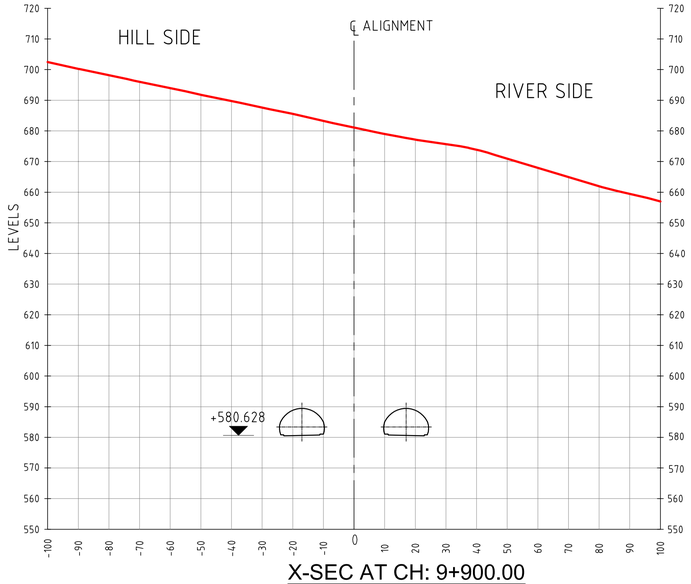
X-SEC AT CH: 9+600.00
SCALE 1:1000



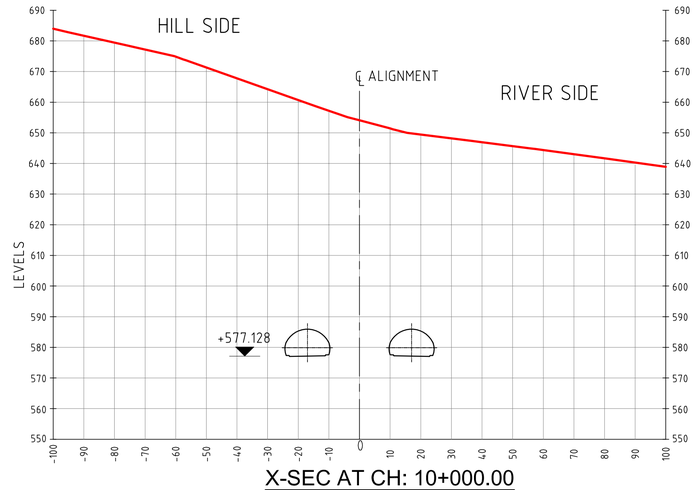
X-SEC AT CH: 9+700.00
SCALE 1:1000



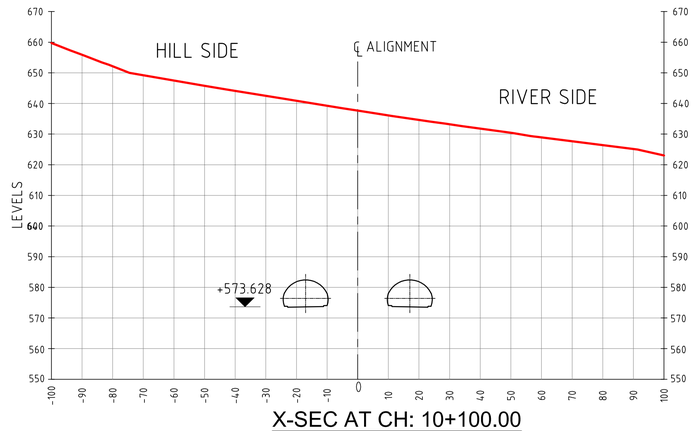
X-SEC AT CH: 9+800.00
SCALE 1:1000



X-SEC AT CH: 9+900.00
SCALE 1:1000



X-SEC AT CH: 10+000.00
SCALE 1:1000



X-SEC AT CH: 10+100.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

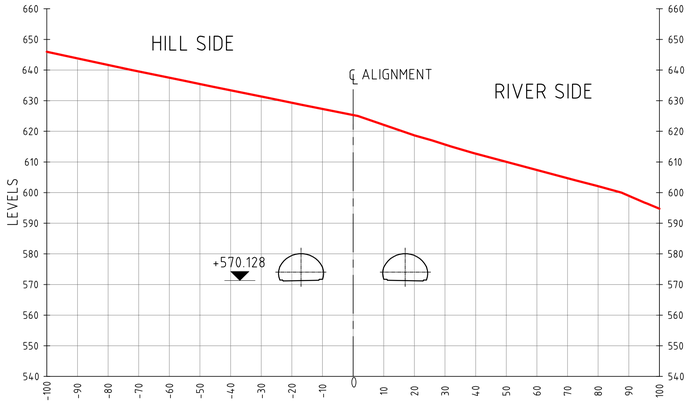
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 9+600 TO 10+100

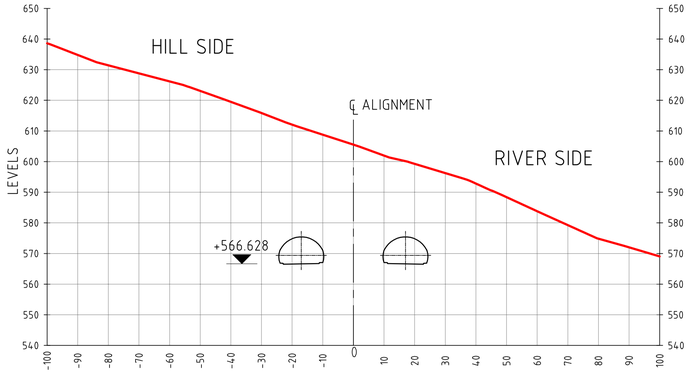
DRAWING NUMBER	REV
SHGA-FS-LAY-1076	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

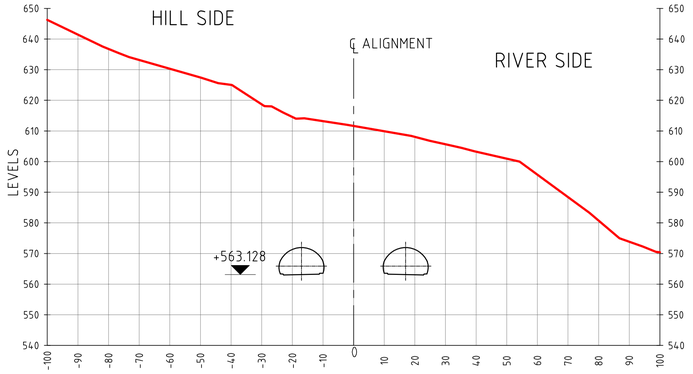
Original Drawing Size A1



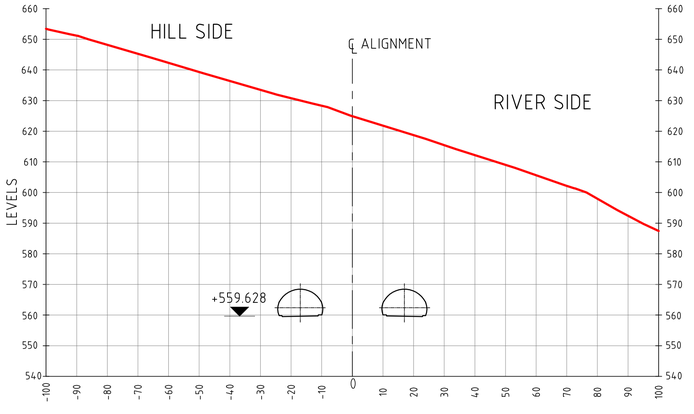
X-SEC AT CH: 10+200.00
SCALE 1:1000



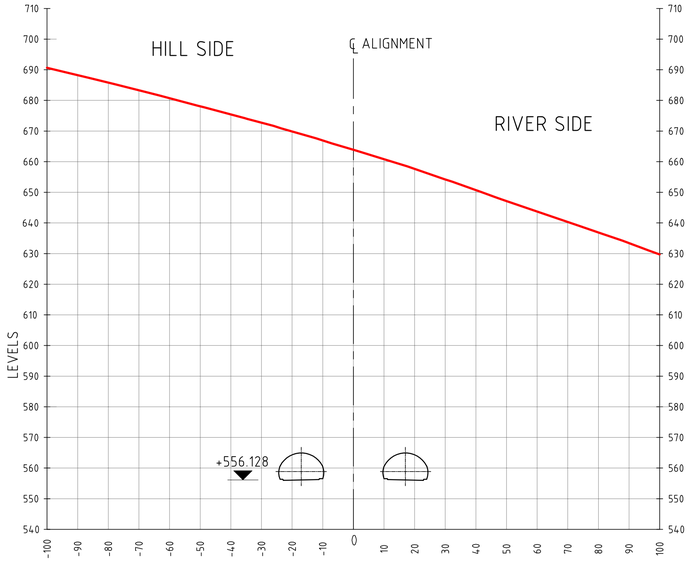
X-SEC AT CH: 10+300.00
SCALE 1:1000



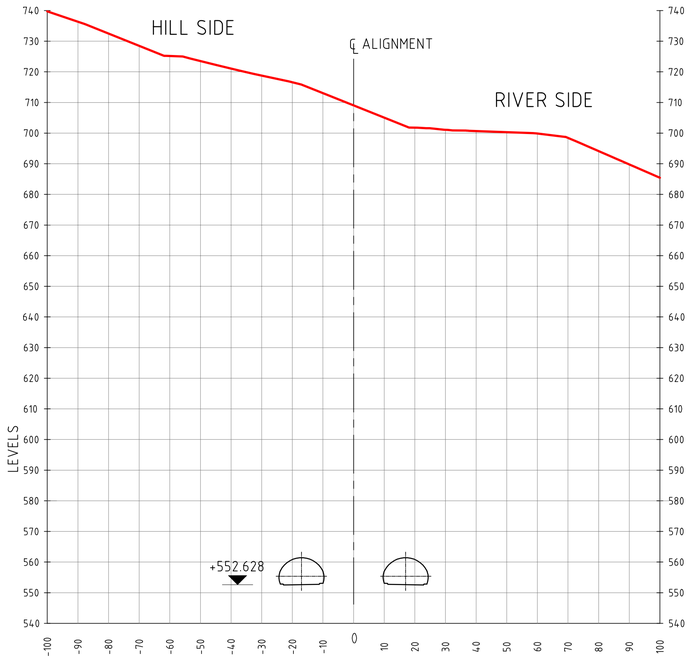
X-SEC AT CH: 10+400.00
SCALE 1:1000



X-SEC AT CH: 10+500.00
SCALE 1:1000



X-SEC AT CH: 10+600.00
SCALE 1:1000



X-SEC AT CH: 10+700.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 10+200 TO 10+700

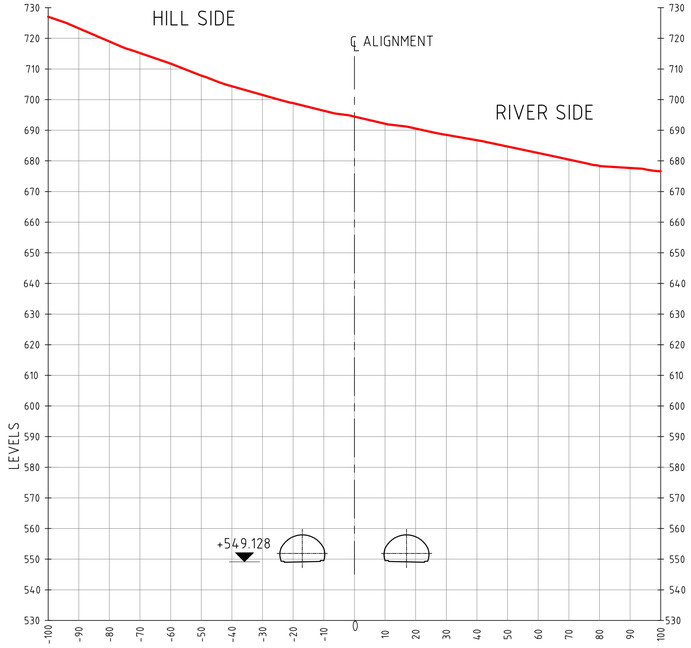
DRAWING NUMBER: SHGA-FS-LAY-1077

REV: B

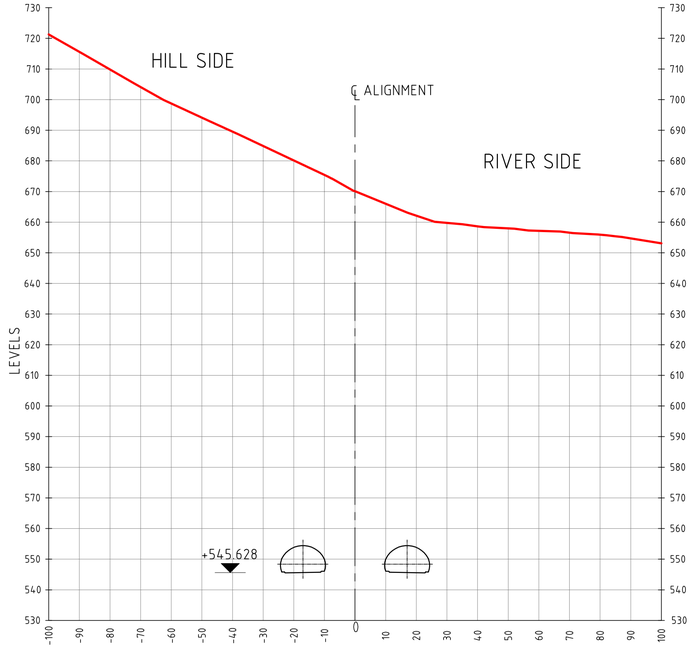
SCALE: AS SHOWN

MONTH (Current Issue): DEC 2015

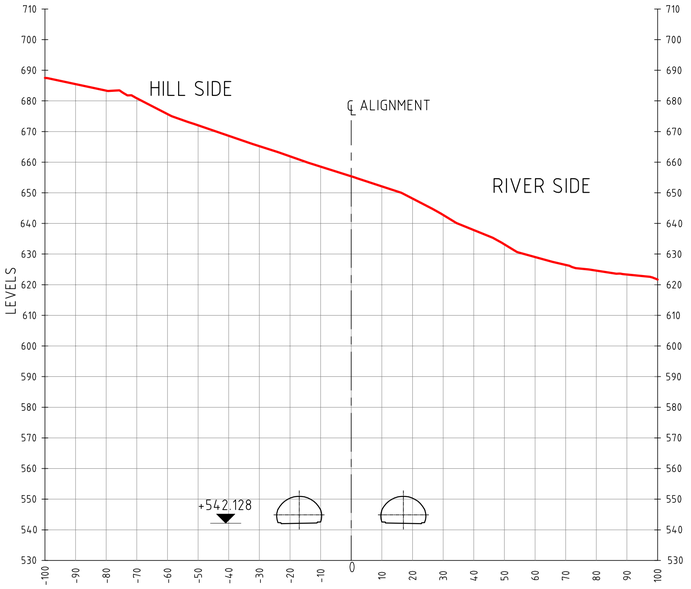
Original Drawing Size A1



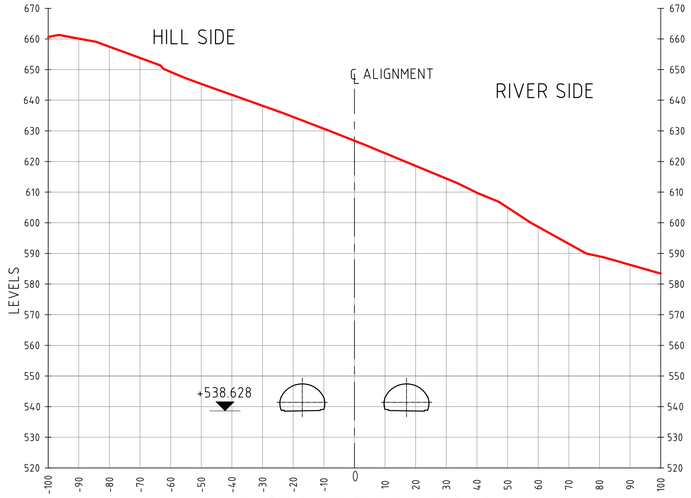
X-SEC AT CH: 10+800.00
SCALE 1:1000



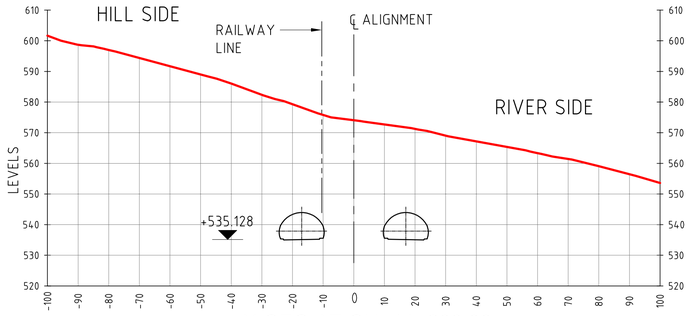
X-SEC AT CH: 10+900.00
SCALE 1:1000



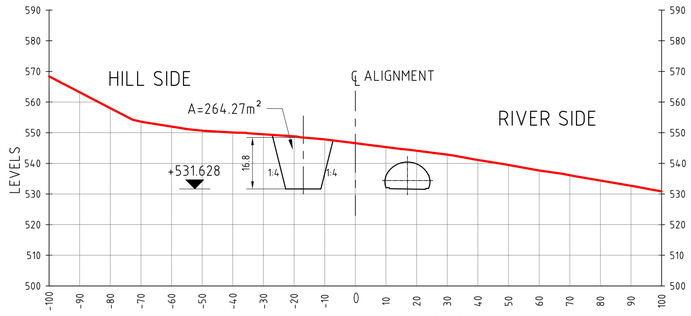
X-SEC AT CH: 11+000.00
SCALE 1:1000



X-SEC AT CH: 11+100.00
SCALE 1:1000



X-SEC AT CH: 11+200.00
SCALE 1:1000



X-SEC AT CH: 11+300.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-18

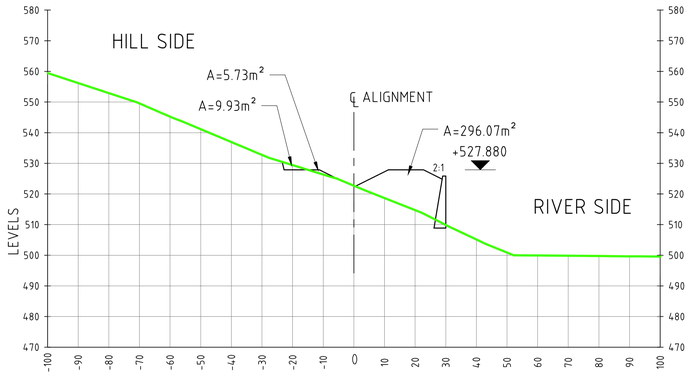
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 10+800 TO 11+300

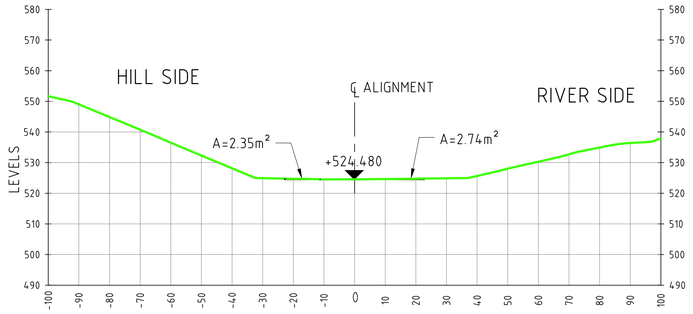
DRAWING NUMBER: SHGA-FS-LAY-1078 | REV: B

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

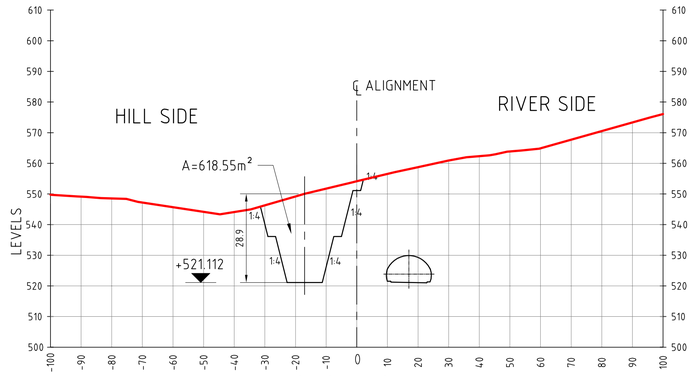
Original Drawing Size A1



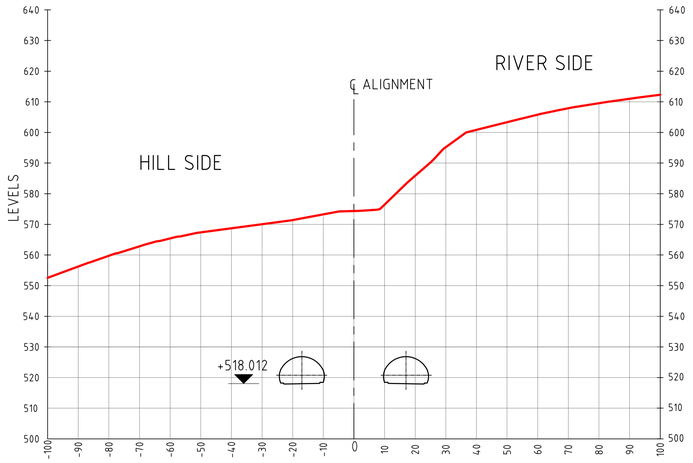
X-SEC AT CH: 11+400.00
SCALE 1:1000



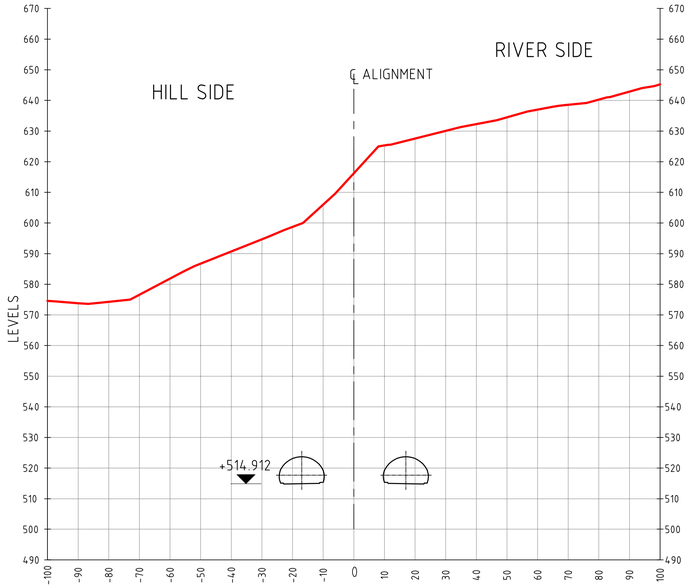
X-SEC AT CH: 11+500.00
SCALE 1:1000



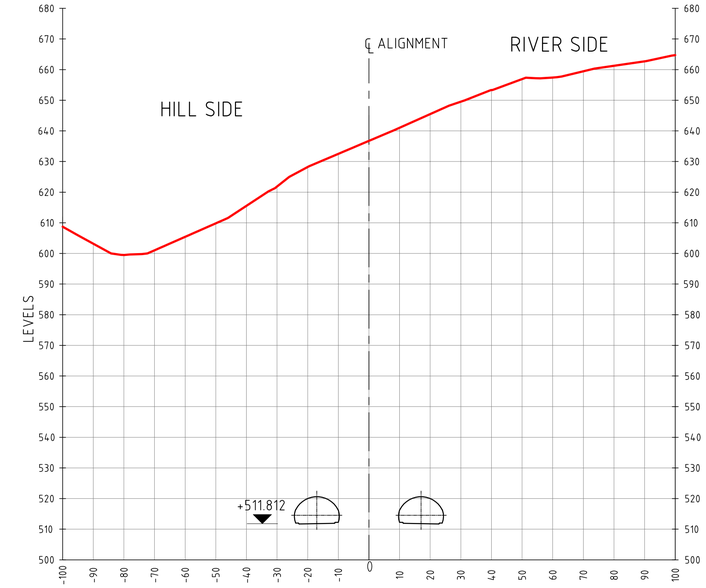
X-SEC AT CH: 11+600.00
SCALE 1:1000



X-SEC AT CH: 11+700.00
SCALE 1:1000



X-SEC AT CH: 11+800.00
SCALE 1:1000



X-SEC AT CH: 11+900.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	MINOR CORRECTIONS / SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; Aba, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 11+400 TO 11+900

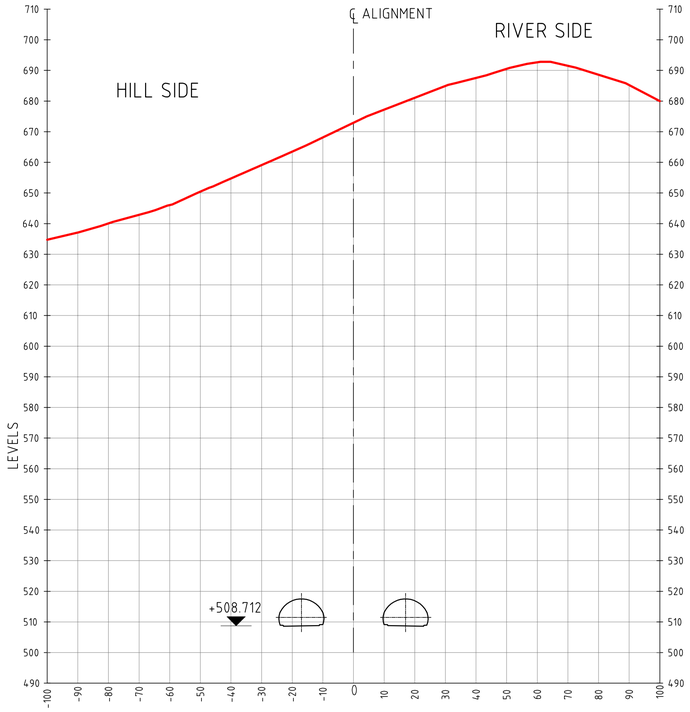
DRAWING NUMBER
SHGA-FS-LAY-1079

REV
B

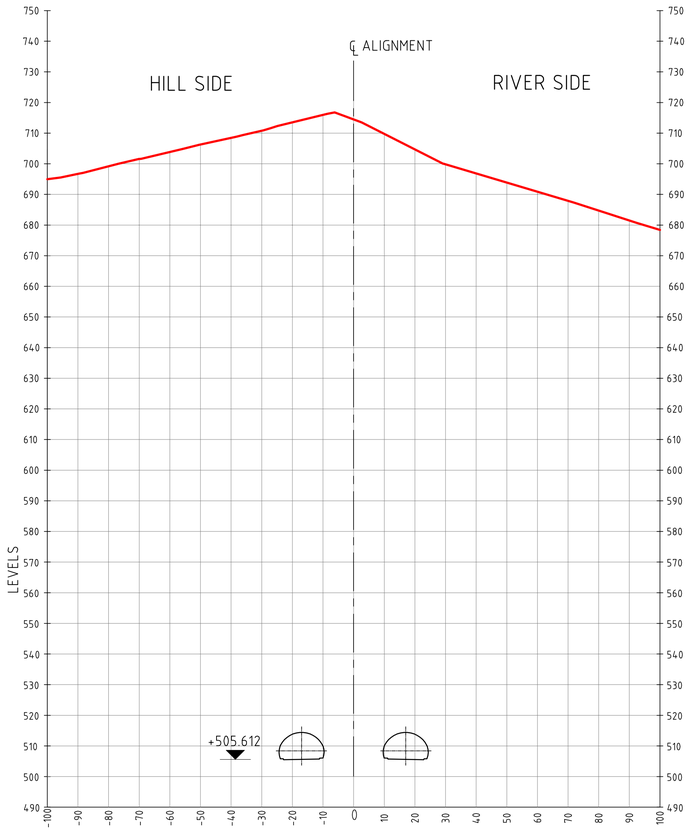
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

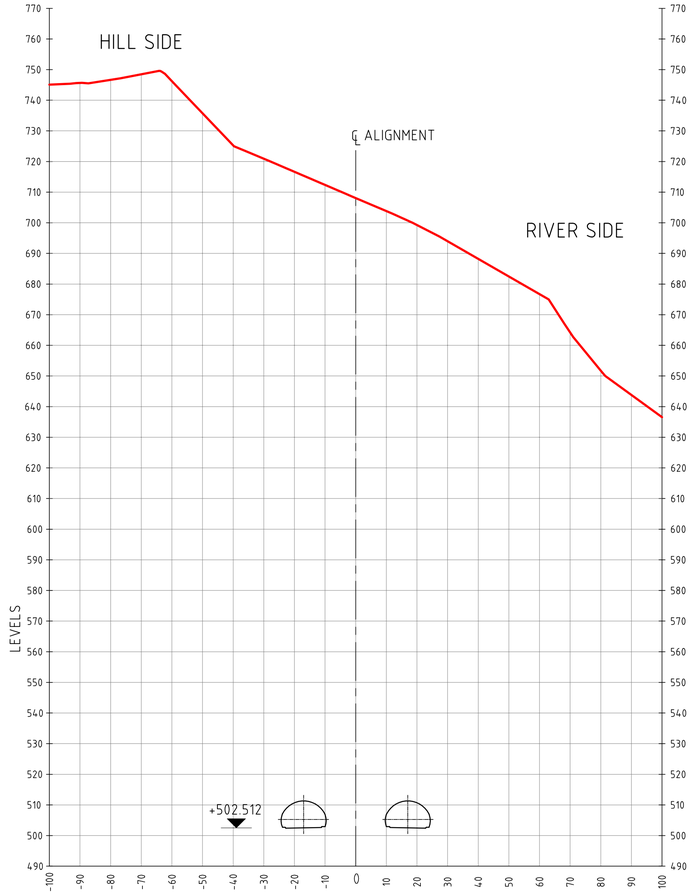
Original Drawing Size A1



X-SEC AT CH: 12+000.00
SCALE 1:1000



X-SEC AT CH: 12+100.00
SCALE 1:1000



X-SEC AT CH: 12+200.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1071 TO 1080_B.dwg, 2015-12-1

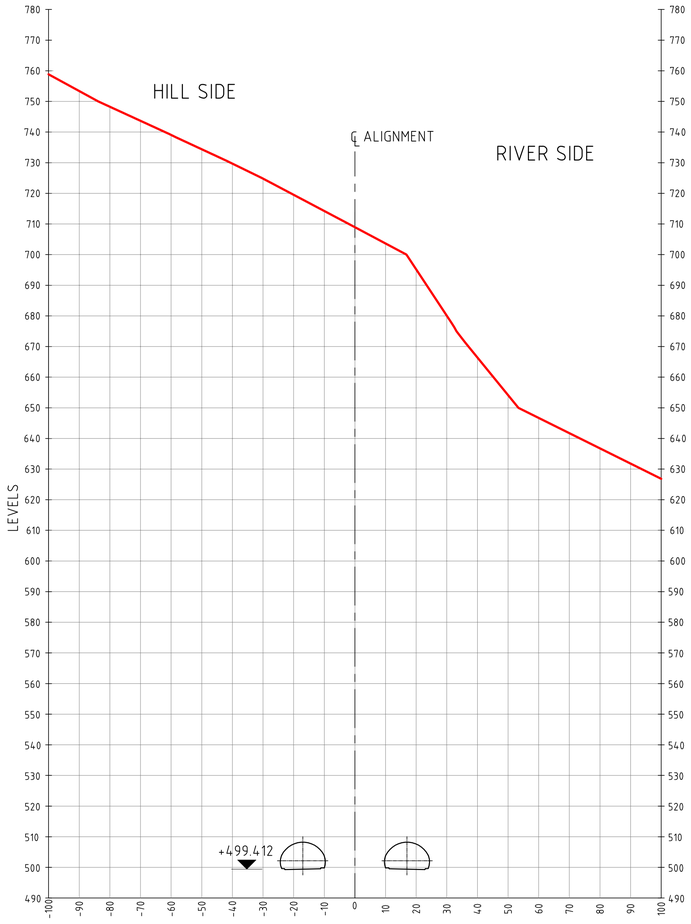
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH: 12+000 TO 12+200

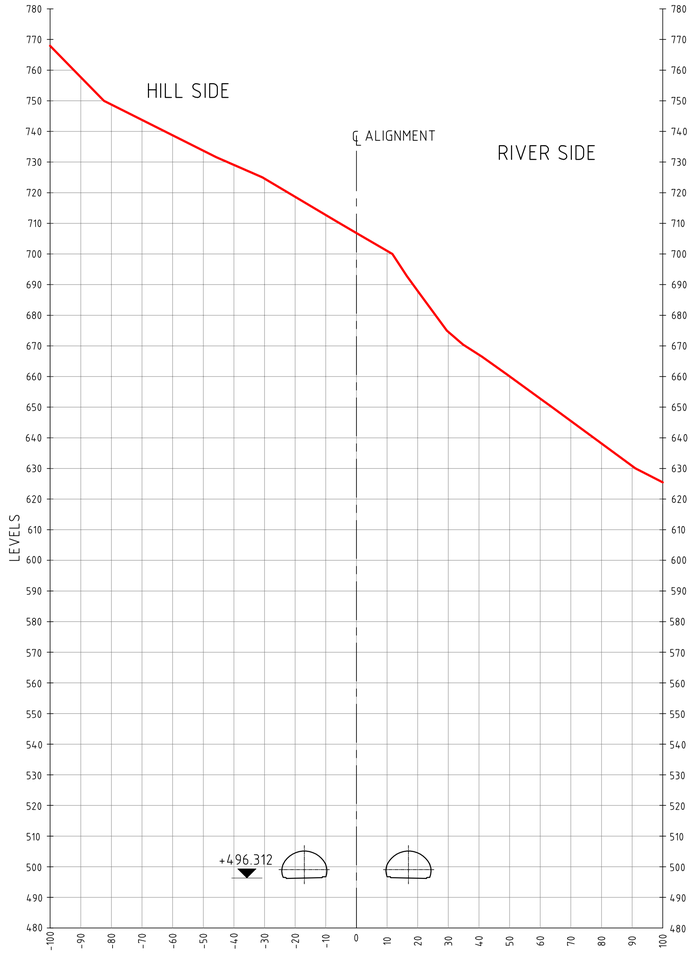
DRAWING NUMBER: SHGA-FS-LAY-1080 | REV: B

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

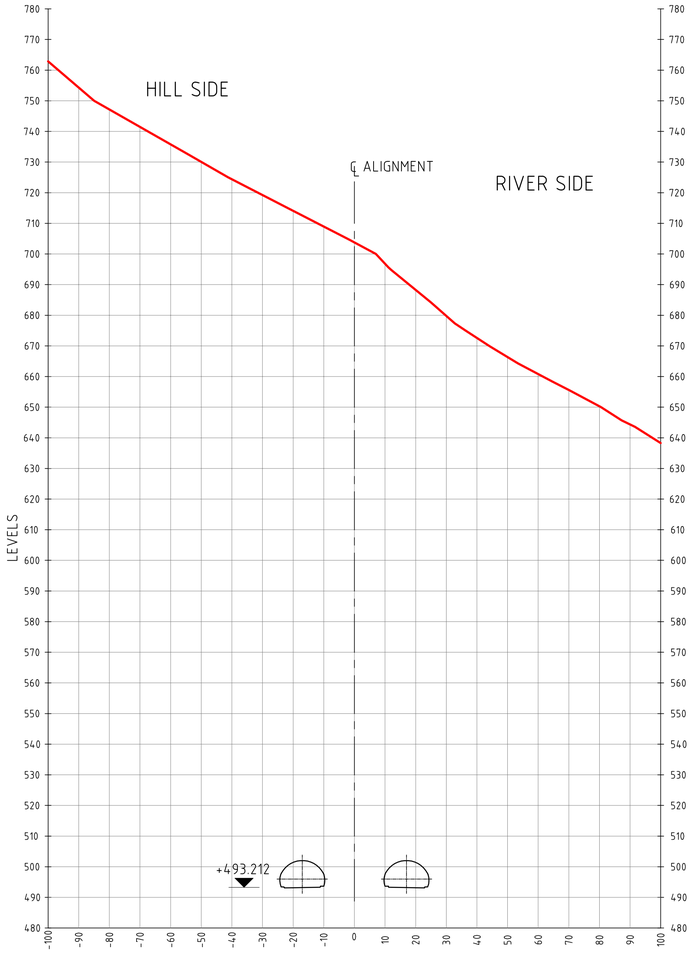
Original Drawing Size A1



X-SEC AT CH: 12+300.00
SCALE 1:1000



X-SEC AT CH: 12+400.00
SCALE 1:1000



X-SEC AT CH: 12+500.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

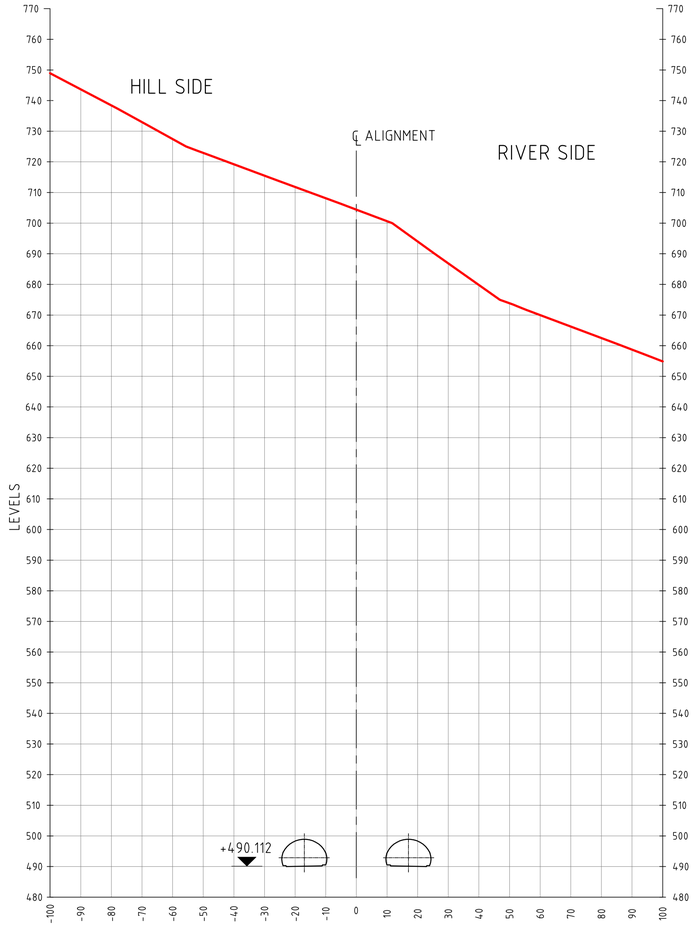
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:12+300 TO 12+500

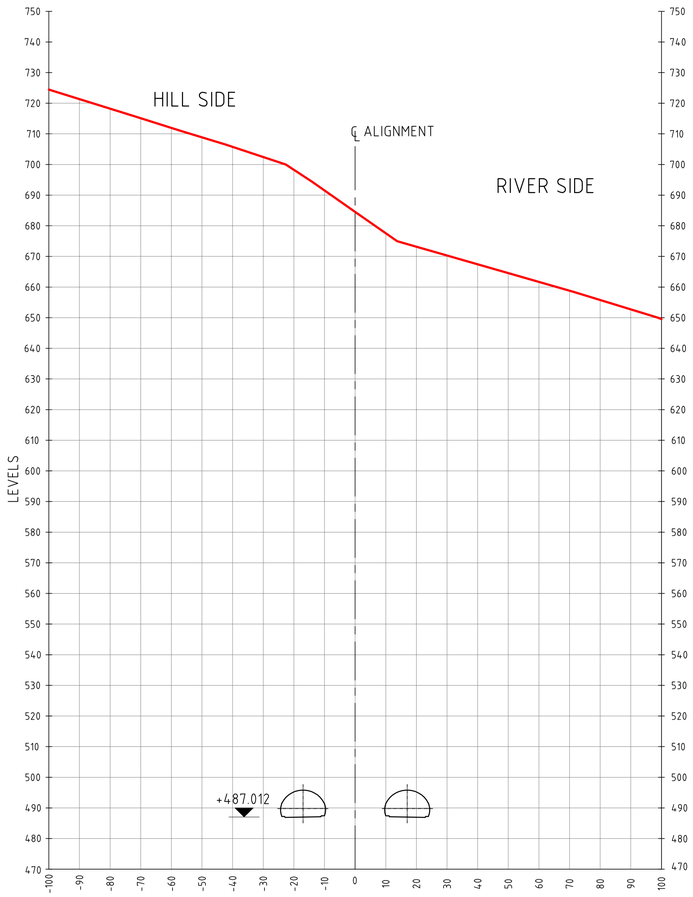
DRAWING NUMBER	REV
SHGA-FS-LAY-1081	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

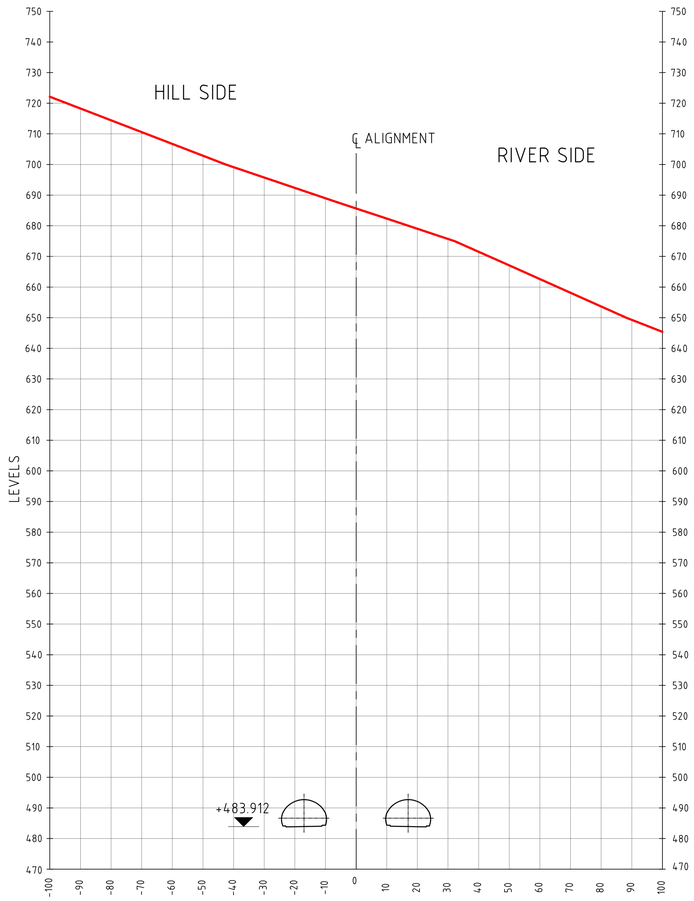
Original Drawing Size A1



X-SEC AT CH: 12+600.00
SCALE 1:1000



X-SEC AT CH: 12+700.00
SCALE 1:1000



X-SEC AT CH: 12+800.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; Aba, R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:12+600 TO 12+800

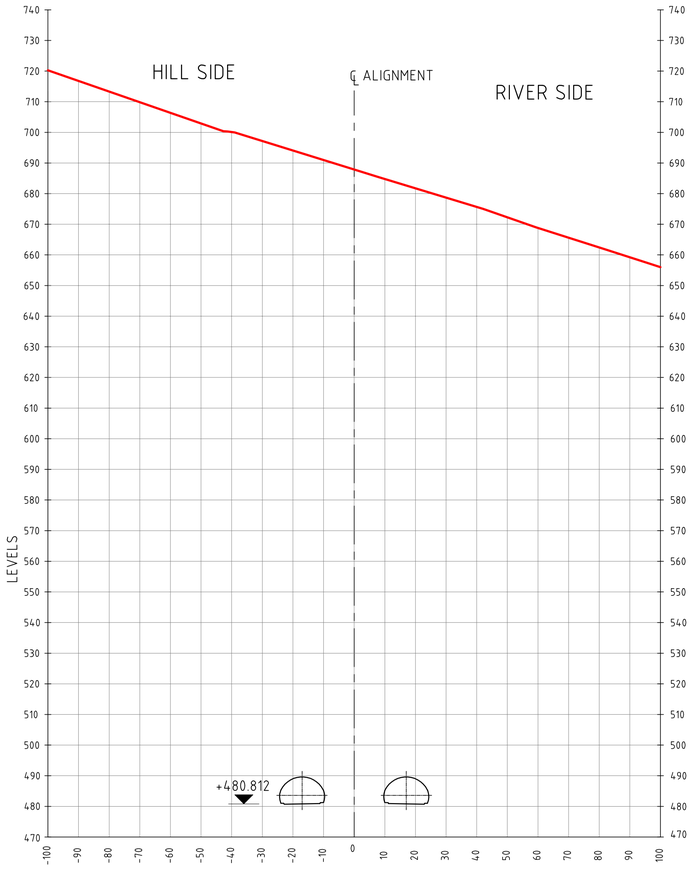
DRAWING NUMBER
SHGA-FS-LAY-1082

REV
B

SCALE
AS SHOWN

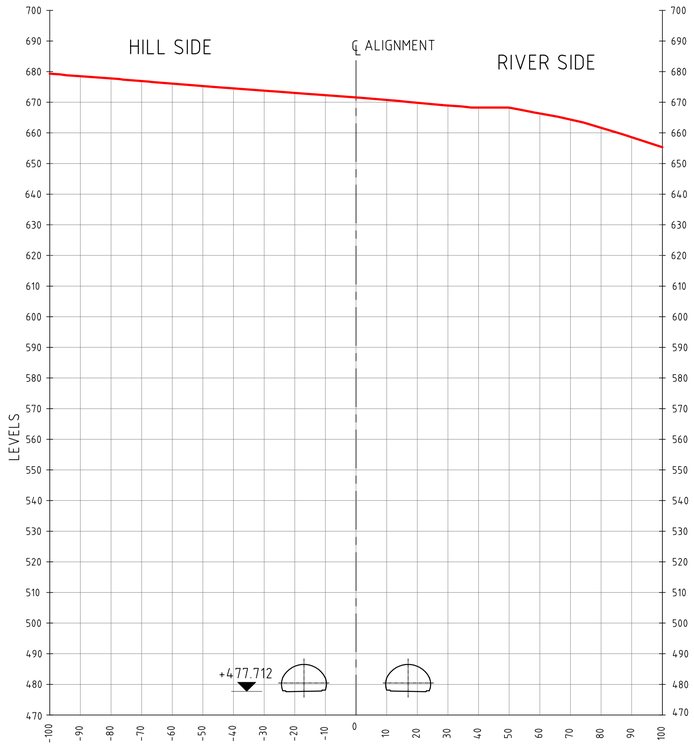
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



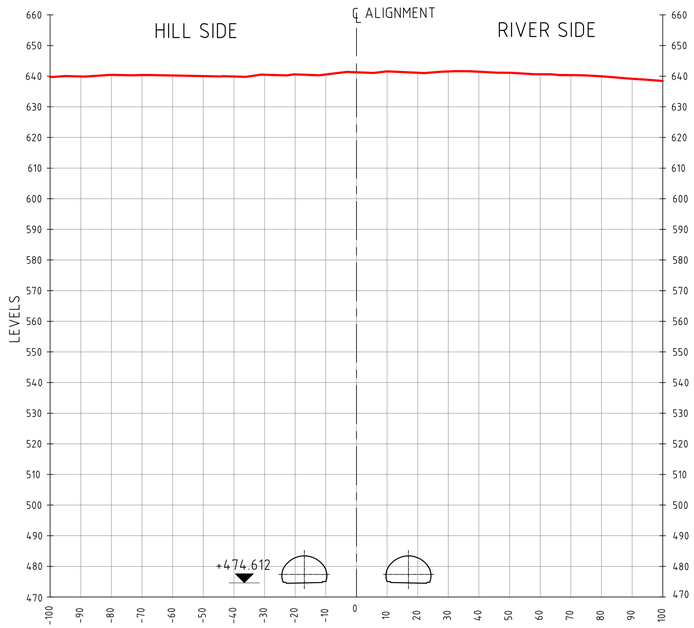
X-SEC AT CH: 12+900.00

SCALE 1:1000



X-SEC AT CH: 13+000.00

SCALE 1:1000



X-SEC AT CH: 13+100.00

SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; Aba, R:\16000 Projects\16066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

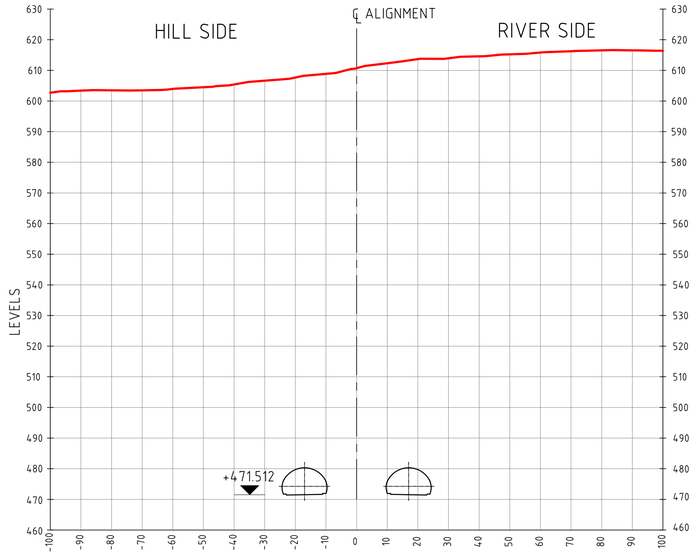
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:12+900 TO 13+100

