CITY OF NAPLES
PUBLIC WORKS PUMP STATION IMPROVEMENTS

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CITY MANAGER
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STREETS AND STORMWATER DIRECTOR
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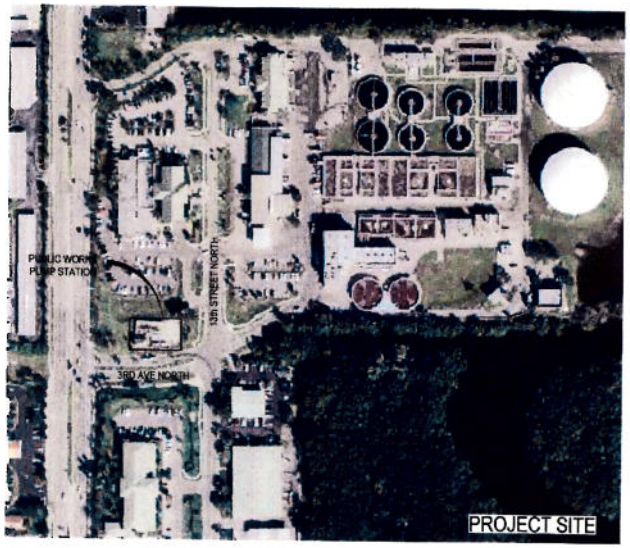

INDEX OF SHEETS

CITY OF NAPLES
STREETS AND STORMWATER DEPARTMENT
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ISSUED FOR BIDDING
SEPTEMBER 2013

RONALD R. CAVALIERI, P.E. #65850
PROJECT MANAGER
SIGNATURE 9/20/2013 DATE

GENERAL NOTES

1. IT IS THE INTENT OF THE CONTRACT DRAWINGS TO PRESCRIBE A COMPLETE WORK OR IMPROVEMENT. THE CONTRACT DRAWINGS ARE COMPLEMENTARY, AND REFERENCE TO CONTRACT DOCUMENTS IS MADE TO DETERMINE HIERARCHY ORDER OF PRECEDENCE OF ALL CONTRACT DOCUMENTS, TO WHICH THE DRAWINGS ARE PART OF.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS AND/OR STEEL PLATES OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK.
4. INTERRUPTION TO WATER AND OTHER EXISTING UTILITIES SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR 3 DAYS IN ADVANCE OF THE WORK.
5. ALL LAYOUT DIMENSIONS REFER TO OUTSIDE EDGE OF WALL AT GRADE LINE, UNLESS OTHERWISE INDICATED.
6. ALL SIGNAGE, HEADWALLS, GUARD RAILS, GUARD POSTS, FENCES, CURBS, ROADWAYS, SIDEWALKS, LANDSCAPING AND ANY OTHER OBJECTS DISTURBED BY CONTRACTOR ACTIVITIES SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
7. ALL UTILITY BOXES, FRAMES, GRATES, ETC. DISTURBED BY CONTRACTOR AND NOT TO BE ABANDONED SHALL BE RESET TO THE PROPER GRADE.
8. UNPAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE CLEARED AND GRUBBED AND RESTORED WITH SOD.
9. THE CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCE NOTICE TO NOTIFY THE OWNER TO ACCOMPLISH LINE RELOCATIONS AS NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
10. ALL CONCRETE AND ASPHALT PAVEMENT SHALL BE SAW-CUT PRIOR TO EXCAVATION.
11. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE FEDERAL, STATE, AND LOCAL AGENCY STANDARDS.
12. MAINTAIN A FLUENT ENGLISH SPEAKING SUPERINTENDENT ON SITE AT ALL TIMES.
13. THE CONTRACTOR SHALL COMPLY WITH THE "TRENCH SAFETY ACT", CHAPTER 90-96, FLORIDA STATUTES.
14. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATION FROM DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE OWNER AND THE ENGINEER.
15. PROVIDE AT LEAST 48 HOURS NOTICE TO AFFECTED UTILITY COMPANIES IN ORDER TO ALLOW THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION.
16. TREES, SHRUBS AND OTHER LANDSCAPING SHALL BE PROTECTED DURING CONSTRUCTION AS IDENTIFIED ON THE PROJECT DOCUMENTS.
17. COORDINATE WITH UTILITY OWNER TO PROVIDE SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE LOSS OF SUPPORT.
18. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL SERVICE (1-800-432-4770) 48 HOURS PRIOR TO COMMENCING EXCAVATION/TRENCHING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS ARE DISCOVERED.
19. EROSION CONTROL
    A. EMPLOY EVERY POSSIBLE MEANS TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIALS TO THE INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS.THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
    B. MAINTAIN ALL EROSION CONTROL IN COMPLIANCE WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS THROUGHOUT THE DURATION OF THE PROJECT.
    C. INSPECT EROSION CONTROL DAILY AND WITHIN 24 HOURS AFTER EACH RAINFALL EVENT OF 1 INCH OR GREATER. ALL NECESSARY MAINTENANCE SHALL BE PERFORMED WITHIN 24 HOURS AFTER INSPECTION. PREPARE AND MAINTAIN A BEST MANAGEMENT PLAN FOR SEDIMENT AND EROSION CONTROL AND MAINTAIN A COPY ON SITE WITH THE SUPERINTENDENT AT ALL TIMES.
21. CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS APPROVED.
22. ALL UNIMPROVED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS. THIS SHALL INCLUDE SCARIFYING, GRADING, ROLLING, AND SODDING OR SEEDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY IRRIGATION FACILITIES FOR 6 WEEKS. SOD OR SEEDED AREAS NOT FULLY RESTORED AT THIS TIME SHALL BE RESODDED OR SEEDED AND THE MAINTENANCE PERIOD RESET.
23. TEST PRESSURE FOR ALL PIPING IS INDICATED ON THE PIPING SCHEDULE.
24. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO CONSTRUCTION TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.
25. WORK SHALL BE SCHEDULED FROM 7 A.M. TO 3:30 P.M. MONDAY THROUGH FRIDAY. NO WORK SHALL BE PERFORMED ON WEEKENDS OR HOLIDAYS OR OUTSIDE OF SPECIFIED HOURS WITHOUT NOTICE AND WRITTEN AUTHORIZATION FROM THE OWNER.

EXISTING STATION NOTES

1. THE STRUCTURAL AND MECHANICAL BASE WAS CREATED USING AS-BUILT DRAWINGS DATED OCTOBER 1999. ACCURACY OF THE STRUCTURES, PIPING, EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

GRADING AND DRAINAGE NOTES

1. TOPSOIL SHALL BE "STRIPPED" AND STOCKPILED. TOPSOIL SHALL BE USED TO ACHIEVE THE LAST 4"-6" OF FINISHED GRADE AS FINAL GRADING OPERATIONS PROGRESS. SEE SPECIFICATIONS.
2. CONTOURS & FINISHED SPOT ELEVATIONS REPRESENT FINISHED GRADE, TOP OF CONCRETE, PAVEMENT, GRASSED AREAS, ETC.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS NOT PREVIOUSLY OBTAINED BY THE OWNER TO CONSTRUCT THIS PROJECT AS COVERED BY STATE & LOCAL AGENCIES, PRIOR TO STARTING CONSTRUCTION.
4. EARTH EXCAVATION AND/OR EMBANKMENT SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.

MECHANICAL / PIPING

1. EQUIPMENT AND SYSTEMS DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF CONTRACTOR PROPOSES TO PROVIDE EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACING DIFFERING FROM THAT INDICATED OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR PROCESS SYSTEMS PROPOSED. THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PLANS, SECTIONS DETAILS AND SCHEMATICS OF ALL PIPING SYSTEMS AND APPURTENANCES REQUIRED, ELECTRICAL CONTROLS, ETC.. SUCH CHANGES IF APPROVED BY THE ENGINEER SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND NO TIME EXTENSION TO THE CONTRACT TIME TO COMPLETION. THE CONTRACTOR SHALL ASSUME THE COST OF AND THE RESPONSIBILITY FOR ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
2. THE CONTRACTOR SHALL MAKE ALL REQUIRED FIELD MEASUREMENTS TO VERIFY EXISTING AND CONTRACT INTERFACE DIMENSIONS, LOCATIONS, AND OTHER CONDITIONS.
3. ALL DIMENSIONS LOCATING EQUIPMENT ARE FROM FINISHED WALL SURFACES OR COLUMN CENTERLINES.
4. REFER TO INSTRUMENTATION DRAWINGS FOR INSTRUMENTATION AND CONTROL SYSTEMS. INSTRUMENT LOCATIONS ARE INDICATED ON MECHANICAL-PROCESS DRAWINGS IN APPROXIMATE LOCATION ONLY.
5. SLEEVE OR GROOVED COUPLINGS MAY BE USED WHERE NECESSARY, AND AS APPROVED, TO FACILITATE PIPING INSTALLATION.
6. FOR FLANGED SYSTEMS PROVIDE FLEXIBLE CONNECTORS WHERE NECESSARY, AND AS APPROVED TO FACILITATE PIPING INSTALLATION AND VALVE AND EQUIPMENT REMOVAL.
7. ALL FLEXIBLE CONNECTORS, INCLUDING EXPANSION JOINTS AND SLEEVE COUPLINGS SHALL BE RESTRAINED AS INDICATED OR AS REQUIRED FOR EXPANSION AND FOR FLEXIBILITY.
8. PROVIDE ALL LIQUID PIPING 24" AND SMALLER WITH 3/4" LOW POINT DRAINS AND 3/4" HIGH POINT VENTS. PROVIDE ALL LIQUID PIPING 30" AND LARGER WITH 1 1/2" LOW POINT DRAINS AND 1 1/2" HIGH POINT VENTS. DRAINS AND VENTS TO INCLUDE BALL VALVE AND CAP, UNLESS OTHERWISE SPECIFIED OR INDICATED.

SURVEY NOTES

1. TOPOGRAPHIC AND EXISTING CONDITION SURVEY AND MAPPING PREPARED BY: E.F. GAINES SURVEYING SERVICES, INC. 5235 RAMSEY WAY, SUITE 10 FORT MYERS, FLORIDA 33907.
2. HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83) UTILIZING RTK GPS EQUIPMENT OPERATING ON THE TRIMBLE VRS NETWORK, U.S. SURVEY FEET.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND WERE DERIVED FROM A PROJECT BENCHMARK SHOWN ON A MAP OF AS-BUILT SURVEY PREPARED BY DAGOSTINO & WOOD, DATED MARCH 9, 2011 (FOUND IRON ROD AT 10+00, ELEVATION 6.35 FEET).
4. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO ESTABLISH RIGHT-OF-WAY LINES, EASEMENTS, BASELINES, BENCHMARKS AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
5. THE CONTRACTOR IS RESPONSIBLE FOR STAKING THE RIGHT-OF-WAYS, EASEMENT LIMITS, AND CENTERLINE OF THE PIPE PRIOR TO CONSTRUCTION.
6. ANY PUBLIC LAND CORNER, PROPERTY OR BENCHMARK WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY. ANY CORNER MONUMENT DESTROYED OR DISTURBED SHALL BE RESET AND CERTIFIED BY A PROFESSIONAL SURVEYOR AND MAPPER REGISTERED IN THE STATE OF FLORIDA AT THE CONTRACTOR'S EXPENSE.

VERIFY SCALES — BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: JRR | DRAWN BY: MPL | CHECKED BY: DMJ | DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E. | REG NUMBER: 65850 | PROJECT NUMBER: 60289240

9-20-2013

AECOM

CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

GENERAL NOTES

G-002

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A	AREA/AMP/AIR
AB	ANCHOR BOLT/AGGREGATE BASE/AUGER BORING
ABAN	ABANDON/ABANDONED
ABS	ACRYLONITROL-BUTADIENE-STYRENE
AC	ALTERNATING CURRENT/ACTIVATED CARBON/ ASPHALTIC CONCRETE/ASBESTOS CEMENT
ACP	ASBESTOS CEMENT PIPE
ACSR	ALUMINUM CONDUCTOR STEEL REINFORCED
ADDL	ADDITIONAL
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A.G.	ALLEY GRATE
AHD	AHEAD
AHDR	AIR HEADER
AHH	ANALOG HANDHOLE
AICS	AMPERE INTERRUPTING CAPACITY SYMMETRICAL
AL	ALUMINUM/ALUM(CONCENTRATED)
ALT	ALTERNATE
ALUM	ALUMINUM
ANCH	ANCHOR
ANG	ANGLE
APPROX	APPROXIMATE
ARCH	ARCHITECTURE/ARCHITECTURAL
ARV	AIR-RELEASE VALVE
ARVV	AIR-RELEASE VACUUM VALVE
ASP	ASPHALT
ASR	AQUIFER STORAGE RECOVERY
ASSY	ASSEMBLY
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AVE	AVENUE
AWG	AMERICAN WIRE GAGE
B	BACK OF CURB/BEGINNING OF CURVE/ BOTTOM OF CURVE/BACK CONNECTED/BARE COPPER
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BK	BACK/BRAKE/BLACK
BKR	BREAKER
B/L	BASE LINE
BL	BULL
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BENCH MARK/BEAM
BO	BLOW OFF
BOT	BOTTOM
BRG	BEARING
BT	BURIED TELEPHONE
BUR CBL	BURIED CABLE
BV	BALL VALVE
BW	BLOCK WALL/BACKWASH
C	CONDUIT/CUT
C&G	CURB & GUTTER
/C	CONDUCTOR
C/L	CENTER LINE
CAP	CAPACITY
CB	CATCH BASIN/CIRCUIT BREAKER
C-C	CENTER TO CENTER
CCP	CONCRETE CYLINDER PIPE
CD	CROSS DRAIN/CONDENSATION DRAIN/ CORD/CEILING DIFFUSER
CE	CURB EDGE
CEM	CEMENT
CFM	CUBIC FEET PER MINUTE
C.E.P.	CITY ELECTRIC POLE
CFS	CUBIC FEET PER SECOND
CHAM	CHAMFER
CHH	COMMUNICATIONS HANDHOLE
CI/CIP	CAST IRON PIPE
CIPL	CAST IN PLACE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTER LINE/CHAIN LINK
CLDI	CEMENT LINED DUCTILE IRON
CLF	CHAIN LINK FENCE
CLR	CLEAR/CLEARANCE
CL2	CHLORINE
CM	CONCRETE MONUMENT
CM,BC	CEMENT MORTAR LINED AND COATED (STEEL PIPE)
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONARY UNIT
CO	CLEAN OUT/CONDUIT ONLY/ CUT OUT/CHANGE ORDER/COUNTY
COL	COLUMN
COMPL	COMPLETE
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCT/CONSTRUCTION
CONT	CONTINUOUS/CONTINUE/CONTROL
CONTR	CONTRACTOR
COORD	COORDINATED
COR	CORNER
CP	CONTROL PANEL
CPLG	COUPLING
CPT	CONTROL POWER TRANSFORMER
CPVC	CHLORINATED POLYVANYL CHLORIDE
CTEL	COAL TAR ENAMEL-LINED STEEL
CTG	CONTAIN/CARTRIDGE
CTR	CENTER/COOLING TOWER RETURN
CTRL	CONTROL
CTV	CABLE TELEVISION
CTVR	CABLE TELEVISION RISER
CTXL&C	COAL TAR EPOXY-LINED AND COATED STEEL PIPE
CU	COPPER/CUBIC
CULV	CULVERT
C&G	CURB & GUTTER
CV	CHECK VALVE
CY	CUBIC YARD/CYCLE
CYL	CYLINDER
D	DEGREE OF CURVATURE
DBL	DOUBLE
DBI	DITCH BOTTOM INLET
DCLR	DECELERATE
DEF	DEFLECTION/DEFECTIVE
DEFLANG	DEFLECTION ANGLE
Δ	DELTA
DEPT	DEPARTMENT
DET	DETAIL/DETOUR
DF	DRINKING FOUNTAIN/DEMAND FACTOR
DI	DROP INLET/DRAINAGE INLET/DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DMH	DROP MANHOLE/DRAINAGE MANHOLE
DN	DOWN
DR	DRIVE/DOOR/DRAIN/DRIVEWAY
DRWY	DRIVEWAY
DWG	DRAWING
DWL	DOWEL/DESIGN WATER LEVEL
DWV	DRAIN,WASTE AND VENT PIPING
DWY	DRIVEWAY
E	EAST/EXTERNAL DISTANCE
E/L	EASEMENT LINE
EA	EACH
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EE	EACH END
EF	EACH FACE/EXHAUST FAN
EFF	EFFLUENT
EL	ELEVATION/EACH LEVEL
ELEC	ELECTRIC/ELECTRICAL
ELIP	ELLIPTICAL
EMB	EMBEDMENT
ENC	ENCASEMENT/ENCASED
ENG	ENGINE
ENGR	ENGINEER
EOP	EDGE OF PAVEMENT
EQ	EQUATION
EQL	EQUAL
EQUIP	EQUIPMENT
ERCP	ELIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EST	ESTIMATE/ESTIMATED
ETM	ELAPSED TIME METER
EW	EACH WAY/EXTERNAL
EX	EXPLOSION PROOF
EXCAV	EXCAVATE/EXCAVATION
EXP JT	EXPANSION JOINT
EXST	EXISTING
EXT	EXTERIOR/EXTENSION/EXTERNAL
F	FILL
F&I	FURNISH AND INSTALL
FAB	FABRICATE
FB	FUSE BLOCK/FLAT BAR
FBC	FLORIDA BUILDING CODE
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEAN OUT
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN/FIRE DAMPER
FDEP	FL DEPT OF ENVIRONMENTAL PROTECTION
FDN	FOUNDATION
FDOT	FL DEPT OF TRANSPORTATION
FF	FINISHED FLOOR/FLAT FACE/FAR FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT/FUME HOOD
FHD	FIRE HYDRANT
FIG	FIGURE
FIT	FITTING/FLOW INDICATING TRANSMITTER
FL	FLOOR/FLOW LINE/FLIGHT LEVEL/FLORIDA
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN/FACTORY MUTUAL
FMH	FLEXIBLE METAL HOSE
FNISH	FINISH
FOC	FACE OF CONCRETE/FIBER OPTIC CABLE
FPC	FLEXIBLE PIPE COUPLING
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FEET/FOOT
FTG	FOOTING/FITTING
FUT	FUTURE
FV	FUEL VENT/FACE VELOCITY
FWD	FORWARD
FXLCSP	FUSION BONDED EPOXY-LINED AND COATED STEEL PIPE
G	GAS
GA	GAGE/GAUGE
GAL	GALLON
GALV	GALVANIZED
GCB	GENERATOR CIRCUIT BREAKER
GDR	GUARD RAIL
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GL	GLASS
GLDI	GLASS-LINED DUCTILE IRON (PIPE)
GLSP	GLASS-LINED STEEL
GM	GAS MAIN/GROSS MILE
GND	GROUND
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR	GRADE/GRT SLURRY
GRDNG	GROUNDING
GRTG	GRATING
GSP	GALVANIZED STEEL PIPE
GV	GAS VALVE
HMB	HOSE BIBB
HC	HEATING COIL/HOLDING COIL/HIGH CURE
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HGT	HEIGHT
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HORSEPOWER/HIGH PRESSURE
HPS	HIGH PRESSURE SODIUM
HR	HOUR/HANDRAIL
HS	HIGH STRENGTH
HSA	HEADED STUD ANCHOR
HV	HOSE VALVE/HIGH VOLTAGE
HVAC	HEATING,VENTILATING AND AIR CONDITIONING
HW	HEADWALL/HOT WATER(DOMESTIC)
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC
HZ	HERTZ
I	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IG	ISOLATED GROUND
IN	INCHES
INF	INFLUENT
INL	INLET
INS	INSULATE/INSULATION
INSTL	INSTALL/INSULATE/INSTALLATION
INT	INTERIOR
INV	INVERT
IP	IRON PIPE/INTERFACE PANEL
IRR	IRRIGATION
J	JOIST
J-BOX	JUNCTION BOX
JT	JOINT
JWW	JACKSONVILLE WATER WORKS
K	KILOVOLT-AMPERE
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KW	KILOWATT
KWH	KILOWATT-HOUR
L	LENGTH OF CURVE/LEFT/LONG/LAMP
LA	LIQUID ALUM/LIMITED ACCESS/ LIGHTNING ARRESTOR
LAM	LAMINATE
LATL	LATERAL
LAV	LAVATORY
LB	POUND
LCP	LIGHTING CONTROL PANEL
LF	LINEAR FEET/LOW FREQUENCY
LG	LENGTH/LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMTL	LIMITED
LOS	LOCKOUT STOP
LP	LIGHT POLE/LIQUID PROPANE/ LIGHTING PANEL
LPT	LOW POINT
LS	LIFT STATION/LIMIT SWITCH
LT	LEFT/LIGHT
LTG	LIGHTING
LTNG PROT	LIGHTNING PROTECTION
LVR	LOUVER
LWL	LOW WATER LEVEL
LWR	LOWER
M	MATERIAL
MAN	MANHOLE
MB	MACHINE BOLT/MIXING BOX/MAILBOX/ MOP BASIN/MEGAGYTE/MAILBOX
MC	METAL CHANNEL/MOMENTARY CONTACT
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION/ MAIN CONTROL PANEL
ME	MITERED END
MECH	MECHANICAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE/METAL HALIDE
MI	MALLEABLE IRON/MILE
MIN	MINIMUM/MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MO	MASONARY OPENING
MOD	MODIFY/MODIFIED
MON	MONUMENT/MOTOR OPERATOR
MPC	MINI-POWER CENTER
MTD	MOUNTED
MTR	MOTOR/METER
MTU	MASTER TERMINAL UNIT
MV	MERCURY VAPOR
MW	MANWAY
N	NORTH/NEUTRAL
NAIC	NAIL AND CAP
N/L	NIGHT LIGHT
NA	NOT APPLICABLE/NOT AVAILABLE
NC	NORMALLY CLOSED
NE	NORTHEAST
NEC	NATIONAL ELECTRIC CODE
NFDS	NON-FUSED DISCONNECT SWITCH
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER/NORMALLY OPEN
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NRS	NON-RISING STEAM
NS	NEAR SIDE
NTS	NOT TO SCALE
NW	NORTHWEST
NY	NYLON TUBING
O	O/O ON/OFF
OC	ON CENTER/OVERCURRENT
OCA	OPEN/CLOSE/AUTO
OD	OUTSIDE DIAMETER/OVERFLOW DRAIN
OE	OR EQUAL/OVERHEAD ELECTRIC
OF	OUTSIDE FACE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
OL	OVERLOAD
OPER	OPERATOR
OPNG	OPENING
OPP	OPPOSITE/OPPOSED
OPT	OPTIONAL
OSC	OPEN/STOP/CLOSE
OT	OVERHEAD TELEPHONE
OVFL	OVERFLOW
OVHD	OVERHEAD
P	POLE
P/L	PROPERTY LINE
PAV	PAVING
PB	PULL BOX/PANIC BUTTON
PC	POINT OF CURVATURE/ PROGRAMMABLE CONTROLLER
PCC	POINT OF COMPOUND CURVATURE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PCM	PERMANENT CONTROL MONUMENT
PE	POLYETHYLENE TUBING/PRIMARY EFFLUENT/ PLAIN END
PEP	POLYETHYLENE PIPE
PG	PRESSURE GAUGE/PROFILE GRADE
PHH	POWER HANDHOLE
PI	POINT OF INTERSECTION /PRESSURE INDICATOR/PRIMARY INFLUENT
PL	PLATE/PLUG/PLACE/PLANT
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLDI	POLYETHYLENE-LINED DUCTILE IRON PIPE
PMS	PAD MOUNTED SWITCH
PNL	PANEL
POB	POINT OF BEGINNING
POJ	PUSH ON JOINT
PP	POWER PANEL/POLYPROPYLENE
P/P	POWER POLE
PPLS	POLYPROPYLENE -LINED STEEL
PR	PAIR
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PRM	PERMANENT REFERENCE MONUMENT
PRV	PRESSURE REDUCING VALVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PT	POINT OF TANGENCY/POINT/PART POTENTIAL TRANSFORMER/PRESSURE TREATED
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVDF	POLYVINYLIDENE FLUORIDE (KYNAR) PIPE
PVDFLS	POLYVINYLIDENE FLUORIDE LINED STEEL PIPE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PWR	POWER
Q	FLOW RATE/PEAK DISCHARGE
R	RADIUS
R	RADIUS/RIGHT/RELAY
R/W	RIGHT OF WAY
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD/ROOF DRAIN/ROUND
RDC	REDUCER
RECPT	RECEPTACLE
REF	REFERENCE
RFINF	REINFORCE/REINFORCED
REM	REMOVE/REMOVABLE
REQD	REQUIRED
REQT	REQUIREMENT
RGS	RIGID GALVANIZED STEEL
RJD	RETRAINED JOINT
RM	ROOM
RMS	ROOT MEAN SQUARE
RND	ROUND
RP	RELAY PANEL
RPM	REVOLUTIONS PER MINUTE
RPMP	REINFORCED PLASTIC MORTAR PIPE
RPT	RADIUS POINT
RR	RAILROAD
RT	RIGHT
RTU	REMOTE TERMINAL UNIT
RV	RELIEF VALVE
RVS	REVERSE
RVT	RIVETED
RWL	RAIN WATER LEADER
RWN	RECLAIMED WATER MAIN
R/W	RIGHT OF WAY
S	SOUTH/SIGN /SLOPE(UNIT/UNIT)
S.B.T.	SOUTHERN BELL TELEPHONE
S/S	START/STOP
S/W	SIDEWALK
SAN	SANITARY
SCHED	SCHEDULE
SE	SOUTHEAST/SECONDARY EFFLUENT
SECT	SECTION
SEW	SEWER
SF	SUPPLY FAN
SGL	SINGLE
SH	SHEET/SHEETING/SHUNT
SHLD	SHIELD/SHIELDED
SHLDR	SHOULDER
SIG	SIGNAL
SIM	SIMILAR
SLV	SLEEVE
SM	SHEET METAL/STATUTE MILE
SMH	STORM MANHOLE
SOF	SOFFIT
SOLV	SOLENOID VALVE
SP	SPACE/SOIL PIPE/STEEL PIPE SET POINT/STATIC PRESSURE
SPEC	SPECIFICATION
SPRT	SUPPORT
SQ	SQUARE
SS	SANITARY SEWER/SERVICE SINK/ SUSPENDED SOLIDS
SST	STAINLESS STEEL
ST	STREET/SURFACE TREATMENT/ SHUNT TRIP
STA	STATION (100 FT)
STD	STANDARD
STK	STAKE
STL	STEEL
STP	STEEL PIPE
STR	STRAIGHT/STRENGTH
STS	STORM SEWER
SURF	SURFACE
SW	SOUTHWEST/SURFACE WASH/ SIDEWALK
SWB	SWITCHBOARD
SYM	SYMMETRICAL
T	TOW/TEE/THERMOSTAT
Tops	TOP & BOTTOM
T/B	TOP OF BEAM
T/O	TOP OF
T/P	TOP OF PIPE
TAN	TANGENT
TB	TOP OF BANK/TERMINAL BOARD/ TERMINAL BLOCK
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB/TELEPHONE CENTRICAL/ THERMOCOUPLE/TIME CODE
TCB	TIE CIRCUIT BREAKER
TE	THERMAL ELEMENT
TEFC	TOTALLY ENCLOSED, FAN COOLED
TEL	TELEPHONE
TEMP	TEMPERATURE/TEMPORARY
TENV	TOTALLY ENCLOSED/NON-VENTILATED
THD	THREAD/THREADED
THK	THICK
THRN	THREAD
TL	TANGENT LENGTH
TO	TERMINAL
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TP	TELEPHONE POLE
TR	TREAD/TELEPHONE RISER
TRA	TIE ROD ASSEMBLY
TS	TUBE STEEL/THICKENED SLUDGE
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
U	UNDERDRAIN CABLE TELEVISION
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
UGND	UNDERGROUND
UGP	UNDERGROUND POWER CABLE/CONDUIT
UGT	UNDERGROUND TELEPHONE
UL	UNDERWRITERS' LABORATORIES, INC
ULT	ULTIMATE
UNO	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SYSTEM
USC&GS	UNITED STATES COASTAL & GEODETIC SURVEY
UTC	UNDERGROUND TELEPHONE CABLE
V	VENT/VALVE/VOLT
VAC	VACUUM/VOLT,ALTERNATING CURRENT
VAR	VARIES/VARIABLE
VC	VERTICLE CURVE /VITRIFIED CLAY
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
W	WEST/WIDTH/WATT/WATER /WIDE/WHITE/WIRE
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN/WATER CLOSET
WCO	WALL CLEANOUT
WDF	WOOD FENCE
WF	WIDE FLANGE
WG	WATER GAUGE
WHC	WELDED TAIL COUPLING
WL	WATER LINE
WLP	WOODEN LIGHT POLE
WM	WATER MAIN/WATER METER/WIRE MESH WATERPROOF/WEATHER PROOF/MORNING POINT WATT METER
WPP	WOODEN POWER POLE
WS	WATER SURFACE/WEATHER SERVICE
WSE	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE/WATER STOP
WT	WEIGHT/WATER TABLE
WTP	WOOD TELEPHONE POLE
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	X COORDINATE DISTANCE (EAST-WEST)/CROSS
XFMR	TRANSFORMER
XMTR	TRANSMITTER
X-SEC	CROSS SECTION
Y	Y COORDINATE DISTANCE (NORTH-SOUTH)
YD	YARD

