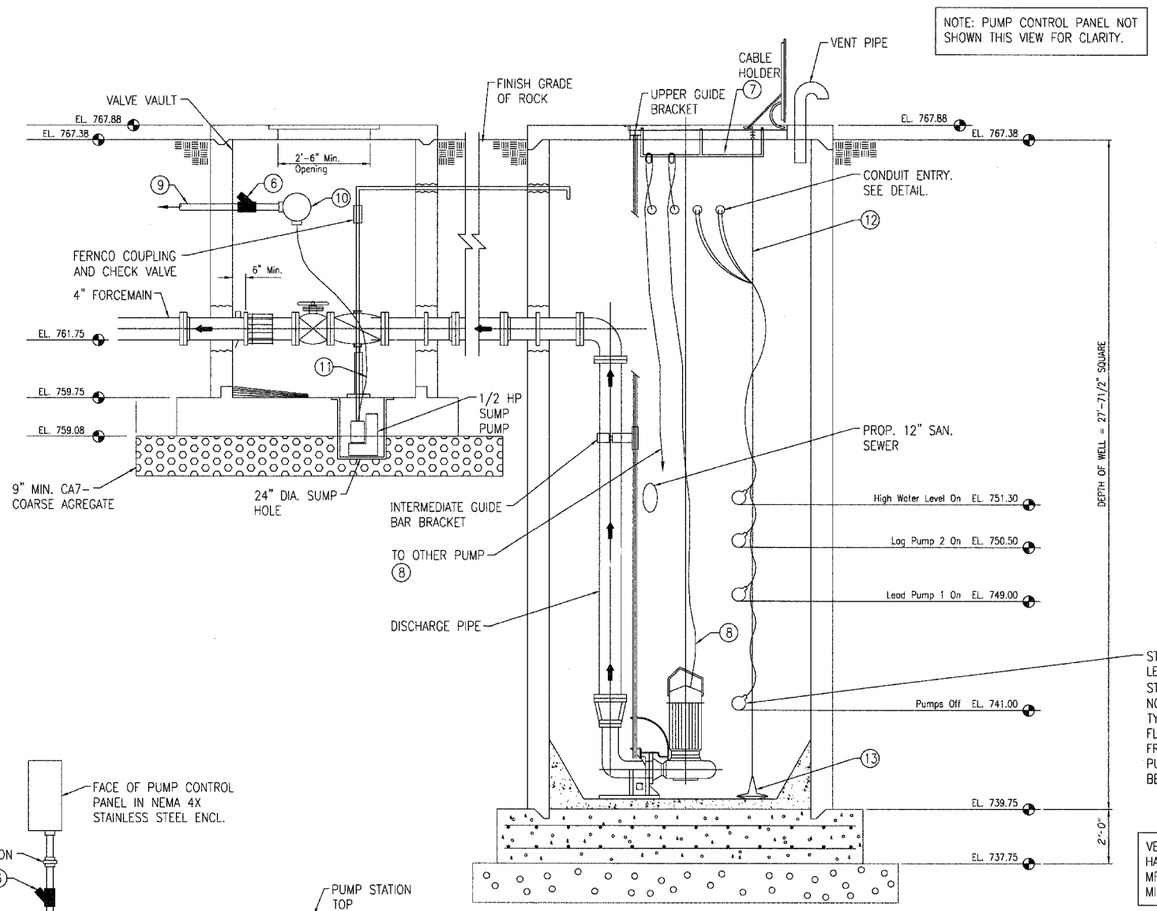
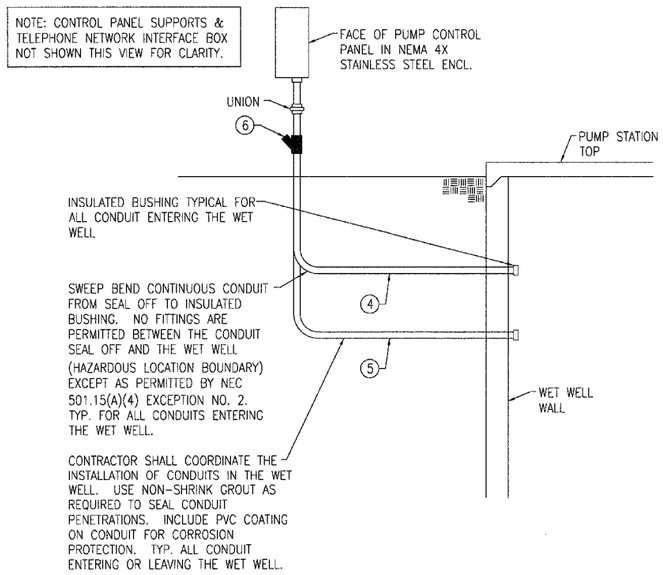
TOTAL SHEETS	SHEET NO.
51	20

87250



ELECTRICAL ELEVATION

NOT TO SCALE



CONDUIT ENTRANCE TO PUMP STATION

NOT TO SCALE

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT INSTALLED IN THE WET WELL SHALL BE SUITABLE FOR USE IN CLASS I, DIV. 1, GROUP D HAZARDOUS LOCATION AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEC ARTICLES 500, 501, & 504 AS WELL AS ALL LOCAL CODES, ORDINANCES AND REQUIREMENTS.
2. ALL ELECTRICAL EQUIPMENT INSTALLED IN THE VALVE VAULT SHALL BE SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUP D HAZARDOUS LOCATION AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEC ARTICLES 500, 501, & 504 AS WELL AS ALL LOCAL CODES, ORDINANCES, AND REQUIREMENTS.
3. CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL EQUIPMENT, AND WORK WITH RESPECT TO PLUMBING, MECHANICAL, CONCRETE, EXCAVATION AND ALL OTHER WORK. COORDINATE THE INSTALLATION OF CONDUITS INTO THE WET WELL. USE NON-SHRINK GROUT AS REQUIRED TO SEAL CONDUIT PENETRATIONS.
4. ALL CONDUIT TERMINATIONS & OPENINGS IN ENCLOSURES SHALL BE SEALED WITH DUCT SEAL OR EQUAL.
5. ALL MERCURY SWITCH LIQUID LEVEL FLOATS SHALL HAVE AN FM LISTED OR UL LISTED INTRINSICALLY SAFE BARRIER (SWITCHING AMPLIFIER) SUPPLIED FOR EACH. INTRINSICALLY SAFE WIRING SHALL HAVE LIGHT BLUE COLORED INSULATION AND KEPT PHYSICALLY ISOLATED FROM OTHER CONDUCTORS. INTRINSICALLY SAFE WIRING AND EQUIPMENT SHALL BE INSTALLED PER ANSI/ISA RP12.6, UL 698A, AND NEC 504. CONDUITS WITH INTRINSICALLY SAFE WIRING SHALL TERMINATE IN THE CONTROL PANEL AT THE INTRINSICALLY SAFE WIRING SECTION.
6. METAL CONDUIT IN DIRECT CONTACT WITH EARTH OR CONCRETE SHALL BE PVC COATED FOR CORROSION PROTECTION.
7. ALL CONDUIT ENTRANCES INTO THE TRANSFER SWITCH, PANELBOARD, PUMP CONTROL PANEL AND ANY OTHER NEMA 4 ENCLOSURES SHALL HAVE WATER TIGHT THREADED HUBS, UL LISTED NEMA 4, 4X FOR RESPECTIVE ENCLOSURE.
8. ALL BUSHINGS, HUBS, & FITTINGS BETWEEN CONDUITS OF DISSIMILAR METALS AND/OR BETWEEN CONDUITS AND ENCLOSURES OF A DISSIMILAR METAL SHALL BE SUITABLE FOR SUCH APPLICATIONS TO ELIMINATE THE POSSIBILITY OF GALVANIC ACTION.

SHEET LEGEND:

(1) (RESERVED)

(2) (RESERVED)

(3) RESERVED)

(4) 2 MULTI-CONDUCTOR FLOAT CABLES (WITH MAXIMUM DIAMETER OF 5/8") IN 2" PVC COATED RIGID ALUMINUM OR PVC COATED GRSC. CONDUIT SHALL BE SIZED FOR 25% MAXIMUM FILL TO CONFORM TO EXPLOSION PROOF CONDUIT SEAL REQUIREMENTS. ADJUST (ENLARGE) AS REQUIRED.

