

GENERAL NOTES

- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION AND STANDARD CONSTRUCTION DETAILS. CONSTRUCTION PRODUCTS SUPPLIED ON THIS PROJECT ARE TO BE IN ACCORDANCE WITH THE EU CONSTRUCTION PRODUCTS REGULATION (NO.3052011-CPR). PRODUCTS ARE TO BEAR THE CE MARKING LABEL & ARE TO BE IN ACCORDANCE WITH THE HARMONISED EUROPEAN STANDARDS (HENS) OR, FOR PRODUCTS NOT COVERED BY THE HENS, ARE TO BE IN ACCORDANCE WITH THE EUROPEAN ASSESSMENT DOCUMENTS (EADs). THE NATIONAL STANDARDS AUTHORITY OF IRELAND (NSAI) HAS PRODUCED ADDITIONAL GUIDANCE TO SOME HENS IN THE FORM OF NATIONAL ANNEXES OR STANDARD RECOMMENDATIONS (SRs) WHICH SET OUT APPROPRIATE MINIMUM PERFORMANCE LEVELS FOR SPECIFIC INTENDED USES OF THE PRODUCT IN IRELAND. NSAI HOST THIS INFORMATION AT WWW.NSAI.IE
- CONTRACTOR IS TO REFER TO GENERAL NOTES-STRUCTURAL DRAWING FOR DETAILS RELATING TO EXCAVATIONS, FOUNDATIONS & BACKFILLING, CAST-IN-SITU CONCRETE ETC.
- ALL DIMENSIONS IN METERS UNLESS SPECIFIED OTHERWISE.
- ALL CO-ORDINATES ARE TO RISH TRAVELER MERCATOR.
- ALL LEVELS ARE TO ORDNANCE DATUM (MAIN HEAD).
- ALL EXISTING LEVELS, EXISTING SITE TOPOGRAPHY AND SURROUNDING SITE TOPOGRAPHY HAS BEEN TAKEN FROM ALTIQEO SURVEY DRAWING REF: 0127-AG-XX-ZZ-DR-G-20001.
- THE CONTRACTOR SHALL CONFIRM ALL EXISTING DRAINAGE / MANHOLE INVERT LEVELS & THE LOCATION OF ALL EXISTING SERVICES ON SITE PRIOR TO COMMENCEMENT OF THE WORKS.
- USICE EIREANN
 - ALL WATER SUPPLY WORKS TO BE IN ACCORDANCE WITH USICE EIREANN 'CODE OF PRACTICE FOR WATER INFRA-STRUCTURE'. THE CONTRACTOR IS TO REFER TO USICE EIREANN 'WATER INFRA-STRUCTURE' STANDARD DETAIL 'A' FOR STANDARD WATER MAIN DETAILS AS PROVIDED AS BMCE DRAWING BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12400, HOWEVER THE CONTRACTOR IS ADVISED USICE EIREANN'S DOCUMENTS TAKE PRECEDENCE.
 - ALL FLOOR DRAINAGE WORKS TO BE IN ACCORDANCE WITH USICE EIREANN 'CODE OF PRACTICE FOR WASTEWATER INFRA-STRUCTURE'. THE CONTRACTOR IS TO REFER TO USICE EIREANN 'WATER INFRA-STRUCTURE' STANDARD DETAIL 'A' HOWEVER, A SIMPLE USICE EIREANN'S DOCUMENTS TAKE PRECEDENCE.
- PRIOR TO THE COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR IS TO CARRY OUT A FLOOD TEST ON ALL EXISTING FIRE HYDRANTS ON THE SITE AND WITHIN 15m OF THE SITE BOUNDARY. TEST RESULTS ARE TO BE CIRCULATED TO THE PROJECT FIRE CONSULTANT AND BMCE FOR REVIEW.
- WITH REFERENCE TO USICE EIREANN QUALITY ASSURANCE FIELD INSPECTION REQUIREMENTS MANUAL, BMCE WILL PROVIDE THE SERVICES AS LISTED FOR THE 'DEVELOPER'S DESIGN ENGINEER'.
- THE CONTRACTOR IS TO INCLUDE FOR ALL SERVICES AS LISTED FOR THE 'DEVELOPER'S CONSTRUCTION ENGINEER' AND ALL LIASONS WITH USICE EIREANN FIELD ENGINEER. THIS INCLUDES ALL TESTING AND COMMISSIONING OF THE WATER AND/OR WASTEWATER INFRASTRUCTURE AND CONFIRMATION OF THE RESULTS OF ALL TESTING AND COMMISSIONING BY WAY OF ANCILLARY CERTIFICATES AND TEST RESULT CERTIFICATES, IN RESPECT OF THE ON-SITE, OFF-SITE TESTING AND COMMISSIONING OF THE WATER AND/OR WASTEWATER INFRASTRUCTURE. BMCE'S RESPONSIBILITY WILL BE LIMITED TO A DESKTOP REVIEW OF THE TESTING RECORDS CONDUCTED AND WITNESSED BY OTHERS (LOCAL AUTHORITY / USICE EIREANN FIELD ENGINEERS) THAT THE WATER AND/OR WASTEWATER INFRASTRUCTURE HAS BEEN APPROPRIATELY TESTED ON SITE.
- LOCAL AUTHORITY SURFACE WATER
 - ALL SURFACE WATER DRAINAGE WORKS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY CODE OF PRACTICE AND STANDARDS.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL APPLICATIONS TO THE LOCAL AUTHORITY FOR TEMPORARY ROAD OPENING LICENCES, TEMPORARY DRAINAGE CONNECTIONS ETC.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL LIASONS WITH THE LOCAL AUTHORITY RELATING TO DRAINAGE INSPECTIONS / FINAL SIGN-OFF.
- GREEN / BLUE ROOFS
 - THE MAIN CONTRACTOR (AND/OR THEIR APPOINTED SPECIALIST ROOF SUBCONTRACTOR) SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN, COORDINATION, SPECIFICATION, DETAILING, INSTALLATION, INSPECTION, BCAR CERTIFICATION, WARRANTY AND MAINTENANCE SPECIFICATIONS FOR ALL GREEN/BLUE ROOFS AND PODIUM BUILD UP.
 - FOR THE AVOIDANCE OF DOUBT BMCE ARE NOT RESPONSIBLE FOR THESE ELEMENTS, AS CIVIL ENGINEERS, BMCE ROLE IN THESE ELEMENTS, RELATES SOLELY TO THEIR USE AS SUDS DEVICES (WHERE APPLICABLE) IN ACCORDANCE WITH BS 8483. THE ROOF BUILD UPS THIS SHALL NOT BE CONSTRUCTED AS A DESIGN BY BMCE, AND IS DEMONSTRATIVE PURPOSES ONLY.
 - FOR FURTHER INFORMATION REFER TO BMCE SUDS STRATEGY DRAWING FOR 'GREEN BLUE ROOF & PODIUM BUILD-UPS - SUDS PERFORMANCE SPECIFICATION'.
- FIRE CERT & FIRE FIGHTING STRATEGY
 - BMCE ARE NOT RESPONSIBLE FOR THE DEVELOPMENT FIRE CERT APPLICATION OR THE FIRE FIGHTING STRATEGY FOR THE SITE / DEVELOPMENT, WE NOTE USICE EIREANN'S CODE OF PRACTICE FOR WATER INFRASTRUCTURE (JULY 2020 REVISION 2) CLAUSE 1.1.7 RELATING TO FIRE AUTHORITY LIAISON. WE NOTE ALL RESPONSIBILITIES RELATING TO 'THE DEVELOPER' ARE NOT WITHIN BMCE'S SCOPE OF WORKS. WE ALSO NOTE RESPONSIBILITY FOR ANY 'LIASONS WITH THE FIRE AUTHORITY AND AGREEING ALL ARRANGEMENTS FOR THE PROVISION OF FIRE FLOW FOR FIRE FIGHTING PURPOSES' AS OUTLINED IN CLAUSE 1.1.7 ARE ALSO NOT PART OF BMCE'S SCOPE OF WORK.
 - THE CLIENT / PROJECT FIRE CONSULTANT ARE TO SATISFY THEMSELVES THAT ALL EXISTING AND PROPOSED FIRE HYDRANTS WILL PROVIDE SUFFICIENT FLOWS FOR FIRE FIGHTING PURPOSES.
 - BMCE WILL INDICATE THE EXISTING AND PROPOSED WATERMAIN LAYOUT FOR THE SITE INCLUDING THE LOCATION OF EXISTING AND PROPOSED FIRE HYDRANTS, HOWEVER AS OUTLINED ABOVE, WILL TAKE NO RESPONSIBILITY FOR THE PERFORMANCE FOR FIRE FIGHTING PURPOSES.
- CONSTRUCTION TRAFFIC MANAGEMENT
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF ALL CONSTRUCTION TRAFFIC.
 - THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND ALTERING ROAD SPECIFICATIONS IF INTENDED TO BE USED AS TEMPORARY CONSTRUCTION ROUTES.
- STORM WATER BURIED ATTENUATION TANKS TO BE DESIGNED AND SUPPLIED BY SPECIALIST SUBCONTRACTOR AND APPROVED VIA TECHNICAL SUBMITTAL. ALL TANKS TO BE DESIGNED FOR FIRE TENDER VEHICULAR LOADS UNLESS NOTED OTHERWISE.

ROADS / FOOTPATH NOTES

NOTE: ALL ROADS A PER DRAWING C-12100

- ALTERNATIVE ROAD BASE MATERIAL:**

AS AN ALTERNATIVE TO DENSE BITUMEN MACADAM ROADBASE THE CONTRACTOR CAN USE A LEAN MIX ROADBASE. AGGREGATES FOR LEAN MIX CONCRETE MAY CONSIST OF EITHER COARSE AND FINE AGGREGATE BATCHED SEPARATELY, OR AN ALL-IN-AGGREGATE, HAVING A MAXIMUM NOMINAL SIZE NOT EXCEEDING 40mm NOR LESS THAN 20mm AND SHOULD LIE WITHIN THE GRADING LIMITS SET OUT IN TABLE 1.1 BELOW.

SIEVE SIZE IS 24	PERCENTAGE BY MASS PASSING	
	40mm	20mm
75mm	100	-
37.5mm	95-100	100
20mm	45-80	80-100
5mm	30-40	35-45
600 µm	8-30	10-35
150 µm	0-6	0-6

PARTICLE SIZE DISTRIBUTION SHOULD BE DETERMINED BY THE WASHING AND SIEVING METHOD OF BS 812: PART 103. THE RATIO, BY MASS, OF CEMENT TO AGGREGATE, SHOULD BE SUCH AS TO PRODUCE 28 DAY CUBE STRENGTHS NOT LESS THAN 10N/mm² AND NOT MORE THAN 20N/mm². CURING OF LEAN-MIX ROAD BASE SHALL BE BY BUTYMINOUS SPRAYING TO CLAUSE 920 SPECIFICATION FOR ROAD WORKS
- USE OF ROADBASE FOR CONSTRUCTION TRAFFIC:**

THE ROADBASE MAY BE USED FOR CONSTRUCTION TRAFFIC PROVIDED IT IS INCREASED IN THICKNESS BY 50mm AND SURFACE DRESSED. SURFACE DRESSING SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE MANUAL 'SURFACE DRESSING' PUBLISHED BY THE DEPARTMENT OF THE ENVIRONMENT. THE SURFACE SHOULD BE CUTBACK BITUMEN OR CATIONIC BITUMEN EMULSION, COMPLYING WITH THE SPECIFICATION ISSUED BY THE DEPARTMENT OF THE ENVIRONMENT. OTHER BINDERS MAY BE USED, SUBJECT TO APPROVAL.

CUTBACK BITUMEN SHOULD BE OF THE APPROPRIATE GRADE RECOMMENDED IN THE MANUAL. CATIONIC BITUMEN EMULSION SHOULD HAVE A NOMINAL BITUMEN CONTENT OF 70%. THE BINDER SHOULD BE SPREAD AT THE APPROPRIATE RATE RECOMMENDED IN THE MANUAL. CHIPSPRING SHOULD BE AS APPROVED BY THE LOCAL AUTHORITY (LOCAL AUTHORITY), CUBICAL IN SHAPE AND SHOULD COMPLY WITH THE REQUIREMENTS OF TABLE 4 OF THE MANUAL.
- DEPTH OF SUB-BASE & CAPPING LAYER**

THE DEPTH OF THE SUB-BASE AND CAPPING LAYERS WILL VARY WITH THE SUBGRADE STRENGTH AS INDICATED BY THE CBR TEST RESULTS.

THE THICKNESS OF THE SUB-BASE LAYER SHOULD BE 150mm FOR ALL FORMS OF ROADWAY CONSTRUCTION.

THE THICKNESS OF THE CAPPING LAYER WILL VARY WITH THE CBR VALUE, AS INDICATED IN TABLE 3.1 BELOW. IF THE CBR VALUE OF THE SUBGRADE EXCEEDS 15%, NO CAPPING LAYER IS REQUIRED.

ROADS / FOOTPATH NOTES (Cont'd)

- | LOWEST SUBGRADE | MINIMUM CAPPING LAYER | MINIMUM CAPPING LAYER |
|-----------------|---------------------------|---------------------------|
| CBR (%) | THICKNESS (mm) | THICKNESS (mm) |
| * LESS THAN 2 | 300 | 300 |
| 2-5 | 150 | 150 |
| 5-15 | 150 | 150 |
| MORE THAN 15 | NO CAPPING LAYER REQUIRED | NO CAPPING LAYER REQUIRED |
- * FOR SUBGRADES WITH A CBR OF LESS THAN 2%, A GEOTEXTILE SEPARATOR (e.g. TERRAM 1000) SHOULD BE USED AND SPECIALIST ADVICE SOUGHT REGARDING MINIMUM THICKNESS.
- IF THE CONTRACTOR PROPOSES TO USE THE SUB-BASE FOR CONSTRUCTION TRAFFIC HE SHOULD SEEK APPROVAL FROM THE ENGINEER TO DO SO. SUCH APPROVAL WILL ONLY NORMALLY BE GIVEN ON CONDITION THAT THE SUB-BASE THICKNESS IS INCREASED. TYPICALLY FOR CBR VALUES ≤ 4% THE SUB-BASE THICKNESS WILL HAVE TO BE INCREASED BY 150mm. FOR CBR VALUES ≥ 4% AN INCREASE OF 80mm WILL BE SUFFICIENT. SUBGRADE STRENGTH SHOULD BE ESTABLISHED BY MEANS OF THE CALIFORNIA BEARING RATIO (CBR) TEST. IN ACCORDANCE WITH BS 1377: PART 4, SECTION 7, SAMPLES SHOULD BE TAKEN AT THE RATE OF ONE PER 100m OF ROAD AND WHERE SIGNIFICANT VARIATIONS IN SOIL TYPE ARE ANTICIPATED, EXTRA SAMPLES MAY BE REQUIRED BY THE LOCAL AUTHORITY WHERE THE DIFFERENCE IN STRENGTH BETWEEN TWO ADJACENT SAMPLES INDICATES A SIGNIFICANT VARIATION IN SOIL TYPE. IN PREPARING THE TEST SPECIMEN, THE METHOD OF COMPACTING SHOULD BE THE STATIC COMPACTION METHOD 2, AS SPECIFIED IN PARAGRAPH 7.2.3 OF BS 1377: PART 4. UNLESS NOTED OTHERWISE, CBR TESTS TO BE TAKEN AT 25m Cns. AT FORMATION LEVEL ALONG THE ROAD CENTRELINE.
- MATERIAL SPECIFICATION FOR SUB-BASE AND CAPPING LAYER:**

(a) SUB-BASE: SUB-BASE MATERIAL SHOULD COMPRISE TYPE B GRANULAR MATERIAL, IN ACCORDANCE WITH CLAUSE 804 OF THE SPECIFICATIONS FOR ROADWORKS. THE MATERIAL SHOULD LIE WITHIN THE GRADING LIMITS SET OUT IN TABLE 4.1 BELOW.

SIEVE SIZE IS 24	PERCENTAGE BY MASS PASSING
75mm	100
37.5mm	80-100
10mm	40-70
5mm	25-45
600 µm	8-22
75 µm	0-10

PARTICLE SIZE DISTRIBUTION SHOULD BE DETERMINED BY THE WASHING AND SIEVING METHOD OF BS 812: PART 103. ALL MATERIAL USED SHOULD BE FRESH RESISTANT. MATERIAL PASSING THE 425 mm SIEVE, WHEN TESTED IN ACCORDANCE WITH BS 1377, SHOULD BE NON-PLASTIC.

THE MATERIAL SHOULD HAVE A TEN PERCENT FINES VALUE OF 100µm, OR MORE, WHEN TESTED IN ACCORDANCE WITH BS 812.

THE SUB-BASE SHOULD BE LAID AND COMPACTED TO THE REQUIREMENTS OF CLAUSE 802 OF THE SPECIFICATION FOR ROADWORKS, WITHOUT DRYING OUT, OR SEGREGATION.

(b) CAPPING LAYER: CAPPING LAYER MATERIAL SHOULD COMPRISE EITHER CRUSHED ROCK, NATURAL GRAVEL, CRUSHED GRAVEL OR CRUSHED CONCRETE. THE MATERIAL SHOULD HAVE A MAXIMUM SIZE OF 100mm AND THE MAXIMUM ALLOWABLE PASSING THE 75µm SIEVE SHOULD BE 10%. THE MATERIAL SHOULD BE WELL GRADED THROUGHOUT ALL SIZES.

SELECTED DEMOLITION MATERIALS WHICH MEET THE ABOVE REQUIREMENTS MAY ALSO BE USED, SUBJECT TO APPROVAL.
 - CONCRETE FOR ROAD PAVEMENTS:**

PAVING QUALITY CONCRETE SHOULD BE 40 N/mm² AIR ENTRAINED CONCRETE MADE FROM NATURAL AGGREGATES, CEMENT, WATER AND AIR ENTRAINING AGENT. AGGREGATES SHOULD BE NATURAL MATERIALS COMPLYING WITH BS 5. CEMENT SHOULD BE NORMAL PORTLAND CEMENT COMPLYING WITH BS 1. THE AIR ENTRAINING AGENT SHOULD COMPLY WITH BS 8075. OTHER ADMIXTURES MAY BE USED, SUBJECT TO APPROVAL. THE CONSTITUENTS SHOULD BE PROPORTIONED AS SET OUT IN TABLE 5.1 BELOW.

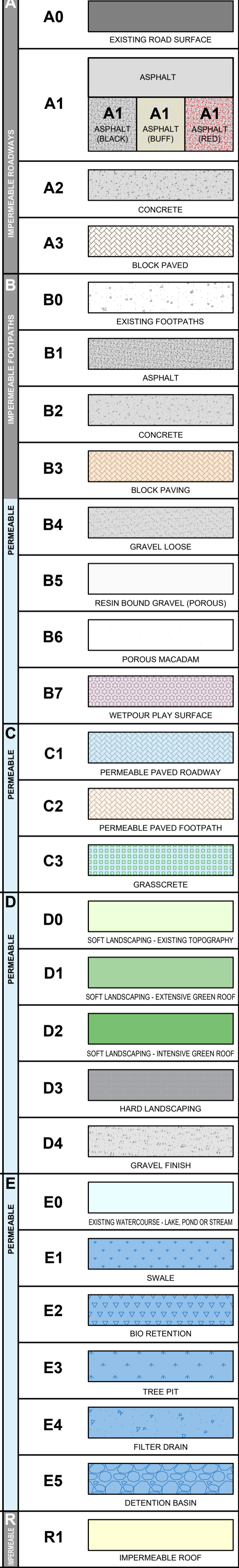
MINIMUM CEMENT CONTENT	325kg/m ³
MAXIMUM FREE WATER/CEMENT RATIO	0.55
MAXIMUM AGGREGATE SIZE	20mm
MINIMUM FINE AGGREGATE CONTENT	30%
AIR CONTENT	3.5 - 6.5 %
SLUMP	50mm

REINFORCEMENT FOR CONCRETE SLABS SHOULD BE LONG MESH STEEL FABRIC, COMPLYING WITH BS 4483 AND SHOULD BE FREE FROM LOOSE MILL SCALE, RUST, DIRT, OIL, PAINT OR GREASE. THE MINIMUM WEIGHT OF REINFORCEMENT SHOULD BE 2.61kg/m². THE REINFORCEMENT SHOULD HAVE 50mm MINIMUM COVER FROM THE SURFACE AND SHOULD TERMINATE BETWEEN 250 AND 300mm FROM ANY TRANSVERSE JOINT BETWEEN 40 AND 80mm FROM A LONGITUDINAL JOINT. THE REINFORCEMENT SHOULD TERMINATE BETWEEN 100 AND 150mm FROM THE EDGE OF THE SLAB. REINFORCING MATS SHOULD OVERLAP SUCH THAT THE TRANSVERSE WIRE OF ONE MAT WOULD LIE WITHIN THE LAST COMPLETE MESH OF THE PREVIOUS MAT AND THE OVERLAP SHOULD BE AT LEAST 450mm. TRANSVERSE CONTRACTION JOINT SPACING FOR VARIOUS MESH SIZES SHOULD BE AS FOLLOWS:

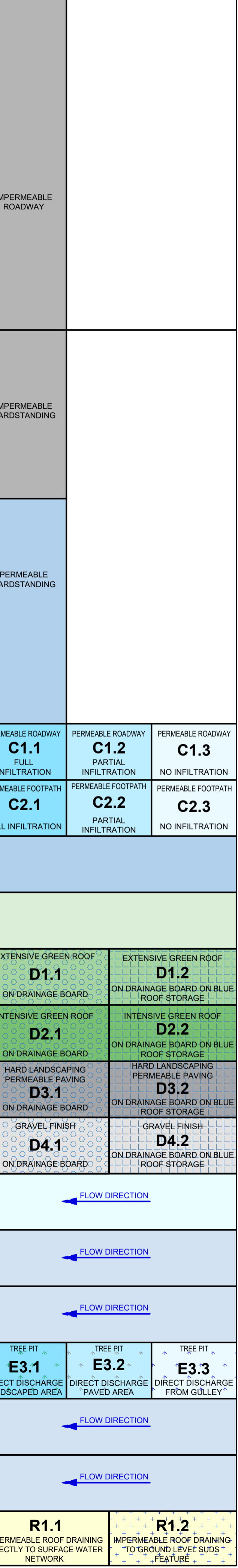
LONG MESH REINFORCEMENT TO BS 4483	MAXIMUM SPACING (m) OF CONTRACTION JOINTS
C283	15m
C385	20m
C503	25m
 - SAWING OF JOINT GROOVES SHOULD BE UNDERTAKEN AS SOON AS POSSIBLE AFTER THE CONCRETE HAS HARDENED SUFFICIENTLY TO ENABLE A SHARP EDGED GROOVE TO BE PRODUCED, WITHOUT DISRUPTING THE CONCRETE AND BEFORE RANDOM CRACKS DEVELOP IN THE SLAB. THIS WOULD BE WITHIN 6 TO 24 HOURS AFTER THE CONCRETE IS POURED. THE GROOVES SHOULD BE BETWEEN 10 AND 15mm DEPTH AND OF ANY CONVENIENT WIDTH NOT LESS THAN 3mm. THE GROOVE CAN BE WIDENED BY SAWING AT THIS STAGE, OR LATER, TO ACCOMMODATE THE JOINT SEALANT.
 - EXPANSION JOINT FILLER SHOULD BE COMPRESSIBLE BLOCK 25mm THICK FOR THE FULL DEPTH OF THE CONCRETE. THE TOP OF THE FILLER SHOULD BE ROUTED OUT LATER, TO A DEPTH OF 25mm, IN ORDER TO RECEIVE THE JOINT SEALANT.
 - PAVING SLABS / PAVOUIRS**

DOVEL BARBS AND THE BARS SHOULD BE GRADE 260 STEEL, COMPLYING WITH BS 4449 AND SHOULD BE FREE FROM OIL, DIRT, LOOSE SCALE AND RUST. DOVEL BARS SHOULD BE STRAIGHT, FREE OF BURRS AND OTHER IRREGULARITIES, WITH THE SLIDING END SAWN. DOVEL BARS SHOULD BE DEBONDED OVER THEIR LENGTH WITH A TOUGH, DURABLE PLASTIC SHEATH OF AVERAGE THICKNESS NOT GREATER THAN 1.2mm. FOR EXPANSION JOINTS, THE EXPANSION SPACE AVAILABLE IN THE WATERPROOF CAP SHOULD BE 10mm GREATER THAN THE THICKNESS OF THE JOINT FILLER BOARD.
 - JOINT GROOVES SHOULD BE SEALED WITH A HOT APPLIED JOINT-SEALING COMPOUND COMPLYING WITH BS 2499 TYPE A2 AND THE FINISHED SURFACE OF THE SEAL SHOULD BE 3mm BELOW THE SURFACE LEVEL OF THE CONCRETE. WHEN A MODULAR PAVEMENT IS TO BE CONSTRUCTED THE LAYOUT, LAYING PATTERN AND STRUCTURAL DESIGN IS TO BE IN ACCORDANCE WITH BS 7533.
 - CLAY AND CALCIUM SILICATE PAVOIRS SHOULD COMPLY WITH BS 6677: PART 1, TYPE PB WITH CHAMFERS, 200 x 100 x 65mm FOR TRAFFICED AREAS & 50mm THICK FOR PEDESTRIAN AREAS. CONCRETE BLOCK PAVOIRS SHOULD COMPLY WITH BS 6717: PART 1, TYPE R, 200 x 100 x 80mm THICK FOR TRAFFICED AREAS & 60mm THICK FOR PEDESTRIAN AREAS. HORIZONTAL INTERLOCK SHOULD BE GIVEN TO THE PAVING EITHER BY THE USE OF SHAPED BLOCKS, OR BY LAYING RECTANGULAR BLOCKS IN HERRINGBONE FASHION. AT THE EDGE OF THE PAVEMENT, RESTRAINT SHOULD BE PROVIDED, IN ORDER TO PREVENT THE PAVOIRS AND THE LAYING COURSE FROM MIGRATING OUTWARDS AND LOSING INTERLOCK. CLAY AND CALCIUM SILICATE PAVOIRS SHOULD BE LAID IN ACCORDANCE WITH BS 6677: PARTS 2 & 3. CONCRETE BLOCK PAVOIRS SHOULD BE LAID IN ACCORDANCE WITH BS 6717: PART 3.
 - LAYING COURSE SAND AND JOINTING SAND SHOULD COMPLY WITH GRADINGS C & F IN TABLE 5 OF BS 5 RESPECTIVELY. AS A GUIDE TO MOISTURE CONTENT, AFTER THE MATERIAL HAS BEEN SQUEEZED IN THE HAND AND THE HAND IS OPENED THE LAYING COURSE MATERIAL SHOULD BIND TOGETHER WITHOUT SHOWING FRESH MOISTURE ON ITS SURFACE. WHERE LAYING COURSE MATERIAL IS STORED ON SITE IT SHOULD BE COVERED TO REDUCE MOISTURE LOSS DUE TO EVAPORATION, OR SATURATION FROM RAINFALL. IF THE LAYING COURSE MATERIAL BECOMES SATURATED AFTER LAYING THEN IT SHOULD BE REMOVED AND REPLACED WITH LAYING COURSE MATERIAL IN A CONDITION SUITABLE FOR THE BLOCK LAYING OPERATION. ALTERNATIVELY THE LAYING COURSE CAN BE LEFT IN PLACE UNTIL IT DRIES SUFFICIENTLY TO ALLOW BLOCK LAYING TO PROCEED.
 - JOINTS BETWEEN PAVOIRS TO BE LAID TIGHT (2mm to 5mm WIDE) AND FILLED WITH FINE SAND AS PER GRADING F TABLE 5 IS 5
- NOTE:** BEFORE PAVOIRS / PAVEMENT WORKS ARE COMMENCED THE CONTRACTOR IS TO ESTABLISH IF THESE WORKS ARE TO BE TAKEN IN CHARGE BY THE LOCAL AUTHORITY. IF THIS IS THE CASE THE CONTRACTOR IS TO GET APPROVAL FROM THE LOCAL AUTHORITY FOR THE DETAILS SHOWN ON THIS DRAWING AND ESTABLISH INSPECTION AND TESTING REQUIREMENTS BEFORE COMMENCING THE WORK.