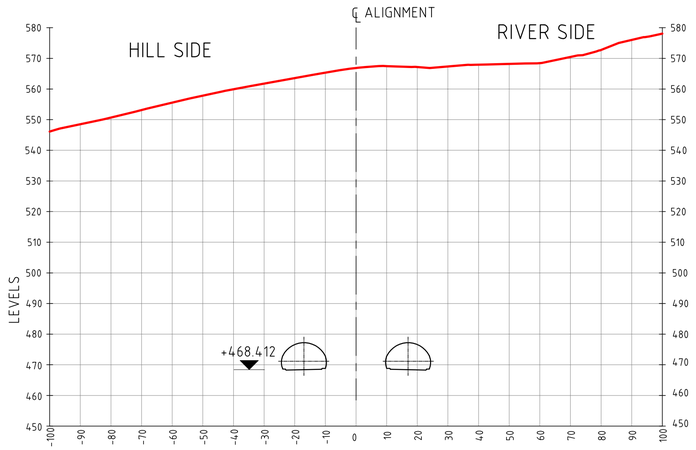
DRAWING NUMBER	REV
SHGA-FS-LAY-1083	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

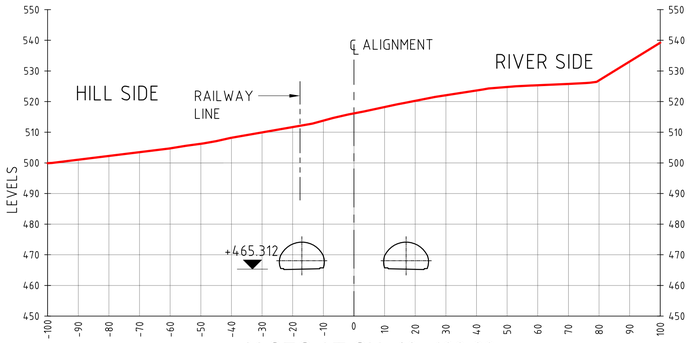
Original Drawing Size A1



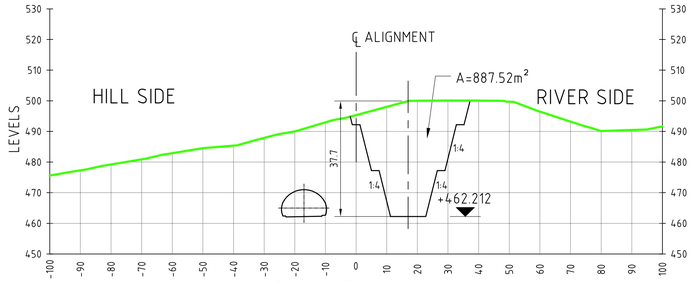
X-SEC AT CH: 13+200.00
SCALE 1:1000



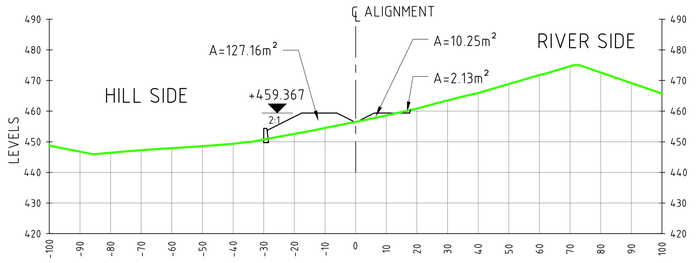
X-SEC AT CH: 13+300.00
SCALE 1:1000



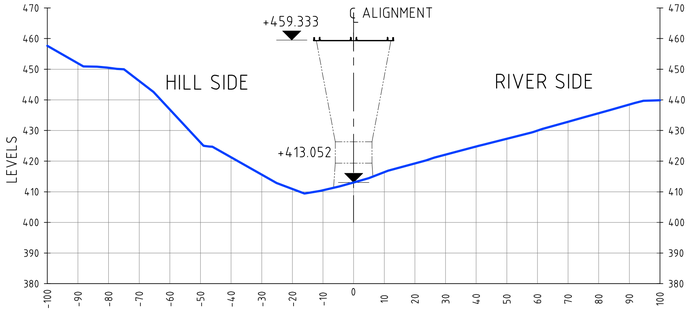
X-SEC AT CH: 13+400.00
SCALE 1:1000



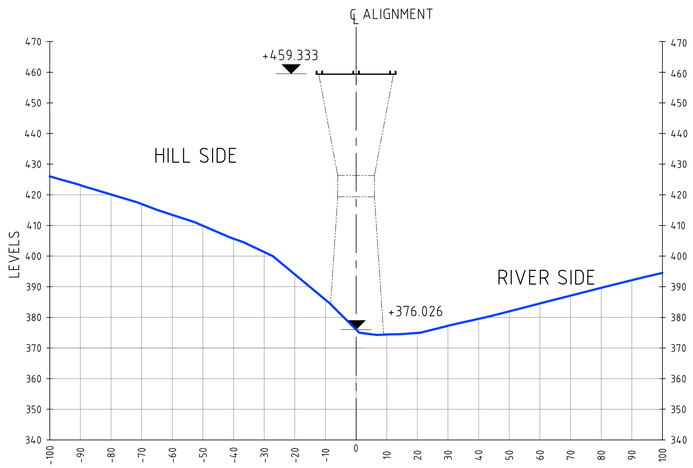
X-SEC AT CH: 13+500.00
SCALE 1:1000



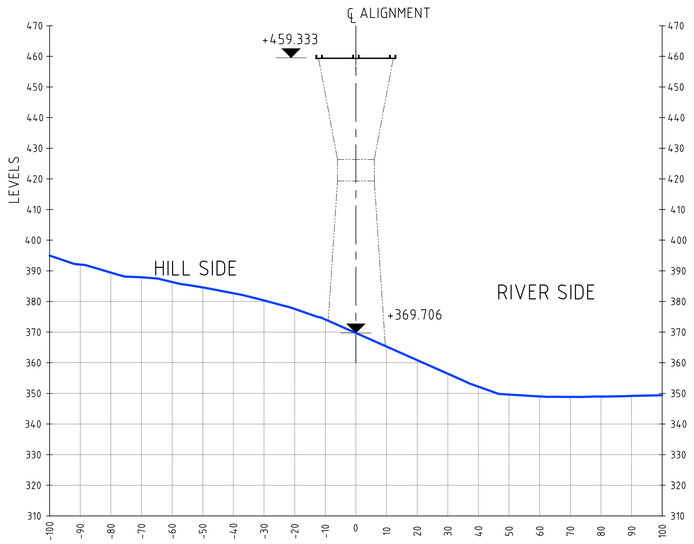
X-SEC AT CH: 13+600.00
SCALE 1:1000



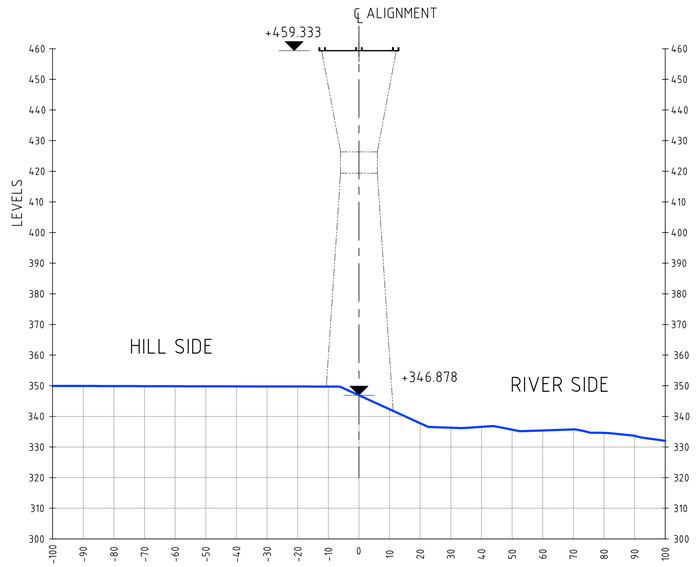
X-SEC AT CH: 13+700.00
SCALE 1:1000



X-SEC AT CH: 13+800.00
SCALE 1:1000



X-SEC AT CH: 13+900.00
SCALE 1:1000



X-SEC AT CH: 14+000.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

CLIENT
GOVERNMENT OF KARNATAKA

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:13+200 TO 14+000

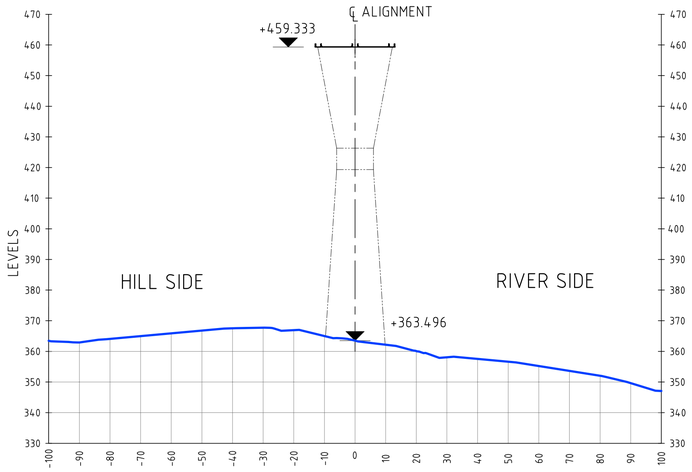
DRAWING NUMBER
SHGA-FS-LAY-1084

REV
B

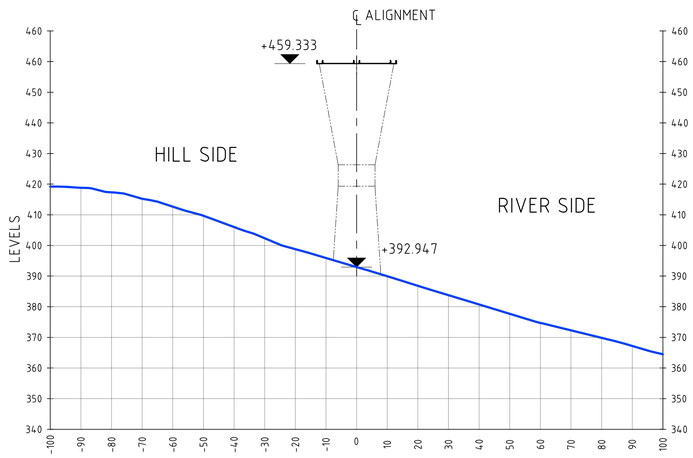
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

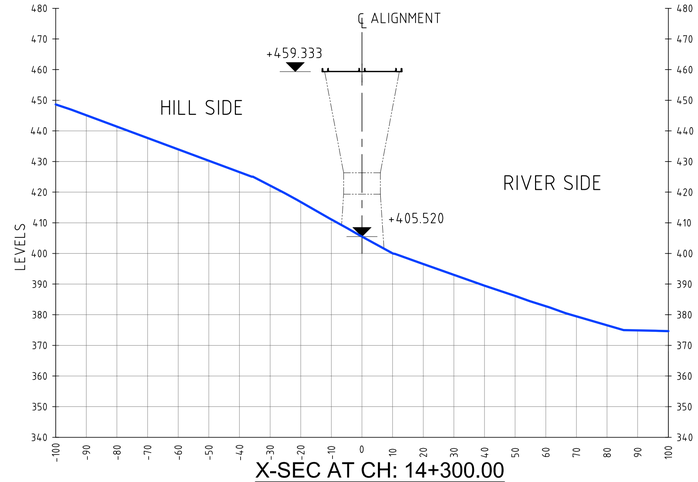
Original Drawing Size A1



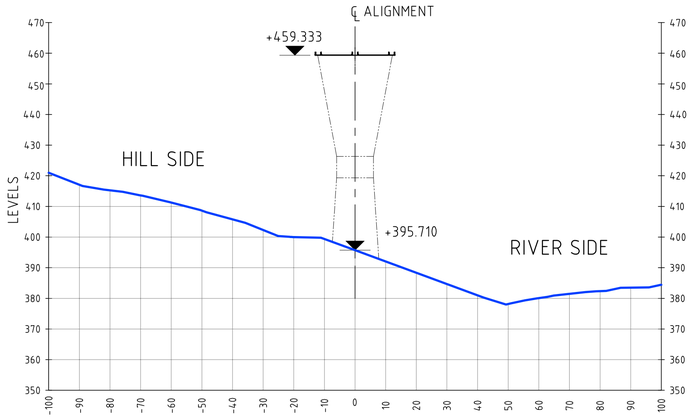
X-SEC AT CH: 14+100.00
SCALE 1:1000



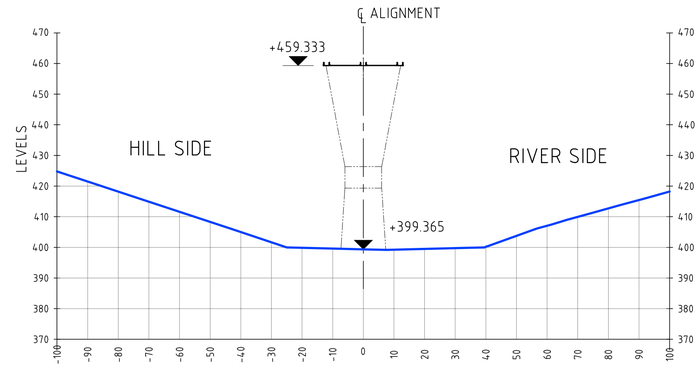
X-SEC AT CH: 14+200.00
SCALE 1:1000



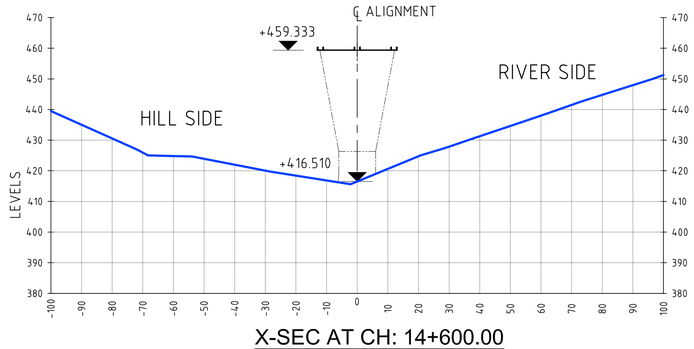
X-SEC AT CH: 14+300.00
SCALE 1:1000



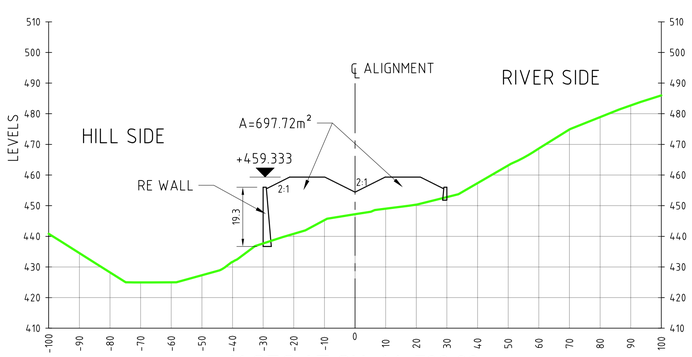
X-SEC AT CH: 14+400.00
SCALE 1:1000



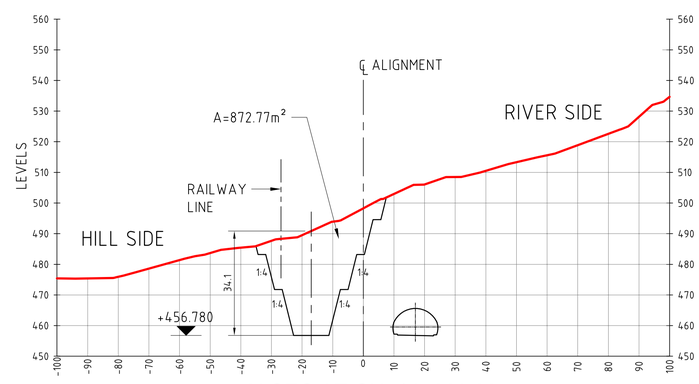
X-SEC AT CH: 14+500.00
SCALE 1:1000



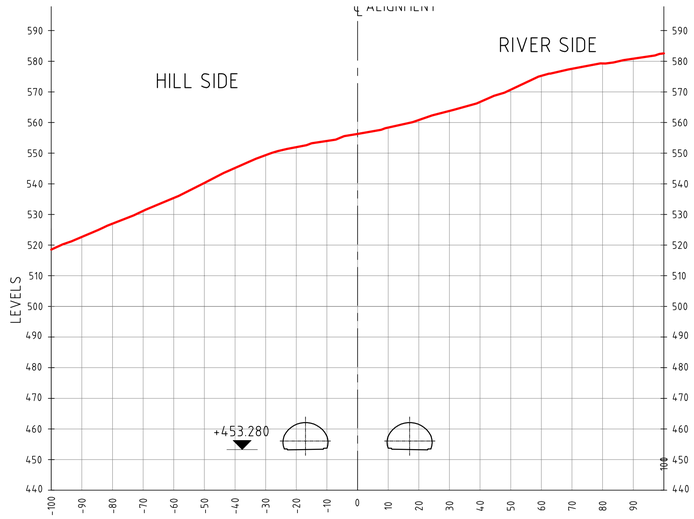
X-SEC AT CH: 14+600.00
SCALE 1:1000



X-SEC AT CH: 14+700.00
SCALE 1:1000



X-SEC AT CH: 14+800.00
SCALE 1:1000



X-SEC AT CH: 14+900.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_ 1081 TO 1092_B.dwg, 2015-12-1

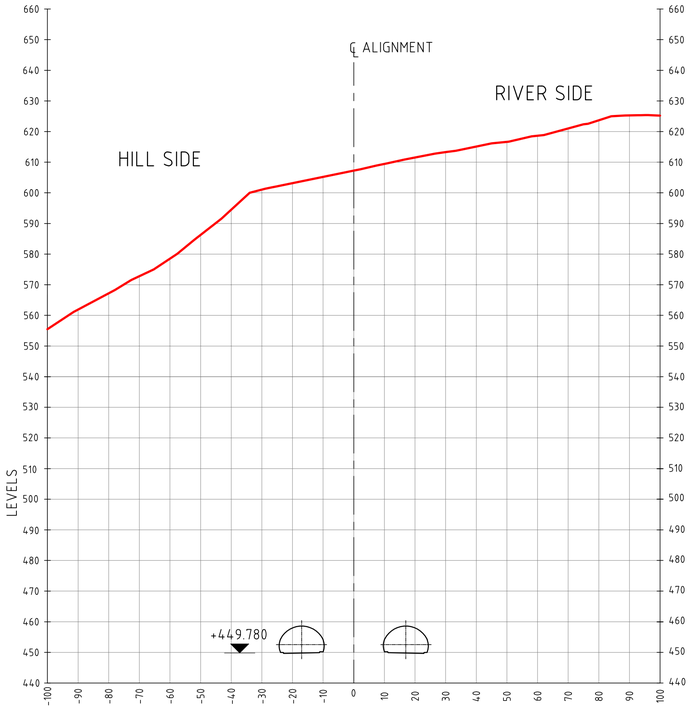
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:14+100 TO 14+900

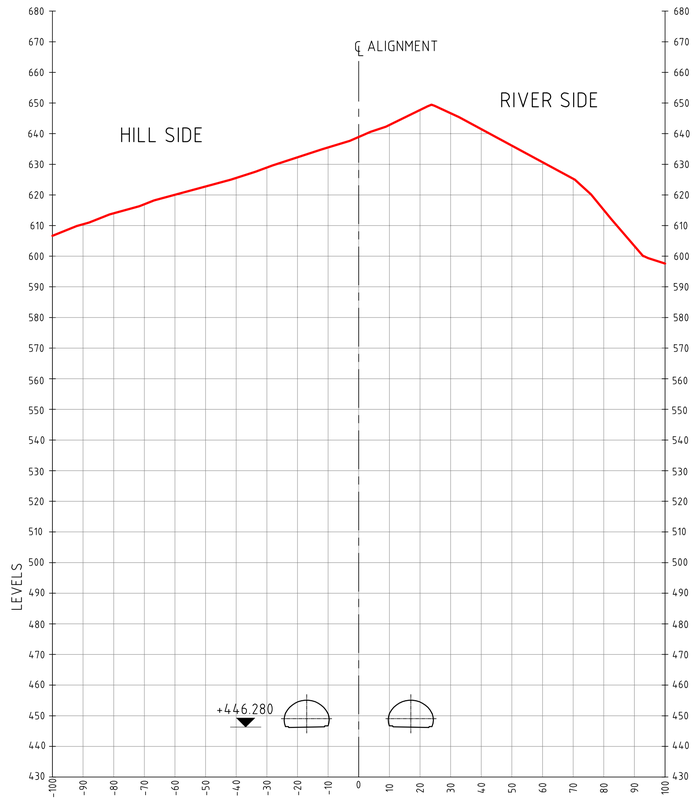
DRAWING NUMBER	REV
SHGA-FS-LAY-1085	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

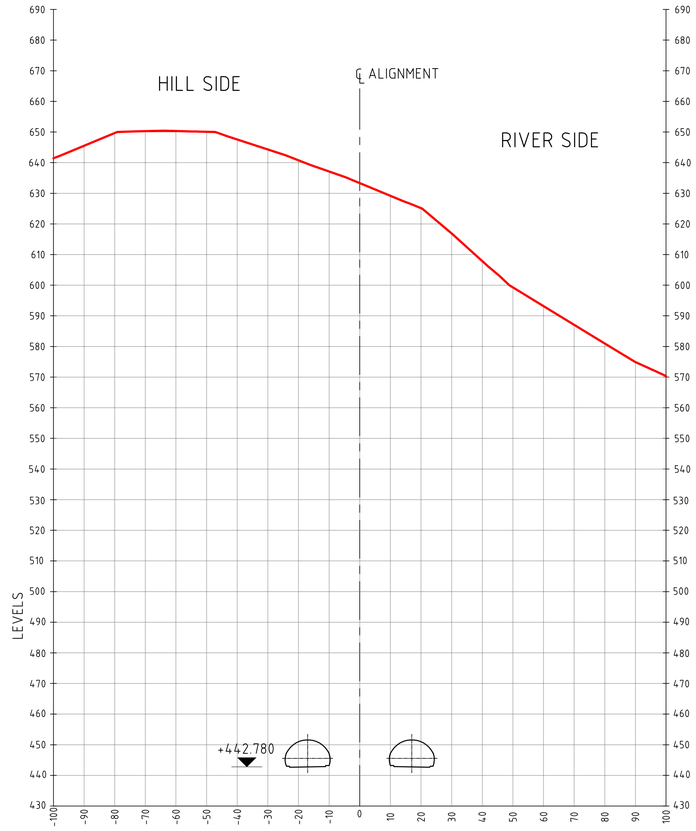
Original Drawing Size A1



X-SEC AT CH: 15+000.00
SCALE 1:1000



X-SEC AT CH: 15+100.00
SCALE 1:1000



X-SEC AT CH: 15+200.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

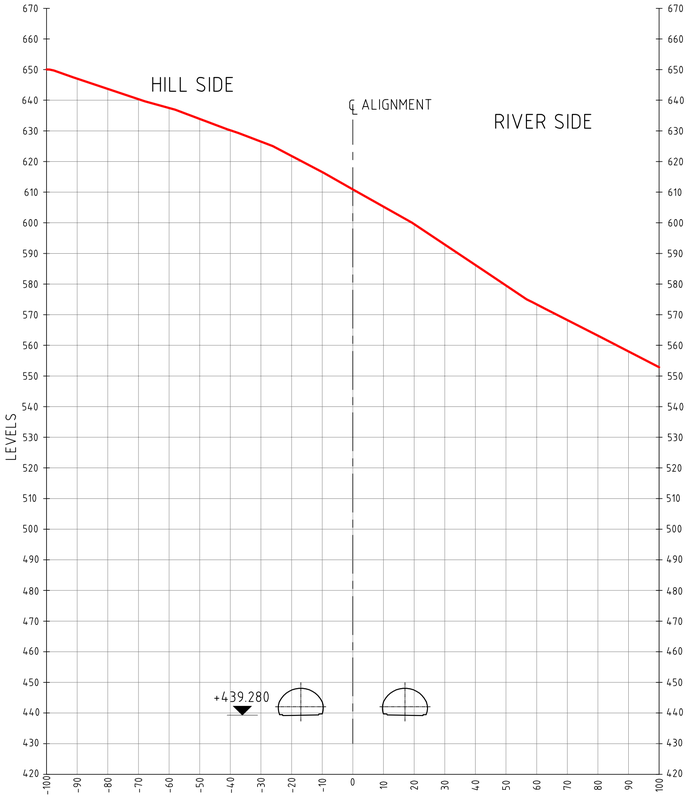
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:15+000 TO 15+200

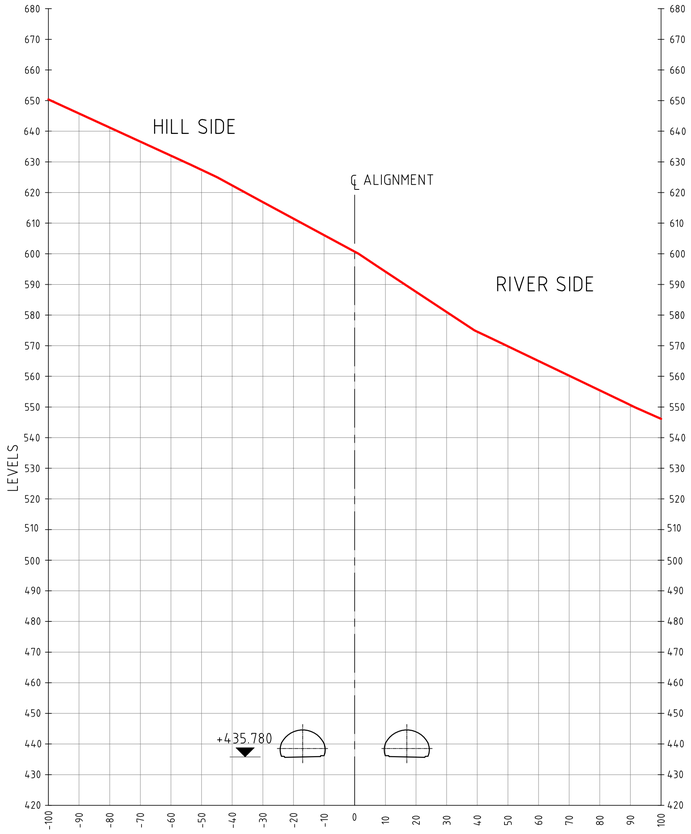
DRAWING NUMBER	REV
SHGA-FS-LAY-1086	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

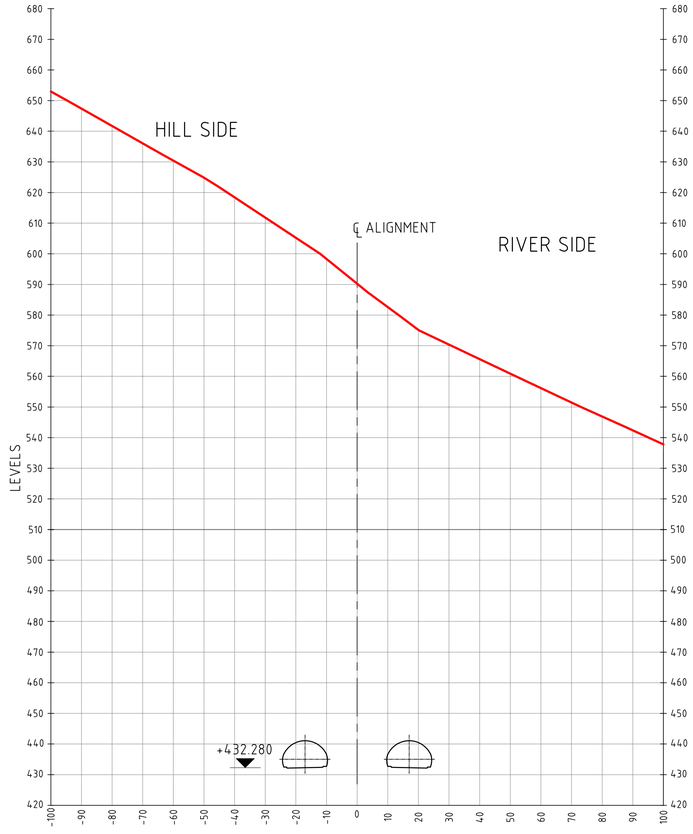
Original Drawing Size A1



X-SEC AT CH: 15+300.00
SCALE 1:1000



X-SEC AT CH: 15+400.00
SCALE 1:1000



X-SEC AT CH: 15+500.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT\ Aba\ R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-18

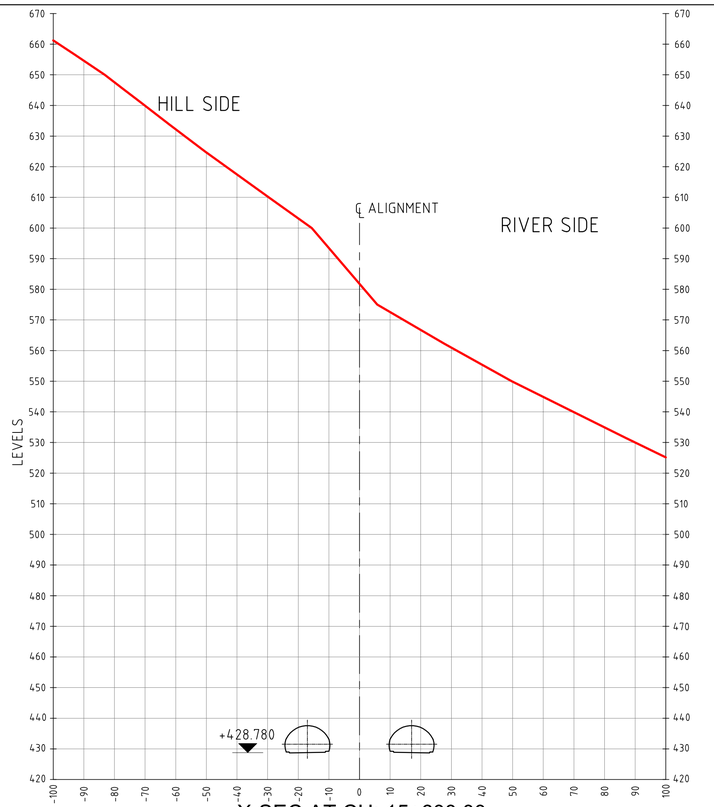
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:15+300 TO 15+500

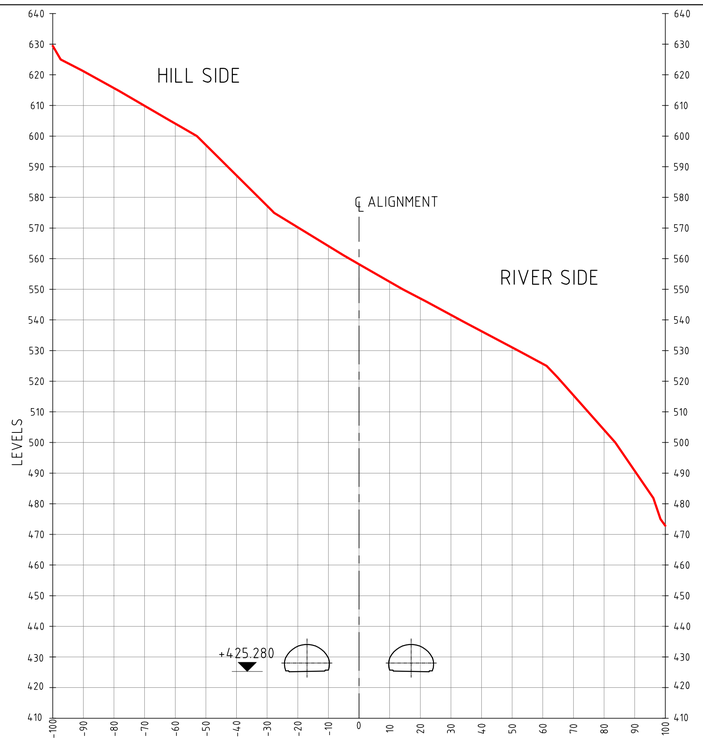
DRAWING NUMBER	REV
SHGA-FS-LAY-1087	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

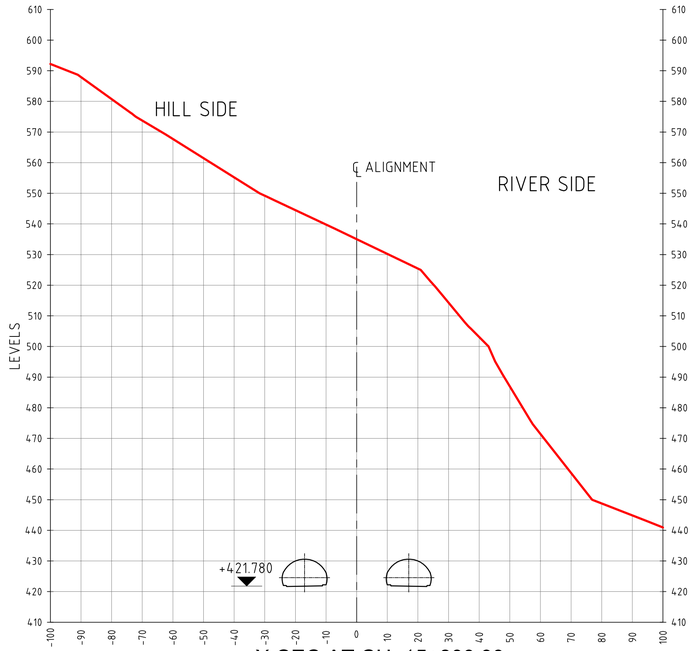
Original Drawing Size A1



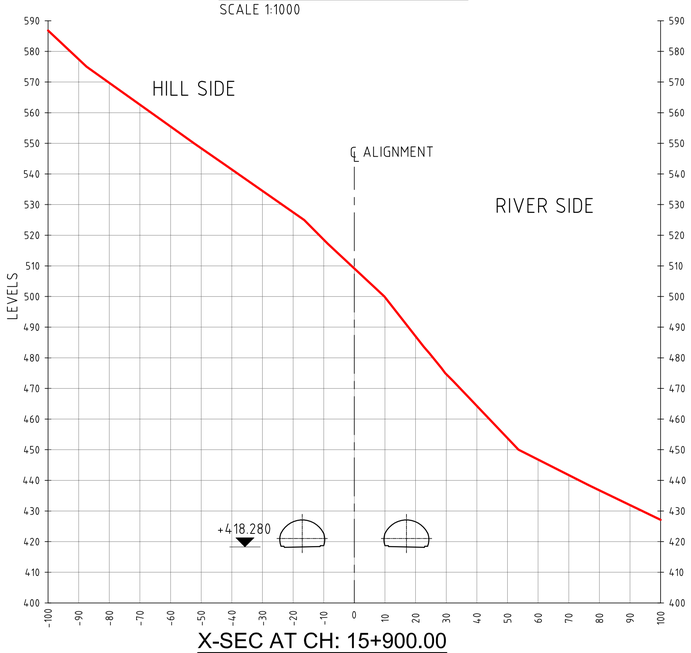
X-SEC AT CH: 15+600.00
SCALE 1:1000



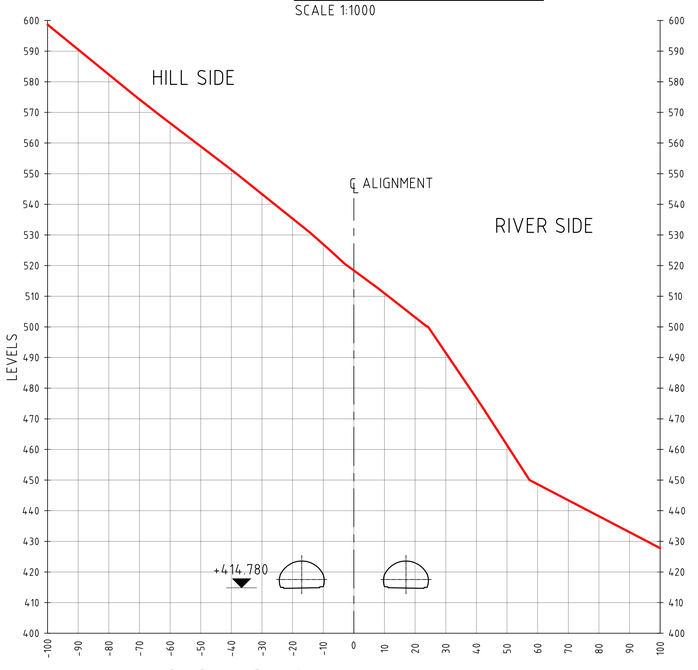
X-SEC AT CH: 15+700.00
SCALE 1:1000



X-SEC AT CH: 15+800.00
SCALE 1:1000

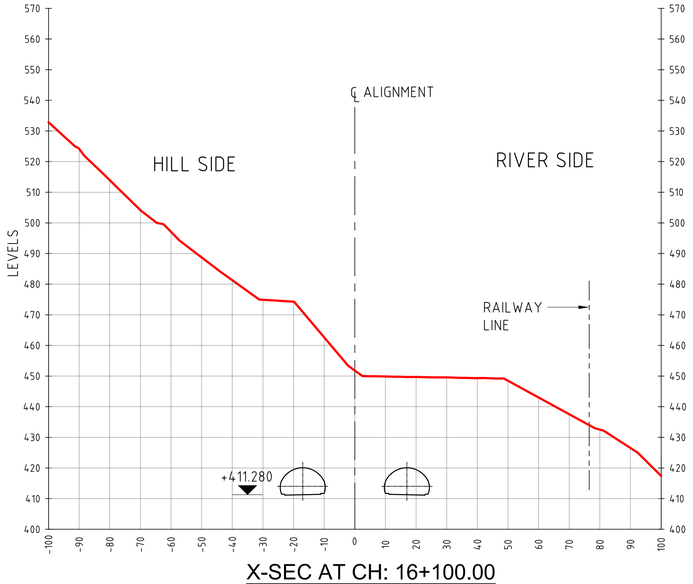


X-SEC AT CH: 15+900.00
SCALE 1:1000



X-SEC AT CH: 16+000.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m



X-SEC AT CH: 16+100.00
SCALE 1:1000

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_ 1081 TO 1092_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:15+600 TO 16+100

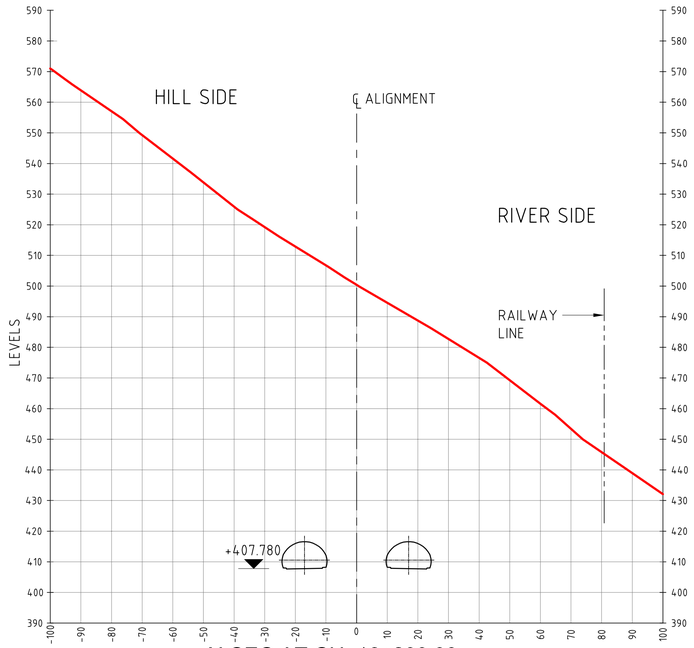
DRAWING NUMBER
SHGA-FS-LAY-1088

REV
B

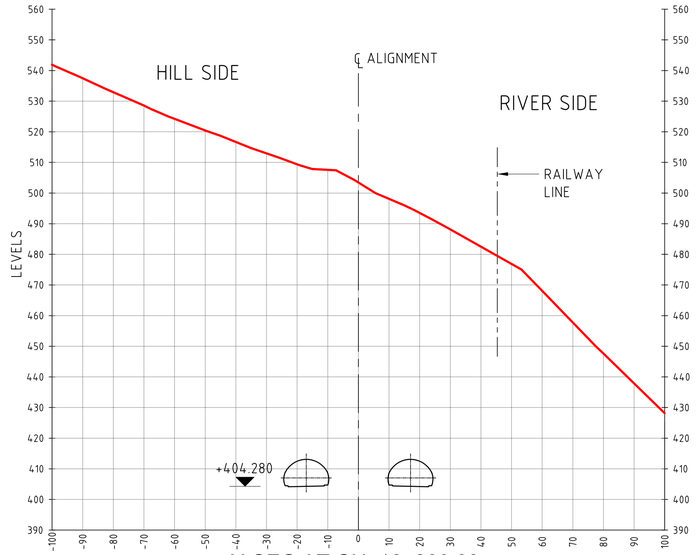
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

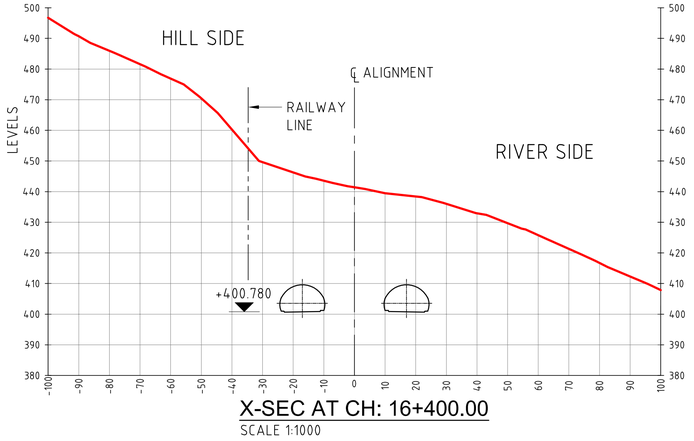
Original Drawing Size A1



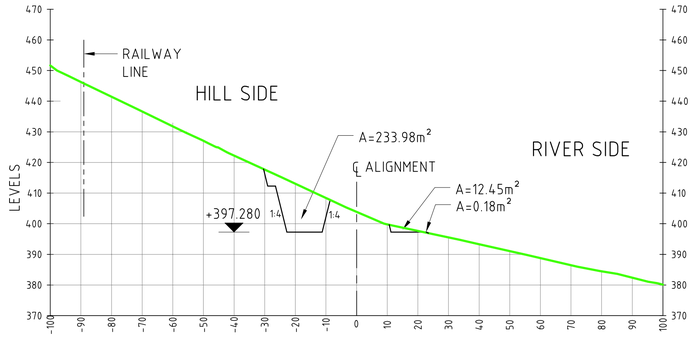
X-SEC AT CH: 16+200.00
SCALE 1:1000



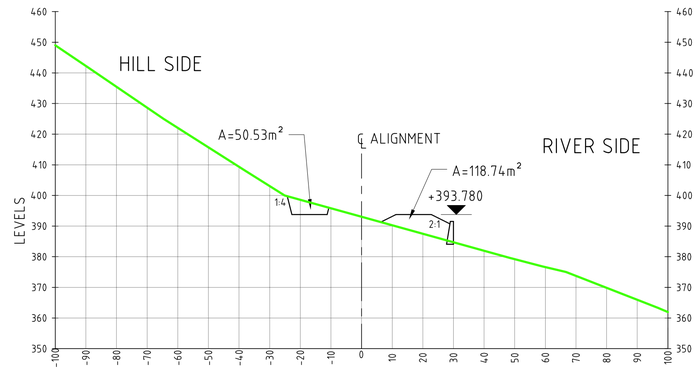
X-SEC AT CH: 16+300.00
SCALE 1:1000



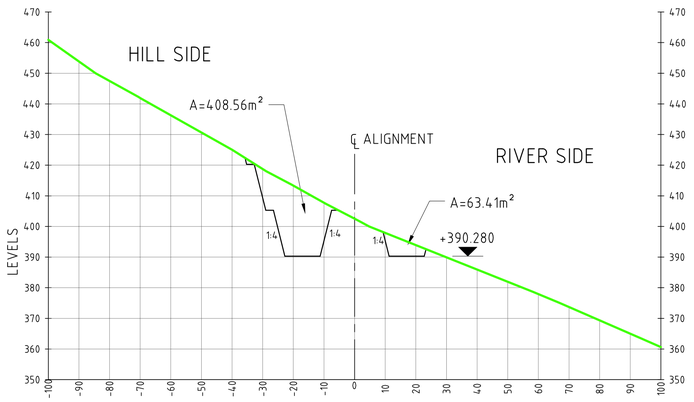
X-SEC AT CH: 16+400.00
SCALE 1:1000



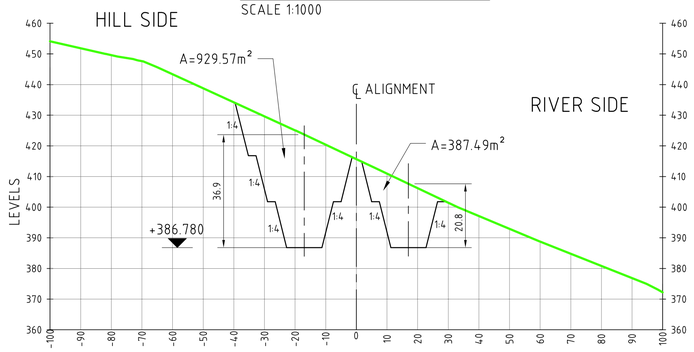
X-SEC AT CH: 16+500.00
SCALE 1:1000



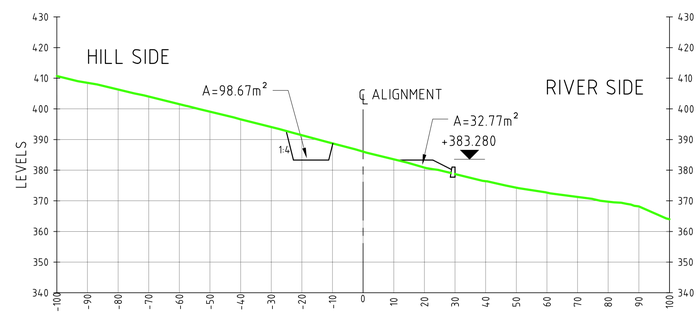
X-SEC AT CH: 16+600.00
SCALE 1:1000



X-SEC AT CH: 16+700.00
SCALE 1:1000

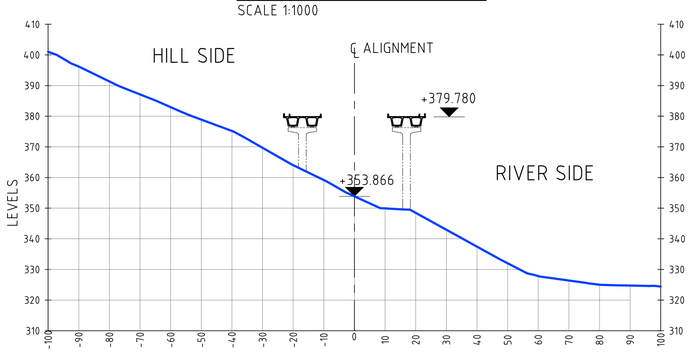


X-SEC AT CH: 16+800.00
SCALE 1:1000



X-SEC AT CH: 16+900.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m



X-SEC AT CH: 17+000.00
SCALE 1:1000

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; Aba; R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

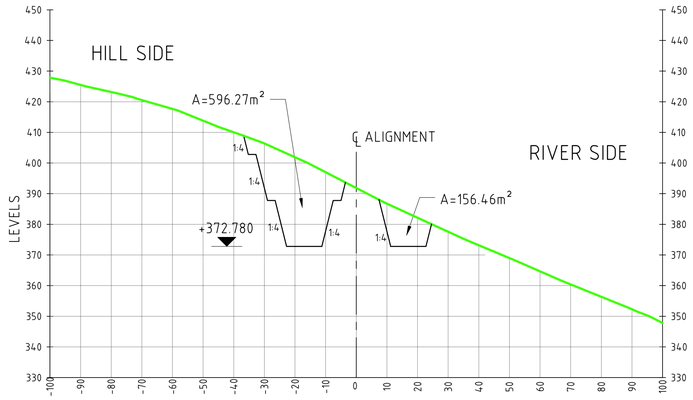
DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:16+200 TO 17+000

