ICN Standard Practice – OSP Engineering Qualifications and Pricing

1. Introduction

This document addresses the requirements for Outside Plant engineering qualifications and the unit price structure for performing services to the Iowa Communications Network (ICN) system.

1.1. Purpose:

To detail/define the duties and responsibilities for engineering services.

1.2. Revision History:

Version:	1.1
Release Date:	11/15/2018
Summary of Change:	Revised
Author:	Tim Flickinger
Subject Matter Expert:	Tim Flickinger, Dave Augspurger, Mike Broderick, Brian Clayton

1.3. **Effective Date:** This document is to be adhered to until an approved revision or revocation is adopted.

1.4. **Reason For Reissue:** Standard Practice

1.5. **Areas Affected:** ICN Outside Plant, OSP Field Technicians, ICN Engineering

1.6. Acronyms/Definitions

ICNSP - Iowa Communications Network Standard Practice
OSP – Outside Plant

2 Project Information:

2.1 All work for the projects included in this scope of work will be within the State of Iowa.
2.2 The Engineering Contractor shall have offices, personnel and facilities within the State of Iowa to fulfill the obligations required within the agreement.
2.3 The Engineering Contractor shall have the ability to attend meetings at the Grimes Office building at 400 East 14th St, Des Moines, Iowa as required per project demands; possibly weekly.
2.4 Work performed per this agreement will be on a unit rates basis or hourly as authorized by the ICN.
2.5 The Engineering Contractor will comply with ICN standard practices for designs:
- 2.5.1 ICNSP – 2052 for Outside Plant Engineering Standards and Specifications
- 2.5.2 ICNSP – 2051.02 for As Built Drawing Standards and Specifications.
- 2.5.3 ICNSP – 2051A Appendix A to As Built Drawing Standards (Legends & Symbols)
- 2.5.4 ICN Templates for engineering designs.

2.6 The ICN will provide information on engineering design requirements for specific projects/work orders such as: site location(s), initial route selection, access to existing as-built documentation, site contacts, etc.

2.7 Each engineering design will be issued based on an ICN Work Order authorizing the engineering design to proceed with the estimated value and type of engineering environment per the unit rate structure.
2.8 ICN reserves the right to change or revise the ICN standard practices; upon such case the ICN will notify the contractor in writing.
2.9 Any changes or revisions to design standards requested by the Contractor must be requested in writing and be approved by the ICN.

3 Engineering Contractor's Responsibilities:

3.1 Contractor at its own expense shall furnish all materials, labor, tools, machinery, vehicles, transportation, lodging, and other facilities necessary to complete issued work orders as described in this document and in compliance with referenced standards and specifications.
3.2 The contractor shall, consistent with sound professional practices, competently render the engineering services required per this agreement.
3.3 The contractor shall comply with all Federal, State and local laws in addition to the following supplemental referenced industry standards:
  3.3.1 Occupational Safety and Health Code (latest edition)
  3.3.2 Applicable power and telephone pole attachment agreements
  3.3.3 Applicable city, county and state ordinances
  3.3.4 National Electric Safety Code (latest edition)
  3.3.5 National Electric Code (latest edition)
  3.3.6 Applicable government agencies for safety and health for the work force
  3.3.7 SUDAS – Statewide Urban Design and Specification Program (latest edition)
3.4 The contractor shall provide weekly, written reports on the status of each work order. Reports shall include project name, percentage complete of field engineering, percentage complete of drafting, status of permit preparation, estimated completion of the work order and other information as requested.
3.5 The contractor shall provide estimated completion time frames for each issued work order.
3.6 The contractor shall have sufficient resources to respond to each issued work order within five (5) business days. This would include initial work order preparation per Unit 6.1, scheduling of the field work and providing delivery time frame.
3.7 The engineering work can consist of new builds, enhancements, maintenance, etc.
3.8 The ICN engineering work is mainly based on the installation of Outside Plant fiber optic cable facilities installed by industry methods which can include building entrances and interior conduit routing to a termination point. Services may be expanded as projects require.
3.9 Contractor shall deliver engineering plans as required per the ICN standard practices.
3.10 Contractor can request a pre-engineering site visit with the ICN to determine placing methods or define requirements for a particular work order based on complexity. Any requested ride outs would be included within the engineering units.

