

RESOLUTION NO. 09-192

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA, APPROVING WORK ORDER #6 UNDER THE GENERAL SERVICES CONTRACT WITH CHARLEY TOPPINO & SONS FOR LABOR, MATERIALS AND EQUIPMENT FOR THE INSTALLATION OF SEWER AND WATER INFRASTRUCTURE AT THE GARRISON BIGHT MODULAR BATHROOMS IN AN AMOUNT NOT TO EXCEED \$109,067.10; PROVIDING FOR AN EFFECTIVE DATE

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF KEY WEST, FLORIDA, AS FOLLOWS:

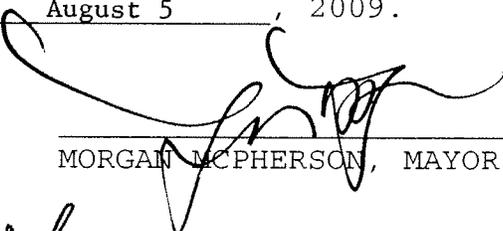
Section 1: That the attached work order 6 is approved in an amount not to exceed \$109,067.10

Section 2: That this Resolution shall go into effect immediately upon its passage and adoption and authentication by the signature of the presiding officer and the Clerk of the Commission.

Passed and adopted by the City Commission at a meeting held this 4th day of August, 2009.

Authenticated by the presiding officer and Clerk of the Commission on August 5, 2009.

Filed with the Clerk August 5, 2009.


MORGAN MCPHERSON, MAYOR

ATTEST:


CHERYL SMITH, CITY CLERK

EXECUTIVE SUMMARY

Date: July 23, 2009

TO: Jim Scholl

FROM: Gary Bowman

RE: Approve Work Order # 6 of the General Services Contract with Charley Toppino & Sons for the installation of sewer and water at the Garrison Bight Modular Bathrooms in the amount of \$109,067.10

Action Statement

A resolution approving Work Order # 6 for the installation of utility infrastructure for the Garrison Bight modular bathrooms in the amount of \$109,067.10 to Charley Toppino & Sons, Inc. under the General Services Contract (GSC)

Strategic Plan Initiatives

We seek to establish and maintain public infrastructure in a cost effective manner to serve the needs of our customers and visitors and protect our local environment. This project is for the installation of sewer and water for the bathrooms

Background

The City of Key West maintains a General Services Contract which is competitively bid for the purpose of performing emergency work to the utilities, rights-of-way and beaches and for planned work that is more economically performed through the contract than designing and bidding separately. Charley Toppino & Sons (CTS) was awarded the contract by resolution # 07-229.

Project Issue

The City is installing a modular restroom facility at the Garrison Bight for the dingy docks. Utility services need to be installed from the FCAA and sewer distribution lines to the meter / cleanout. This work order will install the utilities and other infrastructure needed to complete the project.

Financial Issues

Garrison Bight budgeted \$400,000 in account # 413-7555-575.62 for FY 08-09 for the completion of the Dinghy Dock bathrooms and associated infrastructure. Currently there is a balance of \$217,260 in acct 413-7555-575.62 to complete the remaining work.

Options

- 1.) Approve Work Order #6 to CTS in the amount of \$109,067.10 for Garrison Bight Bathroom infrastructure; doing so will ensure the bathrooms will be completed within budget and will be fully operational.
- 2.) Do not approve the agreement and go out to bid for the installation of sewer & water at the restrooms. This option will cost in staff time. Bid prices may be higher and bidding will delay the completion of the project by 3 to 4 months.

Recommendations

Approve Work Order # 6 of the General Services Contract with Charley Toppino & Sons for the installation of sewer and water at the Garrison Bight Modular Bathrooms in the amount of \$109,067.10.

CONSTRUCTION CONTRACTOR
WORK ORDER

Contract Title: GENERAL SERVICES CONTRACT 2007

Work Order Title: **Work Order # 6, Install Sewer & Water Infrastructure and ADA sidewalk ramp for Garrison Bight Bathrooms in an amount not to exceed \$109,067.10**

Project # GB 0701

CONTRACT NUMBER:GN 0708

This Work Order is an authorization to proceed with the work described herein under the General Services Contract between the City of Key West and Charley Toppino & Sons Inc. dated August 27,2007. All work shall be executed under the provisions of the General Services Contract except as adjusted within this work order.

The Scope of Work is described as follows:

Provide all labor, materials & equipment to install sewer & water infrastructure water booster, pump station and ADA sidewalk ramp for the Garrison Bight Modular Bathrooms according to the attached plan.

CONTRACTOR'S DECLARATION AND UNDERSTANDING

The contractor declares that he has carefully examined the Contract Documents, including this Work Order, that he has personally inspected the potential sites and the overall project area in general, that he has satisfied himself as to the quantities that may be involved, including materials and equipment, and conditions of work that may be involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate that general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Work Order is made according to the provisions and under the terms of the General Services Contract Documents between the City of Key West and Charley Toppino & Sons Inc. dated April 2007 which this Work Order is hereby made a part of.

START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The bidder further agrees to begin work as directed by city staff and to complete the construction, in all respects for this work order, within 15 calendar days.

UNIT PRICE ITEMS

The contractor further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. The amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

Unit prices for items already established in the General Services Contract shall be identical to those provided in this Work Order.

