TYPICAL DETAILS

FIGURE

1. Fence and Gate Detail
2. Pier Details
3. Tank (Fuel) and Foundation Details
4. Discharge in Cement Pipes
5. Discharge in Circular w/Smooth Slopes
6. Discharge in Circular w/Steep Slopes
8. Multiples Connections to Avoid Dead ends
9. Multiples Connections to Avoid Dead ends
10. Subdivided House Connection
11. House Connection with Ford Meter box
12. House Connection (Typical Inst.)
13. 2" Dia. Water Meter Box
14. 4" Dia. Water Meter Box
15. Public Fountain
16. Vent and Pipe Installation
17. Air Release Valve and Basin
18. Butterfly Valve 16" or 20"
20. Fire Hydrant (P.R. Type)
21. Drain Detail
22. C.I. Telescopic Valve Box
23. Pumping Station - Weatherproof Motors
24. Horizontal Centrifugal Booster Pump (pit)
25. Pumping Station Weatherproof Inst.
26. Aluminium Frame and Cover - Flockhart
27. Pumping Station Structural Details
27A. Pumping Station Structural Details
28. Underground Pumping Station
28A. Underground Pumping Station Details
28B. Wiring Diagram for Underground Pumping Stations
28C. Underground Pumping Station Control Panel Mounting Details
30. Deep Well Pump
31. Saddle House Connection to Existing Concrete Sanitary Sewer
32. House Connection and Rungs Details
33. Sanitary House Connection Complete
34. House Connection - Sewer Pipe Plus 2.0 m
35. Concrete Protection for House Connection
36. Frame and Cover (C.I.)
37. Inspection M.H.
38. Inspection M.H.
39. Drop M.H.
40. Drop M.H.
41. Drop M.H.
41A. Elevated M.H.
41B. Precast M.H.
41C. Precast M.H.
41D. Precast M.H.
42. Typical Details - Inverted Siphon
43. Water/Sewer Mains Separation
44. Sludge Drying Beds
45. Hose Valve Detail
46. Spiral Stairs Details
47. Laboratory Arrangement #1
48. Laboratory Arrangement #1
49. Laboratory Arrangement #2
50. Laboratory Arrangement #2
51. Laboratory Arrangement #3
53. Time Required for Sewer Pumps Stops
54. Variation in Daily Sewer Flow
55. Apartment Water Supply Alt.
56. Loading Platform Bumper
57. Exhaust Fan (17" unit)
58 to 58E Distribution Tank
59-59A Vertical Type Pump
60 to 60A Submersible Type Pump
COMMONWEALTH OF PUERTO RICO

PUERTO RICO AQUEDUCT AND SEWER AUTHORITY

TYPICAL DETAIL
PIER DETAIL

NOTE: THIS DETAIL IS TO SHOW THE TYPE AND FORM OF THE PIER. IT SHOULD PERFORM THE STRUCTURAL DESIGN FOR THE PIERS.

DIMENSIONS IN MILLER

3/8" X 3" GALV. STEEL BAND

C.I. PIPE TO BE INST.

3/8" X 3" GALV. STEEL BAND

DIA.

H

Fig. Num. 2

Date 8/09/80
NOTE:
The developer shall be responsible for the structural design of the foundations.

FUEL TANK AND FOUNDATION DETAIL

FIG. NUM. 3
DATE 8/5/80
RELACIÓN DE ALTURA A DIÁMETRO

FACTOR DE ROZAMIENTO

DESCARGA, Q

MANNING'S N

ÁREA, A

VELOCIDAD, V

n, f CONSTANTE

n, f VARIABLE CON LA ALTURA

ELEMENTOS HIDRAULICOS

V

Q

A

VLLENA, QLLENA, ALENA

n = 0.015

FECHA 8/08/80

ELEMENTOS HIDRAULICOS DE SECCIONES CIRCULARES PEQUEÑAS POR LA FORMULA DE KUTTER

FIG. NUM. 7
DUCTILE CAST IRON MAIN PIPE

TAPPED CAP
SIMILAR OR EQUAL TO F-1390
"JAMES B CLOW & SONS, INC."