NO.	DATE	DESCRIPTION	APPD	VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: JRR; DRAWN BY: MPL; CHECKED BY: DMJ; DATE: SEPT 2013

PROJECT MANAGER: RONALD R. CAVALIERI, P.E.
REG. NUMBER: 65850
PROJECT NUMBER: 60269240

9-30-2013

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

ABBREVIATIONS

DRAWING: G-003
SHEET: 3 OF — SHEETS

PUMP STATION CONSTRUCTION

PIPING DESIGNATIONS

16RAS

16 RAS – L
- LINE NUMBER (SHOWN W/PROD FOR CLARITY)
- FLOW STREAM IDENTIFICATION
- NOMINAL PIPE DIAMETER IN INCHES

EXAMPLE — EXISTING CONSTRUCTION

8 ALP (GALVS)

8 ALP (GALVS)
- PIPE MATERIAL (IF KNOWN)
- FLOW STREAM IDENTIFICATION
- NOMINAL PIPE DIAMETER IN INCHES

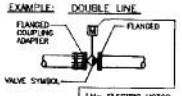
VALVE DESIGNATIONS

8 V 50
- VALVE TYPE (DEFINED IN SPECIFICATION SEC.15100)
- VALVE DESIGNATION
- SIZE OF VALVE IN INCHES

VALVE SYMBOLS

SINGLE LINE
- GATE
- KNIFE GATE
- BUTTERFLY
- GLOBE
- BALL
- VEE-BALL
- SOLENOID
- ECCENTRIC PLUG
- LUBRICATED PLUG
- PLUG OR COCK
- NEEDLE
- DIAPHRAGM
- PINCH
- SWING CHECK
- DOUBLE LEAF CHECK

EXAMPLE: DOUBLE LINE



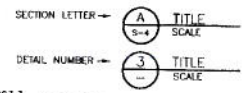
- M= ELECTRIC MOTOR
- P= PNEUMATIC CYLINDER
- H= HYDRAULIC CYLINDER

- BALL CHECK
- MUD
- CONTROL
  - FCV= FLOW CONTROL
  - PRV= PRESSURE REDUCING
  - PSV= PRESSURE SUSTAINING
- IN-LINE PRESSURE RELIEF
- ANGLE BACKPRESSURE
- ANGLE PRESSURE RELIEF
- NEW MOTOR OPERATOR TO BE INSTALLED HANDWHEEL ORIENTED IN DIRECTION SHOWN

DRAFTING LEGEND

- SECTION LETTER
- DRAWING NUMBER ON WHICH SECTION IS SHOWN. A DASH(–) INDICATES THAT SECTION IS SHOWN ON THE SAME SHEET.

- DETAIL NUMBER
- DRAWING NUMBER ON WHICH DETAIL IS SHOWN. A DASH(–) INDICATES THAT DETAIL IS SHOWN ON THE SAME SHEET



WL EL 263.3 — WATER SURFACE ELEVATION

MATCH LINE

02-04 — UNIT TAG NUMBER (SEE SPECIFICATIONS FOR TAG LIST)

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) WELD SYMBOL

PIPE AND FITTING SYSTEM

DOUBLE LINE	SINGLE LINE	
		EXISTING PIPE
		NEW PIPE
		EXISTING PIPE TO BE ABANDONED
		EXISTING PIPE TO BE REMOVED
		WELDED JOINT
		GROOVED END JOINT
		FLANGED JOINT
		MECHANICAL JOINT
		BELL & SPIGOT JOINT
		HUB & SPIGOT JOINT (RUBBER GASKET)
		BALL JOINT
		FLANGED COUPLING ADAPTER
		GROOVED END ADAPTER FLANGE
		FLEXIBLE COUPLING
		FLEXIBLE COUPLING WITH THRUST TIES
		STEEL BELLOWS XP JOINT
		ELASTOMER BELLOWS XP JOINT
		ELBOW UP (FLANGED)
		ELBOW DOWN (FLANGED)
		TEE UP (FLANGED)
		TEE DOWN (FLANGED)
		LATERAL UP (FLANGED)
		LATERAL DOWN (FLANGED)
		CONCENTRIC REDUCER (FLANGED)
		ECCENTRIC REDUCER (FLANGED)
		UNION

- BEND 90
- BEND 45
- BEND 22-1/2
- BEND 11-1/4
- TEE
- CROSS

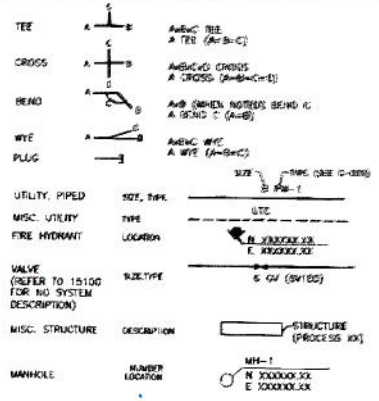
NOTES:
1. FLANGED FITTINGS ARE SHOWN IN THIS LEGEND. REFER TO THE DRAWINGS AND SPECIFICATIONS FOR REQUIRED END CONNECTIONS.
2. MATCH THE DIAMETER OF THE FITTING'S END CONNECTIONS TO THE DIAMETER OF THE CONNECTING PIPE, FITTINGS OR VALVES.
3. THE SIZE AND TYPE OF FITTINGS MAY BE INDICATED ON THE DRAWINGS. USE THIS LEGEND UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

CIVIL CONSTRUCTION

EXISTING

- BUSH
- 4"x4" CONCRETE MONUMENT
- CLEAN OUT
- MANHOLE
- ELECTRIC MANHOLE
- FIRE HYDRANT
- LIGHT POLE
- POWER POLE
- PUMP
- NON-TRAFFIC SIGN
- TRAFFIC SIGN
- ELECTRIC SERVICE METER
- WATER METER
- WATER VALVE
- BACKFLOW PREVENTER
- FLAT GRATE INLET
- MITERED END SECTION
- MONITORING WELL
- POST
- WIRING PULL BOX
- BURIED ELECTRIC PEDESTAL
- BURIED TELEPHONE PEDESTAL
- TRANSFORMER ON SLAB
- –X– CHAIN LINK FENCE
- RCP REINFORCED CONCRETE PIPE
- BARBED WIRE FENCE
- –O– WOOD BOARD FENCE
- TREE LINE
- IRRIGATION VALVE
- IRRIGATION VALVE BOX
- SEWER VALVE

NEW



NO.	DATE	DESCRIPTION	APP'D	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: JRR; DRAWN BY: MPL; CHECKED BY: DMJ; DATE: SEPT 2013	PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.; REG. NUMBER: 65850; PROJECT NUMBER: 60289240	9-20-2013

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

DRAFTING LEGEND

DRAWING NO. G-004

SHEET 4 OF 34[illegible]

PROCESS PIPING SCHEDULE

LEGEND	SYSTEM DESIGN CONDITIONS: SYSTEM	TEMP. (DEG. F): OPER.	TEMP. (DEG. F): MAX.	PRESSURE (PSI): WORK.	PRESSURE (PSI): MAX	PIPING: MATERIAL	PIPING: DIAMETER RANGE	PIPING: SCH./CLASS	PIPING: LINING/COATING	PIPING: JOINT TYPE	VALVING: BLOCK	VALVING: CHECK	VALVING: THROTTLING	TEST REQUIREMENTS: PRESSURE (PSI)	TEST REQUIREMENTS: MEDIUM	TEST REQUIREMENTS: TEST DURATION (SPEC)	TEST REQUIREMENTS: LEAKAGE ALLOWANCE (SPEC)	SPECS SECTION NUMBER	PIPE COLOR (PER AWWA)	REMARKS
STS-1	STORMWATER	75	90	G	10	DIP	4-36"	CLASS 53	SEE SPECS	FLANGED	---	---	---	25	WATER	400515	400515	402040	LIGHT GRAY	NOTES 1, 2, 5, 7
ASR-1	ASR WATER	75	90	50	125	DIP	8-12"	CLASS 53	SEE SPECS	FLANGED/MJ	GATE	SWING	---	125	WATER	400515	400515	402040	LIGHT GRAY	NOTES 1, 2, 5, 7
ASR-2	ASR WATER	75	90	50	125	HDPE	8-12"	DR 11	---	FUSION/FLANGED/MJ	GATE	SILENT	---	125	WATER	400515	400515	402097	LIGHT GRAY	NOTES 1, 3, 4, 6
PW-1	POTABLE WATER	75	90	50	125	HDPE	1-2"	DR 11	---	FUSION/THREADED	CORP	---	---	125	WATER	400515	400515	402097	BLUE	NOTES 1, 2, 4
PW-2	POTABLE WATER	75	90	50	125	SST	0.125-.75"	---	---	COMPRESSION	BALL	---	---	125	WATER	400515	400515	402078	---	NOTES 1, 2, 9
PW-3	POTABLE WATER	75	90	50	125	SST	0.25-3"	SCH 80	---	THREADED	BALL	---	---	125	WATER	400515	400515	402078	---	NOTES 1, 2, 9

PROCESS PUMP SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT: CAPACITY (GPM)	RATING POINT: HEAD (FEET)	RATING POINT: MIN. EFF. %	RATING POINT: SHUTOFF HEAD FT.	MIN. SUCTION/ DISCHARGE SIZE (IN.)	PUMP RPM MAX.	SEAL TYPE	MOTOR DATA: HP	MOTOR DATA: VOLTAGE	MOTOR DATA: RPM (MAX.)	MOTOR DATA: ENCL. TYPE	DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
P-1 & P-2	2	MAIN PUMP	VERTICAL MIXED FLOW	21,000	16	88	25	- / 36	505	TYPE F	125	460	505	TEFC	VFD	432150	PEERLESS	
P-3	1	JOCKEY PUMP	VERTICAL MIXED FLOW	5625	11	81	18	- / 16	1175	TYPE F	25	480	1175	TEFC	VFD	432150	PEERLESS	
P-4	1	ASR PUMP	SUBMERSIBLE	1390	148	70	240	- / 8	1780	TYPE H	88	460	1160	SUB	VFD	432140	FLYGT CP3300	

SLIDE GATE SCHEDULE

TAG NO.	NUMBER OF UNITS	GATE SIZE W(IN.) x H(IN.)	GATE TYPE	MOUNTING CONFIGURATION	SEATED HEAD	UNSEATED HEAD	GATE INVERT (ELEV)	DECK HEIGHT (ELEV)	CHANNEL WIDTH (IN)	SLIDE HEIGHT (IN)	OPERATOR TYPE	MOTOR DATA: HP	MOTOR DATA: VOLTAGE	MOTOR DATA: ENCL. TYPE	SPEC. SECTION	REMARKS
SG-1, SG-3	2	54 x 168	SELF CONTAINED	SURFACE	17.0	13	-10.60	8.33	54	168	ELECTRIC	1	460	NEMA4X	400580	NOTE 11,12
SG-2, SG-4	2	54 x 180	SELF CONTAINED	SURFACE	18.0	14	-11.07	8.33	54	180	ELECTRIC	1	460	NEMA4X	400580	NOTE 11,12

SCREEN SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT: CAPACITY (MGD)	RATING POINT: HEAD LOSS (INCH)	RATING POINT: BAR SPACING (INCH)	CHANNEL WIDTH (INCH)	CHANNEL INVERT TO DECK (INCH)	LIFT (INCH)	MOTOR DATA: HP	MOTOR DATA: VOLTAGE	MOTOR DATA: RPM (MAX.)	MOTOR DATA: ENCL. TYPE	DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
SCR-1, SCR-2	2	BAR SCREEN	VERTICAL	36	9	1	54	233	281	1	460	---	TEFC	GEAR	444333	JOHN MEUNIER	

CONVEYOR SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	CONVEYER DATA: MATERIAL CONVEYED	CONVEYER DATA: LOADING CF/HR	CONVEYER DATA: DIA. OR WIDTH (IN)	CONVEYER DATA: LENGTH (FEET)	CONVEYER DATA: CENTERLINE CONVEYER ABOVE FLOOR (FEET)	CONVEYER SPEED (FPM)	CONVEYER SETTING	CONVEYER DISCHARGE	MOTOR DATA: HP	MOTOR DATA: VOLTAGE	MOTOR DATA: RPM (MAX)	MOTOR DATA: ENCL TYPE	DRIVE TYPE	SPEC SECTION NUMBER	NUMBER
CNV-1	1	SCREENINGS CONVEYOR	BELT	SCREENING	875	24	21	2.5	80	FLOOR	1	3	460	1800	TEFC	GEAR	412123	

STRAINER SCHEDULE

TAG NO.	NUMBER OF UNITS	NAME	TYPE	RATING POINT: CAPACITY (GPM)	RATING POINT: OPERATING PRESSURE (PSI)	RATING POINT: SCREEN SIZE (MICRON)	RATING POINT: BACKWASH SETTING (DPSI)	INLET/ DISCHARGE SIZE (IN.)	BACKWASH OUTLET SIZE (IN.)	MOTOR DATA: HP	MOTOR DATA: VOLTAGE	MOTOR DATA: RPM (MAX.)	MOTOR DATA: ENCL. TYPE	DRIVE TYPE	SPEC. SECTION	BASIS OF DESIGN	REMARKS
FLT-1, FLT-2	2	STRAINER	AUTOMATIC	1340	50	200	7	10	10	0.5	460	---	---	GEAR	44331	AMAD ESB 10000	

NOTES:

1. TEST PIPING IN ACCORDANCE WITH SPEC SECTION 400515, UNLESS OTHERWISE NOTED.
2. LABEL PIPING IN ACCORDANCE SPEC SECTION 400775.
3. ALL PIPING IS TO HAVE A CONSTANT SLOPE BETWEEN THE INVERT OR CENTERLINE SHOWN ON THE DRAWINGS.
4. ALL BURIED JOINTS ARE TO BE MECHANICALLY RESTRAINED UNLESS OTHERWISE NOTED.
5. COORDINATE CONNECTIONS AND ELEVATIONS AT STRUCTURES WITH PROCESS AND STRUCTURAL DRAWINGS.
6. PROVIDE MINIMUM SEPARATION OF PIPING AS IDENTIFIED ON DETAIL 4, DRAWING C-502.
7. PROVIDE COATING SYSTEM PER SPEC SECTION 099000, UNLESS OTHERWISE NOTED.
8. WORKING PRESSURES REPORTED AS "G" INDICATES GRAVITY LINE.
9. DO NOT COAT STAINLESS STEEL PIPE.
10. COAT VENT PIPE THE COLOR OF THE SERVICE THAT IS VENTED.
11. CONTRACTOR SHALL CONFIRM INVERT AND DECK ELEVATIONS PRIOR TO ORDERING GATES.
12. NOTE THAT MAXIMUM HEAD IS GREATER THAN THE HEIGHT OF THE SLIDE GATE. WHEN WATER LEVEL IS HIGH, GATE ACTS AS A WEIR. HOWEVER, GATE MUST BE ABLE TO OPEN UPWARDS UNDER THIS CONDITION.

NO.	DATE	DESCRIPTION	APPR.
5			
4			
3			
2			
1			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DESIGNED BY: JRR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG. NUMBER: 65850
PROJECT NUMBER: 60289240

1-20-2013

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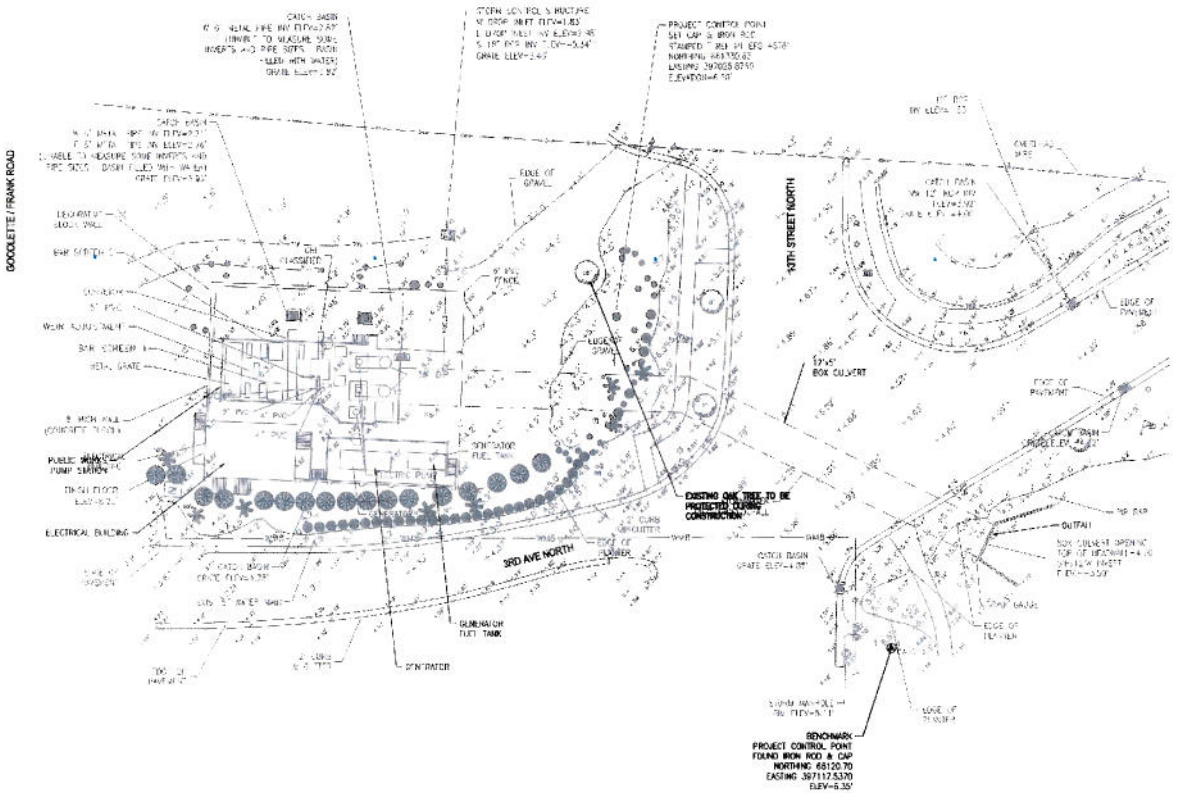
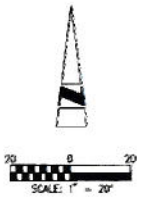
EQUIPMENT SCHEDULE

DRAWING: G-005
SHEET: 5
OF - SHEETS





NO.	DATE	DESCRIPTION	APPR
1			
2			
3			
4			
5			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DESIGNED BY	JRR
DRAWN BY	MPL
CHECKED BY	DMJ
DATE	SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG. NUMBER: 65850
PROJECT NUMBER: 60289240

9-20-2013

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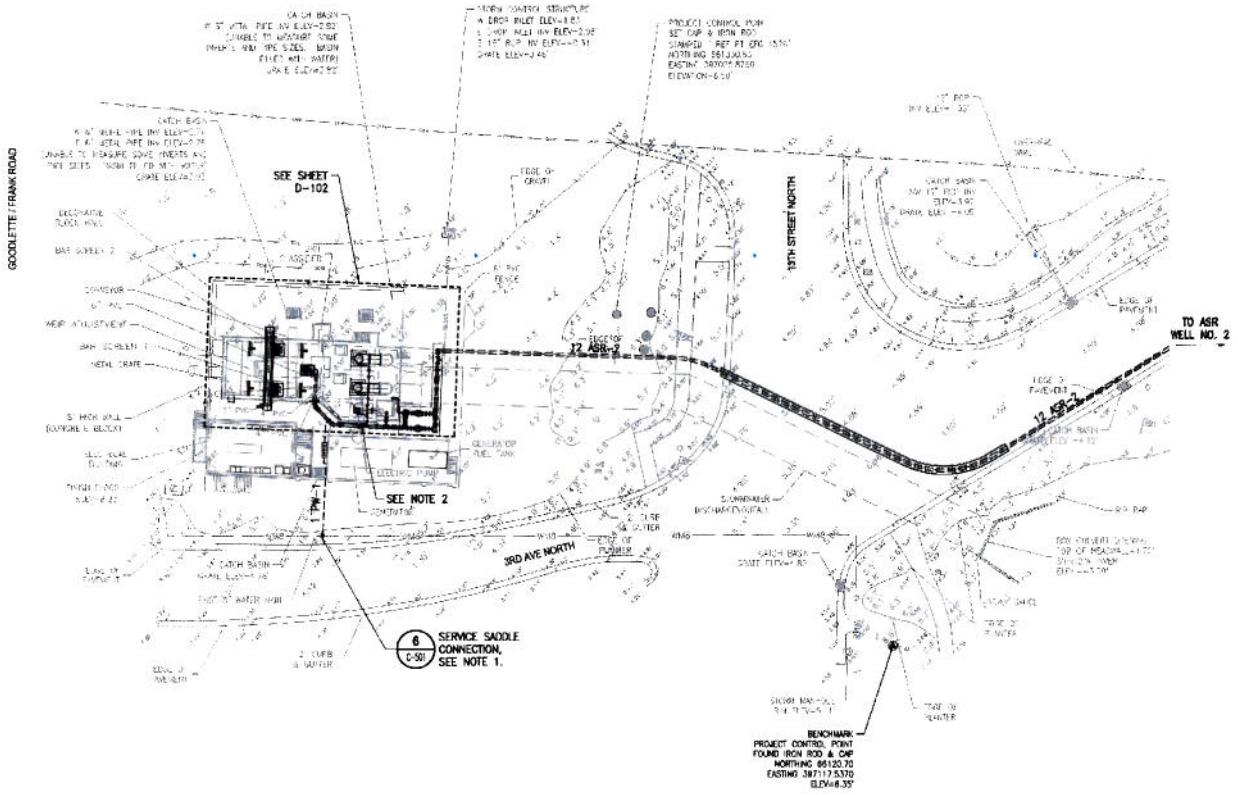
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

EXISTING SITE PLAN PUMP STATION

DRAWING: C-101
SHEET: 6
OF 7 SHEETS



NOTES:

1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF WATER MAIN PRIOR TO ORDERING MATERIALS.
2. REFER TO PROCESS DRAWING FOR DETAILS OF POTABLE WATER PIPING.
3. NEW EQUIPMENT IN PUMP STATION CALLED OUT ON DRAWING D-102.

