

2-0 Notification Service Best Practices



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2-1: Pro-active Public Awareness, Education and Damage Prevention Activities

Practice Statement: The notification service has a documented, pro-active public awareness, education, and damage prevention program.

Practice Description: The notification service promotes the need to “Click or Call Before You Dig,” to enhance awareness of responsibilities to safeguard workers and the public and protect the integrity of the buried infrastructure, to foster a cooperative approach between the owners of buried facilities and the digging community toward the prevention of damage to buried facilities and to promote the service it provides.

Typical notification service activities include: promotional items; media advertising; participation at safety meetings; seminars and trade shows; contractor awareness programs; distribution of education material describing how the notification service system works; maintaining a database of active members of the local digging community; mediating and rationalizing the expectations of both the facility owners and the digging community; and participation in local damage prevention or facility location and coordination committees.

2-2: Specifically Defined Geopolitical Service Area with No Overlap

Practice Statement: A notification service serves each province so that an excavator need only make one call for its members and a owner need only belong to a single notification service.

Practice Description: Notification service programs are designed to promote ease of use for members (facility owners) and for excavators. This ease of use is enhanced when a notification service serves a specifically defined geopolitical area that does not coincide with the service area of another notification service.

There are two requirements notification service program meets in order to be considered as having implemented this best practice:

- The program permits an excavator to use a single point of contact to submit and follow up on a notice of intent to excavate and notify affected owners.
- The program permits a owner to join a single notification service and receive all appropriate notices.

2-3: Formal Agreements with Members

Practice Statement: Each member of the notification service abides by a written agreement that states the rights and the responsibilities of the notification service members and the notification service.

Practice Description: The terms and conditions of service provided by the notification service and the obligations of the member are established in a legally binding standard form Service Agreement document which is signed by both parties. The purpose of the document is to simply state the legal obligations and terms of service for both parties in a standard form contract that all members must sign. This standard form agreement should not be restrictive and there should be no unreasonable barriers to owners signing this agreement.

2-4: Notification Service Governance

Practice Statement: The notification service is governed by a Board of Directors with input from stakeholders.

Practice Description: To ensure that a notification service functions to the best benefit of the entire community, it is governed by a Board of Directors with input from representatives of the stakeholders. Stakeholders are from a variety of industry types, such as facility owners, contractors, designers, project owners and government representatives. Each stakeholder representative is knowledgeable in their own industry and of how it interacts with the notification service and all of the represented stakeholders.

2-5: Single Toll Free Number with North-American Access

Practice Statement: The notification service has a single toll free number with North-American access.

Practice Description: There will be only one toll free telephone number and one toll free fax number for the notification service to receive locate requests. These numbers have toll free North American access, meaning that a caller can telephone or fax the notification service free of charge from anywhere in North America. The notification service will also maintain an e-mail address as an alternate means to receive locate requests.

2-6: Hours of Operation

Practice Statement: The notification service can process locate requests 24 hours a day, 7 days per week.

Practice Description: The notification service has in place a process where a caller, at any time of the day or night, every day of the year, who has a locate request can contact the notification service and have that request processed.

2-7: Documented Record of All Locate Requests

Practice Statement: A record is maintained of all transactions concerning requests to locate facilities.

Practice Description: Voice recording of the telephone communications for locate requests are made to ensure a precise record of the activity is retained. A record of the customers' transaction is retained. These records can be legally supported in court as well as used for damage investigations

2-8: Retention of Voice and Electronic Records According to Applicable Statutes

Practice Statement: Voice records of all calls concerning requests to locate facilities are kept in retention for seven years or according to applicable statutes. Records include but are not limited to, all original requests and changes made by voice, web, app or email.

Practice Description: All records shall be maintained and accessible until expiry per the applicable statute of limitations in the jurisdiction in question. Since these laws may change, no specific time period is set forth as a best practice. In the absence of notice by some party to the contrary, after the expiration of the statute of limitations the records may be destroyed. The notification service shall have a procedure for processing requests for voice and electronic records.

2-9: Requester Feedback

Practice Statement: The notification service provides the requestor with the ticket number and the names of facility owners who will be notified for each locate request.

Practice Description: Providing the locate request number and the names of the facility owners who will be notified enhances the efficiency of the notification service process. When provided the names of the facility owners, the excavator knows which owners will be notified in the area of the planned excavation. This helps the excavator determine if the facility owners have responded to the locate request.

