

		_ LE	EFT SIDE				RI	GHT SIDE	
STAT	NOT	LOCATION	LENGTH	TYPE OF	STAT	TON	LOCATION	LENGTH	TYPE OF
ROM CIM	TO CIM	LOCATION	(m)	STRUCTURE	FROM CIM	TO CIM	LOCATION	(m)	STRUCTURE
55+978		EXIST	NG 2-1520mm#	RCPC x 27.0m	155+978		EXIST	NG 2-1520mmø	RCPC x 27.0m
55+978		s		мн	155+990		0 & 5		CIM
55+978	155÷990	S	13	610 mm ≠ RCPC	155+990		D TO S	4	460 mm ø RCPC
55+990		0 &r 5		CIM	155+990	156+030	5	40	610 mm Ø RCPC
55+990		C TO S	6.5	460 mm Ø RCPC	156+030		0 & S		CIM
55+990	156+030	\$	4	610 mm ≠ RCPC	156+030		O TO S	4	460 mm ≠ RCPC
56+030		0 & S		CIM	156+060		EXIST	ING 1-910mmø R	CPC x 27.0m
56+030		C TO S	6.5	460 mm ø RCPC	156+06D		S		MH
56+06D			ING 1-910mme F		156+060	156+070	S	10	610 mm # RCPC
56+060		ŝ	1	MH	156+070	1001010	0 & S		CIM
56+06D	156+070	s	10	610 mm ø RCPC	156+070	-	o to s	4	460 mm ø RCPC
56+070	1301070	0 & S	10	CIM	156+070	156+110	S S	40	610 mm # RCPC
56+070			<del></del>	460 mm # RCPC	156+110	1557110	0 & S	70	
	156:110	0 & S	4						CIM
56+070	156+110	\$	40	610 mm # RCPC	156+110		0 10 5	4	460 mm # RCPC
56+110		0 & S	ļ	CIM	156+122			ING 1−910mmø R	<del></del>
56+110		стоѕ	4	460 mm # RCPC	156+130	<u> </u>	S		МН
56+120		S		MH	156+130	156+150	S	20	610 mm ≠ RCPC
56+120	156+150	S	30	610 mm # RCPC	156+150	ļ	0 & S		CIM
56+122		EXIST	ING 1-910mm¢ R	RCPC x 31.0m	156+150		0 TO 5	4	460 mm ≠ RCPC
56+150		0 & 5		CIM	156+190		0 & 5		мн
56+150		0 TO S	4	460 mm ø RCPC	156+190		0 TQ S	4	460 mm # RCPC
156+190		0 & \$		мн	156+190	156+200	S	10	610 mm ≠ RCPC
56+190		0 TO 5	4	460 mm ≠ RCPC	156+200		EXIST	NG 1-910mmø R	CPC x 35.0m
156+190	156+200	S	10	610 mm # RCPC	156+200		S		MH
56+200		EXIST	ING 1-910mmø R	CPC x 35.0m	156+230		0 & 5		CIM
156+200	_	S	1	MH	156+230		0 TO S	4	460 mm ø RCPC
156+230		0 & S	<del> </del>	CIM	156+230	156+240	s	10	610 mm # RCPC
156+230		O TO S		460 mm ø RCPC	156+240	1307240		ING 1-910mmø R	
	150 : 240		4					ING 1-91UMM9 K	
56+230	156+240	5	10	610 mm # RCPC	156+240		\$		MH
56+240			ING 1-910mmø R		156+240	156+270	<u> </u>	30	610 mm ø RCPC
156+240		5		MH	156+270		0 & S	5	CIM
156+240	156+270	S	3D	610 mm ≠ RCPC	156+270		0 TO 5		460 mm ø RCPC
156+270		0 & S		CIM	156+314		EXIST	NG 1-910mm# R	CPC x 33.0m
156+270		0 TO S		460 mm ≱ RCPC	156+314		\$		MH
155+314		EXIST	ING 1-910mmø R	RCPC x 33.0m	156+314	156+320	5	. 6	610 mm ø RCPC
156+314		5		мн	156+320		0 & S	1	CIM
156+314	156+320	s	6	610 mm ≠ RCPC	156+320		O TO S		460 mm ≠ RCPC
156+320		0 & S		CIM	156+360		0 & 5		CIM
156+320		0 TO 5	4	460 mm # RCPC	156+360		0 TO S	4	460 mm ≠ RCPC
156+360		0 & S		CIM	156+360	156+382	S	22	610 mm ∉ RCPC
156+360		0 TO S	4	460 mm ø RCPC	156+382			ING 1-910mmø 8	
156+360	156+382	\$	22	61D mm ø RCPC	156+382		S	1 0 10 0 10 10 10 10 10 10 10 10 10 10 1	мн
156+382			ING 1-910mmø R		156+382	156+390	<u>s</u>	10	610 mm # RCPC
156+382		S	ino i promite i	MH	156+39D	1307330		10	CIM
156+382	156+390	5	8			-	0 & S		
	120+390		<u> </u>	610 mm ø RCPC	156+390	155.155	отоѕ	4	460 mm # RCPC
156+390		0 & S		CIM	156+390	156+420	S	30	610 mm ≠ RCPC
156+39D		0 10 5	4	460 mm # RCPC	156+420		0 & 5		CIM
56+390	156+420	\$	30	610 mm # RCPC	155+420		o to s	4	460 mm ø RCPC
56+420		0 & 5		CIM	156+420	156+460	S	40	610 mm # RCPC
56+420		0 TO S	4	460 mm ø RCPC	156+460		2 <b>4</b> S	]	CIM
56+420	156+460	5	40	610 mm # RCPC	156+460		0 TO S	4	460 mm ø RCPC
56+460		0 & 5		CIM	156+460	156+490	S	3D	610 mm ø RCPC
56+460		O TO S	4	460 mm ø RCPC	156+490		0 & S		CIM
56+460	156+490	5	30	610 mm ø RCPC	156+490		D TO S	4	460 mm ≠ RCPC
55+490		0 & \$		CIM	156+500			ING 1-910mmø R	
56+490		o to s	4	460 mm ø RCPC	156+500		S	4	MH
56+490	156+500	s	10	610 mm # RCPC	156+500	156+530	S	30	610 mm # RCPC
56+500			ING 1-910mmø R		156+530	150 7550			CIM
56+500		S	, 910/11/10/16				0 & S		
	150,570		70	MH	156+530	450.570	O TO S	4	460 mm # RCPC
56+500	156+530	\$	30	610 mm ø RCPC	156+530	156+570	5	40	610 mm ø RCPC
56+530		0 & 5	ļ	CIM	156+570		0 & S		CIM
		0 T0 S	4	460 mm ø RCPC	156+570		0 T0 5	4	460 mm ≠ RCPC
	156+570	5	40	610 mm ø RCPC	156+610		O TO S	4	460 mm ⊅ RCPC
		0 & S		CIM	155+610		0 & 5		CIM
56+530		, ,				150.074	S	24	610 mm ≠ RCPC
56+530 56+57D		0 TO S	4	450 mm ø RCPC	156+610	156+634		_ <del>_</del>	O I U IIIIII III NGFE
56+530 56+570 56+570	156+610		40	450 mm # RCPC 610 mm # RCPC	156+610 156+634	130+034		NG 1-910mmø R	
56+530 56+530 56+570 56+570 56+570 56+610		0 T0 S		<del></del>		136+634			

		LE	FT SIDE		RIGHT SIDE					
STATE	ON		LENGTH	TYPE OF	STAT	ION	4.00.77011	LENGTH	TYPE OF	
FROM CIM	TO CIM	LOCATION	(m)	STRUCTURE	FROM CIM	TO CIM	LOCATION	(m)	STRUCTURE	
156+610	156+634	\$	24	610 mm ≠ RCPC	156+634	156+650	5		610 mm ≠ RCPC	
156+634		EXIST	ING 1-910mm¢ l	RCPC x 37.0m	156+650		0 TO S	4	460 mm ø RCPC	
156+634		0 & 5		MH	156+650		0 & S		CIM	
156+634	156+650	5	16	610 mm ø RCPC	156+650	156+690	5	10	610 mm ≠ RCPC	
156+650	_	0 & S		CIM	156+690		0 & S		CIM	
156+650 156+650	156+690	0 TO S	4	460 mm ø RCPC	156+690 156+730		0 TO 5	4	460 mm # RCPC	
156+690	1307050	0 10 5	4	460 mm ø RCPC	156+730		O TO 5	4	CIM 460 mm ø RCPC	
156+690		0 & 5	T	CIM	156+730	156+770	S S	40	610 mm # RCPC	
156+730		0 & S		CIM	156+770		0 & S		CIM	
156+730	··-	0 TO 5	4	460 mm ø RCPC	156+770		0 TO S	4	450 mm ø RCPC	
156+730	156+770	s	40	610 mm ø RCPC	156+810		0 & \$		CIM	
155+770		0 & S		CIM	156+810		0 TO 5	4	460 mm ø RCPC	
156+770		0 TO S	4	460 mm ø RCPC	156+810	156+815	S	5	610 mm ø RCPC	
155+810		0 & S		CIM	155+815		\$		MH	
156+810 156+810	156+815	0 TO S	4	460 mm # RCPC	156+842	}	S	NG 1-910mm#		
156+815	136+813	S	5	610 mm ø RCPC	156+842 155+842	156+850	S S	35 8	MH 610 mm ø RCPC	
156+842				L	156+850	750+030	0 TO S	4	460 mm Ø RCPC	
156+842		S	35	MH	156+850		0 & S		CIM	
156+842	156+850	s	8	510 mm # RCPC	156+910	į	0 TO S	4	460 mm # RCPC	
156+850		o to s	4	460 mm # RCPC	156+910		0 & 5		CIM	
156+850		0 & S		CIM	156+910	156+940	S	30	610 mm # RCPC	
156+910		0 & 5		СІМ	156+94D		0 & S		СІМ	
156+910		0 TO S	4	460 mm ø RCPC	156+940		0 TO S	4	460 mm # RCPC	
156+910	156+940	S	30	610 mm ø RCPC	155+940	156+970	\$	40	610 mm # RCPC	
156+940		0 & 5		CIM	156+970		0 & S		CIM	
156+940	156+970	0 TO S	40	460 mm # RCPC 610 mm # RCPC	156+970 156+970	157+000	0 TO S	4 30	450 mm ≠ RCPC 610 mm ≠ RCPC	
156+970	1307570	0 & 5	+0	CIM	157+000	1377000	0 & 5		CIM	
156+970		o to s	4	460 mm # RCPC	157+000		0 TO S	4	460 mm ø RCPC	
156+970	157+000	5	30	610 mm ≠ RCPC	157+000	157+030	5	30	610 mm # RCPC	
157+000		0 & S		CIM	157+030		0 & S		CIM	
157+000		O TO S	4	460 mm ≱ RCPC	157+030		0 TO S	4	460 mm # RCPC	
157+000	157+030	S	30	610 mm ≠ RCPC	157+060			G 3-3.0 x 2.75	RCBC x 32.80m	
157+030		0 & S		CIM	157+070		0 & S		CIM	
157+030 157+060		0 TO 5	4 G 3-3.0 x 2.75	460 mm ø RCPC	157+070 157+110	157+110	5 0 & S	<b>4</b> D	610 mm # RCPC	
157+070		0 & S	G 3-3.0 x 2.75	CIM	157+110		0 TO S	4	CIM 460 mm ø RCPC	
157+070	157+110	5	4D	610 mm ø RCPC	157+190		S .	<del></del>	CIM	
157+110		0 & S	· · · · · ·	CIM	157+190		o to s	4	460 mm ø RCPC	
157+110		0 TO S	4	460 mm ≠ RCPC	157+190		5	3	610 mm ≠ RCPC	
157+190		S		CIM	157+210		EXISTIN	G 1-1.80 x 1.50	RCBC x 37.0m	
157+190		0 TO S	4	450 mm # RCPC	157+230		S		MH	
157+190		S	3	610 mm ø RCPC	157+230	157+270	S	40	610 mm ø RCPC	
157+210			G 1~1.80 x 1.50	·	157+270		0 & 5	ļ	CIM	
157+230	157+270	S	40	MH 610 mm ø RCPC	157+270		0 TO S	3	460 mm # RCPC	
157+270	13/42/0	0 & 5	40	CIM	157+270 157+270	157+310	S S	40	610 mm # RCPC 610 mm # RCPC	
157+270		0 TO S	4	460 mm # RCPC	157+310		0 & 5	10	CIM	
157+270		5	3	610 mm ø RCPC	157+310		0 TO 5	4	460 mm # RCPC	
157+270	157+310	S	40	610 mm ø RCPC	157+320		EXISTIN	G 1-3,0 x 2.10	RCBC x 34.30m	
157+310		0 & S		CIM	157+350		0 & S		CIM	
157+310		0 TO 5	4	460 mm ø RCPC	157+350		O TO 5	4	450 mm ø RCPC	
157+320			G 1−3.0 x 2.10	T	157+350	157+380	S	30	610 mm # RCPC	
157+350		0 & S	ļ <u>-</u>	CIM	157+380		0 & 5	<del></del>	CIM	
157+350	157+380	0 TO 5	30	460 mm ø RCPC 610 mm ø RCPC	157+380 157+380	157÷420	0 TO S	40	460 mm # RCPC	
157+350 157+380	14/+360	0 & 5	30	CIM	157+380	13/7420		G 1-3.0 x 2.40	610 mm ø RCPC RCRC x 37 80m	
157+380		0 TO S	4	460 mm ø RCPC	157+420	<del> </del>	0 & S	- · - · · · · · · · · · · · · · · · · ·	CIM	
157+380	157+420	s	40	610 mm # RCPC	157+420		0 TO S	4	460 mm # RCPC	
157+400			IG 1-3.0 x 2.40		157+530		0 & 5		CIM	
157+420		D & S		CIM	157+530		0 TO S	4	460 mm ø RCPC	
157+420		0 TO S	4	460 mm ø RCPC	157+530	157+570	S	40	610 mm ≠ RCPC	
157+530		0 & S		CIM	157+570		0 & S		CIM	
157+530		0 TO S	4	460 mm # RCPC	157+570		0 TO S	4	460 mm ≠ RCPC	
157+530	157+570	5	40	610 mm ø RCPC	157+570	157+610	5	40	610 mm # RCPC	
157+570		0 & S	I	CIM	157+610	i	0 & S	L	CIM	

SCALE :

FULL SIZE A1

#### LEGEND:

C - Center Median

S -- Sidewalk

CIM — Catch Inlet Manhole

0 - Outer Separator RCPC - Reinforced Concrete Pipe Culvert

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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

PROJECT AND LOCATION :

SCHEDULE OF SURFACE DRAINAGE

SHEET CONTENTS :

OFFICE OF THE SECRETARY СНЕСКЕД 9/9/13 Н.С. КОТО М SUBMITTED 9/11/02 ТЕМИ LEADER Recommended By:

(See cover sheet for Signature)

MANUEL M. BONDAN

Undersecretary Approved By:
(See cover sheet for Signature/Approval)
SIMEON A DATUMANONG
Secretary KATAHIRA & ENGINEERS YEC YACHIYO ENGINEERING CO., LTD. SAN JOSE BYPASS

DG-01

SHEET NO. :

