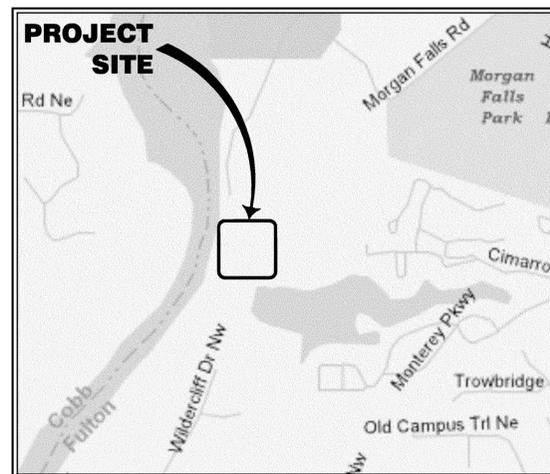


FULTON COUNTY DEPARTMENT OF PUBLIC WORKS NORTH FULTON PUMP STATION UPGRADES MORGAN FALLS PUMP STATION

LAND LOT 84, DISTRICT 17
FULTON COUNTY, GEORGIA

CONSTRUCTION DOCUMENTS
SEPTEMBER 15, 2006



VICINITY MAP

SCALE: 1" = 900'



9-15-06

**PRIME
ENGINEERING
INCORPORATED®**
PROJECT NUMBER 06-2015-005

R:\2015-005 North Fulton Pump Station Upgrades\dwg\Morgan Falls\G001-2015-005-MF.dwg Thu, 09/21/06 10:08 AM

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PROJECT DIRECTORY

1. PROJECT: NORTH FULTON PUMP STATION UPGRADES
MORGAN FALLS PUMP STATION
LAND LOT 84, 17TH DISTRICT
FULTON COUNTY, GEORGIA

2. SITE ADDRESS: MORGAN FALLS ROAD
ATLANTA, GEORGIA 30350

3. OWNER: FULTON COUNTY DEPARTMENT OF PUBLIC WORKS
WATER SERVICES DEVISION
CONTACT: MR. SIMEON SOLOMERO, JR
141 PRYOR STREET, S.W., SUITE 6001
ATLANTA, GA 30303
PHONE: 404-730-7418

4. CIVIL ENGINEER: PRIME ENGINEERING, INC.
CONTACT: MR. ANDY SEDDON, P.E.
1888 EMERY STREET NW, SUITE 300
ATLANTA, GEORGIA 30318
PHONE: 404-425-7100

5. MECHANICAL ENGINEER: PRIME ENGINEERING, INC.
CONTACT: MR. BRYAN WEBB, P.E.
PHONE: 404-425-7100

6. ELECTRICAL ENGINEER: RAY GROUP CONSULTING ENGINEERS, INC.
CONTACT: MR. ASHIM K. RAY, P.E.
1827 POWERS FERRY ROAD
BUILDING 21, SUITE 200
ATLANTA, GEORGIA 30339
PHONE: 770-953-1443

7. SURVEYOR: PRIME SURVEYING, INC.
CONTACT: MR. JOHN BLOUNT, R.L.S.
PHONE: 404-425-7100

FULTON COUNTY NOTES

- ALL WASTEWATER PIPE CONSTRUCTION MUST CONFORM TO FULTON COUNTY'S STANDARDS AND SPECIFICATIONS.
- ALL WASTEWATER EASEMENTS MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE. TREES SHALL NOT BE PLANTED IN THE PERMANENT EASEMENT AREA.
- NEOPRENE COUPLINGS WITH STAINLESS STEEL BANDS AND SHEAR RINGS ARE REQUIRED FOR JOINING DIFFERENT TYPES OF SANITARY SEWER PIPES.
- LOW PRESSURE AIR TESTING REQUIRED FOR ALL WASTEWATER PIPE SYSTEMS. THIS TEST MUST MEET ALL REQUIREMENTS AS OUTLINED IN ASTM C-828-80 OR CURRENT REVISION.
- COMPACTION OF THE BACK FILL OF ALL TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THE THEORETICAL MAXIMUM DENSITY (STANDARD PROCTOR). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER FOREIGN DEBRIS, AND SHALL BE PLACED AT OR NEAR OPTIMUM MOISTURE. CORRECTION OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT ELEVATIONS OF WASTEWATER PIPE FOR CONNECTION TO EXISTING WASTEWATER SYSTEMS.
- EIGHT (8") INCH OR LARGER PIPE LINES SHOULD BE TV INSPECTED. A VHS TAPE AND WRITTEN INSPECTION LOG, CERTIFIED BY A GEORGIA REGISTERED ENGINEER, SHALL BE PROVIDED TO THE PROJECT ENGINEERING SECTION OF PUBLIC WORKS AT THE TIME OF FINAL ACCEPTANCE.

FLOW RANGE HISTORY

DATE	MAX. AVERAGE DAILY FLOW
JULY 2005	1,735 MGD
AUGUST 2005	1,654 MGD
SEPTEMBER 2005	1,736 MGD
OCTOBER 2005	1,679 MGD
NOVEMBER 2005	1,891 MGD
DECEMBER 2005	1,914 MGD
JANUARY 2005	1,706 MGD
FEBRUARY 2005	1,889 MGD
MARCH 2005	1,700 MGD
APRIL 2005	1,700 MGD
MAY 2005	1,530 MGD
JUNE 2005	1,595 MGD

PRIME ENGINEERING

INCORPORATED

1888 EMERY STREET, N.W., SUITE 300
ATLANTA, GEORGIA 30318
404-425-7100

PROJECT:
NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION
PREPARED FOR:
FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
0 09/15/06 T-001	COVER
0 09/15/06 G-001	GENERAL INFORMATION
0 09/15/06 C-001	CIVIL LEGEND
0 09/15/06 C-201	SITE PLAN
0 09/15/06 C-401	CIVIL DETAILS
0 09/15/06 M-001	MECHANICAL LEGEND
0 09/15/06 M-201	MECHANICAL PLAN
0 09/15/06 E-001	ELECTRICAL & INSTRUMENTATION LEGEND
0 09/15/06 E-201	ELECTRICAL & INSTRUMENTATION PLAN
0 09/15/06 E-401	ELECTRICAL & INSTRUMENTATION DETAILS

LEGEND

INDICATES SHEET INCLUDED IN THIS ISSUE

REVISION NUMBER

LATEST ISSUE

GENERAL NOTES

- EXISTING DATA: THE EXISTING INFORMATION PROVIDED IN THESE DRAWINGS WAS OBTAINED BY PRIME ENGINEERING, INC. DURING SITE VISITS ON MAY 16, 2006 AND JULY 11, 2006. EXISTING DRAWINGS BY KHAFRA ENGINEERING CONSULTANTS, INC. DATED JANUARY 2002 WERE ALSO USED TO SUPPLEMENT THE FIELD INFORMATION.
- CONTRACTOR IS RESPONSIBLE DURING BID PHASE FOR VERIFYING ALL EXISTING CONDITIONS, DIMENSIONS, ACCESS LIMITATIONS, AND SITE RESTRICTIONS THAT AFFECT THIS SCOPE OF WORK. CONTRACTOR IS RESPONSIBLE FOR PROVIDING LABOR, MATERIAL, AND EQUIPMENT PROVISIONS AS REQUIRED AND (IN BASE BID AND ANY ALTERNATIVES) TO PERFORM SCOPE OF WORK BASED ON THESE EXISTING SITE CONDITIONS.
- ALL CONNECTIONS TO EXISTING SYSTEMS AND WORK ON ACTIVE SYSTEMS MUST BE SCHEDULED A MINIMUM OF 24 HOURS IN ADVANCE WITH FULTON COUNTY.
- NO SYSTEMS SHALL BE RETURNED TO ACTIVE SERVICE WITHOUT WRITTEN APPROVAL FROM FULTON COUNTY.
- UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS, NO PIPE SHALL BE CUT THAT SHALL REMAIN IN SERVICE. REMOVAL OF OLD FITTINGS WILL BE ACCOMPLISHED FROM JOINT TO JOINT WITH GASKET REPLACEMENT AND NUTS AND BOLTS AT THESE LOCATIONS.
- CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS FOR ELECTROMAGNETIC FLOW METER AND CHART RECORDER.
- REMOVE ALL ABANDONED MECHANICAL AND ELECTRICAL EQUIPMENT PROPERLY. PROPERLY DISPOSE OF ALL REMOVED EQUIPMENT AND/OR DEBRIS.
- BYPASS PUMPING, AS REQUIRED DURING CONSTRUCTION, SHALL BE COORDINATED WITH THE OWNER. AT ALL TIMES THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PUMP STATION WET WELL LEVEL BELOW THE ALARM SET POINT.
- RATED CAPACITY OF EXISTING PUMP STATION IS 6.8 MGD.

DETAIL ID

X
X-XXX

SECTION OR DETAIL NUMBER

TITLE
 SCALE: X"=X"

 SHEET NUMBER

REVISIONS

NO.	DATE	DESCRIPTION
0	9/15/2006	CONSTRUCTION DOCUMENTS

SEAL

DATE: 9-15-06

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DRAWING TITLE

GENERAL INFORMATION

07TBFNFPUMESK:DB

DRAWING DATE	09/15/06	DRAWN BY	ESD	DESIGNED BY	AJS	CHECKED BY	RBW
DRAWING SCALE		NOT TO SCALE		PROJECT NUMBER		06-2015-005	
DRAWING NUMBER		G-001					
NOT ISSUED FOR CONSTRUCTION							

