HYDROLOGY K20/D28 WAREHOUSE ADDITION

K20 / D28

WAREHOUSE
ADDITION

1 PLAN

INFORMATION SHEET

PROJECT TITLE WAREHOUSE ADDITION TYPE OF SUBMITTAL

ZONE ATLAS PAGE NO. K-20 D28 new CITY ADDRESS 120 ERBBE STREET NE

LEGAL DESCRIPTION LOTS 15,16,23,24

ENGINEERING FIRM CONTACT

ADDRESS PHONE

OWNER CONTACT

ADDRESS PHONE

ARCHITECT RICK BENNETT CONTACT RICK BENNETT

ADDRESS 8803 RIVERVIEW PL. NW PHONE 831-3950

SURVEYOR CONTACT

ADDRESS PHONE

CONTRACTOR NUNZIOS INC CONTACT FRANK CASOLE

ADDRESS 107 CORNELL PHONE 262-1555

PRE-DESIGN MEETING: See Steve.

✓ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
✓ BUILDING PERMIT APPROVAL (FOUNDATION PERMIT)
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED OCT 19 1984 HYDROLOGY SECTION

DATE SUBMITTED: 10/19/84

BY: RICK BENNETT

ATTN: Steve Carver
Field Inspections.

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. K-20-D28 DATE: 10-23-84

PLANNING DIVISION NO. Building permit.

CONFERENCE RECAP

SUBJECT: Nunzio's Pizza Warehouse addition - 120 EPBE
Lot 15, 16, 23, 24 Bk 2 Buena Ventura Subdivision

WHO	REPRESENTING
ATTENDANCE: Carlos Montoya	
Augie Mossmann	

FINDINGS: ① Approved drainage plan as per DPM is required prior to issuance of building permit.
② Allow free discharge - due to addition to be placed over impervious area. Also fourpound system helps flooding on Central. If alley is used ~~too~~ to convey roof runoff must address erosion & capacity. Must address sump pump discharge. Need finish floor elevations. Need existing spot elevation of site and alley.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos A. Montoya SIGNED: August L. Mossmann

TITLE: TITLE:

DATE: 10-23-84 DATE:

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

INFORMATION SHEET

PROJECT TITLE: Addition to Nunzio's Warehouse

TYPE OF SUBMITTAL: Grading plan & Drainage Report

ZONE ATLAS PAGE: K-20 / D28

ADDRESS: 120 Erbbe Street, N.E.

LEGAL DESCRIPTION: Lots 15, 16, 23, 24, Block 2, Buena Ventura Subdivision

ENGINEERING FIRM: Engineering Associates

CONTACT: August Mosimann

ADDRESS: 532 Adams N.E., 87108

PHONE: 265-6545

OWNER: Nunzio's Pizza

CONTACT: Frank Casale

ADDRESS: 107 Cornell, S.E.

PHONE: 262-[illegible]55

ARCHITECT: Rick Bennett, Architect

CONTACT: Rick Bennett

ADDRESS: 3813 River View Place N. W.

PHONE: 831-3950

SURVEYOR: Alpha Surveying

CONTACT: Gary Gritsko

ADDRESS:

PHONE: 265-5538

CONTRACTOR: Owner

CONTACT:

ADDRESS:

PHONE:

YES	NO	
X		PRE-DESIGN CONFERENCE (Carlos Montoya, 10/23/84)
X		COPY OF CONFERENCE RECAP PROVIDED

TYPE OF APPROVAL REQUESTED

- SKETCH PLAT
- PRELIMINARY PLAT
- SITE DEVELOPMENT PLAN
- FINAL PLAT
- X BUILDING PERMIT
- CERTIFICATE OF OCCUPATION
- X ROUGH GRADING PERMIT
- GRADING / PAVING PERMIT

RECEIVED
DEC 11 1984
HYDROLOGY SECTION

REGISTERED PROFESSIONAL ENGINEER
NEW MEXICO
NO. 6148

August Mosimann
for
Engineering Associates, Inc.

