## 社会開発調查部報告書

THE DETAILED DESIGN STUDY ON AREA TRAFFIC CONTROL PROJECT IN BANGKOK IN THE KENGDOM OF THAILAND

SUPPLEMENTARY VOLUME

CAPT 7

# DRAFT VEHICLE DETECTOR INSTALLATION PLANS

FINAL REPORT

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JAPAN INTERNATIONAL COOPERATION AGENCY



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THE DETAILED DESIGN STUDY ON AREA TRAFFIC CONTROL PROJECT IN BANGKOK IN THE KINGDOM OF THAILAND

# SUPPLEMENTARY VOLUME

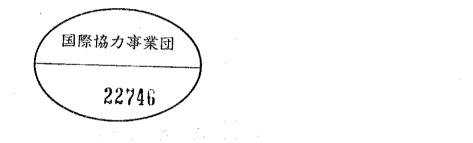
### PART 7

# DRAFT VEHICLE DETECTOR INSTALLATION PLANS

FINAL REPORT

OCTOBER 1990

JAPAN INTERNATIONAL COOPERATION AGENCY



#### PART I: SCHEDULE OF DRAWINGS

**VOLUME 4** VEHICLE DETECTOR INSTALLATION PLANS

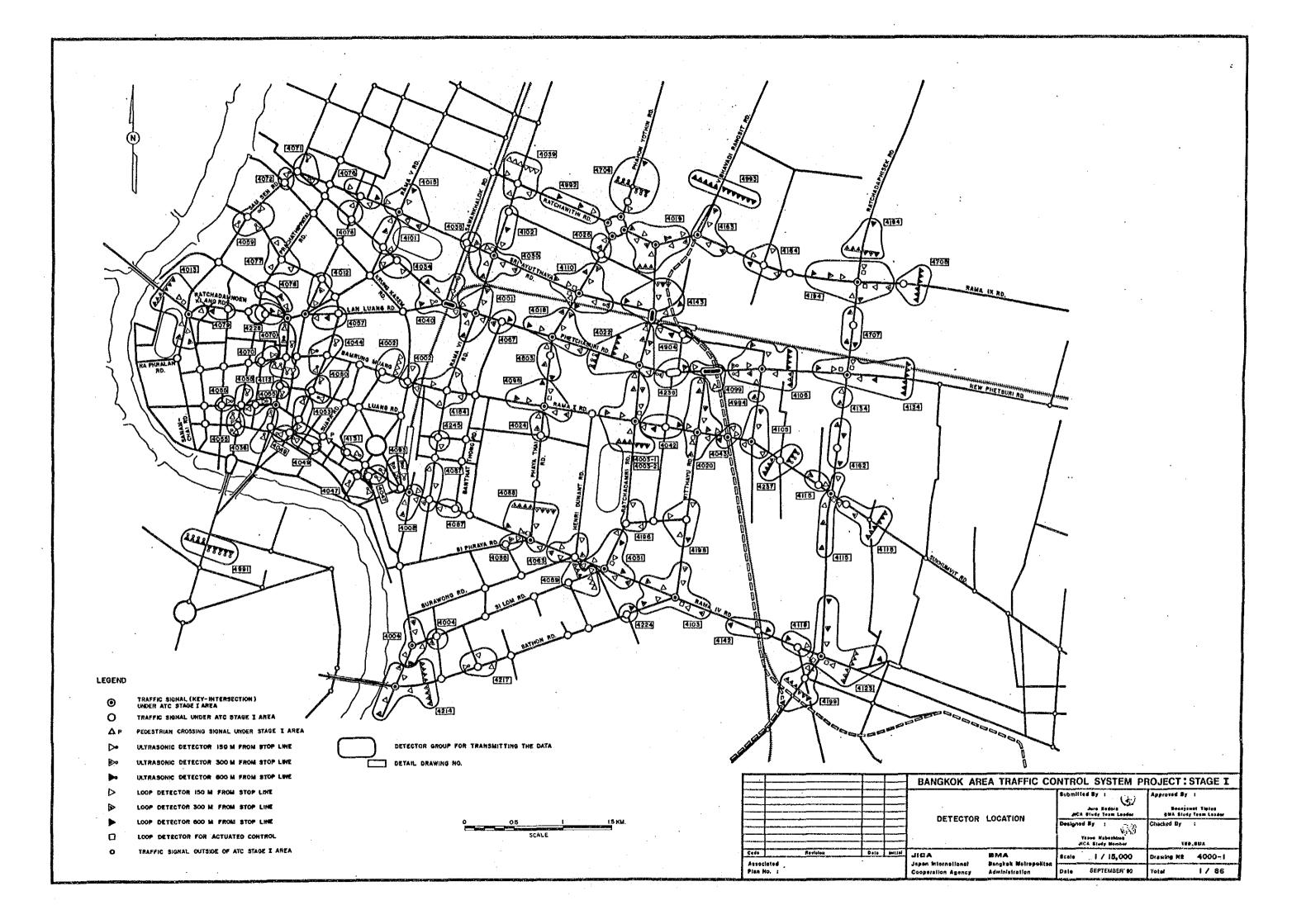
> This "Volume 4: Vehicle Detector Installation Plans" contains the proposed vehicle detector installation plans in relation to the intersection to be centrally controlled by the Bangkok ATC System - Stage I.

Main items included on each plan are:

Location site of vehicle detector installation, (1) (2) (3) (4) (5) (6) Type of vehicle detectors at each site, Number of vehicle detector sensor at each site, Location of vehicle detector cabinet,

\* Note: Tenderers should note that any specifications that may have been shown as "PVC" in the drawings for field installation shall read as "Steel" instead.

Location of telemetry for transmitting detector data, <sup>4</sup> Cable location for vehicle detector.



SYMBOL	ITEM	SYMBOL	ITEM	SYMBOL	ITEM	SYMBOL	ITEM
<u>~</u>	ULTRASONIC TYPE DETECTOR	Ф UH	DETECTOR POLE Type C	Ø	HAND HOLE (C) (EXISTING)	·	PVC CONDUIT (TO BE INSTALLED BY INTERSECTION SIGNAL WORK)
	LOOP COIL TYPE DETECTOR		DETECTOR CABINET		HAND HOLE (C) ( NEWLY )		CABLE CVV-2 <sup>D</sup> (For Underground)
<b>9</b> LL	DETECTOR POLE Type A	$\boxtimes$	TRAFFIC SIGNAL CONTROLLER		HAND HOLE(D)		CABLE CVV-SS2 <sup>D</sup> (FOR AERIAL)
● LH	DETECTOR POLE Type B						

#### SYMBOLS FOR VEHICLE DETECTOR AND CABLE LAYOUT PLAN

Code Burgidon Date Indiat Associated Plan Hp. : Burgidon Date Indiat Code Burgidon Date Indiat JICA Burgidon Agency A

A THAFFIC CO	NTROL SYSTEM PI	RUJECT : STAGE I
	Gubmitted By :	Approved By :
HICLE DETECTOR	Jure Koders JECA Study Team Losdar	Beanyawat Tiptus BMA Study Tepm Loadar
AYOUT PLAN	Designed By :	Checked By :
	Yasup Habazhima JICA Study Mombar	TED, BWA
BMA	Scale	Drawing Nº 4000-2
Bengkak Metropoliten Administration	Date SEPTEMBER' 90	Total 2/86

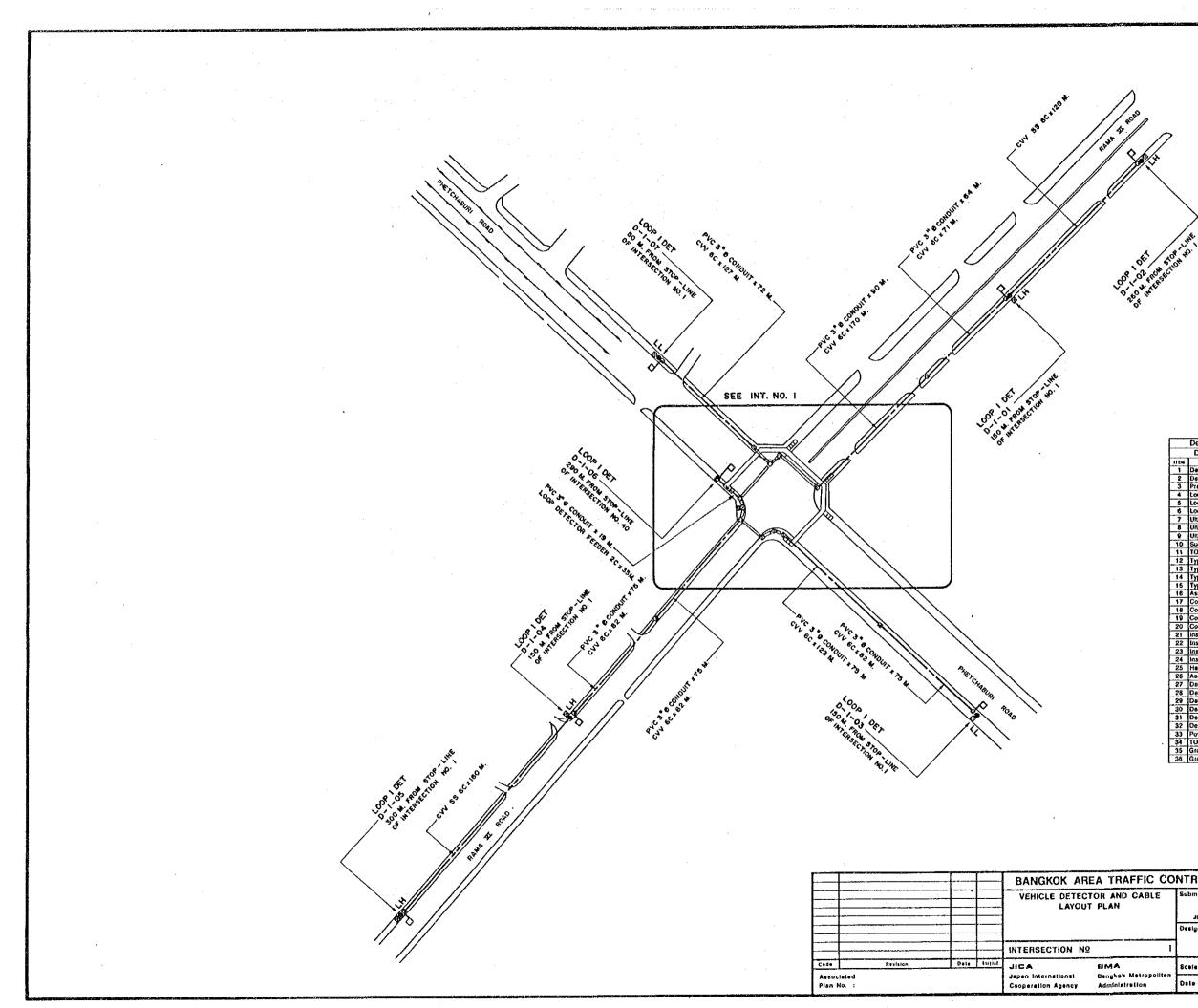
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## LIST OF VEHICLE DETECTOR AND CABLE LAYOUT PLANS

			·····							: <sup>: :</sup>
		Inters	action N	0.		Number of	Detector			
NO.	Drawing		or		÷.,	Loop Coll	Ultrasonic	·	NO.	Drawing
	NO.	Trans	mission	Unlt NC	).	Туре	Туре		1.1	NO.
1	4001	1				7		1	51	4106
2	4002	2	161			5		• •	52	411(
3	4003-1	3				7		.	53	411
	4003-2	3				7		· .	54	411
	4004	4	98			6		1	55	411
	4008	8			**=**	4		j .	56	412
7	4012	12				2			57	413
8	4013	13				13		1	58	413
9	4015	15				5		1	59	414
10	4018	18				7		1	80	414
11	4019	19				11	11	4	61	415
12	4020	20				11		ſ	62	416
13	4022	22				9	4		63	416
14	4024	24				2		1	64	418
15	4025	25				2		1	65	419
16	4034	34				2		1	66	419
17	4035	35	109			7	+		67	419
	4036	36					2		68	419
18 19	4039	39				9		·	69	421
20	4040	40				8		1	70	421
	4040	42				3			71	422
21 22	4042	43				3		1	72	422
23	4044	44					3		73	423
24	4044	47	48				4	1 · · · ·	74	423
25	4049	49	50				2	1	75	424
28	4051	51				9			76	470
27	4053	53	+				2	1	77	470
28	4055	65	94	130	176		5		78	470
29	4057	57				2			79	480
30	4059	59				***	3		80	490
31	4063	63				5		1	81	499
32	4067	67				2		1	82	499
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40	4080	80					2			
41	4087	87	185			4				
42	4088	68	905			15				
43	4089	89				7				
44	4093	93					4			
45	4098	96				7				
40	4090					2		Ļ		
40	4101	101				3				
47	4101	102				2				
	4102	102				9				
49										

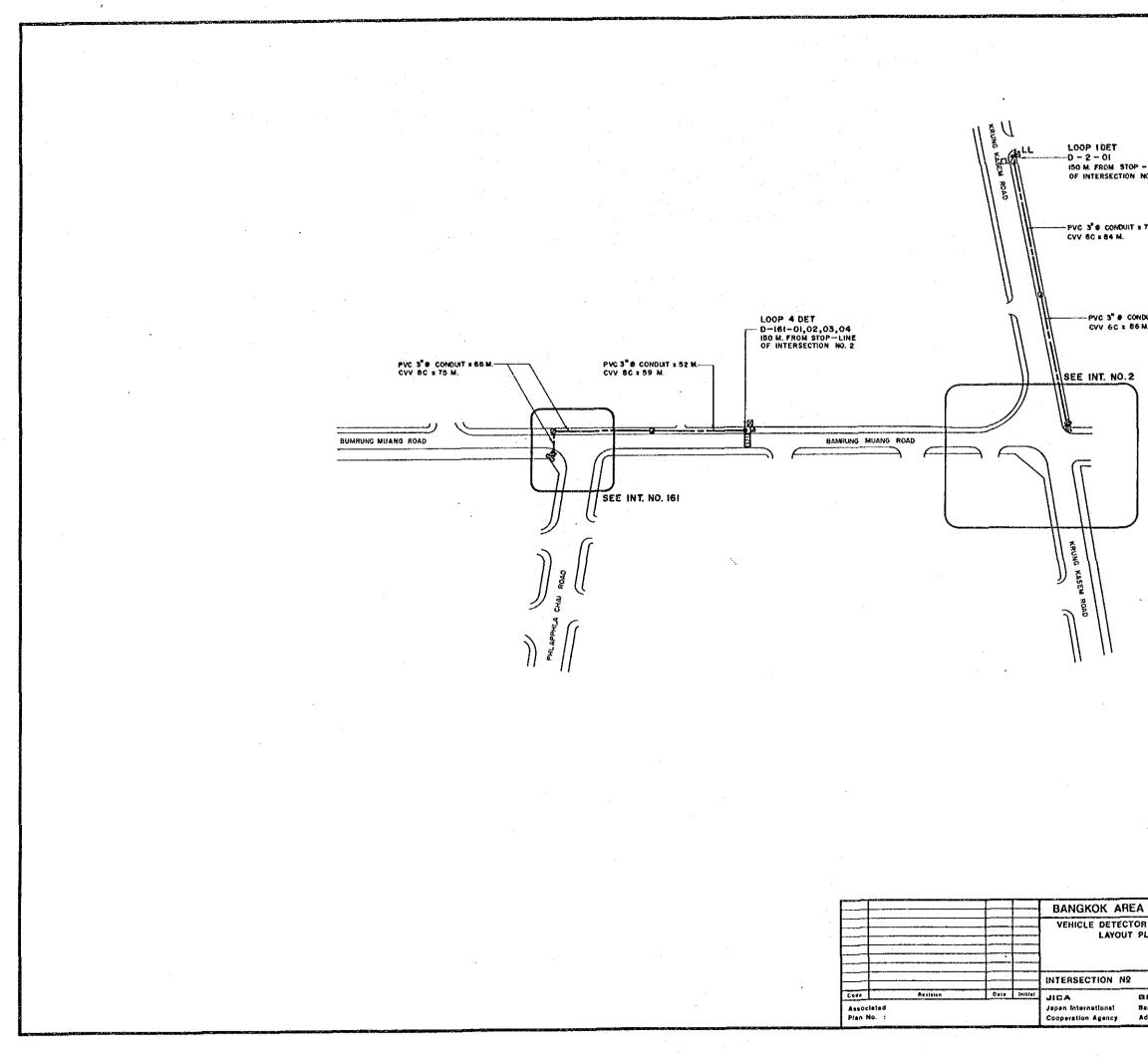
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53	4112	112					1
54	4115	115				15	<b></b>
55	4118	118	~~~			2	
56	4123	123				13	
57	4131	131					1
58	4134	134	T-5			15	11
59	4142	142			***	2	
60	4143	143				8	
61	4162	162				3	
62	4163	163				4	
63	4164	164				4	
64	4184	184				5	
65	4194	194	T-6			17	
66	4196	196				2	
67	4198	198				4	
68	4199	199	*		~~~	8	
69	4214	214				13	
70	4217	217				2	
71	4224	224				1	
72	4228	228				2	
73	4236	236				1	1
74	4237	237		84-C3-48	~~~	4	3
75	4245	245				1	
76	4706	708				2	
77	4707	707				3	6
78	4708	708				6	
79	4803	803				3	
80	4904	904				2	
81	4991	T-1					
82	4992	T-2				3	
83	4993	T-3	~~~			12	9
SUE	TOTAL		•			388	71
GR	AND TOTAL					4	59

112      1      113     15       113     15       113     15       114     15       115     15       116     15       116     15       116     15       116     15       116     1       118     1       118     1       118     1       118	110						1		1					
1163														
193      1      1      1        131      1														
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142	123			م جمع	13									
134    1-5     1      142         163         164         165         166         166         166         166         166         168         168         169         170         280         291         293         294         295         707         717          717	131	. an rea car					1							
142	134	T-5			15		1							
143														
192														
163								ł						
164														
194    T-6														
194    T-6     17       195     2     13      196      13       214      13       224      13       224	164													
190      2       190      8       190      8       214     1        226      1       226      2       226      2       226      2       707      3       706      3       707     3     3      71-2	184				5									
198	194	T-6			17	1								
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198     13       214     1       224     1       226     1       226     1       226     1       226     1       226     1       226     1       226     2       227     3    6      708     2       71     2       73     3       74     3       73     3       439     358    71      439     358    71      439     3       56     3       67								ſ						
217     13       220     1       220     1       221     1       226     1       226     3    6      700     3    6      700     3    6      700     3       803     3       804     3       726     3       803     3       724      12    9      725     3       389    71						┉┉┼		ł						
227       2         228       2         228       2         228       2         228       2         237        2         238        3         700        3         700       2       3         701        3          702        3          7-2        3          7-3       12      9          368      71            368      71		·						ł						
228        2        238        1      1        237        1      1        238        4      3        237        4      3        238        4      3        237        4      3        238        3         707        3         7.3       12      9        7.3       12      9        439       439	214						<b></b>	l						i
228       2         235        4      3        237        4      3        236        4      3        236        4      3        706        3      8        707        3         71        3         71        3         7-1        3         7-3       12      9           389      71           389      71           389      71           389      71            389      71	217				2			]						
288      1    1      287      1       706     2        706     2        707     3        708     3        706     3        707     3        74     3        7-3     3580    71        7-3     3580    71          3580    71	224				1									
288      1    1      287      1       706     2        706     2        707     3        708     3        706     3        707     3        74     3        7-3     3580    71        7-3     3580    71          3580    71					2		***	1						
237					L		1							
245      2       700      3    0      903      3       904      3       7-2      3       7-3      3       7-3      3       7-3      3       7-3     3289    71       389    71         389    71					•			1						
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B03       3         T-1       2	707	-			3	ſ	6	l'						Í
B03        2         T-1        2          T-2        3          T-3        3          T-3        3          439        368      71         439             How Provides             How Provides             How Provides             How Provides              How Provides              How Provides                How Provide	708				6		***	1						
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388  71    439  439<						ł		ļ						
489      BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I      Submitted By :      LIST OF VEHICLE DETECTOR      AND CABLE LAYOUT PLANS      Core      Fedina      Data      Join Index      Join Index      Join Index      Join Index      Join Index      Assertional Plan No. :	T-3	~ ~ ~			12		9	Į						
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BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I        LIST OF VEHICLE DETECTOR AND CABLE LAYOUT PLANS      Submitted By : ( accase and according to a state and according to a state accordite accordite according to a state according to a state according						45	9							
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I    BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I    BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I    List OF VEHICLE DETECTOR    AND CABLE LAYOUT PLANS    Code    Resitation    Date    Intition    JICA    Japan International    Cooperation Agency    Associated    Plan No. :											• ,			
LIST OF VEHICLE DETECTOR  JICA Bluer tester  Bearly and trajus    LIST OF VEHICLE DETECTOR  JICA Bluer tester  BIA Bluer tester    AND CABLE LAYOUT PLANS  Determine tester  BIA Bluer tester    Code  Revision  Determine tester  Travo Rebeaters    Code  Revision  Determine tester  Travo Rebeaters    Code  Revision  Determine tester  Travo Rebeaters    Associated  Japan International Cooperation Agency  Bangkok Metropoliten  Date    Plan No. :  Cooperation Agency  Administration  Date  SEPTEMBER' 50				······································			BANGK	OK ARI	EA TRAFFIC	c co		1 :	Approved, By	1 :
AND CABLE LAYOUT PLANS  Designed By :  Checked By    Code  Revision  Date  Initial    Code  Revision  Date  Initial    Associated  Japan International  Bangkok Metropolitan  Scale  Drawing Ng  4000-3    Plan No. :  Cooperation Agency  Administration  Date  SEPTEMBER' 50  Total  3 / 86							1 1107 /	NG 118011	NE REFERS	<u></u>	Juro Keder			
Associated Plan No. : Drawing N2 4000-3 Cooperation Agency Administration Date SEPTEMBER'60 Total 3/86	Į			·····							Dealoged St.			
Associated Plan No. : Drawing N2 4000-3 Cooperation Agency Administration Date SEPTEMBER'60 Total 3/86		-+				<u> </u>	GRA	LABLE L	ATOUT PLAN	15	Assertings of t	$f \in \mathcal{F}_{2}$	CIRCUPO BY	•
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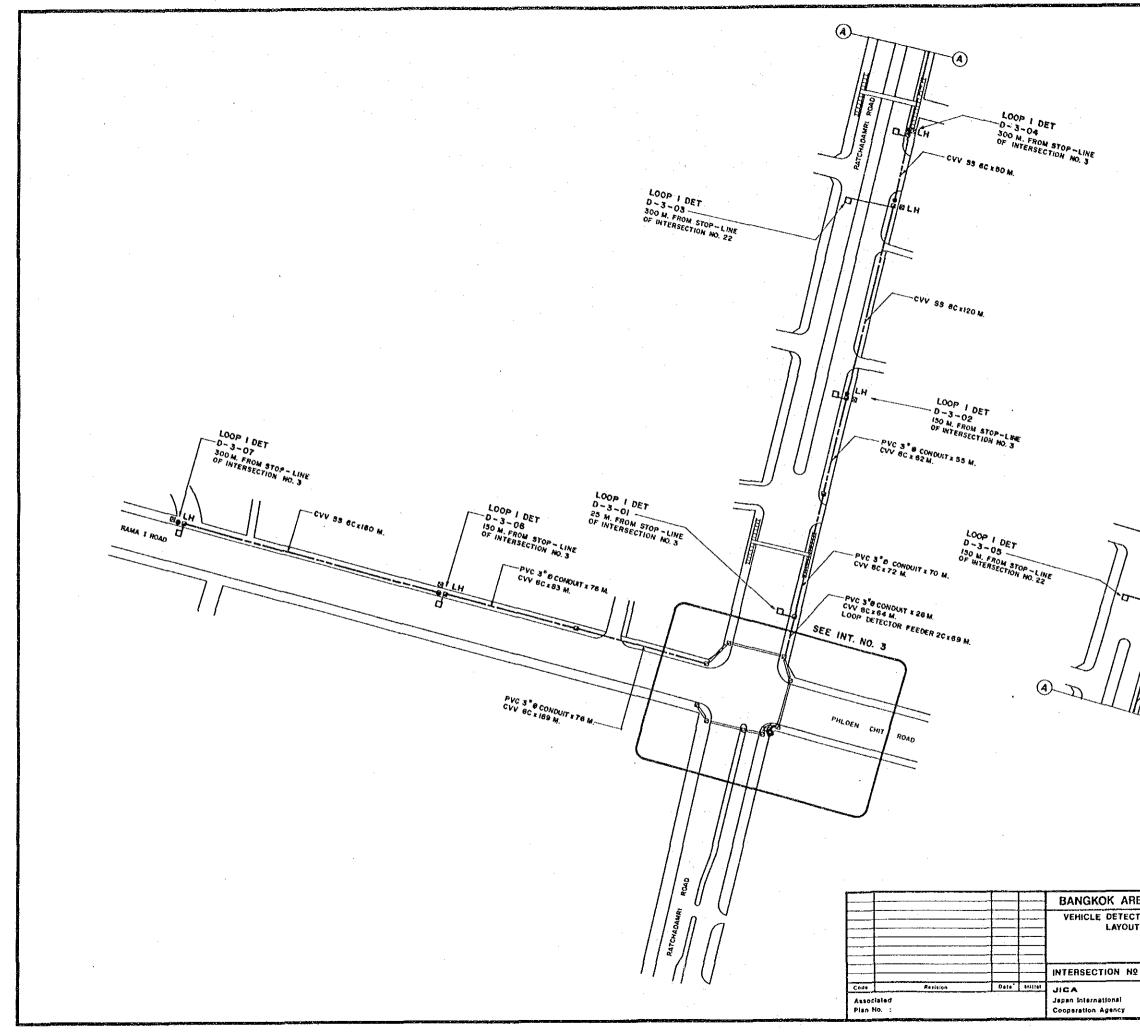
	Detector Equipments List	<u>.</u>
	Drawing NO. 4001	
ITEM	Name of Equipment	Qty.
1	Detector Cabinal (with TTR Unit)	-
2	Detector Cabinet (without TTR Unit)	6
3	Pre-Processor of Detector Pulse	
4	Loop Coll Detector Unit	7
5	Loop Coll Cable	56
6	Loop Coll Feeder Cable	70
7	Ultrasonic Datector Unit	-
8	Ultrasonic Detector Head	-
	Ultrasonic Detector Feeder Cable	1
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	+
12	Type A Pole	2
13	Type B Pole	4
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.6m Arm	+
16	Assembly for Installation on Pedesirian Overpass	-
17	Conduit PVC 3" or 70mm	600
18	Conduit Steel 3" or 70mm	-
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	600
23	Install Conduit on Pedestrian Overpass	-
24	Install Conduit on Riser Support pole	-
25	Handhols Type C	10
26	Asrial Cable Supporter	9
27	Datector Cable 6c	744
28	Delector Cable 8c	-
29	Datector Cable 12c	-
30	Datector Cable SS 6c	280
31	Detector Cable SS 8c	- 1
32	Detector Cable SS 12c	- 1
33	Power Cable	
34	TOT line (CPV, 0.65mm, 1P)	
35	Grounding Rod	6
38	Grounding Cable	30

REA TRAFFIC CO	NTROL SYSTEM P	ROJECT: STAGE I
TOR AND CABLE	Submitted By : Jure Koders JIGA Bludy Team Leader	Approved By : Secarswal Tiplus BMA Sludy Team Londsr
	Designed By : (C)(C)	Checked By :
ç 1	Yeswo Nabeshina JICA Sludy Member	TED, BWA
BMA	Scele I / 1,000	Drawing NS 4001
Bangkok Metropoliten Administration	Dale SEPTEMBER' PC	Total 4/86



	ITEM	Drawing NO. 4002	Qty.
	1	Detector Cabinet (with TTR Unit)	
	2	Detector Cabinet (without 1TR Unit)	2
	- <del>;</del>	Pre-Processor of Detector Pulse	<u> </u>
	1	Loon Coll Delector Unit	5
	5	Loop Coll Cable	40
	- B	Loop Coll Feeder Cable	43
	17	Utrasonic Detector Unit	
	1.	Ultrasonic Detector Head	
	- H	Utrasonic Detector Feeder Cable	<u> </u>
	10	Supply Power Switch Box with Power Breaker	
	11	TOT Line Sox	
		Type A Pole	1 2
re en la companya de		Type B Pole	<u>  _ </u>
		Type C Pole with 7.0m Arm	+ -
		Type C Pole with 8.5m Arm	<u> </u>
	18	Assembly for installation on Pedastrian Overpase	1
		Conduit PVC 3" or 70mm	273
		Condult Steel 3* or 70mm	
		Conduit Steel 39mm	-
i.		Concluit Steel 28mm	
		Install Condult under Asphalt Pavement	<u> </u>
		Install Conduit under Concrete Pavement or Sidewalk	273
		Install Condult on Padestrian Overpass	
		Install Conduit on Riser Support pole	
		Handhola Type C	4
		Aarial Cable Supporter	
		Detector Cable Sc	170
		Detector Cable 5c	134
		Detector Cable 12c	
176 N.	30	Detector Cable SS &c	<u> </u>
	31	Detector Cable SS 8c	1
		Detector Cable SS 12c	1
		Porer Cable	1
		TOT line (CPV, 0.65mm, 1P)	1-2-
		Grounding Rod	2
	35	Grounding Cable	10

A TRAFFIC CO	NTROL SYSTEM PI	ROJECT : STAGE I
OR AND CABLE PLAN	Submitted By : Jure Kodere JICA Study Team Leader	Approved By : Beensewit Tiptus Bida Study Teem Leader
	Designed By :	Checked By :
2,161	Yssue Nebeshiza" JICA Study Member	TED.,BWA
BMA	Scale   / 1,000	Drawing HD 4002
Bangkok Matropolitan Administration	Data ; SEPTEMBER' 00	Total 5/86

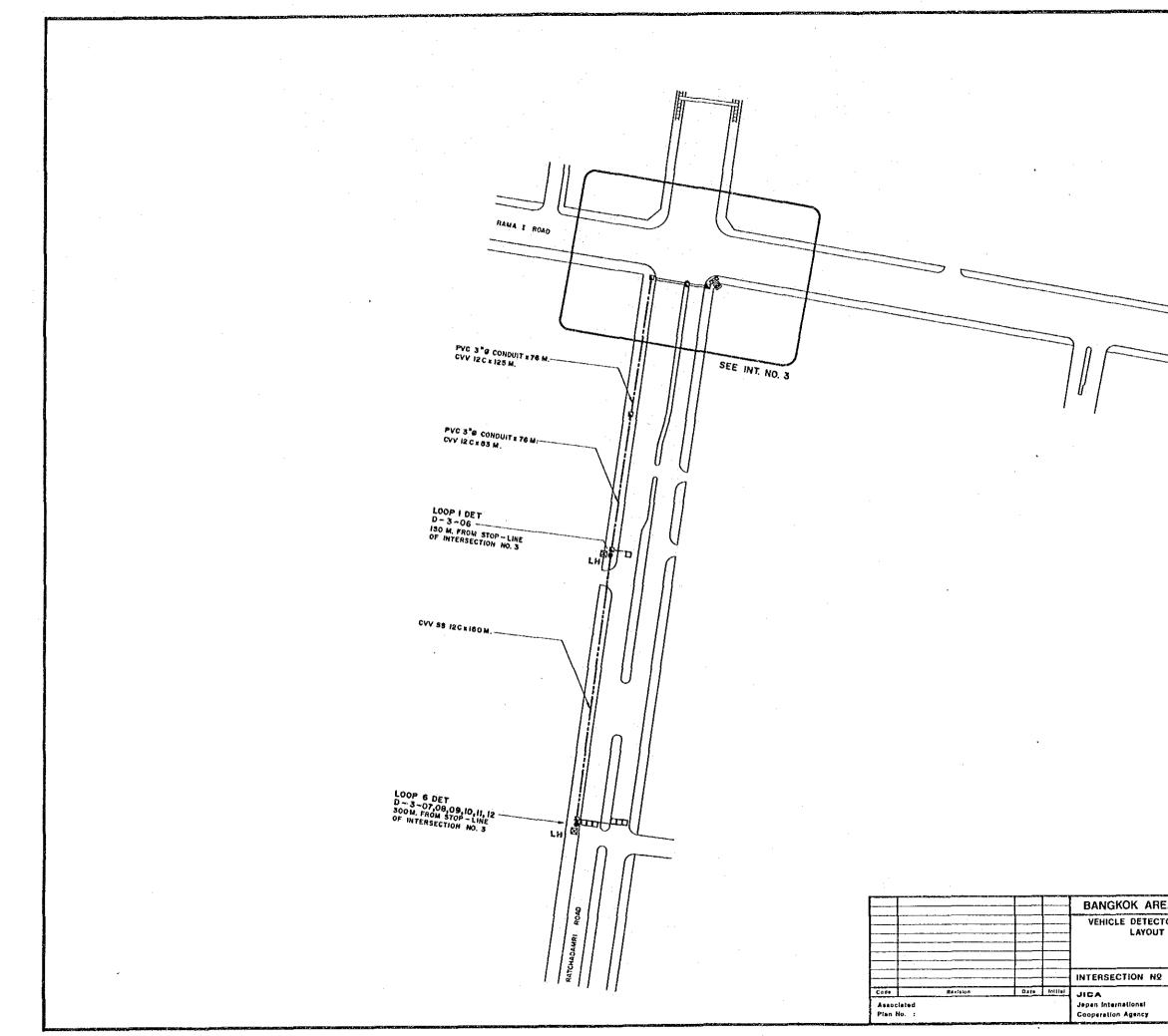


	Detector Equipments List	
	Drawing NO. 4003-1	
inesi	Nama of Equipment	OKY.
1	Datactor Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTR Unit)	8
3	Pre-Processor of Detector Pulse	-
4	Loop Coll Delector Unit	7
5	Loop Coll Cable	58
6	Loop Coll Feeder Cable	104
. 7	Ultrasonic Detector Unit	-
8	Ultrasonic Detector Haad	-
9	Ultrasonic Detector Feeder Cable	- 1
10	Supply Power Switch Box with Power Breaker	-
11	TOT Lina Box	+
12	Type A Pole	-
13	Type B Pola	8
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	- 1
16	Assembly for Installation on Pedestrian Overpase	- 1
17	Condult PVC 3" or 70mm	303
18	Conduit Steel 3" or 70mm	-
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	303
23	Install Conduit on Pedestrian Overpass	-
24	install Condult on Riser Support pole	-
25	Handhole Type C	9
26	Asrial Cable Supporter	14
27	Detector Cable No	272
28	Detector Cable 6c	198
29	Detector Cable 12c	1
30	Detector Cable SS 6c	330
31	Detector Cable SS &c	120
32	Datector Cable SS 12c	-
33	Power Cable	- 1
34	TOT foe (CPV, 0.65mm, 1P)	-
35	Grounding Rod	e
38	Grounding Cable	30

