

| STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | VERTICAL CURVATURE | SUPERELEVATION |
|---------|----------------|-----------------|----------------------|--------------------|----------------|
| 28+900  | 1301.250       | 1303.252        |                      |                    |                |
|         | 1301.092       | 1302.655        |                      |                    |                |
|         | 1300.937       | 1302.150        |                      |                    |                |
|         | 1300.783       | 1301.780        |                      |                    |                |
|         | 1300.628       | 1301.544        |                      |                    |                |
|         | 1300.474       | 1301.445        |                      |                    |                |
|         | 1300.940       | 1301.480        |                      |                    |                |
|         | 1301.417       | 1301.650        |                      |                    |                |
|         | 1301.894       | 1301.955        |                      |                    |                |
|         | 1302.372       | 1302.392        |                      |                    |                |
|         | 1302.849       | 1302.813        |                      |                    |                |
|         | 1303.140       | 1303.147        |                      |                    |                |
|         | 1303.429       | 1303.393        |                      |                    |                |
|         | 1303.515       | 1303.550        |                      |                    |                |
|         | 1303.486       | 1303.622        |                      |                    |                |
|         | 1303.457       | 1303.663        |                      |                    |                |
|         | 1303.549       | 1303.704        |                      |                    |                |
|         | 1303.642       | 1303.746        |                      |                    |                |
|         | 1303.735       | 1303.787        |                      |                    |                |
|         | 1303.828       | 1303.829        |                      |                    |                |
|         | 1303.921       | 1303.870        |                      |                    |                |
|         | 1303.953       | 1303.911        |                      |                    |                |
|         | 1303.984       | 1303.953        |                      |                    |                |
|         | 1304.014       | 1303.985        |                      |                    |                |
|         | 1304.045       | 1303.951        |                      |                    |                |
|         | 1304.075       | 1303.842        |                      |                    |                |
|         | 1303.747       | 1303.657        |                      |                    |                |
|         | 1303.412       | 1303.398        |                      |                    |                |
|         | 1303.077       | 1303.072        |                      |                    |                |
|         | 1302.743       | 1302.737        |                      |                    |                |
|         | 1302.408       | 1302.438        |                      |                    |                |
|         | 1302.220       | 1302.217        |                      |                    |                |
|         | 1301.967       | 1302.011        |                      |                    |                |
|         | 1302.025       | 1302.027        |                      |                    |                |
|         | 1302.084       | 1302.085        |                      |                    |                |

図 3-2-3-21 全体平面・縦断面 (Section II 新設区間 Sta.28+900-Sta.29+600)

THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA

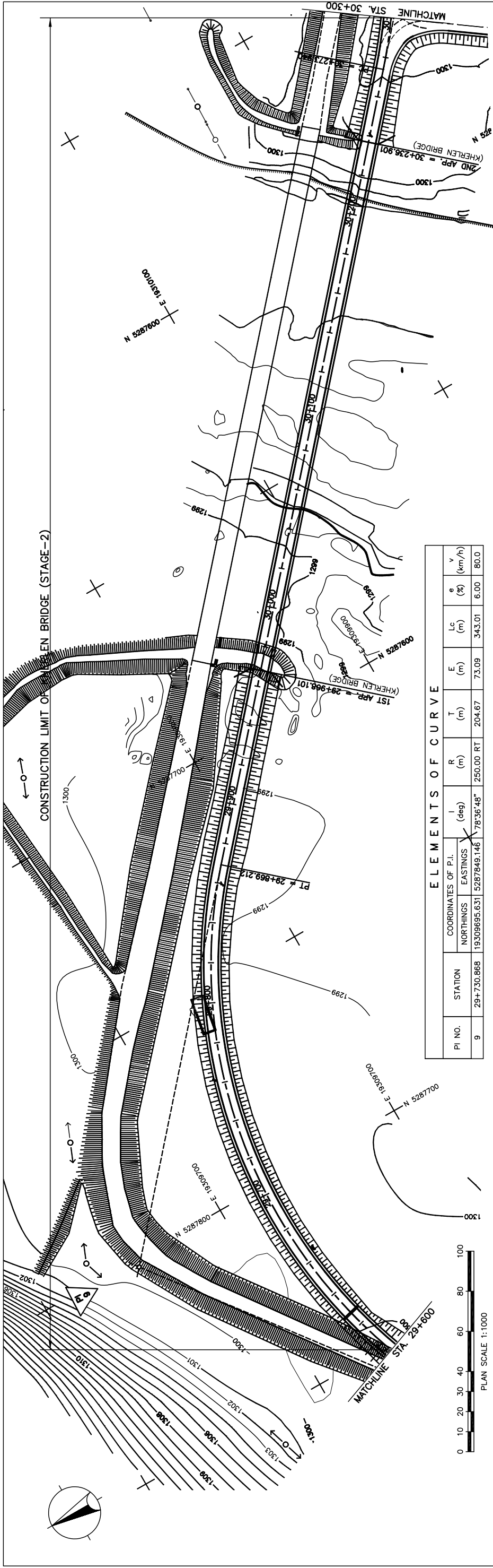
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF INFRASTRUCTURE  
THE GOVERNMENT OF MONGOLIA

