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November 3, 2023

VIA EMAIL - puc.filingcenter@puc.oregon.gov

Public Utility Commission of Oregon
ATTN: Filing Center
201 High Street SE, Suite 100
P.O. Box 1088
Salem, OR 97308-1088

Re: NC 405 – Reply to Bench Request – Staff Exhibit 300

Dear Filing Center:

Enclosed for filing is the Reply to Bench Request – Staff Exhibit 300 regarding NC 405.

Thank you for your attention.

Sincerely,

/s/ Stephanie Andrus

Stephanie Andrus
Sr. Assistant Attorney General
Business Activities Section

SSA:pjr
Enclosure

CASE: NC 405
WITNESS: Kevin Hennessy

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 300

REPLY TO BENCH REQUEST

November 3, 2023

1 **Q. Please re-state your name, occupation, and business address.**

2 A. My name is Kevin Hennessy. I am the Chief of Pipeline Safety of the Utility Safety,
3 Reliability and Security Division of the Public Utility Commission of Oregon (OPUC).
4 My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

5 **Q. Have you previously submitted your educational background and work**
6 **experience?**

7 A. Yes. My witness qualifications statement is found in Exhibit Staff/101.

8 **Q. What is the purpose of this testimony?**

9 A. I respond to two bench requests issued by the Administrative Law Judge regarding
10 obligations of an operator of a utility system under Oregon's One Call system developed
11 under ORS 757.452-562 and OAR 952-001-0001 through 952-001-0100 for locating
12 underground facilities.

13 **Q. What is the first bench request?**

14 A. The first bench requests asks:

15 **Please explain the actions an operator is expected to take in response to a One Call**
16 **System notice for a situation in which the municipality is the operator but does not**
17 **have knowledge of any facilities nor the ability to locate any underground facilities**
18 **in question.**

19 **Q. What is your response?**

20 A. If the municipality does not know whether there are any of its utility system underground
21 facilities in the proposed excavation area in the Locate Request, the best practice is to
22 respond to the Locate Request by providing marks indicating "unlocatable facilities" in the
23 proposed excavation area. The municipality must place the markings using the best

1 information available to it, including as-constructed drawings or other facility records.¹

2 Marking “unlocatable facilities” will put the excavator on notice that there **may** be
3 underground facilities in the proposed excavation area. Once the excavator has markings
4 of unlocatable facilities in the Proposed Excavation Area, the excavator should “[e]mploy
5 hand tools or other non-invasive methods either to determine the exact location of the
6 underground facility or down to 24 inches beyond the depth of intended excavation within
7 24 inches of the outside dimensions of a marked underground facility.”²

8 **Q. If the municipality does not know whether there are any of its system facilities in the**
9 **proposed excavation area, is the municipality obligated to conduct any independent**
10 **investigation to determine whether any system facilities may be present when notified**
11 **of a Locate Request.**

¹ OAR 952-001-001-0070(1) provides:

(1) Except as provided in section (2) of this rule, within two full business days following the day an excavator notifies the Oregon Utility Notification Center of a proposed excavation, the operator or its designated agent must:

(a) Mark within 24 inches of the outside lateral dimensions of both sides of all its locatable underground facilities within the area of proposed excavation. All marks must indicate the name, initials or logo of the operator of the underground facilities, and the width of the facility if it is greater than 2 inches;

(b) Provide marks to the excavator of the unlocatable underground facilities in the area of proposed excavation, using the best information available including as-constructed drawings or other facility records that are maintained by the facility operator; or

(c) Notify the excavator that the operator does not have any underground facilities in the area of the proposed excavation. Acceptable notifications must include locate request call back information and if done with an AVR (Automated Voice Response) must have a repeat option and a call back number to hear the information again.

² OAR 952-001-0090(3)(c).

