12-Sep

ISSUES RELATED TO WATER LEAKAGE

Source of leakage	Cause	Remedial measures	Reference Detail
External walls	Tile rod holes not grouted	Gaps in supervision to be closed. Work permit required along with checklist of sub-strata prior to start of external plaster	
	Junction of beam and masonry wall not grouted		
	Holes made in external walls for scaffolding are not properly grouted after scaffolding is removed		
	Chajja - top not waterproofed or planter box provided on chajja not waterproofed	Chajja top needs to be water proofed & planter boxes need to be large enough to afford sufficient working space for waterproofing masons to work	
	Chajjas not provided for punch windows	Punch windows to be provided with chajjas	
	Grooves in external plaster provided at junction of beam and wall	Groove positions need to be changed so that these do not fall at vulnerable locations (joints) considering the fact that thickness of plaster in grooves is much less.	
	Gap between window Acs & surrounding wall joints	Gaps need to be minimum and to be filled with silicon sealent from outside. Subframe with exact window AC size opening with EPDM gaskets all around to be provided.	Refer Jindal catalogue frame no 18416
	Gaps between aluminium windows and jambs	Need to provide stepped cill or proper aluminium subframe which facilitates draining the water away from window. Gaps need to be min. and sealed with silicon weather sealant	
From floors above	Junction between pipe and nahani trap not properly sealed	Stage wise sign off to be done. Also water level test to be done	
	In case of multiple inlet nahani trap, some inlets could be left open	Smoke test in soil and waste pipes compulsory prior to filling and flooring	
	Drop pipe provided above nahani trap up to Finished floor level (FFL) is not properly jointed and just kept on top of nahani trap	smoke test to be done for concealed piping	
	Leakages in concealed plumbing	Dry fixing + removing assembly + Final fixing to be followed for all concealed plumbing as jointing of pipes in laid condition is very difficult and not done as per required quality	
	Ingress of water under floor tiles (from floor bedding) where tile drop is provided as separation of dry and wet areas. E.g. (Kitchen utility area, bedroom and toilet floor junction, external deck and living / bedroom junction)	Vertical marble cill to be provided as a separator between the dry and wet area. Joint of dry and wet area to be grouted / sealed	Refer Detail A7
Service Ducts	Insufficient place for carrying out proper plaster from inside of service ducts	Sufficiently sized shafts to afford adequate working space for carrying out plaster	
	Top of service ducts at terrace not fully covered	Shafts to be covered from top at terace. Ventilation opening to be kept at sides with netting for preventing ingress of rodents / mosquitoes	Refer Detail A3
	Joints of pipes inside service ducts leaking	Smoke test mandatory	

