

**FLEXIBLE CARRIAGEWAY  
WSCC CONSTRUCTION SPECIFICATION**

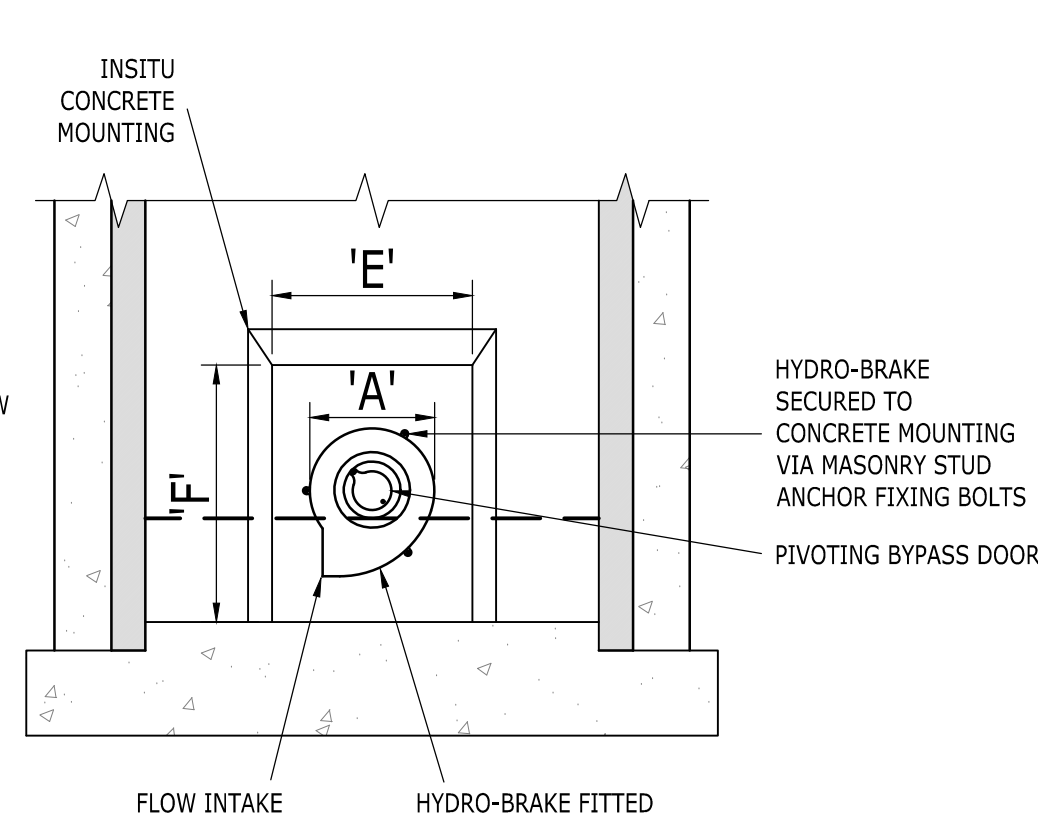
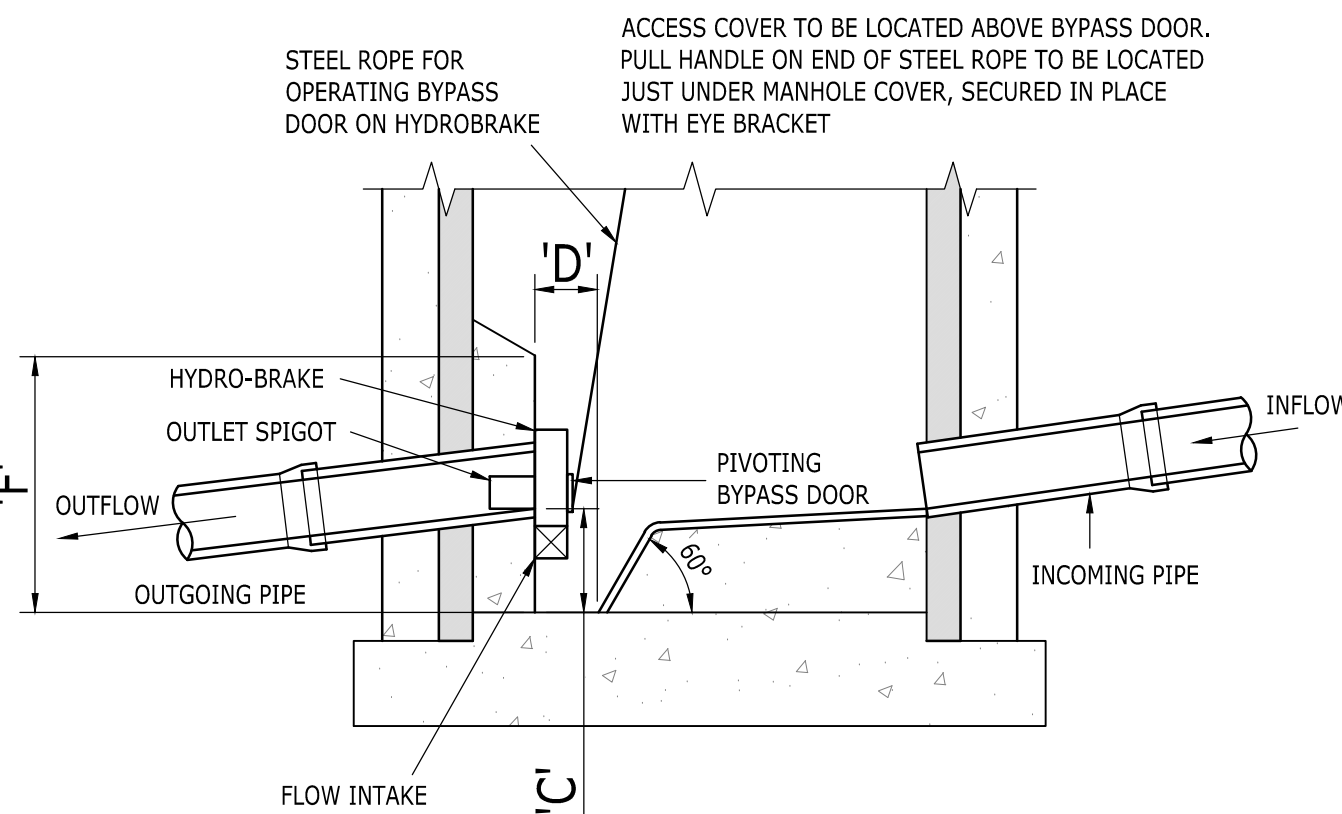
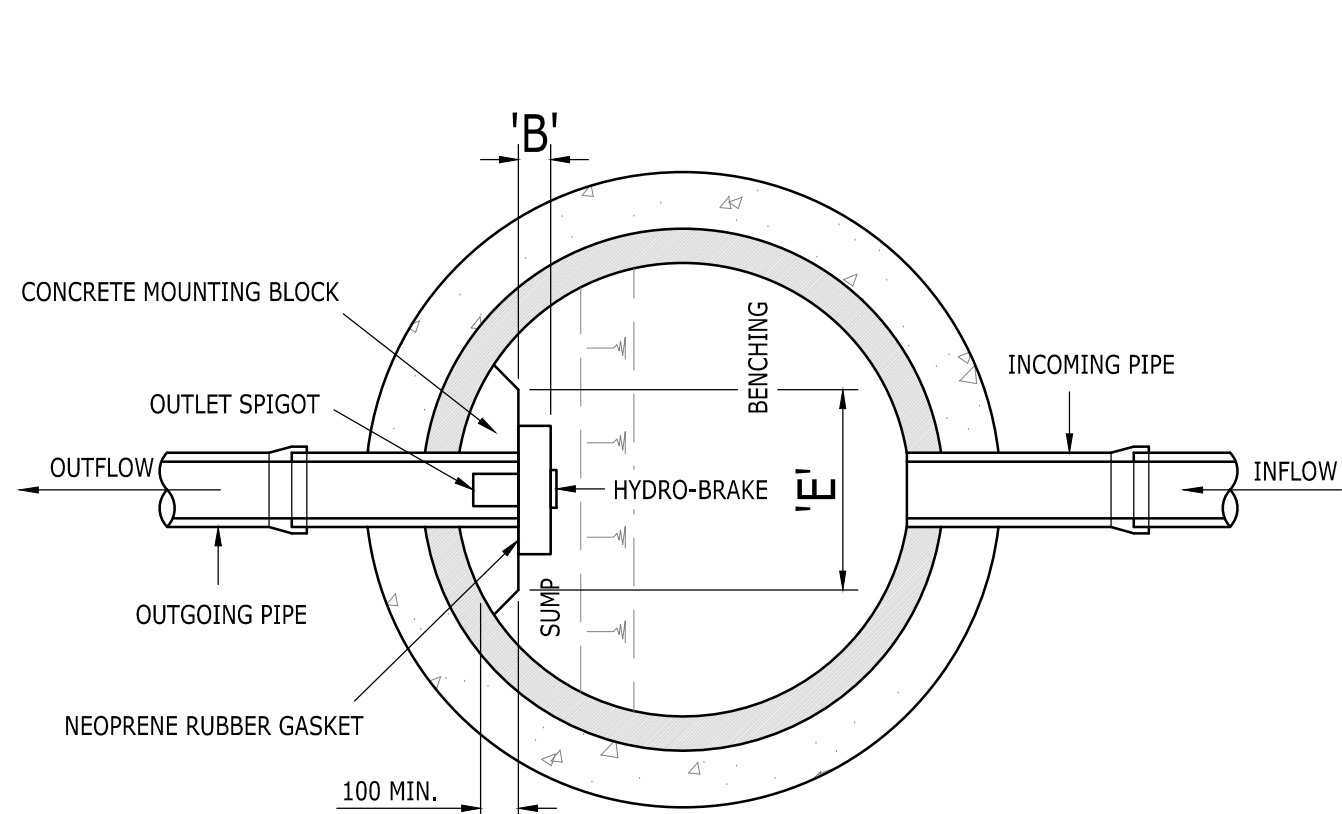
