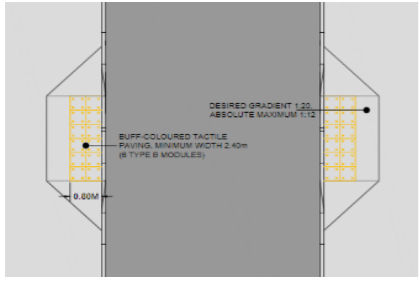

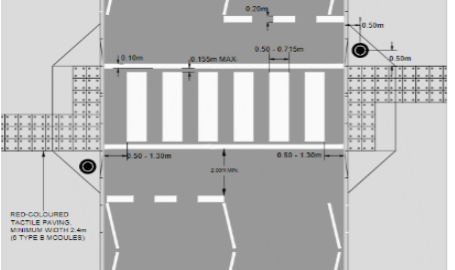

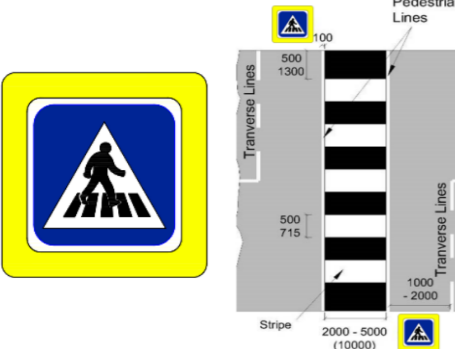

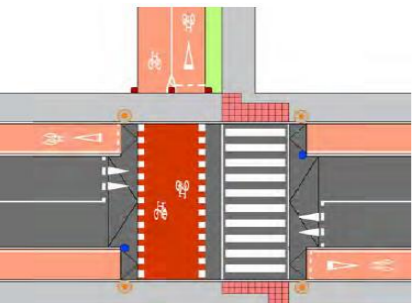




Note: Further Information on Infrastructure Costs is available on the NTA Website (Cost Management Guidelines - Infographic / Cost Information Booklet / Schedule of Rates)









Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Crossing Facilities					
SZ-101	 <p>DESIRED GRADIENT 1:20 ABSOLUTE MAXIMUM 1:12</p> <p>BUFF COLOURED TACTILE PAVING MINIMUM WIDTH 2.40m (8 TYPE B MODULES)</p> <p>0.80M</p>		<p>Description: Uncontrolled crossing (insitu concrete dished footpath and dropped kerb or ramp; tactile paving)</p> <p>Dimension: Varies (crossing width minimum 2m wide)</p> <p>Reference: DMURS (Section 4.3.2), Cycle Design Manual (CDM) (Section 4.5.3)</p> <p>Colour: Buff colour tactile paving</p> <p>Cost Estimate: €8,000 - €12,000 per item Ramp €10,000 Raised table €50,000</p>	<p>Consider gradient from existing footpath to carriageway. Raised table, if desired, is required to be kerb to kerb construction which may incur additional costs due to drainage impacts, budget estimate depending on carriageway width.</p>	Multiple suppliers
SZ-102	 <p>0.50m 0.75m 0.15m MAX 0.50m 1.50m</p> <p>RED COLOURED TACTILE PAVING MINIMUM WIDTH 2.40m (8 TYPE B MODULES)</p>		<p>Description: Zebra crossing (belisha beacons, tactile paving, road markings)</p> <p>Dimension: Varies (crossing width minimum 2m wide)</p> <p>Reference: DMURS (Section 4.3.2), Traffic Signs Manual (Chapter 7.16), CDM (Section 4.5.5)</p> <p>Colour: Red colour tactile paving</p> <p>Cost Estimate: €60,000 - €115,000 per crossing. Median cost €75,000 per crossing.</p>	<p>Suitable for lower speed environments with moderate pedestrian and traffic activity. Solar powered belisha beacons could be considered as an alternative to hardwire connections to electricity supply. Raised table to be kerb to kerb construction which may incur additional costs due to drainage impacts.</p>	Multiple suppliers
SZ-103	 <p>Pedestrian Lines</p> <p>500 1300 500 715 1000 2000 - 5000 (10000)</p> <p>Stripe</p>		<p>Description: Zebra crossing (RUS 066 Zebra Pedestrian Crossing Sign with florescent yellow, tactile paving, road markings)</p> <p>Dimension: Varies (crossing width minimum 2m wide)</p> <p>Reference: DMURS (Section 4.3.2), Traffic Signs Advice Note TSAN-2024-01, CDM (Section 4.5.5)</p> <p>Colour: Red colour tactile paving, Florescent yellow sign</p> <p>Cost Estimate: €20,000 per crossing</p>	<p>85th percentile speed must be less than 50km/h in speed limit zones not exceeding 50 km/h. Two-way traffic volumes to be less than 500 vehicles per hour without a refuge island, or 750 vehicles per hour with a refuge island. The crossing must have good pedestrian-driver visibility and the crossing location to have adequate street lighting. Raised table to be kerb to kerb construction which may incur additional costs due to drainage impacts.</p>	Multiple suppliers
SZ-104			<p>Description: Zebra crossing (belisha beacons, tactile paving, road markings) and separate cycle crossing (red surfacing and elephant's footprint markings)</p> <p>Dimension: Varies (crossing width minimum 2m wide)</p> <p>Reference: DMURS (Section 4.3.2), Traffic Signs Manual (Chapter 7.16), CDM (Section 4.5.5.1)</p> <p>Colour: Red colour tactile paving and red surfacing</p> <p>Cost Estimate: €60,000 - €115,000 per crossing. Median cost €75,000 per crossing</p>	<p>Placed along segregated cycle tracks or greenways where they intersect with roads with speeds of 50 km/h or less, with single lanes in each direction. The crossing must have good visibility between the pedestrian/cyclist and the driver, and the crossing location to have adequate street lighting. Raised table to be kerb to kerb construction which may incur additional costs due to drainage impacts.</p>	Multiple suppliers

