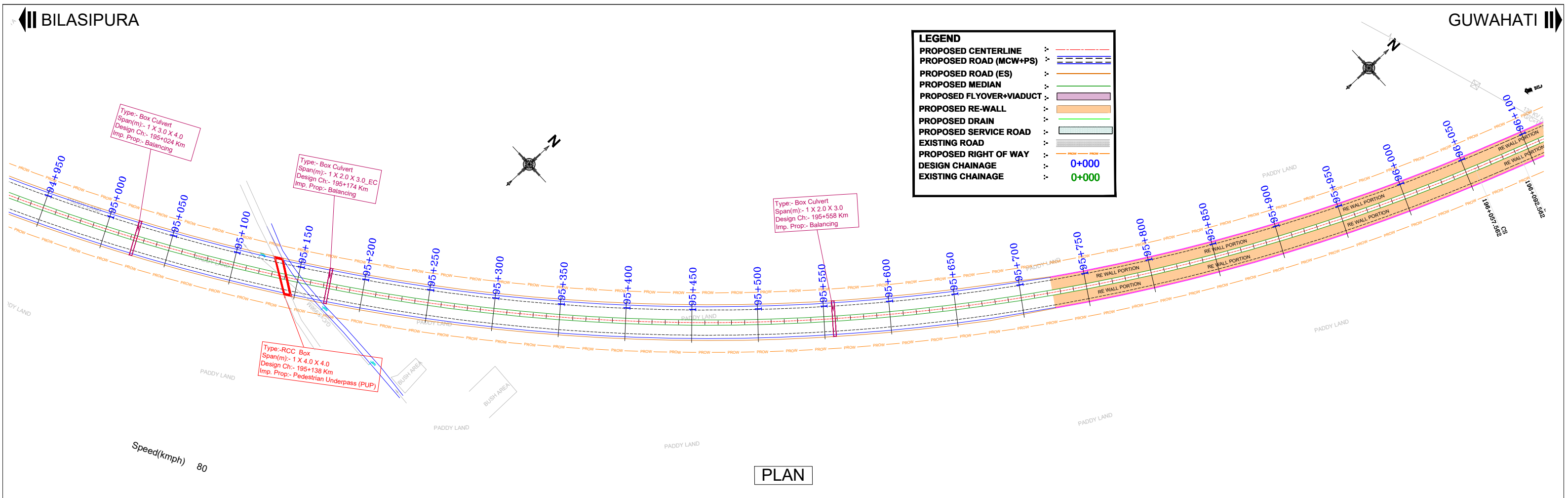


|                                                 |                                                                                                                                                                                                                                                                                                                                               |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| FINISHED ROAD LEVEL,<br>ALONG THE PROPOSED CL.  | 51.582                                                                                                                                                                                                                                                                                                                                        | 51.582  | 51.582  | 51.582  | 51.582  | 51.579  | 51.549  | 51.488  | 51.399  | 51.276  | 51.124  | 50.954  | 50.783  | 50.613  | 50.442  | 50.281  | 50.160  | 50.083  | 50.050  | 50.060  | 50.114  | 50.189  | 50.244  | 50.272  | 50.273  | 50.248  | 50.196  | 50.134  | 50.189  | 50.390  | 50.736  | 51.229  | 51.842  | 52.467  | 53.092  | 53.717  | 54.342  | 54.967  | 55.592  | 56.217  | 56.835  | 57.384  | 57.851  |
| EXISTING GROUND LEVEL<br>ALONG THE PROPOSED CL. | 47.436                                                                                                                                                                                                                                                                                                                                        | 47.394  | 47.472  | 47.407  | 47.497  | 47.886  | 47.322  | 47.456  | 47.483  | 47.564  | 47.486  | 47.481  | 47.501  | 47.597  | 47.559  | 47.485  | 47.408  | 47.326  | 47.327  | 47.301  | 47.288  | 47.295  | 47.261  | 47.251  | 47.277  | 47.288  | 47.283  | 47.273  | 47.248  | 47.228  | 47.295  | 47.328  | 47.174  | 47.067  | 47.146  | 47.208  | 47.177  | 47.186  | 47.161  | 47.170  | 47.227  | 47.211  | 47.188  |
| HORIZONTAL ALIGNMENT                            | <div>L 2060.25<br/>R 1500.00</div>                                                                                                                                                                                                                                                                                                            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| VERTICAL ALIGNMENT                              | <div><div>L140.000<br/>L1 70.000<br/>L2 70.000</div><div>L106.530<br/>Sip:0.681%</div><div>L140.000<br/>L1 70.000<br/>L2 70.000</div><div>L19.587<br/>Sip:0.300%</div><div>L140.000<br/>L1 70.000<br/>L2 70.000</div><div>L100.045<br/>Sip:0.465%</div><div>L120.000<br/>L1 60.000<br/>L2 60.000</div><div>L204.284<br/>Sip2.500%</div></div> |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| SUPERELEVATION (e %)                            | <div><div>100+0.50<br/>5000%</div><div>0.700%</div></div>                                                                                                                                                                                                                                                                                     |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
| CHAINAGE (KM)                                   | 195+000                                                                                                                                                                                                                                                                                                                                       | 195+025 | 195+050 | 195+075 | 195+100 | 195+125 | 195+150 | 195+175 | 195+200 | 195+225 | 195+250 | 195+275 | 195+300 | 195+325 | 195+350 | 195+375 | 195+400 | 195+425 | 195+450 | 195+475 | 195+500 | 195+525 | 195+550 | 195+575 | 195+600 | 195+625 | 195+650 | 195+675 | 195+700 | 195+725 | 195+750 | 195+775 | 195+800 | 195+825 | 195+850 | 195+875 | 195+900 | 195+925 | 195+950 | 195+975 | 196+000 | 196+025 | 196+050 |

SCALE:

Hor - 1:2000

Ver - 1:200

CLIENT:

NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

PTI Building, 3rd Floor, 4, Parliament Street, New Delhi - 110001

PROJECT:

CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A

BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD (LENGTH 225.000 KM) IN THE STATE OF ASSAM.

TITLE :

Plan & Profile (195+000KM-196+000KM)

SUBMISSION TYPE:

FINAL DETAILED PROJECT REPORT PACKAGE 10 (173+434KM TO 200+750KM)

PACKAGE NO:

(LOT-1) PACKAGE 1A

CONSULTANT :

CETEST Engineering Consultants

CE TESTING COMPANY PVT. LTD.

124-A, N.S.C. BOSE ROAD, KOLKATA - 700092.

DWG. NO.

CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/PP

REVISION MKD. - R0

SHEET NO. -23

DRAWN BY.

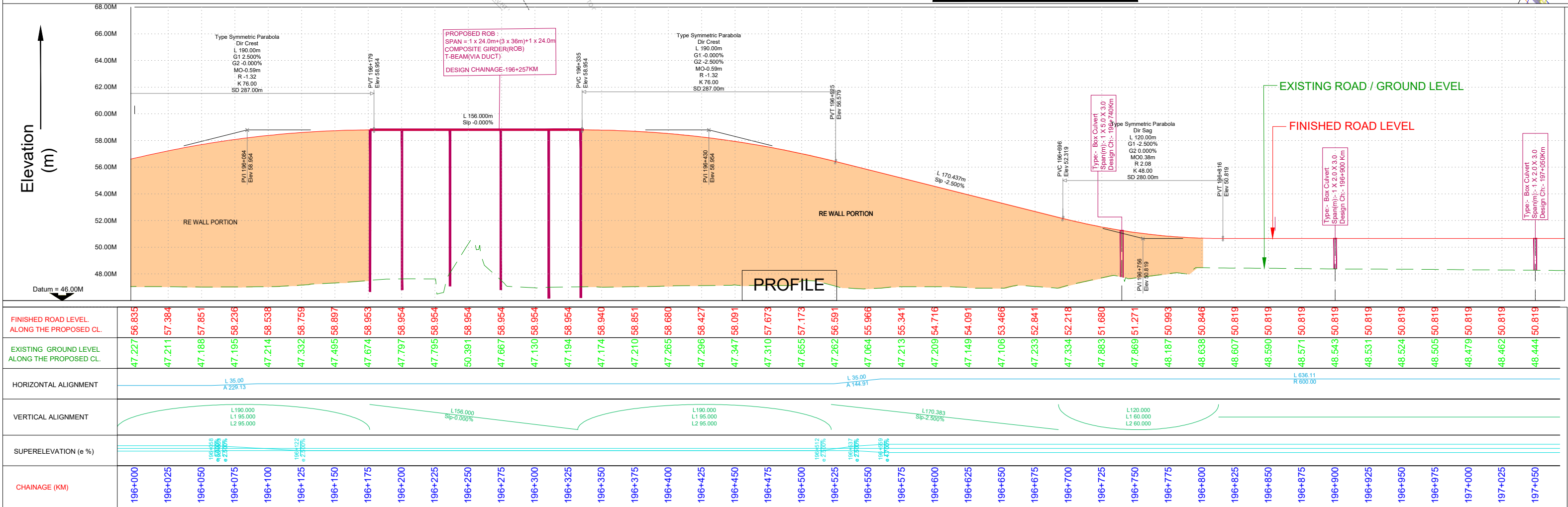
DESIGN BY.

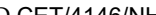
ISSUED BY.

D.CHOWDHURY

A.DEY

S.BHADRA



|                                       |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                              |  |                                                                                                                                                                                    |  |                                                                                                   |  |                                                                                             |  |                                                                                                |  |
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| SCALE:<br>Hor - 1:2000<br>Ver - 1:200 |  |  |  |  |  <div>CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE<br/>DEVELOPMENT CORPORATION LTD.<br/>PTI Building, 3rd Floor, 4, Parliament Street,<br/>New Delhi - 110001</div>                                                                                                              |  | TITLE :<br>Plan & Profile<br>(196+000KM-197+000KM)                                           |  | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. |  | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/PI                                                    |  |                                                                                             |  |                                                                                                |  |
|                                       |  |  |  |  | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD<br>(LENGTH 225.000 KM) IN THE STATE OF ASSAM. |  | SUBMISSION TYPE:<br><br>FINAL DETAILED PROJECT REPORT<br>PACKAGE 10 (173+434KM TO 200+750KM) |  |                                                                                               |  | REVISION MKD. - R0                                                                                |  | SHEET NO. -24                                                                               |  |                                                                                                |  |
| MKD. DATE DESCRIPTION CHKD. APPRD.    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                     |  | DATE:<br>JAN,2023                                                                            |  |                                                                                                                                                                                    |  | DRAWN BY. DESIGN BY. ISSUED BY.                                                                   |  |                                                                                             |  |                                                                                                |  |
| REVISIONS                             |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                     |  | PACKAGE NO: (LOT-1) PACKAGE 1A                                                               |  |                                                                                                                                                                                    |  |  D.CHOWDHURY |  |  A.DEY |  |  S.BHADRA |  |

