

# PBP.I02 Instructions for conducting earthworks

## 1. PURPOSE OF INSTRUCTIONS

To provide for the proper organization, safe conduct, and proper supervision of earthwork operations.

## 2. SCOPE OF INSTRUCTIONS

The provisions of the Instruction shall apply to earth moving works performed by employees of all companies operating within the premises of PCC Rokita SA and by external companies commissioned to perform earth moving works within the premises of PCC Rokita SA. The Director of the Office of Security and Prevention is responsible for overseeing the implementation of the manual.

## 3. BEST PRACTICES

### 3.1 DEFINITIONS AND ABBREVIATIONS

No.	Name	Definition of the name
1.	Earthworks	Any work involving excavation of soil, interference with the subsoil, removal of excavated material, relocation or suitable shaping. Earthworks are carried out when we talk about works related to forging, drilling of underground structures or foundations of above-ground structures, shaping of the ground, shaping of the subsoil for various surfaces, construction of underground utilities (including: removal of concrete elements, which require penetration into the ground, drilling of geological boreholes and planting of plants). In addition, earthwork is the work of laying and compacting the earth mass in places where there is a danger of damaging any underground or aboveground infrastructure. Earthwork may be done by mechanical or manual methods.
2.	Local approval for earthworks	Document approval to perform the work for the period of time specified by the coordinator in para. 3 of the "Local Permit for Earthworks", provided that only those works specified in the scope of work i.e. para. 2 of the "Local Earthwork Permit" in a well-defined and clearly pre-designated area. Marking shall be done with stakes or geodesic spray.
3.	Conditions for conducting earthworks	A document in which the conditions for conducting works are determined by all owners of underground networks by writing guidelines in the appropriate sections of "Conditions for conducting earthworks".
4.	One-day approval for earthwork	A document issued on the basis of "earthwork conditions" prepared by the coordinator before the start of work on a given day.
5.	Work order	A document authorizing to conduct earthworks within the area of underground utility networks, including: devices, installations and networks of power and energy.
6.	Earthworks coordinator	Pursuant to the provisions of the "Instruction on the safe organization of renovation, modernization, construction and investment works", this is a supervisory employee with appropriate knowledge of the place, site and installation where the works are to be carried out, designated by name in the handover protocol (e.g. head of the organizational unit, master, specialist) or a person indicated by the work coordinator. This person must have completed periodic training for supervisors and the required training for coordinators.
7.	Principal map	A section from the base map showing the area in which the earthwork is expected to take place. The base map is available in PCT Process as a system application. Available to work coordinators upon request to <a href="mailto:pomoc@pcc.eu">pomoc@pcc.eu</a> for installation.

### 3.2 GENERAL PRINCIPLES

1. Earthworks should be conducted on the basis of the latest version of the base map and/or map showing the course of installations and location of underground devices that may be within the range of the works.

**Note:**

It is permissible to carry out earthworks, related to the removal of failures or location of existing water supply, electrical, gas, etc., without technical documentation, but under the direct supervision of the supervisor of works.

2. Earthwork in progress (already started) may be continued under the rules in effect prior to the amendments to the instructions.

3. Extract from the master map of PCC Rokita with the layout of the underground utilities network (the master map is available on the PCT Process portal at <https://geo.wdms.local/>) constituting an attachment to the documentation authorizing to conduct earthworks should be:

a) legible, preferably colored,

b) prepared on sheets in A3 format, in a scale presenting as much information as possible in the area of work - recommended scale not less than 1: 250, optimal 1: 100,

c) on the maps, you must:

- determine the northern direction, it is obligatory to mark the boundaries of the works along with their dimensions, precisely define the place of the works (characteristic points such as: designation of the organizational unit, the nearest building or facility, roads running in the vicinity of the place of works, plot number, etc.), directions to the nearest characteristic points mark with vectors / arrows on the map from the place of works to the point,

d) an extract from the base map shall include a legend describing, but not limited to, such items as:

- boundaries of conduct of work,
- description of the networks on the map,
- other elements marked on the map which are important for conducting the work.

4. The basis for conducting earthworks at PCC Rokita SA is:

a) written specification of "Conditions for conducting earthworks" - a specimen of the document is included in item 5 of this manual as Form PBP.00.01.F01,

b) a written determination of "One - Day Earthwork Permit" - a sample document is included in item 5 of this manual as Form PBP.00.01.F02,

c) a written determination of "Local Permit for Earthwork" - a sample document is included in Section 5 of this manual as Form PBP.00.01.F03.

