

J. HOWARD ENGINEERING

8105 Edgewater Drive, #209

Oakland, CA 94621

Contrs. Lic. No.

503495

SUBMITTAL TRANSMITTAL

TO: City of Oakland

250 Frank H Ogawa Plaza, Ste 4314
Oakland, CA 94612

Attn: Wezlon Miles

Tel: (510) 238-5238

Fax: (510) 238-6633

Date: October 26, 2015

Job No.: OAK05

Submittal #: 7.0

Project: SS Rehab of 17th, 21st, 27th St, Inyo St, & 25th Ave

Subject: Vit Clay Pipe and Couplings

Gentlemen,

We are enclosing the following submittal information for review and approval in accordance with the contract documents. Please return two (2) approved/marked sets for our records.

No.	Copies	Ref Spec/Dwg	Description	Source
1	1	207-8	Vit Clay Pipe and Couplings	Mission Clay

Notes:

Review Action (check one):

☐ 1 -No Exceptions Noted

☐ 2 -Make Corections Noted

☐ 3 -Revise & Resubmit

☐ 4 -Not Acceptable -Resubmit

PLEASE DIRECT ANY QUESTIONS REGARDING THIS SUBMITTAL TO:

Ron H. Zelaya, P.E.

Phone (510) 303-9591

ronzelaya@sbcglobal.net

Cc:

J. HOWARD ENGINEERING

By: R. Zelaya

MISSION CLAY PRODUCTS LLC

A COMPLETE LINE OF CLAY PIPE PRODUCTS

BAND-SEAL®

VITRIFIED CLAY PIPE & FITTINGS



BAND-SEAL®

VITRIFIED CLAY PIPE & FITTINGS

The superior properties of clay pipe as applied to water control and waste water control dates back over 2000 years. In fact, clay pipe lines installed in the U.S. in 1815 remain in service today. Mission enhances this centuries-tested application by teaming up its superior vitrified clay pipe with the rugged and dependable Band-Seal® coupling. When you see "Mission" on the product, you can count on over 50 years of unsurpassed industry know-how. Specify Mission.



• **1/16 BEND**
22-1/2°



• **1/8 BEND**
45°



• **WYE TEE COMBINATION**
Available in 4" only



• **SWEEP 1/4 BEND**
90°
Available: 4", 6" & 8"



• **SWEEP 1/8 BEND**
45°
Available: 4", 6" & 8"



• **MITERED 1/4, 1/8, 1/16 BEND**
90°, 45°, 22-1/2°
Available: 10" & 12"



• **CLAY INCREASER/REDUCER**



• **TEE**



• **8" X 4" WYE**
TYPE 2 Available:
6", 8", 10", & 12"



• **8" X 8" WYE**
TYPE 2 Available:
6", 8", 10", & 12"



• **WYE**



• **8" X 4" DOUBLE WYE**
TYPE 2 Available:
6", 8", 10" & 12"



• **HANDHOLE TRAPS**
Available: 4" & 6"



• **CLAY WYE & TEE SADDLES**
Available: 4" and 6"
TYPE 2 Available: 6"



• **POLYURETHANE WYE & TEE SADDLE KITS** Available: 4"
6" available in Tee Saddle only
Epoxy included with kit only



• **BAND-SEAL® STOPPERS**



Band-Seal® Reducing Couplings and Bushings provide a fast and simple method for connecting clay, asbestos cement, cast iron, concrete, steel pipe and plastic pipe.

Ideally suited for the repair, alteration and rehabilitation of gravity sewer pipe made of the following materials; clay, concrete, cast iron, plastic, ductile iron, asbestos cement.



**SMALL DIAMETER BAND-SEAL®
ADJUSTABLE REPAIR COUPLINGS
(ARC) FOR MAINLINE SEWERS (TYPE Z)**

- Available in 4"–12" diameters
- Engineered and designed for the insertion of replacement sections of pipe or new fittings into an existing sewer line
- Split 300 Series stainless steel shear ring with take-up clamps are designed to fit variable outer pipe diameters
- Holds pipe or fitting in alignment and provides superior shear strength
- Rubber collar with 316 Series stainless steel clamps provides a water tight seal
- Also used for flexibility and strength at the first joint out of a manhole
- Meets or exceeds ASTM Specification C 425
- Meets or exceeds Standard Specifications for Public Works Construction (Greenbook), Type Z



**LARGE DIAMETER
ADJUSTABLE REPAIR COUPLINGS
(ARC) FOR MAINLINE SEWERS**

- Available in 15"–42" diameters
- Couplings are 10" wide and come with four multiple take-up stainless steel clamps to provide superior seal on pipe ends
- Flanged bushings accommodate differences in pipe ODs of up to 6"
- Flanged bushings allow for easy positioning into the coupling during installation
- Couplings and flanges are manufactured of EPDM rubber making them resilient to and unaffected by normal soil conditions and sewer gases
- 300 Series stainless steel outside shear rings (ARC)
- T-bolt clamps have a 316 Series stainless steel strap and a torque rating of 150 in./lb. to provide even greater sealing performance

IMPORTANT: When ordering large diameter couplings, specify the outside diameter of the two pipes to be joined.