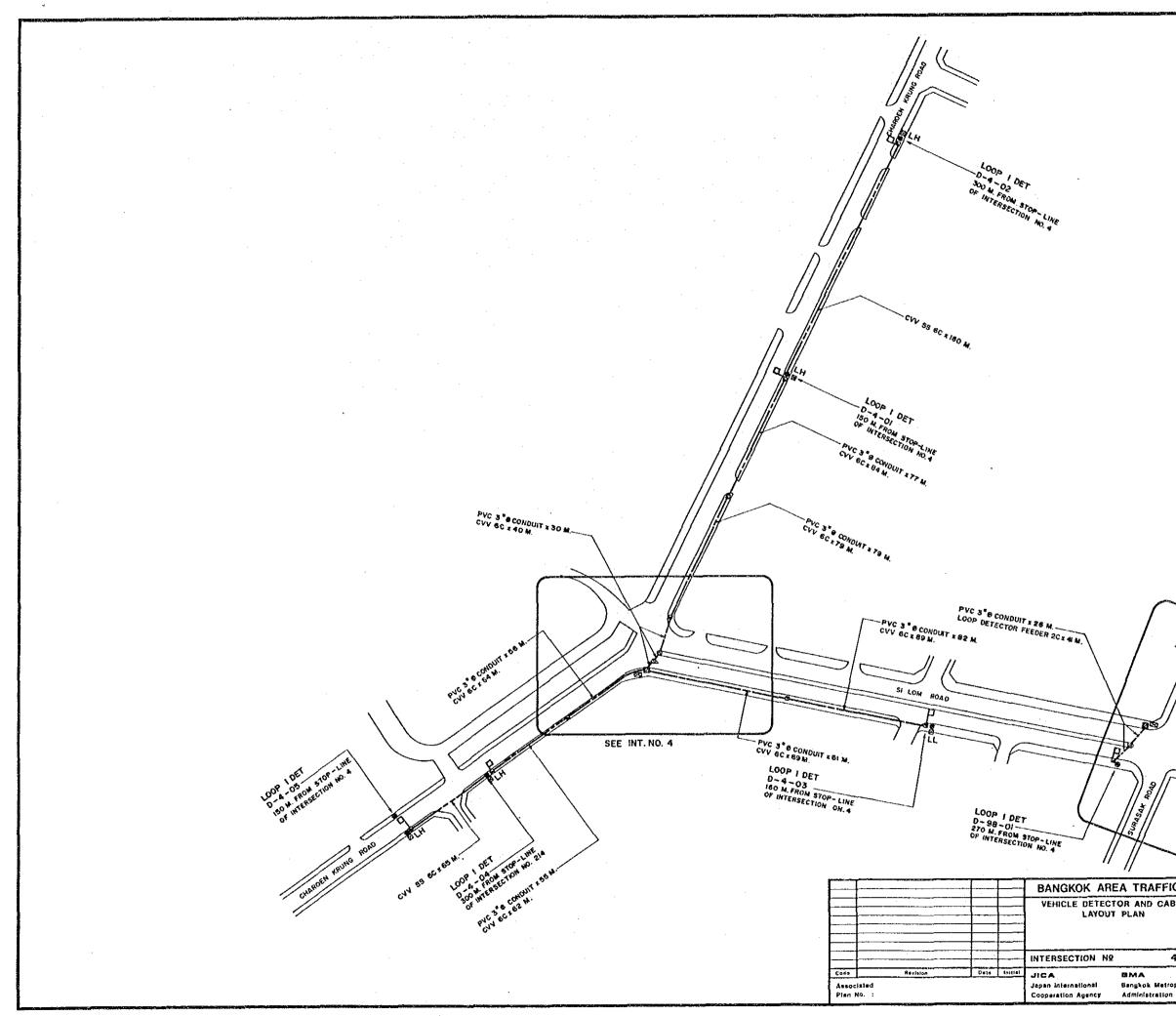
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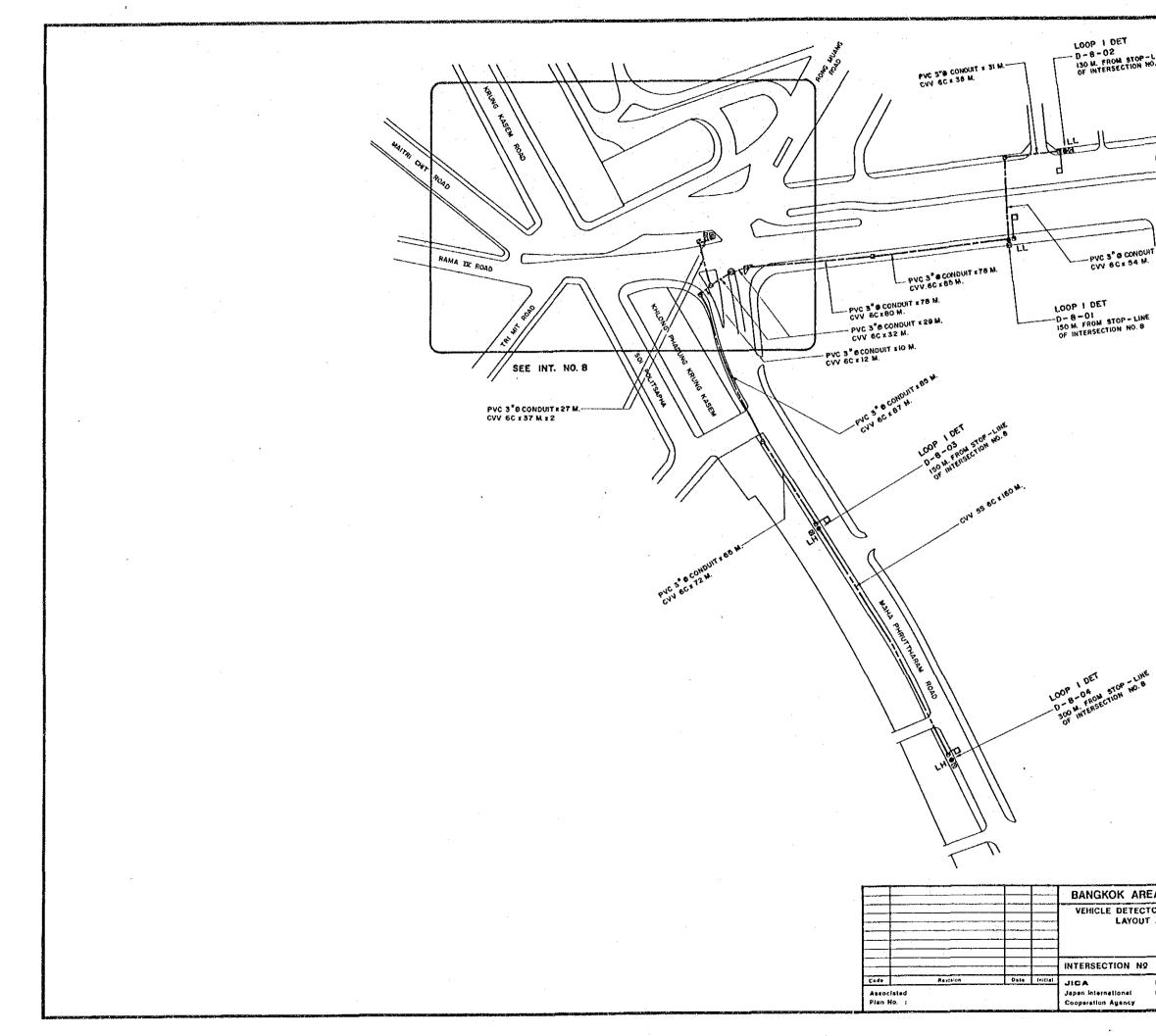
REA TF	RAFFIC CO	NTROL SYSTEM P	ROJECT : STAGE I
TOR AN	ID CABLE	Submitted By : Jura Kodera JICA Study Term Leador	Approved By : Boonyamai Yiptus BMA Study Team Losser
Q	3	Designed By :	Chacked By :
BMA		JICA Study Hember Scale I / 1.000	TRO, INA Drewing NS 4003~1
Bangkok Metropolitan Administration		Data SEPTEMBER' 90	Tolal 6/86



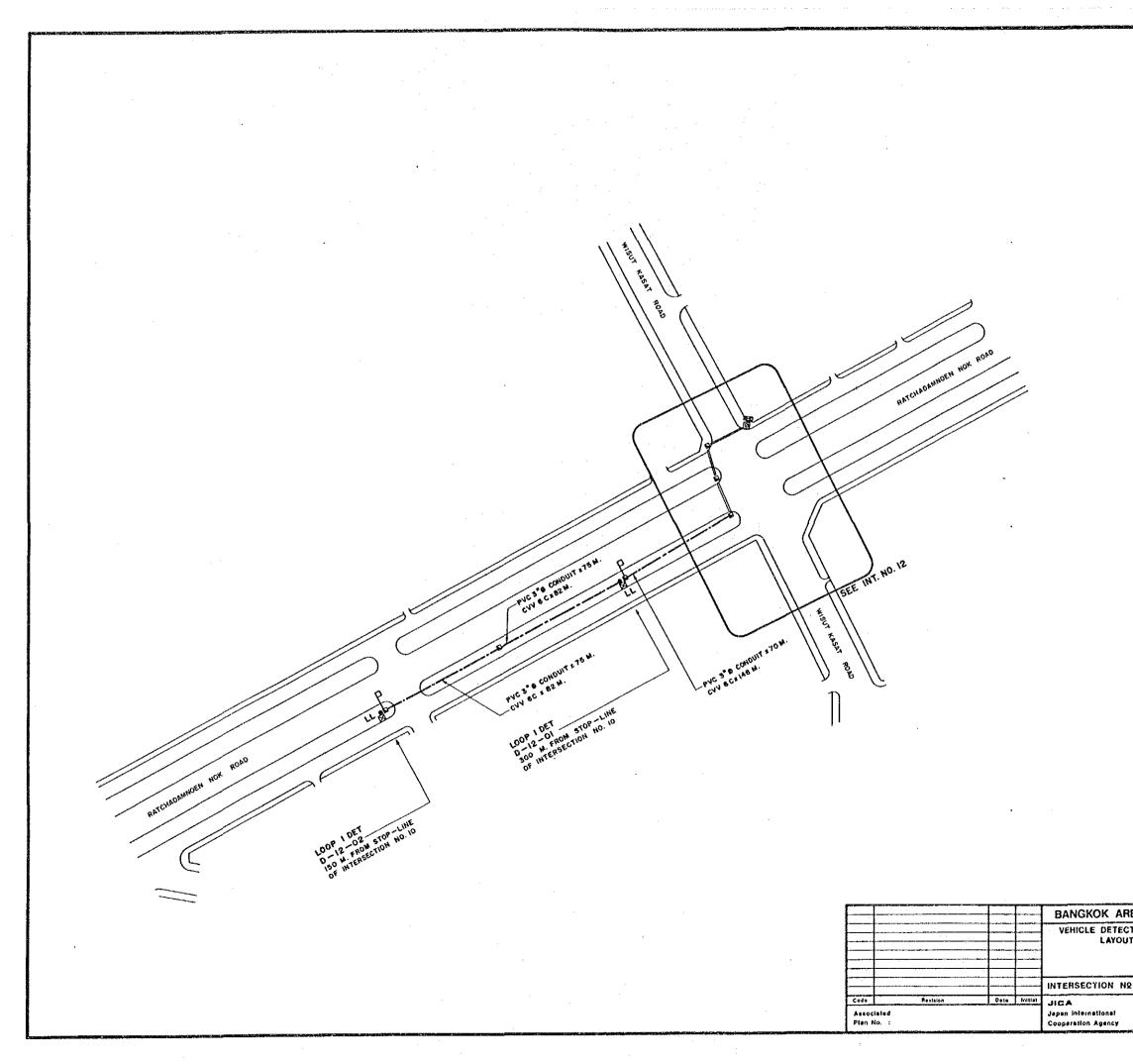
PHLOEN CHIT ROAD	
CHIT ROAD	
· ·	
Delector Equipments List	כ
Drawing NO. 4003-2 ITEM Name of Equipment Ory.	]
Defector Cabinet (with TTR Unit)  Defector Cabinet (without TTR Unit)  Selector Cabinet (without TTR Unit)	
3 Prs-Processor of Detector Pulse  4 Loop Coll Detector Unit 7	-
6 Loop Coll Ender Cable 88	
B [LOOD COIL BEORL CTOR	4
7 Ultrasonic Detector Unit	
7      Ultrasonic Detector Unit         8      Ultrasonic Detector Head         9      Uhrasonic Detector Feeder Cable	
7  Ultivasonic Detector Unit     8  Ultivasonic Detector Head     9  Ultivasonic Detector Feeder Cable     10  Supply Power Switch Box with Power Breaker     11  TOT Like Box	
7  UBrasonic Detector Unit     8  Utivasonic Detector Head     9  Utivasonic Detector Feeder Cable     10  Supply Power Switch Box with Power Breaker     11  TOT Line Box     12  Type A Pole     13  Type B Pole  2	
7  Ultrasonic Datactor Unit     8  Ultrasonic Datactor Head     9  Ultrasonic Datactor Feddra Cible     10  Supply Power Switch Box with Power Breaker     11  TOT Line Box     12  Type A Pole     13  Type B Pole     14  Type C Pole with 7.0m Arm     15  Type C Pole with 8.5m Arm	
7  Ultrasonic Detector Unit     8  Ultrasonic Detector Head     9  Ultrasonic Detector Feeder Cable     10  Suppty Power Switch Box with Power Breaker     11  TOT Line Box     12  Type A Pole     13  Type B Pole     14  Type C Pole with 7.0m Arm     15  Type C Pole with 8.5m Arm     16  Azsembly for installation on Pedestrian Overpase	]
7  Ultrasonic Datactor Unit     8  Ultrasonic Datactor Head     9  Ultrasonic Datactor Feddra Cible     10  Supply Power Switch Box with Power Breaker     11  TOT Line Box     12  Type A Pole     13  Type B Pole     14  Type C Pole with 7.0m Arm     15  Type C Pole with 8.5m Arm     16  Assembly for Installation on Pedestrian Overpass     17  Conduit PVC 3* or 70mm  152    18  Conduit Steel 3* or 70mm	]
7  Ulfrasonic Datactor Unit  -    8  Ulfrasonic Datactor Head  -    9  Ulfrasonic Datactor Fedder Cable  -    10  Supply Power Switch Box with Power Breaker  -    10  Supply Power Switch Box with Power Breaker  -    11  TOT Line Box  -    12  Type A Pole  -    13  Type C Pole with 7.0m Arm  -    14  Type C Pole with 8.5m Arm  -    15  Type C Pole with 8.5m Arm  -    16  Azsembly for Installation on Pedestrian Overpass  -    17  Conduit PVC S* or 70mm  152    18  Conduit Steel 3* or 70mm  -    19  Conduit Steel 38mm  -    20  Conduit Steel 38mm  -	]
7  Ultrasonic Datactor Unit     8  Ultrasonic Datector Head     9  Ultrasonic Datector Feeder Cable     10  Suppty Power Switch Box with Power Breaker     11  TOT Like Box     12  Type A Pole     13  Type B Pole     14  Type C Pole with 7.0m Arm     15  Type C Pole with 7.0m Arm     16  Assembly for installation on Pedestrian Overpass     17  Conduit Steel 3* or 70mm  152    18  Conduit Steel 39mm     20  Conduit Steel 28mm     21  Install Conduit under Asphah Pavement     21  Install Conduit under Concrete Pavement or Stdewalk  152	
7    Ultrasonic Datactor Unit       8    Ultrasonic Datactor Head       9    Ultrasonic Datactor Feddr Cable       10    Supply Power Switch Box with Power Breaker       10    Supply Power Switch Box with Power Breaker       11    TOT Line Box       12    Type A Pola       13    Type C Pola with 7.0m Arm       14    Type C Pola with 7.0m Arm       15    Type C Pola with 8.5m Arm       16    Assembly for Installation on Pedestrian Overpass       17    Conduit Steel 3* or 70mm       18    Conduit Steel 3* or 70mm       20    Conduit Steel 3* or 70mm       21    Instal Conduit under Asphalt Pavement       22    Install Conduit under Asphalt Pavement or Sidewalk    152      23    Install Conduit under Concrete Pavement or Sidewalk    152      23    Install Conduit on Riter Support polo	
7    Ulfrasonic Datactor Unit	
7    Ulfrasonic Datactor Unit       8    Ulfrasonic Datactor Head       9    Ulfrasonic Datactor Feeder Gible       10    Suppty Power Switch Box with Power Breaker       10    Suppty Power Switch Box with Power Breaker       11    TOT Line Box       12    Type A Pole       13    Type C Pole with Zon Arm       14    Type C Pole with 8.5m Arm       15    Type C Pole with 8.5m Arm       16    Assembly for Instatation on Pedestrian Overpass       17    Conduit PVC 37 or Torm    152      18    Conduit Steel 37 or Torm       19    Conduit Steel 37 or Torm       20    Conduit Steel 38mm       21    Instat Conduit under Concriste Pavement       22    Instat Conduit under Concriste Pavement or Sidewalk    152      23    Instat Conduit under Concriste Pavement or Sidewalk       24    Instat Conduit under Concriste Pavement or Sidewalk       24    Instat Conduit under Concriste Pavement or Sidewalk	
7    Ulfrasonic Detector Unit	
7    Ultrasonic Datactor Unit	
7    Ulfrasonic Datactor Unit	
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7  Ulfrasonic Detector Unit	
7  Ultrasonic Datactor Unit	



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-		
ŀ	Detector Equipments List	
	Drawing NO. 4004	City.
ļ	1 Detector Cabinat (with TTR Unit)	-
ŀ	2 Detector Cabinet (without TTR Unit) 3 Pre-Processor of Detector Pulse	5
L. L	4 Loop Coll Detector Unit	6
ŀ	5 Loop Coll Cable 5 Loop Coll Feeder Cable	48
t i	7 Uitrasonic Detector Unit	
ŀ	Ultrasonic Detector Head  Ultrasonic Detector Feeder Cable	<u>-</u> -
	10 Supply Power Switch Box with Power Breaker	
-	11 TOT Line Box 12 Type A Pole	
ŀ	13 Type B Pole	
ļ	14 Type C Pole with 7.0m Arm	
-	15 Type C Pole with 8.5m Arm 18 Assembly for Installation on Pedestrian Overpass	<u> </u>
	17 Conduit PVC 3" or 70mm	478
Ļ	18 Conduit Steel 3* or 70mm 19 Condult Steel 39mm	
ł	20 Conduit Steel 28mm	
Ĥ	21 Instell Conduit under Asphah Pavement	-
Ļ	22 Install Conduit under Concrete Pavement or Sidewalk 23 Install Conduit on Pedestilan Overpess	473
Ĺ	24 Install Condult on Riser Support pole	-
ŀ	25 Handhole Type C 26 Aerial Cable Supporter	10
-	27 Detector Cable 6c	507
Ļ.	28 Detector Cable Sc	
Ļ	29 Detector Cable 12c 30 Detector Cable SS 8c	225
t	31 Detector Cable SS Bc	-
ŀ	32 Delector Cable SS 12C 33 Power Cable	
ŀ	33 Power GEO# 34 TOT line (CPV, 0.65mm, 1P)	
Ľ	35 Grounding Rod 36 Grounding Cable	<u>5</u> 25
	Madification Relation	
	SEE INT. NO. 56	
	SEE INT. NO. 98	
and a second sec		
Comment of the second sec	SEE INT. NO. 98	i
	SEE INT. NO. 58 SI LOM ROAD	
A TRAFFIC CO	SEE INT. NO. 98 SI LOM ROAD	GEI
	SEE INT. NO. 58 SI LOM ROAD	
A TRAFFIC CO	SI LOM ROAD SI LOM ROAD SI LOM ROAD SI LOM ROAD NTROL SYSTEM PROJECT : STAC Submitted By : JICA SINGY Term Leader Boonspeed By : Designed By : Checked By :	
A TRAFFIC CO	SEE INT. NO. SB SI LOM ROAD SI LOM ROAD NTROL SYSTEM PROJECT : STAC Submitted By : JICA Sindy Term Lasser Benyrent Tip SHA Study Term	
A TRAFFIC CO DR AND CABLE PLAN	SEE INT. NO. 50 SI LOM ROAD SI LOM ROAD SI LOM ROAD NTROL SYSTEM PROJECT : STAC Submitted By : JICA Study Term Leser Pesigned By : Vealure Redease JICA Study Term Leser Teo.EMA TEO.EMA	lus Leader
A TRAFFIC CO DR AND CABLE PLAN 4,98	SEE INT. NO. SB SI LOM ROAD SI LOM SI	

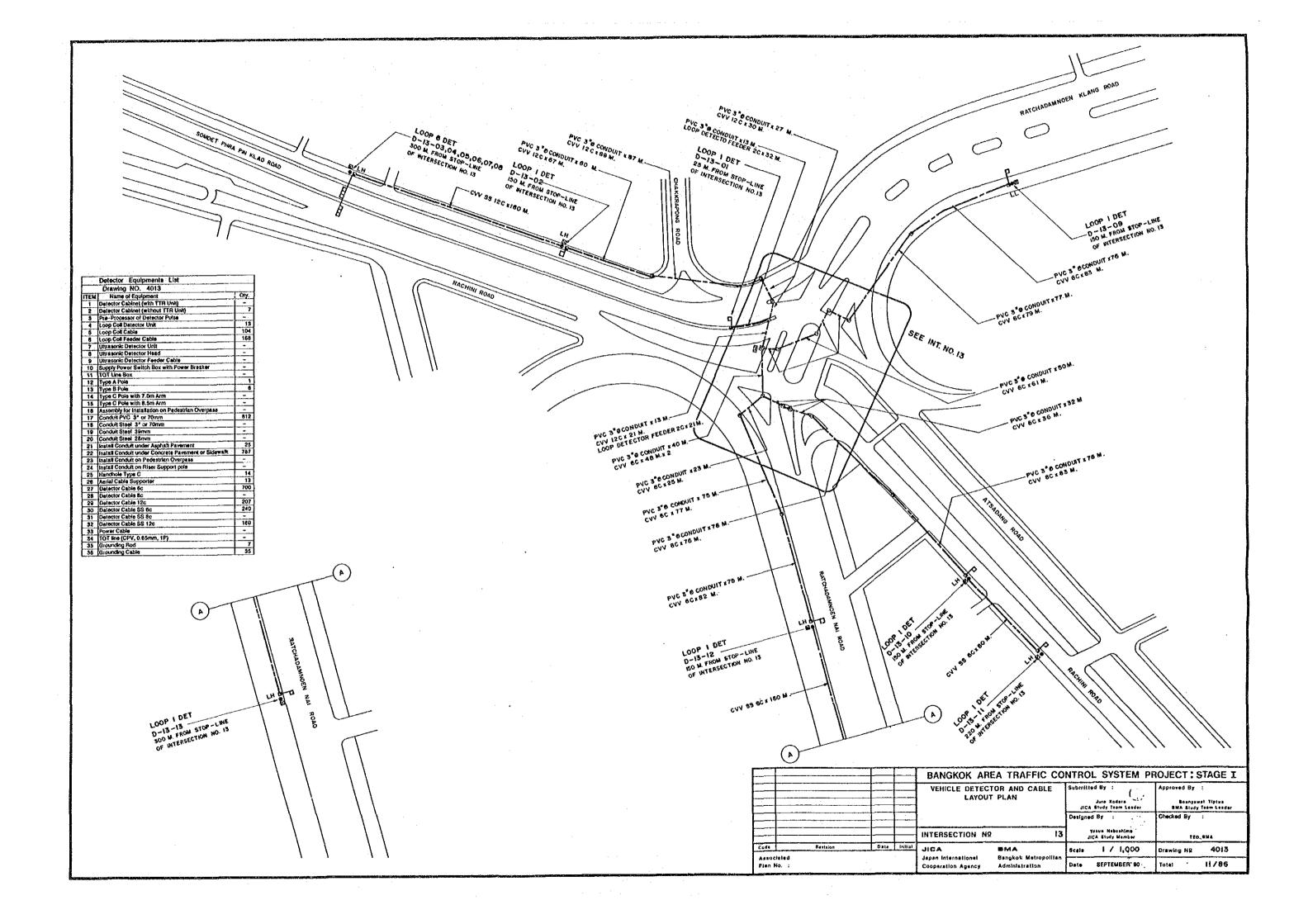


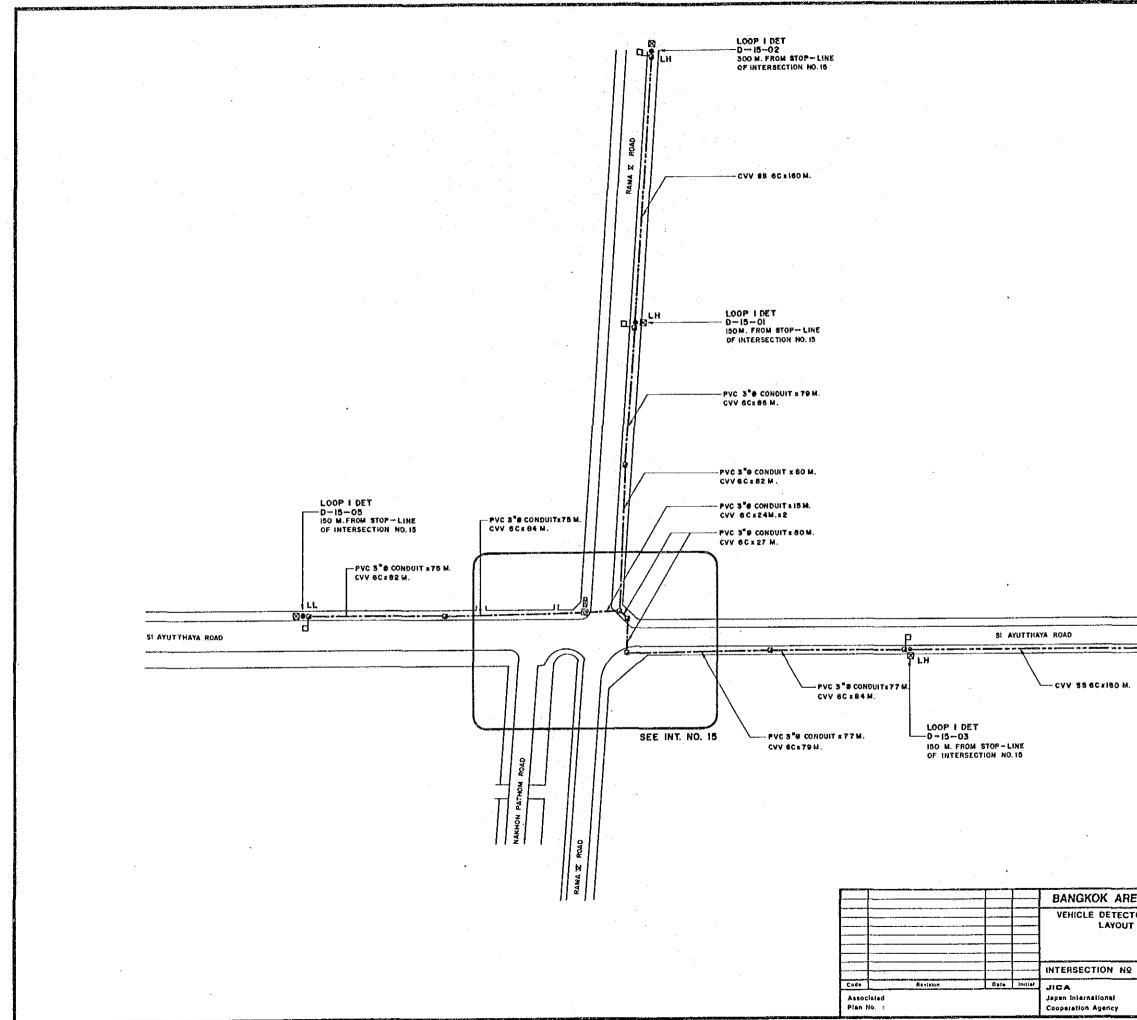
DP-LINE N NO. 183			
RAMA IV ROAD			
IDUIT X 47 M.	) /		
INE 8 I	Detector Equipments L Drawing NO. 4008 TTEM Name of Equipment 1 Detector Cabbel (with TTR U 2 Detector Cabbel (without TT 3 Pre-Processor of Datector P2 4 Loop Coll Detector Unit 5 Loop Coll Detector Unit 6 Loop Coll Detector Unit 8 Utrasonic Detector Head 9 Utrasonic Detector Head 11 TOT Line Box 12 Type A Pole 13 Type B Pole 14 Type C Pole with 7.0m Arm 15 Type C Pole with 5.5m Arm 16 Condult Steel 38 mm 20 Condult Steel 38 mm 21 Instal Conduit on Riser Supp 25 Handhold Figel 38 mm 21 Instal Conduit on Riser Supp 25 Handhold Type C 26 Aertal Cabbis Supporter 27 Detector Cable Sc 28 Detector Cable Sc 31 Detector Cable Sc 32 Detector Cable Sc 32 Detector Cable Sc 33 Power Cable	nki) 1 Unit) (se bbio 1 Power Breaker edoslitan Overpass Pavement a Pavement a Pavement or Sidewalk	Oty.      4        -      -
,we	35 Grounding Rod 38 Grounding Ceble		
	NTROL SYSTEM PF	OJECT : STAG	EI
ECTOR AND CABLE OUT PLAN	Jura Kedera JRCA Bludy Team Leader Designed By :	Bachyawat Tipi, BMA Study Tasm L Checked By :	
NQ Ø	ېښې Yesue Mababima JICA Sludy Mamber	TED., BWA	
вма	Scale   / 1,000		008
Bangkok Metropolitan Administration	Date SEPTEMBER' 80	Total 9/	86
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	Delector Equipments List	
	Drawing NO. 4012	·····
ff Bh		ΟŊ.
1	Detector Cabinet (with TTR Unit)	
8	Detector Cabinet (without TTR Unit)	2
3	Pre-Processor of Detector Pulse	-
4	Loop Coll Detector Unit	2
6	Loop Coll Cable	18
۴.	Loop Coll Feeder Cable	10
T	Ultrasonic Datector Unit	-
8	Ultrasonic Delector Head	-
9	Ultrasonic Detector Feeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	
12	Type A Pole	2
13	Type 8 Pola	-
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
17	Conduit PVC 3* or 70mm	220
18	Conduit Steel 3' or 70mm	-
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Condult under Asphalt Pavemeni	220
22	Install Condult under Concrete Pavement or Sidewalk	-
23	Install Condult on Pedestrian Overpase	- 1
24	Install Conduit on Riser Support pole	-
25	Handhole Type C	3
26	Aerial Cable Supporter	- 1
27	Detector Cable 6c	\$10
28	Detector Cable Bc	-
29	Detector Cable 12c	- 1
30	Detector Cable SS &c	- 1
31	Detector Cable SS 8c	- 1
52	Detector Cable SS 12c	- 1
33	Power Cable	- 1
34	TOT line (CPV, 0.65mm, 1P)	- 1
35	Grounding Rod	2
35	Grounding Cable	10

REA TRAFFIC CONTROL SYSTEM PROJECT: STAGE 1				
TOR AND CABLE	Submilled By : Jure Kodera JICA Bludy Team Leader	Approved By : Beeksowst Siples BMA Sludy Team Leader		
	Designed By :	Checked By :		
<u>۹ اک</u>	JICA Study Member	TED,8MA		
	Scala   / 1,000	Drawing No. 4012		
Bangkok Metropolitan Administration	Date SEPTEMBER' DO	Total 10/86		

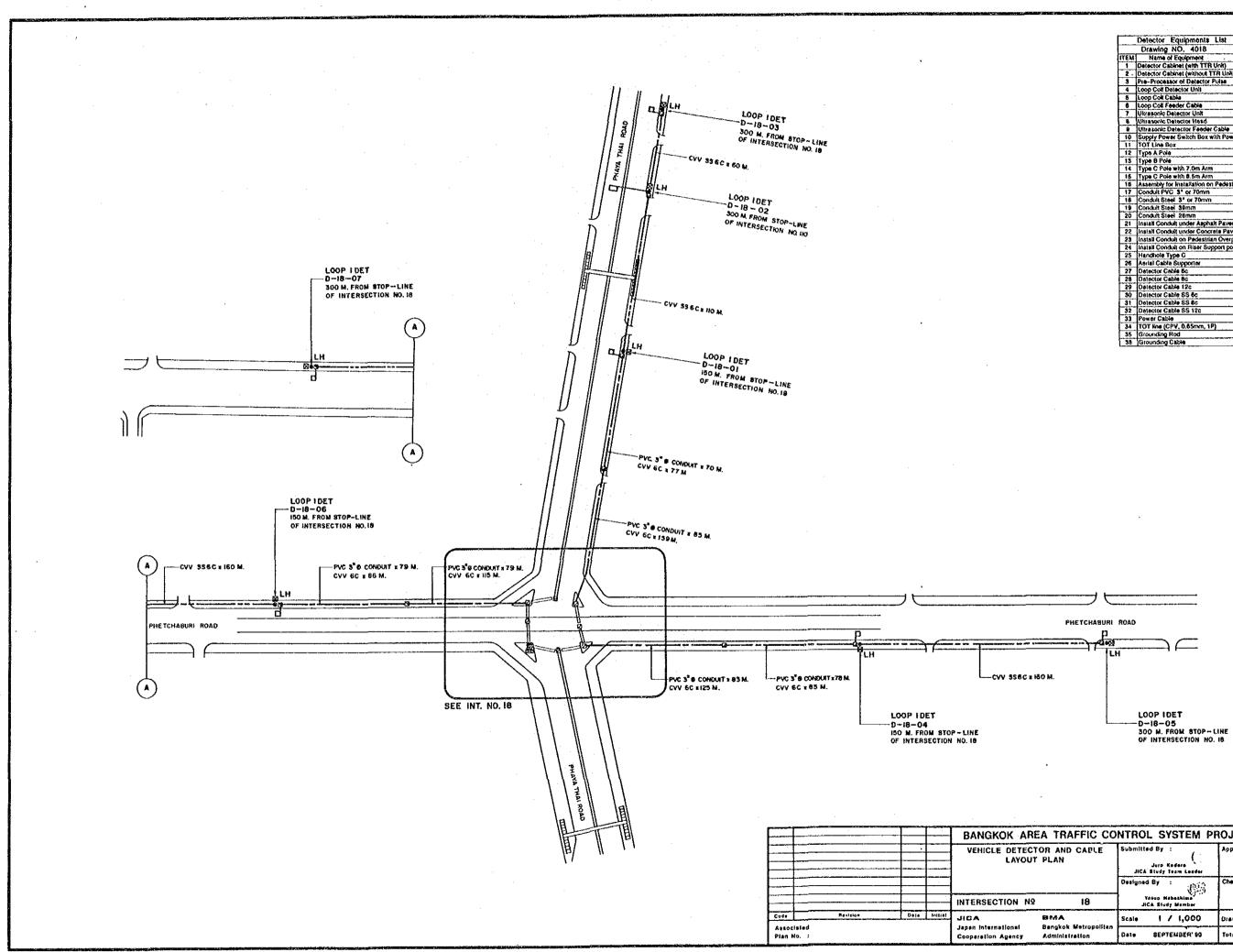




	Detector Equipments List	
	Drawing NO. 4015	
IL BU	Name of Equipment	Qty.
1	Detector Gabinet (with TTR Unit)	- 1
2	Detector Cabinet (without TTA Unit)	5
3	Pre-Processor of Detector Pulse	- 1
4	Loop Coll Detector Unit	3
5	Loop Coll Cable	40
6	Loop Coll Feeder Cable	25
7	Ultrasonic Detector Unit	-
	Utrasonic Detector Head	-
9	Ultrasonic Detector Faeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	1
13	Type B Pole	4
14	Type C Pole with 7.0n Arm	-
15	Type C Pole with 6.5m Arm	- 1
18	Assembly for Installation on Pedestrian Overpass	+
17	Conduit PVC 3" or 70mm	520
18	Condult Steel 3" or 70mm	-
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Instat Condult under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	520
23	Install Conduit on Pedestrian Overpass	-
24	Install Condult on Riser Support pole	+
25	Handhole Type C	8
26	Aerial Cable Supporter	10
27	Detector Cable 6c	572
28	Datactor Cable Bc	-
29	Detector Cable 120	-
30	Detector Cable SS 6c	320
31	Detector Cable SS 8c	-
32	Detector Cable SS 12c	- 1
33	Power Cable	-
54	TOT Kne (CPV, 0.65mm, 1P)	- 1
35	Grounding Rod	6
36	Grounding Cable	25

