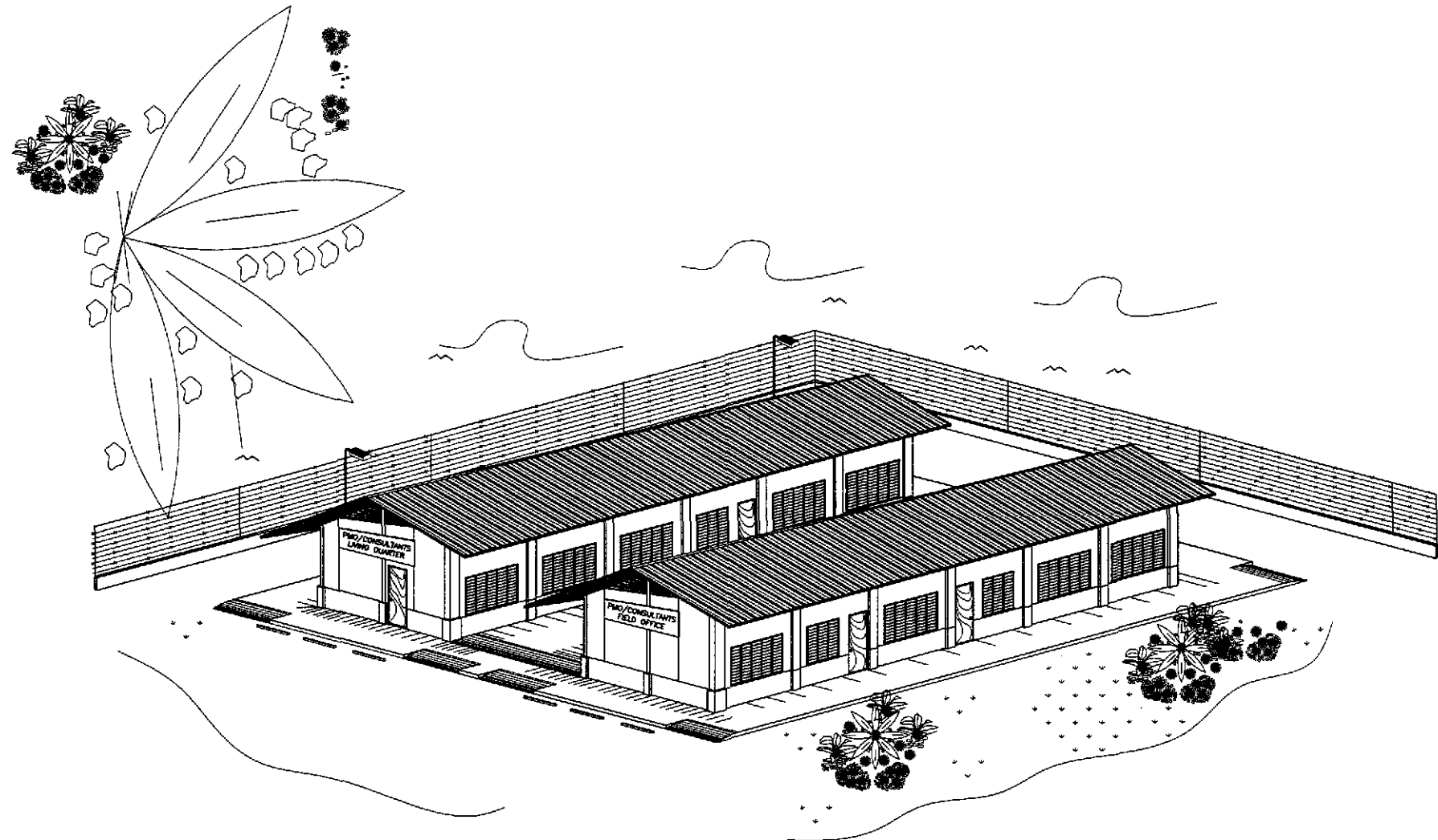


**ENGR'S FIELD OFFICE & LIVING QUARTERS**



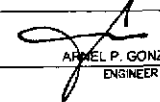
PERSPECTIVE

**GENERAL NOTES :**

IT IS THE INTENTION OF THE DPWH THAT AFTER COMPLETION OF THE PROJECTS ALL PRE-FABRICATED METAL FIELD OFFICES WITH LABORATORY AND ENGINEER'S QUARTERS BUILDINGS BE DONATED TO THE NEAREST PUBLIC SCHOOL. THESE AFOREMENTIONED BUILDINGS SHOULD THEREFORE BE LOCATED WITHIN A PUBLIC SCHOOL COMPOUND OR ON A GOVERNMENT LOT THAT COULD BE EASILY ACQUIRED BY THE DEPARTMENT OF EDUCATION. FOR NEW SCHOOL SITE, IF NONE IS AVAILABLE, THEN THE PRE-FABRICATED METAL COMPONENTS SHALL BE DISMANTLED AFTER COMPLETION OF THE PROJECT FOR DONATION TO THE NEAREST PUBLIC SCHOOL AUTHORITIES OR TO THE LOCAL GOVERNMENT UNIT WHERE SAID PROJECT IS LOCATED.

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**ARNEL P. GONZALES**  
 ENGINEER  
 PTR. NO. 5846340 P.R.C. NO. 53457  
 ISSUED ON 04/26/2002 T.I.N. 138-062-882  
 ISSUED AT SAN JUAN, M.M.

  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 KATAHIRA & ENGINEERS  
 YEO YACHIYO ENGINEERING CO., LTD.

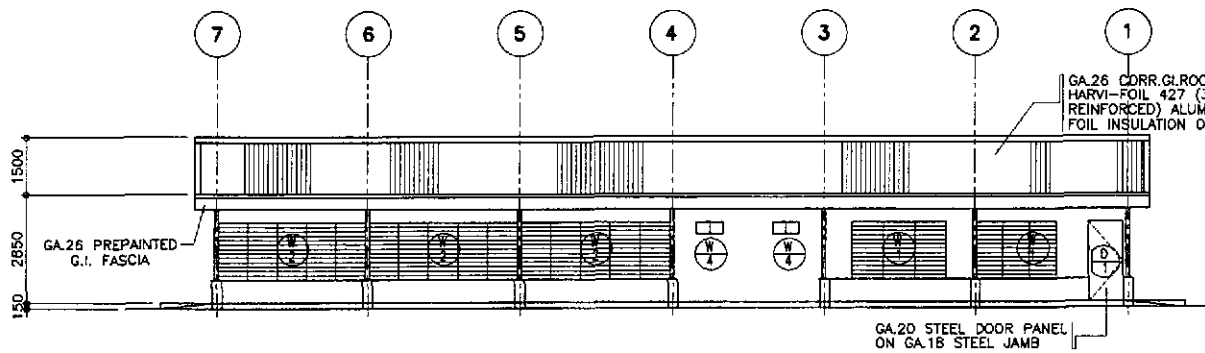
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DESIGNED	10/12/02	AS P. GONZALES		OFFICE OF THE SECRETARY	
CHECKED	10/17/02	AS P. GONZALES		OFFICE OF THE SECRETARY	
SUBMITTED	10/21/02	AS P. GONZALES		OFFICE OF THE SECRETARY	
Submitted By:		Reviewed By:		Recommended By:	
DANILO C. TRAJANO Project Director		EMMANUEL P. CUNTAPAY Chief, Architectural Division		MANUEL M. BONDAN Undersecretary	

PROJECT AND LOCATION :  
 THE DETAILED DESIGN STUDY ON  
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 ALONG THE PAN-PHILIPPINE HIGHWAY  
 (Plaridel, Cabanatuan and San Jose Bypasses)  
 CABANATUAN BYPASS - CONTRACT PACKAGE IV

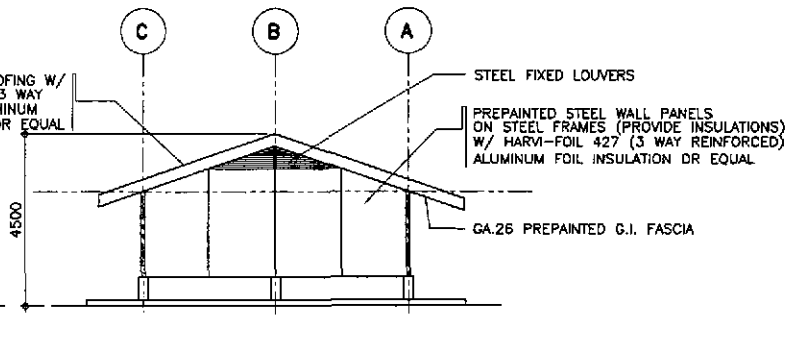
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SHEET CONTENTS :  
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 AND LIVING QUARTERS  
 PERSPECTIVE AND  
 TABLE OF CONTENTS

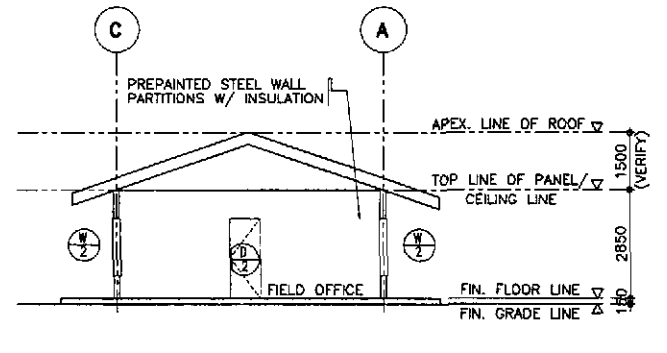
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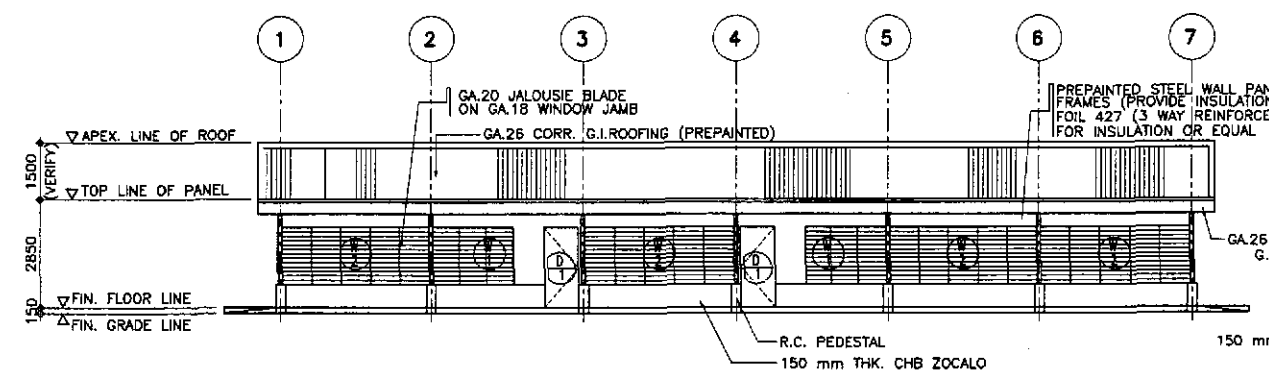
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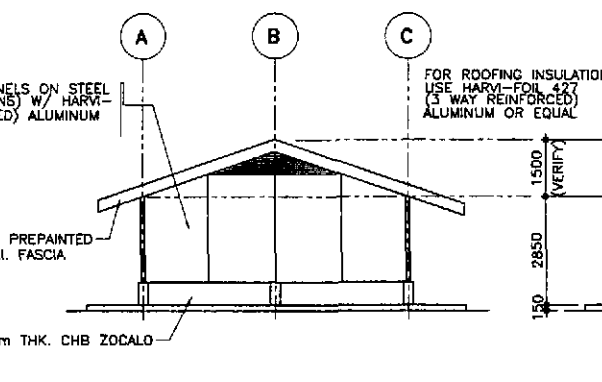
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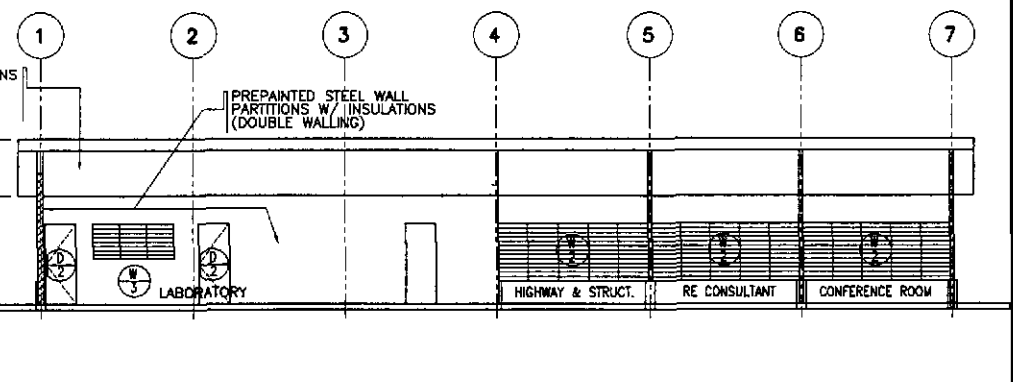
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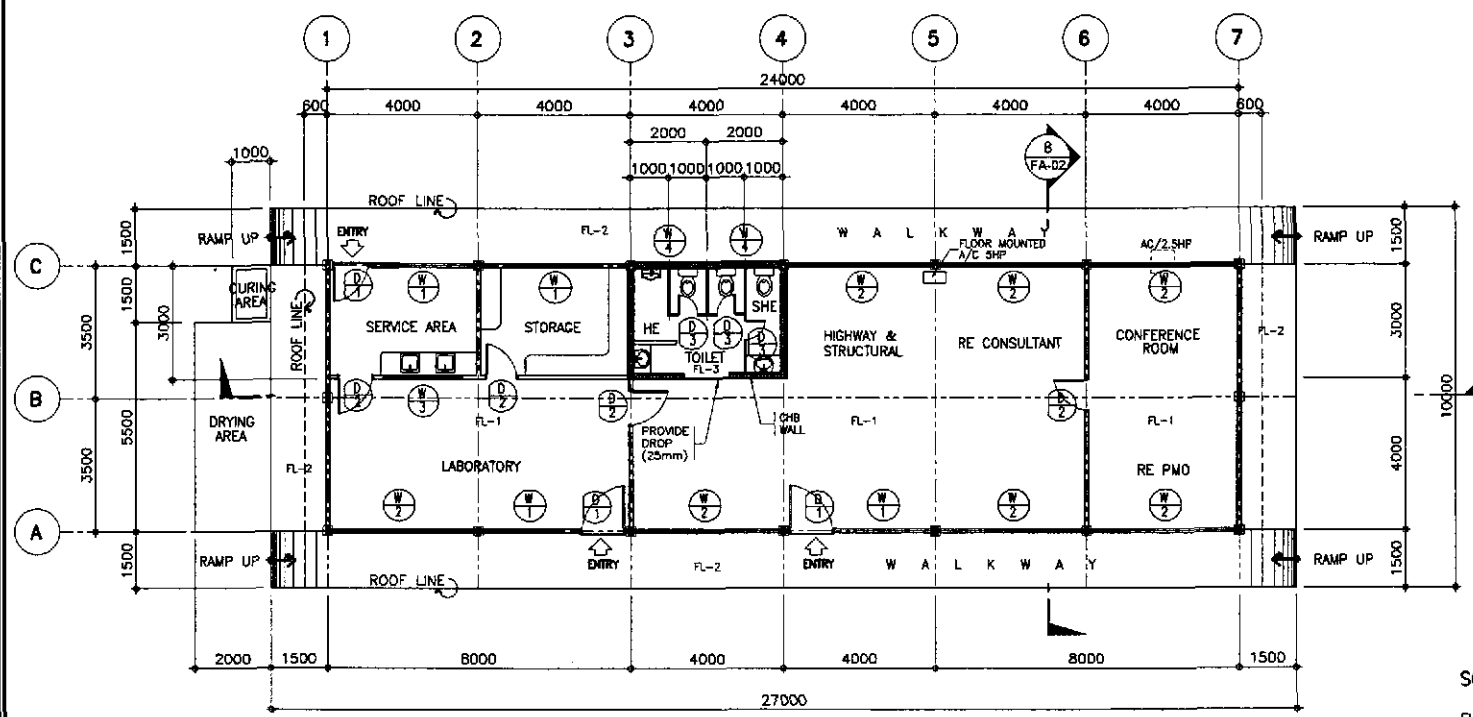
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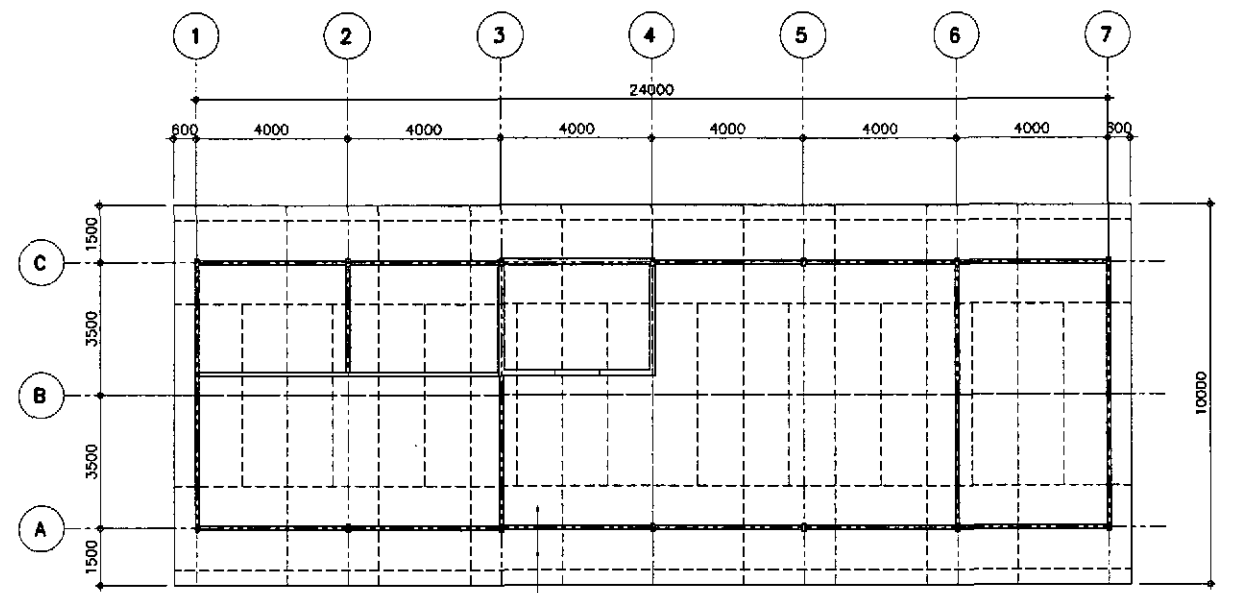
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7 LONGITUDINAL SECTION  
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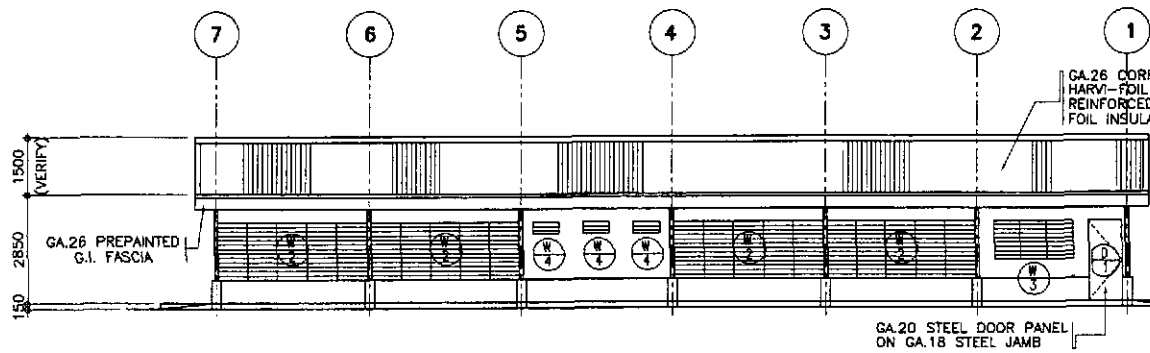
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SCHEDULE OF FLOOR FINISHES

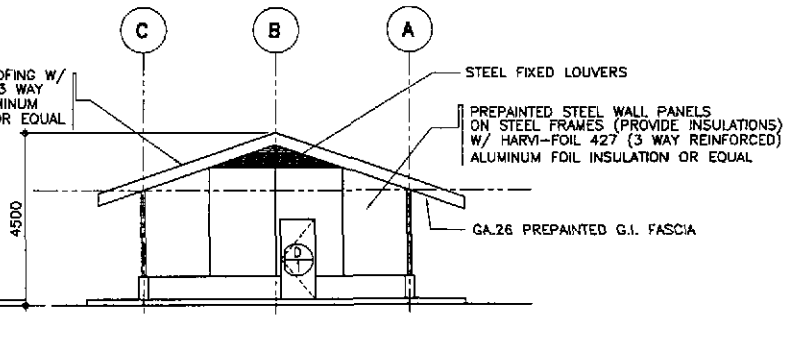
- FL-1 = PLAIN CEMENT FLOOR FINISH
- FL-2 = PLAIN CEMENT FLOOR FINISH WITH NON SKID CEMENT WITH GROOVE LINES
- FL-3 = UNGLAZED TILE FINISH, 200x200mm

APRIL P. GONZALES  
ENGINEER  
PTR. NO. 5848340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, N.M.

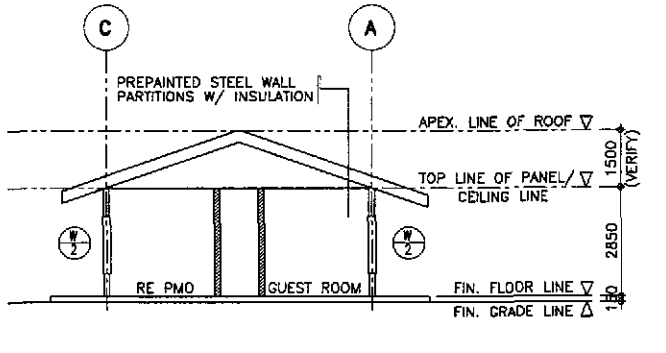
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	CHECKED	10/17/02	A.P. GONZALES		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pardel, Cabanatuan and San Jose Bypasses)			AS SHOWN	ENGR'S FIELD OFFICE / LABORATORY FLOOR PLAN, ELEVATIONS, CROSS-SECTIONS AND REFLECTED CEILING PLAN	FA-02
	SUBMITTED	10/21/02	A.P. GONZALES TEAM LEADER		CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
Submitted By: PUHL - PMO				BUREAU OF DESIGN			OFFICE OF THE SECRETARY			
Reviewed By: DANILLO C. TRAJANO Project Director				Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architectural Division			Recommended By: GILBERTO S. REYES OIC, Director IV			
				Recommended By: MANUEL M. BONDAN Undersecretary			Approved By: SIMON A. DATUMANONG Secretary			



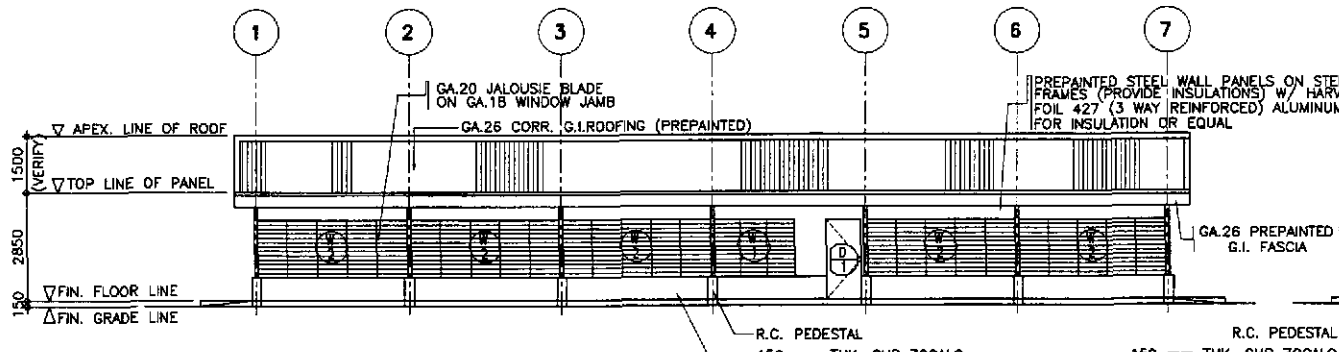
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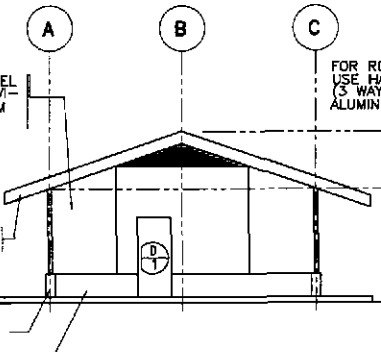
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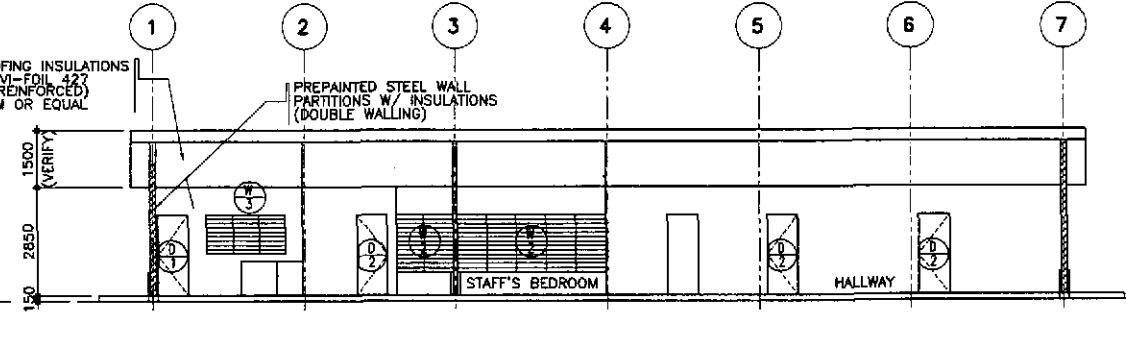
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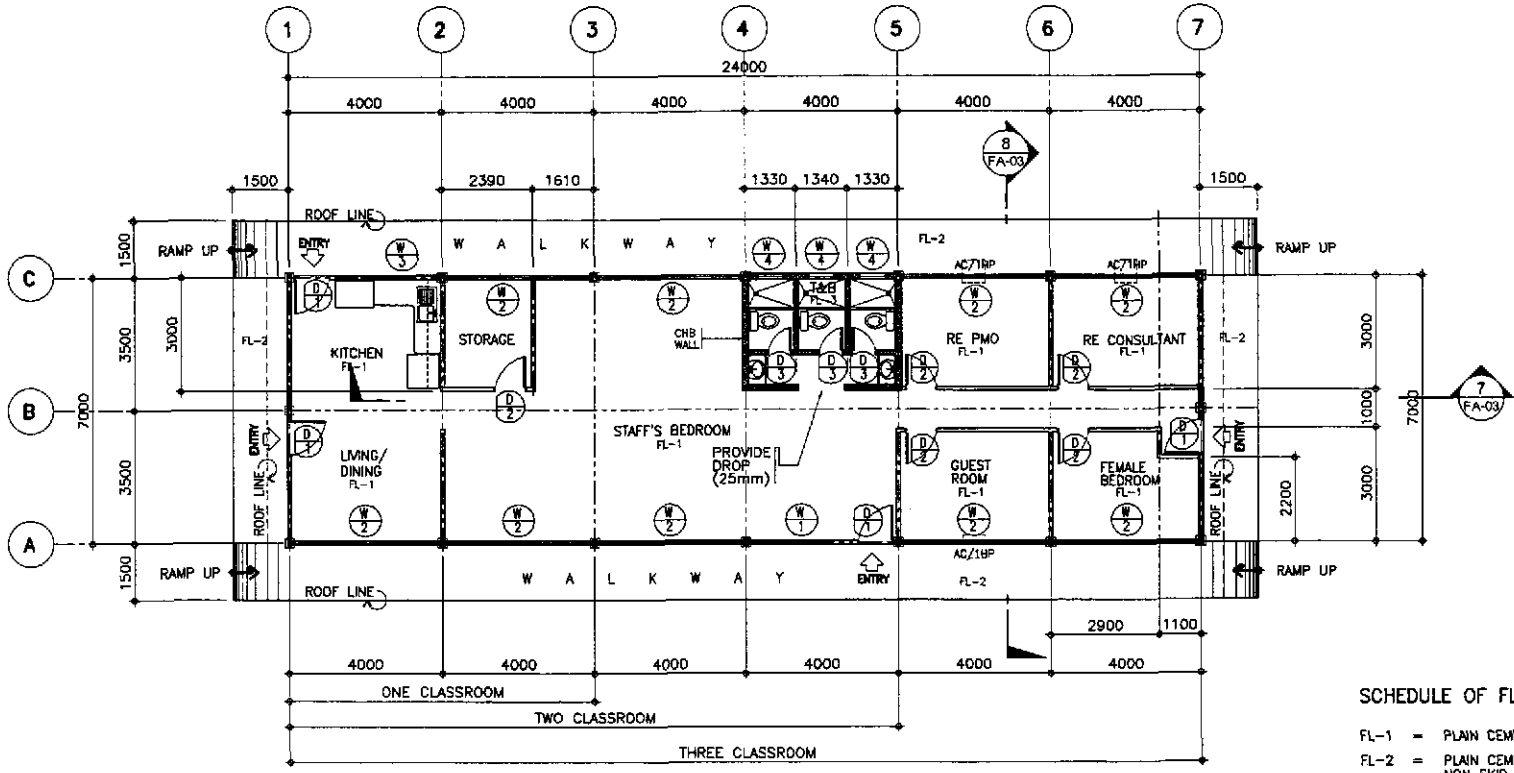
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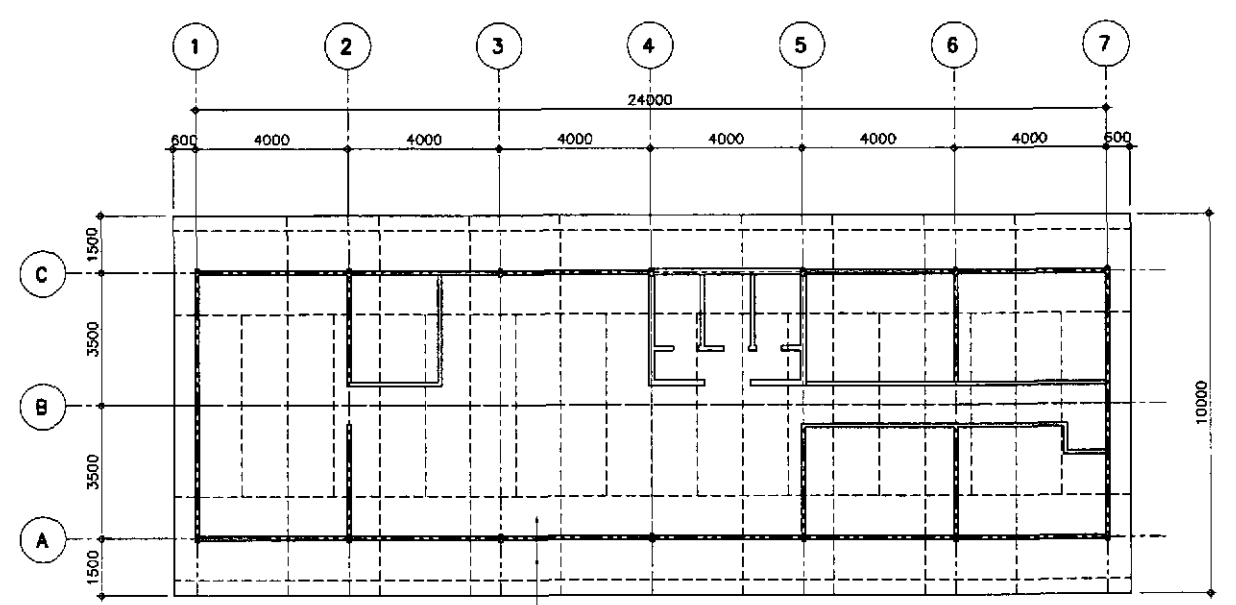
4 RIGHT SIDE ELEVATION  
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7 LONGITUDINAL SECTION  
FA-03 SCALE 1:100