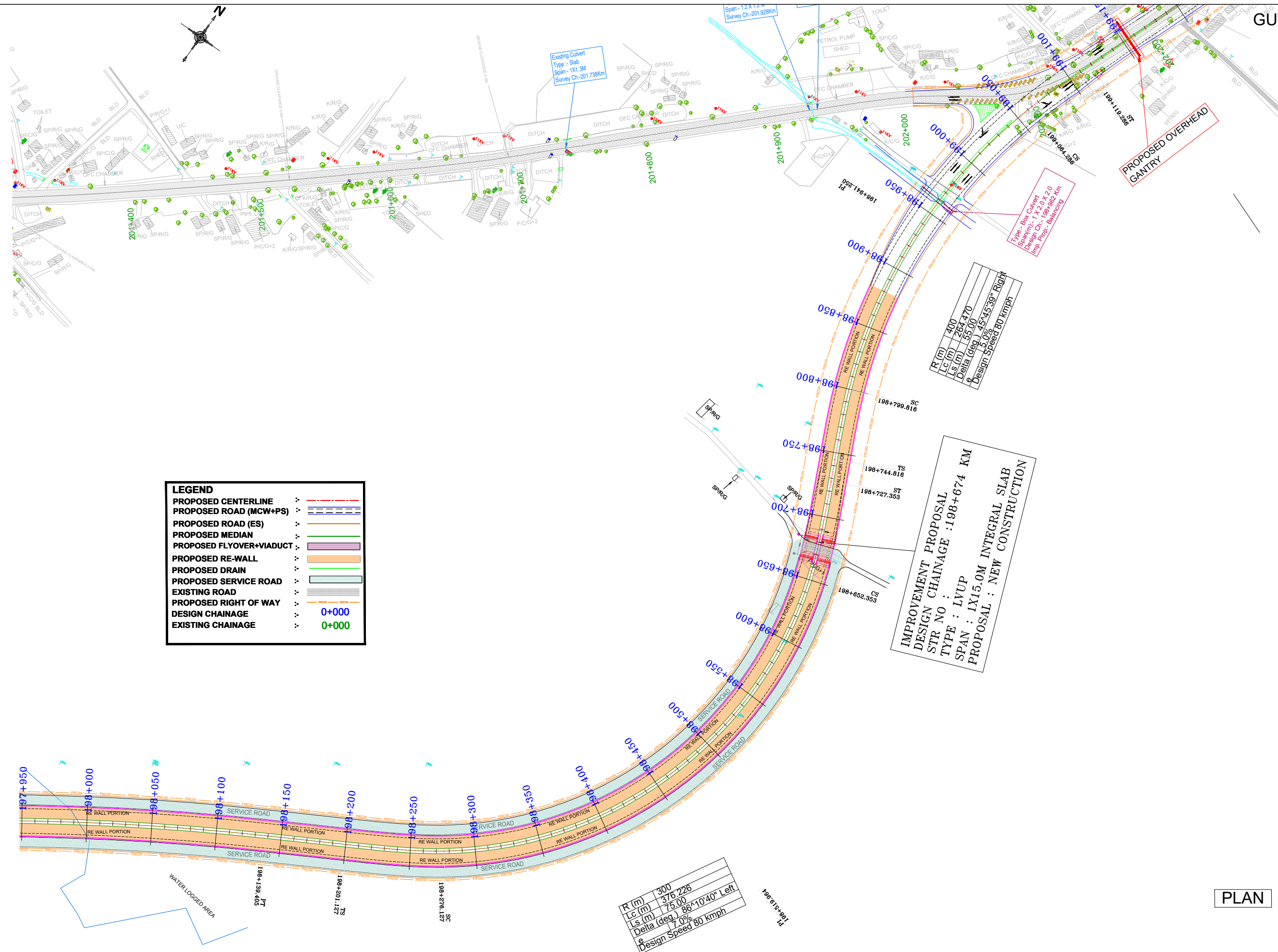




|                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                              |  |                                                                                                                                                                                              |  |                                                           |  |                                                                                                                                                                                                                                                                              |  |
|----------------------------------------------------|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div>SCALE:<br/>Hor - 1:2000<br/>Ver - 1:200</div> |  |  |  |  | <div> CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.<br/>PTI Building, 3rd Floor, 4, Parliament Street,<br/>New Delhi - 110001</div>                                                                                                                              |  | <div>TITLE : Plan &amp; Profile<br/>(197+000KM-198+000KM)</div>                                              |  | <div>CONSULTANT :  CE TESTING COMPANY PVT. LTD.<br/>124-A, N.S.C. BOSE ROAD<br/>KOLKATA - 700092.</div> |  | <div>DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/PP</div> |  |                                                                                                                                                                                                                                                                              |  |
|                                                    |  |  |  |  | <div>PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br/><b>BILASIPURA-CHAPAR-TULUNGA-JOGIHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD</b><br/>(LENGTH 225.000 KM) IN THE STATE OF ASSAM.</div> |  | <div>SUBMISSION TYPE:<br/><b>FINAL DETAILED PROJECT REPORT<br/>PACKAGE 10 (173+434KM TO 200+750KM)</b></div> |  | <div></div>                                                                                             |  | <div>REVISION MKD. - R0</div>                             |  | <div>SHEET NO. -25</div>                                                                                                                                                                                                                                                     |  |
| <div>MKD. DATE DESCRIPTION CHKD. APPRD.</div>      |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                 |  | <div>PACKAGE NO: (LOT-1) PACKAGE 1A</div>                                                                    |  |                                                                                                                                                                                              |  | <div>DRAWN BY. DESIGN BY. ISSUED BY.</div>                |  | <div>  </div> |  |
| <div>REVISIONS</div>                               |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                              |  |                                                                                                                                                                                              |  |                                                           |  |                                                                                                                                                                                                                                                                              |  |

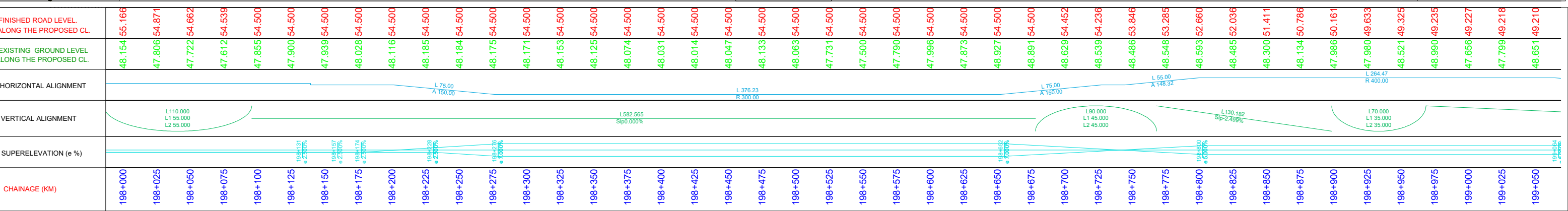


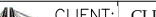




PLAN

|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                          |  |                                                                                              |  |                                                |  |  |
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|  |  |  |  |  | SCALE:<br>Hor - 1:2000<br>Ver - 1:200 |  | CLIENT:<br>NATIONAL HIGHWAYS AND INFRASTRUCTURE<br>DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001                                                                                                                                                                                                                |  | TITLE :<br>Plan & Profile<br>(198+000KM-199+000KM)                                       |  | CONSULTANT :<br>CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. |  | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/PP |  |  |
|  |  |  |  |  | DATE:<br>JAN,2023                     |  | PROJECT:<br>CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD<br>(LENGTH 225.000 KM) IN THE STATE OF ASSAM. |  | SUBMISSION TYPE:<br>FINAL DETAILED PROJECT REPORT<br>PACKAGE 10 (173+434KM TO 200+750KM) |  | Engineering Consultants<br>As ISO 9001, 14001 & OHSAS 18001<br>Certified Company             |  | REVISION MKD. - R0                             |  |  |
|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  | PACKAGE NO: (LOT-1) PACKAGE 1A                                                           |  |                                                                                              |  | SHEET NO. -26A                                 |  |  |
|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                          |  |                                                                                              |  | ISSUED BY.                                     |  |  |
|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                          |  |                                                                                              |  | D.CHOWDHURY                                    |  |  |
|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                          |  |                                                                                              |  | A.DEY                                          |  |  |
|  |  |  |  |  |                                       |  |                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                          |  |                                                                                              |  | S.BHADRA                                       |  |  |



|                                    |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                              |  |                                                                                                                                                                                                                                                                        |  |                                                                                                 |                                                                                                  |                                                                                                  |  |
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|                                    |  |  |  |  | SCALE:<br>Hor - 1:2000<br>Ver - 1:200 |  <div>CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE<br/>DEVELOPMENT CORPORATION LTD.<br/>PTI Building, 3rd Floor, 4, Parliament Street,<br/>New Delhi - 110001</div>                                                                                                              | TITLE : Plan & Profile<br>(198+000KM-199+000KM)                                              |  | CONSULTANT :  CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD,<br>KOLKATA - 700092.  |  | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/PP                                                  |                                                                                                  |                                                                                                  |  |
|                                    |  |  |  |  |                                       | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD<br>(LENGTH 225.000 KM) IN THE STATE OF ASSAM. | SUBMISSION TYPE:<br><br>FINAL DETAILED PROJECT REPORT<br>PACKAGE 10 (173+434KM TO 200+750KM) |  |                                                                                                                                                                                                                                                                        |  | REVISION MKD. - R0                                                                              |                                                                                                  | SHEET NO. -26B                                                                                   |  |
|                                    |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                     | PACKAGE NO: (LOT-1) PACKAGE 1A                                                               |  |                                                                                                                                                                                                                                                                        |  | DRAWN BY.  | DESIGN BY.  | ISSUED BY.  |  |
| MKD. DATE DESCRIPTION CHKD. APPRD. |  |  |  |  | DATE:<br>JAN,2023                     |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                              |  |                                                                                                                                                                                                                                                                        |  | D.CHOWDHURY                                                                                     | A.DEY                                                                                            | S.BHADRA                                                                                         |  |
| REVISIONS                          |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                              |  |                                                                                                                                                                                                                                                                        |  |                                                                                                 |                                                                                                  |                                                                                                  |  |









|                                    |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                              |  |                                                                                                                                                                                    |  |                                                                                                    |  |                                                                                                     |  |                                                                                                     |  |
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|                                    |  |  |  |  | SCALE:<br>Hor - 1:2000<br>Ver - 1:200 |  <div>CLIENT:<br/>NATIONAL HIGHWAYS AND INFRASTRUCTURE<br/>DEVELOPMENT CORPORATION LTD.<br/>PTI Building, 3rd Floor, 4, Parliament Street,<br/>New Delhi - 110001</div>                                                                                                         | TITLE :<br>Plan & Profile<br>(200+000KM-201+000KM)                                           |  | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. |  | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/F                                                      |  |                                                                                                     |  |                                                                                                     |  |
|                                    |  |  |  |  |                                       | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD<br>(LENGTH 225.00 KM) IN THE STATE OF ASSAM. | SUBMISSION TYPE:<br><br>FINAL DETAILED PROJECT REPORT<br>PACKAGE 10 (173+434KM TO 200+750KM) |  |                                                                                               |  | REVISION MKD. - R0                                                                                 |  | SHEET NO. -28                                                                                       |  |                                                                                                     |  |
|                                    |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                              |  |                                                                                                                                                                                    |  | DRAWN BY.<br> |  | DESIGN BY.<br> |  | ISSUED BY.<br> |  |
| MKD. DATE DESCRIPTION CHKD. APPRD. |  |  |  |  | DATE:<br>JAN,2023                     |                                                                                                                                                                                                                                                                                                                                                                    | PACKAGE NO: (LOT-1) PACKAGE 1A                                                               |  |                                                                                                                                                                                    |  | D.CHOWDHURY                                                                                        |  | A.DEY                                                                                               |  | S.BHADRA                                                                                            |  |
| REVISIONS                          |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                              |  |                                                                                                                                                                                    |  |                                                                                                    |  |                                                                                                     |  |                                                                                                     |  |

