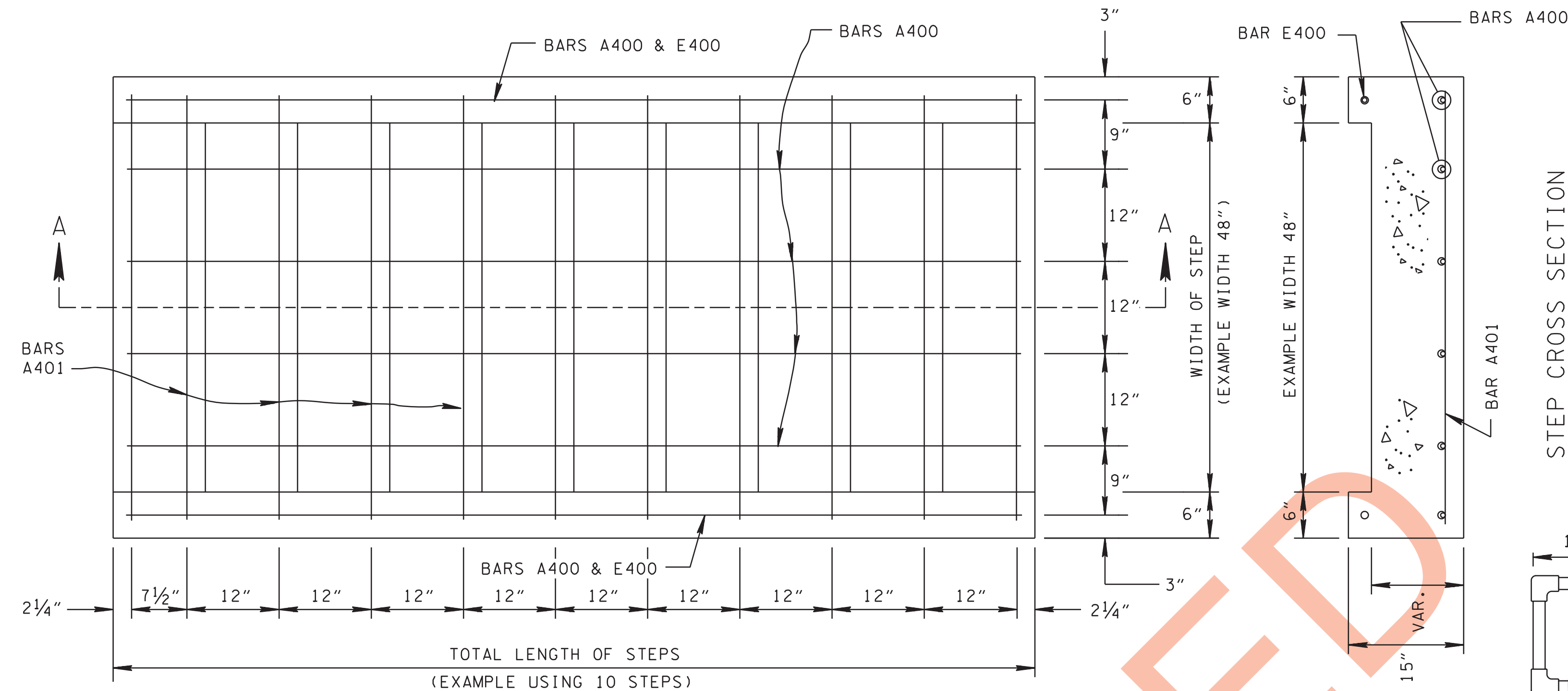
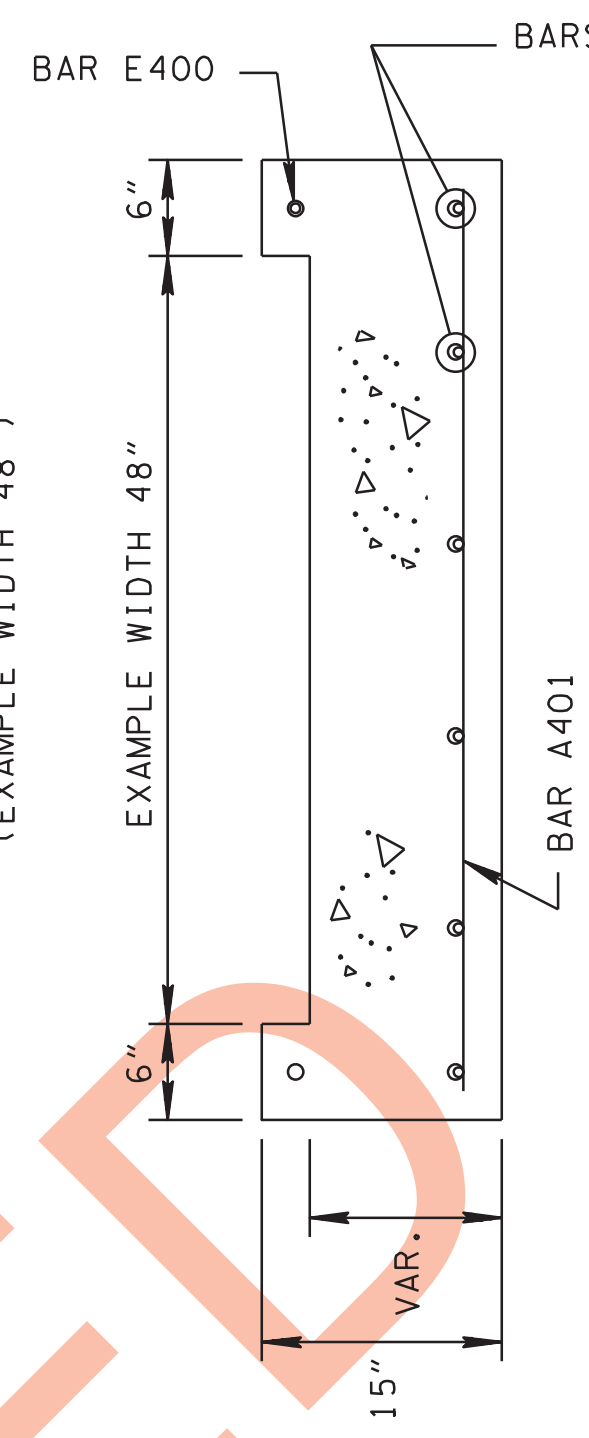