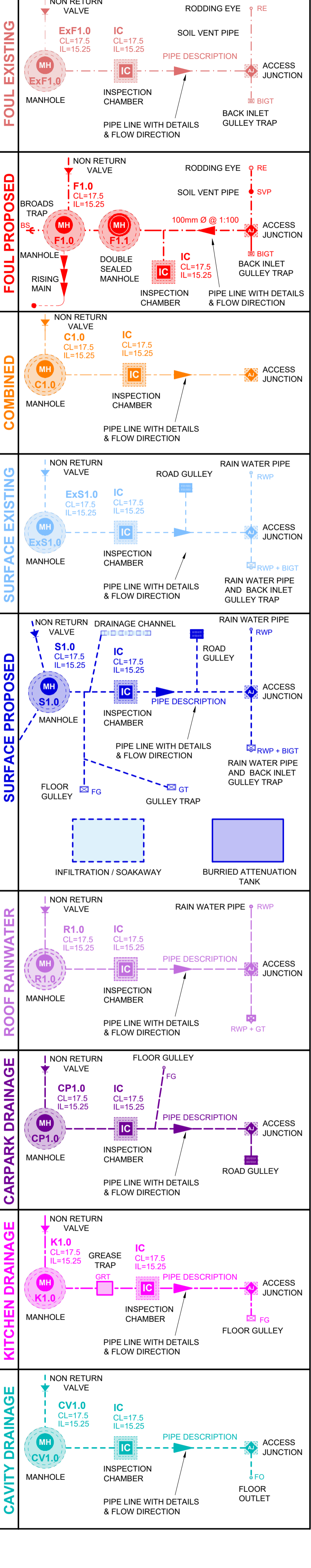
SURFACE LEGEND



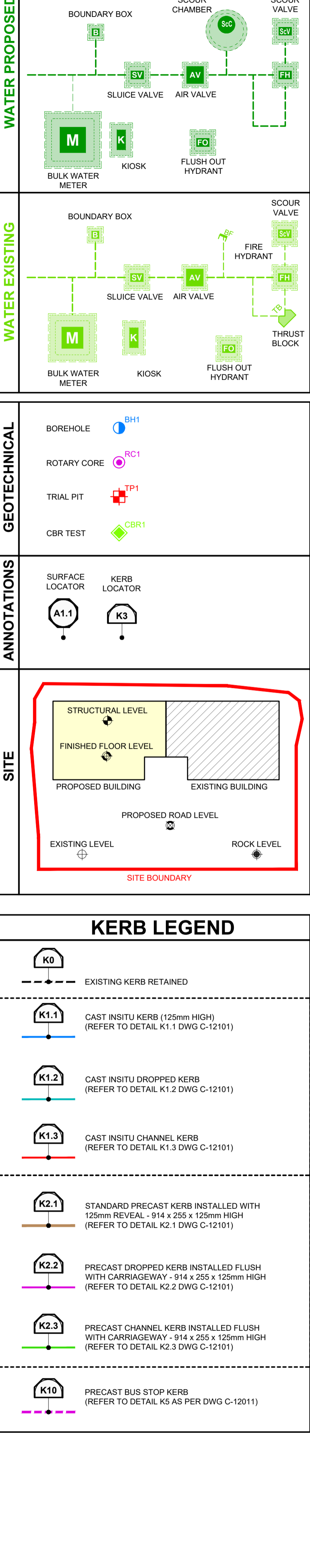
SUDS LEGEND



DRAINAGE LEGEND



WATERMAIN LEGEND



DETAIL No.	USICE EIREANN - WASTEWATER DETAILS
STD-WW-01	WASTEWATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY
STD-WW-02	TYPICAL LAYOUT FOR SEWER WITH NEW DEVELOPMENTS
STD-WW-03	CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-04	TYPICAL SEWER SERVICE PIPE CONNECTION
STD-WW-05	TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES
STD-WW-06A	WASTEWATER SERVICE CONNECTION VERTICAL SEPARATION DISTANCES
STD-WW-06B	RESTRICTIONS ON NEW TREES/SHRUBS ADJACENT TO SEWERS
STD-WW-06C	RESTRICTIONS ON NEW TREES/SHRUBS ADJACENT TO SEWERS
STD-WW-07	TRUNCATED TRENCHES & EXPOSURE
STD-WW-08	CAST IN-SITU CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-09	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-10	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-11	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-12	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-13	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-14	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-15	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-16	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-17	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-18	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-19	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-20	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-21	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-22	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-23	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-24	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-25	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-26	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-27	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-28	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-29	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-30	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-31	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-32	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-33	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-34	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-35	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-36	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-37	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-38	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-39	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK
STD-WW-40	PRE-CAST CONCRETE SERVICE CONNECTION PIPEWORK

DETAIL No.	USICE EIREANN - WATER SUPPLY DETAILS
STD-W-01	WATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY
STD-W-02	TYPICAL LAYOUT FOR WATERMAIN WITH DEVELOPMENTS
STD-W-03	CUSTOMER CONNECTION AND BOUNDARY BOX (200mm Ø PIPE)
STD-W-04	GENERAL PIPE CONNECTIONS (SHEET 1 OF 7)
STD-W-05	GENERAL PIPE CONNECTIONS (SHEET 2 OF 7)
STD-W-06	GENERAL PIPE CONNECTIONS (SHEET 3 OF 7)
STD-W-07	GENERAL PIPE CONNECTIONS (SHEET 4 OF 7)
STD-W-08	GENERAL PIPE CONNECTIONS (SHEET 5 OF 7)
STD-W-09	GENERAL PIPE CONNECTIONS (SHEET 6 OF 7)
STD-W-10	GENERAL PIPE CONNECTIONS (SHEET 7 OF 7)
STD-W-11	TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES
STD-W-12	RESTRICTIONS ON NEW TREES/SHRUBS ADJACENT TO EXISTING TREES
STD-W-13	RESTRICTIONS ON NEW TREES/SHRUBS PLANTING ADJACENT TO WATER MAINS
STD-W-14	SLUICE VALVE FOR DUCTILE IRON PIPE (SHEET 1 OF 2)
STD-W-15	SLUICE VALVE FOR DUCTILE IRON PIPE (SHEET 2 OF 2)
STD-W-16	ONLINE HYDRANT FOR DUCTILE IRON PIPE (SHEET 1 OF 4)
STD-W-17	OFF-LINE HYDRANT FOR DUCTILE IRON PIPE (SHEET 2 OF 4)
STD-W-18	OFF-LINE HYDRANT FOR DUCTILE IRON PIPE (SHEET 3 OF 4)
STD-W-19	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 1 OF 6)
STD-W-20	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 2 OF 6)
STD-W-21	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 3 OF 6)
STD-W-22	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 4 OF 6)
STD-W-23	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 5 OF 6)
STD-W-24	OFF-LINE HYDRANT FOR POLYETHYLENE PIPE (SHEET 6 OF 6)
STD-W-25	PROBING RECORDING / SUBSTANTIAL VALVE CHAMBER IN-SITU I.C. OPTION
STD-W-26	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-27	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-28	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-29	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-30	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-31	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-32	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-33	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-34	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-35	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-36	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-37	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-38	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-39	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-40	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-41	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-42	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-43	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-44	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-45	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-46	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-47	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-48	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-49	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)
STD-W-50	ELECTROMAGNETIC METER CHAMBER (ON-DRAWING DIAL)

KERB LEGEND

K0	EXISTING KERB RETAINED
K1.1	CAST INSITU KERB (125mm HIGH) (REFER TO DETAIL K1.1 DWG C-12101)
K1.2	CAST INSITU DROPPED KERB (REFER TO DETAIL K1.2 DWG C-12101)
K1.3	CAST INSITU CHANNEL KERB (REFER TO DETAIL K1.3 DWG C-12101)
K2.1	STANDARD PRECAST KERB INSTALLED WITH 125mm REVEAL - 914 x 255 x 125mm HIGH (REFER TO DETAIL K2.1 DWG C-12101)
K2.2	PRECAST DROPPED KERB INSTALLED FLUSH WITH CARRIAGEWAY - 914 x 255 x 125mm HIGH (REFER TO DETAIL K2.2 DWG C-12101)
K2.3	PRECAST CHANNEL KERB INSTALLED FLUSH WITH CARRIAGEWAY - 914 x 255 x 125mm HIGH (REFER TO DETAIL K2.3 DWG C-12101)
K10	PRECAST BS STOP KERB (REFER TO DETAIL K5 AS PER DWG C-12101)

ALL FLOOR AND SURFACE WATER DRAINAGE & WATER SUPPLY DETAILS ARE TO BE IN ACCORDANCE WITH USICE EIREANN STANDARD DETAILS UNLESS NOTED OTHERWISE.

CODE OF PRACTICE:
<https://www.water.ie/infocentre/connections/faq/Water-Code-of-Practice.pdf>
WATER INFRASTRUCTURE STANDARD DETAILS:
<https://www.water.ie/infocentre/connections/faq/Water-Standard-Details.pdf>
WASTEWATER INFRASTRUCTURE STANDARD DETAILS:
<https://www.water.ie/infocentre/connections/faq/Wastewater-Standard-Details.pdf>

PROJECT	05.03.26	ISSUED FOR PLANNING	E.C.
PROJECT	23.04.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer:	Dirk Kotze	Project Director:	Stephen O'Connor

PLANNING

Dublin Office:
 Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland.
 Tel: (01) 677 3200 Fax: (01) 677 3184

London Office:
 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom
 Tel: (0044) 20 3750 3530

Consulting Engineers, Civil / Structural / Project Management E-mail: bmce@bmce.ie Web: www.bmce.ie

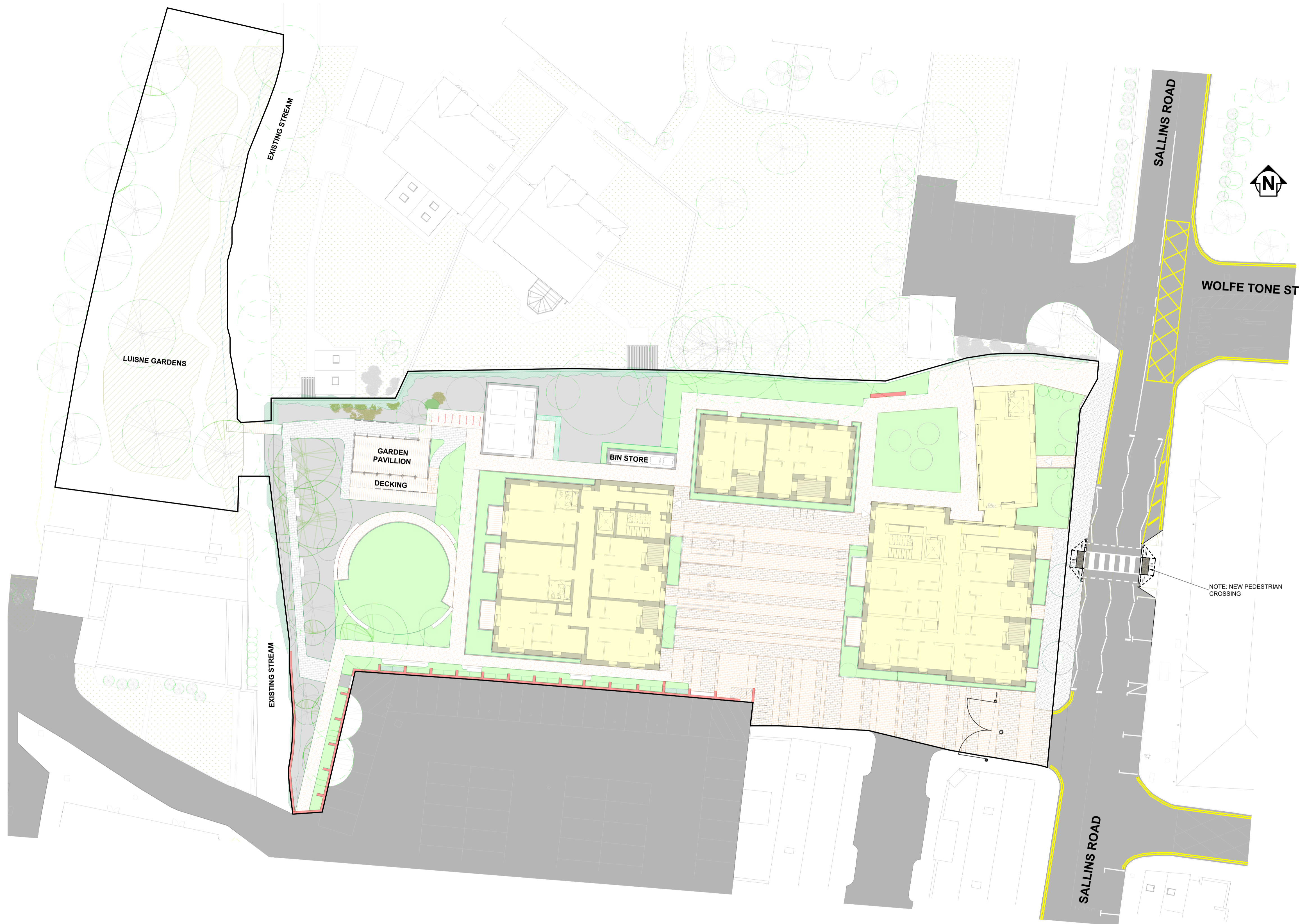
BM The Institution of Structural Engineers **ACEI** International Federation of Consulting Engineers

CLIENT: **McAULEY PLACE**

PROJECT TITLE	1448 - BEAUFORT NAAS	BM PROJECT No.	24145
REFERENCE		SUITABILITY	REVISION
DRAWING TITLE	CIVIL GENERAL NOTES		
DWG	DRAWING REFERENCE	STATUS	REVISION
	BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-10000		PO2

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECT'S DRAWINGS. FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - "ASK".
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.



SITE LAYOUT PLAN

SCALE @ A1: 1:250
SCALE @ A3: 1:500

P02	05.03.26	ISSUED FOR PLANNING	E.C.
P01	23.04.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

PLANNING

BM
 Dublin Office:
 Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland.
 Tel: (01) 677 3200 Fax: (01) 677 3154
 London Office:
 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom
 Tel: (0044) 20 3750 3530
 Consulting Engineers, Civil, Structural, Project Management. E-mail: bmces@bmce.ie Web: www.bmce.ie



CLIENT
McAULEY PLACE

PROJECT TITLE 1448 - BEAUFORT NAAS	BM PROJECT No. 24145
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MODEL REFERENCE	SUITABILITY	REVISION
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DRAWING TITLE
PROPOSED SITE LAYOUT

DWG DRAWING REFERENCE BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-11000	STATUS P02	REVISION
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NOTES

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2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.



ROADS LAYOUT PLAN

SCALE @ A1: 1:250
SCALE @ A3: 1:500

P02	05.03.26	ISSUED FOR PLANNING	E.C.
P01	23.04.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

PLANNING

BM Dublin Office: Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3154
London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom Tel: (0044) 20 3750 3530
BARRETT MAHONY Consulting Engineers, Civil, Structural, Project Management. E-mail: bmce@bmce.ie Web: www.bmce.ie



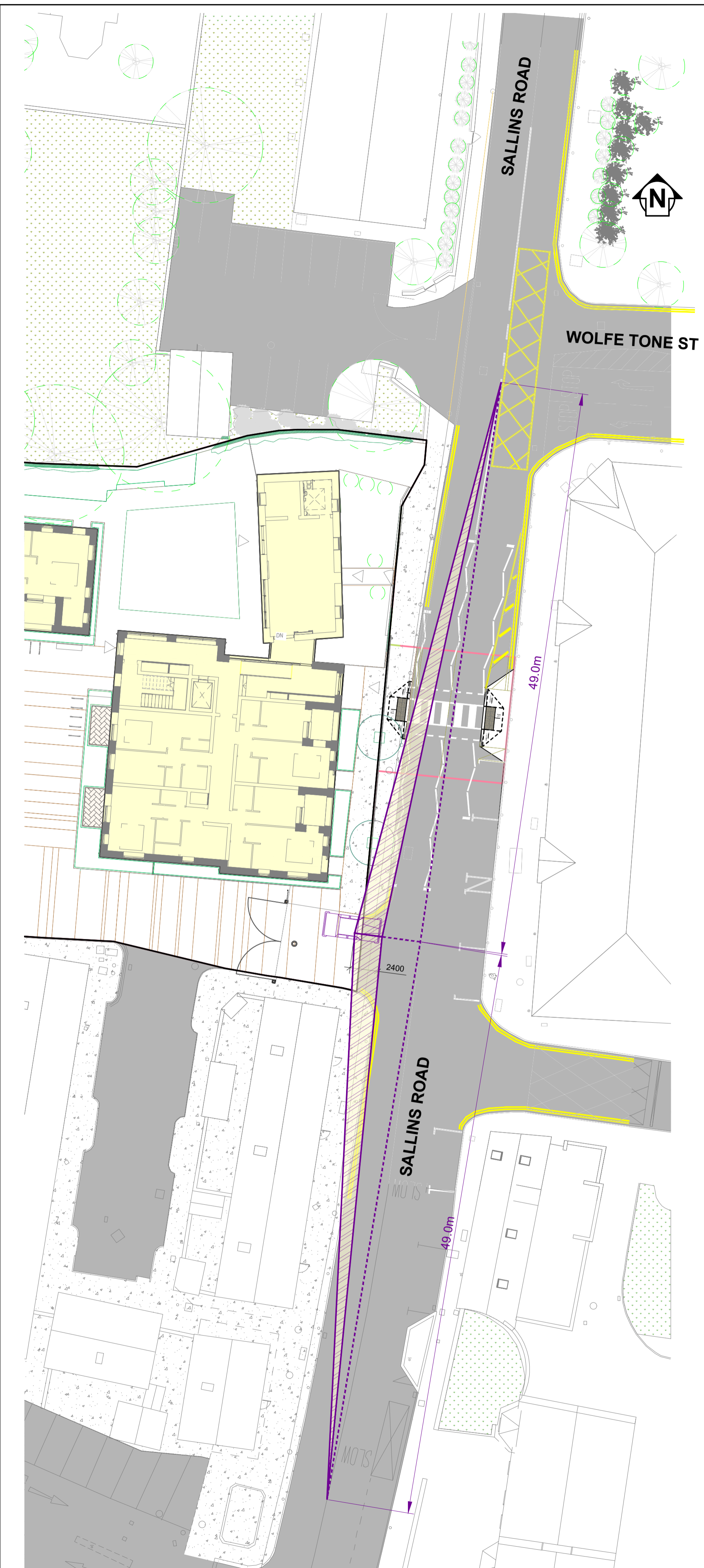
CLIENT
McAULEY PLACE

PROJECT TITLE 1448 - BEAUFORT NAAS	BM PROJECT No. 24145
--	--------------------------------

MODEL REFERENCE	SUITABILITY	REVISION
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DRAWING TITLE
PROPOSED ROAD LAYOUT

DWG DRAWING REFERENCE BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-11101	STATUS P02	REVISION
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PLAN SHOWING SIGHT LINES

SCALE @ A1: 1:250
SCALE @ A3: 1:500

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECT'S DRAWINGS. FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - 'ASK'.
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

P02	05.03.26	ISSUED FOR PLANNING	E.C.
P01	23.04.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

BM STAGE

PLANNING

BM
 Dublin Office:
 Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland.
 Tel: (01) 677 3200 Fax: (01) 677 3154
 London Office:
 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom
 Tel: (0044) 20 3750 3530
 Consulting Engineers, Civil, Structural, Project Management. E-mail: bmces@bmce.ie Web: www.bmce.ie



CLIENT
McAULEY PLACE

PROJECT TITLE 1448 - BEAUFORT NAAS	BM PROJECT No. 24145
--	--------------------------------

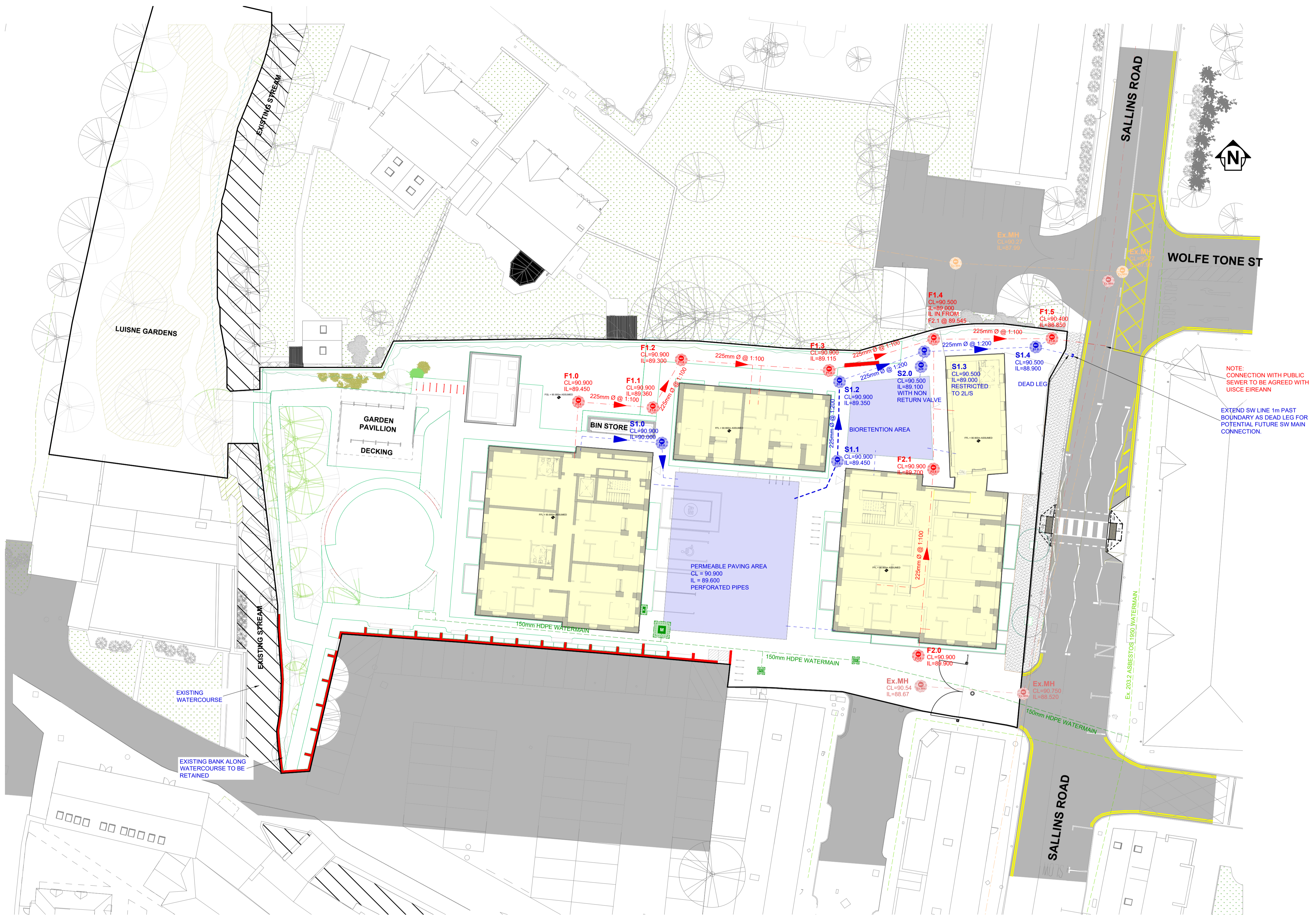
MODEL REFERENCE	SUITABILITY	REVISION
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DRAWING TITLE
PROPOSED ENTRANCE & SIGHTLINES

DWG DRAWING REFERENCE BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-11110	STATUS P02	REVISION
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NOTES

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2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.
3. THRUST BLOCKS ARE TO BE LOCATED AND INSTALLED AS PER UI/SC EIREANN DETAILS.



NOTE: CONNECTION WITH PUBLIC SEWER TO BE AGREED WITH UI/SC EIREANN

EXTEND SW LINE 1m PAST BOUNDARY AS DEAD LEG FOR POTENTIAL FUTURE SW MAIN CONNECTION.

