

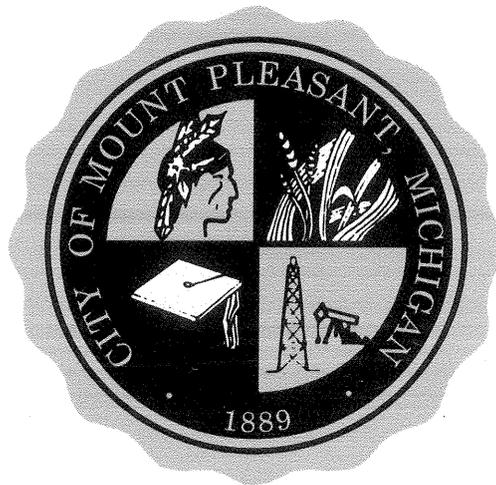
[Form01]

City of Mt. Pleasant, Michigan

CONTRACT DOCUMENTS

For Construction
of

HIGH SERVICE PUMP #2 REHABILITATION



KATHLEEN LING
Mayor

KATHIE GRINZINGER
City Manager

Prepared By:
Division of Public Works

ROGER ROUSSE
DPW Director

January 2013

City of Mt. Pleasant, Michigan
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THE CITY OF MT. PLEASANT, MICHIGAN

CITY HALL
320 W. Broadway St. • 48858-2312
(989) 779-5300
(989) 773-4691 fax

PUBLIC SAFETY
804 E. High • 48858-3595
(989) 779-5100
(989) 773-4020 fax

PUBLIC WORKS
1303 N. Franklin • 48858-4682
(989) 779-5400
(989) 772-6250 fax

NOTICE TO BIDDERS

2013 HIGH SERVICE PUMP #2 REHABILITATION BID

The City of Mt. Pleasant, Michigan, is requesting sealed bids at the Office of the City Clerk, City Hall, 320 W. Broadway Street, Mt. Pleasant, Michigan 48858, until 1:30 p.m. (local time), on February 26, 2013, at which time and place the bids will be publicly opened and read. All bids shall be submitted in a sealed envelope, plainly marked "2013 High Service Pump #2 Rehabilitation Bid – February 26, 2013."

Proposals are solicited on a unit price basis, for the following work:

Labor and materials to remove, inspect, repair and/or replace components of High Service Pump #2

All bid proposals must be accompanied by a bid bond, bank cashier's check, bank draft, or certified check for not less than five percent (5%) of the bid price, made payable to the City of Mt. Pleasant.

To view and download complete Plans and Specifications at no charge, visit the City of Mt. Pleasant website at www.mt-pleasant.org and navigate to the Bids and Quotes page.

The City of Mt. Pleasant reserves the right to accept or reject any or all bids, to waive any irregularities in the bids, and to select the bid considered most advantageous to the city.

Malcolm Fox
Water Plant Supervisor
(989) 779-5426 / 779-5430

Jeremy Howard
City Clerk

City of Mt. Pleasant, Michigan
INSTRUCTIONS TO BIDDERS**1. Proposals**

Proposals must be made upon the forms provided therefore, with the Bid amount both written and shown in figures, and all other data required submitted.

The Proposal, bound together with all Proposal Documents, must be enclosed in a sealed envelope marked as specified in the Notice to Bidders for such Bid and clearly indicating the name and address of the Bidder and must be received by the City Clerk, City Hall, 320 West Broadway Street, Mt. Pleasant, Michigan 48858, no later than the time and date specified in the Notice to Bidders. At such specified time, Proposals shall be publicly opened and read aloud.

2. Basis of Proposals

Proposals are solicited on the basis of unit price(s) and/or lump sum(s), as specified on the Proposal form.

The City of Mt. Pleasant (also referred to as "Owner"), reserves the right to accept any Bid, to reject any or all Bids, to waive any irregularities in the Bids, and to select the Bid considered most advantageous to the city.

3. Comparison of Bids

In comparing Bids, consideration shall be given to the time proposed for completion of the Contract, qualifications of Bidder, price differentials, alternate Proposals for the alternate items listed in the Proposal (if applicable), and any other pertinent factors. **The City of Mt. Pleasant grants a preference to businesses located within the Mt. Pleasant City Limits. The preference given is a differential above the low bid if the low bid is not from a City of Mt. Pleasant bidder. The differential allowed is 3% of the total for bids between \$5,000 and \$9,999 and 2% of the total for bids over \$10,000. The maximum credit allowed is \$1500.00.** The Owner reserves the right to make an award to the Bidder whose Proposal is deemed to be in the best interest of the Owner.

