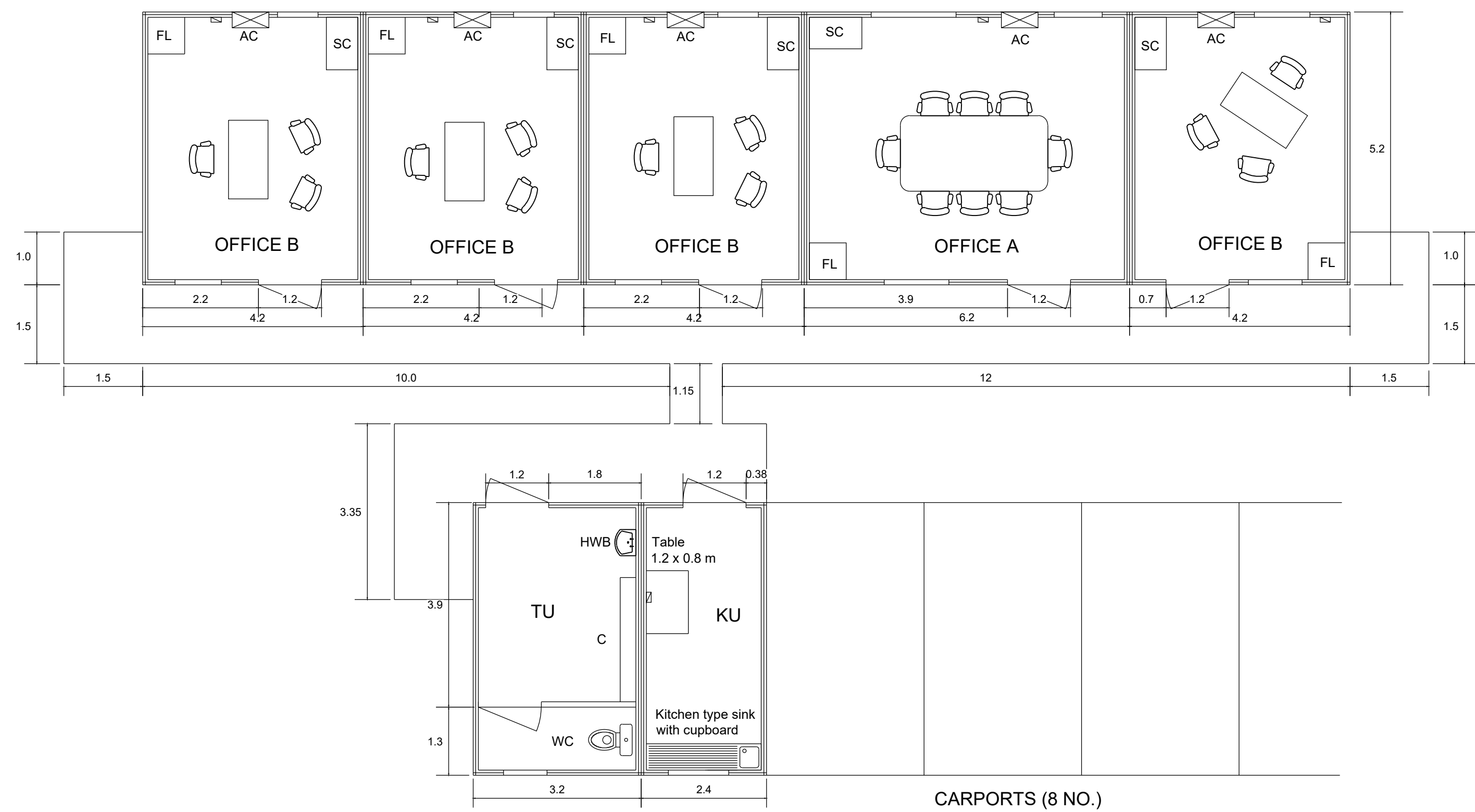


TYPICAL LAYOUT FOR LABORATORY UNITS



TYPICAL LAYOUT FOR OFFICE UNITS

KEY NOTES:

C	CUPBOARD
CB	CONCRETE BASIN
CCB	CONSTANT TEMP. CURING BATH
CW	CONCRETE WORK BENCH
CLN	CUPBOARD WITH LOCK FOR NUCLEAR GAUGE
EF	EXTRACTOR FAN
FL	FILING CABINET
HWB	HAND WASH BASIN
L	LOCKER
S	SHOWER
SC	STEEL CABINET
U	URINAL
WC	TOILET
WS	WOODEN SHELVE
15 A/220 V	POWER POINT
WINDOW	DOOR
AC	AIR-CONDITIONER

UNIT TYPES:

- TYPE A - LABORATORY (Basic compaction unit)  
TYPE B - LABORATORY (Basic indicator unit)  
TYPE C - LABORATORY (Field density unit)  
TYPE D - LABORATORY (Chemical unit)  
TYPE E - LABORATORY (Concrete unit)  
TYPE F - LABORATORY (Asphalt/bitumen rubber unit)  
TYPE G - LABORATORY (Store unit)  
CU - COOKING UNIT  
AU - ABLUTION UNIT  
KU - KITCHEN  
TU - TOILET  
OFFICE A  
OFFICE B

STANDARD FURNITURE AND EQUIPMENT

ITEM		NUMBER PER UNIT													
		LABORATORY TYPE							GENERAL				OFFICE		
		A	B	C	D	E	F	G	CU	AU	KU	TU	A	B	
INTERIOR FLOOR AREA IN m (SPECIFIED IN PROJECT SPECS.)	Small														
	Medium								16	24			24		
	Large	40	24			24									
	Standard			16	16		20	12			8	8		16	
HIGH CHAIRS (lab type) or DRAUGHTSMAN STOOLS		2	2	2	2	2	2							1	
LIGHTS - Double 80 W Fluorescent type complete		3	2	2	2	2	2	2	2	2	1	1	1	2	
HEATERS													1	1	
220/250 POWER POINTS		8	5	3	3	4	7		3	2	2		2	2	
400/231 v 3-Phase POWER POINTS		1													
LABORATORY BASINS COMPLETE WITH SWAN NECK TAPS		1	1		1	1	1								
EXTRACTOR FANS (Complete)		2	1		1		2								
BCP TYPE FIRE EXTINGUISHERS		1	1	1	1	1	2		1		1		1		
WOODEN SHELVLING		8	10	5	8	2	8	24	2						
WORK BENCH WITH CONCRETE TOPS		6	8	3	7	2	5		2						
CONCRETE FOUNDATIONS FOR LAB EQUIPMENT		1				1	1								
SINGLE DOORS		1	1	1	1		1	1	1	3	1	2	1	1	
DOUBLE DOORS		1				1									
CUPBOARDS WITH LOCK FOR NUCLEAR GAUGE				1											
CONSTANT TEMPERATURE CURING BATH (Project Spec. *)						*									
CONCRETE BASINS									1						
WOODEN TABLES (Kitchen)									2		1				
FOUR PLATE STOVE									1						
HOT PLATE FOR COOKING PURPOSES											2				
REFRIGERATOR									1		1				
RUBBISH BINS/WASTE PAPER BASKETS									1		1		1	1	
KITCHEN CHAIRS (Refer to number of people *)									*		2				
VENETIAN BLINDS FOR WINDOWS @ 25% FLOOR AREA									yes		yes		yes	yes	
SHOWERS										2					
WC PANS										2		1			
URINALS 2 m LONG										1		1			
HAND WASH BASIN										2		1			
LOCKERS (Refer to number of people *)										*					
WOODEN BENCHES										2					
LOCKABLE GENERAL PURPOSE STEEL CUPBOARD													1	1	
FILING CABINET													1	1	
OFFICE CHAIRS													8	3	
OFFICE DESK													1	1	
CONFERENCE TABLE (8 PERSONS)													1		
AIR-CONDITIONER													1	1	
KITCHEN TYPE SINK WITH STEEL CUPBOARD (1,8 m)											1				
KITCHEN CUPBOARD									1						
DRAWING TABLE (2 m)														1	
DRAWING RACK or SHELF FOR PLAN STORAGE													1	1	
BOOKSHELVES													1	1	
WHITE BOARD (2 m)													1		
SMALL TABLE FOR COMPUTER & PRINTER													1	1	

NOTES:

- CONCRETE WORK BENCH MUST BE 700 mm WIDE AND 920 mm HIGH WITH ONE WOODEN SHELVE UNDERNEATH.
- EXTRACTOR FANS AND AIR-CONDITIONING UNITS MUST HAVE OWN POWER POINTS.
- FIRE EXTINGUISHERS MUST BE MOUNTED OUTSIDE UNITS NEXT TO DOOR OPENING.
- DOORS MUST OPEN IN DIRECTION SHOWN ON DRAWINGS.
- TOILET AND ABLUTION UNITS WINDOWS MUST BE OPAQUE.
- INSIDE LAYOUT DETAILS OF LABORATORY UNITS SHALL BE COMPLIED WITH. LAYOUT OF LABORATORY AND OFFICE BUILDING COMPLEX MAY BE AGREED WITH ENGINEER.
- CONCRETE WORKING FLOORS: OPEN AND COVERED AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- VERANDA TO BE PROVIDED FOR EACH BUILDING: 1,5 m WIDE OVER FULL LENGTH ON SIDE OF BUILDING AS INDICATED ON DRAWING.
- TELEPHONE EXTENSIONS TO BE PROVIDED IN OFFICE ONLY SPECIFIED IN THE PROJECT SPECIFICATIONS.
- WINDOW AREA TO BE 25% OF FLOOR AREA OF EACH UNIT.
- ALL UNITS SHALL BE PROVIDED WITH EFFECTIVE BURGLAR PROOFING.

FOR TENDER

(FOR TENDER PURPOSES ONLY)

CONSTRUCTION RECORD (AS-BUILT)			DESIGNED BY		CONSULTANT APPROVAL		HEAD OFFICE		EASTERN REGION		ACCEPTANCE		PROJECT DESCRIPTION		PROJECT NUMBER		N.002-300-2020/1	
WORKS CONTRACT ENGINEER			NAME		Name		48 Tambotie Avenue		58 Van Eck Place		THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING		THE CONSTRUCTION OF PAVEMENT AND SETTLEMENT REPAIRS ON NATIONAL ROUTE 2, SECTION 30 FROM BUSHVELD RETREAT FARM (km47.0) TO HLUHLWE INTERCHANGE (km 55.0)		DRAWING LOCATION DATA		START	
Name			Prof. Reg. No.		Prof. Reg. No.		Pretoria 0184		Mkondeni Pietermaritzburg 3201		Date		ROUTE		N.002		N.002	
SANRAL PROJECT MANAGER			CHECKED BY		Date		PO Box 415		PO Box 100410		for the SA NATIONAL ROADS AGENCY SOC LTD.		SECTION		SECTION 30		SECTION 30	
Name			NAME		Prof. Reg. No.		Pretoria 0001		Scottsville 3209		Date		km 47.0		km 55.0		km 55.0	
Date			DRAWN BY		NAME		Tel: (012) 844 8000		Tel: (033) 392 8100		Date		DRAWING TYPE		SITE ESTABLISHMENT		N/A	
1 23/10/09 ORIGINAL			CONSULT. ENG.		Name		Date		Date		Date		BRIDGE/STRUCTURE No.		TP2113-T-040		VER	
No. DATE REVISION			CONSULT. ENG.		Name		Date		Date		Date		CONSULTANT DRAWING No.		SANRAL DOCUMENT #		1	