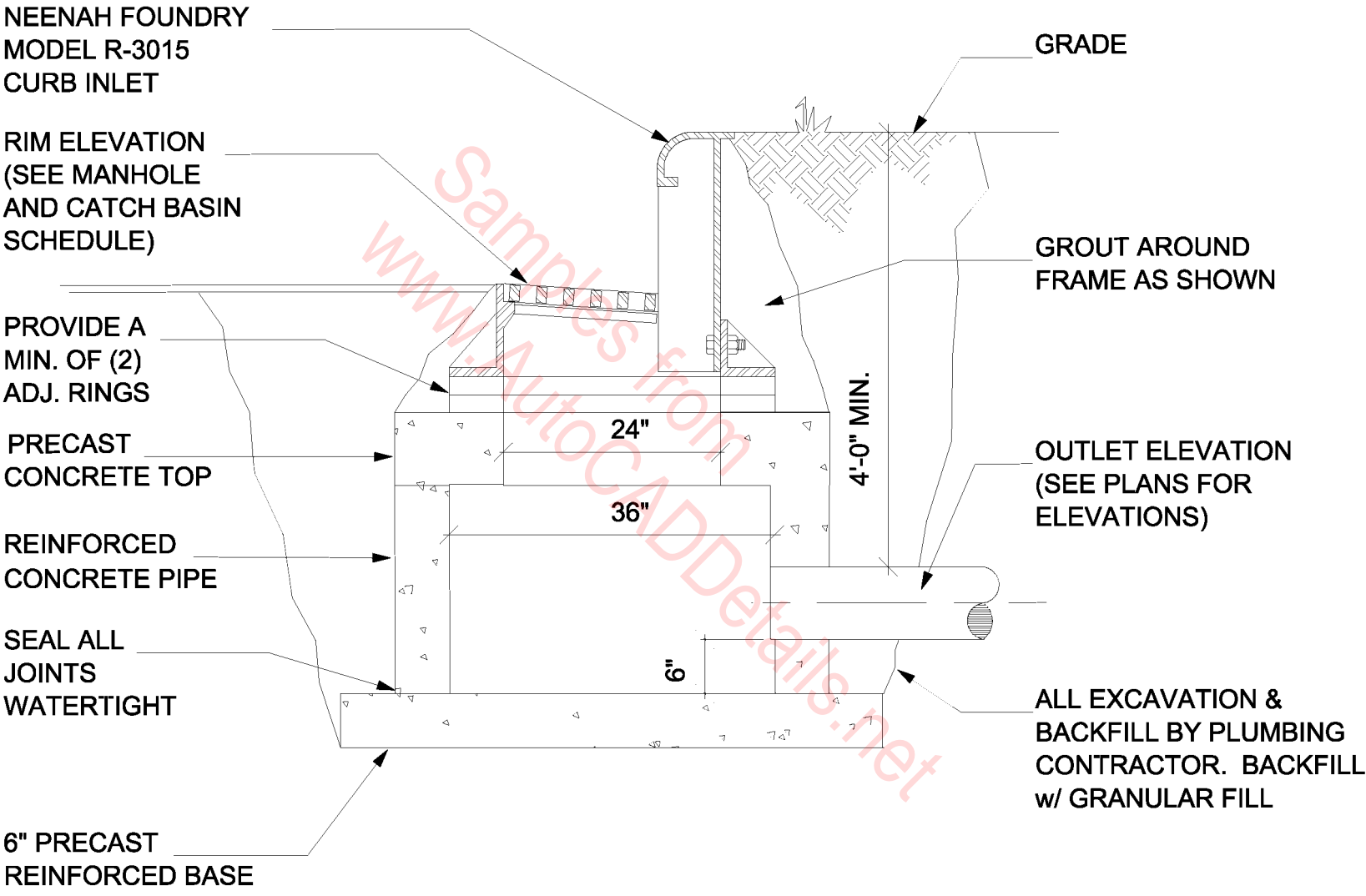
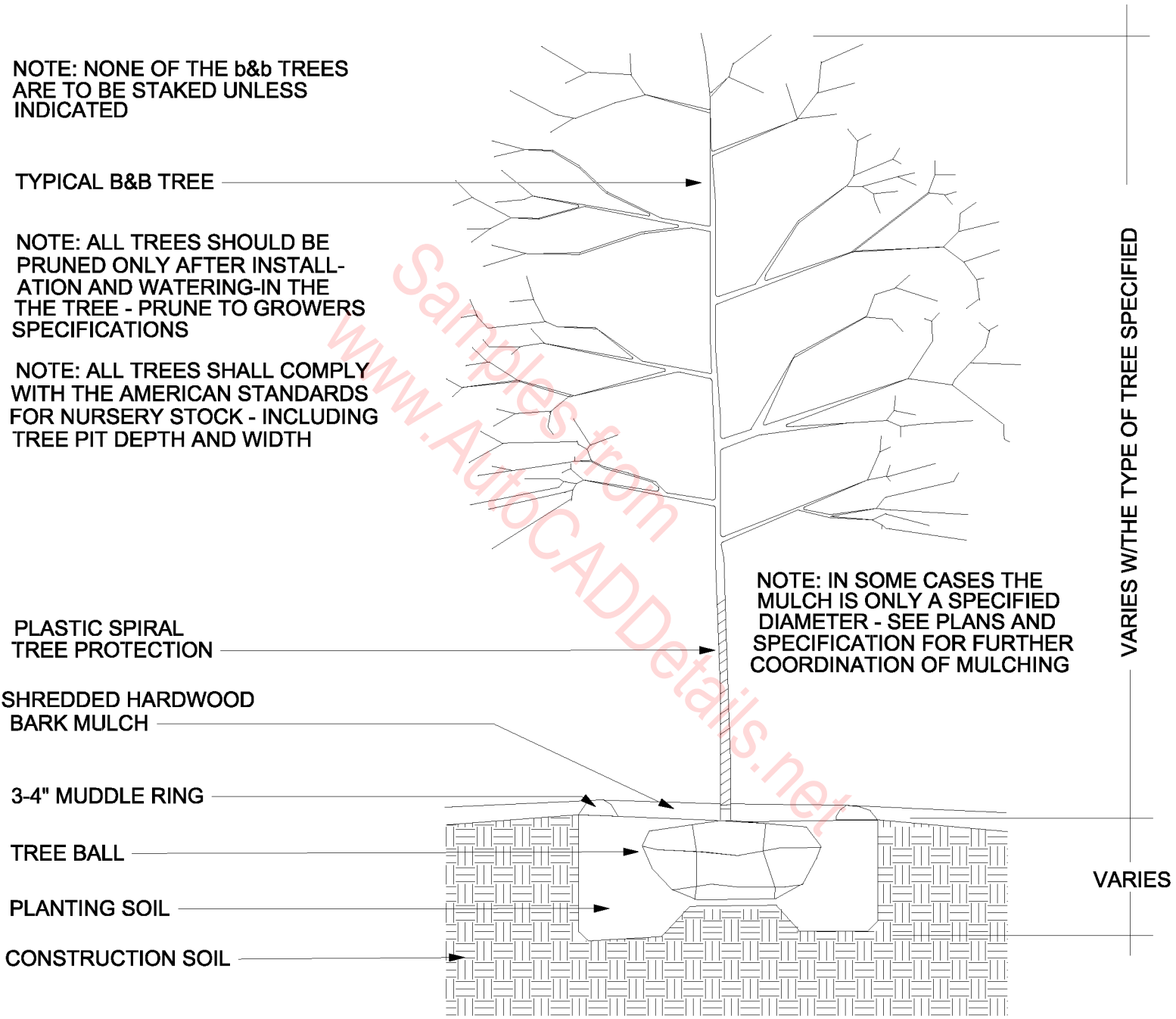


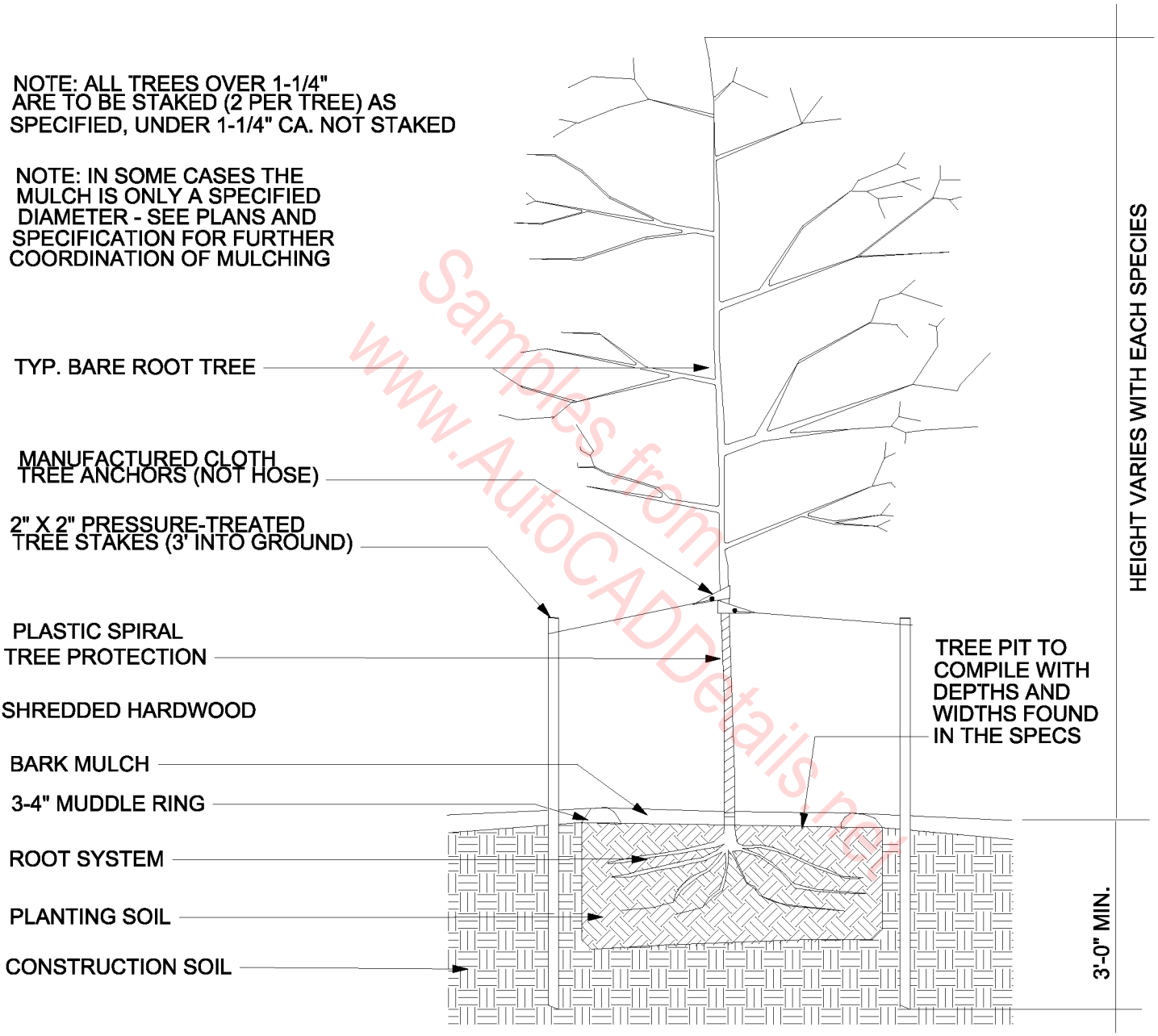



# AREA DRAIN DETAIL





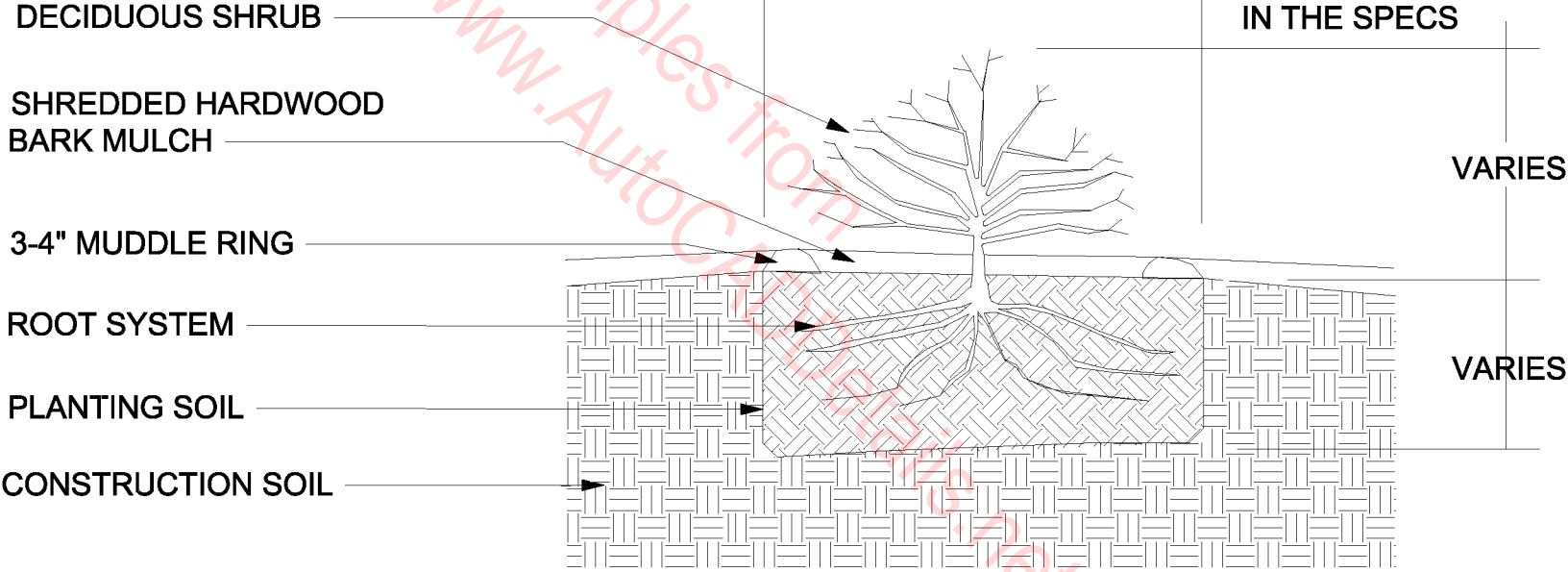

# BALLED & BURLAPPED DECIDUOUS TREE DETAIL





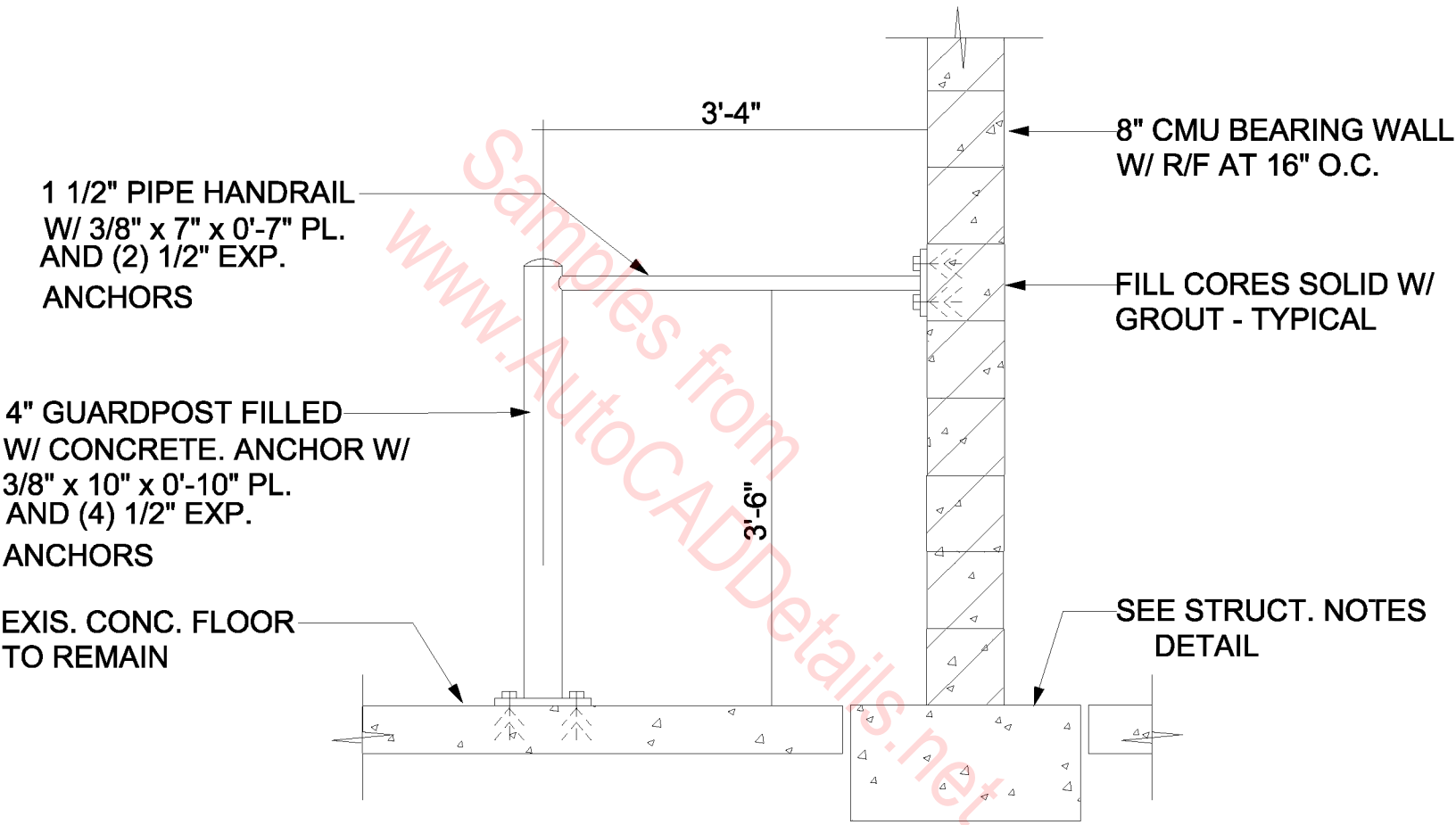

# BARE ROOT DECIDUOUS TREE PLANTING DETAIL

NOTE: IN SOME CASES THE MULCH IS ONLY A SPECIFIED DIAMETER - SEE PLANS AND SPECIFICATION FOR FURTHER COORDINATION OF MULCHING