2-10: Printed Ticket Recall

Practice Statement: The notification service can provide a printed copy of any ticket for a period of time determined by applicable statutes.

Practice Description: In the event of a damage investigation, litigation, or other event, it is often necessary to have a hard copy printout of a location request ticket. The notification service has the ability to produce, as necessary, a copy of a location request ticket for the appropriate statutory period.

2-11: Documented Operating Procedures, Policies, and Manuals

Practice Statement: The notification service has documented operating procedures, human resource policies including health and safety and training manuals.

Practice Description: The notification service has documented operating procedures, human resource policies including health and safety, and training manuals. Training manuals, practices, procedures, and policies are on the premises in a designated area or place, dated, and available for reference.

2-12: Documented Owner Verification of Data Submitted by Facility

Owners

Practice Statement: The notification service returns the geographic description data base documentation to the owner annually and after each change for verification and approval.

Practice Description: The notification service can only work with the information related to the existence of buried facilities that its members provide. It is important that the notification service be able to produce evidence that a member’s data is accurate, according to that member. Regular verification of data is a part of the documented agreement or operating procedures between the owner of buried facilities and the notification service. Any deletions or additions made by the member are entered into the database and documentation of the change sent back to the member for verification, prior to activation.

2-13: Flexibility for Growth and Change

Practice Statement: The operating plan of the notification service is sufficiently flexible to accommodate growth and change.

Practice Description: A successful notification service maintains flexibility to respond to changes by forming and maintaining a responsive governing organization whose Board of Directors’ and stakeholder representative composition allows adequate representation of the needs of all stakeholders.

A Board’s ability to respond to change will be enhanced by drafting bylaws and operating procedures that reflect the current environment in which the notification service serves. The most successful Boards review these documents on an ongoing basis to make sure they continue to reflect or respond to current conditions. These Boards conduct regular strategic planning sessions during which they review the current state of the notification service major systems, programs and outreach activities. Such assessments help them identify stakeholder needs for future growth and development.

Many members of Boards, stakeholder group representatives and notification service management teams keep themselves informed about and involved in the notification service industry by joining associations and attending conferences or other educational events that help them to better identify new opportunities for growth and change.

2-14: Meeting Between the Excavator and Facility Owner(s) Initiated by Notification Service

Practice Statement: The notification service has a process for receiving and transmitting requests for meetings between the excavator and the facility owner(s) for the purpose of discussing locating facilities on large or complex jobs.

Practice Description: The notification service relays requests for job site facility meetings for excavators who request them with facility owners. If a meeting is required to show the limits and schedule of the work, the notification service indicates that a meeting is requested. The notification service requires that the excavator provide sufficient information to fully identify the boundaries of the proposed work site. A meeting request does not necessarily eliminate the need for a locate request.

2-15: Notification Service Accepts Notifications from Designers

Practice Statement: The notification service accepts design requests and has the ability to process them as designated by the facility owners.

Practice Description: To facilitate damage prevention, project designers have a need for access to facility location information from facility owners. If a design request is received, the notification service provides a listing of facility owners directly to the designer. Once the list is identified, the notification service processes the request as designated by each owner.

2-16: Locate Request

Practice Statement: The notification service captures the following information, at a minimum, on a locate request: the caller's name and phone number; the excavator's/company's name, address and phone numbers; the specific location of the excavation; the start date and time of the excavation; and the description of the excavation activity.

Practice Description: A locate request is a communication between an excavator and notification service personnel in which a request for locating underground facilities is processed. In addition to the minimum information required in the practice statement (above), the locate request should include any information, if available, that will help to establish the specific location of the excavation site. This additional information could include, for example:

- A. More detailed information to help determine the specific location of the excavation. Such information may include:
 1. Municipality/Community
 2. County/Region/District/Township
 3. Province

