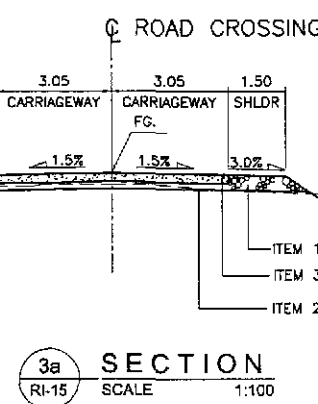
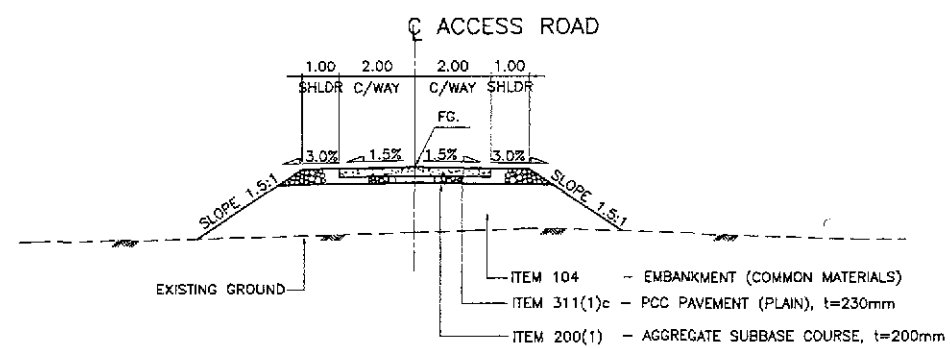
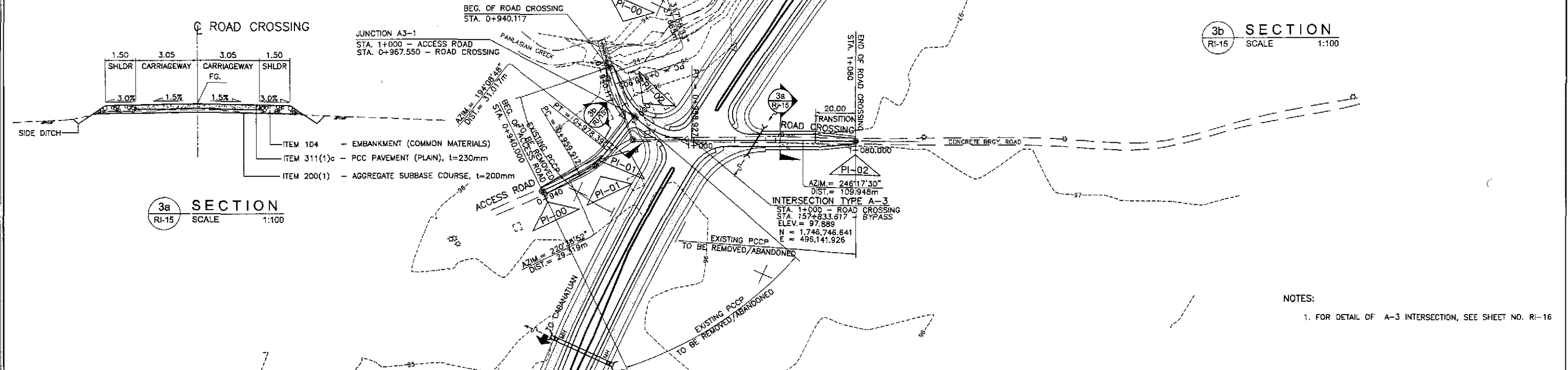


| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
|--------|-------------|---------------|-------------|-----------|----|-------|--------|-------|------|---------|-----------|-----------|
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 940.000 | 1,746,693.206 | 496,083.680 | | | | | | | | | |
| 1 | 0 + 969.319 | 1,746,715.462 | 496,102.766 | 26°28'04" | 40 | 9.407 | 18.478 | 1.091 | 4.00 | 30 | 0+959.912 | 0+978.390 |
| 2 | 1 + 000.000 | 1,746,745.539 | 496,110.346 | | | | | | | | | |

| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
|--------|-------------|---------------|-------------|-----------|----|--------|--------|-------|------|---------|---------|----|
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 940.117 | 1,746,762.553 | 496,089.248 | | | | | | | | | |
| 1 | 0 + 977.781 | 1,746,734.588 | 496,114.479 | 71°39'03" | 40 | 28.876 | 50.022 | 9.334 | 4.00 | 30 | | |
| 2 | 1 + 080.000 | 1,746,778.796 | 496,215.148 | | | | | | | | | |



3b SECTION
RI-15
SCALE 1:100

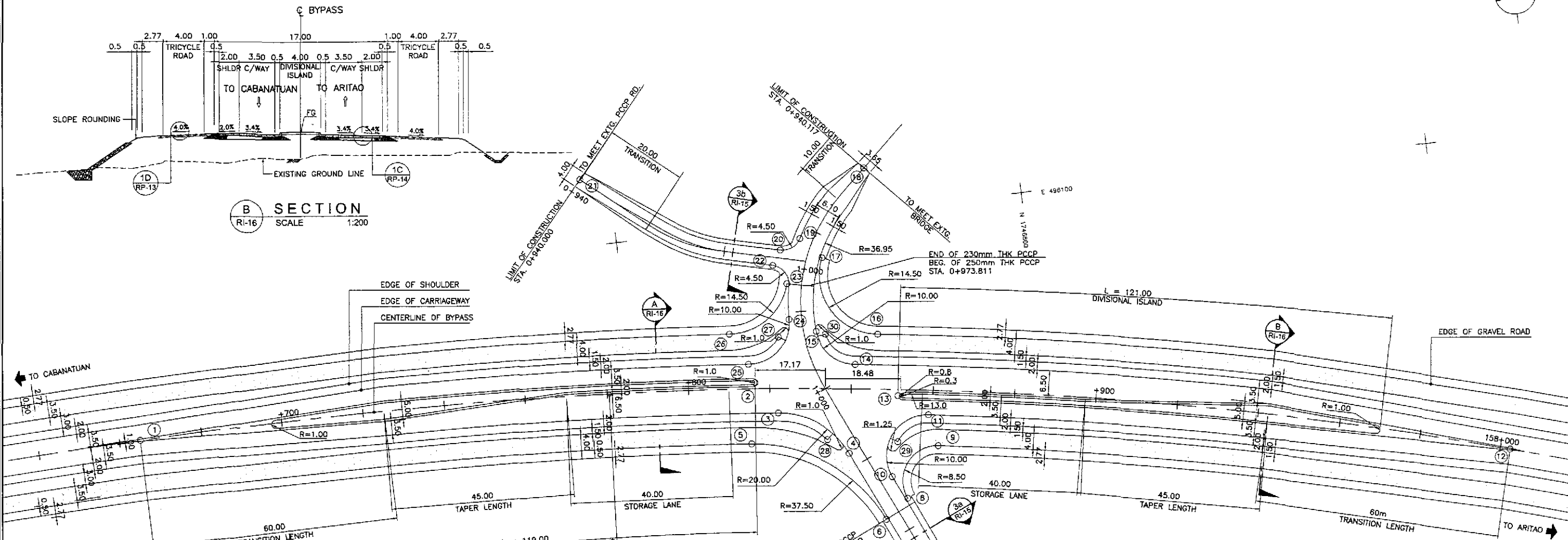
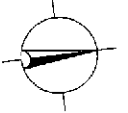
3a SECTION
RI-15
SCALE 1:100

NOTES:
1. FOR DETAIL OF A-3 INTERSECTION, SEE SHEET NO. RI-16

| ELEVATION | ACCESS ROAD | | | | JUNCTION A3-1 | | ROAD CROSSING | | | | | |
|-----------|----------------------|----------------|-----------------|----------------------|---------------|----------------|-----------------|----------------------|---------|----------------|-----------------|----------------------|
| | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE |
| 100 | | | | | | | | | | | | |
| 95 | | | | | | | | | | | | |
| | STATION | +800 | +900 | | STATION | +900 | +1000 | | STATION | +1000 | +1100 | +1200 |
| | FINISHED GRADE | | | | | | | | | | | |
| | ORIGINAL GROUND | | | | | | | | | | | |
| | HORIZONTAL CURVATURE | | | | | | | | | | | |
| | VERTICAL CURVATURE | | | | | | | | | | | |
| | SUPERELEVATION | | | | | | | | | | | |

| ELEVATION | ACCESS ROAD | | | | JUNCTION A3-1 | | ROAD CROSSING | | | | | |
|-----------|----------------------|----------------|-----------------|----------------------|---------------|----------------|-----------------|----------------------|---------|----------------|-----------------|----------------------|
| | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE | STATION | FINISHED GRADE | ORIGINAL GROUND | HORIZONTAL CURVATURE |
| 100 | | | | | | | | | | | | |
| 95 | | | | | | | | | | | | |
| | STATION | +900 | +1000 | | STATION | +900 | +1000 | | STATION | +1000 | +1100 | +1200 |
| | FINISHED GRADE | | | | | | | | | | | |
| | ORIGINAL GROUND | | | | | | | | | | | |
| | HORIZONTAL CURVATURE | | | | | | | | | | | |
| | VERTICAL CURVATURE | | | | | | | | | | | |
| | SUPERELEVATION | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|--|--|------|-----------|--|---|--|---------------------------------------|------------------------------------|--|--|---|-----------------------------|------------------------------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1 | SHEET CONTENTS : PLAN, PROFILE & SECTIONS INTERSECTION A-3 ACCESS ROAD (STA 0+940.000-STA 1+000.000) ROAD CROSSING (STA 0+940.117-STA 1+080.000) | SHEET NO. : RI-15 | |
| | CHECKED | DATE | SIGNATURE | | Submitted By: | Reviewed By: | Recommended By: | Recommended By: | | | | | |
| | SUBMITTED | DATE | SIGNATURE | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BONDAN Undersecretary | | | | | SIMEON A. DATUMANGING Secretary |
| | JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEC YACHIYO ENGINEERING CO., LTD. | | | | BUREAU OF DESIGN OFFICE OF THE SECRETARY (See cover sheet for Signature/Approval) | | | | | | | | |



B SECTION
RI-16 SCALE 1:200

A SECTION
RI-16 SCALE 1:200

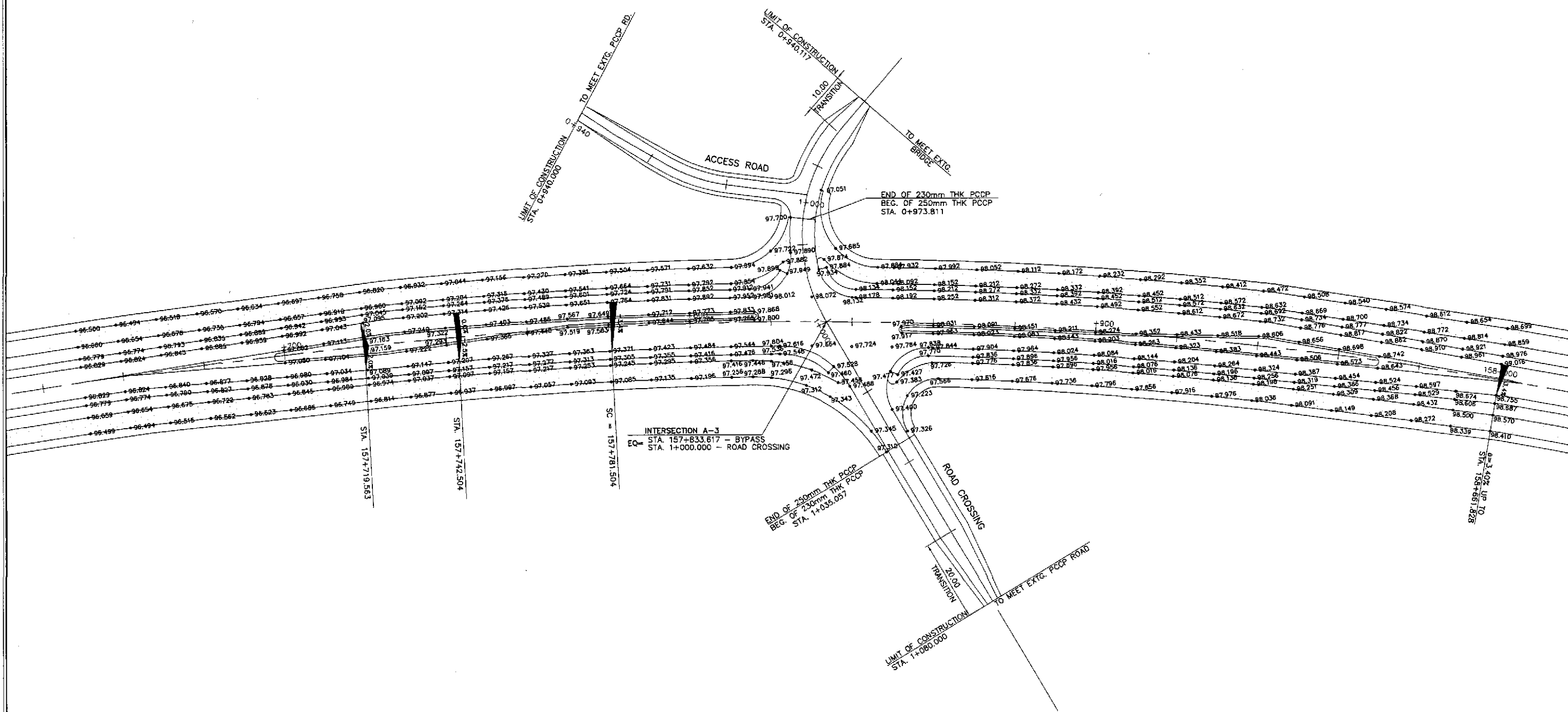
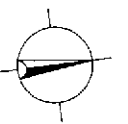
| TABLE OF COORDINATES | | | |
|----------------------|-------------|------------|--|
| CONTROL POINT | COORDINATES | | REMARKS |
| | NORTHING | EASTING | |
| (1) | 1746578.401 | 496133.959 | STA. 157+665.053, BEG. OF TRANSITION |
| (2) | 1746729.754 | 496138.412 | STA. 157+816.462, END OF ISLAND NOSING |
| (3) | 1746734.461 | 496146.482 | STA. 157+822.045, BEG. OF RADIUS 20 |
| (4) | 1746750.505 | 496158.312 | END OF RADIUS 20 |
| (5) | 1746727.146 | 496153.218 | STA. 157+815.452, BEG. OF RADIUS 37.50 |
| (6) | 1746757.475 | 496175.425 | END OF RADIUS 37.50 |
| (7) | 1746778.796 | 496215.148 | LIMIT OF CONSTRUCTION |
| (8) | 1746763.264 | 496170.951 | BEG. OF RADIUS 8.50 |
| (9) | 1746772.345 | 496159.133 | STA. 157+861.664, END OF RADIUS 8.50 |
| (10) | 1746760.204 | 496165.226 | BEG. OF TURNING RADIUS 10 |
| (11) | 1746770.860 | 496151.319 | STA. 157+858.988, END OF TURNING RADIUS 10 |
| (12) | 1746911.517 | 496176.973 | STA. 158+002.393, END OF TRANSITION |
| (13) | 1746764.706 | 496146.096 | STA. 157+852.106, END OF ISLAND NOSING |
| (14) | 1746754.637 | 496136.887 | STA. 157+840.891, BEG. OF RADIUS 10 |
| (15) | 1746745.989 | 496127.768 | END OF RADIUS 10 |
| (16) | 1746760.830 | 496130.159 | STA. 157+846.071, BEG. OF RADIUS 14.50 |
| (17) | 1746749.806 | 496109.826 | END OF RADIUS 14.50 |
| (18) | 1746762.553 | 496089.248 | LIMIT OF CONSTRUCTION |
| (19) | 1746744.834 | 496104.582 | BEG. OF CURB RADIUS 4.5 |
| (20) | 1746739.763 | 496106.828 | END OF CURB RADIUS 4.5 |
| (21) | 1746693.070 | 496083.563 | LIMIT OF CONSTRUCTION |
| (22) | 1746737.457 | 496110.372 | BEG. OF CURB RADIUS 4.5 |
| (23) | 1746740.755 | 496115.691 | END/BEG. OF CURB RADIUS 4.5, 15 |
| (24) | 1746739.720 | 496124.943 | BEG. OF RADIUS 10 |
| (25) | 1746728.719 | 496133.774 | STA. 157+814.942, END OF RADIUS 10 |
| (26) | 1746724.872 | 496125.831 | STA. 157+810.334, END OF CURB RADIUS 15 |
| (27) | 1746736.611 | 496127.999 | STA. 157+822.085, LIMIT OF SHOULDER |
| (28) | 1746745.603 | 496154.346 | STA. 157+834.159, LIMIT OF SHOULDER |
| (29) | 1746762.591 | 496156.943 | STA. 157+851.561, LIMIT OF SHOULDER |
| (30) | 1746748.126 | 496128.606 | STA. 157+833.443, LIMIT OF SHOULDER |

- NOTES:
- FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-15.
 - FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.

1
RI-16 SCALE 1:500

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-3 (STA. 157+833.617) - INITIAL STAGE

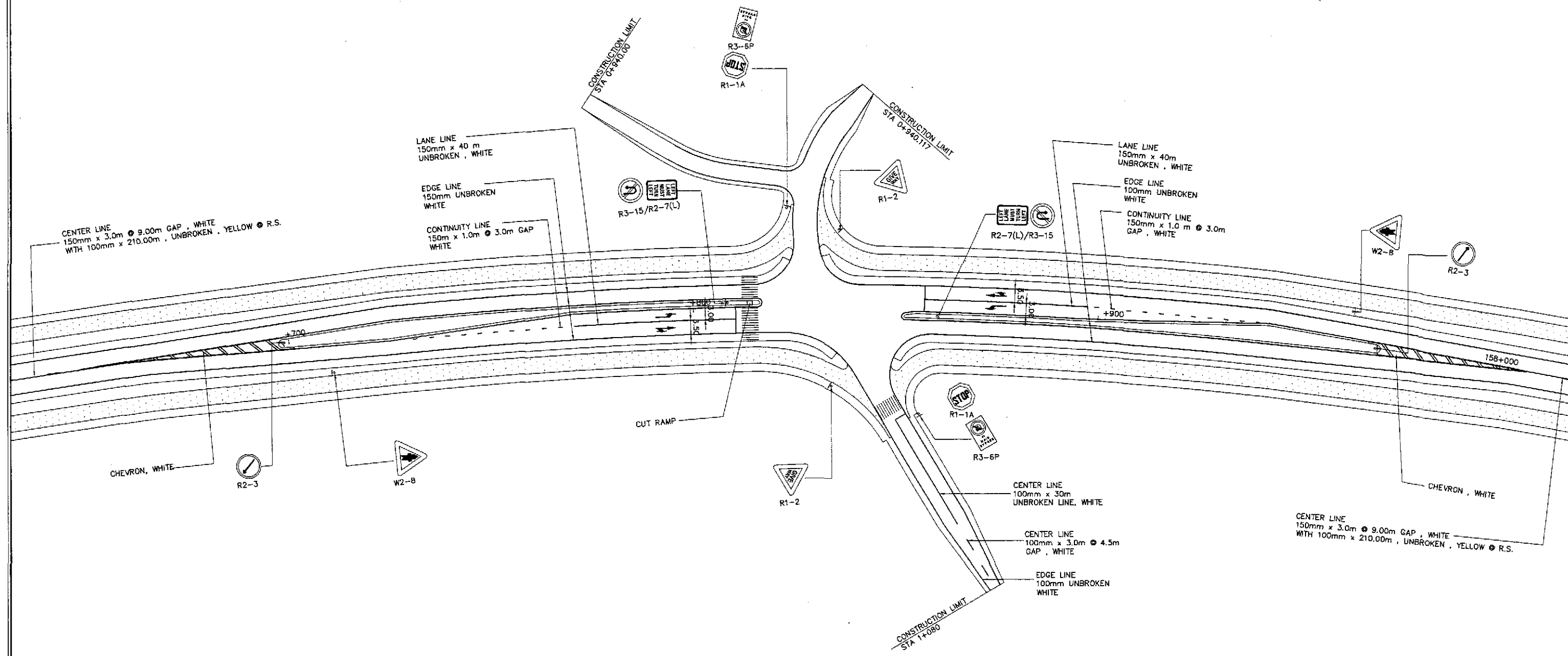
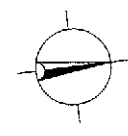
| | | | | | | | | | | | | |
|--|-----------|--------|-----------|--|--|--|---------------------------------------|---|------------------------------------|---|------------------------------------|--------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Palarid, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : | SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-3 (INITIAL STAGE) | SHEET NO. : | |
| | CHECKED | 9/2/02 | ORONCE | | Submitted By: | Reviewed By: | Recommended By: | | Recommended By: | | AS SHOWN | RI-16 |
| | SUBMITTED | 9/4/02 | S. ROSE | | DANIL D. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | | MANUEL M. BONCAN Undersecretary | | SIMEDON A. DATUMANONG Secretary | |



- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-16
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING AND ACCESS ROAD, SEE SHEET NO. RI-15

PAVING PLAN
INTERSECTION A-3 (STA. 157+833.617) - INITIAL STAGE
 SCALE 1:500

| | | | | | | | | | | |
|-----------|----------|-------------|--|--|---------------------------------------|------------------------------------|---|--|---|---------------------------------|
| | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinarid, Cabanatuan and San Jose Bypasses) | SCALE : 1:500 FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL PAVING PLAN INTERSECTION A-3 (INITIAL STAGE) | SHEET NO. : RI-17 |
| | DESIGNED | 9/2/02 | [Signature] | PJHL - PMD | BUREAU OF DESIGN | OFFICE OF THE SECRETARY | | | | |
| | CHECKED | 9/4/02 | [Signature] | Submitted By: | Reviewed By: | Recommended By: | | | | |
| SUBMITTED | 9/6/02 | [Signature] | DANILO C. TRAJANG Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BORDAN Undersecretary | SIMEON A. DATUMANONG Secretary | | | |



NOTES:

1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-3, STA. 157+833.617 (INITIAL STAGE)**

A
R1-18

SCALE

1:500

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS
INTERNATIONAL

yeo YACHIYO ENGINEERING
CO., LTD.

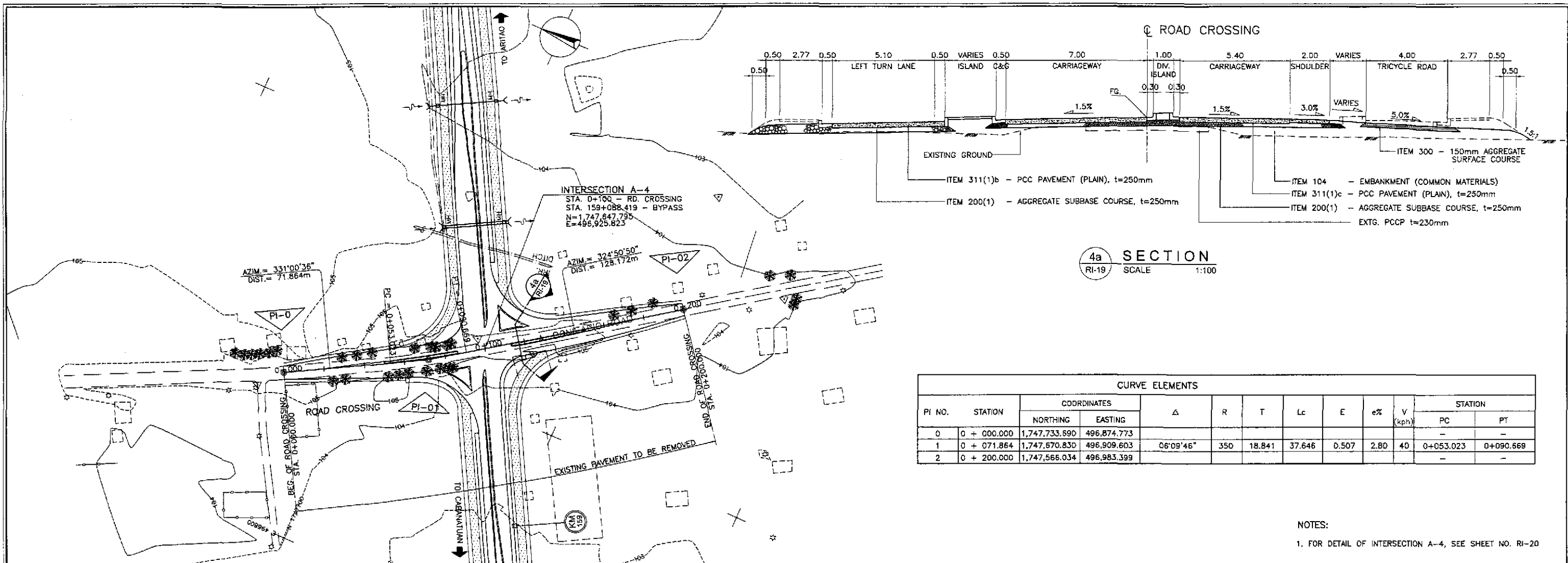
| DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | |
|------------------|-----------------|--|--|---------------------------------------|------------------------------------|
| DESIGNED 9/2/02 | <i>S. Gose</i> | BUREAU OF DESIGN | | OFFICE OF THE SECRETARY | |
| CHECKED 9/4/02 | <i>S. Gose</i> | Submitted By: | Reviewed By: | Recommended By: | Recommended By: |
| SUBMITTED 9/4/02 | <i>M. Bando</i> | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BONDAN Undersecretary |
| | | | | MANUEL M. BONDAN Undersecretary | SIMEON A. DATUMANONG Secretary |

PROJECT AND LOCATION :
**THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Piaridel, Cabanatuan and San Jose Bypasses)**
SAN JOSE BYPASS

SCALE :
1:500
FULL SIZE A1

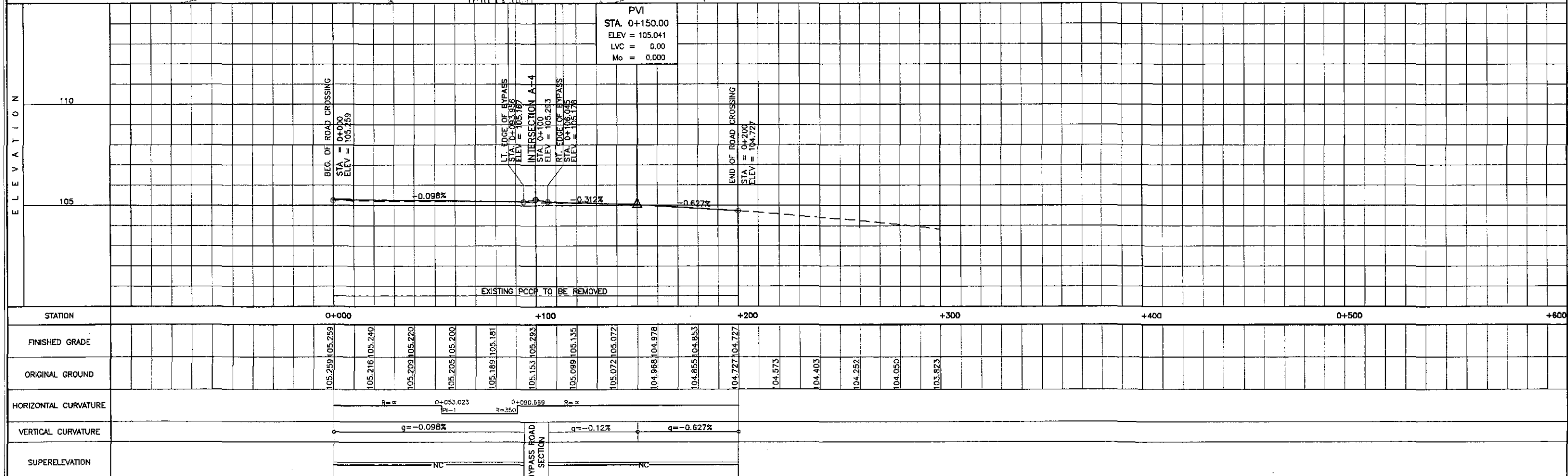
SHEET CONTENTS :
**TRAFFIC SIGNS, PAVEMENT MARKINGS
AND CUT RAMP LAYOUT
INTERSECTION A-3 (INITIAL STAGE)**