MULTIPLE CONNECTION BRONZE PLUG
SIMILAR OR EQUAL TO F-4435
"JAMES B CLOW & SONS, INC."

DETAILS OF MULTIPLES CONNECTIONS TO AVOID DEAD ENDS WHERE POSSIBLE EXTENSION EXISTS

FIG. NUM. 8
DATE: 8/08/80
DUCTILE CAST IRON MAIN PIPE

TAPPED CAP

SIMILAR TO F-1390 DE
"JAMES B. CLOW & SONS, INC."

MULTIPLE CONNECTION BRONZE

SIMILAR TO F-4435
"JAMES B. CLOW & SONS, INC.

DETAILS OF MULTIPLES CONNECTIONS TO AVOID DEAD ENDS WHERE POSSIBLE EXTENSION EXISTS

FIG. NUM. 9
DATE: 8/08/80
METER BOXES

CONNECTION PARTS

GLOBE VALVE TO BE INSTALLED
(SEE DETAIL "A")

ADEQUATE SIZE FLEXIBLE COPPER, TYPE "K" PIPE CONNECTION

CORPORATION COCK AND SERVICE CLAMP, IF NECESSARY

MAIN

NOTES:
1. FOR 3/4" TO 2" DIA. CONNECTION.
2. FOR FLEXIBLE COPPER PIPE CONNECTION USE FLARE END FITTINGS.
3. THE CONNECTION AND BRANCHES SHALL BE DETERMINED IN ACCORDANCE WITH THE NUMBER OF METERS AND ITS SIZE.
5. ALL FITTINGS SHALL BE THREAD TYPE WHEN BRONZE PIPE IS USED.

DATE 6/08/80

SUBDIVIDED HOUSE CONNECTION DETAIL

FIG. NUM. 10
CONNECTION TO MAIN PIPE AND WATER METER INSTALLATION
NOTE:
ALL HOUSE CONNECTIONS TO BE MADE AT CENTER OF PROPERTY

HOUSE CONNECTION AND METER INSTALLATION TYPICAL DETAIL

FIG. NUM. 12
DATE: 8/08/80
C.L FRAME AND COVER
0.75 X 1.52 X 0.62
WITH LOCK

STD. MANHOLE COVER
& FRAME (STANDARD)

1 1/2" WEEP HOLE

SUM 0.30 X 0.30 X 0.60
FILL WITH CRUSHED
STONE

PLAN

SLEEVE IN ASPHALT SEAL

FROM MAIN CL NIPPLE

FLANGE SPIGOT

GATE VALVE MALE ADAPTER

ELBOW

NIPPLE

FLANGE

VALVE FLANGE

DRESSER COUPLING

FLANGE

NIPPLE

FLANGE FLANGE SPIGOT

T-FLANGE

SLEEVE IN ASPHALT SEAL

TO SITE

NIPPLE FLANGE BELL END

HORIZONTAL SECTION

INSIDE DIMENSIONS "A"

3" DIAMETER - 2.74 M.
6" DIAMETER - 3.12 M.
8" DIAMETER - 3.56 M.

BY PASS DIMENSIONS

3" DIAMETER = 2"
4" DIAMETER = 2"
6" DIAMETER = 4"
8" DIAMETER = 4"

VERTICAL SECTION

3" TO 8" WATER METER

FIG. NUM. 14

DATE 8/06/80
1/2" VENT. & CONCRETE BOX DETAIL
NOT TO SCALE

TO BE SAWED INTERMITTENT
WERE PAVEMENT EXISTS

REPLACE ASPHALT TO ORIGINAL THICKNESS
(WERE IT OCCURS)

EXISTING PAVEMENT

3/4" CRUSH STONE WERE PAVEMENT
EXISTS TO ORIGINAL THICKNESS

TAMPERED FILL 90% 

WATER MAIN TO BE ISTOLED

EXCAVATION & FILL FOR PIPE INSTALLATION
NOT TO SCALE

VENT & PIPE INSTALLATION DETAILS

FIG. NUM. 16
DATE 8/08/80
MANHOLE FRAME & COVER TO BE EQUAL TO NEENAH TYPE R-I015 WITH INSET TOP DESIGN MARKED "WATER"

2" COURSE PRECAST ADJUSTING RINGS 8" MAX.

