City of Bloomington Planning & Transportation Dept.

INVITATION TO QUOTE

Issue Date: October 21, 2016
RFQ #2016-PT-100 Activity Counters Installation
Due Date: November 7, 2016 at 11:00 a.m. local time

The City of Bloomington is requesting a price quote for the following:

(1) INSTALLATION OF BICYCLE AND PEDESTRIAN COUNTERS AT VARIOUS LOCATIONS IN BLOOMINGTON

The City of Bloomington is seeking quotes for the installation of eight Eco Counter bicycle and pedestrian counters at eight locations in Bloomington.

The locations for installation and the corresponding type of counter to be installed at said location are as follows:

1) East 7th Street near the 45/46 Bypass- MULTI Pedestrian/Cycles Counter with Direction, 2 loops
2) B-Line Trail between 2nd Street and 3rd Street- Urban Post MULTI Pedestrians/Cyclists Counter, No Direction, 2 Loops
3) B-Line Trail near Country Club Drive- Urban Post MULTI Pedestrians/Cyclists Counter, No Direction, 2 Loops
4) West Bloomfield Road (2nd Street) at Rolling Ridge Way- Urban Post MULTI Pedestrians/Cyclists Counter, No Direction, 2 Loops
5) North Jordan Avenue at 7th Street- Zelt Selective Counter with Direction, 2 Loops
6) East 7th Street at Park Street- Zelt Selective Counter with Direction, 2 Loops
7) North College Avenue at 14th Street- Zelt Selective Counter, No Direction, 1 Loop
8) South Walnut Street at Dodds Street- Zelt Selective Counter, No Direction, 1 Loop

An area map of the locations is also included in the quote packet.

The locations listed above are approximate. When a contractor is selected, precise locations will be marked.

The counters shall be installed per the Eco Counter Installation Guides that are part of this quote packet. Where applicable, INDOT 2016 Standard Specifications will apply.

The following materials will be provided by the City of Bloomington:
Three Urban Post MULTI Pedestrians/Cyclists Counters- No Direction- 2 Loops,
One MULTI Pedestrian/Cycles Counter- with Direction- 2 Loops,
Two ZELT Selective Counters- No Direction- 1 Loop,
Two ZELT Selective Counters- With Direction- 2 Loops.

Included in these Counter packages are:
Wooden Post for PYRO Sensor
Rainbird Manholes
Bluetooth Adapter
Eco-Combo Logger
Magnetic Key
ZELT Sensor

Batteries
Wiring for ZELT Loops
Bidirectional PYRO Sensor
Raygel Junction Box
Scotchlock Connectors
Smart Connect Connectors
Geotextile and band
Socket Spanner and screw
Urban Post
Cap Nuts
Anchor Base
M8 Washers & Nuts
Secured Screws
Yellow Reference Tags
Template
Torx Wrench

All other materials and supplies necessary for the complete installation of the above mentioned counters will be provided by the contractor.
Contractor shall seed and straw all disturbed areas.
Contractor shall follow the current Manual on Uniform Traffic Control Devices (MUTCD) with regard to all signage and signage placement used during the project for vehicular, bicycle, and pedestrian traffic traveling through the project limits.

All work for the Activity Counters Installation Project shall be completed by May 15, 2017.

In comparing quotes, consideration will not be confined to price only. The successful quoter will be one whose service is judged to best serve the interests of the City when price, quality, and adherence to specifications are considered. The City of Bloomington reserves the right to reject any or all quotes or any part thereof, and to waive any minor technicalities.

Quotations shall remain valid and open for acceptance for sixty (60) days following the closing the date. The City reserves the right to cancel this Invitation to Quote (ITQ) before or after closing, without making an award. Detailed specifications are included with this packet. Where applicable, INDOT Standard Specifications will apply.

Responses are due no later than 11:00 A.M., November 7, 2016. Quotes submitted by e-mail are to be submitted to: smethurm@bloomington.in.gov. Quotes submitted by fax should be submitted to the attention of Matt Smethurst at 812-349-3520. Quotes submitted by e-mail or fax must be received in accordance with the published closing date and time. Any quotes submitted after the deadline will be considered non-compliant and will be rejected.

Questions regarding this Invitation to Quote should be directed to:

Matt Smethurst – Project Manager
smethurm@bloomington.in.gov
812-349-3514

QUOTE FORM

This QUOTE Summary Sheet shall be completed and submitted with all other QUOTE Documents.

The Lump Sum cost to complete the 2016-PT-100 Activity Counters Installation Project, including all associated work per plans and specification is;

_____, $_____

Any and all Subcontractors performing work valued over $10,000 shall be listed below: Any subcontractor not listed below at the time of quote, must be approved by the City of Bloomington prior to performing any work on this contract. Subcontractors not listed or approved will not be paid for work under this contract. In accordance with Indiana Code 5-16-13 *et seq*., incorporated herein by reference, any subcontractor performing work on this contract is a Tier 2 contractor.

SUBCONTRACTORS	ADDRESS	TYPE OF WORK

In submitting this Quote, Quoter represents that:

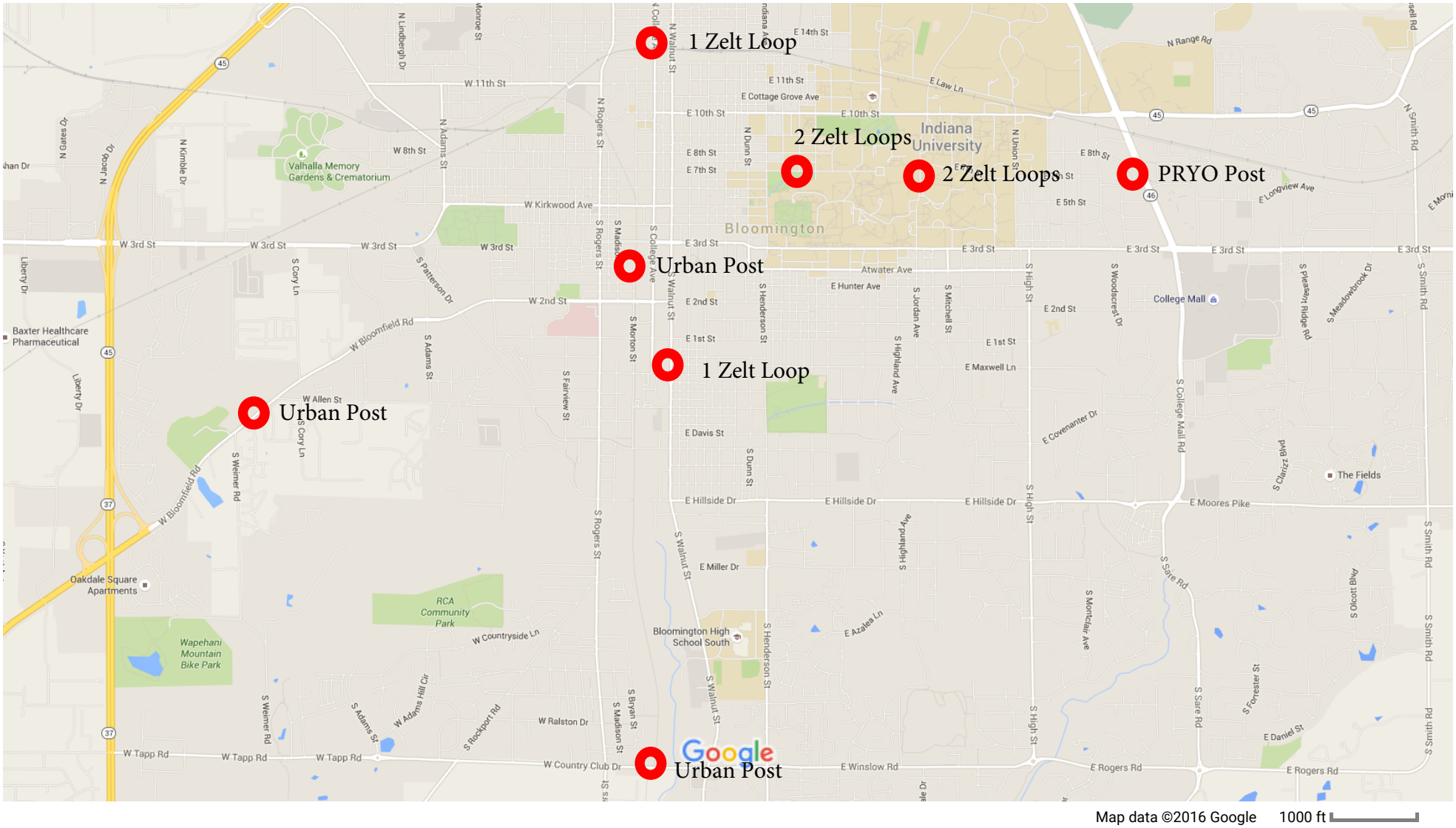
A. Quoter has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.

B. Quoter has examined and carefully studied the Quoting Documents, the other related data identified in the Quoting Documents and the following Addenda, receipt of which is hereby acknowledged.

No. _____ Dated_____

SIGNATURE OF QUOTER
Name of Quoter:_____ Date:_____
By:

_____
Name & Title Printed:_____
Quoter Address:_____
Telephone:_____



Counter Location

MULTI SYSTEMS

INSTALLATION GUIDE

MR

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II. INTRODUCTION

PROPER COUNTS COME FROM A PROPER INSTALLATION: PLEASE READ THIS GUIDE CAREFULLY BEFORE COMMENCING THE INSTALLATION OF YOUR ECO-COUNTER.

The Eco-Counter has been tested to be resistant to the worst environmental conditions (dampness, saltiness, dust, temperature variations, etc.).

However we remind you that it remains a measuring system, and therefore should always be handled with care.

III. DELIVERED EQUIPMENT

AN ECO-COMBO LOGGER AND IT'S ACCESSORIES

Eco-Combo logger

Magnetic key

Netbook[1]

ZELT SENSOR

ZELT SENSOR

Battery

Wiring to form ZELT loops or preformed ZELT loops

[1] Optional for Eco-Combo GSM loggers

PYRO SENSOR

Bidirectional PYRO Sensor

CONNECTORS

Raygel Junction Box

Scotchlock Connectors

SMART CONNECT Connector

SUPPORT

➢ PYRO SENSOR WITHOUT A SUPPORT

The PYRO sensor delivered without a post is installed in the support of your choice. The counting system is itself protected by a manhole.

Manhole

Geotextile and an elastic to attach it under the manhole

A socket spanner and an anti-vandalism screw to seal the cover of the manhole

A screwdriver with two bits

➢ PYRO POST

Wooden post

Manhole

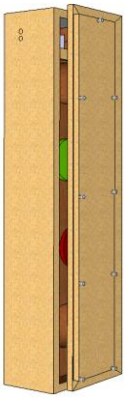
Geotextile and an elastic to attach it under the manhole

A socket spanner and an anti-vandalism screw to seal the cover of the manhole

A Screwdriver with two bits

A Fixation bar

➢ COMBO POST



Wooden post

A screwdriver with two bits

A fixation bar

➢ EQUESTRIAN POST

Wooden post

Manhole

Geotextile and an elastic band to attach it to the manhole

A socket spanner and an anti-vandalism screw to seal the cover of the manhole

A screwdriver with two bits

A fixation bar

SOFTWARE

- A username and password to access the online Eco-Visio platform.
- The Eco-Link software preinstalled on the Netbook.

ADDITIONAL MATERIALS

- A warranty certificate containing the serial number of the Eco-Combo logger. To be conserved.
- An identification sheet for your counter where you must record the installation location.

IV. THE COUNTING SYSTEM

The Eco-MULTI counting system is capable of differentiating between **bicycles, pedestrians and equestrians.**

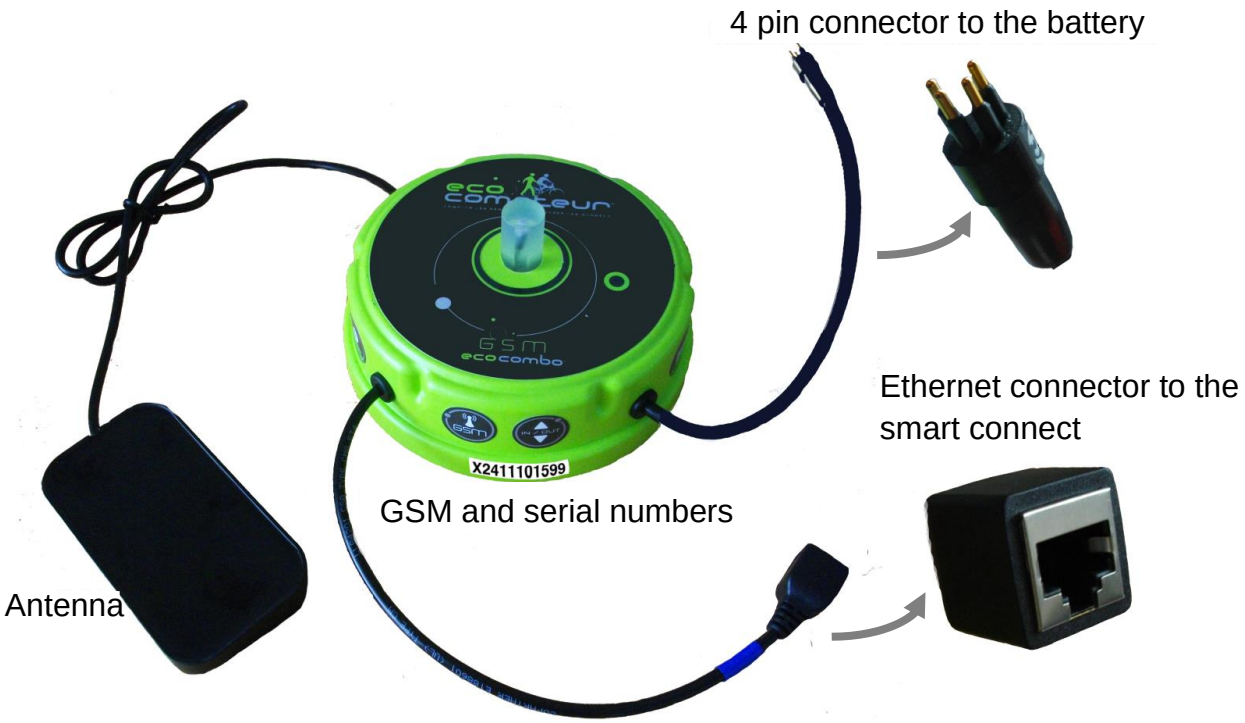
The system is composed of different sensors using different technologies used for different modes of transportation (pedestrians, cyclists and equestrians).The signals are analysed by an intelligent system called **Smart Connect** (see page 10), capable of deciding and classifying the data. The signals are then sent to the **Eco-Combo logger** (see page 10) which collects and saves the data.

The data is then transmitted directly by GPRS to an online platform called Eco-Visio (see page 12) if your logger is equipped with a GSM modem. If your Eco-Combo is equipped with a Bluetooth transmitter you will retrieve the data manually on site with a Netbook and the **Eco-Link** software (see page 12) and then transfer it to the Eco-Visio online platform.

V. THE COMPONENTS

A. THE ECO-COMBO LOGGER

The Eco-Combo logger collects, validates and stores data.



B. CONNECTORS

- **Smart Connect**

The **Smart Connect** connector is an intelligent system, serving as an interface between sensors and the logger when utilizing multiple sensors. This system is capable of analyzing data coming from different sensors. It combines them, verifies their coherence and is capable of interpreting the results and classifying them into different categories.

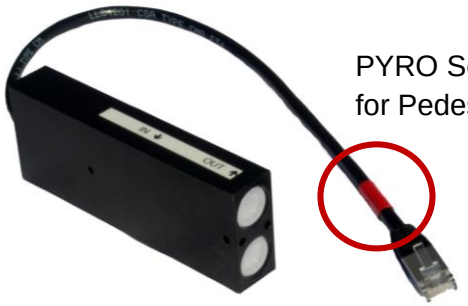
- **Scothlock Connectors**

The Scotchlock connectors are used to connect the ZELT loops to the ZELT sensor. In the diagrams, they are represented by the symbol .

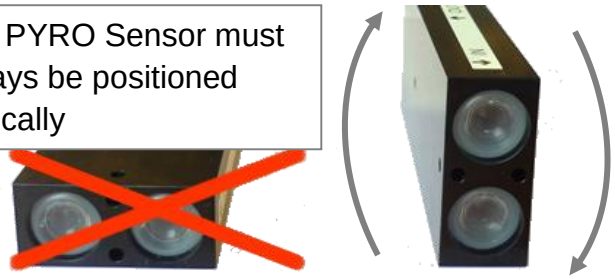
C.SENSORS

- **Counting pedestrians and equestrians: The PYRO Sensor**

The PYRO Sensor looks the same regardless of whether it's intended to count pedestrians or equestrians. The coloured tape on the wire enables them to be differentiated: red tape for pedestrians and white for equestrians.



The PYRO Sensor must always be positioned vertically



The sticker on the sensor indicates the directionality of the counting (IN or OUT). To inverse the directions, simply rotate the sensor 180 degrees.

- **Counting Cyclists: ZELT Loops**

Depending on whether or not you wish to install this system in soft soil or solid ground (asphalt or cement), you have received conductive wires to form loops or preformed loops.

D.SOFTWARE

- **Analysis of Data: Eco-Visio**

Eco-Visio is an online platform that can be used to analyse data, edit reports, manage counting points, etc. This platform is accessed via the Eco-Counter website by logging in with a username and password.

If you have an Eco-Combo GSM logger, the data is automatically transferred online. Manual data retrieval is not necessary to initiate data analysis.

If you have an Eco-Combo Bluetooth logger, data must be retrieved before it can be analysed through Eco-Visio. This step is performed by using the Netbook and Eco-Link software.

- **Data Retrieval : Eco-Link**

Eco-Link is the software which allows data to be retrieved from the Eco-Combo Bluetooth loggers and to transmit the data to Eco-Visio.
When purchasing a Netbook the Eco-Link software is preinstalled.

VI. CHOOSING AN INSTALLATION SITE

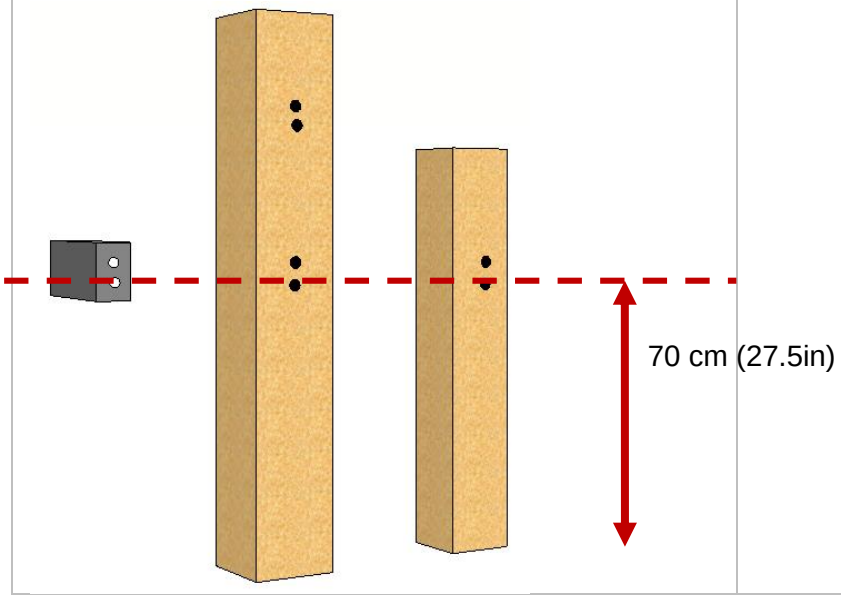
RESPECT THE FOLLOWING INSTRUCTIONS IN ORDER TO CHOOSE THE APPROPRIATE INSTALLATION SITE FOR YOUR COUNTER

CHOOSE A SITE THAT IS	**AVOID**
▪ A path reserved for pedestrians and bicycles ▪ An area where traffic is uncongested. ▪ A path that respects the following widths: - Short-Range PYRO Sensor: maximum 1 meter (3.3ft) - Medium-Range PYRO Sensor: maximum 4 meters (13ft) - PYRO Zoom: maximum 15 meters (49.2ft) ▪ An area where the PYRO sensor can be installed on the border of the path. ▪ A location where the PYRO Sensor can be installed at a height of : - 70cm (27.5in) for pedestrians - 220cm (7.2ft) for equestrians ▪ A location where the temperature remains stable. ▪ A location where the PYRO Sensor will not be pointed at objects that will generate heat (leaves, metallic surfaces, cars, etc.). ▪ A location where the beam of the PYRO Sensor will not be affected by external	▪ Do not point the PYRO sensor towards: - A path where motor vehicles pass - A surface that is directly exposed to sunlight - Vegetation or objects that are likely to move (bushes, branches etc) - A window that could have sunlight pass through it - A metallic surface that can be exposed to sunlight - A door - A radiator ▪ Do not install the PYRO Sensor: - Behind a window. - At a spot where pedestrians are likely to stop or substantially slow down (rest spots, information posters, steep surfaces, etc.). - At a location where other undesired subjects can be counted such as animals, cars, undesired pedestrians.

interferences such as vegetation, branches, etc.

- A location where the PYRO Sensor will not accidentally be pointed at a reflective surface or a metallic plate.

- A location where the PYRO Sensor can be positioned perpendicular to the axis of passage with its beam facing the path.



- Near a heat source such as a rock or leaves that are exposed to the sun.

- Do not install the system:

  - In a location that is subject to electromagnetic fluctuations: other counting loops, buried or overhead high-tension electrical cables, buried telecommunication equipment.

  - On natural soil subject to erosion.

PART 1- INSTALLING THE ZELT INDUCTIVE LOOPS

I. INSTALLATION IN ASPHALT

RISK OF BODILY HARM!

- Wear a reflective safety vest;
- Secure the work site;
- Use signal studs and hazard signs.

A. REQUIRED MATERIALS

- To secure the work site: Signal studs and hazard signs.
- To protect one's self: A reflective safety vest, protective glasses and footwear, noise-cancelling helmet, anti-dust mask, protective gloves.
- To trace the cut-out area: A straight plank of wood (1.5m (59in) minimum), a meter stick and chalk.
- To form the loops: Drill, pliers and a short ruler (to push in the loops).
- To verify the inductance of the loops (optional): A multimeter.
- To cut the diamonds into the asphalt: Thermal saw with a blower and diamond disk capable of cutting out a gutter 1cm (0.4in) wide and 5cm (2in) deep.
- To fill in the cut-outs: Asphalt or another filler regularly used for roadwork which **temperature does not exceed 60°C (140°F),** a sponge, water and a trowel.

When refilling the cut-outs, we recommend the use of micro-cement for sealing the road work (example: sika fastfix-138tp, 714 scellflash micro-beton (micro-cement)).

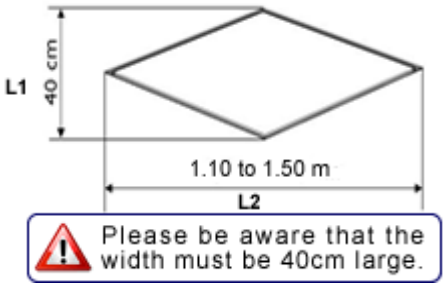
- To install the manhole (if it is being used): A shovel and pickaxe.
- To test the system: A bicycle and a Netbook with the Eco-Link software installed.

  If you do not have a Netbook with the Eco-Link software, ensure that there are two people present in order to correctly test the system.

- To take a photo in order to illustrate the counter location in Eco-Visio (optional): a camera.

B. LAYOUT PATTERNS

01. DIMENSIONS OF THE ZELT INDUCTIVE LOOPS



A loop consists of 8 turns.

- The width L1 of the diamond must be 40 cm (15.7in).
- The length L2 can be adjusted between 1.10m (43.3in) and 1.50m (59in) (1.40m (55in) by default) depending on the width of the path where it will be installed.

The diamond shape must be perfect.

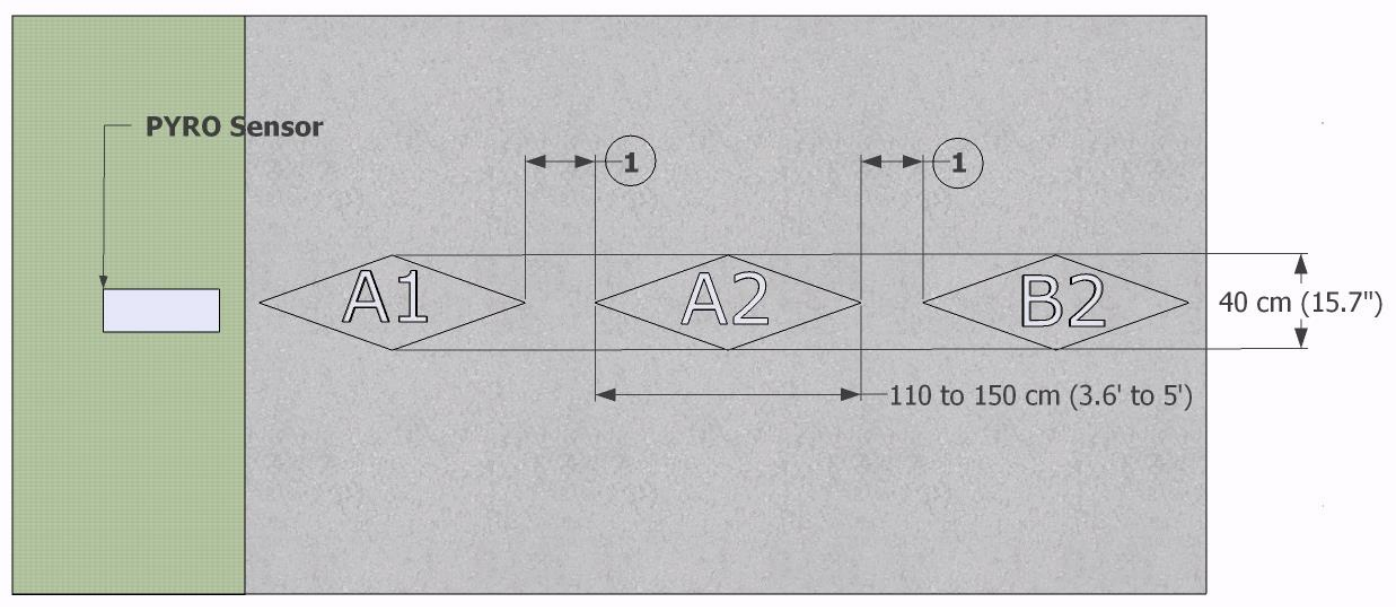
If there is a need for loops of a different size, please contact us to verify whether or not they are feasible.

02. LAYOUT PATTERNS

Attention! If you have specifically ordered a MULTI System with direction recognition through the ZELT Inductive Loops, please refer to the layout patterns in **Appendix A – Direction given by the ZELT Inductive Loops**, page 42.

If you have ordered a standard MULTI System (direction recognition through the PYRO Sensor), please refer to the layout patterns below.

3 LOOPS



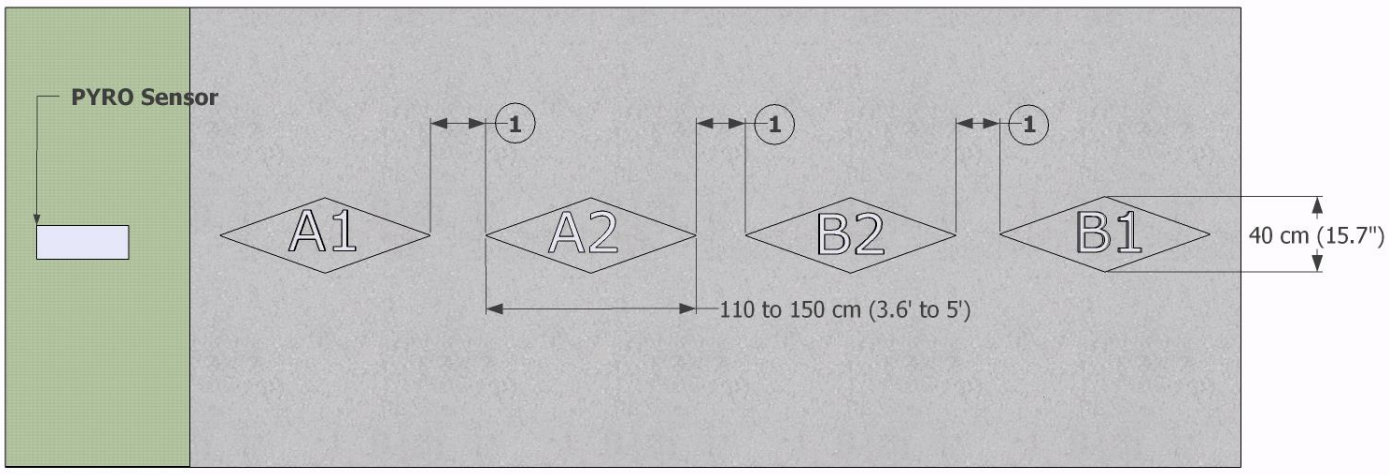
The spacing indicated by the **1** between the two loops will vary depending on the length of the loops themselves.

Apply the corresponding spacing to the length of the loops:

Loop length	Distance	Loop length	Distance
1.50 m	8 cm	5 ft	3.1 in
1.40 m	10 cm	4.6 ft	3.9 in
1.30 m	12 cm	4.2 ft	4.7 in
1.20 m	14 cm	3.9 ft	5.5 in
1.10 m	16 cm	3.6 ft	6.2 in
Less than 1.10 m (3.6 ft)	Contact Eco-Counter to evaluate the feasibility		

Cable B1 won’t be used in this configuration – don’t remove the scotchlock connector at the end of this cable.

4 LOOPS



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Apply the corresponding spacing to the length of the loops:

Loop length	Distance
1.50 m	8 cm
1.40 m	10 cm
1.30 m	12 cm
1.20 m	14 cm
1.10 m	16 cm
Less than 1.10 m (3.6 ft)	Contact Eco-Counter to evaluate the feasibility

C.PROCEDURE

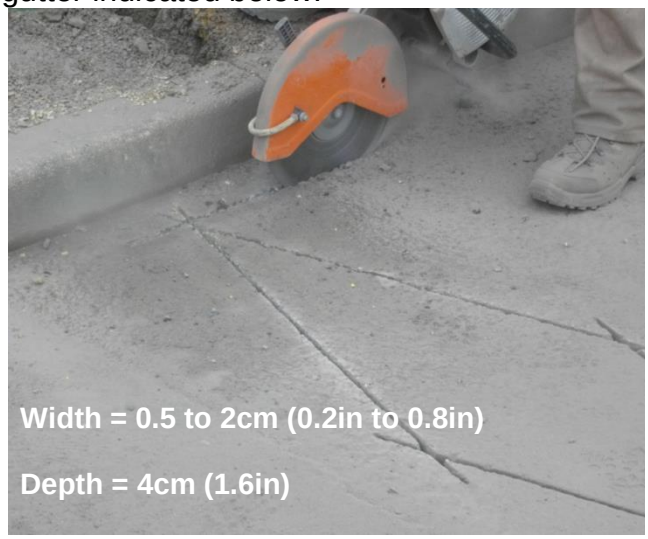
1- Put on the reflective safety vest and protective footwear.

2- Secure the worksite with safety studs and hazard signs.

3- Trace the area needed to be cut out (perpendicular to the flow of circulation) respecting the dimensions and positioning indicated in part I. B. **Layout Patterns** on page 16).

4- Put on the anti-dust mask and noise-cancelling headphones as well as the protective glasses and gloves.

5- Cut-out into the asphalt with the thermal disk according to the markings indicated in step 3 and the dimensions for the gutter indicated below.



6- If you are installing two loops, verify that the gap between the tips of the loops is correctly adapted to the length of your loops (see page 16). If the gap is smaller than that indicated in the diagram break the tips in order to obtain the correct length.

7- Clear out the gravel from the cut-outs by using a blower.

Use the short ruler to remove the remaining pieces of gravel.

8- On the shoulder, dig a hole 26cm (10.2in) deep for the manhole (if you are using one) less than 20 meters (65ft) from the loop furthest from the shoulder. Cut a slit in the shoulder to pass the wiring from the loops to the manhole.

9- Form a loop consisting of 8 turns, depending on the size of the loops in the cut-out furthest from the manhole.

10- Push the wire into the cut-out with the small ruler.

If you are using your own wiring to form the loops, make sure that you use a stranded wire with a diameter of 0.5mm to 1.5mm.

11- Stretch out the cable and cut it. The cable must be long enough to reach the manhole with 50 centimeters (19.6in) of extra slack.

12- Twist the end of the wires as indicated below:

1. Attach the two extremities of the wire to a drill or an electric screwdriver.
2. Stretch out the wires.
3. Spin the wires.
4. Keep the wires tought while rotating the drill at a slow pace in order to achieve optimal results.

   There should be at least 30 twists per meter.

13- Verify the inductance of the loop. The level of inductance must be between 100 and 150 µH.

14- Place the twisted end in the cut-out closest from the manhole.

15- Form the loop the same way and run the end of the wire through the slit into the shoulder towards the manhole.

16- Place the geotextile under the manhole and secure it in place with the supplied elastic band.

17- Insert the manhole into the hole that was prepared for it.

II. INSTALLATION IN SOFT SOIL

A. REQUIRED MATERIALS

- To secure the work site: signal studs and hazard signs.
- To protect one's self: a reflective safety vest, protective glasses and footwear, anti-dust mask, protective gloves.
- To trace the area to be dug out: a straight plank of wood (1.5m (4.9ft) minimum) or a meter stick and a can of spray paint.
- To dig out the area: pickaxe.
- To verify the inductance of the loops (optional): a multimeter.
- To flatten the area where the loops will be placed: trowel, ruler and level.
- To fill in the trenches: sand or earth.
- To test the system: a bicycle and a Netbook with the Eco-Link software.
- If you do not have a netbook with the Eco-Link software, ensure that there is a second person present to assist you in testing the system.
- To take a photo of the installation site for Eco-Visio (optional): A Camera.

B. PROCEDURE

1- Put on the reflective safety vest and protective footwear.

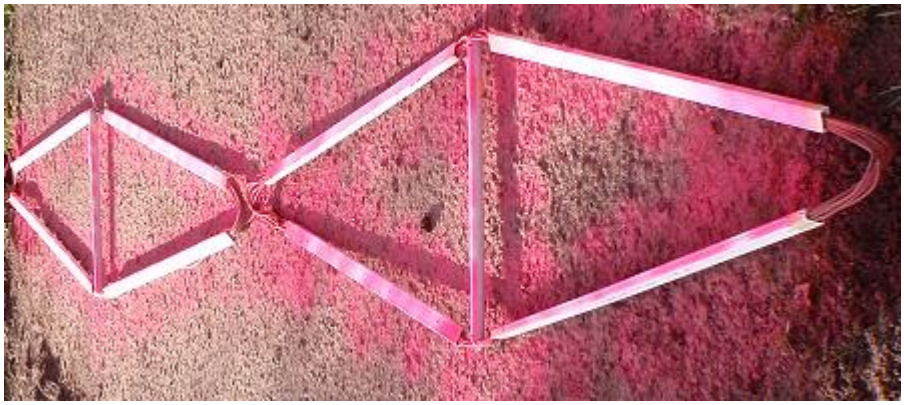
2- Secure the work site with the safety studs and hazard signs.

3- Trace out the area to be dug out perpendicularly to the direction of circulation.

Be sure that you diligently respect the dimensions and placement indicated in part I. B. **Layout Patterns** (on page 16).

Example of an outline

4- Unfold the supplied loop and install the small plastic bar in the middle using the supplied plastic tie in order to form the loop.



5- Put on the anti-dust mask and the protective gloves and goggles.

6- Dig out one or several trenches (depending on the number of loops to be installed) **2 to 6 cm deep** (0.8in to 2.4in) respecting the outlines traced in step 3 and then flatten the trenches.

7- Insert the loops into the trenches ensuring to properly place the end into the gutter leading towards the manhole as indicated in part I. B. **Layout Patterns** (on page 16)16.

- If you have more than one loop:

  First, install the loop that is furthest from the manhole and place its end in the trenches for the other loops.

8- Verify the inductance of the loops. The level should be between 100 µH and 150 µH.

9- On the lower end, dig a trench to place the end of the wires from the inductive loops up to the manhole or post.

10- If you are using a manhole, dig a 26cm (10.2in) deep hole for the manhole no further than 20 meters (65.6ft) from the furthest loop. This is done in order to allow the top of the manhole to be level with the ground after being installed.

11- Place the geotextile under the manhole and secure it in place with the supplied elastic band.

12- Insert the manhole into the designated hole.

