BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON NC 389

In the Matter of:

Public Utility Commission of Oregon Complainant,

v.

Frontier Communications Northwest, Inc.

Defendant.

DEFENDANT'S RESPONSE TO STIPULATION FOR ENTRY OF FINAL ORDER

Frontier Communications Northwest, Inc ("Frontier") respectfully submits the following response to The Public Utility Commission of Oregon's ("Commission" or "PUC") order: Frontier has contracted with USIC Locating Services, LLC ("USIC") to perform locate services. Additionally, Frontier has a variety of policies pertaining to location of facilities for the express purpose of identifying responsible parties, establishing workflow and maintaining compliance with state requirements.

A. Description of the purpose of the policy and commitment thereof by leadership, management, and employees.

Frontier's leadership and staff are committed to the timely and proper marking of underground facilities. This commitment is evidenced by the contract with USIC signed by Daniel McCarthy, Frontier's Chief Executive Officer. The regular oversight of USIC's performance is managed by Bret Plaskey, Network Operations Centralized Services Manager and his team including Carlos Bates, Network Operations Centralized Services Supervisor. Field operations by USIC are monitored by David Carnley, Local

Construction Manager and his team of 30 technicians. Field issues and facility marking delays are monitored by Thomas Novotney, Operations Director and his team of local managers and technicians. The following documents are submitted in support of this response:

Frontier Communications and USIC Locating Services, LLC Contract

Frontier Communications an USIC Locating Services, LLC Statement of Work No. 10

Frontier Policy 16-7129 (Cable Locate Process Overview)

Frontier Policy 16-7130 (Cable Locate Process – State Reference)

Frontier Policy 16-7131 (Cable Locate Process – Cable Locate Email Accounts)

Frontier Policy 16-7132 (Cable Locate Process – Company Locates Manual)

Frontier Policy 16-7133 (Cable Locate Process – Cable Locates Automated)

Frontier Policy 16-7134 (Cable Locate Process – Automated Process Reference)

B. Identification of notifications and types of responses for marking underground facilities;

In accordance with the Frontier Communications and USIC Locating Services, LLC

Contract, USIC is the exclusive vendor providing underground facility marking services
on behalf of Frontier.

In accordance with the Oregon811 Utility Notification Center requirements, USIC receives all notifications placed through the online and telephone portals. For all locates completed by USIC, specifics of their process can be found in the Frontier Communications and USIC Locating Services, LLC Statement of Work No.10.

All delay or field issues are routed to the appropriate Frontier local management team.

In the course of preparing this response, Frontier has identified an opportunity to improve efficiency and implemented revisions to improve customer service.

Once notified of a delay or field issue, Frontier local management has an escalation process with USIC leadership to remedy delays and issues timely. The on-call Frontier manager makes contact with the USIC local management to assess the situation and implement a solution.

Any internal underground facility marking completed by Frontier staff is handled in accordance with Frontier Policy 16-6860 (POTS Cable Locating).

C. Identification of tasks assigned to participants by title or position and their roles and responsibilities in the workflow process.

For all underground facility marking completed by USIC, specifics of their process can be found in the Frontier Communications and USIC Locating Services, LLC Statement of Work No.10.

All underground facility marking completed by Frontier staff is handled in accordance with Frontier Policy 16-6860 (POTS Cable Locating).

D. Identification of the technology or systems and methods used throughout the policy that enables the completion of identified tasks.

Frontier Dispatch notification (internal systems)

Oregon 811

Frontier Customer Service or Executive Escalation Departments

USIC Dispatch

E. Criteria for periodic review of effectiveness and identification of best practices.

Frontier reviews USIC performance at a minimum of quarterly in every state where they are contracted. Identified performance deficiencies result in development of a corrective action that will identify if resource, training or field issues that are leading to the deficiency. Each deficiency has a specific plan for remedy and a specific review period to assure the remedy has been implemented.

Biannually a revised Statement of Work is developed to address any changes in need or responsibility pertinent to the contract.

Submitted this **E** day of **MCH**, 2019.

Respectfully,

George Baker Thomson, Jr.

Associate General Counsel and Assistant Secretary

Frontier Communications Northwest Inc.

Citizens Telecommunications Company of Oregon

1800 41st St, N-100

Everett, WA 98203

425-261-5844

george.thomson@ftr.com

Construction Services Agreement

By and Between

Citizens Telecom Services Company L.L.C. d/b/a Frontier Communications

And

USIC Locating Services, L.L.C.

Effective Date: March 26, 2014

Table of Contents

1	SCOPE OF WORK	
2.	TERM	
3.	FEES, EXPENSES, AND BILLING	
4.	TAXES	
5.	ACCEPTANCE	
6.	WARRANTIES	
7.	INSURANCE	
8.	WORK PRODUCT	
9.	SOFTWARE	
10.	CUSTOMER'S PROPERTY	
11.	RELATIONSHIP OF PARTIES	
12.	DIRECTION AND CONTROL	
13.	WORK RULES	
14.	SAFETY AND SECURITY	
15.	KEY PERSONNEL	
16.	NON-SOLICITATION	
17.	INDEMNIFICATION	
18.	INFRINGEMENT INDEMNIFICATION	
19.	DEFAULT/ TERMINATION	
20.	NOTICE	
21.	CONFIDENTIAL INFORMATION	
22.	RIGHT TO AUDIT	
23.	APPLICABLE LAW	
24.	COMPLIANCE WITH LAWS AND PERMITS	
25.	CHANGES IN LAW	
26.	CONFLICT OF INTEREST	
27.	ASSIGNMENT/ SUBCONTRACTING	
28.	FORCE MAJEURE	18
29.	WAIVER OF TERMS AND CONDITIONS	
30.	DISPUTE RESOLUTION	
31.	WMDVBE	
32.	SURVIVAL OF OBLIGATIONS	20
33.	SEVERABILITY	20
34.	ENTIRE AGREEMENT; COUNTERPARTS	20
7	ADDINIDIM A - STATEMENT OF WORK W	22

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 2 of 22 Customer initials MB3

This Construction Services Agreement (the "Agreement"), effective as of March 26, 2014 (the "Effective Date"), is made by and between Citizens Telecom Services Company L.L.C. d/b/a Frontier Communications, a Delaware limited liability company with offices located at 3 High Ridge Park, Stamford, Connecticut 06905, (hereafter "Customer") on behalf of itself and its Affiliates (Affiliate being defined as an entity controlled by, controlling, or under common control with Customer), and USIC Locating Services, Inc. with offices located at 13085 Hamilton Crossing Blvd., STE 200, Carmel, Indiana 46032 (hereafter "Supplier"). Customer and Supplier may hereafter be referred to collectively as the "Parties", or individually as a "Party".

In consideration of the mutual terms and conditions of this Agreement, the Parties agree as follows:

1. SCOPE OF WORK

- a. When Customer and Supplier have reached a general understanding upon the nature, timing, and requirements for any particular project, engagement, or other course of dealing hereunder, (i) they may complete a statement of work, substantially derived from the form attached hereto as Addendum A ("Statement of Work"); (ii) Services may be further described and be subject to the rates, terms, and conditions set forth in exhibit(s) or form(s) mutually agreed to in writing by Parties; (iii) Customer may issue a purchase order consistent with such understanding with Supplier ("Purchase Order"); or (iv) Customer may issue a work order or service order authorizing specific work or services to be performed by Supplier ("Work Order").
- b. Purchase Orders, Statements of Work, and/or Work Orders, individually and collectively, are referred to herein as "Scope Document(s)". A Scope Document (which may be comprised of a Purchase Order and an associated Work Order) shall be submitted to Supplier by electronic data interchange ("EDI") or the established protocol used to transmit data between organizations electronically, and to the extent applicable, specify (i) the services and deliverables to which it pertains (hereinafter referred to as "Services" and "Deliverables"); (ii) commencement dates and delivery dates; (iii) specific acceptance criteria for the Services and Deliverables; (iv) specific price and payment provisions (if different from or additional to those established in this Agreement); and (v) any other terms and conditions relating to the specific project at issue. Supplier shall not provide any Services or Deliverables to Customer, except in the performance of its obligations under a Scope Document issued in accordance with this provision. Likewise, Customer will have no liability whatsoever to Supplier with respect to any Services or Deliverables provided hereunder, in the absence of a Scope Document. Except as the Parties may otherwise indicate their intent in a Statement of Work, in the event of a conflict between a Scope Document and this Agreement, the terms and conditions set forth in this Agreement will prevail.
- c. Supplier will purchase, generate, and furnish all applicable labor, tools, materials, equipment, including safety protective equipment, transportation, and supervision necessary to complete the Services and provide the Deliverables in a safe and environmentally compliant manner.
- d. Supplier acknowledges and agrees that Customer may add, delete, or change the Services and Deliverables described in any Work Order at any time by its delivery to Supplier of a written notice or request (a "Change Order"), in such form as Customer may deem appropriate. Purchase Orders may only be modified by Customer's issuance of a superseding Purchase Order. Statements of Work may only be modified in writing, signed by an authorized representative of Supplier and Customer. Upon Customer's submission of any Change Order or superseding Purchase Order, the Parties shall mutually agree as to the impact such changes would have on the Services being performed pursuant to the original applicable Scope Document including, but not limited to, additional or reduced fees, schedule changes, etc. If the Parties cannot reach a mutually satisfactory agreement with regard to such changes, Customer may, in its sole discretion, terminate the original Scope Document upon written notice to Supplier, and in such event will have no further liability to Supplier with respect thereto, except to pay Supplier for acceptably performed Services and Deliverables provided through the date of termination.
- e. Supplier further acknowledges and agrees that Customer may suspend Supplier's performance of any Services and provision of Deliverables under a Scope Document at any time, with or without cause, in whole or in part, upon written notice to Supplier. In such event, Supplier shall discontinue performing the Services and providing the Deliverables, and thereafter resume performance of the Services and provision of Deliverables when directed to do so by Customer, subject to availability of personnel. If only

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL

Page 3 of 22

Customer initials

Supplier initials 19773

a portion of the Services or Deliverables are suspended, then Supplier will be compensated only for that portion of the Services actually performed or Deliverables actually provided and accepted during the suspension period. No oral changes to the scope of any Scope Document shall be permitted.

2. TERM

The term of this Agreement shall commence on the Effective Date and will continue until terminated as provided for herein.

3. FEES, EXPENSES, AND BILLING

- a. Unless otherwise agreed upon in writing, any Affiliate that is a party to, or issues a Scope Document hereunder to Supplier, shall have thereby agreed to abide by the terms of this Agreement. Customer hereby guarantees payment of any and all amounts due to Supplier from any Affiliate hereunder. No Affiliate, however, shall be liable to Supplier for the obligations of any other Affiliate to Supplier.
- b. Fees received by Supplier are expressly intended to cover all costs and expenses incurred by Supplier in connection with the performance of Services and Deliverables under this Agreement ("Fees") and in no event shall Customer be obligated to reimburse Supplier for any expenses. Supplier shall not undertake, and Customer shall not pay for Services or Deliverables to the extent Fees for such Services and Deliverables would exceed any maximum liability or expenditure limit specified in an applicable Scope Document.
- c. For a period of three (3) years following the effective date of i) the Agreement, or ii) from the effective date the applicable Scope Document (if a proposed fee change pertains specifically to the Scope Document) the fees for Services and Deliverables shall not be increased by Supplier, unless otherwise agreed to in writing by the Parties.
- d. When Supplier completes any Services and Deliverables under this Agreement, including proper disposal of poles, scrap, ties, cable reels, and all associated miscellaneous materials generated by Supplier and deemed waste by Customer and/or local ordinance ("Waste Materials"), Supplier must notify Customer within ten (10) business days of completion by (i) submission of a proper record of work performed or progress report, or (ii) notice in a method deemed acceptable by Customer ("Completion Notice") and Customer will, within fifteen (15) days of receipt of Completion Notice, approve or reject Completion Notice (failure by Customer to respond within the allotted time shall deem Completion Notice accepted). The date of Customer's acceptance of the Completion Notice shall be referred to herein as the "Acceptance Date". If Completion Notice is rejected and deemed unacceptable by Customer, Supplier shall promptly correct the deficiency and resubmit the Completion Notice to Customer as provided for above. Customer retains the right to determine the completeness of the project at any time during the project including, but not limited to, upon submission of final invoice and shall have the right to withhold payment until it determines that the project is complete.
- e. After the Acceptance Date, Supplier shall submit invoice(s) according to the terms of this Agreement, and Customer agrees to pay Supplier for completion of Services and Deliverables on a per job basis. Customer may, in its sole discretion, elect to pay Supplier periodic progress payments according to a pre-determined payment schedule based on a proportion of Services completed by Supplier and deemed accepted by Customer. Customer shall not be responsible for payment of invoices not rendered within three (3) months of the Acceptance Date.
- If Customer determines that an invoice and/or the related documentation are incomplete and/or incorrect, Customer will notify Supplier in writing. The Parties will cooperate in good faith to resolve any disputes regarding the invoice and/or the related documentation. Customer may withhold from any payment, including the final payment for (i) any amount incorrectly invoiced; (ii) any amount in dispute either because Customer has found the invoice excessive, or the Services performed or the Deliverables provided unacceptable; (iii) any amount sufficient to completely protect Customer from any loss, damage or expense arising out of assertions by other parties of any claim or lien against Customer because of Supplier's performance or failure to perform under this Agreement, or (iv) on the basis of any final accounting made by Customer.