12-Sep

ISSUES RELATED TO WATER LEAKAGE

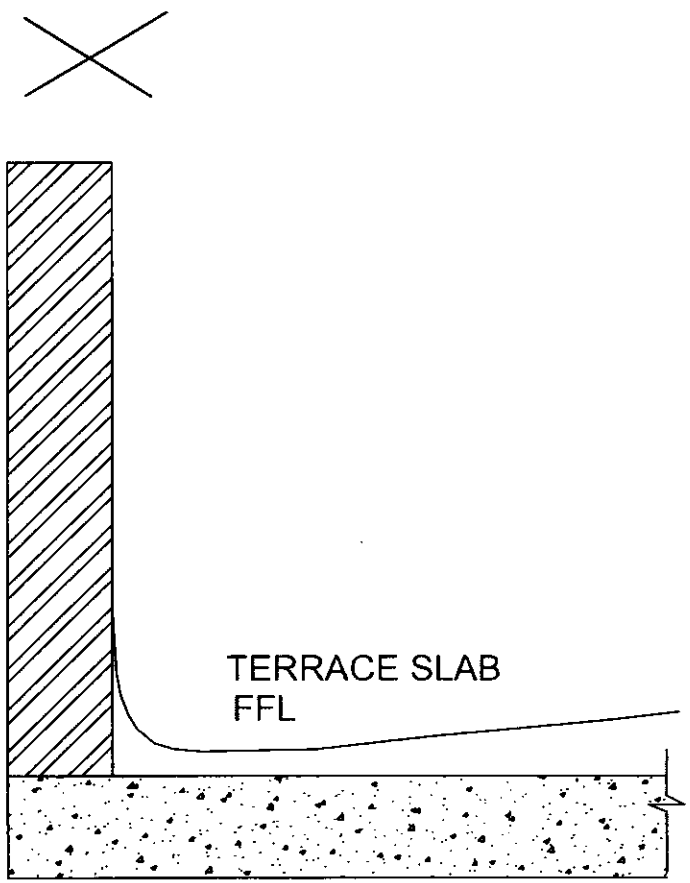
Source of leakage	Cause	Remedial measures	Reference Detail
		Access to shafts needs to be safe and secure for maintenance	
Expansion joints	Proper detail of manufacturer not followed	Manufacturer's shop drawing and installation procedures to be strictly followed	
	Long gap between expansion joint work and RCC completion	Work has to be completed immediately after the RCC works at that level is completed	
Terrace	Slab cast in many pours leading to construction joints	Construction joints to be grouted prior to waterproofing. Entire slab to be cast as single pour so that cold joints are avoided	
	Steel embeddments in waterproofing	Embeddments in waterproofing to be avoided	
	Service penetrations through terrace left untreated or poorly treated	Service penetrations through terrace if any need to be treated with proper waterproofing details with annular gaps sealed with silicon sealant or any sealant compatible with concrete and service	
	Parapet not waterproof	Internal and top plaster of parapet to be responsibility of terrace waterproofing contractor. Also RCC coping to be provided at top in case of masonry plaster	Refer detail A2
Swimming pool, water tanks, water bodies	sleeves left in form of pipe. Leakage around the pipes	All sleeves need to in form of puddle flanges placed in forms prior to concreting	Refer detail A6
	corecuts and chipping done after RCC completion	any corecut or chipping of concrete will surely cause leakage afterwards. This to be strictly avoided	
	joints of base raft and walls	Water stopper to be provided at joints of base raft and walls. In absence of waterstopper the junction to be grouted properly	Refer detail A4
	crystalline waterproofing	Crystalline wateproofing method to be avoided as it is found to be totally ineffective	
	masonry walls for water bodies	Water bodies need to have monolithic construction like concrete trough. All masonry walls of water bodies to be converted to RCC	Refer detail A4
Internal walls at skirting level	Non uniform cement backing behind skirting creating hollow gaps	Cement backing behind skirting to be uniform so that no hollow gaps are left	
	Junction between flooring and skirting not grouted	Junction between flooring and skirting needs to be grouted with white cement	
	no plaster on masonry walls up to skirting height leading to water used in floor polishing travelling upwards due to capillary action	Preferable to plaster masonry wall up to skirting height. Skirting to be fixed with grout	Refer detail A5
Basement raft & Retaining wall	crystalline waterproofing	Crystalline wateproofing method to be avoided as it is found to be totally ineffective	
	joints of base raft and walls	Water stopper to be provided at joints of base raft and walls. In absence of waterstopper the junction to be grouted properly	
	construction joints in raft	all construction joints need to be pre-planned in case of raft concreting so that they can be correctly identified at later stage. All construction joints in walls to be properly marked in drawing and grouted immediately after formwork is removed	