Date Submitted: 12/10/84

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 15, 1985

Mr. August Mosiman
Engineering Associates
532 Adams NE
Albuquerque, NM 87108

REF: ADDITION TO NUNZIO'S WAREHOUSE (K20-D28)

Dear Mr. Mosiman:

Based on the information provided on your December 11, 1984 resubmittal, listed below you will find certain items that will need to be addressed before final approval is granted:

1. Information sheet with resubmittal designation.

2. Engineer's stamp with resubmittal date.

3. Location and description of:

   a) City Benchmark used
   b) TBM location and elevation

4. Type of sump pump used on the loading dock.

If you have any questions or comments, please feel free to call me at 766-7644.

Sincerely yours,

Carlos A. Montoya
City/County Flood Plain Admin.

CAM:BJM:mrk

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 23, 1985

Mr. August Mosimann
Engineering Associates
532 Adams NE
Albuquerque, NM 87108

REF: GRADING PLAN AND DRAINAGE REPORT FOR ADDITION TO NUNZIO'S WAREHOUSE (K20-D28) RECEIVED JANUARY 22, 1985

Dear Mr. Mosimann:

The above referenced plan, dated January 22, 1985 is approved.

Please attach a copy of this approved plan to the construction set prior to Hydrology sign-off.

If I can be of further assistance, please feel free to call me at 766-7644.

Sincerely yours,

Carlos A. Montoya
City/County Flood Plain Admin.

CAM:mrk

ATTN: CARLOS MONTOYA

1/22/85

RESUBMITTAL

INFORMATION SHEET

PROJECT TITLE: Addition to Nunzio's Warehouse

TYPE OF SUBMITTAL: Grading plan & Drainage Report

ZONE ATLAS PAGE: K-20

ADDRESS: 120 Erbbe Street, N.E.

LEGAL DESCRIPTION: Lots 15, 16, 23, 24, Block 2, Buena Ventura Subdivision

ENGINEERING FIRM: Engineering Associates

CONTACT: August Mosimann

ADDRESS: 532 Adams N.E., 87108

PHONE: 265-6545

OWNER: Nunzio's Pizza

CONTACT: Frank Casale

ADDRESS: 107 Cornell, S.E.

PHONE: 262-1555

ARCHITECT: Rick Bennett, Architect

CONTACT: Rick Bennett

ADDRESS: 3913 River View Place N. W.

PHONE: 831-3950

SURVEYOR: Alpha Surveying

CONTACT: Gary Gritsko

ADDRESS:

PHONE: 265-5538

CONTRACTOR: Owner

CONTACT:

ADDRESS:

PHONE:

RECEIVED
JAN 22 1985
HYDROLOGY SECTION

YES	NO	
X		PRE-DESIGN CONFERENCE (Carlos Montoya, 10/23/84)
X		COPY OF CONFERENCE RECAP PROVIDED

TYPE OF APPROVAL REQUESTED

- SKETCH PLAT
- PRELIMINARY PLAT
- SITE DEVELOPME T PLAN
- FINAL PLAT
- X BUILDING PERMIT
- CERTIFICATE OF OCCUPATION
- X ROUGH GRADING PERMIT
- GRADING / PAVING PERMIT

MOSIMANN
STATE OF NEW MEXICO
8048
REGISTERED
PROFESSIONAL ENGINEER
AUGUST

August Mosimann
for
Engineering Associates, Inc.

Date Submitted: 12/10/84

Re-submitted 1/22/85

DRAINAGE REPORT

FOR

WAREHOUSE ADDITION
TO
NUNZIO'S PIZZA

RICK BENNETT, ARCHITECT

Prepared by:
August F. Moshmann
for
Engineering Associates, Inc.
532 Adams St. N. E.
Albuquerque, New Mexico 87108

Dec. 10, 1984

RECEIVED
JAN 22 1985
HYDROLOGY SECTION

PROJECT DESCRIPTION

This project consists of a 3280 Sq. Ft. addition and a 5280 Sq. Ft. addition to an existing 9000 Sq. Ft. building. The existing site is completely paved. Since the additions will be located in areas which were previously paved the net runoff will not be increased.

LOCATION

The site is located on Zone Atlas Area K-20 and is bounded by Altez Street on the east and Erbbe Street on the west. It is bounded on the south of the first alley south of Buena Ventura Street.

