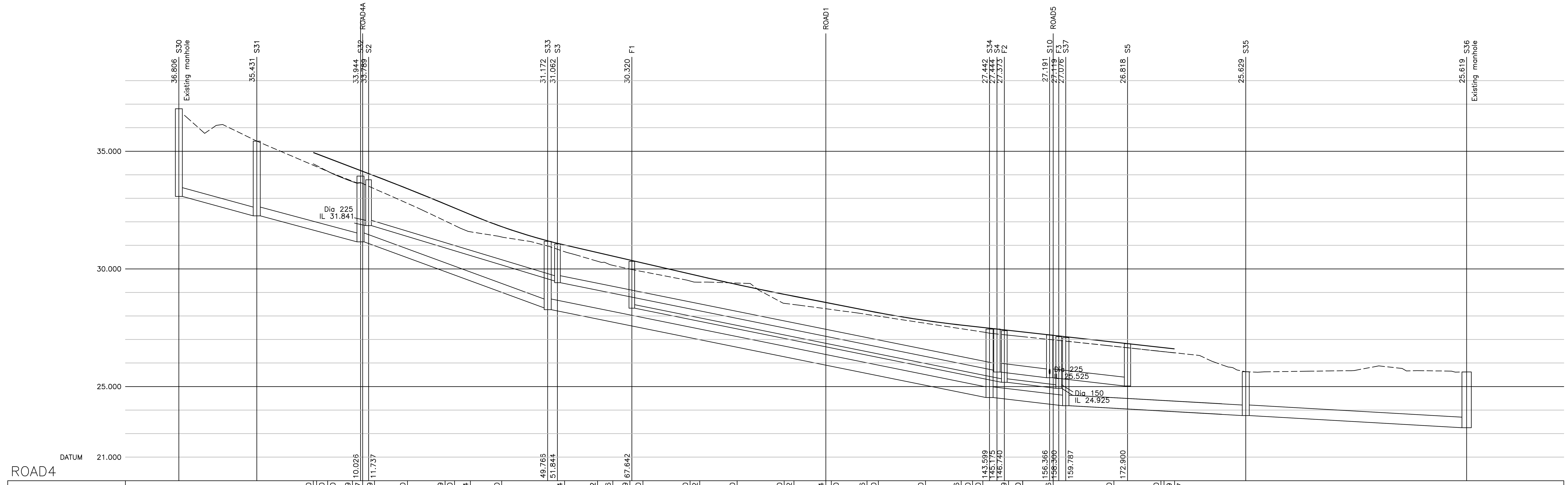
ROAD4



Row	Values
CHAINAGE	0.000, 0.690, 3.040, 8.319, 10.487, 12.989, 20.000, 27.989, 30.000, 33.354, 40.000, 53.354, 60.362, 63.606, 67.219, 70.000, 80.000, 82.062, 90.000, 100.000, 102.062, 108.844, 110.000, 117.586, 120.000, 130.000, 137.586, 140.000, 142.170, 147.629, 150.650, 157.116, 170.000, 180.000, 180.659, 182.897
EXISTING GROUND LEVEL	36.072, 35.270, 34.804, 33.658, 32.783, 31.849, 31.356, 30.962, 30.345, 29.882, 29.487, 29.399, 28.538, 28.276, 27.992, 27.688, 27.384, 27.133, 26.924, 26.713, 26.493, 26.431, 26.173, 25.616, 25.649, 25.672, 25.801, 25.661
ALIGNMENT LEVEL	34.946, 34.183, 33.955, 33.408, 32.757, 32.590, 32.310, 31.797, 31.181, 31.015, 30.709, 30.248, 29.786, 29.691, 29.336, 28.920, 28.838, 28.527, 28.230, 28.138, 27.808, 27.614, 27.560, 27.336, 27.112, 26.889, 26.665, 26.600
VERTICAL ALIGNMENT	G= −7.633% 1: −13.1; L= 15.000 KF= −21.43258; G= −8.333% 1: −12.0; KF= 5.37505 L= 20.000; G= −4.612% 1: −21.7; KF= 28.85550 L= 20.000; G= −3.919% 1: −25.5; KF= 11.89499 L= 20.000; G= −2.238% 1: −44.7
HORIZONTAL ALIGNMENT	R= 8.750; R= 35.000; R= 35.000
LEFT HAND CHANNEL	35.015, 34.957, 34.183, 33.339, 32.521, 31.729, 31.112, 30.640, 30.623, 30.301, 30.173, 29.711, 29.261, 28.845, 28.452, 28.063, 27.733, 27.485, 27.436, 27.267, 27.253, 27.044, 26.820, 26.596, 26.581, 26.531
RIGHT HAND CHANNEL	34.877, 34.825, 34.114, 33.339, 32.521, 31.729, 31.112, 30.640, 30.623, 30.301, 30.173, 29.711, 29.261, 28.845, 28.452, 28.063, 27.733, 27.485, 27.436, 27.267, 27.253, 27.044, 26.820, 26.596, 26.581, 26.531
STORMWATER INVERT	31.841, 29.487, 29.412, 25.693, 25.618, 25.375, 25.375, 25.025
STORMWATER DETAILS	Pipe 1.001 Dia 225 Circular CLAY 1 in 17; Pipe 1.002 Dia 300 Circular CLAY 1 in 25; Pipe 1.003 Dia 375 Circular CONC 1 in 46; Pipe 1.004 Dia 375 Circular CONC 1 in 47
STORMWATER LENGTHS	40.108, 93.375, 11.178, 16.537
STORMWATER INVERT	33.080, 32.253, 32.253, 31.151, 31.151, 28.344, 28.269, 24.534, 24.534, 24.185, 24.185, 23.765, 23.765, 23.250
STORMWATER DETAILS	Pipe 1.000 Dia 375 Circular CONC 1 in 20; Pipe 1.001 Dia 375 Circular CONC 1 in 20; Pipe 1.002 Dia 375 Circular CONC 1 in 14; Pipe 1.003 Dia 450 Circular CONC 1 in 25; Pipe 1.004 Dia 450 Circular CONC 1 in 46; Pipe 1.005 Dia 450 Circular CONC 1 in 91; Pipe 1.006 Dia 450 Circular CONC 1 in 91
STORMWATER LENGTHS	16.546, 22.044, 39.739, 93.748, 16.044, 38.224, 46.909
FOULWATER INVERT	28.329, 25.179, 25.179, 24.925
FOULWATER DETAILS	Pipe 1.000 Dia 150 Circular CLAY 1 in 25; Pipe 1.001 Dia 150 Circular CLAY 1 in 46
FOULWATER LENGTHS	79.099, 11.678