4. Street address
 5. Street name
 6. Length and direction of the excavation and the nearest adjacent cross streets (needed to bound area of excavation or extended excavation)
 7. Subdivision and lot number (for new development)
 8. Latitude/Longitude: Latitude-longitude coordinate(s) or specific address of the dig site may be done automatically by the GIS subsystem, GPS coordinates or determined by computer assisted customer service representative. The dig site can be a point, an area or box, or a polygon. For a spatial rectangle (maximum/ minimum latitude/ longitude), the dig site must be wholly within the included area.
 9. Highway markers
 10. Railroad or pipeline markers
 11. General directions/instructions
 12. Postal code
 13. Distance to nearest cross-street
 14. Telephone number at dig site
 15. 911 address
 16. Lot and concession
 17. Map reference
 18. Pole numbers
 19. Any other pertinent references to help establish the location of the dig site
- B. The intended start date and time of the excavation
 - C. Excavating by hand or machine
 - D. Type of the excavation activity (e.g. boring, blasting, trenching, etc.)
 - E. Whom the excavation work is being done for
 - F. What is the purpose of the work (i.e., what will be installed and/or built)
 - G. Excavation on public property
 - H. Excavation on private property and if so, where (front, side, rear)
 - I. Is the dig site pre-marked by the excavator
 - J. The depth of the excavation
 - K. Is a site meet requested
 - L. Does the excavator want an "outline mark and fax"
 - M. The status of the involved members for that request (notice, clear, suppress, cleared by look-up)
 - N. Additional remarks

2-17: Practices to Reduce Over-Notifications

Practice statement: The notification service employs practices designed specifically to reduce the number of notices transmitted to facility owners, in which the reported excavation site is outside the owner's desired area of notification.

Practice Description: The notification service employs technology that allows the owner to determine its desired area of notification by polygons. To reduce over-notifications, the technology should:

- where due diligence and mapping accuracy permits, enable the notification service to define the proposed excavation site buffer to within approximately 800 feet (250 metres); and
- provide the owner the ability to identify its desired area of notification, including the member specified buffer zone, to within approximately 30 metres.

2-18: Disaster Recovery

Practice statement: The notification service develops, implements, and maintains an effective disaster recovery plan enabling the notification service function to continue in the event of a disaster.

Practice Description: The notification service develops and implements an effective disaster recovery plan enabling it to continue operations in the aftermath of a disaster affecting the facility, including communication with the local emergency services to provide safe access to the notification service. Excavators and owners outside of the area affected by the disaster can continue to conduct business with minimum to no delays in the services provided by the notification service. The disaster recovery plan makes provisions for the notification service to process emergency locate requests for the areas affected by the disaster.

The notification service (the primary centre) has a backup arrangement with another facility at a remote location (the secondary centre). This arrangement includes:

- Telecommunications - alternate routing schedules are in place, ready to be activated within minutes of the primary centres' failure.
- Software and Hardware - the secondary centre has compatible hardware with the primary centre. The secondary centre always has a copy of the primary's current software.
- Database - the secondary centre receives the primary centre's database including locate requests on a regular basis, preferably real-time.
- Staffing - a portion of the secondary centre's staff is cross-trained for the primary centre's operation at all times.
- Simulated Emergency Testing - At least once a year, on a random basis, the disaster recovery plan is implemented to verify that it is operational.

2-19: Remote User Interface

Practice statement: The notification service provides users a means of direct, electronic entry of locate requests of comparable ticket quality to that where an operator assists information entry.

Practice Description: The notification service has interactive data communications sufficient to permit remote data entry for qualified members and excavators. The remote interface validates the input information and allows the user to make corrections if necessary. This correction is accomplished by referencing the same geographic database used at the notification service when taking a voiced-in request. This process ensures that the ticket quality is maintained for all tickets.

2-20: Accept Multiple Reference Points for Locate Requests

Practice statement: The notification service is able to accept multiple types of points of reference to define the exact location of an excavation site (i.e. latitude/longitude, highway/railroad/pipeline markers, address, street and cross street, etc.).

Practice Description: The notification service's locate request taking processes and computer system are designed to accept and process multiple types of reference points used by callers to (1) describe the location of their work and (2) define the excavation site. Examples of different types of reference points include: highway markers, railroad or pipeline markers, valid address or street-cross street, latitude/longitude, municipality, community, county, region, township and mail address (postal code) boundaries, etc.

All stakeholders involved in the notification service process receive a corresponding benefit when the notification service is able to define the excavation site as specifically as possible. The facility owner's job of determining the existence of a potential conflict is expedited, field personnel can find and mark the affected area much easier, and the excavator receives timely markings covering the area of excavation. Standardizing on a limited set of criteria reduces the flexibility of the system to serve the excavator and owner. The notification service invests in systems and processes that permit inclusion of a variety of types of reference points in defining the excavation site. The notification service takes steps to link these reference points to the database used to register the facility owner's desired area of notification, thereby assisting in reducing over-notification.

