

Practice note no. 07

Issued: March 2014

Designing for small lots

With the reduction of lot sizes and associated reduction in road frontage widths, particular attention needs to be given to the urban and engineering design of precincts and subdivisions; incorporating small lots to ensure amenity, functionality, legibility and safety, to avoid conflicts and unnecessary costs and to simplify construction.

The following highlights development issues and recommended best practice solutions for the urban and engineering design for small lots in the context of the PDA Residential 30 Guidelines.

Attention to detail in the coordination of services is essential to avoid potential conflicts between services and with driveways, due to the narrow frontages associated with most small lots.

Critical issues

- » Zero lot line on low side, unless an integrated solution
- » Slope across small lots, unless integrated solution: maximum 10 per cent across lot and 5 per cent longitudinal
- » Infrastructure clashes with zero lot lines and driveways.

Engineering and design issues

Small lots demand greater attention to detail with respect to the location of services and infrastructure both with lots and within the street verge.

Overland flow

Stormwater overland flow can be problematic for small lots and requires particular attention.

- » Provide interallotment drainage
- » Avoid small lots below large drainage catchments



Small lot terraces (Fitzgibbon Chase)

- » Avoid cutting and retaining on the uphill side of lots sloping steeply (more than 1 in 8) to the street, particularly where side slope is present as this generally results in diversion and concentration of overland flow along fencelines to a point of weakness
- » Identify any natural depressions in the landform and ensure overland flow to and within these is managed to avoid nuisance to downstream properties.

On-street car parking

- » Narrow lots should be opposite larger lots where possible
- » For rear lane lofts refer to PDA practice note no.12 Rear

Lanes: design and development.

Streetscape issues

- » Small lots at end of street
- » Too many lots in a run (refer to PDA guideline no.05 neighbourhood planning and design)
- » Avoid single narrow lots amongst larger lots.

Water meters and conduits

- » Avoid clashes with driveways for zero lot line lots.

Power pillars

- » Where positioning adjacent to zero lot line boundaries cannot be avoided, avoid clashes with driveways for zero lot line lots by offsetting to one side of boundary with adjacent lot
- » Power supply authority required minimum clearances to power supply pillars should be accommodated.

Communications pits

- » Avoid clashes with driveways for zero lot line lots, offset to suit.

Sewer manholes and roofwater pits

- » The preferred location for sewer and roofwater mains is within larger lots and along rear boundary
- » Avoid driveways
- » Avoid locating sewer and roofwater mains along zero lot line boundaries and within corner lots
- » Minimise sewers down longitudinal boundary, do not bench.

Footpaths

- » Should be constructed prior to driveways, to ensure continuity of pavement treatment and footpath crossfalls and to provide priority to pedestrians and, where necessary, cyclists
- » Avoid cutting out the kerb by having a lower kerb profile.