1 A. The municipality/operator must use the best information available to it, including as-
2 constructed drawings or other facility records maintained by the facility operator to
3 determine whether it has underground facilities in the proposed excavation area. If the
4 municipality/operator cannot tell from its maps and other available information available
5 whether it has system facilities in the Proposed Excavation area, the municipality should
6 perform a visual inspection onsite to determine if there are facilities placed that are not part
7 of their best information data set. A visual inspection is necessary because records will
8 vary by operator and location. Indications of a facility not on a record is visual comparison
9 for evidence of above ground appurtenances including but not limited to covers or caps,
10 cleanout lids, access points, signage and markers. The operator is not obligated to take
11 further action to ascertain whether there are any facilities before providing the markings
12 indicating unlocatable facilities. The task of determining whether there are underground
13 facilities is left to the excavator under OAR 860-001-0090(3).

14 **Q. If the municipality does not know of underground facilities in the area, could it**
15 **simply notify the excavator that it does not have underground facilities in proposed**
16 **excavation area?**

17 A. I do not think this is a reasonable action and places the excavator and underground
18 facilities at risk. If the municipality is in doubt about the existence of underground
19 facilities, the municipality should notify the excavator of the potential for the facilities by
20 marking unlocatable facilities.

21 **Q. Doesn't this notification of unlocatable facilities create a lot of work for the**
22 **excavators that would be unnecessary in some cases, i.e., when it turns out none of the**
23 **operator's facilities are in the proposed excavation area?**

1 A. I do not think any work caused by notifying the excavator of the potential for unlocatable
2 facilities would ever be “unnecessary.” If nothing else, the excavator’s work in
3 ascertaining whether there are facilities could lead to helpful information for the operator
4 and OUNC. The excavator is required, when they discover “...underground facilities in an
5 area where the operator of the underground facilities had previously stated there were no
6 underground facilities, prior to continuing excavation the excavator must notify the Oregon
7 Utility Notification Center. Currently, the OUNC has a discretionary policy on whether to
8 notify the operator.

9 **Q. Do you think there are many instances in which municipalities or other operators are**
10 **unaware of underground facilities within their utility systems?**

11 A. I think the possibility of this circumstance should be viewed in the context of the
12 operators’ responsibility to keep track of locatable, unlocatable and abandoned facilities for
13 their system. When an operator is made aware of new, or acquires previously unknown,
14 information about their system; corrections and updates to system information should be
15 made so future locating and marking meets either the locatable facility criteria or improves
16 the “best information” available. Current OUNC rules provides opportunities or instances
17 to make corrections and updates for better locating. For example, “Except while making
18 minor repairs to existing non-conductive, unlocatable facilities, an operator burying non-
19 conductive, unlocatable facilities within the public rights-of-way or utility easements must
20 place a tracer wire or other similar conductive marking tape or device with the facility to
21 allow for later location and marking.³ As stated earlier, “if an excavator discovers
22 underground facilities in an area where the operator of the underground facilities had

³ See OAR 952-001-0070(10).

1 previously stated there were no underground facilities, prior to continuing excavation the
2 excavator must notify the Oregon Utility Notification Center.⁴”

3 **Q. What is the second Bench Request?**

4 A. The second question is:

5 **Refer to Staff/200, Hennessy/3-4. Explain what actions the Oregon Utility**
6 **Notification Center (OUNC) expects an operator to take to locate underground**
7 **facilities in response to an OUNC One Call System notice. As part of this response,**
8 **describe what actions the OUNC expects an operator to take before stating there**
9 **are unlocatable facilities.**

10 **Q. What is your response?**

11 A. This question is largely answered in the response to the first bench request. The operator
12 must use the best information available to it, including as-constructed drawings or other
13 facility records maintained by the facility operator to determine whether it has underground
14 facilities in the proposed excavation area. Best information available to the operator
15 should include a visual inspection of the proposed excavation site. If the operator cannot
16 tell from this information whether any of its utility system facilities are in the proposed
17 excavation area the operator should provide marks indicating unlocatable facilities.
18 Marking unlocatable facilities will put the excavator on notice that there may be
19 underground facilities in the proposed excavation area. The burden is then on the
20 excavator to determine whether there are in fact any underground facilities while it is
21 performing the excavation.

⁴ See OAR 952-001-0090(7).