SHEET NO. :
R1-18



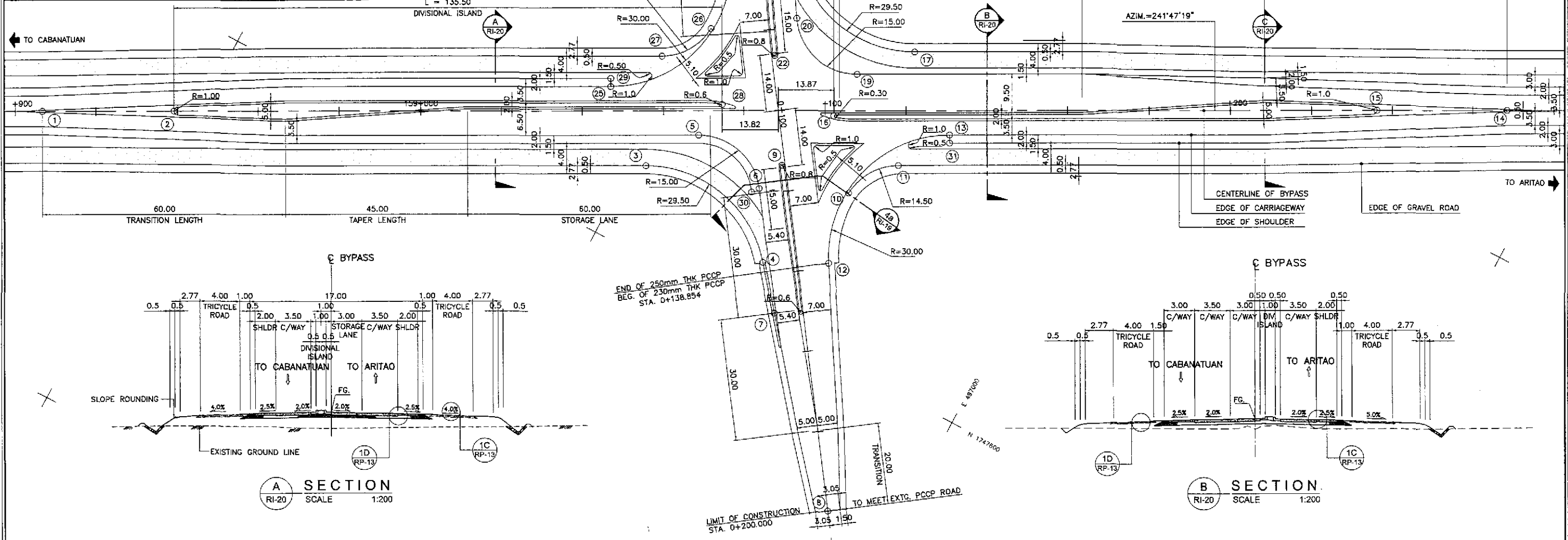
| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
|--------|-------------|---------------|-------------|-----------|-----|--------|--------|-------|------|---------|---------------|-------------|
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| | | 0 | 0 + 000.000 | | | | | | | | 1,747,733.690 | 496,874.773 |
| 1 | 0 + 071.864 | 1,747,670.830 | 496,909.603 | 06°09'46" | 350 | 18.841 | 37.646 | 0.507 | 2.80 | 40 | 0+053.023 | 0+090.669 |
| 2 | 0 + 200.000 | 1,747,566.034 | 496,983.399 | - | - | - | - | - | - | - | - | - |

NOTES:
 1. FOR DETAIL OF INTERSECTION A-4, SEE SHEET NO. RI-20



| | | | | | | | | | | | | | |
|--|--|---------|-------------|--|--|--|--|------------------------------------|----------------------------------|--|--|--|-----------------------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1 | SHEET CONTENTS : PLAN, PROFILE & SECTION INTERSECTION A-4 ROAD CROSSING (STA. 0+000.000 - 0+200.000) | SHEET NO. : RI-19 |
| | CHECKED | 7/11/02 | [Signature] | | P.U.H. - PMO Submitted By: | BUREAU OF DESIGN Reviewed By: | OFFICE OF THE SECRETARY Recommended By: | Approved By: | | | | | |
| | SUBMITTED | 7/16/02 | [Signature] | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES O.C. Director IV | MANUEL M. BONDAN Undersecretary | SIMON A. DATUMANONG Secretary | | | | |
| | JICA JAPAN INTERNATIONAL COOPERATION AGENCY | | | | | | | | | | | | |

| CONTROL POINT | COORDINATES | | REMARKS |
|---------------|-------------|------------|--|
| | NORTHING | EASTING | |
| 1 | 1747561.905 | 496765.715 | STA. 158+906.727, BEG. OF TRANSITION |
| 2 | 1747577.203 | 496794.233 | STA. 158+939.090, END OF ISLAND NOSING |
| 3 | 1747620.375 | 496903.266 | STA. 159+055.579, BEG. OF RADIUS 29.50 |
| 4 | 1747612.930 | 496940.149 | END OF CURB RADIUS 29.50 |
| 5 | 1747633.239 | 496911.382 | STA. 159+068.813, BEG. OF RADIUS 15 |
| 6 | 1747628.658 | 496930.737 | END OF RADIUS 15 |
| 7 | 1747603.162 | 496948.690 | PERPENDICULAR TO CTR. OF ISLAND NOSING |
| 8 | 1747566.328 | 496983.192 | LIMIT OF CONSTRUCTION |
| 9 | 1747636.295 | 496932.943 | STA. 159+089.257, END OF ISLAND NOSING |
| 10 | 1747638.142 | 496950.700 | STA. 159+105.354, BEG. OF RADIUS 14.50 |
| 11 | 1747649.903 | 496958.310 | STA. 159+118.043, END OF RADIUS 14.50 |
| 12 | 1747620.471 | 496954.503 | BEG. OF RADIUS 30 |
| 13 | 1747662.510 | 496965.945 | STA. 159+130.731, END OF RADIUS 30 |
| 14 | 1747732.932 | 497084.527 | STA. 159+268.517, BEG. OF TRANSITION |
| 15 | 1747717.634 | 497058.010 | STA. 159+236.155, END OF ISLAND NOSING |
| 16 | 1747653.234 | 496938.648 | STA. 159+102.291, END OF ISLAND NOSING |
| 17 | 1747676.538 | 496948.729 | STA. 159+122.191, BEG. OF RADIUS 30 |
| 18 | 1747686.382 | 496910.098 | END OF RADIUS 30 |
| 19 | 1747664.929 | 496938.723 | STA. 159+107.886, BEG. OF RADIUS 15 |
| 20 | 1747669.970 | 496919.057 | END OF RADIUS 15 |
| 21 | 1747690.179 | 496899.568 | END OF ISLAND NOSING |
| 22 | 1747659.377 | 496918.676 | END OF ISLAND NOSING |
| 23 | 1747733.690 | 496874.773 | LIMIT OF CONSTRUCTION |
| 24 | 1747672.868 | 496899.335 | BEG. OF TURNING 30 |
| 25 | 1747633.485 | 496886.454 | STA. 159+046.962, END OF TURNING RADIUS 30 |
| 26 | 1747657.853 | 496901.701 | BEG. OF CURB RADIUS 14.50 |
| 27 | 1747646.082 | 496894.091 | END OF CURB RADIUS 14.50 |
| 28 | 1747642.381 | 496913.045 | STA. 159+074.599, END OF ISLAND NOSING |
| 29 | 1747635.247 | 496885.509 | STA. 159+046.962, LIMIT OF SHOULDER |
| 30 | 1747626.968 | 496929.482 | STA. 159+081.797, LIMIT OF SHOULDER |
| 31 | 1747680.748 | 496966.691 | STA. 159+130.731, LIMIT OF SHOULDER |



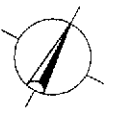
**GEOMETRIC DESIGN LAYOUT
INTERSECTION A-4 (STA. 159+088.415) - INITIAL STAGE**

- NOTES:
- FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-19.
 - FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.

1
RI-20
SCALE

1:500

| | | | | | | | | | |
|--|-----------|--------|-----------|---|--|-------------------------------------|---|-----------------------------|--|
| | DESIGNED | DATE | SIGNATURE | <p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : AS SHOWN FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-4 (INITIAL STAGE) | SHEET NO. : RI-20 | |
| | CHECKED | 9/4/02 | S. ORNICE | | | | | | Submitted By: PUHL - PMO Reviewed By: JOSEFINA M. ALAGAR Recommended By: GILBERTO S. REYES Recommended By: MANUEL M. BONDAN Approved By: SIMEON A. DATUMANGING |
| | SUBMITTED | 9/6/02 | M. RIVERA | | | | | | Submitted By: DANILO C. TRAJANO Project Director Recommended By: JOSEFINA M. ALAGAR Chief, Highways Division Recommended By: GILBERTO S. REYES OIC, Director N Recommended By: MANUEL M. BONDAN Undersecretary Approved By: SIMEON A. DATUMANGING Secretary |



LIMIT OF CONSTRUCTION TO MEET EXTG. PCCP ROAD
STA. 0+000.000

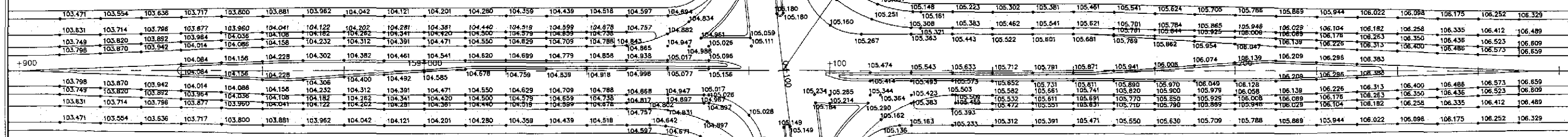
ROAD CROSSING

END OF 230mm THK PCCP
BEG. OF 250mm THK PCCP
STA. 0+058.657

INTERSECTION A-4
EQ= STA. 159+088.419 - BYPASS
STA. 0+100.000 - ROAD CROSSING

END OF 250mm THK PCCP
BEG. OF 230mm THK PCCP
STA. 0+138.854

LIMIT OF CONSTRUCTION TO MEET EXTG. PCCP ROAD
STA. 0+200.000



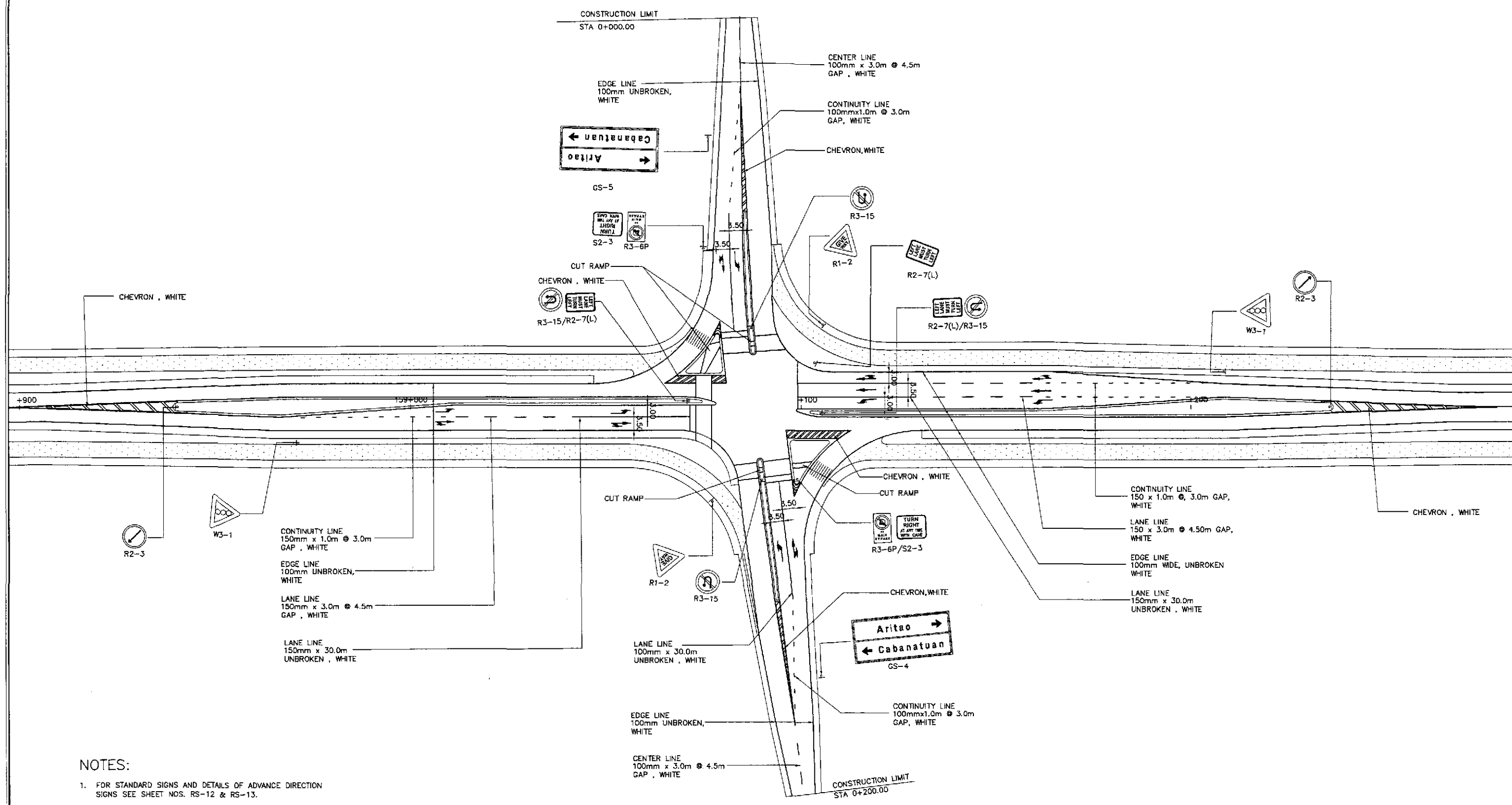
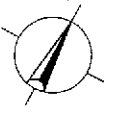
- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-20.
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-19.

A
RI-21

PAVING PLAN
INTERSECTION A-4 (STA. 159+088.419) - INITIAL STAGE

1:500

| | | | | | | | | | | |
|--|-----------|--------|-------------|---|--|--|---|---------|---|-------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 7/2/02 | [Signature] | BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | 1:500 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-4 (INITIAL STAGE) | RI-21 |
| | SUBMITTED | 9/6/02 | [Signature] | OFFICE OF THE SECRETARY Recommended By: JOSEFINA M. ALAGAR Chief, Highways Division Approved By: MANUEL M. BONDAN Undersecretary SIMEON A. DATUMANONG Secretary | | | | | | |



NOTES:

1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

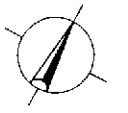
**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-4, STA. 159+088.419 (INITIAL STAGE)**

A
R1-22

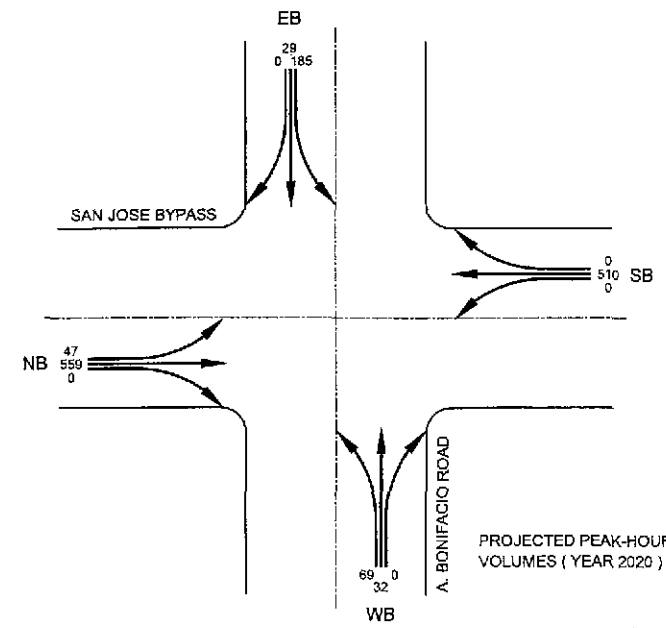
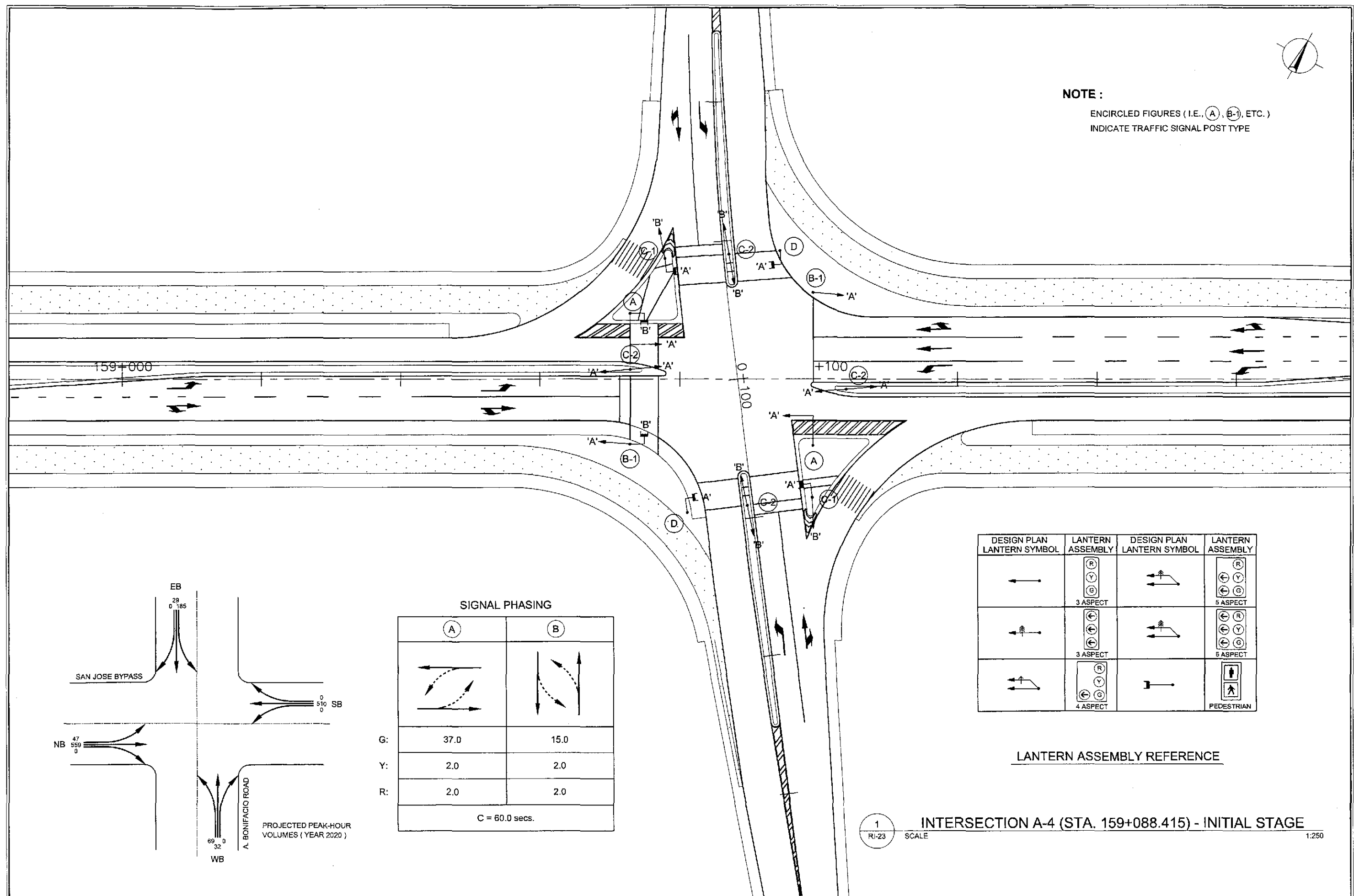
SCALE

1:500

| | | | | | | | | | | | |
|--|-----------|--------|------------|---|--|---|--|---------|------------------|---|-------|
| | DESIGNED | DATE | SIGNATURE | <p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : | | | SCALE : | SHEET CONTENTS : | SHEET NO. : | |
| | CHECKED | 7/2/02 | S. LLUNA | | BUREAU OF DESIGN | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) | | | 1:500 | TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT INTERSECTION A-4 (INITIAL STAGE) | R1-22 |
| | SUBMITTED | 7/6/02 | M. S. ROSE | | Submitted By: DANILO C. TRAJANO Project Director Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division Recommended By: GILBERTO S. REYES DIE, Director IV Recommended By: MANUEL M. BONDAN Undersecretary Approved By: SIMEDON A. DATUMANONG Secretary | SAN JOSE BYPASS | | | FULL SIZE A1 | | |



NOTE :
ENCIRCLED FIGURES (I.E., A, B-1, ETC.)
INDICATE TRAFFIC SIGNAL POST TYPE



SIGNAL PHASING

| | A | B |
|----------------|------|------|
| G: | 37.0 | 15.0 |
| Y: | 2.0 | 2.0 |
| R: | 2.0 | 2.0 |
| C = 60.0 secs. | | |

| DESIGN PLAN LANTERN SYMBOL | LANTERN ASSEMBLY | DESIGN PLAN LANTERN SYMBOL | LANTERN ASSEMBLY |
|----------------------------|------------------|----------------------------|------------------|
| ← | 3 ASPECT | ↔ | 5 ASPECT |
| ↔ | 3 ASPECT | ↔ | 5 ASPECT |
| ↔ | 4 ASPECT | ↑ | PEDESTRIAN |

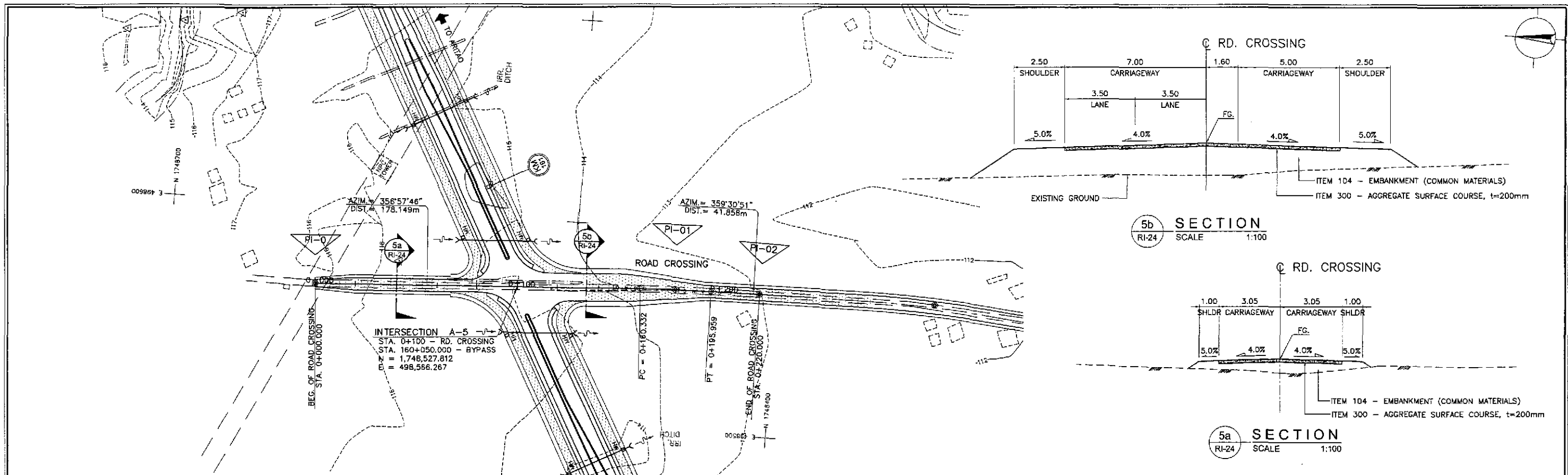
LANTERN ASSEMBLY REFERENCE

1
RI-23 SCALE

INTERSECTION A-4 (STA. 159+088.415) - INITIAL STAGE

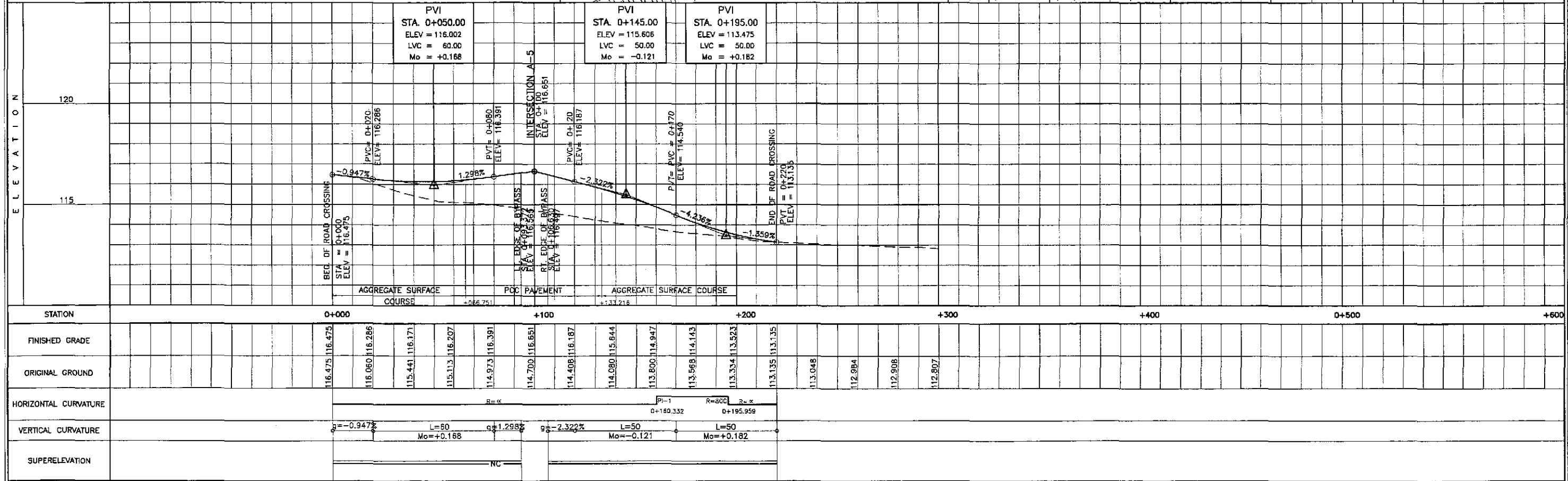
1:250

| | | | | | | | | | |
|-----------|----------|-----------|--|--|--------------------|--|--------------|--|---------------------|
| | DATE | SIGNATURE | <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | | |
| | DESIGNED | 9/2/02 | | | <i>[Signature]</i> | <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> | AS SHOWN | <p>TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-1 (INITIAL)</p> | <p>RI-23</p> |
| | CHECKED | 9/4/02 | | | <i>[Signature]</i> | <p>SAN JOSE BYPASS</p> | FULL SIZE A1 | | |
| SUBMITTED | | 9/6/02 | <i>[Signature]</i> | <p>Submitted By: DANILLO C. TRAJANO Project Director</p> <p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</p> <p>Recommended By: GILBERTO S. REYES OIC, Director IV</p> <p>Recommended By: MANUEL M. BONDAN Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG Secretary</p> | | | | | |

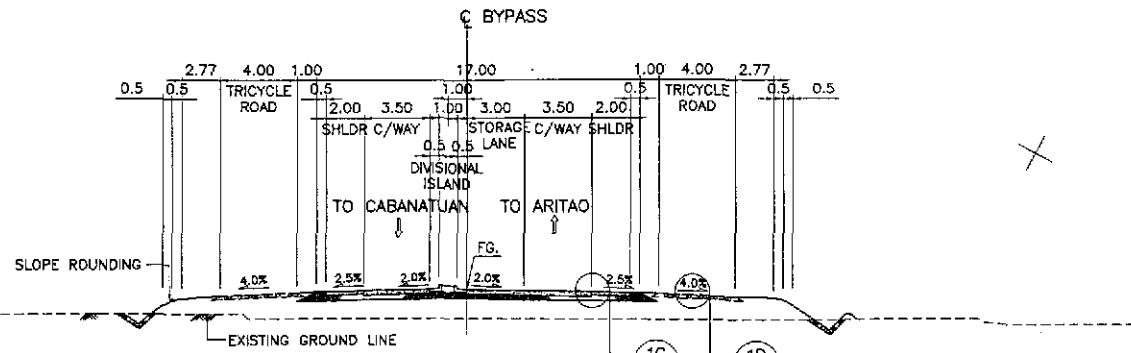


| CURVE ELEMENTS | | | | | | | | | | | | |
|----------------|-------------|---------------|-------------|-----------|-----|--------|--------|-------|----|---------|-----------|-----------|
| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 000.000 | 1,748,527.671 | 498,560.968 | | | | | | | | - | - |
| 1 | 0 + 178.149 | 1,748,449.773 | 498,570.408 | 02°33'06" | 800 | 17.817 | 35.628 | 0.198 | - | 40 | 0+160.332 | 0+195.959 |
| 2 | 0 + 220.000 | 1,748,407.917 | 498,570.763 | | | | | | | | - | - |