The cost of items not established in the General Services Contract shall be established according to the Contract Documents including Section 01005, HOURLY RATES FOR PERSONNEL AND EQUIPMENT. The contractor shall provide with this Work Order submittal a complete breakdown of the costs for labor, equipment, and material for these supplemental work items. Unit prices for labor and equipment shall be identical to those established in the General Services Contract, where applicable. Costs for labor, equipment, and materials not established in the General Utility Services Contract shall be supported by documentation submitted with this Work Order.

Payment for materials and equipment authorized by the ENGINEER in a written Work Order but not listed in the above Proposal will be provided at the suppliers invoice plus shipping plus 25 % for overhead and profit.

SUBCONTRACTORS

The Contractor further certifies that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work:

Portion of Work: _____

Name GARY the Plumber _____

Street _____ City _____ State _____ Zip _____

Portion of Work: _____

Name _____

Street _____ City _____ State _____ Zip _____

Portion of Work: _____

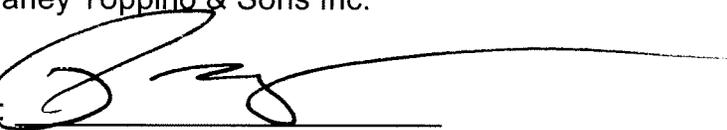
Name _____

Street _____ City _____ State _____ Zip _____

ACCEPTANCE

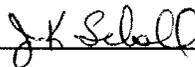
By signature, the parties each accept the provisions of this work order and authorize Toppino's Inc. to proceed at the direction of the City's representative in accordance with the General Services Contract between the City of Key West and Charley Toppino & Sons Inc. dated August 27, 2007.

Charley Toppino & Sons Inc.

By:  _____

Date: 7/15/09

City of Key West

By:  _____

Date: 01 AUGUST 2009

WORK ORDER # 6
 General Services Contact GN 0708
 Project GB 0701

GARRISON BIGHT DINGHY DOCK MODULAR BATHROOMS INFRASTRUCTURE					
ITEM #	Type of Work	Quantity	Units	Cost per Unit	Line Item Cost
3	MOBILIZATION & DEMOBILIZATION, MOT, GENERAL & SUPPLEMENTARY CONDITIONS, CERTIFIED AUTOCAD AS-BUILTS	1	LS	\$18,177.85	\$18,177.85
PERSONNEL & EQUIPMENT					
5	SUPERINTENDENT	20	HR	\$87.50	\$1,750.00
6	FOREMAN	40	HR	\$60.00	\$2,400.00
MATERIALS					
168.5	2" SANITARY SEWER FORCE MAIN (pressure pipe)	400	LF	\$4.37	\$1,748.00
42	TRENCH EXCAVATION & BACKFILL 0-6' (2" pressure pipe)	400	LF	\$40.00	\$16,000.00
62	6" TRENCH EXCAVATION SEWER SERVICE LATERAL	12	LF	\$25.00	\$300.00
162.5	6" PVC PIPE	12	LF	\$4.00	\$48.00
174	WYE CONNECTION	1	EA	\$312.50	\$312.50
154	SEWER CLEAN-OUT	1	EA	\$312.50	\$312.50
155	SEWER CLEAN-OUT BOX	1	EA	\$312.50	\$312.50
149	CONNECTION TO EXISTING MANHOLE	1	EA	\$2,000.00	\$2,000.00
67	TRENCH SAFETY SYSTEM	412	LF	\$6.00	\$2,472.00
68	TRENCH SAFETY SOCIAL SHORING REQUIREMENTS	40	LF	\$12.00	\$480.00
73	FLOWABLE FILL	30	CY	\$130.00	\$3,900.00
74	REMOVAL OF BITUMINOUS MATERIAL	70	SY	\$2.50	\$175.00
75	ASPHALT CONCRETE REPLACEMENT OVER TRENCHES	20	TON	\$187.00	\$3,740.00
	1 1/2 " WATERLINE	320	LF	\$4.50	\$1,440.00
	1 1/2 " WATER METER IN BOX WITH SHUT-OFF VALVE	1	EA	\$900.00	\$900.00
	CONNECT TO EXISTING WATERLINE	1	EA	\$1,500.00	\$1,500.00
	ADA RAMP	155	SF	\$8.50	\$1,317.50
	WATER BOOSTER SYSTEM ON ELEVATED PLATFORM	1	EA	\$18,625.00	\$18,625.00
	11/2" RPZ	1	EA	\$1,125.00	\$1,125.00
	FIBERGLASS PUMP STATION, VALVE BOX AND CONTROL PANEL INSTALLED	1	EA	\$30,031.25	\$30,031.25
					\$109,067.10



6409 2nd Terrace Suite 1
 Key West, FL 33040
 (305) 296-6013

Estimate

Date	Estimate #
7/23/2009	10249

Name / Address
Charley Toppino & Sons, Inc PO Box 787 Key West, FL 33040

Project

Description	Qty	Cost	Total
LOC: 811 Palm Ave			
Install Simplex Weatherbeater Model # VC6AA-SS-3.			
Pump		12,375.00	12,375.00
Freight Charge		450.00	450.00
Labor	32	87.50	2,800.00
Daily Rental of Skid Steer @ (to move equipment)		350.00	350.00
Materials to install		684.00	684.00
Start up and testing		550.00	550.00
NOTE: Include budget for yourself to raise elevation of this pump to the same elevation as the bathhouse. Either by way of pedestal or attaching a bracket to the bathhouse.			

Respectfully Submitted, William Hemberger, Operations Manager	Subtotal	\$17,209.00
	Sales Tax (7.5%)	\$0.00
	Total	\$17,209.00

Acceptance of this proposal is represented by the signature, title and date below.