PACIFIC CONSULTANTS INTERNATIONAL  
JAPAN OVERSEAS CONSULTANTS

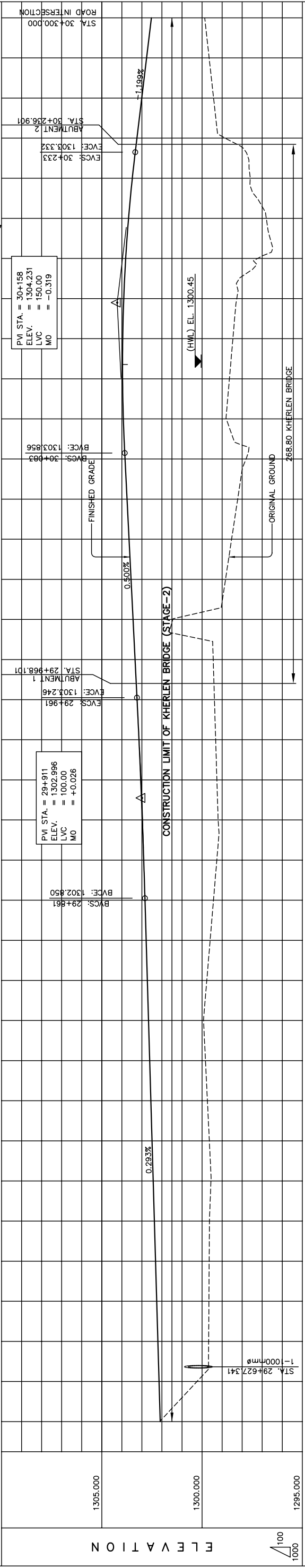
Scale: AS SHOWN

Sheet No.: C-19  
19/21



**ELEMENTS OF CURVE**

| PI NO. | STATION    | COORDINATES OF P.I.                              | $\Delta$ (deg) | R (m)     | T (m)  | E (m) | Lc (m) | $e$ (%) | $V$ (km/h) |
|--------|------------|--|----------------|-----------|--------|-------|--------|---------|------------|
| 9      | 29+730.888 | NORTHINGS: 19309695.631<br>EASTINGS: 5287849.146 | 78°36'48"      | 250.00 RT | 204.67 | 73.09 | 343.01 | 6.00    | 80.0       |



| STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | VERTICAL CURVATURE | SUPERELEVATION |
|---------|----------------|-----------------|----------------------|--------------------|----------------|
| 29+600  | 1302.085       | 1302.085        |                      |                    |                |
| 29+610  | 1302.084       | 1302.085        |                      |                    |                |
| 29+620  | 1302.252       | 1302.144        |                      |                    |                |
| 29+630  | 1302.671       | 1302.202        |                      |                    |                |
| 29+640  | 1302.729       | 1302.271        |                      |                    |                |
| 29+650  | 1302.788       | 1302.319        |                      |                    |                |
| 29+660  | 1302.847       | 1302.378        |                      |                    |                |
| 29+670  | 1302.906       | 1302.437        |                      |                    |                |
| 29+680  | 1302.965       | 1302.495        |                      |                    |                |
| 29+690  | 1303.024       | 1302.554        |                      |                    |                |
| 29+700  | 1303.083       | 1302.612        |                      |                    |                |
| 29+710  | 1303.142       | 1302.671        |                      |                    |                |
| 29+720  | 1303.201       | 1302.729        |                      |                    |                |
| 29+730  | 1303.260       | 1302.788        |                      |                    |                |
| 29+740  | 1303.319       | 1302.847        |                      |                    |                |
| 29+750  | 1303.378       | 1302.906        |                      |                    |                |
| 29+760  | 1303.437       | 1302.965        |                      |                    |                |
| 29+770  | 1303.496       | 1303.024        |                      |                    |                |
| 29+780  | 1303.555       | 1303.083        |                      |                    |                |
| 29+790  | 1303.614       | 1303.142        |                      |                    |                |
| 29+800  | 1303.673       | 1303.201        |                      |                    |                |
| 29+810  | 1303.732       | 1303.260        |                      |                    |                |
| 29+820  | 1303.791       | 1303.319        |                      |                    |                |
| 29+830  | 1303.850       | 1303.378        |                      |                    |                |
| 29+840  | 1303.909       | 1303.437        |                      |                    |                |
| 29+850  | 1303.968       | 1303.495        |                      |                    |                |
| 29+860  | 1304.027       | 1303.554        |                      |                    |                |
| 29+870  | 1304.086       | 1303.612        |                      |                    |                |
| 29+880  | 1304.145       | 1303.671        |                      |                    |                |
| 29+890  | 1304.204       | 1303.729        |                      |                    |                |
| 29+900  | 1304.263       | 1303.788        |                      |                    |                |
| 29+910  | 1304.322       | 1303.847        |                      |                    |                |
| 29+920  | 1304.381       | 1303.906        |                      |                    |                |
| 29+930  | 1304.440       | 1303.965        |                      |                    |                |
| 29+940  | 1304.499       | 1304.024        |                      |                    |                |
| 29+950  | 1304.558       | 1304.083        |                      |                    |                |
| 29+960  | 1304.617       | 1304.142        |                      |                    |                |
| 29+970  | 1304.676       | 1304.201        |                      |                    |                |
| 29+980  | 1304.735       | 1304.260        |                      |                    |                |
| 29+990  | 1304.794       | 1304.319        |                      |                    |                |
| 30+000  | 1304.853       | 1304.378        |                      |                    |                |
| 30+010  | 1304.912       | 1304.437        |                      |                    |                |
| 30+020  | 1304.971       | 1304.495        |                      |                    |                |
| 30+030  | 1305.030       | 1304.554        |                      |                    |                |
| 30+040  | 1305.089       | 1304.612        |                      |                    |                |
| 30+050  | 1305.148       | 1304.671        |                      |                    |                |
| 30+060  | 1305.207       | 1304.729        |                      |                    |                |
| 30+070  | 1305.266       | 1304.788        |                      |                    |                |
| 30+080  | 1305.325       | 1304.847        |                      |                    |                |
| 30+090  | 1305.384       | 1304.906        |                      |                    |                |
| 30+100  | 1305.443       | 1304.965        |                      |                    |                |
| 30+110  | 1305.502       | 1305.024        |                      |                    |                |
| 30+120  | 1305.561       | 1305.083        |                      |                    |                |
| 30+130  | 1305.620       | 1305.142        |                      |                    |                |
| 30+140  | 1305.679       | 1305.201        |                      |                    |                |
| 30+150  | 1305.738       | 1305.260        |                      |                    |                |
| 30+160  | 1305.797       | 1305.319        |                      |                    |                |
| 30+170  | 1305.856       | 1305.378        |                      |                    |                |
| 30+180  | 1305.915       | 1305.437        |                      |                    |                |
| 30+190  | 1305.974       | 1305.495        |                      |                    |                |
| 30+200  | 1306.033       | 1305.554        |                      |                    |                |
| 30+210  | 1306.092       | 1305.612        |                      |                    |                |
| 30+220  | 1306.151       | 1305.671        |                      |                    |                |
| 30+230  | 1306.210       | 1305.729        |                      |                    |                |
| 30+240  | 1306.269       | 1305.788        |                      |                    |                |
| 30+250  | 1306.328       | 1305.847        |                      |                    |                |
| 30+260  | 1306.387       | 1305.906        |                      |                    |                |
| 30+270  | 1306.446       | 1305.965        |                      |                    |                |
| 30+280  | 1306.505       | 1306.024        |                      |                    |                |
| 30+290  | 1306.564       | 1306.083        |                      |                    |                |
| 30+300  | 1306.623       | 1306.142        |                      |                    |                |

**THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA**

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
MINISTRY OF INFRASTRUCTURE  
THE GOVERNMENT OF MONGOLIA

PACIFIC CONSULTANTS INTERNATIONAL  
JAPAN OVERSEAS CONSULTANTS

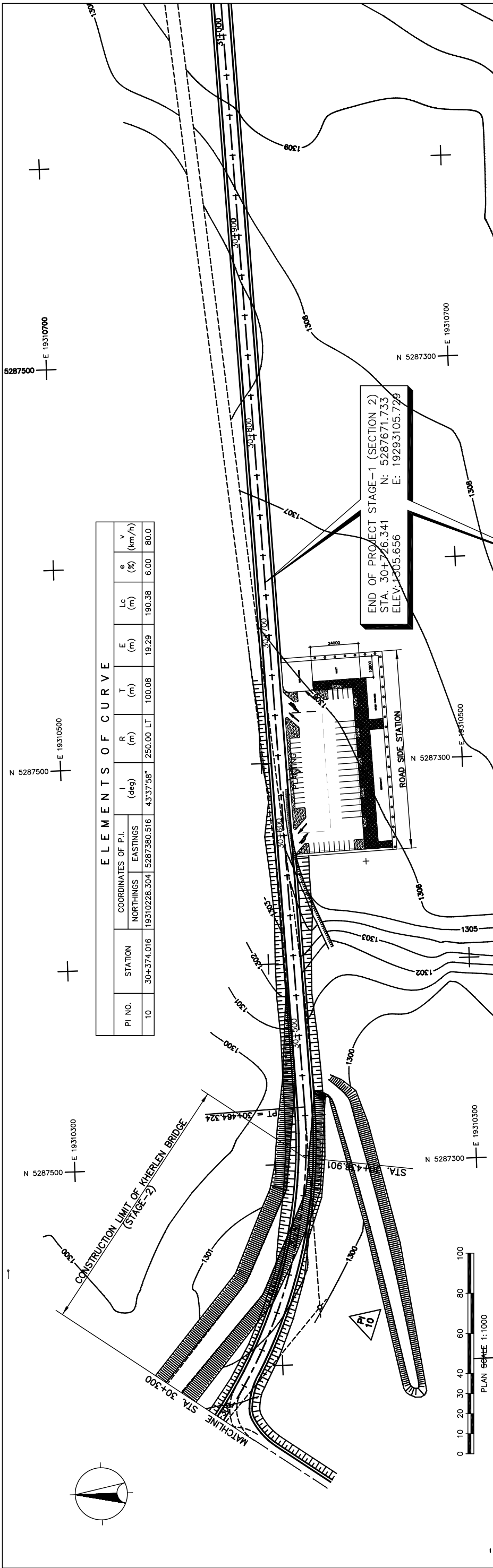
Drawing title  
**PLAN AND PROFILE (STA.29+600 TO STA.30+300) (STAGE-1)**