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C.

CONFIDENTIAL Page 4 of 22 Customer initials KN
Supplier initials MTB

- g. If Customer accepts the Services and Deliverables and determines that a properly submitted invoice and the related documentation are complete and correct and Customer is satisfied by bond or otherwise that there are no outstanding claims against the Services and Deliverables Customer shall make payment to Supplier within forty-five (45) business days of Customers receipt of a complete and correct invoice.
- h. Each invoice must reference Customer's designated authorized representative; the Work Order Number; the Purchase Order Number; and any additional information required. Each invoice must itemize the Services performed and must show the number of units of work performed, the rate per unit of work, the total cost of work at each unit rate, and the total cost of all Services. Supplier shall submit invoices to Customer by EDI unless otherwise specified in the SOW and/or Order, or as requested by Customer.

4. TAXES

Customer will promptly reimburse Supplier or pay directly to the applicable government or taxing authority all applicable taxes arising hereunder, including, and without limitation, sales taxes, and value added taxes. Customer will not be responsible for taxes computed upon the income of Supplier. Supplier shall cooperate with Customer in any effort by Customer to challenge any taxes claimed owing by any government or taxing authority resulting from a transaction under this Agreement.

5. ACCEPTANCE

- a. Unless clearly specified otherwise in an applicable Scope Document, prior to any payment otherwise required by Customer to Supplier, Customer shall have the right to inspect, and to accept or reject, any Services performed or Deliverables associated with such payment. If the Services or Deliverables do not conform to Supplier's warranties, any other requirements established in this Agreement, or the relevant Scope Document, Customer shall so notify Supplier in writing setting forth Customer's rejection and the basis thereof with reasonable particularity. Failure by Customer to deliver such notice of nonconformity within sixty (60) days of the completion of the Services and/or delivery of the Deliverables by Supplier shall be deemed acceptance of the applicable Service and/or Deliverable. Supplier shall have a reasonable time, not to exceed thirty (30) days from the date of such notice, to cure the nonconformity. Supplier shall not have the right to retain or demand, and Customer shall have no obligation to make, payment to Supplier until Customer's acceptance has been made or the nonconformity has been cured.
- b. Because of the expected difficulty in assessing actual damages to Customer as a result of failure to achieve acceptance or a delay in Supplier's performance hereunder, Customer shall be entitled to liquidated damages as described in a Scope Document, if any, not as a penalty, it being agreed that Customer's actual damages in such event would be impossible to ascertain and such amount is a reasonable estimate of same. An attempt to recover, or actual recovery of liquidated damages by Customer as permitted herein shall not bar any remedy, legal or equitable, otherwise available to Customer as a result of a breach by Supplier.

6. WARRANTIES

a. Supplier represents and warrants that it will perform all Services awarded, regardless of size or scope and provide the Deliverables, (i) under the terms and conditions of this Agreement and any Scope Document; (ii) in a professional manner; and (iii) in substantial conformance with any written specifications or other written description (including web based or other electronic presentation) of the Services or Deliverables; and that it will exercise that degree of skill and care commensurate with high standards generally associated with Supplier's industry and area of expertise; provided however, that where this Agreement or any Scope Document specifies a particular standard or criteria for performance, this warranty is not intended to and does not diminish that standard or criteria for performance. If Supplier is unable to provide the required resources within a reasonably acceptable time, Customer may deem it necessary to secure the resources of other approved suppliers. Failure to

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 5 of 22

Customer initials _

Supplier initials M133

provide Services for which Supplier has been selected may nullify Supplier's status, and may result in removal of Supplier from the approved supplier list.

- b. Supplier represents and warrants that it will use only new materials of first-class quality in conformity with the specific requirements of Customer and/or the local industry specifications and warranted by Supplier to be merchantable and fit for the specific purpose for which the material is used. Any warranty on such materials provided by the manufacturer thereof shall be passed through to Customer by Supplier, or if not capable of being passed through, enforced by Supplier on Customer's behalf.
- c. Supplier represents and warrants that it will keep the property upon which the Services are performed free and clear of all liens, claims, and encumbrances arising from Services performed and Deliverables provided by Supplier or any permitted subcontractors.
- d. Supplier represents and warrants that it possesses the necessary skills, technologies, capabilities, and expertise required to fulfill its obligations under this Agreement in a safe manner. Supplier also represents and warrants that it has full legal authority and all rights necessary (i) to perform the Services and provide the Deliverables; (ii) to make the commitments and fulfill the obligations required of it hereunder; and (ili) to grant all the respective rights and licenses related thereto, free and clear of any claim by any third party regarding ownership, security interest, lien, intellectual property right, or other encumbrance on Customer's ability to make full use of the Services and Deliverables.
- e. Further, Supplier represents and warrants that as of the Effective Date, Supplier has not received notice of any claim by any third party alleging that its performance of Services or any use of Deliverables will result in infringement, misuse, or misappropriation of any intellectual property right of such third party and that it will promptly notify Customer in the event that it receives such notice or that such an allegation develops.
- f. Supplier represents and warrants that its performance of the Services and provision of Deliverables will comply in all material respects with all applicable federal, state and local laws and regulations, including safety, health, motor vehicle, transportation, and environmental requirements, and that there is no action, suit, proceeding claim or investigation pending, or, to the best of Supplier's knowledge, threatened against or affecting Supplier in any court or government department, commission, board or agency that, if adversely determined, might adversely affect or restrict Supplier's performance or Customer's right to possess and use Deliverables provided hereunder.
- If the Services or Deliverables are not performed or delivered as warranted or as otherwise required under this Agreement or any Scope Document, then Customer may notify Supplier in writing (i) within ninety (90) days following acceptance of the applicable Services or Deliverables in accordance with the acceptance procedures contained herein or in an applicable Scope Document in the case of nonconformance with the warranties of sub-section (a) above (the "Conformance Warranty Period"); or (ii) at any time during the Conformance Warranty Period, or thereafter, with respect to any other warranty contained in this Agreement. Supplier shall have the obligation to cure or correct the defect, nonconformance, or failure, which shall be at no charge to Customer. If Supplier does not cure or correct any defect, non-conformance, or failure within a commercially reasonable period of time, not to exceed thirty (30) days (without Customer's consent), then Customer shall be entitled to a refund of all amounts paid with respect to the defective or non-conforming Services or Deliverables as well as any other Services or Deliverables whose functionality or utility to Customer have been adversely impacted. Customer shall also be free to pursue any additional remedies it may have arising from such defect, non-conformance, or failure. Notwithstanding the establishment of the Conformance Warranty Period for Customer to notify Supplier of any violation or breach of Supplier's conformance warranty set forth in sub-section (a) above, if Customer discovers any latent deficiencies in the Services or Deliverables within two (2) years from the date Customer accepts such Services or Deliverables, Customer may notify Supplier in writing and Supplier will promptly correct such deficiencies.
- h. THE WARRANTIES AND ANY OTHER WARRANTIES SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES OR DELIVERABLES PROVIDED PURSUANT TO THIS AGREEMENT.

7. INSURANCE

- a. Supplier shall procure and maintain in full force and effect during the term of this Agreement, at its sole cost and expense, policies of insurance which will provide coverage for Supplier and Customer for claims which may arise out of or result from Supplier's performance of this Agreement, whether such services are performed by Supplier or its subcontractor, or by anyone directly employed by them, or by anyone for whose acts they may be held liable, in such amounts and upon such terms as follows:
 - (i) Commercial General Liability Including coverage for contractual liability, product/completed operations, bodily injury, personal and advertising injury and property damage. This insurance shall have minimum limits of \$2,000,000 per occurrence, \$2,000,000 in the General Aggregate, and \$2,000,000 in the aggregate for products/completed operations. Products/completed operations coverage shall be maintained for a minimum of three (3) years after completion of the services. These limits can be satisfied through a combination of primary liability and umbrella/excess liability policies. Defense costs shall not erode the limits;
 - (ii) <u>Comprehensive Automobile Liability</u> -- Coverage for all owned (if any), non-owned and hired vehicles used in connection with the performance of this Agreement. This insurance shall have minimum limits of \$2,000,000 combined single limit each accident;
 - (iii) Workers' Compensation -- With coverage and limits complying with the statutory requirements of the jurisdiction in which the Services or Deliverables are being provided;
 - (iv) <u>Employers' Liability ("Stop Gap" coverage)</u> -- With coverage for all personnel employed by Supplier in connection with its services hereunder. This insurance shall have minimum limits of \$500,000 each accident for Bodily Injury by Accident; \$500,000 each employee for Bodily Injury by Disease, and \$500,000 policy limit for Bodily Injury by Disease;
 - (v) <u>Umbrella/Excess Liability</u> Such coverage shall provide excess limits over the commercial general liability, comprehensive automobile liability and employer's liability policies. This insurance shall have minimum limits of \$5,000,000 per occurrence and in the annual aggregate. Defense costs shall not erode the limits;
 - (vi) Professional Liability/Errors and Omissions If applicable, coverage for the negligent acts, errors or omissions of Supplier in the performance of professional services. This insurance shall have minimum limits of \$1,000,000 per claim and in the annual aggregate, covering any liabilities incurred before, and up to three (3) years after the completion and acceptance of all Services performed under this Agreement; and
 - (vii) Other forms of insurance that may be required by law or by Customer to perform Services under a specific Scope Document.
- b. All such policies identified under this Section shall be issued by Companies authorized to do business in the state where the Services are to be performed. Coverage shall be placed with a reputable and financially sound insurance company or companies with an A.M. Best Rating of A or better.
- c. Any deductible or self-insured retention amount or other similar obligation under the policies identified under this Section shall be the sole responsibility of Supplier.
- d. Customer shall be named as an additional insured on the commercial general liability, comprehensive automobile liability and, to the extent applicable, the umbrella/excess liability policies.
- e. All such policies identified under this Section, through policy form language or separate endorsement, will include: (i) a provision that no material change in coverage (including reduction in coverage) or cancellation shall be effective unless Customer receives thirty (30) days' prior written notice; (ii) a provision that Supplier's insurance coverage will be primary and non-contributory to any other valid and collectible insurance available to the Customer; and (iii) a waiver of subrogation in favor of the Customer.
- f. Supplier shall furnish to Customer prior to commencing performance, and, upon each policy renewal thereafter, certificate(s) of insurance evidencing that such policies are in full force and effect. The

Construction Services Agreement Rev 2012

CONFIDENTIAL

failure of Supplier to furnish any such certificate shall not diminish or otherwise affect its obligation to procure and maintain any policies of insurance contemplated by this Section.

- g. Supplier further agrees to take such actions as are necessary to ensure that all of its contractors, agents, and suppliers procure and maintain policies of insurance and furnish proof as if they were subject to the terms and provisions of this Agreement. . In the event that Supplier's contractors, agents and suppliers do not have the insurance contemplated by this Section, Supplier agrees that its insurance may be utilized for any claim made under this Agreement.
- h. The obligation to insure imposed by this Section shall not relieve Supplier of any obligations imposed upon it by other Sections of this Agreement. Neither the insurance required nor the amount and type of insurance maintained by Supplier shall limit or affect the extent of Supplier's liability hereunder for injury, death or loss or damage.
- For Services performed under this Agreement, Supplier may be required to furnish to Customer performance and payment bonds, each in an amount at least equal to the total value of the Services being performed and Deliverables being provided as security for the faithful performance and payment of all Supplier's obligations under this Agreement. The payment bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by laws or regulations or by the Agreement. All performance bonds shall be in the form acceptable to Customer and shall be executed by such sureties as are named in the current list of "companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department and duly licensed or authorized in the jurisdiction in which the Services are performed. All performance bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act. If the surety of any performance bond furnished by Supplier is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Services are being performed or it ceases to meet the requirements above, Supplier shall have ten (10) days thereafter to substitute another performance bond and surety, both of which must be acceptable to Customer. Supplier shall furnish the required bond to Customer prior to commencing performance.

8. WORK PRODUCT

- a. Supplier acknowledges and agrees that:
 - i. Any and all ideas, inventions, documents, data, programs, and/or other materials developed or produced by Supplier or Supplier's employees, agents or contractors in the performance of this Agreement (hereinafter collectively referred to as "Work Product") are and shall be the sole and exclusive property of Customer, and Customer shall have the right to use the Work Product for any purpose without any additional compensation to Supplier or such employees, agents or contractors. Supplier agrees, and will ensure that its employees, agents and contractors assigned to Customer agree, not to make the materials developed pursuant to this Agreement available to any third party without the prior written consent of Customer.
 - ii. Customer shall be the sole owner of all patents, copyrights, trademarks, trade secrets, and other rights and protection in connection with any Work Product produced by Supplier or Supplier's employees, agents or contractors under this Agreement. Supplier hereby agrees to assign, and will ensure that its employees, agents and contractors assign to Customer all rights of Supplier and such employees, agents and contractors in and to any and all such intellectual property, and shall cooperate with and assist Customer, at Customer's expense, in obtaining patents, copyrights, trademarks and other rights and protections relating to said Work Product.
 - iii. If Supplier, or Supplier's employees, agents or contractors incorporate elements from pre-existing commercial off-the-shelf computer program(s), audio/visual programs or other materials owned by third parties in the production of any Work Product for Customer; then Supplier is responsible for obtaining, at its own expense, any and all licenses, releases or permission necessary to utilize said elements, and shall provide written assurance to Customer that such licenses, releases or permission have been obtained, as well as copies of any documents evidencing any such license,

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 8 of 22

release, or permission. Supplier agrees to indemnify, defend, and hold harmless Customer from any lawsuit, claim, or other cause of action, damages, costs, and expenses, including reasonable attorneys' fees, in connection with any alleged infringement related to Customer's use of such pre-existing programs or infringement upon the intellectual property rights of any third party.