LEGAL DESCRIPTION

The legal description is Lots 15, 16, 23, and 24, Block 2, Buena Ventura Subdivision, Albuquerque, New Mexico.

EXISTING SITE STUDY

Runoff from the existing site is divided into two tributaries which will be designated as Area 1 and Area 2.

Area 1 includes 9000 Sq. Ft. of roofs and 750 Sq. Ft. of paving and drains into an alley along the north property line. This alley conveys the flow north to Erbbe Street. Runoff from Area 1 is as follows:

The flow area is 9750 sq. ft. or 0.224 acres.
The flow area is 100 % impervious.
The soil is group B, type TgB, Soil Survey Sheet 32
The "C" factor is 1.00 (Pl. 22.2 C-1)
The runoff length L is 65 ft (approx)
The slope S is 1.0 %
The concentration time is 0.0078*(L^.77)/(S^.385) = 1.14 min
(10 minutes minimum)
The average velocity is 65 / (10x60) = 0.11ft/sec
The 100-yr 6-hr precipitation amount is 2.4 in (Pl 22 2 D-1)
The 100-yr intensity is 2.15 x 2.4 = 5.16 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIA=1.00 x 5.16 x 0.224 = 1.16 cfs
The 100-yr volume is 1.00 x (2.4/12) x 9750 = 1950 cu ft

The 10-yr values are 65.7% of the 100-yr values
The 10-yr 6-hr precipitation amount is 0.657X2.4=1.58 in
The 10-yr intensity is 2.15 x 1.58 = 3.40 in/hr (Pl 22.2 D-2)
The 10-yr flow rate is CIA=1.00 x 3.40 x 0.224 = 0.76 cfs
The 10-yr volume is 1.00 x (1.58/12) x 9750 = 12[illegible] cu ft

The alley is roughly swale shaped but is poorly graded and in a 100 year storm condition would probably allow runoff to enter the property to the north.

Area 2 includes 17250 Sq. Ft. of paving. A swale conveys the runoff from this area into Erbbe Street which is located to the west of the property. Runoff from Area 2 is as follows:

The flow area is 17250 sq. ft. or 0.396 acres.
The flow area is 100 % impervious.
The soil is group B, type TgB, Soil Survey Sheet 32
The "C" factor is 1.00 (Pl. 22.2 C-1)
The runoff length L is 200 ft (approx)
The slope S is 1.0 %
The concentration time is 0.0078*(L^.77)/(S^.385) = 2.72 min
(10 minutes minimum)
The average velocity is 200/ (10x60) = 0.33 ft/sec
The 100-yr 6-hr precipitation amount is 2.4 in (Pl 22.2 D-1)
The 100-yr intensity is 2.15 x 2.4 = 5.16 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIA=1.00 x 5.16 x 0.396 = 2.04 cfs
The 100-yr volume is 1.00 x (2.4/12) x 17250 = 3450 cu ft

The 10-yr values are 65.7% of the 100-yr values
The 10-yr 6-hr precipitation amount is 0.657X2.4=1.58 in
The 10-yr intensity is 2.15 x 1.58 = 3.40 in/hr (Pl 22.2 D-2)
The 10-yr flow rate is CIA=1.00 x 3.40 x 0.396 = 1.35 cfs
The 10-yr volume is 1.00 x (1.58/12) x 17250 = 2271 cu ft

OFFSITE FLOWS

There are no offsite flows affecting the site. Runoff which generally flows in an east to west direction is intercepted by the curb and gutter in Altez Street.

DEVELOPED SITE STUDY

Runoff from the two additions and the existing roofs will drain into the alley to the north. This area will be designated as Area 1. Runoff from the paved area to the south of the buildings will be designated as Area 2 and will flow through a swale to Erbbe Street as it did prior to the current development. The depressed dock area at the Northeast corner of the site will be designated as Area 3.