PART 2- INSTALLING THE PYRO SENSOR

I. PYRO SENSORS INTEGRATED INTO POSTS

A. REQUIRED MATERIALS

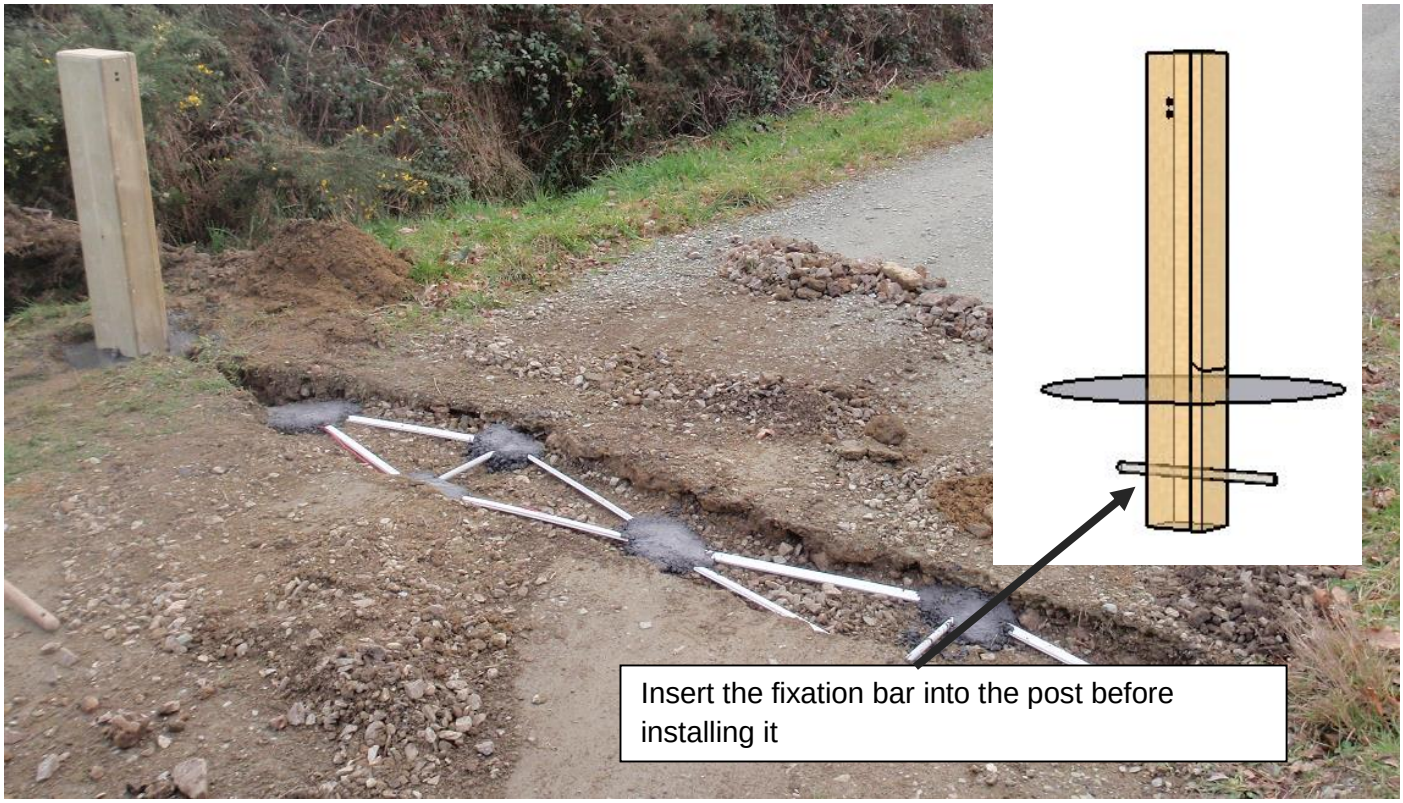
- Shovel and pickaxe.
- Gloves.

If you wish to embed the post to protect it from vandalism:

- Material and equipment necessary to make cement.
- A corrugated sheet to protect the wires and allow them to be easily replaced if necessary.

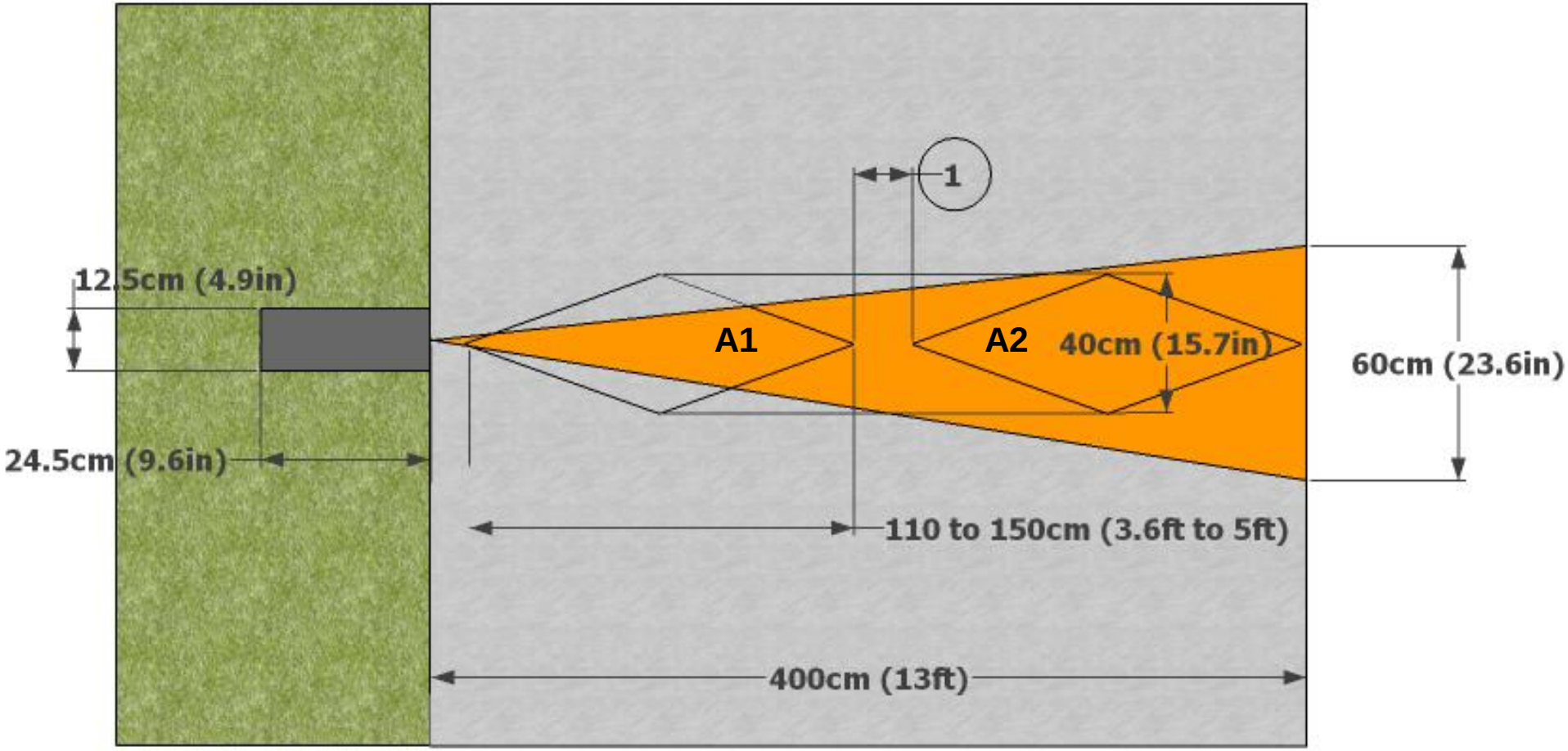
B. INSTALLATION DIAGRAMS

Follow the installation diagram corresponding to the type of post that was purchased.

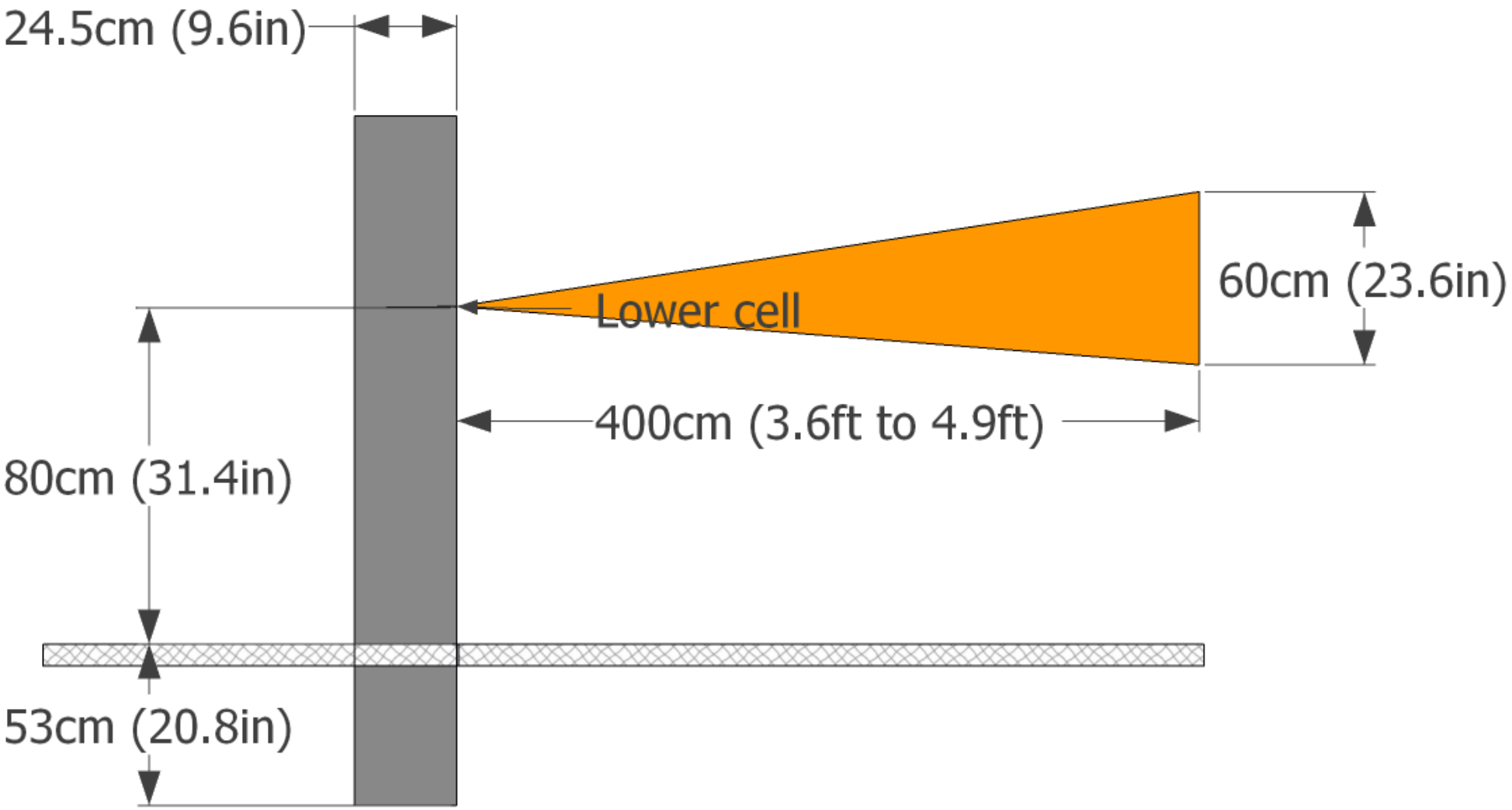


01. COMBO POST

Overhead View



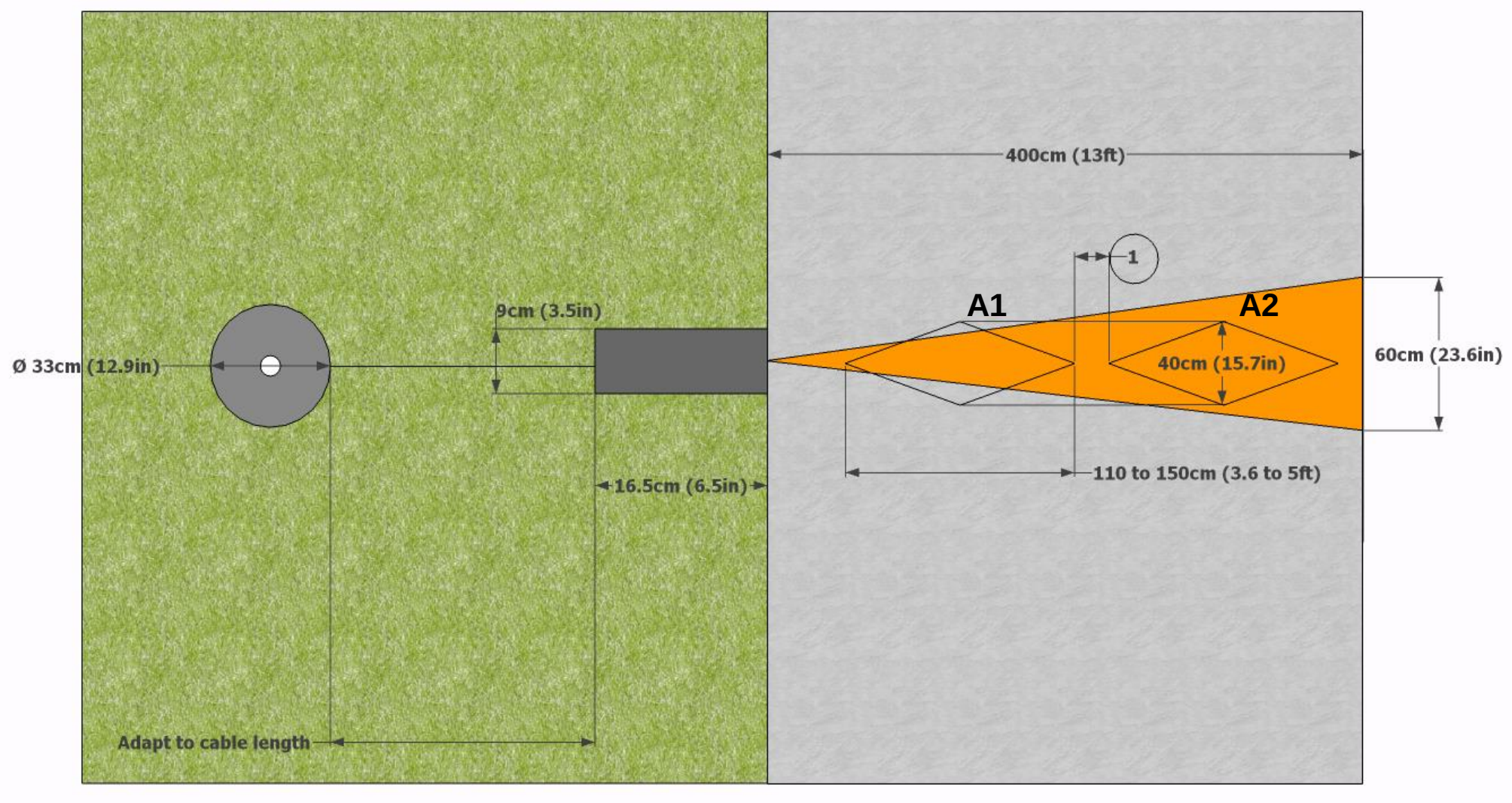
Side View



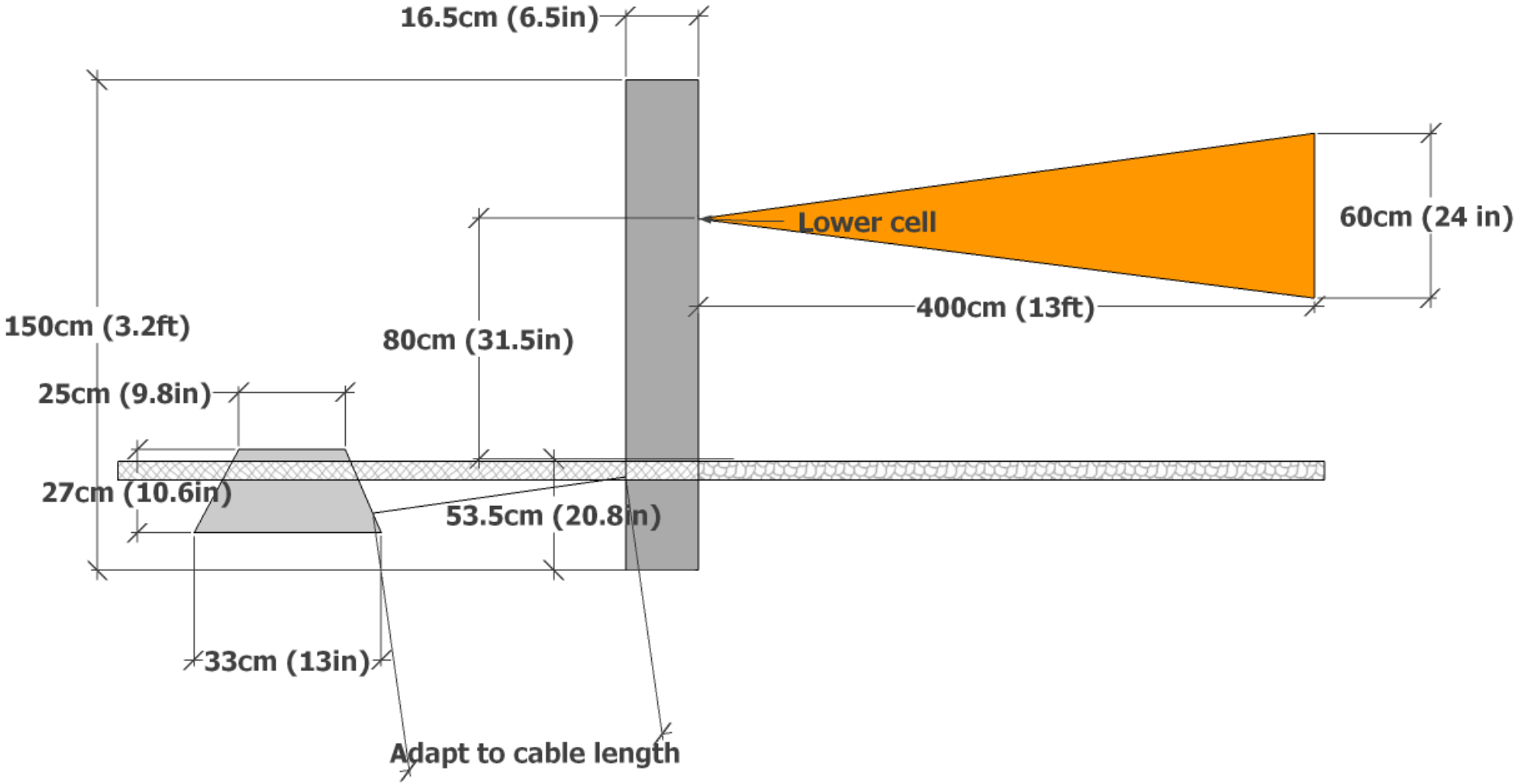
Medium-Range PYRO sensor
Last modified 20/05/2014
Units of measurement: cm

02. PYRO POST

Overhead View



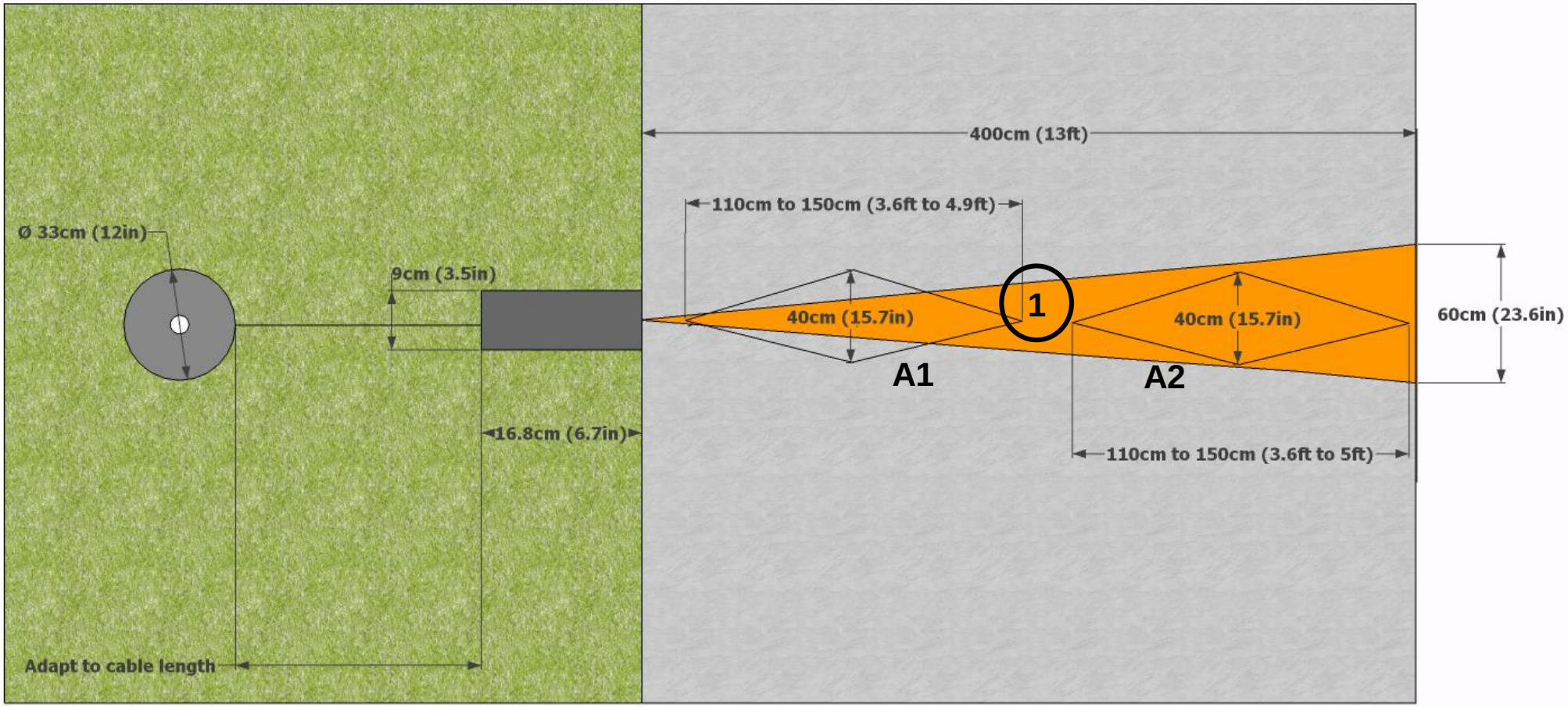
Side View



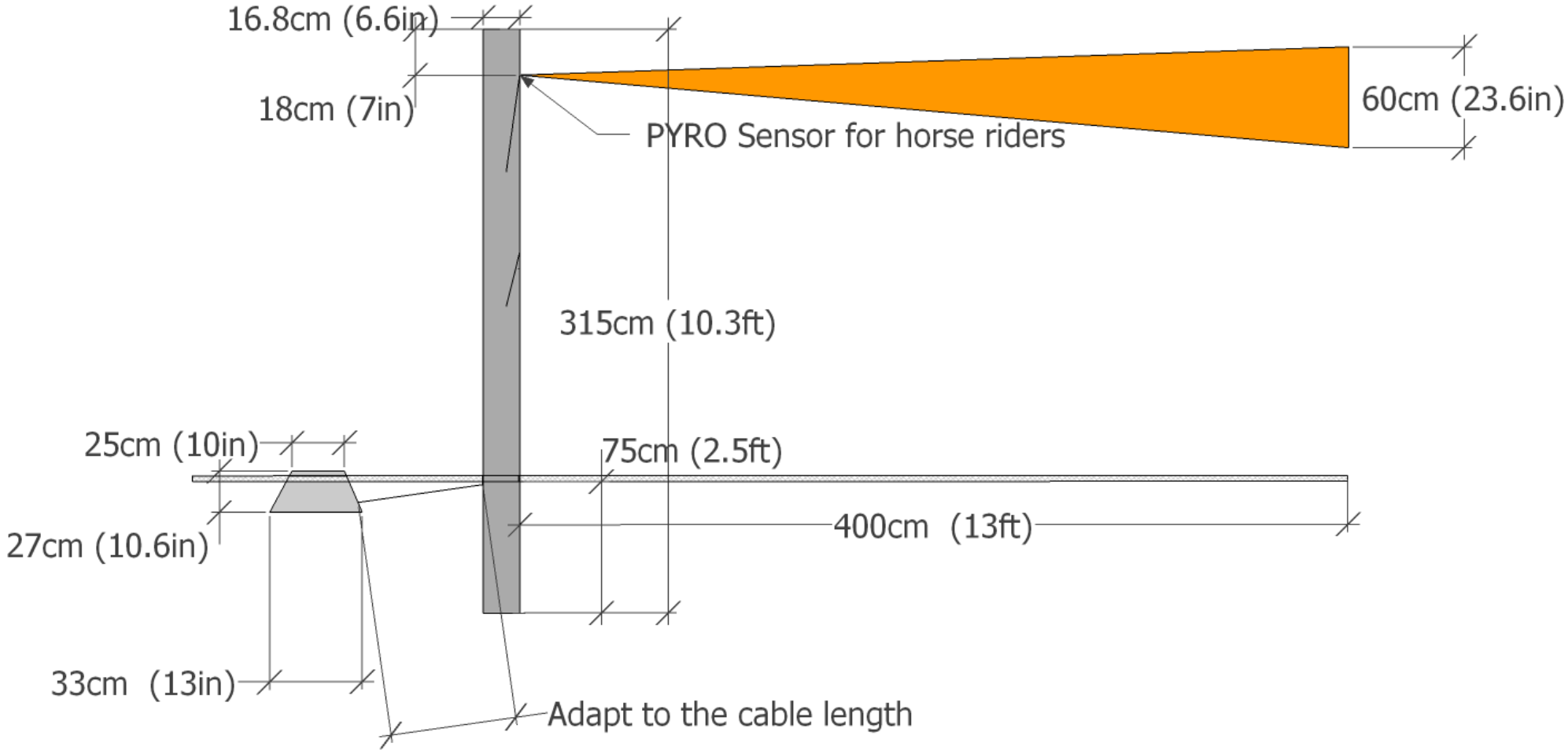
Medium-Range Pyro Sensor
Last modified 20/05/2014
Units of measurement: cm

03. EQUESTRIAN POST

Overhead View



Side View



Medium-Range PYRO sensor
Last modified: 20/05/2014
Units of measurement: cm

II. PYRO SENSOR WITHOUT A SUPPORT

A. BIDIRECTIONAL PYRO SENSOR

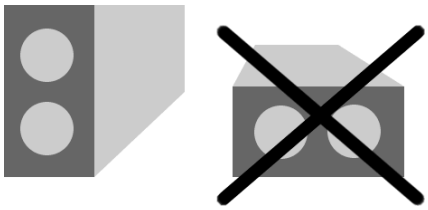
18 mm (0.7in) x 40 mm (1.6in) x 90 mm (3.5in)

The bidirectional PYRO Sensor is capable of being installed in any type of support as long as the support does not generate heat and that the PYRO is able to be installed according to the installation manual.

The following section gives installation instructions for the different support types; notably on the types of material that can be used. The required tools can vary depending on the type of installation. Adapt the required materials in conjunction with the requirements for your type of installation.

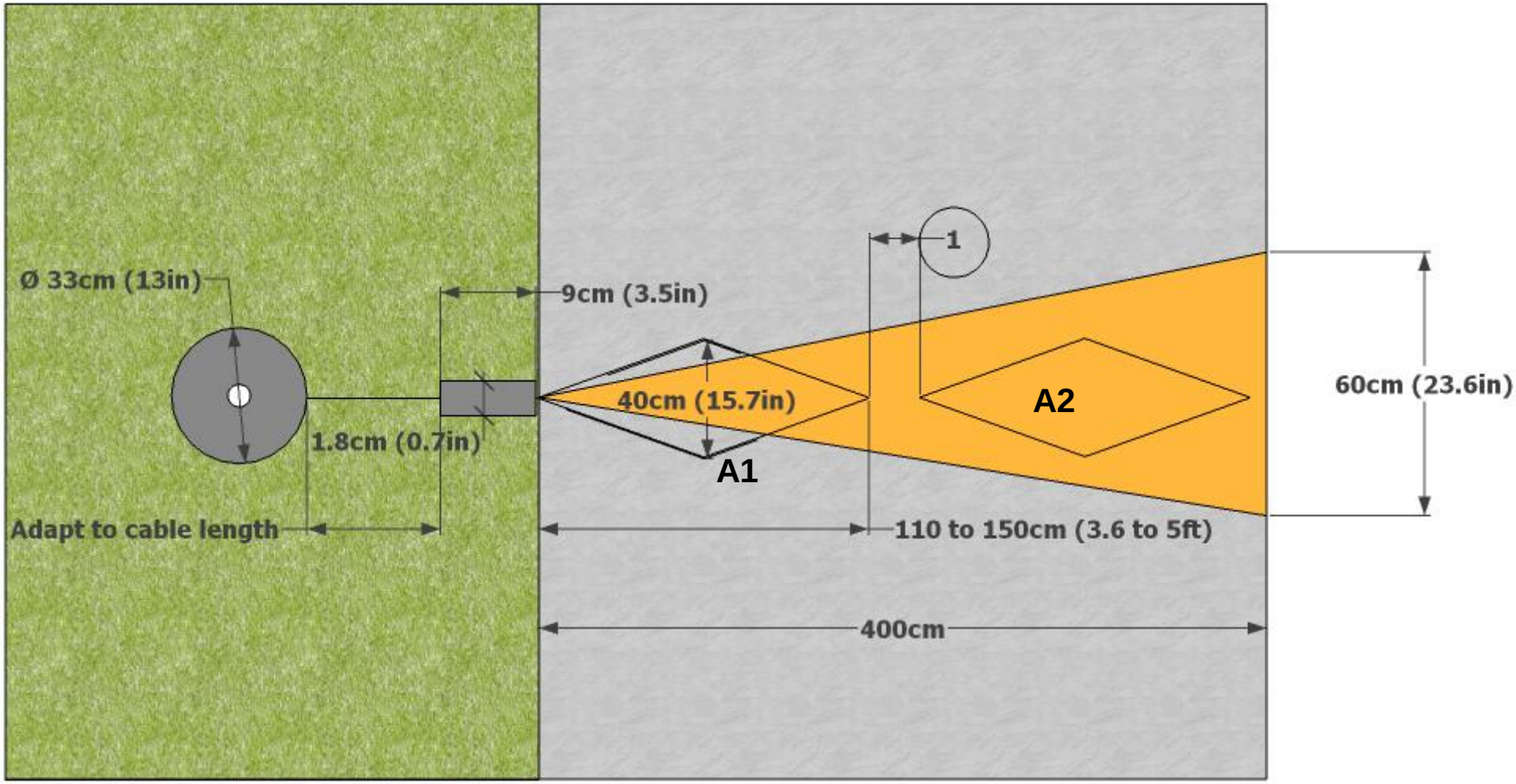
a. INSTALLATION DIAGRAMS

The PYRO Sensor must absolutely be positioned vertically.

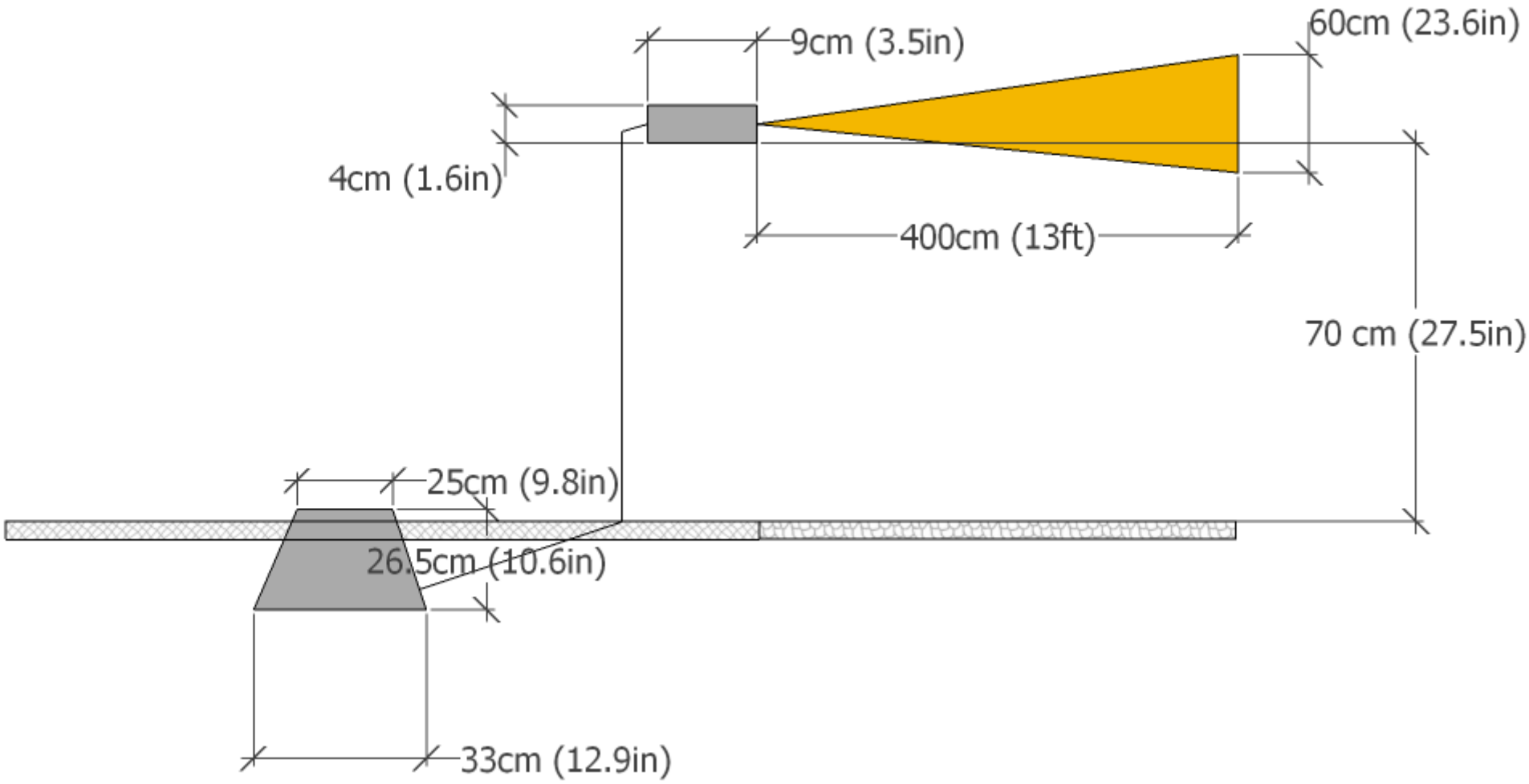


The sticker located on the top of the PYRO Sensor indicates the direction of passage (IN or OUT). To inverse the directionality, simply rotate the PYRO Sensor.

Overhead View



Side View



Medium-range PYRO Sensor
Last Modified: 20/05/2014
Units of measurement: cm

b. INSTALLATION WITHOUT A RECESS

OVERVIEW

- Install the sensor vertically on the support.
- Conceal the wire of the PYRO sensor.
- Camouflage the PYRO sensor.

Dimensions of the sensor = 18 mm (0.7in) x 40 mm (1.6in) x 90 mm (3.5in)

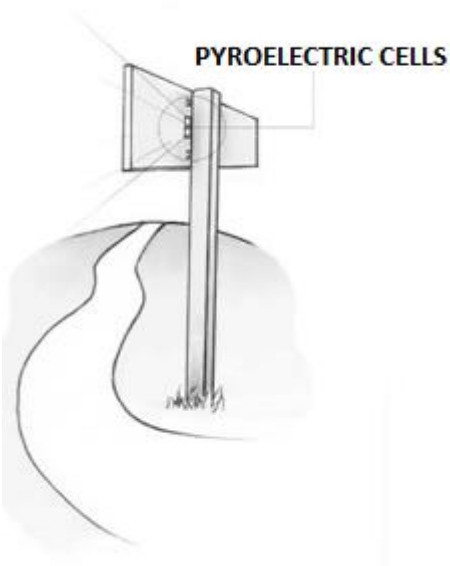
REQUIRED MATERIALS

- To secure the PYRO sensor: two 3.5 x 30 screws and a drill
- To protect the sensor: wooden planks or other appropriate materials.
- To camouflage the wire between the Eco-Combo logger and the PYRO sensor: A recess or other appropriate items.

PROCEDURE

1. Attach the PYRO Sensor to a post using the two fixation screws.
2. Camouflage the PYRO Sensor with an information sign or a wooden plank, making sure not to cover the cells of the PYRO Sensor.
3. Conceal the wire of the PYRO sensor.

Fixation Holes



c. INSTALLATION WITH A RECESS

OVERVIEW

- Cut out a rectangular hole into the wooden post to vertically lodge the PYRO sensor.

The PYRO sensor must be securely lodged into the hole. Do not make the hole too large.

Dimensions of the PYRO sensor = 18mm x 40mm x 90mm (0.7in x 1.6in x 3.5in)

- Conceal the wire of the PYRO sensor.

- Camouflage the PYRO sensor.

REQUIRED MATERIALS

- To make the cut-out: a drill
- To form a trench for the wire of the PYRO Sensor: chisel and hammer
- To install the post into the ground: shovel and pickaxe.
- If it is necessary to embed the post: a trowel, cement and corrugated sheet to protect the wires.
- If you wish to install the post without embedding it: a transversal rod to ensure stability.
- To camouflage the wire of the PYRO sensor: a chisel and plastic wood.

Cut out the embossments between the 3 aligned holes to form the cut-out

.

PART 3- CONNECTIONS

1) Connect the wires according to the instructions in **Appendix B – Connections** (see page 44).

If you have a wooden post and wish to cement it into the ground, insert all of the cables into the corrugated sheath so that the contents can be removed if necessary.

2) Wake up the Eco-Combo logger by passing the magnetic key over the activation zone.
The logger will flash red once and then flash blue every 2 seconds. It will then be awake for 10 minutes.

3) Test the PYRO sensor

If you do not have a Netbook with the Eco-Link software:	If you have a Netbook with the Eco-Link software
▪ Pass in front of the sensor several times and verify that the activation zone flashes green each time. ▪ If you have a bidirectional system, pass in front of the sensor several times in both directions. The green flash indicating IN is longer than that for OUT.	▪ Pass in front of the sensor and verify that the sensor is accurately counting the passages on the Netbook. Refer to the software guide if necessary. ▪ If you have a bidirectional system, pass in front of the system several times in both directions and ensure that the direction of passage is being recorded correctly. The direction of passage is indicated on the PYRO sensor.

4) Test the inductive loops by passing straight over them with a bicycle.