JAPAN INTERNATIONAL COOPERATION AGENCY

		LE	FT SIDE		RIGHT SIDE					
STATI	ON	LOCATION	LENGTH	TYPE OF	STAT	ION	LOCATION	LENGTH	TYPE OF	
ROM CIM	TÓ CIM	200/(1/014	(m)	STRUCTURE	FROM CIM	TO CIM	LOOAHOR	(m)	STRUCTURE	
57+570		0 TO S	4	460 mm ø RCPC	157+610		O TO 5	4	460 mm ≠ RCPC	
57+570	157+610	\$	40	610 mm ø RCPC	157+610	157+650	S	40	610 mm # RCPC	
57+610		0 & 5		CIM	157+650		0 & 5		CIM	
57+610		0 TO S	4	460 mm ø RCPC	157+650		0 TO S	4	460 mm # RCPC	
57+610	157+650	\$	_40	610 mm # RCPC	157+650	157+690	s	34	610 mm # RCPC	
57+650 57+650		0 & S		CIM	157+690 157+690		0 & 5 0 TO S	<del></del>	CIM	
57+650 57+650	157+690	0 TO S	40	460 mm # RCPC 610 mm # RCPC	157+690	157+716	5	4 26	460 mm ø RCPC 610 mm ø RCPC	
57+690	157 + 020	0 & S	-70	CIM	157+716	107+710		ING 2-1070mmø	l .	
57+69D		0 TO S	4	460 mm # RCPC	157+716		S	10/0/11/19	MH MH	
57+690	157+716	S	28	610 mm # RCPC	157+716	157+730	5	14	610 mm ø RCPC	
57+716		EXISTI	NG 2-1070mm# R	CPC x 34,0m	157+730		0 & S		CIM	
57+716		5		MH	157+730		D TO S	4	460 mm ø RCPC	
57+716	157+730	S	14	610 mm # RCPC	157+730	157+760	S	30	610 mm ø RCPC	
57+730		0 & 5		CIM	157+750		C,0,S		CIM	
57+730		0 TO 5	4	460 mm # RCPC	157+760	157+790	5	30	B10 mm ø RCPC	
57+730		2	40	610 mm ø RCPC	157+790		c,o,s	ļ	CIM	
57+770		0 & S		CIM	157+790		c to s	7	460 mm # RCPC	
7+770		0 TO 5	4	460 mm Ø RCPC	157+790	157+820	\$	30	610 mm ø RCPC	
57+770	157+810	\$	40	610 mm # RCPC	157+820		C,0,S	<u> </u>	CIM	
57+810		0 & S		CIM	157+820		C TO S	7	460 mm # RCPC	
57+B10		0 70 5	4	460 mm # RCPC	157+860		C.D.S		CIM	
57+850 57+850		0 & S		CIM 450 4 BCBC	157+860 157+860	157+890	C TO S	7	460 mm # RCPC	
57+850 57+850	157+890	<u>ото s</u>	4 4D	460 mm # RCPC 610 mm # RCPC	157+890	1377030	C,0,5	30	610 mm # RCPC	
57+890	157+090	0 & S	40	CIM	157+890		C TO S	7	460 mm # RCPC	
57+B90		0 TO S	4	460 mm ø RCPC	157+920		C,0,5	,	CIM CIM	
7+890	157+930	S S	40	610 mm # RCPC	157+920		C TO S	7	460 mm # RCPC	
57+930	1071000	O&S		CIM	157+920		S	3	610 mm # RCPC	
7+930		0 70 5	4	460 mm ≠ RCPC	157+920	157+950	5	30	610 mm ø RCPC	
7+970		O & S		CIM	157+950		C,O,S		CIM	
57+970		0 TO S	4	460 mm ø RCPC	157+950		c to s	7	460 mm # RCPC	
57+970		s		610 mm ø RCPC	157+950	157+980	S	30	610 mm # RCPC	
57+970	158+010	s	40	610 mm # RCPC	157+980		C,O,S	· ·	CIM	
58+010		0 & 5		CIM	157+980		C TO S	7	460 mm ø RCPC	
58+010		0 TO S	4	460 mm 4 RCPC	157+950	158+010	S	30	610 mm # RCPC	
58+050		0 & \$		CIM	158+010		0 & 5		CIM	
58+050		0 TO S	4	460 mm Ø RCPC	158+010		0 TO S	4	460 mm ø RCPC	
58+050	158+072	<u>\$</u>	_22	610 mm # RCPC	158+010	158+040	S	30	610 mm ø RCPC	
58+072			ING 1-910mmø R0		158+040		0 % 2		CIM	
58+072		5		MH	158+040		0 TO S	4	460 mm ø RCPC	
58+072	158+090	S	18	510 mm # RCFC	158+070		0 & S		CIM	
58+090		0 & \$		CIM	158+070	150 1070	0 TD 5	4	450 mm ø RCPC	
58+090	4501470	0 TO S	4	460 mm ø RCPC	158+070	158+072	S	2	610 mm ø RCPC	
58+090	158+130	2 4 5	40	510 mm # RCPC	158+072 158+072	ļ <del></del>		TING 1—910mmø 1		
58+130 58+130		0 & S 0 T0 S	4	CIM 460 mm & RCPC	158+072	150.100	5 S		CIM 610 1 PCCC	
58+130	158+170	S S	4D	610 mm # RCPC	<del></del>	158+100	0 & s	28	610 mm # RCPC	
5B+170	1307178	0 & \$	70	CIM	158+100 158+100		0 T0 S	4	460 mm # RCPC	
B+170		O TO S	4	460 mm Ø RCPC	158+100	158+130	S	30	610 mm # RCPC	
B+170	158+210	s	40	610 mm ø RCPC	158+130		0 & 5	30	CIM	
B+210		0 & 5	<del></del>	CIM	158+13D		0 TO S	4	460 mm # RCPC	
58+210		0 TO \$	4	460 mm ø RCPC	158+130	158+160	S	30	610 mm # RCPC	
58+210	158+250	S	40	610 mm ø RCPC	158+160		0 & 5	<del></del>	CIM	
8+250		0 & S		CIM	158+160		0 T0 S	4	460 mm ø RCPC	
8+250		отоѕ	4	460 mm ø RCPC	158+160	158+190	\$	30	610 mm ø RCPC	
8+250	158+290	S	40	610 mm ø RCPC	15B+190		0 & 5	L	CIM	
8+290		0 & \$		CIM	158+190		2 0T 0	4	460 mm # RCPC	
8+290		0 TO S	4	450 mm # RCPC	158+190	15B+220	5	30	610 mm ø RCPC	
8+330		0 & \$		CIM	158+220		0 & 5		CIM	
68+330		0 TO 5	4	460 mm # RCPC	158+220		o Tò s	4	460 mm # RCPC	
58+330	158+350	S	20	610 mm # RCPC	158+220	158+250	5	30	610 mm ≠ RCPC	
58+350			ING 1-910mm# R0		158+250		0 & S		CIM	
58+350		s	L	MH	158+250		0 TO S	4	460 mm ≠ RCPC	
58+350	158+370	\$	20	610 mm # RCPC	158+250	158+280	s	30	610 mm ≠ RCPC	
5B+370		0 & S		CIM	158+280		0 & S		CIM	
58+370		O TO S	4	460 mm ø RCPC 610 mm ø RCPC	158+280 158+280		o To s	4	460 mm # RCPC	
5B+370	158+410	S	40			158+310	\$	30	610 mm # RCPC	

	LEFT SIDE					RIGHT SIDE			
STAT	ION		LENGTH	TYPE OF	STAT	ION		LENGTH	TYPE OF
FROM CIM	TO CIM	LOCATION	(m)	STRUCTURE	FROM CIM	TO CIM	LOCATION	(m)	STRUCTURE
158+410		5	40	610 mm ø RCPC	158+310		0 & S	— ····	CIM
158+410		O TO S	4	450 mm ø RCPC	158+310		O TO S	4	450 mm ø RCPC
158+410	158+450	S	40	610 mm ø RCPC	158+340		D & \$		CIM
158+450		0 & S		CIM	158+340		O TO S	4	460 mm ø RCPC
158+450		0 TO S	4	460 mm ø RCPC	15B+340	158+350	<u> </u>	10	610 mm ø RCPC
158+490		0 & 5		CIM	158+350			ING 1-910mm¢ I	
158+490 158+490	158+500	0 TO S	10	460 mm ø RCPC 610 mm ø RCPC	158+350 158+350	158+370	S S	20	MH 610 mm Ø RCPC
158+500	156+500		ING 2-910mmø i		158+370	1307370	0 & S	20	CIM CIM
158+500		s	110 Z 310 mins 1	MH	158+370		O TO S	4	460 mm ≠ RCPC
158+500	158+530	s	30	610 mm ø RCPC	158+370	158+400	S	30	610 mm # RCPC
158+530		0 & S		CIM	158+400		0 & S		CIM
158+530		0 TO 5	4	460 mm # RCPC	158+400		0 TO S	4	460 mm ø RCPC
158+530	158+570	S	40	610 mm # RCPC	158+400	158+430	S	30	610 mm # RCPC
15B+570		0 & 5		Сім	158+43D		0 & 5		CIM
158+570	150.010	0 TO 5	4	460 mm # RCPC	158+430		0 TO S	4	460 mm ø RCPC
158+570 158+610	158+610	S 0 & S	40	610 mm ø RCPC CIM	158+430 158+460	158+460	S 0 & S	30	610 mm ø RCPC
158+610		O TO 5	4	460 mm ø RCPC	158+460		0 TO S	4	460 mm # RCPC
158+650		0 & S		CIM	158+490		0 & S		CIM
158+650	i	0 TO S	4	460 mm ø RCPC	158+490		0 TO S	4	460 mm # RCPC
158+650	158+66D	5	10	610 mm # RCPC	158+490	15B+500	5	10	610 mm # RCPC
158+660		EXIST	ING 1-910mmø i	RCPC x 36.0m	158+500		EXIST	NG 2-910mmø I	RCPC x 38.0m
158+660		s		MH	15B+500		s		мн
158+660	158+690	5	30	610 mm # RCPC	158+500	158+520	5	20	610 mm # RCPC
158+690		0 & \$		CIM	15B+520		0 & S		CIM
158+690 158+720		0 10 5	4 ING 1-910mmø i	460 mm ø RCPC	15B+520	150.550	0 TO 5	4	460 mm # RCPC
158+720		S	ING 1-910mm9 I	MH	158+520 158+550	158+550	0 & S	30	610 mm # RCPC
158+720	158+730	5	10	610 mm ø RCPC	158+550		0 TD 5	4	460 mm ø RCPC
158+730	700 7 700	0 & S		CIM	158+550	158+580	S	30	510 mm ≠ RCPC
158+730		0 TO 5	4	460 mm ø RCPC	158+580		0 & 5		CIM
158+730	158+770	S	40	610 mm ø RCPC	158+580		0 T0 S	4	450 mm ø RCPC
158+770		0 & S		CIM	158+580	158+610	\$	30	610 mm # RCPC
158+770		0 TO S	4	450 mm ø RCPC	158+610		0 & 5	<b> </b>	СІМ
158+770	158+810	S	40	610 mm ø RCPC	158+610	150.000	O TO S	4	460 mm # RCPC
158+810 158+810		0 & 5 0 TO S	4	460 mm ø RCPC	158+640 158+660	158+660	S EVIST	20 ING 1-910mm# 1	610 mm ø RCPC
158+810	158+850	\$	40	610 mm # RCPC	158+660		S	1-31011111	MH
158+850		0 & 5		CIM	158+660	158+670	s	10	610 mm # RCPC
158+850		0 T0 S	4	460 mm ø RCPC	158+670		0 & S	1	CIM
158+850	158+690	S	40	610 mm # RCPC	158+670		0 TO S	4	460 mm # RCPC
158+890	ļ <u>.</u>	0 & 5		CIM	158+670	158+700	5	30	610 mm # RCPC
158+890		0 TO S	4	460 mm # RCPC	158+700		0 & S		CIM
158+890	158+930	5	40	610 mm ø RCPC	15B+700		0 TO S	4	460 mm ≠ RCPC
158+930		0 & S		CIM 450 4 DODG	158+720			ING 1-910mmø	
158+930 158+955		O TO S	4 NG 1−1070mmø	460 mm ø RCPC RCPC x 37.0m	158+720 158+720	158+730	s s	10	MH 610 mm # RCPC
158+957	<b></b>	S		MH	158+730	,507,50	0 & S	<u> </u>	CIM
158+957	158+970	s	13	610 mm ø RCPC	158+730		O TO S	4	460 mm # RCPC
158+970		0 & S		CIM	158+730	158+770	\$	4	810 mm ≠ RCPC
158+970		0 TO S		450 mm ø RCPC	158+770		0 & S		СІМ
158+970	159+010	S	40	610 mm ø RCPC	158+770		O TO S	4	460 mm # RCPC
159+010		0 & \$	ļ	CIM	158+770	158+810	5	40	610 mm ø RCPC
159+010	160.040	0 TO S	4	460 mm ≠ RCPC	158+810	·	0 & S	ļ	CIM 460 # BCBC
159+010 159+040	159+040	S 0 & 5	30	610 mm # RCPC CIM	158+810 158+810	158+850	0 TO S	40	460 mm # RCPC 610 mm # RCPC
159+040		0 TO S	4 -	460 mm # RCPC	158+850	1307030	0 & S	70	CIM
159+040	159+070	5	30	610 mm ø RCPC	15B+850		D TO S	4	460 mm ø RCPC
159+070		0 & 5		CIM	158+850	158+890	5	40	610 mm # RCPC
159+070		o to s	4	480 mm ø RCPC	158+890	<u> </u>	0 & S		CIM
159+110		0 & 5		CIM	158+890		0 TO \$	4	460 mm ø RCPC
159+110		0 TO S	4	450 mm ø RCPC	158+890	158+930	S	40	510 mm ≠ RCPC
159+110	159+140	5	30	610 mm ø RCPC	158+930	<u> </u>	0 & S		CIM
159+140		0 & S		CIM	158+930	ļ	0 TO 5	4	460 mm ø RCPC
159+140		0 TO S	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	460 mm ø RCPC	158+955	ļ		ING 1-1070mmø	7 · · · · · · · · · · · · · · · · · · ·
159+150 159+170	ļ	0 & S	G 1-1.20 x 0.60	CIM	158+970 158+970	1	0 & S 0 TO S	4	CIM 460 mm ø RCPC
14371/0			l		13079/0	1	V 10 3	<del>                                     </del>	JADA HILL A SEC

#### LEGEND:

C - Center Medion

5 - Sidewalk

CIM - Catch Inlet Manhole

0 - Outer Separator RCPC - Reinforced Concrete Pipe Culvert MH - Manhole

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

KGNED	DATE	SIGNATURE .	4	DEPARTMENT	REPUBLIC OF THE PHIL T OF PUBLIC WOR	IPPINES KS AND HIGHWAYS	3
	111100	1 SHOL HARIA	PJHL - PMO	BUREAU C	F DESIGN	OFFICE OF TH	E SECRETARY
ECKED	7/9/1	170177	/ Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:
BMITTED	9/1/12	M. Killichi	DANILO C. TRAJANO	JOSEFINA M. ALAGAR	gilberto s. Reyes	(See cover sheet for Signature) MANUEL M. BONDAN	(See cover sheet for Signature/Approval) SIMEON A. DATUMANONG
	1411.00	TEAM LEADER	Project Director	Chief, Highwaye Division	OIC, Director M	Undersecretory	Secretory

ROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SCHEDULE OF SURFACE DRAINAGE	DG-02
SAN JOSE BYPASS	FULL SIZE A1		

		LE	EFT SIDE		RIGHT SIDE					
STAT	ION		LENGTH	TYPE OF	STAT	HON		LENGTH	TYPE OF	
гом сім	TO CIM	LOCATION	(m)	STRUCTURE	FROM CIM	то сім	LOCATION	(m)	STRUCTURE	
59+170		0 TO S	4	460 mm ø RCPC	158+970	158+973	s	3	810 mm ∉ RCPC	
59+170	159+200	s	30	610 mm ≠ RCPC	158+973		S		мн	
9+200		0 & S		CIM	158+973	159+010	S	37	610 mm ≠ RCPC	
9+200		0 TO S	4	460 mm ø RCPC	159+010		0 & 5		CIM	
9+200	159+210	S	10	610 mm ¢ RCPC	159+010		0 TO S	4	460 mm # RCPC	
9+210	-		NG 1-1070mmø		159+010	159+040		30	610 mm ø RCPC	
9+210 9+210	159+230	S	20	MH 610 mm ø RCPC	159+040	<u> </u>	0 & S		CIM	
9+230	1254520	S 0 & S	20	CIM	159+040 159+040	159+070	0 TO \$	30	460 mm # RCPC 610 mm # RCPC	
9+230		0 TO S	4	460 mm ø RCPC	159+070	1397070	0 & S	30	CIM	
9+230	159+270	s	40	610 mm # RCPC	159+070		0 TO S	4	460 mm Ø RCPC	
9+270		0 & S		CIM	159+110		0 & S		CIM	
9+270		0 TO S	4	460 mm Ø RCPC	159+110		O TO S	4	460 mm ≠ RCPC	
9+270	159+310	\$	40	610 mm # RCPC	159+110	159+140	<u>.</u> 5	30	610 mm ø RCPC	
9+310		0 &c S		CIM	159+140		0 & S		CIM	
9+310		O TO S	4	460 mm Ø RCPC	159+140		o to s		460 mm # RCPC	
9+310	159+350	5	40	610 mm # RCPC	159+150			G 1-1.20 x 0.60	RCBC x 33.10m	
9+350		0 &c S		CIM	159+200		0 & S		CIM	
9+35D	150 : 700	0 TO S	40	460 mm # RCPC	159+200	450.000	0 TO S	4	460 mm # RCPC	
9+350 0+300	159+390	S	40	610 mm # RCPC	159+200	159+210	S	10 NC 1 1070mmd	610 mm # RCPC	
9+390 9+390		0 & S 0 TO S	4	CIM 460 mm ø RCPC	159+210 159+210		S EXIST	NG 1-1070mmø	RCPC x 37.0m	
9+390 9+450		0 & 5	*	CIM	159+210	159+230	\$	20	610 mm Ø RCPC	
9+450		0 TO S	4	450 mm # RCPC	159+230	100 / 200	0 & S		CIM	
9+450	159+460	S	10	610 mm # RCPC	159+230		O TO S	4	460 mm ≠ RCPC	
9+460		EXIST	1NG_1-910mmø_	RCPC x 33.Dm	159+230	159+270	S	40	610 mm # RCPC	
9+460		S		МН	159+270		0 & S		CIM	
9+460	159+480	Ş	20	610 mm # RCPC	159+270		0 TO S	4	460 mm ∉ RCPC	
9+480		0 & 5		CIM	159+270	159+310	S	40	610 mm ø RCPC	
9+480		0 TO S	4	460 mm # RCPC	159+310		0 & S		CIM	
9+510		0 & \$		CIM	159+310		0 TO S	4	450 mm # RCPC	
9+510		O TO S	4	460 mm # RCPC	159+310	159+350	S	40	610 mm ø RCPC	
9+510	159+550	Ś	40	610 mm # RCPC	159+350		0 & 5		CIM	
9+550		0 & 5		CIM	159+350		O TO S	4	460 mm # RCPC	
9+550 9+550	159+580	0 TO S	30	460 mm # RCPC 510 mm # RCPC	159+350	159+390	<u> </u>	40	610 mm # RCPC	
9+580	1387380	0 & S	34	CIM	159+390 159+390		0 & 5 0 TO S	4	CIM 460 mm ≠ RCPC	
9+580		0 TO S	4	460 mm ø RCPC	159+450		0 & 5	7	CIM	
9+580	159+610	5	30	610 mm ≠ RCPC	159+450		O TO S	4	460 mm # RCPC	
9+610		0 & 5		CIM	159+450	159+460	\$	10	610 mm # RCPC	
9+610		0 TO S	4	460 mm # RCPC	159+460			ING 1-910mmø	·	
9+630		EXISTIN	NG 2-3.0 x 3.0	RCBC × 35.50m	159+460		S	1	мн	
9+640		0 & 5			159+460	159+480	5	20	610 mm # RCPC	
9+640	159+670	S	30	610 mm ø RCPC	159+4B0		0 & S		CIM	
9+670		0 & S		CIM	159+480		0 T0 S	4	460 mm # RCPC	
9+670		отоѕ	4	460 mm ø RCPC	159+510		D & S		СІМ	
9+670	159+710	S	40	610 mm ø RCPC	159+510		0 TO 5	4	460 mm # RCPC	
9+710		0 & 5		CIM	159+510	159+550	\$	40	610 mm ø RCPC	
9+710	450.504	0 70 5	4	460 mm ø RCPC	159+550		0 & S	<u> </u>	CIM	
9+710	159+750	S	40	610 mm ø RCPC	159+550		0 TO S	4	460 mm # RCPC	
9+750	<del> </del>	0 & S	<del> </del>	CIM	159+550	159+580	\$	30	610 mm # RCPC	
9+750 9+770	-	Q TO S	1NC 1 - 010	460 mm Ø RCPC	159+580		D & S		CIM 450 mm # BCBC	
9+770		S	ING 1-910mmø	RCPC x 33.0m	159+580	150,-610	0 T0 S	4 30	460 mm # RCPC 610 mm # RCPC	
9+770	159+790	- 3 S	20	610 mm ø RCPC	159+580 159+610	159+610	S 0 & 5	טנ	CIM	
9+790		0 & S		CIM	159+610		O TD S	4	460 mm # RCPC	
9+790		0 TO S	4	460 mm ¢ RCPC	159+630			NG 2-3.0 x 3.D	<del> </del>	
9+830		0 & S		CIM	159+64D		0 & S		CIM	
9+830		0 TO S	4	460 mm ∉ RCPC	159+64D		2 OT 0	4	460 mm ø RCPC	
+830	159+845	\$	15	610 mm ø RCPC	159+640	159+670	5	30	610 mm ø RCPC	
9+845		EXIST	ING 1-910mmø	<del></del>	159+670	<u> </u>	0 & S	1	CIM	
9+845		S		мн	159+670		D TO S	4	460 mm ø RCPC	
9+870		0 & S		CIM	159+670	159+710	5	40	510 mm ø RCPC	
9+87D		2 OT 0	4	460 mm ≠ RCPC	159+710		0 & S		CIM	
9+87D	159+910	5	40	610 mm ≠ RCPC	159+710		D TO 5	4	480 mm ø RCPC	
9+910		0 & S		CIM	159+710	159+750	S	40	510 mm Ø RCPC	
9+910		0 TO S	4	460 mm # RCPC	159+750		0 & \$		CIM	
			40							

March   Marc		LEFT SIDE					RIGHT SIDE				
	STAT	ION		LENGTH	TYPE OF	STAT	ION		LENGTH	TYPE OF	
1994-95    1994-95    1994-95    2	FROM CIM	TO CIM	LOCATION		STRUCTURE	FROM CIM	TO CIM	LOCATION		1	
199490   \$	159+950		0 & S		CIM	159+770		EXIST	1NG 1−910mmø	RCPC x 33.0m	
1994-990	159+950		o to s	4	460 mm # RCPC	159+770		S		610 mm # RCPC	
1994-980   P.   D.   D.   A.   Million Price   Part   1994-980   D.   D.   D.   Million Price   Million Pric	l	159+990	· · · · · · · · · · · · · · · · · · ·	40		<del>,                                     </del>	159+790		20	610 mm ø RCPC	
169-100					<u> </u>	1					
1994-003           0	<del></del>					<del>}</del>			4	<del> </del>	
189-1000   0 TO S				1-2.40 X 2.40		ŧ			4		
190-970    190-970    0   8   4   410 mm   8   8   6   M   190-970   0   8   5   CM   190-970   0   8   8   CM   190-970   0				4	<del></del>	+	159+845				
1909-770   0 k S	160+030		s	3	610 mm ≠ RCPC	+		EXIST	ING 1-910mmø		
1994-707	160+030	160+070	S	40	610 mm # RCPC	159+845		S		МН	
1909-100   1909-100   S											
1909-110	<u> </u>	*60.440					450.040				
1909-110		100+110		40		<b> </b>	159+910		40		
1809-130				4					4		
160+150	h						159+950				
169+150	160+130		S		мн	159+950		0 & \$		СІМ	
160+150		160+150	S	20	610 mm # RCPC	159+950		0 T0 S	4	450 mm ø RCPC	
150+190						<del></del>	159+990		40		
100+190		100.400									
1904-190		100+190		10		·			<u>-</u>	<del></del>	
1909-190				4					3 1-2.40 x 2.40		
1909-220		160+230		-					4		
1909-220	160+230		0 & S		CIM	160+030		s	3	610 mm ø RCPC	
150+270	160+230		0 TO S	4	450 mm # RCPC	160+030	160+070	S .	40	610 mm ø RCPC	
150+270   160+310   S	l	160+270		40							
150+270											
1991-310		160+310					160+110		40		
1901-310   D TO S		1007310							4		
180+340				4				*****		<u> </u>	
180+340	160+340		EXIST	ING 1-910mm# I							
1801-150	160+340		s		MH	160+130	160+150	S	20	610 mm # RCPC	
150+350		160+350		10							
160+350					-		400.400				
160+390		160+300			<del></del>		160+190		40		
180+390		1001390		. 40					4		
180+430				4	·		160+230				
180+430	160+390	160+43D	S	40	610 mm ≠ RCPC	160+230		0 & S		СІМ	
150+430	160+430		0 & S		CIM	160+230		0 TO S	4	460 mm ≠ RCPC	
160+470	$\vdash$					<del> </del>	160+270		40		
180+470	<b>—</b>	160+470		4	<del></del>						
150+470		- <del>-</del>		4		<b></b>	100.710			· · · · · · · · · · · · · · · · · · ·	
150+510		150+510				<b></b>	100+310		40		
180+510									4		
160+540 S 10 610 mm ≠ RCPC 160+540 160+550 S 10 610 mm ≠ RCPC 160+350 S 0 0 & S CIM 160+550 D & S 10 610 mm ≠ RCPC 160+550 D & S 10 610 mm ≠ RCPC 160+550 D & S 4 460 mm ≠ RCPC 160+550 D & S 40 610 mm ≠ RCPC 160+550 D & S 40 610 mm ≠ RCPC 160+550 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & S 40 610 mm ≠ RCPC 160+590 D & D & S 40 610 mm ≠ RCPC 160+590 D & D & S 40 610 mm ≠ RCPC 160+590 D & D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+630 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+670 D & S 40 610 mm ≠ RCPC 160+710 D & S 40 610 mm ≠ RCPC 160+710 D & S 40 640 mm ≠ RCPC 160+740 D & EXISTING 1-910mm≠ RCPC x 34.0m 160+740 D & EXISTING 1-910mm≠ RCPC x 34.0m	160+510			4	460 mm ø RCPC				ING 1-910mmø	<del></del>	
160+540	150+540		EXIST	ING 1-910mmø l	RCPC x 34.0m	160+340		5		MH	
160+550	<b></b>						160+350		10	<del></del>	
180+550	<del></del>	160+550		10							
180+550   160+590   S	-			L	<del></del>		160.700			<del> </del>	
160+590		160+590		<del></del>			100+390		40	<del></del>	
160+590		7001330	-						4		
160+590	1	-		4		<del> </del>	160+430				
160+630         0 TD S         4         460 mm ø RCPC         160+430         160+470         S         40         610 mm ø RCPC           160+630         160+670         S         40         610 mm ø RCPC         160+470         O & S         CIM           160+670         O & S         CIM         160+470         O TO S         4         460 mm ø RCPC           160+670         O TO S         4         460 mm ø RCPC         180+470         160+510         S         40         610 mm ø RCPC           160+670         160+710         S         40         510 mm ø RCPC         160+510         O & S         CIM           160+710         O & S         CIM         160+510         O TO S         4         460 mm ø RCPC           160+710         O TO S         4         480 mm ø RCPC         160+540         EXISTING 1-910mmø RCPC x 34.0m           160+740         EXISTING 1-910mmø RCPC x 34.0m         160+540         S         MH	160+590	160+630	5	40	610 mm ø RCPC	<b>┾</b>		0 & 5		CIM	
160+630         160+670         S         40         610 mm ø RCPC         160+470         O & S         CIM           160+670         O & S         CIM         160+470         O TO S         4         460 mm ø RCPC           160+670         O TO S         4         460 mm ø RCPC         180+470         160+510         S         40         610 mm ø RCPC           160+670         160+670         S         40         610 mm ø RCPC         160+510         O & S         CIM           160+710         O & S         CIM         160+510         O TO S         4         460 mm ø RCPC           160+710         O TO S         4         480 mm ø RCPC         160+540         EXISTING 1-910mmø RCPC x 34.0m           160+740         EXISTING 1-910mmø RCPC x 34.0m         160+540         S         MH						160+430				<del>                                     </del>	
160+670         0 & S         CIM         160+470         0 TO S         4         460 mm # RCPC           160+670         0 TO S         4         460 mm # RCPC         160+470         160+510         S         40         610 mm # RCPC           160+670         160+710         S         40         510 mm # RCPC         160+510         0 & S         CIM           160+710         O & S         CIM         160+510         0 TO S         4         460 mm # RCPC           160+710         O TO S         4         480 mm # RCPC         160+540         EXISTING 1-910mm# RCPC x 34.0m           160+740         EXISTING 1-910mm# RCPC x 34.0m         160+540         S         MH	-				<del></del>	<del></del>	160+470		40		
160+670         C TO S         4         460 mm # RCPC         160+470         160+510         S         40         610 mm # RCPC           160+670         160+710         S         40         510 mm # RCPC         160+510         O & S         CIM           160+710         O & S         CIM         160+510         O TO S         4         460 mm # RCPC           160+710         O TO S         4         480 mm # RCPC         160+540         EXISTING 1-910mm# RCPC x 34.0m           160+740         EXISTING 1-910mm# RCPC x 34.0m         160+540         S         MH	<u> </u>	160+670		40		<del>†</del>		<del></del>	ļ	<del></del>	
160+670         160+710         S         40         510 mm # RCPC         160+510         O & S         CIM           160+710         O & S         CIM         160+510         O TO S         4         460 mm # RCPC           160+710         O TO S         4         480 mm # RCPC         160+540         EXISTING 1-910mm# RCPC x 34.0m           160+740         EXISTING 1-910mm# RCPC x 34.0m         160+540         S         MH	$\vdash$					<del></del>	160/510		· · · · · · · · · · · · · · · · · · ·		
160+710         0 & S         CIM         180+510         O TO S         4         460 mm # RCPC           160+710         0 TO S         4         460 mm # RCPC         160+540         EXISTING 1-910mm# RCPC x 34.0m           160+740         EXISTING 1-910mm# RCPC x 34.0m         160+540         S         MH		160+710			<del></del>		100+210		40	<u> </u>	
160+710         O TO S         4         460 mm ø RCPC         160+540         EXISTING 1-910mmø RCPC x 34.0m           160+740         EXISTING 1-910mmø RCPC x 34.0m         160+540         S         MH		1001110		,,,	· · · · · · · · · · · · · · · · · · ·	<del></del>	·		4	<del>                                     </del>	
160+740 EXISTING 1-910mm# RCPC x 34.0m 160+540 S MH				4		···					
160+740 S MH 160+540 160+550 S 10 610 mm # RCPC	160+740			ING 1-910mm# !	·					<del>,</del>	
	160+740		S		MH	160+540	160+550	S	10	610 mm # RCPC	

#### LEGEND:

C — Center Median

S — Sidewalk

CIM - Catch Inlet Manhole

RCPC - Relatorced Concrete Pipe Culvert 0 - Outer Separator

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

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PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SCHEDULE OF SURFACE DRAINAGE	DG-03
SAN JOSE BYPASS	FULL SIZE A1		