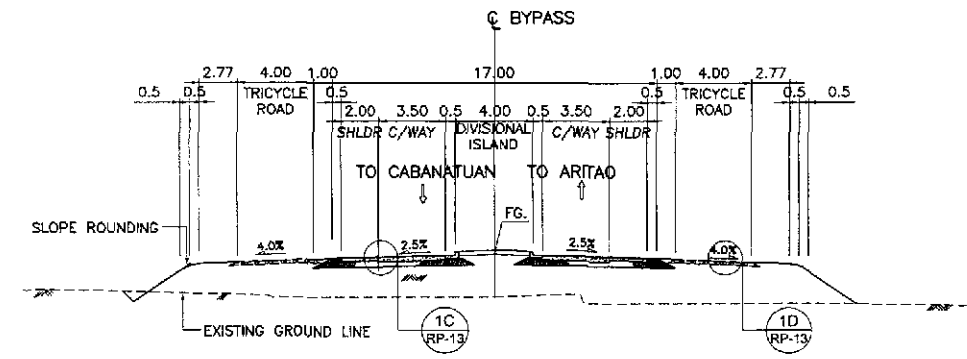
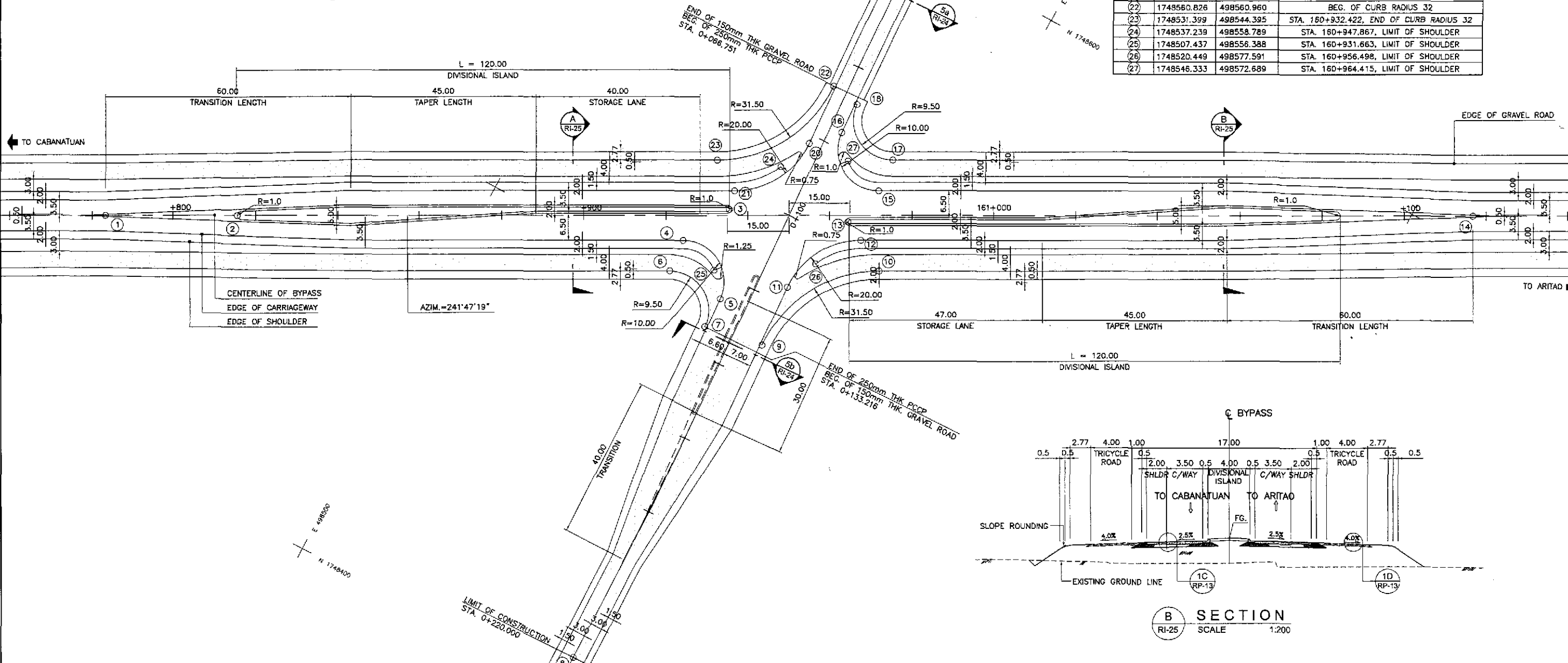
NOTES:
1. FOR DETAIL OF INTERSECTION A-5, SEE SHEET NO. RI-25



| | | | | | | | | | | | | |
|--|-----------|--------|--------------------|--|---|--|--|------------------------------------|---|--|--|-----------------------------|
| | DESIGNED | DATE | SIGNATURE | | DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN | | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1 | SHEET CONTENTS : PLAN, PROFILE & SECTION INTERSECTION A-5 ROAD CROSSING (STA. 0+000.000 - 0+220.000) | SHEET NO. : RI-24 |
| | CHECKED | 9/2/02 | <i>[Signature]</i> | | Submitted By: | Reviewed By: | Recommended By: | Approved By: | | | | |
| | SUBMITTED | 9/2/02 | <i>[Signature]</i> | | DANILO C. TRAHNO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES C.E., Director IV | MANUEL M. BONDAN Undersecretary | | | | |



A SECTION
RI-25 SCALE 1:200



B SECTION
RI-25 SCALE 1:200

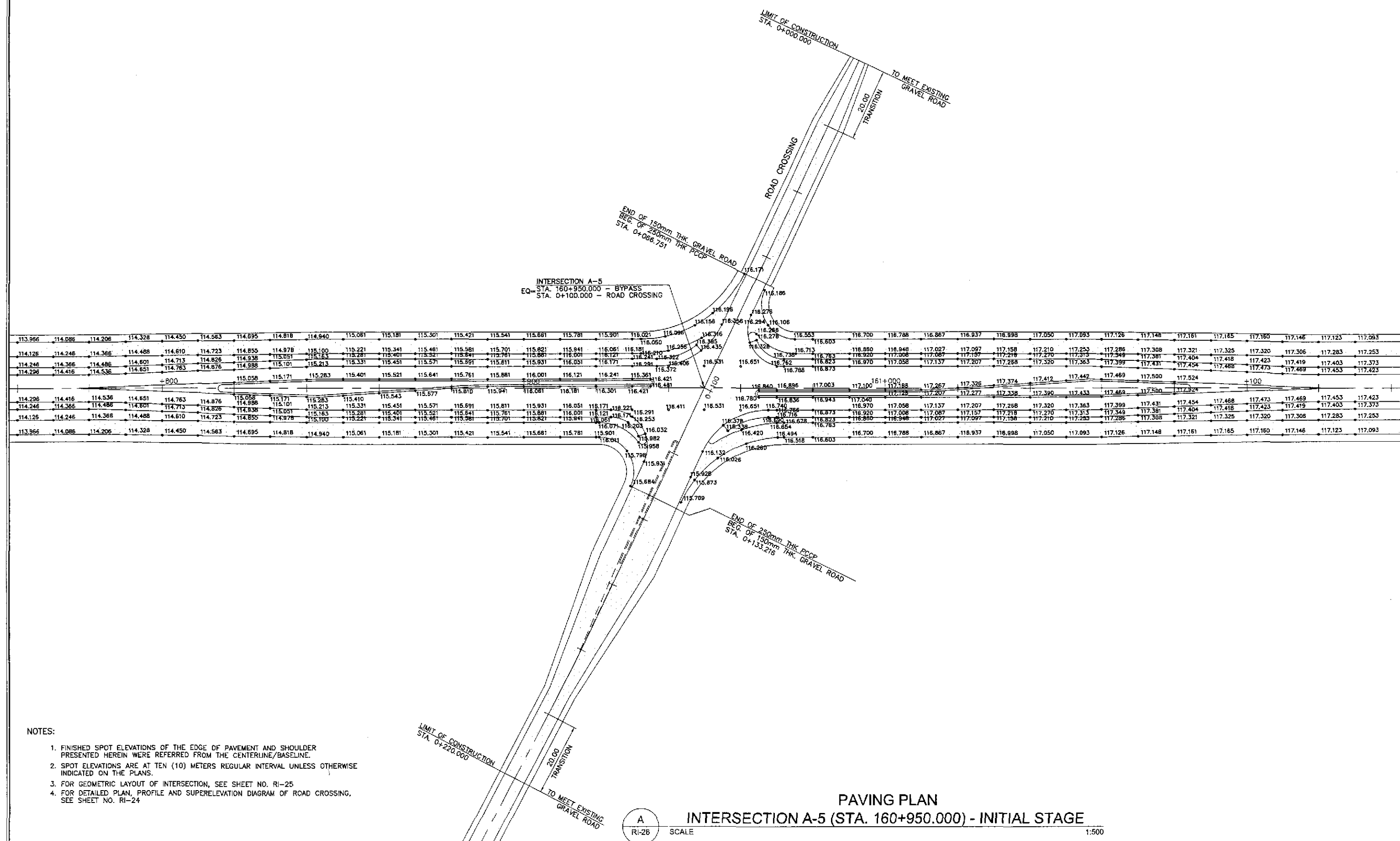
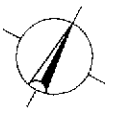
| POINT | COORDINATES | | REMARKS |
|-------|-------------|------------|--|
| | NORTHING | EASTING | |
| (1) | 1748448.969 | 498419.296 | STA. 150+783.217, BEG. OF TRANSITION |
| (2) | 1748464.268 | 498447.814 | STA. 160+815.580, END OF ISLAND NOSING |
| (3) | 1748522.279 | 498552.780 | STA. 160+935.500, END OF ISLAND NOSING |
| (4) | 1748510.298 | 498546.313 | STA. 160+924.138, BEG. OF RADIUS 10 |
| (5) | 1748502.016 | 498581.026 | END OF TURNING RADIUS 10 |
| (6) | 1748502.135 | 498546.960 | STA. 160+920.848, BEG. OF RADIUS 9.50 |
| (7) | 1748494.266 | 498560.937 | END OF RADIUS 9.50 |
| (8) | 1748407.917 | 498570.763 | LIMIT OF CONSTRUCTION |
| (9) | 1748495.861 | 498575.420 | BEG. OF RADIUS 31.50 |
| (10) | 1748526.288 | 498591.955 | STA. 160+971.943, END OF RADIUS 31.50 |
| (11) | 1748512.167 | 498574.107 | BEG. OF RADIUS 20 |
| (12) | 1748530.850 | 498584.624 | STA. 160+967.614, END OF TURNING RADIUS 20 |
| (13) | 1748533.345 | 498579.754 | STA. 160+964.500, END OF ISLAND NOSING |
| (14) | 1748606.654 | 498713.237 | STA. 161+116.782, BEG. OF TRANSITION |
| (15) | 1748543.470 | 498582.764 | STA. 160+971.940, BEG. OF RADIUS 10 |
| (16) | 1748551.752 | 498586.051 | END OF RADIUS 10 |
| (17) | 1748551.635 | 498582.118 | STA. 160+975.230, BEG. OF RADIUS 9.50 |
| (18) | 1748559.503 | 498568.140 | END OF RADIUS 9.50 |
| (19) | 1748627.671 | 498560.968 | LIMIT OF CONSTRUCTION |
| (20) | 1748545.520 | 498562.273 | BEG. OF TURNING RADIUS 20 |
| (21) | 1748526.836 | 498551.755 | STA. 160+936.752, END OF TURNING RADIUS 20 |
| (22) | 1748560.826 | 498560.960 | BEG. OF CURB RADIUS 32 |
| (23) | 1748531.399 | 498544.395 | STA. 160+932.422, END OF CURB RADIUS 32 |
| (24) | 1748537.239 | 498558.789 | STA. 160+947.867, LIMIT OF SHOULDER |
| (25) | 1748507.437 | 498556.388 | STA. 160+831.663, LIMIT OF SHOULDER |
| (26) | 1748520.449 | 498577.591 | STA. 160+956.498, LIMIT OF SHOULDER |
| (27) | 1748546.333 | 498572.689 | STA. 160+964.415, LIMIT OF SHOULDER |

- NOTES:
- FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-24.
 - FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-5 (STA. 160+950.000) - INITIAL STAGE

1
RI-25 SCALE 1:500

| | | | | | | | | | | |
|--|-----------|---------|-------------|--|--|---------------------------------------|--|---------------------------------------|---|--------------|
| | DESIGNED | DATE | SIGNATURE | <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : | SHEET CONTENTS : | SHEET NO. : | | |
| | CHECKED | 9/14/02 | S. ROSE | | | Submitted By: | Reviewed By: | AS SHOWN | INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-5 (INITIAL STAGE) | RI-25 |
| | SUBMITTED | 9/16/02 | M. R. RANDE | | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES Dir. Director IV | | |

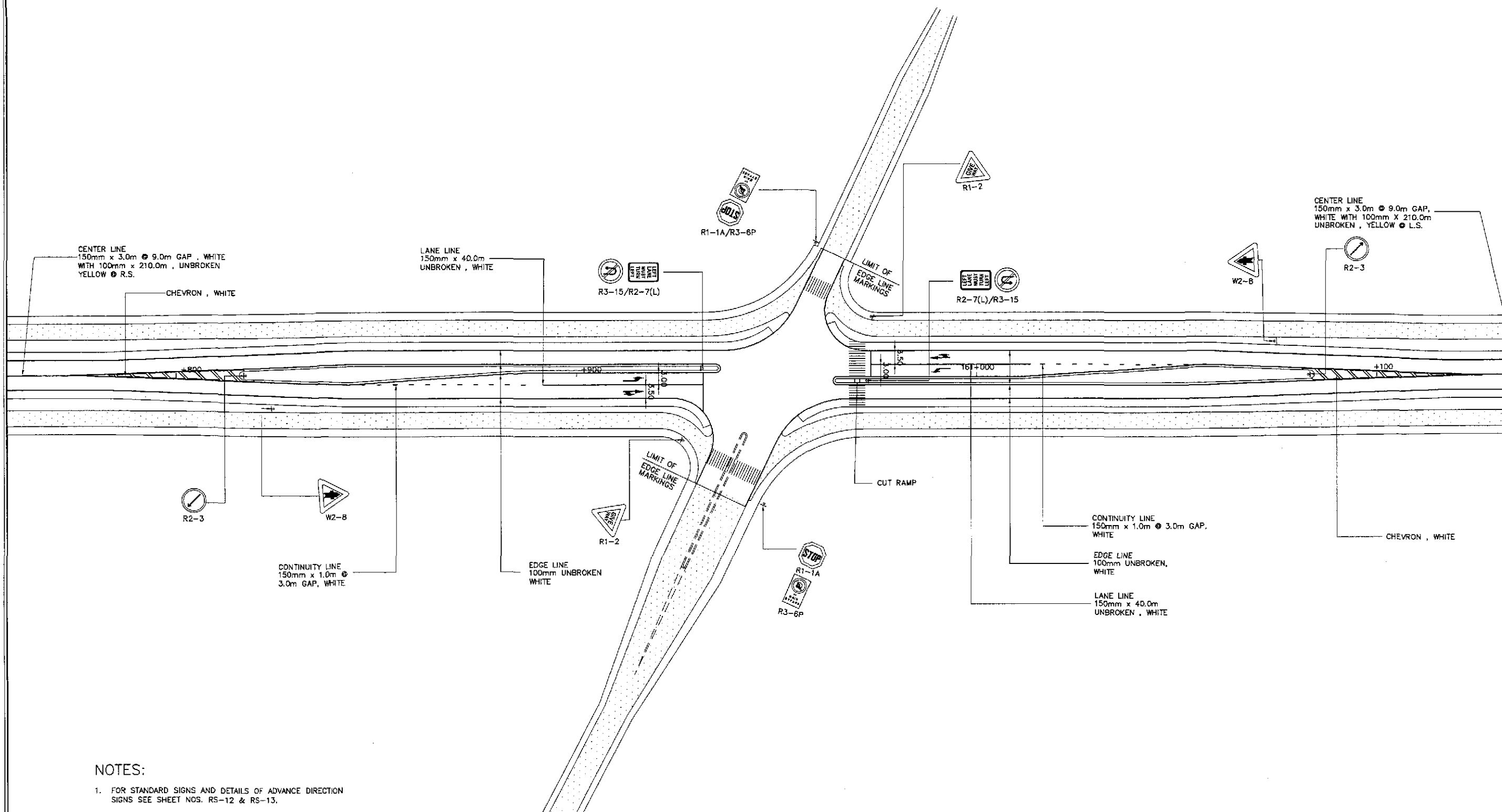
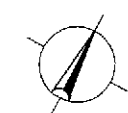


- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-25
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-24

A
RI-26 SCALE 1:500

PAVING PLAN
INTERSECTION A-5 (STA. 160+950.000) - INITIAL STAGE

| | | | | | | | | | |
|--|-----------|--------|------------------|--|------------------------|--|------------------|---|-------|
| JICA JAPAN INTERNATIONAL COOPERATION AGENCY | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | |
| | CHECKED | 9/4/02 | <i>S. G. S.</i> | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) | 1:500 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-5 (INITIAL STAGE) | RI-26 |
| | SUBMITTED | 9/6/02 | <i>Mr. R. R.</i> | | | | | | |
| Submitted By: DANILO C. TRAJANO Project Director Reviewed By: JOSEFINA M. ALADAR Chief, Highways Division Recommended By: GILBERTO S. REYES O.C., Director IV Recommended By: MANUEL M. BONDAN Undersecretary Approved By: SIMEON A. DATUMANONG Secretary | | | | | | | | | |



NOTES:

1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-05.

**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-5, STA. 160+950.000 (INITIAL STAGE)**

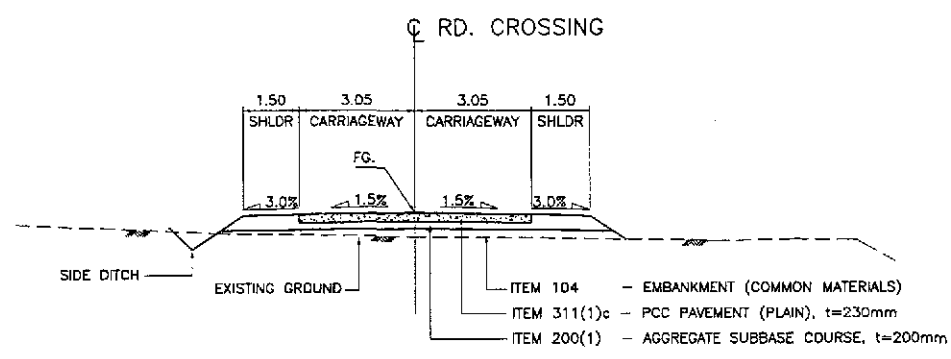
A
R1-27

SCALE

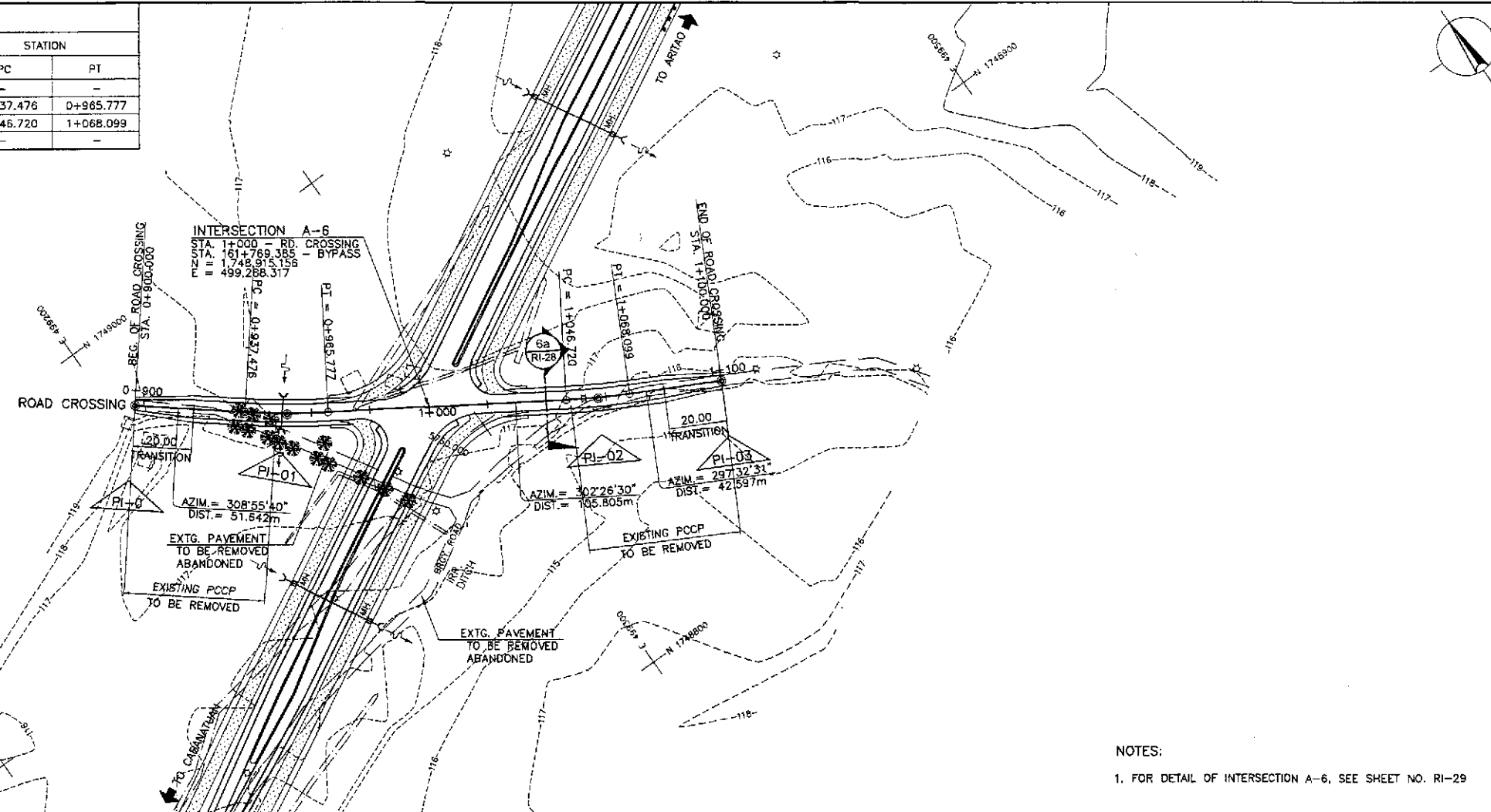
1:500

| | | | | | | | | | | |
|--|-----------|--------|-----------------|--|--|--|---|--------------|---|-------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/4/02 | <i>S. LUNA</i> | Submitted By: | Reviewed By: | Recommended By: | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) | 1:500 | TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT INTERSECTION A-5 (INITIAL STAGE) | R1-27 |
| | SUBMITTED | 9/6/02 | <i>M. KUCHU</i> | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES D.C., Director IV | SAN JOSE BYPASS | FULL SIZE A1 | | |

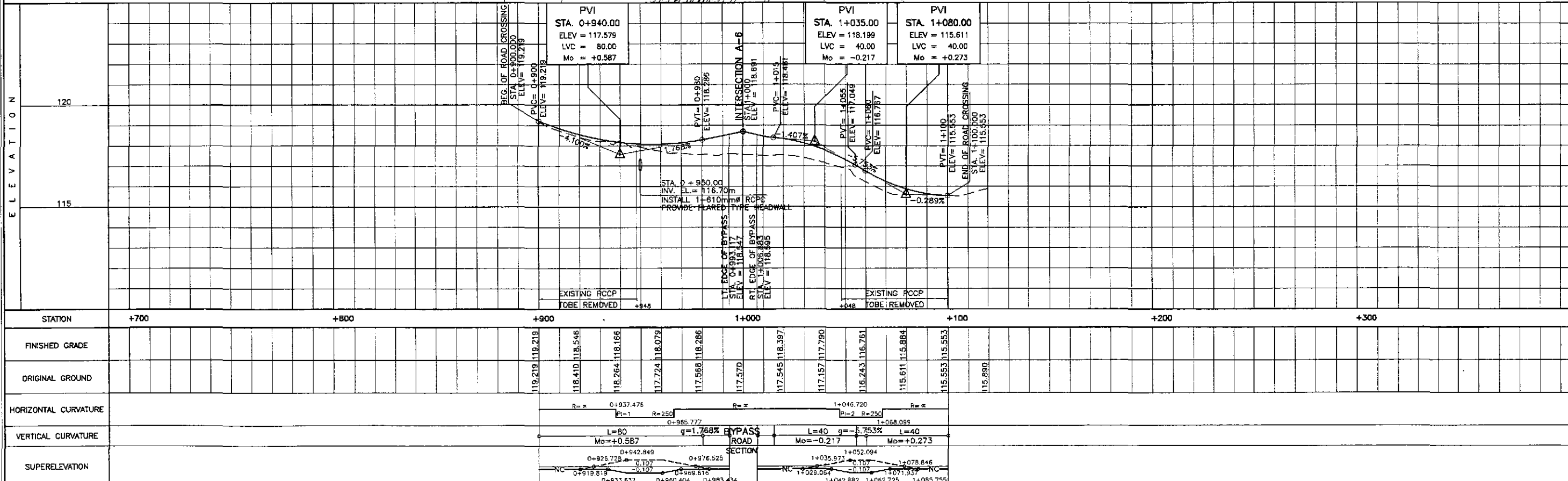
| CURVE ELEMENTS | | | | | | | | | | | | |
|----------------|-------------|---------------|-------------|-----------|-----|--------|--------|-------|------|---------|-----------|-----------|
| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kpn) | STATION | |
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 900.000 | 1,748,973.562 | 499,207.306 | | | | | | | | | |
| 1 | 0 + 951.642 | 1,748,941.113 | 499,247.480 | 06°29'10" | 250 | 14.186 | 28.302 | 0.401 | 3.50 | 40 | 0+937.476 | 0+965.777 |
| 2 | 1 + 057.416 | 1,748,884.356 | 499,336.773 | 04°53'59" | 250 | 10.696 | 21.378 | 0.229 | 3.50 | 40 | 1+046.720 | 1+068.099 |
| 3 | 1 + 100.000 | 1,748,864.659 | 499,374.542 | | | | | | | | | |



6a SECTION
RI-28 SCALE 1:100

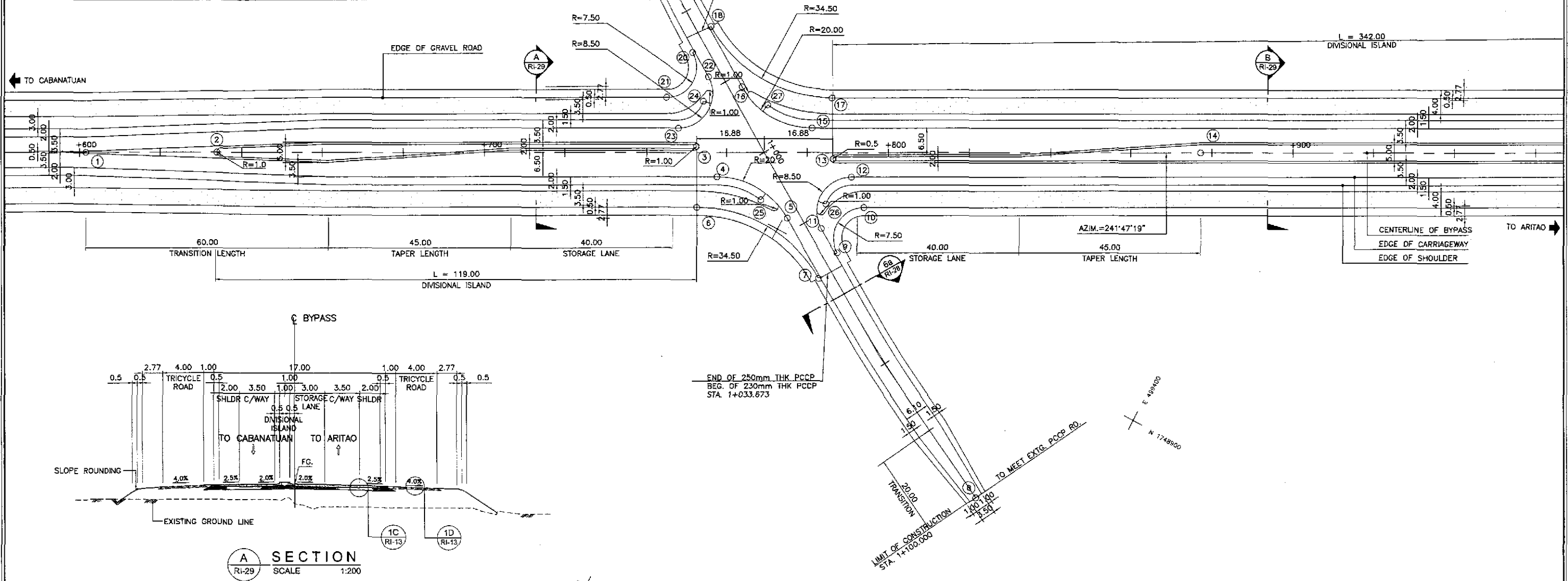


NOTES:
1. FOR DETAIL OF INTERSECTION A-6, SEE SHEET NO. RI-29



| | | | | | | | | | | | | | | |
|--|-----------|--------|-------------|--|---------------------------------------|--|---------------------------------------|------------------------------------|------------------------------------|--|---|--|--|-----------------------------|
| | DESIGNED | 9/2/02 | [Signature] | | BUREAU OF DESIGN | | | OFFICE OF THE SECRETARY | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilarid, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1 | SHEET CONTENTS : PLAN, PROFILE & SECTION INTERSECTION A-6 ROAD CROSSING (STA. 0+900.000 - 1+100.000) | SHEET NO. : RI-28 |
| | CHECKED | 9/4/02 | [Signature] | | Submitted By: | Reviewed By: | Recommended By: | Recommended By: | Approved By: | | | | | |
| | SUBMITTED | 9/6/02 | [Signature] | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES Dir. Director IV | MANUEL M. BONDAN Undersecretary | SIMEON A. DATUMANGANG Secretary | | | | | |
| | DATE | | SIGNATURE | | P.U.H. - PMD | | OFFICE OF THE SECRETARY | | APPROVED BY: | | | | | |