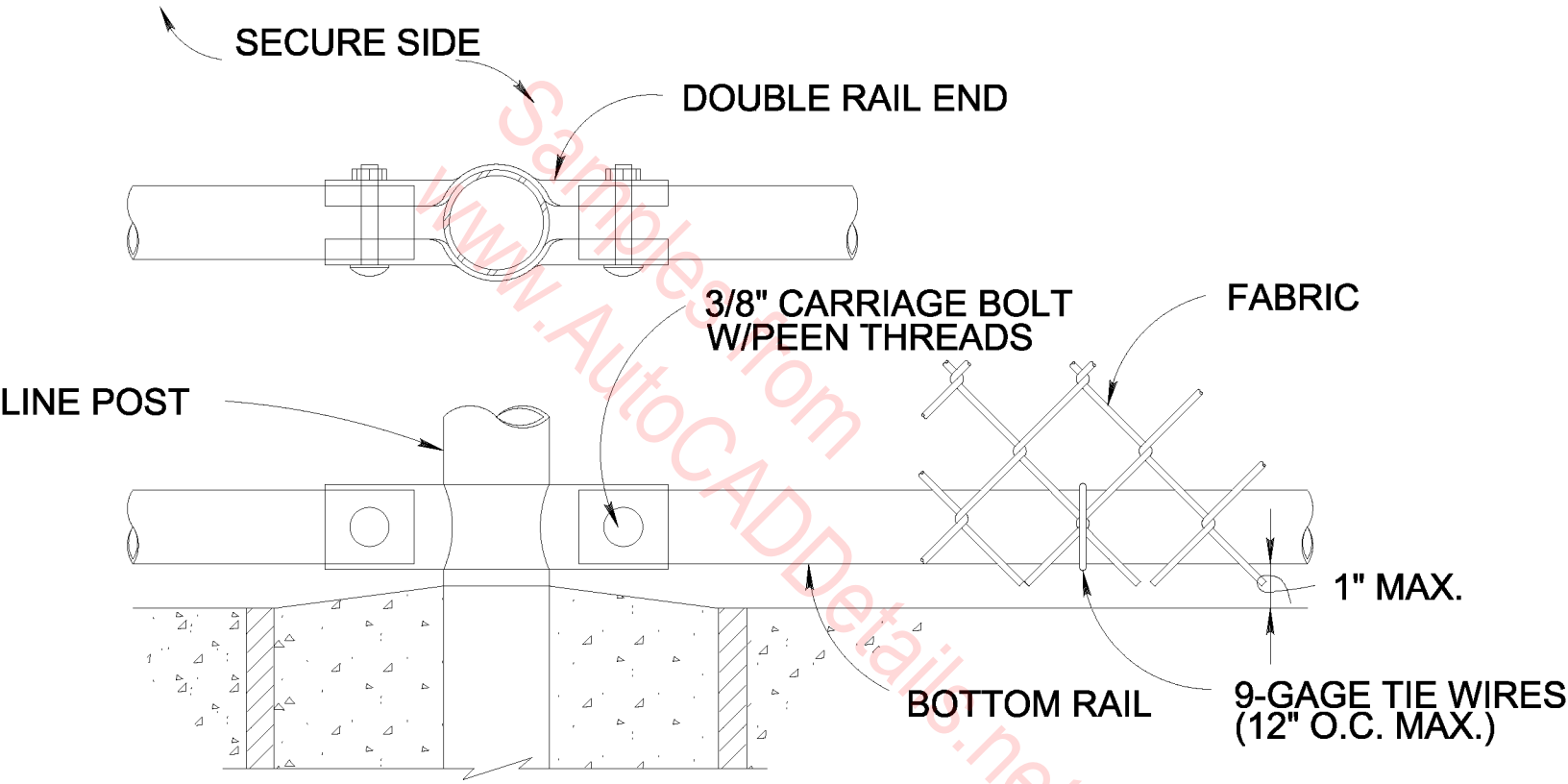



# BARE ROOT PLANTING DETAIL



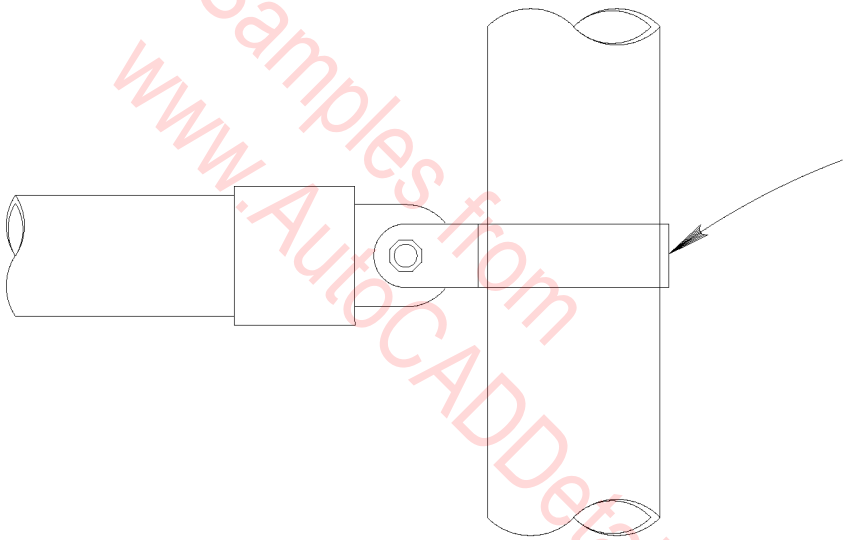



# BOLLARD DETAIL



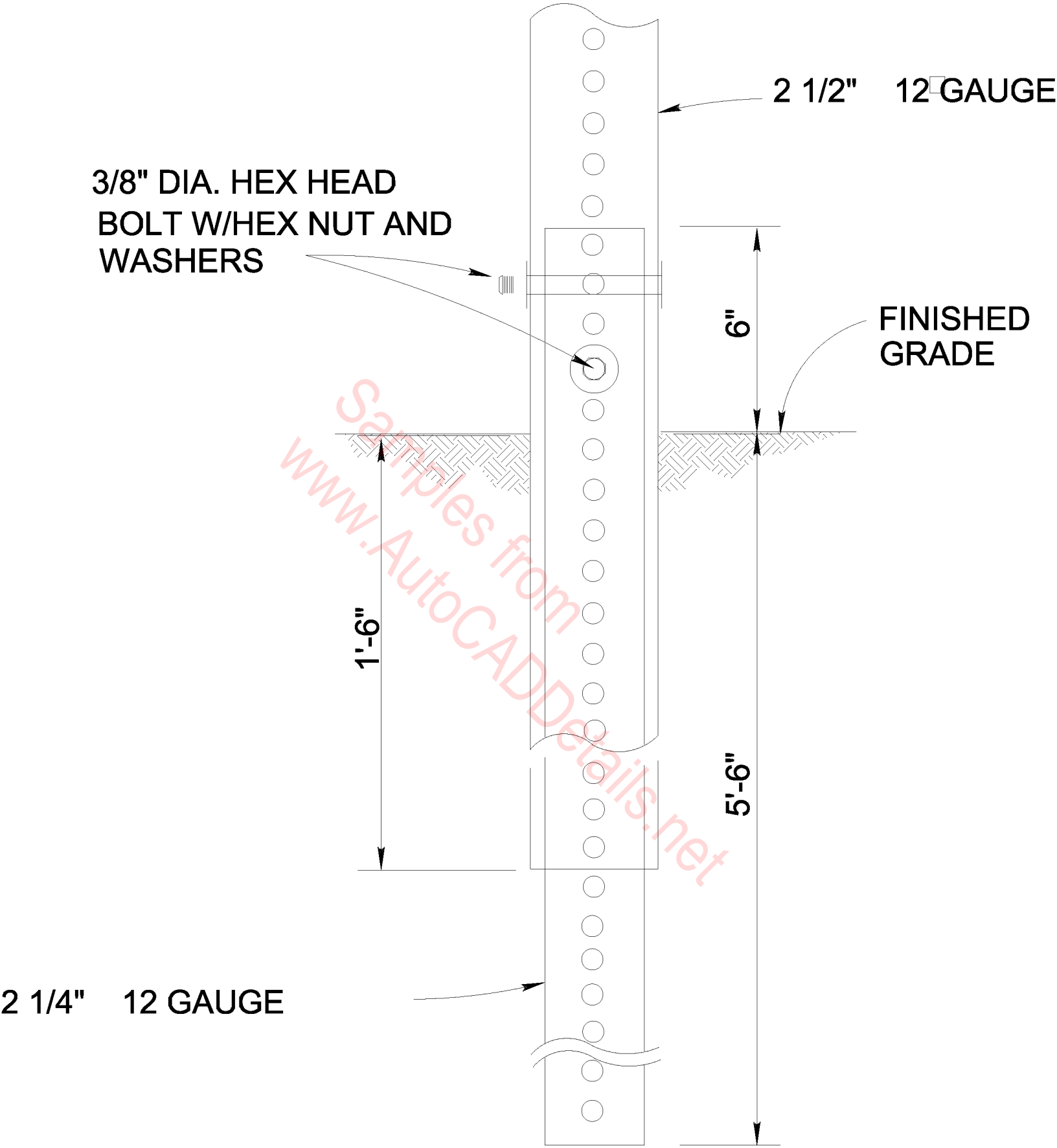



# BOTTOM RAIL DETAILS



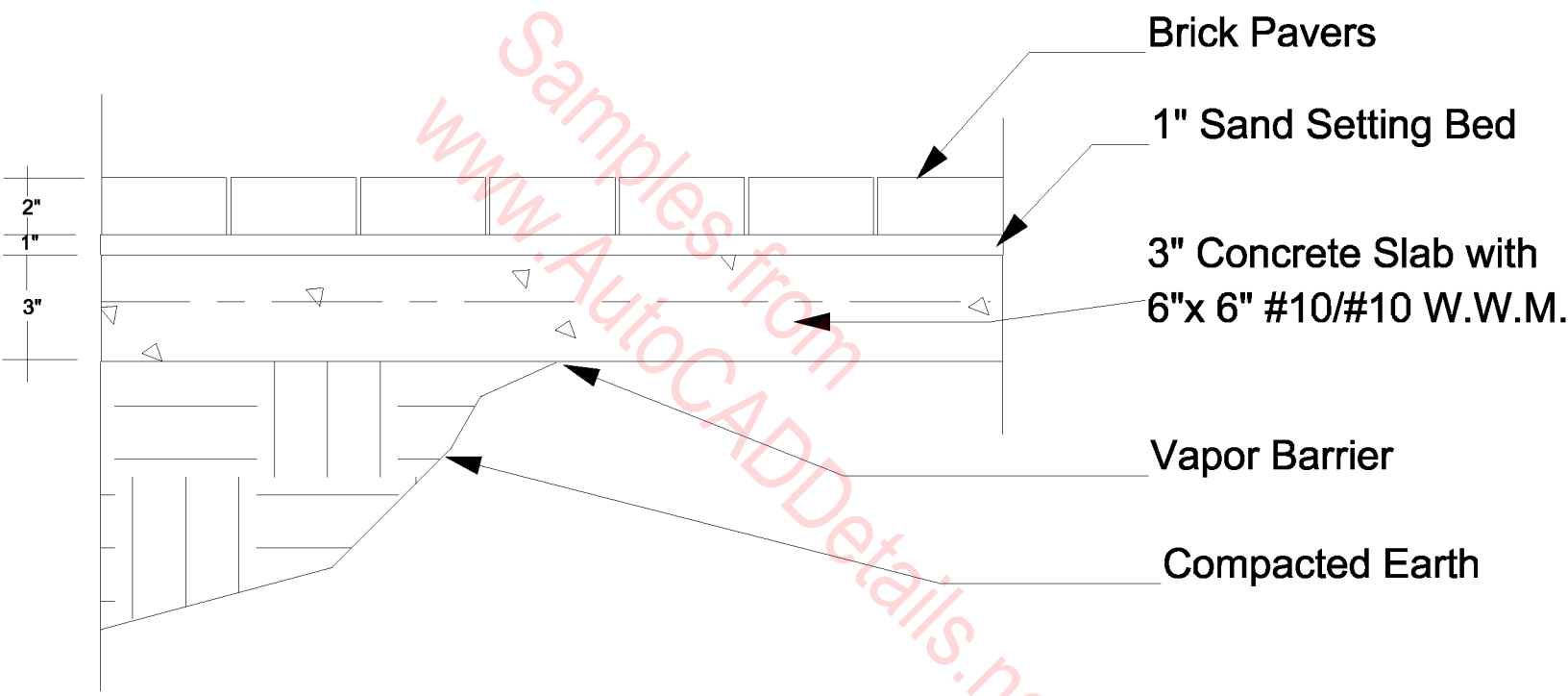



# BRACE RAIL CLAMP DETAIL



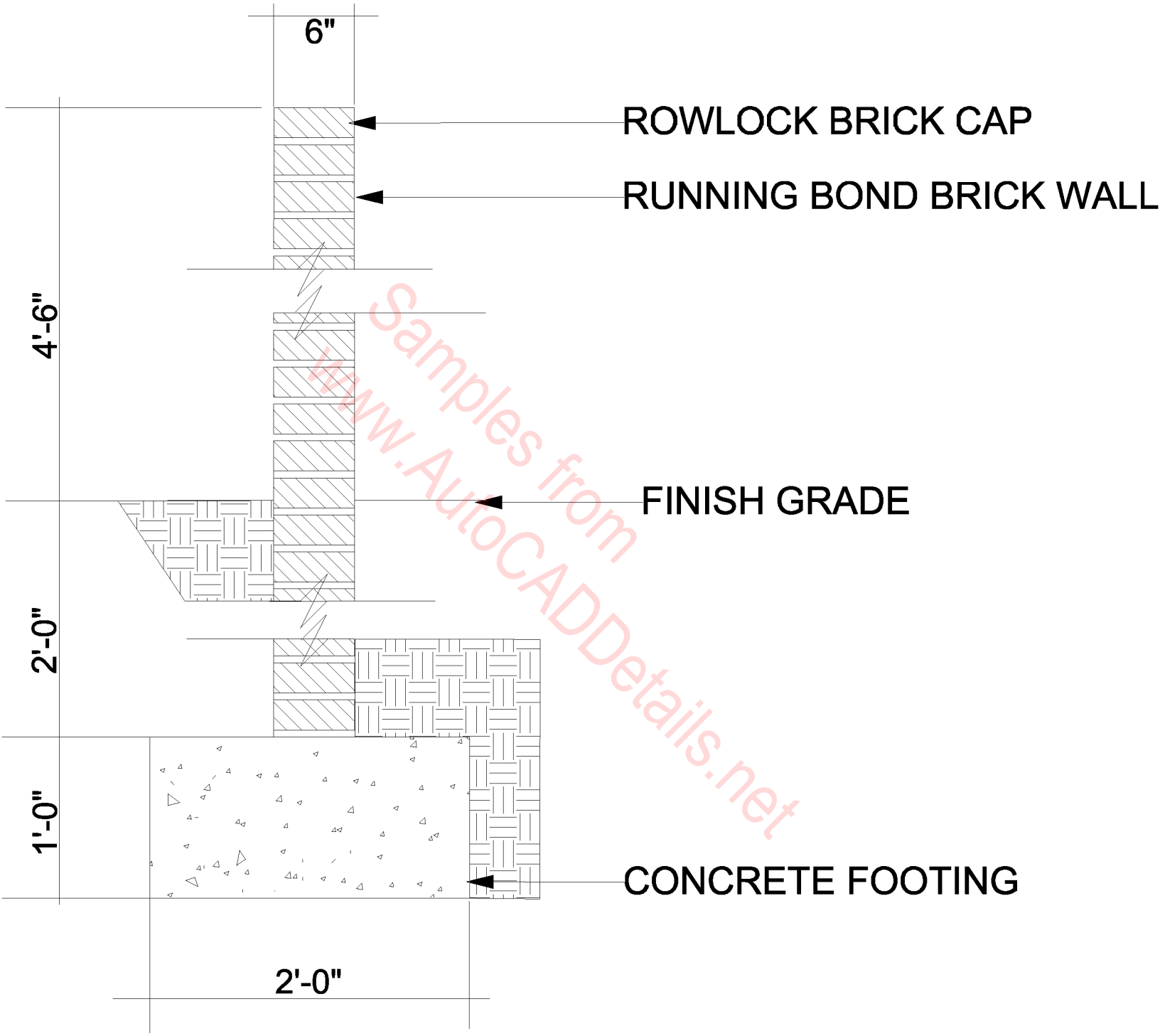



# BREAK-AWAY DETAIL



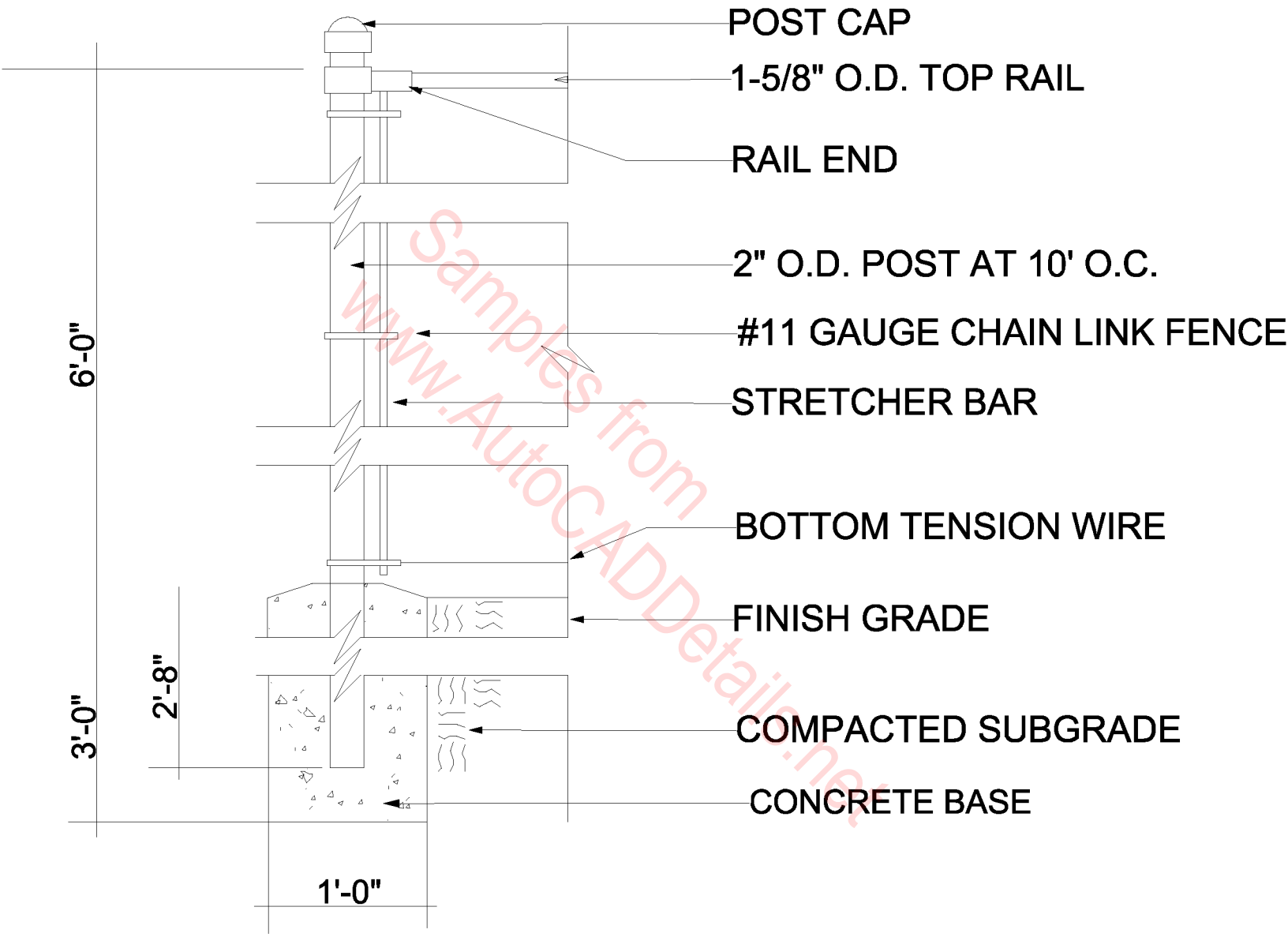



# Brick Paving on Sand & Concrte Slab



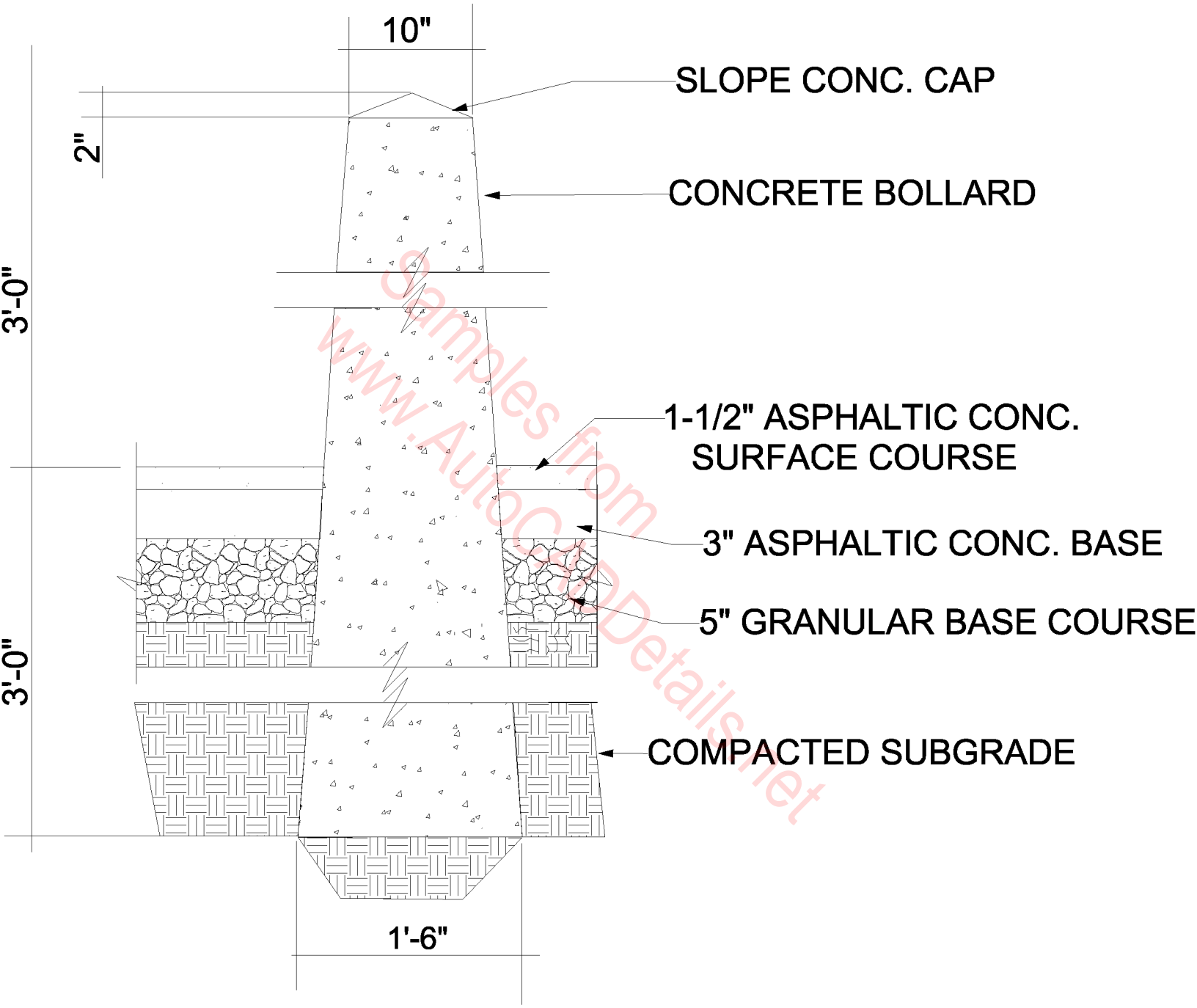



# BRICK YARD WALL



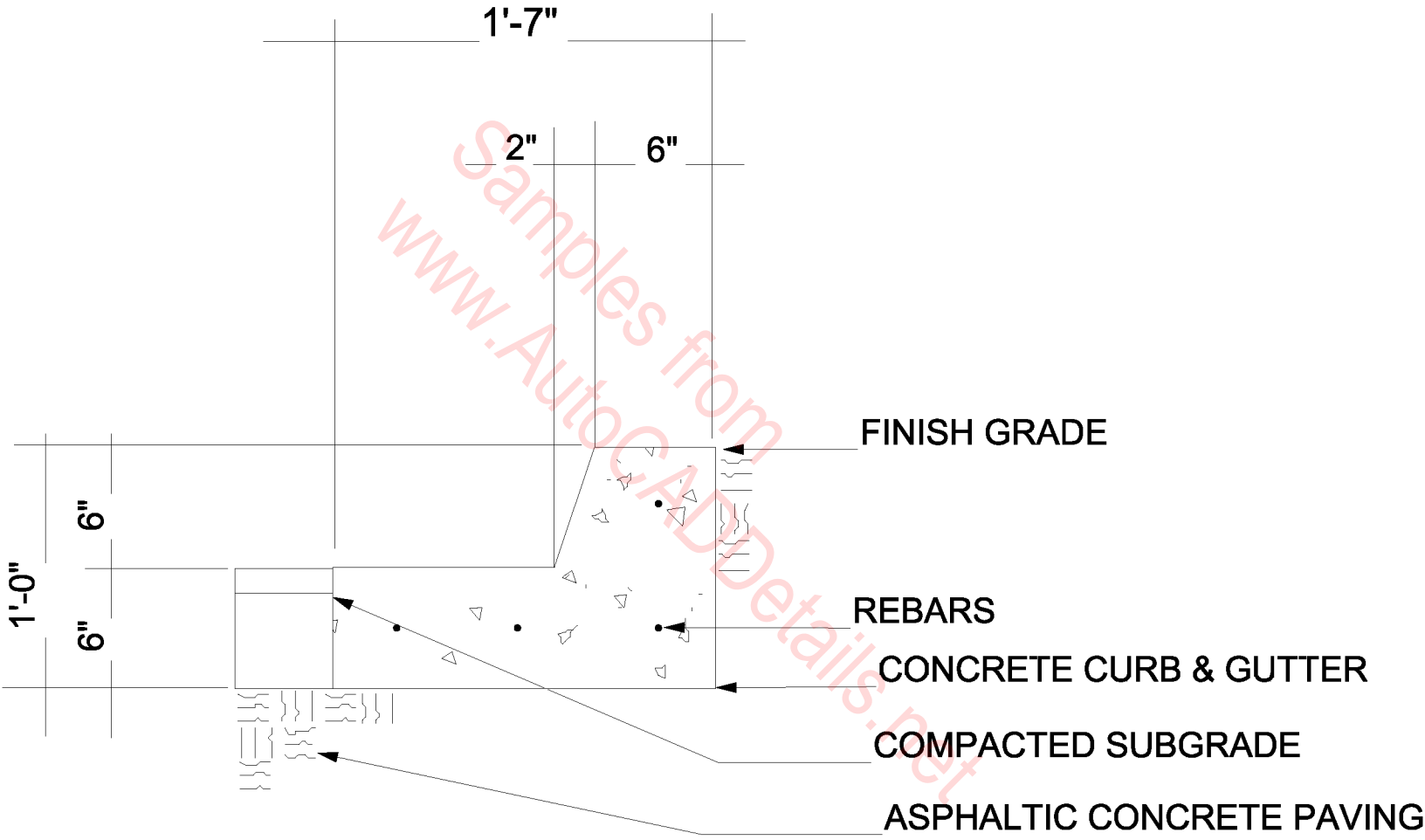



# CHAIN LINK FENCE

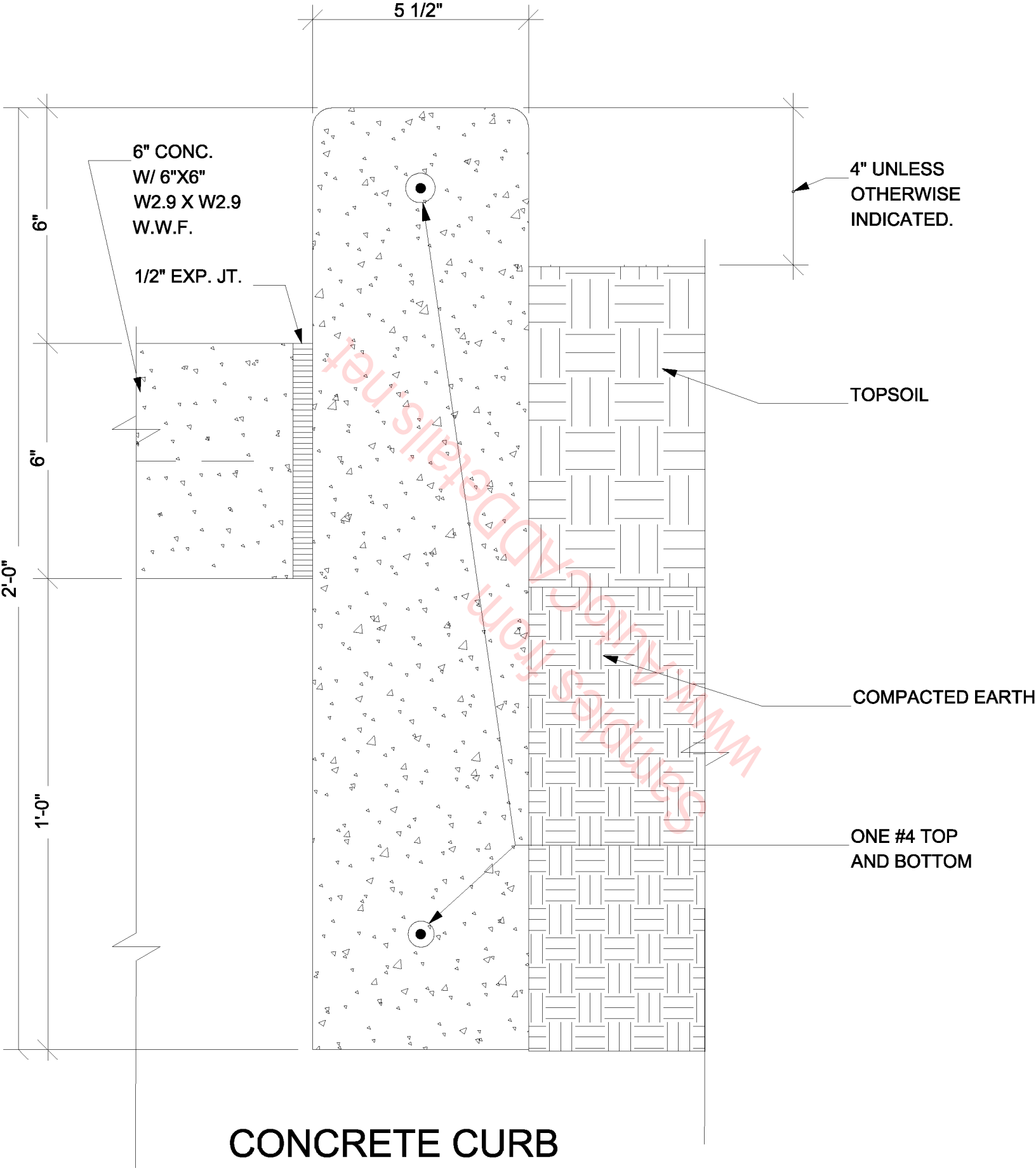




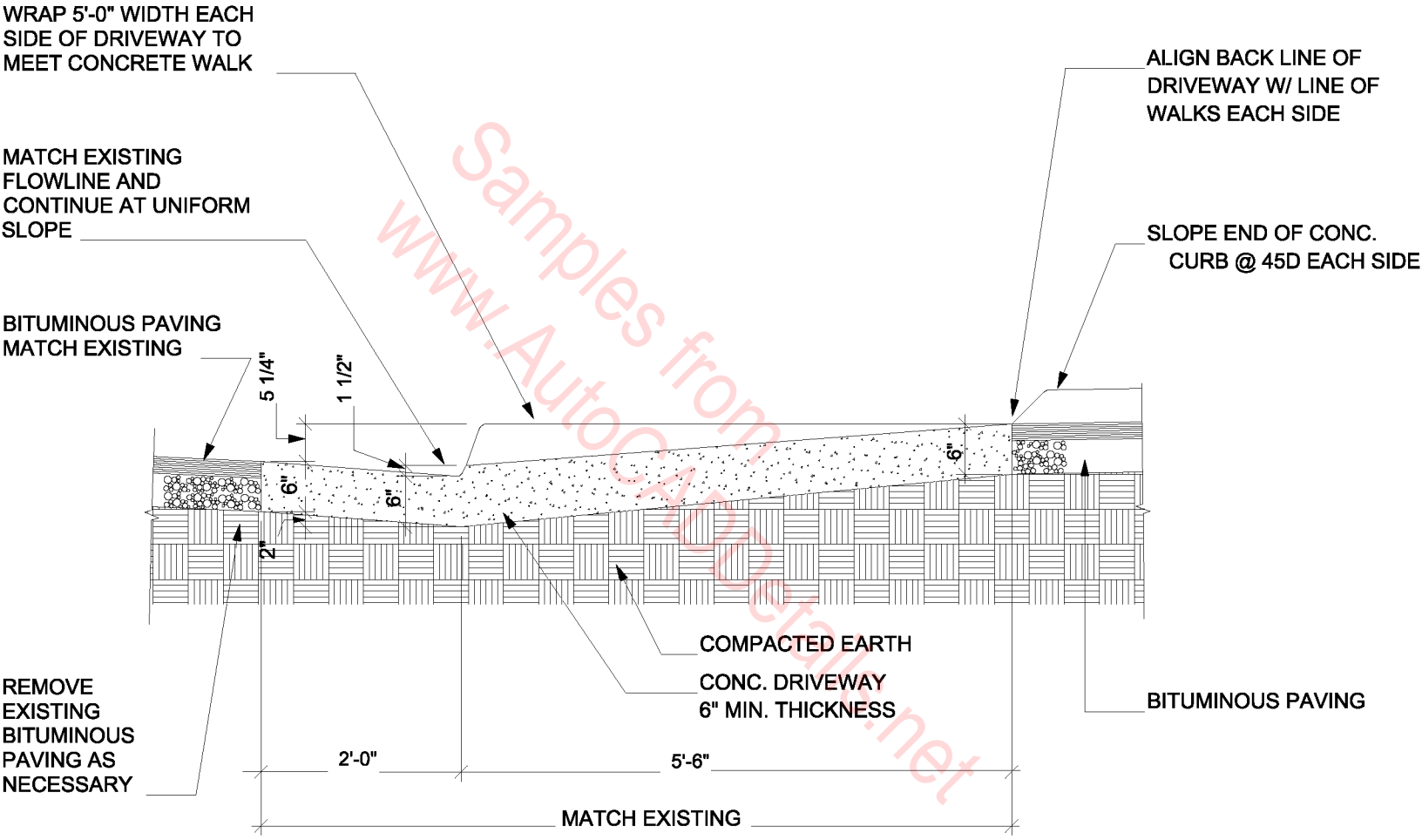

# CONCRETE BOLLARD



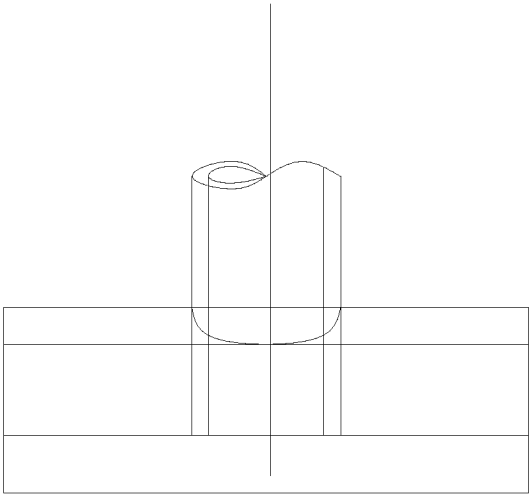

# CONCRETE CURB & GUTTER



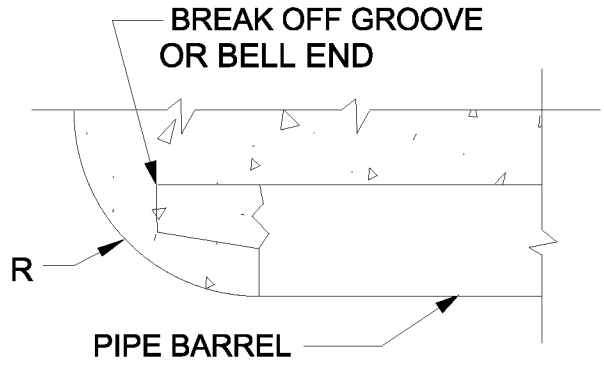

# CONCRETE CURB



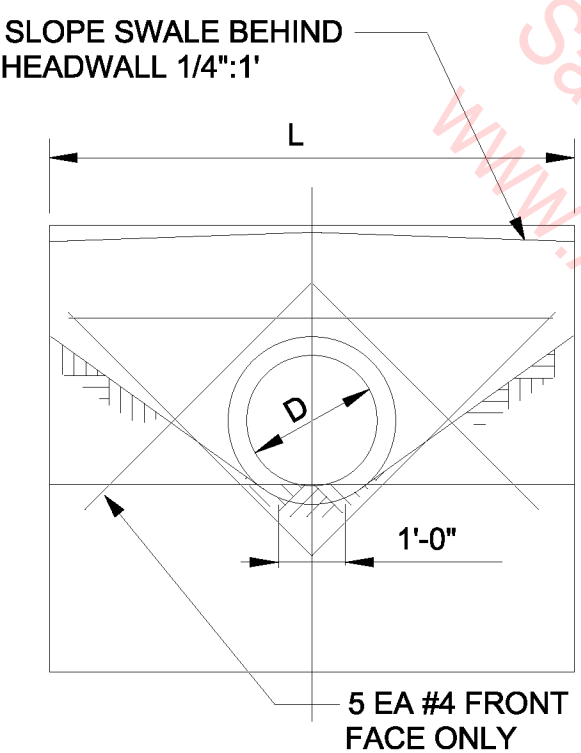

# CONCRETE DRIVEWAY



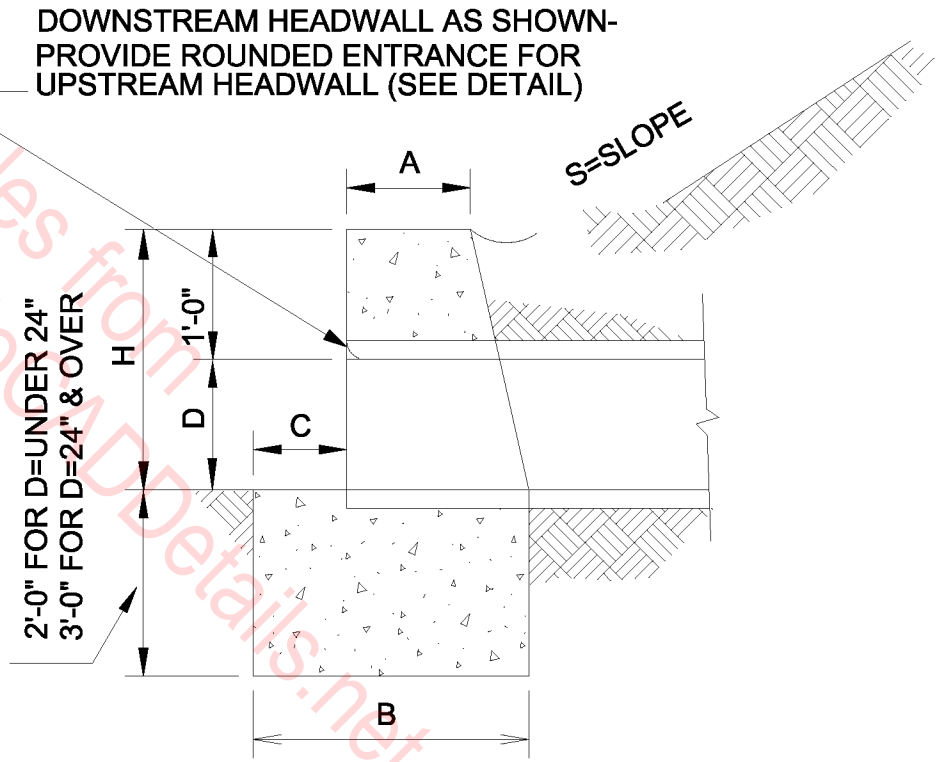
PLAN




ROUNDED ENTRANCE
(UPSTREAM HEADWALLS ONLY)