If you don't have a Netbook with the Eco-Link software installed:	If you have a Netbook with the Eco-Link software installed
▪ Verify that the Eco-Combo flashes green at each passage. ▪ If you have a bidirectional system, the green flash indicating IN is longer than that for OUT.	Verify directly on Eco-Link that the passages are being properly detected.

PART 4- COMPLETING THE INSTALLATION

1) If the functionality tests are successful, clip the RayGel junction boxes over the Ethernet Connectors to ensure perfect protection against water.

2) If the ZELT inductive loops are implanted into asphalt, refill the cut-outs.

Attention: the wires for the inductive loops cannot be filled in with asphalt or cement hotter than 60°C (140°F). Do not use a material that surpasses that temperature to fill in the cut-outs.

3) Finalize the installation of the post and/or manhole.

- **If you have a PYRO sensor integrated into the support of your choice:**

- Conceal the wire of the PYRO sensor and connect the system.

- Seal the cover of the manhole and bury the sensor's wire as well as the manhole. The cover of the manhole must be level with the ground.

- Conceal the cover of the manhole with grass or another appropriate material.

- **If you are using a Combo Post:**

- - Option 1-

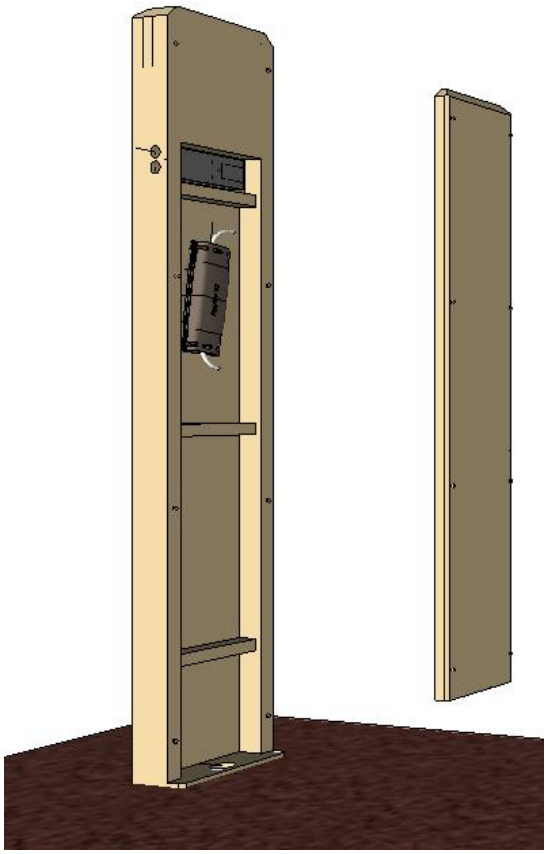
Temporary Installation

If you wish to temporarily install the post, bury the post up to the bottom of the side door while making sure that there is sufficient space for it to be opened.

- Option 2-

Permanent Installation

For a permanent installation, cement the post up to the side door while making sure that there is sufficient space for it to be opened.



- Take a photo of your installation to illustrate your counting point in Eco-Visio.

- **If you are using a PYRO Post or an Equestrian Post:**

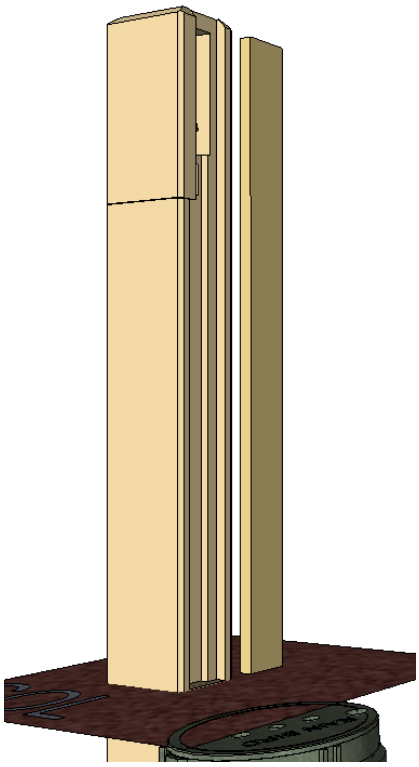
Option 1- Temporary Installation

If you wish to temporarily install the post, bury the post until the bottom of the back door while making sure that there is sufficient space for it to be opened.

Ensure that the sensor is pointed perpendicular to the axis of passage.

Option 2 – Permanent Installation

For a permanent installation, cement the post up to the back door while making sure that there is sufficient space for it to be opened.



Rear View

Seal the cover of the manhole and bury the sensor's wire as well as the manhole. The cover of the manhole must be level with the ground.

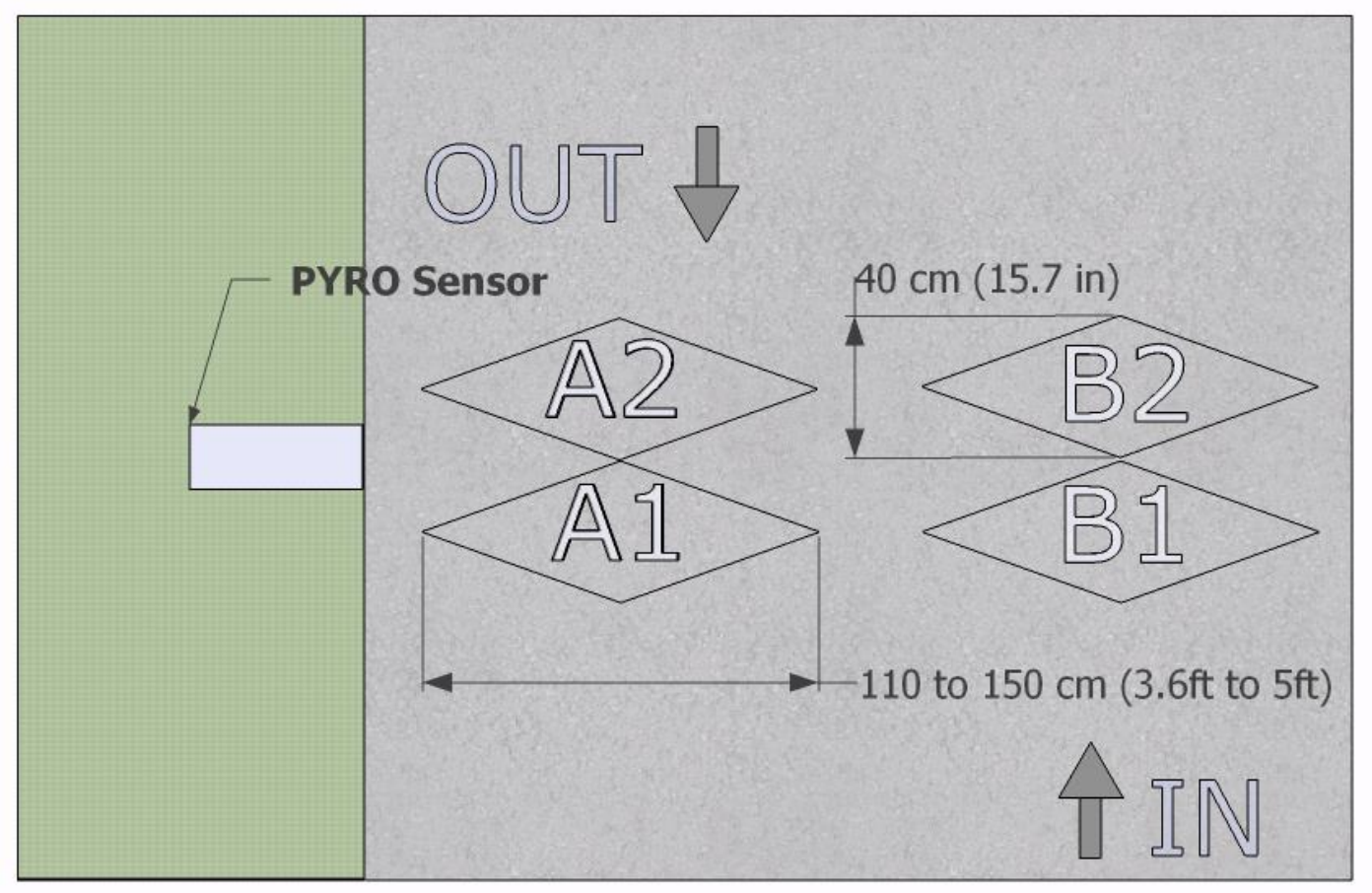
Conceal the cover of the manhole with grass or another appropriate material.

APPENDIX A – DIRECTION GIVEN BY THE LOOPS

01. MULTI SYSTEMS WITH DIRECTION GIVEN BY THE LOOPS

Attention! Follow the preceding layout patterns only if you have specifically ordered a MULTI System with direction recognition through the ZELT Inductive Loops!

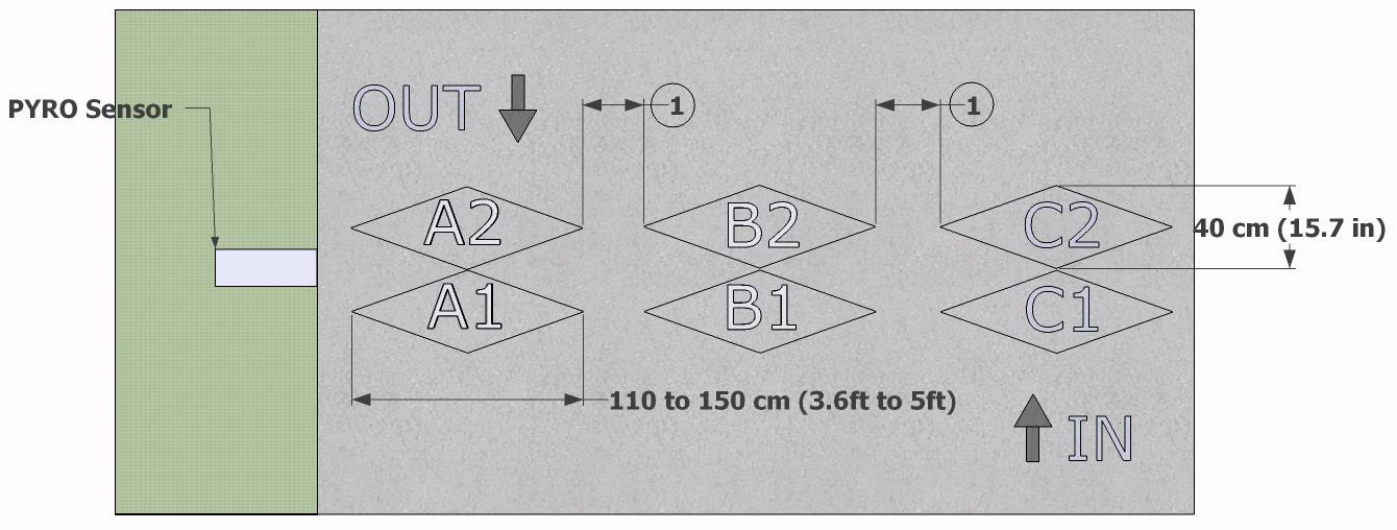
4 LOOPS



The spacing indicated by the 1 between the two loops will vary depending on the length of the loops themselves.

Apply the corresponding spacing to the length of the loops:

Loop length	Distance	Loop length	Distance
1.50 m	8 cm	5 ft	3.1 in
1.40 m	10 cm	4.6 ft	3.9 in
1.30 m	12 cm	4.2 ft	4.7 in
1.20 m	14 cm	3.9 ft	5.5 in
1.10 m	16 cm	3.6 ft	6.2 in
Less than 1.10 m (3.6 ft)	Contact Eco-Counter to evaluate the feasibility		



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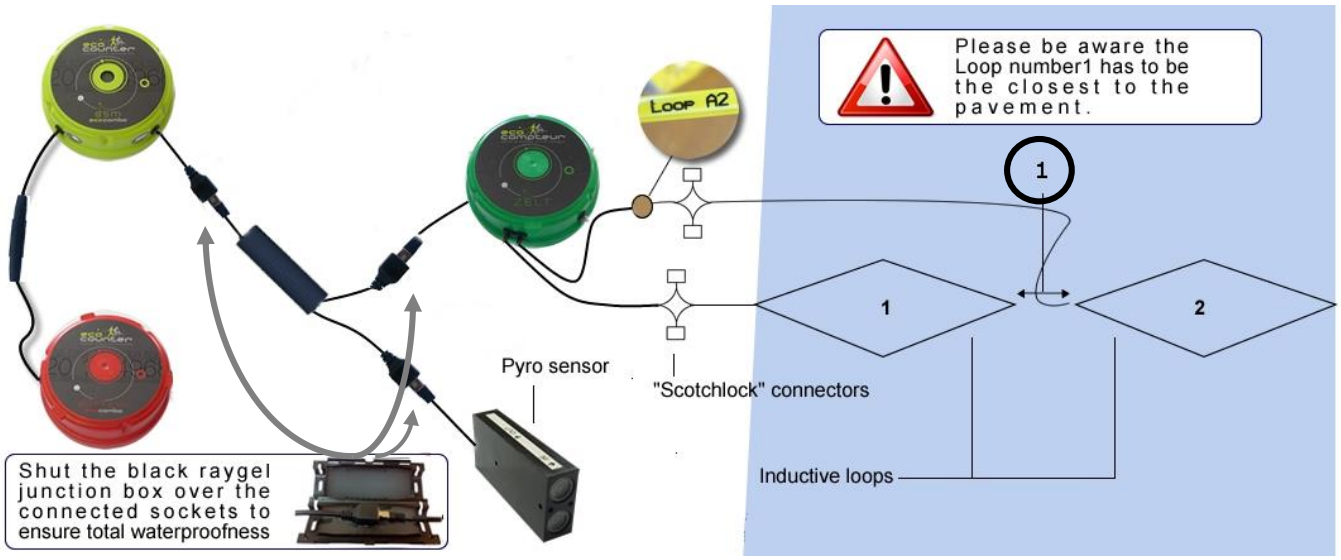
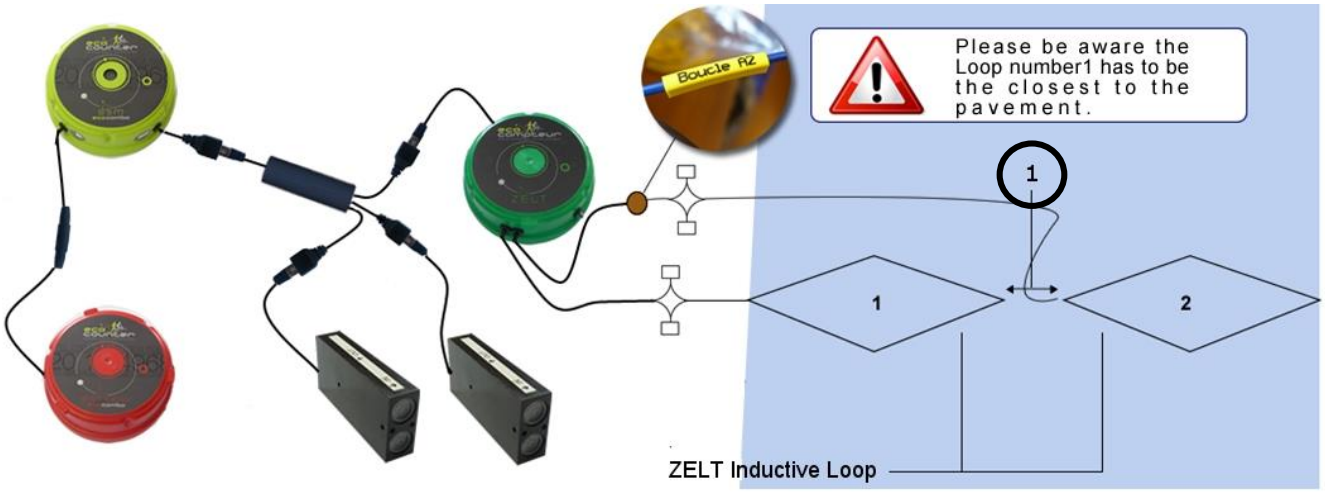
1.10 m	16 cm	3.6 ft	6.2 in
Less than 1.10 m (3.6 ft)	Contact Eco-Counter to evaluate the feasibility		

I. PEDESTRIAN AND BICYCLE SYSTEMS



II. PEDESTRIAN, BICYCLE AND EQUESTRIAN SYSTEMS



III. MANHOLE

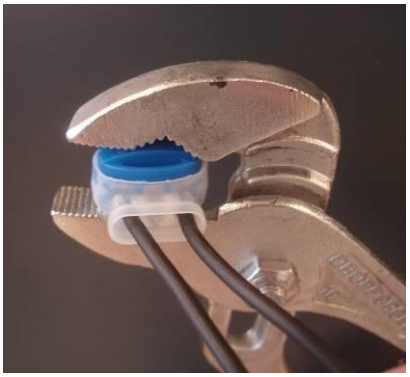
If you are using a manhole, we suggest that you place the battery on the bottom in order for it to be replaced more easily.

IV. SCOTCHLOCK CONNECTORS

- Make sure that you connect the proper wire to the correct Scotchlock connector.
- Install the Scotchlock connectors by proceeding as follows:

1) Insert the two wires into the two external holes of the Scotchlock connector.

2) Insert the wires as far as possible - do not strip them.

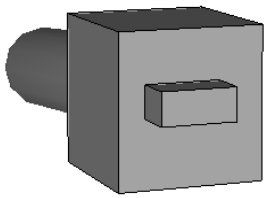


3) Close the connector by using a pair of pliers to release the gel and establish a connection.

V. ETHERNET CONNECTORS

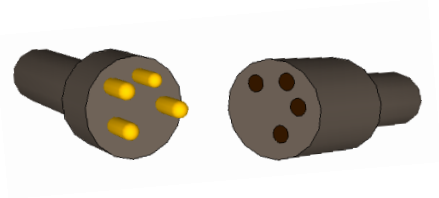
- As indicated in the diagrams, clip the Raygel junction box on the connected Ethernet connectors to ensure complete protection against water.
  This operation must be the last step after installing the system.

- Earth or soil on the Ethernet connector will cause connection problems. Make sure that the Ethernet connector never comes into contact with earth or soil.
  If you must leave one Ethernet disconnected, be sure to protect it with the provided cap.



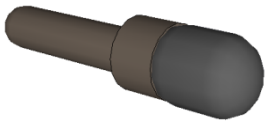
VI. FOUR PIN CONNECTORS

- Do not force the connection. Make sure that the male notch is facing the female notch on the opposite connector.



- These connectors do not need to be protected with the waterproof Raygel junction box.

- If you must leave a four pin connector disconnected ensure that it is protected with its supplied cap.



CUSTOMER SERVICE

HARDWARE

The entire system is guaranteed for 2 years from the date printed on the warranty certificate (the warranty certificate is delivered with your product).
In the rare case that there is a problem with a part of your system, the product must be returned with an indication of the serial number of the logger (the serial number is indicated on the warranty certificate delivered with your system).
Please contact the customer service prior to any return of equipment.
The warranty cannot be implemented in the case of mishandling, incorrect installation (by someone other than Eco-Counter), or any other reason listed in the warranty certificate.
If the product can be repaired, a quote will be submitted to the customer prior to repair.
The damaged product as a result of mishandling or improper use will be either replaced or repaired according to the sales parts price list used at the time of the request.

SOFTWARE

Problems related to the use of the software can be dealt with remotely.
Please do not hesitate to contact the Customer Service for assistance:

Europe / World	**North America**
Tel: +33 (0)2.96.48.48.83	Toll Free: 1-866-518-4404
Fax: +33 (0)2.96.48.69.60	Phone: 1-514-849-9779
Email: support@eco-counter.com	Email: help@eco-counter.com

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Europe/World
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Tel: +33 2 96 48 48 81 | Fax: +33 2 96 48 69 60

North America
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Toll Free: 1-866-518-4404 | Direct: 1-514-849-9779

eco-counter@eco-counter.com | www.eco-counter.com

INSTALLATION GUIDE

URBAN POST MULTI

PEDESTRIANS/CYCLISTS COUNTER

V2

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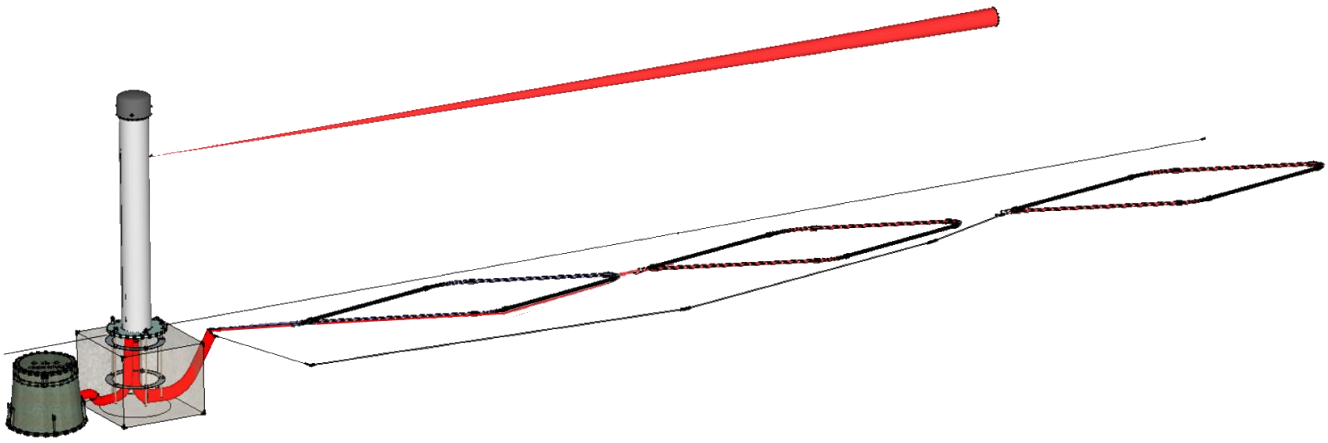
INTRODUCTION

Your *Urban Post MULTI Pedestrians/Cyclists* counter differentiates between pedestrians and cyclists logging each of them separately.

Example of a three-loop counter:



WARNINGS

DANGER

Fire, explosion and burn hazard.

Do not short circuit, crush, disassemble, heat above 100 °C (212 °F) or incinerate the components of your Eco-Counter counting system.

WARNING

Risk of bodily harm!

- **Secure the work site**
- **Wear appropriate personal protective equipment**

NOTICE

Your Eco-Counter counting system is a measuring system: Always handle it with care.

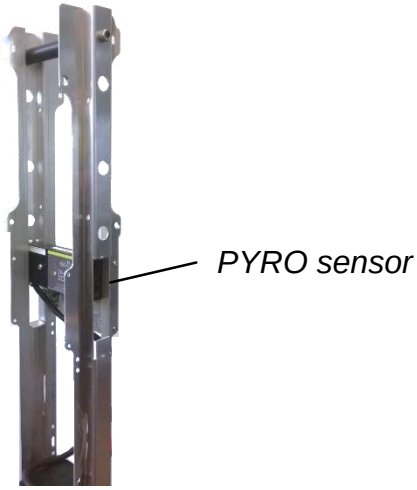
DELIVERED EQUIPMENT

COUNTING SYSTEM

COUNTERS ON WHICH THE COUNTING SYSTEM IS HOUSED IN A MANHOLE

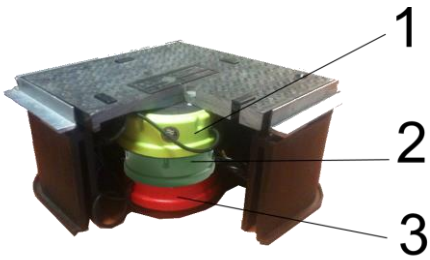
Urban Post

Inner Structure



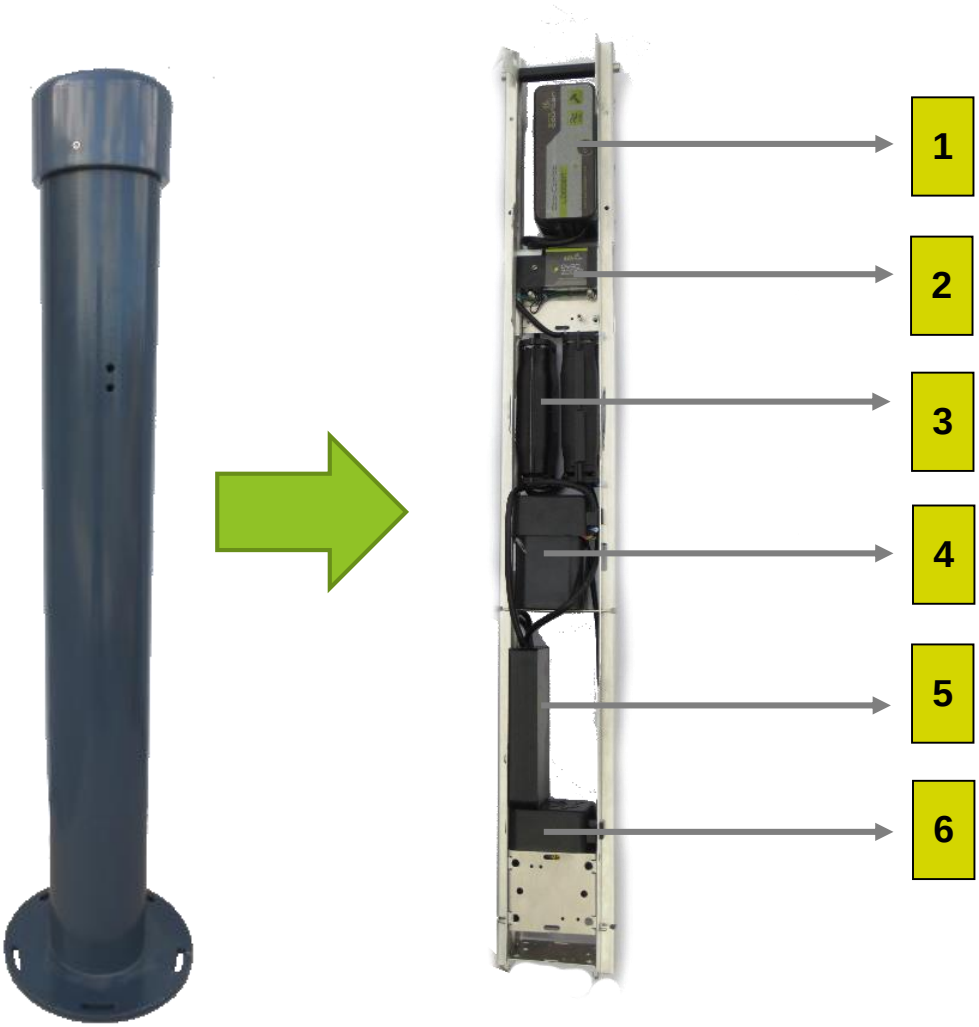
Manhole

Rainbird



B125

1	Eco-Combo Logger	2	ZELT Sensor	3	Battery	Smart Connect



1	Eco-Combo Logger	2	PYRO sensor
3	RayGel protection box	4	Battery for the modem *Only with counters equipped with an active automatic data transmission option*
5	ZELT Sensor	6	Sensor battery

ANCHOR BASE & FIXING HARDWARE

Anchor Base

Cap nuts

M8 washers

M8 nuts

ADDITIONAL HARDWARE

Torx wrench for the secured screws

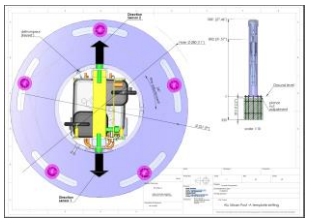
Secured screws M4*20

Scotchlock Connectors

Wire to form the ZELT Loops

Yellow reference tags

Template



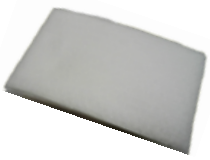
Geotextile fabric

Magnetic key

If the counting system is housed in a manhole, you have also received:

B125 manhole

Geotextile fabric



Screwdriver and anti-vandalism screws

RayGel protection boxes

OR

Rainbird manhole

Geotextile fabric and an elastic to attach it to the underside of the manhole

Socket spanner and anti-vandalism screw to secure the cover of the manhole

RayGel protection boxes

To trace the saw cuts

Straight edge, tape measure and chalk (or felt-tip marker).

To cut the saw cuts into the asphalt

Thermal saw with a blower and diamond disk capable of cutting out a gutter measuring 10 mm (1/2'') wide and 50 mm (2'') deep.

To dig a hole for the anchor base and the manhole

Shovel, pickaxe.

To install the ZELT loops

If you would like to use your own wire to form the ZELT loops, use a stranded wire Ø 0.5 to 1.5 mm (1/4'').

To form the ZELT Loops: Drill, pliers and a short ruler (to push in the loops).

Optional: Multimeter to verify the inductance of the ZELT Loops.

To fill in the saw cuts

Asphalt or other filler regularly used for roadwork with a temperature that does not exceed 60° C (140° F), a sponge, water and a trowel.

We recommend using micro-cement for sealing the road work (example: sika fastfix-138tp, 714 scellflash micro-beton (micro-cement)).

To fix the Urban Post

To fix the anchor base: Spirit level, equipment necessary for making concrete.

To bolt down the Urban Post: M8 spanner

To protect the cables for the PYRO sensor and the ZELT Loops: Conduit Ø 25 mm (1''), utility knife.

To test the counter

Bicycle and Eco-Link software.

If you don't have the Eco-Link software, refer to the list of compatible devices on page 41.

If you don't have the Eco-Link software, ensure that there are two people present in order to correctly test the counter.

To check the Gprs coverage

Mobile device with internet connection or Eco-Link software.

To add a photo to the counter location in Eco-Visio (optional)

Camera.

Follow the instructions below to choose the appropriate installation site for your Eco-Counter.

DO NOT

- Do not point the PYRO sensor towards:
  - A path where motor vehicles pass.
  - A surface that is directly exposed to sunlight.
  - Vegetation or objects that are likely to move (bushes, branches etc).
  - A metallic or reflective surface (i.e. metal, glass).
  - A door.
  - A radiator.
- Do not install the PYRO sensor:
  - Behind a window.
  - At a spot where pedestrians or cyclists are likely to stop or linger (rest spots, information posters, steep surfaces, etc.).
  - At a location where other undesired subjects could be counted such as cars, undesired pedestrians or cyclists.
  - Near a heat source such as a rock or leaves that are exposed to the sun.
  - Near devices that can generate rapid fluctuations in temperature (vents, cars, etc.).
- Do not install the system:
  - In a location that is subject to electromagnetic fluctuations: other counting loops, buried or overhead high-tension electrical cables, buried telecommunication equipment.
  - On soil subject to erosion.

CHOSE A SITE THAT IS:

- A path reserved for pedestrians and bicycles.
- An area where movement is fluid.

- An area where the PYRO sensor can be installed on the border of the path.
- A location where the PYRO sensor can be pointed at a non-reflective surface (i.e. wood, brick, concrete).
- If using automatic data transmission, select a location with sufficient cellular network coverage.

  Refer to ***Appendix C – Checking the level of Gprs coverage***, page 42, to learn how to proceed.

Include the drying time for the concrete into the total installation time.

We recommend installing the counter in two stages:

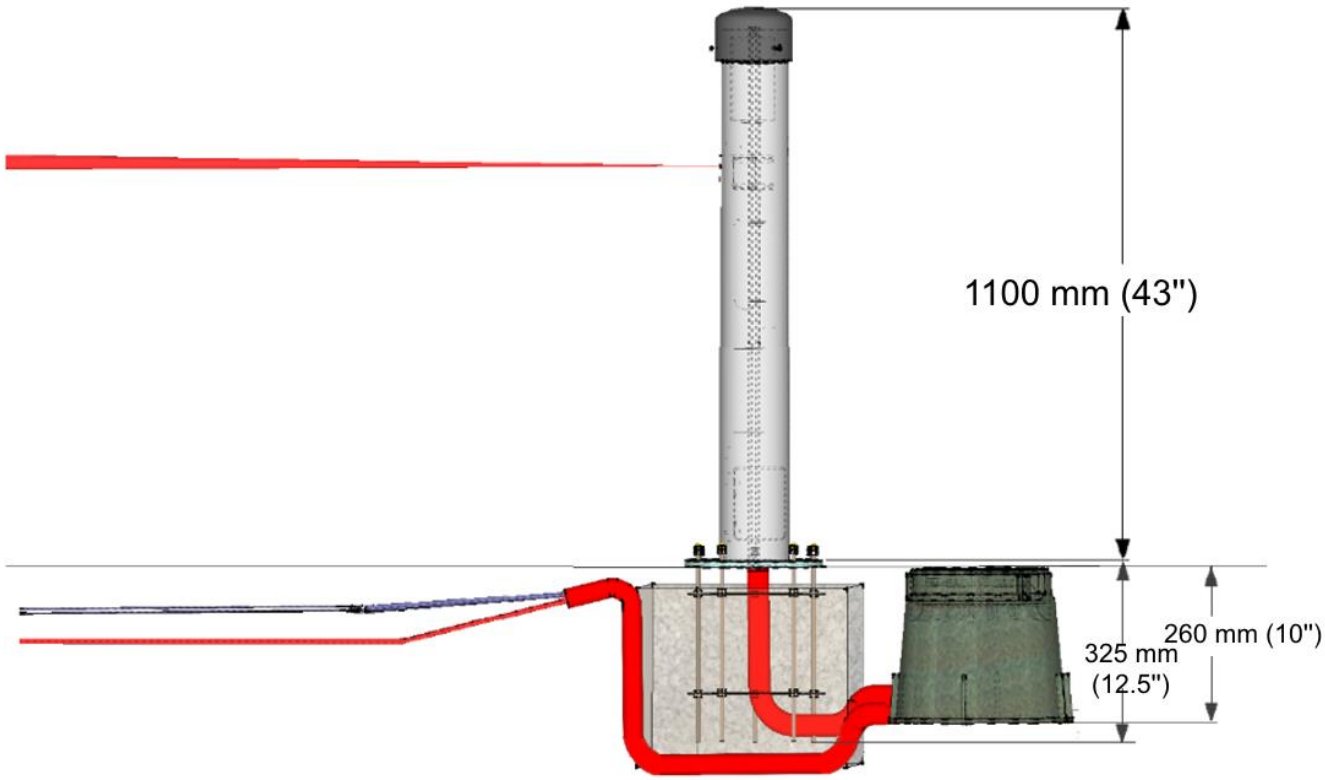
- Day 1: Install the anchor base, the ZELT Loops and the manhole.
- Day 2: Install the Urban Post.

LAYOUT DIAGRAMS

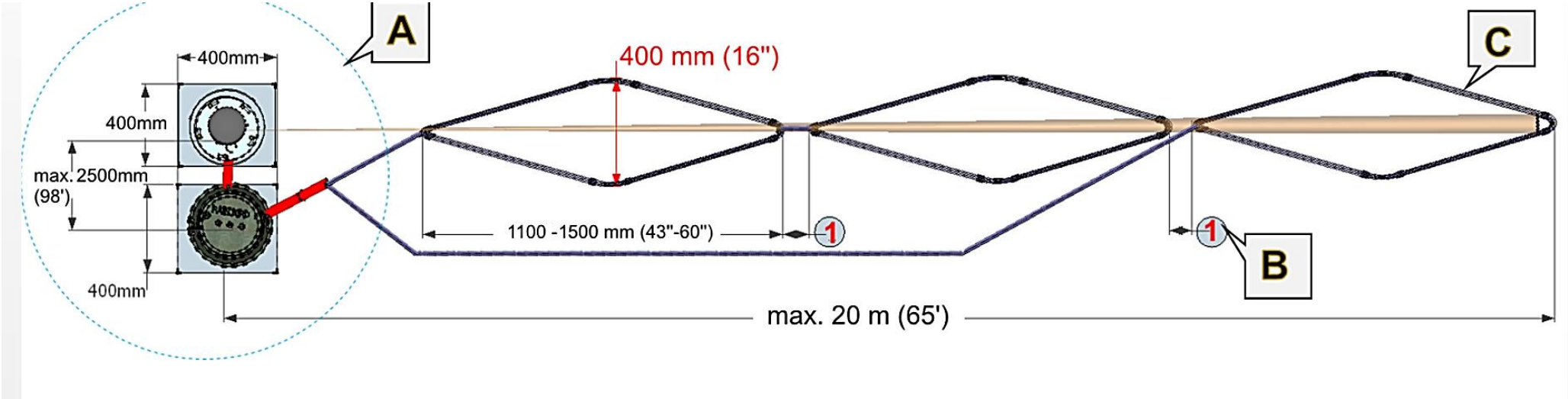
The layout diagrams below show a three-loop counter.

If you have a one- or two-loop counter, your counter doesn't include a manhole.