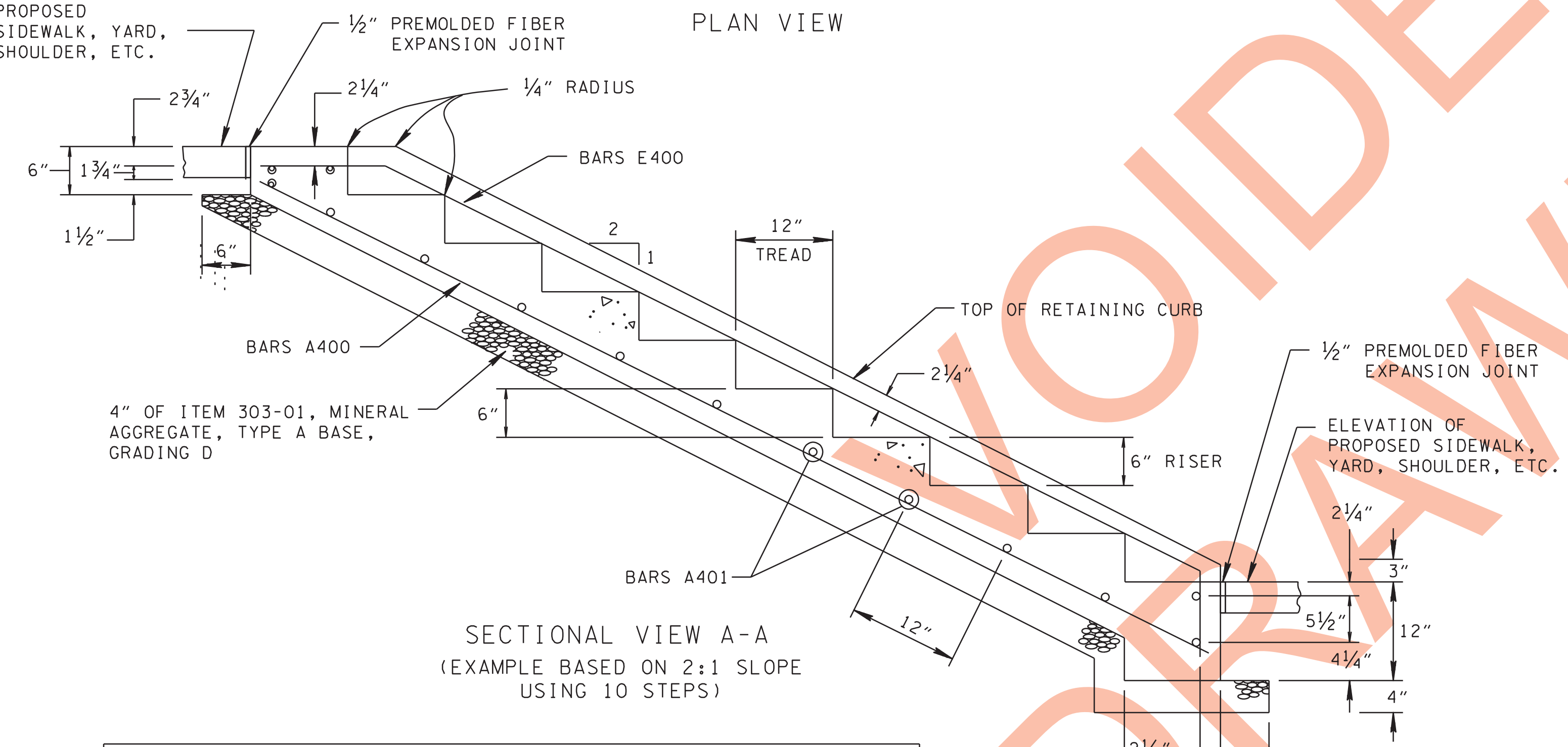
REV. 7-1-72: CHANGED DEPARTMENT NAME.
 REV. 1-1-76: CHANGED DWG. NO. FROM P-S-7a(68) TO RP-S-7.
 REV. 4-15-91: DREW NEW SHEET INCLUDING INFORMATION PREVIOUSLY ON DRAWING NUMBER RP-S-7 REGARDING CONCRETE STEPS. ADDED ADDITIONAL INFORMATION ABOUT CONSTRUCTION OF STEPS. ADDED PIPE HANDRAIL DETAILS.
 □ REV. 1-19-93: CHANGED PIPE SCHEDULES FOR HANDRAIL AND PAINT SPECIFICATIONS.
 REV. 2-5-16: ADDED 12" EXTENTION BEYOND ENDS OF HAND RAIL.



