

<p>SUPERSEDED BY EI 85-023 EFFECTIVE 8/29/85</p> <p>PRELIM BUREAU REVIEW MAY 7 1981 ROOM 408 BLDG. 5</p>	<p align="center">ENGINEERING INSTRUCTION</p> <p align="center">NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p> <p>SUBJECT: CONCRETE COLLARS FOR PIPE EXTENSIONS</p> <p>Subject Code: 7.27-1-603</p>
<p>Distribute: <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Regions <input type="checkbox"/> Special</p>	<p>Code: <u>EI 81-24</u></p>
<p>APPROVED: <i>[Signature]</i> Deputy Chief Engineer (Facilities Design Division)</p>	<p>Date: <u>4/28/81</u></p> <p>Supersedes: <u>EI 79-51</u></p>

This EI administratively supersedes EI 79-51 but will incorporate the provisions of that EI, plus it transmits four (4) new special specifications to provide pipe connections to headwalls and other concrete structures.

The superseded EI 79-51 established Pay Item 603.77 Concrete Collars. This item started with last year's February 28 letting, and was required because the bell and spigot details of modern pipe cannot directly accommodate those of older pipe. Older pipe here is assumed to be that manufactured prior to the mid-sixties approximately.

Details of a suggested collar were shown on EI 79-51 and are repeated here. The main office Final Plan Review Bureau will insert them into future proposals calling for items 603.77 so it will no longer be necessary to detail them on the plans.

This EI also transmits the attached Main Office inserted special specifications listed below and Figures 1 & 2 depicting their suggested installation details. These have been prepared as a result of a request by the AGC that standardization also occur in the area of attaching pipes to headwalls and other structures.

Since the attached specification itself contains construction details for pipe extensions from headwalls on Figures 1 & 2 it will not be necessary to redraw these on the plans.

- 15603.7712 Concrete Collars for Pipe Extensions
(Inside Diameters less than 48")

- 15603.7713 Concrete Collars for Pipe Extensions
(Inside Spans less than 58")

PREL
DESIGN

Subject: CONCRETE COLLARS FOR PIPE EXTENSIONS

15603.7760 Concrete Collars for Pipe Extensions
(Inside Diameters 48" and greater)

15603.7761 Concrete Collars for Pipe Extensions
(Inside Spans 58" and greater)

You will note the payment units for the above item are on an each basis and that drilling, grouting and concrete are included. These new items shall be used commencing with the letting of September 3, 1981, but may be used earlier if desired.

RHE:LWB:JO

15603.77

CONCRETE COLLARS FOR PIPE EXTENSIONS

Description. This work shall consist of constructing concrete pipe collars for extending pipe from headwalls and other structures as shown on the plans and as indicated by the Engineer. The drilling, positioning and grouting of the dowel bars shall be as indicated herein.

Materials. Materials for constructing pipe collars shall meet the following requirements;

- Portland Cement Concrete..... Section 555, Structural Concrete Class A
- Dowels..... Section 556, Reinforcing Steel for Concrete Structures except Grade 40 may be used
- Concrete Repair Material.....701-04
- Grout.....701-05, Concrete Grouting Material

Construction Details. Holes shall be drilled into the existing headwall, structure, etc. with equipment and in a manner approved by the Engineer. The Contractor's drilling method and equipment shall not damage the existing structure. The holes are to be surface dry and clean of all material for the full depth before placing the grout. The grouting material shall be mixed and placed in accordance with the manufacturer's instructions. The holes shall be filled with enough grout so that when the dowels are inserted full depth the grout will completely fill the void and ooze out allowing it to be struck off flush with the existing surface. The dowels shall be worked back and forth to insure complete coverage with the grout and to drive out entrapped air. The final horizontal and concentric position of the dowel may be set with wedges or concrete chips.

Concrete shall be placed in accordance with the requirements of Section 555, Structural Concrete.

When extending concrete pipe from older installations with new pipe requiring elastomeric gaskets, a smooth flow line surface must be obtained. All annular depressions and gaps in the bottom half of the periphery are to be filled with concrete repair material as indicated in the plans.

The butting joint area shall be so finished that the interior pipe surface shall be smooth and even for all joints.

Method of Measurement. The quantity to be measured shall be the number of concrete collars incorporated into the work in accordance with the plans and specifications.