4. Time

Time is of the essence in the performance of the Contract, and each Bidder, by submitting a Proposal, certifies his/her acceptance of the time allowed by the Contract for the completion of the work specified.

5. **Indemnification**

The Contractor shall save and hold harmless the city and its employees from and against all claims, damages, losses, or expenses, including attorney's fees, arising out of or resulting from the performance of the work; provided that any such claim, damage, loss or expense is caused in whole or in part by any negligent or willful act of omission of the contractor, subcontractor, employee, or anyone under their direction. The Contractor shall at his/her own expense, defend any and all such actions and shall pay all attorney's fees, costs, and expenses pertaining thereto.

6. **Bid Deposits**

Each Proposal shall be accompanied by a certified check, or a Bid Bond by a recognized Surety Company similar to a U. S. Government Standard Form Bid Bond, in the amount of five percent (5%) of the total amount of the Bid, made payable to the City of Mt. Pleasant, subject to forfeiture to the Owner in the event of failure on the part of the successful Bidder to enter into the attached form of agreement to do the work specified by said Proposal at the price and within the time stated therein. The Bid Deposit of all Bidders, except the three (3) lowest acceptable Bidders, shall be returned within two (2) weeks after opening of bids. The bid deposits of the three (3) lowest acceptable bidders shall be returned within 48 hours after the executed Contract(s) have been finally approved by the Owner.

7. **Liquidated Damages**

A liquidated damage clause, as given in the Contract form, provides that the Contractor shall pay the Owner as liquidated damages, and not as a penalty, the amount indicated in the Proposal for each and every calendar day that the Contractor may be in default of substantial completion of the work required under said Contract.

8. **Insurance and Bonds**

The successful Bidder will be required to execute (2) Bonds, in the form attached hereto, with Surety acceptable to the Owner and insurance, as follows:

- a. Bond in the amount of 100% of the Estimated Contract Price running to the City of Mt. Pleasant, Michigan, to insure the completion of the entire work, according to the statutes of the State of Michigan in effect at that time.
- b. Bond in the amount of 100% of the Estimated Contract Price running to the People of the State of Michigan for the protection of Subcontractors and Labor and Material Men, according to the statutes of the State of Michigan in effect at that time.
- c. Insurance in the amounts required by City Ordinance as specified in the Section 1 - General Construction Specifications, attached hereto.

The successful bidder shall be required to furnish for each set of executed Contract Documents, and conformed copies thereof, an original conformed Performance Bond, Labor and Materials Bond, Maintenance Bond, and Insurance Certificates.

9. **Permits and Local Codes**

The Owner shall procure the required permits for municipal sanitary sewer construction, municipal water system construction, and soil erosion control.

The Contractor shall obtain, at his/her expense, all other required local construction permits and shall comply with local building code and inspection requirements.

10. **Qualifications of Bidders**

It is the intent of the Owner to award the Contract to a Bidder fully capable, both financially and with regard to experience, to perform and complete all work in a satisfactory and timely manner. Evidence of such competency must be furnished on the forms included in the proposal, listing projects of similar difficulty, scope of work, and size, which the Bidder has satisfactorily undertaken and completed.

It is the intention of the City to award the contract to a Contractor whose ability and financial resources are fully equal to the task of performing the work in a satisfactory manner. With this in view, the Proposal calls for at least five (5) references, using specific names of persons to contact concerning the Contractor's ability to do this particular class of work. References from municipalities are preferred. The mere ability to furnish a Performance Bond shall not be accepted as sufficient evidence of responsibility on the part of the Bidder. The Bidder may also be required to furnish evidence of his current financial status.

11. **Interpretation of Documents**

If any Bidder is in doubt as to the true meaning of any part of the Plans, Specifications or any Contract Document, he/she may submit to the Owner a written request for an interpretation thereof. Any interpretation made in response to such a query shall be made only by Addendum, duly issued, and a copy of such Addendum shall be mailed or duly delivered to each prospective Bidder. The Owner shall not be responsible for any other explanation or interpretation of the Contract Documents. Alternative proposals that are suggested by bidders will be given consideration, if presented before the bid opening. If accepted, an addendum will be issued and sent out to all potential bidders, so that they may bid on the alternatives that have been identified.

