OSP Technologies
Making the Right Connections for Your Outside Plant Projects

Standard Master Service Agreement
"Appendix A – Quality Control"

OSP Technologies- Best Practice / QC Documentation

Safety: We (OSP) conduct a new employee / contractor's orientation as well as monthly refresher meetings that reviews Occupational Safety and Health Administration (OSHA) requirements as related to the type of work we perform. In the years that OSP has been performing Outside Plant Repair and construction, no safety violations or injuries have been reported. It is the policy of OSP Technologies to provide safe and healthy working conditions for all its employees and contractors, as to provide protection for the public.

Quality Assurance: Prior to start of any job, we have a project kickoff review involving ALL stakeholders. We ensure ALL involved understand the scope of work (SOW), task requirements, material usage, start date and customer expectations as related to the completion date. A dedicated project manager and construction manager is assigned to the jobs. Project milestones and dependencies are established and understood by all. Construction managers visit, inspect, report the status and any issues to project manager daily. We have established a best practices checklist that is used to ensure nothing is missed during the review process.

Technical Training: We conduct a new employee / contractor's orientation as well as monthly refresher meetings that reviews national electric code (NEC), and revolving or new service technical topics. As new technology or architecture is introduced in a project, the required training is provided to ensure all involved have a clear understanding of what is needed to successfully complete each job.

Steps to Job Assignment and QC Checklist

Planning:
1) OSP Obtain maps
2) OSP Obtain splice documents
3) OSP Team meeting to discuss job
4) OSP Assigns contractors
5) Communications sent to contractors
   a) Send maps
   b) Send SOW, Tasks, and Pricing
   c) Receive contractors' acceptance of SOW
6) Schedule onsite meeting with OSP & contractors
   a) Onsite job & safety review

b) Prestart joint walk / White line
c) Take pre-con photos/videos
d) Establish start date
7) Verify locate / Permits
a) Obtain copy of locates (also get copies of nonresponse tickets)

Support:
1. Start Support
   a) Is Conduit placed with adequate stub up length?
   b) Is Strand placed
      i) Verify if existing or new attachment is not in violation of height clearance or close to any existing power line or device. (Are all NEC guidelines are met)
      ii) Are customer tags on each bolt at pole(s) if new attachments are placed
   c) Anchors / guards placed (Are all NEC guidelines are met)
   d) Are Pedestals placed properly? (Level, all rotated in the same direction, all labeled)
   e) Vaults placed (obtain GPS coordinates and place on as-built map)
      i) Level at ground fill level and labeled?
   f) Place 6' UG fiber markers (at every vault location and one (1) equally spaced between vault(s), or every 500'
   g) Verify Grounding
      i) Aerial
         Continuity bond(s) & ground wire at active(s) and end of line(s)
      ii) Underground
         Ground rod(s) & ground wire at active(s) and end of line(s)
   h) UG Depth verified
   i) Aerial attachment height verified (ensure if permits specify heights, height is correct)
   j) Updated as-built maps

Placement:
1. Place Fiber
   a) Fiber(s) placed
   b) Risers with riser guard placed
   c) Storage loops placed (obtain GPS coordinates and place on as-built map)
   d) Check / verify if fiber is looped thru location or cut must follow splice design.
   e) Are as-built maps mark accordingly with all relative fiber jacket information (TIC Marks)
   f) Adequate tails for splicing?
   g) Fiber wraps at fiber splice and fiber storage loop locations
2. Place coax
   a) Coax(s) placed
   b) Risers with riser guard placed
   c) Adequate tails for splicing (3 ft tail(s) on each coax if active or passive is on design
3. Final QC before splicing/ activation starts

Splice & Activation:

1. Backbone tie point spliced
2. Power supply installed (obtain GPS coordinates and place on as-built map)

    a) Verify grounding
    b) Power supply module in place and connected
    c) Batteries in place and connected

3. VHub / Node cabinet placed with node (obtain GPS coordinates and place on as-built map)

    a) Stuffed VHub / Node
    b) Verify light levels
    c) Verify power
    d) Ground rod and ground wire attached

4. Placed drop for status monitoring in power supply cabinet
5. Send power supply MAC address to Customer Contact Managers
6. As-built splicing map updated with Active levels EOL's (plus or minus 2 db)

Testing/Documentation:

1. Verified RF levels (and/or) light at EOL's

    a) JSO test Jumper for FTTH jobs (obtain GPS coordinates and place on as-built map)
    b) Levels at each drop?

2. As-built map with levels completed
3. Send levels / EOL map to customer