

UNDERGROUND MATERIALS AND METHODS SUBCOMMITTEE

March 14, 2023

11:00 a.m.

Via Microsoft Teams

1. Call meeting to order
2. Self-introduction
 - a. Mark Giljum – City of LA (problem with Teams)
 - b. Aaron Davey – Alliance of PE Pipe –
 - c. Becky Tarin – EJ
 - d. Camille R. – Plastics Pipe Institute
 - e. Colin McCarter – LACDPW
 - f. Dan Currence – PPI
 - g. David Badgley – Badgley & Associates
 - h. David Savant – EJ
 - i. Andy DaSilva – OCSD
 - j. David Wangerin – EJ
 - k. Diego Rivera – Thompson Pipe Group
 - l. Dickie Fernandez – OCSD
 - m. Gerardo De La Cerda – Gladdy McB
 - n. Jacob Monroe – ADS
 - o. Jacquie Jaques – Sekisui
 - p. Jamie Lienberger – Lienberger & Associates
 - q. Kent Carlson – NCPI
 - r. Steve Cooper – Unibell PVC Pipe Association
3. Meeting minutes: <http://www.greenbookspecs.org/minutes.asp>
 - a. [Strike page 4 comment on page 4/5 “KC” about Mandrel is outdated](#)
4. Announcements, Correspondence and Summary of GB meetings
 - a. OCSD (Dickie Fernandez) –
 - b. No Dig Conference – Portland 4/30 – 5/4th
5. Old Business
 - a. Change No. 284 UM - Part 5 (David Badgley)
 - i. Task Group – Dave Badgley (Badgley & Associates), Jamie Lienberger (Lienberger & Associates), Jacquie Jaques (Sekisui), Colin McCarter (LACDPW)

- ii. Task Group: David Badgley, Jamie Lienberger, Jaquie Jaques, Colin McCarter (LACDPW).
 - iii. Section 1 to 6 reviewed
 - iv. Section 7 is work in progress (technical section).
 - v. Payment
- b. Change No. 318 UM - Composite Frame & Cover for Maintenance Holes (Dickie Fernandez).
 - i. With Editorial Committee
 - ii. CM: Editorial approved. Should be on Main committee meeting.
- c. Change No. 321 UM - Pickle Jar Test (Edward Arrington).
 - i. With Editorial Committee (3/9/2023 Discussion)
 - ii. Not Discussed in March; first discussion expected in April
- d. Change No. 323 UM – Grey Iron & Ductile Iron Casting (Dickie Fernandez – OCSD).
 - i. With Editorial Committee (3/9/2023 Discussion)
 - ii. Not Discussed in March; first discussion expected in April
- e. 328 UM – Barrel Deflection Table 306.7.8.3.1 (Gean Na)
 - i. DB Suggesting bringing in the (2) Unibell & PPI
 - ii. Stage: Discussion
 - iii. GN Presented 2348 UM with background
 - iv. SC /Unibell – See’s a lot of 5%, not uncomfortable. SF at 5 at 5%, 6fs.
 - v. JJ referenced design information bulletin. DIB 83-4.
 - vi. JM/ADS – requesting further discussion. Initially comfortable with it. There is a 1% to 1.5% manufacturing tolerance.
 - vii. Discuss further in April
- f. 329UM (Table 306-7.8.2.4) SDR 35 (Kent Carlson)
 - i. ACTION: Show original text before distributing
 - ii. Action: Invite Unibell (PVC reps)
 - iii. Unibell proposes to review documents and discuss April
- g. 330UM (Mandrel) (Kent Carlson)
 - i. ACTION: Show original text before distributing
 - ii. Stage: Discussion
 - iii. Dan Currence – discussion on mandrel and practically of pulling mandrels. Even leg is likely to get caught in offsets, so an odd number was decided.
 - iv. KC: even leg, better measurement.
 - v. JM:
 - vi. DW: agrees with issue with mandrel, but does not agree with calling out number of legs. Rather include language on error/tolerance on mandrel. Agrees what Kent brings up is a good point.
 - vii. Manufactures in accordance with c
- h. 331UM (11month Warranty footnote to Table 306-7.8.3.1) (Kent Carlson)
 - i. Stage: Discussion

SC: Unibell PVC Steve Cooper – conversation, discussion over the deflection of 6.5% to 5%.