PRECAST CONC. RING CONSTRUCTION
A.S.T.M. C-475

2" B AIR RELEASE VALVE

2" GATE VALVE

PRECAST CONCRETE BASE WITH 2" GRAVEL OR CRUSHED STONE BED

0.51

0.30

1.52

0.15 O.I6

NOT TO SCALE

AIR RELEASE VALVE & BASIN DETAIL

FIG. NO. 17

DATE 8/08/80
16" OR 20" BUTTERFLY VALVE

16" OR 20" DRESSER COUPLING

PLAN

0.81 x 0.91 C.L., FRAME & COVER

SECTION

NOTE:
THE DEVELOPER SHALL BE
RESponsible FOR THE STRUCTURAL
DESIGN

16" OR 20" DIA. BUTTERFLY VALVE DETAIL

FIG. NUM. 18
FECHA: 8/98/80
CONCRETE PLATFORM PLAN

NOTES:
1. ALL FITTINGS SHALL BE MADE OF BRONZE
2. THIS EQUIPMENT SHALL BE INSTALLED INSIDE THE LOT

LEGEND
1. GATE VALVE
2. WATER METER WITH LOCK CAP
3. STRAINER
4. BACKFLOW PREVENTER VALVE
5. TEST COCK
6. UNIVERSAL UNION

BACKFLOW PREVENTER VALVE DETAIL
EQUAL OR APPROVED EQUAL TO WATTS SERIES 900

FIG.NO.19
DATE 8/08/80
NOT TO SCALE

FOR SIDEWALK PLANTING STRIP THE FIRE HYDRANT MUST BE INSTALLED IN SUCH PLANTING STRIP AS SHOWN IN THE DOTTED LINES.

FIRE HYDRANT
(Puerto Rico)

FIG. NO. 20

DATE 8/08/80
PLAN

SECTION

DRAIN DETAIL

C.I. VALV BOX FOR VALVE PROTECTION
CAST IRON TELESCOPIC VALVE BOX
INCLUDING EXTENSION AND COVER

FIG. NO. 22
DATE 8/08/80

NOT TO SCALE
LEGEND

1. Gate Valve, Hand Wheel Operated
2. C.I. Nipple, Flanged & Spigot
3. Dresser Coupling
4. Reducer
5. Horizontal Centrifugal Booster Pump
6. Air Vent
7. Pump Concentric Reducer
8. Combination Back Pressure & Check Valve
9. Tee, Pressure Relief Valve
10. C.I. Flanged Nipple
11. Pressure Gauge
12. Pressure Recorder
13. Automatic Pressure Switch

NOTE: All Flanged Fittings

TYPICAL DETAIL OF HORIZONTAL CENTRIFUGAL BOOSTER PUMP CONNECTED TO A SUCTION PIT

FIG NO. 24

DATE 8/06/80
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NUMBER</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLOAT VALVE FRAME AND COVER</td>
<td>16225</td>
<td>1.07 MT.</td>
<td>0.97 MT.</td>
<td>0.95 MT.</td>
<td>0.90 MT.</td>
</tr>
<tr>
<td>CHECK VALVE FRAME AND COVER</td>
<td>15181</td>
<td>1.22 MT.</td>
<td>1.12 MT.</td>
<td>1.11 MT.</td>
<td>1.07 MT.</td>
</tr>
<tr>
<td>FRAME AND COVER FOR INSPECTION MANHOLE</td>
<td>16215</td>
<td>0.76 MT.</td>
<td>0.66 MT.</td>
<td>0.65 MT.</td>
<td>0.60 MT.</td>
</tr>
</tbody>
</table>