All Mission Band-Seal® Vitrified Clay Pipe is extra strength and plain end

- Type 1 does not include shear ring and is available in 4" and 6" diameter
- Type 2 includes shear ring and is available in 6", 8", 10", and 12" diameter
- Highly resistant to attack from sewer gases, acids, alkalis and most other corrosive products that commonly plague most domestic and industrial sanitary sewer systems
- Quick and easy assembly in the trench; cut and fit with less waste
- Chemically inert and unaffected by decomposition and abrasion common to other pipe materials
- Will not deform under constant load conditions



4 INCH



6 INCH



8 INCH



10 INCH



12 INCH

Nominal I.D. (inches)	Nominal Laying Length (feet)	Approximate Weight (lbs. per lineal foot)	Minimum ASTM 3-Edge Bearing (lbs. per lineal foot)	Minimum SSPWC* 3-Edge Bearing (lbs. per lineal foot)	Nominal Wall Thickness (inches)	Nominal O.D. Barrel (inches)
4	4-6	10	2000	2000	11/16	5.45
6	4 1/2-6	20	2000	2000	7/8	7.75
8	4 1/2-6	30	2200	2200	1 1/16	9.90
10	4 1/2-6	45	2400	2400	1 1/8	12.40
12	4 1/2-6	60	2600	2600	1-15/16	14.60

Dimensions subject to normal variations as defined by ASTM C 700.

HOW TO SPECIFY BAND-SEAL®

All pipe shall be extra strength, plain end vitrified clay, with Band-Seal mechanical compression couplings, meeting the requirements of ASTM Specification C 700, as manufactured by Mission Clay Products, Inc. Field joints are made by tightening the stainless steel nut and bolt take-up after pipe has been properly assembled. Joints conform to the material and performance standards of ASTM C 425 "Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings". Installation shall be as per ASTM C 12 "Installing Vitrified Clay Pipe Sewers".

Coupling and Bushing Specifications

Product Number	COUPLINGS	Minimum Pipe O.D.	Maximum Pipe O.D.
0403 428	3' Type 1 Mission Standard Coupling	4.25	4.50
0404 624	4' Type 0 Mission Standard Coupling	5.31	5.50
0406 652	6' Type 1 Mission Standard Coupling	7.55	7.75
0406 678	6' Type 2 Plastic Shear Ring Coupling	7.58	7.78
0406 751	6' Adjustable Repair Coupling	7.50	8.00
0406 793	6' Adjustable Repair Coupling - Oversize	7.50	8.13
0408 732	8' Type 2 Plastic Shear Ring Coupling	9.80	10.00
0408 781	8' Adjustable Repair Coupling	9.75	10.13
1408 327	8' Adjustable Repair Coupling - Oversize	10.00	10.50
0410 738	10' Type 2 Plastic Shear Ring Coupling	12.25	12.50
0410 688	10' Adjustable Repair Coupling	12.25	12.60
0410 720	10' Adjustable Repair Coupling - Oversize	12.50	13.13
0412 726	12' Type 2 Plastic Shear Ring Coupling	14.50	14.74
0412 635	12' Adjustable Repair Coupling	14.25	14.52
0412 684	12' Adjustable Repair Coupling - Oversize	14.13	15.00
0406 736	6' x 4' Increaser/Reducer Coupling	7.55 5.28	7.75 5.45
0408 864	8' x 6' Increaser/Reducer Coupling	9.25 7.25	10.13 8.00

Product Number	BUSHINGS	Minimum Pipe O.D.	Maximum Pipe O.D.
0502 419	4' x 2' Plain End Bushing	2.26	2.44
0502 427	4' x 2' Bead End Bushing	2.58	2.68
0503 433	3' x 3' Plain End Bushing (use w/coupling 0403 428)	3.34	3.53
0503 417	4' x 3' Plain End Bushing	3.26	3.44
0503 425	4' x 3' Bead End Bushing	3.32	3.50
0504 415	4' x 4' Plain End Bushing	4.29	4.47
0504 423	4' x 4' Bead End Bushing	4.35	4.53
0504 431	4' x 4' Asbestos Cement or Bituminous Fiber Bushing	4.69	4.89
0504 506	4' x 4' Thinwall Plastic Bushing	4.10	4.25
0506 410	6' Plain End Bushing	6.13	6.50
0506 428	6' Bead End Bushing	6.50	6.75
0506 436	6' Asbestos Cement or Bituminous Fiber Bushing	6.81	7.06
0508 416	8' Plain End Bushing	8.25	8.53
0508 424	8' Asbestos Cement Bushing	8.63	9.06
0510 412	10' Plain End Bushing	10.25	10.50
0510 420	10' Asbestos Cement Bushing	10.88	11.13
0512 418	12' Plain End Bushing	11.88	12.50
0512 426	12' Asbestos Cement Bushing	13.00	13.25



MISSION CLAY PRODUCTS LLC

www.missionclay.com

REGIONAL SALES OFFICES

Southern

Post Office Box 549
Corona, CA 92878
tel: (951) 277-4600
fax: (951) 277-1127

Northern

880 81st Avenue
Oakland, CA 94621
tel: (510) 568-0800
fax: (510) 568-2699

WILL CALL YARDS

Corona, CA

23835 Temescal Canyon Road
tel: (951) 277-4600
fax: (951) 277-1127

Oakland, CA

880 81st Avenue 94621
tel: (510) 568-0800
fax: (510) 568-2699

Santa Fe Springs, CA

13344 Cambridge Street
tel: (562) 944-6319
fax: (562) 946-8003



MEMBER

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