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Crossing Facilities					
SZ-105	 <p style="text-align: center;">Toucan Crossing (CDM TL607)</p>	 <p style="text-align: center;">Ballyroan Road, Rathfarnham</p>	<p>Description: New Toucan crossing (traffic signals, tactile paving, ramp, road markings) Dimension: Varies (crossing width minimum 2m wide) Reference: DMURS (Section 4.3.2), Traffic Signs Manual (Chapter 7.16), TII: CC-SCD-5000 Series, CDM (Section 4.5.6) Colour: Red colour tactile paving Cost Estimate: €60,000 - €115,000 per crossing. Median cost €75,000 per crossing.</p>	<p>Shared pedestrian priority area should be minimum of 5m wide from end of cycle track to edge of road, with sufficient sight triangles, to give time for traffic and cyclists to see each other.</p>	<p>Multiple suppliers</p>
Junction Upgrade					
SZ-106	 <p style="text-align: center;">Signalized Junction Pedestrian Crossing (TSM Chapter 9)</p>	 <p style="text-align: center;">Carysfort Avenue, Blackrock, Dun Laoghaire-Rathdown</p>	<p>Description: New pedestrian crossings on all arms of junction (traffic signals, tactile paving, road markings) Dimension: Varies Reference: DMURS (Section 4.4.3), Traffic Signs Manual (Chapter 9), CDM (Section 4.5.6) Colour: Red colour tactile paving Cost Estimate: €60,000 - €90,000 per crossing + Traffic Management Cost</p>	<p>Consider providing all-red traffic stage to allow for warp around green man pedestrian phase. Toucan crossings may be required on cycle routes. Ensure adequate crossing widths/dwelling areas to cater for pedestrian/cyclist activity. Further information on infrastructure costs (examples) are available on the NTA website.</p>	<p>Multiple suppliers</p>
SZ-107	 <p style="text-align: center;">Protected Junctions (e.g. CDM TL501)</p>	 <p style="text-align: center;">Glenageary Road Upper, Dun Laoghaire-Rathdown</p>	<p>Description: Protected junctions (cyclops layout, full signal control, etc.) Dimension: Varies Reference: DMURS (Section 4.4.3), Traffic Signs Manual (Chapter 9), CDM (Section 4.4.3) Colour: Red colour tactile paving, red surface cycle lanes Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>Pedestrians cross the cycle track with priority on a mini zebra crossing and proceed to a landing area adjacent to the carriageway. Ensure adequate crossing widths/dwelling areas to cater for pedestrian/cyclist activity. Further information on infrastructures costs (examples) are available on the NTA website.</p>	<p>Multiple suppliers</p>
Junction Treatment					
SZ-108	 <p style="text-align: center;">Junction Tightening (DMURS Advice Note 6)</p>	 <p style="text-align: center;">Scoil Mochua, Celbridge, Co. Kildare</p>	<p>Description: Side Road Tightening (concrete build-outs to reduce road width; reduced corner radii; tactile paving; raised entry treatment) Dimension: Varies Reference: DMURS (Section 4.3), CDM (Section 4.5), NTA-TCD-0700-007 Colour: Buff colour tactile paving Cost Estimate: €30,000 - €120,000 per junction. Median cost €60,000 per junction.</p>	<p>May require additional drainage as a result of raised entry treatment. Consider Table 3.1 from the DMURS Advice Note 6 for the junction selectio guide. Consider continuing footpath across junction mouth to increase pedestrian priority.</p>	<p>Multiple suppliers</p>









Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Junction Treatment					
SZ-109	 <p data-bbox="172 621 620 646">Raised Table (Traffic Management Guidelines)</p>	 <p data-bbox="902 621 1255 646">Scoil Mhuire, Clondra, Co. Longford</p>	<p>Description: Junction Tightening and Raised Table (concrete build-outs to reduce road width; reduced corner radii; tactile paving; raised entry treatment) Dimension: Varies Reference: DMURS (Section 4.3), CDM (Section 4.5) Colour: Buff colour tactile paving Cost Estimate: €30,000 - €120,000 per junction. Median cost €60,000 per junction.</p>	<p>May require additional drainage as a result of raised entry treatment. Consider continuing footpath across junction mouth to increase pedestrian priority.</p>	<p>Multiple suppliers</p>
Shared Cycling and Pedestrian Facilities					
SZ-110	 <p data-bbox="246 1045 546 1071">Permeability Link (CDM TL106)</p>	 <p data-bbox="783 1045 1374 1071">Scoil Naisiunta Pheadar agus Phoil, Drumconrath, Co. Meath</p>	<p>Description: Insitu concrete footpath or asphalt footpath with public lighting Standards: TII: DN-PAV-03026, CC-SPW-01100, CDM Colour: Varies Cost Estimate: €220,000 - €500,000 per km. Median cost €350,000 per km.</p>	<p>Further information on infrastructure costs (examples) are available on the NTA website including schedule of rates available to apply to each design.</p>	<p>-</p>
Bollards					
SZ-111	 <p data-bbox="255 1461 537 1486">Pencil Shaped Rigid Bollards</p>	 <p data-bbox="834 1461 1329 1486">Presentation Primary School, Terenure, Dublin City</p>	<p>Description: Rigid Pencil Bollard (polyurethane cast around a steel core) Dimension: 1000mm high, 80mm Dia. Reference: TII: CC-SPW-01200 Connection: Retention socket or cast in place Colour: SRTS yellow colours only (RAL 1018 or RAL 1023) Cost Estimate: Median €420 per bollard (supply & Install). Inclusive of Retention Sockets and adaptors.</p>	<p>Bollards should be used only to protect pedestrian space. Check footpath width. Bollards should be placed in carriageway if footpath space is insufficient (passively safe bollards are preferred in this case).</p>	<p>Multiple Suppliers including: Shergan Traffic Solutions: www.shergansolutions.com PWS Signs: www.pwssigns.com</p>
SZ-112	 <p data-bbox="278 1843 507 1869">Flexible Pencil Bollards</p>	 <p data-bbox="804 1843 1359 1869">SS Michael and Peter Junior School, Arklow, Co. Wicklow</p>	<p>Description: Flexible Pencil Bollard (polyurethane) with reflective strip Dimension: 1000mm high, 80mm Dia. Reference: TII: CC-SPW-01200 Connection: Retention socket or bolt down Colour: SRTS yellow colours only (RAL 1018 or RAL 1023) Cost Estimate: Median €350 per bollard (bolt down, Supply & Install)</p>	<p>Bollards should be used only to protect pedestrian space. Check footpath width. Bollards should be placed in carriageway if footpath space is insufficient. Also check for EN and CE mark.</p>	<p>Multiple Suppliers including: IPL Group (Ireland) www.iplgroup.com Shergan Traffic Solutions www.shergansolutions.com PWS Signs www.pwssigns.com</p>




Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Footpath Protection					
SZ-113	 <p style="text-align: center;">Wheel Stoppers</p>	 <p style="text-align: center;">St Joseph's National School, Leitrim Village, Co Leitrim</p>	<p>Description: Plastic and rubber wheel stop with high visibility reflective glass tape Dimension: Varies, 1800mm long, 100mm high, 150mm wide. Reference: TII: CC-SPW-01200 Colour: Black with reflective glass strip Cost Estimate: Median €220 per block (Supply & Install)</p>	<p>Used to preserve and protect active travel space infrastructure.</p>	<p>Multiple suppliers, including:</p> <p>Pittman www.pittman.ie</p> <p>Toolman www.toolman.ie</p> <p>Hermeq www.hermeq.ie</p>
