To: Rickelle Williams, City Manager

From: Talal Abi-Karam, Interim Director – Public Works

Date: March 5, 2025

Re: Change Order No. #1 for Design-Build RFP 99 Project # P12384

Job Description: NE 25th Ave 24-Inch Force Main Replacement, and NE 38th St 42-Inch Force Main and NE 19th Ave 24-Inch Force Main Replacement.

Contractor: David Mancini and Sons, Inc.

Amount: Total amount of Change Order # 1 for **$997,595.04** - No additional days.

Funding: 10-496-7999-536-60-6599-P12384

The purpose of this Change Order is:

Change Order is being requested for necessary improvements within the Repump B station located inside the Coral Ridge Country Club. The additional work consists of installing a new 36" diameter above ground bypass system that will replace an existing deteriorated bypass that has non-functioning components. The bypass is a critical infrastructure for the operation of the Repump B station. The bypass provides relief to the station during peak flows and serves as a "booster" to its discharge during normal operating conditions. This Change Order includes the necessary materials, labor, equipment and coordination to perform the work without disruption to the pumping system.

EXISTING CONTRACT ITEMS ARE UTILIZED – TOTAL CREDIT: ($0.00)

NEW CONTRACT ITEMS ARE UTILIZED – TOTAL ADDITIVE COST: $997,595.04

Item No.**12-P12384** Description: **Repump B New Bypass Connection** **ADD: $997,595.04**

NET AMOUNT OF THIS CHANGE ORDER	**$997,595.04**
ADDITIONAL CONTRACT TIME BEING REQUESTED–	**(0) CALENDAR DAYS**
THE TOTAL AMOUNT OF THIS CHANGE ORDER	**$997,595.04**

IN WITNESS OF THE FOREGOING, the Parties have set their hands and seals the day and year first written above.

CITY

CITY OF FORT LAUDERDALE, a Florida municipal corporation.

By: _____
RICKELLE WILLIAMS
City Manager

Date: _____

ATTEST:

By: _____
DAVID R. SOLOMAN
City Clerk

Approved as to Legal Form and Correctness:
D'Wayne M. Spence, Interim City Attorney

By: _____
RHONDA MONTOYA HASAN
Senior Assistant City Attorney

CONTRACTOR

DAVID MANCINI & SONS, INC., a Florida profit corporation

WITNESSES:

Signature

Raul Cabrera

Print Name

Jose Rios

Signature

Jose Rios

Print Name

By: _____
FABIO ANGARITA
Vice President

ATTEST:

Print Name: David Mancini Jr.
Title: Vice President

(CORPORATE SEAL)

STATE OF Florida :

COUNTY OF Broward

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 9 day of June, 2025, by **Fabio Angarita**, as **Vice President**, for **David Mancini & Sons, Inc.**, a Florida profit corporation.

LEYDIS COLOMINA POWER
MY COMMISSION # HH 502789
EXPIRES: July 10, 2028

_____
(Signature of Notary Public - State of Florida)

Leydis Colomina Power
(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known X OR Produced Identification_____
Type of Identification Produced: _____

CHANGE ORDER SUMMARY SHEET

ORIGINAL CONTRACT AMOUNT		$38,597,800.00
COST OF CHANGE ORDERS TO DATE		$0.00
COST OF THIS CHANGE ORDER		**$997,595.04**
	TOTAL:	**$39,595,395.04**
ORIGINAL CONTRACT TIME	660	calendar days (P12384)
TIME ADDED TO DATE	0	calendar days
TIME ADDED TO THIS CHANGE ORDER	0	calendar days
	TOTAL: **660**	calendar days

SCHEDULE OF CHANGE ORDERS TO DATE

C.O.#	DATE	DESCRIPTION	AMOUNT OF COST OR CREDIT

NONE TO DATE

DMSI DAVID MANCINI & SONS, INC.

2601 Wiles Rd Pompano Beach Florida 33073
PH: (954) 977-3556 FAX: (954) 944-2040

CONTRACT: P12384
PROJECT: Coral Ridge Force Main Replacement
CONTRACTOR: David Mancini & Sons, Inc. (DMSI)
DATE: 3/4/2025
DESCRIPTION: Additional cost related to Repump B connection with 36-Inch above ground bypass.

SUMMARY OF DIRECT COSTS

1	TOTAL LABOR		$	154,887.77
2	TOTAL EQUIPMENT		$	83,279.20
3	TOTAL MATERIAL		$	445,948.55
4	TOTAL SUBCONTRACTORS		$	178,341.51
	SUBTOTAL		**$**	**862,457.03**
5	CONTRACTOR'S MARKUP	**8.00%**	**$**	**68,996.56**
7	**GENERAL CONDITIONS [Items (3+4+5)/Construction Cost]**	**5.35%**	**$**	**46,141.45**
8	TAXES		$	26,806.91
	Total Direct Cost		**$**	**977,595.04**

SUMMARY OF TIME IMPACT (REQUEST FOR ADDITIONAL TIME)

DMSI reserves the right to claim for additional contract time if the critical path is affected after approval.

Submitted by:

Alejandra Suarez 03/19/2025
Alejandra Suarez
Assistant Project Manager
David Mancini and Sons, Inc

Approved by:

Cyrill Garcia 3/19/2025
Cyrill Garcia
Project Manager
City of Fort Lauderdale

LABOR COSTS

SUMMARY - LABOR COSTS	
SUPERVISION	$ 21,600.00
CREW	$ 66,630.00
LABOR BURDEN (75.55%)	$ 66,657.77
TOTAL LABOR	**$ 154,887.77**

LABOR BURDEN MULTIPLIER (LBM)	**58.20%**
Social Security Contributions & Excise and Payroll	6.20%
Medicate Rate	1.45%
Unemployment	5.49%
Workmens Compensation	7.16%
Health Benefits	14.20%
Retirement Benefits	23.70%
VACATION MULTIPLIER (VM)	**13.00%**
Sick Leave (1 week out of 52)	
Vacation (2 weeks out of 52)	
Holiday Pay (1 week out of 52)	
Insurance Schedule	**4.35%**
General Liability Insurance	4.35%

Total Labor Burden Rate	**75.55%**

SUPERVISION	Hourly Rate (Salary)	Hourly Overtime Rate	Hours (Salary)	Hours Overtime	Total Cost
Project Manager	$ 60.00		30.00		$ 1,800.00
Superintendent	$ 55.00		75.00		$ 4,125.00
Crew Foreman	$ 47.50		180.00		$ 8,550.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
TOTAL SUPERVISION					**$ 21,600.00**

MAINLINE CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	150.00	30.00	$ 5,850.00
Loader Operator	$ 27.00	$ 40.50	150.00	30.00	$ 5,265.00
Pipe Layer	$ 28.00	$ 42.00	150.00	30.00	$ 5,460.00
Skilled Laborer	$ 24.00	$ 36.00	150.00	30.00	$ 4,680.00
Skilled Laborer	$ 24.00	$ 36.00	150.00	30.00	$ 4,680.00
Laborer	$ 20.00	$ 30.00	150.00	30.00	$ 3,900.00
Laborer	$ 20.00	$ 30.00	150.00	30.00	$ 3,900.00
TOTAL CREW					**$ 33,735.00**

ASSEMBLY CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					**$ 28,545.00**

RESTORATION CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	30.00		$ 900.00
Loader Operator	$ 27.00	$ 40.50	30.00		$ 810.00
Skilled Laborer	$ 24.00	$ 36.00	30.00		$ 720.00
Skilled Laborer	$ 24.00	$ 36.00	30.00		$ 720.00
Laborer	$ 20.00	$ 30.00	30.00		$ 600.00
Laborer	$ 20.00	$ 30.00	30.00		$ 600.00
TOTAL CREW					**$ 4,350.00**

EQUIPMENT, MATERIAL & SUBCONTRACTOR COSTS

DMSI DAVID MANCINI & SONS, INC.

EQUIPMENT COSTS - RENTAL RATE BLUE BOOK

Skid- Steer	Working Rate	Working Hours	Total Cost
CAT 272D	$ 84.69	180.00	$ 15,244.20
Loaders			
CAT 938M	$ 65.42	180.00	$ 11,775.60
Excavators			
CAT 308	$ 68.14	150.00	$ 10,221.00
CAT 325	$ 133.24	180.00	$ 23,983.20
Trucks			
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Asphalt Pavers			
CAT AP-600D	$ 129.56	20.00	$ 2,591.20
Miscellaneous Equipment			
Trash Pump	$ 9.83	150.00	$ 1,474.50
Steel Plates - 8'x20' (6 On Site $60 per plate PER DAY)	$ 360.00	15.00	$ 5,400.00
Air Compressor Sullair 375	$ 59.80	150.00	$ 8,970.00
Roller	$ 27.09	30.00	$ 812.70
TOTAL EQUIPMENT			***$ 83,279.20***

MATERIAL COSTS

Material Description	QTY	Unit	Unit Cost	Total Cost
36" FLGXPE DIP 6'	1	EA	$ 9,988.24	$ 9,988.24
36" FLGXPE DIP 4'	1	EA	$ 7,641.18	$ 7,641.18
36" FLGXFLG DIP 2'	2	EA	$ 8,089.41	$ 16,178.82
36" MEGA FLANGE REST ADPT	1	EA	$ 3,708.38	$ 3,708.38
36" FLG 90 BEND	2	EA	$ 14,002.40	$ 28,004.80
36" FLG ACC KIT NEOPRENE	10	EA	$ 1,158.83	$ 11,588.30
36" FLG PLUG VALVE W/GEAR	1	EA	$ 49,916.85	$ 49,916.85
36" FLG CHECK VALVE	1	EA	$ 48,348.31	$ 48,348.31
2" BALL CORP	1	EA	$ 315.00	$ 315.00
2" X 4" SS NIPPLE	1	EA	$ 14.00	$ 14.00
36"X2" DBL STRP SS	1	EA	$ 720.00	$ 720.00
2" SEWAGE AIR RELEASE VLV	1	EA	$ 1,040.00	$ 1,040.00
42" MJ LONG SLEEVE	1	EA	$ 8,338.99	$ 8,338.99
42" MEGALUG DIP W/ACC	10	EA	$ 2,417.08	$ 24,170.80
42" MJ 45 BEND	1	EA	$ 11,719.18	$ 11,719.18
42" X 36" MJ TEE	1	EA	$ 19,636.05	$ 19,636.05
36" MEGALUG DIP W/ACC	5	EA	$ 1,693.30	$ 8,466.50
36" MJ 90 BEND	1	EA	$ 9,596.14	$ 9,596.14
36" MJ PLUG VALVE	1	EA	$ 50,939.33	$ 50,939.33
42" MJ PLUG VALVE	1	EA	$ 103,264.00	$ 103,264.00
72" ARV MANHOLE / TOP SLAB	1	EA	$ 2,648.00	$ 2,648.00
690-AH-M PL R/C	1	EA	$ 4,225.00	$ 4,225.00
36" BLND FLG	1	EA	$ 15,546.85	$ 15,546.85
36 SS FLG ACC SET	1	EA	$ 1,158.83	$ 1,158.83
Asphalt	65	TON	$ 135.00	$ 8,775.00
SUBTOTAL				$ 445,948.55
SURTAX			$ 50.00	$ 50.00
TAXES				$ 26,806.91
TOTAL MATERIAL				**$ 472,755.46**

SUBCONTRACTORS COSTS

Description	QTY	Unit	Unit Cost	Total Cost
CMA	1	LS	$ 62,400.00	$ 62,400.00
A&M Brothers Concrete	1	LS	$ 7,600.00	$ 7,600.00
SUPERMIX Flowable Fill 18 CY	1	LS	$ 3,228.40	$ 3,228.40
SUPERMIX 4 CY Concrete for Linestop	1	LS	$ 1,053.90	$ 1,053.90
Rangeline	1	LS	$ 50,307.00	$ 50,307.00
Rangeline (IF NEEDED)	1	LS	$ 50,096.00	$ 50,096.00
MWI PUMPS (IF NEEDED)	1	LS	$ 3,656.21	$ 3,656.21
TOTAL SUBCONTRACTOR				***$ 178,341.51***

P12383 & P12384 – CORAL RIDGE FORCE MAIN REPLACEMENT PROJECT

LABOR BURDEN BREAKDOWN

A. 6.20 % SOCIAL SECURITY RATE
B. 1.45 % MEDICARE RATE
C. 5.49 % UNEMPLOYMENT
D. 7.16 % WORKERS COMP
E. 4.35 % GENERAL LIAB
F. 14.20 % HEALTH INS
G. 23.70 % RETIREMENT
H. 13.00 % VAC/HOLIDAY

Burden Rate: 75.55%

DMSI offers our employees the following paid-off time:

- (2) Weeks Paid Vacation
- (3) Weeks Holiday paid, including time between Christmas and New Year
- (1) Week for Sick Time

Based on this, a DMSI employee works 46 weeks a year and gets paid for 52. Therefore, the yearly burden for General Liability, Health Insurance, Retirement, and vacation Holiday Time must be INCREASED based on the calculation below to cover the six non-revenue weeks (for DMSI), whereas DMSI compensates the employee.

Items A-C Above are standard rates through the federal government and the State of Florida.

Item D – Is DMSI's Workman's Comp rate for Sewer when this project was bid and the Contract executed.

Item E – Is DMSI's G/L rate (1.89%) plus 2.46% to cover the non-revenue paid weeks (See Below) ($21.87x40x6=$5,248.80x1.89%=$992.02/$21.87x40x46 or an additional 2.46%)

Item F – Insurance burden is calculated using the average hourly employee rate multiplied by 40/hrs. per week for 46 weeks worked, dividing this by the average cost of yearly insurance premiums for hourly employees. (Average hourly rate $21.87x 40 hours x 46 weeks/year divided by the average cost of SGL coverage 476.18/mo. x 12)

Item G - (RETIREMENT 11% + Bonus, which is merely part of the employee's yearly compensation package, of 10% plus the average hourly rate $21.87 x 40 x 6 weeks non-working = $5,248.80, we pay 21% of this income as retirement benefit so we need to add $1,102.25 to 46 weeks of working to cover these costs or an additional 2.7%)

ITEM H - (6weeks/46weeks of working to cover costs of vacation and holiday)

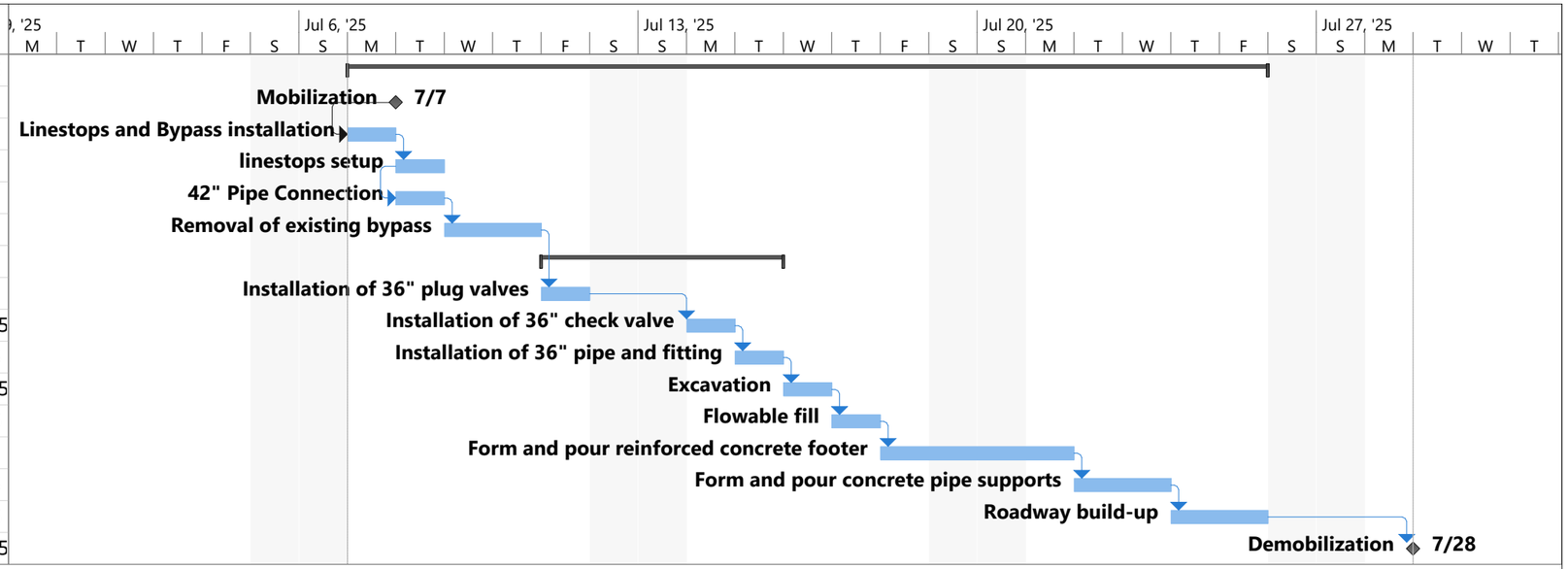
By signing below, I certify that the information provided is true and correct to the best of my knowledge.

Sincerely,

Fabio Angarita
Vice president
David Mancini and Sons, Inc

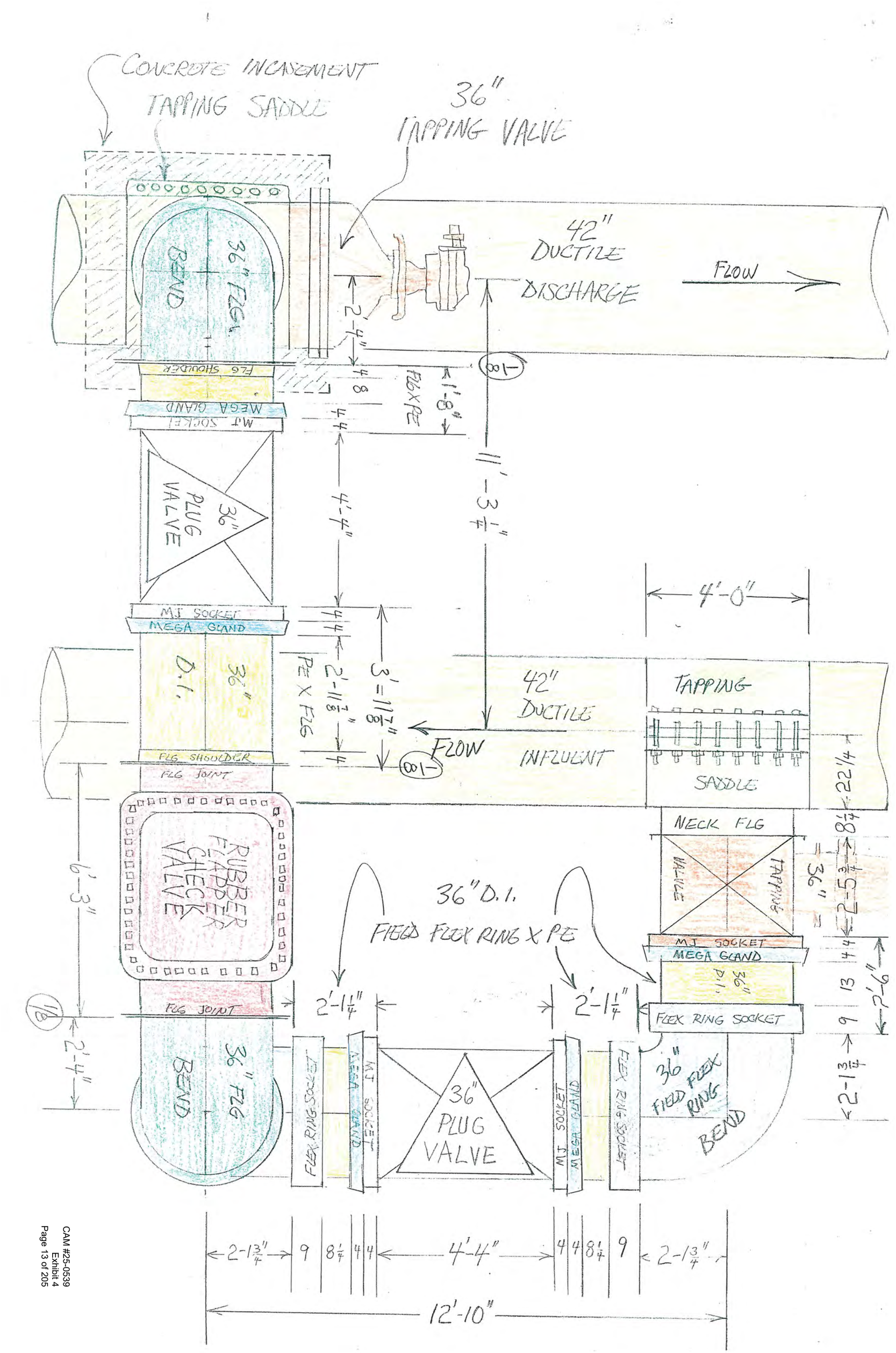
Note:
Our financial statement is proprietary and confidential, so we do not wish it to be made public. Our records are available for your appropriate staff to review at our Pompano Beach, FL office.
Please advise us 48 hours in advance.
If you have any questions about our financial information, please call our Financial Controller, Kimberley Weldon, at (954) 977-3556.

ID	Task Name	Duration	Start
1	**Repump connection with bypass**	**15 days**	**Mon 7/7/25**
2	Mobilization	1 day	Mon 7/7/25
3	Linestops and Bypass installation	1 day	Mon 7/7/25
4	linestops setup	1 day	Tue 7/8/25
5	42" Pipe Connection	1 day	Tue 7/8/25
6	Removal of existing bypass	2 days	Wed 7/9/25
7	**Bypass assembly**	**3 days**	**Fri 7/11/25**
8	Installation of 36" plug valves	1 day	Fri 7/11/25
9	Installation of 36" check valve	1 day	Mon 7/14/25
10	Installation of 36" pipe and fitting	1 day	Tue 7/15/25
11	Excavation	1 day	Wed 7/16/25
12	Flowable fill	1 day	Thu 7/17/25
13	Form and pour reinforced concrete footer	2 days	Fri 7/18/25
14	Form and pour concrete pipe supports	2 days	Tue 7/22/25
15	Roadway build-up	2 days	Thu 7/24/25
16	Demobilization	1 day	Mon 7/28/25



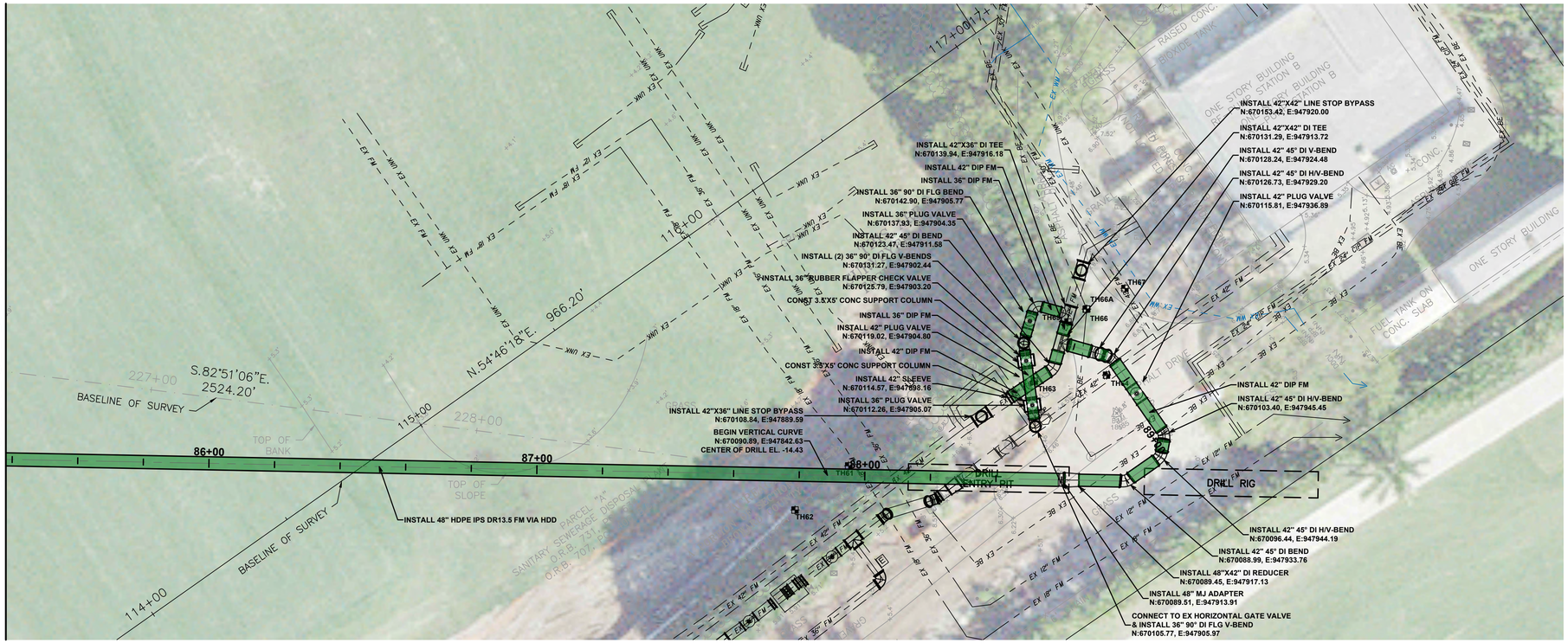
Project: Project1
Date: Mon 2/3/25

Task	Project Summary	Manual Task	Start-only	Deadline			
Split	Inactive Task	Duration-only	Finish-only	Progress			
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress			
Summary	Inactive Summary	Manual Summary	External Milestone				


CONCRETE ENCASEMENT
TAPPING SADDLE
36" TAPPING VALVE
42" DUCTILE DISCHARGE
FLOW
36" FLG BEND
FLG SHOULDER
MJ SOCKET
MEGA GLAND
36" PLUG VALVE
11'-3 1/4"
4'-4"
4'-0"
42" DUCTILE INFLUENT
FLOW
TAPPING SADDLE
NECK FLG
VALVE
TAPPING
MJ SOCKET
MEGA GLAND
36" D.I.
FLEX RING SOCKET
36" FIELD FLEX RING BEND
36" D.I. FIELD FLEX RING X PE
RUBBER FLAPPER CHECK VALVE
FLG JOINT
6'-3"
2'-4"
2'-1 1/4"
2'-1 1/4"
36" PLUG VALVE
FLEX RING SOCKET
MJ SOCKET MEGA GLAND
FLEX RING SOCKET
2-1 3/4"
9
8 1/4
4
4
4'-4"
4
4
8 1/4
9
2-1 3/4"
12'-10"

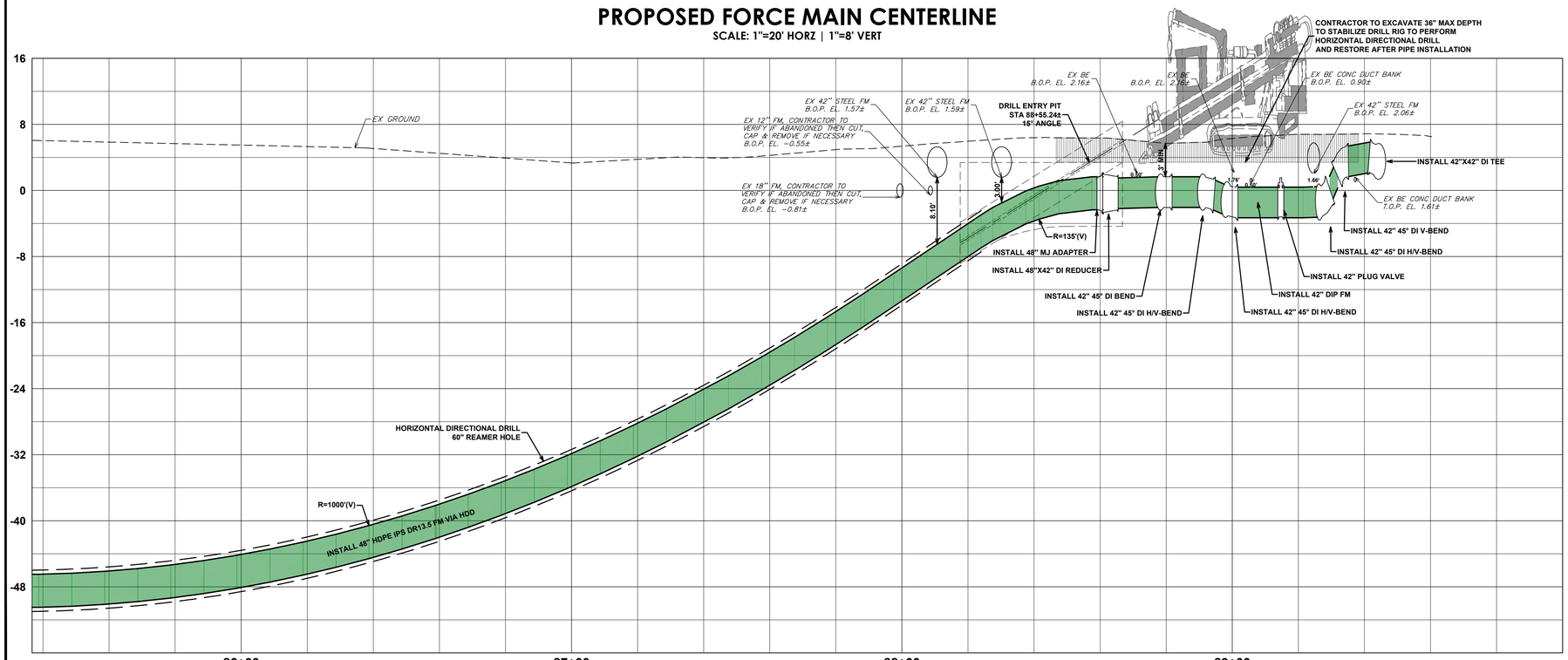
BCTED 231205061

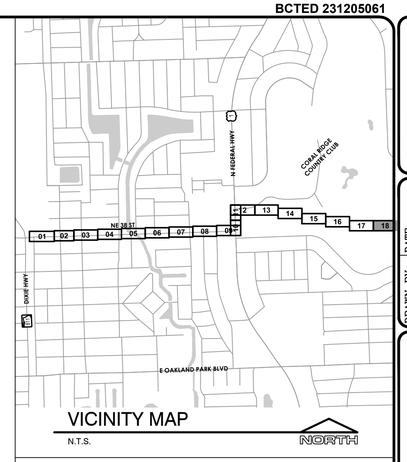
MATCHLINE SEE DRAWING NO. FM17



PROPOSED FORCE MAIN CENTERLINE

SCALE: 1"=20' HORZ | 1"=8' VERT





VICINITY MAP

N.T.S.

NORTH

0 20' 40'

NOTES:

1. CONTRACTOR MUST EXERCISE EXTREME CARE TO AVOID DAMAGE OR DISRUPTIONS TO ANY EXISTING UTILITIES. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BEFORE STARTING CONSTRUCTION. CONSTRUCTION SHALL PROTECT AND SUPPORT ALL EXISTING STRUCTURES AFFECTED BY THE PROJECT. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN DISCREPANCY WITH THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, IN WRITING, BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR TO USE RESTRAINED JOINTS FOR ALL PROPOSED CONNECTIONS.
3. A HORIZONTAL SEPARATION OF 6' MINIMUM SHALL ALWAYS BE ENFORCED WHENEVER THE FORCEMAIN IS LESS THAN 18" BELOW THE WATERMAIN.
4. CONTRACTOR TO PROVIDE PEDESTRIAN ACCESS TO ALL PROPERTIES AT ALL TIMES.
5. OPEN CUT AREAS MAY BE INSTALLED WITH HDPE OR DIP AT THE CONTRACTORS DISCRETION.
6. ALL DIP TO BE RESTRAINED.
7. MINIMUM PIPE COVER IS 36" FOR PVC AND 30" FOR DIP.
8. HDPE PIPE THICKNESS (DR) AND CALCULATIONS PROVIDED BY OTHERS.

VACUUM TEST HOLE DATA TABLE

TH#	GRND EL	COVER	ELEV TOP	DIRECTION	DESCRIPTION
61	5.47	5.83	-0.36	NW - SE	12" SAN FM (UNABLE TO OBTAIN SIZE)
62	5.38	8.12	-2.74	NW - SE	UNABLE TO OBTAIN SIZE
63	6.77	1.49	5.28	NE - SW	42" STEEL FORCE MAIN
64	6.88	1.11	5.77	W - E	42" STEEL FORCE MAIN
65	6.95	1.58	5.37	N - S	42" STEEL FORCE MAIN
66	6.98	5.41	1.57	N - S	CONCRETE ELECTRIC
66A	6.98	5.56	N/A	N - S	CAST IN PLACE CONCRETE
67	7.18	1.75	5.43	NW - SE	42" STEEL FM

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

Check positive response codes before you dig!

cma
chen moore and associates
500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER

DMSI DAVID MANCINI & SONS, INC.
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

100% SUBMITTAL

ENGINEER:
VINCENT LOCIGNO, P.E.
REG. No. 92216
DATE: ----

TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV
DESIGNED BY: ----
DATE: 10/10/2024
SCALE: 1" = 20'
CHECKED BY: ----
FIELD BOOK: ----

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN
AND NE 19TH AVE 24-INCH FORCE
MAIN REPLACEMENTS
FORCE MAIN PLAN AND PROFILE

SHEET NO. FM18
SHT # 25
TOTAL: 57
CAD FILE: 12384-MULTI-PLPR-38
DRAWING FILE NO. #FM18
Page 18 of 205

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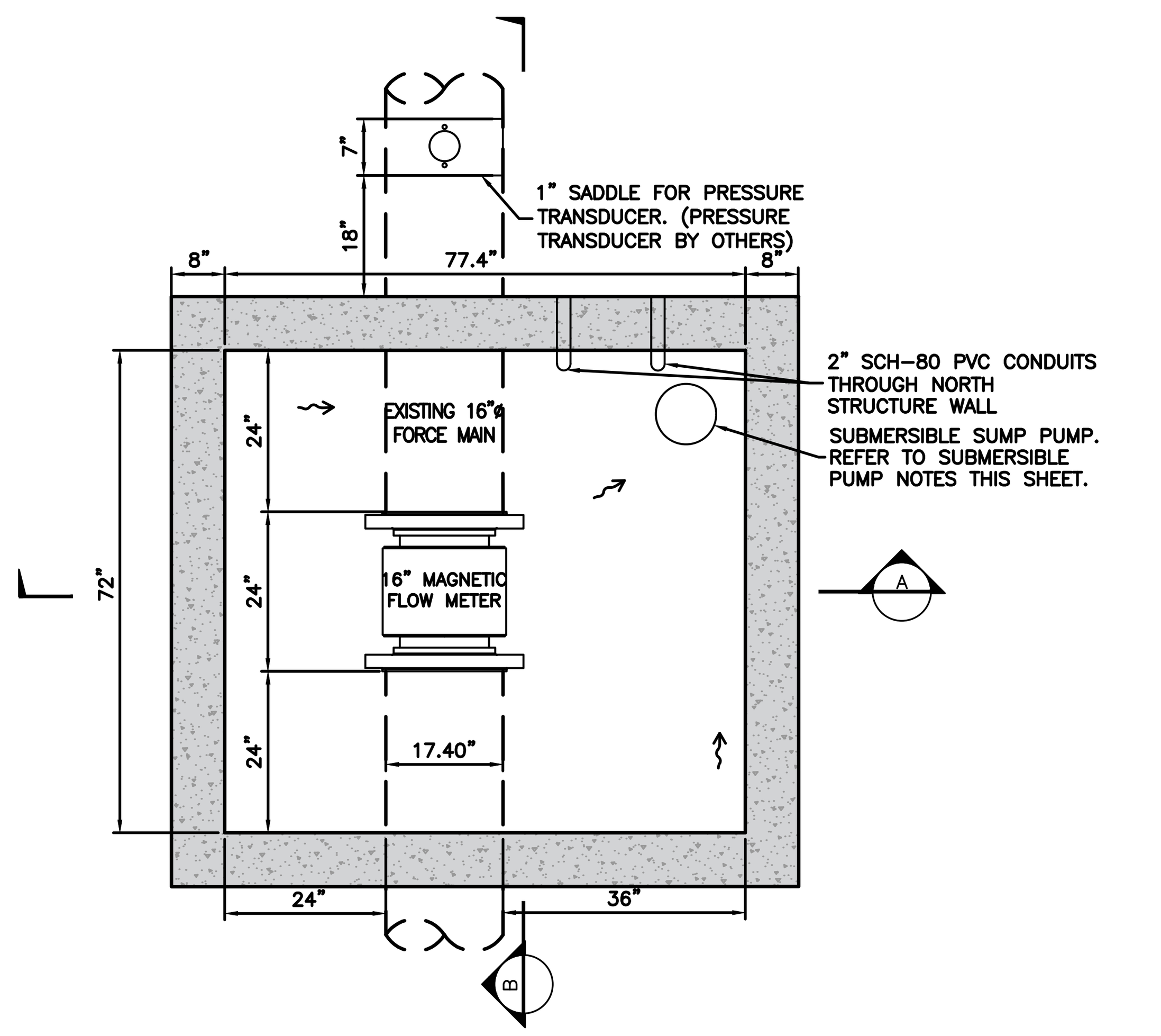
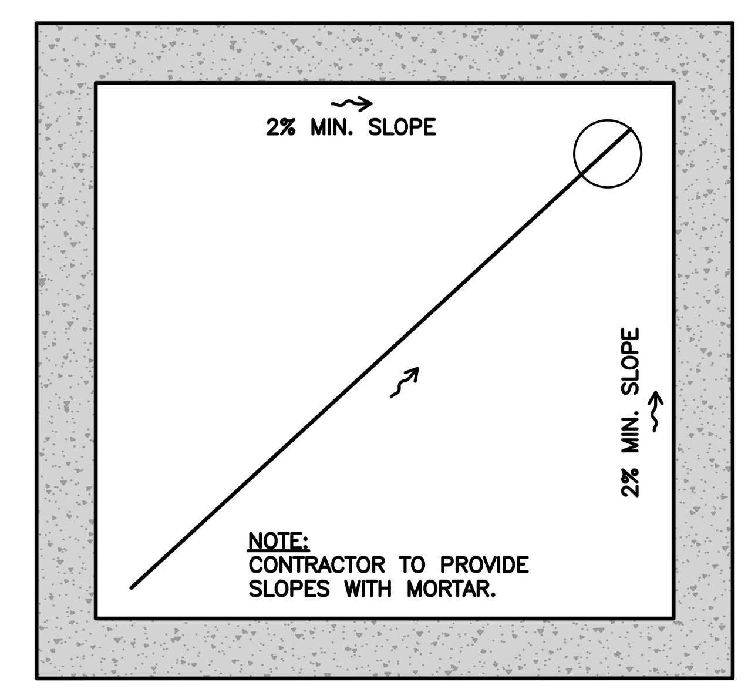
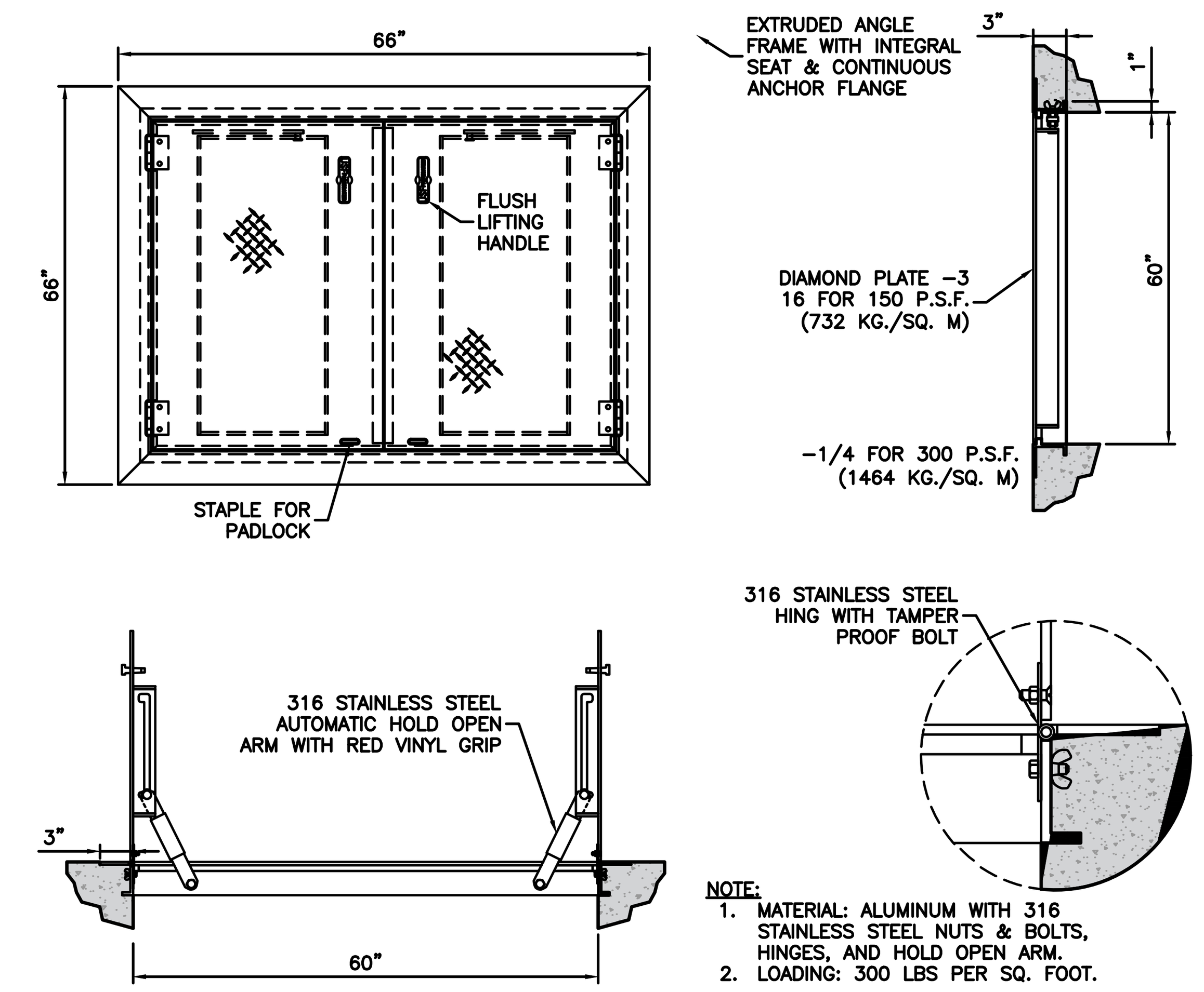


METER VAULT



BOTTOM SLAB DETAIL



48"x54" DOUBLE DOOR ALUMINUM HATCH
MODEL APD300 OR APPROVED EQUAL
N.T.S. (REFER TO U.S.F. FABRICATION, INC.)

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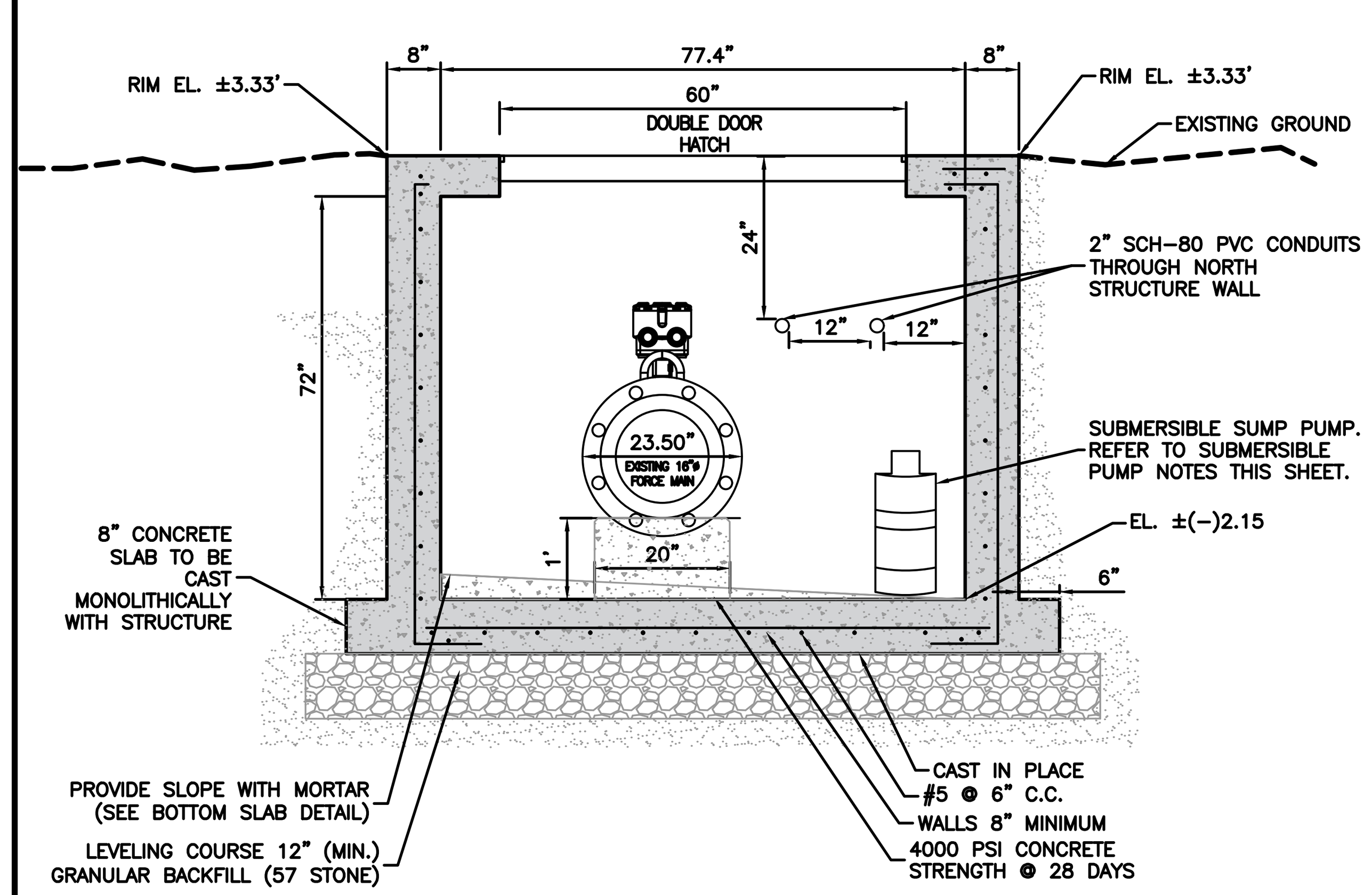
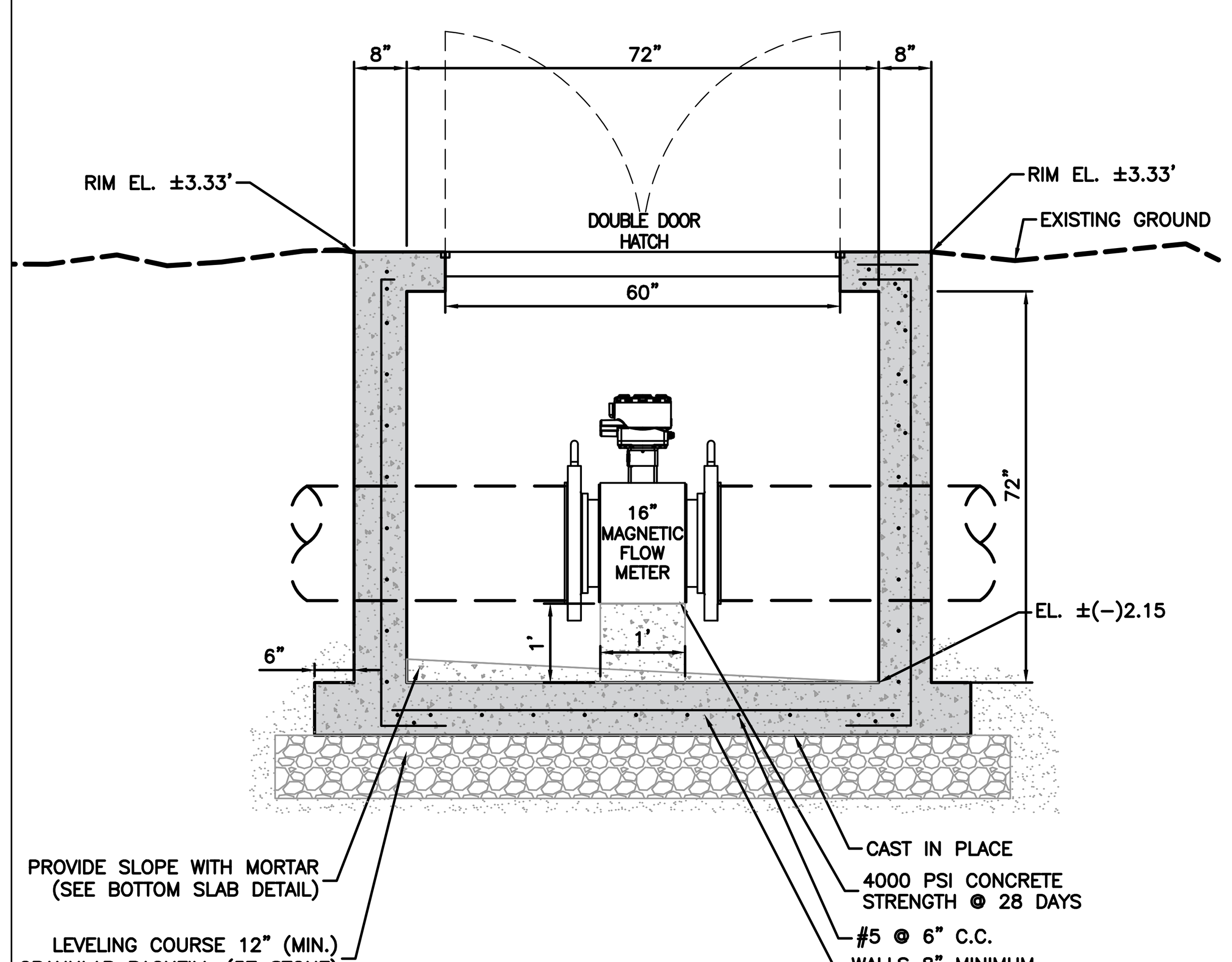


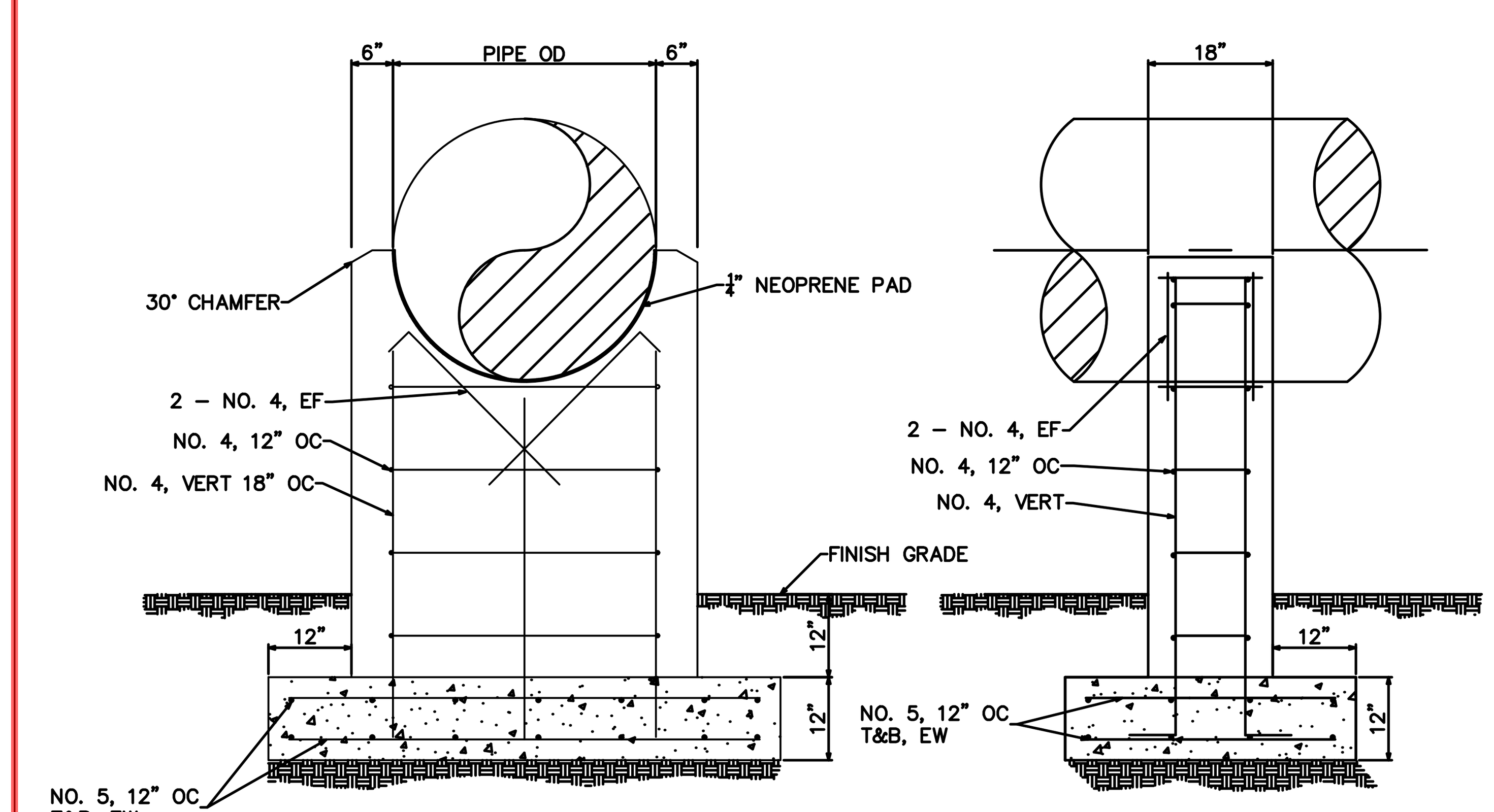
SECTION A

NOTE:
1. STRUCTURE WALLS TO BE SEAL COATED INSIDE AND OUTSIDE WITH 16 MIL. THICKNESS OF COAL TAR EPOXY.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS SHOWING REINFORCEMENT WITHIN THE PRE-CAST CONCRETE STRUCTURE.

SUBMERSIBLE PUMP NOTE:
1. FLOW RATE SHALL BE A MIN OF 110 GPM.
2. PUMP SHALL HAVE THE ABILITY TO FUNCTION WITH A TOTAL DYNAMIC HEAD OF 32 FT.
3. VOLTAGE SHALL BE 120V.
4. HORSEPOWER SHALL BE A MINIMUM OF 0.5.
5. HOUSING AND IMPELLER SHALL BE STAINLESS STEEL.



SECTION B



36" BYPASS ABOVE GROUND PIPE SUPPORT
N.T.S.

cma
chen moore and associates
500 West Cypress Creek Road, Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER
DMSI DAVID MANCINI & SONS, INC.
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

100% SUBMITTAL

ENGINEER: VINCENT LOCIGNO, P.E.
REG. No. 92216
DATE: ----
TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV
DATE: 10/10/2024
DESIGNED BY: ----
SCALE: 1" = 20'
CHECKED BY: ----
FIELD BOOK: ----

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN AND NE 19TH AVE 24-INCH FORCE MAIN REPLACEMENTS
DETAILS

SHEET NO. D07
SHT # 58
TOTAL: 57
CAD FILE: 12384-MULTI-DETL
DRAWING FILE NO.