STEP CROSS SECTION



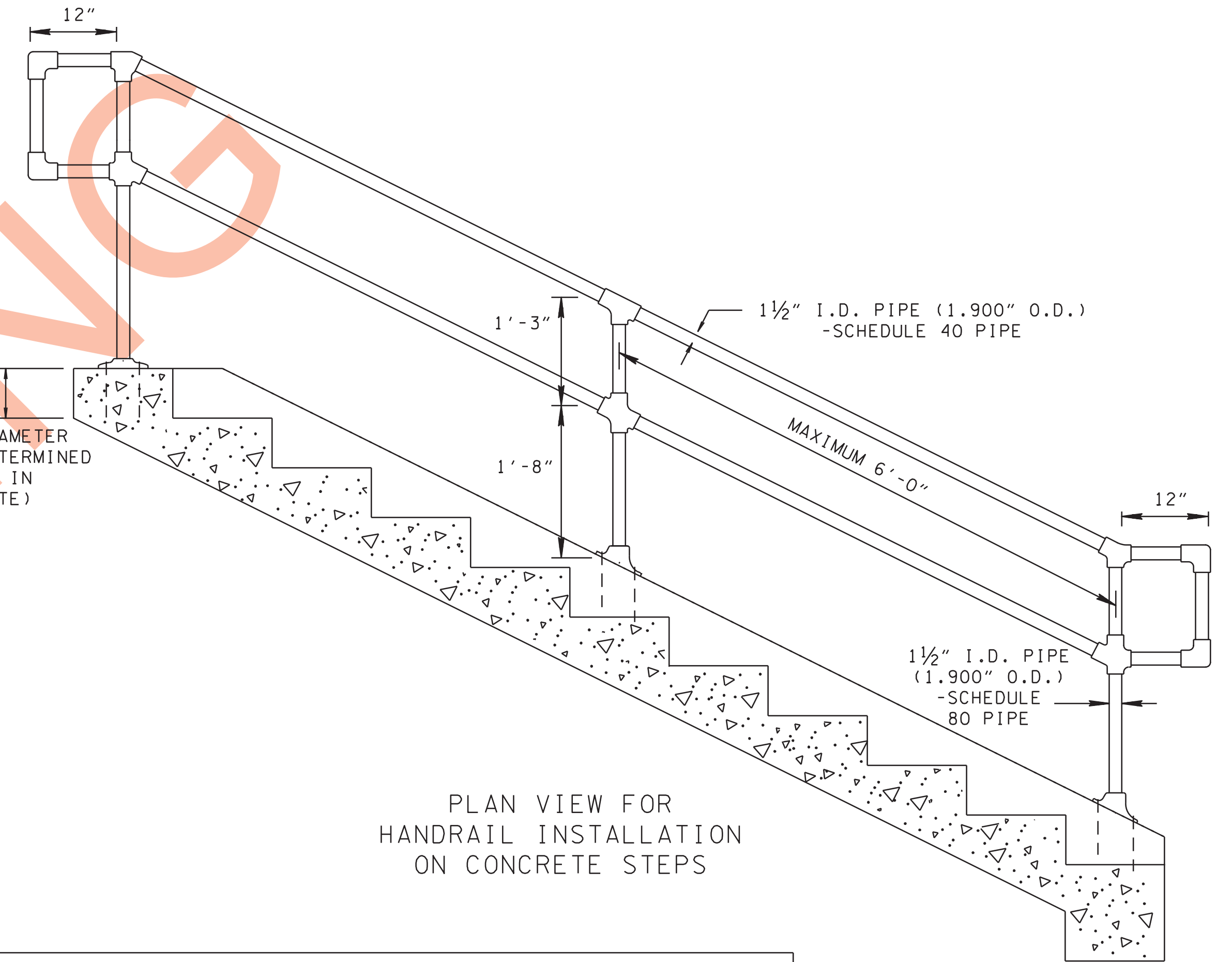
ELEVATION OF PROPOSED SIDEWALK, YARD, SHOULDER, ETC.