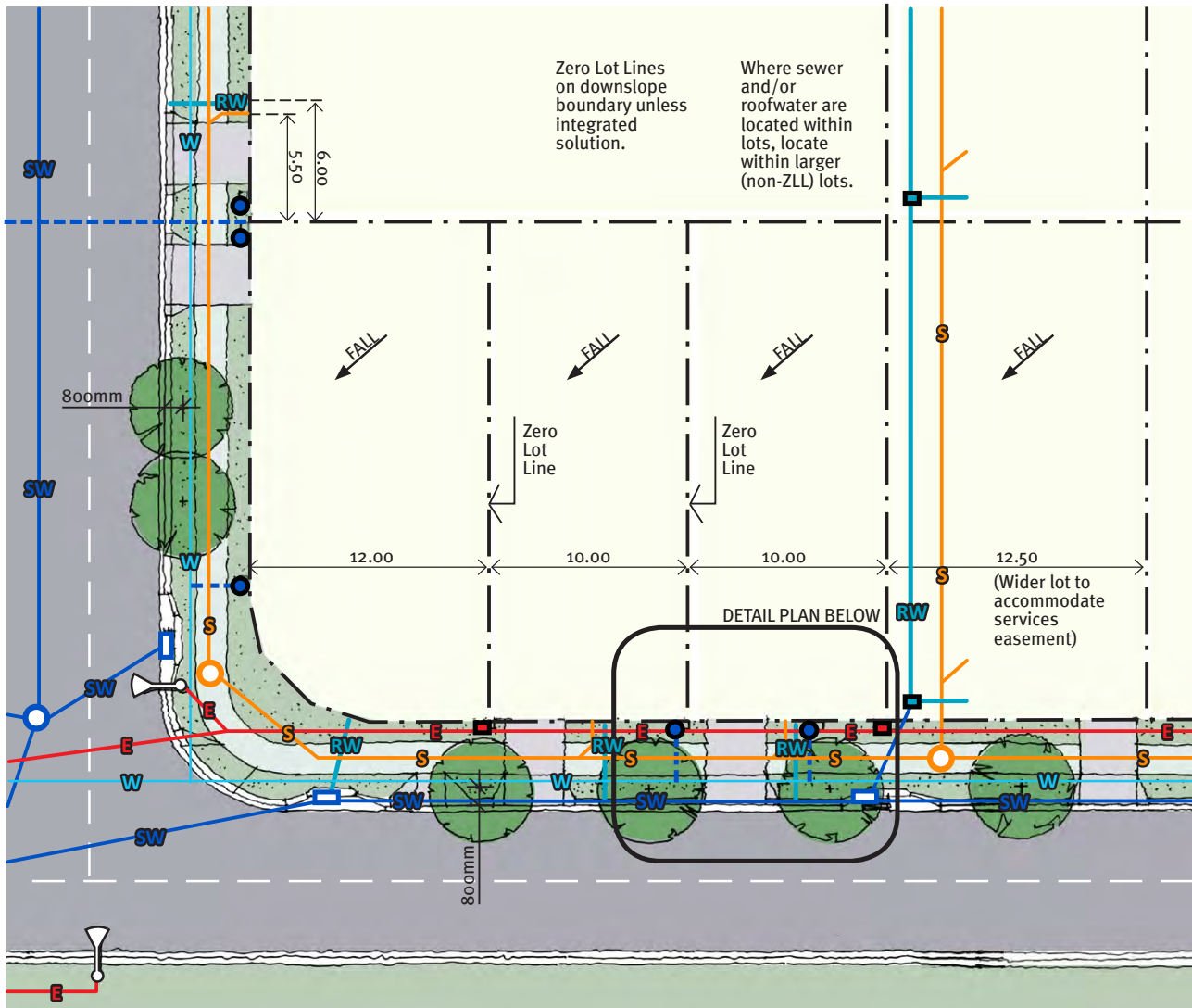
Driveways

- » Driveways should be constructed to conform with and not replace footpaths
- » Driveway will typically be on the zero lot line boundary.

Street trees

- » Coordinate location of street trees with entry and driveway locations for zero lot line lots
- » Use substantial trees, 100 litre minimum, to promote survival during construction.

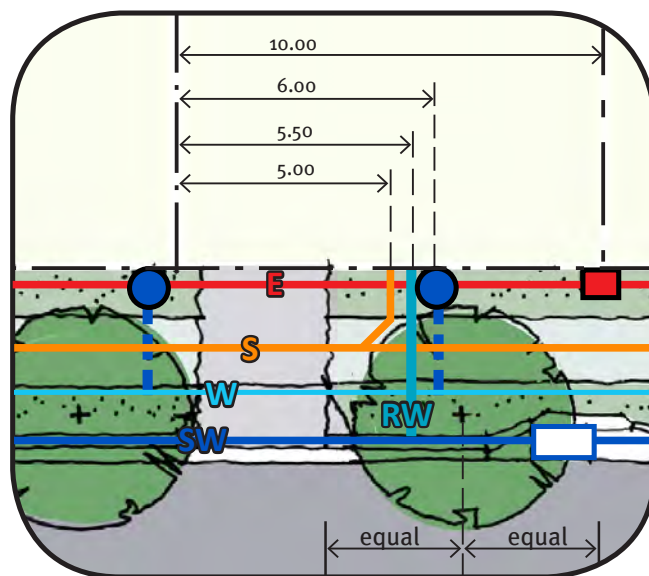
Small lot servicing - corner lots



Legend

Stormwater	SW
Stormwater Manhole	○
Roofwater	RW
Water Main	W
Water Conduit	---
Water Meter	●
Sewerage	S
Sewer Manhole	○
Electrical	E
Power Supply Pillar	■
Street Light	☼
Lot Boundary	- - -
Footpath	Grass texture
Driveway	Paved texture

Detail Plan



Trees located centrally between property boundary and driveway (clear of services)

Hydrants and valves

- » Preferably located opposite side boundaries of lots, or truncations, avoiding driveways.

Stormwater gullies

- » Preferably located mid-block or non-driveway locations for large lots
- » Avoid locating on driveway side of zero lot line boundary where known
- » Avoid using large/long backstones
- » Adoption of one way crossfall roads can minimize gullies on turning points and sags in internal access streets
- » No gully pits in front of small lots
- » Consider driveway access.