DRAWING NUMBER: SHGA-FS-LAY-1089
REV: B

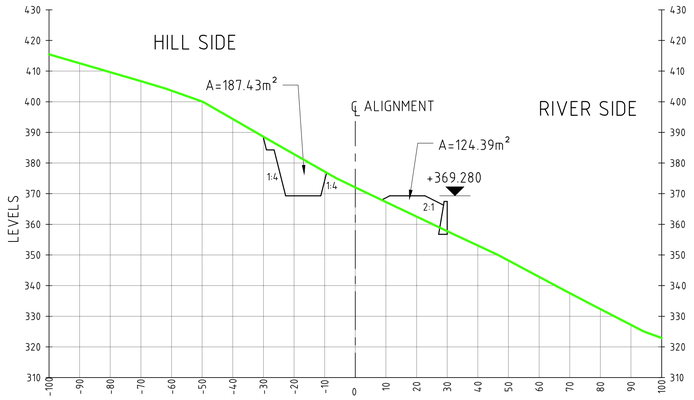
SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1

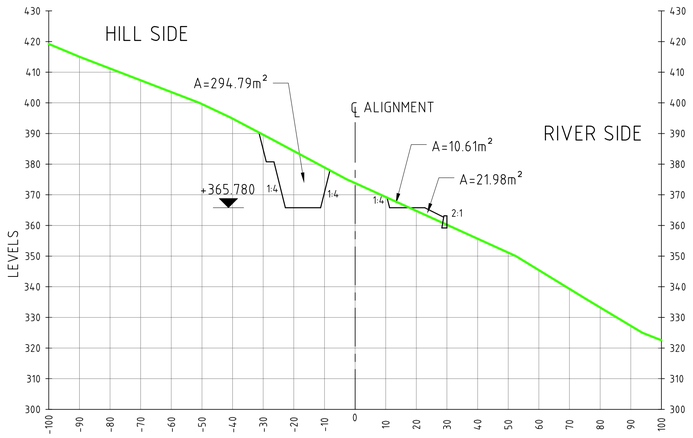
X-SEC AT CH: 17+100.00
SCALE 1:1000



X-SEC AT CH: 17+200.00
SCALE 1:1000

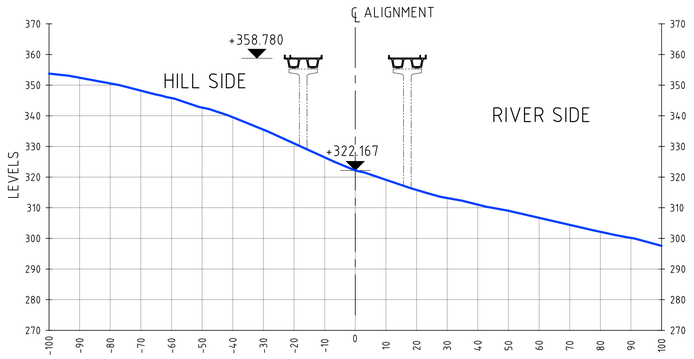


X-SEC AT CH: 17+300.00
SCALE 1:1000

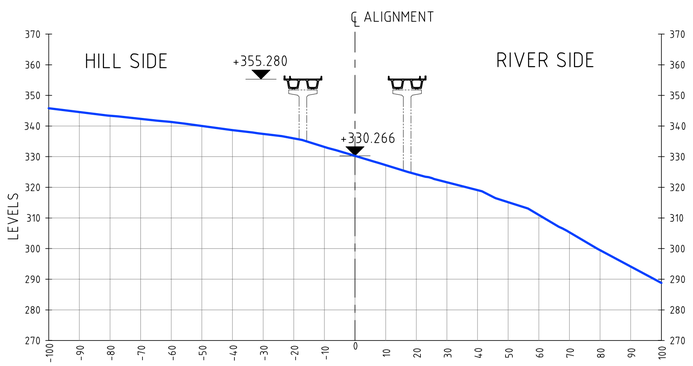


X-SEC AT CH: 17+400.00
SCALE 1:1000

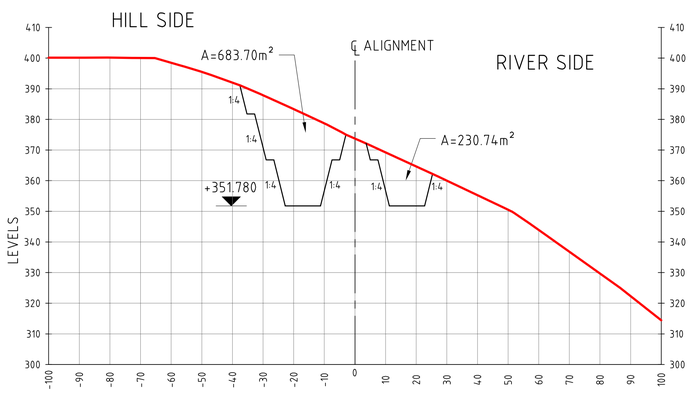
X-SEC AT CH: 17+500.00
SCALE 1:1000



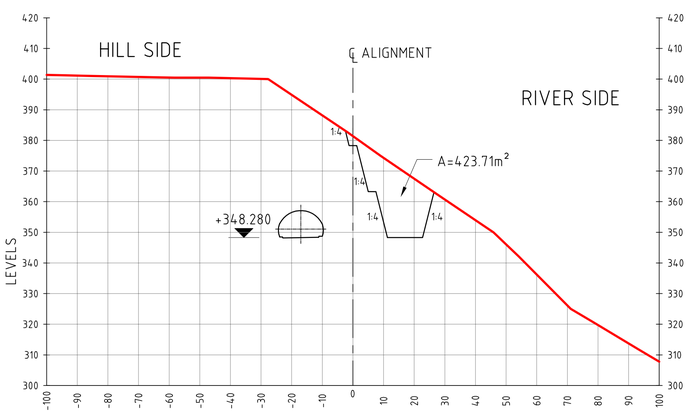
X-SEC AT CH: 17+600.00
SCALE 1:1000



X-SEC AT CH: 17+700.00
SCALE 1:1000



X-SEC AT CH: 17+800.00
SCALE 1:1000



X-SEC AT CH: 17+900.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT\ Aba, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

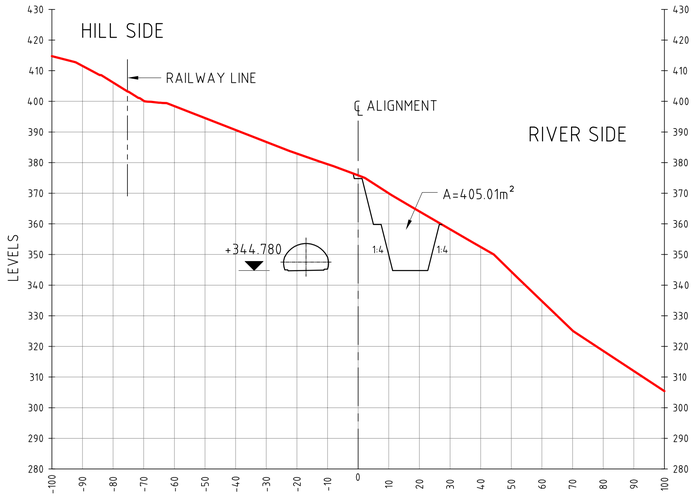
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:17+100 TO 17+900

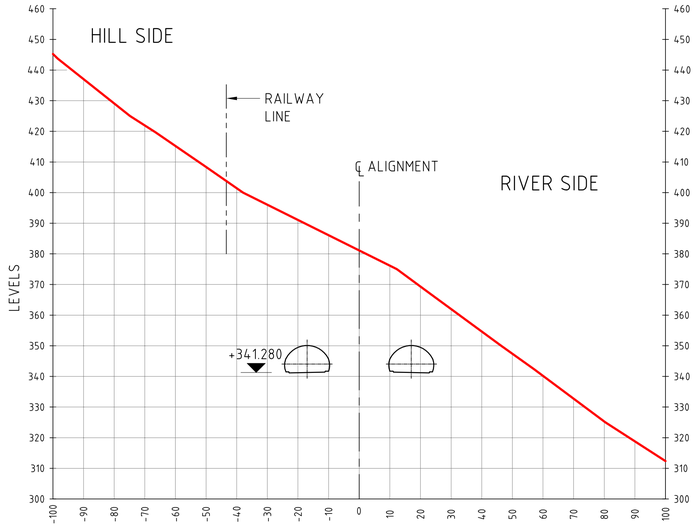
PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING NUMBER: SHGA-FS-LAY-1090
REV: B
SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

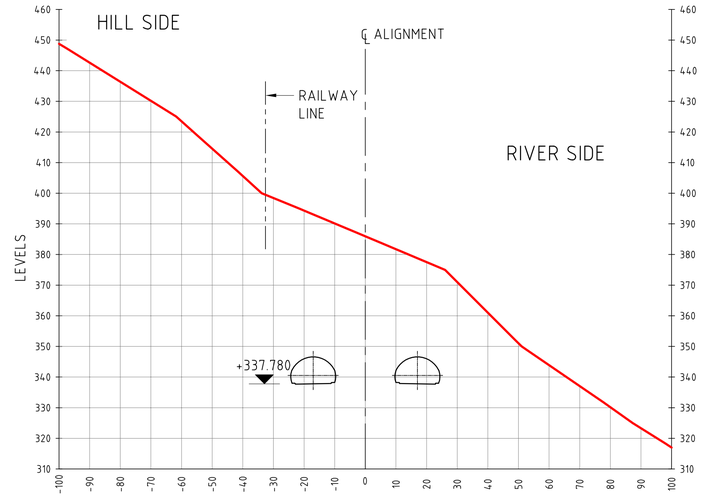
Original Drawing Size A1



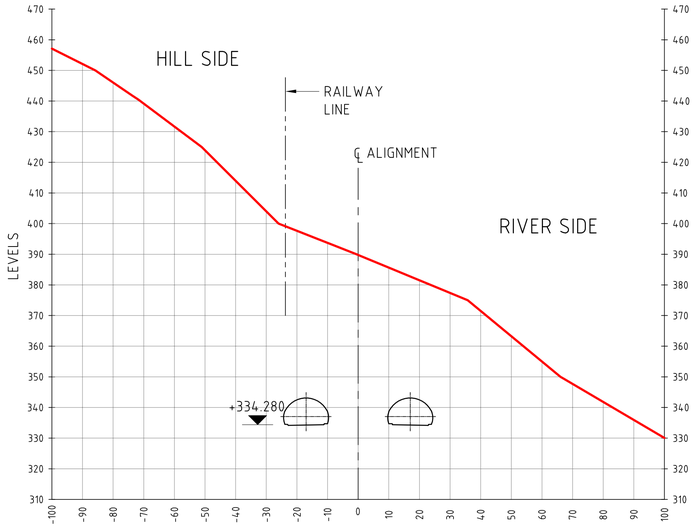
X-SEC AT CH: 18+000.00
SCALE 1:1000



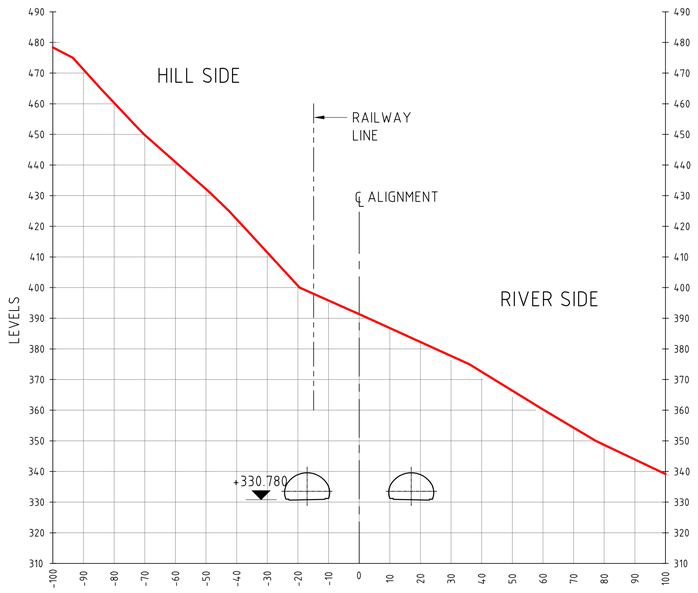
X-SEC AT CH: 18+100.00
SCALE 1:1000



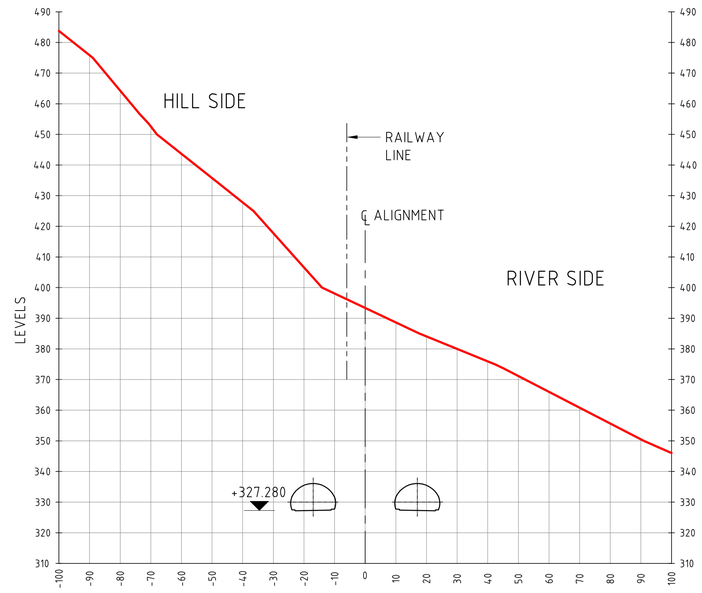
X-SEC AT CH: 18+200.00
SCALE 1:1000



X-SEC AT CH: 18+300.00
SCALE 1:1000



X-SEC AT CH: 18+400.00
SCALE 1:1000



X-SEC AT CH: 18+500.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

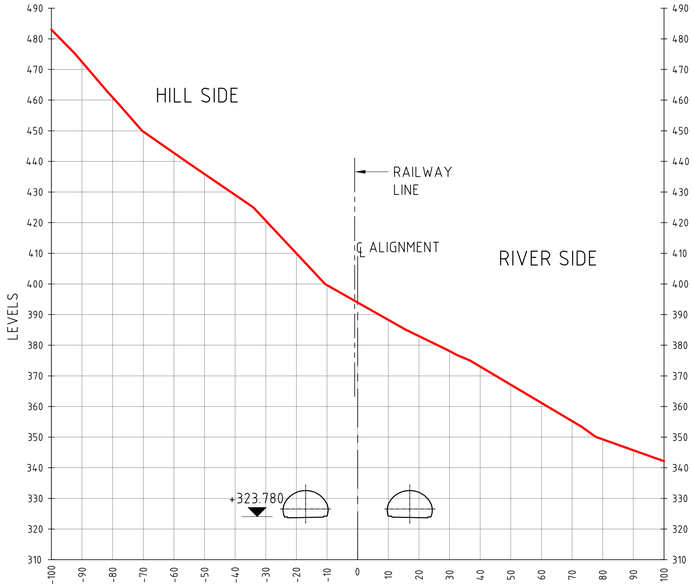
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:18+000 TO 18+500

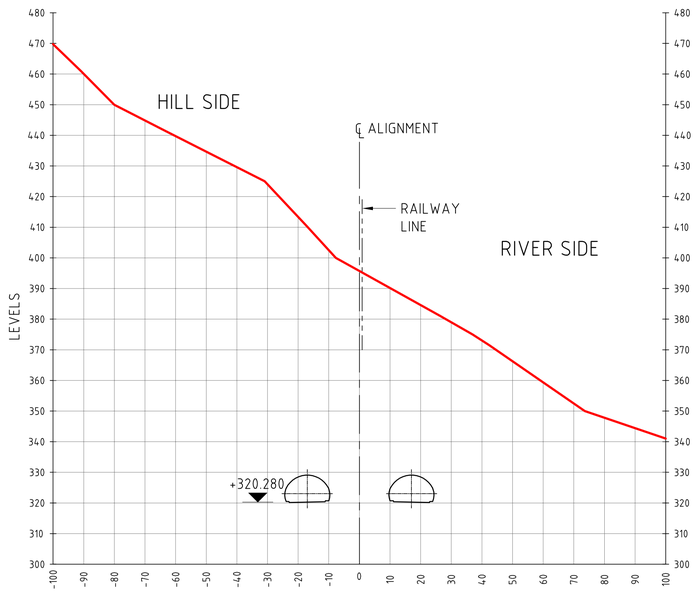
DRAWING NUMBER	REV
SHGA-FS-LAY-1091	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

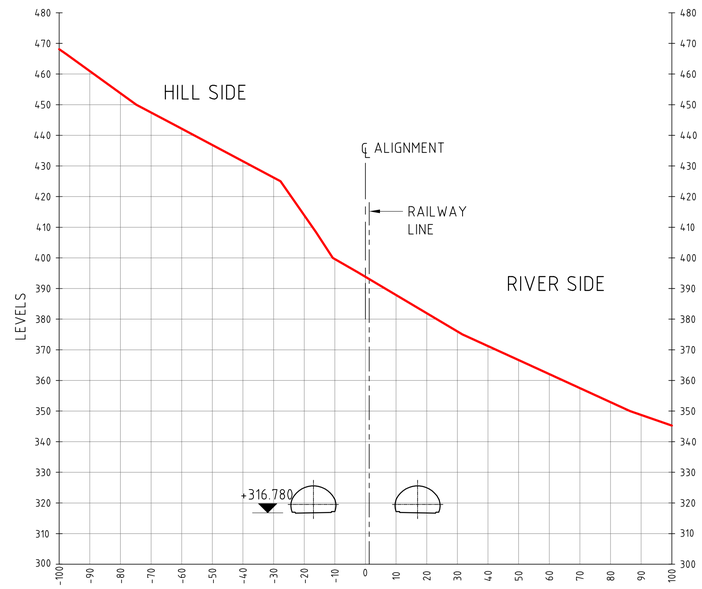
Original Drawing Size A1



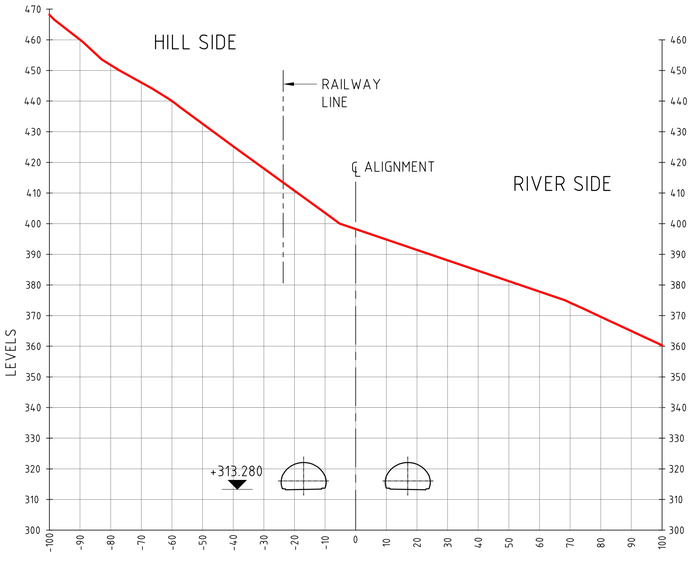
X-SEC AT CH: 18+600.00
SCALE 1:1000



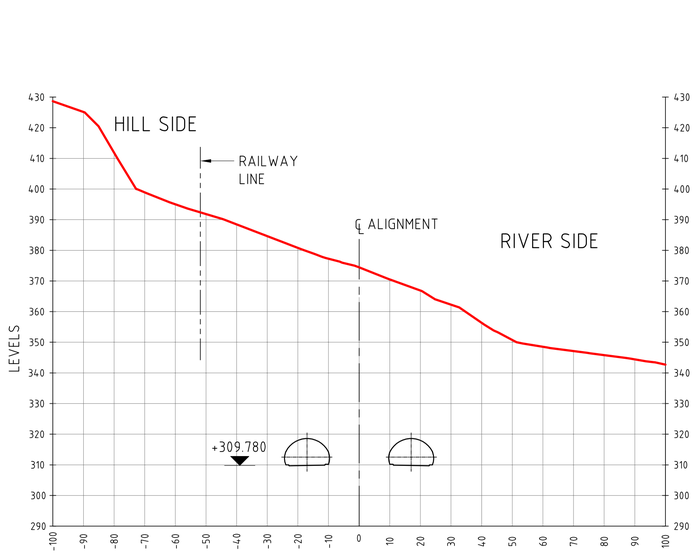
X-SEC AT CH: 18+700.00
SCALE 1:1000



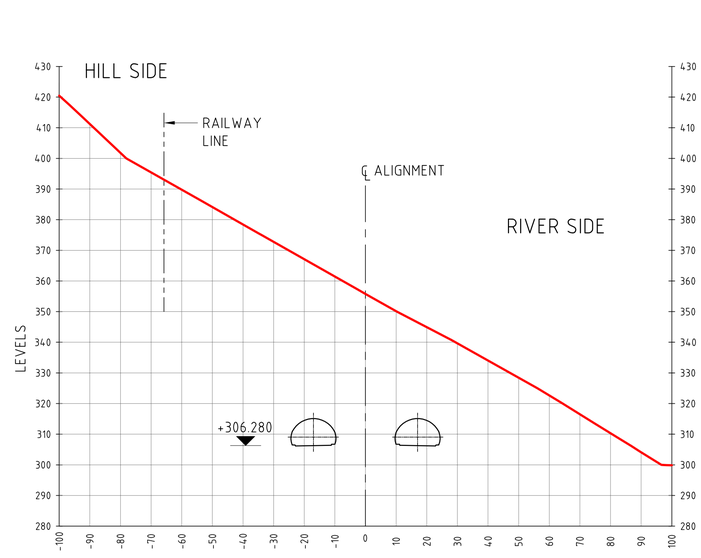
X-SEC AT CH: 18+800.00
SCALE 1:1000



X-SEC AT CH: 18+900.00
SCALE 1:1000



X-SEC AT CH: 19+000.00
SCALE 1:1000



X-SEC AT CH: 19+100.00
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

RAILWAY LINE

CUT/FILL (C/F)

BRIDGES (B)

TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1081 TO 1092_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

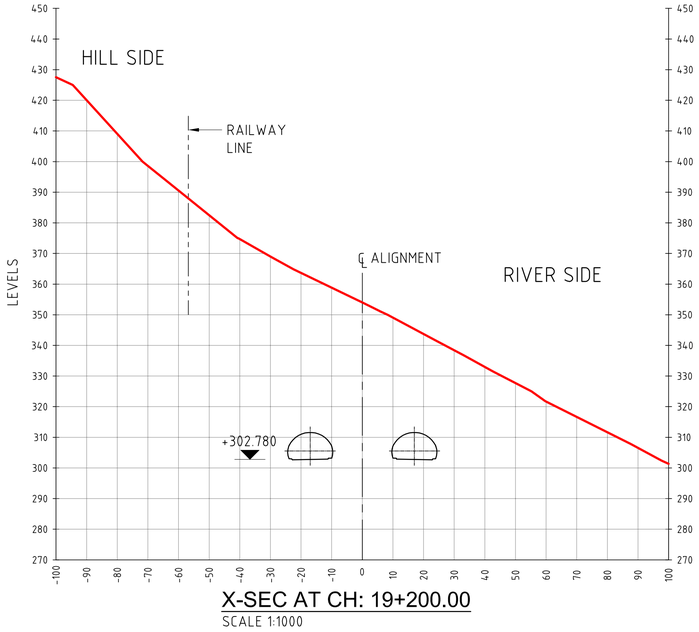
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:18+600 TO 19+100

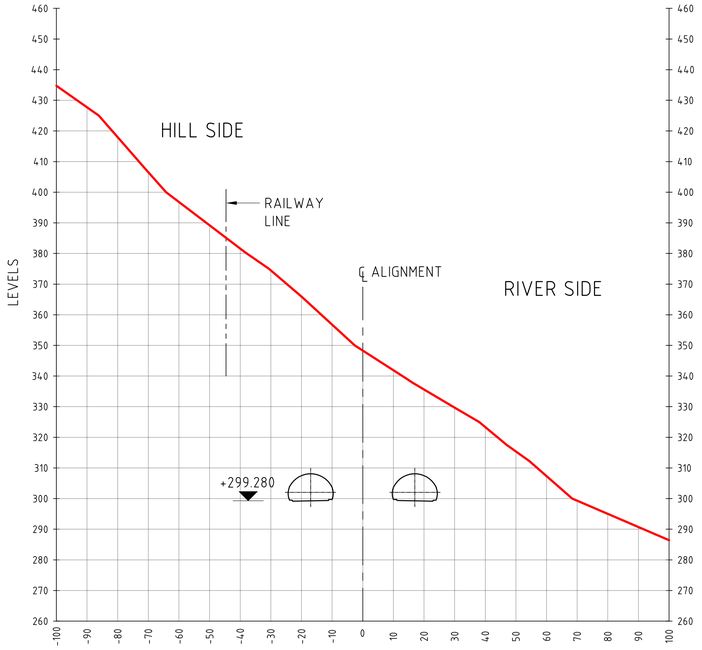
DRAWING NUMBER: SHGA-FS-LAY-1092 | REV: B

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

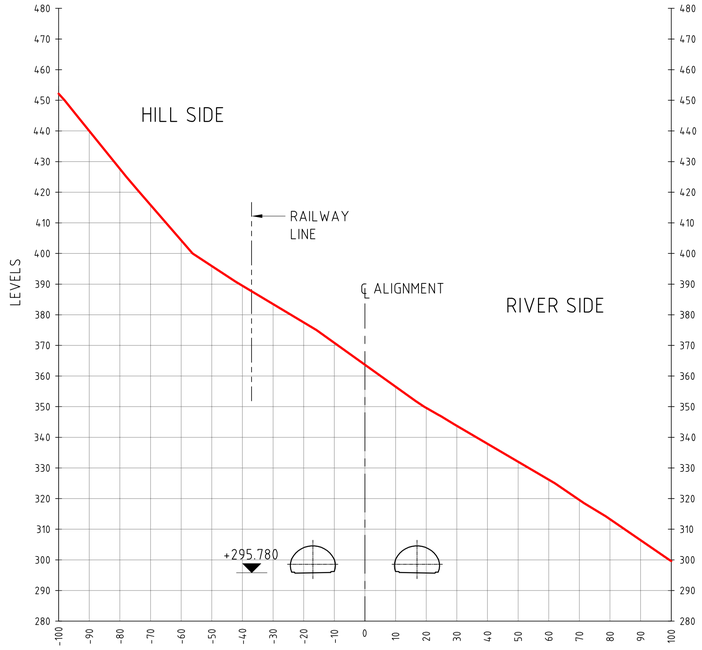
Original Drawing Size A1



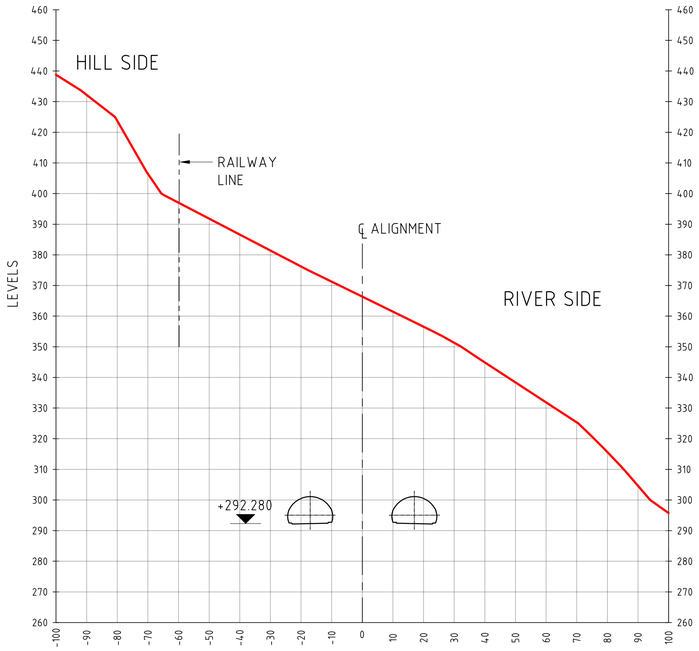
X-SEC AT CH: 19+200.00
SCALE 1:1000



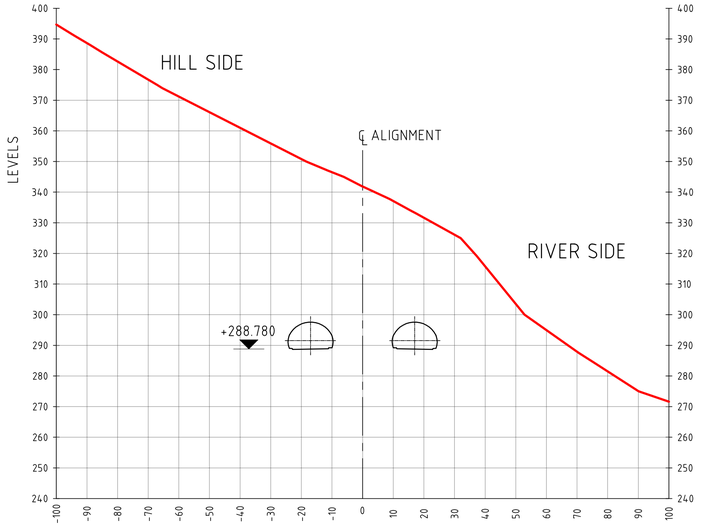
X-SEC AT CH: 19+300.00
SCALE 1:1000



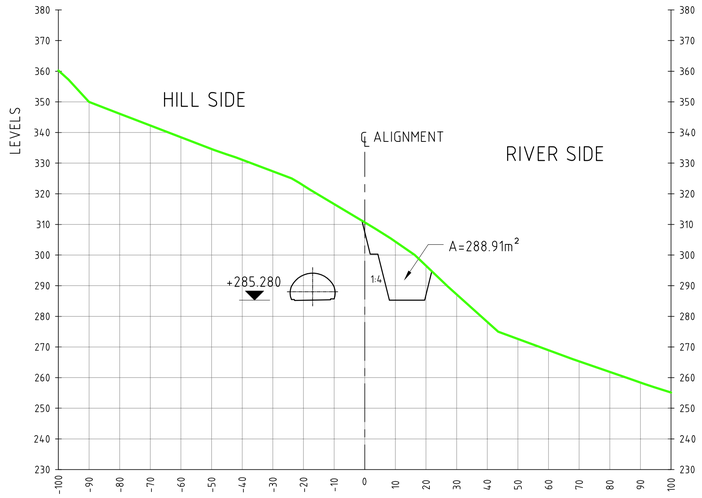
X-SEC AT CH: 19+400.00
SCALE 1:1000



X-SEC AT CH: 19+500.00
SCALE 1:1000



X-SEC AT CH: 19+600.00
SCALE 1:1000



X-SEC AT CH: 19+700.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg; 2015-12-15

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:19+200 TO 19+700

DRAWING NUMBER
SHGA-FS-LAY-1093

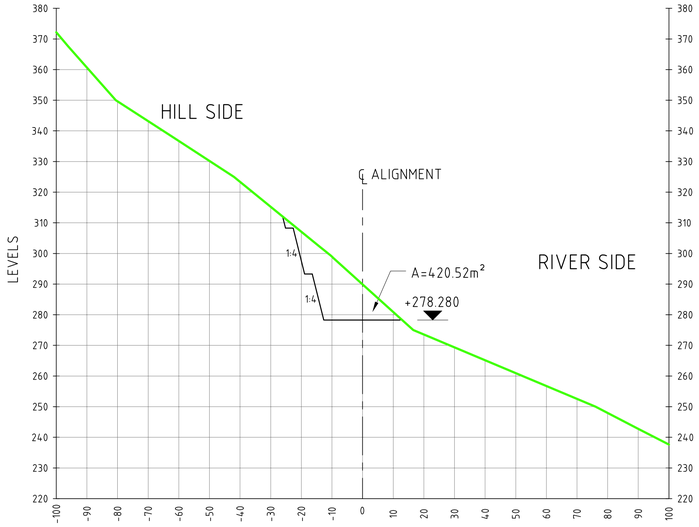
REV
B

SCALE
AS SHOWN

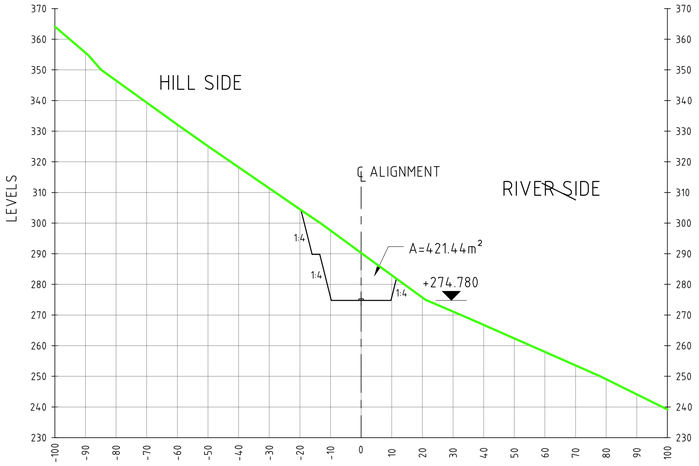
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1

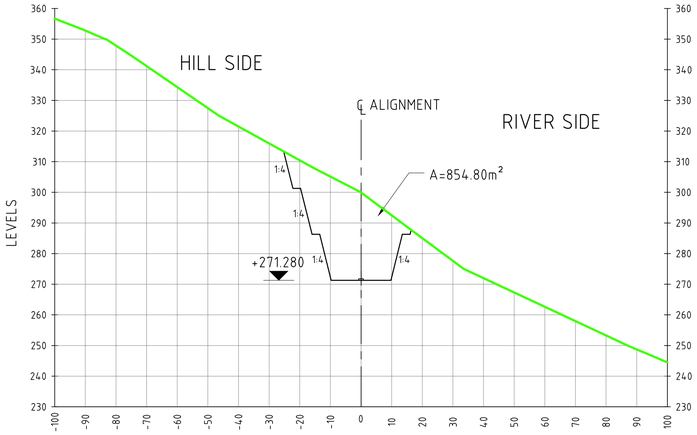
X-SEC AT CH: 19+800.00
SCALE 1:1000



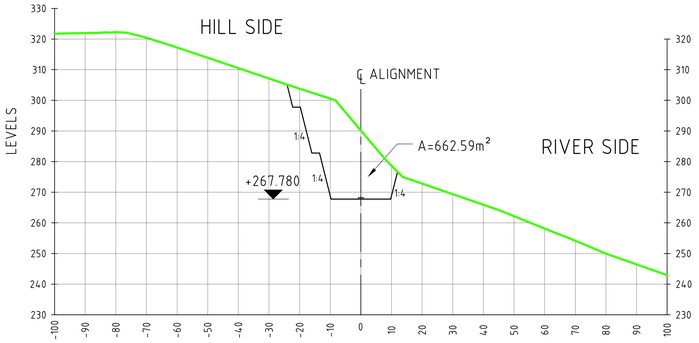
X-SEC AT CH: 19+900.00
SCALE 1:1000



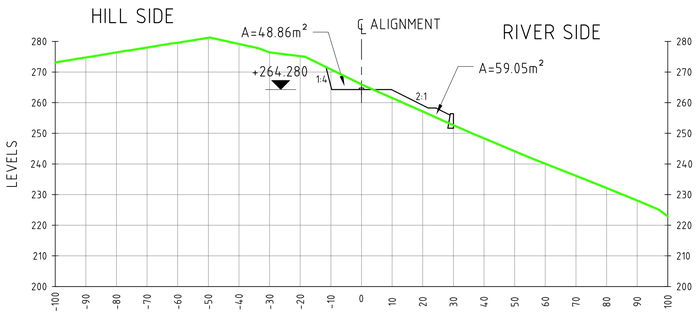
X-SEC AT CH:20+000.00
SCALE 1:1000



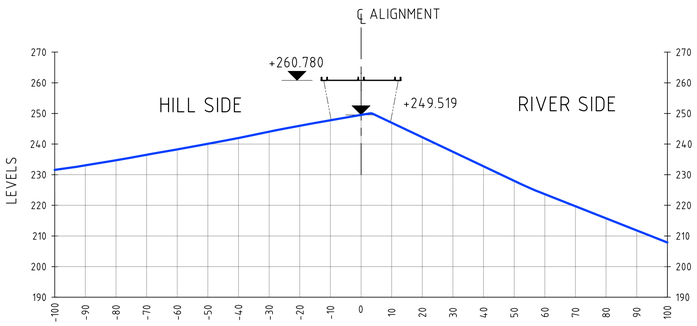
X-SEC AT CH:20+100.00
SCALE 1:1000



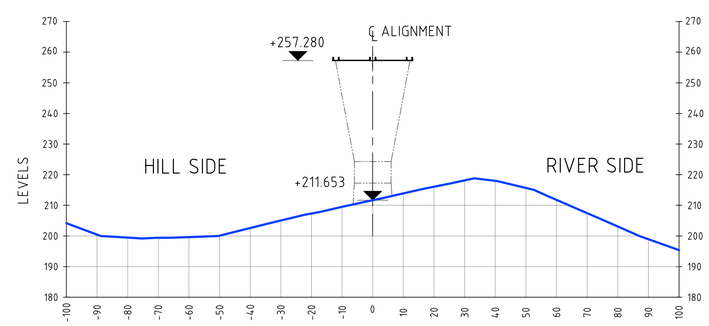
X-SEC AT CH:20+200.00
SCALE 1:1000



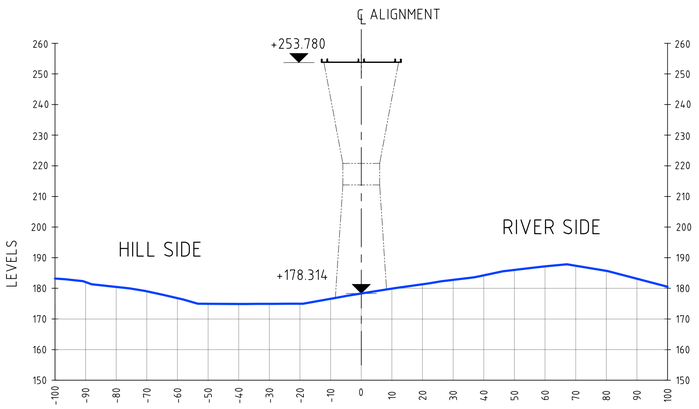
X-SEC AT CH:20+300.00
SCALE 1:1000



X-SEC AT CH:20+400.00
SCALE 1:1000



X-SEC AT CH:20+500.00
SCALE 1:1000



X-SEC AT CH:20+600.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:19+800 TO 20+600

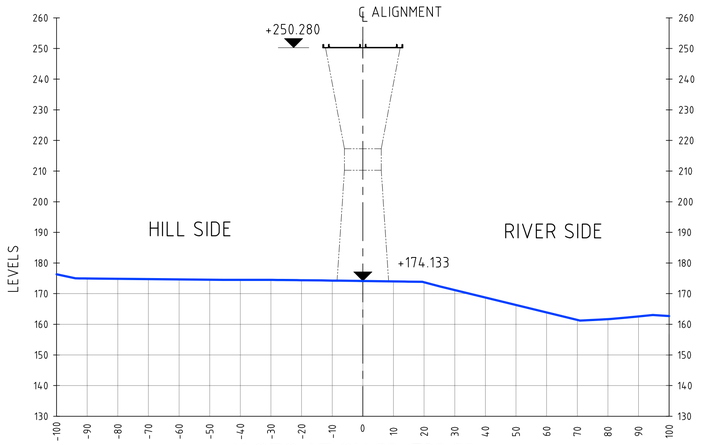
DRAWING NUMBER
SHGA-FS-LAY-1094

REV
B

SCALE
AS SHOWN

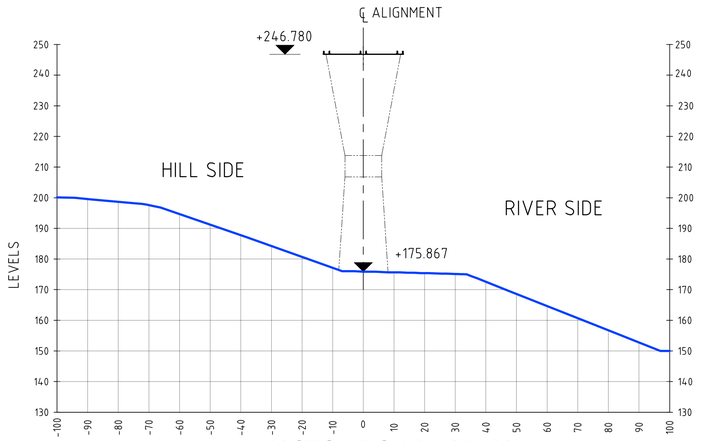
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



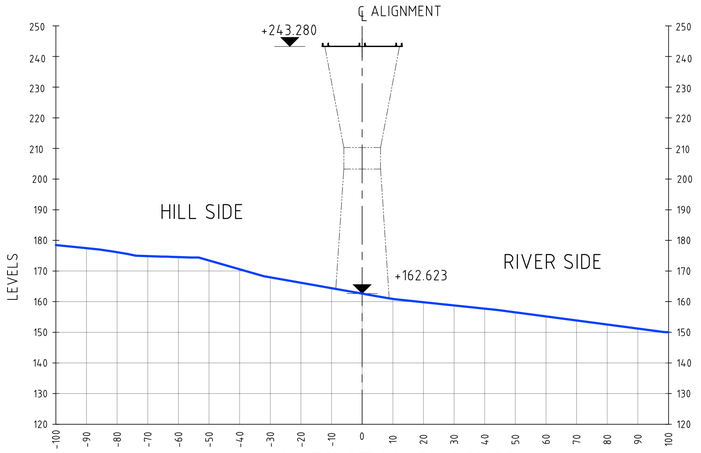
X-SEC AT CH:20+700.00

SCALE 1:1000



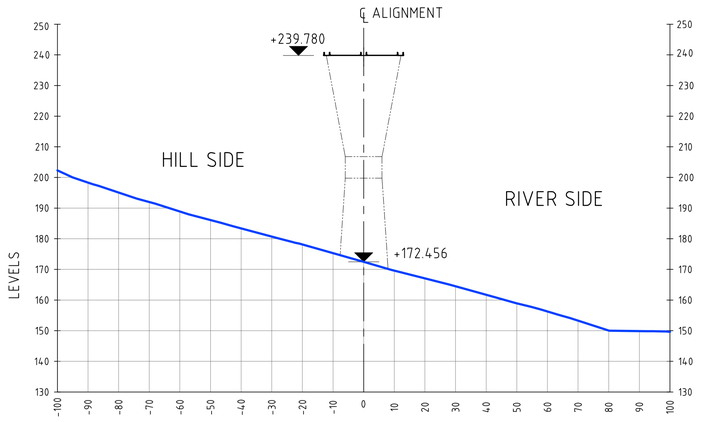
X-SEC AT CH:20+800.00

SCALE 1:1000



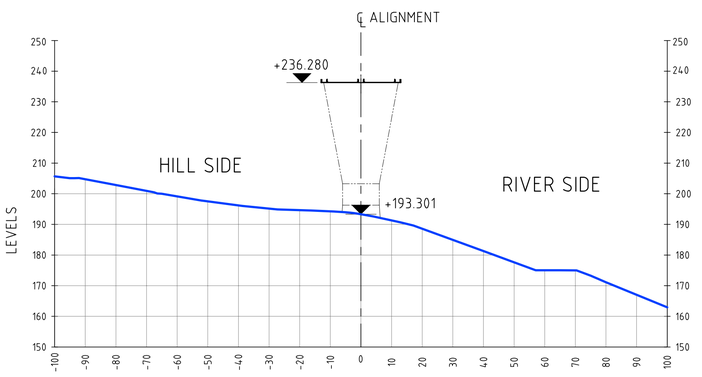
X-SEC AT CH:20+900.00

SCALE 1:1000



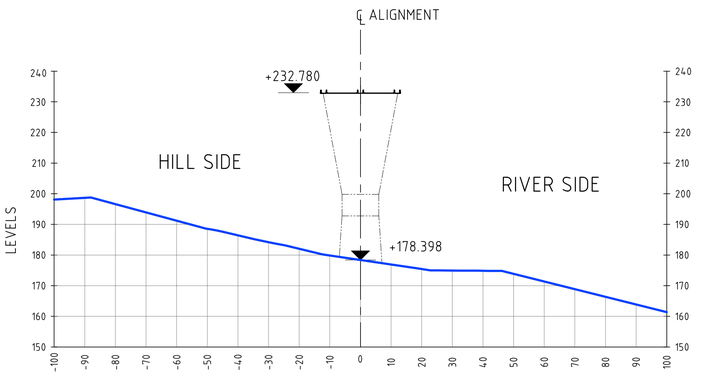
X-SEC AT CH:21+000.00

SCALE 1:1000



X-SEC AT CH:21+100.00

SCALE 1:1000



X-SEC AT CH:21+200.00

SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg; 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

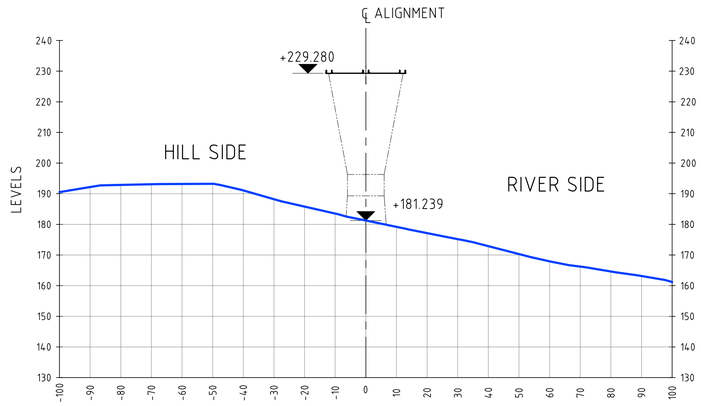
DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:20+700 TO 21+200

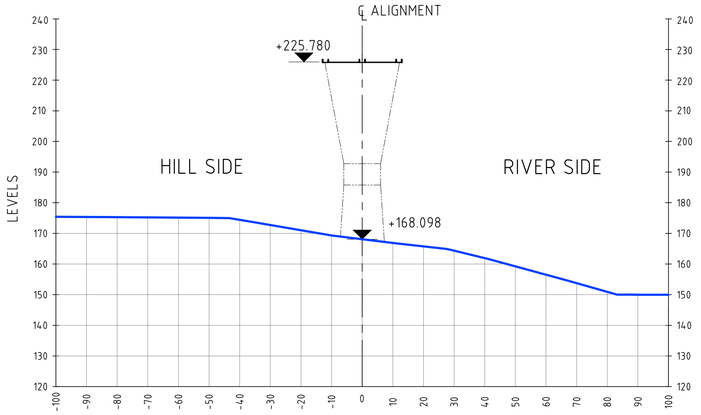
DRAWING NUMBER	REV
SHGA-FS-LAY-1095	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