ELEVATION

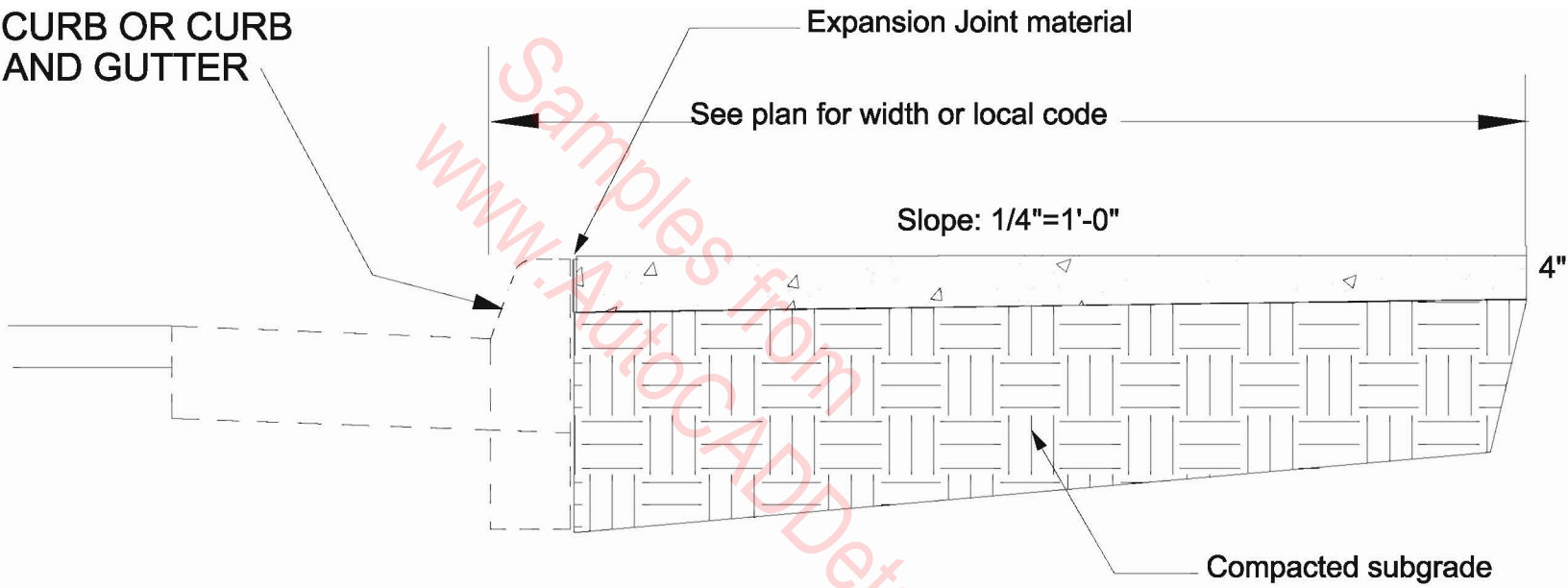



SECTION



| ALL SLOPES | | | | | | S=1 1/2:1 | S=2:1 | S=3:1 |
|---|---|---|---|---|---|---|---|---|
| D | H | A | B | C | R | L | L | L |
| 8" | 1'-8" | 8" | 1'-0" | 0 | —— | 3'-6" | 4'-2" | 5'-6" |
| 10" | 1'-10" | 8" | 1'-0" | 0 | —— | 4'-0" | 4'-10" | 6'-6" |
| 12" | 2'-0" | 10" | 1'-4" | 4" | —— | 4'-6" | 5'-6" | 7'-6" |
| 15" | 2'-3" | 10" | 1'-4" | 4" | 2 1/4" | 5'-3" | 6'-6" | 9'-0" |
| 18" | 2'-6" | 10" | 1'-7" | 6" | 2 3/4" | 6'-0" | 7'-6" | 10'-6" |
| 21" | 2'-9" | 1'-0" | 1'-8" | 6" | 3 1/8" | 6'-9" | 8'-6" | 12'-0" |
| 24" | 3'-0" | 1'-0" | 1'-9" | 6" | 3 5/8" | 7'-6" | 9'-6" | 13'-6" |
| 27" | 3'-3" | 1'-2" | 2'-0" | 8" | 4" | 8'-3" | 10'-6" | 15'-0" |
| 30" | 3'-6" | 1'-3" | 2'-1" | 8" | 4 1/2" | 9'-0" | 11'-6" | 16'-6" |
| 36" | 4'-0" | 1'-6" | 2'-4" | 10" | 5 1/2" | 10'-6" | 13'-6" | 19'-6" |
| 42" | 4'-6" | 1'-6" | 2'-7" | 12" | 6 3/8" | 12'-0" | 15'-6" | 22'-6" |

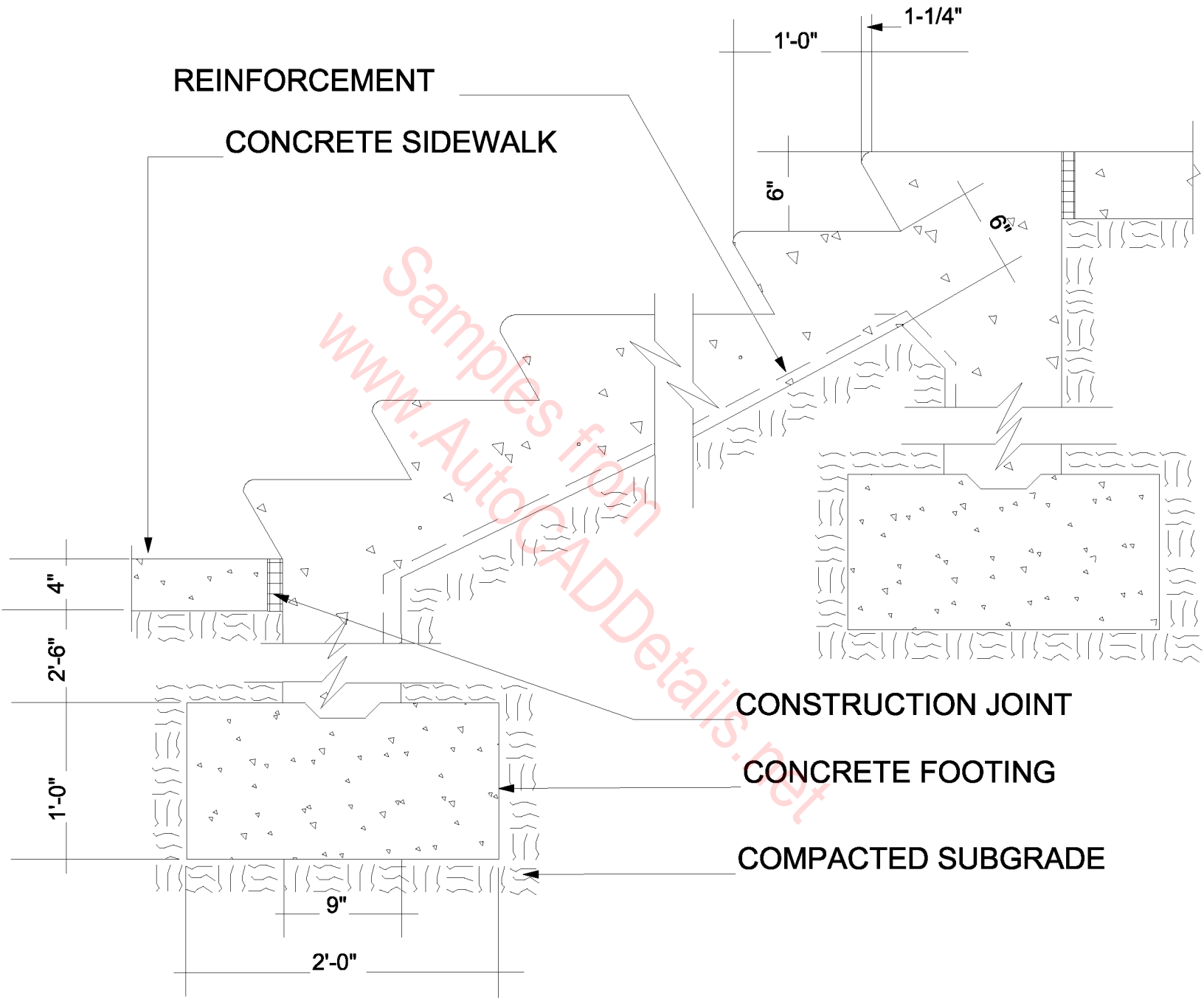
# CONCRETE HEADWALL





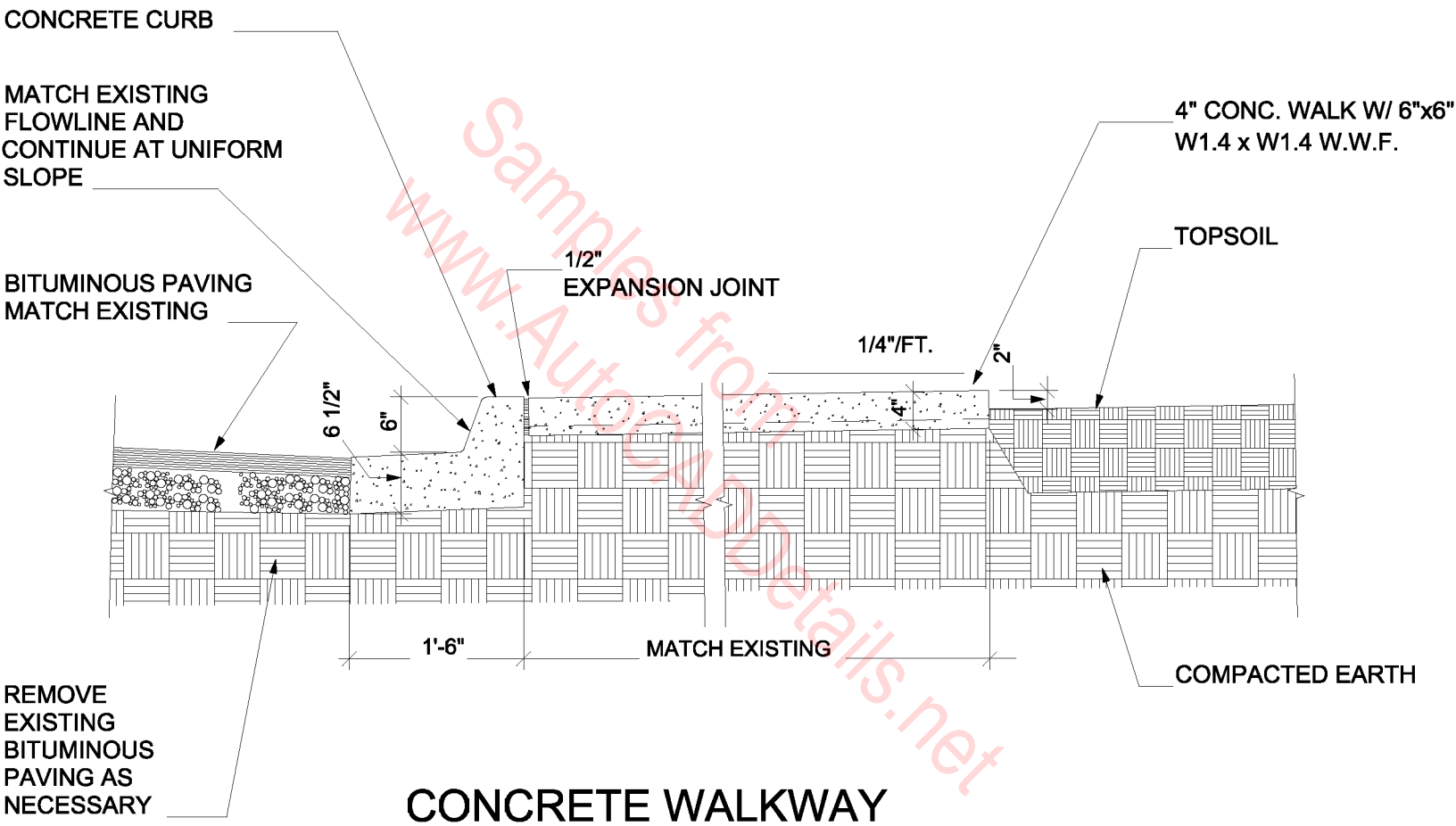

# CONCRETE SIDEWALK

(TO BE USED WHERE ADJACENT TO CURB OR CURB AND GUTTER)





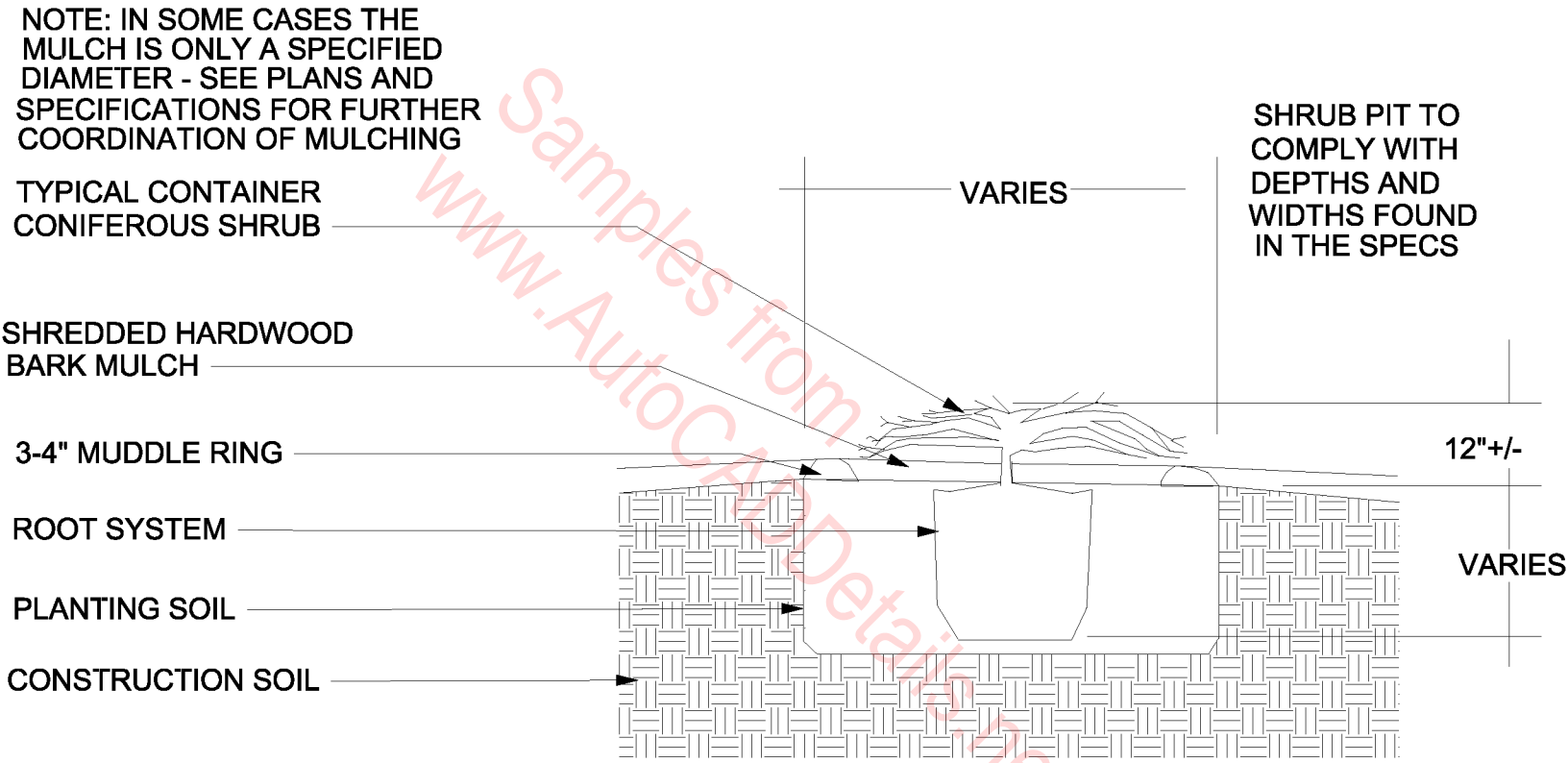

# CONCRETE STEPS




# CONCRETE WALKWAY

(WITH CURB AND GUTTER)

NOTE: IN SOME CASES THE MULCH IS ONLY A SPECIFIED DIAMETER - SEE PLANS AND SPECIFICATIONS FOR FURTHER COORDINATION OF MULCHING

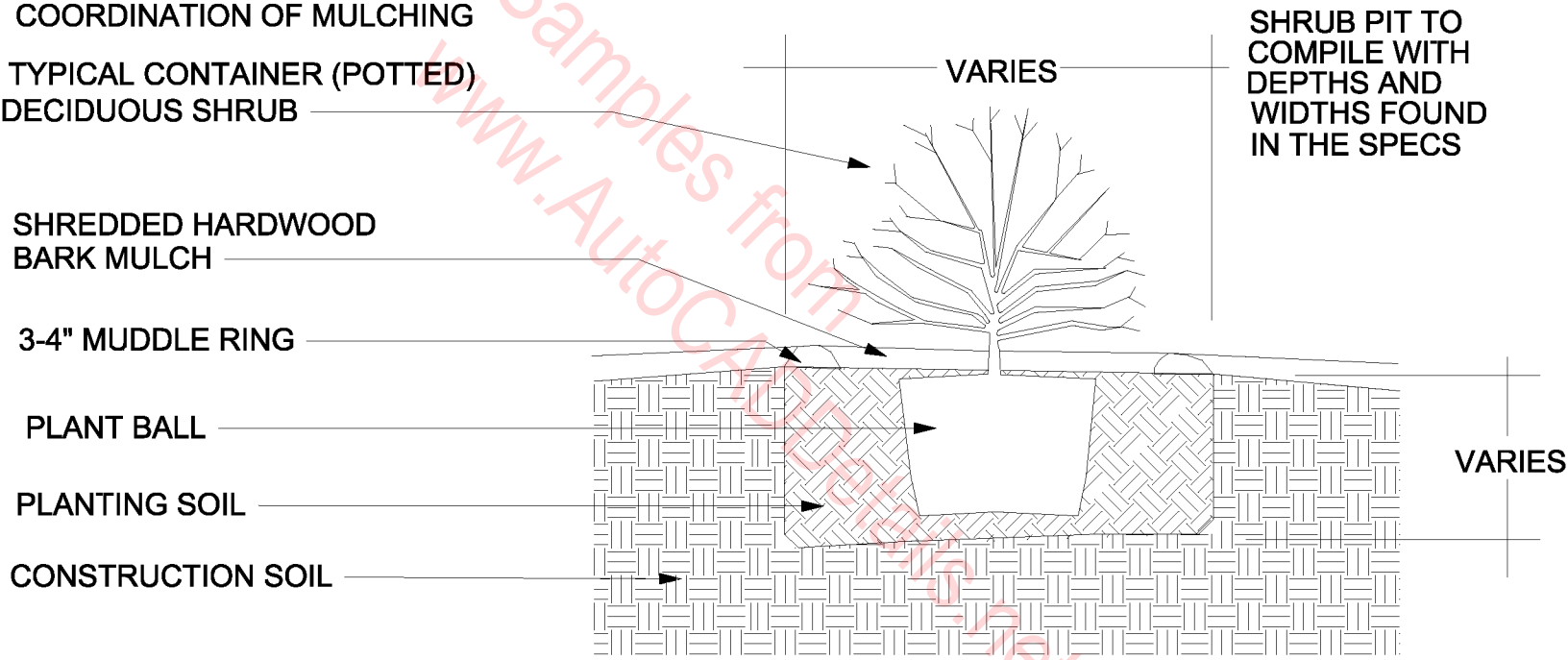





# CONTAINER CONIFEROUS SHRUB DETAIL

NOTE: IN SOME CASES THE MULCH IS ONLY A SPECIFIED DIAMETER - SEE PLANS AND SPECIFICATION FOR FURTHER COORDINATION OF MULCHING

NOTE: PRUNE SHRUB AS RECOMMENDED BY GROWER ONLY AFTER THE PLANT HAS BEEN WATERED IN TO THE PLANTING SOIL

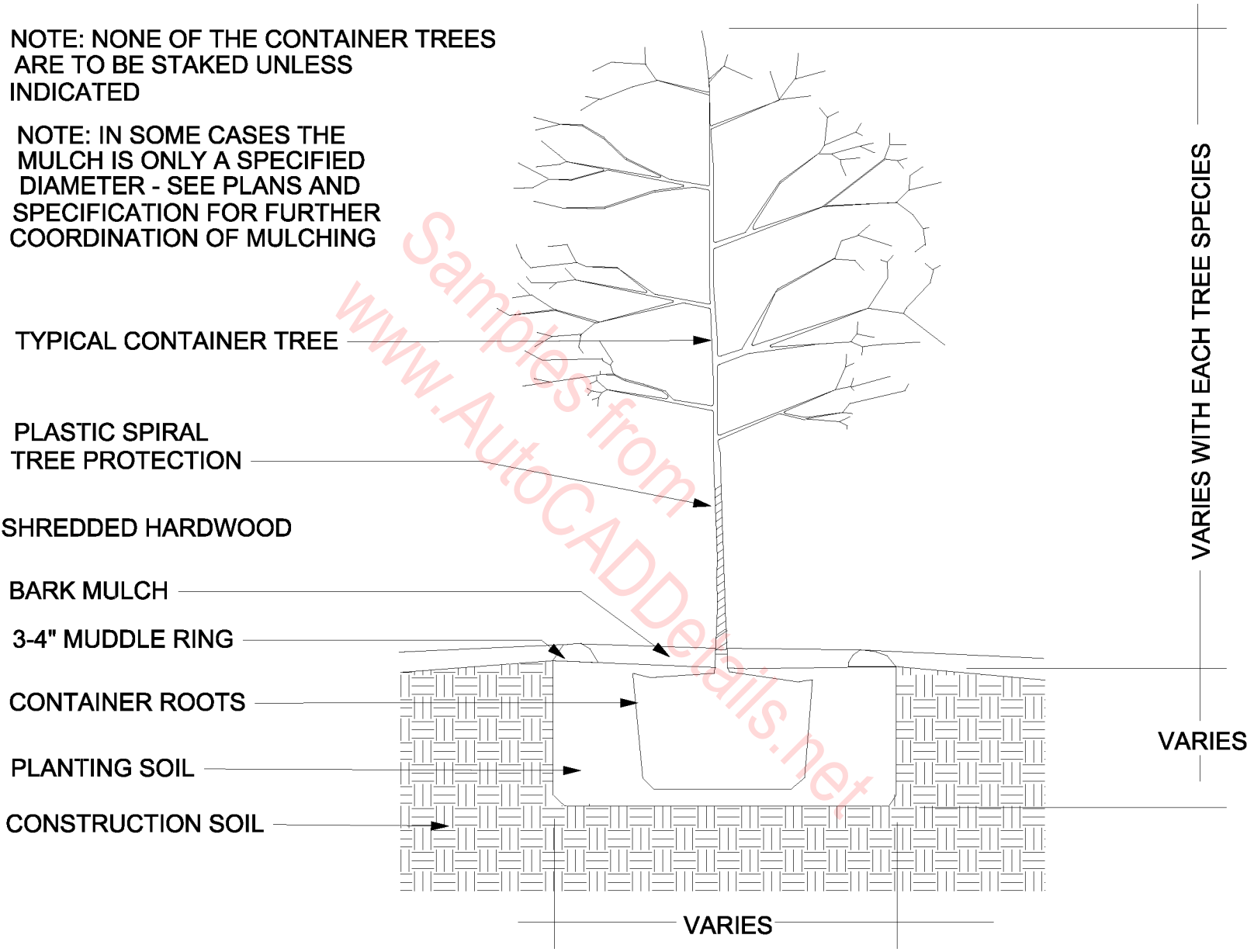





# CONTANER SHRUB PLANTING DETAIL

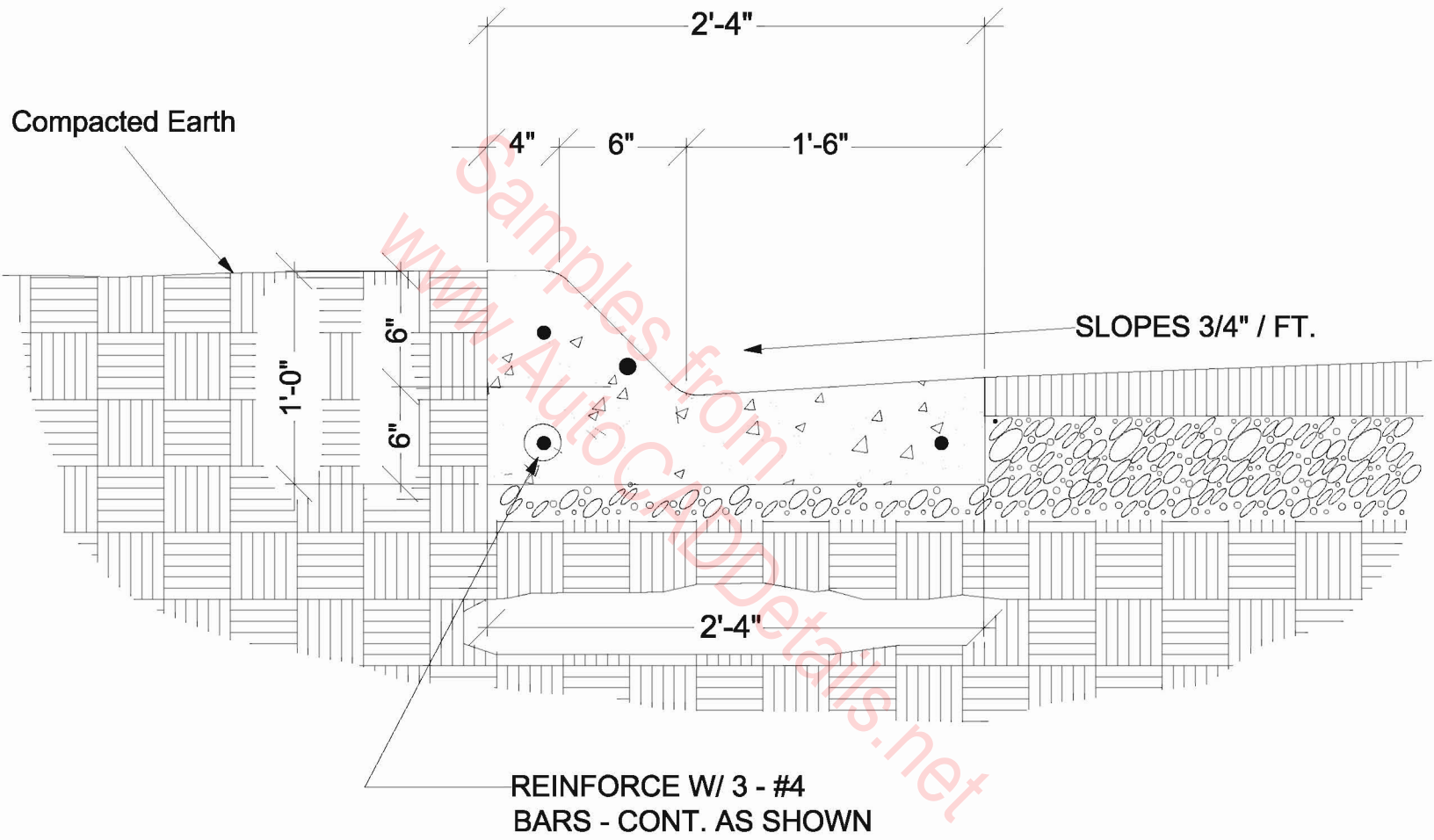
NOTE: NONE OF THE CONTAINER TREES ARE TO BE STAKED UNLESS INDICATED

NOTE: IN SOME CASES THE MULCH IS ONLY A SPECIFIED DIAMETER - SEE PLANS AND SPECIFICATION FOR FURTHER COORDINATION OF MULCHING