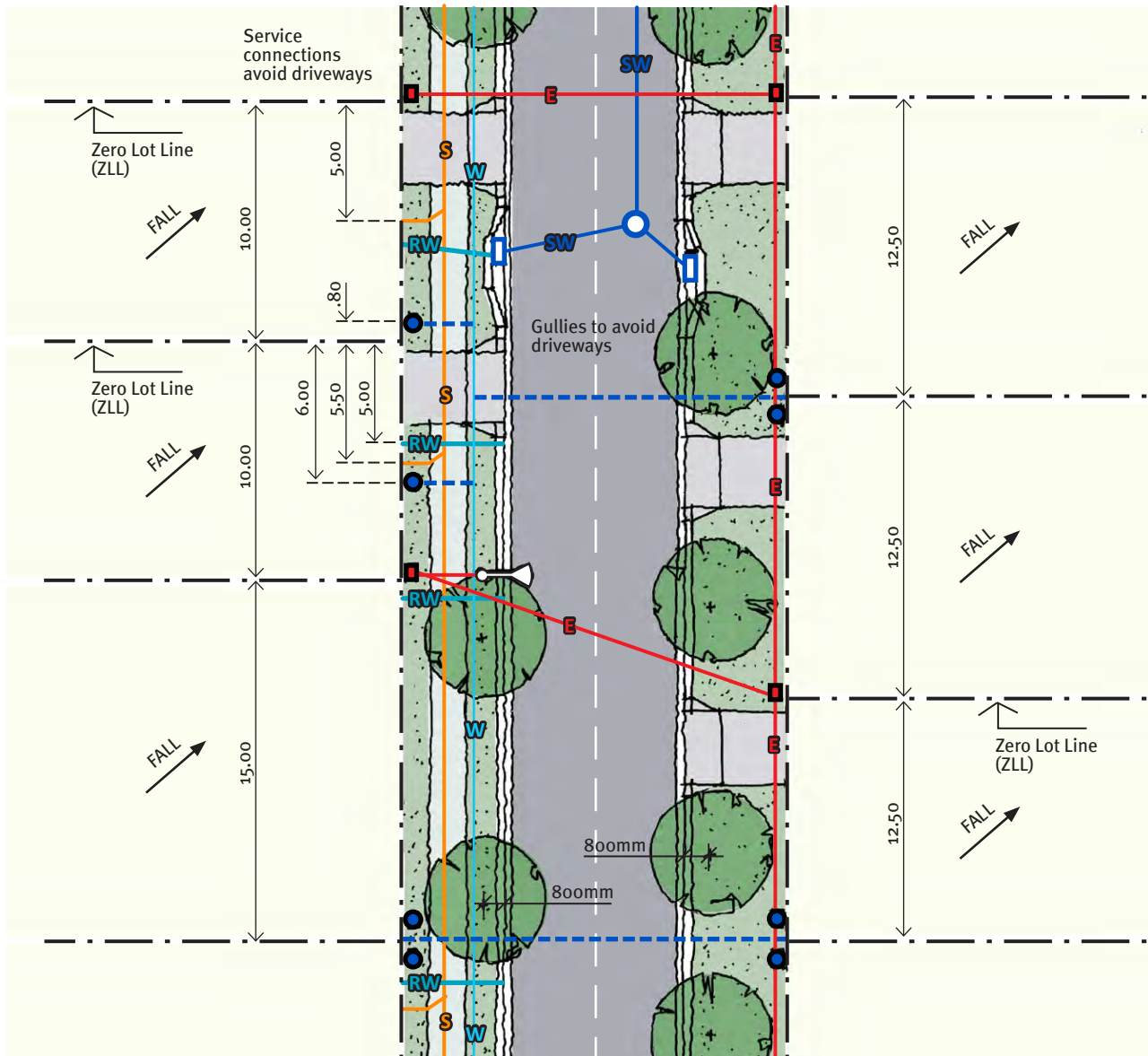
Bioretention pods

- » Preferred location is on park frontages, higher order streets or in medians
- » Undesirable in access streets
- » If unavoidable, locate on side without footpath, preferably on secondary frontage.

Pad mounted transformers

- » Plan well in advance and avoid visually intrusive locations, place in parks and open space and landscape out visual impacts
- » Avoid locations along view lines
- » Avoid locations within lots
- » Should be shown on sales plans.

Small lot servicing - mid lots



Legend

Stormwater	
Stormwater Manhole	
Roofwater	
Water Main	
Water Conduit	
Water Meter	
Sewerage	
Electrical	
Power Supply Pillar	
Street Light	
Lot Boundary	
Footpath	
Driveway	

Telecommunications units

- » Usually located within road reserve, however, as with pad mounted transformers, plan well in advance and avoid visually intrusive locations, place in parks and open space and landscape out visual impacts
- » Avoid locations along view lines
- » Should be shown on sales plans.

