7. PLANNING OF WORK

7.1 Resource consents

A Resource Consent may be necessary before work may start. Generally this applies only where structures are to be placed above the surface of the road. Please first check the Council District Plan or call the Road Controller if unsure.

7.2 Encroachment licenses

An Encroachment License may be necessary before work may start. Generally this applies only where structures are to be placed above the surface of the road. Please first check the Council Bylaws or call the Road Controller if unsure.

7.3 Planning and co-ordination between Principals

7.3.1 General

All works shall be planned and co-ordinated well in advance whenever possible. A summary of stages and affected parties is shown in Appendix A - 'Road Work Interaction Process'

7.3.2 Co-ordination Meetings

All Utility Operators and Council Principal parties must have a representative attend the two monthly co-ordination meeting hosted by the Road Controller. The main purpose is to help co-ordinate all utility work, road resurfacing work and other planned street activities to minimise any nuisance and costs caused to each other and the public.

7.3.3 Carriageway And Footpath Resurfacing Planning

7.3.3.1 Annual Programs

The Carriageway and Footpath resurfacing Principals should contact the planning staff of the Utility Operators with draft proposals before completing their annual resurfacing program. Utility Operators must respond with details of any conflicting work within 15 working days.

Once the program is finalised a copy must be distributed to each of the Utility Operators. The Utility Operators must notify the respective Carriageway or Footpath resurfacing Principal immediately should their circumstances change in that they need to work in any of the roads programmed for resurfacing.
The resurfacing Principal may be able to reprogram their work to minimise conflicts, but if not, additional measures may be required by the Road Controller to fully restore the new surface.

7.3.3.2 Short notice resurfacing work

From time to time the Carriageway or Footpath resurfacing Principal may need to add a job to their annual program at short notice. In those situations they should contact the planning staff of the Utility Operators with their proposal. Utility Operators must respond with details of any conflicting work within 2 working days.

7.3.4 Trench Sharing

Utility Operators and Contractors must co-operate to share trenches and utility facilities to minimise disturbance to the road and public, and to maximise the efficient use of road space.

7.3.5 Co-operation

All Principals and Contractors must reasonably co-operate with each other to minimise the disruption to the public and extent of any work on the roads.

Where possible, this may include sharing of a trench, ducts, or network.

Where co-operation is needed, reasonable time must be given to suit the situation and the interests of others.

From time to time there will be activities, such as events, or parades that affect the road. All Principals and Contractors shall co-operate to accommodate the needs of an activity as may be requested by the Road Controller.

7.4 Size, nature, and positioning of utilities and structures

7.4.1 General

All utilities and structures must be of a minimum dimension for their required purpose.

Wherever possible utilities must be laid to achieve the following:

- They must be laid either parallel, or at right angles to the centreline of the road
- They must be laid on an alignment and at a depth that efficiently uses road space in consideration of future utility and road interests

Where possible utilities should be located underground to reduce unnecessary clutter to the streetscape.

7.4.2 Separation from other features

7.4.2.1 Separation from trees

7.4.2.1.1 Underground utilities near trees

Approval will be required for any excavations under the canopy of trees. Please refer to Section 9.1 ‘Excavation near trees’.

7.4.2.1.2 Overhead utilities near trees

For any overhead cabling to be installed within 1 metre of any tree branches, the Road Controller must be contacted at least 5 working days prior to that work to assess the situation. Should the Road Controller require the tree to be trimmed then it must be done in a manner consistent with good trade practice. The Road Controller may also require the trimming to be done by a person with suitable qualifications in terms of arboriculturist work near overhead utilities. Any trimming costs must be paid by the Principal involved.

With respect to any of the Heritage and Notable Trees, listed in Appendix L, overhead utilities must not be located above, in, or under their canopy area.

7.4.2.2 Separation from other utilities

Utilities must only be laid in a manner that reasonably respects the separation requirements of other Utility Operators. In respect of power cables, gas pipes, Stormwater pipes, Sewer pipes, and Water Supply pipes these separation distances are given in Appendix M.