REV.	DATE	DESCRIPTION	APPR.
1			
2			
3			
4			
5			
6			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: JRR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG. NUMBER: 65850
PROJECT NUMBER: 60289240

4-30-2013

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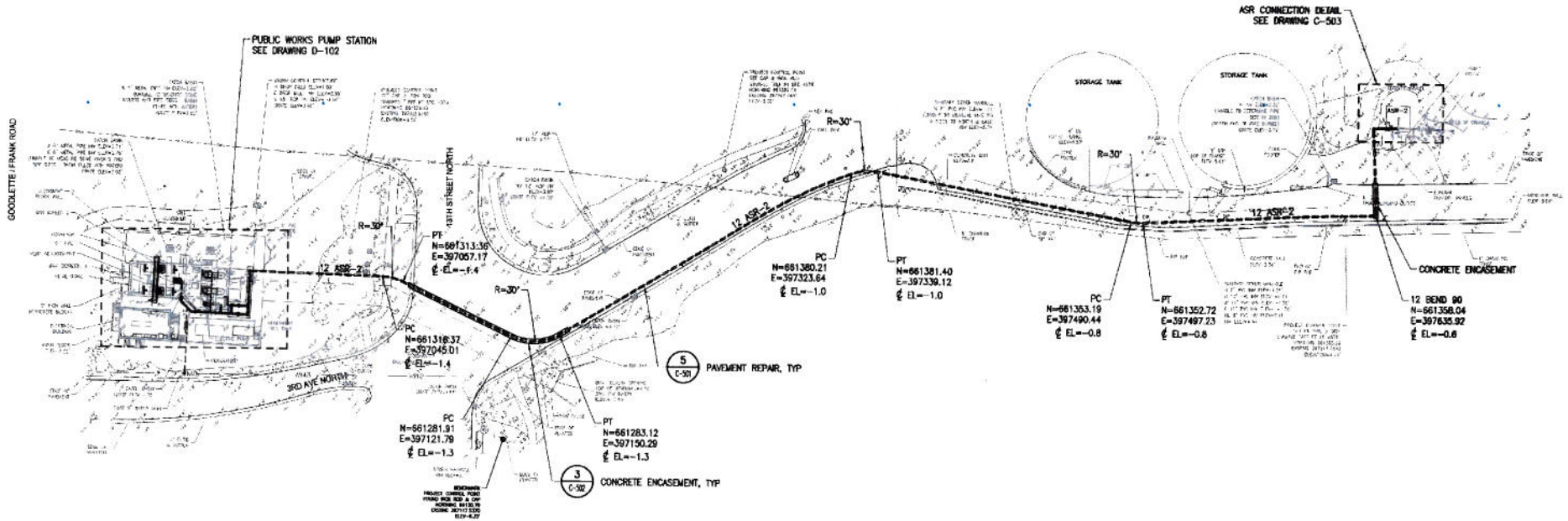
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

PROPOSED SITE PLAN PUMP STATION

DRAWING: C-102
SHEET: 7
OF SHEETS



NOTES:

1. CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT PRIOR TO OPENING PIPE TRENCH, SEE DETAIL 5, DRAWING C-501.
2. PIPE SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS.
3. PIPE SHALL HAVE 3'-0" MINIMUM COVER.
4. AIR RELIEF VALVES SHALL BE PROVIDED AT ALL HIGH POINTS.
5. CONTRACTOR SHALL SUPPORT EXISTING CONCRETE WALL AS REQUIRED.
6. EXISTING UTILITIES WITHIN THE PIPE ALIGNMENT SHALL BE EXPOSED USING DETECTION EQUIPMENT SUCH AS SOFT DIG, GROUND PENETRATING RADAR (GPR), OR OTHER ACCEPTABLE MEANS PRIOR TO INSTALLING THE PIPE. THE CONTACTOR SHALL LOCATE AND AVOID ALL UTILITIES, STRUCTURES, AND OTHER OBSTRUCTIONS BOTH AND BELOW GRADE AND SHALL BE HELD LIABLE FOR DAMAGES CAUSED TO THE INFRASTRUCTURE AND THE EXISTING UTILITIES.

NO.	DATE	DESCRIPTION	APP.

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED JRR
DRAWN MPL
CHECKED DMJ
DATE SEPT 2013

PROJECT MANAGER RONALD R. CAVALIERI, P.E.
FPID NUMBER 65850
PROJECT NUMBER 60289240

9-20-2013

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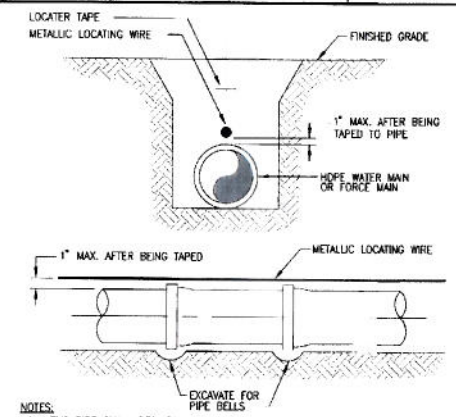
PHONE: 239-213-5000 FAX: 239-213-5010

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

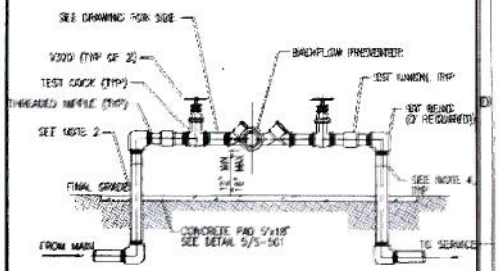
ASR TRANSMISSION MAIN - PLAN

DRAWING C-103
SHEET 8 OF — SHEETS



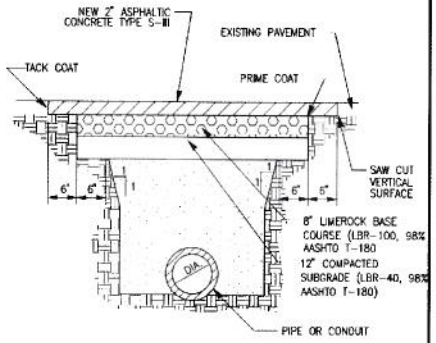
NOTES:
1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (14 GAUGE CCS) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. AND SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX.
3. AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION. USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY ON THE TOP OF THE PIPE.

2 HDPE PIPE LOCATING WIRE DETAIL
SCALE: NONE



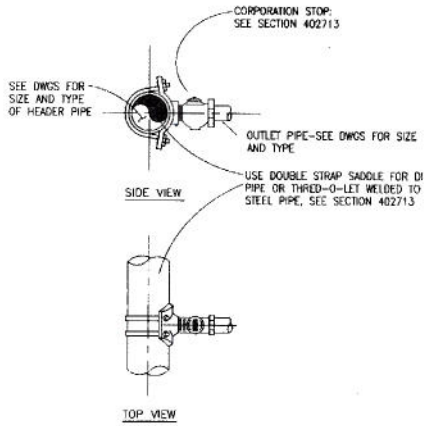
NOTES:
1. ALL PIPE AND FITTINGS SHALL BE THREADED SST BRASS.
2. PROVIDE 1/2" JOINT MATERIAL BETWEEN THE PIPE AND CONCRETE SLAB (TYP)
3. REDUCED PRESSURE DEVICE SUPPLIED WITH AMMONIA AND CHLORINE RESISTANCE SEALS. DEVICE MUST BE APPROVED BY USC FCCCHR AND AWWA. APPROVED DEVICES: AMES, CONBRACO, WILKINS-ZURN, AND WATTS.
4. TRANSITION FROM HDPE TO NPT W/ISCO STAINLESS STEEL THREADED TRANSITION FITTING.

4 BACKFLOW PREVENTER
SCALE: NONE

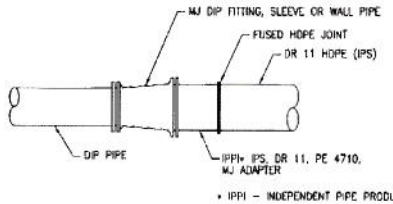


NOTES:
1. ASPHALTIC CONCRETE TO BE PLACED AND COMPACTED IN ONE 2" COURSE.

5 PAVEMENT REPAIR
SCALE: NONE



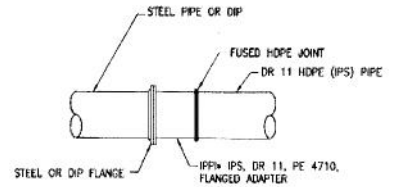
6 SERVICE SADDLE CONNECTION
SCALE: NONE



* IPPI – INDEPENDENT PIPE PRODUCTS, INC.

NOTES:
1. MJ ADAPTER SHALL BE IPPI (INDEPENDENT PIPE PRODUCTS, INC) OR ENGINEER APPROVED EQUAL.
2. PROVIDE INTERNAL STAINLESS STEEL STIFFENER ON ALL TRANSITIONS REGARDLESS OF SIZE.
3. MJ ADAPTER MANUFACTURER SHALL PROVIDE HDPE ANCHOR FITTING, RUBBER GASKET, T-BOLTS AND NUTS, INTERNAL STAINLESS STEEL STIFFENER, AND DUCTILE IRON GLAND RING.
4. FOR BURIED MJ BUTTERFLY VALVES, CONTRACTOR SHALL SUBMIT VALVE INFORMATION TO MJ ADAPTER MANUFACTURER TO PRIOR ORDERING ADAPTER TO INSURE PROPER CLEARANCE OF THE VALVE. PROVIDE VALVE SPACERS OR BEVELED NOSED ANCHOR AS NEEDED. CONTRACTOR SHALL TEST FIT HDPE ANCHORS WITH BUTTERFLY VALVE (FULLY OPEN) TO CONFIRM CLEARANCE BEFORE FUSION AND INSTALLATION.

7 HDPE TO MJ TRANSITION
SCALE: NONE



* IPPI – INDEPENDENT PIPE PRODUCTS, INC.

NOTES:
1. FLANGE ADAPTER SHALL BE IPPI (INDEPENDENT PIPE PRODUCTS, INC) OR ENGINEER APPROVED EQUAL.
2. FLANGE ADAPTER MANUFACTURER SHALL PROVIDE IPS SIZED FLANGE ADAPTER AND MATING BOLT RING.
3. BOLT RING SHALL BE 316 STAINLESS STEEL A351-CF8M.
4. CONTRACTOR TO PROVIDE BOLTS AND NUT PER SECTION XXXXX.

8 HDPE / FLANGE TRANSITION
SCALE: NONE

DATE	DESCRIPTION	APP'D	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: JRR; DRAWN BY: MPL; CHECKED BY: DMJ; DATE: SEPT 2013	PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.; REG. NUMBER: 65850; PROJECT NUMBER: 60289240	9-20-2013

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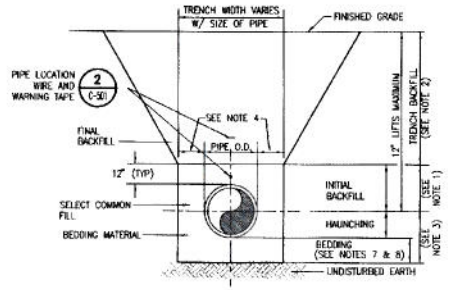
CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 380 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE 239-213-5000 FAX 239-213-5010

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

CIVIL DETAILS

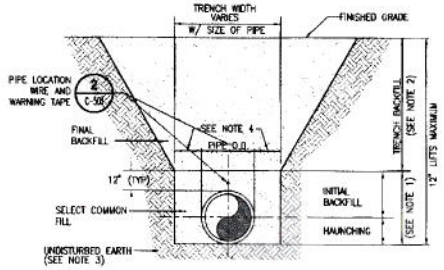
DRAWING: C-501
SHEET: 9
OF — SHEETS



NOTES:

1. INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER ASTM D1557.
2. TRENCH BACKFILL/BACKFILL COMPACTION: SELECT COMMON FILL UNDER & WITHIN 6 FEET OF ANY PAVED SURFACE SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 98% OF MAX DENSITY PER ASTM D1557. BACKFILL IN AREAS OUTSIDE ROADWAY SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% MAX DENSITY PER ASTM D1557.
3. TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
4. 15" MAX (12" MIN) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER UP TO 12" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. OWNER SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
9. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

1 TYPE A BEDDING AND TRENCHING DETAIL
SCALE: NONE

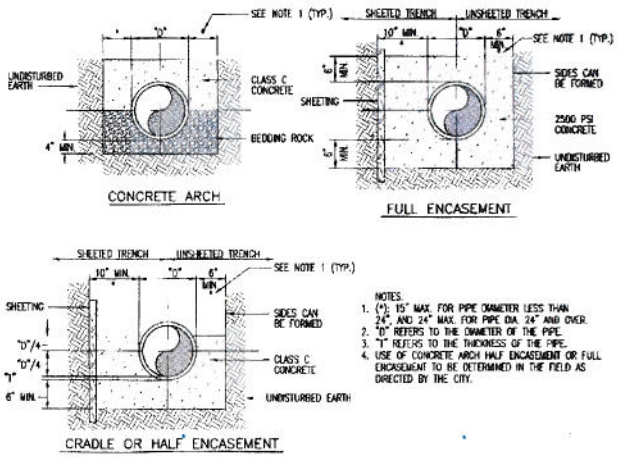


NOTES:

INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER ASTM D1557.

2. TRENCH BACKFILL/BACKFILL COMPACTION: SELECT COMMON FILL UNDER & WITHIN 6 FEET OF ANY PAVED SURFACE SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 98% OF MAX DENSITY PER ASTM D1557. BACKFILL IN AREAS OUTSIDE ROADWAY SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% MAX DENSITY PER ASTM D1557.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY OWNER.
4. 15" MAX (12" MIN) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

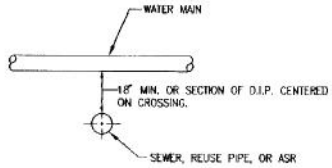
2 TYPE B BEDDING AND TRENCHING DETAIL
SCALE: NONE



NOTES:

1. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIA. 24" AND OVER.
2. "D" REFERS TO THE DIAMETER OF THE PIPE.
3. "T" REFERS TO THE THICKNESS OF THE PIPE.
4. USE OF CONCRETE ARCH HALF ENCASEMENT OR FULL ENCASEMENT TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.

3 CONCRETE ARCH AND ENCASEMENT DETAILS
SCALE: NONE



CROSSING SECTION

NOTES:

1. IF WATERMAIN IS LESS THAN 18" ABOVE SEWER OR REUSE PIPE AT A CROSSING, THEN CENTER ONE JOINT OF D.I.P. ON CROSSING POINT.
2. MAINTAIN 10' MINIMUM SEPARATION BETWEEN PARALLEL WATER AND SEWER PIPES. 5' BETWEEN WATER AND REUSE PIPES.
3. DO NOT ENCASE SEWER IN CONCRETE UNLESS SPECIFICALLY AUTHORIZED.
4. ALL PIPING SHALL CLEAR OTHER CONSTRUCTION BY 6" MINIMUM
5. DUCTILE IRON PIPE WITHIN 10' OF GAS MAIN SHALL BE POLYETHELYNE ENCASED.

4 PIPING CLEARANCES
SCALE: NONE

MK	DATE	DESCRIPTION	APP'D

VERIFY SCALES
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DESIGNED BY: JSR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG. NUMBER: 65650
PROJECT NUMBER: 60289240

9-26-2013

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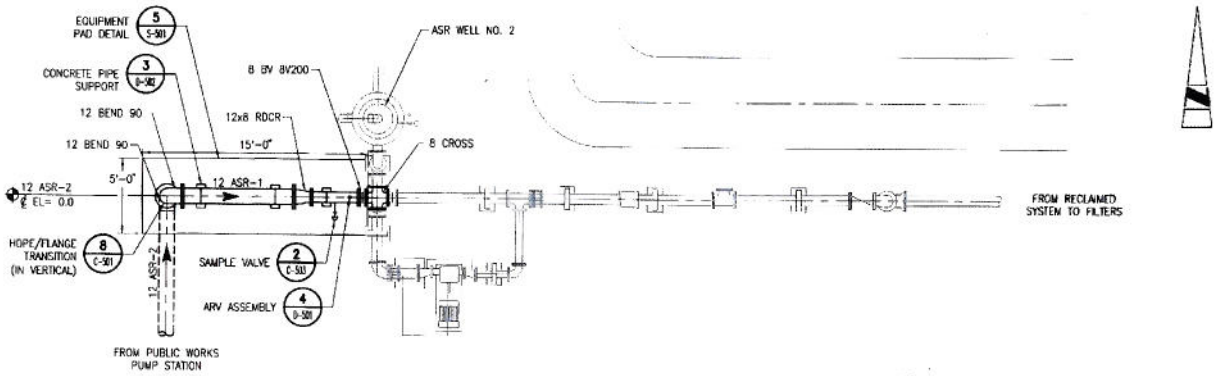
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

CIVIL DETAILS

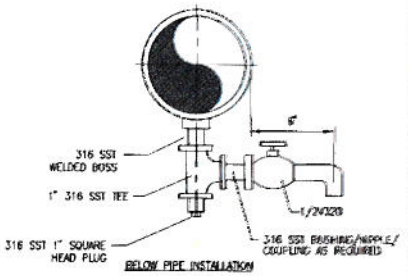
DRAWING: C-502
SHEET: 10
OF - SHEETS



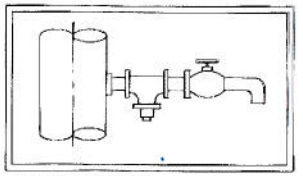
1 ASR 2 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE TIE IN TO ASR NO. 2 WELL HEAD WITH CITY OF NAPLES WWTP STAFF.
2. REMOVE EXISTING 8 TEE AND REPLACE WITH 8 CROSS.
3. CONTRACTOR SHALL RELOCATE INSTRUMENTS IF NECESSARY TO AVOID CONFLICT WITH NEW ASR PIPING.
4. COAT PIPE PER THE PIPING SCHEDULE. COLOR SHALL MATCH EXISTING ASR PIPING.
5. CONTRACTOR TO CONFIRM PIPE ELEVATION AT WELL CONNECTION.



BELOW PIPE INSTALLATION



VERTICAL PIPE INSTALLATION

2 SAMPLE VALVE
SCALE: NONE

REV	DATE	DESCRIPTION	APP'D

VERIFY SCALES
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DESIGNED BY JRR
DRAWN BY MPL
CHECKED BY DNJ
DATE SEPT. 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG. NUMBER 65650
PROJECT NUMBER 60289240

9-20-2013

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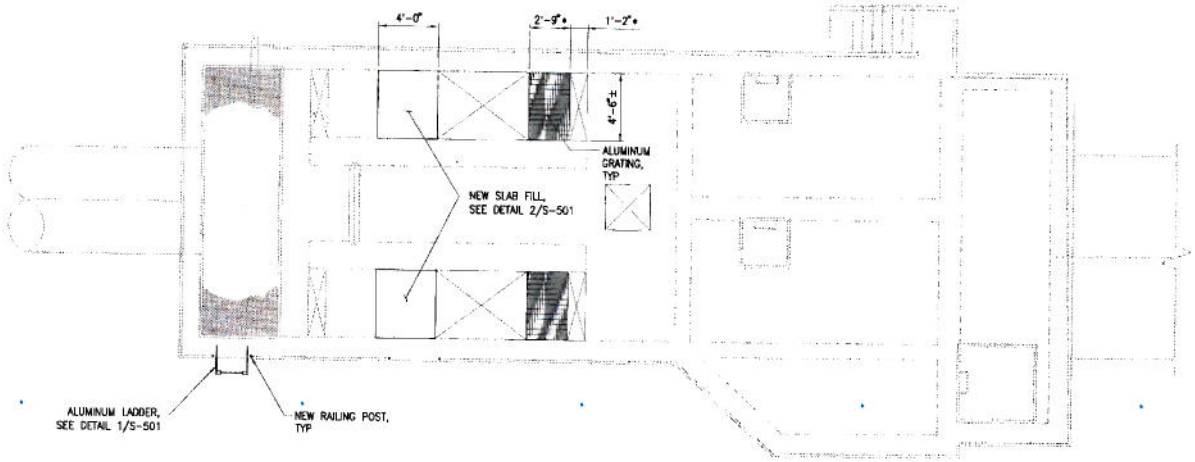
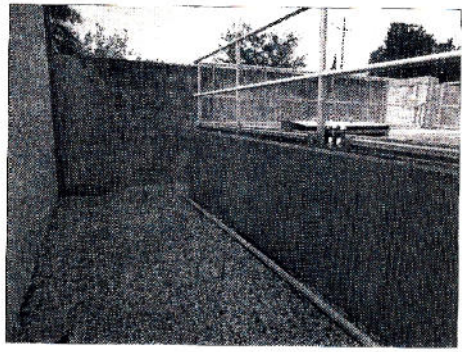
CIVIL DETAILS

DRAWING C-503
SHEET 11 OF — SHEETS

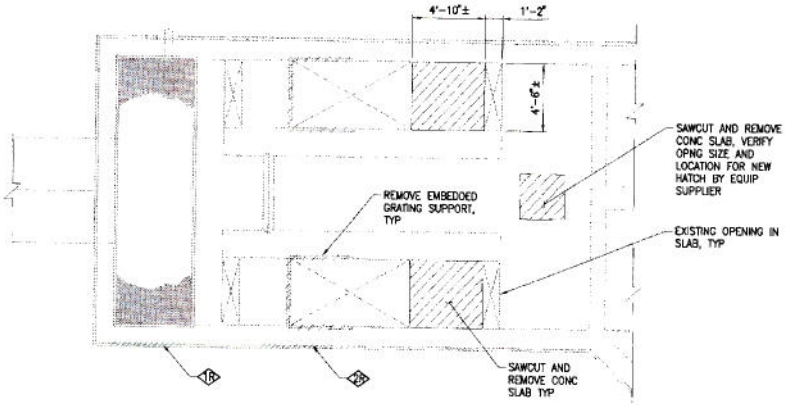


NEW CONSTRUCTION PLAN

SCALE: 1/4" = 1'-0"



1 PHOTO
SCALE: NONE



REMOVAL PLAN

SCALE: 1/4" = 1'-0"

REMOVAL NOTES <R>:

1. REMOVE AND MODIFY PORTION OF EXISTING RAILING AS REQUIRED FOR NEW LADDER ACCESS. PROVIDE NEW RAILING POSTS AS REQUIRED TO MATCH EXISTING. CONNECT NEW RAILING TO LADDER EXTENSION. SEE PHOTO 1 THIS SHEET.
2. REMOVE AND MODIFY PORTION OF EXISTING RAILING AS REQUIRED FOR NEW CONVEYOR BELT EQUIP. PROVIDE NEW RAILING POSTS AS REQUIRED TO MATCH EXISTING.