9. SOFTWARE

- a. Supplier hereby grants to Customer a perpetual, non-transferable, non-exclusive, paid up license to use any software, as well as all documentation, connections, enhancements, updates and new releases thereto which are provided by Supplier to Customer in connection with the performance of Services or the provision of Deliverables hereunder (collectively, "Software").
- b. Title to Software, except Software first created and prepared by Supplier for the benefit of Customer under this Agreement, shall remain with Supplier or Supplier's licensor, as applicable. Customer shall have the right to make a reasonable number of copies of the Software for archival and disaster recovery purposes or for such other use as may be mutually agreed by the Parties in an Order or Schedule. Title to Software first created and prepared by Supplier for the benefit of Customer under this Agreement shall vest and belong to Customer.
- c. If any Software is lost or damaged prior to acceptance, Supplier will promptly replace the Software and Software storage media at no additional charge to Customer. If any Software is lost or damaged while in the possession of Customer, Supplier will promptly replace the Software at the established charge for the Software media on which the Software is stored, unless such media is provided by Customer, in which case there shall be no additional charge.

10. CUSTOMER'S PROPERTY

- a. All supplies, materials, equipment, and other items Customer furnishes, either directly or indirectly, to Supplier, or for which Customer gives consideration to Supplier in whole or in part ("Customer's Property"), will be and remain the property of Customer and be held by Supplier on a bailment basis. Supplier will not sell, lend, rent, encumber, pledge, lease, transfer, or otherwise dispose of Customer's Property. Furthermore, Supplier will not assert, or permit any person claiming an interest through Supplier to assert, any claims of ownership to or any other interest in Customer's Property. When permitted by law, Supplier waives any lien or other rights that Supplier might otherwise have on or in any of Customer's Property.
- b. Customer may, at its sole discretion, allow Supplier to use Customer's Property to perform under this Agreement. Should Supplier elect to utilize Customer's Property, Supplier shall (i) accept Customer's Property in AS-IS condition with no assurances from Customer, regardless of any information or documentation provided by Customer to Supplier, that Customer's Property is of a design and condition suitable for Supplier's intended use; (ii) accept the sole risk of damage to or loss of Customer's Property; (iii) use Customer's Property only for the Services described in this Agreement; (iv) following the completion of the Services and Deliverables, or when requested by Customer, return Customer's Property in a condition comparable to the condition when provided to Supplier, reasonable wear and tear excepted; (v) conspicuously mark Customer's Property as the property of Customer and maintain such markings; (vi) not commingle Customer's Property with the property of Supplier or with that of a third party; and (vii) at all times comply with the written process and/or procedures provided by Customer to Supplier relating to Customer's Property, including, without limitation, related to the flow of Customer's Property from Customer (or its designated supply partner or distribution point), storage and protection thereof, access requirements, insurance, inventorying, sign out or manifesting requirements, usage reporting, usage reconciliation, and return procedures. Supplier will not be required to return any Customer's Property that is reasonably considered expendable, when used properly and was expended while performing the Services required under this Agreement or material used which necessarily becomes a permanent portion of the completed Services or Deliverables. Supplier will only allow qualified individuals to use Customer's Property in a safe and professional manner consistent with Customer's instructions, manufacturer's guidelines, and industry practice.
- c. Supplier agrees that Customer has the right, at any time and from time to time, with or without reason

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 9 of 22

and without payment of any kind, to retake possession of or request the return of Customer's Property. Without further notice or court hearings, which rights, if any, are hereby waived, Customer or its designee(s) will have the right to enter Supplier's premises and take possession of any and all of Customer's Property. Upon Customer's request and in accordance with Customer's instructions, Customer's Property will be immediately released to Customer or delivered to Customer by Supplier to any location Customer designates at Supplier's cost. If Supplier does not release and deliver any Customer's Property in accordance with this Section, Customer may obtain an immediate writ of possession without notice and without the posting of any bond and/or enter Supplier's premises, with or without legal process, and take immediate possession of Customer's Property.

11. RELATIONSHIP OF PARTIES

In providing Services and Deliverables pursuant to this Agreement, Supplier is acting solely as an independent contractor and not as an agent of any other party. Persons furnished by Supplier shall be regarded solely as Supplier's employees and/or subcontractors, and shall be under its sole and exclusive direction and control. Such persons shall not be considered employees of Customer for any purpose. Each Party shall be responsible for compliance with all laws, rules and regulations involving their respective employees or agents, including (but not limited to) employment, labor, hours of labor, health and safety, working conditions and payment of wages. Each Party shall also be responsible, respectively, for payment of taxes, including, but not limited to, federal, state, and municipal taxes, chargeable or assessed with respect to its employees or agents, such as social security, unemployment, worker's compensation, disability insurance and federal and state income tax withholding. Neither Party undertakes by this Agreement to perform or discharge any liability or obligation of the other Party, whether regulatory or contractual in nature, or to assume any responsibility for the conduct of the business or operations of the other Party. Nothing contained in this Agreement is intended to give rise to a partnership, agency, or joint venture between the Parties or to impose upon the Parties any of the duties or responsibilities of partners or ioint venturers.

12. DIRECTION AND CONTROL

Customer shall not direct, control or supervise Supplier as to the details or means by which Services or Deliverables are provided. Notwithstanding the foregoing, Customer may request Supplier to remove an employee of Supplier, if Customer, in its sole judgment, determines that such employee does not meet the standards of this Agreement or is not consistent with the best interests of Customer. Customer may further request Supplier to remove material or equipment being used by Supplier, if such material or equipment does not meet the standards of this Agreement or is not consistent with the best interests of Customer. Upon receipt of such request, Supplier, at its sole expense, shall promptly replace the employee, material, or equipment, with an employee, or material or equipment that strictly complies with the standards of this Agreement.

13. WORK RULES

- a. Supplier agrees that all employees, contractors or agents assigned by Supplier to fulfill this Agreement shall read and obey all work rules, safety rules, policies and regulations established by Customer regarding the conduct of its own employees, including Customer's Code of Conduct handbook and Customer's Environmental, Health and Safety Manual, as the same may be modified from time to time. Copies of such materials are available to Supplier upon request.
- b. Customer shall have the right to modify its work rules, policies and regulations, or promulgate additional rules, policies and regulations, and Supplier and its employees, contractors and agents shall comply with such modified or additional rules, policies and regulations immediately following Supplier's receipt of written notice thereof.
- c. At Customer's sole discretion, Supplier will accept direct shipments from a designated third-party ("designee") upon thirty (30) days notice. Upon receipt of the material delivered to Supplier by designee, Supplier shall verify shipment items, quantities, and inspect for damage. Supplier shall notify designee within twenty-four (24) hours of shipment receipt by Supplier of any damaged materials

Construction Services Agreement Rev 2012

CONFIDENTIAL

discrepancies in quantity of the materials received by Supplier from designee. Supplier shall note on the freight bill prior to signing and accepting delivery any inbound shipment damage.

- d. Supplier shall be responsible for the care, work site transportation, storage, and protection of minor materials and cable. Supplier can order minor materials with the Want List Form, to be provided by Customer, with Customer approval, and Supplier shall fax the form to the designee. Supplier shall sign the designee's packing slip received by Supplier as delivery confirmation. The packing slip will be faxed to the designee within twenty-four (24) hours of receiving materials. Upon removal and use of any length of cable, Supplier shall execute a Cut Sheet, to be provided by Customer, which shall itemize the amount of cable removed from a reel and designate the particular project by date, location, and project number for which it is used. The Cut Sheet will be faxed within twenty-four (24) hours to the designee's Customer Service number and/or as directed by Customer. With the approval of Customer Inventory Planning Staff, Supplier shall use inventory cable for maintenance and shall identify cable on the Cut Sheet and fax to designee's Customer Service. Supplier shall be responsible for the scrap, packaging, and reel disposal after the materials are delivered by the designee and installed.
- e. Supplier is responsible for the redeployment of materials if they, as the prime Supplier, elect to subcontract work out to other contractors to complete a Customer project.
- f. Supplier is responsible for and bears all risk of loss or damage to Deliverables, and to all materials, tools, and equipment used to perform under this Agreement, unless the loss or damage results solely from the fault or negligence of Customer. Supplier shall take all precautions necessary to prevent damage to the Deliverables, and to prevent damage or injury to Customer's property, employees, contractors, visitors, and agents. Supplier shall promptly remove all waste or debris from Supplier's work area, and dispose of such waste or debris as a generator in accordance with all applicable environmental requirements. If Supplier fails to maintain a clean work area, Customer will perform, at Supplier's expense, a cleanup of the work area. Supplier must remain as the legal generator of any waste cleaned up by Customer.
- g. Customer shall not be obligated to reimburse Supplier for the costs of, or otherwise responsible for, any excess inventory or materials ordered, purchased or maintained by Supplier upon termination of this Agreement, except for inventory or materials ordered or purchased by Supplier to fulfill specific orders of Customer or to comply with specific obligations of Supplier under a Statement of Work or Work Order. The foregoing exception shall not apply to any materials or inventory in excess of the quantities necessary for Supplier to meet its obligations under the Agreement.
- h. If Supplier is given access, whether on-site or through remote facilities, to any Customer computer or electronic data storage system in order for Supplier to provide the Services or Deliverables called for in this Agreement, Supplier shall limit such access solely to perform Services within the scope of this Agreement and shall not access or attempt to access any computer system, electronic file, software or other electronic services other than those specifically required to accomplish the Services required under this Agreement. Supplier shall limit such access to those of its employees and/or approved subcontractors whom Customer has authorized in writing to have such access in connection with this Agreement, and shall strictly follow all Customer's security rules and procedures for use of Customer's electronic resources. All user identification numbers and passwords disclosed to Supplier and any information obtained by Supplier as a result of Supplier's access to and use of Customer's computer and electronic data storage systems shall be treated as Confidential Information. Supplier agrees to cooperate with Customer in the investigation of any apparent unauthorized access by Supplier to Customer's computer or electronic data storage systems or unauthorized release of Confidential Information by Supplier.

14. SAFETY AND SECURITY

- a. Supplier's agents, employees, and representatives, while assigned to work on behalf of the Customer, whether on or off the premises of Customer, shall comply with all Customer rules, regulations, policies, practices, and directives governing conduct, environmental, safety, and security, including in connection with access to any Customer facility, computer, or electronic data storage system.
- b. Supplier represents and warrants that all employees, agents, or representatives assigned to work on

behalf of Customer, have had a pre-employment background check and drug screening, which has been updated within the last twelve (12) months. The drug screening shall include, at a minimum, a standard 10 panel, plus ecstasy. The background check shall include, at a minimum; a seven (7) year history for statewide and county criminal, basic nationwide scan, social security verification, employment verification, education verification, credit check, and motor vehicle report. Customer must pre-approve any deviation from the above requirements prior to the start of any work assignment. Customer also reserves the right to require an update of part or all of the background check for employees, agents, or representatives assigned to work on its behalf. If the background check indicates any criminal conviction(s), a negative score or information of any kind (such as a poor score on a credit check, unconfirmed social security number or education credentials, or a Motor Vehicle violation), or a positive result from the drug screening, this must be reported to Customer prior to Supplier's employee, agent, or representative being assigned to work on behalf of Customer. In addition, if Supplier becomes aware of an active employee, agent, or representative already working for Customer being convicted of a crime or testing positive for drugs since the drug screen or background check was completed; Customer must be notified in writing in accordance with the Notice Section of this Agreement. Any notice or report required by this Section must also be faxed to Customer's Director of Security at 585-272-8086. Customer reserves the right to review the background checks at any time.

- c. Supplier represents and warrants that it is in compliance with the Department of Justice Form I-9 requirements governing proof of authorization to work in the United States.
- d. Customer reserves the right to refuse anyone access to its premises, or remove anyone from its premises for any reason, in its sole discretion.

15. KEY PERSONNEL

Key personnel in Supplier's organization may be designated in any Scope Document ("Key Personnel") and such person's resume may be incorporated therein by reference. Supplier shall not add, substitute, remove, transfer, or reassign Key Personnel without first notifying Customer in writing, and providing a detailed resume of the Key Personnel proposed replacement. Customer reserves the right to interview and approve or disapprove any individual proposed or designated as Key Personnel for the Services identified in the Scope Document.

16. NON-SOLICITATION

During the term of this Agreement and for a period of twelve (12) months thereafter, neither Party shall, directly or indirectly, solicit for employment, whether as an employee or independent contractor, any employee of the other involved in the sale, management, performance, review or acceptance of the Services or Deliverables. The preceding sentence shall not prohibit either Party from (i) engaging in general solicitation efforts, such as, by way of example only, newspaper advertisements, utilizing "headhunters" without direction from the soliciting Party to call an employee of the other Party, job fair events or contacting individuals whose resumes are listed on websites; or (ii) hiring any employee of the other who responds to any such regular employment solicitation effort that was not targeted to such employee as a result of such employee's involvement in the Services.