1 **Q. Is marking “unlocatable facilities” all an operator must do in response to a Locate**
2 **Request when the operator does not know if its utility system facilities are in the**
3 **proposed excavation area or not?**

4 A. This is a very high-level answer to the question I think the ALJ is most interested in,
5 which is whether it is up to the operator or excavator to ascertain whether the operator has
6 underground facilities in a proposed excavation area when the operator is unaware of any
7 facilities but is not sure that none are there. In fact, there are specific obligations imposed
8 on a utility system operator, i.e., the operator must respond within 2 business days for
9 regular excavation notifications and mark in accordance with administrative rule, which
10 are covered in previously filed testimony. Further, there are industry standards for utility
11 system operators that facilitate efficient and effective locating services. If the operator
12 follows these industry standards, the likelihood of inaccurate locate request responses is
13 minimized.

14 **Q. Can you provide more information about the industry standards you mention?**

15 A. Below are sequential steps of industry practices published by the Common Ground
16 Alliance⁵ for locating and marking underground facilities with added considerations for
17 specific damage prevention programs.

18 4.1 Available Records - Practice Statement: Locators use available facility records at all
19 times.

20 Practice Description: Facility locators use available records at all times. Facility records
21 indicate approximate location, number of facilities, and access points for buried facilities
22 within a requested area. The use of facility owner/operator-supplied records is an
23 effective method of identifying facilities as part of the locating process.

⁵ See <https://bestpractices.commongroundalliance.com/#mainContentAnchor>

1 4.2 Corrections and Updates - Practice Statement: If a facility locator becomes aware of an
2 error or omission, then the facility locator provides information for updating records that
3 are in error or for adding new facilities.

4 Practice Description: During the course of a locating activity, a locator may become aware
5 of errors or omissions. Methods are in place to notify a facility owner/operator of that error
6 or omission. The corrections are submitted to the appropriate person or department in a
7 timely manner. The method of notification is determined by the facility owner/operator
8 and includes the following information:

- 9 • Name (and company if contracted)
- 10 • Contact phone number of the individual(s) submitting change
- 11 • Location (either address or reference points)
- 12 • Size and type of facility
- 13 • Nature of the error or omission
- 14 • Sketch of the change in relation to the other facilities

15 Omissions and errors may occur as a result of misdrawn records, changes during
16 construction at the job site, repair or abandonment of facilities, and delays in posting new
17 records. Failure to note errors or omissions when found could result in damages to the
18 facility at a later date. The 1994 NTSB Excavation Damage Prevention Workshop stated
19 that “facility operators should be required to update maps when excavation finds errors in
20 the mapping system.”

21 4.3 Color Code - Practice Statement: A uniform color code and set of marking symbols is
22 adopted nationwide.

23 Practice Description: A national standard is adopted defining color specifications relevant
24 to facility type and marking symbols for identifying facilities. (See Appendix B, “Uniform
25 Color Code and Marking Guidelines.”)9 The December 1997 NTSB safety report cites the

1 use of the APWA/ Utility Location and Coordination Council (ULCC) color code as the
2 model example.

3 4.5 Locator Training - Practice Statement: Locators are properly trained. Locator training is
4 documented.

5 Practice Description: Minimum training guidelines and practices are adopted for locator
6 training. These guidelines and practices include the following:

- 7 • Understanding system design/prints/technology
- 8 • Understanding construction standards and practices for all types of facilities
- 9 • Equipment training and techniques
- 10 • Plant recognition training
- 11 • Theory of locating
- 12 • Daily operations
- 13 • Facility owner/excavator relationships and image
- 14 • Safety procedures per Occupational Safety and Health Administration (OSHA)
- 15 regulations/federal, state/provincial and local laws
- 16 • Written and field testing
- 17 • Field training
- 18 • Annual retesting

19 4.6 Safety - Practice Statement: Locates are performed safely.

20 Practice Description: It is the responsibility of the owner/operator and locator to establish
21 when and how the underground facility will be identified. All hazards associated with
22 performing a locate are identified. Appropriate measures conforming to federal, state/
23 provincial, local, and industry standards are established. Employees are made aware of
24 these hazards and are properly trained in worker safety standards.