4 Engineering Deliverables:

4.1 Engineering Plan Review and Quality Audit: Upon completion of and submittal of engineering plans per each work order, the ICN will review the design for compliance to ICN standards. Minor corrections can be expected but multiple revisions or failure to follow ICN standards for design requirements can result in penalties for non-compliance or cancellation of the contract. This will be based on failure to meet the

design requirements for 95% of the designs and/or more than two requests for revisions.

4.2 Schedules: The contractor will also be evaluated on meeting work order schedules and delivery of services. Failure to meet a 95% delivery time line for final engineering designs per the agreed upon schedule can result in penalties or cancellation of the contract.

4.3 Penalties will be based on the value of each individual work order. Failure to pass the engineering plan review and quality audit or agreed upon schedules can result in a 10% reduction of the affected work orders.

4.4 The ICN reserves the right to request removal of a specific field engineer for non-compliance with ICN standards.

4.5 Invoices will be based on the final units engineered and will be based on one invoice per work order. Invoices will be accepted upon receipt of final engineering designs and acceptance by the ICN with the ability to obtain required permits.

5 Engineering Contractor Evaluation:

Contractor quotes will be evaluated on the following criteria:

5.1 Compliance with ICN standards.

5.2 Location of Offices in the State of Iowa

5.3 Years of experience performing Outside Plant engineering services in Iowa.

5.4 Number and location of staff to perform services in the State of Iowa.

5.5 Professional references.

5.6 Professional resumes.

6 Unit and Hourly Rate Structure and Definitions:

The following are the unit rate definitions and units to be utilized by the ICN.

6.1 Minimum Fee per Work Order: Minimum Fee for each project. This is for initial Work Order preparation to include: project setup, as-built review, base map development, establish meetings with ROW authorities and utilities, initial consultation with ICN, etc. Fixed fee applied to each work order to cover initial work order setup for delivery. Additional units apply for items required or requested.

6.2 OSP Engineering- Rural: Unincorporated areas with few buildings (i.e. country)

6.3 OSP Engineering- Suburban: Residential neighborhoods or outlying portions of cities (i.e. areas with adequate green space within the public ROW for utilities).

6.4 OSP Engineering- Urban: Business districts, major industry, retail, etc. (i.e. areas with limited or restricted green space within the public ROW for utilities)

6.5 OSP Engineering- CBD: Central Business Districts of a community (i.e. downtown where there is limited or no green space).

6.6 OSP Engineering – Existing Conduit: This is for documenting existing conduit within a new engineering plan set that would be utilized as part of the project delivery. This includes verifying existing hand hole, access points, etc. and availability of conduit space for the installation of additional facilities.

6.7 Permitting (All City, County, State, other ROW excluding Railroad): Includes all activities associated with completion, submission and tracking of permit applications. Unit applies per permit submittal. This may include:

6.7.1 Pre-engineering consultation with the permitting entity

6.7.2 Completion and submission of required permit forms with any required detail drawings for ICN signature.

6.7.3 Tracking permit status.

6.8 Permitting Railroads (excludes RR Permit Fee): Includes all activities associated with completion, submission and tracking of permit applications. Unit applies per permit submittal. This may include:
- 6.8.1 Pre-engineering consultation with the permitting entity
- 6.8.2 Completion and submission of required permit forms with any required detail drawings for ICN signature.
- 6.8.3 Tracking permit status.
- 6.8.4 Does not include the railroad permit fee; fee would be reimbursable by the ICN.

6.9 Permitting Poles Attachment Application: Includes all activities associated with completion, submission and tracking of pole attachment applications. This includes:
- 6.9.1 Pre-engineering consultation with pole custodian
- 6.9.2 Completion and submission of required attachment application forms with the required detail drawings

6.10 Make-Ready/Plan & Profile (per pole): Applies to areas where pole custodian requires an individual drawing showing a profile view of a pole with detailed attachments and position on the structure.

6.11 Pole Loading Analysis (per pole)
- 6.11.1 Price structure is variable dependent on the requirements of the pole custodian.
- 6.11.2 It may include collection and entry of field survey data into a client mandated software platform in order to generate the required output for custodian review.