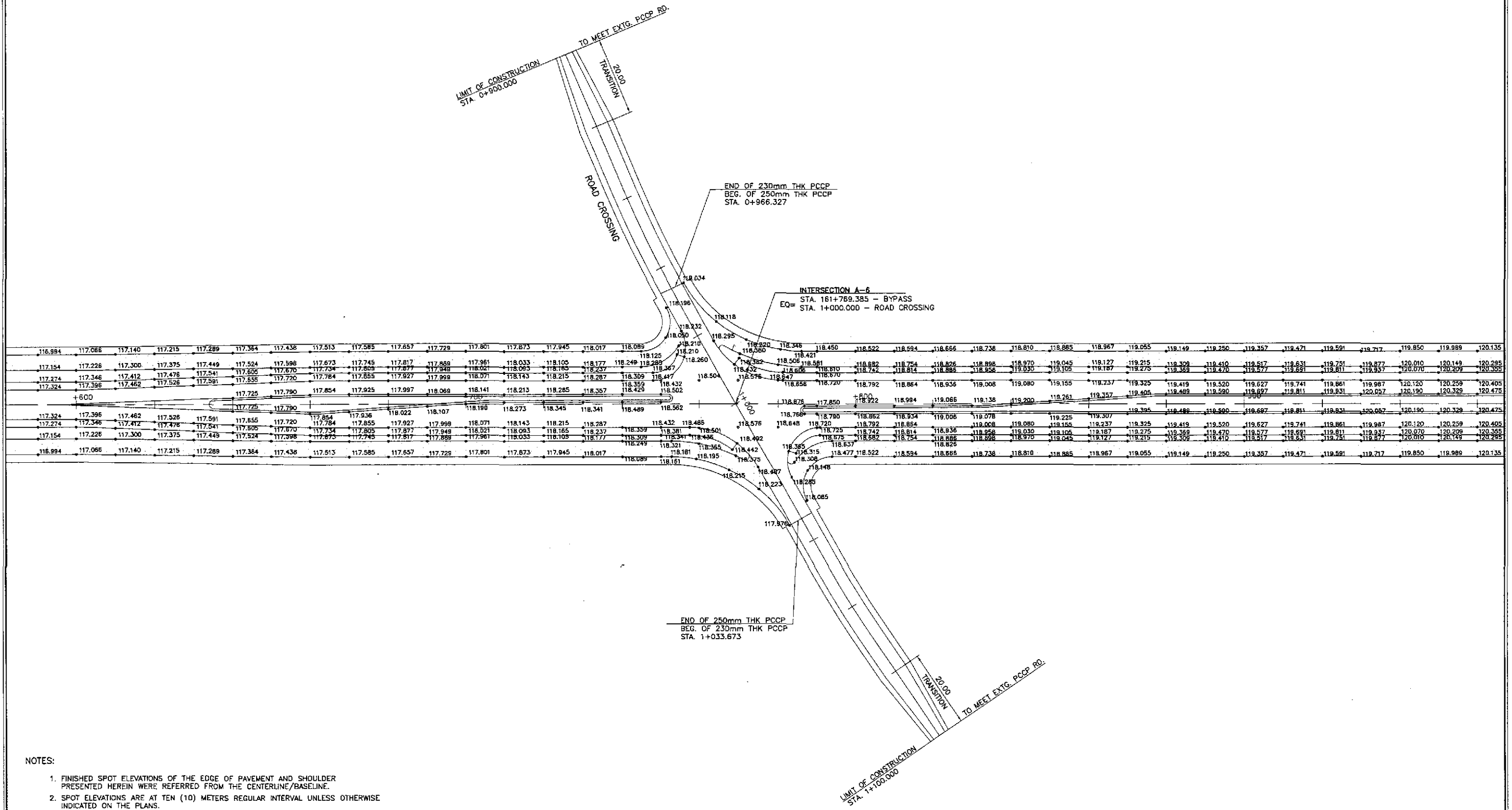
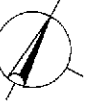
| TABLE OF COORDINATES | | | |
|----------------------|-------------|------------|--|
| CONTROL POINT | COORDINATES | | REMARKS |
| | NORTHING | EASTING | |
| 1 | 1748835.751 | 499140.297 | STA. 161+601.272, BEG. OF TRANSITION |
| 2 | 1748851.110 | 499168.930 | STA. 161+633.904, END OF ISLAND NOSING |
| 3 | 1748908.500 | 499272.737 | STA. 161+752.509, END OF ISLAND NOSING |
| 4 | 1748904.279 | 499280.733 | STA. 161+757.560, BEG. OF RADIUS 20 |
| 5 | 1748903.533 | 499300.916 | END OF RADIUS 20 |
| 6 | 1748895.382 | 499280.015 | STA. 161+752.721, BEG. OF RADIUS 34.50 |
| 7 | 1748894.096 | 499314.831 | END OF RADIUS 34.50 |
| 8 | 1748864.659 | 499374.542 | LIMIT OF CONSTRUCTION |
| 9 | 1748901.895 | 499315.797 | BEG. OF RADIUS 7.50 |
| 10 | 1748914.834 | 499316.275 | STA. 161+793.869, END OF RADIUS 7.50 |
| 11 | 1748905.323 | 499309.473 | STA. 161+782.290, BEG. OF RADIUS 8.50 |
| 12 | 1748919.986 | 499310.014 | STA. 161+790.788, END OF RADIUS 8.50 |
| 13 | 1748921.812 | 499303.897 | STA. 161+786.261, END OF ISLAND NOSING |
| 14 | 1748966.136 | 499383.349 | STA. 161+877.227, BEG. OF TAPER |
| 15 | 1748926.033 | 499295.901 | STA. 161+781.210, BEG. OF RADIUS 20 |
| 16 | 1748926.779 | 499275.718 | STA. 161+765.325, END OF RADIUS 20 |
| 17 | 1748934.930 | 499296.620 | STA. 161+786.049, BEG. OF RADIUS 35 |
| 18 | 1748936.215 | 499261.803 | END OF RADIUS 35 |
| 19 | 1748973.561 | 499207.307 | LIMIT OF CONSTRUCTION |
| 20 | 1748928.417 | 499260.837 | BEG. OF RADIUS 7.50 |
| 21 | 1748915.478 | 499260.360 | STA. 161+744.901, END OF RADIUS 7.50 |
| 22 | 1748924.989 | 499267.162 | BEG. OF RADIUS 8.50 |
| 23 | 1748910.325 | 499266.620 | STA. 161+747.982, END OF RADIUS 8.50 |
| 24 | 1748919.105 | 499268.973 | STA. 161+754.206, LIMIT OF SHOULDER |
| 25 | 1748904.422 | 499293.069 | STA. 161+758.499, LIMIT OF SHOULDER |
| 26 | 1748911.206 | 499307.662 | STA. 161+784.565, LIMIT OF SHOULDER |
| 27 | 1748925.889 | 499283.565 | STA. 161+770.272, LIMIT OF SHOULDER |



GEOMETRIC DESIGN LAYOUT
1 INTERSECTION A-6 (STA. 161+769.385) - INITIAL STAGE
 RI-29 SCALE 1:500

NOTES:
 1. FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-28.
 2. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14

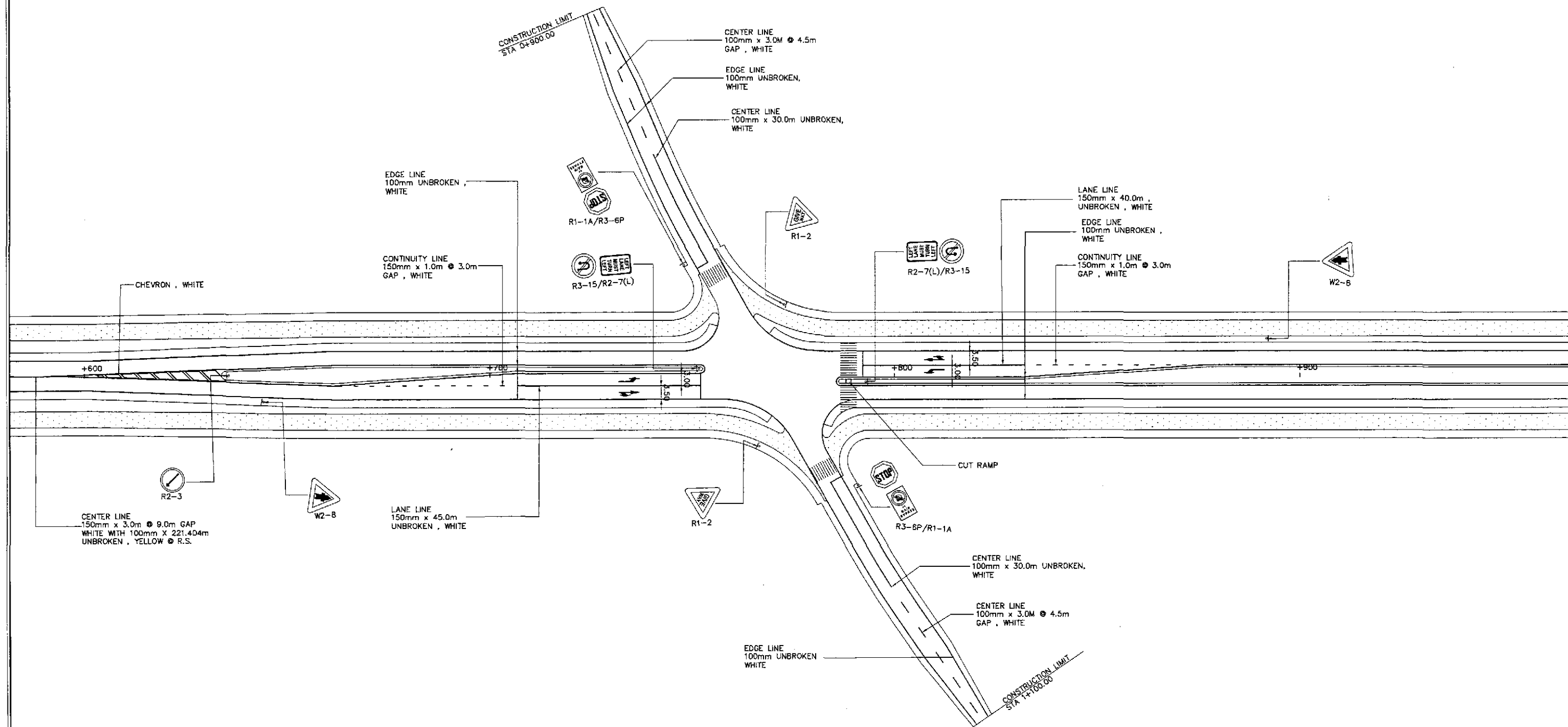
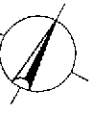
| | | | | | | | | | | | | | |
|--|-----------|------|-----------|--|---|-------------------------------------|---|-----------------------------|--|---|--|---|--|
| | DESIGNED | DATE | SIGNATURE | <p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : AS SHOWN FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-6 (INITIAL STAGE) | SHEET NO. : RI-29 | | | | | |
| | CHECKED | DATE | SIGNATURE | | | | | | BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director | OFFICE OF THE SECRETARY Recommended By: JOSEFINA M. ALAGAR Chief, Highways Division | Approved By: GILBERTO S. REYES OIC, Director IV | Approved By: MANUEL M. BONDAN Undersecretary | Approved By: SIMONE A. DATUMANONG Secretary |
| | SUBMITTED | DATE | SIGNATURE | | | | | | Submitted By: <i>Mr. [Signature]</i> TEAM LEADER | Reviewed By: | Recommended By: | Approved By: | Approved By: |



- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-29
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-28

PAVING PLAN
INTERSECTION A-6 (STA. 161+769.385) - INITIAL STAGE
 SCALE 1:500

| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DESIGNED</th> <th>DATE</th> <th>SIGNATURE</th> </tr> <tr> <td style="text-align: center;">7/2/02</td> <td style="text-align: center;">7/2/02</td> <td style="text-align: center;"><i>[Signature]</i></td> </tr> <tr> <th>CHECKED</th> <th>DATE</th> <th>SIGNATURE</th> </tr> <tr> <td style="text-align: center;">7/4/02</td> <td style="text-align: center;">7/4/02</td> <td style="text-align: center;"><i>[Signature]</i></td> </tr> <tr> <th>SUBMITTED</th> <th>DATE</th> <th>SIGNATURE</th> </tr> <tr> <td style="text-align: center;">7/6/02</td> <td style="text-align: center;">7/6/02</td> <td style="text-align: center;"><i>[Signature]</i></td> </tr> </table> | DESIGNED | DATE | SIGNATURE | 7/2/02 | 7/2/02 | <i>[Signature]</i> | CHECKED | DATE | SIGNATURE | 7/4/02 | 7/4/02 | <i>[Signature]</i> | SUBMITTED | DATE | SIGNATURE | 7/6/02 | 7/6/02 | <i>[Signature]</i> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</th> </tr> <tr> <td style="text-align: center;">P.W. - PMO</td> <td style="text-align: center;">BUREAU OF DESIGN</td> <td style="text-align: center;">OFFICE OF THE SECRETARY</td> </tr> <tr> <td style="text-align: center;">Submitted By: DANILO C. TRAJANO Project Director</td> <td style="text-align: center;">Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</td> <td style="text-align: center;">Recommended By: GILBERTO S. REYES DIE, Director IV</td> </tr> <tr> <td style="text-align: center;">Recommended By: MANUEL M. BONOAN Undersecretary</td> <td style="text-align: center;">Approved By: SIMEON A. DATUMANONG Secretary</td> <td></td> </tr> </table> | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | P.W. - PMO | BUREAU OF DESIGN | OFFICE OF THE SECRETARY | Submitted By: DANILO C. TRAJANO Project Director | Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division | Recommended By: GILBERTO S. REYES DIE, Director IV | Recommended By: MANUEL M. BONOAN Undersecretary | Approved By: SIMEON A. DATUMANONG Secretary | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">PROJECT AND LOCATION :</td> <td style="text-align: center;">SCALE :</td> <td style="text-align: center;">SHEET CONTENTS :</td> <td style="text-align: center;">SHEET NO. :</td> </tr> <tr> <td style="text-align: center;">THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses)</td> <td style="text-align: center;">1:500 FULL SIZE A1</td> <td style="text-align: center;">INTERSECTION DETAIL PAVING PLAN INTERSECTION A-6 (INITIAL STAGE)</td> <td style="text-align: center;">RI-30</td> </tr> </table> | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses) | 1:500 FULL SIZE A1 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-6 (INITIAL STAGE) | RI-30 |
|--|--|--|--------------------|-----------|--------|--------|--------------------|---------|------|-----------|--------|--------|--------------------|-----------|------|-----------|--------|--------|--------------------|---|--|--|--|------------|------------------|-------------------------|--|--|--|---|---|--|---|------------------------|---------|------------------|-------------|--|-----------------------|--|-------|
| | DESIGNED | DATE | SIGNATURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7/2/02 | 7/2/02 | <i>[Signature]</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHECKED | DATE | SIGNATURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/4/02 | 7/4/02 | <i>[Signature]</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBMITTED | DATE | SIGNATURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/6/02 | 7/6/02 | <i>[Signature]</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P.W. - PMO | BUREAU OF DESIGN | OFFICE OF THE SECRETARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submitted By: DANILO C. TRAJANO Project Director | Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division | Recommended By: GILBERTO S. REYES DIE, Director IV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recommended By: MANUEL M. BONOAN Undersecretary | Approved By: SIMEON A. DATUMANONG Secretary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses) | 1:500 FULL SIZE A1 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-6 (INITIAL STAGE) | RI-30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



NOTES:

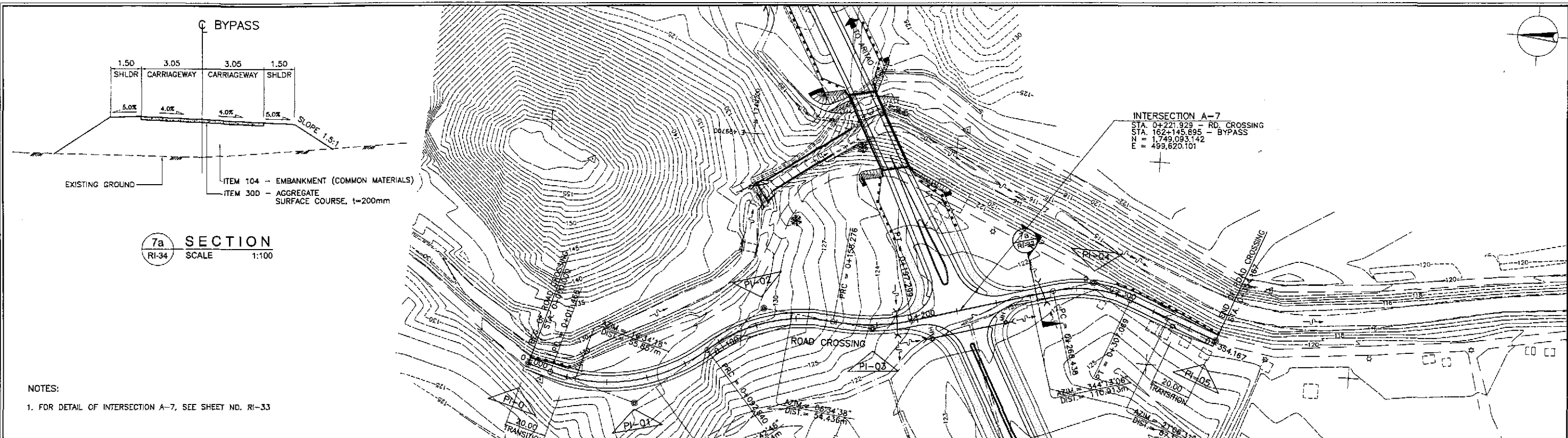
1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

**TRAFFIC SIGNS , PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-6, STA. 161+769.385 (INITIAL STAGE)**

A
R1-31

SCALE 1:500

| | | | | | | | | | | | | |
|--|-----------|--------|-----------|--|--|--|---------------------------------------|---|----------------------------------|--|-----------------------------|------------------------------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : 1:500 FULL SIZE A1 | SHEET CONTENTS : TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT INTERSECTION A-6 (INITIAL STAGE) | SHEET NO. : R1-31 | |
| | CHECKED | 9/2/02 | S. LOPEZ | | Submitted By: | Reviewed By: | Recommended By: | | | | | Approved By: |
| | SUBMITTED | 9/6/02 | Mr. KANDA | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | CILBERTO S. REYES OIC, Director IV | | | | | MANUEL M. BONDAN Undersecretary |

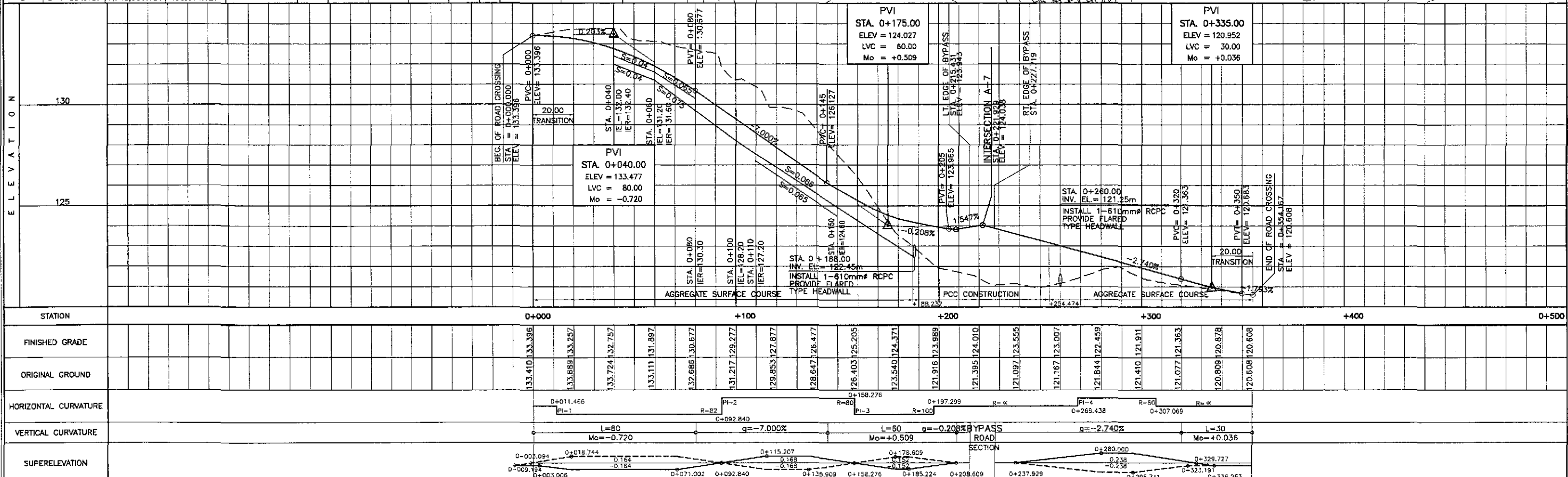


7a SECTION
RI-34 SCALE 1:100

NOTES:
1. FOR DETAIL OF INTERSECTION A-7, SEE SHEET NO. RI-33

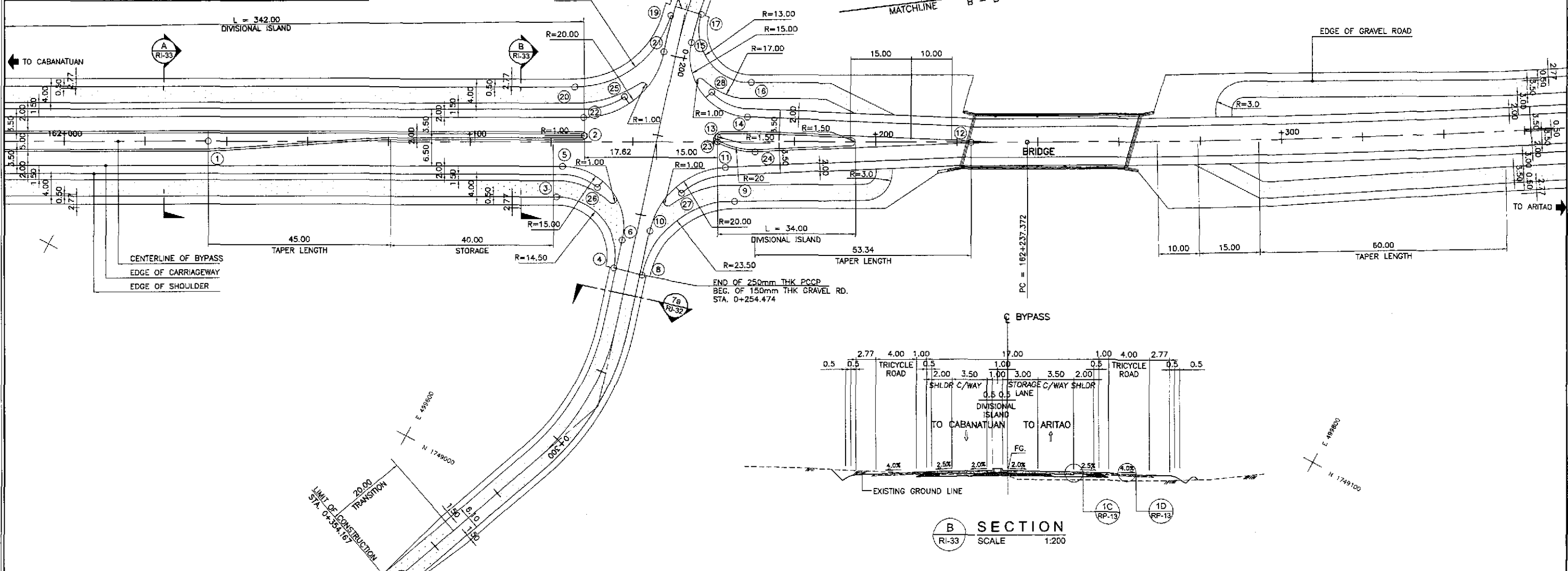
CURVE ELEMENTS

| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
|--------|-------------|---------------|-------------|-----------|-----|--------|--------|--------|------|---------|-----------|-----------|
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | D + 000.000 | 1,749,303.446 | 499,579.166 | | | | | | | | | |
| 1 | D + 055.857 | 1,749,249.909 | 499,563.235 | 56°51'32" | 82 | 44.392 | 81.375 | 11.245 | 5.37 | 30 | 0+011.466 | 0+092.840 |
| 2 | D + 127.513 | 1,749,189.598 | 499,614.359 | 46°51'52" | 80 | 34.673 | 65.435 | 7.191 | 5.50 | 30 | 0+092.840 | 0+158.276 |
| 3 | D + 178.039 | 1,749,135.521 | 499,608.124 | 22°21'32" | 100 | 19.763 | 39.023 | 1.934 | 5.00 | 30 | 0+158.276 | 0+197.299 |
| 4 | D + 288.449 | 1,749,028.788 | 499,638.289 | 36°53'24" | 60 | 20.012 | 38.631 | 3.249 | 7.80 | 40 | 0+266.438 | 0+307.069 |
| 5 | D + 354.167 | 1,748,966.181 | 499,614.120 | | | | | | | | | |



| | | | | | | | | | | | | | | |
|----------|------|--|--|--|---|--|---|--|---|---|--|------------------------------|--------------------------|--|
| | | <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | | | | <p>PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paralid, Cabanatuan and San Jose Bypasses)</p> | | <p>SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1</p> | | <p>SHEET CONTENTS : PLAN, PROFILE & SECTION INTERSECTION A-7 ROAD CROSSING (STA. 0+000.000 - 0+354.167)</p> | | <p>SHEET NO. : RI-32</p> | | |
| DESIGNED | DATE | SIGNATURE | <p>Submitted By: PJHL - PMO</p> | | <p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</p> | | <p>Recommended By: GILBERTO S. REYES OIC, Director IV</p> | | <p>Approved By: MANUEL M. BONDAN Undersecretary</p> | | <p>Approved By: SIMEON A. DATUMANONG Secretary</p> | | <p>Submitted: 9/6/02</p> | |
| CHECKED | DATE | SIGNATURE | <p>Submitted By: DANILLO C. TRAJANG Project Director</p> | | <p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</p> | | <p>Recommended By: GILBERTO S. REYES OIC, Director IV</p> | | <p>Approved By: MANUEL M. BONDAN Undersecretary</p> | | <p>Approved By: SIMEON A. DATUMANONG Secretary</p> | | <p>Submitted: 9/6/02</p> | |