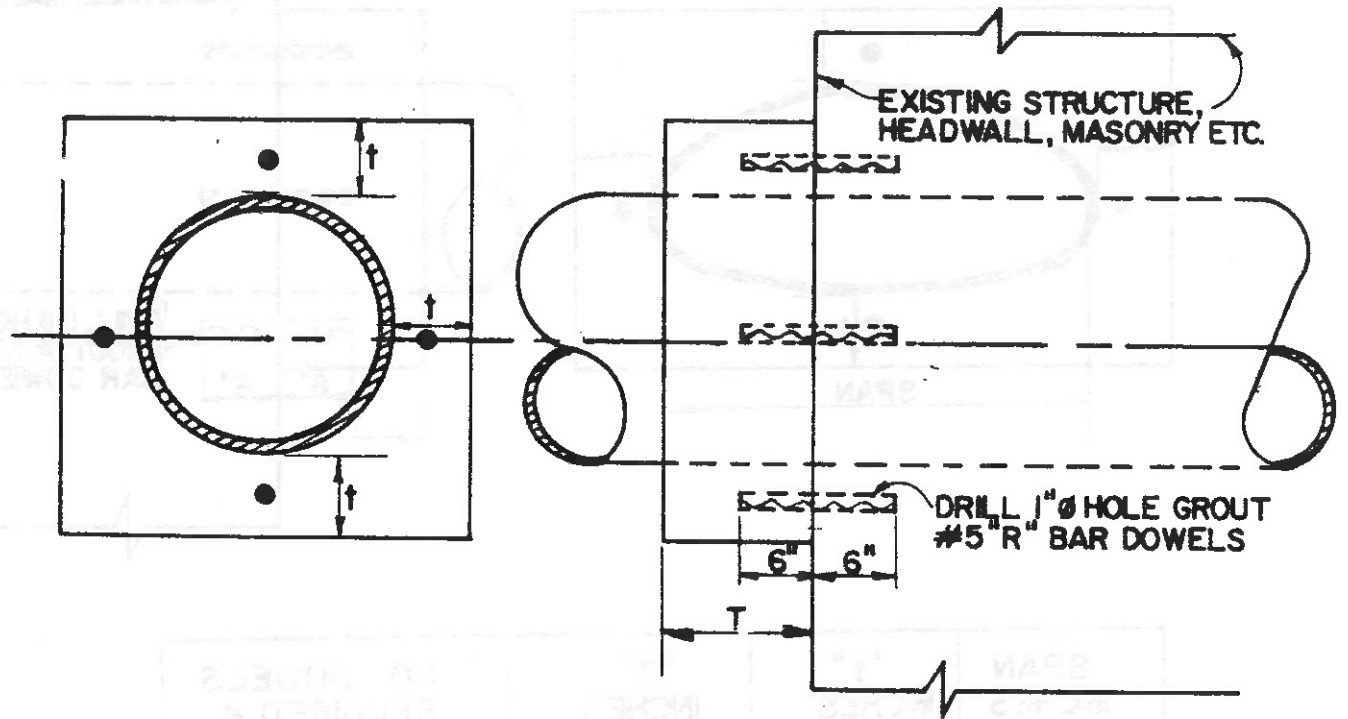
15603.77

Basis of Payment. The unit price bid shall include the cost of furnishing all labor, materials and equipment to satisfactorily complete the work.

Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
15603.7712	Concrete Collars for Pipe Extensions (Inside diameters less than 48")	Each
15603.7713	Concrete Collars for Pipe Extensions (Inside spans less than 58")	Each
15603.7760	Concrete Collars for Pipe Extensions (Inside diameters 48" and greater)	Each
15603.7761	Concrete Collars for Pipe Extensions (Inside spans 58" and greater)	Each