7.4.2.3 Separation from kerbs or water channels

Where utilities are laid along the road the utilities, including any excavation, must not be closer than 300 mm from the kerb or water channel as shown in figure 2. In road situations where there is no kerb, the water channel shall be taken as a 400 mm wide zone along which any stormwater should flow on the edge of the road formation.

Utlities poles, chambers and other structures must not extend into the kerb or water channel.

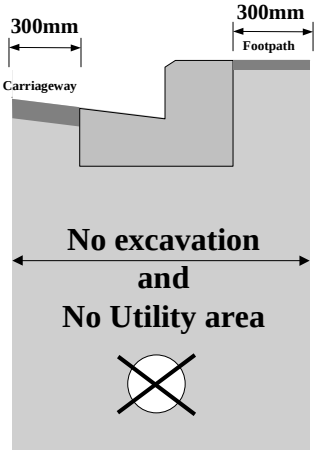

Figure 2 - "No utility" area for utilities laid along the road

7.4.3 Depth of utilities

Utilities must be laid with a depth of cover not less than that shown in the following table.

MINIMUM DEPTHS OF COVER

Where located	NATURE OF UTILITY Mains - generally laid along the road (mm)	Service connections - generally laid across the road (mm)
Carriageways	600	500
Footpaths	500	400
Berms	500	300

7.4.4 Utility chamber covers

Utility chamber covers shall be of a design that can be easily adjusted in level either up, or down, by as much as 100mm to conform with new surface levels that may be required from time to time. In this respect they should be no more difficult or expensive to raise or lower than a standard Council 600 mm diameter manhole cover. Any additional cost would have to be born by the Utility Owner when those adjustments are necessary. Typically the surface of carriageways are adjusted once every 10 years and footpaths once every 20 years.

Utility chambers and their covers must be strong enough to withstand the loading that may legally be applied with a reasonable factor of safety. No rocking or other movement is to occur under vehicular or pedestrian traffic.

Utility covers must achieve a skid resistance classification of either class 'V' or 'W' in terms of Section 5.2; table 2 in AS/NZS 4586:1999 (i.e. a British pendulum value of net less than 45 using a four S Rubber foot on a wetted surface).

Utility chambers shall be positioned preferably in batter or berm areas. Where that is not possible then they shall be in footpath areas. They shall only be put in carriageway areas as a last resort.

7.4.5 Tidiness of overhead utilities

Overhead utilities shall be maintained in a neat and tidy manner. In respect of utilities being run up/down poles they shall, where possible and where the requirements of the pole owner allow, be within the pole, or neatly and securely bundled together against the pole, and be located on the downstream, furthest, side from approaching traffic so as to be not visible to approaching traffic and so as to not to encroach on the footpath width or road width.

7.4.6 Height of overhead utilities

MINIMUM HEIGHT OF OVERHEAD CABLES

Type of road	Over carriageways (m)	Over all other areas of road (m)
Roads on over height route (Indicated in Appendix K)	6.0	4.25
All other roads	5.5	4.25

7.4.7 Poles

7.4.7.1 General

Poles must be tidy in appearance and have no sharp edges that could be a nuisance to pedestrians or cyclists.

7.4.7.2 Position

Poles must not be positioned in either a carriageway or in a position that restricts access to an adjoining property. They must be positioned in a road side batter or berm area if those areas exist. This may require an alternative design such as using a single cantilevered pole structure to reduce the number of poles needed or using an existing pole. Where there is no batter of berm area a pole may be located in the footpath subject to the following requirements:

- it must not encroach more than 500 mm into the footpath from the kerb face
- it must not encroach more than 300 mm into the footpath from a the back of the footpath
- In no situation may a footpath width be restricted to a clear width of less than 1.2 m in a Residential Area or 2.5 m in a Suburban Centre, or the City Central Area. These areas are identified in the Council's District Plan

7.4.7.3 Poles with adjacent Pedestal/Cabinet/Structure

In the situation of poles being relocated and, there being any pedestal or other associated small structure at the base of the pole, the following action is required:

In residential areas

That pedestal/cabinet/structure must also be relocated with the pole and positioned to avoid any nuisance to the public.