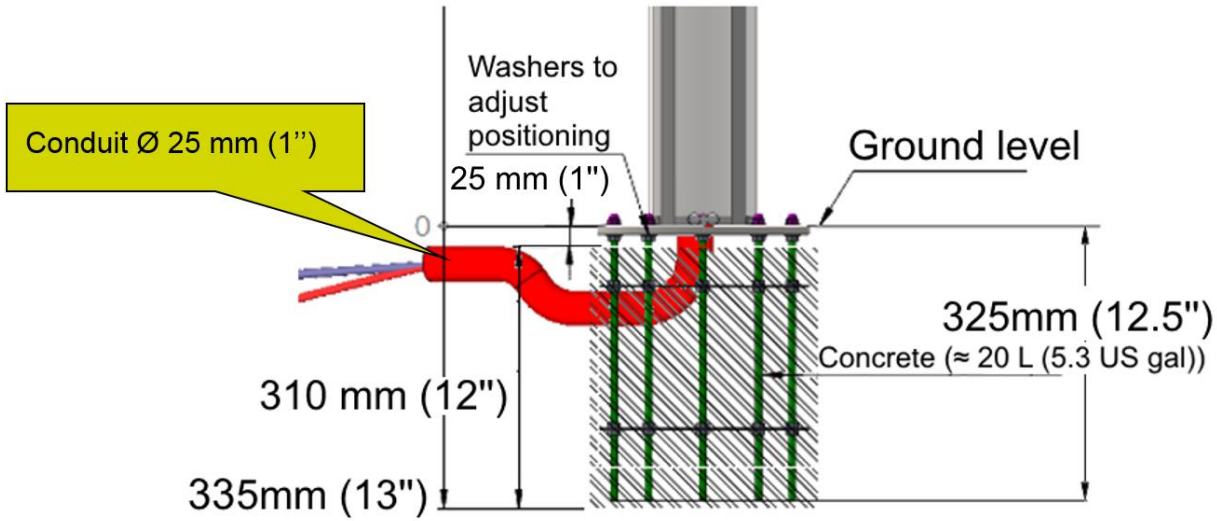
SIDE VIEW



TOP VIEW

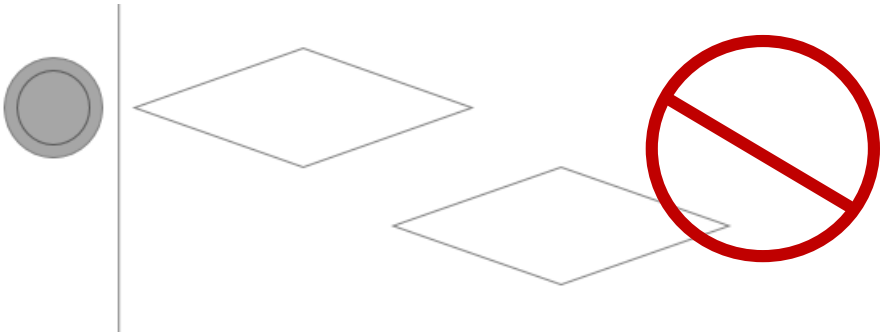


A/ ANCHOR BASE

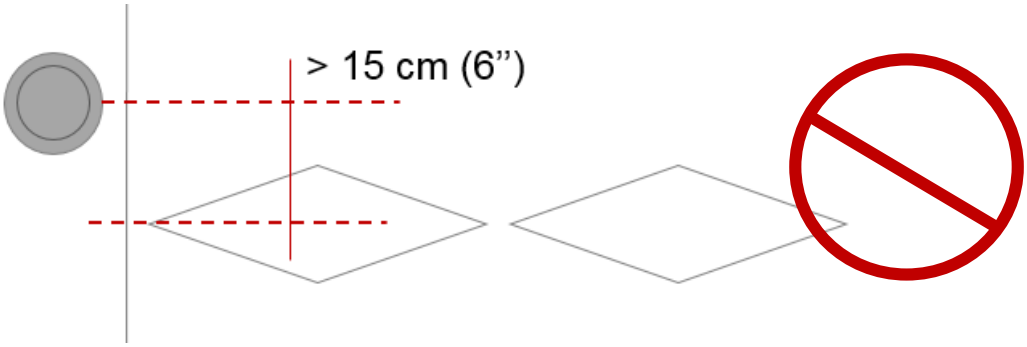


DON'T:

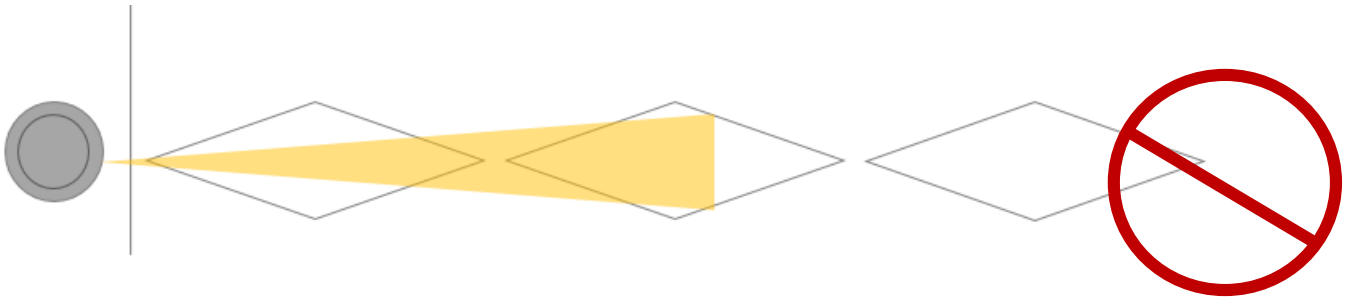
- **ZELT Loops improperly aligned**



- **Urban Post with a gap of more than 15cm (6'') on the right or left**

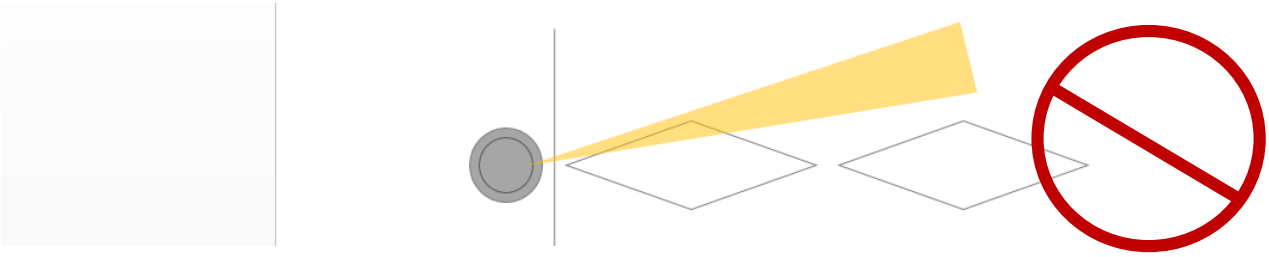


- **Counters on which the direction is given by the PYRO sensor: PYRO sensor that doesn't cover each ZELT loop**

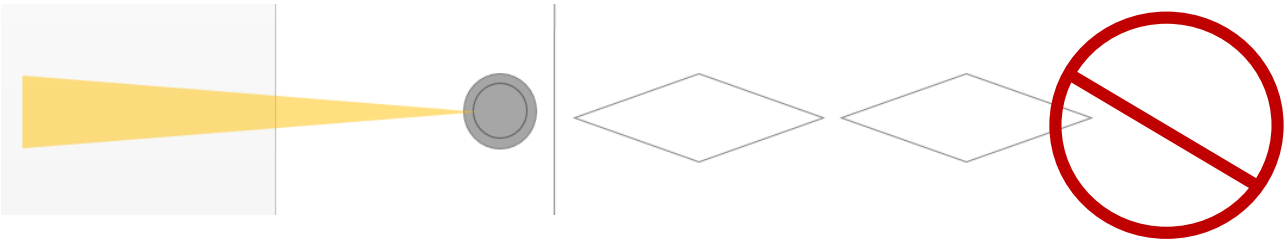


Look at the sticker on the PYRO sensor to know its range.

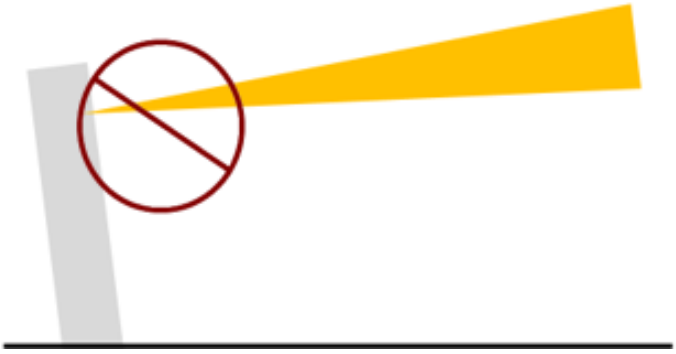
- **PYRO sensor that is not perpendicular to the flow of traffic**



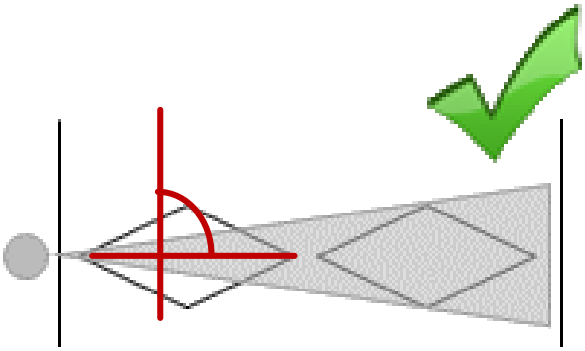
- **PYRO sensor that does not face the path**

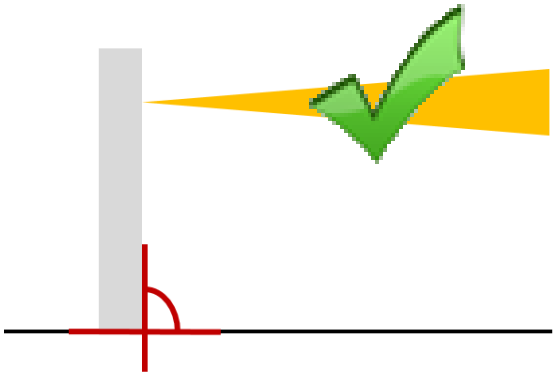


- **Urban Post that is not perpendicular to the ground**

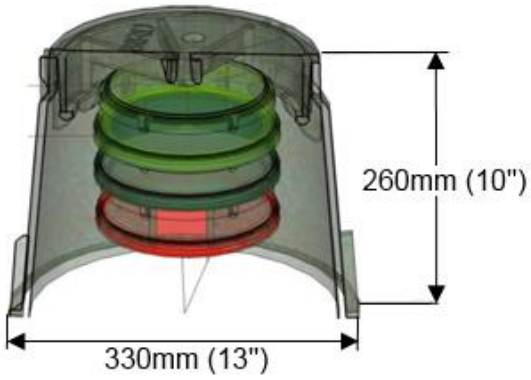


Proper Positioning

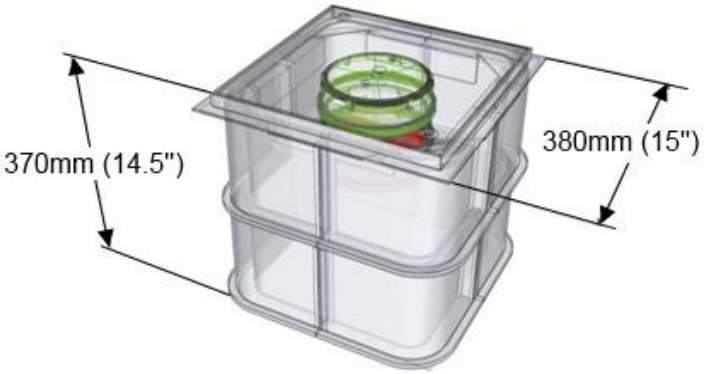




A/ MANHOLE DIMENSIONS



Rainbird

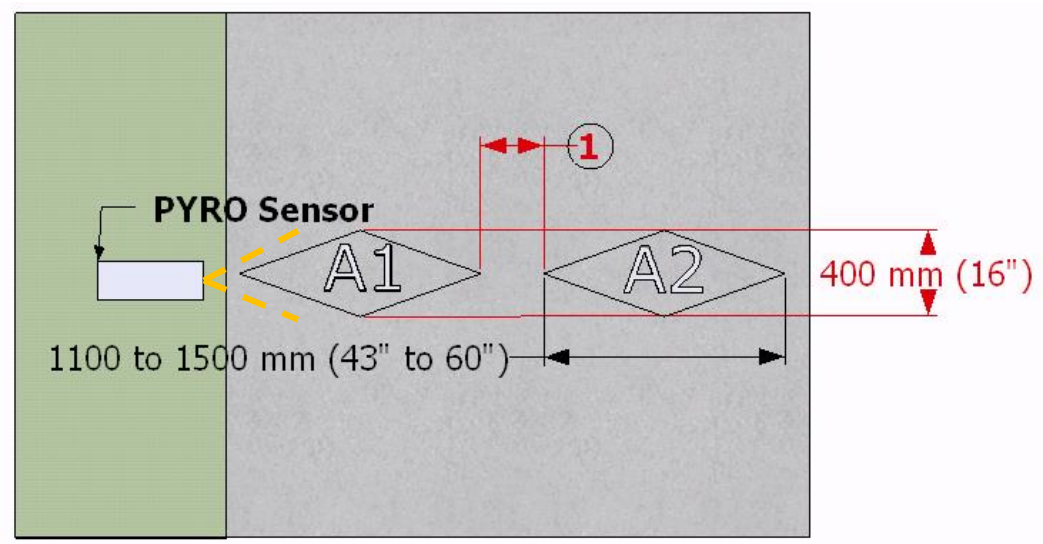


B125

B/ SPACING BETWEEN THE ZELT LOOPS AND DIMENSIONS

SPACING

Respect the spacing indicated by the (1) between the two ZELT loops.

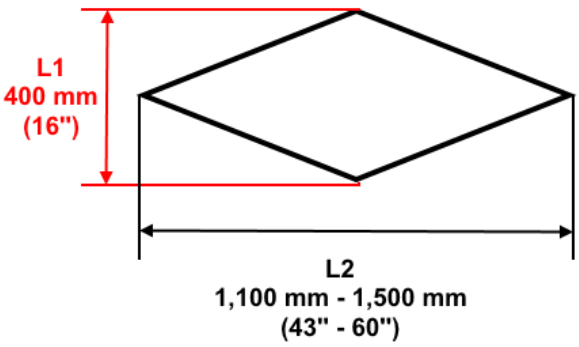


The spacing will vary depending on the length of the ZELT Loops themselves:

Loop Length	Distance	Loop Length	Distance
Greater than 1500 mm (59'')	Contact Eco-Counter to evaluate the feasibility		
1500 mm	80 mm	59''	3.00''
1400 mm	100 mm	55''	4.00''
1300 mm	120 mm	51''	4.75''
1200 mm	140 mm	47''	5.50''
1100 mm	160 mm	43''	6.25''
Less than 1100 mm (43'')	Contact Eco-Counter to evaluate the feasibility		

The dimensions in red in the diagrams in ***appendix A – Layout***, page 36, are fixed dimensions which you must maintain.

You can adjust other dimensions +/- 20 mm (+/- ½’’) if needed.



- Make sure the width L1 of the diamond is **400 mm (16’’).**

- Adjust the length L2 between 1100 mm (43’’) and 1500 mm (60’’) depending on the width of the path.

  Contact Eco-Counter if there is a need for the ZELT loops to be a different size, to verify whether or not the desired dimensions are feasible.

- Make sure the diamond shape is perfect.

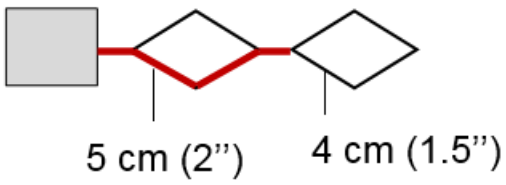
C/ DIMENSIONS OF THE TRENCHES

Width: 0.5 to 1 cm (1/4’’ to 1/2’’)

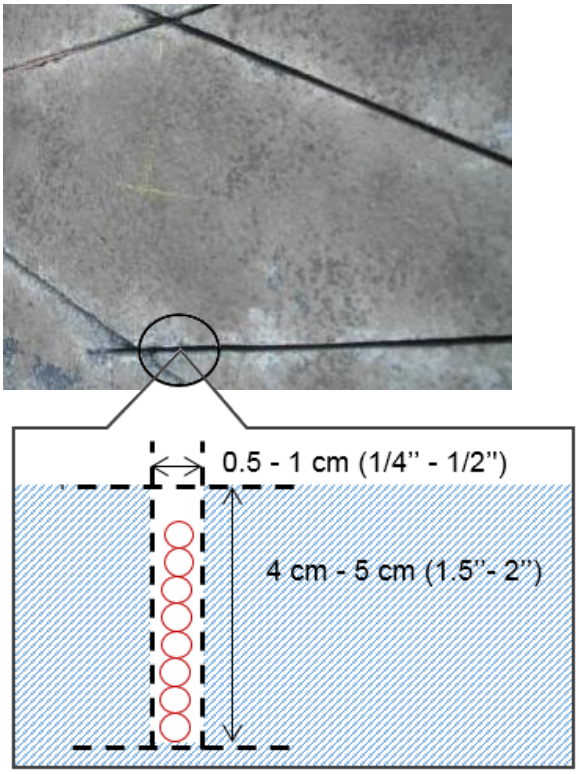
Depth:

- Counters on which the ZELT Loops are installed one above the other: 4 cm (1.5’’)

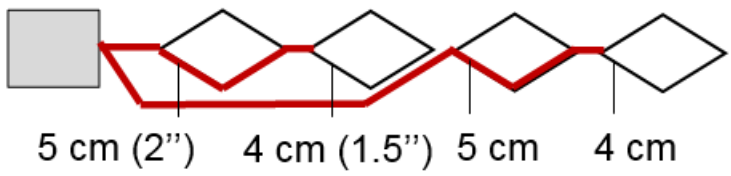
- Counters on which the loops are installed side by side:
  - The loop furthest from the Urban Post: 4 cm (1.5’’)
  - The loop closest to the Urban Post: 5 cm (2’’)

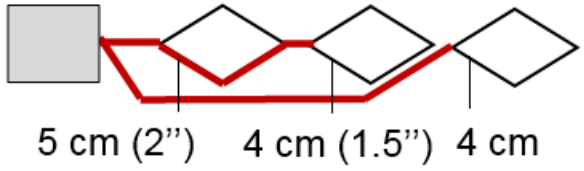


Place the end of the ZELT Loop furthest from the Urban Post through the cut-out in the ZELT Loop closest to it.



- For counters with 3 or 4 Loops installed side by side, we recommend cutting another trench for the end of the ZELT loops furthest from the Urban Post:





C/ POSITIONING OF THE ZELT LOOPS

The positioning of the ZELT loops depends on your type of counter.

Refer to ***Appendix A – Layout***, page 36, to know how to position your ZELT loops.

1- Trace the cut out for the ZELT Loops while making sure to respect the dimensions and positioning indicated in:

- Section ***Layout Diagrams***, page 12.
- ***Appendix A***, ***Layout***, page 36.

2- Cut into the asphalt according to the markings.

Width	0.5 to 1 cm (1/4'' to 1/2'')
Depth per set of ZELT Loops	- The loop furthest from the Urban Post: 4 cm (1.5'') - The loop closest to the Urban Post: 5 cm (2'')

3- Clear out gravel from the saw cuts using a blower.
Use the short ruler to remove any remaining pieces of gravel.

4- Form ZELT loops consisting of 8 turns.

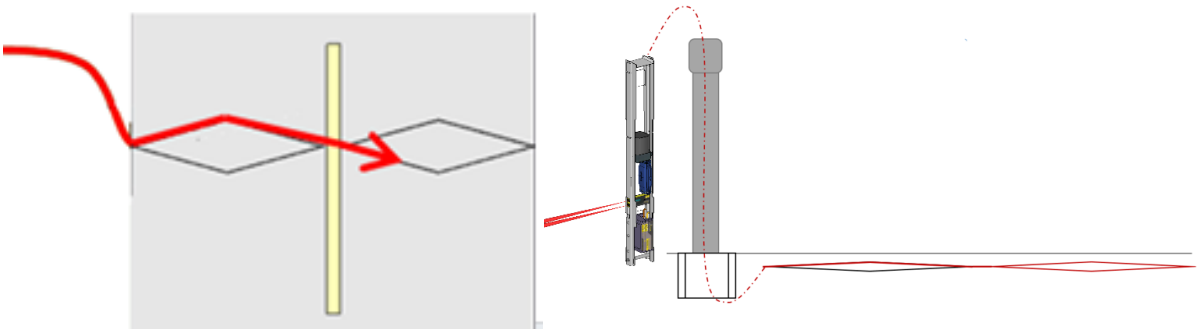
- If you have two pairs of loops (4 loops total), form loops A1 and A2 with the red conductive wire and loops B1 and B2 with the black conductive wire.

  Refer to **Appendix A**, page 36, for the positioning of loops A and B.

- Start with the loop furthest from the Urban Post:

a) Run the wire first through the trench of the first loop to access the furthest loop.

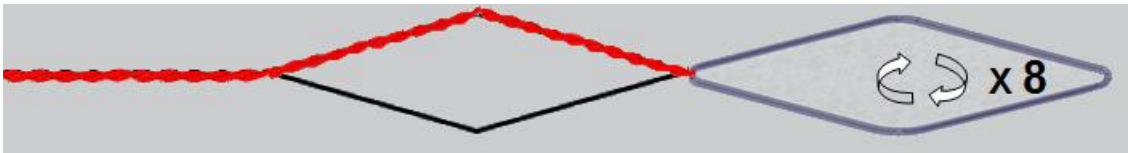
If you have a one- or two-loop counter, keep enough slack to be able to remove the inner structure from the Urban Post and return it after the connections are made.



b) Run the wire around the loop until it has gone full circle 8 times.

c) Push the wire into the saw cut with the small ruler.

d) Stretch out the end of the two wires (red portion in the diagram below) and twist them as indicated in the following instructions:



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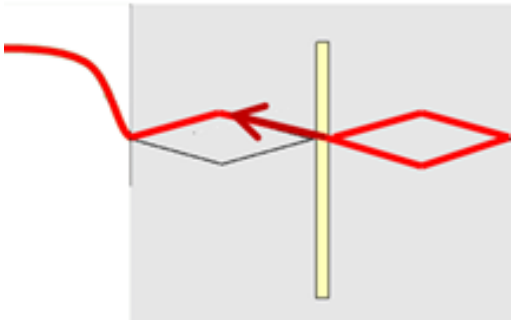
1. *Attach the two extremities of the wire to a drill or an electric screwdriver.*
2. *Stretch out the wires.*
3. *Twist the wires.*
4. *Keep the wires tought while rotating the drill at a slow pace in order to achieve optimal results.*
   There should be at least 30 twists per meter (per yard).

---

e) Run the twisted wires back towards the Urban Post or manhole guiding the twisted wires through the trench of the loop closest to the Urban Post.



5- Verify the inductance of the ZELT Loops. The level of inductance must be between 100 and 150 µH.

NOTICE **Follow the indications in the section *Layout Diagrams*, page 12, while installing the anchor base and the manhole.**

1- Counters with more than two ZELT Loops: Dig a hole for the manhole less than 250 cm (8') from the location intended for the anchor base.

- Rainbird manhole: Place the geotextile under the manhole and secure it with the supplied elastic band.
- B125 manhole: Place the geotextile at the bottom of the hole and place the manhole on top of it.

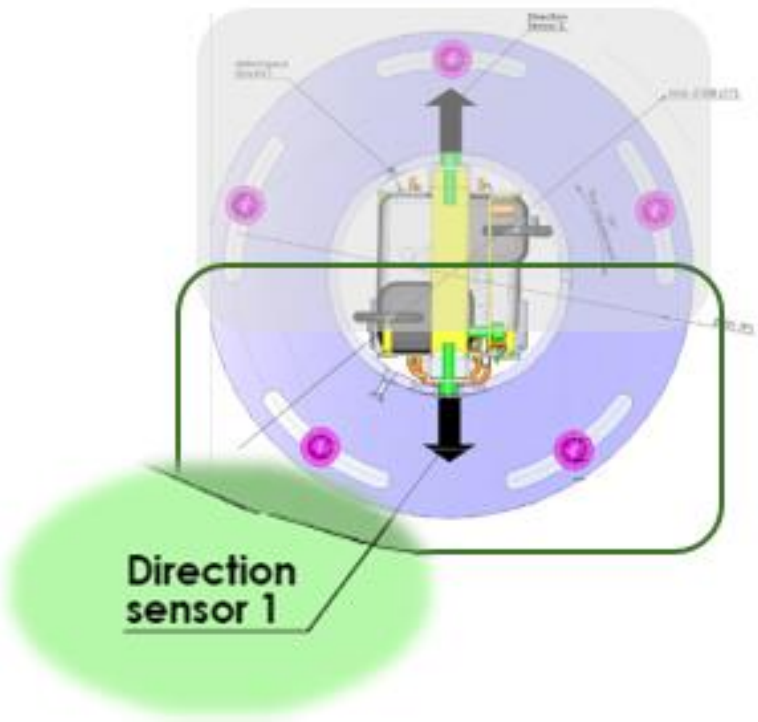
2- Dig a hole for the anchor base.

3- The positioning of the anchor base determines the positioning of the PYRO sensor.

Adjust the positioning of the anchor base by using the template supplied so that:

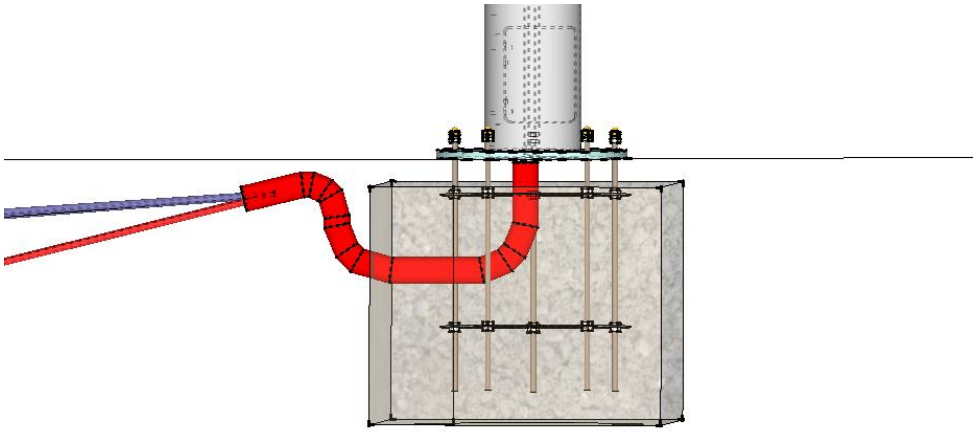
- The axis of the PYRO sensor is perpendicular to the path once the installation has been accomplished.
- The PYRO sensor is pointing at the right direction.

The template supplied has been designed by default for cases where the Urban Post includes two PYRO sensors. In your case, the reference PYRO sensor is "Sensor 1".

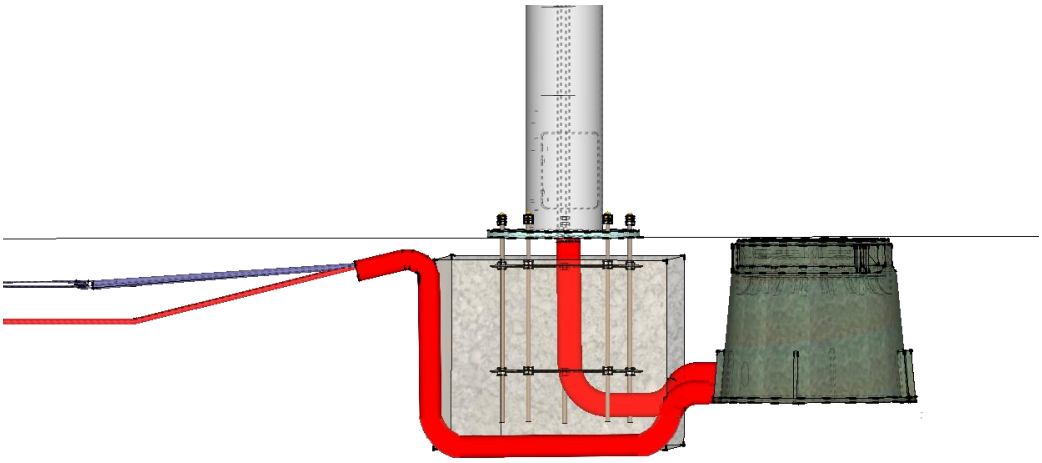


4- Place the conduit.

- Counters with one or two ZELT Loops:

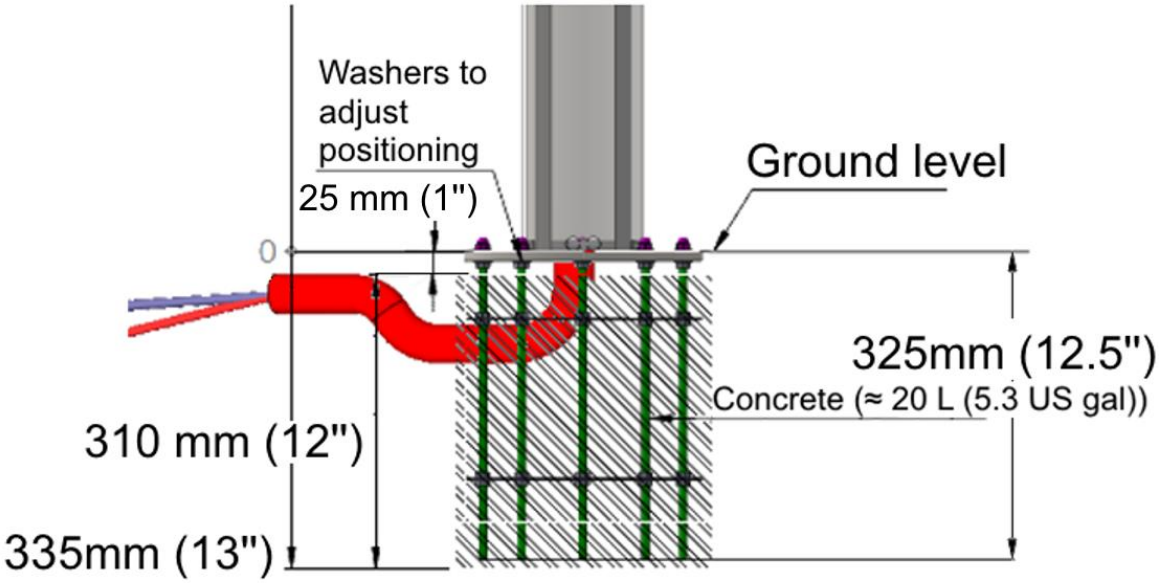


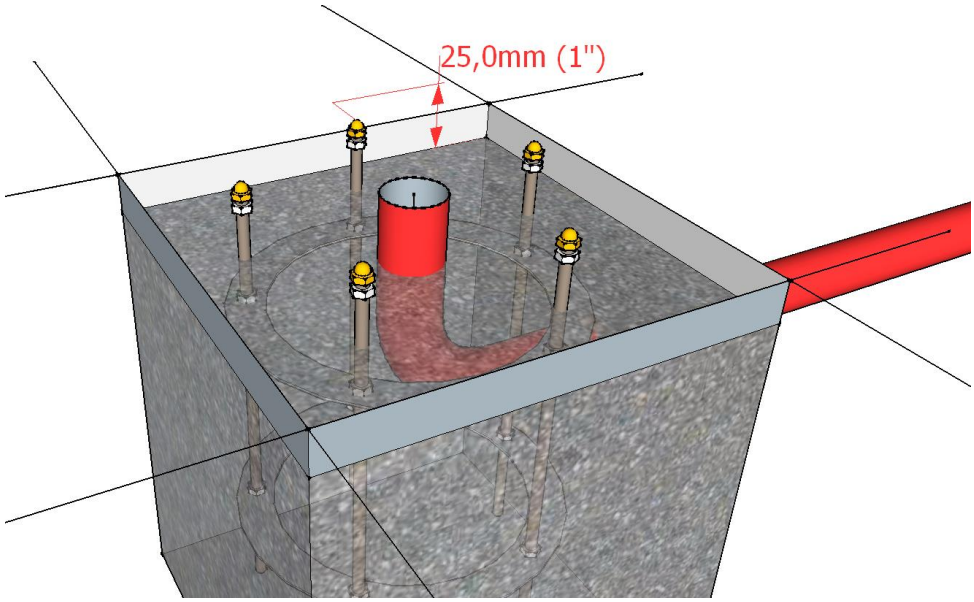
- Counters with more than two ZELT Loops:



5- Fill in the hole and the anchor base with concrete.

Ensure the rod tips of the anchor base protrude 2.5cm (1") above the concrete surface.

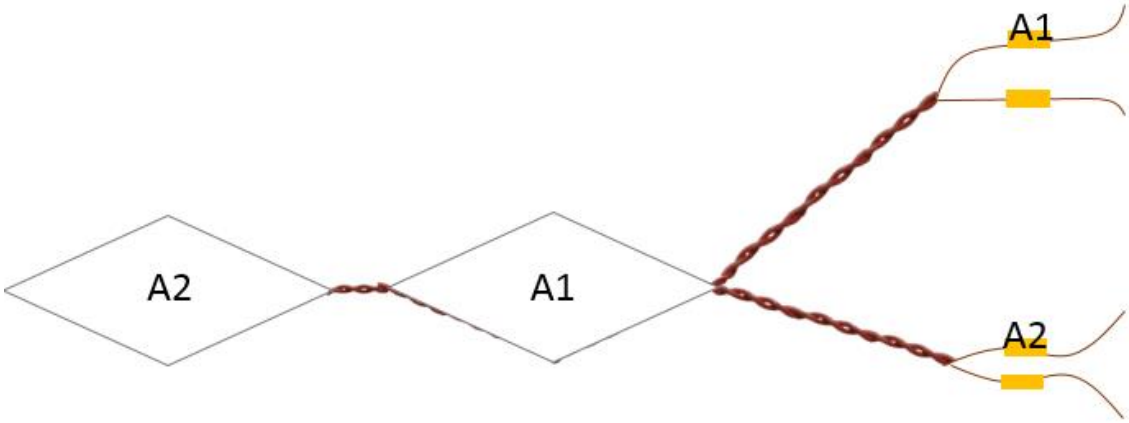




6- Let the concrete dry. Follow the instructions of your concrete for the drying time.

CONNECTING THE ZELT LOOPS TO THE ZELT SENSOR

1- Put a yellow reference tag at the end of the twisted end on each loop to indicate the loop reference (A1, A2, B1 or B2…).

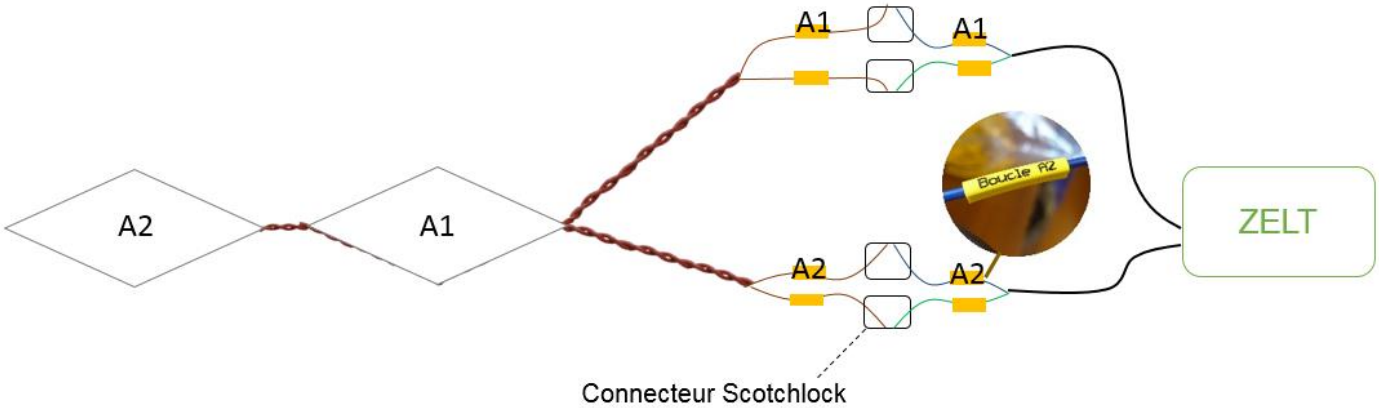


2- Run the twisted wires into the conduit.

3- Make the connections.

- Make sure that you connect the proper wire to the correct Scotchlock connector.

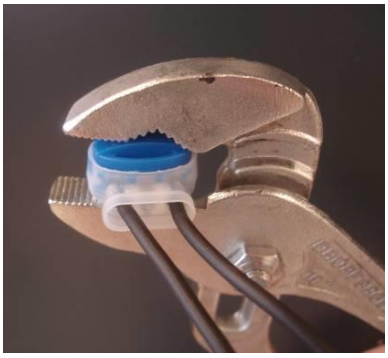
- If you have installed three ZELT Loops, Cable B1 will not be used: Apply a Scotchlock connector to the end of this cable.



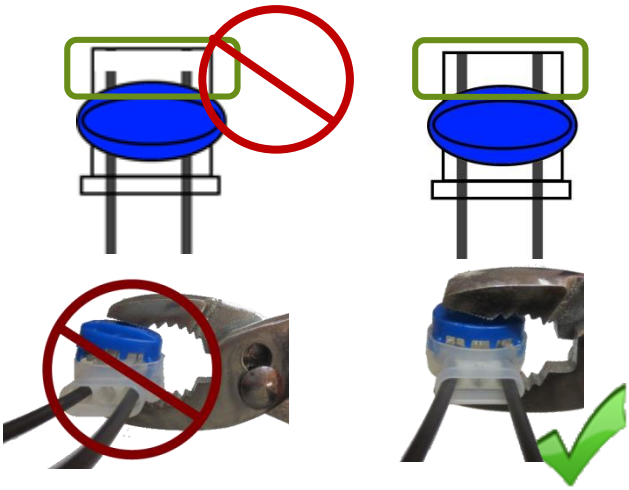
Install the Scotchlock connectors by proceeding as follows:

1) Insert the two wires into the two external holes of the Scotchlock connector.

2) Insert the wires as far as possible – Do not strip the wires.



3) Close the connector by using a pair of pliers to release the gel and establish a connection.