Signs					
SZ-114	 <p style="text-align: center;">Driver Feedback Signs</p>	 <p style="text-align: center;">Hartstown Road, Dublin City</p>	<p>Description: Vehicle activated traffic sign with interactive display depicting actual vehicle speed. Dimension: N/A Reference: Traffic Signs Manual (Chapter 3.8) Power supply: Hardwire connection to electricity supply or solar powered Connection: Pole mounted in retention socket or root fixed Colour: N/A Cost Estimate: €3,000 Supply & Install</p>	<p>Detection can be by means of above-ground radar detection or inductive loops in the carriageway. Solar powered is preferred where available.</p>	<p>Multiple suppliers</p>
SZ-115	 <p style="text-align: center;">School Ahead and Amber Warning Signals (can be used with periodic speed limit)</p>	 <p style="text-align: center;">Scoil Niocláis Naofa, Dunlavin, Co. Wicklow</p>	<p>Description: Periodic Speed Limit Sign with School Ahead Warning Sign supplemented with Flashing Amber Signals Dimension: N/A Reference: Traffic Signs Manual (Chapter 6.17) Power supply: Hardwire connection to electricity supply or solar powered Connection: Pole mounted in retention socket or root fixed Colour: N/A Cost Estimate: €4,500 (Supply & Install) with periodic speed limit. Including installation/commissioning/hardwire connection</p>	<p>The warning signals may be used in combination with a periodic speed limit sign where appropriate.</p>	<p>Multiple suppliers</p>
SZ-116	 <p style="text-align: center;">School Ahead and Amber Warning Signals</p>	 <p style="text-align: center;">Ashe Road, Mullingar, Co. West Meath</p>	<p>Description: School Ahead Warning Sign supplemented with Flashing Amber Signals Dimension: N/A Reference: Traffic Signs Manual (Chapter 6.17) Power supply: Hardwire connection to electricity supply or solar powered Connection: Pole mounted in retention socket or root fixed Colour: N/A Cost Estimate: €3,800 (Supply & Install) Including installation/commissioning/hardwire connection</p>	<p>The warning signals may be used in combination with a periodic speed limit sign where appropriate.</p>	<p>Multiple suppliers</p>






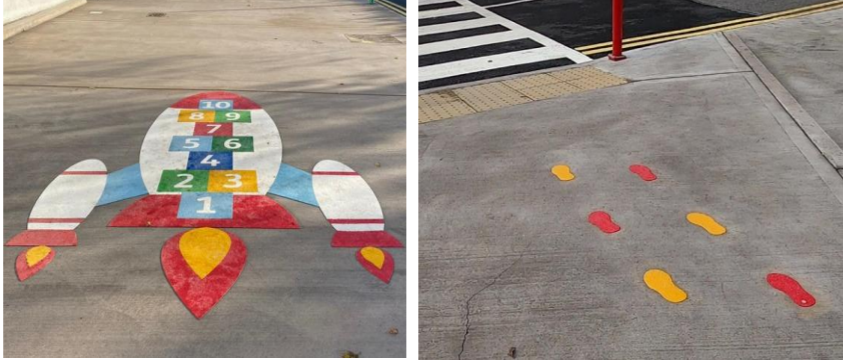
Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Signs					
SZ-117	 <p>School Street signage (TSM Chapter 5 - RUS 032A)</p>		<p>Description: RUS 032A School Street signage with supplementary plate P 051 with the periods of operation Dimension: N/A Reference: Traffic Signs Manual (Chapter 5.22), School Street Guidance Colour: N/A Cost Estimate: €1,000 (Supply & Install)</p>	<p>A school street is a road outside a school where general vehicular traffic is temporarily restricted during certain times of day (typically during school drop-off and pick-up times) to create a safer and healthier environment for children. A school street needs to have the school community's support, low level of residential access, very low level of commercial premises and not on a bus route.</p>	Multiple suppliers
Road Markings					
SZ-118	 <p>School Zone Road Markings</p>	 <p>Scoil Mhuire, Abbeyleix, Co. Laois</p>	<p>Description: 'School Zone' Road Marking (Thermoplastic) Dimension: Varies Reference: TII: CC-SPW-01200, Traffic Signs Manual Colour: White text on red background Cost Estimate: Varies (refer to Schedule of Rates)</p>	Further information available in the NTA Active Travel Infrastructure Schedule of Rates (2025), available on the NTA website.	Multiple suppliers