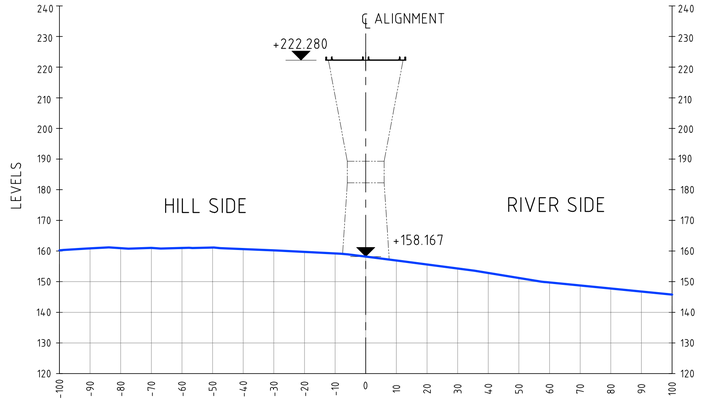
Original Drawing Size A1



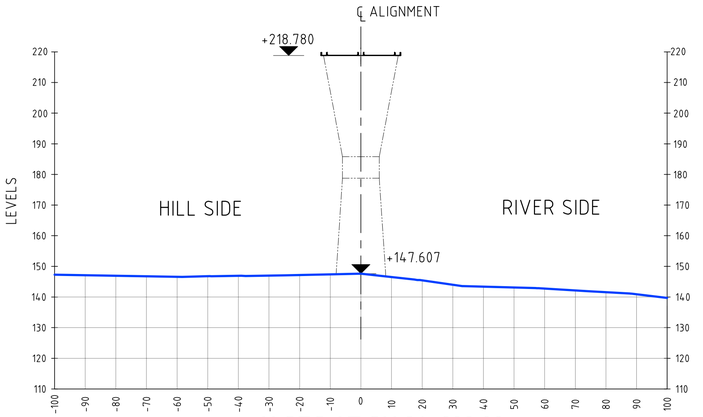
X-SEC AT CH:21+300.00
SCALE 1:1000



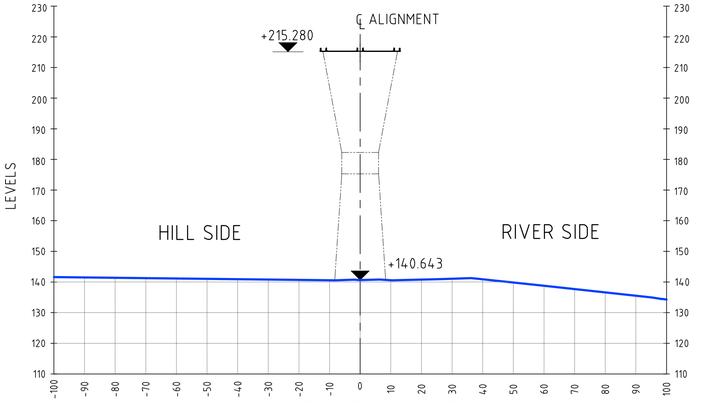
X-SEC AT CH:21+400.00
SCALE 1:1000



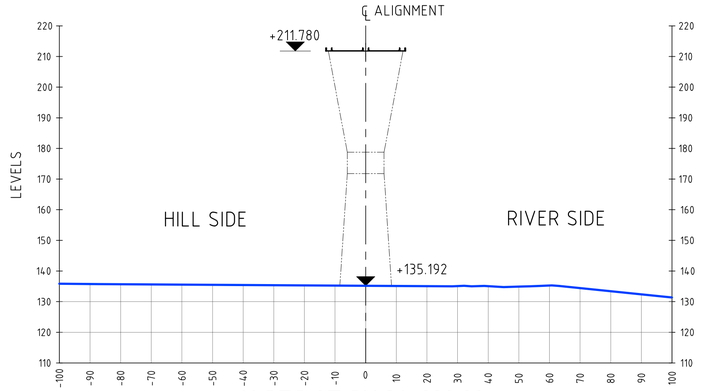
X-SEC AT CH:21+500.00
SCALE 1:1000



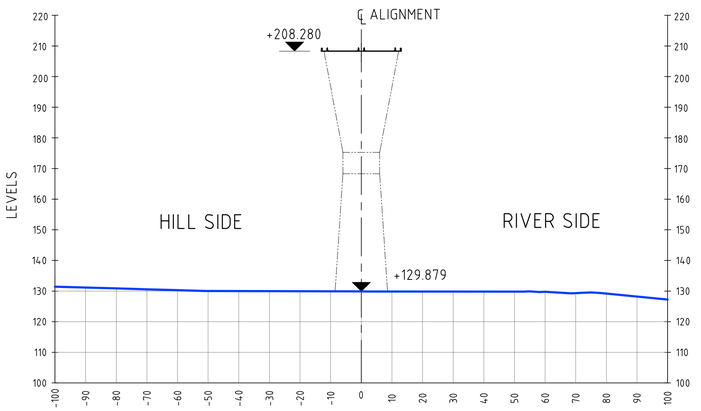
X-SEC AT CH:21+600.00
SCALE 1:1000



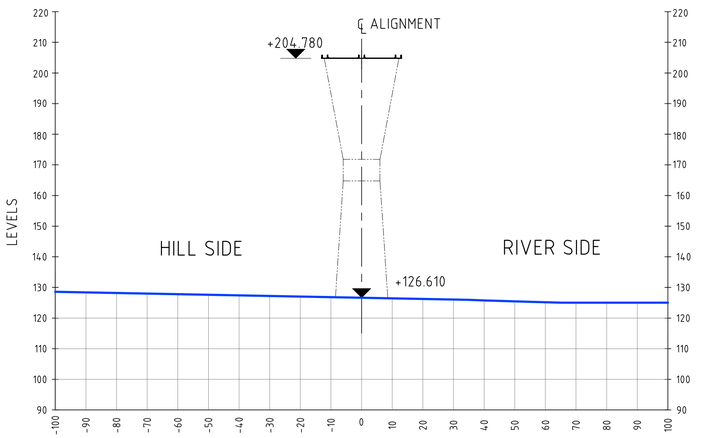
X-SEC AT CH:21+700.00
SCALE 1:1000



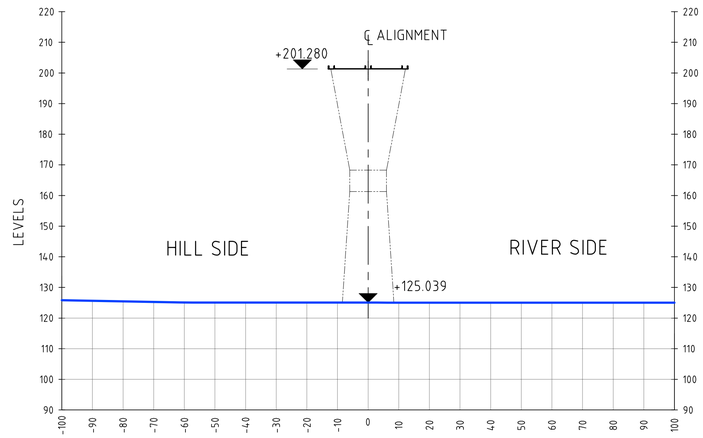
X-SEC AT CH:21+800.00
SCALE 1:1000



X-SEC AT CH:21+900.00
SCALE 1:1000



X-SEC AT CH:22+000.00
SCALE 1:1000



X-SEC AT CH:22+100.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:21+300 TO 22+100

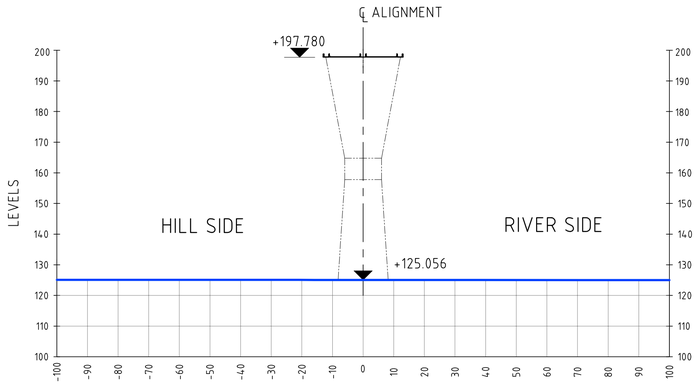
DRAWING NUMBER
SHGA-FS-LAY-1096

REV
B

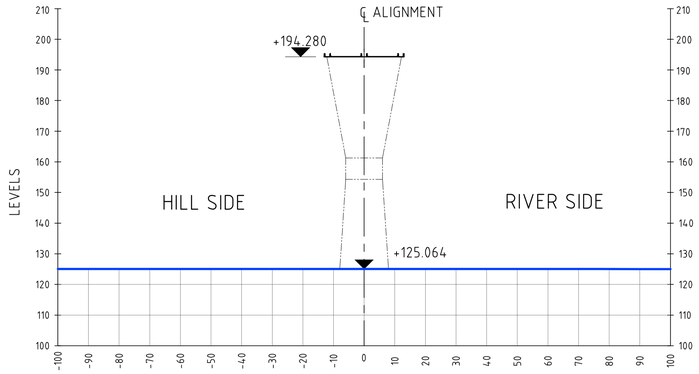
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

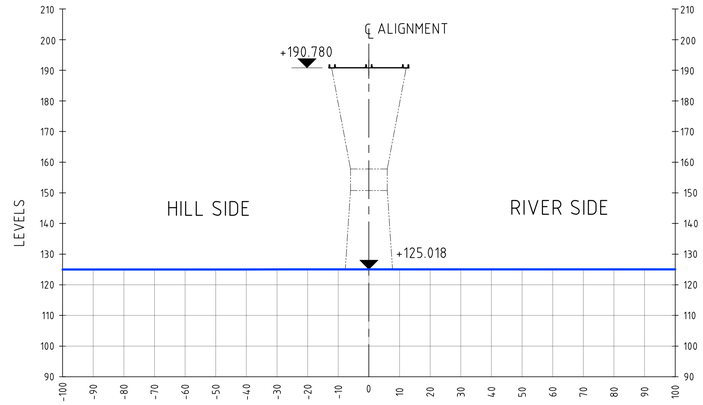
Original Drawing Size A1



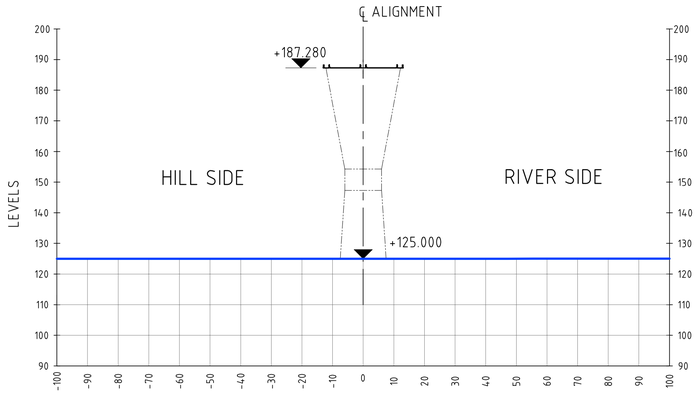
X-SEC AT CH:22+200.00
SCALE 1:1000



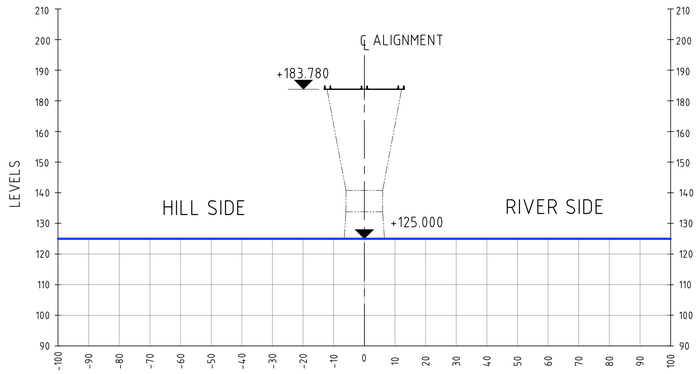
X-SEC AT CH:22+300.00
SCALE 1:1000



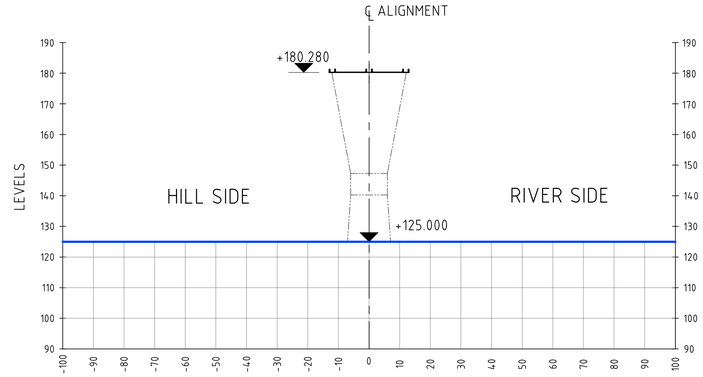
X-SEC AT CH:22+400.00
SCALE 1:1000



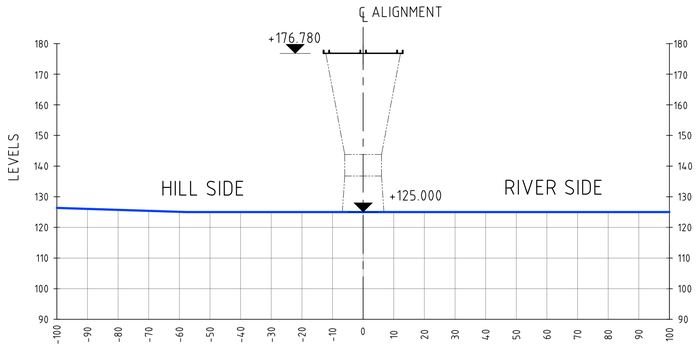
X-SEC AT CH:22+500.00
SCALE 1:1000



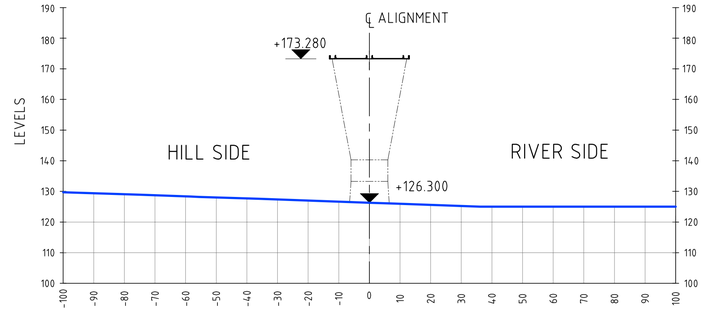
X-SEC AT CH:22+600.00
SCALE 1:1000



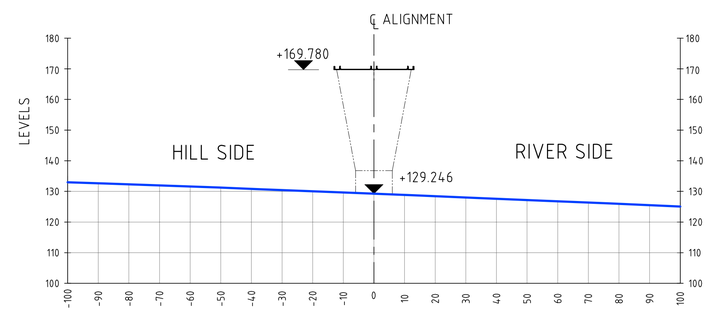
X-SEC AT CH:22+700.00
SCALE 1:1000



X-SEC AT CH:22+800.00
SCALE 1:1000



X-SEC AT CH:22+900.00
SCALE 1:1000



X-SEC AT CH:23+000.00
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg, 2015-12-18

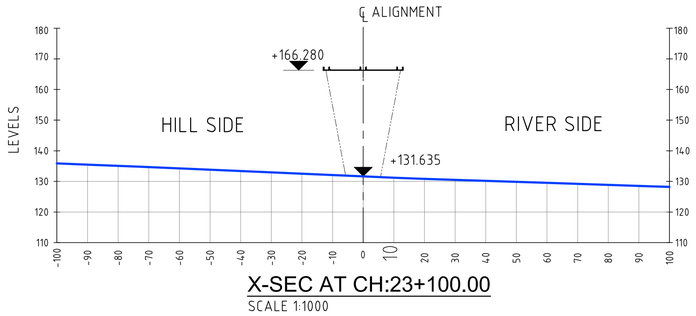
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:22+200 TO 23+000

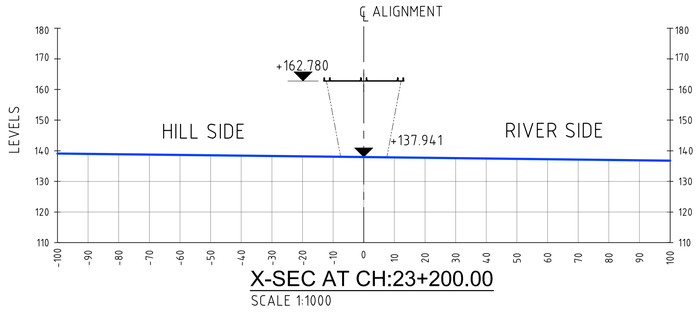
DRAWING NUMBER: SHGA-FS-LAY-1097
REV: B

SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

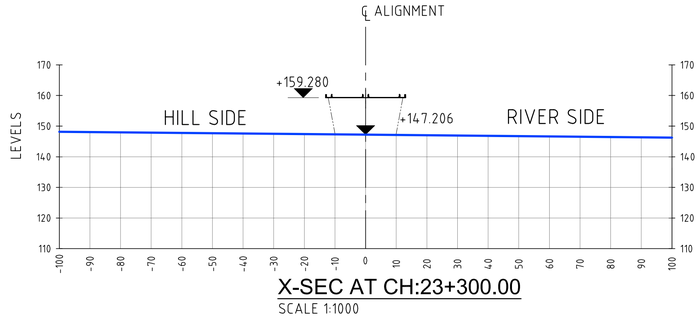
Original Drawing Size A1



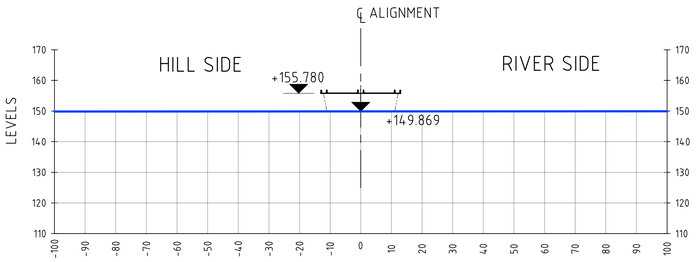
X-SEC AT CH:23+100.00
SCALE 1:1000



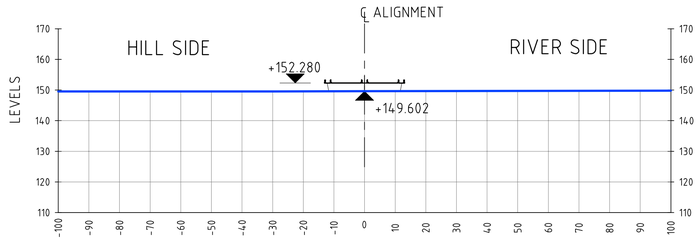
X-SEC AT CH:23+200.00
SCALE 1:1000



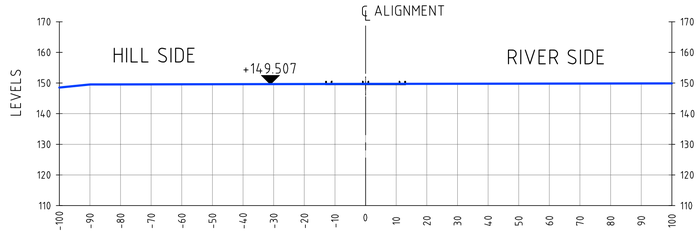
X-SEC AT CH:23+300.00
SCALE 1:1000



X-SEC AT CH:23+400.00
SCALE 1:1000



X-SEC AT CH:23+500.00
SCALE 1:1000



X-SEC AT CH:23+579.22
SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- RAILWAY LINE
- CUT/FILL (C/F)
- BRIDGES (B)
- TUNNELS (T)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	ABa/PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	ABa/PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	RMe/ADh	AKg/ADh	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-LAY_1093 TO 1098_B.dwg, 2015-12-1

CLIENT

GOVERNMENT OF KARNATAKA

DRAWING TITLE

ALIGNMENT OPTION "A"
CROSS SECTIONS
CH:23+100 TO 23+579.22

DRAWING NUMBER	REV
SHGA-FS-LAY-1098	B

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

Original Drawing Size A1

LEAD CHART FOR QUARRY, BORROW AND RAW MATERIALS FOR Shiradi Ghat BY PASS PROJECT Bangalore - Mangalore section.

LEAD CHART

Bangalore

175.00	9 km LHS aggregate quarries are suitable for construction of upper sub-base, base, surfacing and cement concrete works	
196.50	0.2km LHS Borrow soil for embankment, subgrade and filling	
208	→ (5 km LHS) Private land for disposal of Excavated stuff (Dumping Yard 1)	Dumping yard 1 (Location)
210.00	→ 12km LHS Borrow soil for embankment, subgrade and filling	
211.00	8 km LHS aggregate quarries are suitable for construction of upper sub-base, base, surfacing and cement concrete works	
216.22	2 km LHS Casting Yard 1	Casting yard 1 (Location)
218.00	10 km LHS sand quarries are suitable for filter material and concrete works	
220.00		
220.00		
223.00	→ LHS 1.5 km Sakaleshpura,Source of cement & steel (from RS)	
236.00		
237.00	→ Maranahalli Village	
238.00		
238.50		
250.00	3 km LHS Batching Plant for Project	Batching Plant Location (mid way)
250.62	→ Starting reach(Maranahalli Village)	
256.00	Dakshina Kannada & Hassan Dist Bordor	
256.81	→ (Average work spot)	
261.40	Gundya	
	→ 30 Km to Subramanya Station Cement & Steel	
263.00	→ Ending reach(Addahole Village)	
270.00	→ Shibhaje	
280.00		
290.00	→ (2 km LHS) Casting Yard No 2	Casting yard 2 (Location)
293.00	0.2km LHS Borrow soil for embankment, subgrade and filling	
296.00	→ (1 km assumed) Gravel quarry (Uppinangadi)	
300.00		
	5 km LHS Dumping Yard 2	Dumping yard 2 (Location)
300.50	0.2 km LHS sand quarries are suitable for filter material and concrete works	
301.00	20km LHS Borrow soil for embankment, subgrade and filling	
302.00	→ Uppinangadi	
--	→	
325.00	20km LHS Borrow soil for embankment, subgrade and filling	
	28km LHS Borrow soil for embankment, subgrade and filling	
327.00	0.2 km LHS sand quarries are suitable for filter material and concrete works	
328.00	B.C.Road	
--	→	
347.80	Pump well circle	
	→ 23.4 km to Mangalore Refinery for Bitumen	
	→	

Project Bypass Section — Ghat Section (km 236.400 to 263.400)

← 25 km RHS aggregate quarries are suitable for construction of upper sub-base, base, surfacing and cement concrete works

← 11 km RHS aggregate quarries are suitable for construction of upper sub-base, base, surfacing and cement concrete works

Mangalore

PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND SUBMISSION (KD-6)	RMe	RMe	AKg
A	DEC 2015	FIRST SUBMISSION (KD-5)	RMe	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 15	DEC 15	DEC 15	DEC 15	DEC 15
Name	RMe	RMe	AKg	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT, Aba, R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-MISC-1731_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
LEAD CHART
BORROW AND RAW MATERIALS
BANGALORE-MANGALORE SECTION

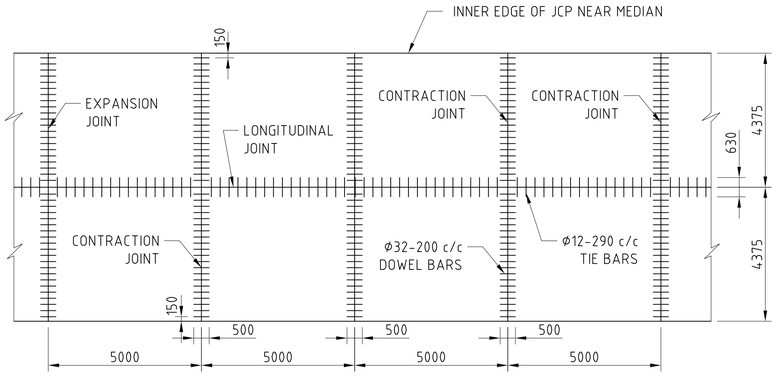
DRAWING NUMBER
SHGA-FS-MISC-1731

REV
B

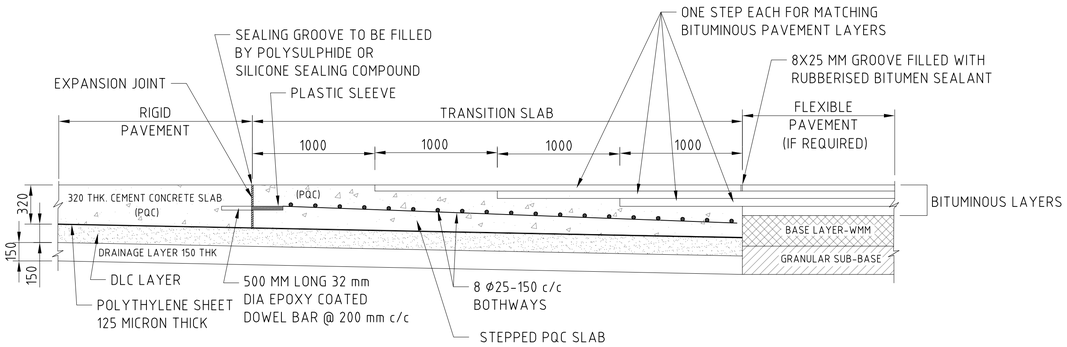
SCALE
-

MONTH (Current Issue)
DEC 15

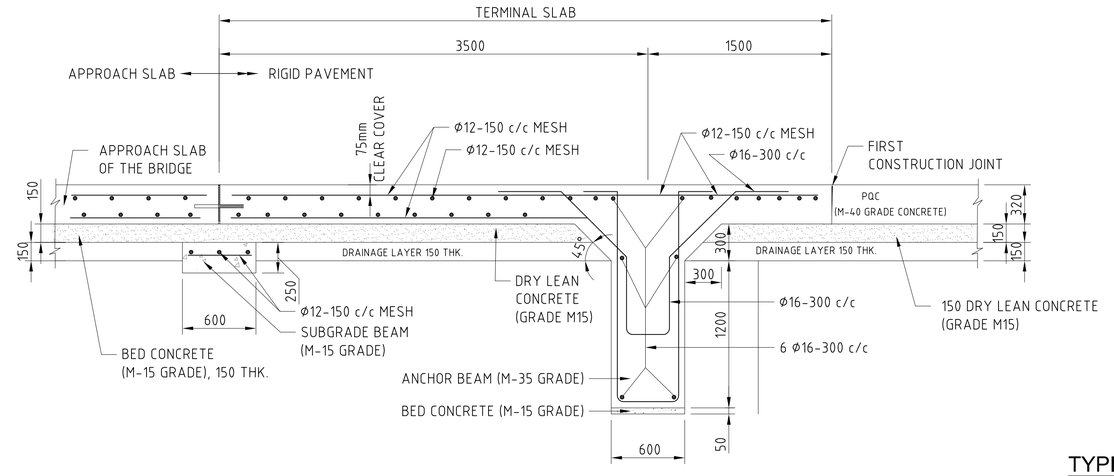
Original Drawing Size A1

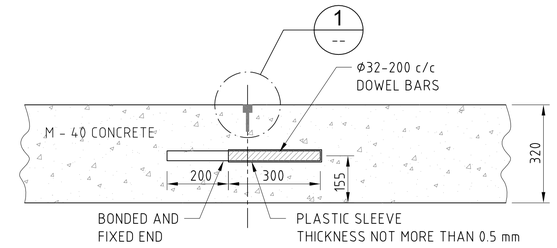


LAYOUT PLAN OF JCP
SCALE 1:100

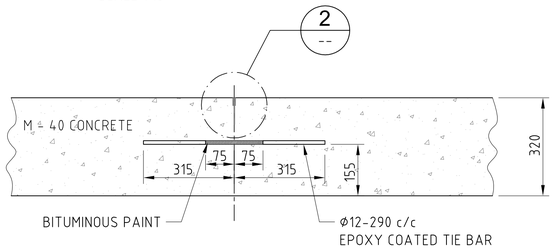


TYPICAL DETAILS OF TRANSITION SLAB BETWEEN RIGID AND FLEXIBLE PAVEMENT (IF REQUIRED)
SCALE 1:25

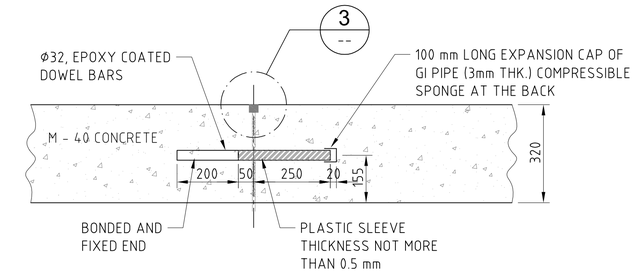




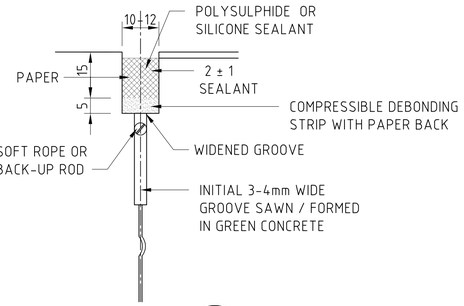
DETAIL OF TRANSVERSE CONTRACTION/ CONSTRUCTION JOINT
SCALE 1:10



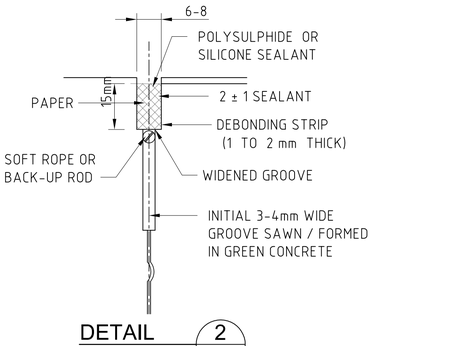
DETAIL OF LONGITUDINAL TIE BARS
SCALE 1:10



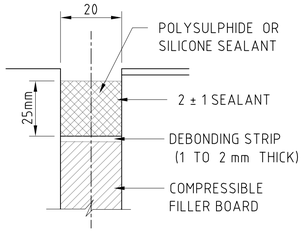
DETAIL OF TRANSVERSE EXPANSION JOINT
SCALE 1:10



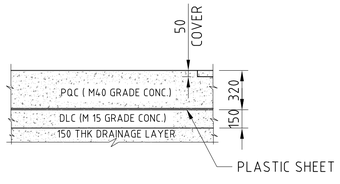
DETAIL 1
SCALE 1:1



DETAIL 2
SCALE 1:1



DETAIL 3
SCALE 1:1



TYPICAL DETAILS OF CONSTRUCTION
SCALE 1:25

SCALE 1 : 100

5m 0 5m 10m

SCALE 1 : 10

0,5m 0 0,5m 1m

NOTES:

1. ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE STATED.
2. CONSTRUCTION OF RIGID PAVEMENT SHALL CONFORM TO IRC 15-2011, IRC 58-2015, "MORTH" SPECIFICATIONS AND OTHER RELEVANT CODES.
3. EXPANSION JOINTS WILL BE PROVIDED AT ABUTMENT OF STRUCTURES.

PRELIMINARY

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 15	SECOND DRAFT (KD-6)	PRa	RMe	AKg
A	DEC 15	FIRST DRAFT (KD-5)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	PRa	RMe	AKg	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

\\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-MISC-1741_B.dwg, 2015-12-18

CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: RIGID PAVEMENT DETAILS

DRAWING NUMBER: SHGA-FS-MISC-1741

REV: B

SCALE: AS SHOWN

MONTH (Current Issue): DEC 2015

Original Drawing Size A1

LOAD LIMIT

LENGTH LIMIT

CYCLE CROSSING

BULLOCK CART PROHIBITED

BUS LANE

HORN PROHIBITED

WIDTH LIMIT

HEIGHT LIMIT

SPEED LIMIT

ONE WAY

LEFT TURN PROHIBITED

PEDESTRIAN CROSSING

TUNNEL LAY-BYE

RIGHT TURN PROHIBITED

NO U TURN

AHEAD LEFT ONLY

AHEAD RIGHT ONLY

TURN LEFT

TURN RIGHT

TURN LEFT RIGHT

U TURN

RESTRICTION END

SPEED LIMIT

KEEP LEFT

MOVE STRAIGHT

EMERGENCY TELEPHONE

KEEP RIGHT

STEEP HILL DOWNWARDS

STEEP HILL UPWARDS

ROAD NARROWS

ROAD NARROWS LEFT

ROAD NARROWS RIGHT

MEN AT WORK

FALLING ROCK

PEDESTRIAN

CYCLING

SCHOOL CROSSING

TUNNEL INDICATOR

FIRE EXTINGUISHER

CATTLE CROSSING

WILD ANIMAL CROSSING

TWO WAY TRAFFIC SIGN

SPEED BREAKER

RIGHT BEND

LEFT BEND

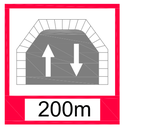
BEND LEFT

BEND RIGHT

CROSS ROAD

ROUNDABOUT

STAGGERED JUNCTION



TUNNEL DISTANCE TO END OF TUNNEL

FIRE HYDRANT

TRAFFIC SIGNAL

DANGER

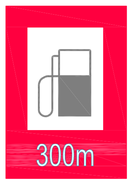
SLOW DOWN

RAILWAY CROSSING WITH BARRIER

RAILWAY CROSSING WITHOUT BARRIER

CAUTION

DANGER

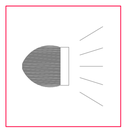


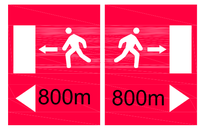
PETROL STATION

HOSPITAL

PARKING

HIGHWAY END


SWITCH ON LIGHTS



EMERGENCY EXIT

SHARP BEND

STOP HERE

PRELIMINARY

REFERENCE DRAWINGS:

.

.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	ABa	RMe	FKr
A	DEC 2015	FIRST DRAFT (KD-5)	ABa	RMe	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa	RMe	AKg	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT, Aba, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-MISC-1746_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ROAD SIGNAGE AND MARKINGS

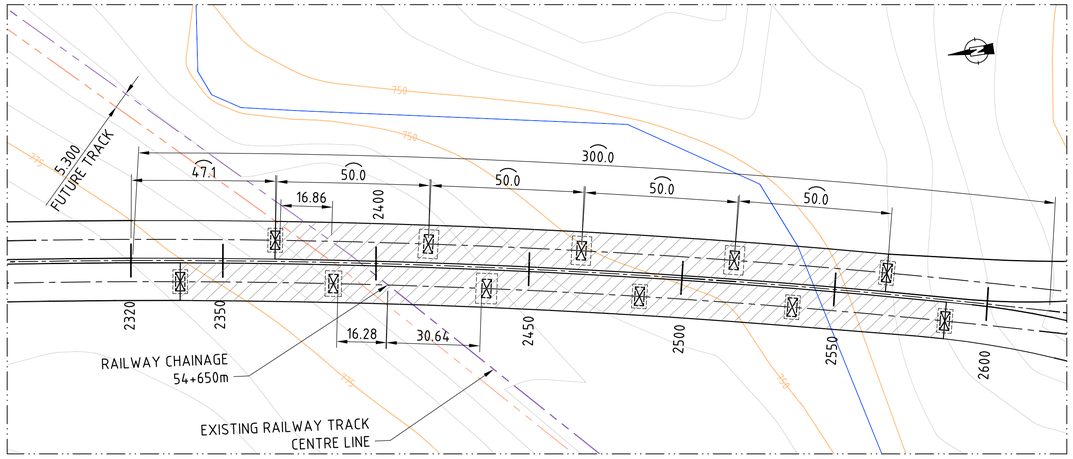
DRAWING NUMBER
SHGA-FS-MISC-1746

REV
B

SCALE
NTS

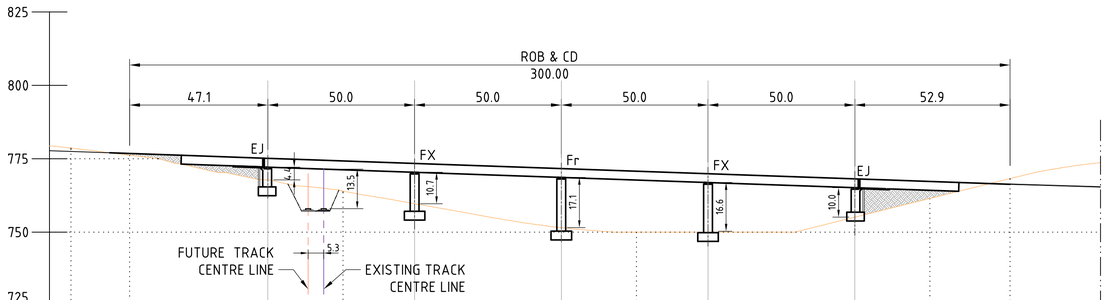
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



GENERAL ARRANGEMENT PLAN
SCALE 1:1000

POSITION OF EXISTING RAILWAY LINE CENTER IS BASED ON PRELIMINARY DATA AND SHALL BE VERIFIED AS PER DETAILED SURVEY AND MAY RESULT IN CHANGE IN BRIDGE LOCATION/SPAN.



CHAINAGE	2300.000	2320.000	2367.090	2400.000	2424.397	2474.397	2500.000	2524.397	2574.397	2600.000	2620.000
GROUND LEVELS	779.387	776.157	767.773	764.003	759.673	751.522	749.998	749.989	755.104	761.478	768.242
FORMATION LEVELS	777.747	776.791	775.143	774.247	773.393	771.643	770.747	769.893	768.143	767.247	766.291
HORIZONTAL ALIGNMENT	R: 2600.000 L: 3320.446										
VERTICAL ALIGNMENT	3.5%										

GENERAL ARRANGEMENT L-SECTION
SCALE 1:1000

GENERAL NOTES:-

1. ALL DIMENSIONS ARE SHOWN IN mm AND LEVELS ARE SHOWN IN METERS UNLESS OTHERWISE SPECIFIED.
2. DO NOT SCALE THE DIMENSIONS.
3. THE FOUNDATION LEVELS SHOWN IN THE DRAWING ARE TO BE VERIFIED AT SITE BASED ON CONFIRMATORY SUBSOIL INVESTIGATION PRIOR TO COMMENCEMENT OF WORK.
4. MAX PRESSURE ON THE SOIL AT FOUNDATION LEVEL IS SPECIFIED IN CONCERNED DETAILED DRAWINGS PERTAINING TO FOUNDATIONS.
5. STANDARD OF CARRIAGEWAY LIVE LOAD SHALL BE ONE OF THE FOLLOWING COMBINATIONS WHICH RESULTS IN MOST CRITICAL FORCES.
   (i) 3-LANES OF CLASS A
   (ii) 1-LANES OF 70 R WHEELED/TRACKED + 1- LANE CLASS A
6. STAIR CASES ARE TO BE PROVIDED ON FOOTPATH SIDE OF THE ROB OUTSIDE RAILWAY BOUNDARY TO SUIT PEDESTRIAN TRAFFIC (WHEREVER FOOTPATHS ARE PROVIDED).
7. GUARD RAILS SHALL BE PROVIDED ON TRACKS.
8. THE GRADE OF CONCRETE FOR VARIOUS RCC/MASS CONCRETE WORKS, & GRADE OF STEEL FOR COMPOSITE STRUCTURES SHALL BE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE 1997 & NEW I.S.456-2000 AND IRC CODES AND SPECIFICATIONS ETC.
9. EXPANSION JOINT SHALL BE STRIP SEAL JOINTS AS PER MORTH SPECIFICATIONS.
10. IN CASE BLASTING TO BE CARRIED OUT IN VICINITY OF RAILWAY LINE, NECESSARY PRECAUTION AND BLOCK SHALL BE OBTAINED AS PER PARA 1006 OF IRW MANUAL.
11. DRAINAGE SPOUTS SHALL BE PROVIDED 1.00m AWAY FROM THE CENTRE LINE OF EXISTING/ FUTURE TRACK CONSIDERING THE TRACTION/ FUTURE TRACTION AND SAME HAS TO BE ENSURED IN THE DETAILED DRAWINGS AND BY THE ENGINEER-IN-CHARGE AT SITE.
12. DURING CONSTRUCTION A MINIMUM CLEARANCE OF 2360mm TO BE MAINTAINED BETWEEN CENTER LINE OF EXISTING TRACK TO THE FACE OF TEMPORARY ARRANGEMENTS STRUCTURE.
13. GRADE OF CONCRETE IN:-
   (i) DECK SLAB----------= M50
   (ii) SUB STRUCTURE & FOUNDATION --------= M35.
   (iii) APPROACH SLAB ----------= M30.
   (iv) PEDESTAL ----------= M35.
   (iv) ALL PCC WORK ----------= M15.
14. THE DETAILS TYPE AND DIMENSIONS OF FOUNDATIONS, SUB-STRUCTURE AND SUPERSTRUCTURE ELEMENTS SHOWN IN THE DRAWING ARE INDICATIVE AND MAY VARY AS PER ACTUAL DESIGN AND DETAILED DRAWINGS. HOWEVER OBLIGATORY CLEARANCES MENTIONED IN THE DRAWINGS SHALL NOT BE REDUCED UNDER ANY CIRCUMSTANCES WITHOUT PRIOR APPROVAL OF DESIGNER.
15. SELF SUPPORTING FORM WORK FOR CASTING DECK SLAB SHALL BE ADOPTED IN PLANNING AND DESIGN.
16. HIGH CONTAINMENT CRASH BARRIER OF 1.80m HEIGHT WITHIN RAILWAY BOUNDARY AND 1.50M HEIGHT IN APPROACHES BEYOND RAILWAY BOUNDARY FOR MINIMUM LENGTH OF 30.00m SHALL BE PROVIDED AS PER IRC 5 & 6 GUIDE LINES.
17. WHEREVER ABUTMENT IS PROPOSED RCC APPROACH SLAB SHALL BE DESIGNED AND PROVIDED TO SATISFY THE CLAUSE 217-3 OF IRC CODE OF PRACTICE. THIS SHALL NOT BE LESS THAN 4.00m IN LENGTH AND SHALL COVER THE FULL WIDTH OF ROAD TO A MINIMUM THICKNESS OF 300mm ON BOTH SIDES OF BRIDGE.
18. SOIL FOR REINFORCED EARTH BEHIND MECHANICALLY STABILIZED WALL (MSE WALL) SHALL BE AS PER IRC SPEC.
19. THE BEARINGS SHALL BE POT / POT CUM PTFE PIN & METALLIC GUIDED. ALL BEARING SHALL CONFIRM TO MORTH STANDARDS AND SPECIFICATIONS.
20. REINFORCEMENT DETAILS OF RCC ABUTMENT AND COMPOSITE GIRDER SHALL BE AS PER APPROVED DESIGN & DRGS BY RAILWAYS.
21. TEMPORARY ENGINEERING INDICATOR SHALL BE USED DURING THE EXECUTION OF WORK AS PER RAILWAY MANUAL.
22. FOR DETAILS OF DRAINAGE SPOUT, WEARING COURSE & EXPANSION JOINTS REFER RELEVANT DRAWINGS.
23. SIZE OF POT/PTFE BEARING SHALL BE AS PER MANUFACTURER'S DESIGN.
24. ROB LIES IN SEISMIC ZONE- II
25. ROB IS NOT UNDER DEDICATED FREIGHT CORRIDOR.

SCALE 1 : 1000
50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000
SHGA-FS-GEN-015 (TYPICAL CROSS-SECTION)

LEGEND:
EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK
EXISTING RAILWAY LINE
FUTURE RAILWAY LINE

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
C	DEC 2015	FUTURE TRACK LINE MODIFIED (KD-6)	PRa	RMe	AKg
B	DEC 2015	ARRANGEMENT AND SPANS MODIFIED (KD-5)	ABa/PRa	RMe	AKg
A	SEP 2015	FIRST DRAFT	PRa/ABa	RMe	AKg

QUALITY ASSURANCE
The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	AUG15	AUG15	AUG15	AUG15	AUG15
Name	ABa/PRa	RMe	ADh/AKg	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-ROB-1591_C.dwg, 2015-12-18

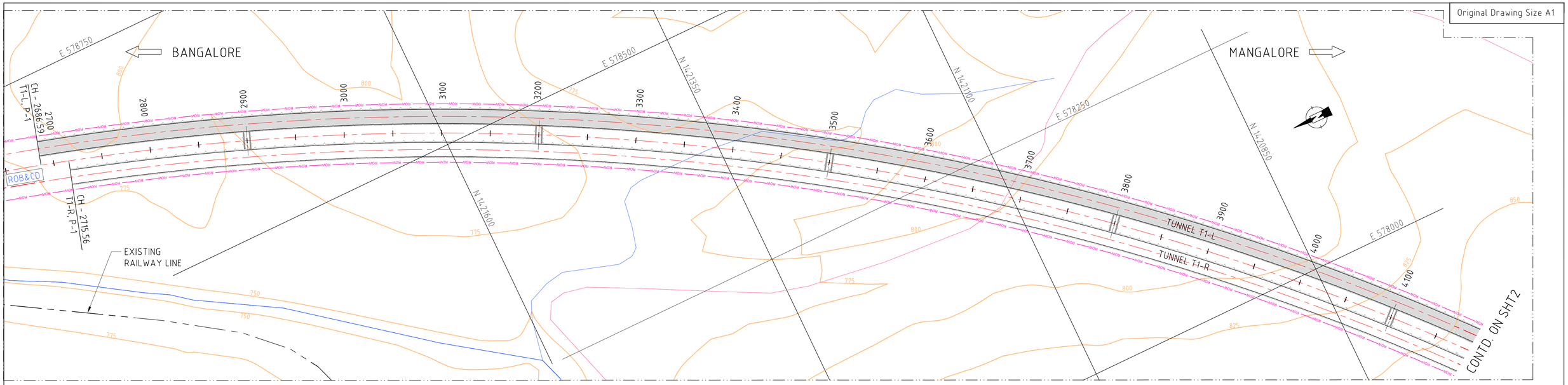
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
ROB NEAR CHAINAGE 2400
GENERAL ARRANGEMENT
PLAN & SECTION

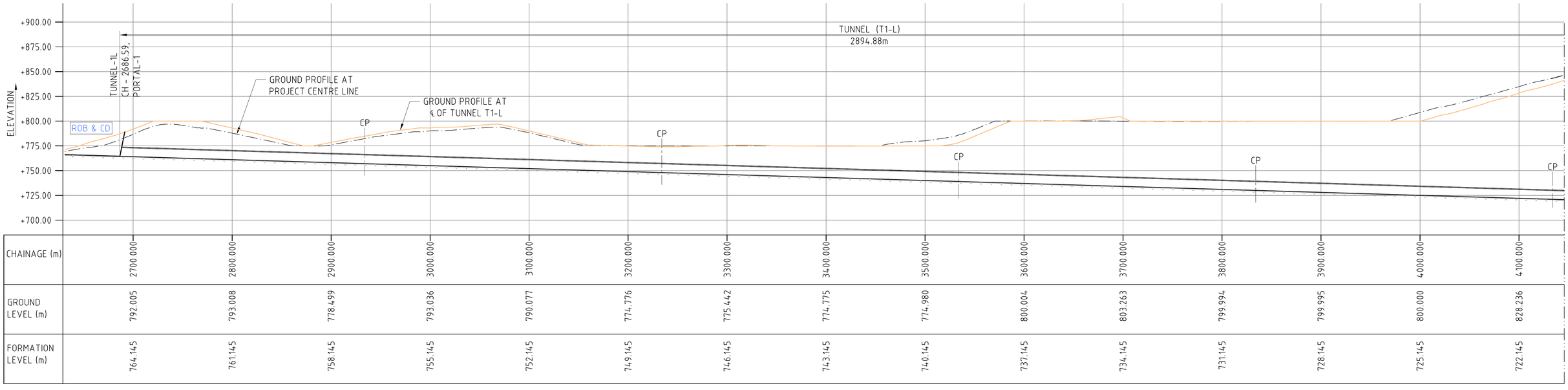
PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING NUMBER: SHGA-FS-ROB-1591
REV: C
SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	2700.000	2800.000	2900.000	3000.000	3100.000	3200.000	3300.000	3400.000	3500.000	3600.000	3700.000	3800.000	3900.000	4000.000	4100.000
GROUND LEVEL (m)	792.005	793.008	778.499	793.036	790.077	774.776	775.442	774.775	774.980	800.004	803.263	799.994	799.995	800.000	828.236
FORMATION LEVEL (m)	764.145	761.145	758.145	755.145	752.145	749.145	746.145	743.145	740.145	737.145	734.145	731.145	728.145	725.145	722.145

LONGITUDINAL SECTION ALONG T1-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1L-T6L_1100-1151_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T1-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

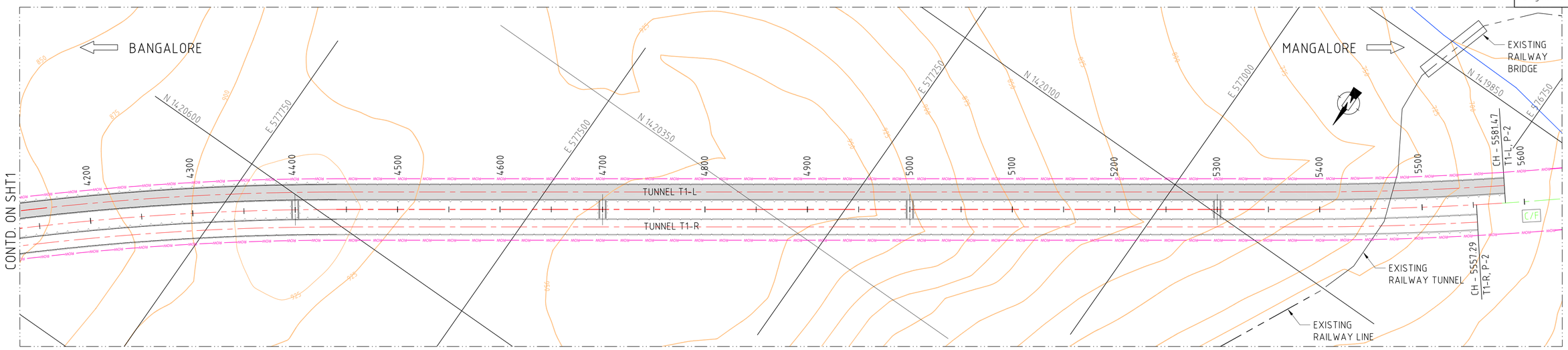
DRAWING NUMBER
SHGA-FS-T1-1100

REV
D

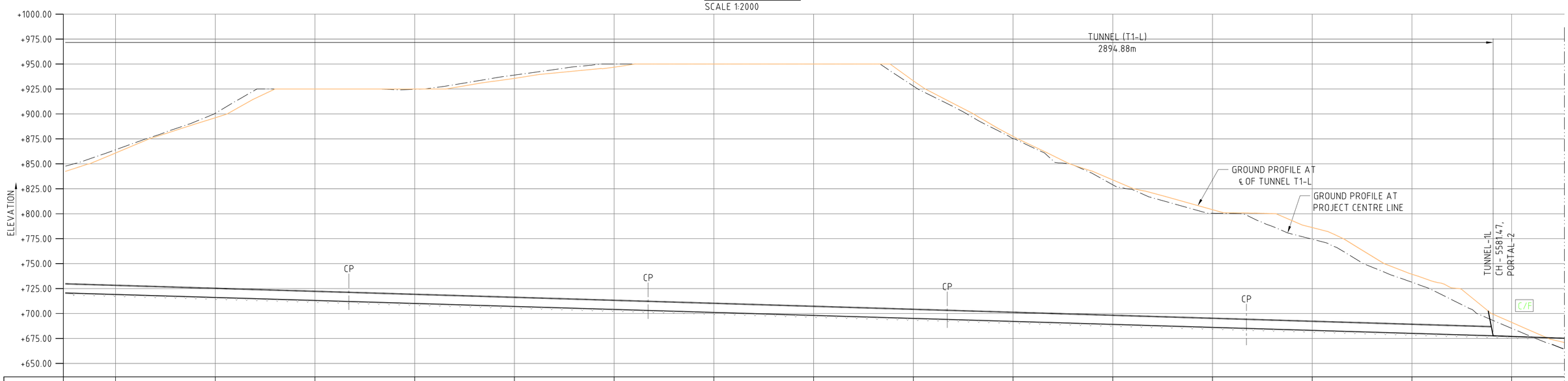
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	4200.000	4300.000	4400.000	4500.000	4600.000	4700.000	4800.000	4900.000	5000.000	5100.000	5200.000	5300.000	5400.000	5500.000	5600.000
GROUND LEVEL (m)	860.860	896.197	925.000	924.983	935.603	946.824	950.000	950.000	933.165	877.448	833.885	804.025	786.127	739.355	691.117
FORMATION LEVEL (m)	719.145	716.145	713.145	710.145	707.145	704.145	701.145	698.145	695.145	692.145	689.145	686.145	683.145	680.145	677.035