In commercial areas

That pedestal/cabinet/structure must be removed unless approved otherwise in writing by the Road Controller. Refer to the requirements for 'Absence of pedestals/cabinets/structures in Commercial areas' in Section 7.4.7. 2.

7.4.7.4 Consultation

Prior to the installation of any pole, the adjoining property owners must be consulted and their reasonable interests accommodated.

7.4.7.5 Signs on poles

Signs must only be attached to street poles, power poles lamp posts or other street structures with the agreement of the owner of that structure.

Signs and lights mounted on poles must be at a height not less than 2.4 metres clear to the underside of the sign/light.

7.4.8 Pedestals, Cabinets and other above ground structures

7.4.8.1 Size, shape and appearance

Any pedestal, cabinet, or other above ground utility or other structure, except for a pole, must not be larger than the following sizes, unless Prior Approval is first obtained:

- Pedestals must be smaller than 600 mm high, 250 mm long, and 250 mm wide, but be at least 300 mm high to avoid people tripping over them
- Cabinets, used to contain utility network equipment, must be smaller than 1000 mm high, 600 mm long, and 400 mm wide, but be at least 300 mm high to avoid people tripping over them

All pedestals, cabinets, or other above ground structures must be tidy in appearance, have rounded corners, and, must not have any sharp protrusions.

7.4.8.2 Absence of pedestals/cabinets/structures in Commercial areas

In the commercial areas of Wellington there are to be no cabinets, pedestals, or other above ground structures, except for poles, unless 'Prior Approval' is first sought and the agreement of the Road Controller is given. These commercial areas are identified as 'Suburban Centres', or 'Central area' in the Council's District Plan.

In respect of customer connection equipment in those commercial areas it is expected that equipment will be located in private property, or in an adjoining underground chamber. Where the supply is to a street structure it is expected that equipment will be contained within that structure, or in an adjoining underground chamber.

In respect of other Utility equipment in commercial areas that needs to be in the road, it is expected that it will be located underground where at all possible to avoid it being a nuisance, or being unsightly, to road users.

7.4.8.3 Position

Above ground structures must not be positioned in either a carriageway or in a position that restricts access to an adjoining property. They must be positioned in a road side batter or berm area if those areas exist. Where there is no batter of berm area a structure may be located in the footpath subject to the following requirements:

- Cabinets must be aligned with another obstruction unless approved otherwise by the Road Controller. Such obstructions may be a lamp posts, street trees (but not positioned within the tree canopy), or discontinuities in the fences and walls at the back of the footpaths. If a cabinet is approved to be located otherwise, in an exposed position, it must be positioned at the back of the footpath and against (not more than 30 mm from) a vertical wall or fence
- Pedestals must be positioned at the back of the footpath and against (not more than 30 mm from) a vertical wall or fence
- In no situation may a footpath width be restricted to a clear width of less than 1.2 m in a Residential Area. More width will likely be required if approval is given for a pedestal, cabinet or other structure in a Suburban Centre, or the City Central Area. These areas are identified in the Council's District Plan.

7.4.8.4 Consultation

Prior to the construction of any pedestal, cabinet, or other above ground structure, the adjoining property owners must be consulted and their reasonable interests accommodated.

7.4.9 Stormwater pipes to kerb and channel

Stormwater pipes running to the street kerb and channel must be galvanised steel in any footpath or vehicle crossing areas. They must be a minimum 100mm internal diameter. In some situations a galvanised rectangular section pipe may be approved by the Road Controller, such as in block paving footpath areas. Refer also to Section 12.2. 'Stormwater outlet in kerb'.

7.5 Mark out and location of underground utilities

7.5.1 General

A list of other Utility Operators is available from where Road Work Notices are obtained.

All underground utilities in close proximity of the proposed work should be marked out on the ground before works commence in accordance with the respective Utility wishes. A copy of all plans of the other underground utilities must be kept on site while work is in progress.