SZ-119	 <p>Colourful Roundels Road Markings</p>	 <p>Scoil Mhuire NS, Rosslare, Co. Wexford</p>	<p>Description: 'Circles' Road Marking (Thermoplastic), sited in school zones Dimension: Pattern with four fixed size diameter circles; 2m, 1.5m, 1.0m, 0.8m Colour: RAL3027, RAL1023, RAL1034, RAL6017 Cost Estimate: €750 (Supply & Laid, cluster of 4 circles)</p>	Dublin City Council found that the brightness of paint became discoloured on roads with heavy traffic volumes or where the pre-existing road surface had not been recently resurfaced. This issue was addressed by changing the application process. Instead of directly painting them onto the road surface, the circles were applied as pre-cut decals, using adhesive and heat treatment. Care was taken not to apply them when weather conditions were poor.	Multiple suppliers including: Ecoflex www.ecoflex.ie
SZ-120	 <p>"Dragon Teeth" Road Markings</p>	 <p>Magherabeg NS, Co. Donegal</p>	<p>Description: Triangle Road Markings (Thermoplastic), Dimension: 1m size white triangles at 4m spacing Colour: White Cost Estimate: Varies (refer to Schedule of Rates)</p>	Further information available in the NTA Active Travel Infrastructure Schedule of Rates (2025), available on the NTA website.	Multiple suppliers

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Road Markings					
SZ-121	 <p data-bbox="299 625 492 653" style="text-align: center;">Virtual Speed Ramp</p>	 <p data-bbox="908 625 1255 653" style="text-align: center;">Scoil Bhríde, Crosshaven, Co. Cork</p>	<p>Description: 'Virtual Speed Ramp' Road Marking (Thermoplastic) i.e. no vertical deflection</p> <p>Dimension: Varies</p> <p>Colour: White road marking on red surface</p> <p>Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>The effectiveness of the ramp may diminish over time as drivers become familiar with the road markings.</p>	<p>Multiple suppliers</p>
Road Pavement Surfacing					
SZ-122	 <p data-bbox="181 1052 611 1079" style="text-align: center;">Bands of Cold Applied High Friction Surface</p>	 <p data-bbox="825 1052 1335 1079" style="text-align: center;">St Paul's Secondary School, Oughterard, Co. Galway</p>	<p>Description: Cold applied high friction surface</p> <p>Dimension: Varies</p> <p>Reference: TII: CC-SPW-00900</p> <p>Colour: Buff</p> <p>Cost Estimate: €48 - €70 per m²</p>	<p>Instant visual impact. The buff surface colour will become darker over time due to traffic wear. Reapplication may be required if services trenches are cut through pavement.</p>	<p>Multiple suppliers</p>
SZ-123	 <p data-bbox="290 1438 492 1465" style="text-align: center;">Traffic Calming Ramp</p>	 <p data-bbox="825 1438 1335 1465" style="text-align: center;">Scoil Íde Girls National School, Coolock, Dublin City</p>	<p>Description: Speed ramps/raised tables</p> <p>Dimension: Varies with design special considerations should be applied along bus routes to accommodate movements</p> <p>Colour: Black SMA</p> <p>Cost Estimate: Median cost €5,000 cost per ramp. Excludes any drainage requirements</p>	<p>The flat-top length of the ramp should be extended to 6m on bus routes. On/off ramp gradients should be a maximum of 1 in 20. Note that drainage and location could affect cost significantly. Should drainage be a requirement, a median (pending design) cost would be €10,000.</p>	<p>Multiple suppliers</p>