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CIVIL LEGEND

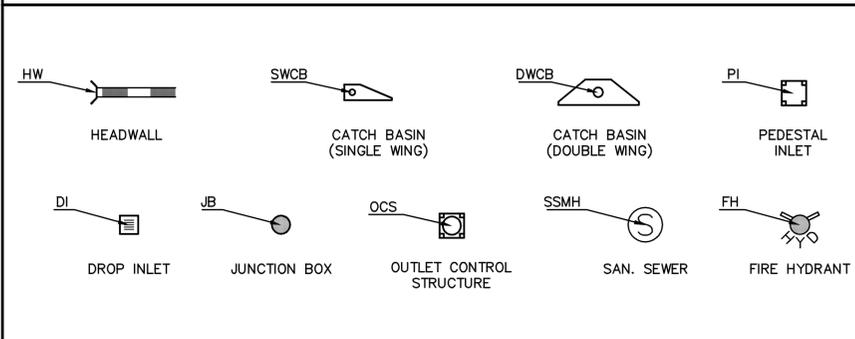
ABBREVIATIONS

CIVIL NOTES

	EXISTING	PROPOSED
ASPHALT PAVEMENT		
BENCHMARK		N/A
BOLLARD		
BUILDING		
CENTERLINE		
CONCRETE		
CONSTRUCTION LIMITS	N/A	
CONTOUR, INTERMEDIATE		
CONTOUR, MAIN		
CONTROL POINTS		N/A
CREEK CENTERLINE		
DEMOLITION (STRUCTURES)	N/A	
DEMOLITION (UTILITIES)	N/A	
EASEMENT		
GROUT		
GUARD RAIL		
HANDICAP SYMBOL		
IRON ROD FOUND		N/A
PAVEMENT ARROW		
PROPERTY LINE		
RETAINING WALL		
SIGN, ONE POLE		
SLOPE ARROW		
TREE LINE		
TREES		
WATER LINE		
FIRE MAIN		
FIRE HYDRANT		
WATER METER		
45° BEND (L)		
45° BEND (R)		
WYE		
CROSS		
90° BEND		
PLUG		
REDUCER		
TEE		
THRUST BLOCK		
VALVE		
VALVE (POST INDICATOR)		
MONITORING WELL		
SIAMESE CONNECTION		

A	ARC LENGTH	M	MOTOR ACTUATOR
AC	ACRE	MAX	MAXIMUM
AE	AIR ELIMINATOR	MH	MANHOLE
AGGR	AGGREGATE	MIN	MINIMUM
ASPH	ASPHALT	MON	MONUMENT
B/F	BELOW FLOOR	N/A	NOT APPLICABLE
BE	BOTTOM ELEVATION	NIC	NOT IN CONTRACT
BFV	BUTTERFLY VALVE	NPT	NATIONAL PIPE THREAD
BITUM	BITUMINOUS	NTS	NOT TO SCALE
BLDG	BUILDING	OC	ON CENTER
BOP	BOTTOM OF PIPE	OD	OUTSIDE DIAMETER
C	CHORD LENGTH	OTS	ON THIS SHEET
CL	CENTERLINE	PL	PROPERTY LINE
CB	CATCH BASIN	PC	POINT OF CURVE
CF	CUBIC FEET	PG	PRESSURE GAUGE
CMP	CORRUGATED METAL PIPE	PI	POINT OF INTERSECTION
COL	COLUMN	PIV	POST INDICATOR VALVE
CO	CLEAN OUT	PP	POWER POLE
CONC	CONCRETE	PPVC	PERFORATED PVC PIPE
COND	CONDUIT	PRV	PRESSURE RELIEF/REDUCING VALVE
CONN	CONNECTION/CONNECT	PRESS	PRESSURE
CT	CLAY TREATER	PRV	PRESSURE RELIEF VALVE
CV	VERTICAL COALESCER	PT	PAINT
DI	DROP INLET	PTB	POINT OF TANGENCY
DIA, Ø	DIAMETER	PV	POWER TERMINAL BOX
DIP	DUCTILE IRON PIPE	PV	PLUG VALVE
DISCH	DISCHARGE	PVC	POLYVINYL CHLORIDE (PIPE)
DWG	DRAWING	PVI	POINT OF VERTICAL INTERSECTION
EF	EACH FACE	PVMT	PAVEMENT
ELEV	ELEVATION	PVT	POINT OF VERTICAL TANGENCY
ELEC	ELECTRICAL	R	RADIUS
EO	ELECTRICAL CABLE (OVERHEAD)	R/W	RIGHT OF WAY
EOP	EDGE OF PAVEMENT	RCP	REINFORCED CONCRETE PIPE
EU	ELECTRICAL CABLE (UNDERGROUND)	RED	REDUCER
EW	EACH WAY	REINF	REINFORCEMENT
EXIST	EXISTING	REQ'D	REQUIRED
F	FUEL	RFWN	RAISED FACE WELDING NECK
F/S	FILTER SEPARATOR	S/W	SIDEWALK
FF	FINISH FLOOR	SAN	SANITARY SEWER (GRAVITY)
FH	FIRE HYDRANT	SANF	SANITARY SEWER FORCE MAIN
FLG	FLANGE	SB	TRAFFIC SIGNAL BOX
FM	SANITARY SEWER FORCE MAIN	SG	SWITCH GAUGE
FW	FIRE WATER	SHT	SHEET
FD	FLOOR DRAIN	SP	TRAFFIC SIGNAL POLE
G	NATURAL GAS	SRC	SPRING RETURN CONTROL
GI	GALVANIZED IRON	SS	SANITARY SEWER
GM	GATE METER	SSMH	SANITARY SEWER MANHOLE
GPM	GALLONS PER MINUTE	ST	STORM SEWER MANHOLE
GV	GATE VALVE	STA	STATION
HDCP	HANDICAP	TD	TRENCH DRAIN
HORZ	HORIZONTAL	TE	TOP ELEVATION
HP	HIGH POINT	TF	TOP OF FOOTING ELEVATION
HW	HEADWALL	TG	TOP OF GRATE ELEVATION
ID	INSIDE DIAMETER	TW	TOP OF WALL ELEVATION
INV	INVERT ELEVATION	TYP	TYPICAL
IPF	IRON PIN FOUND	U/P	UNDER PAVEMENT
IPS	IRON PIN SET	UND	UNDERDRAIN
JB	JUNCTION BOX	VC	VERTICAL CURVE
LF	LINEAR FEET	VCP	VITRIFIED CLAY PIPE
LP	LIGHT POLE	VERT	VERTICAL