1 FLOOR PLAN FOR ENGINEER'S LIVING QUARTER  
FA-03 SCALE 1:100



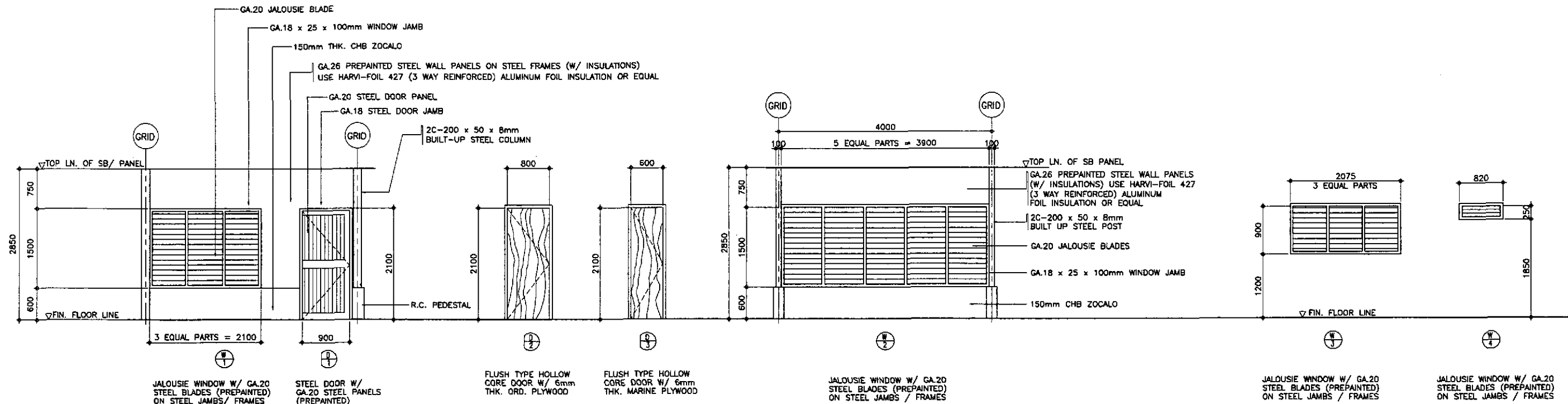
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SCHEDULE OF FLOOR FINISHES

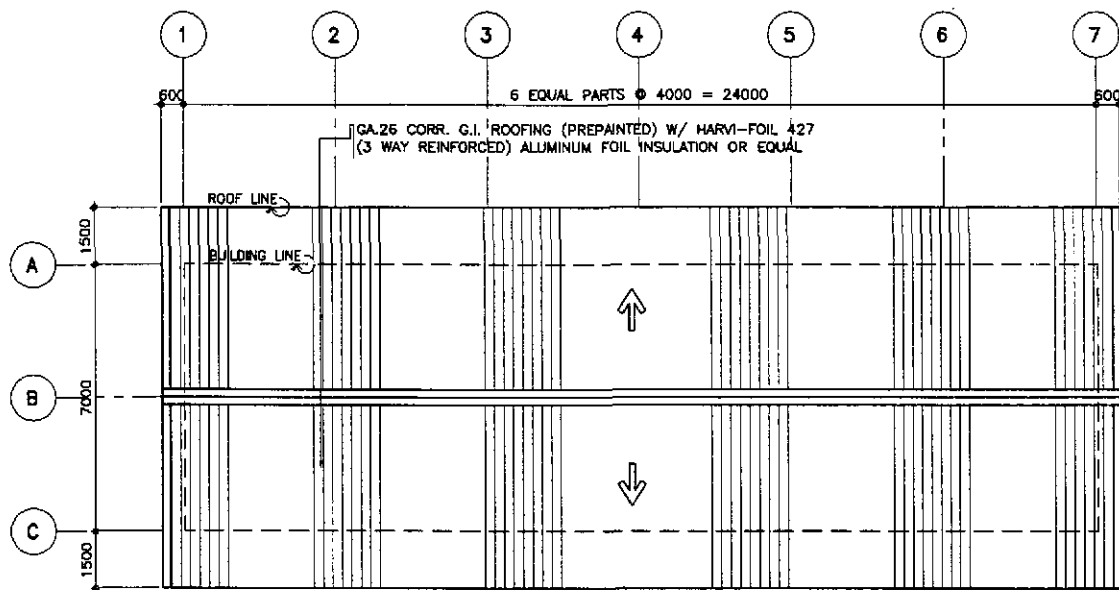
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ARNE P. GONZALES  
ENGINEER  
PTR. NO. 5846340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

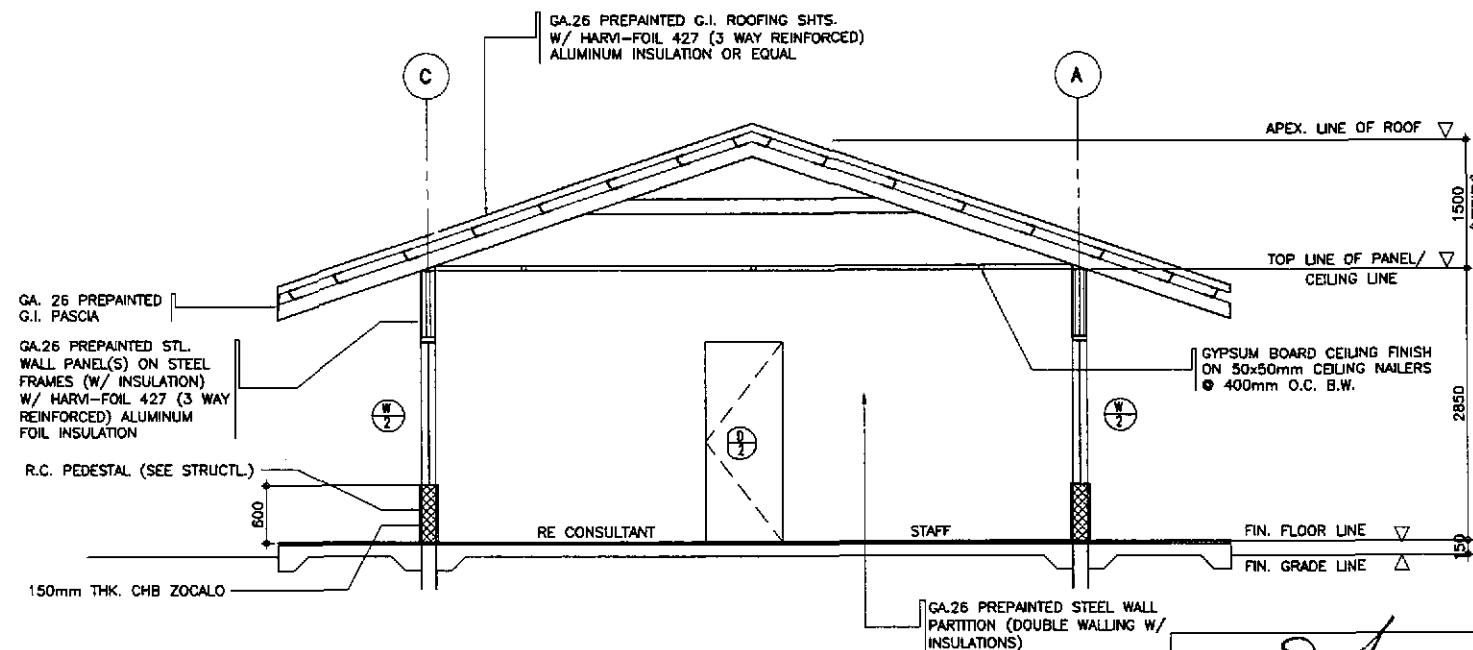
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	CHECKED	10/17/02	A. P. GONZALES		Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architectural Division	Recommended By: GILBERTO S. REYES OIC, Director IV				



3 FOR ENGINEER'S FIELD OFFICE  
 SCHEDULE OF DOORS & WINDOWS  
 FA-04 SCALE 1:40



1 ROOF PLAN  
 FA-04 SCALE 1:100



2 DETAIL CROSS SECTION  
 FA-04 SCALE 1:40

ARNEL P. GONZALES  
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JICA  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 KATAHIRA & ENGINEERS INTERNATIONAL  
 YEO YACHIYO ENGINEERING CO., LTD.

DESIGNED	DATE	SIGNATURE
10/12/01	10/12/01	ARNEL P. GONZALES
CHECKED	10/19/01	ARNEL P. GONZALES
SUBMITTED	10/11/01	ARNEL P. GONZALES

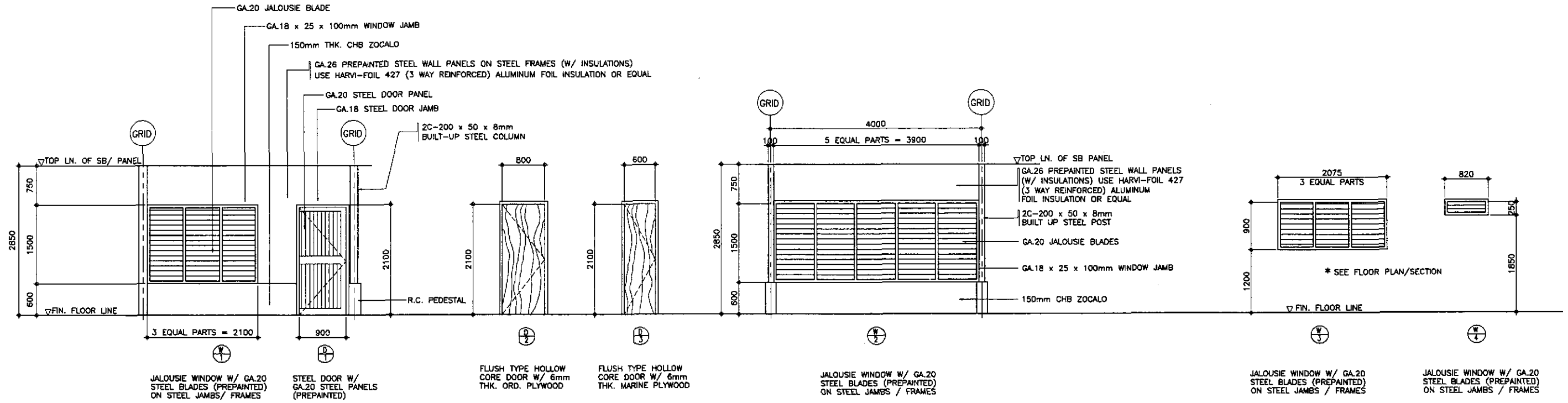
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Approved By:
DANILO C. TRAJANO Project Director	JOSEFINA M. ALADAR Chief, Highways Division	GILBERTO S. REYES OC, Director IV	MANUEL M. BONGAN Undersecretary SIMEON A. DATUMANDANG 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)  
 CABANATUAN BYPASS - CONTRACT PACKAGE IV

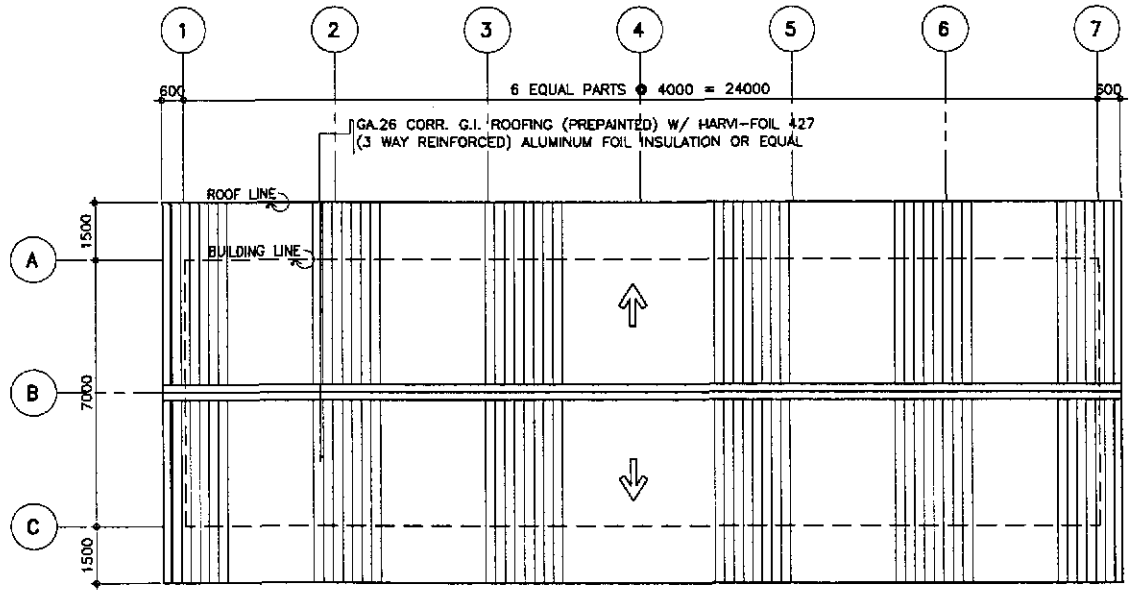
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 AS SHOWN  
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SHEET CONTENTS :  
 ENGR'S FIELD OFFICE / LABORATORY  
 ROOF PLAN, CROSS-SECTION AND  
 SCHEDULE OF DOORS & WINDOWS

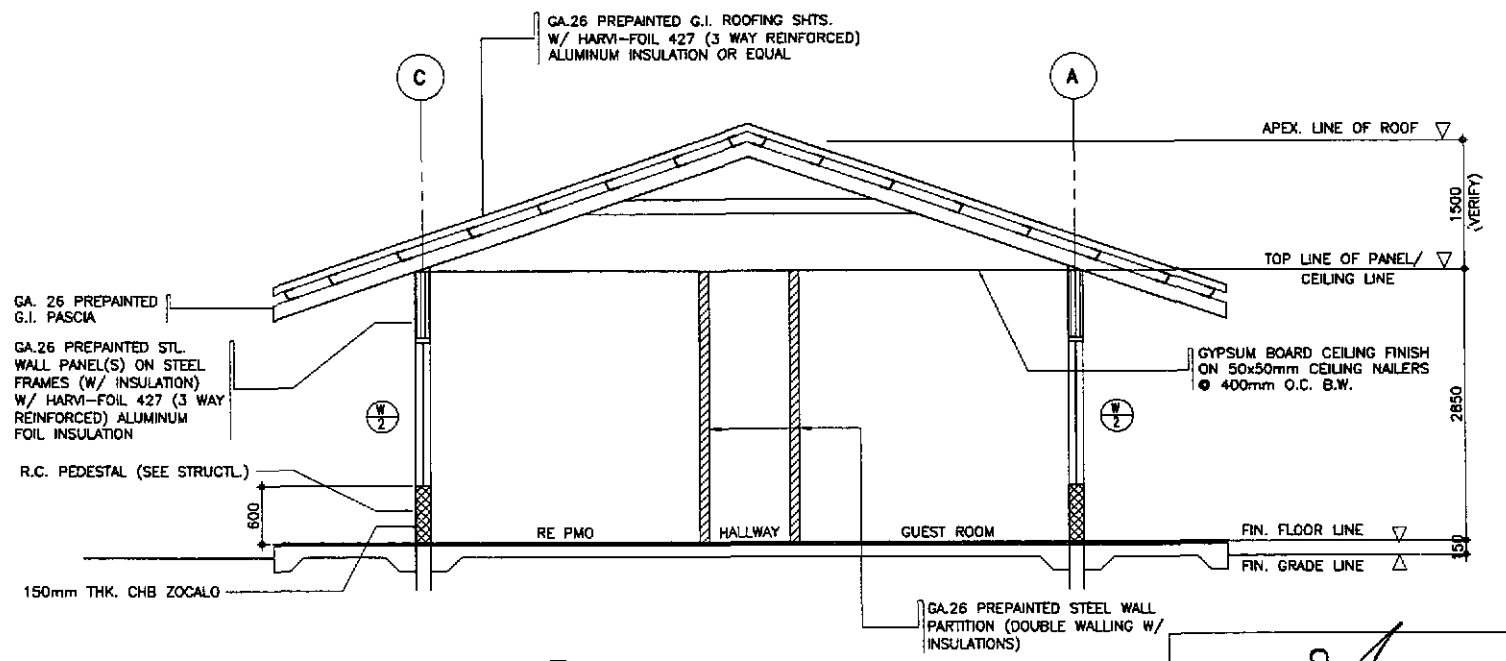
SHEET NO. :  
 FA-04



3 FOR ENGINEER'S LIVING QUARTERS  
 SCHEDULE OF DOORS & WINDOWS  
 FA-05 SCALE 1:40



1 ROOF PLAN  
 FA-05 SCALE 1:100

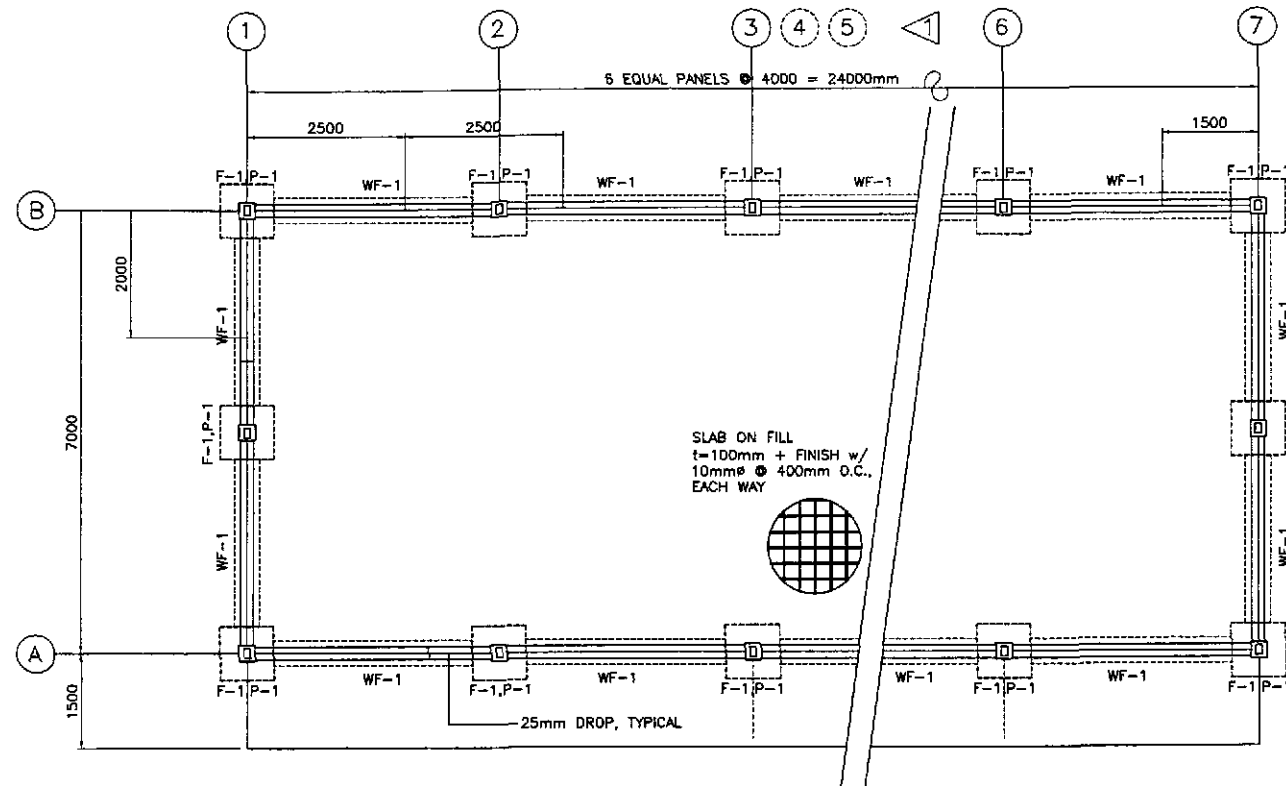


2 DETAIL CROSS SECTION  
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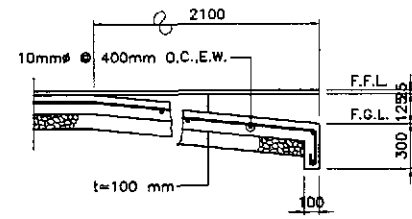
ARMEL P. GONZALES  
 ENGINEER

PTR. NO. 5846340 P.R.C. NO. 53457  
 ISSUED ON 04/26/2002 T.I.N. 138-062-682  
 ISSUED AT SAN JUAN, M.M.

	DESIGNED	10/12/02	A. P. GONZALES		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) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	A. P. GONZALES		Submitted By:	Reviewed By:	Recommended By:	Recommended By:		AS SHOWN	ENGINEER'S LIVING QUARTERS ROOF PLAN, CROSS-SECTION AND SCHEDULE OF DOORS & WINDOWS	FA-05
	SUBMITTED	10/21/02	A. P. GONZALES		DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPEY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Underscretary		SIMEON A. DATUMANONG Secretary		



**1 FOUNDATION PLAN**  
FA-06 SCALE 1:25



**4 R.C. RAMP DETAIL**  
FA-06 SCALE 1:25

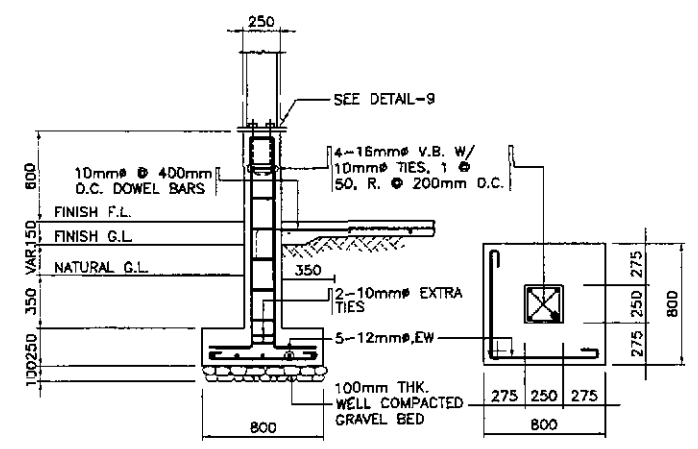
**DESIGN CRITERIA :**

- I. LIVE LOAD**  
 ROOF 0.58 KPa  
 OFFICE/LABORATORY 2.40 KPa
- II. DEAD LOAD**  
 CONCRETE 24 KN/m<sup>3</sup>  
 STEEL 76.10 KN/m<sup>3</sup>  
 CHB 2.73 KPa
- III. WIND LOAD**  
 $p = C_e C_q Q_s I$   
 WHERE :  
 $p$  = ACTUAL WIND PRESSURE  
 $C_e$  = GUST FACTOR COEFFICIENT ( EXPOSURE B=0.53 )  
 $C_q$  = PRESSURE COEFFICIENT  
 $Q_s$  = 1.50 KPa FOR ZONE 2&3,  $Q_s=1.92$  FOR ZONE 1  
 $I$  = OCCUPANCY IMPORTANCE = 1.00
- IV. ALLOWABLE STRESSES**
- CONCRETE (ALLOWABLE COMPRESSIBLE STRENGTH @ 28 DAYS)
    - FOR FOOTINGS AND PEDESTAL COLUMN  
 $f'_c = 20.70$  mpa  $f_c = 9.31$  mpa
    - FOR SLAB ON FILL  
 $f'_c = 17.26$  mpa  $f_c = 7.78$  mpa
  - REINFORCING STEEL BARS (STRUCTURAL GRADE 33 DEFORMED BARS)  
 $f_y = 227.0$  mpa  $f_{st} = 124.02$  mpa
  - STRUCTURAL LIGHT GAGE COLD FORMED STEEL  
 STIFFENED LIGHT GAGE CHANNEL FOR RAFTERS, STUD & WALLS  
 $f_s = 124.0$  mpa (18,000 psi)
  - STRUCTURAL BUILT-UP STEEL PLATES (ASTM A-36)  
 FOR STEEL BOX COLUMN  
 $f_y = 248.0$  mpa (36,000 psi)
  - WELDS  
 USE E-60 XX ELECTRODES  
 $f_v = 93.76$  mpa
  - BOLTS (ASTM A-307)  
 $f_v = 69$  mpa  $f_{st} = 96.60$  mpa
  - CONCRETE MASONRY UNITS (NON-LOAD BEARING CHB)  
 $f_m' = 3.41$  mpa (500 psi)
  - ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 95.76 KPa (2,000 psf)

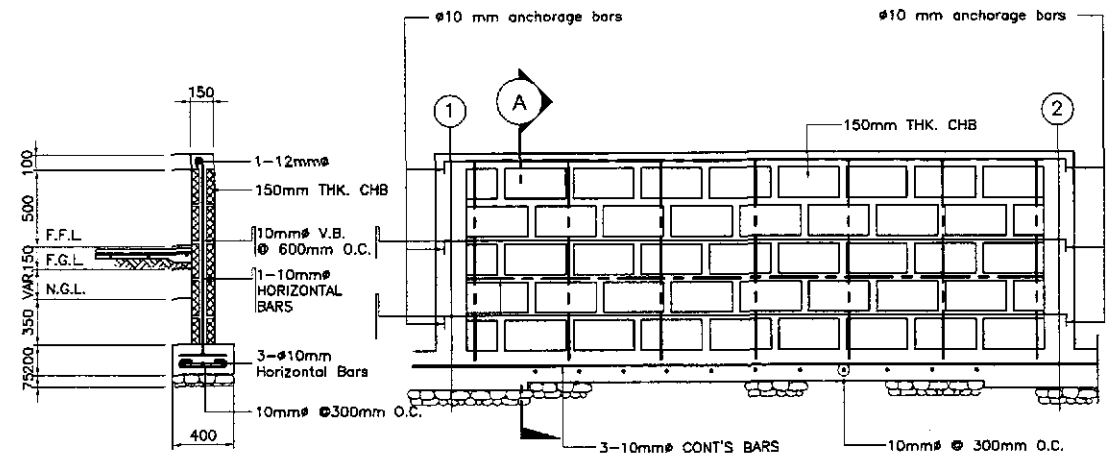
- NOTES ON FOUNDATION :**
- IN CASE THE ACTUAL SOIL BEARING PRESSURE IS FOUND LESS THAN THE ASSUMED VALUE OF 95.76 KPa, NOTIFY THE DIRECTOR, BUREAU OF DESIGN FOR PROPER REVISION OF FOOTINGS.
  - NO FOOTINGS SHALL REST ON FILL.

- MATERIAL SPECIFICATIONS :**
- FOR ROOFING SHEETS :  
 0.6mm THICK (GA.26) PREPAINTED CORRUGATED G.I. ROOFING SHEET, LONG SPAN.
  - FOR WALLING SHEETS : USE ALUMINUM FOIL INSULATION HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL). DOUBLE WALL 0.6mm THICK (GA.26) HIGH TENSILE STEEL SHEET WALLING/CLADDING W/ ALUMINUM FOIL FOR INSULATION. HARVI-FOIL 427 (3-WAY REINFORCED OR EQUAL). BASE STEEL WITH 550 Mpa YIELD STRESS.
  - THE VERTICAL AND HORIZONTAL STUDS AND RAFTERS SHALL CONFORM WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI). SPECIFICATION OF LIGHT GAGE COLD-FORMED STEEL STRUCTURAL MEMBERS AS PER ASTM A246-LIGHT GAGE STRUCTURAL QUALITY FLAT ROLLED CARBON STEEL SHEET.
  - ALL METAL PARTS SHALL BE GIVEN TWO(2) COATS OF ANTI-CORROSIVE PAINT OF APPROVED QUALITY WITH A MINIMUM TOTAL THICKNESS OF 3mm. FINISHING PAINT SHALL BE 2-COATS OF GLOSS OF APPROVED QUALITY, WEATHER RESISTANT AND OF THE SAME COLOR AS THE PREPAINTED SHEETINGS. BASE OF SIDINGS AND DOOR AND WINDOW JAMBS SHALL BE GIVEN ANOTHER TWO COATS OF BROWN OR MAHOGANY COLORED ENAMEL PAINT.

- NOTES :**
- ALL LOCATION OF ANCHOR BOLTS AND BOLT HOLES SHALL BE VERIFIED ON THE SITE PRIOR TO INSTALLATION / ASSEMBLY.
  - HOLES FOR ALL BOLTS SHALL BE 1.6mm LARGER IN DIAMETER THAN BOLTS. BOLTS SHALL BE FITTED WITH STANDARD NUTS AND WASHERS TO ENSURE TIGHT FIT.
  - THE STEEL MANUFACTURER / FABRICATOR / CONTRACTOR SHALL SUBMIT SHOP / FABRICATION DRAWINGS TO INCLUDE MATERIAL SCHEDULES, ASSEMBLY PROCEDURE, CONNECTIONS AND SPLICES AS PER APPROVED PLANS FOR REVIEW AND APPROVAL OF THE DIRECTOR, BUREAU OF DESIGN.



**2 F-1, P-1**  
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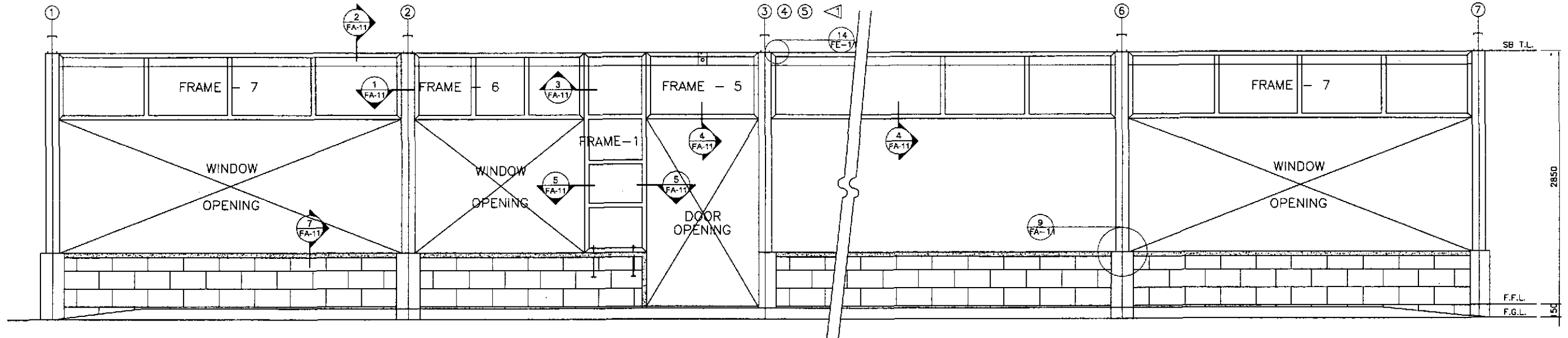


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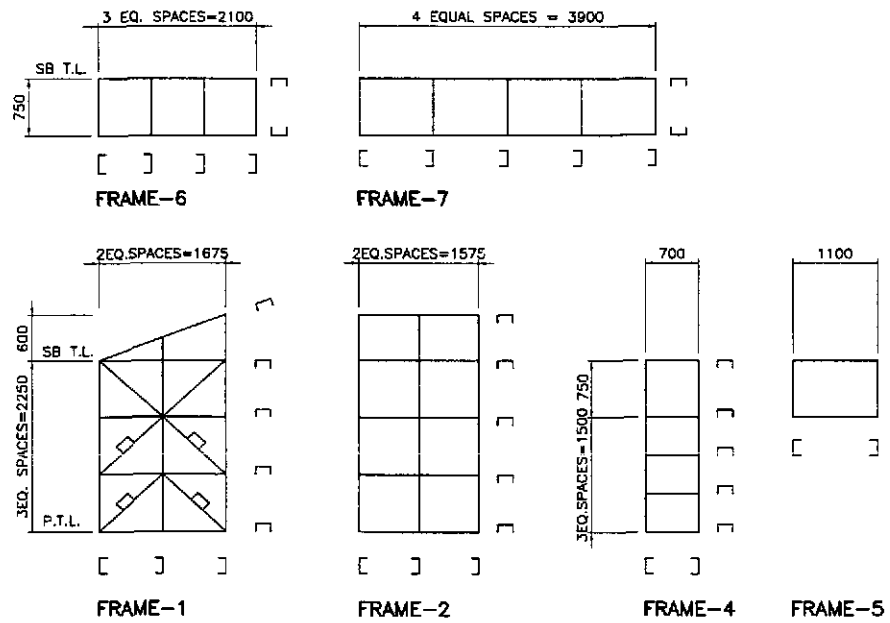
ARNEL P. GONZALES  
ENGINEER

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 ISSUED ON 04/26/2002 T.I.N. 138-062-682  
 ISSUED AT SAN JUAN, M.M.