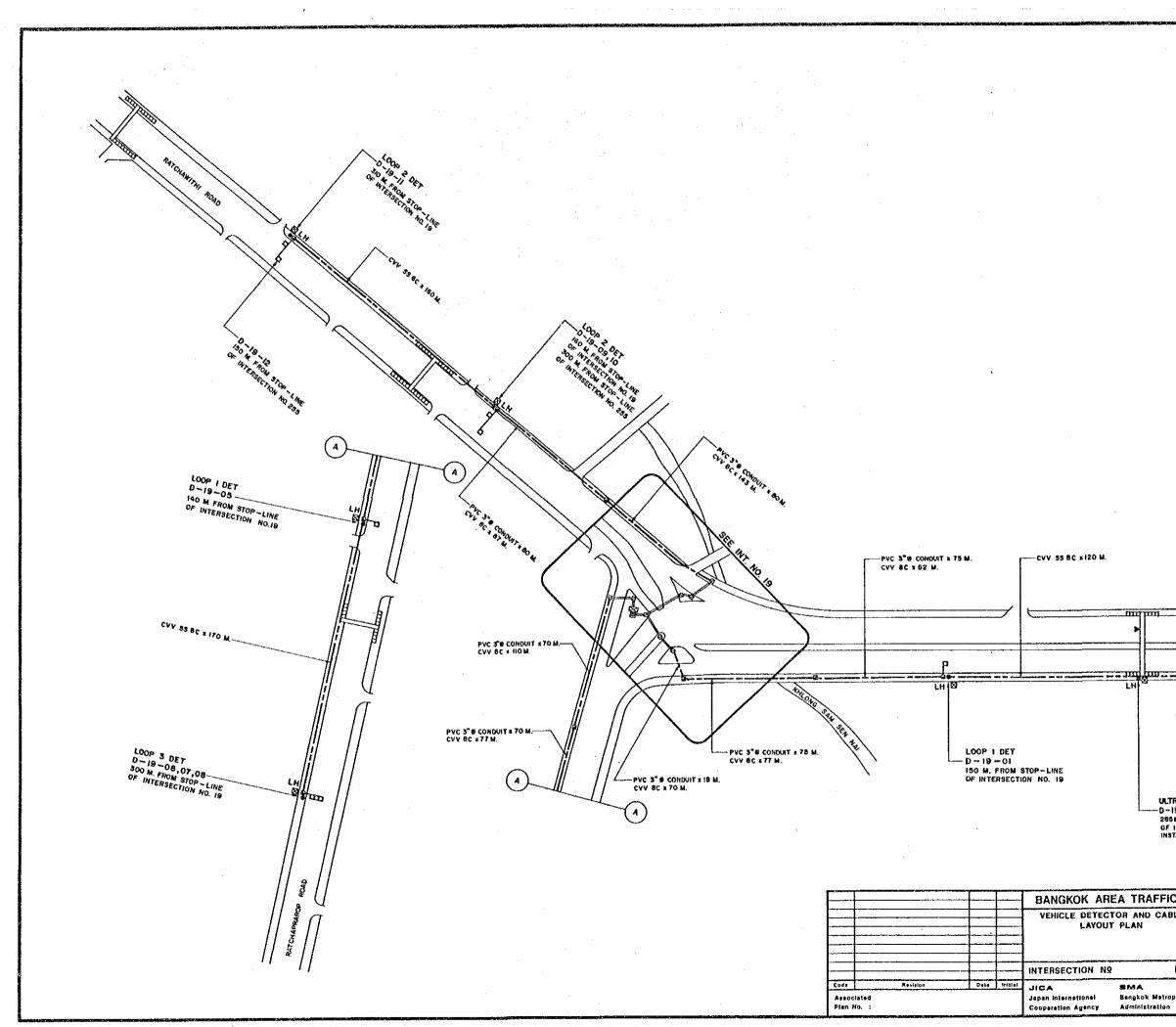
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EA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I				
TOR AND CABLE	Submitted By : Jure Redera JICA Study Team Leader	Approved By : Boonyswei Tiplus BMA Sixdy Toem Loodur		
Q 15	Designed Sy :	Checked By : TED., BMA		
BMA	Scale   / 1,000	Drawing No. 4015		
Bangkok Metropolitan Administration	Onto . GEPTEMBER' 80	Total 12/86		

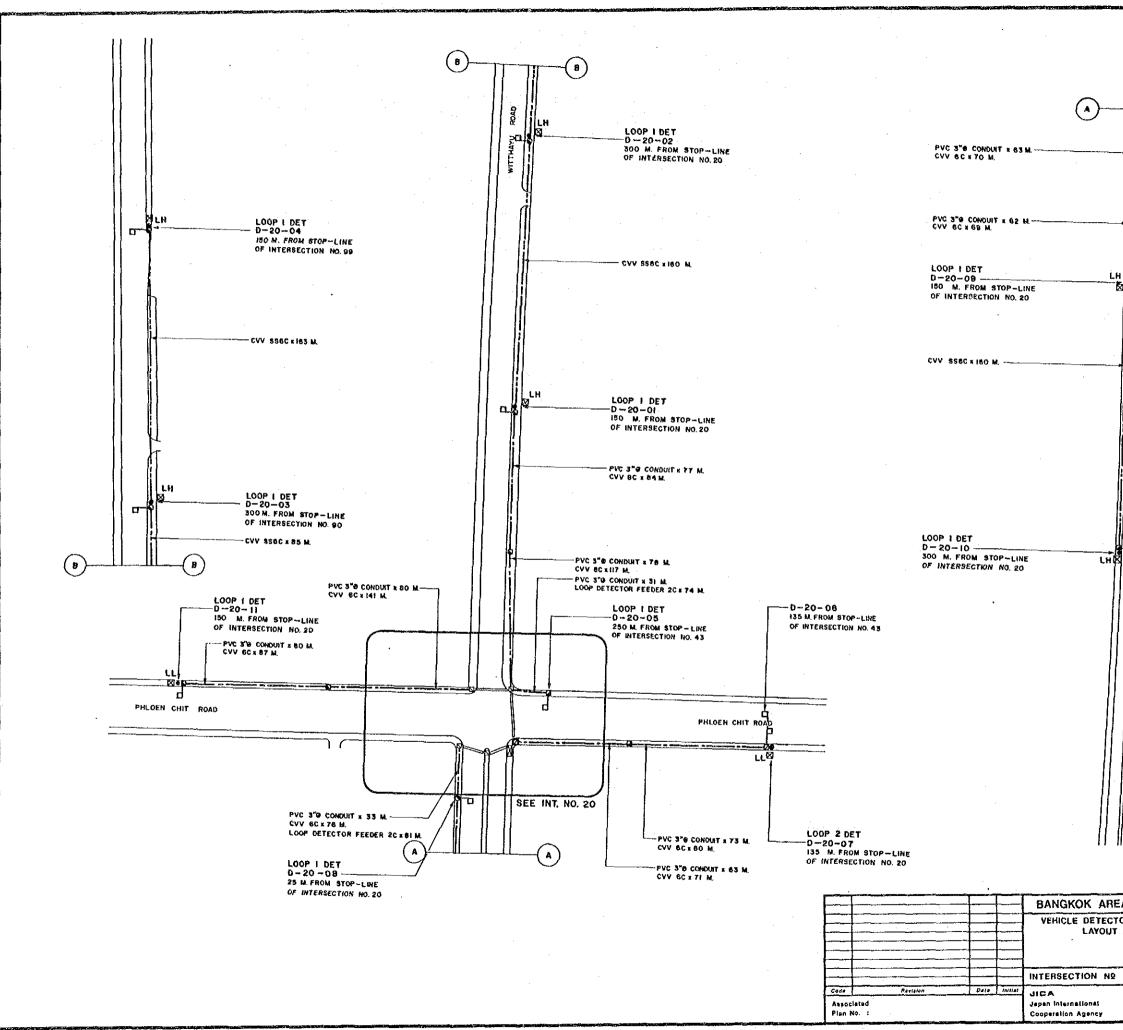


	Partneller Producests 14-4		
	Detector Equipments List		
	Drawing NO, 4018		
ITEM	TEM Name of Equipment . On		
	Detector Cabinet (with TTR Unit)		
	Detector Cabinet (without TTR Unit)	7	
3	Pre-Processor of Detector Pulse	-	
4	Loop Coll Detector Unit	7	
5	Loop Colt Cable	68	
6	Loop Coll Feeder Cable	60	
7	Ultrasonic Delector Unit	-	
8	Ultrasonic Detector Head	-	
9	Ultrasonic Detector Feeder Cable	1	
10	Supply Power Switch Box with Power Breaker	-	
11	TOT Line Box	-	
12	Type A Pole	<u> </u>	
13	Type B Pole	7	
14	Type C Pola with 7.0m Arm		
15	Type C Pole with 8.5m Arm		
18	Assembly for Installation on Pedestrian Overpass		
17	Condult PVC S* or 70mm	474	
18	Condult Steel 3" or 70mm	-	
19	Conduit Steel 39mm	L-	
20	Condult Steel 28mm	Į	
21	Install Conduit under Asphalt PavemarA		
22	Install Condust under Concrete Pavement or Sidewalk	474	
23	Install Condult on Pedestrian Overpase	1-1	
24	Install Conduit on Riser Support pole	-	
25	Handhole Type C	10	
26	Aerial Cable Supporter	18	
27	Detector Cable 5c	490	
28	Delector Cable Sc	1	
29	Delector Cable 12c	I -	
30	Delector Cable SS &c	647	
31	Detector Cable SS 8c	<u> </u>	
32	Detector Cable SS 120	1 -	
33	Power Cable		
34	TOT Kne (CPV, 0.65mm, 1P)		
35	Grounding Rod	7	
38	Grounding Cabie	35	

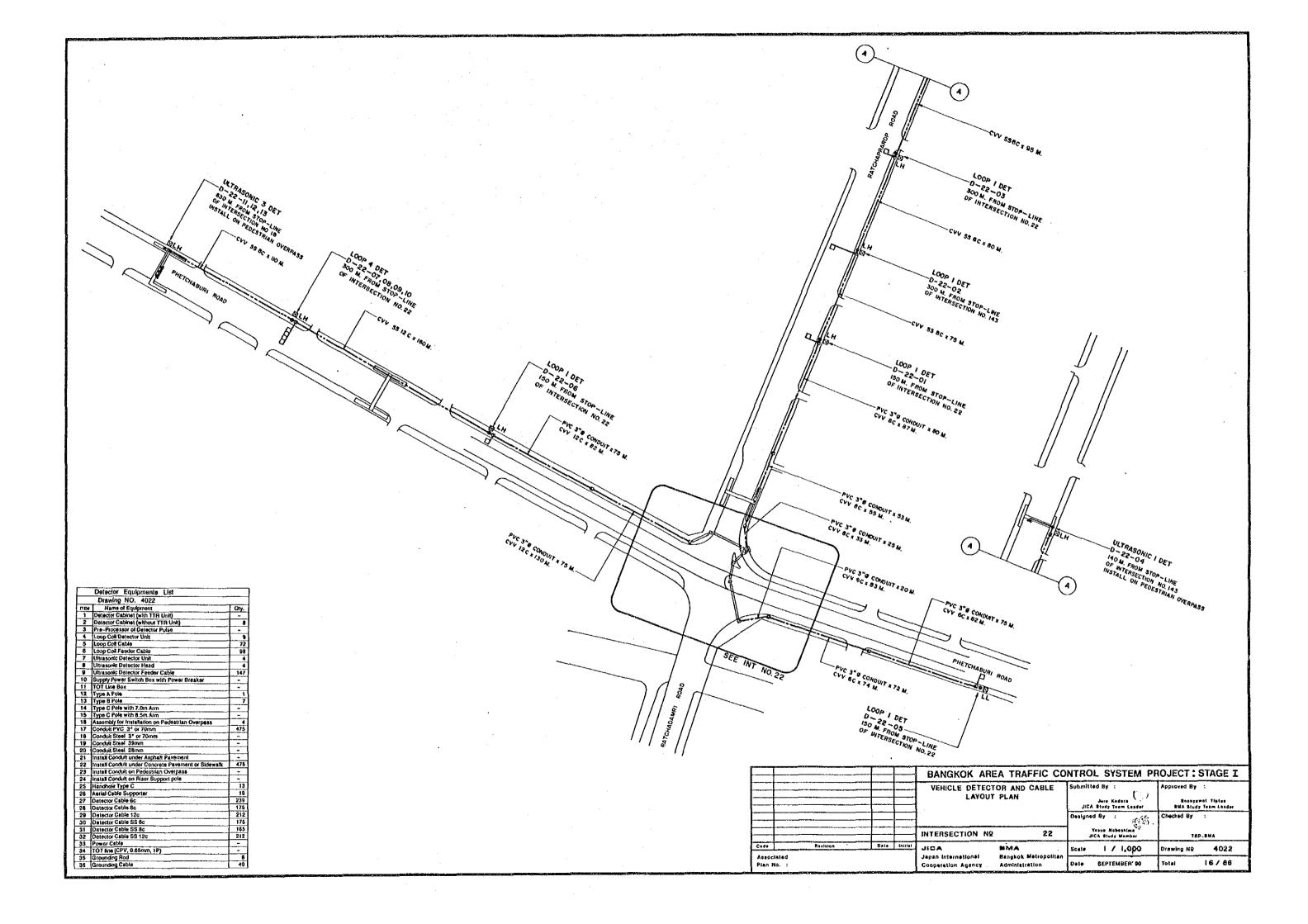
REA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I					
CTOR AND CAPLE	Submitted By : Juro Kedore JICA Study Team Leader	Approved By : Beenynwet Tiptus BMA Study Tenm Lander			
12 18	Designed By :	Checked By : TED.,8WA			
BMA	Scale   / 1,000	Drawing Nº 4018			
Bangkok Metropolit Administration	Date SEPTEMBER' 60	Total -13/86			

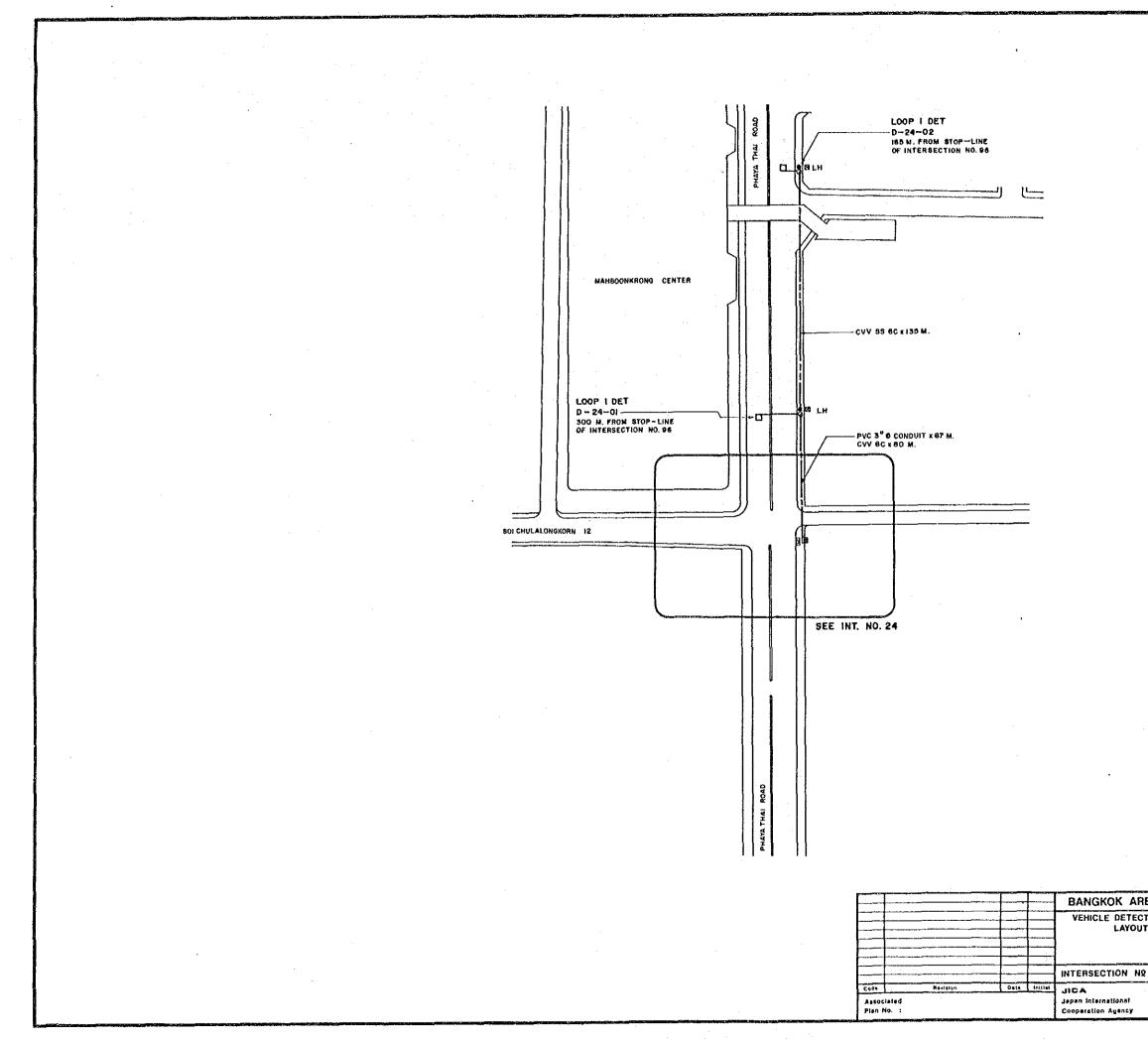


	Detector Equipments List	
	Drawing NO. 4019	TON
	1 Detector Cabinet (with TTR Unit)	Oty.
	2 Detector Cabinet (without TTR UNIt) 3 Pre-Processor of Detector Pulse	
	4 Loop Coll Detector Unit	11
	6 Loop Coll Cable 6 Loop Coll Feeder Cable	88 89
	7 Ulizasonic Detector Unit	1
	Ultrasonic Detector Head  Ultrasonic Detector Feeder Cable	
	10 Supply Power Switch Box with Power Breaker	<u> </u>
	11 TOT Line Box 12 Type A Pole	
	13 Type B Pole	3
	14 Type C Pole with 7.0m Arm 15 Type C Pole with 8.5m Arm	
	16 Assembly for Installation on Pedestrian Overpass	1
	17 Conduit PVC 3" or 70mm 18 Conduit Statel 3" or 70mm	468
	19 Conduit Steet 39mm	-
	20 Conduit Steel 28nm 21 Install Conduit under Asphalt Pavement	33
	22 Install Conduit under Concrete Pavement or Skiewalk	468
	23 Install Condult on Pedestrian Overpass 24 Install Condult on Riser Support pole	
	25 Handhole Type C	11
	28 Aerial Cable Supporter 27 Detector Cable Sc	
	28 Detector Cable Sc	646
	29 Detector Cable 12c 30 Detector Cable SS 5c	
	31 Detector Cable 55 8c	290
	32 Detector Cable SS 12c 33 Power Cable	- <u>-</u> -
	34 TOT line (CPV, 0.85mm, 1P)	
	35 Grounding Rod 36 Grounding Cable	- 8 - 40
	LOOP I DET	-
• mit huit	D- 19-04 150 M. FROM STOP - LINE OF INTERSECTION NO. 163 	
<b></b>	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 CVV SS BC I SO M. DIN DAENG ROAD	
	ISO M. FROM STOP LINE OF INTERSECTION NO. 163	
	ISO M. FROM STOP LINE OF INTERSECTION NO. 163	•12 H
	ISO M. FROM STOP LINE OF INTERSECTION NO. 163	H
LH	ISO M. FROM STOP-LINE OF INTERSECTION NO. 163	H
UTRAS	ISO M. FROM STOP-LINE OF INTERSECTION NO. 163 	H
UTRAS	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	H
LH ULTRAS D-19-C 206M. F OF INTE INSTALL	ISO M. FROM STOP-LINE OF INTERSECTION NO. 163 -CVV SS 6C ± 50 M. DIN DAENG ROAD DIN DAENG ROAD DIN DAENG ROAD DIN DAENG ROAD DIN DAENG ROAD DIN DAENG ROAD CVV SS 6C ± 103 LH 105 LOOP I DET D-19-03 300 M. FROM STOP-LINE OF INTERSECTION NO. 19 ONIC I DET D2 ROM STOP-LINE IRSECTION NO. 163 ON PEDESTRIAN GVERPASS	M
LH LH REA TRAFFIC C	ISO M. FROM STOP-LINE OF INTERSECTION NO. 163 	M
LH LH LH REA TRAFFIC C TOF AND CABLE	ISO M. FROM STOPLINE OF INTERSECTION NO. 163 	GE I
LH LH REA TRAFFIC C	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	-H M. GE I Plus
LH LH ULTRAS D-19-C 205M. F OF INTE INSTALL	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	-H M. GE I Plus
LH LH ULTRAS D-19-C 205M. F OF INTE INSTALL	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	-H M. GE I Plus
LH LH ULTRAS D-19-C 205M. F OF INTE INSTALL	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	-H M. GE I Plus
LN LN ULTRAS D-19-C 205B-C 205F INTE INSTALL REA TRAFFIC C TOR AND CABLE T PLAN	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	GE I
LH LH LH REA TRAFFIC C TOF AND CABLE	ISO M. FROM STOP LINE OF INTERSECTION NO. 163 	-H M. GE I Plus



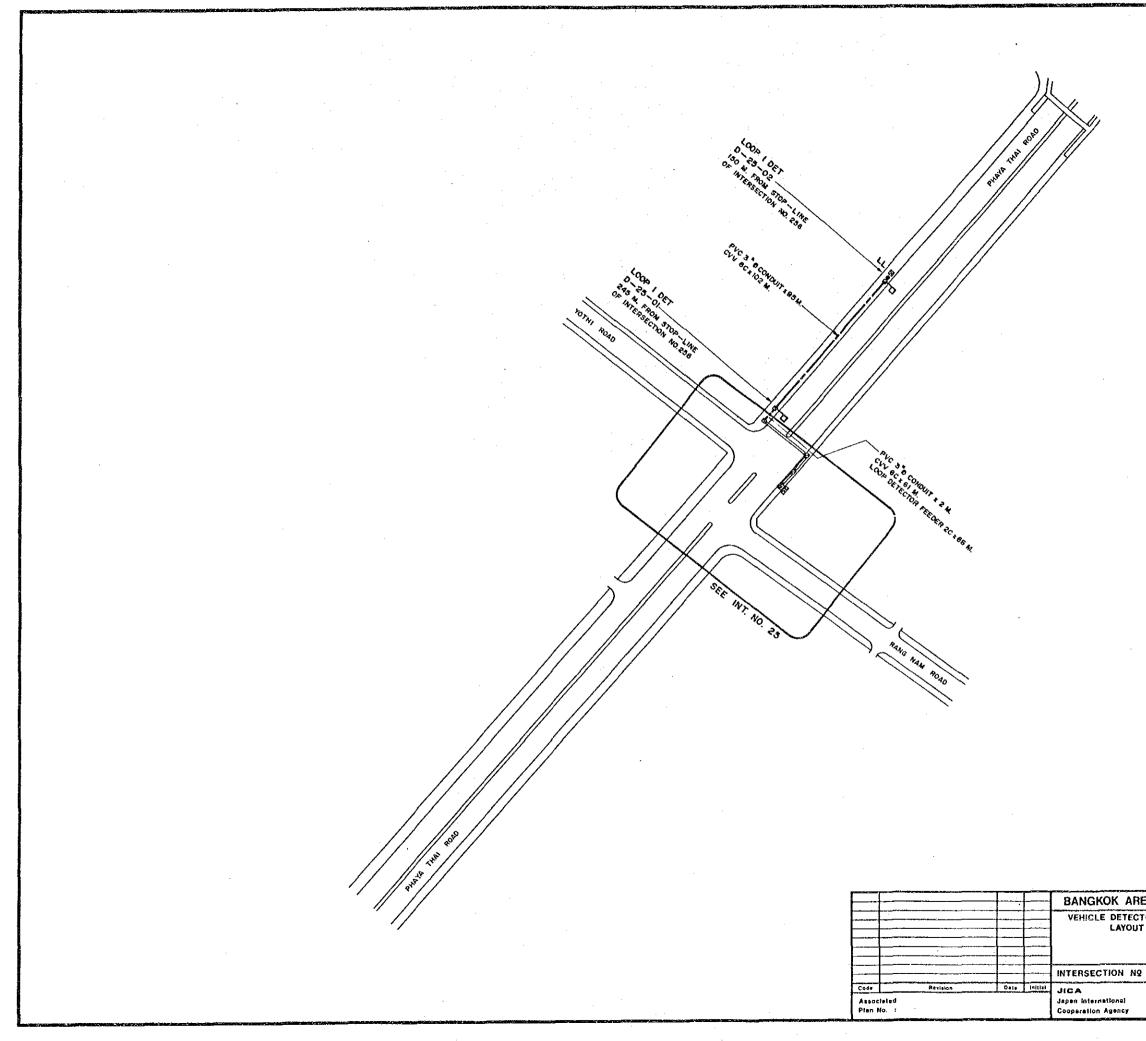
	Drawing NO. 4020 ITEM Name of Equipment 1 Detector Cablen Equipment 2 Detector Cablen Equipment 3 Pre-Processor of Detector Pro- 4 Loop Coll Detector Unit 5 Loop Coll Fender Cable 6 Loop Coll Fender Cable 7 Utrasonic Detector Unit 8 Utrasonic Detector Head 9 Utrasonic Detector Fender 10 Suppy Power Switch Box with 11 TOT Line Box 12 Type A Pola 13 Type B Pole 14 Type C Pole with 7.0m Arin 15 Type C Pole with 7.0m Arin 15 Conduit Steel 3" or 70mm 16 Conduit Steel 3" or 70mm 10 Conduit Steel 3" or 70mm 10 Conduit Steel 3" or 70mm 10 Conduit Steel 3" or 70mm 11 Install Conduit under Corcreti 12 Install Conduit under Corcreti 13 Install Conduit on Riser Supporter 14 Install Conduit on Riser Supporter 15 Install Conduit on Riser Supporter 16 Detector Cable Sc 10 Detector Cable Sc	R Unit) Alue file file file  ebla   edistrian Overpass  Pavement Pavement  Pavement       	
	NTROL SYSTEM PR		_
OR AND CABLE Plan	Submitted By :	Approved By :	
	Jure Kodere JICA Sludy Team Leader Designed By :	Boonyawal Tiptus BIA Study Team Londer Checked By	
20		780 AV-	
BMA	diCA Study Hamber Scale I / 1,000	TEO, SHA Drawing Nº 4020	
Bangkok Metropoliten	Date SEPTEMBER' 90	Total 15/86	
Administration	Darig , GEFTEMDER 40	15786	





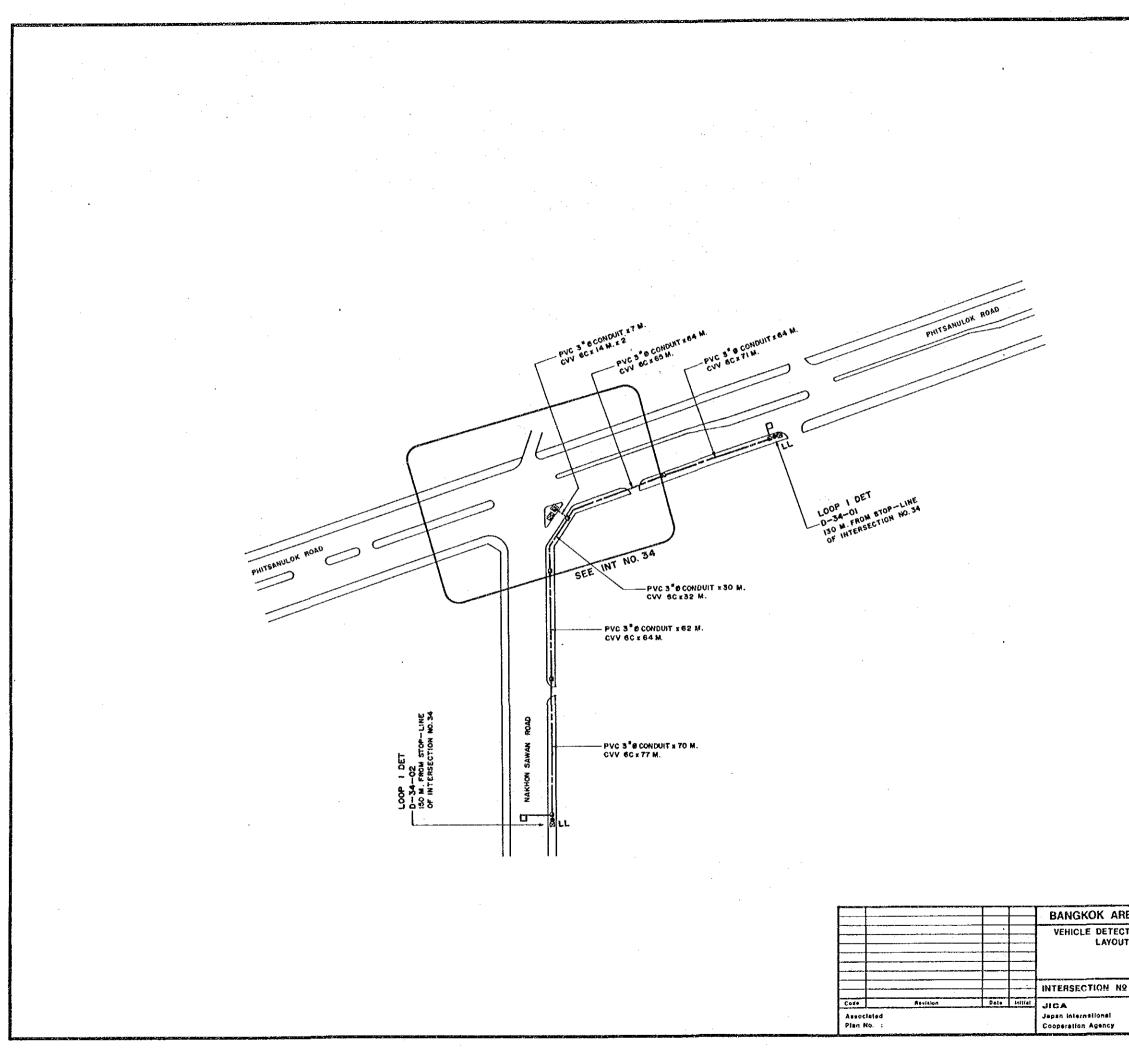
	Detector Equipments List	
	Drawing NO. 4024	
ITEM	Name of Equipment	Qty.
1	Detector Cabinal (with TTR Unit)	
2	Datactor Cabinet (without TTR Unit)	1 1
3	Pre-Processor of Detector Pulse	1 -
4	Loop Golt Detector Unit	1 2
ð	Loop Coll Cable	16
8	Loop Coll Feeder Cable	10
7	Ultrasonic Detector Unit	T -
8	Uttrasonic Detector Head	
9	Utirasonic Detector Feeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	-
13	Type B Pole	2
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	- 1
16	Assembly for Installation on Pedestrian Overpase	1 -
17	Conduit PVC 3° or 70mm	67
18	Conduit Steel 3° or 70mm	- 1
19	Conduit Stael 39mm	
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	- 1
22	Install Conduit under Concrete Pavement or Sidewalk	87
	Install Conduit on Pedestrian Overpass	- 1
24	Install Conduit on Riser Support pole	- 1
23	Handhole Type C	2
26	Aarlal Cable Supporter	5
27	Detector Cable 6c	80
28	Detector Cable 8c	-
29	Detector Cable 12c	<u> </u>
30	Detector Cable SS 6c	135
31	Detector Cabla SS 8c	
32	Distector Cable SS 12c	1 -
33	Power Cable	1 -
34	TOT line (CPV, 0.65mm, 1P)	1
	Grounding Rod	2
	Grounding Cable	10

E A	TRAFFIC CO	NTROL SYSTEM P	ROJECT : STAGE T
TOR AND CABLE		Submitted By :	Approved By :
		Jura Kedera 5.3 JICA Study Team Leader	Beanyawal Tiplus DIGA Sludy Team Leader
		Designed By :	Checked By :
2	24	Yscue Mabeshiata JICA Sludy Meraber	TED , SWA
Bangkok Matropolitan Administration		Scate 1 / 1,000	Drewing No 4024
		Data SEPTEMBER' 90	Total 17/86