STRUCTURAL LAYOUT POINTS



- STANDARD EROSION & SEDIMENT CONTROL GENERAL NOTES:**
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE GEORGIA.
 - THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RAINFALL EVENT. ANY NECESSARY REPAIRS TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND CLEANUP OF SEDIMENTATION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE IMMEDIATELY. EROSION AND SEDIMENT CONTROL MANUAL.
 - THE CONTRACTOR SHALL LIMIT SITE ACCESS BY CONSTRUCTION VEHICLES TO ENTRANCES PROTECTED BY A STONE CONSTRUCTION ENTRANCE OR AN APPROVED COMPARABLE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED FROM PAVED AREAS ON A DAILY BASIS.
 - STOCK PILES OF SOIL AND OTHER ERODIBLE MATERIALS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION FOR STOCKPILES ON SITE AS WELL AS FOR MATERIALS TRANSPORTED FROM THE PROJECT SITE.
 - THE CONTRACTOR SHALL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST INCLUDING (BUT NOT LIMITED TO) USE OF WATER, MULCH, OR CHEMICAL DUST ADHESIVES AND CONTROL OF CONSTRUCTION SITE TRAFFIC.
 - EFFLUENT FROM DE-WATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND CHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT ADJACENT PROPERTIES, WETLANDS, WATERWAYS OR THE STORM DRAINAGE SYSTEM.
 - THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED NECESSARY BY THE PLAN APPROVING AUTHORITY.
 - TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. AFTER STABILIZATION IS COMPLETE, ALL MEASURES SHALL BE REMOVED WITHIN 30 DAYS. TRAPPED SEDIMENT SHALL BE SPREAD AND SEEDED.
 - WHEN THE SITE IS STABILIZED AND AT THE DIRECTION OF THE COUNTY ENGINEER, THE DEVELOPER IS TO REMOVE THE SEDIMENT BASINS AND STABILIZE THE DISTURBED AREAS.
 - PERMANENT GRASSING TO BE COMPLETED WITHIN TWO WEEKS OF COMPLETION OF SITE GRADING.
 - MATTING TO BE PLACED ON ALL SLOPES GREATER THAN 2.5H:1V. AND GREATER THAN 10 FEET IN HEIGHT.
 - THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
 - EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 - ANY AREA THAT IS LEFT FOR 14 DAYS MUST BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 - STRIPPING OF VEGETATION, REGRADING AND OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO MINIMIZE EROSION.
 - CUT AND FILL OPERATIONS MUST BE KEPT TO A MINIMUM.
 - DEVELOPMENT PLANS MUST CONFORM TO TOPOGRAPHY AND SOIL TYPE, SO AS TO CREATE THE LOWEST PRACTICABLE EROSION POTENTIAL.
 - WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.
 - DISTURBED SOIL SHALL BE STABILIZED AS QUICKLY AS PRACTICABLE.
 - TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT.
 - PERMANENT VEGETATION AND STRUCTURAL EROSION CONTROL MEASURES MUST BE INSTALLED AS SOON AS PRACTICABLE.
 - SEDIMENT IN RUNOFF WATER MUST BE TRAPPED BY THE USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS OR SIMILAR MEASURES UNTIL THE DISTURBED AREA IS STABILIZED.
 - ADEQUATE PROVISIONS MUST BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS.
 - CUTS AND FILLS MAY NOT ENDANGER ADJOINING PROPERTY.
 - FILLS MAY NOT ENCR OACH UPON NATURAL WATERCOURSES OR CONSTRUCTED CHANNELS IN A MANNER SO AS TO ADVERSELY AFFECT OTHER PROPERTY OWNERS.
 - GRADING EQUIPMENT MUST CROSS FLOWING STREAMS BY THE MEANS OF BRIDGES OR CULVERTS, EXCEPT WHEN SUCH METHODS ARE NOT FEASIBLE, PROVIDED, IN ANY CASE, THAT SUCH CROSSINGS MUST BE KEPT TO A MINIMUM.
 - IF REQUIRED, OBTAIN STATE VARIANCE. OBTAINS NP OR IP (FEDERAL).
 - THE DISTURBED AREA AND DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM.
 - LAND DISTURBING ACTIVITY PLANS FOR EROSION AND SEDIMENTATION CONTROL SHALL INCLUDE PROVISIONS FOR CONTROL OR TREATMENT OF ANY SOURCE OF SEDIMENTS AND ADEQUATE SEDIMENTATION CONTROL FACILITIES TO RETAIN SEDIMENTS ON SITE OR PRECLUDE SEDIMENTATION OF ADJACENT WATERS.