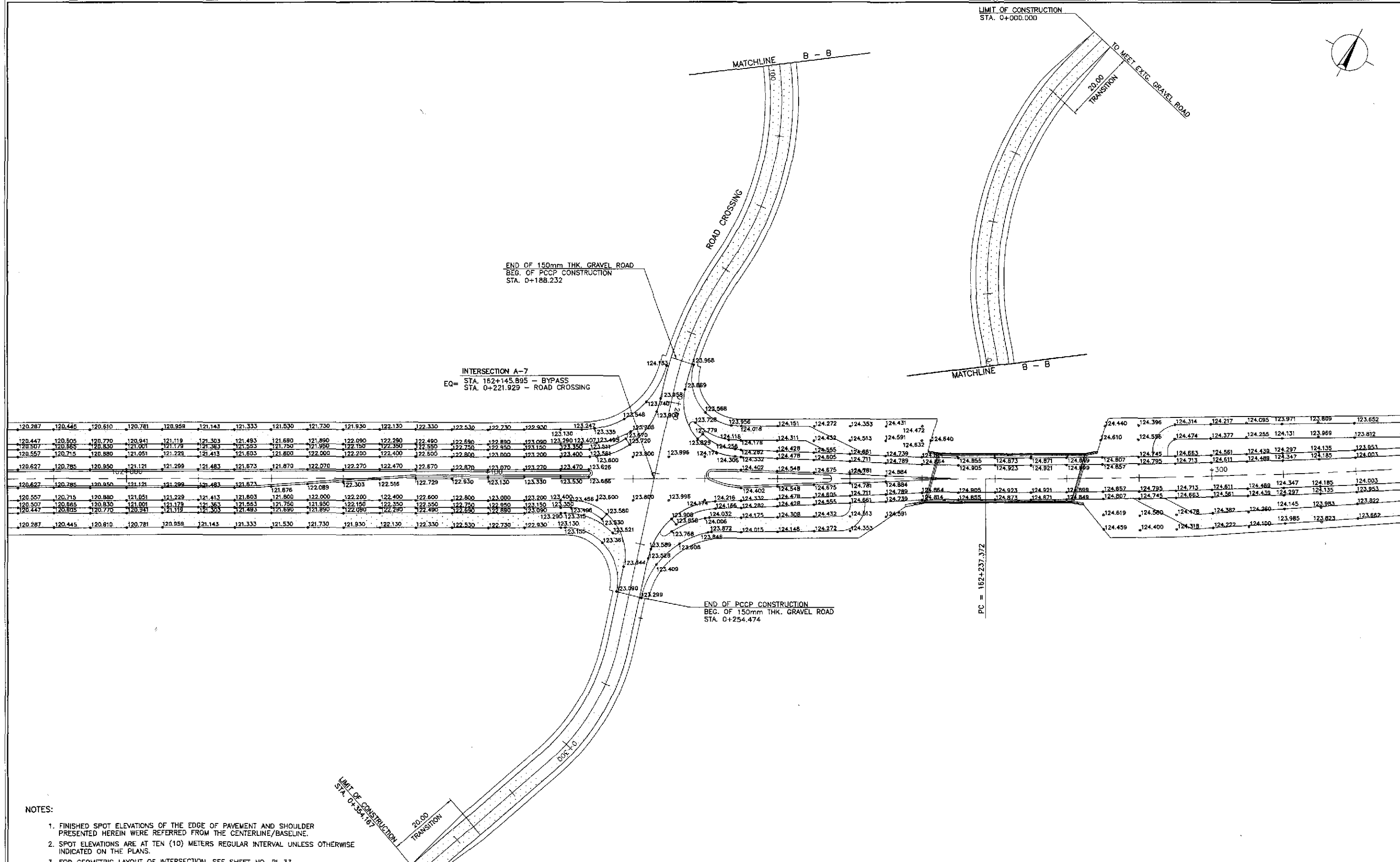
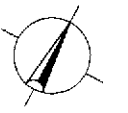
| TABLE OF COORDINATES | | | |
|----------------------|-------------|------------|--|
| CONTROL POINT | COORDINATES | | REMARKS |
| | NORTHING | EASTING | |
| 1 | 1749040.952 | 499522.815 | STA. 162+035.495, BEG. OF TAPER |
| 2 | 1749086.136 | 499603.870 | STA. 162+128.280, END OF ISLAND NOSING |
| 3 | 1749069.591 | 499604.757 | STA. 162+121.240, BEG. OF RADIUS 14.50 |
| 4 | 1749060.757 | 499625.565 | END OF RADIUS 14.50 |
| 5 | 1749076.929 | 499602.571 | STA. 162+122.783, BEG. OF RADIUS 15 |
| 6 | 1749067.790 | 499624.097 | END OF RADIUS 15 |
| 7 | 1748966.181 | 499614.120 | LIMIT OF CONSTRUCTION |
| 8 | 1749062.448 | 499632.465 | BEG. OF RADIUS 23.50 |
| 9 | 1749087.678 | 499641.031 | STA. 162+161.790, END OF CURB RADIUS 23.50 |
| 10 | 1749072.947 | 499628.978 | BEG. OF TURNING RADIUS 20 |
| 11 | 1749095.596 | 499638.035 | STA. 162+162.858, END OF TURNING RADIUS 20 |
| 12 | 1749129.863 | 499688.554 | STA. 162+223.575, BEG. OF TRANSITION |
| 13 | 1749101.318 | 499632.735 | STA. 162+160.893, END OF ISLAND NOSING |
| 14 | 1749109.139 | 499637.059 | STA. 162+188.401, BEG. OF RADIUS 15 |
| 15 | 1749118.789 | 499616.034 | END OF RADIUS 15 |
| 16 | 1749116.109 | 499632.025 | STA. 162+167.223, BEG. OF RADIUS 13.00 |
| 17 | 1749125.980 | 499614.921 | END OF RADIUS 13.00 |
| 18 | 1749303.446 | 499579.166 | LIMIT OF CONSTRUCTION |
| 19 | 1749122.227 | 499608.431 | BEG. OF RADIUS 24.50 |
| 20 | 1749095.556 | 499596.045 | STA. 162+125.838, END OF RADIUS 24.50 |
| 21 | 174912.340 | 499611.388 | BEG. OF RADIUS 20 |
| 22 | 1749089.934 | 499601.430 | STA. 162+127.925, END OF RADIUS 20 |
| 23 | 1749100.073 | 499633.737 | INT. OF TURNING RADIUS 20 & RADIUS 1.50 |
| 24 | 1749102.443 | 499642.729 | STA. 162+170.232, END OF TURNING RADIUS 20 |
| 25 | 1749099.158 | 499607.956 | STA. 162+138.037, LIMIT OF SHOULDER |
| 26 | 1749076.375 | 499612.598 | STA. 162+131.357, LIMIT OF SHOULDER |
| 27 | 1749084.916 | 499631.450 | STA. 162+152.007, LIMIT OF SHOULDER |
| 28 | 1749110.349 | 499626.307 | STA. 162+159.498, LIMIT OF SHOULDER |



**GEOMETRIC DESIGN LAYOUT
INTERSECTION A-7 (STA. 162+145.895) - INITIAL STAGE**

- NOTES:
 1. FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-32.
 2. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.

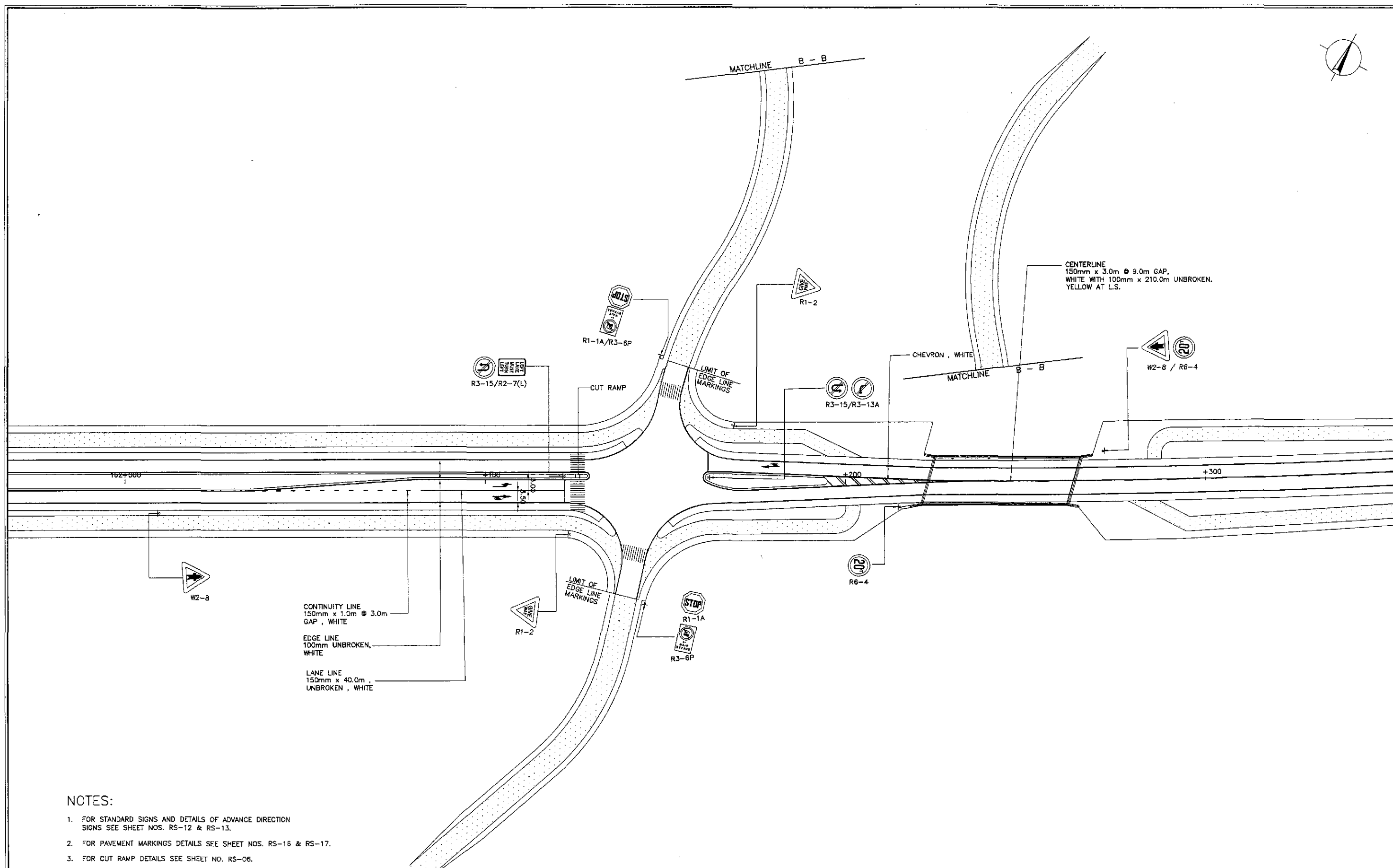
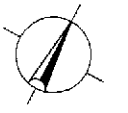
| | | | | | | | | | | | |
|--|-----------|--------|-------------|--------------------|--|--------------------------|---|-------------------------------------|---|-----------------------------|-----------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinarid, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : AS SHOWN FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-7 (INITIAL STAGE) | SHEET NO. : RI-33 | |
| | CHECKED | 9/4/02 | S. JOSE | | Submitted By: | Reviewed By: | | | | | Recommended By: |
| | SUBMITTED | 9/4/02 | M. B. B. B. | | Project Director | Chief, Highways Division | | | | | OC, Director IV |
| | | | | BUREAU OF DESIGN | | OFFICE OF THE SECRETARY | | | | | |
| | | | | DANILLO C. TRAJANO | | JOSEFINA M. ALAGAR | | GILBERTO S. REYES | | MANUEL M. BONDAN | |
| | | | | Project Director | | Chief, Highways Division | | OC, Director IV | | Undersecretary | |
| | | | | | | SIMEON A. DATUMANONG | | Secretary | | | |



- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-33.
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-32.

PAVING PLAN
INTERSECTION A-7 (STA. 162+145.895) - INITIAL STAGE
 A
 RI-34 SCALE 1:500

| | | | | | | | | |
|---|-----------|--------|-----------|--|--|--------------|---|--------------|
| JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YACHIYO ENGINEERING CO., LTD. | DESIGNED | DATE | SIGNATURE | DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/2/02 | | BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division Recommended By: GILBERTO S. REYES, OIC, Director IV Approved By: MANUEL M. BONDAN, Undersecretary Approved By: SIMON A. DATUMANONG, Secretary | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | 1:500 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-7 (INITIAL STAGE) | RI-34 |
| | SUBMITTED | 7/6/02 | | | | FULL SIZE A1 | | |



CONTINUITY LINE
150mm x 1.0m @ 3.0m
GAP, WHITE

EDGE LINE
100mm UNBROKEN,
WHITE

LANE LINE
150mm x 40.0m,
UNBROKEN, WHITE

CENTERLINE
150mm x 3.0m @ 9.0m GAP,
WHITE WITH 100mm x 210.0m UNBROKEN,
YELLOW AT L.S.

NOTES:

1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-7, STA. 162+145.895 (INITIAL STAGE)**

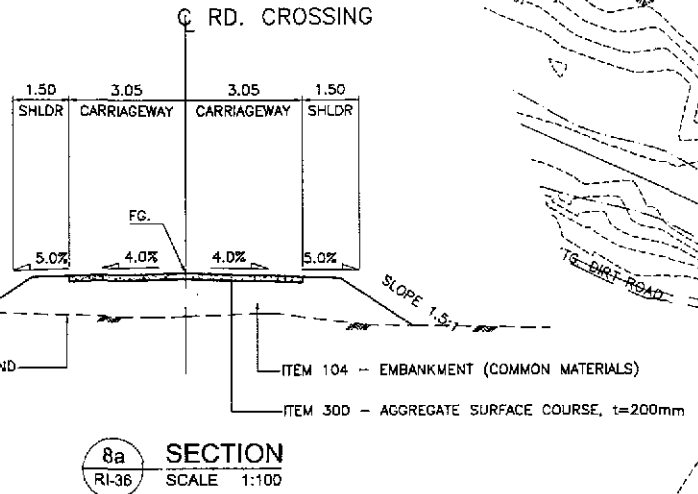
A
R1-35

SCALE

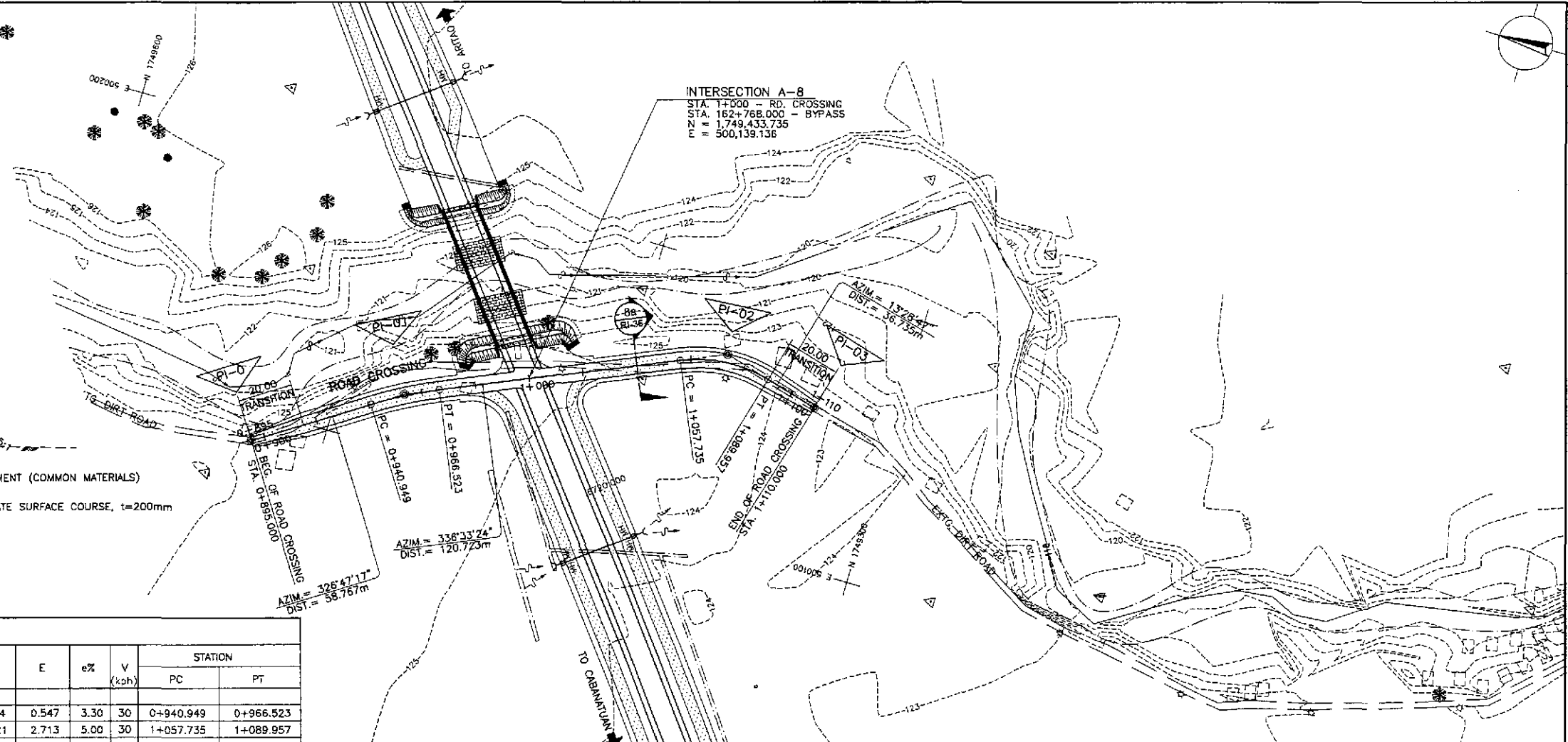
1:500

| | | | | | | | | | | |
|---|-----------|--------|-----------|---|--|--|--|--------------|---|-------------|
| | DESIGNED | DATE | SIGNATURE | <p align="center">REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : | | | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/4/02 | S. JOSE | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) | | | 1:500 | TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT INTERSECTION A-7 (INITIAL STAGE) | R1-35 |
| | SUBMITTED | 9/6/02 | M. BONDAN | | SAN JOSE BYPASS | | | FULL SIZE A1 | | |
| <p>Submitted By: DANILO C. TRAMON, Project Director</p> <p>Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division</p> <p>Recommended By: GILBERTO S. REYES, OIC, Director IV</p> <p>Recommended By: MANUEL M. BONDAN, Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG, Secretary</p> | | | | <p>Office of the Secretary</p> | | | | | | |

NOTES:
1. FOR DETAIL OF INTERSECTION A-8, SEE SHEET NO. RI-37

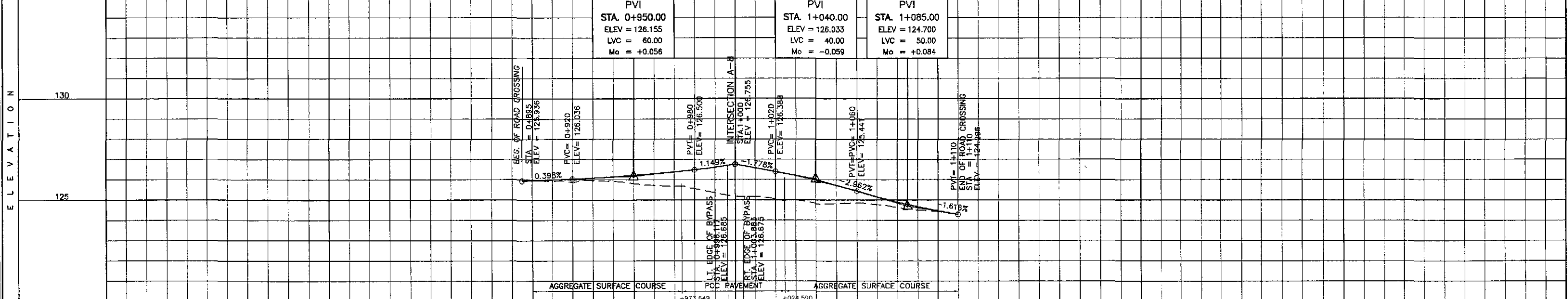


INTERSECTION A-8
STA. 1+000 - RD. CROSSING
STA. 162+768.000 - BYPASS
N = 1,749,433.735
E = 500,139.136



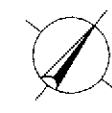
CURVE ELEMENTS

| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
|--------|-------------|---------------|-------------|-----------|-----|--------|--------|-------|------|---------|-----------|-----------|
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 895.000 | 1,749,525.375 | 500,088.530 | | | | | | | | | |
| 1 | 0 + 953.767 | 1,749,476.208 | 500,120.718 | 09°46'07" | 150 | 12.818 | 25.574 | 0.547 | 3.30 | 30 | 0+940.949 | 0+966.523 |
| 2 | 1 + 074.428 | 1,749,365.450 | 500,168.747 | 36°55'23" | 50 | 16.692 | 32.221 | 2.713 | 5.00 | 30 | 1+057.735 | 1+089.957 |
| 3 | 1 + 110.000 | 1,749,329.727 | 500,160.184 | | | | | | | | | |



| STATION | +700 | +800 | +900 | +1000 | +1100 | +200 | +300 | +400 |
|----------------------|------|------|------|-------|-------|------|------|------|
| FINISHED GRADE | | | | | | | | |
| ORIGINAL GROUND | | | | | | | | |
| HORIZONTAL CURVATURE | | | | | | | | |
| VERTICAL CURVATURE | | | | | | | | |
| SUPERELEVATION | | | | | | | | |

| | | | | | | | | | | |
|--|--|---|---|--|--|---|---|----------------------------|--|--|
| | DESIGNED: 9/2/02 CHECKED: 9/4/02 SUBMITTED: 9/6/02 | DATE: 9/2/02 SIGNATURE: [Signature] TEAM LEADER | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridae, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1 | SHEET CONTENTS: PLAN, PROFILE & SECTION INTERSECTION A-8 ROAD CROSSING (STA. 0+895.000 - 1+110.000) | SHEET NO.: RI-36 | | |
| | Submitted By: DANILLO C. TRAJANO, Project Director | | Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division | | Recommended By: GILBERTO S. REYES, OIC, Director IV | | Recommended By: MANUEL M. BONDAN, Undersecretary | | Approved By: SIMEON A. DATUMANONG, Secretary | |
| | P.U.H.L. - P.W.D. | | BUREAU OF DESIGN | | OFFICE OF THE SECRETARY | | (See cover sheet for Signature/Approval) | | (See cover sheet for Signature/Approval) | |

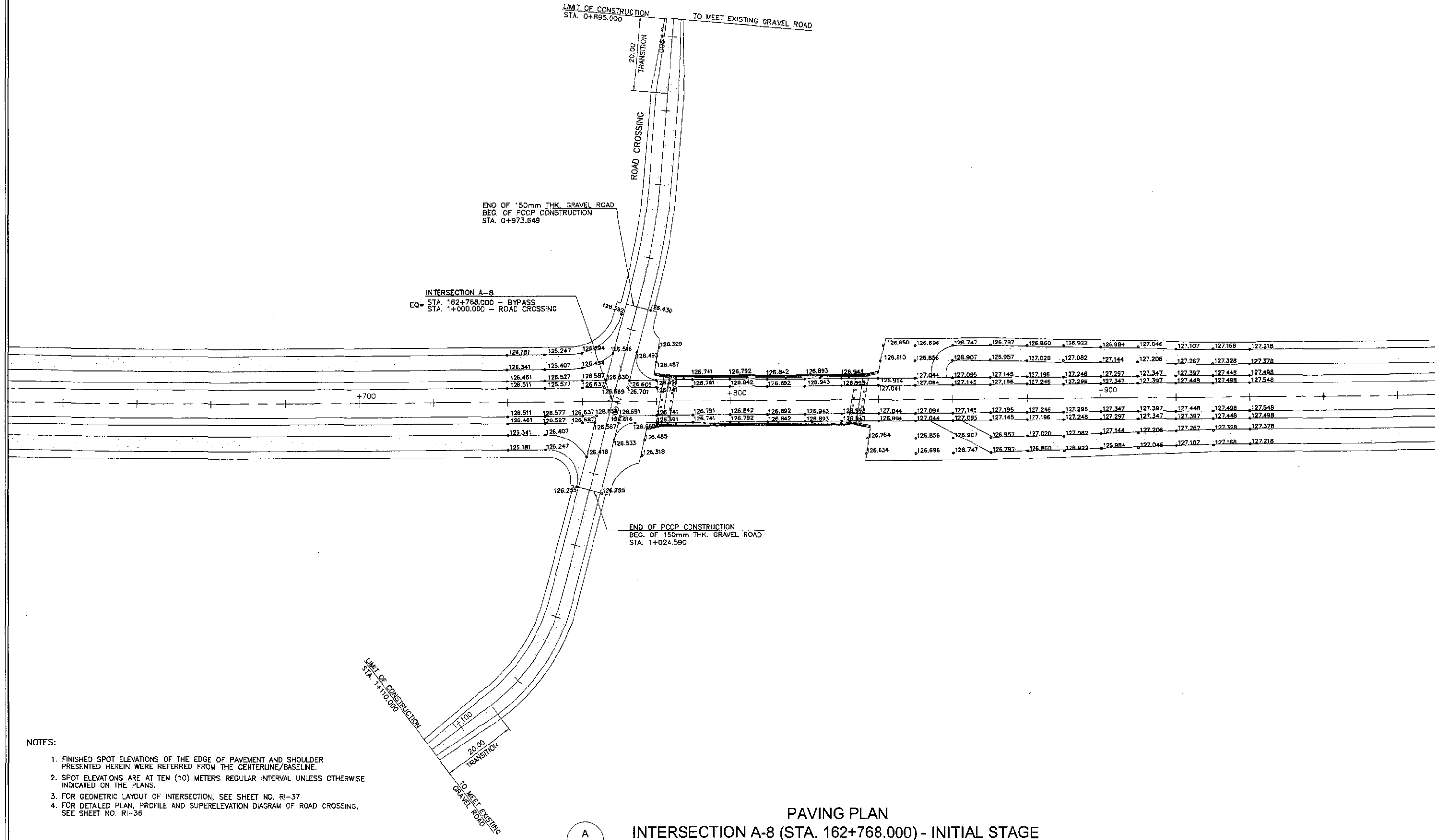


LIMIT OF CONSTRUCTION
STA. 0+895.000
TO MEET EXISTING GRAVEL ROAD

END OF 150mm THK. GRAVEL ROAD
BEG. OF PCCP CONSTRUCTION
STA. 0+973.649

INTERSECTION A-8
STA. 162+768.000 - BYPASS
EQ= STA. 1+000.000 - ROAD CROSSING

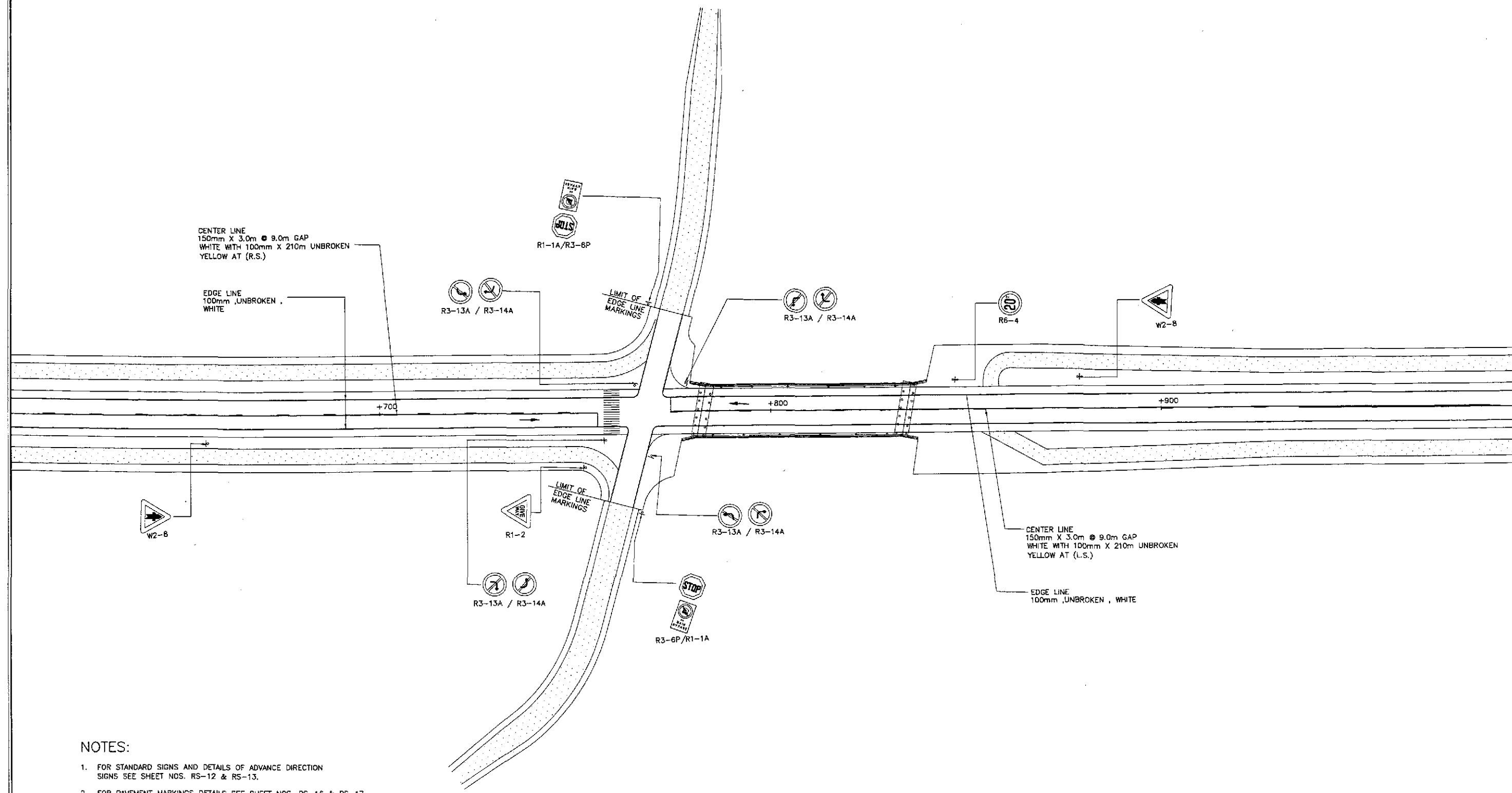
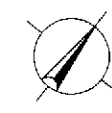
END OF PCCP CONSTRUCTION
BEG. OF 150mm THK. GRAVEL ROAD
STA. 1+024.590



- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-37
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-35

PAVING PLAN
INTERSECTION A-8 (STA. 162+768.000) - INITIAL STAGE
A
RI-38 SCALE 1:500

| | | | | | | | | | | | |
|-----------|----------|-----------|--|--|---------------------------------------|------------------------------------|-----------------------------------|--|------------------|--|-------|
| | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | |
| | DESIGNED | 7/2/02 | | BUREAU OF DESIGN | | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) | 1:500 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-8 (INITIAL STAGE) | RI-38 |
| | CHECKED | 7/11/02 | | Submitted By: | Reviewed By: | Recommended By: | Recommended By: | Approved By: | FULL SIZE A1 | SAN JOSE BYPASS | |
| SUBMITTED | 7/6/02 | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BONDAN Undersecretary | SIMEON A. DATUMANONG Secretary | | | | |



1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.