Knowing this is not a safety issue this is about cleaning.

GN: only changes will affect Storm sewer only – not Sanitary. Reducing 6.5% to 5% in storm drains.

JJ: Working with Cal trans ref doc on website design information FHW culvert repair DIB 3384, maybe some additional information there we could find helpful

JM – ADS: time to be allowed to discuss ASHTO Culvert and Storm drain inspection guide, initially we were accepting of this, however now we notice table 306 7.8.3.1 Nominal pipe sizes – 5% from nominal you are going to get some issues, which is why the 6.5% allows 5% tolerances and time to discuss

KC: time to allow discussion and I am glad we have been allowed less than 10 minutes to discuss what we want to talk about. The Underground committee does not allow us time to discuss things, the 1 hour is not enough time to discuss anything. Back to Gean.

GN: fair to discuss this next month.

KC: concerned I must wait 18 months; I have helped hours and hours. Last meeting there was intimidation on my end that I felt when discussing this

KC: time is money – time adding on we have a lot of people call in and we need to allot time to discuss this

GN: JM ADS do you want to discuss this now or in APRIL?

JM ADS – We will wait till April to discuss is then, we will then be more prepared and ready to present.

TABLE 328 to April – KC please reflect an extra hour to discuss this –

GN: Questions on comments on 328?

KC: changes to 329 –

The confusion in GB standards is derived from nominal sizes – not all pipes are situated from nominal. SC from Unibell PVC D3034 for SDR 35, there is no nominal on SDR 35, you use an average size

SC that is per the standard,

KC the problem with the GB standard that they are using nominal. There are some Monty python signs being bantered around, it was about GB standard not an assail against plastic pipe guys. You do not see nominal size in ASTM – but you do see this in Greenbook,

SC: now for the discussion for next month, I will need to see that our position is correct and I present the facts and be prepared for next month's presentation and meeting.

KC: any other questions on the mandrel diameter?

GN: got it.

GN: 330 – show and tell last month on the mandrels, it was a good presentation.

KC: gave a presentation, it has taken me 18 months to get this to Greenbook, and I was asked to quantify the 9 legged mandrel was wrong and that it needed more legs to be accurate.

Mandrel shall eighteen legged –

My research and the 9-legged mandrel give highly inconclusive data.

When the pipe comes off the truck and is put in the ground it goes into deflection, there is a deflection. 3034 talks about 7.5% as over deflection, the problem that I have found, ASTM does not have a standard on mandrels.

KC I have done mechanical testing, field testing 5% nine legged mandrel did not stop until SDR 35 reached 7.5% deflection, it will only stop when the deflection is 7.5% or greater.

This is not reflective of the pipe, but ASTM want to make sure the pipe is installed correctly.

This must be taken seriously by Greenbrook, you have a mandrel that does not work, - and the mandrel with 5% exceeds the 7.5% on pull.

Retested last week – this is an important and serious matter, if not corrected GB is supporting a method that does not work,

I will share my data with anyone who is interested in this.

Dan Currence: couple of questions – you are agreeing with nominal sizing and tolerances,

KC testing was done with ASTM 3034 – not Greenbook. As Greenbrook reads now all those numbers are from 3034.

Dan C: do you have any information where an 18 legged mandrel is being used.

KC: on the test I did – when I pulled 18 leg thru according to ASTM 3034 stops, the 9 leg will not stop.

The 18 leg will accurately measure for ASTM 3034 and report the deflection,

Dan: in my work, and experience you do not want an even number of legs, you will have one run down the direct center of the pipe and get caught up, this is why I understand an odd numbered leg mandrel was preferred,

KC: good question, not correct. Even or odd you must have the leading edge.