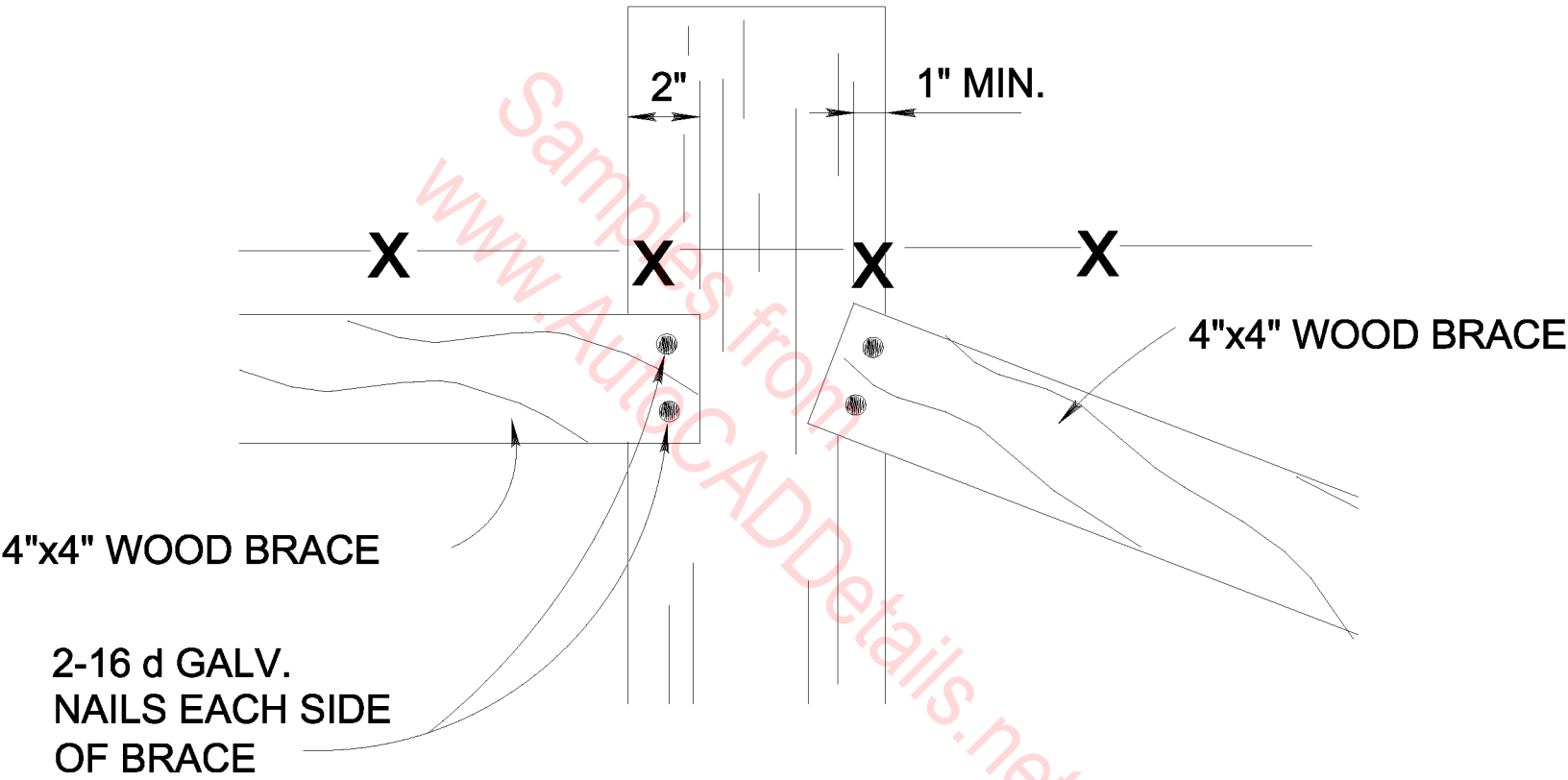



# CONTAINER/POTTED DECIDUOUS TREE DETAIL

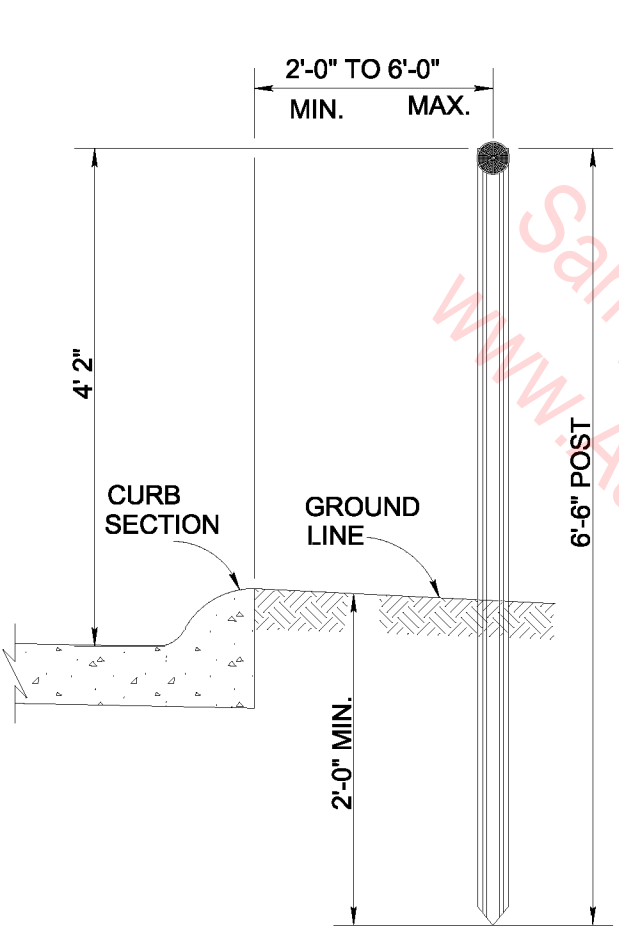


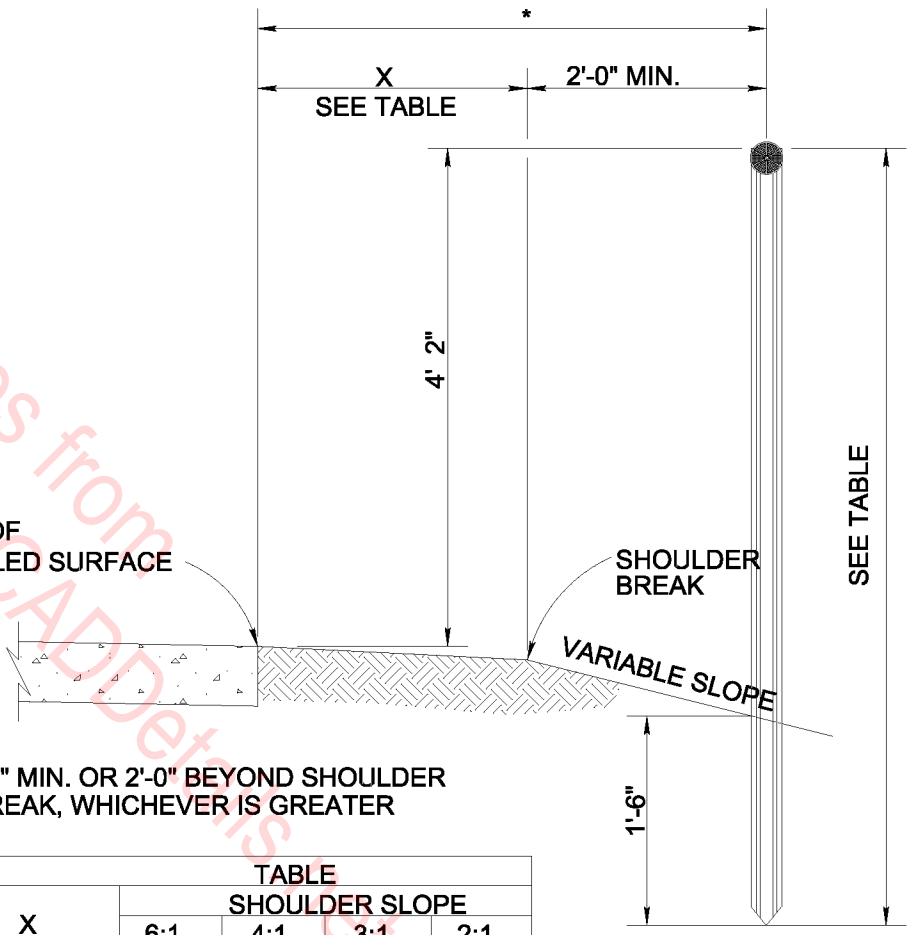



# CURB AND GUTTER DETAIL




# DAP DETAIL



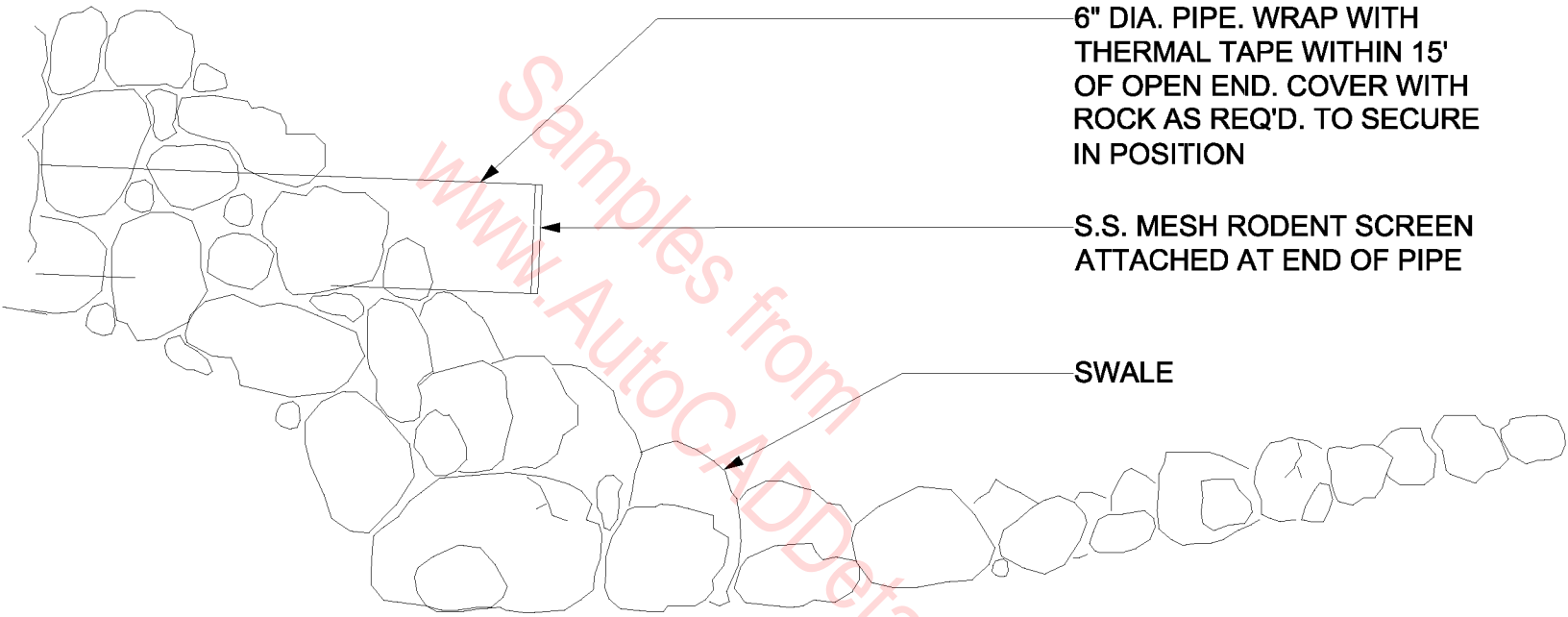




* 6'-0" MIN. OR 2'-0" BEYOND SHOULDER BREAK, WHICHEVER IS GREATER

| TABLE | | | | |
|---|---|---|---|---|
| X | SHOULDER SLOPE | | | |
| | 6:1 | 4:1 | 3:1 | 2:1 |
| 2' | 6 1/2 | 6 1/2 | 8 | 8 |
| 4' to 12' | 6 1/2 | 6 1/2 | 6 1/2 | 8 |

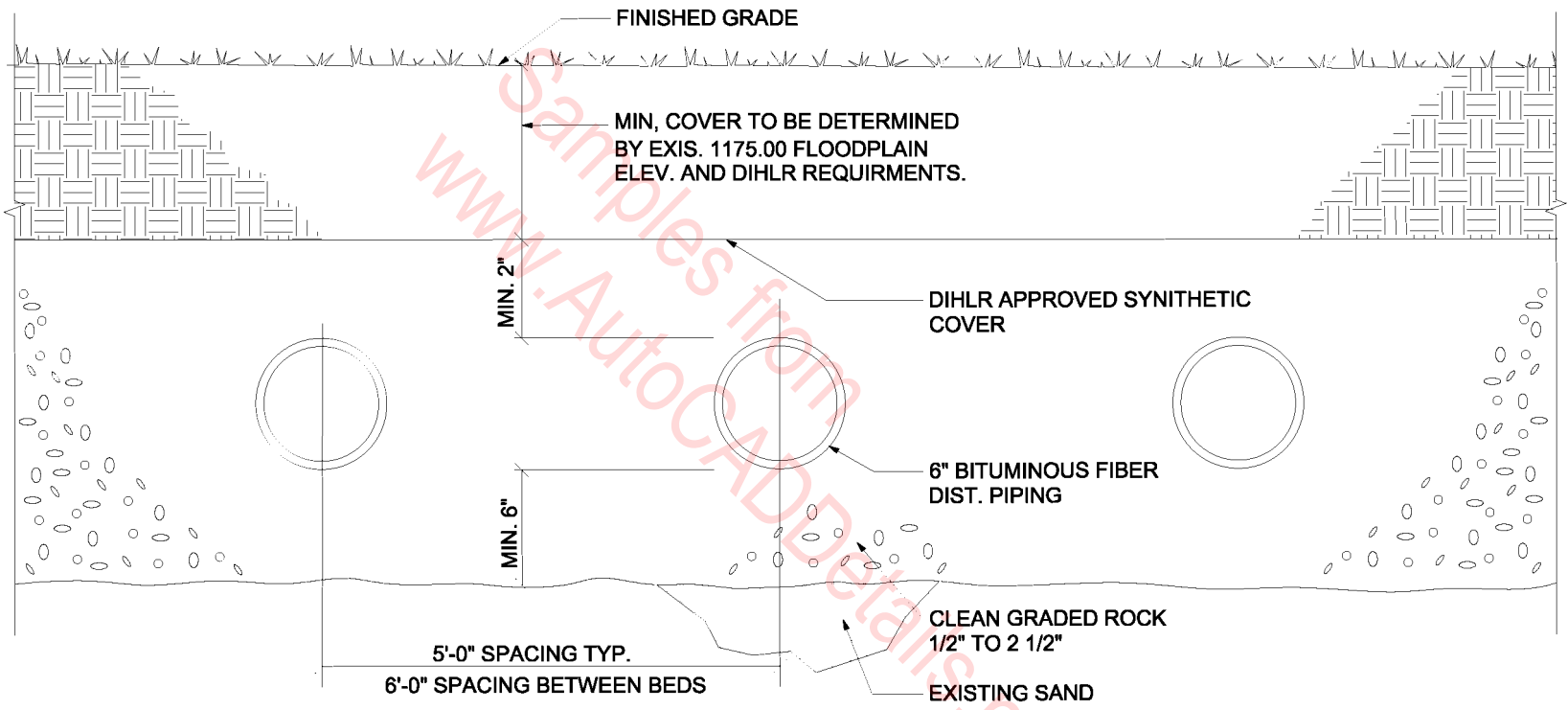
POST LENGTHS IN FEET

# DELINEATOR POST LOCATIONS



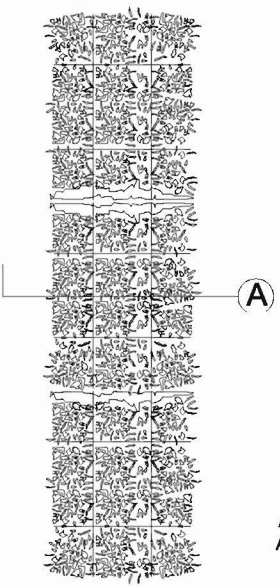



# DRAIN PIPE DETAIL

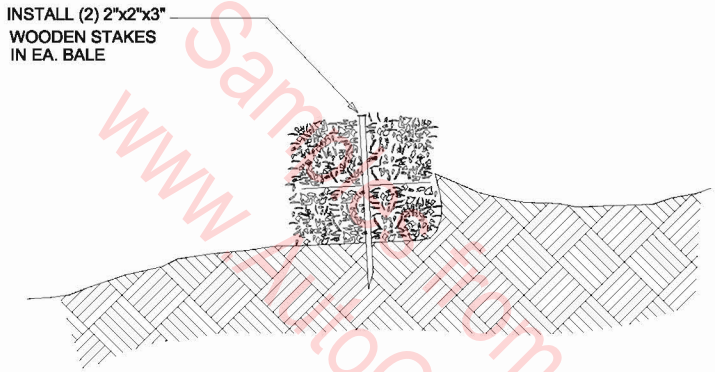





# DRAINAGE FIELD




PLAN VIEW



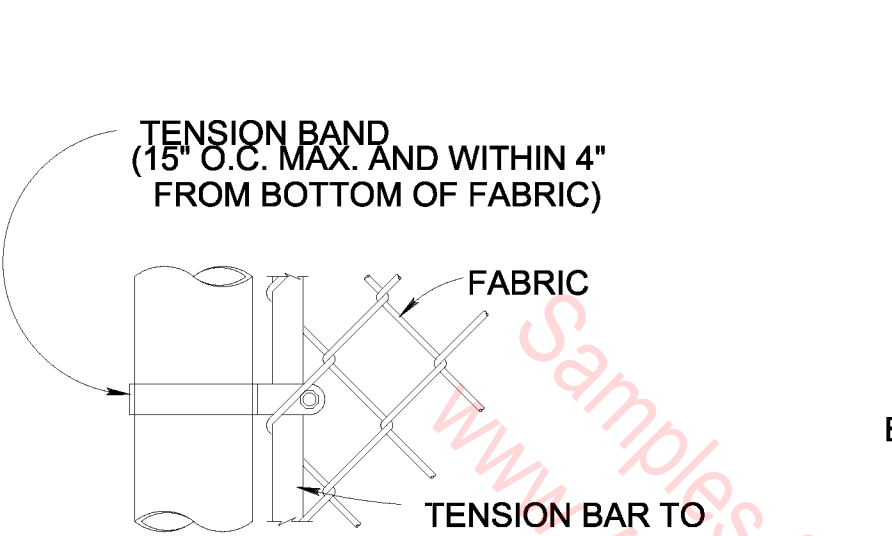

SECTION A

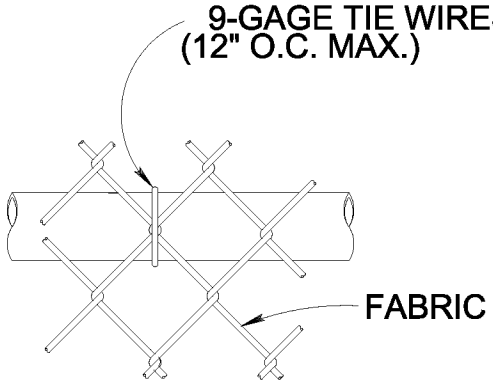
BALES TO BE INSTALLED AS SHOWN ON SITE, GRADING, DRAINAGE, AND UTILITIES PLAN BEFORE COMMENCING GRADING OPERATIONS AND LEFT IN PLACE UNTIL A GOOD STAND OF GRASS IS ESTABLISHED OVER ALL DISTURBED AREAS.

# EROSION SILTATION CONTROL

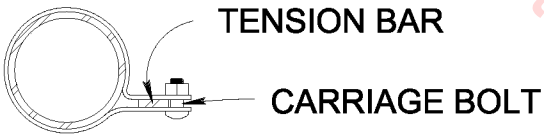
NOTES:

1. EXPOSE AS SMALL AN AREA OF SOIL FOR AS SHORT A TIME AS POSSIBLE.
2. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
3. USE TEMPORARY VEGETATION AND/OR MULCH TO PROTECT BARE AREAS FROM EROSION DURING CONSTRUCTION.
4. ALL CUT/FILL AREAS TO HAVE A MIN. OF 6" DEPTH OF TOP SOIL COVER. AREAS DRESSED WITH TOP SOIL SHALL RECEIVE:
   - 12 LBS./1000 SQ. FT. (6-12-12) FERTILIZER.
   - 5 LBS. OR MORE OF KENTUCKY 31 FESCUE FOR EVERY 1000 SQ. FT.
   - STRAW MULCH OF 70%-80% COVERAGE (APPROXIMATELY 125 LBS./1000 SQ. FT.)
5. STRAW BALES SHOWN ARE TO BE USED AS TEMPORARY SEDIMENT BARRIERS. STRAW BALES TO BE FIRM AND SECURELY TIED WITH PLASTIC OR WIRE BINDING. BALES ARE TO BE PLACED TOUCHING AND FIRMLY ANCHORED TO THE GROUND WITH STEEL DRIFT PINS OR WOODEN STAKES AS SHOWN IN DETAIL "A".
6. DISTURBED AREAS ARE TO BE GRADED TO DRAIN AS INDICATED ON THE PLANS TO SEDIMENT BARRIERS DURING AND UPON COMPLETION OF CONSTRUCTION.
7. A STONE ACCESS RAMP IS TO BE CONSTRUCTED AT THE SITE ENTRANCE WITH A MIN. WIDTH OF 15 FT. AND A MAX. LENGTH OF 50 FT.. RAMP IS TO HAVE A BASE OF 6" OF ASTM D 448, SIZE #1 STONE. RAMP SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
8. STRAW BALES ARE TO BE PLACED AROUND ALL STORM DRAINAGE CATCH BASINS TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION PAVING PROCESS AROUND EACH INLET HAS BEEN COMPLETED.

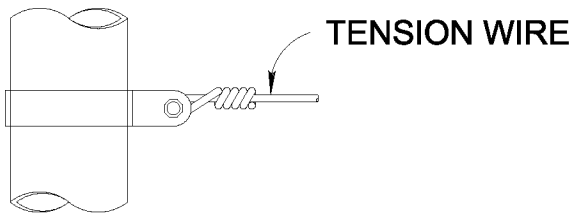


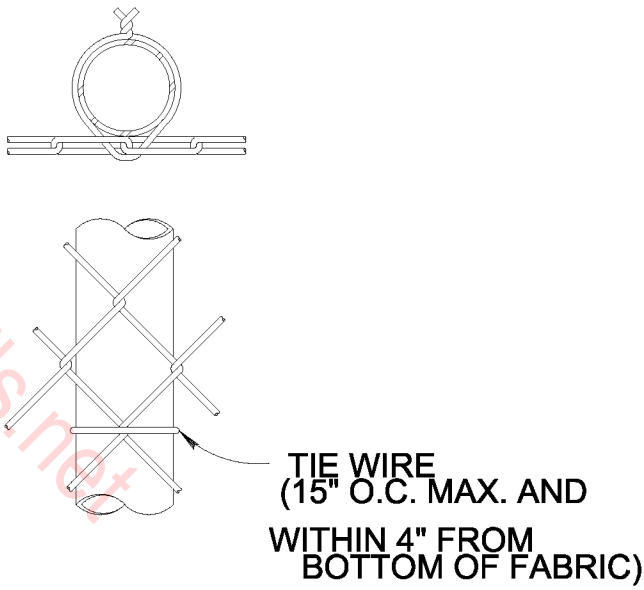

BRACE RAIL ATTACHMENT




END OR GATE POST DETAIL

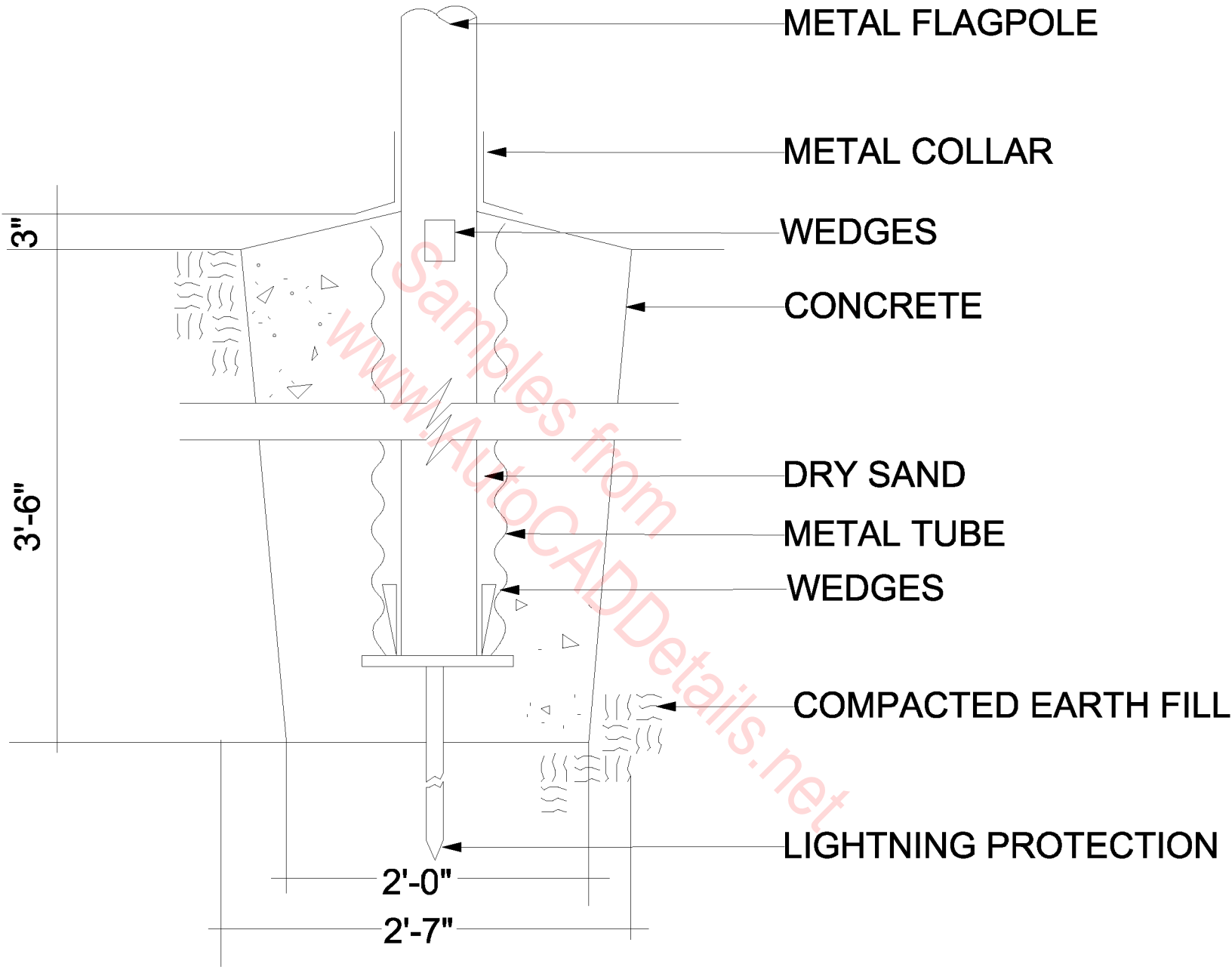



TENSION BAND DETAIL



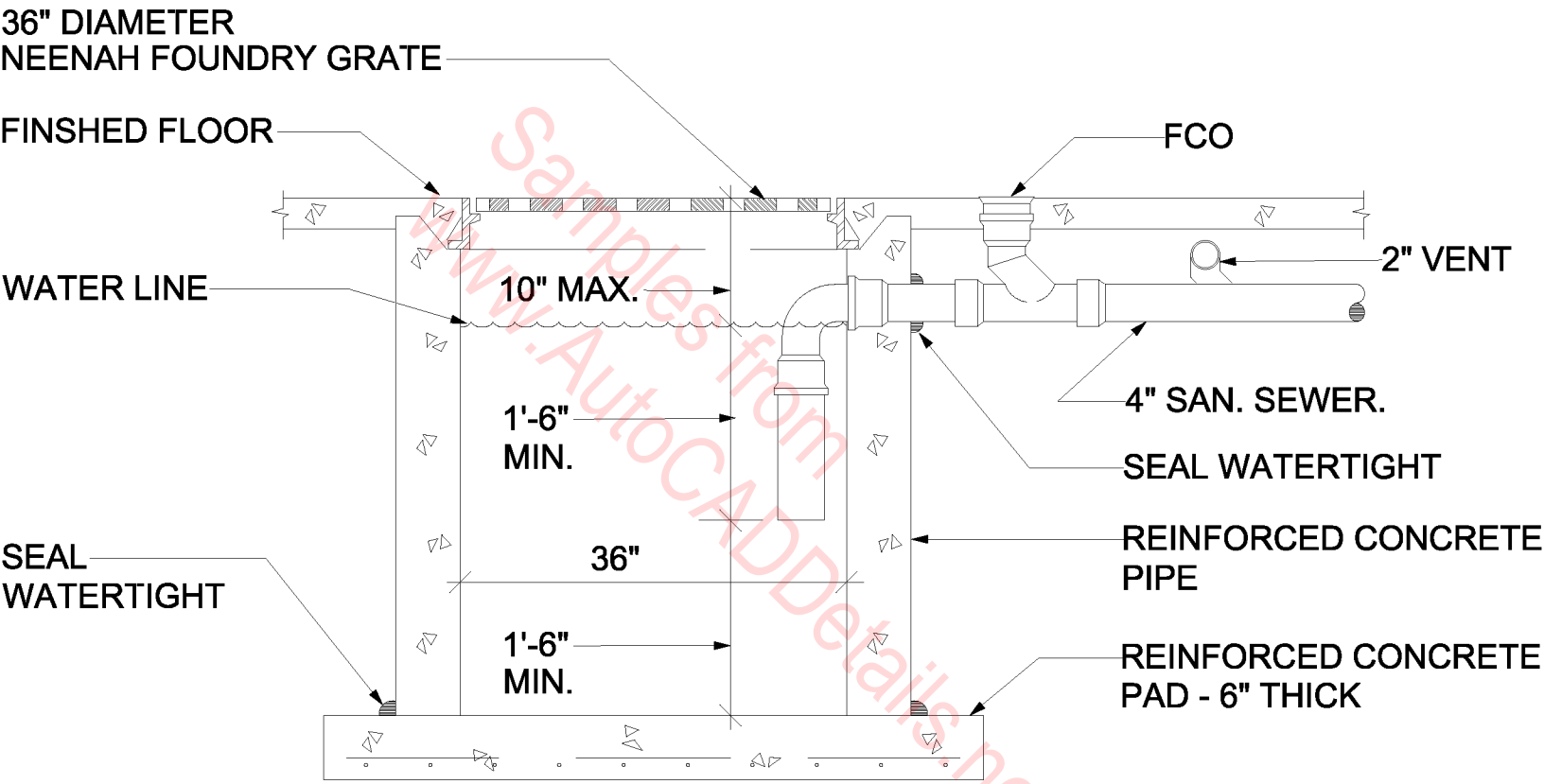

LINE POST ATTACHMENTS

# FASTENING DETAILS



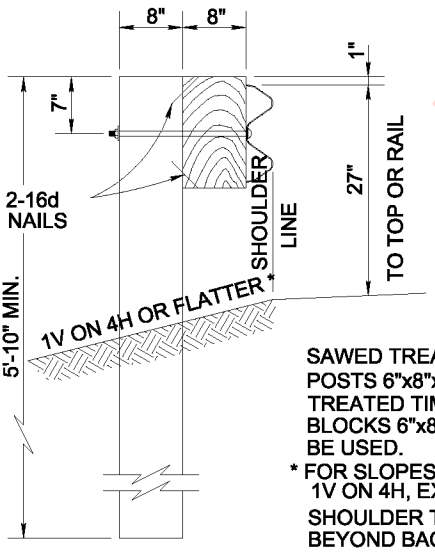



# FLAGPOLE BASE





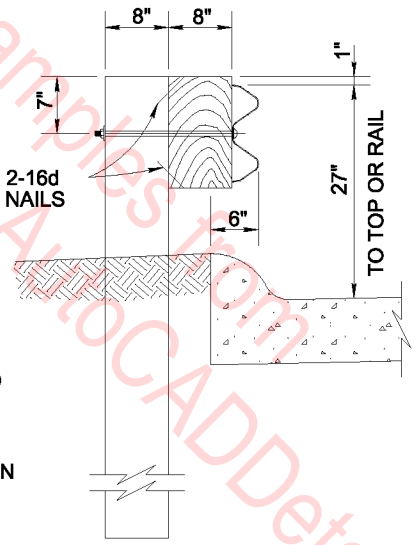

# GARAGE CATCH BASIN DETAIL



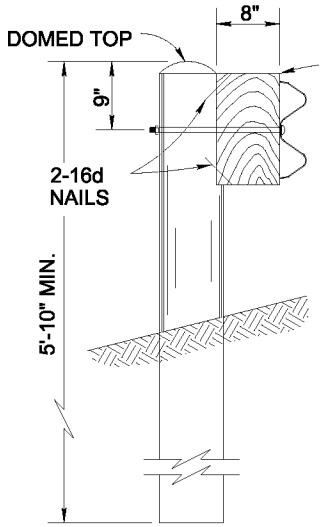

SAWED TREATED TIMBER POSTS 6"x8"x6' AND SAWED TREATED TIMBER OFFSET BLOCKS 6"x8"x14" SHALL BE USED.