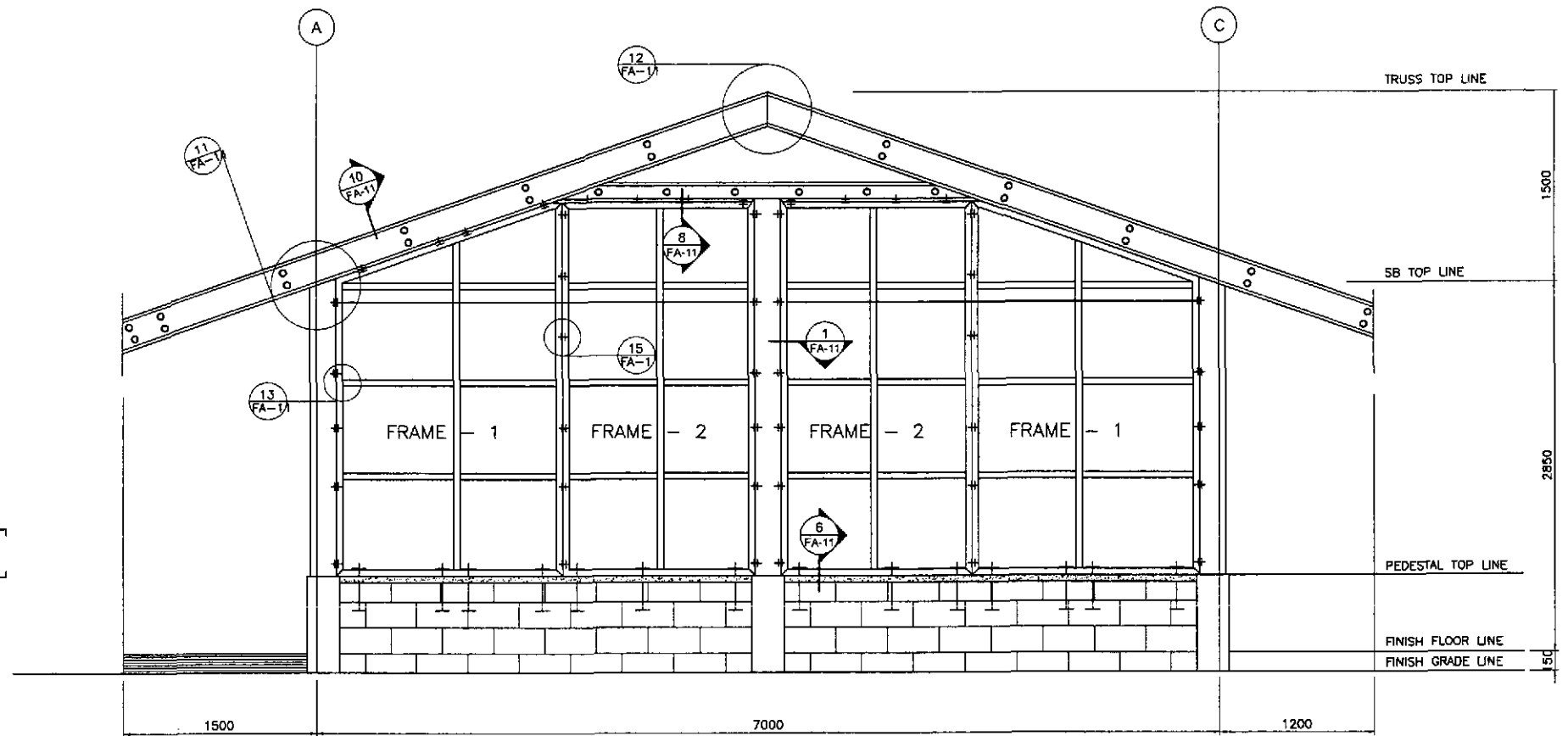
	DESIGNED	10/19/02	A. P. GONZALES	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGINEER'S FIELD OFFICE AND LIVING QUARTERS FOUNDATION PLAN, R.C. RAMP, DETAILS OF F1, P-1 & WF1 AND DESIGN CRITERIA	SHEET NO. : <b>FA-06</b>		
	CHECKED	10/19/02	A. P. GONZALES						Submitted By:	Recommended By:
	SUBMITTED	10/26/02	A. P. GONZALES						DANILO C. TRILANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division



2 FRONT ELEVATION  
FA-07 SCALE 1:25



1 FRAMES SCHEMATIC DIAGRAMS  
FA-07 SCALE 1:50

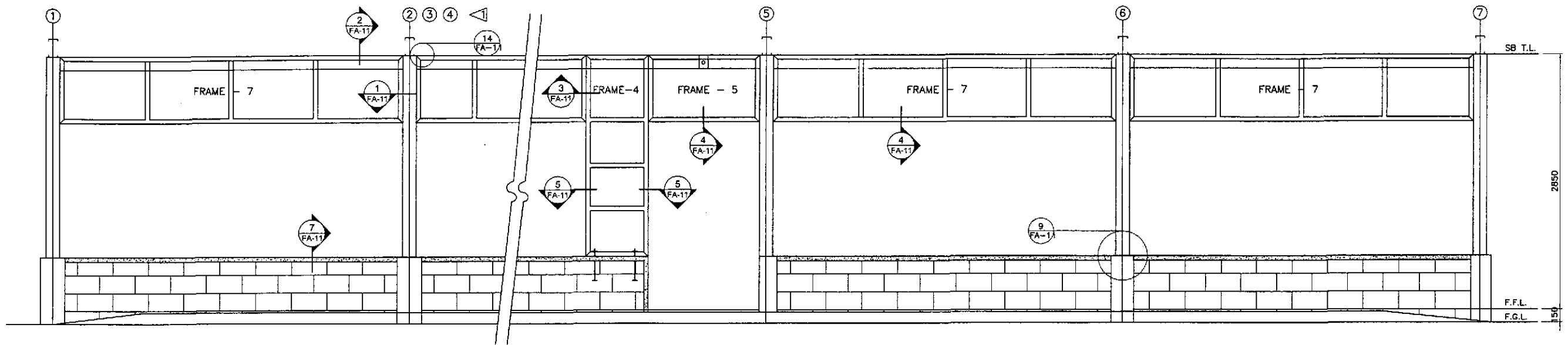


3 RIGHT SIDE ELEVATION  
FA-07 SCALE 1:25

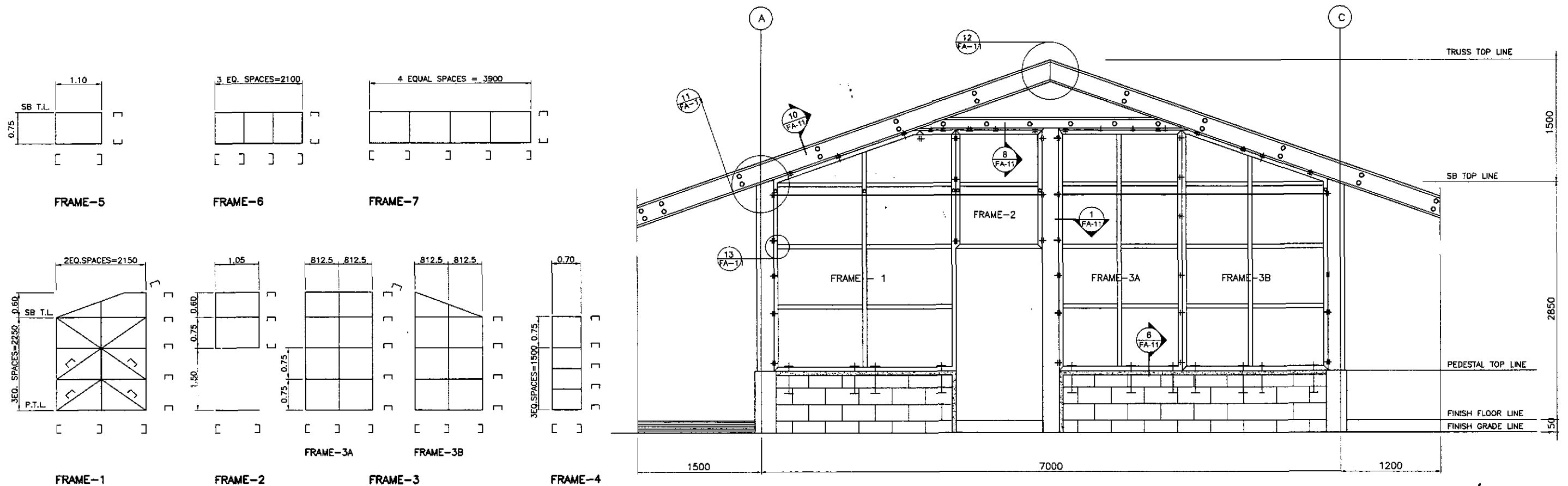
ARNEL P. GONZALES  
ENGINEER  
PTR. NO. 5848340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.J.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

	DESIGNED	10/24/01	A. P. GONZALES	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	10/19/02	A. P. GONZALES		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	ENGR'S FIELD OFFICE / LABORATORY FRONT AND RIGHT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAM	FA-07
	SUBMITTED	10/21/02	PAUL BONDAN		OFFICE OF THE SECRETARY	CABANATUAN BYPASS - CONTRACT PACKAGE II			FULL SIZE A1		
						Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: WILFREDO S. LOPEZ Chief, Structural Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary	

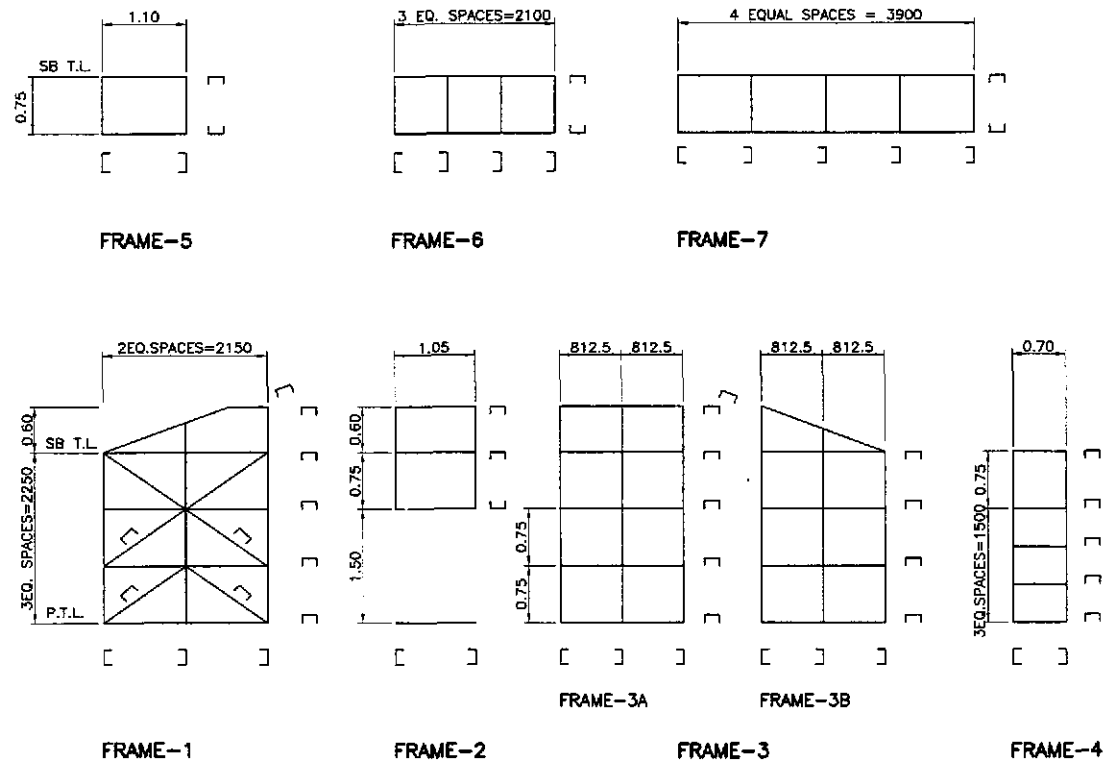




2 FRONT ELEVATION  
FA-08 SCALE 1:25



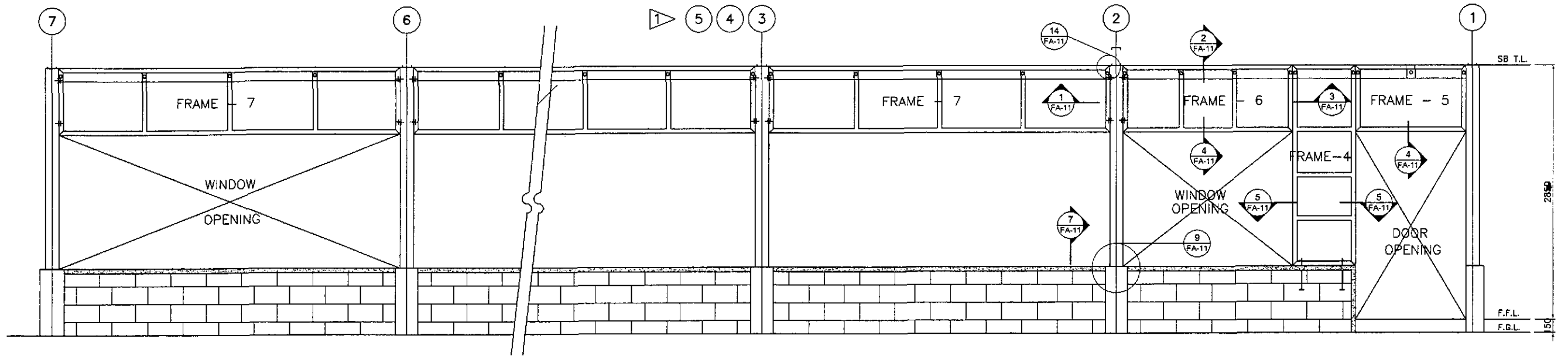
3 RIGHT SIDE ELEVATION  
FA-08 SCALE 1:25



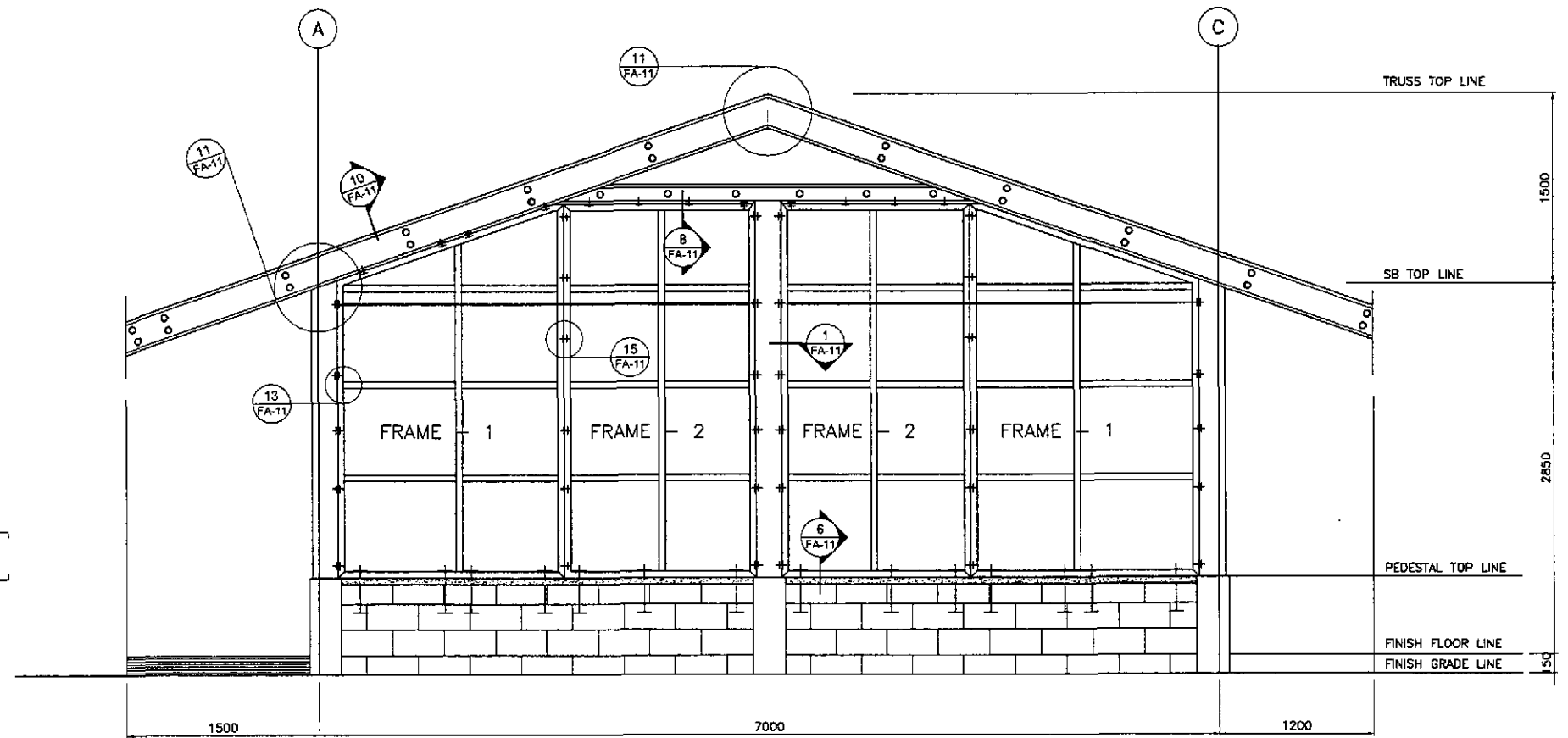
1 FRAMES SCHEMATIC DIAGRAMS  
FA-08 SCALE 1:50

ARNEL P. GONZALES  
ENGINEER  
PTR. NO. 5646340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

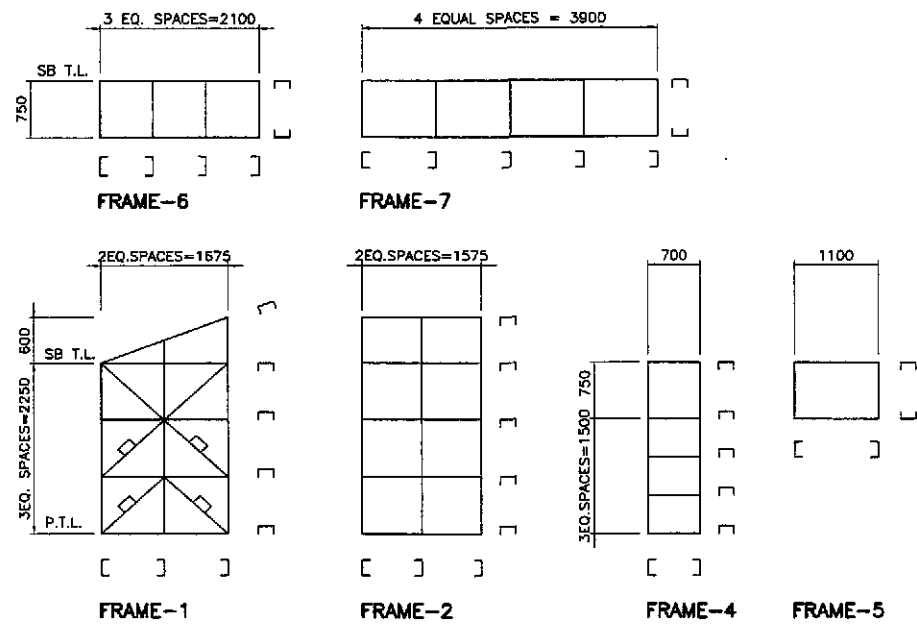
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Piaridet, Cabanatuan and San Jose Bypasses)</b>  <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : AS SHOWN  FULL SIZE A1	SHEET CONTENTS : <b>ENGINEER'S LIVING QUARTERS FRONT AND RIGHT SIDE ELEVATION OF STEEL STUD FRAMES &amp; SCHEMATIC DIAGRAM</b>	SHEET NO. : <b>FA-08</b>
	CHECKED	10/19/02	A.P. GONZALES		Submitted By:	Reviewed By:	Recommended By:				
	SUBMITTED	10/21/02	A.P. GONZALES TEAM LEADER		DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary		



2 REAR ELEVATION  
FA-09 SCALE 1:25



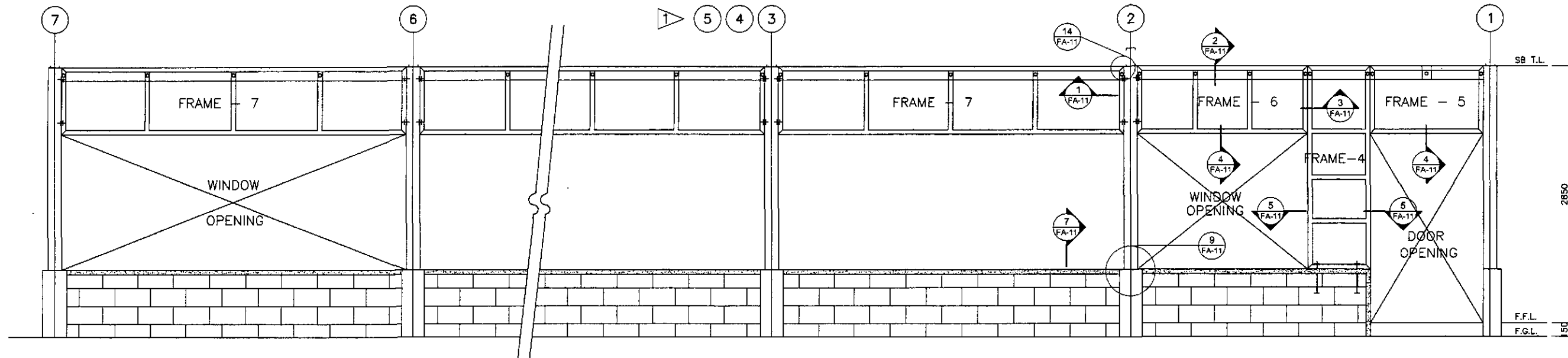
3 LEFT SIDE ELEVATION  
FA-09 SCALE 1:25



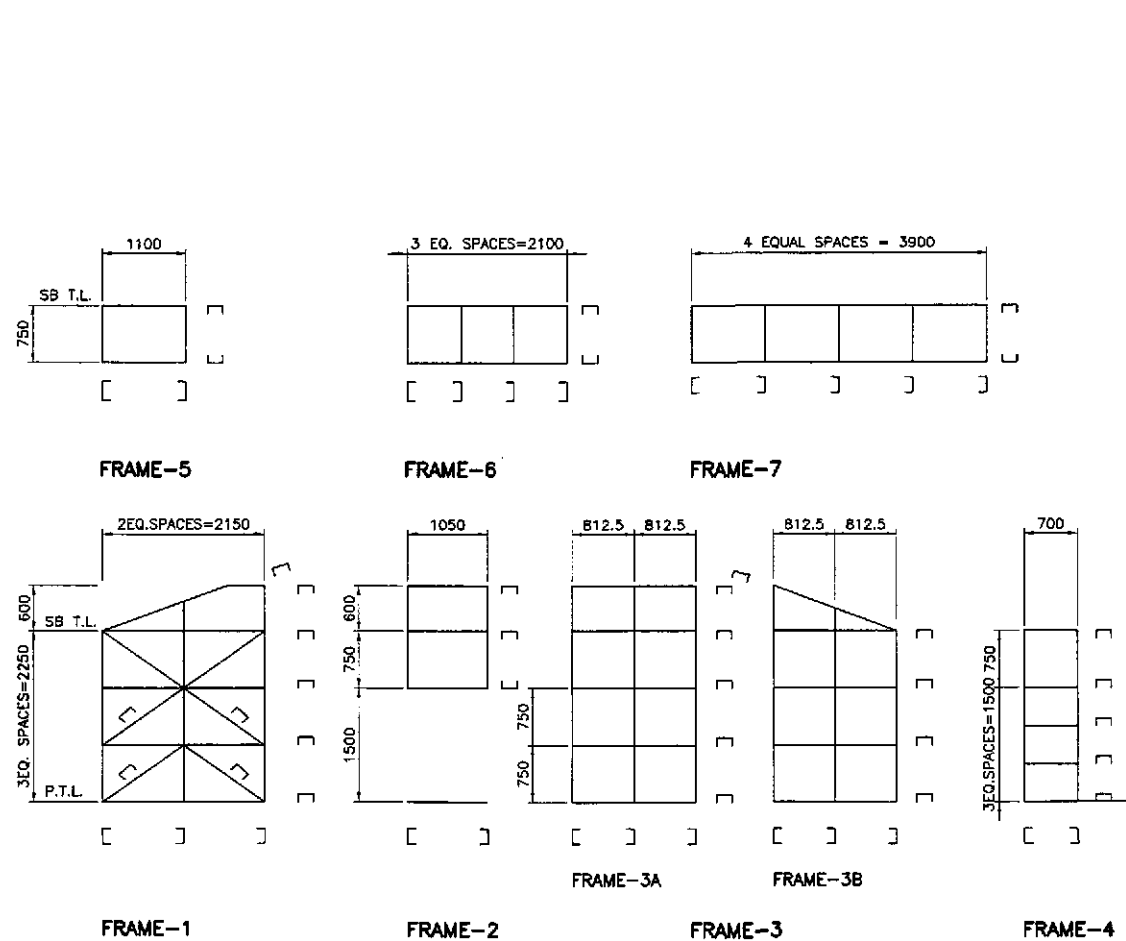
1 FRAMES SCHEMATIC DIAGRAMS  
FA-09 SCALE 1:50

ARNEL P. GONZALEZ  
ENGINEER  
PTR. NO. 5846340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

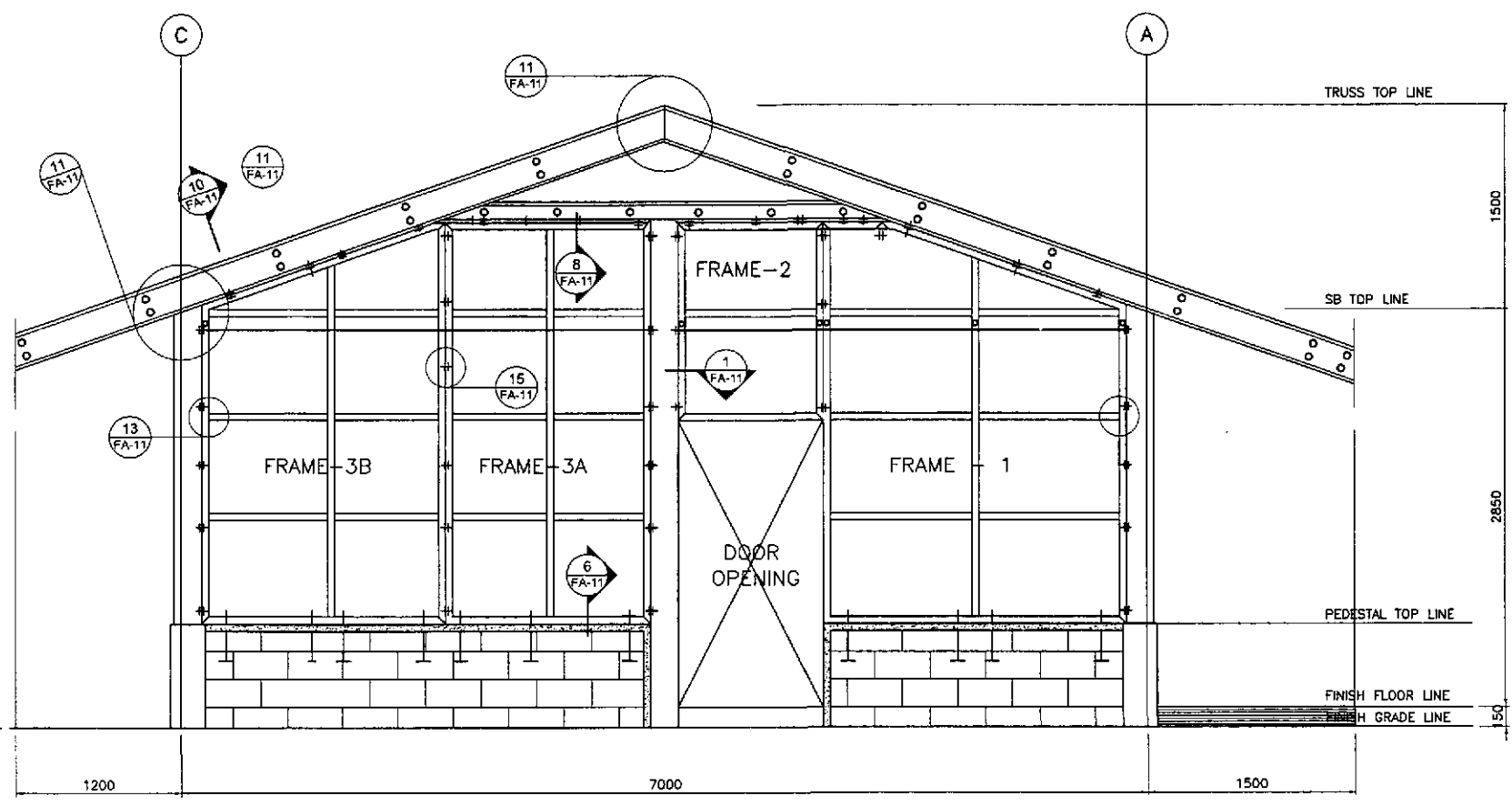
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGR'S FIELD OFFICE / LABORATORY REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAM	SHEET NO. : FA-09
	CHECKED	10/19/02	A. B. GONZALES	PUHL - PMD Submitted By:	Reviewed By: WILFREDO S. LOPEZ Chief, Structural Division	Recommended By: GILBERTO S. REYES OIC, Director IV				
	SUBMITTED	10/24/02	M. B. GONZALES TEAM LEADER	DANILO C. TRAJANO Project Director						



2 REAR ELEVATION  
FA-10 SCALE 1:25



1 FRAMES SCHEMATIC DIAGRAMS  
FA-10 SCALE 1:50



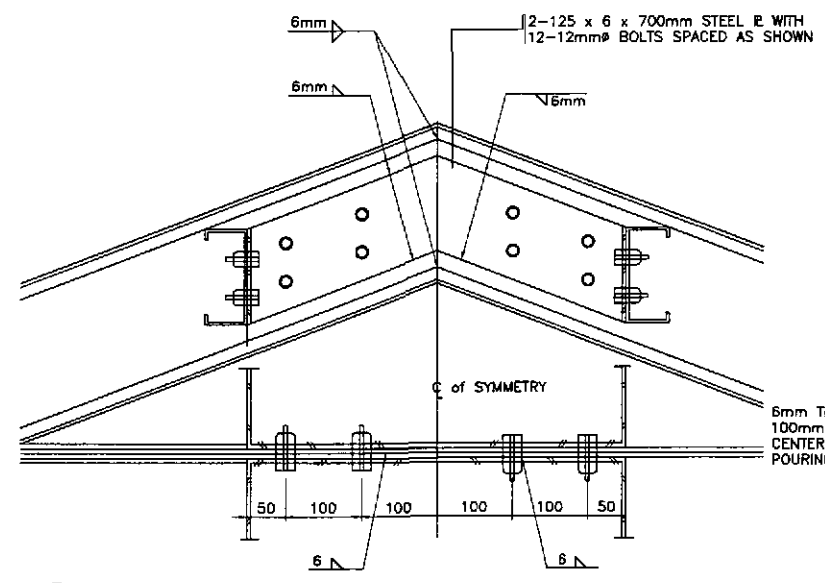
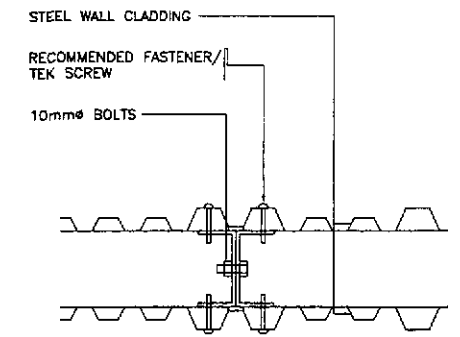
3 LEFT SIDE ELEVATION  
FA-10 SCALE 1:25

ARNEL P. GONZALES  
ENGINEER  
PTR. NO. 5848340 P.R.C. NO. 53457  
ISSUED ON 04/28/2002 T.L.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

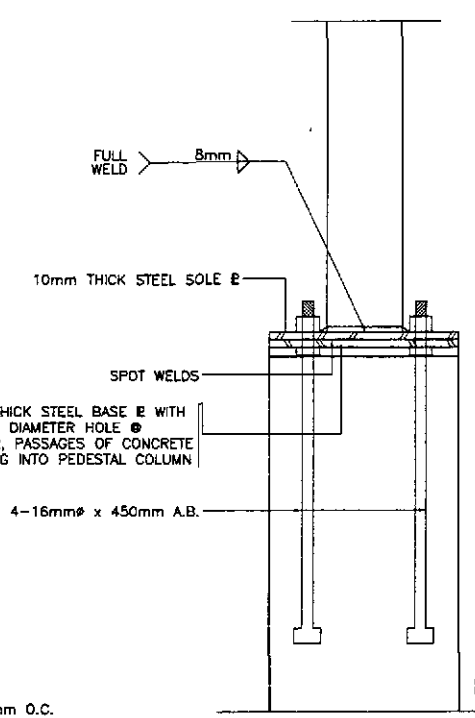
	DESIGNED	10/12/02	A. P. GONZALES		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : ENGINEER'S LIVING QUARTERS REAR AND LEFT SIDE ELEVATION OF STEEL STUD FRAMES & SCHEMATIC DIAGRAMS	SHEET NO. : FA-10
	CHECKED	10/19/02	A. P. GONZALES		PJHL - PMO Submitted By: DANILO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: WILFREDO S. LOPEZ Chief, Structural Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONGAON Undersecretary				

**NOTES :**

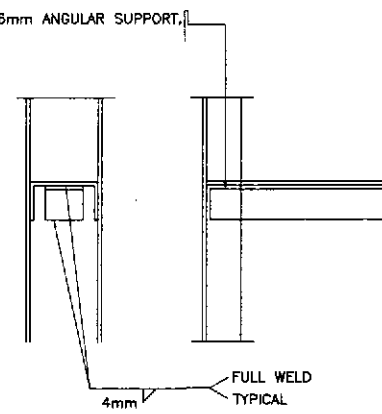
1. ALL VERTICAL AND HORIZONTAL STUDS SHALL BE 100x50x2mm UNSTIFFENED FLANGED UNLESS OTHERWISE SPECIFIED. HORIZONTAL STUDS MUST BE INSERTED TO AND WELDED IN THE VERTICAL STUDS UNLESS OTHERWISE SPECIFIED.
2. REVISION IN THE ATTACHMENT/ CONNECTIONS THAT WILL IMPROVE DESIGN MAYBE DONE W/ PRIOR APPROVAL OF FABRICATION DRAWINGS.