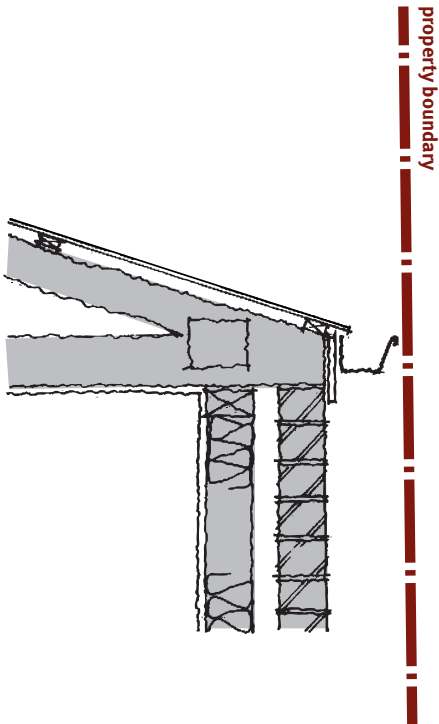
Pad levels

- » Should be nominated with tolerance of +/- 100mm.

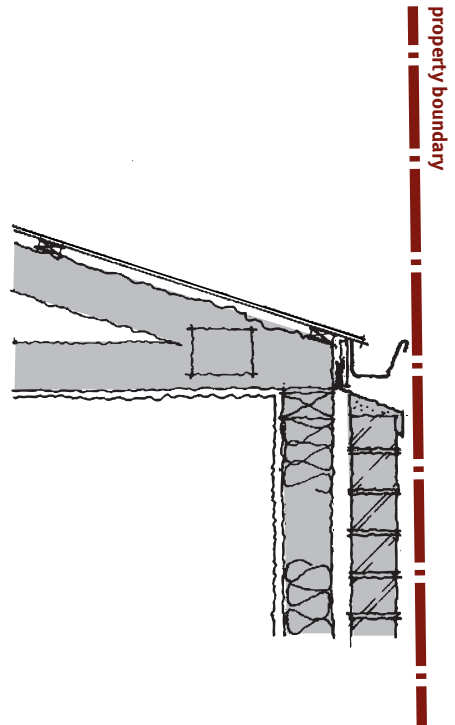
Retaining walls and boundary fences

- » Maximum height for retaining walls of 1.0m unless an integrated solution
- » Combined height with boundary fence, maximum 2.4m
- » On zero lot lines, retaining wall feature treatment should extend to 100mm below nominated pad level for adjacent downslope lot
- » Benching of sites at subdivision stage not required if slope criteria met.