25 A. Pre-Work Safety Considerations

- 1 1. Site Background Data. Site information is gathered to determine hazards, exposures,
2 and/or other potential safety problems that might be encountered in connection with on-
3 site locate work. This information may be gathered from the facility records and from
4 visual inspection.
- 5 2. Site Familiarization. Site characteristics that could affect locate work are analyzed.
6 Areas to be considered include the following:
- 7 a. Obstructions. The site is analyzed to determine if physical obstructions are present on
8 the property that would make locate work unsafe. Means for working around such
9 obstructions are defined.
- 10 b. Traffic. Vehicular arteries (e.g., highways, roadways, railways, etc.) at the work site
11 are identified to determine whether such traffic would pose any safety hazard to locating
12 the site.
- 13 c. Physical Site Conditions. Soil conditions and other factors (e.g., trenches, pits, bores,
14 standing water, etc.) that could affect the safety of the job site are identified. Methods are
15 developed to identify and safely work around these hazards.
- 16 3. External Resources. Information is gathered about safety-related resources that might
17 be required in the event of an accident or other problem (such as an employee illness).
18 Information needed includes location and contact information for the nearest hospital, fire
19 department, police department, and any other public emergency response organization.
20 In addition, access routes and travel plans to emergency response facilities are defined.
- 21 4. Work Plan. A work plan in which procedures, employee roles, equipment
22 requirements, time requirements, and other factors are considered is developed to define
23 the most efficient means for safely accomplishing required locate work. This work plan
24 considers all of the safety related information developed in connection with paragraphs
25 4–6.A.2 and 4–6.A.3.

1 5. Job Briefing. Information developed as discussed in paragraphs 4–6.A.1 through 4–
2 6.A.4 is used to conduct a job briefing prior to commencement of on-site locate work.
3 The job briefing focuses on safety aspects of the required work.

4 B. Locate Work Safety Considerations

5 1. Personnel Protection. Watchman/lookout capabilities are provided to ensure the
6 safety of personnel in cases where locate work requires that working individuals disrupt
7 traffic flow or otherwise occupy hazardous positions. All working individuals wear
8 proper safety attire. Such attire provides for adequate visibility of the worker and
9 personal protection against hazards.

10 2. Equipment. All equipment used in connection with locate work is suitable for the
11 intended uses. Items such as ladders, electrical test devices, and other instruments and
12 items are inspected from a safety perspective prior to use. Safety features such as locking
13 devices, grounding, insulation, etc., are thoroughly inspected.

14 3. Exposures. In cases where locate work requires personnel to enter into spaces with
15 potentially unsafe conditions, appropriate testing is accomplished prior to entry. During
16 times when such spaces are occupied, adequate monitoring and/or ventilation devices are
17 present and properly operating during occupancy.

18 4. Work Activities. All locate work activities are conducted with safety given first
19 priority. All employees are thoroughly trained and briefed regarding safety measures
20 such as minimizing exposures to potentially hazardous conditions, avoiding unnecessary
21 risks, and giving priority to personal safety.

22 C. Post-Work Safety Considerations

23 1. Termination of Work Activities. After locate work is completed, the site is restored
24 and left in such a condition that no safety hazards associated with the locate work
25 activities remain. All personnel and equipment used in connection with the work are

1 accounted for, and no unsafe conditions remain at the site. Any safety related equipment
2 used in connection with the work is returned/restored to pre-work status.

3 2. Debriefing. After completion of locate work, a debriefing safety review of work
4 activities is conducted. The review looks at the safety aspects of all applicable work
5 practices to determine if unnecessary exposures may have occurred and where
6 improvements could be made.

7 4.7 Visual Inspection - Practice Statement: A visual inspection is completed during the
8 facility locating process.