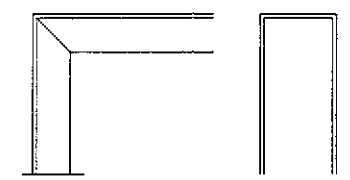
3 DETAIL - 12  
FA-11 SCALE 1:5



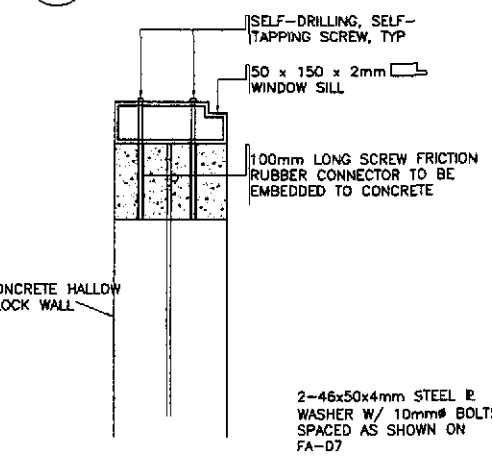
ELEVATION



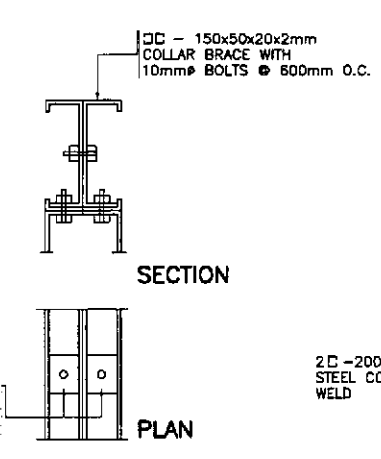
10 DETAIL - 13  
FA-11 SCALE 1:5



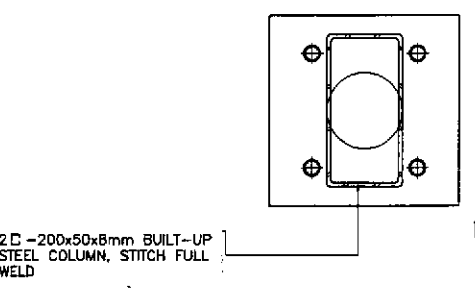
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FA-11 SCALE 1:5



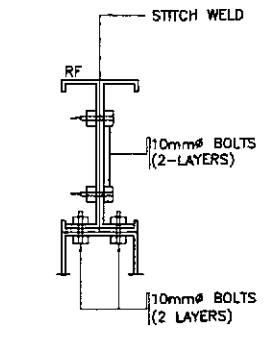
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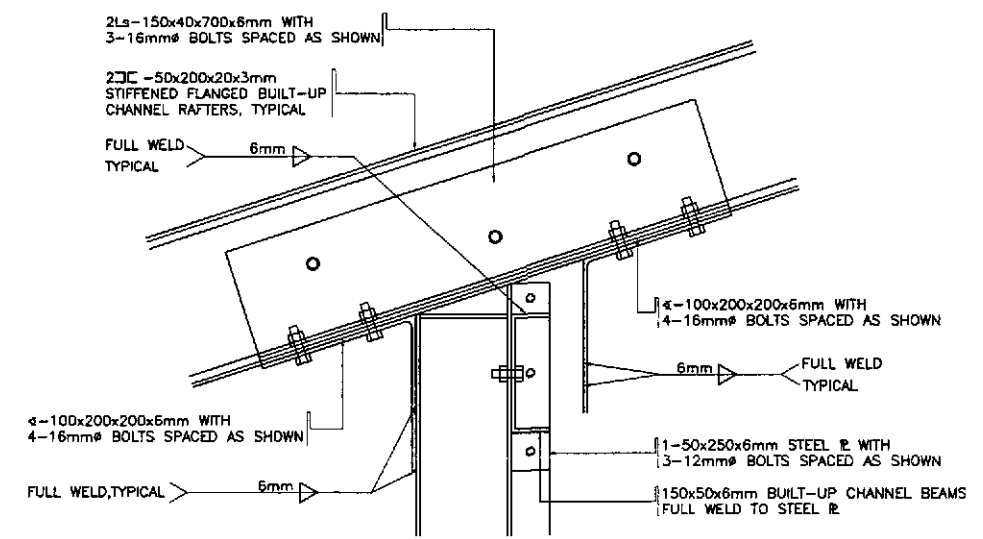
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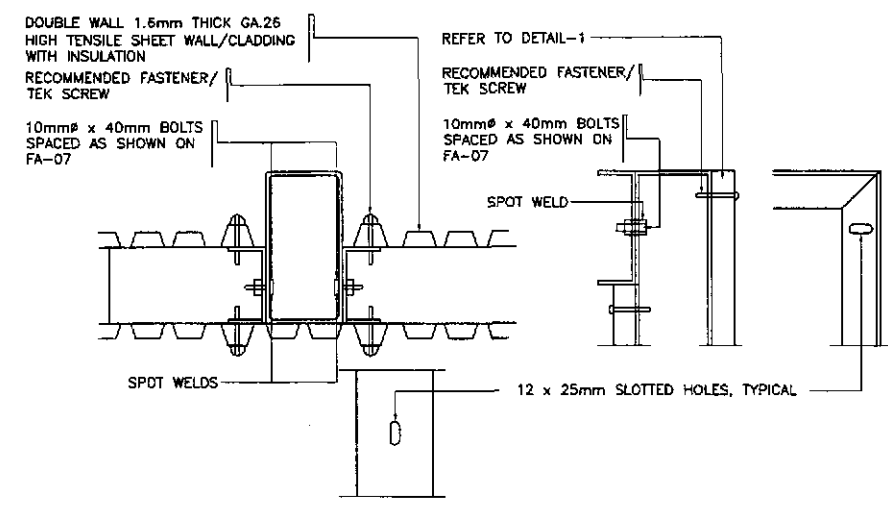
7 DETAIL - 9  
FA-11 SCALE 1:5



9 DETAIL - 10  
FA-11 SCALE 1:5

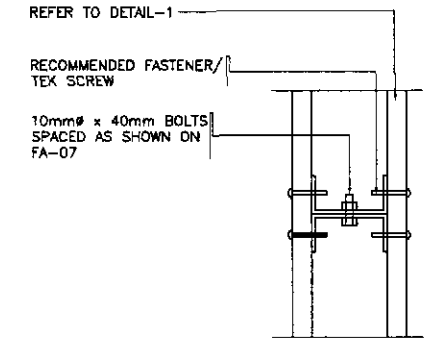


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FA-11 SCALE 1:5

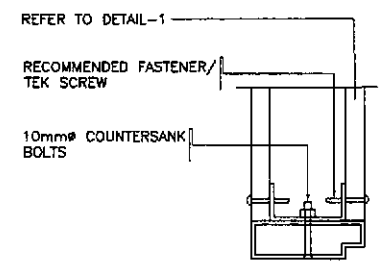


1 DETAIL - 1  
FA-11 SCALE 1:5

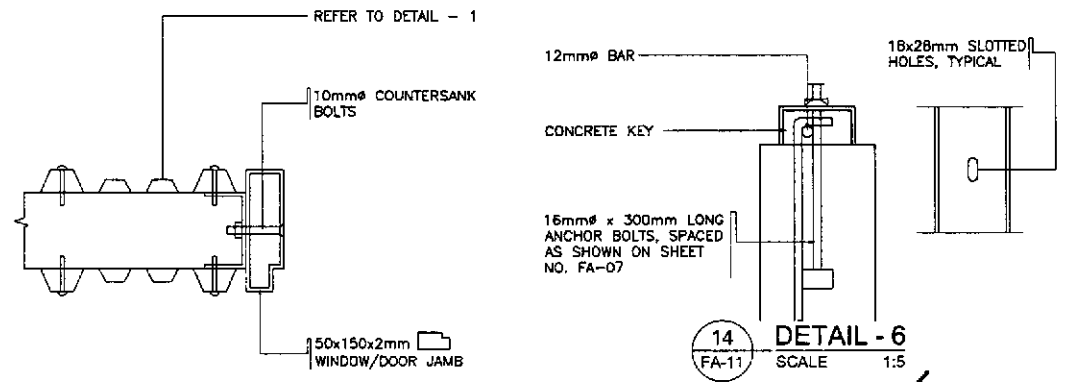
4 DETAIL - 2  
FA-11 SCALE 1:5



6 DETAIL - 3  
FA-11 SCALE 1:5



8 DETAIL - 4  
FA-11 SCALE 1:5



14 DETAIL - 6  
FA-11 SCALE 1:5

ARMEL P. GONZALES  
ENGINEER

PTR. NO. 5846340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 136-062-682  
ISSUED AT SAN JUAN, M.M.

JICA  
JAPAN INTERNATIONAL COOPERATION AGENCY  
KATAHIRA & ENGINEERS INTERNATIONAL  
YEO YACHIYO ENGINEERING CO., LTD.

DESIGNED	DATE	SIGNATURE
	10/20/02	A.P. GONZALES
CHECKED	10/19/02	A.P. GONZALES
SUBMITTED	10/21/02	A.P. GONZALES

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					
BUREAU OF DESIGN		OFFICE OF THE SECRETARY			
Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:	Approved By:
DANILO C. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES DIC, Director IV	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 (Plaridel, Cabanatuan and San Jose Bypasses)  
CABANATUAN BYPASS - CONTRACT PACKAGE IV

SCALE :  
AS SHOWN  
FULL SIZE A1

SHEET CONTENTS :  
ENGINEER'S FIELD OFFICE AND LIVING QUARTERS  
DETAILS OF CONNECTIONS  
DETAIL 1 TO 15

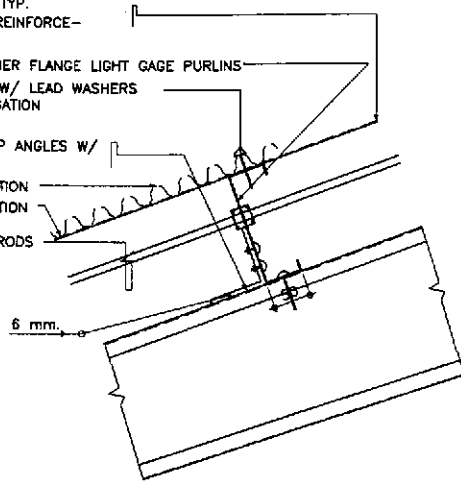
SHEET NO. :  
FA-11

ALUMINUM FOIL INSULATION, TYP.  
USE HAVIFDIL 427(3-WAY REINFORCE-  
MENT) OR EQUAL

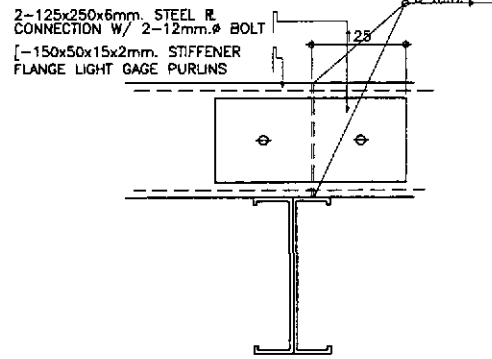
[-150x50x15x2mm. STIFFENER FLANGE LIGHT GAGE PURLINS  
6 mm. # t -HOOK BOLTS W/ LEAD WASHERS  
● EVERY 5-UPPER CORRUGATION

1 -75x75x50x6.0mm. CLIP ANGLES W/  
2 -10mm. # BOLTS

UPPER CORRUGATION  
LOWER CORRUGATION  
10mm # SAG RODS

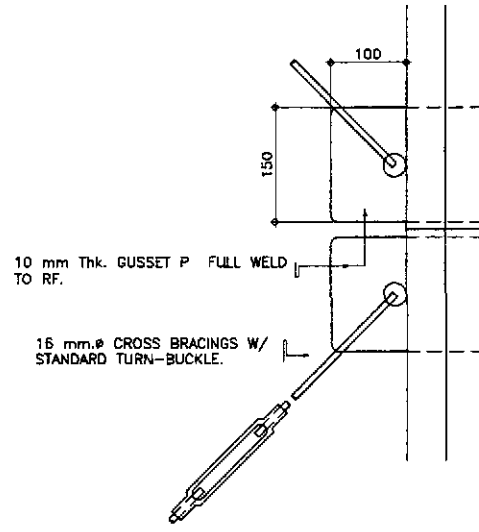


ELEVATION

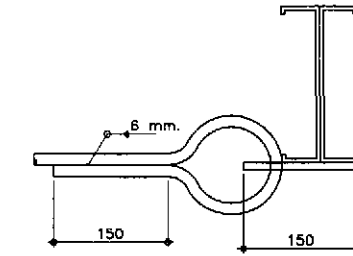


SECTION, SPLICE CONNECTION

2 PURLIN CONNECTION  
FA-12 SCALE 1:5

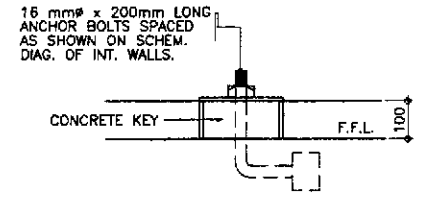


P L A N

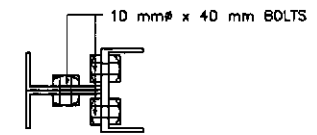


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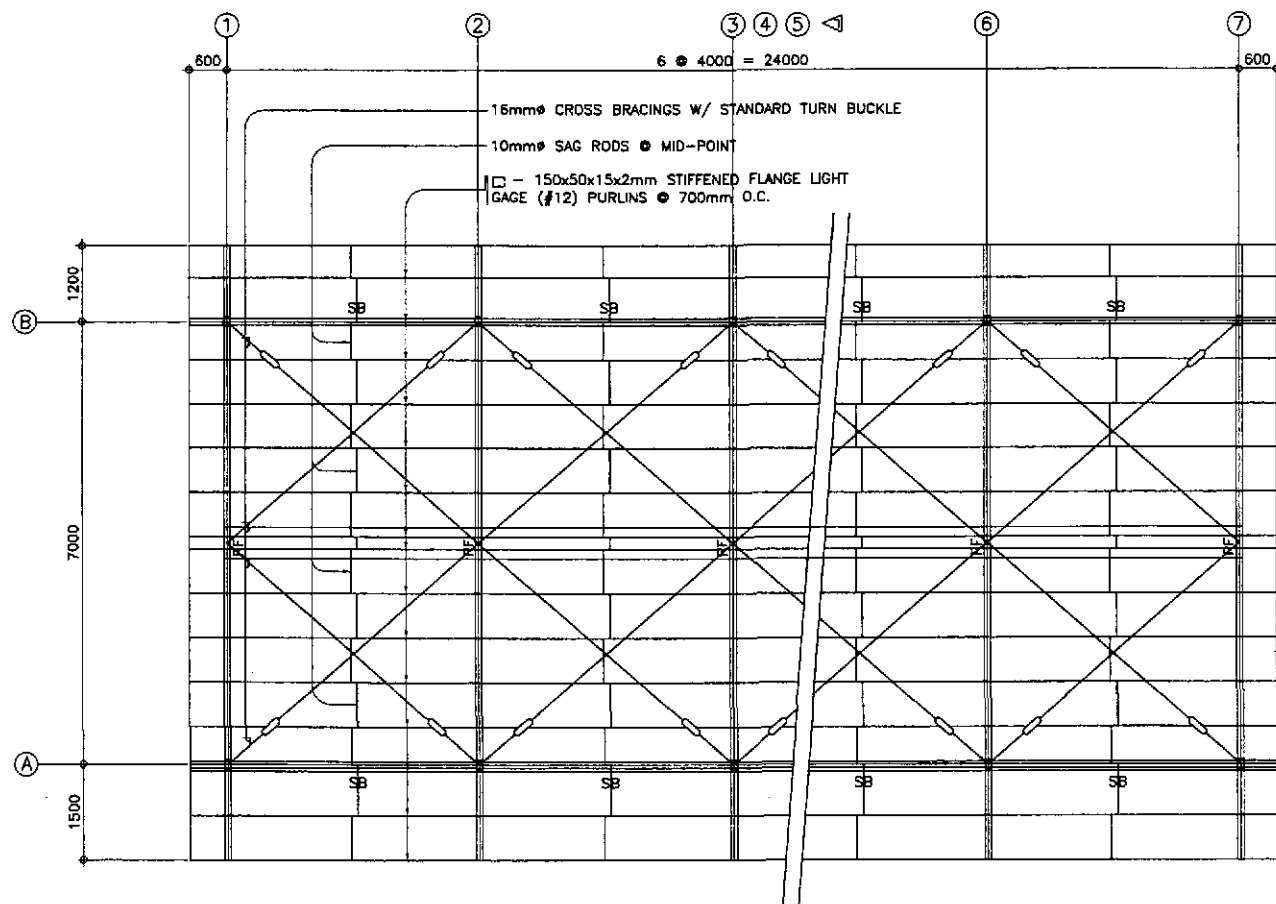
4 CROSS-BRACING CONNECTION  
FA-12 SCALE 1:5



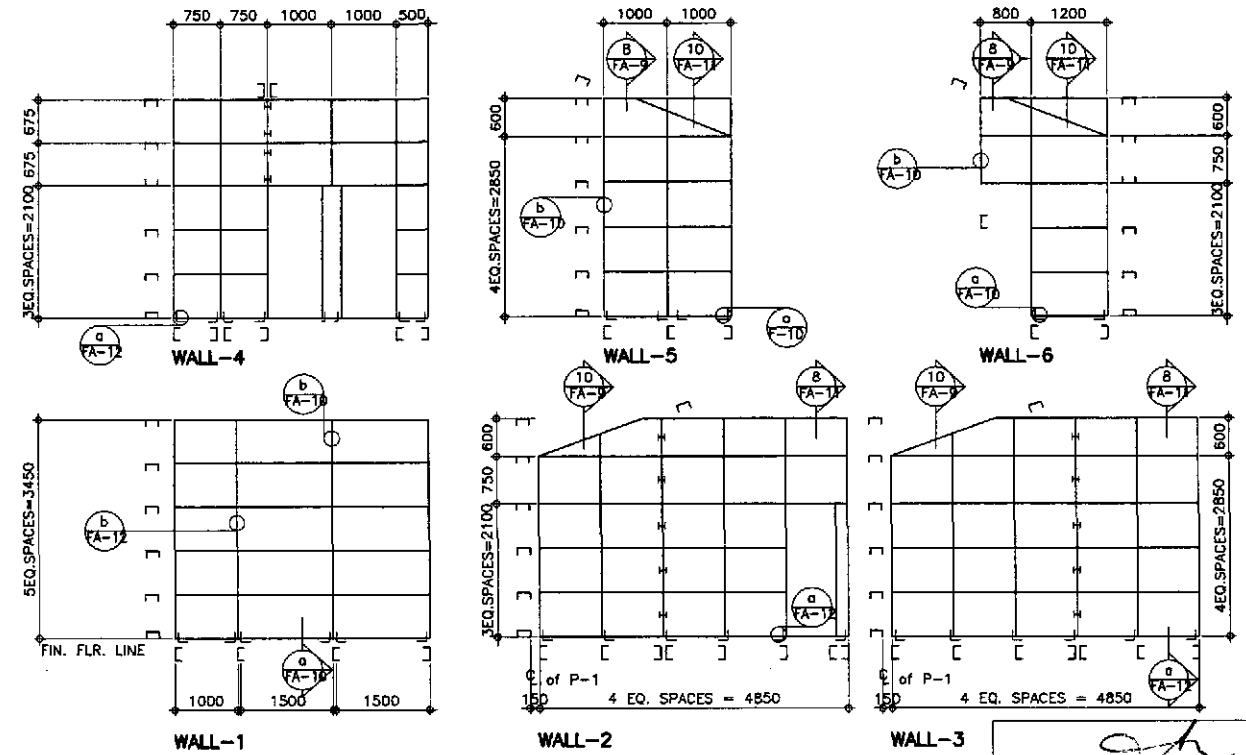
5 DETAIL - a  
FA-12 SCALE 1:5



6 DETAIL - b  
FA-12 SCALE 1:5



1 ROOF FRAMING PLAN  
FA-12 SCALE 1:60



3 SCHEMATIC DIAGRAMS OF INTERIOR WALLS  
FA-12 SCALE 1:60

ARNEL P. GONZALES  
ENGINEER  
PTR. NO. 5846340 P.R.C. NO. 53457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

JICA  
JAPAN INTERNATIONAL COOPERATION AGENCY  
KATAHIRA & ENGINEERS INTERNATIONAL  
YEO YACHIYO ENGINEERING CO., LTD.

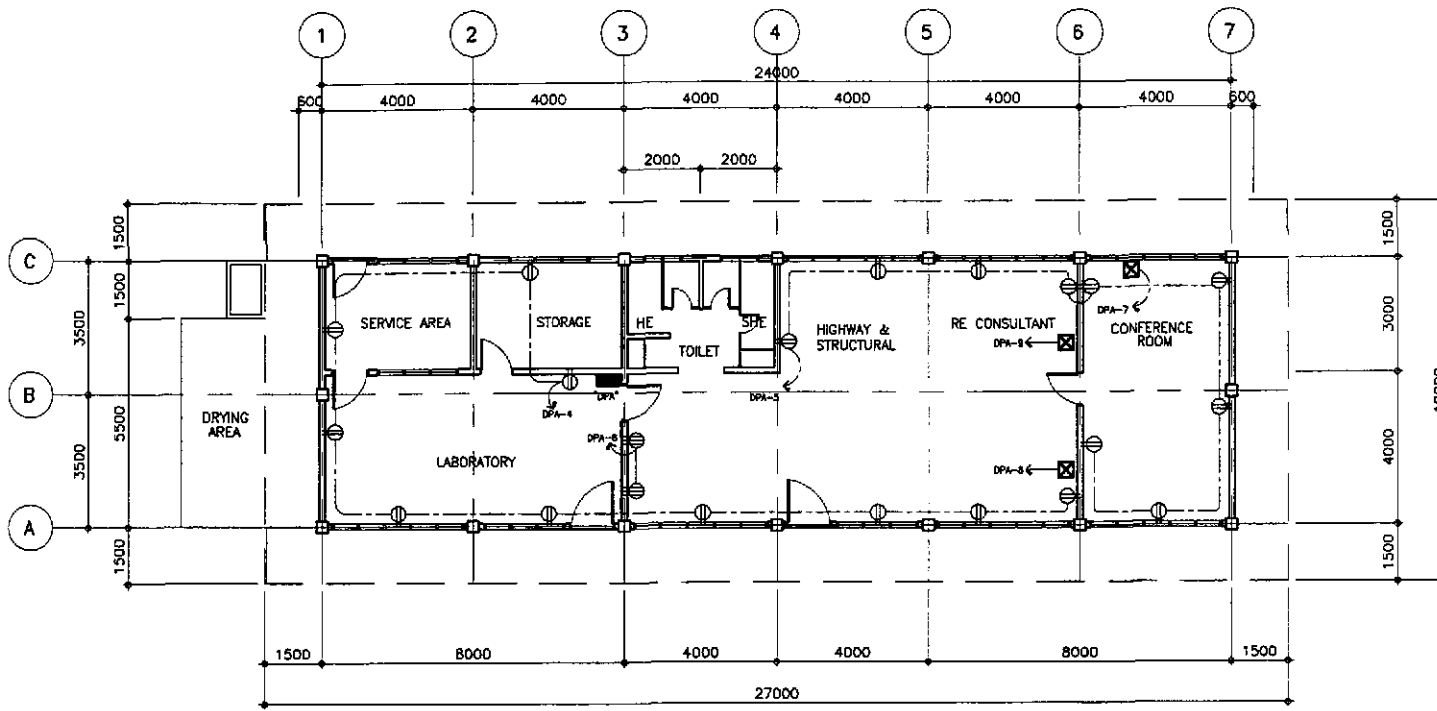
DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				
10/12/01	10/12/01	ARNEL P. GONZALES	BUREAU OF DESIGN		OFFICE OF THE SECRETARY		
CHECKED	10/19/01	ARNEL P. GONZALES	Submitted By:	Reviewed By:	Recommended By:	Approved By:	
SUBMITTED	10/23/01	ARNEL P. GONZALES	DANILO C. TRAJANO Project Director	WILFREDO S. LOPEZ Chief, Structural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMON A. DATUMANONG 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)  
CABANATUAN BYPASS - CONTRACT PACKAGE IV

SCALE :  
AS SHOWN  
FULL SIZE A1

SHEET CONTENTS :  
ENGR'S FIELD OFF. & LIVING QUARTERS  
ROOF FRAMING PLAN, SCHEMATIC DIAGRAM  
PURLIN CONN. & CROSS-BRACING CONN.

SHEET NO. :  
FA-12



2 POWER LAYOUT OF THE ENGINEER'S FIELD OFFICE / LABORATORY  
FE-01 SCALE 1:100

**GENERAL NOTES:**

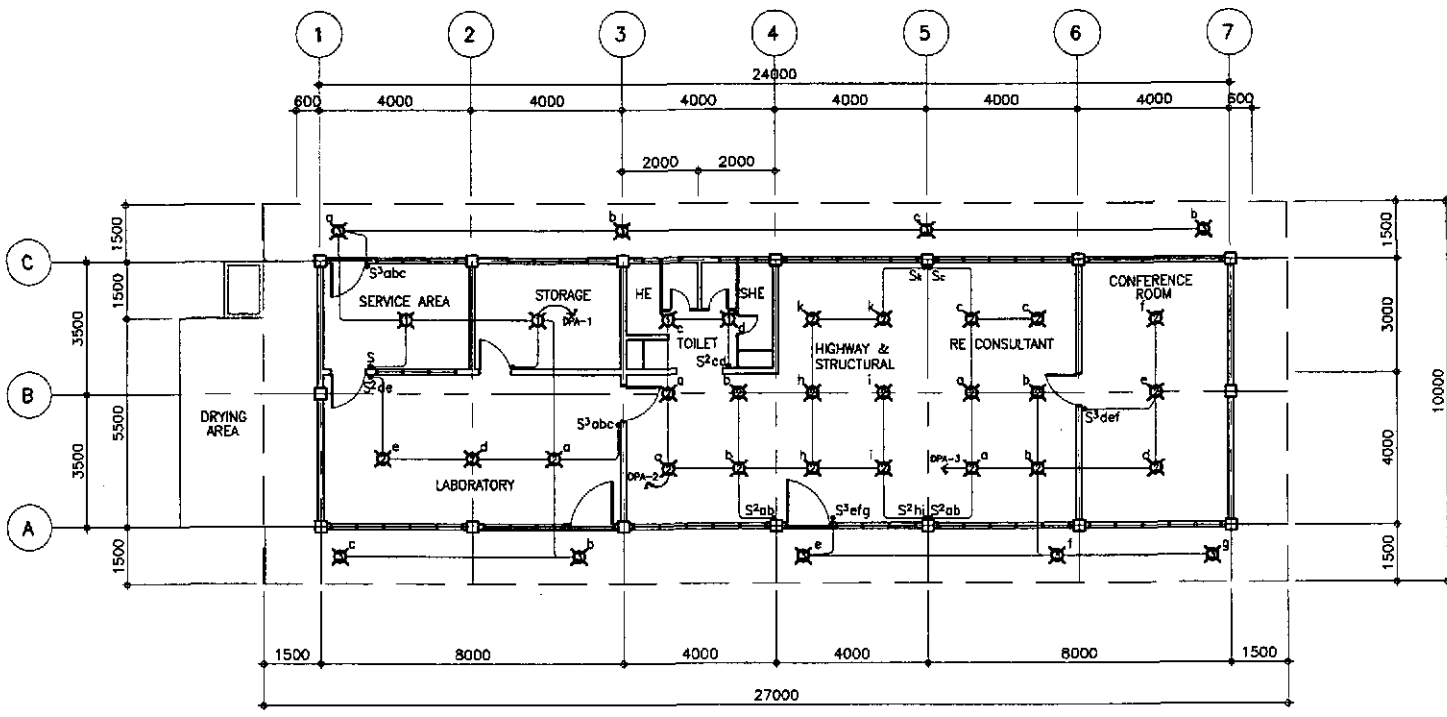
1. ALL ELECTRICAL WORKS SHALL BE DONE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHIL. ELECT. CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF THE POWER COMPANY.
2. THE TYPE OF POWER SERVICE TO USED SHALL BE SINGLE-PHASE 2-WIRE, 240 VOLTS, 60Hz, AC.
3. ALL WIRINGS SHALL BE INSTALLED IN STANDARD GALVANIZED RIGID STEEL CONDUIT, RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCK STRUCTURES, SLABS, COLUMNS, WALLS PARTITIONS AND/OR RUN BETWEEN DOUBLE WALL WOODED PARTITIONS OR INSIDE THE CEILING SPACES.
4. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm IN SIZE.
5. THE MINIMUM SIZES OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm<sup>2</sup> AND 15mm NOMINAL DIAMETER, RESPECTIVELY.
6. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE IV OF THE PHIL. ELECT. CODE, PART I, LATEST EDITION.
7. WHENEVER REQUIRED AND NECESSARY, PULL BOXES OF PROPER SIZES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATIONS, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN IS NOT MENTIONED IN THE SPECIFICATIONS.
8. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHT ABOVE THE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.  
A. WALL SWITCHES .....1200 mm  
B. CONVENIENCE OUTLETS .....300 mm  
C. AIR CONDITIONING OUTLETS .....AT CONVENIENT HEIGHT NEAR THE EQUIPMENT
9. STANDARD TYPE OF ACCESSORIES, SPlicing DEVICES, TERMINATORS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
11. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO POWER COMPANY SERVICE POINT.
12. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE STRICT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

**NOTE:**

ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR SERVICE USED.