DRAINAGE & WATERMAIN LAYOUT PLAN

SCALE @ A1: 1:250
SCALE @ A3: 1:500

P02	05.03.26	ISSUED FOR PLANNING	E.C.
P01	23.04.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

PLANNING

BM Dublin Office: Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3154
London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom Tel: (0044) 20 3750 3530

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The Institution of Structural Engineers **ACEI** International Federation of Consulting Engineers

CLIENT: **McAULEY PLACE**

PROJECT TITLE	BM PROJECT No.
1448 - BEAUFORT NAAS	24145

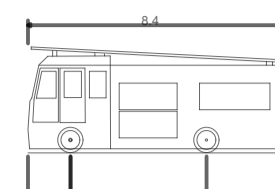
MODEL REFERENCE	SUITABILITY	REVISION
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DRAWING TITLE: **PROPOSED DRAINAGE AND WATERMAIN LAYOUT**

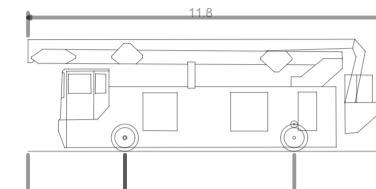
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BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-11200	-	P02

NOTES

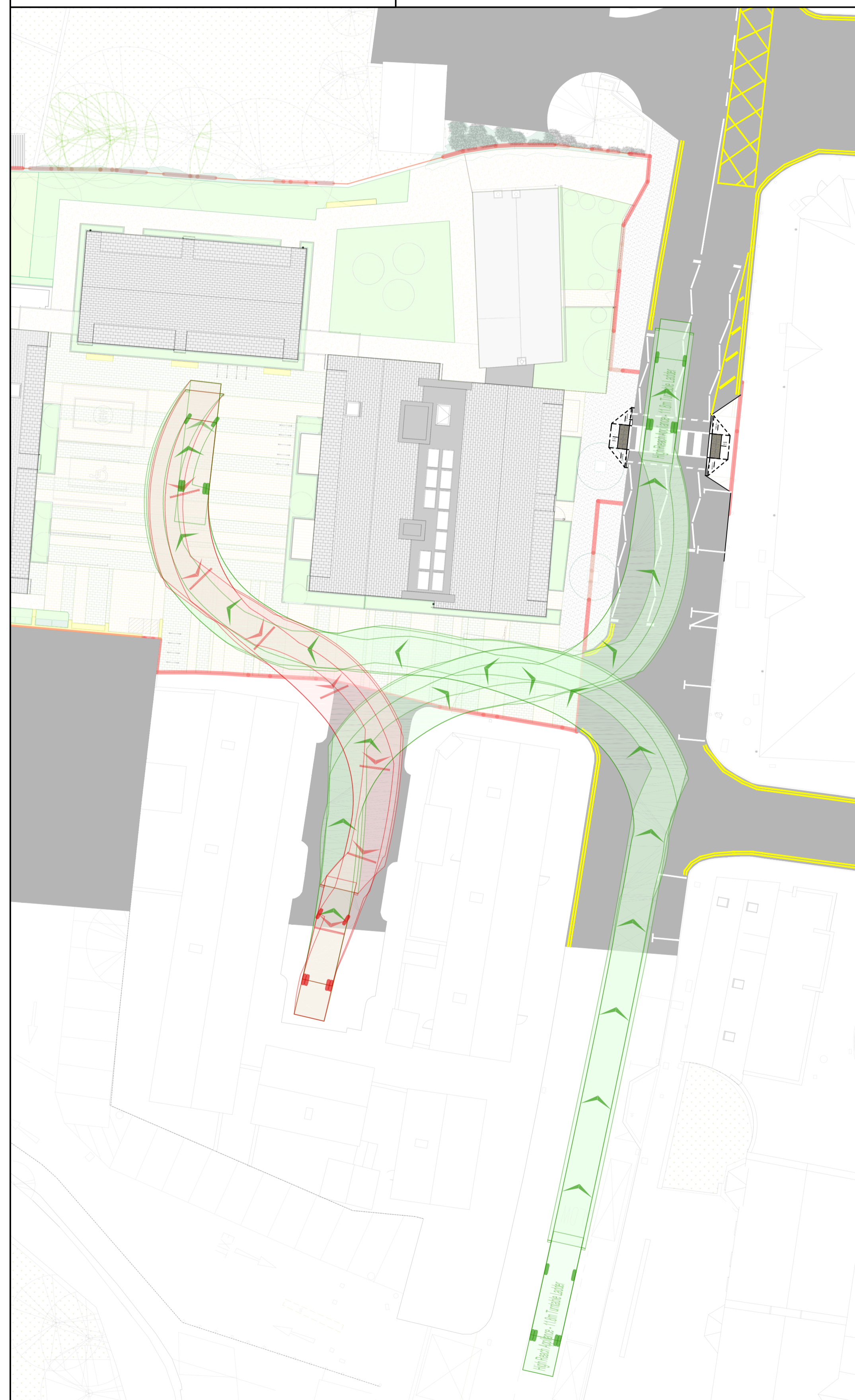
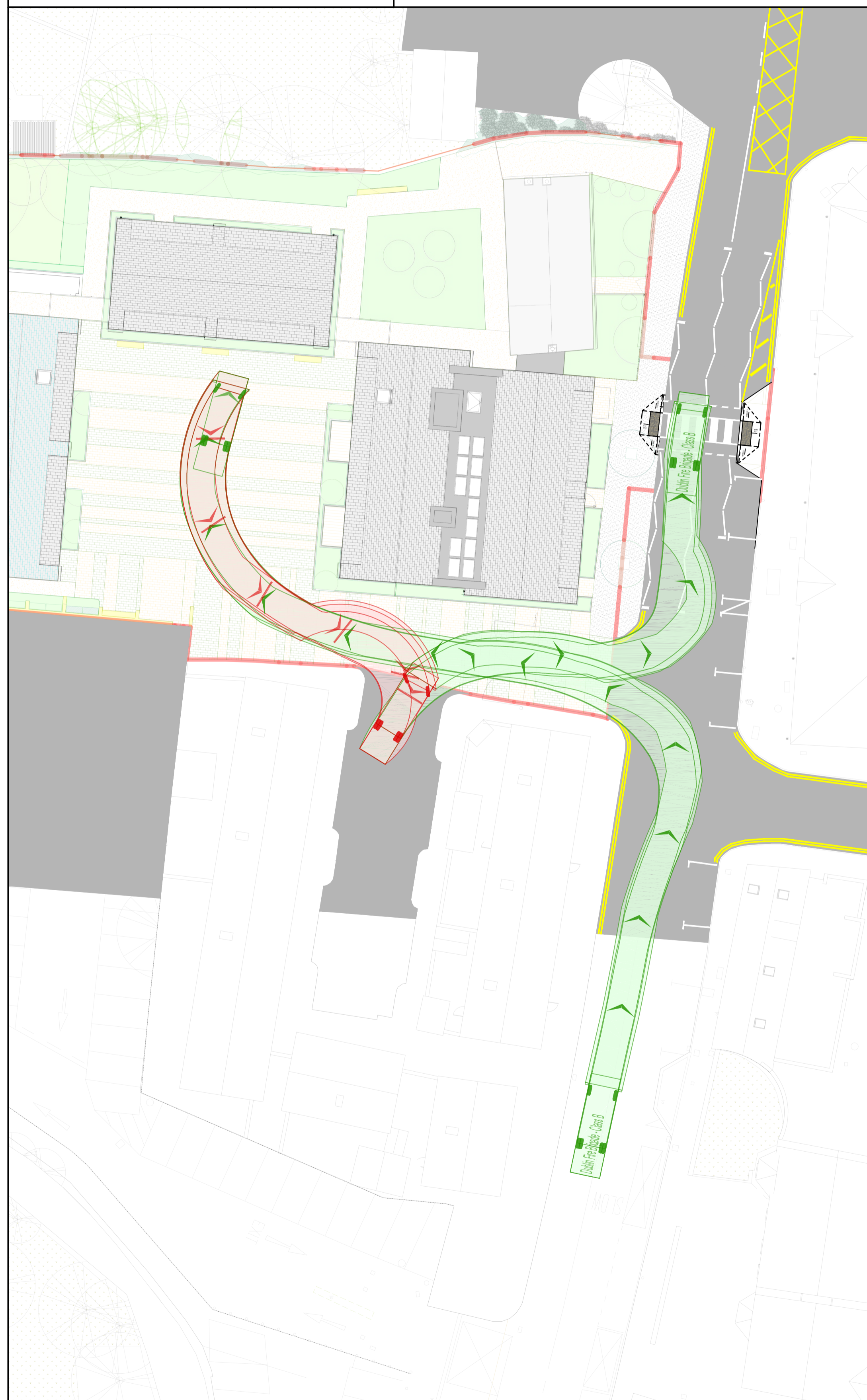
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECTS' DRAWINGS FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - 'ASK'.
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.



Dublin Fire Brigade - Class B
 Overall Length 8.400m
 Overall Width 2.550m
 Overall Body Height 3.500m
 Min Body Ground Clearance 0.140m
 Track Width 2.400m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 7.450m



High Reach Appliance - 11.8m Turntable Ladder
 Overall Length 11.800m
 Overall Width 2.550m
 Overall Body Height 3.700m
 Min Body Ground Clearance 0.130m
 Track Width 2.550m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 13.750m



P03	05.03.26	ISSUED FOR PLANNING	EC
P02	23.04.25	ISSUED FOR PLANNING	EC
P01	05.08.24	ISSUED FOR COMMENT	EC
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

PLANNING

BM
 Dublin Office: Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3154
 London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom Tel: (0044) 20 3750 3530
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CLIENT
McAULEY PLACE

PROJECT TITLE
1448 BEAUFORT NAAS

BM PROJECT No.
24145

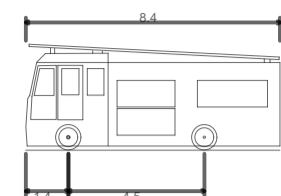
MODEL REFERENCE	SUITABILITY	REVISION
-	-	-

DRAWING TITLE
VEHICLE PATH ANALYSIS - FIRE TENDERS

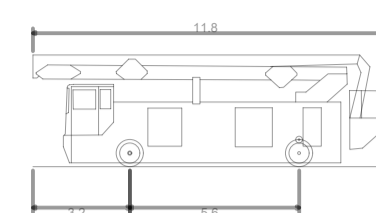
DWG DRAWING REFERENCE	STATUS	REVISION
BEN-ZZ-SW-ZZZ-DR-BMC-CE-11400	S0	P03

NOTES

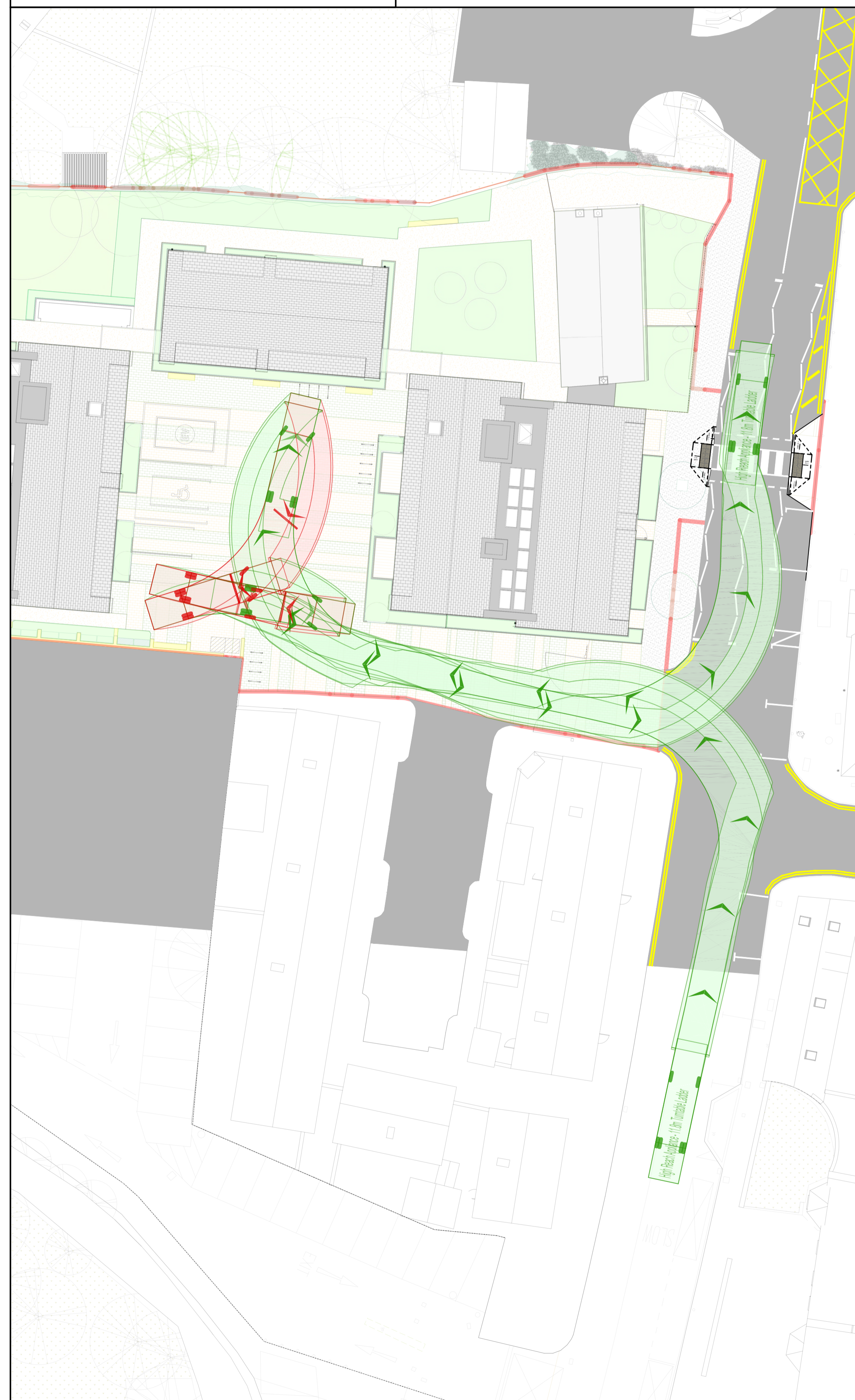
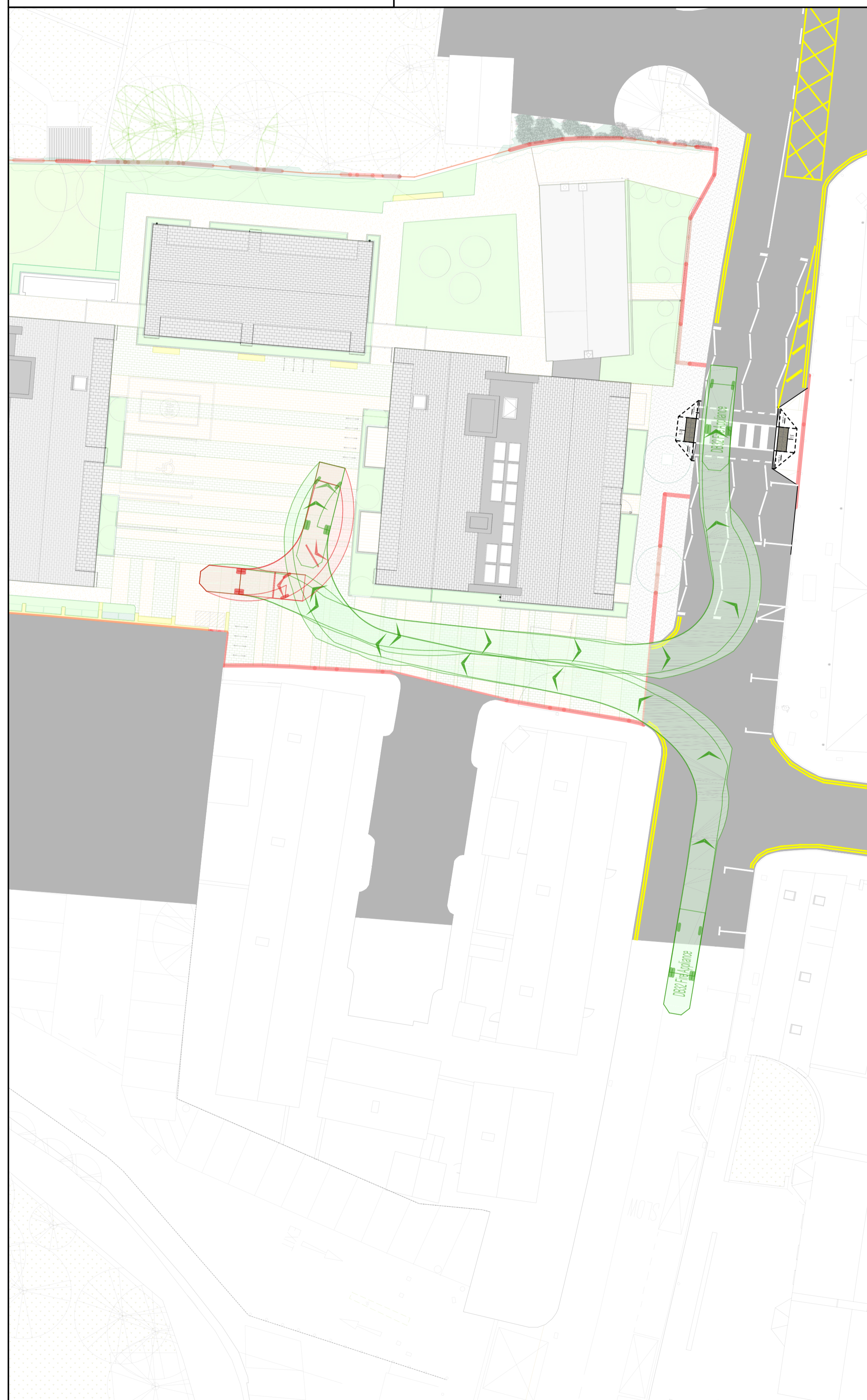
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2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.



Dublin Fire Brigade - Class B
 Overall Length 8.400m
 Overall Width 2.500m
 Overall Body Height 3.500m
 Min Body Ground Clearance 0.140m
 Track Width 2.400m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 7.450m



High Reach Appliance - 11.8m Turntable Ladder
 Overall Length 11.800m
 Overall Width 2.550m
 Overall Body Height 3.700m
 Min Body Ground Clearance 0.130m
 Track Width 2.550m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 13.750m



ISSUE	DATE	DESCRIPTION	BY
P04	05.03.26	ISSUED FOR PLANNING	E.C.
P03	23.04.25	ISSUED FOR PLANNING	EC
P02	16.08.24	HIGH REACH ADDED	EC
P01	15.08.24	ISSUED FOR COMMENT	EC

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

PLANNING

BM Dublin Office: Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3154
 London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom Tel: (0044) 20 3750 3530
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CLIENT
McAULEY PLACE

PROJECT TITLE
1448 BEAUFORT NAAS BM PROJECT No.
24145

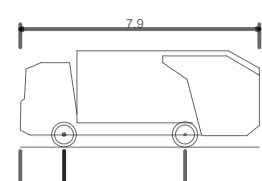
MODEL	REFERENCE	SUITABILITY	REVISION
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DRAWING TITLE
VEHICLE PATH ANALYSIS - FIRE TENDER OPTION

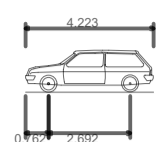
DWG	DRAWING REFERENCE	STATUS	REVISION
BEN-ZZ-ZZ-SW-ZZZ-DR-BMC-CE-11401	S0	P04	

NOTES

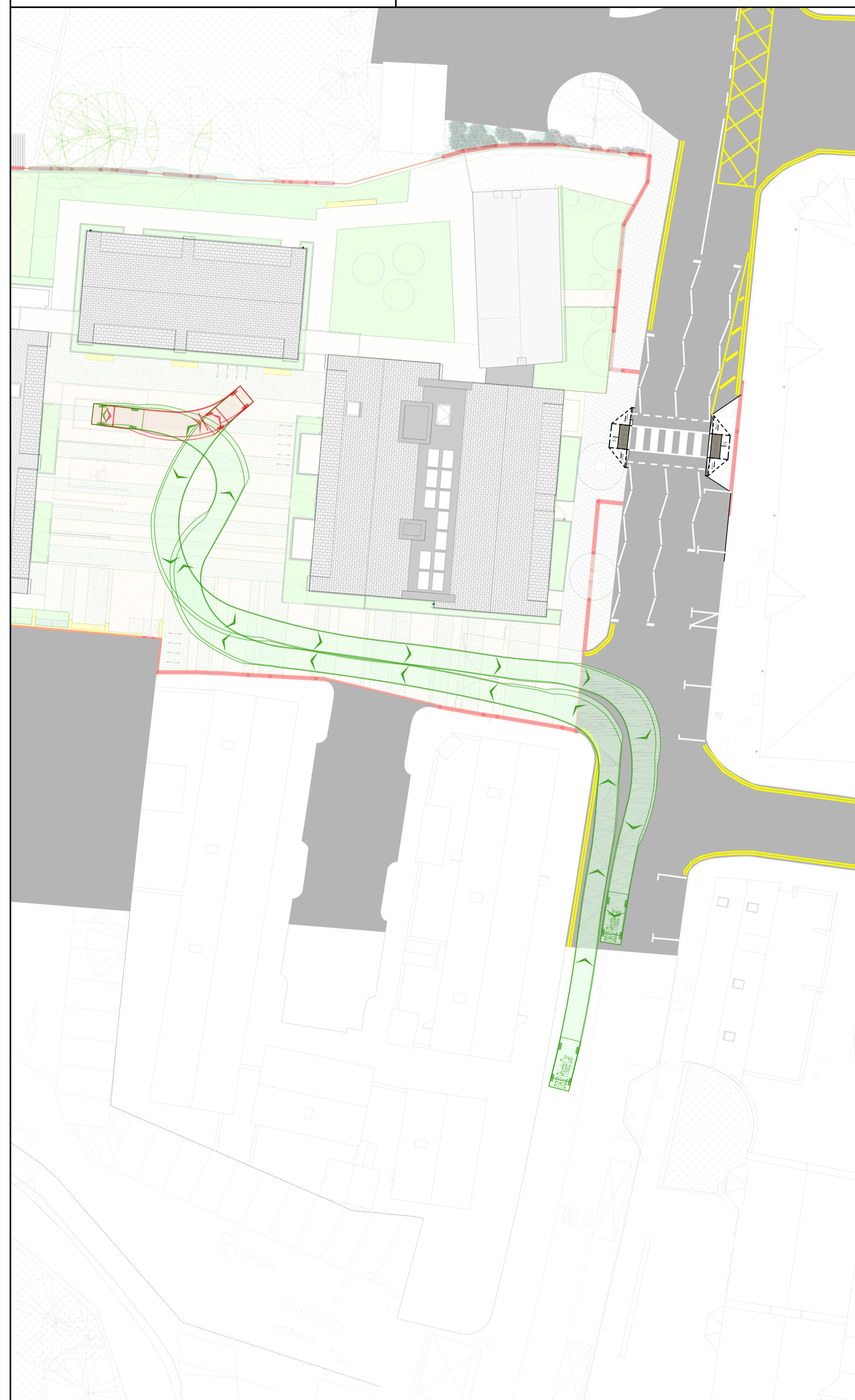
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DB32 Refuse Vehicle
 Overall Length 7.900m
 Overall Width 2.400m
 Overall Body Height 3.183m
 Min Body Ground Clearance 0.385m
 Max Track Width 2.400m
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 6.625m



DB32 Private Car
 Overall Length 4.223m
 Overall Width 1.715m
 Overall Body Height 1.382m
 Min Body Ground Clearance 0.233m
 Max Track Width 1.629m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 5.780m