LEFT SIDE

		LE	FT SIDE		_		Ri	GHT SIDE	1
STAT		LOCATION	LENGTH	TYPE OF STRUCTURE	TATE		LOCATION	LENGTH	TYPE OF STRUCTURE
ROM CIM	TO CIM		(m)		FROM CIM	TO CIM		(m)	
50+740	160+750	S	10	610 mm ø RCPC	160+550		0 & S		CIM
0+75D		0 & 5		CIM	160+550		0 TO S	4	460 mm ø RCPC
0+750		0 TO S	4	460 mm ø RCPC	160+550	160+590	<u> </u>	40	610 mm ø RCPC
0+750	160+790	\$	40	510 mm Ø RCPC	160+590		0 & S		CIM
0+790		0 & S	<del></del>	CIM	160+590	100.070	0 TO S	4	460 mm # RCPC
0+790		o to s	4	460 mm ø RCPC	160+590	16D+630	s	40	610 mm # RCPC
0+790	160+830	5	40	610 mm ø RCPC	160+630		0 & 5		CIM
0.68+030	-	0 & S		CIM	160+630	150.670	o to s	4	460 mm # RCPC
50+830 50+855		D TO S	4	460 mm ø RCPC	160+630	160+670	S	40	610 mm # RCPC
0+855	<del> </del>	S	NG 1-910mm# I		160+670 160+670		0 & 5 0 TO S	<del>                                     </del>	CIM
0+855	160.970	5	16	MH	_+	160+710	5	40	460 mm # RCPC 610 mm # RCPC
80+855	160+870	0 & S	15	610 mm # RCPC	160+670 160+710	160+710	- 0 & S	40	CIM
60+870 60+870	_	0 70 5	4	CIM	150+710		0 TO S	4	460 mm # RCPC
0+870	160+900	\$	30	460 mm ø RCPC	160+740			IING 1~910mmø	
0+900	160+900	0 & S	30	610 mm ø RCPC	160+740		S	1 - 9 1 DM mp	MH
				CIM	150+740	160.750	S		
00+900	450.070	0 TO 5	4	460 mm ø RCPC		160+750		10	610 mm # RCPC
0+900	160+930	5	30	610 mm ø RCPC	160+750	<del></del>	0 & 5		CIM
60+925	<del>                                     </del>		NG 1-910mm#		160+750	150.700	0 TO S	4	460 mm # RCPC
0+930	<del> </del>	2 2 2		HH	160+750	160+790	S	40	510 mm # RCPC
50+97D		0 & S		CIM	160+790	ļ	0 & 5	<del></del>	CIM
0+970	150.007	0 TO S	4	460 mm Ø RCPC	160+790	150:070	0 70 S	4	460 mm # RCPC
0+970	160+983	5	13	610 mm # RCPC	150+790	160+830	\$	40	610 mm # RCPC
0+975			NG 1-910mm#		160+830		0 & S	ļ	CIM
60+9B3		S		МН	160+830		0 TO \$	4	460 mm # RCPC
50+9B3	161+00D	5	17	610 mm ø RCPC	160+855			TING 1-910mmø	· · · · · · · · · · · · · · ·
61+000		0 & S		CIM	160+855		S		MH
61+000		o to s	4	460 mm ≠ RCPC	160+855	160+870	s	15	610 mm ≠ RCPC
1+030	161+044	. 5	14	610 mm ø RCPC	160+B70		0 & 5		CIM
31+044			NG 1-910mm#	RCPC x 37.0m	160+870		0 TO S	4	460 mm ≠ RCPC
51+044		S		MH	160+870	160+900	\$	30	610 mm ≠ RCPC
S1+044	161+060	S	16	610 mm ø RCPC	160+900		0 & S		CIM
61+060		0 & S		CIM	160+900		0 TO S	4	460 mm ≠ RCPC
61+060		0 TO S	4	460 mm ø RCPC	160+917		S		MH
61+130		0 & S		CIM	160+917	160+930	S	13	610 mm ≠ RCPC
61+130		0 TO S	4	460 mm ø RCPC	160+925	1	EXIS	TING 1-910mmø	RCPC x 36.0m
61+130	161+140	S	10	610 mm # RCPC	160+930		2 & 0		CIM
51+14D		EXIST	NG 1−910mmø I	RCPC x 33.0m	160+930		0 TO S	4	460 mm Ø RCPC
61+140		5		MH	160+967		S		мн
61+170		0 & S		CIM	160+967	160+970	s	3	610 mm ≠ RCPC
51 <b>+</b> 170		0 TO \$	4	460 mm # RCPC	160+970		0 & 5		CIM
61+170	161+200	5	30	610 mm ≠ RCPC	160+970		0 T0 S	4	460 mm ø RCPC
61+20D		0 & S		CIM	160+970	161+000	\$	30	610 mm Ø RCPC
61+200		O TO S	4	460 mm # RCPC	161+975		EXIS	TING 1-910mmø	RCPC x 38.0m
1+200	161+210	S	10	610 mm # RCPC	161+000		0 & S		CIM
31+210		EXIST	NG 1-910mmø !	L	151+000		2 07 0	4	460 mm ≠ RCPC
51+210	_	S		мн	161+03D		0 & 5		CIM
31+210	161+250	5	40	610 mm ø RCPC	161+030		0 T0 S	4	460 mm ≠ RCPC
31+250		0 & S		CIM	161+030	161+044	s	14	610 mm # RCPC
1+250	<u> </u>	0 TO S	4	460 mm # RCPC	161+044	<del>                                     </del>		TING 1—910mmø	
1+250	161+290	S	40	610 mm ø RCPC	161+044		s		МН
1+290		0 & \$		CIM	161+044	161+060	5	16	510 mm Ø RCPC
1+290		отоѕ	4	460 mm ø RCPC	161+060		0 & S	†	CIM
1+290	161+330	s	4D	610 mm ≠ RCPC	161+060		0 TO S	4	460 mm # RCPC
1+330		D &c S		CIM	161+13D		0 & 5	<del>                                     </del>	CIM
1+330		0 TO S	4	460 mm ø RCPC	161+130		0 TO S	4	460 mm Ø RCPC
1+455	<del> </del>		G 1-3.0 x 2.10		161+130	161+140	\$	10	610 mm # RCPC
1+460	-	0 & 5		CIM	161+140	12		TING 1-910mmø	<del></del>
1+460	ļ	0 TO S	4	460 mm ø RCPC	161+140	<del></del>	S		MH MH
1+460	161+500	s	40	610 mm # RCPC	161+170		0 & 5	<del>                                     </del>	CIM
31+500	,511300	0 10 \$	4	460 mm ø RCPC	161+170		O TO S	4	460 mm Ø RCPC
	<del> </del>	0 & S	7	CIM		1614200	\$	30	
51+500	<del>                                     </del>		C 1_94 × 540	L	161+170	161+200		30	610 mm # RCPC
51+518	<b> </b> -		6 1-2.4 × 2.10	RCBC x 38.50m	161+200	<del> </del>	0 & 5	<del> </del>	CIM
31+530		0 & S		CIM	161+200	101.515	отов	4	460 mm Ø RCPC
51+530		0 TO \$	4	450 mm Ø RCPC	161+200	161+210	S	10	CIM
61+530	161+560	\$	30	610 mm # RCPC	161+210	ļ <u>-</u>		TING 1-910mmø	
61+560		0 & S		CIM	161+210		0 70 S	4	460 mm ø R¢P¢
51+560		0 TO S	1 4	460 mm ø RCPC	161+210	161+250	5	40	610 mm ø RCPC

		LE	LEFT SIDE RIGHT SIDE						
STAT	TO CIM	LOCATION	LENGTH (m)	TYPE OF STRUCTURE	STAT	TO CIM	LOCATION	LENGTH (m)	TYPE OF STRUCTURE
161+560	161+590	5	30	610 mm ≠ RCPC	161+250	100111	0 & 5	(1117	CIM
161+590	1017390	5 D&S	30	CIM	161+250		0 TO S	4	460 mm ≠ RCPC
151+590		0 TD 5	4	450 mm ø RCPC	161+250	161+290	5	40	610 mm # RCPC
161+590	161+630	S	40	610 mm # RCPC	161+290	161+290	0 & S	40	CIM+
151+530	101+030		40	CIM	161+290	<del> </del>	0 TO S		460 mm Ø RCPC
		0 & S				400.775		4	
161+630		0 TO 5	4	460 mm ø RCPC	161+290	161+330	S	40	610 mm ø RCPC
151+630	161+670	S	40	610 mm ≠ RCPC	161+330		0 & S		CIM
161+670		O TO 5	4	460 mm ø RCPC	151+330		0 TO S	4	450 mm # RCPC
161+670		0 & 5		CIM	161+455		<del> </del>	G 1-3.0 x 2.10	
151+695		EXIST	NG 1-910mm≠ F	RCPC x 36.0m	161+460		0 & S		CIM
161+695		S		МН	161+460		0 TO S	4	460 mm Ø RCPC
161+595	161+710	s	40	610 mm ø RCPC	161+460	161+500	S	40	610 mm ø RCPC
161+710		0 & 5		CIM	161+500	L	0 & 5		CIM
161+710		O TO S	4	460 mm ø RCPC	161+500		0 TO S	4	460 mm ø RCPC
161+710	161+750	5	40	610 mm ø RCPC	161+518		EXISTIN	G 1-2.4 x 2.10	RCBC x 38.50m
161+750		0 & 5		CIM	161+530		0 & S		CIM
161+750		0 TO S	4	460 mm ø RCPC	161+530		0 TO S	4	460 mm ø RCPC
161+790		5	3	510 mm ≠ RCPC	161+530	161+560	s	30	610 mm ø RCPC
161+790		0 & S		CIM	161+560		0 & S		CIM
161+790		0 TO S	4	460 mm Ø RCPC	161+560	<u> </u>	0 TO S	4	460 mm ø RCPC
161+790	161+830	5 70 3	40	510 mm ø RCPC	161+560	161+590	S	30	610 mm ø RCPC
161+830	1013000	0 & S		CIM	161+590	1017330	0 & S	50	CIM
				460 mm # RCPC	·	<del></del>			
161+830		0 TO S	4		161+590	45	0 TO S	4	460 mm Ø RCPC
161+870		0 & 5		CIM	161+590	161+630	S	40	610 mm # RCPC
161+870		O TO S	4	460 mm ø RCPC	161+630	ļ	0 & S		CIM
161+870	161÷88D	5	10	610 mm ø RCPC	161+630		0 TO S	4	460 mm ø RCPC
161+880	·	EXIST	NG 1-910mm# I	RCPC x 39.0m	161+630	161+670	<u>s</u>	30	610 mm ≠ RCPC
161+860		\$		MH	161+670		0 & S		СІМ
161+880	161+910	5	30	610 mm ø RCPC	161+670		0 TO S	4	460 mm ≠ RCPC
161+910		0 & S		CIM	161+695		EXIST	ING 1-910mmø ↓	RCPC x 35.0m
161+910		0 TO S	4	460 mm ø RCPC	161+695		s		MH
161+940		EXISTI	NG 1-1070mm¢	RCPC x 38.0m	161+695	161+710	5	15	MH
161+940		s		мн	161+710	-	0 & S		CIM
161+940	161+950	S	10	610 mm ø RCPC	161+710		0 TO S	4	450 mm Ø RCPC
161+950		0 & S		CIM	161+710	161+750	S	40	610 mm ø RCPC
161+950		0 to 5	4	460 mm ø RCPC	161+750		0 & S		CIM
161+950	161+990	s	40	510 mm ø RCPC	161+750	· · · <del>-</del> · · -	0 10 5	4	460 mm ø RCPC
161+990	1011230	0 & \$		CIM	161+790		0 & S	,	CIM
161+990			4	460 mm # RCPC	161+790		0 TO S	4	460 mm ø RCPC
	1001070	0 TO S	40	610 mm ø RCPC	161+790	104 - 070	S S	40	610 mm ø RCPC
161+990	162+030	S	40	· · · · · · · · · · · · · · · · · · ·	<del> </del>	161+830		40	
162+030		0 & \$	·-··	CIM	161+830		0 & S		CIM
162+030		0 TO S	4	460 mm ≠ RCPC	161+830		D TO 5	4	460 mm # RCPC
162+030	162+D60		30	610 mm # RCPC	161+870	<u> </u>	0 & S		CiM
162+050		0 & 5		CIM	161+870		0 TO S	4	460 mm # RCPC
162+060		0 T0 S	4	460 mm Ø RCPC	161+870	161+880	5	10	610 mm # RCPC
162+060	162+090	\$	30	610 mm ø RCPC	161+860		EXIST	ING 1-910mm#	RCPC x 39.0m
162+090		0 & 5		CIM	161+880	ļ	2		мн
162+090		0 TO S	4	460 mm Ø RCPC	161+880	161+910	5	40	610 mm # RCPC
162+090	162+120	\$	30	610 mm ø RCPC	161+910		0 & S		CIM
162+120		0 & S		CIM	161+910		0 TO S	4	460 mm Ø RCPC
162+120		0 T0 S	4	460 mm Ø RCPC	161+940	T	EXIST	NG 1-1070mmø	RCPC x 38.0m
162+135	-	<b>-</b>	ING 1-910mm# I		161+940		S		МН
162+160		0 & 5		CIM	151+94D	161+950	5	10	610 mm ø RCPC
162+160		O TO S	4	460 mm ≠ RCPC	161+950	1	0 & S		CIM
162+160	162+190	S S	30	610 mm # RCPC	161+950	<del>                                     </del>	0 TO S	4	460 mm ø RCPC
162+190	,52,150	0 & S		CIM	161+950	161+990	5	40	610 mm # RCPC
<b></b>			4	460 mm # RCPC	161+990	1017330	0 & S		CIM
162+190		0 70 S	<del>-</del> -			<del>                                     </del>	O TO S	4	460 mm ø RCPC
162+310		0 & S	<del></del>	CIM	161+990				
162+310		0 10 5	4	460 mm # RCPC	161+990	162+030	S	40	510 mm ≠ RCPC
162+310	162+350	S	4D	610 mm # RCPC	162+030	<b> </b>	0 & S	ļ	CIM
162+340			ING 1-910mmø	r	162+030	ļ	O TO S	4	460 mm @ RCPC
162+350		0 & S		CIM	162+030	162+060	S	30	610 mm ø RCPC
162+350	}	0 TO 5	4	460 mm # RCPC	162+060	L	0 % S		CIM
162+350	162+380	S	30	510 mm ≠ RCPC	162+060		O TO S	4	460 mm ø RCPC
162+380		0 & S		CIM	162+060	162+090	S	30	610 mm Ø RCPC
162+380		0 TO 5	4	460 mm # RCPC	162+090	Γ	0 & S	1	CIM
162+380	162+410	s	30	610 mm ø RCPC	162+090	<del> </del>	0 TO S	4	460 mm ø RCPC
162+410		0 & 5		CIM	162+090	162+120	s	10	610 mm ø RCPC
1321710			L	· • • • • • • • • • • • • • • • • • • •		1	<u> </u>		

RIGHT SIDE

#### LEGEND:

C - Center Medion S S - Sidewalk

CIM - Catch Inlet Manhole

RCPC - Reinforced Concrete Pipe Culvert 0 - Outer Separator

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

DESIGNED CASE SIGNATURE			i) i	REPUBLIC OF THE PHILIPPINES  DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				
CHECKED	9/9/2	Halkan	PJHL PMO Submitted By:	BUREAU ( Reviewed By:	PESIGN Recommended By:	OFFICE OF TH Recommended By: (See cover sheet for	HE SECRETARY  Approved By: (See cover sheet for	
SUBMITTED	9/1/01	TEAM LEADER	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highwaye Division	GILBERTO S. REYES OIC, Director N	Signature) MANUEL M. BONDAN Undersecretory	Signature/Approval) 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 (Plaridel, Cabanatuan and San Jose Bypasses)		SCHEDULE OF SURFACE DRAINAGE	DG-04
SAN JOSE BYPASS	FULL SIZE A1		

