

## Highway Detailed Design

Sanderson Associates offer a full range of Highway Detailed Design Services from the design of a simple vehicle access for one dwelling to signalised junctions and re-routing of primary dual carriageways through City centres to serve major developments. Our Clients range from private individuals through to all members of the Private Sector and a variety of Public Bodies.



The level of services range from the provision of preliminary design advice, through the detailed design process to the preparation of construction drawings, construction documents, tender processes (including tender appraisal), pre-start meetings, project management, works on site supervision, agreeing final accounts, certificates of completion and the preparation of as built drawings.

### Design Standards

The design process is always carried out with close consultation with the Local Highway Authority to ensure that the designs are compliant with current design standards and are to the satisfaction of the appropriate body. The design standards normally used are drawn from the 'Design Manual for Roads and Bridges' (DMRB) and local guides as adapted by the Local Highway Authority. Close liaison can also be provided if required with the appointed contractors when works are under construction.

### Construction Drawings

The level of detail required in the design of a scheme will depend on the scope and complexity of the project. Detailed design drawings at 1:500 / 1:200 scale are typically provided. The following is a list of the most common drawings normally required. The list is by no means exhaustive and additional drawings are quite often necessary dependant on the Local Authority and works being undertaken:

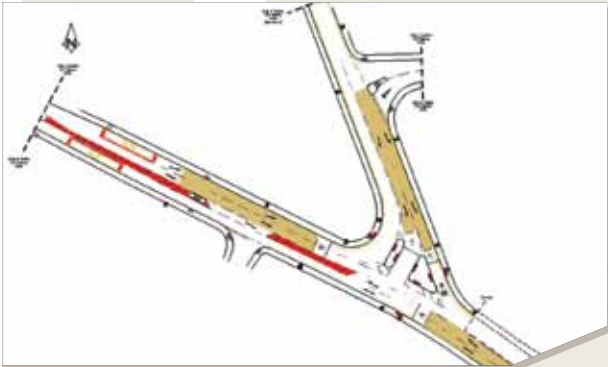
- General Arrangement
- Site Clearance
- Fencing
- Drainage Layout
- Earthworks
- Carriageway and footway construction details
- Kerbing, edging and channel details
- Traffic signs and road markings
- Landscaping proposals
- Street Lighting
- Cross and Longitudinal Sections
- Setting out details
- Standard construction details
- Utility Company Apparatus



## Detailed Design

Sanderson Associates use the latest design tools and applications in the detailed design process including:

- AutoCAD computer aided design software to produce the detailed design drawings
- Key TERRA-FIRMA ground modelling software to prepare the horizontal and vertical design
- AutoTrack for checking various vehicle swept paths for the proposed horizontal design
- KeySIGNAL for the design of new traffic signal schemes
- KeyLINES for the design of new road marking schemes
- KeySIGN for the design of new traffic signs



## Highway Agreements

When a development requires alterations or improvements to an existing public highway, for the works to be implemented the Developer must first enter into an appropriate form of agreement with the Highway Authority. These agreements are contained within the Highways Act 1980.

Sanderson Associates have the experience and expertise to guide a developer through this process and coordinate with the Highway Authority on their behalf. The most common agreements required for the completion of highway works are briefly explained below:

**Section 278 Agreement** - This agreement is appropriate when a development requires alterations to be made to the existing public highway and may require the developer to dedicate land as new public highway as part of the works. Examples of such works could be the construction of a new access/junction or improvements such as a new roundabout, additional traffic lanes etc to an existing access/junction.

**Section 38 Agreement** - This agreement is appropriate where new residential or industrial estate roads are to be constructed to adoptable standards and in the future are to be maintained by the Highway Authority as adopted public highway.

**Section 184 Agreement** - Primarily this agreement is for the formation of vehicle crossings over footways and verges for single dwellings or shared private drives. However, it is also common for Highway Authorities to use this agreement where a developer intends to construct or alter any site access or accesses where these are the only highway works required to serve the development.

Note – this agreement may not be necessary if the works are included within a Section 38 Agreement.

**Section 50 License** - Unless covered by any of the above agreements, excavations in the public highway for the purposes of laying new apparatus, connections to existing services, advance trial holes etc require the issue of a license by the Highway Authority under Section 50 of the New Roads and Street Works Act 1991.

## Contract Documents

Where required, we can prepare contract documents and tender works on behalf of Clients. This includes preparation of highway contracts in accordance with the 'NEC3 Engineering and Construction Contract' suite of documents and the preparation of Specifications and Bill of Quantities in accordance with the 'Manual of Contract Documents for Highway Works' (MCDHW) or as amended by the Local Highway Authority.

## Project Management/Supervision

We regularly provide project management and supervision roles on a variety of highway schemes. This includes managing the contractor on site and coordinating with the Client to ensure that the implementation of the highway works is completed as smoothly as possible and that Client's deadlines are achieved.

## Construction (Design and Management) Regulations 2007 (CDM 2007)

At Sanderson Associates we understand our duties and responsibilities as a Designer under CDM 2007 and fulfil this role on all projects we are employed on. We are also able to provide the role of CDM Coordinator on highway schemes by using our own in house CDM Coordinator.