SZ-124	 <p data-bbox="299 1824 492 1852" style="text-align: center;">Horizontal Deflection</p>	 <p data-bbox="917 1824 1240 1852" style="text-align: center;">Laurel Hill Coláiste, Limerick City</p>	<p>Description: Buildouts with low level planting</p> <p>Dimension: Varies with design, special considerations should be applied along bus routes to accommodate movements</p> <p>Colour: N/A</p> <p>Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>Further information on infrastructure costs (examples) are available on the NTA website including schedule of rates available to apply to each design.</p>	<p>Multiple suppliers</p>

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Road Pavement Surfacing					
SZ-125	 <p>Disabled Persons' Parking (TSM)</p>	 <p>St Conleth's National School, Derrinturn, Co. Kildare</p>	<p>Description: Dedicated blue badge parking Dimension: Varies with design Reference: TSM Colour: N/A Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>Further information on infrastructure costs (examples) are available on the NTA website including schedule of rates available to apply to each design.</p>	<p>Multiple suppliers</p>
Footways					
SZ-126	<p>Quick-build footway area (rubber kerb and slotted linear drains)</p>	 <p>Capel Street, Dublin</p>	<p>Description: Quick-build footpath build-outs (plastic kerb; coloured asphalt footpath) Reference: TII: DN-PAV-03026, CC-SPW-01100 Colour: Varies (typically buff colour) Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>Further information on infrastructure costs (examples) are available on the NTA website including schedule of rates available to apply to each design.</p>	<p>-</p>
SZ-127	<p>Quick-build footway area (concrete kerb and slotted linear drains)</p>	 <p>Dundrum, Dublin</p>	<p>Description: Quick-build footpath build-outs (insitu concrete kerb; coloured asphalt footpath) Reference: TII: DN-PAV-03026, CC-SPW-01100 Colour: Varies (typically buff colour) Cost Estimate: Varies (refer to Schedule of Rates)</p>	<p>Further information on infrastructure costs (examples) are available on the NTA website including schedule of rates available to apply to each design.</p>	<p>-</p>
Street Furniture					
SZ-128	<p>Cycle Stands on public space</p>	 <p>Drumcondra National School, Dublin City</p>	<p>Description: Cycle Stands (Sheffield Stands) Dimension: 750mm wide x 1000mm tall, 2.5mm wall thickness Connection: varies; bolt down, buried flanged fixing, retention socket Colour: Typically stainless steel; or consider School Zone standard colours RAL1034, RAL3014, RAL1018, RAL6017 Cost Estimate: €130 - €335 per stand Incl. foundation system. Median cost €250 per stand (supply & Install)</p>	<p>Further information available in the NTA Active Travel Infrastructure Schedule of Rates (2025), available on the NTA website including schedule of rates available to apply to each design.</p>	<p>Multiple suppliers</p>

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Street Furniture					
SZ-129	 <p>Colour Themed Street Seating</p>	 <p>Scoil Bhríde, Crosshaven, Co. Cork</p>	<p>Description: Seating and benches Dimension: Varies Reference: Various, siting and fixing of street furniture is of critical importance. Some Local Authorities preferences are determined by its age friendly policy which calls for timber benches (warmer material for year around use) with backs and arm rests (assist less able bodied to sit and rise) so there is a focus on specifying either entirely timber or timber with steel framed seating and benches. Colour: SRTS standard colours RAL1034, RAL3014, RAL1018, RAL6017 Cost Estimate: Selection Specific</p>	<p>People appreciate where the seating is set out in a clustered arrangement, allowing to face each other when sitting rather than sitting in a straight line. Leave gaps where wheelchair users or children in buggies can engage with people sitting on the benches. Try to incorporate tables within the clusters. These give people somewhere to place their belongings but also create a sense of place around the seating. The tables can also buffer the seating from passing pedestrians. Seating should be designed and installed in accordance with the requirements of IS EN 17210 Accessibility Standard.