# HORIZONTAL ALIGNMENT REPORT



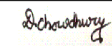
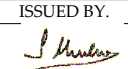
| HORIZONTAL ALIGNMENT REPORT |              |                  |     |         |            |                 |             |              |                 |             |              |            |                  |                       |            |             |                    |                           |                   |
|-----------------------------|--------------|------------------|-----|---------|------------|-----------------|-------------|--------------|-----------------|-------------|--------------|------------|------------------|-----------------------|------------|-------------|--------------------|---------------------------|-------------------|
| HIP                         |              | DEFLECTION ANGLE |     |         | ELEMENT    | START           |             |              | END             |             |              | LENGTH (m) | CHORD LENGTH (m) | BEARING<br>(dd mm ss) | RADIUS (m) | HAND OF ARC | SUPERELEVATION (%) | DESIGN<br>SPEED<br>(km/h) | EXTRA<br>WIDENING |
| EASTING                     | NORTHING     | DEG              | MIN | SEC     |            | CHAINAGE<br>(m) | EASTING     | NORTHING     | CHAINAGE<br>(m) | EASTING     | NORTHING     |            |                  |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 173410.1490     | 336561.1350 | 2881459.5510 | 173468.0580     | 336617.8120 | 2881471.4360 | 57.9100    |                  | N 78°09'24.21" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 173468.0580     | 336617.8120 | 2881471.4360 | 173508.0580     | 336656.9140 | 2881479.8630 | 40         |                  |                       |            |             |                    |                           |                   |
| 336674.2470                 | 2881483.8000 | 1                | 41  | 50.2200 | Arc        | 173508.0580     | 336656.9140 | 2881479.8630 | 173543.6060     | 336691.4570 | 2881488.2500 | 35.5480    |                  |                       | 1200       | Left        | 3.7000             | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 173543.6060     | 336691.4570 | 2881488.2500 | 173583.6060     | 336730.0690 | 2881498.6910 | 40         |                  |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 173583.6060     | 336730.0690 | 2881498.6910 | 173911.7200     | 337046.3250 | 2881586.1020 | 328.1140   |                  | N 74°32'58.49" E      |            |             |                    |                           |                   |
| 337054.7770                 | 2881588.4380 | 0                | 30  | 8.5300  | Arc        | 173911.7200     | 337046.3250 | 2881586.1020 | 173929.2560     | 337063.2480 | 2881590.7000 |            | 17.5360          |                       | 2000       | Right       | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 173929.2560     | 337063.2480 | 2881590.7000 | 174079.2250     | 337208.1420 | 2881629.3830 | 149.9690   |                  | N 75°03'07.02" E      |            |             |                    |                           |                   |
| 337225.6060                 | 2881634.0460 | 1                | 2   | 8.3100  | Arc        | 174079.2250     | 337208.1420 | 2881629.3830 | 174115.3760     | 337242.9830 | 2881639.0230 |            | 36.1510          |                       | 2000       | Left        | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 174115.3760     | 337242.9830 | 2881639.0230 | 174408.1030     | 337524.3940 | 2881719.6300 | 292.7270   |                  | N 74°00'58.72" E      |            |             |                    |                           |                   |
| 337549.0260                 | 2881726.6850 | 1                | 28  | 4.8300  | Arc        | 174408.1030     | 337524.3940 | 2881719.6300 | 174459.3460     | 337573.8310 | 2881733.1080 |            | 51.2430          |                       | 2000       | Right       | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 174459.3460     | 337573.8310 | 2881733.1080 | 174933.9750     | 338033.3090 | 2881852.0710 | 474.6290   |                  | N 75°29'03.55" E      |            |             |                    |                           |                   |
| 338047.6610                 | 2881855.7860 | 0                | 50  | 57.7000 | Arc        | 174933.9750     | 338033.3090 | 2881852.0710 | 174963.6230     | 338062.0650 | 2881859.2890 |            | 29.6480          |                       | 2000       | Right       | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 174963.6230     | 338062.0650 | 2881859.2890 | 175112.8180     | 338207.0360 | 2881894.5390 | 149.1940   |                  | N 76°20'01.25" E      |            |             |                    |                           |                   |
| 338230.7810                 | 2881900.3120 | 1                | 24  | 0.3300  | Arc        | 175112.8180     | 338207.0360 | 2881894.5390 | 175161.6900     | 338254.3790 | 2881906.6650 |            | 48.8720          |                       | 2000       | Left        | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 175161.6900     | 338254.3790 | 2881906.6650 | 175450.7730     | 338533.5240 | 2881981.8080 | 289.0830   |                  | N 74°56'00.92" E      |            |             |                    |                           |                   |
| 338575.2560                 | 2881993.0420 | 2                | 28  | 32.9000 | Arc        | 175450.7730     | 338533.5240 | 2881981.8080 | 175537.1950     | 338616.4640 | 2882006.0690 |            | 86.4220          |                       | 2000       | Left        | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 175537.1950     | 338616.4640 | 2882006.0690 | 175663.6540     | 338737.0420 | 2882044.1840 | 126.4590   |                  | N 72°27'28.01" E      |            |             |                    |                           |                   |
| 338825.7450                 | 2882072.2240 | 5                | 19  | 34.9000 | Arc        | 175663.6540     | 338737.0420 | 2882044.1840 | 175849.5790     | 338916.6690 | 2882091.9090 |            | 185.9250         |                       | 2000       | Right       | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 175849.5790     | 338916.6690 | 2882091.9090 | 175988.1630     | 339052.1150 | 2882121.2330 | 138.5840   |                  | N 77°47'02.91" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 175988.1630     | 339052.1150 | 2882121.2330 | 176058.1630     | 339120.2660 | 2882137.1810 |            | 70               |                       |            |             |                    |                           |                   |
| 339178.4560                 | 2882152.8610 | 9                | 50  | 29.2600 | Arc        | 176058.1630     | 339120.2660 | 2882137.1810 | 176178.3990     | 339233.1110 | 2882178.2560 |            | 120.2360         |                       | 700        | Left        | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 176178.3990     | 339233.1110 | 2882178.2560 | 176248.3990     | 339295.5670 | 2882209.8490 |            | 70               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 176248.3990     | 339295.5670 | 2882209.8490 | 176929.0390     | 339897.7210 | 2882527.1520 | 680.6400   |                  | N 62°12'47.17" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 176929.0390     | 339897.7210 | 2882527.1520 | 177009.0390     | 339967.6360 | 2882566.0030 |            | 80               |                       |            |             |                    |                           |                   |
| 339990.2250                 | 2882579.9030 | 5                | 3   | 44.1400 | Arc        | 177009.0390     | 339967.6360 | 2882566.0030 | 177062.0500     | 340011.4990 | 2882595.7430 |            | 53.0120          |                       | 600        | Left        | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 177062.0500     | 340011.4990 | 2882595.7430 | 177142.0500     | 340073.4690 | 2882646.3120 |            | 80               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 177142.0500     | 340073.4690 | 2882646.3120 | 178095.3070     | 340798.4540 | 2883265.2580 | 953.2570   |                  | N 49°30'41.05" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 178095.3070     | 340798.4540 | 2883265.2580 | 178175.3070     | 340860.4240 | 2883315.8270 |            | 80               |                       |            |             |                    |                           |                   |
| 340885.1880                 | 2883334.2650 | 5                | 53  | 29.2300 | Arc        | 178175.3070     | 340860.4240 | 2883315.8270 | 178237.0020     | 340911.7150 | 2883350.0640 |            | 61.6950          |                       | 600        | Right       | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 178237.0020     | 340911.7150 | 2883350.0640 | 178317.0020     | 340982.1850 | 2883387.8990 |            | 80               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 178317.0020     | 340982.1850 | 2883387.8990 | 178490.9740     | 341137.2530 | 2883466.7660 | 173.9720   |                  | N 63°02'32.25" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 178490.9740     | 341137.2530 | 2883466.7660 | 178585.9740     | 341220.4910 | 2883512.4730 |            | 95               |                       |            |             |                    |                           |                   |
| 341228.4110                 | 2883517.5000 | 2                | 8   | 58.6800 | Arc        | 178585.9740     | 341220.4910 | 2883512.4730 | 178604.7330     | 341236.1370 | 2883522.8200 |            | 18.7590          |                       | 500        | Left        | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 178604.7330     | 341236.1370 | 2883522.8200 | 178699.7330     | 341310.7850 | 2883581.5180 |            | 95               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 178699.7330     | 341310.7850 | 2883581.5180 | 179577.0700     | 341982.9270 | 2884145.3830 | 877.3370   |                  | N 50°00'23.26" E      |            |             |                    |                           |                   |
| 342012.1090                 | 2884169.8640 | 2                | 10  | 55.6400 | Arc        | 179577.0700     | 341982.9270 | 2884145.3830 | 179653.2400     | 342042.2010 | 2884193.2150 |            | 76.1700          |                       | 2000       | Right       | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 179653.2400     | 342042.2010 | 2884193.2150 | 180094.2590     | 342390.6210 | 2884463.5880 | 441.0190   |                  | N 52°11'18.89" E      |            |             |                    |                           |                   |
| 342425.0500                 | 2884490.3050 | 2                | 29  | 47.4300 | Arc        | 180094.2590     | 342390.6210 | 2884463.5880 | 180181.4040     | 342458.2820 | 2884518.4960 |            | 87.1450          |                       | 2000       | Left        | Normal Camber      | 100                       | --NA--            |
|                             |              |                  |     |         | Straight   | 180181.4040     | 342458.2820 | 2884518.4960 | 180461.7230     | 342672.0470 | 2884699.8330 |            |                  |                       |            |             |                    |                           |                   |

