Appendix A- Correlation between Ashby, Van Deman, and others with regard to the Aqua Claudia

3-194-193 Beyond the station of Cineto Romano, in a RR cutting.
A Cutting is about a km SSW of station, 100 m to S of a Casello once numbered 56.257. Ground level now at 1.40m. probably originally was 1.80 m to the springing of vault. Vault 1.20 high. Extrados levelled at 314.51. Allowing .50m for thickness of vault, bottom of the piece in the cutting at about 311 m.a.s.l.
VD Channel 1.30m wide, 1.40m high to the impost line. Sidewalls and roof of coarse concrete, large aggregate of local limestone, poor friable mortar.

13-195-195 Near to the entrance of the railway tunnel below S. Cosimato
A West of Casello 53.222. 0.84m wide. Flat intrados on the north side is at 300.51m, pointed on the south side is at 300.48m. Walls 0.38m thick.
VD. Cut in tufa rock, lined with coarse, unfaced concrete. Roof rounded on railwayside and flat topped on the other.

14-195-195 Just below the gorge of S.Cosimato in the bank above the river
A About 100m before the actual gorge. Remains seem to belong to a reinforcing wall below the specus, which was probably not exposed.
VD. Unfaced gray concrete with large aggregate of local limestone. Buttressing wall below the channel.

15-195-N Short distance, further on, in the bank- round shaft.
A 50 m farther on a circular puteus (may be original). The specus is 1.80 m high and 1.05 wide, hewn in the rock.

16-195-195 Below S.Cosimato, in the cliff
A 28m further on from [15-195-N] is the sluice-tower. Travertine threshold 0.13m high, behind which a pair of slots for a sluice gate, and farther behind after an interval another pair of slots, in blocks of travertine, the intervals being filled with brick facing. Beyond second sluice gate comes the vertical shaft, surrounded by brick faced concrete a metre thick to Aqua Marcia, whose floor is 9.20m below.
VD. At this point rock cut channel 1.10m wide. Downshaft to Aqua Marcia, cut wholly in rock is 1.55 m from roof of the channel belwo to the floor of the Claudia above. Shaft is irregularly rectangular in shape on the inside, being 1.03 to 1.33 m wide and about 1 to 1.22 m long.

17-N-195 Near the end of the channel in the cliff
VD. Short stretch of rock cut channel. Later cutting for an alternative channel along the opposite bank of the river as far as the bridge below Vivovaro is visible.

18-N-196 In the cliff beyond the down chanell to the bridge
VD. A short section of rock cut channel, rate of fall .50 m in a metre.

19-201-196 West end of the tunnel under S. Cosimato, above the railway track
A Specus runs through the rock north-west by west in the railway cutting, just at the west end of the tunnel under S. Cosimato; it passes under the north end of the bridge which carries the path from the gorge over the railway.
VD. A few traces of side wall exist, coarse concrete faced with rough reticulate.

20-201-196 On the hillside, west of section house KM 52.164 (Casello 52.164)
A Specus of small blocks of limestone with brickwork below. 150 m NW of the Casello. Specus is 0.87 m wide with walls 0.80 m thick, faced with opus reticulatum.
VD. Crumbling concrete with coarse reticulate of local limestone, roughly cut blocks vary from 5-13 cm on a side, mortar joints unusually wide.
23-201-196 In the olive grove on the east side of the valley below the Casina Nuova [now destroyed (VD, sic)]
A The rounded roof made a sudden drop of 1.10 m, now obliterated. Its height could not be determined, judging by the levels, it must have been over 3 m.
VD. Channel, roof of which was rounded, 80 cm wide and 1.90 m high on the inside, rough concrete, sudden drop of 1.10.

24-201-N A short distance further on
A Specus lined with rough concrete, in the bank above the next railway cutting between caposaldo 232 bis and the railway bridge over the Anio. Levelled here at 288.08.

38-202-200 East of Vicovaro station, on the hillside
A bad late brickwork
VD. rock cut, lined with unfaced concrete

39-202-201 Immediately behind the station of Vicovaro in the cliff near the entrance to a modern tufa quarry
A 1.03 m wide, sides and rounded roof of unfaced original concrete, in rough grey mortar and large caementa of local tufa
VD. Rounded roof, channel 1.03 m wide, cut in rock, lining of unfaced concrete 26 cm. thick. Poor quality, being made of large aggregate of local tufa laid without order in coarse gray mortar of the Claudian type.

40-202-201 A short distance beyond the preceeding
A A little farther southwest exterior faced in opus reticulatum with tufa quoins of coarse work, set in poor grey mortar.
VD. Small piece of channel -now destroyed- poor concrete faced on the outer side of the lower wall with tufa reticulate.

41-202-201 Near Fosso Le Giunte opposite the section house Km 50.351
A Opposite Casello 50.351 in the quarry the bottom of specus is visible. In the path, a little to the south, a circular inspection shaft (those of the Aqua Anio Novus are rectangular) 1.68 m in internal diametre. Opus reticulatum.
VD. Two pieces of same structure visible -back wall of the first of these pieces cut in the rock, while the front wall is built of coarse concrete faced on the inside with tufa reticulate.

42-N-201 Along the upper bank of Fosso Le Giunte
VD. Second piece wholly of concrete with a buttress of the same 1.77 m wide. Channel faced on the inside with tufa reticulate, while buttress has a facing of small rectangular tufa blocks. A little beyond, the outside of a heavy buttressing wall of coarse concrete is visible in the upper bank of the stream, which is faced with reticulate of the Claudian period.

43-202-201 Across the stream of the Fosso Salone, underneath the modern conduit
A Part of specus preserved, arch over stream has gone.
VD. Arch over stream gone. Channel on upper bank 1.19 m wide, coarse concrete.

44-203-201 Near the gardener’s house (Casetta Colonica) in the field below the path
A To the SW of the RR bridge over Anio, about a KM below Vicovaro, just below the entrance of ‘Prima Galleria Alli’ in the power conduit- massive remains. Lanciani estimated their length at about 60 m. Massive buttresses, overgrown on north side of stream, south side Hadrianic. Underneath a modern pink-washed house (casa colonica) original specus. 1.09 m wide, cement lining 0.03 m thick, side walls 1.48 m thick. A few metres north it is 3.10 m higher including pointed roof.
VD. Channel is 1.09 m wide, 3.09 m high, coarse concrete faced with heavy reticulate blocks about 10 cm on a side.

46-203-203 In the ravine opposite the tomb of Maenius Bassus on the Via Valeria
A 200 m farther south in the next lateral valley, a bridge of the Claudia, some 40 m west (downstream) of that of the Anio Novus. Single arch, originally of ashlar, flanked by concrete abutments faced with opus reticulatum. Rounded roof 0.50 m high, width is 1.01 m from lining to lining (upper end).

**VD.** In original form structure had an arch of cut stone with a single opening, channel above it and abutments at the ends made of concrete faced with tufa reticulate. The channel is about 1.23 m wide a little below the bridge. Aggregate is of local limestone and is very large, often 20-30 cm in longest diameter. Stones are laid without order. Facing is irregular and the joints frequently 2 cm or more wide. Reticulate is local tufa, roughly cut, 8-8 ½ cm on a side.

**49-204-205 Fosso Vallana (Maiuro)**

A Bridge is nearly 200 m long, and it is curious that it should have been thought necessary, when the Anio Novus avoided all bridging by crossing both valleys a little higher up. Original bridge of ashlar, on foundations of concrete (now exposed by the lowering of the ground level). Upper works and abutments were of concrete faced with opus reticulatum with tufa coins. Originally specus was not supported by buttresses. Septus 1.00 m wide, side walls 1.05 m thick.

**VD.** Bridge massive arch with abutments, a little more than three metres wide, with a span of 4 ½ m, on heavy concrete foundations. Bridge proper composed of four courses of reddish-brown tufa blocks 86-88 cm high and 1.35-1.80 m wide. Arch-ring of massive voussoirs of same material and general size. Blocks of walls and arch are evenly laid, heavily bossed on the outside. Lower part of bridge somewhat larger but agrees in material and general type as upper.

Central portion 7 low arches about 1.50 m high, 1.80 m wide. Substruction approach to upper bridge consists of a heavy concrete wall 3.10 m wide (without buttresses, arches), channel on top metre wide 2.83 m high, side walls 1.05 m thick. Substruction below lower bridge does not survive, likely resembled the upper end. Concrete coarse but compact, and of good quality aggregate (especially in the foundations), river bed stones and red brown tufa of medium to large size, and is laid in irregular rows. Reticulate reddish-brown tufa, rough cut, very irregular

**Lanciani 136** At Piano Maiuro there are 3 sets of ruins at 260 m a.s.l. The 1st is a long construction of about 60 m reinforced with pilasters or buttresses. The 2nd is a bridge of one arch of 6 m. The 3rd is a substructure perhaps 20 m long reinforced with 4 buttresses

**50-N-207 Above the bridge, on the upper bank of Fosso della Noce**

**VD.** Mass of concrete, aggregate of local limestone is large, laid with no attention to order.

**52-207-209 Livellazione II, 25. Beyond the bridge over the Noce**

A Specus traceable for some way- outer and inner walls faced with opus reticulatum and brick.

**VD.** Concrete, local limestone (large) and grey tufa in aggregate, set loosely in friable mortar of the dirty white/dark grey variety. Facing of tufa reticulate, tufa quoin. Reticulate blocks vary from 6.5 to 8 cm on different sides of same block.

**53-207-209 West of Castel Madama, above the bridge below Fonte Luca**

A 500 m downstream of modern bridge- piece of specus in original construction with 3 buttresses, running along the side of the hill.

**VD.** Coarse friable concrete with large aggregate of local tufa of brownish-grey colour in irregular rows in poor dirt white and grey mortar.

**54-207-209 Livellazione II, 24 Across the valley below Fonte Luca**

A Well preserved bridge, concrete faced with reticulate, 27 arches in all. Arch over stream has a span of 9 m, others quite smaller. Buttresses project 2.50m. Over first arch south of stream specus levelled at 259.39 m a.s.l.