EquipmentWatch

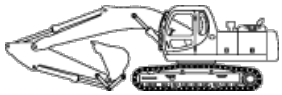
www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 308E2 CR (disc. 2020)
Crawler Mounted Hydraulic Excavators



Size Class:
6.5 - 8.4 mt
Weight:
N/A

Configuration for 308E2 CR (disc. 2020)

Horsepower	**65.0 hp**	Operating Weight	**18519 lbs**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $6,930.00	USD $1,940.00	USD $485.00	USD $73.00	USD $28.76	USD $68.14
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $6,930.00**	**USD $1,940.00**	**USD $485.00**	**USD $73.00**	**USD $28.76**	**USD $68.14**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $21.66
Idling Rate	USD $46.22

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $2,079.00/mo
Overhaul (ownership)	45%	USD $3,118.50/mo
CFC (ownership)	15%	USD $1,039.50/mo
Indirect (ownership)	10%	USD $693.00/mo
Fuel (operating) @ USD 4.15	23.78%	USD $6.84/hr

Revised Date: 1st quarter 2024

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book® Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for DAVID MANCINI (dmancinijr@dmsi.co)

EquipmentWatch

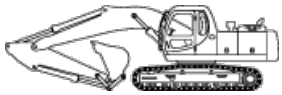
www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 325
Crawler Mounted Hydraulic Excavators



Size Class:
21.5 - 24.4 mt
Weight:
N/A

Configuration for 325

Bucket Capacity	**1.2 cu yd**	Horsepower	**174 hp**
Operating Weight	**49604 lbs**	Power Mode	**Diesel**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $14,760.00	USD $4,135.00	USD $1,035.00	USD $155.00	USD $49.38	USD $133.24
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $14,760.00**	**USD $4,135.00**	**USD $1,035.00**	**USD $155.00**	**USD $49.38**	**USD $133.24**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $46.13
Idling Rate	USD $97.70

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $4,428.00/mo
Overhaul (ownership)	45%	USD $6,642.00/mo
CFC (ownership)	15%	USD $2,214.00/mo
Indirect (ownership)	10%	USD $1,476.00/mo
Fuel (operating) @ USD 4.15	28.03%	USD $13.84/hr

Revised Date: 1st quarter 2024

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EquipmentWatch™

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 938M
4-Wd Articulated Wheel Loaders

Size Class:
175 - 199 hp
Weight:
N/A

Configuration for 938M

Horsepower	**168.0 hp**	Operator Protection	**ROPS/FOPS**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $6,410.00	USD $1,795.00	USD $450.00	USD $68.00	USD $29.00	USD $65.42
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $6,410.00**	**USD $1,795.00**	**USD $450.00**	**USD $68.00**	**USD $29.00**	**USD $65.42**

Non-Active Use Rates

	Hourly
Standby Rate	USD $24.77
Idling Rate	USD $49.38

Rate Element Allocation

Element	**Percentage**	**Value**
Depreciation (ownership)	39%	USD $2,499.90/mo
Overhaul (ownership)	32%	USD $2,051.20/mo
CFC (ownership)	18%	USD $1,153.80/mo
Indirect (ownership)	11%	USD $705.10/mo
Fuel (operating) @ USD 4.15	44.69%	USD $12.96/hr

Revised Date: 1st quarter 2024

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EquipmentWatch™

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

GMC\CHEVY 2500
On-Highway Light Duty Trucks

Size Class:
300 hp & Over
Weight:
N/A

Configuration for 2500

Axle Configuration	**4.0 x 2.0**	Cab Type	**Crew**
Horsepower	**310.0 hp**	Power Mode	**Diesel**
Ton Rating	**3.0 / 4.0**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $710.00	USD $200.00	USD $50.00	USD $8.00	USD $19.36	USD $23.39
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $710.00**	**USD $200.00**	**USD $50.00**	**USD $8.00**	**USD $19.36**	**USD $23.39**

Non-Active Use Rates

	Hourly
Standby Rate	USD $2.66
Idling Rate	USD $19.45

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	35%	USD $248.50/mo
Overhaul (ownership)	34%	USD $241.40/mo
CFC (ownership)	13%	USD $92.30/mo
Indirect (ownership)	18%	USD $127.80/mo
Fuel (operating) @ USD 4.15	79.65%	USD $15.42/hr

Revised Date: 1st quarter 2024

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EquipmentWatch™

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Sullair 375HDPQCA
Portable Rotary Screw Air Compressors

Size Class:
250 - 599 cu ft/min
Weight:
4150 lbs

Configuration for 375HDPQCA

Air Delivery Rating	**375.0 cu ft/min**	Horsepower	**130.0**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $4,235.00	USD $1,185.00	USD $295.00	USD $44.00	USD $35.74	USD $59.80
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $4,235.00**	**USD $1,185.00**	**USD $295.00**	**USD $44.00**	**USD $35.74**	**USD $59.80**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $7.94
Idling Rate	USD $43.46

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	15%	USD $635.25/mo
Overhaul (ownership)	67%	USD $2,837.45/mo
CFC (ownership)	10%	USD $423.50/mo
Indirect (ownership)	8%	USD $338.80/mo
Fuel (operating) @ USD 4.15	54.28%	USD $19.40/hr

Revised Date: 1st quarter 2024

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EquipmentWatch™

www.equipmentwatch.com

All prices shown in US dollars ($)

Rental Rate Blue Book®

February 26, 2025

Caterpillar AP-600D (disc. 2017)
Wheel Mounted Asphalt Pavers

Size Class:
35,000 lbs & Over
Weight:
37251 lbs

Configuration for AP-600D (disc. 2017)

Horsepower	**165.0 hp**	Power Mode	**Diesel**
Screed Model	**AS3251C**	Wheel Drive	**2.0**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $13,590.00	USD $3,805.00	USD $950.00	USD $145.00	USD $52.34	USD $129.56
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2017: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $13,590.00**	**USD $3,805.00**	**USD $950.00**	**USD $145.00**	**USD $52.34**	**USD $129.56**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $34.17
Idling Rate	USD $101.17

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	28.26%	USD $3,840.02/mo
Overhaul (ownership)	55.75%	USD $7,575.79/mo
CFC (ownership)	9.39%	USD $1,276.63/mo
Indirect (ownership)	6.6%	USD $897.56/mo
Fuel (operating) @ USD 3.54	45.76%	USD $23.95/hr

Revised Date: 1st quarter 2025

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The equipment represented in this report has been exclusively prepared for (dmancinijr@dmsi.co)

EquipmentWatch™

www.equipmentwatch.com

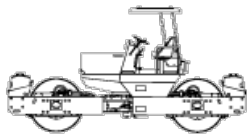
All prices shown in US dollars ($)

Rental Rate Blue Book®

February 25, 2025

Caterpillar CB-24 (disc. 2013)
Tandem Vibratory Compactors

Size Class:
1.5 - 3.4 mt
Weight:
5952 lbs



Configuration for CB-24 (disc. 2013)

Drum Width	**47.0 in**	Horsepower	**31.8 hp**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $2,805.00	USD $785.00	USD $195.00	USD $29.00	USD $11.15	USD $27.09
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2013: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $2,805.00**	**USD $785.00**	**USD $195.00**	**USD $29.00**	**USD $11.15**	**USD $27.09**

Non-Active Use Rates

	Hourly
Standby Rate	USD $8.29
Idling Rate	USD $18.59

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	29.28%	USD $821.19/mo
Overhaul (ownership)	47.97%	USD $1,345.54/mo
CFC (ownership)	11.56%	USD $324.26/mo
Indirect (ownership)	11.19%	USD $314.01/mo
Fuel (operating) @ USD 3.54	23.77%	USD $2.65/hr

Revised Date: 1st quarter 2025

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The equipment represented in this report has been exclusively prepared for (dmancinijr@dmsi.co)

All American Precast
1300 NW 4 Street
Homestead, FL 33030 US
+13054182795
ADMIN@ALLAMERICANPRECAST.COM
www.allamericanprecast.com

ARV MANHOLE TOP SLAB WITH RIM AND COVER FOR ACCESS TO LINESTOP SADDLE ON DRIVEWAY

Estimate

ADDRESS
DAVID MANCINI & SONS INC
2601 Wiles Road
Pompano Beach, FL 33073

SHIP TO
CITY OF FT LAUDERDALE
PROJECT # 12384
NE 38th ST 42-INCH FM
MAIN REPLACEMENT
FORT LAUDERDALE FL

ESTIMATE # 12206D1
DATE 08/07/2024

P.O. NUMBER	SALES REP	JOB NAME
FLGOLF-06	Al	PROJ 12384 NE 38th ST

ACTIVITY	QTY	RATE	AMOUNT
60" RD ARV MANHOLE 60" RD ARV MANHOLE W/ TOP SLAB & USF # 690-AH-M "CITY OF FT LAUDERDALE ARV SEWER" R/C.	7	6,378.00	44,646.00T
Castings NAME CHANGE "CITY OF FT LAUDERDALE" ARV SEWER ON LID.	1	2,500.00	2,500.00
Castings 60" RD ARV MANHOLE W/ TOP SLAB. Add on 05/09/2024	2	2,153.00	4,306.00T
72" RD ARV MANHOLE 72" RD ARV MANHOLEW/ TOP SLAB.	3	2,648.00	7,944.00T
Castings TEMP "M" COVERS	12	150.00	1,800.00
Castings 690-AH-M PL R/C.	5	4,225.00	21,125.00
02 Delivery included. Any paint / coatings not quoted. Casting lead time 6 to 8 weeks. Ram-nek $90 per box as needed.	1	0.00	0.00
***Note** Note: All American Precast Manufacturing, Corp is a material supplier. We are to be paid per invoice or statement, not per customer's contract draws. 1.Proposals are valid for up to 30 calendar days, pricing may be subject to change after 30 days. All American Precast manufacturing, Corp reserves the right to withdraw proposal. Engineering fees if required must be requested.	1	0.00	0.00

Date 01/14/25

Customer	David Mancini & Sons	**Contact**	Ryan Kaltz
	2601 Wiles Rd	**Phone**	954-826-8639
	Deerfield Beach, 33073	**Email**	Rkaltz@Dmsi.co
Project	Coral Ridge Bypass		
	TBD	**Term**	4 week
		PO:	Pending

Qty	Item	Day	Week	4 Week	4 week
100	24" Steel Pipe Per Ft	$1.67	$5.00	$15.00	$1,500.00
3	24" Flange Elbow 90	$27.78	$83.33	$250.00	$750.00
1	Misc. Nuts, Bolts, Silicone	$19.44	$58.33	$175.00	$175.00
				TOTAL RENTAL	**$2,425.00**

Services	Item	Price	Total
2	Delivery	$250.00	$500.00
2	Pick up	$250.00	$500.00
		Services Total	$1,000.00

Subtotal	$3,425.00
Env. Fee	$24.25
Estimated Tax	$206.96
Estimated Total*	$3,656.21

***This is an estimate. Actual site conditions can vary which may effect the final pricing.**

Customer Responsibilities:

Point of discharge.
Fueling, unless otherwise noted by contractor.
Power source, materials and labor for electric units.
Heavy equipment for loading , unloading, set up and tear down of equipment (U.O.N)
Discharge Permit and fees.
Monitoring of Dewatering Equipment
Ballast Rock for turbidity control and stability if needed.
Cleaning of sediment tank/s

208 NW 1st Street Deerfield Beach, FL 33441 Phone: (954) 427-2206 Fax: (954) 426-2009

FERGUSON WATERWORKS

FEL-POMPANO BEACH WW #125
1950 NW 18TH STREET
POMPANO BEACH, FL 33069-1394

Phone: 954-973-8100
Fax: 954-917-3134

Deliver To:
From: **Matt Briggle**
matt.briggle@ferguson.com
Comments:

22:05:49 OCT 02 2024

FEL-POMPANO BEACH, FL WW #125
Price Quotation
Phone: 954-973-8100
Fax: 954-917-3134

Bid No: B574476
Bid Date: 10/02/24
Quoted By: MB

Cust Phone: 954-977-3556
Terms: NET 10TH PROX

Customer:
DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Ship To:
DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Cust PO#:

Job Name: CORAL RIDGE FM REPLACEMEN

Item	Description	Quantity	Net Price	UM	Total
MJLSP4LA42	42 MJ C153 P-401 LONG SLV L/A	1	8338.990	EA	8338.99
MJ4P4LA42	42 MJ C153 P-401 45 BEND L/A	1	11719.180	EA	11719.18
D118MJ36	36 MJ N/LUBE PLUG VLV L/A	1	50939.330	EA	50939.33
SP-MJPLUGVLV42	42 MJ PLUG VALVE - SEE SPEC	2	103264.000	EA	206528.00
SP-MJTLA4236	42X36 MJ TEE C153 CL	1	19636.050	EA	19636.05
MJ9P4LA36	36 MJ C153 P-401 90 BEND L/A	1	9596.140	EA	9596.14
FPPP436P	36X4'0 FLGXPE P-401 BT DI SPL	2	7641.180	EA	15282.36
FFPP436K	36X2'0 FLGXFLG P-401 BT DI SPL	2	8089.410	EA	16178.82
FPPP436U	36X6'0 FLGXPE P-401 BT DI SPL	1	9988.240	EA	9988.24
E213600	36 MEGAFLANGE FLG ADPT	2	3708.380	EA	7416.76
F9P436	36 DI 125# FLG P-401 90 BEND	2	14002.400	EA	28004.80
SP-VF36PV	36 FLG PLUG VLV	1	49916.850	EA	49916.85
SP-VFCV36	36 FLG CHK VLV	1	48348.310	EA	48348.31
SSLDE42	42 DI MJ WDG RTNR GLAND *ONEL	10	2417.080	EA	24170.80
SSLDE36	36 DI MJ WDG REST GLND *ONELO	5	1693.300	EA	8466.50
SP-SSFAP36	36 SS FLG ACC SET	10	1158.830	EA	11588.30

	ARV				
FFC2023830IP7	36X2 IP DBL STRP SS EPOX SDL	1	720.000	EA	720.00
FFB17007NL	LF 2 MIP X FIP BALL CORP	1	315.000	EA	315.00
V48K	2 SEWAGE AIR RELEASE VLV	1	1040.000	EA	1040.00
IS46NKP	2X4 SS S40 316L WLD NIP	1	14.000	EA	14.00

Net Total:	$528208.43
Tax:	$31742.51
Freight:	$0.00
Total:	$559950.94

HOW ARE WE DOING? WE WANT YOUR FEEDBACK!
Scan the QR code or use the link below to complete a survey about your bids:
https://survey.medallia.com/?bidsorder&fc=125&on=74695

500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
Office: +1 (954) 730-0707

chen moore and associates

December 12th, 2024

Fabio Angarita
David Mancini & Sons, Inc
2601 Wiles Road
Pompano Beach, FL 33073

Subject: **City of Fort Lauderdale**
P12384 Coral Ridge Force Main - Phase 4
RCO #2 – 36-inch Bypass at Repump B

Dear Mr. Angarita,

During the design of the force main in Phase 4 of the City of Fort Lauderdale Force Main Project (P12384), the City of Fort Lauderdale has requested that DMSI replace the existing 36-inch above-ground bypass at Repump B. The work required to install a new bypass necessitates additional design and inspection services from CMA that were not included in the original Design Citeria Package (DCP).

As requested by the City of Fort Lauderdale, CMA will include in our Phase 4 submittal plans a detailed design encompassing all necessary piping, valves, connection points, and pipe supports to meet City standards. This design will also incorporate the above-ground bypass under the same permit. Additionally, CMA will provide restoration design plans for all areas impacted during the construction of the bypass. To support the construction process, CMA will provide an inspector onsite during the installation of the 36-inch above-ground bypass. This request also includes the redesign of the connection location to the existing 42-inch influent line at the Master Repump station as discussed in the field with City staff.

Please note that CMA will not perform any modeling or flow calculations as part of this work. The design plans will incorporate the existing system and be replaced in kind.

This additional scope of work has resulted in unanticipated costs for CMA related to the design and construction inspection of the bypass and new connection locations to the existing force main system. The estimated total cost for these additional services is $62,400.

Please feel free to contact me if you have any additional questions at +1 (561) 744-8282 or via email at vlocigno@chenmoore.com.

Respectfully submitted,

Vincent Locigno

Chen Moore and Associates
Vincent Locigno, PE
Project Engineer

Rangeline Is The Lifeline For Your Pipeline

Quote Number RTS24-3112

Rangeline will provide the following Material:

Quantity	Description	Unit Price	Total
1	Night Work Option for the 42" Double Line stop Service	$9,545.00	$9,545.00
1	Night Work Option for the 42" Double Re-Stop Service	$5,574.00	$5,574.00

Rangeline Group will perform the following Double Line Stop:

Quantity	Size	Pipetype	Product	Double Line Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$84,520.00	$84,520.00	$1,500.00 Per Day, Per Line Stop

Rangeline Group will perform the following Double Re-Stop:

Quantity	Size	Pipetype	Product	Double Re-Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$44,522.00	$44,522.00	$1,500.00 Per Day, Per Line Stop

PLEASE NOTE: Rangeline will make every attempt to remove the completion plug and re-insert the line stopper through the existing fitting. If the completion plug cannot be removed, the existing line stop fitting will have to be abandoned and a new line stop fitting and location will be needed in order to shut the system down.

Note: Rangeline cannot guarantee a 100% shutdown due to debris, mineral deposits, solids and/or sediments in the pipe.

Prices are based on the following below:

- Rangeline will provide epoxy coated linestop fittings with stainless steel hardware for the double linestop services, and use existing and serviceable linestop fittings for the double re-stop services.
- If the project is cancelled after NON-AIS(standard) materials are ordered, there will be a restocking fee.
- Rangeline will provide (2) 24" 150# flanged outlets for customer to connect Bypass Piping to the 42" double line stop or double re-stop sets. Customer must provide and install all Bypass Piping and related materials.
- When equipment is placed on the pipeline system, whether the Re-Stop is in the main or not, per day charges will apply.
- Please allow (7 - 14 days) notice for scheduling after receipt of materials to ensure availability. Projects that require shorter lead times may incur additional charges.
- Contractor must encase each line stop fitting in concrete.
- If the type of pipe changes from what we have quoted above, prices and scheduling may vary. Contractor or Municipality is responsible for verifying the type of pipe and it's O.D.
- Rangeline may require a pre-construction meeting or site visit prior to scheduling any services.
- Normal daytime hours (7:00AM- 7:00 PM EST) Monday through Friday. Technician(s) will have a $375.00 per hour after hours charge, portal-to-portal. Additional Expenses will be charged at our cost plus 20%.
- Rangeline will allow (3) Mobilizations/De-Mobilizations to the jobsite per double line stop and (2) Mobilizations/De-Mobilizations to the jobsite per double re-stop. Additional trips will be $750.00 per trip. Mobilization charges are applied when the technician leaves the shop or jobsite to start or after completion of the project.

Rangeline Tapping Services
7256 Westport Place Ste A West Palm Beach, FL 33413

A & M Brothers Concrete Corp.
95 NE 12 Street
Homestead Fl, 33030
Phone: (786) 296 5979
a.m.concrete@hotmail.com

PROPOSAL / CONTRACT
PROPOSAL VALID FOR 90 CALENDAR DAYS
CALENDAR DAYS
Date: FEBRUARY 04, 2025

CONTRACTOR: DAVID MANCINI & SONS INC
Attn: Alejandra Suarez
Email: ASuarez**@dmsi.co**
PHONE: (786)-284-2268
COUNTY: BROWARD
PROJECT NAME : CORAL RIDGE ABOVE GROUND PIPE SUPPORT

Item	Description	Unit	Unit price	Quantity	Total Amount
1	5' X 18" ABOVE GROUND PIPE SUPPORT WITH #5 REBAR 12" ON CENTER TOP AND BOTTOM EACH WAY	EACH	$ 3,800.00	2	$ 7,600.00
	Note: Final Invoice base on Field measurements		TOTAL		$ 7,600.00

PRICE INCLUDES LABOR, MATERIALS, EQUIPMENT AND 3,000 REG OR 2,500 DOT PSI CONCRETE	
Field Office, Inspections, Concrete Cylinder Test are NOT Included	Maintenance of Traffic NOT included.
Fill Materials, Grading and Base Preparation are NOT Included	Bond/Layout/As Built NOT Included.
Lime rock Base and Subgrade are NOT Included.	Concrete Pump are NOT Included.

PAYMENT TO A & M Brothers Concrete Corp. is due within 30 days of receipt of this invoice. Any payment not received timely, shall be subject to interest at the rate of 1.5 % per month. In the event of legal action is required to enforce this invoice, A & M Brothers Concrete shall be entitled to recover its attorneys' fees and costs.

ACCEPTANCE OF PROPOSAL/CONTRACT: **DAVID MANCINI & SONS**

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date_____

_____
Name / Title

_____
Signature

CONFIDENTIAL

Customer Name		**David Mancini & Sons - Alejandra Suarez**		**Phone: 954-977-3556**	
Address		**2601 Wiles Road, Pompano Beach, FL 33073**		**Fax:**	
Project Name		**Coral Ridge FM Replacement - Proj 23-FL.GOLF**		**Cell: 305-775-5340**	
Address		**NE 50th Court & 15th Ave, Ft Lauderdale, 33334**		asuarez@dmsi.co	
Mix Code		***Description***		***U.O.M.***	***Price***
		**** As Requested ****			
06-FF-95		**FDOT FLOWABLE FILL EXCAVATABLE 100 PSI**		Cubic Yard	$173.00
		SERVICE CHARGES			
		Environmental Load Charge		Load	**$25.00**
Currently		**FUEL SURCHARGE - ADJUSTED WEEKLY *1/16/2025***		Load	$32.20
6:00am-12:30pm		**Saturday Delivery Charge**		Cubic Yard	**TBD**
6:00 pm-6:00 am		**Plant Opening 4-HR Minimum Monday - Friday**		FLAT	**TBD**
SHORT257		**Minimum Load Charge - Less than 7 CY**		Load	$250.00
		Return Concrete Handling & Disposal Fee		Cubic Yard	**$35.00**
		Order Cancellation Fee		FLAT	**$1,500.00**
1/6/2025		***Effective Date***		***Expiration Date***	**3/31/2025**
Escalation		***TBD 7/1/2025***			

This quotation must be accepted by written purchase order 30 calendar days from quote date or it will expire; however, Supermix at all times reserves the right to increase the quoted prices without notice that reflect an increase in raw material costs, changes in market conditions, or surcharges incurred by Supermix, and to cancel or defer any quote in the event Supermix becomes delayed or prevented by shortages or allocations of raw materials. Supermix shall not be liable to Buyer, any of its counterparties, or any third parties for damages as a result of any such price change, delay, or cancellation.

Supermix Representative		***Peter Kaczorowski***	***Office: 954.480.9333***	***Cell: 954.214.4937***
		Account Manager	***Fax: 954.480.2893***	***Email: pete@supermix.com***

Accepted by: _____ Date: _____

CONFIDENTIAL

Customer Name		**David Mancini & Sons**		**Phone: 954-977-3556**		
Address		**2601 Wiles Road, Pompano Beach, FL 33073**		**Fax:**		
Project Name				**Cell: 954-668-7770**		
Address						
Mix Code		***Description***		***U.O.M.***		***Price***
		**** As Submitted - 11/6/2024 ****				
33905		**3000 PEAROCK PUMPMIX**		Cubic Yard		$187.00
		SERVICE CHARGES				
		Environmental Load Charge		Load		**$25.00**
Currently		**FUEL SURCHARGE - ADJUSTED WEEKLY *11/6/2024***		Load		$30.90
6:00am-12:30pm		**Saturday Delivery Charge**		Cubic Yard		**TBD**
6:00 pm-6:00 am		**Plant Opening 4-HR Minimum Monday - Friday**		FLAT		**TBD**
SHORT257		**Minimum Load Charge - Less than 7 CY**		Load		$250.00
If Needed		**Placing Pump Primer & Blowback Grout Mix**		Cubic Yard		$250.00
		Return Concrete Handling & Disposal Fee		Cubic Yard		**$35.00**
		Order Cancellation Fee		FLAT		**$1,500.00**
11/6/2024		***Effective Date***		***Expiration Date***		**6/30/2025**
Escalation		***NOT TO EXCEED $10.00 CY 7/1/2025 - 12/30/2025***				

This quotation must be accepted by written purchase order 30 calendar days from quote date or it will expire; however, Supermix at all times reserves the right to increase the quoted prices without notice that reflect an increase in raw material costs, changes in market conditions, or surcharges incurred by Supermix, and to cancel or defer any quote in the event Supermix becomes delayed or prevented by shortages or allocations of raw materials. Supermix shall not be liable to Buyer, any of its counterparties, or any third parties for damages as a result of any such price change, delay, or cancellation.

Supermix Representative		***Peter Kaczorowski***	***Office: 954.480.9333***	***Cell: 954.214.4937***
		Account Manager	***Fax: 954.480.2893***	***Email: pete@supermix.com***

Accepted by: _____ Date: _____

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - CHECK VALVE

1. Date of Submission	12/6/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-02-1
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.03
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

cma
chen moore and associates

[X] No Exceptions Taken [ ] Furnish With Changes Noted
[ ] Revise and Resubmit [ ] Rejected

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By Vincent Locigno, PE Date 12/9/24

AWWA C508 Swing Check Valves

Index

1155 ALPHA DRIVE SUITE A · ALPHARETTA, GA 30004
PHONE: 770-740-0800 · FAX: 770-740 8777

SERIES CVI
AWWA C508
SWING CHECK VALVES

2”-48”

DOC-00000436[A]
April 2023

2”-48” CVI BONDED SEAT SWING CHECK

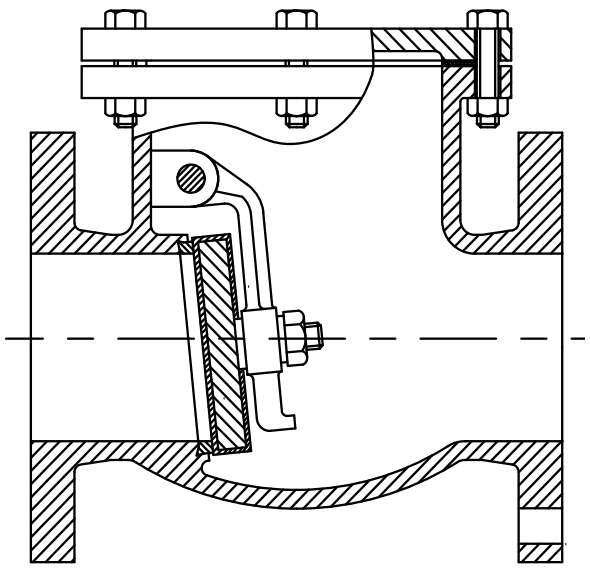
BONDED SEAT SWING CHECK VALVE

VSI offers the simplified bonded seat type check valve for pump and lift stations where a standard duty valve is acceptable and external accessories are not required. It still exemplifies VSI’s commitment to providing a quality product.

- Body seats are permanently bonded non-replaceable, reducing possible leakage paths.
- Disc seats are replaceable by way of replacing the entire disc.
- The shaft extends only to one side, reducing seal friction and possible leakage paths.

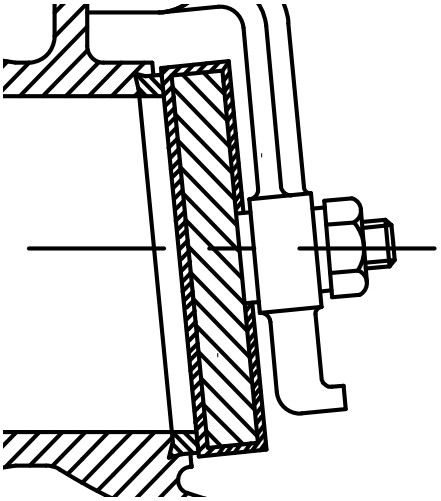
SIMPLE INTERNALS

VSI Bonded Seat Swing Check Valves are built with simplicity in mind for use in general duty applications. They feature minimal internal hardware and robust coatings for long service life in many less demanding applications.



REPLACEABLE DISC

VSI Swing Check Valves incorporate a replaceable bonded seat, which can be removed without taking the valve out from the line. Simply remove the sealed cover, and change out the entire disc.



NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
105 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

DESIGN STANDARDS

Size Range	6"-48" Flanged End
Construction	AWWA C508
	ASME B16.34
	API 600
Coatings	AWWA C550*
Connections	ANSI B16.1 Class 125*
	ANSI B16.1 Class 250
	ANSI B16.5 Class 150
	ANSI B16.5 Class 300
Lay Length	AWWA C508 Appendix A Full
	ISO 5752
Classifications	150 PSIG
	175 PSIG
	200 PSIG*
	250 PSIG*

*Standard Option

American Water Works Association

cma chen moore and associates

[X] No Exceptions Taken [ ] Furnish With Changes Noted
[ ] Revise and Resubmit [ ] Rejected

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By Vincent Locigno, PE Date 12/9/24

RESISTANCE GUIDE

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attached by:
EPDM	EPDM, EPM	Ethylene-propyl-ene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons
NBR	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouropropyl-ene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high tem-peratures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molec-ular weight esters and nitro-containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-eth-ylene	-100F/450F	Excellent abrasion resistance and chemi-cally inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures

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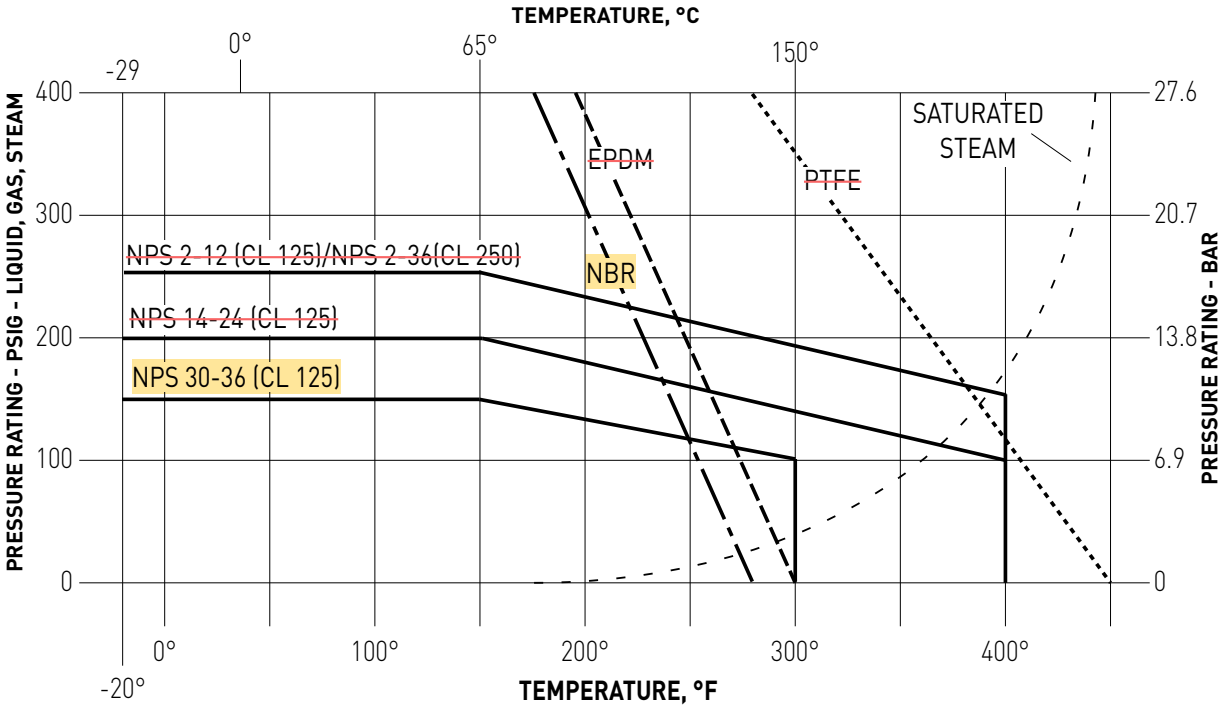
PRESSURE/TEMPERATURE RATINGS



In determining field pressure ratings for Series CVI Check Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

cma
chen moore and associates

X No Exceptions Taken ☐ Furnish With Changes Noted
☐ Revise and Resubmit ☐ Rejected

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By Vincent Lodigno, PE Date 12/9/24

CAM #25-0539
Exhibit 4
Page 36 of 205

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
1205 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
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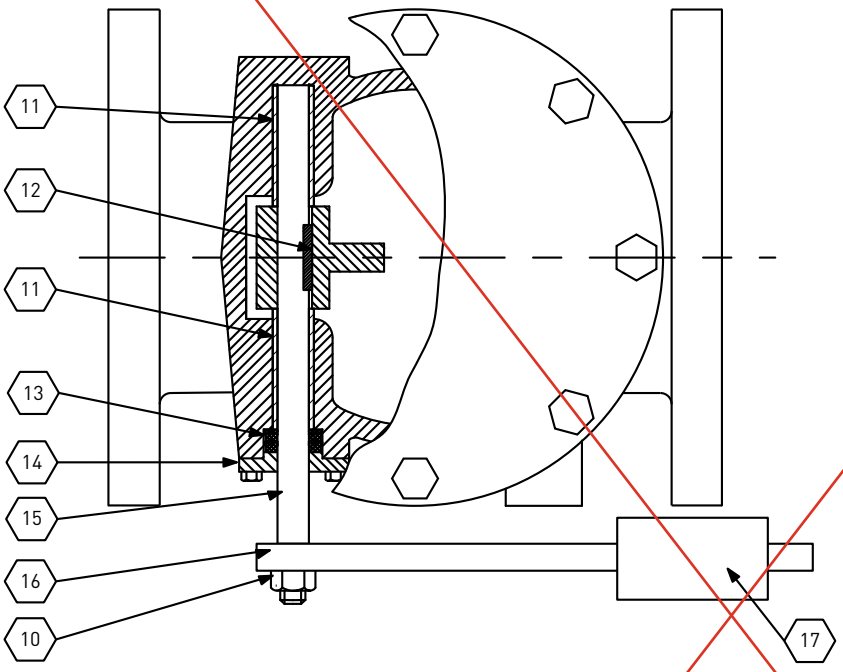
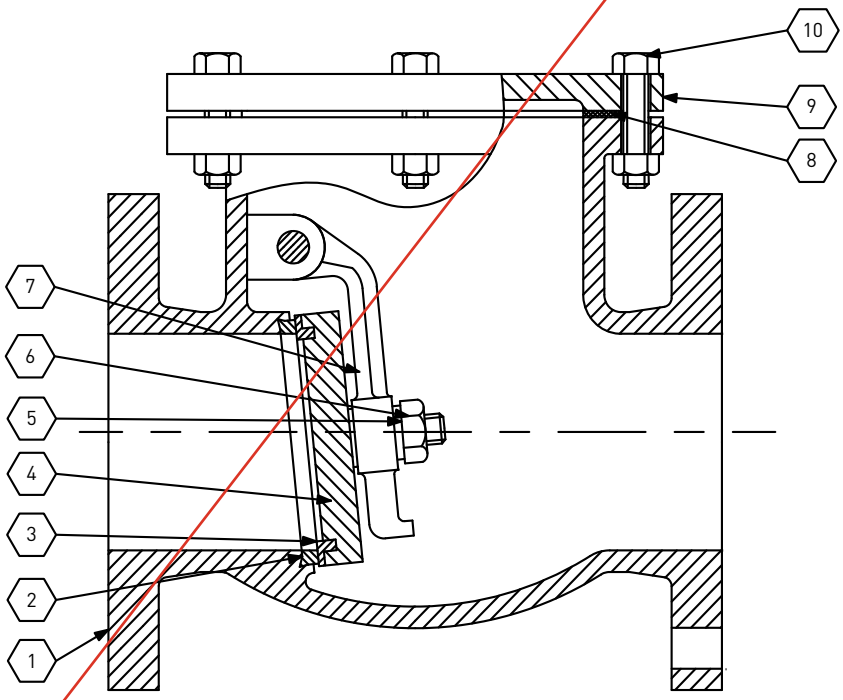
MATERIALS OF CONSTRUCTION METAL SEATED VALVES





ITEM	DESCRIPTION	MATERIAL OPTIONS
1	BODY	DUCTILE IRON ASTM A536 65-45-12
2	BODY SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
3	DISC SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
4	DISC	DUCTILE IRON ASTM A536 65-45-12
5	WASHER	STEEL ASTM A36
6	WETTED HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
7	ARM	DUCTILE IRON ASTM A536 65-45-12
8	SEAL	EPDM
		BUNA-N (NBR)
9	COVER	SAME AS BODY (1)
10	EXTERIOR HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
11	BEARING	PTFE
12	KEY	STEEL ASTM A36
13	SHAFT SEAL	EPDM
		BUNA-N (NBR)
14	RETAINER	SAME AS BODY (1)
15	SHAFT	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		STAINLESS 17-4PH ASTM A693
16	ARM*	DUCTILE IRON ASTM A536 65-45-12
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12

* IF EQUIPPED

VSI Waterworks
1205 Alpha Drive, Alpharetta, GA 30004
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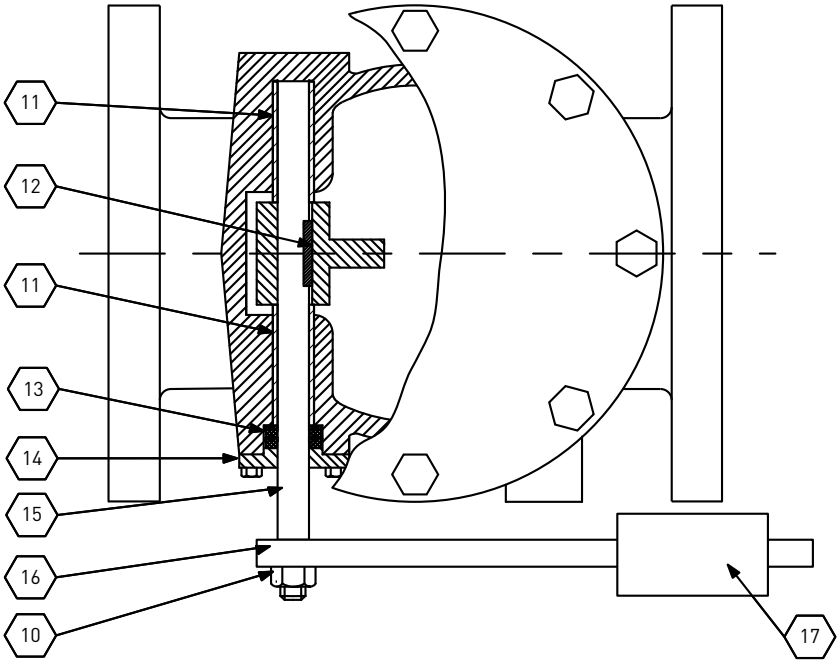
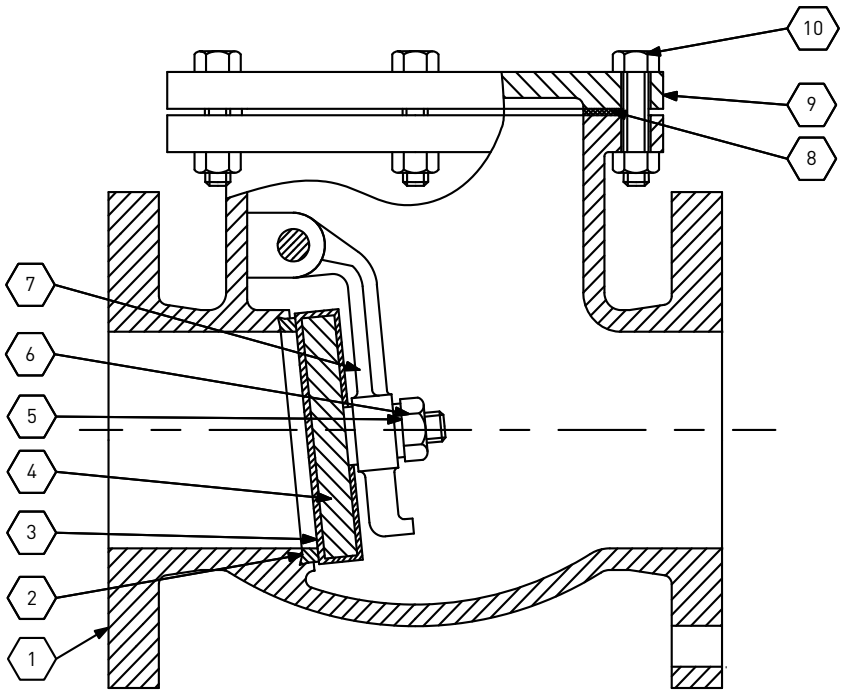
E: sales@vsiwaterworks.com

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

MATERIALS OF CONSTRUCTION RUBBER SEATED





ITEM	DESCRIPTION	MATERIAL OPTIONS	
1	BODY	DUCTILE IRON ASTM A536 65-45-12	
2	BODY SEAT RING	~~STAINLESS 304 ASTM A276~~	
		STAINLESS 316 ASTM A276	
		~~BRONZE ASTM B62~~	
3	DISC SEAT	~~EPDM~~	
		BUNA-N (NBR)	
		~~VITON (FPM)~~	
4	DISC	DUCTILE IRON ASTM A536 65-45-12	
5	WASHER	STEEL ASTM A36	
6	WETTED HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
7	ARM	DUCTILE IRON ASTM A536 65-45-12	
8	SEAL	~~EPDM~~	
		BUNA-N (NBR)	
9	COVER	SAME AS BODY (1)	
10	EXTERIOR HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
11	BEARING	~~PTFE~~ BRONZE	
12	KEY	STEEL ASTM A36	
13	SHAFT SEAL	~~EPDM~~	
		BUNA-N (NBR)	
14	RETAINER	SAME AS BODY (1)	
15	SHAFT	~~STAINLESS 304 ASTM A276~~	
		~~STAINLESS 316 ASTM A276~~	
		STAINLESS 17-4PH ASTM A693	
16	ARM*	DUCTILE IRON ASTM A536 65-45-12	
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12	

* IF EQUIPPED

cma
chen moore and associates

X No Exceptions Taken
Revise and Resubmit
Furnish With Changes Noted
Rejected

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By Vincent Locigno, PE Date 12/9/24

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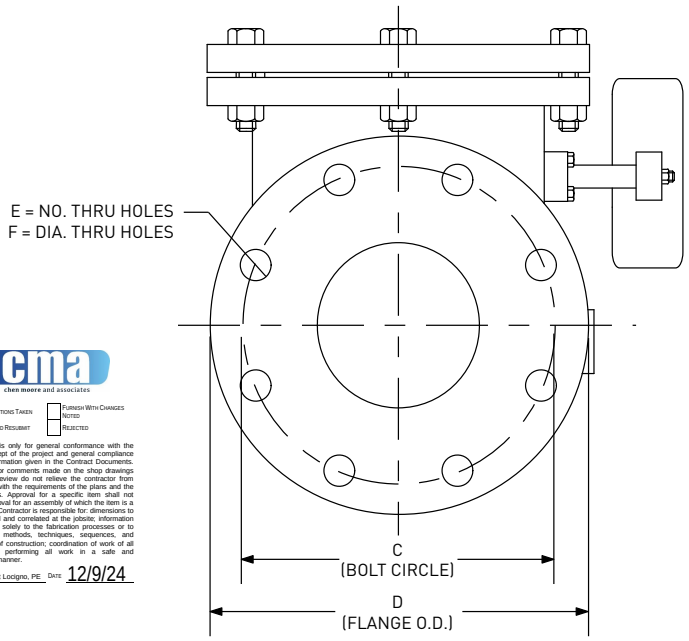
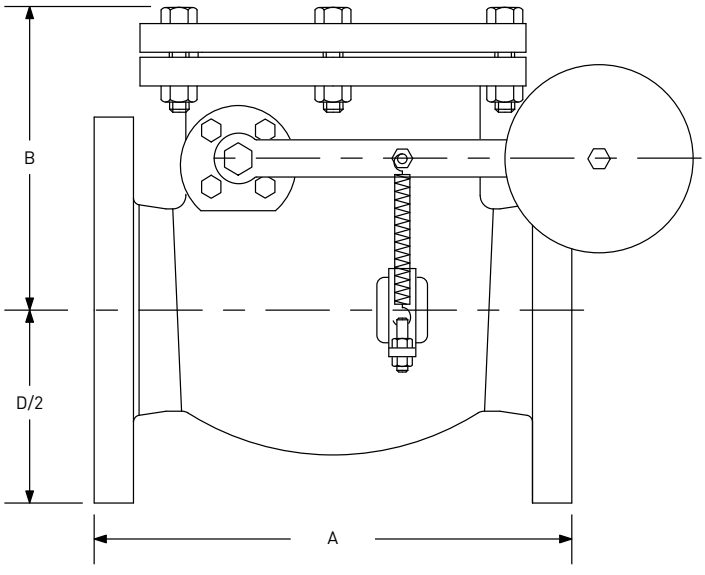
FLANGED WITH OUTSIDE LEVER AND WEIGHT

SIZE	A	B	C	D	E	F	WEIGHT (LBS)
2"	8.00	5.4	4.75	6.0	4	0.75	37
2.5"	8.50	5.8	5.5	7.0	4	0.75	44
3"	9.50	6.3	6.00	7.2	4	0.75	51
4"	11.50	7.1	7.50	9.0	8	0.75	79
5"	13.00	8.0	8.50	10.0	8	0.75	101
6"	14.00	8.8	9.50	11.0	8	0.88	128
8"	19.50	10.2	11.75	13.5	8	0.88	238
10"	24.50	11.4	14.25	16.0	12	1.00	374
12"	27.50	12.8	17.00	19.0	12	1.00	418
14"	31.00	16.7	18.74	21.0	12	1.13	737
16"	36.00	17.5	21.25	23.5	16	1.13	968
18"	38.00	18.9	22.75	25.0	16	1.25	1500
20"	42.00	20.7	25.00	27.5	20	1.25	1600
24"	48.00	23.9	29.50	32.0	20	1.38	2600
30"	56.00	28.6	36.00	38.8	28	1.38	-
36"	63.00	37.9	42.75	46.0	32	1.63	-
42"	70.00	41.0	49.50	53.0	36	1.63	-
48"	76.00	49.0	56.00	49.5	44	1.63	-





cma chen moore and associates

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By Vincent Locigno, PE Date 12/9/24

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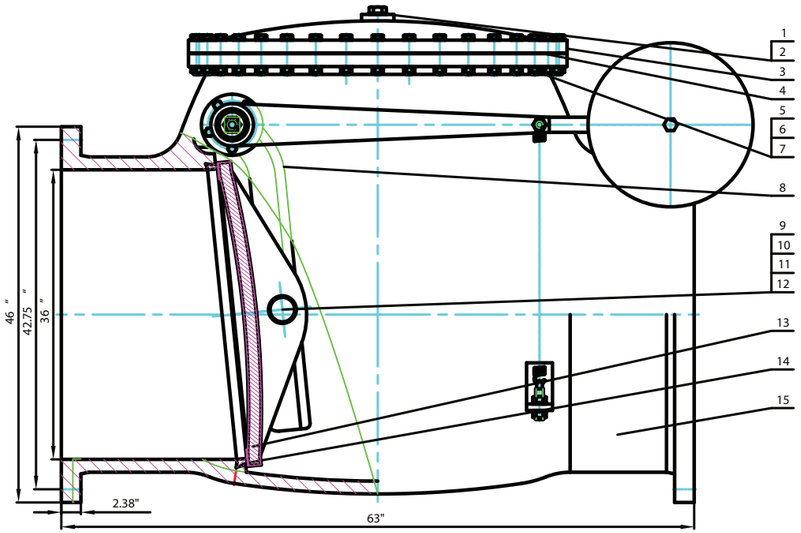

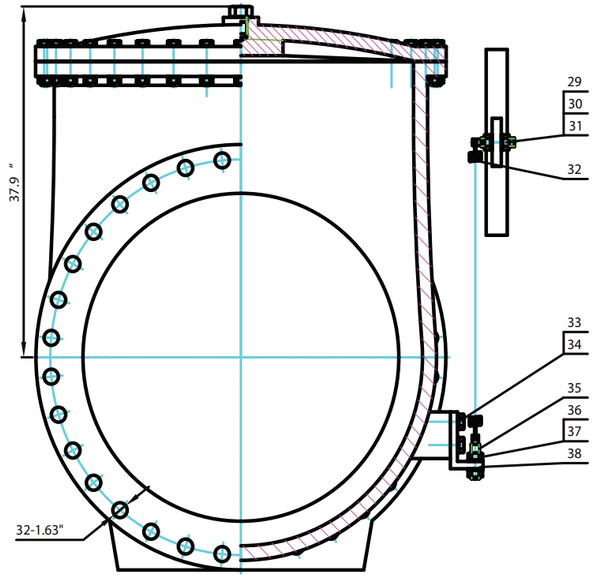

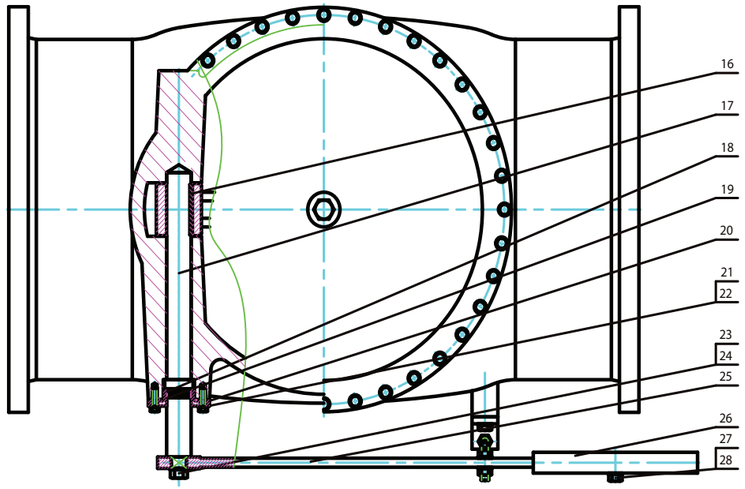

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NO	PART NAME	MATERIAL	STANDARD
1	PLUG	STAINLESS STEEL	SS316
2	O-RING	NBR	ASTM D2000
3	BONNET	DUCTILE IRON	ASTM A536
4	GASKET	NBR	ASTM D2000
5	BOLT	STAINLESS STEEL	SS316
6	NUT	STAINLESS STEEL	SS316
7	WASHER	STAINLESS STEEL	SS316
8	ARM	DUCTILE IRON	ASTM A536
9	HING PIN	STAINLESS STEEL	SS316
10	WASHER	STAINLESS STEEL	SS316
11	NUT	STAINLESS STEEL	SS316
12	COTTER PIN	STAINLESS STEEL	SS316
13	DISC	DUCTILE IRON/NBR	ASTM A536/D2000
14	BODY SEAT RING	STAINLESS STEEL	SS316
15	BODY	DUCTILE IRON	ASTM A536
16	FLAT KEY	STEEL	
17	SHAFT	STAINLESS STEEL	17-4 PH
18	O-RING	NBR	ASTM D2000
19	O-RING	NBR	ASTM D2000
20	GLAND	DUCTILE IRON	ASTM A536
21	BOLT	STAINLESS STEEL	SS316
22	WASHER	STAINLESS STEEL	SS316
23	BOLT	STAINLESS STEEL	SS316
24	WASHER	STAINLESS STEEL	SS316
25	HINGE	DUCTILE IRON	ASTM A536
26	HAMMER	DUCTILE IRON	ASTM A536
27	BOLT	STAINLESS STEEL	SS316
28	WASHER	STAINLESS STEEL	SS316
29	SPRING STUD	STAINLESS STEEL	SS316
30	NUT	STAINLESS STEEL	SS316
31	WASHER	STAINLESS STEEL	SS316
32	SPRING	STAINLESS STEEL	SS316
33	BOLT	STAINLESS STEEL	SS316
34	WASHER	STAINLESS STEEL	SS316
35	SPRING STUD	STAINLESS STEEL	SS316
36	NUT	STAINLESS STEEL	SS316
37	WASHER	STAINLESS STEEL	SS316
38	SPRING BRACKET	CARBON STEEL	

TOLERANCES		
DECIMAL		ANGULAR
X.X	±0.1	±0.25°
X.XX	±0.01	
X.XXX	±0.005	

VSI WATERWORKS
1155 ALPA DR.
ALPHARETTA,GA

36" CVI -
CVI36F-DD63N-B31/0-H
Drawing and Materials

UNITS: INCHES REV 0
SCALE: NTS 12-05-24
DWG. NO. N/A

BONDED SEAT SWING CHECK PART NUMBER MATRIX

CVI ☐☐ - ☐☐☐☐ - ☐☐☐ / ☐ - ☐

MODEL

SIZE CODE
2" - 02
2.5" - 25
3" - 03
.
.
24" - 24

CONNECTION
F -Flanged CL125/150*

BODY MATERIAL
D-Ductile Iron*

DISC MATERIAL
D-Ductile Iron*

SHAFT MATERIAL
~~S-Stainless Steel 304*~~
~~3-Stainless Steel 316~~
6-Stainless 17-4PH

SEAT
~~B-Bronze to Bronze*~~
~~E-EPDM to SS304~~
N-Buna-N (NBR) to SS304

BEARING MATERIAL
~~P-PTFE*~~
B-Bronze ASTM B16

HARDWARE
~~S-Stainless Steel 304*~~
3-Stainless Steel 316
~~Z-Zinc Plated Steel~~

COATINGS
1-AWWA C550 Fusion-Bonded Epoxy
~~C-Custom Project Specific~~

OPTIONS
O-Outside Lever and Weight*
~~OL-Limit Switch~~
~~B-Bare~~

IDENTIFIER

* Standard Material

EXAMPLE:
CVI08F-DDSB-PS1/O-Q
A 8" flanged Check valve with Ductile Iron body and disc, SS304 shaft, Bronze body seat, B[illegible] NBR seals, PTFE bearings, SS304 hardware, AWWA C550 2-part epoxy coatings with outside lever & weight.

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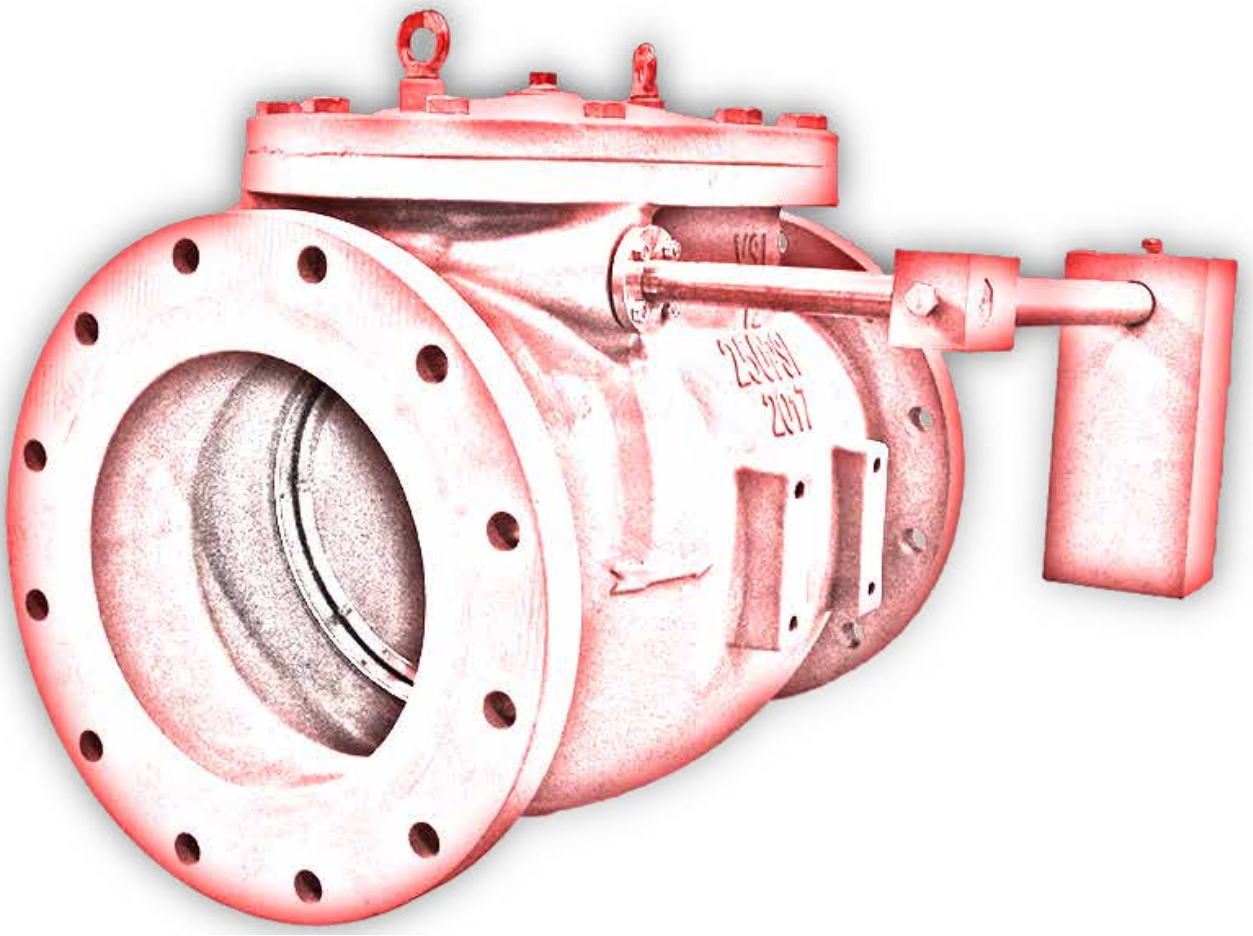

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email: sales@vsiwaterworks.com

www.VSIWaterworks.com

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - PLUG VALVE

1. Date of Submission	12/06/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-20-0
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.02
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

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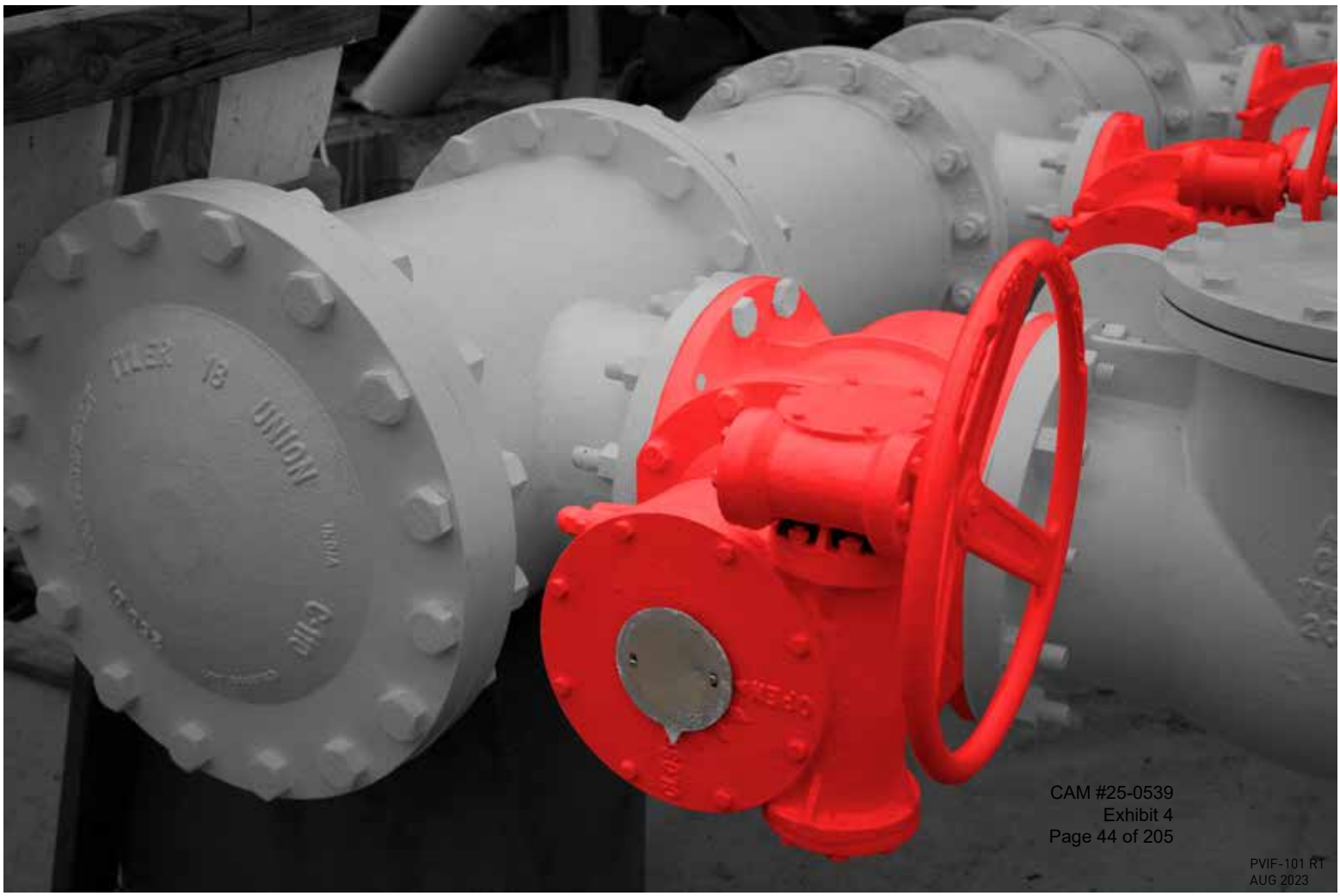
SERIES PVIF
AWWA C517 FULL PORT ECCENTRIC PLUG VALVES

14”-72”



PVIF-101 RT
AUG 2023

IMPLEMENTATIONS

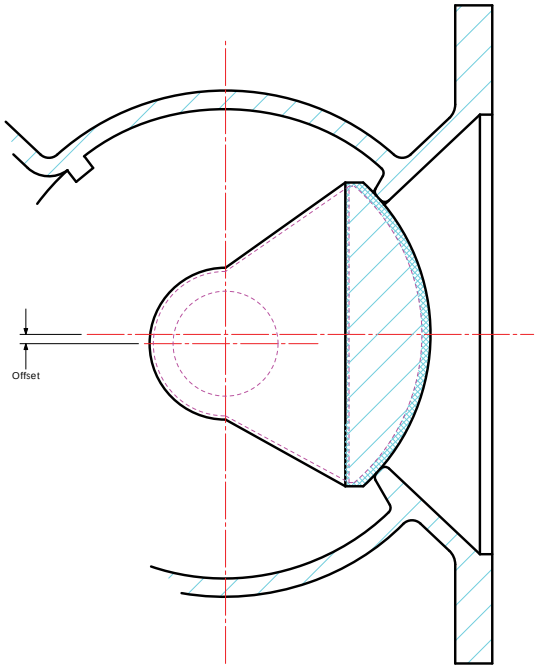
The Eccentric Plug valve is the industry standard for systems that will experience sludge or large particulate flow. VSI Eccentric Plug Valves are able to achieve an extremely high port area while keeping the operating time much lower than the traditional gate valve.

ECCENTRIC MOVEMENT

The most essential function of a valve is that it must isolate line flow. This action is easy to accomplish, but with traditional designs as pressure and size increase the torque required to close the valve increase exponentially.

To counteract this characteristic all VSI Eccentric Plug Valves incorporate an offset in the valve design. By offsetting the plug and shaft centerline from the valve body and pipe centerline a cam action is achieved. This action allows the plug to contact the valve body only in the last 5-10 degrees of movement. Through the rest of the valve motion the only torque transmitted to the operator will be from the low friction bearings and line force on the plug.

The cam action increases the seat force without increasing operator torque allowing for the use of more durable encapsulation materials that are often harder.



RESILIENT PLUG FACING

All VSI Eccentric Plug Valves are equipped as standard with a fully encapsulated resilient plug. By fully encapsulating the plug the service life of the valve is greatly extended by reducing corrosion of the plug. The resilient nature of the seat allows for driptight shut off. Should small solids become deposited upon the plug face, tight shut off is still guaranteed.

VSI Waterworks
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ADJUSTABLE/REPLACEABLE PACKING

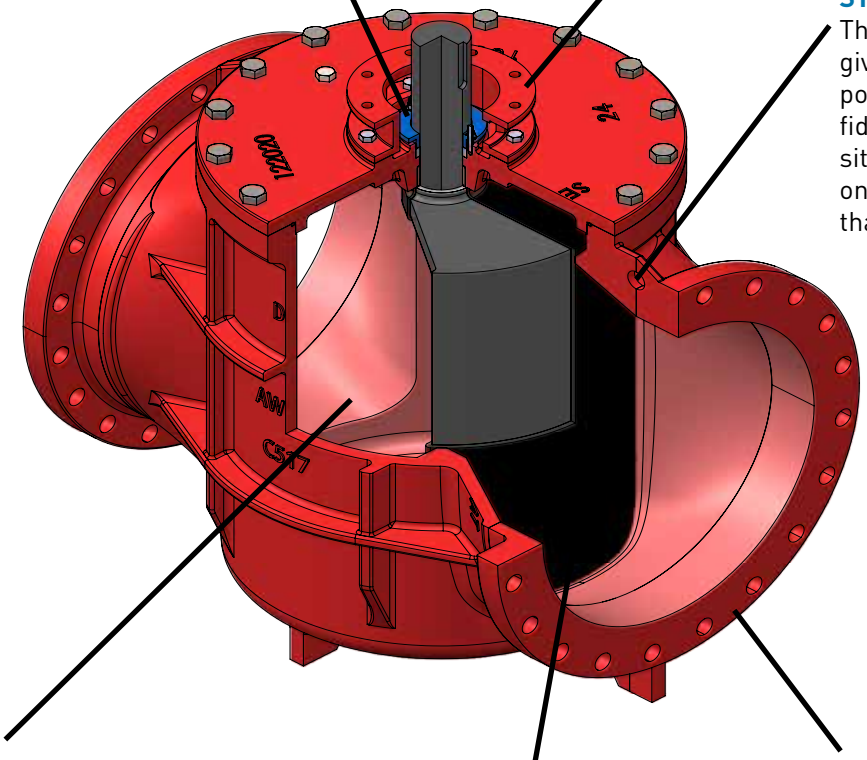
The packing of the Series PVIF consists of multiple v-type packing rings and adjustable gland. The open bonnet on above ground valves allows for the adjustment and replacement of packing without removing the gearbox/operator

NUMEROUS ACTUATION OPTIONS

The standard ISO 5211 top mount allows VSI to offer a wide range of electric, pneumatic, hydraulic, fail-safe, and other actuation packages

STANDARD LIFTING EYE

The lifting holes at all ends of the PVIF give a secure and easy attachment point that allows the valve to be confidently maneuvered into place on job sites. Equipped as a standard feature on all PVIF valves, making your install that much easier.



FULL PORT DESIGN

The rectangular port is of a "Full Port" type with a flow area equal to the nominal pipe to maintain excellent free flow, high Cv values, and low head loss. Pigging with semi-rigid foam type pigs is possible.

FULLY ENCAPSULATED PLUG

The plug of the Series PVIF is fully encapsulated with resilient rubber covering every surface exposed to the line. Full encapsulation eliminates corrosion and minimizes the possibility of delamination or damage to the seat.

MULTIPLE COATING OPTIONS

The standard 2-part heavy duty coating can be optioned to a wide variety of coatings as required by the project requirements such as NSF 61 listed coatings, ceramic reinforced resin, or coal-tar epoxy

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SAMPLE SPECIFICATION

1. FULL RECTANGULAR PORT PLUG VAVES FOR WATERWORKS SERVICE
   1.1. This specification covers the design, manufacture, and testing of eccentric plug valves from 14 inch (350 mm) through 72 inch (1800 mm) under service pressure of up to 150 psig (1035 kPa).
   1.2. Plug valves shall be resilient seated and of the quarter turn, non-lubricated, eccentric type.