LONGITUDINAL SECTION ALONG T1-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1L-T6L_1100-1151_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T1-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

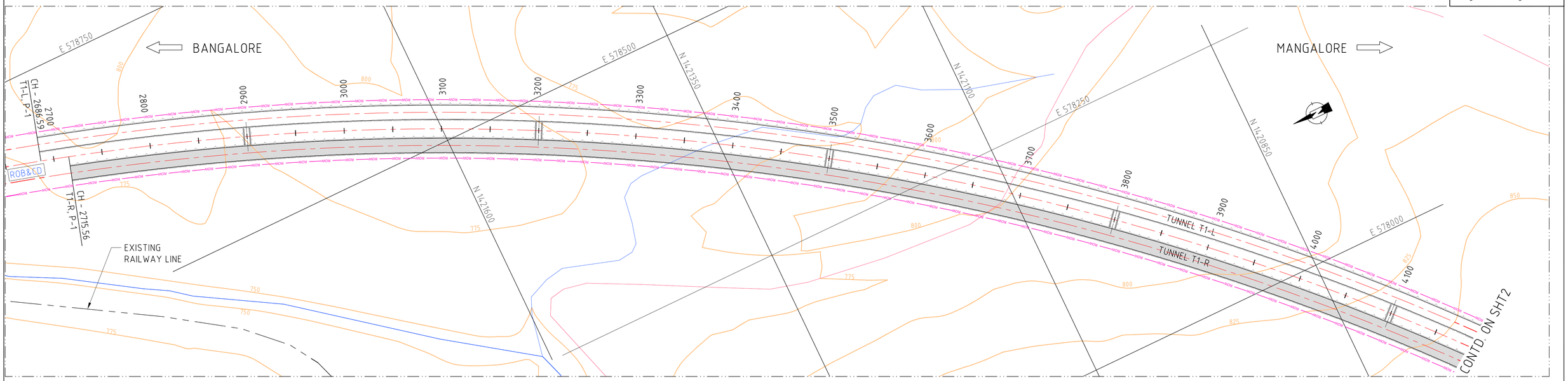
DRAWING NUMBER
SHGA-FS-T1-1100

REV
D

SCALE
AS SHOWN

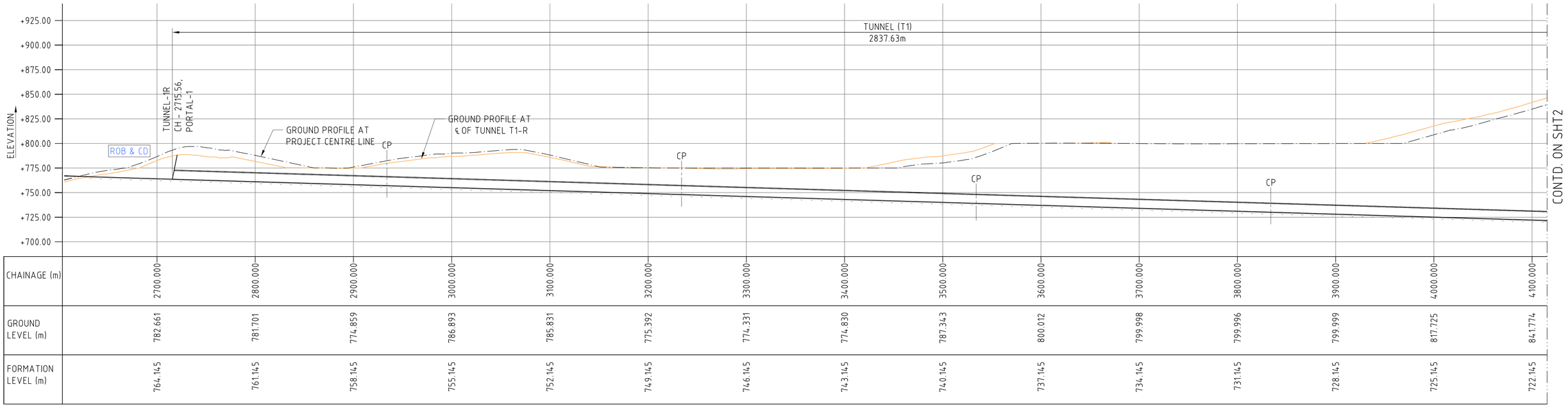
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN

SCALE 1:2000



CHAINAGE (m)	2700.000	2800.000	2900.000	3000.000	3100.000	3200.000	3300.000	3400.000	3500.000	3600.000	3700.000	3800.000	3900.000	4000.000	4100.000
GROUND LEVEL (m)	782.661	781.701	774.859	786.893	785.831	775.392	774.331	774.830	787.343	800.012	799.998	799.996	799.999	817.725	841.774
FORMATION LEVEL (m)	764.145	761.145	758.145	755.145	752.145	749.145	746.145	743.145	740.145	737.145	734.145	731.145	728.145	725.145	722.145

LONGITUDINAL SECTION ALONG T1-R

SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; P:\Ra, R:\6000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-

CLIENT: GOVERNMENT OF KARNATAKA

DRAWING TITLE: TUNNEL - T1-R GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

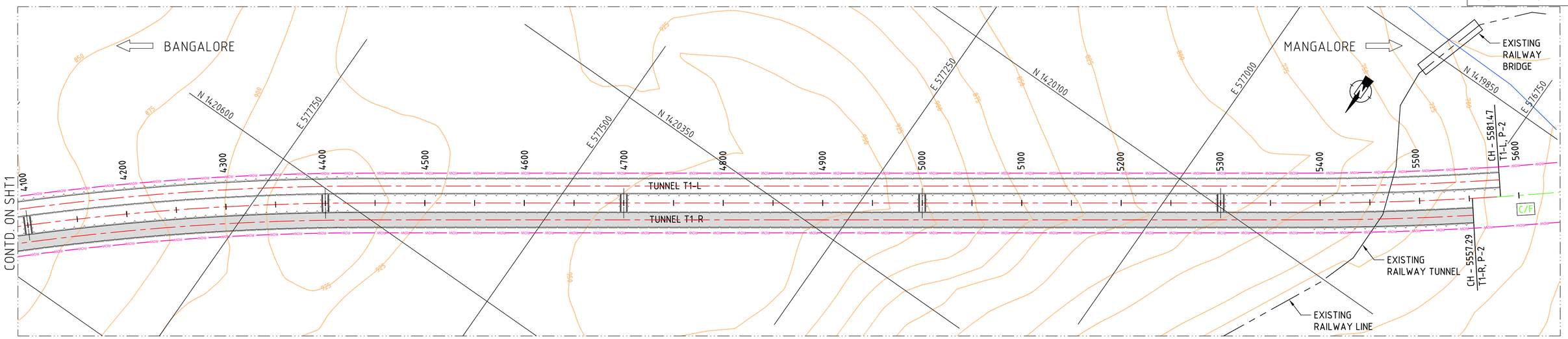
DRAWING NUMBER: SHGA-FS-T1-1101

REV: D

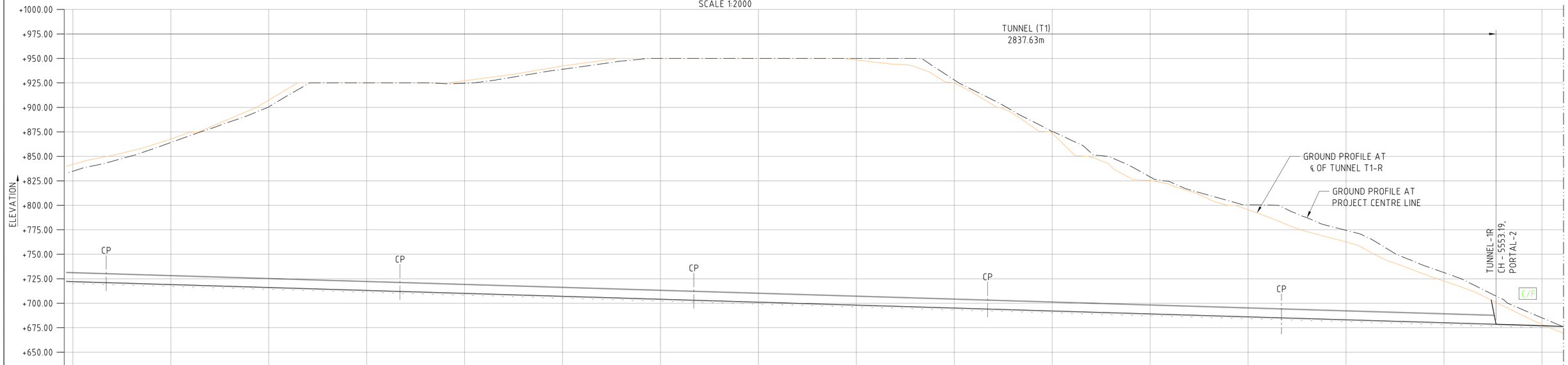
SCALE: AS SHOWN

MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	4100.000	4200.000	4300.000	4400.000	4500.000	4600.000	4700.000	4800.000	4900.000	5000.000	5100.000	5200.000	5300.000	5400.000	5500.000	5600.000
GROUND LEVEL (m)	841.774	867.790	907.482	925.000	927.186	942.251	950.000	950.000	948.399	924.872	873.692	825.223	795.567	762.676	722.657	678.449
FORMATION LEVEL (m)	722.145	719.145	716.145	713.145	710.145	707.145	704.145	701.145	698.145	695.145	692.145	689.145	686.145	683.145	680.145	677.035

LONGITUDINAL SECTION ALONG T1-R
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

Originators

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.
©GEOCONSULT; P:\Ra, R:\6000 Projects\6060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T1-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

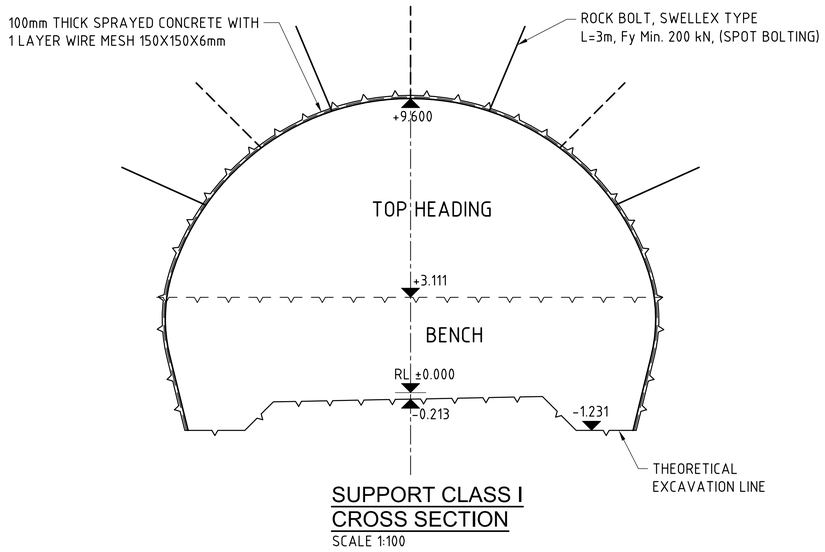
DRAWING NUMBER
SHGA-FS-T1-1101

REV
D

SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



SUPPORT CLASS I
CROSS SECTION
SCALE 1:100

SUPPORT CLASS I EXCAVATION AND SUPPORT QUANTITIES/m				
TOP HEADING	Excavation	Round Length		>3m
		Theoretical Excavation Volume		79.7 m^3
		Theoretical Excavation Circumference		22.5m
	Support	Sprayed concrete	M25, 100 mm thick	2.2m^3*
		Swellex bolts	Fy Min. 200 kN, L=3m	1.1 pcs
		Wire Mesh (150x150x6mm)	Outer Layer	22.4m^2
BENCH	Excavation	Round Length		5-6m
		Theoretical Excavation Volume		58.1m^3
		Theoretical Excavation Circumference		24.4m
	Support	Sprayed concrete	M25, 100 mm thick	0.88m^3*
		Wire Mesh (150x150x6mm)	Outer Layer	8.8m^2

Note : Items marked with * are given In Cu.m/m.

NOTES :

1. ALL DIMENSIONS ARE IN METER UNLESS NOTED OTHERWISE.
2. EXCAVATION IS TO BE MONITORED ACCORDING TO THE GEOTECHNICAL INSTRUMENTATION PROGRAM.
3. SUPPORT MEASURES, ROUND LENGTHS, FACE DISTANCES AND DEFORMATION TOLERANCES HAVE TO BE ADJUSTED TO THE ACTUAL GEOLOGICAL CONDITIONS AND THE MONITORED DEFORMATIONS.
4. OVERLAP OF WIRE MESH (R=2 WEBS, L=1 WEB) NOT INCLUDED IN THE QUANTITIES.
5. ALL QUANTITIES GIVEN ARE BASED ON AVERAGE ROUND LENGTHS (MEAN VALUE OF RANGE OF ROUND LENGTH GIVEN IN THE RESPECTIVE TABLES).
6. SFRS CAN BE UESD IN PLACE OF SPRAYED CONCRETE WITH WIREMESH.

THIS DRAWING IS VALID FOR TUNNEL T1 TO TUNNEL T6

SCALE 1 : 100

5m 0 5m 10m

PRELIMINARY

REFERENCE DRAWINGS:

.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD 6)	PRa/ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD 5)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015	
Name	ABa/PRa	RMe	GMo	PSi	FKr	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1-1103 TO 1105_B.dwg, 2015-12-18

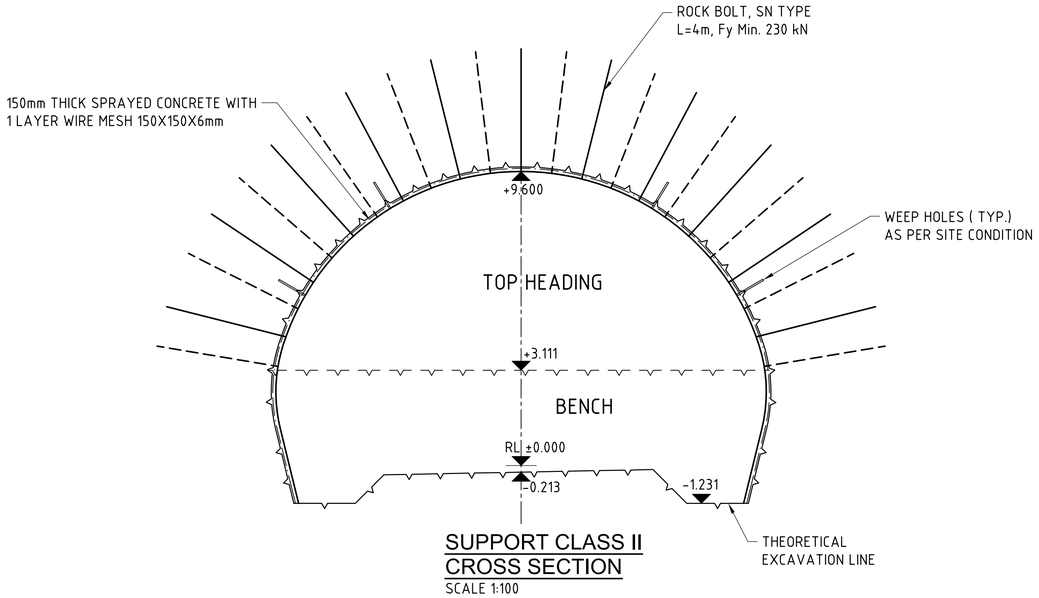
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
MAIN TUNNEL
EXCAVATION AND SUPPORT
CLASS I

DRAWING NUMBER: SHGA-FS-T1-1103
REV: B

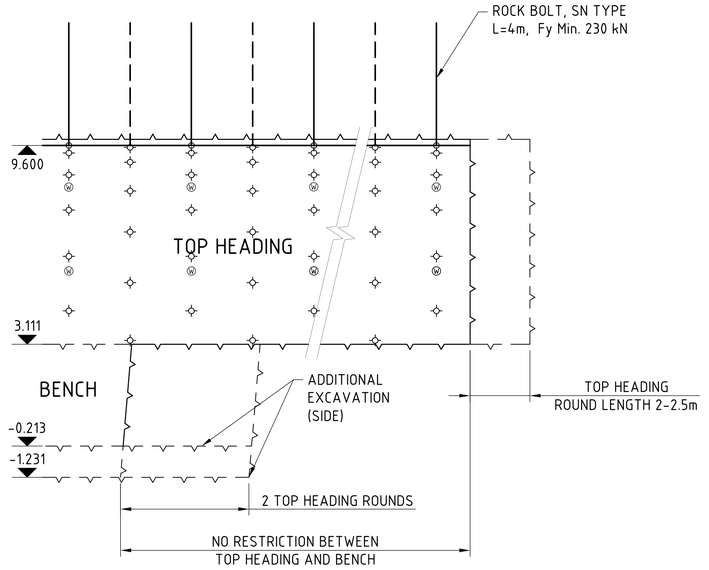
SCALE: 1:100
MONTH (Current Issue): DEC 15

Original Drawing Size A1



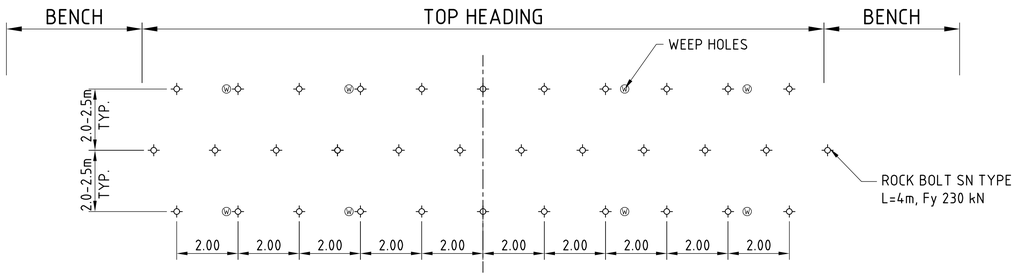
SUPPORT CLASS II CROSS SECTION

SCALE 1:100



LONGITUDINAL SECTION

SCALE 1:100



DEVELOPED VIEW OF ROCK BOLTS ARRANGEMENT

SCALE 1:100

SUPPORT CLASS II EXCAVATION AND SUPPORT QUANTITIES/m				
TOP HEADING	Excavation	Round Length		2-2.5m
		Theoretical Excavation Volume		80.8 m^3
		Theoretical Excavation Circumference		22.7 m
	Support	Sprayed concrete	M25, 150 mm thick	3.3 m^3 *
		SN Bolts	Fy Min. 230 kN, L=4m	5.1 pcs
		Wire Mesh (150x150x6mm)	Outer Layer	22.5m^2
BENCH	Excavation	Round Length		4-5m
		Theoretical Excavation Volume		58.6m^3
		Theoretical Excavation Circumference		24.5m
	Support	Sprayed concrete	M25, 150 mm thick	1.3m^3 *
		Wire Mesh (150x150x6mm)	Outer Layer	8.8m^2

Note : Items marked with * are given In Cu.m/m.

NOTES :

1. ALL DIMENSIONS ARE IN METER UNLESS NOTED OTHERWISE.
2. EXCAVATION IS TO BE MONITORED ACCORDING TO THE GEOTECHNICAL INSTRUMENTATION PROGRAM.
3. SUPPORT MEASURES, ROUND LENGTHS, FACE DISTANCES AND DEFORMATION TOLERANCES HAVE TO BE ADJUSTED TO THE ACTUAL GEOLOGICAL CONDITIONS AND THE MONITORED DEFORMATIONS.
4. OVERLAP OF WIRE MESH (R=2 WEBS, L=1 WEB) NOT INCLUDED IN THE QUANTITIES.
5. ALL QUANTITIES GIVEN ARE BASED ON AVERAGE ROUND LENGTHS (MEAN VALUE OF RANGE OF ROUND LENGTH GIVEN IN THE RESPECTIVE TABLES).
6. SFRS CAN BE UESD IN PLACE OF SPRAYED CONCRETE WITH WIREMESH.

THIS DRAWING IS VALID FOR TUNNEL T1 TO TUNNEL T6

SCALE 1 : 100

5m 0 5m 10m

PRELIMINARY

REFERENCE DRAWINGS:

.
.

LEGEND:

- SN BOLTS, L=4m, Fy = Min. 230kN
- Ⓦ WEEP HOLES

REVISION					
B	DEC 2015	SECOND DRAFT (KD 6)	PRa/ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD 5)	PRa/ABa	RMe	AKg
REV.	DATE	PARTICULARS	Drawn	Checked	Approved

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	GMo	PSi	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

#GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1-1103 TO 1105_B.dwg, 2015-12-18

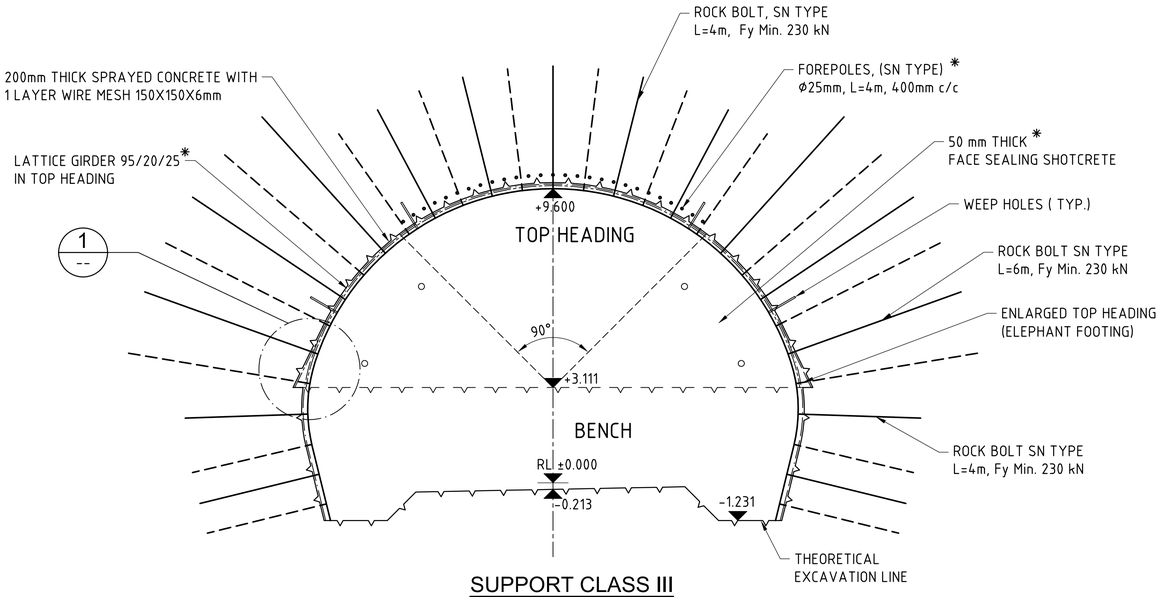
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
MAIN TUNNEL EXCAVATION AND SUPPORT CLASS II

DRAWING NUMBER	REV
SHGA-FS-T1-1104	B

SCALE	MONTH (Current Issue)
1:100	DEC15

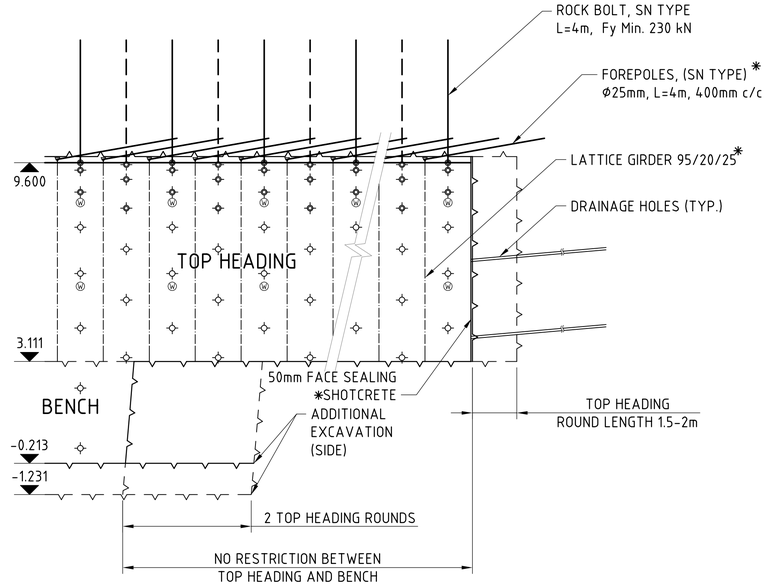
Original Drawing Size A1



SUPPORT CLASS III CROSS SECTION

SCALE 1:100

ITEMS MARKED WITH ✱SHOULD BE PROVIDED IF REQUIRED

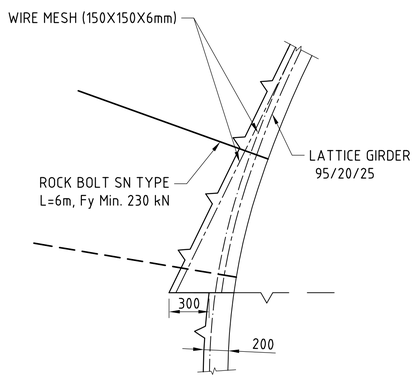


LONGITUDINAL SECTION

SCALE 1:100

DEVELOPED VIEW OF ROCK BOLTS AND LATTICE GIRDER ARRANGEMENT

SCALE 1:100



DETAIL 1

SCALE 1:25

SUPPORT CLASS III EXCAVATION AND SUPPORT QUANTITIES/m				
TOP HEADING	Excavation	Round Length		1.5-2m
		Theoretical Excavation Volume (Including Elephant Footing)		82.4 m^3
		Theoretical Excavation Circumference		23.1 m
	Support	Sprayed concrete	M25, 200 mm thick	4.9 m^3 ✱
		SN Bolts	Fy Min. 230 kN, L=6m	3.4 pcs
		SN Bolts	Fy Min. 230 kN, L=4m	3.1 pcs
		Lattice Girder 95/20/25 @ 11.5kg/m		12.8 m
		Forepoling SN Bolts (if required)	Φ 25 mm L= 4m	7.7pcs
		Wire Mesh (150x150x6mm)	Outer Layer	26.9 m^2
		Drainage Pipes		6 m
	Face Support	Shotcrete (if required)	M25, 50 mm THICK	1.1 m^3
BENCH	Excavation	Round Length		3-4m
		Theoretical Excavation Volume		59.0m^3
		Theoretical Excavation Circumference		24.6m
	Support	Sprayed concrete	M25, 200 mm thick	1.7m^3 ✱
		SN Bolts	Fy Min. 230 kN, L=4m	2.2 pcs
		Wire Mesh (150x150x6mm)	Outer Layer	8.8m^2

Note : Items marked with ✱ are given In Cu.m/m.

NOTES :

1. ALL DIMENSIONS ARE IN METER UNLESS NOTED OTHERWISE.
2. EXCAVATION IS TO BE MONITORED ACCORDING TO THE GEOTECHNICAL INSTRUMENTATION PROGRAM.
3. SUPPORT MEASURES, ROUND LENGTHS, FACE DISTANCES AND DEFORMATION TOLERANCES HAVE TO BE ADJUSTED TO THE ACTUAL GEOLOGICAL CONDITIONS AND THE MONITORED DEFORMATIONS.
4. OVERLAP OF WIRE MESH (R=2 WEBS, L=1 WEB) NOT INCLUDED IN THE QUANTITIES.
5. ALL QUANTITIES GIVEN ARE BASED ON AVERAGE ROUND LENGTHS (MEAN VALUE OF RANGE OF ROUND LENGTH GIVEN IN THE RESPECTIVE TABLES).
6. SFRS CAN BE UESD IN PLACE OF SPRAYED CONCRETE WITH WIREMESH.

THIS DRAWING IS VALID FOR TUNNEL T1 TO TUNNEL T6

SCALE 1 : 100

5m 0 5m 10m

PRELIMINARY

REFERENCE DRAWINGS:

.
.

LEGEND:

✧ SN BOLTS, L=4m, Fy = Min. 230kN

✧ SN BOLTS, L=6m, Fy = Min. 230kN

Ⓦ WEEP HOLES

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD 6)	PRa/ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD 5)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	ABa/PRa	RMe	GMo	PSi	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

✱GEOCONSULT; PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1-1103 TO 1105_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
MAIN TUNNEL
EXCAVATION AND SUPPORT
CLASS III

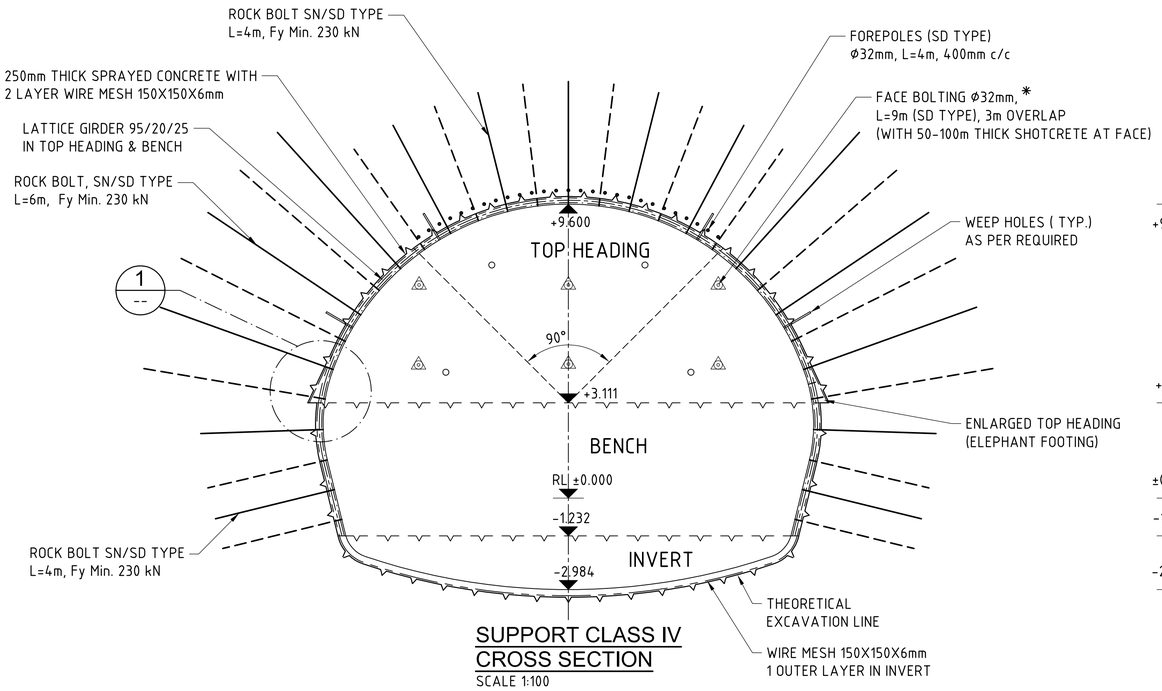
DRAWING NUMBER
SHGA-FS-T1-1105

REV
B

SCALE
1:100

MONTH (Current Issue)
DEC 15

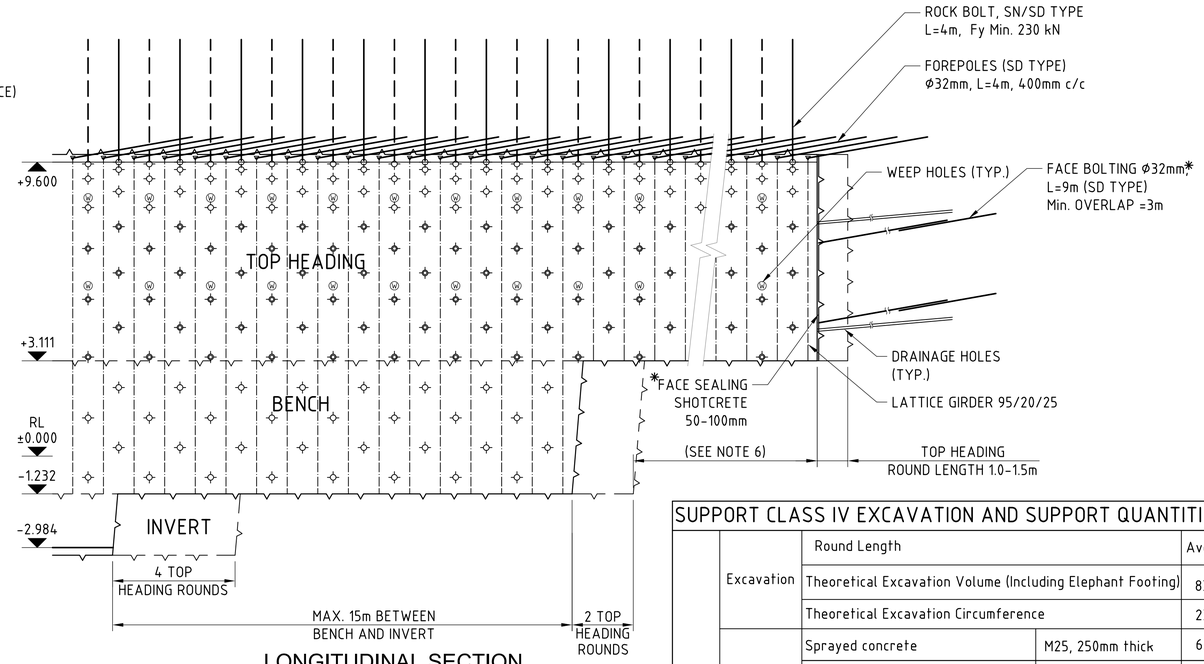
Original Drawing Size A1



SUPPORT CLASS IV CROSS SECTION

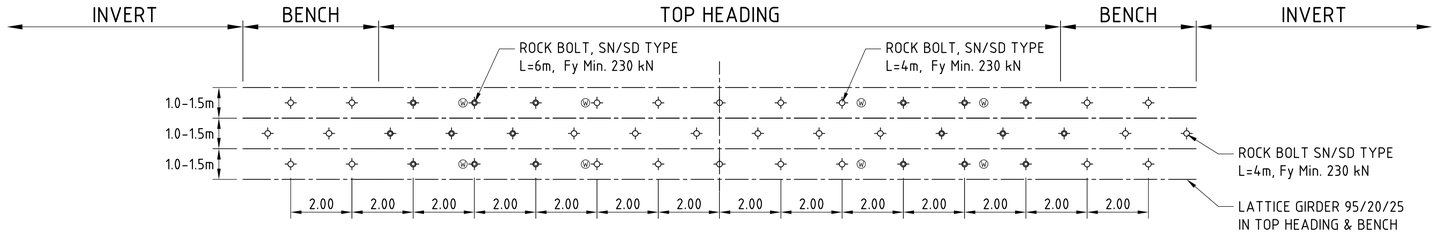
SCALE 1:100

ITEMS MARKED WITH ✱SHOULD BE PROVIDED IF REQUIRED



LONGITUDINAL SECTION

SCALE 1:100

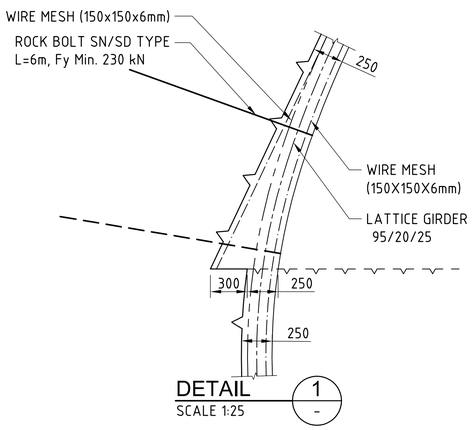


DEVELOPED VIEW OF ROCK BOLTS AND LATTICE GIRDER ARRANGEMENT

SCALE 1:100

NOTES :

1. ALL DIMENSIONS ARE IN METER UNLESS NOTED OTHERWISE.
2. EXCAVATION IS TO BE MONITORED ACCORDING TO THE GEOTECHNICAL INSTRUMENTATION PROGRAM.
3. SUPPORT MEASURES, ROUND LENGTHS, FACE DISTANCES AND DEFORMATION TOLERANCES HAVE TO BE ADJUSTED TO THE ACTUAL GEOLOGICAL CONDITIONS AND THE MONITORED DEFORMATIONS.
4. OVERLAP OF WIRE MESH (R=2 WEBS, L=1 WEB) NOT INCLUDED IN THE QUANTITIES.
5. ALL QUANTITIES GIVEN ARE BASED ON AVERAGE ROUND LENGTHS (MEAN VALUE OF RANGE OF ROUND LENGTH GIVEN IN THE RESPECTIVE TABLES).
6. MAXIMUM DISTANCE BETWEEN TOP HEADING AND BENCH TO BE DECIDED BY THE GEOTECHNICAL ENGINEER ACCORDING TO ENCOUNTERED GEOLOGICAL CONDITIONS.
7. IN CASE OF BORE HOLE COLLAPSE, SD BOLTS TO BE PROVIDED INSTEAD OF SN BOLTS.
8. SFRS CAN BE USED IN PLACE OF SPRAYED CONCRETE WITH WIRE MESH.



DETAIL 1

SCALE 1:25

SCALE 1 : 25

1m 0 1m 2m 2.5m

SCALE 1 : 100

5m 0 5m 10m

SUPPORT CLASS IV EXCAVATION AND SUPPORT QUANTITIES/m

TOP HEADING	Excavation	Round Length		Avg. 1-1.5m
		Theoretical Excavation Volume (Including Elephant Footing)		83.5 m^3
		Theoretical Excavation Circumference		23.2 m
	Support	Sprayed concrete	M25, 250mm thick	6.0 m^3 ✱
		SN/SD Bolts	Fy Min. 230 kN, L=6m	4.8 pcs
		SN/SD Bolts	Fy Min. 230 kN, L=4m	4.4 pcs
		Lattice Girder 95/20/25 @ 11.5kg/m		18.1 m
		Forepoling SD Bolts	ϕ32mm, L=4m	21.6 pcs
		Wire Mesh (150x150x6mm)	Outer Layer	27.0 m^2
			Inner Layer	22.4 m^2
		Drainage Pipes		6 m
	Face Support	Shotcrete	M25, 50-100mm thick	6.2 m^3
		SD type Face Bolt (if required)	L=9m, ϕ32mm	0.5 pcs
BENCH	Excavation	Round Length		2-3m
		Theoretical Excavation Volume		69.4m^3
		Theoretical Excavation Circumference		8.8m
	Support	Sprayed concrete	M25, 250mm thick	2.2m^3 ✱
		Lattice Girder - 95/20/25 @ 11.5kg/m		7.0m
		SN/SD Bolts	Fy Min. 230 kN, L=4m	3.2 pcs
		Wire Mesh (150x150x6mm)	Outer Layer	8.8m^2
			Inner Layer	8.8m^2
INVERT	Excavation	Round Length		4-6m
		Theoretical Excavation Volume		23.0 m^3
		Theoretical Excavation Circumference		16.2m
	Support	Sprayed concrete	M25, 250mm thick	3.9m^3 ✱
		Wire Mesh (150x150x6mm)	Outer Layer	16.0 m^2
			Inner Layer	NIL

Note : Items marked with ✱ are given In Cu.m/m.

PRELIMINARY

REFERENCE DRAWINGS:

LEGEND:

- SN/SD BOLTS, L=4m, Fy = Min. 230kN
- SN/SD BOLTS, L=6m, Fy = Min. 230kN
- FACE BOLTING, L=9m, ϕ32mm
- WEEP HOLES

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD 6)	PRa/ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD 5)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015	
Name	ABa/PRa	RMe	GMo/SKt	PSi	FKr	
	Drawn	Drafting Chk	Designed	Design Chk	Approved	

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1-1106 TO 1107_B.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
MAIN TUNNEL
EXCAVATION AND SUPPORT
CLASS IV

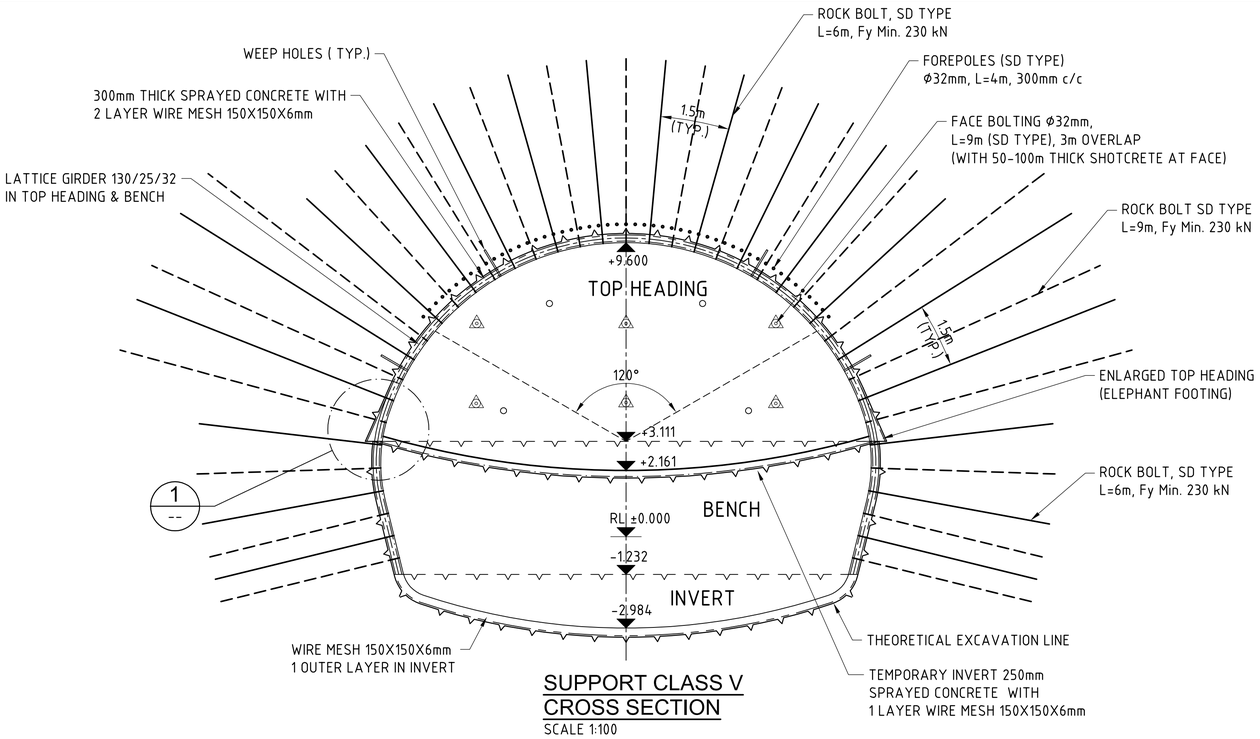
DRAWING NUMBER
SHGA-FS-T1-1106

REV
B

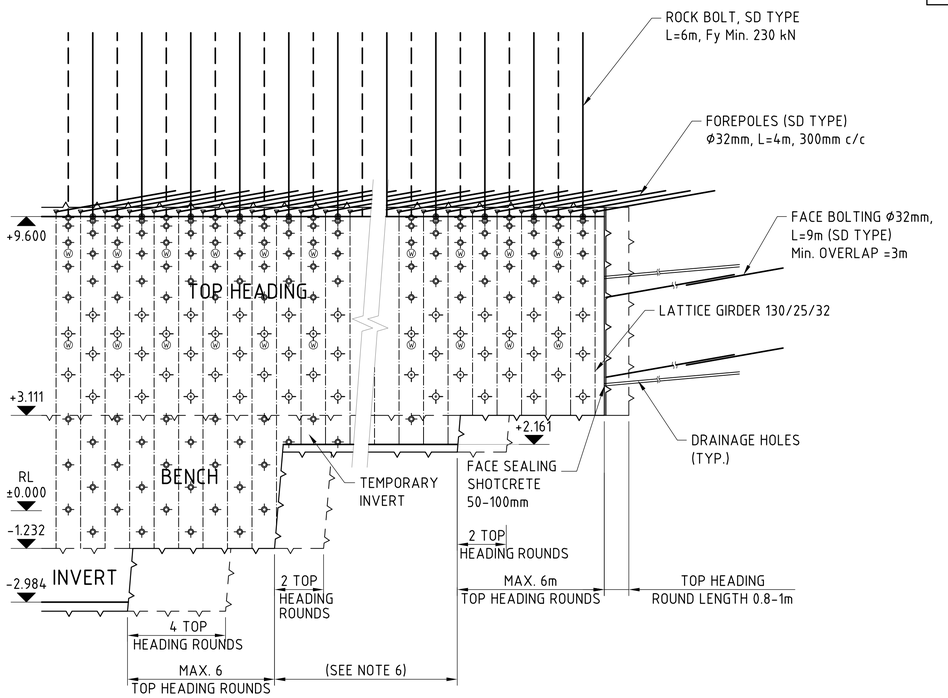
SCALE
1:100 , 1:25

MONTH (Current Issue)
DEC 15

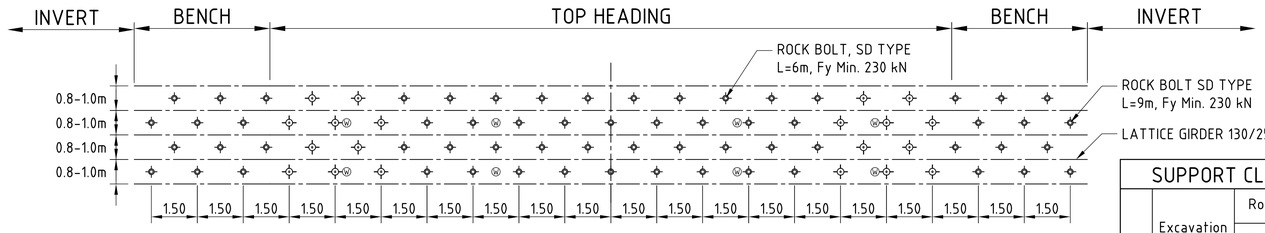
Original Drawing Size A1



SUPPORT CLASS V CROSS SECTION
SCALE 1:100



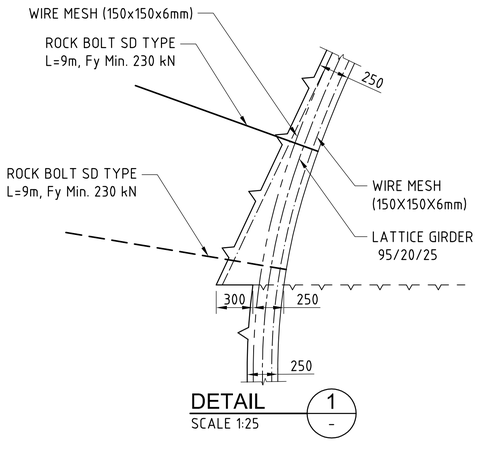
LONGITUDINAL SECTION
SCALE 1:100



DEVELOPED VIEW OF ROCK BOLTS AND LATTICE GIRDER ARRANGEMENT
SCALE 1:100

NOTES :

1. ALL DIMENSIONS ARE IN METER UNLESS NOTED OTHERWISE.
2. EXCAVATION IS TO BE MONITORED ACCORDING TO THE GEOTECHNICAL INSTRUMENTATION PROGRAM.
3. SUPPORT MEASURES, ROUND LENGTHS, FACE DISTANCES AND DEFORMATION TOLERANCES HAVE TO BE ADJUSTED TO THE ACTUAL GEOLOGICAL CONDITIONS AND THE MONITORED DEFORMATIONS.
4. OVERLAP OF WIRE MESH (R=2 WEBS, L=1 WEB) NOT INCLUDED IN THE QUANTITIES.
5. ALL QUANTITIES GIVEN ARE BASED ON AVERAGE ROUND LENGTHS (MEAN VALUE OF RANGE OF ROUND LENGTH GIVEN IN THE RESPECTIVE TABLES).
6. MAXIMUM DISTANCE BETWEEN TOP HEADING AND BENCH TO BE DECIDED BY THE GEOTECHNICAL ENGINEER ACCORDING TO ENCOUNTERED GEOLOGICAL CONDITIONS.
7. SFRS CAN BE USED IN PLACE OF SPRAYED CONCRETE WITH WIRE MESH.