LEFT SIDE			RIGHT SIDE				Γ		
STATI		LOCATION	LENGTH	TYPE OF STRUCTURE	STAT		LOCATION	LENGTH	TYPE OF STRUCTURE
ROM CIM	TO CIM		(m)		FROM CIM	TO CIM		(m)	
162+410		0 TO S	4	460 mm ø RCPC	162+120		0 & 5		CIM
62+41D	162+440	S	30	610 mm Ø RCPC	162+120		0 TO S	4	460 mm ø RCPC
62+440		\$		MH	152+135	———		[NG 1-910mm#   	
62+440 162+451	162+451	5	11   NG 1-910mm# F	810 mm Ø RCPC	162+160 162+160		0 & S 0 TO S	4 4	CIM 460 mm ø RCPC
62+451		0 & 5	- Aumona-	MH	162+160	162+190	S S	30 30	610 mm ø RCPC
62+451	152+48D	V &C 5	29	610 mm ø RCPC	162+190	102+190	0 & S	00 30	CIM
52+480	(527450)	0 & 5		CIM	162+190		0 TO S	4 4	460 mm ø RCPC
62+480		0 TO S	4	46D mm Ø RCPC	162+310		0 & S	<del> </del>	CIM
62+480	162+510	s	30	510 mm ø RCPC	162+310		0 TO S	4 4	460 mm ø RCPC
62+510	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0 & 5		CIM	162+310	162+350	S	40	510 mm ø RCPC
162+510		O TO S	4	460 mm ≠ RCPC	162+340		EXIS	ING 1-910mme I	RCPC x 38.0m
162+537			NG 1-910mmø R	CPC x 34.0m	162+350		0 & 5		CIM
162+537		S		MH	162+350		0 TO S	4	460 mm ≠ RCPC
162+537	162+550	s	13	610 mm # RCPC	162+350	162+380	5	30	610 mm ≠ RCPC
162+550	1	0 & S		CIM	162+380		0 & 5		CIM
62+550		0 T0 S	4	460 mm # RCPC	162+380		O TO S	4	460 mm # RCPC
52+550	162+590	S	25	610 mm ø RCPC	162+410		0 & 5		CIM
62+590		0 & \$		CIM	162+410		D_TO S	4	460 mm # RCPC
62+590		0 T0 S	4	460 mm Ø RCPC	162+410	162+440	S	30	610 mm ø RCPC
62+590	162+630	S	40	610 mm # RCPC	162+440		5		MH
62+630		0 & \$		CIM	162+440	162+451	5	11	610 mm ≠ RCPC
62+630		0 TO S	4	460 mm ≠ RCPC	162+451		EXIS*	ING 1−910mmø I	RCPC x 34.0m
162+630	162+670	s	40	610 mm # RCPC	162+451		D TO S		CIM
62+670		0 & S		CIM	162+451	162+480		29	510 mm # RCPC
162+700			NG 1-910mm¢ F		162+480		0 & 5		CIM
162+700		2 OT 0	4	460 mm ø RCPC	162+480		0 TO S	4	450 mm ≉ RCPC
62+700		s		MH	162+480	162+510	S	30	610 mm # RCPC
I 62+700	162+710	5	10	610 mm # RCPC	162+510		0 & S		CIM
162+710		0 & S		CIM	162+510		0 TO S	4	450 mm ≠ RCPC
62+710		0 TD 5	4	460 mm ø RCPC	162+537			ING 1-910mmø	
62+710	162+750	S	40	610 mm # RCPC	162+550		0 & 5		CIM
162+750		0 & S		CIM	162+550		0 TO S	4	460 mm # RCPC
162+750		0 TO S	4	460 mm ≠ RCPC	162+550	162+590	. 5	25	610 mm # RCPC
162+850		0 & S	4	CIM	162+590		0 & S		CIM
162+850		0 TO S	4	460 mm Ø RCPC	162+590		0 TO \$	4	460 mm # RCPC
162+85D	162+870	S	20	610 mm ø RCPC CIM	162+590	162+630	\$	40	610 mm # RCPC
162+870		0 & 5			162+630		0 & S		CIM
162+870	44D   BBD	0 TO S	10	460 mm ≠ RCPC 610 mm ≠ RCPC	152+630		0 TO S	4	460 mm Ø RCPC
162+870	162+880	-	ING 1~910mmø f		162+630	162+670	S	40	610 mm ø RCPC
162+880 162+880		S	ING 1-910mmin	MH	162+670 162+670		0 & \$ 0 TO 5	4	CIM 460 mm # RCPC
162+880	162+910	s	30	610 mm ø RCPC	162+700			ING 1-910mm#	
162+910	1627910	0 & S		CIM	162+70D		S	ING I—BIOMMP	MH
162+910		0 TO S	4	460 mm ≠ RCPC	162+700	162+710	5	10	610 mm # RCPC
162+910	162+950	S	4	610 mm # RCPC	162+710	102+710	0 & S	·	CIM
162+950	102+350	0 & \$		CIM	162+710		o to s	4	460 mm ø RCPC
162+950		0 TO S	4	460 mm ø RCPC	162+710	162+750	5 10 3	4D	610 mm # RCPC
162+990		0 & S		CIM	162+750	172 1707	0 & 5	† <del></del>	CIM
162+990		0 TO S	4	460 mm ø RCPC	162+750		0 TO S	4	460 mm ø RCPC
162+990	163+000	S	10	610 mm ø RCPC	162+850		0 & 5	<u> </u>	CIM
163+000			ING 1-910mm¢ i	<del></del>	162+B50	-	O TO S	4	460 mm ø RCPC
763+000		5		мн	152+B50	162+87D	s	20	610 mm ø RCPC
163+000	163+030	S	30	610 mm ø RCPC	162+870		0 & 5		CIM
163+030		0 & 5	-	CIM	162+870		O TO S	4	460 mm ≠ RCPC
163+030		D TO 5	4	460 mm ø RCPC	162+870	162+880	\$	10	610 mm # RCPC
163+030	163+070	S	40	510 mm ≠ RCPC	162+8B0			TNG 1—910mmø	
163+070		0 & 5		CIM	162+880		s		МН
163+070		0 TO S	4	460 mm # RCPC	162+880	152+910	s	30	510 mm ø RCPC
163+070	163+100	S	30	610 mm ≠ RCPC	162+910		0 & 5	1	CIM
163+100		0 & S		CIM	162+910		o To s	4	460 mm ₱ RCPC
163+100		0 TO S	4	460 mm ≠ RCPC	162+910	162+950	s	40	610 mm ø RCPC
163+128		EXIST	ING 1-910mmø i	RCPC x 53.0m	162+950		0 & 5		CIM
163+130		0 & 5		CIM	162+950		D TD S	4	460 mm ø RCPC
163+130		0 TO S	4	460 mm # RCPC	162+99D		0 & \$		CIM
163+130	163+150	s	20	610 mm ≠ RCPC	162+990		D TO S	4	460 mm ≠ RCPC
163+150		\$		мн	162+990	163+000	S	10	610 mm ø RCPC
	163+160	\$	10				<del></del>		

	LEFT SIDE					RIGHT SIDE				
STATI	iON	LOCATION	LENGTH	TYPE OF	STAT		LOCATION	LENGTH	TYPE OF	
FROM CIM	TO CIM		(m)	STRUCTURE	FROM CIM	TO CIM		(m)	STRUCTURE	
163+160		0 & S		CIM	163+000			NG 1-910mmø i		
163+160		2 OT 0	4	460 mm ≠ RCPC	163+000		5		MH	
163+176			ING 1-910mmø	- · · · · · · · · · · · · · · · ·	163+000	163+030	s	30	610 mm ø RCPC	
163+176		2		MH _	163+030	<u> </u>	0 & 5		Сім	
163+176	163+190	5	14	610 mm ø RCPC	163+030	153.530	0 TO S	4	460 mm # RCPC 610 mm # RCPC	
163+190		0 & S		CIM	163+030	163+070	S	40		
163+190 163+190	163+220	0 TO S	4 30	460 mm ø RCPC 610 mm ø RCPC	163+070	<del> </del>	0 & S 0 T0 S	4	CIM 460 mm ø RCPC	
163+190	163+220	0 & S	30	CIM CIM	163+070 163+070	163+100	S S	30	610 mm ø RCPC	
163+220		0 10 5	4	460 mm ø RCPC	163+100	1037100	0 TO S	4	460 mm # RCPC	
163+220	163+250	s	30	610 mm Ø RCPC	163+100		0 & 5		CIM	
163+250		0 & 5		CIM	163+110	i	S		MH	
163+250	<u>_</u>	0 TO S	4	460 mm ø RCPC	153+110	163+130	2	20	610 mm ø RCPC	
163+250	163+290	s	40	610 mm ø RCPC	163+128			NG 1-910mmø F	RCPC x 53.0m	
163+290		0 & 5		CIM	163+130		0 & S		CIM	
163+290		o to s	4	460 mm & RCPC	163+130		o to s	4	460 mm ø RCPC	
163+360		0 & S		CIM	163+130	163+160	\$	30	610 mm # RCPC	
163+360		O TO 5	4	460 mm ø RCPC	163+160		0 & S		CIM	
163+360	163+371	s	10	510 mm ø RCPC	163+160		o to s	4	460 mm # RCPC	
163+371			NG 1∽910mmø	<del></del>	163+176			NG 1-910mmø i		
163+371		\$		MH	163+176		ŝ		610 mm ø RCPC	
163+371	163+400	S	30	610 mm # RCPC	163+176	163+190	\$	14	610 mm Ø RCPC	
163+400		D & S		CIM	163+190		0 & 5		CIM	
163+400		0 70 5	4	460 mm ø RCPC	163+190	45	0 TO S	4	460 mm # RCPC	
163+440	$\longrightarrow$	0 & S		CIM	163+190	163+220	\$	30	610 mm ø RCPC	
163+440	107.400	0 TO S	4	460 mm ø RCPC	163+220		0 & 5		CIM	
163+440	163+480	S D&S	40	610 mm ø RCPC CIM	163+220	167.050	0 TO S S	3D	460 mm # RCPC 510 mm # RCPC	
163+480 163+4BD		0 TO S	4	460 mm ø RCPC	163+220 163+250	163+250	0 & S		CIM CIM	
163+4BD	163+52D	S S	40	610 mm ø RCPC	163+250		0 TO S	4	460 mm ≠ RCPC	
163+520	7637320	D & 5	70	CIM	163+250	163+290	S S	4D	610 mm ø RCPC	
163+520		0 TO S	4	460 mm ø RCPC	163+290	-1051255	D & S	'	CIM	
163+590			NG 1−910mmø F	L	163+290		Q TO S	4	450 mm ø RCPC	
163+655			NG 1-1070mm≠		163+360		0 & S		CIM	
<u> </u>					153+360		0 T0 S	4	460 mm ≠ RCPC	
					163+360	163+371	S	10	610 mm ≠ RCPC	
					163+371		EXIST	ING 1−910mm¢ i	RCPC x 29.0m	
					163+371		S		мн	
					163+371	163+400	S	30	610 mm # RCPC	
			Į		163+400		0 & S		CiM	
					<b>.</b>					
1					163+400		0 T0 S	4	450 mm ø RCPC	
I					163+400 163+440		0 TO S 0 & S		450 mm ø RCPC CIM	
					163+400 163+440 163+440	407.400	0 TO S 0 & S 0 TO S	4	450 mm # RCPC CIM 460 mm # RCPC	
					163+440 163+440 163+440 163+440	163+480	0 T0 S 0 & S 0 T0 S S		450 mm # RCPC CIM 450 mm # RCPC 610 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480	163+480	O TO S O & S O TO S S O & S	4 40	450 mm ø RCPC CIM  450 mm ø RCPC 610 mm ø RCPC CIM	
					163+400 163+440 163+440 163+440 163+480 163+480		O TO S O & S O TO S S O & S O TO S	4 40	450 mm # RCPC CIM 450 mm # RCPC 610 mm # RCPC CIM 460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480	163+480	O TO S O & S D TO S S O & S O TO S S TO TO S S	4 40	450 mm ø RCPC CIM  450 mm ø RCPC 610 mm ø RCPC CIM	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520		0 TO S 0 & S 0 TO S 5	4 40 4 4	450 mm # RCPC CIM 450 mm # RCPC 610 mm # RCPC CIM 460 mm # RCPC 610 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480		0 TO S 0 & S 0 TO S	4 40	450 mm # RCPC  CIM  460 mm # RCPC  610 mm # RCPC  CIM  450 mm # RCPC  610 mm # RCPC  CIM  450 mm # RCPC  CIM  450 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 4 40 4	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	
					163+400 163+440 163+440 163+440 163+480 163+480 163+480 163+520 163+520 163+520		0 TO S 0 & S 0 TO S S 0 & S 0 TO S S 0 TO S S 0 TO S S 0 TO S S EXIST	4 40 40 40 40 40 40 1NG 1-910mm	450 mm # RCPC CIM  450 mm # RCPC 610 mm # RCPC CIM  460 mm # RCPC	

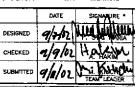
#### LEGEND:

C - Center Median 0 - Outer Separator S — Sidewalk

CIM — Catch Inlet Manhole

RCPC - Reinforced Concrete Pipe Culvert

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

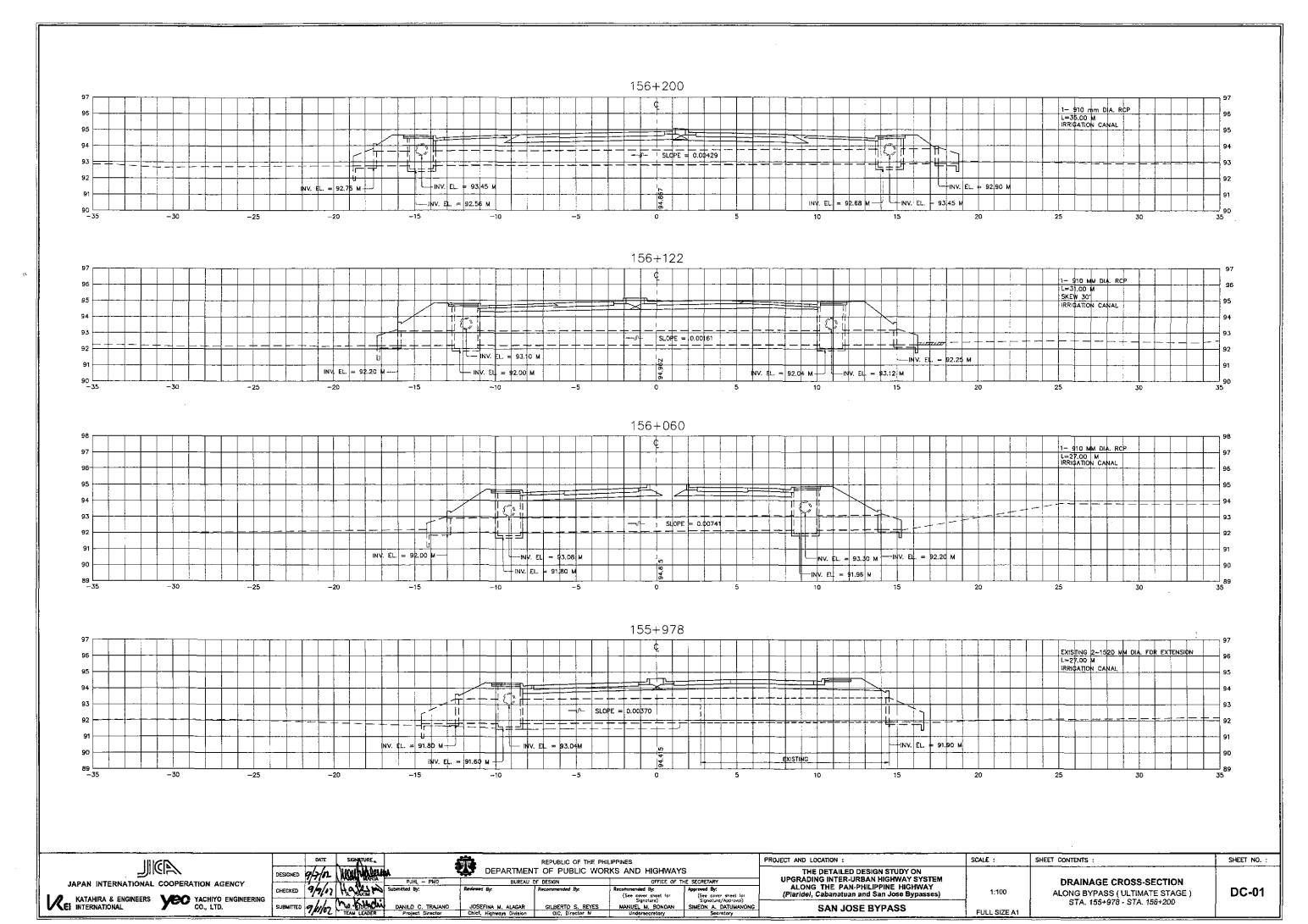


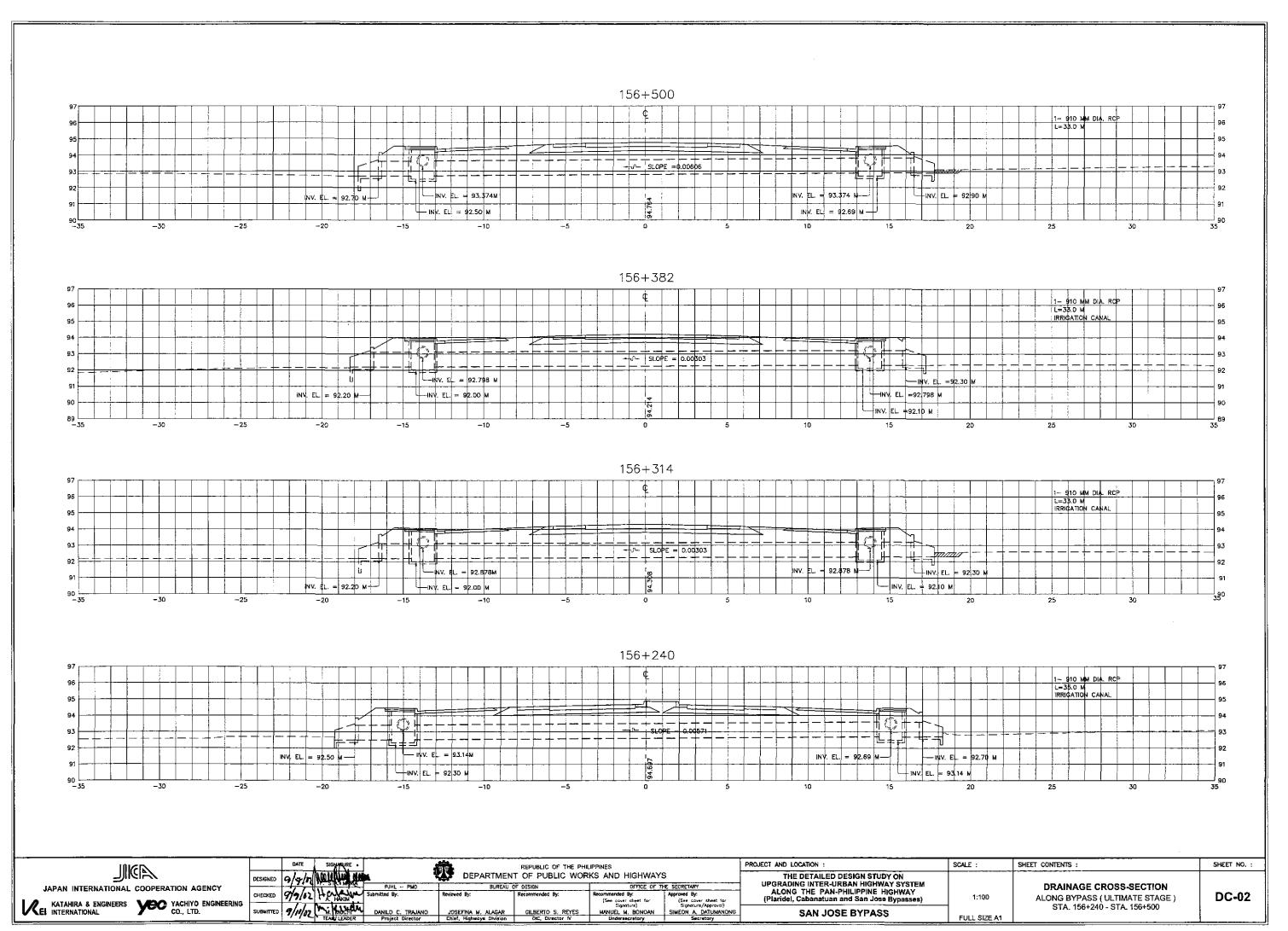
<b>(</b> •	DEPARTMEN	IPPINES KS AND HIGHWAYS	S	
PJHL - PMO	BURÉAU C	IF DESIGN	OFFICE OF TH	IE SECRETARY
Submitted By:	Reviewed By:	Recommended By:	Recommended By:	Approved By:
·			(See cover sheet for Signature)	(See cover sheet for Signature/Approval)
DANILO C. TRAJANO	JOSEFINA M. ALAGAR	CILBERTO S. REYES	MANUEL M. BONDAN	SIMEON A. DATUMANON
Project Director	Chief, Highways Division	OIC, Director M	Undersecretory	Secretory

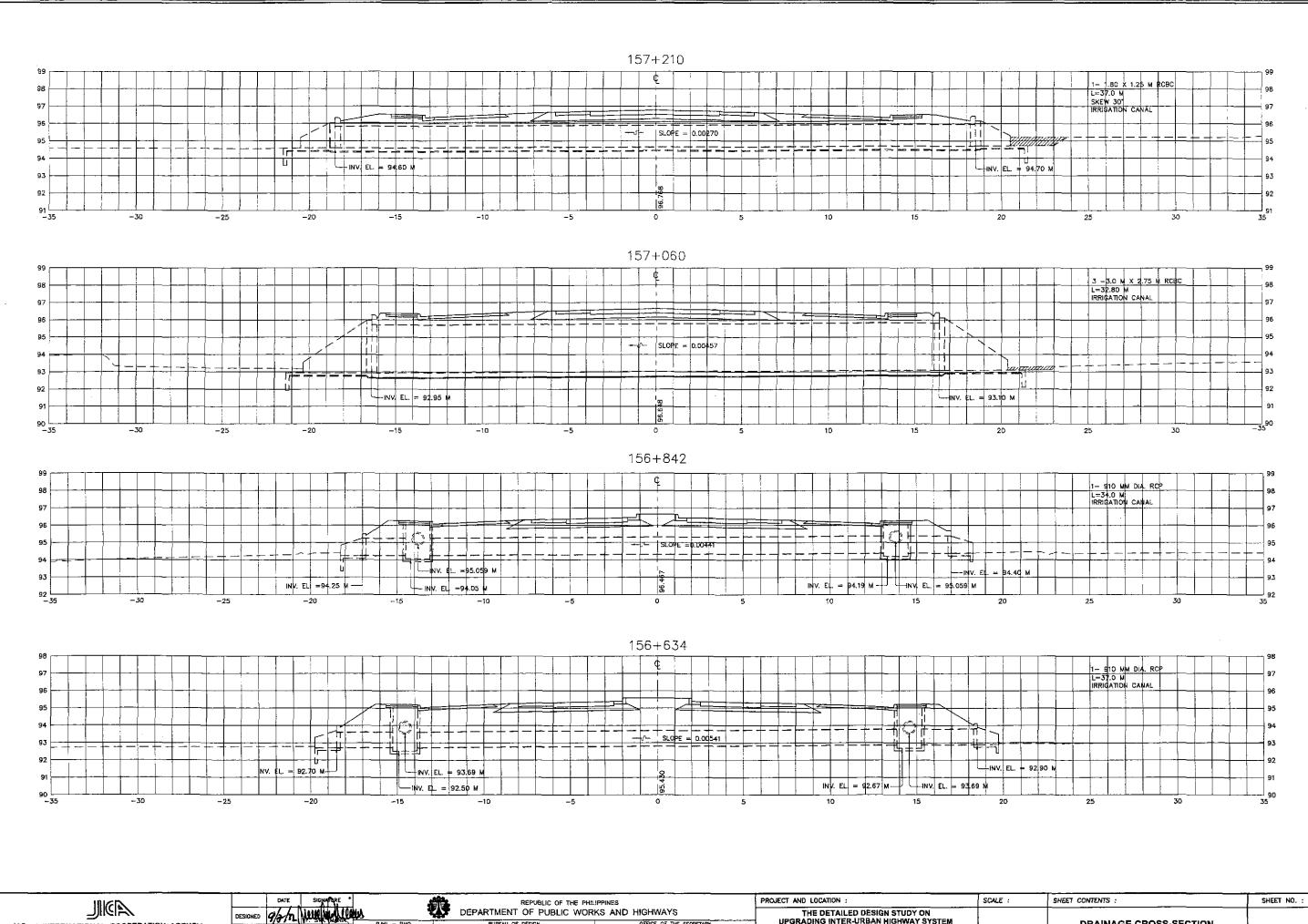
	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :
_	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	·	SCHEDULE OF SURFACE DRAINAGE
	SAN JOSE BYPASS	FULL SIZE A1	
=			

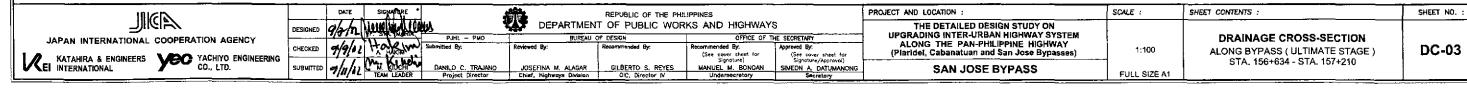
SHEET NO. :