5. Steerable drilling may only be carried out under the "Conditions for Earthworks" and the "One Day Permit for Earthworks", regardless of the time and area of the work.

6. The execution of earthworks in the immediate vicinity of networks and/or installations such as: electrical power, gas, telecommunications, heat, water and sewage systems should be preceded by the determination of the safe distance, by the management of the contractor of earthworks, in which they can be performed from the existing networks and/or installations and the manner of performing these works.

7. The safe distance of performing the above - mentioned works is determined by a representative of the organizational unit conducting the operation of a given network or installation on the basis of applicable legal and normative acts. The locations of these works shall be marked with warning signs and fenced.

8. If it is necessary to perform work (e.g., mechanical, welding, earthwork, etc.) in an excavation performed by employees of another contractor, the employee in charge of such work is required - prior to performing such work - to: a) notify the coordinator of the earthwork performed of the planned work in the excavation already performed. The coordinator should issue a separate "One Day Earthwork Permit" printout for conducting the above work.

9. Earthwork in the vicinity of underground utilities, as well as the sinking of exploratory trenches, should be done manually.

10. Excavation of vertical walls without shoring or support may only be carried out up to a depth of 1 m in compact soils, where the area near the excavation is not loaded in a strip of land equal to the depth of the excavation.

11. Excavations without reinforcement, with a depth greater than 1 m but not greater than 2 m, may be performed if the results of soil investigation and geological - engineering documentation allow for it.

12. Openwork protection of trench walls may be used only in compact soils.

**Note:**

The use of openwork protection of excavation walls during winter is prohibited.

13. The misuse of excavation shoring components is not permitted.

14. During excavations with escarpments with a safe slope in accordance with separate regulations, the following should be done:

- a) in the strip of land adjacent to the upper edge of the escarpment, at a width equal to three times the depth of the excavation, make slopes allowing an easy outflow of rainwater in the direction from the excavation,
- b) eliminate the disturbance of the soil structure of the escarpment by removing the disturbed soil, while maintaining a safe slope at each point of the escarpment,
- c) check the condition of the escarpment after rain, frost or after a longer break in work.

15. The safe slope of the excavation walls should be specified in the design documentation when:

- a) ground works are carried out in waterlogged ground,
- b) the ground near the excavation slope is to be loaded with a strip of soil equal to the depth of the excavation,
- c) the ground is clay prone to swelling,
- d) the excavation is made in landslide areas,
- e) the depth of the excavation is more than 4m.

16. When excavating with a backhoe, shoring shall be made only from the protected portion of the excavation or prefabricated shoring shall be used, using mechanical equipment provided in advance.

17. If the excavation reaches a depth of more than 1 m from ground level, a descent (entrance) into the excavation must be made.

18. The distance between excavation descents (entrances) should not exceed 20 m.

19. It is forbidden to climb into the excavation and climb out on the shoring, to walk on the uncovered elements of the underground network and installations, as well as to move people by means of devices used for excavating the excavated material.

20. Each time work begins in an excavation, the condition of its shoring or slopes must be checked.

21. If the works are carried out in a narrow - space excavation, at the same time as transporting the excavated material, the excavation shall be covered with a tight and durable protection.

22. Containers for transporting excavated material should be loaded below their top edge.

23. Storage of excavated soil, materials and products is prohibited:

- a) at a distance of less than 0.6 m from the edge of the excavation if the walls of the excavation are shored and if the load of the excavated soil is provided for in the selection of the shoring,
- b) in the zone of the wedge of natural ground failure if the walls of the excavation are not shored.

24. The movement of transport means next to the excavations should take place outside the boundary of the natural wedge of ground breaking.