The runoff from Area 1 is as follows:

The flow area is 17560 sq. ft. or 0.403 acres.
The flow area is 100 % impervious.
The soil is group B, type TgB, Soil Survey Sheet 32
The "C" factor is 1.00 (Pl. 22.2 C-1)
The runoff length L is 270 ft (approx)
The slope S is 1.2 %
The concentration time is 0.0078*(L^.77)/(S^.385) = 3.19 min
(10 minutes minimum)
The average velocity is 200/ (10x60) = 0.33ft/sec
The 100-yr 6-hr precipitation amount is 2.4 in (Pl 22.2 D-1)
The 100-yr intensity is 2.15 x 2.4 = 5.16 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIA=1.00 x 5.16 x 0.403 = 2.08 cfs
The 100-yr volume is 1.00 x (2.4/12) x 17560 = 3512 cu ft

The 10-yr values are 65.7% of the 100-yr values
The 10-yr 6-hr precipitation amount is 0.657X2.4=1.58 in
The 10-yr intensity is 2.15 x 1.58 = 3.40 in/hr (Pl 22.2 D-2)
The 10-yr flow rate is CIA=1.00 x 3.40 x 0.403 = 1.37 cfs
The 10-yr volume is 1.00 x (1.58/12) x 17560 = 2307 cu ft

The alley will be re-graded into a 25 ft. wide by 6 inch deep swale with the flowline occuring 20 ft from the buildings. The capacity of this swale is 13.48 cfs in accordance wit the Manning Equation. A calculation is included at the end of this report.

The runoff from Area 2 is as follows:

The flow area is 8090 sq. ft. or 0.186 acres.
The flow area is 100 % impervious.
The soil is group B, type TgB, Soil Survey Sheet 32
The "C" factor is 1.00 (Pl. 22.2 C-1)
The runoff length L is 270 ft (approx)
The slope S is 1.0 %
The concentration time is 0.0078*(L^.77)/(S^.385) = 3.19 min
(10 minutes minimum)
The average velocity is 200/ (10x60) = 0.33ft/sec
The 100-yr 6-hr precipitation amount is 2.4 in (Pl 22.2 D-1)
The 100-yr intensity is 2.15 x 2.4 = 5.16 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIA=1.00 x 5.16 x 0.186 = 0.96 cfs
The 100-yr volume is 1.00 x (2.4/12) x 8090 = 1618 cu ft

The 10-yr values are 65.7% of the 100-yr values
The 10-yr 6-hr precipitation amount is 0.657X2.4=1.58 in
The 10-yr intensity is 2.15 x 1.58 = 3.40 in/hr (Pl 22.2 D-2)
The 10-yr flow rate is CIA=1.00 x 3.40 x 0.186 = 0.63 cfs
The 10-yr volume is 1.00 x (1.58/12) x 8090 = 1063 cu ft

The runoff from Area 2 will flow into Erbbe Street as it did before development.

The runoff from Area 3, the depressed dock, is as follows:

The flow area is 300 sq. ft. or 0.007 acres.
The flow area is 100 % impervious.
The soil is group B, type TgB, Soil Survey Sheet 32
The "C" factor is 1.00 (Pl. 22.2 C-1)
The runoff length L is 30 ft (approx)
The slope S is 5.0 %
The concentration time is 0.0078*(L^.77)/(S^.385) = 0.38 min
(10 minutes minimum)
The average velocity is 35/ (10x60) = 0.16ft/sec
The 100-yr 6-hr precipitation amount is 2.4 in (Pl 22.2 D-1)
The 100-yr intensity is 2.15 x 2.4 = 5.16 in/hr (Pl 22.2 D-2)
The 100-yr flow rate is CIA=1.00 x 5.16 x 0.007 = 0.04 cfs
The 100-yr volume is 1.00 x (2.4/12) x 300 = 60 cu ft

The 10-yr values are 65.7% of the 100-yr values
The 10-yr 6-hr precipitation amount is 0.657X2.4=1.58 in
The 10-yr intensity is 2.15 x 1.58 = 3.40 in/hr (Pl 22.2 D-2)
The 10-yr flow rate is CIA=1.00 x 3.40 x 0.007 = 0.02 cfs
The 10-yr volume is 1.00 x (1.58/12) x 300 = 39 cu ft

A sump pump will be placed at the lowest point of the depressed dock and will convey the runoff int Altez Street.