Construction details options - Zero lot line housing

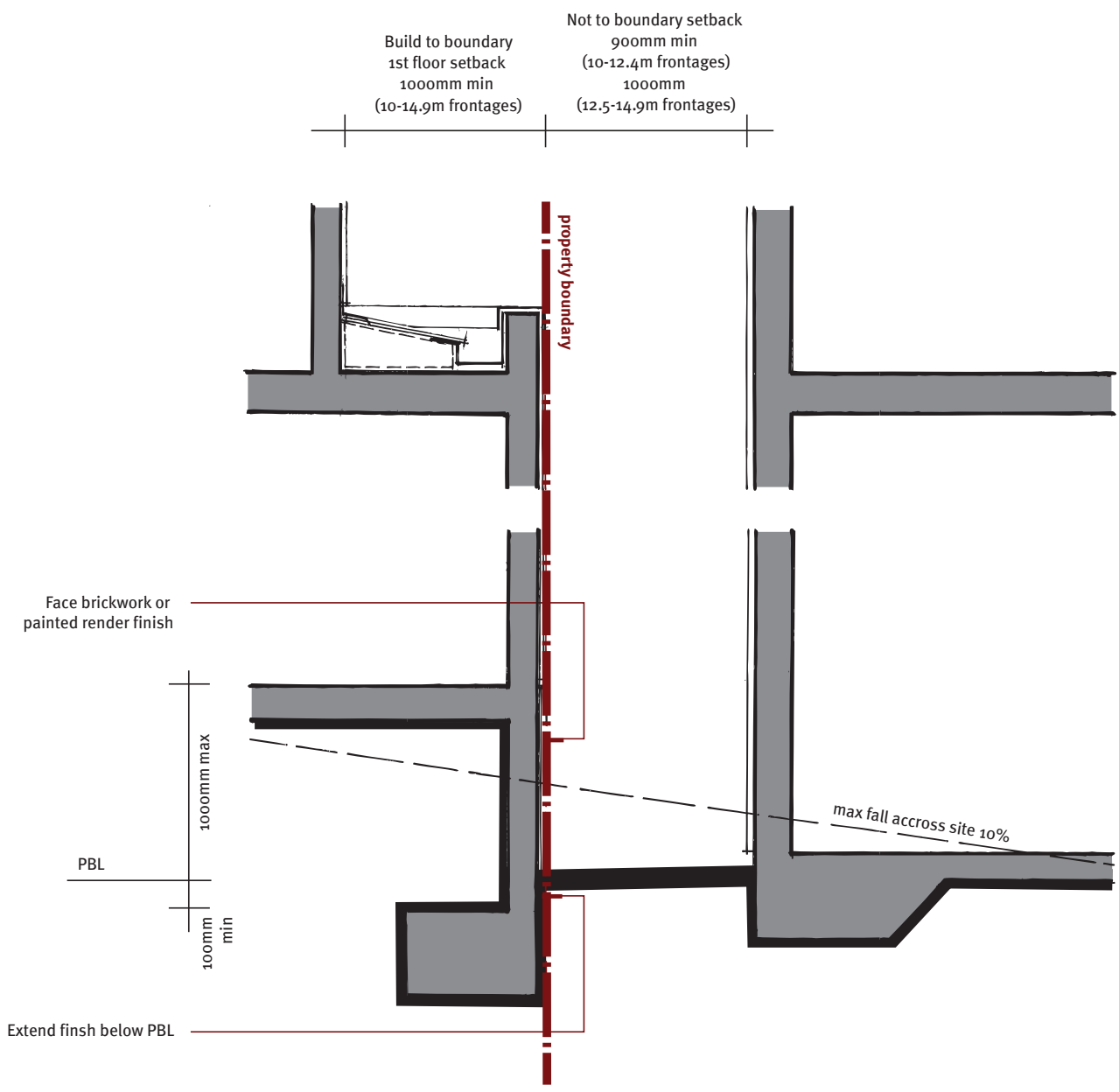


Gutter detail
Fascia built to boundary

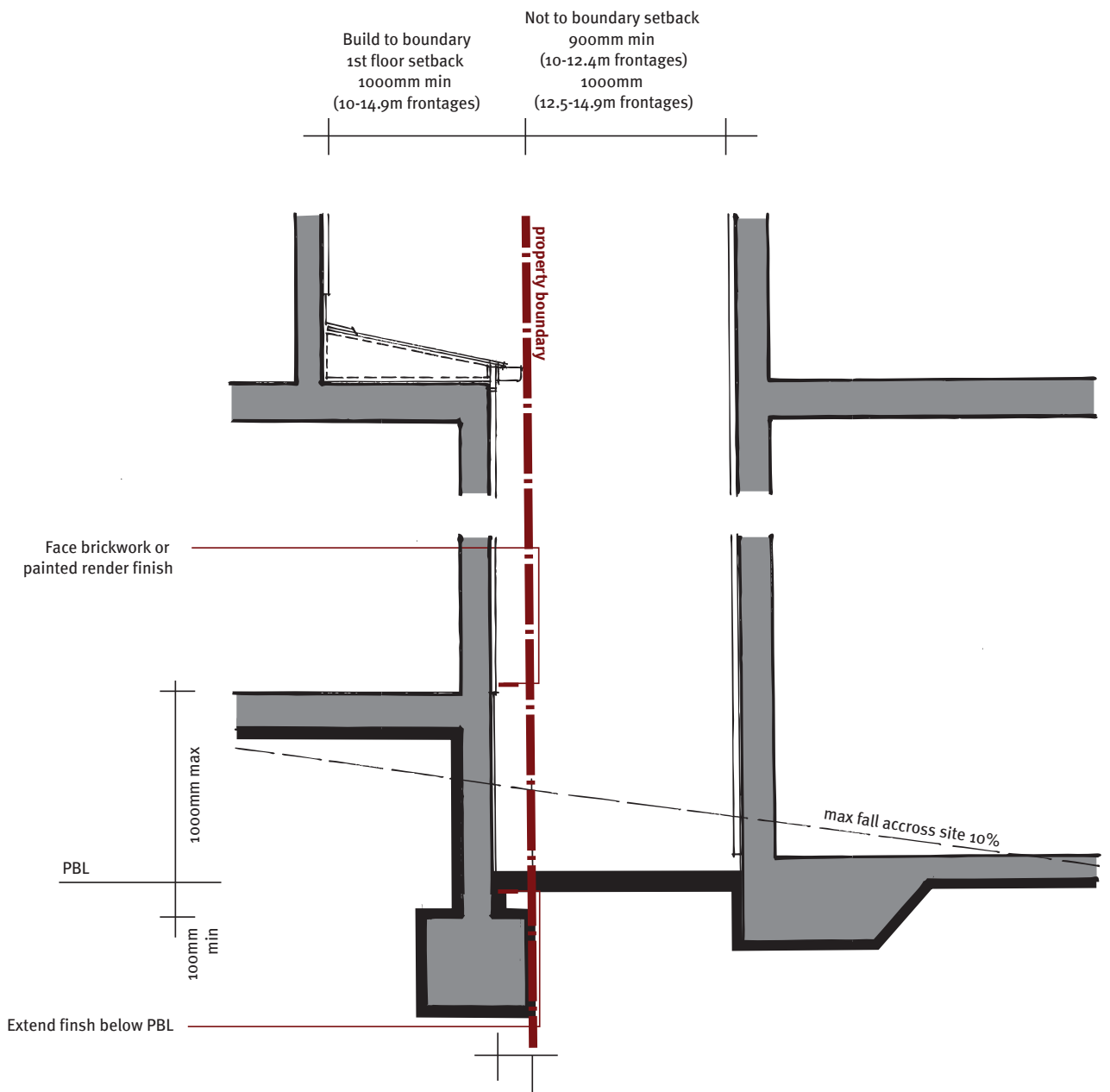