25. During backfilling of shored trenches, the protection shall be removed from the bottom of the trench and gradually removed as the trench is backfilled.
26. The protection can be removed in one step from excavations made:
  - a) in cohesive soils - at a depth of no more than 0.5 m,
  - b) in other soils - at a depth of no more than 0.3 m.
27. Soil overhangs should not be allowed during earthwork operations.
28. When working, the excavator should be positioned at a distance of at least 0.6 m from the excavation beyond the limit of the natural wedge of soil break.
29. When performing earthworks with mechanized equipment, a danger zone should be marked out in the field and appropriately signposted.
30. The passage of persons between the excavation wall and the excavator, even when the excavator is stationary, is prohibited.
31. Soil heating, thawing, or freezing shall be conducted in accordance with the design documents and the contractor's safety instructions.
32. The area where the heating, thawing or freezing of the ground is taking place shall be fenced and marked with warning signs at all times during the process, illuminated at dusk and at night, and professionally supervised.
33. Placing casing or installing pipes in a previously excavated trench with vertical walls and at a depth of less than 1 m requires temporary protection of persons with casing cages or prefabricated casing.
34. Enclosed rooms, tunnels, tanks, wells, technical equipment, ducts should be equipped with gravity ventilation or mechanical ventilation if necessary.
35. Electrical equipment, used in the premises referred to above, should have protection against electric shock and explosion.
36. Outdoor workstations should be segregated, properly marked, and protected from public entry.
37. Persons should have a quick escape route in case of flooding, fire, or harmful gases, and be able to receive immediate medical first aid.

### **3.3 DESCRIPTION OF PROCEEDINGS**

#### **3.3.1 Local Earth work Approval**

3.3.1.1 "Local Earthwork Approval" is issued for earthworks in a well - defined and clearly pre - designated area. Marking shall be done with stakes or geodesic spray or other readily identifiable means. The local earthworks permit shall be valid for the period of time specified by the coordinator in item 3 of the "Local Permit for Earthworks", but not more than 30 days, provided that only those works specified in the scope of work i.e. para. 2 of the "Local Permit for Earthworks".

3.3.1.2. For "Local Earthwork Permit", the printouts "Earthwork Conditions", and "One Day Earthwork Permit" are not applicable.

3.3.1.3. The carrying out of earthworks on the basis of a "Local Permit for Earthworks" is permitted when:

- a) arrangements have been made with all the departments listed in item 4 of the "Local Permit to Conduct Earthworks",
- b) the boundaries of the area where the earthworks will be conducted have been unambiguously determined and marked on the base map of the site as an appendix to the "Local Permit to Conduct

Earthworks",

c) the course of the individual networks has been unambiguously determined on the base map, along with an indication of whether and in which places it is necessary to conduct the works under constant supervision and/or under a written "Work Order",

d) the area where the works are to be carried out as well as the individual zones containing the underground utility networks have been unambiguously marked in the field. Mark with stakes or geodesic spray or other easily identifiable means. The aforementioned designations shall be made by the Earthwork Coordinator or his/her designee,

e) A written "Work Order" has been issued with a supervisor and coordinator designated, and the coordinator must be the Power Dispatcher - if the need for a written "Work Order" is indicated in item 4 of "Local Earthwork Approval.

**NOTE:**

If there are no installations and or networks (power, data communications, water supply, railroads, etc.) at the site of the planned earthwork, the work coordinator may, at his own risk, choose not to report the earthwork to the industry specialist in question, documenting his decision in Item 4 of the "Local Earthwork Authorization" form.

3.3.1.3.1. If agreed upon with all services listed under item 4 of the "Site Permit for Earthwork" of the absence of power and electrical, data communications, and water utilities at the site, the earthwork coordinator may waive the need to issue a written "Work Order."

3.3.1.3.2. No earthworks shall be permitted without a written determination of "Local Permit for earthworks".

3.3.1.3.3. In the event that any of the services selects in item 4 of the "Local Earthwork Permit" "YES" in the section on required work per written "Work Order" - a representative of the department must mark on the attached base map the area in which this "Work Order" is required. The coordinator's role is to ensure that a written "Work Order" is obtained in these areas.

3.3.1.3.4. In the event that any of the services selects in item 4 of the "Local Earthwork Permit" "YES" under the section on required continuous supervision of the department - a representative of the department must indicate on the attached base map the area in which continuous supervision is required. The coordinator's role is to ensure that there is constant supervision by a staff member of the service in these areas.

3.3.1.3.5. If, in a given zone, all services have declared that the zone is free of their associated underground network, and they indicate this on the base map and enter these findings in item 4 of the "Local Permit for Earthworks" by marking "NO" in the section concerning permanent supervision and the need to issue a written "Work Order" - it is possible to carry out work only on the basis of the "Local Permit for Earthworks" with an attachment in the form of a basic map of the area covered by the scope of work.

3.3.1.4. A written "Work Order" shall be issued by the authorized instructing authority, from the organizational unit in charge of the operation of the underground utility network within which the earthworks will be carried out.