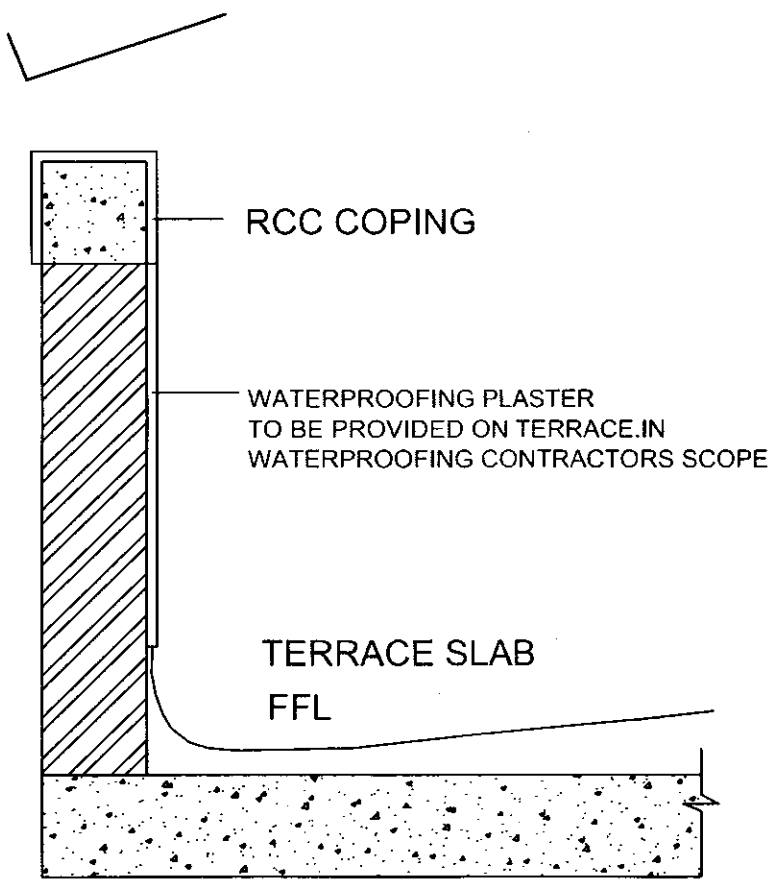
12-Sep

ISSUES RELATED TO WATER LEAKAGE

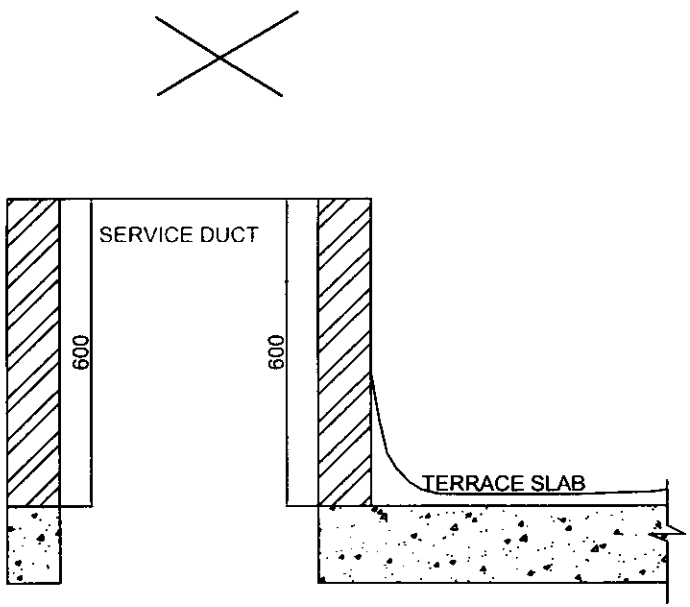
Source of leakage	Cause	Remedial measures	Reference Detail
	waterproofing material not sticking to the substrata due to wet surface	In case of chemical waterproofingthe material selected must be workable on wet surface (most of membranes do not stick to wet surface)	
	sleeves left in form of pipe. Leakage around the pipes	All sleeves need to in form of puddle flanges placed in forms prior to concreting	Refer detail A6
	corecuts and chipping done after RCC completion	any corecut or chipping of concrete will surely cause leakage afterwards. This to be strictly avoided	
Parking floors	architectural openings in external walls leading to water entry during monsoons on Podium Parking floors	Since we do not waterproof parking floor slabs the openings in external walls need to have louvers or arrangements for temporary closure during monsoon	
	construction joints in slab	Construction joints in floor slabs need to be grouted prior to ceiling painting below or flooring above	
	Rain water outlets at long distances creating non uniform slopes, leading to ponding of water	Rain water outlets need to be provided at sufficiently close distance so that proper slope is available for water to drain from any point	
Podium & ramp	sleeves left in form of pipe. Leakage around the pipes	All sleeves need to in form of puddle flanges placed in forms prior to concreting	Refer detail A6
	corecuts and chipping done after RCC completion	any corecut or chipping of concrete will surely cause leakage afterwards. This to be strictly avoided	
	Service penetrations through podium slab not treated or poorly treated	Service penetrations through podium slab need to be treated separately after slab waterproofing (refer terrace remedial measures - point no 3)	
	masonry walls for water bodies	Water bodies need to have monolithic construction like concrete trough. All masonry walls of water bodies to be converted to RCC	Refer detail A4