DETAIL 1
SCALE 1:25

SUPPORT CLASS V EXCAVATION AND SUPPORT QUANTITIES/m

TOP HEADING	Excavation	Round Length		Avg. 0.8-1m
		Theoretical Excavation Volume (Including Elephant Footing)		84.5 m^3
		Theoretical Excavation Circumference (Including Elephant Footing)		23.3 m
	Support	Sprayed concrete (Including Elephant Footing)	M25, 300 mm thick	7.0m^3 *
		SD Bolts	Fy Min. 230 kN, L=9m	5.5 pcs
		SD Bolts	Fy Min. 230 kN, L=6m	10.5 pcs
		Lattice Girder 130/25/32 @ 17.6kg/m		25.2 m
		Forepoling SD Bolts	Ø32mm, L=4m	56.6pcs
		Wire Mesh (150x150x6mm)	Outer Layer	26.8 m^2
			Inner Layer	22.4 m^2
		Drainage Pipes Quantity		6 m
	Face Support	Shotcrete	M25, 50-100 mm thick	8.6 m^3
		SD type Face Bolt	L=9m, Ø32 mm	1 pcs
	Temporary Invert	Theoretical Excavation Volume		13.2 m^3
		Shotcrete	M25, 250 mm thick	4.0 m^3 *
		Wire Mesh (150x150x6mm)	Outer Layer	16.2 m^2

SUPPORT CLASS V EXCAVATION AND SUPPORT QUANTITIES/m

BENCH	Excavation	Round Length		1.6-2m
		Theoretical Excavation Volume		56.6m^3
		Theoretical Excavation Circumference		8.8m
	Support	Sprayed concrete	M25, 300 mm thick	2.6m^3 *
		Lattice Girder - 130/25/32 @ 17.6kg/m		9.6m
		SD Bolts	Fy Min. 230 kN, L=6m	6.6 pc
		Wire Mesh (150x150x6mm)	Outer Layer	8.8m^2
			Inner Layer	8.6m^2
INVERT	Excavation	Round Length		3.2-4m
		Theoretical Excavation Volume		23.8 m^3
		Theoretical Excavation Circumference		16.3m
	Support	Sprayed concrete	M25, 300 mm thick	4.7m^3 *
		Wire Mesh (150x150x6mm)	Outer Layer	16.2 m^2

Note : Items marked with * are given In Cu.m/m.

SCALE 1 : 100
5m 0 5m 10m

SCALE 1 : 25
1m 0 1m 2m 2.5m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:
- SD BOLTS, L=6m, Fy = Min. 230kN
- SD BOLTS, L=9m, Fy = Min. 230kN
- FACE BOLTING, L=9m, Ø32mm
- WEEP HOLES

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD 6)	PRa/ABa	RMe	AKg
A	DEC 2015	FIRST DRAFT (KD 5)	PRa/ABa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	10.11.2015	10.11.2015	10.11.2015	10.11.2015	10.11.2015
Name	ABa/PRa	RMe	GMo/SKt	PSi	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1-1106 TO 1107_B.dwg, 2015-12-18

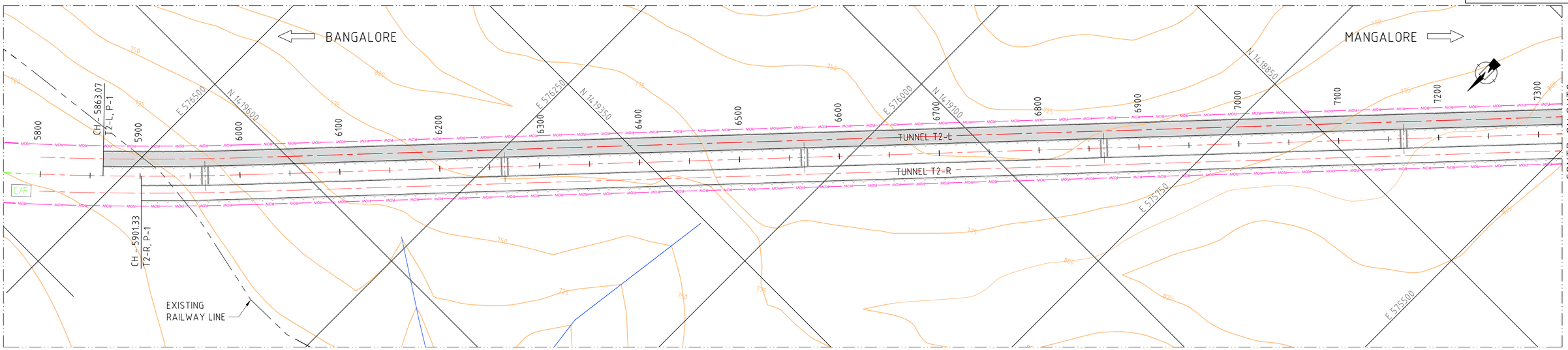
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
MAIN TUNNEL
EXCAVATION AND SUPPORT
CLASS V

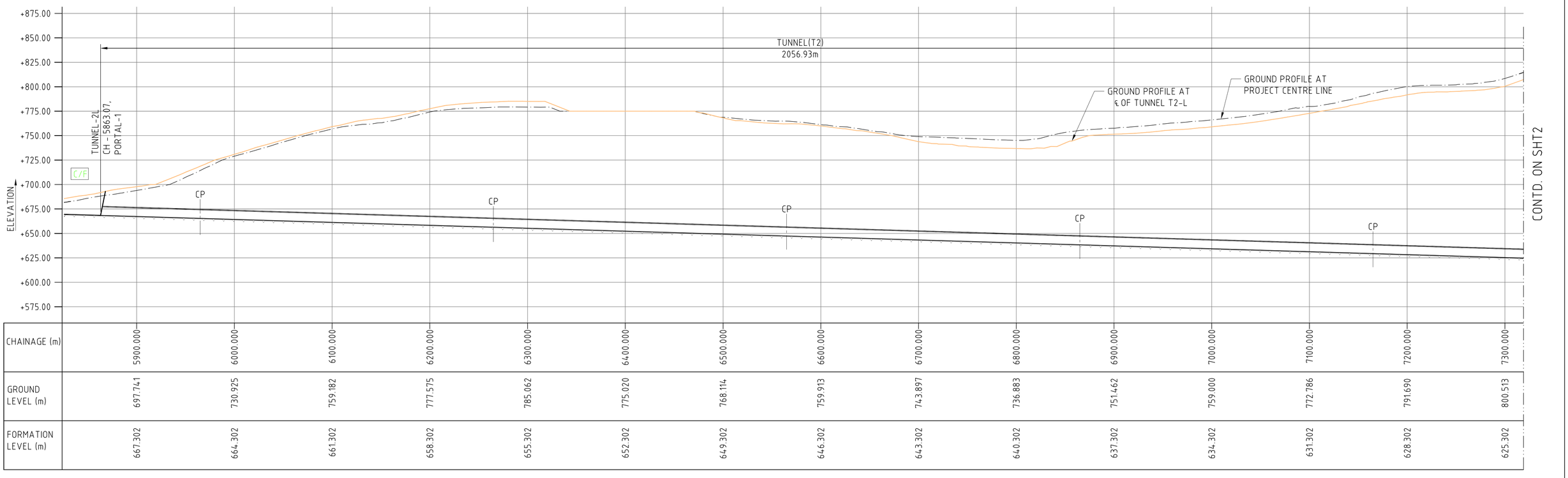
PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING NUMBER: SHGA-FS-T1-1107
REV: B
SCALE: 1:100,1:25
MONTH (Current Issue): DEC 15

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	5900.000	6000.000	6100.000	6200.000	6300.000	6400.000	6500.000	6600.000	6700.000	6800.000	6900.000	7000.000	7100.000	7200.000	7300.000
GROUND LEVEL (m)	697.741	730.925	759.182	777.575	785.062	775.020	768.114	759.913	743.897	736.883	751.462	759.000	772.786	791.690	800.513
FORMATION LEVEL (m)	667.302	664.302	661.302	658.302	655.302	652.302	649.302	646.302	643.302	640.302	637.302	634.302	631.302	628.302	625.302

LONGITUDINAL SECTION ALONG T2-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT, PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TYL-T6L_1100-1151_D.dwg; 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T2-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

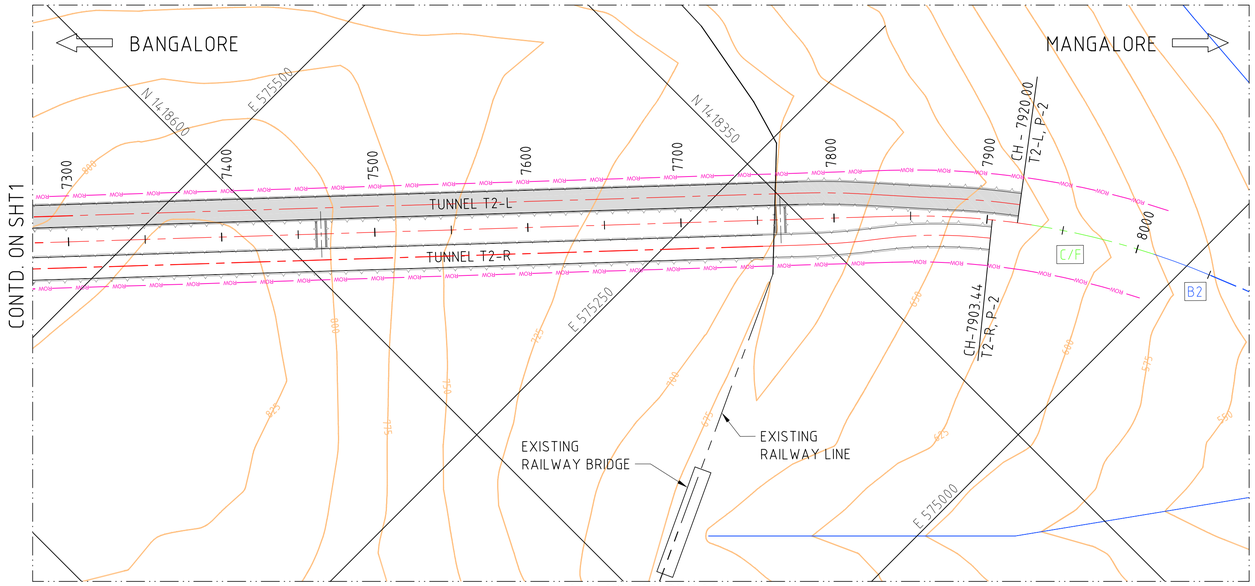
DRAWING NUMBER
SHGA-FS-T2-1111

REV
D

SCALE
AS SHOWN

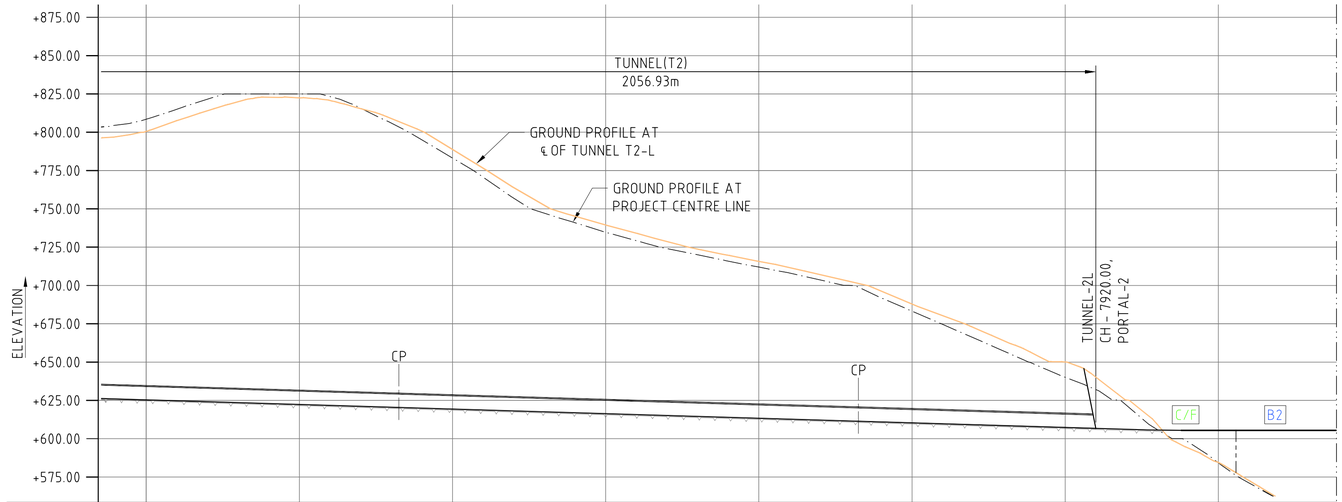
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN

SCALE 1:2000



CHAINAGE (m)	7300.000	7400.000	7500.000	7600.000	7700.000	7800.000	7900.000	8000.000
GROUND LEVEL (m)	800.513	822.393	788.801	739.455	715.686	687.840	650.086	584.501
FORMATION LEVEL (m)	625.302	622.302	619.302	616.302	613.302	610.302	607.302	605.474

LONGITUDINAL SECTION ALONG T2-L

SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TNL-T6L_1100-1151_D.dwg, 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

DRAWING TITLE

TUNNEL - T2-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

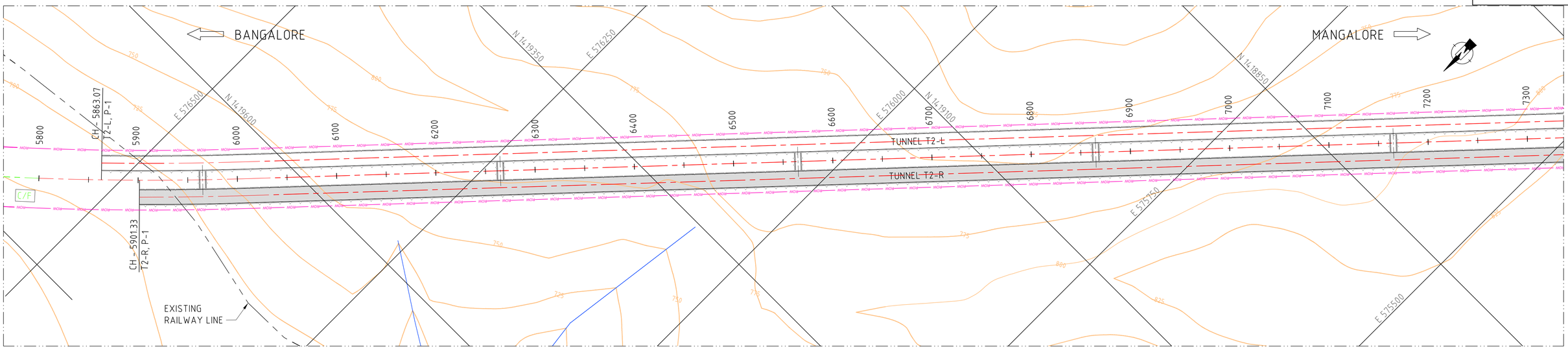
DRAWING NUMBER: SHGA-FS-T2-1111

REV: D

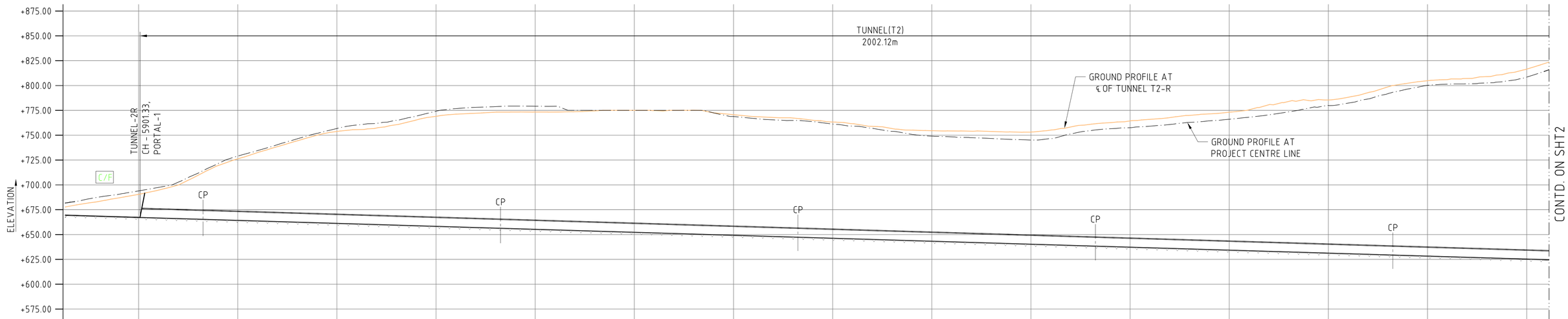
SCALE: AS SHOWN

MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	5900.000	6000.000	6100.000	6200.000	6300.000	6400.000	6500.000	6600.000	6700.000	6800.000	6900.000	7000.000	7100.000	7200.000	7300.000
GROUND LEVEL (m)	690.449	726.195	753.778	769.010	773.308	775.008	770.630	763.293	754.510	753.144	764.346	773.096	785.516	804.872	816.523
FORMATION LEVEL (m)	667.302	664.302	661.302	658.302	655.302	652.302	649.302	646.302	643.302	640.302	637.302	634.302	631.302	628.302	625.302

LONGITUDINAL SECTION ALONG T2-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; P:\Ra, R:\6000 Projects\6066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TSR-T6R_1101-1152_D.dwg, 2015-12-9

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T2-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

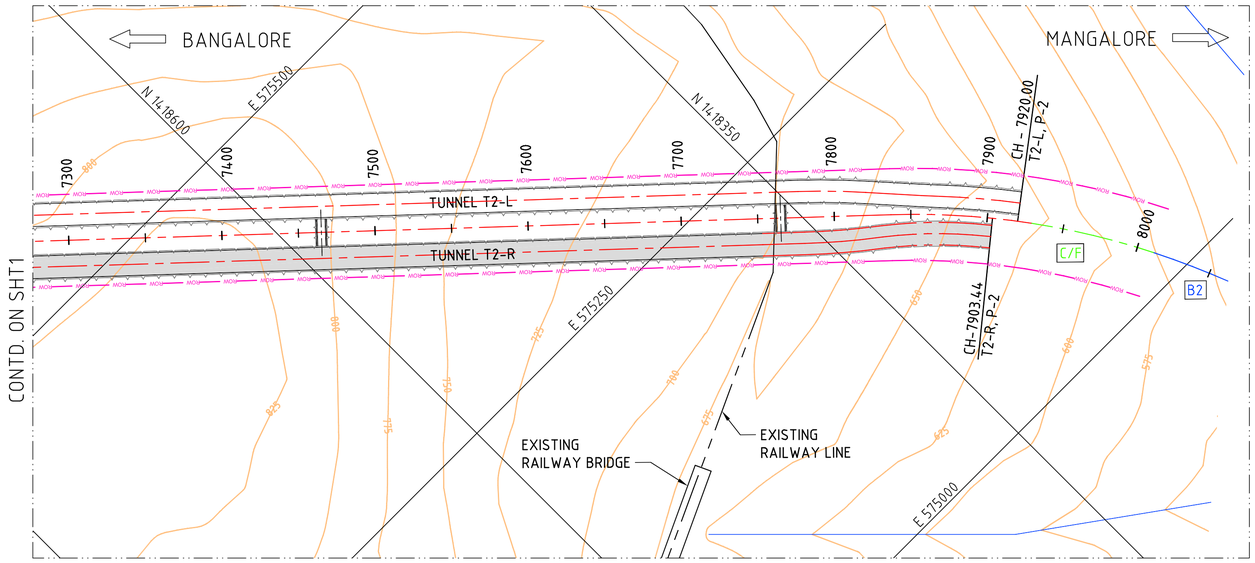
DRAWING NUMBER
SHGA-FS-T2-1112

REV
D

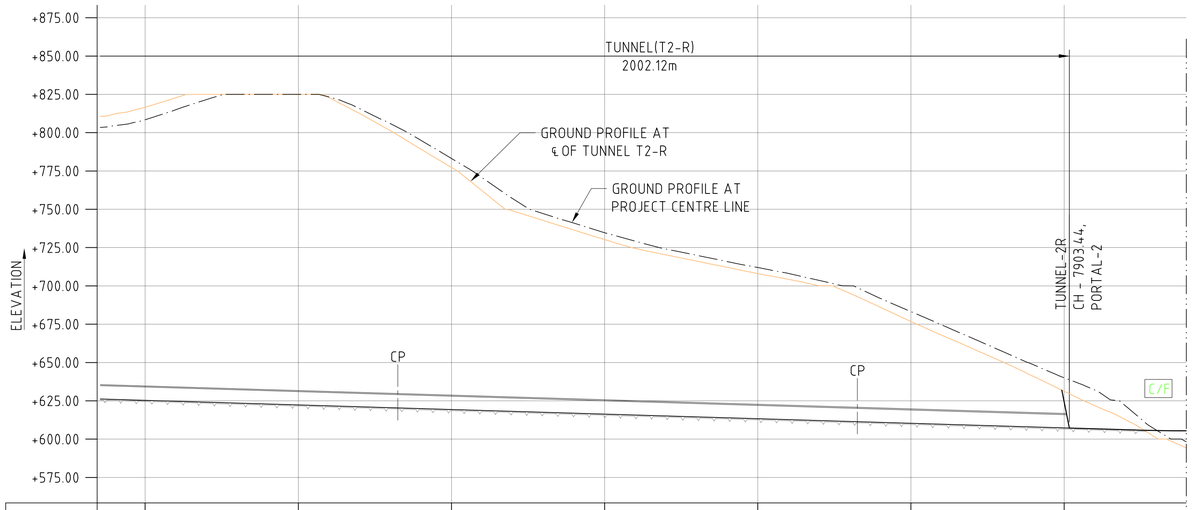
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	7300.000	7400.000	7500.000	7600.000	7700.000	7800.000	7900.000
GROUND LEVEL (m)	816.523	825.000	777.367	730.254	708.021	676.768	631.225
FORMATION LEVEL (m)	625.302	622.302	619.302	616.302	613.302	610.302	607.302

LONGITUDINAL SECTION ALONG T2-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRa\ R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T2-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

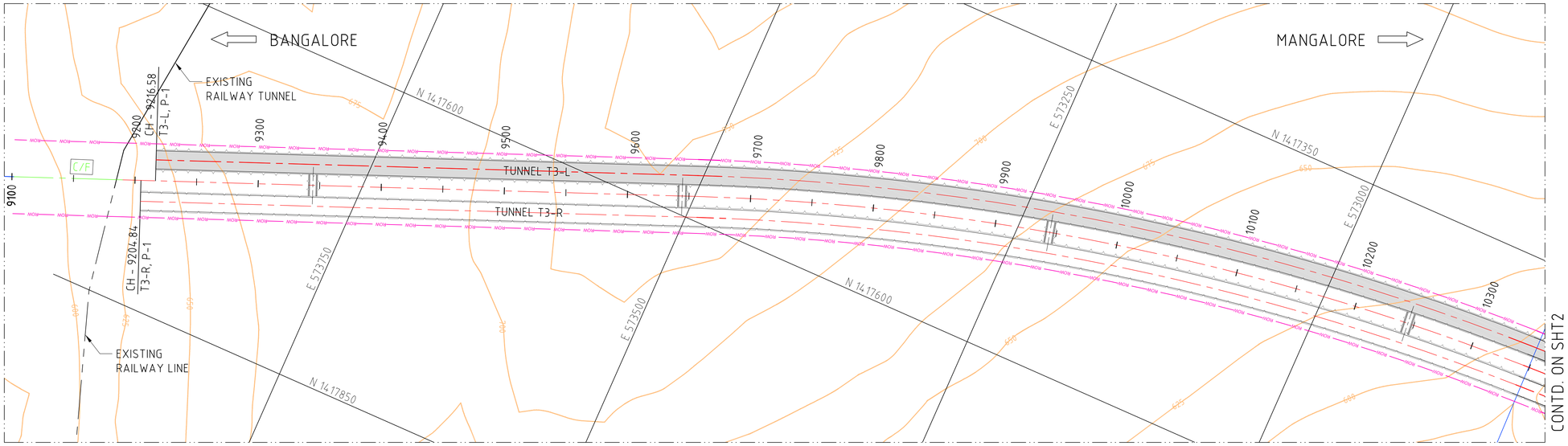
DRAWING NUMBER
SHGA-FS-T2-1112

REV
D

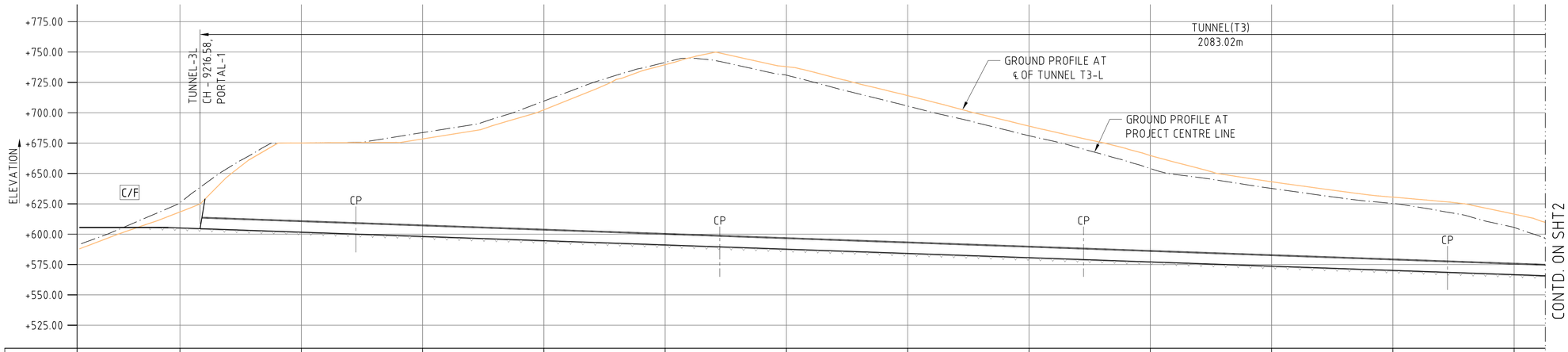
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	9200.000	9300.000	9400.000	9500.000	9600.000	9700.000	9800.000	9900.000	10000.000	10100.000	10200.000	10300.000
GROUND LEVEL (m)	618.300	675.112	678.444	702.393	739.577	737.918	714.141	689.026	664.754	643.145	630.477	616.458
FORMATION LEVEL (m)	605.128	601.628	598.128	594.628	591.128	587.628	584.128	580.628	577.128	573.628	570.128	566.628

LONGITUDINAL SECTION ALONG T3-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TNL-T6L_1100-1151_D.dwg; 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T3-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

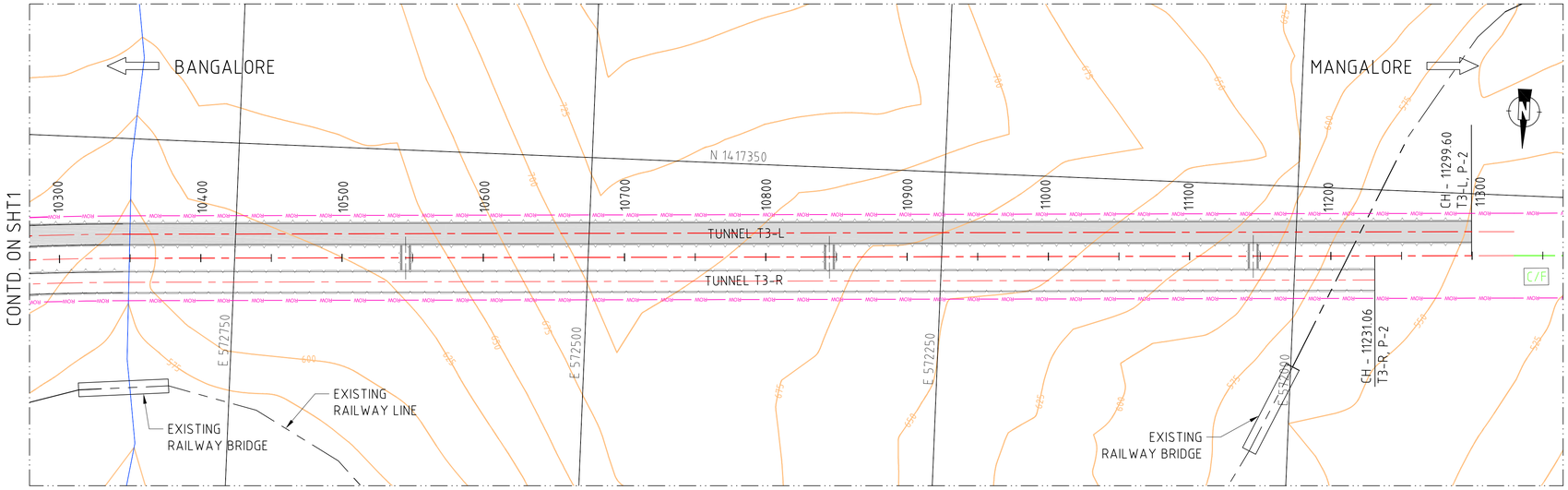
DRAWING NUMBER
SHGA-FS-T3-1121

REV
D

SCALE
AS SHOWN

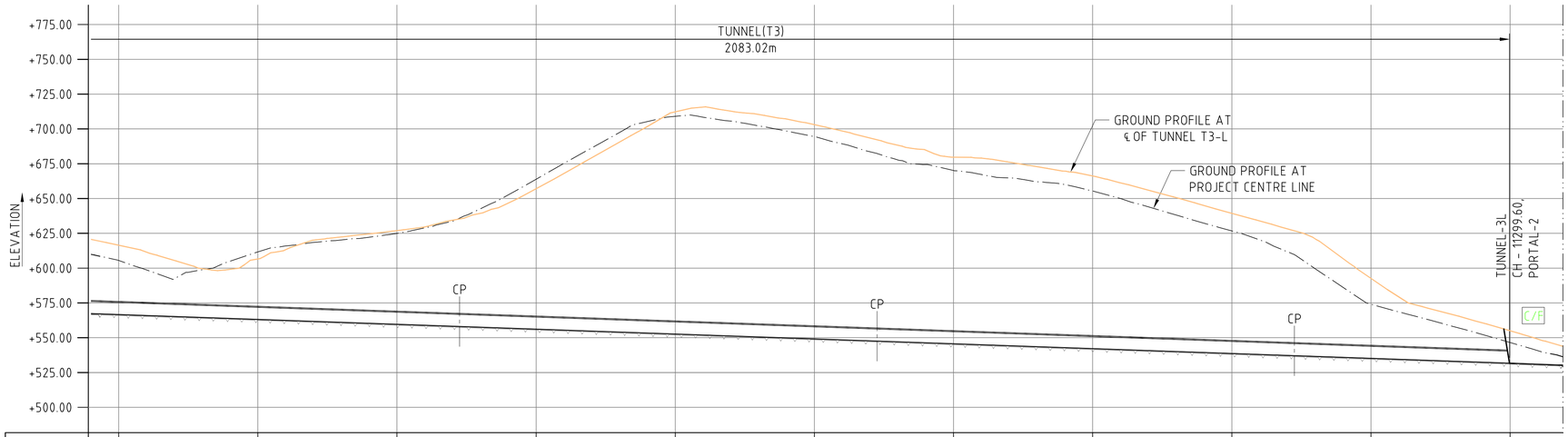
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN

SCALE 1:2000



CHAINAGE (m)	10300.000	10400.000	10500.000	10600.000	10700.000	10800.000	10900.000	11000.000	11100.000	11200.000	11300.000
GROUND LEVEL (m)	616.458	606.569	626.964	657.053	712.279	703.098	679.723	666.201	639.353	592.679	554.989
FORMATION LEVEL (m)	566.628	563.128	559.628	556.128	552.628	549.128	545.628	542.128	538.628	535.128	531.628

LONGITUDINAL SECTION ALONG T3-L

SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16066-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TYL-T6L_1100-1151_D.dwg, 2015-12-9

CLIENT

GOVERNMENT OF KARNATAKA

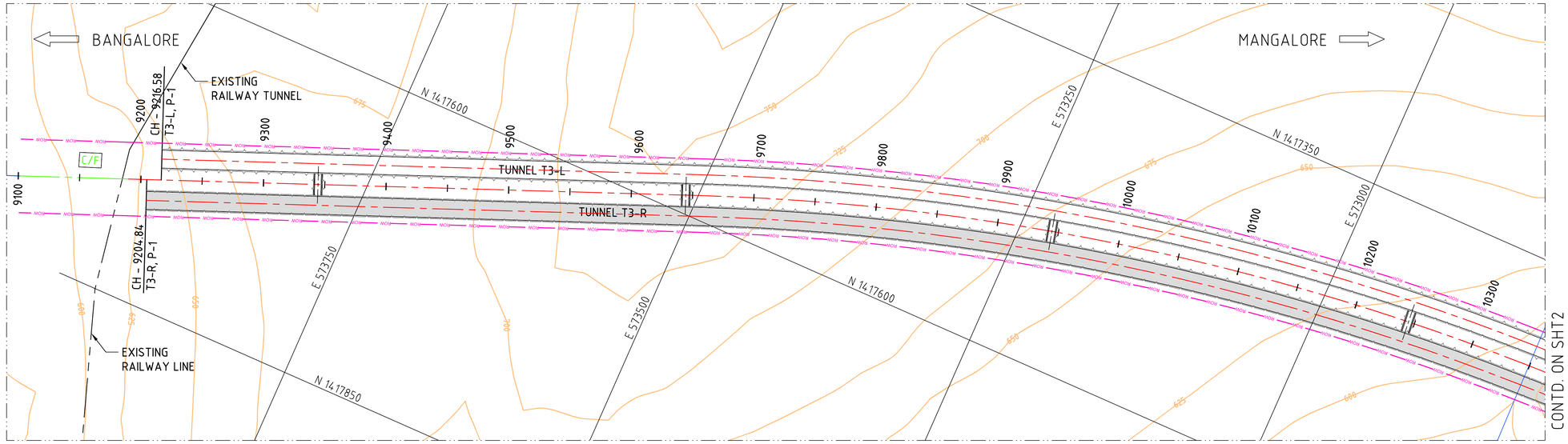
DRAWING TITLE

TUNNEL - T3-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

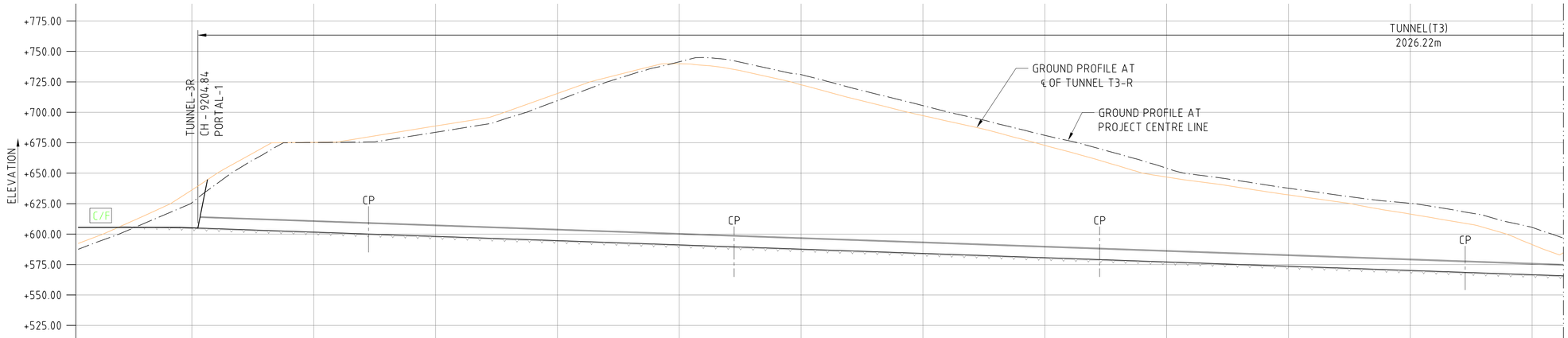
DRAWING NUMBER	REV
SHGA-FS-T3-1121	D

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	9200.000	9300.000	9400.000	9500.000	9600.000	9700.000	9800.000	9900.000	10000.000	10100.000	10200.000	10300.000
GROUND LEVEL (m)	636.214	675.312	688.788	715.488	739.867	722.560	697.270	672.830	646.853	632.191	616.432	591.353
FORMATION LEVEL (m)	605.128	601.628	598.128	594.628	591.128	587.628	584.128	580.628	577.128	573.628	570.128	566.628

LONGITUDINAL SECTION ALONG T3-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T3-R
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

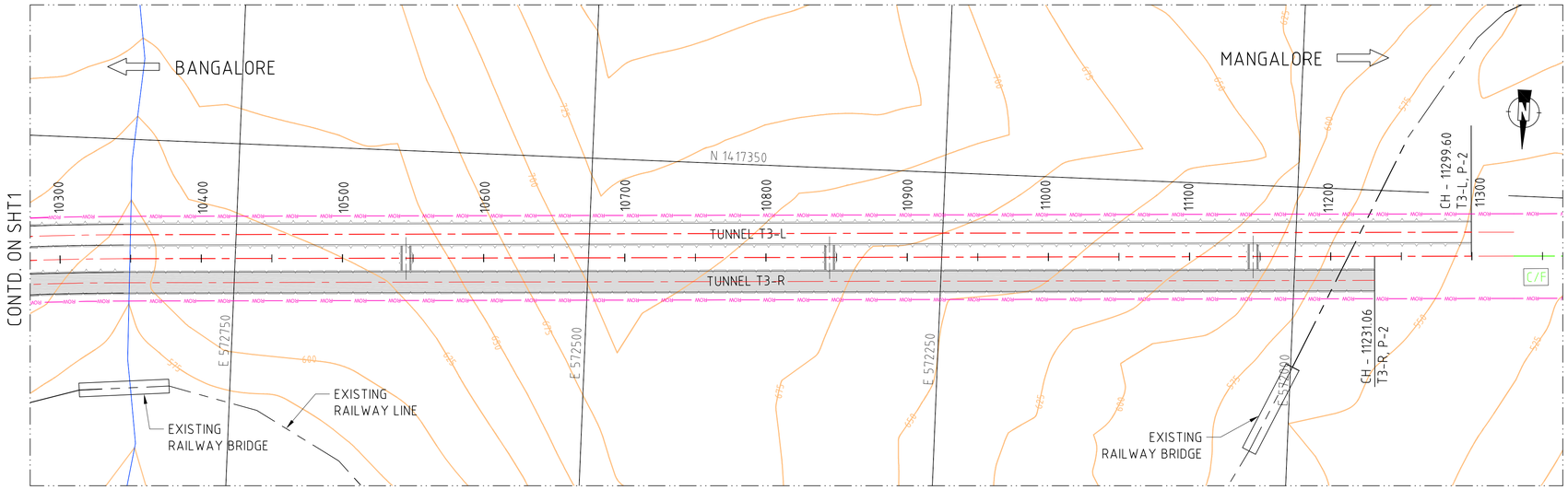
DRAWING NUMBER
SHGA-FS-T3-1122

REV
D

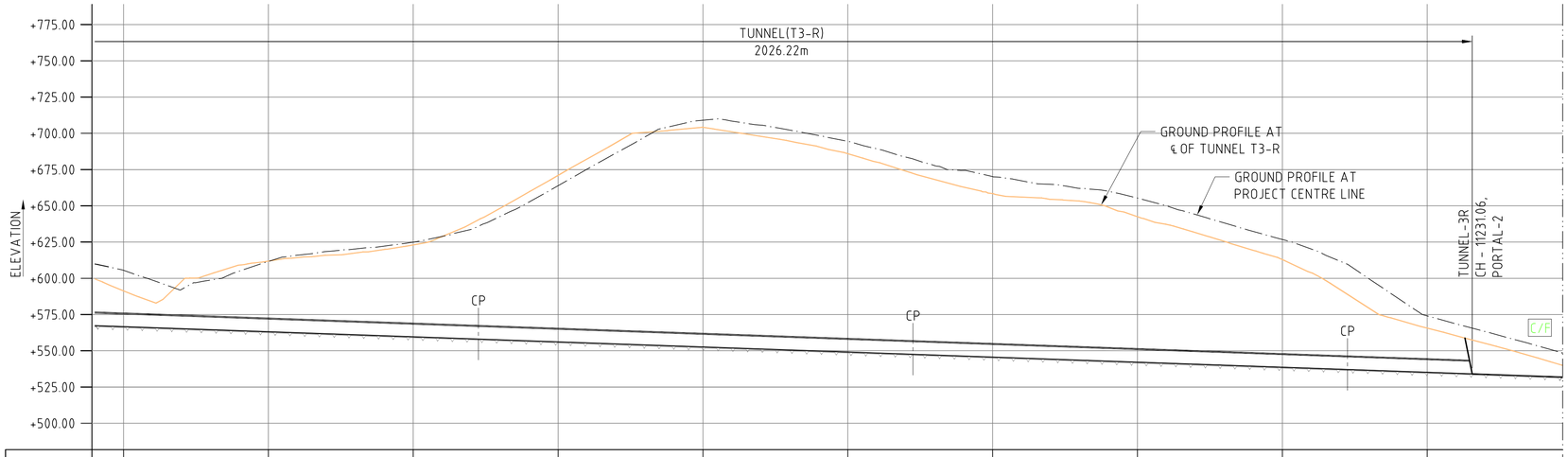
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	10300.000	10400.000	10500.000	10600.000	10700.000	10800.000	10900.000	11000.000	11100.000	11200.000
GROUND LEVEL (m)	591.353	611.858	623.018	671.017	704.168	685.962	658.414	642.499	612.898	565.657
FORMATION LEVEL (m)	566.628	563.128	559.628	556.128	552.628	549.128	545.628	542.128	538.628	535.128

LONGITUDINAL SECTION ALONG T3-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

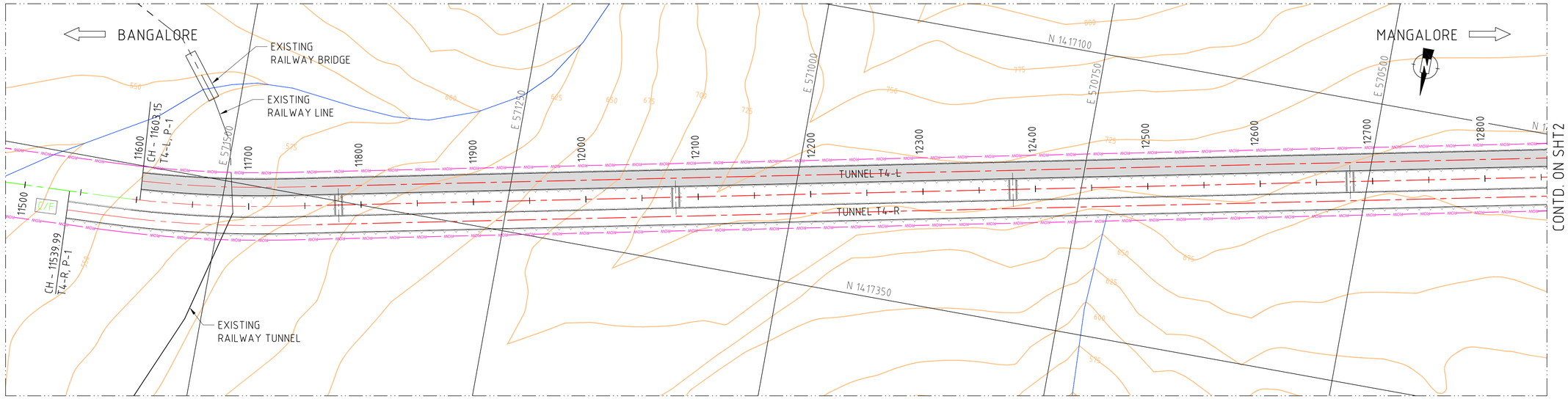
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T3-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

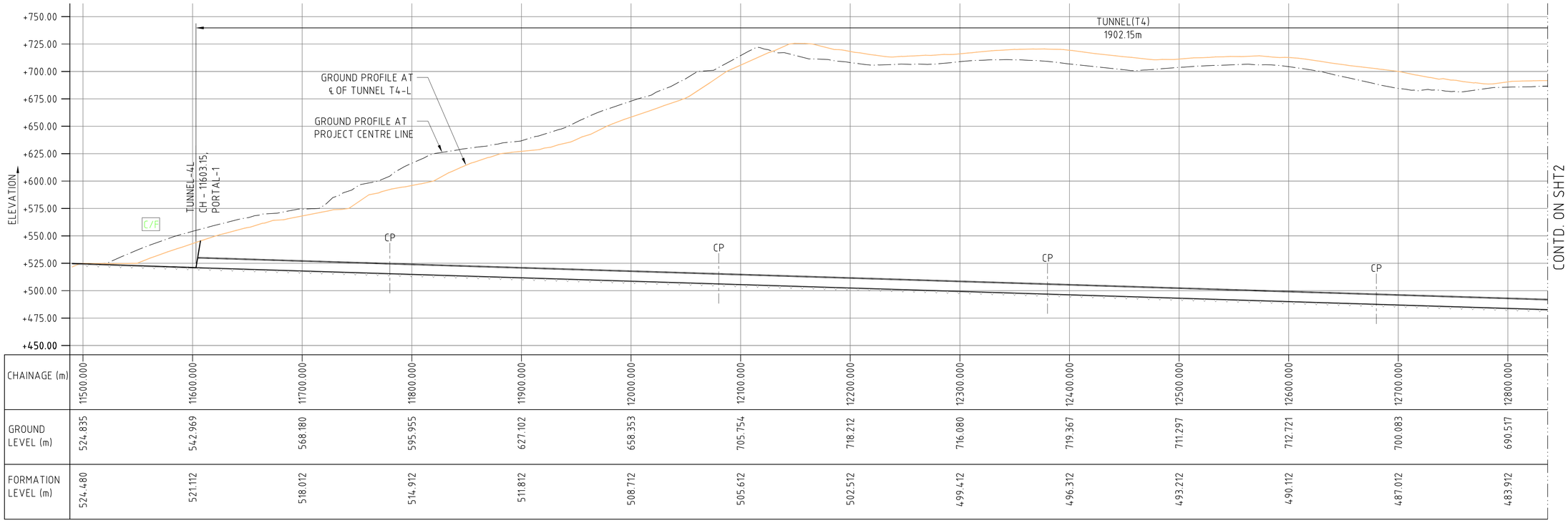
DRAWING NUMBER: SHGA-FS-T3-1122 | REV: D

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	11500.000	11600.000	11700.000	11800.000	11900.000	12000.000	12100.000	12200.000	12300.000	12400.000	12500.000	12600.000	12700.000	12800.000
GROUND LEVEL (m)	524.835	542.969	568.180	595.955	627.102	658.353	705.754	718.212	716.080	719.367	711.297	712.721	700.083	690.517
FORMATION LEVEL (m)	524.480	521.112	518.012	514.912	511.812	508.712	505.612	502.512	499.412	496.312	493.212	490.112	487.012	483.912

LONGITUDINAL SECTION ALONG T4-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TYL-T6L_1100-1151_D.dwg; 2015-12-1