P02	05.03.26	ISSUED FOR PLANNING	E.C.
P01	23.04.25	ISSUED FOR PLANNING	EC
ISSUE	DATE	DESCRIPTION	BY

Project Engineer: Dirk Kotze | Project Director: Stephen O'Connor

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BM Dublin Office: Sandwith House, 52-54 Lower Sandwith Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3154
London Office: 5th Floor, Mill House, 8 Mill Street, London SE1 2BA, United Kingdom Tel: (0044) 20 3750 3530
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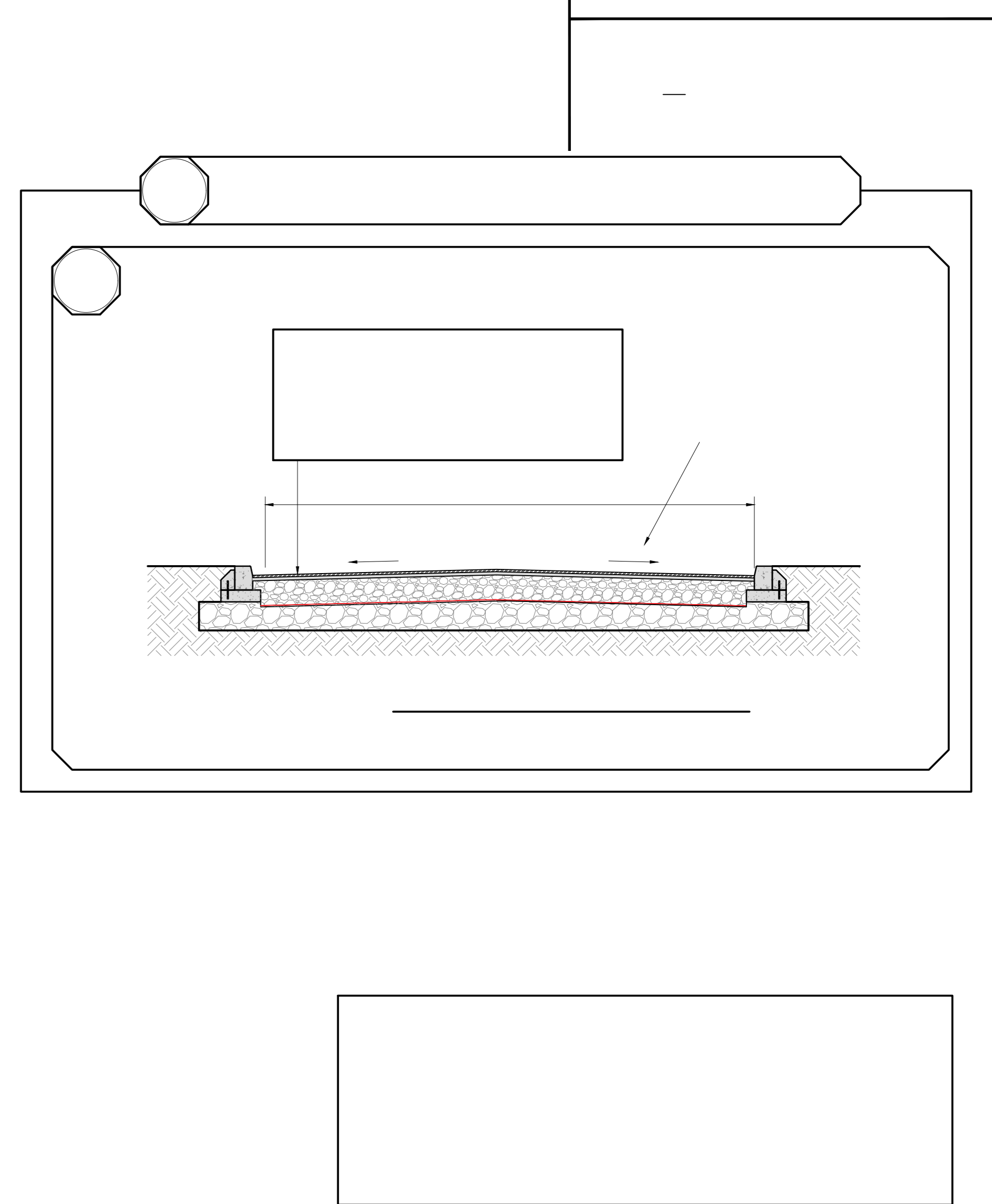
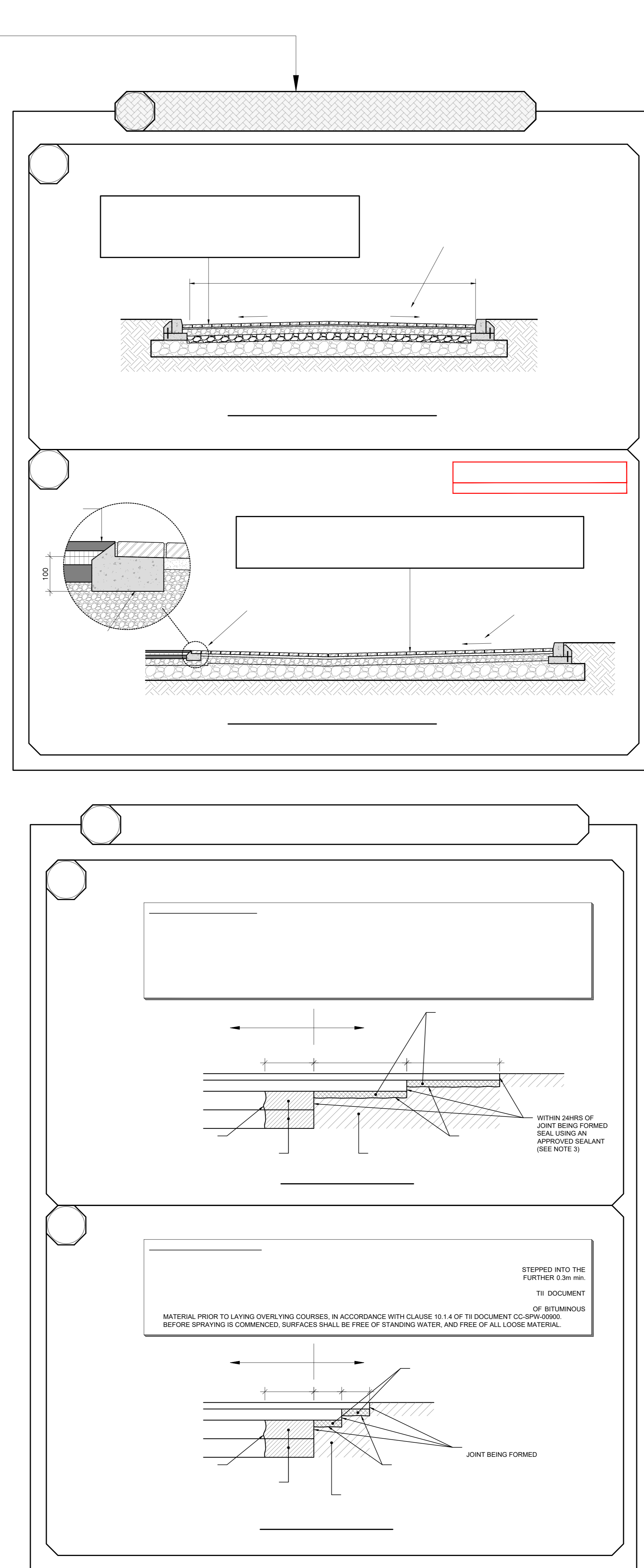
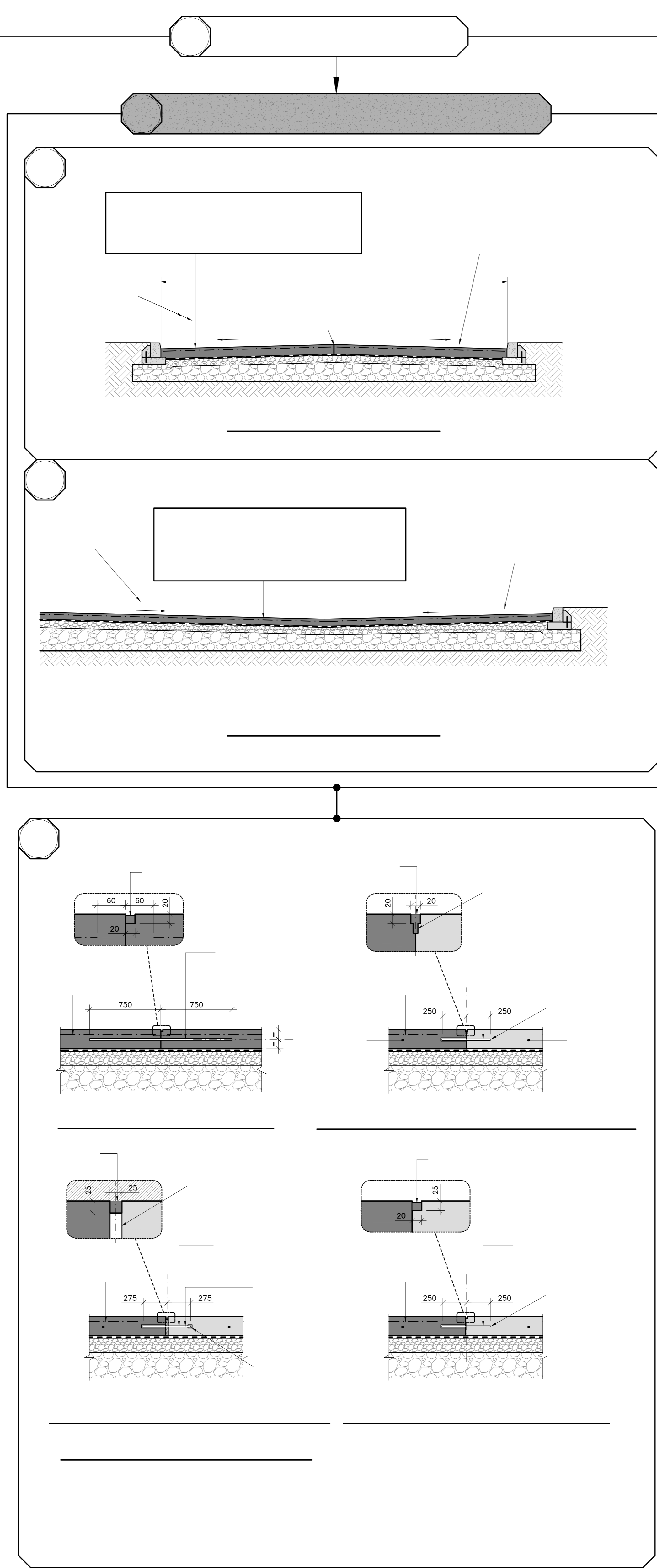
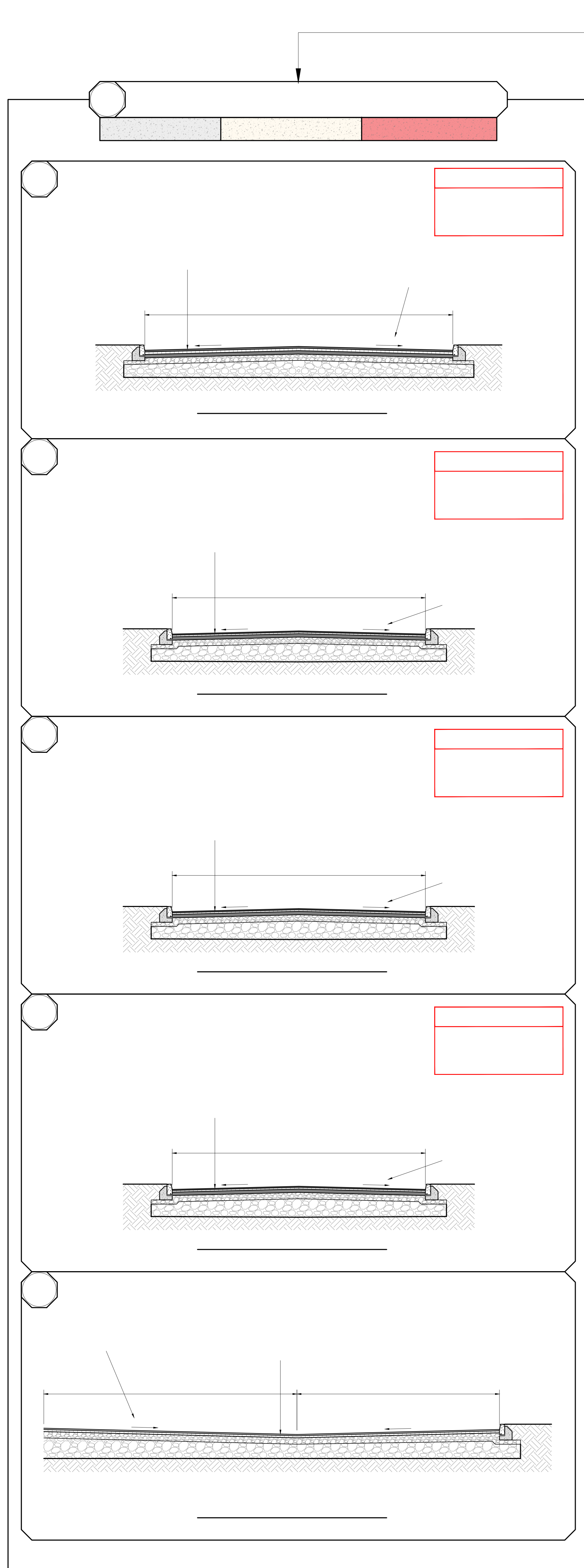
CLIENT
McAULEY PLACE

PROJECT TITLE
1448 BEAUFORT NAAS BM PROJECT No.
24145

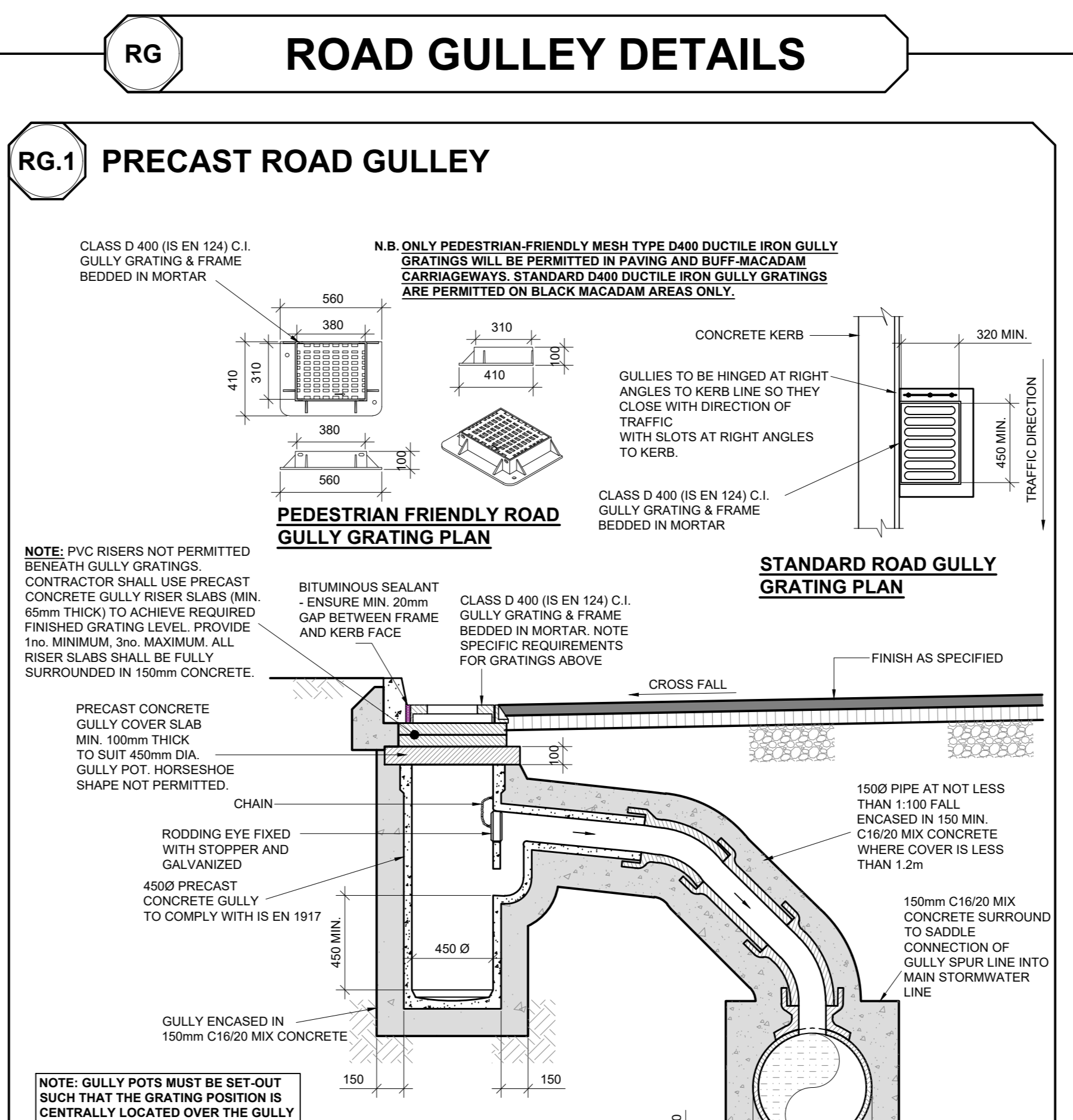
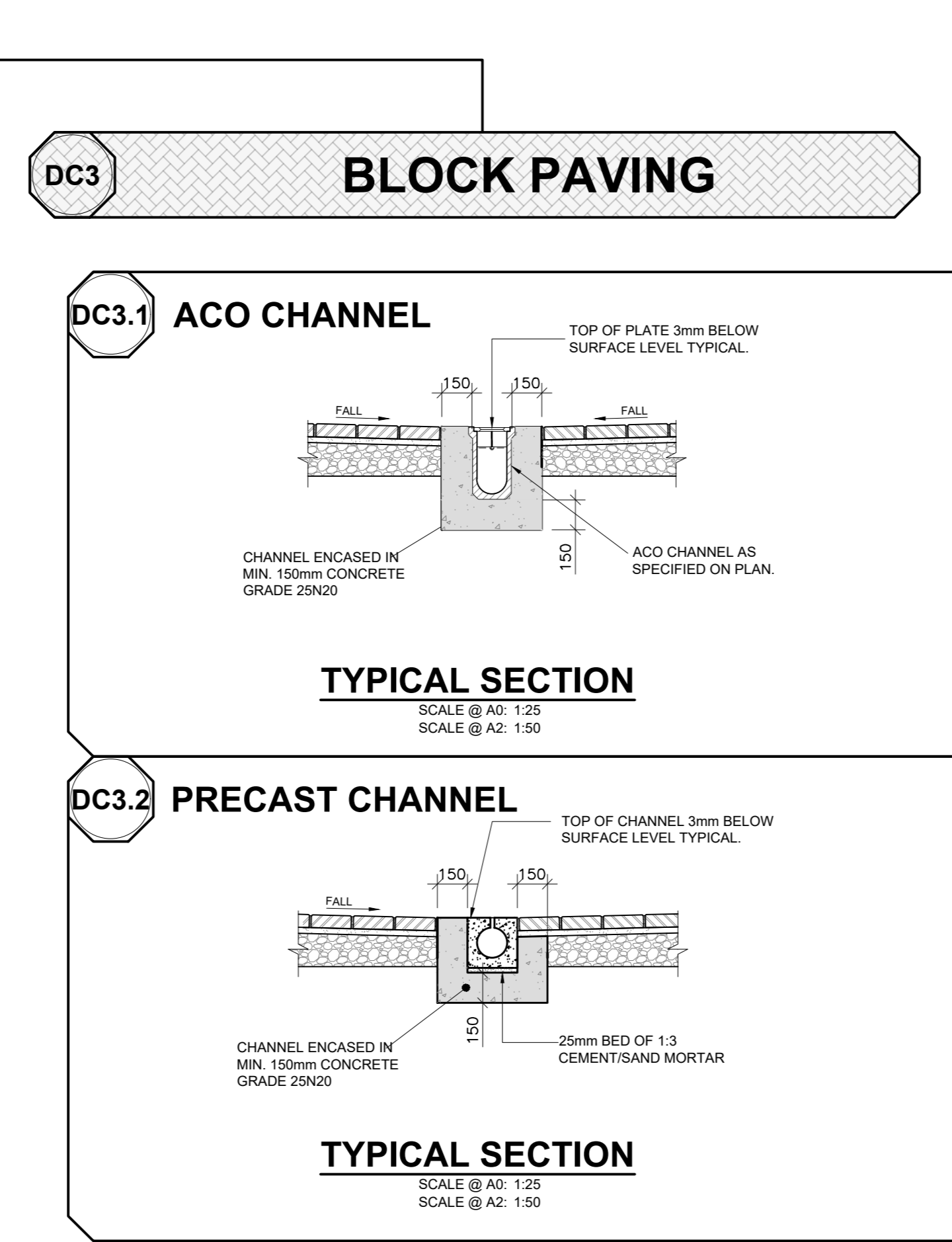
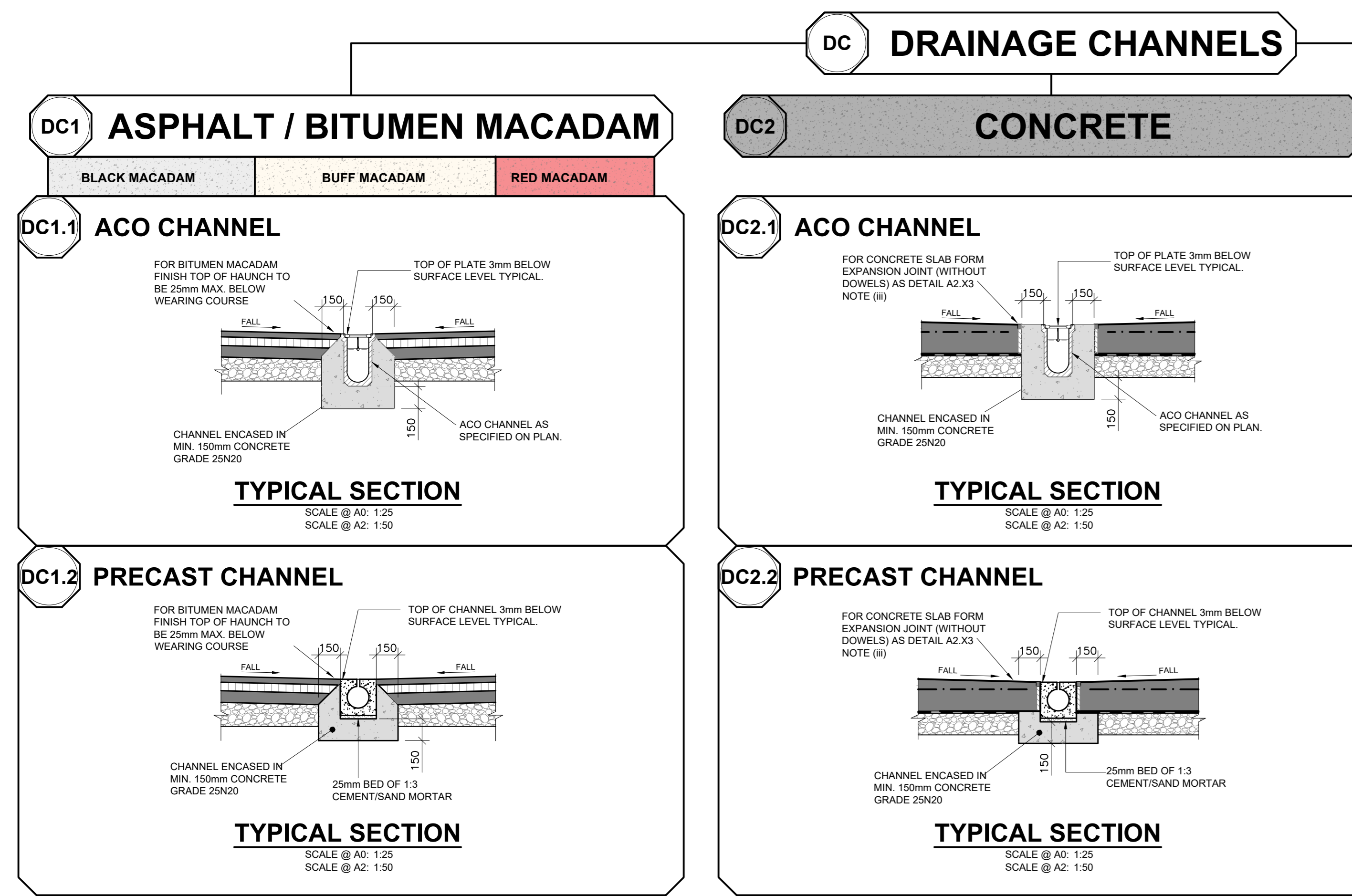
MODEL	REFERENCE	SUITABILITY	REVISION
-	-	-	-