9 Practice Description: This inspection includes the following:

- 10 • All facilities within a facility owner/operator's service area (to evaluate the scope
11 of the locate request)
- 12 • Identification of access points
- 13 • Identification of potential hazards
- 14 • Assurance that plant facilities shown on records match those of the site

15 A visual inspection helps determine if there are facilities placed that are not on record. It
16 is very important that visual inspections be completed in areas of new construction,
17 where records may not indicate the presence of a facility. The visual inspection is
18 necessary because the time between placing a facility in the field and placing it on
19 permanent records varies by facility owner/operator and location. Evidence of a facility
20 not on record includes, but is not limited to, poles, dips, enclosures, pedestals (including
21 new cables found within the pedestals), valves, meters, risers, and manholes.

22 4.8 Facility Marking - Practice Statement: Facilities are adequately marked for
23 conditions.

24 Practice Description: Facility locators match markings to the existing and expected
25 surface conditions. Markings may include one or any combination of the following:
26 paint, chalk, flags, stakes, brushes, or offsets. All marks extend a reasonable distance

1 beyond the bounds of the requested area. Proper training for all facility locators includes
2 properly identifying the varying surface and environmental conditions that exist in the
3 field and what marking methods should be used. Conditions that may affect markings are
4 rain, snow, vegetation, high traffic, construction, etc.

5 4.9 Positive Response to Locate Request - Practice Statement: Positive response is
6 provided to facility locate requests.

7 Practice Description: All facility locate requests result in a positive response from the
8 facility owner/operator to the excavator. A positive response may include one or more of
9 the following: markings or documentation left at the job site, callback, fax, or automated
10 response system. A positive response allows the excavator to know whether all facility
11 owners/operators have marked the requested area prior to the beginning of the
12 excavation.

13 4.10 Marking Multiple Facilities in the Same Trench - Practice Statement: Multiple
14 facilities in the same trench are marked individually and with corridor markers.

15 Practice Description: In general, the number of lines marked on the surface equals the
16 number of lines buried below. In circumstances where the total number of lines buried
17 in the same trench by a single facility owner/operator may not be readily known, a
18 corridor marker is used. The corridor marker indicates the width of the facility. (See
19 Appendix B, "Uniform Color Code and Marking Guidelines.")

20 4.11 Abandoned Facilities - Practice Statement: Information on abandoned facilities is
21 provided when possible.

22 Practice Description: When the presence of an abandoned facility within an excavation
23 site is known, an attempt is made to locate and mark the abandoned facility. When
24 located or exposed, all abandoned facilities are treated as live facilities. Information
25 regarding the presence or location of an abandoned facility may not be available because
26 of updating or deletion of records. In addition, abandonment of an existing facility,

1 damage to an abandoned facility, or limited or non-existing access points may render an
2 abandoned line non-locatable. It should be emphasized that recommendation of this
3 practice is not an endorsement of the maintenance of records for abandoned facilities.

4 4.12 Locating Electromagnetically - Practice Statement: When locating
5 electromagnetically, active/conductive locating is preferable to passive/inductive
6 locating.

7 Practice Description: The preferred method of actively applying a signal onto a facility
8 is to use direct connection. Direct connection is the process of connecting a direct lead
9 from the transmitter to the target facility and connecting a ground lead from the
10 transmitter to a ground point to complete a circuit. This process provides the strongest
11 signal on the line and is less likely to “bleed over” to adjacent facilities than other
12 methods of applying a signal. This method allows a greater range of frequency and
13 power output options. It is good practice to use the lowest frequency possible at the
14 lowest power output possible to complete the locate. If direct connection is not
15 possible, use of an induction clamp (coupler) is the most effective method of applying a
16 locate signal onto the target conductor. This method is more limiting for the choices of
17 frequency and power outputs than direct connection. Using an induction clamp is not
18 as effective at transmitting a signal as direct connection, can only be used within certain
19 frequency ranges, and must use a higher power output. The least-preferred method is
20 induction or broadcast mode on a transmitter. This usually results in a weak signal that
21 will “bleed over” to any conductor in the area.