FLOOD CONTROL

Downstream flooding conditions which have existed along Wyoming Boulevard to the west of the site have been alleviated by the new Fairgrounds Drainage System. Because of this and because the existing runoff will not be increased no new retention will be provided. The re-graded alley described in Area 1 of DEVELOPED SITE STUDY will preclude the possibility of flooding occuring in the buildings to the north.

END OF REPORT

MANNING EQUATION

Q=(1.49/n)*Rh^(2/3)*S^(1/2)*A

SWALE

WIDTH = 25.00 FT
Depth = .50 FT
Low Pt= 20.00 Ft. From Left
n= .030
Area A= 6.25 SQ FT
Wetted Perimeter P=25.03FT
Hydraulic Radius Rh=A/P= .25 FT
Slope S= .0120
Velocity V= 2.16 FPS
Flow Rate Q=13.48 CFS

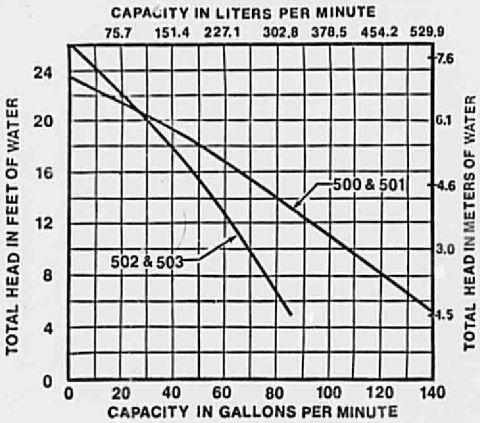
DETAILED SPECIFICATIONS

500 N AUTOMATIC

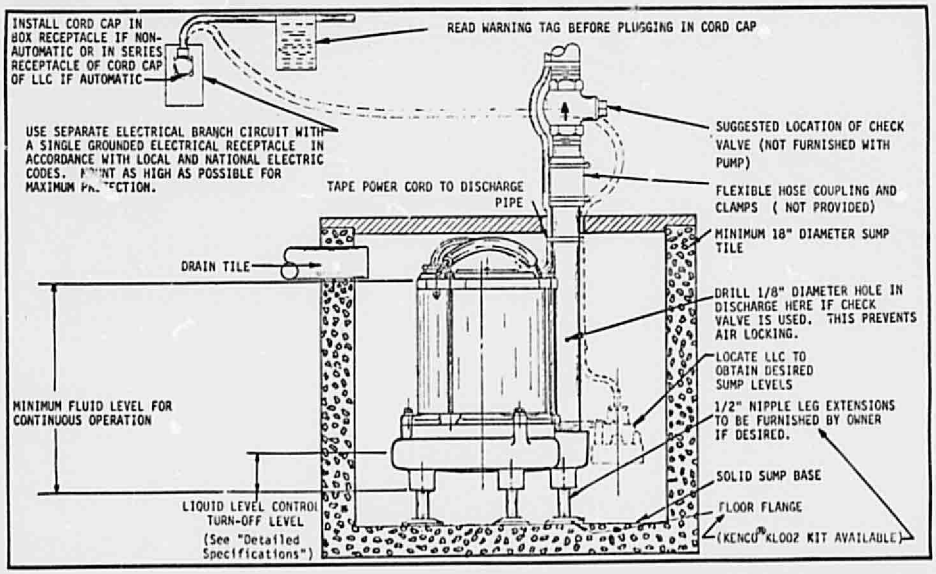
	MODEL 500 & 501	MODEL 502 & 503
Horsepower	1/2	1/2
Motor Type		
1 Phase	PSC	PSC
3 Phase	Polyphase	Polyphase
Motor RPM		
1 Phase	1625	1625
3 Phase	1725	1725
Max. Amps 115V Pumps	11-1/2	10
Max. Amps 230V Pumps		
1 Phase	5.7	5
3 Phase	3.35	2.8
Max. Amps 460V, 3 Phase Pumps	1.6	1.4
Overload Protection		
1 Phase (Thermal)	In Motor	In Motor
3 Phase	In Starter	In Starter
Recommended Slo-Blow Fuse		
115V Pumps	15 Amp	15 Amp
230V 1 Phase Pumps	10 Amp	10 Amp
Power Cord Type		
1 Phase	16-3SJTW-A	16-3SJTW-A
Power cord diameter	.330	.330
3 Phase	14-4STW-A	14-4STW-A
Power cord diameter	.605	.605
*Standard Power cord Length	10'	10'
Maximum Discharge Head	23-1/2'	26'
Liquid Level Control	Optional	Optional
Turn-Off Level (If installed)	4-1/2"Min.	3" Min.
Discharge Piping Connection	2 or 3"NPT	1-1/2"NPT
Pump Height	14-5/8"	13-3/8"
Pump Maximum Width	12-5/8"	10-1/4"