DRAWING TITLE
VEHICLE PATH ANALYSIS - REFUSE TRUCK & PRIVATE CAR

DWG	DRAWING REFERENCE	STATUS	REVISION
	BEN-ZZ-ZZ-SW-ZZZ-DR-BMC-CE-11410	S0	P02

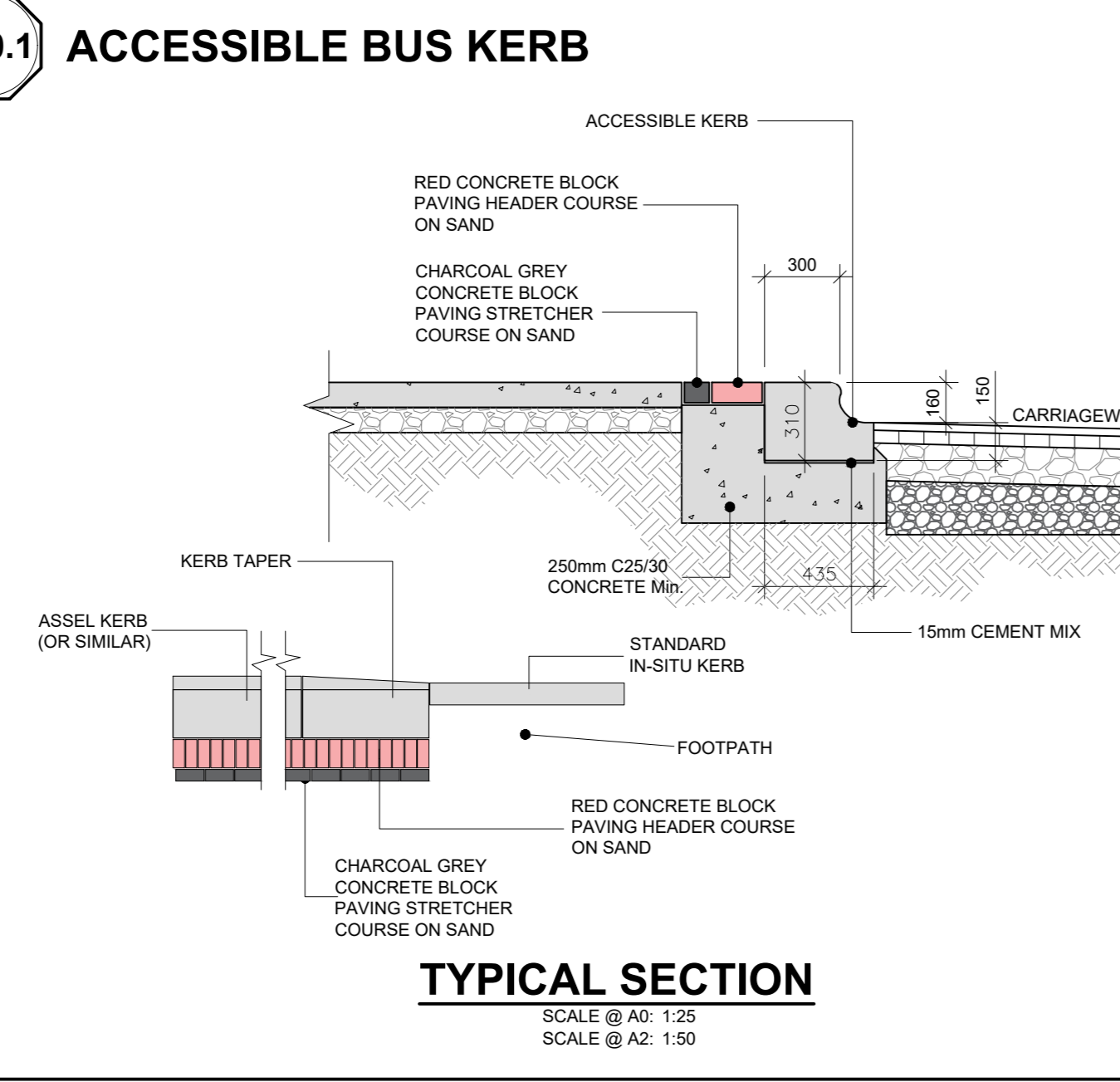
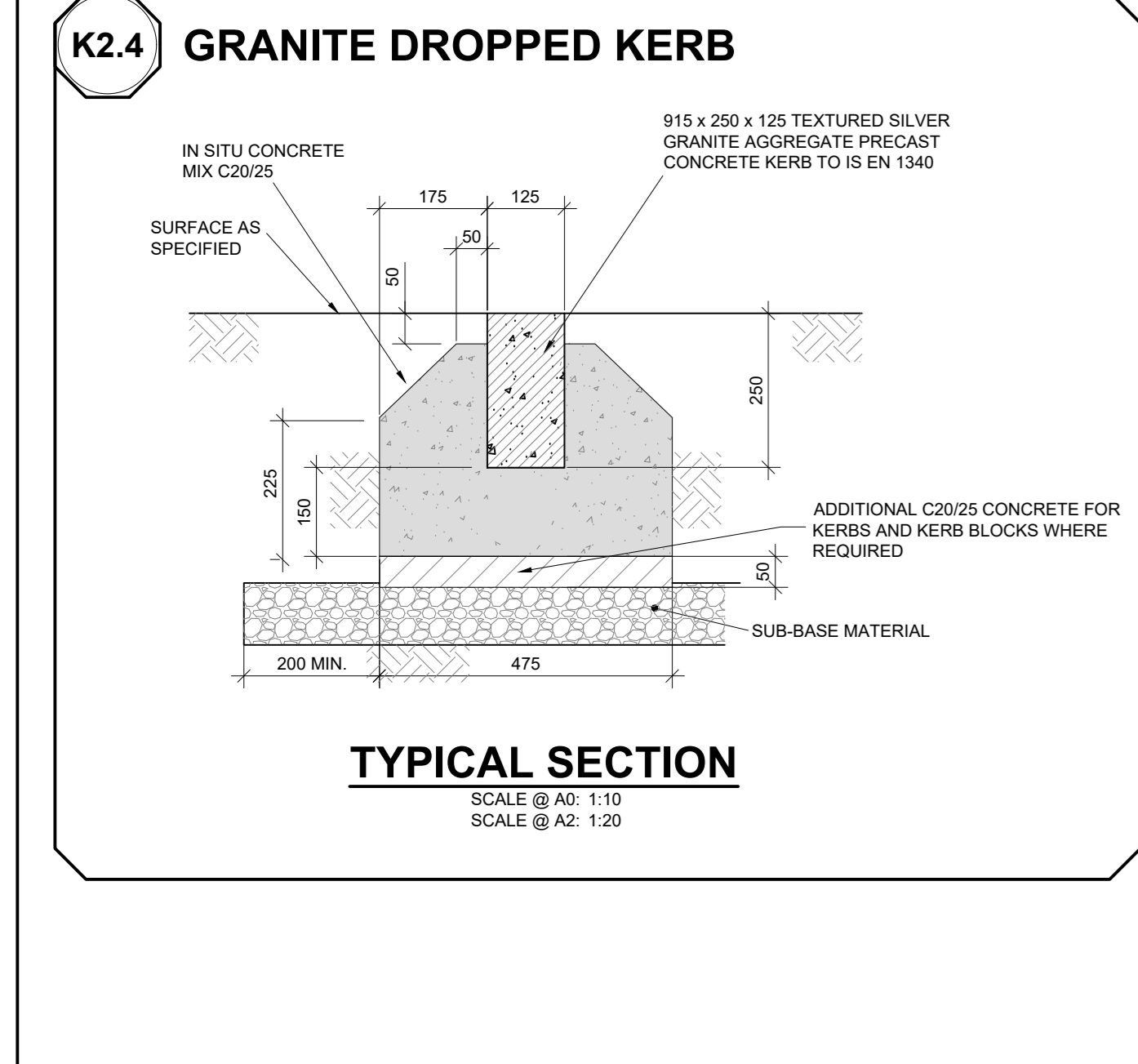
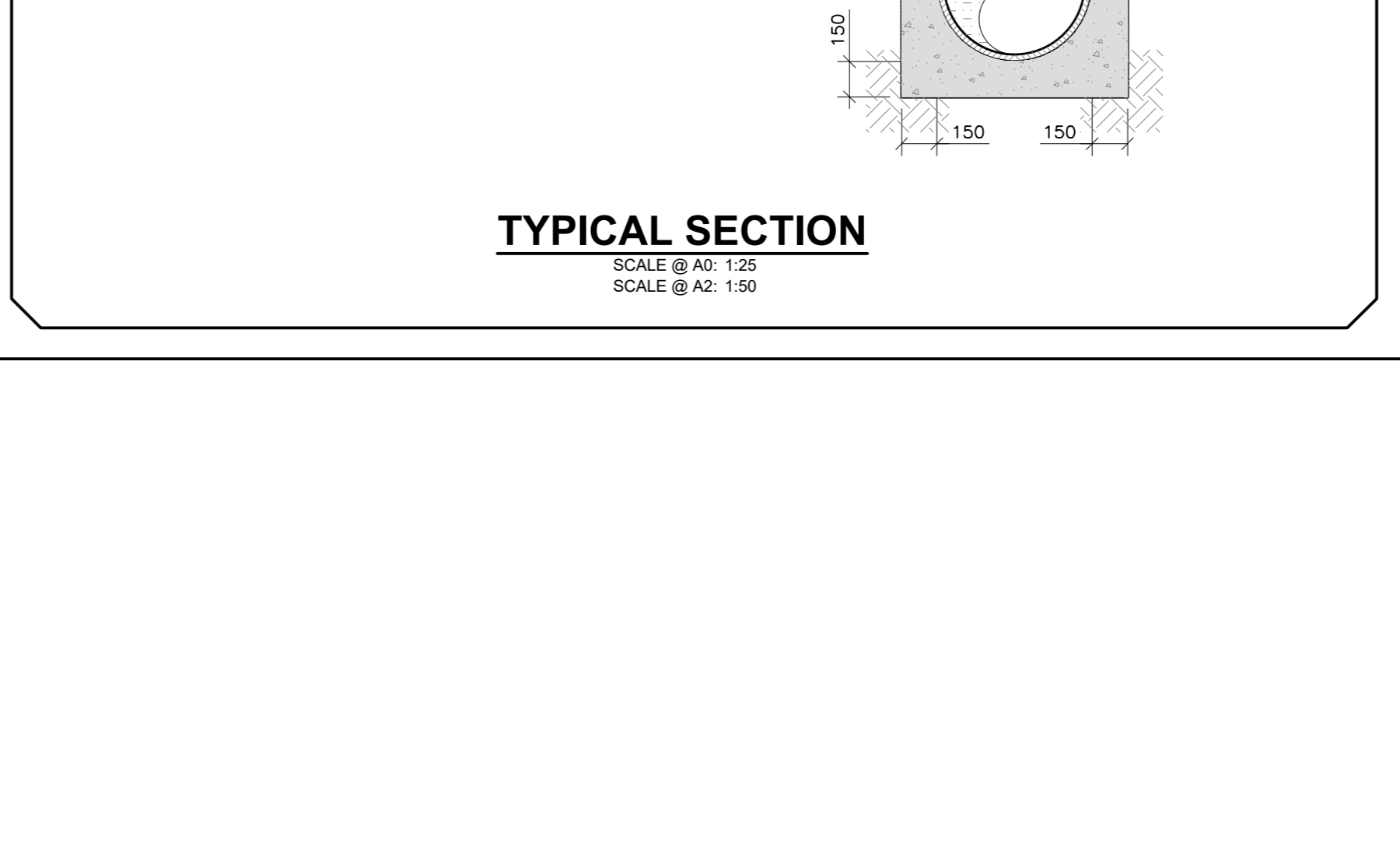
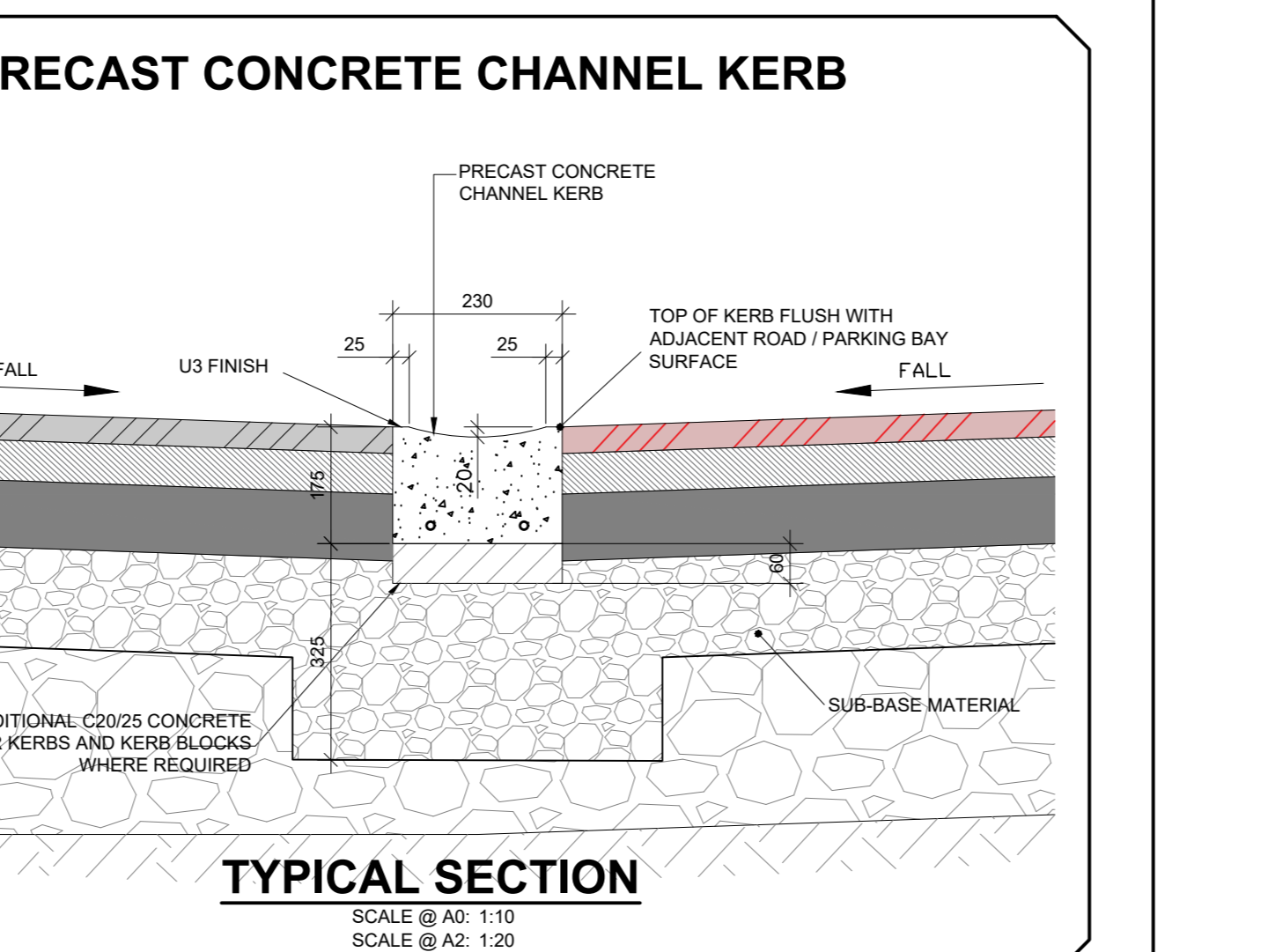
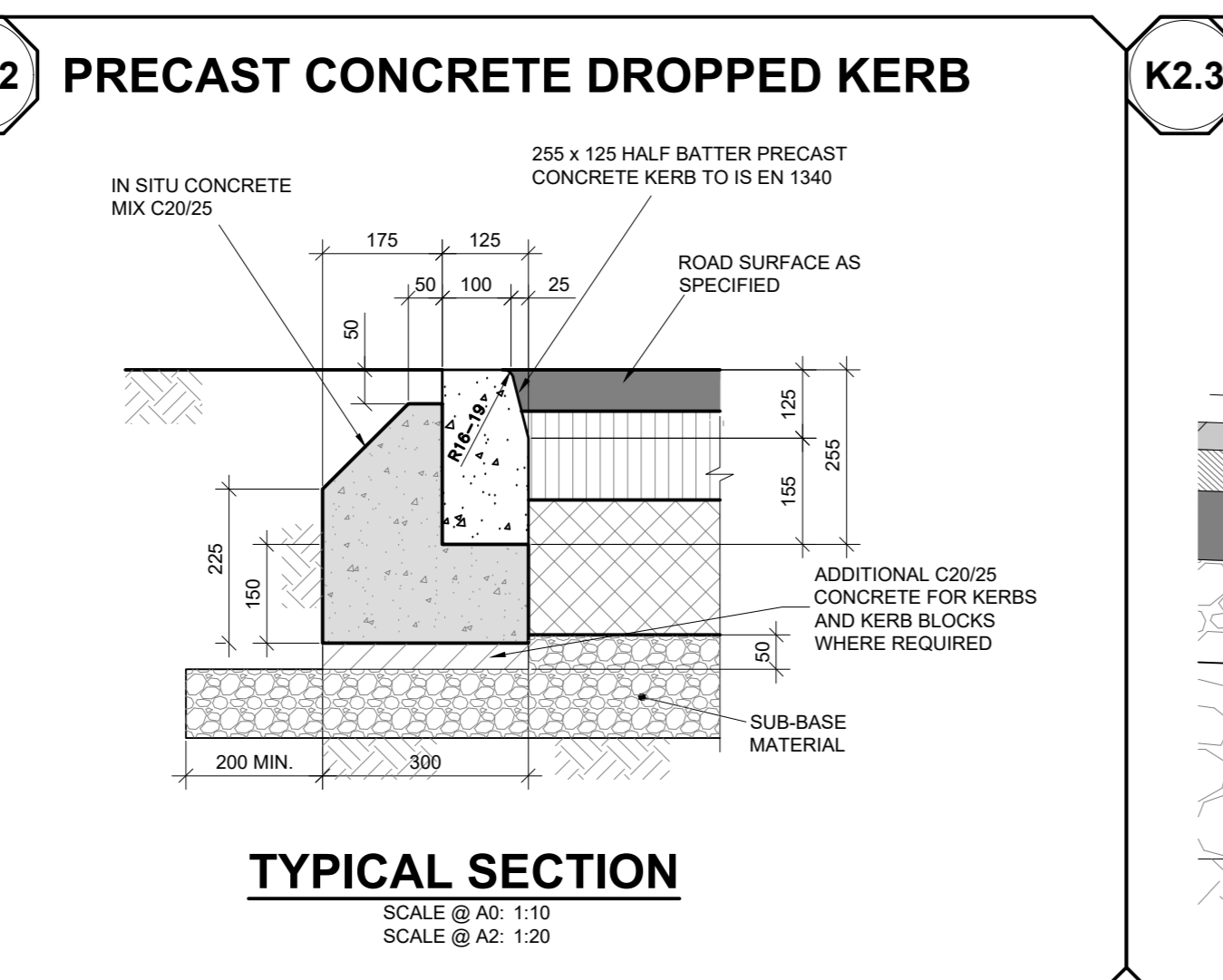
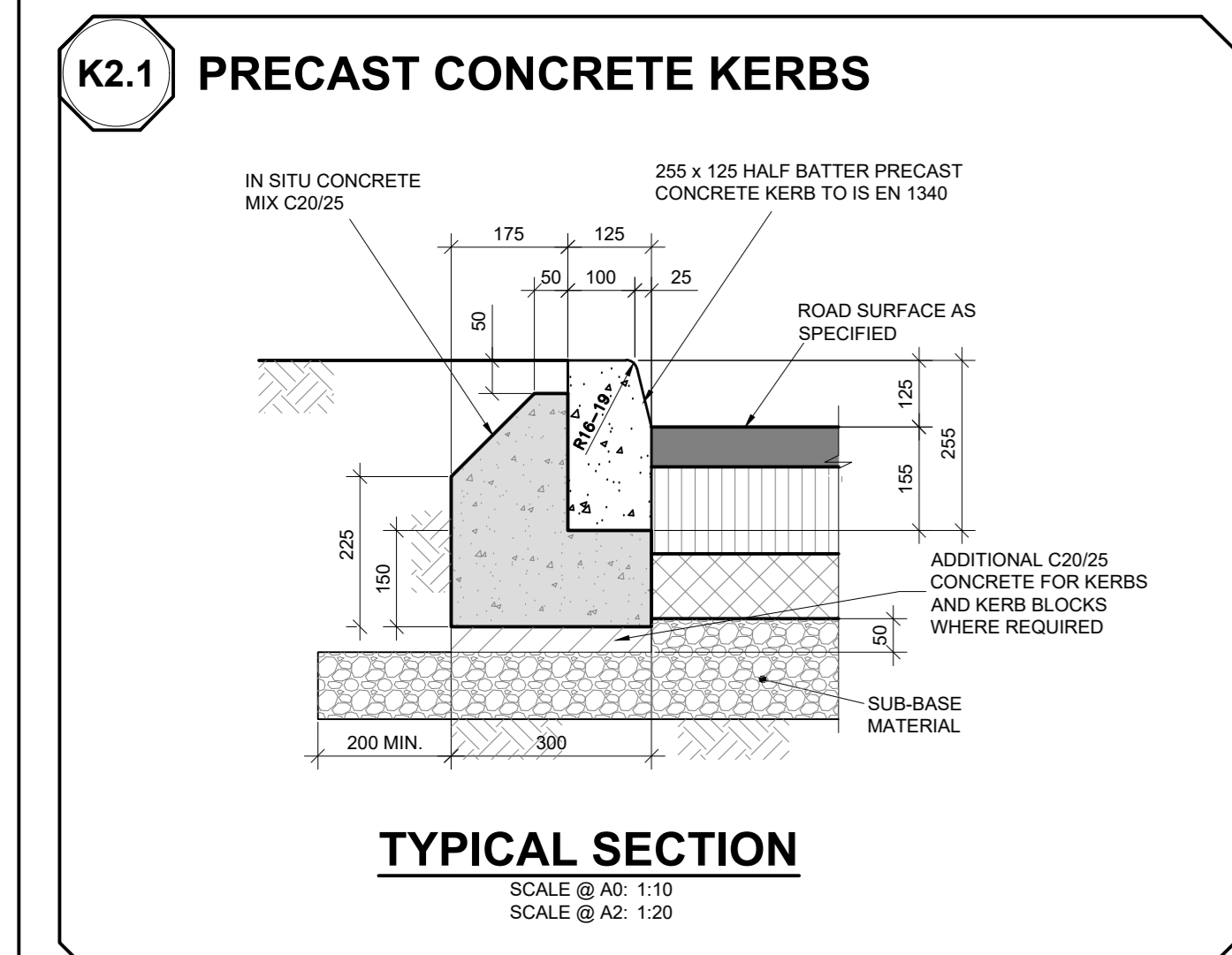
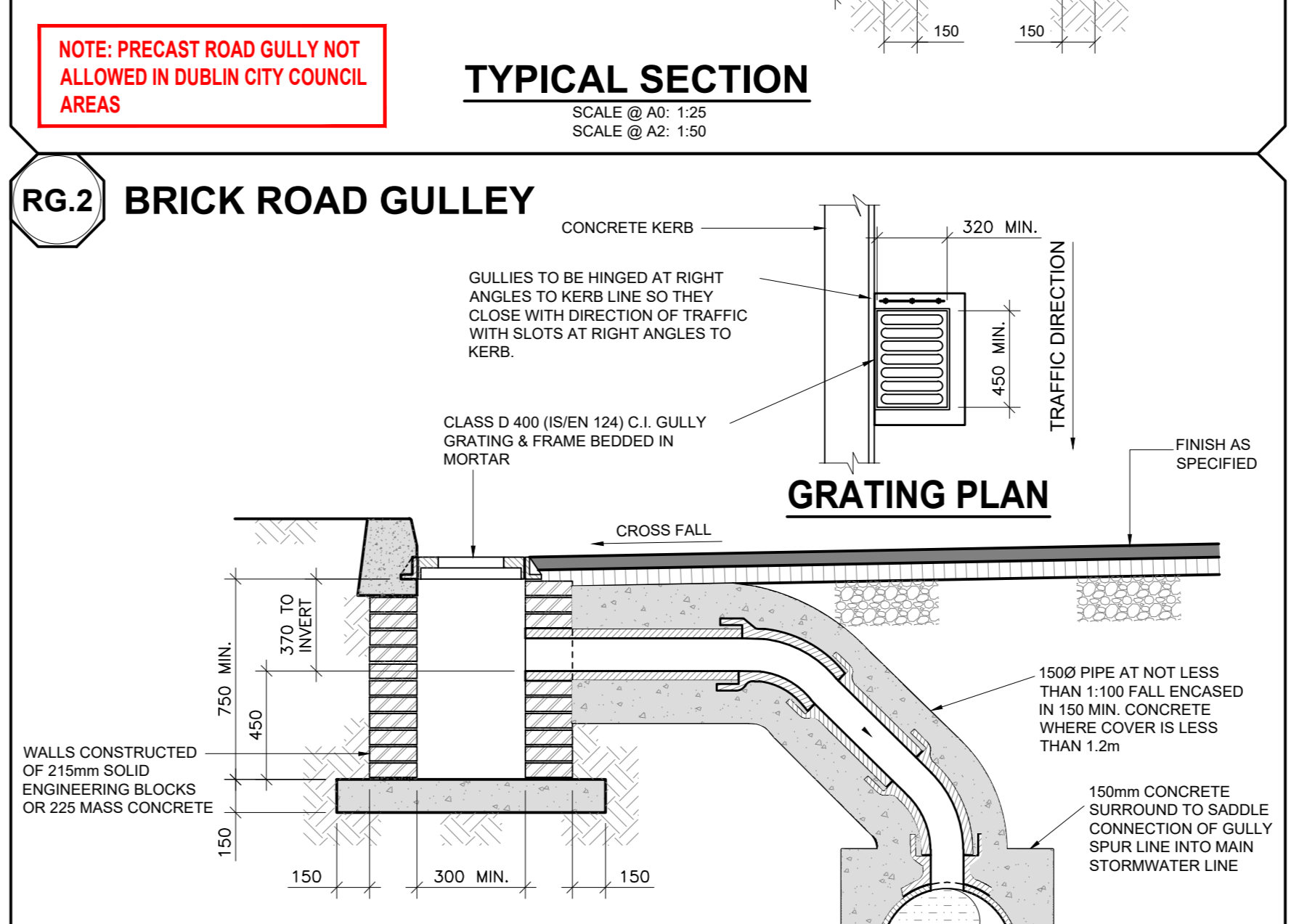
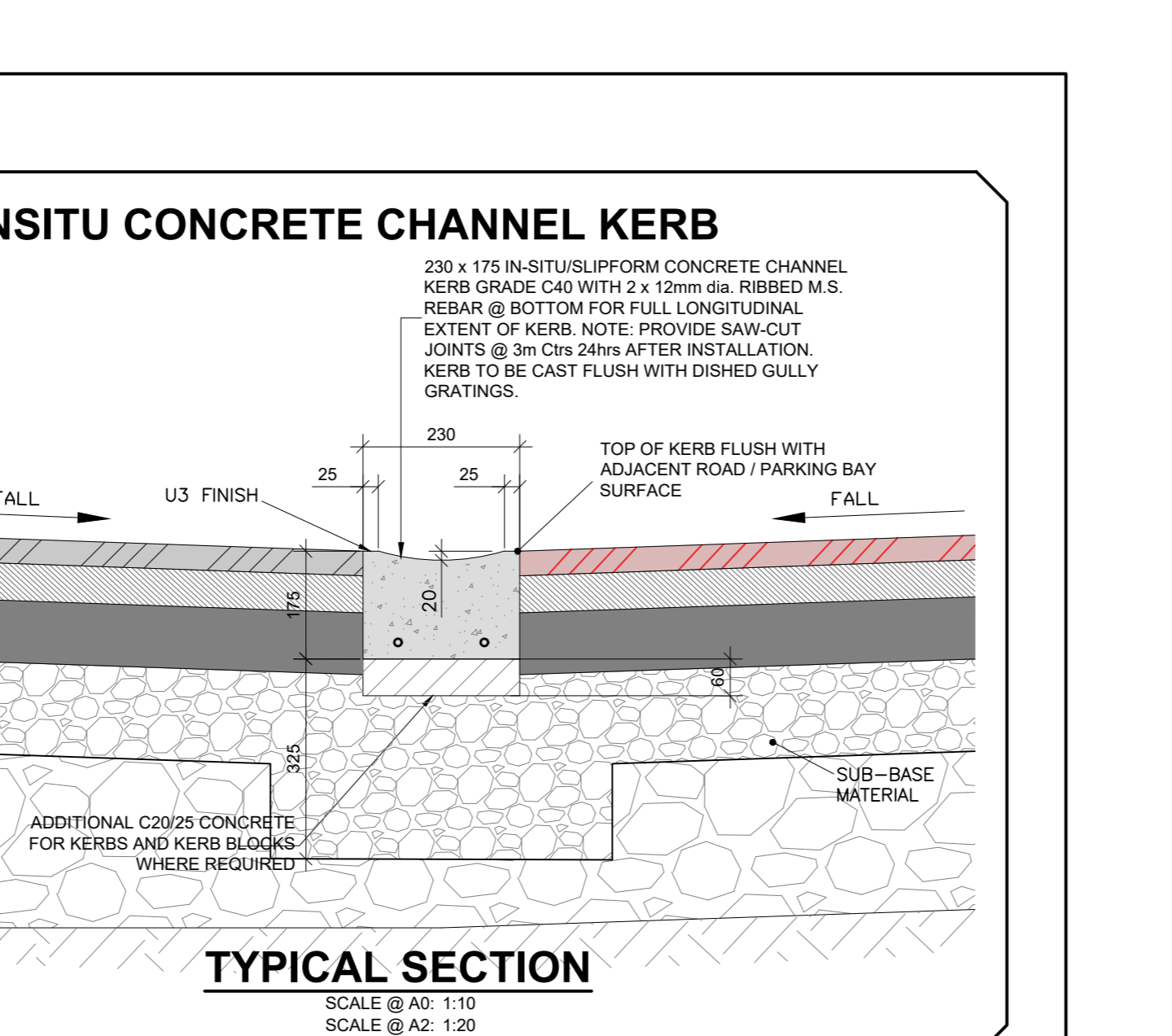
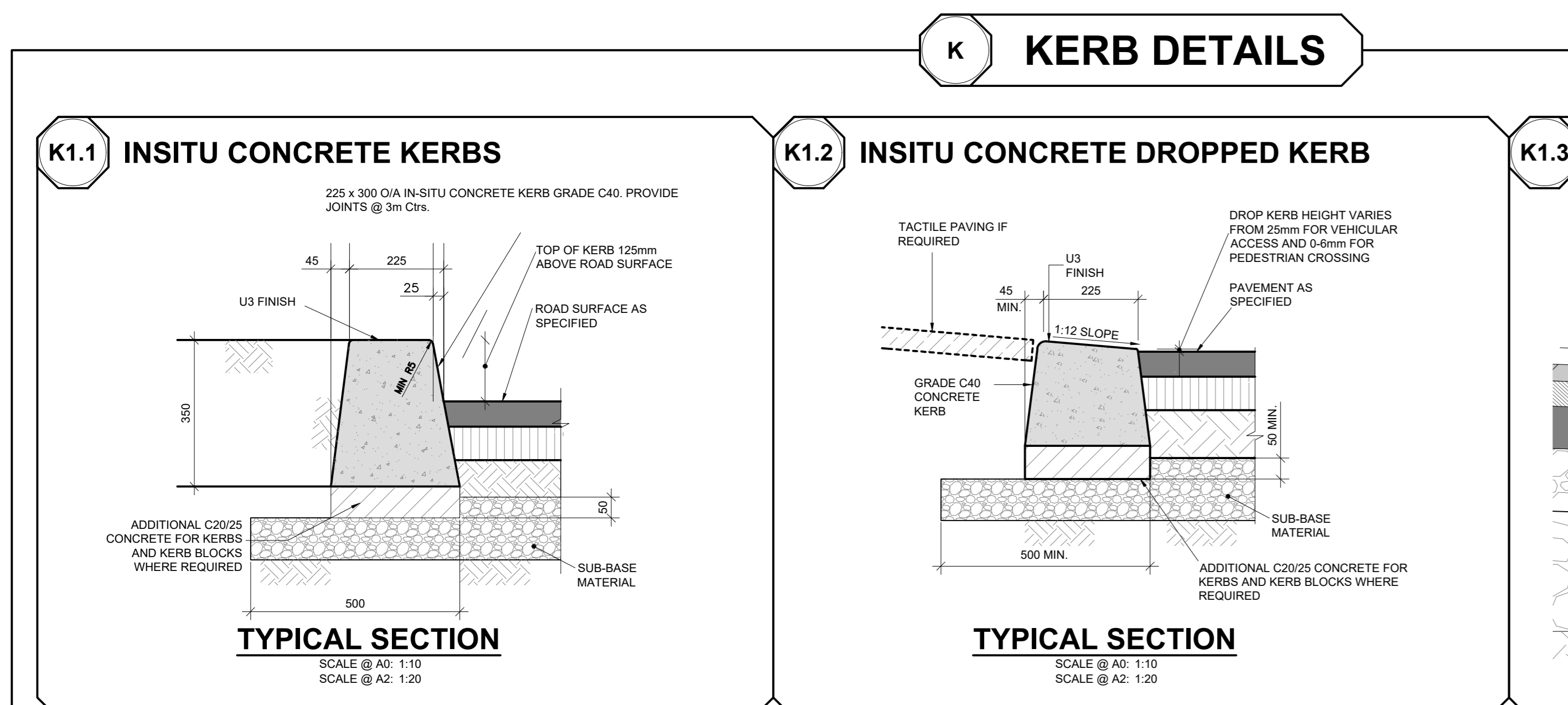


PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dirk Kozak		Project Director: Stephen O'Connor	
BM STAGE			
PLANNING			
BM Dublin Office: Sandwell House, 55-56 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 677 3500 Fax: (01) 677 3154 London Office: 5th Floor, Mill House, 8 Mill Street, London EC1A 3BA, United Kingdom. Tel: (0044) 20 7593 3530 Consulting Engineers, Civil, Structural, Project Management. E-mail: info@bmce.ie Web: www.bmce.ie			
CLIENT			
MCAULEY PLACE			
PROJECT TITLE		BM PROJECT No.	
1448 - BEAUFORT NAAS		24145	
REFERENCE	SUITABILITY	REVISION	
1	1	1	
DRAWING TITLE			
ROADS STANDARD DETAILS - SHEET 1			
DRAWING REFERENCE	STATUS	REVISION	
BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12100	-	P02	



REFER TO DRAWING REFERENCE C-10000, CIVIL ENGINEERING GENERAL NOTES FOR ROAD / FOOTPATH NOTES FOR ALL NOTE REFERRALS ON THIS DRAWING

- #### NOTES
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECTS DRAWINGS FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - ASK.
 - CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.
 - LINEAR DRAINAGE CHANNEL SYSTEMS SHALL BE FULLY COMPLIANT WITH IS 88: 1433:2002 AND CERTIFIED TO THE LOAD CASES SPECIFIED ON THE DRAWINGS AND AS DEFINED IN IS 88: 1433:2002.
 - GRADED LINEAR DRAINAGE CHANNEL SYSTEMS SHALL BE OF 100mm, 150mm OR 200mm NOMINAL INTERNAL WIDTH AS SPECIFIED ON THE DRAWINGS. MANUFACTURED FROM HIGH STRENGTH POLYMER CONCRETE WITH CAST-IN GALVANIZED STEEL EDGE RAILS. THE CHANNELS SHALL BE INSTALLED WITH MANUFACTURERS DUCTILE IRON OR STAINLESS STEEL GRATING APPROPRIATE TO THE SPECIFIED LOAD CLASS AND LOCKED SECURELY IN PLACE. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
 - SLOTTED LINEAR DRAINAGE CHANNEL SYSTEMS SHALL BE CHOSEN ACCORDING TO THE LOAD CLASS REQUIRED AND MANUFACTURED FROM HIGH STRENGTH POLYMER CONCRETE INCORPORATING A 15mm WIDE CENTRALLY POSITIONED SLOT. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
 - PRECAST KERBS SHALL BE LAG AND LEVELLED IN ACCORDANCE WITH BS 7533: PART 4. A RAISED LIP OF 25mm SHOULD BE USED FOR VEHICULAR ENTRANCES AND 45mm FOR PEDESTRIAN CROSSINGS.
 - IN SITU KERBS SHALL COMPLY WITH THE REQUIREMENTS OF BS 8001. KERBS SHALL BE PROTECTED FROM THE EFFECTS OF ADVERSE WEATHER UNTIL CURED. A RAISED LIP OF 25mm SHOULD BE USED FOR VEHICULAR ENTRANCES AND 45mm FOR PEDESTRIAN CROSSINGS.
- NOTE:** BEFORE PAVERS / PAVEMENT WORKS ARE COMMENCED THE CONTRACTOR IS TO GET APPROVAL FROM THE LOCAL AUTHORITY FOR THE DETAILS SHOWN ON THIS DRAWING AND ESTABLISH INSPECTION AND TESTING REQUIREMENTS BEFORE COMMENCING THE WORK.



PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dirk Kotze		Project Director: Stephen O'Connor	
PLANNING			
BM Dublin Office: Sandwell House, 55-56 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 877 3500 Fax: (01) 877 3164 London Office: 8th Floor, 464 Regent Street, London W1B 2SA, United Kingdom Tel: (0044) 20 7370 3530 Consulting Engineers, Civil, Structural, Project Management E-mail: info@bm.ie Web: www.bm.ie			
ACEI The Institution of Structural Engineers			
CLIENT: MCAULEY PLACE			
PROJECT TITLE: 1448 - BEAUFORT NAAS		BM PROJECT No: 24145	
REFERENCE	SUITABILITY	REVISION	
DRAWING TITLE: ROADS STANDARD DETAILS - SHEET 2			
DRAWING REFERENCE: BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12101	STATUS: -	REVISION: P02	

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECTS DRAWINGS FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IN ANY DOUBT - ASK.
- CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

B FOOTPATHS / CYCLE PATHS

B1 ASPHALT / BITUMEN MACADAM

BLACK MACADAM BUFF MACADAM RED MACADAM

B1.1 FOOTPATH / CYCLE PATH

25mm MIN. THICK OF 10mm NOMINAL SIZE CLOSE GRADED WEARING COURSE BITUMEN MACADAM TO BS 4987 ON
 50mm MIN. THICK OF 20mm NOMINAL SIZE DENSE BASE COURSE MACADAM TO BS 4987 ON 100mm SUB-BASE (SEE NOTE 3)
 *AT VEHICULAR CROSSINGS INCREASE DEPTH OF WEARING COURSE AND BASECOURSE TO 40mm AND 60mm RESPECTIVELY

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B1.2 OFF ROAD CYCLE PATH

20mm min. THICK OF BLACK AC 6 DENSE SURF 70/100 TO IS EN 13108-1 & CC-SPW-00900 ON
 50mm min. THICK OF AC20 HDM BN 40/60 TO IS EN 13108-1 & CC-SPW-00900 ON
 200mm min. THICK OF UNBOUND GRANULAR SUB-BASE TYPE B: UBGM Bc TO CC-SPW-00900

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B2 CONCRETE

B2.1 FOOTPATH / CYCLE PATH

* 100mm THICK IN-SITU CONCRETE FOOTPATH (SEE NOTE 5) ON POLYETHYLENE SHEETING SEPARATING MEMBRANE 120 MICRONS THICK (300 LAPS) ON 100mm SUB-BASE (SEE NOTE 3)
 PROVIDE TRANSVERSE CONTRACTION JOINTS IN FOOTPATH @ 3m Cts. USING A DOUBLE LAYER OF ROOFING FELT TO IS 98 FOR THE FULL DEPTH OF THE JOINT.
 *AT VEHICULAR CROSSINGS INCREASE DEPTH OF CONCRETE TO 200mm

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B3 BLOCK PAVED

B3.1 CLAY PAVERS

CLAY (50mm THICK) BLOCK PAVERS (SEE NOTE 10 & 12) ON 100mm SAND LAYING COURSE (SEE NOTE 11) ON 100mm SUB-BASE (SEE NOTE 4)
 *AT VEHICULAR CROSSINGS PROVIDE 80mm THICK 65mm THICK CLAY PAVERS ON 30mm SAND LAYING COURSE ON 150mm LEAN MIX CONCRETE ROADBASE (SEE NOTE 1)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B3.2 CONCRETE FLAG PAVERS

60mm THICK CONCRETE FLAGS TO BS 7263 ON 25mm 1:3 CEMENT/SAND MORTAR LAYING COURSE ON 100mm SUB-BASE (SEE NOTE 4)
 NOMINAL WIDTH 30mm JOINTS GROUTED WITH 1:3 CEMENT/SAND MORTAR AND POINTED
 *AT VEHICULAR CROSSINGS PROVIDE 80mm THICK CONCRETE BLOCK PAVERS ON 30mm SAND LAYING COURSE ON 150mm LEAN MIX CONCRETE ROADBASE (SEE NOTE 1)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B3.3 GRANITE PAVERS

60mm THICK GRANITE FLAGS TO BS EN 1341 ON 25mm 1:3 CEMENT/SAND MORTAR LAYING COURSE ON 100mm SUB-BASE (SEE NOTE 4)
 NOMINAL WIDTH 5/10mm JOINTS GROUTED WITH 1:3 CEMENT/SAND MORTAR AND POINTED
 *AT VEHICULAR CROSSINGS PROVIDE 150mm LEAN MIX CONCRETE ROAD BASE (SEE NOTE 1) ON 150mm SUB-BASE (SEE NOTE 4)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B4 COMPACTED GRAVEL

B4.1 COMPACTED GRAVEL

50mm COMPACTED GRAVEL BALL/LUSK 650 DUST - 35% (40mm) L&D TO FALL COMPACTED IN 2 LAYERS OF 25mm WHEN DAMP
 250mm WELL COMPACTED CL8/8 BASE
 BINDING LAYER OF QUARRY DUST
 2m TYPICAL BUT SEE PANS (1.2m MINIMUM AT OBSTRUCTIONS)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B5 RESIN BOUND GRAVEL (POROUS)

B5.1 RESIN BOUND GRAVEL (POROUS)

24mm COLOURED RESIN BOUND GRAVEL TO LANDSCAPE ARCHITECT'S SPECIFICATION ON 20mm MIN THICK OF AC 14 OPEN SURF BINDER COURSE (MAX. 100/150 PEN) TO IS EN 13108 ON 60mm MIN THICK OF AC 20 OPEN BASE COURSE (MAX. 100/150 PEN) TO IS EN 13108 ON 150mm WELL COMPACTED TYPE 420 GRADED CRUSHED CONCRETE AGGREGATE TO EN 12620 ON PERMEABLE NON-WOVEN GEOTEXTILE ON FILL MATERIAL / SUBGRADE - REFER TO NOTES ON SUBGRADE TESTING
 2m TYPICAL BUT SEE PANS (1.2m MINIMUM AT OBSTRUCTIONS)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B6 POROUS MACADAM

B6.1 POROUS MACADAM

WEARING COURSE: 30mm OF 10mm SIZE POROUS MACADAM TO BS4987 ON
 BASE COURSE: 40mm OF 20mm SIZE STONE POROUS MACADAM TO BS 4987 ON
 SUB-BASE: 200mm COARSE GRADED AGGREGATE TYPE 420 TO TABLE A.1 AND TABLE A.3 OF BS 7533 - PART 13
 CARPING LAYER: 300mm CARPING LAYER CLAUSE 6 OF BS 7533 - PART 13 (SEE NOTE 1) ON SUBGRADE TESTING
 PERMEABLE GEOTEXTILE
 2m TYPICAL BUT SEE PANS (1.2m MINIMUM AT OBSTRUCTIONS)

TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

B7 WETPOUR PLAY SURFACE

B7.1 WETPOUR PLAY SURFACE

50 x 150 PRECAST CONCRETE EDGE HERE
 PERMEABLE SOFT PLAY MAT TO SPECIALIST SUPPLIER DETAILS
 20mm GRIT LAYER(RAKED) ON 60mm 11 STRUC BUNDRING (NOT WACKED) ON MIN. 220mm 12 PERM DRAINAGE STONE (COMPACTED WITH WACKER)
 PERMEABLE GEOTEXTILE MEMBRANE
 CONCRETE HAUNCH

TYPICAL SECTION
 SCALE @ A0: 1:10
 SCALE @ A2: 1:20

S20 SIGNAGE

S20 SIGNAGE POST AND FOUNDATIONS

TYPICAL STOP SIGN: RUS 027 AS PER CHAPTER 5 OF TRAFFIC SIGNS MANUAL (2019) - REFER TO PLANS FOR SIGN FACE SIZE
 TYPICAL YIELD SIGN: RUS 028 AS PER CHAPTER 5 OF TRAFFIC SIGNS MANUAL (2019) - REFER TO PLANS FOR SIGN FACE SIZE
 TYPICAL SHARED TRACK SIGN: RUS 029 AS PER CHAPTER 5 OF TRAFFIC SIGNS MANUAL (2019) - REFER TO PLANS FOR SIGN FACE SIZE
 TYPICAL HOME ZONE SIGN: F 303 AS PER CHAPTER 4 OF TRAFFIC SIGNS MANUAL (2019) - REFER TO PLANS FOR SIGN FACE SIZE