12. **Execution of Bid Proposal**

A Bid Proposal, which is not signed by the individual making it, should have attached thereto a Power of Attorney evidencing authority to sign the Bid Proposal in the name of the person for whom it is signed.

A Bid Proposal, which is signed by a partnership, shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-Fact, there should be attached to the Bid a Power of Attorney evidencing authority to sign the Bid Proposal in the name of the partnership and such Power of Attorney shall be signed by all partners of the partnership.

A Bid Proposal, which is signed for a corporation, should have the correct corporate name thereof and the signature of the President, or other authorized officer(s) of the corporation, manually written below the corporate name and on the line indicating "By:_____." If such a Bid Proposal is manually signed by an officer other than the President of the corporation, a certified copy of a Resolution of the Board of Directors evidencing the authority of such officer(s) to sign the Bid Proposal should be attached thereto. Such a Bid Proposal should also bear the attested signature of the Secretary of the corporation and an impression of the corporate seal.

13. **Execution of Contract**

The successful Bidder to whom an award is made shall be required to enter into a written agreement, in the form attached hereto, within ten (10) days after receipt of a Notice of Award and copies of the documents to be executed. In the event the successful Bidder fails to comply with this provision, he/she may be considered by the Owner to have abandoned all his/her rights and interests in the award and his/her certified check or amount of the Bid Bond may be declared to be forfeited to the Owner, and the Contract may be awarded to another.

14. **Bidder Responsibility For Conditions of Work and Site**

The Bidder, or his/her representative, shall make personal investigation of the site of work and of existing structures and shall determine to his/her own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved in making connections to existing structures and pipes, and any and all other factors affecting the work proposed under the Contract.

The Bidder to whom the Contract is awarded shall not be entitled to any additional compensation by reason of conditions being different from those anticipated or by reason of his/her failure to fully acquaint himself/herself with the conditions at the site affecting the work of the Contract.

15. **Changes in Work**

If any change is required to be made in the work of the Contract, a payment adjustment therefore shall be determined as specified in the "TECHNICAL SPECIFICATIONS, Section 1 - General Construction Specifications" of the Contract.

Revised: February 2006

[Form24a]

City of Mt. Pleasant, Michigan
BID PROPOSAL
HIGH SERVICE PUMP #2 REHABILITATION

TO: Office of the City Clerk
City Hall
320 W. Broadway Street
Mt. Pleasant, MI 48858

BID DATE: February 26, 2013
TIME: 1:30 p.m.

The undersigned, as Bidder, hereby declares that this bid is made in good faith without fraud or collusion with any person or persons bidding of the same Contract; that he has carefully read and examined the Contract Documents, including the Notice to Bidders, Instructions, Bond Forms, Technical and Detailed Specifications, and Contract Drawings, for the designated work and understands all of the same; that he, or his representative, has made such a personal investigation at the site as is necessary to determine the character and difficulties attending the execution of the proposed work; and he proposes and agrees that if this Proposal is accepted, he will contract with the Owner in the form of the Contract hereto annexed, to provide necessary machinery, tools, apparatus and other means of construction, including utility and transportation services, necessary to do all the work and furnish all the materials and equipment specified or referred to in the Contract Documents, including Addenda No. __, __, and __, in the manner and time therein prescribed, and according to the requirements of the Owner as therein set forth to furnish Contractor Bonds and Insurance required of the Contractor by the Contract Documents, and that he will take in full payment therefore the unit prices set forth in the following Proposal.

The Bidder understands that the Owner reserves the right to reject any or all bids, and to waive any irregularities in the bidding.

The Bidder agrees that his bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving the bids.

Upon receipt of a written Notice of Award of the Bid, the Bidder shall execute the formal Contract Agreement attached hereto within ten (10) days and shall deliver to the Owner a Surety Bond or Bonds required. In the event the Contract and Bond are not executed within the time above set forth, the Bid Deposit attached in the sum of five percent (5%) of the Bid Proposal shall become the property of the Owner as liquidated damages for the delay and additional expense to the Owner caused thereby.

The Bidder hereby agrees to commence work under this Contract on or before the date to be specified in the written Notice to Proceed executed by the Owner and to fully complete the project as stipulated in the Special Conditions of these Specifications. The Bidder further agrees to pay as liquidated damages the sum indicated in the Special Conditions for each consecutive calendar day thereafter, until substantial completion, that is when all work items in the proposal are complete and notification of substantial completion of work items and final quantities is given to the Director of Public Works by the contractor.