The mandrel that I made with the eighteen legs, had the leading edge.

KC: I purchased the proofing donuts from the manufacturers, they are not very accurate.

DanC: there is an additional tolerance – fore thought was put into this

KC: Greenbook needs to look into this Nominal pipe size is the wrong terminology to use.

ASTM 3034 -

Minimal mandrel diameter Greenbook, and ASTM call out a specific size of the mandrel, and they are incorrect, and the 9 legs do not give an accurate reading.

These are not frivolous. A lot of firsthand and a lot of research.

18-legged mandrel was the one I made with a go no go gauge. I welcome dialogue.

A mandrel test is make sure a pipe has been installed correctly it is a fail safe for the municipality to know the pipe has been installed correctly.

Dave W: I am going to agree with KC, I do not see the leg or number of legs being called out is going to make a difference, in my mind instead of calling out a specific number call out error or variance. I am reading any variance over 5% is unacceptable.

KC: the eighteen leg was the closest I could get to machine. I wonder if the mandrel companies know their mandrels do not test properly, if a mandrel says it is a go no go to 5%, then that is what it should be.

JM - ADS I agree this is about tolerance and sizes of the mandrel,

The 9 fin mandrel with legs not on the invert of the pipe. - increasing number of fins does not solve the problem it gets you closer to an effective vertical measurement.

JM ADS: we also teach and preach ASHTO install -

GN: I want to correct your information there – you have that information in the yellow portion and not the green portion – there is a remove and replace, we will look at ASHTO and Cal trans.

You were showing incorrect information and I wanted to correct you.

Never once have I seen 7.5% to 10% pipe deflection being acceptable.,

WE are talking about newly installed storm drain -

KC: the math that you show – the problem is when the mandrel is pulled thru it won't stay when pushed when you have a flat bottom pipe the mandrel will straddle that flat. The videos that I have will explain this next month (week)

GN: anything visual will help. Small group of us will appreciate the visual.

KC: all good for Greenbrook.

GN: 331 11th month warranty table –

KC: prudent to have mandrel testing at 11th month, warranty is for 12 months, there is practical reason to have the testing, Greenbook is not standard, final compaction, part of the deflection testing process.

30 days is not suitable for final for the testing of deflection, proper compaction, KC: happy to bring in information, a lot happens within 30 days and more happens during the 11th months.

SC: I do not know municipalities do this, and if you are doing 11th month testing on everything you put in the ground - this is not normal, and 30 days is the traditional method and the norm.

KC good point, there has been mandrel testing for 30 days and for years and years this has not worked, many do an 11th month testing, some 30, days 45 days and 11 months. To inspect how the pipe is installed, back fill and proper procedures.

SC: I am aware of the work in Lima and the work done with the installation, not sure this is required.

JJ: some agencies do have warranty inspection – lump sum or part of the CCTV.

SC: for long term ,just want to make sure you are giving the same attention to all the products going in the ground.,

GN: what I can tell you that referencing wording already in Greenbook, you can see that or say that this testing affects all products in the Greenbrook, we also want to make sure the mandrel are included.

JM – aDS: seems a little one sided – all of this for everything other than clay pipe,

KC; my concern goes well beyond just clay pipe. My interest in the mandrel came from a video I was sent, the mandrel was far beyond a 5% deflection, yet sender said it was 5% deflection. This was and is not about clay pipe – I did a lot of research and built mandrels, this has nothing to do with clay, plastics, etc., it has everything to do with making sure the pipe is installed correctly.

After running the mandrel finding out the mandrel does not work, your pipe will never fail it then is not about the pipe failing,, the pipe will never fail.,

KC: Greenbrook helps plastic pipe.

SC: I am trying to represent the miles of plastic pipe that has been already installed.

GN: APRIL 18th next meeting –

KC: I will send videos to you.,

Adjourned 12:41Pm