17.INDEMNIFICATION

a. Each Party shall defend, indemnify and hold harmless the other Party and its parent, affiliates and subsidiaries, and their officers, directors, shareholders, agents, employees, and representatives from all claims, suits, actions, demands, damages, liabilities, expenses (including reasonable fees and disbursements of counsel), judgments, settlements and penalties of every kind made by or payable to a third party and arising from any bodily injury (including death) or physical damage to tangible or real property to the extent set forth below. The foregoing indemnity, to the extent permitted by law, shall apply in the case of all claims which arise in whole or in part from the negligence, misconduct or other fault of the indemnifying Party or anyone acting under the indemnifying Party's direction, control, or on its behalf, provided, however, that if a claim is the result of the joint negligence, joint misconduct or joint fault of Supplier and Customer, the amount of the claim for which the indemnified Party is entitled to

Construction Services Agreement Rev 2012

CONFIDENTIAL

Customer initials_

Citizens Telecom Services Company L.L.C.

Page 12 of 22

Supplier initials MTB

indemnification shall be limited to that portion of the claim attributable to the negligence, misconduct or other fault of the other or anyone acting under such Party's direction, control or on its behalf.

- b. In addition to its general indemnity obligations under the preceding subparagraph, Supplier shall and does hereby further agree to defend, indemnify, and hold harmless Customer and its parent, affiliates, and subsidiaries, and their officers, directors, shareholders, agents, employees, and representatives from all claims, suits, actions, demands, damages, liabilities, expenses (including reasonable fees and disbursements of counsel), judgments, settlements, and penalties of every kind relating to or otherwise arising from Supplier's performance of its obligations under this Agreement, or its breach of any of its representations or warranties set forth herein (or the performance or breach of anyone acting under Supplier's direction, control, or on its behalf).
- c. The Parties agree that the Fees established under this Agreement include consideration for the obligation to indemnify as set out herein. The obligations in this Section shall not be limited by any limitation on the amount or type of damages, compensation, or benefits payable by Supplier under the Worker's Compensation Acts, Disability Benefits Acts, or any other employee benefit act.
- d. Each Party shall promptly notify the other in writing of any lawsuits, claims, actions, or demands (collectively "Claims") covered by this indemnity or any other indemnity provided under this Agreement. Promptly after receipt of such notice, the indemnifying Party shall assume the defense of such Claim with counsel reasonably satisfactory to the indemnified Party (which includes the right to compromise or settle any such Claim). If the indemnifying Party fails, within a reasonable time after receipt of such notice, to assume the defense with counsel reasonably satisfactory to the indemnified Party, then such indemnified Party shall have the right to undertake the defense, compromise, and settlement of such Claim for the account and at the expense of the indemnifying Party. The indemnified Party shall provide reasonable assistance to the indemnifying Party, at the indemnifying Party's cost and expense, in connection with any Claim. Notwithstanding the foregoing, if the indemnified Party in its sole discretion so elects, such indemnified Party may also participate in the defense of such Claims on a non-controlling basis by employing counsel at its expense, without waiving the indemnifying Party's obligations to indemnify or defend. Neither Party shall (i) settle any Claim; (ii) compromise any Claim; or (iii) consent to the entry of any judgment, without the prior written consent of the other Party and without an unconditional release of all liability by each claimant or plaintiff with respect to such other Party.

18. INFRINGEMENT INDEMNIFICATION

- a. In addition to its obligations under Section 17 above, Supplier shall and does hereby further agree to defend Customer from and against any claim, lawsuit or other proceeding (each, an "Infringement Claim") made or brought against Customer or its parent, affiliates or subsidiaries, or their officers, directors, shareholders, employees, agents or representatives (each, an "Indemnitee") by a third party for infringement, violation or misappropriation of any (i) U.S. patent or copyright issued as of the effective date of this Agreement or any Scope Document, whichever is later, to which the alleged infringement relates; (ii) any trade secret to the extent related to any Deliverable or an Indemnitee's use thereof; or (iii) any other intellectual property rights of such third party. Supplier shall further indemnify and hold the Indemnitees harmless from and against all reasonable costs of litigation (including, without limitation, reasonable attorneys' fees) in connection with any such Infringement Claim and any damages finally awarded to the third party claimant with respect to any such Infringement Claim. The provisions and procedures set forth in Section 17(d) shall apply in the case of any Infringement Claim for which indemnification may be sought hereunder.
- b. Supplier shall have no obligation under Section 18(a) above, or other liability for any infringement, violation or misappropriation claim to the extent arising or allegedly arising from: (i) third party Software, hardware, tools or other products that are provided by Customer for Supplier's use in the performance of its obligations hereunder; (ii) third party Software, hardware, tools or other products that are provided by Customer for Supplier's incorporation into any Deliverable produced hereunder; (iii) any third party Software, documentation, data, system, design, instruction, or other materials or information made available to Supplier by Customer or a third party on Customer's behalf, or Supplier's use thereof in the performance of its obligations under this Agreement; (iv) Customer's use of the Deliverables in combination with any equipment, Software or device that is expressly disapproved by Supplier; (v) modification or alteration of a Deliverable by anyone other than Supplier, its employees, or permitted

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 13 of 22

Customer initials KN
Supplier initials MTB

- subcontractors; or (vi) any trademark, service mark, trade name, logo, trade dress or other name, word, symbol or other item identifying Customer's products and services, or selected for use by Customer, and used by Supplier hereunder, but only to the extent of the usage expressly authorized by Customer.
- c. If an Infringement Claim for which Supplier is obligated to indemnify Customer pursuant to this Section 18 is made or arises, then Supplier will, at no additional cost to Customer, either: (i) procure for Customer the right to continue using the infringing Services or Deliverables subject to such Infringement Claim; or (ii) replace or modify the infringing Services or Deliverables so that they are no longer subject to any such Infringement Claim. If Supplier does not promptly remove the infringement pursuant to subsection (i) or (ii) above, then Customer shall be entitled to a refund of all amounts paid with respect to the infringing Services or Deliverables as well as any other Services or Deliverables whose functionality or utility to Customer have been adversely impacted. Customer shall also be free to pursue any additional remedies it may have arising from such Infringement Claim or loss of right to use owing to such Infringement Claim.

19. DEFAULT/ TERMINATION

- Either Party may terminate this Agreement, in whole or in part, upon written notice after the occurrence of an Event of Default by the other. An "Event of Default" will occur: (i) if Supplier fails to perform its obligations under this Agreement or violates any term or condition of this Agreement, provided that such breach, if curable, is not cured within the time frames, if any, set forth in this Agreement or, if no time frame is specified and the breach is curable, within ten (10) calendar days following receipt of written notice of such breach from Customer; (ii) if Supplier fails to perform in accordance with this Agreement three (3) or more times in any twelve (12) consecutive month period; (iii) upon Supplier's failure to maintain insurance coverage as specified herein, and such failure is not corrected within five (5) calendar days following receipt of written notice of such failure; (iv) if Supplier becomes involved in a labor or material supply problem that, in Customer's sole opinion, unacceptably impedes or slows down the provision of Services or Deliverables; (v) if Supplier fails to make prompt payments for materials or labor used in providing Services or Deliverables under this Agreement; (vi) if Customer fails to pay any amount payable hereunder when due, and thereafter fails to submit such payment within ten (10) calendar days after its receipt of written notice of default from Supplier; (vii) upon the institution of bankruptcy, receivership, insolvency, reorganization or other similar proceedings by or against either Party under any section or chapter of the United States Bankruptcy Code, if such proceedings have not been dismissed or discharged within thirty (30) calendar days after they are instituted; (viii) upon the insolvency, or the making of an assignment for the benefit of creditors, or the institution of any reorganization arrangement or other readjustment of debt plan of or by either Party not involving the United States Bankruptcy Code; or (ix) upon the appointment of a receiver for all or substantially all of a Party's assets or any corporate action taken by either Party's Board of Directors in furtherance of the above action. Written notice pursuant to this Section must specify the conditions permitting termination.
- b. Upon termination of this Agreement in whole or in part by Customer or upon default by Supplier after the expiration of any applicable cure period, Customer may secure substitute resources necessary to complete the Services under any outstanding Scope Document. If Customer secures substitute resources, Supplier shall pay Customer upon demand the difference, if any, between the actual and reasonable cost of the substitute Services and the Fees Supplier would have been paid if Supplier had completed the Services at the rates in effect under this Agreement.
- Notwithstanding anything to the contrary contained in this Agreement, with sixty (60) days prior written notice, Customer reserves the right to terminate this Agreement, in whole or in part, and with or without cause, at any time upon delivery of written notice of termination to Supplier. Upon receiving notice of termination from Customer, Supplier shall discontinue all Services as of the effective date of such termination, and shall not place any further orders for materials or services subsequent to its receipt of such notice; except as needed to continue any portion of the Services which have not been terminated, in the event of a partial termination. Supplier shall use commercially reasonable efforts to cancel, upon terms satisfactory to Customer, all orders or subcontracts related to the terminated Services. Also upon termination, Supplier shall deliver to Customer completed Deliverables and work in progress, including notes, draft reports and similar materials. Upon termination, Supplier maintains responsibility for the proper disposal, in accordance with environmental requirements, of any waste materials it has generated.

- d. In the event of termination, other than arising from an Event of Default by Supplier, Customer shall pay Supplier the Fees for Services acceptably accomplished or Deliverables provided to Customer (including all work-in-progress) prior to and including the effective date of termination.
- e. In the event that, in a single transaction or series of transactions, Customer acquires or is acquired by any other entity (by stock sale, asset sale or otherwise) or merges with any other entity, then, at any time within twelve (12) months after the last to occur of such events, Customer may, at its option, then terminate this Agreement or any Scope Document, in whole or in part, by giving written notice to Supplier.

20. NOTICE

a. Any written notice either Party may give the other concerning the subject matter of this Agreement shall be in writing and given or made by means of certified or registered mail, express mail or other overnight delivery service, or hand delivery, proper postage or other charges paid and addressed or directed to the respective Parties as follows:

To Supplier:

At Supplier's address shown on the first page of this Agreement

Attention: Legal Department

To Customer:

Citizens Telecom Services Company L.L.C.

d/b/a Frontier Communications Attention: Manager, Contracts

111 Field Street

Rochester, New York 14620

With a copy to:

Citizens Telecom Services Company L.L.C.

d/b/a Frontier Communications Attention: Associate General Counsel

180 S. Clinton Avenue Rochester, New York 14646

b. Such notice shall be deemed to have been given or made when actually received as specified above. Each Party hereto may change its address by a notice given to the other Party in the manner set forth above.

21. CONFIDENTIAL INFORMATION

During the term of this Agreement, each Party may come into contact with, or acquire confidential information of the other Party. "Confidential Information" means all confidential, trade secret, and proprietary information of a disclosing Party (the "Disclosing Party"), including any nonpublic information relating to the Disclosing Party's technologies, products, promotional and marketing activities, finances and financial plans, customers, business plans, analyses, models, key personnel and contacts, business targets, strategies and objectives, capabilities, business affairs, and any third party information that Disclosing Party is otherwise obligated to keep confidential, and that should reasonably have been understood by the recipient (the "Receiving Party") because of (i) legends or other markings; (ii) the circumstances of disclosure; or (iii) the nature of the information, which may be disclosed in written or other tangible form (including information in computer software or held in electronic storage media) or by oral, visual or other means. Unless otherwise stipulated by both Parties, Confidential Information includes the fact of the existence of this Agreement, and all of its terms and conditions. Such Confidential Information is, and shall remain, the exclusive property of the Disclosing Party. The Receiving Party shall treat and maintain all such Confidential Information received from the Disclosing Party as confidential, whether or not it has been physically marked as Confidential or Proprietary. The Confidential Information may be used by the Receiving Party only to the extent reasonably required in

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 15 of 22 Customer initials Supplier initials 19773

the performance of its obligations under this Agreement and may only be distributed to those employees, agents or contractors of the Receiving Party who have a need to know in order to perform pursuant to this Agreement, and who are bound to maintain confidentiality. The Confidential Information may not be released to any other person, entity, or the public without the prior written consent of the Disclosing Party. The Receiving Party shall protect all such Confidential Information of the Disclosing Party with no less than the care and diligence with which it protects its own and also with no less care and diligence than would generally be expected of a responsible party similarly situated.