6.12 As-Built Drafting
- 6.12.1 Posting of all redlined construction notes to establish a final as-built.
- 6.12.2 Finalize an electronics document set containing the project as-built

6.13 Building Entrances - Site Plan Route to Building Entry
- 6.13.1 Design and engineering of route segments which extend from the public rights-of-way to a private or public building structure intended to be a fiber termination site. This includes documenting private property routing and construction techniques and establishing a point of entry based upon a general survey of the building and the final location of the fiber distribution panel.

6.14 Building Details- Construction Details to Termination Panel & Site Plan
- 6.14.1 The engineering services include all of the elements of item 6.11(Building Entrances) and includes detailed routing and construction techniques to install a communications line through the interior of the building to the final location of the fiber distribution panel. (Includes items in 6.11 – cannot apply both units.)

6.15 Private Easement: The unit is for acquiring the negotiated long term right to use of private property easements. It is for the development of the easement with all fees excluding payments to property owners. It includes the following:
- 6.15.1 contact with property owner,
- 6.15.2 accessibility study,
- 6.15.3 title and deed searches,
- 6.15.4 zoning, planning and development searches,
- 6.15.5 tax lien/mortgage releases,
- 6.15.6 metes and bounds description,
- 6.15.7 identification of adjacent landowners,
- 6.15.8 site construction and restoral plans,
- 6.15.9 required survey, legal description and sketch of easement and property,
- 6.15.10 executed documents including notarization,
- 6.15.11 filing and recording with assessor.

6.16 PE Stamped Prints: Complete set of PE stamped drawing when it is mandated by permitting authority. Fee is for each plan set.

6.17 Travel - per hour: Includes a nominal labor rate for round trip travel time and reimbursement of mileage from Contractors nearest office to the site location. Unit does not apply to work orders within a 60 mile radius of nearest Contractor office location. Applies once to each work order unless ICN requests return trips for additional engineering.

6.18 Survey Crew – GPS of Located Existing Utilities: Request Iowa One Call Design Locates and upon field markings, collect GPS data on existing utilities and indicate them on the engineering plans.

6.19 Survey Crew – Locate and GPS Installed Facilities: Perform utility locates and GPS the facility running line, depth and related infrastructure.

6.20 Survey Services: Provide surveying services, or subcontract as required, in order to identify and stake ROW, proposed facility alignment or other features as required as directed by the ICN.

6.21 Contractor to provide hourly rates for various services and as outlined in the unit rate cost matrix. Hourly rates require pre-authorization by the ICN with estimated hours for services to be rendered provided by the Contractor.

6.22 Contractor shall identify any unusual circumstances or information required that may be outside the normal parameters of ICN or industry standards where separate rates may apply.

OSP Engineering Fee Schedule			
Bid Unit	**Description**	**Quantity**	**Unit Cost**
6.1	Minimum Fee per Work Order	Lump Sum	
6.2	OSP Route Engineering - Rural	Per/ft	
6.3	OSP Route Engineering - Suburban	Per/ft	
6.4	OSP Route Engineering - Urban	Per/ft	
6.5	OSP Route Engineering - Central Business District (CDB)	Per/ft	
6.6	OSP Route Engineering – Existing Conduit	Per/ft	
6.7	Permitting (All City, County, State, Other ROW; excluding Railroads)	Each	
6.8	Permitting Railroads	Each	
6.9	Permitting Pole Attachment Applications	Each	
6.10	Make Ready Plan and Profile	Per Pole	
6.11	Pole Loading Analysis	Per Pole	
6.12	As Built Drafting	Per/ft	
6.13	Building Entrance - Site Plan Route to Building Entry	Each	
6.14	Building Details - Site Plan Route to Building Entry and Interior Details to Termination Point	Each	
6.15	Private Easement	Each	
6.16	PE Stamped Prints - per plan set	Each	
6.17	Travel from local Contractor office in excess of 60 mile radius	Hourly Rate	
6.18	Survey Crew – GPS of Located Existing Utilities	Hourly Rate	
6.19	Survey Crew – Locate and GPS Installed Facilities	Per/ft	
6.20	Survey Services	Hourly Rate or Quote Rate Per Scope of Work	
6.21	Hourly Rates for the following categories (include other categories if not listed)		
	Project Manager/Sr. Engineer	Hourly Rate	
	Field Engineer	Hourly Rate	
	GIS Analyst	Hourly Rate	
	GIS/CAD Technician	Hourly Rate	
	Clerical	Hourly Rate	
6.22	Other Units proposed by Contractor		