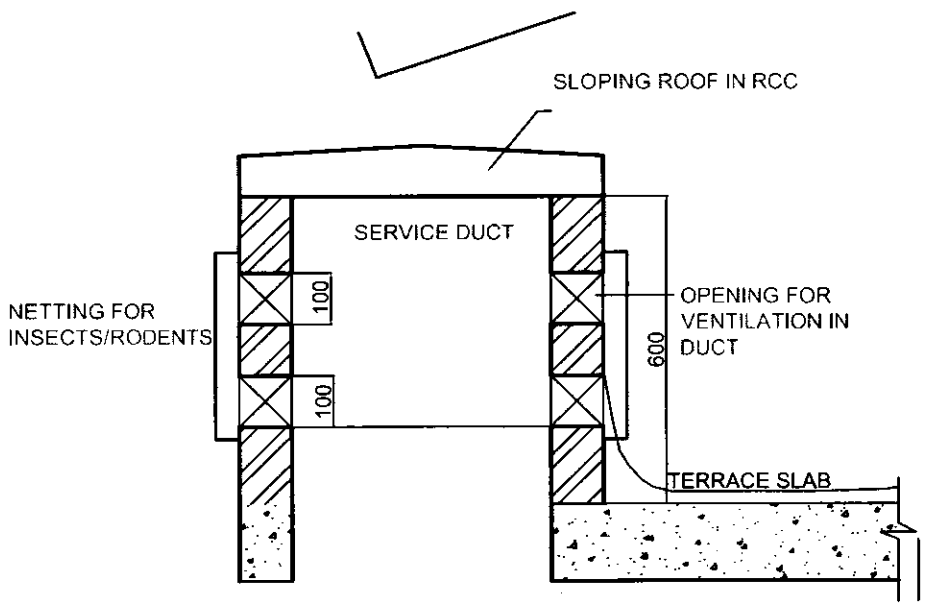
A-2 MASONARY PARAPET ABOVE TERRACE



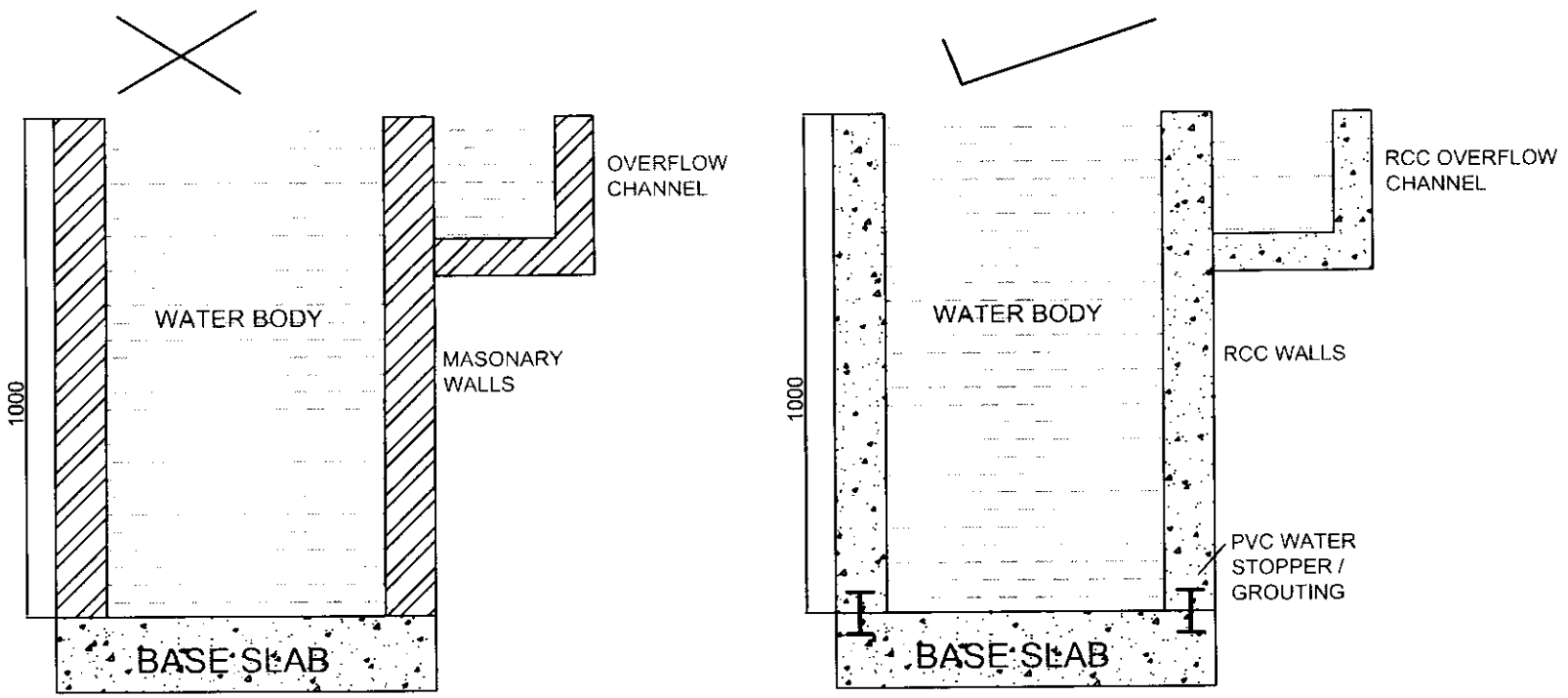


A-3 TOP OF TERRACE SHAFT

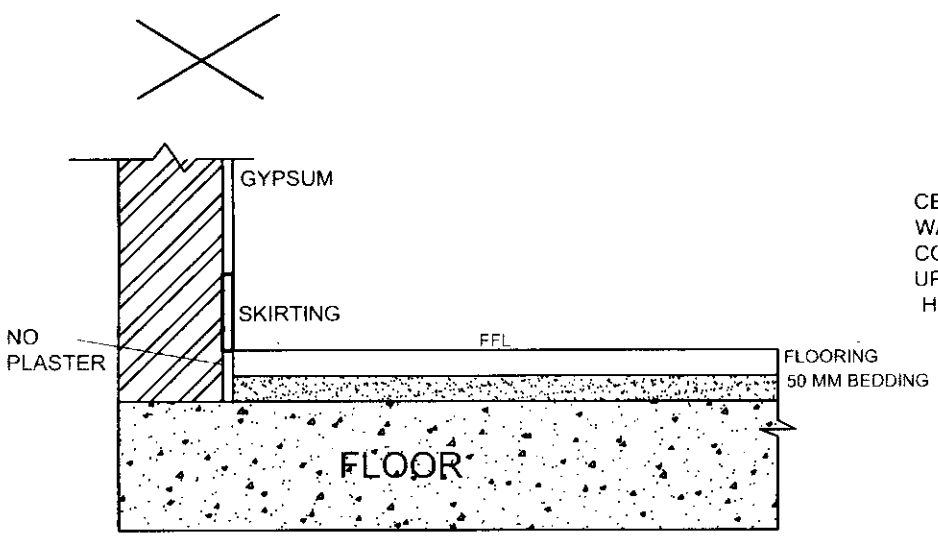