- b. The foregoing obligations shall not apply to any Confidential Information (i) lawfully in the Receiving Party's possession prior to its acquisition from the Disclosing Party; (ii) received in good faith from a third party not subject to any confidentiality obligation to the Disclosing Party; (iii) which now is or later becomes publicly known through no breach of confidentiality obligation by the Receiving Party; or (iv) is independently developed by the Receiving Party without the use or benefit of the Disclosing Party's Confidential Information.
- c. If the Receiving Party receives a request to disclose any Confidential Information to comply with any law, rule, regulation or order of a court or governmental agency, Receiving Party agrees that, prior to disclosing any Confidential Information, it shall (i) notify the Disclosing Party of the existence and terms of such request; (ii) cooperate with the Disclosing Party in taking legally available steps to resist or narrow any such request; and (iii) if disclosure is required, use its best efforts to obtain a protective order or other reliable assurance that confidential treatment will be afforded to the Confidential Information disclosed.
- d. Each Party agrees not to provide copies of this Agreement, or otherwise disclose the terms of this Agreement, to any third party without the prior written consent of the other Party, which shall not be unreasonably withheld, conditioned or delayed; provided, however, that (i) Customer may, without obtaining Supplier's consent, provide copies or make disclosures to prospective purchasers of the business of Customer, Customer's parent, affiliates and subsidiaries, any regulatory or judicial body requesting such information; and (ii) either Party may, without obtaining the other's consent, provide copies or make disclosures to their auditors, banks or financial advisors, provided such third parties are bound to an obligation of confidentiality. Supplier agrees not to publish or use any advertising, sales promotion, press release, or publicity documents regarding or referring to this Agreement, or to use the name, trademarks, service marks or trade names of Customer for any purpose whatsoever, without Customer's prior written approval, which may be granted in Customer's sole discretion.
- e. The Parties acknowledge that any breach of this Section may cause immediate and irreparable injury to the non-breaching Party and that monetary damages will be inadequate to compensate the non-breaching Party for such breach. Having acknowledged the foregoing, the Parties agree that, in the event of such breach, the non-breaching Party will be entitled to seek injunctive relief, in addition to all other remedies available to it at law or in equity. This Section in no way limits the liability or damages that may be assessed against the breaching Party in the event of a breach of any of the provisions of these confidentiality obligations.
- f. Upon expiration or termination of this Agreement, the Receiving Party shall return all Confidential Information of the Disclosing Party in its possession as of the effective date of such termination or expiration to the Disclosing Party. Provided, however, that the Receiving Party may destroy such Confidential Information in lieu of returning, but only to the extent that the Disclosing Party expressly agrees to such destruction. Any secondary copies, views, or images of such Confidential Information remaining in Receiving Party's possession after all such required return shall be destroyed. The obligation of confidentiality and use with respect to Confidential Information shall survive termination of this Agreement.

22. RIGHT TO AUDIT

a. Supplier shall maintain complete and accurate records of all invoices and all amounts billable to and payments made by Customer in accordance with generally accepted accounting practices. Supplier shall retain and make available upon request such records for a period of four (4) years from the completion of the performance of Services covered by this Agreement.

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C. CONFIDENTIAL Page 16 of 22

Customer initials KN Supplier initials KN

- Upon written notice to Supplier, Customer or its authorized representative shall, at Customer's expense, have the right to audit Supplier's books and records. The scope of the audit shall be limited to matters relating directly or indirectly to performance of this Agreement. Within five (5) business days of such notice, the Parties will mutually agree on the location, date, and specific information to be audited. Audits will be conducted during normal business hours. The audit will be at the cost and expense of Customer, unless a discrepancy of five percent (5%) or greater of the amounts paid to Supplier for the applicable Services is found, in which case Supplier will promptly reimburse Customer for all costs of performing the audit.
- c. Customer or its designee may conduct periodic audits of inventory levels of materials in the possession of Supplier. Supplier shall be responsible for any discrepancies and shall work with Customer or its designee to resolve any such inventory discrepancies. Audit may include inspection of material ordering policies and inventories of minor materials thereof, to assure only reasonable quantities of material are stocked by Supplier.
- d. Supplier shall provide reports related to its performance hereunder as reasonably requested by Customer.

23. APPLICABLE LAW

This Agreement, and the rights and obligations contained in it, shall be governed by and construed in accordance with the laws of the State of New York, without regard to any conflicts of law principles that would require the application of the laws of any other jurisdiction. Any and all disputes arising out of, or in connection with, the interpretation, performance or the nonperformance of this Agreement or any and all disputes arising out of, or in connection with, transactions in any way related to this Agreement and/or the relationship between the Parties shall be litigated solely and exclusively in the state or federal courts located in the State of New York.

24. COMPLIANCE WITH LAWS AND PERMITS

- Supplier shall comply with all applicable federal, state, and local laws, ordinances, regulations and codes (including procurement of required permits or certificates) in Supplier's performance under this Agreement, including, but not limited to, the Fair Labor Standards Act, the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101 et seq.), all relevant provisions of the National Electrical Safety Code and the National Electrical Code and all safety, health and environmental laws.
- b. Supplier shall be solely responsible for providing reasonable accommodations, to include auxiliary aids and services, as may be required under the Americans with Disabilities Act, so as to enable any disabled person furnished by Supplier to perform the essential functions of that person's job as pertains to the Services and Deliverables. Supplier shall defend, indemnify, and hold harmless Customer from any claim, demand, lawsuit, action, or liability arising out of failure to comply with the provisions of the referenced Act with respect to providing reasonable accommodations for persons furnished by Supplier. The provisions and procedures related to indemnification in this Agreement shall apply in the case of any matters for which indemnification will be sought under this Section.
- Supplier shall obtain, at its expense, all permits and licenses necessary for the performance and completion of the Services. It shall be the responsibility of Supplier to obtain, at its expense, all permits pertaining to the moving of Supplier's equipment and the right to perform Services in a given location and, at Customer's request, Supplier shall submit to Customer, prior to the commencement of work, evidence of any license required for Supplier to perform Services in a given location.

25. CHANGES IN LAW

If any government statute or regulation or order by a court of law or regulatory authority directly (i) prohibits performance under this Agreement; (ii) makes such performance illegal, impossible or impractical, or (iii) effects a change which has a material adverse impact upon either Party's performance of its obligations under this Agreement (each of (i), (ii) and (iii) being deemed to have "Negatively Impacted" performance), then the Parties will use commercially reasonable efforts to revise the Agreement so that (a) performance

Construction Services Agreement Rev 2012

CONFIDENTIAL

Supplier initials 19703

Customer initials

under the Agreement is no longer Negatively Impacted, and (b) the Agreement is revised in a manner that preserves, to the maximum extent possible, the respective original intent of the Parties. If the Parties are unable to revise the Agreement in accordance with the above, then the Party whose performance is Negatively Impacted shall have the right to, at its sole discretion, to cease performance of any such obligations or Services that are Negatively Impacted upon thirty (30) days prior written notice to the other Party (or less if required by law). The Parties will continue to perform all such obligations and Services under this Agreement that are not Negatively Impacted; provided that if a material part of the rights and obligations under this Agreement are suspended in accordance with the above and the performance of the remaining obligations would not reasonably maintain the respective original intent of the Parties or would not serve the essential purpose of this Agreement, then either Party shall have the right to, at its sole discretion, to terminate this Agreement without further obligation or liability upon thirty (30) days prior written notice to the other Party.

26. CONFLICT OF INTEREST

- a. Supplier represents and warrants that it is not a party to any contracts with any other entity or individual that would interfere with or prevent its compliance with the terms and provisions of this Agreement.
- b. Supplier agrees to refrain from accepting or conducting assignments from any person, firm, or company during the term of this Agreement that would conflict with or impair an unbiased performance of the Services or other duties under this Agreement. During the term of this Agreement, Supplier agrees promptly to disclose to Customer any business relationship or other matter that may raise a question concerning a conflict of interest.

27. ASSIGNMENT/ SUBCONTRACTING

Customer hereby specifically contracts for Services and Deliverables to be provided by Supplier, and Supplier may not assign, subcontract, or delegate the performance of Services, provision of Deliverables, or other duties under this Agreement without the prior written consent of Customer. For purposes of this provision, the term "assign" shall include without limitation, any transfer, or assignment by contract or which may otherwise result by operation of law, as in the case of a merger, consolidation, or other reorganization of Supplier, with or into any third party. Any subcontract, if approved, must incorporate this Agreement by reference, and specify that such agreement does not create a contractual relationship with Customer, but does allow Customer, at its sole election, to enforce the terms and conditions of this Agreement directly against any such permitted subcontractor, as a third party beneficiary to such contract. Upon Customer's request, a copy of the proposed subcontract must be presented to Customer for review and approval prior to execution by Supplier. Even if any subcontract is approved, Supplier shall nonetheless remain solely responsible for satisfying all terms and conditions of this Agreement, and for ensuring that the subcontractor strictly adheres to any restrictions and confidentiality obligations.

28. FORCE MAJEURE

If performance of this Agreement is prevented, restricted or interfered with by reason of acts of God, wars, revolution, civil commotion, acts of public enemy, embargo, acts of government in its sovereign capacity, or any other circumstances beyond the reasonable control and not involving any fault or negligence of the Party affected ("Force Majeure Event"), the Party affected, upon giving prompt notice to the other Party, shall be excused from such performance on a day-to-day basis during the continuance of the Force Majeure Event. The other Party shall likewise be excused from performance of its obligations on a day-to-day basis during the same period, provided, however, that the Party so affected shall use commercially reasonable efforts to avoid or remove such causes of nonperformance and both Parties shall proceed immediately with the performance of its obligations under this Agreement whenever such causes are removed or cease. Labor-related performance impediments, such as labor disputes, strikes or shortages ("Labor Issues"), are not to be construed as Force Majeure Events. Notwithstanding the foregoing, the occurrence of a Force Majeure Event shall not preclude Customer from terminating this Agreement for convenience as set forth in Section 19 (c) herein, and shall not apply in such event, to delay or relieve Customer from paying any

Construction Services Agreement Rev 2012 Citizens Telecom Services Company L.L.C.

CONFIDENTIAL Page 18 of 22 Customer initials M Supplier initials MB amounts that are due and payable with respect to Products or Services or Deliverables that have been provided by Supplier prior to the occurrence of any such Force Majeure event.

The Party affected or potentially affected shall promptly notify the other Party, in writing, of any Labor Issue or anticipated Labor Issue that could reasonably be expected to affect or delay the performance of this Agreement, which notice shall specify the nature of such Labor Issue or anticipated Labor Issue in reasonable detail including the identity of any organizations, if any involved, any action taken or proposed to be taken with respect thereto by Supplier.

Supplier shall cause all employees, contractors or agents assigned by Supplier to fulfill this Agreement to (a) cross all picket lines established against Customer or any Affiliate and (b) refuse to honor or take part in any strike, work slowdown or stoppage targeted at Customer or any Affiliate, unless such action is protected by applicable law, rule, regulation, statute treaty, code or ordinance of any federal, state, county, regional, municipal or other governmental or regulatory authority, agency, board, body, commission, instrumentality, court or quasi-governmental authority with jurisdiction over such actions ("Protected Action Exception"). In the event of a Protected Action Exception, Supplier shall immediately replace any employee contractor or agent so protected with employees, contractors or agents that meet all terms and conditions of this Agreement. Supplier shall also immediately replace any employee, contractor or agent who refuses to report for work under circumstances described in (a) and (b) in the first sentence of this paragraph with employees, contractors or agents who do not refuse to report to work and who otherwise meet the terms and conditions of this Agreement.

29. WAIVER OF TERMS AND CONDITIONS

No failure or delay by either Party hereto in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or future exercise of any right, power, or privilege.

30. DISPUTE RESOLUTION

- a. The Parties desire to resolve certain disputes, controversies, and claims arising out of this Agreement without litigation. Accordingly, except in the case of (i) a dispute, controversy or claim relating to a breach or alleged breach of the provisions governing confidentiality; (ii) a suit, action or proceeding to compel Supplier or Customer to comply with its obligations to indemnify the other Party pursuant to this Agreement; or (iii) a suit, action or proceeding to compel either Party to comply with the dispute resolution procedures set forth in this Section, or otherwise seeking injunctive relief, the Parties agree to use the following alternative dispute procedure as their sole recourse with respect to any dispute, controversy or claim arising out of or relating to this Agreement or its breach. The term " Dispute" means any dispute, controversy, or claim to be resolved in accordance with this dispute resolution procedure.
- b. At the written request of a Party, each Party shall appoint a knowledgeable, responsible representative to meet and negotiate in good faith to resolve any Dispute. These negotiations shall be conducted by non-lawyer, business representatives. Discussions and correspondence among the representatives for purposes of these negotiations shall be treated as Confidential Information developed for purposes of settlement, shall be exempt from discovery and production, and shall not be admissible in any proceeding or lawsuit without the concurrence of both Parties. Documents identified in or provided with such communications, which are not prepared for purposes of the negotiations, are not so exempted, and may, if otherwise admissible, be admitted in evidence in the arbitration or lawsuit.
- c. If the negotiations do not resolve the Dispute within ten (10) business days of their commencement or such negotiations do not commence within seven (7) days of request by the other Party in writing, then either Party shall be free to pursue all rights and remedies available at law and/or in equity.

31.WMDVBE

Customer Initials 2N Supplier Initials 2013

- a. Customer recognizes the need for and the benefits of aiding and stimulating the growth of women, minority and disabled-veteran business enterprises ("WMDVBE") and, consequently, provides opportunities for WMDVBEs to participate in its purchasing and contracting activities on a competitive bidding basis as part of promoting the use of such businesses as sources of supply.
- b. Supplier agrees to be open to increasing the participation of WMDVBEs in the performance of its obligations under this provision. Supplier's WMDVBE support under this provision may be satisfied through any one of the following associations with WMDVBEs, e.g., partnerships, joint ventures, subcontracts, purchase orders, and/or other contractual arrangements. Supplier understands that if Supplier has proposed to Customer and represented that it will use WMDVBEs in the performance hereunder; such representation by Supplier is a material factor, among others, for its selection by Customer for an award of work hereunder.
- c. herefore, in order for Customer to determine Supplier's compliance with its representation, if any, regarding its WMDVBE utilization under the order, Supplier agrees to comply with all reasonable reporting requirements requested by Customer with respect thereto.