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS
2. REMOVE REINFORCEMENT, CONC ANCHORS, ANCHOR BOLTS, AND EMBEDMENTS 1" MIN BEYOND FINISHED SURFACE AND PATCH WITH NON-SHRINK GROUT TO MATCH EXISTING SURFACE.
3. DIMENSIONS WITH AN • ARE TO BE VERIFIED WITH EQUIP SUPPLIER.

4 0 4
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	APP'D

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DESIGNED BY: CWA
DRAWN BY: MDW
CHECKED BY: KM
DATE: SEPT 2013

PROJECT MANAGER: CLEMENT ANSON, P.E.
REG. NUMBER: 75167
PROJECT NUMBER: 60289240

CLEMENT V. ANSON, LICENSED ARCHITECT, No. 75167, STATE OF FLORIDA, PROFESSIONAL ENGINEER

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

PUMP STATION STRUCTURAL PLAN

DRAWING: S-101
SHEET: 12

STRUCTURAL NOTES

A. DESIGN CRITERIA

1. FLORIDA BUILDING CODE: FBC 2010.
2. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
3. AISC MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION.
4. ACI 318-08, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, BY THE AMERICAN CONCRETE INSTITUTE.

B. WIND LOAD

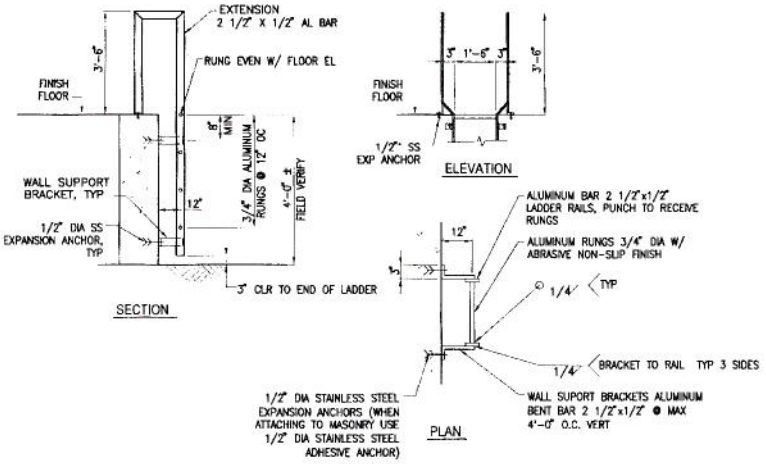
1. WIND LOADING PER FBC 2010
2. ULTIMATE WIND SPEED = 175 MPH
3. EXPOSURE C
4. RISK CATEGORY III

C. GENERAL REQUIREMENTS

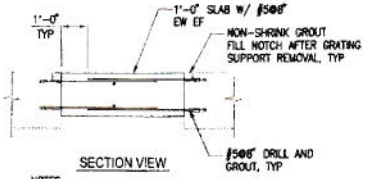
1. ALL DETAILS ARE TYPICAL. INCORPORATE INTO PROJECT AT APPROPRIATE LOCATIONS WHERE CONDITIONS ARE SIMILAR.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO START OF CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS.
3. COORDINATE ALL REQUIRED OPENINGS WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. COORDINATE FINAL SIZE AND LOCATION OF ALL OPENINGS WITH THE ACTUAL EQUIPMENT SUPPLIED, PROJECT REQUIREMENTS, AND WITH FIELD CONDITIONS.

D. CONCRETE AND REINFORCING

1. CAST-IN-PLACE CONCRETE f'c = 4000 PSI @ 28 DAYS
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
3. CONCRETE COVER:
   A. SHALL BE 2", UNLESS OTHERWISE NOTED.
   B. 3" CAST AGAINST GRADE.

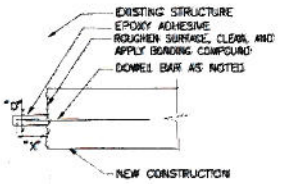


1 ALUMINUM LADDER DETAIL
SCALE: NONE



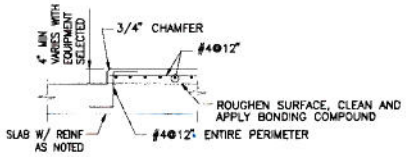
NOTES:
1. AT CONTRACTOR'S OPTION MAY POUR SLAB THICKNESS TO MATCH EXISTING.

2 NEW SLAB FILL DETAIL
SCALE: NONE

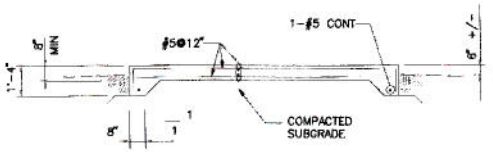


NOTES:
1. EMBEDMENT "X" = 16 BAR DIAMETERS MIN.
2. HOLD DIAMETER "D" = AS RECOMMENDED BY EPOXY GROUT MFR.
3. EPOXY ADHESIVE SHALL BE HIT-RE 500-SD BY HILTI CORP. OR EQUAL.

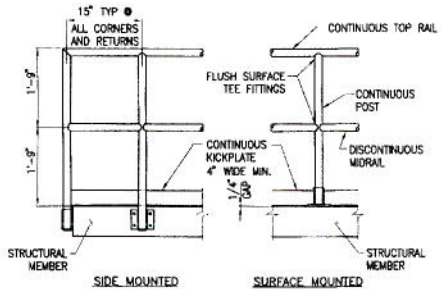
3 DRILL IN DOWEL DETAIL
SCALE: NONE



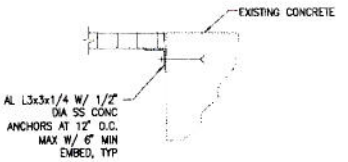
4 EQUIPMENT PAD DETAIL
SCALE: NONE



5 EQUIPMENT PAD DETAIL
SCALE: NONE

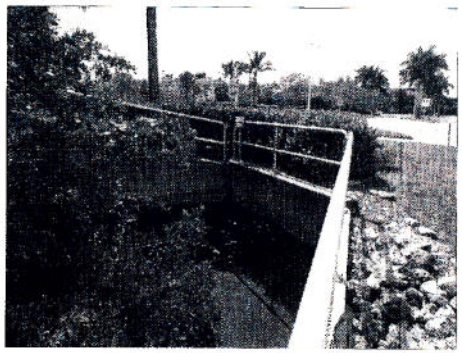


6 ALUMINUM RAILING DETAIL
SCALE: NONE

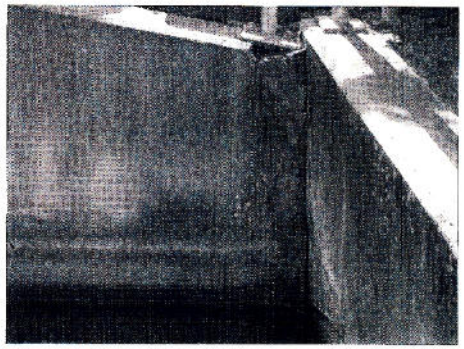


7 GRATING SUPPORT DETAIL
SCALE: NONE

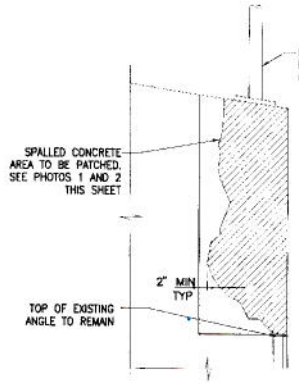
	VERIFY SCALES	DESIGNED BY CWA	PROJECT ENGINEER CLEMENT ANSON, P.E.	CITY OF NAPLES PUBLIC WORKS PUMP STATION	SHEET S-501
	BAR IS 1/2" INCH ON ORIGINAL DRAWING	DRAWN BY MDW	NO. 75167 STATE OF FLORIDA PROFESSIONAL ENGINEER	STRUCTURAL NOTES AND DETAILS	13
	IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY	CHECKED BY KM	PROJECT NUMBER 60289240		
		DATE SEPT 2013	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T 239.278.3090 F 239.278.0021 FL Engineering Business No. 28-8735 www.aecom.com	CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA, 34102 PHONE: 239-213-5000 FAX: 239-213-5010	



1 PHOTO
SCALE: NONE



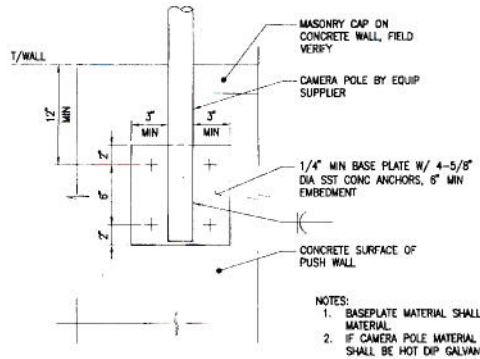
2 PHOTO
SCALE: NONE



NOTES:
1. SAWCUT MINIMUM 1 INCH DEEP AROUND SPALLED AND/OR DETERIORATED CONCRETE.
2. MAKE SAWCUTS IN STRAIGHT LINES.
3. REMOVE SPALLED AND/OR DETERIORATED CONCRETE TO SOUND CONCRETE.
4. PRESERVE EXISTING REINFORCING.
5. EXPOSED EXISTING REINFORCEMENT SHALL BE MECHANICALLY CLEANED TO REMOVE LOOSE RUST.
6. COAT EXPOSED REINFORCEMENT WITH ANTI-CORROSION COATING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SIKA ARMATEC 110 EPOCEM OR EQUAL.
7. APPLY BONDING COMPOUND TO EXPOSED SOUND CONCRETE SURFACES AND PATCH TO MATCH EXISTING SURFACE WITH PATCHING MORTAR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

ELEVATION VIEW

1 CONCRETE PATCHING DETAIL FOR HEADWALL
SCALE: NONE



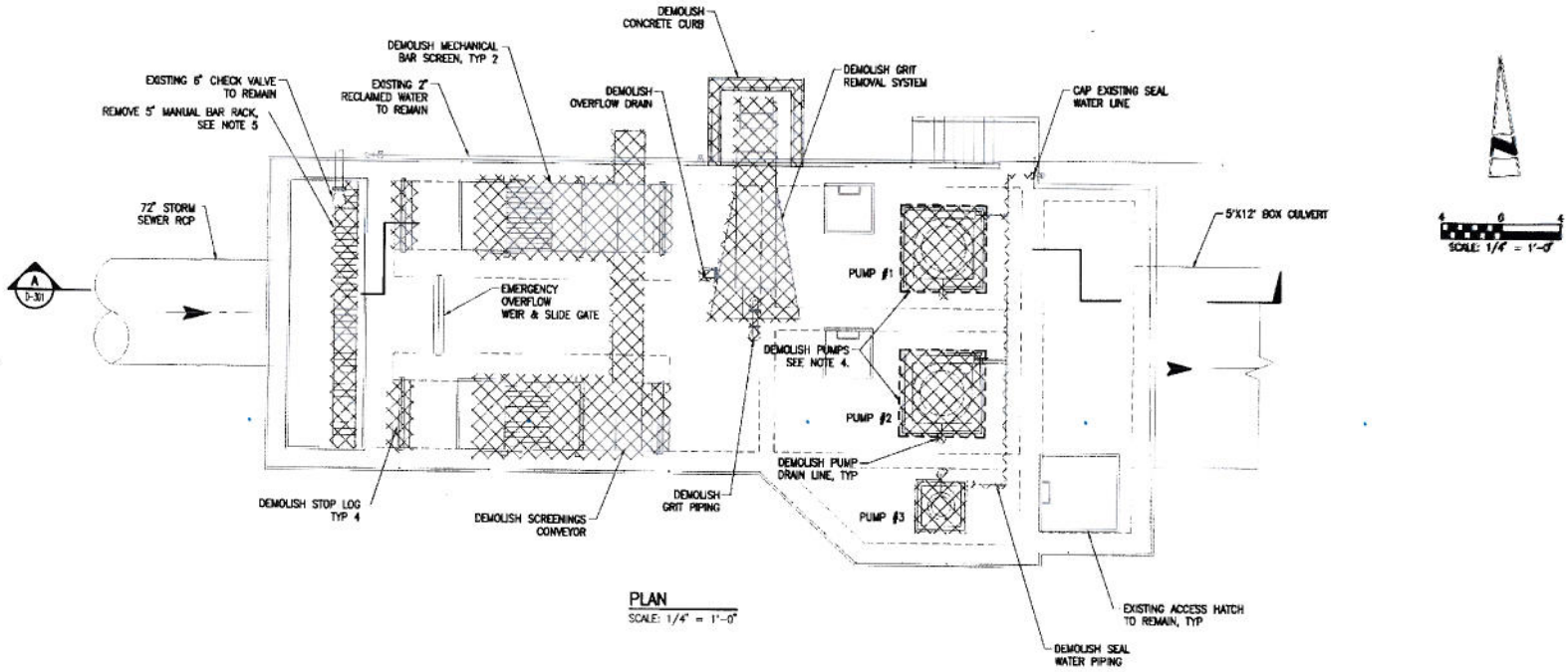
NOTES:
1. BASEPLATE MATERIAL SHALL MATCH CAMERA POLE MATERIAL.
2. IF CAMERA POLE MATERIAL IS STEEL, BASEPLATE SHALL BE HOT DIP GALVANIZED.

ELEVATION VIEW

2 CAMERA MOUNTING DETAIL
SCALE: NONE

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED: CWA	PROJECT DIRECTOR: CLEMENT ANSON, P.E.	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T 239.278.7966 F 239.278.7913 FL Engineering Business No. 28-8115 www.aecom.com	CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010	CITY OF NAPLES PUBLIC WORKS PUMP STATION
	DRAWN BY: MDW	REG. NUMBER: 75167			STRUCTURAL DETAILS
	CHECKED BY: KM	PROJECT NUMBER: 60289240			
	DATE: SEPT 2013				

DRAWING: S-502
SHEET: 14



PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. THIS DRAWING WAS CREATED USING AS-BUILT DRAWINGS DATED OCTOBER 1999. ACCURACY OF PIPING AND EQUIPMENT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2. FOR CONTINUATION OF OUTSIDE PIPING SEE CIVIL DRAWINGS.
3. DEMOLISH EXISTING EQUIPMENT PER SECTION 024100.
4. DEMOLISH PUMPS PER CONSTRUCTION SEQUENCE REQUIREMENTS SET FORTH IN SECTION 010100.
5. REMOVE MANUAL BAR RACK AND RETURN TO OWNER. CARE SHALL BE TAKEN DURING REMOVAL AS OWNER WILL RE-INSTALL BAR RACK AS NEEDED.

REV	DATE	DESCRIPTION	APP'D

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: JRR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG NUMBER: 65850
PROJECT NUMBER: 60289240

9-20-2013

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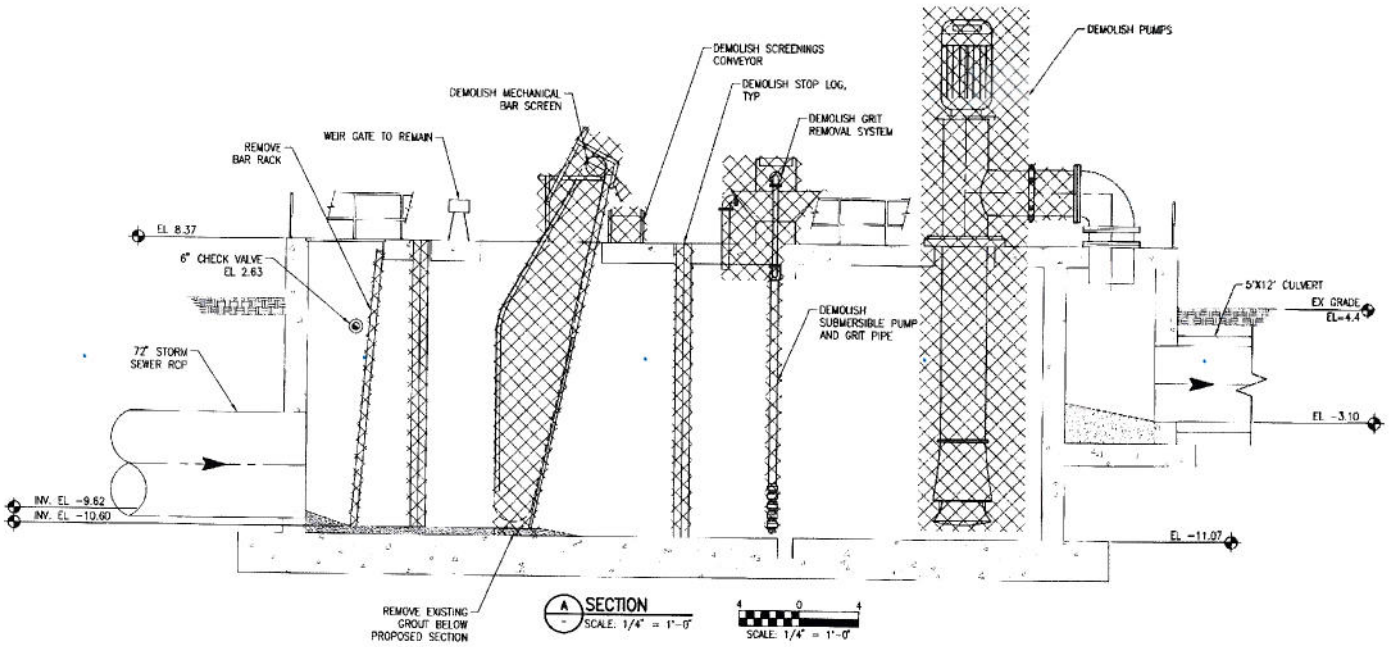
295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102
PHONE 239-213-5600 FAX 239-213-5615

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

EXISTING PUMP STATION
DEMOLITION PLAN

DRAWING: D-101
SHEET: 15



REV	DATE	DESCRIPTION	APP'D	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: JRR; DRAWN BY: MPL; CHECKED BY: DMJ; DATE: SEPT 2013	PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.; REG. NUMBER: 65850; PROJECT NUMBER: 60289240	9-20-2013	AECOM Technical Services, Inc., 4415 Metro Parkway, Suite 404, Fort Myers, Florida 33916, T 239.275.7686 F 239.418.0513, FL Engineering Business No. EB-8115

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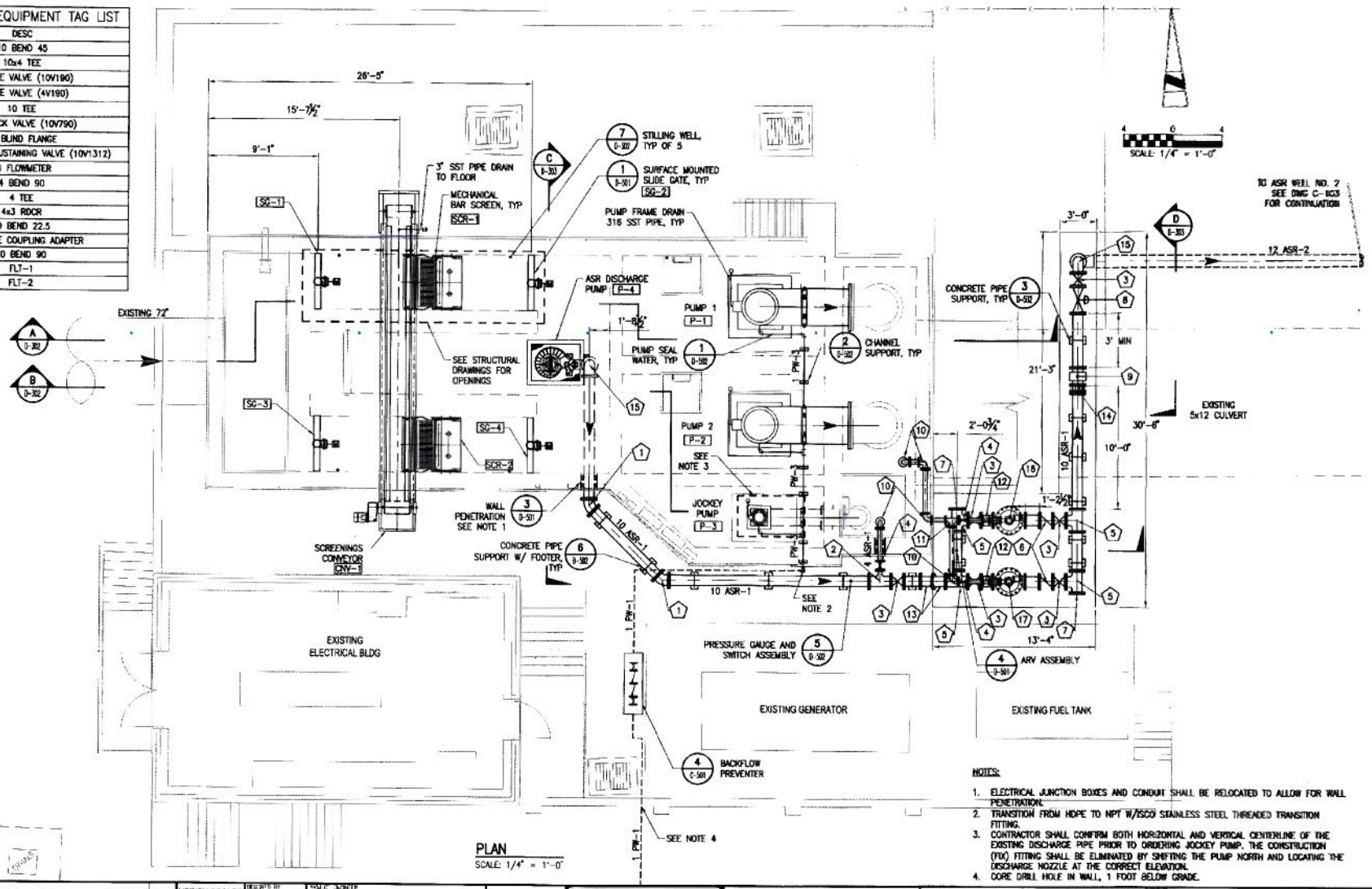
CITY OF NAPLES
PUBLIC WORKS PUMP STATION
EXISTING PUMP STATION DEMOLITION SECTION

DRAWING: D-301
SHEET: 16

FITTING AND VALVE/EQUIPMENT TAG LIST	
NO.	DESC
1	10 BEND 45
2	10x4 TEE
3	10 GATE VALVE (10V190)
4	4 GATE VALVE (4V190)
5	10 TEE
6	10 CHECK VALVE (10V790)
7	10 BLIND FLANGE
8	10 PRESSURE SUSTAINING VALVE (10V1312)
9	10 FLOWMETER
10	4 BEND 90
11	4 TEE
12	4x3 RDCR
13	10 BEND 22.5
14	10 FLANGE COUPLING ADAPTER
15	10 BEND 90
16	FLT-1
17	FLT-2



PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. ELECTRICAL JUNCTION BOXES AND CONDUIT SHALL BE RELOCATED TO ALLOW FOR WALL PENETRATION.
2. TRANSITION FROM HDPE TO NPT W/ISCO STAINLESS STEEL THREADED TRANSITION FITTING.
3. CONTRACTOR SHALL CONFIRM BOTH HORIZONTAL AND VERTICAL CENTERLINE OF THE EXISTING DISCHARGE PIPE PRIOR TO ORDERING JOCKEY PUMP. THE CONSTRUCTION (FIX) FITTING SHALL BE ELIMINATED BY SHIFTING THE PUMP NORTH AND LOCATING THE DISCHARGE NOZZLE AT THE CORRECT ELEVATION.
4. CORE DRILL HOLE IN WALL, 1 FOOT BELOW GRADE.