**TRAFFIC SIGNS AND PAVEMENT MARKINGS LAYOUT
INTERSECTION A-8, STA. 162+768.000 (INITIAL STAGE)**



SCALE 1:500

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YEO YACHIYO ENGINEERING CO., LTD.

| DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | |
|-------------------|-------------|--|--|---------------------------------------|------------------------------------|
| DESIGNED: 9/2/02 | S. LUNA | BUREAU OF DESIGN | | OFFICE OF THE SECRETARY | |
| CHECKED: 9/4/02 | S. JOSE | Submitted By: | Reviewed By: | Recommended By: | Approved By: |
| SUBMITTED: 9/6/02 | Team Leader | DANILO C. TRAJANO Project Director | JOSEFINA M. ALACAR Chief, Highways Division | GILBERTO S. REYES DIC, Director IV | MANUEL M. BONDAN Undersecretary |
| | | | | MANUEL A. DATUMANDONG Secretary | |

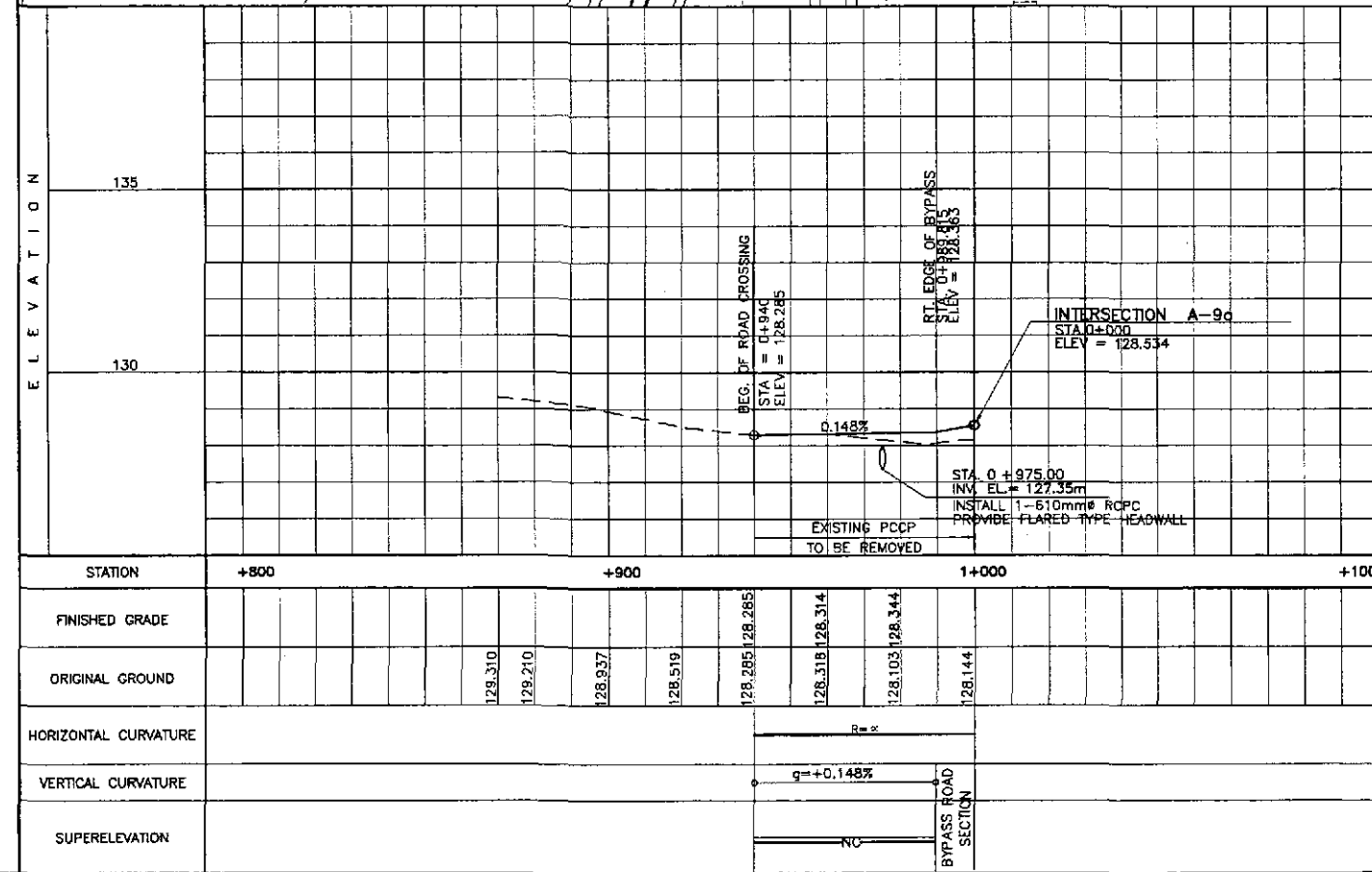
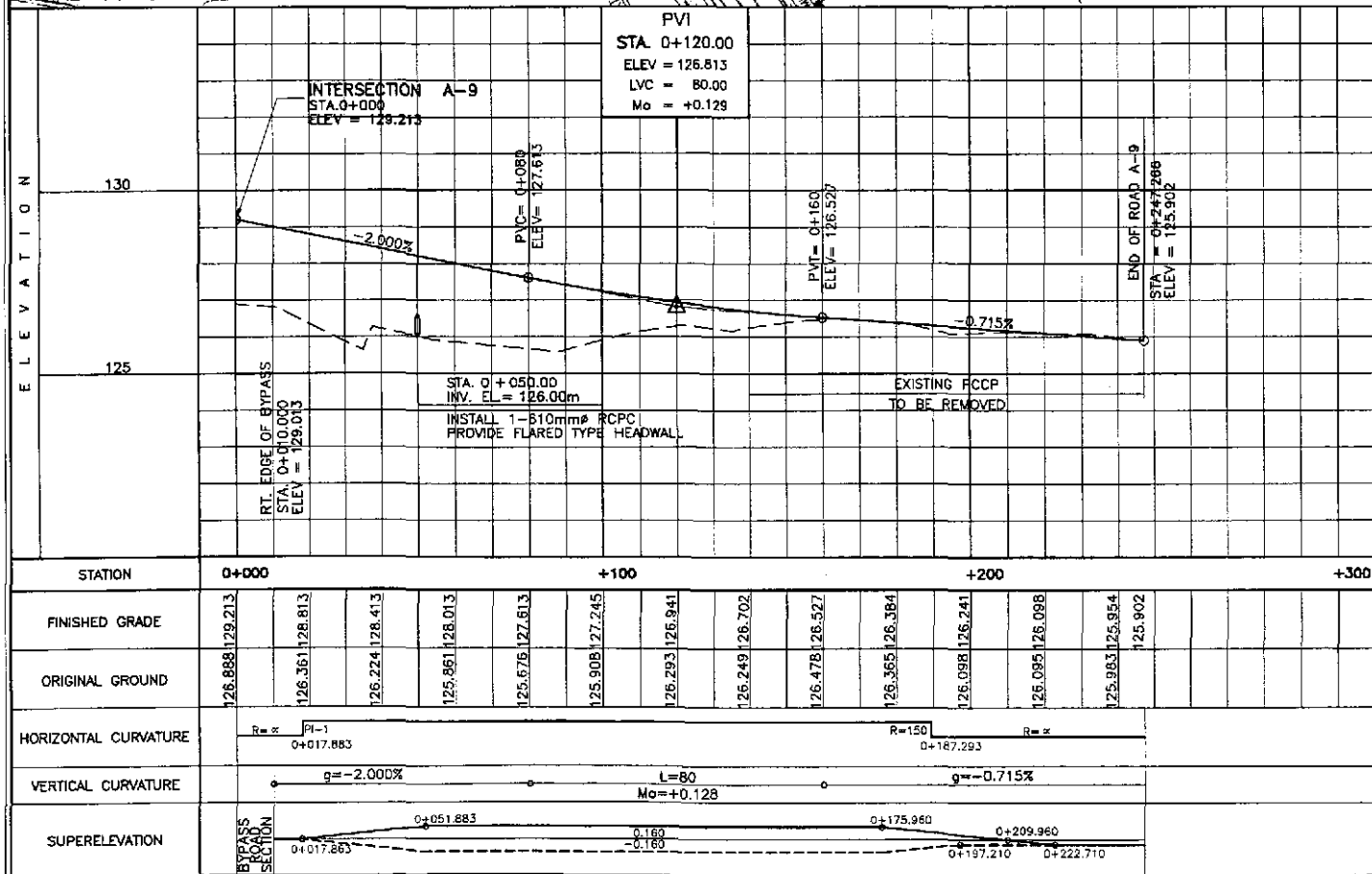
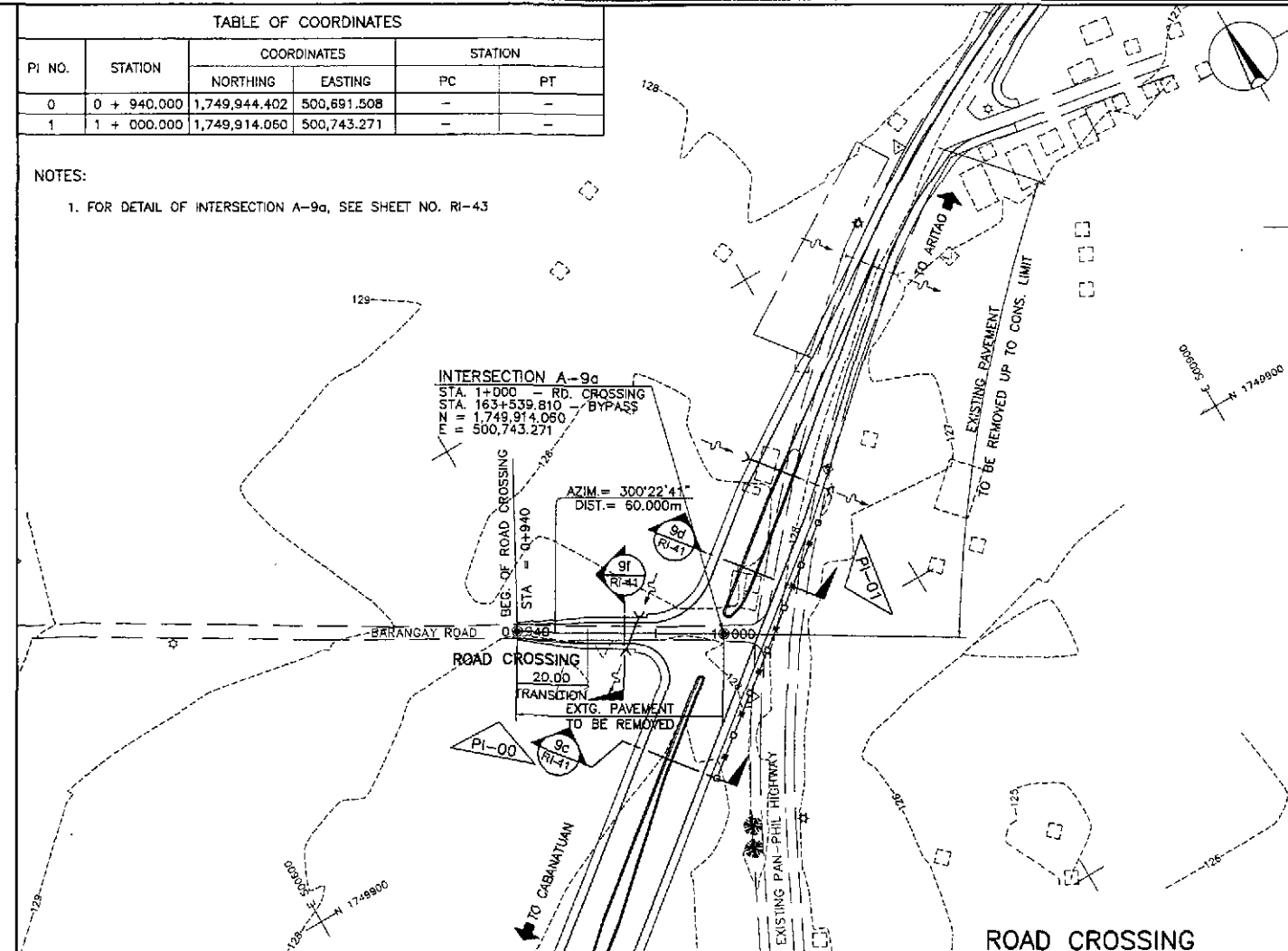
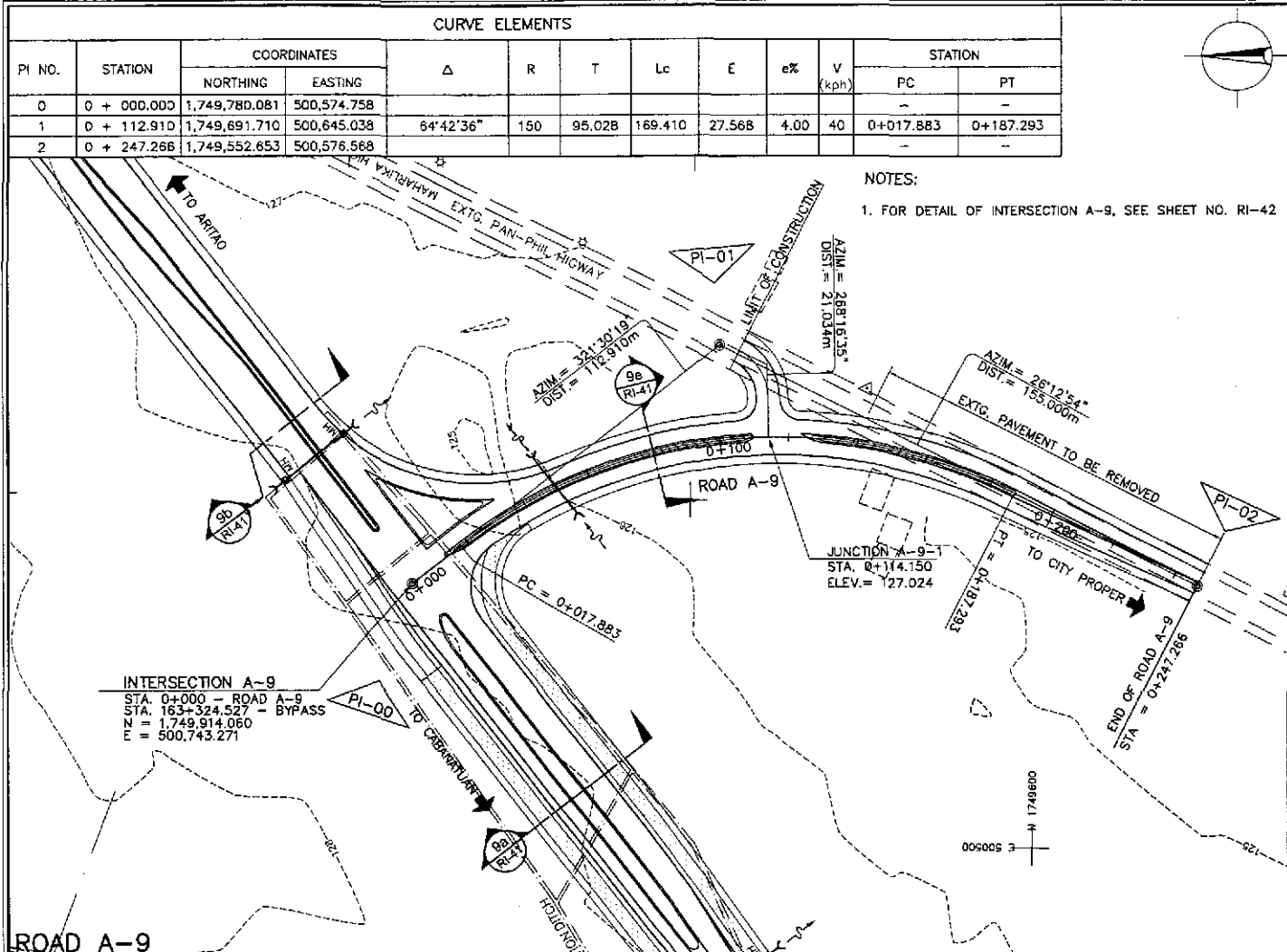
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)

SAN JOSE BYPASS

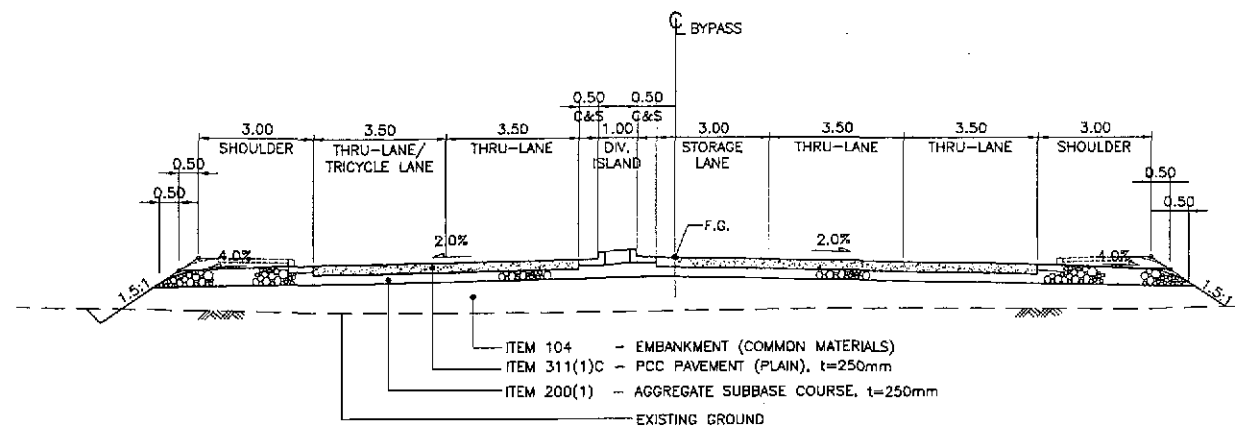
SCALE :
1:500
FULL SIZE A1

SHEET CONTENTS :
**TRAFFIC SIGNS AND PAVEMENT
MARKINGS LAYOUT
INTERSECTION A-8 (INITIAL STAGE)**

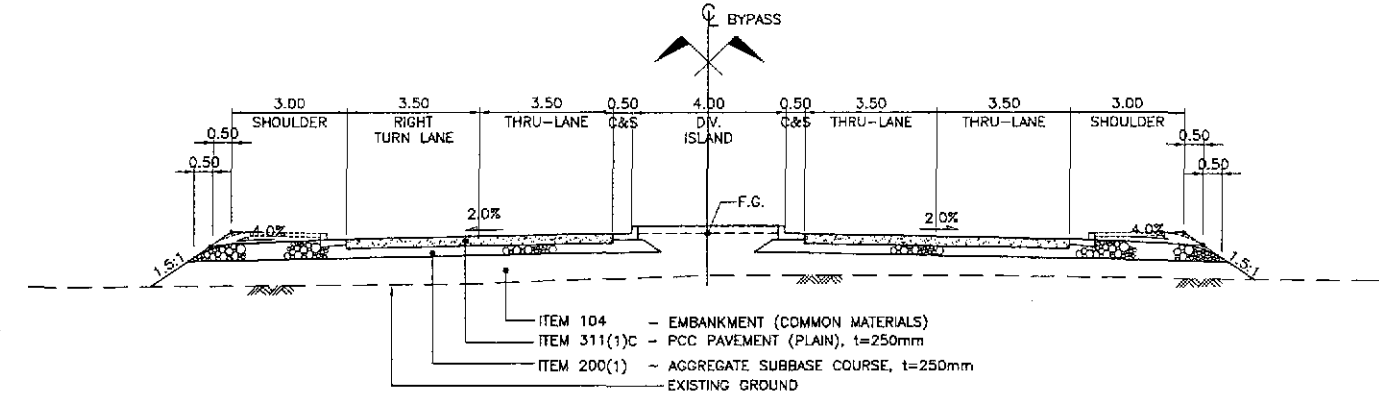
SHEET NO. :
R1-39



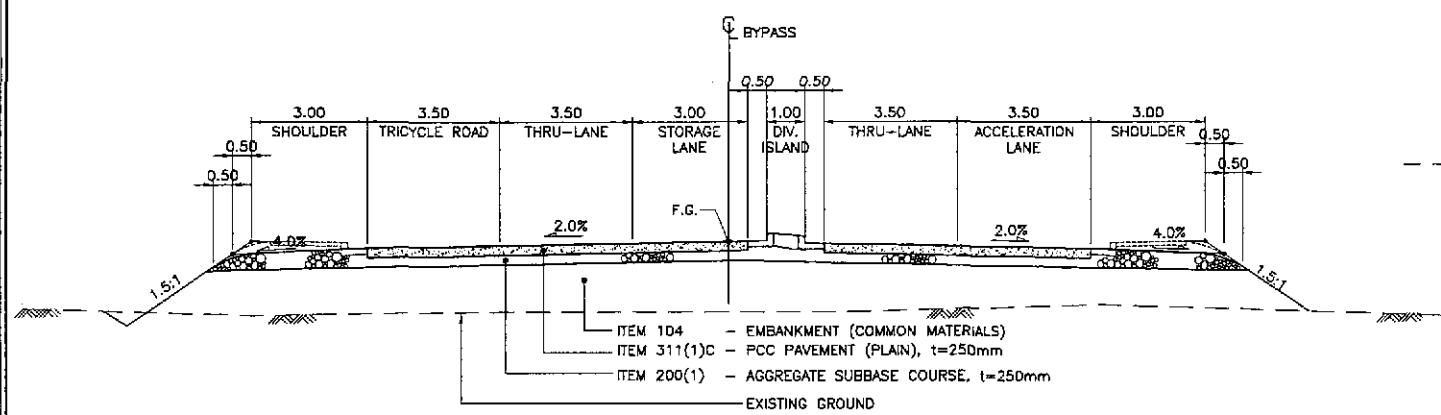
| | | | | | | | | | | |
|--|-----------|--------|--------------------|--|--|--|---|----------------------|---|--------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/2/02 | <i>[Signature]</i> | BUREAU OF DESIGN | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) | HORIZONTAL 1:1000 | PLAN AND PROFILE INTERSECTION A-9 ROAD A-9 (STA 0+000.000-STA 0+247.266) ROAD CROSSING (STA 0+940.00-STA 1+000.000) | RI-40 |
| | SUBMITTED | 9/6/02 | <i>[Signature]</i> | OFFICE OF THE SECRETARY | | | SAN JOSE BYPASS | VERTICAL 1:100 | | |
| | | | | | Submitted By: DANILLO C. TRAJANO Project Director Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division Recommended By: GILBERTO S. REYES OIC, Director IV Recommended By: MANUEL M. BONDUAN Undersecretary Approved By: SIMEDON A. DATUMANONG Secretary | | | FULL SIZE A1 | | |



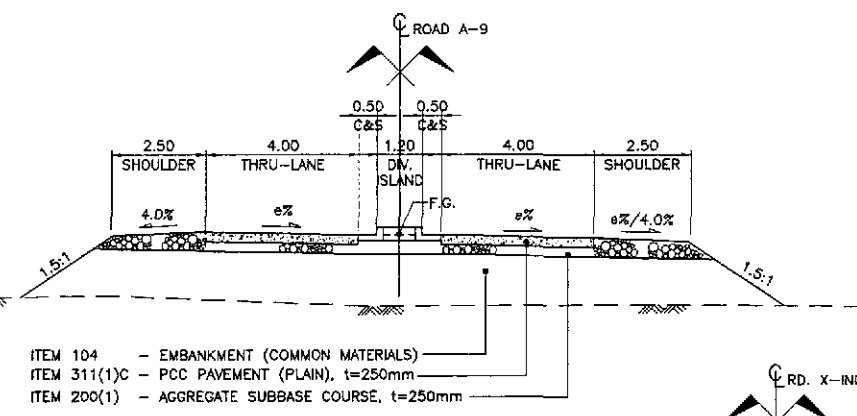
9c SECTION
RI-41 SCALE 1:100



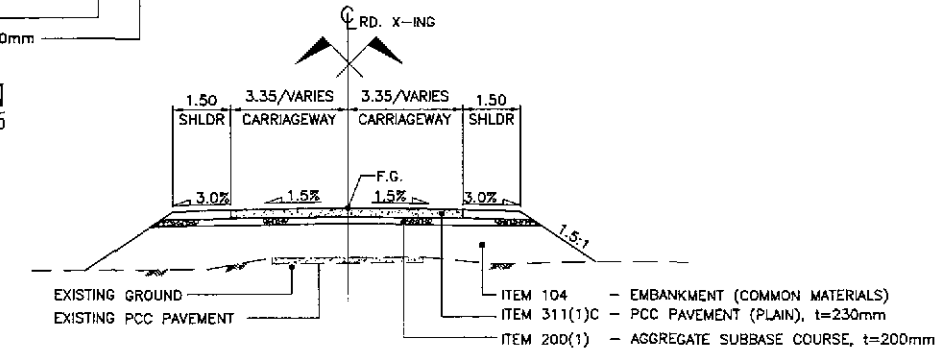
9d SECTION
RI-41 SCALE 1:100



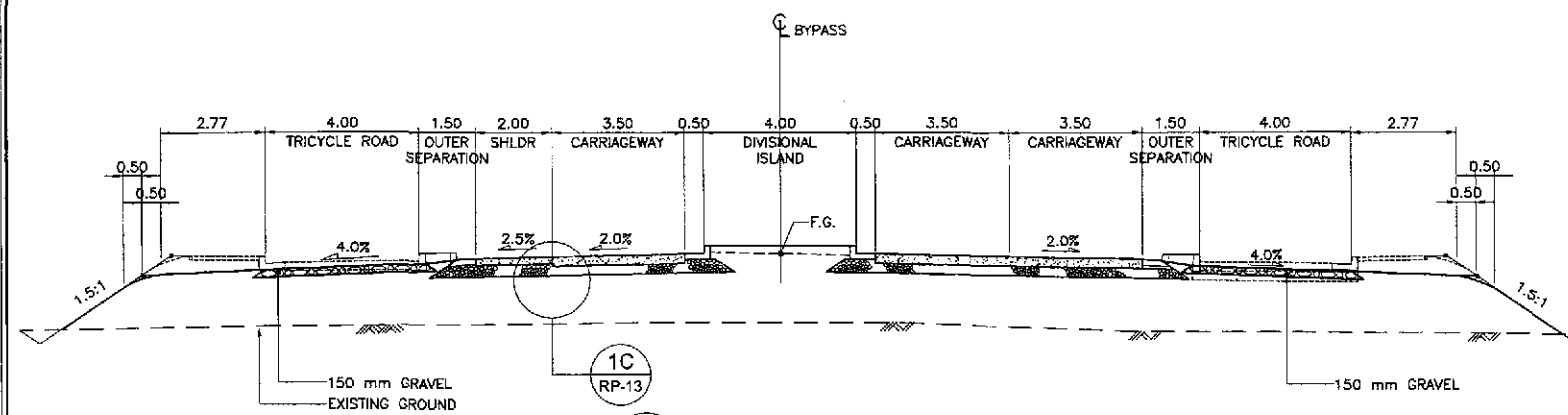
9b SECTION
RI-41 SCALE 1:100



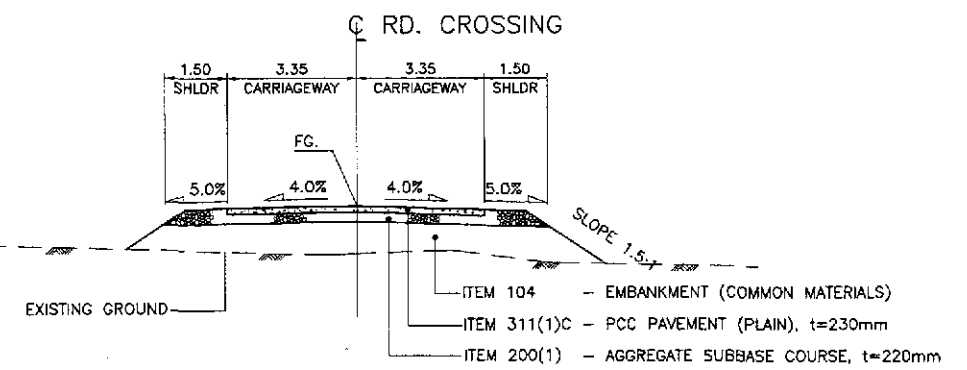
9e SECTION
RI-41 SCALE 1:100



9f SECTION
RI-41 SCALE 1:100



9a SECTION
RI-41 SCALE 1:100



9g SECTION
RI-41 SCALE 1:100

| | | | | | | | | | | |
|----------------------------------|---|------|--|--|--|--|--|----------------------------------|---|-----------------------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : 1:100 FULL SIZE A1 | SHEET CONTENTS : SELECTED SECTIONS ROAD A-9 CROSSING ROAD CROSSING | SHEET NO. : RI-41 |
| | CHECKED | DATE | SIGNATURE | | | | | | | |
| | Submitted By: DANILLO C. TRAJANO Project Director | | | Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division | | | | | | |
| | Recommended By: GILBERTO S. REYES Chief, Director IV | | | Recommended By: MANUEL M. BONDAN Undersecretary | | | | | | |
| Submitted: 9/6/02 TEAM LEADER | | | Approved By: SIMEON A. DATUMANONG Secretary | | | | | | | |