Scale  
**AS SHOWN**

Sheet No.  
**C-20**

20/21

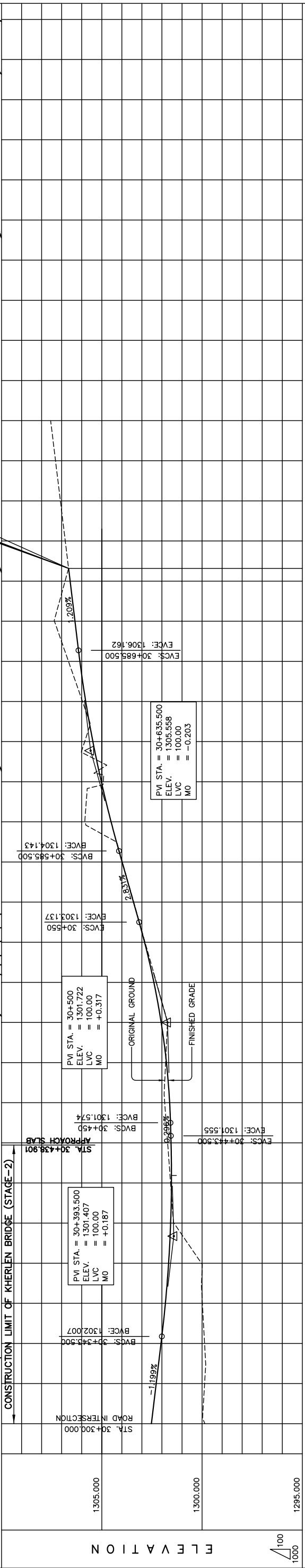
図 3-2-3-22 全体平面・縦断面 (Section II 新設区間 Sta.29+600-Sta.30+300)



**ELEMENTS OF CURVE**

| PI NO. | STATION    | COORDINATES OF P.I. |             | I (deg)   | R (m)     | T (m)  | E (m) | Lc (m) | e (%) | V (km/h) |
|--------|------------|---------------------|-------------|-----------|-----------|--------|-------|--------|-------|----------|
|        |            | NORTHINGS           | EASTINGS    |           |           |        |       |        |       |          |
| 10     | 30+374.016 | 19310228.304        | 5287380.516 | 43°37'58" | 250.00 LT | 100.08 | 19.29 | 190.38 | 6.00  | 80.0     |

**END OF PROJECT STAGE-1 (SECTION 2)**  
 STA. 30+726.341 N: 5287671.733  
 ELEV. 1305.656 E: 19293105.729



| STATION  | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | VERTICAL CURVATURE | SUPERELEVATION |
|----------|----------------|-----------------|----------------------|--------------------|----------------|
| 1299.868 | 1302.528       | 1299.868        |                      |                    |                |
| 1299.873 | 1302.288       | 1299.873        |                      |                    |                |
| 1299.875 | 1302.049       | 1299.875        |                      |                    |                |
| 1299.985 | 1301.829       | 1299.985        |                      |                    |                |
| 1300.031 | 1301.668       | 1300.031        |                      |                    |                |
| 1301.404 | 1301.568       | 1301.404        |                      |                    |                |
| 1301.571 | 1301.527       | 1301.571        |                      |                    |                |
| 1301.717 | 1301.545       | 1301.717        |                      |                    |                |
| 1301.863 | 1301.616       | 1301.863        |                      |                    |                |
| 1301.818 | 1301.777       | 1301.818        |                      |                    |                |
| 1301.724 | 1302.039       | 1301.724        |                      |                    |                |
| 1302.278 | 1302.402       | 1302.278        |                      |                    |                |
| 1302.844 | 1302.867       | 1302.844        |                      |                    |                |
| 1303.410 | 1303.421       | 1303.410        |                      |                    |                |
| 1303.977 | 1303.987       | 1303.977        |                      |                    |                |
| 1305.837 | 1304.536       | 1305.837        |                      |                    |                |
| 1304.927 | 1305.023       | 1304.927        |                      |                    |                |
| 1305.853 | 1305.444       | 1305.853        |                      |                    |                |
| 1305.962 | 1305.801       | 1305.962        |                      |                    |                |
| 1306.661 | 1306.093       | 1306.661        |                      |                    |                |
| 1307.361 | 1306.338       | 1307.361        |                      |                    |                |
| 1306.831 | 1306.579       | 1306.831        |                      |                    |                |
| 1305.656 | 1305.656       | 1305.656        |                      |                    |                |