|  |  |  |  |  |               |                                                                                     |
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|  |  |  |  |  | SCALE:<br>NTS |  |
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| HORIZONTAL ALIGNMENT REPORT |              |                  |     |         |            |                 |             |              |                 |             |              |            |                  |                       |            |             |                    |                           |                   |
|-----------------------------|--------------|------------------|-----|---------|------------|-----------------|-------------|--------------|-----------------|-------------|--------------|------------|------------------|-----------------------|------------|-------------|--------------------|---------------------------|-------------------|
| HIP                         |              | DEFLECTION ANGLE |     |         | ELEMENT    | START           |             |              | END             |             |              | LENGTH (m) | CHORD LENGTH (m) | BEARING<br>(dd mm ss) | RADIUS (m) | HAND OF ARC | SUPERELEVATION (%) | DESIGN<br>SPEED<br>(km/h) | EXTRA<br>WIDENING |
| EASTING                     | NORTHING     | DEG              | MIN | SEC     |            | CHAINAGE<br>(m) | EASTING     | NORTHING     | CHAINAGE<br>(m) | EASTING     | NORTHING     |            |                  |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 183430.8400     | 345536.4320 | 2884621.4220 | 184086.1270     | 345880.5370 | 2884063.7550 | 655.2860   |                  | S 31°40'35.06" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 184086.1270     | 345880.5370 | 2884063.7550 | 184201.1270     | 345945.4840 | 2883968.9780 |            | 115              |                       |            |             |                    |                           |                   |
| 346040.1760                 | 2883855.7780 | 40               | 30  | 14.5900 | Arc        | 184201.1270     | 345945.4840 | 2883968.9780 | 184483.8980     | 346185.7010 | 2883831.2080 |            | 282.7720         |                       | 400        | Left        | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 184483.8980     | 346185.7010 | 2883831.2080 | 184598.8980     | 346300.3020 | 2883823.0100 |            | 115              |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 184598.8980     | 346300.3020 | 2883823.0100 | 185554.6810     | 347255.8200 | 2883800.5420 | 955.7820   |                  | S 88°39'10.78" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 185554.6810     | 347255.8200 | 2883800.5420 | 185684.6810     | 347385.5450 | 2883805.2990 |            | 130              |                       |            |             |                    |                           |                   |
| 347578.7750                 | 2883835.8970 | 57               | 2   | 33.2900 | Arc        | 185684.6810     | 347385.5450 | 2883805.2990 | 186043.0900     | 347658.2210 | 2884014.6770 |            | 358.4090         |                       | 360        | Left        | 7                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 186043.0900     | 347658.2210 | 2884014.6770 | 186173.0900     | 347696.3080 | 2884138.7760 |            | 130              |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 186173.0900     | 347696.3080 | 2884138.7760 | 186181.8730     | 347698.3750 | 2884147.3130 | 8.7830     |                  | N 13°36'51.42" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 186181.8730     | 347698.3750 | 2884147.3130 | 186276.8730     | 347723.6380 | 2884238.8520 |            | 95               |                       |            |             |                    |                           |                   |
| 347885.3920                 | 2884707.0960 | 89               | 28  | 11.7200 | Arc        | 186276.8730     | 347723.6380 | 2884238.8520 | 187057.6460     | 348355.1130 | 2884549.6810 |            | 780.7720         |                       | 500        | Right       | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 187057.6460     | 348355.1130 | 2884549.6810 | 187152.6460     | 348443.0630 | 2884513.8680 |            | 95               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 187152.6460     | 348443.0630 | 2884513.8680 | 187579.4800     | 348833.0840 | 2884340.4600 | 426.8340   |                  | S 66°01'46.55" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 187579.4800     | 348833.0840 | 2884340.4600 | 187649.4800     | 348897.5050 | 2884313.0950 |            | 70               |                       |            |             |                    |                           |                   |
| 348958.3280                 | 2884289.6180 | 10               | 38  | 31.8700 | Arc        | 187649.4800     | 348897.5050 | 2884313.0950 | 187779.4980     | 349022.4410 | 2884277.7780 |            | 130.0190         |                       | 700        | Left        | 5                  | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 187779.4980     | 349022.4410 | 2884277.7780 | 187849.4980     | 349091.6550 | 2884267.3680 |            | 70               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 187849.4980     | 349091.6550 | 2884267.3680 | 188100.4700     | 349340.4220 | 2884234.1810 | 250.9710   |                  | S 82°24'04.91" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 188100.4700     | 349340.4220 | 2884234.1810 | 188140.4700     | 349380.0410 | 2884228.6720 |            | 40               |                       |            |             |                    |                           |                   |
| 349456.6460                 | 2884217.1500 | 7                | 23  | 14.3600 | Arc        | 188140.4700     | 349380.0410 | 2884228.6720 | 188295.1890     | 349531.1340 | 2884195.8740 |            | 154.7200         |                       | 1200       | Right       | 3.7037             | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 188295.1890     | 349531.1340 | 2884195.8740 | 188335.1890     | 349569.4710 | 2884184.4610 |            | 40               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 188335.1890     | 349569.4710 | 2884184.4610 | 190167.5730     | 351322.7590 | 2883651.9110 | 1832.3830  |                  | S 73°06'15.05" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 190167.5730     | 351322.7590 | 2883651.9110 | 190207.5730     | 351361.0960 | 2883640.4990 |            | 40               |                       |            |             |                    |                           |                   |
| 351487.7760                 | 2883604.3160 | 12               | 31  | 50.2200 | Arc        | 190207.5730     | 351361.0960 | 2883640.4990 | 190470.0130     | 351619.2890 | 2883596.4790 |            | 262.4410         |                       | 1200       | Left        | 3.7037             | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 190470.0130     | 351619.2890 | 2883596.4790 | 190510.0130     | 351659.2410 | 2883594.5430 |            | 40               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 190510.0130     | 351659.2410 | 2883594.5430 | 191515.4790     | 352663.7840 | 2883551.4680 | 1005.4660  |                  | S 87°32'40.77" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 191515.4790     | 352663.7840 | 2883551.4680 | 191555.4790     | 352703.7370 | 2883549.5330 |            | 40               |                       |            |             |                    |                           |                   |
| 352760.2650                 | 2883546.1640 | 5                | 24  | 12.8400 | Arc        | 191555.4790     | 352703.7370 | 2883549.5330 | 191668.6510     | 352816.2240 | 2883537.4870 |            | 113.1720         |                       | 1200       | Right       | 3.7037             | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 191668.6510     | 352816.2240 | 2883537.4870 | 191708.6510     | 352855.6810 | 2883530.9190 |            | 40               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 191708.6510     | 352855.6810 | 2883530.9190 | 193962.3140     | 355076.6660 | 2883148.5350 | 2253.6620  |                  | S 80°13'52.43" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 193962.3140     | 355076.6660 | 2883148.5350 | 193997.3140     | 355111.1810 | 2883142.7310 |            | 35               |                       |            |             |                    |                           |                   |
| 356325.5300                 | 2882948.2170 | 78               | 41  | 44.4700 | Arc        | 193997.3140     | 355111.1810 | 2883142.7310 | 196057.5620     | 356754.3070 | 2884100.8790 |            | 2060.2480        |                       | 1500       | Left        | 2.9630             | 100                       | --NA--            |
|                             |              |                  |     |         | Transition | 196057.5620     | 356754.3070 | 2884100.8790 | 196092.5620     | 356766.2540 | 2884133.7760 |            | 35               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 196092.5620     | 356766.2540 | 2884133.7760 | 196524.4440     | 356912.0970 | 2884540.2890 | 431.8820   |                  | N 19°44'10.26" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 196524.4440     | 356912.0970 | 2884540.2890 | 196559.4440     | 356924.2350 | 2884573.1150 |            | 35               |                       |            |             |                    |                           |                   |
| 357052.5750                 | 2884900.4780 | 60               | 44  | 37.2900 | Arc        | 196559.4440     | 356924.2350 | 2884573.1150 | 197195.5510     | 357400.9030 | 2884948.4960 |            | 636.1060         |                       | 600        | Right       | 4.7407             | 80                        | --NA--            |
|                             |              |                  |     |         | Transition | 197195.5510     | 357400.9030 | 2884948.4960 | 197230.5510     | 357435.6600 | 2884952.6010 |            | 35               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 197230.5510     | 357435.6600 | 2884952.6010 | 197303.3440     | 357508.0300 | 2884960.4350 | 72.7930    |                  | N 83°49'19.66" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 197303.3440     | 357508.0300 | 2884960.4350 | 197358.3440     | 357562.5490 | 2884967.6030 |            | 55               |                       |            |             |                    |                           |                   |
| 357666.5000                 | 2884986.1510 | 29               | 34  | 31.2000 | Arc        | 197358.3440     | 357562.5490 | 2884967.6030 | 197564.8190     | 357747.7520 | 2885053.5900 |            | 206.4750         |                       | 400        | Left        | 5                  | 80                        | --NA--            |
|                             |              |                  |     |         | Transition | 197564.8190     | 357747.7520 | 2885053.5900 | 197619.8190     | 357788.4110 | 2885090.6110 |            | 55               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 197619.8190     | 357788.4110 | 2885090.6110 | 197630.8460     | 357796.3930 | 2885098.2200 | 11.0270    |                  | N 46°22'07.04" E      |            |             |                    |                           |                   |
| 357981.4370                 | 2885274.6280 | 14               | 34  | 8.8900  | Arc        | 197630.8460     | 357796.3930 | 2885098.2200 | 198139.4050     | 358204.9060 | 2885398.8170 |            | 508.5590         |                       | 2000       | Right       | Normal Camber      | 80                        | --NA--            |
|                             |              |                  |     |         | Straight   | 198139.4050     | 358204.9060 | 2885398.8170 | 198201.1270     | 358258.8570 | 2885428.7990 | 61.7220    |                  | N 60°56'15.93" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 198201.1270     | 358258.8570 | 2885428.7990 | 198276.1270     | 358322.7950 | 2885467.9020 |            | 75               |                       |            |             |                    |                           |                   |
| 358498.1570                 | 2885596.3620 | 71               | 51  | 14.1700 | Arc        | 198276.1270     | 358322.7950 | 2885467.9020 | 198652.3530     | 358430.7010 | 2885803.0100 |            | 376.2260         |                       | 300        | Left        | 7                  | 80                        | 0.6000            |
|                             |              |                  |     |         | Transition | 198652.3530     | 358430.7010 | 2885803.0100 | 198727.3530     | 358401.5940 | 2885872.0740 |            | 75               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 198727.3530     | 358401.5940 | 2885872.0    |                 |             |              |            |                  |                       |            |             |                    |                           |                   |

|           |      |             |       |        |                   |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                      |                                     |                                             |                                                                                                                                                                                           |                                                 |            |                     |  |
|-----------|------|-------------|-------|--------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------|---------------------|--|
|           |      |             |       |        | SCALE:<br>NTS     |                                                                                                                                                                                                                                                                                      | CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE<br>DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001 | TITLE : HORIZONTAL ALIGNMENT REPORT |                                             | CONSULTANT :<br> <b>CE TESTING COMPANY PVT. LTD.</b><br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/HAR |            |                     |  |
|           |      |             |       |        | DATE:<br>JAN,2023 | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br><b>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD</b><br>(LENGTH 2250 KM) IN THE STATE OF ASSAM. | SUBMISSION TYPE:                                                                                                                                     |                                     | FINAL DETAILED PROJECT REPORT<br>PACKAGE-10 |                                                                                                      | REVISION MKD. - R1                              |            | SHEET NO. -02 OF 03 |  |
| MKD.      | DATE | DESCRIPTION | CHKD. | APPRD. |                   |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                      |                                     |                                             |                                                                                                                                                                                           | DRAWN BY.                                       | DESIGN BY. | ISSUED BY.          |  |
| REVISIONS |      |             |       |        |                   |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                      | PACKAGE NO: (LOT-1) PACKAGE 1A      |                                             |                                                                                                                                                                                           | D.CHOWDHURY                                     | A.DEY      | S.BHADRA            |  |

| HORIZONTAL ALIGNMENT REPORT |              |                  |     |         |            |                 |             |              |                 |             |              |            |                  |                       |            |             |                    |                           |                   |
|-----------------------------|--------------|------------------|-----|---------|------------|-----------------|-------------|--------------|-----------------|-------------|--------------|------------|------------------|-----------------------|------------|-------------|--------------------|---------------------------|-------------------|
| HIP                         |              | DEFLECTION ANGLE |     |         | ELEMENT    | START           |             |              | END             |             |              | LENGTH (m) | CHORD LENGTH (m) | BEARING<br>(dd mm ss) | RADIUS (m) | HAND OF ARC | SUPERELEVATION (%) | DESIGN<br>SPEED<br>(km/h) | EXTRA<br>WIDENING |
| EASTING                     | NORTHING     | DEG              | MIN | SEC     |            | CHAINAGE<br>(m) | EASTING     | NORTHING     | CHAINAGE<br>(m) | EASTING     | NORTHING     |            |                  |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 200339.4580     | 359127.5920 | 2887184.6860 | 200429.4580     | 359184.7890 | 2887254.0060 |            | 90               |                       |            |             |                    |                           |                   |
| 359215.1210                 | 2887282.8890 | 19               | 1   | 17.9400 | Arc        | 200429.4580     | 359184.7890 | 2887254.0060 | 200512.4560     | 359253.2110 | 2887300.3090 |            | 82.9980          |                       | 250        | Right       | 7                  | 80                        | 0.6000            |
|                             |              |                  |     |         | Transition | 200512.4560     | 359253.2110 | 2887300.3090 | 200602.4560     | 359338.8280 | 2887327.6310 |            | 90               |                       |            |             |                    |                           |                   |
|                             |              |                  |     |         | Straight   | 200602.4560     | 359338.8280 | 2887327.6310 | 200728.3870     | 359460.8770 | 2887358.6560 | 125.9310   |                  | N 75°44'14.68" E      |            |             |                    |                           |                   |
|                             |              |                  |     |         | Transition | 200728.3870     | 359460.8770 | 2887358.6560 | 200773.3870     | 359504.3150 | 2887370.3950 |            | 45               |                       |            |             |                    |                           |                   |

|           |      |             |       |        |                   |                                                                                     |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                   |                                             |                                                                                                                                                                                               |                                                 |                                                                                                    |                                                                                                     |                     |                                                                                                     |  |
|-----------|------|-------------|-------|--------|-------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------|--|
|           |      |             |       |        | SCALE:<br>NTS     |  | CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001 | TITLE : HORIZONTAL ALIGNMENT REPORT                                                                                                                                                                                                                                                                                                                               |                                             | CONSULTANT :<br><br> <b>CE TESTING COMPANY PVT. LTD.</b><br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/HAR |                                                                                                    |                                                                                                     |                     |                                                                                                     |  |
|           |      |             |       |        |                   |                                                                                     |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                   | SUBMISSION TYPE:                            |                                                                                                                                                                                               |                                                 | REVISION MKD. - R1                                                                                 |                                                                                                     | SHEET NO. -03 OF 03 |                                                                                                     |  |
| MKD.      | DATE | DESCRIPTION | CHKD. | APPRD. | DATE:<br>JAN,2023 |                                                                                     |                                                                                                                                                   | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br><b>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD</b><br>(LENGTH 2250 KM) IN THE STATE OF ASSAM. | FINAL DETAILED PROJECT REPORT<br>PACKAGE-10 |                                                                                                                                                                                               |                                                 | DRAWN BY.<br> | DESIGN BY.<br> |                     | ISSUED BY.<br> |  |
| REVISIONS |      |             |       |        |                   |                                                                                     |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                   | PACKAGE NO: (LOT-1) PACKAGE 1A              |                                                                                                                                                                                               |                                                 | D.CHOWDHURY                                                                                        | A.DEY                                                                                               |                     | S.BHADRA                                                                                            |  |



