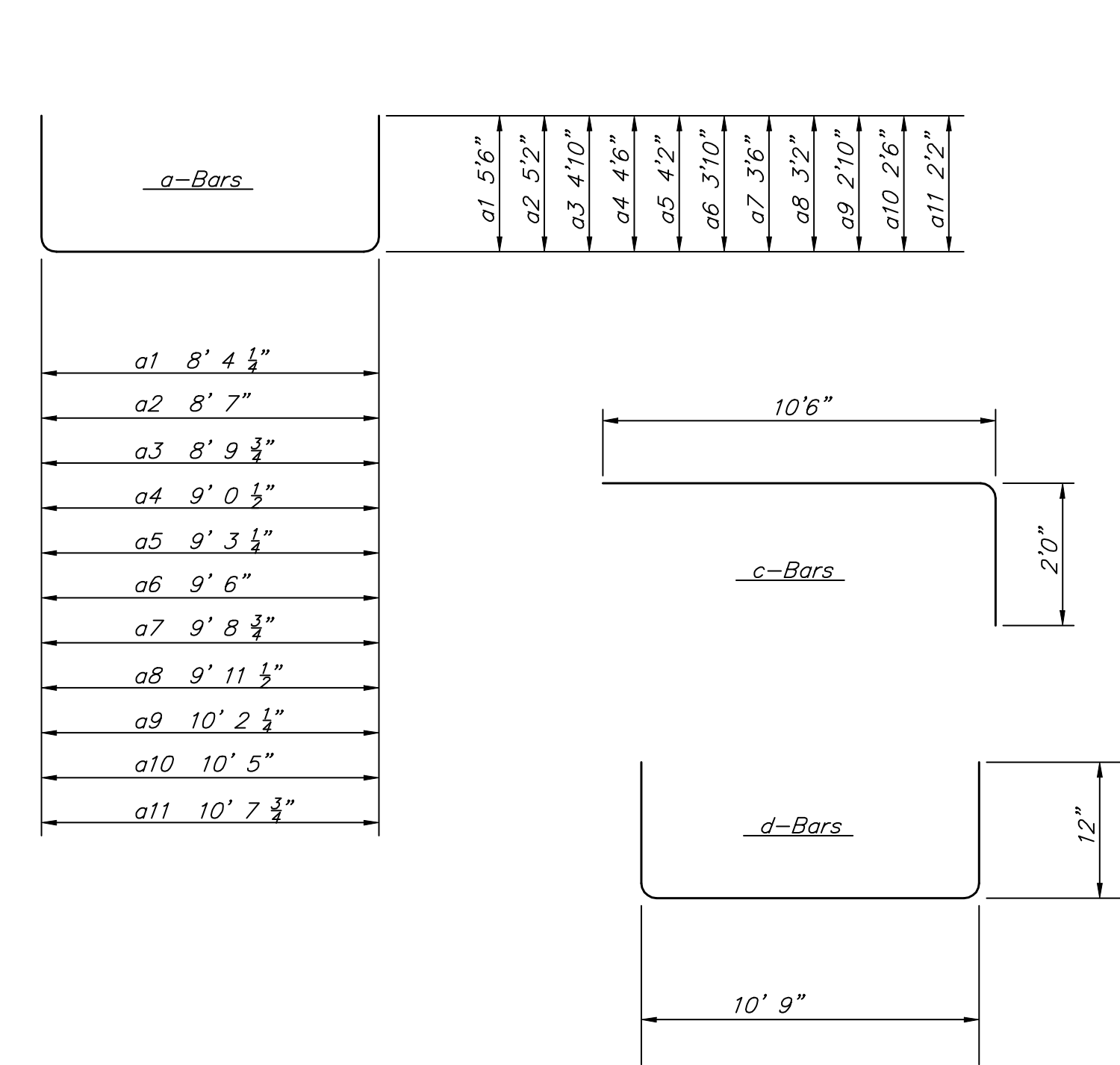
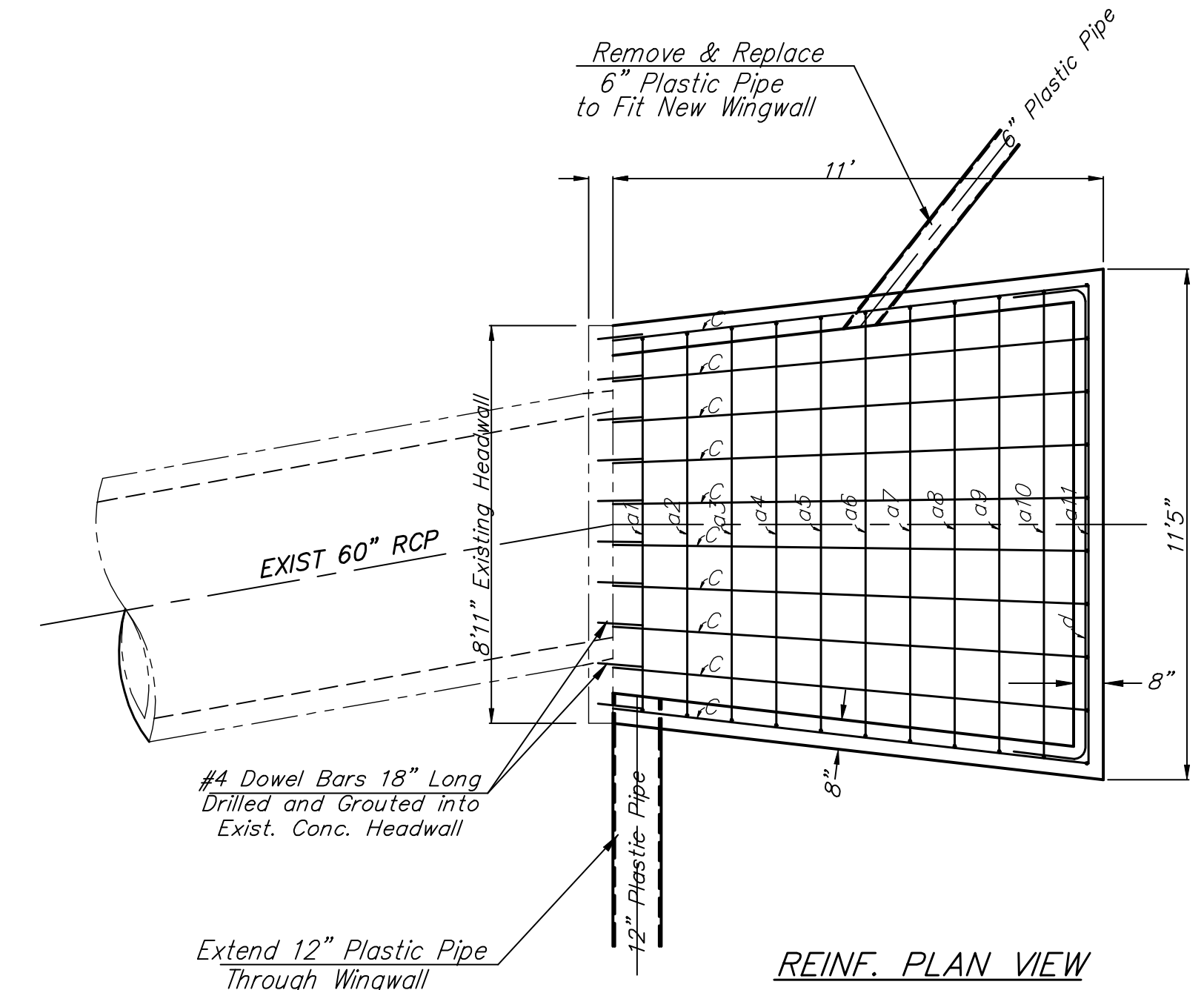
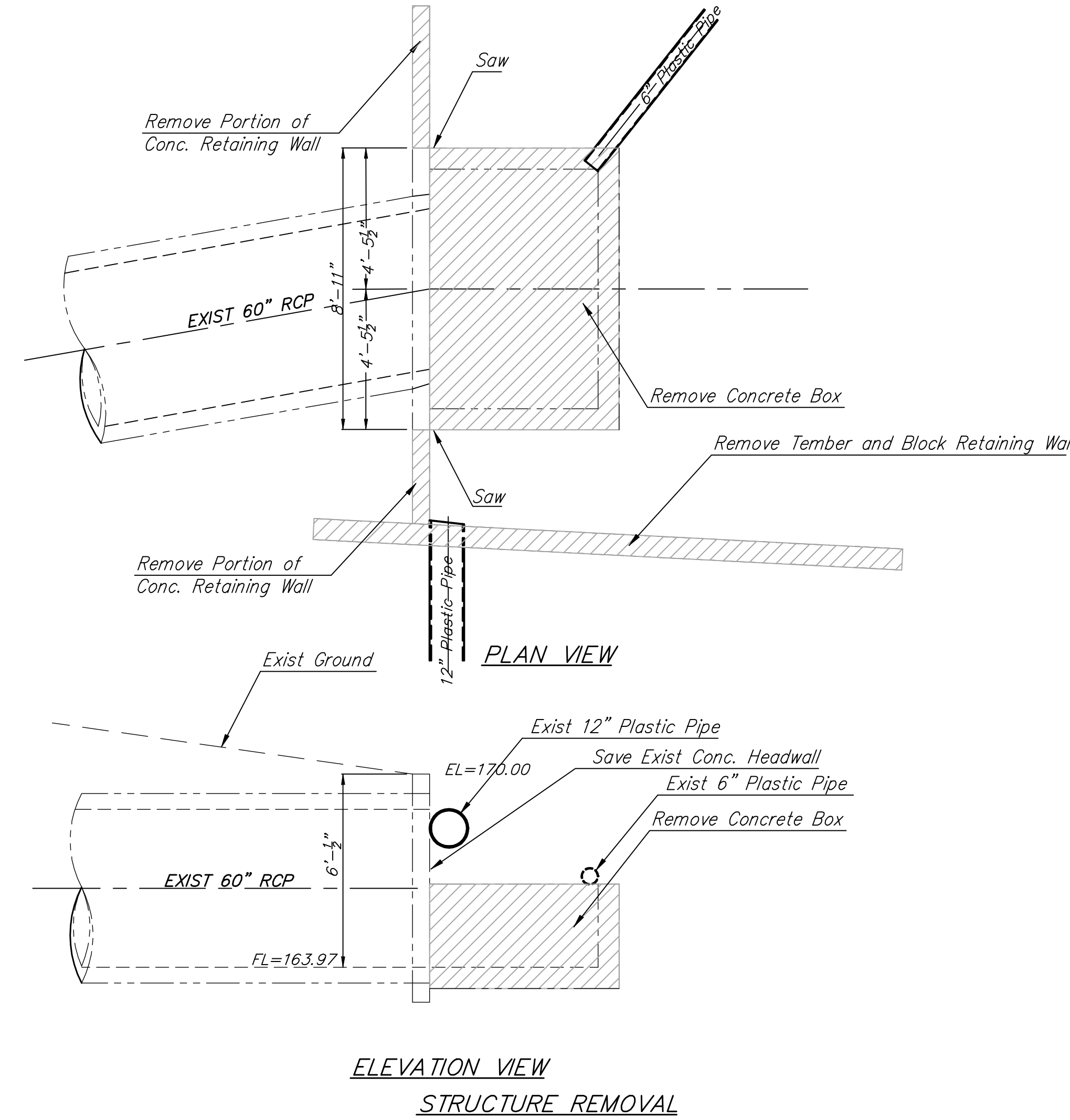
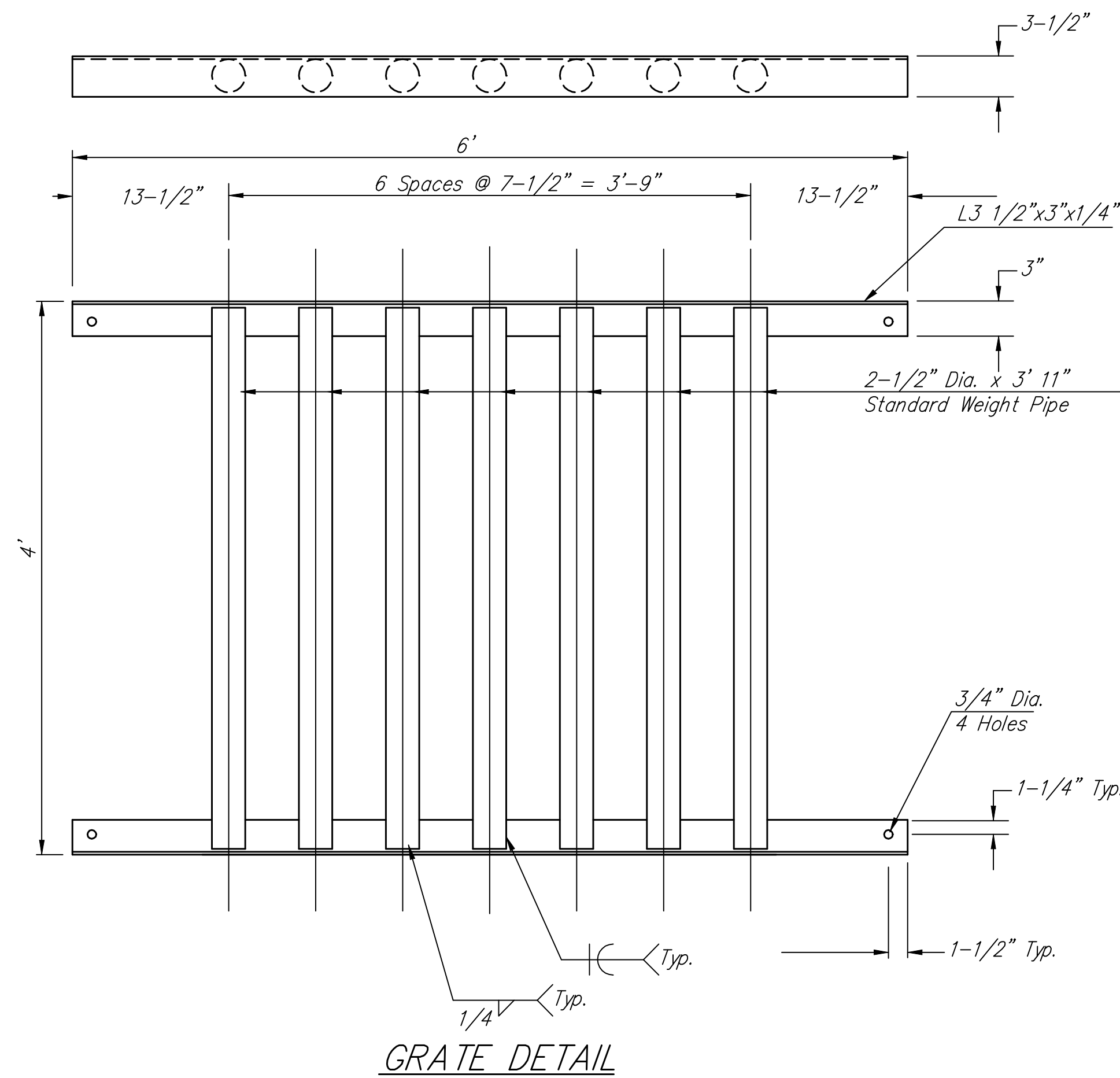


The grate shall be fabricated from standard or commercial grade structural steel and black steel pipe. The unit shall be hot dipped, galvanized after fabrication, in accordance with ASTM A123 except the weight of coating shall average not less than 2.0 ounces per square foot of actual surface and no individual test shall show less than 1.8 ounces of coating per square foot of actual surface area.

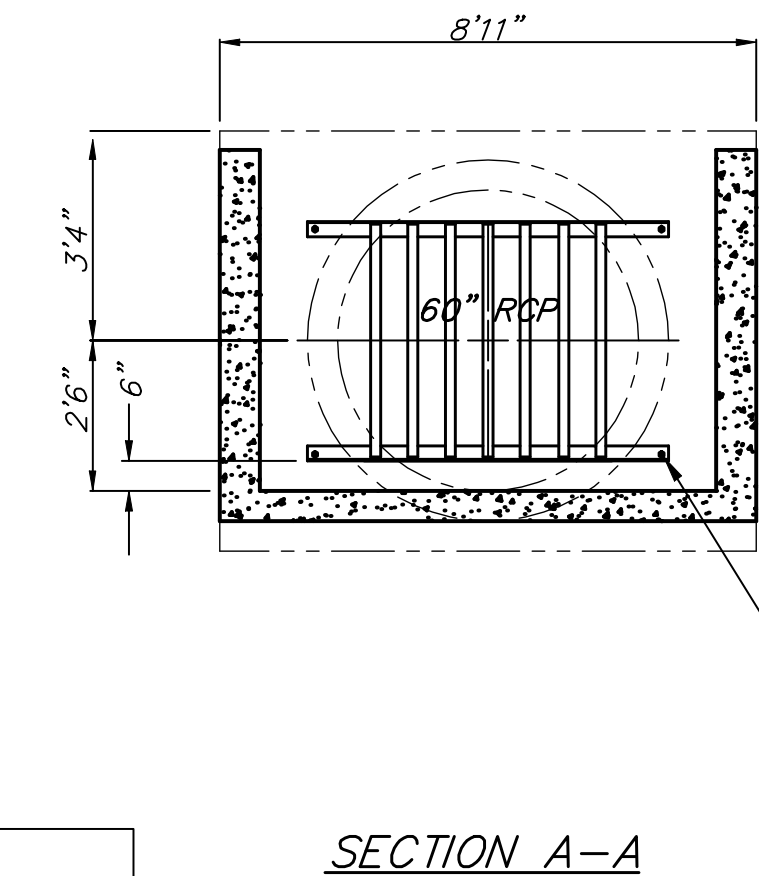


**REBAR SCHEDULE**

Bar	Shape	No.	Length	Weight
a1		1	19' 4 1/2"	12.93
a2		1	18' 11"	12.64
a3		1	18' 5 3/4"	12.34
a4		1	18' 0 1/2"	12.05
a5		1	17' 7 1/2"	11.76
a6		1	17' 2"	11.47
a7		1	16' 8 3/4"	11.18
a8		1	16' 3 1/2"	10.88
a9		1	15' 10 1/4"	10.59
a10		1	15' 5"	10.30
a11		1	14' 11 3/4"	10.01
b1		2	10' 6"	14.03
b2		2	10' 6"	14.03
b3		2	8' 6"	11.36
b4		2	6' 6"	8.68
b5		2	11' 3"	15.03
c		10	12' 6"	83.50
d		2	12' 9"	17.03
dowel		20	1' 6"	20.04
Total Rebar			309.85 Lbs.	
Concrete			4.53 C.Y.	

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Wingwalls Field Bend or Cut Reinforcing as Required for Clearance around pipe openings.  
All Concrete Reinforcement to be #4 Rebar  
All Rebar to Have Min. of 1 1/2" Conc. Cover

- GENERAL NOTES**
- ALL PIPES SHALL BE FLUSH CUT PRIOR TO BEING CAST INTO CONCRETE HEADWALL
  - CONCRETE USED IN HEADWALL CONSTRUCTION SHALL BE SAME AS PER CITY STANDARD PAVING MIX EXCEPT THAT IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
  - ALL EXPOSED EDGES SHALL BE BEVELED 1/2" .
  - REINFORCING STEEL SHALL COMPLY TO A.S.T.M. DESIGNATION A615 GRADE 60. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED.
  - THE "REIN. CONC. HEADWALL" SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH IN PLACE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, CONCRETE, REINFORCING STEEL AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK. MATERIAL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.



Install 5/8" Dia. x 4" Anchor Bolt 4 Places to Match Grate (See Grate Detail)