**ELECTRICAL SYMBOLS:**

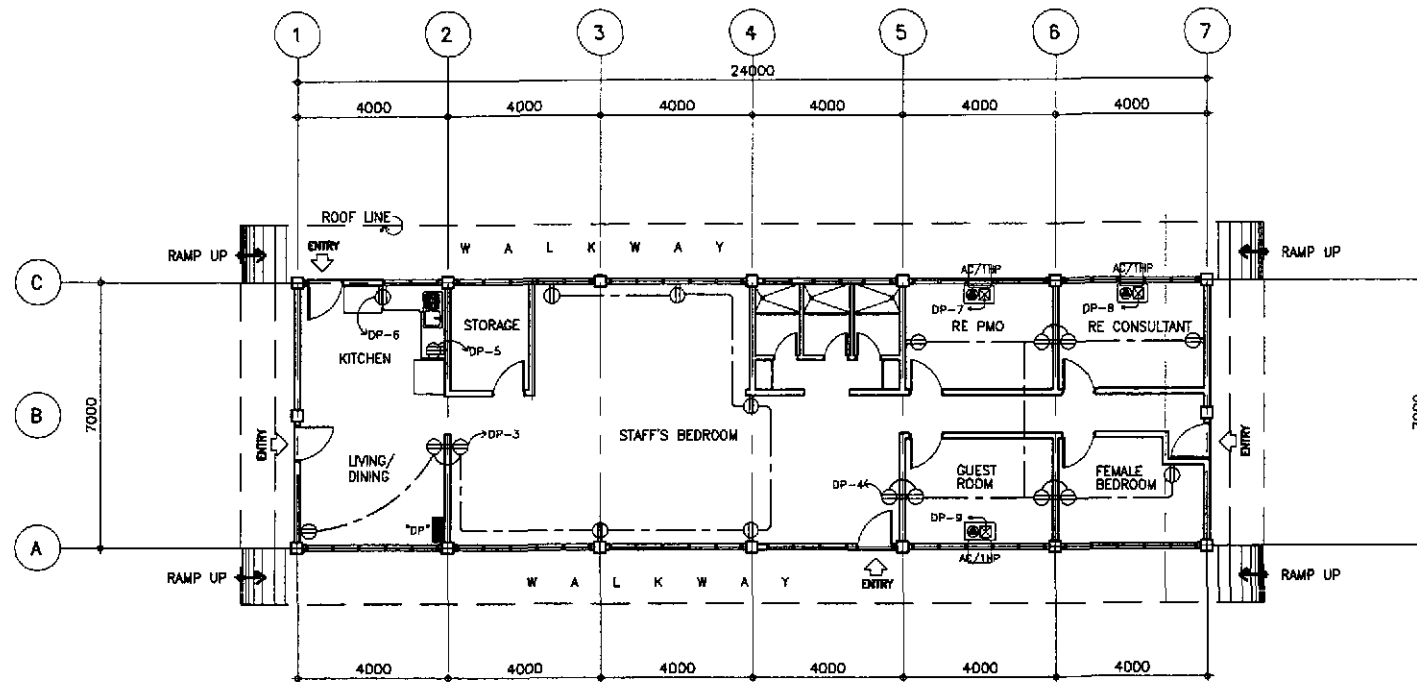
- ☒ CEILING LIGHT; REFER TO SCHEDULE OF LIGHTING FIXTURES AND LAMPS
- ELECTRICAL RISER
- S ONE-WAY WALL SWITCH, 15A, 250V
- S<sup>2</sup> 2 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- S<sup>3</sup> 3 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- ⊕ DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 20A, 250V
- ⊕ HEAVY DUTY CONVENIENCE OUTLETS, SINGLE-GROUNDING TYPE, 30A, 250V
- ⊕ AIR CONDITIONING OUTLET GROUNDING TYPE WITH AUTOMATIC CIRCUIT BREAKER IN ONE ENCLOSURE
- ⊕ ENCLOSED AUTOMATIC CIRCUIT BREAKER (ACB) 70AT, 10DAF, 2P, 240V
- DISTRIBUTION PANEL BOARD
- PULL BOX OR JUNCTION BOX
- ⊕ ELECTRIC SERVICE METER
- PROPOSED SERVICE ENTRANCE WITH CAP
- CONCEALED OR EMBEDDED CONDUIT RUN
- UNDERGROUND OR UNDER FLOOR CONDUIT RUN
- CIRCUIT HOMERUN TO PANEL BOARD



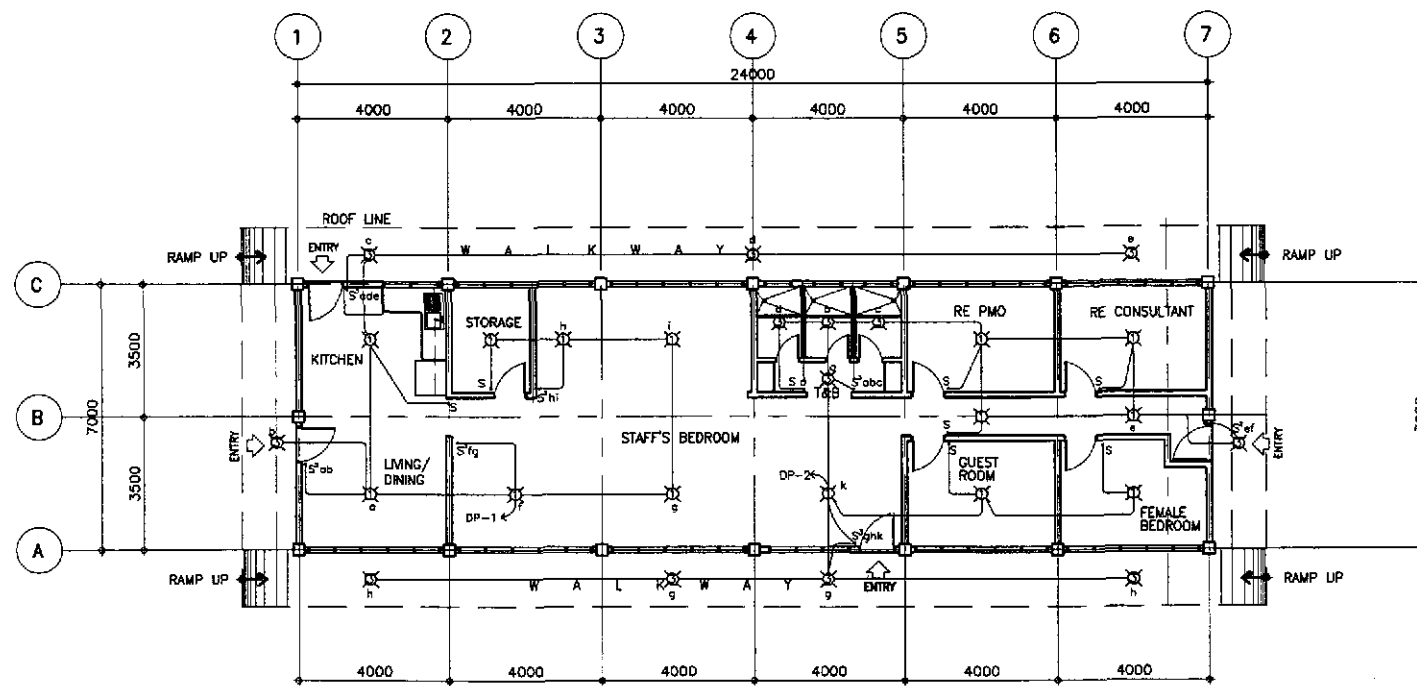
2 LIGHTING LAYOUT OF THE ENGINEER'S FIELD OFFICE / LABORATORY  
FE-01 SCALE 1:100

*[Signature]*  
ERNESTO M. ANTIQUIA  
ENGINEER  
PTR. NO. 7403664 P.E.E. NO. 2913  
ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA  
T.I.N. 109-382-379

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	10/19/02	<i>[Signature]</i>		Submitted By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	ENGR'S FIELD OFFICE / LABORATORY LIGHTING LAYOUT, POWER LAYOUT ELECTRICAL SYMBOLS & GENERAL NOTES	FE-01
	SUBMITTED	10/24/02	<i>[Signature]</i>		Reviewed By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
				Project Director	Chief, Mechanical-Elect. Div.	OIC, Director IV	Undersecretary	Secretary			



2 POWER LAYOUT FOR ENGINEER'S LIVING QUARTER  
FE-02 SCALE 1:100



1 LIGHTING LAYOUT FOR ENGINEER'S LIVING QUARTER  
FE-02 SCALE 1:100

**GENERAL NOTES:**


1. ALL ELECTRICAL WORKS SHALL BE DONE IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHIL. ELECT. CODE, EXISTING APPLICABLE ORDINANCES, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF THE POWER COMPANY.
2. THE TYPE OF POWER SERVICE TO USED SHALL BE SINGLE-PHASE 2-WIRE, 240 VOLTS, 60Hz, AC.
3. ALL WIRINGS SHALL BE INSTALLED IN STANDARD GALVANIZED RIGID STEEL CONDUIT, RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCK STRUCTURES, SLABS, COLUMNS, WALLS PARTITIONS AND/OR RUN BETWEEN DOUBLE WALL WOODED PARTITIONS OR INSIDE THE CEILING SPACES.
4. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm IN SIZE.
5. THE MINIMUM SIZES OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm<sup>2</sup> AND 15mm NOMINAL DIAMETER, RESPECTIVELY.
6. ALL NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE IV OF THE PHIL. ELECT. CODE, PART I, LATEST EDITION.
7. WHENEVER REQUIRED AND NECESSARY, PULL BOXES OF PROPER SIZES SHALL BE INSTALLED AT CONVENIENT AND INCONSPICUOUS LOCATIONS, ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLAN IS NOR MENTIONED IN THE SPECIFICATIONS.
8. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHT ABOVE THE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.  
A. WALL SWITCHES .....1200 mm  
B. CONVENIENCE OUTLETS .....300 mm  
C. AIR CONDITIONING OUTLETS ....AT CONVENIENT HEIGHT NEAR THE EQUIPMENT
9. STANDARD TYPE OF ACCESSORIES, SPlicing DEVICES, TERMINATORS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
11. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF THE SERVICE ENTRANCE FOR CONNECTION TO POWER COMPANY SERVICE POINT.
12. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE STRICT SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.





**NOTE:**

ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR SERVICE USED.

**ELECTRICAL SYMBOLS:**

- ⊗ CEILING LIGHT; REFER TO SCHEDULE OF LIGHTING FIXTURES AND LAMPS
- ELECTRICAL RISER
- S ONE-WAY WALL SWITCH, 15A, 250V
- S<sup>2</sup> 2 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- S<sup>3</sup> 3 ONE-WAY WALL SWITCHES ON ONE-GANG PLATE, 15A, 250V
- ⊕ DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 20A, 250V
- ⊕ HEAVY DUTY CONVENIENCE OUTLETS, SINGLE-GROUNDING TYPE, 30A, 250V
- ⊗ AIR CONDITIONING OUTLET GROUNDING TYPE WITH AUTOMATIC CIRCUIT BREAKER IN ONE ENCLOSURE
- ⊗ ENCLOSED AUTOMATIC CIRCUIT BREAKER (ACB) 70AT, 100AF, 2P, 240V
- DISTRIBUTION PANEL BOARD
- PULL BOX OR JUNCTION BOX
- Ⓜ ELECTRIC SERVICE METER
- PROPOSED SERVICE ENTRANCE WITH CAP
- CONCEALED OR EMBEDDED CONDUIT RUN
- UNDERGROUND OR UNDER FLOOR CONDUIT RUN
- CIRCUIT HOMERUN TO PANEL BOARD

  
 ERNESTO M. ANTIOQUIA  
 ENGINEER  
 PTR. NO. 7403664 P.E.E. NO. 2913  
 ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA  
 T.I.N. 109-382-379

	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	10/12/02		BUREAU OF DESIGN			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	ENGINEER'S LIVING QUARTERS LIGHTING LAYOUT, POWER LAYOUT ELECTRICAL SYMBOLS & GENERAL NOTES	FE-02
	CHECKED	10/17/02		Submitted By:	Reviewed By:	Recommended By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		
SUBMITTED	10/21/02		DANILO C. TRAJANO Project Director	FE. M. BARRIENTOS Chief, Mechanical-Elect. Div.	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary				

**SCHEDULE OF LOADS AND COMPUTATIONS**

CRT. NO.	LOAD DESCRIPTION	VA	RATING OF BRANCH BREAKER			SIZE OF HOMERUN WIRES IN CONDUIT	
			VOLTS	AF	P AT		
1	LIGHT OUTLETS	455	220	50	2	15	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
2	LIGHT OUTLETS	640	220	50	2	15	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
3	CONVENIENCE OUTLET	1440	220	50	2	20	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
4	CONVENIENCE OUTLET	1620	220	50	2	20	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
5	REFRIGERATOR	500	220	50	2	20	2-3.5mm <sup>2</sup> THW + 1-20mm <sup>2</sup> TW(G) IN 15mm $\phi$ C
6	ELECTRIC STOVE	3000	220	50	2	30	2-5.5mm <sup>2</sup> THW+1-3.5mm <sup>2</sup> TW(G) IN 20mm $\phi$ C
7	1hp,1 $\phi$ WDO,TYPE ACU	1980	220	50	2	30	2-5.5mm <sup>2</sup> THW+1-3.5mm <sup>2</sup> TW(G) IN 20mm $\phi$ C
8	1hp,1 $\phi$ WDO,TYPE ACU	1980	220	50	2	30	2-5.5mm <sup>2</sup> THW+1-3.5mm <sup>2</sup> TW(G) IN 20mm $\phi$ C
9	1hp,1 $\phi$ WDO,TYPE ACU	1980	220	50	2	30	2-5.5mm <sup>2</sup> THW+1-3.5mm <sup>2</sup> TW(G) IN 20mm $\phi$ C
10	SPARE	1500	220	50	2	20	-
11	SPARE	1500	220	50	2	20	-
12	SPARE	1500	220	50	2	20	-
TOTAL		18,095					

MAIN A.C.B. : 100AF,2P, 250V  
100 AT, 18 KAIC W/SOLID NEUTRAL

$I_v @ 90\% \text{ D.F.} = \frac{18095}{220} (0.90) + 0.25(I) = 76.03 \text{ Amps}$   
 $I_B = \frac{18095}{220} (0.90) + 1.5(I) = 86.03 \text{ Amps}$   
 MAIN ACB: 100AF,2P,250 V,100AT,15KAIC  
 USE : 2-38mm<sup>2</sup> THW + 1-14mm<sup>2</sup> TW(G) IN 40mm $\phi$  RSC

**SCHEDULE OF LIGHTING FIXTURES & LAMPS**

SYMBOLS	DESCRIPTION	MOUNTING & INSTALLATION
①	ONE (1) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
②	ONE (2) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
③	ONE (1)-SL-18 LAMP WITH HEXLESS TYPE, MEDIUM BASE PORCELAIN RECEPTACLE	SURFACE CEILING MOUNTED

NOTE:  
ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAS, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.

**ENGINEER'S LIVING QUARTERS**

**SCHEDULE OF LOADS AND COMPUTATIONS**

CRT. NO.	LOAD DESCRIPTION	VA	RATING OF BRANCH BREAKER			SIZE OF HOMERUN WIRES IN CONDUIT	
			VOLTS	AF	P AT		
1	LIGHT OUTLETS	590	220	50	2	15	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
2	LIGHT OUTLETS	1210	220	50	2	15	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
3	LIGHT OUTLETS	1065	220	50	2	15	2-3.5mm <sup>2</sup> THW in 15mm $\phi$ C
4	CONVENIENCE OUTLETS	1800	220	50	2	20	2-3.5mm <sup>2</sup> THW + 1-2.0mm <sup>2</sup> TW(G) IN 15mm $\phi$ C
5	CONVENIENCE OUTLETS	1620	220	50	2	20	2-3.5mm <sup>2</sup> THW + 1-2.0mm <sup>2</sup> TW(G) IN 15mm $\phi$ C
6	PHOTOCOPIY MACHINE /HEAVY DUTY CO.	2500	220	50	2	20	2-3.5mm <sup>2</sup> THW + 1-2.0mm <sup>2</sup> TW(G) IN 15mm $\phi$ C
7	3TR,1 $\phi$ ,SPLIT TYPE ACU	6930	220	100	2	70	2-8mm <sup>2</sup> THW + 1-5.5mm <sup>2</sup> TW(G) IN 25mm $\phi$ C
8	3TR,1 $\phi$ ,SPLIT TYPE ACU	6930	220	100	2	70	2-8mm <sup>2</sup> THW + 1-5.5mm <sup>2</sup> TW(G) IN 25mm $\phi$ C
9	3TR,1 $\phi$ ,SPLIT TYPE ACU	6930	220	100	2	70	2-8mm <sup>2</sup> THW + 1-5.5mm <sup>2</sup> TW(G) IN 25mm $\phi$ C
10	SPARE	5000	220	100	2	70	-
11	SPARE FOR PARAMETER LIGHTS	1500	220	50	2	30	2-5.5mm <sup>2</sup> THW + 1-3.5mm <sup>2</sup> TW(G) IN 25mm $\phi$ C
12	SPARE	1500	220	50	2	20	-
TOTAL		37,575					

MAIN A.C.B. : 225AF,2P, 250V  
200 AT, 18 KAIC W/SOLID NEUTRAL

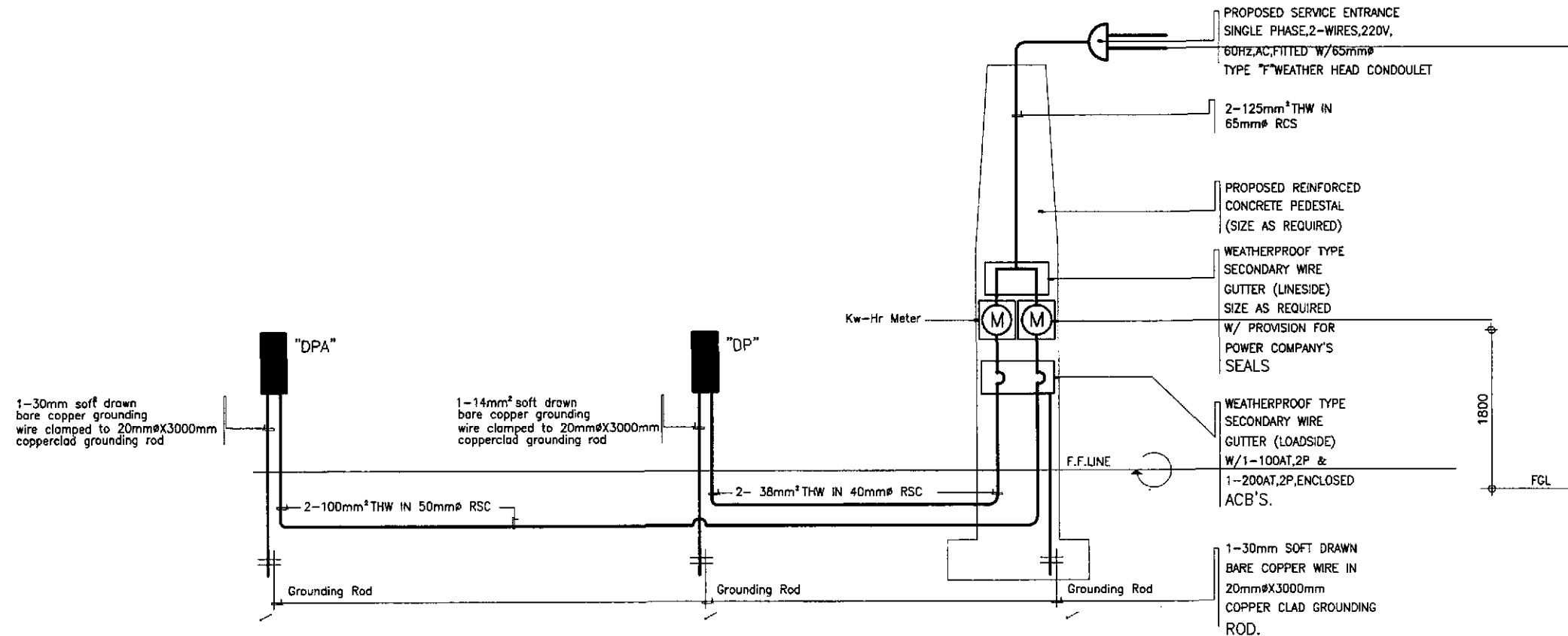
$I_v @ 95\% \text{ D.F.} = \frac{37575(0.95)}{220} + 0.25(23) = 168 \text{ Amps}$   
 USE : 2-100mm<sup>2</sup> THW + 1-30mm<sup>2</sup> TW IN 50mm $\phi$  RSC  
 $I_B = 162.25567 + 1.5(23) = 196.75 \text{ Amps.}$   
 MAIN ACB: 225AF,2P,250 V,200AT,18 KAIC

**SCHEDULE OF LIGHTING FIXTURES & LAMPS**

SYMBOLS	DESCRIPTION	MOUNTING & INSTALLATION
①	ONE (1) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
②	ONE (2) 40 WATTS, 220V, FLUORESCENT LIGHTING FIXTURES, BOX TYPE	SURFACE CEILING MOUNTED
③	ONE (1)-SL-18 LAMP WITH HEXLESS TYPE, MEDIUM BASE PORCELAIN RECEPTACLE	SURFACE CEILING MOUNTED

NOTE:  
ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR PRE-HEAT WITH STARTER TYPE BALLAS, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.

**ENGINEER'S FIELD OFFICE/LABORATORY**

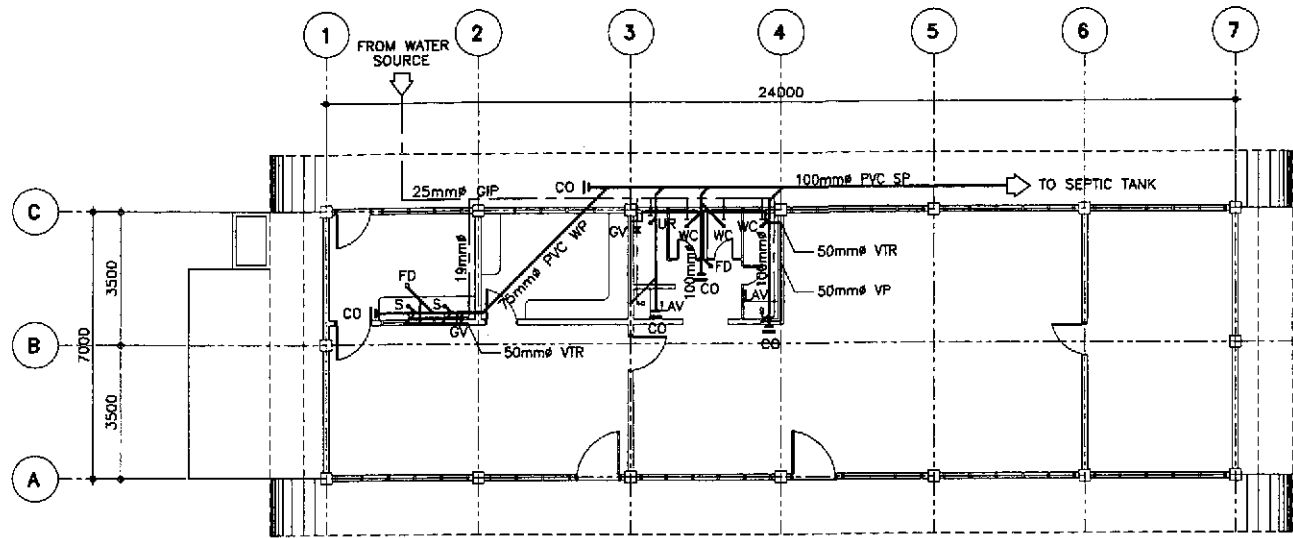


COMPUTATION FOR REQUIRED SIZE OF MAIN SERVICE ENTRANCE FEEDER:  
 $I_T = \frac{VA^{DPA} + VA^{AP}}{220} @ 85\% \text{ DF} + 0.25(I)$   
 $I_T = \frac{37575 + 18095}{220} (0.85) + 0.25(23)$   
 $I_T = 220.83 \text{ Amps.}$   
 USE : 2-125 mm<sup>2</sup> THW IN 65 mm $\phi$  RSC

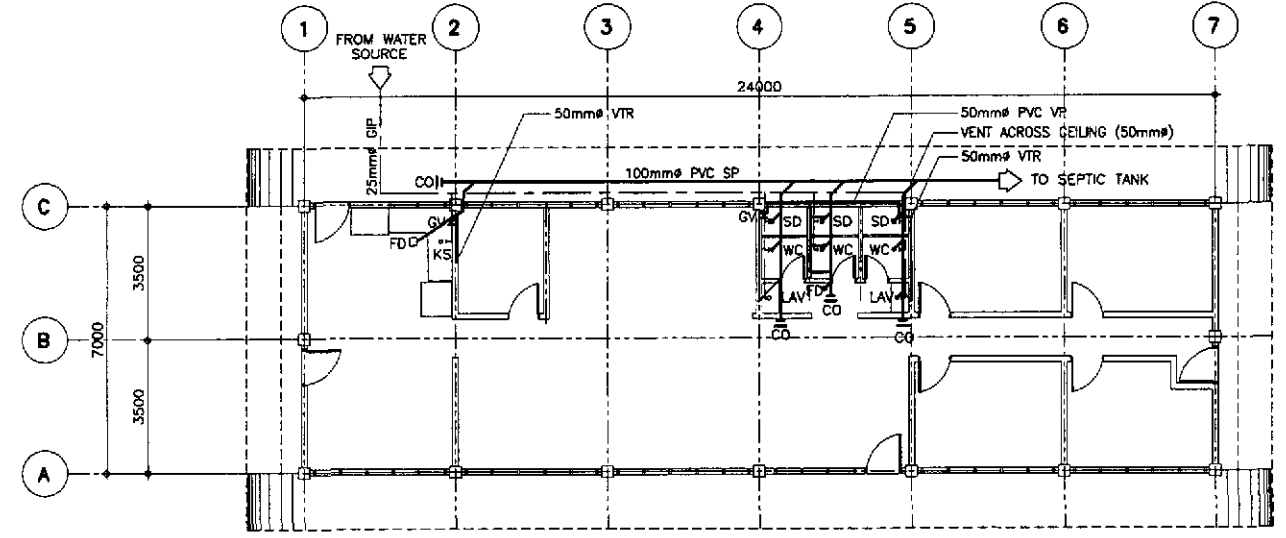
1 ELECTRICAL RISER DIAGRAMS  
FE-03 NOT TO SCALE

*Ernesto M. Antioquia*  
 ERNESTO M. ANTIOQUIA  
 ENGINEER  
 PTR. NO. 7403664 P.E.E. NO. 2913  
 ISSUED ON 01/02/2002 ISSUED AT CABUYAO, LAGUNA  
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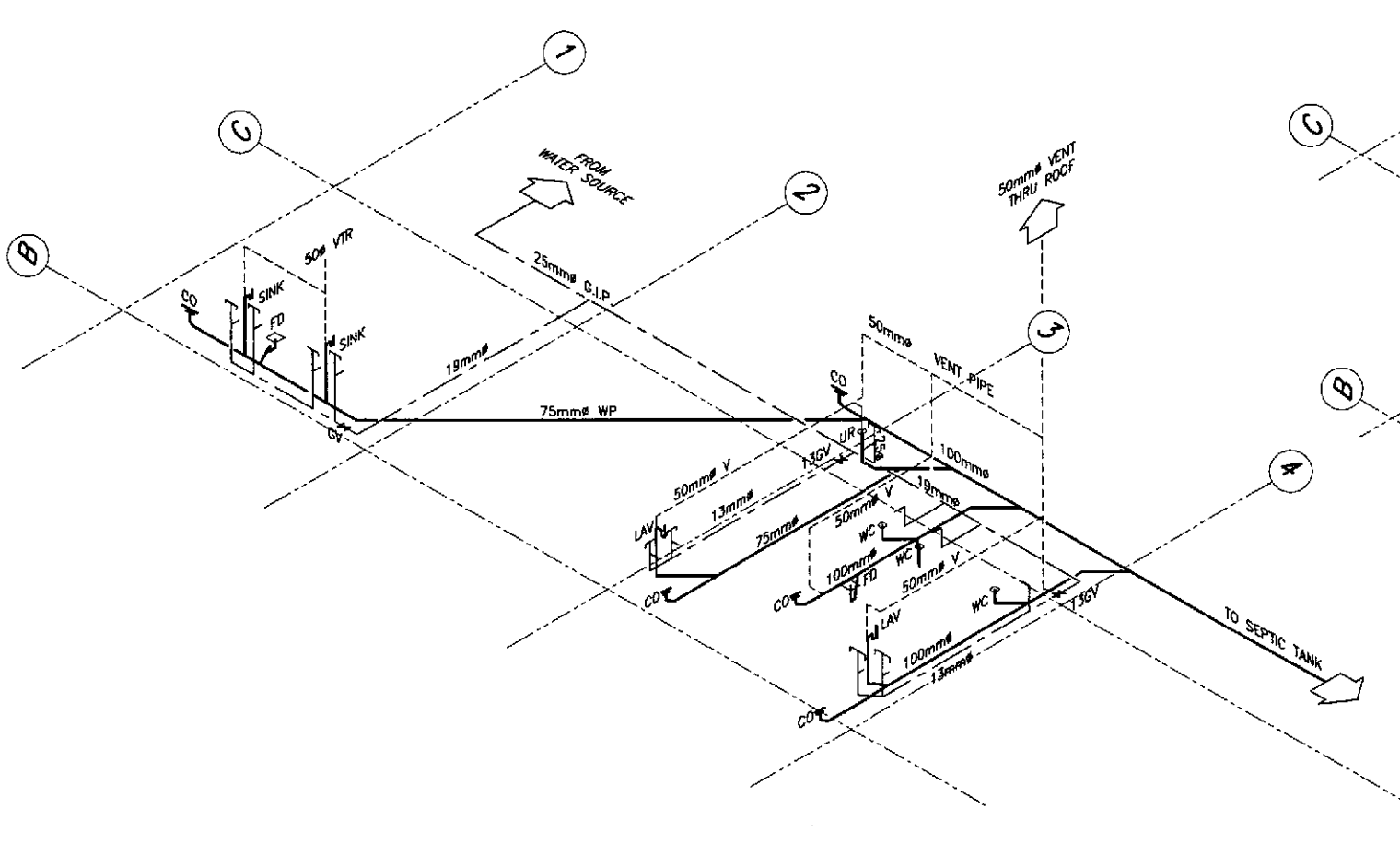


1 ENGINEER'S FIELD OFFICE  
SEWER AND WATER LINE LAYOUT  
FP-01 SCALE 1:100

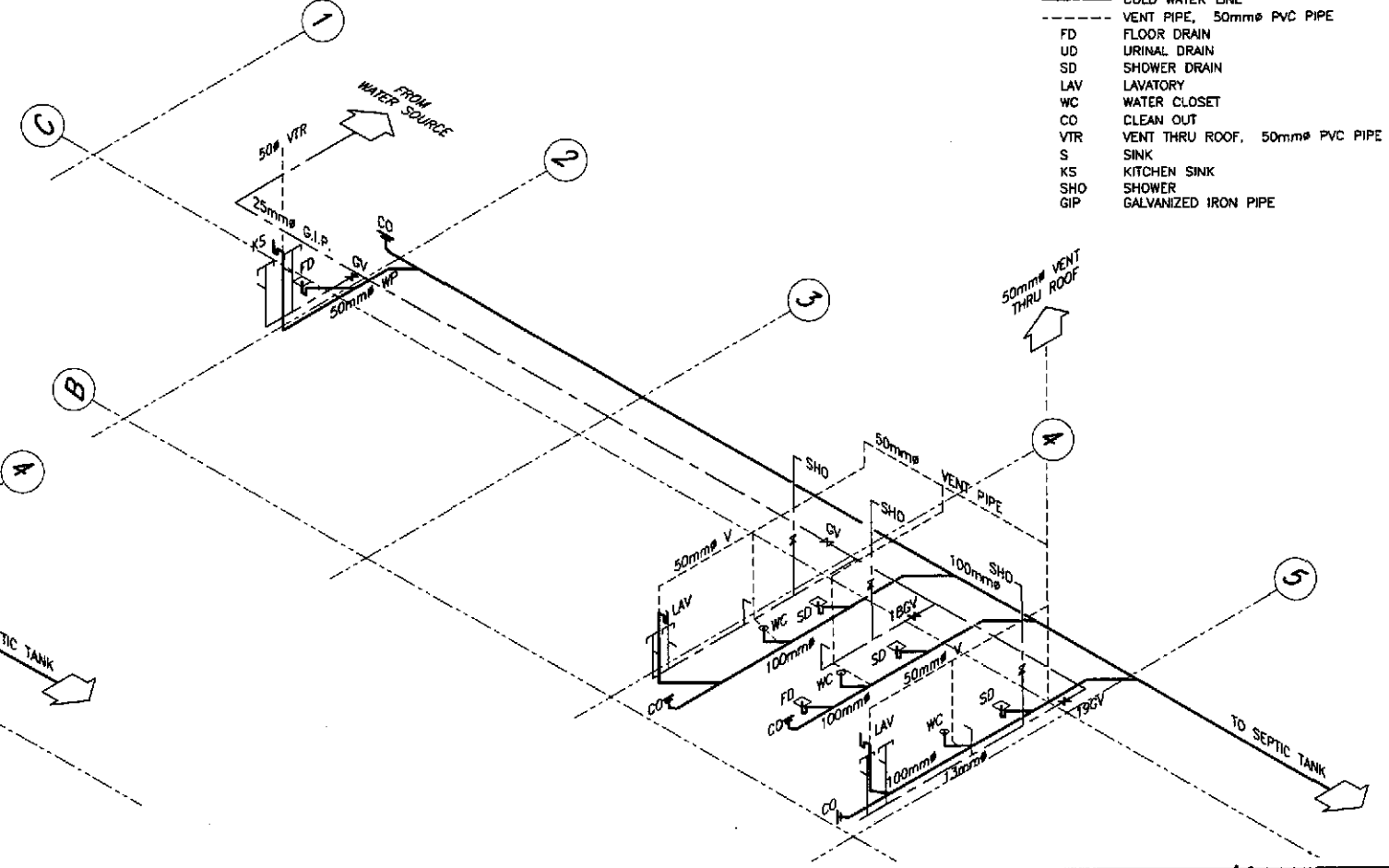


2 ENGINEER'S LIVING QUARTER  
SEWER AND WATER LINE LAYOUT  
FP-01 SCALE 1:100

- LEGEND :
- SEWER LINE
  - COLD WATER LINE
  - - - VENT PIPE, 50mm PVC PIPE
  - FD FLOOR DRAIN
  - UD URINAL DRAIN
  - SD SHOWER DRAIN
  - LAV LAVATORY
  - WC WATER CLOSET
  - CO CLEAN OUT
  - VTR VENT THRU ROOF, 50mm PVC PIPE
  - S SINK
  - KS KITCHEN SINK
  - SHO SHOWER
  - GIP GALVANIZED IRON PIPE