* FOR SLOPES STEEPER THAN 1V ON 4H, EXTEND THE SHOULDER TO TWO FEET BEYOND BACK OF POST.

NON-CURBED LOCATIONS



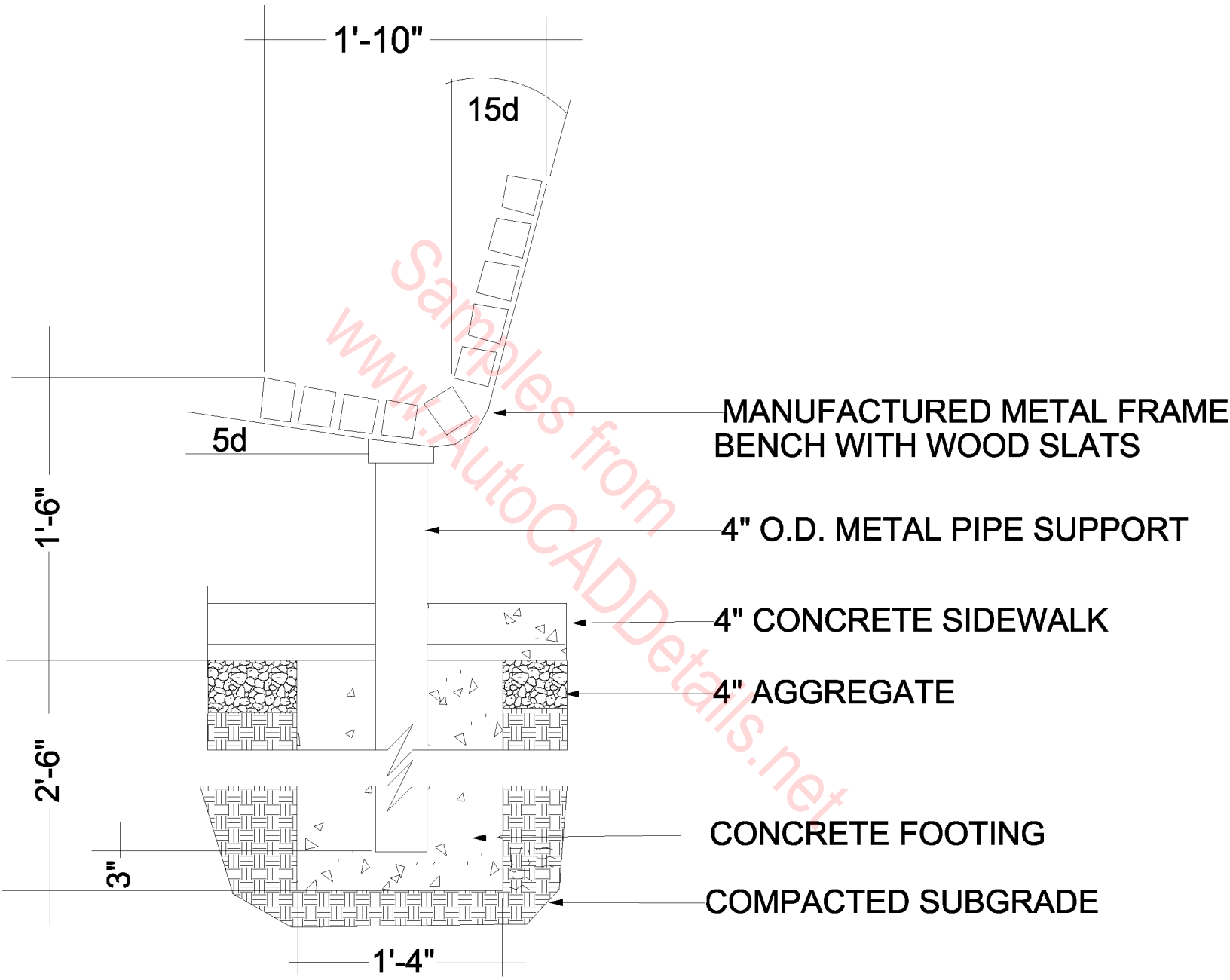

CURBED LOCATIONS




ALTERNATE ROUND WOOD POST

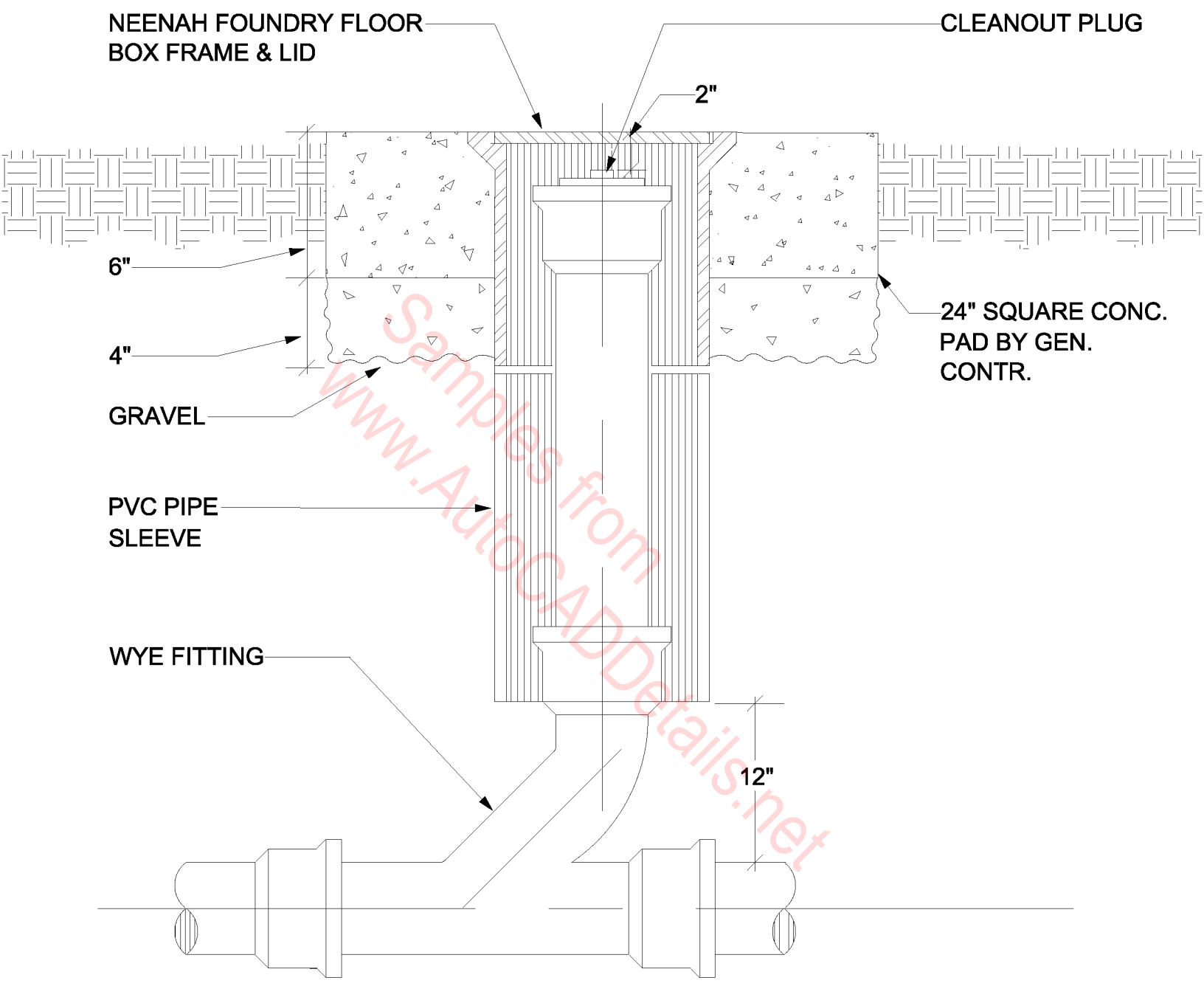
SAWN WOOD POST

# GUARDRAIL POST DETAILS



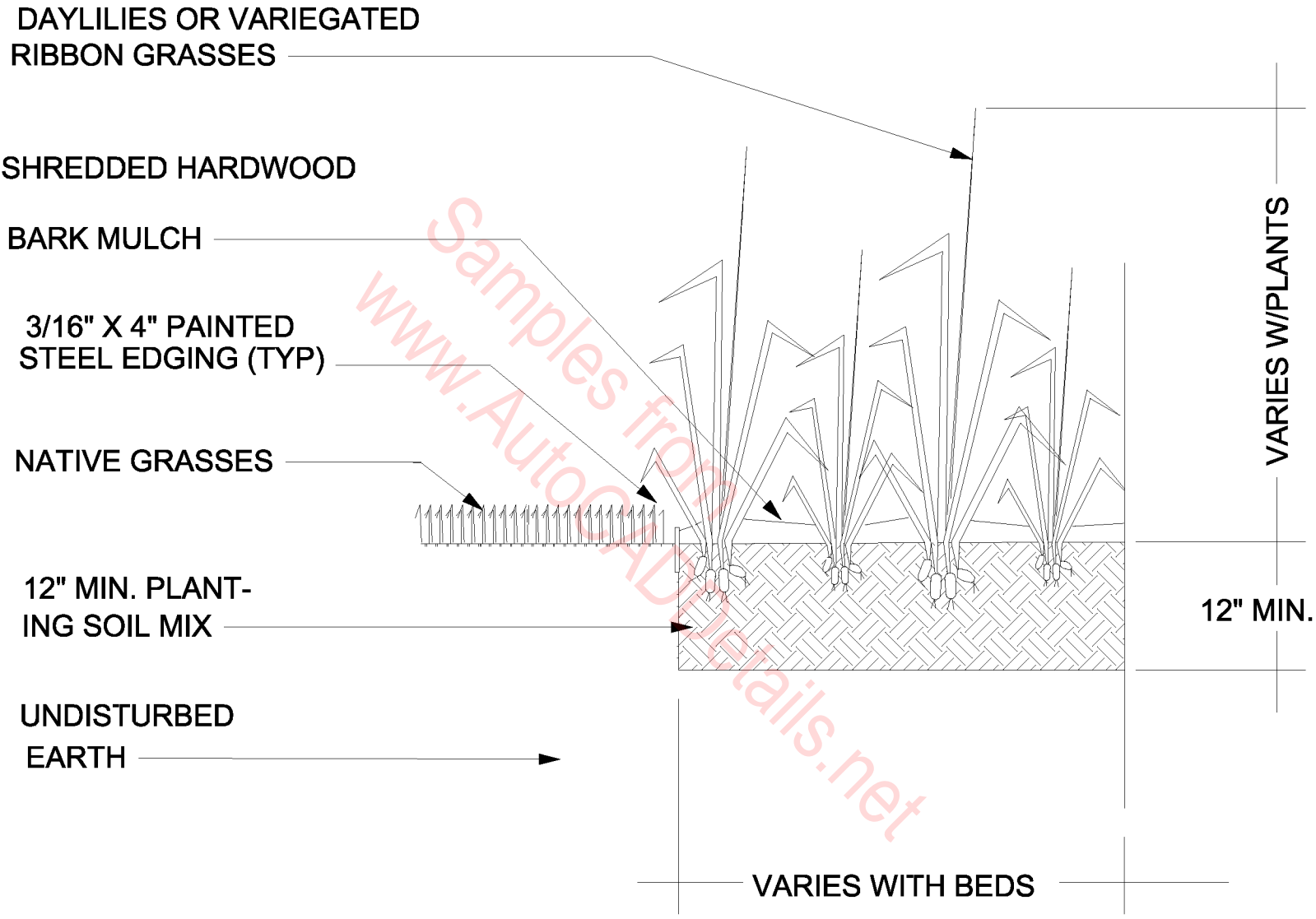



# METAL FRAME WOOD BENCH



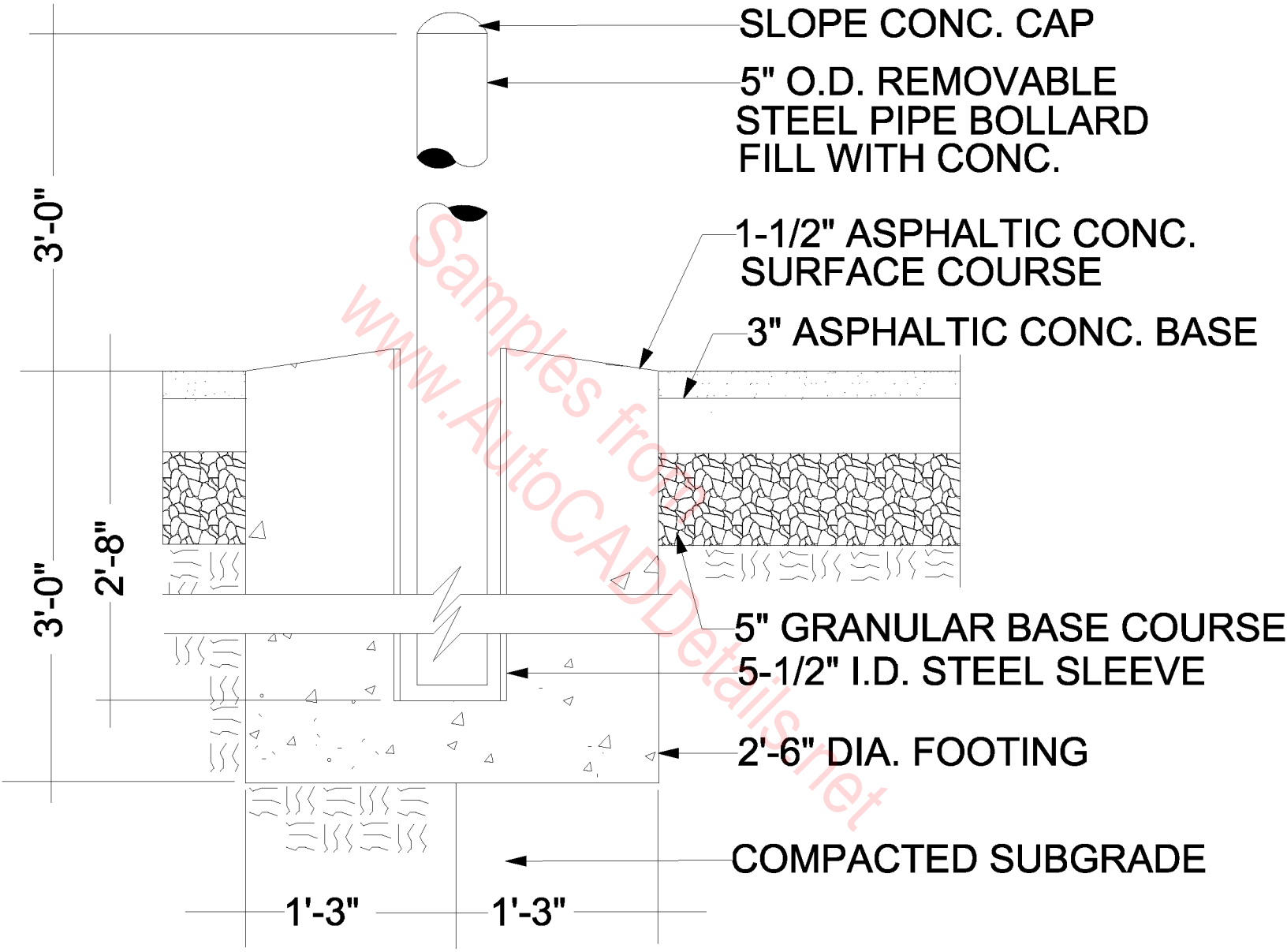



# OUTDOOR CLEANOUT DETAIL



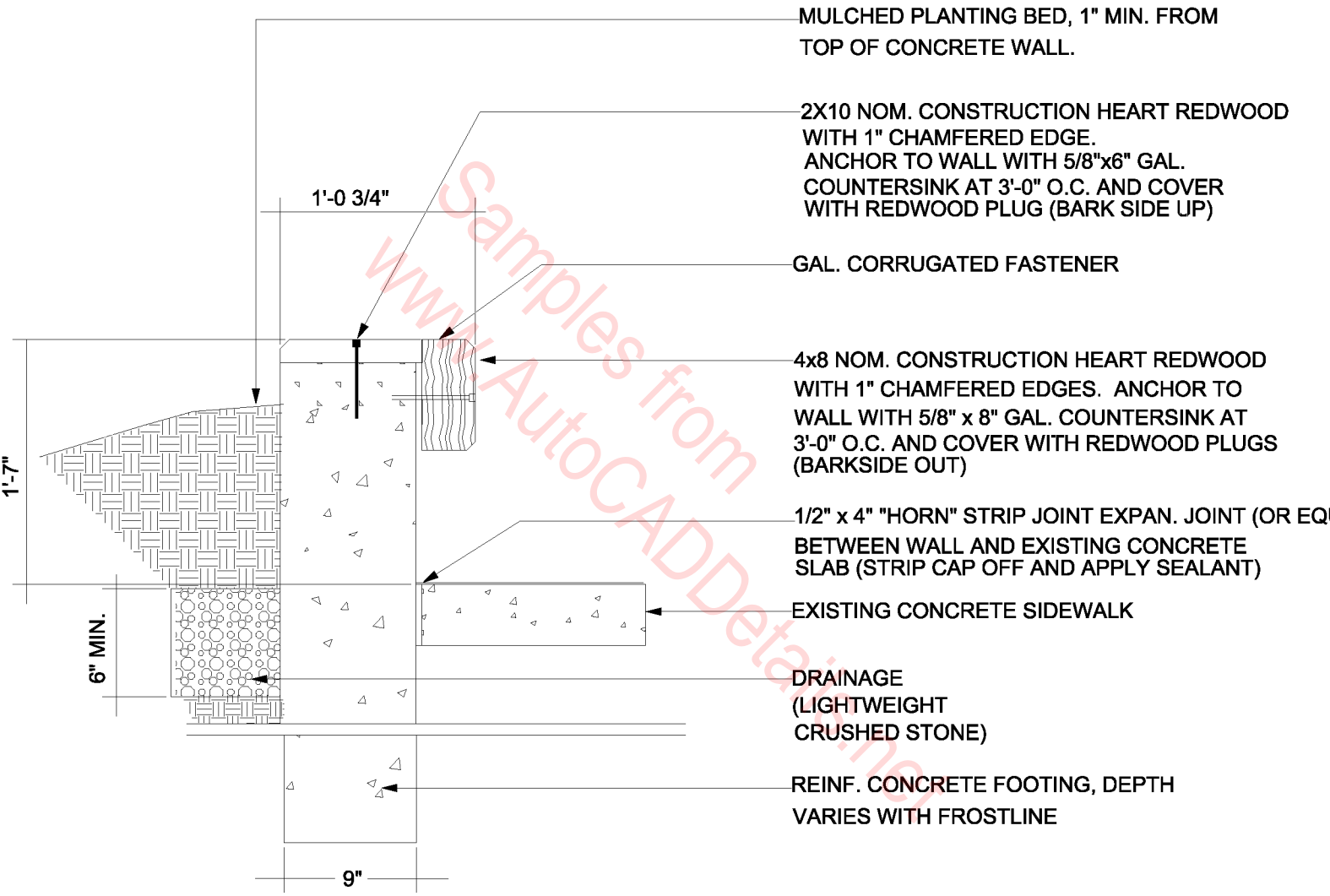



# PERENNIAL BED PLANTING DETAIL



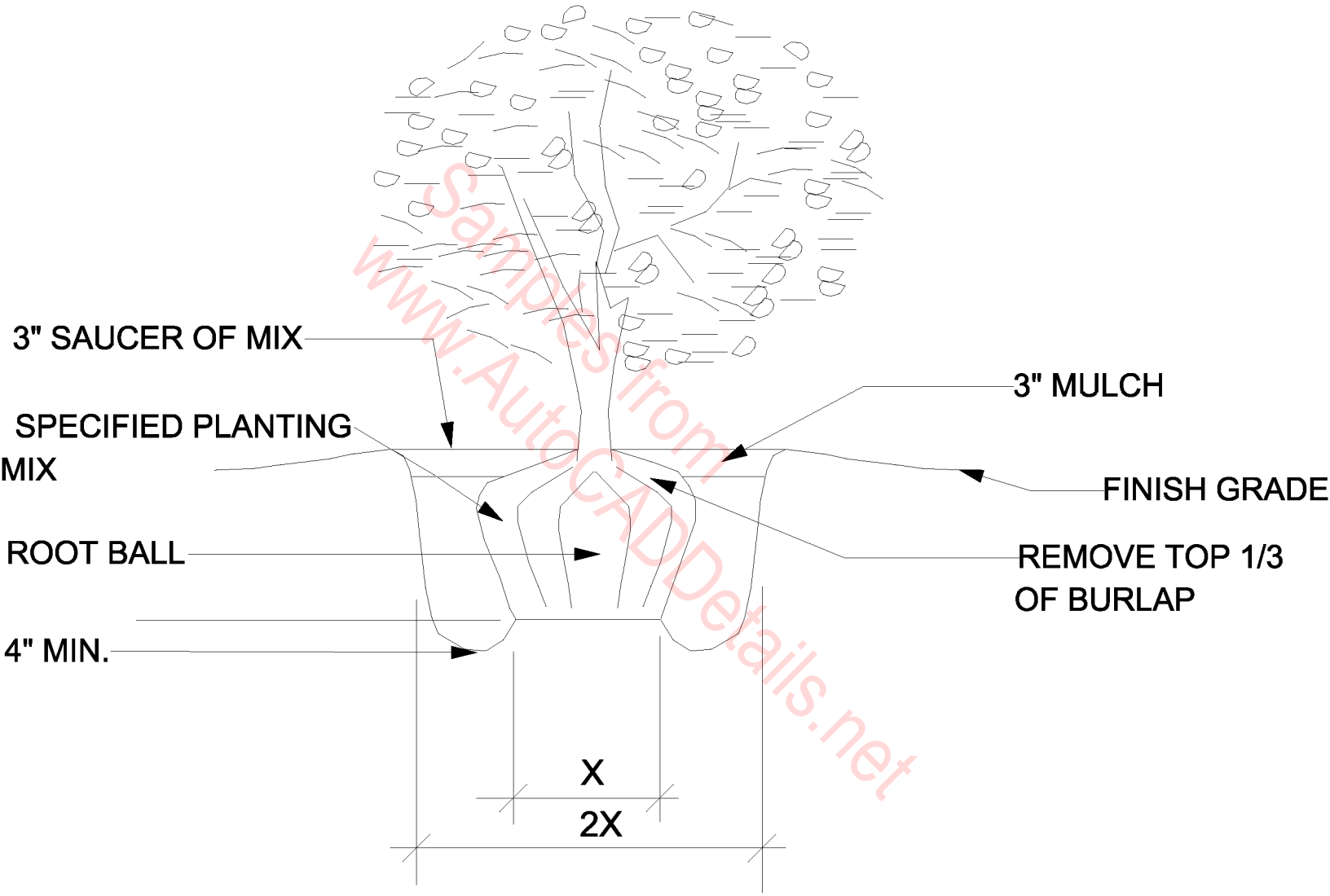



# REMOVABLE PIPE BOLLARD

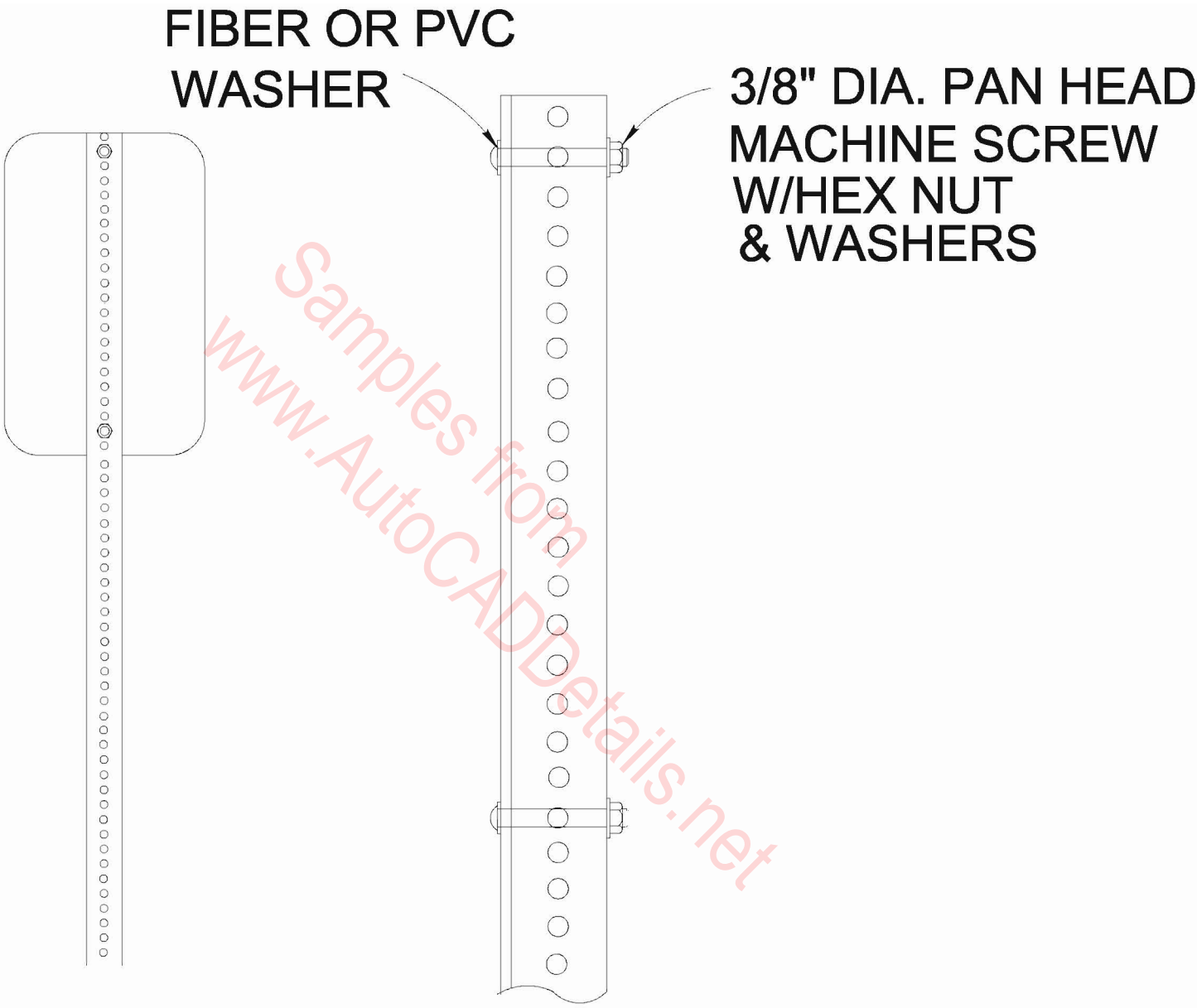





# SEATWALL SECTION

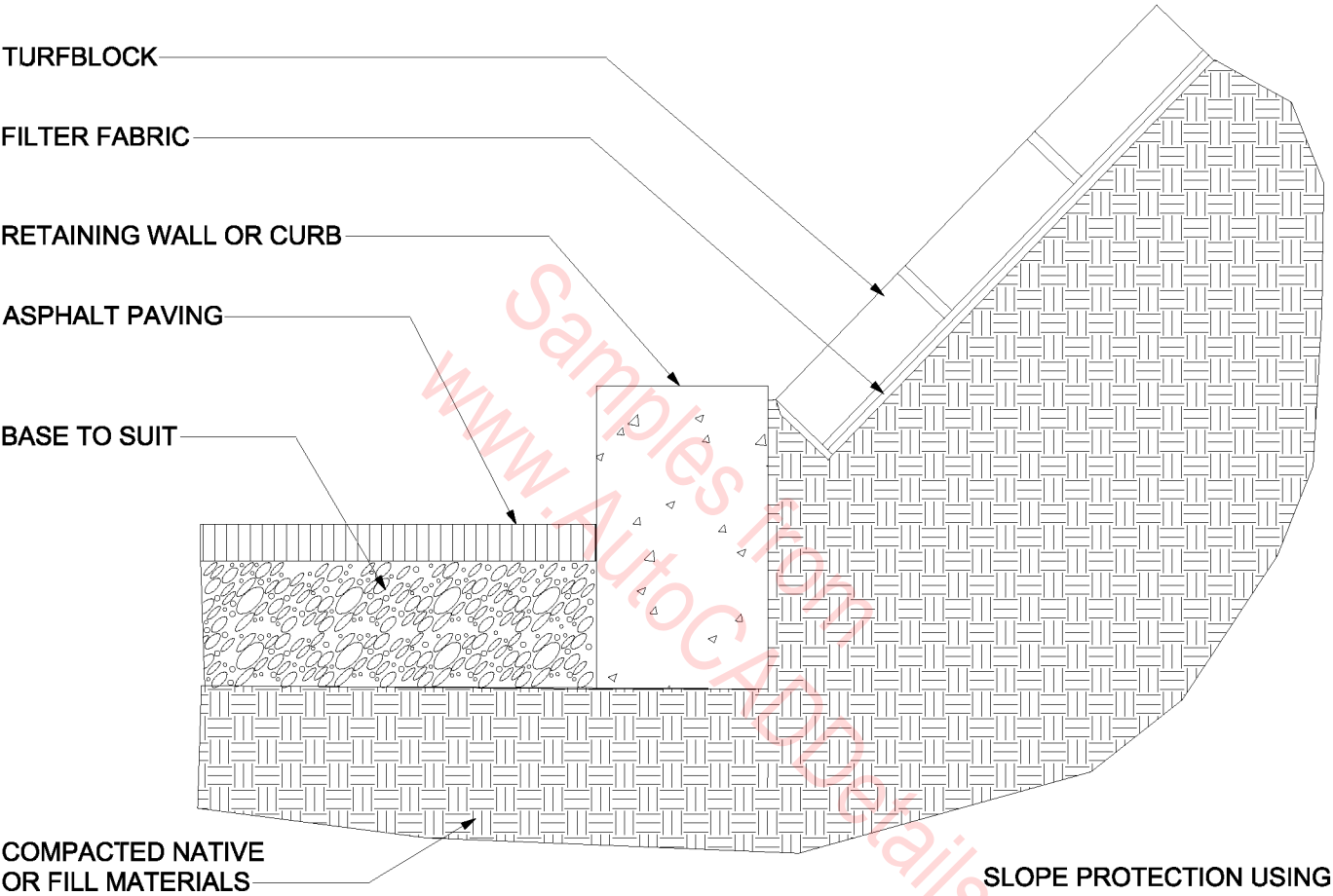



# SHRUB DETAIL






# SIGN PANEL ATTACHMENT






# SLOPE PROTECTION DETAIL

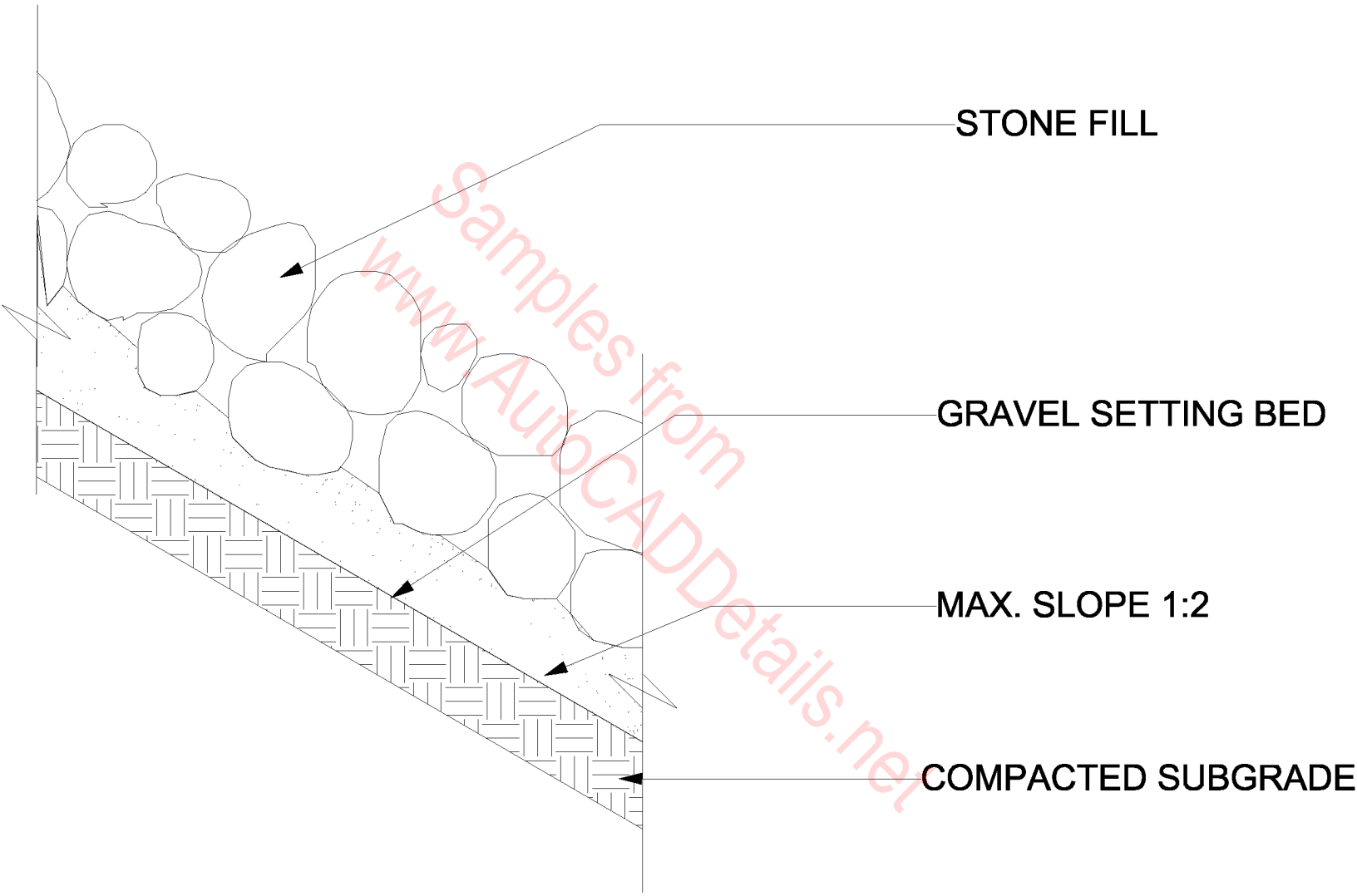
SLOPE PROTECTION USING TURFBLOCK:

1. STONE SHOULD ALWAYS BE LAID FROM BOTTOM UP.

2. STAKING OR PINNING MAY BE USED ON SLOPES STEEPER THAN 1 TO 1 OR WHERE HYDRAULIC FORCES ARE MORE INTENSE.

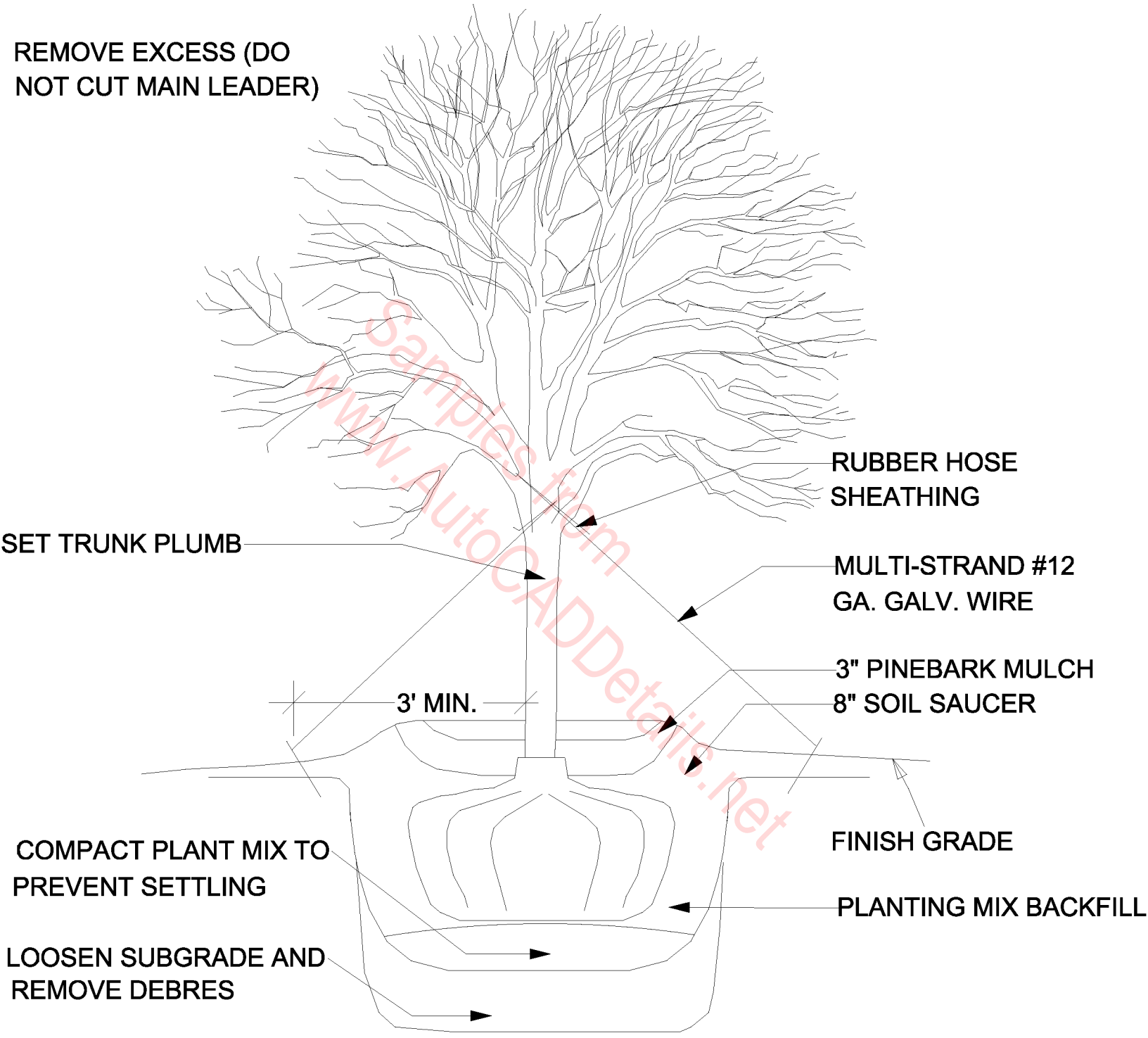
3. APERTURES MAY BE FILLED WITH TOPSOIL AND PLANTED OR FILLED WITH GRAVEL.

4. THE TOP OF THE SLOPE SHOULD BE PROTECTED AGAINST UNDERMINING.



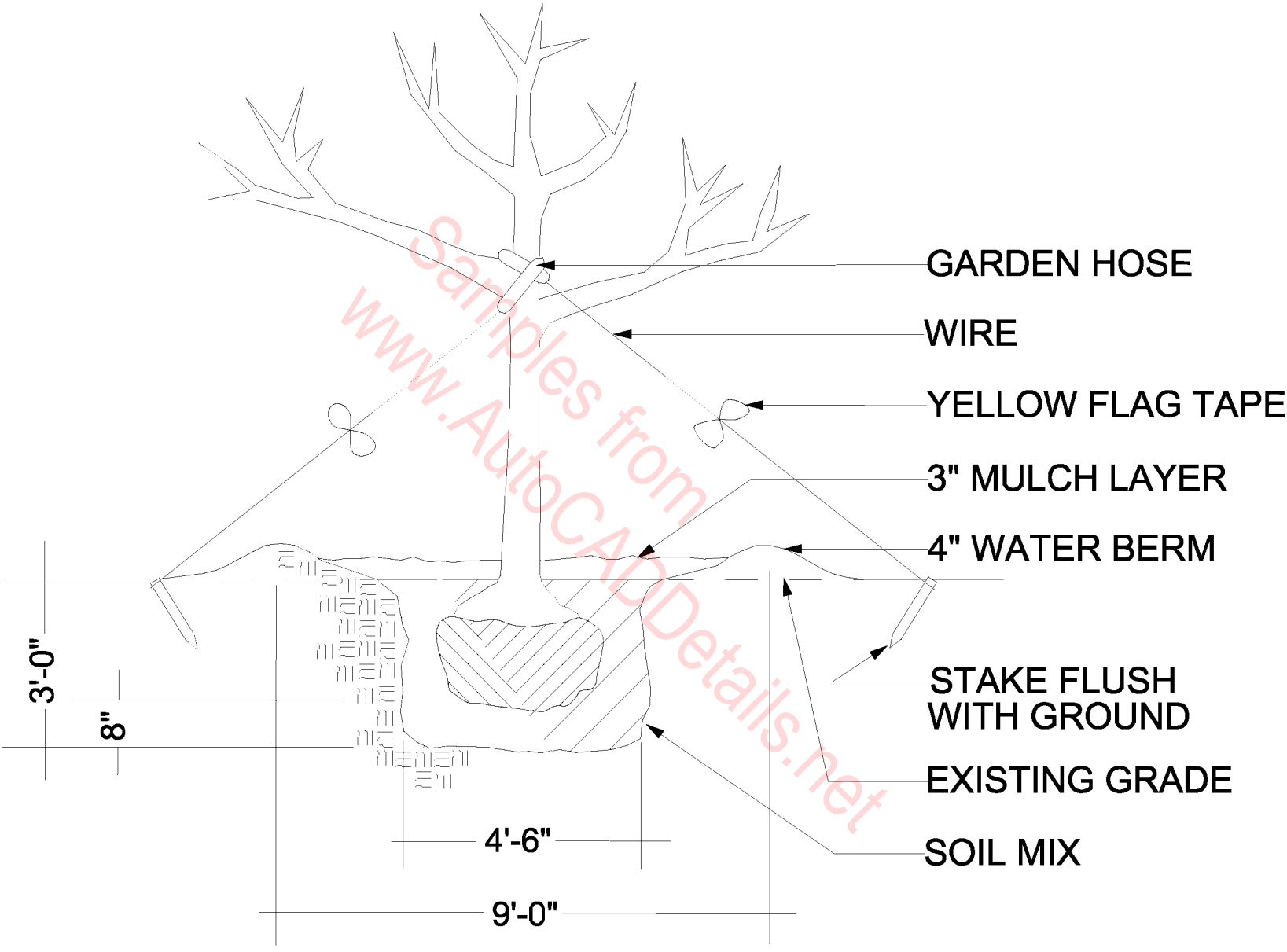



# STONE EROSION CONTROL



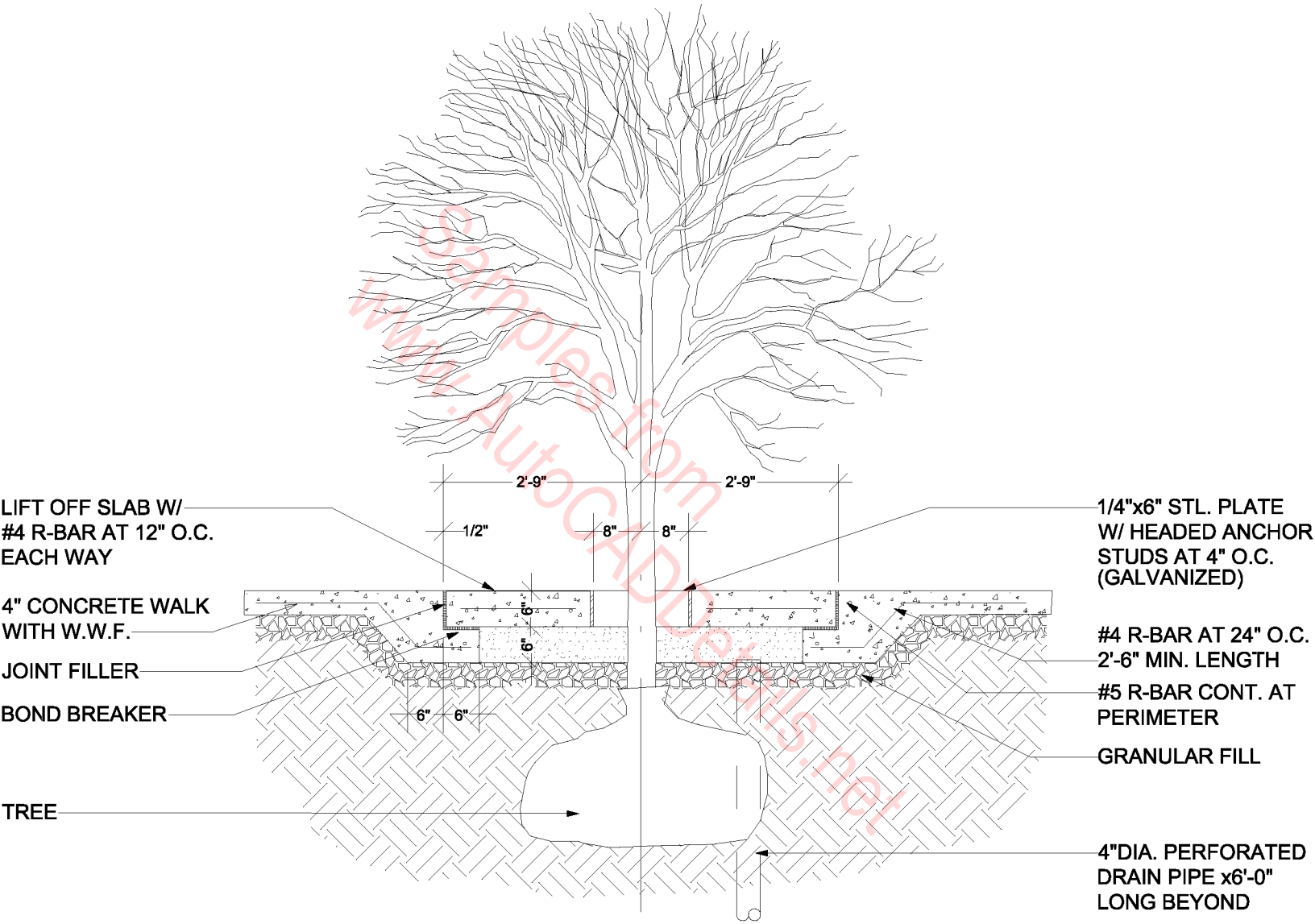



# TREE DETAIL






# TREE PLANTING

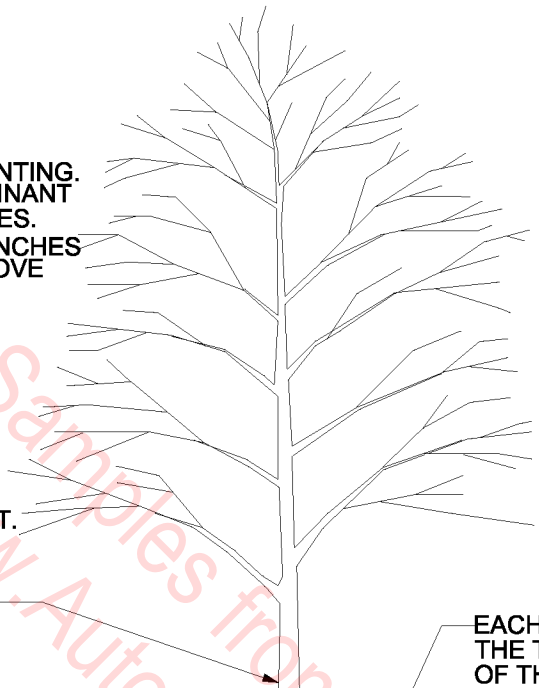





# TREE PLANTING DETAIL

(SECTION)

# INTERNATIONAL SOCIETY OF ARBORICULTURE



DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT SEE STAKING DETAIL.

WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT. SEE WRAPPING DETAIL.

MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER POSSIBLE.