ALUMINUM FRAME AND COVER
TIPE FLOCKHART 678 WITH LOCK

NOTE:
ALL PARTS TO BE BRONZE

LOCK DETAIL

NOT TO SCALE
PLAN
SCALE 1:40
1/4" DIA. PIPE TO TANKTROL

LEGEND

1. UNDERGROUND PUMP WITH CAPACITY FOR ___ G.P.M.,
   AGAINST A TOTAL HEAD OF ___ FT. EQUAL OR SIMILAR TO MODEL
   ATTACHED TO ___ H.P. ELECTRIC MOTOR ___ R.P.M.
   PHASES ___ VOLTAGE.
2. 4" DIA. STRAINER H.F., F.L.
3. 4" DIA. TRUE "Y" H.F., F.L.
4. 4" DIA. NIPPLE H.F., F.L. (8" LENGTH)
5. 4" BEND 4" DIA. H.F., F.L. (SHORT BODY)
6. 4" DIA. VALVE H.F., F.L.
7. 4" DIA. NIPPLE H.F., F.L. (10" LONG)
8. FLANGED COUPLING ADAPTER 4" DIA. H.F.
9. 4" X 2" REDUCER H.F., F.L.
10. 90° ELBOW 4" DIA. H.F. (SHORT BODY)
11. 4" DIA. CROSS H.F., F.L. (SHORT BODY)
12. 2" DIA. NIPPLE H.B. (20" LENGTH)
13. 2" DIA. VALVE BRONZE AND THREADED
14. PRESSURE SUSTAINING VALVE 2" DIA. SIMILAR OR
   EQUAL TO MODEL 50 0-01 FROM CLAYTON VALVES.
15. FLANGED ADAPTER
16. 90° ELBOW 2" DIA. H.B., WITH FLANGE
17. 4" DIA. NIPPLE H.F., F.L.
18. PRESSURE SUSTAINING AND CHECK VALVE EQUAL OR
   SIMILAR TO MODEL NO. 51 FROM CLA-VAL CO.
19. 1/2" DIA. AUTOMATIC VENT.
20. ELECTRODE HOLDER, VENT. AND MANOMETER
21. MANOMETER.

NOTE:
FOR SECTION "A-A" SEE FIG. NO. 28-A.

DATE: 7/11/60
UNDERGROUND PUMPS STATION

FIG. NO. 28
### General Notes

1. All conduits to be galvanized steel, 3/4" minimum size or specified in the drawings.
2. All wires and conductors to be of copper and minimum size #12 or as specified in the drawings.
3. All power and lighting wires and conductors to have 600 volts type THW insulation.
4. All primary line work to be done by P.P.E.P.A. and paid for by the contractor.
5. Ground connection shall have a resistance greater than 30 ohms.
6. Overload relays to be of the quick trip adjustable type.
7. Motors to be grounded by #4 wire.
8. Magnetic starter to be of the non-reversible type.
9. Coordinate with P.P.E.P.A. the point of connection, meter base and riser installation.
10. Control panel shall be manufacturer wired, dead front and Nema type with key locking facilities.
11. Control panel cover or doors shall be provided with corner attachments to open at an angle not greater than 90°.

### Note A

The construction department shall be responsible for rejecting any project which does not requirement as stipulated on general notes #5.
LEGEND:

1. VERTICAL TURBINE PUMP
2. REDUCER
3. DRESSER COUPLING (SEE DETAIL "D")
4. FLANGED SPIGOT C.I. FLANGED NIPPLE
5. AIR VENT
6. COMBINATION BALK PRESSURE AND CHECK VALVE
7. TEE PRESSURE RELIEF VALVE
8. G.I. FLANGED NIPPLE
9. PRESSURE GAUGE
10. PRESSURE RECORDER
11. AUTOMATIC PRESSURE SWITCH
12. GATE VALVE, HAND WHEEL OPERATED