NO.	DATE	DESCRIPTION	APP'D
1			
2			

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DESIGNED BY JRR
DRAWN BY MPL
CHECKED BY DMJ
DATE SEPT 2013

PROJECT ENGINEER RONALD R. CAVALIERI, P.E.
FCE NUMBER 65850
PROJECT NUMBER 60289240

9-20-2013

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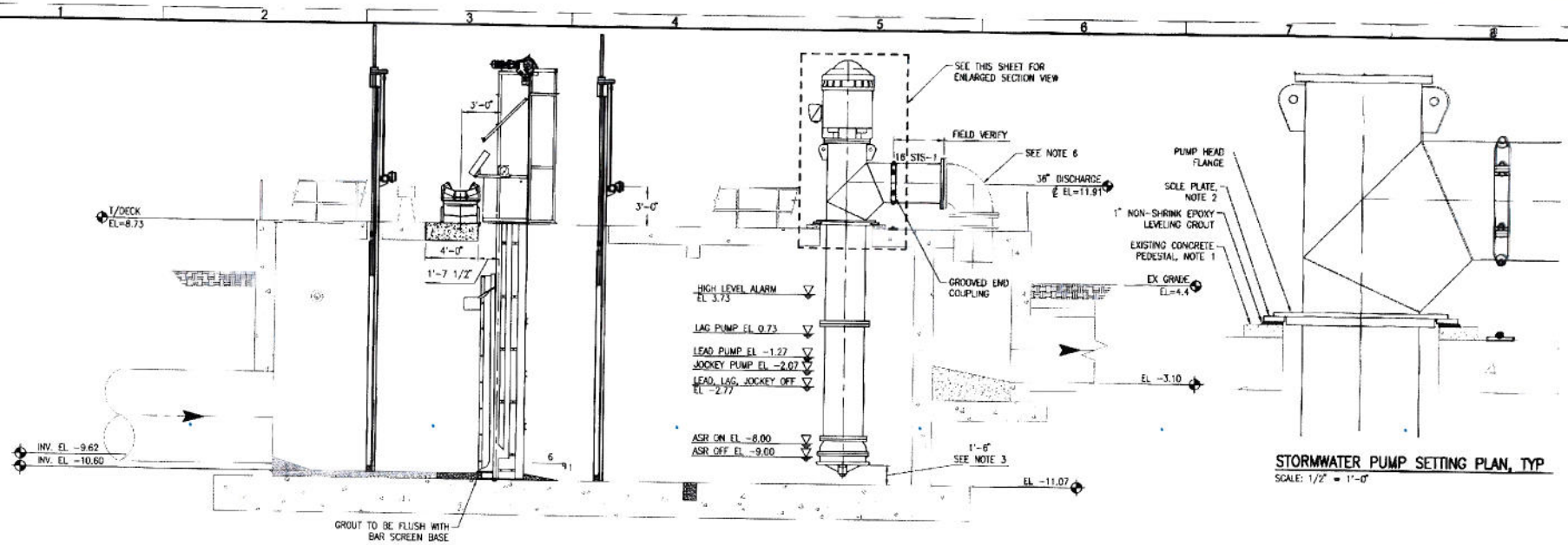
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

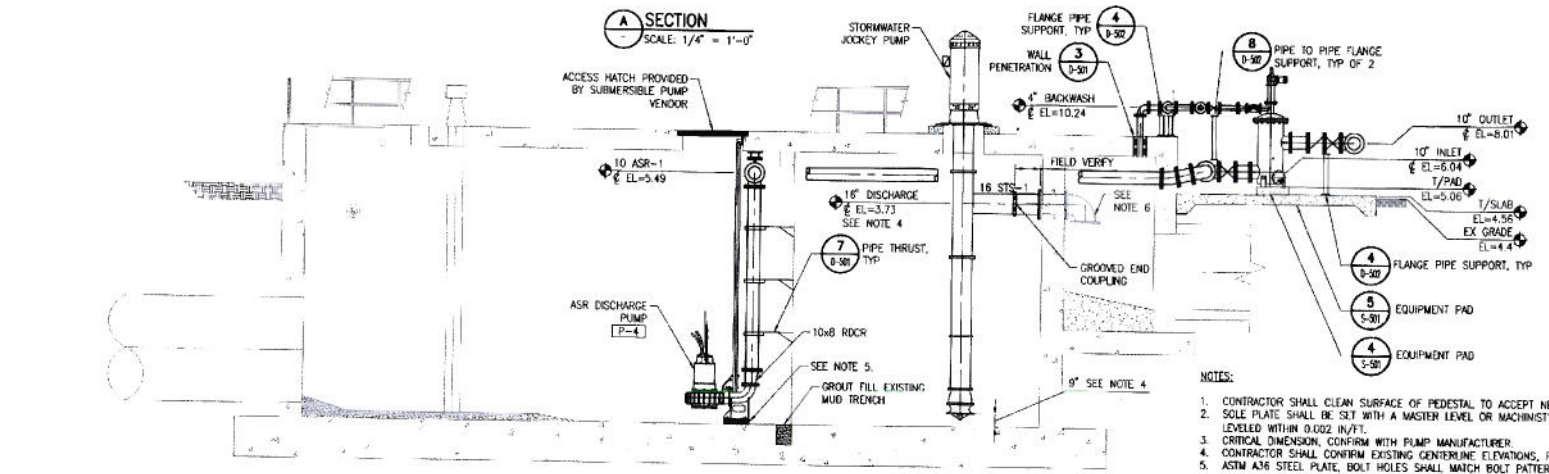
PUMP STATION PLAN

DRAWING D-102
SHEET 17 OF SHEETS



STORMWATER PUMP SETTING PLAN, TYP

SCALE: 1/2" = 1'-0"



B SECTION

SCALE: 1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL CLEAN SURFACE OF PEDESTAL TO ACCEPT NEW GROUT, REFER TO SECTION 4432150.
2. SOLE PLATE SHALL BE SET WITH A MASTER LEVEL OR MACHINIST'S LEVEL. THE SOLE PLATE SHALL BE LEVELED WITHIN 0.002 IN/FT.
3. CRITICAL DIMENSION, CONFIRM WITH PUMP MANUFACTURER.
4. CONTRACTOR SHALL CONFIRM EXISTING CENTERLINE ELEVATIONS, PRIOR TO ORDERING PUMPS.
5. ASTM A36 STEEL PLATE, BOLT HOLES SHALL MATCH BOLT PATTERN ON BASE ELBOW; COAT WITH FUSION BONDED EPOXY PER SECTION 099761. COORDINATE WITH PUMP MANUFACTURER FOR PLATE(S) THICKNESS TO PROVIDE CORRECT DISTANCE FROM FLOOR.
6. CONTRACTOR'S OPTION TO REPLACE EXISTING DIP SPOOLS AND FITTINGS WITH STS-1 PIPE OR REFURBISH BY SAND BLASTING TO SSPC SP-10 AND LINE AND COAT WITH SYSTEMS NO. 7 AND NO. 10, RESPECTIVELY, PER SECTION 099000. ADJUST SPOOL LENGTHS AS NEEDED FOR NEW PUMP.

NO.	DATE	DESCRIPTION	APP.	VERIFY SCALES	DESIGNED BY: JRR	PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.	CITY OF NAPLES PUBLIC WORKS PUMP STATION
				BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWN BY: MPL CHECKED BY: DNJ DATE: SEPT 2013	FDEP NUMBER: 65850 PROJECT NUMBER: 60289240	PUMP STATION SECTION

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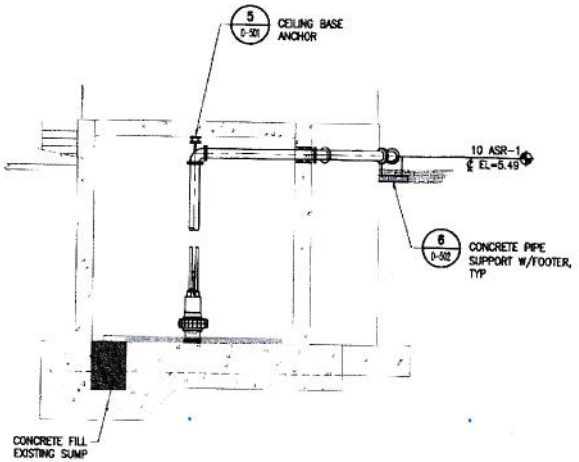
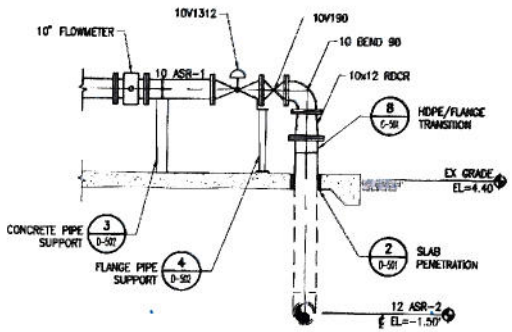
CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010

DRAWING D-302
SHEET 18



C SECTION
SCALE: 3/16" = 1'-0"

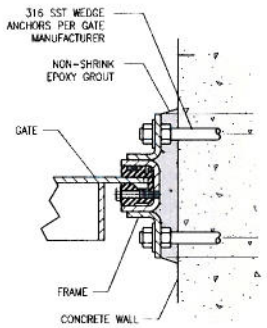
6 0 6
SCALE: 3/16" = 1'-0"

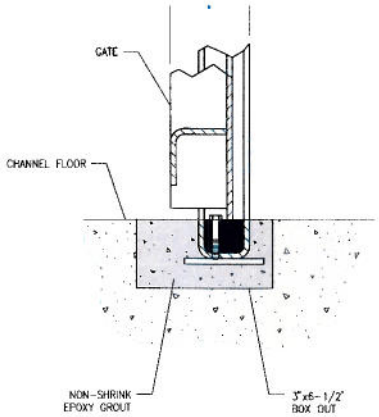


D SECTION
SCALE: 3/8" = 1'-0"

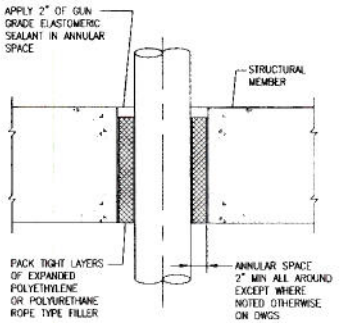
3 0 3
SCALE: 3/8" = 1'-0"

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: JRR	PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.		AECOM	CITY OF NAPLES, STREETS AND STORMWATER DEPARTMENT, 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102, PHONE: 239-213-5000 FAX: 239-213-5010	CITY OF NAPLES PUBLIC WORKS PUMP STATION	DRAWING: D-303
	DRAWN BY: MPL	FEC NUMBER: 65850	9-20-2013	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T 239.275.7596 F 239.278.0913 FL Engineering Business No. 28-8115 www.aecom.com		PUMP STATION SECTIONS	SHEET: 19
	CHECKED BY: DMJ	PROJECT NUMBER: 60289240					BY:
	DATE: SEPT 2013						

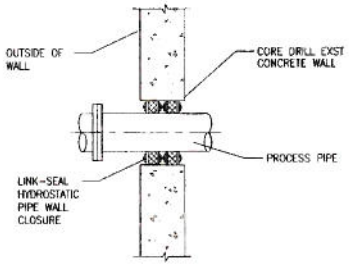




1 SURFACE MOUNTED SLIDE GATE
SCALE: NONE



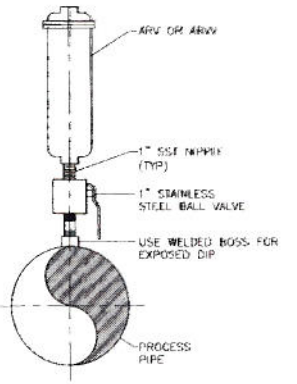
2 SLAB PENETRATION
SCALE: NONE



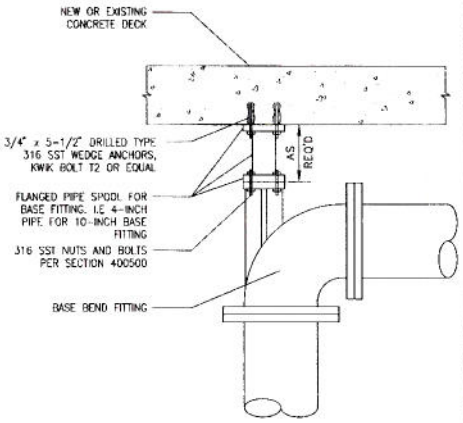
NOTES:

1. PROVIDE A SINGLE RUBBER ANNULAR SEAL WHEN THE WALL IS 8 INCHES THICK OR LESS. PROVIDE TWO RUBBER ANNULAR SEALS (ONE AT EACH END) WHEN THE WALL IS MORE THAT 8 INCHES THICK.
2. COORDINATE THE DIAMETER OF THE CORE OPENING PER LINK SEAL MANUFACTURER.
3. LINK SEAL SHALL HAVE 316 SST NUTS AND BOLTS.

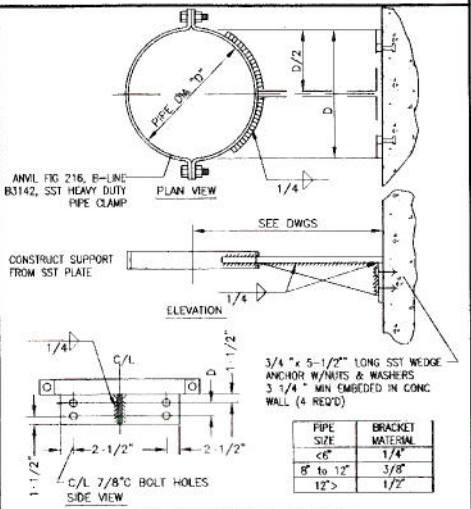
3 WALL PENETRATION
SCALE: NONE



4 ARV ASSEMBLY
SCALE: NONE



5 CEILING BASE ANCHOR
SCALE: NONE



PIPE SIZE	BRACKET MATERIAL
<6"	1/4"
8" to 12"	3/8"
12">	1/2"

7 PIPE THRUST SUPPORT
SCALE: NONE

REV	DATE	DESCRIPTION	APPR
1			
2			
3			
4			
5			
6			

VERIFY SCALES
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: JRR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
FLA. NUMBER: 65850
PROJECT NUMBER: 60289240

9-20-2013

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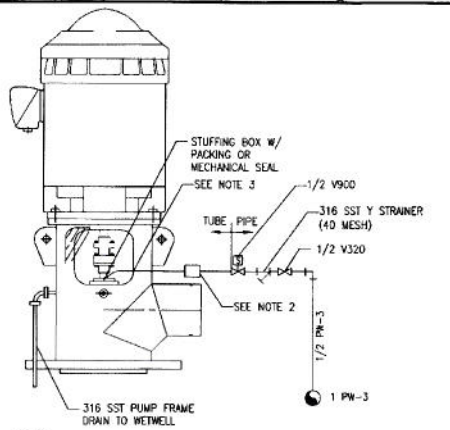
PHONE: 239-213-5000 FAX: 239-213-5010

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

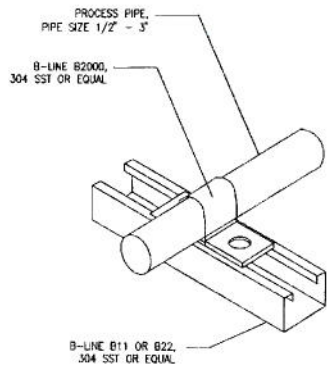
PROCESS DETAILS

SHEET NO. D-501
SHEET 20
OF SHEETS

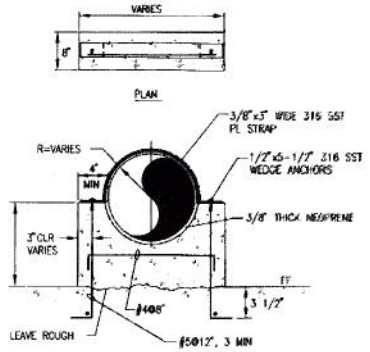


NOTES:
1. SEE DWGS FOR SIZE, LOCATION AND MATERIAL OF WATER SUPPLY LINE.
2. JOHN CRANE SAFEUNIT TYPE SFP, FLOW 8 L/MIN PRESSURE 10 BAR, AC RATED FLOW SWITCH, W/STAND.
3. SST TUBING AS REQUIRED.

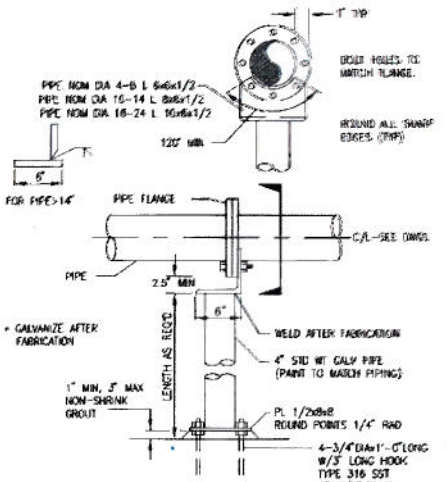
1 PUMP SEAL WATER
SCALE: NONE



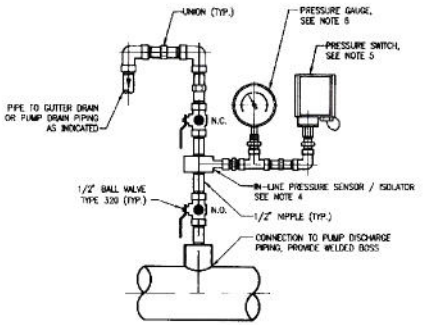
2 CHANNEL SUPPORT
SCALE: NONE



3 CONCRETE PIPE SUPPORT
SCALE: NONE

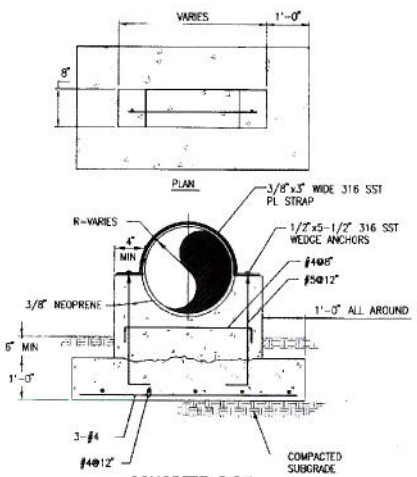


4 FLANGE PIPE SUPPORT
SCALE: NONE

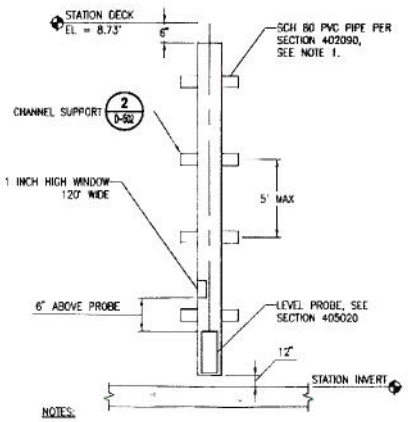


NOTES:
1. PIPING: SCH 80 TYPE 316L S.S.
2. VALVES: TYPE 316 S.S. V320
3. HARDWARE: TYPE 316 S.S.
4. ONYX PSS, 316 SST, ELASTOMER-NITRILE, FILL FLUID-SILICONE.
5. PRESSURE SWITCH, 0-100 PSI, SEE SECTION 405020
6. ASHCROFT TYPE 1279 DURAGAUGE, 0-100 PSI

5 PRESSURE GAUGE AND SWITCH ASSEMBLY
SCALE: NONE

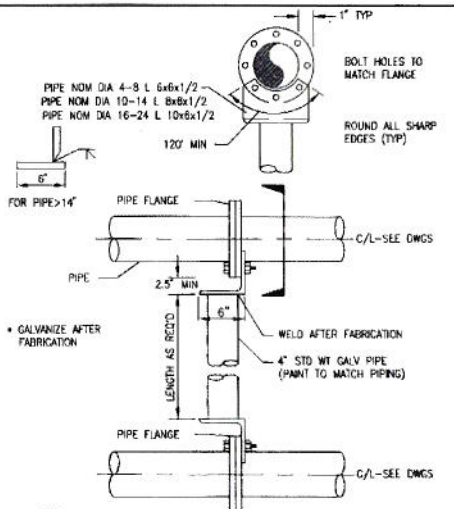


6 CONCRETE PIPE SUPPORT W/ FOOTER
SCALE: NONE



NOTES:
1. PVC PIPE SHALL BE SIZED SLIGHTLY LARGER THAN THE DIAMETER OF THE PROBE TO ALLOW FOR INSTALLATION AND EXTRACTION. COORDINATE W/ INSTRUMENT MANUFACTURER TO CONFIRM PIPE SIZE.

7 STILLING WELL FOR SUBMERSIBLE LEVEL PROBE
SCALE: NONE



8 PIPE TO PIPE FLANGE SUPPORT
SCALE: NONE

REV	DATE	DESCRIPTION

VERIFY SCALES
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DESIGNED BY: JRR
DRAWN BY: MPL
CHECKED BY: DMJ
DATE: SEPT 2013

PROJECT ENGINEER: RONALD R. CAVALIERI, P.E.
REG NUMBER: 65650
PROJECT NUMBER: 60289240

9-20-2013

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION

PROCESS DETAILS

DRAWING: D-502
SHEET: 21
OF SHEETS

ELECTRICAL SYMBOLS – PLAN

30 NF	NON-FUSED SWITCH,SIZE AS INDICATED ON DRAWINGS
30 HFF	FUSED SWITCH, SIZE AS INDICATED ON DRAWINGS
	ENCLOSED MAGNETIC STARTER W/NEMA SIZE INDICATED
	ENCLOSED COMBINATION STARTER W/NEMA SIZE INDICATED
	CONTROL STATION – SEE SCHEMATIC DIAGRAM
	TRANSFORMER
(D001)	CONDUIT NUMBER – SEE CONDUIT SCHEDULE
	CONDUIT OR CONDUCTOR – EXPOSED
	CONDUIT OR CONDUCTOR – DIRECT BURIAL OR IN SLAB
	CONDUIT – DIRECT BURIAL WITH CONCRETE ENCASEMENT
	CONDUIT OR CONDUCTOR – TURNING UP
	CONDUIT OR CONDUCTOR – TURNING DOWN
	WIRE QUANTITIES – LONG LINES INDICATE NEUTRAL CONDUCTORS, SHORT LINES INDICATE HOT (SWITCHED OR UNSWITCHED) LEGS CONDUIT 3/4" U.O.N. #12 AWG U.O.N.
A-1,3	HOMERUN TO PANEL A, CIRCUITS 1 & 3
	CONDUIT – CAPPED
	JUNCTION BOX
	INCANDESCENT, FLUORESCENT OR HID FIXTURE – "A" INDICATES TYPE, "2" INDICATES CIRCUIT, "a" INDICATES SWITCHING CONTROL (CALL – OUTS TYP FOR ALL FIXTURES)
	INCANDESCENT, FLUORESCENT OR HID FIXTURE – SURFACE MTD
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE WITH BATTERY BACK-UP
	FLUORESCENT STRIP LIGHT
	LIGHTING STANDARDS, POLE MOUNTED
	EXIT LIGHT – ARROWS AS INDICATED
	EMERGENCY LIGHT FIXTURE
	POWER PANELBOARD
	LIGHTING PANELBOARD
S	SWITCH, SINGLE POLE
S_2	SWITCH, DOUBLE POLE
S_3	SWITCH, THREE WAY
S_4	SWITCH, FOUR WAY
S_a	SWITCH – "a" INDICATES DEVICE CONTROLLED
S_D	SWITCH, DIMMER
S_M S_{MK}	MANUAL MOTOR STARTER, MK = KEY OPERATED
S_{MT}	SWITCH, MOMENTARY TYPE SPRING RETURN TO CENTER
	DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE FLOOR MOUNT FLUSH
	SPECIAL RECEPTACLE, NEMA TYPE AS INDICATED ON DRAWINGS
	BOND TO REINFORCING STEEL
	MOTOR
SPD	SURGE PROTECTION DEVICE
	AIR TERMINAL
	CONCRETE – ENCASED GROUND ELECTRODE
	GROUND ROD
G	INDICATES GROUND CONDUCTOR
	CAMERA

ELECTRICAL SYMBOLS – PLAN

(R)	MOTION SENSOR
	RECEPTACLE MOUNTED ABOVE COUNTER TOP
M	MAGNETIC CONTACT – SECURITY
TC	TIME CLOCK
L	LIGHTNING PROTECTION CABLE
C1	LIGHTING CONTACTOR
PC	PHOTOELECTRIC CELL
T	THERMOSTAT BY HVAC CONTRACTOR
D	DATA OUTLET – 4"x4" OUTLET BOX MTD. AT 18"AFF W/ "CO. UP TO CEILING SPACE
J	SECURITY JUNCTION BOX–4"x4" FLUSH OUTLET BOX MTD. AT 48" AFF UON
+12"	INDICATED HEIGHT FROM FINISHED FLOOR OR GRADE TO CENTERLINE OF DEVICE
T	TELEPHONE OUTLET – FLOOR MOUNTED
T , T W	TELEPHONE OUTLET, +18"; TELEPHONE OUTLET, +48" PROVIDE A 4"x4" OUTLET BOX , 1" CONDUIT WITH CAT 5 TELEPHONE CABLE TO LIS