PRIME ENGINEERING INCORPORATED

1888 EMERY STREET, N.W., SUITE 300
ATLANTA, GEORGIA 30318
404-425-7100

PROJECT: NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION

PREPARED FOR: FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

NO.	DATE	DESCRIPTION
0	9/15/2006	CONSTRUCTION DOCUMENTS

SEAL

DATE: 9-15-06

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CIVIL LEGEND

OTTENFUMPSK:DB

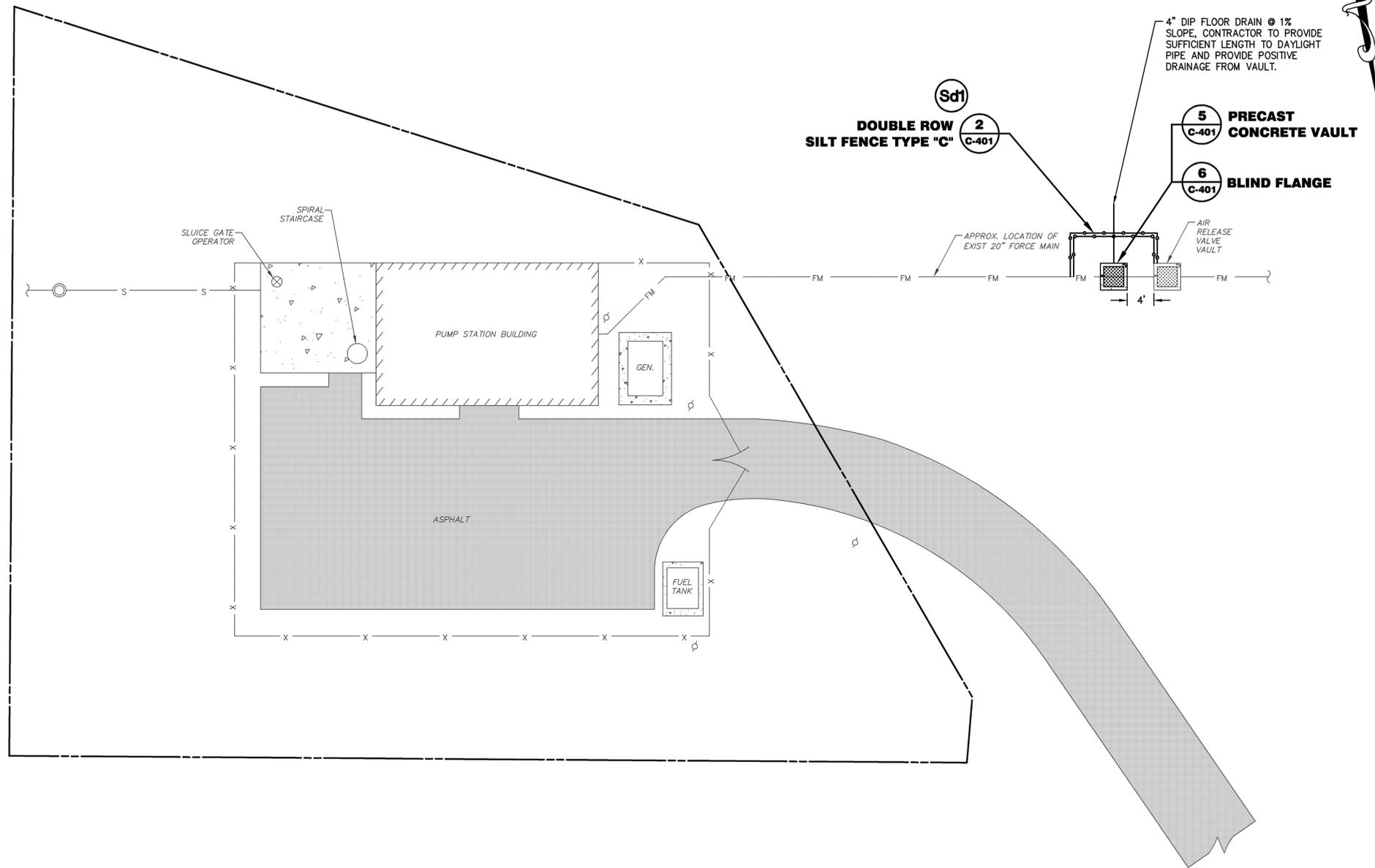
DRAWING DATE	09/15/06	DRAWN BY	ESD	DESIGNED BY	AJS
DRAWING SCALE	NOT TO SCALE	CHECKED BY	RBW	PROJECT NUMBER	
06-2015-005		DRAWING NUMBER			
C-001					