2. GOVERNING STANDARDS
   2.1. All eccentric plug valves shall be in full conformance with the design, manufacturing, and testing standards set forth by the American Water Works Association (AWWA) in Standard ANSI/AWWA C517.
   2.2. When requested, manufacturer shall provide an Affidavit of Proof of Design Testing in accordance with AWWA C517.

3. CONNECTIONS
   3.1. Flanged valves shall conform to all standards of ANSI B16.1, Class 125.
   3.2. Mechanical joint valves shall conform to all standards of ANSI/AWWA C111/A21.11.

4. MARKINGS
   4.1. Each valve shall be marked with the manufacturer's name, valve size, body material, and pressure rating cast into the body of the valve. Lettering shall be a minimum of 1/2 inch tall and project 1/10 inch from body.
   4.2. All plug valves, except buried or submerged valves, shall be equipped with a type 304 or 316 stainless steel or Aluminum tag identifying body, plug, resilient seat, and stem material in addition to manufacturer's name, pressure rating, size, date of manufacturer, and date of testing.

5. DESIGN
   5.1. Port areas of valves in relation to pipe areas shall not be less than 100%
   5.2. Valves shall be equipped with a minimum 95% nickel seat directly bonded to a machined finished surface on valve body. Plated or removable seats are not acceptable.
   5.3. Valve shall be equipped with a set of V-type stem packing with an adjustable gland. Valve stem packing shall be replaceable without removing the cover or bonnet of the valve.
   5.4. Radial shaft bushings shall be supplied in the upper and lower bearing journals. Thrust bearings shall be supplied between the plug and body in both the upper and lower journal areas.
   5.5. The valves shall be equipped with a mounting area for operators conforming to Manufacturers Standard Society(MMS) 101 or International Organization of Standardization(ISO) 52111. There shall be sufficient clearance to directly mount standardized operators with easily accessible fasteners.

6. MATERIALS
   6.1. The valve body, cover, and bonnet if equipped shall be constructed of ASTM A536 Ductile Iron.
   6.2. The plug shall be constructed of ASTM A536 Ductile Iron and shall be one piece. The resilient plug encapsulation shall conform to ASTM D429 testing.
   6.3. Radial and thrust bearings shall be made of permanently lubricated type 316 stainless steel.
   6.4. All ~~submerged~~ coatings shall conform to AWWA C550, be holiday free, and have a minimum total dry film thickness of 10 mils.
   6.5. All uncovered, submerged, or buried valves shall have type 304 or 316 stainless steel hardware unless specified.

7. OPERATORS
   7.1. All manually operated valves 4 inch and larger shall be equipped with a worm gear actuator with position indicator. Direct 2" operator nut may be used when specified on 6" and under valves.
   7.2. All actuators shall be permanently sealed and suitable for buried service.
   7.3. All 2 inch square operating nuts, exposed hardware and shafts shall be made of corrosion resistant stainless steel.
   7.4. All actuators equipped with handwheels shall have a maximum rim pull of 80lbs.

8. MANUFACTURER
   8.1. Eccentric plug valves shall be VSI Series AWWAC517 as manufactured by Valve Solutions, Inc., Alpharetta, GA USA or approved equal.
   8.2. All valves shall be warranted by manufacturer for a minimum of 12 months.

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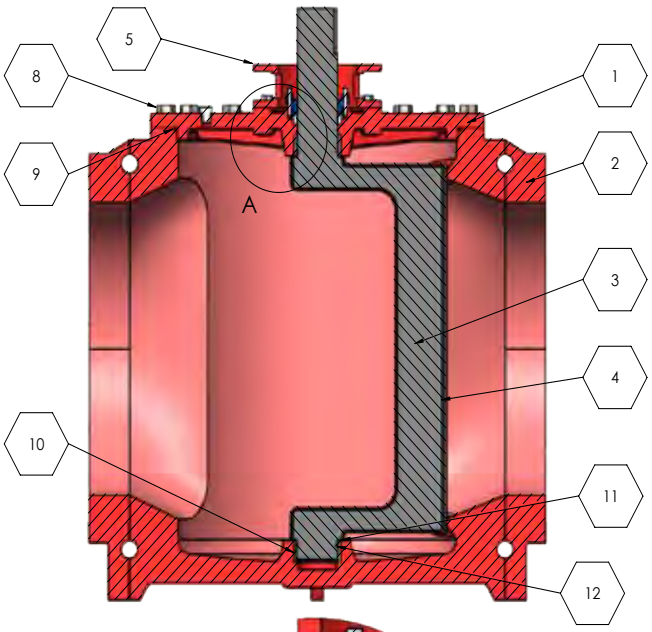
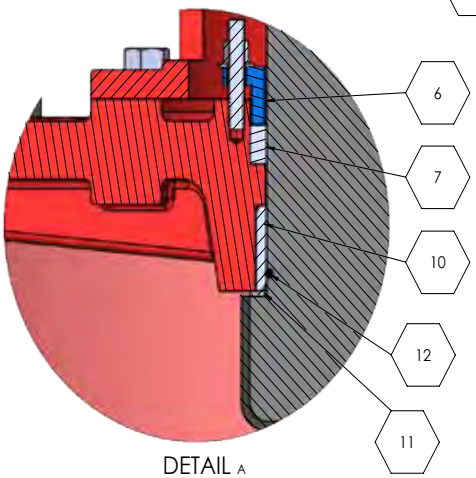
By Vincent Locigno, PE Date 12/9/24

Materials of Construction

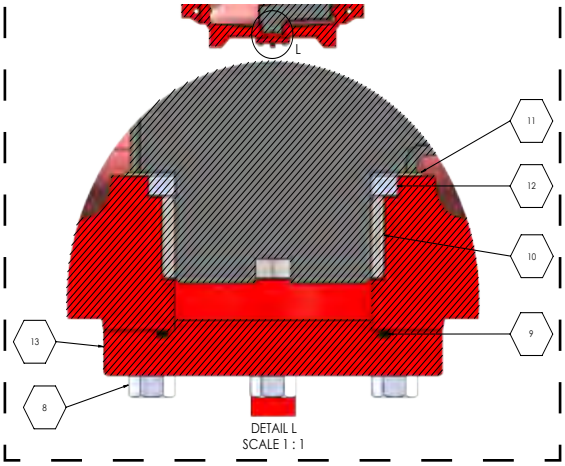




DETAIL A
SCALE 1 : 1.5

Item	Description	Materials Available	Standard
1	Cover	Same as Body	
2	Body	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
3	Plug	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
4	Plug Encapsulation	Buna-N (NBR)*	
		Chloroprene	
		EPDM	
		Viton (FPM)	
5	Bonnet	Same as Body	
6	Gland	Same as Body	
7	Packing	Same as Plug Encapsulaton	
8	Exterior Hardware	Stainless 304*	ASTM F593/594
		Stainless 316	ASTM F593/594
9	Cover Seal	Same as Plug Encapsulation	
10	Bearings	Stainless 316*	
		Stainless 304	
		Reinforced PFTE	
		Bronze	
11	Grit Guard	Nylon	
12	Grit Seal	Same as Plug Encapsulation	
13	Lower Cover[2]	Same as Body	
NS	Coating/Lining	Fusion Bonded Epoxy, Black*	
		Two-Part Epoxy	
		Coal-Tar Epoxy	
NS	Tag	Aluminum*	
		Stainless Steel	
NS	Assembly Lubricant	ANSI/NSF 61 Listed Silicone Lubricant	
NS	Operator	Varies	

***Standard configuration on 30" and above**



DETAIL L
SCALE 1 : 1

Additional material options available as special order.
*Standard Material
(1) Lower cover integral to body casting on 14"-24"
(2) Lower journal cover standard on 30" and above

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Design Standards

Size Range	3"-72" Flanged End 3"-48" MJ End
Construction	AWWA C517* ASME B16.34
Coatings	AWWA C550* ANSI/NSF 61 Compliant
Connections	ANSI B16.1 Class 125/ANSI B16.5 Class 150* ANSI B16.1 Class 250/ANSI B16.5 Class 300 ANSI/AWWA C111/A21.11 (MJ)*
Lay Length	AWWA C517* (ex. MJ)
Bonnet	ISO 5211* MSS SP-101

*Standard Option

American Water Works Association

Resistance Guide

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attacked by:
NBR*	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouroproply-ene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high temperatures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molecular weight esters and nitro containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-ethylene	-100F/450F	Excellent abrasion resistance and chemically inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures
EPDM	EPDM, EPM	Ethylene-propyl-ene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons

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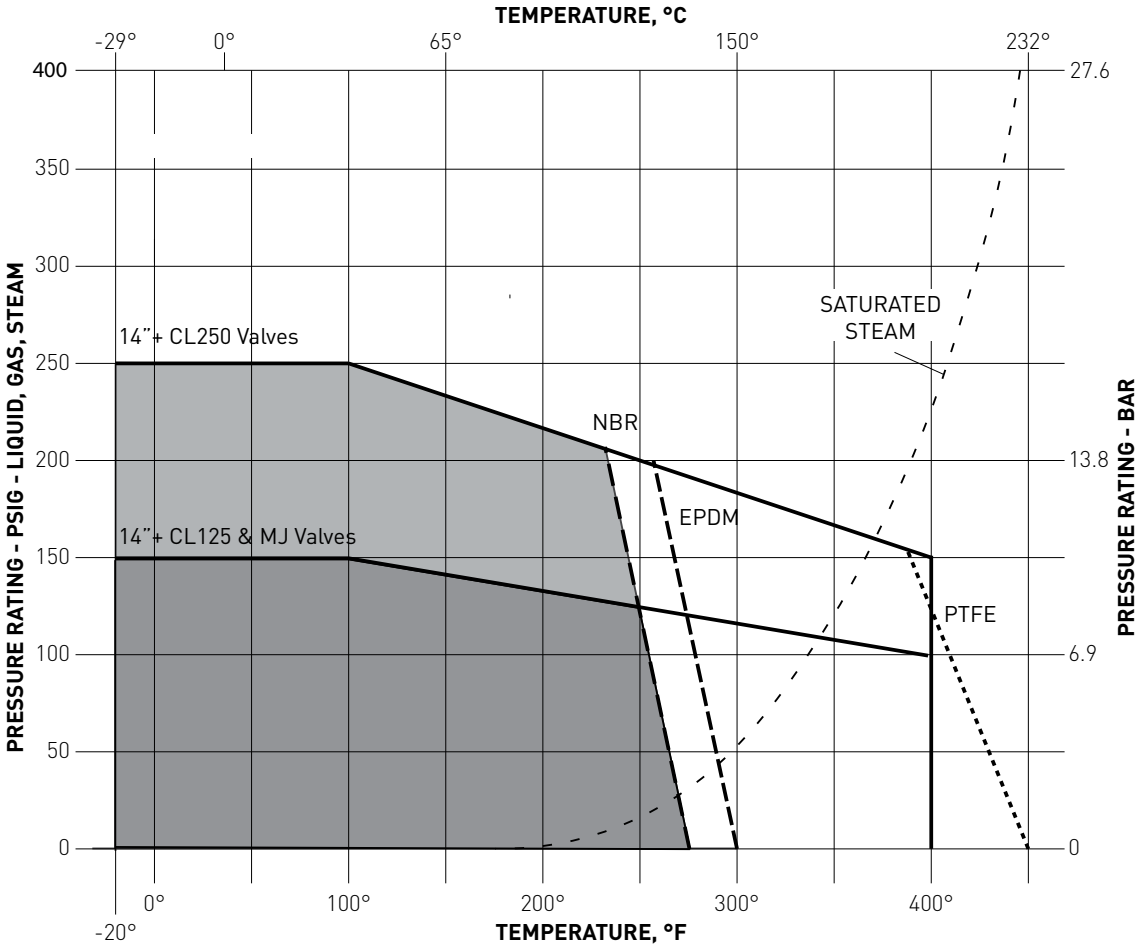
Pressure/Temperature Ratings



In determining field pressure ratings for Series PVIF Plug Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

Cold Working Pressure Rating

SIZE	FORWARD CLOSEOFF W/GEAR	REVERSE CLOSEOFF W/ GEAR	FORWARD CLOSEOFF NUT AND/OR LEVER	REVERSE CLOSEOFF NUT AND/OR LEVER
14"+ CL125	150 PSI	150 PSI	NA	NA
14"+ MJ	150 PSI	150 PSI	NA	NA
14"+ CL250	250 PSI	150 PSI	NA	NA

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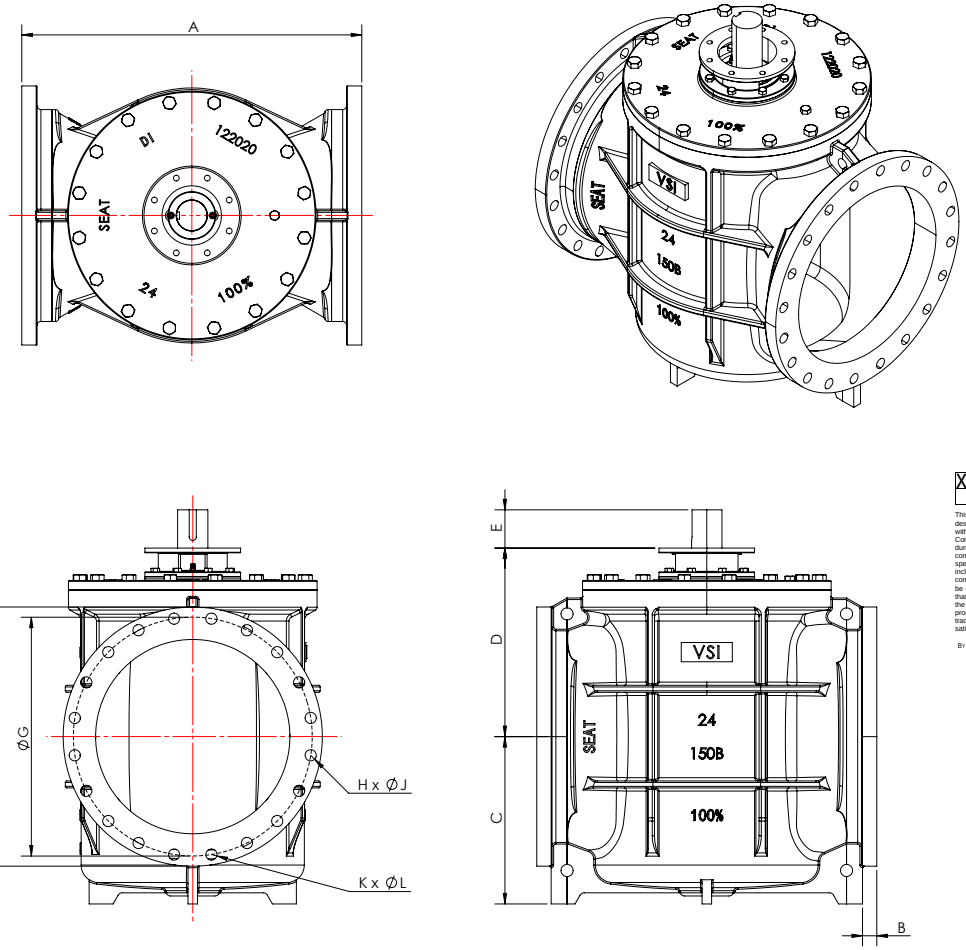
Flanged CL125 Barestem Dimensions



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By Vincent Locigno, PE Date 12/9/24

SIZE	A	B	C	D	E	F	G	H[1]	J [2]	K[3]	L[4]
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC
18"	21.50	1.56	15.95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC
36"	60.00	2.38	30.71	34.41	5.50	46.00	42.75	24	1.625	8	1.5-6UNC
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC

(1) "H" represents the total number of through holes, per flange
(2) "J" represents the size of the through holes for flange
(3) "K" represents the total number of tapped holes, per flange
(4) "L" represents the size of tapped holes and bolts used for flange

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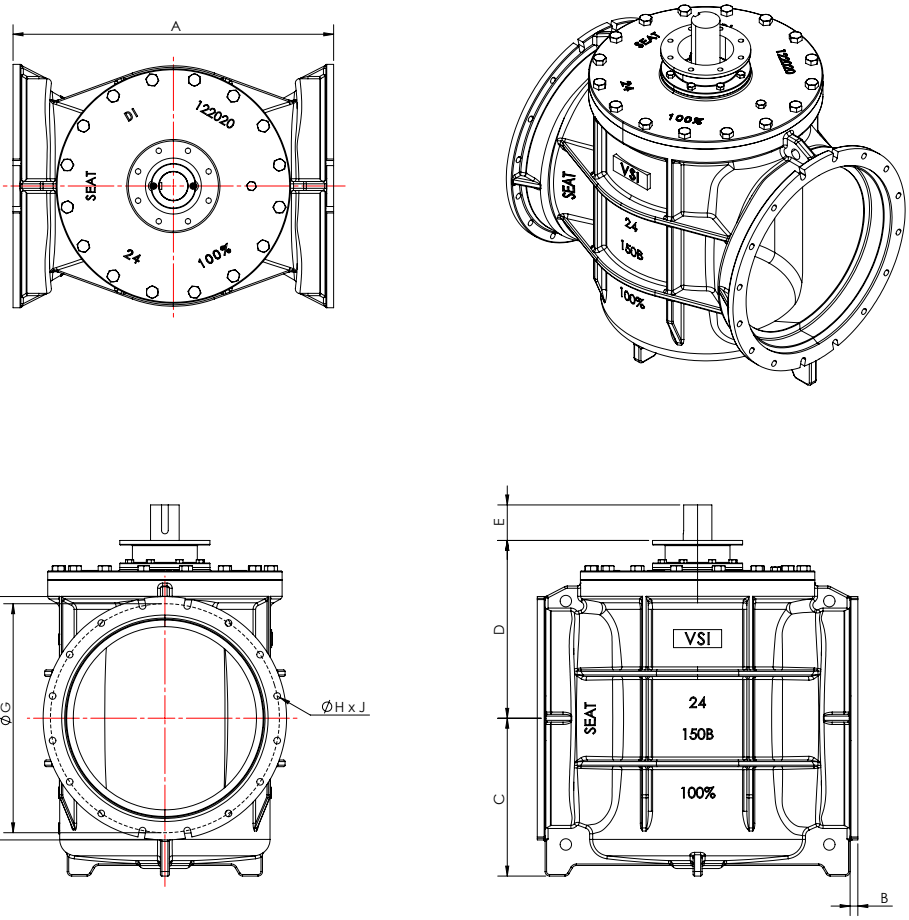
Mechanical Joint Barestem Dimensions



SIZE	A	B	C	D	E	F	G	H[1]	J[2]
14"	24.50	0.79	13.11	17.00	3.35	20.31	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	3.54	22.64	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.35	25.00	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.64	27.16	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	4.66	31.89	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	4.92	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	5.50	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	7.50	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.50	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
- Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111
(2) "J" represents the total number through holes, per flange

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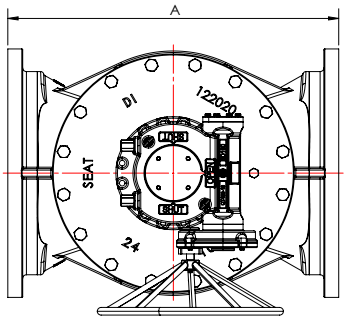
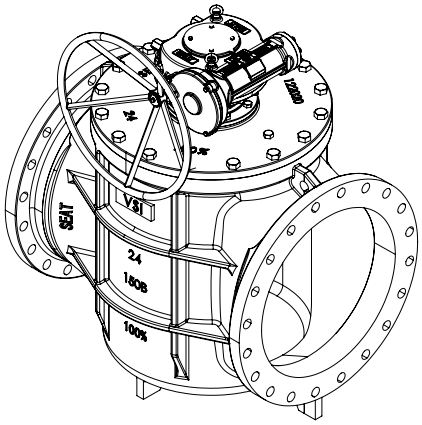
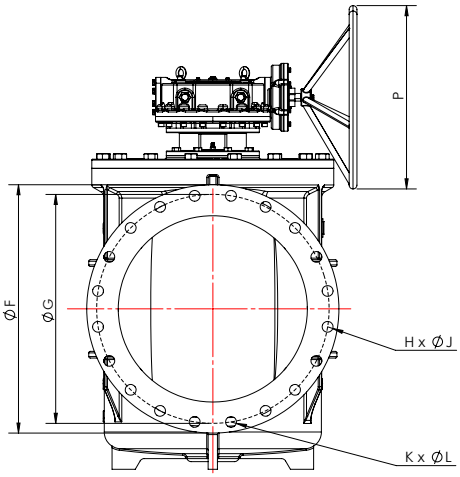
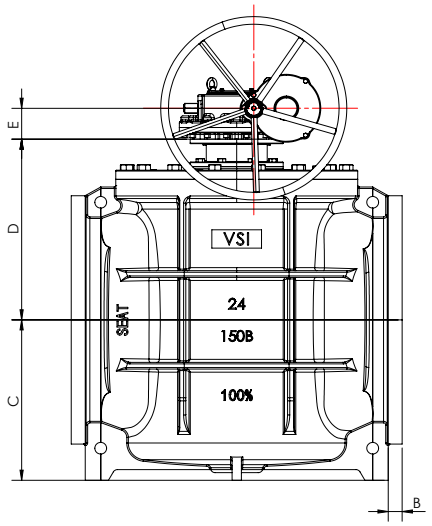
Flanged With Worm Gear & HW









SIZE	A	B	C	D	E	F	G	H[1]	J [2]	K[3]	L[4]	P
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC	24
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC	24
18"	21.50	1.56	15.95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC	20
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC	24
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC	24
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC	27.5
36"	60.00	2.38	30.71	34.41	5.50	46.00	42.75	24	1.625	8	1.5-6UNC	31.5
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC	35.5
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC	31.5

(1) "H" represents the total number of through holes, per flange
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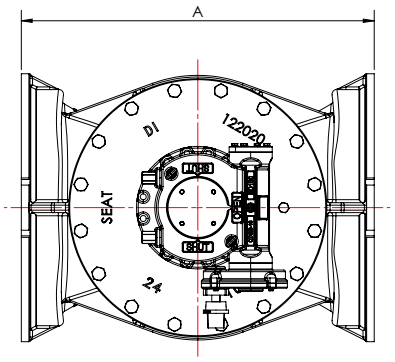
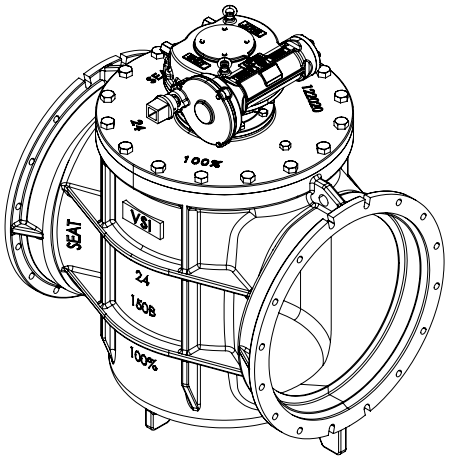
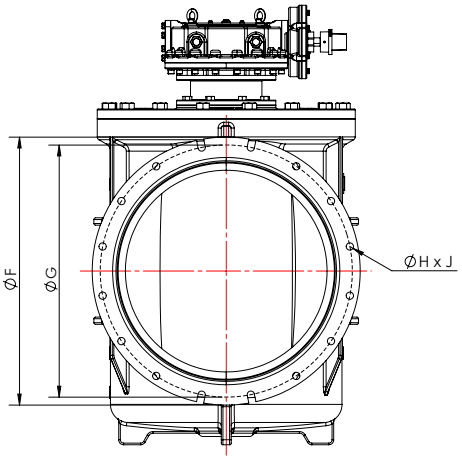
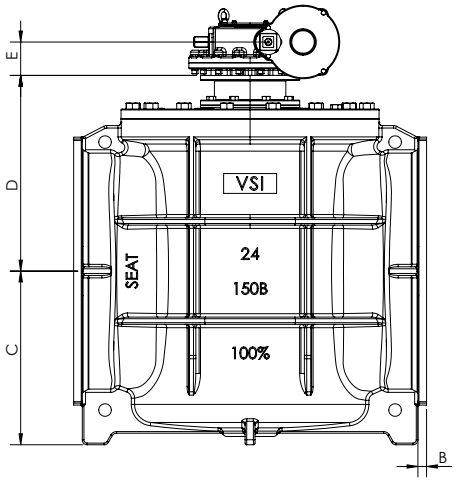
Mechanical Joint With Worm Gear & 2" Nut Op









cma
chen moore and associates

X No Exceptions Taken
Furnish With Changes Noted
Revise and Resubmit
Rejected

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By Vincent Locigno, PE Date 12/9/24

SIZE	A	B	C	D	E	F	G	H[1]	J[2]
14"	24.50	0.79	13.11	17.00	2.00	20.25	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	2.00	22.50	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.15	24.75	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.55	27.00	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	3.98	31.50	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	5.47	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	6.61	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	6.77	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.36	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
- Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111

(2) "J" represents the total number through holes, per flange

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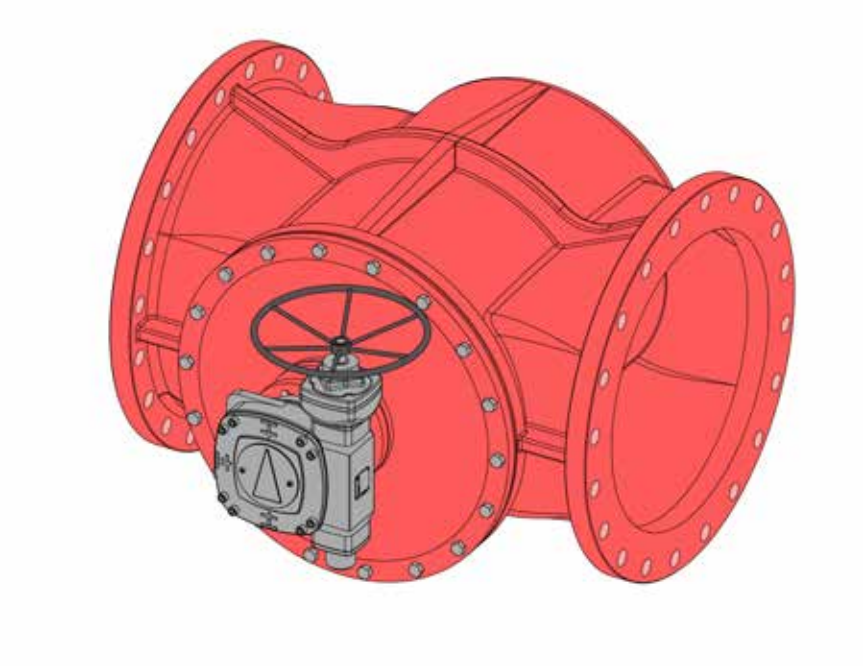
STANDARD OPERATOR TYPES

SINGLE STAGE WORM GEAR WITH SPUR SECONDARY GEAR



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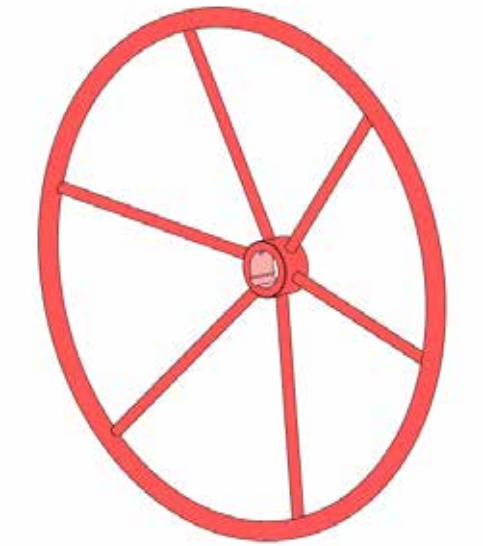
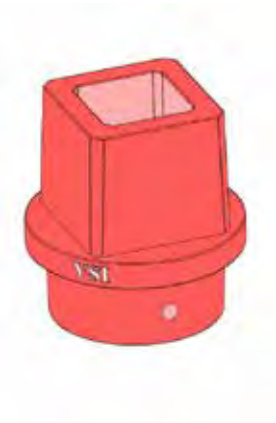
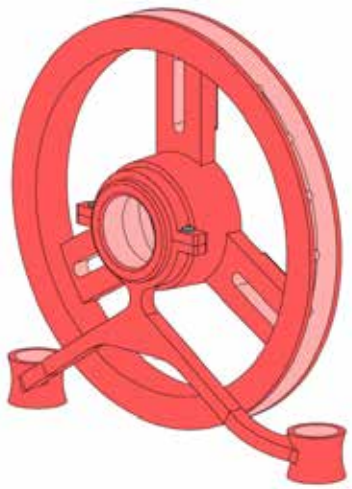
HANDWHEEL ✓



2-INCH NUT OP.



CHAINWHEEL



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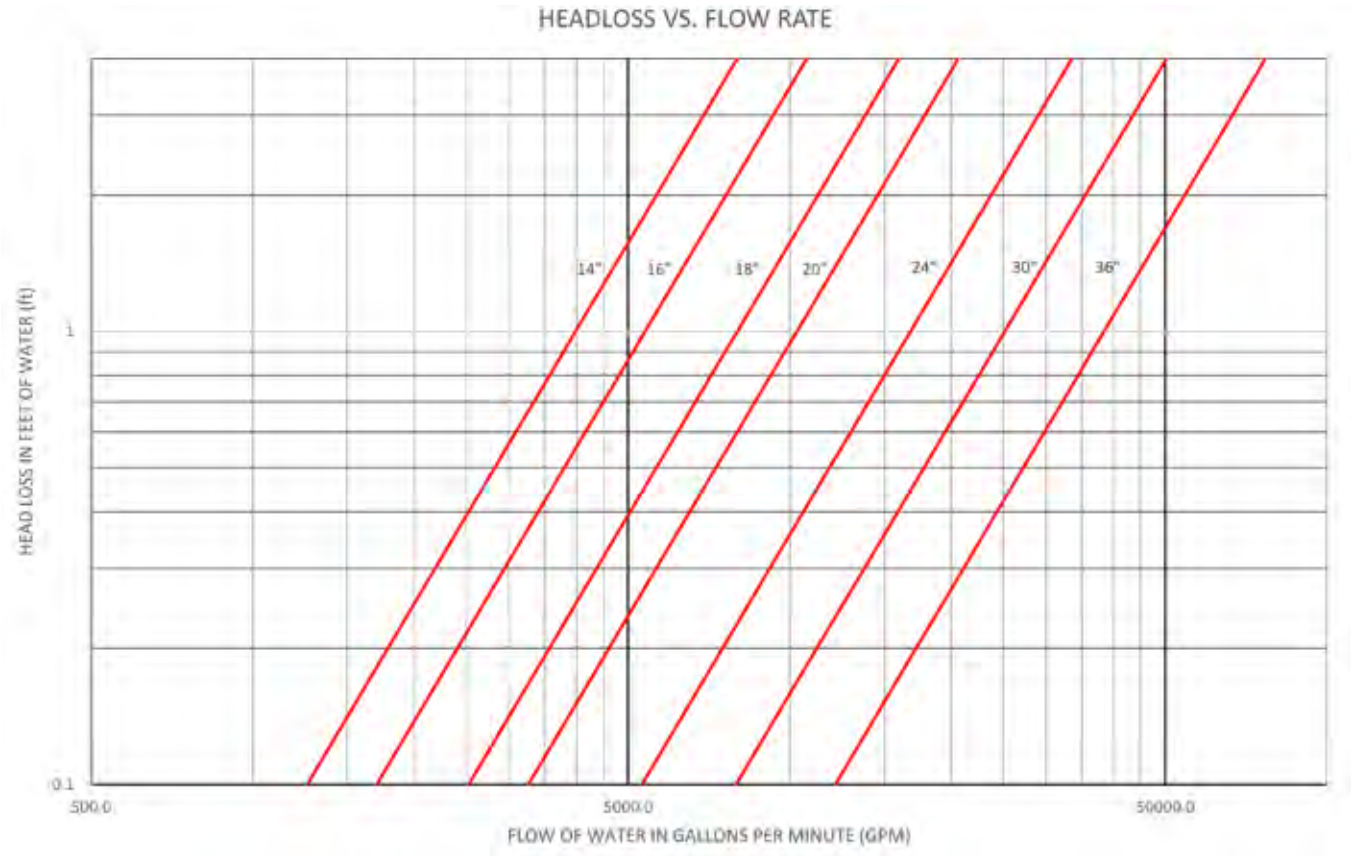
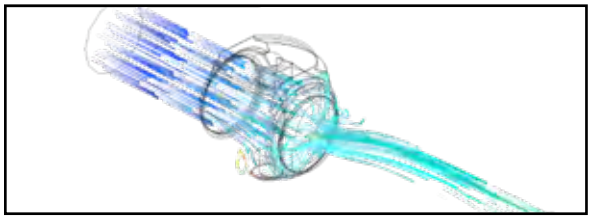
FLOW CHARACTERISTICS



SIZE	Cv	Kv
14"	6085	5257
16"	8199	7084
18"	12168	10513
20"	15710	13573
24"	25565	22088
30"	38315	33104
36"	58623	50650



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By Vincent Locigno, PE Date 12/9/24

PART NUMBER MATRIX

□□□ - □ □ □ - □ □ □ / □□ - □

MODEL
PVIF- Series PVIF

SIZE CODE
14" - 14
..
72" - 72

CONNECTION
F -Flanged CL125/150*
2 -Flanged CL250/300
M-Mechanical Joint to AWWA C111*

BODY MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG ENCAPSULATION
N-NBR (Buna-N)*
V-Viton (FKM)
C-Chloroprene/Neoprene
E-EPDM

IDENTIFIER

OPERATOR
H-Handwheel*
N-2-inch Nut Op.*
C-Chainwheel

OPERATOR ARRANGEMENT
W-Worm Gearbox*
B-Barestem w/ISO Mount
C-Custom/Project Specific

COATINGS
1-Fusion-Bonded Epoxy*
A-AWWA 2-Part Epoxy
2-Tnemec N140, ANSI/NSF 61
C-Custom/Project Specific

HARDWARE
S-Stainless Steel 304*
3-Stainless Steel 316

BEARING MATERIAL
3-Stainless 316 *
S-Stainless 304
P-PFTE
B-Bronze

* Standard Material
1 - May not be available for all configurations/sizes

EXAMPLE:
PVIF14F-DDN-3S1/WC-J
A 14" flanged rectangular full port plug valve with Ductile Iron body and plug, NBR plug encapsulation, SS316 bearings, SS304 hardware, Fusion bonded epoxy, worm gearbox with chainwheel operator.

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AWWA C517-09 Proof of Design Test Certification
(36" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 36 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 05/31/2010
Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael. fan DATE: 05/31/2010
Michael Fan, Tianjin Flow Security Valve Co., Ltd

AWWA C517-09 Proof of Design Test Certification (42" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 42 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

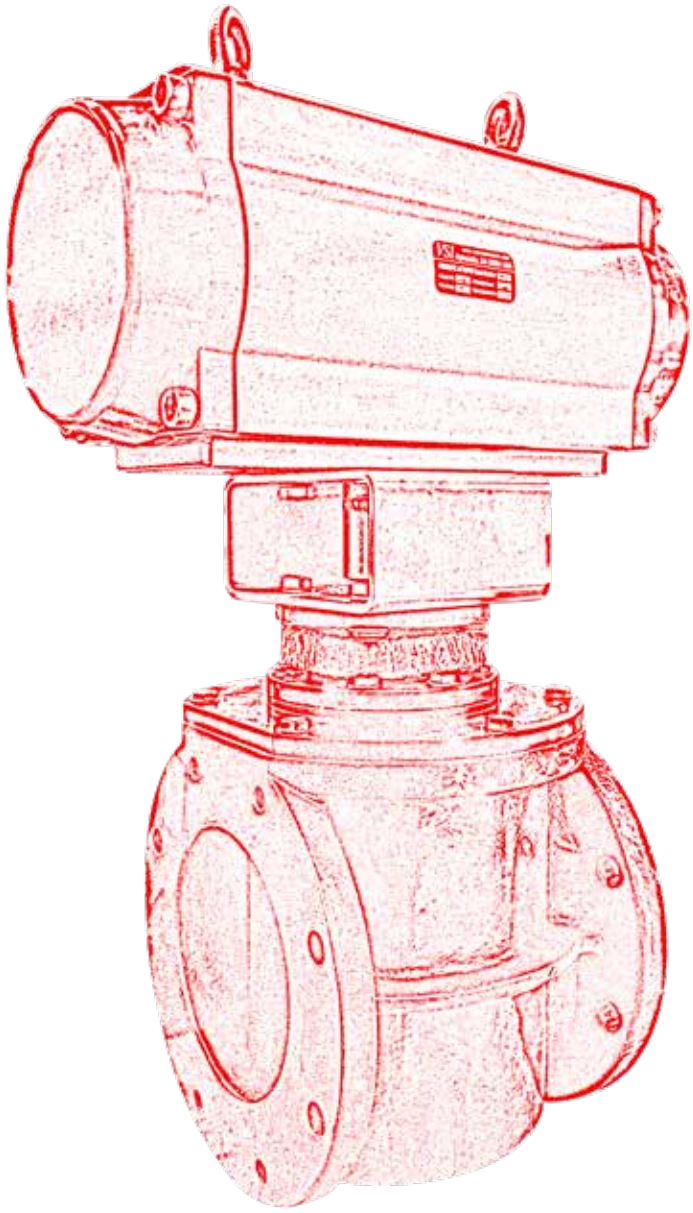
Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 06/07/2010

Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael. fan DATE: 06/07/2010

Michael Fan, Tianjin Flow Security Valve Co., Ltd



VSI Waterworks LLC
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fax: 1 (770) 740 8777
email: sales@vsiwaterworks.com

www.VSIWaterworks.com

VSI Waterworks

2″ - 72″ AWWA C517 ECCENTRIC PLUG VALVES

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

TABLE OF CONTENTS

SCOPE:

This installation, operation, and maintenance manual covers the VSI AWWA C517 resilient seated eccentric plug valve and should be read and understood thoroughly by all parties responsible for installation and continued use/maintenance.

WARNINGS:

The critical safety messages within this manual are labeled with an exclamation symbol within a red triangle flag. Care should be taken to thoroughly read and understand these warnings before proceeding to ensure no damage to equipment occurs. Failure to follow all warnings could result in injury or death.

⚠ WARNING!

All parties that take part in any installation or continued use/maintenance are cautioned to be vigilant in the possible exposure to media that is contained within the valve and its pipeline. Because of the vast range of media that could be within the valve, protection from pipeline media is not within the scope of this manual. All personnel should be aware of the media within the valve and take appropriate precautions when exposure is possible while installing or servicing the valve.

RECEIVING:

The VSI AWWA C517 Resilient Seated Eccentric Plug Valve is rugged and will be packaged to provide protection during most shipping incidents, however care should be taken to inspect the valve on receipt for any possible shipping damage. Inspection should be performed as soon as practical. Failure to promptly notify VSI of any shipping damage may invalidate any claim for shipping damage. Most shipments from VSI will be made FOB Origin, unless noted on the sales documents, the purchaser will own the freight while in transit, assumes all risk while in transit, and will be responsible for reporting shipping damage promptly to the carrier.

PARTS:

Order parts from your Valve Solutions Inc. sales representative. Please include the serial number, located on the valve tag, when ordering parts.

⚠ WARNING!

Read all applicable instructions and directions prior to any maintenance, installation or troubleshooting.

SECTION 1: GENERAL

Plug valves are a significant component of any water distribution system or treatment plant operation. Valve failure due to faulty installation, improper operation, or maintenance in such systems could result in damage, downtime, and costly repairs. In buried or underground installations, problems or malfunctions can result in extensive and costly unearthing operations to correct or eliminate the problem. Many problems with plug valves can be traced to improper installation, operation, or maintenance procedures.

SECTION 2: UNLOADING

Inspect valves on receipt for damage in shipment and conformance with quantity and description on the shipping notice and order. Unload valves carefully to the ground without dropping. On valves larger than 6 in. (150 mm), use forklifts or slings under skids. On smaller valves, do not lift valves with slings or chain around actuator or through waterway. Lift these valves with eyebolts or rods through flange holes or chain hooks at the ends of valve parts.

SECTION 3: STORAGE

If it is not practical to store the valve indoors, protect the valve and actuators from weather and the accumulation of dirt, rocks, and debris. When valves fitted with power actuators and controls are stored, energize electric actuators or otherwise protect electrical-control equipment to prevent corrosion of electrical contacts due to condensation resulting from temperature variation. Do not expose resilient seats to sunlight or ozone for any extended period. Also see the manufacturer's specific storage instructions.

SECTION 4: INSPECTION PRIOR TO INSTALLATION

Make sure valve ends and seats are clean. Check all exposed bolting for loosening in transit and handling and tighten to manufacturer's recommendations. Open and close the valve to make sure it operates properly and that stops or limit switches are correctly set so that the plug seats fully. Close the valve before installing. Check coatings for damage and repair as required.

SECTION 5: INSTALLATION

It is strongly recommended that instruction manuals supplied by the manufacturer be reviewed in detail before installing plug valves. Be sure the inspection, as described in Sec. 4, is carried out at the job site prior to installation.

Sec. 5.1 Handling

Handle valves carefully when positioning, avoiding contact or impact with other equipment or structures.

Sec. 5.2 Service Conditions

Valves are to be installed in accordance with the manufacturer's instructions.

5.2.1 Clean service. Eccentric plug valves used for fluids free of suspended solids may be installed in any orientation. If practical, the valves shall be installed so the pipe line pressure is exerting force on the plug from opposite the seat end of the valve (direct pressure).

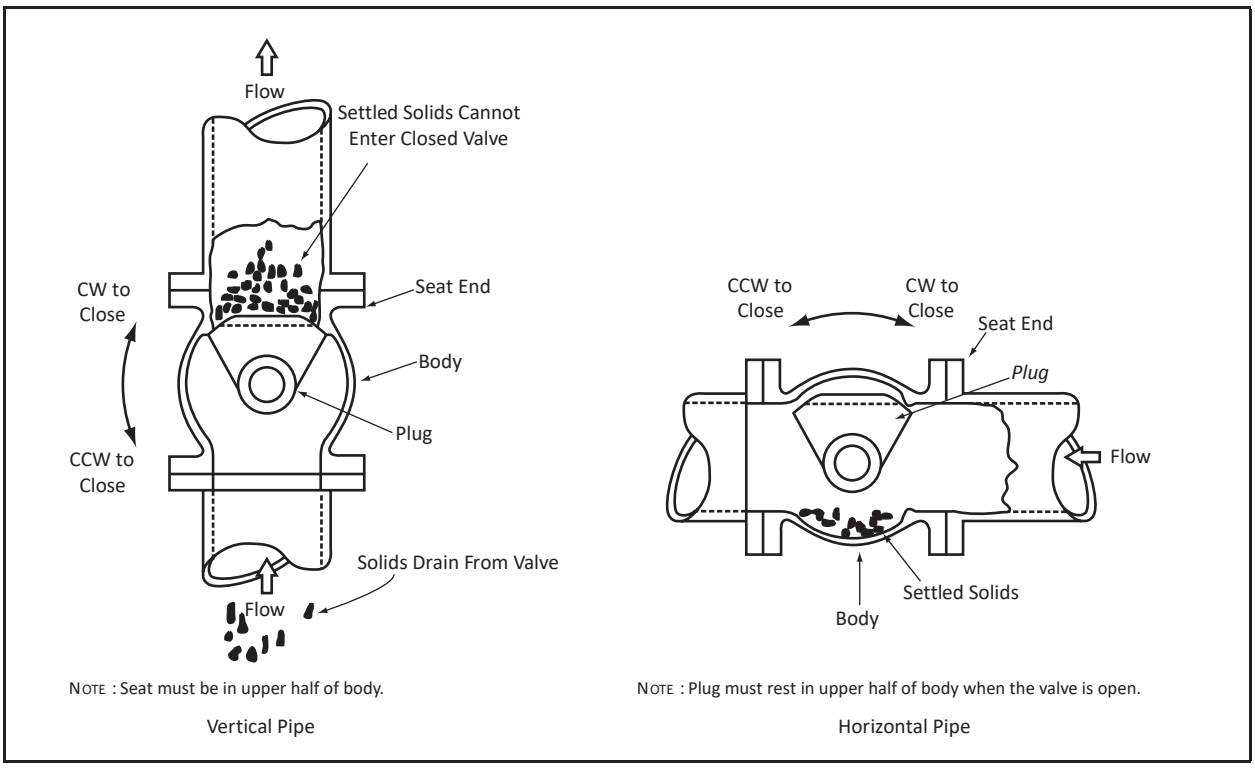


Image courtesy of Robert O'Neill

Figure 1. Recommended installation position for suspended solids service

5.2.2 Other service. Eccentric plug valves used for fluids containing suspended solids should be installed as shown in Figure 1. When installed in horizontal pipes, the axis of the plug is to be horizontal, with flow entering the valve body from the seat end. The plug is to rotate counterclockwise to open, keeping the plug in the upper half of the body. When installed in vertical pipes, the seat end shall be oriented as shown in Figure A-1.

Sec. 5.3 Buried Installations

When practical, valves in buried installations should be located in unpaved areas.

Sec. 5.4 Cleaning

Be sure valve interiors, ends, and adjacent piping are cleaned of foreign material prior to making up valve-to-pipe joint connection.

Sec. 5.5 Pipe Ends

Prepare pipe ends and install valves in accordance with the pipe manufacturer's instructions for the joint used. Do not deflect the pipe-valve joint. Do not use a valve as a jack to pull pipe into alignment. In plant piping, the valve shall be installed so as to minimize the bending stresses in the valve end connection with pipe loading.

Sec. 5.6 Installation

For mechanical-joint end valves, lubrication and additional cleaning should be provided by brushing both the gasket and the plain end of the mating pipe with soapy water or pipe lubricant just before slipping the gasket onto the plain end and assembling the joint. When tightening bolts, it is essential that the gland be brought up toward the bell flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This may be achieved by first partially tightening the bottom bolt, then the top bolt, next the bolts at either side, and finally, the remaining bolts. This process should be repeated until all bolts are fully torqued.

Sec. 5.7 Valve Boxes

Buried valves installed with valve boxes shall be installed so that the valve box does not transmit shock or stress to the valve actuator as a result of shifting soil or traffic load.

Sec. 5.8 Valves Installed in Vaults

When valves are installed in vaults, the vault design shall provide space for removal of the valve-actuator assembly for purposes of repair. Consideration should be given to the possible entry of groundwater or surface water and to the need to provide for disposal thereof. The valve operating nut should be accessible from the top opening of the vault with a tee wrench.

SECTION 6: TESTING

When resilient-seated cast-iron eccentric plug valves are used to isolate sections of a pipeline for testing, it is important to realize that eccentric plug valves are typically factory adjusted to hold pressure only up to the specified shutoff pressure in the direct pressure direction. Prior to any field pressure test under conditions different from above, it is recommended that the valve manufacturer be contacted for approval. Otherwise, test pressures above the valve design pressure may cause leakage, permanent damage, or structural failure to the valve and injury or death to the operator.

Sec. 6.1 Leaks

In order to prevent the loss of time due to searching for leaks, it is recommended, where feasible, that excavations for buried valves not be backfilled until after pressure tests have been completed.

Sec. 6.2 Seat Leakage

Seat leakage can occur from foreign material in the line. If this occurs, open the valve 5° to

10° to obtain high-velocity flushing action, then close. Repeat several times to clear seats for tight shutoff. Do not force valves for a tighter seal. Plug valves are provided with an externally adjustable closed stop on the actuator to provide a tighter seal. See the instruction manual provided by the manufacturer for the correct adjustment procedure.

SECTION 7: RECORDS

On completion of installation, the valve location, size, make, type, date of installation, number of turns to open, direction of opening, and any other information deemed pertinent should be entered on the owner's permanent records.

SECTION 8: OPERATION

Sec. 8.1 Design Pressure

Do not permit the use or operation of any valve at pressures above the rated design pressure of the valve.

Sec. 8.2 Input Torque

Do not exceed 250 ft-lb (339 N·m) input torque on actuators with wrench nuts and do not exceed 200 lb (890 N) rim pull for handwheels or chainwheels. If portable auxiliary actuators are used, size the actuator or use a torque-limiting device to prevent application of torque exceeding 250 ft-lb (339 N·m). If an oversize actuator with no means of limiting torque is used, stop the actuator before the valve is fully opened or closed against stops and complete the operation manually. Be sure to check the actuator directional switch against the direction indicated on the wrench nut, handwheel, or records before applying opening or closing torque.

Sec. A.8.3 Sticking

If a valve is stuck in some intermediate position between open and closed, check first for jamming in the actuator. If nothing is found, the interference is inside the valve. In this case, do not attempt to force the plug open or closed, because excessive torque in this position can severely damage internal parts.

SECTION 9: MAINTENANCE

Maintenance of resilient-seated plug valves by the owner is generally limited to actuators and shaft seals. Unless the owner has skilled personnel and proper equipment, any major internal problem will probably require removal of the valve from the line and return to the manufacturer for repair.

Sec. 9.1 Normal Maintenance

Normal maintenance is in the area of shaft seals and actuators. Seal leakage, broken parts, hard operation, and, in some cases, seat leakage should be corrected by a repair crew as soon as possible after a defect is reported.

Sec. 9.2 Valve Exercising

Each valve should be operated through a full cycle and returned to its normal position on a time schedule that is designed to prevent a buildup of lubrication or other deposits that could render the valve inoperable or prevent a tight shutoff. The interval of time between operations of valves in critical locations or valves subjected to severe operating conditions should be shorter than for other less important installations, but it can be whatever time period is found to be satisfactory based on local experience. For gear operators, the number of turns required to complete the operation cycle should be recorded and compared with permanent installation records to ensure full plug travel.

Sec. 9.3 Field Repairs

If repairs are to be made in the field, repair crews should take a full complement of spare parts to the job site. Be sure to review the valve manufacturer's instructions prior to any repair work.

Sec. 9.4 Isolation

Provision should be made to stop line flow and isolate the valve from line pressure prior to performing any corrective maintenance.

Sec. 9.5 Repair Testing

After completing repairs, cycle the valve through one complete operating cycle and, after line pressure has been restored, inspect for leakage.

Sec. 9.6 Valve Removal

If major repairs require the removal of the valve for repair, be sure to notify interested parties in the water department and fire department that the valve and line are out of service. On completion of repair and reinstallation, notify the same personnel of the return of the valve and line to service.

SECTION 10: TROUBLESHOOTING

Problem	Cause	Correction
The operator or shaft will not turn	Interference between valve box and shaft key	Reposition valve box if necessary
	Uneven tightening of gland plate bolts	Loosen then retighten bolts and nuts evenly
	Corrosion or debris between the stem and packing	Consult VSI for disassembly procedures and clean stem, stuffing, and stem nut
	Debris blocking movement of plug	Consult VSI for disassembly procedures and clean out debris
	RARE: Seized worm gear	Inspect and replace if necessary
Leakage between the body and cover of valve	Bolts and nuts may be loose or tightened irregularly	Loosen then retighten bolts and nuts evenly
	Bonnet o-ring may be damaged	Consult VSI for disassembly procedures and replace o-ring
	RARE: Crack in body or bonnet	Inspect and replace if necessary
Leakage at the stem	Damaged stuffing	Consult VSI for disassembly procedures and replace damaged parts if needed
	Loose packing	Tighten the packing gland nuts until leakage stops or replace packing
Valve fails pressure test or a leak present in the line	Valve is not completely closed	Close valve completely
	Debris trapped between plug and seat	Throttle valve from fully closed to approximately 25% open several times under line flow to clear debris. If unsuccessful follow instructions for disassembly and remove debris
	Rubber plug or metal seat is damaged	Consult VSI for disassembly procedures to inspect for damage. If present replace damaged parts.

DMSI Responses to Comments of Proposal Rev. 01

2601 Wiles Rd Pompano Beach Florida 33073
PH: (954) 977-3556 FAX: (954) 944-2040

CONTRACT: P12384
PROJECT: Coral Ridge Force Main Replacement
CONTRACTOR: David Mancini & Sons, Inc. (DMSI)
DATE: 2/4/2025
DESCRIPTION: Additional cost related to Repump B connection with 36-Inch above ground bypass no includeded on the scope of work on the DCP.

SUMMARY OF DIRECT COSTS

1	TOTAL LABOR		$	85,527.96
2	TOTAL EQUIPMENT		$	71,374.80
3	TOTAL MATERIAL		$	420,467.87
4	TOTAL SUBCONTRACTORS		$	126,980.61
	SUBTOTAL		**$**	**704,351.24**
5	CONTRACTOR'S MARKUP	**8.00%**	**$**	**56,348.10**
7	**GENERAL CONDITIONS (Items (3+4+5)/Construction Cost)**	**5.35%**	**$**	**37,682.79**
8	TAXES		$	25,278.07
	Total Direct Cost		**$**	**798,382.13**

SUMMARY OF TIME IMPACT (REQUEST FOR ADDITIONAL TIME)

DMSI reserves the right to claim for additional contract time if the critical path is affected after approval.

Submitted by:

Alejandra Suarez 02/04/2025

Alejandra Suarez
Assistant Project Manager
David Mancini and Sons, Inc

Approved by:

Cyrill Garcia
Project Manager
City of Fort Lauderdale

LABOR COSTS

SUMMARY - LABOR COSTS	
SUPERVISION	$ 20,175.00
CREW	$ 28,545.00
LABOR BURDEN (75.55%)	$ 36,807.96
TOTAL LABOR	$ 85,527.96

LABOR BURDEN MULTIPLIER (LBM)	58.20%
Social Security Contributions & Excise and Payroll	6.20%
Medicate Rate	1.45%
Unemployment	5.49%
Workmens Compensation	7.16%
Health Benefits	14.20%
Retirement Benefits	13.70%
VACATION MULTIPLIER (VM)	13.00%
Sick Leave (1 week out of 52)	
Vacation (2 weeks out of 52)	
Holiday Pay (1 week out of 52)	
Insurance Schedule	4.35%
General Liability Insurance	4.35%

Total Labor Burden Rate	75.55%

SUPERVISION	Hourly Rate (Salary)	Hourly Overtime Rate	Hours (Salary)	Hours Overtime	Total Cost
Project Manager	$ 60.00		30.00		$ 1,800.00
Superintendent	$ 55.00		75.00		$ 4,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
TOTAL SUPERVISION					$ 20,175.00

MAINLINE CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					$ 28,545.00

ASSEMBLY CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					$ 28,545.00

EQUIPMENT, MATERIAL & SUBCONTRACTOR COSTS

EQUIPMENT COSTS - RENTAL RATE BLUE BOOK

Skid- Steer	Working Rate	Working Hours	Total Cost
CAT 272D	$ 84.69	150.00	$ 12,703.50
Loaders			
CAT 938M	$ 65.42	150.00	$ 9,813.00
Excavators			
CAT 308	$ 68.14	150.00	$ 10,221.00
CAT 325	$ 133.24	150.00	$ 19,986.00
Trucks			
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Miscellaneous Equipment			
Trash Pump	$ 9.83	150.00	$ 1,474.50
Steel Plates - 8'x20' (6 On Site $60 per plate PER DAY)	$ 360.00	15.00	$ 5,400.00
Air Compressor Sullair 375	$ 59.80	150.00	$ 8,970.00
TOTAL EQUIPMENT			**$ 71,374.80**

MATERIAL COSTS

Material Description	QTY	Unit	Unit Cost	Total Cost
36" FLGXPE DIP 6'	1	EA	$ 9,988.24	$ 9,988.24
36" FLGXPE DIP 4'	1	EA	$ 7,641.18	$ 7,641.18
36" FLGXFLG DIP 2'	2	EA	$ 8,089.41	$ 16,178.82
36" MEGA FLANGE REST ADPT	1	EA	$ 3,708.38	$ 3,708.38
36" FLG 90 BEND	2	EA	$ 14,002.40	$ 28,004.80
36" FLG ACC KIT NEOPRENE	10	EA	$ 1,158.83	$ 11,588.30
36" FLG PLUG VALVE W/GEAR	1	EA	$ 49,916.85	$ 49,916.85
36" FLG CHECK VALVE	1	EA	$ 48,348.31	$ 48,348.31
2" BALL CORP	1	EA	$ 315.00	$ 315.00
2" X 4" SS NIPPLE	1	EA	$ 14.00	$ 14.00
36"X2" DBL STRP SS	1	EA	$ 720.00	$ 720.00
2" SEWAGE AIR RELEASE VLV	1	EA	$ 1,040.00	$ 1,040.00
42" MJ LONG SLEEVE	1	EA	$ 8,338.99	$ 8,338.99
42" MEGALUG DIP W/ACC	10	EA	$ 2,417.08	$ 24,170.80
42" MJ 45 BEND	1	EA	$ 11,719.18	$ 11,719.18
42" X 36" MJ TEE	1	EA	$ 19,636.05	$ 19,636.05
36" MEGALUG DIP W/ACC	5	EA	$ 1,693.30	$ 8,466.50
36" MJ 90 BEND	1	EA	$ 9,596.14	$ 9,596.14
36" MJ PLUG VALVE	1	EA	$ 50,939.33	$ 50,939.33
42" MJ PLUG VALVE	1	EA	$ 103,264.00	$ 103,264.00
72" ARV MANHOLE / TOP SLAB	1	EA	$ 2,648.00	$ 2,648.00
690-AH-M PL R/C	1	EA	$ 4,225.00	$ 4,225.00
SUBTAX			$ 50.00	$ 50.00
SUBTOTAL				$ 420,467.87
TAXES				$ 25,278.07
TOTAL MATERIAL				**$ 445,745.94**

SUBCONTRACTORS COSTS

Description	QTY	Unit	Unit Cost	Total Cost
CMA	1	LS	$ 62,400.00	$ 62,400.00
A&M Brothers Concrete	1	LS	$ 7,600.00	$ 7,600.00
SUPERMIX Flowable Fill 18 CY	1	LS	$ 3,228.40	$ 3,228.40
Rangeline (IF NEEDED)	1	LS	$ 50,096.00	$ 50,096.00
MWI PUMPS (IF NEEDED)	1	LS	$ 3,656.21	$ 3,656.21
TOTAL SUBCONTRACTOR				**$ 126,980.61**

Where is the ARV and manhole?

ARV MH TOP SLAB WITH RIM AND COVER FOR LINESTOP IN DRIVEWAY

P12383 & P12384 – CORAL RIDGE FORCE MAIN REPLACEMENT PROJECT

LABOR BURDEN BREAKDOWN

A. 6.20 % SOCIAL SECURITY RATE
B. 1.45 % MEDICARE RATE
C. 5.49 % UNEMPLOYMENT
D. 7.16 % WORKERS COMP
E. 4.35 % GENERAL LIAB
F. 14.20 % HEALTH INS
G. 23.70 % RETIREMENT
H. 13.00 % VAC/HOLIDAY

Burden Rate: 75.55%

DMSI offers our employees the following paid-off time:

- (2) Weeks Paid Vacation
- (3) Weeks Holiday paid, including time between Christmas and New Year
- (1) Week for Sick Time

Based on this, a DMSI employee works 46 weeks a year and gets paid for 52. Therefore, the yearly burden for General Liability, Health Insurance, Retirement, and vacation Holiday Time must be INCREASED based on the calculation below to cover the six non-revenue weeks (for DMSI), whereas DMSI compensates the employee.

Items A-C Above are standard rates through the federal government and the State of Florida.

Item D – Is DMSI's Workman's Comp rate for Sewer when this project was bid and the Contract executed.

Item E – Is DMSI's G/L rate (1.89%) plus 2.46% to cover the non-revenue paid weeks (See Below) ($21.87x40x6=$5,248.80x1.89%=$992.02/$21.87x40x46 or an additional 2.46%)

Item F – Insurance burden is calculated using the average hourly employee rate multiplied by 40/hrs. per week for 46 weeks worked, dividing this by the average cost of yearly insurance premiums for hourly employees. (Average hourly rate $21.87x 40 hours x 46 weeks/year divided by the average cost of SGL coverage 476.18/mo. x 12)

Item G - (RETIREMENT 11% + Bonus, which is merely part of the employee's yearly compensation package, of 10% plus the average hourly rate $21.87 x 40 x 6 weeks non-working = $5,248.80, we pay 21% of this income as retirement benefit so we need to add $1,102.25 to 46 weeks of working to cover these costs or an additional 2.7%)

DMSI DAVID MANCINI & SONS, INC.

ITEM H - (6weeks/46weeks of working to cover costs of vacation and holiday)

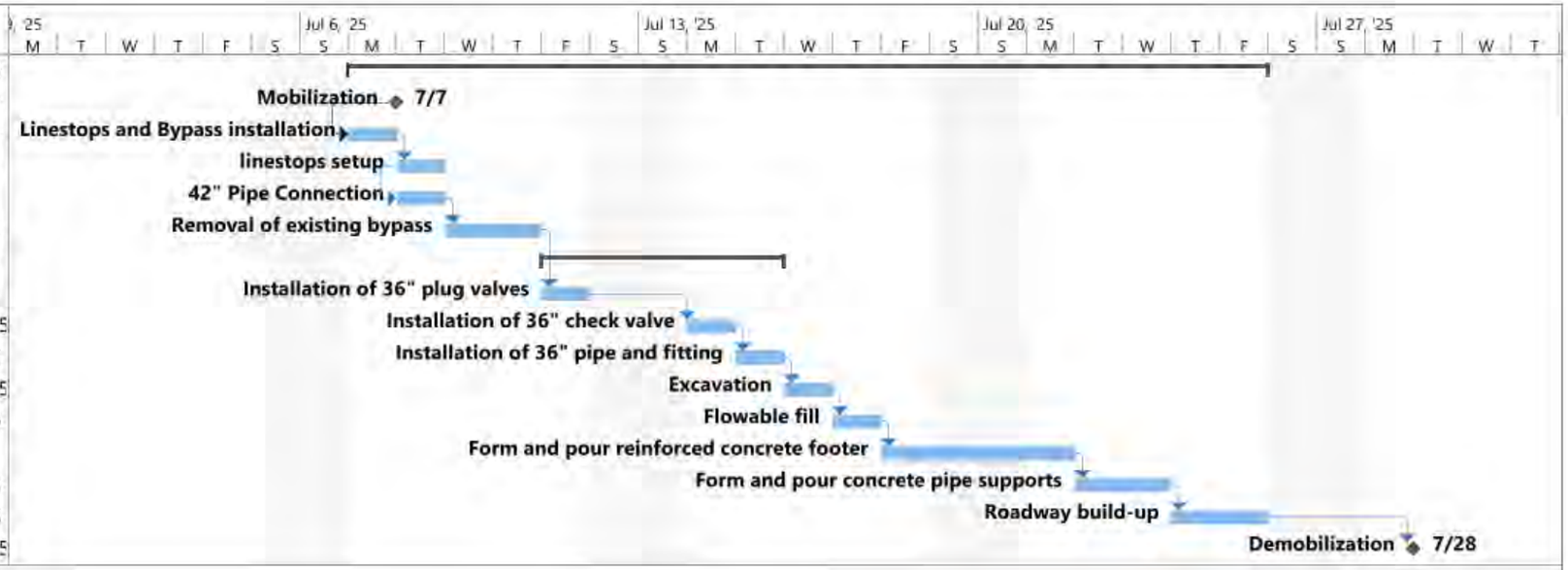
By signing below, I certify that the information provided is true and correct to the best of my knowledge.

Sincerely,

Fabio Angarita
Vice president
David Mancini and Sons, Inc

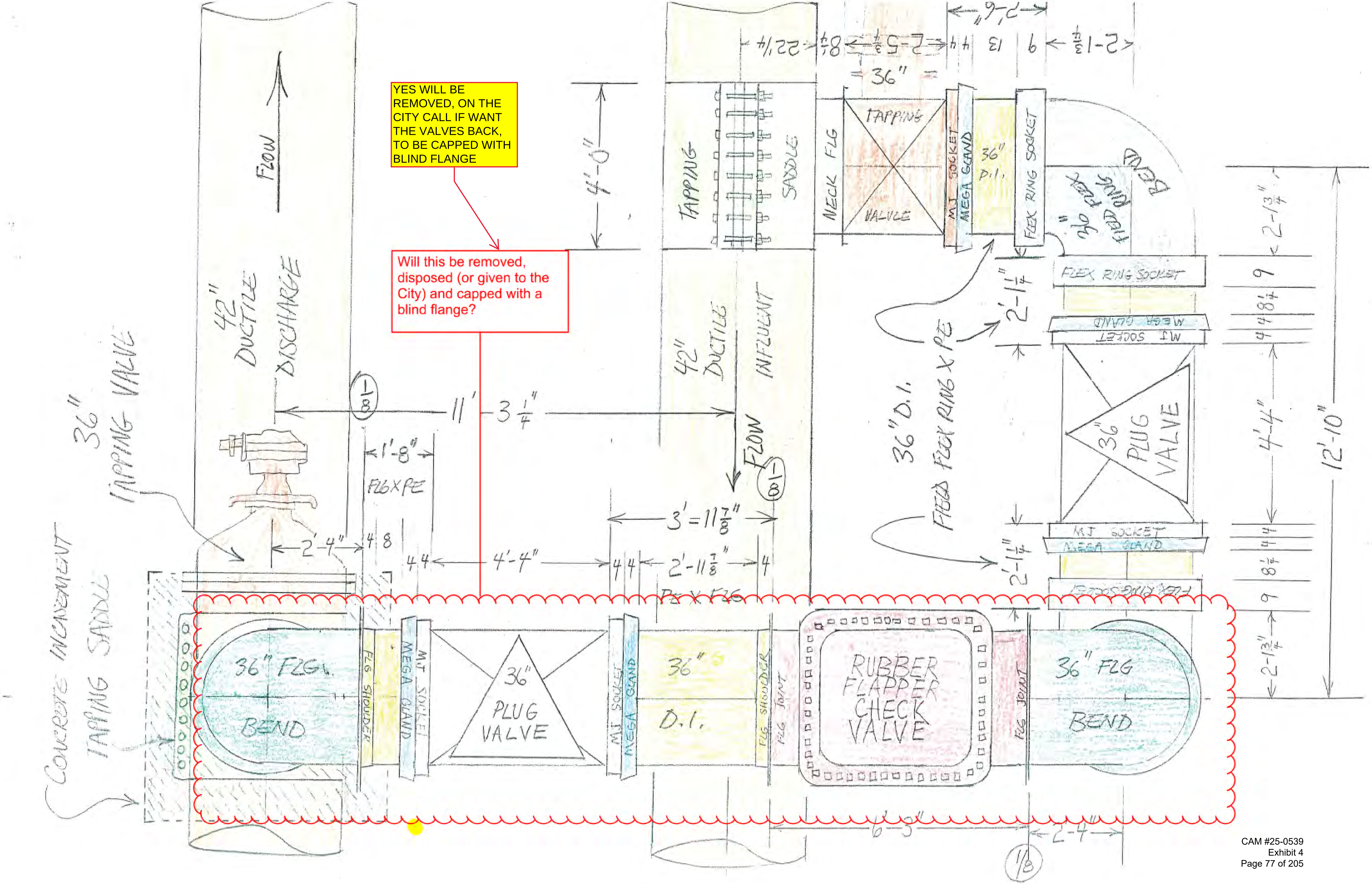
Note:
Our financial statement is proprietary and confidential, so we do not wish it to be made public. Our records are available for your appropriate staff to review at our Pompano Beach, FL office.
Please advise us 48 hours in advance.
If you have any questions about our financial information, please call our Financial Controller, Kimberley Weldon, at (954) 977-3556.

ID	Task Name	Duration	Start
1	**Repump connection with bypass**	**15 days**	**Mon 7/7/25**
2	Mobilization	1 day	Mon 7/7/25
3	Linestops and Bypass installation	1 day	Mon 7/7/25
4	linestops setup	1 day	Tue 7/8/25
5	42" Pipe Connection	1 day	Tue 7/8/25
6	Removal of existing bypass	2 days	Wed 7/9/25
7	**Bypass assembly**	**3 days**	**Fri 7/11/25**
8	Installation of 36" plug valves	1 day	Fri 7/11/25
9	Installation of 36" check valve	1 day	Mon 7/14/25
10	Installation of 36" pipe and fitting	1 day	Tue 7/15/25
11	Excavation	1 day	Wed 7/16/25
12	Flowable fill	1 day	Thu 7/17/25
13	Form and pour reinforced concrete footer	2 days	Fri 7/18/25
14	Form and pour concrete pipe supports	2 days	Tue 7/22/25
15	Roadway build-up	2 days	Thu 7/24/25
16	Demobilization	1 day	Mon 7/28/25



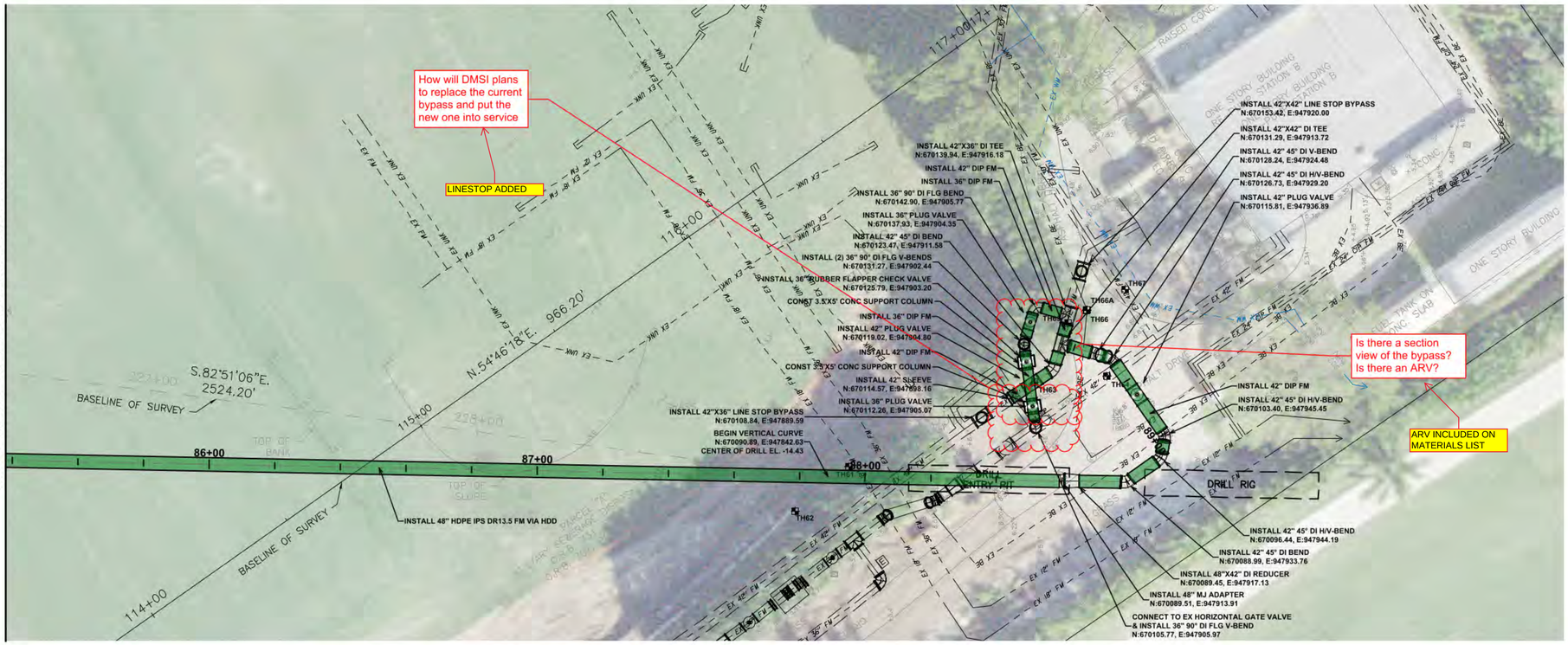
Project: Project1
Date: Mon 2/3/25

Task	Project Summary	Manual Task	Start-only	Deadline			
Split	Inactive Task	Duration-only	Finish-only	Progress			
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress			
Summary	Inactive Summary	Manual Summary	External Milestone				


YES WILL BE REMOVED, ON THE CITY CALL IF WANT THE VALVES BACK, TO BE CAPPED WITH BLIND FLANGE
Will this be removed, disposed (or given to the City) and capped with a blind flange?
FLOW
42" DUCTILE DISCHARGE
42" DUCTILE INFLUENT
TAPPING SADDLE
NECK FLG
TAPPING VALVE
MJ SOCKET
MEGA GLAND
FLEX RING SOCKET
36" FLEX FLED RING BEND
FLEX RING SOCKET
36" PLUG VALVE
36" D.I. FLEX RING X PE
36" TAPPING VALVE
CONCRETE INCASEMENT TAPPING SADDLE
36" FLG BEND
FLG SHOULDER
36" PLUG VALVE
36" D.I.
RUBBER FLAPPER CHECK VALVE
FLG JOINT
36" FLG BEND
FLG X PE
11'-3 1/4"
1'-8"
3'-11 7/8"
4'-4"
2'-11 7/8"
2'-4"
4'-0"
12'-10"
6'-3"
2'-4"

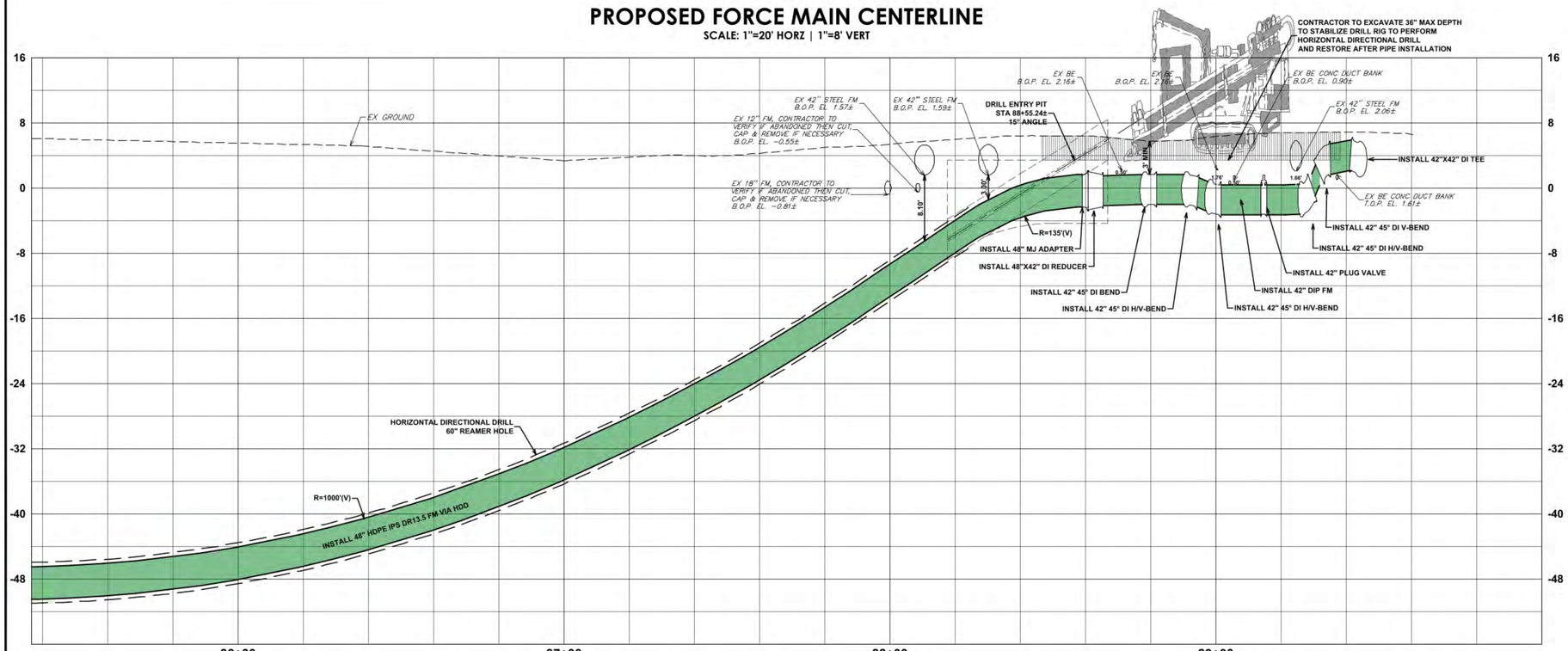
BCTED 231205061

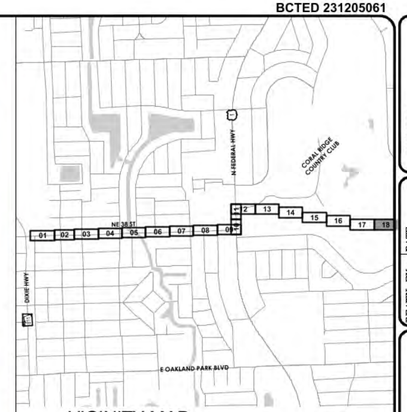
MATCHLINE SEE DRAWING NO. FM17



PROPOSED FORCE MAIN CENTERLINE

SCALE: 1"=20' HORZ | 1"=8' VERT





NOTES:

1. CONTRACTOR MUST EXERCISE EXTREME CARE TO AVOID DAMAGE OR DISRUPTIONS TO ANY EXISTING UTILITIES. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BEFORE STARTING CONSTRUCTION. CONSTRUCTION SHALL PROTECT AND SUPPORT ALL EXISTING STRUCTURES AFFECTED BY THE PROJECT. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN DISCREPANCY WITH THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, IN WRITING, BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR TO USE RESTRAINED JOINTS FOR ALL PROPOSED CONNECTIONS.
3. A HORIZONTAL SEPARATION OF 6' MINIMUM SHALL ALWAYS BE ENFORCED WHENEVER THE FORCEMAIN IS LESS THAN 18" BELOW THE WATERMAIN.
4. CONTRACTOR TO PROVIDE PEDESTRIAN ACCESS TO ALL PROPERTIES AT ALL TIMES.
5. OPEN CUT AREAS MAY BE INSTALLED WITH HDPE OR DIP AT THE CONTRACTORS DISCRETION.
6. ALL DIP TO BE RESTRAINED.
7. MINIMUM PIPE COVER IS 36" FOR PVC AND 30" FOR DIP.
8. HDPE PIPE THICKNESS (DR) AND CALCULATIONS PROVIDED BY OTHERS.

VACUUM TEST HOLE DATA TABLE

TH#	GRND EL	COVER	ELEV TOP	DIRECTION	DESCRIPTION
61	5.47	5.83	-0.36	NW - SE	12" SAN FM (UNABLE TO OBTAIN SIZE)
62	5.38	8.12	-2.74	NW - SE	UNABLE TO OBTAIN SIZE
63	6.77	1.49	5.28	NE - SW	42" STEEL FORCE MAIN
64	6.88	1.11	5.77	W - E	42" STEEL FORCE MAIN
65	6.95	1.58	5.37	N - S	42" STEEL FORCE MAIN
66	6.98	5.41	1.57	N - S	CONCRETE ELECTRIC
66A	6.98	5.56	N/A	N - S	CAST IN PLACE CONCRETE
67	7.18	1.75	5.43	NW - SE	42" STEEL FM

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

Check positive response codes before you dig!

cma
chen moore and associates

500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER

DMSI DAVID MANCINI & SONS, INC.
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

100% SUBMITTAL

ENGINEER: VINCENT LOCIGNO, P.E.
REG. No: 82216
DATE: ____
TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV | DESIGNED BY: ____ | CHECKED BY: ____ | DATE: 10/10/2024 | SCALE: 1" = 20' | FIELD BOOK: ____

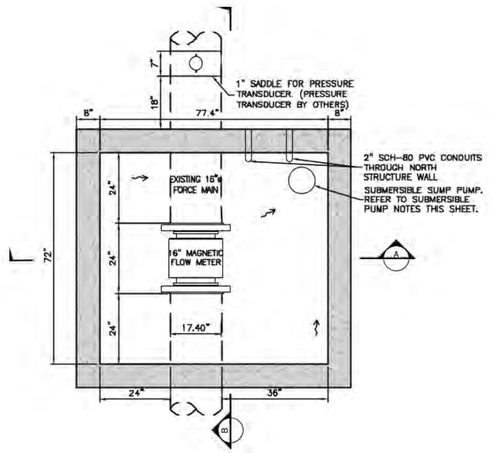
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

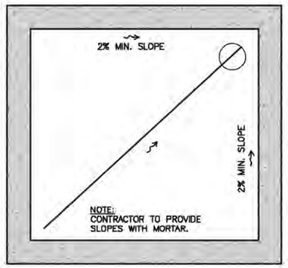
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN AND NE 19TH AVE 24-INCH FORCE MAIN REPLACEMENTS
FORCE MAIN PLAN AND PROFILE

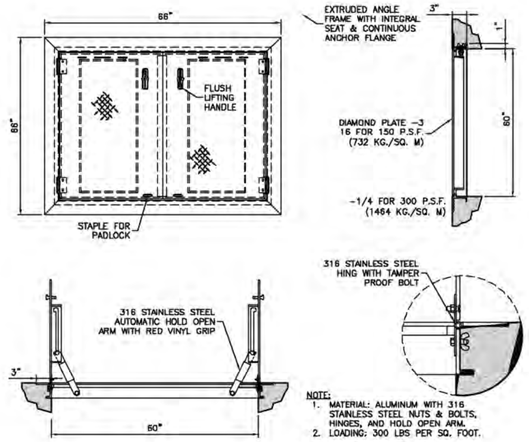
SHEET NO. FM18 | SHT # 25
TOTAL: 57
CAD FILE: 12384-MULTI-PLPR-38
DRAWING FILE NO. ____



METER VAULT



BOTTOM SLAB DETAIL



48"x54" DOUBLE DOOR ALUMINUM HATCH
MODEL APD300 OR APPROVED EQUAL

(N.T.S. REFER TO D.S.F. FABRICATION, INC.)

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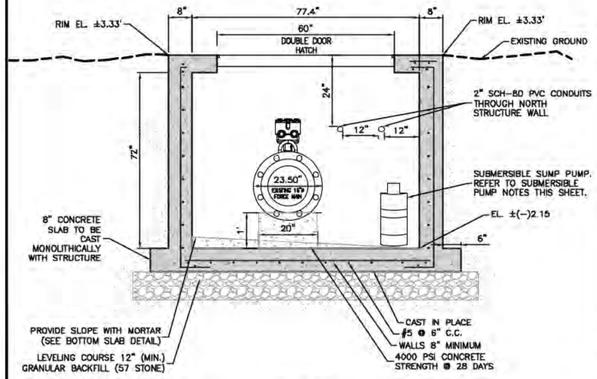
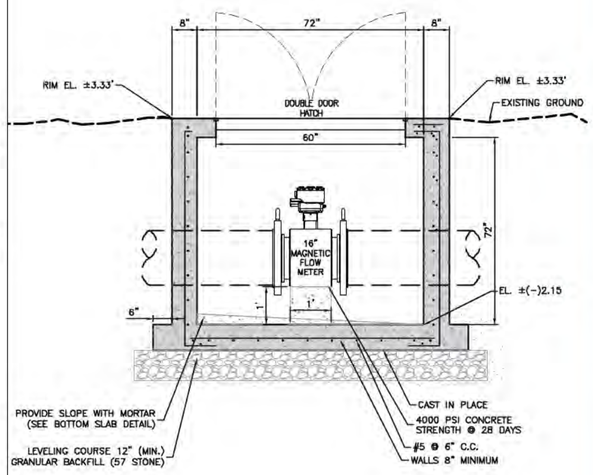


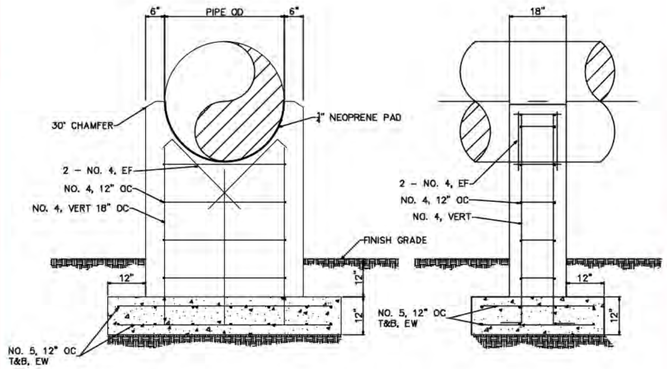
SECTION A

NOTE:
1. STRUCTURE WALLS TO BE SEAL COATED INSIDE AND OUTSIDE WITH 16 MIL. THICKNESS OF COAL TAR EPOXY.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS SHOWING REINFORCEMENT WITHIN THE PRE-CAST CONCRETE STRUCTURE.

SUBMERSIBLE PUMP NOTE:
1. FLOW RATE SHALL BE A MIN OF 110 GPM.
2. PUMP SHALL HAVE THE ABILITY TO FUNCTION WITH A TOTAL DYNAMIC HEAD OF 32 FT.
3. VOLTAGE SHALL BE 120V.
4. HORSEPOWER SHALL BE A MINIMUM OF 0.5.
5. HOUSING AND IMPELLER SHALL BE STAINLESS STEEL.



SECTION B



36" BYPASS ABOVE GROUND PIPE SUPPORT

N.T.S.

cma
chen moore and associates
500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER
DMSI DAVID MANCINI & SONS, INC
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

100% SUBMITTAL

ENGINEER:
VINCENT LOCIGNO, P.E.
REG. No: 82216
DATE: ____
TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV
DATE: 10/10/2024
DESIGNED BY: ____
SCALE: 1" = 20'
CHECKED BY: ____
FIELD BOOK: ____

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN AND NE 19TH AVE 24-INCH FORCE MAIN REPLACEMENTS
DETAILS

SHEET NO. D07
SHT # 58
TOTAL: 57
CAD FILE: 12384-MULTI-DETL
DRAWING FILE NO.

EquipmentWatch

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 308E2 CR (disc. 2020)
Crawler Mounted Hydraulic Excavators

Size Class:
6.5 - 8.4 mt
Weight:
N/A

Configuration for 308E2 CR (disc. 2020)

Horsepower	**65.0 hp**	Operating Weight	**18519 lbs**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $6,930.00	USD $1,940.00	USD $485.00	USD $73.00	USD $28.76	USD $68.14
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)						
Total:	**USD $6,930.00**	**USD $1,940.00**	**USD $485.00**	**USD $73.00**	**USD $28.76**	**USD $68.14**

Non-Active Use Rates

	Hourly
Standby Rate	USD $21.66
Idling Rate	USD $46.22

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $2,079.00/mo
Overhaul (ownership)	45%	USD $3,118.50/mo
CFC (ownership)	15%	USD $1,039.50/mo
Indirect (ownership)	10%	USD $693.00/mo
Fuel (operating) @ USD 4.15	23.78%	USD $6.84/hr

Revised Date: 1st quarter 2024

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book® Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for DAVID MANCINI (dmancinijr@dmsi.co)

EquipmentWatch

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 325
Crawler Mounted Hydraulic Excavators

Size Class:
21.5 - 24.4 mt
Weight:
N/A

Configuration for 325

Bucket Capacity	**1.2 cu yd**	Horsepower	**174 hp**
Operating Weight	**49604 lbs**	Power Mode	**Diesel**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD $14,760.00	USD $4,135.00	USD $1,035.00	USD $155.00	USD $49.38	USD $133.24
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-		-		
Hourly Operating Cost (100%)					-	
Total:	**USD $14,760.00**	**USD $4,135.00**	**USD $1,035.00**	**USD $155.00**	**USD $49.38**	**USD $133.24**

Non-Active Use Rates

	Hourly
Standby Rate	USD $46.13
Idling Rate	USD $97.70

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $4,428.00/mo
Overhaul (ownership)	45%	USD $6,642.00/mo
CFC (ownership)	15%	USD $2,214.00/mo
Indirect (ownership)	10%	USD $1,476.00/mo
Fuel (operating) @ USD 4.15	28.03%	USD $13.84/hr

Revised Date: 1st quarter 2024

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EquipmentWatch

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 938M
4-Wd Articulated Wheel Loaders

Size Class:
175 - 199 hp
Weight:
N/A

Configuration for 938M

Horsepower	**168.0 hp**	Operator Protection	**ROPS/FOPS**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD $6,410.00	USD $1,795.00	USD $450.00	USD $68.00	USD $29.00	USD $65.42
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $6,410.00**	**USD $1,795.00**	**USD $450.00**	**USD $68.00**	**USD $29.00**	**USD $65.42**

Non-Active Use Rates

	Hourly
Standby Rate	USD $24.77
Idling Rate	USD $49.38

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	39%	USD $2,499.90/mo
Overhaul (ownership)	32%	USD $2,051.20/mo
CFC (ownership)	18%	USD $1,153.80/mo
Indirect (ownership)	11%	USD $705.10/mo
Fuel (operating) @ USD 4.15	44.69%	USD $12.96/hr

Revised Date: 1st quarter 2024

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EquipmentWatch

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

GMC\CHEVY 2500
On-Highway Light Duty Trucks

Size Class:
300 hp & Over
Weight:
N/A

Configuration for 2500

Axle Configuration	**4.0 x 2.0**	Cab Type	**Crew**
Horsepower	**310.0 hp**	Power Mode	**Diesel**
Ton Rating	**3.0 / 4.0**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD $710.00	USD $200.00	USD $50.00	USD $8.00	USD $19.36	USD $23.39
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)						
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $710.00**	**USD $200.00**	**USD $50.00**	**USD $8.00**	**USD $19.36**	**USD $23.39**

Non-Active Use Rates

	Hourly
Standby Rate	USD $2.66
Idling Rate	USD $19.45

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	35%	USD $248.50/mo
Overhaul (ownership)	34%	USD $241.40/mo
CFC (ownership)	13%	USD $92.30/mo
Indirect (ownership)	18%	USD $127.80/mo
Fuel (operating) @ USD 4.15	79.65%	USD $15.42/hr

Revised Date: 1st quarter 2024

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EquipmentWatch

www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Sullair 375HDPQCA
Portable Rotary Screw Air Compressors

Size Class:
250 - 599 cu ft/min
Weight:
4150 lbs

Configuration for 375HDPQCA

Air Delivery Rating	**375.0 cu ft/min**	Horsepower	**130.0**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD $4,235.00	USD $1,185.00	USD $295.00	USD $44.00	USD $35.74	USD $59.80
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $4,235.00**	**USD $1,185.00**	**USD $295.00**	**USD $44.00**	**USD $35.74**	**USD $59.80**

Non-Active Use Rates

	Hourly
Standby Rate	USD $7.94
Idling Rate	USD $13.46

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	15%	USD $635.25/mo
Overhaul (ownership)	67%	USD $2,837.45/mo
CFC (ownership)	10%	USD $423.50/mo
Indirect (ownership)	8%	USD $338.80/mo
Fuel (operating) @ USD 4.15	54.28%	USD $19.40/hr

Revised Date: 1st quarter 2024

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The equipment represented in this report has been exclusively prepared for DAVID MANCINI (dmancinijr@dmsi.co)

All American Precast
1300 NW 4 Street
Homestead, FL 33030 US
+13054182795
ADMIN@ALLAMERICANPRECAST.COM
www.allamericanprecast.com

Estimate

ADDRESS
DAVID MANCINI & SONS INC
2601 Wiles Road
Pompano Beach, FL 33073

SHIP TO
CITY OF FT LAUDERDALE
PROJECT # 12384
NE 38th ST 42-INCH FM
MAIN REPLACEMENT
FORT LAUDERDALE FL

ESTIMATE # 12206D1
DATE 08/07/2024

P.O. NUMBER	SALES REP	JOB NAME
FLGOLF-06	Al	PROJ 12384 NE 38th ST

ACTIVITY	QTY	RATE	AMOUNT
60" RD ARV MANHOLE 60" RD ARV MANHOLE W/ TOP SLAB & USF # 690-AH-M "CITY OF FT LAUDERDALE ARV SEWER" R/C.	7	6,378.00	44,646.00T
Castings NAME CHANGE "CITY OF FT LAUDERDALE" ARV SEWER ON LID.	1	2,500.00	2,500.00
Castings 60" RD ARV MANHOLE W/ TOP SLAB. Add on 05/09/2024	2	2,153.00	4,306.00T
72" RD ARV MANHOLE 72" RD ARV MANHOLEW/ TOP SLAB.	3	2,648.00	7,944.00T
Castings TEMP "M" COVERS	12	150.00	1,800.00
Castings 690-AH-M PL R/C.	5	4,225.00	21,125.00
02 Delivery included. Any paint / coatings not quoted. Casting lead time 6 to 8 weeks. Ram-nek $90 per box as needed.	1	0.00	0.00
***Note** Note: All American Precast Manufacturing, Corp is a material supplier. We are to be paid per invoice or statement, not per customer's contract draws.	1	0.00	0.00

1.Proposals are valid for up to 30 calendar days, pricing may be subject to change after 30 days. All American Precast manufacturing, Corp reserves the right to withdraw proposal, Engineering fees if required must be requested.

Date 01/14/25

Customer David Mancini & Sons
2601 Wiles Rd
Deerfield Beach, 33073
Project Coral Ridge Bypass
TBD

Contact Ryan Kaltz
Phone 954-826-8639
Email Rkaltz@Dmsi.co

Term 4 week
PO: Pending

Qty	Item	Day	Week	4 Week	4 week
100	24" Steel Pipe Per Ft	$1.67	$5.00	$15.00	$1,500.00
3	24" Flange Elbow 90	$27.78	$83.33	$250.00	$750.00
1	Misc. Nuts, Bolts, Silicone	$19.44	$58.33	$175.00	$175.00
				TOTAL RENTAL	**$2,425.00**

Services	Item	Price	Total
2	Delivery	$250.00	$500.00
2	Pick up	$250.00	$500.00
		Services Total	$1,000.00

Subtotal	$3,425.00
Env. Fee	$24.25
Estimated Tax	$206.96
Estimated Total*	$3,656.21

*This is an estimate. Actual site conditions can vary which may effect the final pricing.

Customer Responsibilities:

Point of discharge.
Fueling, unless otherwise noted by contractor.
Power source, materials and labor for electric units.
Heavy equipment for loading , unloading, set up and tear down of equipment (U.O.N)
Discharge Permit and fees.
Monitoring of Dewatering Equipment
Ballast Rock for turbidity control and stability if needed.
Cleaning of sediment tank/s

208 NW 1st Street Deerfield Beach, FL 33441 Phone: (954) 427-2206 Fax: (954) 426-2009

FERGUSON WATERWORKS

FEL-POMPANO BEACH WW #125
1950 NW 18TH STREET
POMPANO BEACH, FL 33069-1394

Phone: 954-973-8100
Fax: 954-917-3134

Deliver To:
From: Matt Briggle
matt.briggle@ferguson.com
Comments:

FEL-POMPANO BEACH, FL WW #125
Price Quotation
Phone: 954-973-8100
Fax: 954-917-3134

Bid No: B574476
Bid Date: 10/02/24
Quoted By: MB

Cust Phone: 954-977-3556
Terms: NET 10TH PROX

Customer: DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Ship To: DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Cust PO#:

Job Name: CORAL RIDGE FM REPLACEMEN

Item	Description	Quantity	Net Price	UM	Total
MJLSP4LA42	42 MJ C153 P-401 LONG SLV L/A	1	8338.990	EA	8338.99
MJ4P4LA42	42 MJ C153 P-401 45 BEND L/A	1	11719.180	EA	11719.18
D118MJ36	36 MJ N/LUBE PLUG VLV L/A	1	50939.330	EA	50939.33
SP-MJPLUGVLV42	42 MJ PLUG VALVE - SEE SPEC	2	103264.000	EA	206528.00
SP-MJTLA4236	42X36 MJ TEE C153 CL	1	19636.050	EA	19636.05
MJ9P4LA36	36 MJ C153 P-401 90 BEND L/A	1	9596.140	EA	9596.14
FPPP436P	36X4'0 FLGXPE P-401 BT DI SPL	2	7641.180	EA	15282.36
FPPP436K	36X2'0 FLGXFLG P-401 BT DI SPL	2	8089.410	EA	16178.82
FPPP436U	36X6'0 FLGXPE P-401 BT DI SPL	1	9988.240	EA	9988.24
E213600	36 MEGAFLANGE FLG ADPT	2	3708.380	EA	7416.76
F9P436	36 DI 125# FLG P-401 90 BEND	2	14002.400	EA	28004.80
SP-VF36PV	36 FLG PLUG VLV	1	49916.850	EA	49916.85
SP-VFCV36	36 FLG CHK VLV	1	48348.310	EA	48348.31
SSLDE42	42 DI MJ WDG RTNR GLAND *ONEL	10	2417.080	EA	24170.80
SSLDE36	36 DI MJ WDG REST GLND *ONELO	5	1693.300	EA	8466.50
SP-SSFAP36	36 SS FLG ACC SET --- ARV	10	1158.830	EA	11588.30
FFC2023830IP7	36X2 IP DBL STRP SS EPOX SDL	1	720.000	EA	720.00
FFB17007NL	LF 2 MIP X FIP BALL CORP	1	315.000	EA	315.00
V48K	2 SEWAGE AIR RELEASE VLV	1	1040.000	EA	1040.00
IS46NKP	2X4 SS S40 316L WLD NIP	1	14.000	EA	14.00

Net Total:	$528208.43
Tax:	$31742.51
Freight:	$0.00
Total:	$559950.94

HOW ARE WE DOING? WE WANT YOUR FEEDBACK!
Scan the QR code or use the link below to complete a survey about your bids:
https://survey.medallia.com/?bidsorder&fc=125&on=74695

500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
Office: +1 (954) 730-0707

chen moore and associates

December 12th, 2024

Fabio Angarita
David Mancini & Sons, Inc
2601 Wiles Road
Pompano Beach, FL 33073

Subject: **City of Fort Lauderdale**
P12384 Coral Ridge Force Main - Phase 4
RCO #2 – 36-inch Bypass at Repump B

Dear Mr. Angarita,

During the design of the force main in Phase 4 of the City of Fort Lauderdale Force Main Project (P12384), the City of Fort Lauderdale has requested that DMSI replace the existing 36-inch above-ground bypass at Repump B. The work required to install a new bypass necessitates additional design and inspection services from CMA that were not included in the original Design Criteria Package (DCP).

As requested by the City of Fort Lauderdale, CMA will include in our Phase 4 submittal plans a detailed design encompassing all necessary piping, valves, connection points, and pipe supports to meet City standards. This design will also incorporate the above-ground bypass under the same permit. Additionally, CMA will provide restoration design plans for all areas impacted during the construction of the bypass. To support the construction process, CMA will provide an inspector onsite during the installation of the 36-inch above-ground bypass. This request also includes the redesign of the connection location to the existing 42-inch influent line at the Master Repump station as discussed in the field with City staff.

Please note that CMA will not perform any modeling or flow calculations as part of this work. The design plans will incorporate the existing system and be replaced in kind.

This additional scope of work has resulted in unanticipated costs for CMA related to the design and construction inspection of the bypass and new connection locations to the existing force main system. The estimated total cost for these additional services is $62,400.

Please feel free to contact me if you have any additional questions at +1 (561) 744-8282 or via email at vlocigno@chenmoore.com.

Respectfully submitted,

Vincent Locigno

Chen Moore and Associates
Vincent Locigno, PE
Project Engineer

Rangeline Is The Lifeline For Your Pipeline

Quote Number RTS24-3112

Rangeline will provide the following Material:

Quantity	Description	Unit Price	Total
1	Night Work Option for the 42" Double Line stop Service	$9,545.00	$9,545.00
1	Night Work Option for the 42" Double Re-Stop Service	$5,574.00	$5,574.00

Rangeline Group will perform the following Double Line Stop:

Quantity	Size	Pipetype	Product	Double Line Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$84,520.00	$84,520.00	$1,500.00 Per Day, Per Line Stop

Rangeline Group will perform the following Double Re-Stop:

Quantity	Size	Pipetype	Product	Double Re-Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$44,522.00	$44,522.00	$1,500.00 Per Day, Per Line Stop

PLEASE NOTE: Rangeline will make every attempt to remove the completion plug and re-insert the line stopper through the existing fitting. If the completion plug cannot be removed, the existing line stop fitting will have to be abandoned and a new line stop fitting and location will be needed in order to shut the system down.

Note: Rangeline cannot guarantee a 100% shutdown due to debris, mineral deposits, solids and/or sediments in the pipe.

Prices are based on the following below:

- Rangeline will provide epoxy coated linestop fittings with stainless steel hardware for the double linestop services, and use existing and serviceable linestop fittings for the double re-stop services.
- If the project is cancelled after NON-AIS(standard) materials are ordered, there will be a restocking fee.
- Rangeline will provide (2) 24" 150# flanged outlets for customer to connect Bypass Piping to the 42" double line stop or double re-stop sets. Customer must provide and install all Bypass Piping and related materials.
- When equipment is placed on the pipeline system, whether the Re-Stop is in the main or not, per day charges will apply.
- Please allow (7 - 14 days) notice for scheduling after receipt of materials to ensure availability. Projects that require shorter lead times may incur additional charges.
- Contractor must encase each line stop fitting in concrete.
- If the type of pipe changes from what we have quoted above, prices and scheduling may vary. Contractor or Municipality is responsible for verifying the type of pipe and it's O.D.
- Rangeline may require a pre-construction meeting or site visit prior to scheduling any services.
- Normal daytime hours (7:00AM- 7:00 PM EST) Monday through Friday. Technician(s) will have a $375.00 per hour after hours charge, portal-to-portal. Additional Expenses will be charged at our cost plus 20%.
- Rangeline will allow (3) Mobilizations/De-Mobilizations to the jobsite per double line stop and (2) Mobilizations/De-Mobilizations to the jobsite per double re-stop. Additional trips will be $750.00 per trip. Mobilization charges are applied when the technician leaves the shop or jobsite to start or after completion of the project.

Rangeline Tapping Services
7256 Westport Place Ste A West Palm Beach, FL 33413

A & M Brothers Concrete Corp.
95 NE 12 Street
Homestead Fl, 33030
Phone: (786) 296 5979
a.m.concrete@hotmail.com

PROPOSAL / CONTRACT
PROPOSAL VALID FOR 90 CALENDAR DAYS
CALENDAR DAYS
Date: FEBRUARY 04, 2025

CONTRACTOR: DAVID MANCINI & SONS INC
Attn: Alejandra Suarez
Email: ASuarez@dmsi.co
PHONE: (786)-284-2268
COUNTY: BROWARD
PROJECT NAME : CORAL RIDGE ABOVE GROUND PIPE SUPPORT

Item	Description	Unit	Unit price	Quantity	Total Amount
1	5' X 18" ABOVE GROUND PIPE SUPPORT WITH #5 REBAR 12" ON CENTER TOP AND BOTTOM EACH WAY	EACH	$ 3,800.00	2	$ 7,600.00
	Note: Final Invoice base on Field measurements		TOTAL		$ 7,600.00

PRICE INCLUDES LABOR, MATERIALS, EQUIPMENT AND 3,000 REG OR 2,500 DOT PSI CONCRETE	
Field Office, Inspections, Concrete Cylinder Test are NOT Included	Maintenance of Traffic NOT included.
Fill Materials, Grading and Base Preparation are NOT Included	Bond/Layout/As Built NOT Included.
Lime rock Base and Subgrade are NOT Included.	Concrete Pump are NOT Included.

PAYMENT TO A & M Brothers Concrete Corp. is due within 30 days of receipt of this invoice. Any payment not received timely, shall be subject to interest at the rate of 1.5 % per month. In the event of legal action is required to enforce this invoice, A & M Brothers Concrete shall be entitled to recover its attorneys' fees and costs.

ACCEPTANCE OF PROPOSAL/CONTRACT: **DAVID MANCINI & SONS**

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date_____

_____
Name / Title

_____
Signature

CONFIDENTIAL

SUPERMIX™

NRMCA
PREMIER PRODUCER

Customer Name	David Mancini & Sons - Alejandra Suarez		Phone: 954-977-3556	
Address	2601 Wiles Road, Pompano Beach, FL 33073		Fax:	
Project Name	Coral Ridge FM Replacement - Proj 23-FL.GOLF		Cell: 305-775-5340	
Address	NE 50th Court & 15th Ave, Ft Lauderdale, 33334		asuarez@dmsi.co	
Mix Code	*Description*		*U.O.M.*	*Price*
	* As Requested *			
06-FF-95	FDOT FLOWABLE FILL EXCAVATABLE 100 PSI		Cubic Yard	$173.00
	SERVICE CHARGES			
	Environmental Load Charge		Load	$25.00
Currently	FUEL SURCHARGE - ADJUSTED WEEKLY 1/16/2025		Load	$32.20
6:00am-12:30pm	Saturday Delivery Charge		Cubic Yard	TBD
6:00 pm-6:00 am	Plant Opening 4-HR Minimum Monday - Friday		FLAT	TBD
SHORT257	Minimum Load Charge - Less than 7 CY		Load	$250.00
	Return Concrete Handling & Disposal Fee		Cubic Yard	$35.00
	Order Cancellation Fee		FLAT	$1,500.00
1/6/2025	*Effective Date*		*Expiration Date*	3/31/2025
Escalation	*TBD 7/1/2025*			

This quotation must be accepted by written purchase order 30 calendar days from quote date or it will expire; however, Supermix at all times reserves the right to increase the quoted prices without notice that reflect an increase in raw material costs, changes in market conditions, or surcharges incurred by Supermix, and to cancel or defer any quote in the event Supermix becomes delayed or prevented by shortages or allocations of raw materials. Supermix shall not be liable to Buyer, any of its counterparties, or any third parties for damages as a result of any such price change, delay, or cancellation.

Supermix Representative	*Peter Kaczorowski*	*Office: 954.480.9333*	*Cell: 954.214.4937*
	Account Manager	*Fax: 954.480.2893*	*Email: pete@supermix.com*

Accepted by: _____ Date: _____

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - CHECK VALVE

1. Date of Submission	12/6/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-02-1
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.03
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

AWWA C508 Swing Check Valves

Index

1155 ALPHA DRIVE SUITE A · ALPHARETTA, GA 30004
PHONE: 770-740-0800 · FAX: 770-740 8777

VSI WATERWORKS USA

SERIES CVI
AWWA C508
SWING CHECK VALVES

2"-48"

DOC-00000435A1
April 2023

2"-48" CVI BONDED SEAT SWING CHECK

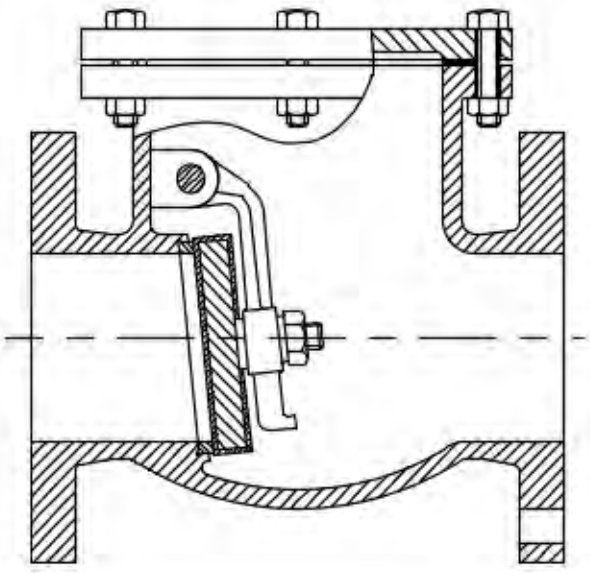
BONDED SEAT SWING CHECK VALVE

VSI offers the simplified bonded seat type check valve for pump and lift stations where a standard duty valve is acceptable and external accessories are not required. It still exemplifies VSI's commitment to providing a quality product.

- Body seats are permanently bonded non-replaceable, reducing possible leakage paths.
- Disc seats are replaceable by way of replacing the entire disc.
- The shaft extends only to one side, reducing seal friction and possible leakage paths.

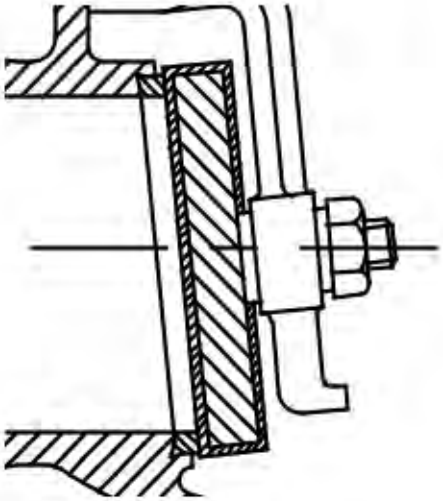
SIMPLE INTERNALS

VSI Bonded Seat Swing Check Valves are built with simplicity in mind for use in general duty applications. They feature minimal internal hardware and robust coatings for long service life in many less demanding applications.



REPLACEABLE DISC

VSI Swing Check Valves incorporate a replaceable bonded seat, which can be removed without taking the valve out from the line. Simply remove the sealed cover, and change out the entire disc.



NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
105 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

DESIGN STANDARDS

Size Range	6"-48" Flanged End
Construction	AWWA C508 ASME B16.34 API 600
Coatings	AWWA C550*
Connections	ANSI B16.1 Class 125* ANSI B16.1 Class 250 ANSI B16.5 Class 150 ANSI B16.5 Class 300
Lay Length	AWWA C508 Appendix A Full ISO 5752
Classifications	150 PSIG 175 PSIG 200 PSIG* 250 PSIG*

*Standard Option

American Water Works Association

RESISTANCE GUIDE

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attached by:
EPDM	EPDM, EPM	Ethylene-propylene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals	Mineral oils and solvents, aromatic hydrocarbons
NBR	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouropropylene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high temperatures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molecular weight esters and nitro containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-ethylene	-100F/450F	Excellent abrasion resistance and chemically inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures

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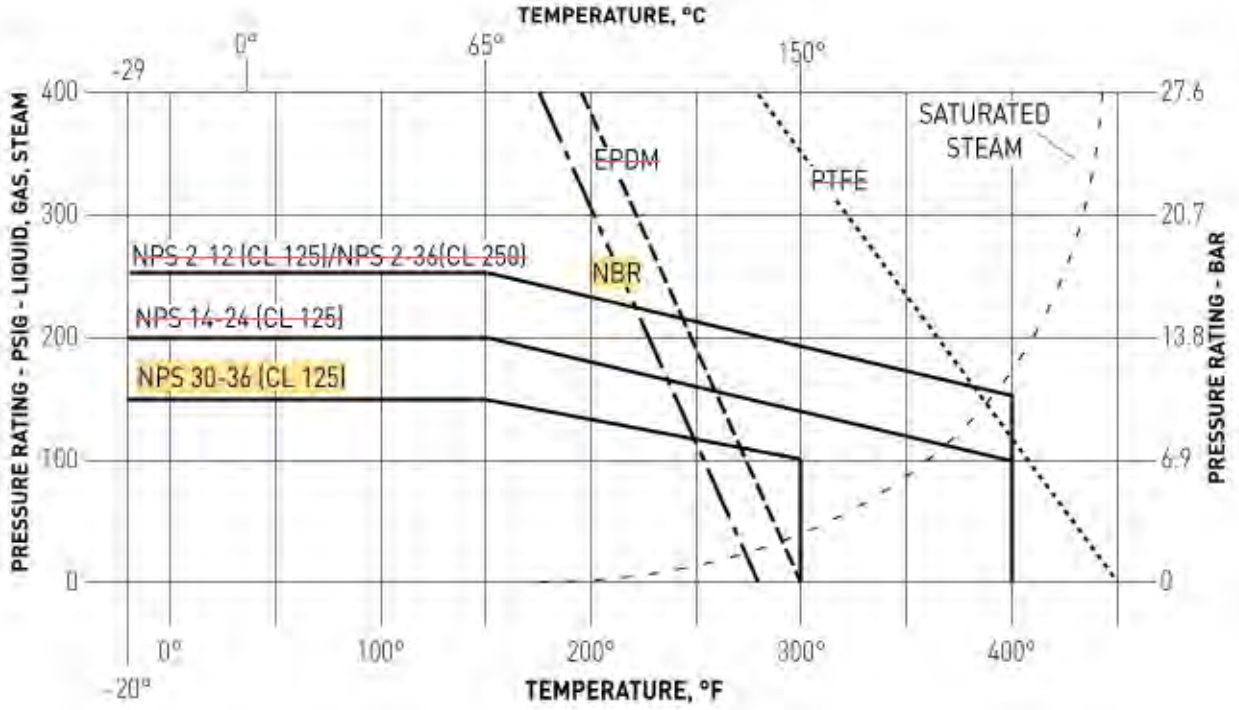
PRESSURE/TEMPERATURE RATINGS



In determining field pressure ratings for Series CVI Check Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

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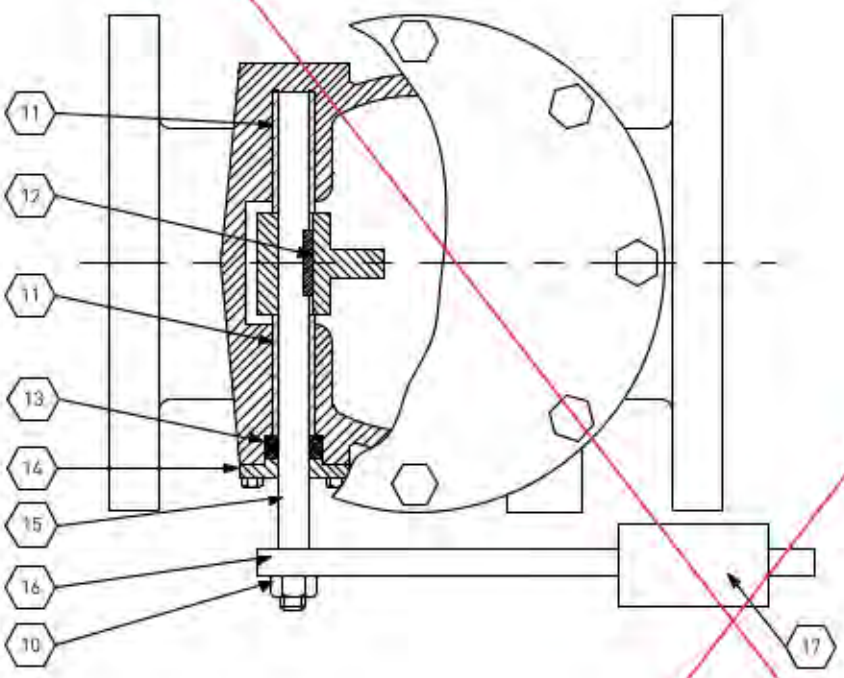
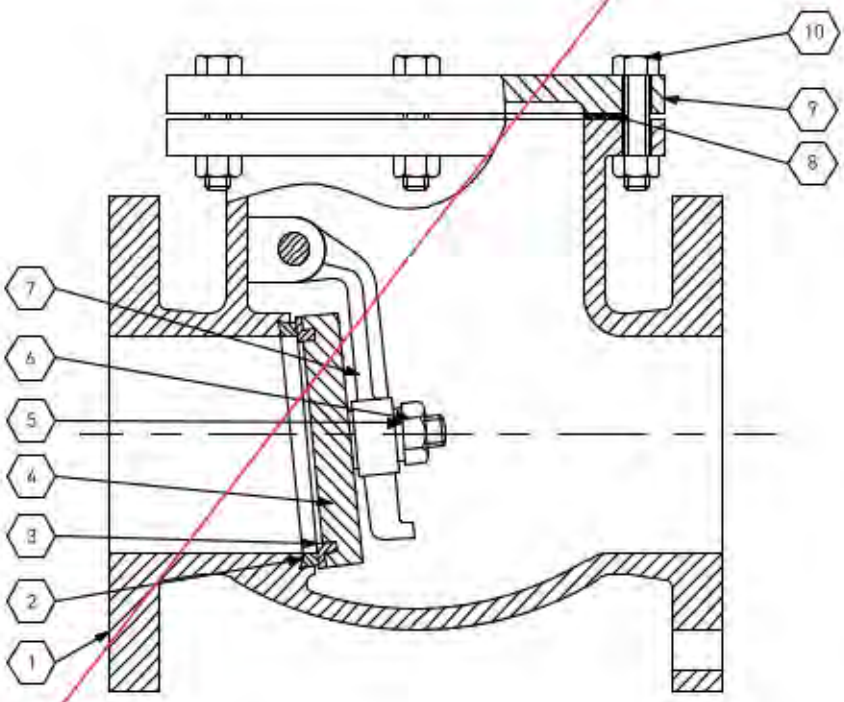
MATERIALS OF CONSTRUCTION METAL SEATED VALVES





ITEM	DESCRIPTION	MATERIAL OPTIONS
1	BODY	DUCTILE IRON ASTM A536 65-45-12
2	BODY SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
3	DISC SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
4	DISC	DUCTILE IRON ASTM A536 65-45-12
5	WASHER	STEEL ASTM A36
6	WETTED HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
7	ARM	DUCTILE IRON ASTM A536 65-45-12
8	SEAL	EPDM
		BUNA-N (NBR)
9	COVER	SAME AS BODY (1)
10	EXTERIOR HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
11	BEARING	PTFE
12	KEY	STEEL ASTM A36
13	SHAFT SEAL	EPDM
		BUNA-N (NBR)
14	RETAINER	SAME AS BODY (1)
15	SHAFT	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		STAINLESS 17-4PH ASTM A693
16	ARM*	DUCTILE IRON ASTM A536 65-45-12
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12

* IF EQUIPPED

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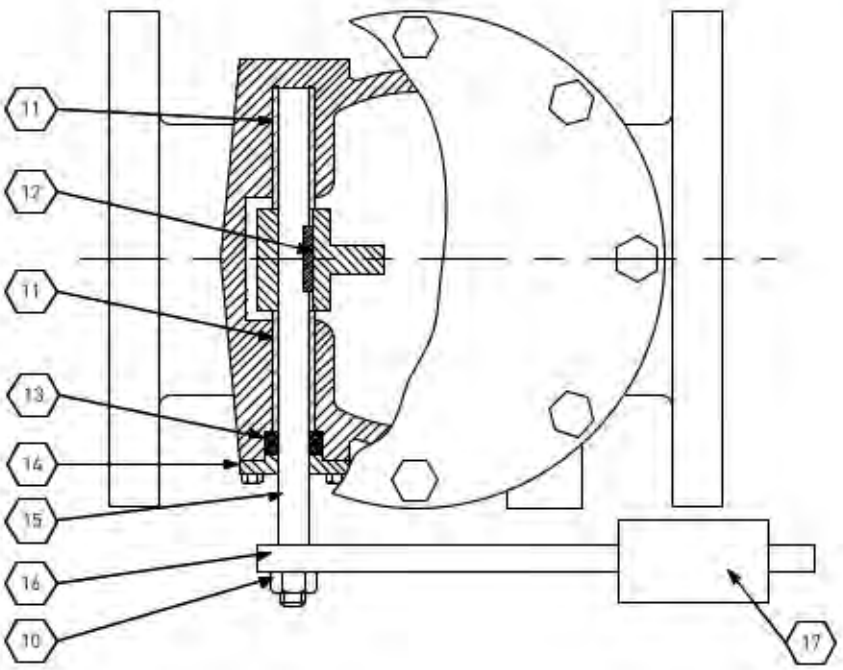
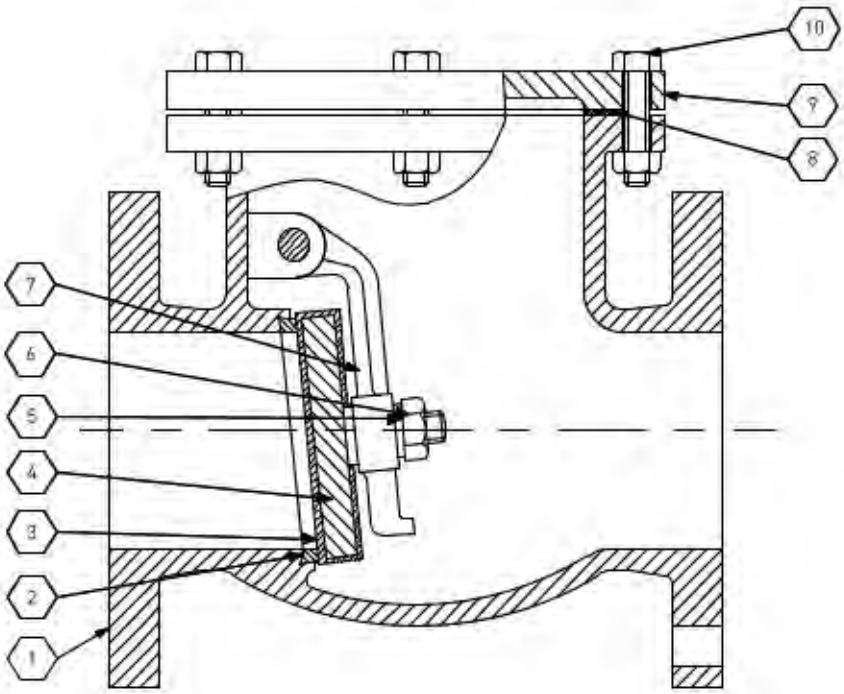
MATERIALS OF CONSTRUCTION RUBBER SEATED





ITEM	DESCRIPTION	MATERIAL OPTIONS	
1	BODY	DUCTILE IRON ASTM A536 65-45-12	
2	BODY SEAT RING	~~STAINLESS 304 ASTM A276~~	
		STAINLESS 316 ASTM A276	
		~~BRONZE ASTM B62~~	
3	DISC SEAT	EPDM	
		BUNA-N (NBR)	
		~~VITON (FPM)~~	
4	DISC	DUCTILE IRON ASTM A536 65-45-12	
5	WASHER	STEEL ASTM A36	
6	WETTED HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
7	ARM	DUCTILE IRON ASTM A536 65-45-12	
8	SEAL	EPDM	
		BUNA-N (NBR)	
9	COVER	SAME AS BODY (1)	
10	EXTERIOR HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
11	BEARING	PTFE BRONZE	
12	KEY	STEEL ASTM A36	
13	SHAFT SEAL	EPDM	
		BUNA-N (NBR)	
14	RETAINER	SAME AS BODY (1)	
15	SHAFT	~~STAINLESS 304 ASTM A276~~	
		~~STAINLESS 316 ASTM A276~~	
		STAINLESS 17-4PH ASTM A693	
16	ARM*	DUCTILE IRON ASTM A536 65-45-12	
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12	

* IF EQUIPPED

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

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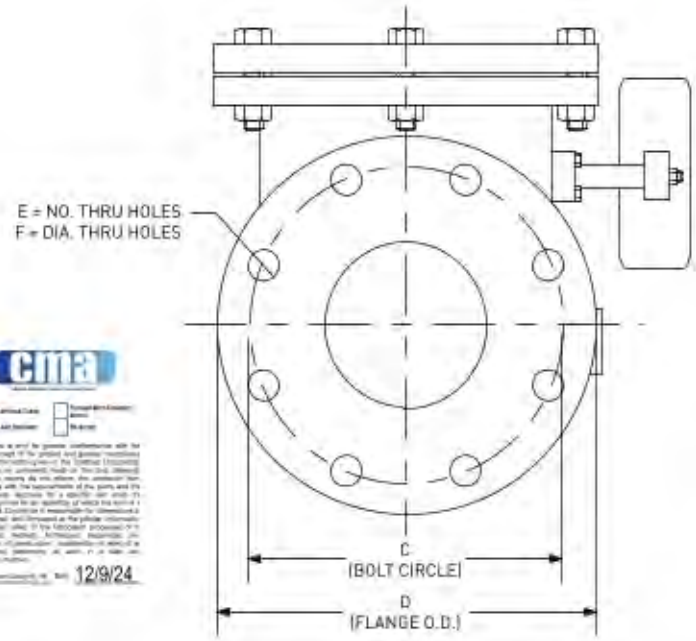
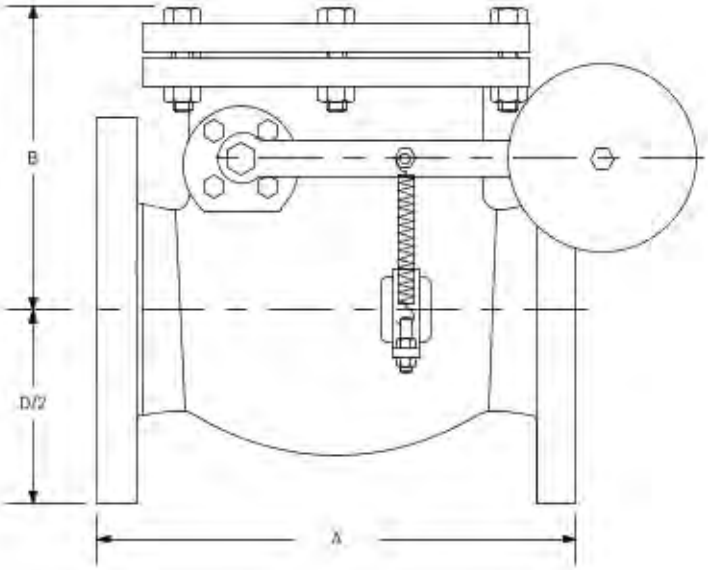
FLANGED WITH OUTSIDE LEVER AND WEIGHT

SIZE	A	B	C	D	E	F	WEIGHT (LBS)
2"	8.00	5.4	4.75	6.0	4	0.75	37
2.5"	8.50	5.8	5.5	7.0	4	0.75	44
3"	9.50	6.3	6.00	7.2	4	0.75	51
4"	11.50	7.1	7.50	9.0	8	0.75	79
5"	12.00	8.0	8.50	10.0	8	0.75	101
6"	14.00	8.8	9.50	11.0	8	0.88	128
8"	19.50	10.2	11.75	13.5	8	0.88	228
10"	24.50	11.4	14.25	16.0	12	1.00	374
12"	27.50	12.8	17.00	19.0	12	1.00	418
14"	31.00	16.7	18.74	21.0	12	1.13	737
16"	36.00	17.5	21.25	23.5	16	1.13	968
18"	38.00	18.9	22.75	25.0	16	1.25	1500
20"	42.00	20.7	25.00	27.5	20	1.25	1800
24"	48.00	23.9	29.50	32.0	20	1.38	2600
30"	56.00	29.6	36.00	39.8	28	1.38	
36"	63.00	37.9	42.75	46.0	32	1.63	-
42"	70.00	41.0	49.50	53.0	36	1.63	
48"	76.00	49.0	56.00	49.5	44	1.63	-





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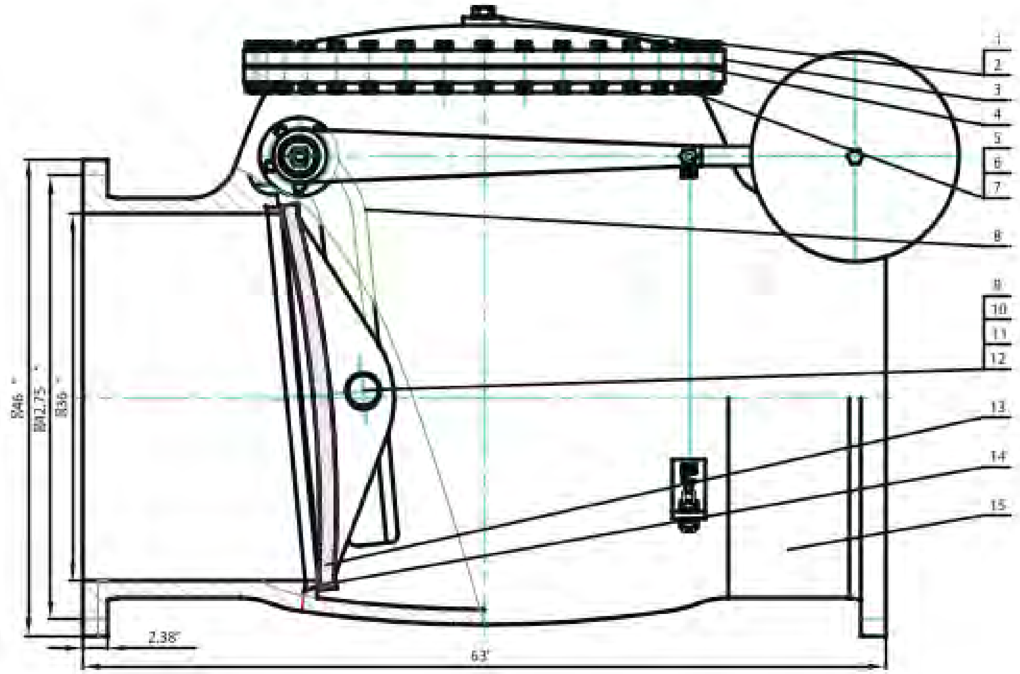

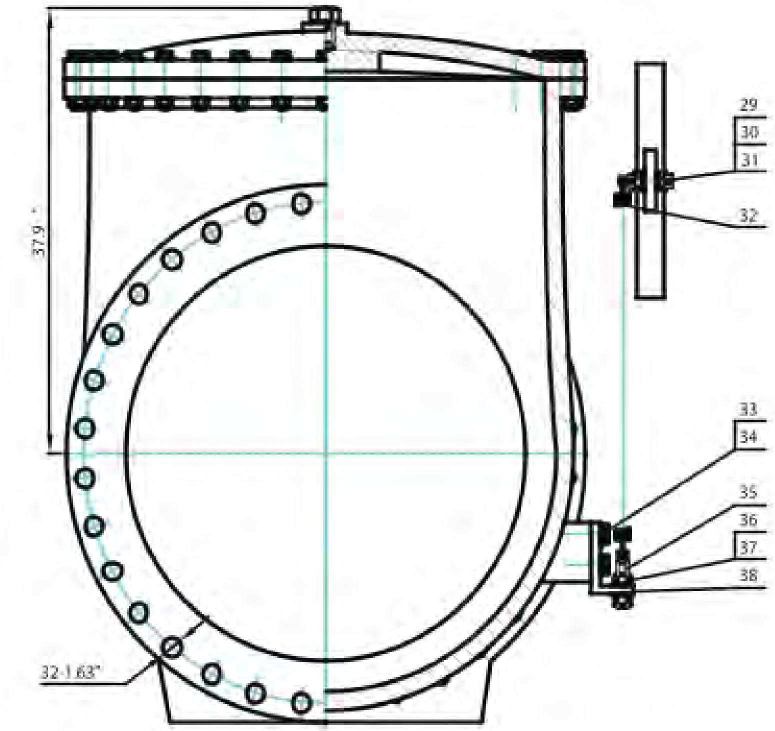

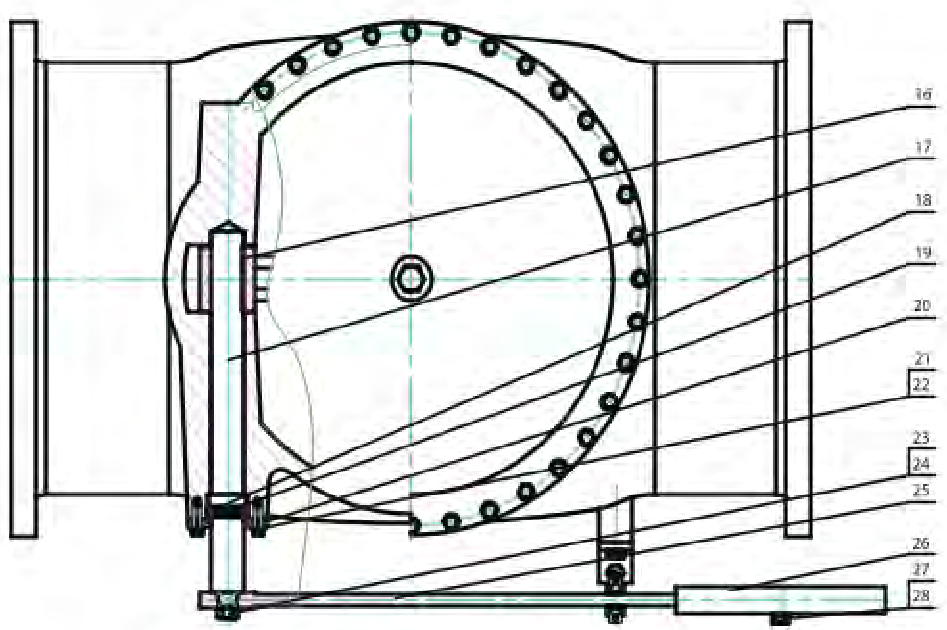

cma

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12/9/24

NO	PART NAME	MATERIAL	STANDARD
1	PLUG	STAINLESS STEEL	SS316
2	O-RING	NBR	ASTM D2000
3	BONNET	DUCTILE IRON	ASTM A536
4	GASKET	NBR	ASTM D2000
5	BOLT	STAINLESS STEEL	SS316
6	NUT	STAINLESS STEEL	SS316
7	WASHER	STAINLESS STEEL	SS316
8	ARM	DUCTILE IRON	ASTM A536
9	HING PIN	STAINLESS STEEL	SS316
10	WASHER	STAINLESS STEEL	SS316
11	NUT	STAINLESS STEEL	SS316
12	COTTER PIN	STAINLESS STEEL	SS316
13	DISC	DUCTILE IRON/NBR	ASTM A536/D2000
14	BODY SEAT RING	STAINLESS STEEL	SS316
15	BODY	DUCTILE IRON	ASTM A536
16	FLAT KEY	STEEL	
17	SHAFT	STAINLESS STEEL	17-4 PH
18	O-RING	NBR	ASTM D2000
19	O-RING	NBR	ASTM D2000
20	GLAND	DUCTILE IRON	ASTM A536
21	BOLT	STAINLESS STEEL	SS316
22	WASHER	STAINLESS STEEL	SS316
23	BOLT	STAINLESS STEEL	SS316
24	WASHER	STAINLESS STEEL	SS316
25	HINGE	DUCTILE IRON	ASTM A536
26	HAMMER	DUCTILE IRON	ASTM A536
27	BOLT	STAINLESS STEEL	SS316
28	WASHER	STAINLESS STEEL	SS316
29	SPRING STUD	STAINLESS STEEL	SS316
30	NUT	STAINLESS STEEL	SS316
31	WASHER	STAINLESS STEEL	SS316
32	SPRING	STAINLESS STEEL	SS316
33	BOLT	STAINLESS STEEL	SS316
34	WASHER	STAINLESS STEEL	SS316
35	SPRING STUD	STAINLESS STEEL	SS316
36	NUT	STAINLESS STEEL	SS316
37	WASHER	STAINLESS STEEL	SS316
38	SPRING BRACKET	CARBON STEEL	

TOLERANCES		
DECIMAL		ANGULAR
X.X	±0.1	±0.25°
X.XX	±0.01	
X.XXX	±0.005	

VSI WATERWORKS
1155 ALPA DR.
ALPHARETTA,GA

36" CVI -
CVI36F-DD63N-B31/0-H
Drawing and Materials

UNITS: INCHES	REV 0
SCALE: NTS	12-05-24
DWG. NO.	N/A

BONDED SEAT SWING CHECK PART NUMBER MATRIX

CVI ☐ ☐ - ☐ ☐ ☐ ☐ - ☐ ☐ ☐ / ☐ - ☐

MODEL

SIZE CODE
2" - 02
2.5" - 25
3" - 03
.
.
24" - 24

CONNECTION
F -Flanged CL125/150*

BODY MATERIAL
D-Ductile Iron*

DISC MATERIAL
D-Ductile Iron*

SHAFT MATERIAL
~~S-Stainless Steel 304*~~
~~3-Stainless Steel 316~~
6-Stainless 17-4PH

SEAT
~~B-Bronze to Bronze*~~
~~E-EPDM to SS304~~
N-Buna-N (NBR) to SS304

BEARING MATERIAL
~~P-PTFE*~~
B-Bronze ASTM B16

HARDWARE
~~S-Stainless Steel 304*~~
3-Stainless Steel 316
~~Z-Zinc Plated Steel~~

COATINGS
1-AWWA C550 Fusion-Bonded Epoxy
~~C-Custom Project Specific~~

OPTIONS
O-Outside Lever and Weight*
~~OL-Limit Switch~~
~~B-Bare~~

IDENTIFIER

* Standard Material

12/9/24

EXAMPLE:
CVI08F-DDSB-PS1/O-Q
A 8" flanged Check valve with Ductile Iron body and disc, SS304 shaft, Bronze body seat, B[illegible] NBR seals, PTFE bearings, SS304 hardware, AWWA C550 2-part epoxy coatings with outside lever & weight.

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

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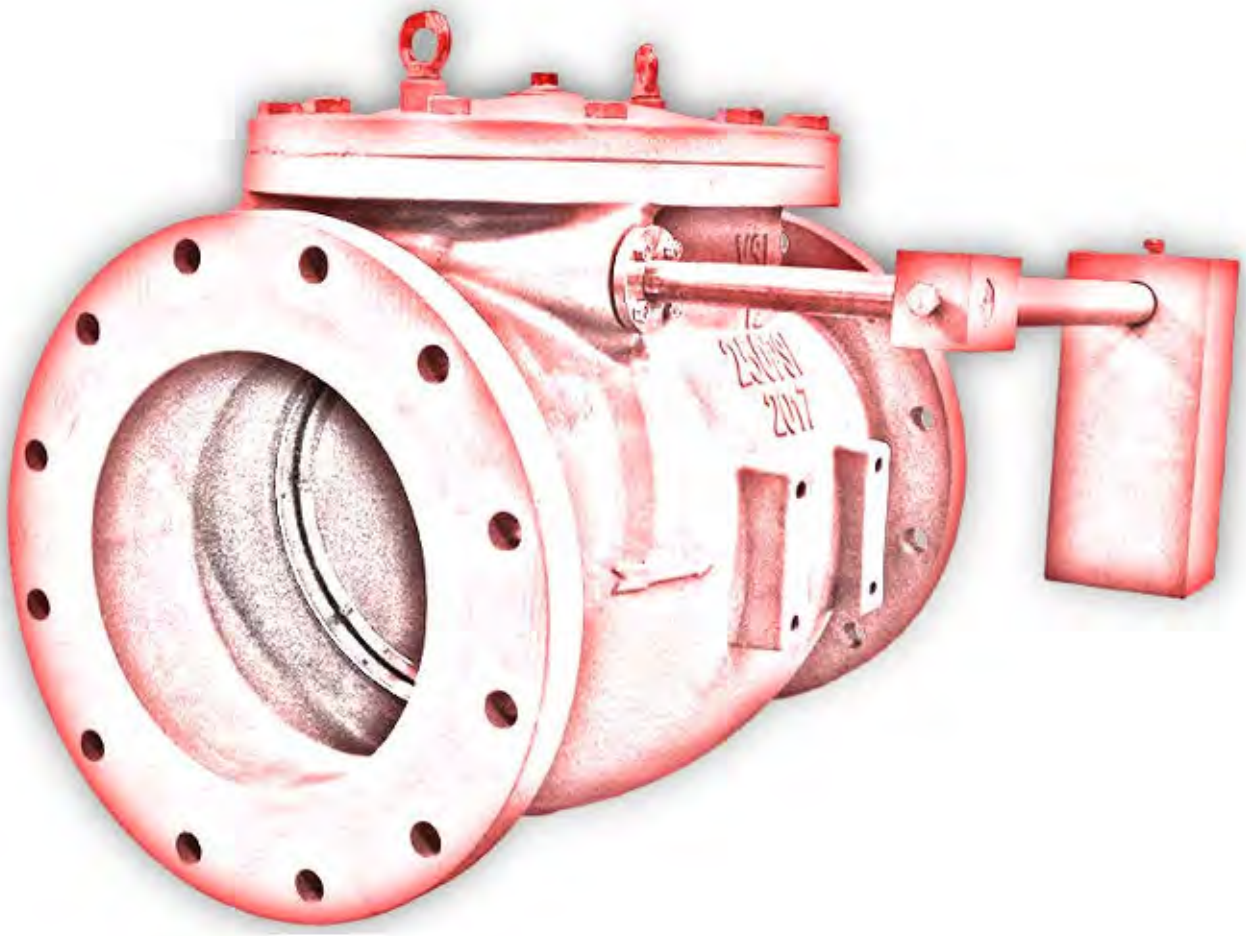

VSI Waterworks LLC
tel: 1 (770) 740 0800
fax: 1 (770) 740 8777
email: sales@vsiwaterworks.com

www.VSIWaterworks.com

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - PLUG VALVE

1. Date of Submission	12/06/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-20-0
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.02
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

CM3

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12/9/24

VSI WATERWORKS USA

SERIES PVIF
AWWA C517 FULL PORT ECCENTRIC PLUG VALVES

14"-72"

IMPLEMENTATIONS

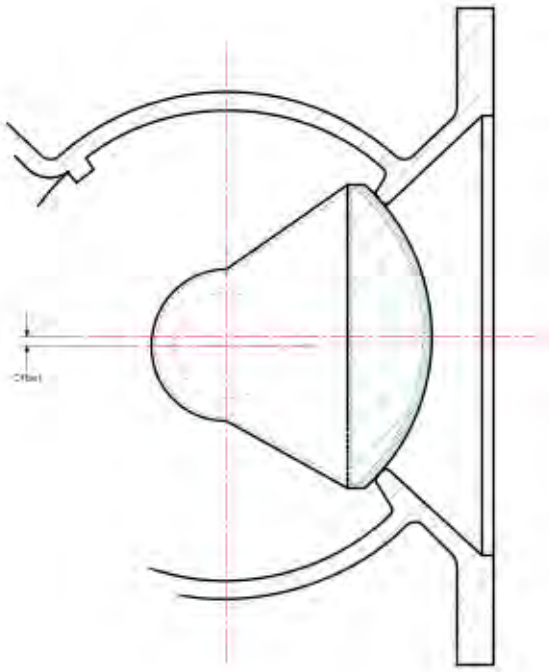
The Eccentric Plug valve is the industry standard for systems that will experience sludge or large particulate flow. VSI Eccentric Plug Valves are able to achieve an extremely high port area while keeping the operating time much lower than the traditional gate valve.

ECCENTRIC MOVEMENT

The most essential function of a valve is that it must isolate line flow. This action is easy to accomplish, but with traditional designs as pressure and size increase the torque required to close the valve increase exponentially.

To counteract this characteristic all VSI Eccentric Plug Valves incorporate an offset in the valve design. By offsetting the plug and shaft centerline from the valve body and pipe centerline a cam action is achieved. This action allows the plug to contact the valve body only in the last 5-10 degrees of movement. Through the rest of the valve motion the only torque transmitted to the operator will be from the low friction bearings and line force on the plug.

The cam action increases the seat force without increasing operator torque allowing for the use of more durable encapsulation materials that are often harder.



RESILIENT PLUG FACING

All VSI Eccentric Plug Valves are equipped as standard with a fully encapsulated resilient plug. By fully encapsulating the plug the service life of the valve is greatly extended by reducing corrosion of the plug. The resilient nature of the seat allows for driptight shut off. Should small solids become deposited upon the plug face, tight shut off is still guaranteed.

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E: sales@vsiwaterworks.com

ADJUSTABLE/REPLACEABLE PACKING

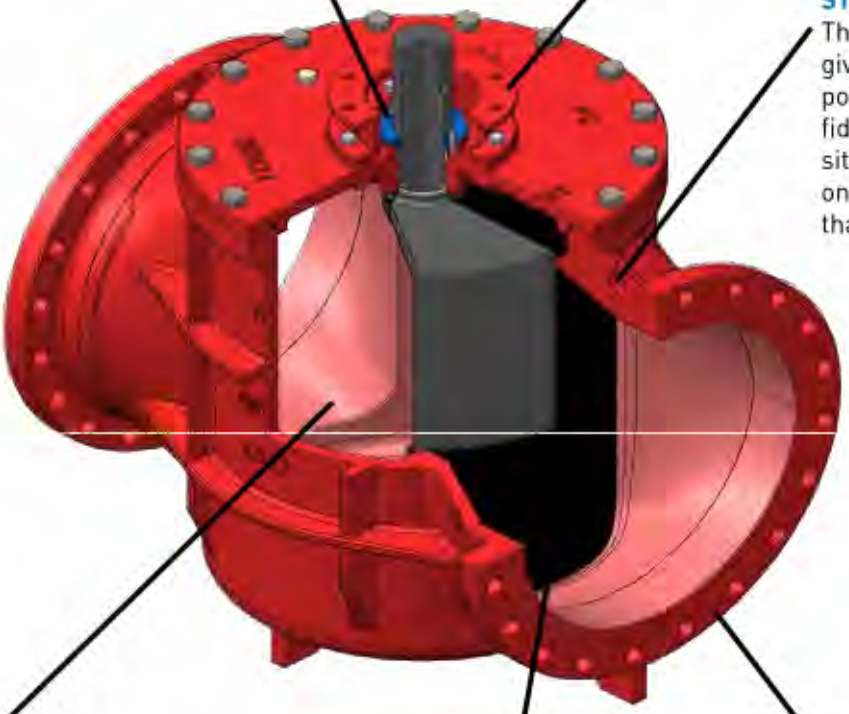
The packing of the Series PVIF consists of multiple v-type packing rings and adjustable gland. The open bonnet on above ground valves allows for the adjustment and replacement of packing without removing the gearbox/operator

NUMEROUS ACTUATION OPTIONS

The standard ISO 5211 top mount allows VSI to offer a wide range of electric, pneumatic, hydraulic, fail-safe, and other actuation packages

STANDARD LIFTING EYE

The lifting holes at all ends of the PVIF give a secure and easy attachment point that allows the valve to be confidently maneuvered into place on job sites. Equipped as a standard feature on all PVIF valves, making your install that much easier.



FULL PORT DESIGN

The rectangular port is of a "Full Port" type with a flow area equal to the nominal pipe to maintain excellent free flow, high Cv values, and low head loss. Pigging with semi-rigid foam type pigs is possible.

FULLY ENCAPSULATED PLUG

The plug of the Series PVIF is fully encapsulated with resilient rubber covering every surface exposed to the line. Full encapsulation eliminates corrosion and minimizes the possibility of delamination or damage to the seat.

MULTIPLE COATING OPTIONS

The standard 2-part heavy duty coating can be optioned to a wide variety of coatings as required by the project requirements such as NSF 61 listed coatings, ceramic reinforced resin, or coal-tar epoxy

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SAMPLE SPECIFICATION

1. FULL RECTANGULAR PORT PLUG VAVES FOR WATERWORKS SERVICE
   1.1. This specification covers the design, manufacture, and testing of eccentric plug valves from 14 inch (350 mm) through 72 inch (1800 mm) under service pressure of up to 150 psig (1035 kPa).
   1.2. Plug valves shall be resilient seated and of the quarter turn, non-lubricated, eccentric type.

2. GOVERNING STANDARDS
   2.1. All eccentric plug valves shall be in full conformance with the design, manufacturing, and testing standards set forth by the American Water Works Association (AWWA) in Standard ANSI/AWWA C517.
   2.2. When requested, manufacturer shall provide an Affidavit of Proof of Design Testing in accordance with AWWA C517.

3. CONNECTIONS
   3.1. Flanged valves shall conform to all standards of ANSI B16.1, Class 125.
   3.2. Mechanical joint valves shall conform to all standards of ANSI/AWWA C111/A21.11.

4. MARKINGS
   4.1. Each valve shall be marked with the manufacturer's name, valve size, body material, and pressure rating cast into the body of the valve. Lettering shall be a minimum of 1/2 inch tall and project 1/10 inch from body.
   4.2. All plug valves, except buried or submerged valves, shall be equipped with a type 304 or 316 stainless steel or Aluminum tag identifying body, plug, resilient seat, and stem material in addition to manufacturer's name, pressure rating, size, date of manufacturer, and date of testing.

5. DESIGN
   5.1. Port areas of valves in relation to pipe areas shall not be less than 100%
   5.2. Valves shall be equipped with a minimum 95% nickel seat directly bonded to a machined finished surface on valve body. Plated or removable seats are not acceptable.
   5.3. Valve shall be equipped with a set of V-type stem packing with an adjustable gland. Valve stem packing shall be replaceable without removing the cover or bonnet of the valve.
   5.4. Radial shaft bushings shall be supplied in the upper and lower bearing journals. Thrust bearings shall be supplied between the plug and body in both the upper and lower journal areas.
   5.5. The valves shall be equipped with a mounting area for operators conforming to Manufacturers Standard Society(MMS) 101 or International Organization of Standardization(ISO) 52111. There shall be sufficient clearance to directly mount standardized operators with easily accessible fasteners.

6. MATERIALS
   6.1. The valve body, cover, and bonnet if equipped shall be constructed of ASTM A536 Ductile Iron.
   6.2. The plug shall be constructed of ASTM A536 Ductile Iron and shall be one piece. The resilient plug encapsulation shall conform to ASTM D429 testing.
   6.3. Radial and thrust bearings shall be made of permanently lubricated type 316 stainless steel.
   6.4. All ~~submerged~~ coatings shall conform to AWWA C550, be holiday free, and have a minimum total dry film thickness of 10 mils.
   6.5. All uncovered, submerged, or buried valves shall have type 304 or 316 stainless steel hardware unless specified.

7. OPERATORS
   7.1. All manually operated valves 4 inch and larger shall be equipped with a worm gear actuator with position indicator. Direct 2" operator nut may be used when specified on 6" and under valves.
   7.2. All actuators shall be permanently sealed and suitable for buried service.
   7.3. All 2 inch square operating nuts, exposed hardware and shafts shall be made of corrosion resistant stainless steel.
   7.4. All actuators equipped with handwheels shall have a maximum rim pull of 80lbs.

8. MANUFACTURER
   8.1. Eccentric plug valves shall be VSI Series AWWAC517 as manufactured by Valve Solutions, Inc., Alpharetta, GA USA or approved equal.
   8.2. All valves shall be warranted by manufacturer for a minimum of 12 months.

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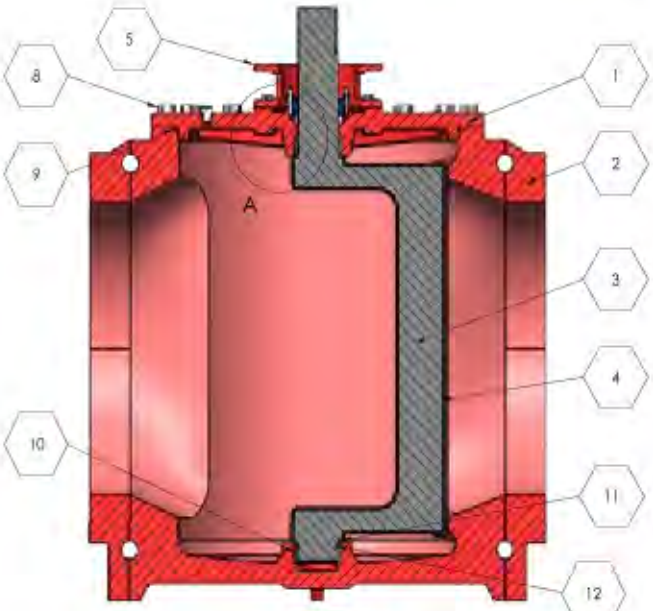
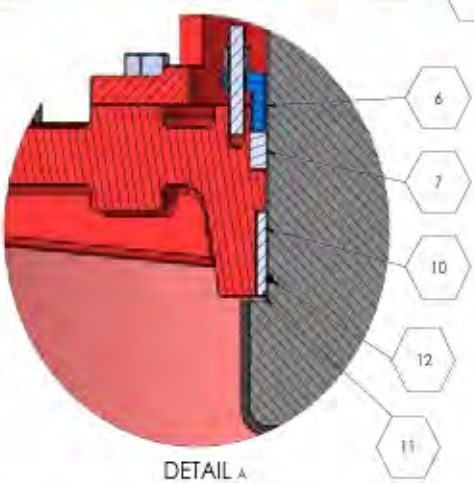
CMA

X

12/9/24

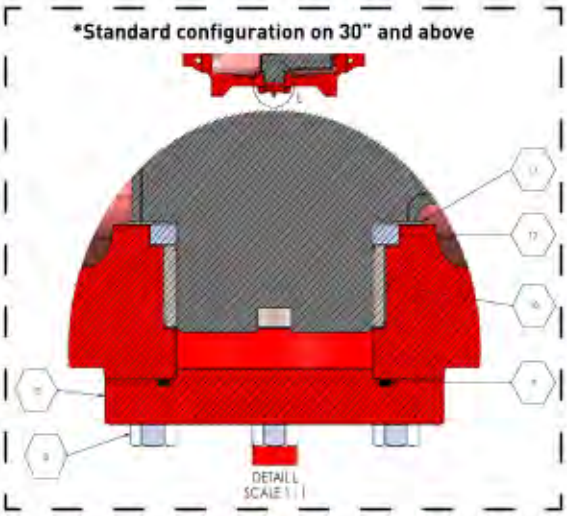
Materials of Construction





DETAIL A
SCALE 1 : 1.5

*Standard configuration on 30" and above



DETAIL L
SCALE 1 : 1

Item	Description	Materials Available	Standard
1	Cover	Same as Body	
2	Body	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
3	Plug	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
4	Plug Encapsulation	Buna-N (NBR)*	
		Chloroprene	
		EPDM	
		Viton (FPM)	
5	Bonnet	Same as Body	
6	Gland	Same as Body	
7	Packing	Same as Plug Encapsulaton	
8	Exterior Hardware	Stainless 304*	ASTM F593/594
		Stainless 316	ASTM F593/594
9	Cover Seal	Same as Plug Encapsulation	
10	Bearings	Stainless 316*	
		Stainless 304	
		Reinforced PFTE	
		Bronze	
11	Grit Guard	Nylon	
12	Grit Seal	Same as Plug Encapsulation	
13	Lower Cover[2]	Same as Body	
NS	Coating/Lining	Fusion Bonded Epoxy, Black*	
		Two-Part Epoxy	
		Coal-Tar Epoxy	
NS	Tag	Aluminum*	
		Stainless Steel	
NS	Assembly Lubricant	ANSI/NSF 61 Listed Silicone Lubricant	
NS	Operator	Varies	

Additional material options available as special order.
*Standard Material
(1) Lower cover integral to body casting on 14"-24"
(2) Lower journal cover standard on 30" and above

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Design Standards

Size Range	3"-72" Flanged End
	3"-48" MJ End
Construction	AWWA C517*
	ASME B16.34
Coatings	AWWA C550*
	ANSI/NSF 61 Compliant
Connections	ANSI B16.1 Class 125/ANSI B16.5 Class 150*
	ANSI B16.1 Class 250/ANSI B16.5 Class 300
	ANSI/AWWA C111/A21.11 (MJ)*
Lay Length	AWWA C517* (ex. MJ)
Bonnet	ISO 5211*
	MSS SP-101

*Standard Option

American Water Works Association

Resistance Guide

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attacked by:
NBR*	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouroproply-ene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high temperatures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molecular weight esters and nitro containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-ethylene	-100F/450F	Excellent abrasion resistance and chemically inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures
EPDM	EPDM, EPM	Ethylene-propyl-ene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons

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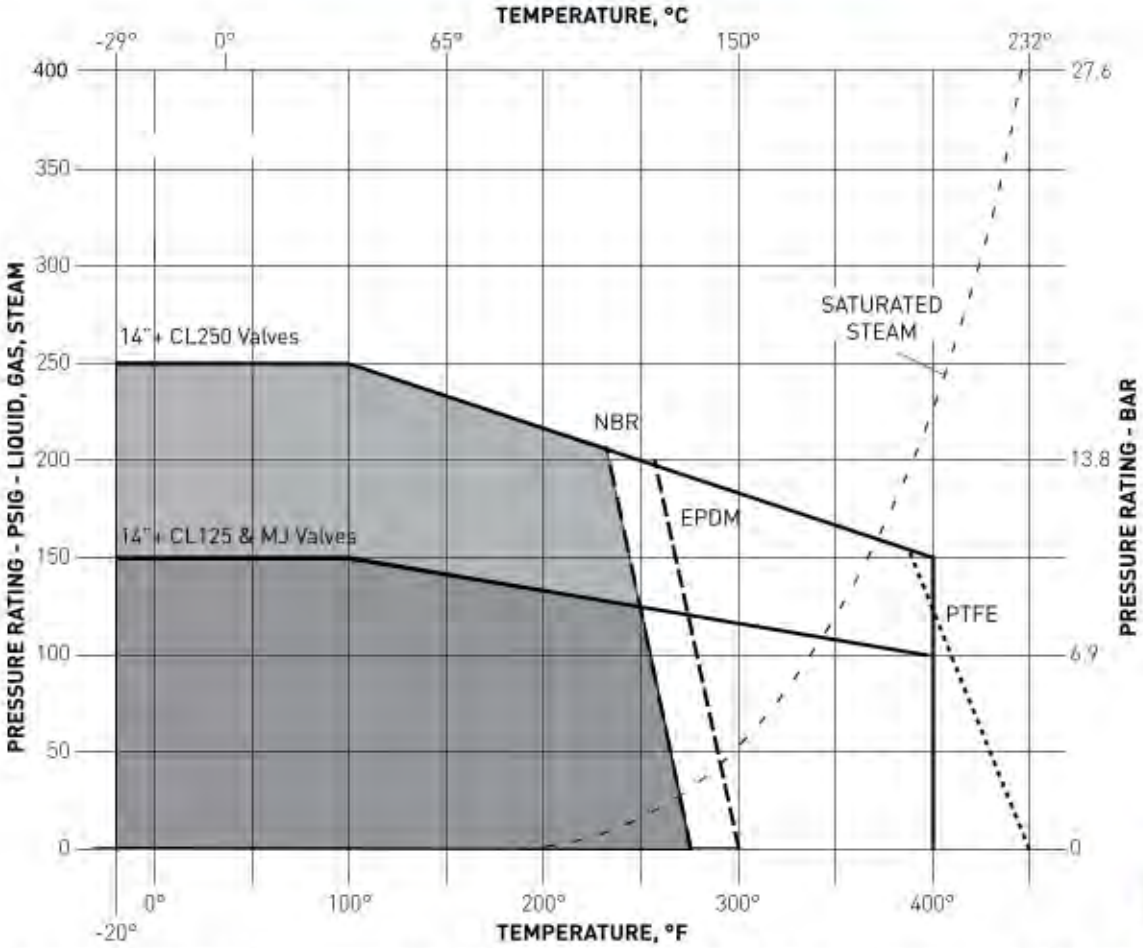
Pressure/Temperature Ratings



In determining field pressure ratings for Series PVIF Plug Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

Cold Working Pressure Rating

SIZE	FORWARD CLOSEOFF W/GEAR	REVERSE CLOSEOFF W/ GEAR	FORWARD CLOSEOFF NUT AND/OR LEVER	REVERSE CLOSEOFF NUT AND/OR LEVER
14"+ CL125	150 PSI	150 PSI	NA	NA
14"+ MJ	150 PSI	150 PSI	NA	NA
14"+ CL250	250 PSI	150 PSI	NA	NA

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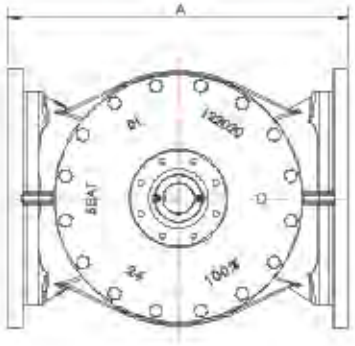
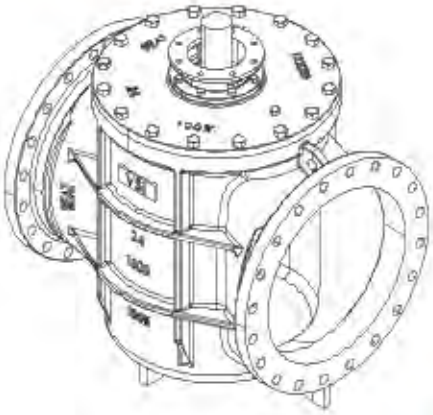
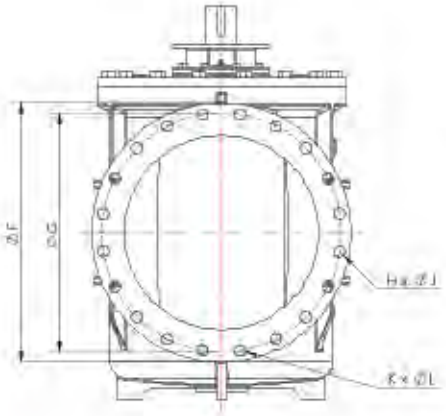
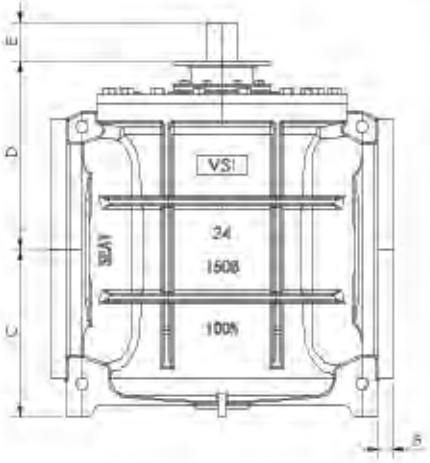
Flanged CL125 Barestem Dimensions









SIZE	A	B	C	D	E	F	G	H[1]	J[2]	K[3]	L[4]
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC
18"	21.50	1.56	15,95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC
36"	60,00	2.38	30,71	34.41	5.50	46,00	42,75	24	1.625	8	1.5-6UNC
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC

(1) "H" represents the total number of through holes, per flange
(2) "J" represents the size of the through holes for flange
(3) "K" represents the total number of tapped holes, per flange
(4) "L" represents the size of tapped holes and bolts used for flange

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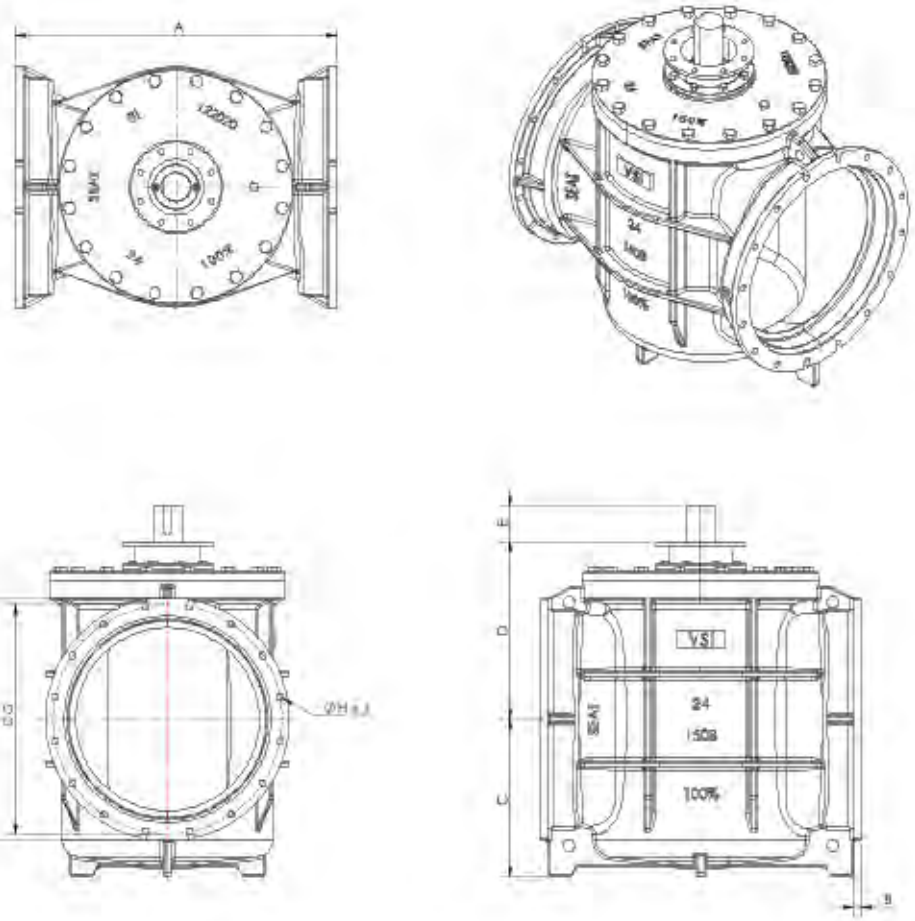
Mechanical Joint Barestem Dimensions



SIZE	A	B	C	D	E	F	G	H(1)	J(2)
14"	24.50	0.79	13.11	17.00	3.35	20.31	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	3.54	22.64	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.35	25.00	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.64	27.16	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	4.66	31.89	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	4.92	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	5.50	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	7.50	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.50	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
– Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111
(2) "J" represents the total number through holes, per flange

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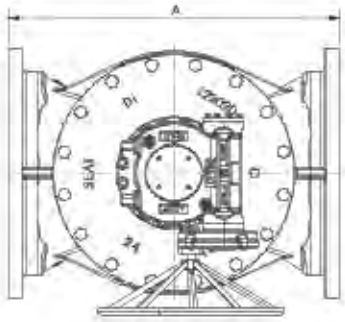
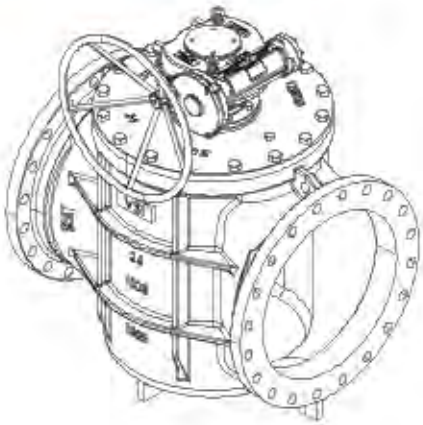
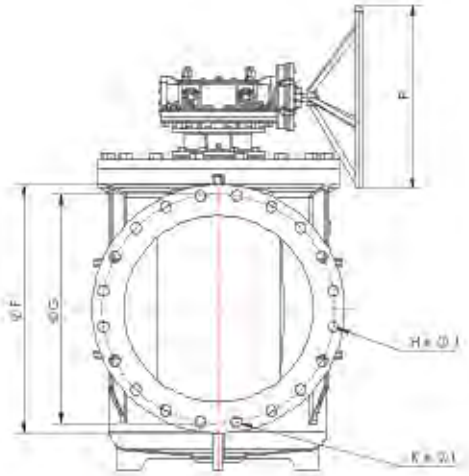
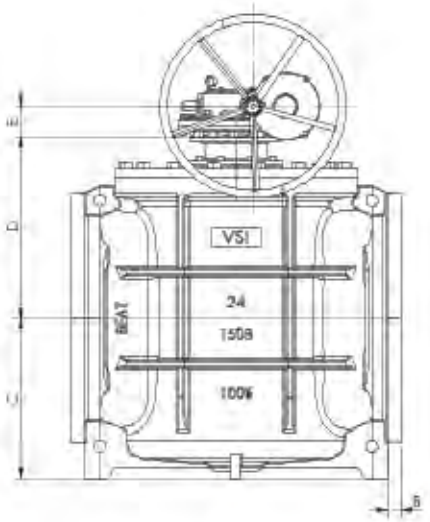
Flanged With Worm Gear & HW









SIZE	A	B	C	D	E	F	G	H[1]	J[2]	K[3]	L[4]	P
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC	24
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC	24
18"	21.50	1.56	15.95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC	20
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC	24
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC	24
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC	27.5
36"	60.00	2.38	30.71	34.41	5.50	46.00	42.75	24	1.625	8	1.5-6UNC	31.5
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC	35.5
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC	31.5

(1) "H" represents the total number of through holes, per flange
(2) "J" represents the size of the through holes for flange
(3) "K" represents the total number of tapped holes, per flange
(4) "L" represents the size of tapped holes and bolts used for flange

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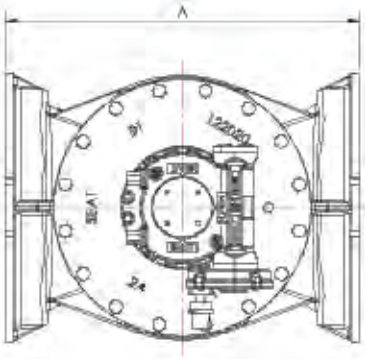
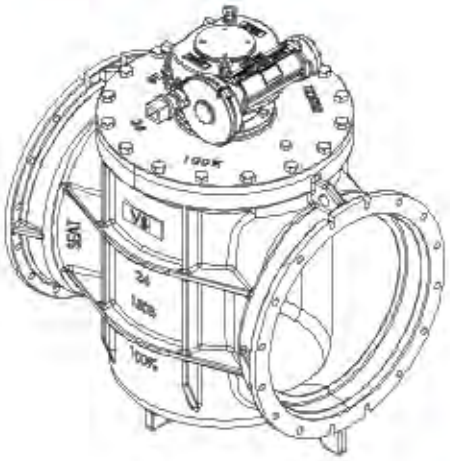
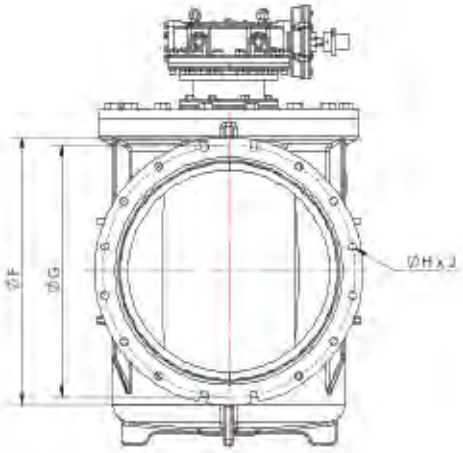
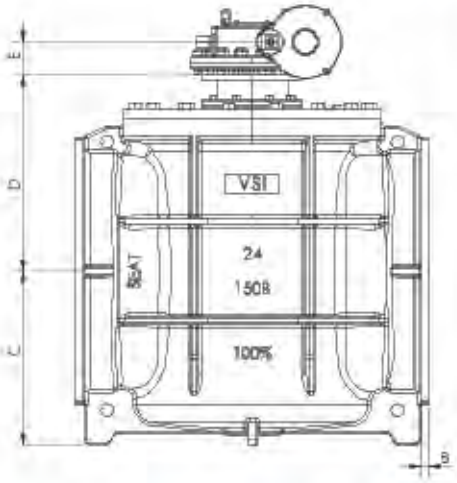
Mechanical Joint With Worm Gear & 2" Nut Op









SIZE	A	B	C	D	E	F	G	H[1]	J[2]
14"	24.50	0.79	13.11	17.00	2.00	20.25	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	2.00	22.50	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.15	24.75	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.55	27.00	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	3.98	31.50	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	5.47	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	6.61	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	6.77	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.36	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
- Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111
(2) "J" represents the total number through holes, per flange

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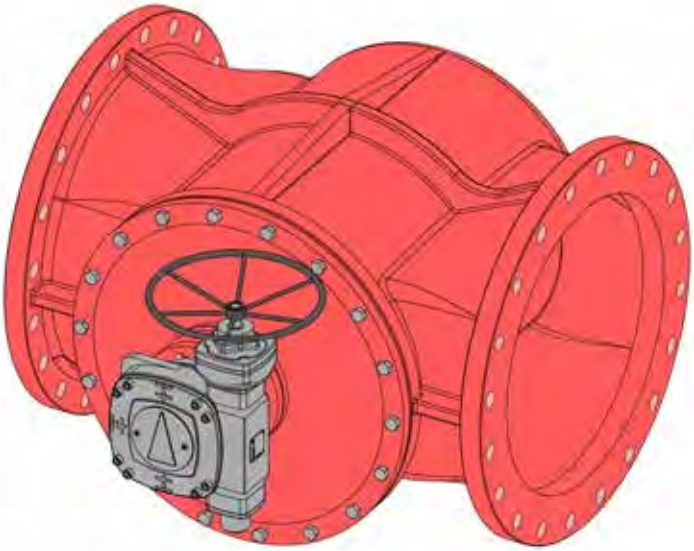
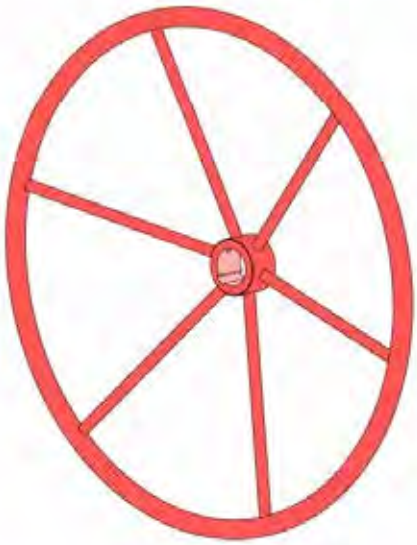
STANDARD OPERATOR TYPES

SINGLE STAGE WORM GEAR WITH SPUR SECONDARY GEAR



HANDWHEEL ✓



2-INCH NUT OP.

CHAINWHEEL

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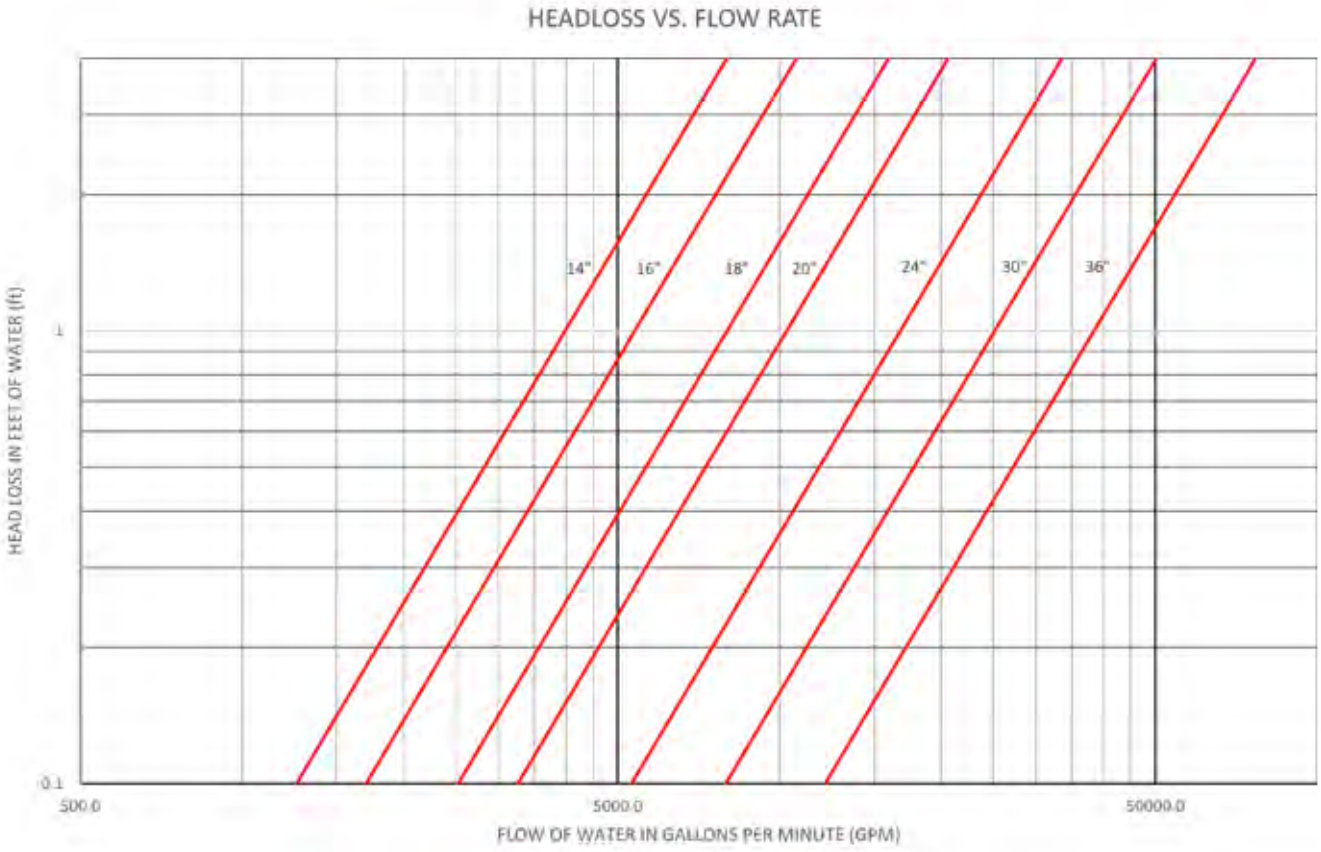
FLOW CHARACTERISTICS



SIZE	Cv	Kv
14"	6085	5257
16"	8199	7084
18"	12168	10513
20"	15710	13573
24"	25565	22088
30"	38315	33104
36"	58623	50650

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PART NUMBER MATRIX

□ □ □ - □ □ □ - □ □ □ / □ □ - □

MODEL
PVIF- Series PVIF

SIZE CODE
14" - 14
..
72" - 72

CONNECTION
F -Flanged CL125/150*
2 -Flanged CL250/300
M-Mechanical Joint to AWWA C111*

BODY MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG ENCAPSULATION
N-NBR (Buna-N)*
V-Viton (FKM)
C-Chloroprene/Neoprene
E-EPDM

IDENTIFIER

OPERATOR
H-Handwheel*
N-2-inch Nut Op.*
C-Chainwheel

OPERATOR ARRANGEMENT
W-Worm Gearbox*
B-Barestem w/ISO Mount
C-Custom/Project Specific

COATINGS
1-Fusion-Bonded Epoxy*
A-AWWA 2-Part Epoxy
2-Tnemec N140, ANSI/NSF 61
C-Custom/Project Specific

HARDWARE
S-Stainless Steel 304*
3-Stainless Steel 316

BEARING MATERIAL
3-Stainless 316 *
S-Stainless 304
P-PFTE
B-Bronze

* Standard Material
1 - May not be available for all configurations/sizes

EXAMPLE:
PVIF14F-DDN-3S1/WC-J
A 14" flanged rectangular full port plug valve with Ductile Iron body and plug, NBR plug encapsulation, SS316 bearings, SS304 hardware, Fusion bonded epoxy, worm gearbox with chainwheel operator.

VSI Waterworks
1205 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

AWWA C517-09 Proof of Design Test Certification (36" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 36 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 05/31/2010
Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael. fan DATE: 05/31/2010
Michael Fan, Tianjin Flow Security Valve Co., Ltd

AWWA C517-09 Proof of Design Test Certification (42" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 42 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

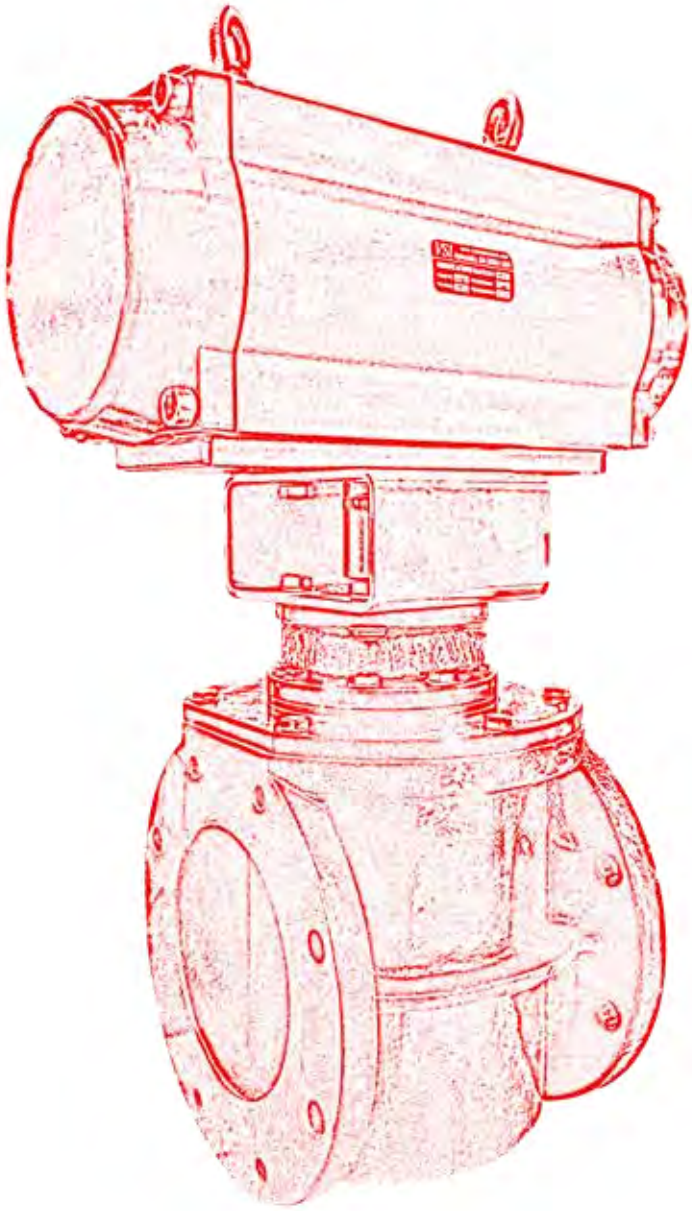
POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 06/07/2010
Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael Fan DATE: 06/07/2010
Michael Fan, Tianjin Flow Security Valve Co., Ltd



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email: sales@vsiwaterworks.com

www.VSIWaterworks.com

VSI Waterworks

2" - 72" AWWA C517 ECCENTRIC PLUG VALVES

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

TABLE OF CONTENTS

SCOPE:

This installation, operation, and maintenance manual covers the VSI AWWA C517 resilient seated eccentric plug valve and should be read and understood thoroughly by all parties responsible for installation and continued use/maintenance.

WARNINGS:

The critical safety messages within this manual are labeled with an exclamation symbol within a red triangle flag. Care should be taken to thoroughly read and understand these warnings before proceeding to ensure no damage to equipment occurs. Failure to follow all warnings could result in injury or death.

WARNING!

All parties that take part in any installation or continued use/maintenance are cautioned to be vigilant in the possible exposure to media that is contained within the valve and its pipeline. Because of the vast range of media that could be within the valve, protection from pipeline media is not within the scope of this manual. All personnel should be aware of the media within the valve and take appropriate precautions when exposure is possible while installing or servicing the valve.

RECEIVING:

The VSI AWWA C517 Resilient Seated Eccentric Plug Valve is rugged and will be packaged to provide protection during most shipping incidents, however care should be taken to inspect the valve on receipt for any possible shipping damage. Inspection should be performed as soon as practical. Failure to promptly notify VSI of any shipping damage may invalidate any claim for shipping damage. Most shipments from VSI will be made FOB Origin, unless noted on the sales documents, the purchaser will own the freight while in transit, assumes all risk while in transit, and will be responsible for reporting shipping damage promptly to the carrier.

PARTS:

Order parts from your Valve Solutions Inc. sales representative. Please include the serial number, located on the valve tag, when ordering parts.

WARNING!

Read all applicable instructions and directions prior to any maintenance, installation or troubleshooting.

SECTION 1: GENERAL

Plug valves are a significant component of any water distribution system or treatment plant operation. Valve failure due to faulty installation, improper operation, or maintenance in such systems could result in damage, downtime, and costly repairs. In buried or underground installations, problems or malfunctions can result in extensive and costly unearthing operations to correct or eliminate the problem. Many problems with plug valves can be traced to improper installation, operation, or maintenance procedures.

SECTION 2: UNLOADING

Inspect valves on receipt for damage in shipment and conformance with quantity and description on the shipping notice and order. Unload valves carefully to the ground without dropping. On valves larger than 6 in. (150 mm), use forklifts or slings under skids. On smaller valves, do not lift valves with slings or chain around actuator or through waterway. Lift these valves with eyebolts or rods through flange holes or chain hooks at the ends of valve parts.

SECTION 3: STORAGE

If it is not practical to store the valve indoors, protect the valve and actuators from weather and the accumulation of dirt, rocks, and debris. When valves fitted with power actuators and controls are stored, energize electric actuators or otherwise protect electrical-control equipment to prevent corrosion of electrical contacts due to condensation resulting from temperature variation. Do not expose resilient seats to sunlight or ozone for any extended period. Also see the manufacturer's specific storage instructions.

SECTION 4: INSPECTION PRIOR TO INSTALLATION

Make sure valve ends and seats are clean. Check all exposed bolting for loosening in transit and handling and tighten to manufacturer's recommendations. Open and close the valve to make sure it operates properly and that stops or limit switches are correctly set so that the plug seats fully. Close the valve before installing. Check coatings for damage and repair as required.

SECTION 5: INSTALLATION

It is strongly recommended that instruction manuals supplied by the manufacturer be reviewed in detail before installing plug valves. Be sure the inspection, as described in Sec. 4, is carried out at the job site prior to installation.

Sec. 5.1 Handling

Handle valves carefully when positioning, avoiding contact or impact with other equipment or structures.

Sec. 5.2 Service Conditions

Valves are to be installed in accordance with the manufacturer's instructions.

5.2.1 Clean service. Eccentric plug valves used for fluids free of suspended solids may be installed in any orientation. If practical, the valves shall be installed so the pipe line pressure is exerting force on the plug from opposite the seat end of the valve (direct pressure).

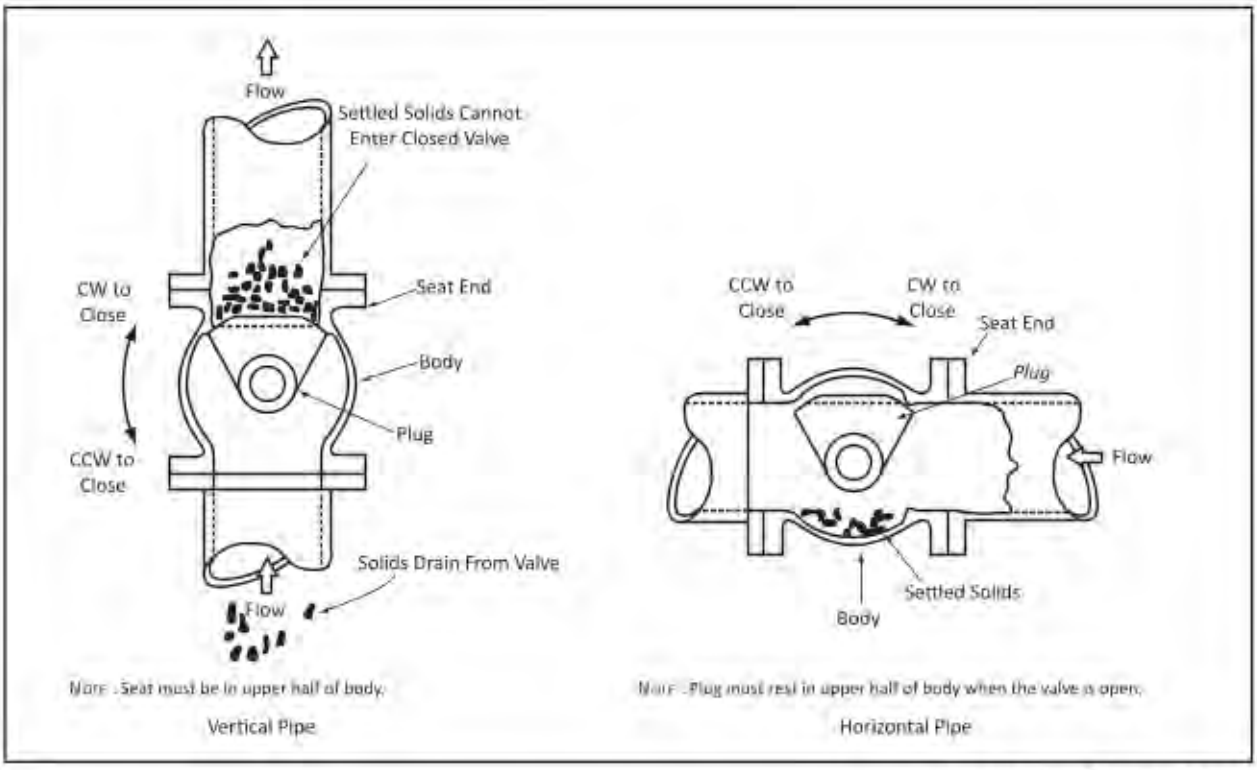

Image courtesy of Robert O'Neill

Figure 1. Recommended installation position for suspended solids service

5.2.2 Other service. Eccentric plug valves used for fluids containing suspended solids should be installed as shown in Figure 1. When installed in horizontal pipes, the axis of the plug is to be horizontal, with flow entering the valve body from the seat end. The plug is to rotate counterclockwise to open, keeping the plug in the upper half of the body. When installed in vertical pipes, the seat end shall be oriented as shown in Figure A-1.

Sec. 5.3 Buried Installations

When practical, valves in buried installations should be located in unpaved areas.

Sec. 5.4 Cleaning

Be sure valve interiors, ends, and adjacent piping are cleaned of foreign material prior to making up valve-to-pipe joint connection.

Sec. 5.5 Pipe Ends

Prepare pipe ends and install valves in accordance with the pipe manufacturer's instructions for the joint used. Do not deflect the pipe-valve joint. Do not use a valve as a jack to pull pipe into alignment. In plant piping, the valve shall be installed so as to minimize the bending stresses in the valve end connection with pipe loading.

Sec. 5.6 Installation

For mechanical-joint end valves, lubrication and additional cleaning should be provided by brushing both the gasket and the plain end of the mating pipe with soapy water or pipe lubricant just before slipping the gasket onto the plain end and assembling the joint. When tightening bolts, it is essential that the gland be brought up toward the bell flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This may be achieved by first partially tightening the bottom bolt, then the top bolt, next the bolts at either side, and finally, the remaining bolts. This process should be repeated until all bolts are fully torqued.

Sec. 5.7 Valve Boxes

Buried valves installed with valve boxes shall be installed so that the valve box does not transmit shock or stress to the valve actuator as a result of shifting soil or traffic load.

Sec. 5.8 Valves Installed in Vaults

When valves are installed in vaults, the vault design shall provide space for removal of the valve-actuator assembly for purposes of repair. Consideration should be given to the possible entry of groundwater or surface water and to the need to provide for disposal thereof. The valve operating nut should be accessible from the top opening of the vault with a tee wrench.

SECTION 6: TESTING

When resilient-seated cast-iron eccentric plug valves are used to isolate sections of a pipeline for testing, it is important to realize that eccentric plug valves are typically factory adjusted to hold pressure only up to the specified shutoff pressure in the direct pressure direction. Prior to any field pressure test under conditions different from above, it is recommended that the valve manufacturer be contacted for approval. Otherwise, test pressures above the valve design pressure may cause leakage, permanent damage, or structural failure to the valve and injury or death to the operator.

Sec. 6.1 Leaks

In order to prevent the loss of time due to searching for leaks, it is recommended, where feasible, that excavations for buried valves not be backfilled until after pressure tests have been completed.

Sec. 6.2 Seat Leakage

Seat leakage can occur from foreign material in the line. If this occurs, open the valve 5° to

10° to obtain high-velocity flushing action, then close. Repeat several times to clear seats for tight shutoff. Do not force valves for a tighter seal. Plug valves are provided with an externally adjustable closed stop on the actuator to provide a tighter seal. See the instruction manual provided by the manufacturer for the correct adjustment procedure.

SECTION 7: RECORDS

On completion of installation, the valve location, size, make, type, date of installation, number of turns to open, direction of opening, and any other information deemed pertinent should be entered on the owner's permanent records.

SECTION 8: OPERATION

Sec. 8.1 Design Pressure

Do not permit the use or operation of any valve at pressures above the rated design pressure of the valve.

Sec. 8.2 Input Torque

Do not exceed 250 ft-lb (339 N·m) input torque on actuators with wrench nuts and do not exceed 200 lb (890 N) rim pull for handwheels or chainwheels. If portable auxiliary actuators are used, size the actuator or use a torque-limiting device to prevent application of torque exceeding 250 ft-lb (339 N·m). If an oversize actuator with no means of limiting torque is used, stop the actuator before the valve is fully opened or closed against stops and complete the operation manually. Be sure to check the actuator directional switch against the direction indicated on the wrench nut, handwheel, or records before applying opening or closing torque.

Sec. A.8.3 Sticking

If a valve is stuck in some intermediate position between open and closed, check first for jamming in the actuator. If nothing is found, the interference is inside the valve. In this case, do not attempt to force the plug open or closed, because excessive torque in this position can severely damage internal parts.

SECTION 9: MAINTENANCE

Maintenance of resilient-seated plug valves by the owner is generally limited to actuators and shaft seals. Unless the owner has skilled personnel and proper equipment, any major internal problem will probably require removal of the valve from the line and return to the manufacturer for repair.

Sec. 9.1 Normal Maintenance

Normal maintenance is in the area of shaft seals and actuators. Seal leakage, broken parts, hard operation, and, in some cases, seat leakage should be corrected by a repair crew as soon as possible after a defect is reported.

Sec. 9.2 Valve Exercising

Each valve should be operated through a full cycle and returned to its normal position on a time schedule that is designed to prevent a buildup of lubrication or other deposits that could render the valve inoperable or prevent a tight shutoff. The interval of time between operations of valves in critical locations or valves subjected to severe operating conditions should be shorter than for other less important installations, but it can be whatever time period is found to be satisfactory based on local experience. For gear operators, the number of turns required to complete the operation cycle should be recorded and compared with permanent installation records to ensure full plug travel.

Sec. 9.3 Field Repairs

If repairs are to be made in the field, repair crews should take a full complement of spare parts to the job site. Be sure to review the valve manufacturer's instructions prior to any repair work.

Sec. 9.4 Isolation

Provision should be made to stop line flow and isolate the valve from line pressure prior to performing any corrective maintenance.

Sec. 9.5 Repair Testing

After completing repairs, cycle the valve through one complete operating cycle and, after line pressure has been restored, inspect for leakage.

Sec. 9.6 Valve Removal

If major repairs require the removal of the valve for repair, be sure to notify interested parties in the water department and fire department that the valve and line are out of service. On completion of repair and reinstallation, notify the same personnel of the return of the valve and line to service.

SECTION 10: TROUBLESHOOTING

Problem	Cause	Correction
The operator or shaft will not turn	Interference between valve box and shaft key	Reposition valve box if necessary
	Uneven tightening of gland plate bolts	Loosen then retighten bolts and nuts evenly
	Corrosion or debris between the stem and packing	Consult VSI for disassembly procedures and clean stem, stuffing, and stem nut
	Debris blocking movement of plug	Consult VSI for disassembly procedures and clean out debris
	RARE: Seized worm gear	Inspect and replace if necessary
Leakage between the body and cover of valve	Bolts and nuts may be loose or tightened irregularly	Loosen then retighten bolts and nuts evenly
	Bonnet o-ring may be damaged	Consult VSI for disassembly procedures and replace o-ring
	RARE: Crack in body or bonnet	Inspect and replace if necessary
Leakage at the stem	Damaged stuffing	Consult VSI for disassembly procedures and replace damaged parts if needed
	Loose packing	Tighten the packing gland nuts until leakage stops or replace packing
Valve fails pressure test or a leak present in the line	Valve is not completely closed	Close valve completely
	Debris trapped between plug and seat	Throttle valve from fully closed to approximately 25% open several times under line flow to clear debris. If unsuccessful follow instructions for disassembly and remove debris
	Rubber plug or metal seat is damaged	Consult VSI for disassembly procedures to inspect for damage. If present replace damaged parts.

Detail by Entity Name

Florida Profit Corporation
DAVID MANCINI & SONS, INC.

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Event Effective Date	NONE

Principal Address

2601 Wiles Road
Pompano Beach, FL 33073

Changed: 02/03/2020

Mailing Address

2601 WILES ROAD
POMPANO BEACH, FL 33073

Changed: 05/15/2017

Registered Agent Name & Address

MANCINI, DAVID A
2601 WILES ROAD
POMPANO BEACH, FL 33073

Address Changed: 05/15/2017

Officer/Director Detail

Name & Address

Title P

MANCINI, DAVID
1875 N HIBISCUS DRIVE
Miami, FL 33181

Title SECR

MANCINI , DAVID A, Jr.
1875 N. HIBISCUS DRIVE
MIAMI, FL 33181

Title VP

Mancini, David A, Jr.
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Title VP

MANCINI, RICHARD
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Annual Reports

Report Year	Filed Date
2022	02/01/2022
2022	02/22/2022
2023	03/01/2023

Document Images

03/01/2023 -- ANNUAL REPORT	View image in PDF format
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10/20/2010 -- Domestic Profit	View image in PDF format

Proposal - Revision #1 with Comments

DMSI DAVID MANCINI & SONS, INC.

2601 Wiles Rd Pompano Beach Florida 33073
PH: (954) 977-3556 FAX: (954) 944-2040

CONTRACT: P12384
PROJECT: Coral Ridge Force Main Replacement
CONTRACTOR: David Mancini & Sons, Inc. (DMSI)
DATE: 2/4/2025
DESCRIPTION: Additional cost related to Repump B connection with 36-Inch above ground bypass no includeded on the scope of work on the DCP.

SUMMARY OF DIRECT COSTS

1	TOTAL LABOR		$	85,527.96
2	TOTAL EQUIPMENT		$	71,374.80
3	TOTAL MATERIAL		$	420,467.87
4	TOTAL SUBCONTRACTORS		$	126,980.61
	SUBTOTAL		**$**	**704,351.24**
5	CONTRACTOR'S MARKUP	**8.00%**	**$**	**56,348.10**
7	**GENERAL CONDITIONS [Items (3+4+5)/Construction Cost]**	**5.35%**	**$**	**37,682.79**
8	TAXES		$	25,278.07
	Total Direct Cost		**$**	**798,382.13**

SUMMARY OF TIME IMPACT (REQUEST FOR ADDITIONAL TIME)

DMSI reserves the right to claim for additional contract time if the critical path is affected after approval.

Submitted by:

Alejandra Suarez 02/04/2025

Alejandra Suarez
Assistant Project Manager
David Mancini and Sons, Inc

Approved by:

Cyrill Garcia
Project Manager
City of Fort Lauderdale

LABOR COSTS

SUMMARY - LABOR COSTS	
SUPERVISION	$ 20,175.00
CREW	$ 28,545.00
LABOR BURDEN (75.55%)	$ 36,807.96
TOTAL LABOR	**$ 85,527.96**

LABOR BURDEN MULTIPLIER (LBM)	**58.20%**
Social Security Contributions & Excise and Payroll	6.20%
Medicate Rate	1.45%
Unemployment	5.49%
Workmens Compensation	7.16%
Health Benefits	14.20%
Retirement Benefits	23.70%
VACATION MULTIPLIER (VM)	**13.00%**
Sick Leave (1 week out of 52)	
Vacation (2 weeks out of 52)	
Holiday Pay (1 week out of 52)	
Insurance Schedule	**4.35%**
General Liability Insurance	4.35%

Total Labor Burden Rate	**75.55%**

SUPERVISION	**Hourly Rate (Salary)**	**Hourly Overtime Rate**	**Hours (Salary)**	**Hours Overtime**	**Total Cost**
Project Manager	$ 60.00		30.00		$ 1,800.00
Superintendent	$ 55.00		75.00		$ 4,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
TOTAL SUPERVISION					**$ 20,175.00**

MAINLINE CREW - DMSI	**Hourly Rate**	**Hourly Overtime Rate**	**Hours**	**Hours Overtime**	**Total Cost**
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					**$ 28,545.00**

ASSEMBLY CREW - DMSI	**Hourly Rate**	**Hourly Overtime Rate**	**Hours**	**Hours Overtime**	**Total Cost**
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					**$ 28,545.00**

EQUIPMENT, MATERIAL & SUBCONTRACTOR COSTS

DMSI DAVID MANCINI & SONS, INC.

EQUIPMENT COSTS - RENTAL RATE BLUE BOOK

Skid- Steer	Working Rate	Working Hours	Total Cost
CAT 272D	$ 84.69	150.00	$ 12,703.50
Loaders			
CAT 938M	$ 65.42	150.00	$ 9,813.00
Excavators			
CAT 308	$ 68.14	150.00	$ 10,221.00
CAT 325	$ 133.24	150.00	$ 19,986.00
Trucks			
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 23.39	60.00	$ 1,403.40
Miscellaneous Equipment			
Trash Pump	$ 9.83	150.00	$ 1,474.50
Steel Plates - 8'x20' (6 On Site $60 per plate PER DAY)	$ 360.00	15.00	$ 5,400.00
Air Compressor Sullair 375	$ 59.80	150.00	$ 8,970.00
TOTAL EQUIPMENT			***$ 71,374.80***

MATERIAL COSTS

Material Description	QTY	Unit	Unit Cost	Total Cost
36" FLGXPE DIP 6'	1	EA	$ 9,988.24	$ 9,988.24
36" FLGXPE DIP 4'	1	EA	$ 7,641.18	$ 7,641.18
36" FLGXFLG DIP 2'	2	EA	$ 8,089.41	$ 16,178.82
36" MEGA FLANGE REST ADPT	1	EA	$ 3,708.38	$ 3,708.38
36" FLG 90 BEND	2	EA	$ 14,002.40	$ 28,004.80
36" FLG ACC KIT NEOPRENE	10	EA	$ 1,158.83	$ 11,588.30
36" FLG PLUG VALVE W/GEAR	1	EA	$ 49,916.85	$ 49,916.85
36" FLG CHECK VALVE	1	EA	$ 48,348.31	$ 48,348.31
2" BALL CORP	1	EA	$ 315.00	$ 315.00
2" X 4" SS NIPPLE	1	EA	$ 14.00	$ 14.00
36"X2" DBL STRP SS	1	EA	$ 720.00	$ 720.00
2" SEWAGE AIR RELEASE VLV	1	EA	$ 1,040.00	$ 1,040.00
42" MJ LONG SLEEVE	1	EA	$ 8,338.99	$ 8,338.99
42" MEGALUG DIP W/ACC	10	EA	$ 2,417.08	$ 24,170.80
42" MJ 45 BEND	1	EA	$ 11,719.18	$ 11,719.18
42" X 36" MJ TEE	1	EA	$ 19,636.05	$ 19,636.05
36" MEGALUG DIP W/ACC	5	EA	$ 1,693.30	$ 8,466.50
36" MJ 90 BEND	1	EA	$ 9,596.14	$ 9,596.14
36" MJ PLUG VALVE	1	EA	$ 50,939.33	$ 50,939.33
42" MJ PLUG VALVE	1	EA	$ 103,264.00	$ 103,264.00
72" ARV MANHOLE / TOP SLAB	1	EA	$ 2,648.00	$ 2,648.00
690-AH-M PL R/C	1	EA	$ 4,225.00	$ 4,225.00
SURTAX			$ 50.00	$ 50.00
SUBTOTAL				$ 420,467.87
TAXES				$ 25,278.07
TOTAL MATERIAL				**$ 445,745.94**

SUBCONTRACTORS COSTS

Description	QTY	Unit	Unit Cost	Total Cost
CMA	1	LS	$ 62,400.00	$ 62,400.00
A&M Brothers Concrete	1	LS	$ 7,600.00	$ 7,600.00
SUPERMIX Flowable Fill 18 CY	1	LS	$ 3,228.40	$ 3,228.40
Rangeline (IF NEEDED)	1	LS	$ 50,096.00	$ 50,096.00
MWI PUMPS (IF NEEDED)	1	LS	$ 3,656.21	$ 3,656.21
TOTAL SUBCONTRACTOR				***$ 126,980.61***

Where is the ARV and manhole?

P12383 & P12384 – CORAL RIDGE FORCE MAIN REPLACEMENT PROJECT

LABOR BURDEN BREAKDOWN

A. 6.20 % SOCIAL SECURITY RATE
B. 1.45 % MEDICARE RATE
C. 5.49 % UNEMPLOYMENT
D. 7.16 % WORKERS COMP
E. 4.35 % GENERAL LIAB
F. 14.20 % HEALTH INS
G. 23.70 % RETIREMENT
H. 13.00 % VAC/HOLIDAY

Burden Rate: 75.55%

DMSI offers our employees the following paid-off time:

- (2) Weeks Paid Vacation
- (3) Weeks Holiday paid, including time between Christmas and New Year
- (1) Week for Sick Time

Based on this, a DMSI employee works 46 weeks a year and gets paid for 52. Therefore, the yearly burden for General Liability, Health Insurance, Retirement, and vacation Holiday Time must be INCREASED based on the calculation below to cover the six non-revenue weeks (for DMSI), whereas DMSI compensates the employee.

Items A-C Above are standard rates through the federal government and the State of Florida.

Item D – Is DMSI's Workman's Comp rate for Sewer when this project was bid and the Contract executed.

Item E – Is DMSI's G/L rate (1.89%) plus 2.46% to cover the non-revenue paid weeks (See Below) ($21.87x40x6=$5,248.80x1.89%=$992.02/$21.87x40x46 or an additional 2.46%)

Item F – Insurance burden is calculated using the average hourly employee rate multiplied by 40/hrs. per week for 46 weeks worked, dividing this by the average cost of yearly insurance premiums for hourly employees. (Average hourly rate $21.87x 40 hours x 46 weeks/year divided by the average cost of SGL coverage 476.18/mo. x 12)

Item G - (RETIREMENT 11% + Bonus, which is merely part of the employee's yearly compensation package, of 10% plus the average hourly rate $21.87 x 40 x 6 weeks non-working = $5,248.80, we pay 21% of this income as retirement benefit so we need to add $1,102.25 to 46 weeks of working to cover these costs or an additional 2.7%)

ITEM H - (6weeks/46weeks of working to cover costs of vacation and holiday)

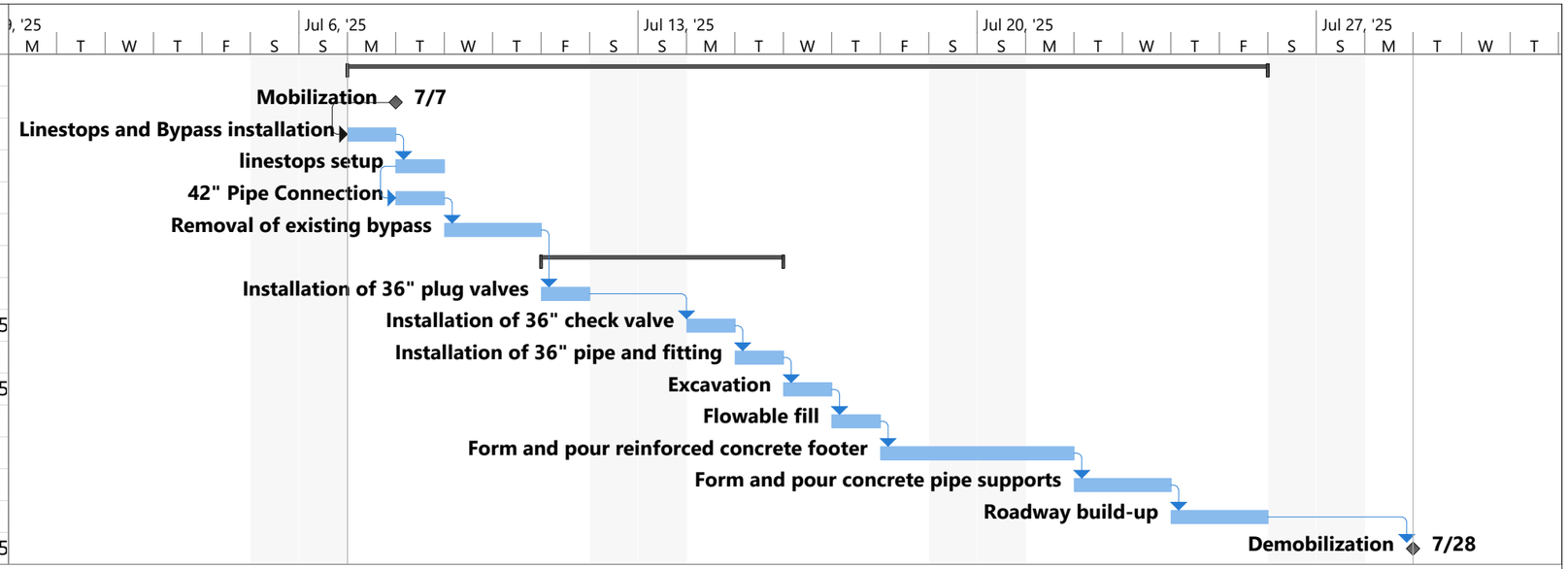
By signing below, I certify that the information provided is true and correct to the best of my knowledge.

Sincerely,

Fabio Angarita
Vice president
David Mancini and Sons, Inc

Note:
Our financial statement is proprietary and confidential, so we do not wish it to be made public. Our records are available for your appropriate staff to review at our Pompano Beach, FL office.
Please advise us 48 hours in advance.
If you have any questions about our financial information, please call our Financial Controller, Kimberley Weldon, at (954) 977-3556.

ID	Task Name	Duration	Start
1	**Repump connection with bypass**	**15 days**	**Mon 7/7/25**
2	Mobilization	1 day	Mon 7/7/25
3	Linestops and Bypass installation	1 day	Mon 7/7/25
4	linestops setup	1 day	Tue 7/8/25
5	42" Pipe Connection	1 day	Tue 7/8/25
6	Removal of existing bypass	2 days	Wed 7/9/25
7	**Bypass assembly**	**3 days**	**Fri 7/11/25**
8	Installation of 36" plug valves	1 day	Fri 7/11/25
9	Installation of 36" check valve	1 day	Mon 7/14/25
10	Installation of 36" pipe and fitting	1 day	Tue 7/15/25
11	Excavation	1 day	Wed 7/16/25
12	Flowable fill	1 day	Thu 7/17/25
13	Form and pour reinforced concrete footer	2 days	Fri 7/18/25
14	Form and pour concrete pipe supports	2 days	Tue 7/22/25
15	Roadway build-up	2 days	Thu 7/24/25
16	Demobilization	1 day	Mon 7/28/25

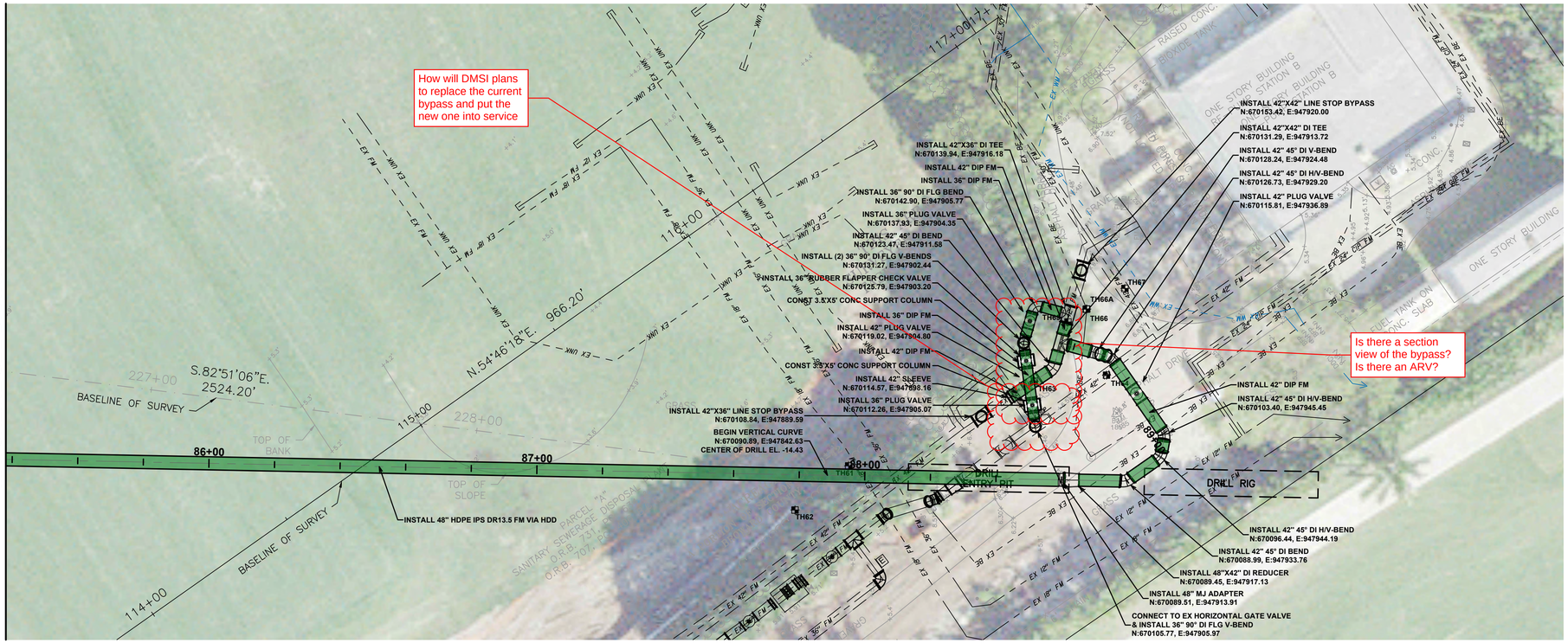


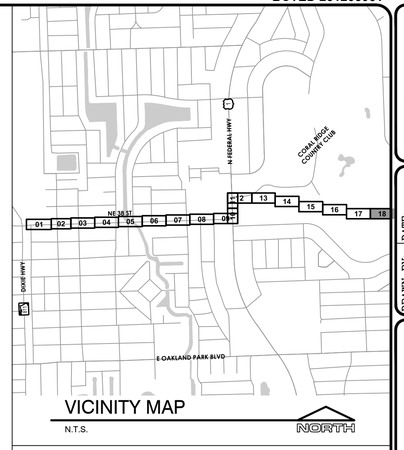
Project: Project1
Date: Mon 2/3/25

Task	Project Summary	Manual Task	Start-only	Deadline			
Split	Inactive Task	Duration-only	Finish-only	Progress			
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress			
Summary	Inactive Summary	Manual Summary	External Milestone				

Will this be removed, disposed (or given to the City) and capped with a blind flange?

BCTED 231205061





VICINITY MAP

N.T.S.

NORTH

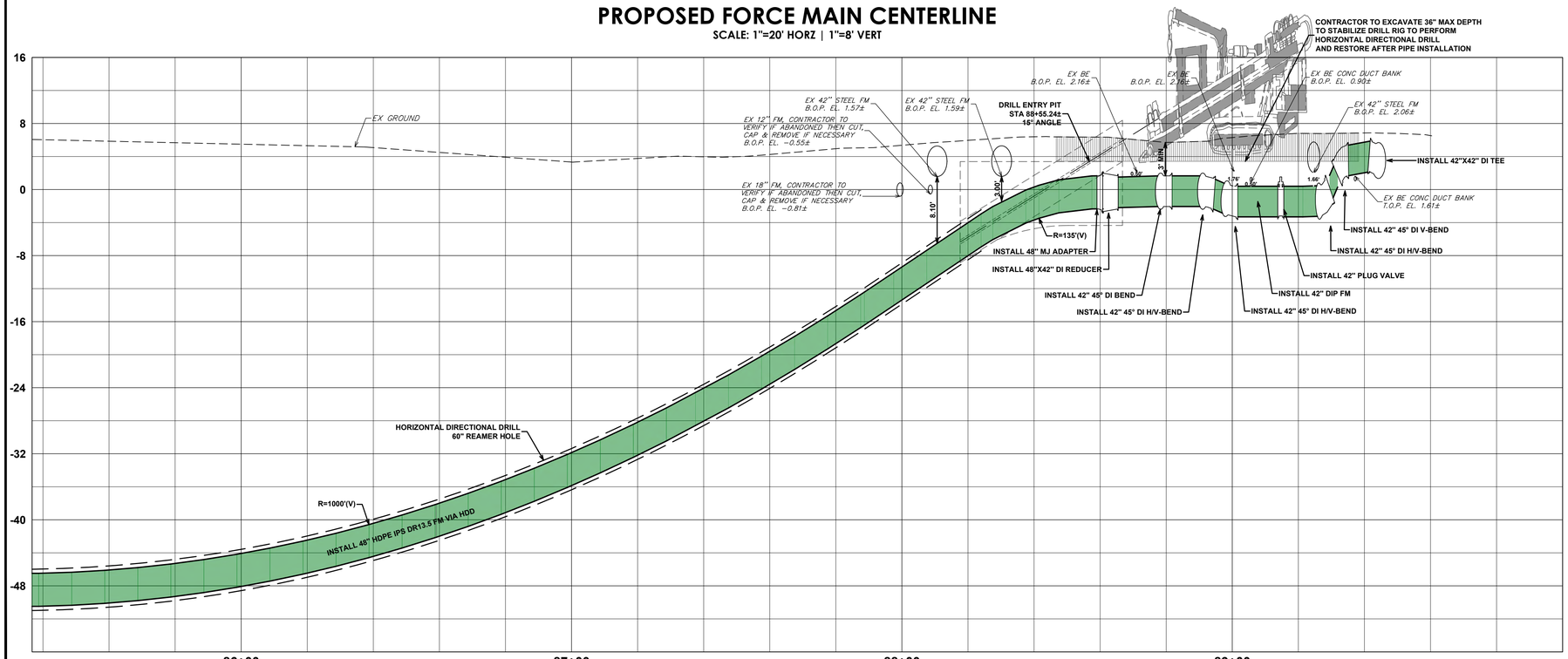
0 20' 40'

NOTES:

1. CONTRACTOR MUST EXERCISE EXTREME CARE TO AVOID DAMAGE OR DISRUPTIONS TO ANY EXISTING UTILITIES. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BEFORE STARTING CONSTRUCTION. CONSTRUCTION SHALL PROTECT AND SUPPORT ALL EXISTING STRUCTURES AFFECTED BY THE PROJECT. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN DISCREPANCY WITH THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, IN WRITING, BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR TO USE RESTRAINED JOINTS FOR ALL PROPOSED CONNECTIONS.
3. A HORIZONTAL SEPARATION OF 6' MINIMUM SHALL ALWAYS BE ENFORCED WHENEVER THE FORCEMAIN IS LESS THAN 18" BELOW THE WATERMAIN.
4. CONTRACTOR TO PROVIDE PEDESTRIAN ACCESS TO ALL PROPERTIES AT ALL TIMES.
5. OPEN CUT AREAS MAY BE INSTALLED WITH HDPE OR DIP AT THE CONTRACTORS DISCRETION.
6. ALL DIP TO BE RESTRAINED.
7. MINIMUM PIPE COVER IS 36" FOR PVC AND 30" FOR DIP.
8. HDPE PIPE THICKNESS (DR) AND CALCULATIONS PROVIDED BY OTHERS.

PROPOSED FORCE MAIN CENTERLINE

SCALE: 1"=20' HORZ | 1"=8' VERT



VACUUM TEST HOLE DATA TABLE

TH#	GRND EL	COVER	ELEV TOP	DIRECTION	DESCRIPTION
61	5.47	5.83	-0.36	NW - SE	12" SAN FM (UNABLE TO OBTAIN SIZE)
62	5.38	8.12	-2.74	NW - SE	UNABLE TO OBTAIN SIZE
63	6.77	1.49	5.28	NE - SW	42" STEEL FORCE MAIN
64	6.88	1.11	5.77	W - E	42" STEEL FORCE MAIN
65	6.95	1.58	5.37	N - S	42" STEEL FORCE MAIN
66	6.98	5.41	1.57	N - S	CONCRETE ELECTRIC
66A	6.98	5.56	N/A	N - S	CAST IN PLACE CONCRETE
67	7.18	1.75	5.43	NW - SE	42" STEEL FM

cma chen moore and associates

500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER

DMSI DAVID MANCINI & SONS, INC.
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

100% SUBMITTAL

ENGINEER: VINCENT LOCIGNO, P.E.
REG. No. 92216
DATE: ----

TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV | DATE: 10/10/2024
DESIGNED BY: ---- | SCALE: 1" = 20'
CHECKED BY: ---- | FIELD BOOK: ----

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

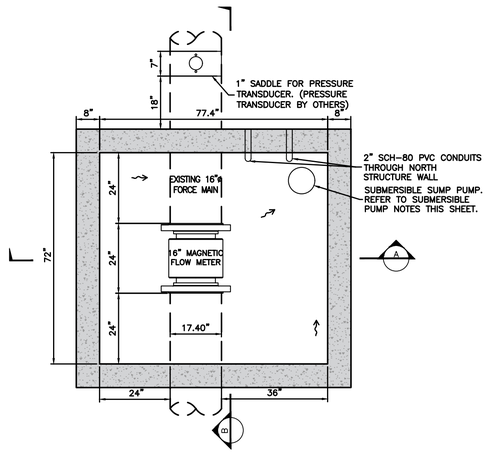
PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN AND NE 19TH AVE 24-INCH FORCE MAIN REPLACEMENTS
FORCE MAIN PLAN AND PROFILE

SHEET NO. FM18 | SHT # 25

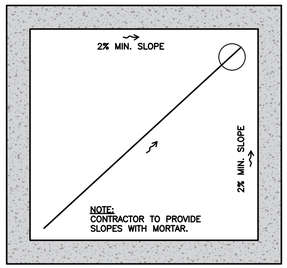
TOTAL: 57

CAD FILE: 12384-MULTI-PLPR-38

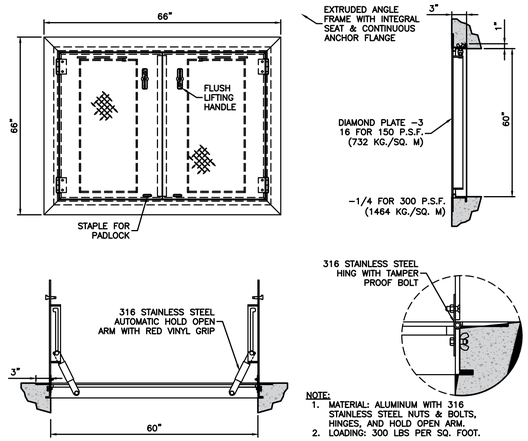
DRAWING FILE NO. #12384 4 Page 132 of 205



METER VAULT



BOTTOM SLAB DETAIL



48"x54" DOUBLE DOOR ALUMINUM HATCH
MODEL APD300 OR APPROVED EQUAL

N.T.S. (REFER TO U.S.F. FABRICATION, INC.)

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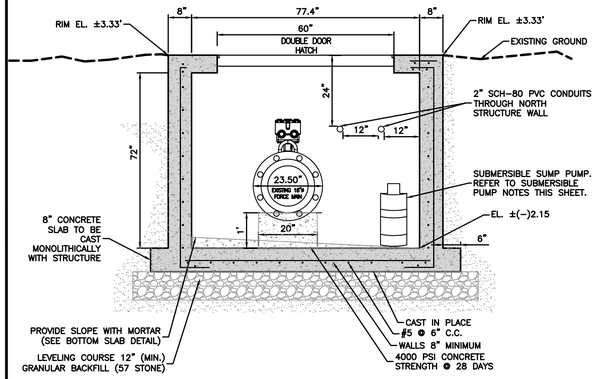
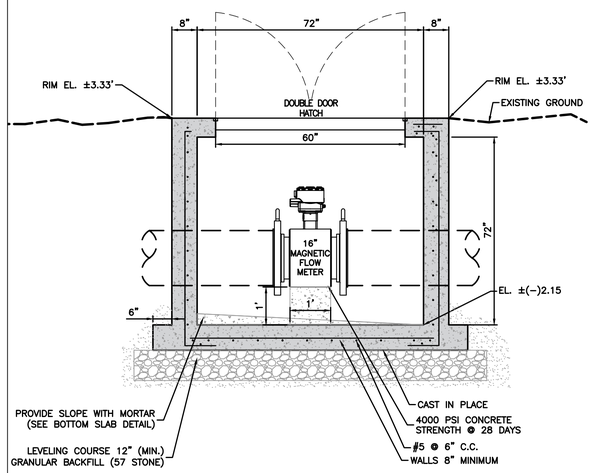


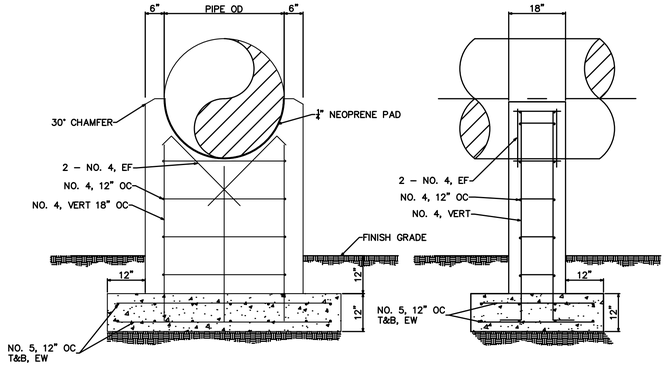
SECTION A

NOTE:
1. STRUCTURE WALLS TO BE SEAL COATED INSIDE AND OUTSIDE WITH 16 MIL. THICKNESS OF COAL TAR EPOXY.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS SHOWING REINFORCEMENT WITHIN THE PRE-CAST CONCRETE STRUCTURE.

SUBMERSIBLE PUMP NOTE:
1. FLOW RATE SHALL BE A MIN OF 110 GPM.
2. PUMP SHALL HAVE THE ABILITY TO FUNCTION WITH A TOTAL DYNAMIC HEAD OF 32 FT.
3. VOLTAGE SHALL BE 120V.
4. HORSEPOWER SHALL BE A MINIMUM OF 0.5.
5. HOUSING AND IMPELLER SHALL BE STAINLESS STEEL.



SECTION B



36" BYPASS ABOVE GROUND PIPE SUPPORT

N.T.S.

cma
chen moore and associates
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DRAWN BY: CV
DATE: 10/10/2024
DESIGNED BY: ____
SCALE: 1" = 20'
CHECKED BY: ____
FIELD BOOK: ____

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN AND NE 19TH AVE 24-INCH FORCE MAIN REPLACEMENTS
DETAILS

SHEET NO. D07
SHT # 58
TOTAL: 57
CAD FILE: 12384-MULTI-DETL
DRAWING FILE NO.

EquipmentWatch™

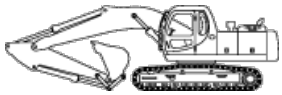
www.equipmentwatch.com

All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 308E2 CR (disc. 2020)
Crawler Mounted Hydraulic Excavators



Size Class:
6.5 - 8.4 mt
Weight:
N/A

Configuration for 308E2 CR (disc. 2020)

Horsepower	**65.0 hp**	Operating Weight	**18519 lbs**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $6,930.00	USD $1,940.00	USD $485.00	USD $73.00	USD $28.76	USD $68.14
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $6,930.00**	**USD $1,940.00**	**USD $485.00**	**USD $73.00**	**USD $28.76**	**USD $68.14**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $21.66
Idling Rate	USD $46.22

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $2,079.00/mo
Overhaul (ownership)	45%	USD $3,118.50/mo
CFC (ownership)	15%	USD $1,039.50/mo
Indirect (ownership)	10%	USD $693.00/mo
Fuel (operating) @ USD 4.15	23.78%	USD $6.84/hr

Revised Date: 1st quarter 2024

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book® Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for DAVID MANCINI (dmancinijr@dmsi.co)

EquipmentWatch™

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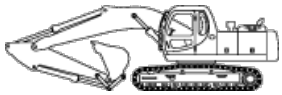
All prices shown in US Dollars ($)

Rental Rate Blue Book®

February 6, 2024

Caterpillar 325
Crawler Mounted Hydraulic Excavators



Size Class:
21.5 - 24.4 mt
Weight:
N/A

Configuration for 325

Bucket Capacity	**1.2 cu yd**	Horsepower	**174 hp**
Operating Weight	**49604 lbs**	Power Mode	**Diesel**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $14,760.00	USD $4,135.00	USD $1,035.00	USD $155.00	USD $49.38	USD $133.24
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $14,760.00**	**USD $4,135.00**	**USD $1,035.00**	**USD $155.00**	**USD $49.38**	**USD $133.24**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $46.13
Idling Rate	USD $97.70

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	USD $4,428.00/mo
Overhaul (ownership)	45%	USD $6,642.00/mo
CFC (ownership)	15%	USD $2,214.00/mo
Indirect (ownership)	10%	USD $1,476.00/mo
Fuel (operating) @ USD 4.15	28.03%	USD $13.84/hr

Revised Date: 1st quarter 2024

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February 6, 2024

Caterpillar 938M
4-Wd Articulated Wheel Loaders

Size Class:
175 - 199 hp
Weight:
N/A

Configuration for 938M

Horsepower	**168.0 hp**	Operator Protection	**ROPS/FOPS**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $6,410.00	USD $1,795.00	USD $450.00	USD $68.00	USD $29.00	USD $65.42
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $6,410.00**	**USD $1,795.00**	**USD $450.00**	**USD $68.00**	**USD $29.00**	**USD $65.42**

Non-Active Use Rates

	Hourly
Standby Rate	USD $24.77
Idling Rate	USD $49.38

Rate Element Allocation

Element	**Percentage**	**Value**
Depreciation (ownership)	39%	USD $2,499.90/mo
Overhaul (ownership)	32%	USD $2,051.20/mo
CFC (ownership)	18%	USD $1,153.80/mo
Indirect (ownership)	11%	USD $705.10/mo
Fuel (operating) @ USD 4.15	44.69%	USD $12.96/hr

Revised Date: 1st quarter 2024

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Rental Rate Blue Book®

February 6, 2024

GMC\CHEVY 2500
On-Highway Light Duty Trucks

Size Class:
300 hp & Over
Weight:
N/A

Configuration for 2500

Axle Configuration	**4.0 x 2.0**	Cab Type	**Crew**
Horsepower	**310.0 hp**	Power Mode	**Diesel**
Ton Rating	**3.0 / 4.0**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $710.00	USD $200.00	USD $50.00	USD $8.00	USD $19.36	USD $23.39
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $710.00**	**USD $200.00**	**USD $50.00**	**USD $8.00**	**USD $19.36**	**USD $23.39**

Non-Active Use Rates

	Hourly
Standby Rate	USD $2.66
Idling Rate	USD $19.45

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	35%	USD $248.50/mo
Overhaul (ownership)	34%	USD $241.40/mo
CFC (ownership)	13%	USD $92.30/mo
Indirect (ownership)	18%	USD $127.80/mo
Fuel (operating) @ USD 4.15	79.65%	USD $15.42/hr

Revised Date: 1st quarter 2024

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EquipmentWatch™

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Rental Rate Blue Book®

February 6, 2024

Sullair 375HDPQCA
Portable Rotary Screw Air Compressors

Size Class:
250 - 599 cu ft/min
Weight:
4150 lbs

Configuration for 375HDPQCA

Air Delivery Rating	**375.0 cu ft/min**	Horsepower	**130.0**
Power Mode	**Diesel**		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	**Weekly**	**Daily**	**Hourly**	**Hourly**	**Hourly**
Published Rates	USD $4,235.00	USD $1,185.00	USD $295.00	USD $44.00	USD $35.74	USD $59.80
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2024: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	**USD $4,235.00**	**USD $1,185.00**	**USD $295.00**	**USD $44.00**	**USD $35.74**	**USD $59.80**

Non-Active Use Rates	**Hourly**
Standby Rate	USD $7.94
Idling Rate	USD $43.46

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	15%	USD $635.25/mo
Overhaul (ownership)	67%	USD $2,837.45/mo
CFC (ownership)	10%	USD $423.50/mo
Indirect (ownership)	8%	USD $338.80/mo
Fuel (operating) @ USD 4.15	54.28%	USD $19.40/hr

Revised Date: 1st quarter 2024

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All American Precast
1300 NW 4 Street
Homestead, FL 33030 US
+13054182795
ADMIN@ALLAMERICANPRECAST.COM
www.allamericanprecast.com

Estimate

ADDRESS
DAVID MANCINI & SONS INC
2601 Wiles Road
Pompano Beach, FL 33073

SHIP TO
CITY OF FT LAUDERDALE
PROJECT # 12384
NE 38th ST 42-INCH FM
MAIN REPLACEMENT
FORT LAUDERDALE FL

ESTIMATE # 12206D1
DATE 08/07/2024

P.O. NUMBER	SALES REP	JOB NAME
FLGOLF-06	Al	PROJ 12384 NE 38th ST

ACTIVITY	QTY	RATE	AMOUNT
60" RD ARV MANHOLE 60" RD ARV MANHOLE W/ TOP SLAB & USF # 690-AH-M "CITY OF FT LAUDERDALE ARV SEWER" R/C.	7	6,378.00	44,646.00T
Castings NAME CHANGE "CITY OF FT LAUDERDALE" ARV SEWER ON LID.	1	2,500.00	2,500.00
Castings 60" RD ARV MANHOLE W/ TOP SLAB. Add on 05/09/2024	2	2,153.00	4,306.00T
72" RD ARV MANHOLE 72" RD ARV MANHOLEW/ TOP SLAB.	3	2,648.00	7,944.00T
Castings TEMP "M" COVERS	12	150.00	1,800.00
Castings 690-AH-M PL R/C.	5	4,225.00	21,125.00
02 Delivery included. Any paint / coatings not quoted. Casting lead time 6 to 8 weeks. Ram-nek $90 per box as needed.	1	0.00	0.00
***Note** Note: All American Precast Manufacturing, Corp is a material supplier. We are to be paid per invoice or statement, not per customer's contract draws. 1.Proposals are valid for up to 30 calendar days, pricing may be subject to change after 30 days. All American Precast manufacturing, Corp reserves the right to withdraw proposal. Engineering fees if required must be requested.	1	0.00	0.00

Date 01/14/25

Customer	David Mancini & Sons	**Contact**	Ryan Kaltz
	2601 Wiles Rd	**Phone**	954-826-8639
	Deerfield Beach, 33073	**Email**	Rkaltz@Dmsi.co
Project	Coral Ridge Bypass		
	TBD	**Term**	4 week
		PO:	Pending

Qty	Item	Day	Week	4 Week	4 week
100	24" Steel Pipe Per Ft	$1.67	$5.00	$15.00	$1,500.00
3	24" Flange Elbow 90	$27.78	$83.33	$250.00	$750.00
1	Misc. Nuts, Bolts, Silicone	$19.44	$58.33	$175.00	$175.00
				TOTAL RENTAL	**$2,425.00**

Services	Item	Price	Total
2	Delivery	$250.00	$500.00
2	Pick up	$250.00	$500.00
		Services Total	$1,000.00

Subtotal	$3,425.00
Env. Fee	$24.25
Estimated Tax	$206.96
Estimated Total*	$3,656.21

***This is an estimate. Actual site conditions can vary which may effect the final pricing.**

Customer Responsibilities:

Point of discharge.
Fueling, unless otherwise noted by contractor.
Power source, materials and labor for electric units.
Heavy equipment for loading , unloading, set up and tear down of equipment (U.O.N)
Discharge Permit and fees.
Monitoring of Dewatering Equipment
Ballast Rock for turbidity control and stability if needed.
Cleaning of sediment tank/s

208 NW 1st Street Deerfield Beach, FL 33441 Phone: (954) 427-2206 Fax: (954) 426-2009

FERGUSON WATERWORKS

FEL-POMPANO BEACH WW #125
1950 NW 18TH STREET
POMPANO BEACH, FL 33069-1394

Phone: 954-973-8100
Fax: 954-917-3134

Deliver To:
From: **Matt Briggle**
matt.briggle@ferguson.com
Comments:

22:05:49 OCT 02 2024

FEL-POMPANO BEACH, FL WW #125
Price Quotation
Phone: 954-973-8100
Fax: 954-917-3134

Bid No: B574476
Bid Date: 10/02/24
Quoted By: MB

Cust Phone: 954-977-3556
Terms: NET 10TH PROX

Customer:
DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Ship To:
DAVID MANCINI & SONS INC
2601 WILES ROAD
CORAL RIDGE FM REPLACEMENT
POMPANO BEACH, FL 33073

Cust PO#:

Job Name: CORAL RIDGE FM REPLACEMEN

Item	Description	Quantity	Net Price	UM	Total
MJLSP4LA42	42 MJ C153 P-401 LONG SLV L/A	1	8338.990	EA	8338.99
MJ4P4LA42	42 MJ C153 P-401 45 BEND L/A	1	11719.180	EA	11719.18
D118MJ36	36 MJ N/LUBE PLUG VLV L/A	1	50939.330	EA	50939.33
SP-MJPLUGVLV42	42 MJ PLUG VALVE - SEE SPEC	2	103264.000	EA	206528.00
SP-MJTLA4236	42X36 MJ TEE C153 CL	1	19636.050	EA	19636.05
MJ9P4LA36	36 MJ C153 P-401 90 BEND L/A	1	9596.140	EA	9596.14
FPPP436P	36X4'0 FLGXPE P-401 BT DI SPL	2	7641.180	EA	15282.36
FFPP436K	36X2'0 FLGXFLG P-401 BT DI SPL	2	8089.410	EA	16178.82
FPPP436U	36X6'0 FLGXPE P-401 BT DI SPL	1	9988.240	EA	9988.24
E213600	36 MEGAFLANGE FLG ADPT	2	3708.380	EA	7416.76
F9P436	36 DI 125# FLG P-401 90 BEND	2	14002.400	EA	28004.80
SP-VF36PV	36 FLG PLUG VLV	1	49916.850	EA	49916.85
SP-VFCV36	36 FLG CHK VLV	1	48348.310	EA	48348.31
SSLDE42	42 DI MJ WDG RTNR GLAND *ONEL	10	2417.080	EA	24170.80
SSLDE36	36 DI MJ WDG REST GLND *ONELO	5	1693.300	EA	8466.50
SP-SSFAP36	36 SS FLG ACC SET	10	1158.830	EA	11588.30

	ARV				
FFC2023830IP7	36X2 IP DBL STRP SS EPOX SDL	1	720.000	EA	720.00
FFB17007NL	LF 2 MIP X FIP BALL CORP	1	315.000	EA	315.00
V48K	2 SEWAGE AIR RELEASE VLV	1	1040.000	EA	1040.00
IS46NKP	2X4 SS S40 316L WLD NIP	1	14.000	EA	14.00

Net Total:	$528208.43
Tax:	$31742.51
Freight:	$0.00
Total:	$559950.94

HOW ARE WE DOING? WE WANT YOUR FEEDBACK!
Scan the QR code or use the link below to complete a survey about your bids:
https://survey.medallia.com/?bidsorder&fc=125&on=74695

500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
Office: +1 (954) 730-0707

chen moore and associates

December 12th, 2024

Fabio Angarita
David Mancini & Sons, Inc
2601 Wiles Road
Pompano Beach, FL 33073

Subject: **City of Fort Lauderdale**
P12384 Coral Ridge Force Main - Phase 4
RCO #2 – 36-inch Bypass at Repump B

Dear Mr. Angarita,

During the design of the force main in Phase 4 of the City of Fort Lauderdale Force Main Project (P12384), the City of Fort Lauderdale has requested that DMSI replace the existing 36-inch above-ground bypass at Repump B. The work required to install a new bypass necessitates additional design and inspection services from CMA that were not included in the original Design Citeria Package (DCP).

As requested by the City of Fort Lauderdale, CMA will include in our Phase 4 submittal plans a detailed design encompassing all necessary piping, valves, connection points, and pipe supports to meet City standards. This design will also incorporate the above-ground bypass under the same permit. Additionally, CMA will provide restoration design plans for all areas impacted during the construction of the bypass. To support the construction process, CMA will provide an inspector onsite during the installation of the 36-inch above-ground bypass. This request also includes the redesign of the connection location to the existing 42-inch influent line at the Master Repump station as discussed in the field with City staff.

Please note that CMA will not perform any modeling or flow calculations as part of this work. The design plans will incorporate the existing system and be replaced in kind.

This additional scope of work has resulted in unanticipated costs for CMA related to the design and construction inspection of the bypass and new connection locations to the existing force main system. The estimated total cost for these additional services is $62,400.

Please feel free to contact me if you have any additional questions at +1 (561) 744-8282 or via email at vlocigno@chenmoore.com.

Respectfully submitted,

Vincent Locigno

Chen Moore and Associates
Vincent Locigno, PE
Project Engineer

Rangeline Is The Lifeline For Your Pipeline

Quote Number RTS24-3112

Rangeline will provide the following Material:

Quantity	Description	Unit Price	Total
1	Night Work Option for the 42" Double Line stop Service	$9,545.00	$9,545.00
1	Night Work Option for the 42" Double Re-Stop Service	$5,574.00	$5,574.00

Rangeline Group will perform the following Double Line Stop:

Quantity	Size	Pipetype	Product	Double Line Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$84,520.00	$84,520.00	$1,500.00 Per Day, Per Line Stop

Rangeline Group will perform the following Double Re-Stop:

Quantity	Size	Pipetype	Product	Double Re-Stop With Bypass	Total	Line Stop Equipment Overnight charges after 7PM on 5th Day "When Equipment is on the Pipe"
1	42"	DI	Force Main	$44,522.00	$44,522.00	$1,500.00 Per Day, Per Line Stop

PLEASE NOTE: Rangeline will make every attempt to remove the completion plug and re-insert the line stopper through the existing fitting. If the completion plug cannot be removed, the existing line stop fitting will have to be abandoned and a new line stop fitting and location will be needed in order to shut the system down.

Note: Rangeline cannot guarantee a 100% shutdown due to debris, mineral deposits, solids and/or sediments in the pipe.

Prices are based on the following below:

- Rangeline will provide epoxy coated linestop fittings with stainless steel hardware for the double linestop services, and use existing and serviceable linestop fittings for the double re-stop services.
- If the project is cancelled after NON-AIS(standard) materials are ordered, there will be a restocking fee.
- Rangeline will provide (2) 24" 150# flanged outlets for customer to connect Bypass Piping to the 42" double line stop or double re-stop sets. Customer must provide and install all Bypass Piping and related materials.
- When equipment is placed on the pipeline system, whether the Re-Stop is in the main or not, per day charges will apply.
- Please allow (7 - 14 days) notice for scheduling after receipt of materials to ensure availability. Projects that require shorter lead times may incur additional charges.
- Contractor must encase each line stop fitting in concrete.
- If the type of pipe changes from what we have quoted above, prices and scheduling may vary. Contractor or Municipality is responsible for verifying the type of pipe and it's O.D.
- Rangeline may require a pre-construction meeting or site visit prior to scheduling any services.
- Normal daytime hours (7:00AM- 7:00 PM EST) Monday through Friday. Technician(s) will have a $375.00 per hour after hours charge, portal-to-portal. Additional Expenses will be charged at our cost plus 20%.
- Rangeline will allow (3) Mobilizations/De-Mobilizations to the jobsite per double line stop and (2) Mobilizations/De-Mobilizations to the jobsite per double re-stop. Additional trips will be $750.00 per trip. Mobilization charges are applied when the technician leaves the shop or jobsite to start or after completion of the project.

Rangeline Tapping Services
7256 Westport Place Ste A West Palm Beach, FL 33413

A & M Brothers Concrete Corp.
95 NE 12 Street
Homestead Fl, 33030
Phone: (786) 296 5979
a.m.concrete@hotmail.com

PROPOSAL / CONTRACT
PROPOSAL VALID FOR 90 CALENDAR DAYS
CALENDAR DAYS
Date: FEBRUARY 04, 2025

CONTRACTOR: DAVID MANCINI & SONS INC
Attn: Alejandra Suarez
Email: ASuarez@dmsi.co
PHONE: (786)-284-2268
COUNTY: BROWARD
PROJECT NAME : CORAL RIDGE ABOVE GROUND PIPE SUPPORT

Item	Description	Unit	Unit price	Quantity	Total Amount
1	5' X 18" ABOVE GROUND PIPE SUPPORT WITH #5 REBAR 12" ON CENTER TOP AND BOTTOM EACH WAY	EACH	$ 3,800.00	2	$ 7,600.00
	Note: Final Invoice base on Field measurements		TOTAL		$ 7,600.00

PRICE INCLUDES LABOR, MATERIALS, EQUIPMENT AND 3,000 REG OR 2,500 DOT PSI CONCRETE	
Field Office, Inspections, Concrete Cylinder Test are NOT Included	Maintenance of Traffic NOT included.
Fill Materials, Grading and Base Preparation are NOT Included	Bond/Layout/As Built NOT Included.
Lime rock Base and Subgrade are NOT Included.	Concrete Pump are NOT Included.

PAYMENT TO A & M Brothers Concrete Corp. is due within 30 days of receipt of this invoice. Any payment not received timely, shall be subject to interest at the rate of 1.5 % per month. In the event of legal action is required to enforce this invoice, A & M Brothers Concrete shall be entitled to recover its attorneys' fees and costs.

ACCEPTANCE OF PROPOSAL/CONTRACT: **DAVID MANCINI & SONS**

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date_____

_____
Name / Title

_____
Signature

CONFIDENTIAL

Customer Name		**David Mancini & Sons - Alejandra Suarez**		**Phone: 954-977-3556**	
Address		**2601 Wiles Road, Pompano Beach, FL 33073**		**Fax:**	
Project Name		**Coral Ridge FM Replacement - Proj 23-FL.GOLF**		**Cell: 305-775-5340**	
Address		**NE 50th Court & 15th Ave, Ft Lauderdale, 33334**		asuarez@dmsi.co	
Mix Code		***Description***		***U.O.M.***	***Price***
		**** As Requested ****			
06-FF-95		**FDOT FLOWABLE FILL EXCAVATABLE 100 PSI**		Cubic Yard	$173.00
		SERVICE CHARGES			
		Environmental Load Charge		Load	**$25.00**
Currently		**FUEL SURCHARGE - ADJUSTED WEEKLY *1/16/2025***		Load	$32.20
6:00am-12:30pm		**Saturday Delivery Charge**		Cubic Yard	**TBD**
6:00 pm-6:00 am		**Plant Opening 4-HR Minimum Monday - Friday**		FLAT	**TBD**
SHORT257		**Minimum Load Charge - Less than 7 CY**		Load	$250.00
		Return Concrete Handling & Disposal Fee		Cubic Yard	**$35.00**
		Order Cancellation Fee		FLAT	**$1,500.00**
1/6/2025		***Effective Date***		***Expiration Date***	**3/31/2025**
Escalation		***TBD 7/1/2025***			

This quotation must be accepted by written purchase order 30 calendar days from quote date or it will expire; however, Supermix at all times reserves the right to increase the quoted prices without notice that reflect an increase in raw material costs, changes in market conditions, or surcharges incurred by Supermix, and to cancel or defer any quote in the event Supermix becomes delayed or prevented by shortages or allocations of raw materials. Supermix shall not be liable to Buyer, any of its counterparties, or any third parties for damages as a result of any such price change, delay, or cancellation.