It is up to the Contractor to use such methods approved by other respective Utility Operators to locate and confirm the exact position of their Utilities. In respect of thrusting, boring or bursting techniques being used nearby utilities shall include every utility that crosses the path of the proposed thrust, bore, or burst. Locating other utilities would normally require excavation by hand. Some exceptions are:

- In respect of thrusting, boring, or bursting activities below a depth of 800mm the lateral water household services do not need to be first located
- In respect of thrusting, boring, or bursting activities lateral household services can be located without excavation if flush down locator or underground radar techniques can be shown to locate these services in a sufficiently accurate manner

If prior to thrusting, boring or pipe bursting a Contractor does not first locate all utilities that cross the path they shall be liable for all costs necessary to expose or test those utilities to ensure they have sustained no damage.

If there is a retaining wall supporting the road, then there may be anchors or tie backs in the road. Care will be needed to locate and avoid any damage to these. If unsure, ask the Road Controller.

The 'Guide for Safety with Underground Services' published by OSH shall also be used in conjunction with these above requirements.

7.5.2 Traffic light cables and detector loops

Traffic light cables and detector loops exist in the vicinity of traffic lights.

Most traffic light cables carry 220 volts and are housed in ducts with 300 – 600 mm cover.

Traffic detector loops are typically located in the road surfacing within 6 metres of a stop line at any signalised location as indicated in figure 3.

The Contractor must liaise with the Council's traffic light staff before any excavation or saw cutting work near traffic lights. This is to clarify the location of cables and to prevent unnecessary damage to loops. Saw cutting through these shallow loops results in changes in signal operations which can in turn cause significant disruption to traffic flows.

The Contractor is liable for the full cost of repairing loops, tobies, cables or other signal equipment damaged by their works.

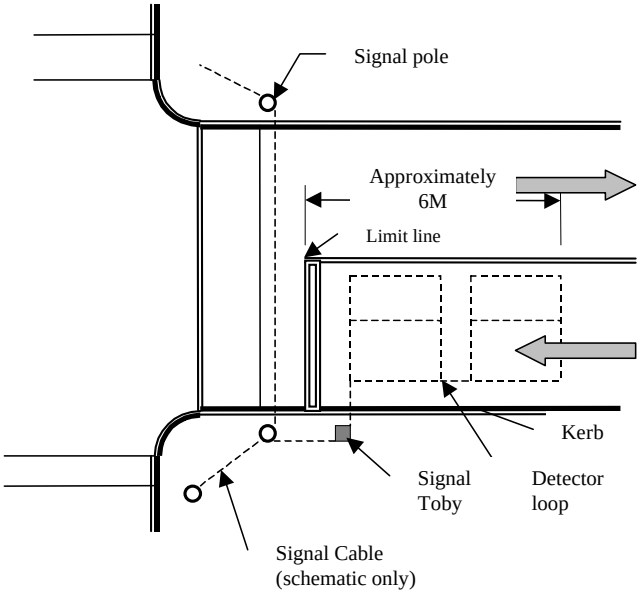

Figure 3 - Plan view of Traffic Signal cables and detector loops (Schematic only)

7.6 Surface level survey

The Road Controller may require a road surface level survey to be carried out where an excavation is proposed that will be over 1.5 metres deep. This survey would measure the road surface level at 5 metre intervals on each kerb and immediately around the proposed excavation. Such a survey must be accurate and have sufficient off-set marks so that levels can be re-measured at the same points to within 5mm at any stage of the road work. The Principal will be responsible for the cost of these surveys.