The below unit prices shall include all labor, materials, overhead, profit, insurance,

EXPERIENCE QUESTIONNAIRE
TO BE FURNISHED BY BIDDER
CITY OF MOUNT PLEASANT, MICHIGAN

The signatory of this proposal guarantees the truth and accuracy of all statements and of all answers hereinafter made.

1. How many years have you been in business as a contractor under your present name?

2. How many years have you been a principal officer of a firm under a different name?

Name of Firm _____

3. What projects of a similar nature has your organization contracted for within the past five years? (NOTE: Fill out each blank completely.)

Name of Owner & Location	Name/Address/Phone # of Person in Charge as Reference	Type of Work	Value of Work	Date Completed
1.				
2.				
3.				
4.				
5.				
6.				

SPECIFICATIONS
2013 HIGH SERVICE PUMP #2 REHABILITATION BID
REHABILITATION AND UPGRADING

SCOPE OF WORK

The work to be performed under this contract includes pump removal and inspection, repair (as necessary following inspection) of the #2 High Service Pump, replacement of the motor, removal and rehabilitation of the combination drive, and reinstallation of the pump and components at the High Service Pump Station. The bids are to include all mobilization, equipment, labor, tools, materials, clean up, and the meeting of all OSHA requirements.

WORK COMPONENTS

- 1) Remove pump motor, pump base, column, shaft, and combination drive. Pump disassembly, cleaning, (inspect for repair as authorized by owner) and pump assembly. Replace and install new motor, rebuild and install combination drive, pump and assembly.
- 2) The contractor for inspection by the Owner shall clean column, shaft, and pump assembly.
- 3) Because of the unknown condition of the existing pump assembly, column, coupling, combination drive, and shaft, the contractor will furnish a price list of these items for replacement listed in the Bid Proposal.
- 4) Combination Drive rehabilitation shall at a minimum include; disassemble and clean, flush gear casing and refill with new oil, check gears and backlash for wear, check machine and bearing fits, check pilot bearing tolerance, reassemble, test and paint.
- 5) Provide a "Pump Installation Report" that includes at a minimum; a labeled schematic of the pump, motor data, column data, pump head data, pump bowl data (manufacturer, s/n, size, No. of stages, material, etc.).
- 6) See the following pages for information on the existing motor, pump, and combination drive.

REPAIRS

Repairs, if required, to the pump and appurtenances will be made after the pump has been removed, disassembled, and inspected by the contractor and the Division of Public Works. The contractor shall prepare an itemized list of repairs and costs for approval by the Division of Public Works Water Department prior to making any repairs.

Pump parts shall be new and conform to ASA-58-1 1961 (or newest) specifications entitled "American Standard Specifications for Vertical Turbine Pumps." Bidder should field verify motor, combination drive, and pump as needed for bid process.

HSP 2 Pump and Motor Data

Pump: Layne

Serial Number = 45735

Motor: 100hp, 1170 rpm, 460V, 124A

Manufacturer = AO Smith Corp.

Serial Number = 1A63

Combination Gear Drive:

Manufacturer = Amarillo

Ratio = 3/2

Serial Number = C150 93419

Note: The pump configuration is similar to the HSP 3 unit; see the two following data sheets.



SHORT COUPLED PUMP INSTALLATION REPORT

Sales Order No. 9149 Date 6/5/91
 Pump Mfg. Layne/Floway Serial No. 45734 Pump No. #3 H.S.
 Owner City of Mt. Pleasant City Mt. Pleasant State MI
 Location of Pump McGurk Well Field
 MOTOR: Make A.O. Smith Type TZBV Frame A305P Model 505-3420-P5
 HP 100 Volts 220/440 Line Voltage 480 Phase 3 RPM 1170 Non-Reverse Ratchet Yes
 GEAR DRIVE: Make None Serial No. N/A Gear Ratio N/A
 Was motor and/or gear taken to a repair shop at this time? Motor Yes Where Alectrico
 Gear N/A Where _____
 ENGINE: Make None Model N/A Serial No. N/A