22 Practice Statement B:

23 When electromagnetic locating is not possible, radar-based technologies can be used.¹⁰

24 Practice Description:

25 In cases where non-conductive utilities cannot be located using electromagnetic means,
26 radar-based methods such as ground penetrating radar and associated technologies can be

1 used to determine the location of such utilities. It is important to note that these
2 technologies are not applicable in all areas or conditions, because conductive soils and
3 materials obscure radar signals. Users of these technologies should have the degree of
4 knowledge and training required to operate the associated equipment and/or to interpret
5 the results. Applicable radar frequencies range from 200 MHz to 900 MHz, where higher
6 frequencies provide higher resolution but shallower depth of penetration.

7 4.13 Facility Owner/Operator Identification - Practice Statement: The facility
8 owner/operator is identified.

9 Practice Description: When feasible, the owner/operator of a facility is identified by
10 markings at the time the facility is located. This practice facilitates a positive response
11 for all facilities within the requested area. (See Appendix B, "Uniform Color Code and
12 Marking Guidelines.")

13 4.14 Communication between Parties - Practice Statement: Communication is established
14 between all parties.

15 Practice Description: 811 centers, facility owners/operators, and excavators all have
16 clearly defined processes to facilitate communication between all parties. If the
17 complexity of a project or its duration is such that a clear and precise understanding of
18 the excavation site is not easily conveyed in writing on a locate request, then a pre-
19 location meeting is scheduled. This pre-location meeting is on-site to establish the scope
20 of the excavation. Written agreements between the excavator(s) and the locator(s)
21 include the following information:

- 22 • Date
- 23 • Name
- 24 • Company
- 25 • Contact numbers for all parties
- 26 • A list of the areas to be excavated

- A schedule for both marking and excavating the areas

Any follow-up agreements that might be necessary

Any changes to the areas that are to be located are in writing and include all parties responsible for the excavation and marking of the excavation sites. Locators also schedule meetings if the complexity of the markings requires further explanation.

4.15 Documentation of Work Performed - Practice Statement: Documentation of work performed on a locate is maintained.

Practice Description: A facility locator always documents what work was completed on a locate request. This assists in the locate process by requiring a locator to review what was located and then to verify that all facilities within the requested area were marked. Careful documentation helps ensure that there is an accurate record of the work performed by the locator and helps eliminate confusion over what work was requested by the excavator.

4.16 Damage Investigation - Practice Statement: A damaged facility is investigated as soon as possible after occurrence of damage.

Practice Description: Anytime a damage occurs, a proper investigation is performed to determine not only the responsible party but also the root cause of the damage. The information gathered from damage investigations is essential in preventing future damages.

4.17 Forecasting/Planning for Workload Fluctuations - Practice Statement:

A plan including an annual forecast, quarterly review, weekly/monthly engagement, or another agreed-upon frequency is developed to manage ticket volume and locate workload fluctuations.

Practice Description: Facility owners/operators and/or their representatives develop methods to sufficiently forecast and plan for future workloads so that ticket requests may

1 be completed on time. This best practice ensures that adequate personnel and equipment
2 are available to complete all locate requests.

3 4.18 Quality Assurance - Practice Statement: Underground facility owners/operators have
4 a quality assurance program in place for monitoring the locating and marking of
5 facilities.⁷

6 Practice Description: The process of conducting audits for locates is a critical component
7 to the protection of underground facilities. The recommended components listed below
8 are assembled from multiple sources and are meant to provide general guidelines for
9 auditing the work of locators. Components:

10 A. Conduct field audits and choose some locations to be audited/surveyed purely at
11 random.

12 B. Check accuracy to within, governed, contractual, and minimum tolerance levels.

13 C. Measure timeliness, as defined by regulation/statute.

14 D. Check completion of a request.

15 E. Check evidence of accurate and proper communication.

16 F. Check that proper documentation exists.

17 G. Check that an audit/survey is documented.

18 H. Communicate results to applicable personnel.

19 I. Trace audits for trend analysis.

20 J. Verify proper hook-up and grounding procedures where applicable.

21 K. Verify the reference material used to document that the locate was up to date
22 (electronic plans or paper plans).