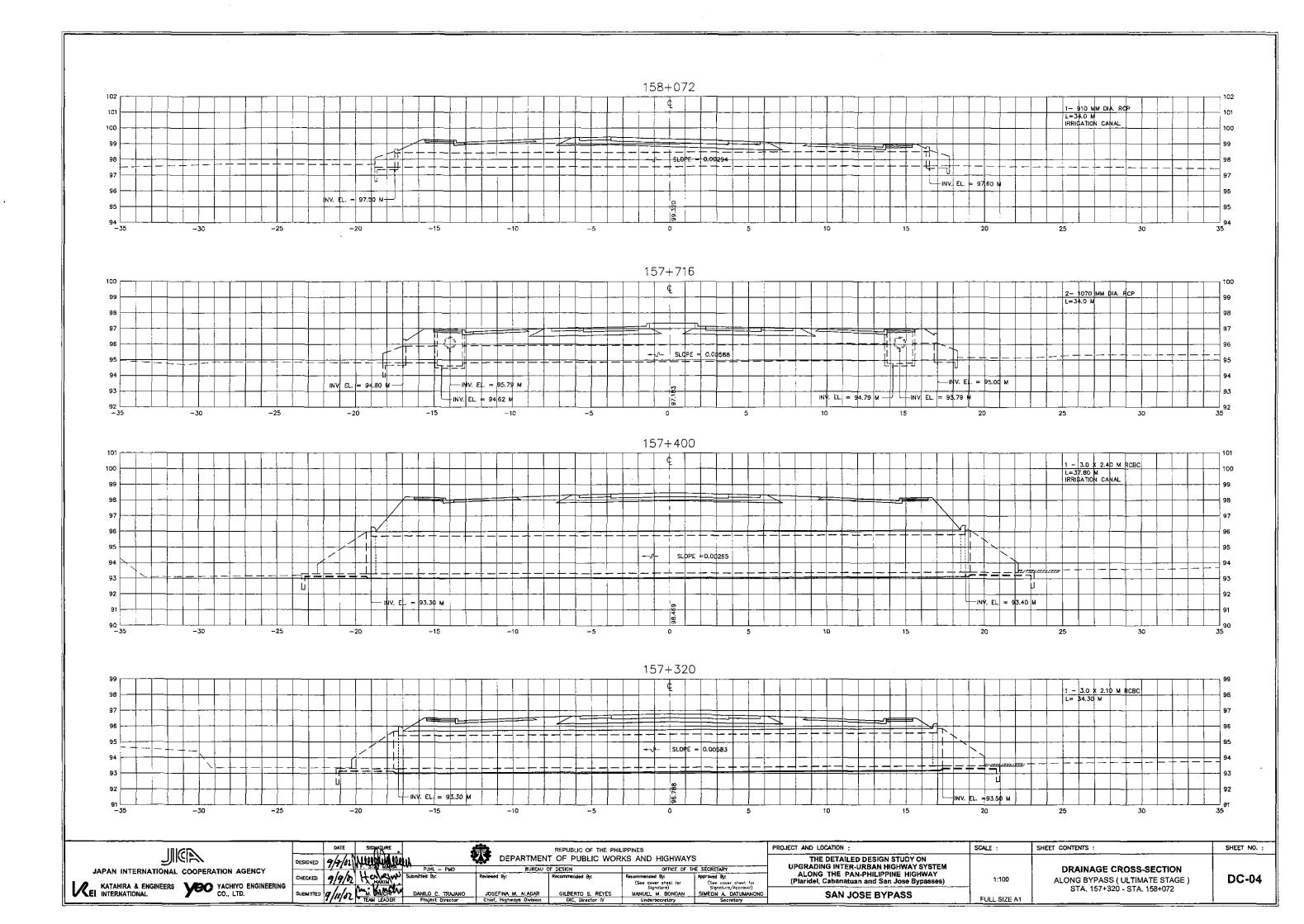
DG-05

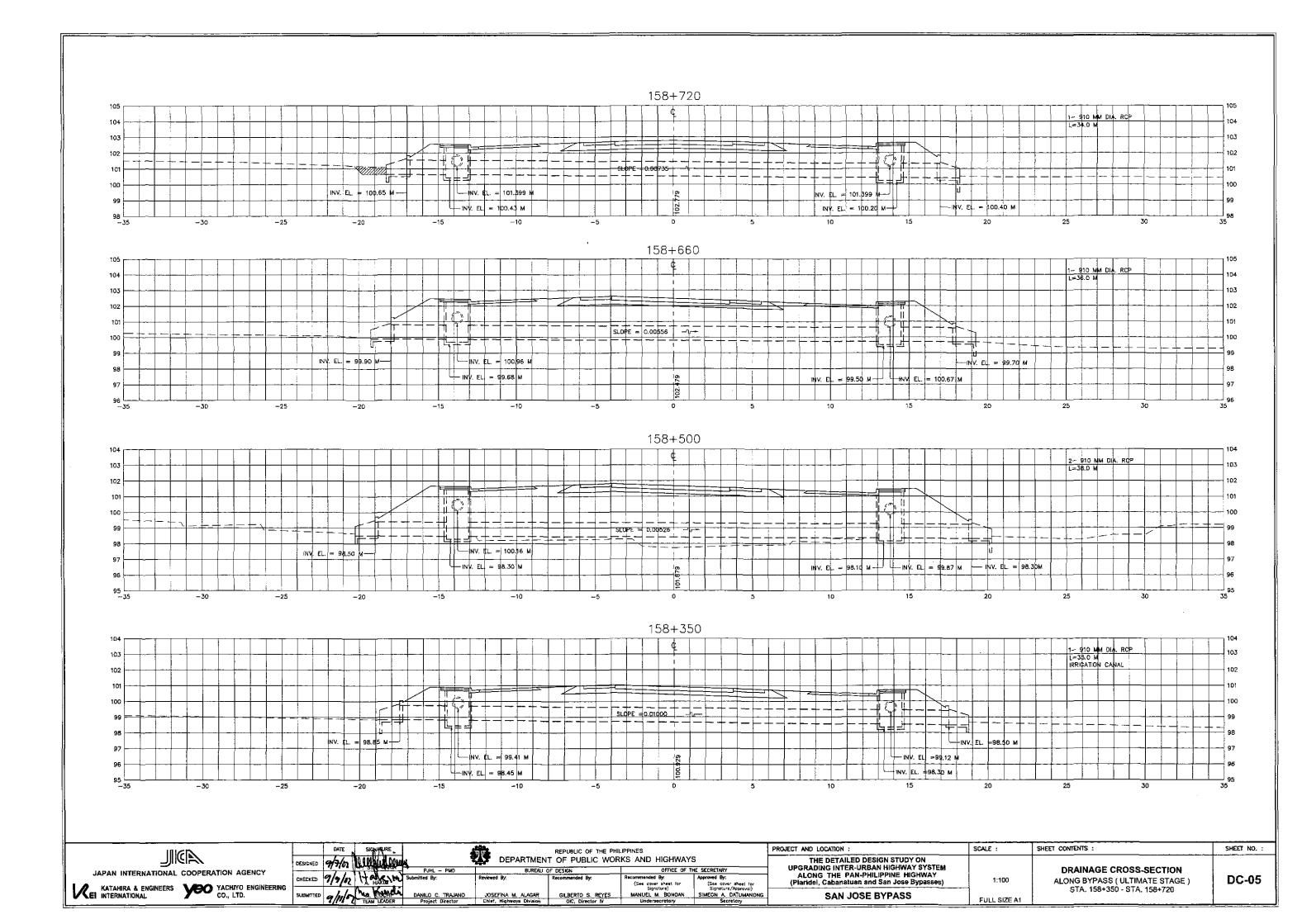


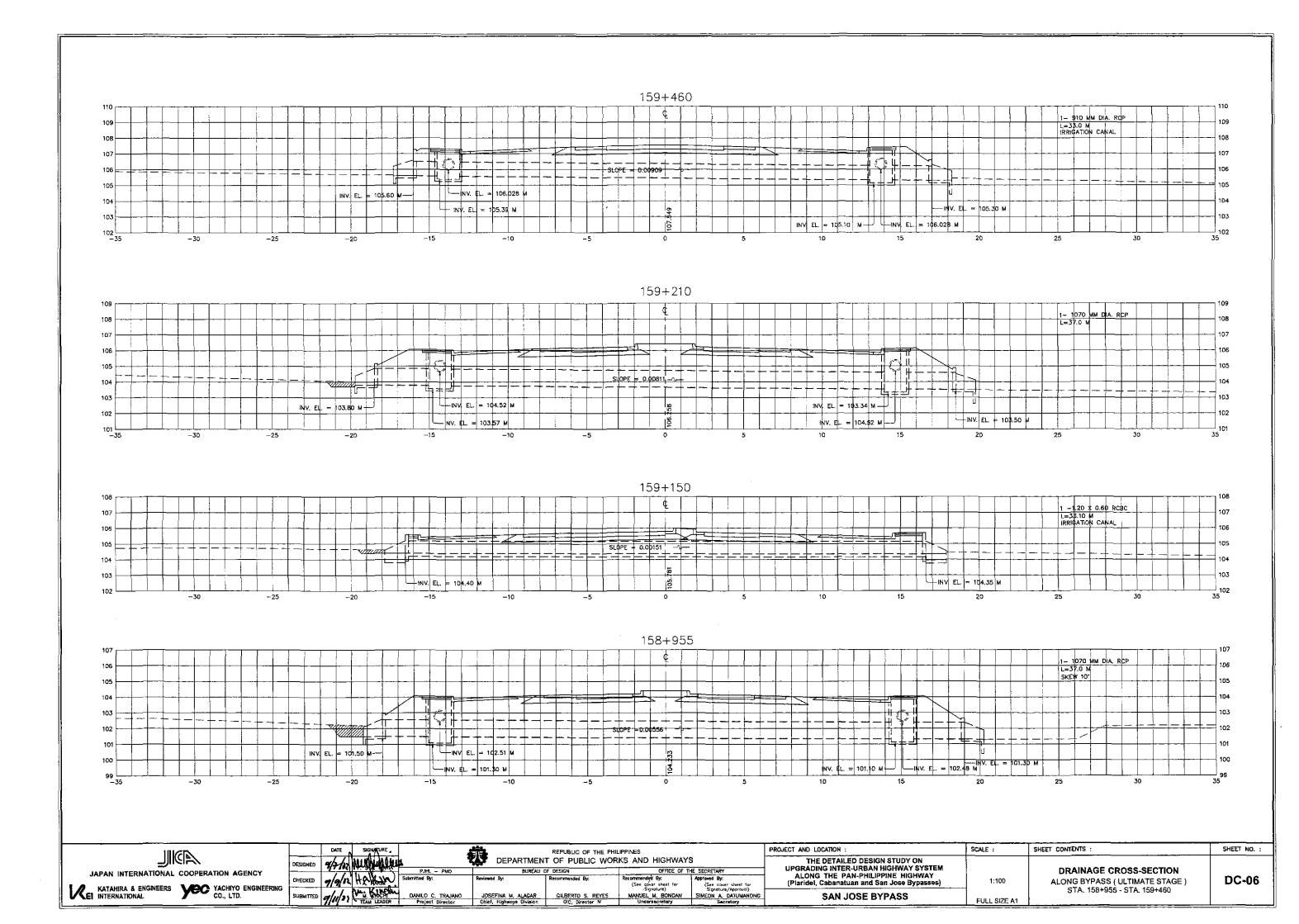


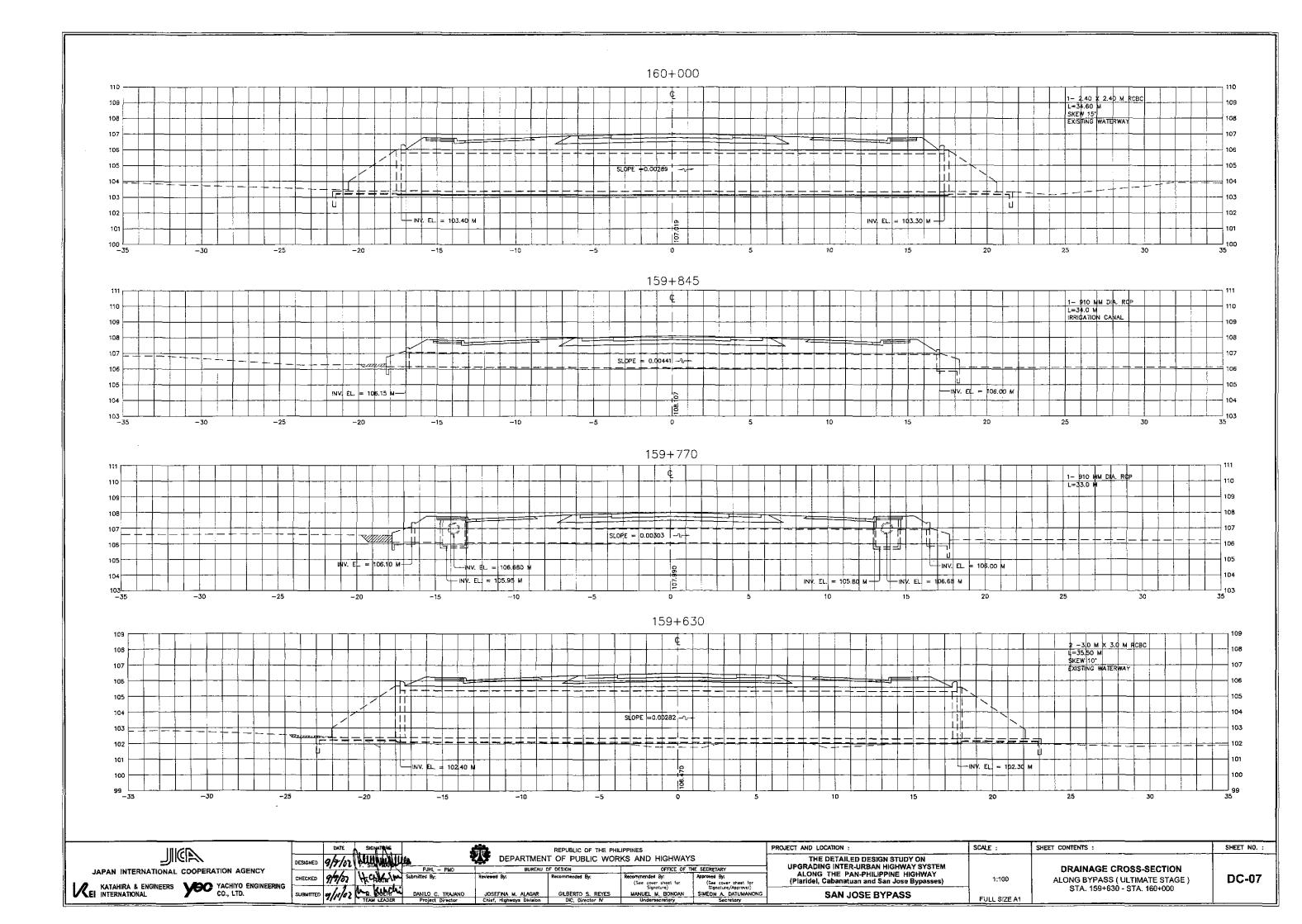


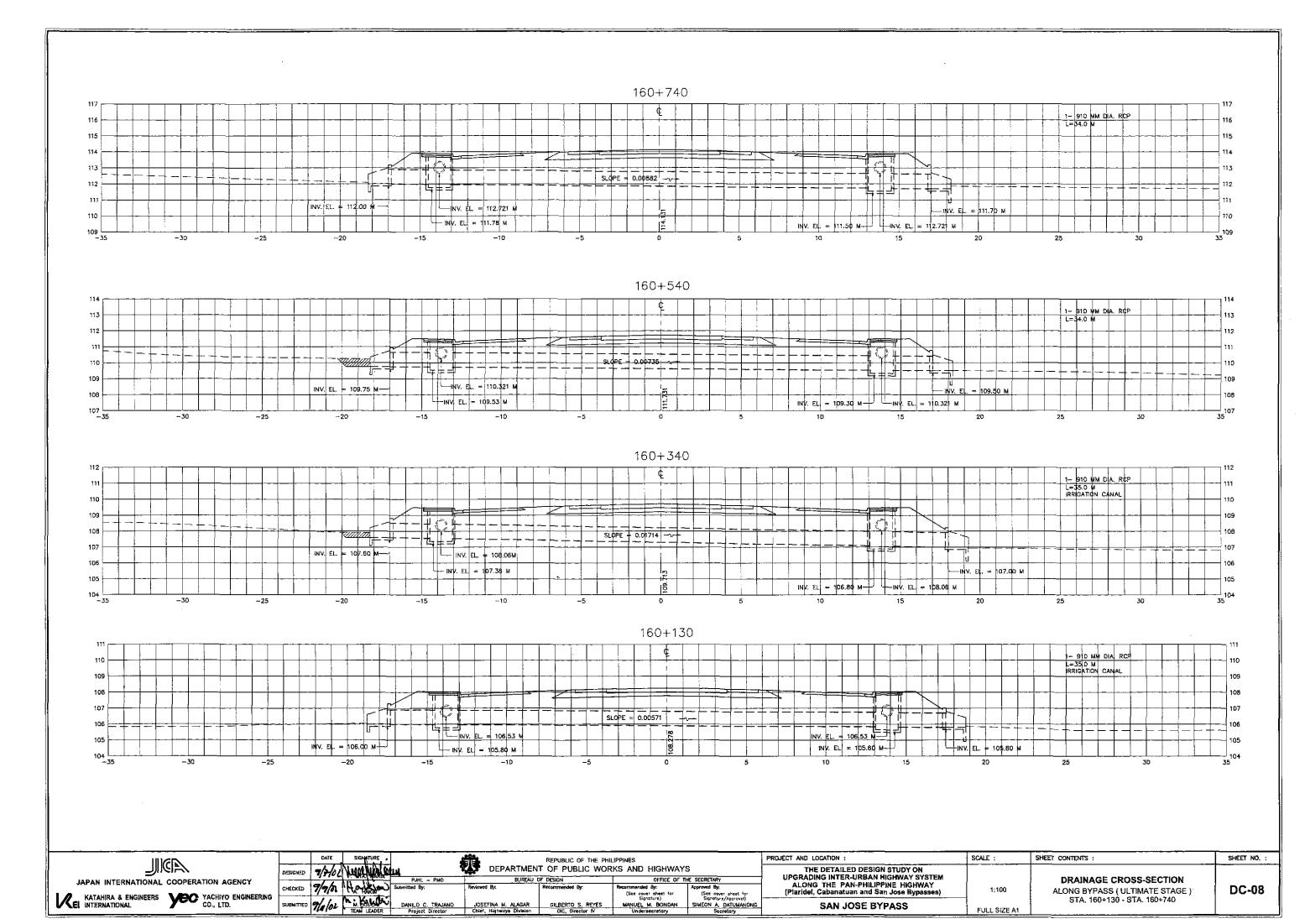


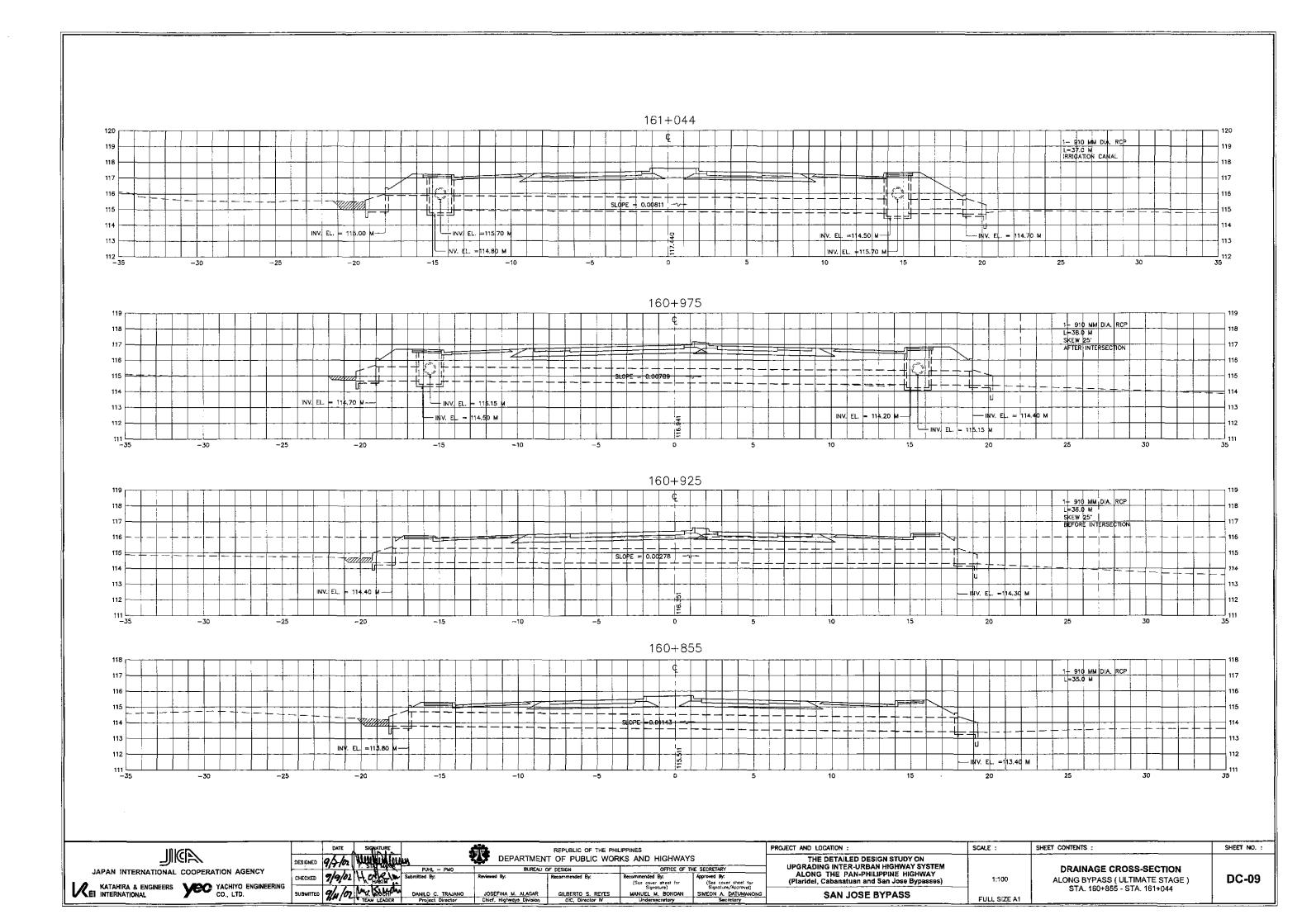