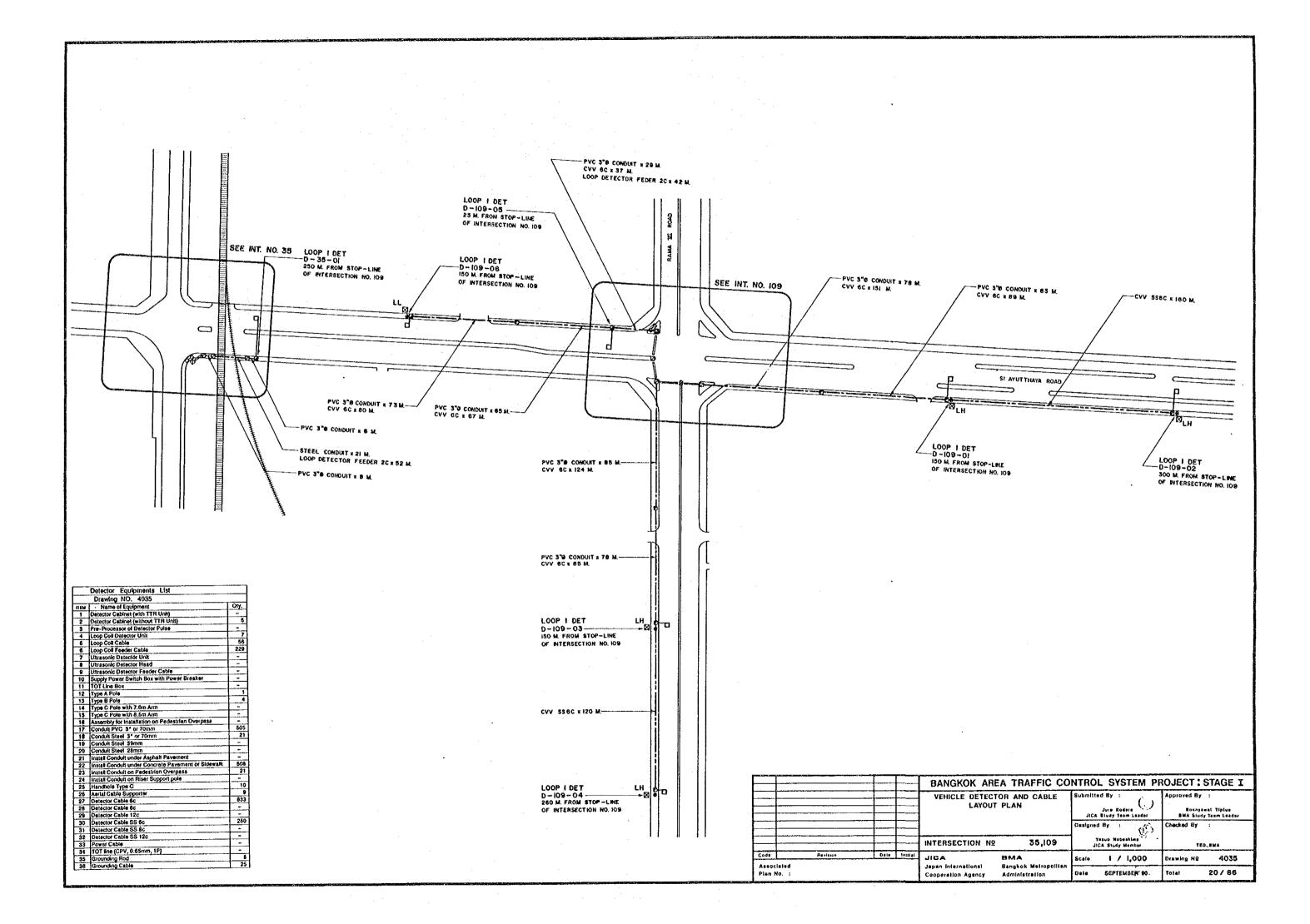
	Detector Equipments List	
	Drawing NO. 4025	
n ex	Name of Equipment	Qty.
1	Detector Cabinal (with TTR Unit)	-
2	Datector Cabinat (without TTR Unit)	1
3	Pra-Processor of Detector Pulse	1
4	Loop Coll Datector Unit	2
5	Loop Coll Cable	16
5	Loop Coll Feeder Cable	78
7	Ultresonic Datector Unit	-
8	Ultraconic Detector Head	1-
9	Ultrationic Datactor Feeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	1
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	
16	Assembly for installation on Pedestrian Overpase	
17	Condult PVC 3" or 70mm	100
15	Conduit Steel 3° or 70mm	-
19	Condult Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Condult under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	100
23	Instell Conduit on Pedestrian Overpass	<b>-</b>
24	Install Condult on Riser Support pole	
25	Handhole Type C	2
28	Aarial Cable Supporter	-
27	Detector Cable 60	161
28	Datector Cable 84	- 1
29	Detector Cable 12c	- 1
30	Detector Cable SS 6c	1
31	Detector Cable SS Bc	1 -
32	Detector Cable SS 12c	- 1
33	Power Cable	- 1
34	TOT line (CPV, 0.65mm, 1P)	1
35	Grounding Rod	1
36	Grounding Cable	6

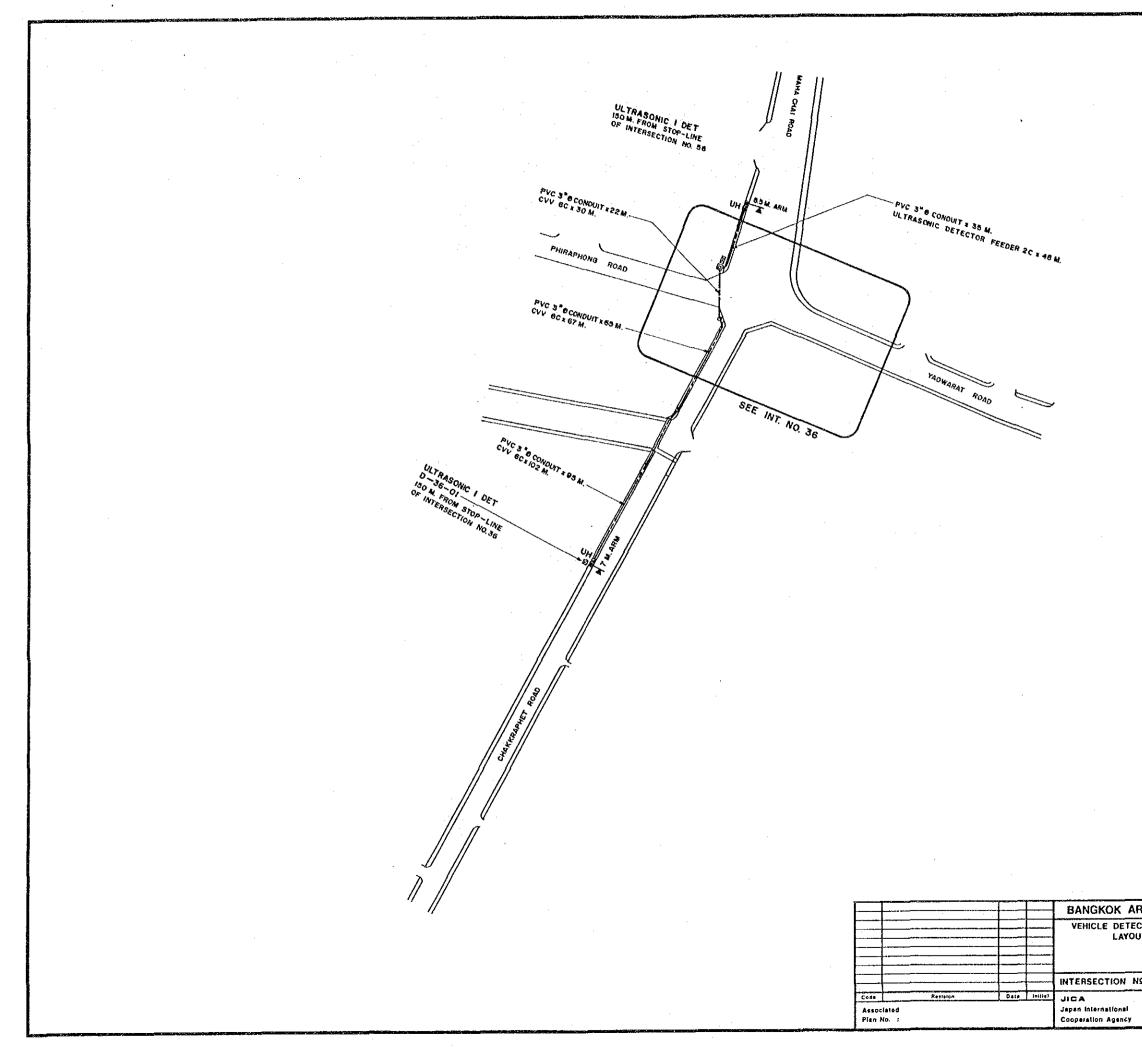
REA TRAFFIC CONTROL SYSTEM PROJECT : STAGE 1						
TOR AND CABLE	Submilled By : Juis Kedurd JICA Study Team Leader	Approved By : Boosyawal Tiptue BMA Study Tears Leader				
9 25	Designed By : (37) Yesus Nabyshimo JiCA Study Member	Checked By : TED, BMA				
BMA Bangkok Metropoliten Administration	Scala I / 1.000 Data SEPTEMBER' 40	Drawing N2 4025 Total 18/86				



	Detector Equipments List Drawing NO. 4034	
		1.
ITEM		Oty.
1	Delector Cabinet (with TTH Unit)	
2	Detector Cabinel (without TTR Unit)	2
3	Pre-Processor of Detector Pulse	<u> </u>
4	Loop Coll Detector Unit	2
5	Loop Coll Cable	18
8	Loop Coll Feeder Cable	10
7	Ultrasonic Detector Unit	
5	Ultrasonic Delector Head	
9	Ultrasonic Detector Feeder Cable	L
10	Supply Power Switch Box with Power Breaker	L
11	TOT Line Box	-
12	Type A Pole	2
19	Type B Pole	
14	Type C Pole with 7.0m Arm	I
15	Type C Pola with 6.5m Arm	- 1
18	Assembly for instattation on Pedestrian Overpass	
17	Conduit PVC \$* or 70mm	207
18	Conduit Steel 3" or 70mm	-
19	Conduit Steel 39mm	- 1
20	Conduit Steel 28mm	- 1
21	Install Condult under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	297
23	Install Conduit on Pedastrian Overpass	- 1
24	Install Conduit on Riser Support pole	
25	Hanchole Typa C	6
26	Aerial Cable Supporter	-
.27	Datactor Cable 60	337
28	Detector Cable 8c	
29	Detector Cable 12c	-
30	Detector Cable SS 6c	1 -
31	Detector Cable SS BC	-
32	Detector Cable SS 12c	1 -
33	Power Cable	t
34	TOT line (CPV, 0.65mm, 1P)	1
35	Grounding Rod	
36	Grounding Cable	10

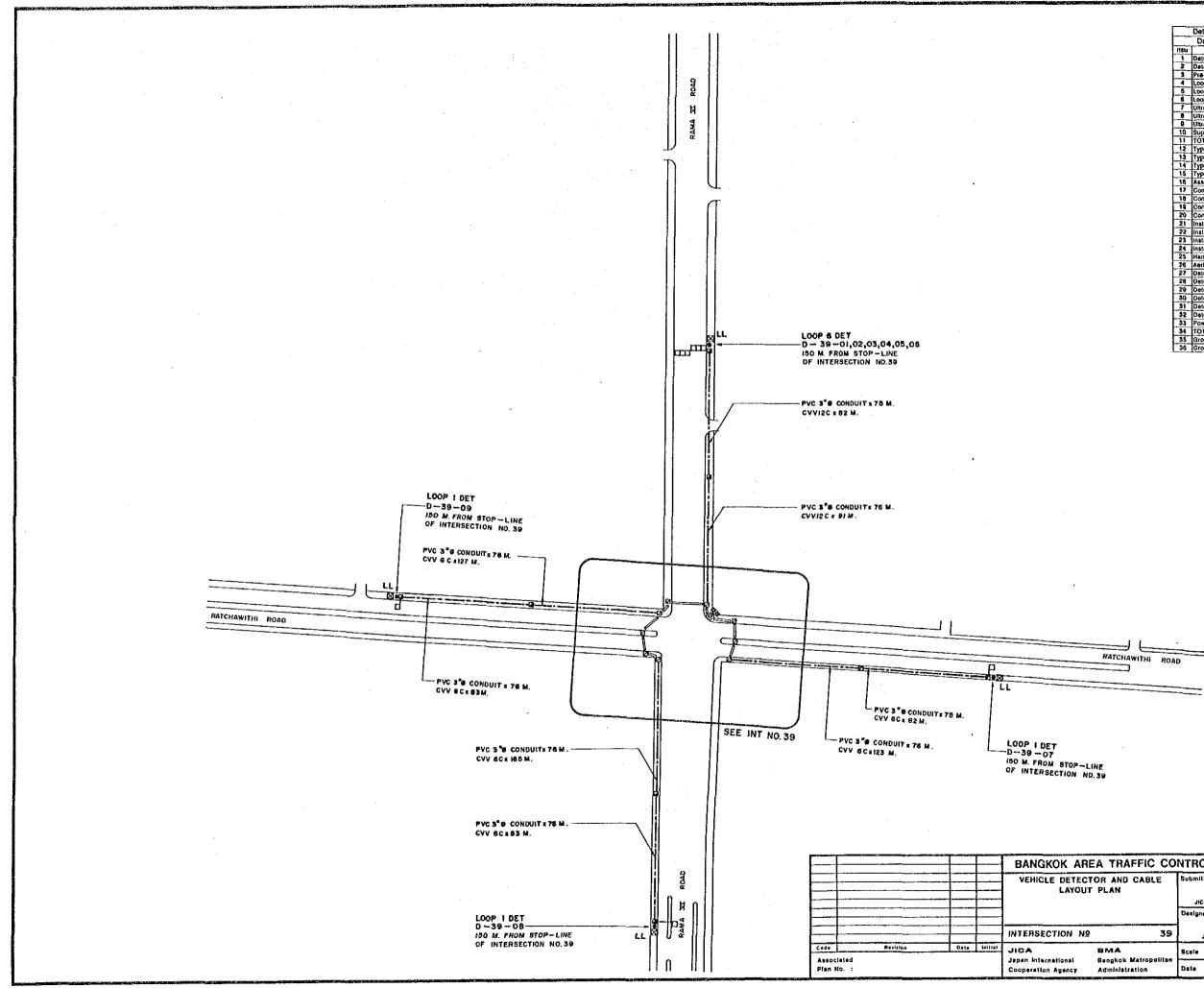
REA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I				
CTOR AND CABLE UT PLAN	Submitted By : Juro Kedera	Approved By : Beonyewst Tiptus		
	JICA Study Team Leader	BMA Study Team Leader		
	Designed By :	Checked By :		
I <u>2</u> 34	Yssup Hs3esələrə JICA Sludy Member	TED, DMA		
BMA Beestak Halissaillas	Scale   /  ,000	Drawing Nº 4034		
Bangkok Metropolitan Administration	Dele SEPTEMBER' 60	Totel 19/86		





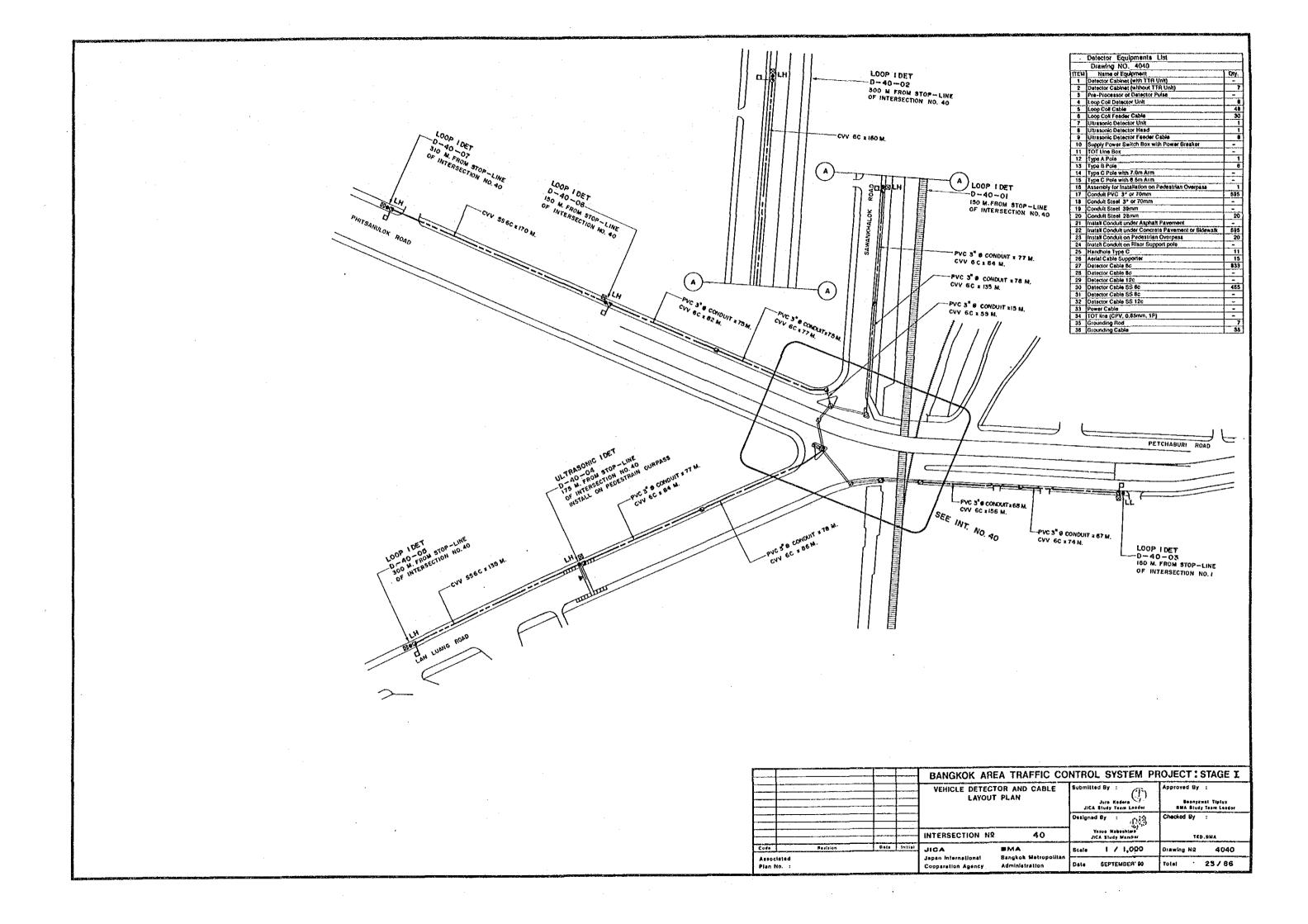
	Datactor Equipments List	
	Drawing NO. 4038	
ITEM		Qty.
1	Detactor Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTA Unit)	1
3	Pre-Processor of Detector Pulse	-
4	Loop Coll Detector Unit	-
6	Loop Coll Cable	-
6	Loop Coll Feeder Cable	-
7	Ultrasonic Detector Unit	3
	Ultresonic Detector Head	2
9	Ultrasonic Detector Feeder Csble	64
10	Supply Power Switch Box with Power Breaker	<b>-</b>
11	TOT Line Box	- 1
12	Type A Pole	-
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	1
15	Type C Pole with 8.5m Arm	1
18	Assembly for installation on Pedestrian Overpase	-
17	Conduit PVC 3" or 70mm	182
18	Condult Steel 3" or 70mm	-
19	Conduit Steel 39mm	-
20	Conduli Steel 28mm	- 1
21	Install Conduit under Asphalt Pavement	18
22	Install Condult under Concrete Pavement or Sidewalk	168
23	Instal Conduit on Pedestrian Overpasa	-
24	Install Condult on Riser Support pole	+
25	Handhole Type C	4
26	Aerial Cable Supporter	-
27	Datector Cable 6c	199
28	Detector Cable 8c	~
29	Detector Cable 12c	-
30	Detector Cable SS 6c	-
	Detector Cable SS 8c	-
32	Detector Cable SS 12c	-
33	Power Cable	-
34	TOT line (CPV, 0.65mm, 1P)	-
35	Grounding Rod	2
38	Grounding Cable	10

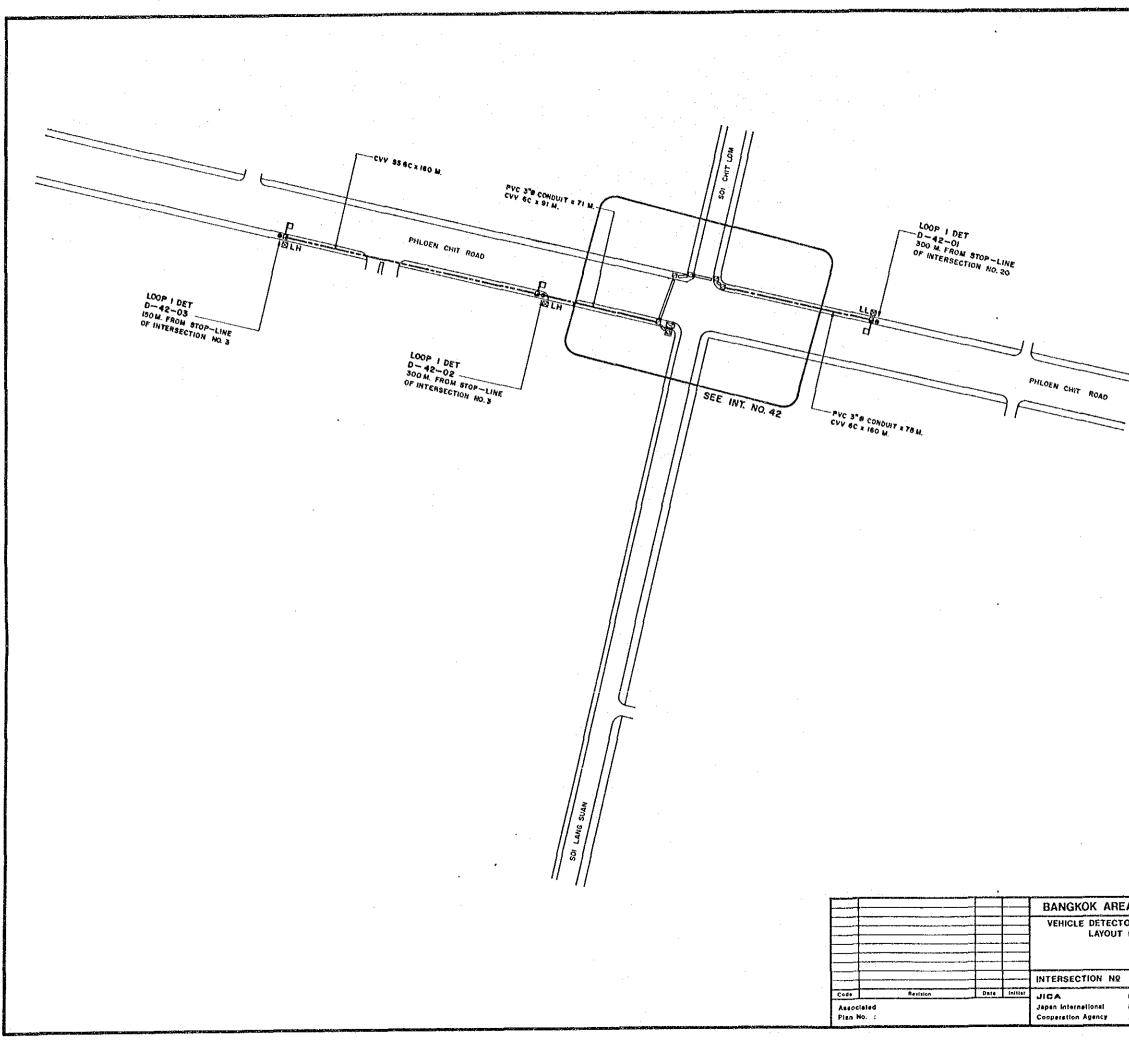
ILA INALIO U	ONTROL SYSTEM P	
CTOR AND CABLE UT PLAN	Submitted By : Jure Kedere JKCA Bludy Team Lasder	Approved By : Boonyawel Tiptue BNA Study Team Leader
	Designed By :	Checked By :
12 30	Yasua Nabashima JICA Sludy Nambar	TED, BUA
BMA	Scale t / 1,000	Drawing N2 4038
Bangkok Matropolitar Administration	Date SEPTEMBER' 60	Total 21/86



	Detector Equipments List	
	Drawing NO. 4039	
mesa	Name of Equipment	Oly.
1	Detector Cabinet (with TTR Unit)	-
2	Detector Cabinel (without TTR Unit)	4
3	Pre-Processor of Detector Pulse	-
4	Loop Coll Datector Unit	
6	Loop Coll Cable	72
6	Loop Coll Feeder Cable	85
7	Ultrasonic Datector Unit	۰ ا
	Ultrasonic Delector Nead	-
0	Utrasonic Detector Feeder Cable	- 1
10	Supply Power Switch Box with Power Breaker	1 - 1
11	TOT Line Box	-
12	Type A Pole	4
13	Type B Polo	
14	Type C Pola with 7.0m Ann	-
15	Type C Pole with 6.5m Arm	- 1
16	Assembly for Installation on Pedestrian Overpass	- 1
17	Conduit PVC 3" or 70mm	608
18	Conduit Stesl 3" or 70mm	
19	Condult Steet 39mm	- 1
20	Condult Steet 28mm	-
21	Install Conduit under Asphalt Pavement	+
22	Install Condult under Concrete Pavement or Sidewalk	608
23	Install Conduit on Pedestrian Overpass	- 1
24	Install Condult on Riser Support pole	-
25	Handhola Type G	
28	Aerial Cable Supporter	<u> </u>
27	Datector Cable Sc	663
28	Datector Cable Bc	+
29	Detector Cable 12c	173
30	Detector Cable SS 6c	<u>.</u>
31	Detector Cable SS 8c	- 1
32	Detector Cable SS 12c	1
33	Power Cable	1
34	TOT line (CPV, 0.65mm, 1P)	<u> -</u> :-
35	Grounding Rod	
36	Grounding Cable	20

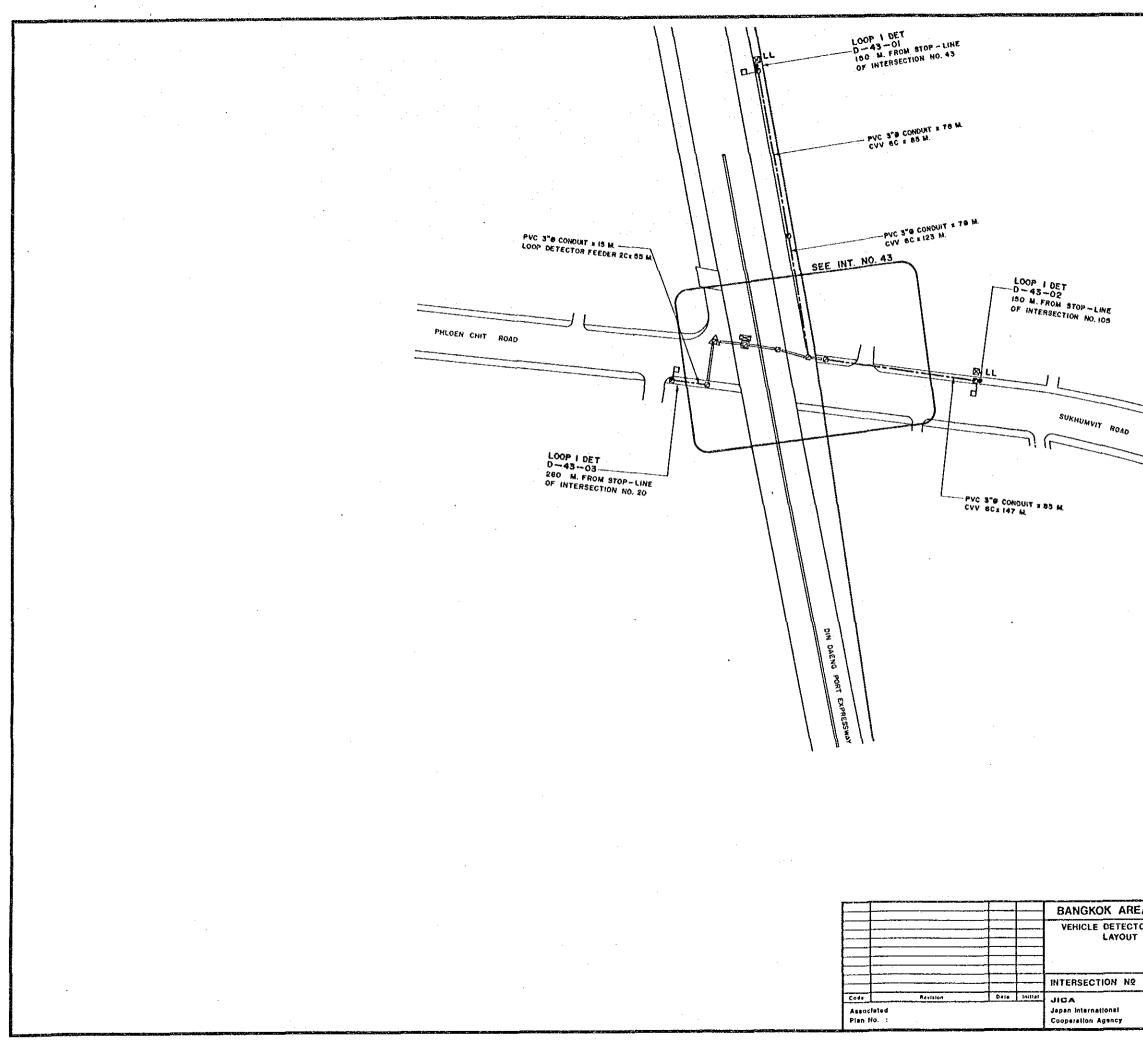
REA TRAFFIC CO	NTROL SYSTEM P	ROJECT: STAGE I
CTOR AND CABLE	Submitted By : Jure Kedere JICA Bludy Toam Leader	Approved By : Begnysmet Tiplus BWA Bludy Tesm Leader
N <u>0</u> 39	Designed By : C. Voltar Yasus Habeshine JiCA Study Membar	Checked By :
BMA	Scale 1 / 1,000	Drawing Ng 4039
Bangkok Matropolites Administration	Date SEPTEMBER' 60	Total 22 / 86





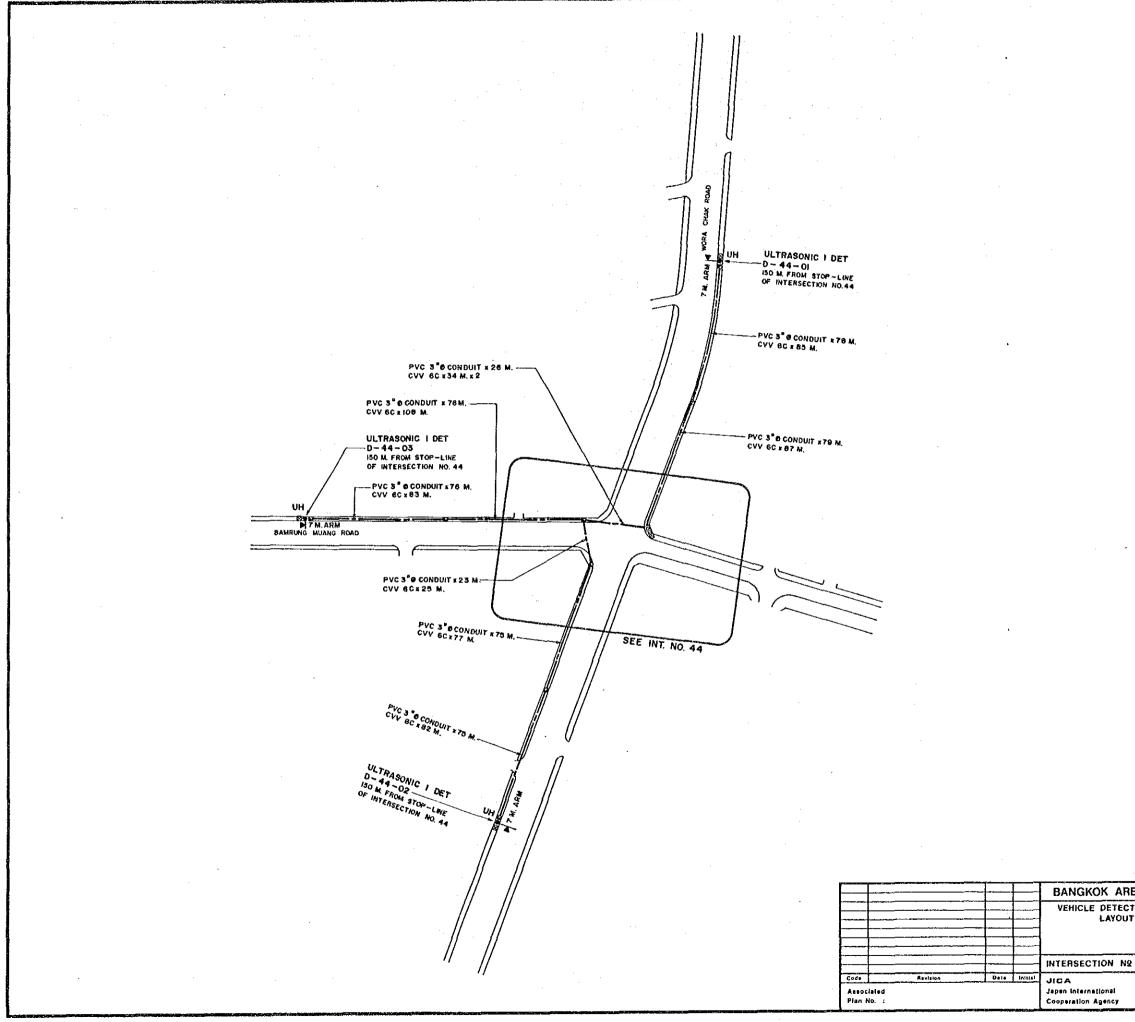
Detector Equipments List	
Drawing NO. 4042	
men   Name of Equipment	) Qity.
1 Detector Cabinet (with TTR Unit)	
2 Detector Cabinet (without TTR Unit)	
3 Pre-Processor of Detector Pulse	-   -
4 Loop Coll Detector Unit	3
8 Loop Coll Cable	24
8 Loop Coll Feeder Cable	15
7 Ultraconic Detector Unit	
8 Ultrasonio Detector Head	
9 Ulirasonic Detector Feeder Cabia	1-
10 Supply Power Switch Box with Power Break	ter -
11 TOT Line Box	
12 Type A Pole	
13 Type B Pola	2
14 Type C Pole with 7.0m Arm	1 -
15 Type C Pole with 8.5m Arm	
16 Assembly for Installation on Pedestrian Ove	ND438 -
17 Conduit PVC 9" or 70mm	149
18 Conduit Steel 3" or 70mm	- 1
19 Gonduit Steel 39mm	-
20 Conduit Steel 28mm	
21 Install Conduit under Asphalt Pavement	
22 Install Conduit under Concrete Pavement of	r Sidewalk 149
23 Install Conduit on Pedestrian Overpass	-
24 Install Conduit on Riser Support pole	
25 Handhole Type C	
26 Aerial Cable Supporter	5
27 Detector Cable 5c	251
28 Detector Cable 8c	
29 Detector Cable 12c	
30 Detector Cable SS 6c	160
31 Detector Cable SS 8c	-
32 Detector Cable SS 12c	
33 Power Cable	
34 TOT line (CPV, 0.65mm, 1P)	1 -
35 Grounding Rod	3
36 Grounding Cable	15

A TRAFFIC CO	NTROL SYSTEM P	ROJECT: STAGE I
OR AND CABLE	Submitted By : Jure (Losse JICA Study Team Leader	Approved By : Boonyewel Tiptus SMA Study Teom Leader
	Designed By	Chacked By
42	JICA Study Member	TED., BWA
BMA	Scale   / 1,000	Drawing NR 4042
Bengkok Metropolitan Administration	Dale SEPTEMBER' 90	Total 24/86



		100.000
	Detector Equipments List	
	Drawing NO. 4043	
ITEM		Oty.
1	Detector Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTR Unit)	2
3	Pre-Processor of Ostactor Pulss	
4	Loop Coll Delector Unit	3
5	Loop Coll Cable	24
6	Loop Coll Feeder Cable	70
7	Uttrasonic Detector Unit	-
8	Ultrasonic Detector Haad	
9	Ultresonic Datector Feeder Cable	
10	Supply Power Switch Box with Power Breaker	
11	TOT Une Box	
12	Type A Pole	2
13	Type B Pole	1
14	Type C Pole with 7.0m Arm	
15	Type C Pole with 8.5m Arm	
16	Assembly for Installation on Pedestrian Overpasa	
17	Conduit PVC 3" or 70mm	257
18	Conduit Steel 3" or 70mm	
19	Condult Steel 39mm	
20	Condult Steel 28mm	
21	Install Conduit under Asphalt Pavement	- 1
22	Install Conduit under Concrete Pavement or Sidewalk	257
23	Install Conduit on Pedesulan Overpass	-
24	Install Conduit on Riser Support pole	-
25	Hanohola Type C	4
26	Aerial Cable Supporter	
27	Detector Cable 5c	355
28	Detector Cable 8c	
29	Detector Cable 12c	- 1
30	Detector Cable SS 6c	-
31	Detector Cable SS 8c	
32	Detector Cable SS 12c	-
33	Power Cable	-
34	TOT line (CPV, 0.65mm, 1P)	-
35	Grounding Rod	2
36	Grounding Cable	10

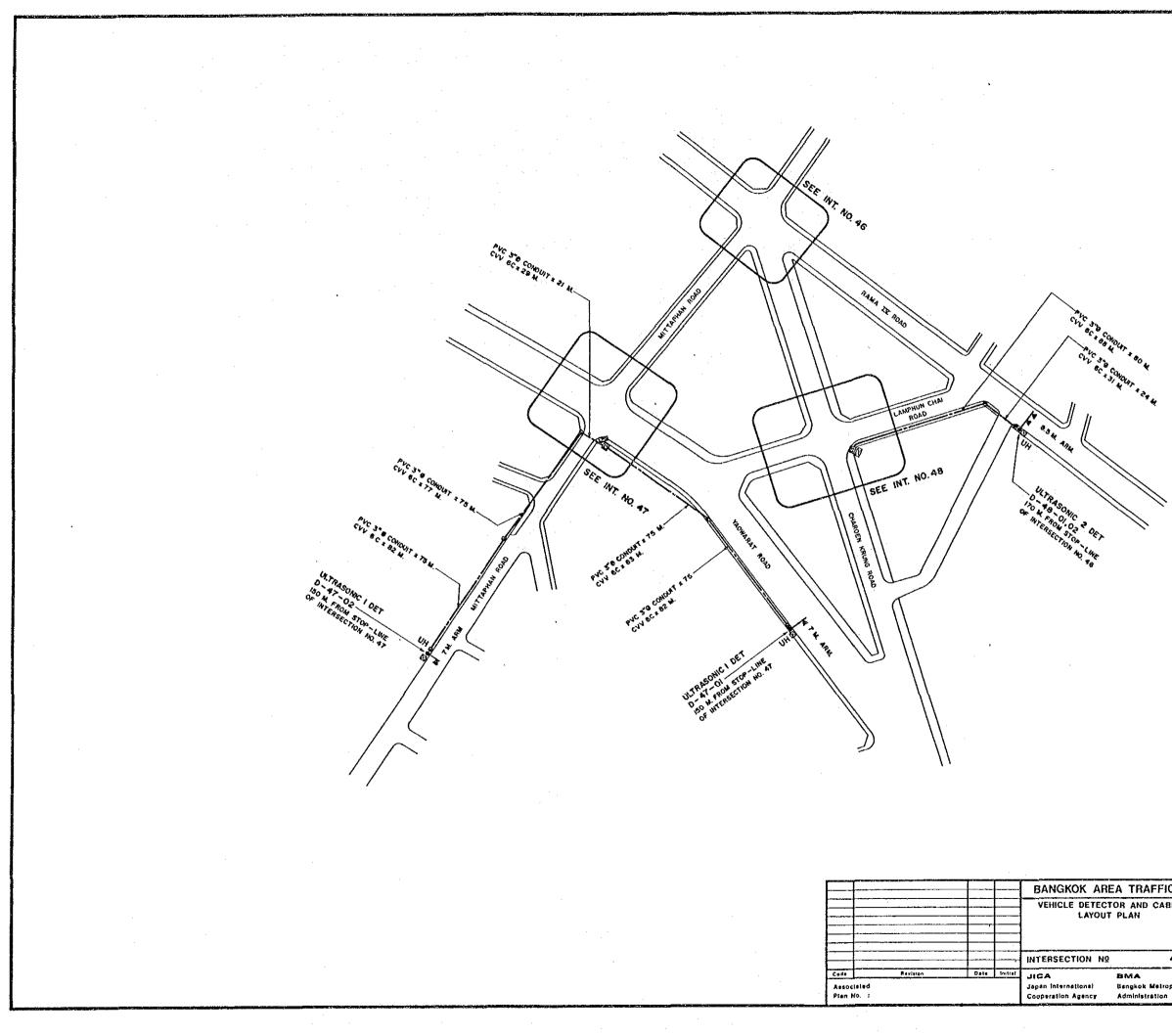
EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
FOR AND CABLE	Submitted By :	Approved By :
PLAN	Juce Roders	Repnyawat Tiplus BMA Bludy Team Leader
	Designed By :	Checked By :
43	Yasua Nabashilaé JiCA Bludy Nember	TED., BWA
вма	Scale 1 / 1,000	Drawing Nº 4043
Bangkok Metropolitan Administration	Date SEPTEMBER' 10	Total 25/86



Detector Equipments List	
Drawing NO. 4044	
rrsu Name of Equipment	Öly.
1 Detector Cabinet (with TTR Unh)	
2 Delector Cabinet (without TTR Unit)	3
3 Pre-Processor of Detector Pulse	
4 Loop Goil Detector Unit	
5 Loop Coll Cable	
6 Loop Coll Feeder Cable	
7 Ultrasonic Detector Unit	3
8 Ultrasonic Detector Head	3
9 Ultrasonic Delector Feeder Cable	24
10 Supply Power Switch Box with Power Be	
11 TOT Line Box	-
12 Type A Pole	-
13 Type B Pole	-
14 Type C Pole with 7.0m Arm	3
15 Type C Pole with 8.5m Arm	-
16 Assembly for installation on Pedestrian (	herpass -
17 Conduit PVC S" or 70mm	508
18 Conduit Steel 3* or 70mm	-
19 Condult Steel 39mm	
20 Conduit Steel 28mm	
21 Install Condult under Asphalt Pavement	45
22 Install Conduit under Concrete Pavemer	I or Sidewalk 463
23 Install Conduit on Pedestrian Overpass	-
24 Install Conduit on Riser Support pole	-
25 Handhole Type C	8
28 Aerial Cable Supporter	. ~
27 Detector Cable 6c	660
28 Detector Cable 8c	-
29 Detector Gable 12c	+
30 Detector Cable SS 6c	-
31 Detector Cable SS 8c	
32 Detector Cable SS 12c	
33 Power Cable	
34 TOT line (CPV, 0.65mm, 1P)	- 1
35 Grounding Rod	3
36 Grounding Cable	15

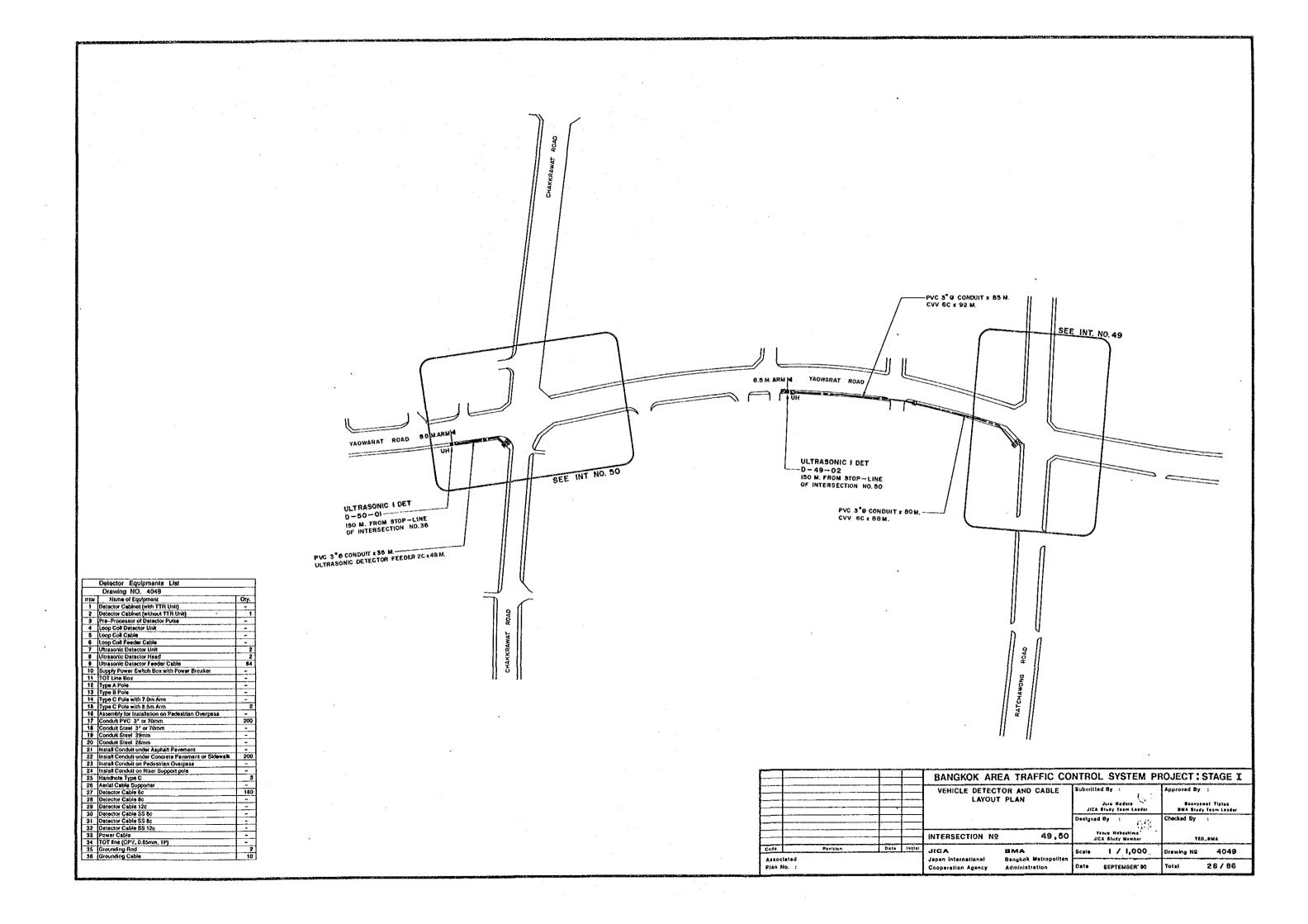
EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
TOR AND CABLE T PLAN	Submilled By : Jure Kodern JICA Bludy Team Leedor	Approved By : Boonyawai Tiptua BMA Study Tesin Leadar
2 44	Designed Sy :	Checked By :
BMA Bangkok Metropolitan Administration	Scata I / 1,000	Drawing HQ 4044
	Date BEPTEMBER 90	Totel 26/86

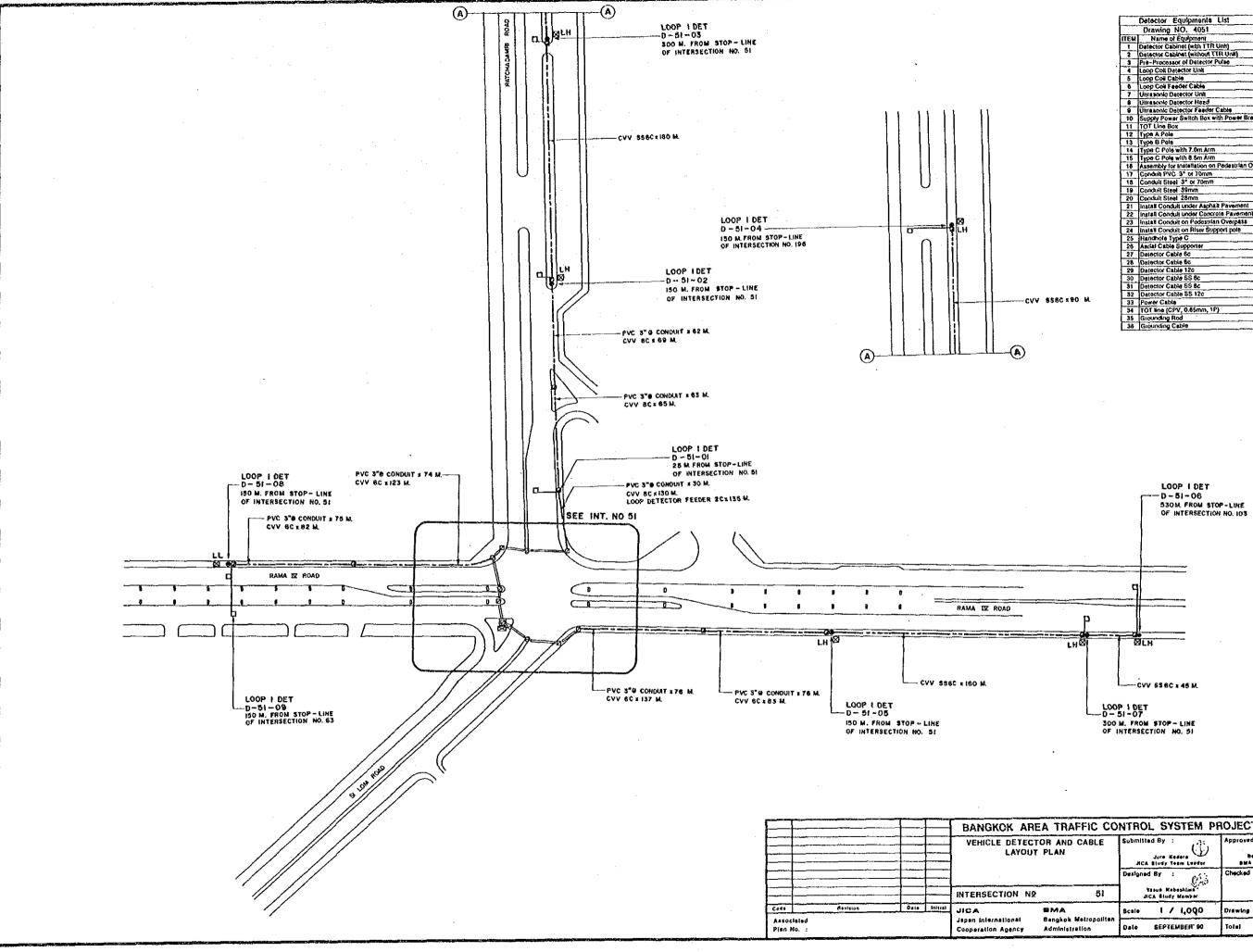
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	Detector Equipments List	
	Drawing NO. 4047	
M3Y		Oxy.
1	Detector Cabinel (with TTR Unit)	-
2	Detector Cabinet (without TTR Unit)	3
3	Pre-Processor of Detector Pulse	L-
4	Loop Coll Detector Unit	L-
5	Loop Coll Cable	-
6	Loop Coll Feeder Gable	-
7	Utrasonic Datactor Unit	. 4
8	Uluasonic Datector Haad	4
9	Ultrasonic Detector Feeder Cable	32
10	Supply Power Switch Box with Power Breaker	
11	TOT Line Box	L.+
12	Type A Pole	-
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	Z
15	Type C Pole with 8.5m Arm	1
16	Assembly for Installation on Pedesinian Overpase	<b>-</b>
17	Conduit PVC 3" or 70mm	425
18	Condult Steel 3" or 70mm	1 -
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	1
21	Install Conduit under Asphalt Pavement	10
22	Install Condult under Concrete Pavement or Sidewalk	407
23	Install Conduit on Pedestrian Overpasa	- 1
24	Install Condult on Riser Support pole	
25	Handhola Type C	7
28	Aerial Cable Supporter	T - T
27	Detector Cable 6c	472
28	Detector Cable Bc	<u>t – – – – – – – – – – – – – – – – – – –</u>
29	Detector Cable 12c	1 -
	Detector Cable SS 5c	t -
31	Detector Cable SS Bc	t
32	Detector Cable SS 12c	t
33	Power Cable	t -
34	TOT line (CPV, 0.65mm, 1P)	1
35	Grounding Rod	+

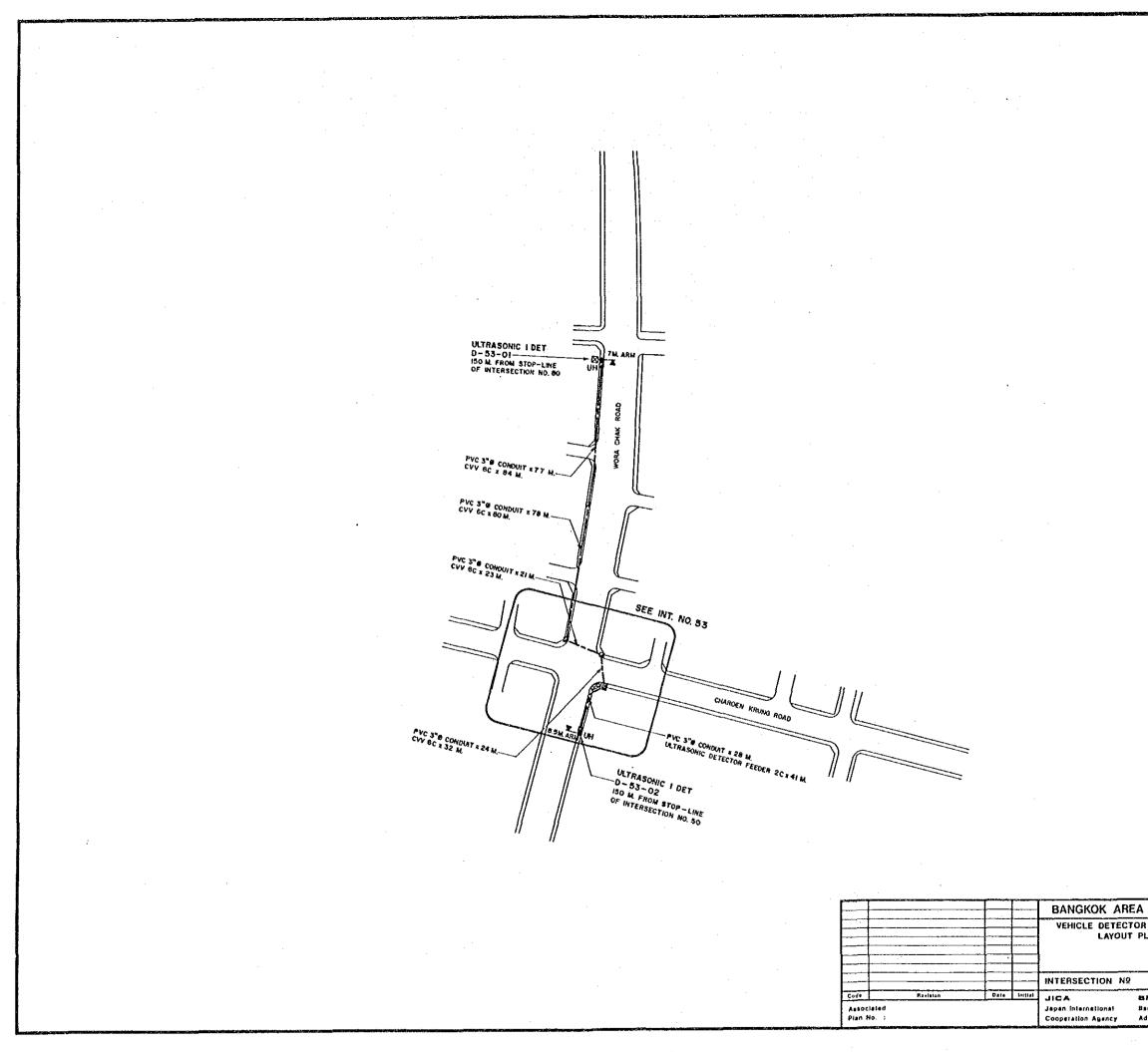
REA TRAFFIC CO	NTROL SYSTEM P	ROJECT : STAGE I	
TOR AND CABLE	Submitted By : Jure Kedere JICA Study Team Leader	Approved By : Econyanet Tiplus BMA Study Taom Leader	
♀	Designed By : Vasue Nabeshiwa JICA Study Member	Checked By : TED.,SMA	
BMA Bangkok Metropolitan	Scale I / 1,000	Orawing Nº 4047	





	Detector Equipments List	
	Drawing NO. 4051	
пем	Name of Equipment	Ohy.
t	Detector Cabinet (with TTR Unit)	-
2	Ostector Cabinet (without TTR Unk)	7
3	Pre-Processor of Delector Pulse	· -
4	Loop Coll Datactor Unit	
5	Loop Coil Cable	72
8	Loop Coll Feeder Cable	230
7	Ultrasonic Detector Unit	-
8	Ultrasonic Detector Hazd	-
9	Ultrasonic Detector Feeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	T -
12	Type A Pole	<u> </u>
13	Type B Pole	8
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	
18	Assembly for Installation on Pedestrian Overpasa	-
17	Condult PVC 3" of T0mm	456
15	Conduit Steel 3" or 70mm	Γ
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Condult under Asphalt Pavement	<u> </u>
22	Install Condult under Concrote Pavement or Sidowalk	458
23	Install Conduit on Pedestrian Overpass	<u> </u>
24	Install Conduit on Riser Support pole	T
25	Handhole Type C	1 11
26	Ascial Cable Supporter	1 14
27	Dejector Cable 60	425
28	Datector Cable Bc	264
29	Detector Cable 12c	-
30	Detector Cable SS 6c	<u> </u>
31	Detector Cable SS Bc	455
32	Detector Cable SS 12c	1 -
33	Power Cabla	-
34	TOT line (CPV, 0.65mm, 1P)	1
35	Grounding Rod	7
38	Grounding Cable	35

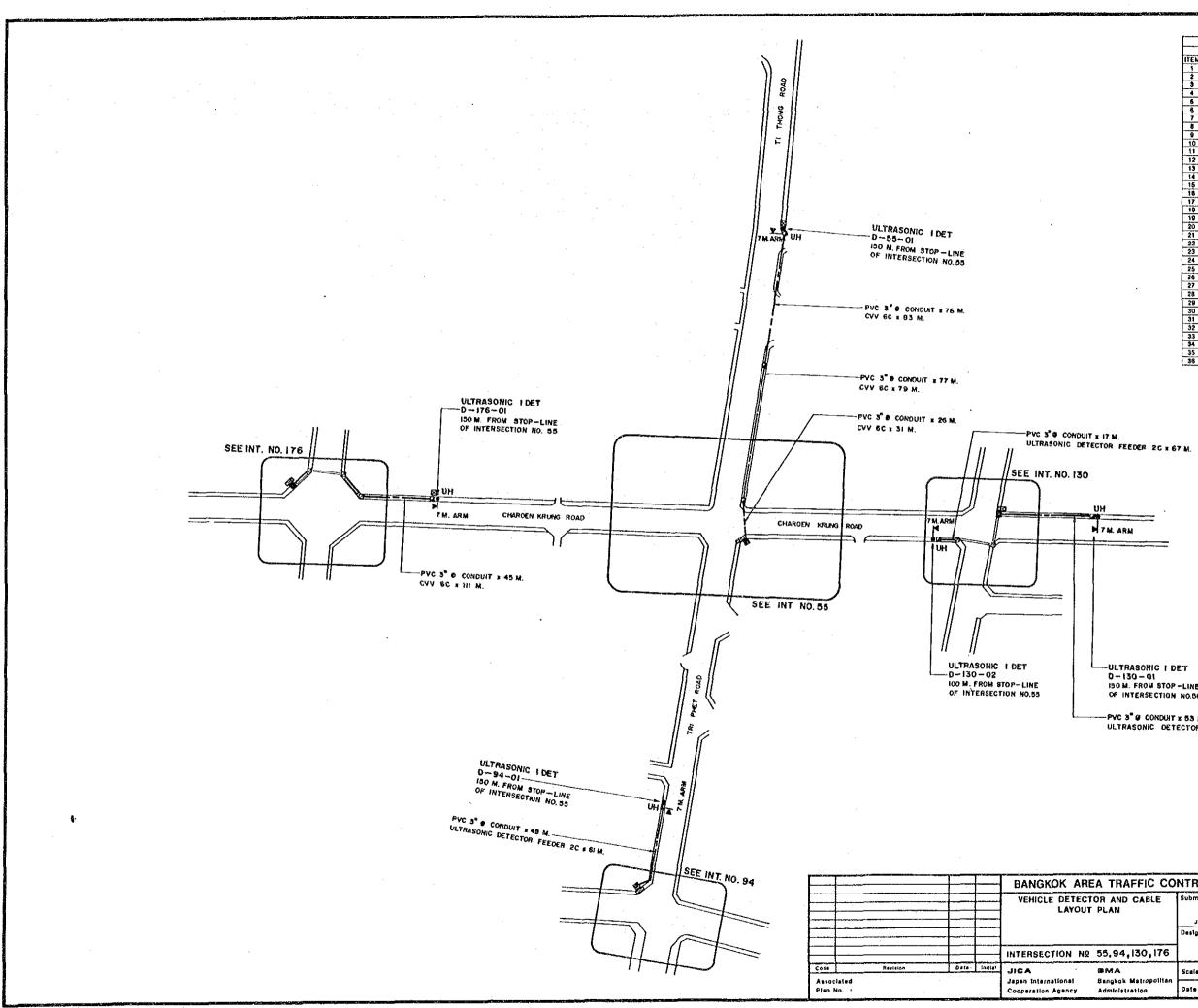
A TRAFFIC CONTROL SYSTEM PROJECT: STAGE I			
OR AND CABLE PLAN	Submitted By : Jure Kedera JICA Sludy Team Leader	Approved By : Boonyowal Tiplus BMA Study Teem Leader	
	Designed By :	Checked By :	
51	Yasud Kabeshiain" JICA Sludy Member	TED., BMA	
BMA Bangkok Metropolitan Administration	Scale 1 / 1,000	Drawing Nº 4051	
	Date SEPTEMBER' 90	Total 29/86	



	Detector Equipments List	
	Drawing NO, 4053	
ITEM	Name of Equipment	Ūη.
1	Detector Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTR Unit)	1
3	Pre-Processor of Detector Pulse	
4	Loop Coll Detector Unit	
6	Loop Coll Cable	<u>-</u>
6	Loop Coll Feeder Cable	
7	Ultrasonic Detector Unit	5
ð	Ultrasonic Detector Head	2
9	Ultrasonic Detector Feeder Cable	57
10	Supply Power Switch Box with Power Breaker	Ι-
11	TOT Line Box	-
12	Type A Pole	
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	1
15	Type C Pole with 8.5m Arm	1
16	Assembly for Installation on Pedestrian Overpase	Τ-
17	Conduit PVC 3" or 70mm	228
18	Condult Steel 3" or 70mm	1 -
.19	Condult Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	31
22	Install Conduit under Concrete Pavement or Sk. swalk	197
23	Install Conduit on Pedestrian Overpass	-
24	Install Conduit on Riser Support pole	-
25	Handhole Type C	5
28	Aerial Cable Supporter	-
27	Detector Cable 6c	219
28	Detector Cable 8c	
29	Detector Cable 12c	-
30	Detector Cable SS 5c	•
31	Detector Cable SS 8c	<b>—</b>
32	Detector Cable SS 12c	-
33	Power Cable	-
34	TOT Mos (CPV, 0.65mm, 1P)	-
35	Grounding Rod	2
36	Grounding Cable	10

A TRAFFIC CO	NTROL SYSTEM PI	ROJECT : STAGE I
OR AND CABLE	Submitted By : Jure Kodern JICA Study Team Leader	Approved By : Boonyaset Tiptus BMA Study Team Leader
53	Designed By :	Checked By : TED.,8MA
8MA Bangkok Matropolitan Administration	Scale 1 / 1,000	Drawing Nº 4053
	Date SEPTEMBER' 00	Tolal 30/86

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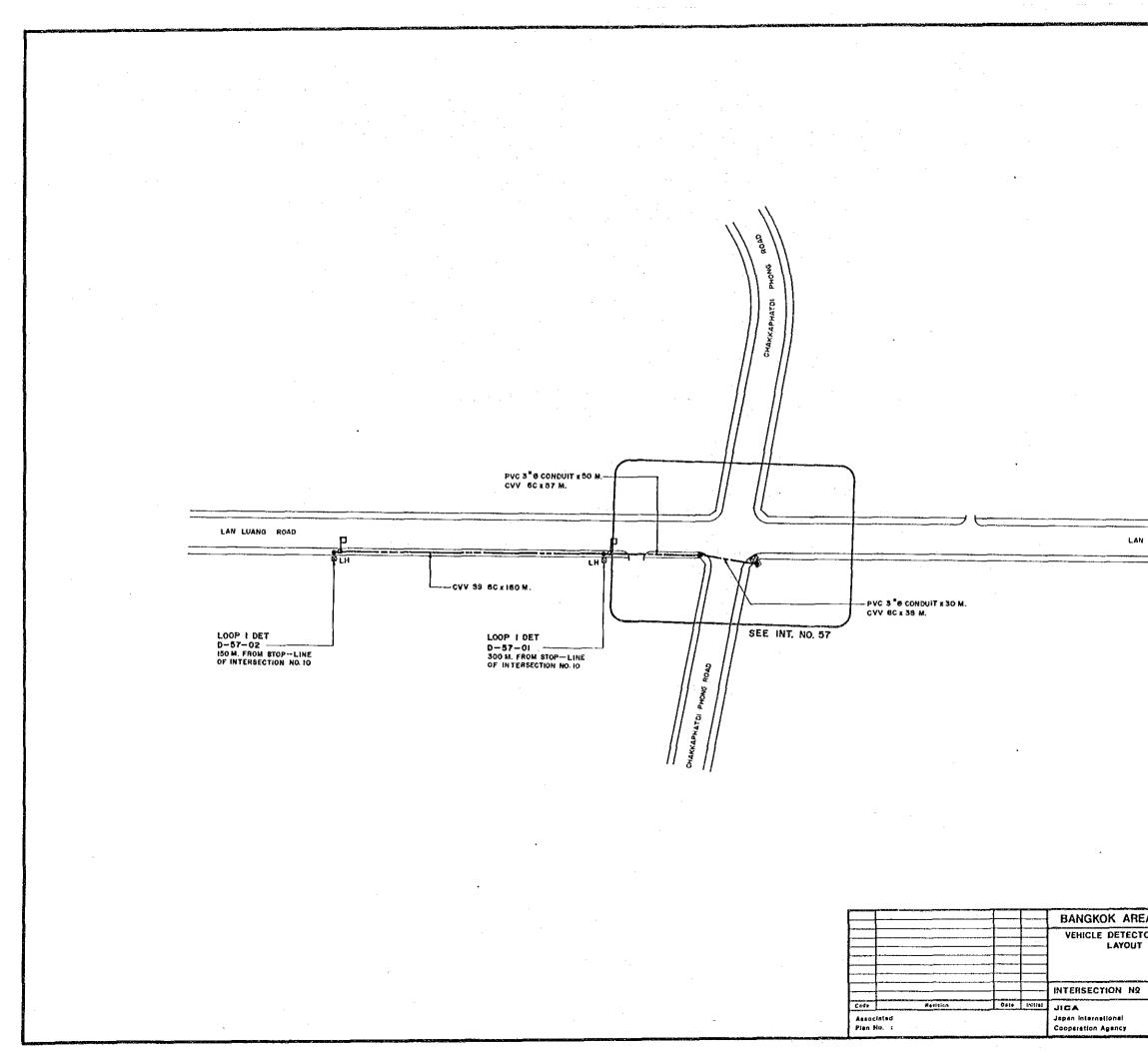


	Detector Equipmente List	
	Drawing NO. 4055	
ITEM	Name of Equipment	Oty.
1	Delector Cabinet (with TTR Unit)	-
2	Detactor Cabinet (without TTA Unit)	2
3	Pre-Processor of Detector Pulse	-
4	Loop Coll Delector Unit	
6	Loop Coll Cable	- 1
8	Loop Coll Feeder Cable	
7	Ultrasonic Detector Unit	5
8	Ultrasonic Detector Head	5
9	Ultrasonic Detector Feeder Cable	234
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	-
13	Type B Pole	
14	Type C Pole with 7.0m Arm	8
15	Type C Pole with 8.5m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
	Conduit PVC 3" or 70mm	342
18	Condult Steel 3" or 70mm	- 1
	Conduit Steel 39mm	
20	Condult Staal 28mm	-
21	Install Condult under Asphalt Pavement	42
	Install Condult under Concrete Payement or Skiewalk	300
	Install Conduit on Pedustrian Overpass	-
	Install Conduit on Riser Support pole	
	Handhole Type C	7
	Aerial Cable Supporter	-
	Detector Cable 6c	184
	Datector Cable Bc	-
	Detector Cable 12c	-
	Datactor Cabla SS 6c	-
	Detector Cable SS 8c	
	Detector Cable SS 12c	
	Power Cable	- 1
	TOT line (CPV, 0.65mm, 1P)	
		5
		25
35	TOT line (CPV, 0.65mm, 1P) Grounding Rod Grounding Cable	

118 M 7 M. ARM ---ULTRASONIC | DET D--130--01 ISOM. FROM STOP--LINE OF INTERSECTION NO.86

- PVC 3" Ø CONDULT x 53 M. Ultrasonic detector feeder 2C x 68 M.

