

Dee Hart - Fwd: Re: City of Rockwall - Springer EST

From: Matt Hickey
To: Dee Hart
Date: 8/26/2014 4:46 PM
Subject: Fwd: Re: City of Rockwall - Springer EST
Attachments: 137719 Overflow_Weir Dwgs_Calcs.pdf

Please laserfiche the attached to Rockwall/Water/2001180/Shop Drawings

Name it "Overflow Weir"
Thanks

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>>> Orville A Earhart <OEarhart@CBI.com> 8/26/2014 12:56 PM >>>
Here is the information you requested. It looks like the overflow rate was specified at 5600 gpm.



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From: "Matt Hickey" <MHickey@BHCLLP.COM>
To: <OEarhart@CBI.com>
Cc: "Jerry Strouse" <jstrouse@rockwall.com>
Date: 08/21/2014 03:47 PM
Subject: City of Rockwall - Springer EST

Orville-

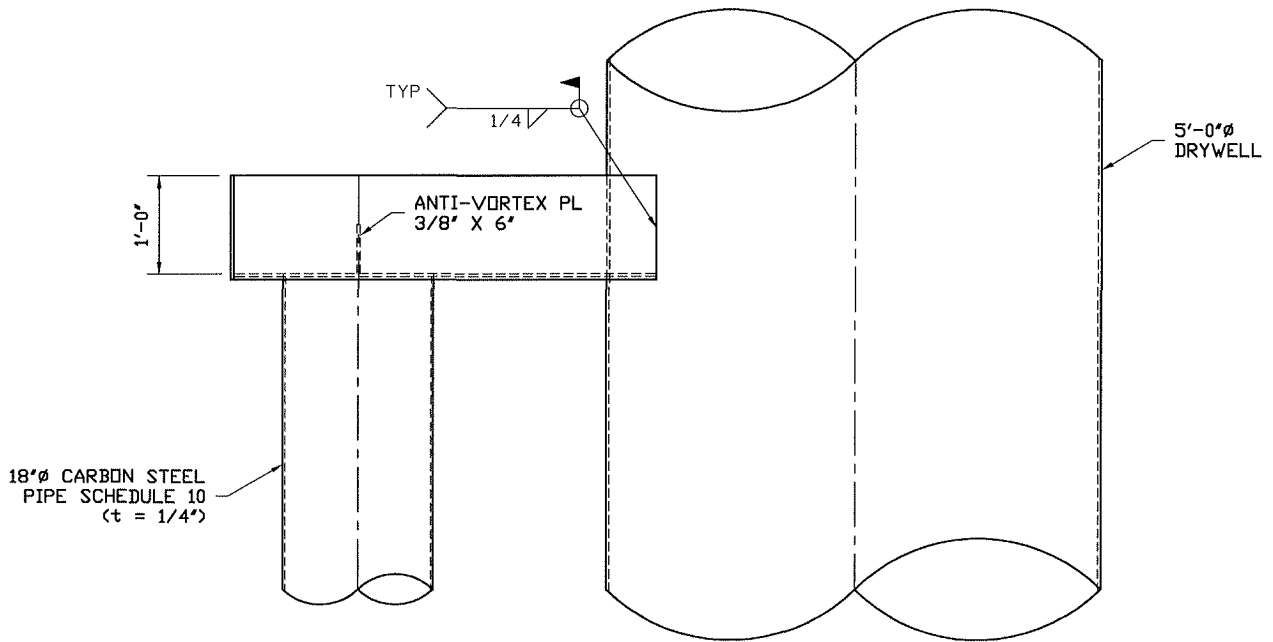
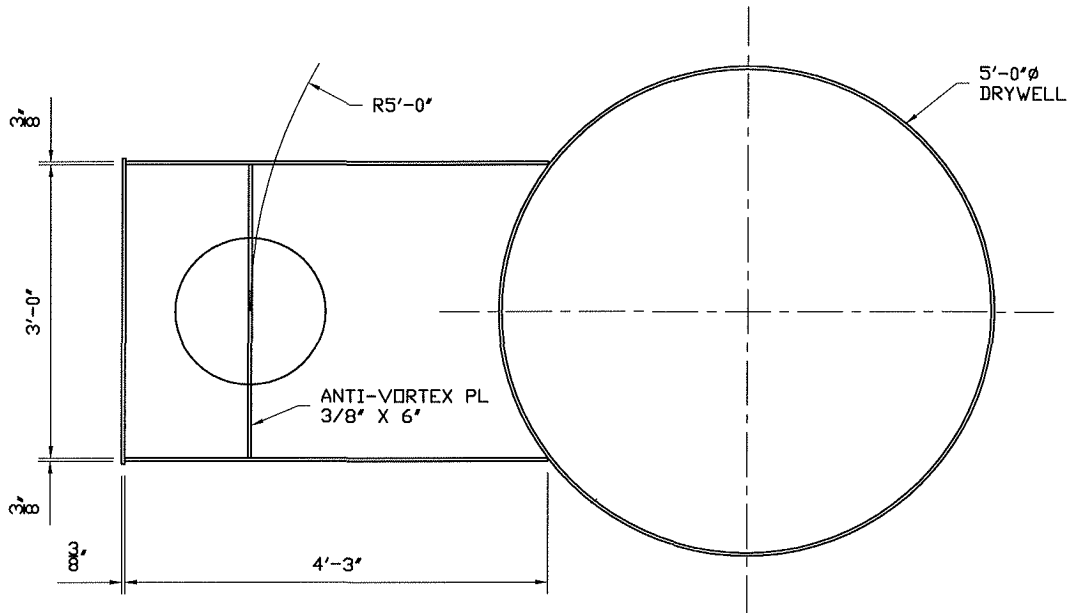
I wanted to see if CBI had records of the overflow and weir for the Springer EST (CBI Contract No. 137719). We do not have in our archive the piping for this tank. We also do not have the weir calculations. Could you check your records and see if this information is still available?

Thanks

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WEIR DETAILS



DETAIL B

Greg Schroder, CB&I Water 10/8/02 4:07 PM 1-7A.dwg



SUBJECT: 2000M CET/ 97'ØX40'HR/ 52'ØTWR

LOCATION: ROCKWALL, TX

REVISION:

PREPARED BY/DATE: GAS 10/8/02

CHECKED BY/DATE:

CONTR.NO. 137719

FILE NO. 7443.006

PAGE NO. 1.7A

Pitt-DesMoines, Inc.
oflowq.bas / RevDate 97/02/26 / Design Results
Project No.: 137719 By: GAS 10-08-2002

Overflow Design Conditions:

Design Flow Rate, Q = 5600 gpm = 12.477 cfs
Weirbox Head = 0.500 ft 18 in diam Sch 10 pipe (t = 0.250 in)

Overflow Pipe Capacity:

Pipe diam = 1.458 ft Pipe area = 1.670 sqft Total head = 184 ft

Pipe Length = 210 ft

Pipe Head Losses:

4 - 90 Meters (4 @ 85 ft) 340
Total oflow pipe design lgth = 550 say 550 ft

Inlet Head Loss Coeff = 0.500

Outlet Head Loss Coeff = 0.750

Pipe Length Head Loss Coeff = 1.000

Total head loss coefficient = 2.250

$Q_{max} = Area * \sqrt{2 * g * H / (Headloss + K * PipeLgth / D)}$
 $= 1.670 * \sqrt{2 * 32.2 * 184 / (2.250 + 0.02 * 550 / 1.458)}$
 $= 58.103 \text{ cfs} = 26078 \text{ gpm} > 5600$