Signature / Title _____



8811 Venture Cove
 Tampa, Florida 33637
 Phone 813-987-2151 Fax 813-987-2112
 Email: henry@vcsystems.net

PROPOSAL NUMBER: VC007239VV-HID
 DATE: JULY 23, 2009

PROJECT NAME:

DISTRIBUTOR: GARY'S PLUMBING

SYSTEM MODEL: IVC-BP-WB(X) SIMPLEX WEATHERBEATER

SYSTEM DATA: P-I MODEL NO: VC6AA-SS-3 60 GPM
 NOTE: PUMP IS FLANGED, DUCTILE IRON CASE W/316 S/S IMPELLER

SYSTEM CAP. (GPM) 60 GPM
 PRESSURE (PSI): 40 PSI/92' TDH
 MOTOR SPEED/HP: 3500 RPM 3 HP
 POWER SUPPLY: 230/60/1 PH
 ENCLOSURE: ODP
 HEADER SIZE: 2" IN/2" OUT
 HEADER MATERIAL: WELDED 304 S/S PIPE

CONTROL PANEL:

CONSTANT SPEED CONTROLLER (UL508A)
 UL LISTED, INDUSTRIAL CONTROL PANEL
 NEMA 4, UL TYPE 1, POWDER COATED ENCLOSURE
 MAIN DISC. SWITCH WITH DOOR INTERLOCK
 INDIVIDUAL PUMP FUSE BLOCKS, WITH FUSES
 MAGNETIC MOTOR STARTERS WITH O.L. RELAYS
 POWER "ON" PILOT LIGHT, WHITE
 GREEN PUMP RUN PILOT LIGHTS & HOA SWITCHES
 ALARMS:
 LOW SUCTION PRESSURE SHUT-DOWN
 LOW SYSTEM PRESSURE ALARM ONLY
 HIGH SYSTEM PRESSURE SHUT-DOWN
 COMMON AUDIBLE/VISUAL ALARM WITH SILENCE P.B.
 COMMON NO/NC REMOTE ALARM CONTACT
 LCD READOUT OF SUCTION & DISCHARGE PRESSURE
 DUAL TRANSDUCERS, SUCTION & DISCHARGE
 DOOR MOUNTED PLC & OPERATOR INTERFACE

BLADDER TANK: 15 GALLON, BACKPAK TANK, MOUNTED AND PIPED IN ENCLOSURE

ENCLOSURE: VCD-207, INSULATED, VENTED FIBERGLASS PUMP SYSTEM ENCLOSURE

NET LOT PRICE, FOB FACTORY, FULL FREIGHT ALLOWED
 (NOTE: UNLOADING AND TAX IS NOT INCLUDED)

Janet Muccino

From: Rey Martinez [rey@charleytoppinoandsons.com]
Sent: Wednesday, July 22, 2009 4:08 PM
To: Janet Muccino; Gary Bowman
Subject: Fiberglass Station Installation
Attachments: Pump Station Installation.xls; hydro pumps quote_2344_0001.pdf

Janet, here is the pump station breakdown:

- Pump Station, Valve Box, Control panel and pumps plus tax (see attachment)	\$ 14,781.25
- Electrical work (Nearshore Electric)	\$ 6,000.00
- Installation including concrete ballast (see attachment)	\$ 16,170.00

We'll send plumbers breakdown tomorrow.
Sincerely,

Rey Martinez
Project Superintendent
Charley Toppino and Sons, Inc.

Cell (305) 797 1003
Off (305) 296 5606
Fax (305) 296 5189

Hydro Pumps, Inc.

P.O. Box 16295 6512 NW 13th Court
Plantation, FL 33318

Broward: (954) 583-3303
Fax: (954) 583-3305

Toll Free (FL) 1-800-306-7867

June 30, 2009

Charley Toppino and Sons
e-mail: TOPPKW@aol.com

Attn: Ron
Re: Garrison Bight
Design Condition: 55 GPM @ 40 FT TDH

Gentlemen:

We offer the following equipment in reference to your inquiry:

- 1 - Duplex fiberglass basin package 48" diameter x 120" deep which includes the following: 2 - F.E. Myers model WG20-21-35 (rated 2 hp, 230v, 1 phase, 60hz) rail-mounted submersible grinder pumps with SRA125 base assemblies, schedule 80 PVC discharge piping, stainless steel lifting cables, stainless steel floatholder, stainless steel guide rails and aluminum hatch cover.
- 1 - NEMA 3R stainless steel control panel which includes the following: main & emergency circuit breakers, emergency generator receptacle, pump circuit breakers, control circuit breaker, duplex gfi receptacle with circuit breaker, IEC-rated motor starters with thermal overload mechanisms, high water alarm light and horn with silence and test, duplex alternator with mode selector, elapsed time meters for each pump, lightning arrestor, surge arrestor, phase monitor, and oil seal fail indication for each pump.
- 1 - 30" w x 40" l x 36" d fiberglass valve vault with aluminum access cover. Vault includes 2 - 2" Bronze gate valves, 2 - 2" Cast iron ball check valves, and a 2" aluminum quick disconnect fitting with dust cap (for pumpout).
- 4 - Float switches.

TOTAL PRICE PUMPS, ACCESSORIES, & PANEL \$13,750.00

Price includes freight allowed and prepaid to the jobsite and startup services but does not include Florida State Sales Tax (if applicable). Delivery is estimated at 3-4 weeks after receipt of approved shop drawings. If you have any questions or comments concerning this quotation, please call our office.