ELECTRICAL SYMBOLS – SCHEMATIC DIAGRAM/ SINGLE LINE DIAGRAM

NORMALLY OPEN	NORMALLY CLOSED	DEVICE
		CONTACT
		TIMED CONTACT CONTACT ACTION RETARDED ON DE-ENERGIZATION
		TIMED CONTACT CONTACT ACTION RETARDED ON ENERGIZATION
		PUSHBUTTON SINGLE CIRCUIT MOMENTARY CONTACT
		PUSHBUTTON SINGLE CIRCUIT LOCK – OUT
		LIMIT SWITCH
		LIQUID – LEVEL ACTUATED SWITCH
		PRESSURE OR VACUUM ACTUATED SWITCH
		FLOW ACTUATED SWITCH
		TEMPERATURE ACTUATED SWITCH
		SELECTOR SWITCH
		PANIC BUTTON, SINGLE CIRCUIT, MAINTAINED CONTACT, LARGE RED MUSHROOM HEAD
		MOTOR OVERLOAD HEATERS
		PILOT LIGHT R=RED, W=WHITE, G=GREEN, A=AMBER, B=BLUE
		PILOT LIGHT – PUSH TO TEST
	R	RELAY
	M	STARTER COIL
		SOLENOID OPERATED CONTROL VALVE
	ETM	ELAPSED TIME METER
		FUSE
		CONTROL POWER TRANSFORMER
		GROUND
		TERMINAL
		OVERLOAD RELAY
	UM	UTILITY METERING
	A	AMMETER
	V	VOLTMETER
	FM	FREQUENCY METER
	3	CURRENT TRANSFORMER, QUANTITY INDICATED

ELECTRICAL SYMBOLS – SCHEMATIC DIAGRAM/ SINGLE LINE DIAGRAM – CONT'D

	DRAW-OUT TYPE EQUIPMENT
SC	SURGE CAPACITOR
LA	LIGHTING ARRESTER
52	MEDIUM VOLTAGE CIRCUIT BREAKER, DRAW-OUT TYPE
3	POTENTIAL TRANSFORMER, QUANTITY INDICATED
30A MCP	CIRCUIT BREAKER, 3 POLE UNLESS NOTED MCP INDICATES MOTOR CIRCUIT PROTECTION
4 RV	MAGNETIC MOTOR STARTER, NEMA SIZE INDICATED RV=REDUCED VOLTAGE STARTING 2S, 2W=2 SPEED, 2 WINDING
M G	MOTOR, M = HORSEPOWER, G = GENERATOR
K	KEY INTERLOCKING OF EQUIPMENT
AMCP	AUTOMATIC POWER FACTOR CORRECTION CAPACITOR
SSS	SOLID-STATE, REDUCED VOLTAGE SOFT START MOTOR STARTER

FIRE ALARM SYMBOLS

FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL

ELECTRICAL SYMBOLS – GENERAL

3 DE-2	CALL-OUT FOR DETAIL OR SECTION ON THE DWG'S "3" INDICATES NUMERICAL ORDER ON DETAIL DWG "DE-2" INDICATES DETAIL DWG REFERED TO

CONSTRUCT FACILITIES PER THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE

ELECTRICAL ABBREVIATIONS

A	A	AMP
	AF	AMP FRAME
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AISC	AMPERE INTERRUPTING CAPACITY, SYMMETRICAL
	AT	AMP TRIP
	ATS	AUTOMATIC TRANSFER SWITCH
	AWG	AMERICAN WIRE GAUGE
B	BKR	BREAKER
	BSCP	BAR SCRIPTN CONTROL PANEL
C	C	CONDUIT
	CB	CIRCUIT BREAKER
	CKT	CIRCUIT
	CL2	CHLORINE
	CP	CONTROL PANEL
	CPT	CONTROL POWER TRANSFORMER
	CS	CONSTANT SPEED
	CO	CONDUIT ONLY
	CTL	CONTROL
D	DPDT	DOUBLE POLE DOUBLE THROW
	DRB	DUPLEX RECEPTACLE BREAKER
	DWG	DRAWING
E	EF	EXHAUST FAN
	ETM	ELAPSED TIME METER
	EX	EXPLOSION PROOF
	EXIST	EXISTING
F	F	FUSE
	FB	FUSE BLOCK
	FT	FLOW INDICATING TRANSMITTER
	FS	FLOW SWITCH
	FVNR	FULL VOLTAGE NON-REVERSING
G	GCP	GRF CLASSIFIER CONTROL PANEL
	GEN	GENERATOR
	GFI	GROUND FAULT INTERRUPTER
	GFDR	GROUND FAULT DUPLEX RECEPTACLE
	G,GND	GROUND
H	HH	HANDHOLE
	HOA	HAND/OFF/AUTOMATIC
	HPS	HIGH PRESSURE SODIUM
	HSP	HIGH SERVICE PUMP
	HZ	HERTZ
J	J-BOX	JUNCTION BOX
K	kcmil	THOUSAND CIRCULAR MILLS
	KV	KILOVOLT
	KVA	KILOVOLT–AMPERE
	KW	KILOWATT
	KW-H	KILOWATT–HOUR
L	LOS	LOCK–OUT–STOP
	LTG	LIGHTING
	LTNG PROT	LIGHTNING PROTECTION
M	MB	MOTOR BREAKER
	MCB	MAIN CIRCUIT BREAKER
	MCC	MOTOR CONTROL CENTER
	MCP	MOTOR CIRCUIT PROTECTOR, MAIN CONTROL PANEL
	MH	METAL HALIDE, MANHOLE
	MOV	MOTOR OPERATED VALVE
	MTR	MOTOR
N	N	NEUTRAL
	NEC	NATIONAL ELECTRICAL CODE
	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
O	O/O	ON/OFF
	OCA	OPEN/CLOSE/AUTO
	OL	OVERLOAD
	OSC	OPEN/STOP/CLOSE
P	P	POLE
	PB	PULL BOX, PANIC BUTTON,POWER BLOCK
	PCP	PUMP CONTROL PANEL
	PLC	PROGRAMMABLE LOGIC CONTROLLER
	PM	PHASE MONITOR
	PNL	PANEL
	PR	PAIR
	PVC	POLYVINYL CHLORIDE
	PWR	POWER
R	R	RETURN, RELAY
	RECPT	RECEPTACLE
	RGS	RIGID GALVANIZED STEEL
	RMS	ROOT MEAN SQUARE
	RR	RATE OF RISE
	RTU	REMOTE TERMINAL UNIT
	RVS	REVERSE
S	S	SUPPLY
	SF	SUPPLY FAN
	SMC	SMART MOTOR CONTROLLER – SOLID STATE STARTER
	SSSS	SOLID STATE SOFT START
	SST	STAINLESS STEEL
	SW	SWITCH
	SWBD	SWITCHBOARD
	SYM	SYMMETRICAL
T	TB	TERMINAL BLOCK
	TCB	TIE CIRCUIT BREAKER
	TDR	TIME DELAY RELAY
	TDODE	TIME DELAY ON DE-ENERGIZED
	TPDT	TRIPLE POLE DOUBLE THROW
	TSP	TWISTED SHIELDED PAIR
	TTS	THERMAL TERMINAL STRIP
	TYP	TYPICAL
	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
U	UGND	UNDERGROUND
	UL	UNDERWRITERS LABORATORIES
	UON	UNLESS OTHERWISE NOTED
	UPS	UNINTERRUPTIBLE POWER SYSTEM
V	V	VOLT
	VFD	VARIABLE FREQUENCY DRIVE
	VS	VARIABLE SPEED
W	W	WIRE
	WP	WEATHERPROOF
X	XFMR	TRANSFORMER
	XMTR	TRANSMITTER

NOTE:

THIS IS A STANDARD SYMBOLS SHEET. THEREFORE SOME SYMBOLS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

NO.	DATE	DESCRIPTION	APP'D

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DESIGNED BY: DK
DRAWN BY: DK
CHECKED BY: MAP
DATE: SEPT 2013

PROJECT MANAGER: MARK A. PELLISH P.E.
REG. NUMBER: 46906
PROJECT NUMBER: 60289240

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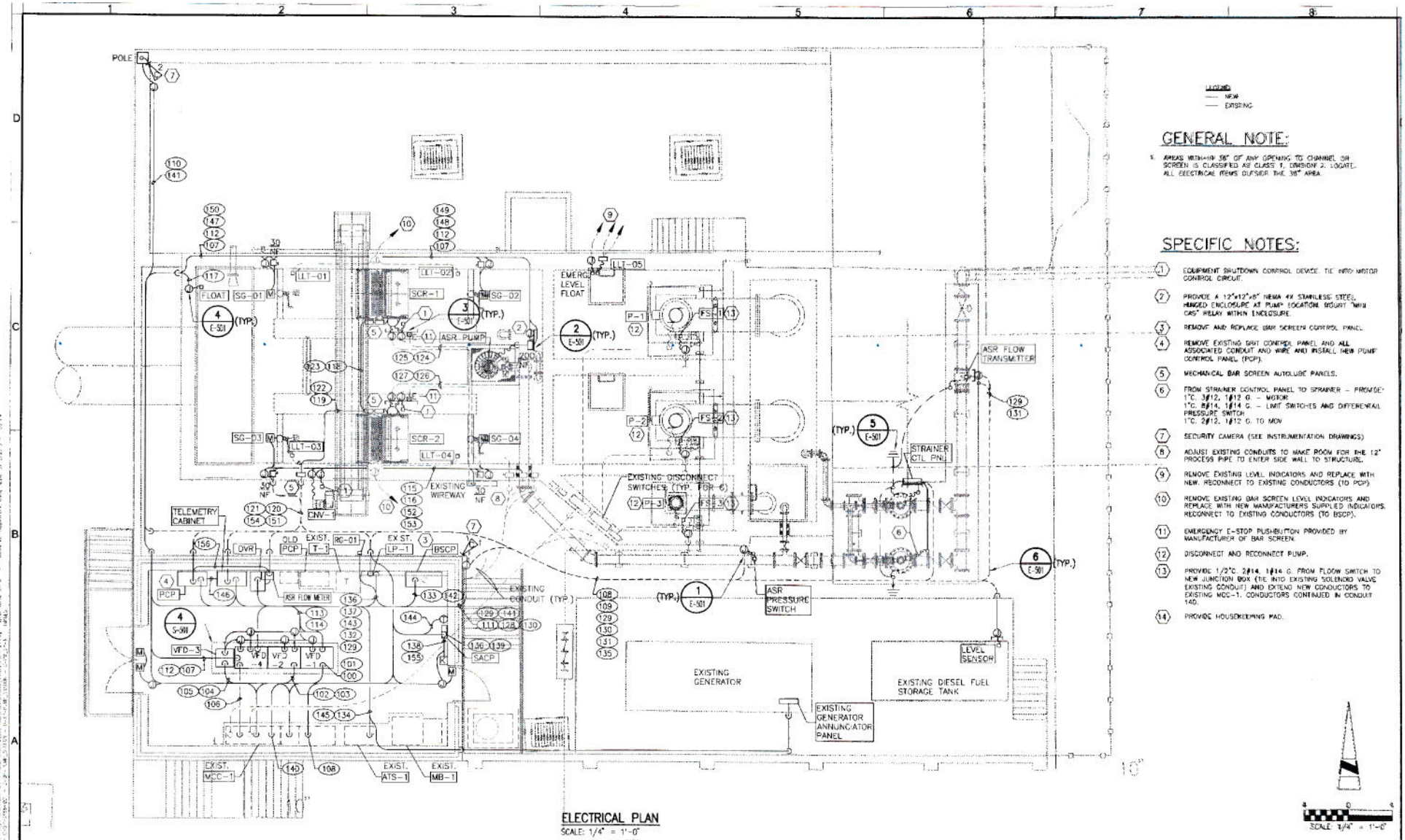
CITY OF NAPLES
PUBLIC WORKS PUMP STATION

ELECTRICAL SYMBOLS AND ABBREVIATIONS

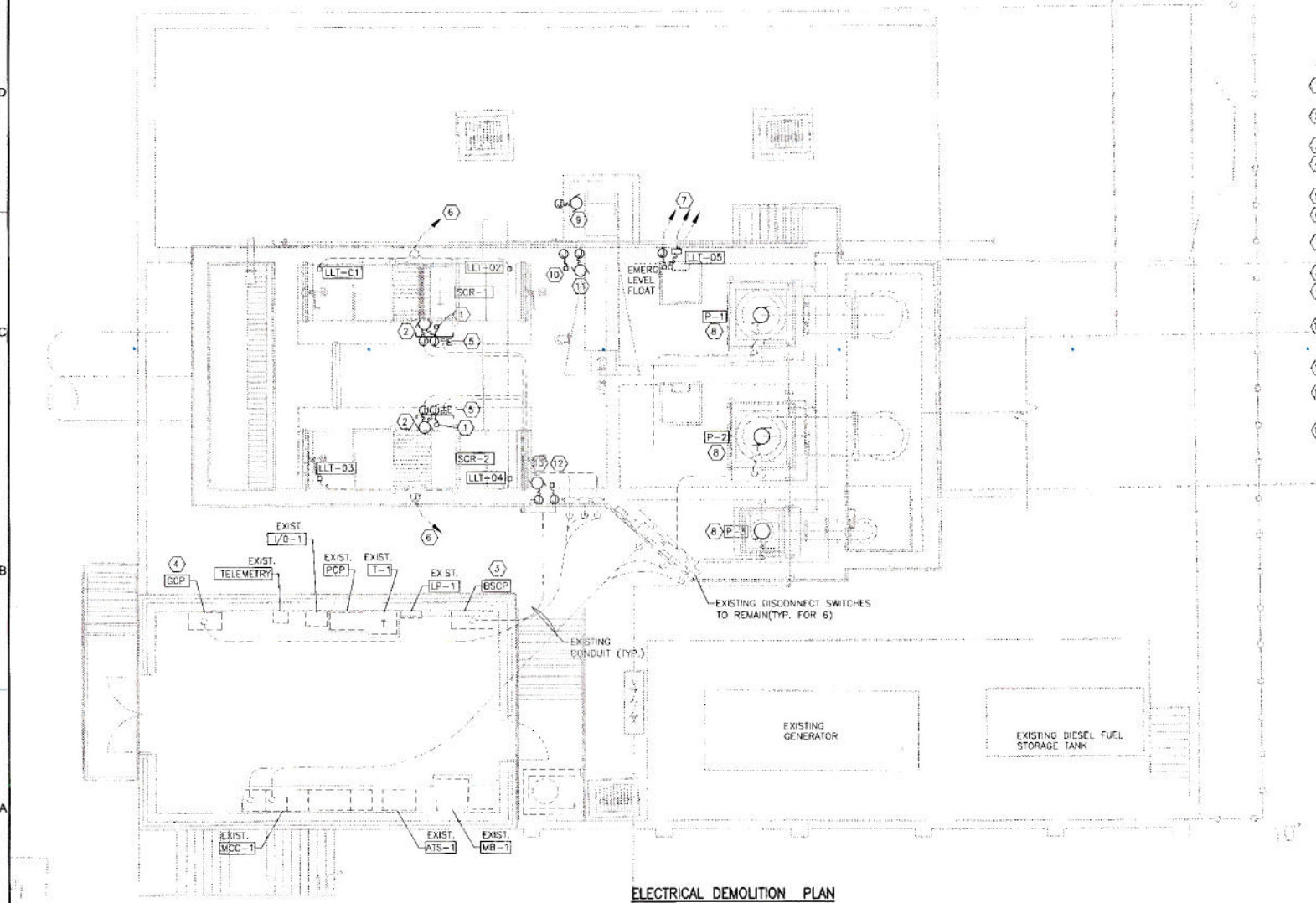
DRAWING: E-001
SHEET: 22
OF



ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

		VERIFY SCALES	DESIGNED BY: DK	PROJECT ENGINEER: MARK A. PELLISH, P.E.	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 308 Fort Myers, Florida 33916 T 239.278.7998 F 239.278.0813 FL Engineering Business No. 28-8115 www.aecom.com	CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FLORIDA 34102 PHONE: 239-213-5000 FAX: 239-213-5010	CITY OF NAPLES PUBLIC WORKS PUMP STATION
		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWN BY: DK	POD NUMBER: 46906			- SOUTH ELECTRICAL PLAN
REV	DATE	DESCRIPTION	CHECKED BY: MAP	DATE: SEPT 2013			

DRAWING: E-101
SHEET: 23



SPECIFIC NOTES:

1. REMOVE EXISTING CONDUIT AND WIRE BACK TO J-BOX FOR EQUIPMENT SHUTDOWN CONTROL DEVICE.
2. REMOVE EXISTING CONDUIT AND WIRE FROM BAR SCREEN BACK TO J-BOX.
3. REMOVE AND REPLACE BAR SCREEN CONTROL PANEL.
4. REMOVE EXISTING GRIT CONTROL PANEL AND ALL ASSOCIATED CONDUIT AND WIRE.
5. REMOVE EXISTING EMERGENCY E-STOP PUSHBUTTON.
6. REMOVE EXISTING BAR SCREEN LEVEL INDICATORS. EXISTING CONDUCTORS TO REMAIN (TO BSCP).
7. REMOVE EXISTING LEVEL INDICATORS. EXISTING CONDUCTORS TO REMAIN (TO PCP).
8. DISCONNECT CONDUIT AND WIRE TO PUMP.
9. REMOVE EXISTING CONDUIT AND WIRE FROM GRIT CLASSIFIER TO J-BOX. REMOVE WIRE FROM J-BOX BACK TO "GCP".
10. REMOVE EXISTING CONDUIT AND WIRE BACK TO J-BOX FOR EQUIPMENT SHUTDOWN CONTROL DEVICE. REMOVE WIRE FROM J-BOX BACK TO "GCP".
11. REMOVE EXISTING CONDUIT AND WIRE FROM GRIT PUMP TO J-BOX. REMOVE WIRE FROM J-BOX BACK TO MCC-1.
12. REMOVE EXISTING CONDUIT AND WIRE BACK TO J-BOX FOR EQUIPMENT SHUTDOWN CONTROL DEVICE. REMOVE WIRE FROM J-BOX BACK TO "BSCP".
13. REMOVE EXISTING CONDUIT AND WIRE FROM CONVEYOR TO J-BOX. REMOVE WIRE FROM J-BOX BACK TO "BSCP".

ELECTRICAL DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

		VERIFY SCALES	DESIGNED BY	DK	PROJECT ENGINEER	MARK A. PELLISH P.E.	
		BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWN BY	DK	P.E. NUMBER	46906	
		IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY	CHECKED BY	MAP	PROJECT NUMBER	60289240	
			DATE	SEPT 2013			

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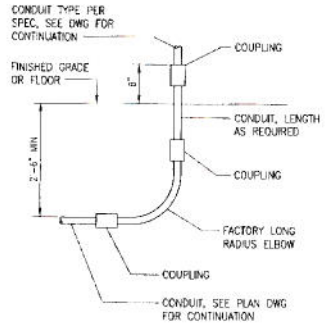
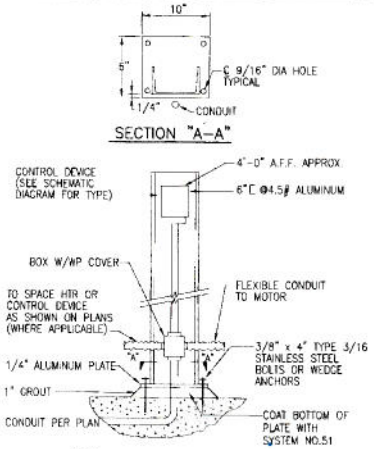
ELECTRICAL DEMOLITION PLAN

DRAWING NO. E-102

SHEET NO. 24

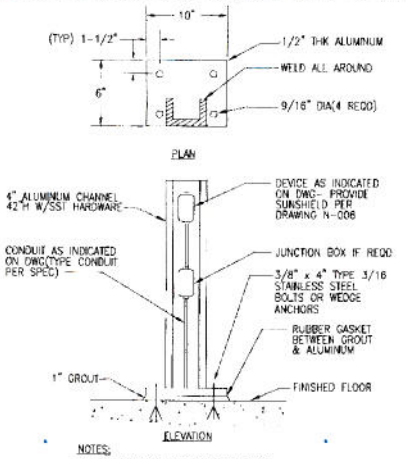


1 CONDUIT TRANSITION DETAILS
SCALE: NONE



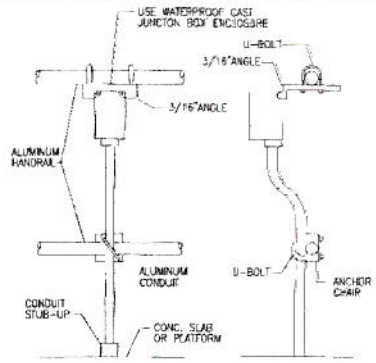
NOTES:
1. USE 316 SST MOUNTING HARDWARE

2 CONTROL STATION MOUNTING



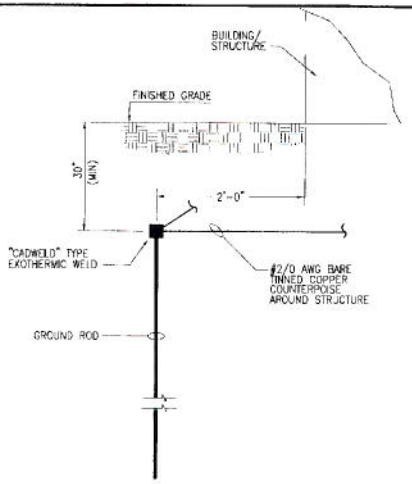
NOTES:
1. USE 316 SST MOUNTING HARDWARE

3 PEDESTAL MOUNTED DEVICE DETAIL
SCALE: NONE

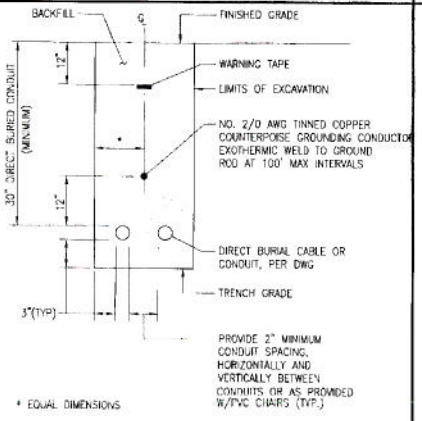


NOTES:
1. USE ALUMINUM 6063-T3 MATERIAL
2. USE SST MOUNTING HARDWARE

4 DEVICE MOUNTING
SCALE: NONE



5 TYPICAL COUNTERPOISE/GROUND ROD INSTALLATION DETAIL
SCALE: NONE



NOTES:
1. SEE "EARTHWORK AND TRENCHING" SPECIFICATION FOR EXCAVATION AND BACKFILL.
2. THERE SHALL BE A MINIMUM 18" BETWEEN POWER AND ANALOG CONDUIT RUNS.