PUMP HEAD Type SDH 12 COLUMN Pipe Size 10"
 Discharge Pipe Size 12" Flanged _____ Coupled X
 Located above X below _____ ground Oil Lube _____ Water Lube X
 Flanged _____ Special Paint? Yes, Floway Coating
 Threaded _____ Shaft Size 1 1/2" SS X or CS _____
 Separate Base Plate? None Tubing Size None Stl _____ or Br _____
 Head Shaft Length 66 1/2" PUMP BOWL
 Dia. 1 1/2" Coupled above X below _____ Dia. 14" Type THC
 Stuffing Box Size 1 1/2" Imp. No. 7T17 Open _____ Encl. X
 MOTOR SHAFT No. of Stages 5 Bowls: CI X Brz. _____
 Dia. 1 1/2" Length 47 1/2" Wear Rings Yes
 Thread Size in Head 1 1/2" Length Shaft _____ Dia. 1-15/16"
 Keyway 1/2" Strainer None Type _____
 Impeller Trim Full

WATER SUPPLY

Pit - 23'2" Deep

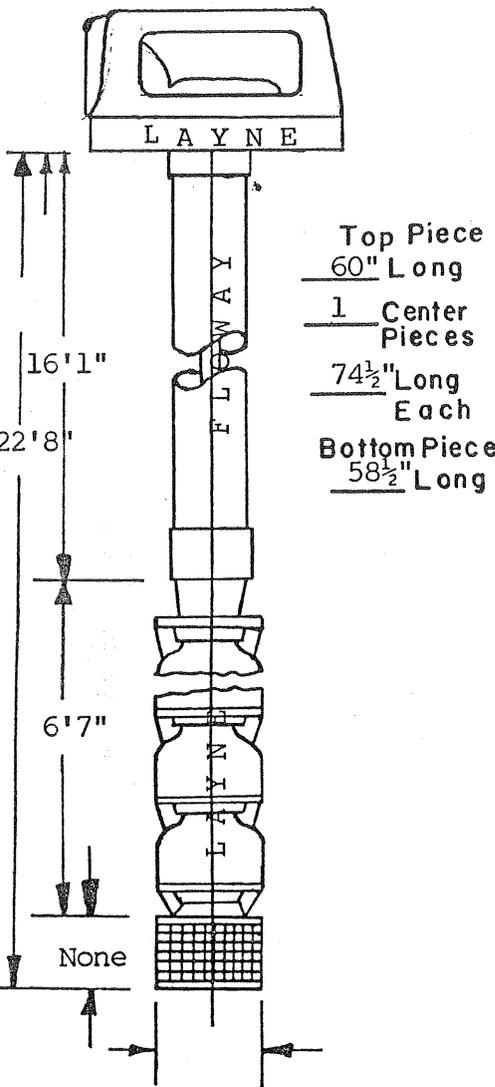
PUMPING TEST—Pumped _____ GPM at _____ Ft. Pumping Level
 with 62 lbs. Discharge Pressure Amps 128 128 122
 Volts 480

SPECIAL EQUIPMENT OR PULLING INSTRUCTIONS

Power Lines: None

REMARKS: Need R.O. and electric chain hoist to pull and set pump.

