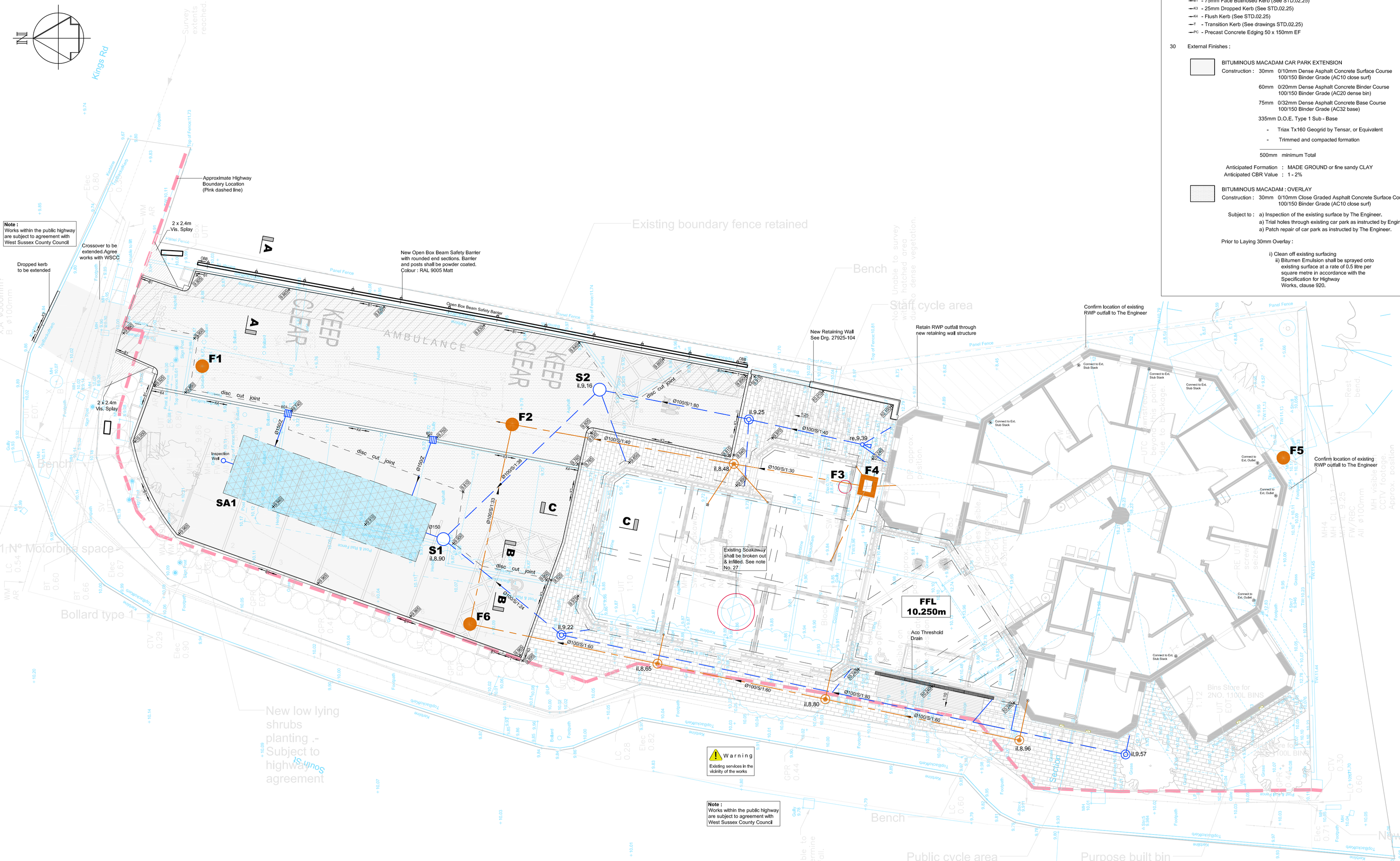


Outstanding Design Issues :

* On site soakage testing by The Contractor.
* Full Soakaway design.

PROVISIONAL SOAKAWAY SCHEDULE

TYPE	LOWEST INCOMING INVERT LEVEL	EFFECTIVE DEPTH (H)	TOTAL DEPTH (m)	RING DIA. (m)	PIT DIMENSIONS PLAN (L x W) (m)	COVER SIZE (CLEAR OPENING) (mm)	COVER TYPE	COMMENT
SA1	1. b. c.	1.600	2.500	–	10.00 x 3.00	1 x ø225	B125	SEE DRG 'ST-A3' HIGH STORAGE SOAKAWAY

1. A Lotrak 1800 geotextile or equivalent surround is required.
2. Soakaways shall be a minimum of 5.00m from any buildings or structures.
3. The Contractor shall immediately notify the Engineer if groundwater is encountered in soakaway pits.
4. A provisional soil infiltration rate of 7.0 E-6 m/sec has been used for soakaway design. Full soil infiltration testing to BRE.365 shall be undertaken at the site by The Contractor, with soakage rate results supplied to The Engineer for further consideration.