Sincerely,

Alan Robbins

General Services Contract City of Key west # GN0708 Charley Toppino & Sons, INC.
Fiberglass Pump Station Installation

Personnel and Equipment				
5. Superintendent	20	HR	\$87.50	\$1,750.00
6. Foreman	20	HR	\$60.00	\$1,200.00
7. Operator	40	HR	\$40.00	\$1,600.00
8. Laborer	40	HR	\$28.00	\$1,120.00
9. Mason		HR		\$0.00
10. Licensed Surveyor		HR		\$0.00
11. Crane-Minimum 18-Ton Hydraulic Truck Type, w/o Operator, Grove TM 180, or Equal		HR		\$0.00
12. Backhoe, w/ Rock Bucket, w/o Operator, Cat 426, or Equal		HR		\$0.00
13. Backhoe, w/ Rock Bucket, w/o Operator, Cat 320, or Equal	20	HR	\$100.00	\$2,000.00
14. Wheel Front End Loader, w/o Operator, Cat 950, or Equal	20	HR	\$100.00	\$2,000.00
15. Air Compressor, 165 C.F.M.		HR		\$0.00
16. Dump Truck, 15CY, w/o Operator	16	HR	\$75.00	\$1,200.00
17. Flatbed Dump Truck, w/o Operator		HR		\$0.00
18. Backhoe, Rubber Tire, Various Attachments, w/o Operator, Arckman H7MC, or Equal		HR		\$0.00
19. Trailer, Scow, off-road sand truck, w/o Operator, 24 CY minimum		HR		\$0.00
20. Pavement Saw	2	HR	\$35.00	\$70.00
21. 3-inch Trash Pump	12	HR	\$30.00	\$360.00
22. 4-inch Trash Pump		HR		\$0.00
23. 6-inch Hydraulic Pump	8	HR	\$125.00	\$1,000.00
24. 1000 Gallon Sediment Box	20	HR	\$50.00	\$1,000.00
25. Jet Truck (Cleaning)		HR		\$0.00
26. Laser		HR		\$0.00
27. Vibrator Roller		HR		\$0.00
28. Plate Compactor	8	HR	\$15.00	\$120.00
29. Dozer		HR		\$0.00
30. Road Grader		HR		\$0.00
31. Bob Cat or Equivalent		HR		\$0.00
32. Water Tank		HR		\$0.00
33. Huber Grader		HR		\$0.00
34. 18" Auger Truck		HR		\$0.00
Materials				
35. Crushed Lime Rock		TON		\$0.00
36. No. 57 Rock	20	TON	\$40.00	\$800.00
37. No. 89 Rock		TON		\$0.00
38. Screening Sand		TON		\$0.00
39. Ortona Sand		TON		\$0.00
40. No. 4 Rock		TON		\$0.00
41. Sod		SF		\$0.00
2575 Surface Restoration				
Lime Rock Base				
69. Lime Rock Base over Sewer Trenches, Pipe 12 inches and under, Excluding Sewer Service Lateral		LF		\$0.00
70. Lime Rock Base Over Sewer Trenches, pipe 15 through 24 inches		LF		\$0.00
71. Lime Rock Base Over Sewer Trenches, Pipe 30 inches through 48 inches		LF		\$0.00
72. Lime Rock Base Over Sewer Service Lines		LF		\$0.00
73. Flowable Fill (500pis)	15	CY	\$130.00	\$1,950.00
TOTAL				\$16,170.00

In lieu of 10 cy of concrete for bala

WG20/~~WG20~~ Series

Standard and Explosion-proof
2 HP Submersible Grinder Pumps



THE MYERS WG/WGX20 SERIES ARE RUGGED 2 HORSEPOWER SUBMERSIBLE CENTRIFUGAL GRINDER PUMPS DESIGNED FOR RESIDENTIAL, LIGHT COMMERCIAL OR INDUSTRIAL APPLICATIONS. It is especially suited for use in pressure sewer applications or in systems with long discharge runs or high static heads. The WG/WGX20 Series features a patented cutter mechanism and recessed impeller design to efficiently grind typical domestic sewage solids into a fine slurry. These pumps are available in standard and U.L. Listed explosion-proof construction for use in Class I, Group D hazardous locations.

The WG/WGX20 Series can be installed in a variety of packaged systems. Factory-assembled simplex or duplex packages with guide rail systems or suspended systems are available. Individual rail components are also available for installation in on-site concrete systems. Myers offers a complete line of submersible sump, sewage, effluent, grinder, non-clog wastewater pumps, controls, basins, and accessories. For additional information, please contact your local Myers representative or the Myers Ashland, Ohio sales office at 419-289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN PRESSURE SEWER SYSTEMS.

- Choice of standard or high flow designs.
- Recessed impeller provides steep non-overloading operating curve.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE.

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Recessed impeller reduces radial bearing loads, increases bearing life.
- High torque capacitor start/run single phase or three phase motors for assured starting under heavy load.
- Seal leak probes and on-winding heat sensors warn of seal leak condition, and stop motor if motor overheats. Helps prevent costly motor damage.

THE WG/WGX20 SERIES IS DESIGNED FOR EASY MAINTENANCE.

- Shredding ring and grinder impeller are replaceable without dismantling pump or motor.

PRODUCT CAPABILITIES

Capacities To	70 GPM	260 LPM
Heads To	105 ft.	32.1 m
Liquids Handling	domestic raw sewage	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Winding Insulation Temp. (Class F)	311 F	155 C
Motor Electrical Data (Single phase motors are capacitor start type. Myers control panels or capacitor kits are recommended for proper operation and warranty.)	2 HP, 3450 RPM 1 ph - capacitor start/run. 208 or 230 volt, 60 Hz 3 ph - induction run 200, 230, 460, 575 volts, 60 Hz	
Third Party Approvals	CSA, UL	
Acceptable pH Range	6 - 9	
Specific Gravity	.9 - 1.1	
Viscosity	28 - 35 SSU	
Discharge, NPT	1 1/4 in.	31.75 mm
Min. Sump Diameter		
Simplex	24 in.	61.0 cm
Duplex	36 in.	91.4 cm

Note: Consult factory for applications outside of these recommendations.

Construction Materials

Motor Housing, Seal Housing, Cord Cap, Volute Case	cast iron, Class 30, ASTM A48	
Impeller	recessed, bronze	
Power Cord	35ft	XXXX 14/4 SOCW
Control Cord	35ft	XXXX 18/5 SOCW
Mechanical Seals - Std	dbl tandem carbon & ceramic XXXXX XXXXXX XXXXXXX XXXXXXXX	
Pump, Motor Shaft	416 SST	
Fasteners	300 Series SST	
Shredding Ring, Grinder Impeller	440 SST, 58-60 Rockwell	

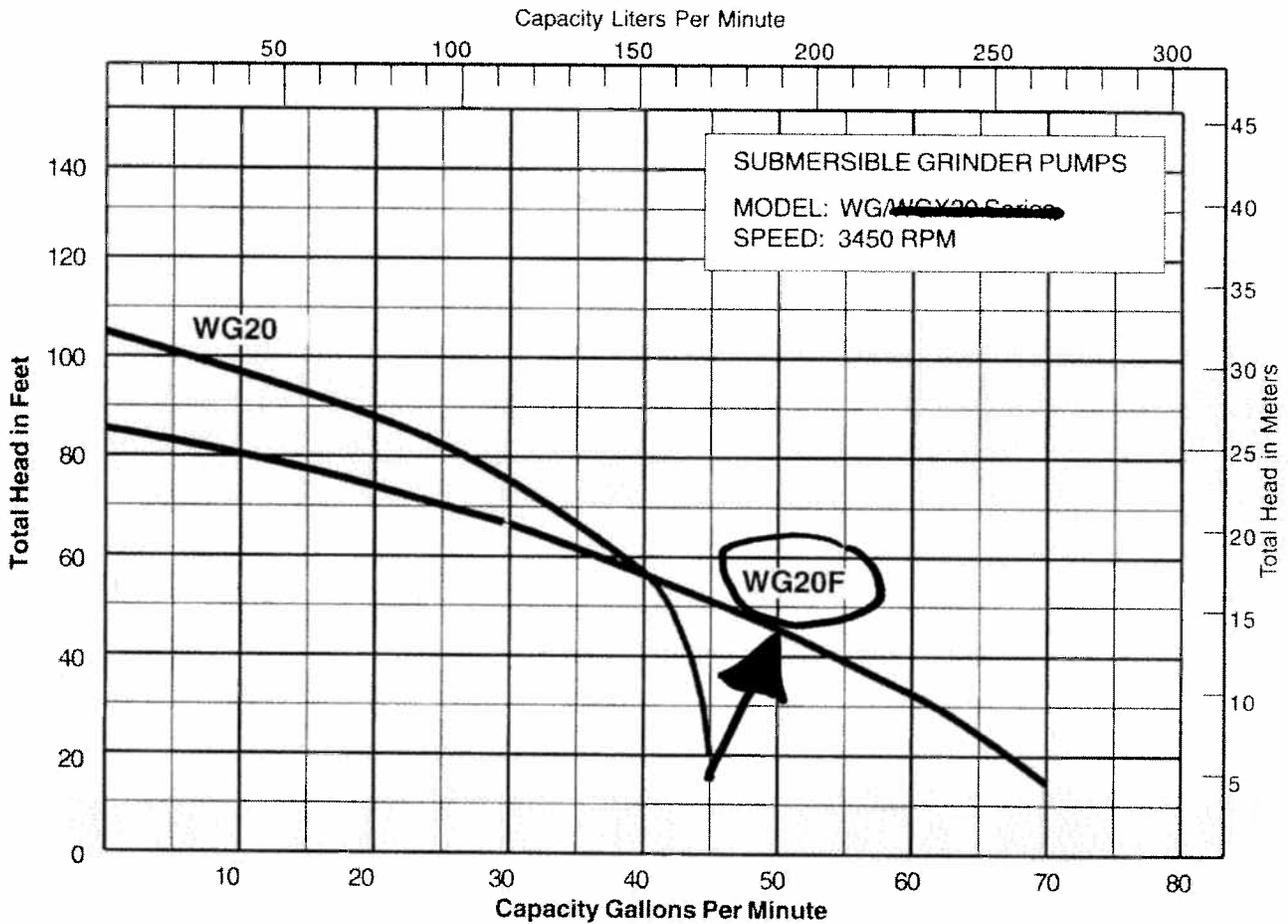
WHERE INNOVATION MEETS TRADITION

Myers[®]