3.3.1.4.1. A supervisor may be an employee (manager, maintenance supervisor, chief engineer, specialist, master, process operator, and other employees with appropriate qualifications) designated and authorized in writing by the employer to give written instructions and holding a valid certificate of qualification in a supervisory position.

3.3.1.5. In the event that an additional supervisor other than the one specified in the written "Work Order" is appointed during the arrangement of the "Site Approval for Earthwork", that supervisor must acknowledge his presence by an entry in the register of additional supervisors in item 9 of the "Local Permit for Earthworks".

3.3.1.6. The additional supervisor is a person from the organizational unit that conducts the

operation of the underground utility network that interferes with the earthworks conducted on the basis of the "Local Permit for Earthworks".

3.3.1.7. If the Additional Supervisor moves away from the work site, the earthwork shall be stopped immediately.

3.3.1.8. "Local approval for earthworks" shall be made once for the place and scope of work specified in this print. If the location of the work and/or the extent of the work is changed, a new "Site Permit for Earthwork" must be specified, evidenced by a re-filled "Site Permit for Earthwork" form that takes into account the changed location and extent of the earth work.

3.3.1.9. The earthwork coordinator may be a supervisory employee (e.g., business unit manager, master, specialist) designated by name in the handover protocol for the renovation/upgrade/construction site. This person must have completed periodic training for supervisors and the required training for coordinators.

3.3.1.10. The works coordinator shall issue a "Site Approval for Earthworks" in duplicate - one copy to the works contractor and one copy to the works coordinator. The above mentioned forms should be kept for a period of 6 months after the completion of the earthworks to which they relate.

**Note:**

The written "Work Order" is the overriding document; therefore, if work is being performed on a "Work Order", the Coordinator is required to provide a copy of the completed "Site Permit for Earthwork" to the Instructor.

3.3.1.11 On a daily basis, prior to the commencement of earthworks, the coordinator has to notify the Land User and the GB Bureau representative about the commencement of work. The User and the representative of the GB Bureau have to verify compliance with the requirements and allow the work by confirming this fact with a signature in item. 6 of the "Site Approval for Earthworks".

**Note:**

In exceptional situations it is allowed (by prior arrangement with GBH) to sign item. 6 of the "Site Approval for Earthworks" on the day before doing earthworks.

**Note:**

In the event of changes in weather conditions or general working conditions at the site, the Work Coordinator, before allowing earthworks to proceed, is required to check safe conditions at the site. In doubtful situations, the Work Coordinator can contact with an employee of the GB Bureau.

3.3.1.12. Each day prior to the start of the work, the work coordinator shall check at the work site to ensure that the conditions set forth in Section. 4 of the "Local Permit for Earthworks". If all requirements have been met, the coordinator authorizes the work to begin, confirming this fact with a signature in item 7 of "Local approval of earthworks".

3.3.1.13. Every day, before starting the work, the employee in charge of the earthworks work (manager, specialist or master on the part of the earthworks contractor) and the operator of the construction equipment shall sign (acknowledge) confirming this fact in item 8 of "Local approval of earthworks".

3.3.1.14. The completed "Site Approval for Earthwork" form is attached to the written "Work Order".

### **3.3.2 Earthwork Conditions and One - Day earthwork permit**

3.3.2.1. The conditions for conducting earthworks are determined by industry specialists operating underground installations and networks and rail infrastructure networks, writing guidelines in the appropriate boxes in section II of the "Conditions for conducting earthworks" form.

**Note:**

If there are no utilities and/or networks (power, data communications, water supply, railroads, etc.) at the location of the planned earthwork, the Work Coordinator may, at his/her own risk, choose not to report this earthwork to the industry specialist in question, documenting his/her decision in Section II of the "Conditions for Earthwork" form.

3.3.2.2. "Earthwork Conditions" and "One - Day Permit for Earthwork" must be completed prior to the start of earthwork.

**Note:**

"Earthwork Conditions" issued prior to the effective date of this Instruction shall remain valid until the completion of the work specified in item 2 of the "Conditions for the Conduct of Earthworks".

3.3.2.3. The "Earthwork Conditions" form shall be prepared once for the location and scope of work specified in this form.

3.3.2.4. A base map of the area in which the work will be carried out shall be attached to the "Conditions for Earthworks". On the aforementioned map, it is necessary to: a) clearly define the boundaries of the area in which the earthworks will be carried out, b) unambiguously mark the course of the individual networks, together with an indication of whether and in which places it is necessary to carry out the work under constant supervision and/or by written "Work Order".