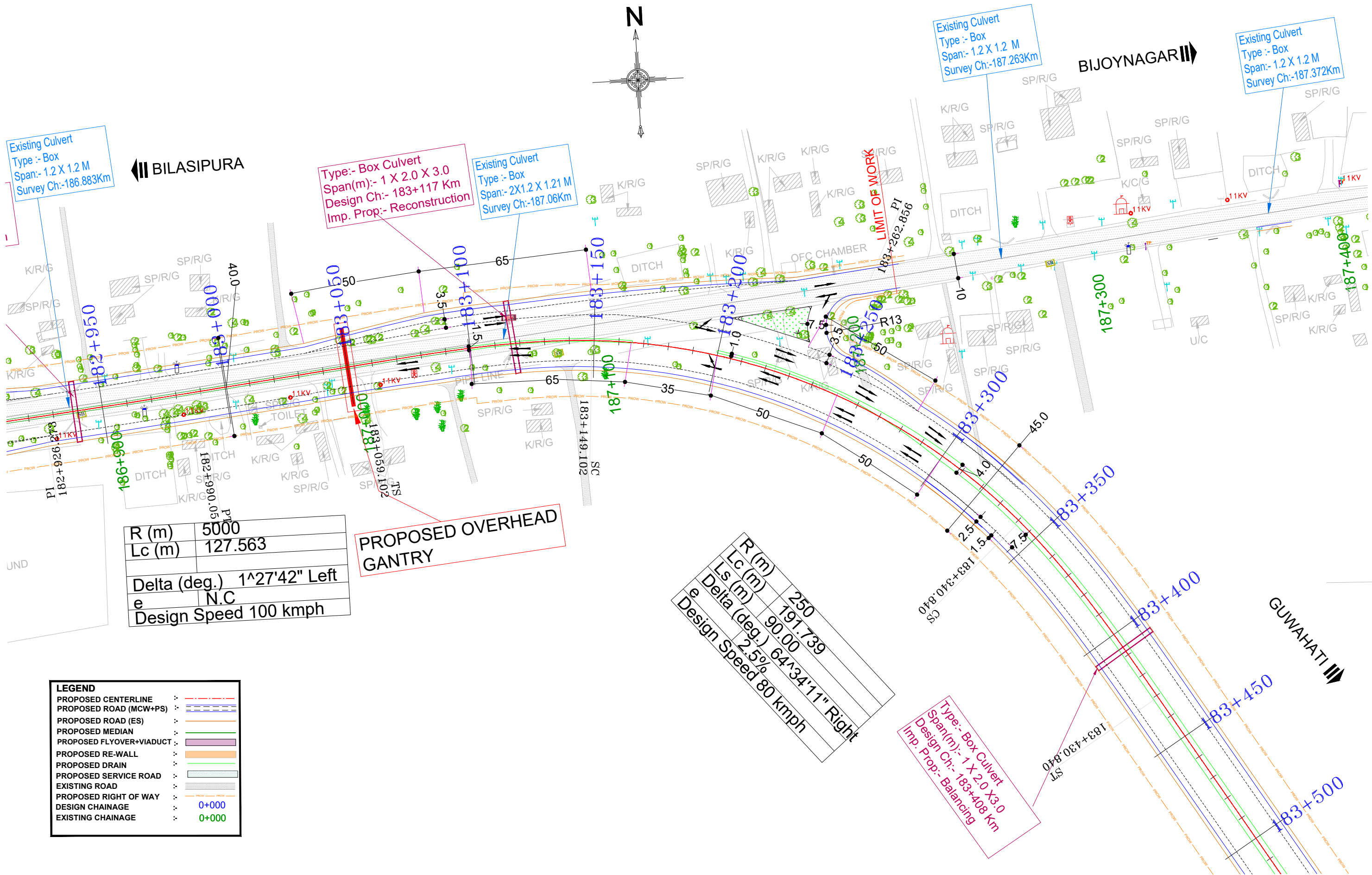
# VERTICAL CURVE REPORT

| IP          |         | TYPE OF CURVE | CURVE LENGTH | M VALUE | START       |         | END         |         | GRADIENT(%) |         |
|-------------|---------|---------------|--------------|---------|-------------|---------|-------------|---------|-------------|---------|
| CHAINAGE    | LEVEL   |               |              |         | CHAINAGE    | LEVEL   | CHAINAGE    | LEVEL   | IN          | OUT     |
| 173056.4980 | 46.4460 | Sag           | 110.0000     | 0.1390  | 173001.4980 | 46.9960 | 173111.4980 | 46.4520 | -1.0000     | 0.0110  |
| 173478.4940 | 46.4910 | Sag           | 70.0000      | 0.0620  | 173443.4940 | 46.4880 | 173513.4940 | 46.7410 | 0.0110      | 0.7140  |
| 173752.3440 | 48.4480 | Hog           | 80.0000      | -0.0710 | 173712.3440 | 48.1620 | 173792.3440 | 48.4480 | 0.7140      | 0.0000  |
| 173884.8350 | 48.4480 | Hog           | 80.0000      | -0.1000 | 173844.8350 | 48.4480 | 173924.8350 | 48.0480 | 0.0000      | -1.0000 |
| 174010.6450 | 47.1900 | Sag           | 60.0000      | 0.0720  | 173980.6450 | 47.4900 | 174040.6450 | 47.1770 | -1.0000     | -0.0420 |
| 174248.6510 | 47.0900 | Hog           | 60.0000      | -0.0160 | 174218.6510 | 47.1030 | 174278.6510 | 47.0150 | -0.0420     | -0.2510 |
| 174402.3140 | 46.7050 | Sag           | 70.0000      | 0.1130  | 174367.3140 | 46.7930 | 174437.3140 | 47.0700 | -0.2510     | 1.0430  |
| 174656.9170 | 49.3600 | Hog           | 80.0000      | -0.1040 | 174616.9170 | 48.9430 | 174696.9170 | 49.3600 | 1.0430      | 0.0000  |
| 174777.8350 | 49.3600 | Hog           | 75.0000      | -0.0940 | 174740.3350 | 49.3600 | 174815.3350 | 48.9850 | 0.0000      | -1.0000 |
| 175100.4320 | 46.1340 | Sag           | 180.0000     | 0.7870  | 175010.4320 | 47.0340 | 175190.4320 | 48.3840 | -1.0000     | 2.5000  |
| 175592.2780 | 58.4300 | Hog           | 190.0000     | -0.5940 | 175497.2780 | 56.0550 | 175687.2780 | 58.4300 | 2.5000      | 0.0000  |
| 175865.0210 | 58.4300 | Hog           | 115.0000     | -0.2160 | 175807.5210 | 58.4300 | 175922.5210 | 57.5680 | 0.0000      | -1.5000 |
| 176010.3150 | 56.2510 | Sag           | 100.0000     | 0.1880  | 175960.3150 | 57.0010 | 176060.3150 | 56.2510 | -1.5000     | 0.0000  |
| 176495.0000 | 56.2510 | Hog           | 190.0000     | -0.5940 | 176400.0000 | 56.2510 | 176590.0000 | 53.8760 | 0.0000      | -2.5000 |
| 176882.2560 | 46.5690 | Sag           | 150.0000     | 0.4940  | 176807.2560 | 48.4440 | 176957.2560 | 46.6710 | -2.5000     | 0.1360  |
| 177137.1810 | 46.9150 | Hog           | 70.0000      | -0.0410 | 177102.1810 | 46.8670 | 177172.1810 | 46.8000 | 0.1360      | -0.3290 |
| 177219.2100 | 46.6450 | Sag           | 60.0000      | 0.0480  | 177189.2100 | 46.7440 | 177249.2100 | 46.7380 | -0.3290     | 0.3090  |
| 177332.1490 | 46.9950 | Hog           | 70.0000      | -0.0440 | 177297.1490 | 46.8860 | 177367.1490 | 46.9250 | 0.3090      | -0.1990 |
| 177429.5900 | 46.8010 | Sag           | 60.0000      | 0.0330  | 177399.5900 | 46.8610 | 177459.5900 | 46.8740 | -0.1990     | 0.2420  |
| 177564.5730 | 47.1280 | Hog           | 60.0000      | -0.0310 | 177534.5730 | 47.0550 | 177594.5730 | 47.0770 | 0.2420      | -0.1690 |
| 177705.6530 | 46.8890 | Sag           | 60.0000      | 0.0310  | 177675.6530 | 46.9400 | 177735.6530 | 46.9620 | -0.1690     | 0.2410  |
| 177856.1110 | 47.2520 | Hog           | 90.0000      | -0.0720 | 177811.1110 | 47.1430 | 177901.1110 | 47.0730 | 0.2410      | -0.3970 |
| 177971.3280 | 46.7950 | Sag           | 60.0000      | 0.0460  | 177941.3280 | 46.9140 | 178001.3280 | 46.8580 | -0.3970     | 0.2120  |
| 178062.0790 | 46.9870 | Hog           | 80.0000      | -0.0590 | 178022.0790 | 46.9020 | 178102.0790 | 46.8350 | 0.2120      | -0.3780 |
| 178155.2720 | 46.6340 | Sag           | 60.0000      | 0.0440  | 178125.2720 | 46.7470 | 178185.2720 | 46.6980 | -0.3780     | 0.2130  |
| 178251.4800 | 46.8390 | Hog           | 60.0000      | -0.0260 | 178221.4800 | 46.7750 | 178281.4800 | 46.7970 | 0.2130      | -0.1400 |
| 178331.1370 | 46.7270 | Sag           | 60.0000      | 0.0330  | 178301.1370 | 46.7690 | 178361.1370 | 46.8170 | -0.1400     | 0.3010  |
| 178652.8210 | 47.6950 | Hog           | 150.0000     | -0.1930 | 178577.8210 | 47.4690 | 178727.8210 | 47.1500 | 0.3010      | -0.7260 |
| 178784.8080 | 46.7360 | Sag           | 60.0000      | 0.0400  | 178754.8080 | 46.9540 | 178814.8080 | 46.6770 | -0.7260     | -0.1960 |
| 179049.9850 | 46.2150 | Sag           | 60.0000      | 0.0110  | 179019.9850 | 46.2740 | 179079.9850 | 46.2010 | -0.1960     | -0.0470 |
| 179456.1860 | 46.0240 | Sag           | 80.0000      | 0.1670  | 179416.1860 | 46.0430 | 179496.1860 | 46.6720 | -0.0470     | 1.6180  |
| 179590.6240 | 48.2000 | Hog           | 140.0000     | -0.2830 | 179520.6240 | 47.0670 | 179660.6240 | 48.2000 | 1.6180      | 0.0000  |
| 179846.0640 | 48.2000 | Hog           | 170.0000     | -0.2570 | 179761.0640 | 48.2000 | 179931.0640 | 47.1740 | 0.0000      | -1.2070 |
| 179972.8750 | 46.6690 | Sag           | 60.0000      | 0.0950  | 179942.8750 | 47.0310 | 180002.8750 | 46.6870 | -1.2070     | 0.0600  |
| 180222.9030 | 46.8190 | Hog           | 60.0000      | -0.0170 | 180192.9030 | 46.8010 | 180252.9030 | 46.7690 | 0.0600      | -0.1660 |
| 180425.2660 | 46.4830 | Sag           | 120.0000     | 0.4000  | 180365.2660 | 46.5820 | 180485.2660 | 47.9830 | -0.1660     | 2.5000  |
| 180610.8350 | 51.1220 | Hog           | 190.0000     | -0.5940 | 180515.8350 | 48.7470 | 180705.8350 | 51.1220 | 2.5000      | 0.0000  |
| 180950.8350 | 51.1220 | Hog           | 190.0000     | -0.5940 | 180855.8350 | 51.1220 | 181045.8350 | 48.7470 | 0.0000      | -2.5000 |
| 181119.8390 | 46.8970 | Sag           | 110.0000     | 0.3550  | 181064.8390 | 48.2720 | 181174.8390 | 46.9430 | -2.5000     | 0.0840  |
| 181409.7200 | 47.1390 | Hog           | 60.0000      | -0.0190 | 181379.7200 | 47.1140 | 181439.7200 | 47.0870 | 0.0840      | -0.1710 |
| 181536.6950 | 46.9210 | Hog           | 60.0000      | -0.0100 | 181506.6950 | 46.9730 | 181566.6950 | 46.8300 | -0.1710     | -0.3050 |
| 181658.8600 | 46.5490 | Sag           | 60.0000      | 0.0400  | 181628.8600 | 46.6400 | 181688.8600 | 46.6190 | -0.3050     | 0.2350  |
| 181744.9180 | 46.7510 | Hog           | 60.0000      | -0.0310 | 181714.9180 | 46.6810 | 181774.9180 | 46.6970 | 0.2350      | -0.1820 |
| 181832.1550 | 46.5930 | Sag           | 60.0000      | 0.0440  | 181802.1550 | 46.6470 | 181862.1550 | 46.7130 | -0.1820     | 0.4020  |
| 181912.1440 | 46.9140 | Hog           | 90.0000      | -0.0740 | 181867.1440 | 46.7330 | 181957.1440 | 46.8010 | 0.4020      | -0.2520 |
| 182017.8790 | 46.6480 | Sag           | 60.0000      | 0.0290  | 181987.8790 | 46.7240 | 182047.8790 | 46.6870 | -0.2520     | 0.1290  |
| 182213.0300 | 46.8990 | Hog           | 60.0000      | -0.0270 | 182183.0300 | 46.8610 | 182243.0300 | 46.8320 | 0.1290      | -0.2270 |
| 182311.6750 | 46.6760 | Sag           | 60.0000      | 0.0300  | 182281.6750 | 46.7440 | 182341.6750 | 46.7300 | -0.2270     | 0.1800  |
| 182546.8910 | 47.0990 | Hog           | 60.0000      | -0.0230 | 182516.8910 | 47.0450 | 182576.8910 | 47.0610 | 0.1800      | -0.1290 |
| 182748.9460 | 46.8390 | Sag           | 60.0000      | 0.0230  | 182718.9460 | 46.8780 | 182778.9460 | 46.8950 | -0.1290     | 0.1840  |
| 182838.3600 | 47.0040 | Hog           | 60.0000      | -0.0310 | 182808.3600 | 46.9490 | 182868.3600 | 46.9330 | 0.1840      | -0.2360 |
| 182979.7160 | 46.6710 | Sag           | 60.0000      | 0.0290  | 182949.7160 | 46.7410 | 183009.7160 | 46.7150 | -0.2360     | 0.1470  |
| 183066.1380 | 46.7970 | Hog           | 60.0000      | -0.0110 | 183036.1380 | 46.7530 | 183096.1380 | 46.7950 | 0.1470      | -0.0070 |
| 183138.3110 | 46.7930 | Sag           | 60.0000      | 0.0150  | 183108.3110 | 46.7950 | 183168.3110 | 46.8520 | -0.0070     | 0.1970  |
| 183656.3500 | 47.8130 | Sag           | 120.0000     | 0.3450  | 183596.3500 | 47.6940 | 183716.3500 | 49.3130 | 0.1970      | 2.5000  |
| 183865.5000 | 53.0410 | Hog           | 190.0000     | -0.5940 | 183770.5000 | 50.6660 | 183960.5000 | 53.0410 | 2.5000      | 0.0000  |
| 184180.5000 | 53.0410 | Hog           | 190.0000     | -0.5940 | 184085.5000 | 53.0410 | 184275.5000 | 50.6660 | 0.0000      | -2.5000 |
| 184397.8150 | 47.6080 | Sag           | 120.0000     | 0.3770  | 184337.8150 | 49.1080 | 184457.8150 | 47.6150 | -2.5000     | 0.0110  |
| 184729.5970 | 47.6470 | Hog           | 120.0000     | -0.0090 | 184669.5970 | 47.6400 | 184789.5970 | 47.6180 | 0.0110      | -0.0480 |
| 185030.4870 | 47.5010 | Sag           | 140.0000     | 0.1140  | 184960.4870 | 47.5350 | 185100.4870 | 47.9220 | -0.0480     | 0.6010  |
| 185279.9450 | 49.0000 | Hog           | 100.0000     | -0.0750 | 185229.9450 | 48.7000 | 185329.9450 | 49.0000 | 0.6010      | 0.0000  |

