

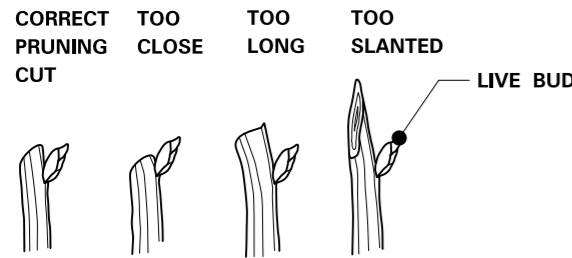
INCORRECT CUT (TOO CLOSE) WILL RESULT IN DISCONTINUOUS CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

CORRECT CUT (LEAVING BRANCH COLLAR BUT NO STUB) WILL RESULT IN CONTINUOUS DOUGHNUT SHAPED CALLUS FORMATION AFTER ONE SEASON OF GROWTH.

- STEPS TO PRUNING WITH PRUNING SAW
1. CUT PART WAY THROUGH THE BRANCH AT POINT A.
  2. CUT COMPLETELY THROUGH BRANCH FROM POINT B TO A.
  3. CUT FROM POINT C TO D.
  4. LEAVE BRANCH COLLAR (C TO D)
  5. DO NOT FLUSH CUT (C TO X)
  6. DO NOT LEAVE STUBS (B TO A)

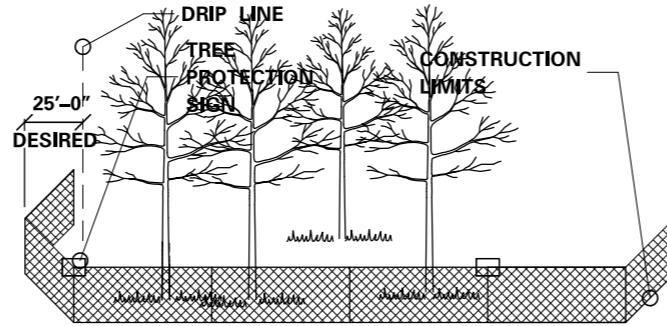
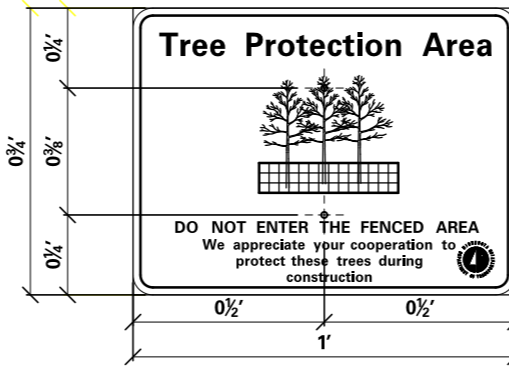
- PRUNING NOTES
1. PRUNE USING CLEAN AND SHARP SISSOR TYPE PRUNER OR PRUNING SAW.
  2. THE BEST TIME TO PRUNE IS LATE DORMANT SEASON OR EARLY SPRING.
  3. AVOID PRUNING OAKS IN APRIL, MAY, JUNE OR JULY.
  4. IF PRUNING IS NECESSARY OR IF WOUNDS OCCUR TO OAK TREES IN APRIL, MAY, JUNE OR JULY, IMMEDIATELY PAINT CUT SURFACE OR WOUND WITH LATEX PAINT OR SHELLAC.

BRANCHES PRUNED AT TRUNK

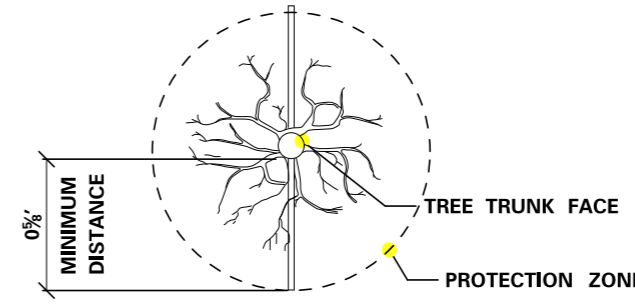
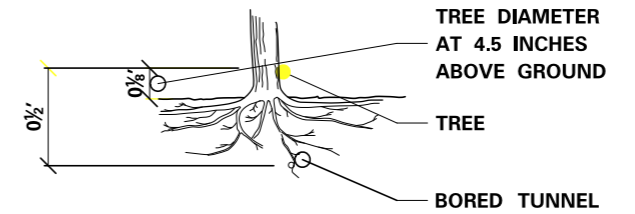


BRANCHES PRUNED TO LIVE BUD

1. FABRICATE 12" X 9" X 3/8" SIGN WITH 0.75" RADIUS CORNERS.
2. SIGN SHALL BE WHITE WITH BLACK LETTERING.
3. ATTACH SIGN TO POST USING 1" LENGTH WOOD SCREWS.

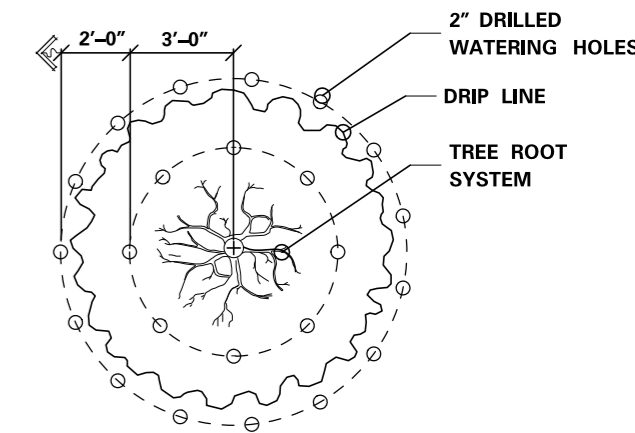
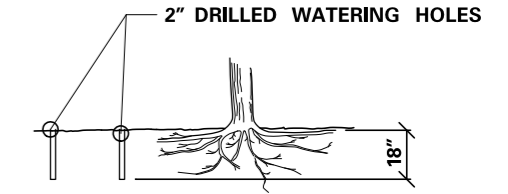


1. FURNISH AND INSTALL TEMPORARY FENCE AT THE TREE'S DRIPLINE OR CONSTRUCTION LIMITS AS SPECIFIED, PRIOR TO ANY CONSTRUCTION.
2. WHEN POSSIBLE PLACE FENCE 25 FEET BEYOND THE DRIPLINE.
3. PLACE TREE PROTECTION SIGNS ALONG FENCE AT 50' INTERVALS.



TREE PROTECTION ZONE		
TREE DIAMETER AT 4.5' ABOVE GROUND	MINIMUM DISTANCE FROM FACE OF TREE TRUNK	MINIMUM DEPTH OF TUNNEL
0"-2"	2'	2'
3"-4"	4'	2.5'
5"-9"	6'	2.5'
10"-14"	10'	3'
15"-19"	12'	3.25'
19" +	15'	4'

1. REDUCE COMPACTION ON ROOT SYSTEMS WHERE IT OCCURS BY DRILLING 2" DIAM. HOLES IN THE SOIL TO A DEPTH OF 18". BEGIN 3'-0" FROM THE TREE TRUNK AND CONTINUE AT 2'-0" INTERVALS IN CONCENTRIC RINGS OUT TO THE PROTECTION ZONE.
2. WATERING OF ROOT DAMAGED TREES WILL BE REQUIRED TO MAINTAIN ADEQUATE BUT NOT EXCESSIVE SOIL MOISTURE TO A DEPTH OF 18" WITHIN THE UNDISTURBED PORTION OF THE IMPACTED TREE DRIPLINE.



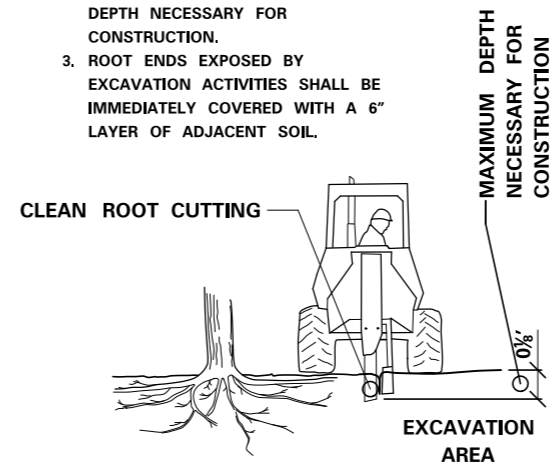
TREE PROTECTION

(MnDOT 2572.3A1)

UTILITY CONSTRUCTION

(MnDOT 2572.3A5)

1. WHEN DESIGNATED IN THE PLAN OR DIRECTED BY THE ENGINEER, PRIOR TO EXCAVATION, ALL TREE ROOTS WILL BE CLEANLY CUT BY A VIBRATORY PLOW OR OTHER APPROVED ROOT CUTTER.
2. THE TREE ROOTS WILL BE CUT CLEANLY TO THE MAXIMUM DEPTH NECESSARY FOR CONSTRUCTION.
3. ROOT ENDS EXPOSED BY EXCAVATION ACTIVITIES SHALL BE IMMEDIATELY COVERED WITH A 6" LAYER OF ADJACENT SOIL.