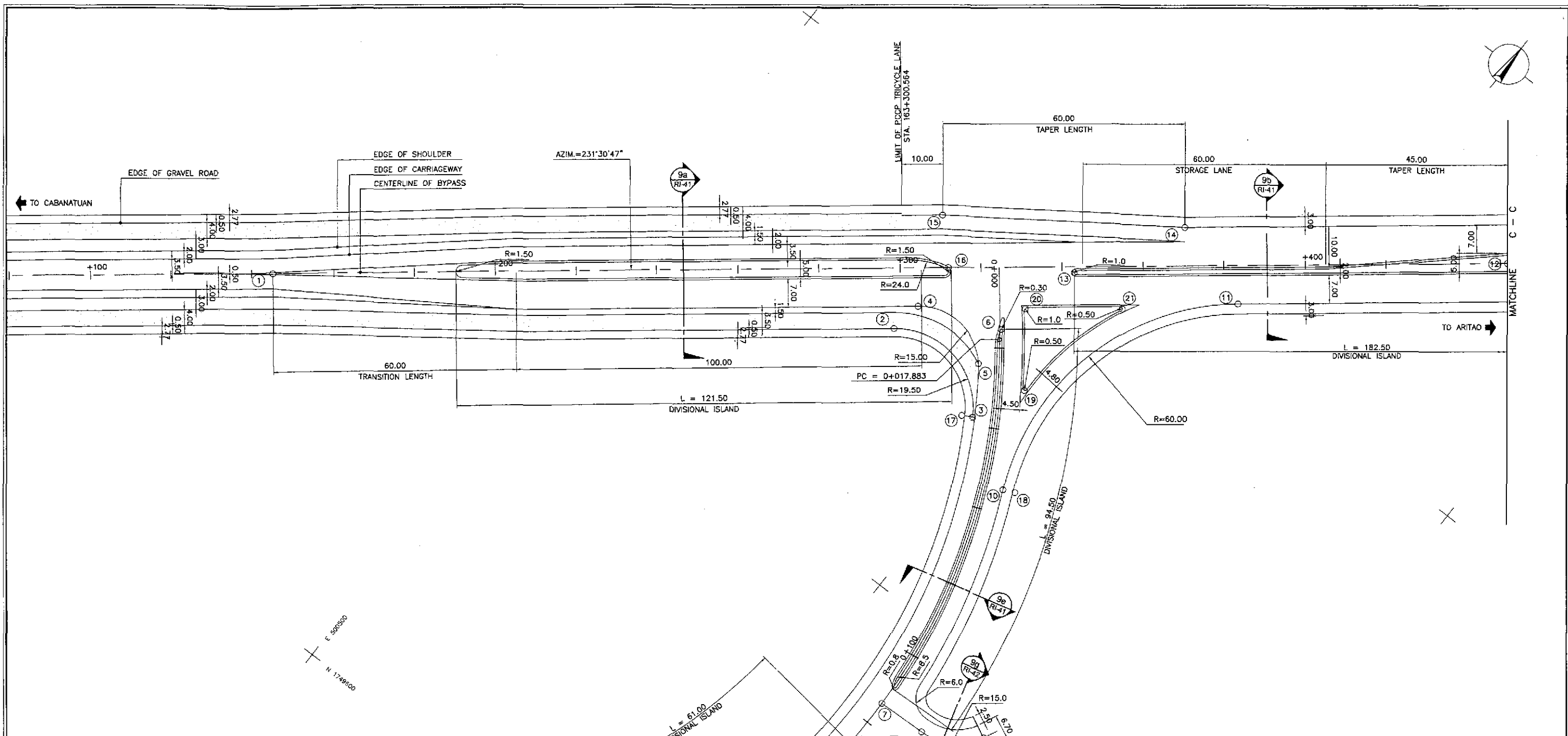


TABLE OF COORDINATES

| CONTROL POINT | COORDINATES | | REMARKS |
|---------------|-------------|------------|---|
| | NORTHING | EASTING | |
| 1 | 1749668.434 | 500434.332 | STA. 163+145.126, BEG. OF TRANSITION |
| 2 | 1749752.032 | 500563.581 | STA. 163+298.322, BEG. OF SHLDR. RADIUS 19.50 |
| 3 | 1749746.768 | 500592.457 | END OF SHLDR. RADIUS 19.50 |
| 4 | 1749760.034 | 500584.807 | STA. 163+304.262, BEG. OF TURNING RADIUS 15 |
| 5 | 1749758.163 | 500585.437 | END OF TURNING RADIUS 15 |
| 6 | 1749768.267 | 500584.586 | STA. 163+324.867, END OF ISLAND NOSING |
| 7 | 1749677.230 | 500618.421 | STA. 0+114.150, C.L. INTERSECTION OF ACCESS RD. |
| 8 | 1749677.592 | 500630.426 | BEG. OF C.L. RADIUS 15 |
| 9 | 1749685.959 | 500643.432 | LIMIT OF CONSTRUCTION |
| 10 | 1749737.303 | 500609.503 | BEG. OF RADIUS 60 |
| 11 | 1749809.253 | 500628.713 | STA. 163+383.349, END OF RADIUS 60 |
| 12 | 1749858.186 | 500672.995 | STA. 163+450.030, BEG./END OF TAPER |
| 13 | 1749790.422 | 500590.174 | STA. 163+343.030, END OF ISLAND NOSING |
| 14 | 1749816.205 | 500604.931 | STA. 163+370.628, BEG. OF TAPER |
| 15 | 1749781.607 | 500555.788 | STA. 163+310.628, END OF TAPER |
| 16 | 1749771.232 | 500585.573 | STA. 163+311.829, END OF ISLAND NOSING |
| 17 | 1749745.352 | 500590.088 | LIMIT OF SHOULDER |
| 18 | 1749738.557 | 500612.239 | LIMIT OF SHOULDER |
| 19 | 1749759.863 | 500598.436 | END OF ISLAND NOSING |
| 20 | 1749775.886 | 500586.048 | END OF ISLAND NOSING |
| 21 | 1749790.732 | 500604.843 | END OF ISLAND NOSING |

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-9 (STA. 163+324.527) - INITIAL STAGE

1
RI-42

SCALE

1:500

NOTES:

- FOR DETAIL OF CURVE DATA SEE SHIT. NO. RI-40.
- FOR TYPICAL ROAD CROSS-SECTIONS SEE SHIT. NO. RP-13 & RP-14.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATHIIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

DATE: 9/2/02
SIGNATURE: A. CRONCE
DESIGNED BY: A. CRONCE

DATE: 9/4/02
SIGNATURE: S. ROSE
CHECKED BY: S. ROSE

DATE: 9/6/02
SIGNATURE: M. RIZAL
SUBMITTED BY: M. RIZAL

PROJECT DIRECTOR: DANILO C. TRAJANO
CHIEF, HIGHWAYS DIVISION: JOSEFINA M. ALAGAR

BUREAU OF DESIGN
RECOMMENDED BY: GILBERTO S. REYES
OIC, DIRECTOR IV

OFFICE OF THE SECRETARY
RECOMMENDED BY: MANUEL M. BONDAN
Undersecretary

APPROVED BY: SIMEON A. DATUMANDING
Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)

SAN JOSE BYPASS

SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
INTERSECTION DETAIL
GEOMETRIC DESIGN LAYOUT
INTERSECTION A-9 (INITIAL STAGE)

SHEET NO. : **RI-42**

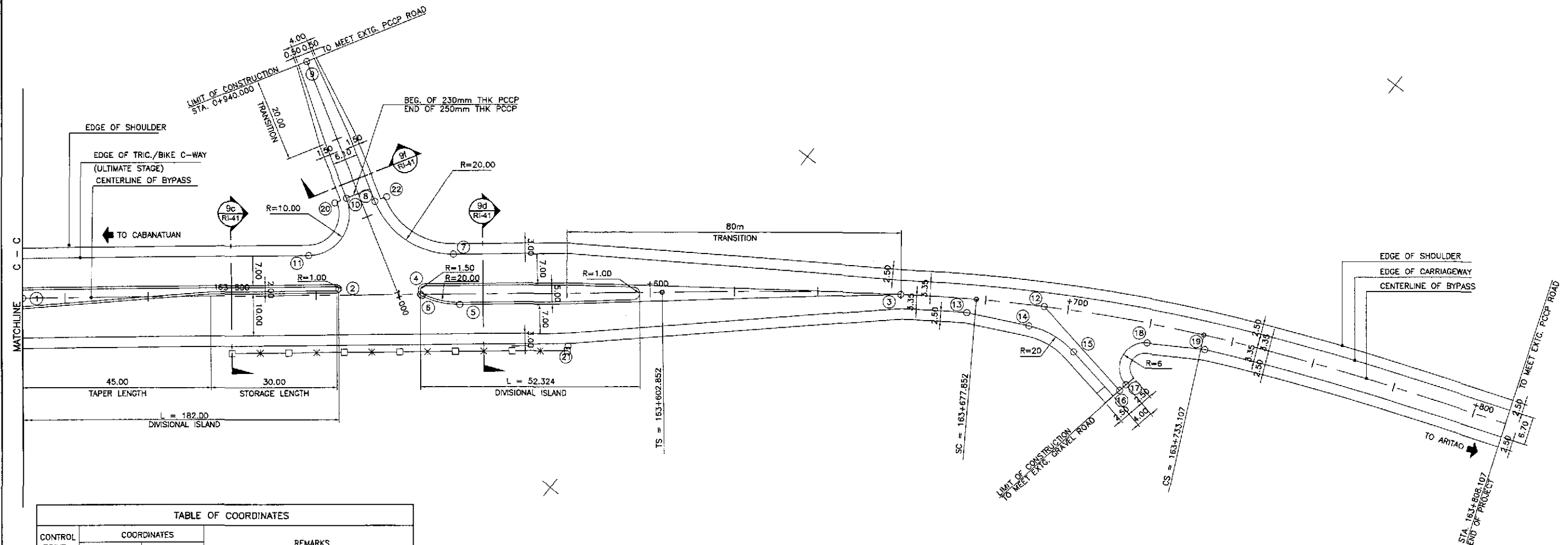


TABLE OF COORDINATES

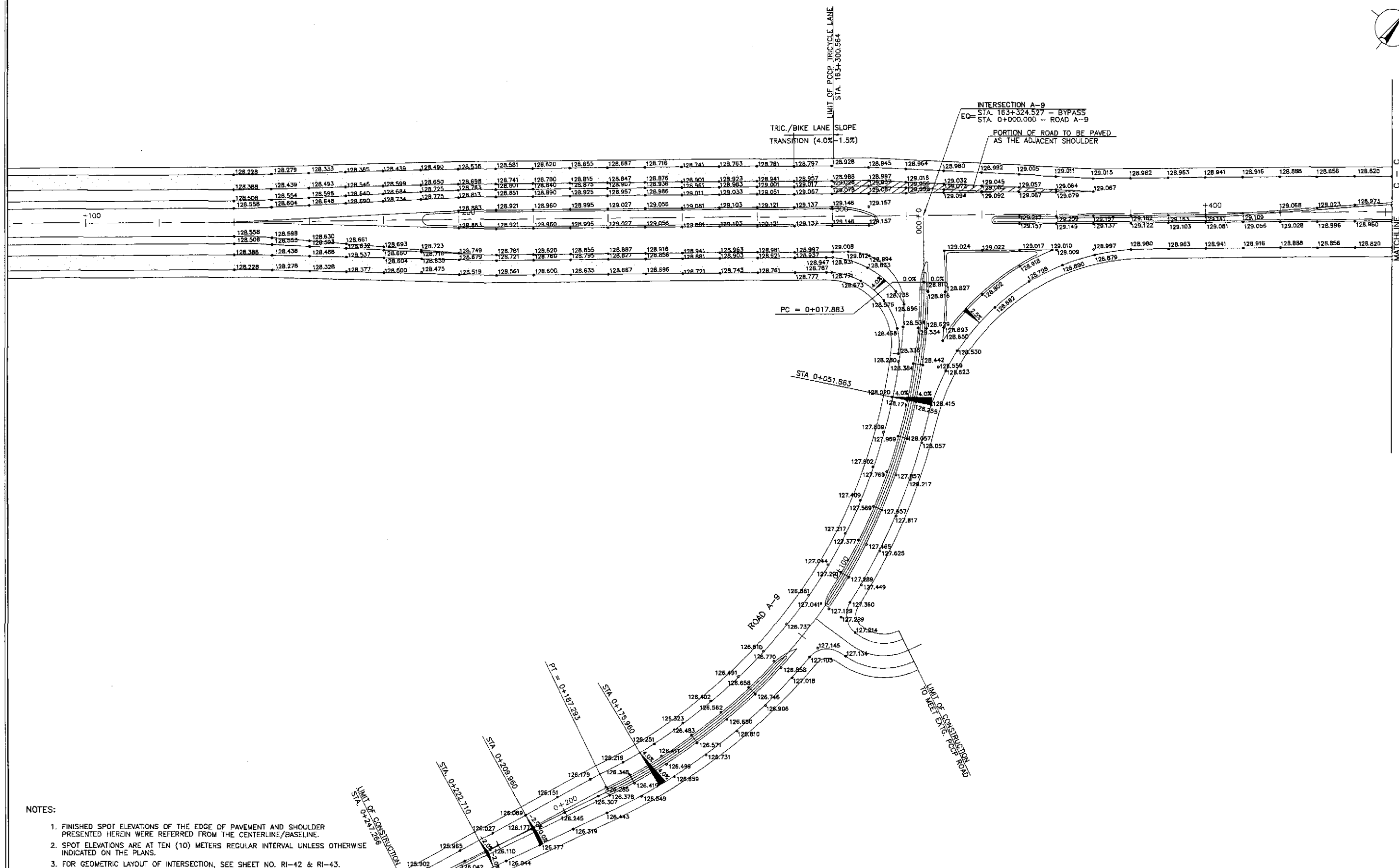
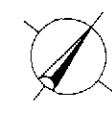
| CONTROL POINT | COORDINATES | | REMARKS |
|---------------|-------------|------------|--|
| | NORTHING | EASTING | |
| 1 | 1749858.186 | 500672.995 | STA. 163+450.030, BEG./END OF TAPER LENGTH |
| 2 | 1749906.347 | 500731.159 | STA. 163+525.530, END OF ISLAND NOSING |
| 3 | 1749988.037 | 500837.982 | STA. 163+660.000, BEG. OF TRANSITION |
| 4 | 1749918.347 | 500746.682 | STA. 163+545.148, END OF ISLAND NOSING |
| 5 | 1749921.237 | 500756.315 | STA. 163+554.487, BEG. OF TURNING RADIUS 20 |
| 6 | 1749917.301 | 500747.890 | END OF TURNING RADIUS 20 |
| 7 | 1749929.778 | 500747.775 | STA. 163+553.118, BEG. OF RADIUS 20 |
| 8 | 1749928.179 | 500725.214 | END OF RADIUS 20 |
| 9 | 1749944.401 | 500691.508 | LIMIT OF CONSTRUCTION |
| 10 | 1749924.552 | 500719.340 | BEG. OF RADIUS 10 |
| 11 | 1749908.097 | 500720.506 | STA. 163+518.280, END OF RADIUS 10 |
| 12 | 1750006.782 | 500865.666 | STA. 163+694.276, C.L. INTERSECTION OF ACCESS ROAD |
| 13 | 1749994.205 | 500852.908 | STA. 163+675.861, BEG. OF TAPER |
| 14 | 1750000.852 | 500866.535 | STA. 163+691.090, BEG. OF RADIUS 20 |
| 15 | 1750002.559 | 500878.844 | END OF RADIUS 20 |
| 16 | 1750002.024 | 500893.118 | LIMIT OF CONSTRUCTION |
| 17 | 1750003.992 | 500893.472 | BEG. OF RADIUS 6 |
| 18 | 1750014.993 | 500891.366 | STA. 163+720.024, END OF RADIUS 6 |
| 19 | 1750022.360 | 500903.216 | STA. 163+734.049, END OF TAPER |
| 20 | 1749921.955 | 500717.818 | LIMIT OF SHOULDER |
| 21 | 1749929.699 | 500782.223 | STA. 163+580.033, LIMIT OF SHOULDER |
| 22 | 1749930.776 | 500726.737 | LIMIT OF SHOULDER |

1
RI-43

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-9a (STA. 163+539.810) - INITIAL STAGE

- NOTES:
1. FOR DETAIL OF CURVE DATA SEE SHT. NO. RI-40.
2. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.

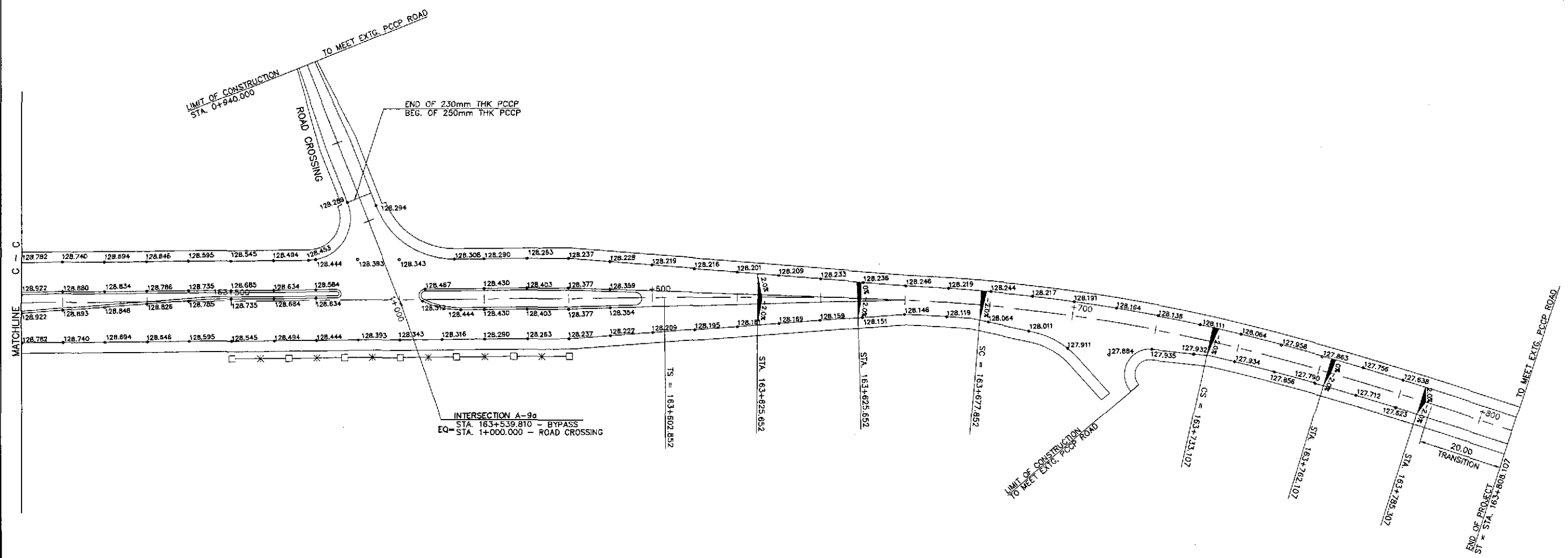
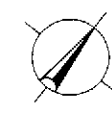
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|--|------|--|---------------------------------------|--|--|---|---------------------------------------|-------------------------------------|---|----------------------|
| JICA JAPAN INTERNATIONAL COOPERATION AGENCY | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) | | SCALE : AS SHOWN FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-9a (INITIAL STAGE) | SHEET NO. : RI-43 |
| DESIGNED | DATE | SIGNATURE | SUBMITTED BY | | REVIEWED BY | | APPROVED BY | | | |
| CHECKED | DATE | SIGNATURE | SUBMITTED BY | | REVIEWED BY | | APPROVED BY | | | |
| SUBMITTED | DATE | SIGNATURE | SUBMITTED BY | | REVIEWED BY | | APPROVED BY | | | |
| | | | DANILO C. TRAJANO Project Director | | JOSEFINA M. ALACAR Chief, Highways Division | | GILBERTO S. REYES OIC, Director IV | | MANUEL M. BONDAN Undersecretary | |
| | | | SIMEON A. DATUMANONG Secretary | | | | | | | |



- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-42 & RI-43.
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD A-9 SEE SHEET NO. RI-40.

A
PAVING PLAN
INTERSECTION A-9 (STA. 163+324.527) - INITIAL STAGE
 SCALE 1:500

| | | | | | | | | | | | |
|-----------|----------|-----------|--|--|---------------------------------------|-------------------------------------|-----------------------------------|--|---------------------------|---|--------------|
| | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : | |
| | DESIGNED | 9/2/02 | | BUREAU OF DESIGN | | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | 1:500 FULL SIZE A1 | INTERSECTION DETAIL PAVING PLAN INTERSECTION A-9 (INITIAL STAGE) | RI-44 |
| | CHECKED | 9/4/02 | | Submitted By: | Reviewed By: | Recommended By: | Recommended By: | | | | |
| SUBMITTED | 9/6/02 | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BONGAON Undersecretary | SIMEON A. DATUMANONG Secretary | | | | |



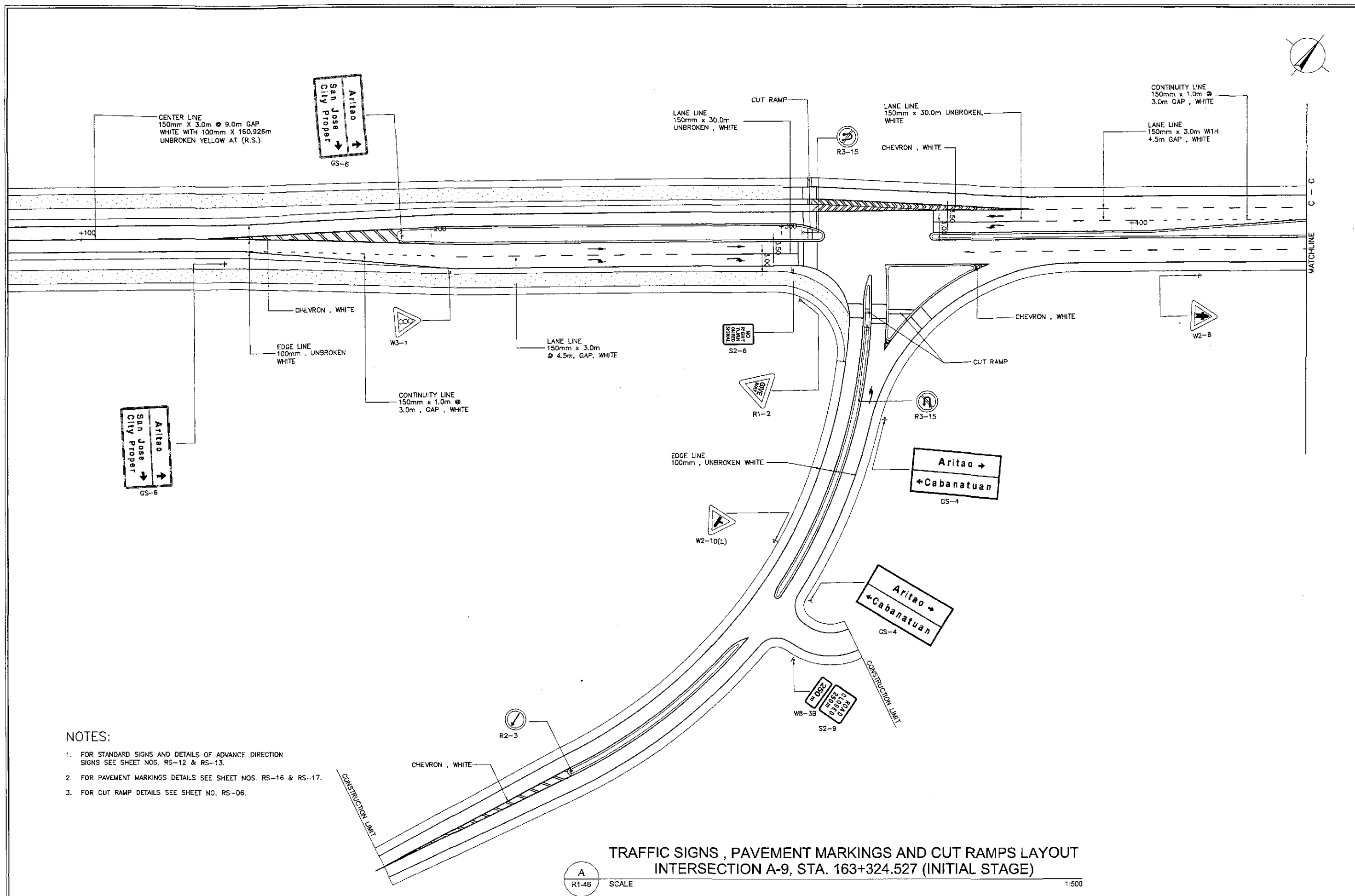
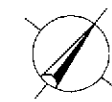
- NOTES:
1. FINISHED SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC LAYOUT OF INTERSECTION, SEE SHEET NO. RI-42 & RI-43.
 4. FOR DETAILED PLAN, PROFILE AND SUPERELEVATION DIAGRAM OF ROAD CROSSING, SEE SHEET NO. RI-40.