SECTIONAL VIEW A-A
 (EXAMPLE BASED ON 2:1 SLOPE USING 10 STEPS)

MINIMUM DEPTH OF BOLT 6" (BOLT DIAMETER TO BE DETERMINED BY HOLES IN BASE PLATE)

PLAN VIEW FOR HANDRAIL INSTALLATION ON CONCRETE STEPS



CONCRETE STEP GENERAL NOTES

(C1) FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.

(C2) CONCRETE STEPS MAY BE CAST IN PLACE OR PRECAST. ALL CONCRETE CAST IN PLACE TO BE CLASS "A". ALL PRECAST TO BE 4000 POUNDS PER SQUARE INCH.

(C3) ALL EXPOSED EDGES ARE TO BE ROUNDED USING A QUARTER INCH RADIUS.

(C4) THE TREAD IS TO BE TWELVE INCHES DEEP. THE RISER HEIGHT IS TO BE VARIED SO AS TO CONFORM TO THE PROPOSED SLOPE. A MAXIMUM RISER HEIGHT OF SEVEN INCHES IS NOT TO BE EXCEEDED.

(C5) CONCRETE JOINT MATERIAL TO BE 1/2" PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 OF THE STANDARD SPECIFICATIONS. COST OF JOINT MATERIAL WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(C6) ALL REINFORCING STEEL TO ADHERE TO SPECIFICATION ASTM A 615. ALL REINFORCING STEEL TO BE NO. 4 BARS.

(C7) THE COST OF EXCAVATION BELOW LEVEL ON PROPOSED SLOPE TO BE INCLUDED IN THE COST OF OTHER ITEMS.

(C8) PAYMENT FOR CONCRETE STEPS WILL BE MADE AS FOLLOWS:
 ITEM NO. 604-01.01, CLASS "A" CONCRETE (ROADWAY) PER CUBIC YARD.
 ITEM NO. 604-01.02, STEEL BAR REINFORCEMENT (ROADWAY) PER POUND.

HANDRAIL GENERAL NOTES

(H1) PIPE CROSS MEMBERS ARE TO ADHERE TO SPECIFICATION ASTM A 53 TYPE E OR S-GRADE A OR B.

(H2) THE PIPE HANDRAIL IS TO BE PAINTED BLACK IN COLOR AND ADHERE TO FEDERAL SPECIFICATION TT-E-489H.

(H3) THE PIPE HANDRAIL IS TO BE USED ONLY AS A PROTECTION FOR PEDESTRIANS AND SHOULD NOT BE PLACED IN ANY LOCATION WHERE IT MIGHT BE SUBJECT TO VEHICULAR IMPACT. FOR VEHICULAR PROTECTION STANDARD GUARD RAIL SHOULD BE USED.

(H4) THE PIPE HANDRAIL IS TO BE PAID FOR UNDER ITEM NO. 604-01.04, 1 1/2" STEEL PIPE HANDRAIL PER LINEAR FEET.

(H5) THE PIPE HANDRAIL SHALL BE REQUIRED WITH FIVE OR MORE STEPS AND WILL MEET THE FOLLOWING CONDITIONS:

- ① ON STEPS LESS THAN 44 INCHES WIDE HAVING BOTH SIDES ENCLOSED, ONE HANDRAIL ON EACH SIDE.
- ② ON STEPS LESS THAN 44 INCHES WIDE HAVING ONE SIDE OPEN, ONE HANDRAIL ON EACH SIDE.
- ③ ON STEPS LESS THAN 44 INCHES WIDE HAVING BOTH SIDES OPEN, ONE HANDRAIL ON EACH SIDE.
- ④ ON STEPS MORE THAN 44 INCHES WIDE BUT LESS THAN 88 INCHES WIDE, ONE HANDRAIL ON EACH SIDE.
- ⑤ ON STEPS 88 OR MORE INCHES WIDE, ONE HANDRAIL ON EACH SIDE, AND ONE INTERMEDIATE HANDRAIL LOCATED APPROXIMATELY MIDWAY OF THE WIDTH.

□ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.