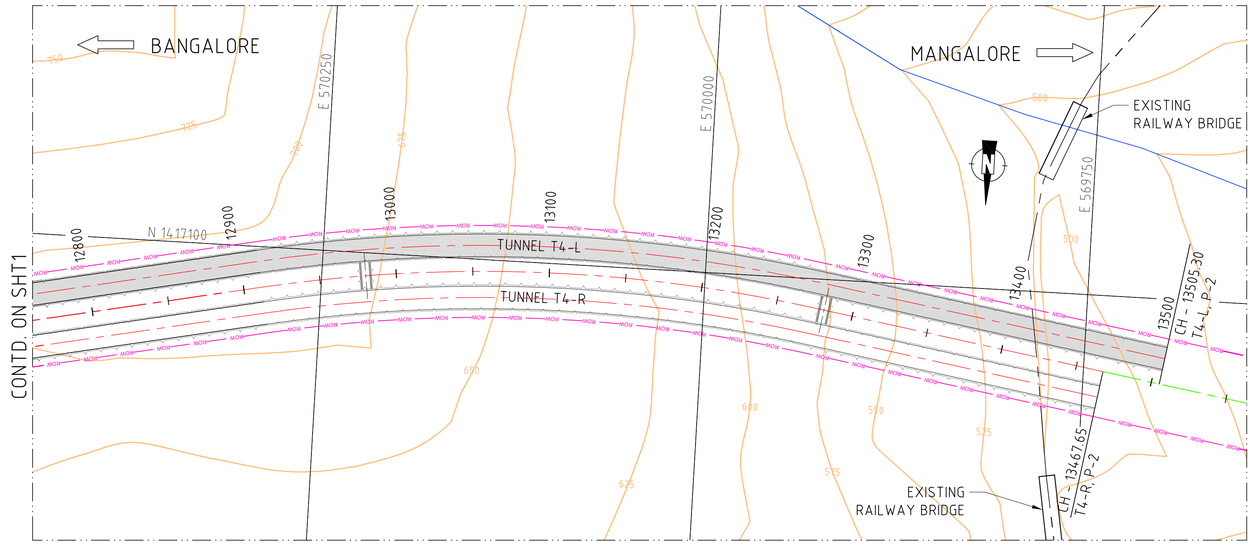
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T4-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

DRAWING NUMBER: SHGA-FS-T4-1131
REV: D

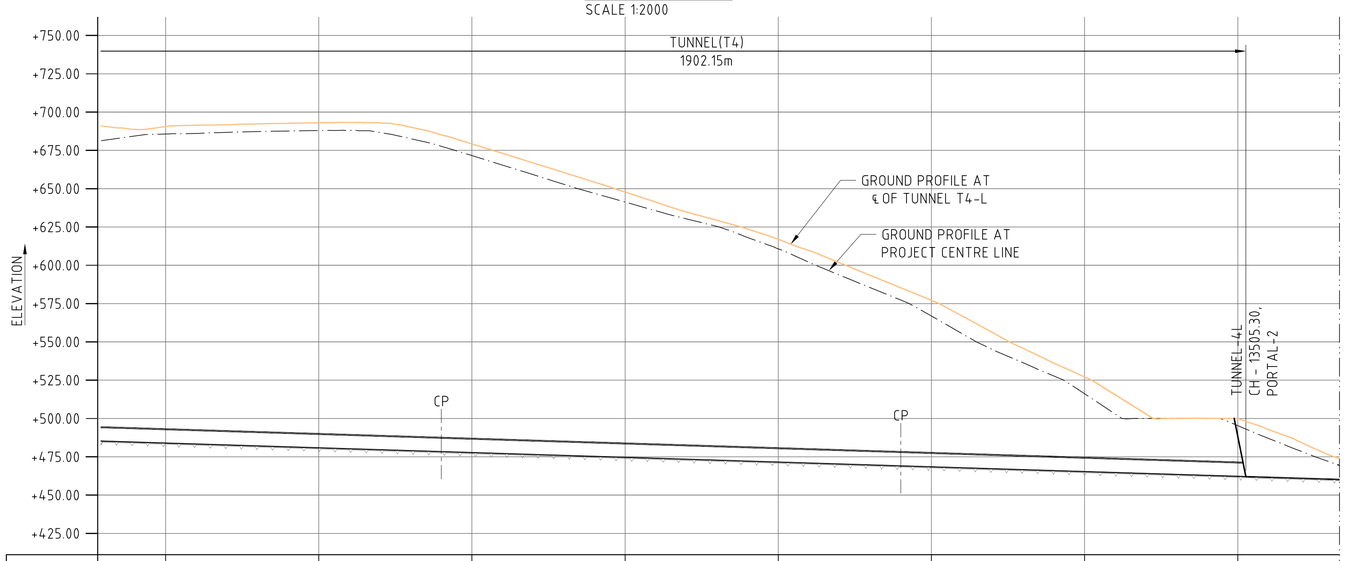
SCALE: AS SHOWN
MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN

SCALE 1:2000



CHAINAGE (m)	12800.000	12900.000	13000.000	13100.000	13200.000	13300.000	13400.000	13500.000
GROUND LEVEL (m)	690.517	692.994	679.210	647.802	616.938	577.104	527.078	499.993
FORMATION LEVEL (m)	483.912	480.812	477.712	474.612	471.512	468.412	465.312	462.212

LONGITUDINAL SECTION ALONG T4-L

SCALE 1:2000

SCALE 1 : 2000

50m 0 100m 200m

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT\ PRa\ R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1L-T6L_1100-1151_D.dwg, 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

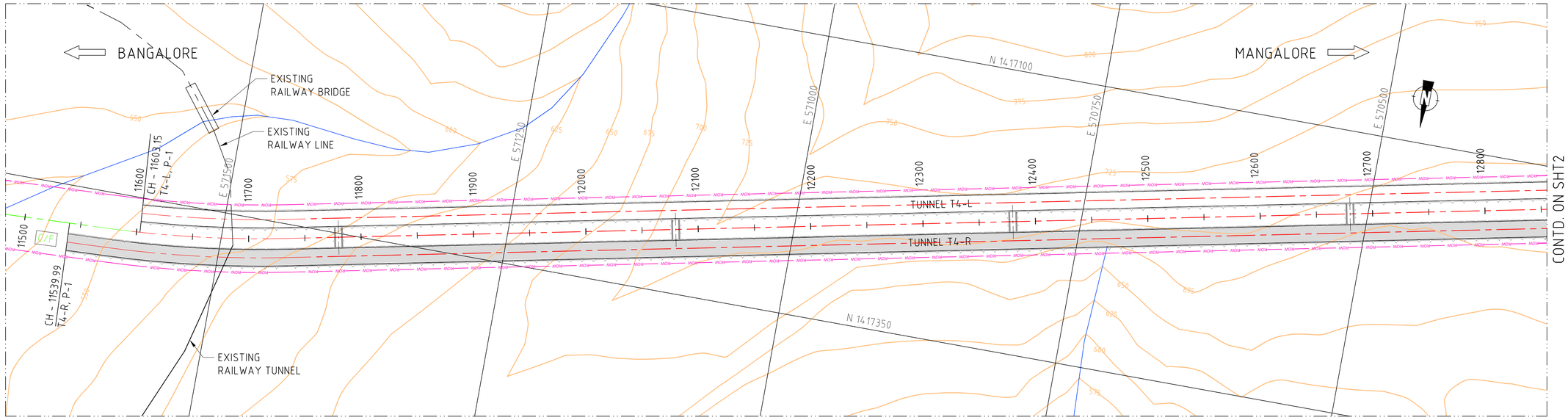
DRAWING TITLE

TUNNEL - T4-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT2

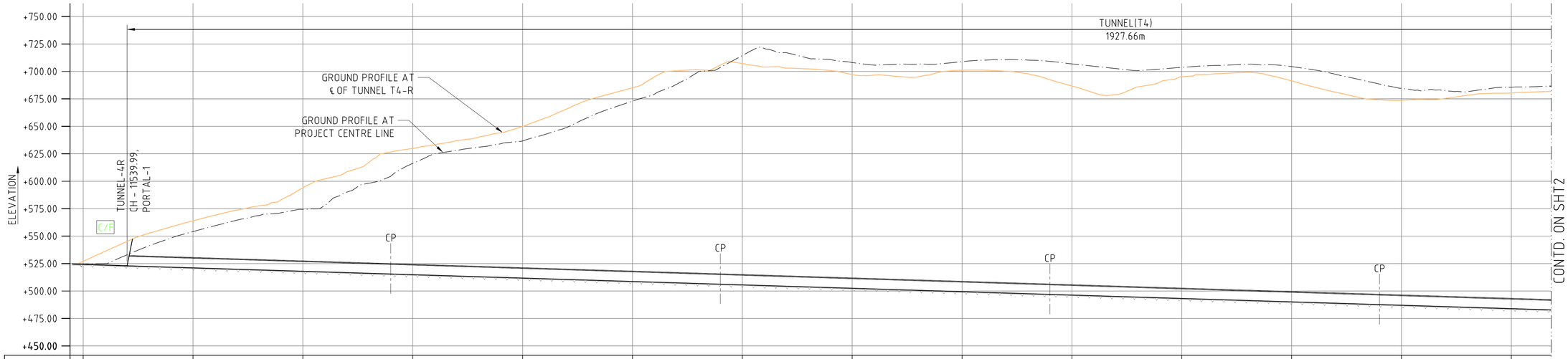
DRAWING NUMBER	REV
SHGA-FS-T4-1131	D

SCALE	MONTH (Current Issue)
AS SHOWN	DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	11500.000	11600.000	11700.000	11800.000	11900.000	12000.000	12100.000	12200.000	12300.000	12400.000	12500.000	12600.000	12700.000	12800.000
GROUND LEVEL (m)	527.112	563.973	594.018	629.899	649.889	685.079	707.158	697.165	701.031	686.722	695.112	691.361	673.643	680.344
FORMATION LEVEL (m)	524.480	521.112	518.012	514.912	511.812	508.712	505.612	502.512	499.412	496.312	493.212	490.112	487.012	483.912

LONGITUDINAL SECTION ALONG T4-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TIR-T6R_1101-1152_D.dwg, 2015-12-

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T4-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

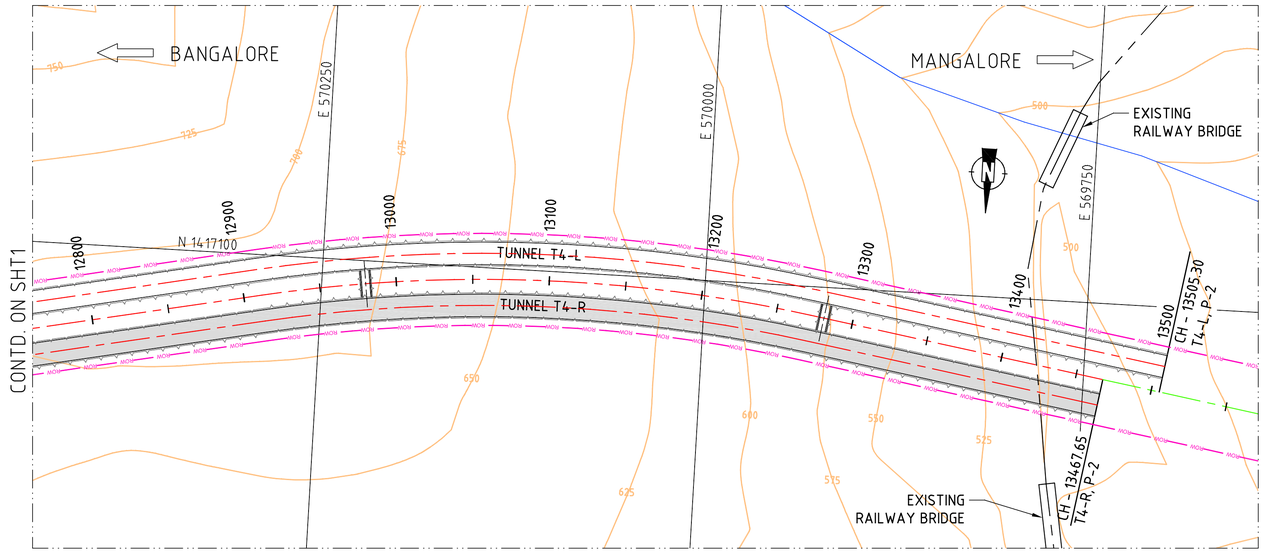
DRAWING NUMBER
SHGA-FS-T4-1132

REV
D

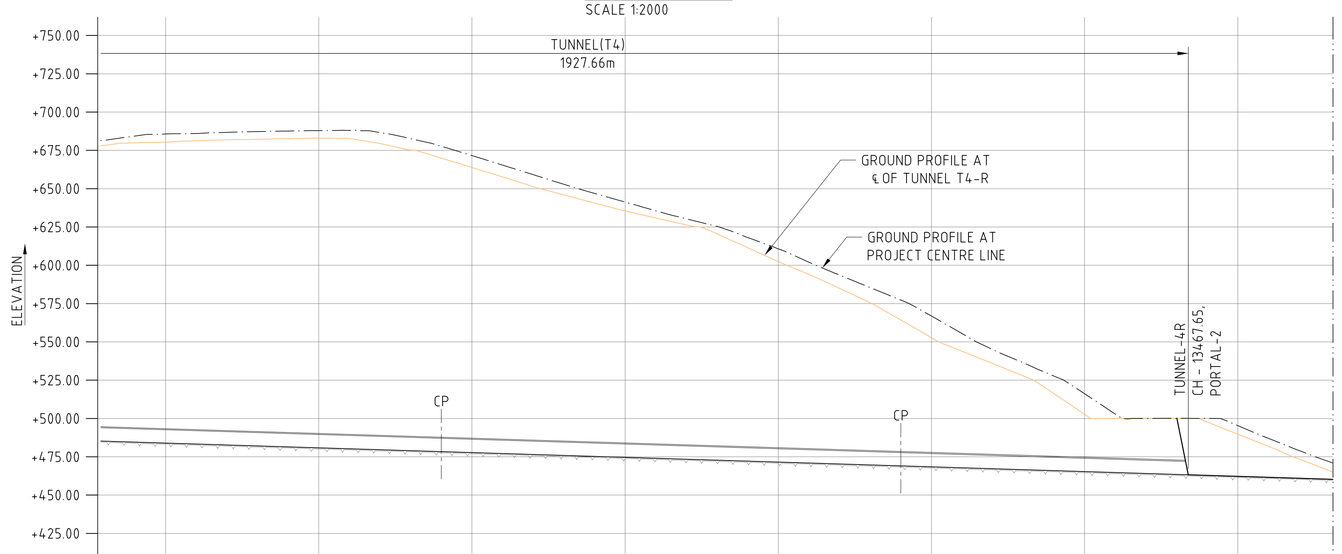
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	12800.000	12900.000	13000.000	13100.000	13200.000	13300.000	13400.000	13500.000
GROUND LEVEL (m)	680.344	682.986	663.811	635.455	602.456	552.725	502.667	489.772
FORMATION LEVEL (m)	483.912	480.812	477.712	474.612	471.512	468.412	465.312	462.212

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

LONGITUDINAL SECTION ALONG T4-R
SCALE 1:2000

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TYP-T6R_1101-1152_D.dwg, 2015-12-

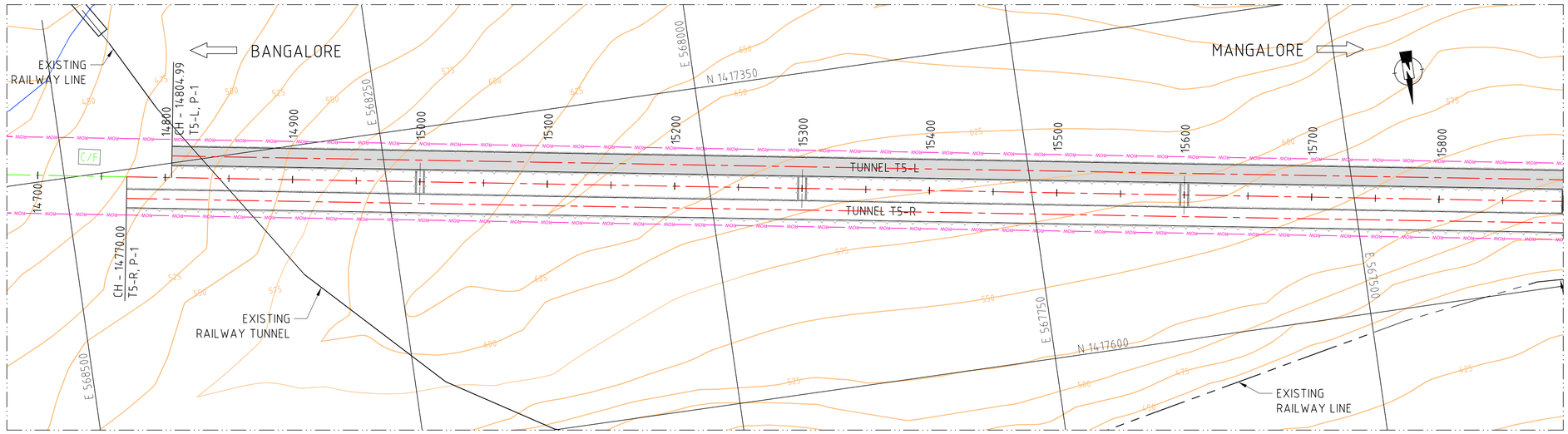
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T4-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

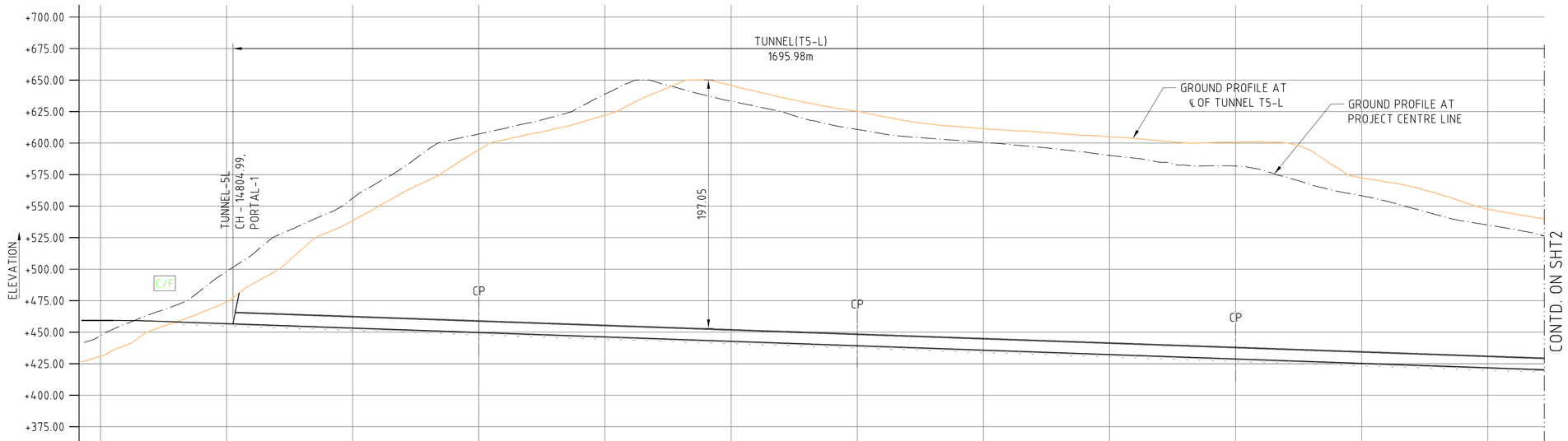
DRAWING NUMBER: SHGA-FS-T4-1132 | REV: D

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	14700.000	14800.000	14900.000	15000.000	15100.000	15200.000	15300.000	15400.000	15500.000	15600.000	15700.000	15800.000
GROUND LEVEL (m)	430.878	474.014	538.634	594.730	622.132	645.783	625.232	611.488	605.015	600.867	572.346	547.554
FORMATION LEVEL (m)	459.333	456.780	453.280	449.780	446.280	442.780	439.280	435.780	432.280	428.780	425.280	421.780

LONGITUDINAL SECTION ALONG T5-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1L-T6L_1100-1151_D.dwg; 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T5-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

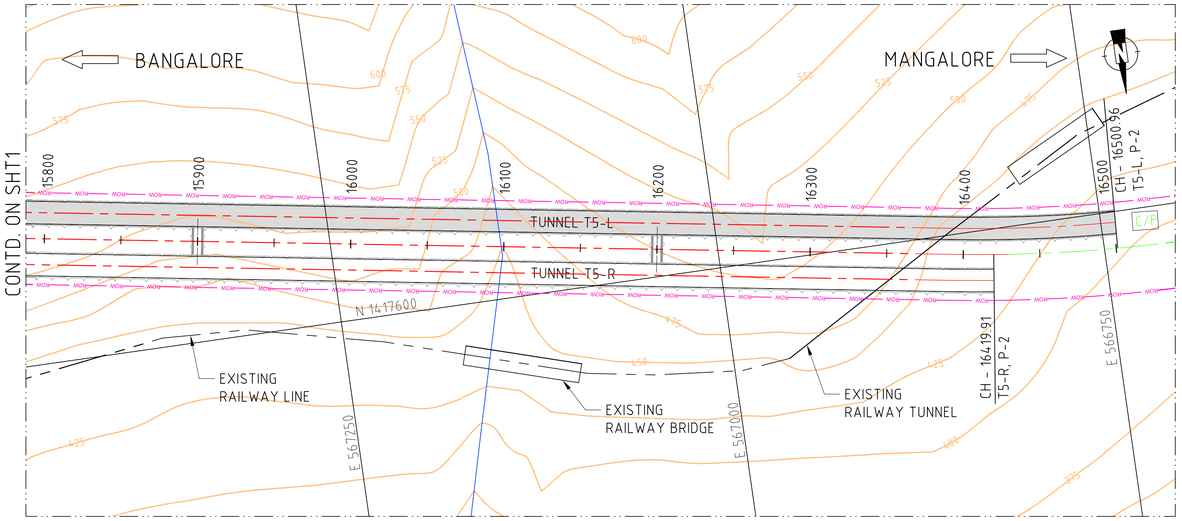
DRAWING NUMBER
SHGA-FS-T5-1141

REV
D

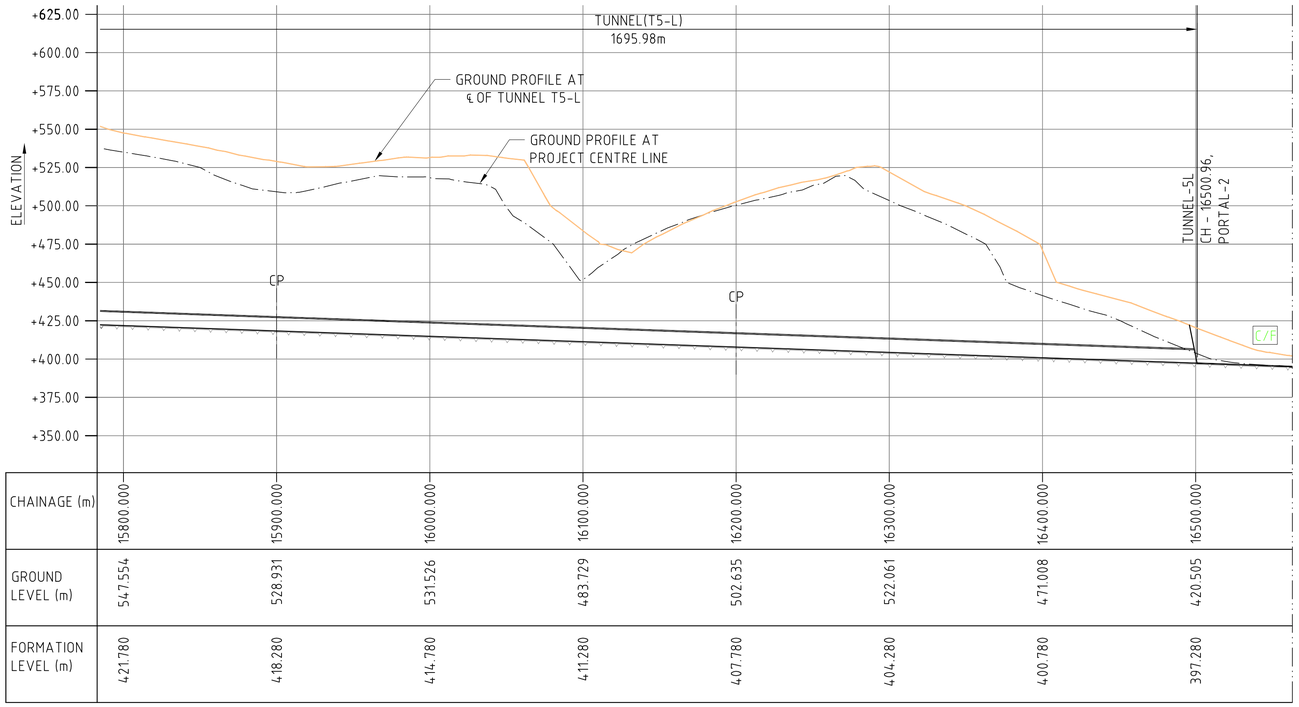
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	15800.000	15900.000	16000.000	16100.000	16200.000	16300.000	16400.000	16500.000
GROUND LEVEL (m)	547.554	528.931	531.526	483.729	502.635	522.061	471.008	420.505
FORMATION LEVEL (m)	421.780	418.280	414.780	411.280	407.780	404.280	400.780	397.280

LONGITUDINAL SECTION ALONG T5-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; P:\Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TYL-T6L_1100-1151_D.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T5-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT2

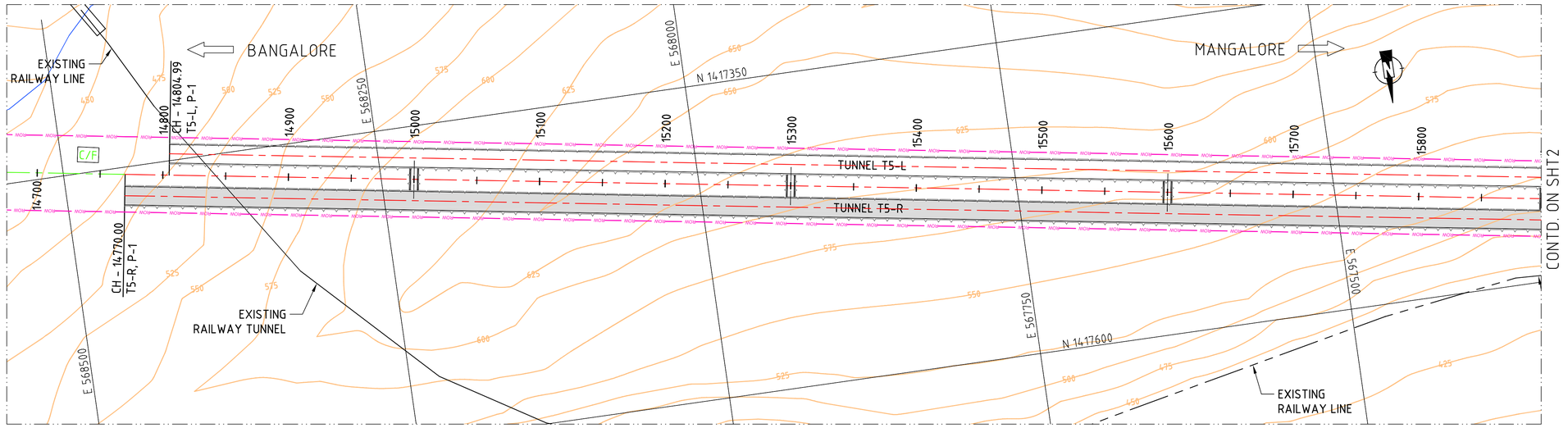
DRAWING NUMBER
SHGA-FS-T5-1141

REV
D

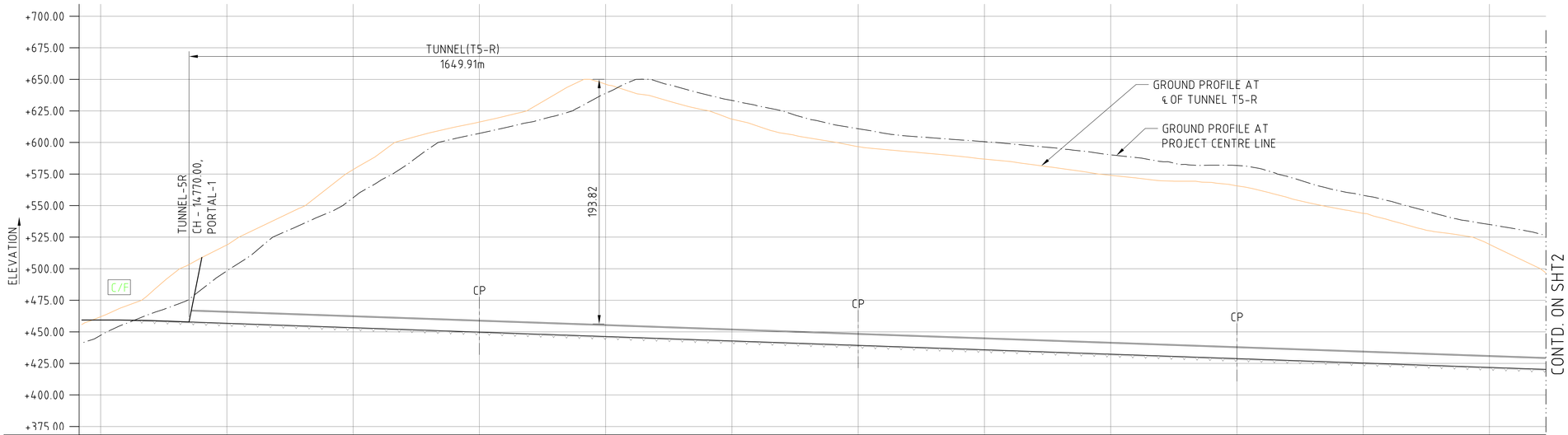
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	14700.000	14800.000	14900.000	15000.000	15100.000	15200.000	15300.000	15400.000	15500.000	15600.000	15700.000	15800.000
GROUND LEVEL (m)	461.941	518.822	578.524	616.212	646.194	618.499	596.721	586.849	574.003	565.671	543.873	519.338
FORMATION LEVEL (m)	459.333	456.780	453.280	449.780	446.280	442.780	439.280	435.780	432.280	428.780	425.280	421.780

LONGITUDINAL SECTION ALONG T5-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

DRAWING TITLE
TUNNEL - T5-R
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

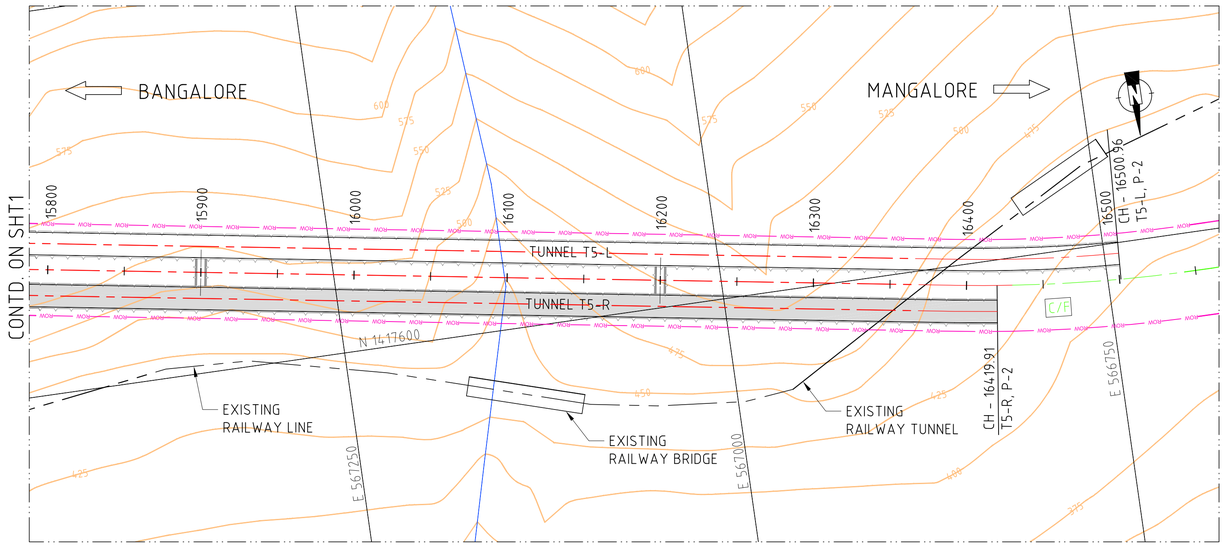
DRAWING NUMBER
SHGA-FS-T5-1142

REV
D

SCALE
AS SHOWN

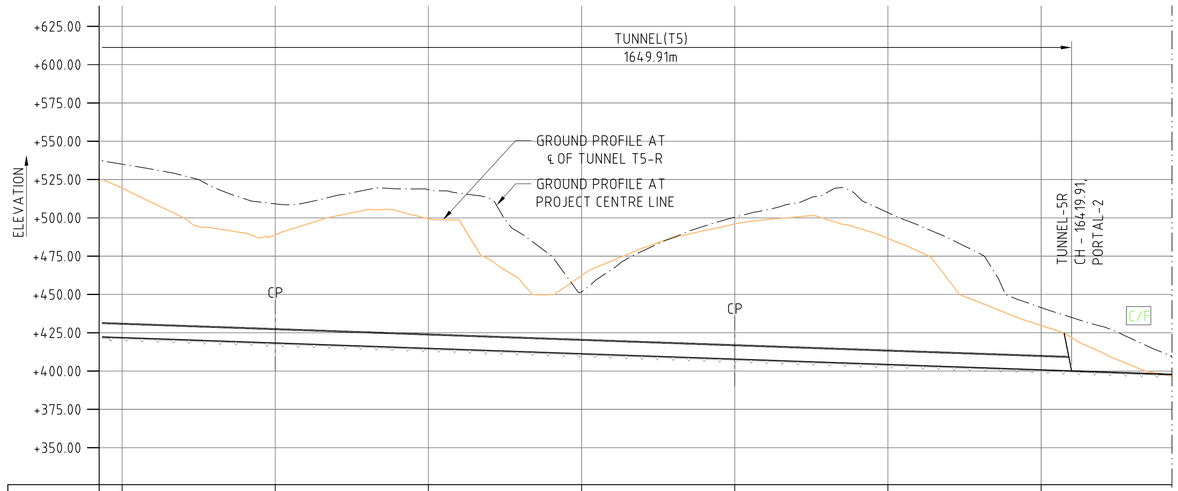
MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN

SCALE 1:2000



CHAINAGE (m)	15800.000	15900.000	16000.000	16100.000	16200.000	16300.000	16400.000
GROUND LEVEL (m)	519.338	488.882	499.406	462.350	496.139	486.611	429.737
FORMATION LEVEL (m)	421.780	418.280	414.780	411.280	407.780	404.280	400.780

LONGITUDINAL SECTION ALONG T5-R

SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:

1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date [FIRST ISSUE]	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :

GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; PRa; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-9

CLIENT

GOVERNMENT OF KARNATAKA

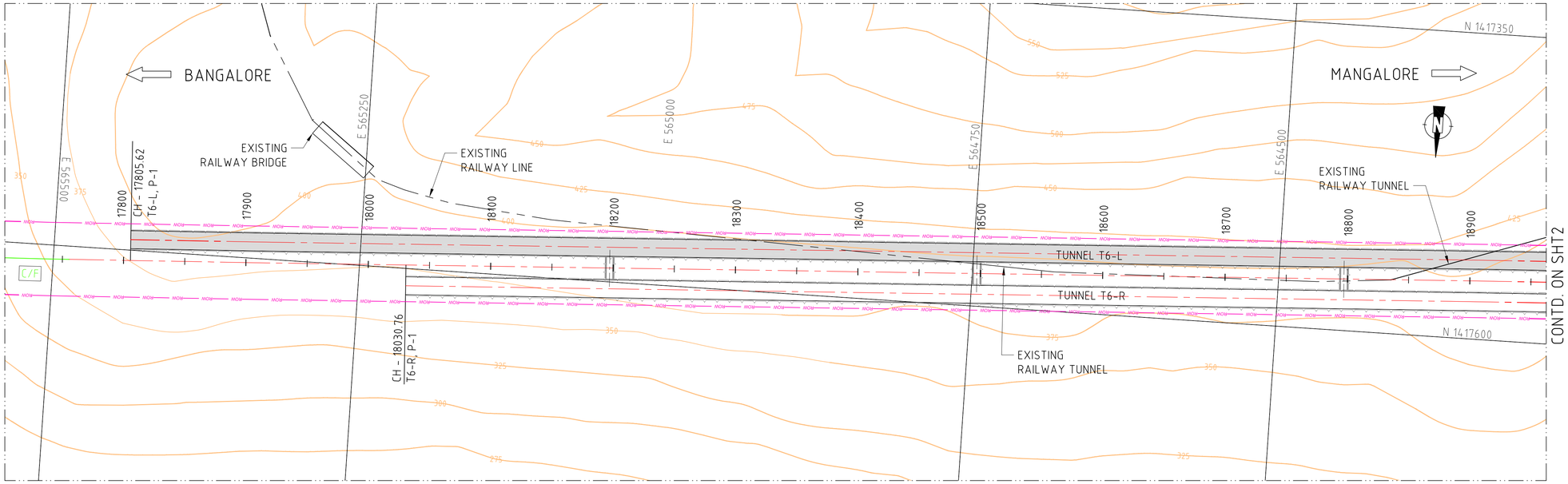
DRAWING TITLE

TUNNEL - T5-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

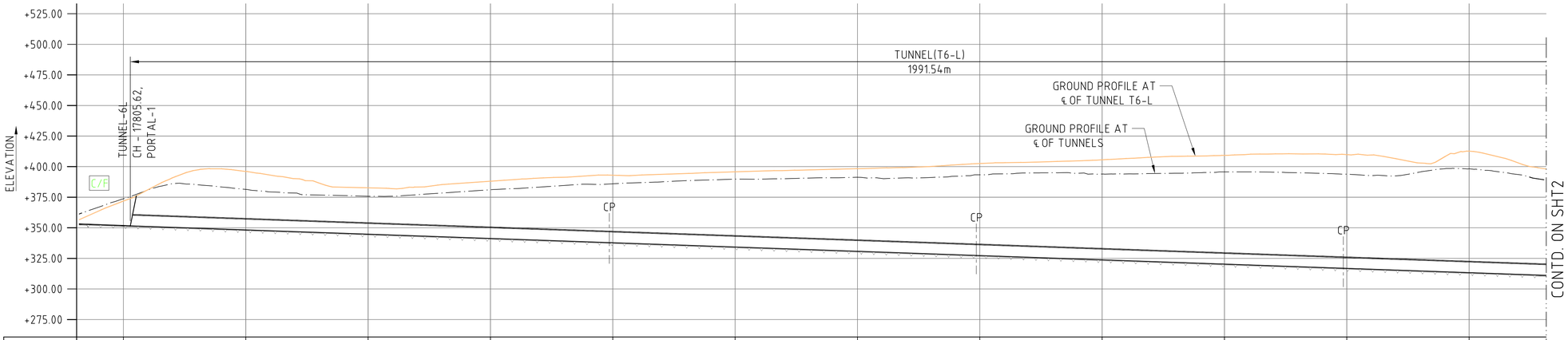
DRAWING NUMBER	REV
SHGA-FS-T5-1142	D

SCALE	MONTH (Current Issue)
AS SHOWN	SEP 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	17800.000	17900.000	18000.000	18100.000	18200.000	18300.000	18400.000	18500.000	18600.000	18700.000	18800.000	18900.000
GROUND LEVEL (m)	371.859	396.075	382.704	388.062	392.990	395.791	398.363	402.544	405.600	409.189	409.847	412.679
FORMATION LEVEL (m)	351.780	348.280	344.780	341.280	337.780	334.280	330.780	327.280	323.780	320.280	316.780	313.280

LONGITUDINAL SECTION ALONG T6-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1L-T6L_1100-1151_D.dwg, 2015-12-14

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T6-L
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT1

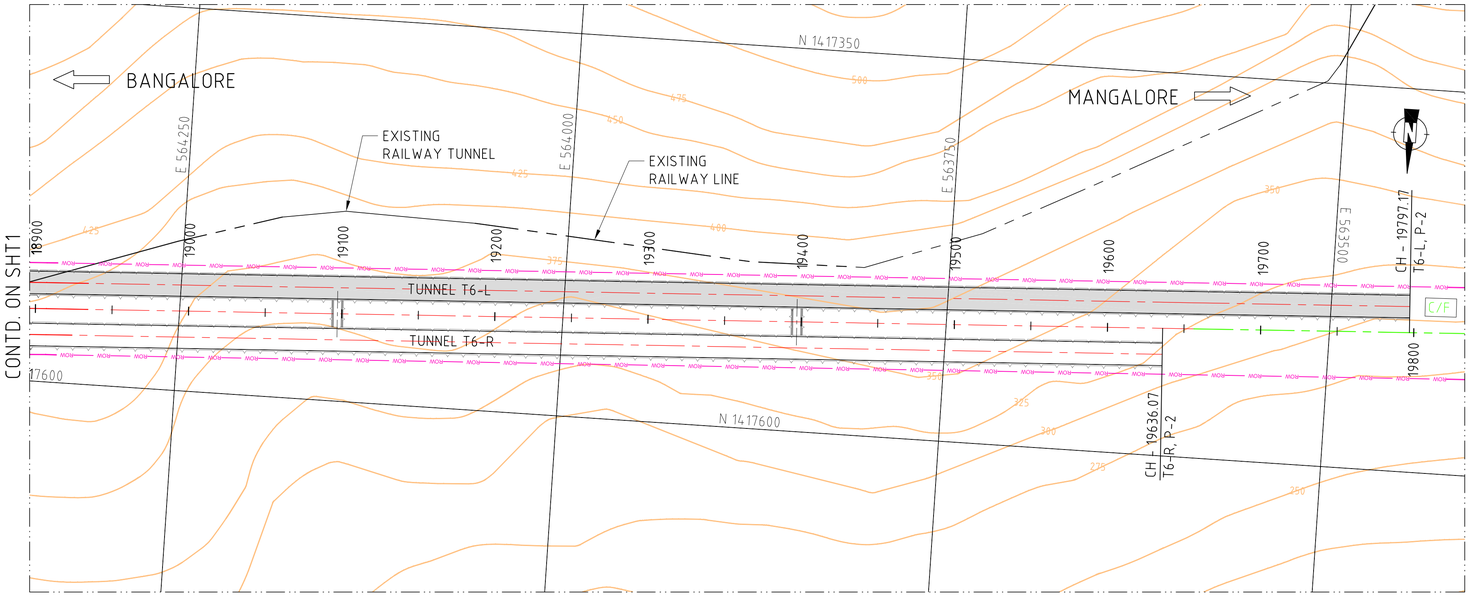
DRAWING NUMBER
SHGA-FS-T6-1151

REV
D

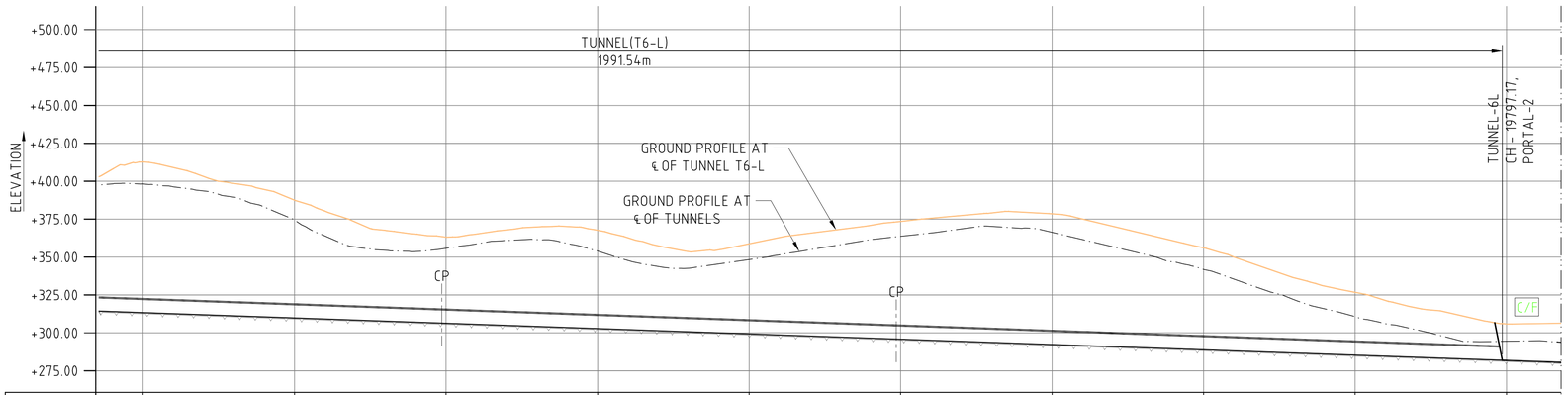
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	18900.000	19000.000	19100.000	19200.000	19300.000	19400.000	19500.000	19600.000	19700.000	19800.000
GROUND LEVEL (m)	412.679	387.510	363.137	367.658	358.730	373.482	378.500	356.082	326.708	305.916
FORMATION LEVEL (m)	313.280	309.780	306.280	302.780	299.280	295.780	292.280	288.780	285.280	281.780

LONGITUDINAL SECTION ALONG T6-L
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000

50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:

- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	ADh/RMe	AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ PRa, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TNL-T6L_1100-1151_D.dwg, 2015-12-1

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T6-L
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT2

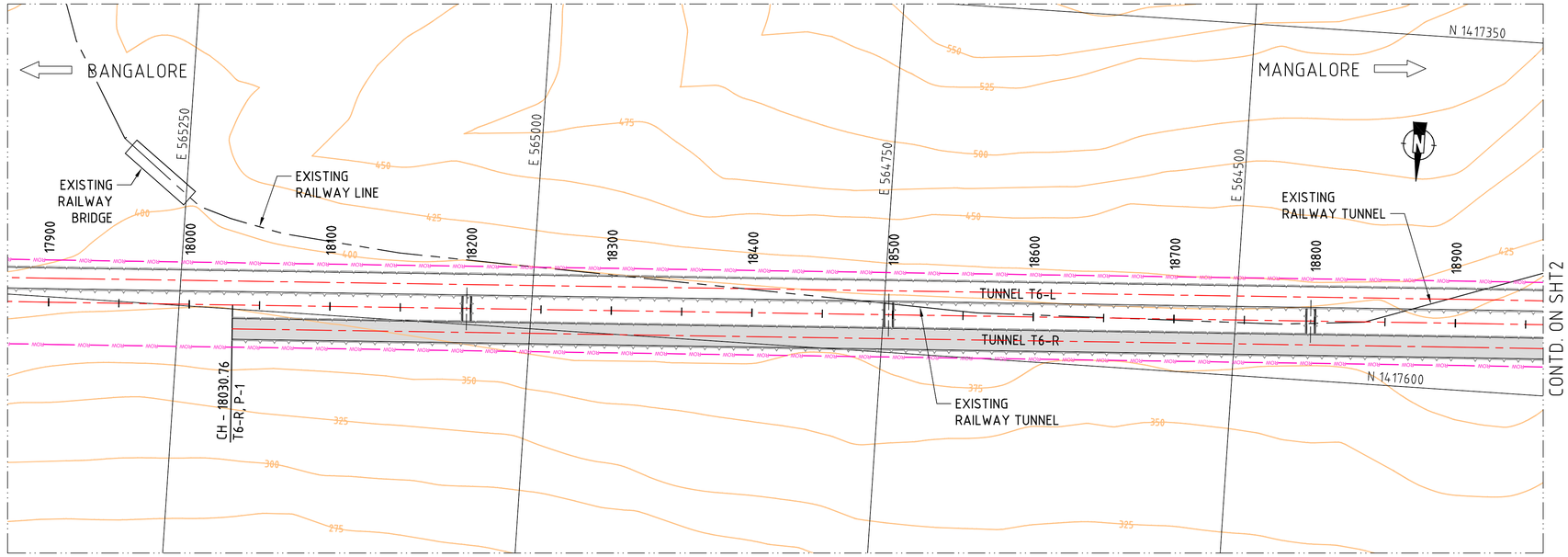
DRAWING NUMBER
SHGA-FS-T6-1151

REV
D

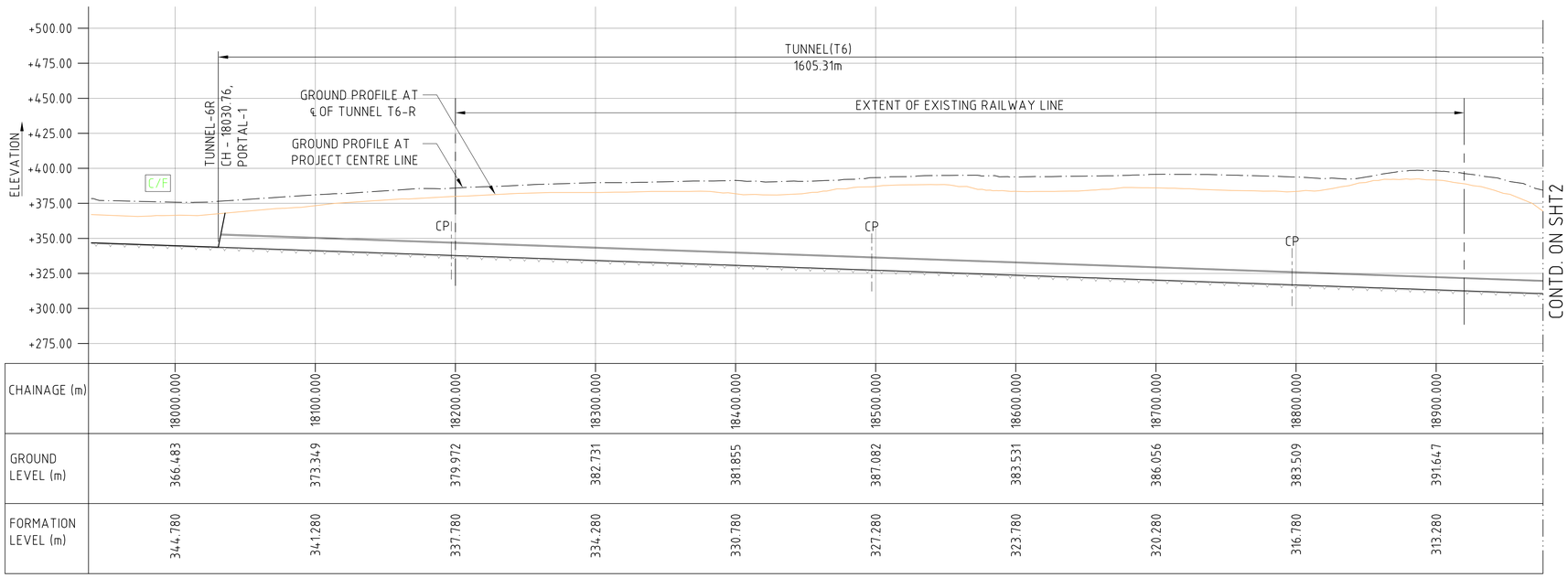
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	18000.000	18100.000	18200.000	18300.000	18400.000	18500.000	18600.000	18700.000	18800.000	18900.000
GROUND LEVEL (m)	366.483	373.349	379.972	382.731	381.855	387.082	383.531	386.056	383.509	391.647
FORMATION LEVEL (m)	344.780	341.280	337.780	334.280	330.780	327.280	323.780	320.280	316.780	313.280

LONGITUDINAL SECTION ALONG T6-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	DEC 15	THIRD SUBMISSION (KD-5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

©GEOCONSULT; P:\Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-T1R-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T6-R
GENERAL ARRANGEMENT PLAN AND L-SECTION_SHT1

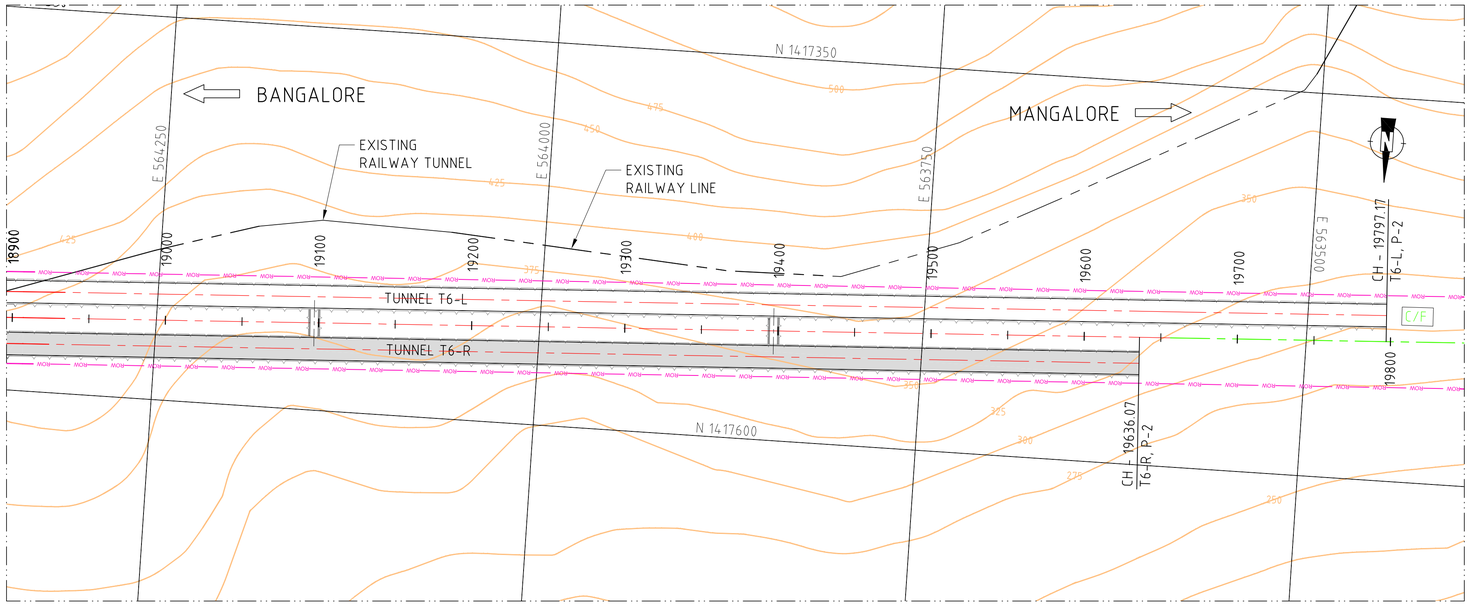
DRAWING NUMBER
SHGA-FS-T6-1152

REV
D

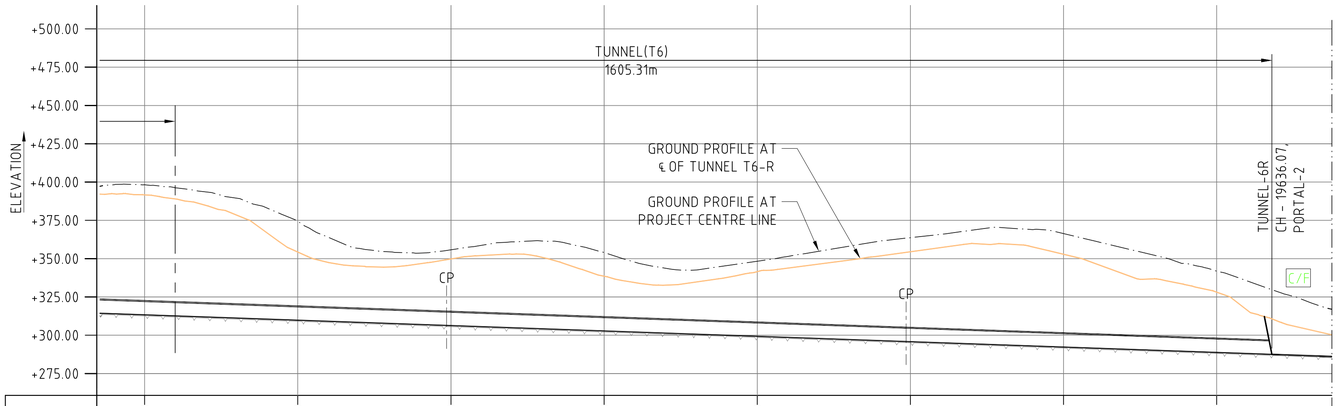
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



LAYOUT PLAN
SCALE 1:2000



CHAINAGE (m)	18900.000	19000.000	19100.000	19200.000	19300.000	19400.000	19500.000	19600.000
GROUND LEVEL (m)	391.647	354.343	349.792	338.527	341.489	354.506	352.857	328.144
FORMATION LEVEL (m)	313.280	309.780	306.280	302.780	299.280	295.780	292.280	288.780

LONGITUDINAL SECTION ALONG T6-R
SCALE 1:2000

TUNNELS PLAN AND SECTIONS ARE BASED ON PRELIMINARY IMAGERY DATA OF THE AREA AND MAY CHANGE AFTER GETTING DETAILED SURVEY DONE.