NOT ISSUED FOR CONSTRUCTION

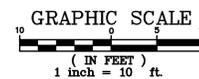
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NOTES:

1. FIELD CONFIRM ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK.
2. CONTRACTOR RESPONSIBLE FOR INTERCEPTING ALL WASTEWATER FLOWS DURING CONSTRUCTION.
3. CONTRACTOR TO VERIFY LOCATION OF EXISTING FORCE MAIN AND ADJUST LOCATION OF PROPOSED PRECAST CONCRETE VAULT ACCORDINGLY.
4. NEW BLIND FLANGE TO BE USED AS ACCESS POINT FOR BYPASS PUMPING DURING CONSTRUCTION.



1 SITE PLAN
C-201 SCALE: 1"=10'



- 3 TEMPORARY SEEDING**
(TYP. ALL DISTURBED AREAS)
- 4 PERMANENT SEEDING**
(TYP. ALL DISTURBED AREAS)

PRIME ENGINEERING
 INCORPORATED
 1888 EMERY STREET, N.W., SUITE 300
 ATLANTA, GEORGIA 30318
 404-425-7100

PROJECT:
 NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION
PREPARED FOR:
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DRAWING TITLE
SITE PLAN
 07TTFNFUMPSEK-DB

DRAWING DATE	09/15/06
DRAWING SCALE	1" = 10'
PROJECT NUMBER	06-2015-005
DRAWING NUMBER	C-201
DRAWN BY	ESD
DESIGNED BY	AJS
CHECKED BY	RBW
NOT ISSUED FOR CONSTRUCTION	

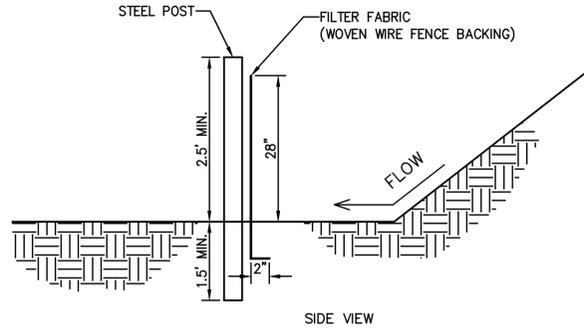
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1 2 3 4 5 6 7 8 9 10 11 12 13 14

A
B
C
D
E
F
G
H
I
J

EROSION CONTROL LEGEND					
CODE	PRACTICE	DETAIL	CODE	PRACTICE	DETAIL
Ds1	DISTURBED AREA STABILIZATION (MULCH)	STRAW OR HAY @ 6-10" DEPTH	Sd1	SILT FENCE	2/C-401
Ds2	TEMPORARY SEEDING	3/C-401			
Ds3	PERMANENT SEEDING	4/C-401			

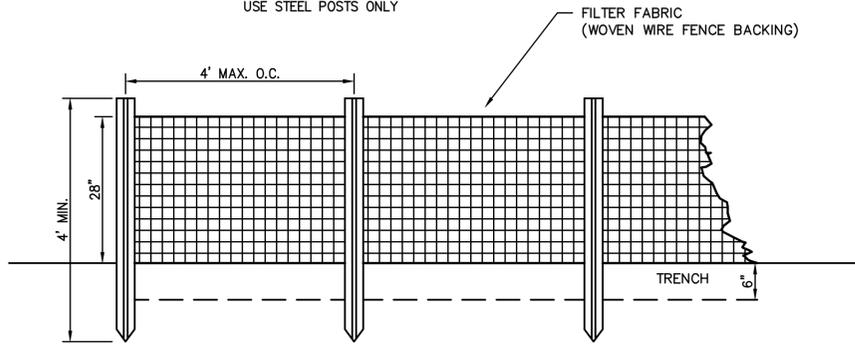
1 EROSION CONTROL LEGEND
C-401 NOT TO SCALE



GRADE (%)	HORIZONTAL SPACING (FT)
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
> 20*	15

*IN AREAS WHERE THE SLOPE IS GREATER THAN 20%, A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF THE SLOPE TO THE FENCE SHOULD BE PROVIDED.