32. SURVIVAL OF OBLIGATIONS

The respective obligations of Supplier and Customer under this Agreement, which by their nature would continue beyond the termination, cancellation or expiration of the Agreement (including, but not limited to, (i) obligations under any unexpired Scope Document that is not expressly terminated or cancelled in connection with the event that gave rise to the termination of the Agreement; (ii) confidentiality obligations; and (iii) indemnification obligations), shall survive such termination, cancellation or expiration.

33. SEVERABILITY

If any provision of this Agreement is declared or determined to be invalid or unenforceable under applicable law, such invalidity or unenforceability will not invalidate or render this Agreement unenforceable, but this Agreement will be construed as if not containing the particular invalid or unenforceable provision and the rights and obligations of the Parties will be construed and enforced accordingly.

34. ENTIRE AGREEMENT; COUNTERPARTS

This Agreement, together with each Scope Document, represents the entire understanding between the Parties with respect to the subject matter of this Agreement, and cancels and supersedes all prior agreements or understandings, whether written or oral, with respect to the subject matter. This Agreement may only be modified or amended by an instrument in writing signed by duly authorized representatives of the Parties. No verbal changes to a Scope Document shall be permitted, and Customer shall make no payment for Services or Deliverables provided pursuant to verbal order or agreement. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall together constitute but one and the same document and the parties expressly agree to electronic forms of contract execution including Adobe Acrobat® portable document format (.pdf) signatures.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement through their authorized representatives;

ACCEPTED BY CUSTOMER	AGGSPIED BY GUPPIER
CITIZENS TELECOM SERVICES COMPANY L.L.C. D/B/A FRONTIER COMMUNICATIONS	USIC LOCATING SERVICES, L.L.C.
CUSTOMER'S SIGNATURE:	SUPPLIER'S SIGNATURE:
KNO	Made / Burel
Printed Name: Worthaup	Printed Name! MARK T. BUKEZ
Title: VP Procure ment	Title: SVP+COO
Date: 4/8/14	Date: 04/07/2014

ADDENDUM A – STATEMENT OF WORK № _____

Citizens Telecom Services Company L.L.C. d/b/a Frontier Communications ("Customer") and <Insert Supplier Name> ("Supplier") hereby enter into this Statement of Work N2___ under the Services Agreement between such parties, effective as of <Insert Date> (the "Agreement"), on the following terms. Except as otherwise defined herein, all capitalized terms used herein shall have the same meaning as in the Agreement.

arties, II capita	effective as of <u><insert date=""></insert></u> (the "Agreement"), Califert by the same means and the same means are the same means and the same means are the same are the same means are the same are t	ning	as in the Agreement.	, 40 0	
	Purpose of the SOW				
	Supplier shall:				
2.	Term				
•	This Statement of Work will commence on continue until, unless earlier terminate	d in	_ (the "Statement of Worl accordance with the Agre	< Effective Date eement.	") and will
3.	Description of Services/Milestones/Deliverable	<u>es</u>			
4.	Project Managers:				
	Customer Project Manager:				
	Supplier Project Manager:	~/6	50 - 120 in a second se	or regarded to a constraint of the constraint of	
5. Control of the con	Supplier Compensation	And the second of the second o		THE STATE OF THE S	
6.	Project Management Status Reporting and Si	atu	s Meetings	Acceptance of the control of the con	
All market and the second seco	Issue Resolution Process Change Management Process			Company of the Compan	
9.	Other Terms				
	[Special Terms and Conditions that is applicable	e to	this SOW.]		
In Wit	NESS WHEREOF, Parties hereto have caused this centatives.	Sta		ecuted by their	
	AGGEPTED BY CUSTOMER				
CITIZ D/B/A	ENS TELECOM SERVICES COMPANY L.L.C. FRONTIER COMMUNICATIONS		<insert na<="" supplier="" td=""><td>AIVIE></td><td></td></insert>	AIVIE>	
	omer's Signature:		Supplier's Signature:		
Printe	d Name:		Printed Name:	2- Carrier - Carrier	
Title:			Title:		
Date:			Date:		

SharePoint

Newsfeed OneDrive Sites

Epley, Jessica 🕶

-



Summary

The Purpose Of This Article Is To Provide The Information Required To Generate A Cable Locate In A Given Area For VxField Cable Locate Process

Article Content

Related Content State Reference Cable Locate Email Accounts Company Locates-Manual Cable Locates-Automated

Automated Process Reference

Overview

All excavators must request a cable locate be done prior to any digging. Any excavators who come in physical contact with a buried facility must immediately report any damage caused to that facility to the specific owner/operator of the facility involved. Excavators can find the repair or emergency telephone number of the buried facility owner/operators in the telephone directory or on any buried facility markers in the area. Reporting all instances of damaged facilities is extremely important and required by law. Even minor scratches, dents, or nicks can lead to the structural failure of buried facilities and result in catastrophic incidents. Regular Cable Locate involves a request for utility locates at a specific address or area for a specified dig start date. Emergency Cable Locate involves a request for utility locates at a specific address or area due to a condition where there is clear and immediate danger to life or health, or essential services, or a potentially significant loss of property. Including but not limited

- An unforeseen excavation necessary in order to prevent a condition that poses a clear and immediate danger to life or health.
- An excavation required repairing a utility service outage.
- An immediate excavation required in order to prevent significant property or environmental damage.
- The repair of an existing unstable condition, which may result in any of the conditions, listed above (for example, a leak in any service or main, or a fault in a primary or secondary wire or cable).

Purpose

The purpose of this document is to provide the information required to generate a Cable Locate in a given area. Each state has unique requirements for cable locates.

Company Locates

In some states, cable locates are processed automatically from the state facility creating an automated VxField Work Request. Some cable locate requests are sent to group email boxes or faxed from the state organizations responsible for coordinating locations of utilities. The dispatchers have access to each of these email boxes and faxes.

Contactor Locates

In certain areas contractors handle cable locates. In those cases, arrangements have been made with the state locate organizations to have those locates sent directly to those contractors. Frontier is not involved in handling those cable locate requests at all.

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	Dispatch Support

Article Details

KID: FONE-16-7129

Article Type: Process > Operations Guide

Issue Date: 4/10/2013
Article Visible To: 12/30/2099
Customer: Customers
Location: Locations
Organization: 468-Dispatch
Product: Products

Article Rating (click here to rate):



Suggested Content				
☐ VxField Cable Locate Process – State Process > Operations Guide				
TNS Database - Contact Center and Re				
Dynamic Dispatch Talking Points Learning Bulletin				
Internet Phone Line - Technical Trainin Process > Operations Guide				
Assignment - Terminal ID Maintenance Process > Operations Guide				

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
4/30/2018	Updated to VxField DC

<u>Disclaimer:</u>
This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

SharePoint

Newsfeed OneDrive Sites Epley, Jessica •

Search...

		Customer	Location	Organization	Product	
V	Fiel O National Inc.	Arctatle 1	Flyqoe: Sr	⊖Seate@Re	endinces :	Guide

Summary		
This Article Provides Information On State Reference For VxField Cable Locate Process		
Article Content		
Overview Article		

VxField Cable Locate Process – State Reference

Description

VxField Cable Locate Process – Overview

State Reference is a list with link to the State Facility responsible for cable locates requests. Also designated is a reference to how Dispatch receives the request from the State Facility or if a Contractor handles the request.

	T	1			
State	State Facility	FAX	Email	Automated VxField Work Request	Legacy Only
Arizona	Arizona Blue Stake 800-782-5348, 811 http://www.azbluestake.com			Χ	Х
Alabama	One call 800-292-8525 http://www.la/1call.com				
California	USAN (Underground Service Alert North) (Legacy Only) 800-227-2600, 811 www.usanorth.org			Х	Х
Georgia	Utilities Center 800-282-7411 http://www.gaupc.com/			Х	
Idaho	Dig Line Inc 800-342-1585, 811 www.digline.com			Х	Х
Illinois	Julie Inc 800-892-0123 http://www.illinois1call.com/			Х	Х
Indiana	IUPPS 800-382-5544 http://www.iupps.org/			Х	Х
lowa	IUPLS 800-292-8989, 811 http://www.iowaonecall.com/			Х	
Kansas	One Call 800-344-7233 http://www.kansasonecall.com/			Х	
Michigan	MISS Dig 800-482-7171 http://www.missdig.net/			Х	Х
Minnesota	Gopher 800-252-1166 http://www.gopherstateonecall.org/			Х	
Mississippi	One Call			Х	

Article Details
KID: FONE-16-7130
Article Type: Process > Operations Guide
Issue Date: 4/10/2013
Article Visible To: 12/30/2099
Customer: Customers
Location: Locations
Organization: 468-Dispatch
Product: Products

Article Rating (click here to rate):



Sug	Suggested Content					
	VxField Cable Locate Process – Cable Process > Operations Guide					
	VxField Cable Locate Process – Cable L Process > Operations Guide					
	VxField Cable Locate Process – Autom Process > Operations Guide					
	VxField Cable Locate Process – Overvior Process > Operations Guide					
	Dispatch- Multi Order Dispatch Process					
4	,					

2/1/2019		,	vxrieid Ca	ble Locate Proce	ss – State i
	800-227-6477 http://www.ms1call.org/				
Montana	Montana One Call Center 800-424-5555, 811 http://www.callbeforeyoudig.org/			Х	
Montana (Flathead & Lincoln Counties)	Montana One Call Center 800-551-8344, 811 www.udig.org			X	
Nebraska	Digger 800-331-5666 http://www.ne1call.com			Х	
Nevada	USAN (Under GRD Svc Alert N) 800-227-2600, 811 http://www.usanorth.org/			Х	Х
New Mexico	One Call 800-321-2537 http://www.nmonecall.org/		Х		
New York	UFPO 800-962-7962, 811 http://www.digsafelynewyork.com/			Х	
North Dakota	One Call 800-795-0555 http://www.ndonecall.com/			Х	
Oregon	OUNC (OR Utility Notification Center 800-322-2344, 811 http://www.digsafelyoregon.com/			Х	
Pennsylvania	One Call 800-242-1776 , 811 http://www.pa1call.org/POCS/index16.aspx			Х	
South Dakota	One Call 800-781-7474 http://onecall.sd.gov/			Х	
Tennessee	One Call 800-351-1111, 811 http://www.tnonecall.com/			Х	
Utah	Blue Stake of Utah 800-662-4111, 811 http://www.bluestakes.org/			Х	
Vermont	Dig Safe 800-344-7233 http://www.digsafe.com/	N/A	N/A	N/A	N/A
Wisconsin	Diggers/TelDig 800-242-8511 http://www.diggershotline.com/			Х	Х

NOTE: If an area or state is not listed in the above table, Frontier does not handle the cable locate, it is handled by independent contractors.

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	National Support

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
4/30/2018	Updated to VxField DC

<u>Disclaimer:</u>
This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

SharePoint

Location Organization Search...



Customer Cus

VxField Cable Locate Process – Cable Locate Email Accounts

Sum	mary
-----	------

This Article Provides Information On Cable Locate Email Accounts For VxField Cable Locate Process

Article Content

Overview Article

VxField Cable Locate Process - Overview

VxField Cable Locate Process – Cable Locate Email Accounts

Description

Dispatch in each Operating Area has several company email accounts to receive notifications from the States requesting cable locates. The Dispatch department for processing monitors these email accounts.

State	Email Address
Alabama	GreatLakesLocates@frontiercorp.com
Arizona	Dispatch_Locates_West@frontiercorp.com
California	Dispatch_Locates_West@frontiercorp.com
Georgia	GreatLakesLocates@frontiercorp.com
Iowa	GreatLakesLocates@frontiercorp.com
Idaho	Dispatch_Locates_West@frontiercorp.com
Illinois	Ilwi_locates@frontiercorp.com
Indiana	IN-MI_Cable_Locates@frontiercorp.com
Kansas	GreatLakesLocates@frontiercorp.com
Michigan	IN-MI_Cable_Locates@frontiercorp.com
Minnesota	GreatLakesLocates@frontiercorp.com
Mississippi	GreatLakesLocates@frontiercorp.com
Montana	Dispatch_Locates_West@frontiercorp.com
Nebraska	GreatLakesLocates@frontiercorp.com
Nevada	Dispatch_Locates_West@frontiercorp.com
New York (Former Frontier Areas)	fnylocates@frontiercorp.com
New York Central	Dispatch.locatesnyc@frontiercorp.com
New York North	Dispatch.locatesnyc@frontiercorp.com
New York (Chenango)	Dispatch.locatesnyc@frontiercorp.com
North Dakota	GreatLakesLocates@frontiercorp.com
Ohio	IN-MI_Cable_Locates@frontiercorp.com
Oregon	Dispatch_Locates_West@frontiercorp.com
Pennsylvania	Pa1.callsystem@frontiercorp.com
South Dakota	GreatLakesLocates@frontiercorp.com
Tennessee	GreatLakesLocates@frontiercorp.com



Epley, Jessica 🕶

Article Rating (click here to rate):

Newsfeed OneDrive Sites



Sug	gested Content
	Technician Referral Process Process
	Dispatch- Multi Order Dispatch Process Process
ß	VxField Technician Load Change Proce Process
ß	VxField Cable Locate Process – Cable Process > Operations Guide
	HSI Go Live (West Region) Process > Operations Guide
4	→

Utah	Dispatch_Locates_West@frontiercorp.com
Wisconsin	llwi_locates@frontiercorp.com

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	Dispatch Support

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
5/24/18	Updated to VxField DMC

Disclaimer:

This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

SharePoint

Newsfeed OneDrive Sites Epley, Jessica -

VxFidO Valle Artable Propers Pocasi Capar Baicanes - Mianual

Summary

This Article Provides Information On Company Locates-Manual For VxField Cable Locate Process

Article Content

Overview Article

VxField Cable Locate Process - Overview

VxField Cable Locate Process - Company Locates-Manual

Company Locates

The following table provides steps for company locates for manual locates.