SET TOP OF ROOT BALL FLUSH TO GRADE OR 25-50 MM (1-2 IN.) HIGHER IN SLOWLY DRAINING SOILS.

MULCH RING
1800 MM (6 FT.) DIAM. MIN.
2400 MM (8FT.) DIAM. PREFERRED

EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

200 MM (8 IN.)

100 MM (4 IN.) HIGH EARTH SAUCER BEYOND EDGE OF ROOT BALL.

50 MM (2 IN.) MULCH. DO NO PLACE MULCH IN CONTACT WITH TREE TRUNK. MAINTAIN THE MULCH WEED-FREE FOR A MINIMUM OF THREE YEARS AFTER PLANTING.

REMOVE ALL TWINE, ROPE AND WIRE, AND BURLAP FROM TOP HALF OF ROOT BALL

IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN 200 MM (8 IN.) INTO PLANTING HOLE.

PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.

NOTE: FOR DIMENSIONS OF PLANTING AREAS, TYPES OF SOIL AMENDMENTS, OR SOIL REPLACEMENT, SEE "SOIL IMPROVEMENT DETAILS."

TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT.

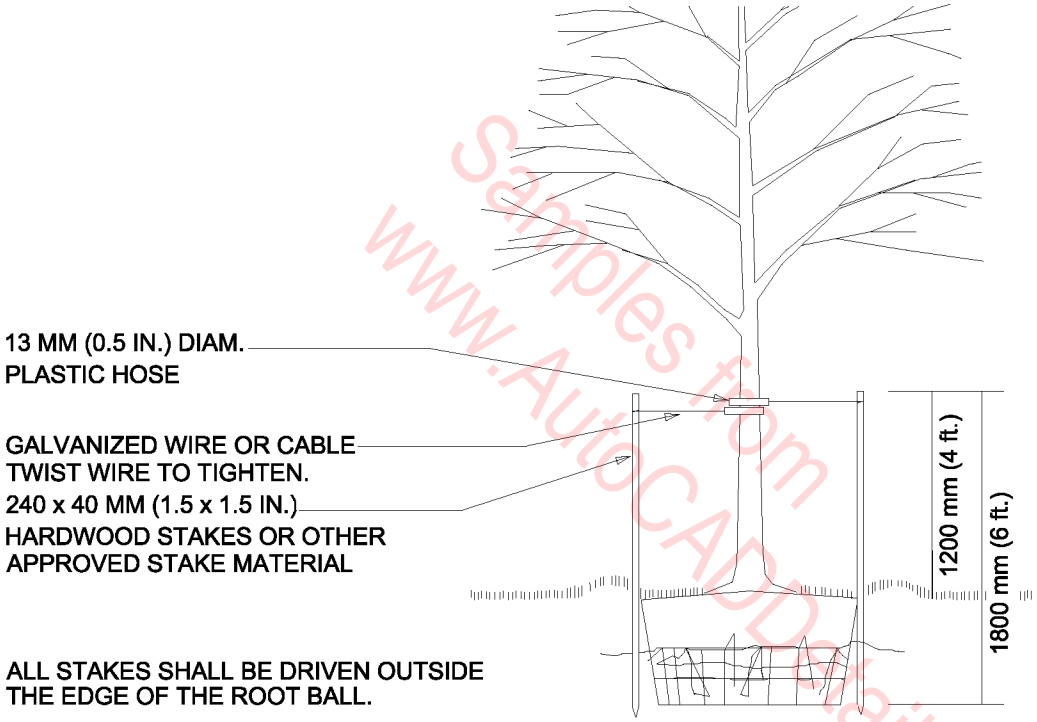


## TREE PLANTING DETAIL - B&B TREES IN ALL SOIL TYPES

NOTE: THIS DETAIL ASSUMES THAT THE PLANTING SPACE IS LARGER THAN 2400 MM (8 FT.) SQUARE, OPEN TO THE SKY, AND NOT COVERED BY ANY PAVING OR GRATING.

# INTERNATIONAL SOCIETY OF ARBORICULTURE

WIRE OR CABLE SIZES SHALL BE AS FOLLOWS:
TREES UP TO 65 MM (2.5 IN.) CALIPER - 14 GAUGE
TREES 65 MM (2.5 IN.) TO 75 MM (3 IN.) CALIPER - 12 GAUGE
TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 35MM (1.5 IN.) OF GROWTH AND BUFFER ALL BRANCHES FROM THE WIRE.
TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

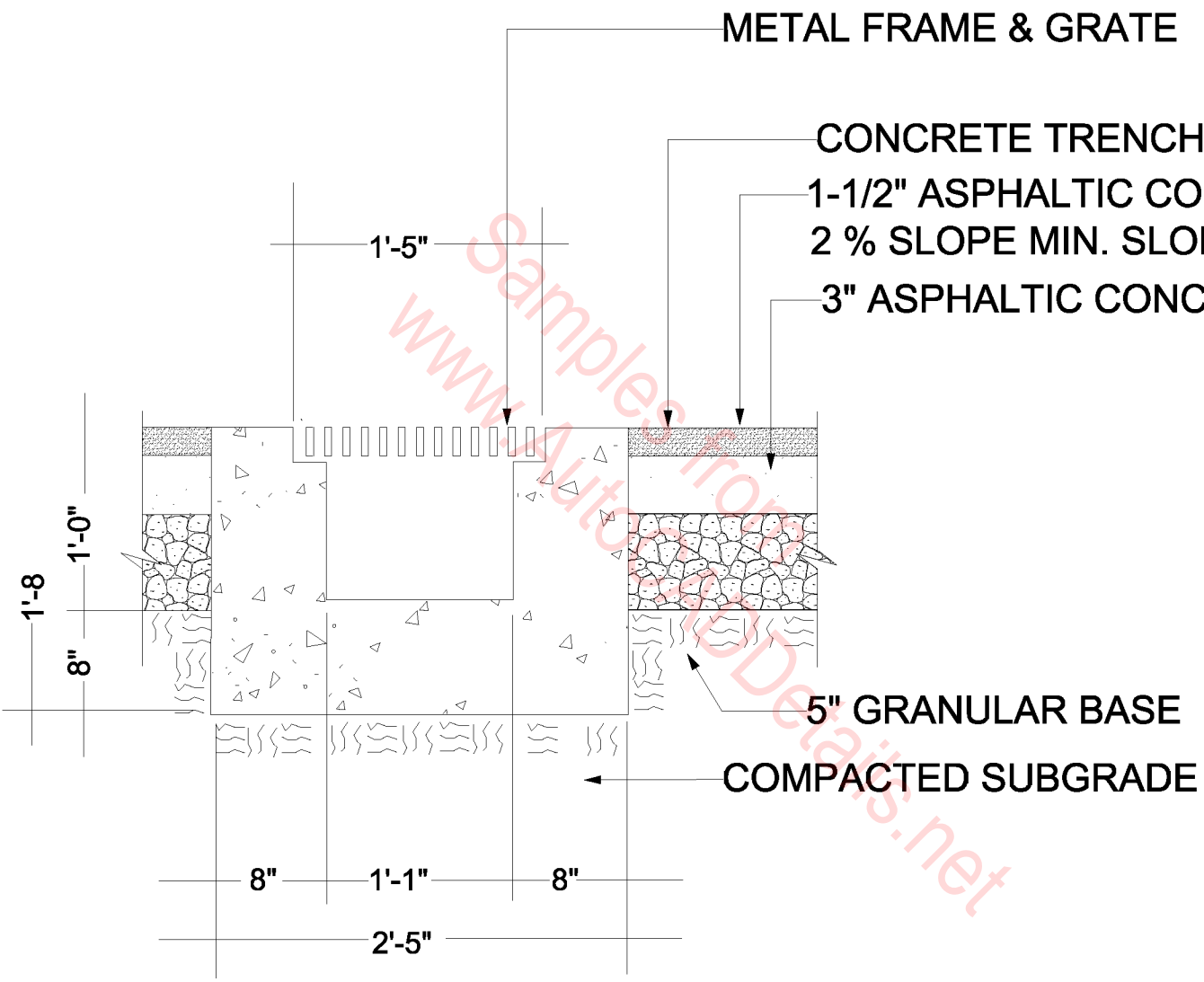




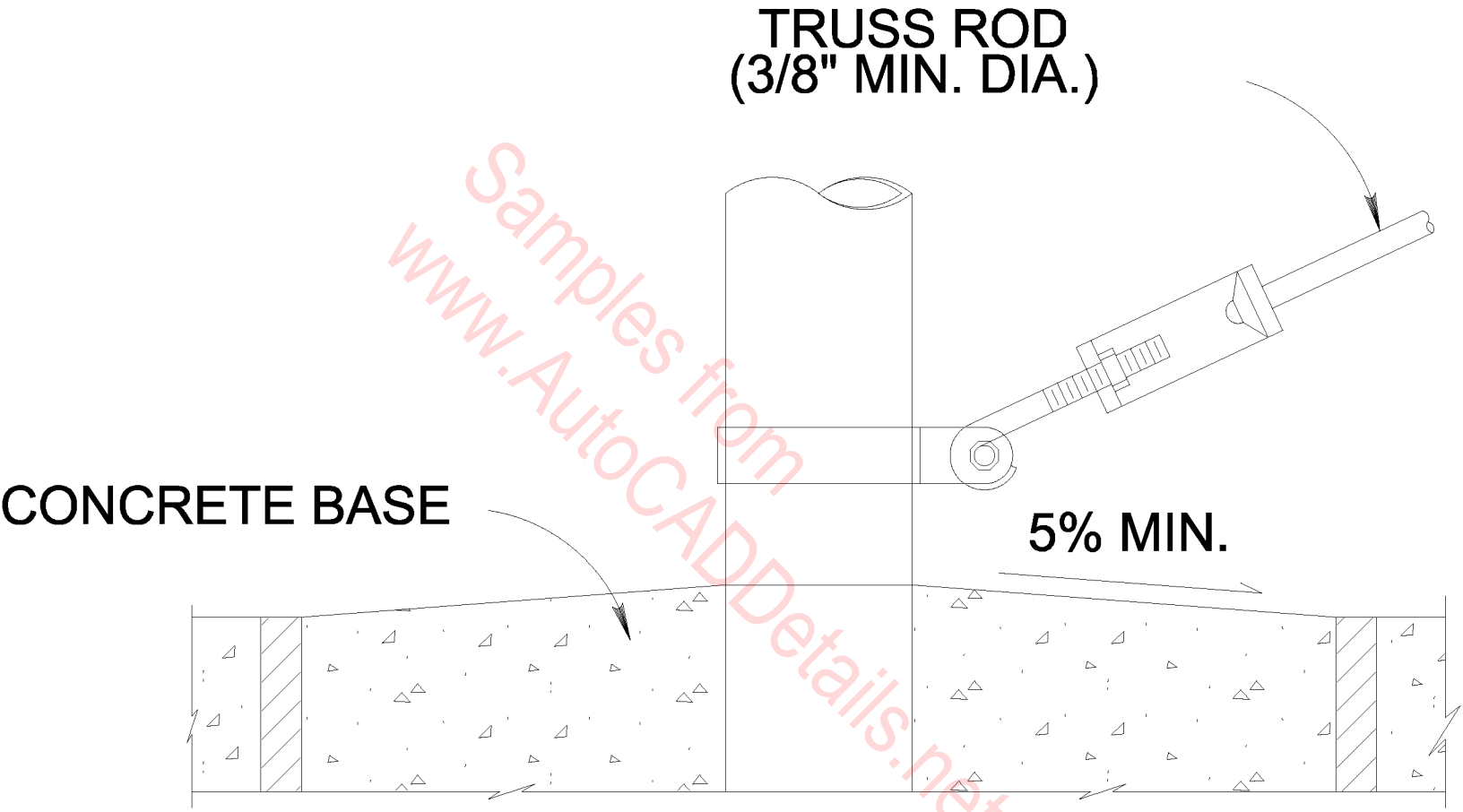

ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM OF 12 MM (0.5 IN.).
REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF.
THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT.