3.3.2.5. In the event of a change in the location of the work and/or the scope of the work, the new conditions of the work must be specified, as evidenced by a newly completed "Conditions of Earthwork" form, taking into account the changed location and scope of the earthwork.

3.3.2.6. As a prerequisite for the commencement of earthworks on any given day, the contractor shall obtain a "One Day Permit for Earthworks" this means that prior to commencing earthworks, the work contractor shall obtain the above print from the works coordinator on each occasion.

3.3.2.7. The Coordinator, when issuing a "One Day Permit for Earthwork" each time, is required in item 2, specify precisely the area and type of work to be performed on a given day.

3.3.2.8 . A base map of the area on which the work will be performed shall be attached to the "One Day Earthwork Permit". On the aforementioned map, it is necessary to:  
a) clearly define the boundaries of the area in which the earthworks will be carried out,  
b) unambiguously mark the course of the individual networks, together with an indication of whether and in which places it is necessary to carry out the work under constant supervision and/or by written "Work Order".

3.3.2.9. The coordinator of earthworks in accordance with the provisions of the "Manual for the safe organization of renovation, modernization, construction and investment works" may be a supervisory employee designated by name in the protocol of handover to renovation/modernization/construction site (e.g. head of the organizational unit, master, specialist) or a person designated by the coordinator of works. This person must have completed periodic training for supervisors and the required training for coordinators.

3.3.2.10. The works coordinator shall issue the "Conditions for Earthworks" and the "One - Day Permit for Earthworks" in duplicate - one copy to the works contractor and the other to the works coordinator. The above mentioned forms should be kept for a period of 6 months after the completion of the earthworks to which they relate.

**Note:**

The written "Work Order" is the overriding document; therefore, if work is being performed on a "Work Order", the Coordinator is required to provide a copy of the completed "One - Day Earthwork Permit" to the Instructor.

3.3.2.11. The completed forms are signed (acknowledged) by the employee in charge of earthworks (manager, specialist or master on the part of the earthworks contractor).

**Note:**

a) It is unacceptable to carry out earthworks without specifying "Conditions for carrying out earthworks". Except where earthwork is carried out under a "Local Earthwork Permit".  
b) It is not permissible to carry out earthwork without obtaining a written "One Day Earthwork Permit" on a daily basis. Except when earthworks are carried out under the "Local Permit for Earthworks".

3.3.2.12. "One - Day Earthwork Permit" shall be completed by the work coordinator - in consultation with the work manager (contractor) after determining the scope of earthwork on the day of work. The issuance of a "One Day Permit for Earthwork" shall be preceded by an inspection, by the coordinator of the site where the earthwork will be performed.

**NOTE:**

Trade specialists are required to detail the route of their networks in the "Conditions for the Conduct of Earthworks" and to indicate areas in which work must be preceded by agreement with the trade specialist before work is permitted.

The Work Coordinator shall notify industry professionals of the intent to proceed with the work in the area for which they have indicated their willingness to participate in allowing the work to proceed no later than 1:00 p.m. the day before the work is to begin. No response from industry professionals means that they agree to conduct work on a given day without the need for additional arrangements.

3.3.2.13. The conditions for conducting earthworks must be specified and confirmed in the "One – day permission for earthworks" by specialists of industries whose networks - according to the provisions of the "Conditions for conducting earthworks" - are located in the place where the earthworks will be carried out.

Agreements with individual trades are not required if there are no power, data communication or water supply installations, etc. in the area and scope of work on a given day, or if the industry specialist has specified in the "Conditions for Conducting Earthworks" how work is to be carried out in the vicinity of existing networks.

**Note:**

Excavations over 1 m deep should be inspected by a Bureau of Safety and Prevention (GB) employee. A representative of the Security and Prevention Bureau is additionally available at +48 667 650 769.

### **3.3.3 Commencement of work and control of earthwork operations**

3.3.3.1. The Earthwork Contractor shall notify the Work Coordinator via email of its intent to proceed with earthwork by 12:00 p.m. the day before the day the work is to begin. Thereafter, the Work Coordinator shall notify the trade specialists by 1:00 p.m. the day before the day the work is to commence of the earthwork planned in the area. Industry specialists notified by the Coordinator shall have until 08.00, the following day (the scheduled day of work) to contribute their agreements/feedback to the "One Day Earthwork Permit". No additional comments from industry professionals means that the work in the area is approved without the need for additional approvals.