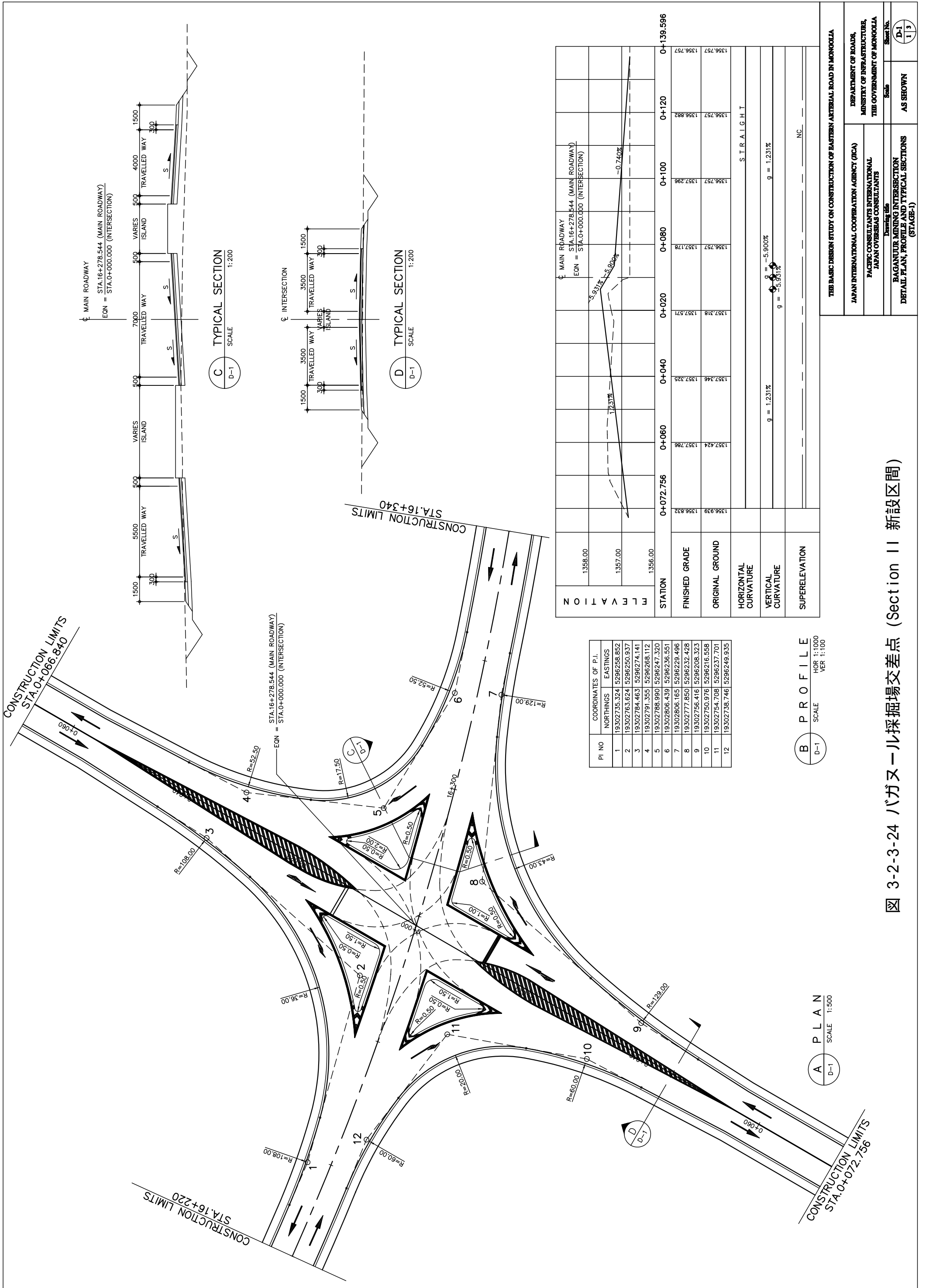
**THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 DEPARTMENT OF ROADS,  
 MINISTRY OF INFRASTRUCTURE,  
 THE GOVERNMENT OF MONGOLIA

PACIFIC CONSULTANTS INTERNATIONAL  
 JAPAN OVERSEAS CONSULTANTS  
 Drawing title  
**PLAN AND PROFILE (STA.30+300 TO STA.30+726.341) (STAGE-1)**

Scale  
 AS SHOWN

Sheet No.  
**C-21**  
 21/21

図 3-2-3-23 全体平面・縦断面 (Section II 新設区間 Sta.30+300-Sta.30+726.341)



MAIN ROADWAY  
 STA.16+278.544 (MAIN ROADWAY)  
 EON = STA.0+000.000 (INTERSECTION)

C TYPICAL SECTION  
 D-1 SCALE 1:200

D TYPICAL SECTION  
 D-1 SCALE 1:200

B PROFILE  
 D-1 SCALE HOR 1:1000  
 VER 1:100

A PLAN  
 D-1 SCALE 1:500

| PI NO | COORDINATES OF P.I. |             |
|-------|---------------------|-------------|
|       | NORTHINGS           | EASTINGS    |
| 1     | 19302735.324        | 5296258.852 |
| 2     | 19302763.624        | 5296250.837 |
| 3     | 19302784.463        | 5296274.141 |
| 4     | 19302791.355        | 5296268.112 |
| 5     | 19302788.990        | 5296247.320 |
| 6     | 19302806.439        | 5296236.551 |
| 7     | 19302806.165        | 5296229.496 |
| 8     | 19302777.850        | 5296232.428 |
| 9     | 19302756.416        | 5296208.323 |
| 10    | 19302750.976        | 5296216.558 |
| 11    | 19302754.708        | 5296237.701 |
| 12    | 19302738.746        | 5296249.935 |

| STATION   | ELEVATION      |                 |
|-----------|----------------|-----------------|
|           | FINISHED GRADE | ORIGINAL GROUND |
| 0+072.756 | 1357.424       | 1357.786        |
| 0+060     | 1357.346       | 1357.325        |
| 0+040     | 1357.318       | 1357.571        |
| 0+020     | 1356.757       | 1357.178        |
| 0+100     | 1356.757       | 1357.296        |
| 0+120     | 1356.757       | 1356.882        |
| 0+139.596 | 1356.757       | 1356.757        |

VERTICAL CURVATURE: STRAIGHT

VERTICAL CURVATURE:  $g = 1.231\%$ ,  $g = -5.900\%$ ,  $g = -5.901\%$ ,  $g = -0.740\%$

SUPERELEVATION: NC

図 3-2-3-24 バガヌール採掘場交差点 (Section II 新設区間)

THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

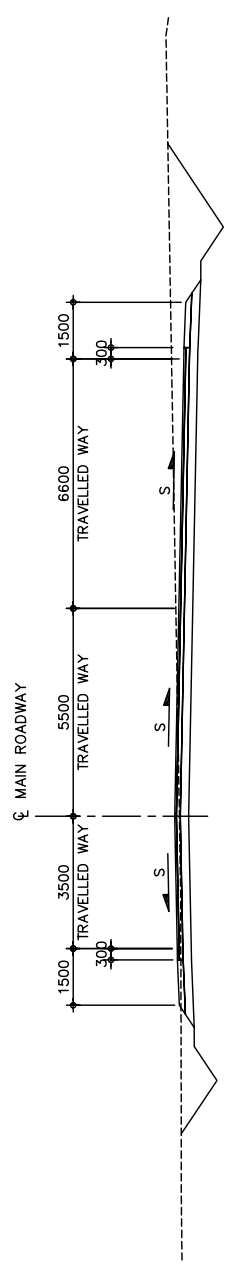
PACIFIC CONSULTANTS INTERNATIONAL  
 THE GOVERNMENT OF MONGOLIA

DEPARTMENT OF ROADS,  
 MINISTRY OF INFRASTRUCTURE,  
 THE GOVERNMENT OF MONGOLIA

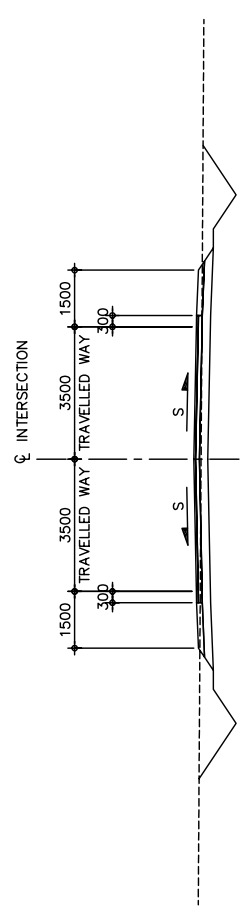
BAGANUR MINING INTERSECTION  
 DETAIL PLAN, PROFILE AND TYPICAL SECTIONS  
 (STAGE-1)

Scale AS SHOWN

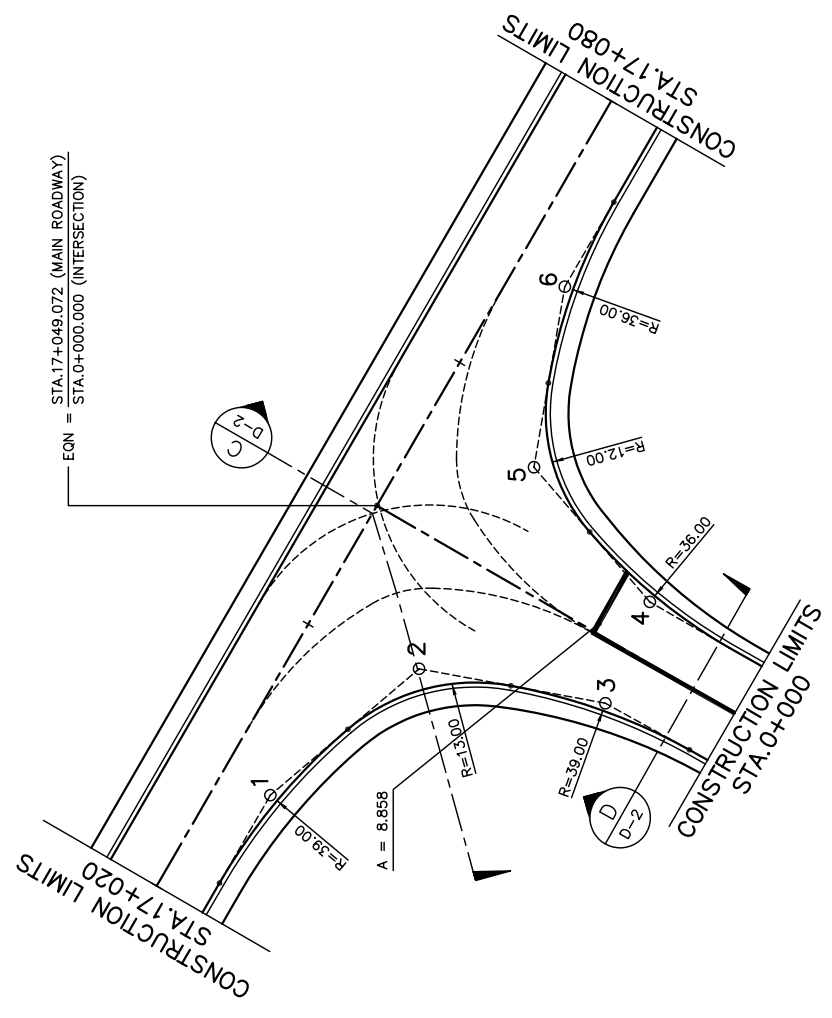
Sheet No. D-1 1/3



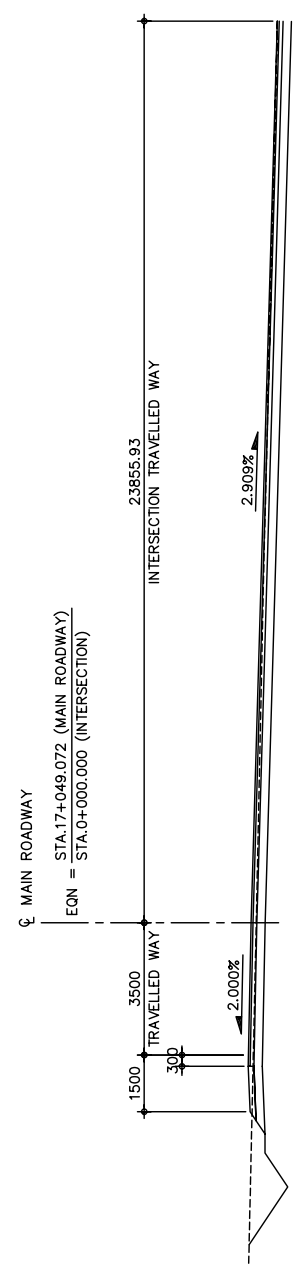
**C**  
D-2  
SCALE 1:200  
TYPICAL SECTION