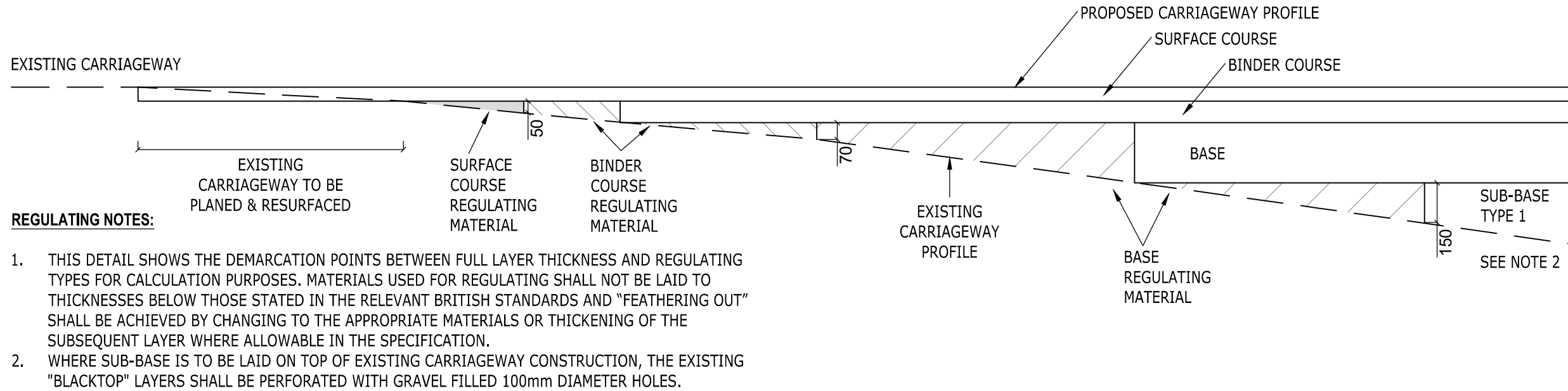
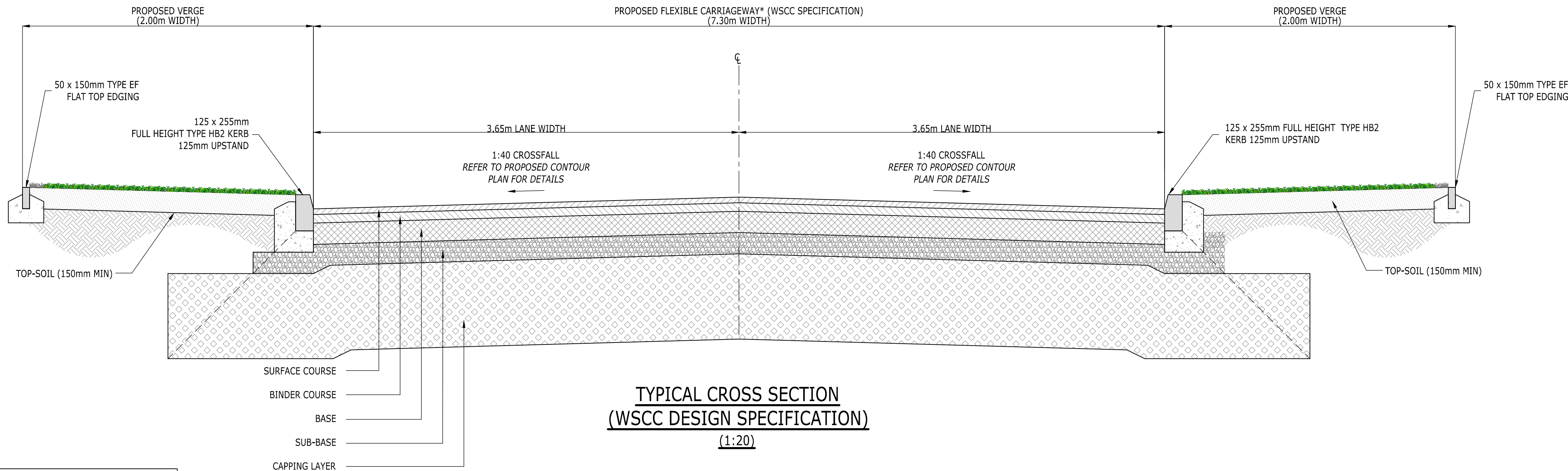
**SURFACE COURSE**  
50mm of HRA 55/14 WITH 14/20mm PRE-COATED CHIPPINGS, TO BS EN 13108-4 HOT ROLLED ASPHALT AND THE SPECIFICATION GIVEN ON WSCC STANDARD DETAIL DRAWING S278/38/21 rev E. MINIMUM PSV=65 AND TEXTURE DEPTH=1.2mm.