6 DIRECT BURIAL INSTALLATION
SCALE: NONE

				VERIFY SCALES	DESIGNED BY	DK	PROJECT ENGINEER: MARK A. PELLISH P.E.
				BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWN BY	DK	A/E NUMBER: 46906
				IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	CHECKED BY	MAP	PROJECT NUMBER: 60289240
					DATE	SEPT 2013	

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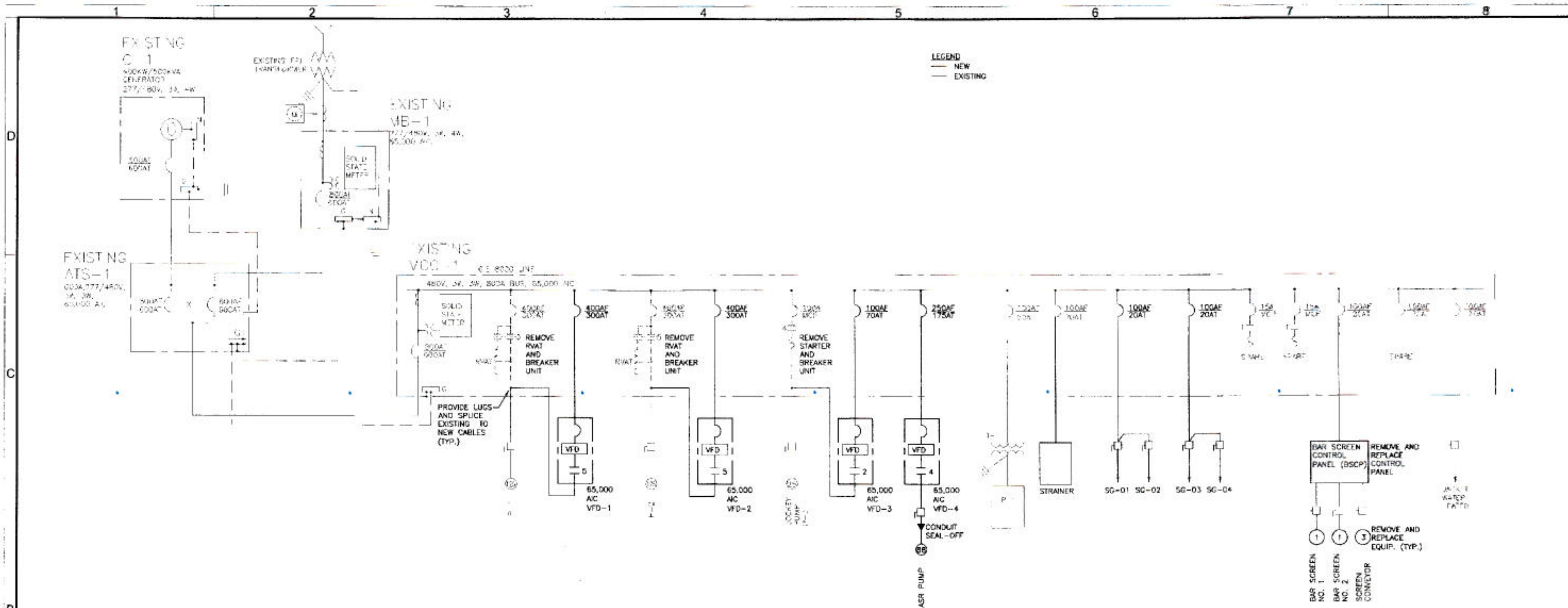
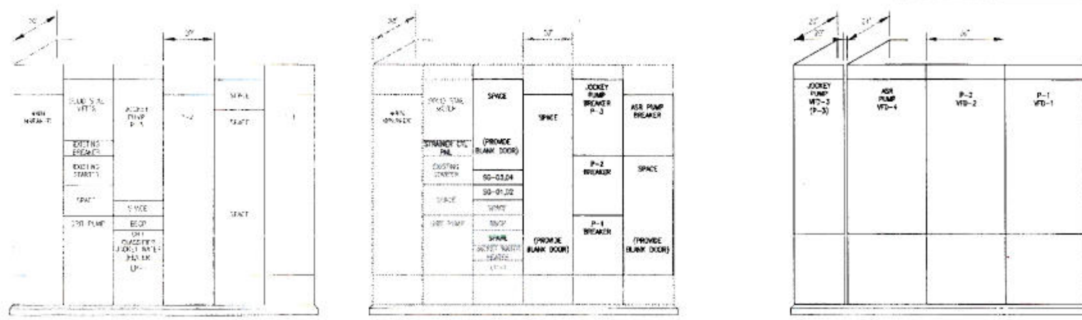
ELECTRICAL DETAILS

DRAWING NO. E-501
SHEET NO. 25



SINGLE LINE DIAGRAM



EXISTING MCC-1 ELEVATION

EXISTING MCC-1 MODIFIED ELEVATION

VFD ELEVATION

Electrical Requirements

	Tag No.	Description	Connected HP	Connected FLA	Connected VA	Demand HP	Demand VA	Source	Future Load	Generator Load
VFD	P-1	Pump 1	125	156	129838	125	129838	MCC		1
VFD	P-2	Pump 2	125	156	129838	125	129838	MCC		1
VFD	P-3	Jockey Pump	25	34	32267			MCC		
VFD	ASR PUMP	ASR Pump	50	56	[illegible]			MCC		
	STRAINER 1	Strainer	1	1.8	1496	0.5	1496	MCC		1
	STRAINER 2	Strainer	1	1.8	1496	0.5	1496	MCC		1
	SC-1	Screen/Conveyor	3	4.8	3591	3	3591	MCC		1
	BCS-1	Bar Screen Drive 1	1	1.8	1496	1	1496	MCC		1
	BCS-2	Bar Screen Drive 2	1	1.8	1496			MCC		
		Generator Jacket Water Heater			[illegible]		[illegible]	MCC		
	LP-1	Panelboard			30000		24000	MCC		1
	SG-01	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
	SG-02	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
	SG-03	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1
	SG-04	Motorized Slide Gate	1	1.8	1496	1	1496	MCC		1

Connected Load

TOTAL: KVA 417 = A 502

Demand Load

TOTAL: KVA 302 = A 363

Generator Load

TOTAL: KVA 292 = A 351

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY DK DRAWN BY DK CHECKED BY MAP DATE SEPT 2013	PROJECT ENGINEER MARK A. PELLISH P.E. REG NUMBER 46906 PROJECT NUMBER 60289240

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CITY OF NAPLES
PUBLIC WORKS PUMP STATION
SINGLE LINE DIAGRAM

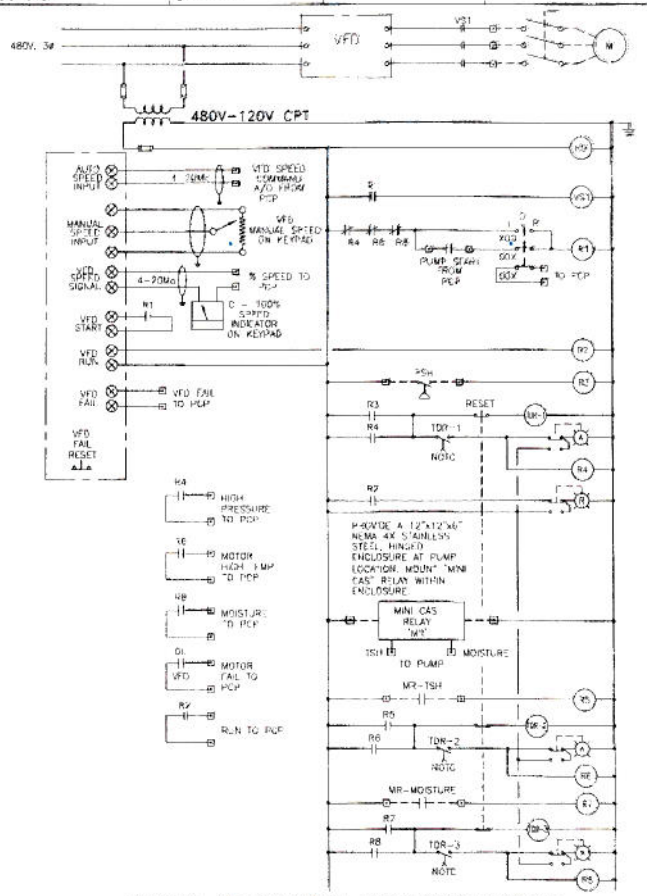
E-601

CONDUIT SCHEDULE

CONDUIT NUMBER	CONDUIT SIZE	CONDUCTORS POWER, GROUND, & CONTROL	FROM	TO	REMARKS
100	2"	3#250kcmil, 1#4 G.	EXISTING MCC 1 (P-1)	VFD-1	
101	3"	3#250kcmil, 1#4 G.	VFD-1	EXISTING MCC 1 (P-1)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
102	3"	3#250kcmil, 1#4 G.	EXISTING MCC 1 (P-2)	VFD-2	
103	3"	3#250kcmil, 1#4 G.	VFD-2	EXISTING MCC 1 (P-2)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
104	1"	3#6, 1#6 G.	EXISTING MCC 1 (P-3)	VFD-3	
105	1"	3#6, 1#6 G.	VFD-3	EXISTING MCC 1 (P-3)	PROVIDE LUGS AND SPLICE TO EXISTING CABLES
106	1-1/2"	3#2/0, 1#6 G.	EXISTING MCC 1 (ASR PUMP)	VFD-4	
107	1 1/2"	3#2/0, 1#6 G.	VFD-4	ASR PUMP	
108	1"	3#12, 1#12 G.	EXISTING MCC-1	STRAINER CTL PNL	
109	1"	12#14, 1#14 G.	STRAINER CTL PNL	TELEMETRY CABINET	
110	1"	RS485 COAX CABLE	CAMERA 2	CAMERA 1	CONT. IN C.111
111	1-1/4"	RS485 (2)COAX CABLE	CAMERA 1	DVR RECORDER	
112	1"	6#14, 1#14 G.	ASR PUMP CTL	VFD-4	
113	1-1/2"	10#14, 1#14 G.	VFD-1	PCP	
		10#14, 1#14 G.	VFD-2		
		10#14, 1#14 G.	VFD-3		
		10#14, 1#14 G.	VFD-4		
114	1 1/4"	(2)2C #18 TSP	VFD-1	PCP	
		(2)2C #18 TSP	VFD-2		
		(2)2C #18 TSP	VFD-3		
		(2)2C #18 TSP*	VFD-4		
115	1"	3#12, 1#12 G.	EXISTING SCREEN CONVEYOR DISCONNECT SWITCH	SCREEN CONVEYOR	
116	1"	10#14, 1#14 G.	SCREEN CONVEYOR CTL	EXISTING WIREWAY	CONNECT TO EXISTING CONTROL WIRES
117	1"	4#14, 1#14 G.	FLOAT	TELEMETRY CABINET	
118	1"	4#14, 1#14 G.	AUTOLUBE PNL 1,2	AUTOLUBE PNL 3,4	CONT. IN C.119
119	1"	6#14, 1#14 G.	AUTOLUBE PNL 3,4	SCREEN CONVEYOR AUTOLUBE	CONT. IN C.120
120	1"	10#14, 1#14 G.	CONVEYOR AUTOLUBE	TELEMETRY CABINET	
121	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-15	SCREEN CONVEYOR AUTOLUBE	CONT. IN C.122, 1P -20A SPARE BREAKER
122	1"	2#12, 1#12 G.	SCREEN CONVEYOR AUTOLUB	AUTOLUBE PNL 3,4	CONT. IN C.123
123	1"	2#12, 1#12 G.	AUTOLUBE PNL 3,4	AUTOLUBE PNL 1,2	
124	1"	3#12, 1#12 G.	BSCP	BAR SCREEN 1	EXISTING CONDUIT AND WIRE, VIA DISC. SW.
125	1"	18#14, 1#14 G.	BSCP	BAR SCREEN 1 CTL	EXISTING CONDUIT, VIA WIREWAY
126	1"	3#12, 1#12 G.	BSCP	BAR SCREEN 2	EXISTING CONDUIT AND WIRE, VIA DISC. SW.
127	1"	18#14, 1#14 G.	BSCP	BAR SCREEN 2 CTL	EXISTING CONDUIT, VIA WIREWAY
128	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-17	CAMERA 1	1P -20A SPARE BREAKER, CONT. IN C.129
129	1"	C.O.	EXISTING PANEL LP-1	STUB-UP & CAP AT ASR FLOW TRANSMITTER	
130	1"	4#14, 1#14 G.	PRESSURE SWITCH	VFD-4	
131	1"	FLOW METER TRANSMITTER CABLE	FLOW METER	FLOW TRANSMITTER	
132	1"	2#14, 1#14 G.	RG 01	TELEMETRY CABINET	
133	1"	16#14, 1#14 G.	BSCP	TELEMETRY CABINET	
134	1"	6#14, 1#14 G.	EXISTING ATS-1	TELEMETRY CABINET	
135	1"	2/C #18 TSP	DIESEL FUEL STORAGE TANK LEVEL SENSOR	TELEMETRY CABINET	
136	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-21	SACP, DVR, FLOW METER	PROVIDE GE BREAKER
137	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-22	PCP	PROVIDE GE BREAKER
138	1"	4#14, 1#14 G.	SACP	DOOR INTRUSION SWITCHES	
139	1"	4#14, 1#14 G.	SACP	TELEMETRY CABINET	
140	1"	2#14, 1#14 G.	EXISTING MCC 1 (FS-1)	VFD-1	
		2#14, 1#14 G.	EXISTING MCC-1 (FS-2)	VFD-2	
		2#14, 1#14 G.	EXISTING MCC-1 (FS-3)	VFD-3	
141	1"	2#10, 1#10 G.	CAMERA 1	CAMERA 2	
142	1"	4#14, 1#14 G.	BSCP	PCP	
143	1"	2#12, 1#12 G.	EXISTING PANEL LP-1-23	TELEMETRY CABINET	PROVIDE GE BREAKER
144	1"	2/C #18 TSP	THERMOSTAT	TELEMETRY CABINET	
145	1-1/4"	32#14, 1#14 G.	EXISTING GENERATOR ANNUNCIATOR PNL	TELEMETRY CABINET	
146	1"	CAT 5 CABLE	PCP	TELEMETRY CABINET	
147	1"	2#12, 1#12 G.	EXISTING MCC-1	SG-01	
148	1"	2#12, 1#12 G.	SG-01	SG-02	

CONDUIT SCHEDULE

CONDUIT NUMBER	CONDUIT SIZE	CONDUCTORS POWER, GROUND, & CONTROL	FROM	TO	REMARKS
149	1"	12#14, 1#14 G.	SG-02	SG-01	
150	1"	24#14, 1#14 G.	SG-01	TELEMETRY CABINET	
151	1"	2#12, 1#12 G.	EXISTING MCC-1	SG-03	
152	1"	2#12, 1#12 G.	SG-03	SG-04	
153	1"	12#14, 1#14 G.	SG-04	SG-03	
154	1"	24#14, 1#14 G.	SG-03	TELEMETRY CABINET	
155	1"	CAT 5 CABLE	SACP	KEY PAD	
156	1"	2/C #18 TSP	FLOW METER	PCP	



TYPICAL VFD CONTROL SCHEMATIC DIAGRAM

TYPICAL FOR: ASR PUMP

VERIFY SCALES	DESIGNED BY	DK	PROFESSIONAL ENGINEER: MARK A. PELLISH, P.E.
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWN BY	DK	NO. 46906
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY	CHECKED BY	MAP	PROJECT NUMBER: 60289240
	DATE	SEPT. 2013	

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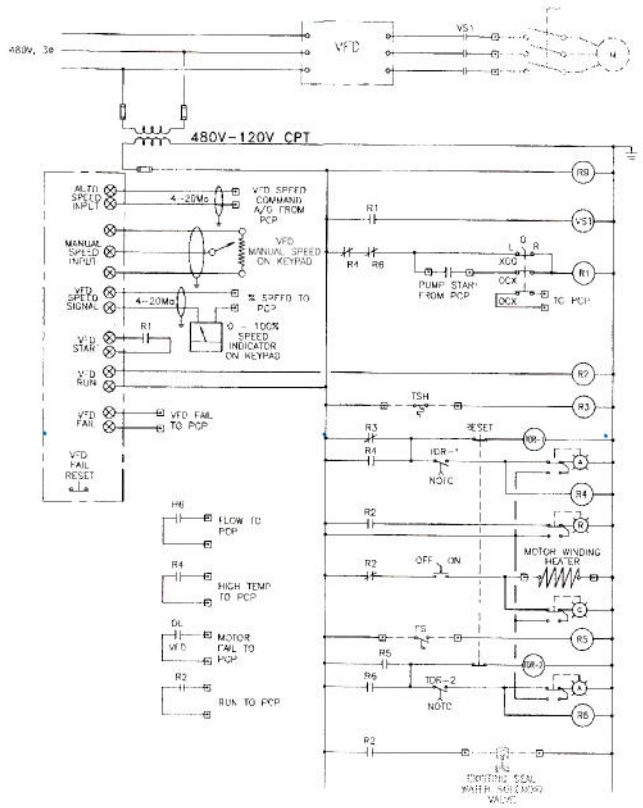
CONDUIT SCHEDULE AND MOTOR CONTROL SCHEMATIC WIRING DIAGRAM

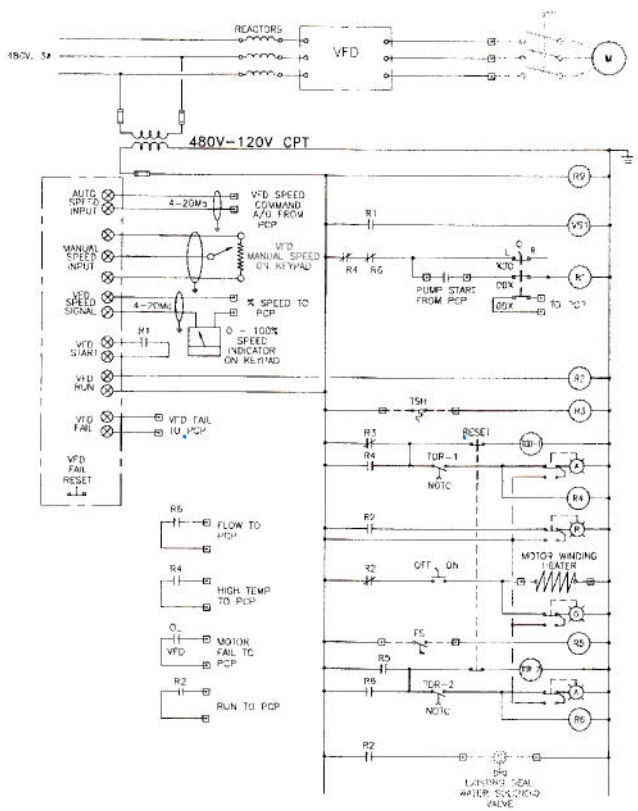
DRAWING NO. E-602

SHEET NO. 27



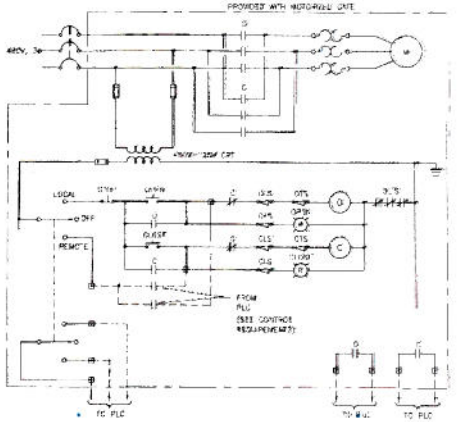
TYPICAL VFD CONTROL SCHEMATIC DIAGRAM

TYPICAL FOR: PUMP NO. 1 & 2



TYPICAL VFD CONTROL SCHEMATIC DIAGRAM

TYPICAL FOR: JOCKEY PUMP



MOTORIZED GATE CONTROL SCHEMATIC DIAGRAM

TYPICAL FOR: SG-01, 02, 03, 04

REV.	DATE	DESCRIPTION	APP'D	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY: DK; DRAWN BY: DK; CHECKED BY: MAP; DATE: SEPT 2013	FACILITY ENGINEER: MARK A. PELLISH P.E.; REG. NUMBER: 46906; PROJECT NUMBER: 60289240	AECOM Technical Services, Inc. 4415 Metro Parkway, Suite 404 Fort Myers, Florida 33916 T 239.278.2090 F 239.278.0813 FL Engineering Business No. EB-8115 www.aecom.com

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MOTOR CONTROL SCHEMATIC WIRING DIAGRAM

DRAWING: E-603

SHEET: 28

CONTROL & INSTRUMENTATION DIAGRAM
PUMP CONTROL PANEL (PCP)

INSTRUMENT LINE SYMBOLS

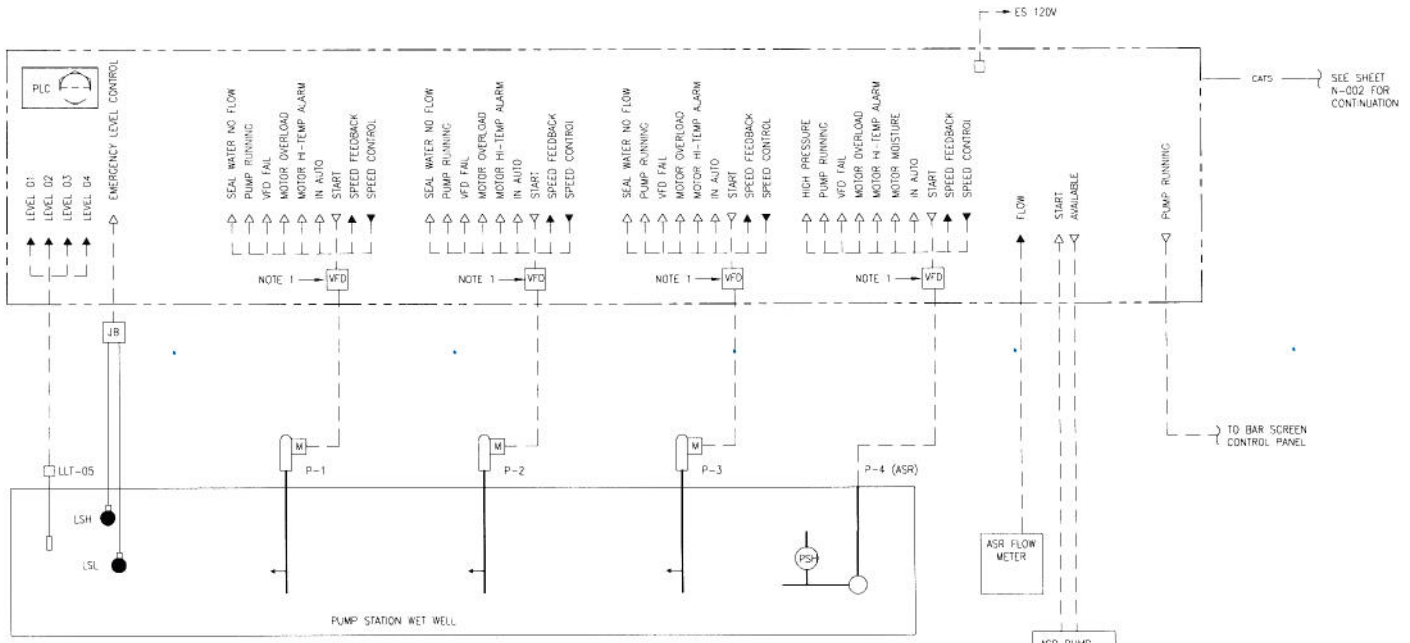
- ELECTRIC SIGNAL (ANALOG OUTPUT)
- ELECTRIC SIGNAL (ANALOG INPUT)
- ELECTRIC SIGNAL (DISCRETE OUTPUT)
- ELECTRIC SIGNAL (DISCRETE INPUT)
- ANTENNA CABLE
- CAT5 — CAT5 CABLE

PUMPS MOTORS & DRIVES

- PSH — ELECTRIC DRIVEN SUBMERCIBLE PUMP
- M — ELECTRIC DRIVEN VERTICAL AXIAL PUMP
- VFD — AC VARIABLE FREQUENCY DRIVE

PRIMARY ELEMENTS

- SUBMERSIBLE LIQUID LEVEL LEVEL TRANSMITTER (LLT)
- RAIN GAUGE
- SCADA RADIO ANTENNA
- JB — FLOAT CONTROL
- TS — TEMPERATURE SENSOR



SCHEDULE 'A' P-1 INPUTS FROM PUMP P-1	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

SCHEDULE 'B' P-2 INPUTS FROM PUMP P-2	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

SCHEDULE 'C' P-3 INPUTS FROM PUMP P-3	
A	SEAL WATER NO FLOW
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	IN AUTO

SCHEDULE 'D' P-4 INPUTS FROM PUMP P-4	
A	HIGH PRESSURE
B	PUMP RUNNING
C	VFD FAIL
D	MOTOR OVERLOAD
E	MOTOR HI-TEMP ALARM
F	MOTOR MOISTURE
G	IN AUTO

NOTES:

1. FOR CONTROL WIRING SCHEMATIC SEE DRAWING E-602 & E-603

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VERIFY SCALES
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DESIGNED BY	JS
DRAWN BY	LM
CHECKED BY	TJL
DATE	SEPT 2013
PROJECT ENGINEER	THOMAS J. LEPORE, P.E.
REG NUMBER	43086
PROJECT NUMBER	121104A

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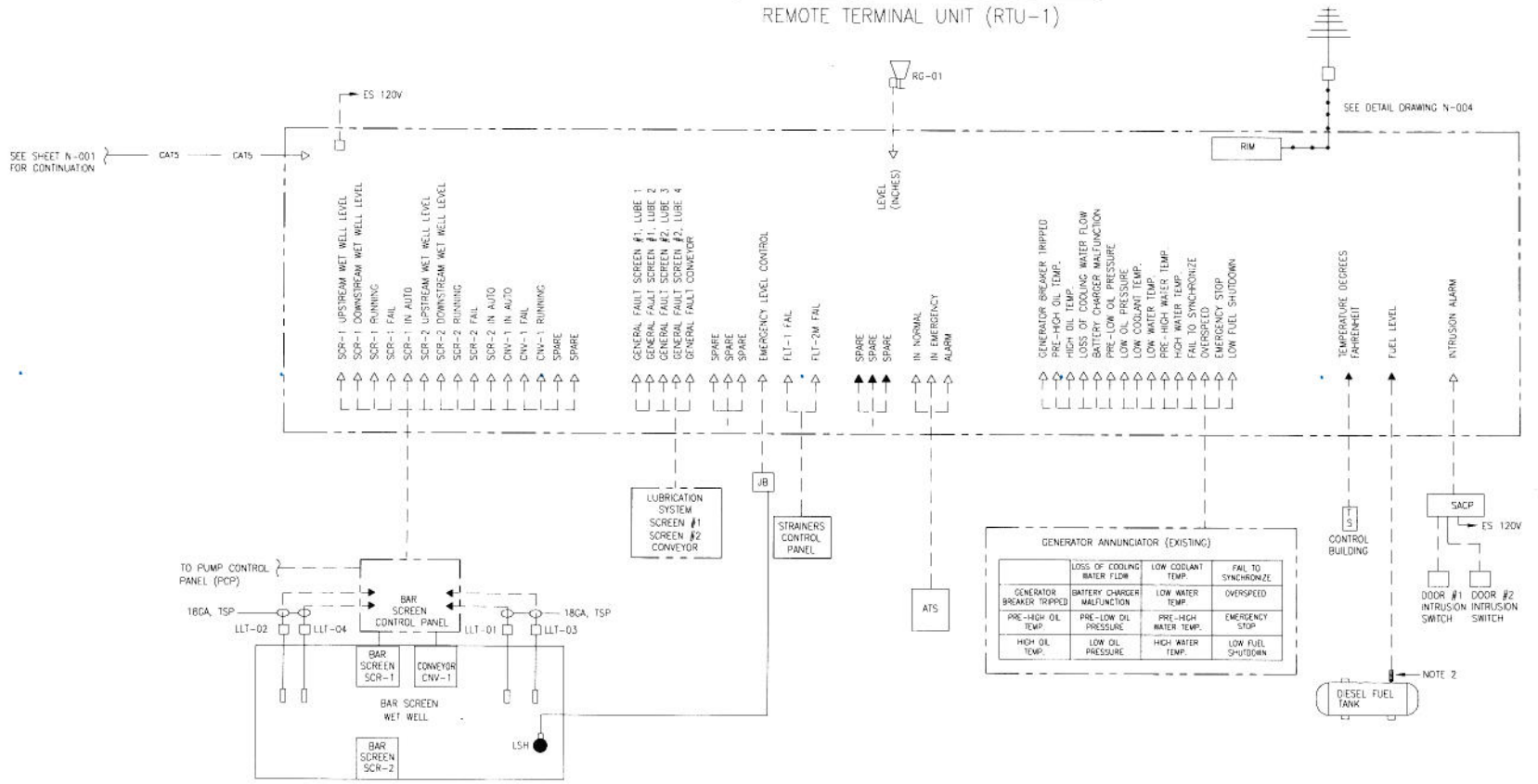
CONTROL & INSTRUMENTATION DIAGRAM

DRAWING: N-001
SHEET: 29
OF — SHEETS

CONTROL & INSTRUMENTATION DIAGRAM
REMOTE TERMINAL UNIT (RTU-1)



GENERATOR ANNUNCIATOR (EXISTING)

	LOSS OF COOLING WATER FLOW	LOW COOLANT TEMP.	FAIL TO SYNCHRONIZE
GENERATOR BREAKER TRIPPED	BATTERY CHARGER MALFUNCTION	LOW WATER TEMP.	OVERSPEED
PRE-HIGH OIL TEMP.	PRE-LOW OIL PRESSURE	PRE-HIGH WATER TEMP.	EMERGENCY STOP
HIGH OIL TEMP.	LOW OIL PRESSURE	HIGH WATER TEMP.	LOW FUEL SHUTDOWN

NOTES:

1. FOR CONTROL WIRING SCHEMATIC SEE DRAWING E-602 & E-603
2. PROVIDE FUEL TANK LEVEL SENSOR AS SPECIFIED SECTION 405020 INSTRUMENTATION EQUIPMENT.