2-21: Notification Service Security

Practice Statement: The notification service provides appropriate physical and systems security, fire protection and electrical protection to protect the notification service and its critical components.

Practice Description: The notification service needs protection from natural disasters and other threats. Since the notification service is a critical link in the communication chain between the excavating community and facilities, it is important that the notification service does whatever it can to provide adequate security, taking into account that it may well need to be operational in times of natural disasters or in the face of other threats. Security components could include:

- Physical security for the building and its employees through locked operations areas, lighting, employee key cards, guard patrols.
- Physical security for critical systems components. This may include locating the facilities in locked enclosures and restricting access to necessary personnel.
- General fire protection for the notification service personnel and property.
- Specialized fire protection for critical systems components.
- Specialized theft protection for critical systems components.
- Telephone demarcation points in a protected area within the notification service.
- Passwords and protections to limit access to computers and other systems.
- Offsite storage of duplicate data base and necessary system software.

2-22: Hardware Designed to Tolerate a Single Point of Failure

Practice Statement: The notification service uses fault tolerant hardware for its critical path operations, such as ticket taking, database access, and ticket delivery.

Practice Description: A fault tolerant system can withstand any single hardware malfunction without any interruption or degradation of service. These systems have the ability to identify the malfunctioning hardware component and permit its replacement while remaining online and processing its normal applications. These fault tolerant systems maximize the probability that the notification service will be able to properly process an excavation request in the event of a failure or malfunction.

2-23: Notification Quality Standards

Practice Statement: The notification service establishes performance standards for the operation of the centre for the purpose of promoting accuracy, cost effectiveness and efficiency.

Practice Description:

A. Customer Quality of Service Performance Measurements – It is best practice in the notification service industry to monitor the quality of service provided to the customer calling the notification service. Key measurements include:

1. Speed of Answer

Process – Most notification services route incoming calls through an ACD (automatic call distributor) either via an on-premise PBX or a Centrex at the telephone company’s central office. Both of these devices provide reports that identify, on the average, how long a caller had to wait before they were answered. This measurement is called average speed of answer (ASA) and is normally captured on a half hourly basis and accumulated for the day.

Service Level – An objective service level should be set based on customer satisfaction and economics. An ASA objective of 30 seconds or less is recommended.

2. Abandoned Calls

Process – The PBX or Centrex also provides this data. It will normally identify the number of calls abandoned and how long the callers waited before they hung up.

Service Level – An objective service level should be set based on percentage of calls. An abandonment rate of less than 5% by callers that waited more than 60 seconds is a reasonable objective.

3. Busy Signals

Process – The notification service is equipped with sufficient incoming lines to minimize busy signals.

Service Level – The performance level for busy signals received by callers into the notification service does not exceed 1% of the total incoming call volume.

4. Customer Satisfaction

Process - A fundamental principal in measuring quality is that “the customer defines quality.” Periodic customer satisfaction surveys of callers are conducted.

Service Level – An objective service level is set based on percentage of caller’s responses. An objective of 99% customer satisfaction is recommended.

B. Locate Request Content

The notification service has in place a quality of service plan that includes measurements of accuracy, productivity, and defects in locate request tickets.

C. Relational Database Quality and System Functionality

The geographic, relational database and the system that uses it confirms the hierarchical relationship between the street address, street, municipality, county or region.

D. Locate Request Delivery

The notification service establishes the following minimum criteria for quality of locate request delivery. Transmission audit reports are sent to receiving locations daily.

1. Average emergency ticket transmission time (< 5 minutes)
2. Average priority notice ticket transmission time (< 15 minutes)
3. Average standard ticket transmission time (< 30 minutes)
4. The ticket information should be transmitted in an electronic data format that allows the receiving equipment to parse/extract the data.

E. Ratio of Incoming Locate Requests to Outgoing Ticket Transmission

The notification service monitors the ratio of incoming locate requests to outgoing ticket transmissions. This data assists in evaluating the service's marketing, education, mapping, budgeting, and cost performance.

2-24: Notification Service Mapping

Practice statement: The notification service maintains a current street centreline mapping database and updates it as new/revised map data becomes available.

Practice Description: The notification service utilizes various official mapping sources to maintain an accurate and up to date street centreline base map for the centre. This map is continuously updated with new street names and addressed segments as well as current and past place names for various political entities. The service's online base map is refreshed at least twice a year and more frequently in areas of rapid growth.