</p>	<p>Multiple suppliers</p>
SZ-130	 <p>School Zone Banner</p>	 <p>St Peter and Paul's National School, Drumconrath, Co. Meath</p>	<p>Description: SRTS banners for school zone in standard schools Dimension: 750 x 1500mm Reference: SRTS Guidance Connection: Pole mounted in retention socket or root fixed Colour: SRTS colour palette Cost Estimate: €1,300 (Supply & Install)</p>	<p>SCHOOL ZONE with SRTS logo' to be printed back-to-back with the 'SCHOOL ZONE END with school crest' at gateways to school zones. For schools that do not have a crest, the 'SCHOOL ZONE END with SRTS logo' is recommended instead. Material to be durable (wind-resistant) and light-weight (PVC woven).</p>	<p>Multiple suppliers including: Lampost www.lampost.ie Bay Media www.baymedia.ie Touchpoint Media www.touchpointmedia.ie</p>
SZ-131	 <p>Higher Speed Rural Road School Zone Banner</p>	 <p>Coomhola National School, Co. Cork</p>	<p>Description: SRTS banners for school zone in HSRR schools Dimension: 900 x 1500mm Reference: SRTS Guidance Connection: Pole mounted in retention socket or root fixed Colour: SRTS colour palette Cost Estimate: €1,300 (Supply & Install)</p>	<p>SCHOOL ZONE' with SRTS logo to be installed in HSRR roads, on both sides of the road where feasible to create a 'gateway' effect.</p>	<p>Multiple suppliers</p>
SZ-132	 <p>Colour Themed School Zone Gateway Poles</p>	 <p>St Brigid's National School, Donaskeigh, Co. Tipperary</p>	<p>Description: Coloured sign pole covers Dimension: Diameter to fit 76mm steel sign pole, 300mm long sections. Reference: TII: CC-SPW-01200, Traffic signs manual 2019 Colour: School Zone standard colours RAL1034, RAL3014, RAL1018, RAL6017 Cost Estimate: €545, Supply & Install - Cost is for Pole & 4 colour Sleeves & retention socket (Excludes sign/flashing lights)</p>	<p>-</p>	<p>Multiple suppliers including: PWS Signs www.pwssigns.com</p>

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Landscape and Urban Design					
SZ-133	 <p style="text-align: center;">Rain Gardens</p>	 <p style="text-align: center;">Scoil Mhuire na nGrást, Belgooly, Co. Cork</p>	<p>Description: Rain Garden, rainwater attenuation Dimension: Varies Reference: NTA Active Travel Advice Note: Greening and Nature-based SuDS for Active Travel Schemes Cost: 150€ - 200€ per m² (refer to Schedule of Rates)</p>	<p>Guidance on design of rain gardens in Chapter 18 of The SuDS Manual (CIRIA) https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS</p> <p>Designing Rain Gardens: A Practical Guide https://www.urbandesignlondon.com/documents/85/UDL_Rain_Gardens_for_web_0vwx1Ls.pdf</p> <p>Case Study: https://www.london.gov.uk/what-we-do/environment/climate-change/surface-water/alma-road-suds-project</p>	Multiple suppliers
