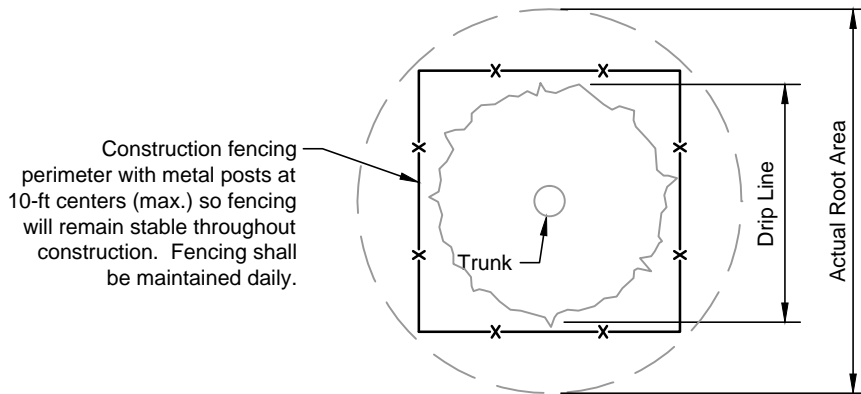


TREE PRESERVATION

Private Property Trees:

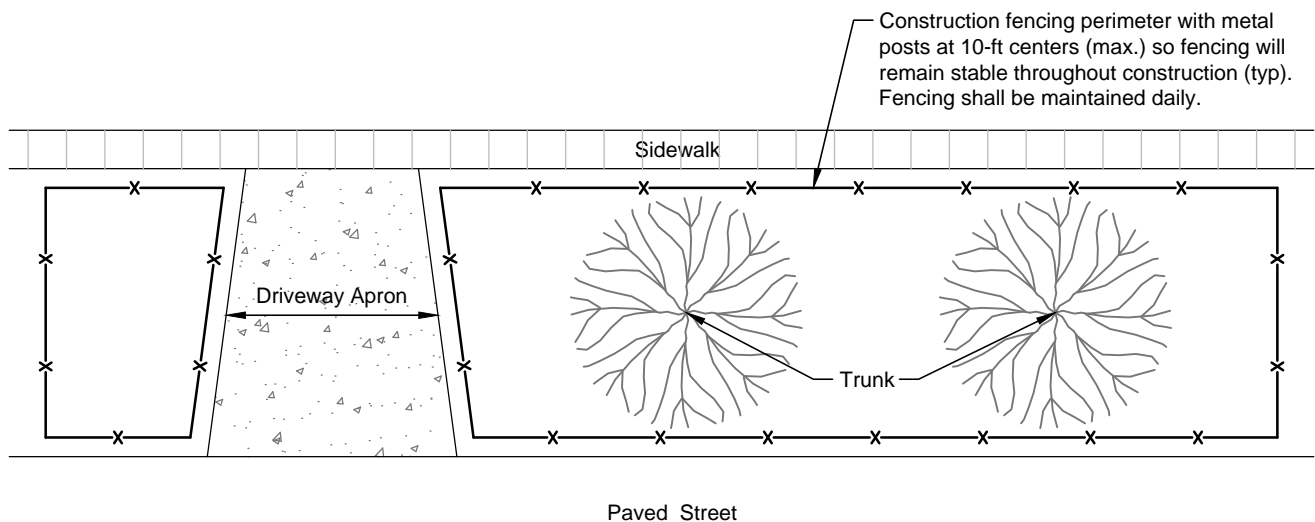


Roots of trees extend far beyond the tree's canopy. To protect these roots, place construction fence around the Root Protection Zone (RPZ) or drip line of the tree, whichever distance is greater (see detail).

The impact of construction on a tree is largely determined by the amount of space given for the tree protection area. Increasing the size of the protected area increases the chance of survival during and after construction.

Parkway Trees:

Generally root systems of parkway trees only extend from the trunk to the edge of pavement. The roots on the sidewalk side can run underneath the sidewalk and onto private property. IT IS VERY IMPORTANT TO FENCE OFF THE ENTIRE PARKWAY TO MINIMIZE DAMAGE TO THE ROOT SYSTEM OF THE TREE. See the detail below:

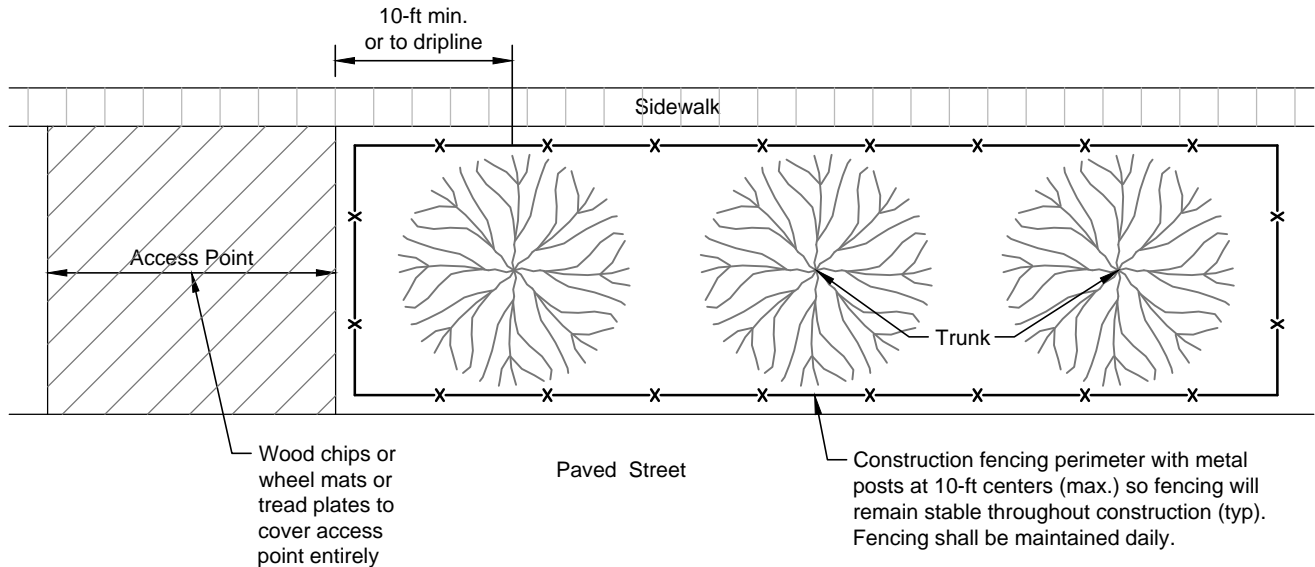


File Name: w:\tools and utilities\drafting standards\cma std details\2910-x tree protection details.dwg

FILE NO.:	CITY OF CEDAR RAPIDS PUBLIC WORKS DEPARTMENT STANDARD DETAIL (MANDATORY FOR CITY PROJECTS - RECOMMENDED FOR ALL OTHER PROJECTS)			
DATE: NOV. 2013	TREE PROTECTION FENCING DETAIL SHEET 1 OF 2			
REVISION NO.:				NO.
REVISION DATE:				2910-020

Parkway Tree Fencing Without Driveway:

Certain sites do not have access to the front of the property for various types of construction activity. If the property DOES NOT have a driveway for access or suitable alley access, the City of Cedar Rapids will allow for an access point to the front of the property across the parkway. This access point must be properly constructed to protect the root zone of the parkway trees from compaction by heavy equipment or other construction damage. The general contractor or owner must fence off the perimeter of the parkway up to the designated access point. Wheel mats or tread plates or a layer of wood chips with a minimum depth of 10 inches must be placed across the entire 10 foot wide access point. It must be maintained daily for the duration of the construction activity.



Construction Dangers To Be Aware Of:

COMPACTION: Minimize this type of damage by fencing the entire CRZ or out to the dripline of the tree. Roots are located in the top 6-12 inches of the soil and extend out 2-3 times the canopy diameter. They are the vital support structure and water/nutrient provider to the tree. Large equipment (bobcats, loaders, cement trucks, etc.) will reduce pore space in the soil if driven over this area. There will be less water and oxygen available to the roots/tree because of this activity. This will cause the tree to "starve" since its roots will be damaged and uptake of water and nutrients will be limited or eliminated.

TRUNK DAMAGE/BROKEN BRANCHES: Prevent this damage by pruning low hanging limbs on construction sites to avoid breaking and ripping them with trucks and other equipment. If there are low hanging limbs on parkway trees, contact the Forestry Division. The trees will be pruned to provide clearance by City crews. Installation and maintaining tree protection fencing will keep equipment from damaging the trunk. Wounds caused in this manner will leave entry points for insects and other pathogens. This will stress the tree and increase its susceptibility to disease and eventually death.

TRENCHING: Sewer, water and other utilities are placed underground. The installation of these utilities via trenching causes tremendous damage to the root system of the tree. Trenching equipment will tear and sever a large portion of the root zone responsible for the water and nutrient uptake. This will also provide a source for fungal infection and other pathogens leading to stress, disease problems, weak limbs and death. CONTRACTORS MUST UTILIZE BORE AND TRENCH DETAIL No. 2910-026 PROVIDED BY THE CITY AND/OR CONTACT THE CITY ARBORIST FOR REVIEW OF THE SITE.

PLEASE NOTE THAT OTHER MEASURES MAY BE USED TO PROTECT TREES DURING CONSTRUCTION. THESE METHODS WILL BE WRITTEN ON THE BUILDING PERMIT AND WORKING DETAILS PROVIDED.

File Name: w:\tools and utilities\drafting standards\cma and details\2910-026 tree protection details.dwg

FILE NO.:	CITY OF CEDAR RAPIDS PUBLIC WORKS DEPARTMENT STANDARD DETAIL (MANDATORY FOR CITY PROJECTS - RECOMMENDED FOR ALL OTHER PROJECTS)		
DATE: MAY 2013			
REVISION NO.:	TREE PROTECTION FENCING DETAIL		NO.
REVISION DATE:	SHEET 2 OF 2		2910-020