SURFACE WATER MANHOLE SCHEDULE

M.H. REF.	COVER LEVEL	INVERT LEVEL. LOWEST PIPE.	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H./ CATCHPIT TYPE	COMMENT
S1	9.900	8.900	900 x 675	VENTED 600 Sq.	D400	C2A	CATCHPIT CHAMBER
S2	9.820	9.160	750 x 675	750 x 600	D400	P2	MANHOLE

FOUL MANHOLE SCHEDULE

M.H. REF.	COVER LEVEL	INVERT LEVEL. LOWEST PIPE.	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H./ CATCHPIT TYPE	COMMENT
F1	9.860	7.700	EXISTING CHAMBER	EXISTING	–	–	ADJUST COVER LEVEL
F2	9.775	8.200	ø1050	600 x 600	D400	P3	DRG. STD.01.23
F3	9.830	8.710	REDUNDANT	EXISTING	–	–	DEMOLISH CHAMBER
F4	10.250	8.710	600 x 450	600 x 450	B125(GWR)	INTERNAL	SEE DRG. 27925-04
F5	10.170	9.250	EXISTING CHAMBER	EXISTING	–	–	–
F6	9.950	8.500	750 x 675	750 x 600	D400	P2	DRG. STD.01.22

GWR = Double sealed, gas and watertight, bolt down, recessed cover

29 Kerb types are shown thus :

- B1 - 75mm Face Bullnosed Kerb (See STD.02.25)
- K3 - 25mm Dropped Kerb (See STD.02.25)
- K4 - Flush Kerb (See STD.02.25)
- T - Transition Kerb (See drawings STD.02.25)
- PC - Precast Concrete Edging 50 x 150mm EF

30 External Finishes :

BITUMINOUS MACADAM CAR PARK EXTENSION

Construction : 30mm 0/10mm Dense Asphalt Concrete Surface Course 100/150 Binder Grade (AC10 close surf)
60mm 0/20mm Dense Asphalt Concrete Binder Course 100/150 Binder Grade (AC20 dense bin)
75mm 0/32mm Dense Asphalt Concrete Base Course 100/150 Binder Grade (AC32 base)
335mm D.O.E. Type 1 Sub - Base
- Triax Tx160 Geogrid by Tensar, or Equivalent
- Trimmed and compacted formation
500mm minimum Total

Anticipated Formation : MADE GROUND or fine sandy CLAY
Anticipated CBR Value : 1 - 2%

BITUMINOUS MACADAM : OVERLAY

Construction : 30mm 0/10mm Close Graded Asphalt Concrete Surface Course 100/150 Binder Grade (AC10 close surf)

Subject to : a) Inspection of the existing surface by The Engineer.
a) Trial holes through existing car park as instructed by Engineer.
a) Patch repair of car park as instructed by The Engineer.

Prior to Laying 30mm Overlay :

i) Clean off existing surfacing
ii) Bitumen Emulsion shall be sprayed onto existing surface at a rate of 0.5 litre per square metre in accordance with the Specification for Highway Works, clause 920.

NOTES

1 This drawing to be read in conjunction with all relevant Architects and Engineers drawings and specifications.

2 Dimensions are in millimetres unless noted otherwise.

3 Original topographic survey undertaken by Se Surveying.
For full topographic survey information see Se Surveying drawings no. 012/07/15 001 + 002.
All levels based on a Datum at Station No. 1, Value : 10.000m

4 **Existing levels shown thus:** +16.77

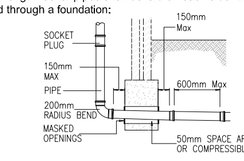
5 Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.

6 All drainage shall be in accordance with Building Regulations 2002: Part H & W.S.A Sewers for Adoption 7th edition.

7 Details of existing sewers & drains shall be confirmed by the contractor on site prior to the commencement of works.

8 Sewers of different diameters shall be laid soffit to soffit in manholes, unless backdrops are detailed.

9 Private drains passing through walls and footings are to be sleeved and a 600mm length of rocker pipe shall be laid on each side of the wall or footing. Runs under building shall have a type 'S' bed and surround, unless depth below underside of slab is less than 300mm where a 150mm bed and surround of concrete is to be used. Where pipes pass beneath foundations 600mm length rocker pipes shall be laid on each side. Below is shown a typical detail of a pipe sleeved through a foundation:



10 Manhole (M.H.) covers and inspection chamber (I.C.) shall be adjusted to suit final surface levels.

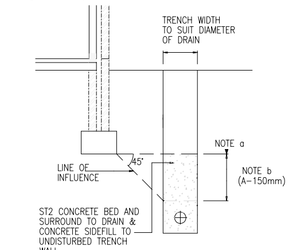
11 Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.