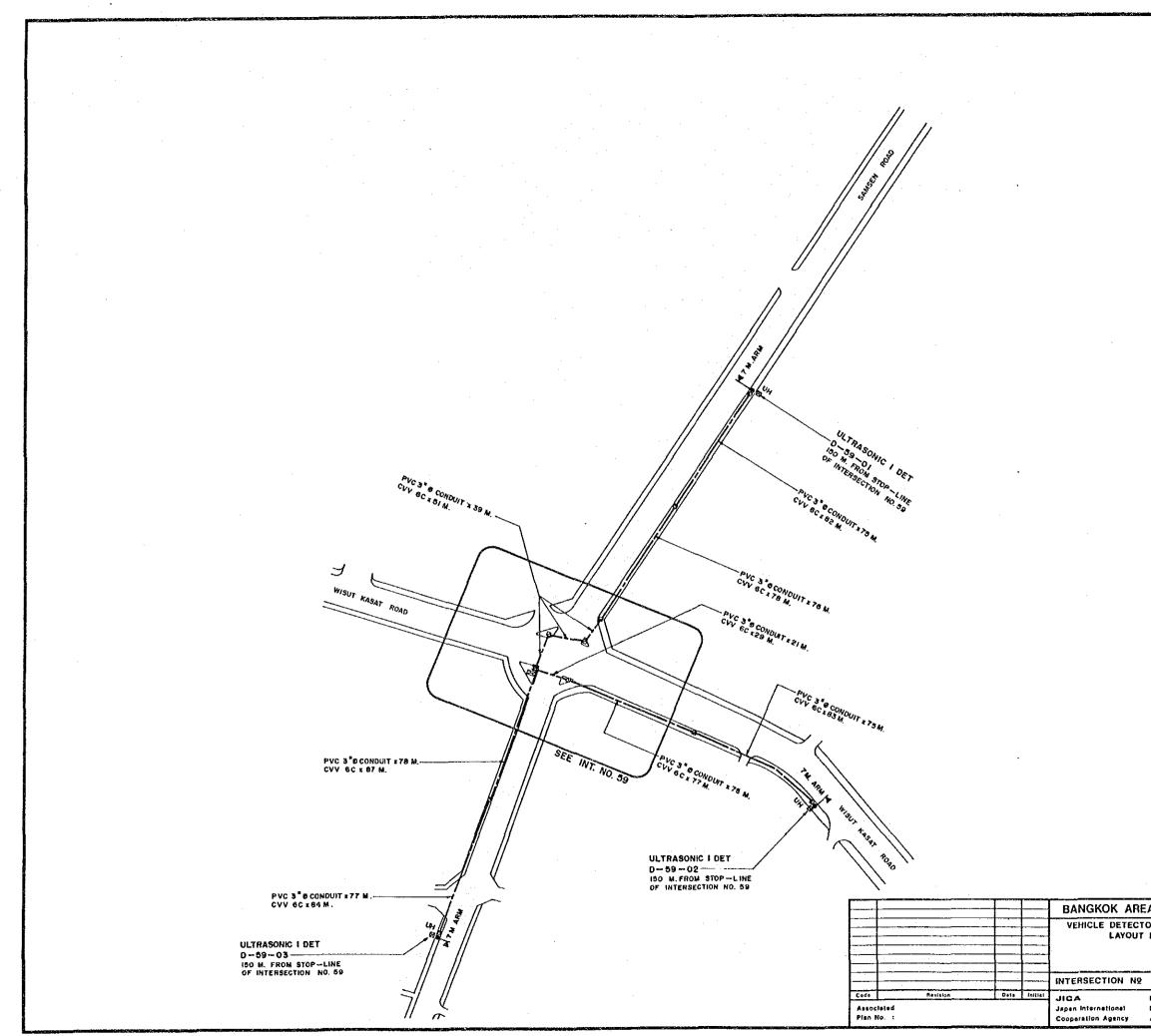
REA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
TOR AND CABLE T PLAN	Submitted By ; Jure Kadste JICA Bludy Team Lander	Approvad By : Beanyswet Tratus BMA Study feam Leader	
	Designed By	Checked By :	
2 55,94,130,176	JICA Study Member	TED., BMA	
BMA Sangkok Matropolitan Administration	Scale 1 / 1,000	Drawing Nº 4055	
	Data SEPTEMBER' 90	Total 31/86	



	Detector Equipments List	
	Drawing NO, 4057	
ines.	Name of Equipment	Qty.
1	Datactor Cabinat (with TTR Unit)	
2	Datactor Cabinet (without TTA Unit)	2
3	Pre-Processor of Detector Pulse	
4	Loop Coll Detector Unit	2
5	Loop Coil Cable	18
8	Loop Coll Feeder Cable	10
7	Utrasonic Detector Unit	•
	Ultrasonic Detector Head	
9	Ultrasonic Delector Feeder Cable	- 1
10	Supply Power Switch Box with Power Breaker	- 1
11	TOT Line Box	- 1
12	Type A Pole	-
13	Type B Pole	2
14	Type C Pole with 7.0m Arm	- 1
15	Type C Pole with 8.5m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
17	Conduit PVC 3* or 70mm	60
18	Conduit Steel 3" or 70mm	- 1
19	Condult Steel 39mm	-
20	Condult Steel 28mm	-
21	Install Condult under Asphalt Pavement	- 1
22	Install Condult under Concrete Pavement or Sidewalk	80
23	Install Condult on Pedestrian Overpasa	+
24	Install Condult on Riser Support pole	- 1
25	Hanshole Type C	3
26	Aerial Cable Supporter	6
27	Detector Cable Sc	95
28	Detector Cable 8c	- 1
29	Detector Cable 12c	- 1
30	Detector Cable SS &c	160
31	Detector Cable SS 8c	- 1
32	Detector Cable SS 12c	-
33	Power Cable	- 1
34	TOT line (CPV, 0.65mm, 1P)	- 1
35	Grounding Rod	2
36	Grounding Cable	10

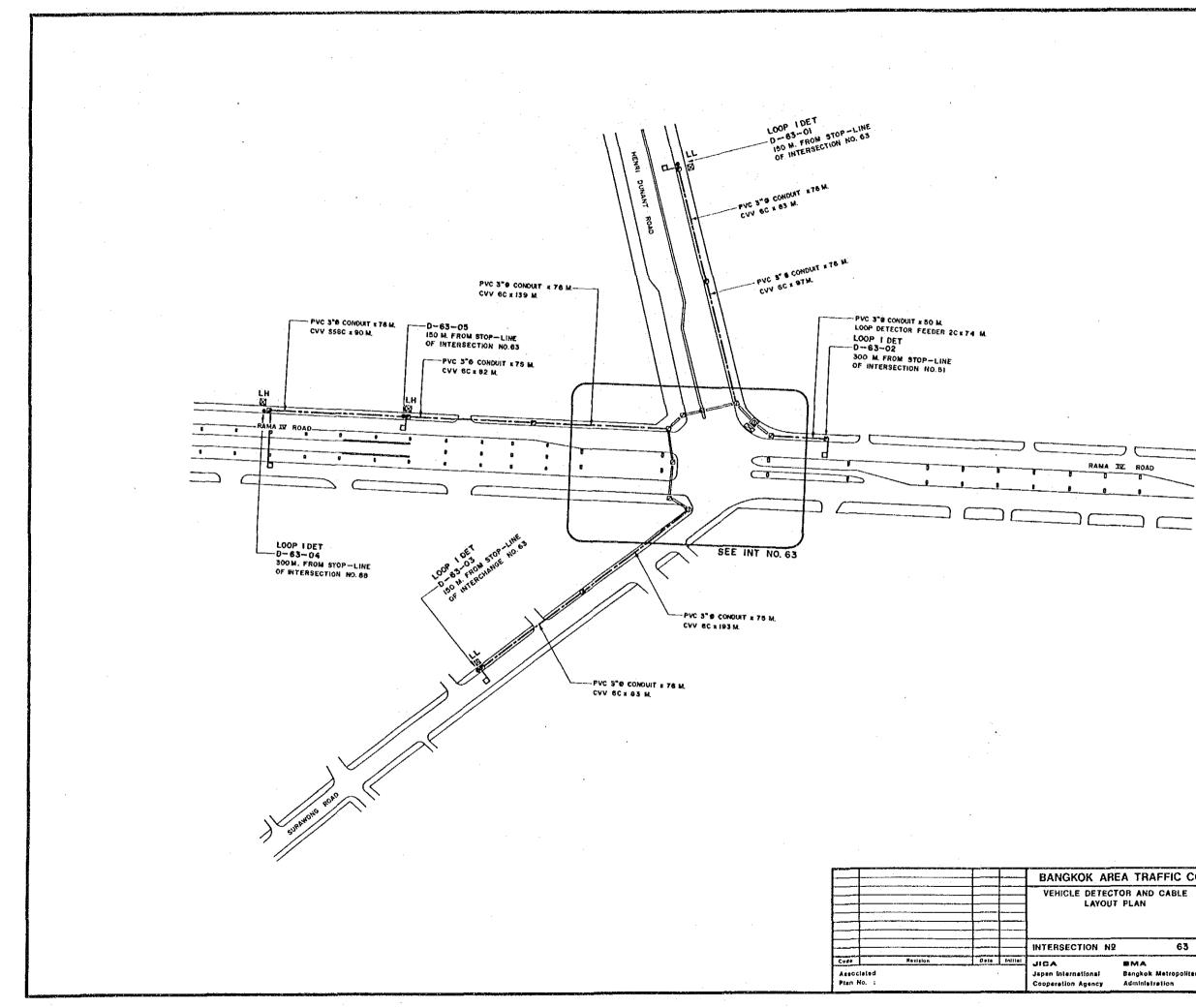
LAN LUANG ROAD

EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I			
TOR AND CABLE T PLAN	Submitted By : Jure Kedera JICA Study Team Leader	Approved By : Beenyawet Tiptus BWA Study Team Leader			
<u>۶</u> 57	Designed By ((15)) Tesus Nebethine JICA Study Member	Checked By : TED., SMA			
BMA	Scale   / 1,000	Drewing Nº 4057			
Bangkok Metropolitan Administration	Dale SEPTEMBER' SO	Total 32/86			



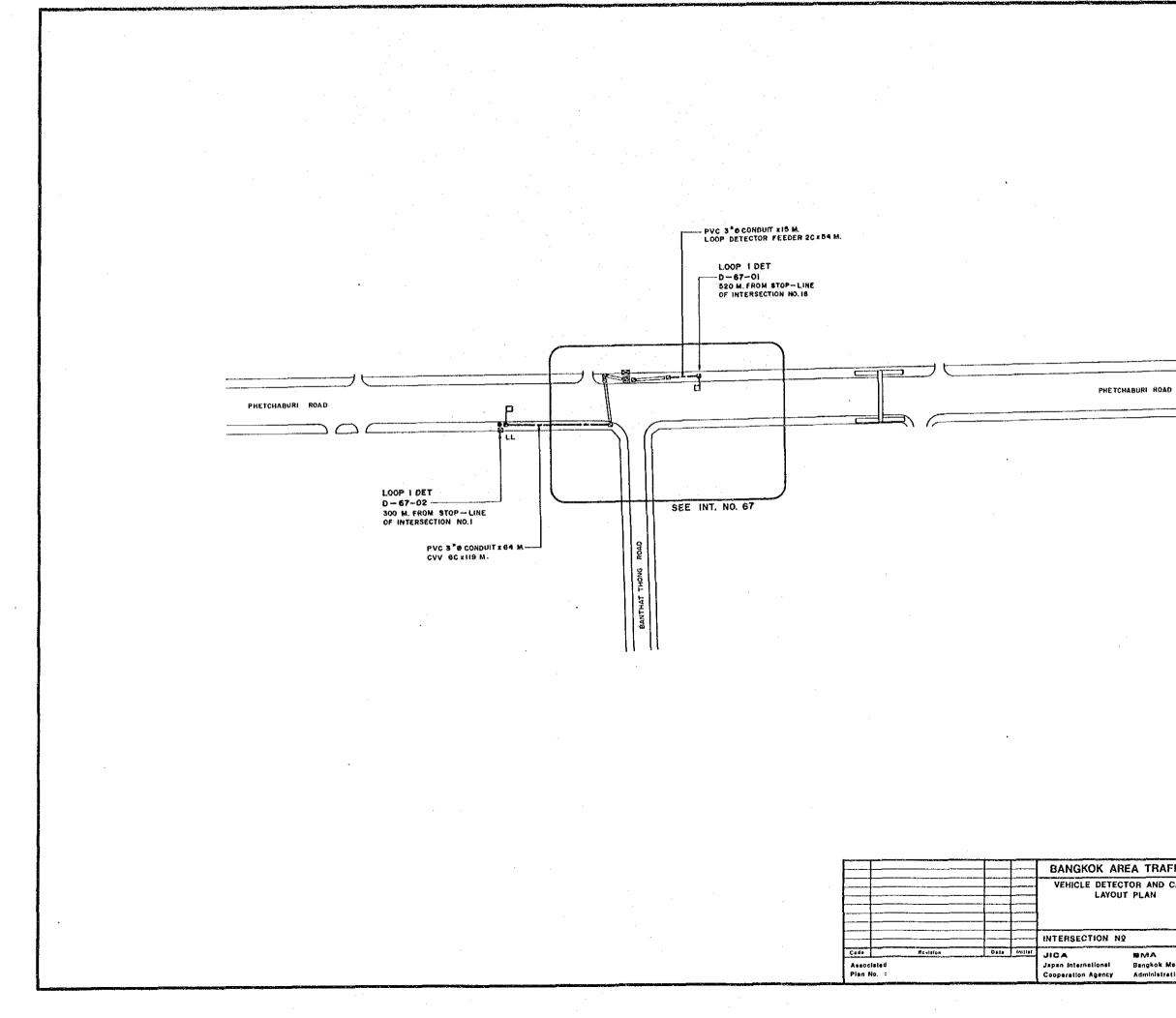
(	Detector Equipments List				
	Drawing NO. 4059				
ITEM		Oty.			
1	Detector Cabinet (with TTR Unit)	1			
2	Detector Cabinet (without TTR Unit)	- 3			
3	Pre-Processor of Detector Pulse				
4	Loop Coll Detector Unit				
5	Loop Coll Cable				
6	Loop Coll Feeder Cable	-			
7	Ultrasonic Detector Unit	3			
8	Ultrasonic Detector Head	3			
9	Ultrasonic Detector Feeder Cable	24			
10	Supply Power Switch Box with Power Breaker	- 1			
11	TOT Line Box	-			
12	Type A Pole	-			
13	Type 8 Pola	- 1			
14	Type C Pole with 7.0m Arm	3			
15	Type C Pole with 8.5m Arm	- 1			
16	Assembly for Installation on Padestrian Overpass	-			
17	Conduit PVC 3" or 70mm	611			
18	Condult Steal \$* or 70mm				
	Condult Stael 39mm	-			
20	Conduit Steel 28mm	-			
21	Instell Conduit under Asphalt Pavement	-			
22	Install Conduit under Concrete Pavenient or Sidewalk	011			
23	Instal Conduit on Pedestrian Overpass	-			
24	Install Condult on Riser Support pole				
25	Handhole Type C	7			
	Aerial Cable Supporter	-			
	Detector Cable 6c	571			
	Detector Cable Sc	-			
	Detector Cable 12c	-			
	Detector Cable SS 6c				
	Detector Cable SS 8c	-			
	Detector Cable SS 12c	-			
	Power Cable	-			
34	TOT line (CPV, 0.65mm, 1P)	-			
	Grounding Rod	3			
38	Grounding Cable	15			

A TRAFFIC CO	NTROL SYSTEM P	ROJECT : STAGE I	
OR AND CABLE PLAN	Submitted By ; Jure Kedere JICA Study Team Leader	Approved By : Boongawel Tiplus BMA Sludy Team Leader	
	Designed By	Checked By :	
59	JiCA Study Member	TED., BWA	
BMA	Scale   / 1,000	Drawing NE 4059	
Bangkok Metropoliten Administration	Data SEPTEMBER' 10	Tolel 33/86	



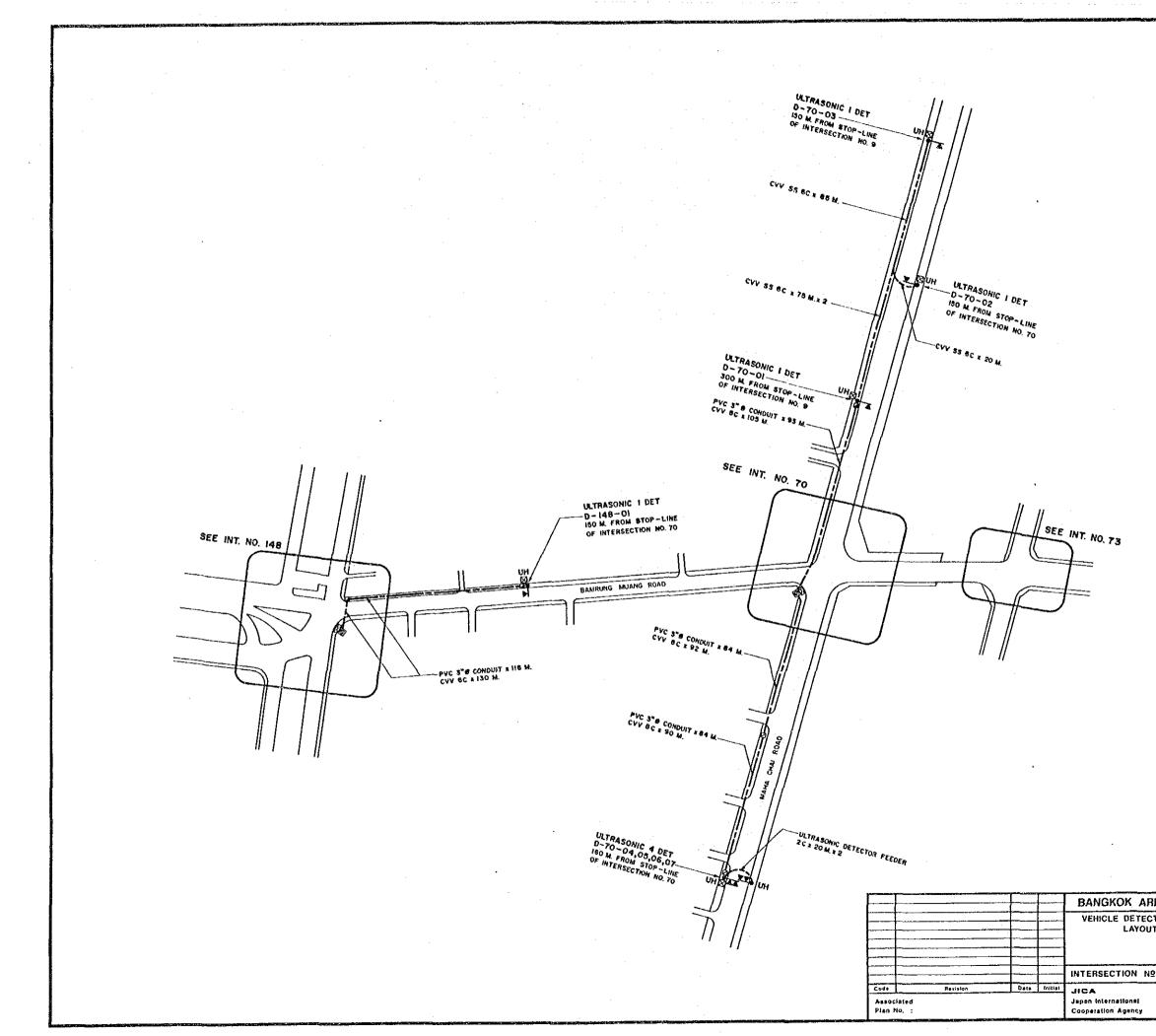
Detector Equipments List			
Drawing NO, 4063			
ITEM	Name of Equipment	Qty.	
1	Detector Cabinet (with TTR Unit)	- 1	
2	Detector Cabinet (without TTR Unit)	-	
3	Pre-Processor of Detector Pulse	-	
4	Loop Coll Detector Unit	6	
5	Loop Coll Cable	40	
6	Loop Coll Feeder Cable	89	
.7	Ultrasonic Detector Unit	-	
6	Ultrasonic Detector Head	-	
	Ultrasonic Detector Feeder Cable		
10	Supply Power Switch Box with Power Breaker	-	
11	TOT Line Box	-	
12	Type A Pole	2	
13	Type B Pole	2	
14	Type C Pole with 7.0m Arm	- 1	
16	Type C Pole with 8.5m Arm	-	
16	Assembly for Installation on Pedestrian Overpasa		
17	Condult PVC 3" or 70mm	528	
.18	Condult Steel 3" or 70mm	-	
19	Conduli Steel 39mm	- 1	
20	Condult Steal 28mm	-	
21	Install Condult under Asphalt Pavement	-	
22	Install Condult under Concrete Pavement or Sidewalk	528	
23	Install Condult on Pedestrian Overpase		
	Install Condult on Riser Support pola	-	
25	Handhole Type C	7	
28	Aerial Cable Supporter	3	
27	Detector Cable 6c	677.	
28	Detector Cable \$c	•	
29	Detector Cable 12c	-	
30	Detector Cable SS 6c	80	
31	Detector Cable SS 8c	- · ·	
32	Detector Cable SS 12c	-	
33	Power Cable		
34	TOT Hoe (CPV, 0.65mm, 1P)	1	
35	Grounding Rod	4	
35	Grounding Cable	20	

				OJECT:	<u> </u>
CTOR AND CABLE UT PLAN		ibmitted By :		Approved By	:
		Juro Kadera Saonyowal JICA Study Team Leader BMA Study Ti		wal Tiptus y Tesm Lesder	
		eelgned By ;	62	Checked By	:
		Yésun Neba JICA Biudy k		761	
BMA Bangkok Metropolitan Administration		ialia IZ	1.000	Drawing NQ	4083
		to SEPTEM	IBER' 90	Total	34/86



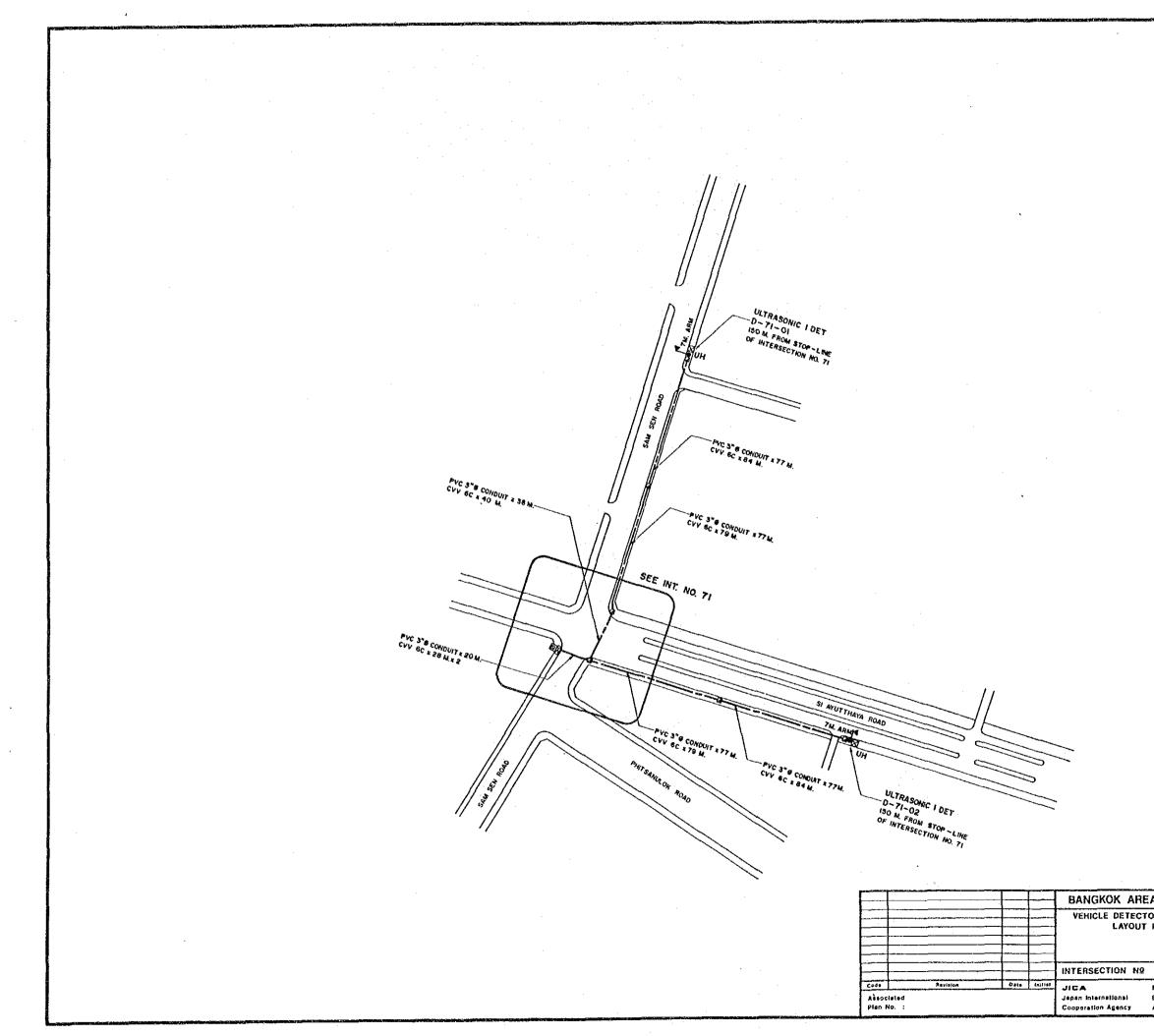
	Detector Equipments List			
	Drawing NO. 4067			
ITEM	Name of Equipment	QQ.		
1	Detector Cabinet (with TTA Unit)			
2	Detector Cabinet (without TTR Unit)			
3	Pre-Processor of Detector Pulse	- 1		
4	Loop Coil Defector Unit	5		
δ	Loop Coll Cable	40		
6	Loop Coll Feeder Cable	99		
7	Ultrasonic Detector Unit	ا		
8	Ultrasonic Delector Head			
9	Ultrasonic Detector Feeder Cebie			
10	Supply Power Switch Box with Power Breaker	1		
11	TOT Line Box	1		
	Type A Pole	2		
13	Type B Pole	2		
14	Type C Pole with 7.0m Arm			
15	Type C Pola with 8.5m Arm	Ŀ		
	Assembly for Installation on Pedestrian Overpasa	<u> </u>		
17	Conduit PVC 3" or 70mm	628		
18	Conduit Steel 3" or 70mm			
19	Conduit Steel 39mm	- 1		
20	Conduit Steel 28mm			
21	Install Conduit under Asphalt Pavemont			
22	Install Conduit under Concrete Pavement or Sidewalk	528		
23	Install Conduit on Pedestrian Overpasa	-		
-24	Install Condult on Riser Support pola			
25	Handhole Type C	- 7		
28	Aerial Cable Supporter	3		
27	Detector Cebia 6c	677		
28	Detector Cable Bc			
29	Detector Cable 12c			
30	Detector Cable SS 8c	80		
31	Detector Cable SS Bc	1-1		
32	Delector Cable SS 120	1-1		
33	Power Cable	11		
34	TOT line (CPV, 0.85mm, 1P)	1		
35	Grounding Rod	1 4		
36	Grounding Cable	20		
		لتتصبي		

REA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I					
CTOR AND CABLE UT PLAN	Submitted By : Jura Kedera JICA Study Years Loader	Approved By : Boonyemal Yiptus BMA Study Team Leader			
12 67	Designed By : Ysovo Nebezhime JICA Study Kembor	Checked By : TED.BMA			
<b>NMA</b>	Scale   / 1,000	Drawing NB 4067			
Bangkok Metropolitan Administration	Data SEPTEMBER' 90	Total 35/86			



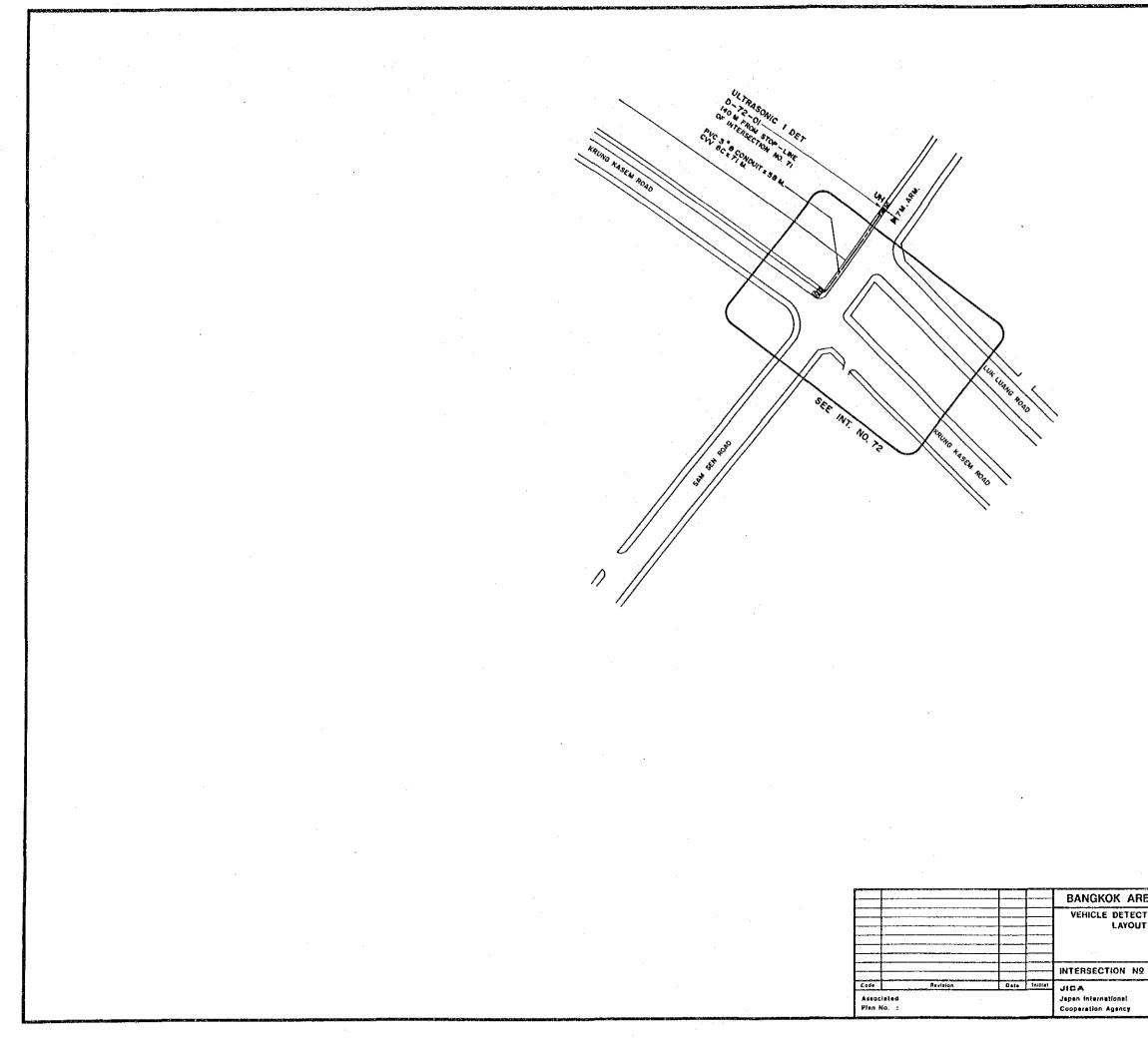
	Detector Equipments List	
	Drawing NO. 4070	1-2
(TEM	Name of Equipment	Oty.
1	Detector Cabinet (with TTR Unit)	<u>+-</u>
2	Detector Cabinet (without TTR Unit)	8
3	Pre-Processor of Detector Pulse	<u>   </u>
4	Loop Coli Detector Unit	<u> </u>
6	Loop Coll Cable	•
6	Loop Coll Feeder Cable	1
1	Ditrasonic Detector Unit	8
8	Uttrasonic Detector Head	1
9	Ultrasonic Detector Feeder Cable	104
10	Supply Power Switch Box with Power Breaker	- 1
11	TOT Une Box	-
12	Type A Pole	1 -
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	6
15	Type C Pole with 8.6m Arm	-
16	Assembly for Installation on Pedestrian Overpass	<u> </u>
17	Condult PVC 3* or 70mm	373
18	Conduit Steel 3" or 70mm	-
19	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	42
22	Install Condult under Concrete Pavement or Sidewalk	\$31
23	Install Condult on Pedesirian Overpass	-
24	Instal Condult on Riser Support pole	-
25	Handhole Type C	5
26	Aerial Cable Supporter	7
27	Detector Cable 6c	130
28	Datector Cable 8c	287
29	Detector Cable 12c	-
30	Datactor Cable SS 6c	255
31	Detector Cablo SS 8c	- 1
32	Detector Cable SS 12c	-
33	Power Cable	1 -
34	TOT line (CPV, 0.65mm, 1P)	1 -
35	Grounding Rod	6
36	Grounding Cable	30

EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
TOR AND CABLE F PLAN	Submitted By : Juro Kaders JSCA Study Team Lesdor	Approved By ; Biomyswell Tiptus BMA Study Team Leader
	Designed By	Checked By :
70,148	JICA Study Member	TED., BMA
BMA	Scale   / 1,000	Drawing Ng 4070
Bengkok Metropolitan Administration	Date SEPTEMBER 90	Total 36/86