3 (SHOWING SEWER AND WATER LINE)  
ISOMETRIC DIAGRAM  
FP-01 SCALE 1:50

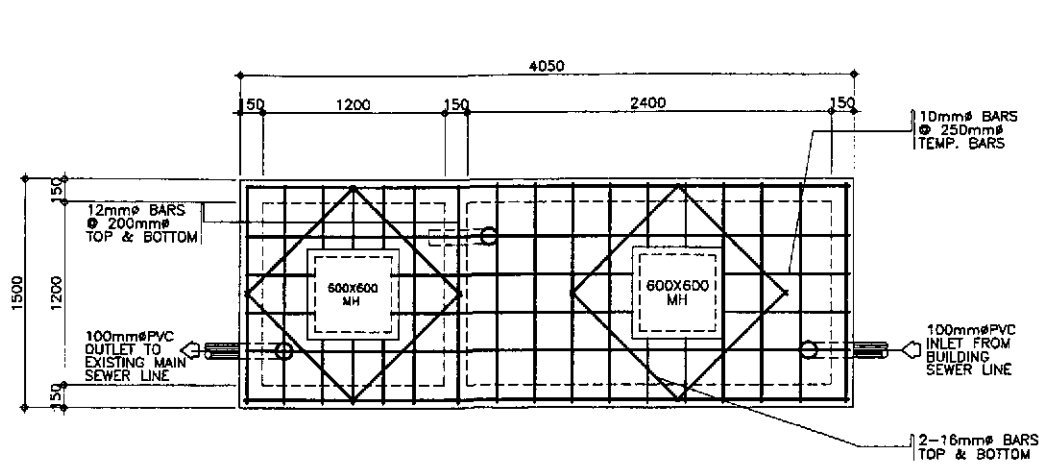


4 (SHOWING SEWER AND WATER LINE)  
ISOMETRIC DIAGRAM  
FP-01 SCALE 1:50

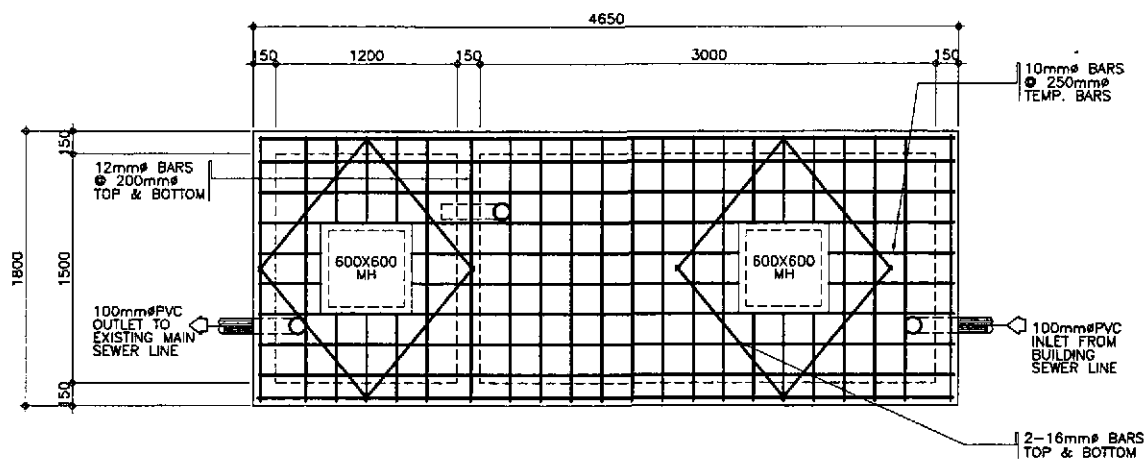
*FAUSTINO STA MARIA*  
SANITARY ENGINEER

PTR. NO. 0083138 P.R.C. NO. 0000695  
ISSUED ON 03/26/2002 T.I.N. 119-878-225  
ISSUED AT SAN MATEO, RIZAL

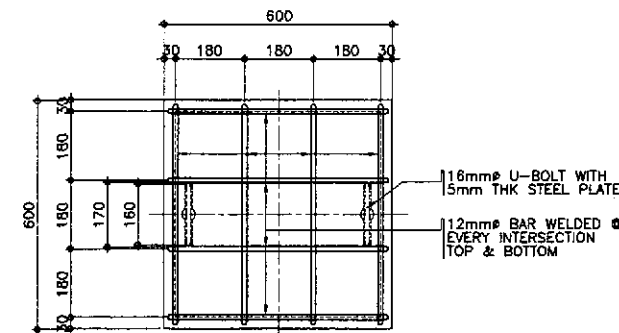
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</b> <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : <b>ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEWER AND WATER LINE LAYOUT AND ISOMETRIC DIAGRAM</b>	SHEET NO. : <b>FP-01</b>
	CHECKED	10/12/02	<i>FAUSTINO STA MARIA</i>		Submitted By:	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	Approved By:				
SUBMITTED	10/21/02	<i>FAUSTINO STA MARIA</i>	TEAM LEADER	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				



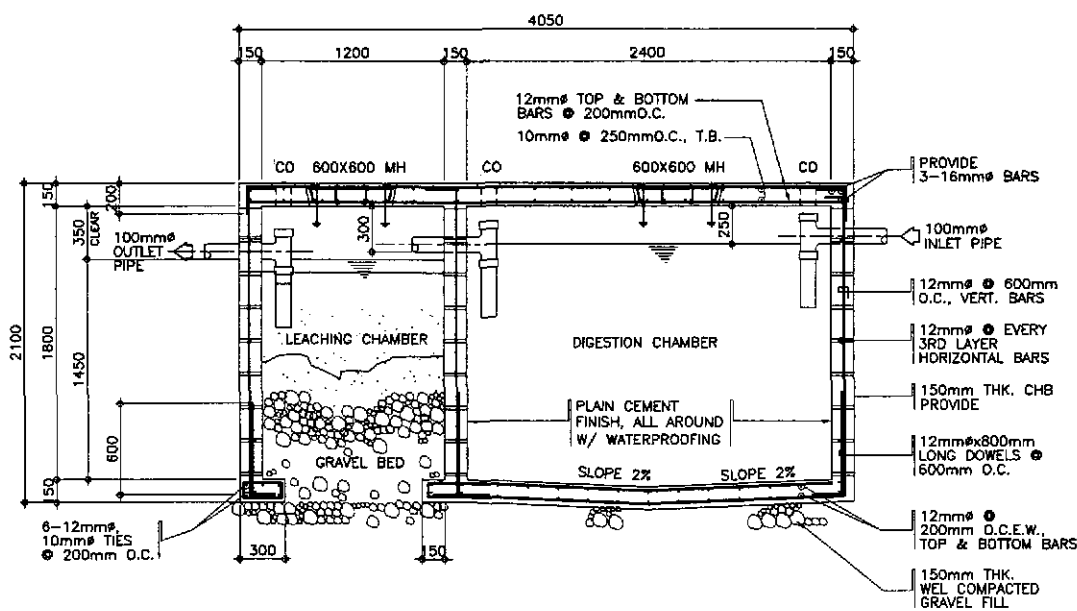
1A PLAN  
FP-02 SCALE 1:20



1C PLAN  
FP-02 SCALE 1:20

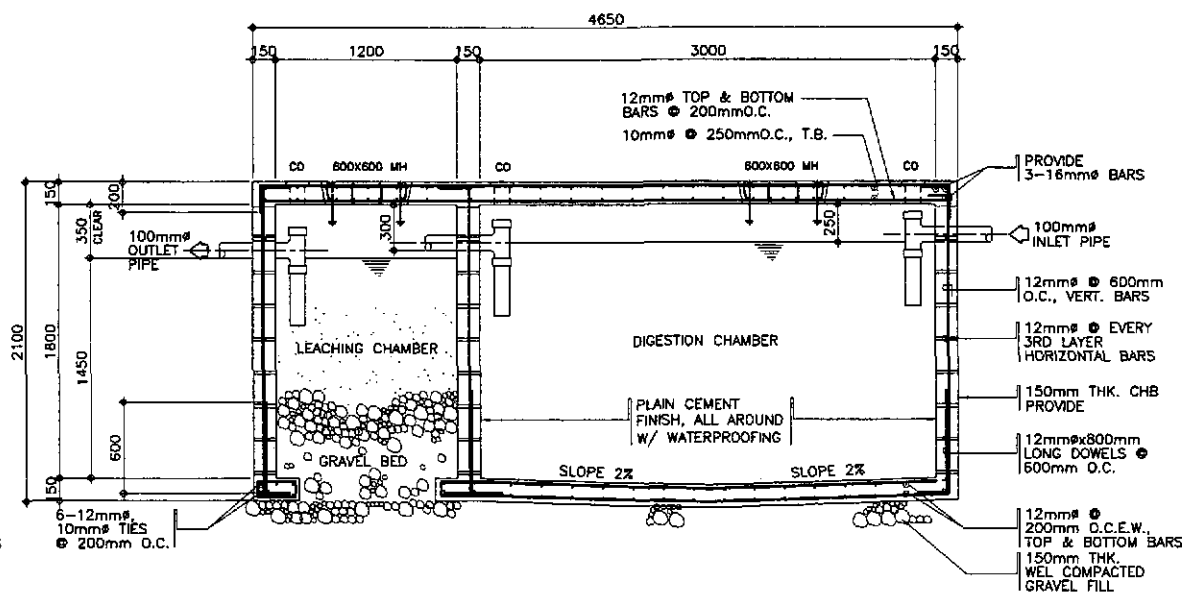


2A PLAN  
FP-02 SCALE 1:20



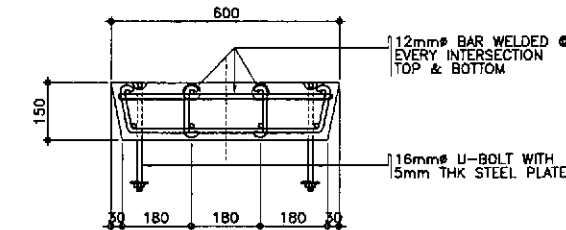
1B SECTION  
FP-02 SCALE 1:20

ENGINEER'S FIELD OFFICE



1D SECTION  
FP-02 SCALE 1:20

ENGINEER'S LIVING QUARTER



2B SECTION  
FP-02 SCALE 1:20

2 CONCRETE COVER DETAIL  
FP-02 SCALE AS SHOWN

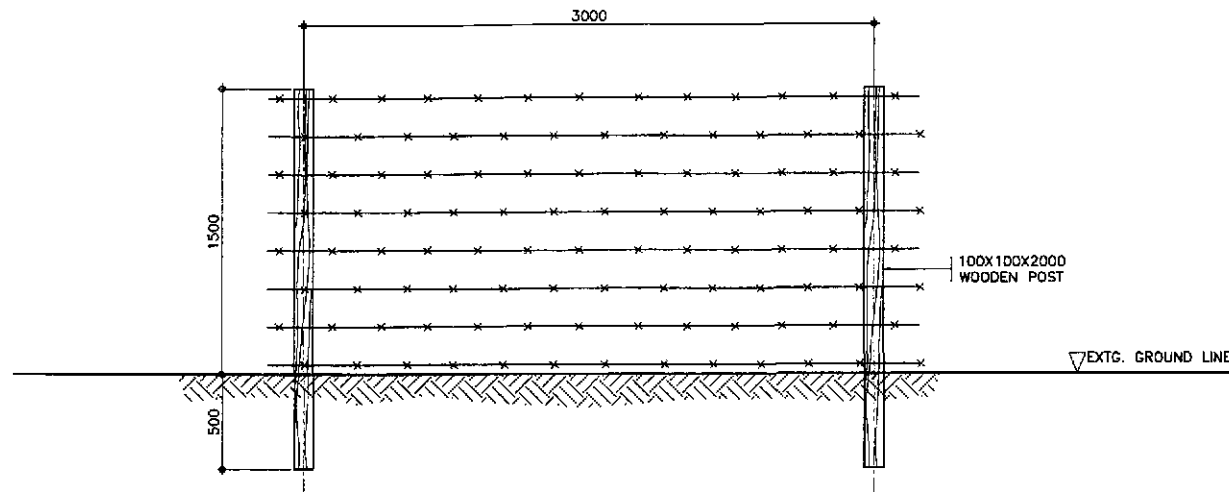
GENERAL NOTES:

1. ALL PLUMBING WORKS INCLUDED HEREIN EXECUTED ACCORDING TO THE PROVISIONS AND REQUIREMENTS OF THE PHILIPPINE NATIONAL PLUMBING CODE.
2. SOIL AND WASTE PIPE LINE SHALL BE PVC, SIZE AS IN DRAWING.
3. ALL WATER LINES SHALL BE G.I. PIPE SCHEDULE 40 AND SIZE OF PIPES TO THE FIXTURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
4. PROVIDE 2% SLOPE FOR HOUSE AND SEWER LINES.
5. ALL G.I. PIPES AND FITTINGS BURIED UNDERGROUND SHALL BE LEAD COATED OR TAR COATED.
6. VENT THRU ROOF PIPE SHALL BE AT LEAST 0.30m ABOVE ROOF.
7. ALL DOWNSPOUTS SHALL BE PVC PIPES 75mm (3") UNLESS OTHERWISE SPECIFIED.

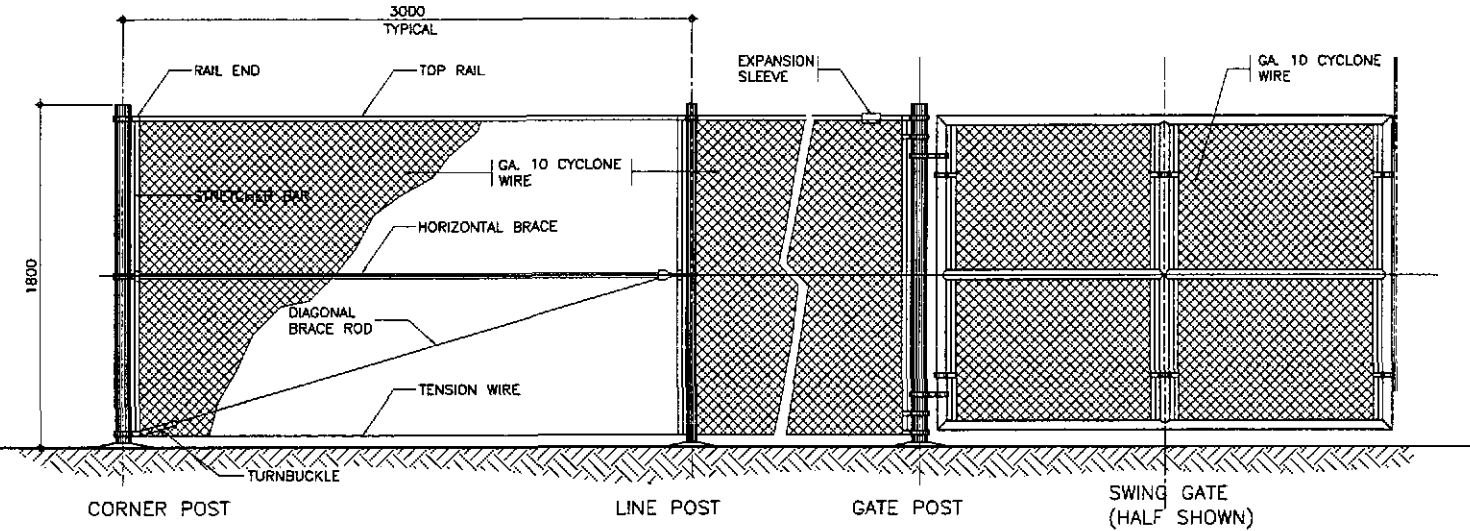
1 SEPTIC TANK DETAILS  
FP-02 SCALE AS SHOWN

*[Signature]*  
SANITARY ENGINEER  
PTR. NO. 0083138 P.R.C. NO. 0000695  
ISSUED ON 03/26/2002 T.I.N. 119-878-225  
ISSUED AT SAN MATEO, RIZAL

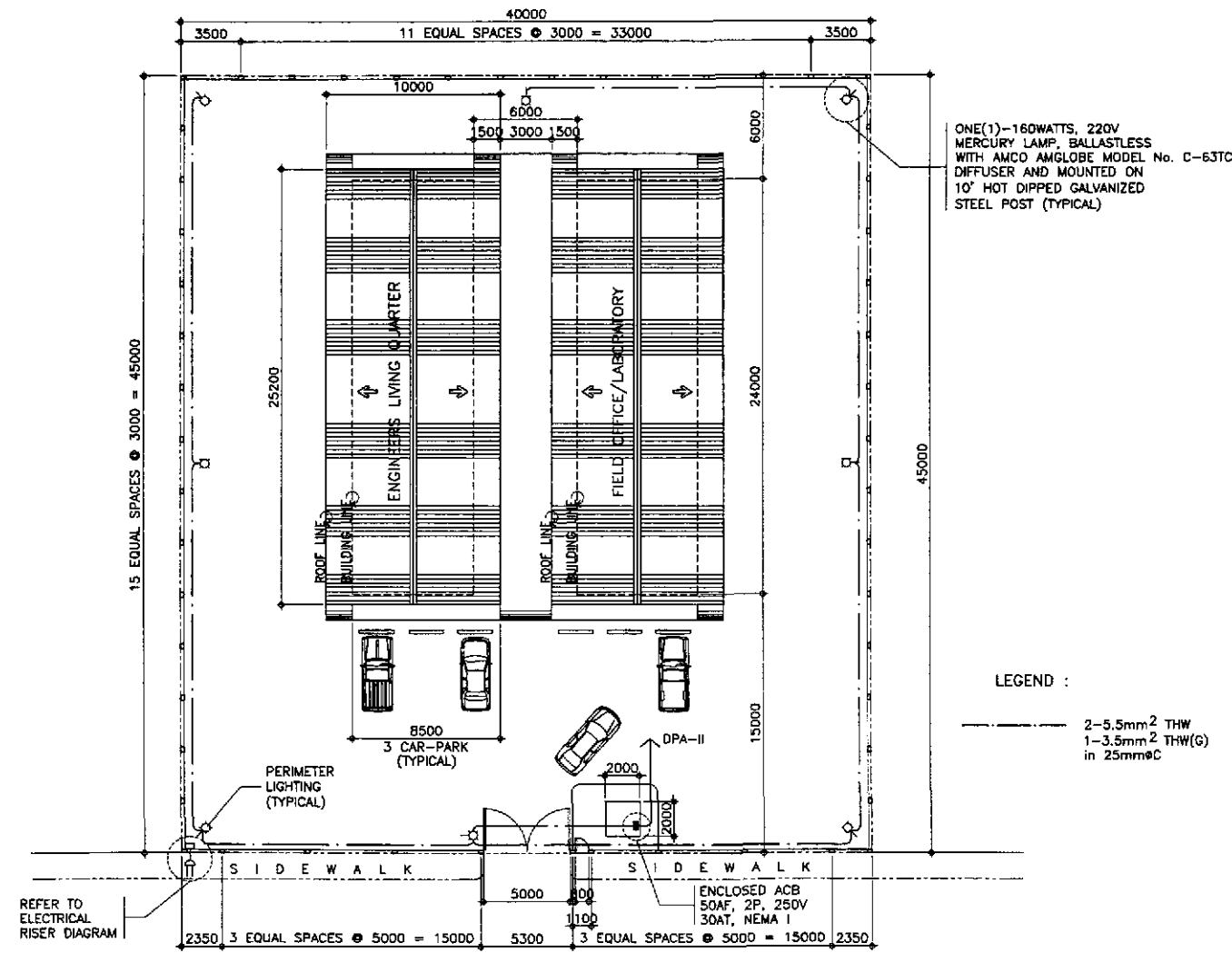
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE :	SHEET CONTENTS : ENGINEER'S FIELD OFFICE AND LIVING QUARTERS SEPTIC TANK DETAILS	SHEET NO. :
	CHECKED	10/19/02	<i>[Signature]</i>		BUREAU OF DESIGN					AS SHOWN		SHEET NO. : <b>FP-02</b>
	SUBMITTED	10/21/02	<i>[Signature]</i>		Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: EMMANUEL P. CUNTAPAY Chief, Architectural Division	Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended By: MANUEL M. BONANAN Undersecretary		Approved By: SIMEON A. DATUMANONG Secretary		



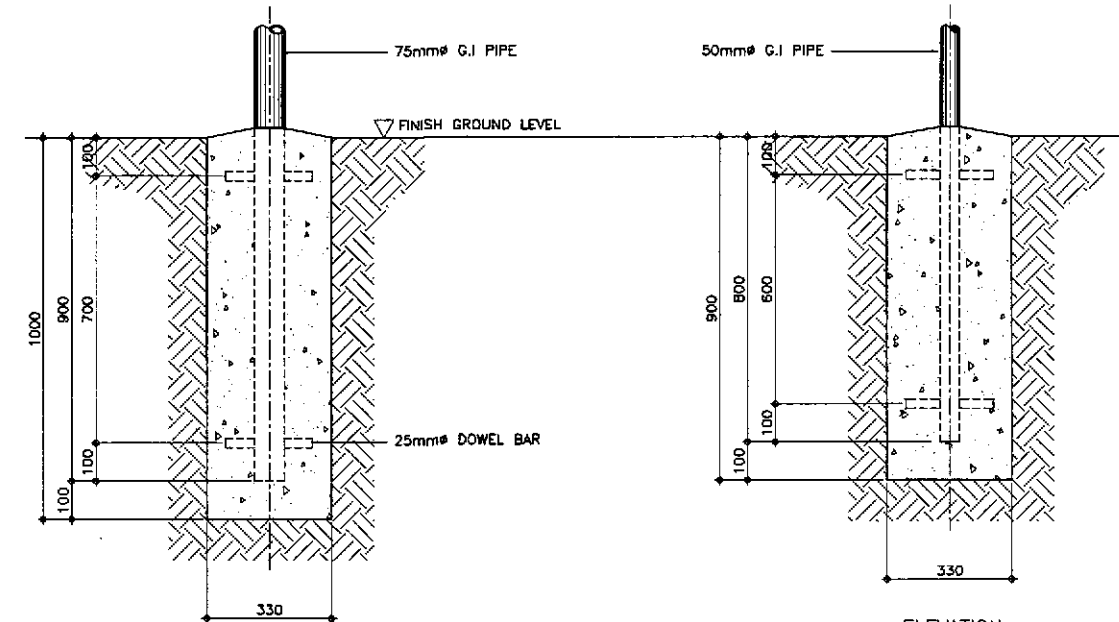
3 TYPICAL ELEVATION FENCE (REAR & SIDE)  
FX-01 SCALE 1:20



2 TYPICAL ELEVATION - FENCE AND GATE  
FX-01 SCALE 1:20



1 PLOT PLAN  
FX-01 SCALE 1:200



ELEVATION  
PLAN  
CORNER AND GATE POST

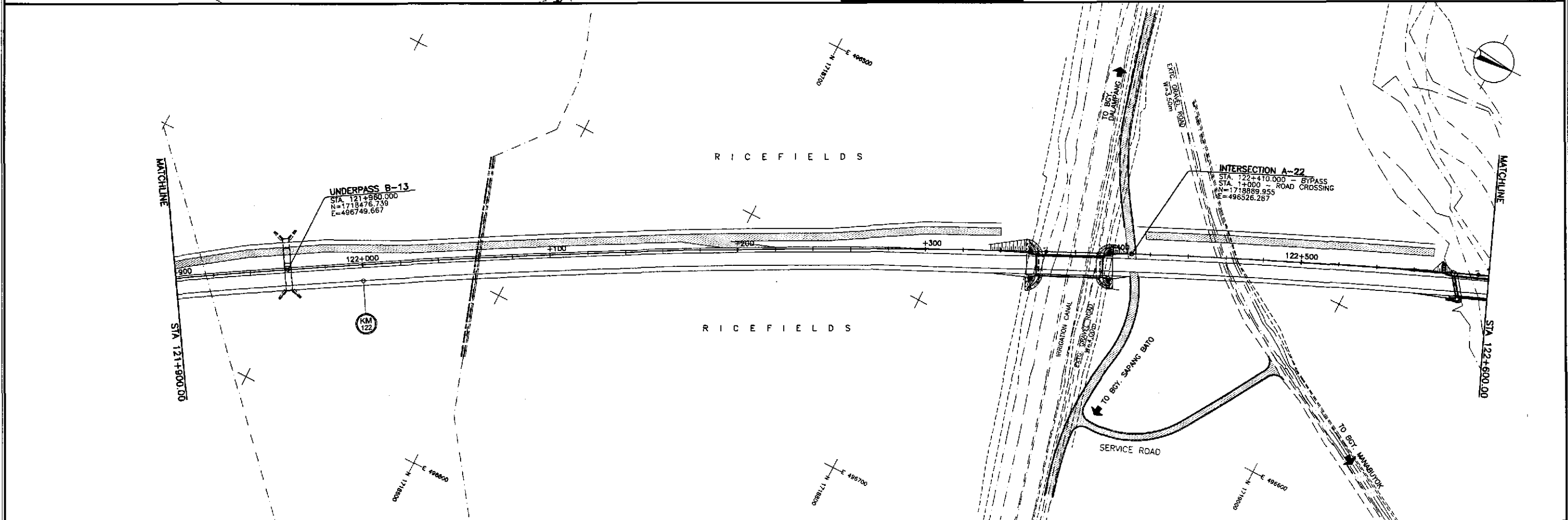
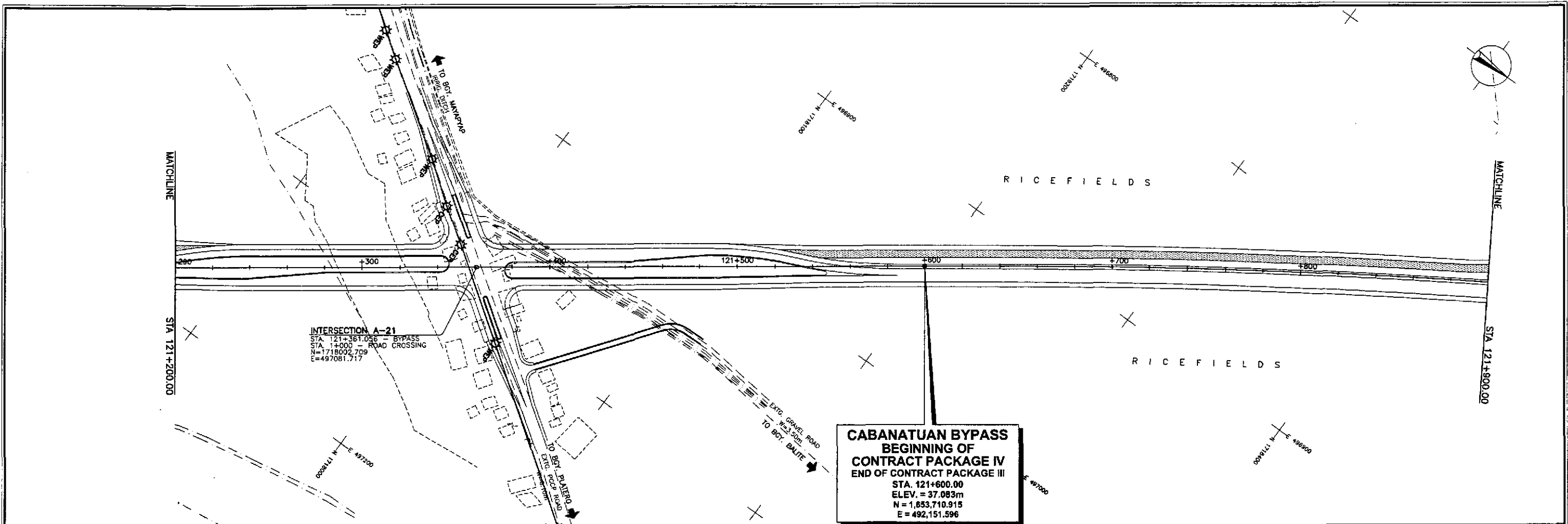
ELEVATION  
PLAN  
LINE POST

4 TYPICAL FOUNDATION DETAIL  
FX-01 SCALE 1:10

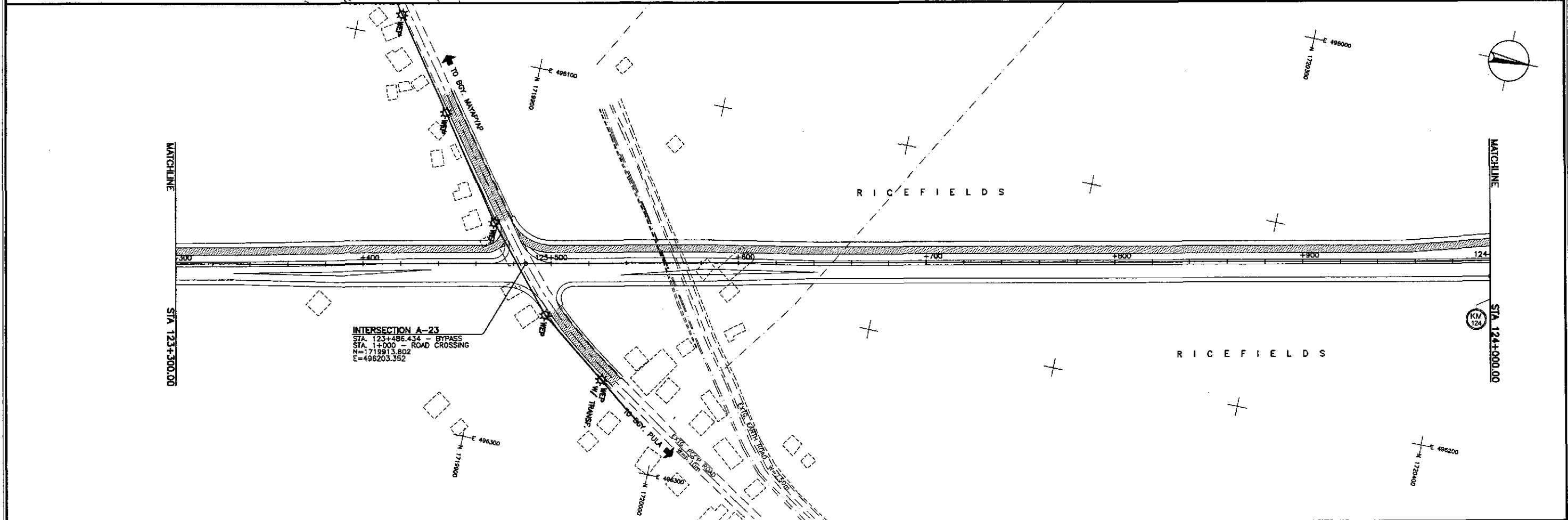
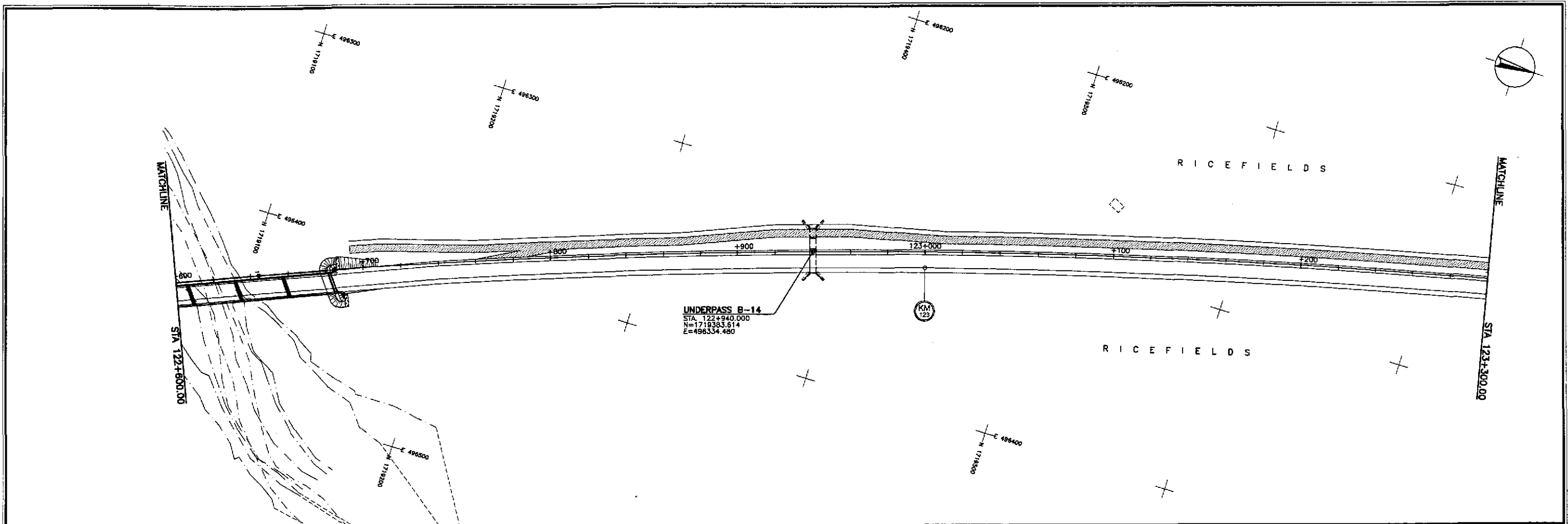
ARIEL P. GONZALES  
ENGINEER  
PTR. NO. 5846340 P.R.C. NO. 33457  
ISSUED ON 04/26/2002 T.I.N. 138-062-682  
ISSUED AT SAN JUAN, M.M.