| IP          |         | TYPE OF CURVE | CURVE LENGTH | M VALUE | START       |         | END         |         | GRADIENT(%) |           |
|-------------|---------|---------------|--------------|---------|-------------|---------|-------------|---------|-------------|-----------|
| CHAINAGE    | LEVEL   |               |              |         | CHAINAGE    | LEVEL   | CHAINAGE    | LEVEL   | IN          | OUT       |
| 185279.9450 | 49.0000 | Hog           | 100.0000     | -0.0750 | 185229.9450 | 48.7000 | 185329.9450 | 49.0000 | 0.6010      | 0.0000    |
| 185595.7230 | 49.0000 | Sag           | 80.0000      | 0.0450  | 185555.7230 | 49.0000 | 185635.7230 | 49.1780 | 0.0000      | 0.4460    |
| 185905.0810 | 50.3790 | Hog           | 185.0000     | -0.5750 | 185812.5810 | 49.9670 | 185997.5810 | 48.4930 | 0.4460      | -2.0390   |
| 186090.3680 | 46.6010 | Sag           | 145.0000     | 0.3970  | 186017.8680 | 48.0790 | 186162.8680 | 46.7090 | -2.0390     | 0.1490    |
| 186831.4830 | 47.7040 | Hog           | 150.0000     | -0.0260 | 186756.4830 | 47.5930 | 186906.4830 | 47.7120 | 0.1490      | 0.0100    |
| 187187.7940 | 47.7410 | Sag           | 120.0000     | 0.3730  | 187127.7940 | 47.7350 | 187247.7940 | 49.2410 | 0.0100      | 2.5000    |
| 187442.8130 | 54.1170 | Hog           | 370.0000     | -2.3130 | 187257.8130 | 49.4920 | 187627.8130 | 49.4920 | 2.5000      | -2.5000   |
| 187690.4330 | 47.9260 | Sag           | 120.0000     | 0.3750  | 187630.4330 | 49.4260 | 187750.4330 | 47.9260 | -2.5000     | 0.0000    |
| 188258.9240 | 47.9260 | Sag           | 120.0000     | 0.3750  | 188198.9240 | 47.9260 | 188318.9240 | 49.4260 | 0.0000      | 2.5000    |
| 188594.8130 | 56.3230 | Hog           | 370.0000     | -2.3120 | 188409.8130 | 51.6980 | 188779.8130 | 51.6990 | 2.5000      | -2.5000   |
| 188910.0410 | 48.4430 | Sag           | 120.0000     | 0.4050  | 188850.0410 | 49.9430 | 188970.0410 | 48.5630 | -2.5000     | 0.1990    |
| 189280.7360 | 49.1800 | Hog           | 80.0000      | -0.0480 | 189240.7360 | 49.1010 | 189320.7360 | 49.0690 | 0.1990      | -0.2780   |
| 189508.0420 | 48.5470 | Sag           | 120.0000     | 0.4170  | 189448.0420 | 48.7140 | 189568.0420 | 50.0470 | -0.2780     | 2.5000    |
| 189794.8130 | 55.7170 | Hog           | 370.0000     | -2.3120 | 189609.8130 | 51.0920 | 189979.8130 | 51.0920 | 2.5000      | -2.5000   |
| 190055.3960 | 49.2020 | Sag           | 120.0000     | 0.4190  | 189995.3960 | 50.7020 | 190115.3960 | 49.3760 | -2.5000     | 0.2900    |
| 190512.1830 | 50.5270 | Hog           | 120.0000     | -0.0890 | 190452.1830 | 50.3530 | 190572.1830 | 50.3470 | 0.2900      | -0.3000   |
| 190672.1830 | 50.0470 | Sag           | 80.0000      | 0.0600  | 190632.1830 | 50.1670 | 190712.1830 | 50.1670 | -0.3000     | 0.3000    |
| 190832.1830 | 50.5270 | Hog           | 120.0000     | -0.0900 | 190772.1830 | 50.3470 | 190892.1830 | 50.3470 | 0.3000      | -0.3000   |
| 191018.4400 | 49.9690 | Sag           | 120.0000     | 0.4200  | 190958.4400 | 50.1490 | 191078.4400 | 51.4690 | -0.3000     | 2.5000    |
| 191404.8130 | 59.6280 | Hog           | 370.0000     | -2.3130 | 191219.8130 | 55.0030 | 191589.8130 | 55.0030 | 2.5000      | -2.5000   |
| 191796.7550 | 49.8290 | Sag           | 120.0000     | 0.4200  | 191736.7550 | 51.3290 | 191856.7550 | 50.0080 | -2.5000     | 0.2970    |
| 192011.2710 | 50.4670 | Hog           | 200.0000     | -0.1490 | 191911.2710 | 50.1700 | 192111.2710 | 50.1670 | 0.2970      | -0.3000   |
| 192200.2890 | 49.9000 | Sag           | 140.0000     | 0.1050  | 192130.2890 | 50.1100 | 192270.2890 | 50.1100 | -0.3000     | 0.3000    |
| 192360.2890 | 50.3800 | Hog           | 140.0000     | -0.1050 | 192290.2890 | 50.1700 | 192430.2890 | 50.1700 | 0.3000      | -0.3000</ |