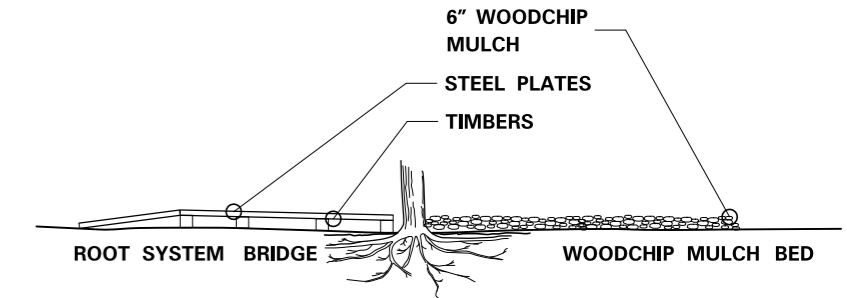
CLEAN ROOT CUTTING

(MnDOT 2572.3A2)

WATERING

(MnDOT 2572.3A3)

- IF CONSTRUCTION VEHICLES MUST PASS OVER ROOT ZONES, THE CONTRACTOR MUST EITHER:
1. CONSTRUCT ROOT SYSTEM BRIDGES WITH STEEL PLATE SUPPORTED ON WOOD TIMBERS PLACED RADIALLY TO THE TREE TRUNK.
- OR
2. PLACE A 6 INCH LAYER OF WOODCHIP MULCH OVER A GEOTEXTILE (3733) (PERMEABLE FABRIC) TYPE III.

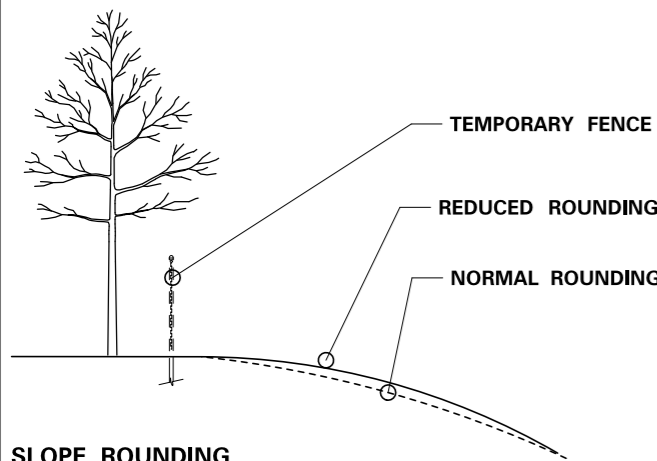


OTHER VEGETATION PROTECTION MEASURES

(MnDOT 2572.3A10)

SIGNIFICANT TREES NEAR THE PROPOSED CONSTRUCTION LIMITS WILL BE IDENTIFIED IN THE PLAN OR BY THE ENGINEER AND WILL BE PRESERVED BY THE CONTRACTOR.

1. PLACE THE TEMPORARY FENCE.
2. REDUCE SLOPE ROUNDING WHERE ROOT ZONES ARE DISTURBED BY NORMAL SLOPE ROUNDING.
3. VARY BACK SLOPE STEEPNESS TO AVOID TREE LOSS OR UNNECESSARY ROOT DAMAGE.



SLOPE ROUNDING

VEGETATION PROTECTION

MISCELLANEOUS DETAILS

REVISION DATE 06/16/10

### Sample Plan

#### MISCELLANEOUS DETAILS ----- NARRATIVE

##### References:

- Design Scene: Chapter 3 - Details
- Standard Plates: 8400 Pipe Railing  
8401 At Grade Pipe Rail
- Miscellaneous: Metro District's Electronic Details Library  
Standards Office's Electronic Details Library

##### General Information:

Miscellaneous Details are specific project details other than construction details, concrete paving details, bituminous paving details, retaining wall details, drainage details, impact attenuator details, and traffic barrier details.

Depending on the project, specific details may be grouped into the Miscellaneous Details category.

All special bid items shall include a complete detail and a list of materials to be shown in the Plan. The Special Provisions or notes for this item shall be specifically written with a description of the work involved to include measurement and payment of that item.

Note any incidental work which applies to Miscellaneous Details.

Aesthetics vs cost should be addressed during the development of special details.

If the detail was developed by another functional group, their Engineer should sign the sheet and technician initial. See General Notes of this Sample Plan.

Examples of Miscellaneous Details include the following:

- Tree Protection
- Standard Vegetation Protection
- Sign Collars
- Stairways
- Reinforced Curb & Gutter at Drainage Structures

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### Sample Plan

#### MISCELLANEOUS DETAILS ----- CHECKLIST

- \_\_\_ 1. Pay Item provided for Miscellaneous Details
- \_\_\_ 2. Note Incidental Work Which Applies to Miscellaneous Details
- \_\_\_ 3. Provide Special Provisions In the proposal for Miscellaneous Details
- \_\_\_ 4. Cross references to other sheets (as applicable)
- \_\_\_ 5. Drawn by: and Checked by: Initials and Engineer's signature