Gutter detail
Set back built to boundary

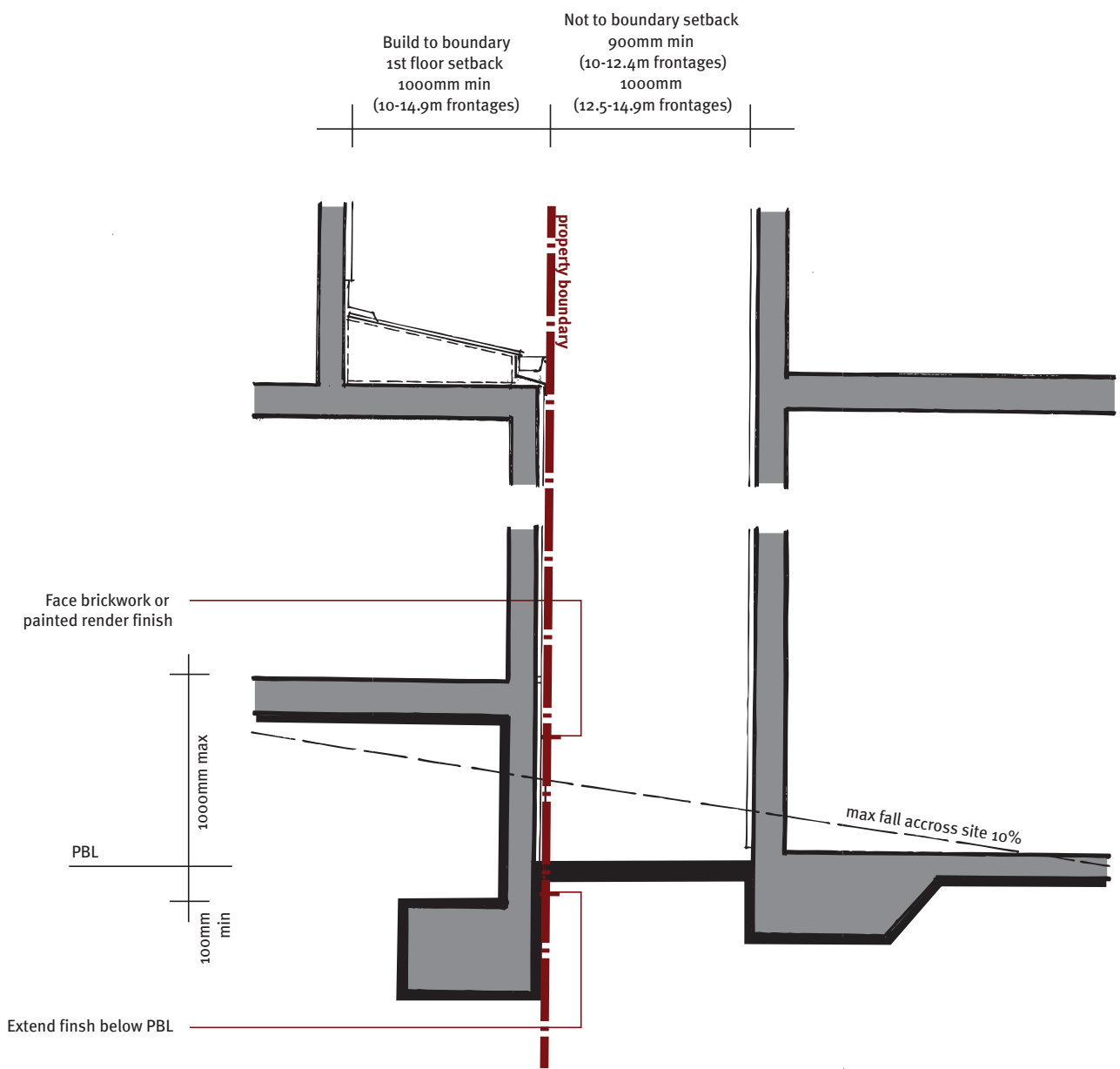
Side boundary detail - Concealed gutter built to boundary



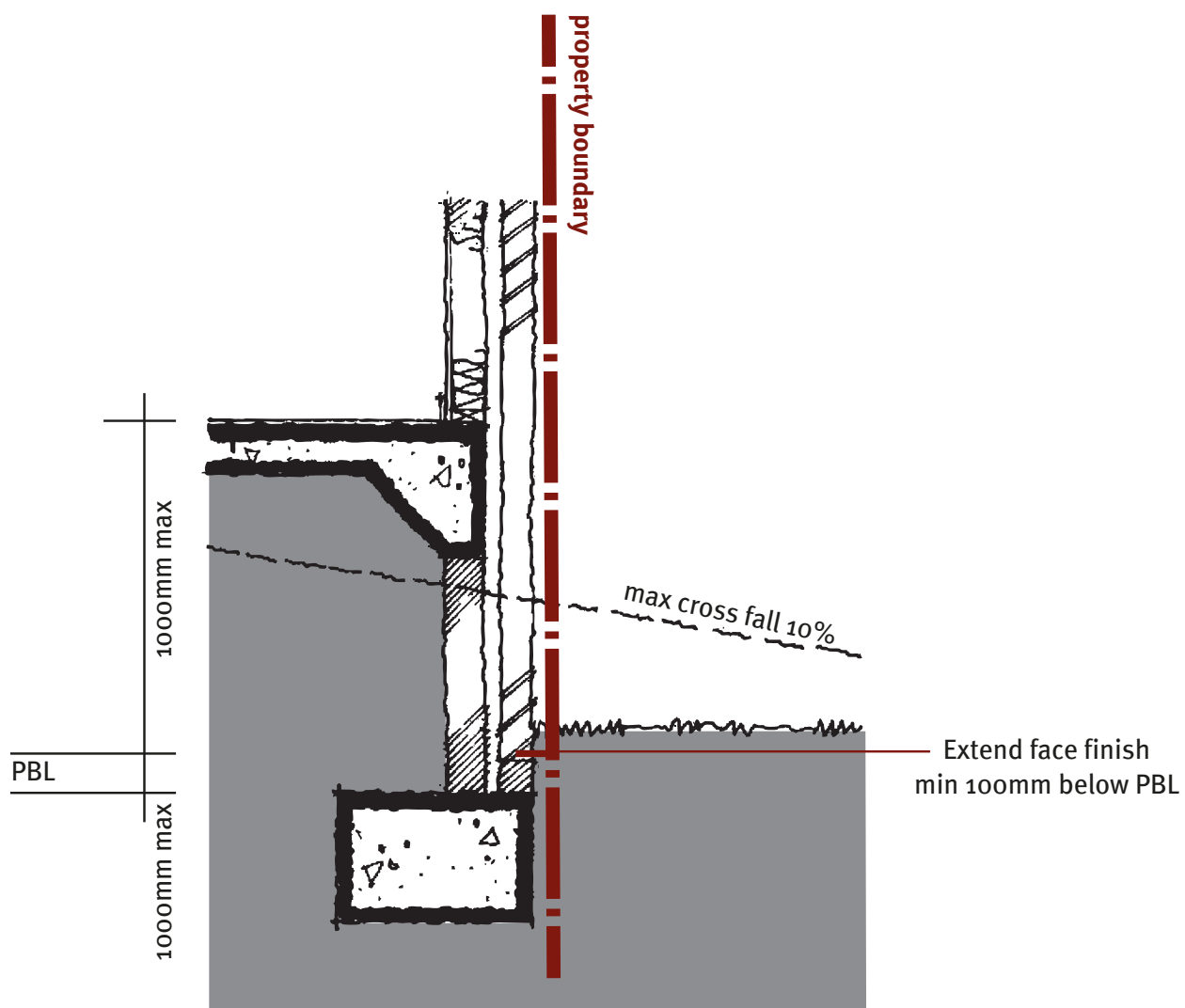
Side boundary detail - Conventional fascia gutter built to boundary



Side boundary detail - Recessed gutter built to boundary



Footing detail - built to boundary



Zero lot lines

- » On low side unless an integrated solution.

Speed control devices and roundabouts

- » Special attention at speed control devices and roundabouts
- » To ensure safe and convenient access to lots, these should be located such that they are clear of driveways or small lots. If this cannot be avoided, driveways should be constructed as part of the subdivision works to provide safe and convenient access.
- » In all other cases, driveway access at speed control devices should be prohibited
- » Utilise features, such as trees
- » Landscape within speed control devices.

Rear lanes

- » Where possible, avoid locating utility services within laneways
- » Where utility services within laneways cannot be avoided, they will generally be required to be located within an unpaved section of laneway along the edge of the trafficable surface
- » Refer to Rear Lane Practice Note for further details.

Flush kerb detail

- » Flush kerb should be provided to the low side edge of one-way crossfall pavements where fall is to swale or open space and pavements with no kerb and channel
- » Flush kerb in this application should have chamfer or radius providing a 40mm difference in elevation from pavement edge to verge to minimize siltation and drainage problems
- » Bollards may be required for driver safety.