23 L. Verify that appropriate safety equipment and procedures were used by the locator.

24 M. Verify that tools and equipment are in proper working order and properly calibrated.
25

1 4.20A Locating and Marking in Navigable Waterways - Practice Statement: Permanent
2 markers are placed as close as practical at the entrance and exit points of facilities located
3 underneath bodies of water where facilities are at risk of being damaged. For natural
4 (and other) gas and hazardous liquids pipelines, these affected bodies of waters are
5 “commercially navigable waterways” that have been defined in 49 CFR 195.450 for
6 hazardous liquids pipelines as “waterways where a substantial likelihood of commercial
7 navigation exists.”

8 Practice Description: Markers are used by underwater facility owners (e.g., cable,
9 telecommunication, electric, water, sewer, and oil/gas pipelines, etc.) to indicate the
10 presence of an underwater facility in the area. There are many excavating activities (e.g.,
11 dredging, bridge construction, anchors, directional boring, and other activities) that can
12 damage these underwater facilities. The proper placement and maintenance of visible
13 permanent markers raise the awareness of these facilities and reduce the likelihood of
14 damage. Markers for underwater facilities follow local, state, and federal laws and
15 regulations. Facility type, name, and contact number of the facility operator are included
16 on markers for all facility types. In some cases, the facility contact is the 811 center.
17 Markers include the words “Do Not Anchor or Dredge” and/or applicable warning
18 language.

19 Benefits:

20 By alerting excavators to the presence of underwater facilities, permanent shoreline
21 markers provide additional protection to the excavators, facilities, and the public.

22 4.20B Locating and Marking in Navigable Waterways -

23 B: Temporary Markers for Underwater Facilities Practice Statement: Temporary markers
24 are placed within the areas of proposed excavations as close as practical over facilities
25 that are submerged in bodies of water where facilities are at risk of being damaged
26 without impeding or creating additional hazards.

1 Practice Description: The technology used to locate and mark the submerged facility is
2 dependent upon the size of the facility, depth of water, material composition of the floor,
3 and the depth the facility is positioned in or on the floor of the body of water. Temporary
4 markers such as buoys, poles, or PVC markers are used by underwater facility owners to
5 indicate the presence of an underwater facility in the area. At times these markers may
6 be supplemented with mapping, GPS coordinates, and/or fixed high-bank marks. There
7 are many excavating activities, such as dredging, bridge construction, setting of anchors,
8 and directional boring, that can damage underwater facilities. The proper placement of
9 visible temporary markers raises the awareness of these facilities and reduces likelihood
10 of damage. Communication between stakeholders is initiated through the 811 center to
11 reduce potential conflicts. It is critical for stakeholders to maintain communication
12 throughout the excavation to ensure the safe and successful completion of the project.
13 Placement and removal of temporary markers for underwater facilities follow local, state,
14 and federal laws and regulations.

15 Benefits:

16 By alerting excavators to the presence of underwater facilities, temporary markers
17 provide additional protection to excavators, facilities, and the public.

18 4.21 Service Lines - Practice Statement: A service line is marked in response to a locate
19 request to the operator who uses the service line to pursue a business that derives revenue
20 by providing a product or service to an end-use customer via the service line. A service
21 line is marked in response to a locate request to a governmental entity that provides a
22 product or service to an end-use customer via the service line.

23 Practice Description: A service line is a type of underground facility that is connected to
24 a main facility. The service line is used by the following entities:

- 25 • An operator who provides a product or service within a right-of-way, an
26 easement, or an allowed access to or through private property while pursuing a business

1 that generates revenue by providing a product or service to an end-use customer (other
2 than another operator of like kind or themselves)

- 3 • A governmental entity that provides a product or service via that service line.

4 The operator or the governmental entity locates and marks these service lines within the
5 bounds of the locate request up to either 1) the point of their operational responsibility, 2)
6 the point the service line enters a building, or 3) where the access to locate the line
7 terminates, as designated by the prevailing law.

8 **Q. Does this conclude your testimony?**

9 A. Yes.

10

11