Supermix Representative		***Peter Kaczorowski***	***Office: 954.480.9333***	***Cell: 954.214.4937***
		Account Manager	***Fax: 954.480.2893***	***Email: pete@supermix.com***

Accepted by: _____ Date: _____

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - CHECK VALVE

1. Date of Submission	12/6/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-02-1
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.03
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

cma
chen moore and associates

[X] No Exceptions Taken [ ] Furnish With Changes Noted
[ ] Revise and Resubmit [ ] Rejected

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By Vincent Locigno, PE Date 12/9/24

AWWA C508 Swing Check Valves

Index

1155 ALPHA DRIVE SUITE A · ALPHARETTA, GA 30004
PHONE: 770-740-0800 · FAX: 770-740 8777

VSI WATERWORKS USA

SERIES CVI
AWWA C508
SWING CHECK VALVES

2”-48”

DOC-00000436[A]
April 2023

2”-48” CVI BONDED SEAT SWING CHECK

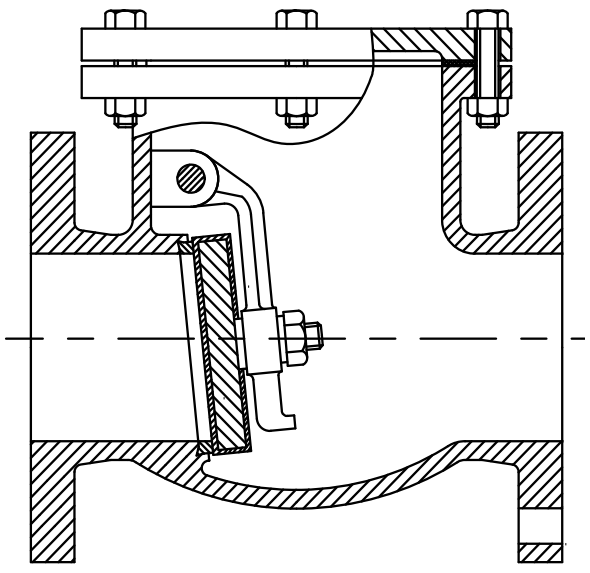
BONDED SEAT SWING CHECK VALVE

VSI offers the simplified bonded seat type check valve for pump and lift stations where a standard duty valve is acceptable and external accessories are not required. It still exemplifies VSI’s commitment to providing a quality product.

- Body seats are permanently bonded non-replaceable, reducing possible leakage paths.
- Disc seats are replaceable by way of replacing the entire disc.
- The shaft extends only to one side, reducing seal friction and possible leakage paths.

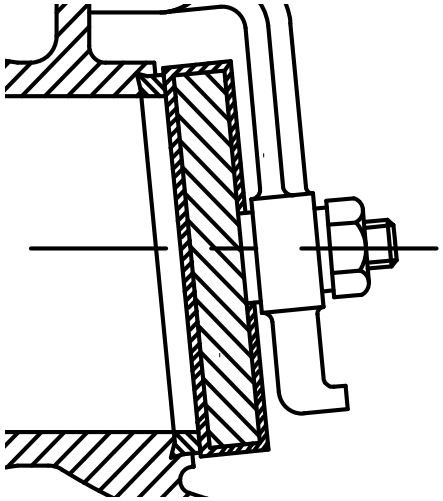
SIMPLE INTERNALS

VSI Bonded Seat Swing Check Valves are built with simplicity in mind for use in general duty applications. They feature minimal internal hardware and robust coatings for long service life in many less demanding applications.



REPLACEABLE DISC

VSI Swing Check Valves incorporate a replaceable bonded seat, which can be removed without taking the valve out from the line. Simply remove the sealed cover, and change out the entire disc.



NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
105 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

DESIGN STANDARDS

Size Range	6"-48" Flanged End
Construction	AWWA C508
	ASME B16.34
	API 600
Coatings	AWWA C550*
Connections	ANSI B16.1 Class 125*
	ANSI B16.1 Class 250
	ANSI B16.5 Class 150
	ANSI B16.5 Class 300
Lay Length	AWWA C508 Appendix A Full
	ISO 5752
Classifications	150 PSIG
	175 PSIG
	200 PSIG*
	250 PSIG*

*Standard Option

American Water Works Association

cma chen moore and associates

[X] No Exceptions Taken [ ] Furnish With Changes Noted
[ ] Revise and Resubmit [ ] Rejected

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By Vincent Locigno, PE Date 12/9/24

RESISTANCE GUIDE

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attached by:
EPDM	EPDM, EPM	Ethylene-propyl-ene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons
NBR	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouroproply-ene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high tem-peratures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molec-ular weight esters and nitro-containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-eth-ylene	-100F/450F	Excellent abrasion resistance and chemi-cally inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
105 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
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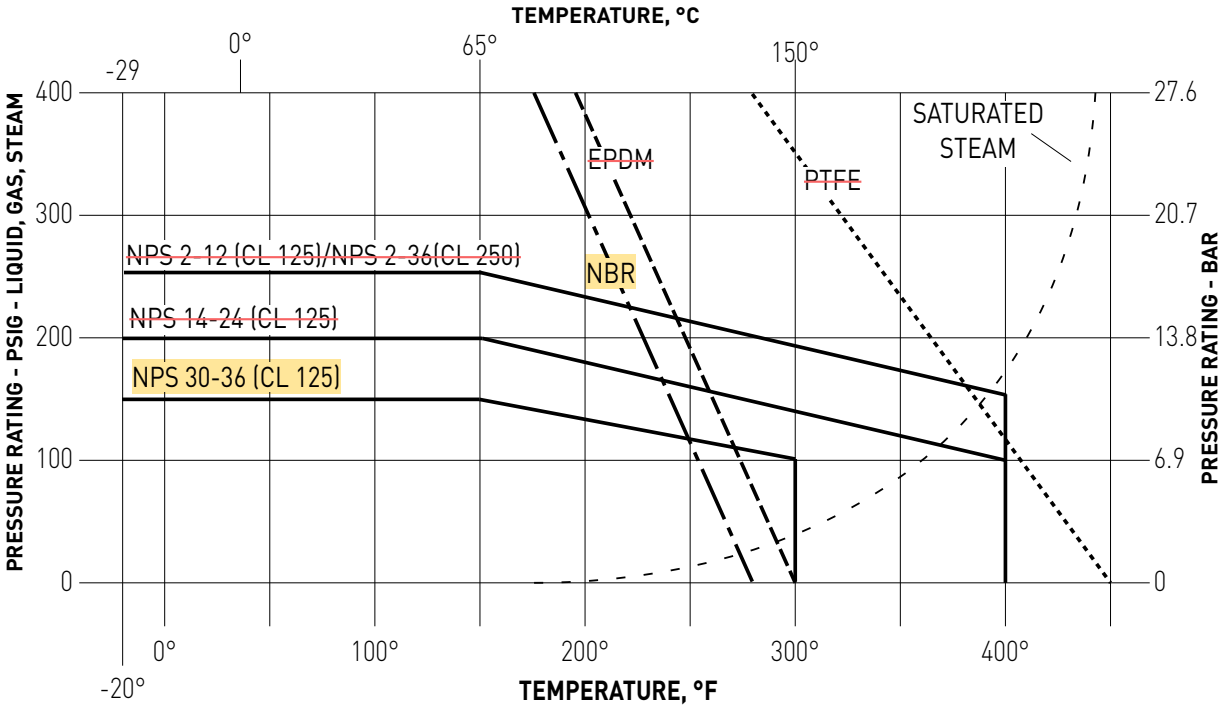
PRESSURE/TEMPERATURE RATINGS



In determining field pressure ratings for Series CVI Check Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

cma
chen moore and associates

X No Exceptions Taken
Furnish With Changes Noted
Revise and Resubmit
Rejected

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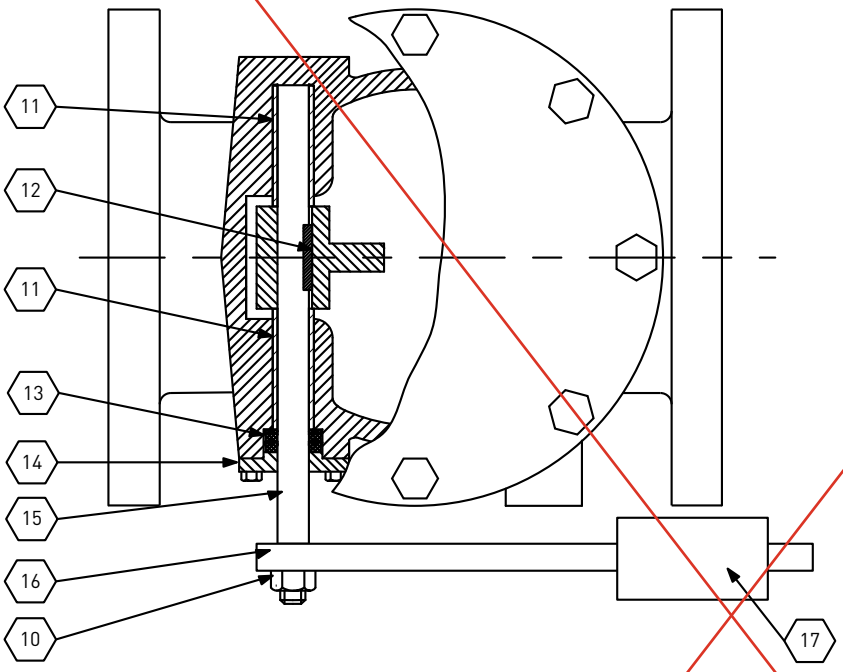
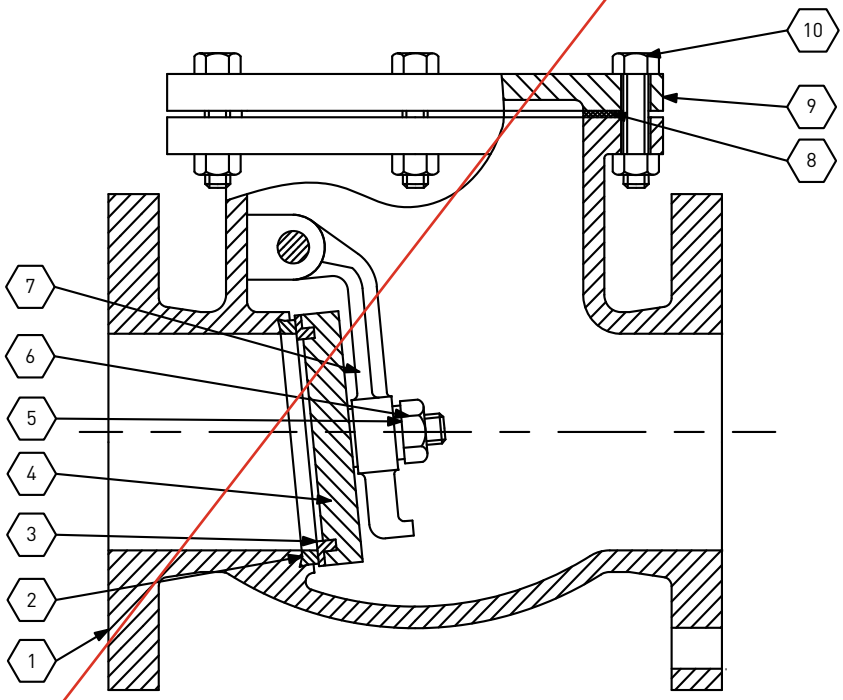
By Vincent Lodigno, PE Date 12/9/24

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

VSI Waterworks
1205 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

MATERIALS OF CONSTRUCTION METAL SEATED VALVES





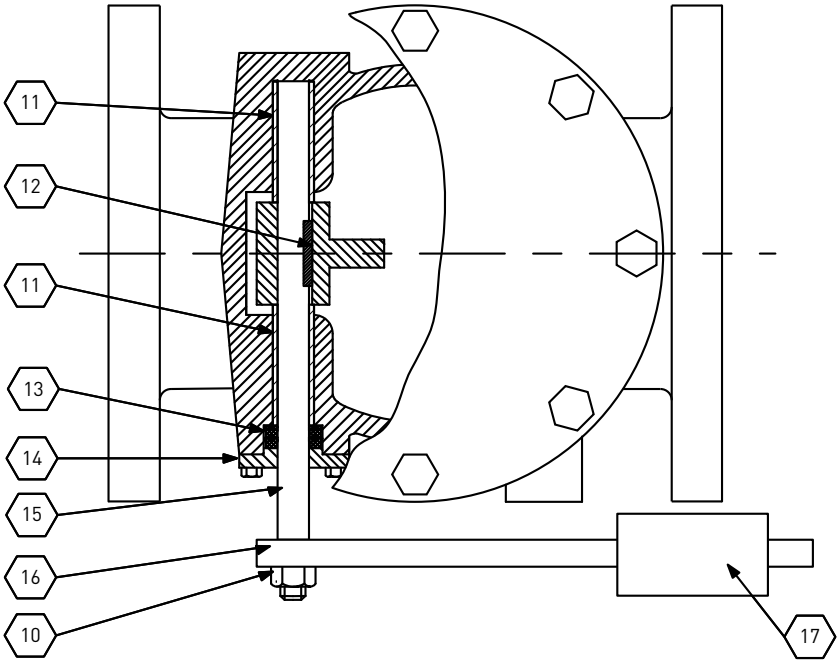
ITEM	DESCRIPTION	MATERIAL OPTIONS
1	BODY	DUCTILE IRON ASTM A536 65-45-12
2	BODY SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
3	DISC SEAT RING	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		BRONZE ASTM B62
4	DISC	DUCTILE IRON ASTM A536 65-45-12
5	WASHER	STEEL ASTM A36
6	WETTED HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
7	ARM	DUCTILE IRON ASTM A536 65-45-12
8	SEAL	EPDM
		BUNA-N (NBR)
9	COVER	SAME AS BODY (1)
10	EXTERIOR HARDWARE	STAINLESS ASTM F593 GROUP 1
		STAINLESS ASTM F593 GROUP 2
		STEEL ASTM A325 TYPE 1
11	BEARING	PTFE
12	KEY	STEEL ASTM A36
13	SHAFT SEAL	EPDM
		BUNA-N (NBR)
14	RETAINER	SAME AS BODY (1)
15	SHAFT	STAINLESS 304 ASTM A276
		STAINLESS 316 ASTM A276
		STAINLESS 17-4PH ASTM A693
16	ARM*	DUCTILE IRON ASTM A536 65-45-12
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12

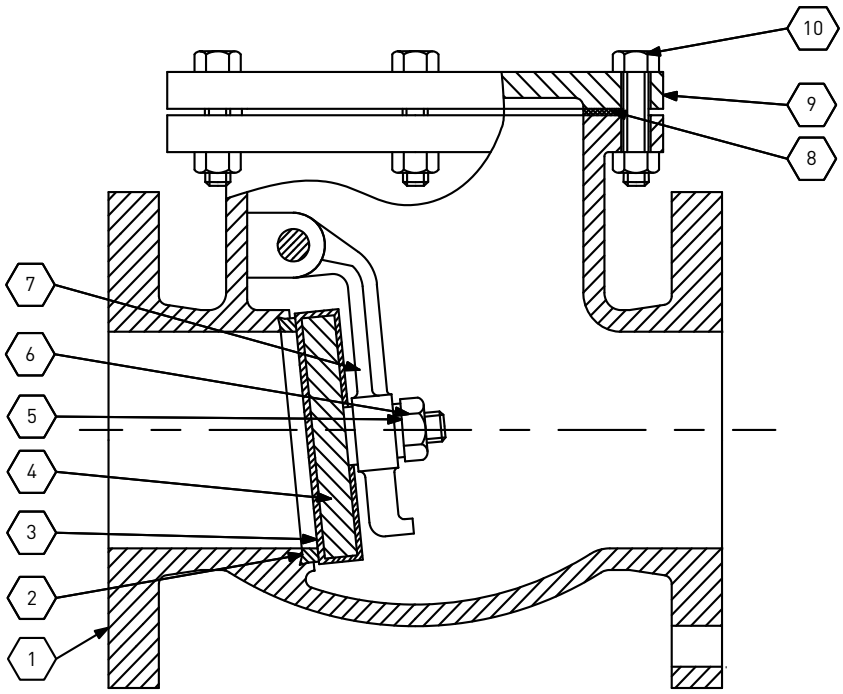
* IF EQUIPPED

VSI Waterworks
1205 Alpha Drive, Alpharetta, GA 30004
T: 770.740.0800 F: 770.740.8777
E: sales@vsiwaterworks.com

NOTE: VSI offers two versions of the series CVI. All features are not applicable to all valves. Consult with VSI for more information.

MATERIALS OF CONSTRUCTION RUBBER SEATED





ITEM	DESCRIPTION	MATERIAL OPTIONS	
1	BODY	DUCTILE IRON ASTM A536 65-45-12	
2	BODY SEAT RING	~~STAINLESS 304 ASTM A276~~	
		STAINLESS 316 ASTM A276	
		~~BRONZE ASTM B62~~	
3	DISC SEAT	~~EPDM~~	
		BUNA-N (NBR)	
		~~VITON (FPM)~~	
4	DISC	DUCTILE IRON ASTM A536 65-45-12	
5	WASHER	STEEL ASTM A36	
6	WETTED HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
7	ARM	DUCTILE IRON ASTM A536 65-45-12	
8	SEAL	~~EPDM~~	
		BUNA-N (NBR)	
9	COVER	SAME AS BODY (1)	
10	EXTERIOR HARDWARE	~~STAINLESS ASTM F593 GROUP 1~~	
		~~STAINLESS ASTM F593 GROUP 2~~	SS316
		~~STEEL ASTM A325 TYPE 1~~	
11	BEARING	~~PTFE~~ BRONZE	
12	KEY	STEEL ASTM A36	
13	SHAFT SEAL	~~EPDM~~	
		BUNA-N (NBR)	
14	RETAINER	SAME AS BODY (1)	
15	SHAFT	~~STAINLESS 304 ASTM A276~~	
		~~STAINLESS 316 ASTM A276~~	
		STAINLESS 17-4PH ASTM A693	
16	ARM*	DUCTILE IRON ASTM A536 65-45-12	
17	WEIGHT*	DUCTILE IRON ASTM A536 65-45-12	

* IF EQUIPPED

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Furnish With Changes Noted
Revise and Resubmit
Rejected

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By Vincent Locigno, PE Date 12/9/24

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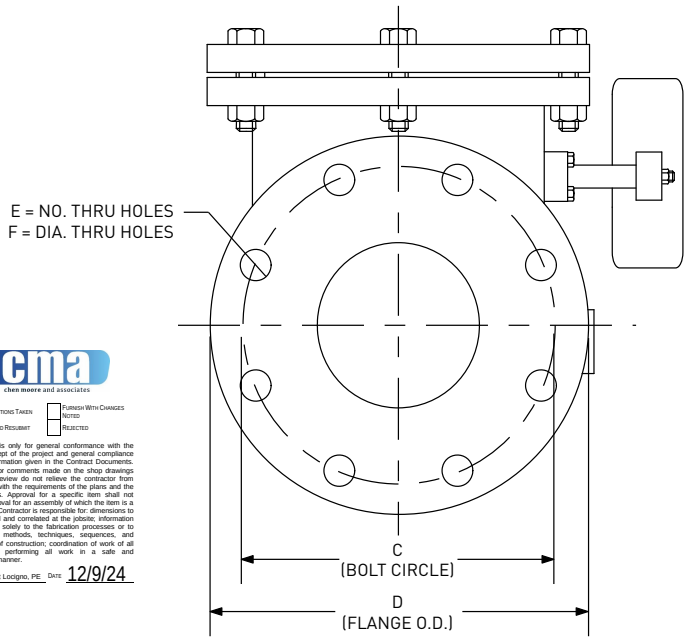
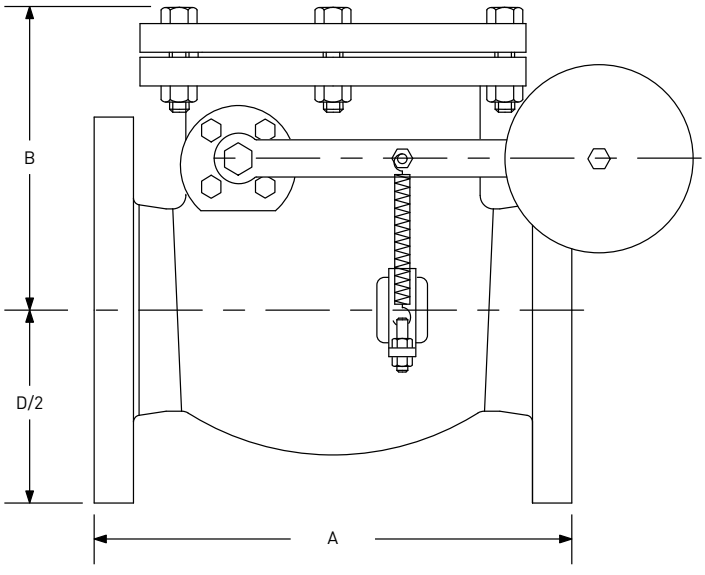
FLANGED WITH OUTSIDE LEVER AND WEIGHT

SIZE	A	B	C	D	E	F	WEIGHT (LBS)
2"	8.00	5.4	4.75	6.0	4	0.75	37
2.5"	8.50	5.8	5.5	7.0	4	0.75	44
3"	9.50	6.3	6.00	7.2	4	0.75	51
4"	11.50	7.1	7.50	9.0	8	0.75	79
5"	13.00	8.0	8.50	10.0	8	0.75	101
6"	14.00	8.8	9.50	11.0	8	0.88	128
8"	19.50	10.2	11.75	13.5	8	0.88	238
10"	24.50	11.4	14.25	16.0	12	1.00	374
12"	27.50	12.8	17.00	19.0	12	1.00	418
14"	31.00	16.7	18.74	21.0	12	1.13	737
16"	36.00	17.5	21.25	23.5	16	1.13	968
18"	38.00	18.9	22.75	25.0	16	1.25	1500
20"	42.00	20.7	25.00	27.5	20	1.25	1600
24"	48.00	23.9	29.50	32.0	20	1.38	2600
30"	56.00	28.6	36.00	38.8	28	1.38	-
36"	63.00	37.9	42.75	46.0	32	1.63	-
42"	70.00	41.0	49.50	53.0	36	1.63	-
48"	76.00	49.0	56.00	49.5	44	1.63	-





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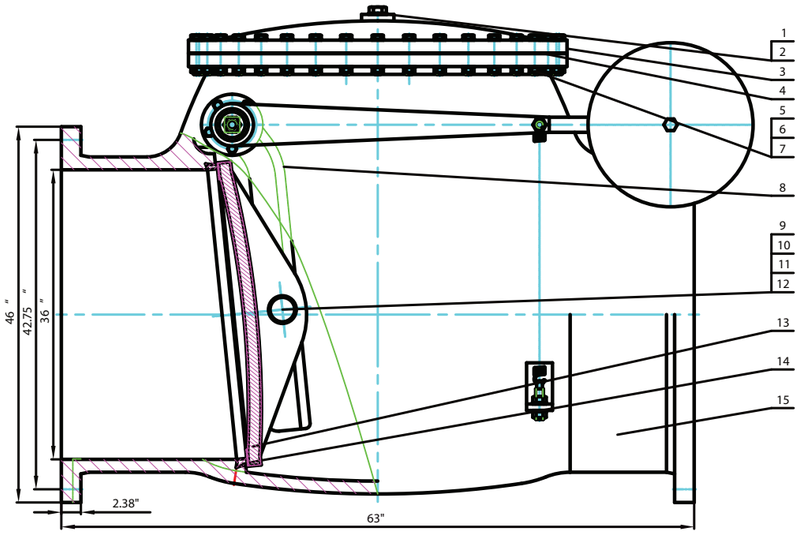

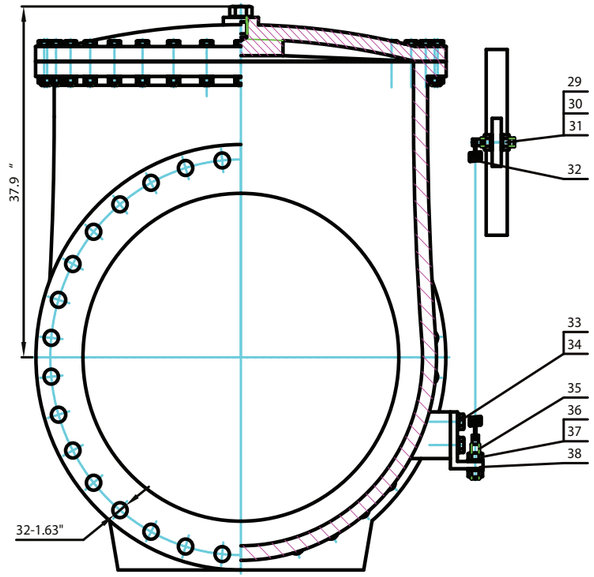

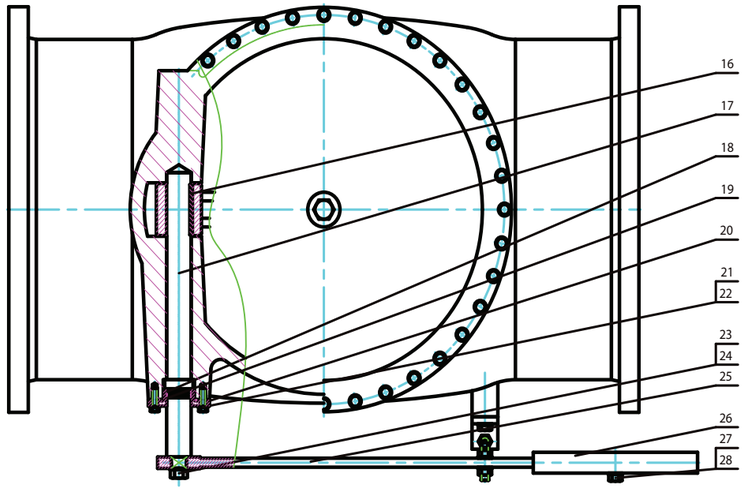

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NO	PART NAME	MATERIAL	STANDARD
1	PLUG	STAINLESS STEEL	SS316
2	O-RING	NBR	ASTM D2000
3	BONNET	DUCTILE IRON	ASTM A536
4	GASKET	NBR	ASTM D2000
5	BOLT	STAINLESS STEEL	SS316
6	NUT	STAINLESS STEEL	SS316
7	WASHER	STAINLESS STEEL	SS316
8	ARM	DUCTILE IRON	ASTM A536
9	HING PIN	STAINLESS STEEL	SS316
10	WASHER	STAINLESS STEEL	SS316
11	NUT	STAINLESS STEEL	SS316
12	COTTER PIN	STAINLESS STEEL	SS316
13	DISC	DUCTILE IRON/NBR	ASTM A536/D2000
14	BODY SEAT RING	STAINLESS STEEL	SS316
15	BODY	DUCTILE IRON	ASTM A536
16	FLAT KEY	STEEL	
17	SHAFT	STAINLESS STEEL	17-4 PH
18	O-RING	NBR	ASTM D2000
19	O-RING	NBR	ASTM D2000
20	GLAND	DUCTILE IRON	ASTM A536
21	BOLT	STAINLESS STEEL	SS316
22	WASHER	STAINLESS STEEL	SS316
23	BOLT	STAINLESS STEEL	SS316
24	WASHER	STAINLESS STEEL	SS316
25	HINGE	DUCTILE IRON	ASTM A536
26	HAMMER	DUCTILE IRON	ASTM A536
27	BOLT	STAINLESS STEEL	SS316
28	WASHER	STAINLESS STEEL	SS316
29	SPRING STUD	STAINLESS STEEL	SS316
30	NUT	STAINLESS STEEL	SS316
31	WASHER	STAINLESS STEEL	SS316
32	SPRING	STAINLESS STEEL	SS316
33	BOLT	STAINLESS STEEL	SS316
34	WASHER	STAINLESS STEEL	SS316
35	SPRING STUD	STAINLESS STEEL	SS316
36	NUT	STAINLESS STEEL	SS316
37	WASHER	STAINLESS STEEL	SS316
38	SPRING BRACKET	CARBON STEEL	

TOLERANCES		
DECIMAL		ANGULAR
X.X	±0.1	±0.25°
X.XX	±0.01	
X.XXX	±0.005	

VSI WATERWORKS
1155 ALPA DR.
ALPHARETTA,GA

36" CVI -
CVI36F-DD63N-B31/0-H
Drawing and Materials

UNITS: INCHES | REV 0
SCALE: 1:25 | 12-05-24
DWG. NO. N/A

BONDED SEAT SWING CHECK PART NUMBER MATRIX

CVI ☐☐ - ☐☐☐☐ - ☐☐☐ / ☐ - ☐

MODEL

SIZE CODE
2" - 02
2.5" - 25
3" - 03
.
.
24" - 24

CONNECTION
F -Flanged CL125/150*

BODY MATERIAL
D-Ductile Iron*

DISC MATERIAL
D-Ductile Iron*

SHAFT MATERIAL
~~S-Stainless Steel 304*~~
~~3-Stainless Steel 316~~
6-Stainless 17-4PH

SEAT
~~B-Bronze to Bronze*~~
~~E-EPDM to SS304~~
N-Buna-N (NBR) to SS304

BEARING MATERIAL
~~P-PTFE*~~
B-Bronze ASTM B16

HARDWARE
~~S-Stainless Steel 304*~~
3-Stainless Steel 316
~~Z-Zinc Plated Steel~~

COATINGS
1-AWWA C550 Fusion-Bonded Epoxy
~~C-Custom Project Specific~~

OPTIONS
O-Outside Lever and Weight*
~~OL-Limit Switch~~
~~B-Bare~~

IDENTIFIER

* Standard Material

EXAMPLE:
CVI08F-DDSB-PS1/O-Q
A 8" flanged Check valve with Ductile Iron body and disc, SS304 shaft, Bronze body seat, B[illegible] NBR seals, PTFE bearings, SS304 hardware, AWWA C550 2-part epoxy coatings with outside lever & weight.

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[X] No Exceptions Taken [ ] Furnish With Changes Noted
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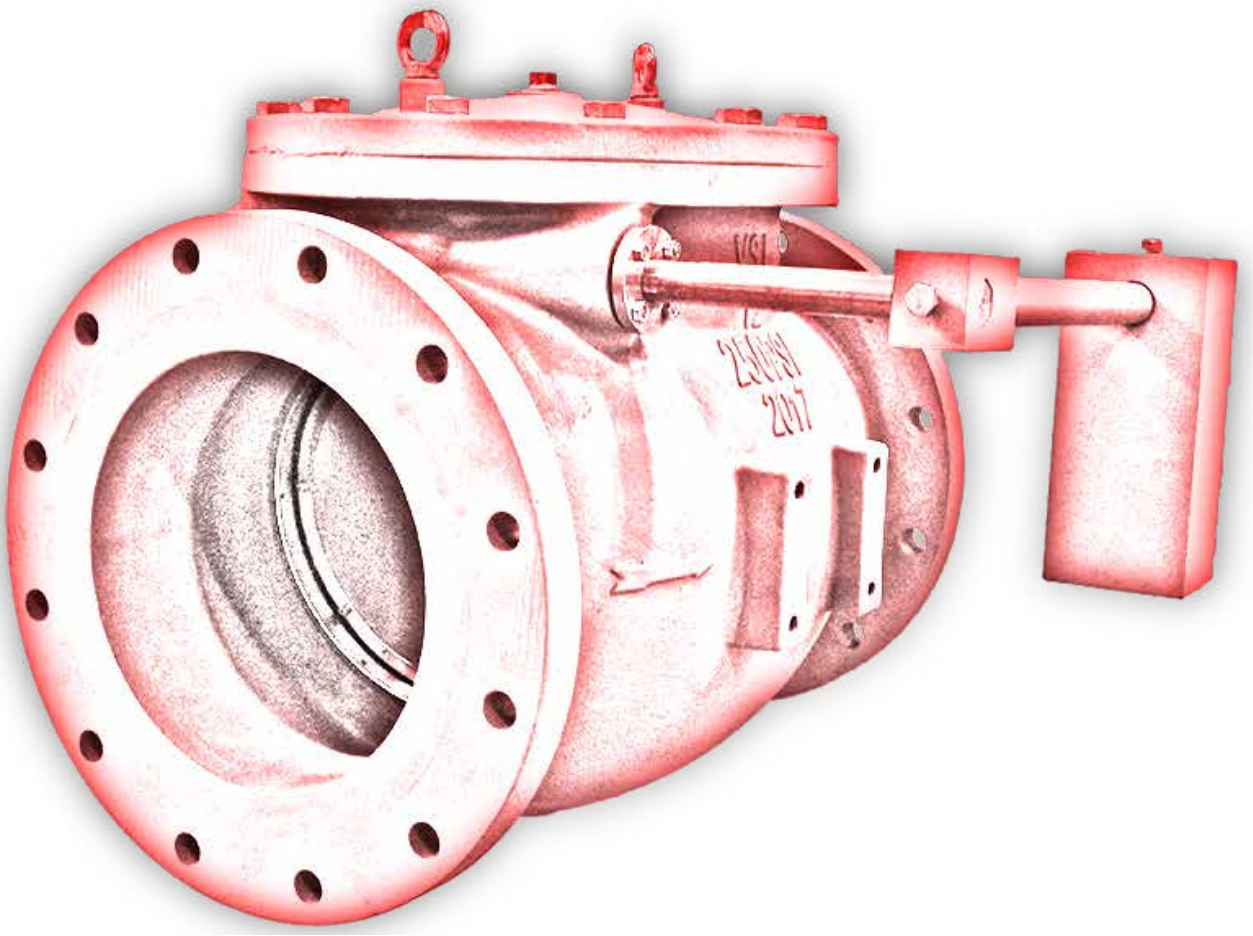

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email: sales@vsiwaterworks.com

www.VSIWaterworks.com

City of Fort Lauderdale
NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
Submittal Name: SHOP DRAWINGS - PLUG VALVE

1. Date of Submission	12/06/2024
2. Project Number	P12384
3. Project Name	NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4. Contractor Identification	23-FL.GOLF-001
a. Contractor	David Mancini and Sons, Inc
b. Supplier	
c. Manufacturer	N/A
d. Manufacturer or supplier representative	N/A
5. Identification of the Product	EXB-12.0-P12384-20-0
6. Reference to Contract Drawing	D02
7. Reference to Specification Section Number, page and paragraphs.	Technical Specifications 2.02
8. Indication of Contractor's approval.	Approved by DMSI
9. Contractor's Certification Statement. (Refer to paragraph 1.03.F.2)	"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
10. Identification of deviations from the Contract, if any.	
11. Reference to previous submittal (for resubmittals).	

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SERIES PVIF
AWWA C517 FULL PORT ECCENTRIC PLUG VALVES

14”-72”

PVIF-101 RT
AUG 2023

IMPLEMENTATIONS

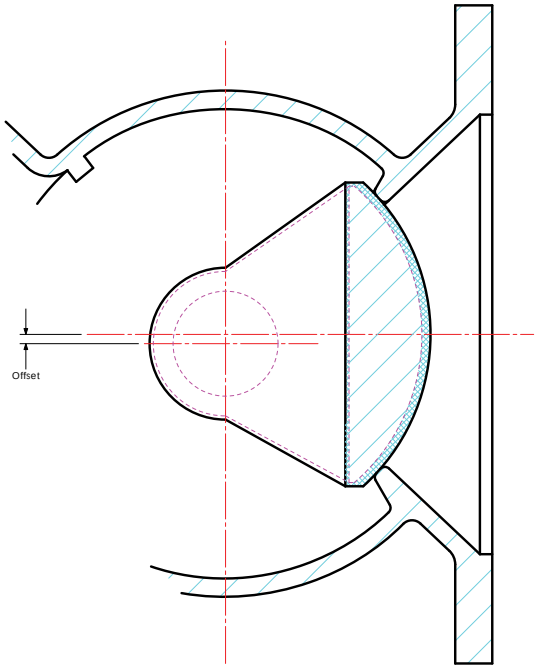
The Eccentric Plug valve is the industry standard for systems that will experience sludge or large particulate flow. VSI Eccentric Plug Valves are able to achieve an extremely high port area while keeping the operating time much lower than the traditional gate valve.

ECCENTRIC MOVEMENT

The most essential function of a valve is that it must isolate line flow. This action is easy to accomplish, but with traditional designs as pressure and size increase the torque required to close the valve increase exponentially.

To counteract this characteristic all VSI Eccentric Plug Valves incorporate an offset in the valve design. By offsetting the plug and shaft centerline from the valve body and pipe centerline a cam action is achieved. This action allows the plug to contact the valve body only in the last 5-10 degrees of movement. Through the rest of the valve motion the only torque transmitted to the operator will be from the low friction bearings and line force on the plug.

The cam action increases the seat force without increasing operator torque allowing for the use of more durable encapsulation materials that are often harder.



RESILIENT PLUG FACING

All VSI Eccentric Plug Valves are equipped as standard with a fully encapsulated resilient plug. By fully encapsulating the plug the service life of the valve is greatly extended by reducing corrosion of the plug. The resilient nature of the seat allows for driptight shut off. Should small solids become deposited upon the plug face, tight shut off is still guaranteed.

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ADJUSTABLE/REPLACEABLE PACKING

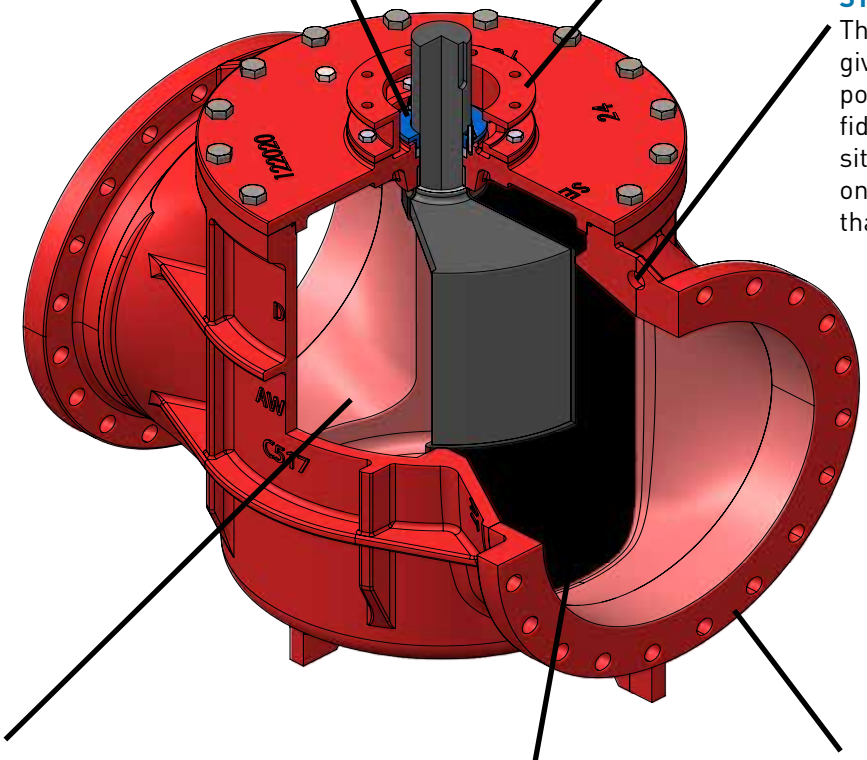
The packing of the Series PVIF consists of multiple v-type packing rings and adjustable gland. The open bonnet on above ground valves allows for the adjustment and replacement of packing without removing the gearbox/operator

NUMEROUS ACTUATION OPTIONS

The standard ISO 5211 top mount allows VSI to offer a wide range of electric, pneumatic, hydraulic, fail-safe, and other actuation packages

STANDARD LIFTING EYE

The lifting holes at all ends of the PVIF give a secure and easy attachment point that allows the valve to be confidently maneuvered into place on job sites. Equipped as a standard feature on all PVIF valves, making your install that much easier.



FULL PORT DESIGN

The rectangular port is of a "Full Port" type with a flow area equal to the nominal pipe to maintain excellent free flow, high Cv values, and low head loss. Pigging with semi-rigid foam type pigs is possible.

FULLY ENCAPSULATED PLUG

The plug of the Series PVIF is fully encapsulated with resilient rubber covering every surface exposed to the line. Full encapsulation eliminates corrosion and minimizes the possibility of delamination or damage to the seat.

MULTIPLE COATING OPTIONS

The standard 2-part heavy duty coating can be optioned to a wide variety of coatings as required by the project requirements such as NSF 61 listed coatings, ceramic reinforced resin, or coal-tar epoxy

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SAMPLE SPECIFICATION

1. FULL RECTANGULAR PORT PLUG VAVES FOR WATERWORKS SERVICE
   1.1. This specification covers the design, manufacture, and testing of eccentric plug valves from 14 inch (350 mm) through 72 inch (1800 mm) under service pressure of up to 150 psig (1035 kPa).
   1.2. Plug valves shall be resilient seated and of the quarter turn, non-lubricated, eccentric type.

2. GOVERNING STANDARDS
   2.1. All eccentric plug valves shall be in full conformance with the design, manufacturing, and testing standards set forth by the American Water Works Association (AWWA) in Standard ANSI/AWWA C517.
   2.2. When requested, manufacturer shall provide an Affidavit of Proof of Design Testing in accordance with AWWA C517.

3. CONNECTIONS
   3.1. Flanged valves shall conform to all standards of ANSI B16.1, Class 125.
   3.2. Mechanical joint valves shall conform to all standards of ANSI/AWWA C111/A21.11.

4. MARKINGS
   4.1. Each valve shall be marked with the manufacturer's name, valve size, body material, and pressure rating cast into the body of the valve. Lettering shall be a minimum of 1/2 inch tall and project 1/10 inch from body.
   4.2. All plug valves, except buried or submerged valves, shall be equipped with a type 304 or 316 stainless steel or Aluminum tag identifying body, plug, resilient seat, and stem material in addition to manufacturer's name, pressure rating, size, date of manufacturer, and date of testing.

5. DESIGN
   5.1. Port areas of valves in relation to pipe areas shall not be less than 100%
   5.2. Valves shall be equipped with a minimum 95% nickel seat directly bonded to a machined finished surface on valve body. Plated or removable seats are not acceptable.
   5.3. Valve shall be equipped with a set of V-type stem packing with an adjustable gland. Valve stem packing shall be replaceable without removing the cover or bonnet of the valve.
   5.4. Radial shaft bushings shall be supplied in the upper and lower bearing journals. Thrust bearings shall be supplied between the plug and body in both the upper and lower journal areas.
   5.5. The valves shall be equipped with a mounting area for operators conforming to Manufacturers Standard Society(MMS) 101 or International Organization of Standardization(ISO) 52111. There shall be sufficient clearance to directly mount standardized operators with easily accessible fasteners.

6. MATERIALS
   6.1. The valve body, cover, and bonnet if equipped shall be constructed of ASTM A536 Ductile Iron.
   6.2. The plug shall be constructed of ASTM A536 Ductile Iron and shall be one piece. The resilient plug encapsulation shall conform to ASTM D429 testing.
   6.3. Radial and thrust bearings shall be made of permanently lubricated type 316 stainless steel.
   6.4. All ~~submerged~~ coatings shall conform to AWWA C550, be holiday free, and have a minimum total dry film thickness of 10 mils.
   6.5. All uncovered, submerged, or buried valves shall have type 304 or 316 stainless steel hardware unless specified.

7. OPERATORS
   7.1. All manually operated valves 4 inch and larger shall be equipped with a worm gear actuator with position indicator. Direct 2" operator nut may be used when specified on 6" and under valves.
   7.2. All actuators shall be permanently sealed and suitable for buried service.
   7.3. All 2 inch square operating nuts, exposed hardware and shafts shall be made of corrosion resistant stainless steel.
   7.4. All actuators equipped with handwheels shall have a maximum rim pull of 80lbs.

8. MANUFACTURER
   8.1. Eccentric plug valves shall be VSI Series AWWAC517 as manufactured by Valve Solutions, Inc., Alpharetta, GA USA or approved equal.
   8.2. All valves shall be warranted by manufacturer for a minimum of 12 months.

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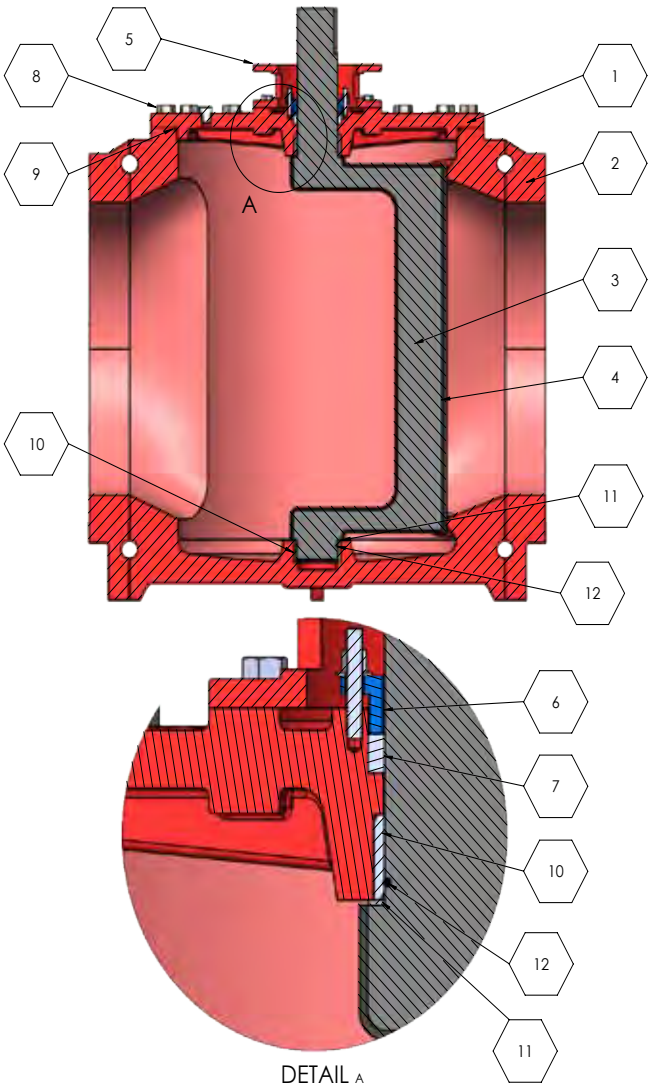
By Vincent Locigno, PE Date 12/9/24

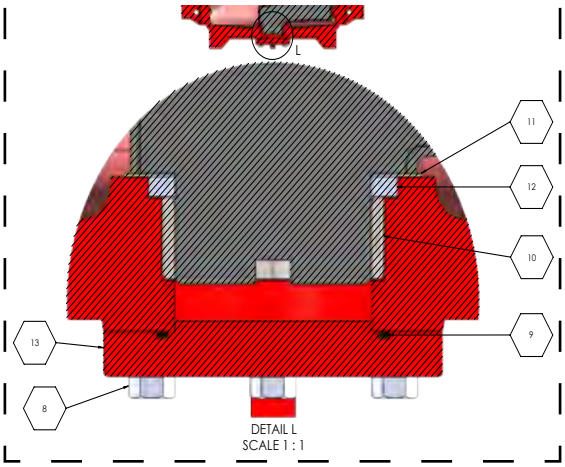
Materials of Construction



DETAIL A
SCALE 1 : 1.5

Item	Description	Materials Available	Standard
1	Cover	Same as Body	
2	Body	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
3	Plug	Ductile Iron*	ASTM A536 65-45-12
		Cast Iron	ASTM A126 Class B
		Stainless Steel 304	ASTM A351 CF8
		Stainless Steel 316	ASTM A351 CF8M
4	Plug Encapsulation	Buna-N (NBR)*	
		Chloroprene	
		EPDM	
		Viton (FPM)	
5	Bonnet	Same as Body	
6	Gland	Same as Body	
7	Packing	Same as Plug Encapsulaton	
8	Exterior Hardware	Stainless 304*	ASTM F593/594
		Stainless 316	ASTM F593/594
9	Cover Seal	Same as Plug Encapsulation	
10	Bearings	Stainless 316*	
		Stainless 304	
		Reinforced PFTE	
		Bronze	
11	Grit Guard	Nylon	
12	Grit Seal	Same as Plug Encapsulation	
13	Lower Cover[2]	Same as Body	
NS	Coating/Lining	Fusion Bonded Epoxy, Black*	
		Two-Part Epoxy	
		Coal-Tar Epoxy	
NS	Tag	Aluminum*	
		Stainless Steel	
NS	Assembly Lubricant	ANSI/NSF 61 Listed Silicone Lubricant	
NS	Operator	Varies	

***Standard configuration on 30" and above**



DETAIL L
SCALE 1 : 1

Additional material options available as special order.
*Standard Material
(1) Lower cover integral to body casting on 14"-24"
(2) Lower journal cover standard on 30" and above

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Design Standards

Size Range	3"-72" Flanged End 3"-48" MJ End
Construction	AWWA C517* ASME B16.34
Coatings	AWWA C550* ANSI/NSF 61 Compliant
Connections	ANSI B16.1 Class 125/ANSI B16.5 Class 150* ANSI B16.1 Class 250/ANSI B16.5 Class 300 ANSI/AWWA C111/A21.11 (MJ)*
Lay Length	AWWA C517* (ex. MJ)
Bonnet	ISO 5211* MSS SP-101

*Standard Option

American Water Works Association

Resistance Guide

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attacked by:
NBR*	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexaflouroproply-ene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high temperatures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molecular weight esters and nitro containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-ethylene	-100F/450F	Excellent abrasion resistance and chemically inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures
EPDM	EPDM, EPM	Ethylene-propyl-ene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons

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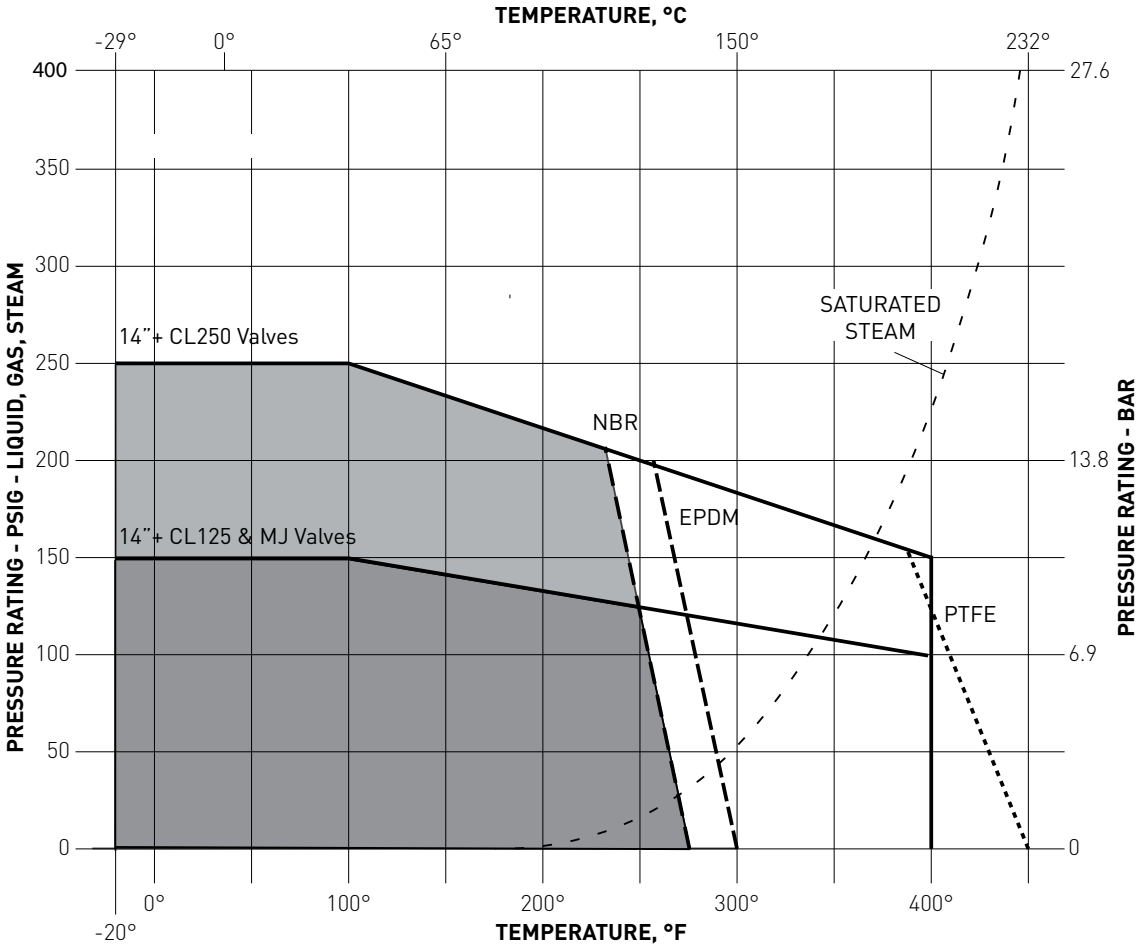
Pressure/Temperature Ratings



In determining field pressure ratings for Series PVIF Plug Valves that are constructed of Ductile Iron the above chart should be used. Pressure cast on valve represents maximum seating pressure; maximum hydrostatic pressure is temperature dependent, and may be higher than nominal pressure rating.

Cold Working Pressure Rating

SIZE	FORWARD CLOSEOFF W/GEAR	REVERSE CLOSEOFF W/ GEAR	FORWARD CLOSEOFF NUT AND/OR LEVER	REVERSE CLOSEOFF NUT AND/OR LEVER
14"+ CL125	150 PSI	150 PSI	NA	NA
14"+ MJ	150 PSI	150 PSI	NA	NA
14"+ CL250	250 PSI	150 PSI	NA	NA

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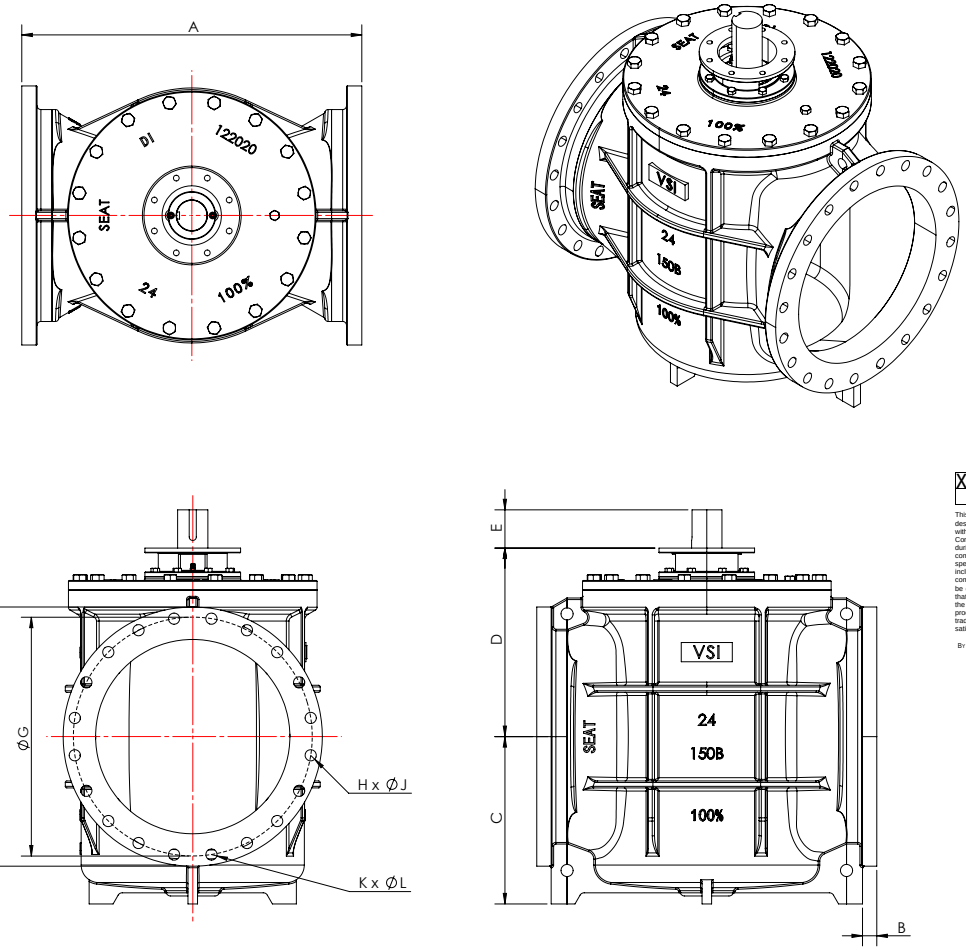
Flanged CL125 Barestem Dimensions



SIZE	A	B	C	D	E	F	G	H[1]	J [2]	K[3]	L[4]
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC
18"	21.50	1.56	15.95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC
36"	60.00	2.38	30.71	34.41	5.50	46.00	42.75	24	1.625	8	1.5-6UNC
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC

(1) "H" represents the total number of through holes, per flange
(2) "J" represents the size of the through holes for flange
(3) "K" represents the total number of tapped holes, per flange
(4) "L" represents the size of tapped holes and bolts used for flange

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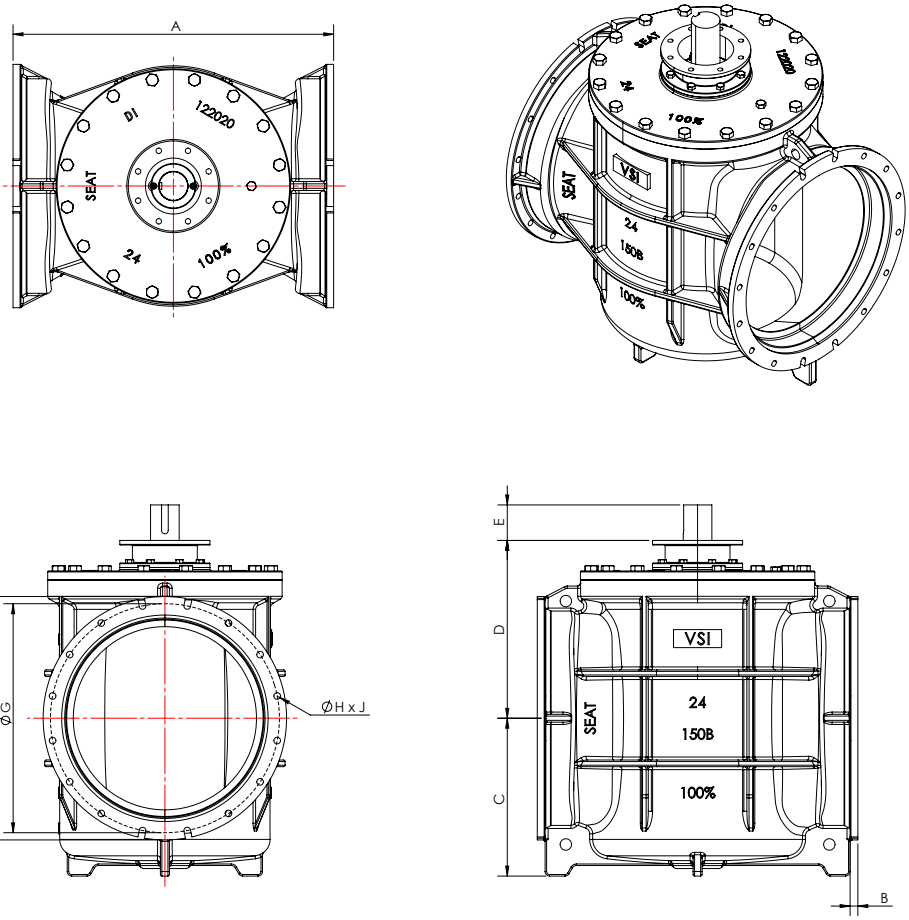
Mechanical Joint Barestem Dimensions



SIZE	A	B	C	D	E	F	G	H[1]	J[2]
14"	24.50	0.79	13.11	17.00	3.35	20.31	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	3.54	22.64	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.35	25.00	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.64	27.16	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	4.66	31.89	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	4.92	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	5.50	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	7.50	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.50	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
- Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111

(2) "J" represents the total number through holes, per flange

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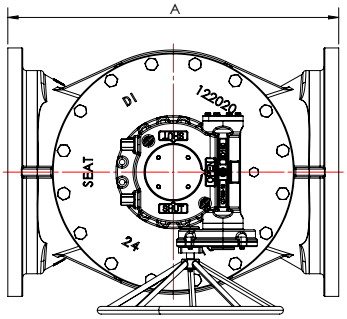
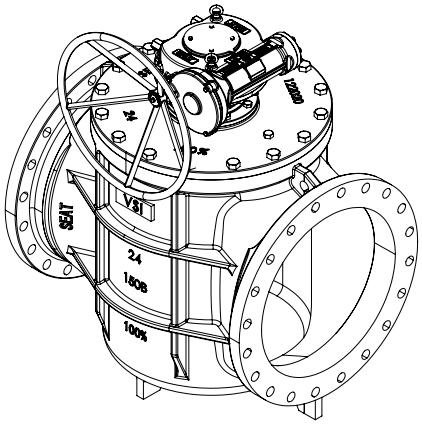
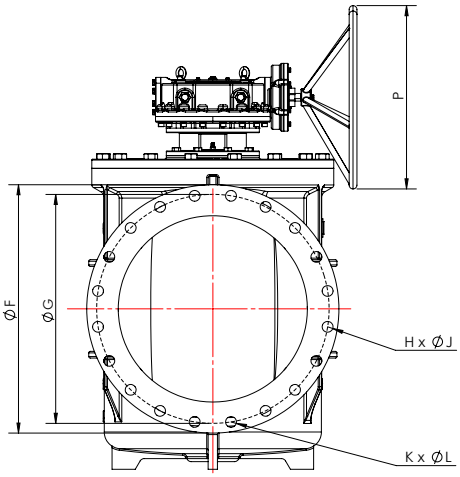
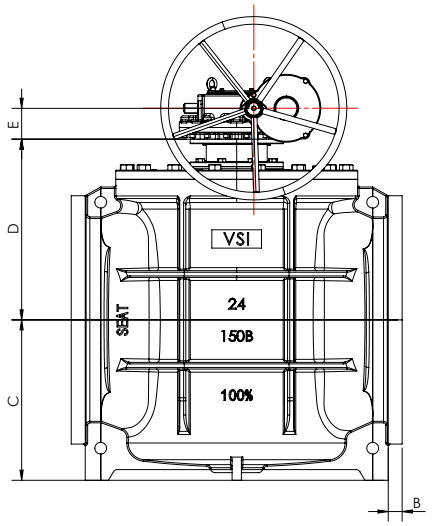
Flanged With Worm Gear & HW









SIZE	A	B	C	D	E	F	G	H[1]	J [2]	K[3]	L[4]	P
14"	17.00	1.38	13.11	17.00	3.35	21.00	18.75	8	1.125	4	1-8UNC	24
16"	17.75	1.44	14.37	17.70	3.54	23.50	21.25	8	1.125	8	1-8UNC	24
18"	21.50	1.56	15.95	19.10	3.35	25.20	22.75	8	1.25	8	1.125-7UNC	20
20"	23.50	1.69	16.62	20.00	3.64	28.15	25.00	12	1.25	8	1.125-7UNC	24
24"	42.00	1.88	20.67	23.30	4.66	32.00	29.50	20	1.375	8	1.25-7UNC	24
30"	51.00	2.12	26,57	30.12	4.92	38.75	36.00	20	1.375	8	1.25-7UNC	27.5
36"	60.00	2.38	30.71	34.41	5.50	46.00	42.75	24	1.625	8	1.5-6UNC	31.5
42"	72.00	2.62	37.40	43.26	7.50	53.00	49.50	32	1.625	4	1.5-6UNC	35.5
48"	84.00	2.75	42.32	47.33	7.50	59.50	56.00	40	1.625	4	1.5-6UNC	31.5

(1) "H" represents the total number of through holes, per flange
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(3) "K" represents the total number of tapped holes, per flange
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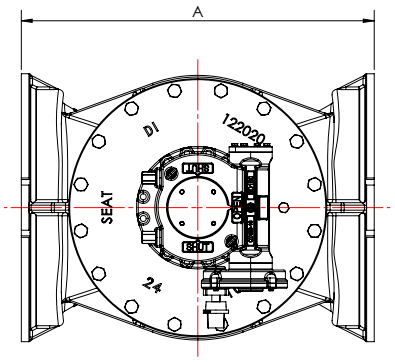
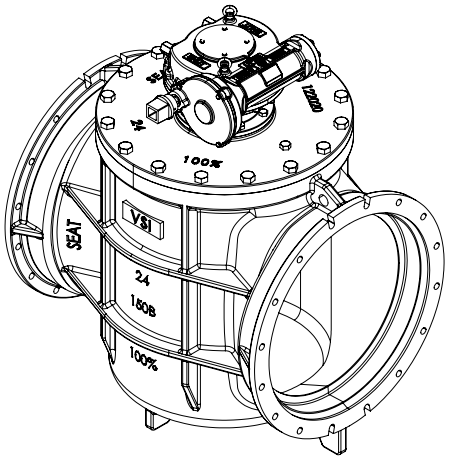
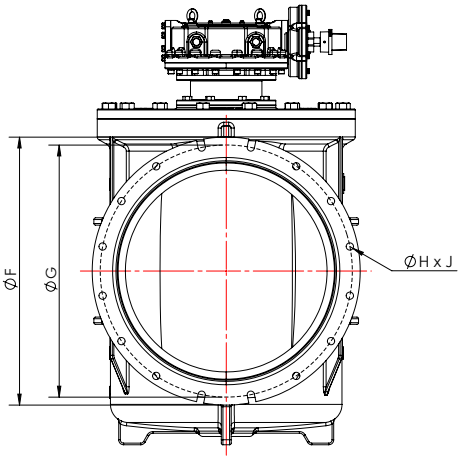
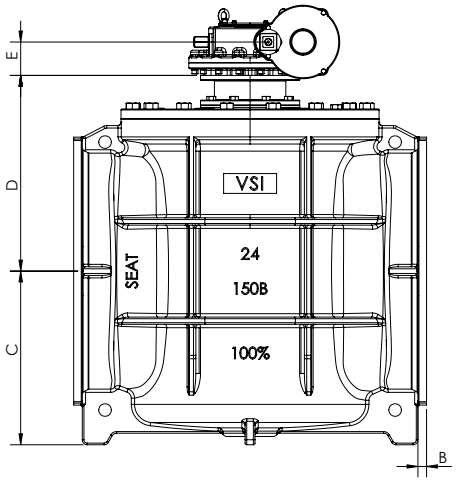
Mechanical Joint With Worm Gear & 2" Nut Op









cma
chen moore and associates

X No Exceptions Taken
Furnish With Changes Noted
Revise and Resubmit
Rejected

This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and the specifications. Approval for a specific item shall not include approval for an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; coordination of work of all trades; and performing all work in a safe and satisfactory manner.

By Vincent Locigno, PE Date 12/9/24

SIZE	A	B	C	D	E	F	G	H[1]	J[2]
14"	24.50	0.79	13.11	17.00	2.00	20.25	18.75	0.88	6
16"	27.25	0.85	14.37	17.72	2.00	22.50	21.00	0.88	8
18"	29.25	1.00	15.95	19.10	3.15	24.75	23.25	0.88	8
20"	31.00	1.02	16.62	20.00	3.55	27.00	25.50	0.88	10
24"	42.00	1.02	20.67	23.31	3.98	31.50	30.00	0.88	12
30"	51.00	1.31	26.57	30.12	5.47	39.12	36.88	1.13	12
36"	60.00	1.45	30.71	34.41	6.61	46.00	43.75	1.13	16
42"	72.00	1.45	37.40	43.26	6.77	53.12	50.62	1.38	20
48"	84.00	1.45	42.32	47.33	7.36	60.00	57.50	1.38	24

(1) "H" represents the size of through holes, bolt size is 1/8" smaller
- Flange's drilling/bolting and bell end/gasket groove dimensions per AWWA C111

(2) "J" represents the total number through holes, per flange

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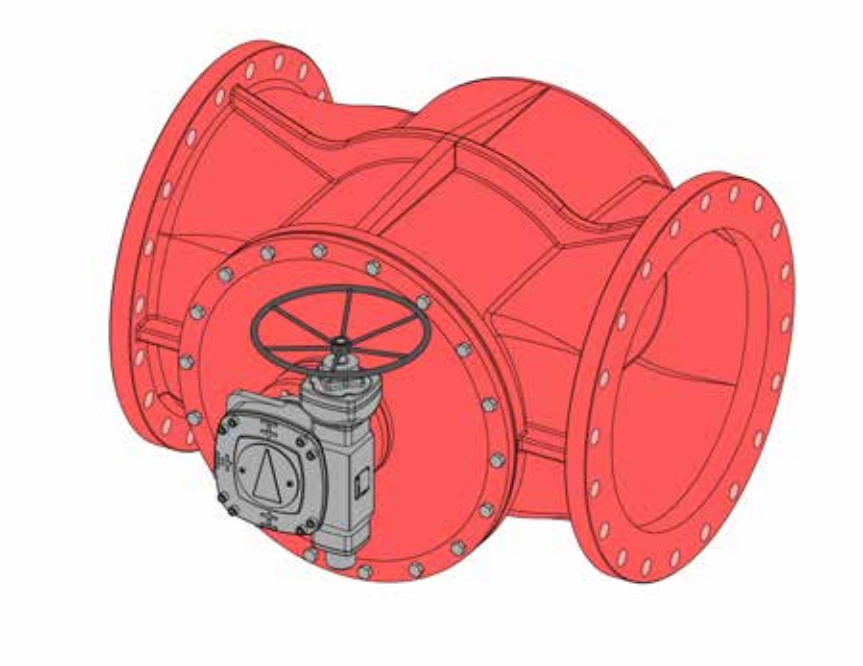
STANDARD OPERATOR TYPES

SINGLE STAGE WORM GEAR WITH SPUR SECONDARY GEAR



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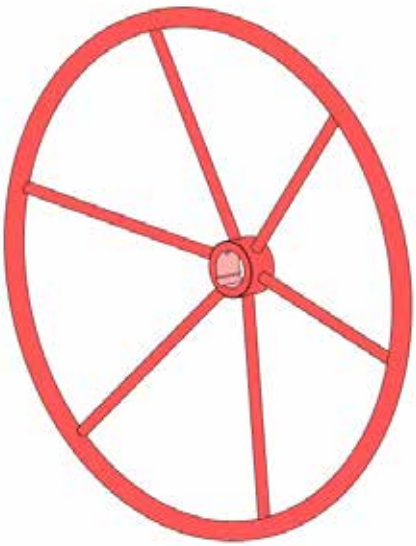
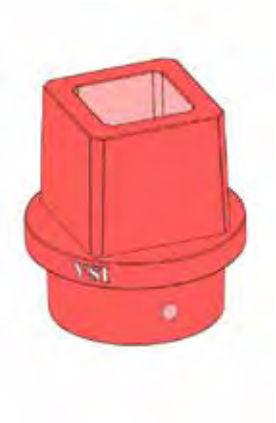
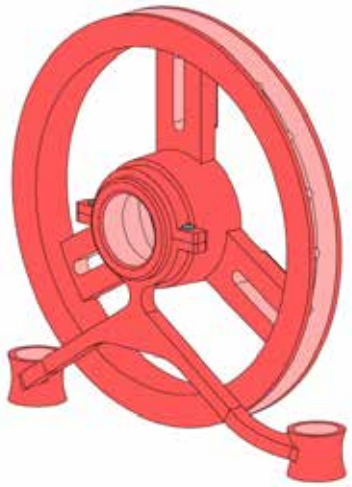
HANDWHEEL ✓



2-INCH NUT OP.



CHAINWHEEL



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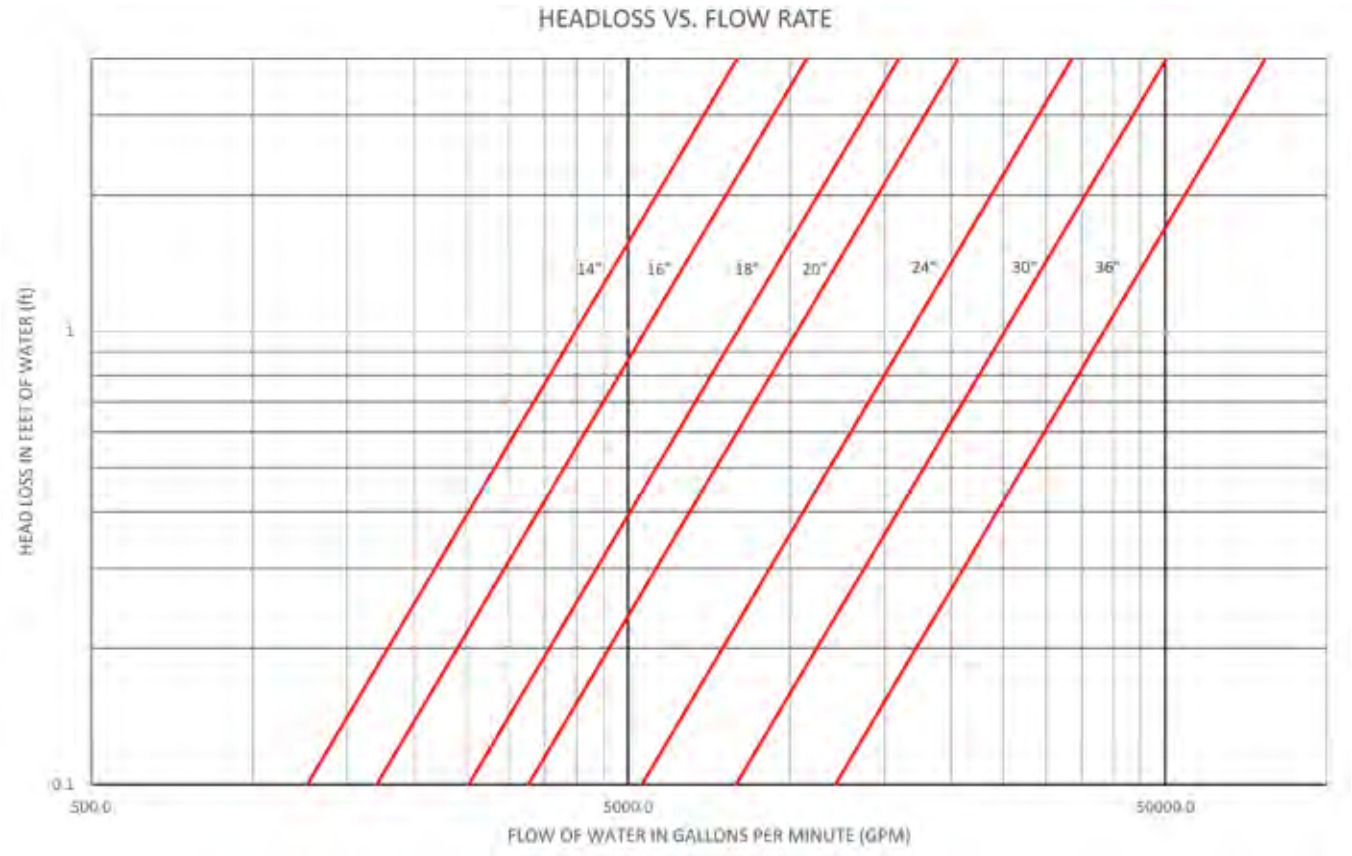
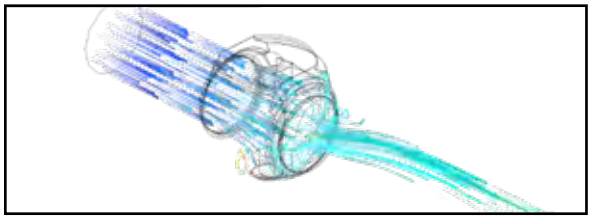
FLOW CHARACTERISTICS



SIZE	Cv	Kv
14"	6085	5257
16"	8199	7084
18"	12168	10513
20"	15710	13573
24"	25565	22088
30"	38315	33104
36"	58623	50650



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By Vincent Locigno, PE Date 12/9/24

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By Vincent Locigno, PE Date 12/9/24

PART NUMBER MATRIX

[ ][ ][ ] - [ ][ ][ ] - [ ][ ][ ] / [ ][ ] - [ ]

MODEL
PVIF- Series PVIF

SIZE CODE
14" - 14
..
72" - 72

CONNECTION
F -Flanged CL125/150*
2 -Flanged CL250/300
M-Mechanical Joint to AWWA C111*

BODY MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG MATERIAL
D-Ductile Iron*
C-Cast Iron
S-Cast Stainless 304[1]
3-Cast Stainless 316[1]

PLUG ENCAPSULATION
N-NBR (Buna-N)*
V-Viton (FKM)
C-Chloroprene/Neoprene
E-EPDM

IDENTIFIER

OPERATOR
H-Handwheel*
N-2-inch Nut Op.*
C-Chainwheel

OPERATOR ARRANGEMENT
W-Worm Gearbox*
B-Barestem w/ISO Mount
C-Custom/Project Specific

COATINGS
1-Fusion-Bonded Epoxy*
A-AWWA 2-Part Epoxy
2-Tnemec N140, ANSI/NSF 61
C-Custom/Project Specific

HARDWARE
S-Stainless Steel 304*
3-Stainless Steel 316

BEARING MATERIAL
3-Stainless 316 *
S-Stainless 304
P-PFTE
B-Bronze

* Standard Material
1 - May not be available for all configurations/sizes

EXAMPLE:
PVIF14F-DDN-3S1/WC-J
A 14" flanged rectangular full port plug valve with Ductile Iron body and plug, NBR plug encapsulation, SS316 bearings, SS304 hardware, Fusion bonded epoxy, worm gearbox with chainwheel operator.

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AWWA C517-09 Proof of Design Test Certification (36" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 36 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 05/31/2010

Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael. fan DATE: 05/31/2010

Michael Fan, Tianjin Flow Security Valve Co., Ltd

AWWA C517-09 Proof of Design Test Certification (42" Resilient Seated Eccentric Plug Valve)

ITEM TESTED:

VSI C517 Series Resilient Seated Eccentric Plug Valve - 42 inch size (150psi)
Ductile Iron Body and Bonnet
95% Nickel Bonded Seat
Ductile Iron Plug encapsulated in NBR

PURPOSE:

To perform the Proof of Design test requirements laid out in American Water Works Association (AWWA) Standard C517, Resilient Seated Cast Iron Eccentric Plug Valves.

RECORD OF TEST:

PLUG STRUCTURE TEST: The test valve was mounted to the test heads, and the valve put into the closed position. A pressure of 300 psi was then applied to the seat side of the plug for 60 seconds. The pressure was then released, and 300 psi was applied to the back side of the plug for 60 seconds. After the test pressure was released, the plug was inspected. There were no signs of deformation nor breakage found.

LIFE CYCLE TEST: The test valve was mounted to the test heads, and put into the closed position. A test pressure of 150 psi was applied to the seat side of the valve, and zero pressure on the back side. The valve was then operated from fully closed to fully open 5,000 times. The test took place over a period of 21 days. Upon completion of the life cycle test, a hydrostatic seat test was performed. A test pressure of 150 psi was applied to the seat side of the valve and held for 60 seconds. The test pressure was then relieved and applied to the back side of the plug for 60 seconds. There were no visible signs of leakage from the stem, seat, or any other pressure constraining joints.

POST TEST INSPECTION: Upon completion of all the tests, the valve was disassembled, and inspected. There were no signs of extensive wear, cracking, or bonding failure on the valves corrosion-resistant seating surfaces.

CERTIFICATION:

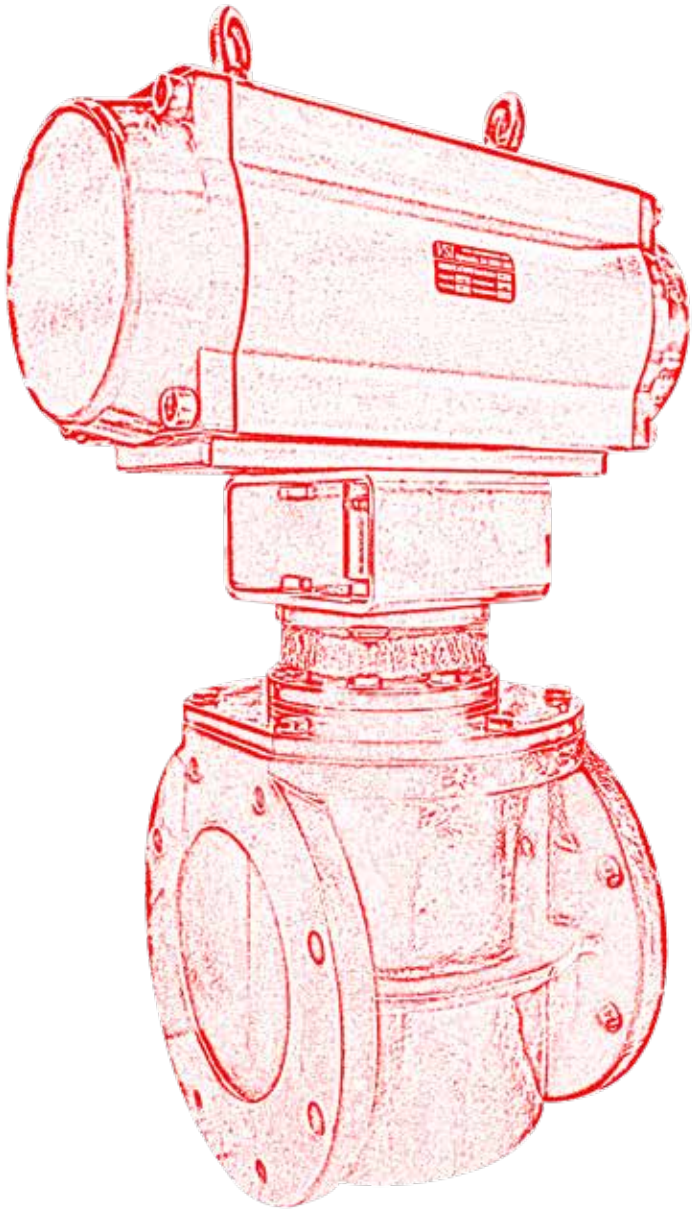
Based on the above test record, we here by certify that the test valve has successfully met all of the proof of design requirements in AWWA C517 and therefore qualifies similar valves in the Series C517 24 inch through 42 inch product line, with equal or lesser pressure classes to the same standards.

TESTED BY: Robert wang DATE: 06/07/2010

Robert Wang, Valve Solutions, Inc.

CERTIFIED BY: Michael. fan DATE: 06/07/2010

Michael Fan, Tianjin Flow Security Valve Co., Ltd



VSI Waterworks LLC
tel: 1 (770) 740 0800
fax: 1 (770) 740 8777
email: sales@vsiwaterworks.com

www.VSIWaterworks.com

VSI Waterworks

2″ - 72″ AWWA C517 ECCENTRIC PLUG VALVES

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

TABLE OF CONTENTS

SCOPE:

This installation, operation, and maintenance manual covers the VSI AWWA C517 resilient seated eccentric plug valve and should be read and understood thoroughly by all parties responsible for installation and continued use/maintenance.

WARNINGS:

The critical safety messages within this manual are labeled with an exclamation symbol within a red triangle flag. Care should be taken to thoroughly read and understand these warnings before proceeding to ensure no damage to equipment occurs. Failure to follow all warnings could result in injury or death.

WARNING!

All parties that take part in any installation or continued use/maintenance are cautioned to be vigilant in the possible exposure to media that is contained within the valve and its pipeline. Because of the vast range of media that could be within the valve, protection from pipeline media is not within the scope of this manual. All personnel should be aware of the media within the valve and take appropriate precautions when exposure is possible while installing or servicing the valve.

RECEIVING:

The VSI AWWA C517 Resilient Seated Eccentric Plug Valve is rugged and will be packaged to provide protection during most shipping incidents, however care should be taken to inspect the valve on receipt for any possible shipping damage. Inspection should be performed as soon as practical. Failure to promptly notify VSI of any shipping damage may invalidate any claim for shipping damage. Most shipments from VSI will be made FOB Origin, unless noted on the sales documents, the purchaser will own the freight while in transit, assumes all risk while in transit, and will be responsible for reporting shipping damage promptly to the carrier.

PARTS:

Order parts from your Valve Solutions Inc. sales representative. Please include the serial number, located on the valve tag, when ordering parts.

WARNING!

Read all applicable instructions and directions prior to any maintenance, installation or troubleshooting.

SECTION 1: GENERAL

Plug valves are a significant component of any water distribution system or treatment plant operation. Valve failure due to faulty installation, improper operation, or maintenance in such systems could result in damage, downtime, and costly repairs. In buried or underground installations, problems or malfunctions can result in extensive and costly unearthing operations to correct or eliminate the problem. Many problems with plug valves can be traced to improper installation, operation, or maintenance procedures.

SECTION 2: UNLOADING

Inspect valves on receipt for damage in shipment and conformance with quantity and description on the shipping notice and order. Unload valves carefully to the ground without dropping. On valves larger than 6 in. (150 mm), use forklifts or slings under skids. On smaller valves, do not lift valves with slings or chain around actuator or through waterway. Lift these valves with eyebolts or rods through flange holes or chain hooks at the ends of valve parts.

SECTION 3: STORAGE

If it is not practical to store the valve indoors, protect the valve and actuators from weather and the accumulation of dirt, rocks, and debris. When valves fitted with power actuators and controls are stored, energize electric actuators or otherwise protect electrical-control equipment to prevent corrosion of electrical contacts due to condensation resulting from temperature variation. Do not expose resilient seats to sunlight or ozone for any extended period. Also see the manufacturer's specific storage instructions.

SECTION 4: INSPECTION PRIOR TO INSTALLATION

Make sure valve ends and seats are clean. Check all exposed bolting for loosening in transit and handling and tighten to manufacturer's recommendations. Open and close the valve to make sure it operates properly and that stops or limit switches are correctly set so that the plug seats fully. Close the valve before installing. Check coatings for damage and repair as required.

SECTION 5: INSTALLATION

It is strongly recommended that instruction manuals supplied by the manufacturer be reviewed in detail before installing plug valves. Be sure the inspection, as described in Sec. 4, is carried out at the job site prior to installation.

Sec. 5.1 Handling

Handle valves carefully when positioning, avoiding contact or impact with other equipment or structures.

Sec. 5.2 Service Conditions

Valves are to be installed in accordance with the manufacturer's instructions.

5.2.1 Clean service. Eccentric plug valves used for fluids free of suspended solids may be installed in any orientation. If practical, the valves shall be installed so the pipe line pressure is exerting force on the plug from opposite the seat end of the valve (direct pressure).

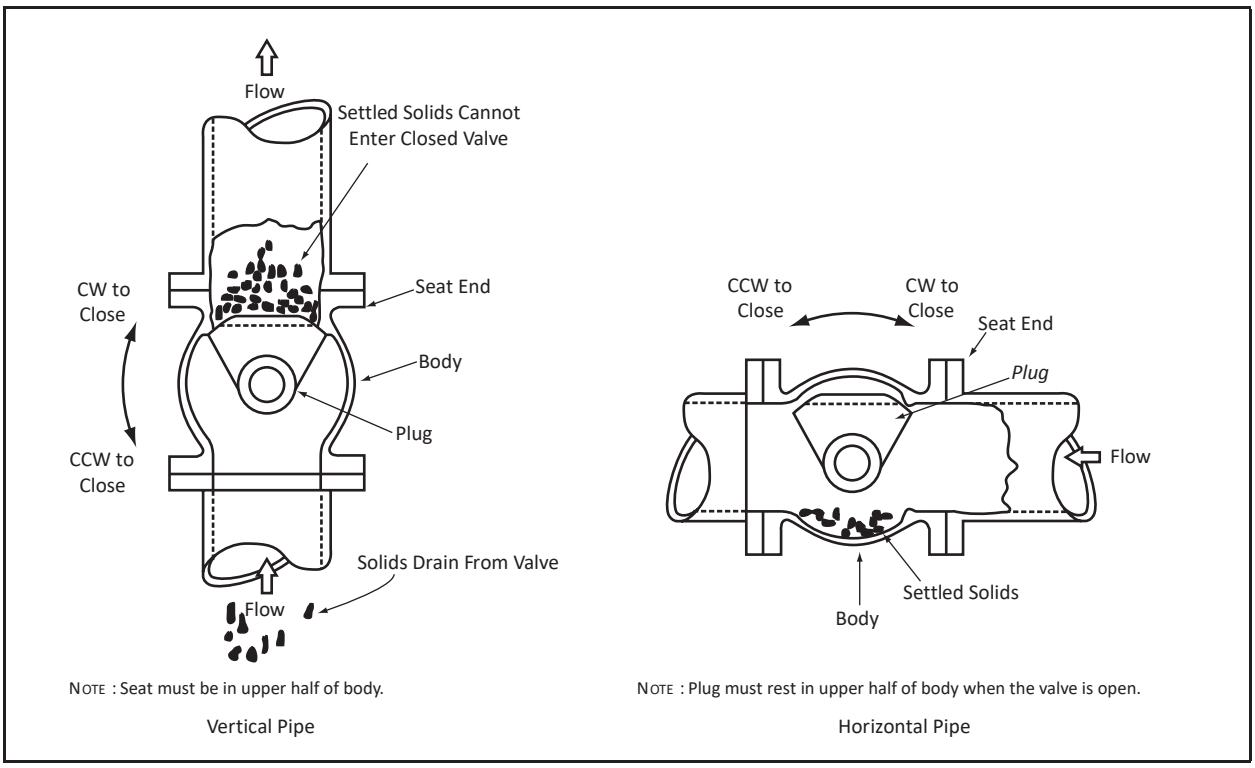


Image courtesy of Robert O'Neill

Figure 1. Recommended installation position for suspended solids service

5.2.2 Other service. Eccentric plug valves used for fluids containing suspended solids should be installed as shown in Figure 1. When installed in horizontal pipes, the axis of the plug is to be horizontal, with flow entering the valve body from the seat end. The plug is to rotate counterclockwise to open, keeping the plug in the upper half of the body. When installed in vertical pipes, the seat end shall be oriented as shown in Figure A-1.

Sec. 5.3 Buried Installations

When practical, valves in buried installations should be located in unpaved areas.

Sec. 5.4 Cleaning

Be sure valve interiors, ends, and adjacent piping are cleaned of foreign material prior to making up valve-to-pipe joint connection.

Sec. 5.5 Pipe Ends

Prepare pipe ends and install valves in accordance with the pipe manufacturer's instructions for the joint used. Do not deflect the pipe-valve joint. Do not use a valve as a jack to pull pipe into alignment. In plant piping, the valve shall be installed so as to minimize the bending stresses in the valve end connection with pipe loading.

Sec. 5.6 Installation

For mechanical-joint end valves, lubrication and additional cleaning should be provided by brushing both the gasket and the plain end of the mating pipe with soapy water or pipe lubricant just before slipping the gasket onto the plain end and assembling the joint. When tightening bolts, it is essential that the gland be brought up toward the bell flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This may be achieved by first partially tightening the bottom bolt, then the top bolt, next the bolts at either side, and finally, the remaining bolts. This process should be repeated until all bolts are fully torqued.

Sec. 5.7 Valve Boxes

Buried valves installed with valve boxes shall be installed so that the valve box does not transmit shock or stress to the valve actuator as a result of shifting soil or traffic load.

Sec. 5.8 Valves Installed in Vaults

When valves are installed in vaults, the vault design shall provide space for removal of the valve-actuator assembly for purposes of repair. Consideration should be given to the possible entry of groundwater or surface water and to the need to provide for disposal thereof. The valve operating nut should be accessible from the top opening of the vault with a tee wrench.

SECTION 6: TESTING

When resilient-seated cast-iron eccentric plug valves are used to isolate sections of a pipeline for testing, it is important to realize that eccentric plug valves are typically factory adjusted to hold pressure only up to the specified shutoff pressure in the direct pressure direction. Prior to any field pressure test under conditions different from above, it is recommended that the valve manufacturer be contacted for approval. Otherwise, test pressures above the valve design pressure may cause leakage, permanent damage, or structural failure to the valve and injury or death to the operator.

Sec. 6.1 Leaks

In order to prevent the loss of time due to searching for leaks, it is recommended, where feasible, that excavations for buried valves not be backfilled until after pressure tests have been completed.

Sec. 6.2 Seat Leakage

Seat leakage can occur from foreign material in the line. If this occurs, open the valve 5° to

10° to obtain high-velocity flushing action, then close. Repeat several times to clear seats for tight shutoff. Do not force valves for a tighter seal. Plug valves are provided with an externally adjustable closed stop on the actuator to provide a tighter seal. See the instruction manual provided by the manufacturer for the correct adjustment procedure.

SECTION 7: RECORDS

On completion of installation, the valve location, size, make, type, date of installation, number of turns to open, direction of opening, and any other information deemed pertinent should be entered on the owner's permanent records.

SECTION 8: OPERATION

Sec. 8.1 Design Pressure

Do not permit the use or operation of any valve at pressures above the rated design pressure of the valve.

Sec. 8.2 Input Torque

Do not exceed 250 ft-lb (339 N·m) input torque on actuators with wrench nuts and do not exceed 200 lb (890 N) rim pull for handwheels or chainwheels. If portable auxiliary actuators are used, size the actuator or use a torque-limiting device to prevent application of torque exceeding 250 ft-lb (339 N·m). If an oversize actuator with no means of limiting torque is used, stop the actuator before the valve is fully opened or closed against stops and complete the operation manually. Be sure to check the actuator directional switch against the direction indicated on the wrench nut, handwheel, or records before applying opening or closing torque.

Sec. A.8.3 Sticking

If a valve is stuck in some intermediate position between open and closed, check first for jamming in the actuator. If nothing is found, the interference is inside the valve. In this case, do not attempt to force the plug open or closed, because excessive torque in this position can severely damage internal parts.

SECTION 9: MAINTENANCE

Maintenance of resilient-seated plug valves by the owner is generally limited to actuators and shaft seals. Unless the owner has skilled personnel and proper equipment, any major internal problem will probably require removal of the valve from the line and return to the manufacturer for repair.

Sec. 9.1 Normal Maintenance

Normal maintenance is in the area of shaft seals and actuators. Seal leakage, broken parts, hard operation, and, in some cases, seat leakage should be corrected by a repair crew as soon as possible after a defect is reported.

Sec. 9.2 Valve Exercising

Each valve should be operated through a full cycle and returned to its normal position on a time schedule that is designed to prevent a buildup of lubrication or other deposits that could render the valve inoperable or prevent a tight shutoff. The interval of time between operations of valves in critical locations or valves subjected to severe operating conditions should be shorter than for other less important installations, but it can be whatever time period is found to be satisfactory based on local experience. For gear operators, the number of turns required to complete the operation cycle should be recorded and compared with permanent installation records to ensure full plug travel.

Sec. 9.3 Field Repairs

If repairs are to be made in the field, repair crews should take a full complement of spare parts to the job site. Be sure to review the valve manufacturer's instructions prior to any repair work.

Sec. 9.4 Isolation

Provision should be made to stop line flow and isolate the valve from line pressure prior to performing any corrective maintenance.

Sec. 9.5 Repair Testing

After completing repairs, cycle the valve through one complete operating cycle and, after line pressure has been restored, inspect for leakage.

Sec. 9.6 Valve Removal

If major repairs require the removal of the valve for repair, be sure to notify interested parties in the water department and fire department that the valve and line are out of service. On completion of repair and reinstallation, notify the same personnel of the return of the valve and line to service.

SECTION 10: TROUBLESHOOTING

Problem	Cause	Correction
The operator or shaft will not turn	Interference between valve box and shaft key	Reposition valve box if necessary
	Uneven tightening of gland plate bolts	Loosen then retighten bolts and nuts evenly
	Corrosion or debris between the stem and packing	Consult VSI for disassembly procedures and clean stem, stuffing, and stem nut
	Debris blocking movement of plug	Consult VSI for disassembly procedures and clean out debris
	RARE: Seized worm gear	Inspect and replace if necessary
Leakage between the body and cover of valve	Bolts and nuts may be loose or tightened irregularly	Loosen then retighten bolts and nuts evenly
	Bonnet o-ring may be damaged	Consult VSI for disassembly procedures and replace o-ring
	RARE: Crack in body or bonnet	Inspect and replace if necessary
Leakage at the stem	Damaged stuffing	Consult VSI for disassembly procedures and replace damaged parts if needed
	Loose packing	Tighten the packing gland nuts until leakage stops or replace packing
Valve fails pressure test or a leak present in the line	Valve is not completely closed	Close valve completely
	Debris trapped between plug and seat	Throttle valve from fully closed to approximately 25% open several times under line flow to clear debris. If unsuccessful follow instructions for disassembly and remove debris
	Rubber plug or metal seat is damaged	Consult VSI for disassembly procedures to inspect for damage. If present replace damaged parts.

Original Proposal with Comments

DMSI DAVID MANCINI & SONS, INC.

2601 Wiles Rd Pompano Beach Florida 33073
PH: (954) 977-3556 FAX: (954) 944-2040

Mark-ups are based on total amounts that include taxes

CONTRACT: P12384
PROJECT: Coral Ridge Force Main Replacement
CONTRACTOR: David Mancini & Sons, Inc. (DMSI)
DATE: 1/23/2025
DESCRIPTION: Additional cost related to Repump B connection with 36Inch above ground bypass no includeded on the scope of work on the DCP.

SUMMARY OF DIRECT COSTS

1	TOTAL LABOR		$ 85,527.96
2	TOTAL EQUIPMENT		$ 107,829.75
3	TOTAL MATERIAL		$ 445,745.94
4	TOTAL SUBCONTRACTORS		$ 126,980.61
	SUBTOTAL		**$ 766,084.26**
5	CONTRACTOR'S MARKUP	**8.00%**	**$ 61,286.74**
7	**GENERAL CONDITIONS [Items (3+4+5)/Construction Cost]**	**5.35%**	**$ 40,985.51**
	Total Direct Cost		**$ 868,356.51**

SUMMARY OF TIME IMPACT (REQUEST FOR ADDITIONAL TIME)

		DAYS	*0*
	ADDITIONAL TIME FOR NEW SCOPE OF WORK	15	*15*
ADDITIONAL TIME REQUESTED			***15***

Submitted by:

Alejandra Suarez
Assistant Project Manager
David Mancini and Sons, Inc

Approved by:

Cyrill Garcia
Project Manager
City of Fort Lauderdale

GENERAL COMMENTS

1. Provide layout/sketch of the new work (including material) clearly showing the difference from the original scope. Layout and location of proposed works needs to be approved by the City.
2. Provide a description of the work included in this proposal.

LABOR COSTS

SUMMARY - LABOR COSTS	
SUPERVISION	$ 20,175.00
CREW	$ 28,545.00
LABOR BURDEN (75.55%)	$ 36,807.96
TOTAL LABOR	**$ 85,527.96**

LABOR BURDEN MULTIPLIER (LBM)	58.20%
Social Security Contributions & Excise and Payroll	6.20%
Medicate Rate	1.45%
Unemployment	5.49%
Workmens Compensation	7.16%
Health Benefits	14.20%
Retirement Benefits	23.70%
VACATION MULTIPLIER (VM)	**13.00%**
Sick Leave (1 week out of 52)	
Vacation (2 weeks out of 52)	
Holiday Pay (1 week out of 52)	
Insurance Schedule	**4.35%**
General Liability Insurance	4.35%

Total Labor Burden Rate	75.55%

SUPERVISION	Hourly Rate (Salary)	Hourly Overtime Rate	Hours (Salary)	Hours Overtime	Total Cost
Project Manager	$ 60.00		30.00		$ 1,800.00
Superintendent	$ 55.00		75.00		$ 4,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
Crew Foreman	$ 47.50		150.00		$ 7,125.00
TOTAL SUPERVISION					**$ 20,175.00**

MAINLINE CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					**$ 28,545.00**

What role will the support crew provide?

SUPPORT CREW - DMSI	Hourly Rate	Hourly Overtime Rate	Hours	Hours Overtime	Total Cost
Excavator Operator	$ 30.00	$ 45.00	120.00	30.00	$ 4,950.00
Loader Operator	$ 27.00	$ 40.50	120.00	30.00	$ 4,455.00
Pipe Layer	$ 28.00	$ 42.00	120.00	30.00	$ 4,620.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Skilled Laborer	$ 24.00	$ 36.00	120.00	30.00	$ 3,960.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
Laborer	$ 20.00	$ 30.00	120.00	30.00	$ 3,300.00
TOTAL CREW					**$ 28,545.00**

Please provide an expected schedule that details expected overtime.

Why are hourly rates used for two weeks of work with overtime? Provide weekly or monthly rate for comparison

Provide justification for this equipment

DMSI DAVID MANCINI & SONS, INC.

EQUIPMENT, MATERIAL & SUBCONTRACTOR COSTS

EQUIPMENT COSTS - RENTAL RATE BLUE BOOK

Skid- Steer	Working Rate	Working Hours	Total Cost
CAT 272D	$ 137.96	150.00	$ 20,694.00
Loaders			
CAT 938M	$ 85.19	150.00	$ 12,778.50
Excavators			
CAT 308	$ 103.43	150.00	$ 15,514.50
CAT 325	$ 153.18	150.00	$ 22,977.00
Trucks			
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 61.63	150.00	$ 9,244.50
Pick-Up Truck - Chevy Silverado 2500 - Foreman	$ 61.63	150.00	$ 9,244.50
Pick-Up Truck - Chevy Silverado 2500 - Superindendant	$ 61.63	75.00	$ 4,622.25
Miscellaneous Equipment			
Water Pump	$ 9.83	150.00	$ 1,474.50
Steel Plates - 8'x20' (6 On Site $60 per plate PER DAY)	$ 360.00	15.00	$ 5,400.00
Air Compressor Sullair 375	$ 392.00	15.00	$ 5,880.00
TOTAL EQUIPMENT			***$ 107,829.75***

Provide back up for material cost

MATERIAL COSTS

Material Description	QTY	Unit	Unit Cost	Total Cost
36" FLGXPE DIP 6'	1	EA	$ 9,988.24	$ 9,988.24
36" FLGXPE DIP 4'	1	EA	$ 7,641.18	$ 7,641.18
36" FLGXFLG DIP 2'	2	EA	$ 8,089.41	$ 16,178.82
36" MEGA FLANGE REST ADPT	1	EA	$ 3,708.38	$ 3,708.38
36" FLG 90 BEND	2	EA	$ 14,002.40	$ 28,004.80
36" FLG ACC KIT NEOPRENE	10	EA	$ 1,158.83	$ 11,588.30
36" FLG PLUG VALVE W/GEAR	1	EA	$ 49,916.85	$ 49,916.85
36" FLG CHECK VALVE	1	EA	$ 48,348.31	$ 48,348.31
2" BALL CORP	1	EA	$ 315.00	$ 315.00
2" X 4" SS NIPPLE	1	EA	$ 14.00	$ 14.00
36"X2" DBL STRP SS	1	EA	$ 720.00	$ 720.00
2" SEWAGE AIR RELEASE VLV	1	EA	$ 1,040.00	$ 1,040.00
42" MJ LONG SLEEVE	1	EA	$ 8,338.99	$ 8,338.99
42" MEGALUG DIP W/ACC	10	EA	$ 2,417.08	$ 24,170.80
42" MJ 45 BEND	1	EA	$ 11,719.18	$ 11,719.18
42" X 36" MJ TEE	1	EA	$ 19,636.05	$ 19,636.05
36" MEGALUG DIP W/ACC	5	EA	$ 1,693.30	$ 8,466.50
36" MJ 90 BEND	1	EA	$ 9,596.14	$ 9,596.14
36" MJ PLUG VALVE	1	EA	$ 50,939.33	$ 50,939.33
42" MJ PLUG VALVE	1	EA	$ 103,264.00	$ 103,264.00
72" ARV MANHOLE / TOP SLAB	1	EA	$ 2,648.00	$ 2,648.00
690-AH-M PL R/C	1	EA	$ 4,225.00	$ 4,225.00
SURTAX			$ 50.00	$ 50.00
SUBTOTAL				$ 420,467.87
TAXES				$ 25,278.07
TOTAL MATERIAL				**$ 445,745.94**

Provide back up for subs

SUBCONTRACTORS COSTS

Description	QTY	Unit	Unit Cost	Total Cost
CMA	1	LS	$ 62,400.00	$ 62,400.00
A&M Brothers Concrete	1	LS	$ 7,600.00	$ 7,600.00
SUPERMIX Flowable Fill 18 CY	1	LS	$ 3,228.40	$ 3,228.40
Rangeline (IF NEEDED)	1	LS	$ 50,096.00	$ 50,096.00
MWI PUMPS (IF NEEDED)	1	LS	$ 3,656.21	$ 3,656.21
TOTAL SUBCONTRACTOR				***$ 126,980.61***

Hazen and Sawyer
498 Seventh Avenue, 11th Floor
New York, New York 10018
Phone: (212) 539-7011

Project: 43194-023/024 - P12383 & 12384, Design Build Services for NE 25th Avenue 24-Inch Force Main Replacement, and NE 38th Street 42-Inch FM and NE 19th Avenue 24-Inch FM Replacement
4000 NE 25 AVE
Fort Lauderdale, Florida 33308

RFI #5 - Repump Station B Connection

DATE INITIATED:	08/21/ 2024	**STATUS:**	Closed on 09/20/24
LOCATION:		**DUE DATE:**	08/30/2024
COST CODE:		**REFERENCE:**	
COST IMPACT:		**SCHEDULE IMPACT:**	
DRAWING NUMBER:		**SPEC SECTION:**	
LINKED DRAWINGS:			
RECEIVED FROM:	Vincent Locigno **(Chen Moore & Associates)**		

COPIES TO:
Vanessa Davis **(Jacobs Engineering)**, Diana Francois **(Jacobs)**, Peggy Jaime **(Hazen and Sawyer - Coral Gables)**, Criztol Lopez **(WSP)**, Enrique Vadiveloo **(Hazen and Sawyer - Hollywood)**

Question

Received on 8/16/2023
See attached.

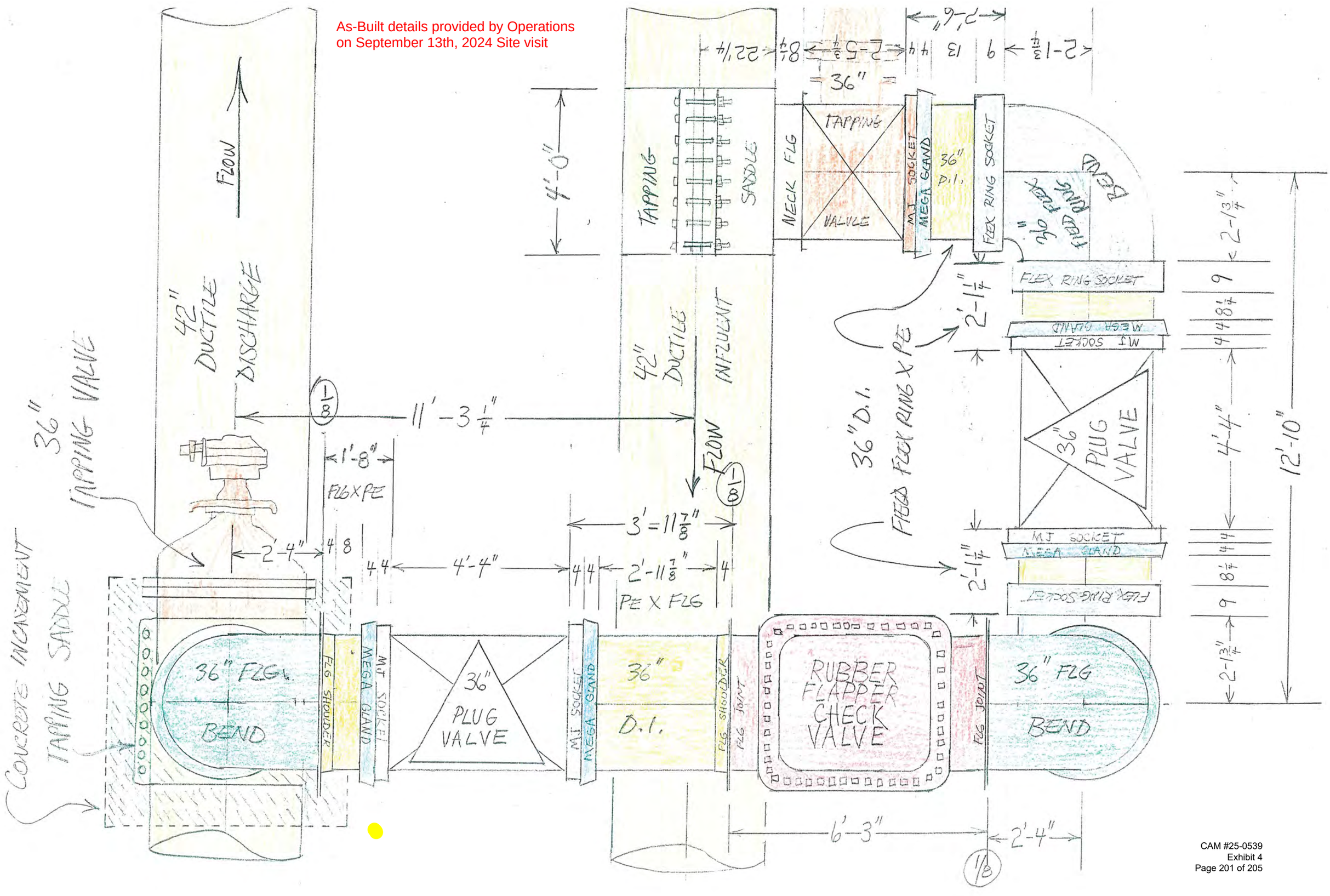
Attachments:
P12384 - RFI Repump B Conenction.pdf

Official Response: **Diana Francois (Jacobs)** *responded on Friday, September 20th, 2024 at 3:19PM EDT*
Per meeting held at the Repump B Station site on September 13, 2024, please provide a quote for the additional work related to the installing a new permanent bypass.

Attachments:

BY **DATE** **COPIES TO**

As-Built details provided by Operations
on September 13th, 2024 Site visit



500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
Office: +1 (954) 730-0707

chen moore and associates

August 16th, 2024

Cyrill Garcia
Project Manager II
City of Fort Lauderdale
Public Works – Engineering
101 NE 3rd Ave, Suite 2100
Fort Lauderdale, Florida 33301

Re: P12384 Phase 4 – Request for Information for Connections

To Mr. Garcia,

David Mancini and Sons, Inc. (DMSI) began exploratory efforts at the City of Fort Lauderdale Repump B pump station to locate existing utilities and plan for the proposed connection to the existing 42-inch force main, as shown in the Design Criteria Package (DCP). During the field investigation, a valve (shown in Image 1 and labeled as valve 1 on PDF markup) was located on the south side of the manifold system and this valve appears to be currently closed. On the east side of the manifold system, there is a similar valve configuration (shown in image 2 and labeled as valve 2 on PDF markup), which was found to be open during the investigation.

Chen Moore and Associates (CMA) believes this valve configuration allows for the flow at Repump B station to be diverted in case of emergency or maintenance by simply operating these two valves. Therefore, valve 1 on the south side should remain closed at all times and only be operated when necessary to bypass the station by closing valve 2. The DCP shows the proposed connection on the south side of valve 1. If the connection were performed at this location, the flow from the new 42-inch main would not pump through the repump station but would instead divert the new 42-inch flow directly into the existing 36-inch/42-inch effluent main leading out to GTL.

The above scenario is based off field investigation and CMA would like clarification on where the connection should be made and weather the goal of this project is to route the flow from the proposed 42-inch FM through repump B. Also, please clarify the end result of this project and weather it is to completely isolate and place out of service the existing 42-inch FM, if so a cap/plug/or permanent separation needs to be performed near the proposed connection point.

Should you have any questions, please do not hesitate to contact me at my cell phone at +1 (561) 926-2596 or send me an electronic message at **vlocigno@chenmoore.com**.

Respectfully submitted,

Vincent Locigno

Vincent Locigno, PE
Project Engineer

500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
Office: +1 (954) 730-0707

Figure 1: Existing Valve on south side of manifold appears to be in closed position. Labeled as valve 1 in PDF markup.

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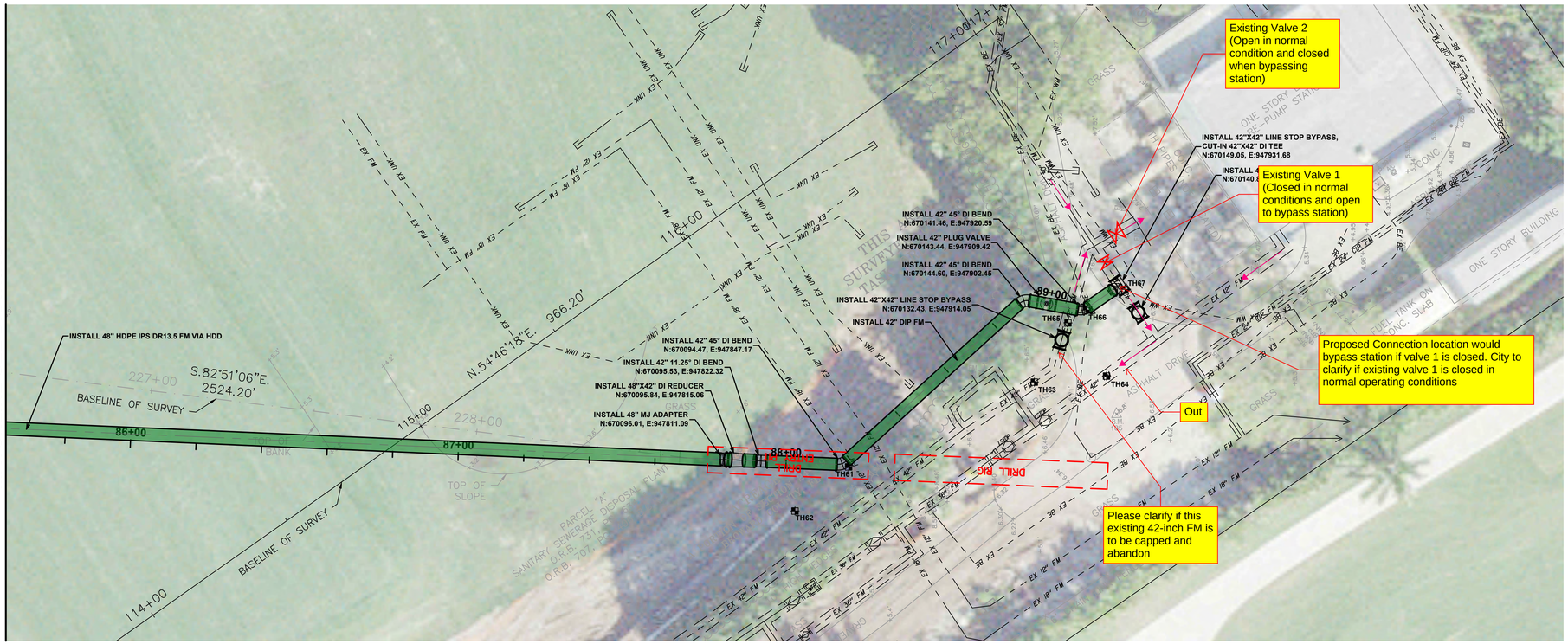
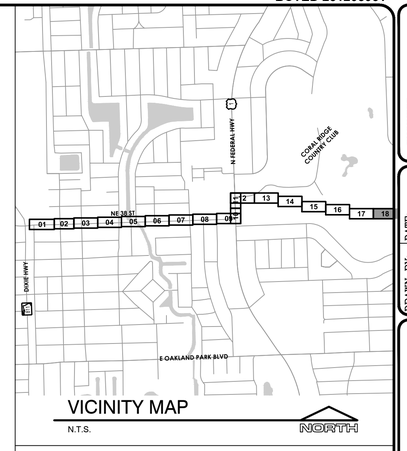
Figure 2: Existing valve on east side of manifold system and open in normal operating conditions letting flow into Repump B. Labeled as valve 2 in PDF markup.

BCTED 231205061

MATCHLINE SEE DRAWING NO. FM17





VICINITY MAP

N.T.S.

NORTH

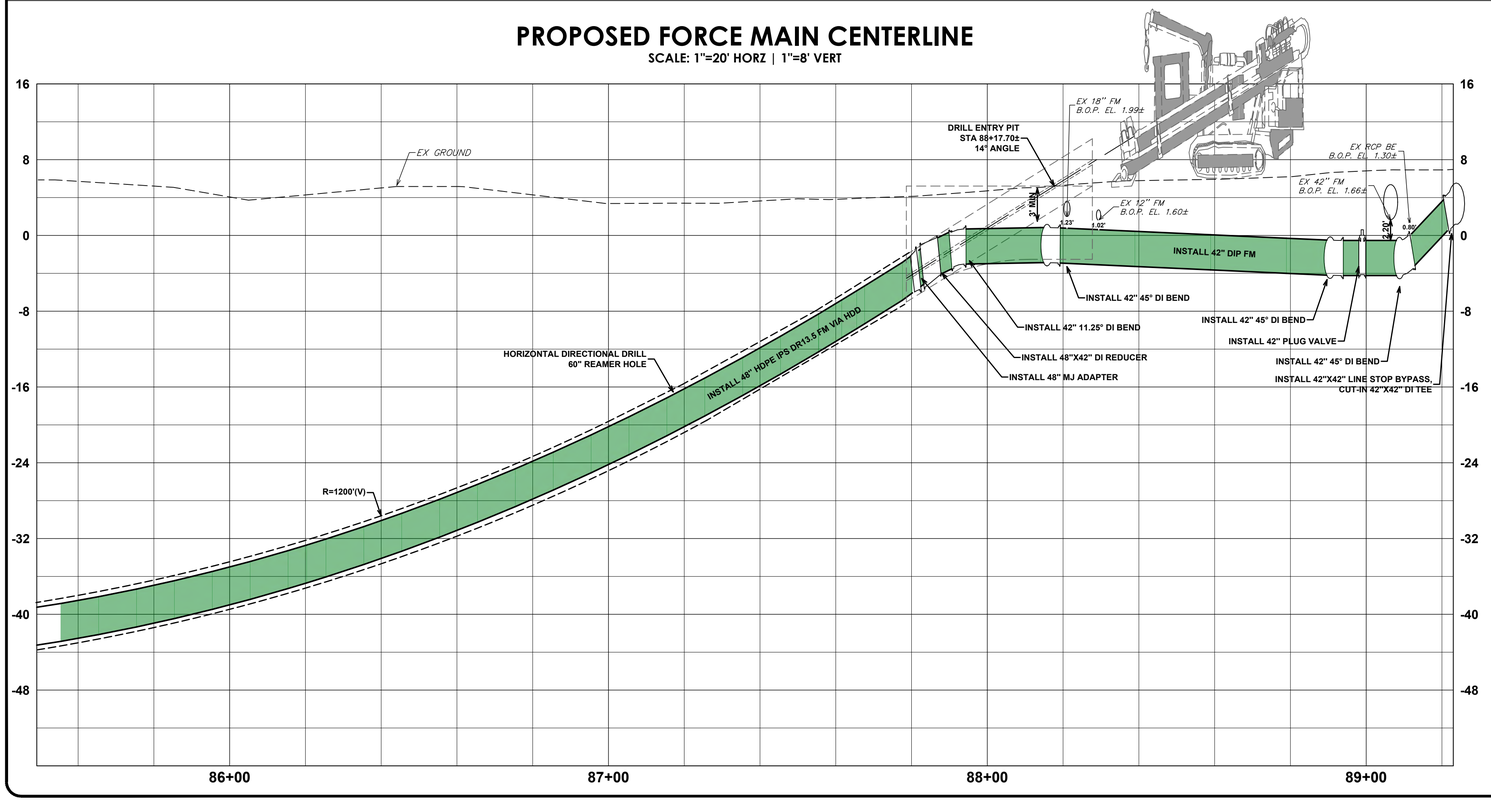
0 20' 40'

NOTES:

1. CONTRACTOR MUST EXERCISE EXTREME CARE TO AVOID DAMAGE OR DISRUPTIONS TO ANY EXISTING UTILITIES. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BEFORE STARTING CONSTRUCTION. CONSTRUCTION SHALL PROTECT AND SUPPORT ALL EXISTING STRUCTURES AFFECTED BY THE PROJECT. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN DISCREPANCY WITH THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, IN WRITING, BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR TO USE RESTRAINED JOINTS FOR ALL PROPOSED CONNECTIONS.
3. A HORIZONTAL SEPARATION OF 6' MINIMUM SHALL ALWAYS BE ENFORCED WHENEVER THE FORCEMAIN IS LESS THAN 18" BELOW THE WATERMAIN.
4. CONTRACTOR TO PROVIDE PEDESTRIAN ACCESS TO ALL PROPERTIES AT ALL TIMES.
5. OPEN CUT AREAS MAY BE INSTALLED WITH HDPE OR DIP AT THE CONTRACTORS DISCRETION.
6. ALL DIP TO BE RESTRAINED.
7. MINIMUM PIPE COVER IS 36" FOR PVC AND 30" FOR DIP.
8. HDPE PIPE THICKNESS (DR) AND CALCULATIONS PROVIDED BY OTHERS.
9. ALL HDDS TO HAVE WATER BALLAST PRIOR TO INSTALL/PULL.

PROPOSED FORCE MAIN CENTERLINE

SCALE: 1"=20' HORZ | 1"=8' VERT



VACUUM TEST HOLE DATA TABLE

TH#	GRND EL	COVER	ELEV TOP	DIRECTION	DESCRIPTION
61	5.47	5.83	-0.36	NW - SE	12" SAN FM (UNABLE TO OBTAIN SIZE)
62	5.38	8.12	-2.74	NW - SE	UNABLE TO OBTAIN SIZE
63	6.77	1.49	5.28	NE - SW	42" STEEL FORCE MAIN
64	6.88	1.11	5.77	W - E	42" STEEL FORCE MAIN
65	6.95	1.58	5.37	N - S	42" STEEL FORCE MAIN
66	6.98	5.41	1.57	N - S	CONCRETE ELECTRIC
67	7.18	1.75	5.43	NW - SE	42" STEEL FM

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

Check positive response codes before you dig!

cma chen moore and associates

500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

DESIGN-BUILDER

DMSI DAVID MANCINI & SONS, INC.
Pompano Office:
2601 Wiles Road
Pompano Beach, FL 33073
954.977.3556
www.dmsi.co
CUC 044220

90% PROGRESS SET

ENGINEER:
VINCENT LOCIGNO, P.E.
REG. No. 92216
DATE: ----

TEL: 954.730.0707
FAX: 954.730.2030

DRAWN BY: CV
DESIGNED BY: ----
CHECKED BY: ----
DATE: 07/31/2024
SCALE: 1" = 20'
FIELD BOOK: ----

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12384
NE 38TH ST 42-INCH FORCE MAIN
AND NE 19TH AVE 24-INCH FORCE
MAIN REPLACEMENTS
FORCE MAIN PLAN AND PROFILE

SHEET NO. FM18
SHT # 23
TOTAL: 55
CAD FILE: 12384-MULTI-PLPR-38
DRAWING FILE NO. 4