NOTE:
ALL FLANGED FITTINGS

INSTALLATION DETAIL OF A VERTICAL TURBINE PUMP TO A WET PIT

FIG. NUM. 29
DATE 9/5/60
PLAN
NOT TO SCALE

SECTION A-A
NOT TO SCALE

LEGEND:
1 VERTICAL TURBINE DEEP WELL PUMP
2 REDUCER
3 FLEXIBLE JOINT (SEE DETAIL)
4 NIPPLES FLANGE SPIGOT
5 TEE AND PRESSURE RELIEF VALVE
6 RETENTION VALVE AND OR CONTROLLER OF AUTOMATIC FLOW
7 TEE, GATE VALVE, DRAIN PIPE
8 PRESSURE GAUGE
9 GRAPHIC PRESSURE RECORDER
10 PUMP NIPPLE
11 GRAPHIC PRESSURE SWITCH
12 TURBINE METER OR VENTURI TYPE
13 GATE VALVE HANDLE HOOK OPERATED
14 PUMP COLUMN

NOTE:
ALL FLANGED FITTINGS

DETAIL "D"
NOT TO SCALE

DETAIL OF A DEEP WELL PUMP

FIG. NUM. 30
DATE 9/5/80
NOT TO SCALE

SADDLE HOUSE CONNECTION TO EXISTING SANITARY SEWER

DATE: 8/08/80
DETAIL OF HOUSE CONNECTION WHEN SEWER IS 2.0 M. DEEP OR MORE
CONCRETE PROTECTION FOR HOUSE CONNECTION DETAIL

CONCRETE PROTECTION DETAIL FOR PIPES AT DEPTHS LESS THAN 0.60 M

RIGHT OF WAY WIDTH FOR PARARELL RUNNING SEWER & WATER PIPERS DETAIL

PROTECTION DETAILS AND RIGHT OF WAY

FIG. NUM. 35
DATE 8/08/80
PLAN
SCALE 3/32" = 1"
SECTIONAL PLAN

NOTE:
MANHOLE INTERIOR DIAMETER
FROM 8" TO 10" = 1.20 M.
FROM 16" TO 27" = 1.90 M.
FROM 30" AND LARGER = 1.00 M. + 0.17\

SECTION - A-A

THE INVERT OF THE LATERAL PIPE MUST BE ABOVE THE INVERT OF THE MAIN SEWER

NOT TO SCALE

INSPECTION MANHOLE DETAIL

FIG. NO. 37
DATE 8/08/80
NOTE:
FOR MANHOLE INTERIOR DIAMETER, SEE NOTE ON FIGURE NUMBER 37

SECTIONAL PLAN

SECTION A-A

TRANSITION PIPE SHALL HAVE THE SAME SLOP AS INLET PIPE. RINGS MUST BE PLACED WHEN DEPTH EXCEEDS 0.31M. (3'-0"

SECTION B-B

INSPECTION MANHOLE DETAIL

FIG. NO. 38
DATE: 8/08/89
3/4" 6 SOLID GALV.
WROUGHT IRON OR
ALUMINUM LADDER
RINGS @ 0.30 C.C.

SANITARY

STD. C.I. PIPE

5/6"X3" GALV. STEEL
BRACKET 0.91 M.C.C.

FIN. GRADE 1.20

MANHOLE

NOT MORE THAN 12"

LEAD & CAULK

PLUG

C.I. SAN CROSS

C.I. ELBOW

C.I. ELBOW

STL. BRACKET DET. B-B

3/4" ANCHOR BOLT

D.

ELEV.

SECTION — B-B

NOT TO SCALE

DROP. MANHOLE DETAIL

FIG. NO. 39

DATE 8/08/80
DROP MANHOLE DETAIL
(WHEN THE DROP EXCEEDS 1.00M. AND FOR
THE LINE EXCEEDS 12"

DATE: 8/08/80
NOTE
THE DEVELOPER SHALL BE RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THE MANHOLE.