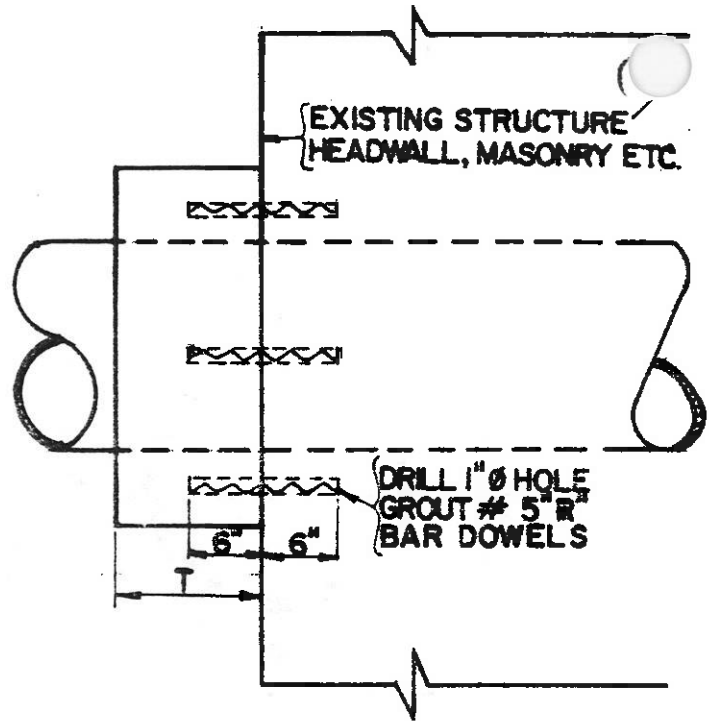
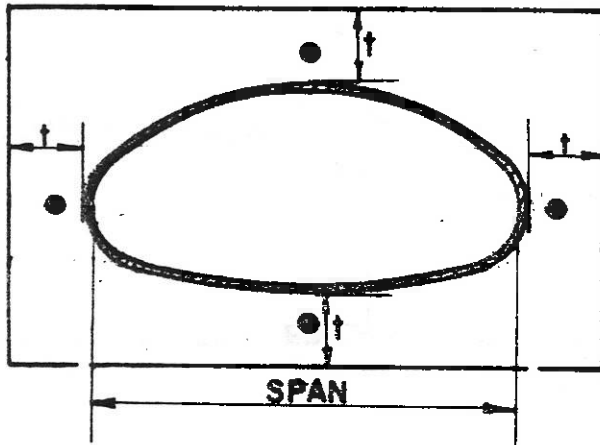
CONCRETE COLLARS FOR PIPE EXTENSIONS



INSIDE DIA. INCHES	"f" INCHES	"T" INCHES	NO. DOWELS REQUIRED *
12	9	12	4
24	9	12	4
36	9	12	6
48	9	12	8
60	12	18	8
72	12	18	10
84	12	18	10
96	12	18	12
108	12	18	12

* SPACE EVENLY AROUND PIPE AS INDICATED.

CONCRETE COLLARS FOR PIPE EXTENSIONS



SPAN INCHES	"t" INCHES	"T" INCHES	NO. DOWELS REQUIRED *
17	9	12	4
28	9	12	4
42	9	12	6
57	9	12	8
71	12	18	8
83	12	18	10
95	12	3	10
112	12	18	12
128	12	18	12

* SPACE EVENLY AROUND PIPE AS INDICATED .