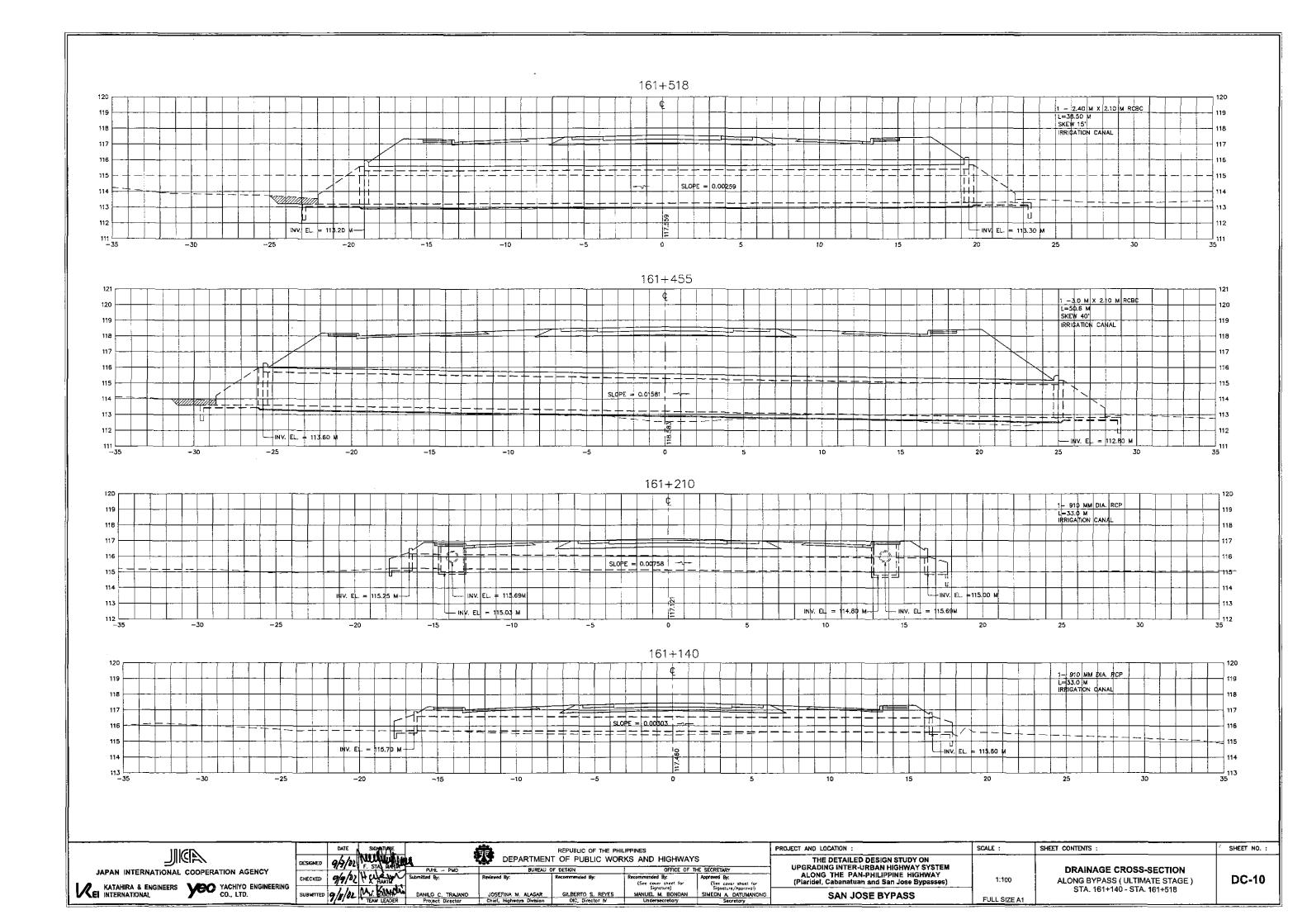


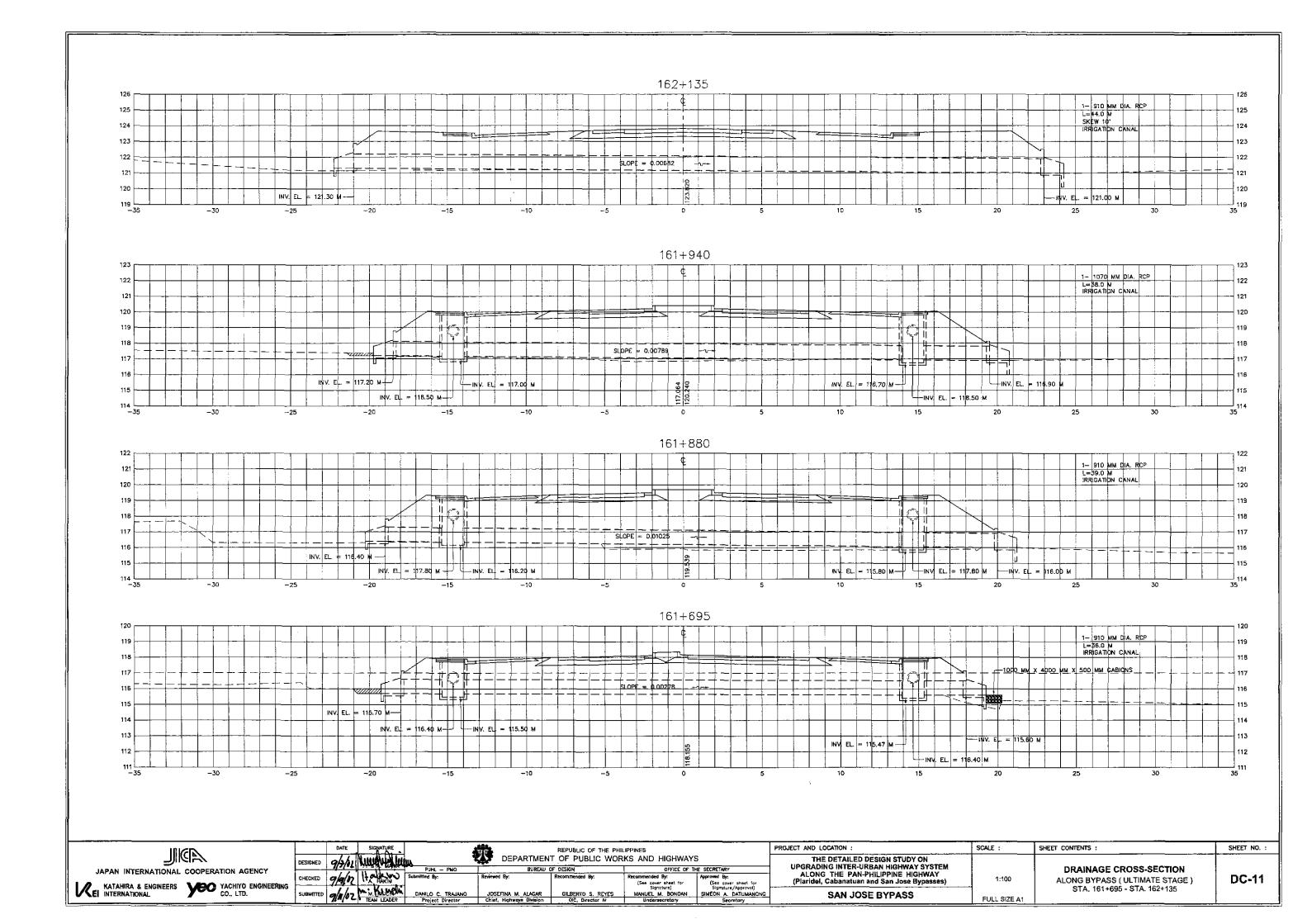


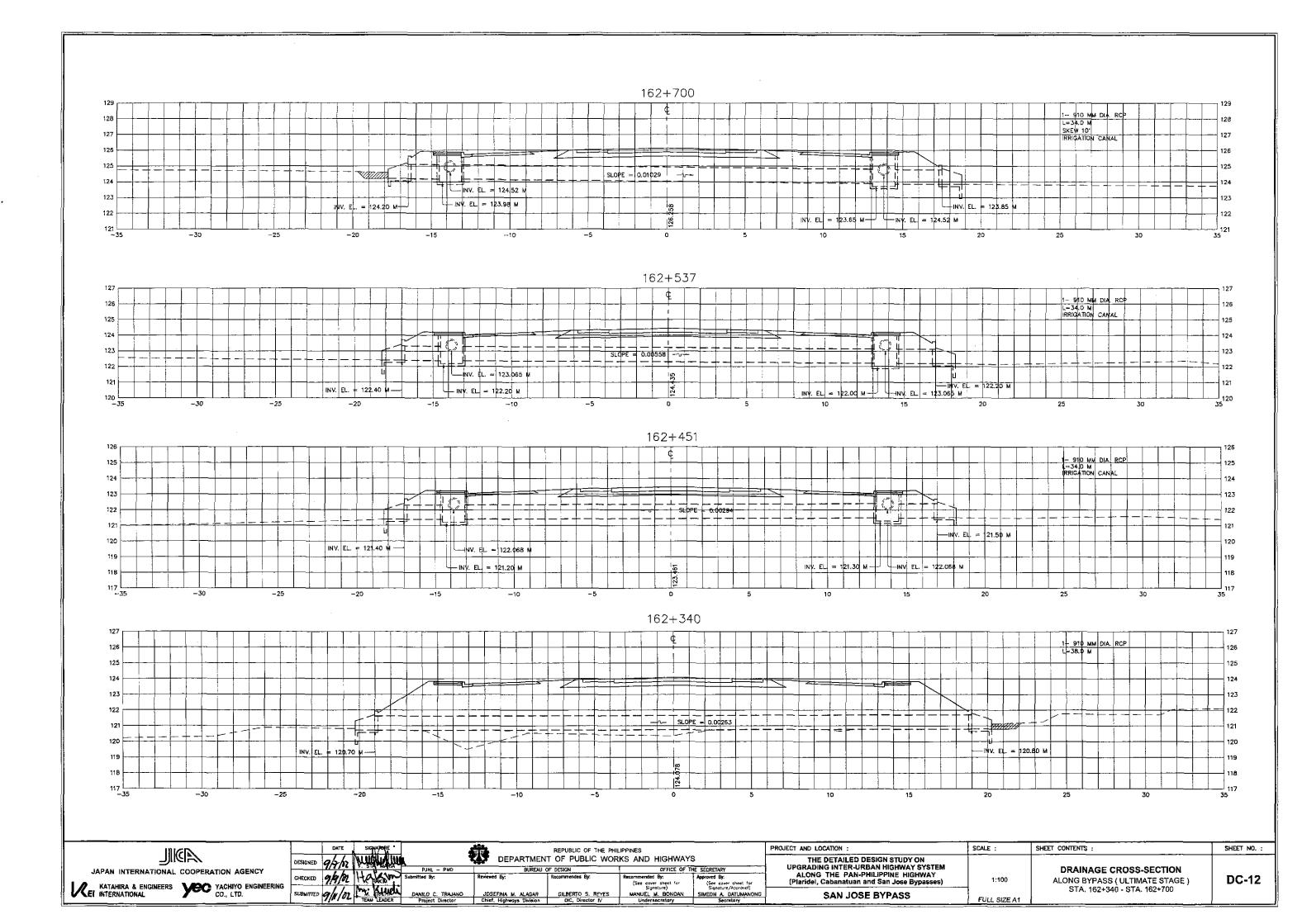


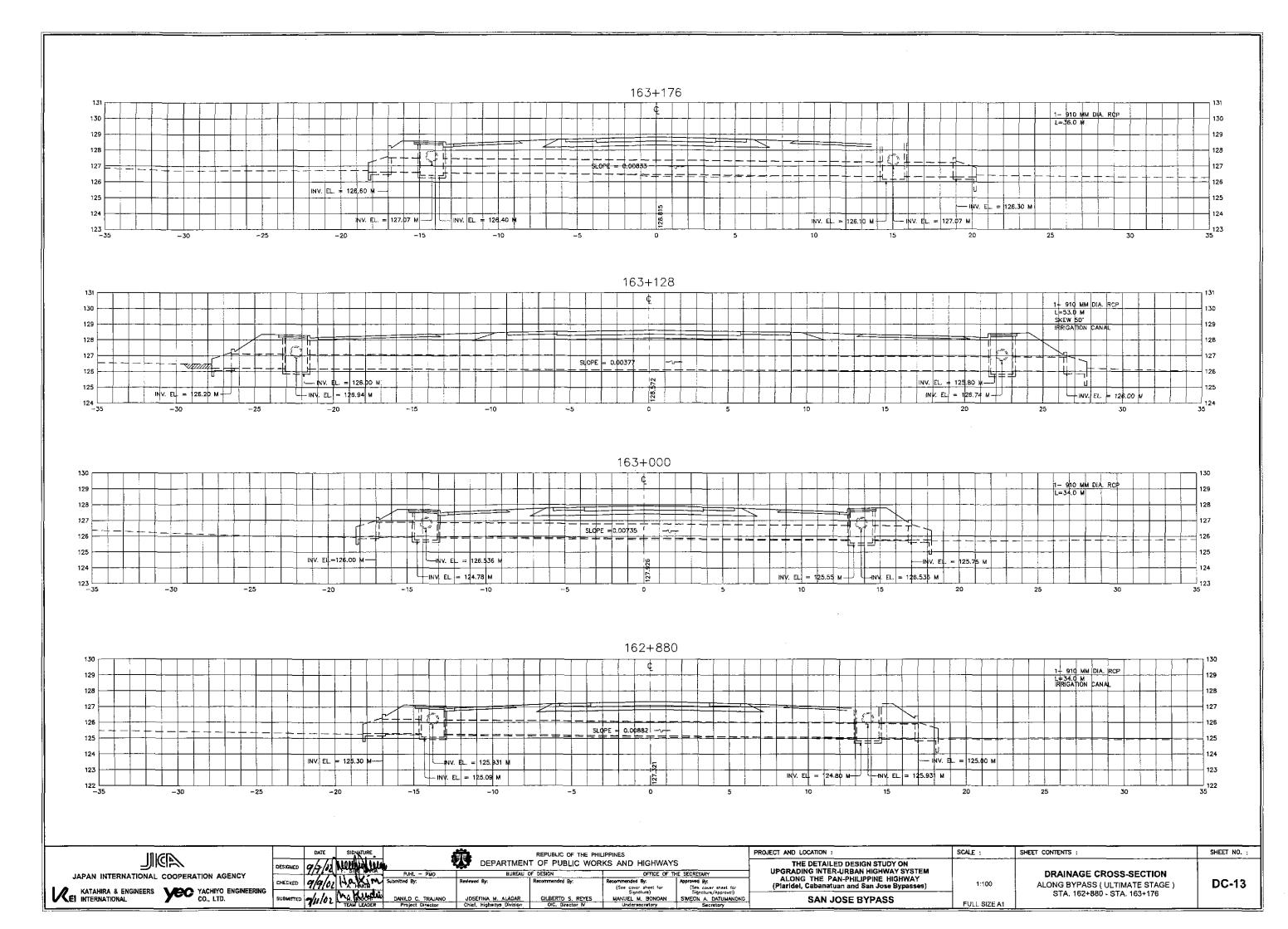


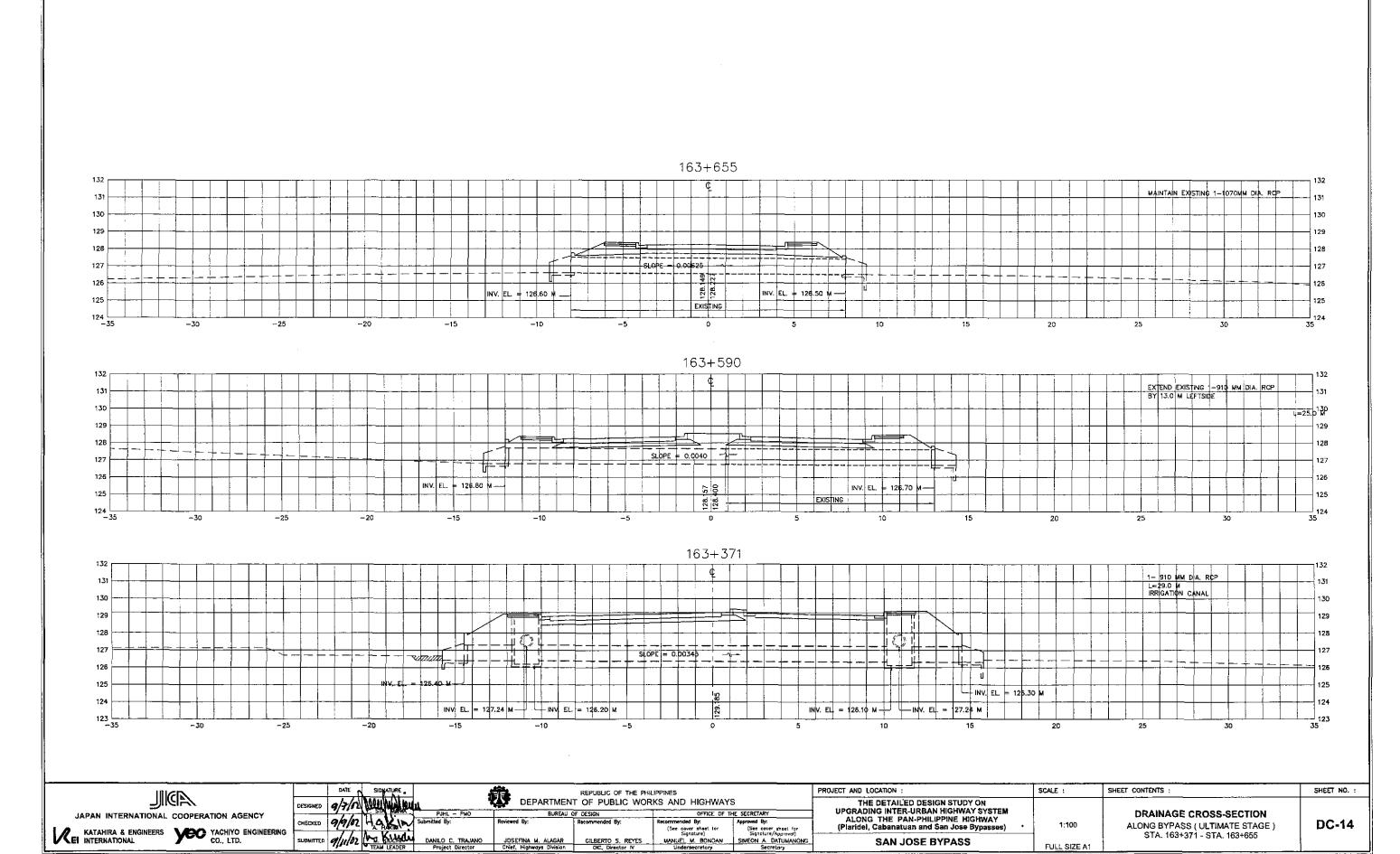












FULL SIZE A1