- TREES WITH POOR - QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR DAMAGED. REJECT RATHER THAN STAKE.
- TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
- PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.
- ROOT BALLS PLACED ON SOFT SOIL. TAMP SOILS UNDER ROOT BALL PRIOR TO PLANTING.
- ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
- TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.

# TREE STAKING DETAIL - TREES 75MM (3 IN.) CALIPER OR LESS

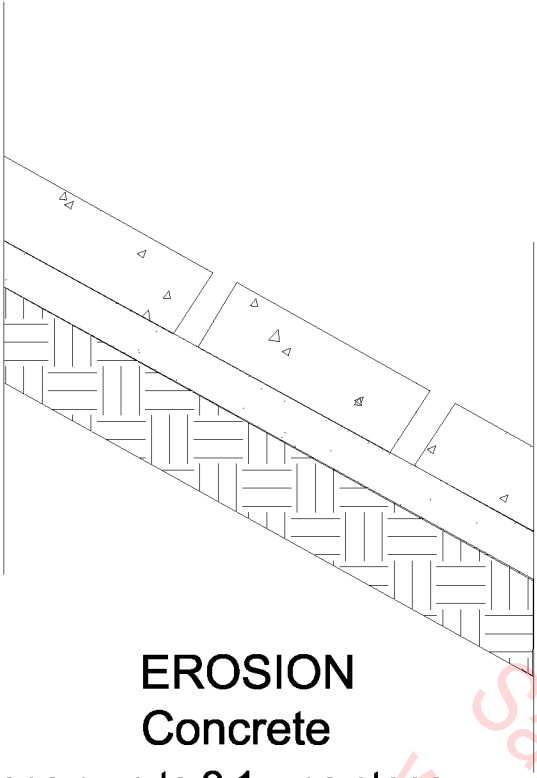



# TRENCH DRAIN






# TRUSS ROD AND BAND

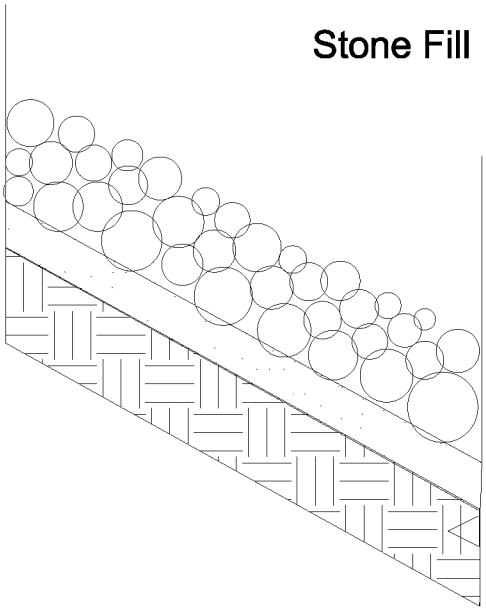


## EROSION
## Concrete

Slope s up to 2:1, use stone, broken concrete or wood grid.

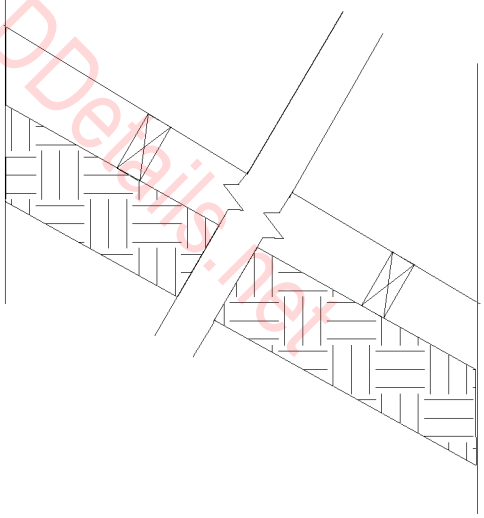
Slopes up to 1:1, use stone or broken concrete set on mortar & with mortar between joints

Steeps slopes, use retaining walls




## EROSION CONTROL
## Stone

Use 4" to 8" dia. round stone
Hand place on 3" sand bed.

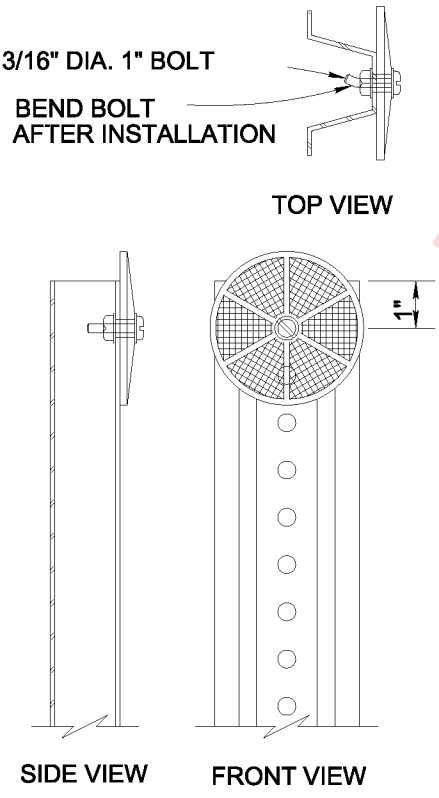


## EROSION CONTROL
## Wood Grid

Lay 2x4's across the slope @ 3' spacing; lay 1x4 ties @ 8' o.c.

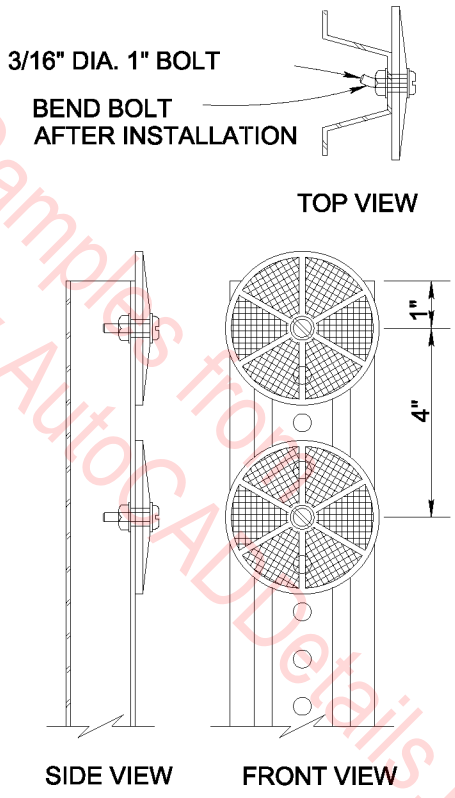
Fill grid spaces with topsoil & sod or seed, wood chips, gravel or ground cover.

# TYPES OF EROSION CONTROL



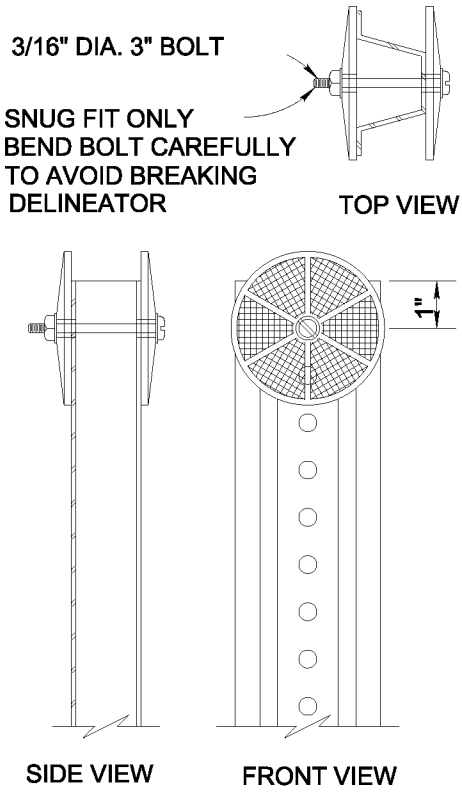

TYPE I

SINGLE DELINEATOR - ONE WAY




TYPE II

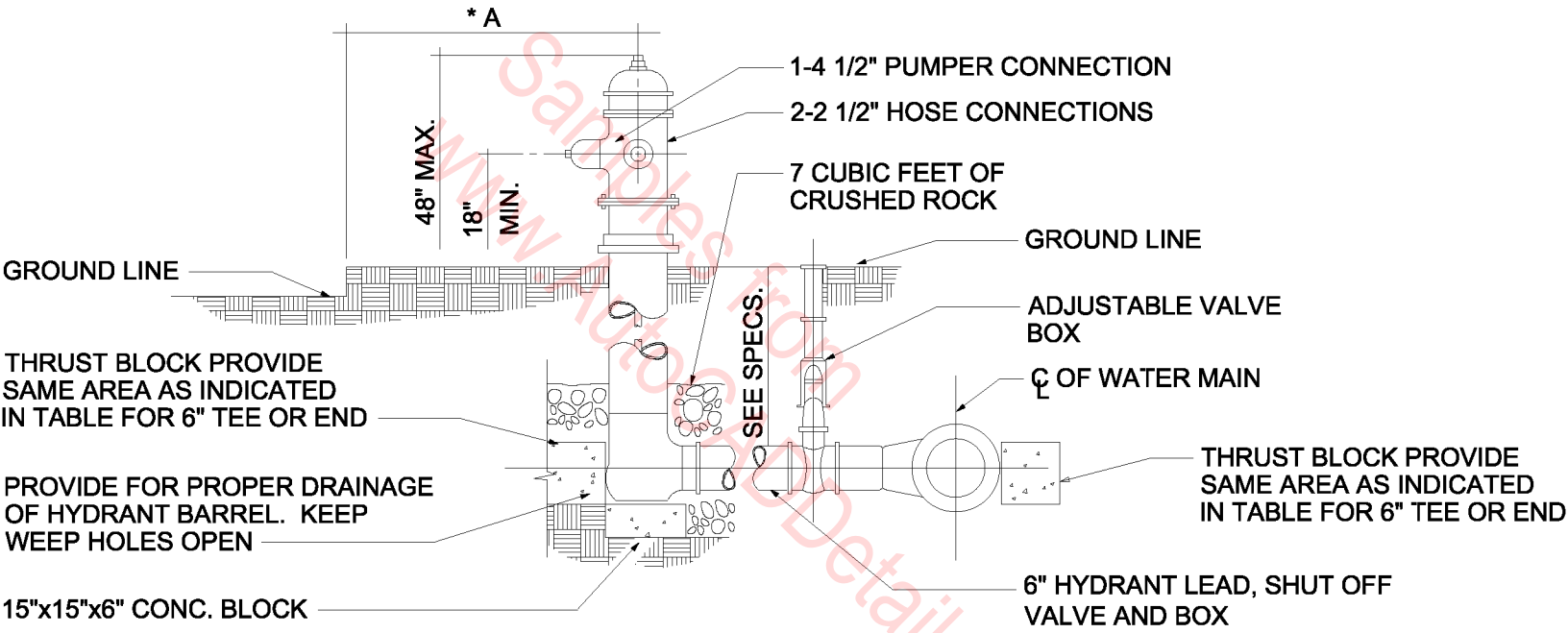
DOUBLE DELINEATOR - ONE WAY




TYPE III

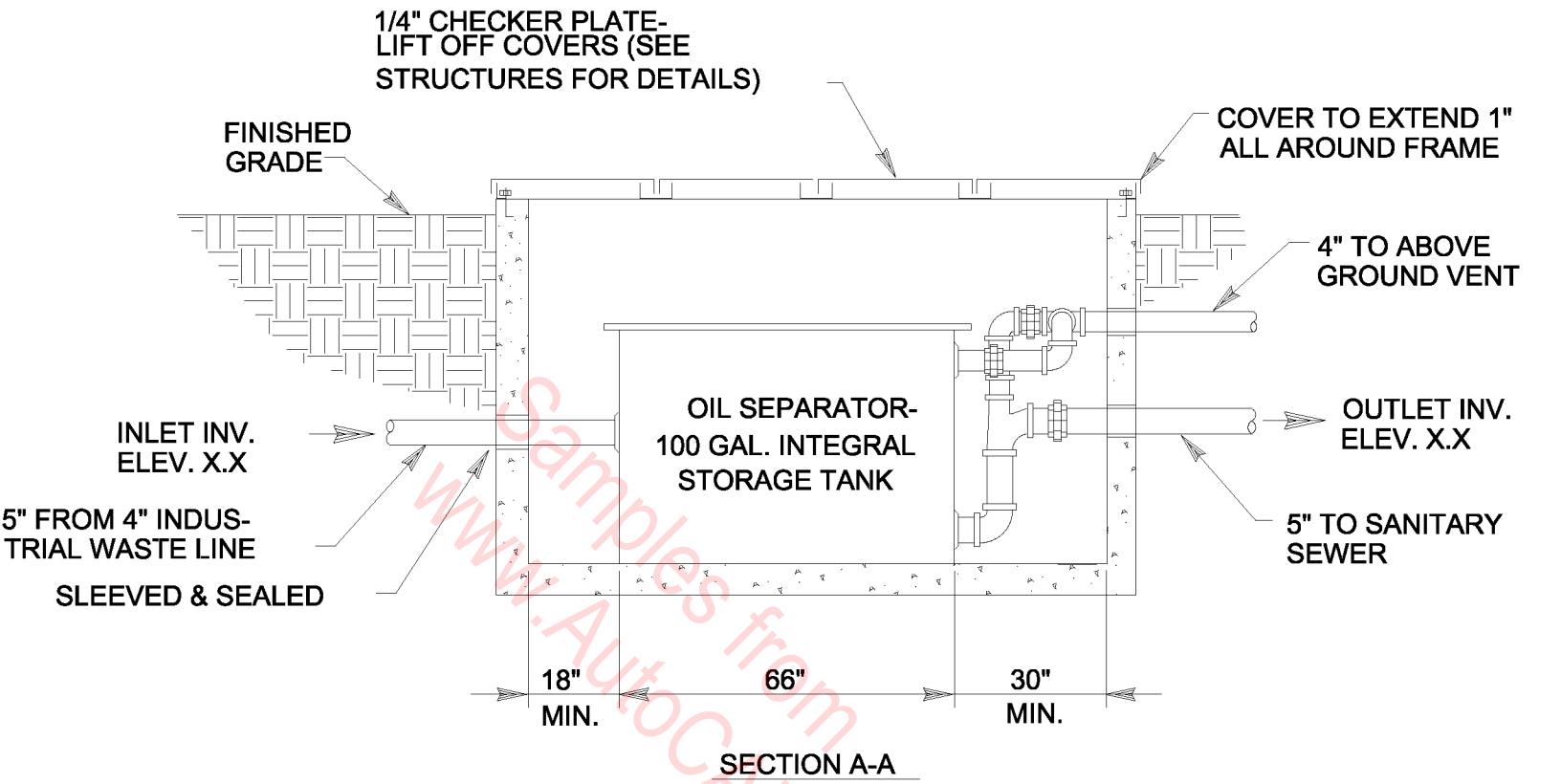
SINGLE DELINEATOR - TWO WAY

# TYPICAL DELINEATOR TYPES AND MOUNTINGS

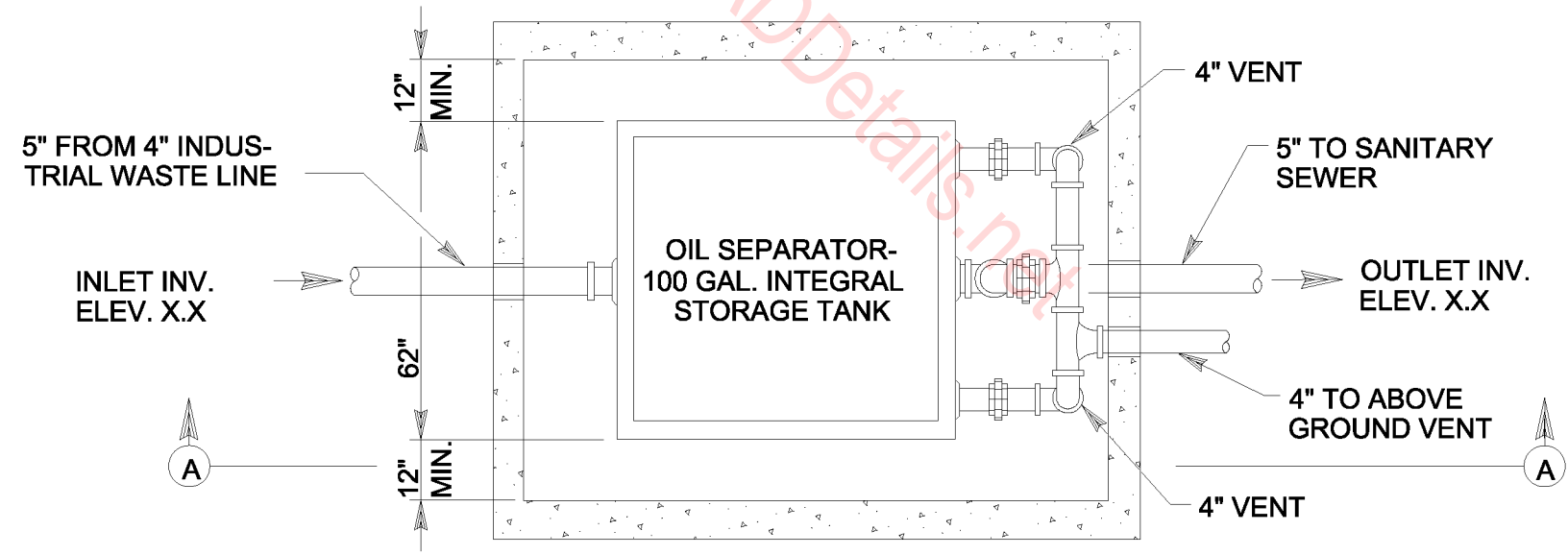



# TYPICAL FIRE HYDRANT SETTING

* A =7'-0" FROM BACK OF PAVEMENT WHERE NO CURB EXISTS
OR 4'-0" FROM BACK OF CURB.