Installer Ron Hughes

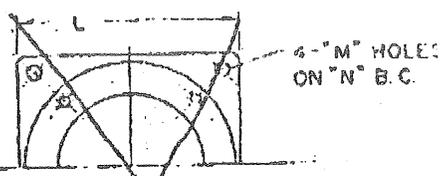
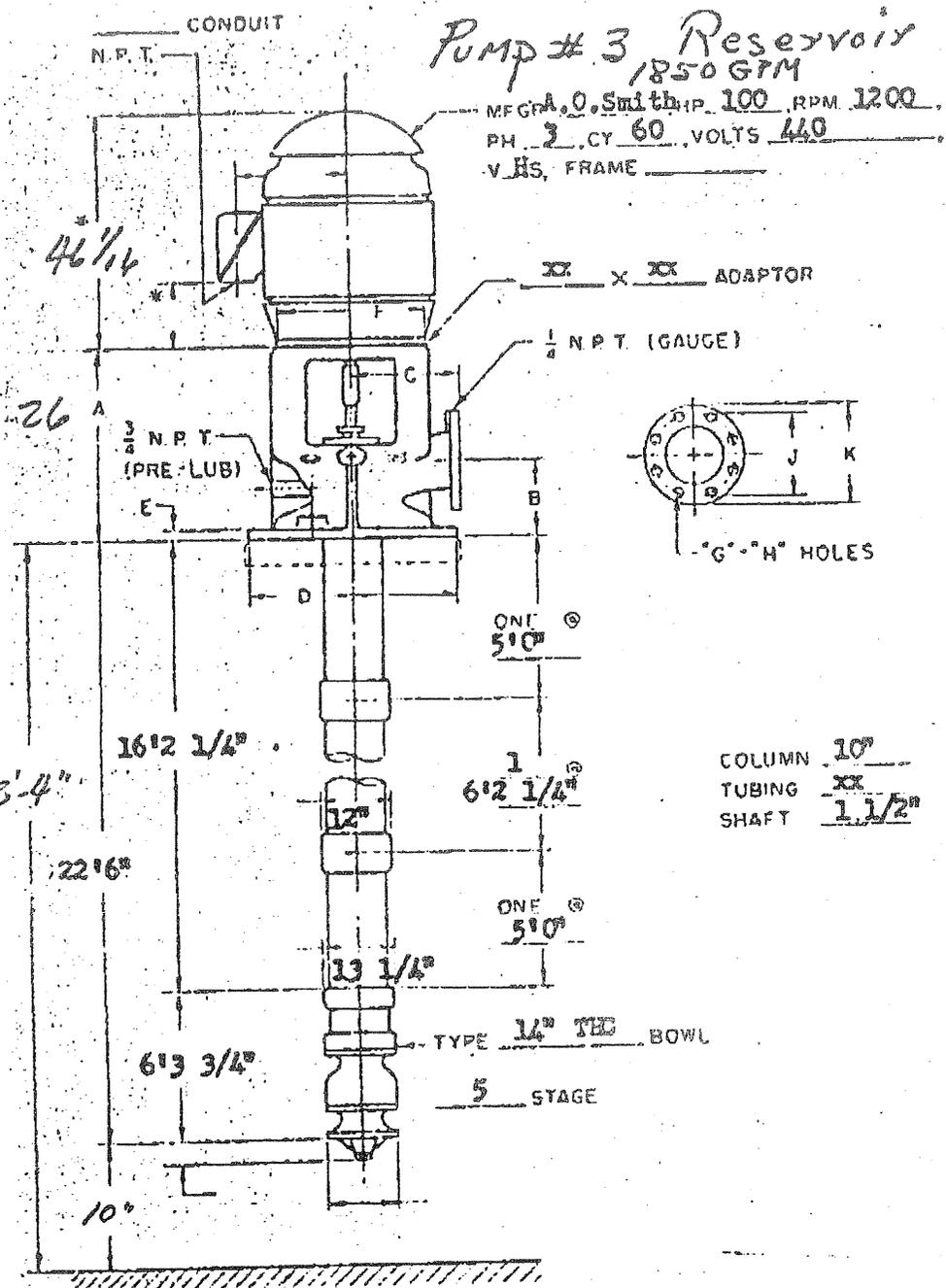


INSTALLATION PLAN
 TYPE 12 SDH DISCHARGE HEAD
 LAYNE & BOWLER, INC. MEMPHIS, TENNESSEE



USE THESE DIMENSIONS ONLY
 WHEN CERTIFIED BY FACTORY

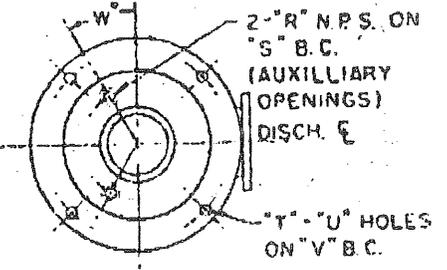
Pump # 3 Reservoir
 1850 GPM
 MFG. A. O. Smith HP. 100 RPM 1200
 PH. 3 CY 60 VOLTS 440
 V HS. FRAME



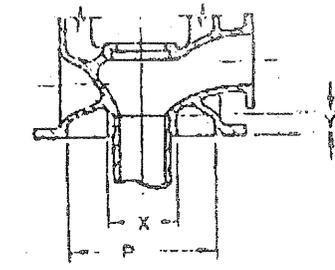
HOLES IN BASE PLATE



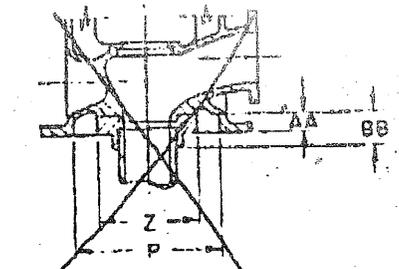
BASE PLATE



BASE OF HEAD



SCREW TYPE HEAD



FLANGE TYPE HEAD

COLUMN 10"
 TUBING XX
 SHAFT 1 1/2"