SCALE 1 : 2000
50m 0 100m 200m

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

NOTES:
1. ALL DIMENSIONS, CHAINAGES AND ELEVATIONS ARE IN m.

LEGEND:
- EXISTING ROAD
- RIVER/NALA
- RAILWAY LINE
- ACCESS ROAD
- ROW — RIGHT OF WAY (ROW)

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 15	FOURTH SUBMISSION (KD-6)	PRa	RMe	AKg
C	NOV 15	THIRD DRAFT (KD5)	PRa	RMe	AKg
B	SEP 15	SECOND DRAFT (KD-4)	PRa	RMe	AKg
A	AUG 15	FIRST DRAFT (INTERIM PROGRESS-KD3)	PRa	RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	SEP 2015	SEP 2015	SEP 2015	SEP 2015	SEP 2015
Name	PRa	RMe	BRs	BRs	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

©GEOCONSULT; P:\Ra, R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-TIR-T6R_1101-1152_D.dwg, 2015-12-8

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
TUNNEL - T6-R
GENERAL ARRANGEMENT
PLAN AND L-SECTION_SHT2

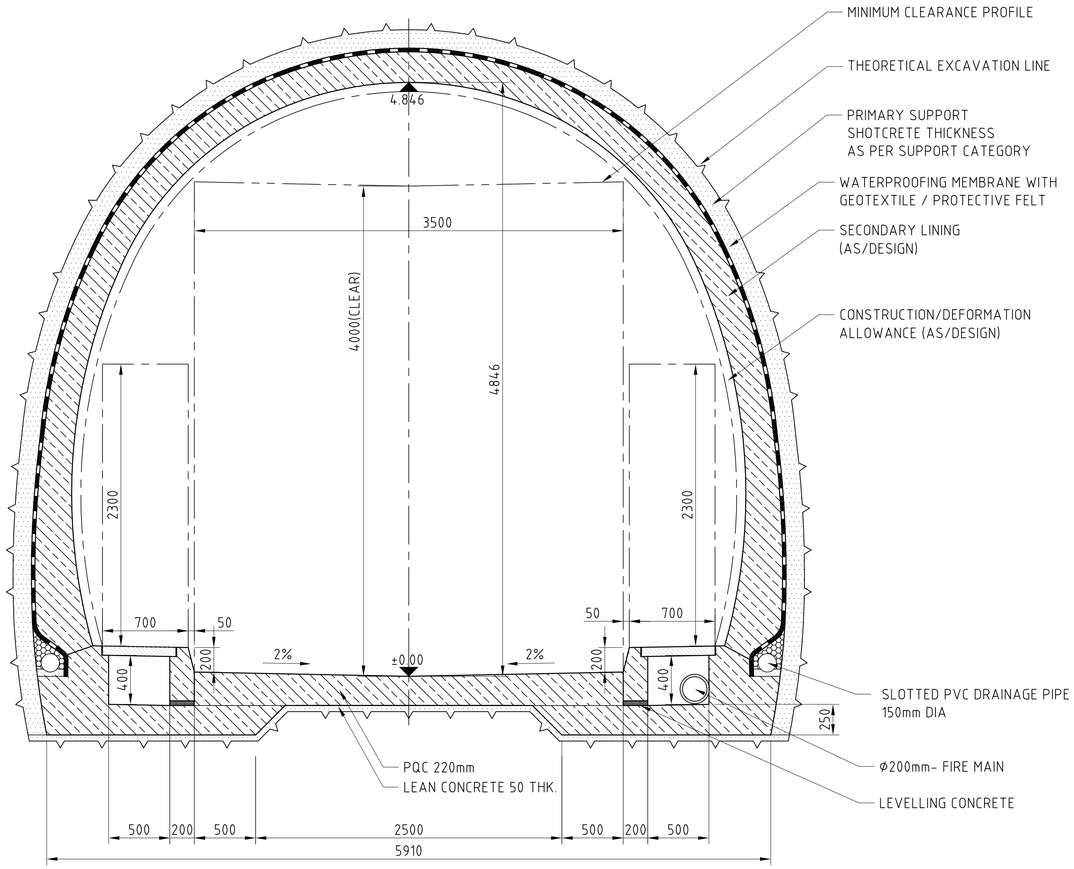
DRAWING NUMBER
SHGA-FS-T6-1152

REV
D

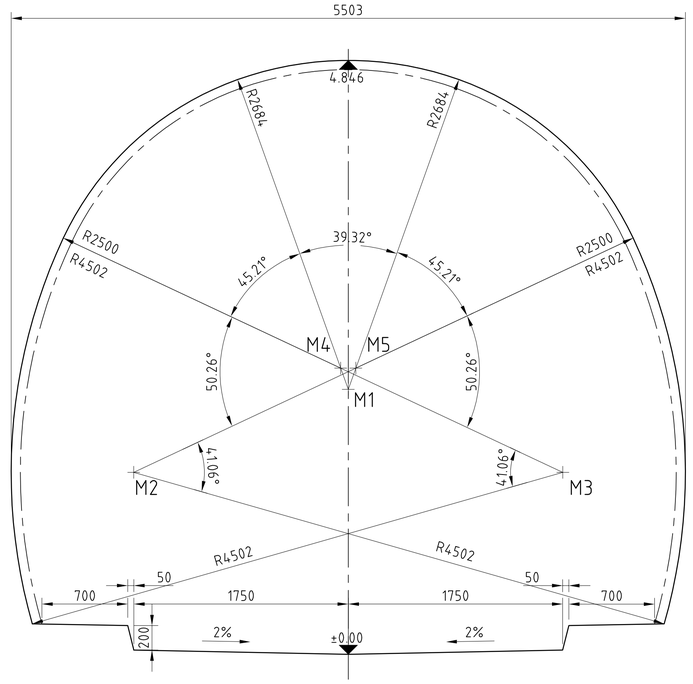
SCALE
AS SHOWN

MONTH (Current Issue)
DEC 2015

Original Drawing Size A1



REGULAR CROSS SECTION
WITH FLAT INVERT
SCALE 1:25



REGULAR CROSS SECTION
GEOMETRICAL DEFINITION
SCALE 1:25

POINT COORDINATES (mm)		
Point	X	Y
M1	0	+2162
M2	-1751	+1485
M3	+1751	-1485
M4	-62	+2336
M5	+62	+2336

NOTES :

1. ALL DIMENSIONS ARE IN m UNLESS NOTED OTHERWISE.
2. PAVEMENT CROSS SECTION TAKES IN TO ACCOUNT THAT, ROCK IS BELOW LEAN CONCRETE AND OF SUFFICIENT STIFFNESS.

SCALE 1 : 25
1m 0 1m 2m 2.5m

PRELIMINARY

REFERENCE DRAWINGS:
.
.

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	RMe	BRs	FKr
A	DEC 2015	FIRST DRAFT (KD-5)	RMe	BRs	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	RMe	RMe	BRs	BRs	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT\ Aba\ R \16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VCP-1201_B.dwg, 2015-12-18

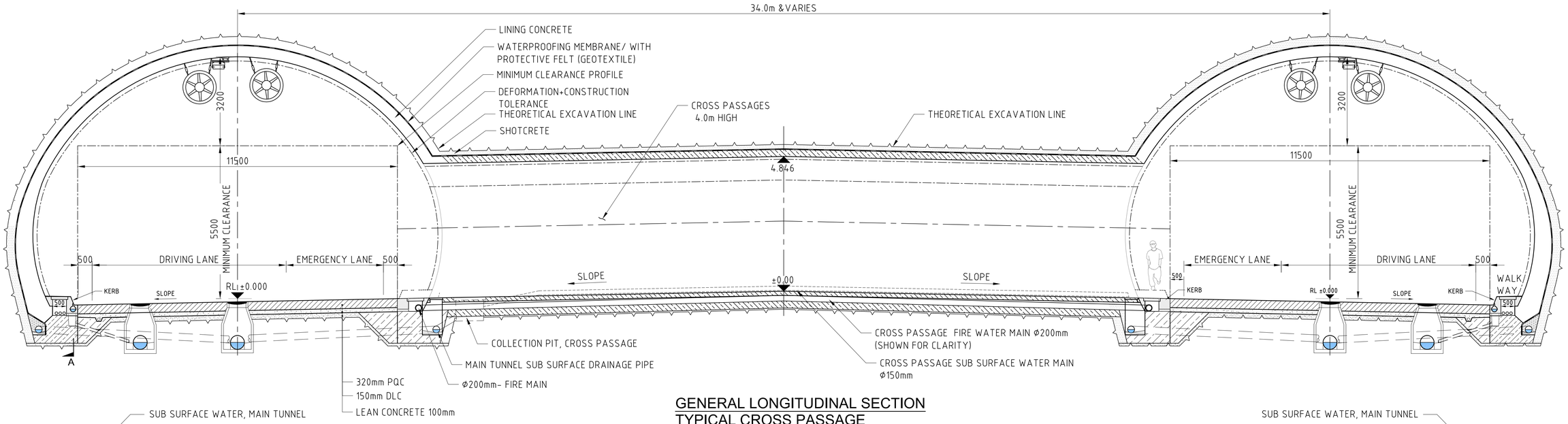
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VEHICULAR CROSS PASSAGE
GENERAL ARRANGEMENT
REGULAR CROSS SECTION

DRAWING NUMBER	REV
SHGA-FS-CP-1201	B

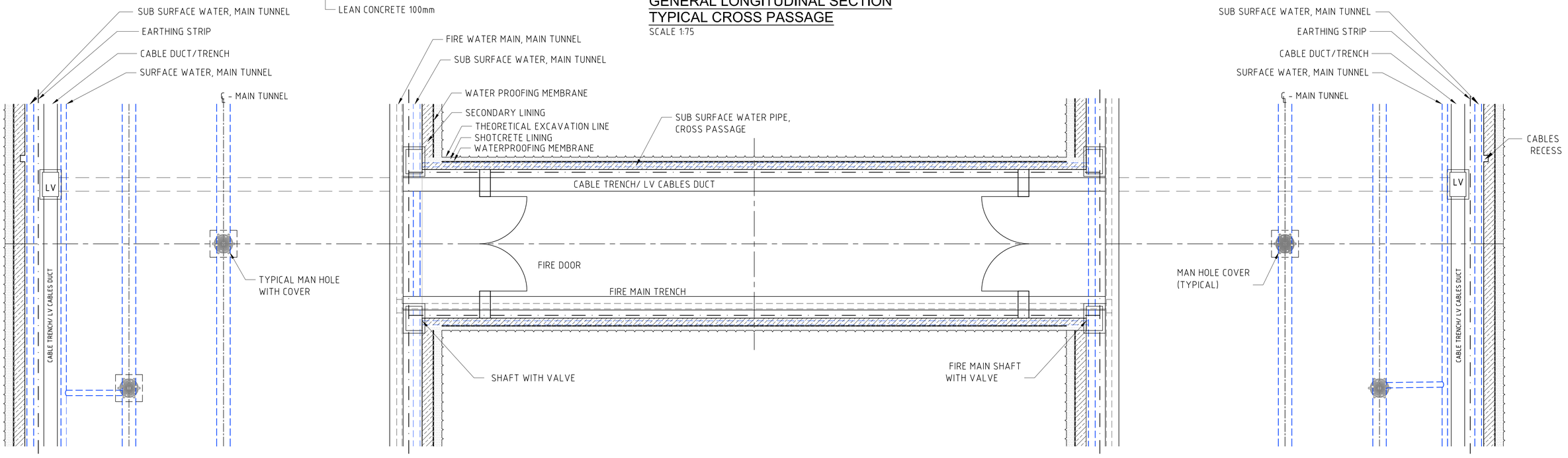
SCALE	MONTH (Current Issue)
1:25	DEC 2015

Original Drawing Size A1



GENERAL LONGITUDINAL SECTION TYPICAL CROSS PASSAGE

SCALE 1:75



GENERAL PLAN TYPICAL CROSS PASSAGE

SCALE 1:75

SCALE 1 : 75

2.5m 0 2.5m 5.0m 7.5m

NOTES :

1. ALL DIMENSIONS ARE IN m UNLESS NOTED OTHERWISE.
2. DRAINAGE PIPES ARRANGEMENT IS PRELIMINARY ONLY AND MAY CHANGE AT DEATILED DESIGN STAGE.

REFERENCE DRAWINGS:

LEGEND:

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
B	DEC 2015	SECOND DRAFT (KD-6)	RMe	BRs	FKr
A	DEC 2015	FIRST DRAFT (KD-5)	RMe	BRs	FKr

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	DEC 2015	DEC 2015	DEC 2015	DEC 2015	DEC 2015
Name	RMe	RMe	BRs	BRs	FKr
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

\\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VCP-1211_B.dwg, 2015-12-18

CLIENT

GOVERNMENT OF KARNATAKA

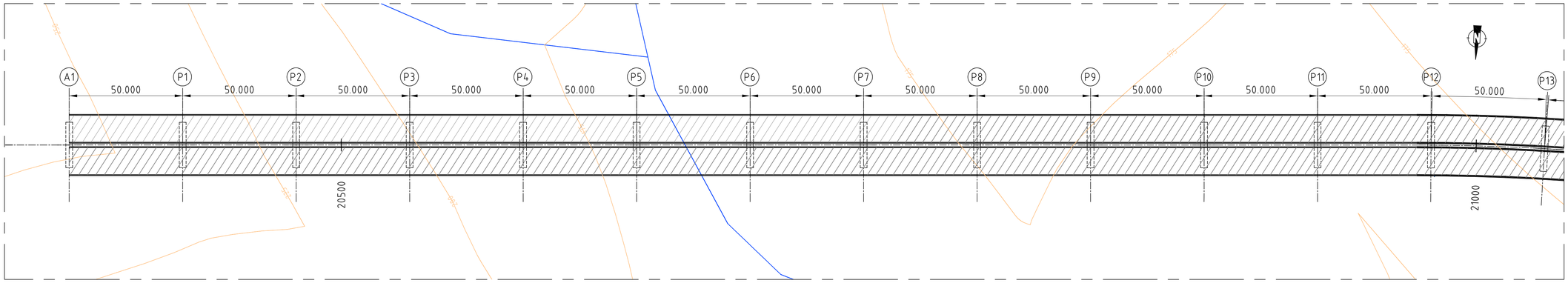
DRAWING TITLE

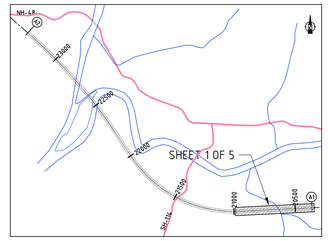
VEHICULAR CROSS PASSAGE GENERAL ARRANGEMENT PLAN AND L-SECTION

DRAWING NUMBER	REV
SHGA-FS-VCP-1211	B

SCALE	MONTH (Current Issue)
1:75	DEC 2015

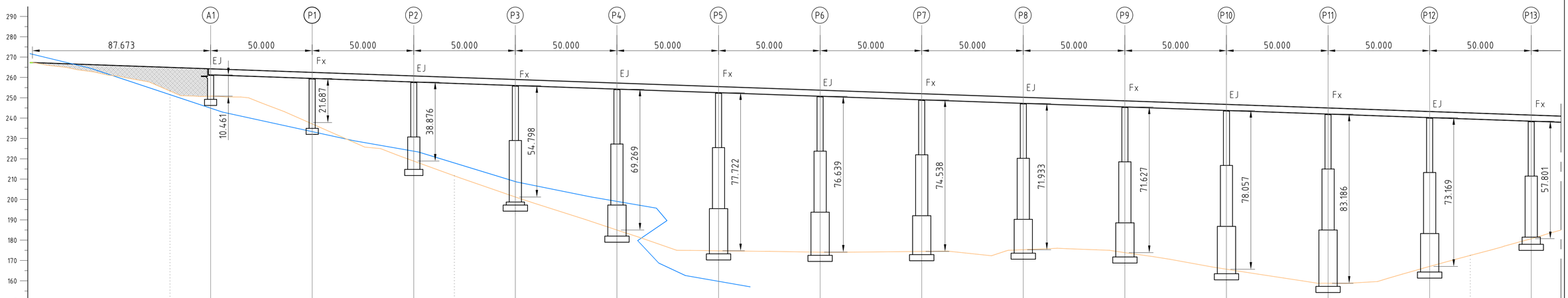
Original Drawing Size A1





KEY PLAN

PLAN
SCALE 1:1000



CHAINAGE (m)	20360.00	20380.00	20430.00	20480.00	20500.00	20530.00	20580.00	20630.00	20680.00	20730.00	20780.00	20830.00	20880.00	20930.00	20980.00	21000.00	21030.00								
GROUND LEVEL (m)	250.780		237.145		218.866	201.193	184.973	174.769	174.103	174.454	175.309	173.865	165.685	158.805	167.073		180.691								
FORMATION LEVEL (m)	264.244		262.494		260.744	258.994	257.244	255.494	253.744	251.994	250.244	248.494	246.744	244.994	243.244		241.494								
HORIZONTAL ALIGNMENT	L =1500.959										L =565.911														
VERTICAL ALIGNMENT	GRADIENT 3.5%																								

LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

NOTES:
1. SPAN ARRANGEMENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-014, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

PRELIMINARY

REFERENCE DRAWINGS:
SHGA-FS-LAY-1000

SHGA-FS-GEN-014 (TYPICAL CROSS-SECTION)

LEGEND:
EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH SUBMISSION (KD-6)	PRa	ADh/RMe	AKg
C	DEC 2015	THIRD SUBMISSION (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT	ABa	ADh/RMe	AKg

QUALITY ASSURANCE
The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VD1-1501_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VIADUCT (CH.20362.44 TO 23579.21)
GENERAL ARRANGEMENT
PLAN & SECTION (SHEET 1)

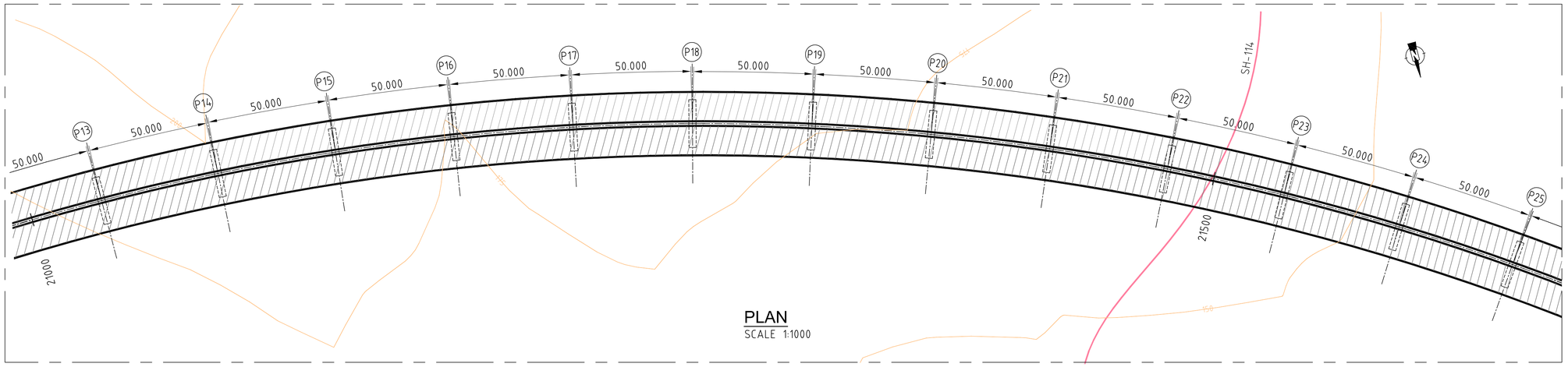
DRAWING NUMBER
SHGA-FS-VD1-1501

REV
D

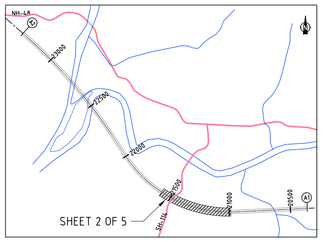
SCALE
1:1000

MONTH (Current Issue)
DEC 2015

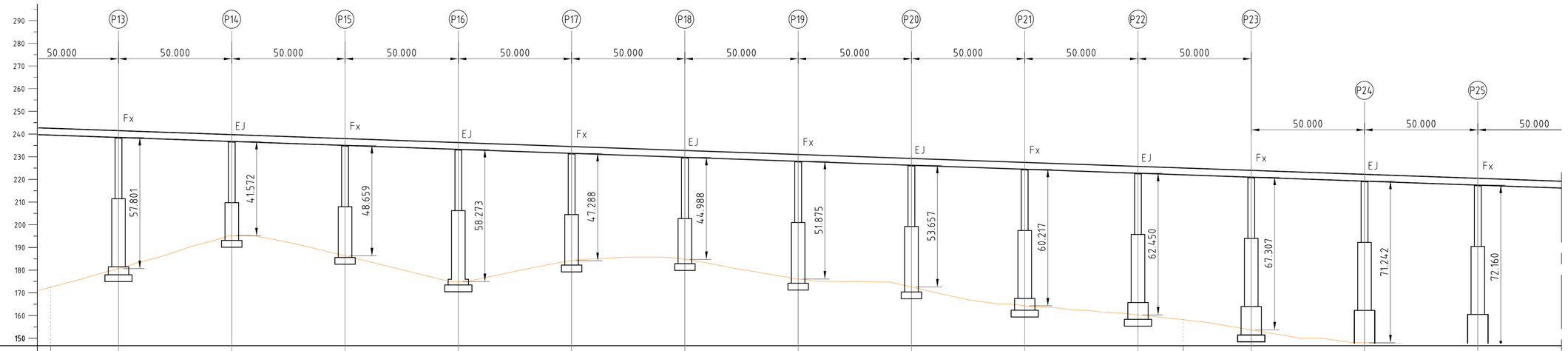
Original Drawing Size A1



PLAN
SCALE 1:1000



KEY PLAN



CHAINAGE (m)	21000.00	21030.00	21080.00	21130.00	21180.00	21230.00	21280.00	21330.00	21380.00	21430.00	21480.00	21500.00	21530.00	21580.00	21630.00
GROUND LEVEL (m)	180.691	195.170	186.333	174.969	184.203	184.754	176.117	172.585	164.275	160.291	153.684	148.000	145.332		
FORMATION LEVEL (m)	241.494	239.744	237.994	236.244	234.494	232.744	230.994	229.244	227.494	225.744	223.994	222.244	220.494		
HORIZONTAL ALIGNMENT	R: 1000.000 L: 1035.225														
VERTICAL ALIGNMENT	GRADIENT 3.5%														

LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

NOTES:

1. SPAN ARRANGEMENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-014, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-014 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH SUBMISSION (KD-6)	PRa	ADh/RMe	AKg
C	DEC 2015	THIRD SUBMISSION (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT	ABa	ADh/RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commisioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commisioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VD1-1501_D.dwg, 2015-12-18

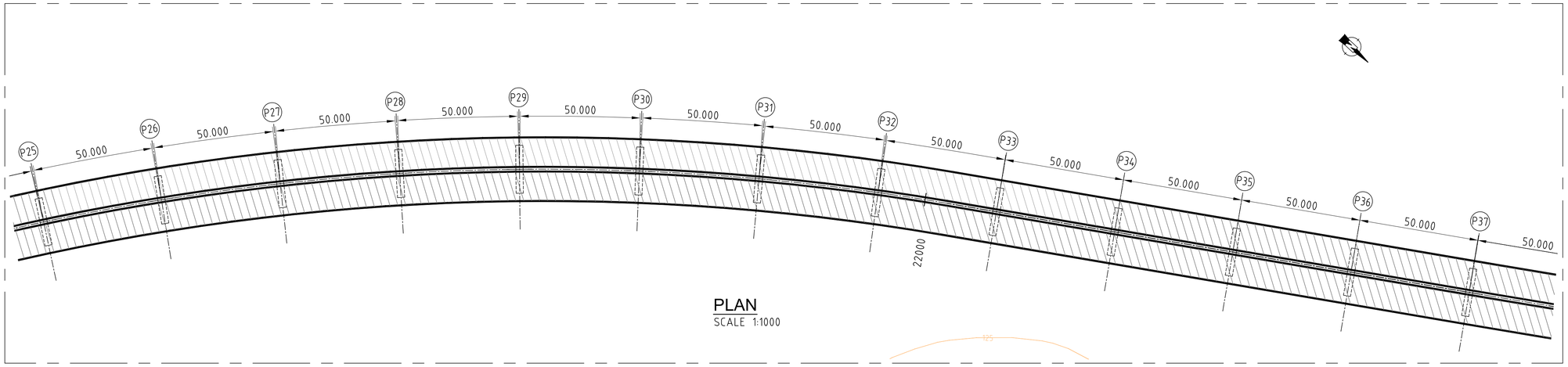
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VIADUCT (CH.20362.44 TO 23579.21)
GENERAL ARRANGEMENT
PLAN & SECTION (SHEET 2)

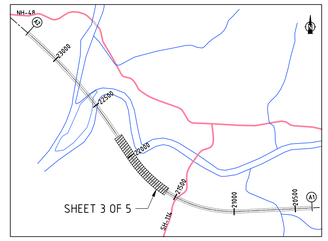
DRAWING NUMBER: SHGA-FS-VD1-1501
REV: D

SCALE: 1:1000
MONTH (Current Issue): DEC 2015

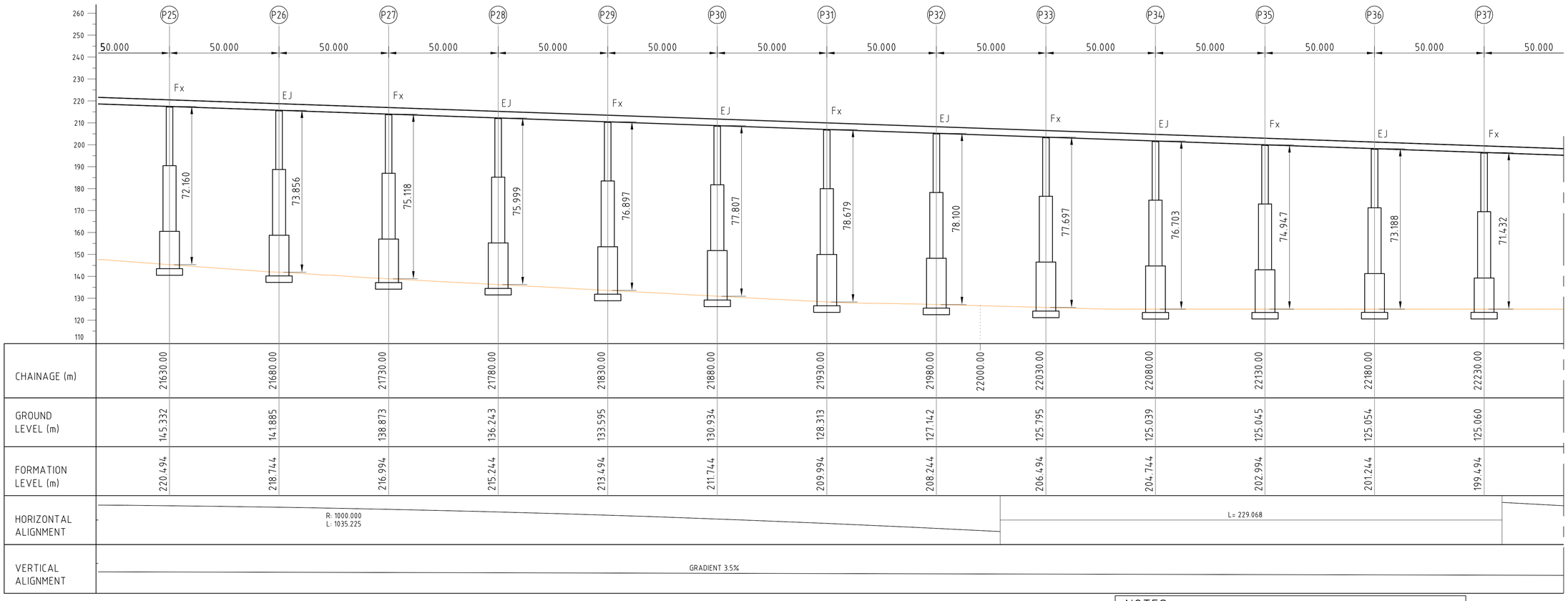
Original Drawing Size A1



PLAN
SCALE 1:1000



KEY PLAN



LONGITUDINAL SECTION AT PROJECT CENTRE LINE

SCALE 1:1000

SCALE 1 : 1000

50m 0 50m 100m

NOTES:

1. SPAN ARRANGEMENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-014, FOR GENERAL PIERS SECTIONS ADAPTABILITY.

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-014 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH SUBMISSION (KD-6)	PRa	ADh/RMe	AKg
C	DEC 2015	THIRD SUBMISSION (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT	ABa	ADh/RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE

CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

G:\GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VD1-1501_D.dwg, 2015-12-18

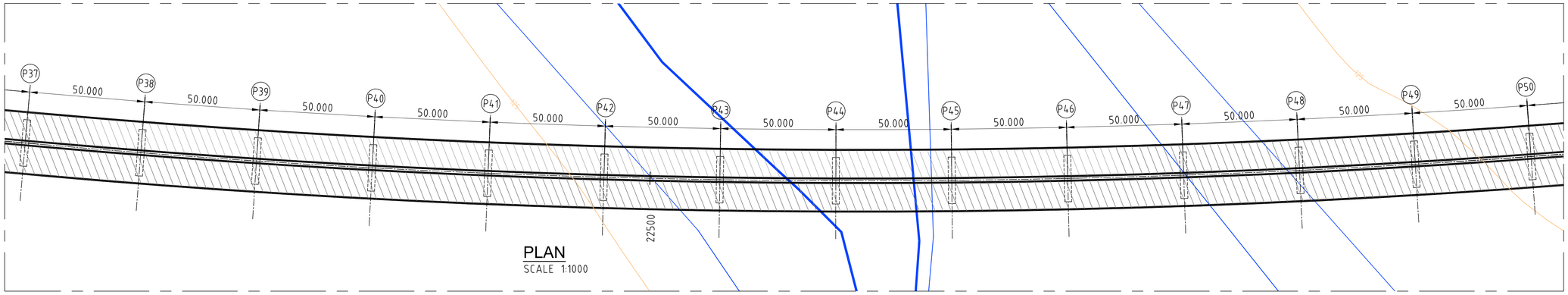
CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VIADUCT (CH.20362.44 TO 23579.21)
GENERAL ARRANGEMENT
PLAN & SECTION (SHEET 3)

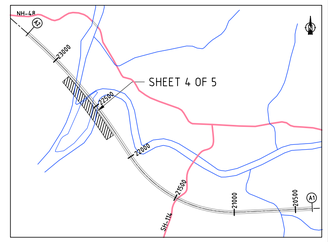
DRAWING NUMBER: SHGA-FS-VD1-1501
REV: D

SCALE: 1:1000
MONTH (Current Issue): DEC 2015

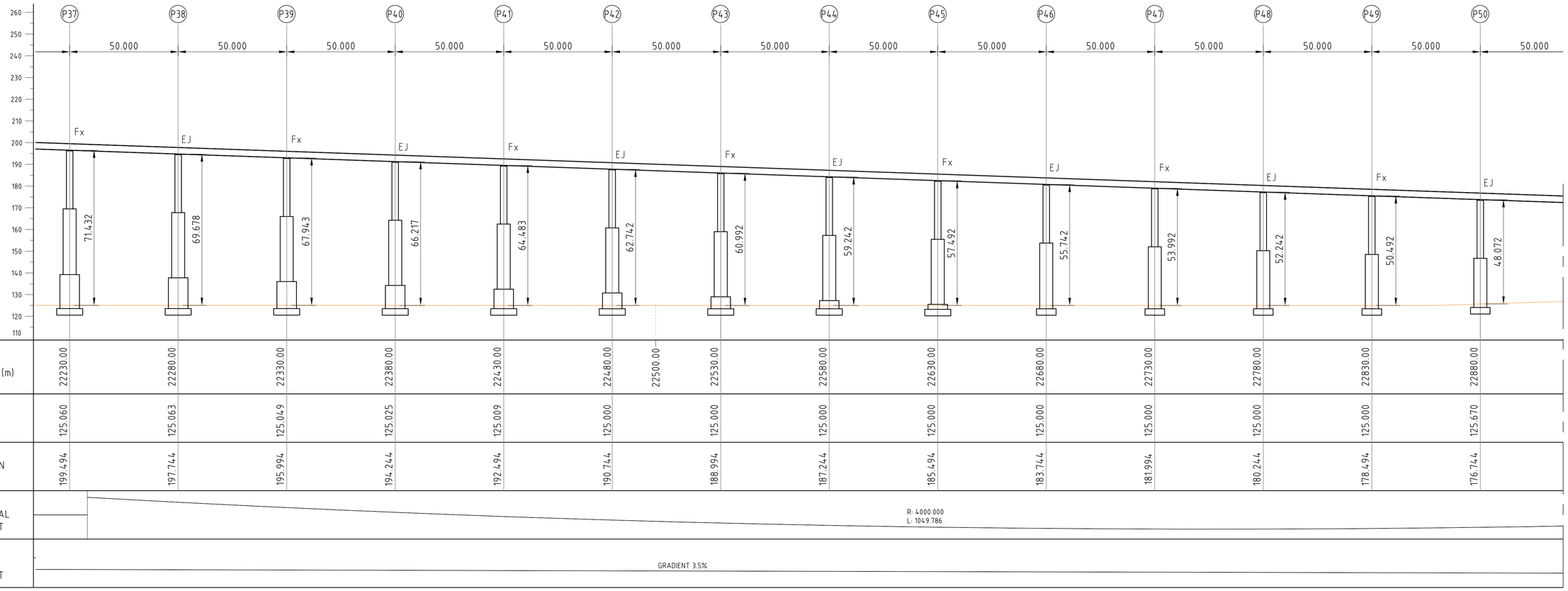
Original Drawing Size A1



PLAN
SCALE 1:1000



KEY PLAN



LONGITUDINAL SECTION AT PROJECT CENTRE LINE

SCALE 1:1000

NOTES:

1. SPAN ARRANGEMENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-014, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

SCALE 1 : 1000

50m 0 50m 100m

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-014 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH SUBMISSION (KD-6)	PRa	ADh/RMe	AKg
C	DEC 2015	THIRD SUBMISSION (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT	ABa	ADh/RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.
©GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VD1-1501_D.dwg, 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VIADUCT (CH.20362.44 TO 23579.21) GENERAL ARRANGEMENT PLAN & SECTION (SHEET 4)

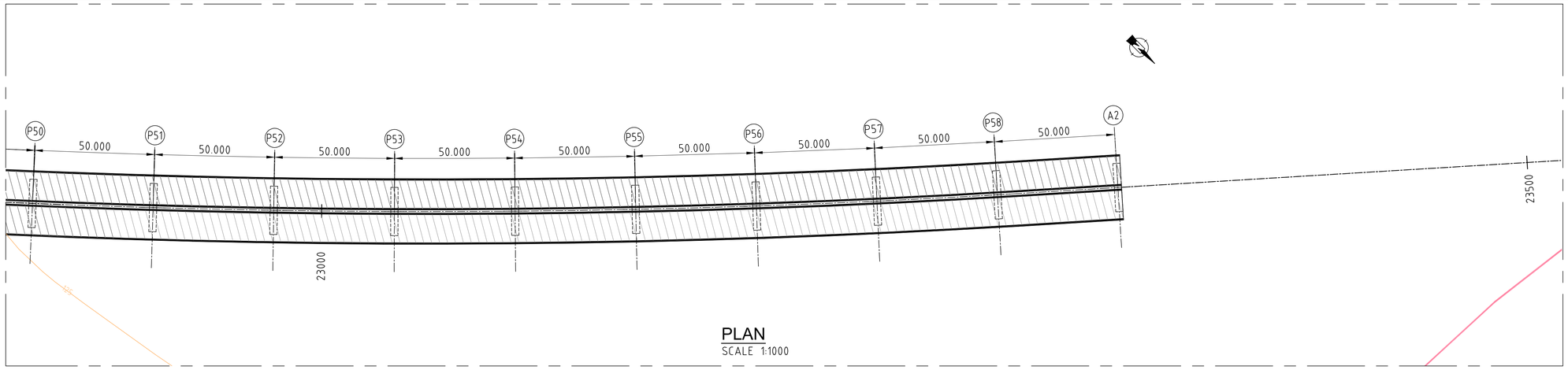
DRAWING NUMBER
SHGA-FS-VD1-1501

REV
D

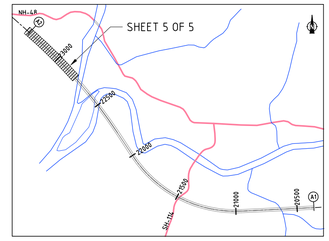
SCALE
1:1000

MONTH (Current Issue)
DEC 2015

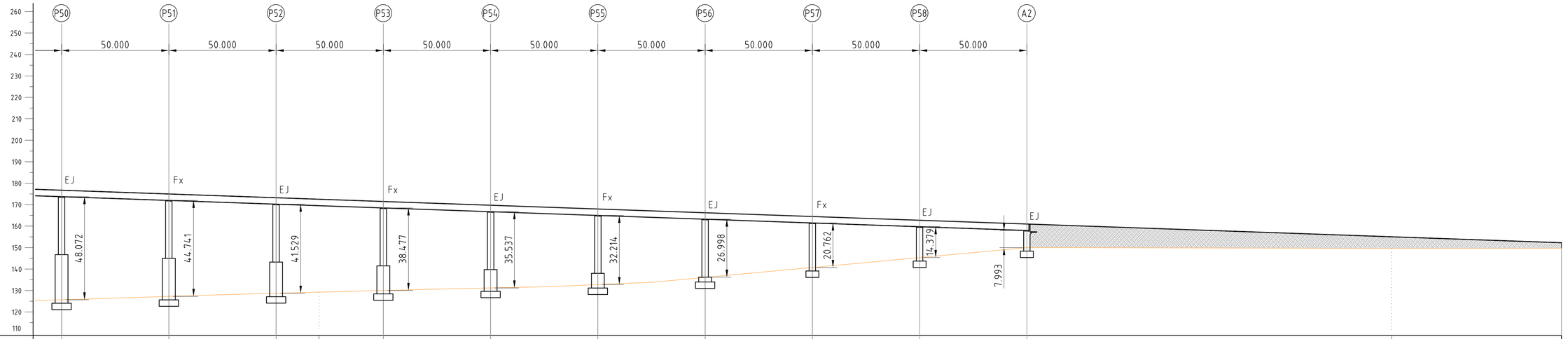
Original Drawing Size A1



PLAN
SCALE 1:1000



KEY PLAN



CHAINAGE (m)	22880.00	22930.00	22980.00	23000.00	23030.00	23080.00	23130.00	23180.00	23230.00	23280.00	23330.00	23500.00	23579.219
GROUND LEVEL (m)	125.670	127.251	128.713	130.015	131.205	132.777	136.103	140.730	145.363	150.000			
FORMATION LEVEL (m)	176.744	174.994	173.244	171.494	169.744	167.994	166.244	164.494	162.744	160.994			
HORIZONTAL ALIGNMENT	R: 4000.000 L: 1049.786										L =291.136		
VERTICAL ALIGNMENT	GRADIENT 3.5%												

LONGITUDINAL SECTION AT PROJECT CENTRE LINE
SCALE 1:1000

SCALE 1 : 1000
50m 0 50m 100m

NOTES:

1. SPAN ARRANGEMENTS SHOWN ARE PRELIMINARY AND SHALL BE VERIFIED / FINALISED AFTER DETAILED GEOLOGICAL INVESTIGATION AND TOPOGRAPHIC SURVEY.
2. THIS DRAWING SHALL BE READ ALONGWITH DRAWING NUMBER SHGA-FS-GEN-014, FOR GENERAL PIERS SECTIONS ADAPTABILITY .

PRELIMINARY

REFERENCE DRAWINGS:

SHGA-FS-LAY-1000

SHGA-FS-GEN-014 (TYPICAL CROSS-SECTION)

LEGEND:

EJ- EXPANSION JOINT
Fx - FIXED JOINT
Fr - FREE JOINT
▨ - BRIDGE DECK

REVISION

REV.	DATE	PARTICULARS	Drawn	Checked	Approved
D	DEC 2015	FOURTH SUBMISSION (KD-6)	PRa	ADh/RMe	AKg
C	DEC 2015	THIRD SUBMISSION (KD-5)	PRa	ADh/RMe	AKg
B	SEP 2015	SECOND DRAFT	PRa	ADh/RMe	AKg
A	AUG 2015	FIRST DRAFT	ABa	ADh/RMe	AKg

QUALITY ASSURANCE

The responsibility of control, check and verification of accuracy, correctness, completeness, integration and full compliance of contract provisions in respect of design analysis and drawings rests with the design consultants and the contractor.

Date (FIRST ISSUE)	AUG 15	AUG 15	AUG 15	AUG 15	AUG 15
Name	ABa/PRa	RMe	ADh	ADh/AKg	AKg
	Drawn	Drafting Chk	Designed	Design Chk	Approved

Originators

DESIGN CONSULTANTS :
GEOCONSULT India Pvt. Ltd.
Plot No. 473, Industrial Estate,
Udyog Vihar, Phase V
Gurgaon-122016, (India)

PROJECT TITLE
CONSULTANCY SERVICES FOR FEASIBILITY-CUM-GEO TECHNICAL STUDY FOR BYPASS TO SHIRADI GHAT FROM Km 238.00 TO 261.45 ON NH-48 IN THE STATE OF KARNATAKA- JOB NUMBER NH-48-KNT-2015-16-780

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Geoconsult was commissioned. Geoconsult accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

#GEOCONSULT; Aba; R:\16000 Projects\16060-Shiradi Ghat\CURRENT\KD-6\SHGA-FS-VD1-1501_D.dwg; 2015-12-18

CLIENT
GOVERNMENT OF KARNATAKA

DRAWING TITLE
VIADUCT (CH.20362.44 TO 23579.21)
GENERAL ARRANGEMENT
PLAN & SECTION (SHEET 5)

DRAWING NUMBER: SHGA-FS-VD1-1501 | REV: D

SCALE: AS SHOWN | MONTH (Current Issue): DEC 2015