# MAJOR INTERSECTION



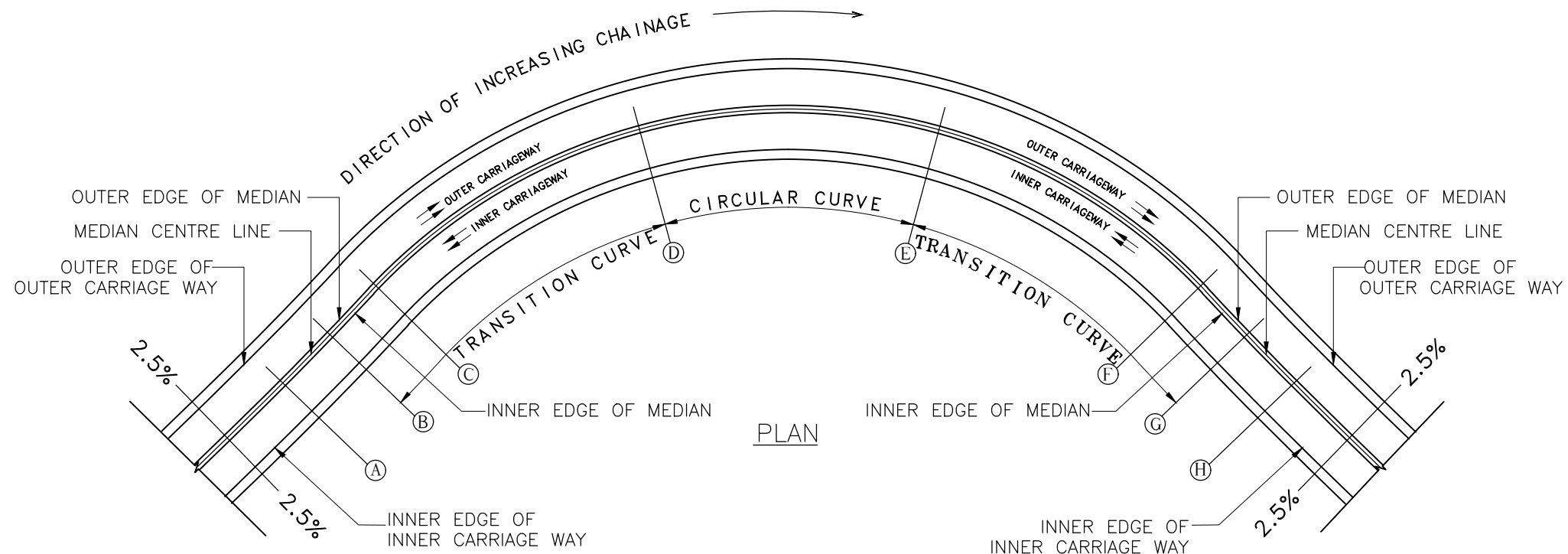
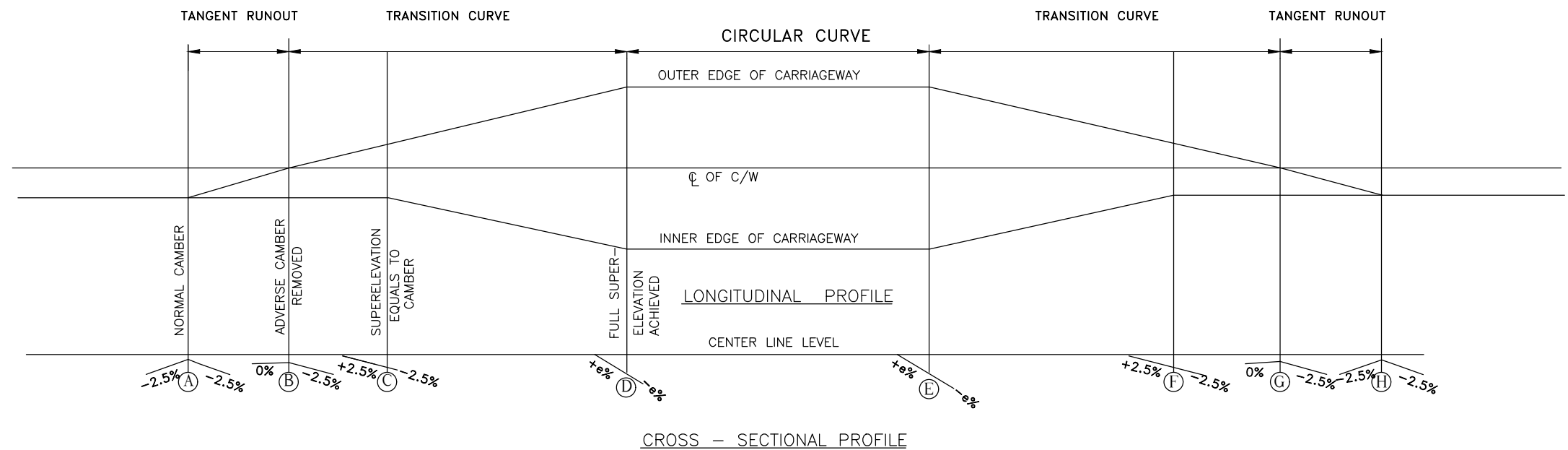


|      |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                          |        |                                                                                                                                                                                     |  |                                                                                       |  |                                                                                       |                                                                                       |  |
|------|--|--|--|--|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
|      |  |  |  |  | SCALE:<br>Hor - 1:2000<br>Ver - 1:200 |  CLIENT:<br>NATIONAL HIGHWAYS AND INFRASTRUCTURE<br>DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001                                                                                                                         | TITLE :<br>MAJOR INTERSECTION<br>AT SATPAKHALI                                           |        | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD,<br>KOLKATA - 700092. |  | DWG. NO.CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/MI                                        |  |                                                                                       |                                                                                       |  |
|      |  |  |  |  | DATE:<br>JAN,2023                     | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC<br>CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF<br>FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD<br>(LENGTH 225.000 KM) IN THE STATE OF ASSAM. | SUBMISSION TYPE:<br>FINAL DETAILED PROJECT REPORT<br>PACKAGE 10 (173+434KM TO 212+495KM) |        |                                                                                                                                                                                     |  | REVISION MKD. - R1                                                                    |  | SHEET NO. -01                                                                         |                                                                                       |  |
| MKD. |  |  |  |  | DATE                                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                         | CHKD.                                                                                    | APPRD. |                                                                                                                                                                                     |  | DRAWN BY.                                                                             |  | DESIGN BY.                                                                            | ISSUED BY.                                                                            |  |
|      |  |  |  |  |                                       |                                                                                                                                                                                                                                                                                                                                                                     |                                                                                          |        |                                                                                                                                                                                     |  |  |  |  |  |  |
|      |  |  |  |  |                                       | REVISIONS                                                                                                                                                                                                                                                                                                                                                           |                                                                                          |        | PACKAGE NO: (LOT-1) PACKAGE 1A                                                                                                                                                      |  | D.CHOWDHURY                                                                           |  | A.DEY                                                                                 | S.BHADRA                                                                              |  |

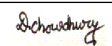
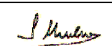


# MISCELLANEOUS DRAWINGS





TYPICAL DETAILS OF SUPERELEVATION ATTAINMENT FOR A CIRCULAR CURVE WITH TRANSITION CURVE  
(ROTATION ABOUT MEDIAN EDGE)

|           |      |             |       |        |                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  |                                                                                                    |                                                                                                     |                                                                                                     |  |           |  |  |  |
|-----------|------|-------------|-------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--|-----------|--|--|--|
|           |      |             |       |        | SCALE:<br>N.T.S                                                                                                                                                                                                                                                                                                                                             |  | CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street, New Delhi - 110001 | TITLE : DETAILS OF CURVE COMPONENT | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD, KOLKATA - 700092. | DWG. NO. CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/MISC-1                                                |                                                                                                     |                                                                                                     |  |           |  |  |  |
|           |      |             |       |        | DATE:<br>JAN, 2023                                                                                                                                                                                                                                                                                                                                          |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  | REVISION MKD. - R0                                                                                 |                                                                                                     | SHEET NO. - 01 OF 01                                                                                |  |           |  |  |  |
| MKD.      | DATE | DESCRIPTION | CHKD. | APPRD. | PROJECT: CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS, INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A<br>BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD (LENGTH 225.000 KM) IN THE STATE OF ASSAM. |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  | DRAWN BY.<br> | DESIGN BY.<br> | ISSUED BY.<br> |  |           |  |  |  |
| REVISIONS |      |             |       |        |                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  | D. CHOWDHURY                                                                                       |                                                                                                     | A. DEY                                                                                              |  | S. BHADRA |  |  |  |
|           |      |             |       |        |                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  |                                                                                                    |                                                                                                     |                                                                                                     |  |           |  |  |  |
|           |      |             |       |        |                                                                                                                                                                                                                                                                                                                                                             |                                                                                     |                                                                                                                                                |                                    |                                                                                                                                                                                  |                                                                                                    |                                                                                                     |                                                                                                     |  |           |  |  |  |