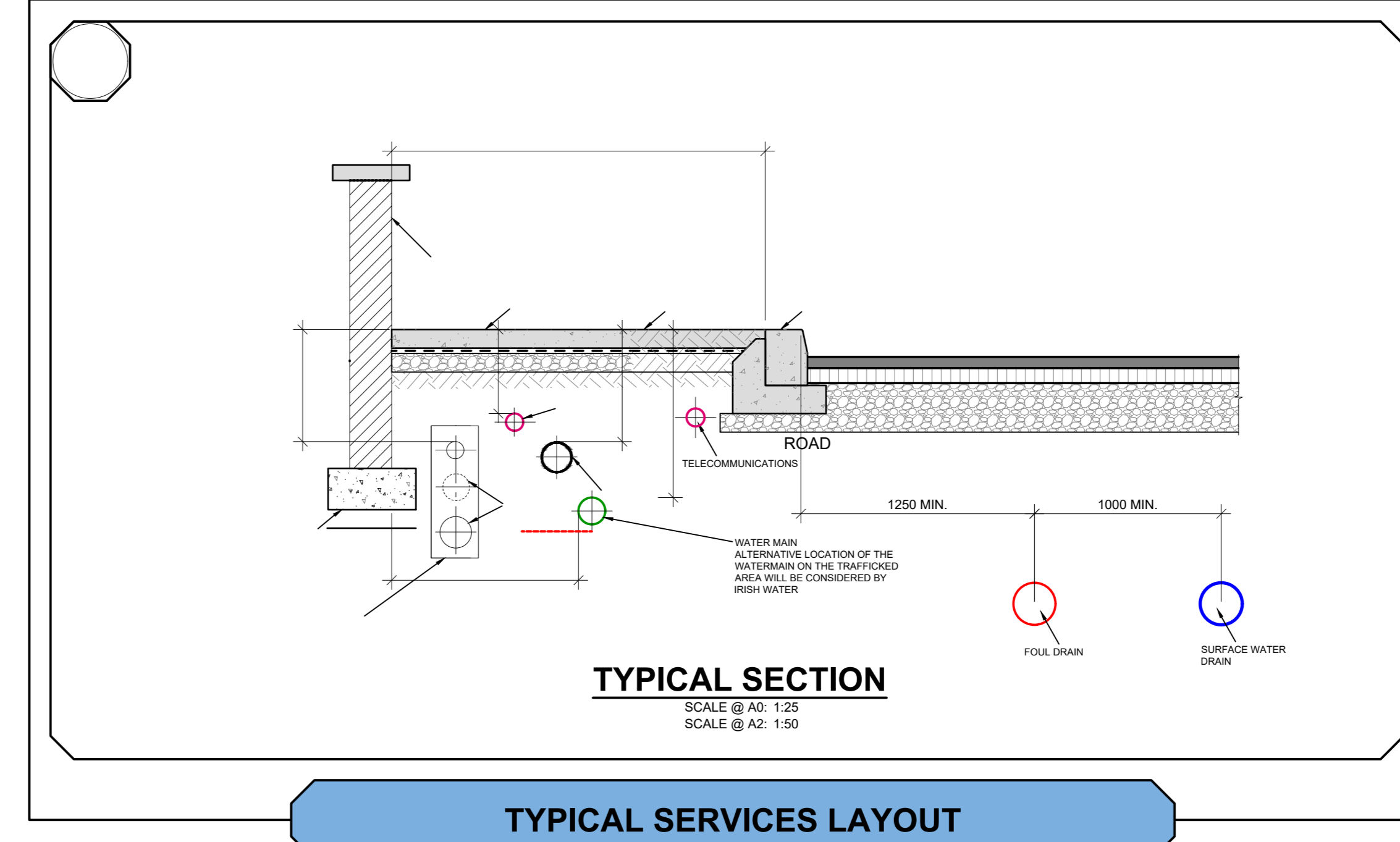
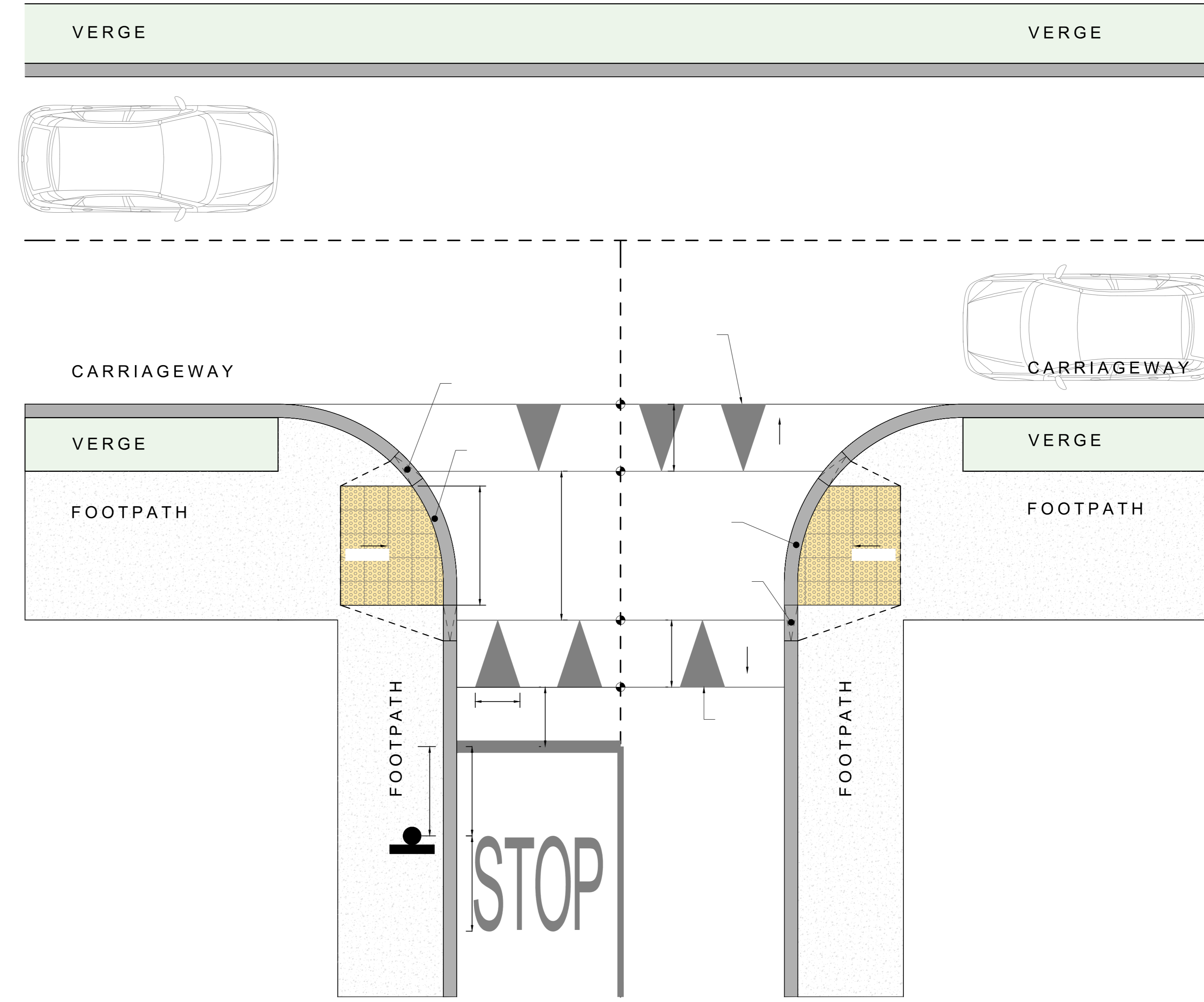
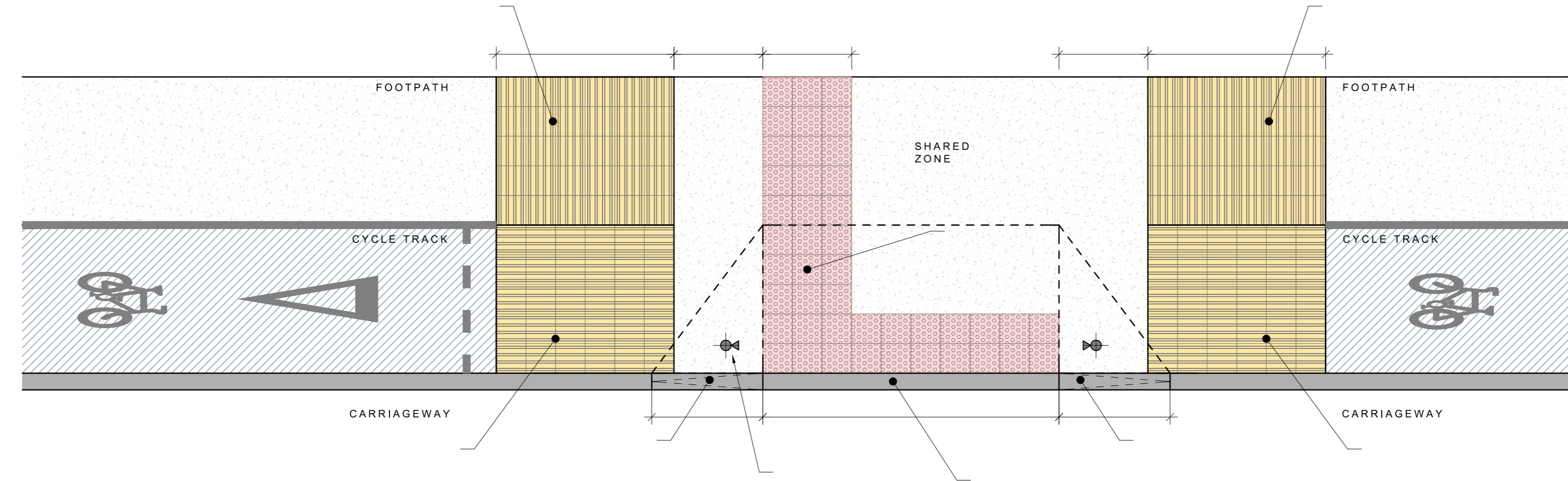
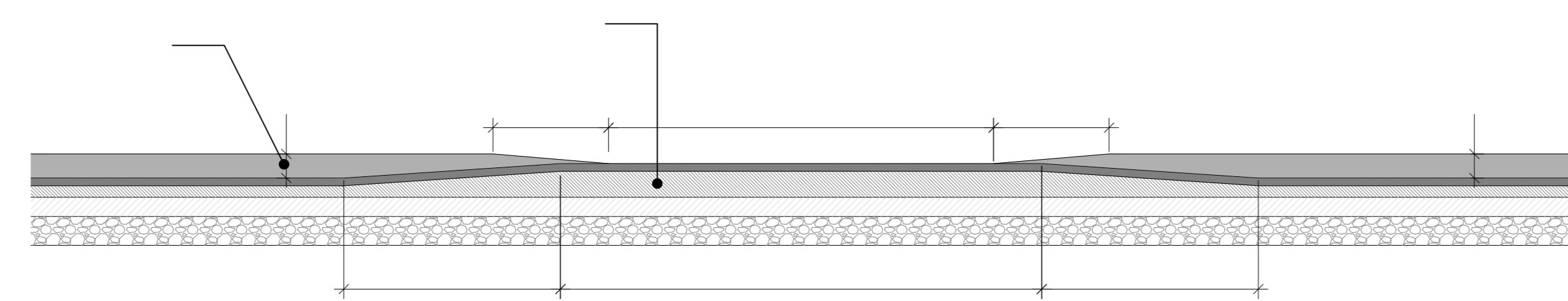
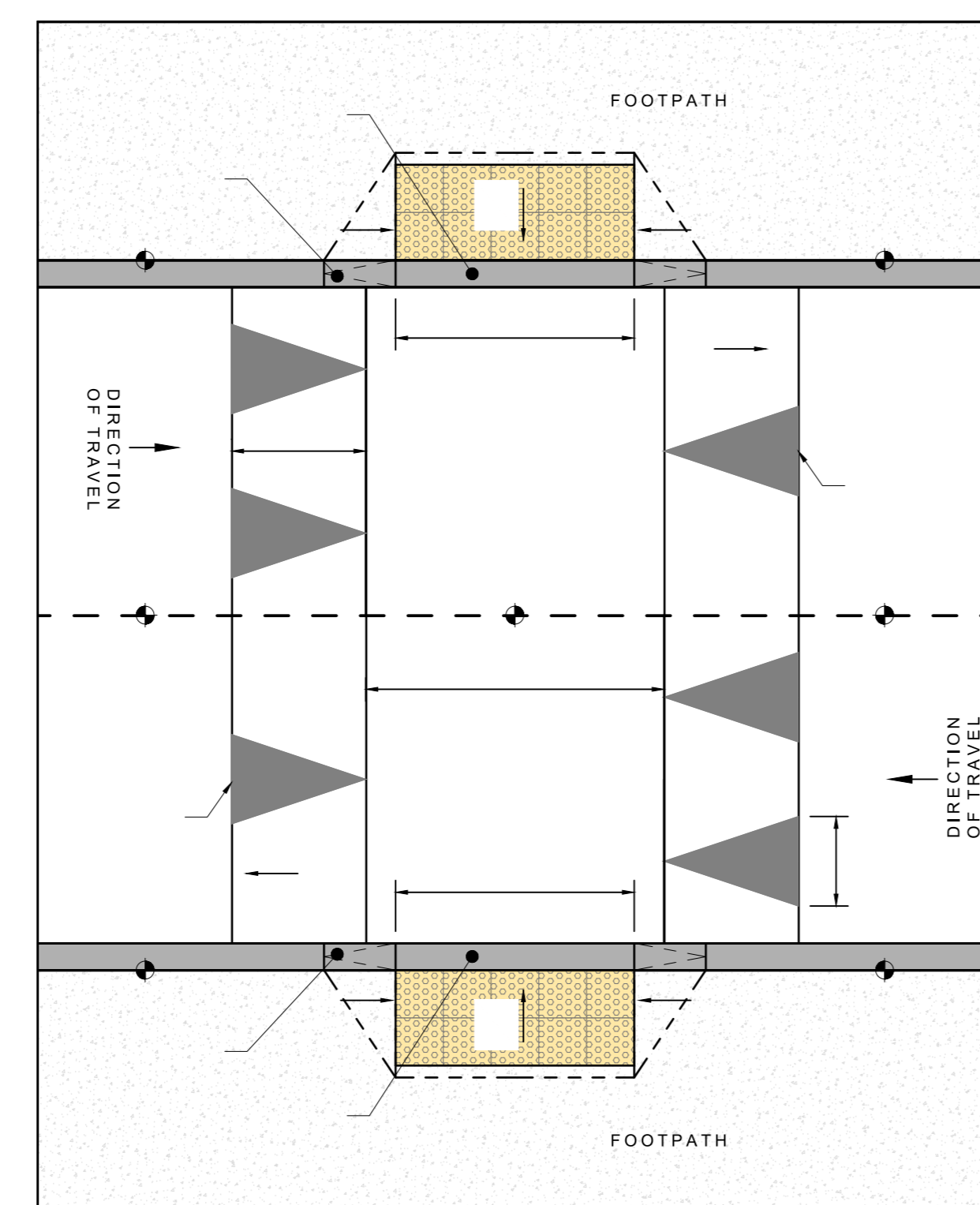
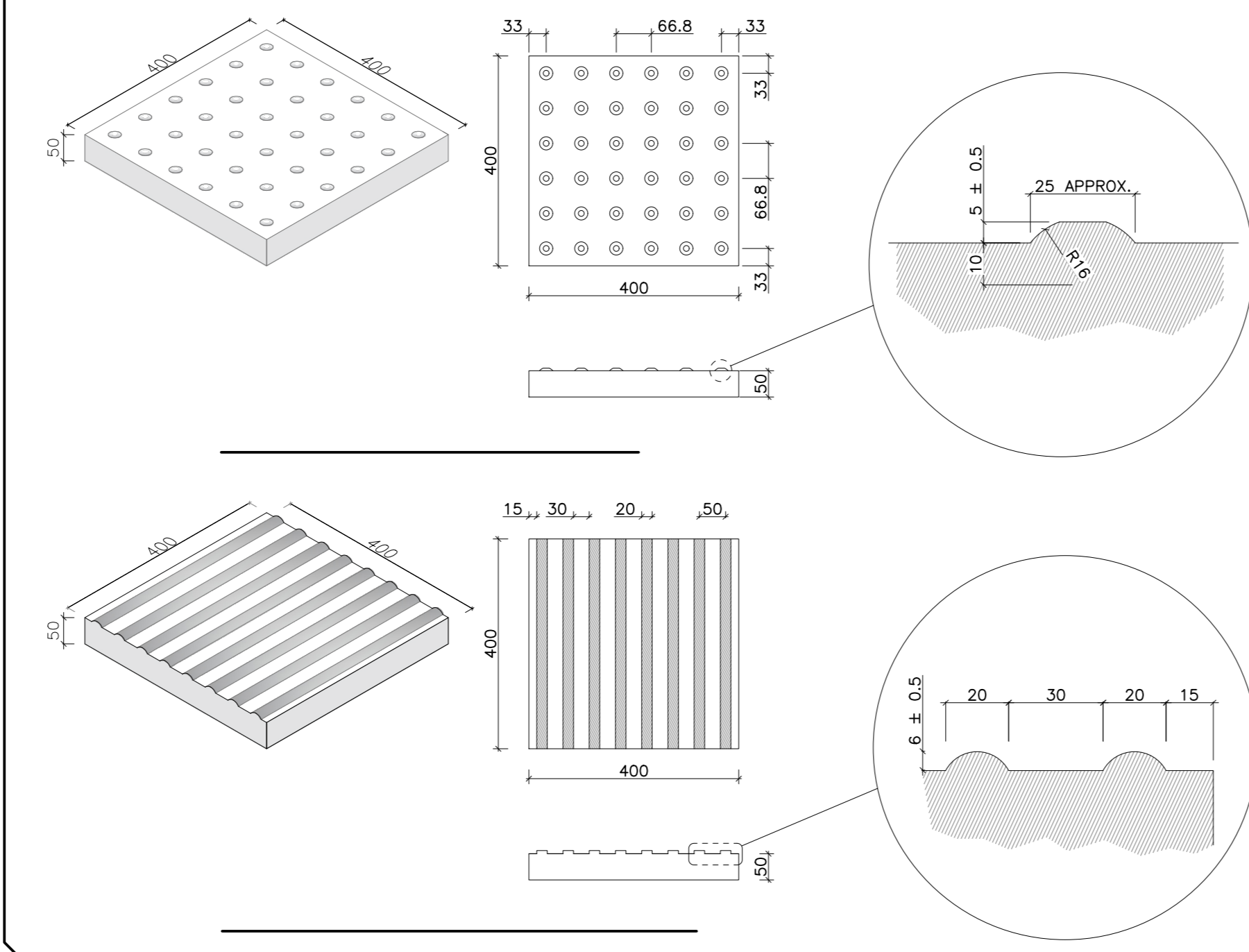
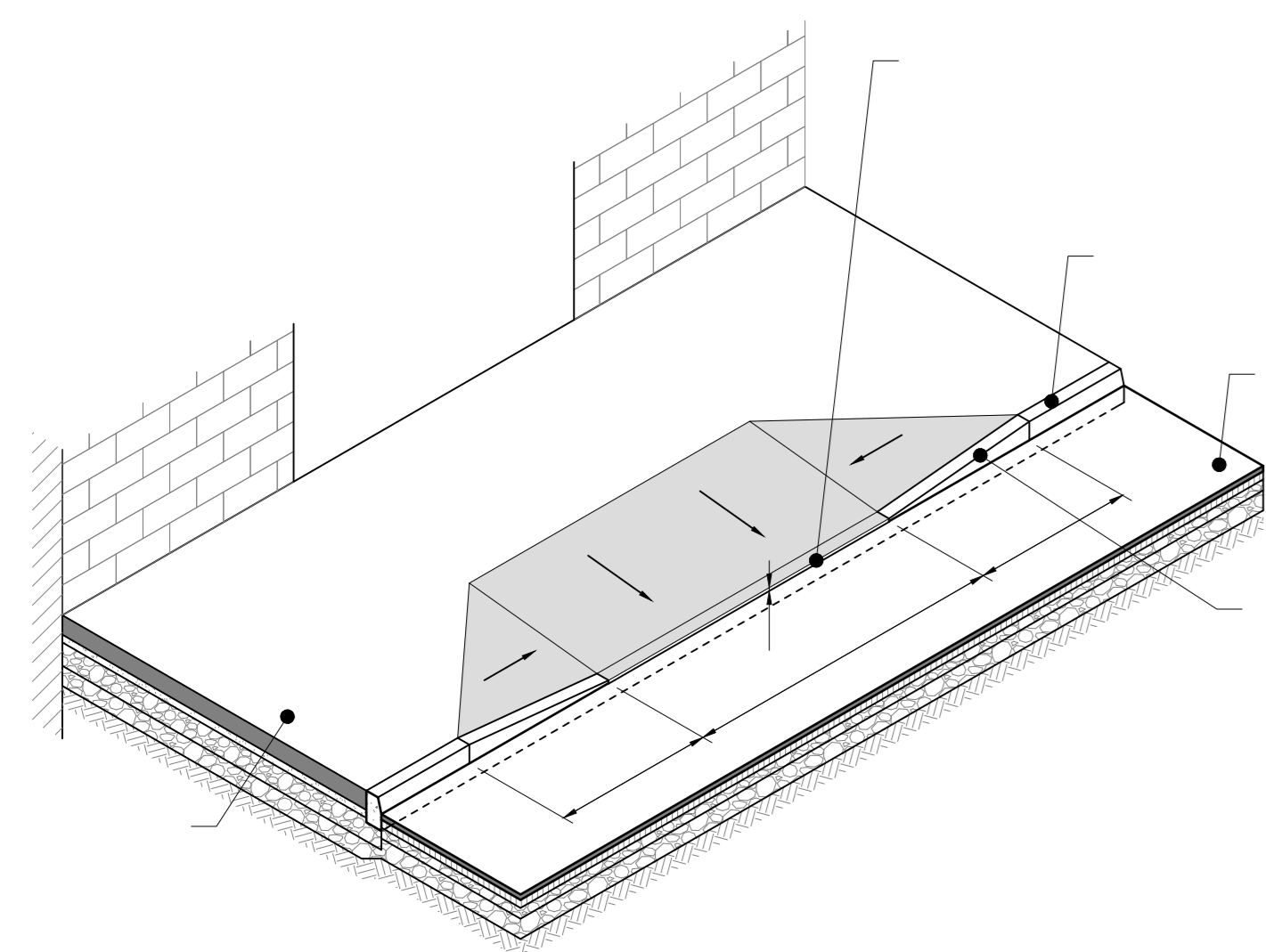
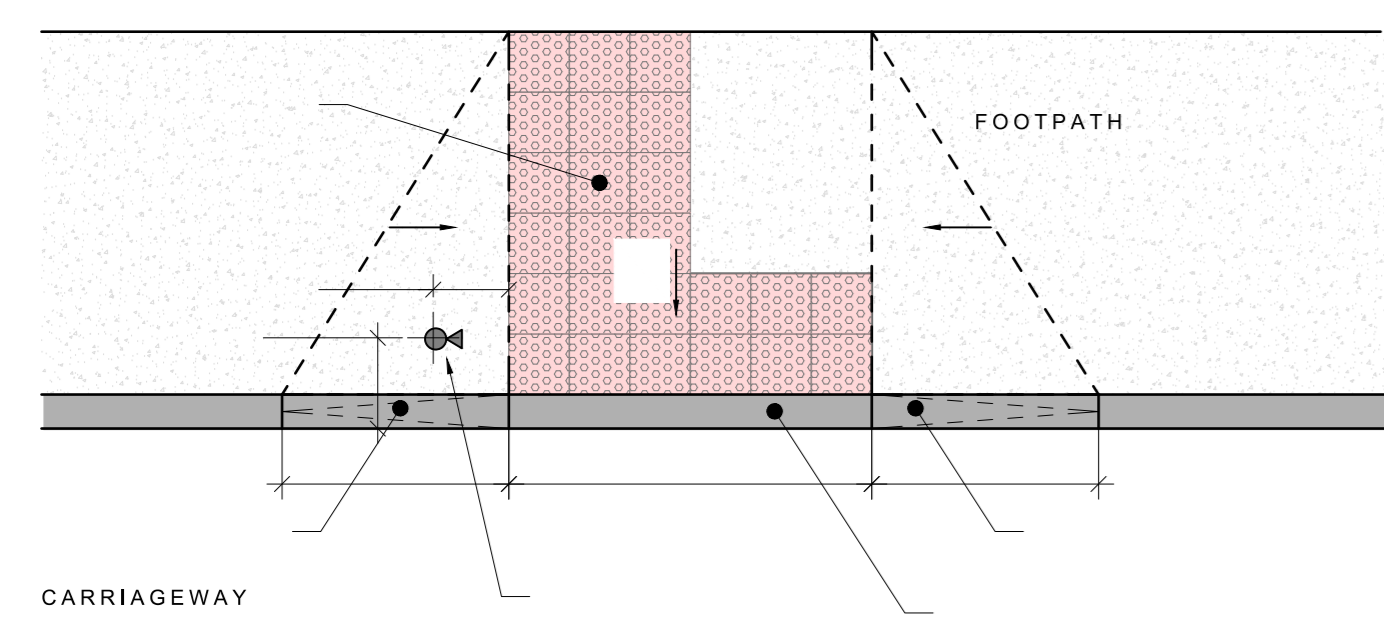
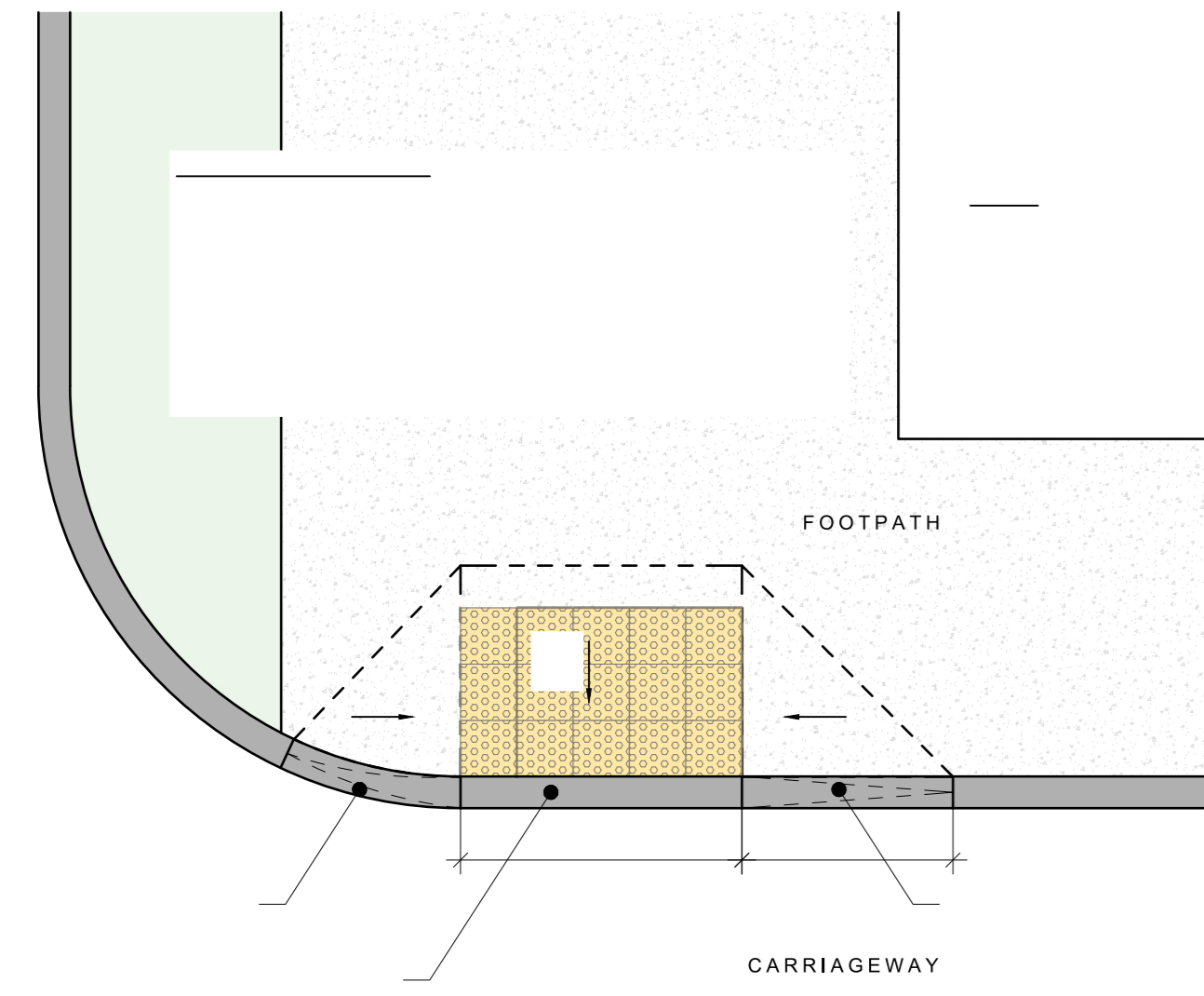
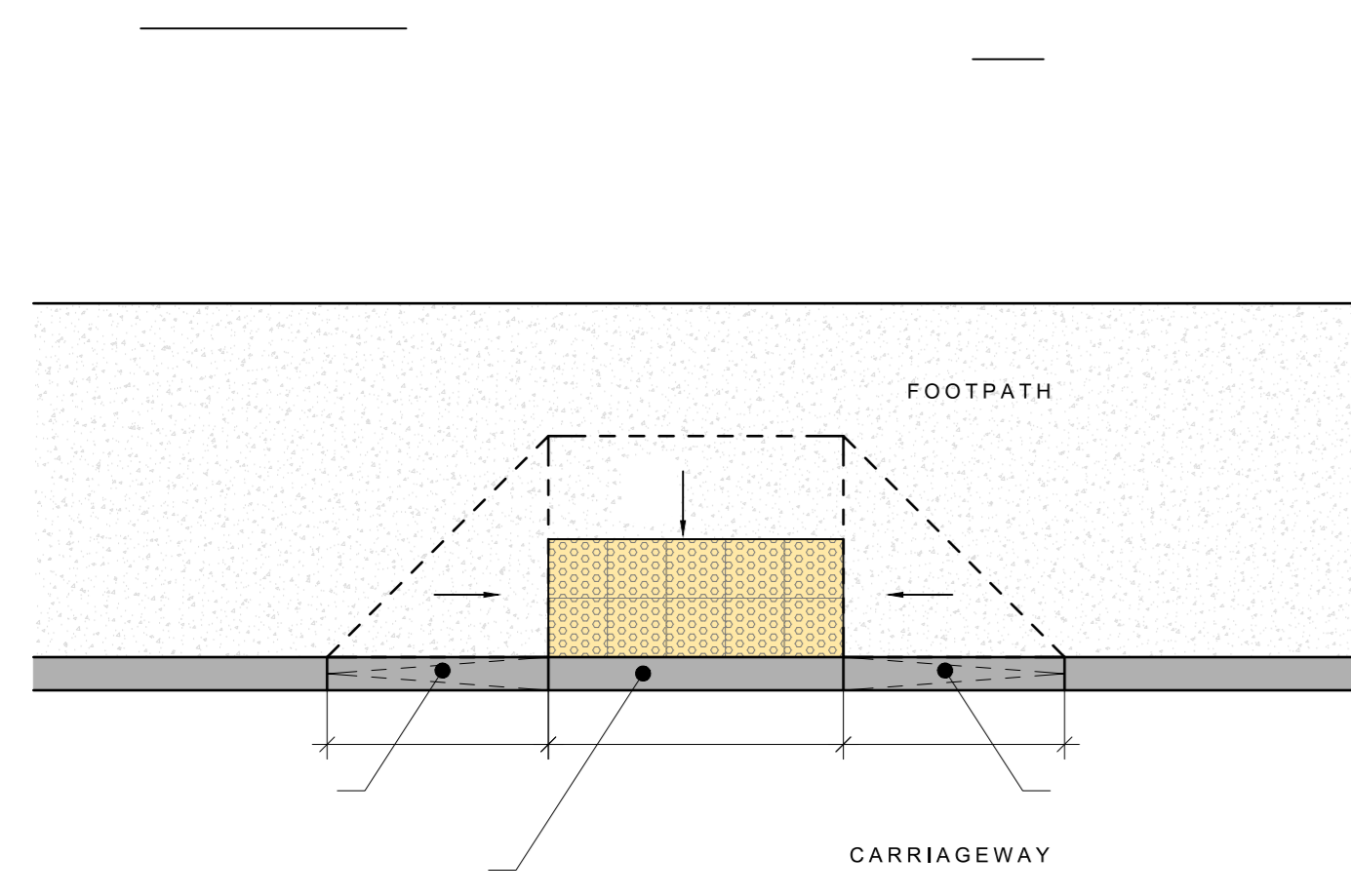
TYPICAL CROSS SECTION
 SCALE @ A0: 1:25
 SCALE @ A2: 1:50

NOTE:

- * MIN. MOUNTING HEIGHT (HT) = 2200mm FROM FINISHED GROUND LEVEL OR FROM FINISHED FOOTPATH LEVEL IF WITHIN 1.2m OF SIGN POST) TO LOWEST EDGE OF SIGN, WHERE SIGNS ARE LOCATED IN THE VICINITY OF CYCLE LANES. MOUNTING HEIGHT SHALL BE INCREASED TO 2500mm.
- ALL SIGNS TO BE MOUNTED ON 100 x 76.1mmØ GALVANISED CHS POST SECURED WITH PROPRIETARY ANTI-ROTATION CLIPS.
- ALL POSTS TO BE FITTED WITH POST CAPS IMMEDIATELY AFTER INSTALLATION TO PREVENT WATER INGRESS.
- ALL SIGN POSTS TO BE SET IN 450mm x 450mm x 600mm DEEP C32/40 CONCRETE FOUNDATION (I.N.O.).
- TOP OF FOUNDATION TO BE FINISHED 200mm BELOW FINISHED GROUND LEVEL.
- ALL SIGN SIZES AND MOUNTING HEIGHTS SHOULD BE VERIFIED WITH ENGINEER PRIOR TO PLACING ORDER.
- ALL SIGN FACES TO BE IN ACCORDANCE WITH THE IRISH TRAFFIC SIGNS MANUAL.