*Other cord lengths available on Special Order.

PERFORMANCE CURVE



TYPICAL INSTALLATION—500N MODEL SERIES



INSTALLATION & OPERATING MANUAL
MODELS 500, 501, 502 & 503

IMPORTANT: READ THIS MANUAL COMPLETELY BEFORE INSTALLING PUMP

These models are Non-Automatic, Submersible, Centrifugal Sewage Pumps designed for high capacity sump usage. Each pump is equipped with a multi-vane, non-clog, vortex type impeller which will pass spheres of up to 3/4" on the Models 502 and 503, and up to 2" on Models 500 and 501. Pump power cords are assembled to seal water from entering the pump and oil from wicking up the inside of the sheath and conductors.

Kenco Model Series 500 and 502 are built with cast iron castings while Model Series 501 and 503 have bronze castings. Both model series have a stainless steel housing surrounding an oil-flooded motor. All external fasteners are stainless steel.

This series does not contain a built-in liquid level control and will run continuously when connected to a suitable power source. Caution must be exercised when operating a non-automatic pump to insure that water is present in the sump for cooling the pump motor (See "Typical Installation" on page 6 for minimum fluid level) and for lubrication of the shaft seal. Do not run the pump without having it submerged in fluid as it will quickly damage the shaft seal and lead to motor damage. Level with the pump top cover is also a safe visual gauge point.

If Liquid Level Controls are desired, ask your KENCO® Distributor for their recommendation from the following units:

115 Volt	DXN1 Alternator	134 or 135 Liquid Level Switch	141M1S VARI-TROL
230 Volt	DXN2 or PXN2 Alternator	136 Liquid Level Switch	141M2S VARI-TROL
460 Volt	PXN1 or PXN2 Alternator	134 Liquid Level Switch	

CAST IRON PUMPS

MODEL	SPHERE	H.P.	VOLT	PHASE
500N1(*)	2"	1/2	115	1
502N1(*)	3/4"	1/2	115	1
500N2(*)	2"	1/2	230	1
502N2(*)	3/4"	1/2	230	1
500N3(*)	2"	1/2	230	3
502N3(*)	3/4"	1/2	230	3
500N4(*)	2"	1/2	460	3
502N4(*)	3/4"	1/2	460	3

BRONZE PUMPS

MODEL	SPHERE	H.P.	VOLT	PHASE
501N1(*)	2"	1/2	115	1
503N1(*)	3/4"	1/2	115	1
501N2(*)	2"	1/2	230	1
503N2(*)	3/4"	1/2	230	1
501N3(*)	2"	1/2	230	3
503N3(*)	3/4"	1/2	230	3
501N4(*)	2"	1/2	460	3
503N4(*)	3/4"	1/2	460	3

* Another digit appears for product identification. Always refer to the complete model number and serial number in communications with Kenco Authorized Servicenter or factory.

CAUTION: NEVER TOUCH THE PUMP OR DISCHARGE PIPE WHEN THE PUMP IS CONNECTED TO THE ELECTRICAL SUPPLY RECEPTACLE. ALWAYS DISCONNECT THE PUMP FROM THE POWER SOURCE PRIOR TO INSPECTING OR MOVING IT.

MODELS 500 & 501

MODELS 502 & 503

Pump Models are manufactured under one or more of the following patents: 2627716, 2635546, 2743673, 29933570, 3021788, 3070021, 3162737, 3264999, 3366759 and other patents pending.