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DESIGNED BY: JDS
DRAWN BY: LM
CHECKED BY: TJL
DATE: SEPT 2013

PROJECT ENGINEER: THOMAS J. LEPORE, P.E.
REG. NUMBER: 43086
PROJECT NUMBER: 121104A

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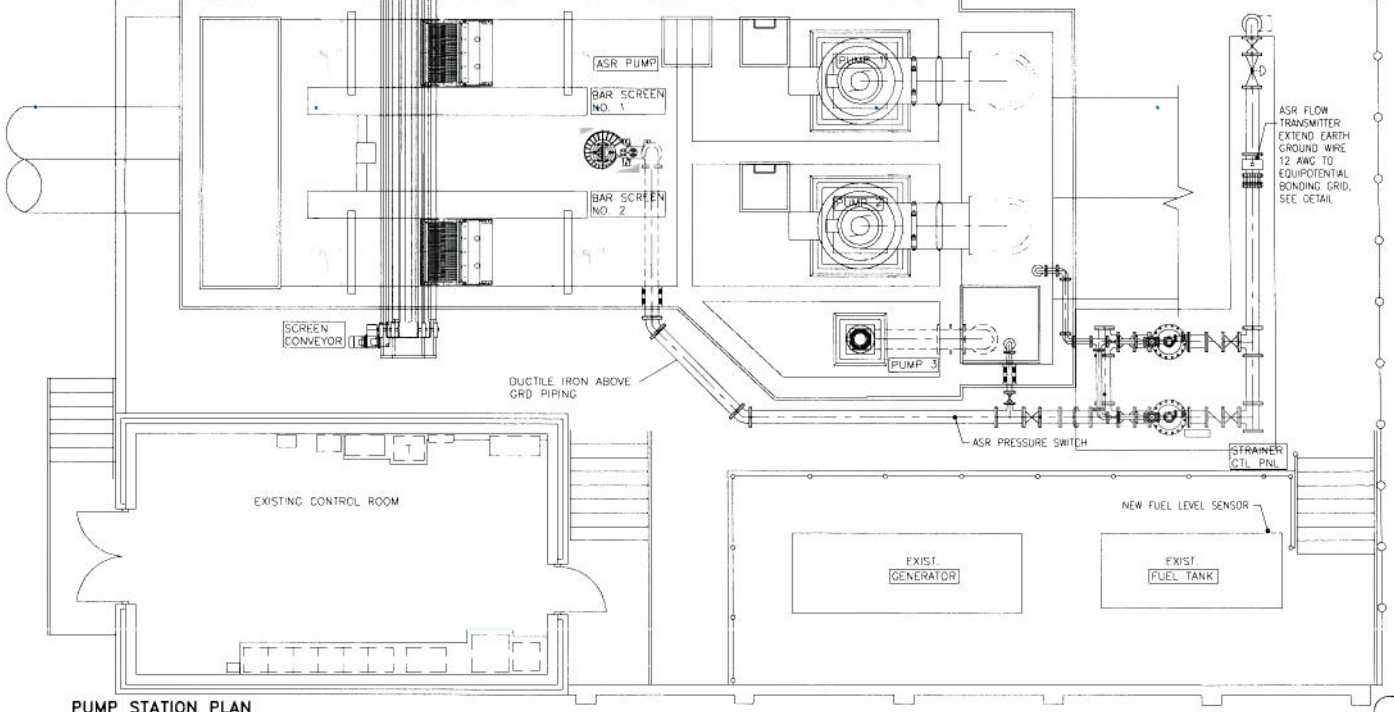
CONTROL & INSTRUMENTATION DIAGRAM

DRAWING: N-002
SHEET: 30
OF — SHEETS

ASR FLOW TRANSMITTER GROUNDING DETAIL



PUMP STATION PLAN

SCALE: 1/4" = 1'-0"

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DATE: SEPT 2013

PROJECT ENGINEER: THOMAS J. LEPORE, PE
REG NUMBER: 43086
PROJECT NUMBER: 121104A

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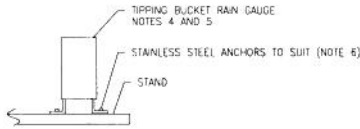
CITY OF NAPLES
PUBLIC WORKS PUMP STATION
PROPOSED OVERALL PLAN

DRAWING: N-003
SHEET: 31
OF ** SHEETS

NOTES:

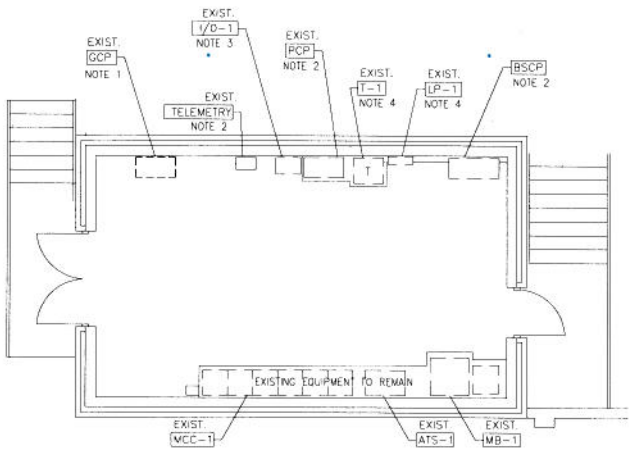
1. MOUNTING STANDOFF PVC PIPE SUPPORT SHALL BE MADE ENTIRELY OF 316 STAINLESS STEEL. PROVIDE ANGLE, U-BOLTS, WALL PLATE, WALL ANCHORS AND FITTINGS SHALL BE STAINLESS STEEL.
2. JUNCTION BOX SHALL BE NEMA 4X, 316 STAINLESS STEEL WITH SCREW COVER, GASKET AND BACK MOUNTING PLATE TO SUIT. PROVIDE (2) 6 POINT 30A TERMINAL BLOCKS FOR WIRING TERMINATIONS.
3. PROVIDE 316 STAINLESS STEEL UNISTRUT SUPPORTS AS REQUIRED. ALL FITTINGS SHALL BE STAINLESS STEEL.
4. TIPPING BUCKET RAIN GAUGE LOCATION SHALL BE DETERMINED BY ENGINEER. PROVIDE ELECTRICAL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
5. TIPPING BUCKET RAIN GAUGE SHALL BE ANCHORED TO RESIST 140 MPH WINDS.
6. ANCHORS AND BOLTS SHALL BE SEALED WITH APPROVED WATER AND WEATHERPROOF SEALANT.



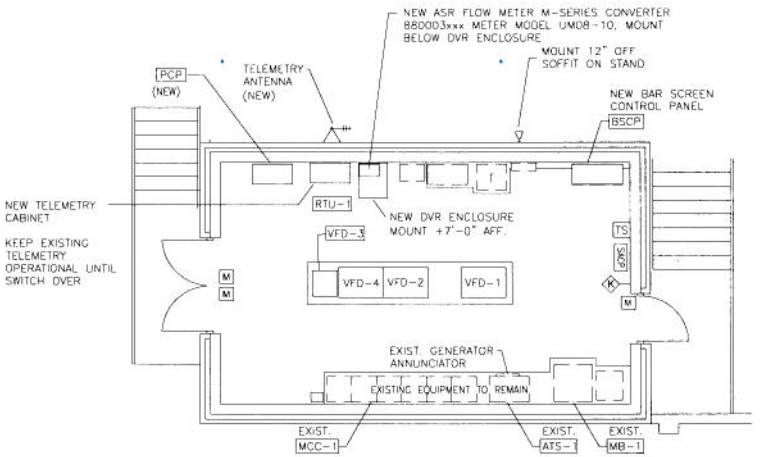
RAIN GAUGE
NO SCALE

LEGEND
EXISTING
PROPOSED

NOTES:
1. TO BE REMOVED. NOT IN USE
2. REMOVE AND REPLACE WITH NEW CABINET
3. REMAIN AND REUSE
4. NO CHANGE IN SCOPE OF WORK



DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



PROPOSED PLAN
SCALE: 1/4" = 1'-0"

SECURITY SYSTEM LEGEND
- SAP — SECURITY ALARM CONTROL PANEL
- M — SECURITY ALARM DOOR SWITCH 18/2 STR TO SECURITY CONTROL PANEL
- K — SECURITY ALARM KEY PAD WITH 18/4 STR TO SECURITY CONTROL PANEL

N

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CHECKED BY: TJL
DATE: SEPT 2013

PROJECT ENGINEER: THOMAS J. LEPORE, PE
REG NUMBER: 43086
PROJECT NUMBER: 121104A

THOMAS J. LEPORE, P.E. LICENSE No. 43086 STATE OF FLORIDA PROFESSIONAL ENGINEER

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DEMOLITION PLAN AND PROPOSED CONTROL EQUIPMENT PLAN

DRAWING: N-004
SHEET: 32
OF — SHEETS

DWG: T:\pdf\projects\2013 PROJECTS\121104 CITY OF NAPLES AECOM\Drawings\CITY OF NAPLES AECOM 121104 N-004-32 PLANS.dwg Layout: Name: N-004-32 - Plotted by: K. Date: 9/6/2013 - 4:24 PM
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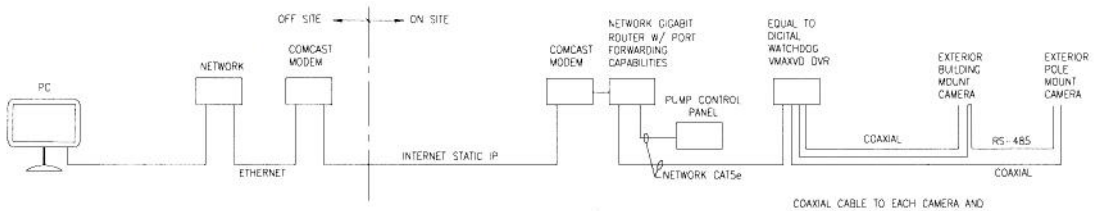


PROVIDE 120VAC TO 12VDC RECTIFIER AND L-COM CAT # AL-D15P120W, WITH RS-485 CONTROL + 12VDC POWER LINE PROTECTION, LOCATE AS CLOSE TO CAMERA AS POSSIBLE.

PROVIDE COAXIAL CABLE SURGE PROTECTION DEVICE LEA INTERNATIONAL BASE-BAND COAXIAL PROTECTOR CAT # IS-75BB/18, INSTALL INSIDE BUILDING FOR BOTH CAMERAS AND IN A WEATHERPROOF JUNCTION BOX FOR POLE MOUNT CAMERA.

COAXIAL CABLE TO EACH CAMERA AND RS-485 DAISY CHAIN FROM BUILDING TO POLE MOUNTED CAMERA

VIDEO SURVEILLANCE SYSTEM

NOT TO SCALE

COORDINATE INTERNET INSTALLATION AND SETUP WITH COMCAST AND CITY OF NAPLES IT DEPARTMENT.

NETWORK ROUTER SPECIFICATIONS

HARDWARE FEATURES:

WAN: GIGABIT ETHERNET (10/100/1000) WAN PORT
LAN: 4-PORT, FULL-DUPLEX 10/100/1000 ETHERNET SWITCH

SOFTWARE FEATURES:

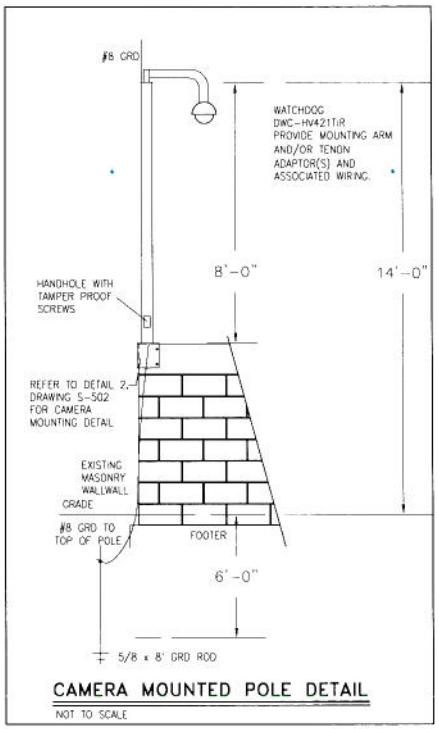
WAN TYPE: DYNAMIC/STATIC IP/PPPOE
ROUTING: STATIC ROUTING, ROUTING INFORMATION PROTOCOL (RIPv1 & RIPv2)
NETWORK: DHCP SERVER, DHCP CLIENT, DHCP ADDRESS RESERVATION, NETWORK ADDRESS TRANSLATION (NAT)
QUALITY OF SERVICE: IP/PORT-BASED BANDWIDTH CONTROL
PORT FORWARDING: VIRTUAL SERVER, PORT TRIGGERING, UPNP, DMZ
ACCESS CONTROL LIST: IP/MAC/DOMAIN NAME FILTERING
SECURITY: SPI FIREWALL, VPN PASSTHROUGH, DOS DEFENSE, IP/MAC ADDRESS BINDING

DVR VMAXHD, 1080p

OPERATING SYSTEM	LINUX
VIDEO INPUT	4CH HD-SDI
VIDEO LIVE	FRAME RATE = 1~30fps, RESOLUTION 1920X1080/1280X720
VIDEO OUTPUT	HDMI, VGA, CVBS
AUDIO OUTPUT	INPUT 4CH LINE INPUT, 1CH LINE OUTPUT, AUDIO CODE G.711
ALARM SENSOR INPUT	4CH INPUT, NO/NC
ALARM OUT	1CH OUTPUT, ACTIVATED BY MOTION DETECTION OR VIDEO LOSS
SERIAL	(2) RS485 CONNECTORS FOR PTZ & CONTROLLER
RECORDING	COMPRESSION - H.264, RATE - UP TO 60 FPS @ 1920X1080
PLAYBACK	FAST FORWARD - X1/4, X1/2, X2, X4, X8, X16, FRAME BY FRAME REWIND - X2, X4, X8, X16, X32, FRAME BY FRAME
STORAGE	HDD INTERFACE, INTERNAL HDDs (4)
NETWORK CONNECTION	RJ-45, 10/100/1000 BASE-T, AUTO MDI-MDIX
STREAMING	TRANSMISSION SPEED LIVE, 1280X720 @ 120fps, 640X360 @ 100fps
SEARCH	TRANSMISSION SPEED PLAYBACK, H.248 @ 120/100fps
PROTOCOLS	HTTP, DDNS, NTP, SMTP
ACCESS	WEB VIEWER - LIVE, SEARCH/PLAYBACK, BACKUP, PTZ CONTROL REMOTE MONITORING SOFTWARE - REMOTE SETUP & UPGRADE
ELECTRICAL (VOLTAGE)	AC 100 ~ 120V
WEIGHT	14.6 LBS
DIMENSIONS	17" X 16.92" X 3.86"
WARRANTY (LIMITED)	FIVE (5) YEAR LIMITED

DIGITAL WATCHDOG DWC-HV421TIR

IMAGE DEVICE	1/2.8
IMAGE PIXELS TOTAL	2000 (H) 1241 (W)
MIN. SCENE ILLUMINATION	F1.6 (30IRE): 0.1 LUX [COLOR], 0.01 LUX [B/W]
IR DISTANCE	70 FEET
FUNCTIONS	BLC, AGC, WDR, AWB, MIRROR, MOTION DETECTION, 3D-DNR, HME, DIGITAL ZOOM, RS485, TDN, AUTO ZOOM, MIRROR IMAGE, DSS
LENS	3.5 ~ 16MM
HORIZONTAL RESOLUTION	2.1 MEGAPIXELS (1920X1080) @30FPS
VIDEO OUTPUT	HD-SDI
OPERATING TEMPERATURE	-10°C ~ 50°C (14°F ~ 122°F)
POWER REQUIREMENTS	DC12V ONLY (10V ~ 16V)
POWER CONSUMPTION	2.0W, 166.7mA / LED ON 3.5W, 291.7mA
DIMENSIONS (W x H)	139 X 118.8mm (5.47 X 4.7 in.)
WARRANTY	TWO (2) YEAR
WEIGHT	2.05 LBS



CAMERA MOUNTED POLE DETAIL

NOT TO SCALE

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DRAWN BY: LM
CHECKED BY: TJL
DATE: SEPT 2013

PROJECT ENGINEER: THOMAS J. LEPORE, P.E.
REG. NUMBER: 43086
PROJECT NUMBER: 121104A

THOMAS J. LEPORE, P.E. LICENSE No. 43086 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VIDEO SURVEILLANCE SYSTEM

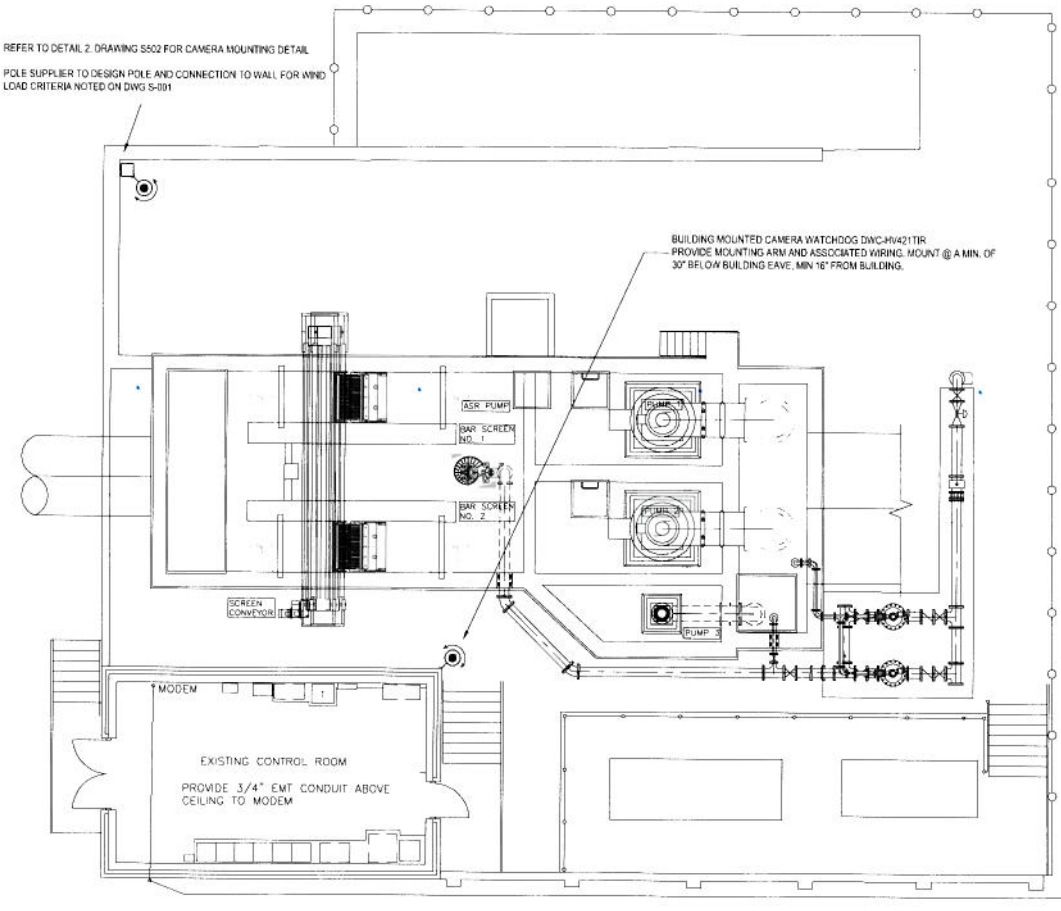
DRAWING: N-005
SHEET: 33
OF - SHEETS

DWG. I:\pw\projects\2012 PROJECTS\121104 CITY OF NAPLES AECOM\DRAWINGS\CITY OF NAPLES AECOM (09.05).dwg, Layout: None, N-005-33 VIDEO SURVEILLANCE SYSTEM.dwg - Plotted by: K. Date: 9/18/2013 - 4:25 PM
XREFS:
IMAGES:

REFER TO DETAIL 2, DRAWING S502 FOR CAMERA MOUNTING DETAIL

POLE SUPPLIER TO DESIGN POLE AND CONNECTION TO WALL FOR WIND LOAD CRITERIA NOTED ON DWG S-001

BUILDING MOUNTED CAMERA WATCHDOG DWC-HV421TIR
PROVIDE MOUNTING ARM AND ASSOCIATED WIRING. MOUNT @ A MIN. OF 30" BELOW BUILDING EAVE, MIN 16" FROM BUILDING.



PROVIDE 1-1/4" SCHEDULE 40 PVC CONDUIT UNDERGROUND TO COMCAST UTILITY DEMARCATION (FIELD VERIFY LOCATION). PROVIDE PULL STRING 200LBS. TEST AND TRANSITION CONDUIT ENTERING BUILDING, (SEE NOTE IN CONTROL ROOM) OTHER END AT THE COMCAST MODEM IN CONTROL ROOM. CABLE TO BE PROVIDED BY COMCAST.

VIDEO LEGEND

VIDEO CAMERA

EQUIPMENT YARD PLAN

SCALE: 3/16" = 1'-0"

N

PELICAN ENGINEERING CONSULTANTS, LLC
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3073 Horseshoe Drive South, Suite 112, Naples, FL 34104
Phone: (239) 597-7544

CITY OF NAPLES
PUBLIC WORKS PUMP STATION

VIDEO SYSTEM SITE PLAN

DRAWING N-006
SHEET 34 OF - SHEETS

REV	DATE	DESCRIPTION	APPR

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DESIGNED BY	JS
DRAWN BY	LM
CHECKED BY	TJL
DATE	SEPT 2013
PROJECT ENGINEER	THOMAS J. LEPORE, PE
REGISTERED	43086
PROJECT NUMBER	121104A

THOMAS J. LEPORE, P.E. LICENSE No. 43086 STATE OF FLORIDA PROFESSIONAL ENGINEER

AECOM

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