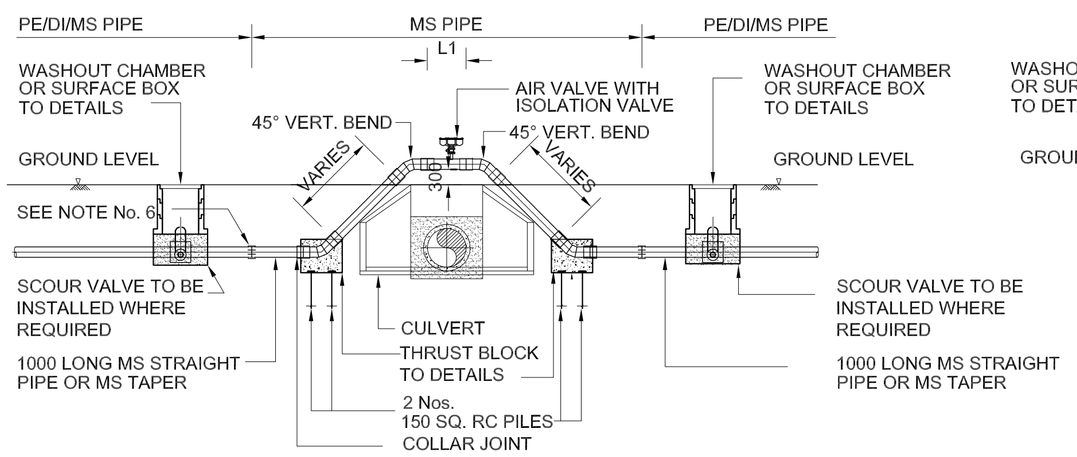
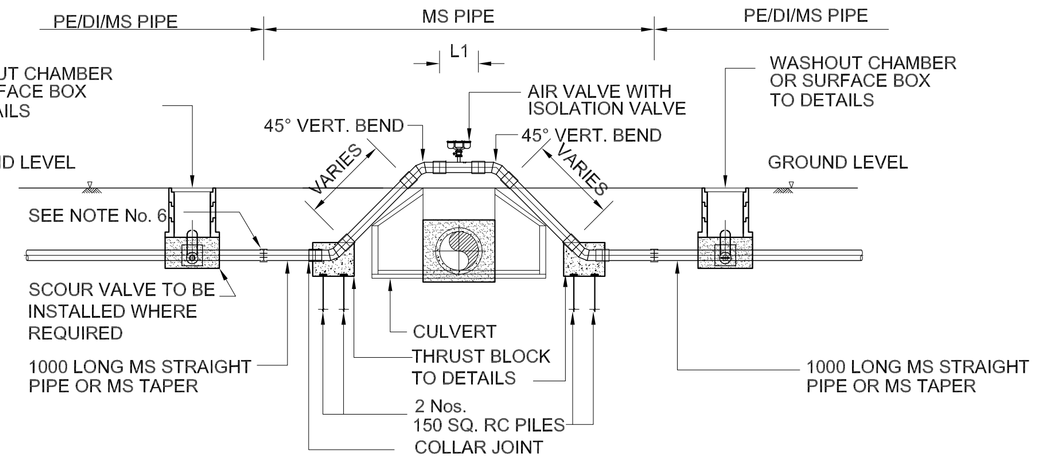
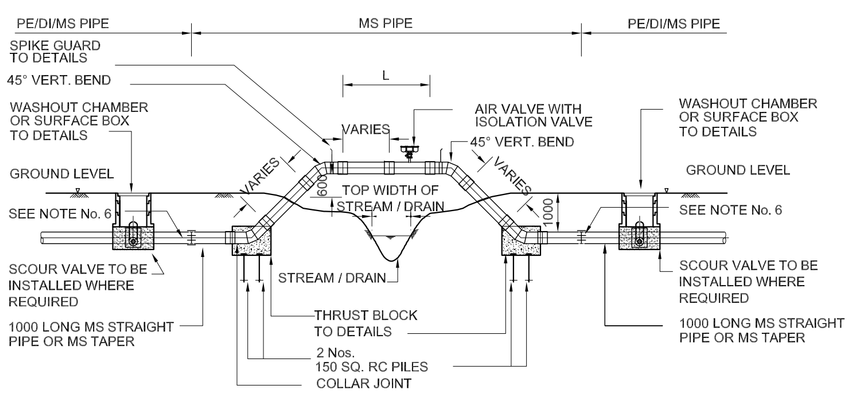


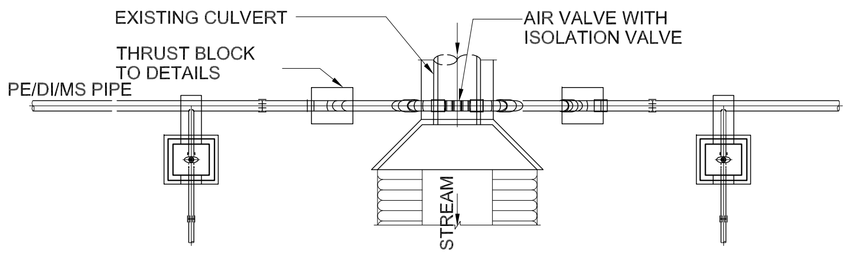
SECTIONAL ELEVATION



SECTIONAL ELEVATION

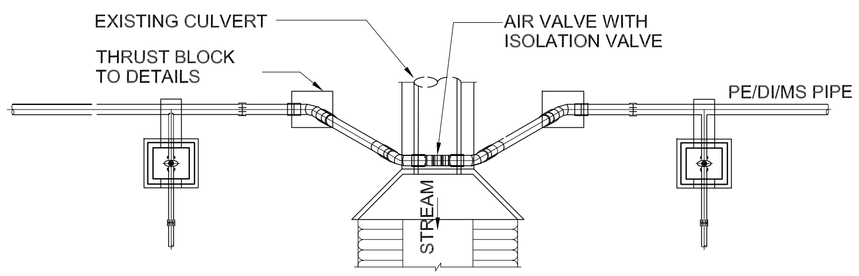


SECTIONAL ELEVATION



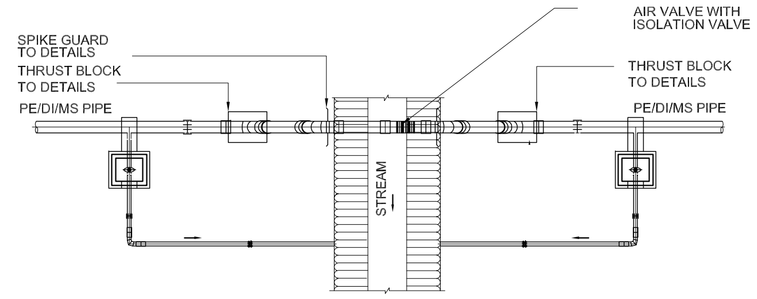
PLAN

TYPICAL TYPE 1 CULVERT OR STREAM CROSSING



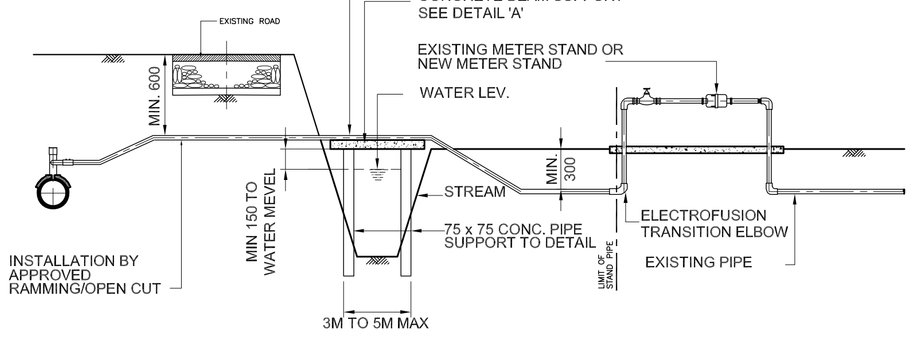
PLAN

TYPICAL TYPE 2 CULVERT OR STREAM CROSSING

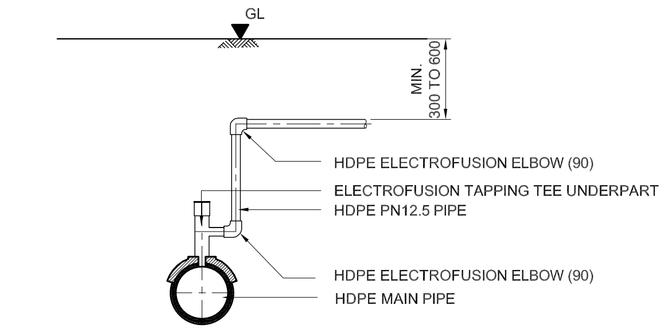


PLAN

TYPICAL TYPE 3 CULVERT OR STREAM CROSSING



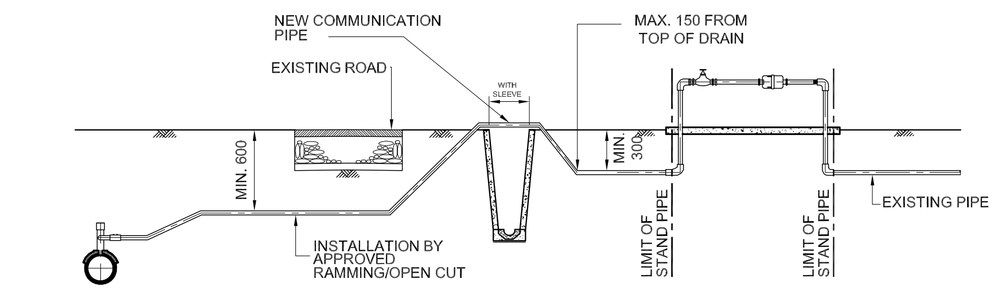
TYPICAL DETAIL FOR HDPE COMMUNICATION PIPE WITH STREAM CROSSING



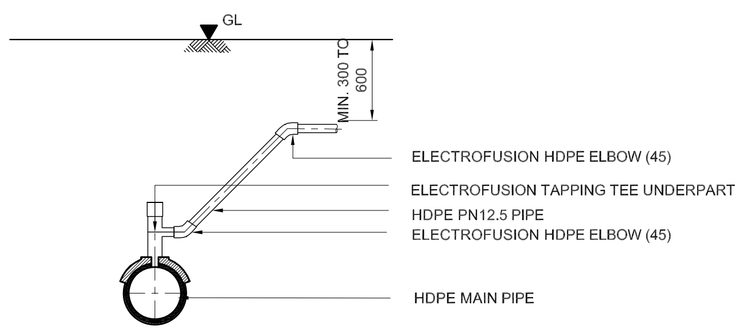
SECTION

TYPE 1 - HDPE TAPPING SADDLE FOR
HDPE MAIN PIPE WITH HDPE COMMUNICATION PIPE
FOR LOCATION WITH SPACE COSTRAINT

TABLE FOR TYPE 3 CROSSING	
MS PIPE ND (mm)	SAFE SPAN L (m)
100	3.0
150	4.0
200	5.0
250	5.0
300	6.0
350	6.0
400	6.0
450	6.0
500	6.0
600	6.0

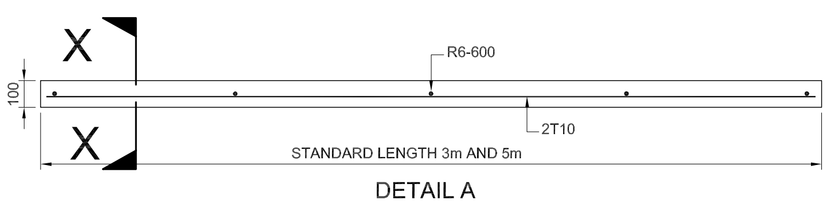


TYPICAL DETAIL FOR HDPE COMMUNICATION PIPE WITH DRAIN CROSSING



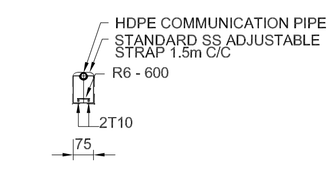
SECTION

TYPE 2 - HDPE TAPPING SADDLE FOR
HDPE MAIN PIPE WITH HDPE COMMUNICATION PIPE
FOR LOCATION WITH SPACE COSTRAINT

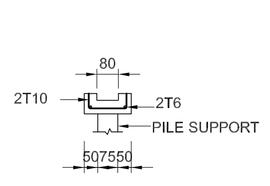


DETAIL A

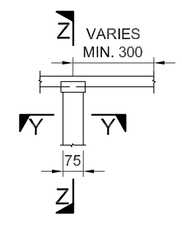
DETAIL OF PRECAST RC CONCRETE BEAM SUPPORT



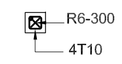
SECTION X-X



SECTION Z-Z



DETAILS OF RC POLE SUPPORT



SECTION Y-Y

LUKISAN INI ADALAH HAKCIPTA JURUTERA
Kontraktor hendaklah mengkut ukuran di dalam rajah. Segala ukuran hendaklah diperiksa di tapak dan sebarang salisihan yang terdapat hendaklah dilaporkan dengan segera kepada arkitek sebelum kerja-kerja pembangunan dilaksanakan.

TAJUK PRDJEK :

CADANGAN PENGGANTIAN SALURAN PAIR AIR UTAMA JENIS HDPE SERTA KERJA-KERJA BERKAITAN DI KOLEJ MARA (KM) BANTING, SELANGOR DARUL EHSAN

UNTUK TETUAN
MAJLIS AMANAH RAKYAT (MARA)

PEMILIK :

MAJLIS AMANAH RAKYAT (MARA)

No 21, Jln Raja Laut, Chow Kit,
50609 Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur
MARA Hotline : 03-26132000

JURUTERA STRUKTUR & SIVIL :

PAKATAN RUNDING
ZAIN SPENCER SDN BHD
36-B Jalan SG 3/2,
Pusat Bdr Sri Gombak,
68100 Batu Caves,
Selangor Darul Ehsan
Tel: 603-6186 1209 Fax: 603-6185 4552
email : przs_kl@yahoo.com.my

I HEREBY CERTIFY THAT THESE WORKS HAS BEEN DESIGNED BY ME IN ACCORDANCE WITH SOUND ENGINEERING PRACTICE AND THAT I TAKE FULL RESPONSIBILITY FOR THE DESIGN AND PROPER PERFORMANCE OF THE SAME

JURUTERA MEKANIKAL & ELEKTRIKAL :

DFR CONSULT SDN. BHD.
(BEM REG. NO: 1605 B/C) (1324927-D)
NO 8-3B, JALAN UP 1/1, UKAY PERDANA,
68000, AMPANG SELANGOR DARUL EHSAN
TEL : 019 322 3226
E-mail : dfrconsultsb@gmail.com

JURUKUR BAHAN :

ASRI QS CONSULT
NO 49, Jalan SG 3/10, Taman Sri Gombak,
68100 Batu Caves, Selangor Darul Ehsan
TEL : 03-6186 8460
E-mail : aasqsconsult@gmail.com

TAJUK LUKISAN :

RETIKULASI BEKALAN AIR

- PERINCIAN (6)

TARIKH	: MAC 2026	SKALA	: AS SHOWN
DILUKIS OLEH	: AZRIL		
DISEMAK OLEH	: IR SPENCER KLUMAI		
DILULUSKAN OLEH	: IR SPENCER KLUMAI		

NO LUKISAN :

PRZS(159-25)-KMBanting-008