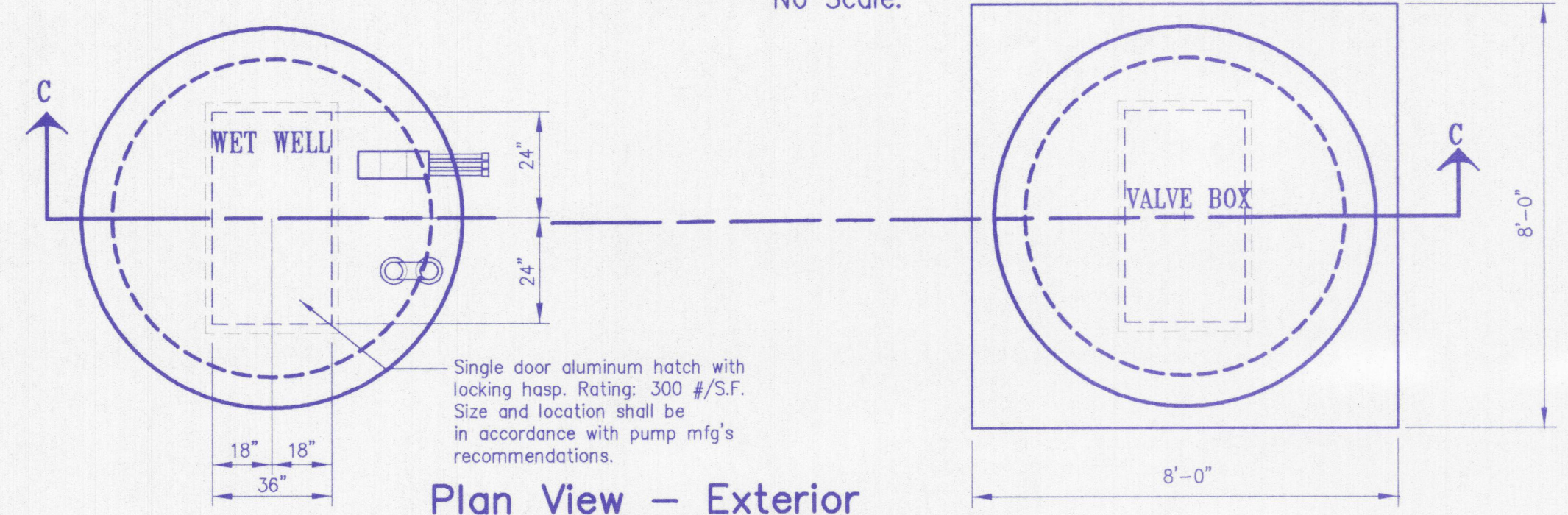


Plan View - Interior



Plan View - Exterior

Wall Construction

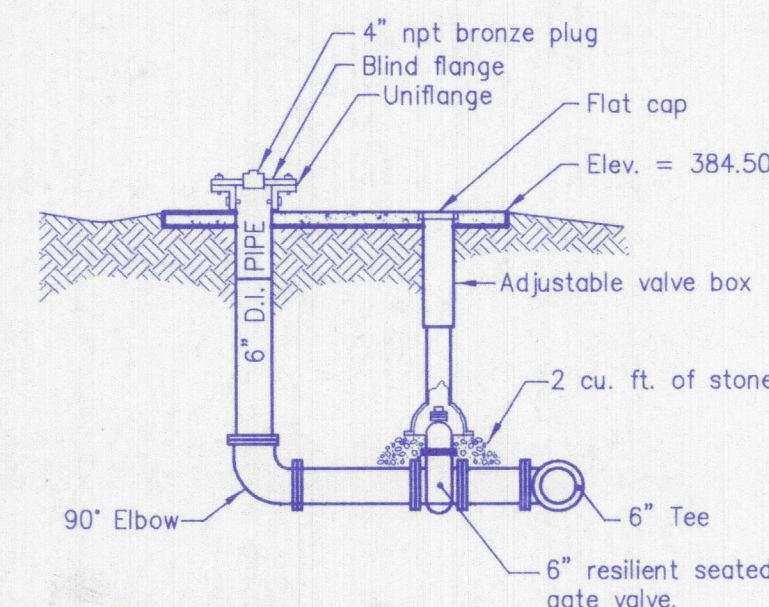
- 4" brick veneer
- 1/2" O.S.B. or plywood sheathing
- 2"x4" wall studs at 16" o.c. with 20 gage galvanized corrugated wall ties at 16" o.c. vert. & horiz.

Building Notes

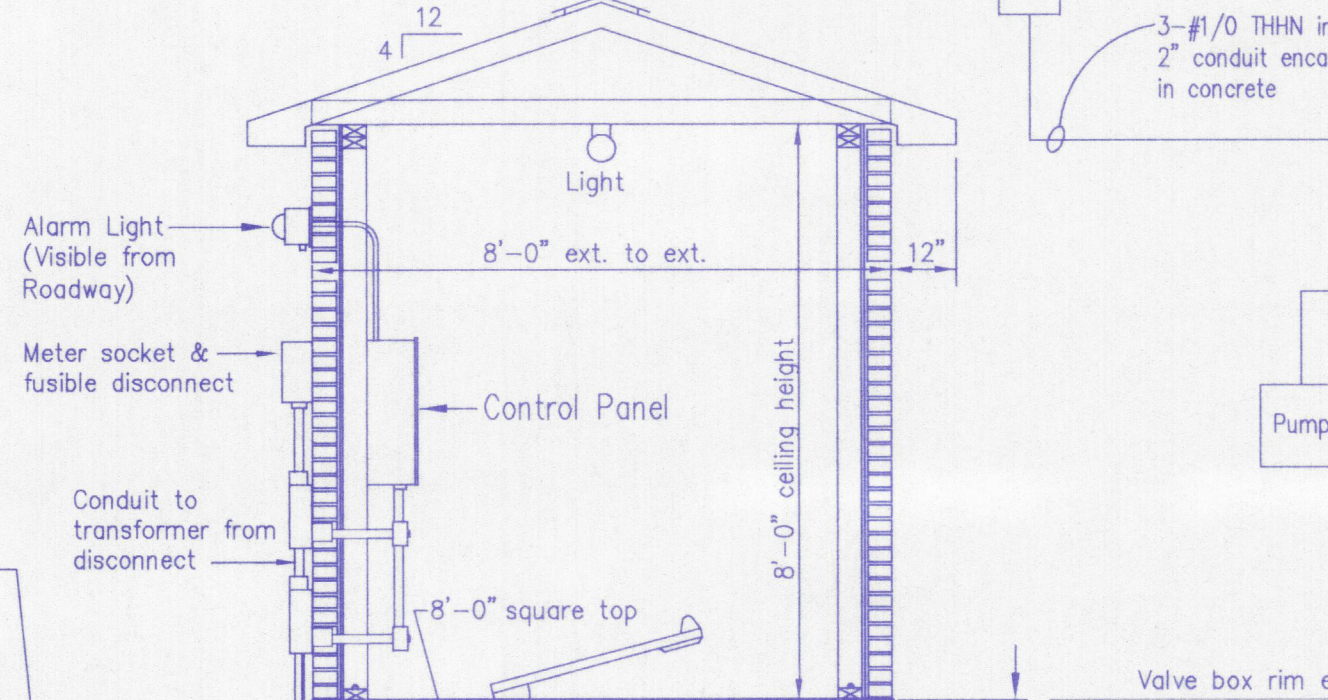
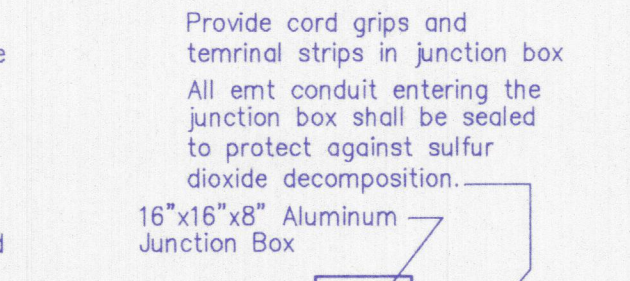
- Minimum door dimensions shall be 3'-6"x7'-0"x1 3/4"
- Door shall have 3 hinges with hasp for pad lock
- Door shall have an aluminum threshold.
- Door shall be fabricated of 16 gage steel with 2"x2" louvered vent.
- Building shall meet all building codes.
- Door frame shall be steel and painted to match trim.
- Supply and install overhead light with switch at door.
- Supply and install one (1) GFI outlet box.
- All lumber is to be kiln dried, treated southern yellow pine.
- Building anchored to concrete top with 1/2" expansion anchors at 48" O.C. with a minimum embedment of 4".

Roof Construction

- 215# fiberglass shingles (color/owner)
- 5/8" OSB decking with clips
- 15# building felt, 2" lap
- Drip edge
- 2"x4" rafter at 16" o.c.
- 2"x4" ceiling joists at 16" o.c.
- Continuous ridge vent
- Aluminum soffit with continuous vent
- 1"x4" fascia with aluminum face



Section D-D



Section C-C

Pump Information:

(May vary from manufacturer selected) pump operation 500 GPM at 38 TDH. Number of pumps: 2

Force Main and Lift Station Notes:

- Verify all dimensions with pump manufacturer before casting lids.
- Spare pump with impeller, shall be furnished to EWSU prior to final acceptance.
- Access boxes for tracer wires will be required when distances between structures and air relief valve manholes exceed 1000 feet.
- All mounting brackets and hardware shall be stainless steel. Flange bolts for discharge piping shall be stainless steel.
- Exposed interior piping in the wet well and valve pit shall be coated with primer and 2 coats of epoxy paint. Application shall follow the manufacturer's recommendations. Material shall be approved by the owner prior to application.
- All sand in grass areas shall be capped with 6" of topsoil to insure grass growth.
- Sand fill adjacent to all structure walls - 95% AASHTO T-180 (typ.) Lifts shall not exceed 8 inches.
- All construction shall be constructed in accordance with all local, state, and federal ordinances.
- All pumps and electrical equipment must be submitted by suppliers/contractors for approval.
- (TELEMETRY) Motorola moscad unit and appurtenances per city specifications.
- Contractor shall comply with all local, state and federal codes, ordinances, rules, regulations, orders and other legal requirements of municipal authorities which bear on the performance of the work.
- The contractor is cautioned that the location and / or elevation of existing utilities as shown on these plans is based on records of various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must contact the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. Indiana Underground Utility Locate Service Phone 1-800-382-5544
- All fittings used for bends shall be secured using approved design and installation methods.
- Force Main trench shall be backfilled with sand in areas within 5' of a paved roadway or driveway. Backfill shall be placed in layers not to exceed 9" loose measurement and each layer compacted to a minimum 95% Standard Proctor in accordance with AASHTO T-99.
- Lift Station rim elevation shall be at or above the 100 - year flood elevation.
- Electrical wiring shall be in accordance with local utility standards.

Electrical Notes

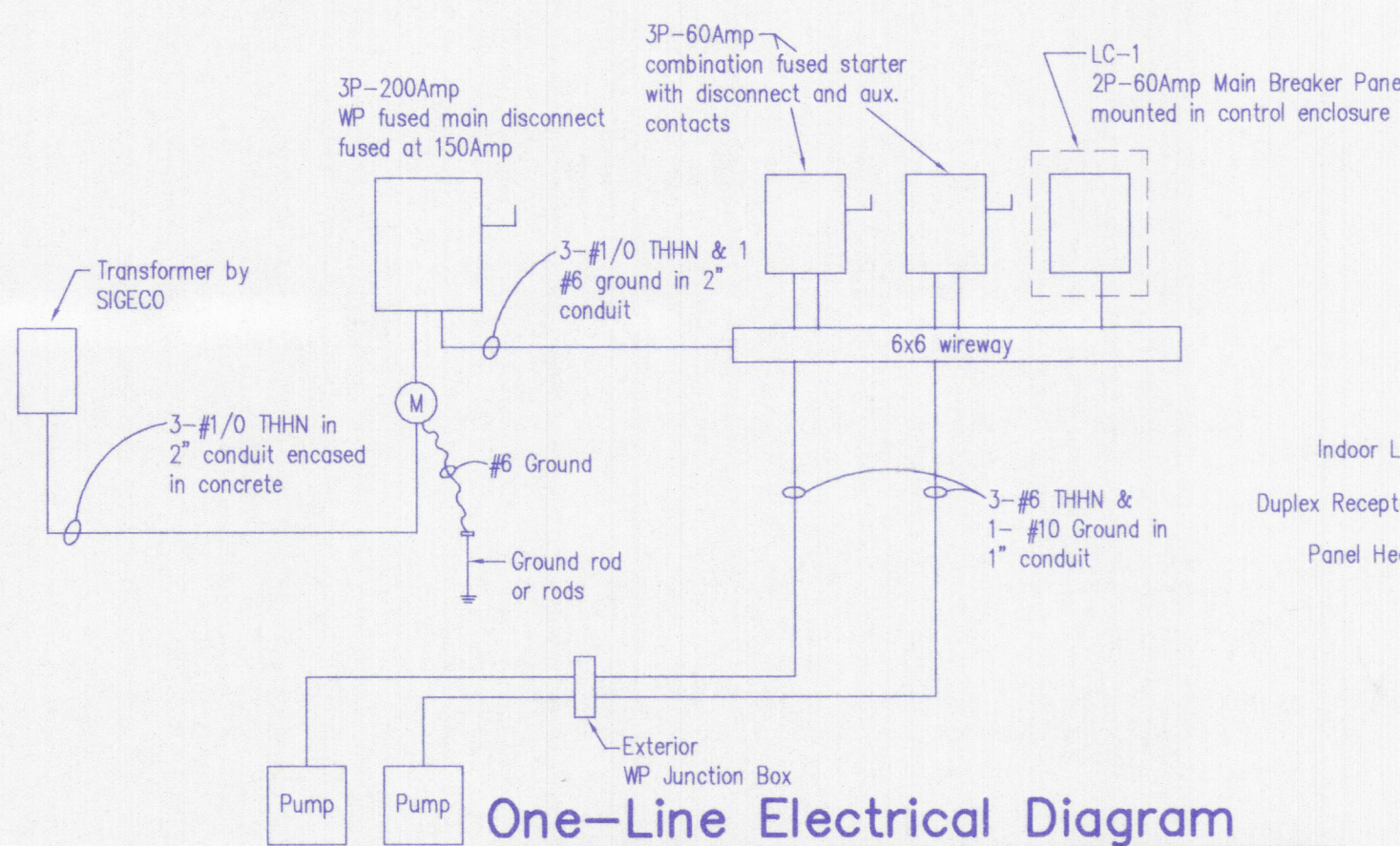
- 240 Volt, 3-Phase, 60 Hz, 4-Wire Delta Service or 440 Volt, 3-Phase, 60 Hz with 240/440 Volt to 120/440 Volt 7.5 KVA (Minimum) Transformer.
- Underground electrical service shall be installed in 3" schedule 40 PVC conduit encased in 6" (minimum) concrete. A No. 2 bare copper ground wire shall be installed from the pad mounted transformer to the panel. Install a 24"x24"x12" weatherproof junction box with two (2) 2" schedule 80 PVC conduits to the wet well and a 2 1/2" rigid conduit through the wall to the control enclosure.
- Exterior enclosures NEMA 4X and Mechanical Building interior enclosures NEMA 12.
- Magnetic Pump Starters, NEMA Rated - NEMA 1 Size minimum, with 120 Volt control coil, thermal overload relays in each phase leg, "Hand-Off-Auto" Selector Switch and "Normal-Bypass" Switch (Switches operable on face of Control Enclosure without opening door).
- 30 Amp, 3-Phase WYE, female receptacle equal to Hubbell 3430 with 7/424 MO lift cover - weatherproof with cover open - for emergency electrical pump connection.
- Externally mounted NEMA 3 Globe-Type Alarm Light with Lexan Globe, wire guard and flashing RED light - mount wet well level.
- Logic Programmable Controller (LPC) equal to OMRON S3D Series, dry contact input type, with optically DC power source, eight (8) inputs (minimum), four (4) outputs (minimum) and EEPROM memory.
- Automatically resetting phase monitors on each phase. Automatically resetting alarm relays with adjustable time delays as listed for specific applications and compatible with Monitoring System.
- Power Distribution Panel with circuit breakers for each individual circuit mounted in Control Enclosure.
- "High Wet Well Level" Alarm with 0 - 15 Minute (adjustable) time delay prior to alarming and light in or on Control Enclosure Door.
- 0 - 30 Seconds (adjustable) APDT time delay relay for float inputs to LPC.
- Accumulative, non-resettable, type elapsed run time meter with one-tenth (1/10) hour increments for each pump.
- 1P-20A, 120 Volt GFI Duplex Receptacle mounted inside LPC enclosure.
- 150 Watt, screw base, electric heater with adjustable thermostat mounted in LPC enclosure to prevent condensation.
- Pump Seal-Failure alarm with light.
- Monitoring System equal to MOTOROLA moscad with alarm components compatible to the existing telemetry system installed at the Westside Waste Water Treatment Plant, five (5) (minimum) contact status-type alarm points for monitoring lift station alarms.
- "Tag" type radio antenna, externally mounted, with connection to the telemetry system.
- Control enclosure, dead front type, for mounting control components and devices listed plus front or face mounted elapsed time meters, indicating lights - Each pump "On/Off" labeled "Pump-x-Run", "High Wet Well Level", "Seal-Failure - pumps" - with identification, "Test-Off-Auto" Switch for all alarm lights and other switches and/or push buttons. Each device or light shall be identified by a 1/16" thick Black Grovers nameplate with 3/16" white letters, beveled edges and 3/8" holes for mounting screws - verify Nomenclature before mounting nameplate.

General Wiring Notes

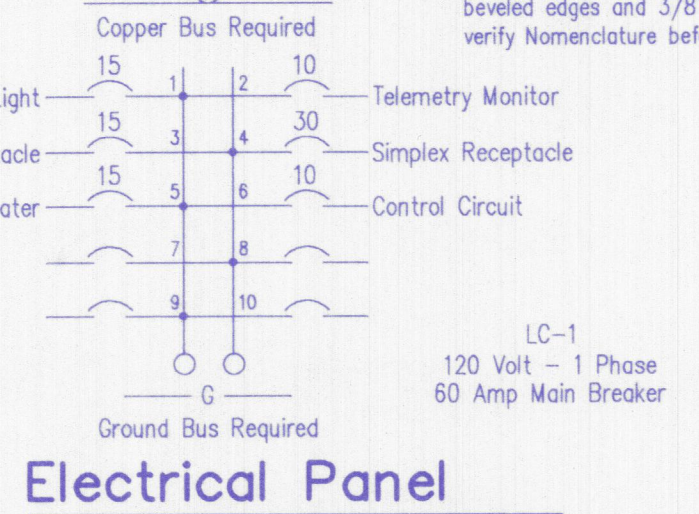
- Minimum conduit size is 3/4" except for communication using Belden, Penn or similar cable.
- Minimum wire size is No. 12 AWG copper, No. 10 and smaller wire shall be solid. No. 8 and larger may be solid or stranded. Insulation shall be UL labeled for 600 volts, 75C (167F) moisture and heat resistant thermoplastic type THHN, THWN or THW. 50% conductive copper - no aluminum. No splices are permitted in wet well. Seal space between conductors and conduit in panels.
- Identify each conductor in every J-Box, Panel, Pull Box, etc. in addition to color coding as specified or noted elsewhere.
- A ground wire is required for all motor and equipment circuits - see NEC for size if not shown. Provide insulated grounding busings with attached ground lug in all panels. (Rigid & IMC). EMT connectors shall have double locknuts and bonds made to bare metal in panels, J-Boxes and pull boxes.
- Identify every panel, disconnect, combination starter, etc. with laminated plastic nameplate as specified and/or detailed.
- Torque all electrical connections. Match Lug/Screw/nut size to recommended torque, using either U's or manufacturer's recommendations. Before torquing, clean connection to remove dirt, corrosion, carbon deposits, etc., execute the specific torque on the connections and do not retorque when complete. Obtain manufacturer's published torque requirements, if possible.

Conduit and Fittings

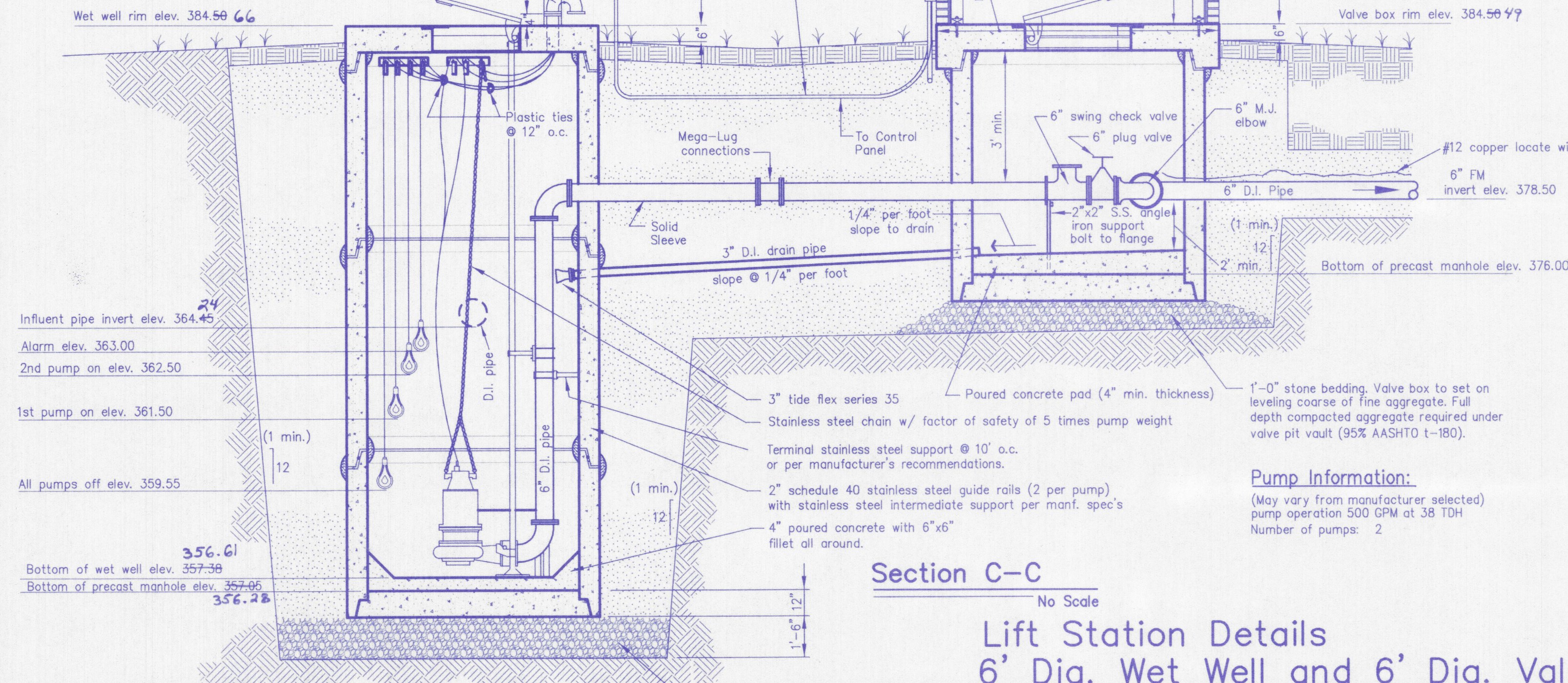
- Conduit shall be PVC, Schedule 40.
- Electrical metallic tubing (EMT) shall be FS WW-C-563 galvanized tubing with ANSI/NEMA FB 1, steel compression fittings and conduit bodies.
- Flexible metal conduit shall be steel FS WW-C-556 with ANSI/NEMA FB 1 fittings and conduit bodies.
- Liquid tight flexible conduit shall be flexible metal conduit with PVC jacket. Fittings and conduit bodies shall be ANSI/NEMA FB 1.
- Size conduit for conductor type installed (3/4" inch minimum size). Route exposed conduit parallel to floors, ceilings, etc. and perpendicular to walls.
- Arrange conduit supports to prevent distortion of alignment by wire pulling operations. Fasten conduit using galvanized straps, lay-in adjustable hangers, galvanized hangers, or bolted split stamped galvanized hangers. Group conduit in parallel runs where practical and use conduit rack constructed of steel channel with conduit straps and clamps. Provide space for 25 percent additional conduit. Do not fasten conduit with wire or perforated pipe straps. Remove all wire used for temporary conduit support during construction, before conductors are pulled.
- Cut conduit square using a saw or pipecutter and de-burr cut ends. Conduit shall be to the shoulder of fittings and couplings before fastening. Use conduit hubs for fastening conduit to cast boxes and for fastening conduit to sheet metal boxes in damp or wet locations. Install no more than the equivalent of three 90-degree bends between boxes.
- Use conduit bodies to make sharp changes in direction, as around beams.
- Avoid moisture traps where possible. Where unavoidable, provide junction box with drain fitting at low point. Use conduit caps to protect installed conduit against entrance of dirt and moisture. Cap all conduits installed for future use.
- Install expansion joints where conduit traverses building expansion joints.
- All conduit installation shall be in accordance with the latest issue of the N.E.C.
- Secure boxes and conduit to metal studs and tee bars with fasteners equal to caddy 512, AT-1-41, MS, C85 12, etc.



One-Line Electrical Diagram



Electrical Panel



Section B-B

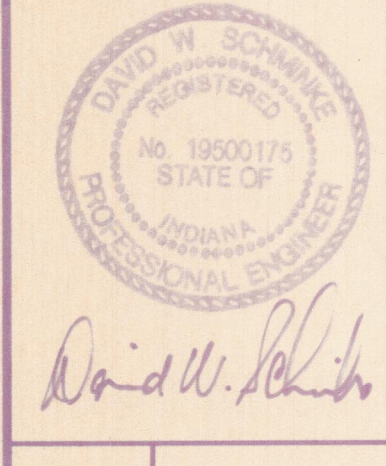
Lift Station Details
6' Dia. Wet Well and 6' Dia. Valve Box

5027.dwg Date: 09-11-00

Morley and Associates, INC.
Consulting Engineers/Surveyors/Architects
600 S.E. 6th Street
Evansville, Indiana 47713
(812) 464-9505

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No.	By	Date	Description



Project: Keystone Development, LLC
Sheet Title: Lift Station Details

Scale: As Shown
Designed By: J.E.M. #6 Number: 3998-4
Drawn By: D.W.N. Date: 09/18/00
Checked By: #6 Number: 3998JFT.dwg
Sheet Number: C-16 of 18

**RECORD
DRAWING**

ISSUED FOR CONSTRUCTION 9-19-00

PLOTTED 8/11/00 9:15 A.M.