SECTIONAL PLAN

SECTION "A"

NOT TO SCALE

DETAILS OF ELEVATED MANHOLES

FIG. NO. 41- A
DATE 8/06/80
REINFORCED PRECAST CONCRETE MANHOLE
48° for 8" Dia. to 18" Dia. Sewer Pipe
60° for 16" Dia. to 27" Dia. Sewer Pipe

FIG. NO. 41-6

DATE 8/08/80
REINFORCED PRECAST CONCRETE MANHOLE
FOR TRUNK SEWER 30'' DIA. OR LARGER

SECTIONAL VIEW
(SEE TOP VIEW FOR TRUE ORIENTATION)

MANHOLE BASE DETAILS

<table>
<thead>
<tr>
<th>MANHOLE WALL</th>
<th>BASE DIA. (IN)</th>
<th>HOOK CASES</th>
<th>INSIDE CAGE AS (IN²/LIN. FT)</th>
<th>OUTSIDE CAGE AS (IN²/LIN. FT)</th>
<th>BASE SLAB T (IN)</th>
<th>BASE SLAB REINFORCEMENT (IN²/FT LIN.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70</td>
<td>7</td>
<td>2</td>
<td>0.29</td>
<td>12</td>
<td>0.29 EA WAY</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>7 1/2</td>
<td>2</td>
<td>0.35</td>
<td>12</td>
<td>0.29 EA WAY</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>8</td>
<td>2</td>
<td>0.41</td>
<td>12</td>
<td>0.29 EA WAY</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>8 1/2</td>
<td>2</td>
<td>0.48</td>
<td>12</td>
<td>0.29 EA WAY</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>9</td>
<td>2</td>
<td>0.54</td>
<td>12</td>
<td>0.29 EA WAY</td>
</tr>
</tbody>
</table>

REQUIRED DESIGNS FOR INTERMEDIATE MANHOLE SLAB

<table>
<thead>
<tr>
<th>DIA. OF SLAB THICKNESS (IN)</th>
<th>DIA. OF HOLE IN SLAB (IN)</th>
<th>AREA STEEL TOP &amp; BOTTOM BOTH WAYS (IN²/FT LIN.)</th>
<th>AREA STEEL TOP &amp; BOTTOM AROUND HOLE (IN²/FT LIN.)</th>
<th>MAX EARTH COVER (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>90</td>
</tr>
<tr>
<td>75</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>90</td>
</tr>
<tr>
<td>80</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>25</td>
</tr>
<tr>
<td>85</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>25</td>
</tr>
<tr>
<td>90</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>14</td>
</tr>
<tr>
<td>102</td>
<td>48</td>
<td>0.12</td>
<td>0.20</td>
<td>12</td>
</tr>
</tbody>
</table>
PARALLEL INSTALLATION
NOT TO SCALE

EXISTING OR FINAL GRADE

SANITARY

WATER

0.75

0.457

3.05 M.

CROSSING INSTALLATION
NOT TO SCALE

EXISTING OR FINAL GRADE

SEWER ABOVE MAIN

WATER MAIN

0.10

0.457

0.10

CONCRETE PROTECTION
IF NOT ON UNDISTURBED
EARTH OR LESS THAN 0.45 M.
BETWEEN LINES

VARIABLE

SEWER PIPE O.D. + 0.30

SEWER BELOW MAIN

ONE FULL LENGTH OF PIPE
WITH JOINTS EQUIDISTANT
FROM SEWER LINE

FIG NO. 43
DATE 8/08/80

SEPARATION OF WATER & SEWER MAINS
ANTI-SIPHON VACUUM BREAKER

CHAIN

3/4" GLOBE VALVE

CLASS "A" CONCRETE

3/4" C.L. PIPE

MAIN PIPE

ANTI-SIPHON VACUUM BREAKER

HOSE VALVE DETAIL

FIG. NO. 45

DATE 7/11/80
SPiral StAIR DeTAIL

Fig. No. 46
Date 8/06/80
ILLUSTRATION OF ADEQUATE LABORATORY ARRANGEMENT-2
ILLUSTRATION OF ADEQUATE
LABORATORY ARRANGEMENT-3

FIG. NO. 51
DATE 8/08/80
MINIMUM TIME REQUIRED BETWEEN SEWER PUMPS SUCCESSIVE STOPS

FORMULA:

\[ V = GPM \times T \]

WET PIT EFFECTIVE VOLUME [CU. FT.]