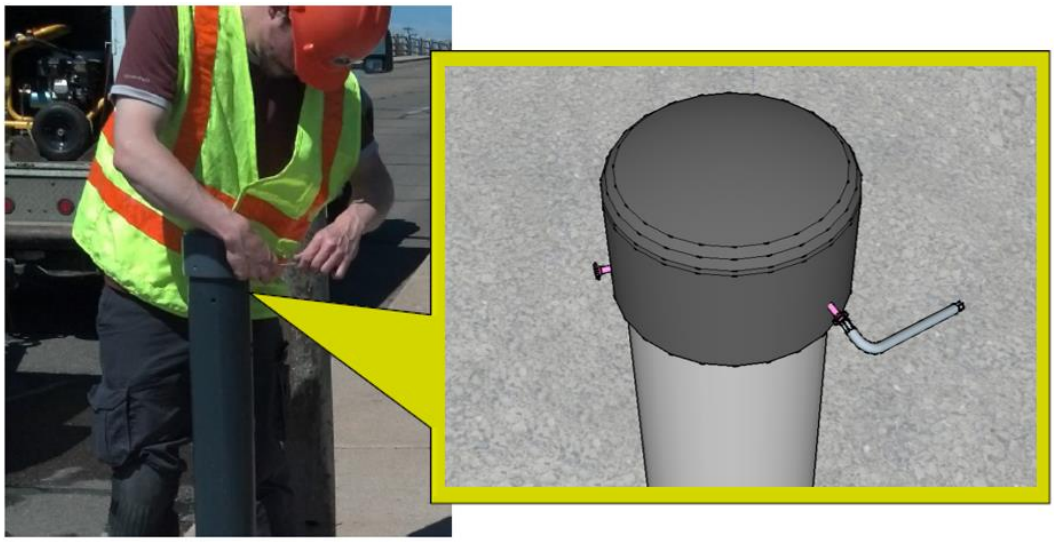
NOTICE

If the concrete is not dry, place the geotextile fabric over it before fixing the Urban Post to the anchor base.

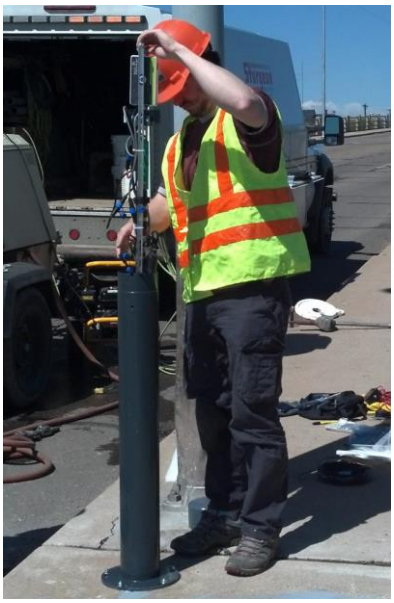
The geotextile fabric prevents the concrete from rising into the Urban Post.

1- Identify directions IN and OUT on the PYRO sensor to know to which direction of travel they correspond when you will analyze the data in Eco-Visio.

a) Unscrew the three secured screws located on the cap using the torx wrench.

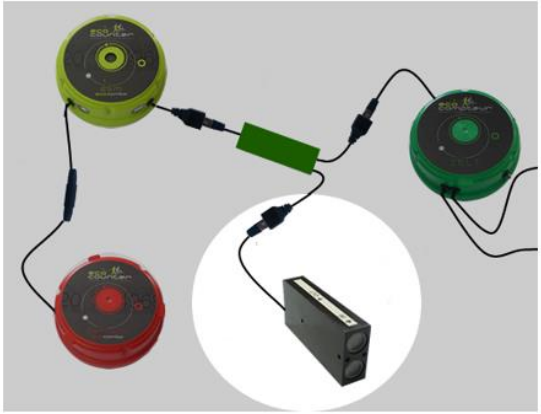


b) Lift the inner structure to identify directions IN and OUT.

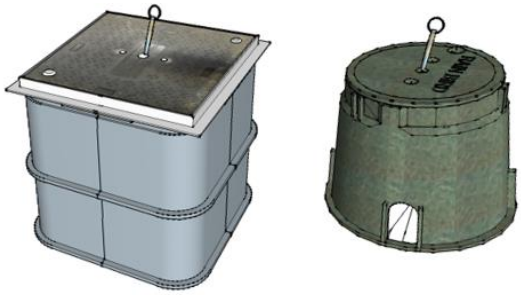


2- Counters with more than two ZELT Loops.

a) Connect the PYRO sensor to the Smart Connect.



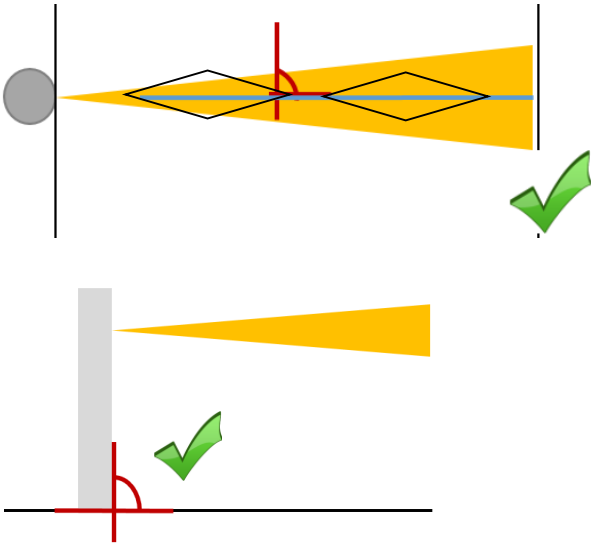
b) Wave the magnetic key over the wake-up zone to wake the Eco-Combo logger up.

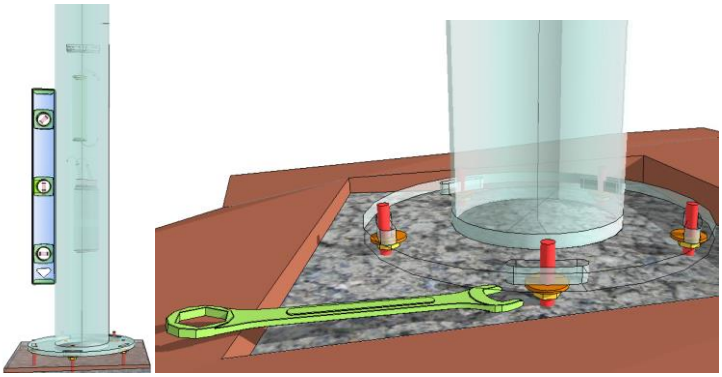


c) Leave the magnetic key over the wake-up zone until you see very quick green flashes. This allows the Eco-Combo logger to detect the PYRO sensor.

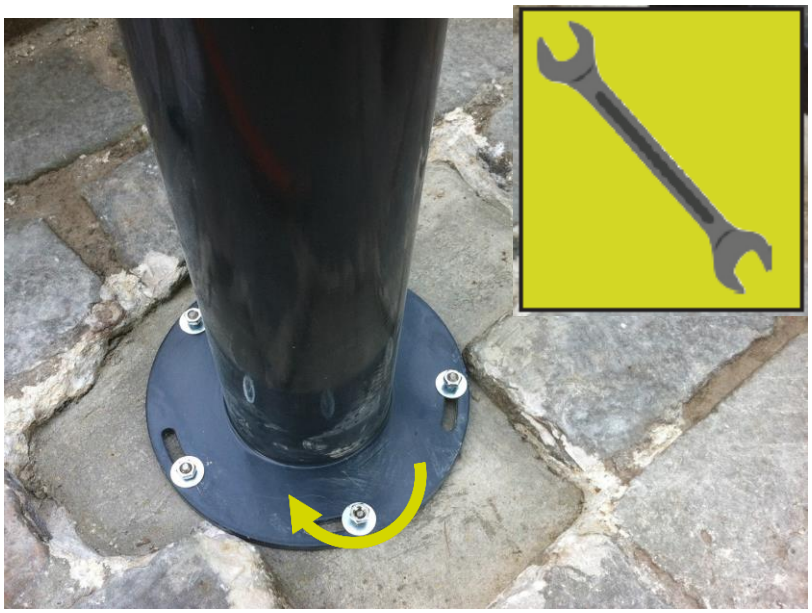
3- Put the inner structure back inside the Urban Post.

4- Place the Urban Post on the anchor base and adjust its position so that the axis of the PYRO sensor is perpendicular to the path.

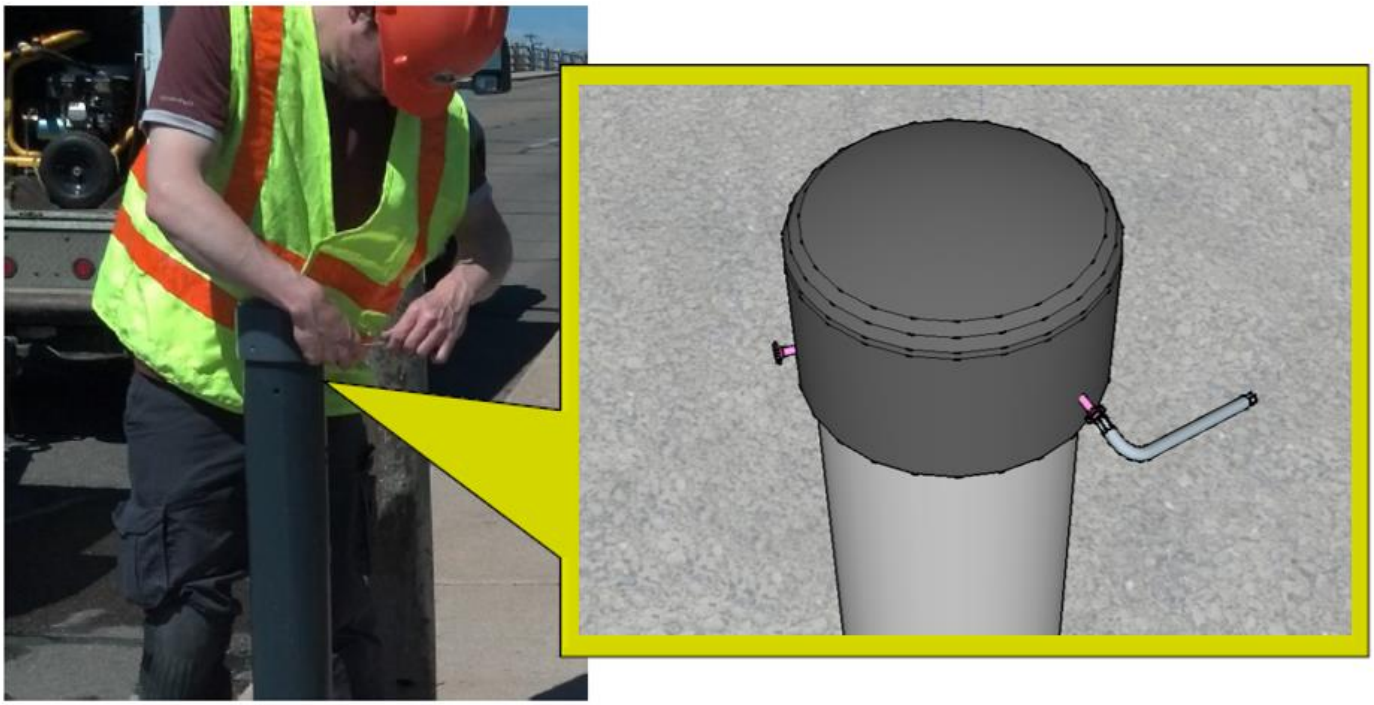




5- Bolt down the Urban Post.



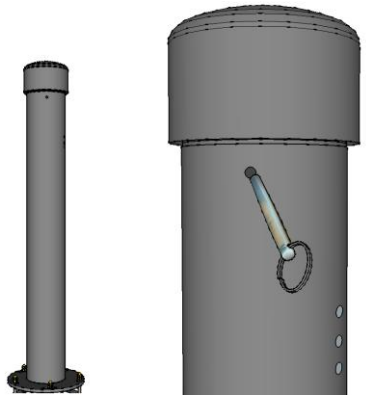
6- Secure the cap with the three secured screws.



BLUETOOTH COMMUNICATION

The following section is only relevant if you are using the software Eco-Link.

1- Wake up your counter by proceeding as follows:

Counters without a Manhole	*Counters with a Manhole*
Insert the magnetic key into the hole and tap the wake-up zone. 	Wave the magnetic key over the wake-up zone.

The wake-up zone starts flashing blue at regular interval.

2- Start Eco-Link and follow the instructions in the section ***Connecting to an Eco-Counter***, in the Eco-Link software guide.

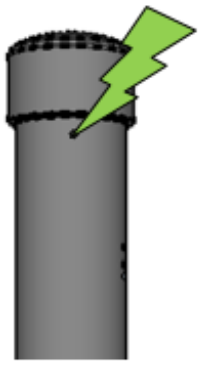
COUNTING FUNCTION

1- If the wake-up zone is off, follow step 1 in the above section: ***Bluetooth Communication***.

2- Ride over each ZELT Loop in both directions and:

a) **If you have the Eco-Link software:** Verify on Eco-Link that the passages are being correctly recorded.
Refer to the section ***Verification of counts***, in the Eco-Link software guide, to learn how to proceed.

b) **If you do not have the Eco-Link software:** Verify that the wake-up zone displays one green flash with each passage.

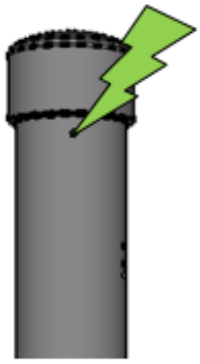
Counters without a manhole	*Counters with a manhole*
	

3- Simulate passages in front of the PYRO sensor in both directions:

a) **If you have the Eco-Link software:** Verify on Eco-Link that the passages are being correctly recorded.

Refer to the section ***Verification of counts***, in the Eco-Link software guide, to learn how to proceed.

b) **If you do not have the Eco-Link software:** Verify that the wake-up zone displays one green flash with each passage.

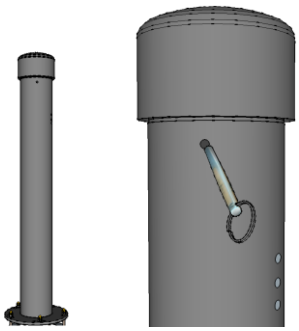
Counters without a manhole	*Counters with a manhole*
	

1- If the wake-up zone is off, follow step 1 in the section ***Bluetooth Communication***, page 31.

2- If you have the Eco-Link software:

Refer to the section ***Testing a modem***, in the Eco-Link software guide, to learn how to proceed.

- **If you don't have the Eco-Link software:**

Counters without a Manhole	*Counters with a Manhole*
Insert the magnetic key into the hole and tap the wake-up zone six times.  x **6**	Wave the magnetic key six times over the wake-up zone. x **6**

The wake-up zone lights solid blue.The modem is now activated for 12 minutes. The following light signals indicate the modem is functioning correctly:

a) Blue wake-up zone, 3 flashes	Modem trying to connect to the network.
b) Blue wake-up zone, 2 flashes	Modem connected to the network.
c) Blue wake-up zone, 1 flash	Modem connected to the server storing the data files.
d) Steady blue light in wake-up zone	Data file transmitted to the server storing the data files.

1- Fill in the saw cuts.

Warning! The wiring used in the ZELT Loops will not withstand temperatures exceeding 60° C (140° F). Do not use a substance that surpasses this temperature when filling in the saw cuts.

2- Secure the lid of the manhole.

3- Take a picture of the counter to show your counting site on Eco-Visio.

COUNTERS EQUIPPED WITH AN AUTOMATIC DATA TRANSMISSION OPTION

Ativate the counting site in our online software, Eco-Visio, **on the installation date**.

Follow the instructions in the document ***Eco-Visio: Quick Start Guide*** to activate your counter.

COUNTERS WITH MANUAL DATA COLLECTION

1. Retrieve the data using Eco-Link before leaving the installation site by following the instructions in the ***Eco-Link software guide***.

- Serial numbers starting with **YA**: You need at least 15 minutes of data.
- Serial numbers starting with **XA**: You need at least 60 minutes of data.

2. Send the data to Eco-Visio by following the instructions in the ***Eco-Link software guide***.

ABACUS - LOOP LENGTH AND CORRESPONDING SPACING

The spacing indicated by the 1 between the two ZELT loops is very important to respect and will vary depending on the length of the ZELT loops themselves.

Apply the corresponding spacing to the length of the ZELT loops:

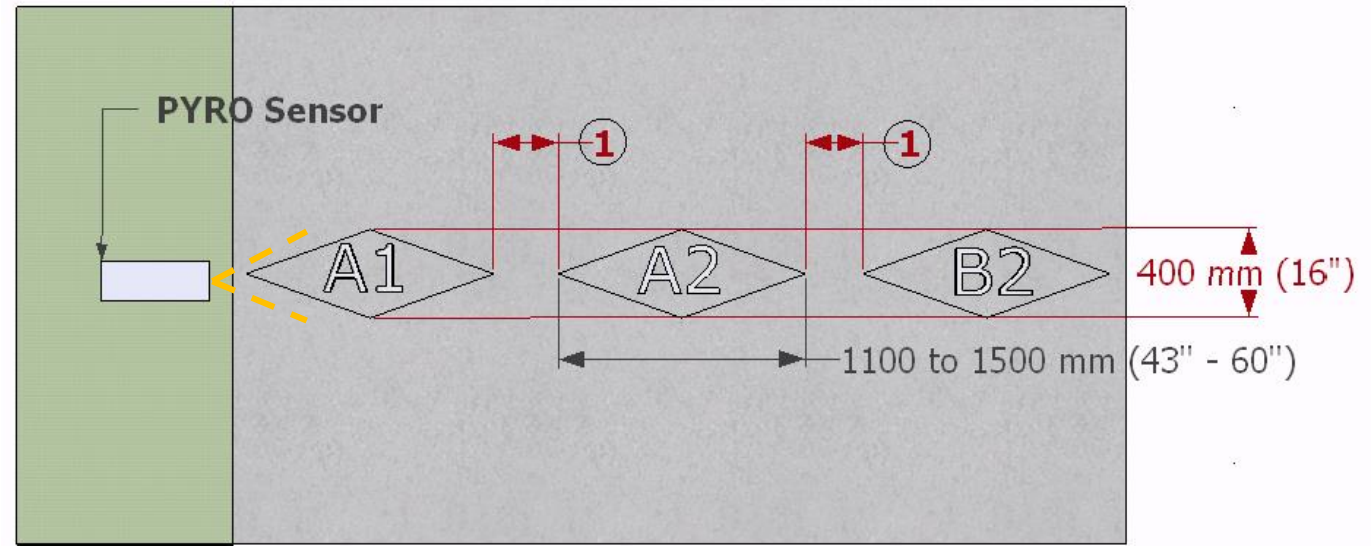
Loop length	Distance	Loop length	Distance
Greater than 1500 mm (59’’)	Contact Eco-Counter to evaluate the feasibility		
1500 mm	80 mm	59’’	3.00’’
1400 mm	100 mm	55’’	4.00’’
1300 mm	120 mm	51’’	4.75’’
1200 mm	140 mm	47’’	5.50’’
1100 mm	160 mm	43’’	6.25’’
Less than 1100 mm (43’’)	Contact Eco-Counter to evaluate the feasibility		

NOTICE

- If you have specifically ordered a MULTI Counter with direction recognition through the ZELT Loops, follow the layout patterns in the section ***MULTI Counters with Direction Given by the ZELT Loops***, page 38.

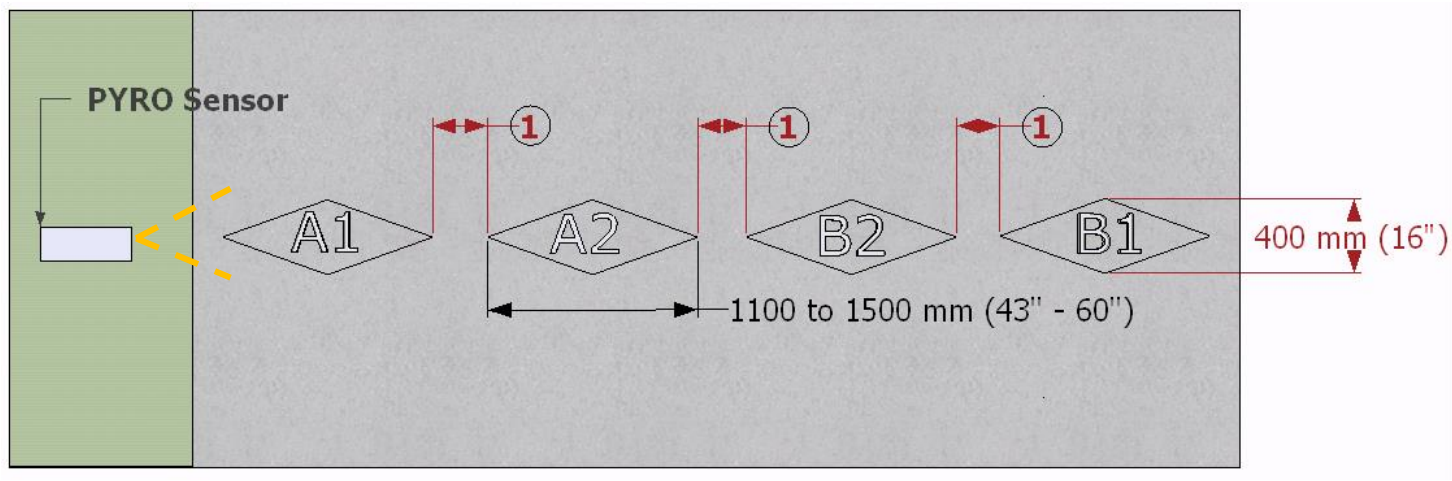
- The dimensions in red in the diagrams are fixed dimensions which you must maintain.
  You can adjust other dimensions +/- 20 mm (+/- ½") if needed.

3 ZELT LOOPS



Cable B1 will not be used in this configuration – do not remove the Scotchlock connector at the end of this cable.

4 ZELT LOOPS



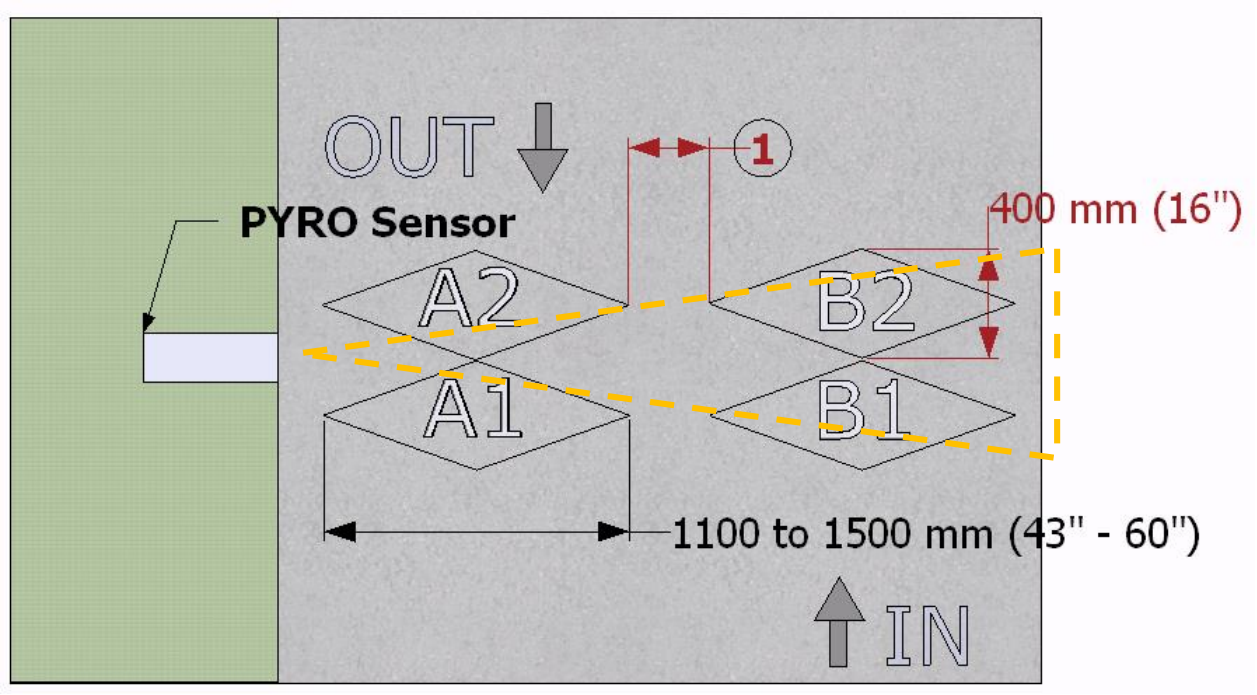
MULTI COUNTERS WITH DIRECTION GIVEN BY THE ZELT LOOPS

NOTICE

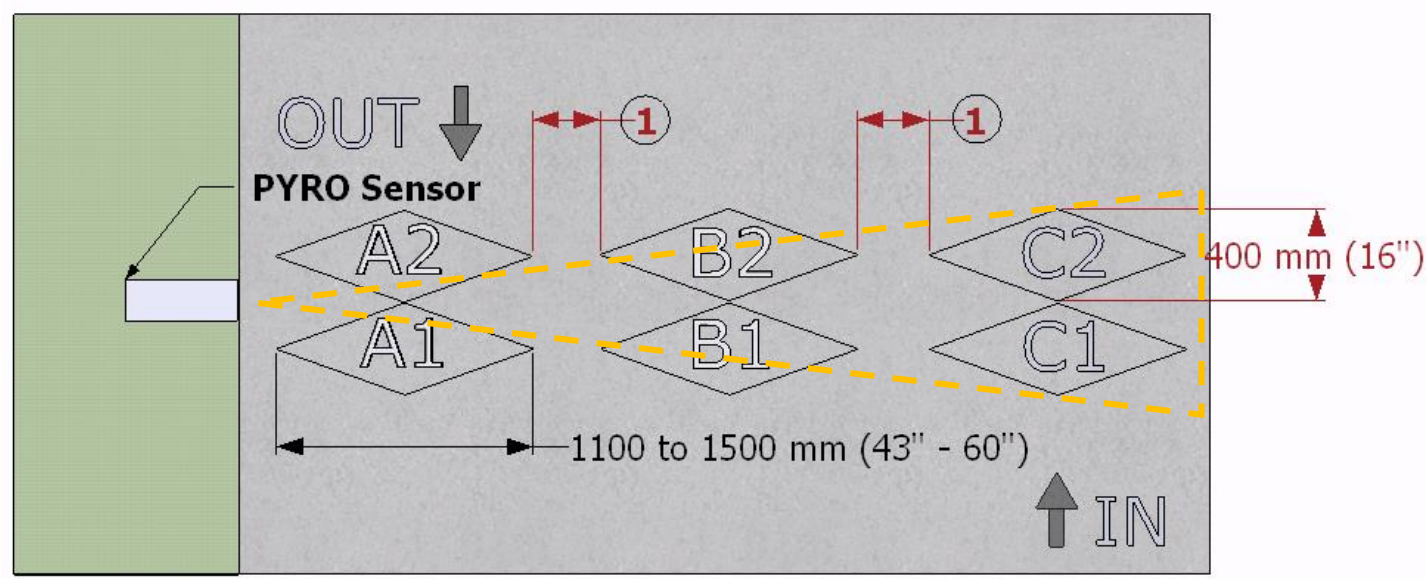
- Follow the installation diagrams below only if you have specifically ordered a MULTI Counter with direction recognition through the ZELT Inductive Loops.

- The dimensions in red in the diagrams are fixed dimensions which must be maintained.
  Other dimensions can be adjusted +/- 20 mm (+/- ½") if needed.

4 ZELT LOOPS



6 ZELT LOOPS



COMPONENTS

ECO-COMBO LOGGER

The heart of the counting system is the Eco-Combo logger.

The Eco-Combo logger:

- Retrieves data from the sensors
- Stores the data.

The Eco-Combo logger is housed in a manhole if the counter includes more than two ZELT Loops.

Eco-Combo logger inside the Urban Post

Eco-Combo logger in a manhole

SMART CONNECT

The Smart Connect is an intelligent system, serving as an interface between sensors and the logger when utilizing multiple sensors.

ZELT SENSOR

The ZELT loop precisely analyzes the electromagnetic signature of each bicycle wheel, with 13 differentiation criteria.

The ZELT Sensor looks differently if it is housed inside the Urban Post or in a manhole:

ZELT Sensor inside the Urban Post

ZELT Sensor in a manhole

PYRO SENSOR

The PYRO sensor uses a combination of passive infrared pyroelectric technology and a high precision lens to detect a change in the detected temperature when a person passes in the range of the sensor.

The sticker on the sensor indicates the way direction of travel is identified (IN or OUT).

BATTERIES

COUNTERS INCLUDING A MANHOLE

The battery powers both the ZELT and PYRO sensors with energy.

On counters equipped with an active automatic data transmission option, it also powers the modem with energy.

COUNTERS WITHOUT A MANHOLE

Counters with an Active Automatic Data Transmission Option	*Counters with Manual Data Collection*
The Urban Post includes two batteries of the following type: The upper battery in the Urban Post powers the **modem** with energy. The lower battery powers the **sensors** with energy.	The following battery powers the sensors with energy.

SOFTWARE

DATA ANALYSIS: ECO-VISIO

Eco-Visio is an online platform that can be used to analyze data, edit reports, manage counting sites, etc. This platform is accessed via the Eco-Counter website by logging in with a username and password.

DATA RETRIEVAL: ECO-LINK

Eco-Link is a software program which enables users to interact with Eco-Counters. Eco-link allows users to:

- Retrieve data from an Eco-Counter manually (a necessary step for Eco-Counters without active automatic data transmission option).
- Transfer data to Eco-visio online software.
- Modify the sensors settings.

List of compatible devices with Eco-Link:

- *Laptop: The laptop must be equipped with a compatible Bluetooth connection.*

  - *Bluetooth compatibility test: https://www.eco-visio.net/Download/bluetooth-test-en.exe*

  - *Eco-Link: https://www.eco-visio.net/Download/ecolink.zip*

- *Tablet or Smartphone: The device must run with Android OS.*

  Download Eco-Link on the Google Play Store.

PREREQUISITES

- Check the level of Gprs coverage on the installation site.
- Make sure that the Eco-Combo logger is connected to the battery.

▪ Required Equipment

Magnetic key

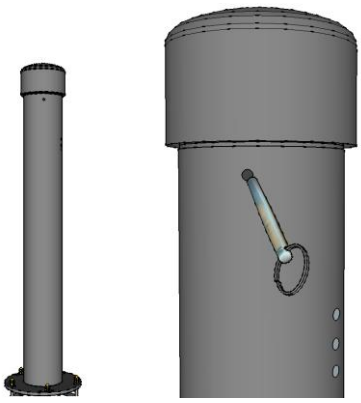
Mobile device with internet connection

If you do not have a mobile device with Internet connection, you can check the level of GPRS coverage using the Eco-Link software.

Refer to the section **Testing the Counter** > **Automatic Data Transmission**, page 33, to learn how to proceed.

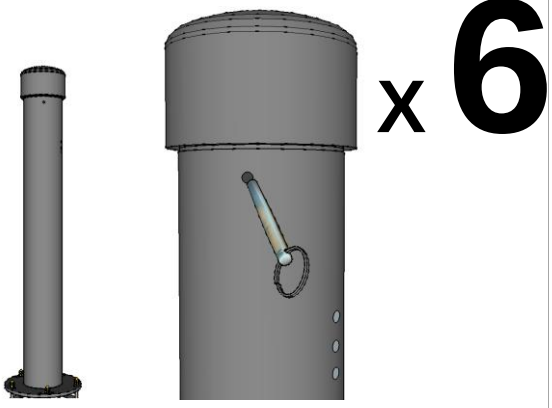
PROCEDURE

1. Wake up your counter by proceeding as follows:

Counters without a Manhole	*Counters with a Manhole*
Insert the magnetic key into the hole and tap the wake-up zone. 	Wave the magnetic key over the wake-up zone.

The wake-up zone starts flashing blue at regular interval.

2.

Counters without a Manhole	*Counters with a Manhole*
Insert the magnetic key into the hole and tap the wake-up zone six times. 	Wave the magnetic key six times over the wake-up zone.

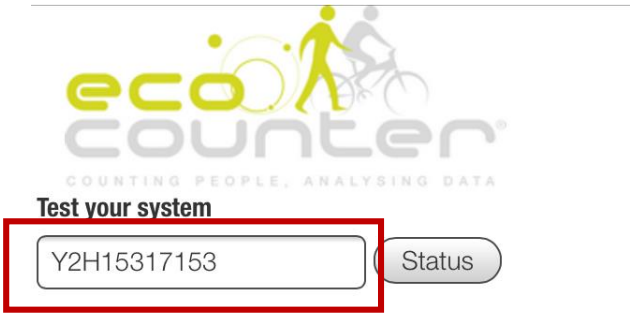
The wake-up zone shows the following light signals:

a)	*Blue wake-up zone, 3 flashes*	Modem trying to connect to the network.
b)	*Blue wake-up zone, 2 flashes*	Modem connected to the network.
c)	*Blue wake-up zone, 1 flash*	Modem connected to the server storing the data files.
d)	*Steady blue light in wake-up zone*	Data file transmitted to the server storing the data files.

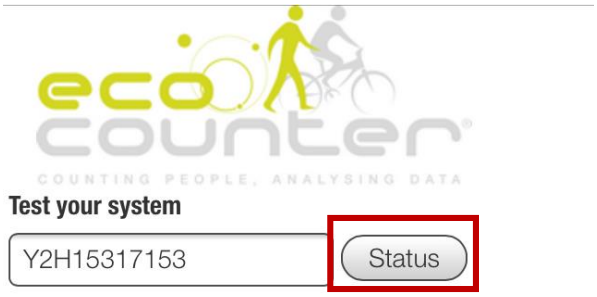
3. When the wake-up zone is steady blue, go to the following webpage: http://eco-counter.net/status/

web

4. Type in the serial number of your counter.

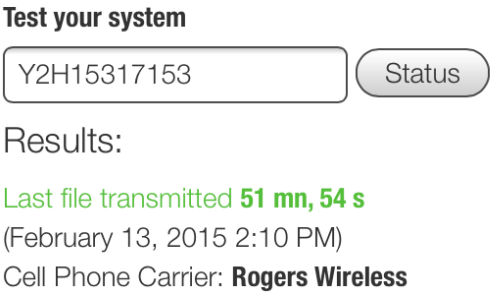


5. Click on **Status**.



The webpage gives you:

The date and time when the counter communicated for the last time. Make sure that the date and time matches with the time when you waved the magnetic key over the wake-up zone.

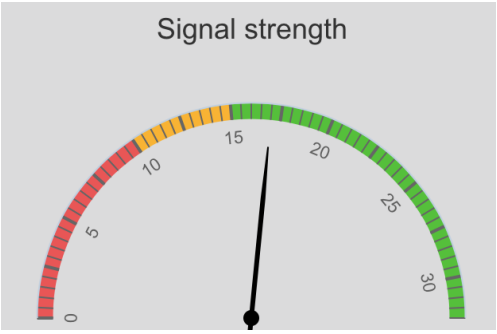


If the date and time doesn't match, proceed as follows:

a) Leave the magnetic key over the wake-up zone until it switches off.

b) Repeat the procedure again.

The quality of the coverage.



- If the indicator is in the red zone, the counter will not be able to send data, so do not install it at this location.

- If the indicator is in the orange zone, the counter may have difficulty sending data on a daily basis.

CUSTOMER SERVICE

HARDWARE

The entire system is guaranteed for **2 years** starting from the date printed on the warranty certificate (the warranty certificate is delivered with your product).

In the rare case that there is a problem with a part in your system, the product must be returned with the Product Return Sheet. Please contact us to receive this sheet.

The logger serial number (please see the warranty certificate delivered with the product) must be identified on the Product Return Sheet.

The warranty cannot be implemented in the case of mishandling, incorrect installation (by someone other than Eco-Counter), or any other reason listed in the warranty certificate.

If the product can be repaired, a quote will be submitted to the customer prior to repair.

Any product damaged as a result of mishandling or improper use will be either replaced or repaired according to the parts price list used at the time of the request.

SOFTWARE

Problems related to the use of the software can be dealt with remotely.

Please do not hesitate to contact Customer Service for assistance:

Europe / World	**North America**
Tel: +33 (0)2.96.48.48.83	Toll Free: 1-866-518-4404
Fax: +33 (0)2.96.48.69.60	Phone: 1-514-849-9779
Email: support@eco-counter.com	Email: help@eco-counter.com

COUNTING PEOPLE, ANALYSING DATA

Urban Post Multi-Aluminium-Installation Guide - 27/01/2016-ENG

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Toll Free: 1-866-518-4404 | Direct: 1-514-849-9779

eco-counter@eco-counter.com | www.eco-counter.com

ZELT INDUCTIVE LOOPS FOR BICYCLES

INSTALLATION IN ASPHALT

Serial numbers starting with X or Y

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INTRODUCTION

Thank you for purchasing this Eco-Counter! We hope that you will enjoy using it and that the data will be helpful to you for many years to come.

This document will guide you through the appropriate steps for installation of the ZELT for bicycles system in asphalt. Following these instructions step by step will allow you to achieve the best results possible.

WARNINGS

Fire, explosion and burn hazard.

Do not short circuit, crush, disassemble, heat above 100 °C (212 °F) or incinerate the components of your counting system.

All Eco-Counters have been tested to be resistant under the most severe environmental conditions (moisture, salt content, dust, temperature variations, etc.).

We remind you that your Eco-Counter remains a measuring system, and therefore it should always be handled with care.

PREPARING THE INSTALLATION

SAFETY

Risk of bodily harm!

- Use safety cones and hazard signs to secure the work site
- Wear the necessary protective equipment.

DELIVERED EQUIPMENT

COUNTER

Eco-Combo Logger

Selective ZELT Sensor

Battery

Wires for forming the loops in solid ground

OR

Greenway ZELT Sensor [1]

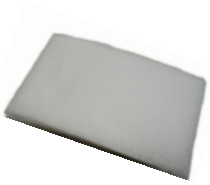
ADDITIONAL HARDWARE

RayGel junction boxes

Yellow reference tags

Scotchlock Connectors

Magnetic key



Geotextile fabric

Screwdriver and anti-vandalism screws

B125 manhole

OR

Geotextile fabric and an elastic to attach it to the underside of the manhole

OR

A socket spanner and anti-vandalism screw to secure the cover of the manhole

OR

Rainbird manhole

For more information about the components, please refer to *appendix B* (page 31).