Pentair Pump Group

DUTY: 55GPM @ 40FT TH

PUMP PERFORMANCE



Available Models		Motor Electrical Data										
Standard	Explosion Proof	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Run KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
WG20-01-15	WGX20-01-15	2	200	1	60	50.0	15.0	2.8	10.0	3.0	F	1.25
WG20-21-15	WGX20-21-15	2	230	1	60	44.0	12.0	2.8	10.1	2.8	F	1.25
WG20-03-15	WGX20-03-15	2	200	3	60	30.0	9.5	2.9	10.4	3.3	F	1.25
WG20-23-15	WGX20-23-15	2	230	3	60	27.5	8.4	2.9	11.0	3.3	F	1.25
WG20-43-15	WGX20-43-15	2	460	3	60	13.8	4.2	2.9	11.0	3.3	F	1.25
WG20-53-15	WGX20-53-15	2	575	3	60	11.0	3.4	2.9	11.0	3.3	F	1.25
WG20F-01-15	WGX20F-01-15	2	200	1	60	50.0	15.0	2.8	10.0	3.0	F	1.25
WG20F-21-15	WGX20F-21-15	2	230	1	60	44.0	12.0	2.8	10.1	2.8	F	1.25
WG20F-03-15	WGX20F-03-15	2	200	3	60	30.0	9.5	2.9	10.4	3.3	F	1.25
WG20F-23-15	WGX20F-23-15	2	230	3	60	27.5	8.4	2.9	11.0	3.3	F	1.25
WG20F-43-15	WGX20F-43-15	2	460	3	60	13.8	4.2	2.9	11.0	3.3	F	1.25
WG20F-53-15	WGX20F-53-15	2	575	3	60	11.0	3.4	2.9	11.0	3.3	F	1.25

STATOR

2 hp, 3450 RPM, 1 and 3 phase. Press fit for perfect alignment and best heat transfer. Oil-filled motor conducts heat and lubricates bearings.

CABLE ENTRY SYSTEM

Provides double seal protection. Cable jacket sealed by compression fitting. Individual wires sealed by epoxy potting.

HEAT SENSOR

Protects motor from burn-out due to excessive heat from any overload condition. Automatically resets when motor has cooled.

BALL BEARINGS

Upper and lower ball bearings support shaft and rotor and take axial and radial loads.

HEAVY 416 SST SHAFT

Corrosion resistant. Reduces shaft deflection due to grinding loads.

SHAFT SEALS

Double tandem mechanical shaft seals protect motor. Oil-filled seal chamber provides continuous lubrication.

SEAL LEAK PROBE

Detects water in seal housing, activates warning light in control panel.

VOLUTE CASE

Cast iron 1 1/2" NPT vertical discharge.

IMPELLER

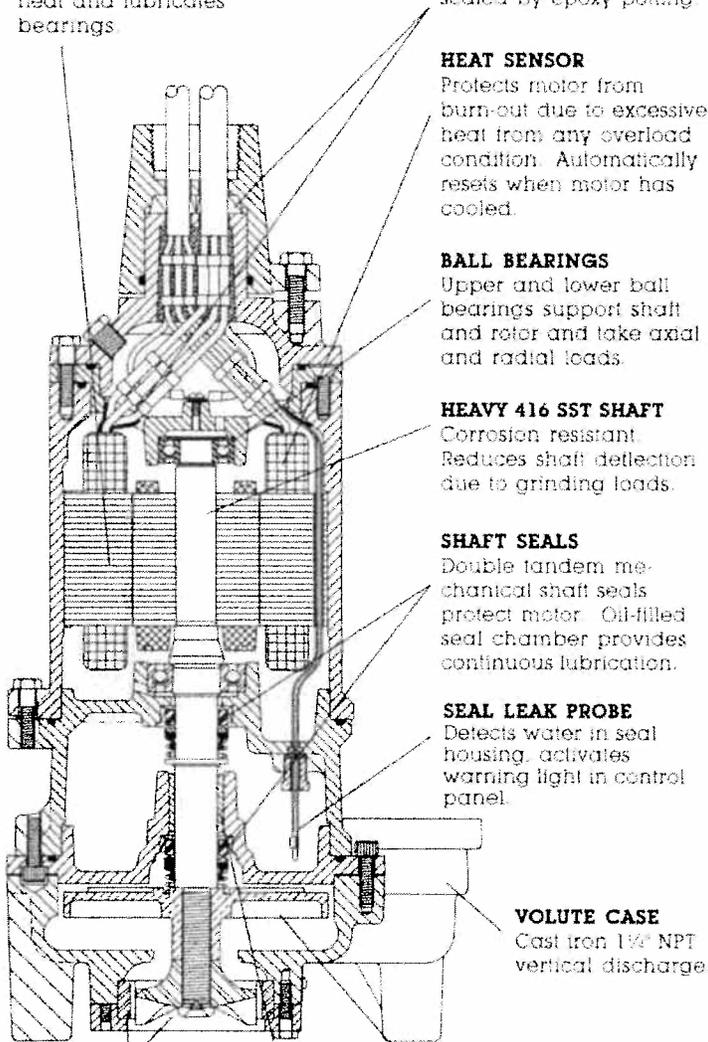
Bronze recessed impeller handles ground slurry without clogging or binding. Provides unobstructed flow passage. Reduces radial loads. Pump-out vanes help keep trash from seal, reduces pressure at seal faces.

SLEEVE BEARING

Takes radial load; provides flame path. (UL listed pumps only)

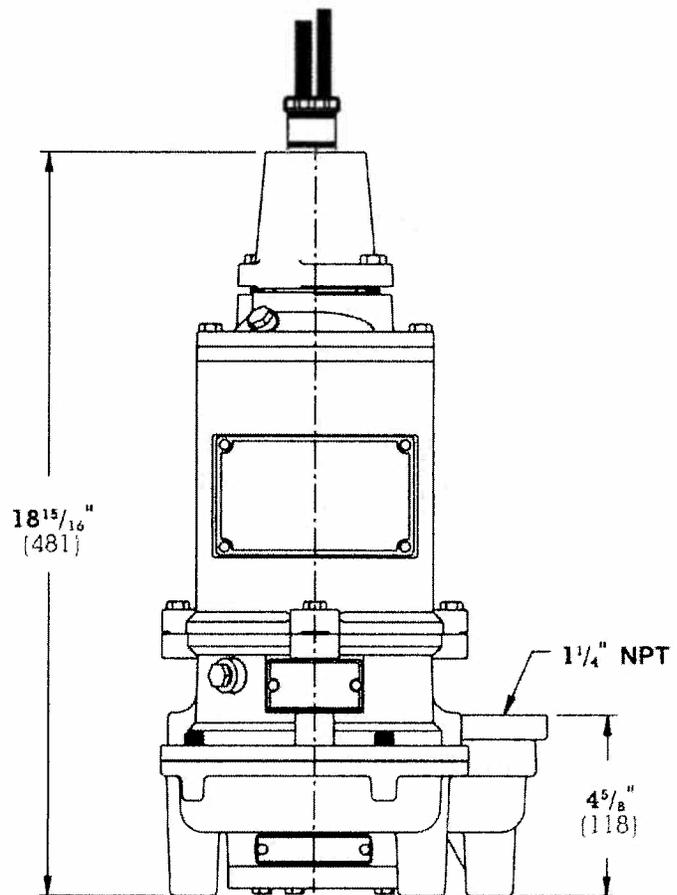
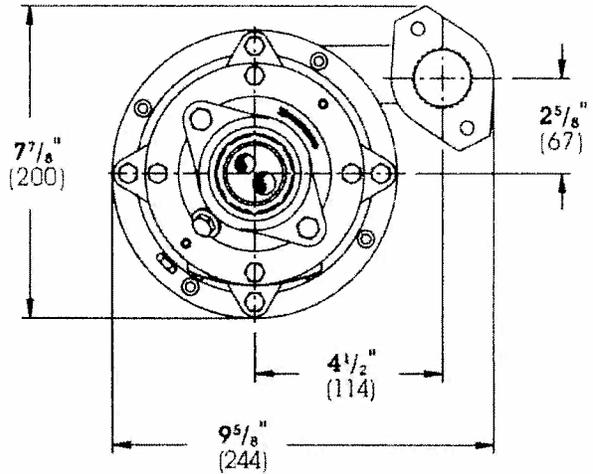
GRINDER ASSEMBLY

Grinder impeller and shredding ring are replaceable without dismantling pump. Constructed of 440 SST hardened to 56-60 Rockwell.



DIMENSIONS

(Dimensions in MM)



WG/WGX20 Series

SPECIFICATIONS

PUMP MODEL - Pump shall be of the centrifugal type Myers model WG/WGX20 Series or equal with an integrally built in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage including reasonable amounts of foreign objects such as small wood, sticks, plastic, thin rubber, sanitary napkins, disposable diapers and the like to a fine slurry that will pass freely through the pump and 1-1/4" discharge pipe. Discharge shall be 1-1/4" NPT. ~~WG Series pump and motor assembly shall be UL listed for Class 1, Group D explosion proof service.~~

OPERATING CONDITIONS - Pump shall have a capacity of 55 GPM at a total head of 40 feet and shall use a 2 HP motor operating at 3450 RPM.

MOTOR - Pump motor shall be of the submersible type rated 2 horsepower at 3450 RPM. Motor shall be for single phase ~~200 volts~~, 230 volts X ~~three phase 200 volts, 200 volts, 160 volts or 675 volts~~. Single phase motors shall be of capacitor start, capacitor run, NEMA L type. Three phase motors shall be NEMA B type. Motors rated for VFD/continuous duty operation.

Stator winding shall be of the open type with Class F insulation good for 155°C (311°F) maximum operating temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings and rotor to outer shell. Air-filled motors which do not have the superior heat dissipating capabilities of oil-filled motors shall not be considered equal.

Motor shall have two heavy duty ball bearings to support pump shaft and take radial and thrust loads and a sleeve guide bushing directly above the lower seal to take radial load and act as flame path for seal chamber. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be heat shrunk into motor housing.

A heat sensor thermostat shall be attached to top end of motor winding and shall be connected in series with the magnetic contactor coil in control box to stop motor if motor winding temperature reaches 221°F. Thermostat to reset automatically when motor cools. Two heat sensors shall be used on 3 phase motors.

The common motor pump and grinder shaft shall be of #416 stainless steel threaded to take pump impeller and grinder impeller.

SEALS - Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell.

Seal face shall be carbon and ceramic and lapped to a flatness of one light band. ~~Lower seal face shall be made (optional)~~

A double electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop motor but shall act as a warning only, indicating service is required.

PUMP IMPELLER - The pump impeller shall be of the recessed Myers type to provide an open unobstructed passage through the volute for the ground solids. Impeller shall be of 85-5-5 bronze and shall be threaded onto stainless steel shaft.

GRINDER CONSTRUCTION - Grinder assembly shall consist of grinder impeller and shredding ring and shall be mounted directly below the volute passage. Grinder impeller to be threaded onto stainless shaft and shall be locked with screw and washer. The shredding ring shall be pressed into iron holding flange for easy removal. Flange shall be provided with tapped back-off holes so that screws can be used to push the shredding ring from housing. All grinding of solids shall be from action of the impeller against the shredding ring.