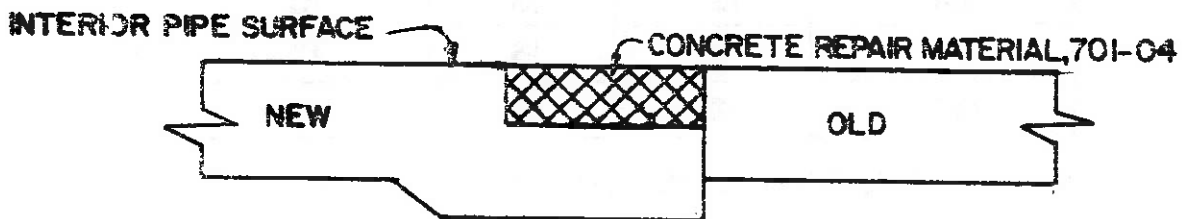
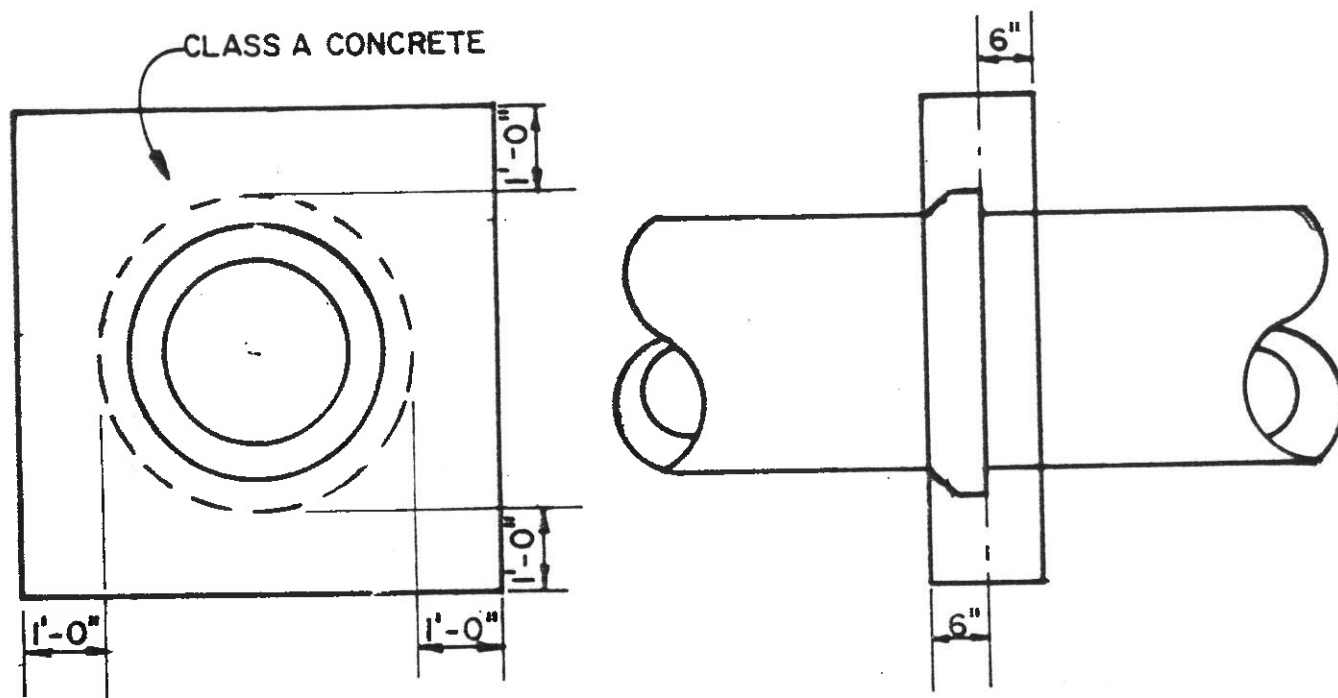


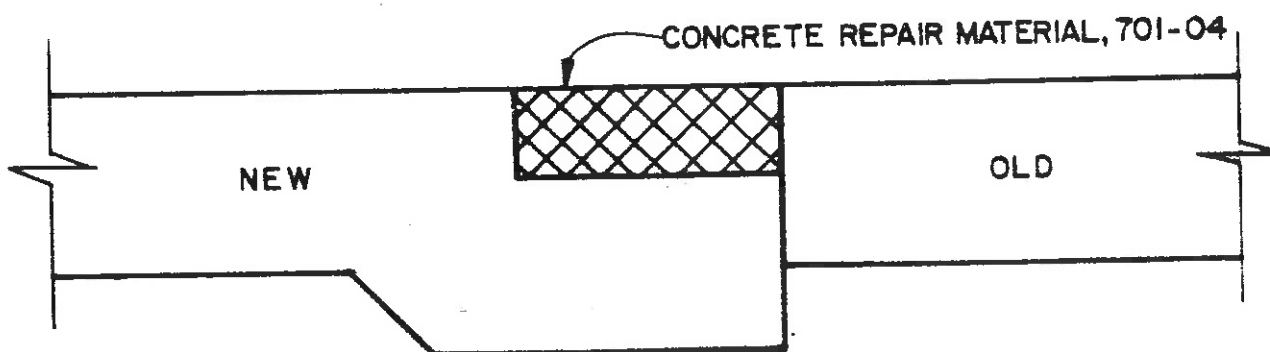
FIGURE 2

ADD THE FOLLOWING TO 603-3 CONSTRUCTION DETAILS OF THE STANDARD SPECIFICATIONS OF JANUARY 2, 1981:

CONCRETE COLLARS FOR PIPE EXTENSIONS



DETAIL A



DETAIL B