NOTES:
USE 36" D.O.T. APPROVED FABRIC
USE STEEL POSTS ONLY



2 SILT FENCE TYPE "C"
C-401 NOT TO SCALE

TEMPORARY SEEDING Ds2						
EROSION CONTROL SEEDING NOTES						
AREA	DATES	SPECIES	SEEDING RATES	FERTILIZER	LIME	MAINTENANCE
FLAT TO ROLLING TERRAIN WITH SLOPES LESS THAN 3:1	8/15-4/15	ANNUAL RYE GRASS	40#/AC 0.9#/1000 SF	12#/AC (10-10-10)	45#	7# (10-10-10)
EMBANKMENTS WITH SLOPES 3:1 OR STEEPER	4/15-8/15	PEARL MILLET	50#/AC 1.1#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)
	3/1-7/31	WEeping LOVE GRASS	4#/AC 0.1#/1000 SF	12#/AC (10-10-10)	45#	7# (10-10-10)
	3/1-2/29	TALL FESCUE	70#/AC 1.6#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)

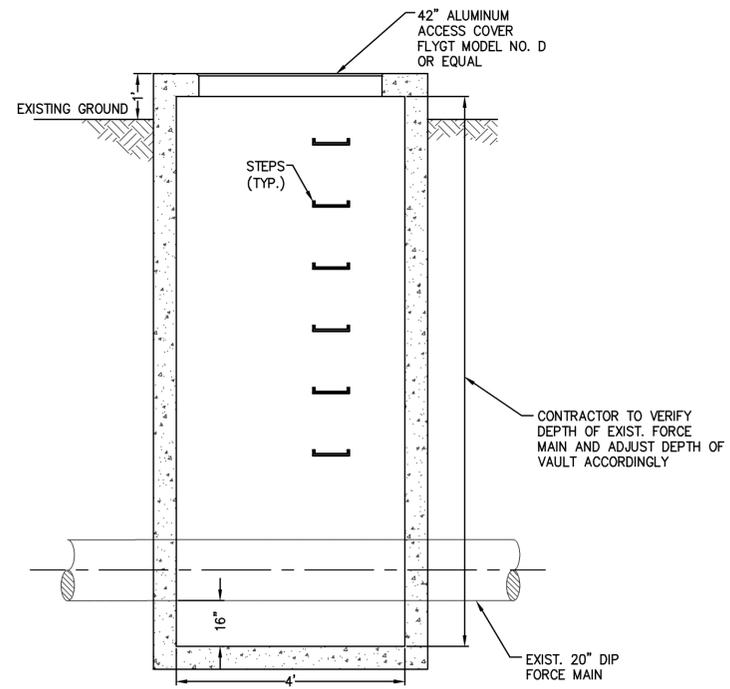
NOTE: ALL GRASSING SHALL MATCH SPECIES OF EXISTING LOT/PARCEL

3 TEMPORARY SEEDING
C-401 NOT TO SCALE

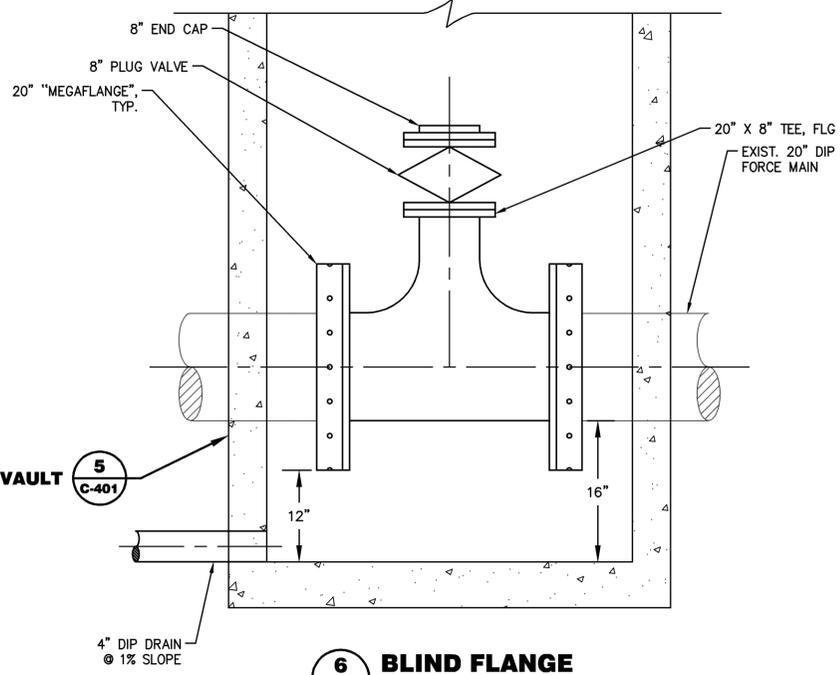
PERMANENT SEEDING Ds3						
EROSION CONTROL SEEDING NOTES						
AREA	DATES	SPECIES	SEEDING RATES	FERTILIZER	LIME	MAINTENANCE
FLAT TO ROLLING TERRAIN WITH SLOPES LESS THAN 3:1	2/15-8/14	COMMON BERmUDA (HULLED SEED)	10#/AC 0.2#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)
	2/15-8/14	COMMON BERmUDA (UNHULLED SEED)	10#/AC 0.2#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)
	8/15-2/14	COMMON BERmUDA (UNHULLED SEED)	10#/AC 0.2#/1000 SF	12#/AC (10-10-10)	45#	10# (10-10-10)
	8/15-2/4	TALL FESCUE	50#/AC 1.1#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)
EMBANKMENTS WITH SLOPES 3:1 OR STEEPER	3/1-7/31	WEeping LOVE GRASS	4#/AC 0.1#/1000 SF	35#/AC 6-12-12)	45#	10# (10-10-10)
	3/1-7/31	LESPEDEZA SERICEA (SCARIFIED)	60#/AC 1.4#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)
	8/1-2/29	LESPEDEZA SERICEA (UNSCARIFIED)	75#/AC 1.7#/1000 SF	35#/AC (6-12-12)	45#	01# (10-10-10)
	8/1-2/29	TALL FESCUE	50#/AC 1.1#/1000 SF	35#/AC (6-12-12)	45#	10# (10-10-10)