[1] If you have ordered a system to be installed on a dedicated bicycle lane or on a greenway, you have received a ZELT Greenways sensor.

REQUIRED EQUIPMENT

To trace the saw cuts

A straight plank of wood (150 cm (60 in) minimum), a meter stick and chalk.

To cut the diamonds into the asphalt

Thermal saw with blower and double diamond disk capable of cutting out a gutter measuring 10 mm (1/2'') wide and 50 mm (2'') deep.

To install the loops

- To form the loops: Drill, pliers and a short ruler (to push in the loops).
- To verify the inductance of the loops (optional): A multimeter.
- To protect the loop ends (optional): Conduit Ø 25 mm (1''), utility knife.

If you would like to use your own wire to form the loops, make sure that you use a stranded wire.

To fill in the saw cuts

Asphalt or other filler regularly used for roadwork with a temperature that does not exceed 60° C (140° F), a sponge, water and a trowel.

When filling in the saw cuts:

- We recommend using micro-cement for sealing the road work (example: sika fastfix-138tp, 714 scellflash micro-beton (micro-cement)).

To dig a hole for the manhole and a gutter for the conduit

Shovel and pickaxe.

To test the system

A bicycle and the Eco-Link software.

You will find a list of compatible devices in the section Software, page 32.

If you do not have the Eco-Link software, please ensure that there are two people present in order to correctly test the system.

To add a photo to the counter location in Eco-Visio (optional)

A camera.

It is important to follow the instructions below to choose the appropriate installation site for your Eco-Counter.

AVOID

- Locations where other undesired subjects can be counted.
- Areas subject to electromagnetic interferences.
  - Proximity to other ZELT Inductive Loops.
  - Electrical wires, overhead or underground.
  - Buried telecommunication equipment, etc.
- Locations that circulation is congested:
  - Proximity to rest areas.
  - Peaks of inclined paths.
  - Stops.
  - Proximity to road crossings.
  - Proximity to lookout points.
  - The presence of undesired obstacles throughout the area being counted.

CHOOSE A SITE THAT IS

- A major axis of passage.
- An uncongested path.
- A location that has a stable and steady flow of traffic; preferring flat and straight paths.
- If using automatic data transmission, select a location with sufficient cellular network coverage. Refer to *Appendix D – Checking the level of GPRS coverage*, page 35, to know how to proceed.

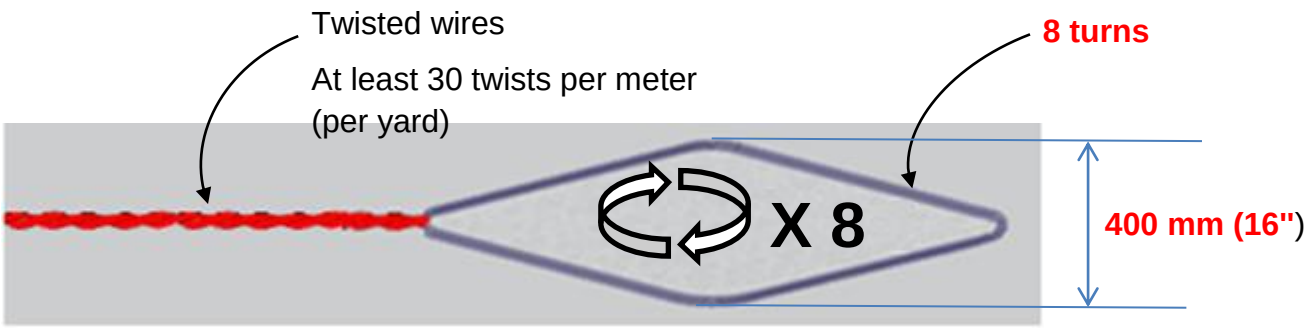
LAYOUT

EXAMPLE OF A COMPLETED SYSTEM

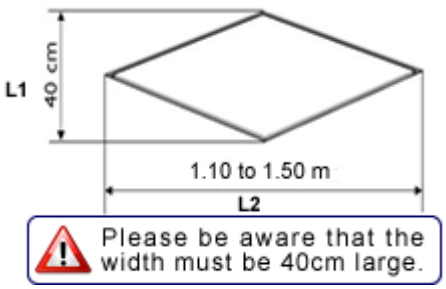
Example of a four-loop system installed on a bike lane

PRINCIPLE OF THE ZELT INDUCTIVE LOOP

Shape of the Loops



Dimensions of the Loops



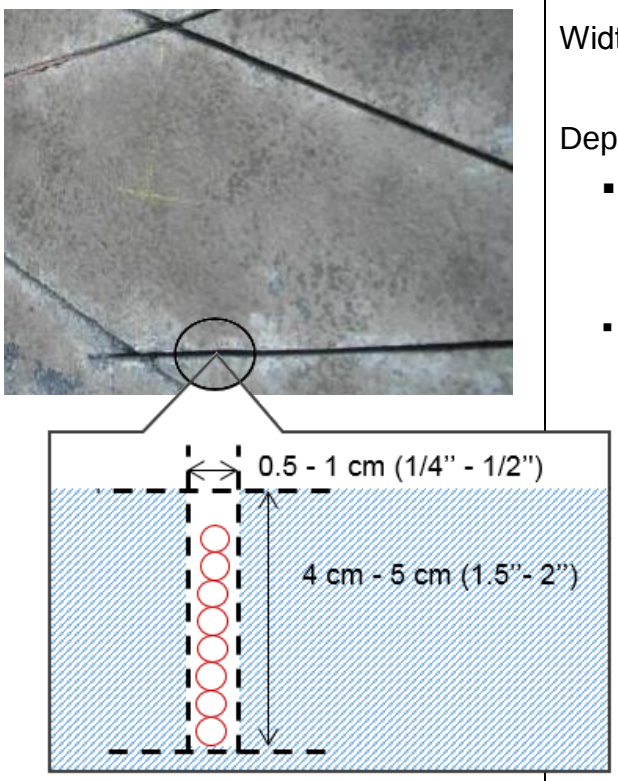
The width L1 of the diamond must be 400 mm (16’’).

The length L2 can be adjusted between 1100 mm (43’’) and 1500 mm (60’’) (1400 mm (55’’) is the most common) depending on the width of the path where it will be installed.

The diamond shape must be perfect.

If there is a need for the loops to be a different size, please contact Eco-Counter to verify whether or not the desired dimensions are feasible.

Dimensions of the Trenches



Width: 0.5 to 1 cm (1/4'' to 1/2'')

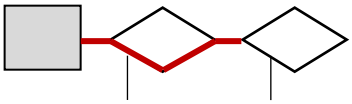
Depth:

- Systems on which the loops are installed one above the other: 4 cm (1.5'')

- Systems on which the loops are installed side by side: you will place the end of the Loop furthest from the manhole through the cut-out in the loop closest to the manhole:

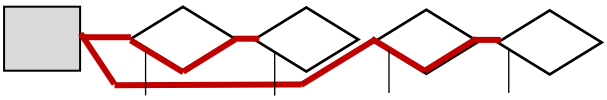
  - The loop furthest from the manhole: 4 cm (1.5'')

  - The loop closest to the manhole: 5 cm (2'')

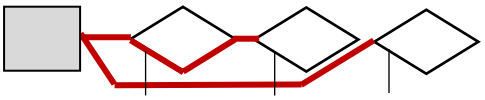


5 cm (2'') 4 cm (1.5'')

- For systems with 3 or 4 Loops installed side by side, it is recommended to cut another trench for the end of the loops furthest from the manhole :



5 cm (2'') 4 cm (1.5'') 5 cm 4 cm



5 cm (2'') 4 cm (1.5'') 4 cm

Positioning of the Loops

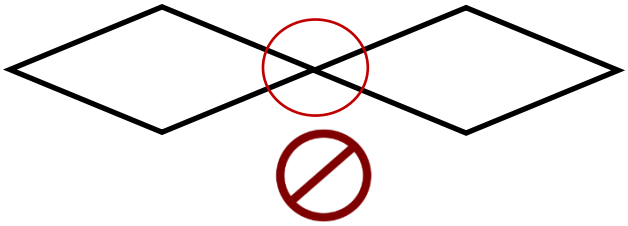
The positioning of the loops depends on the type of system ordered.

Please refer to:

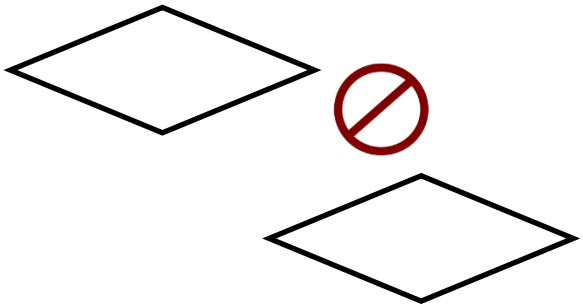
- *Appendix A - Layout*, page 22 if you have ordered a system with Greenway ZELT Sensor.
- *Appendix A - Layout*, page 27 if you have ordered a system with Selective ZELT Sensor.

To avoid imperatively:

Loops installed side by side without respecting the required spacing



Loops installed without respecting the recommended positioning



INSTALLING THE ZELT INDUCTIVE LOOPS

PREPARING THE INSTALLATION SURFACE

1. Trace the area needed to be cut out perpendicularly to the flow of circulation respecting the dimensions and positioning for your system:

   - System with Greenway ZELT Sensor, please refer to *Appendix A - Layout*, page 22.
   - System with Selective ZELT Sensor, please refer to *Appendix A - Layout*, page 27.

2. Cut into the asphalt with the thermal disk according to the markings indicated in step 1 and the dimensions for the gutter recommended in the section "*Principle of the ZELT Inductive Loop" > "Dimensions of the trenches*", page 10.

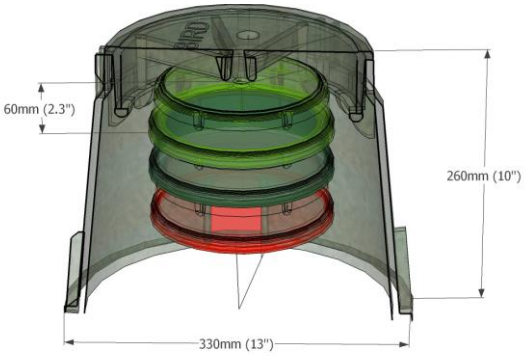
Width = 0.5 to 1 cm (1/4'' to 1/2'')

Depth (per set of loops):

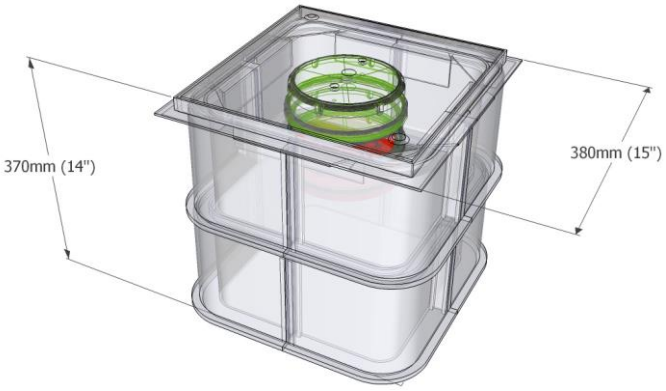
- Loop furthest from the manhole: 4 cm (1.5'')
- The loop closest to the manhole: 5 cm (2'')

3. Clear out gravel from the saw cuts using a blower.
   Use the short ruler to remove any remaining pieces of gravel.

4. On the shoulder, dig a hole 260 mm (10") deep for the manhole less than 20 meters (65') from the loop furthest from the shoulder. Cut a slit in the shoulder to pass the wiring from the loops to the manhole.
   The cover of the manhole must not exceed ground level.



Rainbird



B125

5. If you have a Rainbird manhole, place the geotextile under the manhole and secure it with the supplied elastic band.

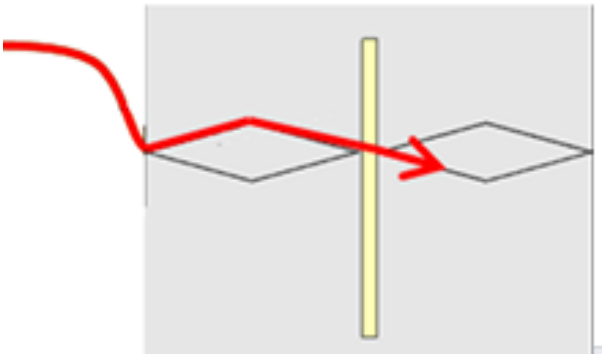
   If you have a B125 manhole, place the geotextile at the bottom of the hole and place the manhole on top of it.

FORMING THE ZELT INDUCTIVE LOOPS

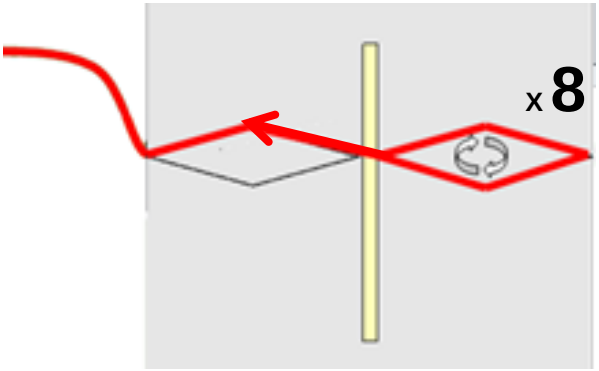
If you would like to use your own wire to form the loops, make sure that you use a stranded wire.

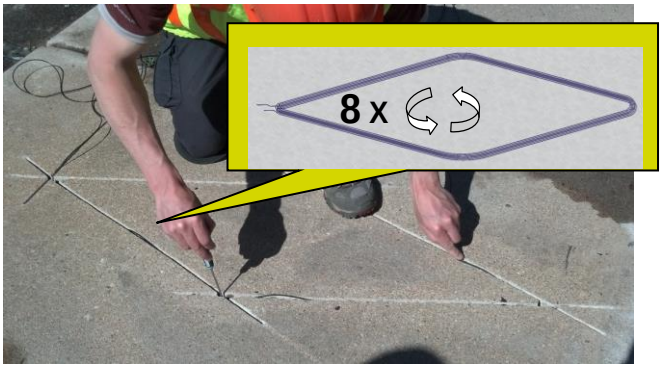
1. Form a first loop in the cut-out furthest from the manhole while placing its end through the cut-out in the loop closest to the manhole.

   Keep enough slack so that the wire extends back to the manhole.

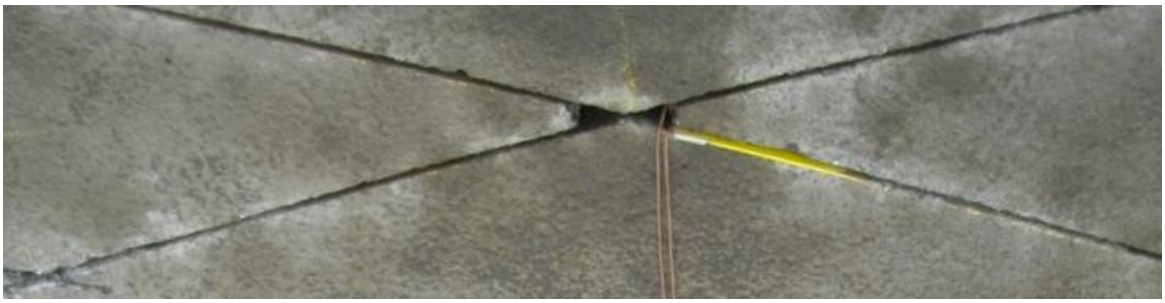


2. Form a loop of 8 turns.



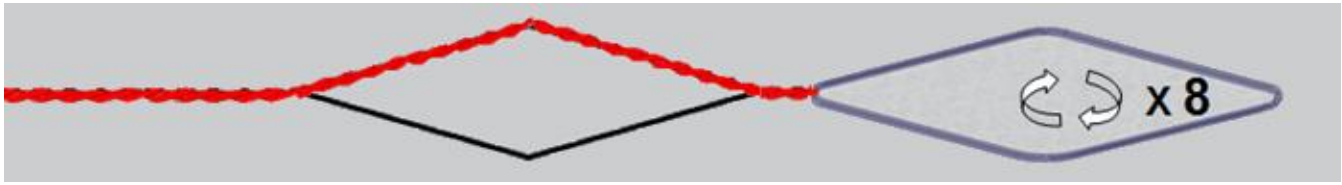


3. Push the wire into the saw cut with the small ruler.



4. Stretch out the end of the two wires and bring them to the manhole. The end must be long enough to reach the manhole with 50 centimeters (20") of extra slack. Cut the end if it is longer.

5. Stretch out the end of the two wires (red portion in the diagram below) and twist them as indicated in the following instructions:

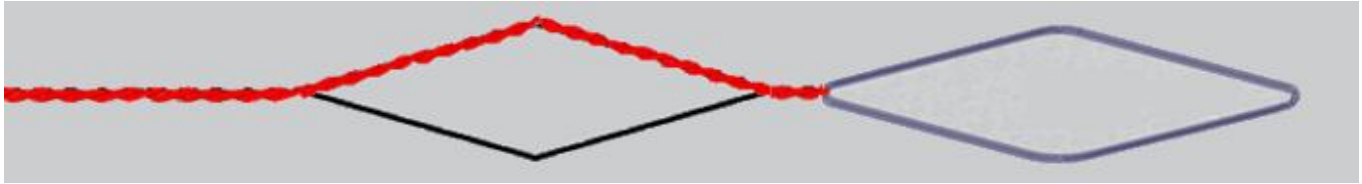


Example with two loops installed side by side.

Attach the two extremities of the wire to a drill or an electric screwdriver.

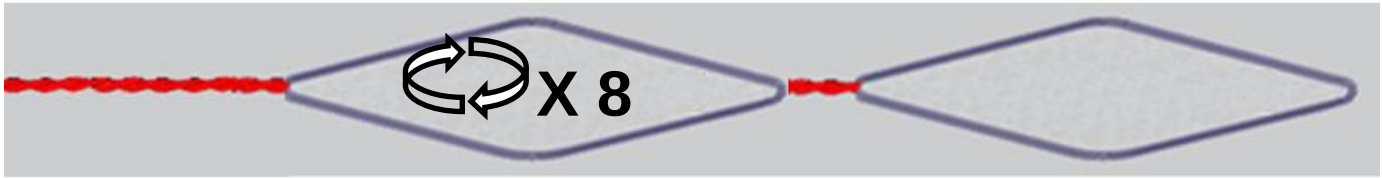
1. Stretch out the wires.
2. Twist the wires.
3. Keep the wires tought while rotating the drill at a slow pace in order to achieve optimal results.
   There should be at least 30 twists per meter (per yard).

6. Bring the twisted end to the manhole while placing its end through the cut-out in the loop closest to the manhole if you have loops installed side by side.



7. Put a yellow reference tag at the end of the twisted end to indicate the loop reference (A1, A2, B1 or B2…).

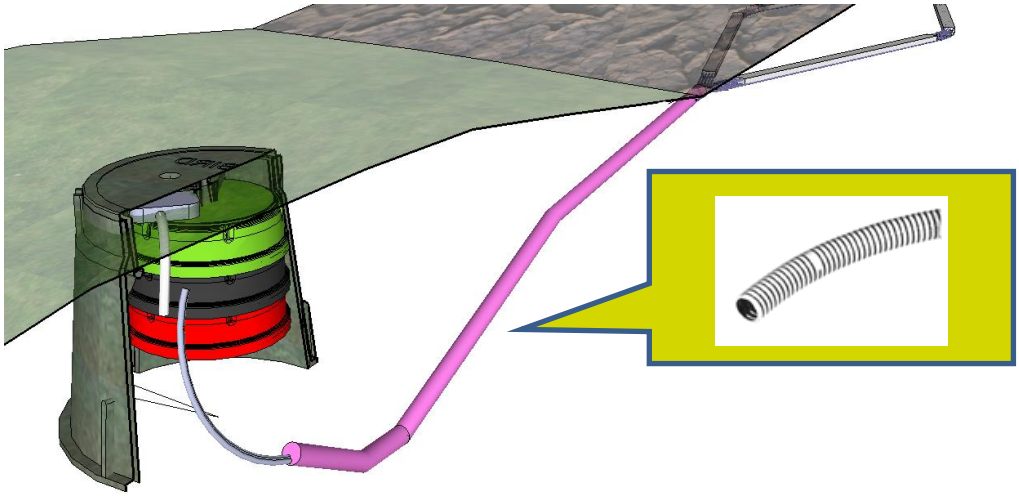
8. Form the other loops the same way while placing them on top of the twisted end of the first formed loops if you have loops installed side by side.



If you have two pairs of loops (4 loops total), form loops A1 and A2 with the red conductive wire and loops B1 and B2 with the black conductive wire. This will make it easier to identify the two pairs of loops.

1. Verify the inductance of the loops. The level of inductance must be between 100 and 150 µH.

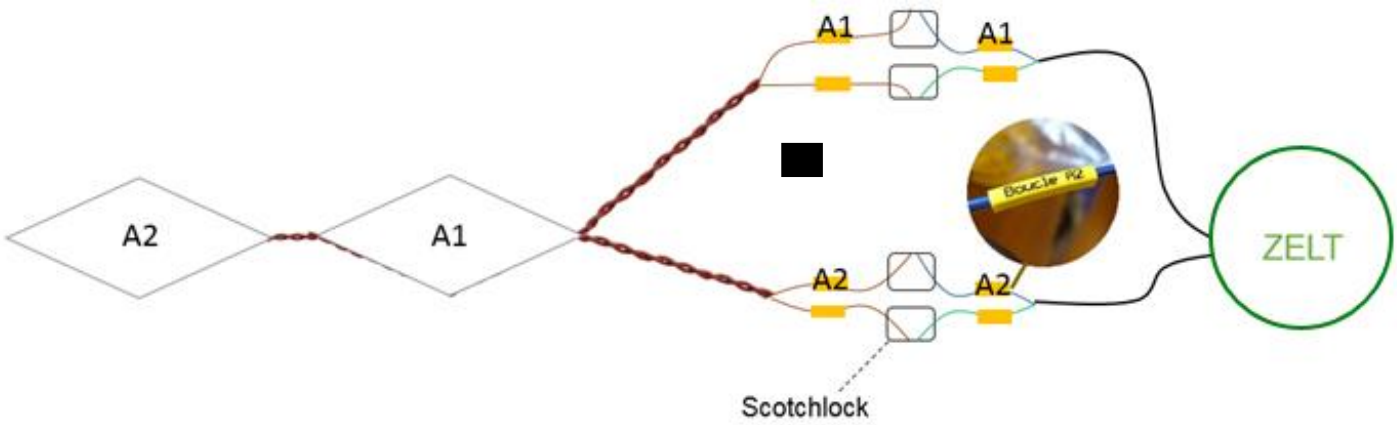
2. Run the twisted wires into the conduit (optional).



3. Make the connections inside the manhole:

- System with Greenway ZELT Sensor, please refer to *Appendix A - Layout*, page 22.
- System with Selective ZELT Sensor, please refer to *Appendix A - Layout*, page 27.
- ⚠ Make sure to connect the right loop to the right scotchlock connector by using the yellow reference tags supplied.

- If you have installed three ZELT Inductive loops, cable B1 won't be used – don't remove the scotchlock connector at the end of this cable.

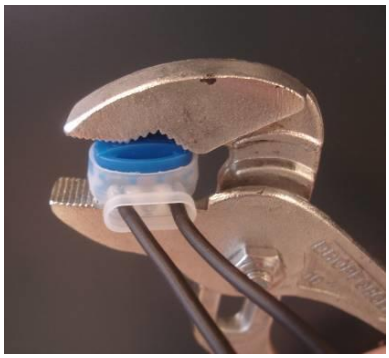


Example of connections on a two-loop system

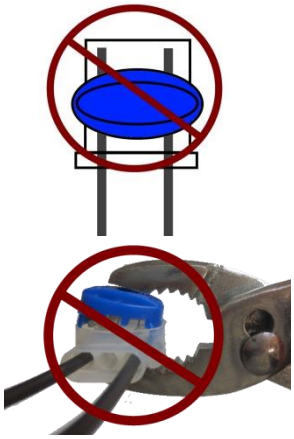
Install the Scotchlock connectors by proceeding as follows:

1) Insert the two wires into the two external holes of the Scotchlock connector.

2) Insert the wires as far as possible - there is no need to strip the wires.



3) Close the connector by using a pair of pliers to release the gel and establish a connection.



- Wake up your Eco-Counter by waving the magnetic key over the activation zone.

x 1

x 1

If you do not have the Eco-Link software:

- Verify that the Eco-Combo logger flashes green every time a person passes.

If you have the Eco-Link software:

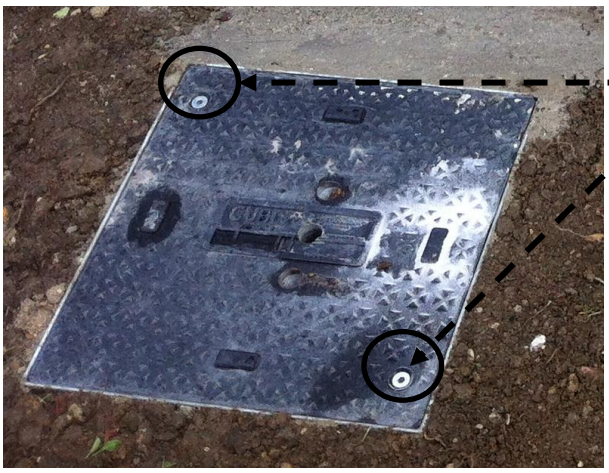
- Verify directly on Eco-Link that the passages are being correctly recorded.
- If you have a bidirectional system, ensure that the directional counts are being correctly recorded.

1. Shut the black Raygel junction boxes over the connected Ethernet sockets.

2. Fill in the saw cuts.

Attention: the wiring used in the loops will not withstand temperatures exceeding 60° C (140° F). Do not use a substance that surpasses this temperature when filling in the saw cuts.

3. Secure the lid of the manhole.



4. Conceal the manhole cover with grass or earth (less than 1 cm (0.4 in) thick if the Eco-Combo is equipped with an active automatic data transmission option) if possible.

5. Take a photo of the installation to illustrate your counter on Eco-Visio.

ABACUS

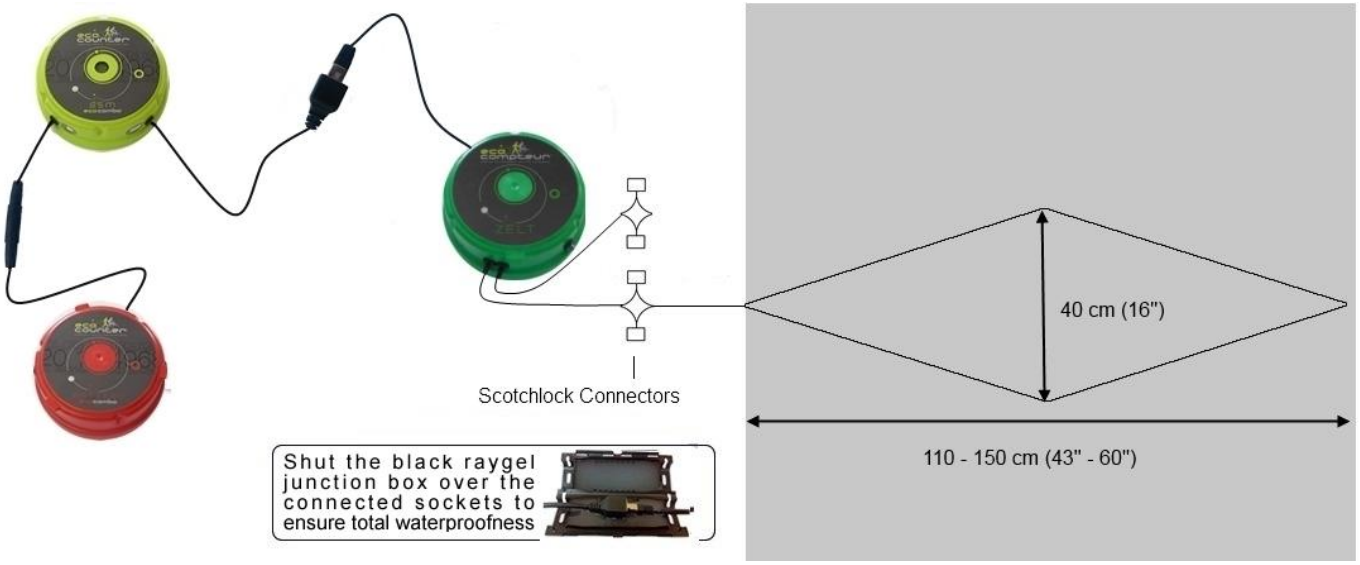
The spacing indicated by the ① between the two loops is very important to respect and will vary depending on the length of the loops themselves.

Apply the corresponding spacing to the length of the loops:

Loop length	Distance
Greater than 1500 mm (59’’)	Contact Eco-Counter to evaluate the feasibility
1500 mm (59’’)	80 mm (3.00’’)
1400 mm (55’’)	100 mm (4.00’’)
1300 mm (51’’)	120 mm (4.75’’)
1200 mm (47’’)	140 mm (5.50’’)
1100 mm (43’’)	160 mm (6.25’’)
Less than 1100 mm (43’’)	Contact Eco-Counter to evaluate the feasibility

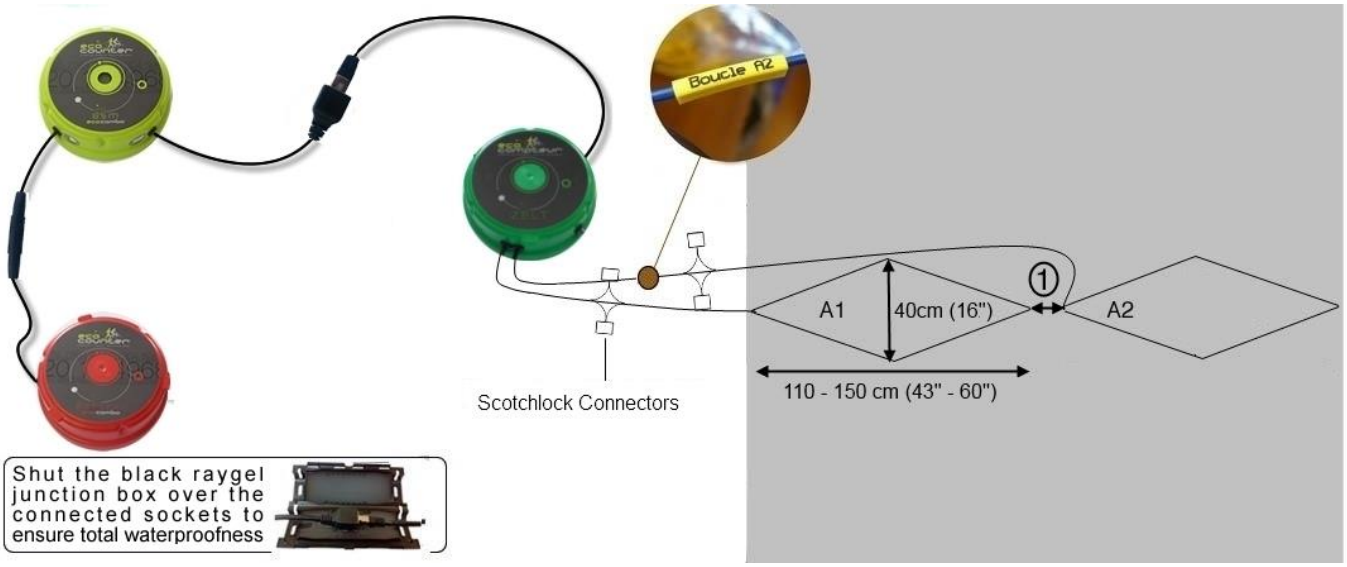
UNIDIRECTIONAL SYSTEMS

Installation of 1 Loop



In the case of the installation of 1 loop, disregard the second wire of the ZELT sensor. Close this wire with a Scotchlock connector.

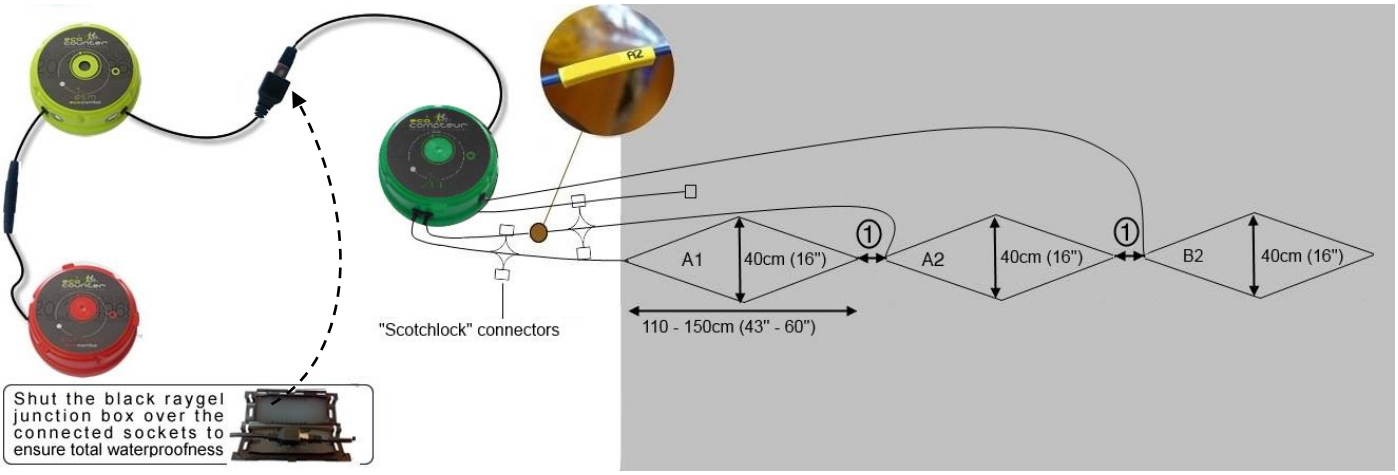
Installation of 2 Loops



Place the end of the loop A2 under the loop A1.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

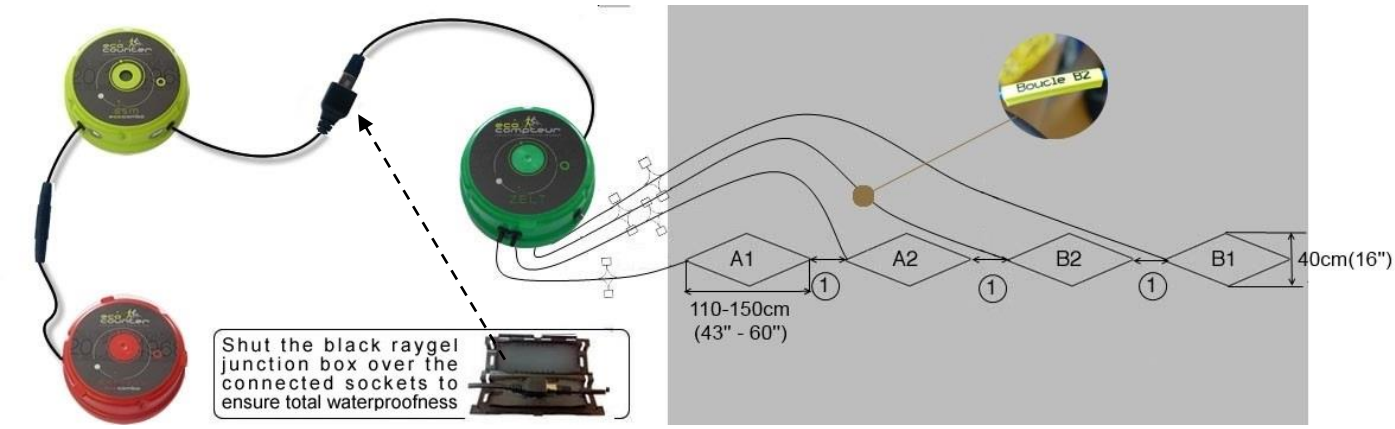
Installation of 3 Loops



Disregard the wire B1 of the ZELT sensor. Close this wire with a Scotchlock connector.