SZ-134	 <p style="text-align: center;">Low Level planting bed</p>	 <p style="text-align: center;">St Paul's National School, Dooradoyle, Co. Limerick</p>	<p>Description: Above ground permanent planter Dimension: Varies Reference: NTA Active Travel Advice Note: Greening and Nature-based SuDS for Active Travel Schemes Cost: Varies (refer to Schedule of Rates)</p>	<p>Permanent inground planting beds can benefit from painted steel guards around the edges. Without some form of edging pedestrians, buggy wheels and bike wheels tended to encroach onto the planting, mud gets drawn around the local paths and planting is damaged/lost. From DLRCC architects dept "On some of the schemes we have utilised native wild meadow turf. The flowers are great pollinator's and ideal for bio diversity but the disadvantage of this type of planting is that it gets cut back in late Autumn and can look bare and scruffy for the winter months. In other locations we have planted herbaceous perennial's and grasses which are good pollinator's and ideal for bio diversity. The planting in the bed retains some body and 3d presence throughout the year. Where possible we also include a variety of spring bulbs in all the planted beds".</p>	Multiple suppliers

Ref. #	Design/Visualisation	Constructed Example	Specification	Considerations	Known Supplier (inclusion does not equal endorsement)
Landscape and Urban Design					
SZ-135	 <p style="text-align: center;">Tree Planting</p>	 <p style="text-align: center;">Blacklion Manor Campus, Greystones, Co. Wicklow</p>	<p>Dimensions: Most trees should be minimum 14/16 cm diameter and these would generally have a 2m clear trunk.</p> <p>Materials: Local Authority parks department can advise, some have specified apple and pear trees in past which deliver interest, with blossoms, leaves and fruit but in addition to losing leaves these trees lose their fruit which can become a hazard on paths.</p> <p>Cost: Varies (refer to Schedule of Rates)</p>	<p>Single stem trees maintain clear visibility at low level but the biggest difficulty is to choose a location for the tree which allows sight lines to traffic lights.</p>	<p>Multiple suppliers</p>
SZ-136	 <p style="text-align: center;">Planters</p>	 <p style="text-align: center;">Maryborough National School, Portlaois, Co. Laois</p>	<p>Description/use: For quick build schemes, in ground planting generally preferred as it is more sustainable and requires less maintenance. Planters deliver immediate results when needed but they will require maintenance and monitoring.</p> <p>Dimension: 450/500mm high. This height can act as a good buffer and can have seating elements incorporated on top. 600mm wide where the planters are freestanding and need to ensure stability. When the planters can be fixed in place width can be reduced to 300mm.</p> <p>Colour: Timber or a neutral colour e.g. grey. Not SRTS colours.</p> <p>Cost: Varies (refer to Schedule of Rates)</p>	<p>One of the big challenges in placing trees in planters in existing streets is finding adequate spaces to accommodate a 1m cube pit for the tree roots which is free of services. Investigate existing services and requirements each provider has in regard to clear distances between the service and trees.</p>	<p>Multiple Suppliers</p>
SZ-137	 <p style="text-align: center;">Micro Art Examples (coloured flags, footsteps, games etc...)</p>	 <p style="text-align: center;">Bunscoil Rinn an Chablaigh, Cobh, Co. Cork</p>	<p>Description: the Planning/Public Realm/Art Office in Local Authorities should lead any Micro Art inclusions. For ideas see www.aplayfulcity.com https://thewallsproject.ie https://www.creativeireland.gov.ie/en/event/street-art-electrical-boxes/</p> <p>Colour: For street markings consider School Zone standard colours RAL1034, RAL3014, RAL1018, RAL6017</p> <p>Cost: Varies (refer to Schedule of Rates)</p>	<p>-</p>	<p>Multiple suppliers</p>