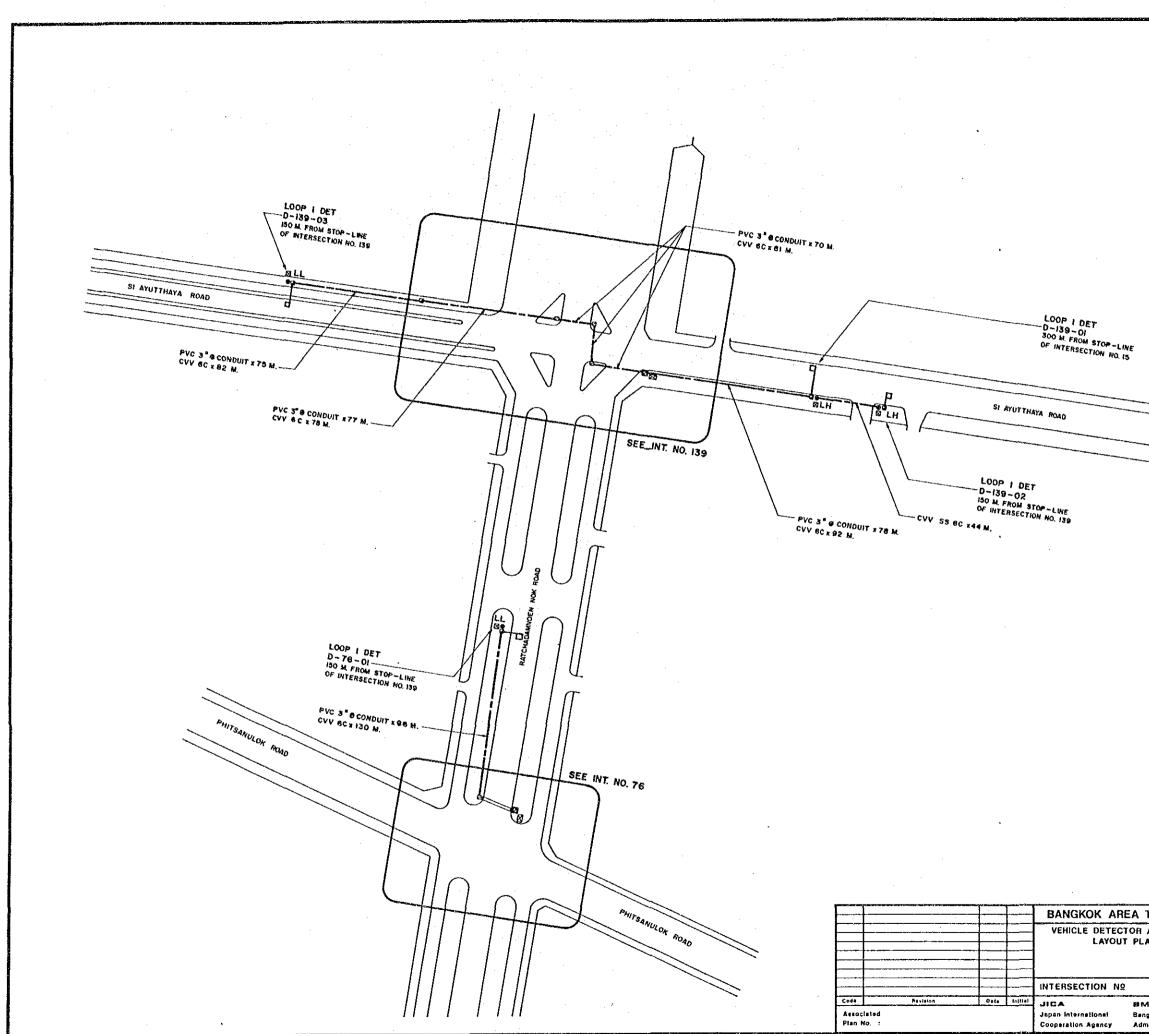
	Detector Equipments List	
	Drawing NO. 4071	
ITEM	Name of Equipment	Oty.
1	Detector Cabinet (with TTR Unit)	
5	Detector Cabinet (without TTA Unit)	\$
3 ·	Pre-Processor of Delector Pulse	<u> </u>
4	Loop Coll Detector Unit	<u> </u>
5	Loop Coll Cable	<u> </u>
6	Loop Coll Feeder Cable	·
7	Uturasonic Detector Unit	2
	Ultrasonic Detector Head	2
9	Uhrasonic Datector Feeder Cable	16
10	Supply Power Switch Box with Power Breaker	
11	TOT Une Box	
12	Type & Pole	<u> </u>
13	Type 8 Pole	<u> </u>
14	Type C Pole with 7.0m Arm	2
15	Type C Pole with 8.5m Arm	L
16	Assembly for Installation on Pedestrian Overplas	
17	Conduit PVC 3" or 70mm	386
18	Condult Steet 3* or 70mm	<u> </u>
19	Condult Steel 39mm	L
20	Condult Steel 26mm	<u> </u>
21	Install Conduit under Asphält Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	356
23	Install Conduit on Pedestrian Overpass	<u> </u>
24	Install Conduit on Risar Support pole	<b>-</b>
25	Handhola Typs C	8
26	Aerial Cable Supporter	1 ·
27	Detector Cable Sc	399
28	Datector Cable Sc	
29	Detector Cable 12c	<u></u>
30	Detector Cable SS 6c	
31	Delector Cable SS 8c	
32	Detector Cable SS 12c	1 =
33	Power Cable	
34	TOT live (CPV, 0.65mm, 1P)	L -
35	Grounding Rod	2
35	Grounding Cable	10

REA TRAFFIC CO	NTROL SYSTEM P	ROJECT: STAGE I	
CTOR AND CABLE UT PLAN	Submitted By : Jure Kedera JiCa Bludy Team Lander	Approved By : Booxyawat Tiplus BMA Bludy Team Leader	
NQ 71	Designed By : (55) Yasuo Kebeshima JICA Study Member	Checked By : TED.,SHA	
BMA	Scale -1 / 1,000	Drewing Ng 4071	
Sangkok Metropolilan Administration	Date SEPTEMBER' 90	Total 37/86	



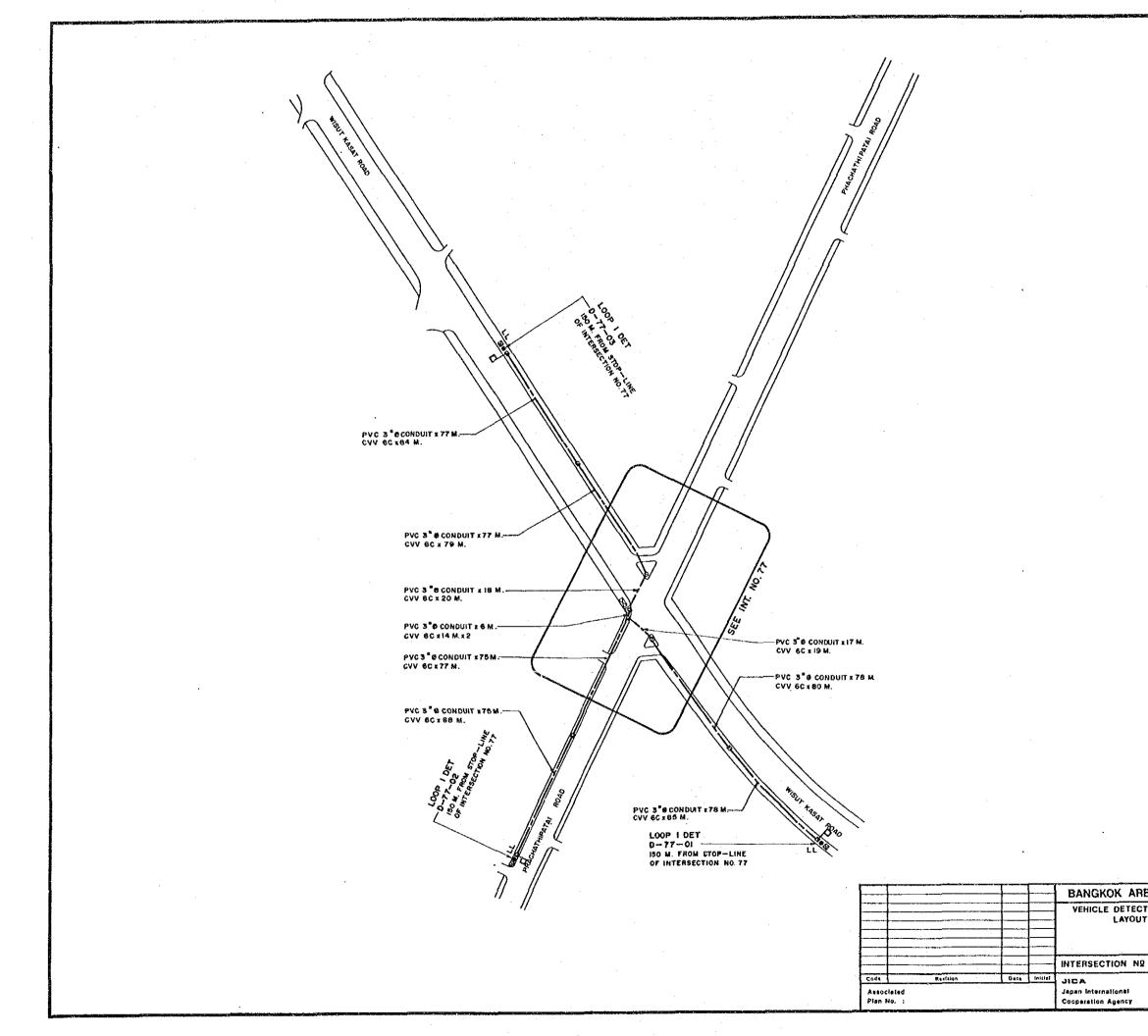
	Detector Equipments List	
	Drawing NO. 4072	
ri TAL	Name of Equipment	Qty.
	Detector Cabinat (with TTR Unit)	
	Detector Cabinet (without TTR Unk)	1
3	Pra-Processor of Datactor Pulsa	-
4	Loop Coll Detector Unit	-
5	Loop Coil Cable	-
6	Loop Coll Feeder Cable	-
7	Ultrasonic Detector Unit	ĩ
8	Ultrasonic Datactor Head	1
9	Ultresonic Detector Feeder Cable	
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	
12	Type A Pole	
	Type B Pole	-
14	Type C Pole with 7.0m Arm	1
15	Type C Pole with 8.5m Arm	· •
	Assembly for Installation on Pedestrian Overpass	+
17	Conduit PVC 3" or 70mm	58
18	Conduit Steel 3° or 70mm	-
19	Conduit Stast 39mm	-
20	Conduit Steel 28mm	-
	Install Condult under Asphalt Pavement	+
	Install Condult under Concrete Pavement or Sidewalk	58
23	Install Conduit on Pedestrian Overpass	-
24	Install Conduit on Riser Support pole	-
25	Handhole Type C	1
28	Asrial Cable Supporter	-
27	Detector Cable 6c	71
28	Detector Cable BC	1 -
29	Detsclor Cable 120	-
30	Detector Cable SS 6c	-
31	Detector Cable SS 8c	-
32	Detector Cable SS 12c	-
33	Power Cable	1 -
34	TOT fine (CPV, 0.65mm, 1P)	-
35	Grounding Rod	1
36	Grounding Cable	5

EA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I				
TOR AND CABLE	Submilled By : Juro Koders JiCA Bludy Team Luader	Approved By : Beonyowal Tiplus BMA Sludy Team Leader		
<u>۹</u>	Designed By : 	Checked By : TED_BMA		
BMA Bangkok Metropolitan Administration	Scala 1 / 1,000 Date SEPTEMBER' 90	Drawing Nº 4072 Total 38/86		



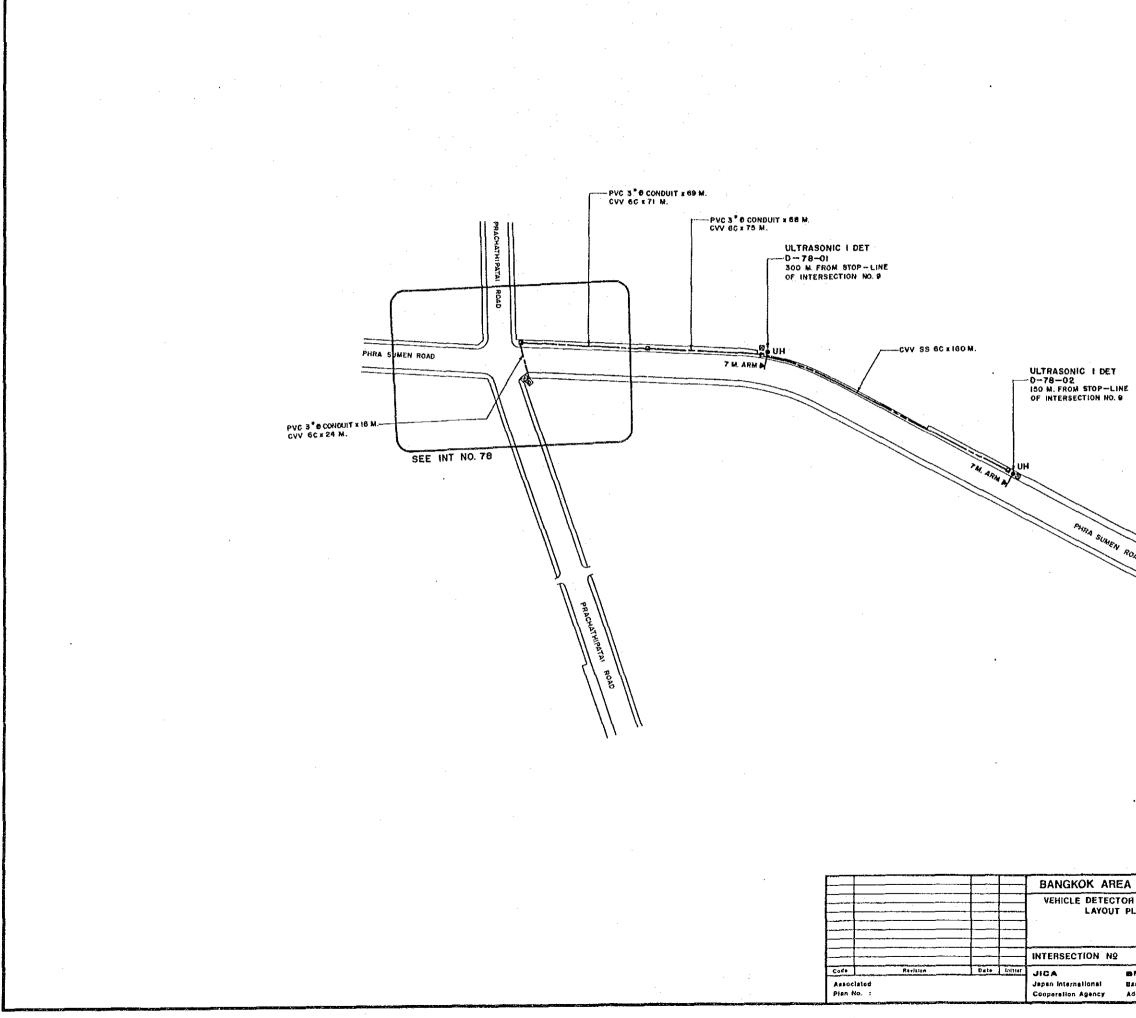
·· ····	Delector Equipments List	
	Drawing NO. 4076	
ЩЕМ		Oty.
1	Detector Cabinet (with YTR Unit)	·
\$	Delector Cabinet (without TTA Unit)	4
3	Pre-Processor of Detector Pulse	<u> </u>
4	Loop Coll Datector Unit	1
6	Loop Coll Cable	32
8	Loop Coll Feeder Cable	20
7	Ultrasonic Detector Unit	<u> </u>
1	Ultrasonic Detector Head	<u> </u>
9	Ultrasonic Detector Feeder Cable	
10	Supply Power Switch Box with Power Breaker	
11	TOT Line Box	-
12	Type A Pole	2
	Type B Pole	2
	Type C Pole with 7,0m Arm	-
	Type C Pole with 8.5m Arm	-
16	Assombly for Installation on Pedestrian Overpasa	-
17	Conduit PVC 3* or 70mm	\$98
18	Conduit Steel 3" or 70mm	-
19	Conduit Steel 39mm	+
20	Condult Steel 28mm	-
21	Install Condult under Asphalt Pavement	98
22	Install Condult under Concrete Pavement or Sidewalk	300
23	Install Condult on Pedestrian Overpass	-
24	Install Conduit on Riser Support pole	-
25	Hundhola Type C	5
26	Aerial Cable Supporter	4
27	Detector Cable 6c	483
28	Datactor Cable 8c	-
29	Datactor Cable 12c	
30	Datector Cable SS 6c	44
31	Detector Cabla SS 8c	<u> </u>
32	Delector Cable SS 12c	-
33	Power Cable	-
34	101 line (CPV, 0.65mm, 1P)	1 -
35	Grounding Rod	4
36	Grounding Cable	20

EA TRAFFIC CO	NTROL SYSTEM PF	ROJECT:STAGE I
OR AND CABLE	Submitted By :	Approved By :
PLAN	Juro Rodara JICA Study Topm Lesder	Boonyswal Tipluy BWA Study Yeam Leader
	Dasigned By :	Checked By :
76 , 139	Tesus Nabeshims JICA Study Mamber	TED, 6MA
вма	Scale   / 1,000	Drewing No 4076
Bangkok Metropoliten Administration	Date BEPTEMBER' 90	Total 39/86



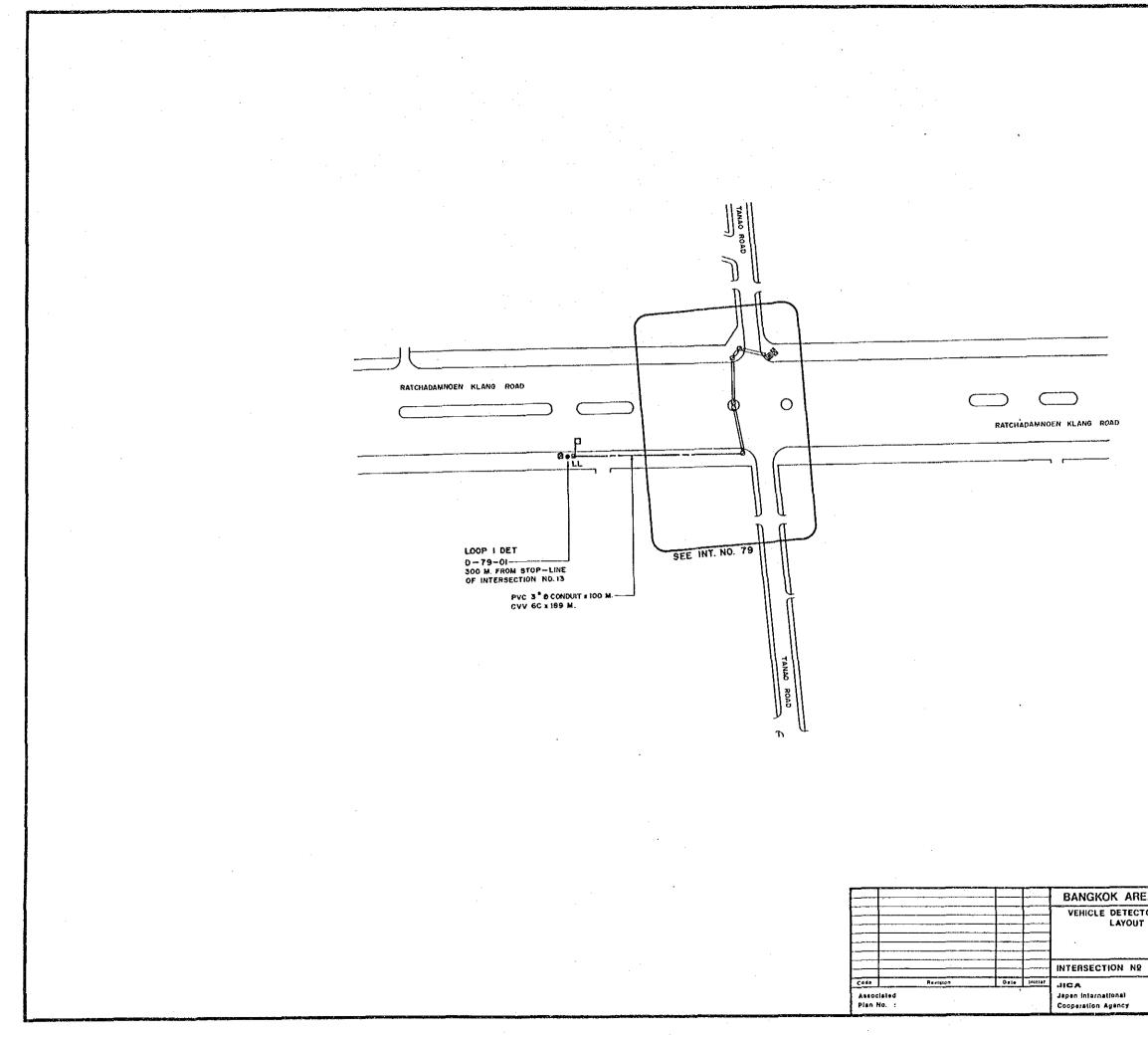
	Delector Equipments List	
	Drawing NO, 4077	
tem	Name of Equipment	Oty.
1	Detector Cabinal (with TTR Unit)	-
2	Detector Cabinet (without TTA Unit)	3
3	Pre-Processor of Detector Pulse	-
4	Loop Coil Delector Unit	3
5	Loop Coll Cable	24
8	Loop Coll Feeder Cable	15
7	Ultrasonic Detector Unit	-
8	Uttrasonic Detector Head	-
9	Utussonio Detector Feeder Cable	+
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	3
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	+
15	Type C Pole with 8.5m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
17	Conduit PVG 3* or 70mm	503
18	Conduit Stael 3" or 70mm	-
tê.	Conduit Steel 39mm	-
20	Conduit Steel 28mm	-
21	Instalt Condult under Asphalt Pavement	-
22	Install Condult under Concrete Pavement or Sidewalk	503
23	Install Condult on Pedestrian Overpase	-
24	Install Conduit on Riser Support polo	-
25	Handhols Type C	6
28	Aerial Cable Supporter	-
27	Detector Cable 6c	560
28	Detector Cable Sc	-
29	Detector Cable 12c	-
30	Detector Cable SS 6c	-
31	Delector Cable SS 8c	-
32	Detector Cable SS 12c	
33	Power Cable	-
34	TOT line (CPV, 0.65mm, 1P)	
35	Grounding Rod	3
38	Grounding Cable	15

REA TRAFFIC CO	NTROL SYSTEM PI	ROJECT : STAGE I
CTOR AND CABLE UT PLAN	Submilled By : Jure Kadala JICA Bludy Tasm Leader	Approved By : Masayawal Tiptys BNA Study Team Leader
1 <u>0</u> 77	Designed By : Checked By : Yasue Hoberhime	
·	JICA Study Member	TEO., UMA
BMA	Scale 1 / 1,000	Drawing N2 4077
Bangkok Metropoliten Administration	Dete GEPTEMBER' 80	Total 40/86



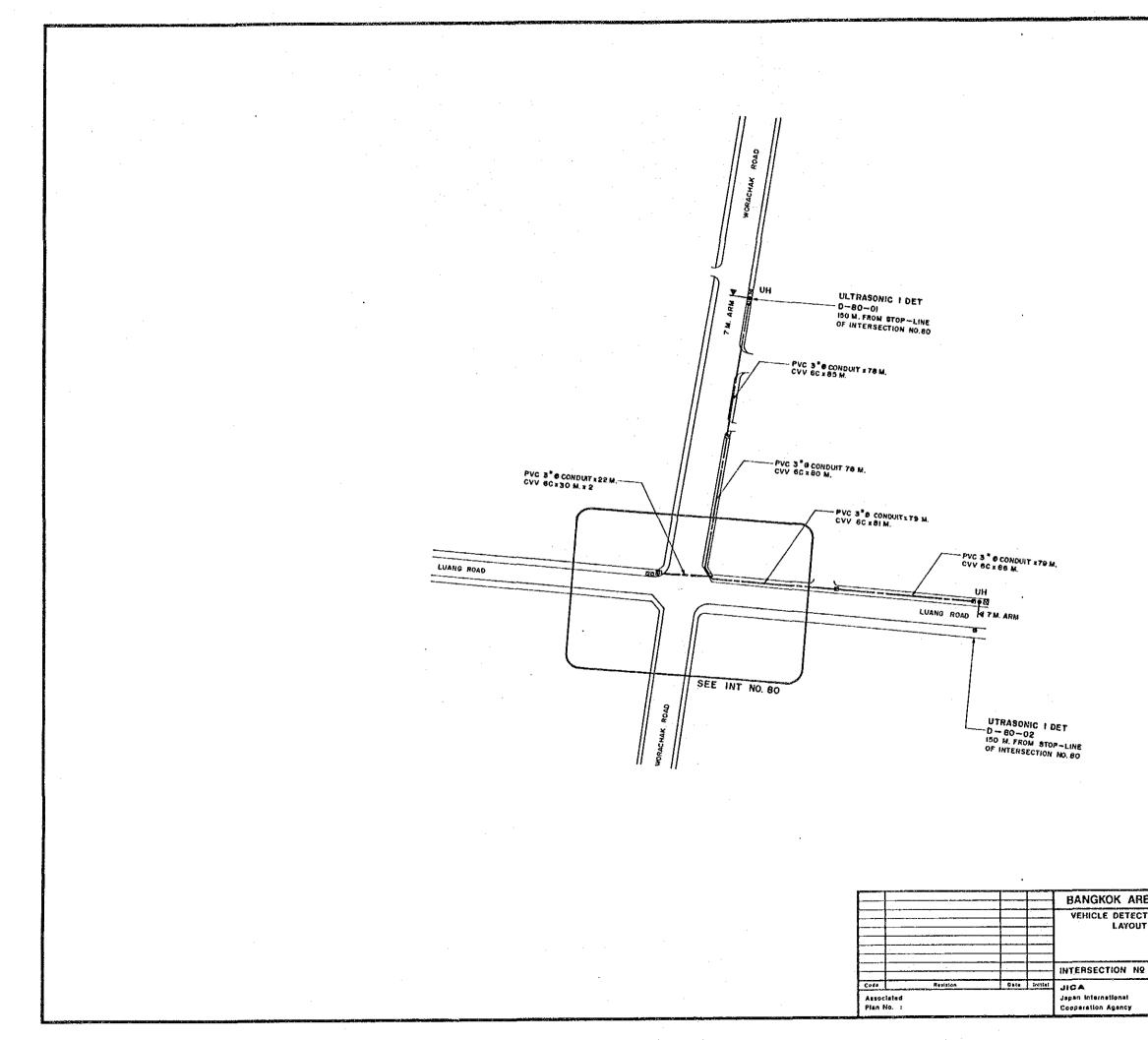
	Detector Equipments List Drawing NO. 4078	
ITÉM	Name of Equipment	ON.
1	Datector Cables (with TTR Unit)	1- <u></u>
2	Datactor Cabinet (without TTR Unit)	2
2	Pre-Processor of Detector Pulse	1
	Loop Coll Datector Unit	
5	Loop Coll Cable	-
8	Loop Coll Fooder Cable	
7	Utrasonic Detector Unit	2
	Ultrasonic Delector Head	
	Ultrasonic Datactor Fasder Cable	18
10	Supply Power Switch Box with Power Brezker	
11	TOT Line Box	
12	Type A Pole	
13	Type B Pole	1
14	Type C Pole with 7.0m Arm	2
15	Type C Pole with 8.5m Arm	<u> </u>
18	Assembly for Installation on Pedesidan Overpase	<u> </u>
17	Conduit PVC 3* or 70mm	153
18	Conduit Steel 3' or 70mm	1
19	Conduit Steel 39mm	1
20	Conduit Steel 28mm	
21	Install Conduit under Asphalt Pavement	13
22	Instal Conduit under Concrete Pavement or Sidewalk	140
23	Instat Conduit on Podesvian Overpass	
24	Install Conduit on Riser Support pole	
25	Handhole Type C	··· 4
28	Aerial Cable Supporter	5
27	Detector Cable 6c	<u> </u>
28	Detector Cable Sc	170
29	Detector Cable 12c	┼┈╴
30	Delector Cable SS 5c	1
30	Detector Cable SS 8c	160
32	Datector Cable SS 80	+
32	Power Cubia	1
34	TOT line (CPV, 0.65mm, 1P)	1
35	Grounding Rod	1 2
36	Grounding Cable	10

EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
TOR AND CABLE	Submitted By : { Jure Kodere JICA Bludy Team Leader	Approved By : Béanyswel Tiplue BMA Study Teem Leeder
78	Designed By : Yasue Habeshima JICA Study Mamber	Checked By : TEO,BWA
BMA	Scale [ / I <sub>s</sub> 000	Drawing Nº 4078
Bangkok Metropolilan Administration	Date SEPTEMBER' 90	Total 41/86



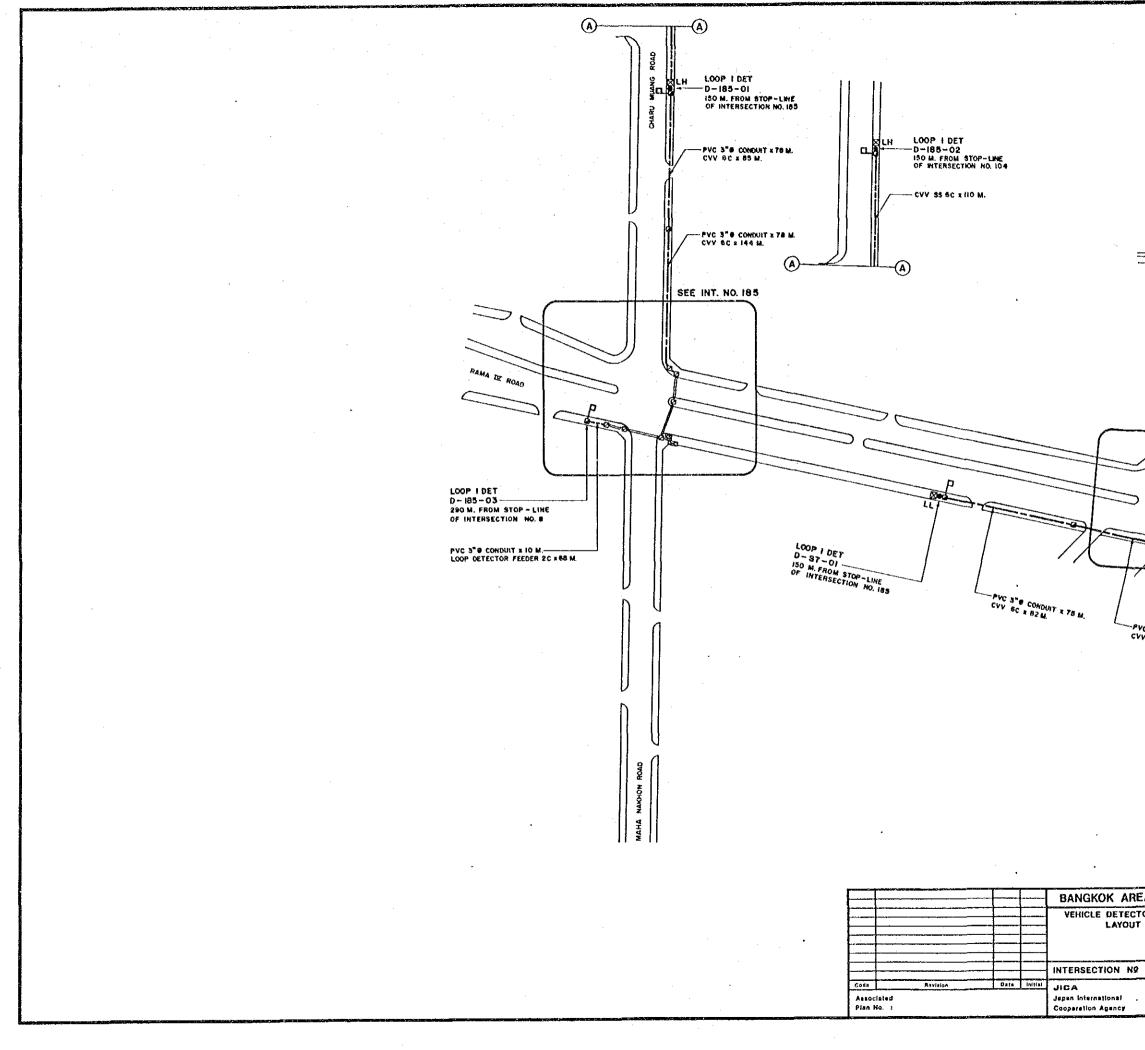
	Detector Equipments List	
	Drawing NO. 4079	
TEM	Name of Equipment	Qty.
1	Detector Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTR Unk)	1
3	Pre-Processor of Detector Pulsa	
4	Loop Coll Datactor Unit	1
6	Loop Coll Cable	8
6	Loop Coll Feeder Cable	6
7	Ultrasonic Detector Unit	-
	Ultrasonic Detector Head	-
	Ultrasonic Detector Feeder Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	1
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
17	Condult PVC 3" or 70mm	100
18	Condult Steel 3" or 70mm	-
19	Condult Steel 39mm	-
20	Conduit Steel 28mm	-
21	Install Conduit under Asphalt Pavement	-
22	Install Conduit under Concrete Pavement or Sidewalk	100
23	Install Condult on Padestilan Overpass	-
24	Install Conduit on River Support pole	-
25	Handhole Type C	1
26	Aerial Cable Supporter	-
27	Detector Cable 6c	189
28	Detector Cable 8c	*
29	Detector Cable 12c	-
30	Detector Cable SS 6c	-
31	Detector Cable SS 8c	-
32	Detector Cable SS 12c	-
33	Power Cable	A.
34	TOT line (CPV, 0.65mm, 1P)	- 1
35	Grounding Rod	1
36	Grounding Cable	6

	CONTROL SYSTEM		
TOR AND CABLE	Submitted By :	Approved By :	
T PLAN	Jure Koders JiCA Bludy Team Lender	Buonyawal Tiptus BMA Bludy Team Loader	
	Designed By :	Checked By :	
2	9 JICA Study Member	TED., BMA	
BMA	Scale L / IgQ00	Drawing No 4079	
Bangkok Matropoli Administration	Date SEPTEMBER 90	Total 42/86	

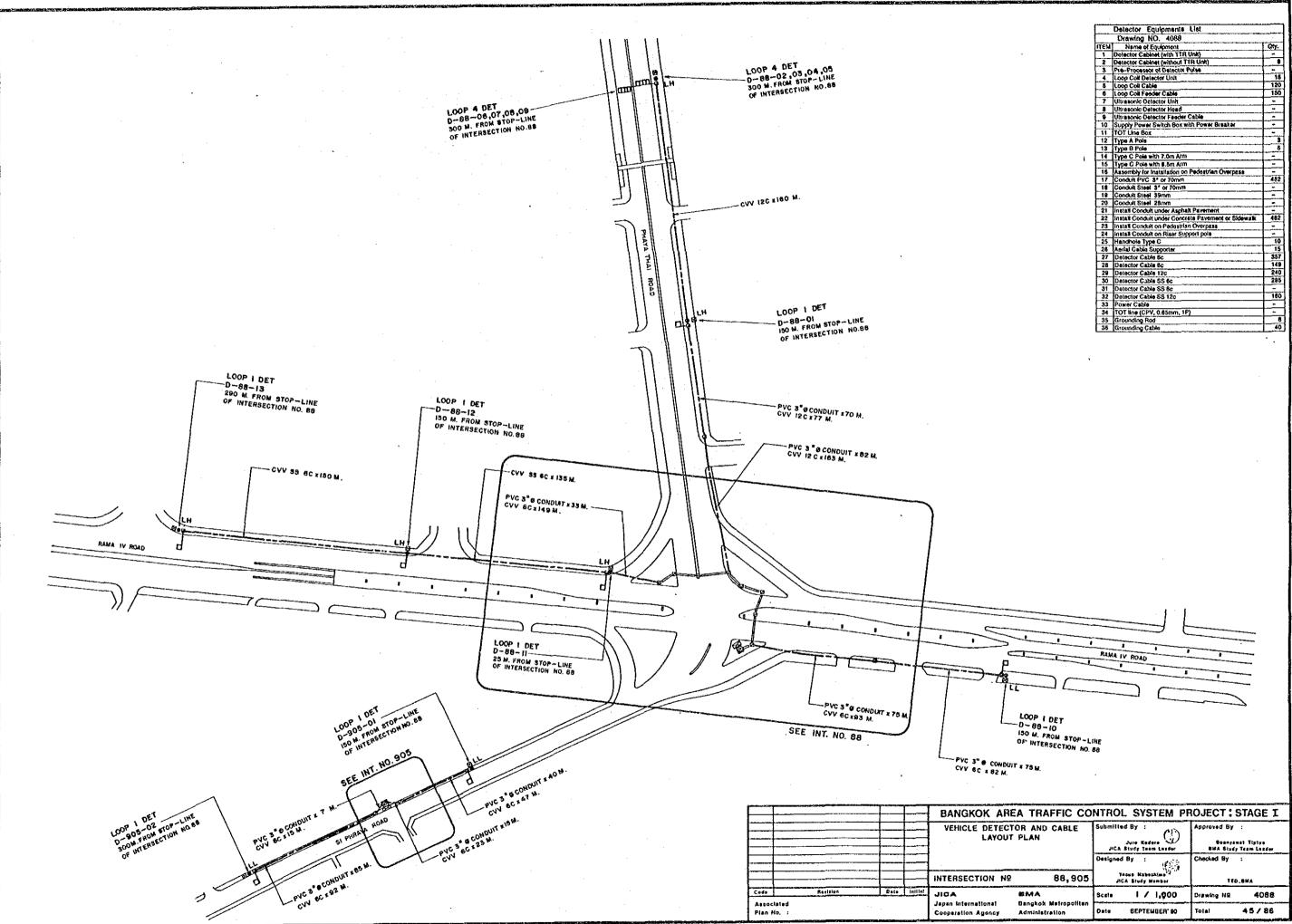


	Detector Equipments List Drawing NO. 4060	
		Oty.
пен		
1	Detector Cabinet (with TTR Unit)	
2	Detector Cabinet (without TTH Unit)	ļ
3	Pre-Processor of Delector Pulse	Į
4	Loop Coll Detector Unit	
6	Loop Coll Cable	<b>-</b> -
6	Loop Coll Feeder Cable	
7	Ulussonic Detector Unit	- 2
	Ultrazonic Detector Head	18
9	Ultrasonic Detector Feeder Cable	1
10	Supply Power Switch Box with Power Breaker	<del>1 -</del>
11	TOT Line Box	•
12	Type A Pole	- <u>-</u>
13	Type B Pole	
14	Type C Pole with 7.0m Ann	<u> </u> *
16	Type C Pole with 8.5m Arm	<u> </u>
16	Assembly for Installation on Pedeatrian Overpass	330
17	Condult PVC 3" or 70mm	
18	Conduit Steel 3* or 70mm	- <u>-</u> -
19	Conduit Steel 39mm	
20	Conduit Steel 28mm Instal Conduit under Asphalt Pavement	25
21	Install Conduit under Concrete Pavement or Bidewalk	311
22	Install Conduit on Pedestrian Overpass	
23	Install Conduit on Pagestrian Overpres	<u> </u>
25	Handhole Type C	<u>† -</u> 6
25	Aerial Cable Supporter	1*
20	Detector Cable Sc	374
28	Detector Cable BC	1
29	Detector Cable 120	+
30	Detector Cable SS 6c	1
30	Cetector Cable SS 8c	+- <u>-</u> -
32	Detector Cable SS 120	<u> </u>
32	Petector Cable SS 120	<u>t</u>
	TOT line (CPV, 0.65mm, 1P)	+
34		
35	Grounding Rod Grounding Cable	10

EA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
TOR AND CABLE T PLAN	Submitted By : Jure Kedars JICA Study Teem Leader	Approved By : Boonyawal Tiplus BMA Study Team Lander
2 60	Designed By :	Checked By : TED., BMA
2MA	Scale   / 1,000	Drawing N2 4080
Bengkok Metropolitan Administration	Data SEPTEMBER' 90	Total 43/86

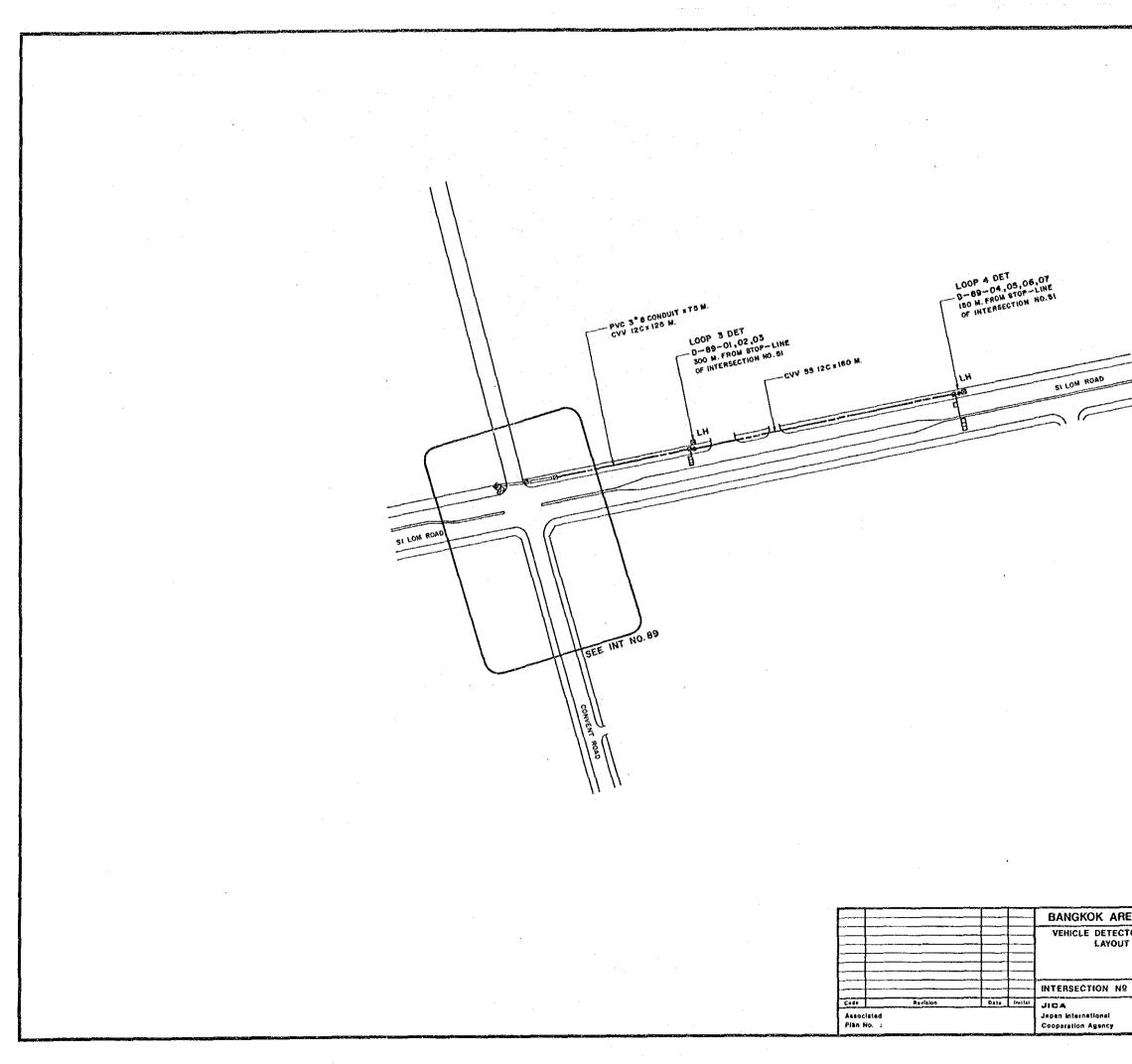


_			
· ·	Detector Equipments List Drawing NO. 4087		
	TEN Name of Equipment	City.	
F	1 Detector Cabinet (with TTR Unit) 2 Detector Cabinet (without TTR Unit)		
Ļ	Pre-Processor of Datector Pulse  Loop Coll Detector Unit		
L L	5 Loop Coll Cable	32	
	6 Loop Coll Feeder Cable 7 Ultrasonic Detector Unit	83	
Ļ	Utrasonic Detector Head  Utrasonic Detector Feeder Cable		
ŀ	10 Supply Power Switch Box with Power	r Broaker -	
F	11 TOT Line Box 12 Type A Pole		
L L L L L L L L L L L L L L L L L L L	13 Type 8 Pole 14 Type C Pole with 7.0m Arm	2	
	15 Type C Pole with 8.6m Arm		
F	18 Assembly for Installation on Pedestr 17 Conduit PVC 3" or 70mm	lan Overpasa	
	18 Conduit Steel 3" or 70mm 19 Conduit Steel 39mm		
la l	20 Conduit Steel 28mm		
ŀ	21 Install Condult under Asphall Paven 22 Install Condult under Concrete Pave	nent - kment or Sidewalk 316	
א וו עב	23 Install Conduit on Pedeatrian Overp 24 Install Conduit on Risse Support pol	-	
$\leq   $	25 Handhola Typa C	6	
	26 Aerial Cebia Supporter 27 Detector Cable 6c	4 394	
	28 Detector Cable 8c		
	30 Detector Cable SS 60	110	
9	31 Detector Cable SS 8c 32 Detector Cable SS 12c		
	33 Power Cable		
BANTHAT THONG ROAD	34 TOT line (CPV, 0.65mm, 1P) 35 Grounding Rod		
Į ž 🔨 – C	36 Grounding Cable	15	
L VA			
<b>a</b>			
		•	
SEE INT	NO. 87		
	)		
	+		
_	M AMAN	POLO	
RAMA IS ROAD			
TAR			
VV 3*6 CONDUST & 75 M.			
VC 3" 6 CONDUST #75 M.			
VVC 3" & COMDUST # 78 M.			
VC 3* & CONDUST & TS M.			
VC 3" & COMOUNT & 76 M.			
VC 3" & COMDUNT # 76 M.			
VVC 3* @ COMDUST # 78 M.			
VVC 3" & COMDUST & 75 M.			
VVC 3" 8 COMDUST & 76 M.			
VVC 3" 8 COMDUT & 75 M.			
VVC 3*8 COMDUST #78 M.			
VV STOCADUST X75 M.			
VVC 3" 6 CCADUAT # 75 M.			
VVC 3" 6 CONDUST # 75 M.			
VC 3" 6 CONDUST & 75 M.			
VC 3" 6 CONDUST & 75 M.			
VC 3" 6 CONDUT & 75 M.			
	NTROL SYSTEM PROJ		
EA TRAFFIC CO TOR AND CABLE	Submitted By : App		
EA TRAFFIC CO	Submitted By :	ECT:STAGE I	
EA TRAFFIC CO TOR AND CABLE	Submitted By : Jura Kadera JICA Study Team Leader	ECT: STAGE I Novad By : Biography Tiplus BMA Study form Locar	
EA TRAFFIC CO TOR AND CABLE	Submitted By : Jure Kaders JICA Study Team Leader Designed By :	ECT:STAGE I	
EA TRAFFIC CO TOR AND CABLE	Submitted By : App Jure Keders JICA Study Team Leader	ECT: STAGE I Novad By : Biography Tiplus BMA Study form Locar	
EA TRAFFIC CO TOR AND CABLE T PLAN 87,185	Submitted By : Juce Kadera Jich Study Team Leader Designed By : Yesue Nabephine JICA Study Member	ECT:STAGE I Moved By : Blan Study Toom Looder Maked By : TED., BMA	
EA TRAFFIC CO TOR AND CABLE T PLAN	Submitted By : Juca Study Team Leader JicA Study Team Leader Designed By : Yesue Makephine JICA Study Memore Scale I / I <sub>0</sub> 000 Dre	ECT: STAGE I Noved By : Becgywyl Tiplus BMA Bludy Team Losder Klad By : YED, BMA Wing NR 4087	
EA TRAFFIC CO TOR AND CABLE T PLAN 8 87,185 BMA	Submitted By : Juce Kadera Jich Study Team Leader Designed By : Yesue Nabephine JICA Study Member	ECT:STAGE I NOVED BY : BECT:STAGE I NOVED BY : ECONTANT TIPIUS BMA BUGY TEAM LOSSER COMPANY TED.BMA WING NO 4087	



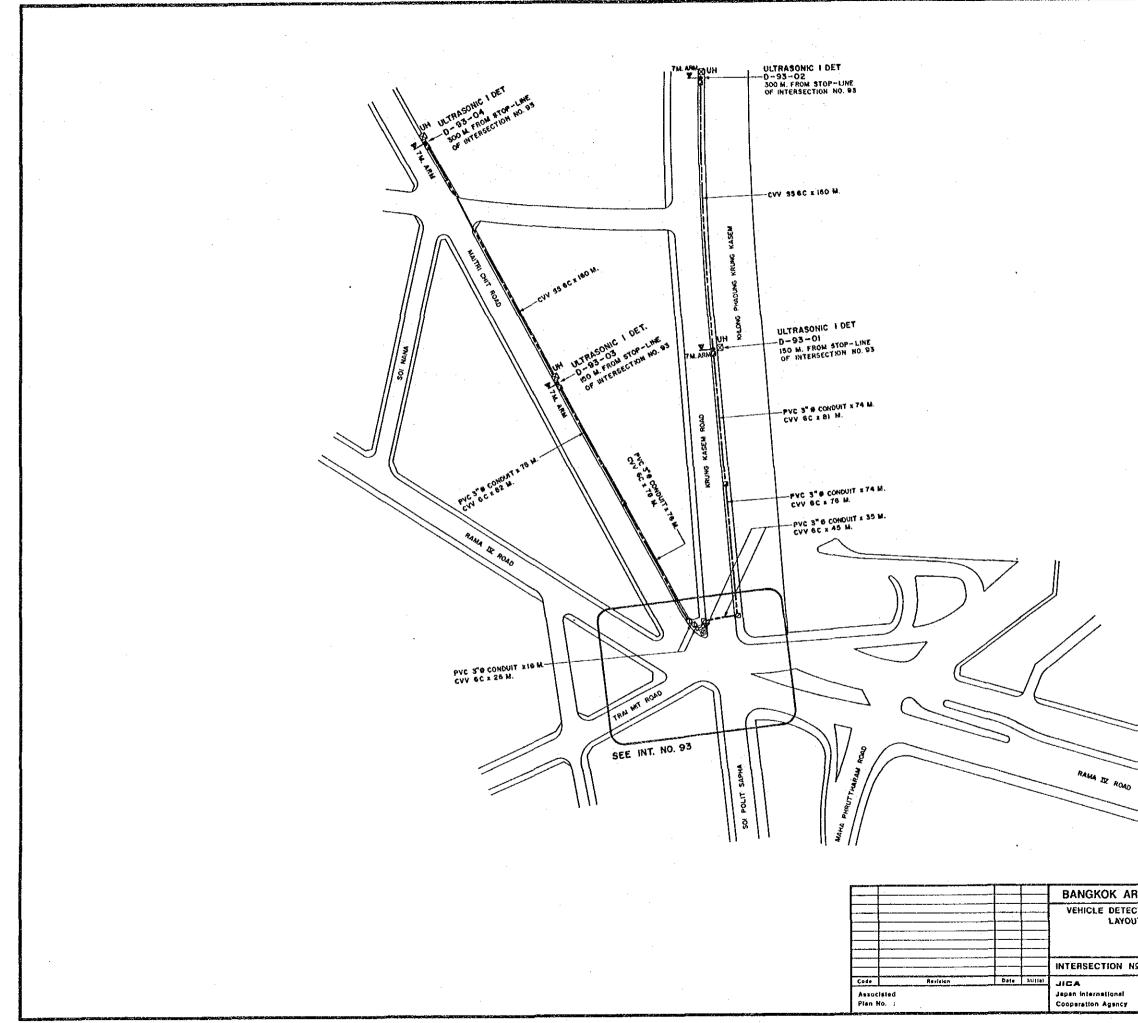
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Detector Equipments List Drawing NO. 4088	
	1.04.
ITEM Name of Equipment	Qty.
1 Detector Cabinet (with TTR Unit)	<u> </u>
2 Detector Cabinet (without TTR Unit)	-
3 Pre-Processor of Detector Pulse	15
4 Loop Coll Detector Unit	120
5 Loop Coll Cable	150
6 Loop Coll Fesder Cable	
7 Ultrasonic Octoctor Unit	
8 Ultrasonic Detector Head	
9 Ultrasonic Detector Faeder Cable	<u> </u>
10 Supply Power Switch Box with Power Breaker	<u></u>
11 TOT Line Box	
12 Type A Pole	3
13 Type B Pole	5
14 Type C Pole with 7.0m Arm	-
15 Type C Pole with 8.5m A/m	-
16 Assembly for Installation on Pedestrian Overpasa	-
17 Conduit PVC 3* or 70mm	482
18 Condult Steet 3" or 70mm	-
19 Conduit Steel 39mm	-
20 Condult Steel 28mm	-
21 Install Condult under Asphalt Pavement	-
22 Install Conduit Under Concrete Pavement or Sidewalk	482
23 Instal Conduit on Pedestrian Overpass	-
24 Install Conduit on Riser Support pole	-
25 Handhole Type C	10
28 Aerial Cable Supporter	15
27 Detector Cable Sc	357
28 Detector Cable 8c	149
29 Detector Cable 12c	240
30 Detector Cubie SS 6c	285
31 Detector Cable SS 8c	-
32 Detector Cable SS 12c	160
33 Power Cable	-
34 TOT line (CPV, 0.65/mm, 1P)	1-
35 Grounding Rod	8
35 Grounding Cable	40



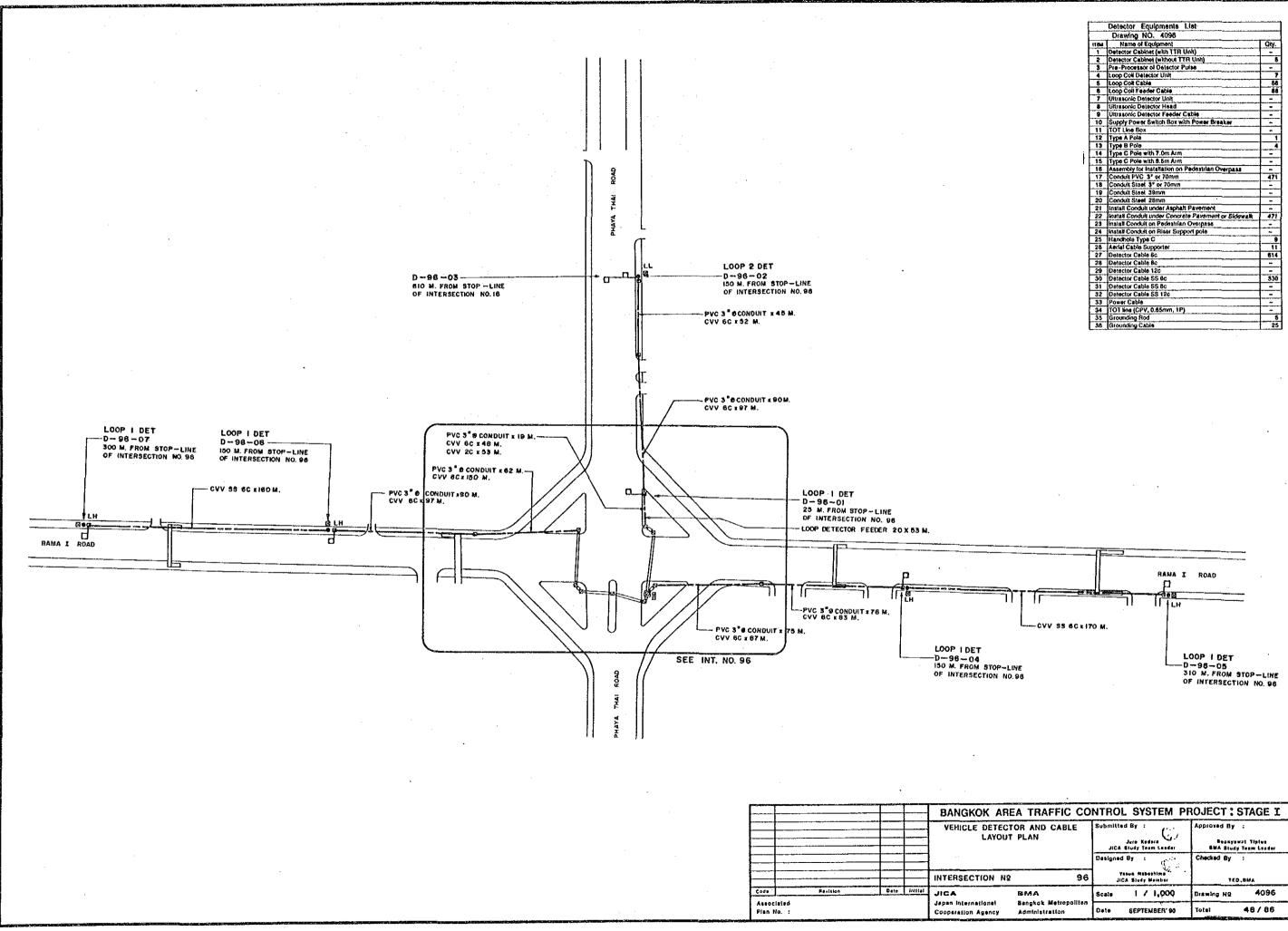
	Detector Equipments List	
	Drawing NO. 4089	
пен	Name of Equipment	Ory.
1	Detector Cabinet (with TTR Unit)	-
2	Datactor Cabinet (without TTR Unit)	2
3	Pre-Processor of Detector Pulse	- 1
	Loop Coil Detector Unit	7
5	Loop Coll Cable	56
8	Loop Coll Feeder Cable	35
7	Ultrasonic Detector Unit	-
8	Ultrasonic Detector Head	-
0	Ultrasonic Datector Feader Cable	-
10	Supply Power Switch Box with Power Breaker	-
11	TOT Une Box	1 -
12	Typa A Pole	} -
13	Type B Pole	2
14	Type C Pole with 7.0m Arm	-
16	Type C Pole with 6.6m Arm	-
18	Assembly for Installation on Pedestrian Overpass	-
17	Conduit PVC 3" or 70mm	75
18	Condult Steel 9" or 70mm	-
19	Condult Steel 39mm	-
20	Condult Steet 28mm	~
21	Install Conduit under Asphält Pavement	-
22	Install Condult under Concrete Pavement or Sidewalk	75
23	Install Conduit on Pedestrian Overpass	-
24	Install Conduit on Riser Support pole	<u> </u>
25	Hanchole Type C	2
28	Aerial Gable Supporter	6
27	Detector Cable 6c	-
28	Detector Cable Bc	-
29	Detector Cable 12c	125
30	Datector Cable SS 6c	-
31	Detector Cable SS 8c	1
35	Detector Cable SS 12c	160
33	Power Cable	1 -
34	TOT line (CPV, 0.65mm, 1P)	-
35	Grounding Rod	2
36	Grounding Cable	10

	NTROL SYSTEM PI	
TOR AND CABLE T Plan	Submitted By : Juro Kodara JiCA Bludy Team Leader	Approved By : Seenyewat Tiplua BWA Bludy Team Leader
	Designed By :	Checked By :
º 69	Yanus Habeshima JICA Study Mambur	TED., BHA
BMA	Scale 1 / 1,000	Drawing No 4089
Bangkoʻz Metropoliten Administration	Date SEPTEMBER' 90	Total 46/86



	Detector Equipments List	
	Drawing NO. 4093	
пем		Oty.
1	Detector Cabinal (with TTR Unit)	- 1
2	Datector Cabinet (without TTR Unit)	
\$	Pre-Processor of Detector Pulse	-
4	Loop Coll Detector Unit	<b>—</b> —
5	Loop Coll Cable	
6	Loop Coll Feeder Cable	-
7	Ultrasonic Detector Unit	4
6	Ultrasonic Datector Head	4
9	Ultrasonic Detector Feeder Cable	32
10	Supply Power Switch Box with Power Breaker	L -
11	TOT Line Box	- 1
12	Type A Pole	-
13	Type B Pole	-
14	Type C Pole with 7.0m Arm	4
15	Type C Pole with 6.6m Arm	-
16	Assembly for Installation on Pedestrian Overpase	-
17	Condult PVC 3" or 70mm	\$50
18	Condult Steel 3" or 70mm	-
19	Condult Steel 39mm	-
20	Condult Steel 28mm	-
21	Install Condult under Asphalt Pavement	-
22	Install Condult under Concrete Pavement or Sidewalk	\$50
23	Install Conduit on Pedestrian Overpass	
24	Install Conduit on Riser Support pole	-
25	Handhole Type C	6
26	Aerial Cable Supporter	10
27	Detector Cable 6c	388
28	Detector Cable 8c	
29	Detector Cable 120	-
\$0	Detector Cable SS 6c	320
31	Detector Cable SS 8c	-
32	Detector Cable SS 12c	- 1
33	Power Cablo	-
34	TOT line (CPV, 0.65mm, 1P)	-
35	Grounding Rod	4
36	Grounding Cable	20

REA TRA	FFIC CO	NTROL SYSTEM P	ROJECT : STAGE I	
CTOR AND CABLE OUT PLAN		Submitted By : Jure Kadera JICA Bludy Teem Lender	Approved By : Bookyswai Tiptus BMA Study Taam Laader	
		Designed By : Vesus Hobeshine JICA Study Member	Checked By : TED., BMA	
81 MA Bangkok Administr	Metropolitan	Scale 1 / 1,000 Date SEPTEMBER' 90	Drawing N9 4093	



	Detector Equipments List	
	Drawing NO. 4098	
1184	Name of Equipment	Qty.
1	Detector Cabinet (with TTR Unit)	-
5	Detector Cabinet (without TTR Unit)	6
3	Pre-Processor of Detector Pulse	
4	Loop Coll Detector Unit	7
\$	Loop Coll Cable	56
8	Loop Coll Feeder Cable	88
7	Ultrasonic Detector Unit	
8	Ultrasonic Detector Head	-
9	Ultrasonic Detector Feeder Cable	
10	Supply Power Switch Box with Power Breaker	-
11	TOT Line Box	-
12	Type A Pole	1
13	Type B Pole	4
14	Type C Pole with 7.0m Arm	-
15	Type C Pole with 8.5m Arm	1
16	Assembly for Installation on Pedestrian Overpass	-
17	Condult PVC 3* or 70mm	475
18	Condult Stael \$" or 70men	-
19	Condult Steel 39mm	-
20	Condult Steel 28mm	
21	Install Conduit under Asphalt Pavement	1 -
22	Install Condult under Concrete Pavement or Sidewalk	471
23	Install Conduit on Pedestrian Overpase	-
24	Install Conduit on Riser Support pole	-
25	Handhole Type C	. 9
28	Aerial Cable Supporter	11
27	Detector Cable 6c	614
28	Detector Cable Bc	-
29	Detector Cable 12c	- 1
30	Detector Cable SS 6c	330
31	Detector Cable SS 8c	- 1
32	Detector Cable SS 12c	1 -
33	Power Cable	1
34	TOT line (CPV, 0.65mm, 1P)	- 1
35	Grounding Rod	5
	Grounding Cable	25

TOR AND CABLE		Submitted By :	Approved By :
IT PLAN		Jeco Kodora JICA Sludy Toam Landar	Backyowst Tiplus BMA Study Team Leader
		Designed By :	Checked By :
Q	96	JICA Sludy Mamber	TED., BMA
	BMA	Scale 1 / 1,000	Drawing No. 4096
	Bangkok Metropolitan Administration	Date GEPTENBER' 90	Total 48/86

, . LOOP I DET D-99-02 150 M FROM STOP-LINE OF INTERSECTION NO.99 -PVC 3 °O CONDUIT x 78 M. GVV 6C x 85 M. -- PVC 3 GCONDUIT x 79 M. CVV 6C x 263 M. 11. Bers. Ø...... d PHETCHABURI ROAD SEE PVC 3" & CONDUIT # 76 M.-CVV 8C # 152 M. KHLONG SAEN SEAP PVC 3<sup>\*</sup> G CONDUIT x 40 M. --Stell 3<sup>\*</sup> O Conduit x 37 M. CVV 6C x 93 M. 
 Detector
 Equipments
 List

 Drawing NO. 4099
 ITEM
 Name of Equipment

 1
 Detector Cabinet (with TTR Unit)
 2

 2
 Detector Cabinet (with TTR Unit)
 2

 3
 Pre-Processor of Detector Pulse
 4

 4
 Loop Coll Cable
 5

 5
 Loop Coll Cable
 5

 6
 Ubrasonic Detector Unit
 4

 10
 Wirasonic Detector Head
 10

 10
 Supp Power Switch Box with Power Breaker
 11

 10
 Loop Coll Cable
 11

 11
 TOT Line Box
 11

 12
 Type C Pole with 7.0m Arm
 11

 13
 Type C Pole with 7.0m Arm
 11

 14
 Type C Pole with 7.0m Arm
 11

 15
 Conduit Sizel 3.0mm
 12

 16
 Conduit Sizel 3.0mm
 13

 17
 Cenduit Sizel 3.0mm
 14

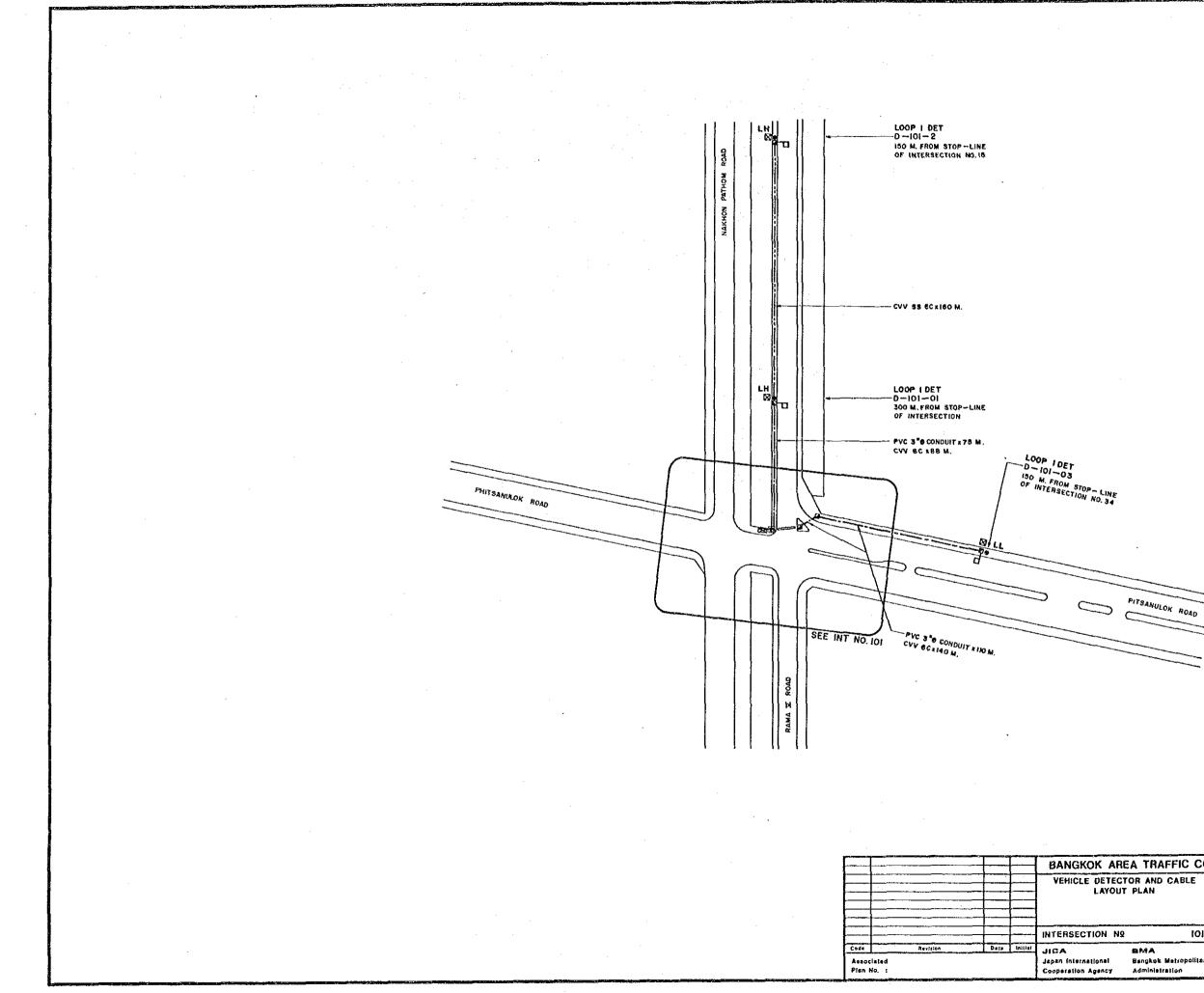
 17
 Cenduit Sizel 3.0mm
 15

 16
 Conduit Sizel 3.0mm
 15

 20
 Conduit Sizel 3. LOOP I DET D-99-01-160 M. FROM STOP-LINE OF INTERSECTION NO. 99 City. -2 16 10 -EXPRESSWAY ROAD -÷ £ PORT - 2 DAENG -273 Nio --273 37 . BANGKOK AR 4 VEHICLE DETECT 583 --LAYOUT • --2 10 INTERSECTION NO Code Revielor Dete Initial JICA Jepan International Associated Fian No. : Cooperation Agency

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2	PHETCHABURI	ROAD
INT. NO. 99		
REA TRAFFIC CO	NTROL SYSTEM PF	OJECT: STAGE I
TOR AND CABLE T PLAN	Submitted By : Jura Kodera JiCA Study Team Leader Designed By : Yasue Maketan JiCA Study Mamber	Approved By : Beensewet Tiplus Bild Study Team Leader Checked By :
99 99		TED., BMA
BMA Bangkok Metropolitan Administration	Scale I / 1,000	Drawing HR 4099 Total 49/86
Administration	Date SEPTEMBER' 90	10141 4V/85



	Detector Equipments List	
	Drawing NO. 4101	
ΠEM	Name of Equipment	Qiy.
1	Detector Cabinat (with TTR Unit)	-
2	Detector Cabinet (without TTR Unit)	3
3	Pre-Processor of Detector Pulse	- 1
4	Loop Coll Detector Unit	3
5	Loop Coll Cable	24
6	Loop Coll Feeder Cable	15
7	Uttrasonic Detector Unit	- 1
8	Ulvasonic Delector Head	-
9	Utresonic Detector Feeder Cable	
10	Supply Power Switch Box with Power Branker	-
11	TOT Line Box	-
12	Type A Pole	1
13	Type B Pole	2
	Type C Pole with 7.0m Arm	
15	Type C Pole with 8.5m Arm	-
18	Assembly for installation on Pedestrian Overpass	-
17	Condult PVC 3" or 70mm	185
18	Conduit Steel 3" or 70mm	1 -
19	Condult Steel 39mm	-
20	Condult Steel 28mm	<u> </u>
21	Install Condult under Asphalt Pavement	-
22	Install Condult under Concrete Pavament or Sidewalk	185
23	Install Conduit on Pedestrian Overpass	<u> </u>
24	Install Conduit on Riser Support pole	-
25	Hanchole Type C	4
28	Aerial Cable Supporter	5
27	Detector Cable 6c	228
28	Detector Cable 8c	-
29	Detector Cable 12c	-
30	Detector Cable SS 6c	160
31	Detector Cable SS &c	<u> </u>
32	Detactor Cable SS 12c	
33	Power Cable	<u></u>
34	TOT line (CPV, 0.65mm, 1P)	~
35	Grounding Rod	3
38	Grounding Cable	15

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REA TRAFFIC CO	NTROL SYSTEM PI	ROJECT: STAGE I
CTOR AND CABLE	Submitted By : Jure Kedere JICA Study Team Leader	Approved By ; Basayswat Tiplus BWA Bludy Tasm Cosper
9 IOI	Basigned By	Checked By :
¥ 101	JICA Study Member	TED, BWA
BMA Bangkok Matropolitan	Scale 1 / 1,000	Drewing NS 4101
Administration	Date SEPTEMBER' 90	Total 50/86

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