	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) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : <b>ENGINEER'S FIELD OFFICE          AND LIVING QUARTERS</b> PLOT PLAN, ELEVATION OF FENCE & GATE TYPICAL FOUNDATION DETAILS	SHEET NO. : <b>FX-01</b>
	CHECKED	10/17/02	A. P. GONZALES		Submitted By:	Reviewed By:	Recommended By:				
	SUBMITTED	10/26/02	Team Leader	DANILO C. TRAJANO Project Director	EMMANUEL P. CUNTAPAY Chief, Architectural Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SIMON A. DATUMANONG Secretary			

**OTHERS**



	DESIGNED	10/12/02	S. Gose		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) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 121+600 - STA. 122+600	SHEET NO. : <b>OE-01</b>
	CHECKED	10/14/02	S. Gose		BUREAU OF DESIGN Submitted By: DANILO C. TRAJANO (Project Director) Reviewed By: JOSEFINA M. ALAGAR (Chief, Highways Division) Recommended By: GILBERTO S. REYES (OIC, Director IV), MANUEL M. BONDAN (Undersecretary), SIMEON A. DATUMANONG (Secretary)								
	SUBMITTED	10/21/02	M. Kondo										



  
**JICA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY  
 KATAHIRA & ENGINEERS INTERNATIONAL  
 YACHIYO ENGINEERING CO., LTD.

DATE	SIGNATURE
DESIGNED 10/14/02	<i>S. G. G. OSE</i>
CHECKED 10/14/02	<i>S. G. G. OSE</i>
SUBMITTED 10/21/02	<i>Mrs. K. K. K.</i>

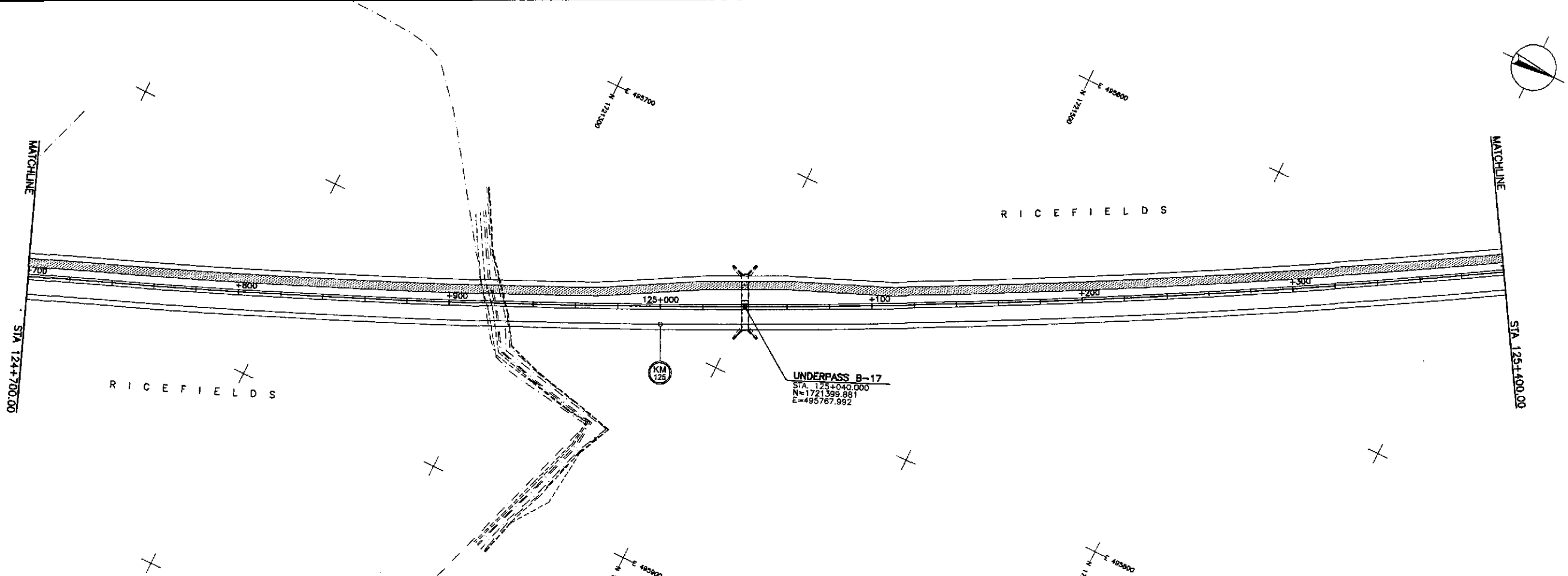
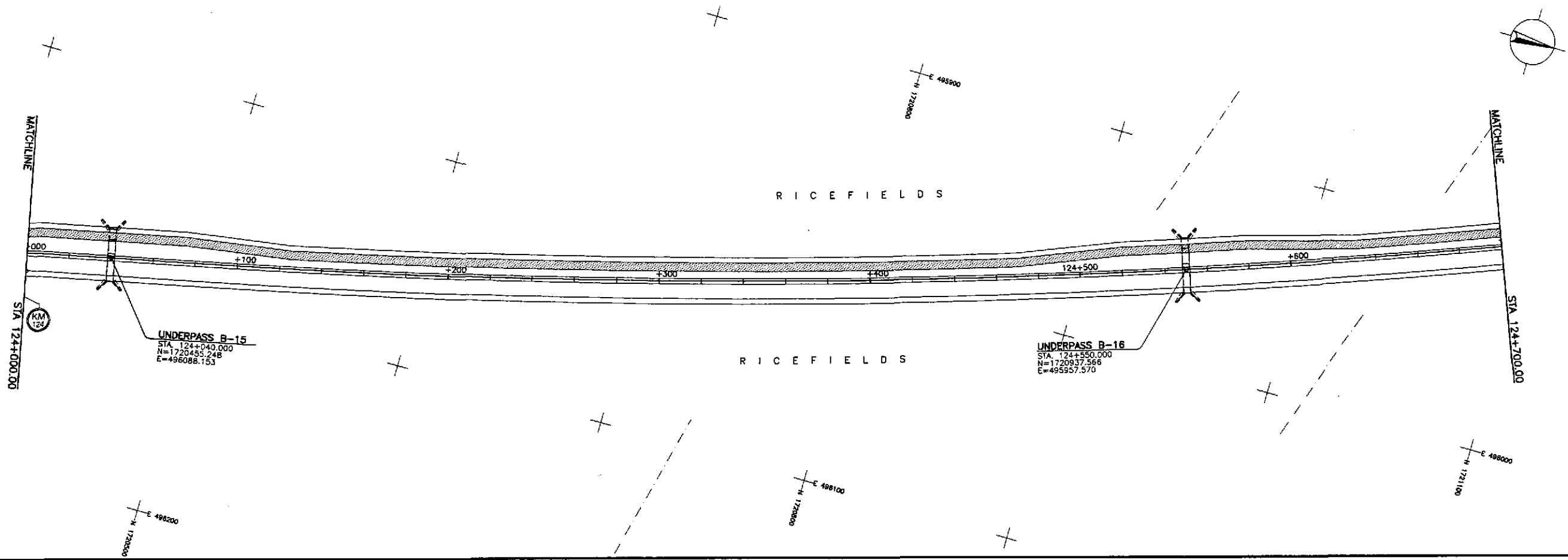
BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By: DANIEL C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES Dir. Director IV	Approved By: MANUEL M. BONDAN Undersecretary

PROJECT AND LOCATION :  
 THE DETAILED DESIGN STUDY ON  
 UPGRADING INTER-URBAN HIGHWAY SYSTEM  
 ALONG THE PAN-PHILIPPINE HIGHWAY  
 (Palarid, Cabanatuan and San Jose Bypasses)  
**CABANATUAN BYPASS - CONTRACT PACKAGE IV**

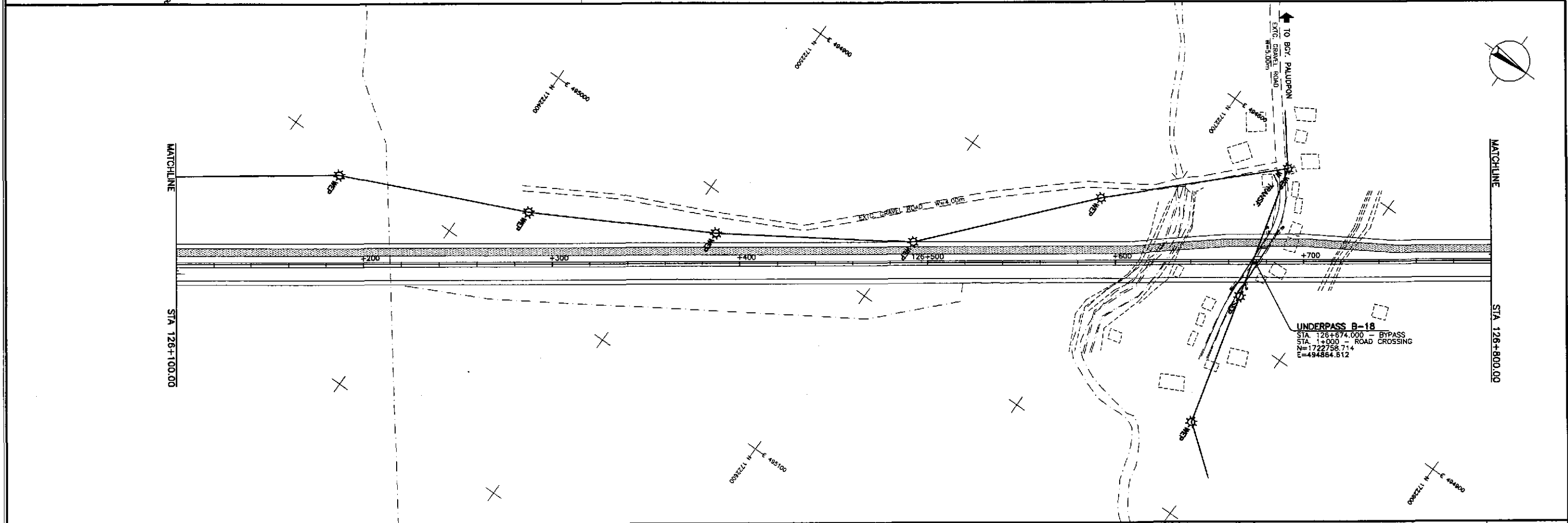
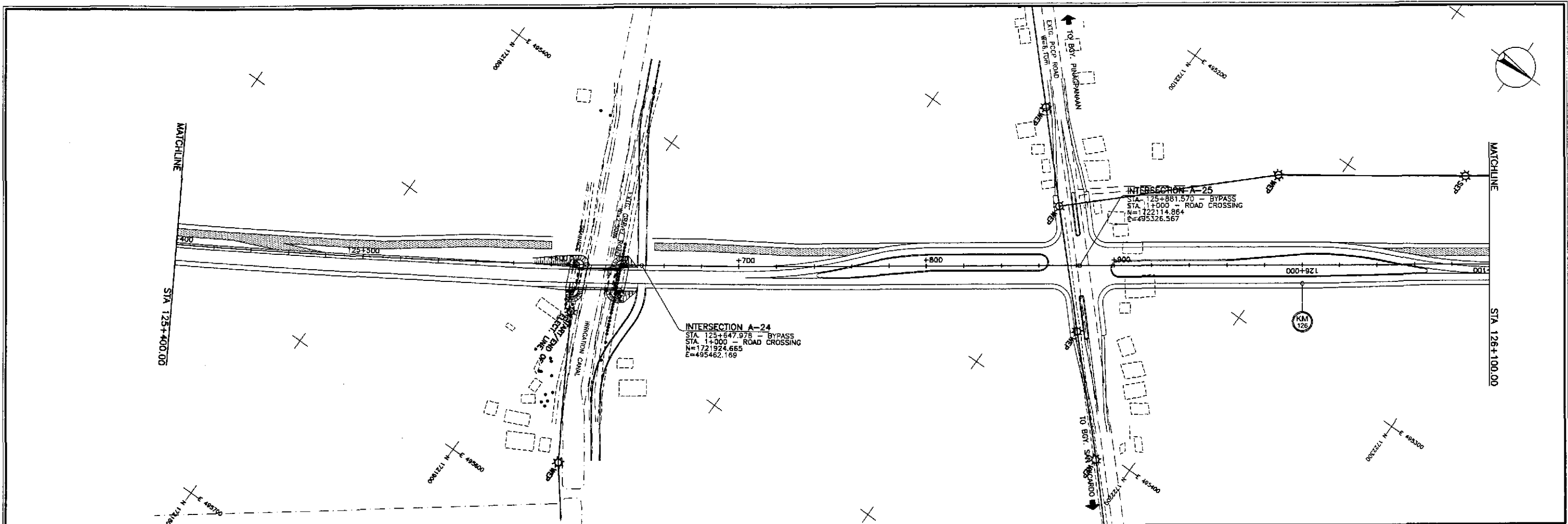
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SHEET CONTENTS :  
 UTILITY RELOCATION REFERENCE  
 LAYOUT PLAN  
 ALONG BYPASS  
 STA. 122+600 - STA. 124+000

SHEET NO. :  
**OE-02**

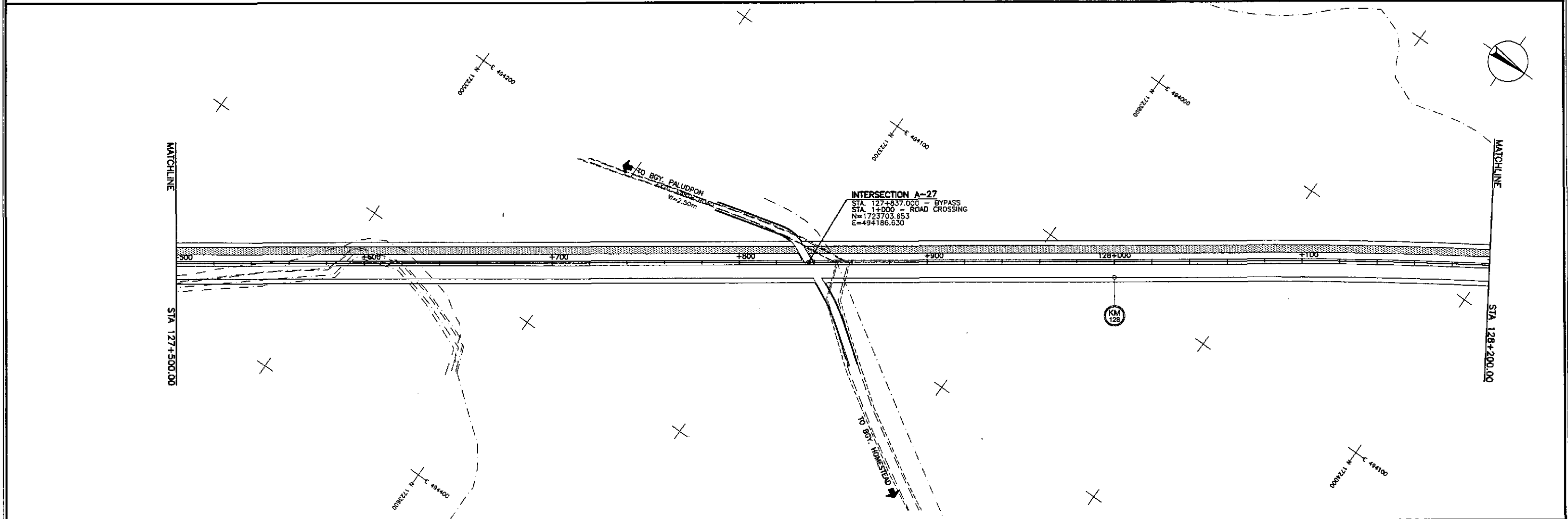
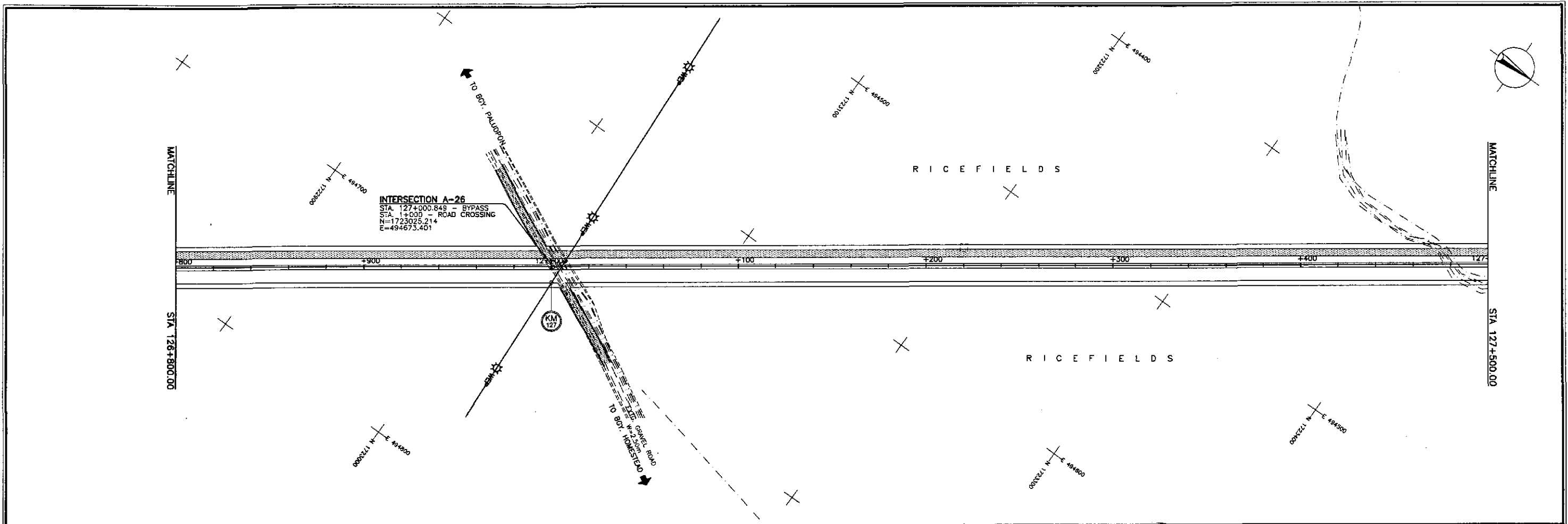


	DESIGNED	10/12/02	<i>S. P. Del</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 124+000 - STA. 125+400	SHEET NO. : <b>OE-03</b>
	CHECKED	10/17/02	<i>S. P. Del</i>		FUJIL - PMO Submitted By:	BUREAU OF DESIGN Reviewed By:	OFFICE OF THE SECRETARY Recommended By:				
	SUBMITTED	10/21/02	<i>Mr. Rando</i>		DANILDO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OC, Director IV				

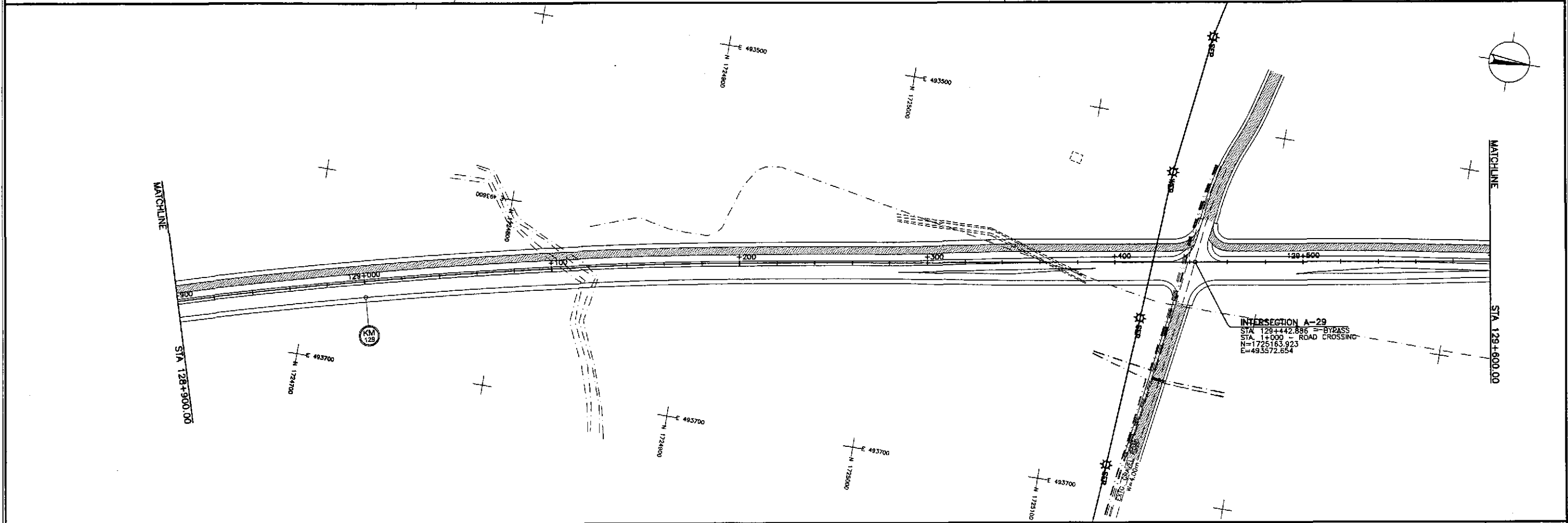
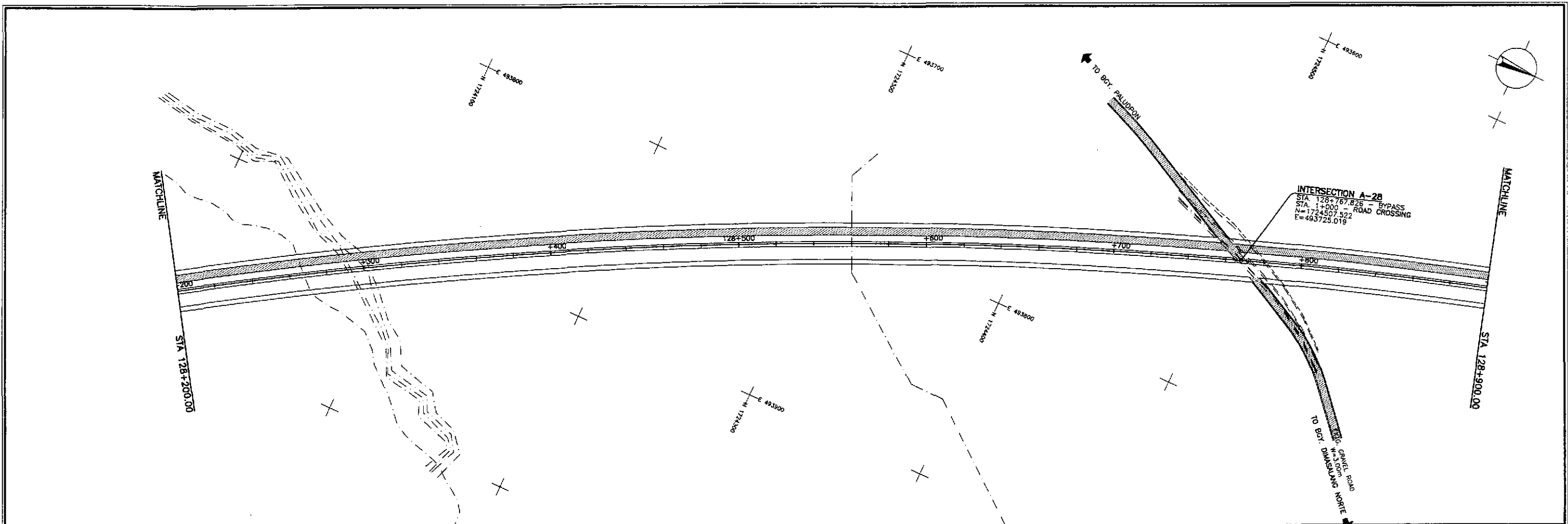


	DESIGNED	10/12/02	<i>S. Gose</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 125+400 - STA. 126+800	SHEET NO. : OE-04
	CHECKED	10/19/02	<i>S. Gose</i>		PUHL - PMO Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
	SUBMITTED	10/11/02	<i>M. Kundi</i>		DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary				

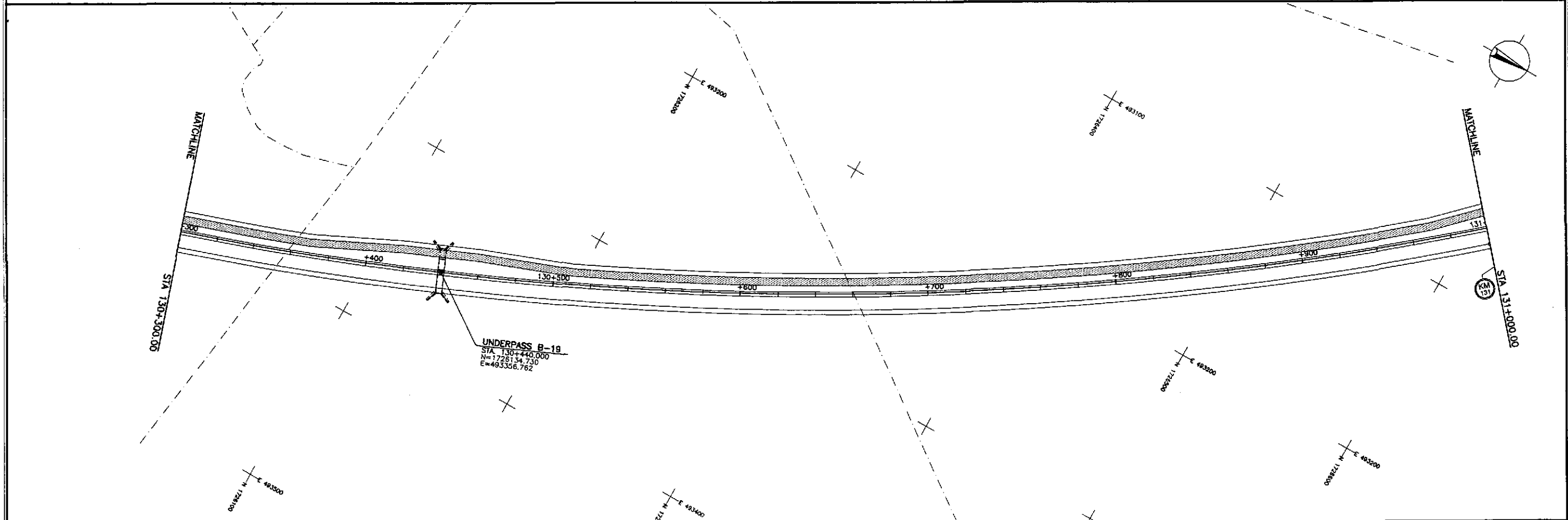
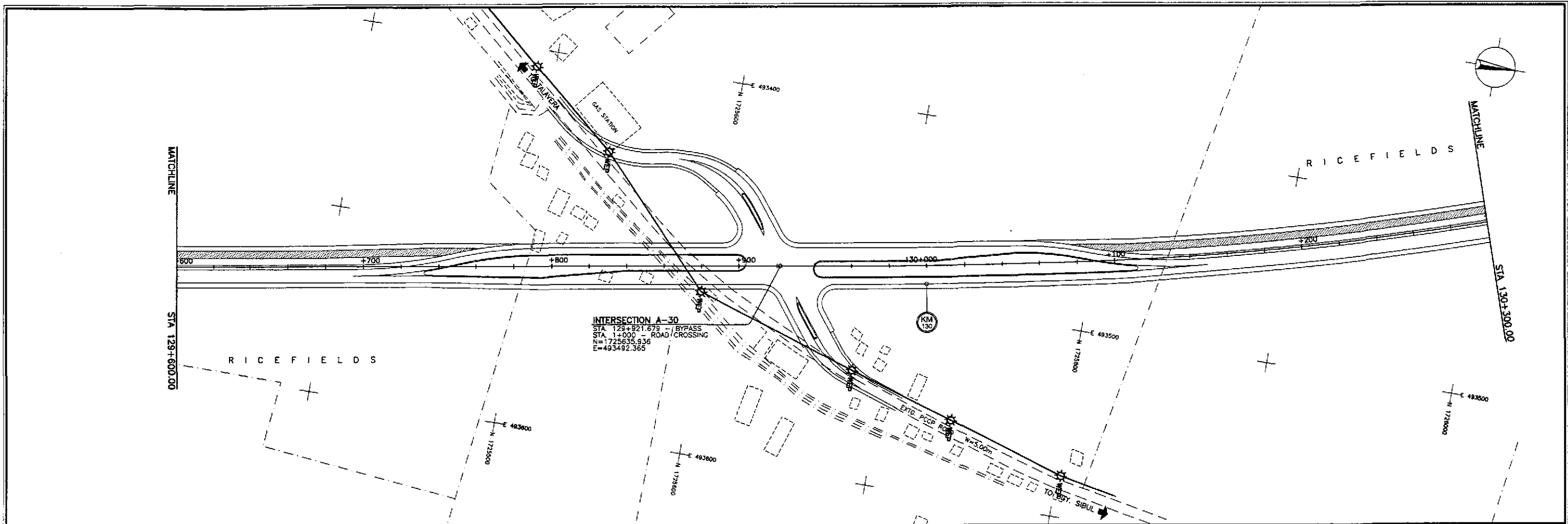