Street lights

- » Required within laneways over 60 metres for safety, preferably mid block
- » Avoid locating on boundary of small lots, preferably locate on boundary of large lots.

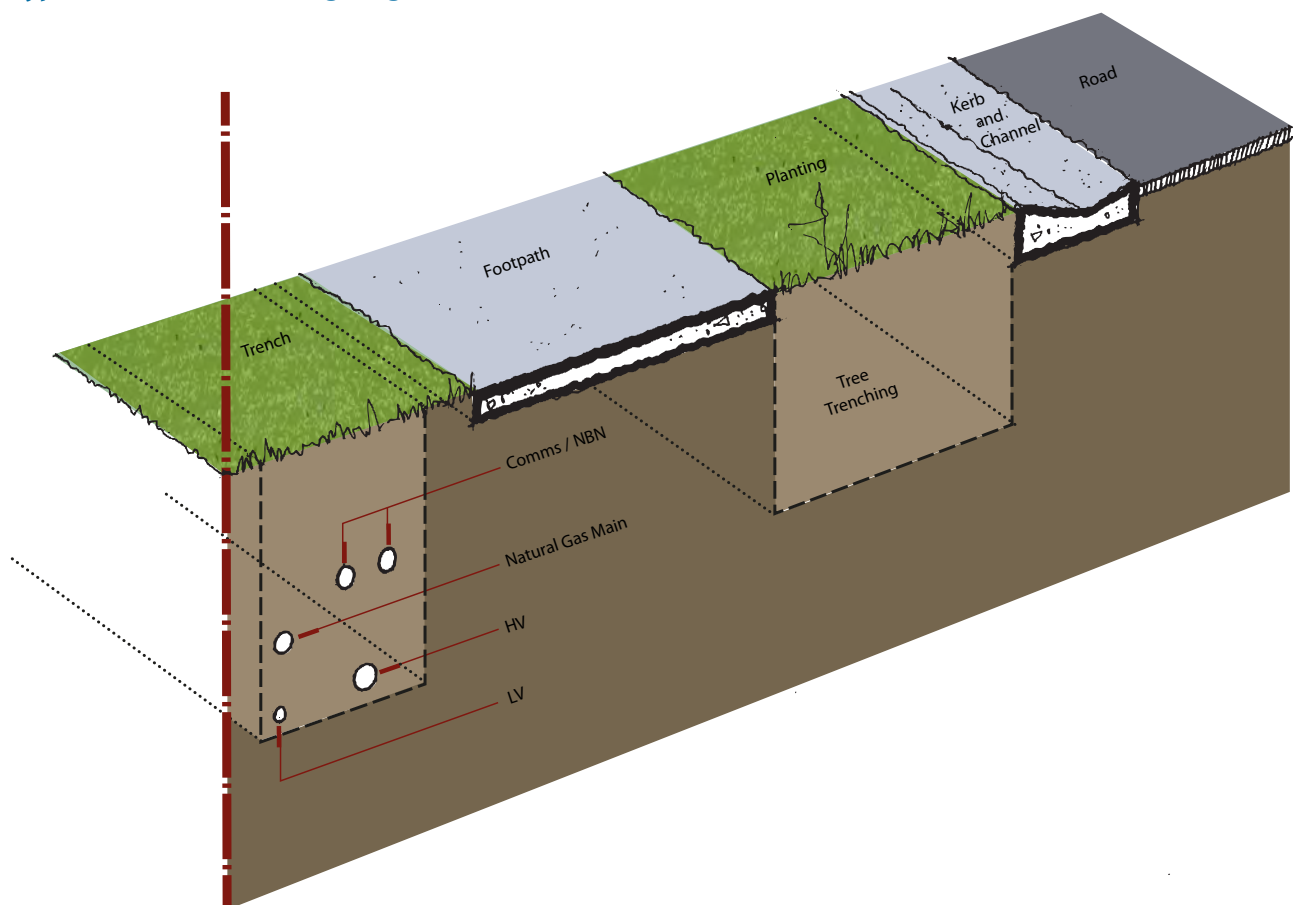
Common trenching

Common trenching, or shared service allocation, is encouraged and, involves the provision of a number of services within one trench or service allocation area.

The advantages of common trenching include:

- » elimination of a number of single trenches, each with its own construction, settlement and reinstatement problems
- » accurate location of services for possible repair or maintenance
- » reduced verge width
- » increased verge width available for tree planting and/or landscaping
- » less conflict between services as depth relativities are known
- » more efficient use of construction equipment
- » reduced verge and footpath disturbance for earlier establishment.

Typical common trenching diagram



Boundary setbacks for sloping sites