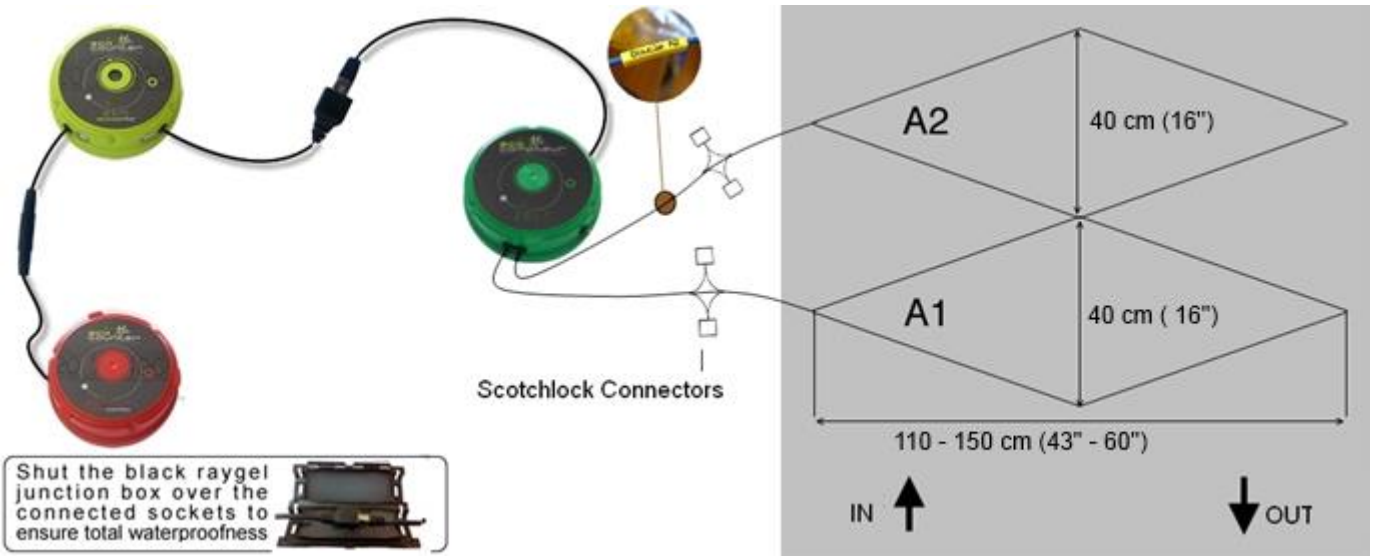
1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 4 Loops

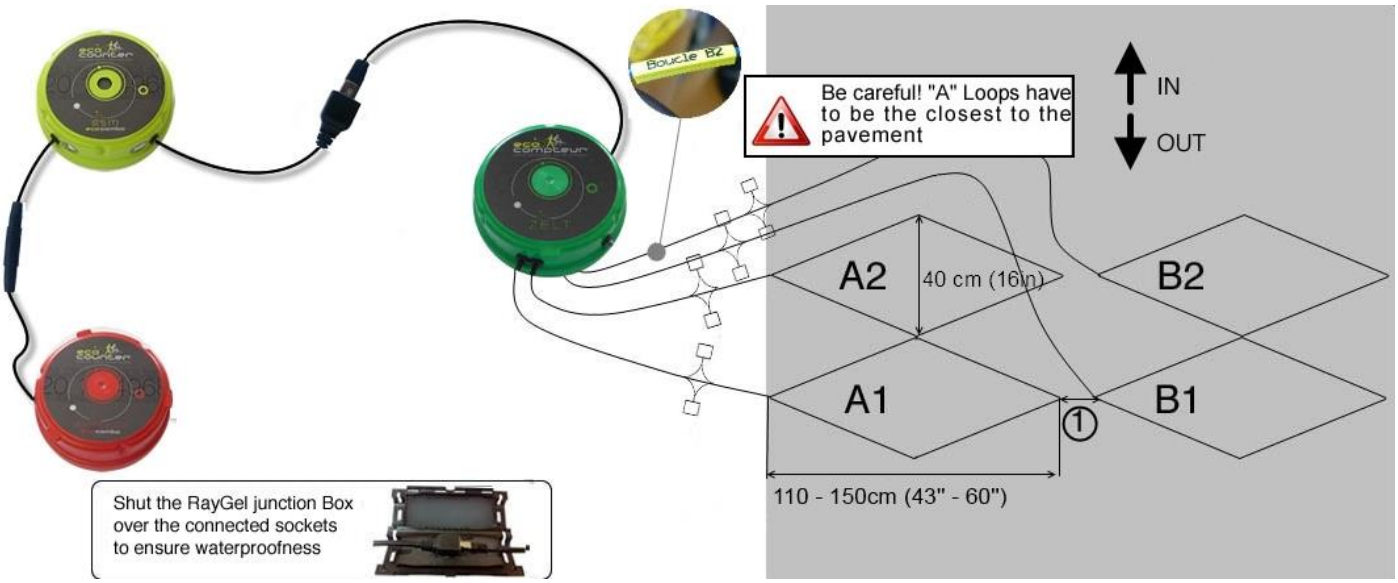


1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 2 Loops



Installation of 2x2 Loops

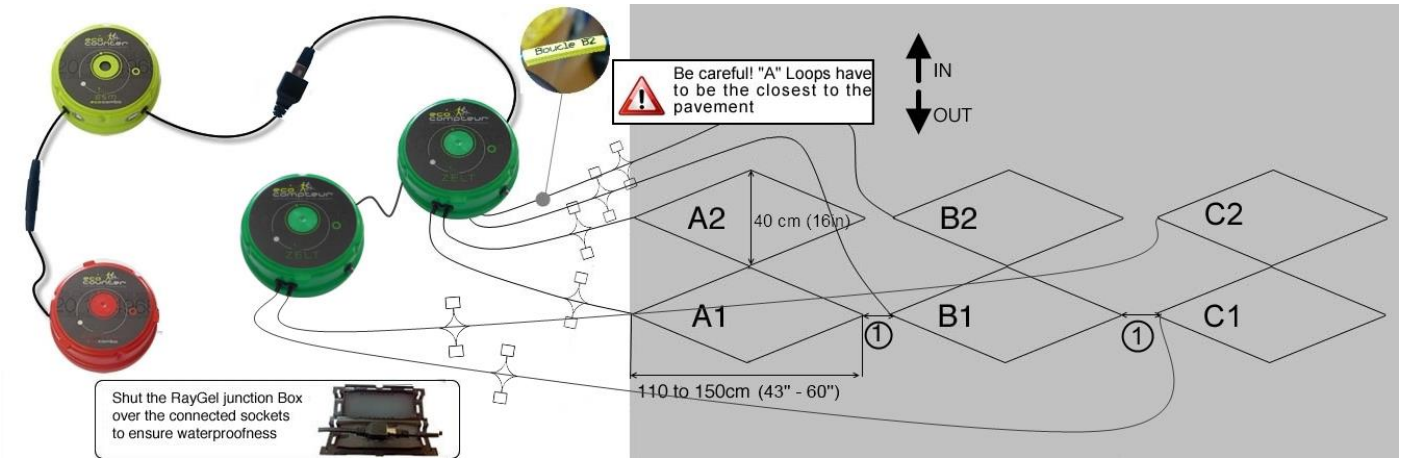


Place the end of the loop B2 under the loop A2.

Place the end of the loop B1 under the loop A1.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 6 Loops



Place the end of the loop B2 under the loop A2.

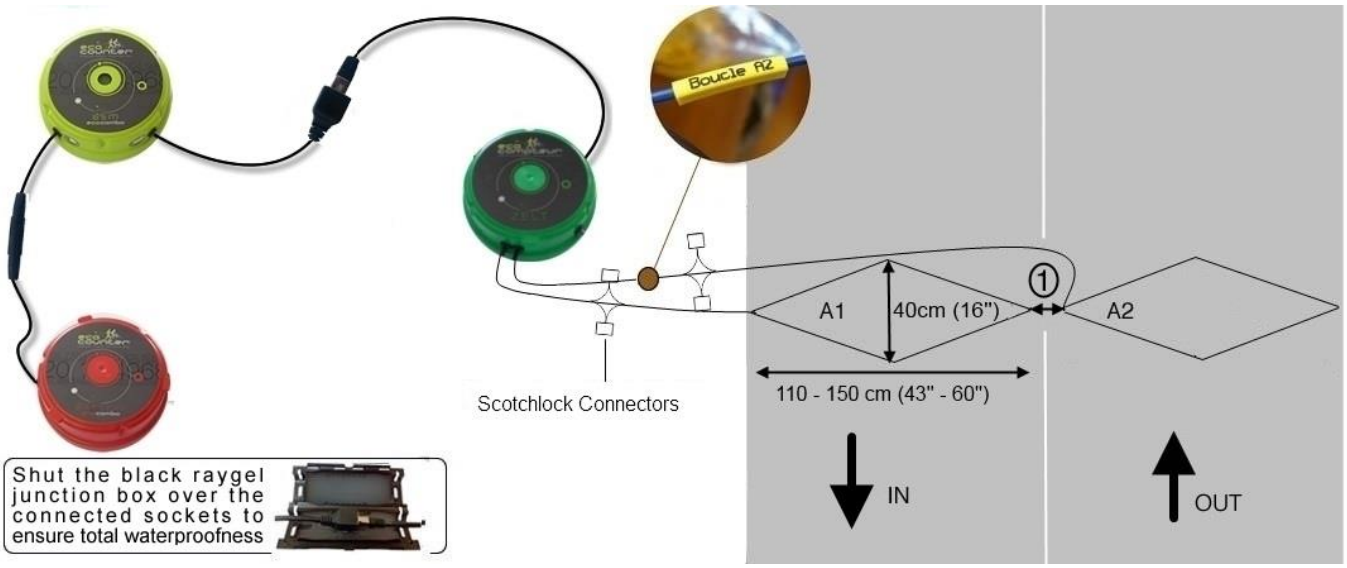
Place the end of the loop B1 under the loop A1.

Place the end of the loop C1 under the loops B1 and A1.

Place the end of the loop C2 under the loops B2 and A2.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

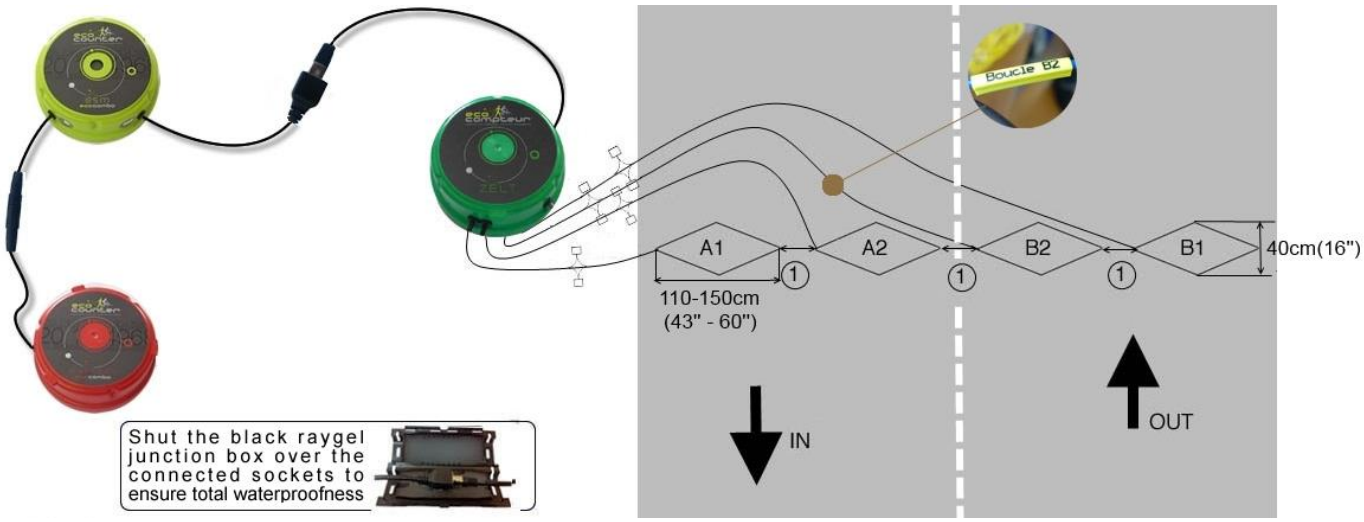
Installation of 2 Loops



Place the end of the loop A2 under the loop A1.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

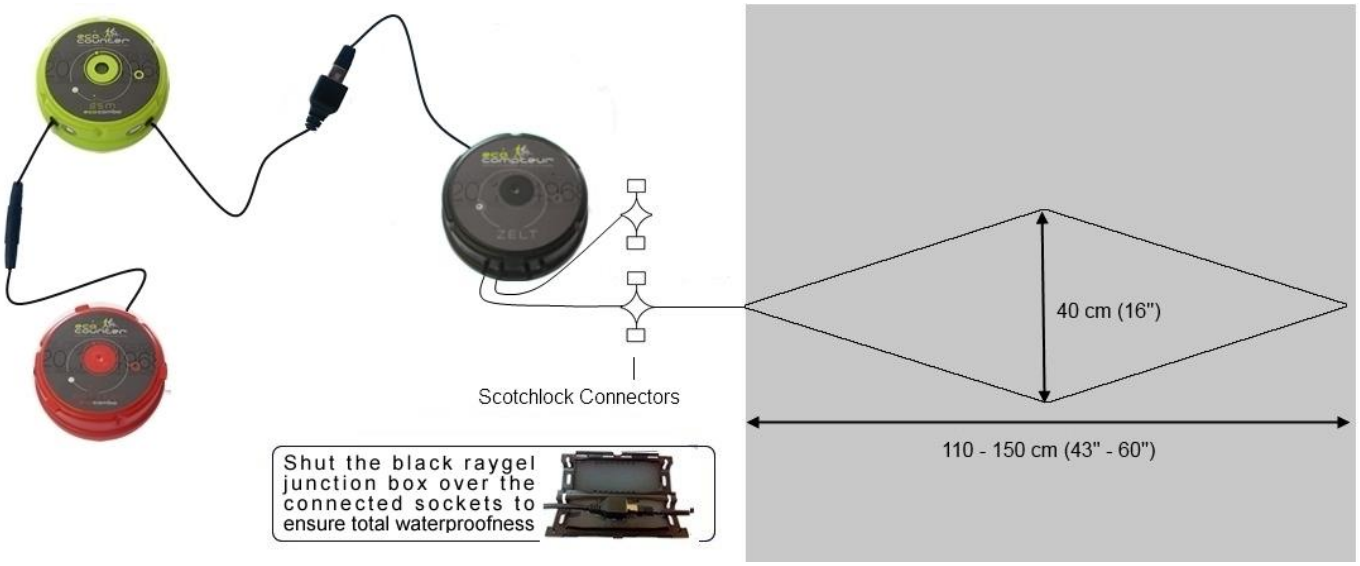
Installation of 4 Loops



1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

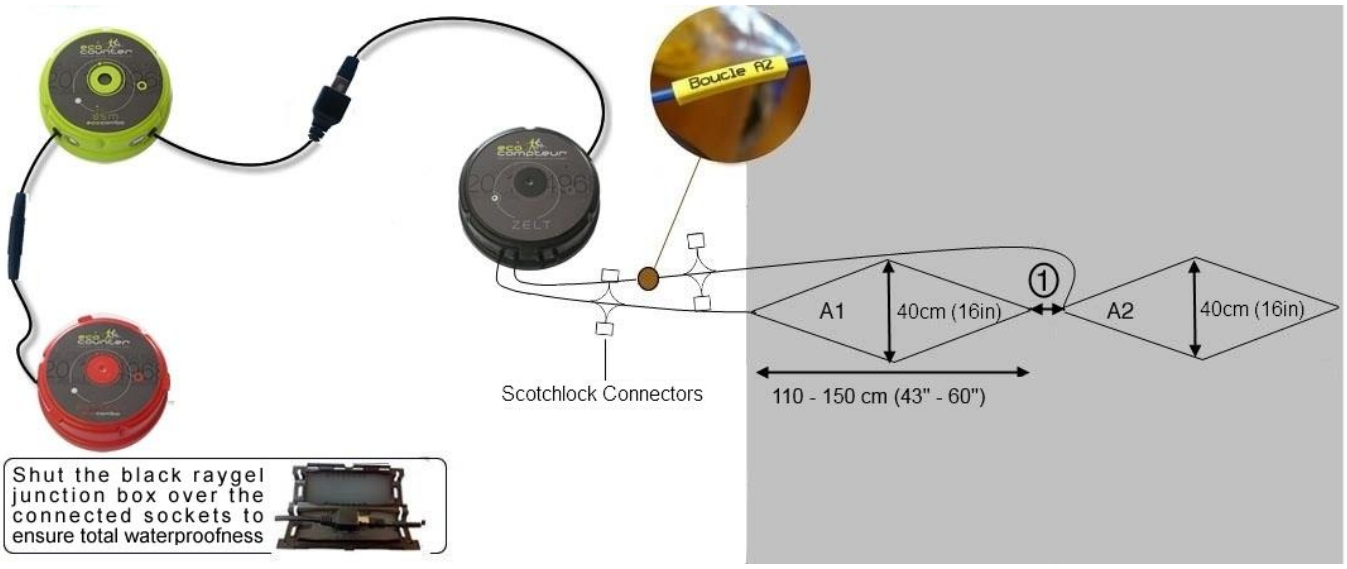
UNIDIRECTIONAL SYSTEMS

Installation of 1 Loop



In the case of the installation of 1 loop, disregard the second wire of the ZELT sensor. Close this wire with a Scotchlock connector.

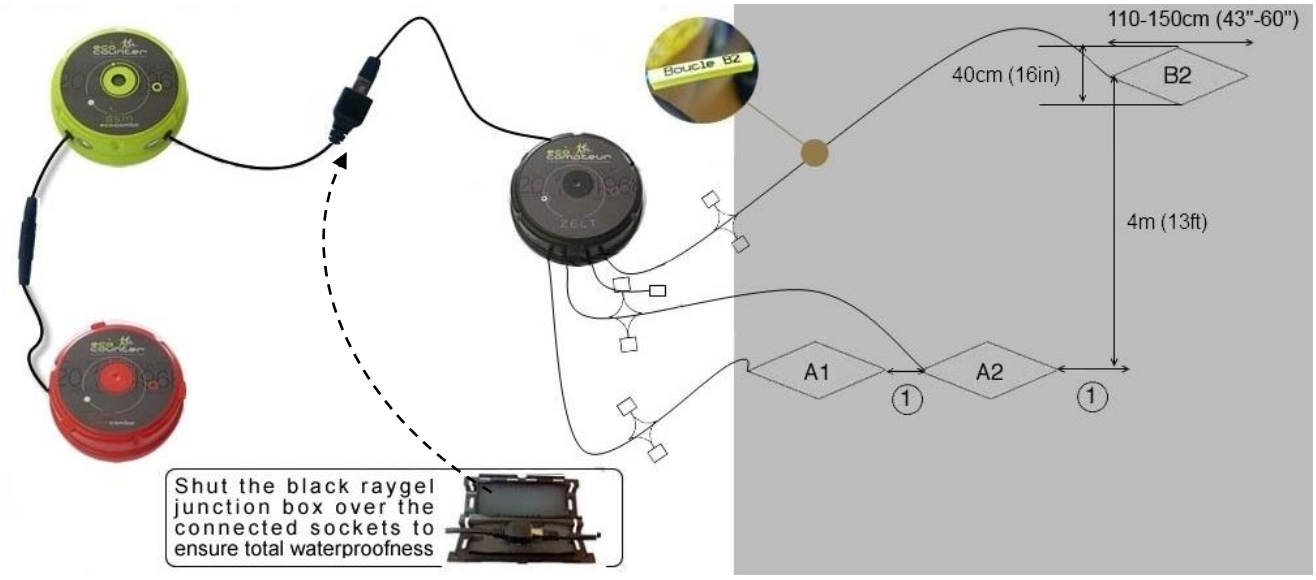
Installation of 2 Loops



Place the end of the loop A2 under the loop A1.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

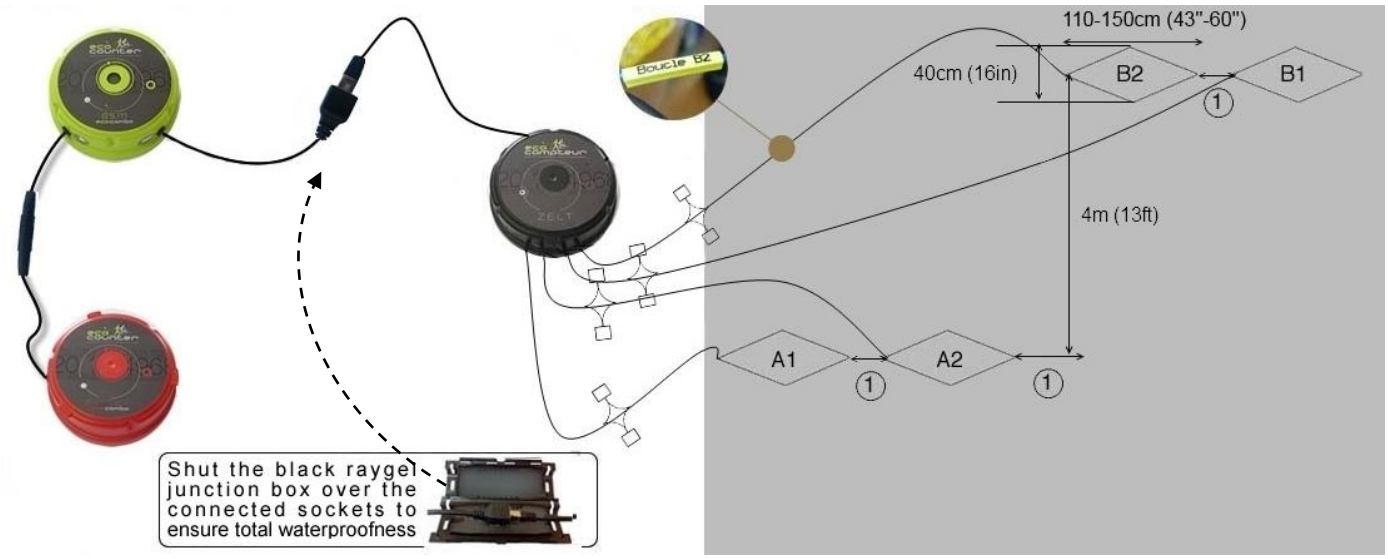
Installation of 3 Loops



Disregard the wire B1 of the ZELT sensor. Close this wire with a Scotchlock connector.

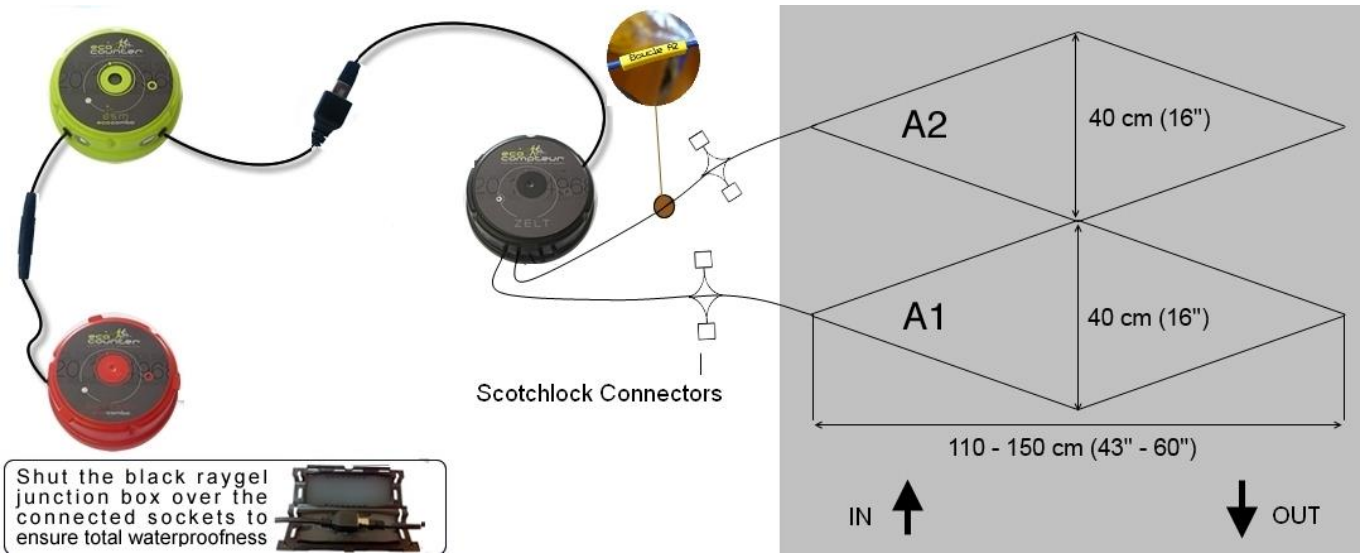
1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 4 Loops

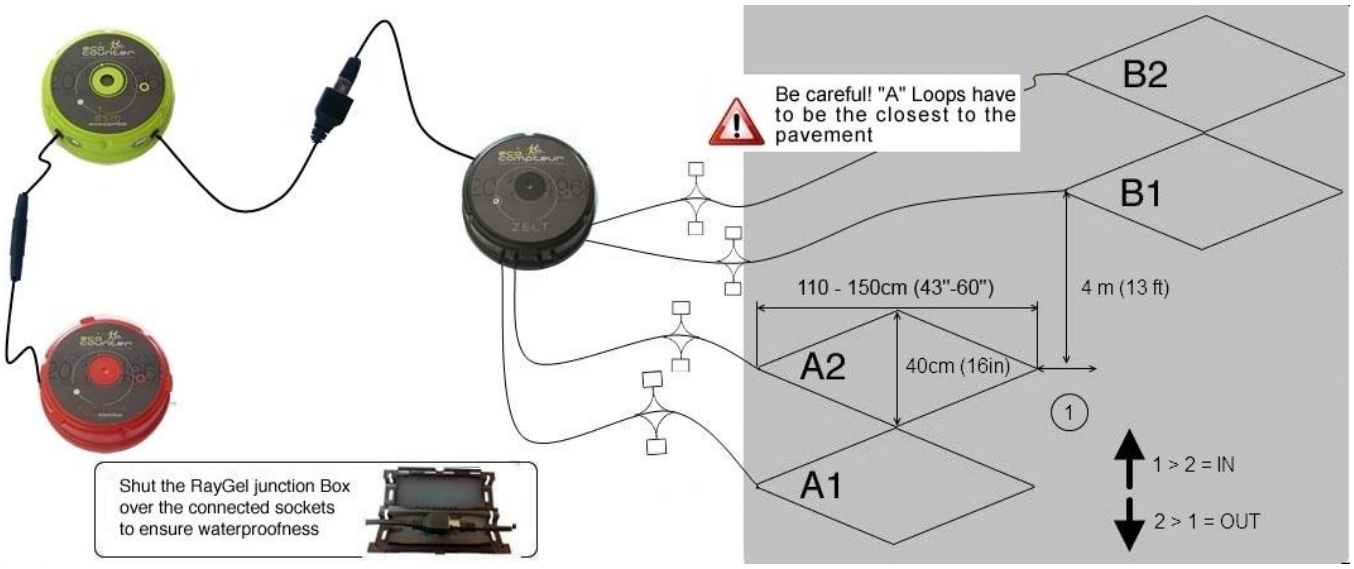


1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 2 Loops

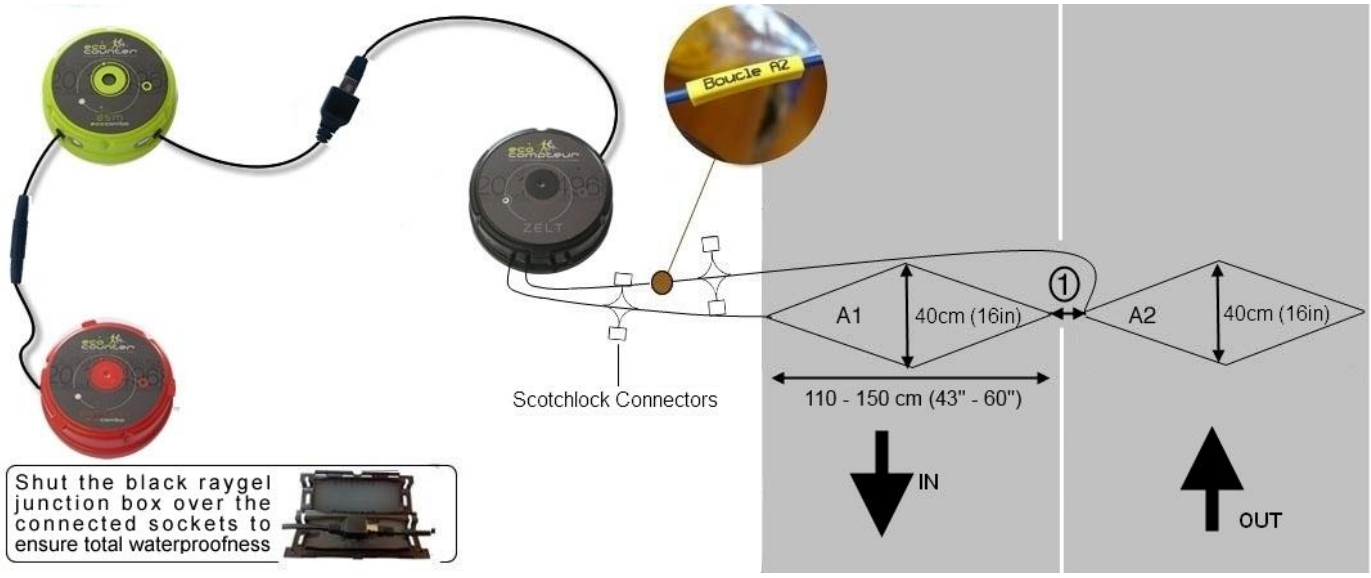


Installation of 2x2 Loops



(1) Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

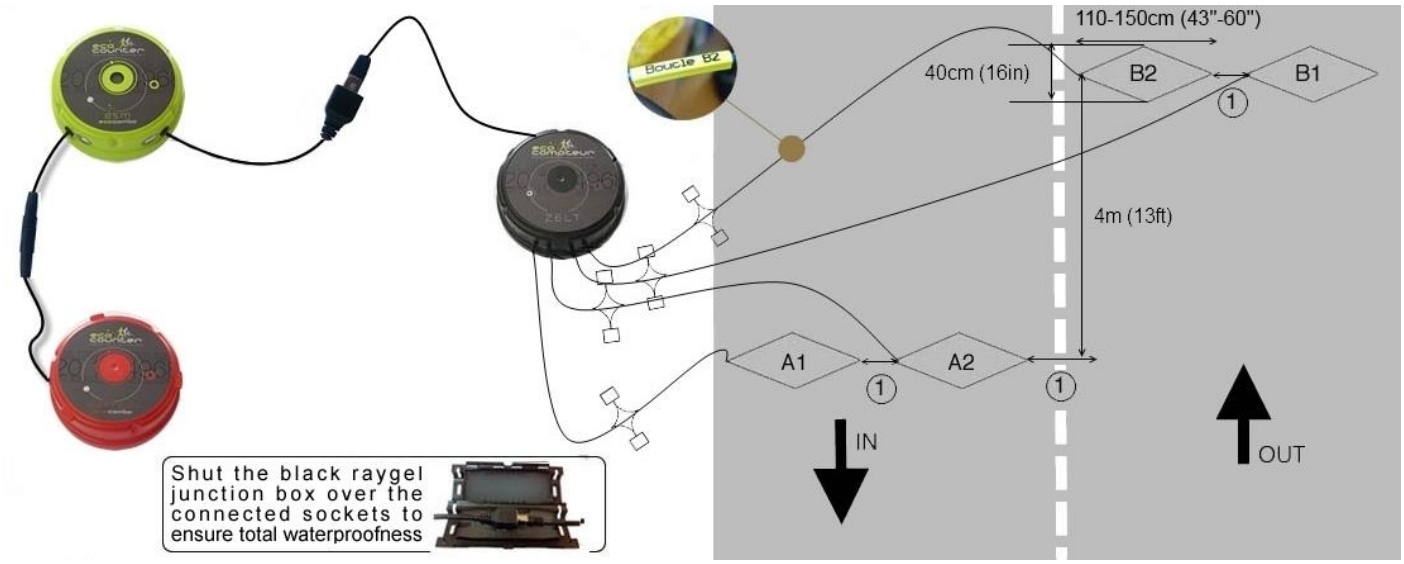
Installation of 2 Loops



Place the end of the loop A2 under the loop A1.

1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

Installation of 4 Loops



1 Refer to the chart on page 21 to apply the correct spacing to the length of the loops.

APPENDIX B - COUNTING SYSTEM - DESCRIPTION

THE COUNTING SYSTEM

The counting system works as follows:

1. The ZELT inductive loop detects the magnetic signature of the wheels of a bicycle and sends a signal to the Eco-Combo logger.

2. The Eco-Combo logger registers a count.

3. Data is retrieved manually using a magnetic key and the Eco-Link software
   OR
   Data is directly transmitted to a central server by GPRS (if you have an Eco-Combo with active automatic data transmission option).

4. Analyze the data by using the Eco-Visio online platform.

THE COMPONENTS

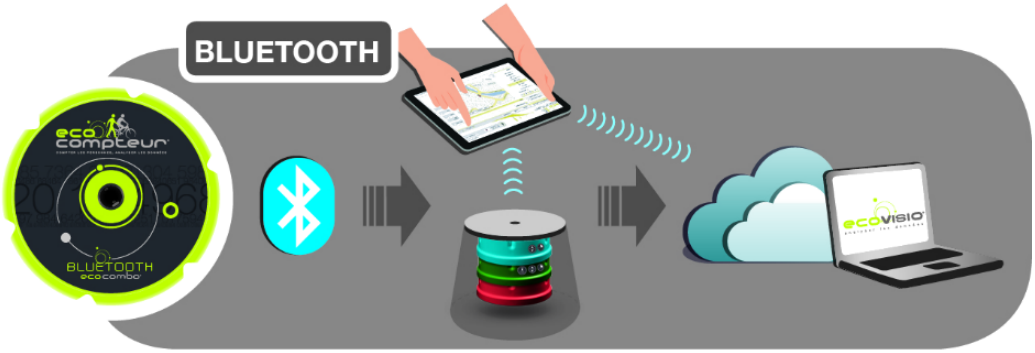
COUNTER

Eco-Combo Logger	*Battery Pack*
This intelligent logger collects, stores and transmits data - via a Bluetooth connection or automatic data transmission - to the online data management platform Eco-Visio.	The battery supplies power to the ZELT Sensor. On systems equipped with an active automatic data transmission option, it also supplies power to the modem which sends data automatically.

ZELT Sensor
 Zelt Greenways *Zelt Selective* The ZELT Sensor precisely analyzes the electromagnetic signature of each bicycle wheel, with 13 differentiation criteria. One Zelt Sensor can be connected to up to four loops. The ZELT Greenways Sensor is Specifically designed to monitor bicycles on dedicated bicycle lanes and greenways. The ZELT Selective sensor is specifically designed to monitor bicycles on roads in mixed traffic (bicycle lanes, sharedbicycle/bus lanes). It ignores motorized vehicles (scooters, motorbikes, cars, and buses).

SOFTWARE

DATA RETRIEVAL: ECO-LINK



Eco-Link is a software program which enables users to interact with Eco-Counters. Eco-link allows users to:

- Retrieve data from an Eco-Counter manually (a necessary step for Eco-Counters without active automatic data transmission option).
- Transfer data to Eco-visio online software.
- Modify the sensors settings.

- List of compatible devices:

  - Laptop: The laptop must be equipped with a compatible Bluetooth connection.

    Bluetooth compatibility test: https://www.eco-visio.net/Download/bluetooth-test-en.exe

    Eco-Link: https://www.eco-visio.net/Download/ecolink.zip

  - Tablet or Smartphone: The device must run with Android OS.

    Download Eco-Link via the Google Playstore.

DATA ANALYSIS: ECO-VISIO

Eco-Visio is an online platform that can be used to analyze data, edit reports, manage counting sites, etc. This platform is accessed via the Eco-Counter website by logging in with a username and password.

Please refer to the document *Eco-Visio: Quick Start Guide* to know how to proceed.

APPENDIX C - USEFUL INFORMATION FOR ELECTRICAL CONNECTIONS

MANHOLE

If a manhole is being used, we recommend positioning the battery in the bottom in order for it to be replaced as easily as possible.

ETHERNET CONNECTORS

- Shut the black Raygel junction box over the connected Ethernet sockets to ensure total waterproofness.

- If you have to leave an Ethernet connector unplugged, protect it using the cap supplied and shut a black Raygel junction box over it.

FOUR PINS CONNECTORS

- Carefully connect the male socket to the female socket making sure they front each other.

- The four pins connectors don’t need to be protected by a Raygel Junction Box.

- If you have to leave a four pins connector unplugged, protect it using the cap supplied.

APPENDIX D - CHECKING THE LEVEL OF GPRS COVERAGE

This procedure must be completed on the installation site, with the Eco-Combo logger and the battery pack.

- Required Equipment

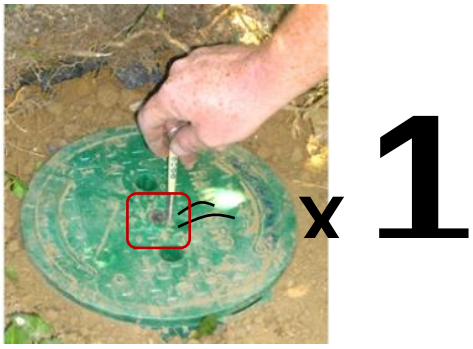
Magnetic key

Smartphone or tablet with Internet connection

- Procedure

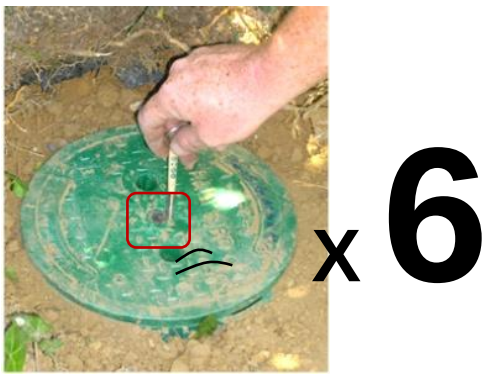
Verify the cellular network coverage on site by proceeding as follows:

1. Wake-up your Eco-Combo logger by waving the magnetic key over the activation zone.



While waving the magnetic key, the activation zone lights up green. It then flashes blue at regular interval when the Eco-Combo logger is awake.

