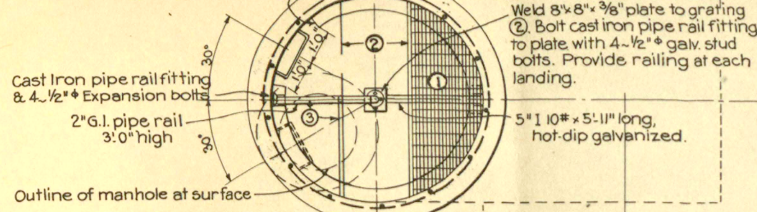
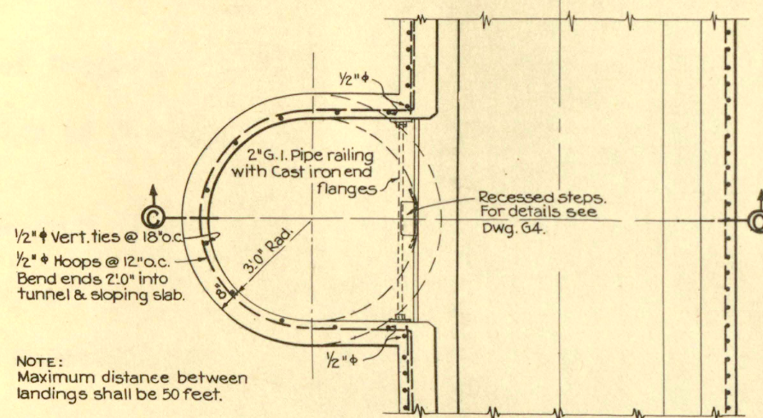


NOTE: Where more than one landing is required openings shall be on alternate sides of beam.
Omit landing ledge at opening.



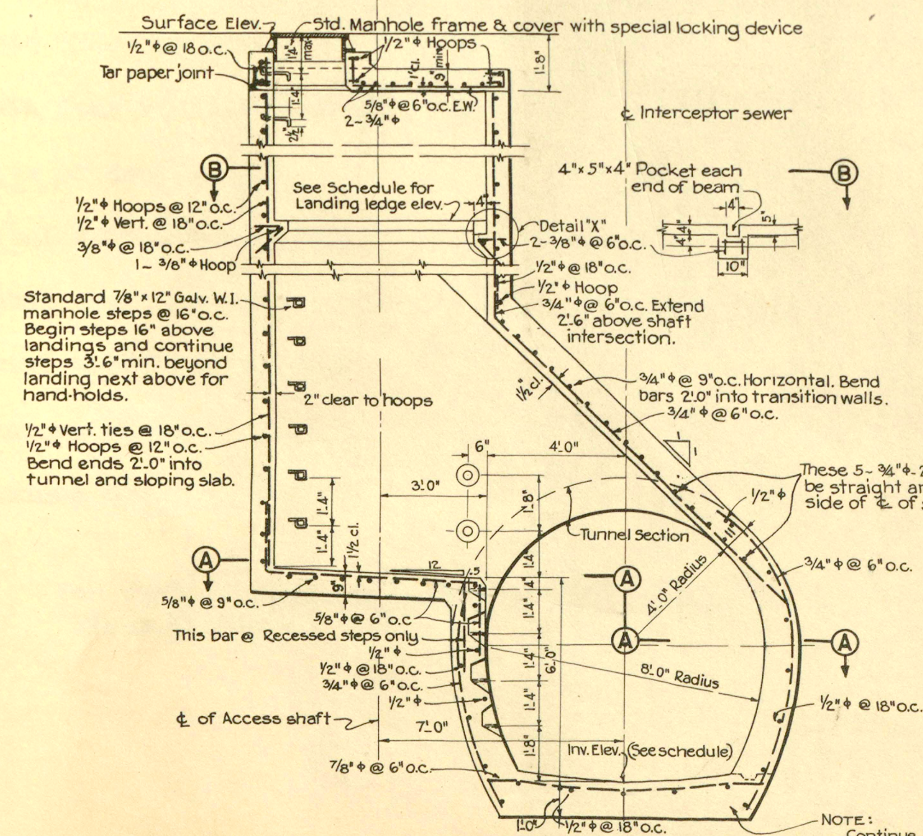
PLAN AT SECTION B-B

Scale: 3/8" = 1'-0"



PLAN AT SECTION A-A

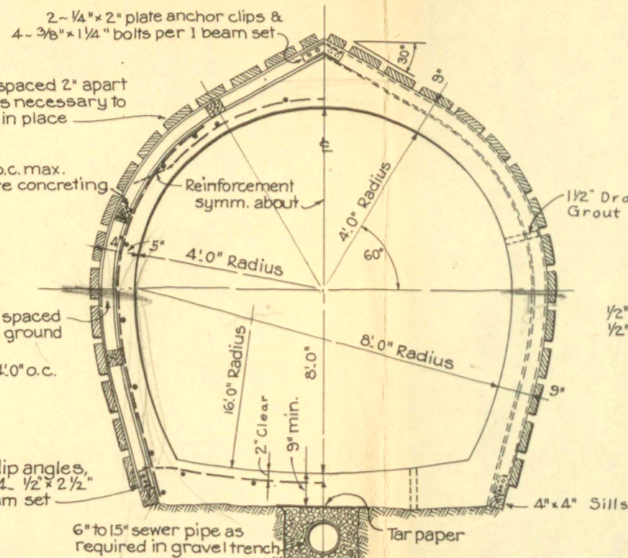
Scale: 3/8" = 1'-0"



SECTION C-C

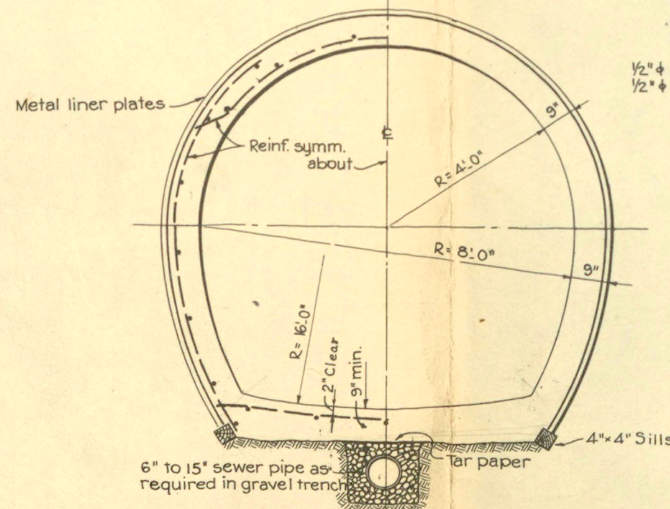
Scale: 3/8" = 1'-0"

NOTE: Continue this Tunnel Section 10'-0" minimum each direction from center of shaft. See Dwg. G3 for tunnel dimensions, reinforcing, etc.



TUNNEL SECTION A

Scale: 1/2" = 1'-0"

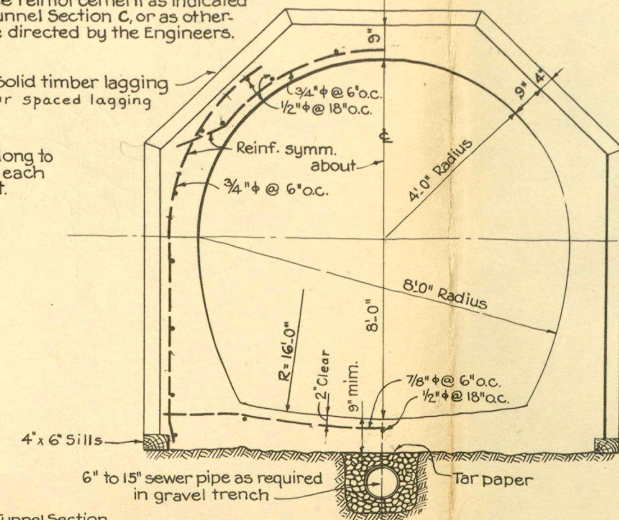


TUNNEL SECTION B

Scale: 1/2" = 1'-0"

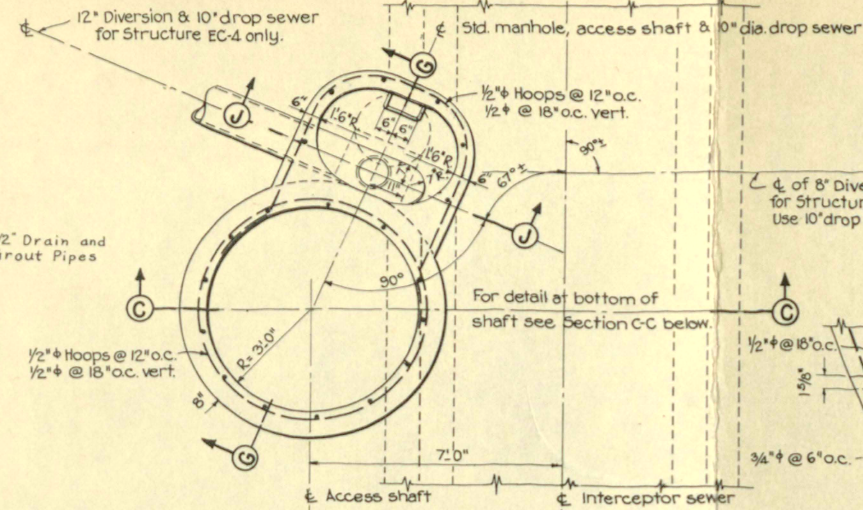
NOTE: The N. Delaware Tunnel may be constructed without reinforcement, but where required by the Engineers the Contractor shall place reinforcement as indicated in Tunnel Section C, or as otherwise directed by the Engineers.

4" Solid timber lagging or spaced lagging



TUNNEL SECTION C

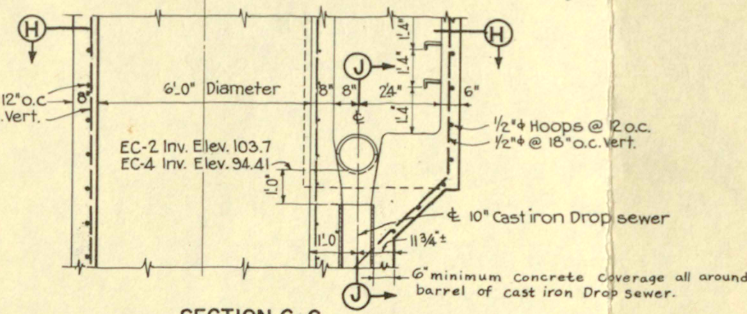
Scale: 1/2" = 1'-0"



PLAN AT SECTION H-H

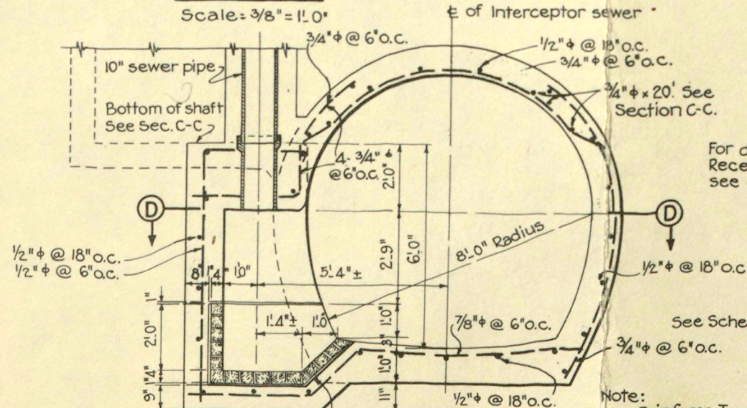
Scale: 3/8" = 1'-0"