A
RI-45

PAVING PLAN
INTERSECTION A-9a (STA. 163+539.810) - INITIAL STAGE

1:500

| | | | | | | | | | | |
|--|-----------|--------|-------------|--|--|--|---|--|--|---------------------------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : 1:500 FULL SIZE A1 | SHEET CONTENTS : INTERSECTION DETAIL PAVING PLAN INTERSECTION A-9a (INITIAL STAGE) | SHEET NO. : RI-45 |
| | CHECKED | 7/4/02 | S. ROSE | PUHL - PMO Submitted By: | BUREAU OF DESIGN Reviewed By: | OFFICE OF THE SECRETARY Recommended By: | | | | |
| | SUBMITTED | 7/6/02 | Mr. Kishida | DANILLO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | | | | |



- NOTES:
1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
 2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
 3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

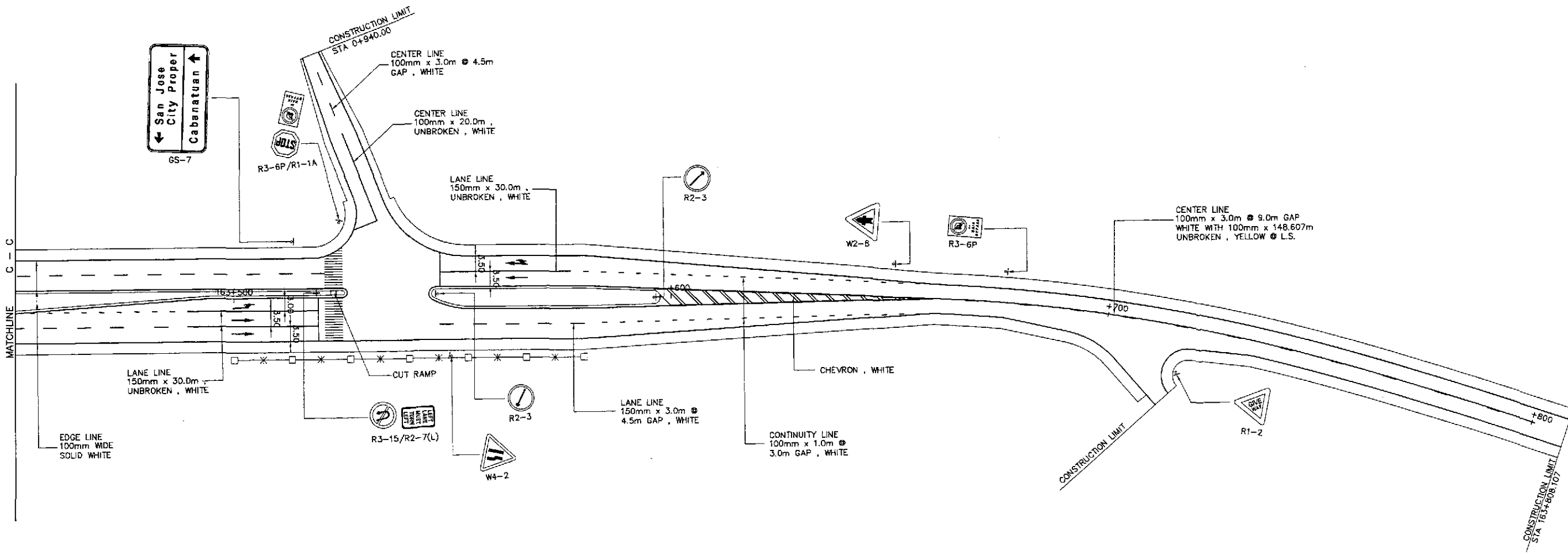
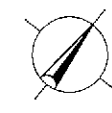
TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT
 INTERSECTION A-9, STA. 163+324.527 (INITIAL STAGE)

A
R1-46

SCALE

1:500

| | | | | | | | | | | |
|--|-----------|--------|-----------|---|---|--|--|--------------|--|--------------|
| | DESIGNED | DATE | SIGNATURE | <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> | PROJECT AND LOCATION : | | | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/4/02 | S. JOSE | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinaridel, Cabanatuan and San Jose Bypasses) | | | 1:500 | TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT - 1 OF 2 INTERSECTION A-9 (INITIAL STAGE) | R1-46 |
| | SUBMITTED | 9/6/02 | M. KANDI | | SAN JOSE BYPASS | | | FULL SIZE A1 | | |
| Submitted By: DANILLO C. TRILANG, Project Director Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BONDAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary | | | | | | | | | | |



NOTES:

1. FOR STANDARD SIGNS AND DETAILS OF ADVANCE DIRECTION SIGNS SEE SHEET NOS. RS-12 & RS-13.
2. FOR PAVEMENT MARKINGS DETAILS SEE SHEET NOS. RS-16 & RS-17.
3. FOR CUT RAMP DETAILS SEE SHEET NO. RS-06.

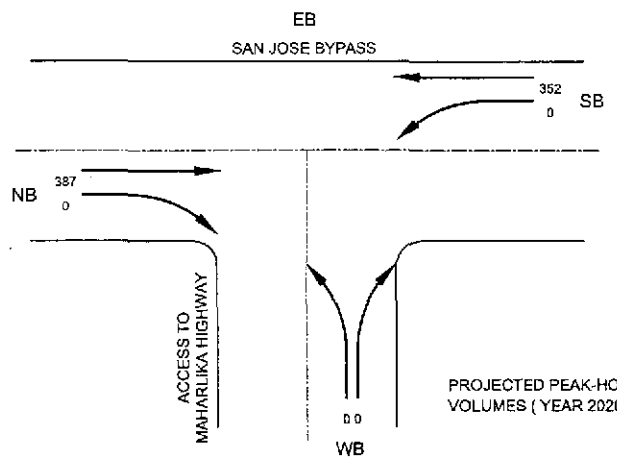
**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT
INTERSECTION A-9a, STA. 163+539.810 (INITIAL STAGE)**

A
R1-47

SCALE

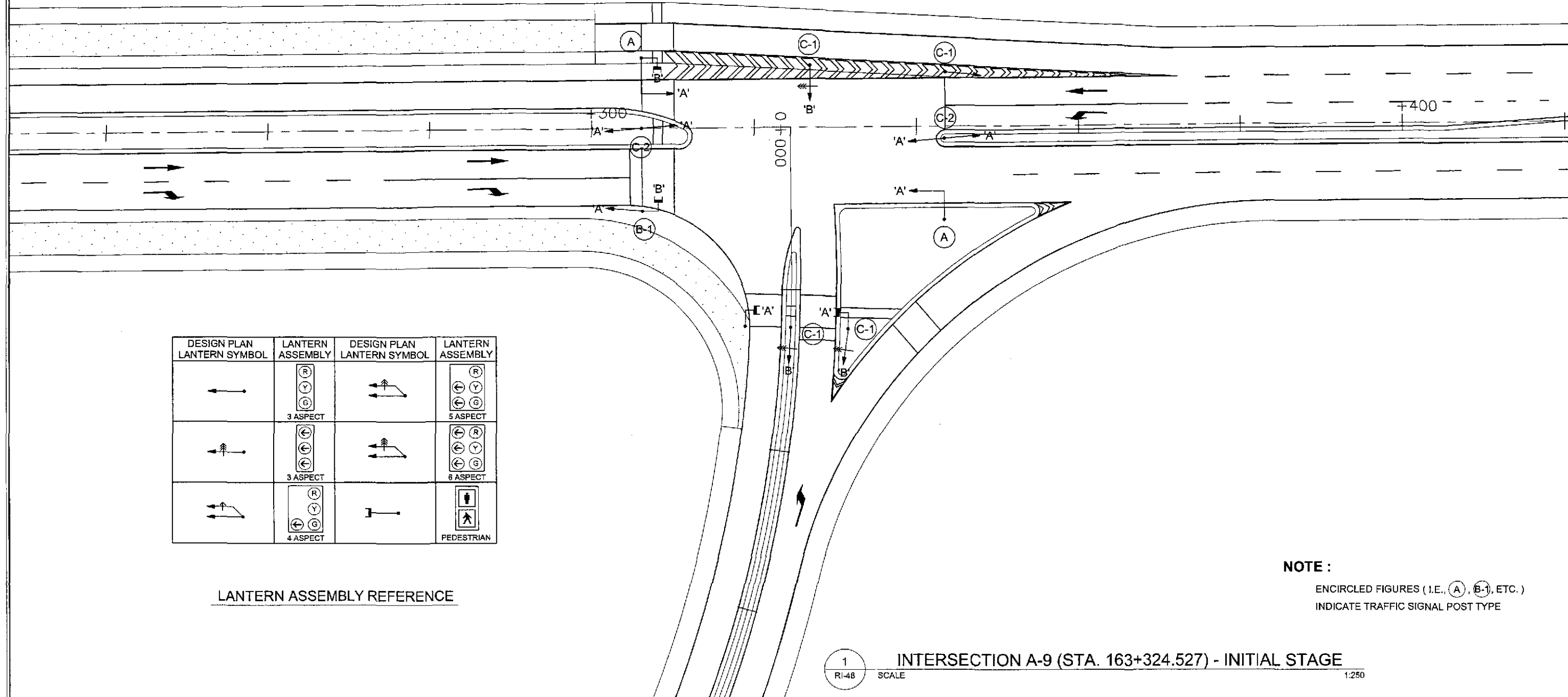
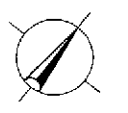
1:500

| | | | | | | | | | | | | |
|--|-----------|--------|------------------|--|--|--|---------------------------------------|---|--|--|---------------------------------|------------------------------------|
| | DESIGNED | DATE | SIGNATURE | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : 1:500 FULL SIZE A1 | SHEET CONTENTS : TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMP LAYOUT - 2 OF 2 INTERSECTION A-9a (INITIAL STAGE) | SHEET NO. : R1-47 | |
| | CHECKED | 9/4/02 | <i>S. LUNA</i> | | Submitted By: | Reviewed By: | Recommended By: | | | | | Office of the Secretary |
| | SUBMITTED | 9/6/02 | <i>M. BONDAN</i> | | DANILDO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES D/C, Director IV | | | | | MANUEL M. BONDAN Undersecretary |



SIGNAL PHASING

| | (A) | (B) |
|----------------|------|-----|
| | | |
| G: | 48.0 | 4.0 |
| Y: | 2.0 | 2.0 |
| R: | 2.0 | 2.0 |
| C = 60.0 secs. | | |



| DESIGN PLAN LANTERN SYMBOL | LANTERN ASSEMBLY | DESIGN PLAN LANTERN SYMBOL | LANTERN ASSEMBLY |
|----------------------------|------------------|----------------------------|------------------|
| | 3 ASPECT | | 5 ASPECT |
| | 3 ASPECT | | 6 ASPECT |
| | 4 ASPECT | | PEDESTRIAN |

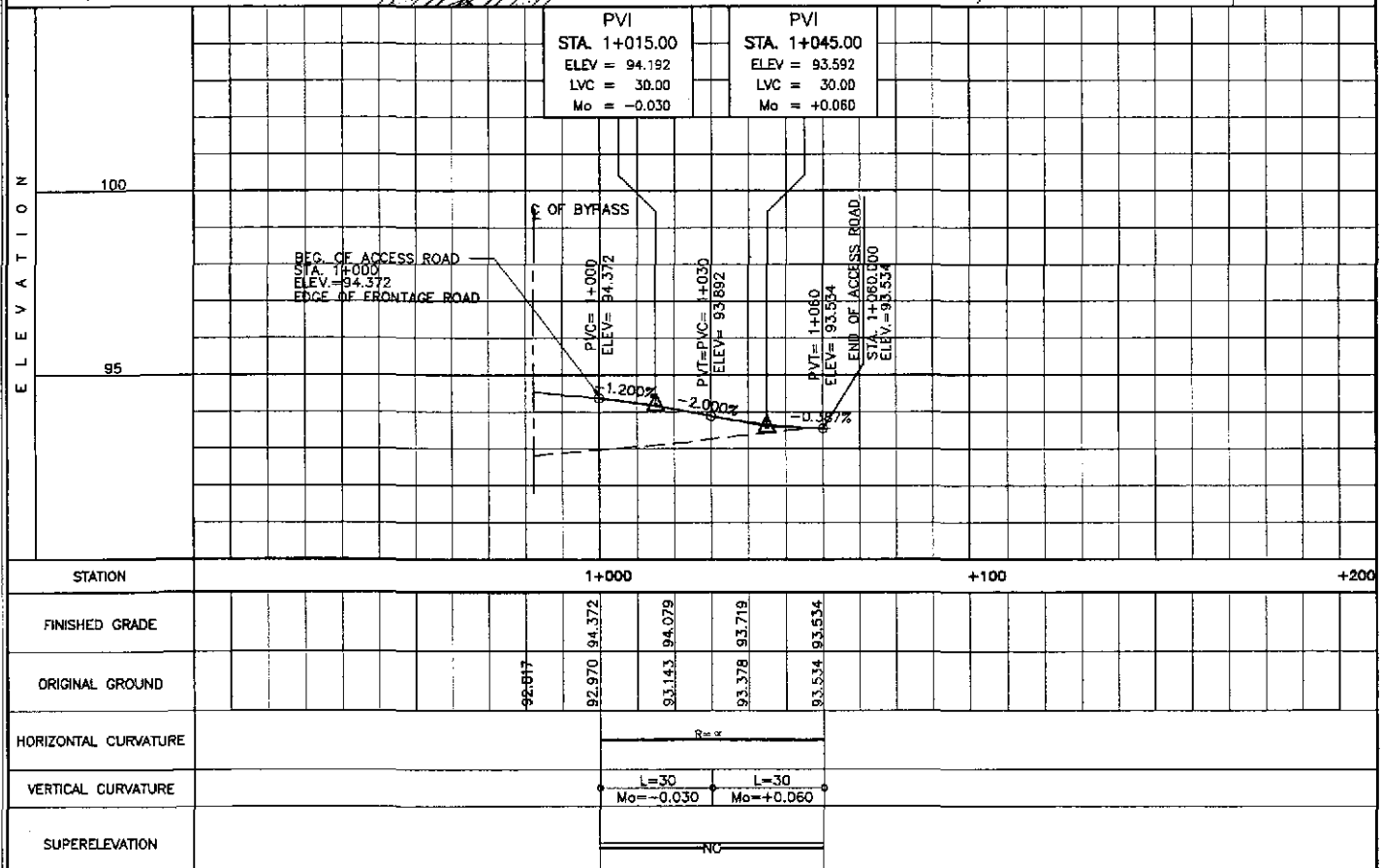
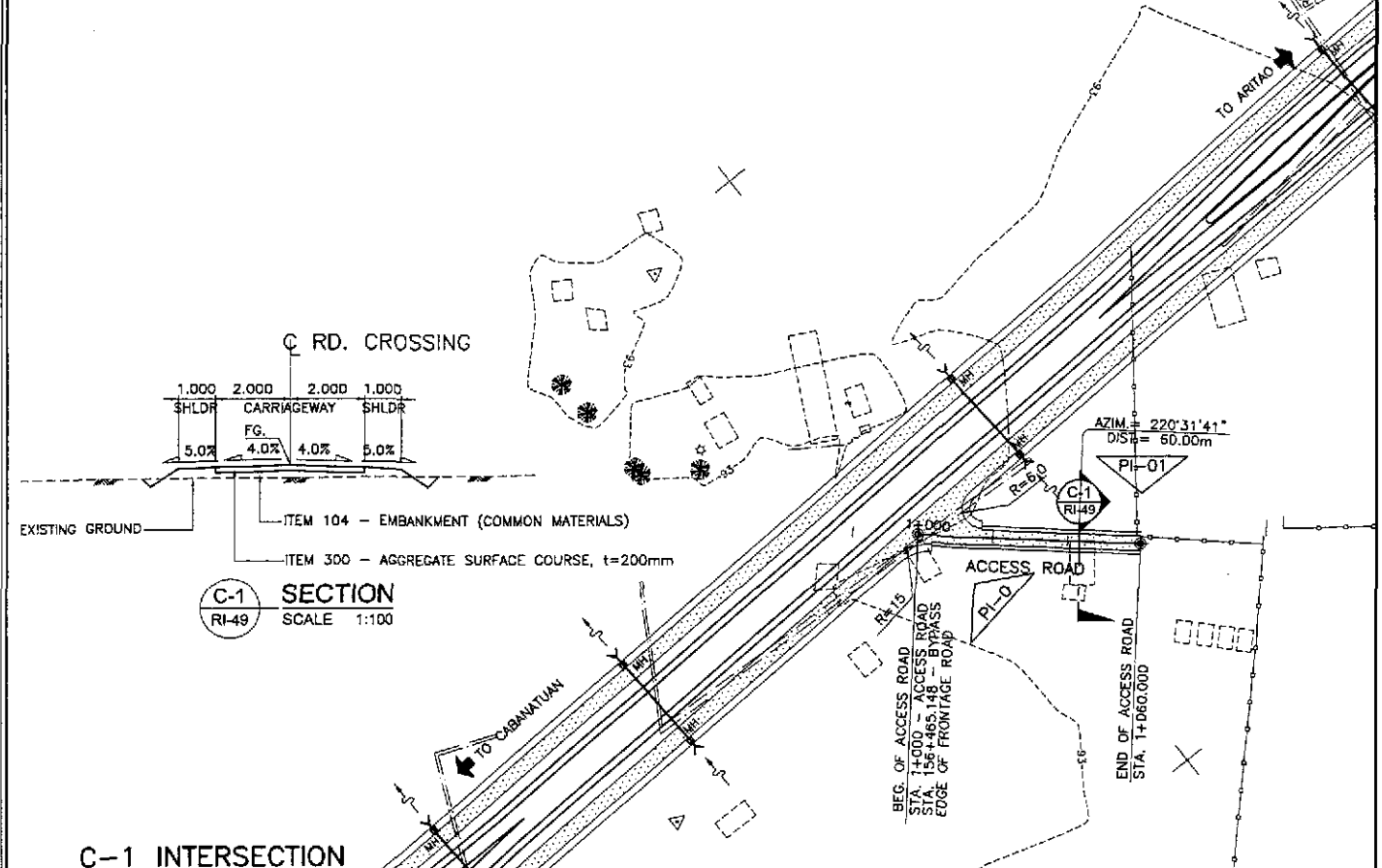
LANTERN ASSEMBLY REFERENCE

NOTE :
ENCIRCLED FIGURES (I.E., A, B-1, ETC.)
INDICATE TRAFFIC SIGNAL POST TYPE

1 INTERSECTION A-9 (STA. 163+324.527) - INITIAL STAGE
RI-48 SCALE 1:250

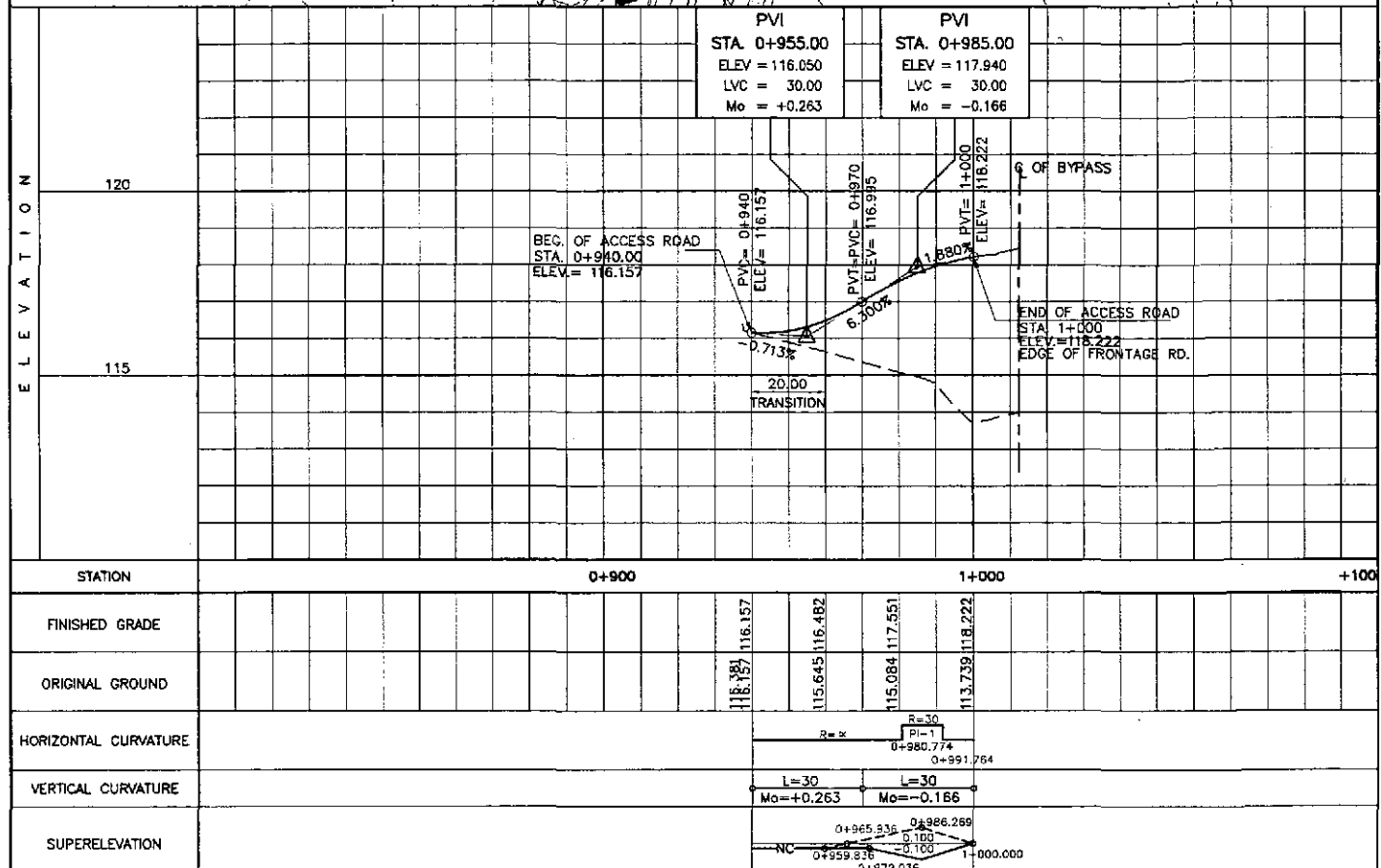
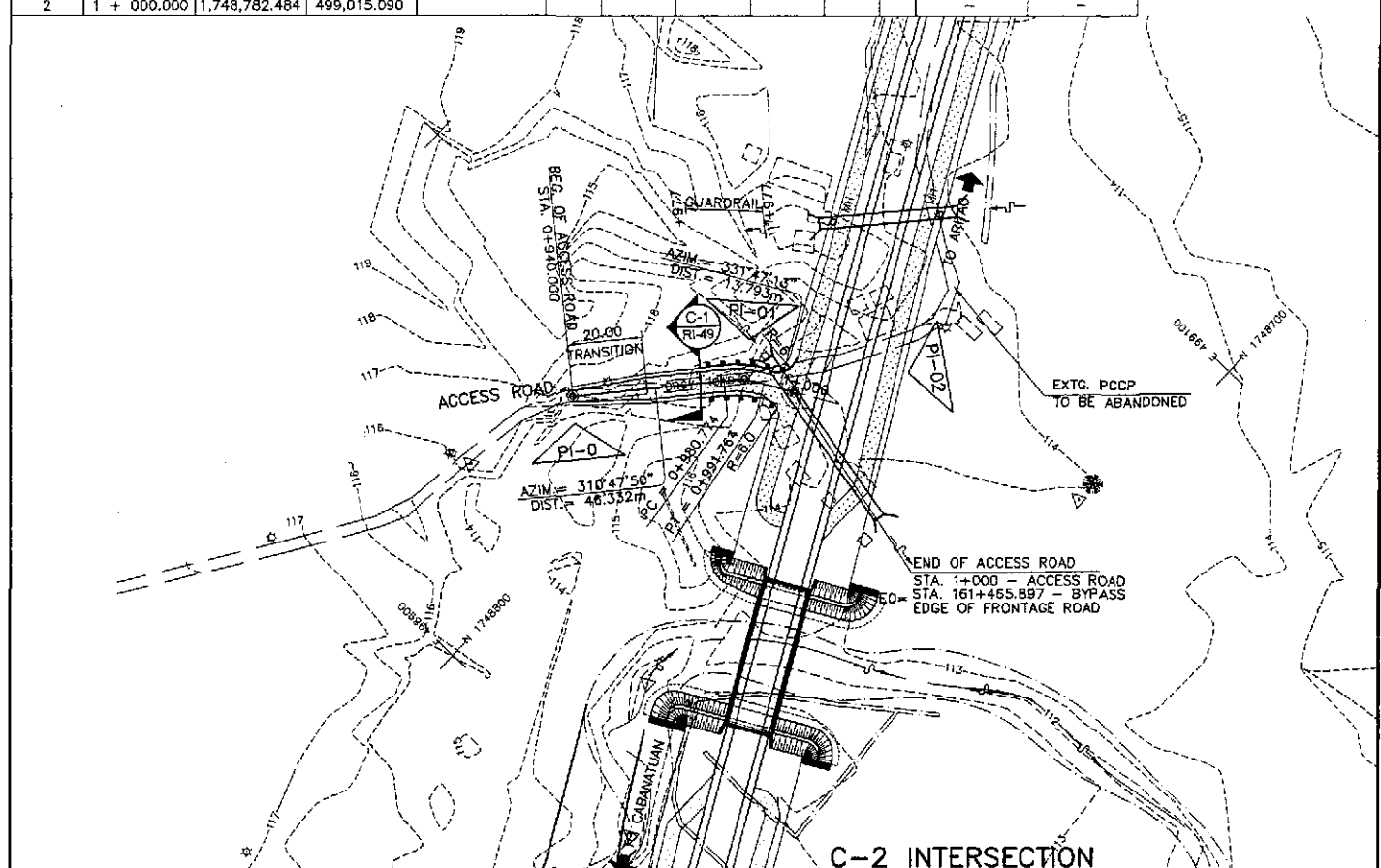
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|--|-----------|--------|---------------------------------------|--|---------------------------------------|------------------------------------|--|--------------|---|-------------|
| | DESIGNED | DATE | SIGNATURE | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : | SCALE : | SHEET CONTENTS : | SHEET NO. : |
| | CHECKED | 9/4/02 | S. JOSE | BUREAU OF DESIGN | | | THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) | AS SHOWN | TRAFFIC SIGNAL LIGHT LAYOUT INTERSECTION A-9 (INITIAL) | RI-48 |
| | SUBMITTED | 7/6/02 | M. Renda | Submitted By: | Reviewed By: | Recommended By: | SAN JOSE BYPASS | FULL SIZE A1 | | |
| | | | DANILO C. TRAJANO Project Director | JOSEFINA M. ALAGAR Chief, Highways Division | GILBERTO S. REYES OIC, Director IV | MANUEL M. BONGAN Undersecretary | | | | |
| | | | | | | SIMEON A. DATUMANDING Secretary | | | | |

| TABLE OF COORDINATES | | | | | |
|----------------------|-------------|---------------|-------------|---------|----|
| PI NO. | STATION | COORDINATES | | STATION | |
| | | NORTHING | EASTING | PC | PT |
| 0 | 1 + 000.000 | 1,745,380.683 | 496,206.653 | - | - |
| 1 | 1 + 060.000 | 1,745,426.288 | 496,245.852 | - | - |



| | | | | | |
|----------------------|--------|----------------|--------|----------------|--------|
| STATION | 1+000 | 1+050 | 1+100 | 1+150 | 1+200 |
| FINISHED GRADE | | 94.372 | 94.079 | 93.719 | 93.534 |
| ORIGINAL GROUND | 92.617 | 92.970 | 93.143 | 93.378 | 93.534 |
| HORIZONTAL CURVATURE | | R=∞ | | | |
| VERTICAL CURVATURE | | L=30 Mo=-0.030 | | L=30 Mo=+0.060 | |
| SUPERELEVATION | | NO | | | |

| CURVE ELEMENTS | | | | | | | | | | | | |
|----------------|-------------|---------------|-------------|-----------|----|-------|--------|-------|------|---------|-----------|-----------|
| PI NO. | STATION | COORDINATES | | Δ | R | T | Lc | E | e% | V (kph) | STATION | |
| | | NORTHING | EASTING | | | | | | | | PC | PT |
| 0 | 0 + 940.000 | 1,748,824.911 | 498,973.495 | - | - | - | - | - | - | - | - | - |
| 1 | 0 + 986.332 | 1,748,794.639 | 499,008.569 | 20°59'23" | 30 | 5.557 | 10.990 | 0.510 | 5.00 | 30 | 0+980.774 | 0+991.764 |
| 2 | 1 + 000.000 | 1,748,782.484 | 499,015.090 | - | - | - | - | - | - | - | - | - |



| | | | | | | |
|----------------------|---------|----------------|---------|----------------|---------|---------|
| STATION | 0+900 | 0+950 | 0+1000 | 1+000 | 1+050 | 1+100 |
| FINISHED GRADE | | 116.157 | 116.482 | 117.551 | 118.222 | |
| ORIGINAL GROUND | 116.157 | 116.157 | 115.645 | 115.084 | 113.739 | 118.222 |
| HORIZONTAL CURVATURE | | R=∞ | | R=30 | R=∞ | |
| VERTICAL CURVATURE | | L=30 Mo=+0.263 | | L=30 Mo=-0.166 | | |
| SUPERELEVATION | | NC | | | | |

| | | | | | | | | | | | | |
|--|-----------|--------|------------------|--------------------|--|--|--------------------------|-------------------|--|------------------|---|----------------------|
| | DESIGNED | 9/2/02 | SIGNATURE | <i>[Signature]</i> | | REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS | | | PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS | SCALE : | SHEET CONTENTS : PLAN AND PROFILE INTERSECTION C-1 & C-2 ACCESS ROAD (STA 1+000.000 - STA 1+060.000) ACCESS ROAD (STA 0+940.000 - STA 1+000.000) | SHEET NO. : |
| | CHECKED | 9/4/02 | COSE | <i>[Signature]</i> | | Submitted By: | Reviewed By: | Recommended By: | | Recommended By: | | Approved By: |
| | SUBMITTED | 9/6/02 | MANUEL M. BONDAN | MANUEL M. BONDAN | | DANILO C. TRAJANO | JOSEFINA M. ALAGAR | GILBERTO S. REYES | | MANUEL M. BONDAN | | SIMEON A. DATUMANONG |
| | | | TEAM LEADER | Undersecretary | | Project Director | Chief, Highways Division | Dir. Director N | | Undersecretary | | Secretary |