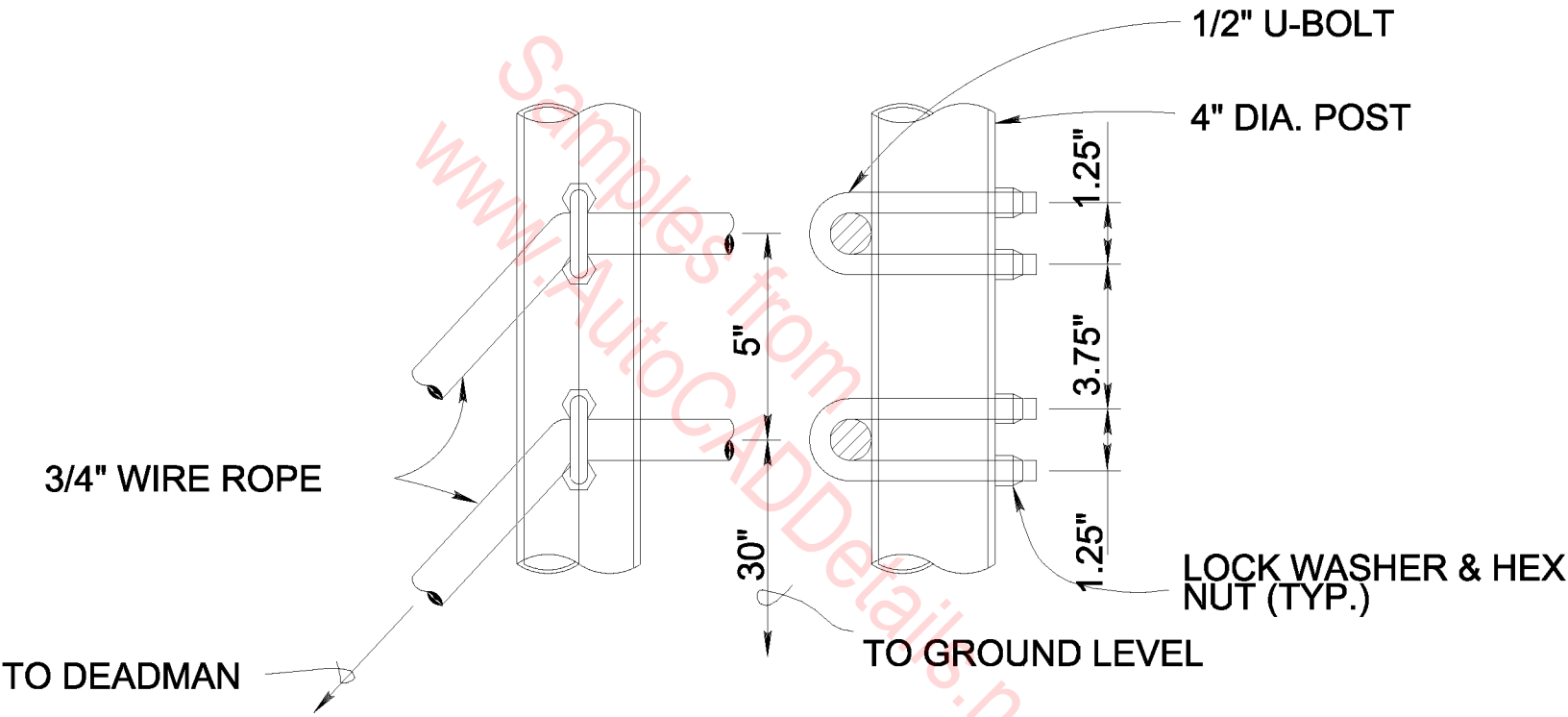



SECTION A-A



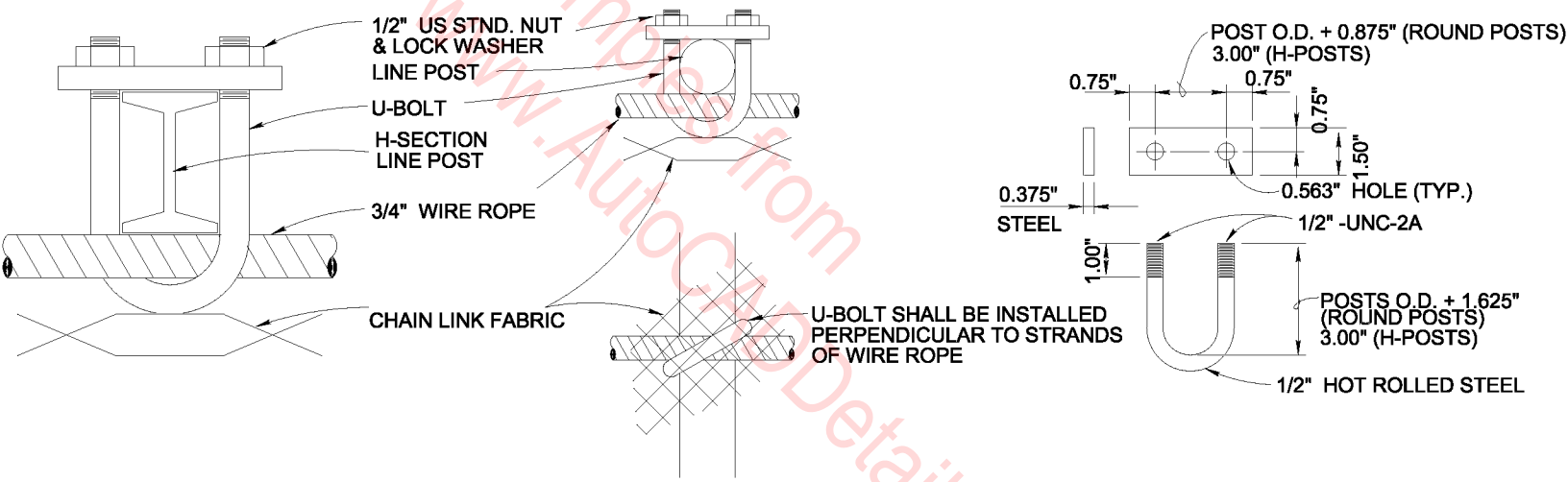

PLAN VIEW

# TYPICAL OIL SEPARATOR DETAIL

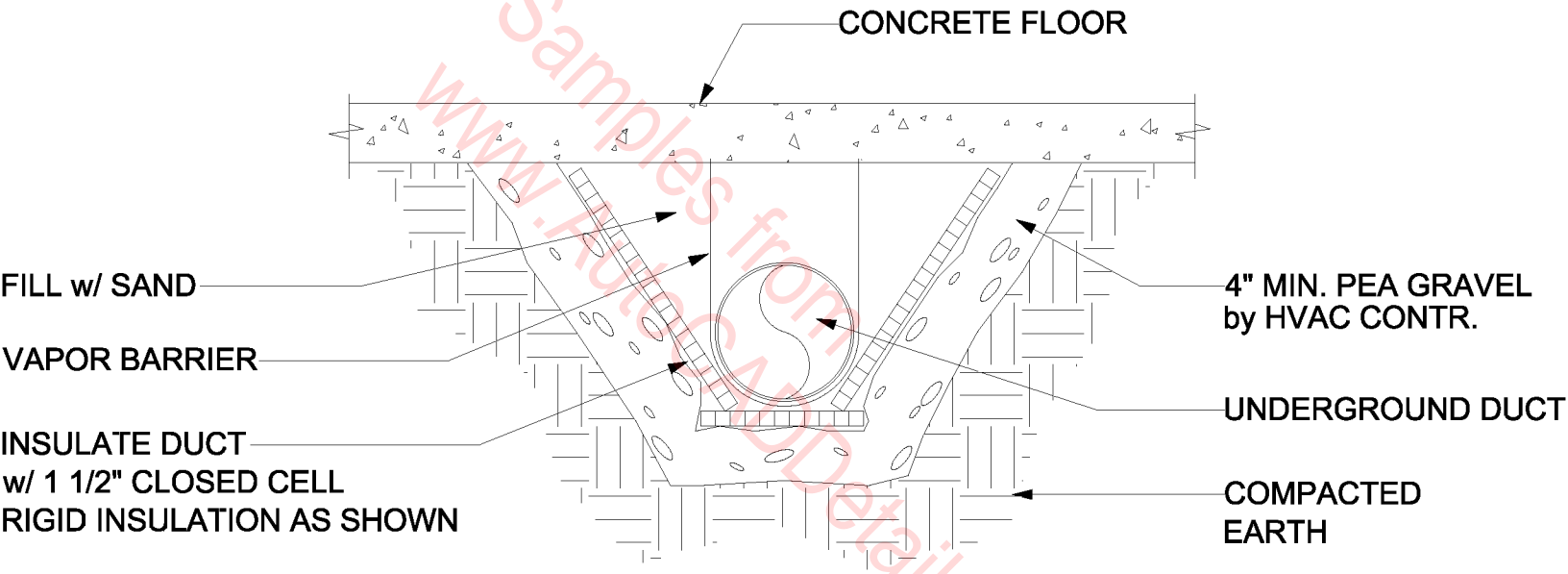





# U-BOLT AT CABLE ANCHOR POST DETAIL




# U-BOLT AT LINE POST DETAILS

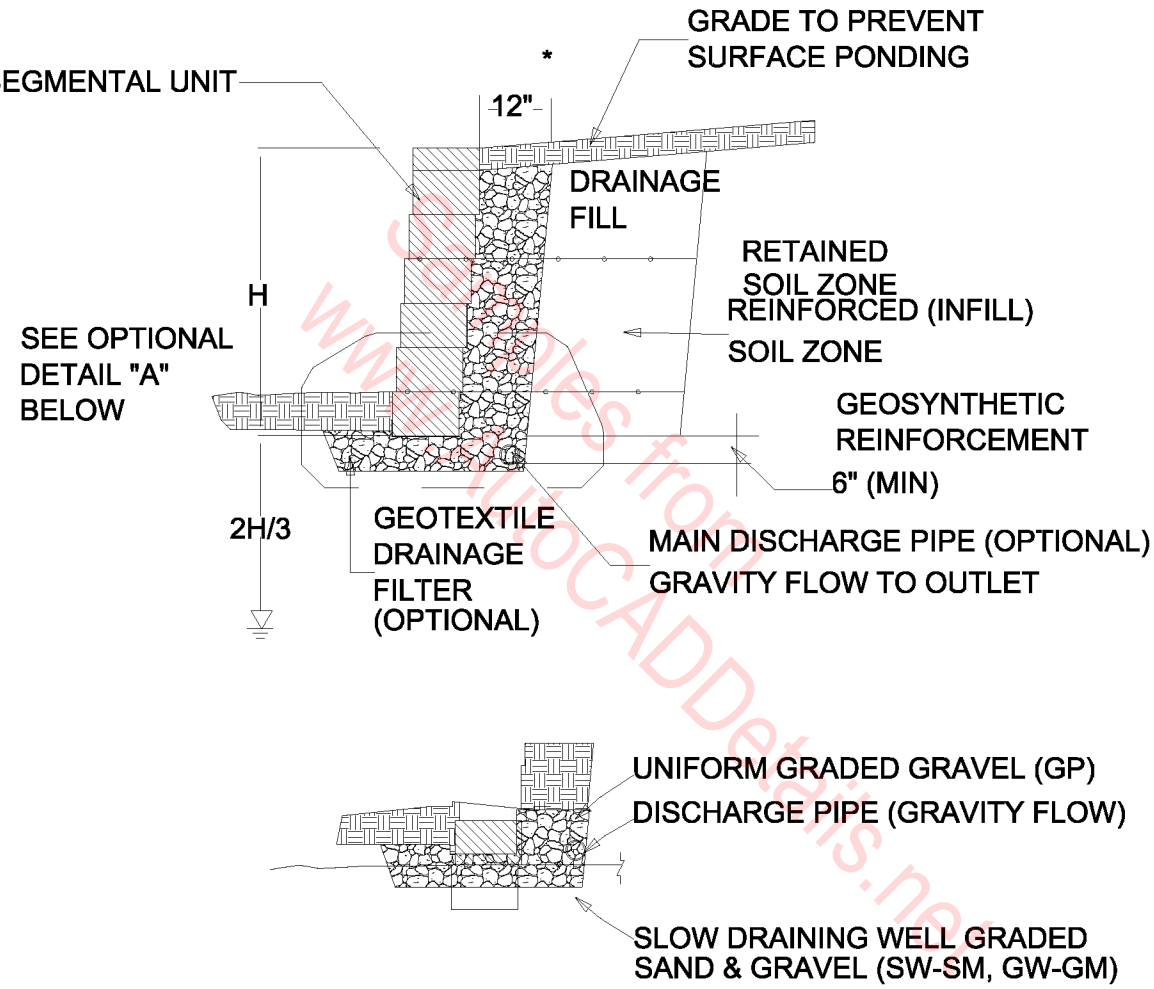



# UNDERGROUND DUCT DETAIL

GROUNDWATER CONDITIONS FOR CASE 1

1. GROUNDWATER TABLE AT A MINIMUM OF 2H/3 BELOW BOTTOM OF WALL ( )
2. NO POSSIBILITY OF LATERAL (HORIZONTAL) GROUNDWATER FLOW INTO INFILL AND RETAINED SOILS

* MAY BE REDUCED TO 6" WHEN DRAIN MATERIAL IS PLACED IN CORES AND BETWEEN SRW UNITS



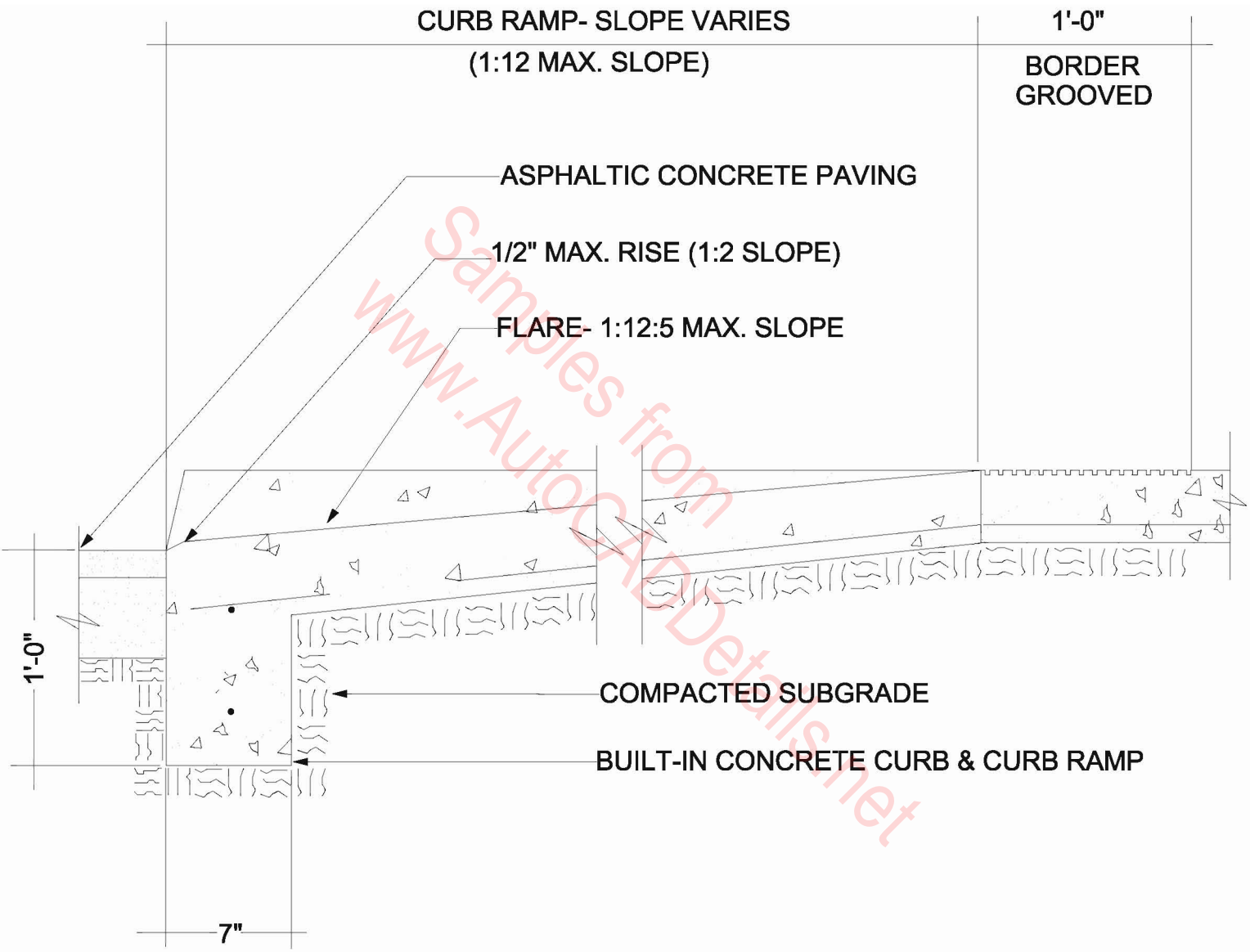

OPTIONAL DETAIL "A"



NOTES:

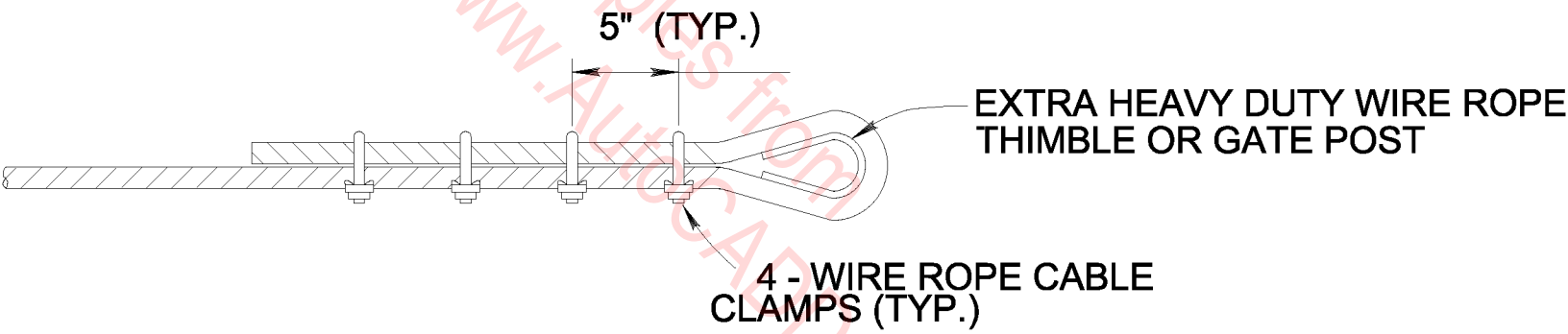
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.

# WALL FACE DRAIN DETAIL

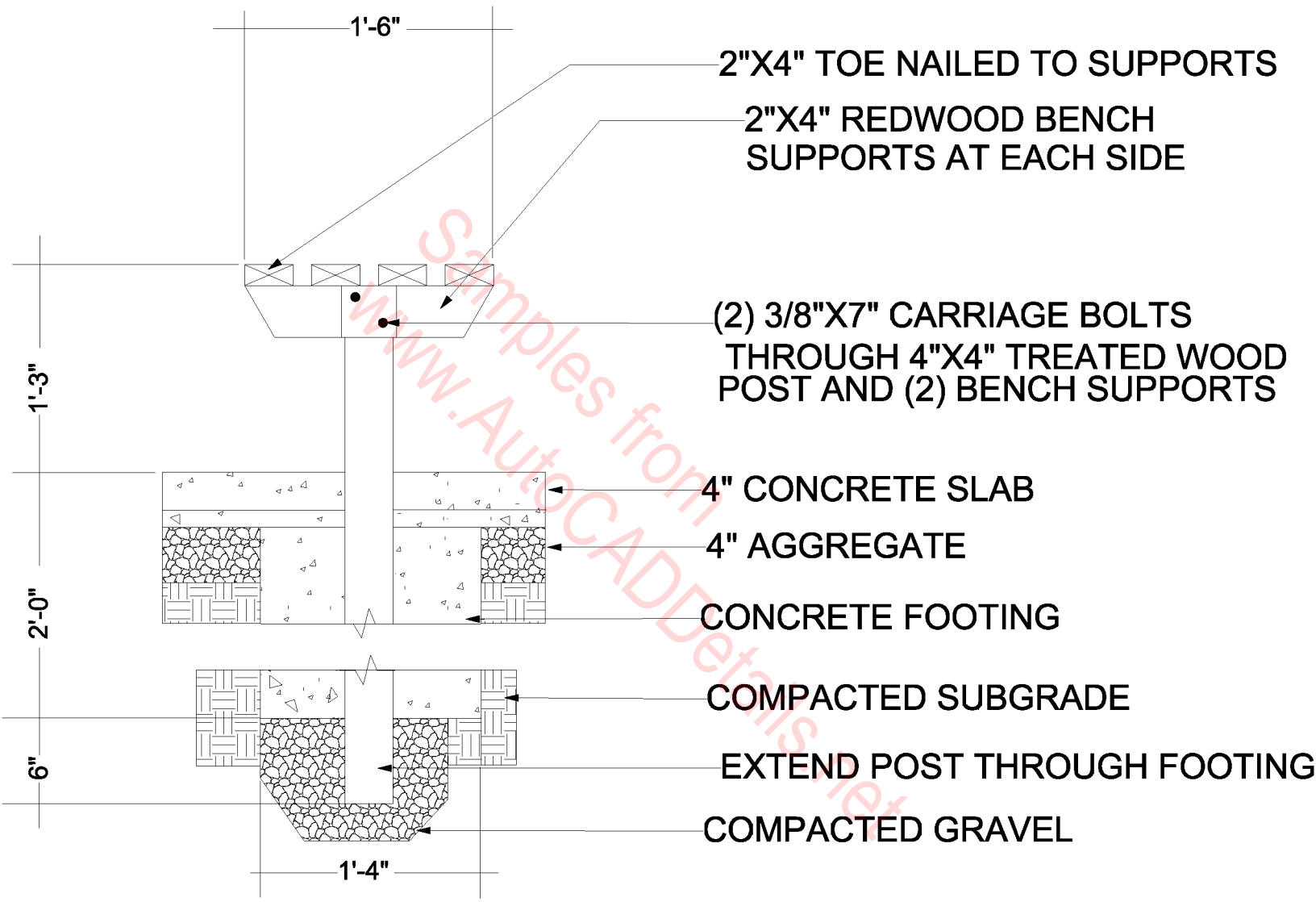





# WHEELCHAIR CURB RAMP SECTION

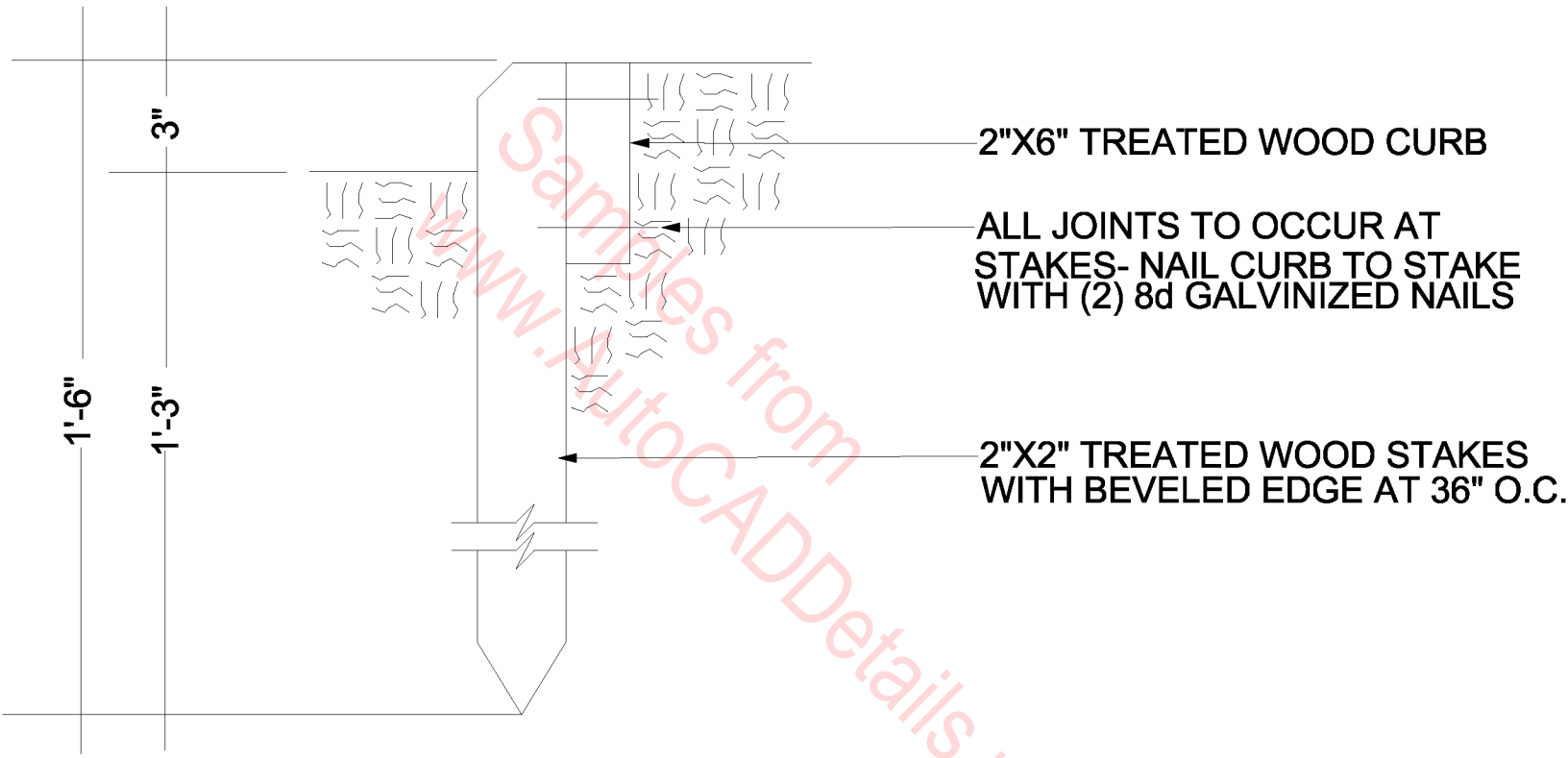



# WIRE ROPE CLAMP DETAIL



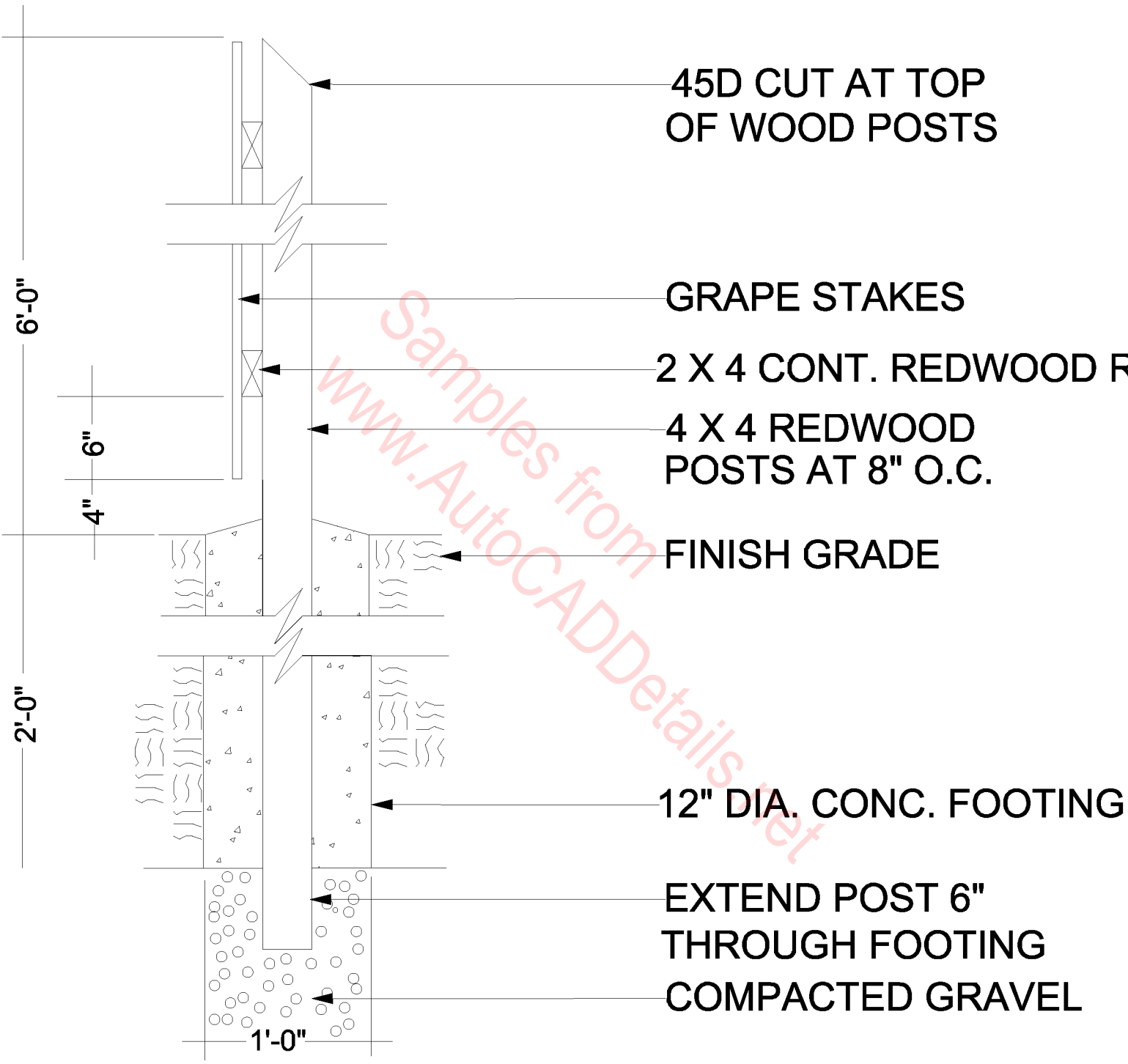



# WOOD BENCH

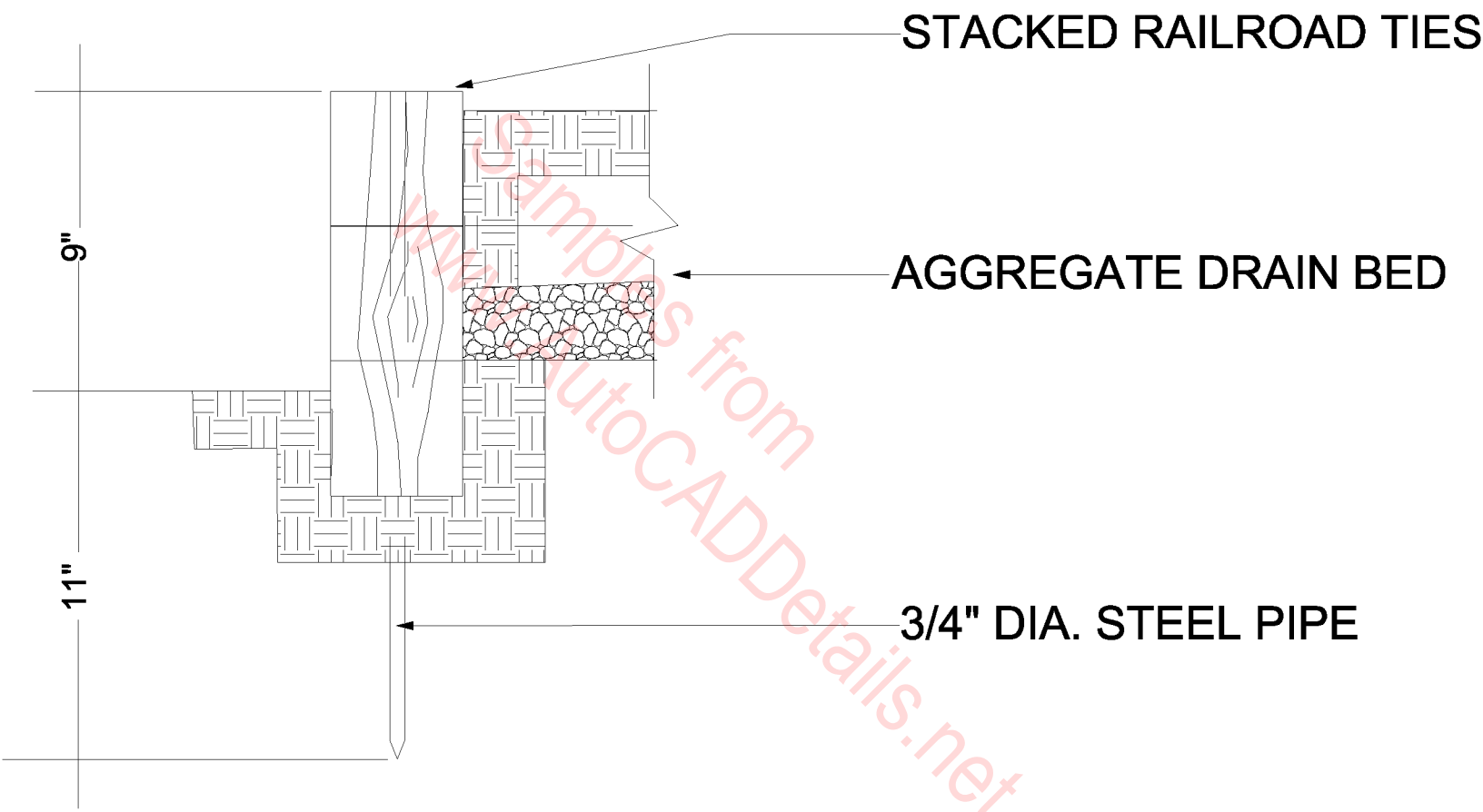





# WOOD CURB

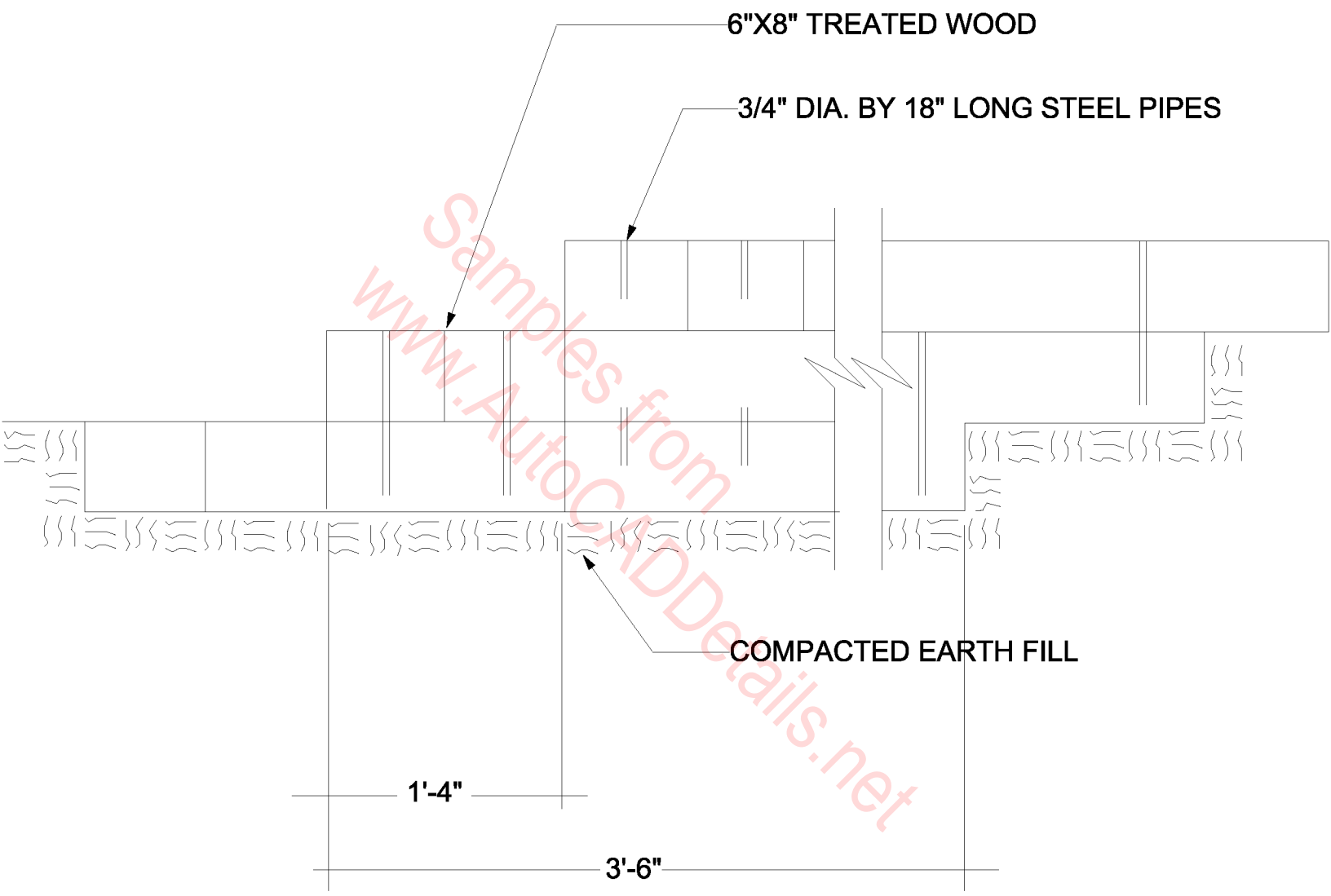



# WOOD FENCE






# WOOD PLANTER






# WOOD STEPS