**D**  
D-2  
SCALE 1:200  
TYPICAL SECTION



**A**  
D-2  
SCALE 1:500  
P L A N



**B**  
D-2  
SCALE 1:200  
SECTION @ INTERSECTION

| PI NO | COORDINATES OF P.I. |             |
|-------|---------------------|-------------|
|       | NORTHINGS           | EASTINGS    |
| 1     | 19303486.742        | 5296147.317 |
| 2     | 19303497.100        | 5296137.488 |
| 3     | 19303494.821        | 5296125.167 |
| 4     | 19303501.525        | 5296122.227 |
| 5     | 19303510.433        | 5296129.888 |
| 6     | 19303522.373        | 5296127.847 |

THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL  
THE GOVERNMENT OF MONGOLIA

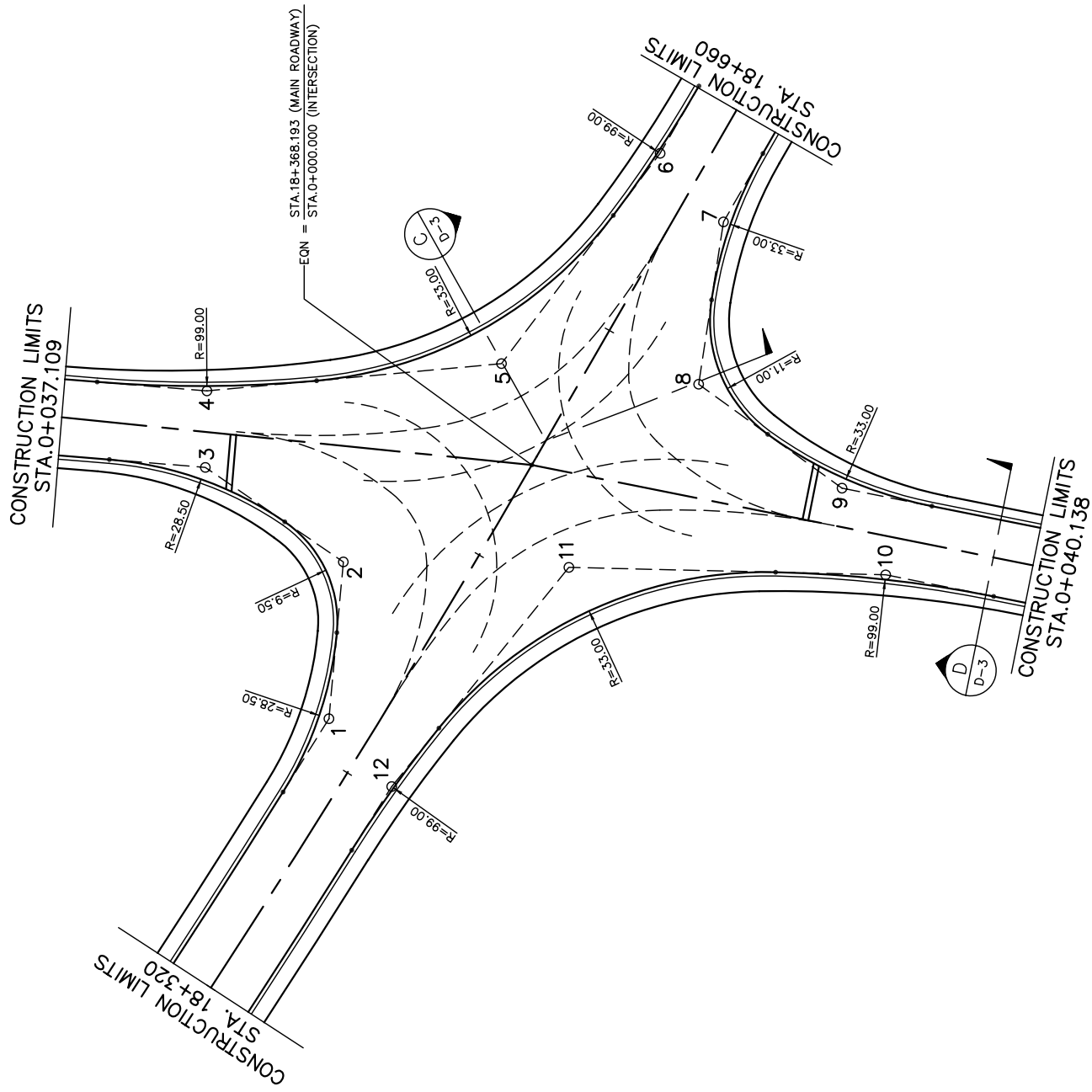
DEPARTMENT OF ROADS,  
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THE GOVERNMENT OF MONGOLIA