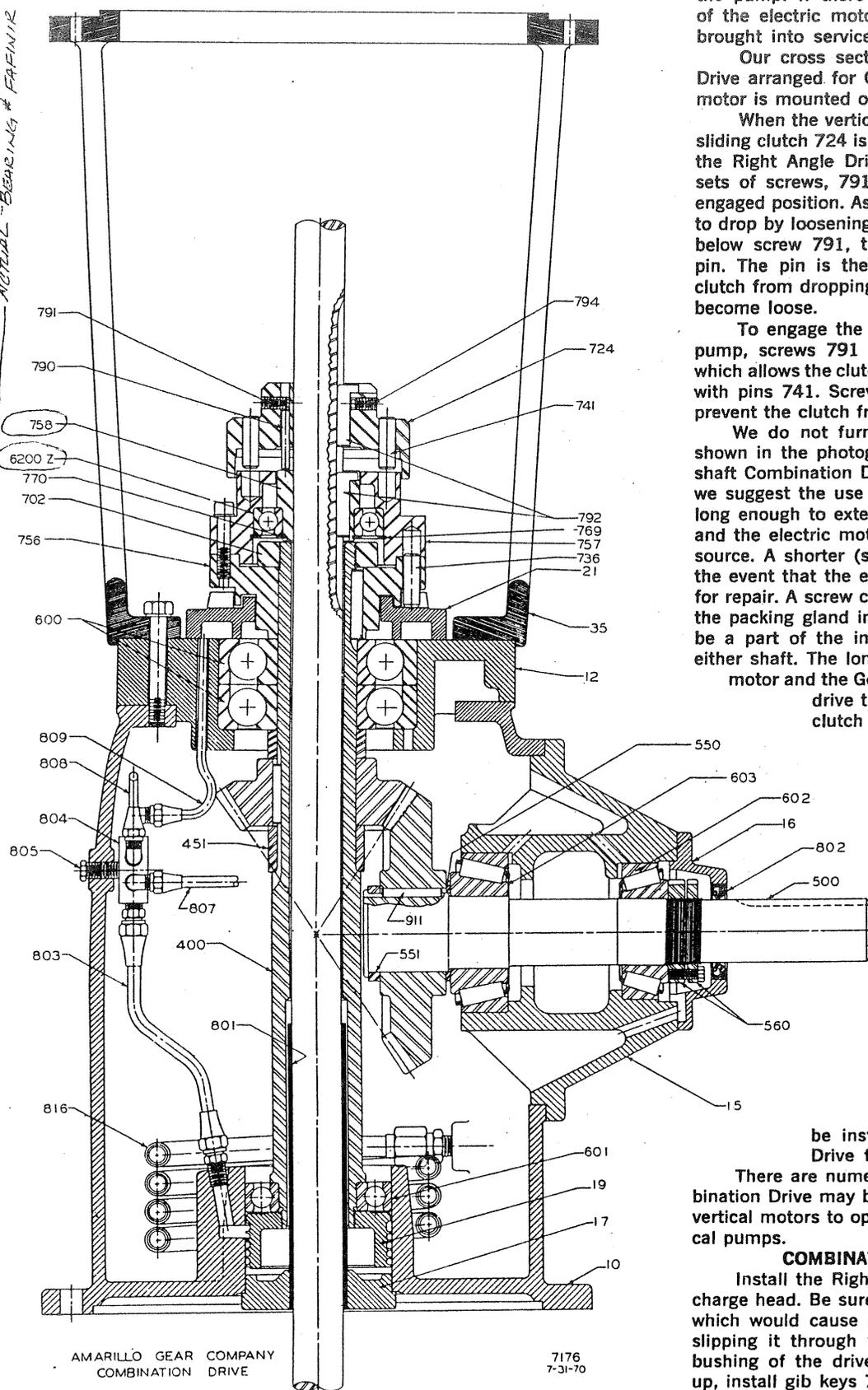
CUSTOMER: City of
 LOCATION: Mt. Pleasant, Michigan
 FOR APPROVAL *John S. ...*
 CERTIFIED:

YOUR NO: 722
 OUR NO: 620-3175
 PUMP NO: 45734
 DATE: Sept. 28, 1962
 G.P.M. 1850
 T.D.H. 195
 R.P.M. 1200
 B.H.P. 7200

TYPE HEAD	HEAD DISCHARGE FLANGI																HEAD BASE		V	W	X	Y	Z	AA	BB						
	A	B	C	D	E	F	125° AS4 FLANGE						150° AS4 FLANGE				STD	185°													
	1	2	3	4	5	6	G	H	J	K	L	M	N	P	Q	R	S	T								U					
SDH 3	14	5	7	13	1	10	4	7	6	7	8	6	8	13	2	15	7	1	1	7	4	2	1	11	24	4	1	5	1	1	1
SDH 4	16	6	9	16	1	12	8	7	7	9	8	7	10	16	2	18	11	1	1	8	4	2	1	14	18	5	1	7	1	1	1
SDH 6	20	7	11	21	1	16	8	9	9	11	12	8	12	21	1	24	14	1	1	11	4	2	1	18	20	7	2	7	1	1	1
SDH 8	22	8	13	23	1	18	8	11	11	13	12	8	13	23	1	27	16	1	1	14	4	2	1	21	20	10	2	11	1	1	1
SDH 10	25	11	15	27	1	20	12	14	14	16	16	10	15	27	1	31	20	1	1	17	4	2	1	24	17	12	2	14	1	1	1

COMBINATION DRIVE with Manually Operated Sliding Clutch

ACTUAL DRAWING # FAFNIR 214 NPP



On some pumping installations it is desirable to provide alternate power for driving a turbine or vertical pump: (1) by equipping the installation with a Right Angle Gear Drive and an internal combustion engine, and (2) by using a Right Angle Gear Drive with a stand on which a vertical electric motor is mounted above the drive. This arrangement is referred to as a "combination drive."

The vertical electric motor is normally used to operate the pump. If there is an electric power failure or failure of the electric motor, the Right Angle Gear Drive is then brought into service by engaging the sliding clutch.

Our cross sectional print 7176 shows a Right Angle Drive arranged for Combination Drive. The vertical electric motor is mounted on the stand above the drive.

When the vertical electric motor is operating the pump, sliding clutch 724 is in the raised position which disengages the Right Angle Drive from the vertical pump shaft. Two sets of screws, 791 and 794, hold the clutch in the disengaged position. As a safety measure, pin 790 is permitted to drop by loosening screw 791. When the pin has dropped below screw 791, the screw is then tightened above the pin. The pin is the correct length to prevent the sliding clutch from dropping down and engaging should screw 794 become loose.

To engage the Right Angle Gear Drive to operate the pump, screws 791 are backed out until pin 790 is free, which allows the clutch to move downward until it is engaged with pins 741. Screws 791 and 794 are then tightened to prevent the clutch from working up out of engagement.

We do not furnish or manufacture the vertical shaft shown in the photograph and drawing for standard hollow shaft Combination Drives; however, on Combination Drives we suggest the use of two top shafts. One shaft would be long enough to extend through the Right Angle Gear Drive and the electric motor, which normally is the prime power source. A shorter (spare) shaft would be recommended in the event that the electric motor is damaged and removed for repair. A screw coupling below the gear drive and above the packing gland in the discharge head would necessarily be a part of the installation to accommodate the use of either shaft. The longer shaft used in conjunction with the motor and the Gear Drive should be keyseated above the drive to permit the engagement of the sliding clutch during a temporary power failure.

With this arrangement the thrust bearing in the vertical electric motor carries the thrust for both units. The rotor of the electric motor always rotates when the Right Angle Drive is operating the pump. Should the electric motor be removed for any purpose, the spare shaft would be used to replace the longer shaft and the thrust would be transferred to the Right Angle Gear Drive.

A grease lubricated steady ball bearing 6200Z is provided to prevent run-out and vibration in the top shaft.

The Combination Drive may be used with hollow shaft or solid shaft motors. A support bearing may be installed in the base of the Right Angle Drive for a solid shaft drive.

There are numerous arrangements by which the Combination Drive may be used with solid shaft or hollow shaft vertical motors to operate deep well turbine pumps or vertical pumps.

COMBINATION DRIVE INSTALLATION

Install the Right Angle Gear Drive on the surface discharge head. Be sure there are no burrs or dirt on the base which would cause misalignment. Install the top shaft by slipping it through the sliding clutch and steady bearing bushing of the drive. After the top shaft has been made up, install gib keys 792 in the steady bearing bushing and in the sliding clutch.

AMARILLO GEAR COMPANY
COMBINATION DRIVE

7176
7-31-70

model C-150