

**Engineering Review Requirements
For Overhead Line Crossings of Streams/Rivers (bed and banks) owned by SARA**

1. The overall goal of these requirements is for the applicant to design and construct overhead line projects with minimal disruption to the bed and banks of the stream, the public, and the environment during construction as well as the long-term operation. No clearance of trees or brush is allowed on the bed and banks of the San Antonio River or any of its tributaries.
2. Project should cross riparian areas at 90° angles. Minimize disturbance to stream banks and riparian zones. Avoid native stands of vegetative and cover. A review of site vegetation and topography will be conducted prior to beginning work.
2. An on the ground centerline profile will be submitted for the proposed crossing. The ground shots will be based on NAVD 1988 datum. There will be enough points to describe and capture the significant features for the river/stream at the crossing. Provide an ascii file of the point data used to create the profile based on the same datum submitted. Format for the ascii file comma (delimited) northing, easting, elevation, description (N,E,Z,D). Include detailed overhead line location within the easement area. For Horizontal control refer to survey standards.
3. Provide SARA with a map showing no activities within the 1% annual chance floodplain (100-yr) or a permit from the local floodplain administrator for proposed activities. Do not alter or fill in SARA right of way or floodplain.
4. Any modifications to the channel or floodplain should include hydrology and hydraulics modeling for review and comment that assure no downstream impacts from the proposed temporary or permanent activities. In addition, a permit from the local floodplain administrator should be included.
5. The consultant designing the crossing should assure proper depth of utility poles to prevent exposure from localized scouring caused by improvements, if present, in the stream corridor. In such cases, applicant shall coordinate with local floodplain administrator to determine appropriate scour protection depths.
6. Contact the San Antonio River Authority (SARA) Environmental Investigations Specialist at least 72 hours prior to any installation activities. Contact must be made person to person and not thru email or phone messages. A site meeting to discuss the crossing must include a representative from the utility and installation companies.
7. Best management practices for environmental and safety contingency plans must be in place prior to any activities. A Methods of Environmental Protection Plan must be provided to SARA. All equipment listed in this plan shall be on site when drilling within 100 feet of the stream.

8. River Authority staff must be present during installation activities over the bed and banks of river or its tributaries.
9. Water from any river or stream will not be used in any activity without prior permit approval from TCEQ.
10. The site will be properly cleaned up and all debris removed. Restore site to original or better condition.
11. Provide SARA with the following within 30 days of completion: MSDS sheets of all chemicals and products used on-site; and documentation of the actual line elevations over the river or stream (as-builts). Failure to produce close-out documentation may prohibit future crossings for that company.
12. SARA is not responsible for any damages, property or personal, related to the crossing.
13. SARA's review is based upon general compliance with the contract documents only and does not infer approval of the proposed design or construction operations. Sole responsibility for correctness and safety of the design and construction operations remains with the applicant.
14. This document is subject to revisions at any time and is provided for informational purposes only.

Revised July 22, 2015