BAGAMUR POWER PLANT INTERSECTION  
DETAIL PLAN AND TYPICAL SECTIONS  
(STAGE-1)

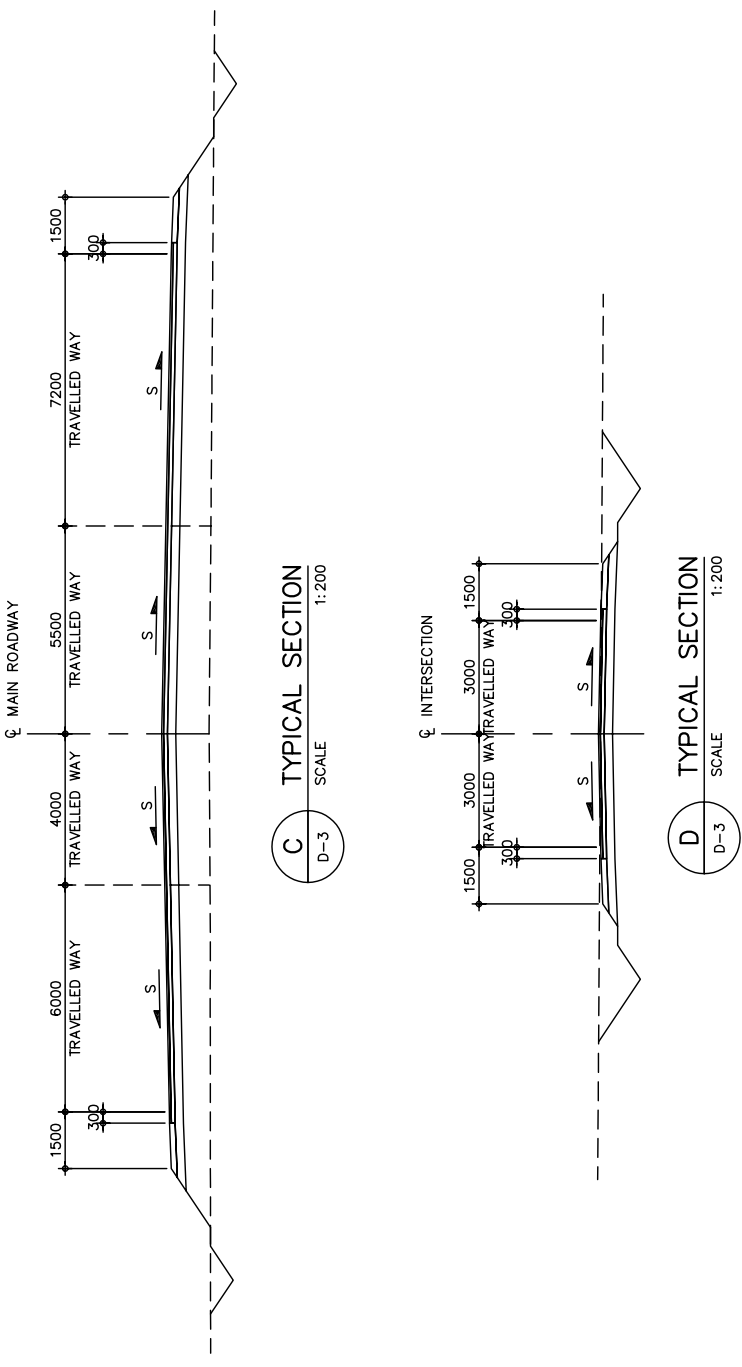
Scale AS SHOWN

Drawing title Sheet No. D-2 2/3

図 3-2-3-25 バガヌール発電所交差点 (Section II 新設区間)



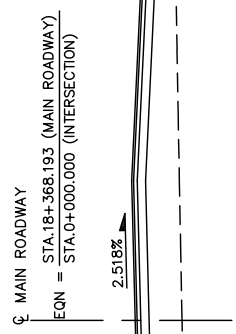
**A** PLAN  
D-3 SCALE 1:500



**C** TYPICAL SECTION  
D-3 SCALE 1:200

**D** TYPICAL SECTION  
D-3 SCALE 1:200

| COORDINATES OF P.I. |              |
|---------------------|--------------|
| PI NO               | EASTINGS     |
| 1                   | 19304362.359 |
| 2                   | 19304374.675 |
| 3                   | 19304382.102 |
| 4                   | 19304388.112 |
| 5                   | 19304390.256 |
| 6                   | 19304406.775 |
| 7                   | 19304401.393 |
| 8                   | 19304388.635 |
| 9                   | 19304380.471 |
| 10                  | 19304373.665 |
| 11                  | 19304374.248 |
| 12                  | 19304357.029 |



**B** SECTION @ INTERSECTION  
D-3 SCALE 1:200

図 3-2-3-26 バガヌール倉庫交差点 (Section II 新設区間)

THE BASIC DESIGN STUDY ON CONSTRUCTION OF EASTERN ARTERIAL ROAD IN MONGOLIA

|   |   |
|---|---|
| JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)                                   | DEPARTMENT OF ROADS,<br>MINISTRY OF INFRASTRUCTURE,<br>THE GOVERNMENT OF MONGOLIA |
| PACIFIC CONSULTANTS INTERNATIONAL<br>JAPAN OVERSEAS CONSULTANTS                 | Scale   |
| BAGAMATUR STORAGE INTERSECTION<br>DETAIL PLAN AND TYPICAL SECTIONS<br>(STAGE-1) | Sheet No.<br>D-3<br>3/3   |