A City State (which includes street address) or Telephone number search using DPI, Line Card Inquiry can be done, to determine which office code should be used to create the cable locate work request and the physical address.

If no existing address information is found in DPI the Map Quest link could give a near enough location for the work request to be created: http://www.mapquest.com/maps/main.adp.

Step	Action	
1	Locate information is received in fax or group email box and reviewed by Dispatch.	
2	Dispatch determines the proper location (of the locate) and generates a Cable Locate, Work Request in VxField (defaults to 30 minutes). A number of different maps, spreadsheets, etc are used to determine the proper location of the work request. See Map Link.	
3	Dispatcher copies and pastes or types in the locate information we received to the notes section of the Cable Locate. Work Request.	
4	Dispatcher will date the Work Request for the next business day (unless it is an Emergency Locate). NOTE : Emergency Locates are scheduled with the current date and set for immediate dispatch.	
5	Based on the date on the work request VxField will automatically assign the work requests . **NOTE: For Emergency Locates the Dispatcher will notify the technician to let them know that he/she is receiving an emergency locate.	

Vermont

Frontier handles repair calls for Vermont Telephone, after normal business hours and on weekends. If a call comes in for an emergency locate, it must be referred to the Call Out Dispatcher. The Call Out Dispatcher will notify the Vermont Duty Supervisor immediately, per Call Out procedure.

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	Dispatch Support

Article Details KID: FONE-16-7132 Article Type: Process > Operations Guide Issue Date: 4/10/2013 Article Visible To: 12/30/2099 Customer: Customers Location: Locations Organization: 468-Dispatch Product: Products

Article Rating (click here to rate):



Sug	Suggested Content		
	VxField Cable Locate Process – Cable L Process > Operations Guide		
	ViryaNet: Alternate Search Lookup Pag Process > Procedure		
	Teradyne ARCHIVE Process > Operations Guide		
	VxField Technician Load Change Proce Process		
4	→		

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
5/2018	Updated to VxField information DMC

<u>Disclaimer:</u>
This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

SharePoint Newsfeed OneDrive Sites Epley, Jessica ▼ '



Variety Condie Editable Highlessi a Cabile Huddies Autum	ME
Summary	Ar
his Article Provides Information On Cable Locates-Automated For VxField Cable Locate Process	

Article Content
Overview Article

VxField Cable Locate Process - Overview

VxField Cable Locate Process - Cable Locates-Automated

Automated VxField Cable Locates

The automated VxField cable locate process is used by the following states:

- Arizona
- California
- Georgia
- Idaho
- Illinois
- Indiana
- lowaMichigan
- Minnesota
- Mississippi
- Montana
- Nebraska
- NevadaNew York
- Oregon
- Pennsylvania
- Tennessee
- Utah
- Wisconsin

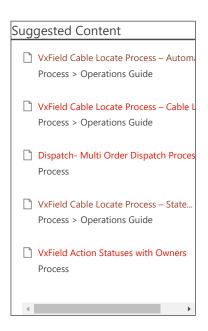
Step	Action	
1	The state One Call or State Facility group sends a cable locate request to Frontier Communications via email address DigAlert@frontiercorp.com.CSD (Corporate System Development) then parses the email via rules to send through ESB to VxField to create a call.	
2	CSD will determine if all information needed is included on the email. Required Information for VxField processing: • Location – Address, City, State and Zip Code • Requested Date/Time • Ticket Number (One Call Center's/State Facility tracking number) Additional Information, that if given will populate: • Cross Street • Contact Name and Phone number • Description of work required • Lawful dig date • Request for Engineering drawings • Meet date • Emergency meet date • Notes	
3	Information is sent from CSD via ESB (Enterprise Service Bus) to VxField	
4	All Cable Locates will have a Township or Place Identifier. In VxField there is a corresponding Township/Place Table. As a result, VxField will calculate the Reporting Center and Exchange based on the DPI office and create a Cable Locate Work Request.	



Article Rating (click here to rate):



Q



Pennsylvania

Pennsylvania follows the established Automated VxField Cable Locate process. Cable Locates for Pennsylvania will be sent to the **Cable Locate Review** Status in VxField. The Technical Supervisor/Local Managers in PA will monitor and acknowledge the requests for their exchanges.

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	Disptch Support

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
5/24/2018	updated to vxfield DMC

Disclaimer:

This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

SharePoint Newsfeed OneDrive Sites

Customer Location Organization Search...

VIFICO NATILE Artistle Physicist - Action parationsessire ence

Summary

This Article Provides Information On Automated Process Reference For VxField Cable Locate Process

Article Content

Overview Article

Article Visible To: 12/30/2099 VxField Cable Locate Process - Overview **Customer:** Customers Location: Locations Organization: 468-Dispatch **Product:** Products VxField Cable Locate Process – Automated Process Article Rating (click here to rate): ☆☆☆☆

Reference

Locate Types

VxField will determine the type of locate based on the information provided. If no meet date or emergency meet date is on the request, it is considered a normal request.

NOTE: The A Time will always equal the Create Time.

IF the request reflects	AND the B Time & Commitment Date/Time is	THEN Work Request Type is
Emergency Meet Time	1 (one) hour from the Create Time	EMER LOCATE
Meet Date/Time is requested	reflecting that Meet Date/Time requested	CABLE LOCATE
Normal Locate	the next business day at 17:00 hours	CABLE LOCATE

NOTE: All emergency locates will have an email sent to the appropriate Dispatch Center. If the state is NY but the values are unknown an email will default to the NYC mailbox.

Regardless of locate type, if the state information is unknown or missing on the request, it will go to standard Intervention Error in VxField

VxField Cable Locate Work Requests

The following are standard field values for automated VxField, Cable Locate, Work Requests:

- Work Request Type = Cable Locate (unless an Emergency)
- Skill = Cable Locate
- Related Order Number = State and One Call or State Facility Tracking Number
- Duration = 30 minutes
- Created By = CBLADD (this code reflects system generated)

NOTE: Entire email from One Call Center or State Facility will populate.

Cable Locate Error Status

Automated Locates that:

- Do not have required information, from the One Call Center or State Facility.
- Have missing or incorrect Township or Place information.
- Have specific Tables set to handle manually or refer to Dispatcher.
- The township dpi ofc relationship, county call number, office code is needed.

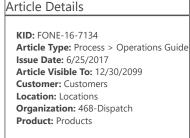
Will go to a Cable Locate Error Status. This Status will be monitored in VxField by Dispatch.

Cable Loc Ind Field

When clearing an Automated Cable Locate, Work Request, the Technician (as well as the Dispatcher on behalf of the Technician; will see a new field in the Reports Events screen. (CABLE LOC IND)

This is a Y or N field entry based on, Yes if a cable locate was required or, No if a cable locate was not required.

Cancellations



Epley, Jessica 🕶







VxField Cable Locate Process – State... Process > Operations Guide

VxField Action Statuses with Owners Process

Scenario	Process
CSD wants to cancel the request for the Locate.	CSD will send a Cancel to VxField, referencing the original One Call or State Facility tracking number. VxField will report the cancel and follow business as usual process from that point. NOTE: If the call is scheduled to a technician, the normal To Do List process will be followed. Note Text
The word cancel is found in the body of the comments or remarks section of a New York or West Region locate.	A new call will be created and it will automatically go to Cable Locate Error status in VxField. The dispatcher will view the notes to determine if it is an actual cancel or not. • If Yes, cancel both work requests (if scheduled to tech, notify and advise tech to complete). • If No, then cancel only work request in Cable Locate Error.
A Cable Locate is received from One Call or State Facility, for locate that is not in Frontier Territory.	The Dispatcher will use business as usual process to search for these types of requests and call the customer with the clear notification. Dispatcher will then cancel the work request with notes of whom they spoke with.

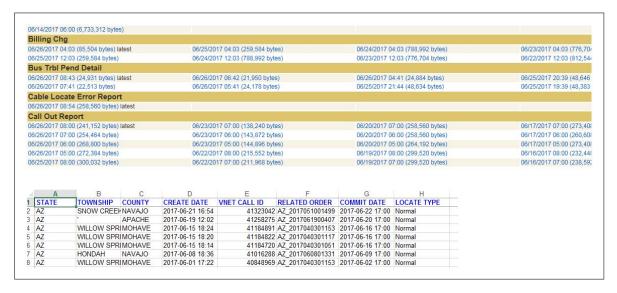
Error Report

An Error Report is available on the Excel download reports page. The report lists any Work Request that were auto created and had a Cable Locate Error event. The report runs once a day and will appear with a 90 day history. The report will run once a day and will sort by state, create date, descending, and will show calls for up to 90 days.

Notify VxField Tables Admin via email VxField Tables Admin if there is a Township that consistently goes to cable locate error because no office is identified.

Provide the following information in the email:

- Example Call ID
- State
- Township
- Office Code



Updates To Work Requests

Updates for Automated Cable Locate Work Requests.

IF the original call is	THEN
Completed	Treat the update as a new request and enter a new work request.
Open but not scheduled to a	VxField will report the cancel event on the open work request and create a

technician: Example: pending status	new work request with the new information.
Scheduled to a technician (updating, allocated, tech en route or future assignment)	 Append all new information to the notes of the existing call. BOB Update event will be reported in VxField and dispatch will follow the To Do List procedure. Notify the technician of the change and reports the tech notify event. If the dispatch area has changed, dispatchers are responsible to report the change site event once the call is no longer scheduled to the technician. VxField will update any of the fields that are sent through ESB as data fields.
Updated to an Emergency status	The state One Call/State Facility will send an email to the Plant Service Center shared mailbox.

System Down Process

During normal working hours (6:00am- 6:00pm) in the event that cable locates are not processing systematically.

Stage	Description
1	Call Help Desk 866-745-9122 to report.
2	Request Priority 1 heat ticket.
3	Contact State Facility to set up temporary fax or email option to send locates.

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.dispatch.support@ftr.com	Dispatch Support

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
6/22/17	Updated the Error Report section per Kathy Ward- LV
6/26/17	Updated image in the Error Report section per Kathy Ward - LV
5/24/18	Updated to vxfield DMC

Disclaimer:

This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.

Newsfeed OneDrive Sites Epley, Jessica -



Summary

This article is designed to teach the proper use of the Dynatel 573 and 2273 in locating cables and sheath faults and determining cable depths prior to digging.

Description

#Graff

Article Content

Table of Contents

Cable Locating Basics Introduction to the Dynatel 2273 Dynatel 2273 Transmitter Set up Sheath Fault Locating NYS State Code Rule 753

Article Details

KID: FONE-16-6860

Article Type: Process > Operations Guide

Issue Date: 8/6/2018
Article Visible To: 12/30/2099
Customer: Customers
Location: Locations
Organization: Field Ops.
Product: Voice

Article Rating (click here to rate):



Q

POTS Cable Locating

Overview

This article is designed to teach the proper use of the Dynatel 573 and 2273 in locating cables and sheath faults and determining cable depths prior to digging.

Objectives

Upon completion of this article, students should be able to;

- Locate cable paths
- Pinpoint sheath faults and cable breaks.
- Determine whether a fault is light or heavy
- Measure cable depth

Cable Locating Basics

[Top]

Frequency Selection

Frequency choice is an important consideration in getting the maximum signal on the cable. Signals applied to a cable leak off as they get farther away from the transmitter and eventually disappear.

Dynatel Transmitters offer a variety of frequency choices:

- Low (<10kHz): Provides the most accurate locate in congested areas because these frequencies don't couple easily to
 other cables. These frequencies travel farther on the cable and therefore are suitable for tracing over long distances. These
 low frequencies should only be used with the direct connect method.
- Medium (30kHz 90 kHz): These frequencies are best suited for the Dyna-Coupler or the induction mode and the tracing
 distance is one mile or less. These frequencies will couple to other nearby cables so extra care must be taken to ensure an
 accurate locate.
- High (130 350 kHz): These frequencies are best suited for sweeping a large area to locate all buried cables. High
 frequencies attenuate rapidly and therefore they are intended for shorter runs, these frequencies will couple strongly to
 other nearby cables.

Applying the Signal

There are three methods for applying signal to the cables being located:

- Induction method
- Direct connect method
- Dyna-Coupler method

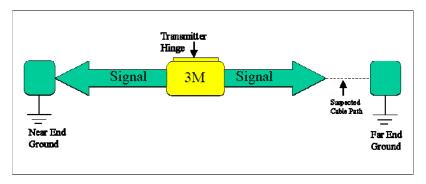
Induction Method

The easiest way to put a signal on a buried cable is with induction, where you merely set the Transmitter on the ground directly over the cable and turn on the Transmitter. The Transmitter then induces a signal into any parallel cable within range. When using the induction method set the Transmitter frequency to 33 kHz or higher, and be sure to keep the Receiver at least 50 feet from

the Transmitter as it can detect a signal at close range even if there is no cable between them. When using the induction method the cable must be grounded at both ends to produce a good locate.

Induction Method Diagram

The following diagram shows the Transmitter placement for induction locating.