2. Wave the magnetic key six times over the activation zone.



After waving the magnetic key, the Eco-Combo logger shows the following light signals:

1. Blue activation zone, 3 flashes
2. Blue activation zone, 2 flashes
3. Blue activation zone, 1 flash
4. Solid blue light in activation zone

3. When the activation zone is solid blue, go to the following webpage: http://eco-counter.net/status/

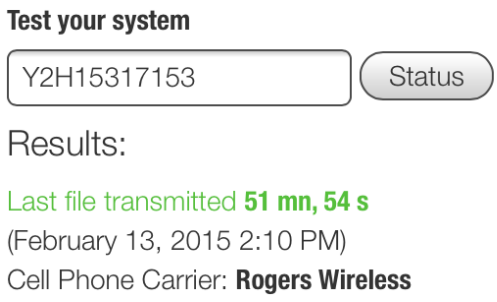
web

4. Type in the serial number of your Eco-Combo logger.

5. Click on Status.

The webpage gives you:

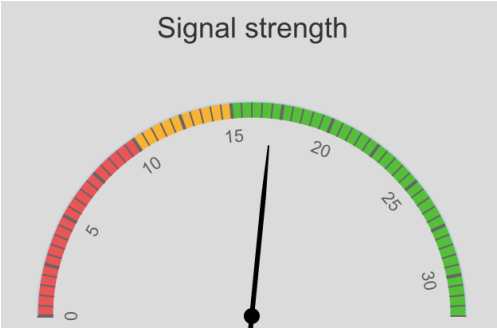
- The date and time when the counter communicated for the last time. Make sure that the date and time matches with the time when you waved the magnetic key six times over the activation zone.



If the date and time doesn’t match, proceed as follows:

- Leave the magnetic key over the activation zone until it switches off.
- Repeat the procedure again.

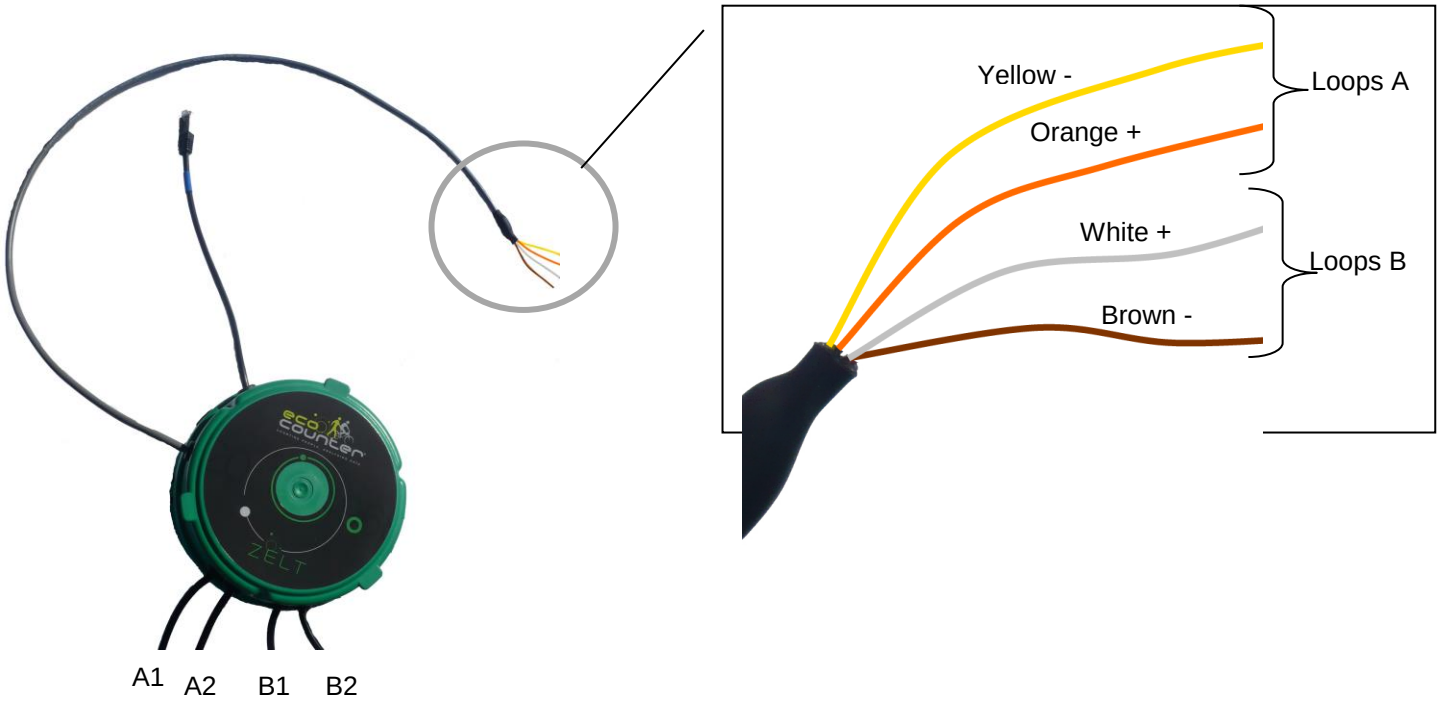
- The quality of the coverage.



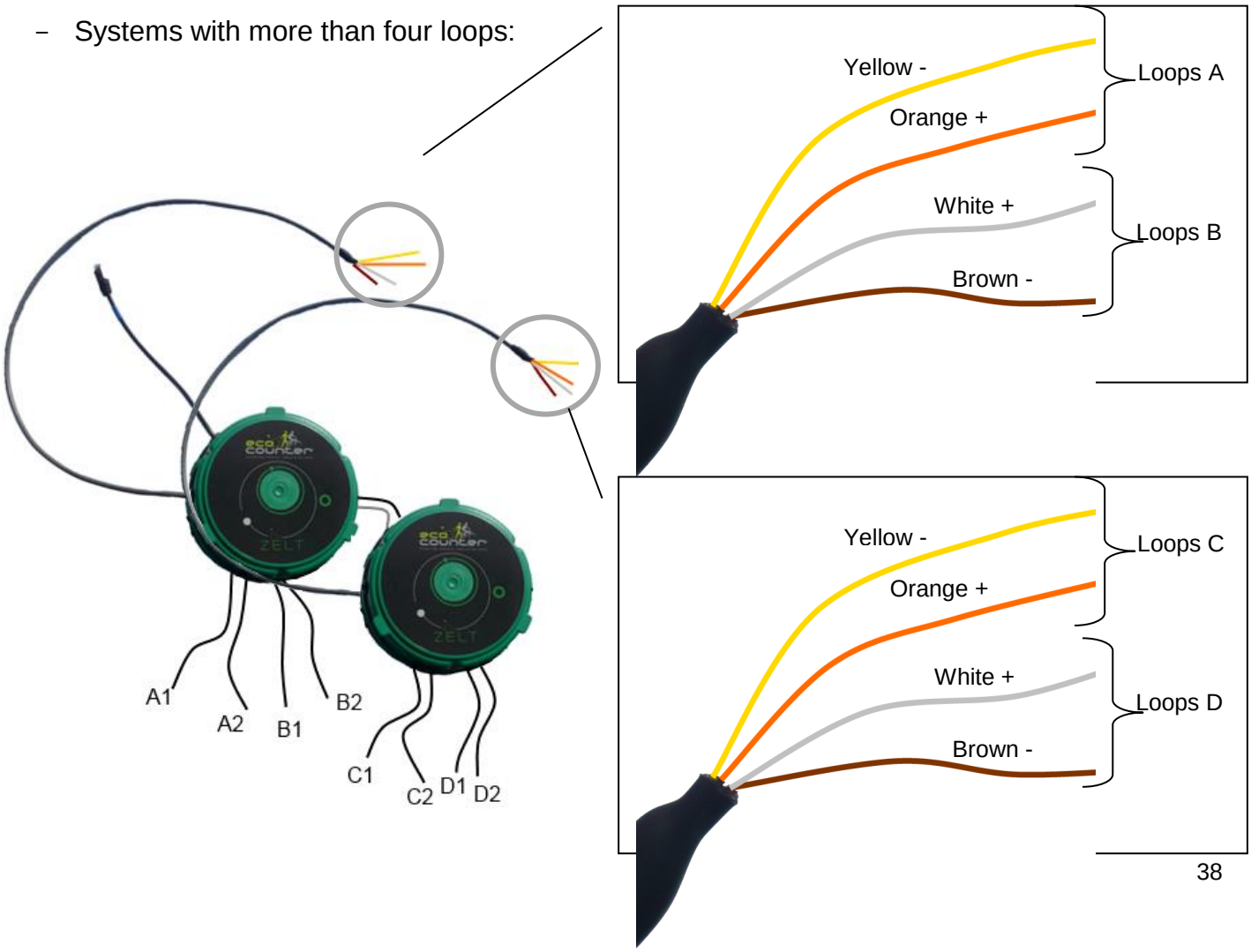
- If the indicator is in the red zone, the counter will not be able to send data, so do not install the counter at this location.
- If the indicator is in the orange zone, the counter may have difficulty sending data on a daily basis.

If you have ordered a ZELT System with dry contact output, your ZELT Sensor looks like this:

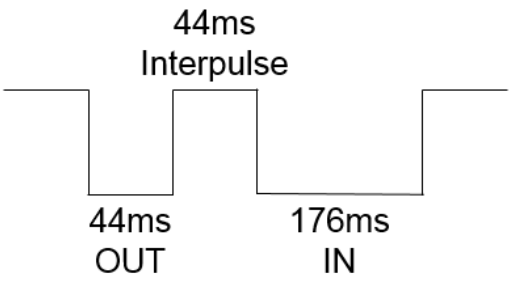
- Systems with one to four loops:



- Systems with more than four loops:



- The output signals are as shown:



HARDWARE

The entire system is under warranty for 2 years starting from the date printed on the warranty certificate (the warranty certificate is delivered with your product).

In the rare case that there is a problem with a part of your system, the product must be returned with the “After-sales return sheet”. Please contact us in order to obtain the ’After-sales return sheet’. The logger serial number (see the warranty certificate delivered with the product) must be reported on this ’after-sales return sheet’.

Pieces consistently damaged due to an improper installation or an improper use will be repaired or replaced and labour and material costs will be charged.

In the case of damage due to vandalism, a brief description of the damage will be necessary in order to be able to distinguish which parts will need to be replaced and which will be delivered.

SOFTWARE

Problems related to the use of the software can usually be dealt with remotely.

Please do not hesitate to contact the Customer Service for assistance:

Europe / World

Tel: +33 (0)2.96.48.48.83

Fax: +33 (0)2.96.48.69.60

Email: support@eco-counter.com

North America

Toll Free: 1-866-518-4404

Phone: 1-514-849-9779

Email: help@eco-counter.com

COUNTING PEOPLE, ANALYSING DATA

ZELT in asphalt-Installation Guide -2/24/2016 - ENG

AGREEMENT

BETWEEN

CITY OF BLOOMINGTON

PLANNING AND TRANSPORTATION DEPARTMENT

AND

CONTRACTOR

FOR

PROJECT NAME

THIS AGREEMENT, executed by and between the City of Bloomington, Indiana, Planning and Transportation Department through the Board of Public Works (hereinafter CITY), and _____, (hereinafter CONTRACTOR);

WITNESSETH THAT:

WHEREAS, CITY desires to retain CONTRACTOR'S services for **SCOPE OF WORK** (more particularly described in Attachment A, "Scope of Work"; and

WHEREAS, CONTRACTOR is capable of performing work as per his/her Bid on the Bid Summary sheet; and

WHEREAS, in accordance with Indiana Code 5-16-13 *et seq*., incorporated herein by reference, Contractor is a Tier 1 or General Contractor for this project; and

WHEREAS, CONTRACTOR was determined to be the lowest responsible and responsive Bidder for said project.

NOW, THEREFORE, in consideration of the mutual promises hereinafter enumerated, the parties agree as follows:

ARTICLE 1. TERM

1.01 This Agreement shall be in effect upon execution of this Agreement by all parties. In accordance with Indiana Code 5-16-13 *et seq*., incorporated herein by reference, Contractor is a Tier 1 contractor or general contractor for this project.

ARTICLE 2. SERVICES

2.01 CONTRACTOR shall complete all work required under this Agreement on or before _____, unless the parties mutually agree to a later completion date. Substantial Completion shall mean completion of all work.

2.02 It is hereby understood by both parties that time is of the essence in this Agreement. Failure of CONTRACTOR to complete all work as herein provided will result in monetary damages to CITY. It is hereby agreed that CITY will be damaged for every day the work has not been performed in the manner herein provided and that the measure of those damages shall be determined by reference Section 13.00 of the General Conditions for Each Day of Overrun in Contract Time. CONTRACTOR agrees to pay CITY said damages or, in the alternative, CITY, at its sole discretion, may withhold monies otherwise due CONTRACTOR. It is expressly understood by the parties hereto that these damages relate to the time of performance and do not limit CITY's other remedies under this Agreement, or as provided by applicable law, for other damages.

2.03 CONTRACTOR agrees that no charges or claims for damages shall be made by him for any delays or hindrances, from any cause whatsoever during the progress of any portion of the services specified in the Agreement. Such delays or hindrances, if any, may be compensated for by an extension of time for a reasonable period as may be mutually agreed upon between the parties, it being understood, however, that permitting CONTRACTOR to proceed to complete any service, or any part of the services / project, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of CITY of any of its rights herein.

ARTICLE 3. COMPENSATION

3.01 CONTRACTOR shall provide services as specified in Attachment A, "Scope of Work", attached hereto and incorporated into this Agreement.

3.02 Upon the submittal of approved claims, CITY shall compensate CONTRACTOR in a lump sum not to exceed _____. CITY may withhold payment, in whole or in part, to the extent necessary to protect itself from a loss on account of any of the following:

Defective work.

Evidence indicating the probable filing of claims by other parties against CONTRACTOR which may adversely affect CITY.

Failure of CONTRACTOR to make payments due to subcontractors, material suppliers or employees.

Damage to CITY or a third party.

3.03 The submission of any request for payment shall be deemed a waiver and release by CONTRACTOR of all liens and claims with respect to the work and period to which such payment request pertains except as specifically reserved and noted on such request.

3.04 CONTRACTOR shall maintain proper account records for the scope of all services of this Agreement and provide an accounting for all charges and expenditures as may be necessary for audit purposes. All such records shall be subject to inspection and examination by CITY's representatives at reasonable business hours.

3.05 For projects utilizing federal funding the CONTRACTOR shall submit time sheets (WH-347) for his own and all subcontracted employees, to City Engineer or his representative for approval and review, including review for compliance with Davis Bacon requirements, if federal funds are used.

3.06 **Engineer** The City Engineer shall act as the CITY's representative and assume all duties and responsibilities and have all the rights and authority assigned to the Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4. **RETAINAGE**

For contracts in excess of $100,000, the Owner requires that retainage be held set out below.

4.01 **Escrow Agent** The retainage amount withheld shall be placed in an escrow account. First Financial Bank, Bloomington, Indiana, shall serve as the escrow agent.

4.02 **Retainage Amount** **The** escrow agent, Owner and Contractor shall enter into a written escrow agreement. Under that agreement, the Owner shall withhold ten percent (10%) of the dollar value of all work satisfactorily completed until the Contract work is fifty percent (50%) completed. No additional retainage shall be withheld on the remaining fifty percent (50%) of the Contract work. The escrow agent shall invest all escrowed principal in obligations selected by the escrow agent. The escrow agent shall be compensated for the agent's services by a reasonable fee, agreed upon by the parties, that is comparable with fees charged for the handling of escrow accounts of similar size and duration. The fee shall be paid from the escrow income. The escrow agent's fee may be determined by specifying an amount of interest the escrow agent will pay on the escrowed amount, with any additional earned interest serving as the escrow agent's fee. The escrow agreement may include other terms and conditions as deemed necessary by the parties.

4.03 **Payment of Escrow Amount** The escrow agent shall hold the escrowed principal and income until receipt of the notice from the Owner and Contractor that the Contract work has been substantially completed to the reasonable satisfaction of the Owner, at which time the Owner shall pay to the Contractor the balance to be paid under this Contract and execute such documents as are necessary to authorize the escrow agent to pay to the Contractor the funds in the escrow account, including both specifying the part of the escrowed principal to be released from the escrow and the person to whom that portion is to be released. After receipt of the notice, the escrow agent shall remit the designated part of the escrowed principal and the escrowed income, minus the escrow agent's fees, to the person specified in the notice. However, nothing in this section shall prohibit Owner from requiring the escrow agent to withhold amounts necessary to complete minor items of the Contract, following substantial completion of the Contract in accordance with the provisions of paragraph 4.04.

4.04 **Withholding Funds for Completion of Contract** **If**, upon substantial completion of the Contract, there still remains minor Contract work that needs to be completed, or minor Contract work that needs to be performed to the satisfaction of the Owner, Owner may direct the escrow agent to retain in the escrow account, and withhold from payment to the Contractor, an amount equal to two hundred percent (200%) of the value of said work. The value of said work shall be determined by the architect/engineer. The escrow agent shall release the funds withheld under this section after receipt of notice from the Owner that all work on the Contract has been satisfactorily completed. In the event that said work is not completed by the Contractor, but by Owner or another party under contract with the Owner, said funds shall be released to the Owner.

ARTICLE 5. **GENERAL PROVISIONS**

5.01 CONTRACTOR agrees to indemnify and hold harmless CITY and its officers, agents, officials and employees for any and all claims, actions, causes of action, judgments and liens arising out of any negligent act or omission by CONTRACTOR or any of its officers, agents, officials, employees, or subcontractors or any defect in materials or workmanship of any supply, materials, mechanism or other product or service which it or any of its officers, agents, officials, employees, or subcontractors has supplied to CITY or has used in connection with this Agreement and regardless of whether or not it is caused in part by a

party indemnified herein under. Such indemnity shall include attorney's fees and all costs and other expenses arising there from or incurred in connection therewith and shall not be limited by reason of the enumeration of any insurance coverage required herein.

5.02 Abandonment, Default and Termination

5.02.01 CITY shall have the right to abandon the work contracted for in this Agreement without penalty. If CITY abandons the work described herein, CONTRACTOR shall deliver to CITY all surveys, notes, drawings, specifications and estimates completed or partially completed and these shall become the property of CITY. The earned value of the work performed shall be based upon an estimate of the proportion between the work performed by CONTRACTOR under this Agreement and the work which CONTRACTOR was obligated to perform under this Agreement. This proportion shall be mutually agreed upon by CITY and CONTRACTOR. The payment made to CONTRACTOR shall be paid as a final payment in full settlement of his services hereunder.

5.02.02 If CONTRACTOR defaults or fails to fulfill in a timely and proper manner the obligations pursuant to this Agreement, CITY may, after seven (7) days' written notice has been delivered to CONTRACTOR, and without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due to CONTRACTOR. In the alternative, CITY, at its option, may terminate this Agreement and take possession of the site and of all materials, equipment, tools and construction equipment and machinery thereon owned by CONTRACTOR, and may finish the project by whatever method it may deem expedient, and if the such action exceeds the unpaid balance of the sum amount, CONTRACTOR or his surety, shall pay the difference to CITY.

5.02.03 **Default**: If CONTRACTOR breaches this Agreement or fails to perform the work in an acceptable manner, he shall be considered in default. Any one or more of the following will be considered a default:

Failure to begin the work under this Agreement within the time specified.

Failure to perform the work with sufficient supervision, workmen, equipment and materials to insure prompt completion of said work within the time limits allowed.

Unsuitable performance of the work as determined by CITY ENGINEER or his representative.

Neglecting or refusing to remove defective materials or failure to perform anew such work as shall have been rejected.

Discontinuing the prosecution of the work or any part of it.

Inability to finance the work adequately.

If, for any other reason, CONTRACTOR breaches this Agreement or fails to carry on the work in an acceptable manner.

5.02.04 CITY shall send CONTRACTOR a written notice of default. If CONTRACTOR, or his Surety, within a period of ten (10) days after such notice, fails to remedy the default, then CITY shall have full power and authority, without violation of the Contract, to take the prosecution of the work out of the hands of said CONTRACTOR, to appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable, and may, at its option, turn the work over to the Surety, or enter into an agreement with another Contractor for the completion of the Agreement according to the terms and provisions thereof, or CITY may use such other methods as, in its opinion, shall be required for the completion of said Contract in an acceptable manner.

5.02.05 All cost of completing the work under the Contract shall be deducted from the monies due or which may become due to said CONTRACTOR. In case the expenses so incurred by CITY shall be less than the sum which would have been payable under the Contract if it had been completed by said CONTRACTOR, CONTRACTOR shall be entitled to receive the difference.

However, in case such expense shall exceed the sum which would have been payable under the Contract, CONTRACTOR and his Surety will be liable and shall pay to CITY the amount of said excess. By taking over the prosecution of the work, CITY does not forfeit the right to recover damages from CONTRACTOR or his Surety for his failure to complete the work in the time specified.

5.02.06 Notwithstanding any other provision of this Agreement, if funds for the continued fulfillment of the Agreement by CITY are at any time not forthcoming or are insufficient, through failure of any entity to appropriate the funds or otherwise, then CITY shall have the right to terminate this Agreement without penalty by giving prior written notice documenting the lack of funding in which instance, unless otherwise agreed to by the parties, this Agreement shall terminate and become null and void.

5.02.07 CITY agrees that it will make its best effort to obtain sufficient funds, including but not limited to, including in its budget for each fiscal period during the term hereof a request for sufficient funds to meet its obligations hereunder in full.

5.03 Successors and Assigns

5.03.01 Both parties agree that for the purpose of this Agreement, CONTRACTOR shall be an Independent Contractor and not an employee of CITY.

5.03.02 No portion of this Agreement shall be sublet, assigned, transferred or otherwise disposed of by CONTRACTOR except with the written consent of CITY being first obtained. Consent to sublet, assign, transfer, or otherwise dispose of any portion of this Agreement shall not be construed to relieve CONTRACTOR of any responsibility of the fulfillment of this Agreement.

5.04 Extent of Agreement: Integration

5.04.01 This Agreement consists of the following parts, each of which is as fully a part of this Agreement as if set out herein:

1. This Agreement and its Attachments.
2. All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto.
3. All Addenda to the Bid Documents.
4. The Invitation to Bidders.
5. The Instructions to Bidders.
6. The Special Conditions.
7. All plans as provided for the work that is to be completed.
8. The Supplementary Conditions.
9. The General Conditions.
10. The Specifications.
11. The current Indiana Department of Transportation Standard Specifications and the latest addenda.
12. CONTRACTOR'S submittals.
13. The Performance and Payment Bonds.
14. The Escrow Agreement.
15. Request for Taxpayer Identification number and certification: Substitute W-9.

5.04.02 In resolving conflicts, errors, discrepancies and disputes concerning the Scope of Work to be performed by CONTRACTOR, and other rights and obligations of CITY and CONTRACTOR, the document expressing the greater quantity, quality or other scope of work in question, or imposing the greater obligation upon CONTRACTOR and affording the greater right or remedy to CITY shall govern; otherwise the documents shall be given precedence in the order as enumerated above.

5.05 Insurance

5.05.01

CONTRACTOR shall, as a prerequisite to this Agreement, purchase and thereafter maintain such insurance as will protect him from the claims set forth below which may arise out of or result from CONTRACTOR'S operations under this Agreement, whether such operations be by CONTRACTOR or by any SUBCONTRACTORS or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

Coverage		Limits
A.	Worker's Compensation & Disability	Statutory Requirements
B.	Employer's Liability Bodily Injury by Accident	$100,000 each accident
	Bodily Injury by Disease	$500,000 policy limit
	Bodily Injury by Disease	$100,000 each employee
C.	Commercial General Liability (Occurrence Basis) Bodily Injury, personal injury, property damage, contractual liability, products-completed operations, General Aggregate Limit (other than Products/Completed Operations)	$1,000,000 per occurrence and $2,000,000 in the aggregate
	Products/Completed Operation	$1,000,000
	Personal & Advertising Injury Limit	$1,000,000
	Each Occurrence Limit	$1,000,000
	Fire Damage (any one fire)	$50,000
D.	Comprehensive Auto Liability (single limit, owned, hired and non-owned)	$1,000,000 each accident
	Bodily injury and property damage	

E.	Umbrella Excess Liability	$5,000,000 each occurrence and aggregate
	The Deductible on the Umbrella Liability shall not be more than	$10,000

5.05.02 CONTRACTOR'S comprehensive general liability insurance shall also provide coverage for the following:

Premises and operations;

Contractual liability insurance as applicable to any hold-harmless agreements;

Completed operations and products; which also must be maintained for a minimum period of two (2) years after final payment and CONTRACTOR shall continue to provide evidence of such coverage to CITY on an annual basis during the aforementioned period;

Broad form property damage - including completed operations;

Fellow employee claims under Personal Injury; and

Independent Contractors.

5.05.03 With the prior written approval of CITY, CONTRACTOR may substitute different types or amounts of coverage for those specified as long as the total amount of required protection is not reduced.

5.05.04 Certificates of Insurance showing such coverage then in force (but not less than the amount shown above) shall be on file with CITY prior to commencement of work. These Certificates shall contain a provision that coverage afforded under the policies will not be canceled or non-renewed until at least sixty (60) days' prior written notice has been received by CITY. The CITY shall be named as an additional insured on the Commercial General Liability, Automobile Liability, and Umbrella Excess Liability policies. The CONTRACTOR shall agree to a waiver of subrogation on its Worker's Compensation policy.

5.06 **Necessary Documentation** CONTRACTOR certifies that it will furnish CITY any and all documentation, certification, authorization, license, permit or registration required by the laws or rules and regulations of the City of Bloomington, the State of Indiana and the United States. CONTRACTOR further certifies that it is now and will maintain in good standing with such governmental agencies and that it will keep its license, permit registration, authorization or certification in force during the term of this Agreement.

5.07 **Applicable Laws** CONTRACTOR agrees to comply with all federal, state, and local laws, rules and regulations applicable to CONTRACTOR in performing work pursuant to this Agreement, including, but not limited to, discrimination in employment, prevailing wage laws, conflicts of interest, public notice, accounting records and requirements. This Agreement shall be governed by the laws of the United States, and the State of Indiana, and by all Municipal Ordinances and Codes of the City of Bloomington. Venue of any disputes arising under this Agreement shall be in the Monroe Circuit Court, Monroe County, Indiana.

5.08 **Non-Discrimination**

5.08.01 CONTRACTOR and subcontractors shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to hire, tenure, terms, training, conditions or privileges of employment, because of race, sex, color, religion, national origin, ancestry, disability, sexual orientation, gender identity, veteran status, or housing status. Breach of this covenant may be regarded as a material breach of the Agreement.

5.08.02 CONTRACTOR certifies for itself and all its subcontractors compliance with existing laws of the City of Bloomington, the State of Indiana and the United States regarding:

Prohibition of discrimination in employment practices on the basis of race, sex, color, religion, national origin, ancestry, disability, sexual orientation, gender identity, veteran status, housing status or any other legally protected classification;

The utilization of Minority and Women Business Enterprises. CONTRACTOR further certifies that it:

a. Has formulated its own Affirmation Action plan for the recruitment, training and employment of minorities and women, including goals and timetable; which has been approved by the City's Contract Compliance Officer.

b. Encourages the use of small business, minority-owned business and women-owned business in its operations.

5.08.03 FURTHER, PURSUANT TO INDIANA CODE 5-16-6-1, CONTRACTOR AGREES:

A) That in the hiring of employees for the performance of work under this Agreement or any sub agreement hereunder, no contractor, or subcontractor, nor any person acting on behalf of such CONTRACTOR or subcontractor, shall by reason of race, sex, color, religion, national origin, ancestry, or any other legally protected classification, discriminate against any citizen of the State of Indiana who is qualified and available to perform the work to which the employment relates.

B) That no contractor, subcontractor, or any person on their behalf, shall, in any manner, discriminate against or intimidate any employee hired for performance of work under this Agreement on account of race, religion, color, sex, national origin, ancestry or any other legally protected classification.

C) That there may be deducted from the amount payable to CONTRACTOR, by CITY, under this Agreement, penalty of Five Dollars ($5.00) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of this Agreement. Any such person discriminated against retains the right to file a discrimination complaint with the appropriate civil rights agency or court.

D) That this Agreement may be canceled or terminated by CITY and all money due or to become hereunder may be forfeited, for a second or any subsequent violations of the terms or conditions under this section of the Agreement.

5.09 Workmanship and Quality of Materials

5.09.01 CONTRACTOR shall guarantee the work for a period of one (1) year from the date of substantial completion. Failure of any portion of the work within one (1) year due to improper construction, materials of construction, or design may result in a refund to CITY of the purchase price of that portion which failed or may result in the forfeiture of CONTRACTOR's Performance Bond.

5.09.02 OR EQUAL: Wherever in any of the Agreement Documents an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer or vender, the term "Or Equal" or the term "The Equivalent" if not inserted, shall be implied, and it is done for the express purpose of establishing a basis of durability and efficiency and not for the purpose of limiting completion. Whenever material or equipment is submitted for approval as being equal to that specified, the submittal shall include sufficient information and data to demonstrate that the material or equipment conforms to the Contract requirements. The decision as to whether or not such material or equipment is equal to that specified shall be made by the ENGINEER. The approval by the ENGINEER of alternate material or equipment as being equivalent to that specified, shall not in any way relieve CONTRACTOR of responsibility for failure of the material or equipment due to faulty design, material, or workmanship, to perform the function required by the Contract Documents. Specifications as determined by other entities within the City of Bloomington such as City Utilities shall only be substituted or changed by their approval which shall be submitted in writing to the ENGINEER.

5.09.03 CITY shall be the sole judge of the sufficiency of workmanship and quality of materials. Disputes shall be resolved by the Director of Public Works and are not subject to arbitration.

5.10 Safety. CONTRACTOR shall be responsible for the safety of employees at all times and shall provide all equipment necessary to insure their safety. CONTRACTOR shall ensure the enforcement of all applicable safety rules, regulations, ordinances and laws, whether federal, state or local. Contractor's Superintendent of Safety shall make daily inspections upon the arrival and leaving of the site at the close of each workday.

5.11 Amendments/Changes

5.11.01 Except as provided in Paragraph 5.11.02, this Agreement may be amended only by written instrument signed by both CITY and CONTRACTOR.

5.11.02 Without invalidating the Agreement and without notice to any surety, CITY may, at any time or from time to time, order, in writing, additions, deletions, or revisions in the work. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the work involved, which will be performed under the applicable conditions of the Agreement Documents.

5.11.03 If CONTRACTOR believes that any direction of CITY under paragraph 5.11.02, or any other event or condition, will result in an increase in the Contract time or price, he shall file written notice with CITY no later than twenty (20) calendar days after the occurrence of the event giving rise to the claim and stating the general nature of the claim with supporting data. No claim for any adjustment of the Contract time or price will be valid if not submitted in accordance with this Paragraph.

5.11.04 CONTRACTOR shall carry on the work and adhere to the progress schedule during all disputes or disagreements with CITY. No work shall be delayed or postponed pending resolution of any dispute or disagreement except as CONTRACTOR and CITY may otherwise agree in writing.

5.12 Performance Bond and Payment Bond

5.12.01 For contracts in excess of $100,000, CONTRACTOR shall provide CITY with a Performance Bond and a Payment Bond in the amount of one hundred percent (100%) of the contract amount.

5.12.02 Failure by CONTRACTOR to perform the work in a timely or satisfactory fashion may result in forfeiture of CONTRACTOR'S Performance Bond.

5.12.03 If the surety on any bond furnished by CONTRACTOR becomes a party to supervision, liquidation, or rehabilitation action pursuant Indiana Code 27-9 et seq. or its right to do business in the State of Indiana is terminated, CONTRACTOR shall, within thirty (30) calendar days thereafter, substitute another bond and surety, both of which must be acceptable to CITY.

5.13 Payment of Subcontractors CONTRACTOR shall pay all subcontractors, laborers, material suppliers and those performing services to CONTRACTOR on the project under this Agreement. CITY may, as a condition precedent to any payment hereunder, require CONTRACTOR to submit satisfactory evidence of payments of any and all claims of subcontractors, laborers, material suppliers, and those furnishing services to CONTRACTOR. Upon receipt of a lawful claim, CITY shall withhold money due to CONTRACTOR in a sufficient amount to pay the subcontractors, laborers, material suppliers, and those furnishing services to CONTRACTOR.

5.14 Written Notice Written notice shall be considered as served when delivered in person or sent by mail to the individual, firm, or corporation, or to the last business address of such known to CONTRACTOR who serves the Notice. Notice shall be sent as follows:

TO CITY:		TO CONTRACTOR:
City of Bloomington		
Attn: Roy Aten, Senior Project Manager		
P.O. Box 100 Suite 130		
Bloomington, Indiana 47402		

5.15 Severability and Waiver In the event that any clause or provision of this Agreement is held to be invalid by any court of competent jurisdiction, the invalidity of such clause or provision shall not affect any other provision of this Agreement. Failure of either party to insist on strict compliance with any provision of this Agreement shall not constitute waiver of that party's right to demand later compliance with the same or other provisions of this Agreement.

5.16 Notice to Proceed CONTRACTOR shall not begin the work pursuant to the "Scope of Work" of this Agreement until it receives an official written Notice to Proceed from the City. Contractor shall start active and continuous work on the Agreement within five (5) calendar days after the date of the Notice to Proceed. In no case shall work begin prior to the date of the Notice to Proceed. If a delayed starting date is indicated in the proposal, the five (5) calendar day limitation will be waived. Work day charges will then begin on a date mutually agreed upon, but not later than the delayed starting date specified. In the event that any Agreement is canceled after an award has been made but prior to the issuing of the Notice to Proceed, no reimbursement will be made for any expenses accrued relative to this contract during that period.

5.17 Steel or Foundry Products

5.17.01 To comply with Indiana Code 5-16-8, affecting all contracts for the construction, reconstruction, alteration, repair, improvement or maintenance of public works, the following provision shall be added: If steel or foundry products are to be utilized or supplied in the performance of any contract or subcontract, only domestic steel or foundry products shall be used. Should CITY feel that the cost of domestic steel or foundry products is unreasonable; CITY will notify CONTRACTOR in writing of this fact.

5.17.02 Domestic Steel products are defined as follows:

> "Products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two (2) or more of such operations, from steel made in the United States by open hearth, basic oxygen, electric furnace, Bessemer or other steel making process."

5.17.03 Domestic Foundry products are defined as follows:

> "Products cast from ferrous and nonferrous metals by foundries in the United States."

5.17.04 The United States is defined to include all territory subject to the jurisdiction of the United States.

5.17.05 CITY may not authorize or make any payment to CONTRACTOR unless CITY is satisfied that CONTRACTOR has fully complied with this provision.

5.18 Verification of Employees' Immigration Status

Contractor is required to enroll in and verify the work eligibility status of all newly-hired employees through the E-Verify program. (This is not required if the E-Verify program no longer exists). Contractor shall sign an affidavit, attached as Attachment B, affirming that Contractor does not knowingly employ an unauthorized alien. "Unauthorized alien" is defined at 8 U.S. Code 1324a(h)(3) as a person who is not a U.S. citizen or U.S. national and is not lawfully admitted for permanent residence or authorized to work in the U.S. under 8 U.S. Code Chapter 12 or by the U.S. Attorney General.

Contractor and any of its subcontractors may not knowingly employ or contract with an unauthorized alien, or retain an employee or contract with a person that the Contractor or any of its subcontractors learns is an unauthorized alien. If the City obtains information that the Contractor or any of its subcontractors employs or retains an employee who is an unauthorized alien, the City shall notify the Contractor or its subcontractors of the Agreement violation and require that the violation be remedied within thirty (30) calendar days of the date of notice. If the Contractor or any of its subcontractors verify the work eligibility status of the employee in question through the E-Verify program, there is a rebuttable presumption that the Contractor or its subcontractor did not knowingly employ an unauthorized alien. If the Contractor or its subcontractor fails to remedy the violation within the thirty (30) calendar day period, the City shall terminate the Agreement, unless the City determines that terminating the Agreement would be detrimental to the public interest or public property, in which case the City may allow the Agreement to remain in effect until the City procures a new contractor. If the City terminates the Agreement, the Contractor or its subcontractor is liable to the City for actual damages.

Contractor shall require any subcontractors performing work under this Agreement to certify to the Contractor that, at the time of certification, the subcontractor does not knowingly employ or contract with an unauthorized alien and the subcontractor has enrolled in and is participating in the E-Verify program. Contractor shall maintain on file all subcontractors' certifications throughout the term of this Agreement with the City.

IN WITNESS WHEREOF, the parties of this Agreement have hereunto set their hands.

DATE: _____

City of Bloomington
Bloomington Board of Public Works

BY:

_____
Kyla Cox Deckard, President, Board of Public Works

_____
Melanie Castillo-Cullather, Member, Board of Public Works

_____
Kelly Boatman, Member, Board of Public Works

_____
John Hamilton, Mayor of Bloomington

BY:

_____
Contractor Representative

_____
Printed Name

_____
Title of Contractor Representative

Attachment 'A'

"SCOPE OF WORK"

2016-PT-100 ACTIVITY COUNTERS INSTALLATION

This project shall include, but is not limited to the installation of eight Eco Counter Pedestrian and Cyclists Counters at eight different locations in Bloomington, Indiana. The counters and other materials listed in the 'Invitation to Quote' are being provided by the City of Bloomington. All other materials needed to complete the installation shall be provided by the Contractor. A map highlighting the locations where the counters are to be installed is included with the quote packet. All work shall be completed by May 15, 2017.

ATTACHMENT B

"AFFIDAVIT"

STATE OF INDIANA)

)SS:

COUNTY OF _____)

AFFIDAVIT

The undersigned, being duly sworn, hereby affirms and says that:

1. The undersigned is the _____ of _____.
   a. (job title) (company name)
2. The company named herein that employs the undersigned:
   i. has contracted with or seeking to contract with the City of Bloomington to provide services; **OR**
   ii. is a subcontractor on a contract to provide services to the City of Bloomington.
3. The undersigned hereby states that, to the best of his/her knowledge and belief, the company named herein does not knowingly employ an "unauthorized alien," as defined at 8 United States Code 1324a(h)(3).
4. The undersigned herby states that, to the best of his/her belief, the company named herein is enrolled in and participates in the E-verify program.

_____

Signature

_____

Printed Name

STATE OF INDIANA)

)SS:

COUNTY OF _____)

Before me, a Notary Public in and for said County and State, personally appeared _____ and acknowledged the execution of the foregoing this _____ day of _____, 20____.

_____

Notary Public's Signature

_____

Printed Name of Notary Public

My Commission Expires: _____

County of Residence: _____