(5) SUBMERSIBLE PUMP MOTOR CABLE IN 2" PVC COATED RIGID ALUMINUM OR PVC COATED GRSC. CONDUIT SHALL BE SIZES FOR 25% MAXIMUM FILL TO CONFORM TO EXPLOSION PROOF CONDUIT SEAL REQUIREMENTS. ADJUST (ENLARGE) AS REQUIRED.

(6) EXPLOSION PROOF CONDUIT SEAL SUITABLE FOR CLASS I, DIVISION 1, GROUP D HAZARDOUS LOCATION, CROUSE HINDS EYS, APPLETON EYS, ESU, EY, KILLARK ENY, EY EYS OR O-Z GEDNEY EYA, EY, OR EZS SERIES, REQUIRED FOR ALL CONDUITS ENTERING OR LEAVING THE WET WELL OR VALVE VAULT INSTALLED IN CONFORMANCE WITH NEC 501 & MANUFACTURER'S DIRECTIONS. NOTE CONDUIT SEALS SHALL BE SIZED AS REQUIRED FOR THE RESPECTIVE CABLE FILL. CABLE FILL SHALL NOT EXCEED 25% FOR CONDUIT SEAL APPLICATION. CONDUIT SEALS SHALL BE THE FIRST FITTING AFTER THE CONDUIT LEAVES THE WET WELL AND EMERGES FROM GRADE & THE FIRST FITTING AFTER CONDUIT ENTERS THE VALVE VAULT.

(7) HEAVY DUTY STAINLESS STEEL CABLE RACK ADEQUATELY SIZED FOR THE RESPECTIVE PUMP & FLOAT CABLES OR HEAVY DUTY NYLON SADDLE RACKS (CABLE HANGAR WITH 3" THROAT OPENING), UNDERGROUND DEVICES CAT. NO. 3SR1N. MOUNT AT IMMEDIATELY INSIDE ACCESS HATCH WITH STAINLESS STEEL STRUT SUPPORT & STAINLESS STEEL HARDWARE. PROVIDE SUFFICIENT RACKS FOR EACH PUMP CABLE & FLOAT CABLES. EACH PUMP MOTOR SHALL HAVE 10' MINIMUM SLACK CABLE TO ALLOW FOR FUTURE REMOVAL AND REINSTALLATION. LOOP SLACK CABLES AROUND SADDLE RACK AND SECURE WITH CABLE TIES.

(8) SUBMERSIBLE PUMP CABLE BY PUMP MANUFACTURER. VERIFY EACH PUMP MOTOR HAS A MINIMUM OF 10 FEET OF SLACK CABLE. (2 TYP.)

(9) 1 #10 THWN, 1 #10 THWN NEUTRAL, 1 #10 GND IN 3/4" PVC COATED GRSC FROM PANELBOARD TO VALVE VAULT. NOTE CONDUIT ENTRY LOCATION SHOWN FOR CLARITY. ADJUST POINT OF ENTRY AS APPLICABLE.

(10) NEMA 7 & NEMA 4 CAST ALUMINUM JUNCTION BOX, WITH THREADED SCREW ON COVER & GASKETING TO MAKE WATER-TIGHT.

(11) SUMP PUMP CABLE. PROVIDE CORD GRIP CONNECTOR FOR CABLE AT J-BOX.

(12) STAINLESS STEEL CABLE/WEIGHT SUSPENSION MOUNTING KIT FOR FLOATS AS MANUFACTURED BY US FILTER CONTROL SYSTEMS/CONSOLIDATED ELECTRIC. ALL HARDWARE & MOUNTING ACCESSORIES SHALL BE STAINLESS STEEL.

(13) 20 TO 25 POUND PLASTIC COATED CAST IRON WEIGHT FOR USE WITH CABLE/WEIGHT SUSPENSION MOUNTING KIT.

Kevin N. Lightfoot

DATE: FEB. 2, 2005

EXPIRES: NOV. 30, 2005

PUMP STATION ELECTRICAL DETAILS

FELL AVENUE
BRIDGE REPLACEMENT

DRAWN	MV 10/07/2004	DESIGNED	KNL 10/07/2004
CHECKED	KNL 10/09/2004	CHECKED	XXX
FILE: 03S2019		DATE: 2-2-05	

HANSON

$DATE$
$FILE$