2-25: Notification Service is the Interface between Excavators and Registered Facility Owners for the Purpose of Receiving Locate Requests

Practice statement: The notification service is the interface between the digging community (all excavators) and registered owners of buried facilities for the purpose of receiving locate requests.

Practice Description: The notification service makes every effort through its damage prevention promotional and educational activities to ensure that all excavators are aware of digging dangers and the necessity of requesting locates through the notification service prior to excavating. The notification service promotes the benefits of membership to all facility owners. The notification service implements the notification service best practices to ensure the locate request process established by the notification service, provides an effective interface between the excavator and registered facility owners.

2-26: All Buried Facility Owners are Members of the Notification Service

Practice Statement: All buried facility owners are members of the notification service and register the location of their notification areas with the notification service.

Practice Description: The notification service uses a comprehensive marketing strategy to make all facility owners aware of the benefits of membership in the notification service. Where applicable, the notification service should reach out to provincial regulatory agencies to ensure their governed members are maintaining compliance and registering with the notification service. If legislation does not exist, the notification service should request regulatory agency(s) to circulate information to their governed owners supporting registration of their buried underground infrastructure with the local notification service. The process to join is simple and barrier free. The services offered by the notification service are cost effective and meet the needs of facility owners.

2-27: Excavators Contact the Notification Service Before Excavating

Practice Statement: Excavators contact the notification service to request locates prior to excavating.

Practice Description: The notification service educates excavators of the necessity to contact the notification service before they dig. The notification service employs best practices to ensure access to the notification service at all times and by a variety of methods (e.g., phone, app, web, remote entry) to ensure that the locate request process is efficient and effective.

2-28: Notification Service Advises Excavators to Contact Non-Members Directly

Practice Statement: The notification service will advise excavators on every request that not all facility owners are members of the notification service and that the excavator must contact non-members directly to obtain locates prior to excavating.

Practice Description: The notification service advises excavators on the status for members only for the dig site location. Until all facility owners are members of the notification service, the notification service will advise every excavator for their request that they must contact non-members directly before they excavate.

2-29: Notification Service Accepts Locate Requests in Both Official Languages

Practice statement: The notification service accepts locate requests in English or French and subscribes to a translation service for other common languages.

Practice Description: The notification service maintains sufficient bilingual staff on duty at the centre to accept locate requests in either English or French. The notification service will subscribe to a translation service to assist with the communication of locate requests by excavators using other common languages. The ticket documentation will always be processed in English.

2-30: Notification Service is the Interface between Excavators and Registered Facility Owners for the Purpose of Updating the Status of Locate Completions

Practice statement: The notification service is the interface between the digging community (all excavators) and registered owners of buried facilities for the purpose of updating the status of locate completions by members.

Practice Description: The notification service provides the means via its web site for members to post the status of their locate notifications on an individual ticket basis. The notification service will accept requests from excavators to reissue the notification to members who have not completed their locate by the work to begin date on the original request.

2-31: Notification Service Reminds Excavators Digging on Private Property that They Should Advise the Notification Service if They are Aware of Any Private Lines Situated on the Property

Practice statement: The notification service reminds excavators digging on private property that they should advise the notification service Reminds Excavators Digging on Private Property that They Should Advise the Notification Service if They are Aware of Any Private Lines Situated on the Property if they are aware of any private lines situated on the property and that it is the responsibility of the property owner to ensure that their private lines are located prior to excavation.

Practice Description: The notification service includes a reminder to excavators digging on private property that they should make the notification service aware of any private lines that exist on the property. The notification service will advise the excavator that it is responsibility of the excavator to ensure that any private lines on the property are located prior to excavation. The notification service will note this information in the remarks section of the notification to members. The members may then take whatever action they deem necessary with the excavator when private lines are known to be buried in the vicinity of the excavation site.

2-32: The Notification Service is the Interface between Excavators and Registered Facility Owners for the Purpose of Reporting Buried Facilities Not Originally Identified on the Locate Sheet.

Practice statement: The notification service will receive calls from the excavator reporting the discovery of unidentified facilities found within the excavation area.

Practice Description: The notification service receives detailed verbal description of plant that has been discovered from the excavator. This information is then dispatched/forwarded to the registered facility owners. This type of request triggers an emergency notification.