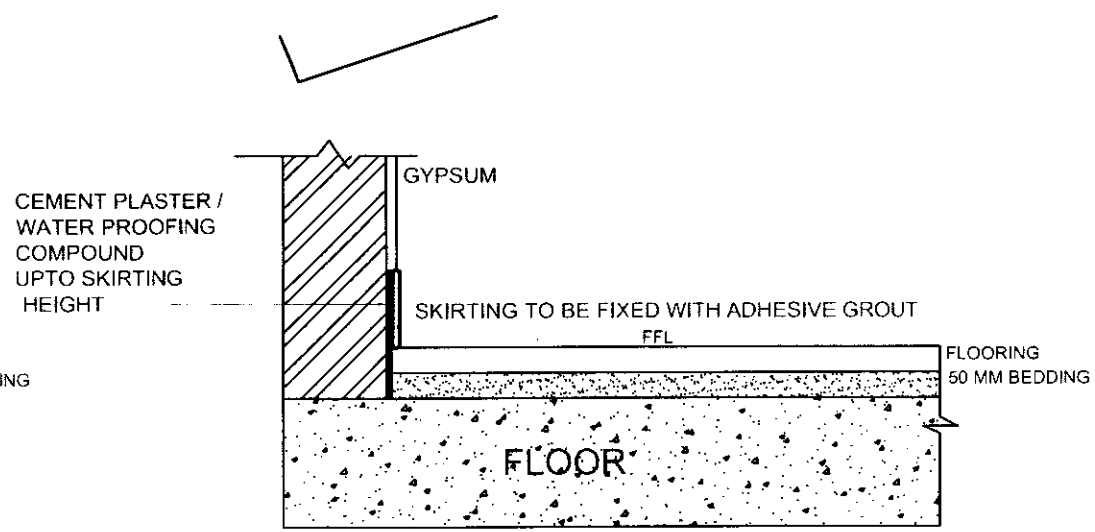


A-4 RCC DETAIL FOR SWIMMING POOL AND WATER BODIES

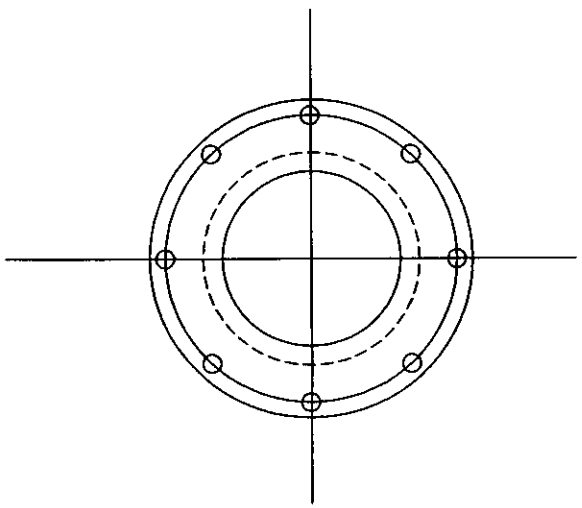


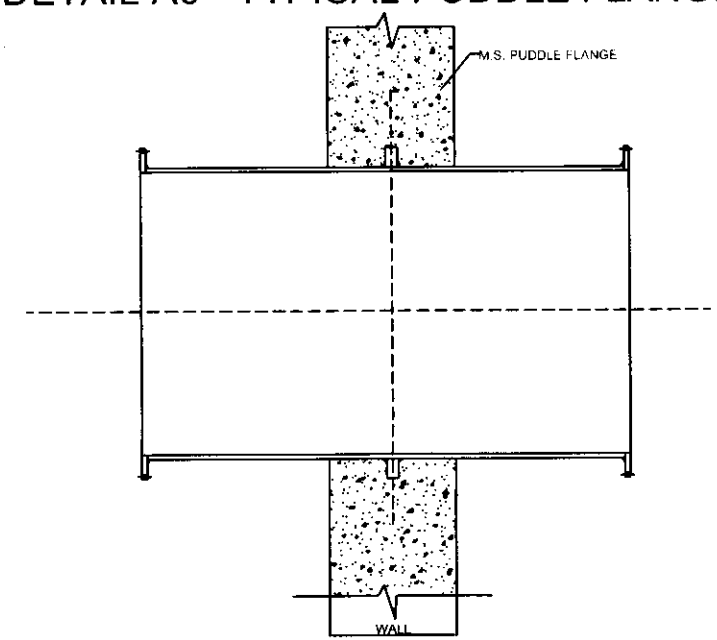
A-5 PLASTER UPTO SKIRTING HEIGHT



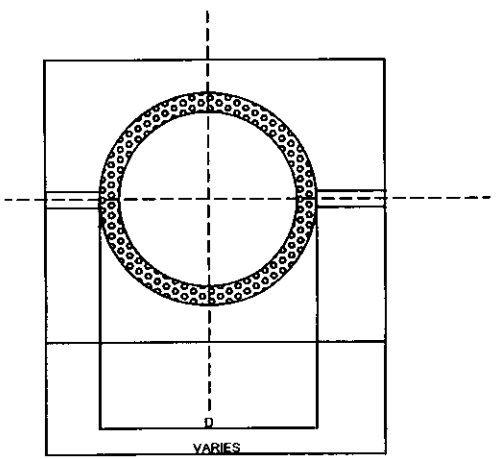


DETAIL A6 - TYPICAL PUDDLE FLANGE





SLEEVES DETAIL
SCALE - NTS



PUDDLE FLANGE DETAIL

A 7 JUNCTION BETWEEN DRY AND WET AREAS

