For FRSA Use:
Log # _____
Date: _____

Four Rivers Sanitation Authority
Engineering Dept.
3501 Kishwaukee Street
Rockford, Illinois 61109

Schedule F - Sewer System Lift Station / Force Main

1. Name of Project: _____

2. Design Population:

Area to be served _____ acres. Population to be served _____ P.E.

3. Design Flows:

Design Average Flow _____ gpm. Design Maximum Flow _____ gpm.

4. Lift Station will serve:

Only separate sewers ___Yes ___No Domestic waste sewers ___ Yes ___ No
Industrial waste sewers ___Yes ___No Domestic & industrial wastes ___ Yes ___ No

5. Lift Station is designed to serve:

___ Only the population indicated above ___ An anticipated additional waste contribution of _____ P.E.

6. Force Main:

Size of Force Main (inches) _____ Total Length (feet) _____

Pipe material specifications _____ Joint specifications _____

Are air relief valves provided at high points? ___Yes ___ No

Are clean-outs (blow-offs) provided at low points? ___Yes ___ No

7. Design Head (Total Dynamic Head):

Static Head:
Forcemain High Point Elevation: _____
Low Water Elevation : _____

Static Head : (A) _____ Feet

Pipe friction loss: (B) _____ Feet at "C" = 100 or
(Attach calculations) _____ Feet at "C" = 120

Minor Losses (Valves, etc.) : (C) _____ Feet at "C" = 100
(Attach calculations)

Total Dynamic Head (A + B + C) _____ Feet

8. Pumps

Number of Pumps	Type of Pumps	GPM per Pump	at TDH (Feet)	HP of Each Pump	Pass 3" Spheres
					Yes No
					Yes No
					Yes No

a. Rated Capacity of Lift Station _____ gpm at _____ feet of TDH.

b. Pumping Capacity with Largest Unit Out of Service _____ gpm at _____ feet of TDH.

c. Are all pumps with positive suction head and/or self priming? ___Yes ____No

d. Have provisions been made to detect shaft seal failure or potential shaft seal failure? ___ Yes ____ No

9. Valves

a. Discharge Pipe ___Gate ___Check ___ Other _____ ___ Other _____
b. Suction Line (if Applicable) ___Gate ___Check ___ Other _____ ___ Other _____

10. Wet Well

a. Effective capacity (volume between pumps off and pumps on switches) = _____ gallons
b. Detention time at design flow = _____ minutes
c. Are there provisions for pump removal? ___Yes___ No

11. Buoyancy Calculations

a. Have buoyancy calculations been submitted? ___Yes ___ No ___ N/A
b. Depth of groundwater table: _____ feet below the ground surface.

12. Accessibility

Is the pump station accessible by an all weather road? ___Yes ___No

13. Ventilation
a. Wet Well:
Continuous with at least 12 complete air changes per hour? ___Yes ___ No
Intermittent with at least 30 complete air changes per hour? ___Yes ___ No

b. Dry Well (if applicable):
Continuous with at least 6 complete air changes per hour? ___Yes ___ No ___ N/A
Intermittent with at least 30 complete air changes per hour? ___Yes ___ No ___ N/A

c. Is portable ventilation equipment available for use at all times? ___Yes ___ No

14. Emergency Operations

a. In case of power failure, is an alternate power supply available? ___Yes ___ No
If yes, please describe the source of the alternate power supply. _____
b. Is a portable pump, with adequate pumping capacity, available for use at all times? ___Yes ___No
c. Has a riser from the force main been provided to hook-up portable pumps? ___Yes ___ No
d.Length of time between a power failure and commencement of pumping by emergency equipment _____.
e. Estimated time interval before damage or sewer backup will occur _____.

f. Type of alarm system proposed: ___ Telemetering System ___ Audio-Visual with self contained power

g. Are personnel available at all times to operate emergency equipment? ___Yes ___ No

15. Flow Measurement

a. Type of flow measurement provided: ___ Flow meter ___ Elapsed time meters ___ ITR

16. Compliance with Illinois Recommended Standards for Sewage Works

a. Can the pump station remain operational during the 25-year flood? ___Yes ___ No
b. Is the pump station protected from physical damage during the 100-year flood? ___Yes ___ No
c. When applicable, will electrical systems and components comply with NEC requirements for Class I, Group D, Division I locations? ___Yes ___No
d. Have provisions been made to automatically alternate the pumps? ___Yes ___ No
e. Is the motor control center located outside and protected by a conduit seal? ___Yes ___ No
f. Can the motor be electronically disconnected without disturbing the seal? ___Yes ___ No

This Agency is authorized to require this information under Illinois Compiled Statutes, 1998, Chapter 415, Title X, Section 5/39 et seq.. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied.