# FORCEMAIN DISCHARGE PIPING, TYP. PROVIDE OFF SET PIPING AS REQUIRED TO ACCOMMODATE POSITIONING OF CHECK VALVES WITHIN ENERGY DISSIPATING MANHOL (NOTE 22) -30"x36" ALUMINUM ACCESS HATCH (NOTE 9) -10" TIDE FLEX CHECK VALVE NUISANCE PUMP - (NP) NOT SHOWN 10'-0" Ø R.C.P. — WET WELL PROVIDE CAST IRON STEPS AND "LADDER UP" DEVICE CONTRACTOR TO COORDINATE ORIENTATION AS REQUIRED. NOTE 9 24" Ø R.C.P. WET WELL INTAKE PIPE. SEE PUMP STATION SITE PLAN 72" Ø ENERGY DISSIPATING MANHOLE GRAVITY FLOW TO RETENTION POND FLOW 24" Ø R.C.P. SEE PUMP STATION SITE PLAN FOR ALIGNMENT PROVIDE CAST IRON STEPS AND "LADDER UP" DEVICE CONTRACTOR TO COORDINATE ORIENTATION 4" TIDE FLEX CHECK VALVE -10" TIDE FLEX CHECK VALVE USE FLANGE-FLANGE CONNECTIONS INSIDE STRUCTURES -1" THREADED DRILL HOLE, TYP. EACH FORCE MAIN FOR VENT RISER PIPE USE PUSH ON CONNECTION FOR BURIED APPLICATIONS -WHERE PIPING PENETRATES STRUCTURE USE FLEXIBLE BOOT (NOTE 22) **PLAN VIEW** ALUMINUM ACCESS HATCH (PROVIDE SEPARATE HATCH FOR EACH PUMP. ORIENTATION AS REQUIRED) NOTE 9

-STAINLESS STEEL LIFTING CHAIN HELD BY HOOK- PUMPS LIFTS ON CENTER OF GRAVITY- NO SIDE LOADING, NO BINDING

REINFORCED FLAT SLAB TOP (NOTE 7)

3" CL.

10'-0"

1" GALVANIZED STEEL SCHEDULE 40 VENT RISER PIPE. TOP OF VENT PIPE © EL. 642.00

6'-0"

633.00 -

-10" D.I. PIPE, SUPPORT AS REQUIRED. MAXIMUM LENGTH OF PIPE SECTION TO BE 10 FT. TO FACILITATE INSTALLATION/REMOVAL

-SUBMERSIBLE STORMWATER PUMP (EXPLOSION PROOF CLASS 1, DIVISION 1, GROUP D)

\*5 @ 12" O.C., BOTH WAYS TOP & BOTTOM, 3" CLR

PUMP & RAIL SUPPORT

-10" TIDE FLEX CHECK VALVE ARRANGED FOR BOLTING ON TO FLANGED CONNECTION AND RATED FOR PUMP DISCHARGE

-10" DIP FORCEMAIN DISCHARGE PIPING

**>>>** 

### 75 70 65 60 55 DUTY POINT 50 45 35 RATED CONDITION 2.250 gpm @ 42 FT. 30 DUITY POINT 25 20 15 10 0 1000 3000 FLOW PER MINUTE IN GALLONS

#### FLOOD WATER PUMPS (SP-1 & 2) PUMP CURVE

NOTE: PUMPS DESIGNATED SP-1 & 2 SHALL BE CAPABLE OF MEETING THE RATED CONDITIONS INDICATED. PUMPS SHALL ALSO BE CAPABLE OF OPERATING OVER THE OPERATING RANGE INDICATED FROM DUTY POINTS "AND "B" (MAX. HEAD/MIN. FLOW TO MIN. HEAD/MAX. FLOW) AND PASSING THRU THE RATED CONDITION. APPROXIMATE DUTY POINT PATINGS ARE AS FOLLOWS: RATED CONDITION. APPROX RATINGS ARE AS FOLLOWS:

PUMP STATION WET WELL FLAT SLAB TOP ELEV. 643.00

DUTY POINT "A" : 1.350 gpm @ 55FT. DUTY POINT "B" : 2,700 gpm @ 35FT.

PROVIDE COMPACTED
STRUCTURAL GRANULAR
BACKFILL EQUAL TO IDOT
CA-6 FOR STRUCTURAL
BACKFILL ALL AROUND
PUMP STATION AND
RELATED APPURTENANCES

COMPACTED IDOT CA-6 (6" MIN. DEPTH PLACED AGAINST UNDISTURBED SOIL)

# **STORMWATER PUMP STATION NOTES**

- ANY AND ALL DEWATERING REQUIRED DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ORIENTATION OF PIPING, CONDUITS, EQUIPMENT ETC. MAY VARY. CONTRACTOR TO COORDINATE WITH EQUIPMENT LOCATIONS SHOWN ON OTHER SHEETS.
- 3. DIMENSIONING SHOWN ON THIS DRAWING IS NOT TO SCALE (NTS). DO NOT SCALE THIS DRAWING.
- LOCATION ORIENTATION AND NUMBER OF EMBEDDED AND/OR BURIED CONDUITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. MINIMUM NUMBER OF CONDUITS ARE SHOWN ON CONDUIT PLAN, CABLES INTEGRALLY WIRED AND PROVIDED WITH PUMPS AND FLOATS TO BE OF SUFFICIENT LENGTH TO CONNECT TO CONTROLLER WITHOUT SPLICING.
- CONTRACTOR TO COORDINATE POSITION AND SIZE OF PUMP STATION HATCHES TO ALLOW FOR PUMP REMOVAL.
- USE OF PUMPS SUPPLIED UNDER THIS CONTRACT FOR THE PURPOSE OF DEWATERING DURING CONSTRUCTION, WILL NOT BE PERMITTED.
- 7. SEE FLAT SLAB TOP & HATCH NOTES.

PROPOSED GRADE

2ND MAIN PUMP ON (LAG)

IST MAIN PUMP ON (LEAD)
EL.: 607.26

ALARM LEVEL

EL.: 609.16

EL.: 608.26

- 8. PROVIDE AUTOMATIC ALTERNATOR TO ALTERNATE OPERATION OF LEAD AND LAG PUMPS.
- HATCHES SHALL BE ALUMINUM WITH BRONZE AND/OR 316 STAINLESS STEEL TRIM. LOAD RATING SHALL BE 300 PSF. CONTRACTOR TO COORDINATE HATCH SIZE AND ORIENTATION FOR ACCESS TO CAST IRON STEPS.
- 10. PROVIDE SEPARATE CONDUITS FOR EACH PUMP POWER CABLE. PROVIDE SEPARATE CONDUIT FOR PUMP CONTROL CABLES. PROVIDE SEPARATE CONDUIT FOR FLOAT CONTROL CABLES.
- 11. CONTRACTOR RESPONSIBLE FOR EQUIPMENT ORIENTATION.
- 12. PROVIDE PLASTIC COATED ANCHOR FOR FLOAT SWITCH TO PREVENT MOVEMENT. (SEE DETAILS ON THIS SHEET)
- 13. ALL FASTENERS, MOUNTING HARDWARE, AND LIFTING CHAINS SHALL BE STAINLESS STEEL.
- 14. FOR OPERATING NOTES, SEE PROPOSED PUMP STATION DETAILS (3 OF 4).
- 15. (NOT USED).
- 16. THE FLOAT SYSTEM SHALL OPERATE AS A BACK-UP SYSTEM. A PRIMARY LEVEL MANAGEMENT SYSTEM SHALL BE PROVIDED AND SHALL CONSIST OF A PRESSURE TRANSDUCER AND A CONTROLLER.
- 17. PROVIDE CONDENSATION HEATER AND THERMOSWITCH FOR TRAFFIC BOX ENCLOSURE.
  HEATER SIZE TO BE COORDINATED BY CONTRACTOR FOR SIZE OF TRAFFIC BOX ENCLOSURE.
- 18. PROVIDE A DUAL 20 AMP GFCI CONVENIENCE OUTLET LOCATED WITHIN THE PUMP CONTROLLER.
- 19. HATCHES SHALL BE GASKETED, ODOR RESISTANT AND LOCKABLE. ALL LOCKS SHALL BE KEYED TO MATCH OWNER'S REQUIREMENTS.
- SAFETY GRATES SHALL SPAN THE ENTIRE OPENING OF EACH HATCH. A SINGLE SAFETY GRATE SPANNING ALL HATCHES WILL NOT BE ACCEPTABLE. GRATES SHALL BE CAPABLE OF SUPPORTING A 300 PSF.
- 21. PRIOR TO FABRICATION, CONTRACTOR SHALL VERIFY GRADE ELEVATIONS AND INVERTS OF EXISTING SEWERS AND STRUCTURES. CONTRACTOR SHALL COORDINATE INVERTS SUCH THAT JOINTS DO NOT FALL AT LOCATION(S) OF PIPE PENETRATIONS.
- 22. PROVIDE SOLID SLEEVE COUPLINGS AND/OR OFFSET FITTINGS AS REQUIRED TO ACCOMMODATE PIPING ALIGNMENTS BETWEEN WET WELL AND VALVE VAULT. USE FLEXIBLE BOOT SEAL PIPING THROUGH PENETRATION.
- 23. PROVIDE WATER TIGHT JOINT BY FILLING ANNULAR SPACE BETWEEN OPENNING AND PIPE WITH SEALING GROUT, TYPICAL FOR ALL PIPING WHICH PENETRATES WET WELL AND/OR VALVE VAULT STRUCTURE.

# FLAT SLAB TOP & HATCH NOTES

- MAXIMIZE TO ALLOW FOR REINFORCEMENT: NEED (AS MIN.) 12" BETWEEN CLEAR OPENINGS OF HATCHES.
- HATCH FOR NUISANCE PUMP: 30.5"X 25" (NOMINAL) CONTRACTOR TO COORDINATE LOCATION. (SEE NOTE 5)
- 3. HATCHES FOR MAIN FLOODWATER PUMP, EACH 42"X 32" (NOMINAL); CONTRACTOR TO COORDINATE LOCATION. (SEE NOTE 5)
- 4. HATCH FOR EDMH: 30"X 36" (NOMINAL) CONTRACTOR TO COORDINATE LOCATION. (SEE NOTE 5)
- 5. CONCRETE: FLAT SLAB (FOR WET-WELL) THICKNESS = 12", STRENGTH = 4000 PSI
- 6. PUMP/HATCH LAYOUT BASED UPON HYDROMATIC PUMPS.
  OTHER PUMPING UNITS MAY REQUIRE LARGER HATCH
  AND/OR DIFFERENT ORIENTATION THAN INDICATED.
  CONTRACTOR TO COORDINATE AS REQUIRED. CONTRACTOR
  TO PROVIDE HATCH SIZE AS REQUIRED FOR ACCESS
  TO LADDER RUNGS.

DO NOT ALLOW EXCAVATION TO FILL WITH WATER. STRUCTURE WILL FLOAT. CONTRACTOR TO TAKE APPROPRIATE PRECAUTIONS. AND PROVIDE DEWATERING AS REQUIRED.

## NOTE:

VILLAGE OF ROSEMONT

WILL BE OWNER/OPERATOR OF THIS PUMPING FACILITY

NP POWER INTERRUPT EL.: 604.31 EL.: 603.56 MAIN PUMPS OFF EL.: 602.76 MAIN PUMPS ALARM (FAILURE TO SHUT OFF) EL.: 602.06 NUISANCE PUMP (NP) ON EL.: 601.56 PUMP SUPPORT BRACKET NUISANCE PUMP (NP) OFF EL.: 600.56 NP ALARM (FAILURE TO SHUT OFF) PUMP & RAIL SUPPORT EL.: 599.56 -3" CL. TYP. TOP & BOTTOM

END VIEW

**SIDE VIEW** 

USER NAME = pmagnell DESIGNED JP REVISED DRAWN KWB REVISED CHECKED JPC REVISED - 10/17/2012 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

ALUMINUM ACCESS HATCH (PROVIDE SEPARATE HATCH FOR EACH PUMP. ORIENTATION AS REQUIRED) NOTE 9

SAFETY HATCH FALL PROTECTION DEVICE (SEE NOTE 20)

RIM ELEV. - 053.00

TEINFORCED FLAT SLAB TOP
TO BE A MINIMUM OF 10" THICK.
REBARS TO BE \*5 © 12" ON CENTER
BOTH WAYS, TOP AND BOTTOM.
ADD FULL LENGTH BARS EQUAL IN
NUMBER TO THOSE BARS CUT AND
LAY IN SAME DIRECTION AS THOSE CUT

GRAVITY FLOW TO RETENTION POND

RIM ELEV. = 643.00

PROPOSED PUMP STATION PLAN AND SECTION

SECTION COUNTY 330 0105 WRS&HB COOK 605 196 CONTRACT NO. 60G37 SHEET NO. OF SHEETS STA.

SAFETY HATCH FALL PROTECTION DEVICE (SEE NOTE 20)

4" DIP FLANGED -VENT PIPING WITH BIRD SCREEN

FLOAT MOUNTING BRACKET

RIM ELEV. = 643.00-

CONTROL CABLES

POWER CABLES

CONDUITS FOR POWER AND CONTROL (NOTES 4 & 10) TO TRAFFIC BOX ENCLOSURE

24" INLET PIPE (SEE SITE PLAN FOR PROPER ORIENTATION)

FLOW

10 LB PVC COATED ANCHOR

ELEV.: 598.56

ELEV.; 596.06

STAINLESS STEEL GUIDE RAILS

INV. ELEV.: 608.25

PROPOSED GRADE -