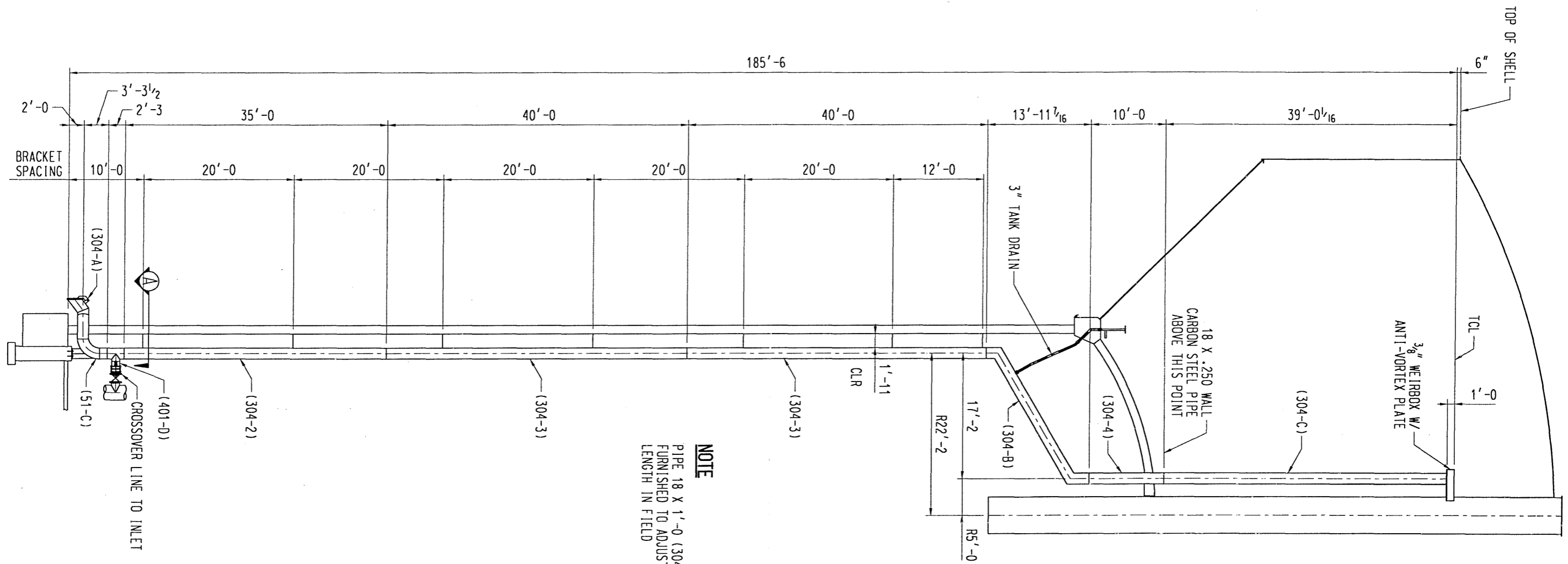
Oflow Pipe Head = $[Q / (K * Area)]^2 / (2 * g)$
18 in pipe, H = $[12.477 / (.82 * 1.670)]^2 / (2 * 32.2)$
= 1.289 ft

Weirbox Capacity:

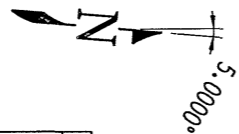
Crest lgth = $1.5 * Q / (K * WeirHead * \sqrt{2 * g * WeirHead})$
= $1.5 * 12.477 / (0.6 * 0.500 * \sqrt{2 * 32.2 * 0.500})$
= 10.994 ft

Weirbox depth reqd = 1.289 - 0.500 ft, depth provd = 1.000

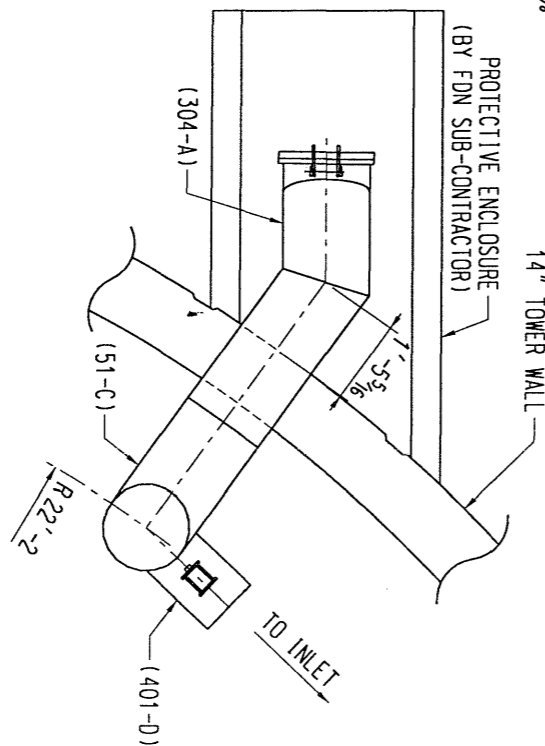
18" OVERFLOW ERECTION
 18 X .188 WALL PIPE A778-316L U.N.
 FLOW RATE = 8 MGD



NOTE
 PIPE 18 X 1'-0 (304-5)
 FURNISHED TO ADJUST
 LENGTH IN FIELD



SECTION A-A



BY: *Gregory A. Schrodner* DATE: 12/2/02
 CERTIFIED FOR CONFORMANCE TO PLANS & SPECIFICATIONS

		SUPPLIER'S / PURCHASER'S NO	
		OVERFLOW ELEVATION SPRINGER ROAD 2.0 MG ELEVATED STORAGE TANK 2000 MG CET 97' DIA X 40' HR X 52' TWR ROCKWALL, TX	
CUSTOMER'S NO BY: JRM CHKD: CDS DATE: 12NOV02 GREG SCHRODER - CLIVE ENGINEERING ASSIGNED		CONTRACT NO 137719	
REVISIONS BY: DATE: BY: DATE: BY: DATE: BY: DATE:		DWG E7	REV 0
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▶ INDICATES CHANGE FROM PREVIOUS ISSUE