**VD.** Length of bridge about 156 m and width exclusive of buttresses is 3 m. Single arch over stream, 20 or 21 small arches on upper and 8 on lower bank. Stream arch 9 m, 14 feet above bed of modern stream. Small arches 3 m in span, pillars between are 1.60 to 1.80 long. Buttresses are 1.60 m to 1.80 m wide with projection 2.30 m. channel is about a metre above the extrados of the arches and is 1.25 to 1.3 m wide on
the inside. Construction throughout with exception of bridge proper is concrete with tufa reticulate, with small rectangular blocks for the angles and the fronts of the buttresses. Coarse but good quality concrete. Local grey tufa aggregate, marked difference in size in different parts of structure. In foundations and vaults pieces 25 cm or more in length. Same material in walls but much smaller, regularly laid. Mortar coarse, firm in texture, dark grey made of medium clean lime and dark gray pozzolana Reticulate facing irregular. Original bridge over stream may have been of cut stone.

55-208-211 Livellazione II, 23 Opposite section house KM 45.952
A Emerges from underground section, coarse concrete with opus reticulatum.
VD. A considerable stretch extant, coarse concrete of large aggregate and friable gray mortar.

56-208-211 Livellazione II, 58 Just before the new dam at Ponte Rotto
A Exposed by modern quarrying. Rough concrete, unlined with rounded cement roof set on planks. Square puteus with opus reticulatum
VD. 30 m long. Cut through by a farm road to the quarry. Side hill channel of concrete. Cut and cover, round roof, above which is a rectangular shaft. Channel is 1.05 m wide, about 2.05 m high. Walls laid unfaced in rough trenches cut in the refractory limestone of the hill. Wall on upper side about 75-80 cm thick. Roof laid on 5 horizontal planks. Shaft of concrete, faced where it rises above the ground with crude limestone quoins 7-9 1/2 cm on a side. Top of channel is 259.08 m.a.s.l.

57-208-211 Livellazione II, 57 Above the intake dam of the reservoir
A Occurs in small gulley about 500 m from the damn, 1.05 m wide, similar to above.
VD. A few metres beyond above, similar construction. Top of channel is 258.08 m.a.s.l.

58-208-211 Livellazione II, 21 Opposite section house KM 44.886
A Specus similar to 56-208-211
VD. Pointed roof visible in path. Specus 1.05 m wide

59-N-N Farther on, along the hillside. Fragmentary channel, coarse concrete. Original. Not mentioned in the texts.

Fin Pars Superior
From the last remains to below Villa Braschi is a distance of about 6 km. No remains were found in this section. Ashby’s map assumes the Claudia follows the Anio Vetus and the Aqua Marcia (Ashby 208). Van Deman states emphatically that the Claudia does follow the older two aqueducts. (Van Deman 211). We pick it up again at the next original remains.

63-209-212 Beyond Villino Fattori, on Via Carciano, 500 m from Tivoli.
A In building Villino Fattori, a small stretch of it 0.95 m wide was used as a chicken coop.
VD. In building the Villino Fattori, channel a metre wide discovered and destroyed. Its walls were of rough concrete.

64-209-212 At head of 1st small valley on Via Carciano belwo modern road to S. Gregorio.
A Above the ruined chapel of Madonna del Padre Michele.
VD. Lower part of the channel cut wholly in native rock while upper walls and roof of unfaced concrete are built by cut-and-cover method (a type of construction especially in favour in this section with its steep and difficult slopes). concrete of walls and roof is very coarse, with large limestone aggregate laid without order in friable mortar of the dirty white and grey type (characteristic of the period).

65-209-212 A few metres beyond the preceeding.
A Retaining wall faced with opus reticulatum.
VD. Underground channel with retaining wall behind. Wall formed a part structurally of the channel in front of it. Coarse concrete with heavy reticulate facing. Aggregate large, randomly laid, local limestone. Mortar poor, dirty grayish brown pozzolana and not overly clean lime. Facing very crude, mortar joints, 3-5 cm.
Blocks are roughly cut and irregular in shape, of regratory limestone, which forms most common building material of the region. Fronts vary normally from 6-12 x 9-12 cm.

66-N-212 Livellazione II,49 Above the quarry beyond the small chapel beside the road.
VD. A shapeless mass of rough concrete. Channel at 233.59 m a.s.l.

67-209-212 Below the Grotte Sconcie
A Claudia appears below the castellum of the Anio Novus known as the Grotte Sconcie. Lined with irregular opus reticulatum, 1.10 m wide with a pointed roof. Circular puteus.
VD. There exists a small piece of the outer wall directly below the reservoir. Construction agrees with other portions described.

68-210-213 Livellazione II,19. Immediately before and after the downshaft from the Anio Novus to the Claudia
A As above 67-209-212, just on either side of downshaft.
VD. Channel 1.10-1.20 m wide. Construction as above.

69-N-213 Farther on, in the road to a new quarry
VD. Side-hill channel appears again, accompanied as above by a round shaft- channel is of the type found at head of valley below the road to S. Gregorio (64-209-212) with walls partly cut into the rock, in part of coarse concrete faced with rough cut reticulate. In path beyond to new quarry on the hillside above the road and some distance beyond the line is traceable in fragmentary series.

70-210-213 Livellazione II,18. Before the Voltata della Carrozze
A Main channel, rough concrete following the hillside.
VD. Channel agrees closely with above- 1.20 m wide, outer wall of coarse concrete .50m thick, round roof.

71-N-214 Livellazione II,48 Between the voltata and Ponte Arcinelli
VD. Fragments of channel, maybe of shaft. Same construction as above.

72-N-214 Livellazione II 48 In the stream-bed below the Arcinelli
VD. Stream has cut down into the channel which was originally underground. Channel 1.10 m wide. Same construction as above.

73-N-214 On the slope beyond the Arcinelli
VD. Channel at this point is but 89 cm wide and 1.94 m high, exclusive of the pointed roof. coarse concrete, large aggregate of limestone, friable grey mortar. Facing rough reticulate of the same material. The blocks measure 9-10 cm on a side.

81-211-215 Livellazione II,16 Farther on, below the strada di Carciamo
A The specus is now running very close to Strada di Carciano, and the next piece is seen under the road. The whole of the earlier channel appears to have been demolished, except for a rectangular puteus faced with opus reticulatum, refaced outside with post Severan brickwork. Roof is pointed, 0.97 m high.
VD. The shaft in its early form was 1.20 m square on the inside, with outhers walls 60 cm thick, of coarse concrete faced in rough reticulate with tufa quoins.

83-211-217 Much further along same road.
A There occurs a rectangular puteus faced with opus reticulatum.
VD. A rectangular shaft, coarse concrete faced with usual Claudian reticulate.

84-N-217 Livellazione II,16 Below the reservoir at Gericomio
VD. Bit of channel, coarse concrete.
Lanciani 137 "Doubtful whether exactly here or not, but in this area Where the Claudia encounters the Anio Novus above Gericomio the channel measures 2.67 x 1.56 m."
85-211-217 On the banks of foso di Ponte Terra, about 200 m above Ponte Pussiano. 
A Two channels cross the stream, some 15 m apart. Upper late. Lower channel on north bank has a specus 1.17 m wide, with walls 0.90 m thick, good opus reticulatum on exterior with tufa quoins and without any restoration. On south bank are foundations only, rendering it questionable whether any bridge crossed here. 
VD. Lower channel is 1.17 m wide, sidewalls 0.90 m thick. Coarse concrete with tufa aggregate of large size laid in somewhat regular order. The facing is of tufa reticulate with stone quoins, blocks of which are of medium size, regularly cut and laid with close joints measuring commonly but 0.7 cm or little more in width.

VD. 218: Beyond these broken remains, the Claudia (like its predecessors the Anio Vetus and the Marcia abandoning its tortuous way amid the hills with their steep and rocky slopes) laid its course in a direct line across the uplands of the Campagna to the meeting place of the aqueducts near Capanelle, emerging only where its path was cut by a deep ravine.

86-211-218 Fosso dell’Acqua Ramina - upstream from the Ponte S. Antonio
A Originaly a single arch bridge about 2m wide, built in ashlars of reddish-brown tufa
VD. Little has survived - arch wholly dissappeared. Above the stream, the bottom of the channel with original wall on which it rested has been in part preserved. On lower bank a small bit of the cut stone wall of the abutment with a reinforcing wall of concrete behind it.

88-212-220 Livellazione II,14 Across the deep valley of the Mola di S. Gregorio. Forme Rotte (Broken Channels)
A Channel running deep, parallel to the stream, then it turns almost 90° to cross the stream (26 m below in the ravine). In stream and on southwest bank are massive remains in tufa ashlar, drawn from quarries just above the south edge of the bridge. Stonework seems to have been used at the bottom of the bridge, brick faced concrete being used above. If there was an original bridge entirely of stone, no evidence for its existence appears. ‘E’ on A fig 20 still in position, and has an ashlar base under the concrete. Directly under the specus there’s a vertical strip of rubble not more than 1m wide and at least 6m deep, enclosed between the ashlars - may have been dishonestly substituted by the builders.
VD. The bridge was 60m or more long, not far from 40 m high. Remains of abutment at lower end of bridge is about 12 m long and more than 9 m high. Consists of massive substruction with buttresses on either side [later date] on top of which rests the channel. Channel 95 cm wide on inside, 2.35 m high, pointed roof with rectangular shafts. Cut stone walls of the abutment below the channel, consists of two thin outer walls of tufa blocks the space between which was a metre wide and 6 deep filled with a loose mass of earth and broken stone with no trace of mortar - a typical example of the ‘graft’ so common in the work of Claudius.

Note: If the channel crosses the stream 26 m below, how can the same bridge be 40 m high? Even if we were to take Ashby as meaning say, the bottom of the bridge is 26 m above the stream, that is still far too much superstructure to reconcile these two. I used Ashby’s figure in my calculations.

89-213-223 On the lower bank of the stream below the bridge
A Specus enters a tunnel in the rock, 0.85 m wide, roof lined with concrete.
VD. Width of channel, cut in tufa of hillside, .85 m. Sides unfaced but rounded roof lined with concrete.

90-213-223 A short distance beyond above.
A Tunnel, roof lined with concrete, running SSE
VD. Same as above.

92-214-223 Livellazione II,13 Left branch of the Mola, on the right bank below Ponte dell’Inferno
A Pointed specus is 0.84 m wide, with sides of small blocks of limestone 0.40 thick, and 0.30-0.38 m high, while roof is formed by two inclined slabs, each 0.68 m high and 0.27 m thick. Form very strange for Claudia, attribution due to level.
VD. According to Italian engineers, but in general type as well as construction it might well belong to the original Anio Vetus, belongs to Claudia, due to level. Channel in bank 80 cm wide, about 1.5 m high and has a pointed roof. Sides of channel are faced with cut stone walls of local limestone, 3 course high, blocks 30-35 cm wide and 27-56 high. Pointed top strangely reminiscent of an earlier period made of 2 limestone slabs 25 cm thick and 68 cm long, joined at the top so as to form a gable. Construction somewhat crude but the technique in general suggests the development of an advanced period.

93-214-223 North of cemetry of Gallicano, in tenuta di S. Giovanni
A Puteus 0.90 m², opus reticulatum, open for a depth of 6.5 m.
VD. Shaft 90 cm², concrete with reticulate.

94-214-223 Livellazione II,12. Fosse Caipoli below Gallicano, underneath the bridge of Ponte Scalino
A On east side, at north end, 3 fine arches of tufa ashlar are visible. The stream arch if it exists is encased in the modern bridge. Bridge now 3.70m wide overall. Level on highest tufa construction at 199.86m, about 1m below bottom of specus.
VD. In original form bridge 3.10 m wide, now 3.70. Cut stone arches of local brown tufa. Centre of arch towards the east is 94 cm high and the low course of cut stone to the right it is 44 cm wide, vousoirs and the few blocks visible are well cut and carefully laid.

95-215-225 Livellazione II,11. Fosso Collofrì, NW of Ponte Amato, under modern road bridge.
A Originally of ashlar, visible today 3 buttresses on NE bank, 2 on SE bank, one on NW side, a few loose blocks in the stream. 5 arches at irregular intervals on NE bank. Present width of bridge is 4.70 m, or 5.60 m from buttress to buttress. Total length 68.50 m, 8.50 m high at the stream to the top of the string course of the ashlar buttress 0.40 m below the roadway- string probably marks the bottom of one of the two specus. Level of 188.81 taken on upstream side.
VD. Bridge in modern form 680.50 long, 8 m high above the level of the stream. Differing little in dimensions from Roman times. Width increased according to Ashby from 2.82 to 4.7 m. 5 arches and 5 buttresses on upper bank and one buttress on lower bank, bear the unmistakable marks of the period of Augustus. All are of cut stone brown tufa.

97-215-226 In front of the farmhouse called Fienile, behind the fountain
A A curving wall of opus reticulatum at the west end of the fountain 0.60 m thick. Opus reticulatum is irregular.
VD. Wall belonged to outer side of conduit, inner side buried in the earth. 60 cm thick of coarse friable concrete faced both inside and outside with tufa reticulate. Tufa aggregate in concrete mass large, placed with no attention to order. Facing uneven, mortar joints are wide, measuring 1 1/2 to 3 cm. Reticulate blocks of local tufa are irregular in shape and are roughly cut or broken, 7-12 cm on a side, no trace of having been sawn.

99-216-227 West branch of Acqua Nera
A Stream bed is only 5m deep while the shaft is 10.50 m deep. Square, lined with opus reticulatum quoined in tufa - Specus round roofed and apparently unlined. Cut in dark tufa
VD. Shaft of concrete faced with reticulate with tufa quoins. Reticulate blocks of tufa measure 6.75-7.75 cm on a side, about 15 cm deep. Quoins are 8 cm thick, 22 cm long. Blocks and quoins well shaped and cut, but show no use of the saw. Specus cut in tufa, unlined. 1.03 m wide and 1.60 high, has round roof.

100-217-227 Just beyond the preceeding on west slope of hill called Cancellata di Mezzo, on the bank of a small stream.
A Square shaft- present depth of 15 m greatly reduced. rock cut, no traces of lining.
VD. A few metres NW of communal boundary line between Zagarola and Gallican. Cut in soft tufa, unlined. Presently 15 m deep but originally must have reached a greater depth since aqueduct at this point runs at a much lower level.
101-217-228 Fosso Scuro (Biserano)

A A single arch of concrete faced with ashlar belwo and opus reticulatum quoined in tufa above. Bridge is 4.40 m wide, arch has a span of 2.90 m and a height of 2 m from crown to spring. Blocks not rusticated.

VD Arch has a span of 2.90 m and a rise of two metres. Structure throughout of concrete. Lower part of the abutments and arch are faced with cut-stone, the blocks of which are smoothly finished with no trace of bossing, and are carefully laid. 72-74 cm high, 1.42-2.10 m long. Upper portion of the structure with fragmentary channel are faced with reticulate.

102-218-228 Livellazione II, 9 In the valley of the Fosso di Pallavicina, near the Laghetto di Monno

A Great deal of deposit in the field walls on the hill to the east of Laghetto di Monno or della Pallavicina, and also paving stones belonging to a service road for the aqueduct. Sidewalls are 0.85 m thick. The whole is supported by buttresses at an average interval of 6m, 1.05 m wide and projecting from 1.85-2.10 m. 10 buttresses are well preserved on each side, two can be traced at the west end, a large terminal one at the east end. Structure hangs in mid-air over the stream which once passed through a small arch between two buttresses. Lower part of original bridgehead about 2.60 m wide faced with opus reticulatum of selce still preserved on N and S sides.

VD 75 m long, 3 m high over stream. A single arch over stream, substructions, low arches and buttresses on either side. Arch over stream probably of cut stone. Same measurements for buttresses. Selce aggregate dates to Severans.

103-218-230 Livellazione II,8. Near the country road leading to the farmhouse called Pallavicina

A SW of Casale della Pallavicina, piece of substructure about 200 m long. More than half of this is Flavian or Hadrianic. Original was opus reticulatum outside, rough concrete inside. Round topped. 1.16 m wide, sidewalks 0.95 m thick. Floor of specus at 157.93 m a.s.l.

VD Earlier structure preserved along the right side of the road for over a hundered metres toward west, consists of a sidehill channel or low substruction supported with buttresses on the lower side. Coars concrete, large selce aggregate in crumbling mortar, faced on outside with selce reticulate blocks, which are roughly cut and large sized, 8-9 cm on a side. Angles faced with brick and rectangular tufa blocks.

104-219-230 Livellazione II,30 A mile north of Colonna station, over the stream west of the marmorelle.

A Bridge built of selce concrete, faced with opus reticulatum quoined in stone; little way up west bank a string of a single course of broken tiles 0.042 m thick with opus reticulatum below and small rectangular blocks above. Bridge about 4m wide at bottom, with offset at the specus.

VD Small bridge with abutments- heavy concrete with huge selce aggregate and friable mortar. Lower part also faced with coarse selce reticulate with a narrow cornice above it of a single course of tiles, facing above of small rectangular selce blocks 7-9 cm a side, the rectangles are commonly 10-12 cm thick, 19 cm long. Mortar joints 0.5 to 1.7 cm wide.

105-219-230 Livellazione II,29 West of the Colle della Lite in the vineyard of Casale Mattia

A Fragment of substructure some 60 m long with 8 buttresses. concrete faced with opus reticulatum in selce with quoins of the same. Five largest intervals between buttresses have arches of fine tile work. Stream runs over arch in largest interval. After a buttress 2.20 m wide to the east there is an arch 3.78 m wide in span, coming 1.75 m short of the next buttress, 1.79 m wide.

VD Line of substructions with arches, 60 m or more long, carrying the aqueduct across the valley. Structure composed of a series of arches in the centre on the lower side at least by heavy buttresses with a solid wall at either end. Only 6 arches and 8 buttresses now visible. Width of arches in centre is 3.80 m and their height not far from ten metres. Buttresses about 2.20 m wide, diminishing to 1.80 m or less toward the east. Concrete with roughly broken aggregate of large selce pieces, especially foundation, laid without order in coarse though firm mortar. Selce reticulate facing, block irregular in shape 5 1/2 - 9 cm on a side. Mortar joints variable 1-3 cm. Arch facings single concentric rows of small tiles about 35 cm long and 5 cm thick around outside of which is a line of square selce blocks.
106-220-231 On the east slope of Colle I Trugli
A On east side of Colle I Trugli, south of the Ruderi at point 147, about 145 m.a.s.l. channel, round topped and 1.08 m wide. On west side a rock cut shaft 0.70 m in diameter with foot holes.
VD Channel with round roof 1 to 1.08 m wide.

107-220-231 Valley of Prata Porci
A single arch, about 6 m wide, concrete faced with tufa opus reticulatum quoined in tufa.
VD Single arch with abutments and buttresses on lower bank. Concrete with tufa opus reticulatum, quoins of tufa. Reticulate blocks 7 cm on a side, quoins 6 1/2 - 8 cm thick.

108-220-232 Valle della Morte, east of entrance to the tunnel under the hill.
A Fosso della Morte [stream] follows specus of the Claudia
VD A few metres before the modern entrance to the existing tunnel, the floor of the ancient channel is laid bare.

109-220-232 Livellazione II.8 East Branch of Foss della Morte, a few metres beyond the preceding
A Tunnel about 90 m long, height of 3.55 m at east end and width of 2.30 lined with concrete. At the upper end, where it runs due west, the specus is 2.86 m high and 1.10 m wide. About the middle of the tunnel is a circular puteus of concrete now 1.20 m in diameter but originally smaller.
VD Tunnel 3 1/2 metres high and wide at the upper end, diminishing a trifle farther on to 2.55 m in width. Channel on the inside 1.10 m wide 2.80 m high, walls of concrete 40-50 cm thick, roof of same material 70 cm high. Farther to the west tunnel over 2 1/2 m in height/width. Actual channel only 1.5 m wide. Coarse concrete lines channel composed of large rough broken aggregate laid with no attention to order in poor friable mortar. Round roof laid on boards.

111-222-233 Livellazione II.7 North of Villa Centrone, a hundred metres from Casal Moreno.
A A puteus brought to light 100 m to the east. Circular 90 m diameter, faced with opus reticulatum inside and out. Specus lined with rough concrete. Walls .78 m thick, external facing of opus reticulatum. A lateral buttress is faced with small rectangular blocks of tufa.
VD Round shaft, 90 cm diameter, belonging seemingly to the Claudia. Its walls are 60 cm thick, faced with reticulate. Channel (by the spring of the Acetosa) is 1.08 m wide and 2.40 m high. Walls .48 cm thick of concrete with tufa reticulate but unfaced on the inside. Th buttress (as is very common in the original structure) faced wholly with small tufa blocks.

112-222-233 Immediately beyond the preceding
A Tunnel later used by Calixtus II for the Acqua Marrana. Puteus at ESE end, circular and of opus reticulatum. Other putei have all been altered, though some were originally round. Intervals irregular, varying from 74.40 m (249 Roman feet) to 77.50 (259 Roman feet).
VD Tunnel with 10 shafts, about 940 m long. Channel according to Lais 1.30 m wide at upper end. Shafts were probably of rough concrete with reticulate facing (of the Claudian type).

In this area was the clearing basing whence the two Claudian aqueducts joined together for the final journey to Rome. Ashby 224,225, Van Deman 233.
For clearing basin, see Appendix B, 154-N-319
See Appendix C for the combined Anio Novus/Claudia
Appendix B- Correlation between Ashby, Van Deman, and others with regard to the Aqua Anio Novus

9-258-275 Opposite Rovranella, two metres below railway to Subiaco
A Roundheaded, cut in rock and lined with cement, 1.20 m wide.
VD Cut in rock and lined with cement

10-259-276 Livellazione I, 72 Due south of railway station of Cineto Romano, near the bridge of the railway to Subiaco.
A Main channel 0.90 m wide, pointed roof; faced with inferior thin bricks, probably not later than Claudius.
VD Main channel 0.90 m wide, round roof with shaft above it, rough concrete, no trace of facing.

A Below house, specus accessible. Brick facing has been robbed, two triangular bricks undoubtedly Claudian.
VD Channel .87 m wide, .75 m high to impost, round top. Coarse concrete with triangular brick facing.

14-260-276 Liv I.69 Opposite section house km 56.257, below the path of a small modern stream
A Bottom of concrete resting directly upon the rock. Outer wall of opus mixtum.
VD Lower walls of channel about 1.05 m wide.

16-N-277 A little farther on, above the path
VD Original channel a disintegrating mass of poor coarse concrete, faced with irregular reticulate in rough rows. Aggregate of local limestone and riverbed stones laid at random in dirty friable gray mortar. Reticulate of same refractory limestone and riverbed stones. Reticulate blocks 7-10 cm on a side, laid with very wide mortar joints.

A 100 m or more long, following slope, lined with rough concrete.
VD Cut and cover, 95 cm - 1m wide. Rough cut, coarse unfaced concrete.

21-260-279 Just before the path crosses conduit
A Channel can be made out in later encasements.
VD Ridge like mass of coarse concrete.

23-261-279 Ashby says original, van Deman says Hadrianic.

29-262-280 Liv I.63. Below the monastery of S. Cosimato, near the lower end of the bridge of the Claudia
A Intrados of specus levelled at 288.44. 1.18-1.20 m wide, with pointed top. Coarse concrete, without facing or lining. Deposit foul, almost black, and very hard.
VD channel bottom 72 cm from top of Claudia. 1.18-1.22 m wide. Coarse concrete of the Claudian type.

30-262-281 Liv I.62 Along the bank above the entrance to the 2nd tunnel of the modern conduit.
A Long stretch in rough concrete, partly cut in rock and partly laid in earth.
VD Channel partly rock cut, partly of concrete of a medium good type.

31-262-281 Liv I.61 Beyond preceding in the hillside behind the channel of the modern conduit
A next piece no longer visible. Deposit stalactitic.
VD Front wall and channel destroyed by power conduit. Back wall 1.05 m wide. Coarse unfaced concrete, aggregate is of local limestone, large, mortar gray white (common throughout this section)
33-262-281 A few metres further on [from the bridge of the electric conduit]
A channel ran around this minor valley in a specus of concrete faced with bad opus mixtum, preserved for
17.80 m then turned at right angles and crossed a small bridge faced with opus reticulatum quoined in stone.
3.60 m wide excluding buttresses.
VD Bridge 3.60 m wide, one arch. Massive abutments and buttresses on both banks. Bridge and buttresses
usual grey concrete, large aggregate of local limestone. Buttresses faced with tufa reticulate with tufa
quoins.

34-N-281 On lower bank of stream in modern quarry
VD Channel 1.03 cm [sic] wide, rock cut concrete lining 72 cm thick.

35-262-281 Liv I.59 Opposite section house 57.333
A Well preserved typical underground concrete channel
VD Bottom of an underground channel still traceable

38-262-282 Behind section house 50.798 on the southwest side of a small ravine
A At casello a 1st century AD villa with black and white chequer mosaic found, just to east. Specus 1.10
wide, blackish deposit in thin flakes, lower specus wall supported by buttresses of rough, small blocks of
selce, obviously late.
VD Underground channel 1.10 wide, buttresses below choked with deposit. Rock cut, concrete coarse
unfaced lining. Buttresses faced with small blocks of selce.

39-262-282 Immediately behind railway station of Vicovaro, in modern tufa quarry
A 8m above railway line- cut and cover- specus 1.04-1.10 wide, concrete side wall 0.50 m, 2.17 high to
spring of round concrete vault some 0.50 m high.
VD rock cut, lined with coarse unfaced concrete. Concrete retaining wall behind.

40-263-282 Along slope behind the station
A length 20m
VD Upper part of walls of channel with rounded top. Coarse unfaced concrete.

41-263-282 Few metres beyond preceeding, in a tufa quarry
A Another length of 20 m
VD channel 1.06 m wide, 2.10 high cut and cover vaulted roof of concrete laid on boards. Concrete has
large aggregate of local grey tufa in uneven rows with dark grey friable mortar.

42-263-282 Liv I.57 Fosso Le Giunte along upper bank a little above the small stream
A Original specus round headed in rough concrete.
VD Roundtopped 3.63 m high. Heavy retaining wall of concrete with Claudian reticulate. Coarse concrete.
Facing of channel both inside and out medium good reticulate of local tufa. Buttresses faced with tufa block
work.

44-263-283 Farther on beneath the footpath
A In a hole a specus 98 cm wide with inner wall 0.67 m wide set against a vertical rock face.
VD Rock cut circular shaft with coarse concrete faced with crude reticulate. Channel (period uncertain) 98
cm wide.

45-263-283 Liv I.56 fosse Salone, some 50 metres above the line of the Claudia
A Arch over stream has fallen. Specus walls and buttresses in opus reticulatum with stone quoins on both
banks.
VD Abutments 2.89 m wide. Abutment on left bank (maybe also right) supported by buttresses. Concrete
Claudian, large local limestone aggregate and tufa without order in medium good mortar. Facing rough cut
rectangular blocks 7-7.5 cm wide, 20-23 cm long of harder brown tufa of the region. Reticulate blocks 7-
7.5 cm on a side.
49-264-284 Several hundred metres farther on [from tomb of Maenius Bassus]
A Specus appears on line of hillside path, some original brick facing
VD Side hill channel concrete usual Claudian type faced with tufa reticulate.

54-205-285 Above the Fosso della Noce, in the hillside
A Small mass of concrete, 10 m upstream from the Claudia.
VD A disintegrating mass of Claudian concrete marks the emergence of the Anio Novus from the ground.

55-265/206-285 LivI.52.II.62 Fosso della Noce, below the bridge of the Claudia
A Bridge across this deep valley almost disappeared. A206 Pier of unfaced concrete on right bank, mass of rock in stream, left bank ashlar pier belong to the Anio Novus.
VD 15 m downstream of the Claudia by a lofty bridge surpassing in height as well as in length its rival. Single pier, little survives- Claudian concrete, medium large aggregate of grey tufa laid at random in coarse friable mortar. Rough reticulate facing. Large piece of local stone, may have been base of pier since it is exactly in line of the bridge. Abutment on lower bank of cutstone.

58-265-285 LivI.49 West of electric works, in a vineyard.
A Specus in concrete with opus reticulatum of tufa with grey mortar with pointed roof soon curves north along hillside in a cut and cover.
VD Channel with pointed roof, 1.05 m wide grey concrete Claudian type with rough tufa reticulate, 8.5-11 cm on a side, mortar joints 1-2 cm.

59-265-286 LivI.48 Farther on along the sloping hillside, in a small piece of woods
A In the wood it is running 30° W of N.
VD Broken remains of channel with shaft, concrete, shaft faced with reticulate.

62-265-286 LivI.47 At the first turn in the road to Castelmadama
A Outer walls, originally visible, are of concrete roughly faced. Roof is round and shows impression of planks on which it was set. Above it is concrete 0.65 m thick, with a flat extrados, suggestion that the roof also was meant to be convered.
VD Sidehill channel number of metres long. 1.18-1.20 m wide, round roof flattened on top 60 cm thick, which was laid on boards 28-30 cm wide placed length wise. Claudian concrete. Aggregate grayish brown tufa found near to hand, large, laid in rough rows. Mortar very friable, of poor lime and dirty brownish gray pozzolana.

63-265-286 LivI.46 In the valley west of Castelmadama above the bridge of the Claudia
A From above to the bridge, underground for about 600 m. Bridge of considerable size, not as big as the Claudia bridge. Originally opus reticulatum with tufa quoins and voussoirs, stone arches on concrete foundations at the crossing of the stream- probably two such arches, only abutment on east bank preserved. Courses of asomy irregular in height, some blocks are bossed regularly, others irregularly.
VD Length of bridge 160-170 m. Bridge proper one (probably 2) cut stone arches with heavy abutments at either end, line of smaller arches with buttresses on both banks. On upper bank 7 or 8 buttresses, 11-12 on lower. Buttresses now visible 2.30 m wide, 1.95 m in projection with intervals of about 6 m. Channel 1 m wide with side walls 74-75 cm thick. Bridge proper of cut stone brownish grey tufa of the region, with concrete foundations. Courses vary in height from 55-60 cm. Concrete of foundations regular Claudian type. Except for upper part of bridge over stream, the superstructure is wholly of concrete. Aggregate of local gray/brownish grey tufa, medium size irregular rows. Reticulate, quoins, voussoirs all of same material as aggregate. Reticulate blocks 7-7.5 cm wide, 20-25 cm long. Mortar joints vary from 0.7 to 1.5 cm. VD postulates that the Claudia bridge might be by the same builder.
68-267-288 LivL.41 Along the slope north of Osteriola
A Aqueduct continues to follow hillside, in a long stretch, still without regular facing on the inside; on the outside it is faced with late opus mixtum and has been reinforced at least once. Disputes the Livellezzone diagram (fig 41) giving depth from impost to bottom as 1.68. Ashby thinks 2.90 m accords better with the levels.
VD Cut in soft rock. Front wall built of disintegrating concrete. Built against a casing of boards supported at intervals by posts 15-17 cm wide (from impressions left in concrete) Concrete usual Claudian type. Floor 60 cm thick beneath thin layer of cement. Aggregate, especially in the floor is very heavy, 20-25 cm at times. Grey tufa laid in gray mortar, no attention to order. Roof of concrete laid on boards placed lengthwise which are from 20-30 cm wide, 4-5 m long.

70-N-289 LivL.53.d.q Near Osteriola, at the junction of the two branches of the aqueduct
VD 1.23 m wide, cut in rock, rough concrete

71 Below the point of divergence of the branch
Not mentioned in Van Derme's text, nor in Ashby.

72-269-290 Between preceding and the high road. Bridge of Valle d'Empiglione
VD appendix 7 piers, cut stone
A Arches begin north of the road, with a few low arches originally of ashlar. Break at the road where Ashby's diagram begins. From diagram 28: at least 41 piers, at 5 m intervals. 2 sets of ashlar buttresses, either side of the stream, 2m x 3 m. About 14 m high, according to the reconstruction.
VD Remains consist in upper part of section of the lower courses and foundations of the stone piers.
Lanciani 142 At Valle degli Arci the Anio Novus is preserved for about 2300 m, with substructions alternating with arches. The specus emerges from the flank of Moniotola at 260 m a.s.l. It runs above ground for 300 m; on substructions for 250 m; upon arches for 225 m. These arches are designated on the map Fossi d'Empiglione.

73-269-290 LivL.54 d.r. and Fig.44 From high road to the bank of the modern stream.
VD appendix 27 piers and arches of which 18-20 are cut stone original
A Original ashlar masonry frequently reinforced. Whole section much ruined.
VD Structure as a whole was 625 m long, 3.5 m wide, maximum height at stream of 25 m. Originally 50 or more stone piers 3 1/2 m² with exception of those on either side of wide arch beyond modern stream, which were much longer. Arches for most part have 2 opening one above other 3.50 -2.75 m wide, except for the large one. No buttresses, except for those on either side of ancient stream. Type and dimensions of channel no data available. Material throughout local tufa, quarries of which still visible on neighboring hills. Courses of stone differ noticeably in height. Ten typical examples measure from 60-75 cm. Carefully cut with bossed fronts and as a rule laid in alternate rows of headers and stretchers, varying in width from 60-75 cm and in length from 45 cm to 1.5 m. Average width of ten typical blocks 68.8 cm and length 87.6 m.

VD appendix 19 piers (5 buttressed) 15 arches and channel. cut stone and concrete with tufa reticulate facing.
A South bank of stream tufa ashlar. Original single arch (not double) at e' on fig 28 contemporaneous concrete with reticulate against an ashlar pier. At S end work all in concrete with opus reticulatum and stone quoins, against which modern house is built.
VD There remain but two broken arches with a portion of a third beyond. concrete with reticulate of local tufa, with quoins and string courses of the same material. Concrete fair but coarse with aggregate of tufa of the kind used in the stone arches. Reticulate coarse, arch facings of tufa voussoirs. Aggregate measures 20-25 cm in diametre, reticulate 8-9 cm on a side.

A 270, VD 293 Colle Castello - tunnel 41 m deep, 250-255 m long. No remains.
76-270-293 Beyond tunnel in the Valle Barberini
A Original structure was the straight channel. Single arched bridge in tuface ashlar, quarried nearby in hillside at north end of bridge. Solid approaches in concrete with opus reticulatum facing, of which specus probably was also.
VD Tiny bridge of one possibly 2 arches, with short sections of substructions on both sides. Bridge and supporting walls are cut stone of local brownish-gray tufa with possibly a little admixture of limestone. Length of substructions of this period cannot be determined. Coarse concrete with tuface reticulate. Cut stone courses 78-80 cm high. Rough cut and carelessly laid with wide joints. Reticulate in substructures 8-9 cm on a side.

83-273-297 LivI.36 Immediately beyond the farmhouse on the N side of the aqueduct
VD Appendix- Substructions and channel- concrete faced with triangular brick- original
A Long substructure of post-Severan brick faced concrete- specus almost choked with deposit where the house is built against the aqueduct.
VD Few fragments of brick faced concrete wall in the rear of the house, assignable from its construction to the original structure.

85-274-298 Fosso degli Arci
A In lower pier on farther bank there is ashlar still preserved. According to Mr. Newton’s suggestion for restoration the stream was spanned by 5 ashlar arches, four originally in 2 tiers.
VD Bridge over Fosso degli Arci was amongst highest in the whole line. Few remains are left. consisted of a bridge over the stream, abutments and arches at either end. About 275 m long, 35 m high at highest point, width 6-8 m. Original bridge 5-7 arches of cut stone of varying heights, wholly disappeared. Small portion of abutments survive, of local tufa of reddish brown colour. Cut stone varies in height from 60-86 cm.
Lanciani 142 These are the highest arches in the entire aqueduct at 32.5 m.

87-275-299 LivI.34 Fosso Arcese
A About 20m to north of W end of Severan bridge [at 86] a rectangular shaft, probably Claudian seen some years ago, since been filled with rubbish. Probably conveyed water to the Marcia.
VD 20 m beyond Severan bridge, down channel to Marcia, measuring 1*1.40 m on the inside.. Channel and shaft rock cut, coarse concrete lining, large aggregate randomly laid in poor friable mortar. Channel shows no sign of facing, shaft is faced with coarse reticulate with rough cut blocks of local gray tufa. Reticulate blocks 7-8 cm on a side.

Fin Pars Superior

96-277-301 LivI.49 Below the road to S. Gregorio before the reservoir of Grotte Sconcie
A Roundtopped specus 1.27 m wide.
VD Channel with round top. Walls on inside concrete though of an inferior grade as is common in underground structures. Aggregate of local limestone, large, irregular rows, coarse mortar of a dark grey colour. Facing on inside of roughly cut stones.

97-277-301 Reservoir, short distance beyond the preceeding.
A Castellum, with 3 chambers. In centre of each opening between chambers are two pillars to carry quadripartite vaulting of the roof which runs back to main walls. Internal buttresses shown in outline on fig. 31 only run up to the level of the spring of these vaults, on west side a continuous shelf at the same level which also has a flat top; so that by the use of planks it would have been possible to reach any oint of the interior by arched apertures leading easily from one chamber to another. West wall an extremely massive piece of construction, further reinforced by a massive concrete foundation, the edge of which lies some metres away.
VD (Grotte Sconcie) trapezoidal in shape, 3 chambers measured by Nibby are respectively 12.75, 11.27, 11.20 wide and 44 m long including walls. On inside a double row of pillars on which rested quadripartite vaults while along sides buttresses reaching to the springline of the roof. Walls 60 cm thick. Openings
between rooms 1.80 m high. Inlet near upper left hand corner, outlet in the centre of the lower end, while opening for branch channel to lower aqueducts at lower right hand corner. Coarse concrete with triangular brick facing. Aggregate of local limestone, medium to large, rough rows with poor friable mortar. Facing of medium good grade, though less regular on inside of walls. Bricks range in colour from reddish-yellow to dark red, 3-4 cm thick, 28-30 cm long, ten typical examples averaged 3.52 * 28 cm. Mortar joints 1.4 * 1.8 cm wide.

98-277-302 LivI.49 Below the large reservoir of Grotte Sconcie
A supply channel, 0.87 m wide with rounded roof.
VD Clearly traceable from reservoir to Anio Vetus where it ends abruptly. Width on inside 0.87 m. Coarse concrete faced on inside with triangular brick. Roof is pointed and built of concrete of a heavier type laid on boards placed lengthwise.

101-279-303 Over six metres beyond [shaft to the Marcia, 100]
A Downshaft to Anio Vetus. Brick work, walls 0.75 m thick, no less than 1.1 m wide.
VD Portion of back and side walls on an inclined shaft. Construction similar to the reservoir and branch channel.

102-279-303 LivI.49 Along hillside beyond reservoir (main channel)
A Intended to be used by engineers of modern Acqua Marcia; abandoned the scheme after clearing the specus of deposit. Was half full of deposit, a solid mass 0.60 m deep leaving a channel 0.50 m for the water.
VD Channel 1.37 m wide and 1.83 high with a round top. Construction identical with reservoir. Heavy concrete lined with triangular brick. Roof is of coarser concrete laid on boards about 27-32 cm wide. Bricks vary from 2.7 cm to 3.5 cm wide, 23-35 cm long. Mortar joints usually 1.5-2 cm thick.

114-281-305 300 m above Ponte Pussiano, near Casale Gericomio.
VD Appendix says reservoir, concrete faced with brick.....Claudian(?) [sic]
A Building which seems to be reservoir where Valle Barberini branch rejoins Tivoli branch. Cistern with 2 chambers each measuring 10.82 m long by 7.15 m wide. Upper end specus enters 1.22 m wide choked with deposit, about 2 m from north-east angle. Dividing wall 1.82 m wide. Aperture in this wall 3.46 from SE, aperture in exit wall 2.47 from SW. Brickwork certainly not earlier than Severan. Over each aperture a relieving arch, a light shaft 1.20 m² in lower chamber, may have been another in upper, the vaulting having fallen away.
VD Remains are still preserved of a small reservoir in which the waters of the branch channel from the valley of the Empiglone were once more united with those of the main channel.

115-281-306 LivI.25 S of Casale Gericomio on the N side of Fosso delle Mandorle
A Hillside specus, faced with rough opus reticulatum inside and rectangular blocks of tufa outside. Roundheaded vault. Circular puteus 2.39 diametre overall, faced with opus reticulatum inside and roughly laid small blocks of tufa.
VD Back wall of shaft, small section of channel either side. Shaft outside diametre 2.30 m, medium coarse concrete facing on inside with reticulate and on outside with small tufa blocks roughly laid. Aggregate of local tufa, medium size irregularly laid in grey mortar. Round topped channel 1.12 m wide, identical in construction with shaft. Reticulate blocks measure 7-8 cm on a side.

116 would seem to be referring to 115.

188-N-306 On north bank of Fosso Acqua Raminga
VD Channel with square shaft. Channel 80 cm wide, concrete faced with reticulate. Aggregate large local tufa. Medium clean grey mortar. Reticulate blocks measure 6.8-7.5 cm on a side.

119-282-306 LivI.24 Fosso dell'Acqua Raminga (Ponte S. Antonio)
A Original bridge of ashlar with abutments of concrete. Central arch 32.30 m height, 10.40 in span. It has two prominent oversailing courses, and farther below two corbels, probably to take staging for repairs.
Upper width 2.60 m, length almost 120 m. The two piers on each side of stream have lateral buttresses, so has the second on each side beyond them. At S end specus still in ashlar supported by concrete faced in opus reticulatum quoined in tufa. Width of specus 1.0 m from ashlar on west to later brick lining on east, height 3.12 from intrados to oversailing course in stone. Stone blocks have bossing 0.11 m. On west side of aqueduct and north of first archway leading through it one block (0.44 m high) has M.V. 0.11 m high. Seems ancient. On 2nd arch from north end P.R. (0.13 m high).

VD Central arch over stream, including abutments on both banks 120 to 125m long, maximum height about 30 m. Width varies in different parts, at bottom 9-11.15 m on upper bank, 15-18 on lower bank. Central arch is 32.30 m high, 10.40 m wide. 6 narrower arches above and 2 below, abutments about 22 m long on upper bank with very short one at lower end. Small arches vary from 5-6 m in width. Piers on upper bank above central arch with one at lower end of series are practicly square, 4.5m in width and length. Piers on either side of the arch over the stream with one immediatley to the south 5 1/2-6m in length. Piers next to stream with the 2nd from them on both banks reinforced with buttress 1.60-1.70 m long, with projection 1.50-1.60 m. Channel rests directly on extrados of the arches below. 1m wide with side walls 90 cm thick. Cut stone of grey brown tufa of region. Abutments of concrete faced with tufa reticulate with tufa quoins. Concrete medium good quality, large aggregate of local tufa laid in rough rows in compact mortar of white and grey type. Stone courses are from 53-77 cm in height, laid in alternate rows of headers and stretchers. The bossed fronts have a projection of 11 cm. The stones vary from 53-87 cm in height, 75cm - 1.5 m in length. Reticulate facing of the abutments (with which the stone of the bridge is carefully bonded) vary from 6.2-7 cm on a side. Ten typical examples averaged 6.7 cm. Quoins usually 7-8 cm wide.

Lanciani 136 The specus crosses the river near the chapel of S. Antonio. There are two levels of arches, 3 on the bottom, 5 on the top. The height to the water channel is 31 m, the length is 105 m.

120-308-284 200 m above the bridge of Forme Rotte
A Rectangular shaft 0.90x1.70 m and perhaps 50 feet deep.
VD Rectangular shaft of considerable depth 90x170 cm.

122-284-308 Fosso della Mola (Forme Rotte)
A Bridge would have been 40 m, highest in whole course of the aqueducts. Nothing left of the bridge. Original construction seen at base. Ashlar of limestone and tufa blocks, on SW bank of ravine 1 block in situ belonging to the right hand side of the specus, tufa on concrete, only trace of construction at this height.
VD Bridge according to Ashby (Builder 142) about 55 m long and not less than 50 high. Only trace of Claudian period single block of tufa on gorge wall. The single block which remains measures 60 cm high, 71 cm wide, 74 cm long.
Lanciani 144 The bridge at Forme Rotte is composed of one arch, with two lateral arches, crowned with a much elevated attic.

123-285-311 Liv.1.23 On lower bank of the stream at the end of the bridge abutment
A Rock cut, rounded concrete roof. Circular puteus of opus reticulatum 1 m diameter.
VD Channel 1.20 m wide, walls unlined, round roof faced with rough concrete. Shaft 1 m on inside, concrete faced with Claudian reticulate.

124 would seem to refer back to 123

125-285-311 Liv.1.22 East division of the lower branch of the Fosso della Mola
A Single arch bridge of ashlar. 3.80 m wide at base, decreasing to 3.20 at arch itself. Specus ashlar of local porous limestone from a bed which lies immediately above tufa on which bridge rests.
VD Wholly of cut stone. Porous limestone quarried from nearby hills. Technique of structure poor. The height of the individual courses differs greatly, from 45 cm to more than 90 cm. Individual blocks show no general unit of measure- 45-67 cm wide, 95-1.5 m long.

126-286-312 Liv.1.21 At end of western division of lower branch of the Fosso della Mola
A Rock cut specus, concrete lining 0.50 Round headed roof rough concrete. Channel 1.60 m wide.
VD 1.06 wide wall and roof rock cut, lined with coarse unfaced concrete. Concrete inferior, large aggregate (20-cm in largest diametre) dirty firable mortar.

127-286-312 Beside footpath to high road.
A Puteus 1.30 m² with opus reticulatum of tufa inside.
VD Puteus 1.30 m² on the inside, coarse concrete with reticulate. Reticulate 7.5 - 9 cm on a side.

128-288-312 LivI.20 Below Gallicano underneath Ponte Scalino
Anio Novus crosses with Claudia, Ashby and Van Deman describe at 94-214-223 (Appendix A).
Incorporated into modern road bridge.

130-288-312 LivI.19 NW of Ponte Amato, underneath modern road bridge
Anio Novus crosses with Claudia, Ashby and Van Deman describe at 95-215-225 (Appendix A).
Incorporated into modern road bridge.

132-288-312 LivI.18 South of the ancient Via Praenestina near the farmhouse of the Fienile
A Line of substructures about 230 m long. Bridge over stream ashlar 2.60 m wide. Tufa voussoirs have holes for swallow-tail clamps in pairs at ends in which some traces of cement remain. Also dowel hole in centre of lower edge to attach to next voussoir sideways.
VD 230 m long, 2.60 wide, voussoirs with swallow tail clamps held with cement. Channel itself is 1.32 m wide and about 2.83 high, sidewalls 75 cm thick.

134-289-314 LivI.17 To the west of a footpath leading to the ancient Via Praenestina
A Specus wall, concrete and opus reticulatum 40 cm with Hadrianic brickwork above.
VD 40 cm high and then Hadrianic brickwork. 1.97 m wide, walls 1.40m and 0.57 m. large tufa aggregate with coarse grey mortar. Outside tufa reticulate.

136-290-314 LivI.16 Fosso dell'Acqua Nera (Ponte Barucelli or Diruto)
A Bridge 83.95 m long, originally ashlar
VD 83.95 long, 5 wide. Maximum height 9.90. Cut stone (tufa) in Claudian times.

138-291-316 LivI.15 Across narrow ravine of the Fosso Scuro (Biserano)
A Ashlar, arch over stream span 4.70, another on east bank. Opus reticulatum, originally 2.70 m wide. Specus at end of bridge round topped 1.18 wide.
VD High central arch of cut stone with abutments/buttresses on both sides, heavy superstructure of concrete supporting channel. 2.70 m wide. Tufa from quarries still visible on banks of stream. Rock cut channels at ends of bridge 1.18-1.20 m wide, round topped. Cut stone 60-74 cm high with bossed fronts.

140-293-317 LivI.13 Across first stream beyond Casale Marmorelle
A Bridge in original selce concrete, almost entirely destroyed.
VD Small bridge over tiny stream consisting of broken mass of unfaced concrete which originally formed the abutment on lower bank.

141-293-317 LivI.12(caposaldo 78) At the second stream beyond the Casale Marmorelle
A Considerable remains of substructure concrete with opus reticulatum of selce with quoins of selce. N side 6 buttresses. 4 on east side, 2 on west side of stream, S hidden. Specus 2 m high excluding vault, sidewall 0.90 thick. Interval between buttresses about 4.95 m, 1.50 m wide except for one nearest stream 1.80. Projection of 2.35. Exterior faced in hydraulic cement.
VD Six buttresses about 5 m apart, one by stream 1.80. Coarse aggregate of selce, large at bottom small at top, brown gray-black mortar. Walls: reticulate facing local tufa with quoins of same. Buttresses faced in selce. Selce aggregate very coarse. Individual pieces vary in size according to their place in the structure. Those in the lower part often exceed 20 cm in largest diameter, while those in walls higher up do not measure normally over 8-10 cms. Reticulate measures 7-8 cm on a side. Buttresses faced with irregularly
cut rectangular blocks of selce 6.5 - 8 cm wide and 20-30 cm long. mortar joints very irregular 1.5-3.5 cm wide.

142-293-318 LivI.11 Over stream in broad valley of Prata Porci
A Single arch, 6 m span. Original wall opus reticolatum 2.85 m wide, reinforced with brick walls 2 m thick on each side, buttresses of same material on the west.
VD 2.85 m wide. Walls built on bed of friable light brown tufa, walls wholly of concrete with large aggregate of local tufa and selce with coarse mortar. Channel 1.15 wide with side walls 0.80 m. Reticulate facing 8-9 cm on a side.

143-293-318 LivI.10 Valle della Morte, in vineyard near footpath
A Concrete specus with curved intrados, 1.20 m wide.
VD Underground channel 1.18-1.20 wide, 2 m high rock cut. Roof lined with coarse concrete.

144-294-318 LivI.26 Short distance beyond preceeding
A Little bridge of concrete, faced with opus reticolatum quoined in tufa. Specus 1.10 wide with sidewalls 0.85, reinforced on SE by wall of opus reticolatum 0.75 thick, buttress 0.90 thick faced with small rectangular blocks of tufa. To NW of aqueduct a distribution tank 0.60 x 0.90 with walls 0.15 of opus reticolatum. Pipe gives inscription with name of Aurelius Alexander- to his villa? Other pipes had been found in the past.
VD Bridge with abutments, buttresses. Abutment on SW bank consists of two walls. Concrete on inner wall very crude- large aggregate carelessly laid with carse friable mortar. Facing of rough tufa reticulate, with quoins of smae. Channel 1.30 wide, sidewalls 0.77, 2.73 high. Channel height 2.73 m.

145-295-318 LivI.9 Beyond these remains near the Fontanile Transanelle
A Specus 1.30 m without cement lining increasing to 1.60 higher up with pointed roof, sidewalls 0.77. Concrete unfaced inside, faced outside with opus reticolatum quoined in stone and bonded with a double coarse of short bricks.
VD Channel agrees in construction and period with bridge described above.

148-N-319 LivI.6 About 100 m East of the tenuta di Casal Mareno (Acqua Acetosa)
VD Rock cut, lined with coarse concrete 2 m high.

152-N-319 East of Villa Bertone, W of driveway along the Marrana Mariana
VD Upper part of channel made of selce concrete of the Claudian type.

153-N-319 NE of the Villa, in a field.
VD Short section of channel with round roof, coarse concrete. Outside faced with reticolatum, rough on inside.

154-N-319 Fifty metres east of the Villa
VD Where the waters rest then keep going. Rectangular basin, 21.60 m long by 8.90 m divided into 2 compartments. Larger one, on SE, measures inside 6.50-6.70 x 12 m, NW 6.50-6.70 x 6 m. Outer wall 1.20 m thick. Lower part of basin coarse concrete of selce aggregate faced with large reticulate.
Lanciani 146 The piscina is 34.04 m long by 9.5 wide. The interior chamber towards Marino is 9.5 m x 5.94, that towards Rome is 19 x 5.94 m.

The Anio Novus here joins the Claudia; see appendix C.
Appendix C- Correlation between Ashby, Van Deman, and others with regard to the Aqua Claudia and Aqua Anio Novus where they run together

113-226-234 Northwest of Villa Bertone, along the avenue of Pines
A Settling tank of the Anio Novus only some 50 m to the east of Villa Bertone. A long stretch of the specus of the Anio Novus and the Claudia was found and destroyed in 1887 in the making of the avenue which leads NW from the Villa to the RR station of capannelle. Only 60 m preserved. Bottom slabs of peperino 3.19 m in breadth, generally 0.59 m thick (others were found to be 0.955 m wide and 4.35 m thick). Lateral walls are of 3 courses of tufa blocks, total height of 1.78 m. Bed of cement at bottom 0.15 thick making effective height about 1.63. cover slabs were also 0.59 m thick, then a layer of cement 0.18 thick (for bottom of Anio Novus). Anio Novus: sidewalls were 0.75 m thick, faced with brick to a height of 0.83 and with opus reticulatum above that. They were lined with cement 0.04 m thick and the specus was 1.05 m wide.
VD Originally 300-400 m long with the Anio Novus already on top. This was the beginning of the famous substruction 609 paces (900.17 m) long. Only 60 m now preserved. Channel 98 cm. wide, 1.78 m high. Walls of 3 courses of peperino which normally are 59-60 cm high though occasionally reaching 1 m. Floor and roof slabs are of same material 3.20 m long and 60 cm thick.

114-227-234 Beyond the road to the station of Capannelle, almost opposite the Chapel of S. Antonio.
A Interval of 150 m, near chapel close to station. Sidewalls of Claudia specus unfaced concrete (being laid in trenches between which the earth removed to form the channel, and the coverslabs superimposed. 1.10 m wide without cement lining. Peperino coverslab 0.47 m. Anio Novus measurements the same as previous.
VD For 150 m no remains found. Two specus continue on for 200 m. Sidewalls of the Claudia are coarse unfaced concrete laid in parallel trenches, 50-60 cm wide and about 1.15 m apart, earth removed to form the channel. Concrete very rude with heavy aggregate of peperino and selce, laid without order in coarse mortar of the dirty-white and red variety. Roof slabs of peperino 45-47 cm thick.

115-228-234 Some distance farther on, beyond the crossroad from the Via Appia Nuova to Via Tuscolana.
A The Claudia begins to run on arches. 2 small ones close to road, small knoll in which vousoirs of 2 more seen, then they are buried, then interval of some 20 m before the well known line of arches begins.
VD Small group of 2 arches with broken channel, serving as an advanced guard.

116-228-234 50-60 m beyond preceding
A [Ashby quotes at length Lanciani Melanges de l'ecole francaise xi (1891) 172 and PBSR iv, 110 but modifies where necessary with his own observations]. 155 piers and 154 arches. Piers 3.35 m wide, 3.10 m thick. Lowest course of blocks projects 0.15 m farther. Height of blocks varies 0.55 to 0.75 m, average of 29: 0.658 m. Length of blocks varies, one was full length of thick pillar, 3.10 m. Distance pier to pier 5.60 m. Height varies with the ground, first less than 1 m, last 6.58 m. Piers have a cornice 0.35 m high, serving as an impost to the archivolts which consist of a single ring of blocks. Arches and 2 specus 2.52 m thick. Every 11th pier reinforced with 2 buttresses at right angles to the axis of the aqueduct, 1.30 m thick, with projection 1.50 m. These decrease as height increase- at upper end of arches buttresses are only 0.35 m thick with a projection of 1.20 m. They also increase as arches grow higher, for at S end of 3rd group of twenty arches the buttresses on S side were 1.40 m thick with a projection of 2.10 m. Whole construction is of peperino, sometimes a few blocks of tufa inserted; while in some piers there may be one course of tufa to 9 of peperino. Only 3 piers of the whole 155 are entirely of tufa. Specus of the Claudia rests upon a fillet which crowns the archivolts, sides 1.79 m high and 0.65 m thick, 1.10 m wide. Specus of the Anio Novus 1.14 m wide and 1.25 m high to spring of concrete vault. Vault rests upon fillet 0.40 thick with a bed of concrete 0.45 m on it. Side walls are concrete with brickwork below and opus reticulatum above on outside, lined with brick up to the spring of the vault inside. Both specus are lined with hydraulic cement 0.15 m thick at the bottom, 0.006 m at sides. Interval between the bottom of the Anio Novus and the intrados of the Claudia about 1.00 m
VD Arches rise from less than a metre to more than 9 metres. May be divided for sake of concenience into 9 small groups separated from each other by buttressed piers
NOTE Van Deman lists more groups than the 9, and still has not enough piers to fill this section which her appendix says has 153 piers- which in turn does not agree with Ashby. The missing ten or so arches might be explained by the buttressed piers which divide the '9 small groups' from each other.

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<thead>
<tr>
<th>group</th>
<th>1</th>
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| # arches | 7 | 20 | 20 | 10 | 10 | 11 | 13 | 10 | 17 | 8 | 17 = 143 arches

VD cont. At fifth arch from beginning 5-6 m height, at opposite end near Roma Vecchia height not less than 13 m. Lower portion of structure 3.10-3.30 m wide. Above springing of arches width 2.50-2.55 m. Piers 154 in number [155 in appendix] rest on heavy bases of wide courses of peperino or local tufa blocks projecting 15 cm beyond face of piers, which in turn rest on massive concrete foundations. Piers proper are about 3.10-3.30 m wide, 3.30-3.35 m long. Interval distance 5.50-5.60. Stone courses alternately headers, stretchers. Blocks 50-75 cm high, usually headers 45-85 cm (or more). Stretchers run from 50 cm- 3.30 m. Top of piers crowned with a low course of peperino slabs 35 cm high which projects 30-25 cm beyond the face of piers forming a triple cornice. Arches span 6.15-6.20 m, 2.60-2.65 m deep, interval at spring line 2.60-2.65 m. Height varies from less than a metre above ground level at upper end to over 6 m at Roma Vecchia. Soffit of arches not flush with face of piers but set back about 38-40 cm. Arch rings composed of 17 voussoirs about 1.15 m to 1.20 m long, with exception of the two longer ones at the ends with which corresponding voussoir of adjoining arch form continuous bases for spandrels above. Channel rests immediately on crown of the arch, 1.85-1.90 m high, 1.20 m wide. Walls 65 cm thick, consist of 3 courses of peperino 63-65 cm high, floor and roof of peperino about 50-55 cm thick which project about 24 cm beyond face of walls. Eleven buttresses on either side. At eastern end 35 cm wide by 1.20 in length, at opposite end not less than 1.30 m wide and 1.55 m long. Material employed as a rule peperino with considerable mixture, especially in lower part of the piers, of the cheaper local tufas. Two varieties of local tufa especially conspicuous- first light red, second grayish yellow (quarries of which are numerous in the region) contact surfaces of stones roughly worked and fronts heavily bossed.

Lanciani 146 The first section of arches between the piscina and Roma Vecchia= 155 piers, 154 whole arches. Piers 3.35 on front, 3.10 deep. First level of stone above ground sticks out 0.15 m. The height of the stones is not constant varying 0.55 to 0.75. Out of 29 measurements the average size is 0.658. The length is variable also, the longest being 3.10 m. The distance to the next pier is 5.60m. The height of piers varies with the terrain. Piers are crowned with a cornice 0.35 m, serving as an impost for the archivolts, which are composed of one level of stone. The whole structure above the impost cornice is narrower than the piers at 2.52 m. Every 13th pier is reinforced with two buttresses, normally to the axis of the aqueduct, 1.30 m on the front and 1.50 on the flank. This measurement shrinks with height. At the eastern extremity of the arches the buttresses are 1.20 m x 0.35. They seem to be original because they have the same impost cornice. In general all the piers are of peperino, though some have a level of tufa above 9 levels of peperino. 3 of the 155 are completely of tufa. The specus of the Claudia rests upon a dado which crowns the archivolt. The sides of the specus are 1.97 m high, 0.65 m thick and each contains 3 levels of stone. The specus of the Anio Novus rests on a similar dado. The sides are partly brick, partly reticulate. Both specus are lined with cocciopesto, 0.15 m thick on the bottom, 0.06 on the sides.

117-230[?]-238 Opposite the farmhouse of Roma Vecchia
A A hundred metres farther on [from the one fine arch near the casale] there is a reinforced stone arch, followed by the brick reinforcing of another pier.
VD Single cut-stone arch and beginning of a second, fine piece of channel above them, on top of this a fragment of the Anio Novus. supported by reinforcing arches of the Hadrianic era.
From 117 to 124 impossible to reconcile Ashby with Van Deman
If my identification above of Ashby with Van Deman is correct, then counting inclusively from 117 to 124 (opposite to Casale Roma Vecchia to under the RR line to Naples) gives:

VD Appendix:
Arches 2 3 3 4 [just says arches] 6 =18
Piers 2 5 5 6 8 3 =29

VD Text
Arches 2 3 4 2 6 =17
Piers 5 6 8 =24

Ashby
Arches 1 4 2 11 6 =24
Piers 1 3 =4

124-230-239 Under the old railway to Naples
A When the RR to Naples by way of Cassino was constructed in 1890, foundations of 3 piers were discovered, with 1 course of blocks of stone each.
VD In laying the RR to Naples in 1890, lower part of the stone piers of the original conduit was discovered and destroyed.

125-230-239 Beyond the old RR to Naples
A 6 arches and a gap of 2
VD 6 arches and eight piers. Construction throughout is of cut stone.

126-230-239 A little farther on
A 14 arches, finest in the whole stretch, estimated to reach a height of 27.41 m. [Quotes Lanciani at length.]
Piers measure on average 3.705 m wide, 3.50 thick, and are from 5.25 to 5.71 m apart. Greatest height is 25 courses, or 16.85 m, adding to which 10.56 for height of the arches, specus, cornices (total 27.41 m). Lanciani measured some of the blocks, 2.51x0.86x0.62, another 1.98 x 0.99 x 0.71, a third 2.28 x 1.02 x 0.64 giving average cubical content of 1.40 m³. Tufà blocks mixed with those of peperino; some piers have 3 or 4 courses of peperino.
VD Height about 27.40 m. General dimensions agree with the lower arches to the east. Piers (16.85 m high) trifle more massive, being 3.50 m wide x 3.70. Courses of alternate headers and stretchers commonly 59-65 cm. Blocks vary in length from 50 cm - 3m
Lanciani 147 The wonderful arch- the piers measure on average 3.705 x 3.50 on the front and the flak, and the interval is 5.48 m (from 5.25 to 5.71). At the highest point there are 25 levels of stone (16.85 m) to which is added the height of the arches, specus, cornices (10.56). On the 14th of May, 1879, I measured some of the stones. I found amongst them one 2.51 x 0.86 x 0.62; another 1.98 x 0.99 x 0.71; a third 2.28 x 1.02 x 0.64: giving an average volume of 1.40 m³.

127-231-240 A short distance beyond the preceding.
A 3 arches
VD 3 arches which agree in type and construction with those above.
Lanciani 147 In general the piers in this section are of peperino interspersed with tufa. Some have 3 or 4 levels. Only one is completely of tufa, and it has Severan reinforcements. There are holes in the piers and arches where people searched for clamps. This is a useless activity because the stones are laid and joined with a thin layer of lime, sometimes tinted red.
130-231-240 East of RR to Naples, where the Claudian Aqueducts cross the line of the Marcia. The Claudia turns nearly at right angles, crosses the Aqua Marcia, then turns a second time to resume more or less its former direction. At both turns stone work almost entirely removed except from the very first pier. New direct RR to Naples on the other side of the turn, stone pier of turn remains, with springs of the arches in both directions. All that remains is the stone pier, with arch on either side (which stood between the pier above and the Marcia) wholly disappeared, though impressions remain on later concrete encasements.

131-232-241 Tor Fiscale
A Tor Fiscale is the 17th century name, derived from an official of the Papal treasury, for the medieval Torris S. Iohannis [400 metres from the previous section]. Tower erected over a zigzag by which the Claudia crossed the Marcia a second time and kept its direction. One original arch preserved in the north side of the tower. Bottom of the pseucus at 69.197 m. Pier of Claudia has some very late brick-faced concrete at its base. Between these two double right-angle turns must be placed the camp of the Goths, in AD 537 as described by Procopius.
VD Between the above and Tor Fiscale, no remains visible at present. This was where the camp of the Goths was. Two fine piers and 1 arch of the original conduit with channel above is preserved in the medieval tower. Construction is of cut stone of the regular type of the Claudian period.

133-235-241 Opposite Casale Rampa.
VD appendix six piers (fragmentary) and five voussoirs of one arch- cut stone.
A Near the farm house called Frattoria G. Rampa are more piers, mostly robbed of ashlar.
VD Original structure has been entirely destroyed, with the exception of five voussoirs belonging to the last arch and a few broken bits of cut stone adhering to later concrete.

136-N-244 further on, northeast of Casale Rampa.
VD 3 broken piers and 2 arches of original conduit with small piece of structure above. Agrees in type and construction with those farther east.

138-N-244 Beyond the preceding
VD One of the original piers with beginning of the arch on either side. Normal Claudian construction.

139-N-244 Some distance further on
VD Arch ring of original arch was visible a few years ago.

141-N-244 Between preceding and the tramline to Frascati
VD One fragmentary pier has been found, which has now disappeared.

142-235-245 Between tramline and Porta Furba
A Original stone arches reinforced under Hadrian.
VD Consisted at an earlier time of 16 cut stone piers and 17 arches belonging to the older conduit with the channel above them. 3 stone piers and five arches with a small piece of channel now distinguishable. Width of lower part of the conduit is 3.25-3.40m, upper part above impost line 2.60-2.75m. Piers are about 4.20 m long and 3.25 m wide, span of arches 6.10 m. Channel is of the regular type, being 1.15 wide on the inside and 2.05 m high. Walls are about 65-75 cm thick.

143-237-246 Across the Via Tuscolana, to the left of the fountain at the beginning of Via del Mandrione
A The Claudia turned at right angles, its stone blocks have all been removed, including those of a large buttress at the turn.
VD Of the heavy pier which marks the site of the first of these turns, it has been destroyed in great part, though impressions of tufa blocks in mortar of later encasing wall establishes positions, dimensions, of 2 maybe 3 of its massive buttresses.
141-151 Remains are divided by VD into sections based on buttresses/turns. In her appendix, she gives 8 groups dividing up 91 piers; in text, 8 groups dividing up 91 arches. It works out to '18,8,15,8,10,9,18,5'. Can follow this on Ashby's fig. 23. Where the diagram says 'four surviving piers to 2nd turn at Porta Furba' A 237 gives 7 niches corresponding with original ashlars. VD's first group of 18 only seems to have 17 on A's diagram, if including 90° turns just before the Acqua Felice crosses to the Marcia. A gives details about later restorations only, but mentions at A 238 a cippus found between the 16th and 17th piers (which would be VD's group 3, #8+9), but not mentioned in VD. It lay 3.58 m from centre of arches on edge of the ancient road.

VD describes all original remaines in section at VD 247- height of conduit to top of channel is 16.60 to 16.80 above the present ground level, which is not less than one-two metres higher than ancient level. Lower part of aqueduct is 3.30-3.40 m wide. Superstructure not more than 2.75, piers normally 4.20 m long and 3.30 m wide with intervals of about 5.60 between them. Channel is 1.10-1.15 m wide, 2.30-2.50 high (including the roof), with walls 75-80 cm thick. Construction very regular in materials and technique. 7 of 80 original arches (90 original piers) have keystones of travertine. Foundations where visible are of coarse firable concrete with large aggregate of local tufa and selce.

152-157 VD's appendix says in next section to Aurelianic walls, 7 arches, 8 piers of original still standing. VD 149-50 indicates at least 9 arches original. A 240 talking about the Acqua Felice, in 57 arches of the Acqua Felice follow 16 arches in which original, Hadrianic, and very late work can be seen. The foundations of 1 pier were found in the cutting of the connecting line for the railway to Florence in 1890. Selce concrete 4 m thick, 3 wide, 2 high. In total 4 piers and 1 arch found.

158-241-250 Between the angle of the Aurelian wall near S.Croce in Gerusalemme and Porta Maggiore.
VD appendix - 36 piers, 40 arches
VD text 50 piers, 49 arches originally, now 41.
A 45 piers, of which 34 are now standing.
VD Piers measure 4.02 by 3.60 m at base and are 5.50 m apart.
VD Piers have length of 4.02 m, width of 3.60 to 3.70 m. Construction does not differ from other sections.
Lanciani 150, S.Croce in Gerusalemme to Porta Maggiore. 34 piers are standing, originally 45. They measure 4.02 x 3.60 m, the interval being 5.5m. The 14th and 15th piers have 2 large buttresses 3.50 deep and 3.25 m wide.

159-242-250 Porta Maggiore
A Built of travertine, 24 m high, 32 m wide. Two road arches 14 m high, 6.35 m wide, 6.20 deep. In central pier a small archway 5.10 m high 1.80 m wide. Above this at same level in North and South piers are open arches, framed in engaged columns with composite capitals and entablature, never fully carved. Attic is divided by string courses into 3 panels, lowest purely ornamental, upper 2 front each specus. Inscriptions upon them.
VD Cut stone travertine, famous arch over the two roads is 32 m high and 14 wide. Opening of the arches are 6.35 m wide, 6.20 m deep, and about 14 m high.

160-162 VD Appendix gives 2 arches, 8 piers
A 242 cites Lanciani Forma Urbis 32,31,24 indicating 26 piers, of which 3rd, 4th, 5th just inside Porta Maggiore. Each measured 4.10 x 3.65 and were 5.80 m apart, ashlars masonry of peperino. A 243 Between these and those of Aqua Marcia were 3 others in tufa ashlars 3.30 x 2.70 about 6 m interval. He discounts the suggestion that here the Claudia and the Anio Novus were running seperately (his footnote #3, p243: Bull.Comm 1912, 235). 5 more piers found at 1.75 below modern level- concrete foundations 5.10 in length and 4.50 m apart, but subtracting 0.54 m on each side we arrive at size of masonry piers which agrees with the 4.02 and 3.58 recorded by Lanciani on the piers of the former Vigna di S.Croce. The dimensions no doubt conform to a standard.
VD 251 5 piers below Viale Principeessa Margherita. Regular construction with foundations of coarse concrete on which rested in one example a course of tufa or peperino blocks of the usual type of the Claudian period.
A little farther on, near the so-called temple of Minerva Medica

The castellum has completely disappeared since 1880. Before that Lanciani wrote 'the terminal castellum, at which the arches of the Claudia and the Anio Novus ended still exists in ruins near the three arches of the railway'. Piranesi's engraving shows 3 lofty chambers side by side with a much lower chamber to the northwest; in the internal face of each larger chamber are two double relieving arches of large tiles.

According to the plan of Lanciani the castellum measured on the outside 21.50 m long and 14.20 m wide and was divided into 5 chamber. Construction, so far as can be gleaned from Piranesi was of cut stone with vaults of concrete.

Fin