**BINDER COURSE**  
60mm of AC 20 BIN 40/60 PEN TO BS EN 13108-1 ASPHALT CONCRETE

**BASE**  
150mm of AC 32 BASE 40/60 PEN TO BS EN 13108-1 ASPHALT CONCRETE

**SUB-BASE**  
150mm MIN. OF TYPE 1 GRANULAR MATERIAL TO CLAUSE 803 MCHW1

**CAPPING LAYER**  
600mm MIN. OF CLASS 6F1/6F2 MATERIAL TO TABLE 6/1 OF SERIES 600 OF MCHW1 (MATERIAL TO BE CHECKED AND APPROVED ON SITE BY HIGHWAYS INSPECTOR PRIOR TO USE)  
**(BASED UPON A DESIGN CBR OF 2.2% DETERMINED BY SOAKED CBR TESTING UNDERTAKEN BY GSTL DATED 23/09/2024)**



**HYDRO-BRAKE DIMENSION TABLE - (ALL DIMENSIONS IN mm)**

| MANHOLE REFERENCE | HYDRO INTERNATIONAL HYDRO-BRAKE REFERENCE | 'A' (HYDRO-BRAKE WIDTH) | 'B' (HYDRO-BRAKE DEPTH) | 'C' (SUMP DEPTH) | 'D' (SUMP WIDTH (MIN.)) | 'E' (MOUNTING BLOCK WIDTH (MIN.)) | 'F' (MOUNTING BLOCK HEIGHT (MIN.)) | OUTGOING PIPE SIZE | OUTGOING PIPE INVERT LEVEL | SUMP INVERT LEVEL | CHAMBER DIAMETER |
|-------------------|-------------------------------------------|-------------------------|-------------------------|------------------|-------------------------|-----------------------------------|------------------------------------|--------------------|----------------------------|-------------------|------------------|
| S9                | SHE-0051-1400-1500-1400                   | 310                     | 60                      | 270              | 120                     | 515                               | 660                                | 3000               | 3.829                      | 3.559             | 12000            |

**NOTES**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATION AND ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
- DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES UNLESS OTHERWISE STATED.
- ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER.
- ALL DRAINAGE WORKS SUBJECT TO WEST SUSSEX COUNTY COUNCIL APPROVAL.
- ALL MATERIALS AND WORKMANSHIP SHALL COMPLY FULLY WITH THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, VOLUME ONE, SPECIFICATION FOR HIGHWAY WORKS AND THE LOCAL AUTHORITY SPECIFICATION FOR ROAD CONSTRUCTION AND STANDARD DETAILS.
- THE CONTRACTOR SHALL UNDERTAKE SUCH MATERIALS TESTING AS INDICATED IN THE SPECIFICATIONS AND SHALL INCLUDE THE COST OF TESTING IN THE TENDER.
- UNLESS STATED OTHERWISE, ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AT AN APPROVED TIP OFF-SITE.
- THE PUBLIC HIGHWAY AND WORKS WILL BE KEPT CLEAN AND FREE OF DEBRIS BY USE OF WHEEL WASHING FACILITIES AND ROAD SWEEPERS TO THE COUNCIL'S SATISFACTION.
- ALL SETTING OUT SHALL BE AGREED ON-SITE WITH THE ENGINEER, PRIOR TO THE COMMENCEMENT OF THE WORKS.
- UPON COMPLETION OF THE WORKS, THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY MAINTENANCE REPAIRS TO RETURN THE HIGHWAY TO ITS FORMER CONDITION. THIS SHALL INCLUDE THE REINSTATEMENT OF VERGES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS FROM WSCC PRIOR TO COMMENCING WORKS ON THE HIGHWAY.
- PROPOSED GULLY GRATINGS AND FRAMES SHALL BE SET AT A LEVEL OF 5-10mm BELOW THE FINISHED LEVEL OF THE CARRIAGEWAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIONING ROAD GULLIES AT ALL LOW SPOTS IN THE CARRIAGEWAY.
- NO DOORS, WINDOWS, GATES ETC. SHOULD OPEN OVER THE ADAPTABLE HIGHWAY AND THERE SHOULD BE NO PROJECTING RAIN WATER DOWN PIPES OR OVERHANGING EAVES FROM ROOFS.
- NO SURFACE WATER RUN-OFF FROM PRIVATE AREAS SHALL DISCHARGE ONTO THE ADAPTABLE HIGHWAY.
- THERE SHALL BE NO PLANTING OVER 600mm IN HEIGHT WITHIN VISIBILITY SPLAYS.

**CDM NOTES:**

- THE ATTENTION OF THE CLIENT AND THE PRINCIPAL CONTRACTOR IS DRAWN TO THE FOLLOWING POTENTIAL RISKS IN CONJUNCTION WITH THE PROPOSED ON-SITE AND OFF-SITE WORKS AS DESIGNED FOR THIS PROJECT.
- WORKS IN THE VICINITY OF LIVE SERVICES INCLUDING GAS, ELECTRICITY AND BT WILL BE NECESSARY AND THE ADVICE OF ALL STATUTORY SERVICE COMPANIES MUST BE SOUGHT BEFORE ANY WORKS COMMENCE.
- WORKS WITHIN AND ABUTTING THE EXISTING HIGHWAY WILL ENTAIL TRAFFIC HAZARDS AND ALL APPROPRIATE SAFETY MEASURES INCLUDING BARRIERS, SIGNS AND LIGHTING MUST BE UNDERTAKEN TO THE APPROVAL OF THE LOCAL AUTHORITY, THE HIGHWAY AUTHORITY AND THE POLICE CONSTABULARY.
- HAZARDOUS MATERIALS INCLUDING CEMENT AND BITUMINOUS MATERIALS ARE SPECIFIED AND THE MANUFACTURER'S ADVICE ON SAFE HANDLING PROCEDURES MUST BE OBTAINED AND MADE CLEAR TO ALL OPERATIVES.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN THE VICINITY OF THE WORKS HAND DUG AND ENSURE THESE ARE PROTECTED THROUGHOUT THE DURATION OF THE WORKS. ALL UTILITY PLANT SHOULD BE CLEARLY MARKED ON THE GROUND PRIOR TO COMMENCEMENT OF THE WORKS.
- THE CONTRACTOR MUST ENSURE ALL WORKING AREAS ARE FULLY SECURE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIAISON WITH THE RELEVANT BUS COMPANIES TO ENSURE ALL ROUTES ARE MAINTAINED DURING THE HIGHWAY WORKS.

**TRAFFIC MANAGEMENT:**

- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A SATISFACTORY TRAFFIC MANAGEMENT SYSTEM FOR THE DURATION OF THE WORKS.
- ALL TRAFFIC MANAGEMENT PROPOSALS SHALL BE SUBMITTED TO AND AGREED WITH WEST SUSSEX COUNTY COUNCIL AND POLICE CONSTABULARY PRIOR TO IMPLEMENTATION.

