

Rock River Water Reclamation District

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:

(Attach calculations)

(B) _____ Feet at "C" = 100 or

_____ Feet at "C" = 120

Minor Losses (Valves, etc.) :

(Attach calculations)

(C) _____ Feet at "C" = 100

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
					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 ___ N/A
- 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: _____ Telemetry 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.

L:\ENGINEER\SHARE\IEPA Permits\Permits - AG\Forms - Blank\Schedule F.docx