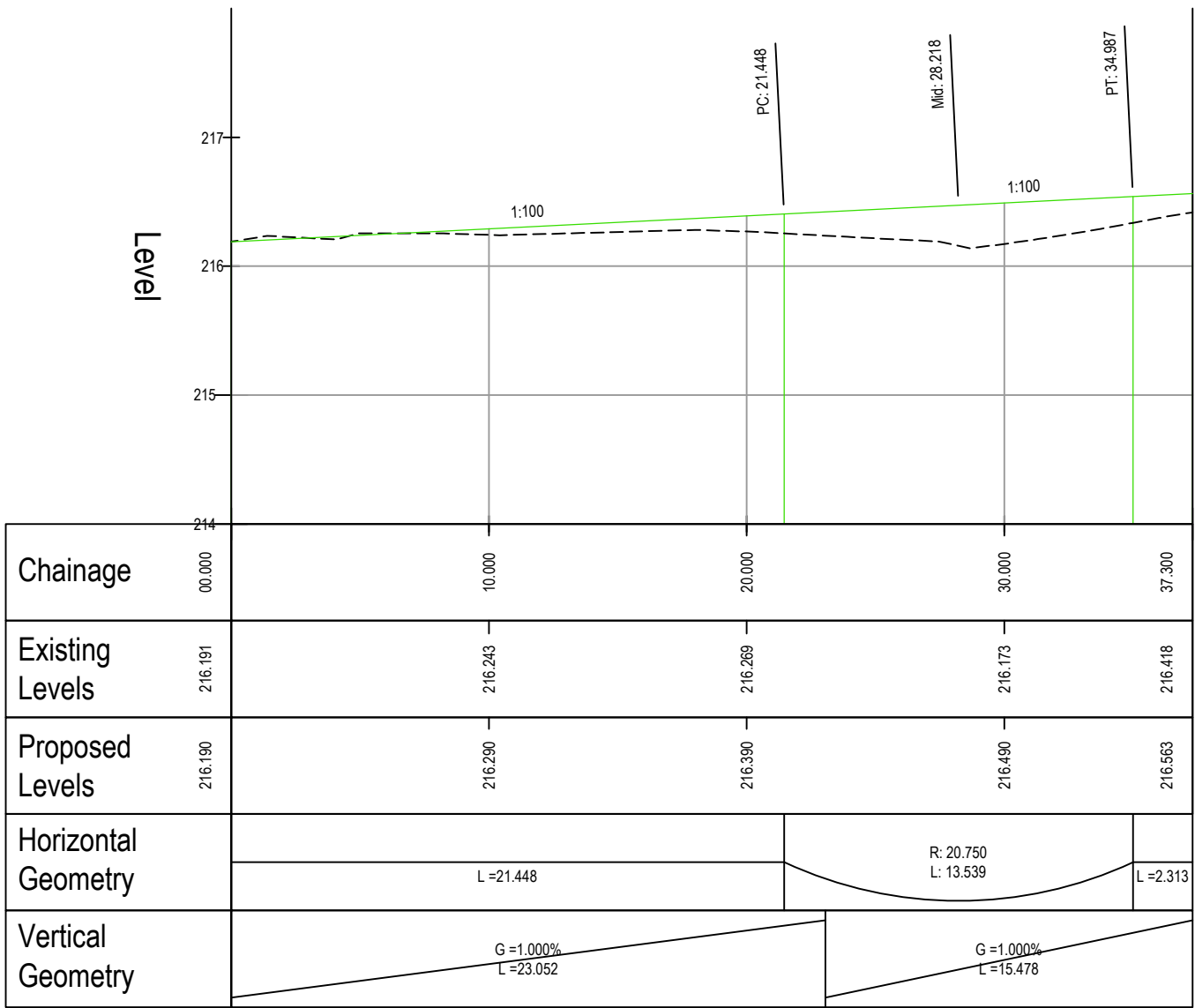
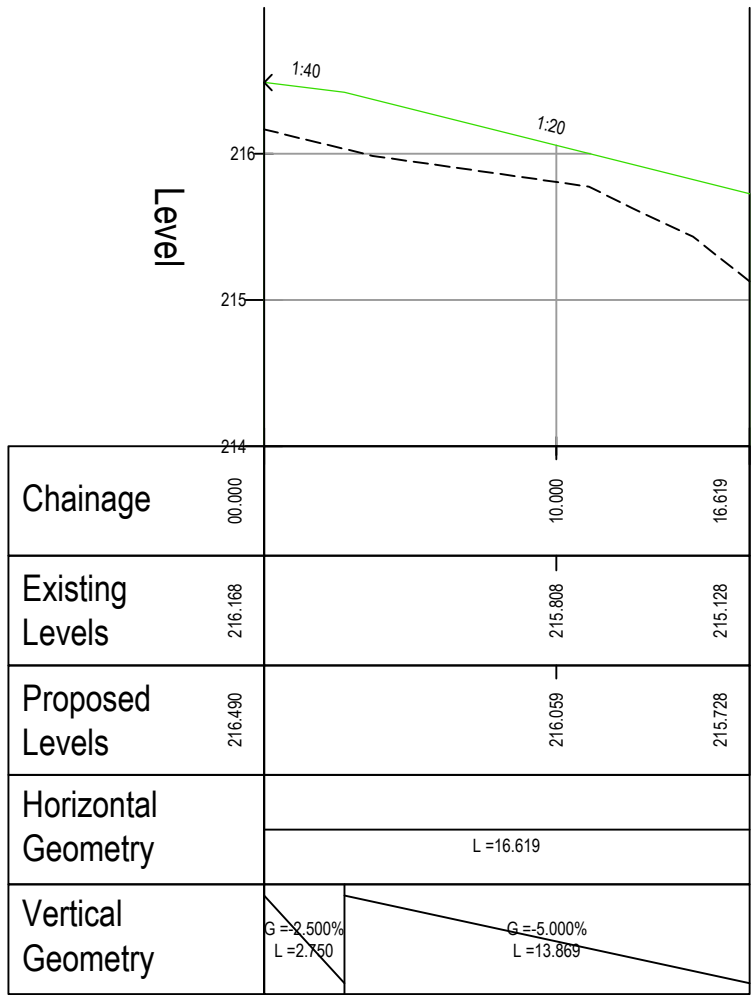
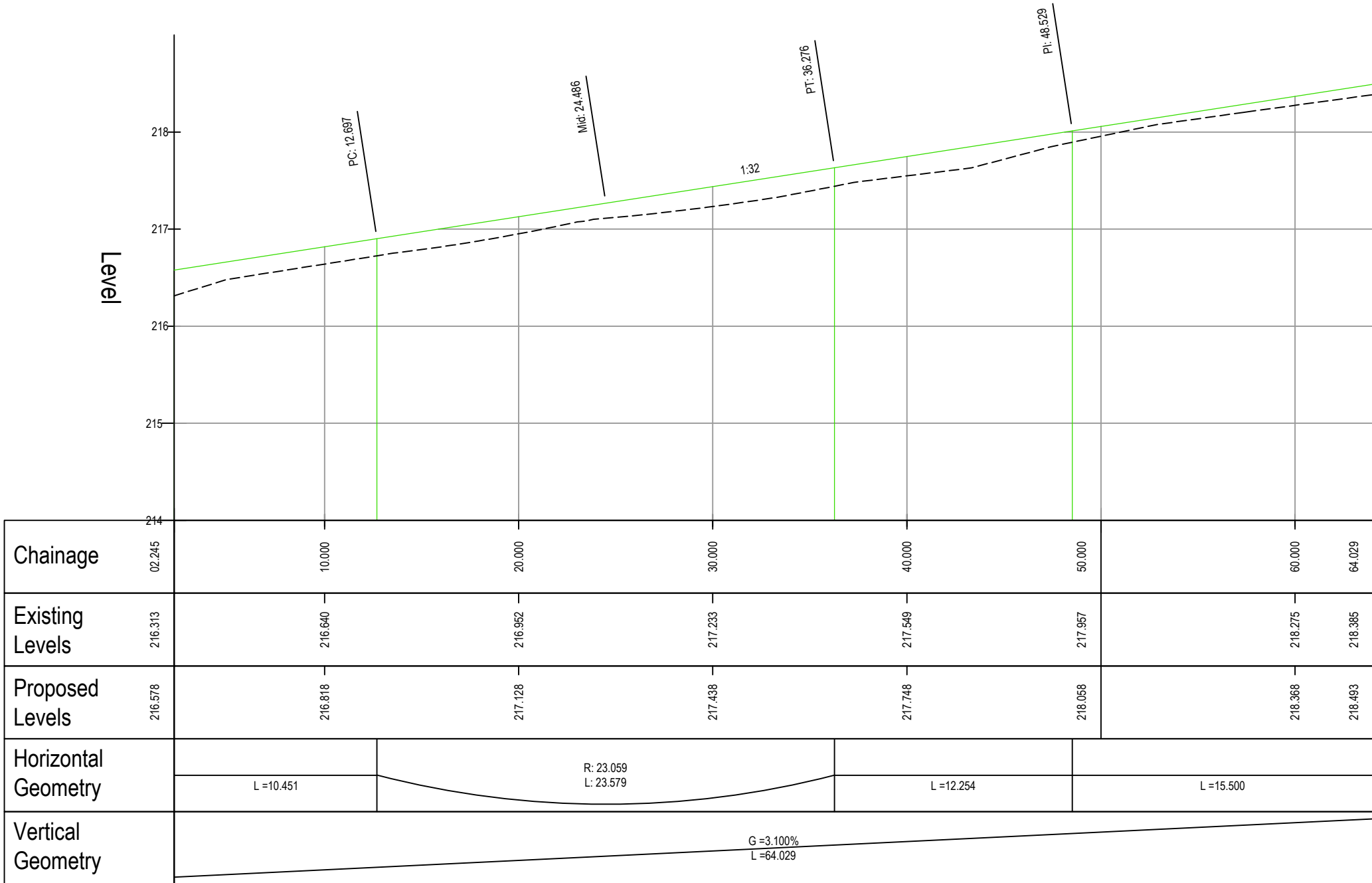




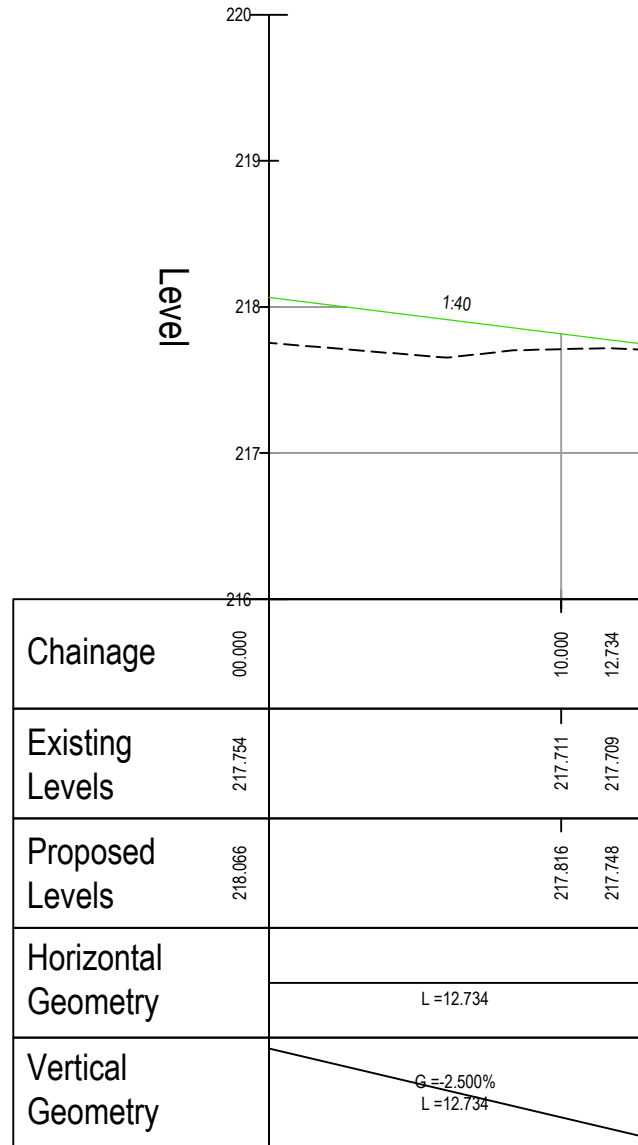
ROAD 01 - LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 214.000



ROAD 02 - LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 214.000



PD 01 - LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 214.000



PD 02 - LONGSECTION
SCALE: H 1:250,V 1:50. DATUM: 216.000

- GENERAL SAFETY NOTES:**
- WHERE THE BASE (ROAD BASE) HAS BEEN USED AS A TEMPORARY RUNNING SURFACE DURING THE CONTRACT IT SHALL BE THOROUGHLY CLEANED AND POWER WASHED AS NECESSARY AFTER DRYING AND IMMEDIATELY BEFORE THE BINDER COURSE IS Laid A THICK COAT OF BITUMEN EMULSION CLASS A1-40 OR K1-40 TO BS434 SHALL BE APPLIED AT A RATE OF 0.35-0.55 LITRES/SQ METER.
 - ALL RADIUS KERBS WITH A RADIUS OF 12m OR LESS SHALL BE FORMED WITH PROPRIETARY RADIUS KERBS.
- HEALTH & SAFETY:**
- CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.
 - CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE.
 - THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
 - CONNECTIONS TO EXISTING SEWERS TO BE MADE BY APPROVED CONTRACTOR ONLY.
 - CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LEPTOSPIROSIS (WELLS DISEASE) AND RECOMMENDED PRECAUTIONS, ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
 - UNFINISHED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER.
- PIPES & CABLES**
- CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING.
 - SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND DIG AND PROTECTED ACCORDINGLY.
- EXCAVATION/FILL**
- CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
 - CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
 - CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.
- DRAINAGE SPECIFICATIONS FOR YORKSHIRE WATER**
- ALL ADAPTABLE SEWER WORKS AND MATERIALS TO BE IN ACCORDANCE WITH SEWERAGE SECTOR GUIDANCE, THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATERS STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
 - MANHOLE COVERS SHALL MUST HAVE A CLEAR OPENING OF 600mm AND SHALL BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAYS.
 - FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
 - YORKSHIRE WATER IS NOT OR USED TO ACCEPT FILTER DRAN/LAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADAPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIASE WITH THE LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAN/LAND DRAINAGE RUN-OFF.
 - COVER SLABS MUST CARRY THE BS1 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 ADAPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERB FACES 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 TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES OR LESS THAN 900mm IN NON-VEHICULAR ACCESS AREAS, THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
 - BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-48-02 (TABLE A2).
 - THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
 - YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE 'C' BRICK MANHOLES AND 150mm DIA MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE 'B' MANHOLE WITH 1200mm DIA OR 1500mm DIA RINGS. WITH THE OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1 - 1.5m.
 - ALL ADAPTABLE PLASTIC SEWER PIPES TO BE KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS EN 13476). ADAPTABLE PLASTIC SEWER PIPES TO BE LAID IN MINIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD PREFER CLAYWARE CHANNEL IN MANHOLES. PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING.
 - WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.

- OTHER DRAINAGE NOTES**
- ALL PRIVATE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS 2010 EDITION.
 - CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR TO COMMENCEMENT ON SITE.
 - THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES.
 - THE CONTRACTOR SHALL ALLOW FOR ALL TRAFFIC MANAGEMENT IN CONNECTION WITH ROAD AND SEWER WORKS.
 - THE CONTRACTOR SHALL ALLOW FOR KEEPING SEWER TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SUMPS AND DETERMINING AS APPROPRIATE, THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.
 - FOR PIPE SPECIFICATION PLEASE REFER TO ADDITIONAL NOTES.
 - VITRIFIED CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN205 AND BS 65 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 65 OR EQUIVALENT BS EN205 PIPE CRUSHING STRENGTH.
 - PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911 AND BE KITEMARKED. CONCRETE PIPES TO BE CLASS 120 UNLESS NOTED OTHERWISE.
 - GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124 AND BE OF A NON-LOCKING DESIGN WITH CAPTIVE HINGE ACCESS AND BE KITEMARKED. LOAD CLASS D400 FOR ROADS AND SERVICE YARD AREAS. CLASS C250 TO BE USED IN CAR PARKING AREAS.
 - BACKFILLING AND REINSTATEMENT TO TRENCHES IN PUBLIC HIGHWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE ADOPTING AUTHORITY. OR, IN THE ABSENCE OF SUCH IN ACCORDANCE WITH THE REQUIREMENTS OF 'THE STREET WORKS REGULATIONS 1992' AND RELEVANT PROVISIONS OF H.A.U.C. 'SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS' JUNE 1992, BOTH UNDER SECTION 11 OF THE NEW ROADS AND STREET WORKS ACT 1991.
 - ALL TRADITIONAL RAINWATER PIPE DOWN COMERS TO DISCHARGE TO TRAPPED GULLIES.
 - ALL SPHERIC DRAINAGE DOWN COMERS TO DISCHARGE TO TRAPPED GULLIES.
 - ALL ROAD GULLIES ARE TO BE TRAPPED GULLIES.
 - ALL GULLY LEADS TO BE 150mm DIAMETER.
 - ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED, ANY EXISTING LIVE DRAINAGE SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED.
 - ALL ROAD GULLIES & LEADS TO BE CLEARED OF DEBRIS UPON COMPLETION OF WORKS.
 - THE CONTRACTOR MUST ENSURE THAT ANY OF THE EXISTING DRAINAGE WHICH IS LIVE IS KEPT CLEAR OF DEBRIS AND SHOULD ALLOW FOR JETTING THROUGH THE NEW & EXISTING DRAINAGE UPON COMPLETION.
 - CONTRACTOR TO TAKE MEASURES TO PROTECT HIS OPERATIVES WITH RESPECT TO THE PRESENCE OF GAS IN SEWER TRENCHES AND MANHOLES THROUGH THE USE OF GAS MONITORING EQUIPMENT AND BREATHING APPARATUS AS REQUIRED.
 - CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.
 - WHERE PLASTIC PIPES ARE INSTALLED PRIOR TO GETTING APPROVAL THEN A LIGHT LINE CCTV SURVEY AND REPORT (ELECTRONIC DEFLECTION TESTING) OF THE PROSPECTIVELY ADAPTABLE SEWERS ARE REQUIRED PRIOR TO APPROVAL AT THE DEVELOPERS EXPENSE.

30.09.2024	AMENDED TO SUIT REVISED LAYOUT	NA	AE	2
24.11.2023	FIRST ISSUE	PAS	AE	1
Date	Revisions	Drawn	Checked	Rev
Dwg Status	STATUS			
NORTH EAST 0191 2586632 YORKSHIRE 0113 5323500 CONSULTING ENGINEERS WWW.RWO.GROUP INFO@RWO.GROUP R W O				
Client	YORKSHIRE COUNTY PROPERTIES			
Project	DENBY LANE GRANGE MOOR			
Title	LONG SECTIONS			
DO NOT SCALE	Scale @ A1: 250	Drawn PAS	Checked AE	Date 20.11.2023
Job No	Y22054	Dwg No	D901	Rev 2