

IV. Optional Bid Items. If optional bid items #0019 and/or #0032 are exercised, the Contractor shall reconfigure the datalinks for the following existing City pump stations and incorporate their operation and monitoring into the new master control stations.

TABLE E: Opt. Item #0018-Existing Grand Forks pump stations to be integrated into new master control stat'n

| Station Monitor Points | Grand Forks Pump Station Identification Numbers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|-----|---|---|----|----|----|----|----|----|----|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|---|---|---|--|
| | 1 | 4 | 5 | 6 | 7 | 7.1 | 8 | 9 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 17.1 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 37 | 38 | 39 | 40 | 88 | 100 | | | | |
| Discharge Press. (Gauge Feet) | x | x | x | x | | | x | x | | 2 | 2 | x | x | x | 2 | x | x | x | x | x | | | x | x | x | x | | | | | | | | | x | x | x | | | | | |
| Current Flow Meter (GPM) | x | x | x | x | | | | | | | x | x | x | x | x | | x | x | x | x | | | | | | | | 5 | | | | | | | | x | x | x | | | | |
| Flow Meter Total (Gallons) | x | x | x | x | | | x | x | | x | x | x | x | x | | x | x | x | x | | | | | | | | | 5 | x | | | x | | | | x | x | x | | | | |
| Pump Run Time (Hours) | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Current Pump Speed (Rpm) | 3 | 2 | 3 | 2 | | | 2 | 2 | | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | | | | 3 | 3 | 3 | 2 | | | | 5 | 2 | | | | | 2 | 2 | 2 | | | | |
| Current Wet Well Level In Inches | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | x | x | x | x | | x | x | | | | | x | x | x | x | | x | | | |
| Current Alarms | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | |
| Anticavitation Mode Status | x | x | x | x | | | x | x | | x | x | x | x | x | x | x | x | x | x | | | | | x | x | x | x | | | | | | | | | x | x | x | | | | |
| Control Power Fail Alarm | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | |
| Phase Fail Alarm | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Intrusion Alarm | x | x | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Valve Pit/ Dry Well Flooded Alarm | x | x | x | x | | | x | x | | x | x | x | x | x | x | | x | x | x | x | | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Telemetry Fail Alarm | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Cabinet Ventilation Fail Alarm | x | x | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | x | x | x | | | | | | | | | | | | x | x | x | | |
| Pump Local Selector | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump Over Temp Alarm | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump VFD/SSRV Fault Alarm | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump In Standby | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| High Level Alarm | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | |
| Low Level Alarm | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | |
| Pump Check Valve Fail Alarm | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump Run Light | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump Fail Light | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump HOA Switch Pos. Indicator | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Pump VFD Speed % | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Lead Pump Start Set Point | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Lead Pump Stop Set Point | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Lag Pump Start Set Point | 2 | x | 2 | x | x | x | x | x | | x | x | x | 2 | 2 | 2 | x | 2 | 2 | 2 | 2 | x | x | 2 | 2 | 2 | 2 | x | x | x | 2 | x | x | x | x | x | x | x | x | x | x | | |
| Lag Pump Stop Set Point | 2 | x | 2 | x | x | x | x | x | | x | x | x | 2 | 2 | 2 | x | 2 | 2 | 2 | 2 | x | x | 2 | 2 | 2 | 2 | x | x | x | 2 | x | x | x | x | x | x | x | x | x | x | | |

Note: Numbers in table indicate number of multiple monitor points for each pump in station.