Both grinder impellers and shredding ring shall be of 440F stainless steel hardened to 58-60 Rockwell C.

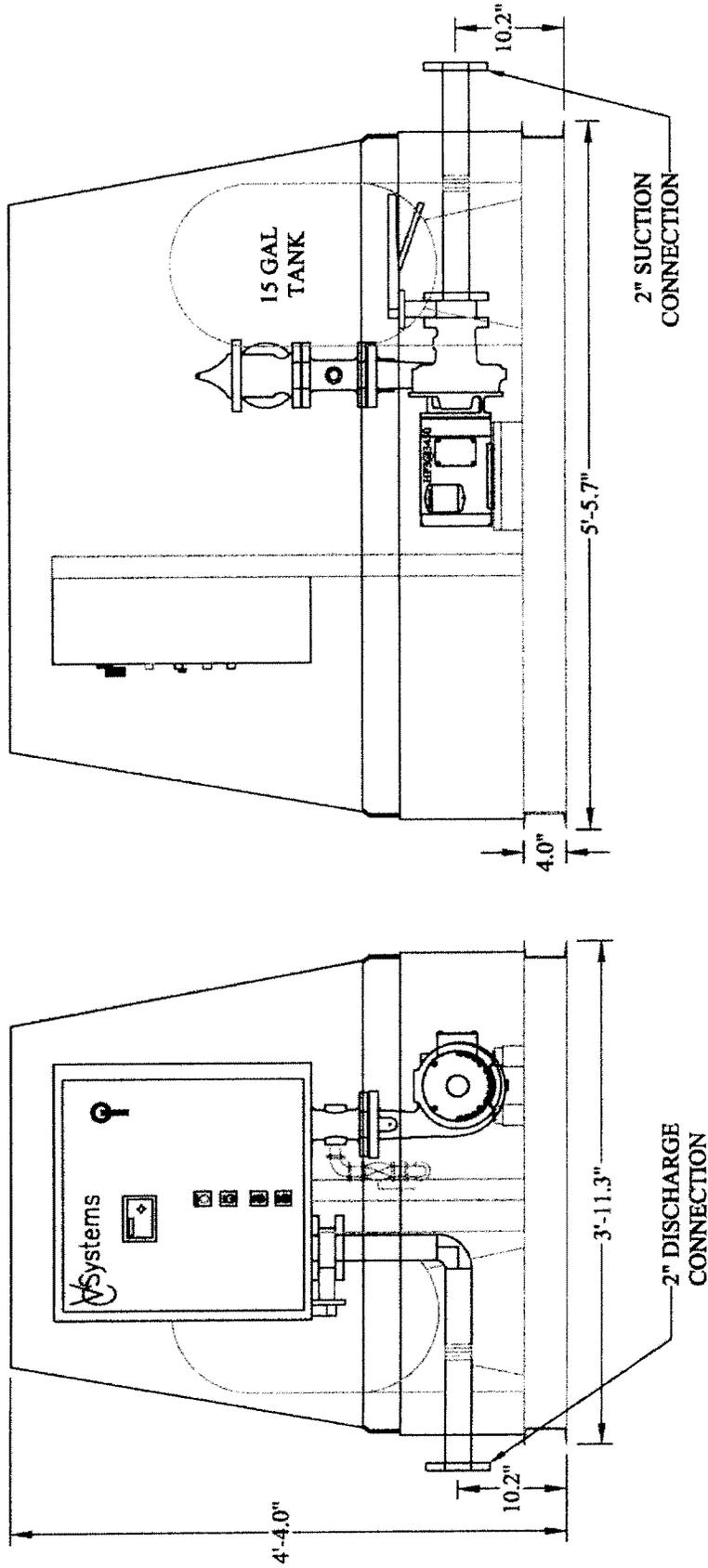
CORROSION PROTECTION - All iron castings shall be pre-treated with phosphate and chromic rinse and to be painted before machining and all machined surfaces exposed to the sewage water to be re-painted. All fasteners to be 302 stainless steel.

BEARING END CAP - Upper motor bearing cap shall be a separate casting for easy mounting and replacement.

POWER CABLES - Power cord and control cord shall be double sealed. The power and control conductor shall be single strand sealed with epoxy potting compound and then clamped in place with rubber seal bushing to seal outer jacket against leakage and to provide for strain pull. Cords shall withstand a pull of 300 pounds to meet U.L. requirements.

Insulation of power and control cords shall be type SOOW. Both control and power cords shall have a green carrier ground conductor that attaches to motor frame.

DOMESTIC PRESSURE BOOSTER SYSTEM



NOTE 1: MINIMUM SLAB 4" ABOVE NATURAL GRADE, SHOULD BE 6" LARGER THAN THE SYSTEM BASE ON ALL FOUR SIDES FOR ANCHOR, 59 X 78.

NOTE 2: ELECTRICAL SUPPLY SHOULD BE FOR FULL LOAD AMPS FOR 3HP, AT 230/60/1, 16 FLA X 1.25 = PLUS 2 AMP FOR THE PANEL LOAD. ELECTRICIAN SHOULD SIZE HIS SERVICE PER NEC REQUIREMENTS AS REQ'D BY LOCAL CODE.

VC SYSTEMS

DRAWN BY: MRT CHECKED BY: HGV DATE: JULY 2, 2007

PUMP SCHEDULE

PUMP	MANUFACTURER	MODEL NO.	GPM	HEAD	HP	SPEED	POWER
P-1	VC SYSTEMS	VC6AA-SS	60	92'	3	3500CS	230-60-1