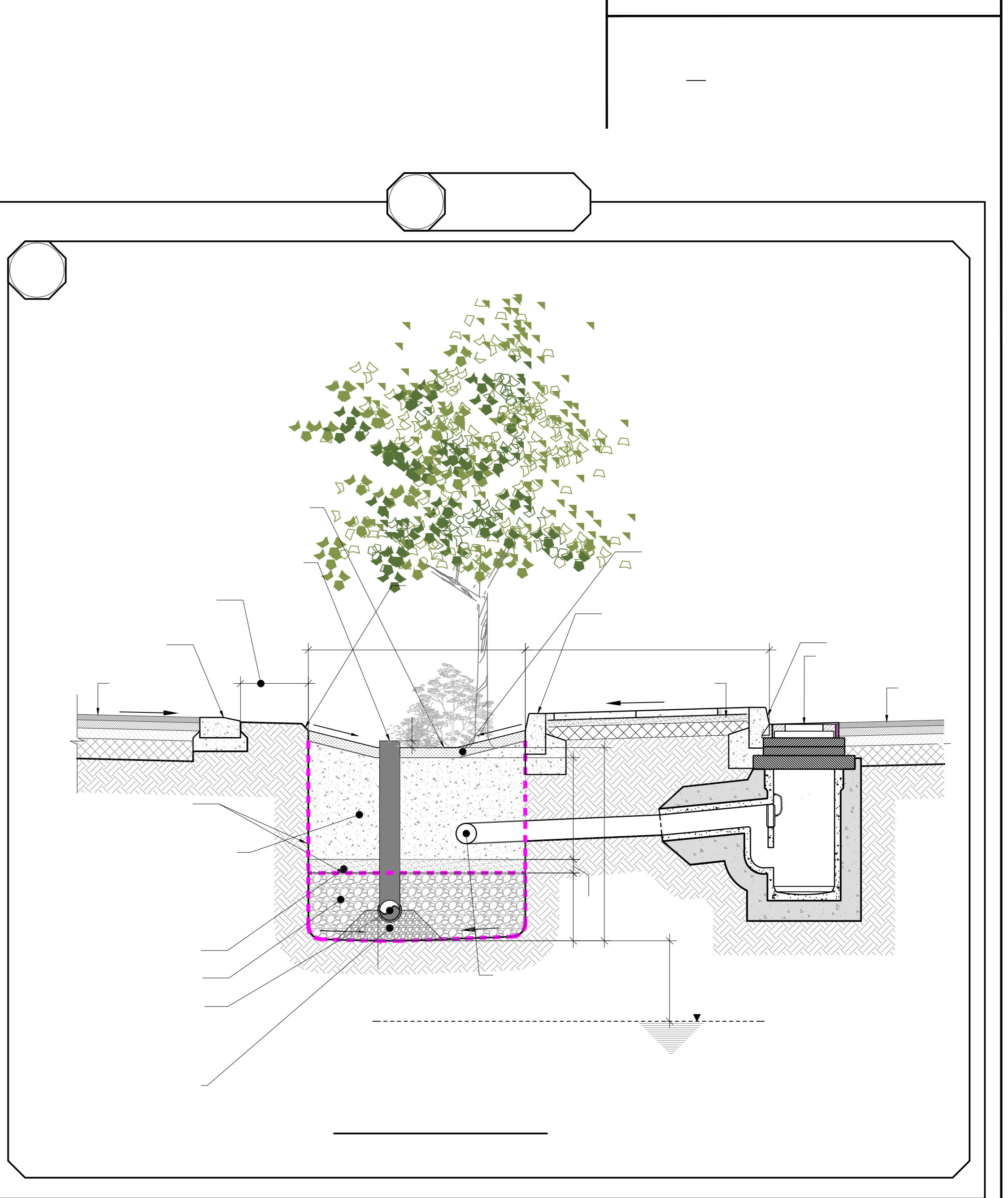
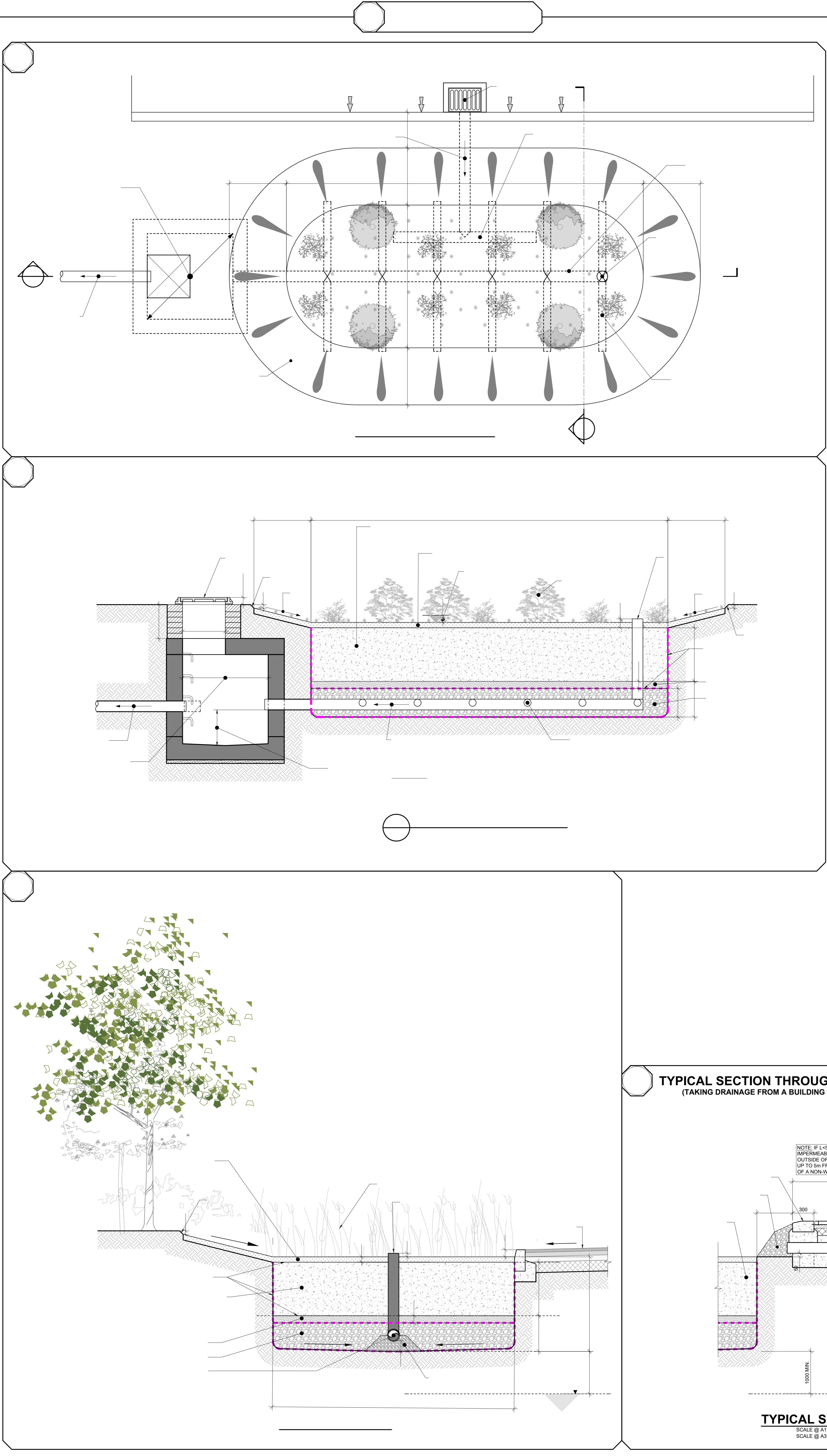
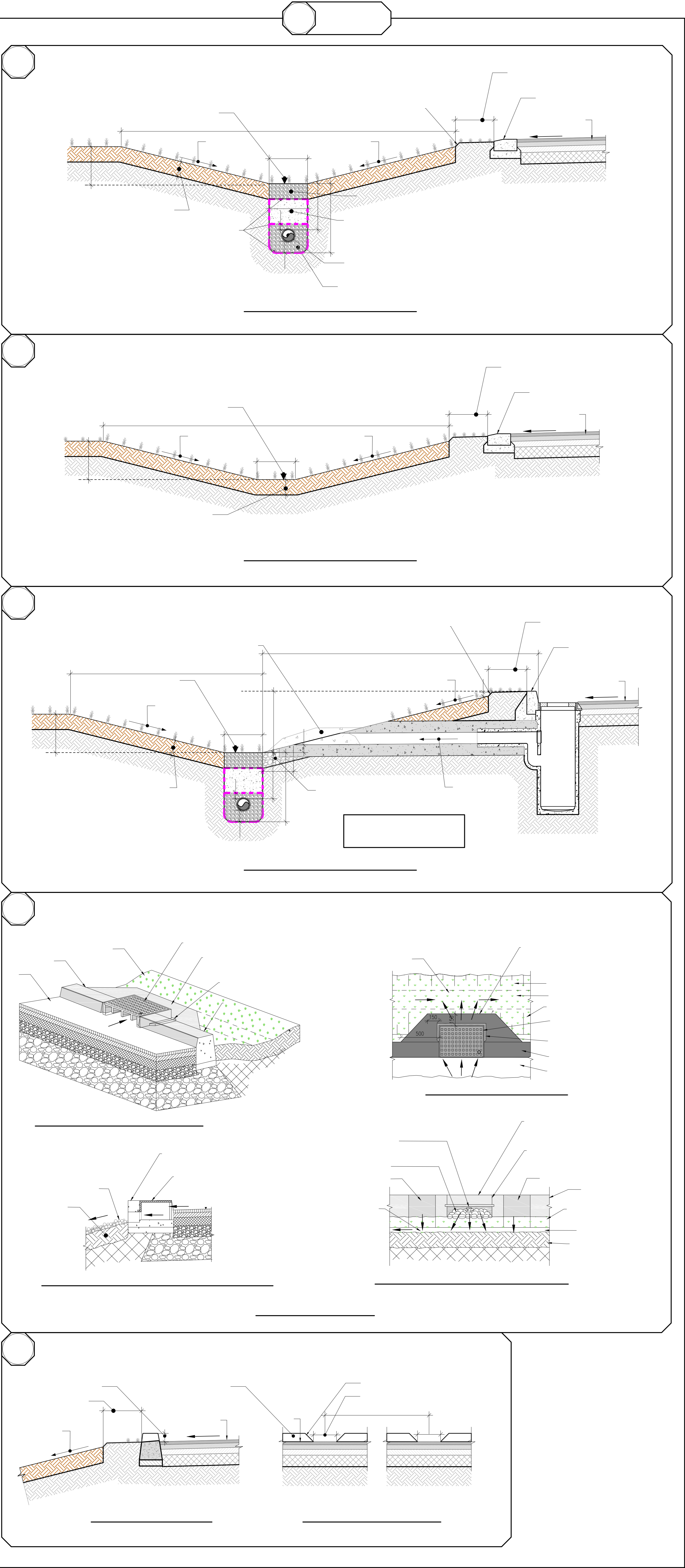
REFER TO DRAWING REFERENCE C-10000, CIVIL ENGINEERING GENERAL NOTES FOR ROAD / FOOTPATH NOTES FOR ALL NOTE REFERRALS ON THIS DRAWING

PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dark Kote		Project Director: Stephen O'Donnor	
BM STAGE			
PLANNING			
<p>BM Dublin Office: Sandwell House, 55-56 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 877 3500 Fax: (01) 877 3164</p> <p>London Office: 8th Floor, 464 Finsbury, 464 Finsbury, London EC1R 3BA, United Kingdom. Tel: (0204) 20 3750 3530</p> <p>Consulting Engineers, Civil, Structural, Project Management E-mail: info@bm.ie Web: www.bm.ie</p> <p>Barrett Mawhood The Institution of Structural Engineers ACEI Institution of Civil Engineers</p>			
CLIENT: MAULEY PLACE			
PROJECT TITLE: 1448 - BEAUFORT NAAS		BM PROJECT No: 24145	
REFERENCE	SUITABILITY	REVISION	
DRAWING TITLE: FOOTPATH STANDARD DETAILS - SHEET 1			
DRAWING REFERENCE: BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12110	STATUS: -	REVISION: P02	



TYPICAL SERVICES LAYOUT

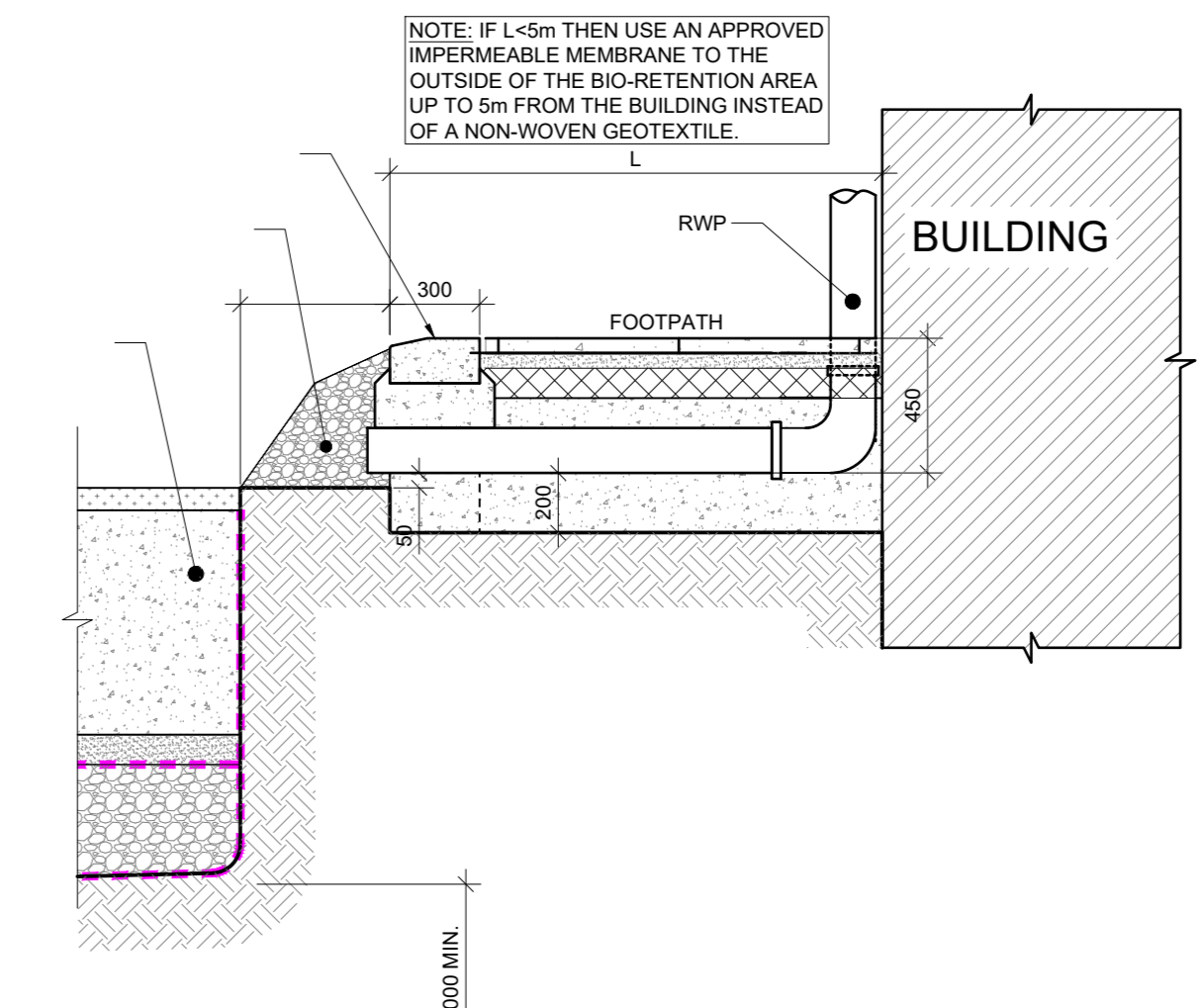
PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.20	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dina Kozla		Project Director: Stephen O'Connor	
BM STAGE			
PLANNING			
BM		Dublin Office: Sandwell House, 33-34 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 677 3500 Fax: (01) 677 3164 London Office: 20th Floor, 444 House, 4 MM Street, London SE1 2BA, United Kingdom Tel: (02044) 20 3730 3530	
BARRETT MAHONY		Chartered Engineers, Civil, Structural, Project Management E-mail: info@bmce.ie Web: www.bmce.ie The Institution of Structural Engineers ACEI	
CLIENT: MCAULEY PLACE			
PROJECT TITLE: 1448 - BEAUFORT NAAS		BM PROJECT No: 24145	
REFERENCE: 1	SUITABILITY: +	REVISION: -	
DRAWING TITLE: FOOTPATH STANDARD DETAILS - SHEET 2			
DRAWING REFERENCE: BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12111	STATUS: -	REVISION: P02	



REMOVE AND REPLACE FILTER MEDIUM AND VEGETATION ABOVE.
FREQUENCY - AS REQUIRED BUT LIKELY TO BE > 20 YEARS

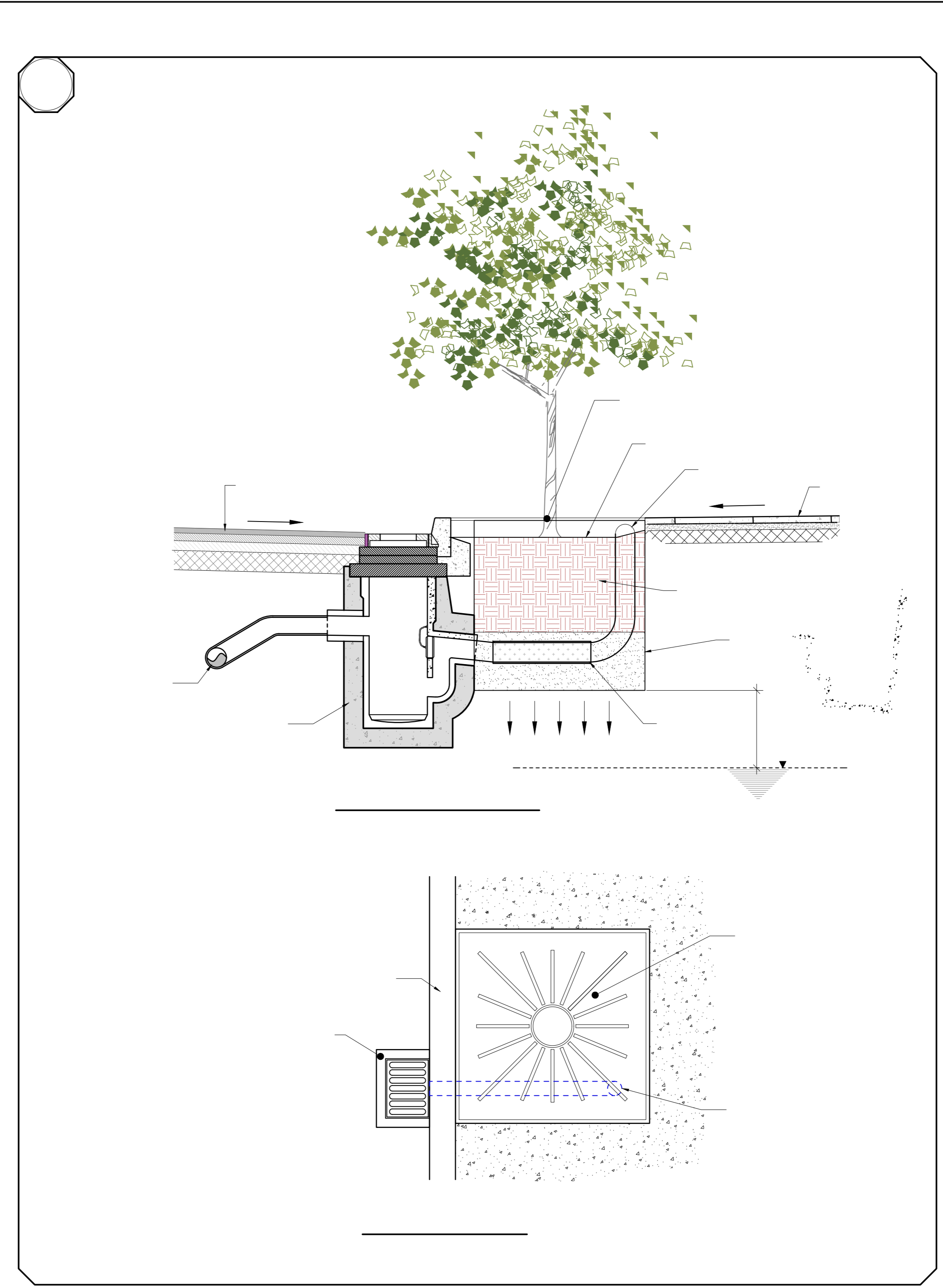
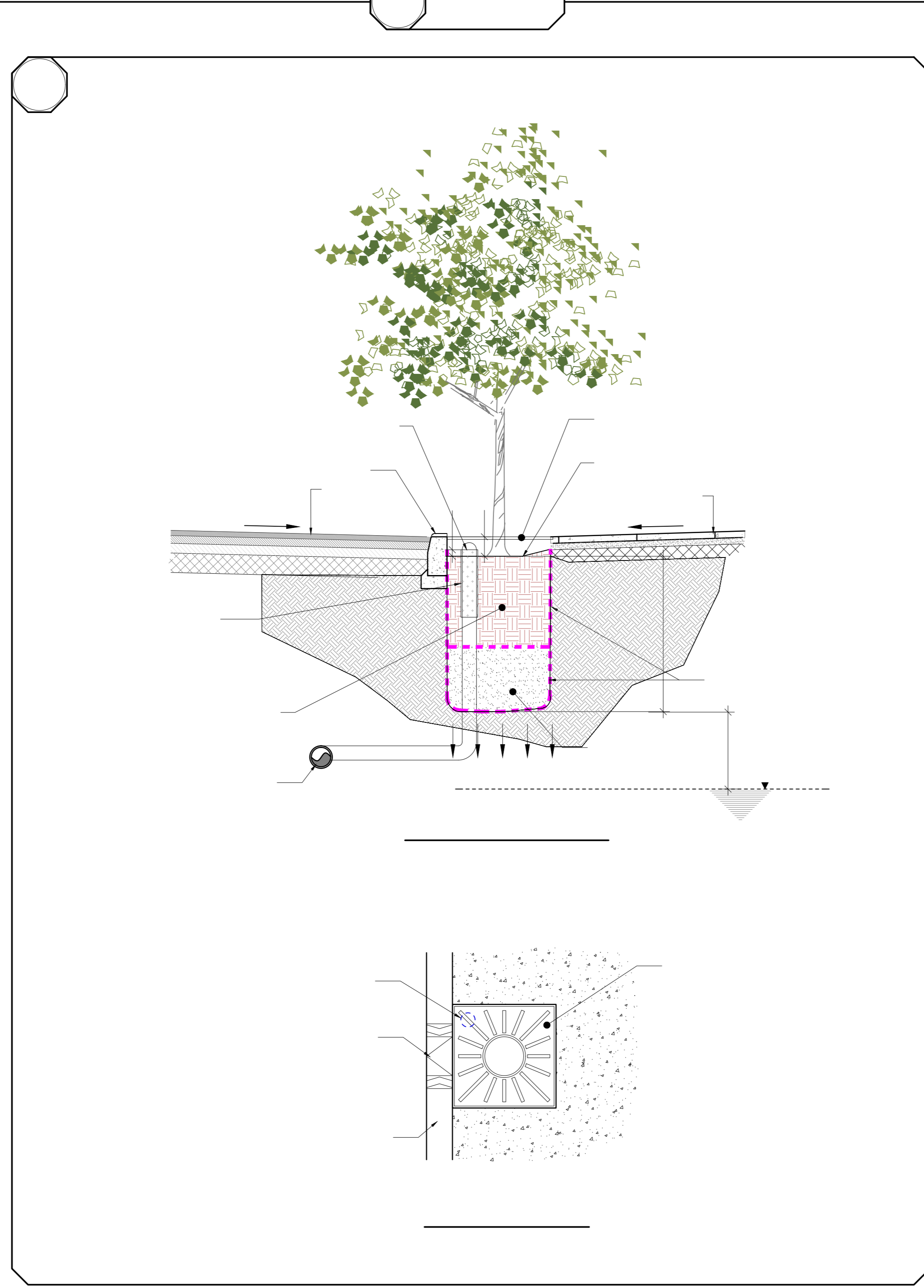
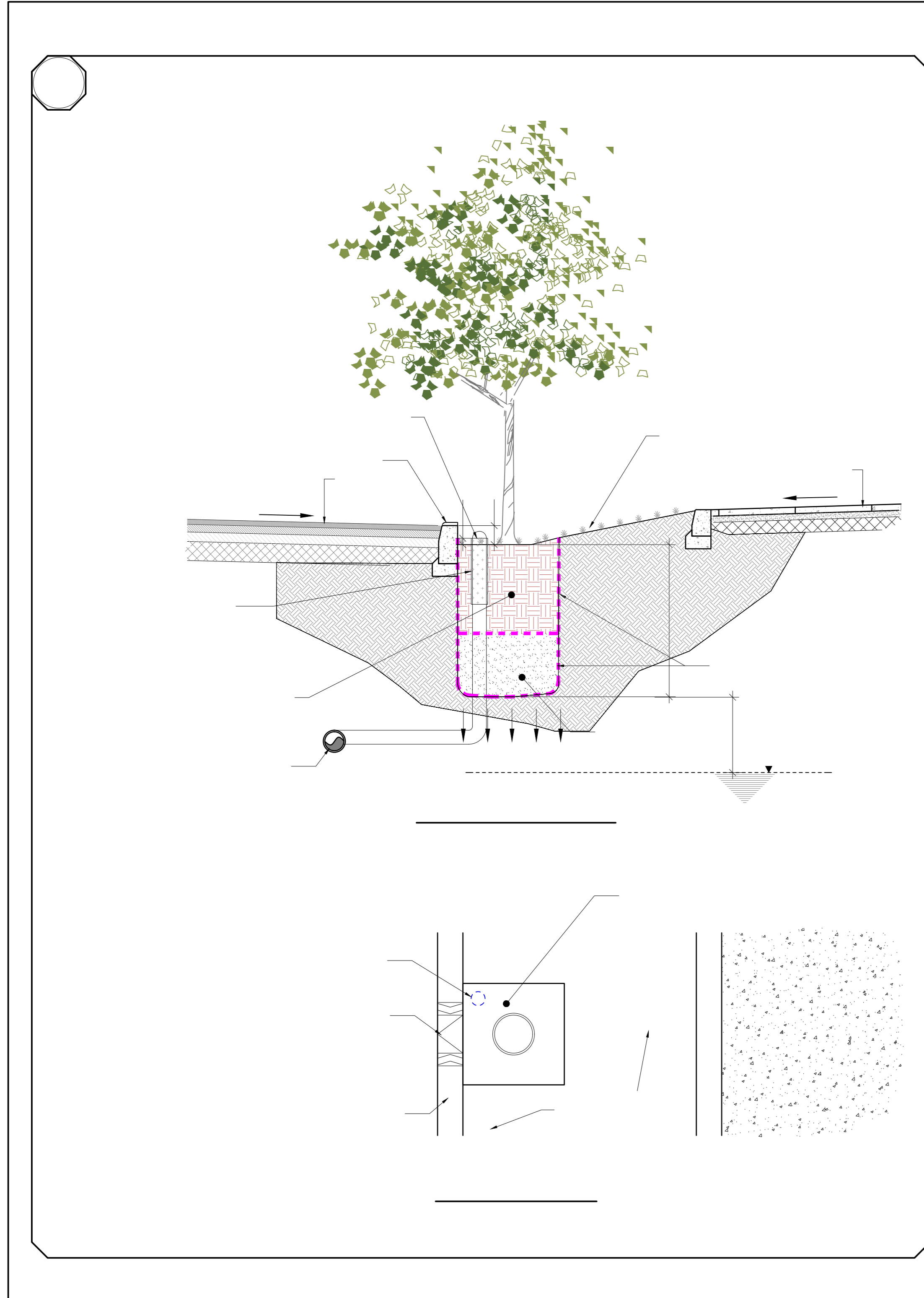
ROOTSPACE SUPPORT STRUCTURE UNDER COVERED / GRILLED TREE PITS.
IN ALL COVERED / GRILLED TREE PITS AND IN ALL INSTANCES WHERE THE TREE PIT SOIL EXTENDS BENEATH THE FOOTPATH / PAVEMENT, A PROPRIETARY ROOTSPACE PAVEMENT SUPPORT SYSTEM BY GREENLEAF IRELAND, OR EQUAL APPROVED, SHALL BE INTEGRATED ACROSS THE FULL EXTENT OF THE TREE PIT. REFER TO LANDSCAPE ARCHITECTS DRAWING FOR TREE PIT SOIL EXTENTS.

TYPICAL SECTION THROUGH BIORETENTION AREA
(TAKING DRAINAGE FROM A BUILDING RAINWATER DOWNPIPE)



TYPICAL SECTION
SCALE @ A1: 1:20
SCALE @ A3: 1:50

PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dirk Kotze		Project Director: Stephen O'Connor	
BM STAGE			
PLANNING			
BM Dublin Office: Sandwell House, 55-56 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3164 London Office: 5th Floor, 444 House, 4 MM Street, London EC1M 2BA, United Kingdom. Tel: (0044) 20 3750 3530 Consulting Engineers, Civil, Structural, Project Management E-mail: info@bm.ie Web: www.bm.ie			
CLIENT: MCAULEY PLACE			
PROJECT TITLE: 1448 - BEAUFORT NAAS		BM PROJECT No: 24145	
REFERENCE	SUITABILITY	REVISION	
DRAWING TITLE: SUDS DETAILS SWALES & BIO RETENTION AREAS			
DRAWING REFERENCE: BEN-ZZ-95-SW-ZZZ-DR-BMC-CE-12320	STATUS: P02	REVISION:	



PO2	05.03.20	ISSUED FOR PLANNING	E.C.
PO1	16.05.25	ISSUED FOR PLANNING	E.C.
ISSUE	DATE	DESCRIPTION	BY
Project Engineer: Dik Kotze		Project Director: Stephen O'Connor	
RM STAGE			
PLANNING			
BM Dublin Office: Sandwell House, 55-56 Lower Sandwell Street, Dublin 2, Ireland. Tel: (01) 677 3200 Fax: (01) 677 3164 London Office: 5th Floor, 444 Finsbury, 4 MM Street, London EC1 3BA, United Kingdom Tel: (0044) 20 3750 3530 Consulting Engineers, Civil, Structural, Project Management E-mail: bmco@bmco.ie Web: www.bmco.ie			
			
CLIENT			
MCAULEY PLACE			
PROJECT TITLE		BM PROJECT No.	
1448 - BEAUFORT NAAS		24145	
REFERENCE	SUITABILITY	REVISION	
1	+	-	
DRAWING TITLE			
SUDS DETAILS			
TREE PITS			
DRAWING REFERENCE	STATUS	REVISION	
BEN-BMD-ZZ-ZZ-DR-C-12321	P02	P02	