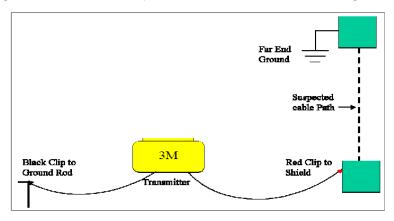


Direct Connect Method

The direct connect method of locating requires access to the cable shield and applies tone directly to this shield. The signal goes to ground at the far end, and returns to the Transmitter through the ground rod. Because of this a good ground is essential, the better the ground the better the signal. The cable shield ground must be disconnected at the near end where the Transmitter will be connected. The far end ground must remain intact. Lower frequencies should be used where possible, as they do not couple to other cables as easily as the higher frequencies.

Direct Connect Diagram

The following diagram shows the basic Transmitter placement for the direct connect method of locating.

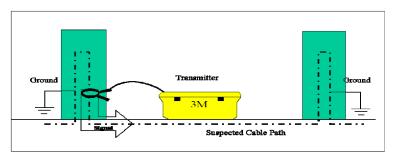


Dyna-Coupler Method

The easiest way of applying signal to a cable is with the Dyna-Coupler. The Dyna-Coupler clamps around the cable and places a signal selectively on that cable. This eliminates the need to disconnect any shield grounds. When the Dyna-Coupler is used it will only apply signal to the section of cable that is between the shield grounds at each end. Multiple cables grounded at a common point are not a problem for the Dyna-Coupler method. The cable with the Dyna-Coupler will clearly have the strongest signal.

Dyna-Coupler Diagram

The following diagram shows the basic Transmitter placement for the Dyna-coupler method of locating.



Trace Modes

There are five options for choosing Trace Modes, they are as follows:

Peak: This is the mode that will most often be used. In peak mode the Receivers speaker volume increases to a maximum
as the antenna crosses the cable. At the same time the bar graph fills from both sides towards the middle. The numeric
strength indicator also increases. This mode is useful when tracing changes in cable direction because the speaker volume

- drops
- off rapidly if the antenna is not in line with the cable.
- Peak with Expander: The expander is used to sharpen the audio response of the receiver. This only allows an audio
 response when the receiver is directly over the cable so as to beep when the receiver crosses the cable as it is swept from
 side to side.
- Null: With this mode the signal is a minimum directly over the cable and a maximum on either side of the cable. The speaker falls silent and the bar graph fills from both sides toward the middle as the cable path is approached.
- Differential: In this mode, the Receiver gives an indication of the direction of the cable relative to the Receiver by displaying right or left arrows that point towards the cable. The speaker emits a high warbling tone to the right of the cable path, a solid tone directly over the cable, and a low warbling tone to the left of the cable path.
- Special Peak Mode: In this mode the signal sensitivity of the Receiver is increased when the signal is too weak for normal tracing. Extra care should be taken while in this mode because it is more susceptible to congestion than normal peak mode.

Locating Techniques

There are three techniques used for cable locating with the Receiver as follows:

- Tracing: This technique should be used with the direct connect or Dyna-Coupler methods for the most accurate results. Simply follow the cable trace at a slow walk while moving the Receiver from side to side, periodically marking the cable path.
- Sweeping: This technique allows you to locate all the cables in an area using the induction method to apply the Transmitter signal. Use the highest frequency so that signal is applied to all cables in the area and walk a grid pattern over the selected area; cover the area from two directions. Locate the position of any cables and trace them until you are out of the area. marking the path as you go.
- Positioning: This technique is used to quickly find the path of a cable, and can save time when the signal is lost while
 tracing. Using the differential mode the Receiver antenna is placed on the ground and rotated. Watching the arrows on
 the display to note the direction of the cable.

Introduction to the Dynatel 2273

[Top]

The Dynatel 2273 Advanced Cable and Fault Locator consists of a Transmitter and a Receiver for locating buried cables and cable sheath faults. It can also pinpoint conductor faults in aerial cable. The Transmitter provides four frequencies to accommodate varying factors such as cable type, soil conditions, and distance. The Receiver provides four locating modes to accomplish difficult tracing and to pinpoint a buried cable. The Receiver also detects 50 or 60 Hz AC power signals and also measures the signal current in a cable and displays its magnitude; in addition it will display the depth of a buried cable.

Transmitter Features

The following table gives some of the features and benefits of the 2273 transmitter.

Features	Benefits
Three signal application methods.	Flexibility under varying plant conditions.
Induction Direct connect Dyna-Coupler	
Built-in ohmmeter with voltage measuring/sensing capability.	Confirms far-end grounds and shield continuity; displays earth fault resistance.
Normal and high output levels.	High output level aids in extreme distance locates.
Audible indication of hazardous voltage in ohms mode.	Warns operator of potentially dangerous situations.
Cable-locate/fault-locate signals can be applied simultaneously.	Enables receiver to verify cable location while fault locating.

Receiver Features

The following table gives some of the Features and Benefits of the 2273 receiver.

Features	Benefits
Differential mode.	Indicates direction to cable.
Measures signal current in cable.	Helps to identify target cable regardless of depth.
Audible and visual cable locates.	Ensures accuracy under varying field conditions.
Digital fault strength indicator.	Helps operator differentiate between heavy and light sheath faults.
Graphic display.	Operator can distinguish between target cable and other cables in congested areas.
Push button digital depth readout.	Easy, quick, and accurate depth measurements.

Dynatel 2273 Transmitter Set up

[Top]

Direct Connect Method Transmitter Setup

The following table gives the steps taken to setup the Transmitter using the direct connect method for locating.

6.	
Step	Action
1	With the Transmitter turned off, plug the direct connect cable into the front panel jack.
2	Connect the black clip to the ground rod, and place the ground rod in the earth perpendicular to the suspected cable path.
3	Remove the shield ground from the cable and attach the red clip to the cable shield.
4	Press the to turn the Transmitter on in the Ohms mode. It will measure the continuity of the cable under test. The results are displayed in Ohms and as a tone: Solid tone = good ground Beeping tone = useable ground No tone = poor or no ground
5	Press to select trace mode.
6	Press again to select one or all four frequencies. It is best to select the lowest frequency for direct connect with a far end ground, and a high frequency for direct connect with no far end ground.
7	Press to select high output for longer tracing distances and deep cables.
8	Transmitter setup is complete. Proceed to Receiver setup.

Dyna Coupler Method Transmitter Setup

The following table gives the steps taken for setting up the Transmitter when using the direct connect method of locating.

Step	ction	
1	Connect the Dyna-Coupler to the Transmitter front panel jack using the coupler cable.	
2	mp the Dyna-Coupler around the cable below any bonds just before the cable enters the earth. **NOTE: The jaws of the Dyna-Coupler must be fully closed.**	
3	Press to turn the Transmitter on.	
4	Press again to select 8 kHz,33kHz, or 200 kHz.	
5	Select high output level by pressing	
6	Transmitter setup is complete. Proceed to Receiver setup.	

Induction Method Transmitter Setup

The following table gives the steps taken for setting up the Transmitter when using the induction method of locating.

Step	Action
1	Place the Transmitter on the ground over the target cable with the lid hinge in line with the suspected cable path.
2	Press to turn the Transmitter on.
3	Press again to select either 33kHz or 200kHz.

4	Press to select high output for greater tracing range.	
5	5 Transmitter setup is complete. Proceed to Receiver setup.	

NOTE: The Receiver can pick up the Transmitter signal through the air at distances less than 50 feet. For best results, keep the Receiver away from the Transmitter by at least this distance.

Receiver Setup

The following table gives the steps taken for Receiver setup for locating.

Step	Action
1	Press to turn the Receiver on.
2	Press to select the same frequency as the Transmitter.
3	Press to adjust the volume as needed; off, normal, High, or high expanded. The high expanded causes the audio to cut off below a certain threshold.
4	Press to select a locate mode; Peak, Null, or Differential.
5	To select Special Peak mode: from Peak mode press and hold Then press to toggle between Peak and Speak Peak modes. The peak flag will flash while in Special Peak mode.

NOTE: Null, Peak or Special Peak mode may require re-setting the Receiver gain. Press remains either fully open or fully closed.



when the bar graph

Cable Depth and Current Measurement

Determining Cable Depth

The following table gives the steps taken to determine a cables depth after locating.

Step	Action	
1	Place the Receiver Antenna on the ground directly over the cable with the locators handle parallel to the cables path.	
2	Press and the display will indicate the cable depth and relative current. Current is displayed in the lower left corner of the display.	
3	Press twice to continue tracing or press to return to Trace mode.	

Using Current Indications for Locating

During locating both the Transmitter and Receiver indicate cable current. These indications will aid in selecting a trace frequency, identifying the correct cable and troubleshooting the setup.

Because the trace signal can travel on any cable that shares a ground with the target cable it is possible for a cable that is buried shallower than the target cable to have a stronger trace signal, but the target cable will have a stronger current measurement.

Current Indicator Setup

The following table gives the steps taken for locating using the current indicator.

Step	Action
1	Set up the Transmitter for your locate following the instructions given on pages 11-13 of this manual, or see the operators manual.
2 Set up the Receiver for you locate, using the same frequency as the Transmitter. See paranual.	
3	

	On the Receiver, press to display the current indicator in the lower left corner of the display
4	When using the direct connect method, the transmitter output number will be displayed on the Transmitter. "LO" or a number less than 50, indicates a weak trace signal. A number greater than 70 indicates a strong tracing signal. When the Receiver is used to locate the cable near the Transmitter connection point, the current number on the Receiver should correspond within 5 points to the Transmitter number as long as you are over the correct cable, and most of the signal is flowing in that cable.
5	When using the Dyna-Coupler to apply signal, the Transmitter current display indicates the current in the coupler and not in the cable. To get a cable current measurement, point the Receiver at the exposed cable about 2 feet from the Dyna-Coupler. This will be the current number that should be used to identify the correct cable.

NOTE: Some of the signal in the cable will bleed off into the earth; this will cause the Receiver current indication to decrease gradually away from the Transmitter, especially at higher frequencies.

Sheath Fault Locating

[Top]

Sheath Faults

The 2273 Locator can be used to locate sheath faults and to determine whether they are a light or a heavy fault.

Transmitter Setup

The following table gives instructions for Transmitter setup when locating sheath faults.

Step	Action	
1	Remove the near-end and far-end shield bonds from the section of cable to be tested.	
2	With the Transmitter off, connect the black clip to the ground rod and place the ground rod behind the Transmitter, away from the faulted section, and in line with the cable path.	
3	Attach the red clip to the cable shield.	
4	Press to turn the Transmitter on in the Ohms mode Ω .	
5	Measure the fault resistance. The results are displayed in ohms.	
6	Press again, to select Fault mode	
7	For maximum fault sensitivity, select high output level by pressing	

NOTE: Failure to disconnect the shield bonds at either the near-end or far-end will produce a heavy fault indication.

Receiver Setup

The following table gives instructions for Receiver setup when locating sheath faults.

Step	ction	
1	Press to turn the Receiver on.	
2	Press to select fault mode .	
3	Connect the Earth Contact Frame to the accessory jack on the Receiver using the earth frame cable.	

Locating the Fault

The following table gives instructions on locating and pinpointing the sheath fault.

Step	Action	
1	About one step away from the ground rod location, insert the frame probes fully into the ground with the green -banded leg towards the fault and in line with the cable path.	
2	Press to record a fault level reference that will be visible in the lower left corner of the	

	display.
3	The Receiver bar graph is visible on the right (green) side. This indicates that the fault is ahead of the operator in the direction of the green banded leg.
4	Continue following the path of the cable and re-insert the frame probes every few steps while watching the bar graph on the Receiver. When the bar graph is visible on the left (red) side, the fault is now behind the operator.
5	Back up slowly, and insert the frame probes into the earth every few inches, until the bar graph returns to the green side.
6	Turn the frame ninety degrees to the cable path. The fault is located beneath the center of the frame when the bar graph changes from one side to the other.
7	After a fault is found and pinpointed, move the Earth contact Frame about one frame width away from the fault and insert it into the ground with the green-banded leg towards the fault.
8	Compare the numeric indicator reading with the fault level reference in the lower left corner of the display. If they are close, the fault is the major one. If the fault reading is 20 points or less than the reference reading, there may be multiple faults and further searching is necessary to find the fault with the highest reading.

NYS State Code Rule 753

[Top]

APWA Color Code

The APWA (American Public Works Association) Uniform color code for marking buried utilities is shown below.

Proposed Excavation
Temporary Survey Markings
Electric Power Lines, Cables, Conduit and Lighting Cables
Gas, Oil, Steam, Petroleum or Gaseous Materials
Communication, Alarm or Signal Lines, Cables or Conduit
Potable Water
Reclaimed Water, Irrigation and Slurry Lines
Outside Plant Construction Training Overview serv



Part 753

The following pages contain NYS Code Rule Part 753 for the protection of underground facilities. These pages are also available on-line atwww.digsafELynewyork.com

Contacts

The following table displays Project Contacts and their roles.

Contact	Role
nsg.technical.support@ftr.com	National Support

Revisions

The following table displays revisions made since initial posting.

Date/Time	Description of Change Made
8/7/18	Content verified as accurate by T Graff - LV
2/9/15	Reviewed - L Vaughn

Disclaimer:

This document contains proprietary and/or confidential information. This document is intended only for the party to whom it is presented and copying and re-distribution are strictly prohibited.