12 For positions of SVP's stub stacks and rainwater pipes see detailed Architects layouts.

13 Minimum gradients for pipes where no gradient is shown shall be 1:80.

14 Dimensions of M.H. on private drains and sewers to be in accordance with requirements of the Building Regulations.

15 Drainage trenches lower than foundations:
a) Where drainage trench is within 1.0 distance of a building the trench is to be filled with concrete mix ST 2up to the level of the foundation, in accordance with Building Regulation 2002: Part H, diagram 8.
b) Where drainage trench is distance 'A' from footing and the depth of trench below foundation level is geater than 'A' the lower trench shall be infilled with concrete mix ST 2 such that the top level of concrete infill is no less than ('A' - 150mm) below foundation level. Notes a) and b) are represented diagramatically below:



16 Pipe materials shall be:
a) For external private drain runs:
i) Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
ii) UPVC pipes on accordance with BS 4660 & BS 5481: 1989 (flexible pipes)
iii) Ductile iron pipe work in accordance with BS EN 598, as Stanton Integral with high performance joints or equivalent.
b) For adoptable sewers/highway drains, see longitudinal sections.

17 Definition of 'rigid' and 'flexible' pipes shall be as Building Regulations Part H, table 7.

18 Flexible pipes - Where private flexible pipes have more than 900mm cover under vehicular areas and more than 600mm cover under gardens, bedding and backfill shall be Type S as shown on drawing STD.01.85.
For special protection where pipes are laid with less cover see notes below.
a) Where private flexible pipes have less than 900mm cover under vehicular areas, a reinforced concrete bridging slab shall be used (as Type 'Y' drawing STD.01.85) Reference Building Regulations 2000: Part H.
b) Where private flexible pipes have less than 600mm cover under gardens, concrete paving slabs laid as bridging slab shall be used (as Type 'X' drawing STD.01.85,) Reference Building Regulations 2002: Part H.

19 Rigid pipes - Bedding and backfill shall be Type 'S' as shown on drawing STD.01.85, except on lengths where special protection is required (see notes below).
a) Where Ø 100mm private rigid pipes have less than 400mm cover under vehicular areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
b) Where Ø 100mm private rigid pipes have less than 300mm cover under garden areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H
c) Where Ø 150mm private rigid pipes have less than 600mm cover under any areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H

20 Private storm and foul drainage connections shall be detailed by the Architect.

21 All external rainwater down pipes shall discharge through a proprietary bottle gulley as shown on drawing STD.01.12.

22 Trenches below existing carriageways and parking areas shall be reinstated with D.O.E Type 1 material in accordance with standard detail STD.02.05.

23 Channel drains shall be 100mm Aco Multi Drain MD with 0.5% in built gradient, or equivalent. They shall discharge via a sump by Aco or equivalent. Grating shall be Class B125 (Heelguard). To be installed in accordance with manufacturers instructions.

24 Road gullies shall be in accordance with drawing STD.01.05 Type 1T.

25 All utility covers & frames within the extent of the works shall be adjusted as necessary. The Contractor shall ensure that all services within vehicular areas have appropriate grade covers & frames as shown : Vehicular areas : D400 Pedestrian areas : B125

26 Where drains are to be abandoned they shall be removed or infilled by grouting in accordance with The Civil Engineering Specification for the Water Industry - 6th Edition, clause 5.23. Drainage runs shall be CCTV Surveyed prior to being abandoned to ascertain whether any "blind" junctions exist.

27 Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with foamed concrete.

28 All internal rain water pipes and foul outlets that do not connect directly to an inspection chamber shall have a rodding access provided above floor level for future maintenance purposes, Pre-formed connections shall be installed for all 'Y' and 'T' junctions.

30 Finishes Continued :

PERMEABLE BLOCK PAVING (Provisional)

Construction : 60mm Marshalls Priora Permeable Blocks, or equivalent Block Bond and Colour to be confirmed
30mm of 6mm Nominal Sized Basalt Aggregate, or equivalent
- Lotrak 1800 Geotextile
250mm Type 3 (Permeable) Sub Base
- Triax Tx160 Geogrid by Tensar, or equivalent
340mm Total

Provisional pavement construction only shown. Full soil infiltration testing to BRE.365 shall be undertaken at the site by The Contractor.

31 Drainage Key :

- Proposals
- Proposed Surface Water Drains Ø100 Unless Noted Otherwise
- Surface Water Manhole/ Ø450 Insp. Chamber/ Rodding Eye
- Proposed Foul Drains Ø100 Unless Noted Otherwise
- Foul Manhole/Ø450 Inspection Chamber/ Roddable Floor Gulley (Gulley details by others)
- Internal Manhole
- Ø100/S/1:80 Gradient
- Bed Type (See STD.01.85)
- Pipe Diameter
- Direction of Fall
- 50.500x Proposed Level

REV	DESCRIPTION	CHECKED	DATE
T2	CAR PARK ENTRANCE WORKS EXTENDED.	-	PF-25-11-16
T1	TENDER ISSUE. FOUL DRAINAGE LAYOUT COMPLETED.	-	PF-20-10-16
P3	EXISTING RWP LOCATIONS ADDED.	-	PF-26-08-16
P2	RETAINING WALL ADDED.	-	PF-19-08-16

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CLIENT
New Pond Road Surgery

PROJECT
New Pond Road Surgery
Lancing
General Arrangement

DRAWN BY	CHECKED BY	DESIGNED BY
PF	VC	PF
SCALE @ A1	©DATE	STATUS
1:100	Aug. 2016	Tender
JOB NO.	DRAWING NO.	REVISION
27925	102	T2