A01. These notes are intended to augment drawings and specifications. Where conflict of requirements exists the order of precedence shall be as shown in the specification. Otherwise the strictest provision shall govern.

A02. This drawing to be read in conjunction with all other relevant engineers and architects drawings.

A03. Drawings not to be scaled. All dimensions to be checked on site by the contractor. Any discrepancies to be notified to the Engineer and further instructions obtained before work is commenced.

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Manhole construction – refer to CPA technical bulletin Sept 2001 outlining changes to relevant British Product Standards BS5911–200:1994. All precast concrete products are to be kite marked or they will be rejected as part of an adoptable system. Manhole cover slabs to BS5911

Manhole covers to have a clear opening of 600 x 600mm and shall be class D400 to BSEN124 with 150mm deep frames.

Filled ground must be filled and consolidated under the supervision of YW before any sewer works are carried out. All adoptable sewers to be BSI kitemarked, (certified to WIS–4–35–01)

Plastic channels are not acceptable

All custom built ironwork to be hot dipped galvanised prior to final fitting.

Adoptable sewer pipes to be laid in max 3m lengths unless there is a specific operational need to lay longer lengths.

The chamber size of manholes with more then one connection in them may need to be increased one increment to accommodate the connection and bends.

Yorkshire Water policy is not to accept type C brick manholes and 1050mm diameter manhole rings. Instead it is preferred to use a type B manhole construction with a 1200 or 1500mm cover slab with the opening sited over the channel where the depth of cover to pipe soffit is 1.0–1.5m.

Contractors should be aware of significantly large diameter pipes and manhole chamber rings proposed in this design and precautions should be taken in movement and placing of such items. Also to be considered is the depth of excavation of the drainage works especially the large diameter components up to 8m deep excavations.

All adoptable sewer works and materials to be in accordance with Sewers for Adoption 6th edition. The relevant British / European and Yorkshire Water standards / requirements / addendum & Kitemarked.

Manhole covers shall / must have a clear opening of 600mm and shall be class D400 BSEN124 and be 150mm deep in highways

Where B125 cover & frame has been approved this must be Kitemarked, ductile iron and not coated in plastic and must have suitable size lifting eyes. Screw down covers not acceptable

Filled ground must be filled and consolidated under the supervision of YW before any sewer works are carried out

Yorkshire water are not obliged to accept filter drain / land drainage runoff into the public sewernetwork or adoptable drainage network (directly or indirectly). An alternative method of disposal of land drainage runoff will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run–off.

Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.

Sulphate resistant cement (C20–DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.

The adoptable sewers shall be a min 1.0m and manholes 0.5m from the kerb and service margins.

Sewers must have 5 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in ?Sewers for Adoption? 6th Edition for restrictions on tree planting adjacent to sewers)?.

Sewers to be laid in class S bedding (150mm granular bed and surround. Where depth of cover is less then 1.2m in highways and verges (or less then 900mm in non vehicle access areas) then a concrete slab should be provided above the granular bed and surround.

Bedding and backfill material to conform with the Water Industry specification 4–08–02 (table A2)

Lifting eyes to be pointed

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A. Full drainage / road redesign in line with planning layout, storage basin replacing tank storage 10–2–22

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