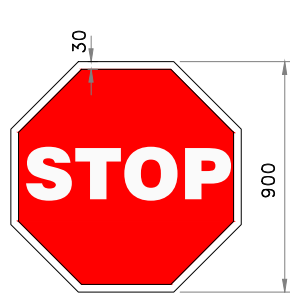


Fig. 14.01  
STOP SIGNAL

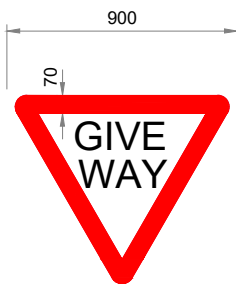


Fig. 14.02  
GIVE WAY SIGN

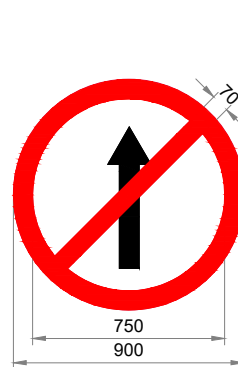


Fig. 14.19  
NO ENTRY

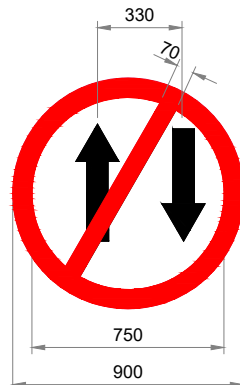


Fig. 14.20  
ONE WAY SIGNS



Fig. 14.22  
RIGHT TURN PROHIBITED

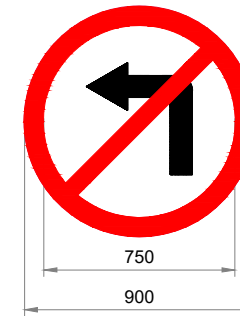


Fig. 14.21  
LEFT TURN PROHIBITED

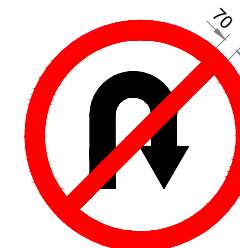


Fig. 14.24  
U - TURN PROHIBITED

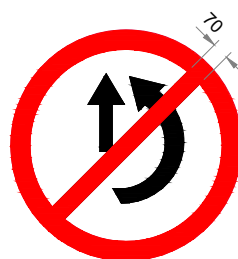


Fig. 14.23  
OVERTAKING PROHIBITED

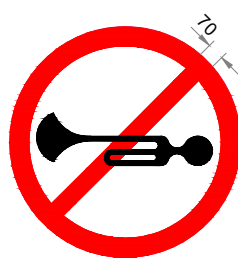


Fig. 14.18  
HORN PROHIBITED

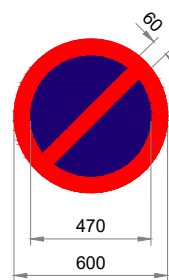


Fig. 14.29  
NO PARKING

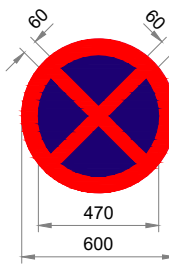


Fig. 14.28  
NO STOPPING AND  
NO STANDING



Fig. 14.37  
SPEED LIMIT

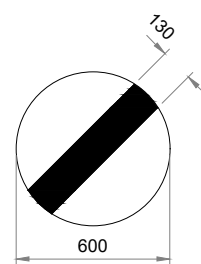


Fig. 14.40  
RESTRICTION END



Fig. 14.48  
COMPULSORY  
KEEP LEFT



Fig. 14.46  
COMPULSORY TURN  
RIGHT AHEAD

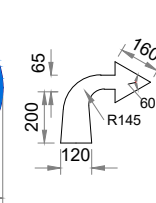


Fig. 14.47  
COMPULSORY TURN  
LEFT AHEAD



Fig. 14.42  
COMPULSORY AHEAD  
OR TURN RIGHT

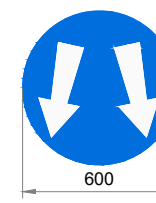


Fig. 14.5  
PASS EITHER  
SIDE

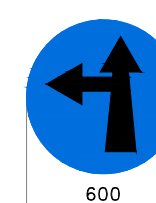


Fig. 14.43  
COMPULSORY AHEAD  
OR TURN LEFT

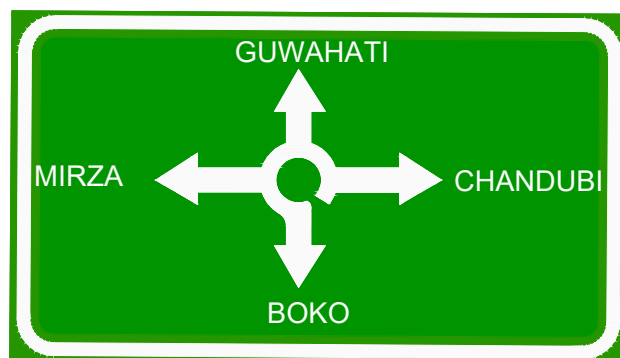


Fig. 16.03  
ADVANCE DIRECTION SIGN



Fig. 16.05  
REASSURANCE SIGN



Fig. 16.06  
PLACE IDENTIFICATION SIGN



Fig. 16.04  
PLACE IDENTIFICATION SIGN

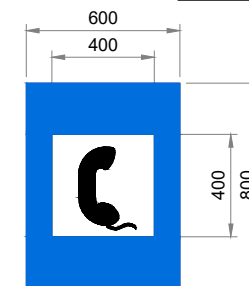


Fig. 17.08  
PUBLIC TELEPHONE

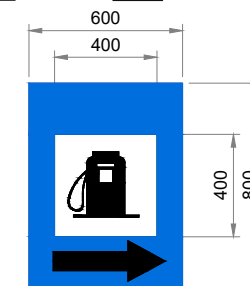


Fig. 17.06  
FILLING STATION

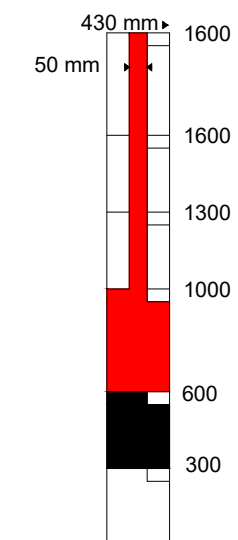


Fig. 18.10  
FLOOD GAUGE

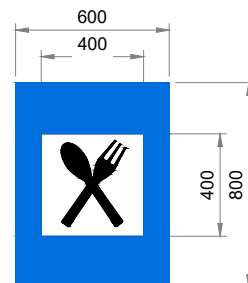


Fig. 17.01  
EATING PLACE

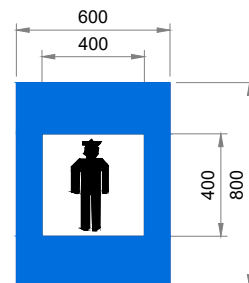


Fig. 17.13  
POLICE STATION

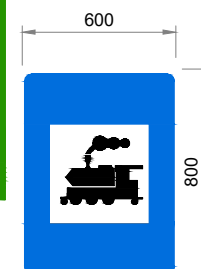


Fig. 17.16  
RAILWAY STATION

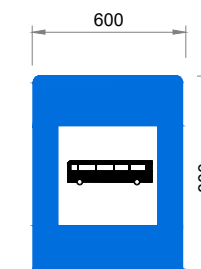


Fig. 17.35  
BUS STOP

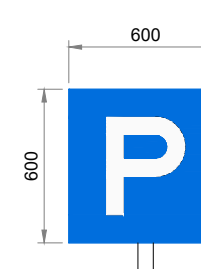


Fig. 18.01  
PARKING THIS SIDE

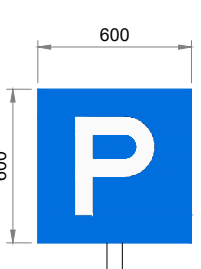


Fig. 14.01  
PARKING BOTH SIDE

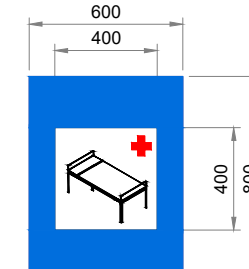


Fig. 17.07  
HOSPITAL

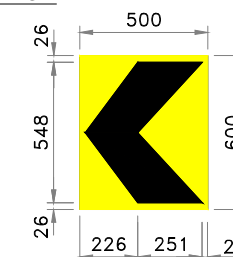


Fig. 15.72  
SINGLE CEVRON (NORMAL)

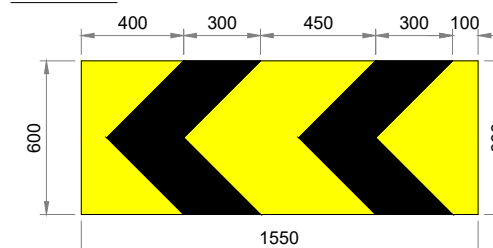
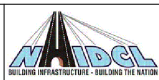
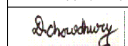
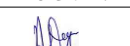
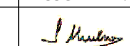
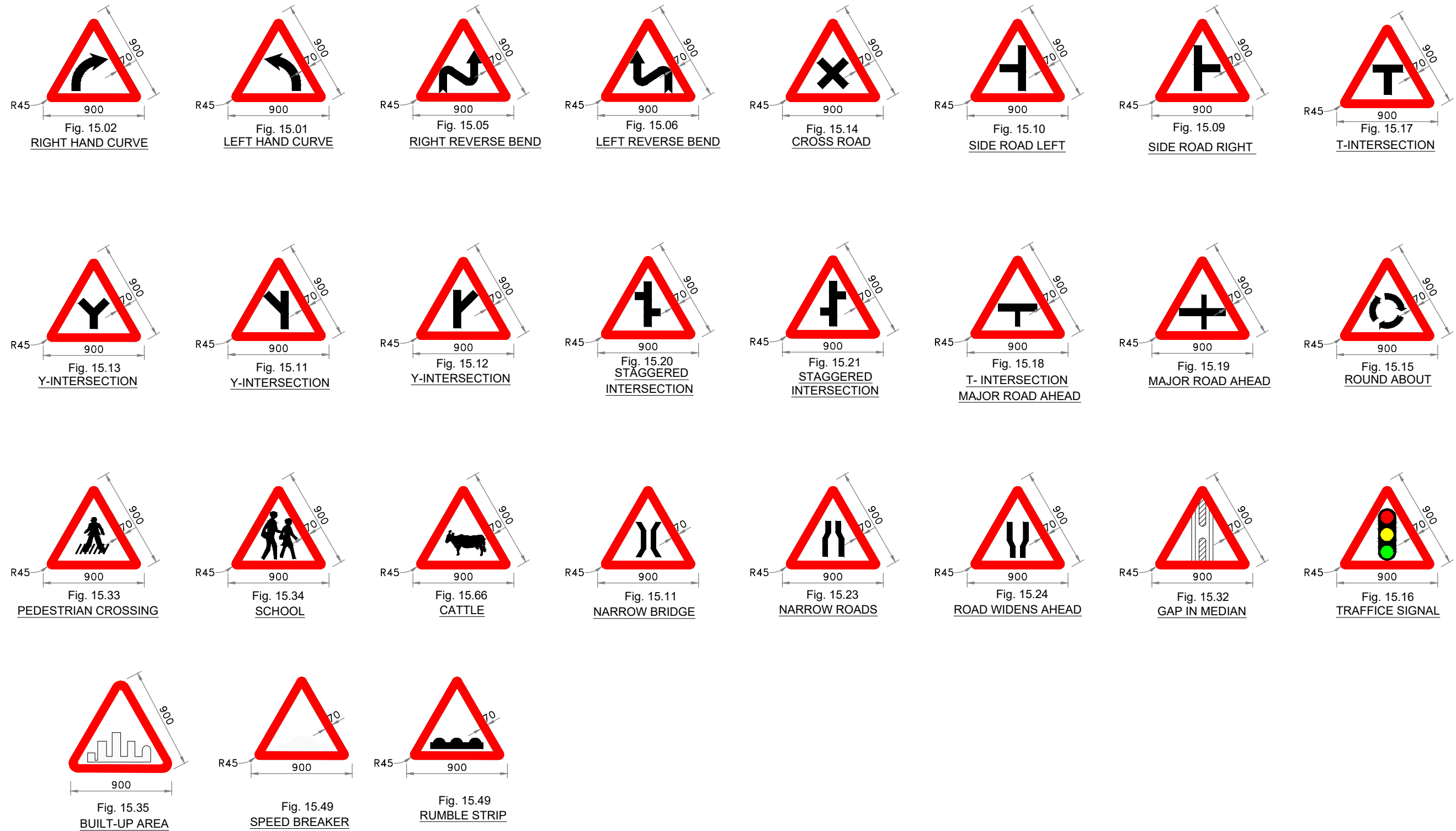


Fig. 15.74  
DOUBLE CHEVRON

NOTE:

1. ALL DIMENSIONS ARE IN MM UNLESS AND OTHERWISE SPECIFIED.
2. FOR DETAILS OF ROAD SIGN REFER IRC: 67-2012.

|           |      |             |       |        |                    |                                                                                     |                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                        |                                                       |                                                                                                                                                                                    |                                                     |  |                                                                                                   |  |                                                                                              |  |                                                                                                |
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|           |      |             |       |        | SCALE:<br>N.T.S    |  | CLIENT:<br>NATIONAL HIGHWAYS AND INFRASTRUCTURE<br>DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001 | TITLE : TYPICAL DETAILS OF ROAD SIGNS                                                                                                                                                                                                                                                                                                                  |                                                       | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092. | DWG. NO. CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/MISC-2 |  |                                                                                                   |  |                                                                                              |  |                                                                                                |
|           |      |             |       |        | DATE:<br>JAN, 2023 |                                                                                     |                                                                                                                                                         | PROJECT:CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD (LENGTH 225.000 KM) IN THE STATE OF ASSAM. | SUBMISSION TYPE:<br><br>FINAL DETAILED PROJECT REPORT |                                                                                                                                                                                    | REVISION MKD. - R0                                  |  | SHEET NO. - 01 OF 03                                                                              |  |                                                                                              |  |                                                                                                |
| MKD.      | DATE | DESCRIPTION | CHKD. | APPRD. |                    |                                                                                     |                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                        | PACKAGE NO: (LOT-1) PACKAGE 1A                        |                                                                                                                                                                                    | DRAWN BY.                                           |  | DESIGN BY.                                                                                        |  | ISSUED BY.                                                                                   |  |                                                                                                |
| REVISIONS |      |             |       |        |                    |                                                                                     |                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                        |                                                       |                                                                                                                                                                                    |                                                     |  |  D.CHOWDHURY |  |  A. DEY |  |  S.BHADRA |



NOTE:  
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED  
2. FOR DETAILS OF ROAD SIGN REFER IRC-67:2012

|           |      |             |       |        |                   |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                         |                                                   |  |                                                                                                                                                                                                                                                                             |                                                                                                                   |                                                                                                               |
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|           |      |             |       |        | SCALE:<br>N.T.S   |                                                                                                                                                                                                                                                                     | CLIENT:<br>NATIONAL HIGHWAYS AND INFRASTRUCTURE<br>DEVELOPMENT CORPORATION LTD.<br>PTI Building, 3rd Floor, 4, Parliament Street,<br>New Delhi - 110001 | TITLE : TYPICAL DETAILS OF ROAD SIGNS             |  | CONSULTANT :<br> CE TESTING COMPANY PVT. LTD.<br>124-A, N.S.C. BOSE ROAD<br>KOLKATA - 700092.<br> | DWG. NO. CET/4146/NHIDCL/NH-17/B-G ROAD/FDPR/MISC-2                                                               |                                                                                                               |
| MKD.      | DATE | DESCRIPTION | CHKD. | APPRD. | DATE:<br>JAN,2023 |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                         | SUBMISSION TYPE:<br>FINAL DETAILED PROJECT REPORT |  |                                                                                                                                                                                                                                                                             | REVISION MKD. - R0                                                                                                | SHEET NO. - 02 OF 03                                                                                          |
| REVISIONS |      |             |       |        |                   | PROJECT:CONSULTANCY SERVICES FOR PREPARATION OF DPR FOR DEVELOPMENT OF ECONOMIC CORRIDORS,INTER CORRIDORS AND FEEDER ROUTES TO IMPROVE THE EFFICIENCY OF FREIGHT MOVEMENT IN INDIA UNDER BHARATMALA PARIYOJANA (LOT-1) PACKAGE 1A BILASIPURA-CHAPAR-TULUNGIA-JOGIGHOPA-GENDERA-PAIKAN-DUDHNOI-GUWAHATI ROAD (LENGTH 225.000 KM) IN THE STATE OF ASSAM. |                                                                                                                                                         | PACKAGE NO: (LOT-1) PACKAGE 1A                    |  |                                                                                                                                                                                                                                                                             | DRAWN BY.<br><br>D.CHOWDHURY | DESIGN BY.<br><br>A. DEY |