**NOTES:**

- DURING CONSTRUCTION THE CONTRACTOR MUST DEMONSTRATE THAT THE CBR VALUE OF THE SUBGRADE IS EQUAL TO OR GREATER THAN THE DESIGN CBR VALUE. IT SHOULD BE NOTED THAT THE CONSTRUCTION THICKNESS MAY NEED TO BE INCREASED IF IN-SITU CBR VALUES AT THE TIME OF CONSTRUCTION ARE LESS THAN THE DESIGN CBR VALUE (CONTRACTOR TO CONSULT ENGINEER PRIOR TO LAYING OF CAPPING / SUB-BASE IF THIS IS THE CASE). HOWEVER, A REDUCTION IN THE CONSTRUCTION THICKNESS WILL NOT BE CONSIDERED IF THE IN-SITU CBR VALUES AT THE SAME TIME OF CONSTRUCTION ARE GREATER THAN THE DESIGN CBR VALUE. IN-SITU CBR TESTING SHALL BE CARRIED OUT AT NOT GREATER THAN 30m CENTRES, STAGGERED ACROSS THE WIDTH OF THE ROAD CORRIDOR. ACCEPTABLE IN-SITU CBR TEST METHODS INCLUDE: TRL DYNAMIC CONE PENETROMETER TESTING, CALIFORNIA BEARING RATIO (BS1377, PART 9), OR ALTERNATIVELY THE CBR VALUE MAY BE DERIVED FROM PLATE BEARING TEST DATA.
- IN ADDITION TO THE SUB-GRADE CONFIRMATION CBR TEST, DURING CONSTRUCTION, THE CONTRACTOR SHALL ALSO CARRY OUT IN-SITU CBR TEST AT THE TOP OF CAPPING (DEMONSTRATING THAT A MINIMUM 15% CBR IS BEING ACHIEVED) AND AT THE TOP OF THE SUB-BASE (DEMONSTRATING THAT A MINIMUM 30% CBR IS BEING ACHIEVED).
- THE CONTRACTOR SHALL PROVIDE A PLAN SHOWING IN-SITU CONFIRMATION CBR TEST LOCATIONS, NUMBERED ACCORDINGLY AND TEST RESULTS CORRESPONDING WITH THE NUMBERING INDICATED ON SAID PLAN.
- CONTRACTOR TO PROVIDE DELIVERY TICKETS AND GRADING CERTIFICATES FOR ALL CAPPING AND SUB-BASE MATERIAL DELIVERED TO SITE WHICH IS TO BE USED UNDER ADAPTABLE ROADS.

**APPROVED FOR CONSTRUCTION**

| CI  | TECHNICAL APPROVAL                                                | AMC | AMC | AD  | 07.03.25 |
|-----|-------------------------------------------------------------------|-----|-----|-----|----------|
| T3  | DESIGN CBR UPDATED TO 2.2% AND CAPPING INCREASED TO 600mm TO SUIT | JEC | MJR | JEC | 05.11.24 |
| T2  | REFERENCE TO CBR TESTING ADDED                                    | JEC | MJR | JEC | 16.10.24 |
| T1  | ISSUED FOR TENDER                                                 | MJR | MJR | JEC | 05.07.24 |
| P1  | DRAWING NUMBER UPDATED, SURFACE COURSE DEPTH UPDATED              | JEC | MSL | JEC | 21.06.24 |
| Rev | Description                                                       | Drm | Chk | App | Date     |

**ARDENT** CONSULTING ENGINEERS

Third Floor,  
The Hallmark Building  
52-56 Leadenhall Street  
London  
EC3M 5JE

Tel: 020 7680 4088  
Web: [www.ardent-ce.co.uk](http://www.ardent-ce.co.uk)  
E-mail: [enquiries@ardent-ce.co.uk](mailto:enquiries@ardent-ce.co.uk)

**worksafe** consultant  
[www.smesitd.com](http://www.smesitd.com)

**SSIP** SAFETY  
SUSSEX INSTITUTE OF  
TECHNOLOGY

ISO 9001  
BUREAU VERITAS  
CERTIFICATION

|                |                                                          |             |  |  |        |
|----------------|----------------------------------------------------------|-------------|--|--|--------|
| Client         | VISTRY SOUTH EAST                                        |             |  |  |        |
| Project Title: | FORD AIRFIELD, ARUN:<br>SECTION 278 WORKS                |             |  |  |        |
| Drawing Title: | YAPTON ROAD ROUNDABOUT<br>CONSTRUCTION DETAILS (SHEET 2) |             |  |  |        |
| A1 Scale       | Date                                                     | Designed by |  |  |        |
| 1:250          | 07.06.24                                                 | IL          |  |  |        |
| Drawn by       | Checked by                                               | Approved by |  |  |        |
| IL             | MSL                                                      | JEC         |  |  |        |
| Drawing Number | 2205772-D1171                                            |             |  |  | Rev C1 |