NOTE: See details at left for further notes, etc., regarding Shaft, landing ledge, manhole steps, removable grating, beam, shaft entrance, cover, etc. Details "D-D" through "J-J" apply to shaft EC-2 & EC-4



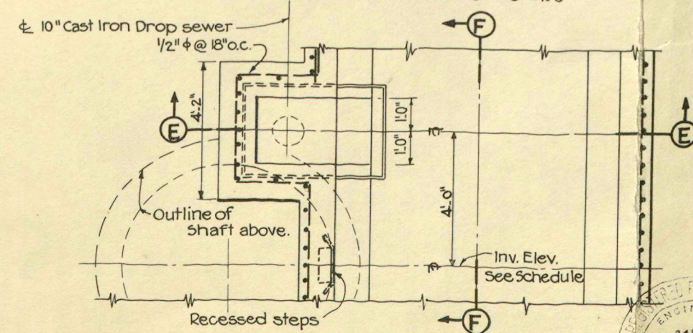
SECTION G-G

Scale: 3/8" = 1'-0"



SECTION E-E

Scale: 3/8" = 1'-0"



PLAN AT SECTION D-D

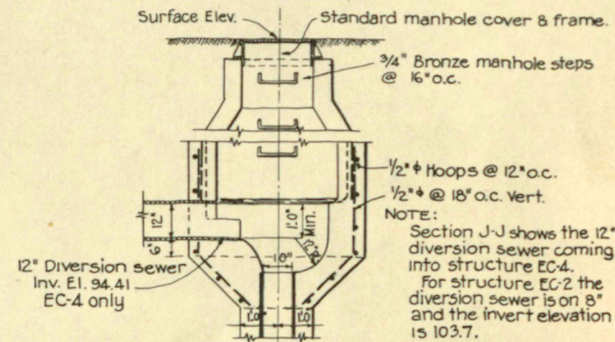
Scale: 3/8" = 1'-0"

Structure No.	Dwg. Reference & Station	Invert Elevation	Landing Ledge Elevation	Surface Elevation
EC-1	EC9 Sta. 54+30	36.27	133.5± 85.0±	179.0±
EC-4	EC6 Sta. 114+10	39.09	76.00	106.0±
EC-2	EC9 Sta. 102+73	38.69	135.0± 90.0±	176.0±

JOINT BETWEEN FLOOR AND WALL

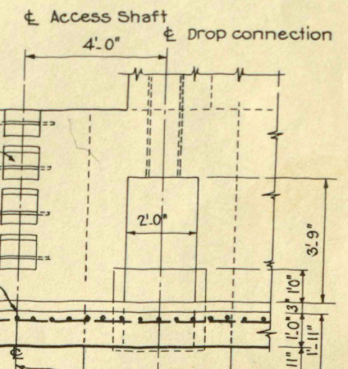
(If Floor is poured first) (If Wall is poured first)

Scale: 1" = 1'-0"



SECTION J-J

Scale: 3/8" = 1'-0"



SECTION F-F

Scale: 3/8" = 1'-0"

NOTE: Reinforcing steel in tunnel only where required due to local ground conditions as determined in field, except as otherwise noted.

ENGINEERS PORTLAND SEWERAGE PROJECT
SPALDING BUILDING PORTLAND, OREGON

CITY OF PORTLAND, OREGON
DEPARTMENT OF PUBLIC WORKS
WM. A. BOWES, COMMISSIONER

EAST CENTRAL SECTION
N. DELAWARE TUNNEL SECTIONS
ACCESS SHAFTS & SEWER DROPS

DATE: 12-18-45	NO. 1	BY: B.M.	APPROVED: [Signature]	DESIGNED BY: H.L.T.	SUBMITTED BY: Thompson
SCALE: SHOWN	REVISIONS			TRACED BY: EMP	FILE NUMBER
				CHECKED BY: H.L.T.	ECIO