1 = TIME IN MINUTES BETWEEN PUMP STOPS

CAPACITY - G.P.M.

DATE 8/08/80

FIG. NO. 52
MINIMUM TIME REQUIRED BETWEEN SUCCESSIVE STOPS OF THE SANITARY SEWER PUMP

FIG. NO. 53

DATE 8/08/80
GENERAL METER

INVOICE TO OWNER OR CONDOMINIUM ADMINISTRATION

INDIVIDUAL METER INSTALLED AT FIRST FLOOR OR BASEMENT LEVELS OF THE BUILDING

PUMPS

TANK

GENERAL METER FOR GENERAL USES

"REMOTE READING"

1ST, 2ND & 3RD FLOORS METER GROUPED AND READ AT 2ND FLOOR.

4TH, 5TH & 6TH FLOORS METERS GROUPED AND READ AT 5TH FLOOR.

PUMPS

GENERAL METER

STOP VALVE

COMMON USES

METER FOR COMMON USES AND INDIVIDUAL METERS AT PLANTING STRIP OR SIDEWALK

SUPPLY BY GRAVITY

INSTALLATION FACILITIES SO THE OWNER CAN CHARGE EACH APARTMENT

AC

PRIVATE METER

PUMPS

GENERAL METER

ALTERNATIVES FOR SUPPLYING WATER SERVICE TO APARTMENT FOR CONDOMINIUM BUILDINGS.

FIG. NO. 55

DATE: 8/06/80
SECTION

EXHAUST FAN DETAIL
17" UNIT

NOT TO SCALE

FIG. NO. 57
DATE: 6/08/80
DISTRIBUTION TANK & PUMPING STATION (50,000 GALS)

Fig. Num. 58
Date 8-08-81

Legend:
1. Vertical Centrifugal Pump
2. Weatherproof with Capacity for 50 G.P.M., Against a Total Head of 20 F.T. Attatched to
3. H.P. Electric Motor
4. R.P.M.
5. Phases
6. Cycles
7. Volts
8. 3"Dia. C.I., Fl. Valve
9. Dia. C.I., Fl. Control Valve
10. Dia. C.I., Fl. Check Valve
11. Dia. C.I., Fl. 150# Short Body 90° Elbow
12. Dia. C.I., Fl. 150# Short Body Tee
13. Dia. C.I., Fl. 150# Short Body Reduced Tee
14. 2"Dia. Pressure Cushion Valve
15. 2" Eccentric Reducer
16. 1" Dia. C.I. Band B Wall Sleeve
17. Strainer
18. Single Slab B Concentric Reducer
19. Pressure Recorder
20. 1/4" Dia. Stop Valve

Design Factors:
- P = 2,000# H = 15
- Fc = 800#/f V = 60 fpm
- Fx = 18,000#/ft M = 120 ft/ft

Live Load = 20#/sq ft

Note: Lifting equipment. The sketch shown is a guide for arrangement only; its design depends on height, distance and weight of equipment. Its design is the responsibility of the consultant. (Please refer to typical drawings 27 and 27-A.)
NOTE: LIFTING EQUIPMENT

THE SKETCH SHOWN IS A GUIDE FOR ARRANGEMENT ONLY. ITS DESIGN DEPENDS ON HEIGHT, DISTANCE AND WEIGHT OF EQUIPMENT. ITS DESIGN IS THE RESPONSIBILITY OF THE CONSULTANT (PLEASE REFER TO TYPICAL DRAWINGS # 27 AND 27-A).

DISTRIBUTION TANK CAPACITY 50,000 GALS.
DISTRIBUTION TANK CAP. = 50,000 GALS.
VERTICAL TYPE PUMP (100 GALS. OR MORE)

FIG. NUM. 59-A
DATE 8-08-80
NOTE: Dimension LV1, location and size of bolt to be determined according to equipment installed.

DETAIL "D"

SECTION "B-B" NOT TO SCALE

SUBMERSIBLE TYPE PUMP (100 G.P.M. OR MORE) FOR 6" DIA. PIPE

FIG. NUM. 60-A
DATE 8-08-60