7.7 Duration of the work

All road work must be planned and carried out to minimise the duration of the work and the inconvenience to the public. There is also a restriction on work in the December Christmas shopping period. (Refer to Section 8.1)

7.8 Notification of public

7.8.1 Information signs

Where work is likely to extend more than one week in duration, special information signs must be erected at the ends of the job. These should be erected at least one week before work starts.
The information displayed, lettering size, size and colour of sign, should match the example shown in figure 4

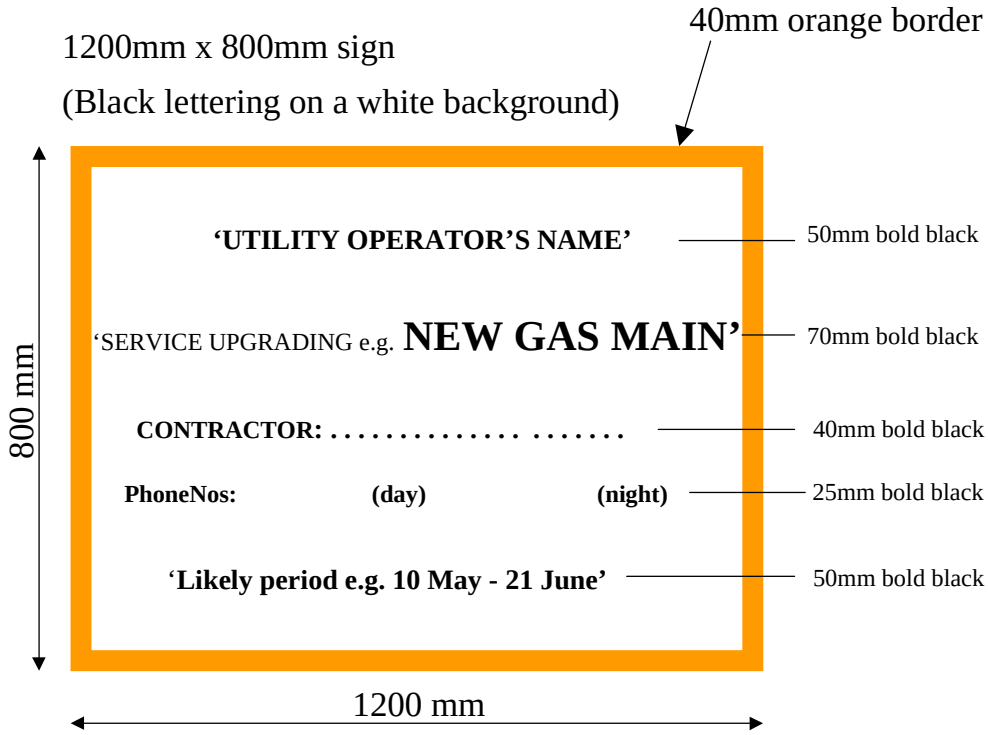

Figure 4 - Information sign

Signs must be erected so they are clearly visible to road users and must not cause a nuisance in the following respects:

- They must not be within 30 metres of a pedestrian crossing or an intersection. Otherwise they might distract a driver
- They must not be on a handrail fence
- They must not be on a pole or structure without first obtaining the agreement of the owner of that pole/structure
- They must not obstruct the visibility of Road Users
- They must not physically obstruct Road Users and must be at least 2.4 metres clear above pedestrian areas

7.8.2 Letter drops

All public working or residing within 50 metres of the work site must be given at least 48 hours advanced notice in writing of the nature, times, duration of the works, and 24 hour contact telephone number/s where it is likely they will be affected. A copy shall also be delivered or sent by fax to the Road Controller, (Fax 801 3018) at the same time. A suggested form of the letter is given in Appendix D.

Situations where the public are likely to be affected are:

- Work outside of Normal Hours of Work
- Where parking or access from a street may be affected
- Resurfacing or excavation work within 50 metres of a shop during shopping hours
- Resurfacing or excavation work within 50 metres of a school during week days
- Where the use of breakers, road profiling, saw cutting, pile driving or other very loud equipment is likely to extend for more than an hour
- Where construction work is to start before 8.00 a.m.

7.8.3 Extensive notification

In situations where there may be a significant effect on the public the Road Controller may require any or all of the following before construction work may start:

a) Production and distribution of a suitable leaflet advising the public of the forthcoming project at least one month before work starts.

b) Advertisement/public-notice in specified local newspapers at least two working days before work is started.

c) Advertisement/public-notice on specified local major radio stations be made in advance of the work and throughout the period of the work. Typically this would be made regularly during the peak traffic times both immediately before and while traffic or public may be affected each day.