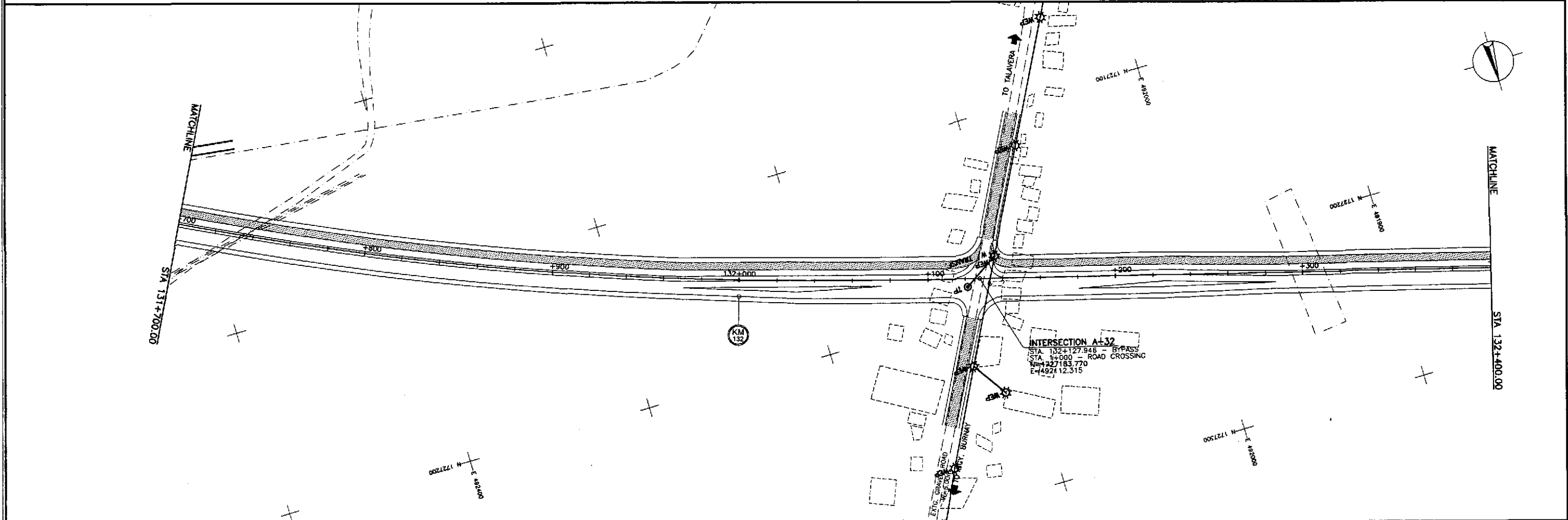
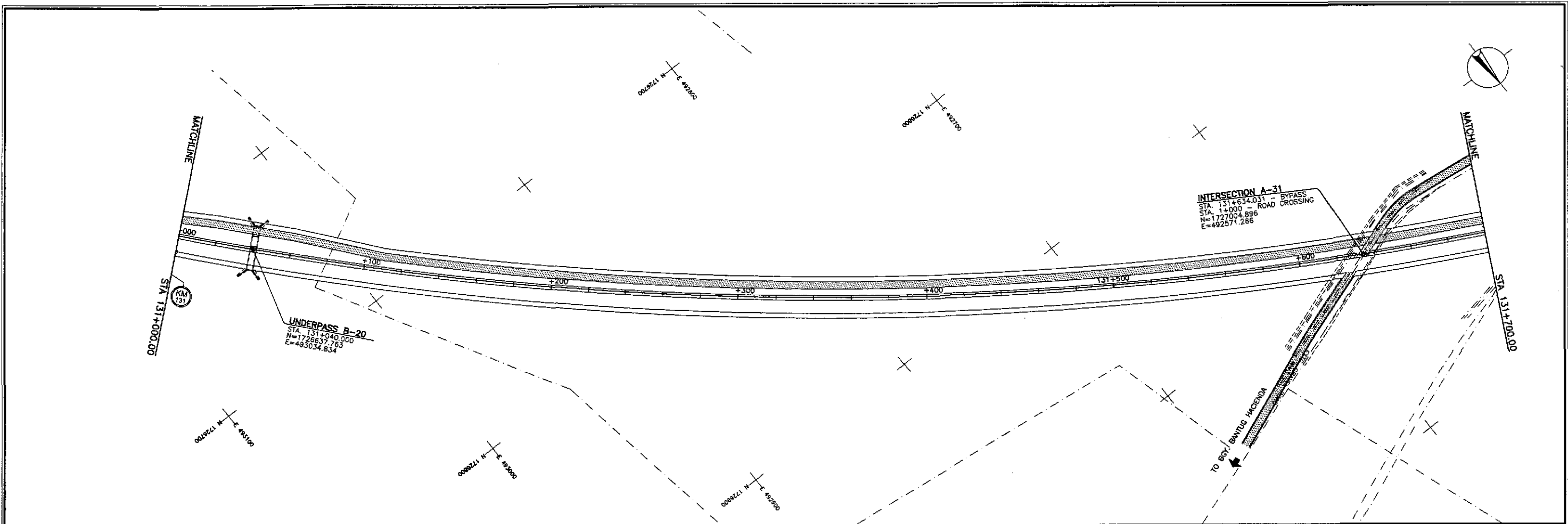
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	CHECKED	10/14/02	S. JOSE	Submitted By:	Reviewed By:	Recommended By:	Approved By:				
SUBMITTED	10/21/02	M. KIMURA	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary				



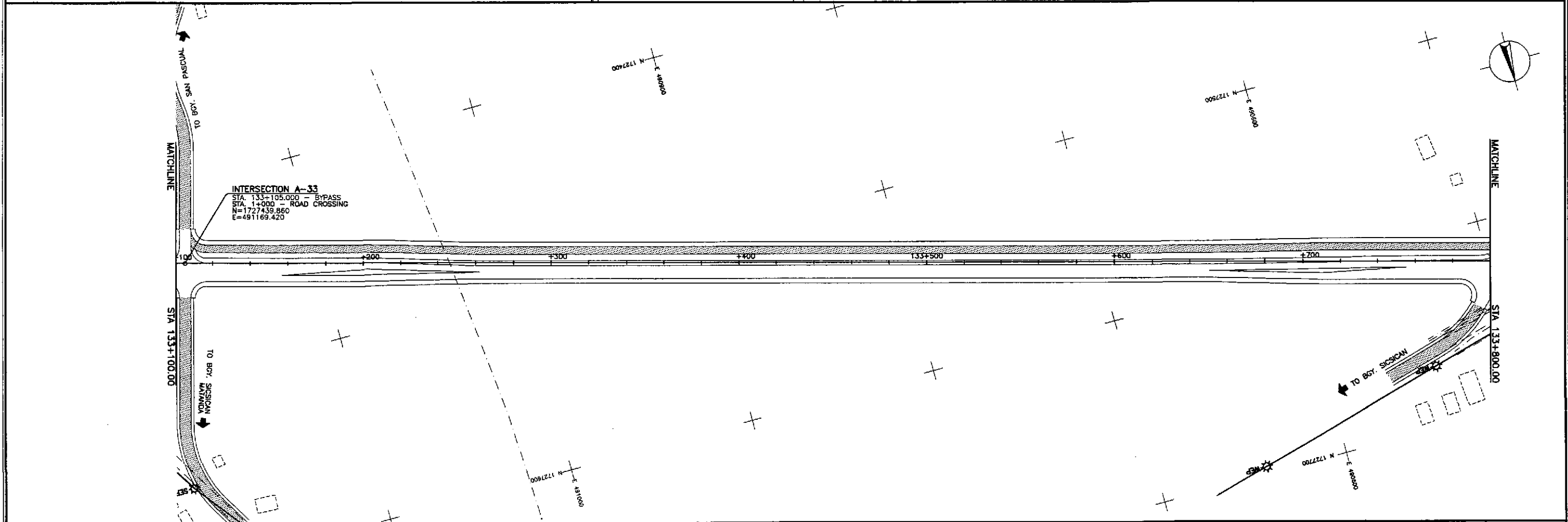
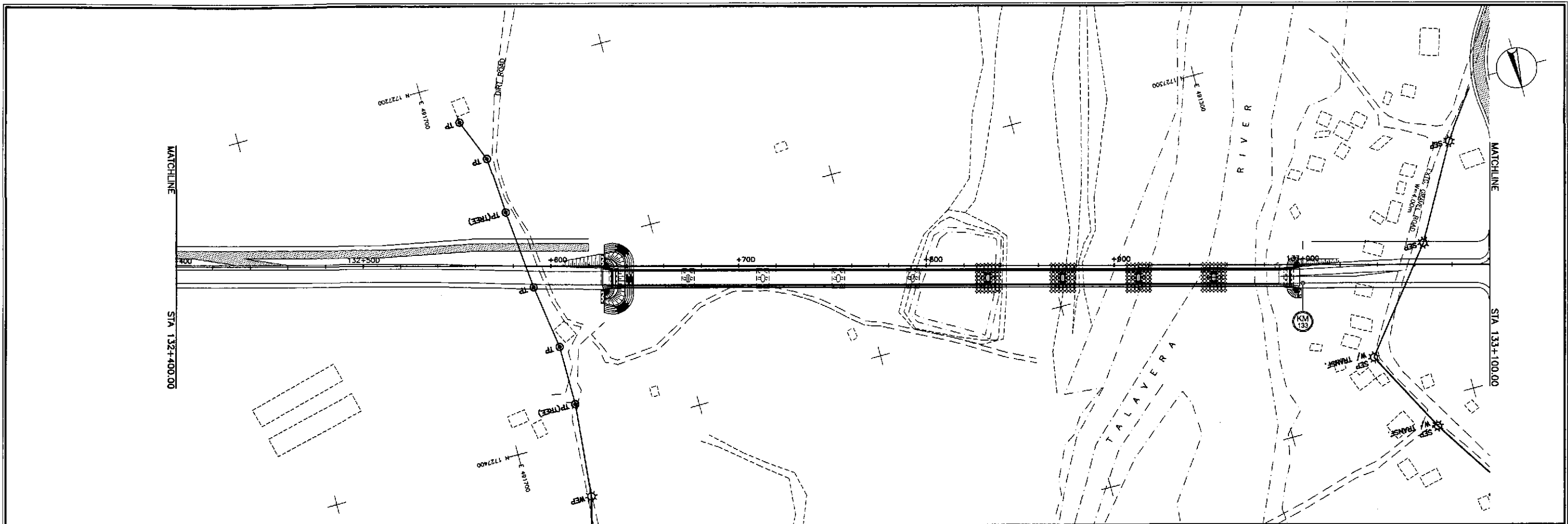
	DESIGNED	10/14/02	S. G. ROSE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 128+200 - STA. 129+600	SHEET NO. : <b>OE-06</b>
	CHECKED	10/17/02	S. G. ROSE		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director	OFFICE OF THE SECRETARY Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By: GILBERTO S. REYES OIC, Director IV				



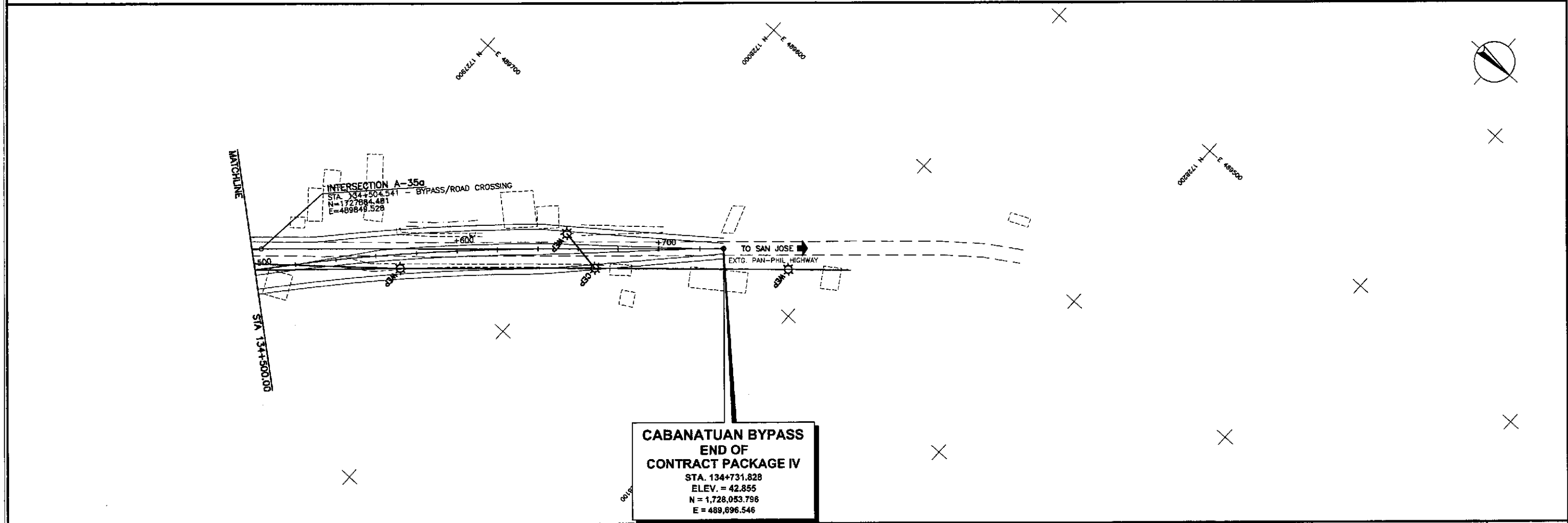
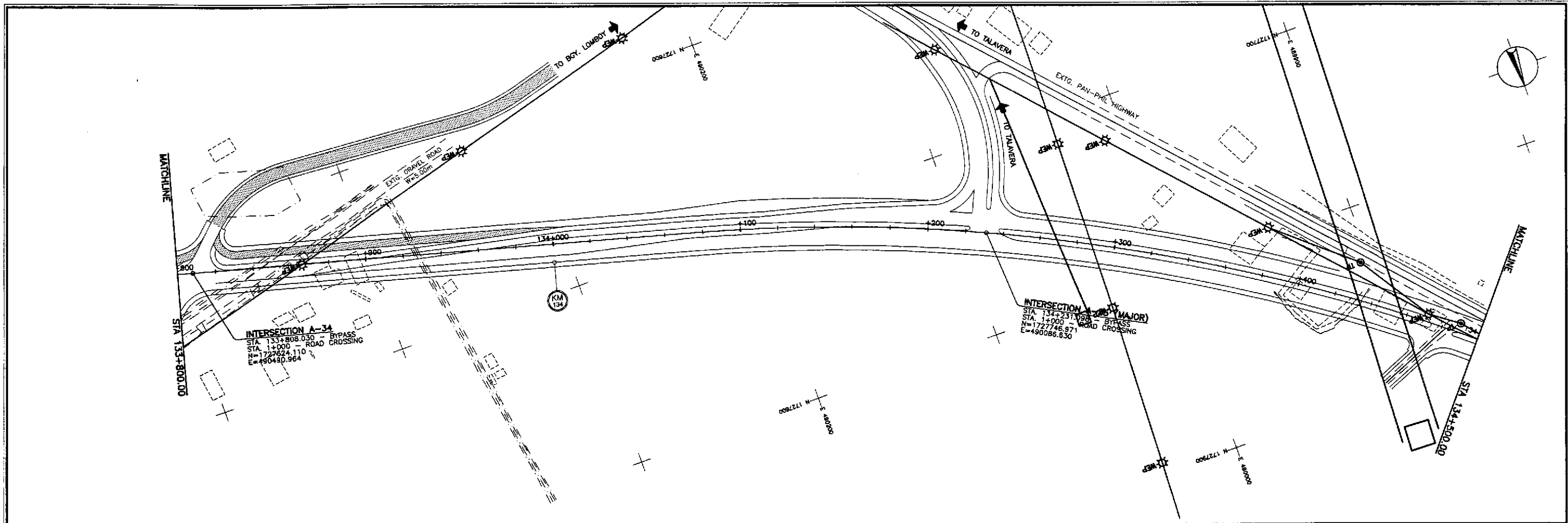
	DESIGNED	10/12/02	SIGNATURE	<i>[Signature]</i>	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>[Signature]</i>	<i>[Signature]</i>	BUREAU OF DESIGN OFFICE OF THE SECRETARY			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinarid, Cabanatuan and San Jose Bypasses)	1:1000	UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS	OE-07
	SUBMITTED	10/21/02	<i>[Signature]</i>	<i>[Signature]</i>	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division	Recommended By: GILBERTO S. REYES DIC, Director IV	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMEDON A. DATUMANDONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV FULL SIZE A1	



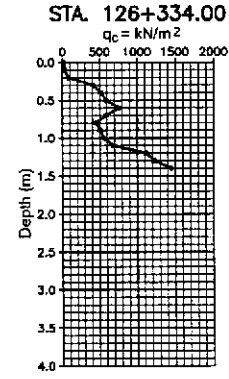
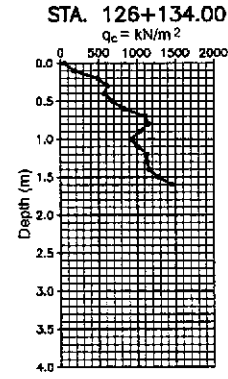
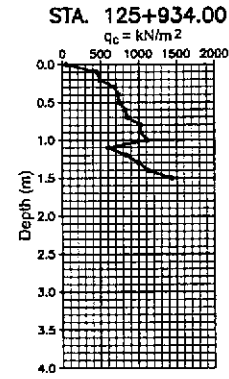
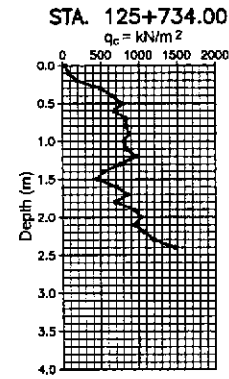
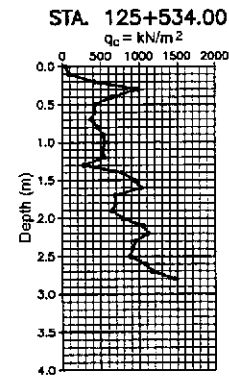
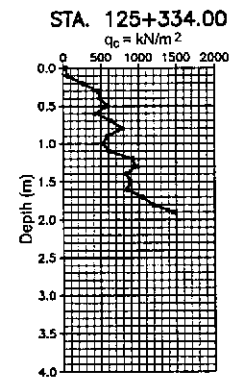
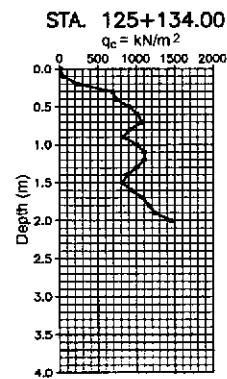
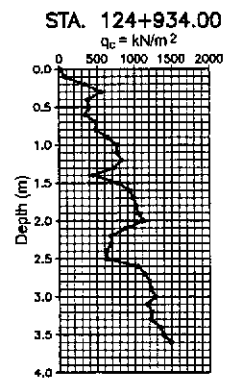
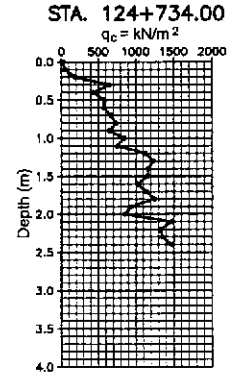
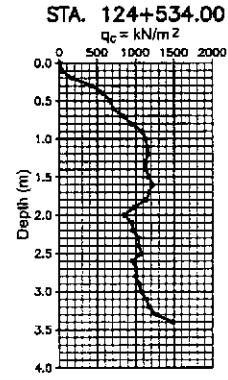
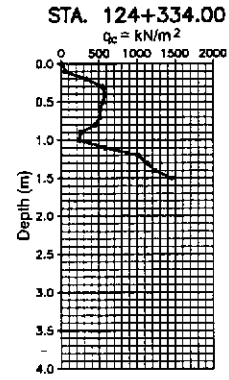
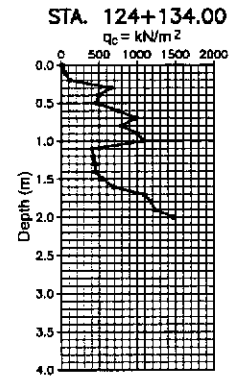
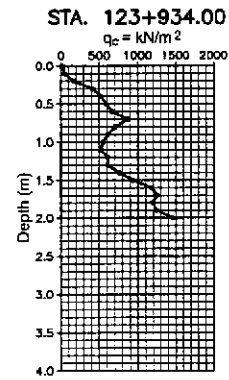
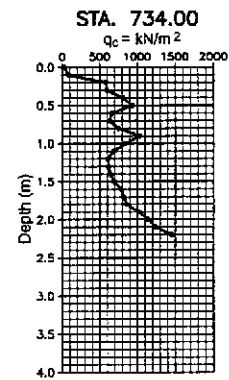
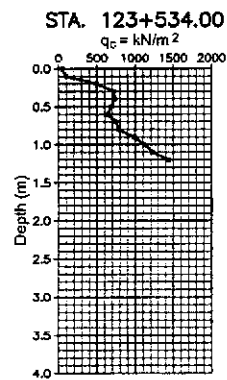
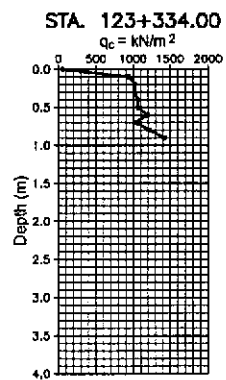
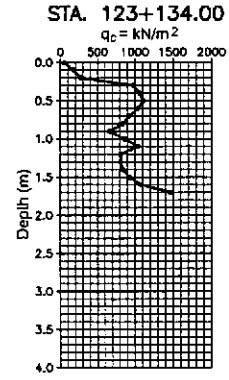
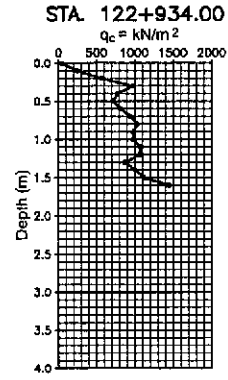
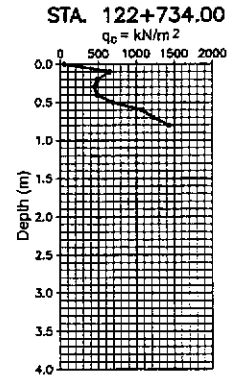
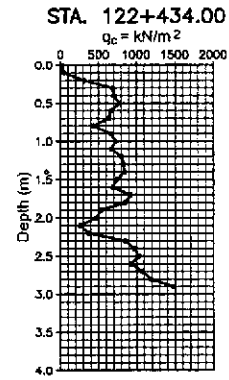
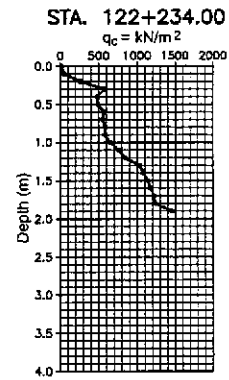
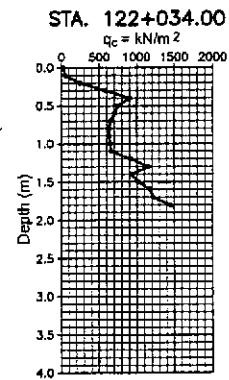
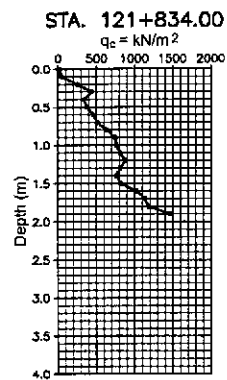
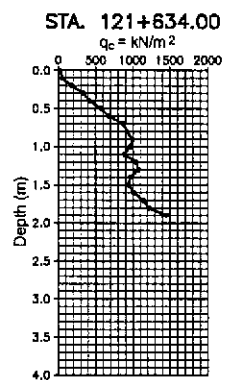
	DESIGNED	10/12/02	<i>S. POA</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON          UPGRADING INTER-URBAN HIGHWAY SYSTEM          ALONG THE PAN-PHILIPPINE HIGHWAY          (Pardel, Cabanatuan and San Jose Bypasses)</b> <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>UTILITY RELOCATION REFERENCE          LAYOUT PLAN          ALONG BYPASS          STA. 131+000 - STA. 132+400</b>	SHEET NO. : <b>OE-08</b>
	CHECKED	10/19/02	<i>S. POA</i>		BUREAU OF DESIGN							
	SUBMITTED	10/21/02	<i>M. Kudi</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:				
			<i>M. Kudi</i> TEAM LEADER	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				



	DESIGNED	10/12/02	<i>S. G. JOSE</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION : <b>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</b> <b>CABANATUAN BYPASS - CONTRACT PACKAGE IV</b>	SCALE : 1:1000 FULL SIZE A1	SHEET CONTENTS : <b>UTILITY RELOCATION REFERENCE LAYOUT PLAN ALONG BYPASS STA. 132+400 - STA. 133+800</b>	SHEET NO. : <b>OE-09</b>
	CHECKED	10/17/02	<i>S. G. JOSE</i>		BUREAU OF DESIGN							
	SUBMITTED	10/21/02	<i>M. K. KIRITO</i>		Submitted By: <b>DANILO C. TRAJANO</b> Project Director	Reviewed By: <b>JOSEFINA M. ALAGAR</b> Chief, Highways Division	Recommended By: <b>GILBERTO S. REYES</b> OIC, Director IV	Recommended By: (See cover sheet for Signature) <b>MANUEL M. BONOAN</b> Undersecretary				

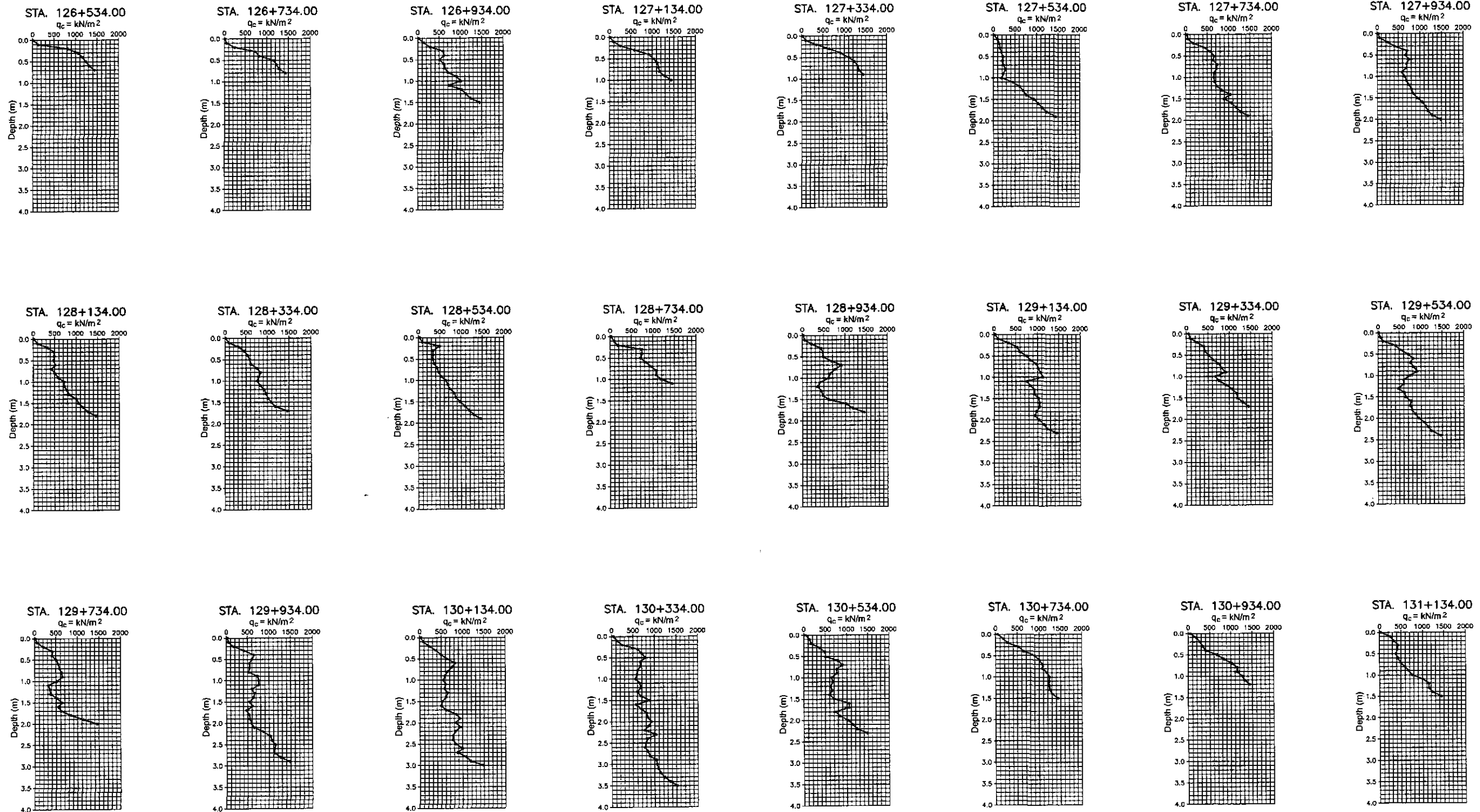


	DESIGNED	10/12/02	<i>S. Reyes</i>		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>S. Reyes</i>		Submitted By:	Reviewed By:	Recommended By:	Recommended By:	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:1000	UTILITY RELOCATION REFERENCE LAYOUT PLAN	OE-10
	SUBMITTED	10/29/02	<i>M. Bonoan</i>		DANILLO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV FULL SIZE A1	ALONG BYPASS STA. 133+800 - STA. 134+731.828	



1 GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT)  
OC-01 NOT TO SCALE

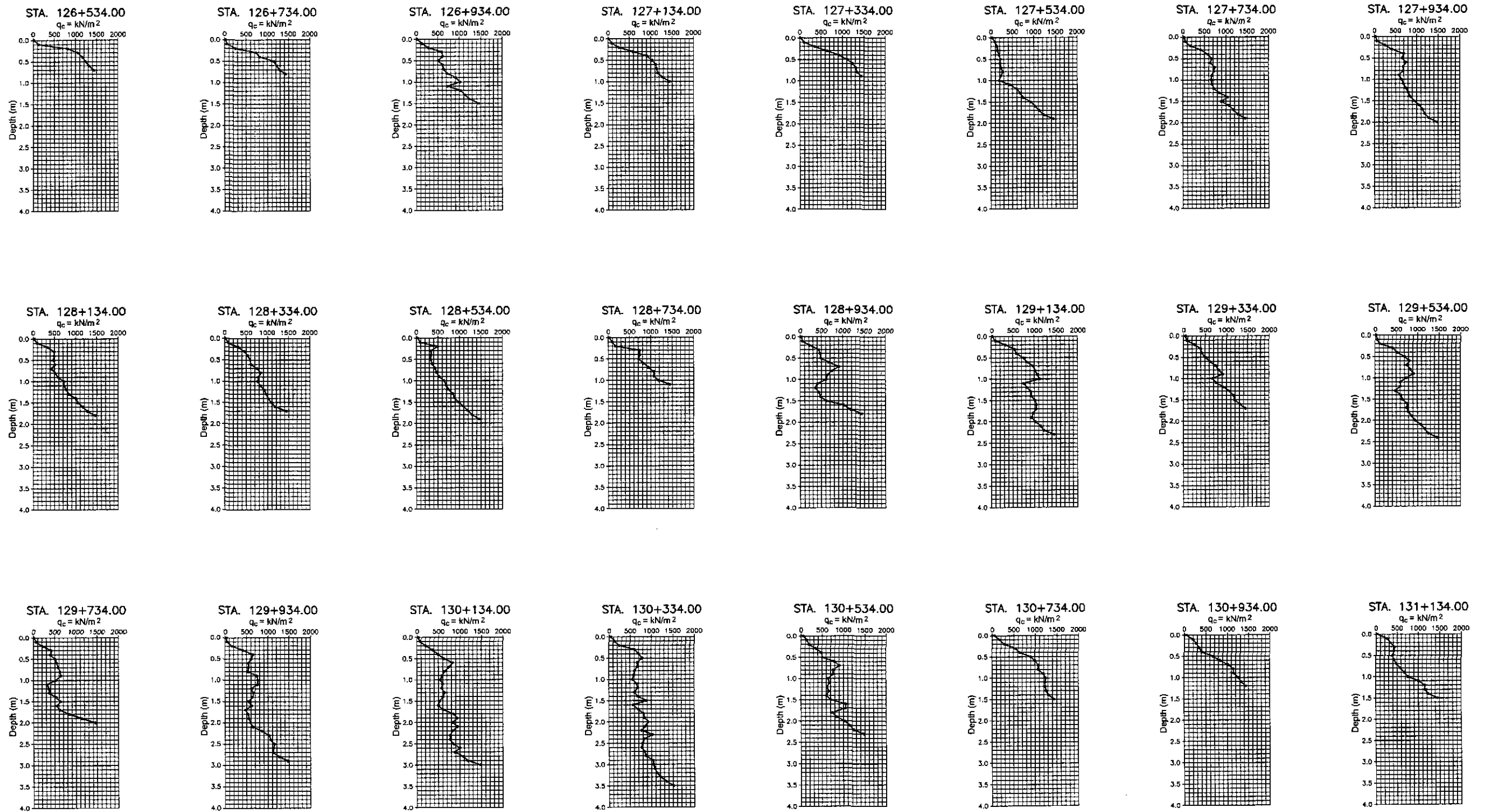
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	CHECKED	10/19/02	S. G. [Signature]		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					
SUBMITTED	10/21/02	[Signature]	TEAM LEADER							



2 GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT) SCALE  
 OC-012 NOT TO

				REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				
	DESIGNED	DATE	SIGNATURE	PJHL - PMO	BUREAU OF DESIGN	OFFICE OF THE SECRETARY		PROJECT AND LOCATION :
	CHECKED	10/17/02	<i>S. Lopez</i>	Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:
SUBMITTED	10/21/02	<i>M. K. K...</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES Dir. Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV
				SCALE :	SHEET CONTENTS :		SHEET NO. :	
				NOT TO SCALE	PORTABLE CONE PENETRATION TEST (CPT) PROFILE ALONG BYPASS STA. 126+534.00 - STA. 131+134.00		OC-02	
				FULL SIZE A1				





2
 GEOTECHNICAL SURVEY - PORTABLE CONE PENETRATION TEST (CPT)

OC-012    NOT    TO    SCALE

		DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	10/12/02	<i>S. Reyes</i>	PJHL - PMD	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	NOT TO SCALE	PORTABLE CONE PENETRATION TEST (CPT) PROFILE ALONG BYPASS	OC-03
	CHECKED	10/17/02	<i>S. Reyes</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1	STA. 1131+334.00 - STA. 134+534.00	
SUBMITTED	10/21/02	<i>M. K. ...</i>	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES O/C, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV		