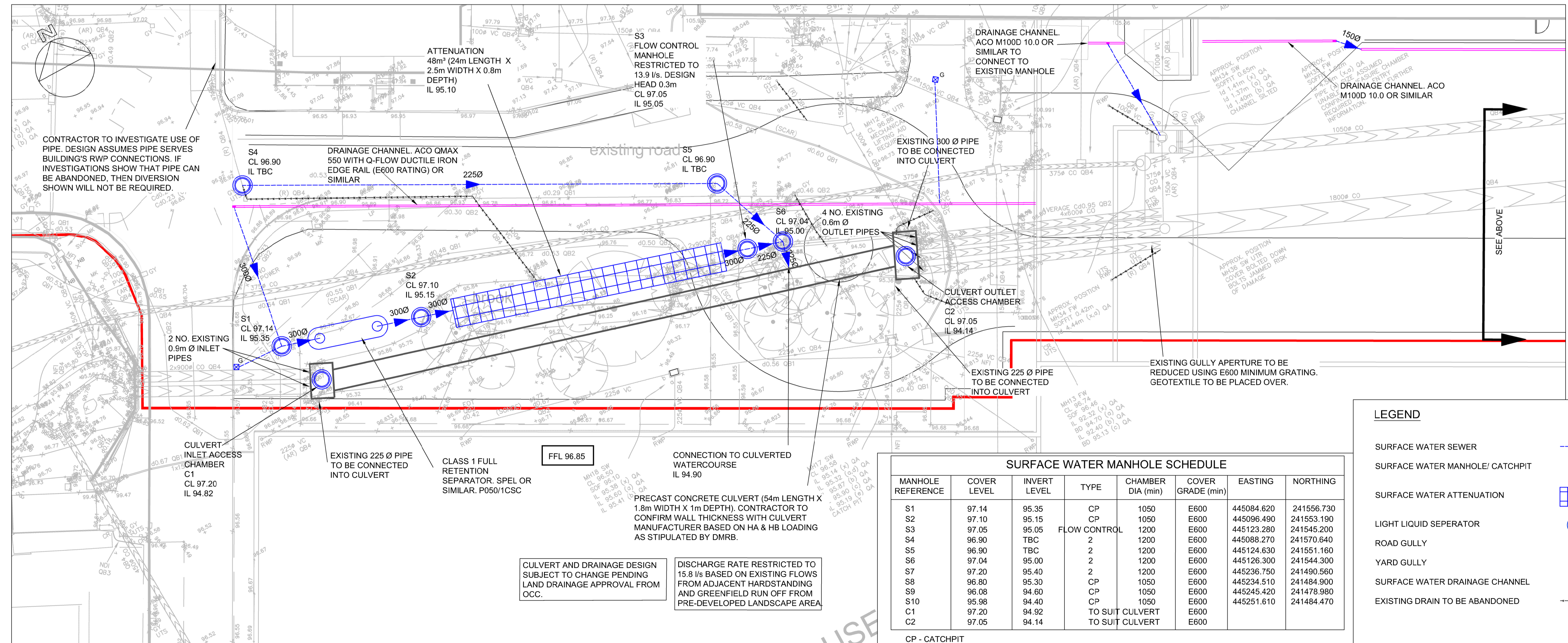


- NOTES:**
- THIS DRAWING IS NOT TO BE SCALED.
 - THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS' AND SERVICE ENGINEERS' DRAWINGS AND SPECIFICATIONS.
 - THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.
 - THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATION AND FROM GROUNDWATER BY MEANS OF SUMPS, PUMPING AND DE-WATERING AS APPROPRIATE, IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
 - ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.
 - PIPE MATERIAL SHALL BE AS FOLLOWS:
1000 TO 2250 - CLAYWARE TO BS EN 295 3000 AND ABOVE - CONCRETE TO BS EN 1916.
N.B PVCu PIPES TO BE EN 1401-1:1998 MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. PIPES OF LESS THAN 400MM DIAMETER TO HAVE A RESISTANCE OF 270 BAR.
 - SURFACE WATER PIPE DIAMETERS ARE AS INDICATED
PIPE GRADIENTS UNLESS SHOWN ARE:
SURFACE WATER: MINIMUM GRADIENT 1:80.
 - CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Z BEDDING.
 - UPVC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q OR Z BEDDING.
 - BACKFILL TO TRENCHES MAY BE SUITABLE EXCAVATED MATERIAL IN LANDSCAPED AREAS. TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARDSTANDINGS AND ROADS.
 - ROAD GULLY CONNECTIONS SHALL BE 150mm DIAMETER AND WITH CLASS Z BEDDING.
 - ROAD GULLIES SHALL BE TRAPPED 450mm DIAMETER x 900mm DEEP WITH CLASS D400 FRAME AND GRATINGS TO BS EN 124.
 - ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. FOR DETAILS OF COVER TYPE & LOCATION, PLEASE REFER TO THE MANHOLE SCHEDULE. MANHOLE COVERS WITHIN BLOCK PAVED AREAS & BUILDINGS SHALL BE RECESSED, DOUBLE SEALED WITHIN BUILDING.
 - ALL LIGHT LIQUID SEPARATORS SHALL BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS AND VENT LATED BY VENTILATION PIPEWORK TO MANUFACTURERS RECOMMENDATIONS AND FITTED WITH AN ALARM. LOCATIONS OF VENTS TO BE AGREED.
 - COVER LEVELS SHOWN ARE APPROXIMATE. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
 - MANHOLE COVERS TO BE RETAINED TO BE ADJUSTED TO PROPOSED LEVEL.
 - DRAINAGE LAYER TO BE LAID OVER EXISTING SLAB. REFER EXTERNAL WORKS DRAWING. DRAINAGE LAYER TO CONNECT INTO DRAINAGE CHANNEL.
 - ABANDONED PIPES TO BE FILLED WITH GROUT OR REMOVED.
 - VENTILATION TO BE PROVIDED TO ATTENUATION AS REQUIRED BY MANUFACTURER.
 - DRAINAGE LAYER TO BE LAID OVER EXISTING SLAB. REFER EXTERNAL WORKS DRAWINGS FOR LOCATIONS. DRAINAGE LAYER TO DRAIN TO DRAINAGE CHANNEL.



SURFACE WATER MANHOLE SCHEDULE

MANHOLE REFERENCE	COVER LEVEL	INVERT LEVEL	TYPE	CHAMBER DIA (mm)	COVER GRADE (min)	EASTING	NORTHING
S1	97.14	95.35	CP	1050	E600	445084.620	241556.730
S2	97.10	95.15	CP	1050	E600	445096.490	241553.190
S3	97.05	95.05	FLOW CONTROL	1200	E600	445123.280	241545.200
S4	96.90	TBC	2	1200	E600	445088.270	241570.640
S5	96.90	TBC	2	1200	E600	445124.630	241551.160
S6	97.04	95.00	2	1200	E600	445126.300	241544.300
S7	97.20	95.40	2	1200	E600	445236.750	241490.560
S8	96.80	95.30	CP	1050	E600	445234.510	241484.900
S9	96.08	94.60	CP	1050	E600	445245.420	241478.980
S10	95.98	94.40	CP	1050	E600	445251.610	241484.470
C1	97.20	94.92	TO SUIT CULVERT		E600		
C2	97.05	94.14	TO SUIT CULVERT		E600		

CP - CATCHPIT

- LEGEND**
- SURFACE WATER SEWER
 - SURFACE WATER MANHOLE/ CATCHPIT
 - SURFACE WATER ATTENUATION
 - LIGHT LIQUID SEPERATOR
 - ROAD GULLY
 - YARD GULLY
 - SURFACE WATER DRAINAGE CHANNEL
 - EXISTING DRAIN TO BE ABANDONED

Rev	Date	Description	By	Ckd
T4	13.09.17	CULVERT SIZE AND ATTENUATION AMENDED	AB	JH
T3	11.08.17	AMENDED TO SUIT JDE COMMENTS.	AB	JH
T2	07.08.17	AMENDED TO SUIT JDE COMMENTS.	GW	JH
T1	27.07.17	TENDER ISSUE	GW	JH



Project Title: **JDE BUILDING SEPARATION**

Drawing Title: **DRAINAGE LAYOUT**

Drawing Status: **TENDER ISSUE**

Hydrock Job No: **C161279**

Drawn: GW, Checked: JH, Scale @ A1: 1:200, Date: 27.07.17, Issue Date: 27.07.17

Drawing Number: **C161279-HYD-XX-XX-DR-C-0102**, Revision: **T4**