3.3.3.2. The works coordinator is obliged to report (by phone at 71 794 3430 or in person) to the Plant's Dispatcher and to the host (user) of the area where the earthworks will be carried out, the fact of commencement and completion of earthworks on a given day, providing the following data:

- a) location of the works,
- b) scope of the works,
- c) name of the works contractor,
- d) number of the contractor's employees,
- e) time of the works (specifies the time of commencement and completion of the works).

3.3.3.3. On non - working days, the Plant Dispatcher prepares a list of earthworks in progress and submits it to the shift manager of the Plant Rescue Service (ZSR).

3.3.3.4. The manager of the ZSR shift instructs to conduct - during patrols made by ZSR employees - inspections of the correctness of documents authorizing to perform earthworks, held by the employees of contractors at the site of works.

**Note:**

If irregularities are found, earthworks should be stopped immediately by ZSR staff.



3.3.3.5. In the case of earthworks with construction equipment, the operator of such equipment - after becoming familiar with the "Conditions for earthworks" and the "One - day permission for earthworks" or the "Local permission for earthworks" - shall be obliged to confirm in writing that he has taken note of and shall comply with the provisions of the above - mentioned documents during earthwork operations.

**Note:**

If earthworks on a given day is performed without the use of construction equipment, the work coordinator in item 8 "One - Day Earthwork Permit" or "Local Earthwork Permit" shall make an entry: "NOT APPLICABLE".

3.3.3.6. Conducting earthworks by contractors without the required documents or not in compliance with the "Conditions for Conducting Earthworks" and the One - Day Permit for Earthworks" or the "Local Permit for Earthworks" is grounds for imposing a fine in the amount of PLN 20,000. This penalty is independent of the calculation of costs related to the coverage of losses incurred by the PCC Group Companies as a result of improperly conducted earthworks.

3.3.3.7. Prior to the commencement of earthworks, the coordinator of the works must determine in the field whether the route of the excavation will interfere with pipes of electrical installations, water supply systems, sewage systems, gas pipelines, etc. This must be done with the aid of an up - to - date base map, available detailed technical documentation of the routes of individual installations, as well as the location of cables routed with the aid of specialist equipment such as e.g. locators or tracers of underground utilities. It is necessary to use an up - to - date base map, available detailed technical documentation of the routes of individual installations, as well as the location of cable routes with the aid of specialist equipment, such as e.g. locators or tracers of underground utilities.

3.3.3.8. If it is necessary to carry out earthworks on or near electrical installations (cables), on the basis of a written "Work Order - in accordance with the entry of an employee of the Power Grid Maintenance Department (GTS) in the "Conditions for Conducting Earthworks" - such work should be performed by employees who operate the installation or network in question, or by other authorized employees, but under the supervision of employees who exercise supervision over the operation of the installation or network in question. Employees performing the above mentioned work should have current qualification certificates, in accordance with separate regulations.

**Note:**

In this case, it is not required to obtain a "One Day Permit for Earthwork".

### **3.3.4 Securing the earthwork site**

3.3.4.1. The earthwork area should be fenced off and marked with warning signs in a way that prevents unauthorized persons from entering.

3.3.4.2. During earthworks, hazardous areas (e.g. excavations) should be fenced off and warning signs should be posted.

3.3.4.3. During excavation work, areas accessible to persons not employed in the work should be marked by placing safety railings around the excavation equipped with a red warning light for the duration of darkness and night.

**Note:**

The safety railing shall consist of a curb board 0.15 m high and a guardrail placed at a height of 1.1 m.

The guardrail shall have painted diagonal stripes of similar dimensions at a 45° angle in yellow and black or white and red. The free space between the curb board and the guardrail shall be filled in such a manner as to prevent workers from falling into the excavation. The railings' handrails mentioned above should be at a height of 1.1 m above the ground and at a distance of not less than 1 m from the edge of the excavation.

3.3.4.4. Notwithstanding the placement of the guardrails referred to above, in cases justified by safety considerations, the excavation shall be tightly covered in such a way as to prevent falling into the excavation.

3.3.4.5. If the excavation is covered, instead of using guardrails, the work area may be marked by rope or plastic tape guardrails placed along the excavation at a height of 1.1 m and at a distance of 1 m from the edge of the excavation.

3.3.4.6. If the area where the earthwork is being carried out cannot be fenced off, the work contractor shall ensure that it is supervised at all times.