NOTE: ALL GRASSING SHALL MATCH SPECIES OF EXISTING LOT/PARCEL

4 PERMANENT SEEDING
C-401 NOT TO SCALE



5 PRECAST CONCRETE VAULT
C-401 SCALE: NOT TO SCALE



6 BLIND FLANGE
C-401 SCALE: NOT TO SCALE

PRIME ENGINEERING
INCORPORATED

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404.425.7100

PROJECT: NORTH FULTON PUMP STATION UPGRADES - GAME CREEK PUMP STATION
PREPARED FOR: FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

NO.	DATE	DESCRIPTION
0	9/15/2006	CONSTRUCTION DOCUMENTS



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DRAWING TITLE
CIVIL DETAILS

07TENTPUMPSEK-DE

DRAWING DATE	09/15/06
DRAWN BY	ESD
DESIGNED BY	AJS
CHECKED BY	RBW
PROJECT NUMBER	06-2015-005
DRAWING NUMBER	C-401

NOT ISSUED FOR CONSTRUCTION

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ABBREVIATIONS

AD AREA DRAIN	G GAS - LOW PRESSURE	PVC POLYVINYL CHLORIDE PIPE
AFF ABOVE FINISHED FLOOR	GC GAS COCK	PVMT PAVEMENT
AFG ABOVE FINISHED GRADE	GLV GLOBE VALVE	R RADIUS
AS AIR SUPPLY	GPF GALLONS PER FLUSH	RD ROOF DRAIN
ASPH ASPHALT	GPM GALLONS PER MINUTE	RCP REINFORCED CONCRETE PIPE
BE BOTTOM ELEVATION	GV GATE VALVE	REINF REINFORCEMENT
BFP BACK FLOW PREVENTER	HB HOSE BIBB	RGS RIGID GALVANIZED STEEL
B/G BELOW GRADE	HD HUB DRAIN	RL RAIN LEADER
BLDG BUILDING	HLA HIGH LEVEL ALARM	RPZ REDUCED PRESSURE ZONE
BRS BARSCREEN	HHLA HIGH HIGH LEVEL ALARM	S SOIL STACK
BTF BUTTERFLY VALVE	HORIZ HORIZONTAL	SA SHOCK ABSORBER
BV BALANCING VALVE	HP HORSEPOWER	SAN SANITARY
CB CATCH BASIN	HPV HIGH POINT VENT	SBP SUBMERSIBLE PUMP
CHWR CHILLED WATER RETURN	HWR HOT WATER RETURN	SD SLUICE GATE
CHWS CHILLED WATER SUPPLY	HWS HOT WATER SUPPLY	SD STORM DRAIN
C CENTER LINE	ID INSIDE DIAMETER	SS STAINLESS STEEL
CLG CEILING	IE INVERT ELEVATION	SHT SHEET
CMP CORRUGATED METAL PIPE	JFH JET FUEL HYDRANT	STM STEAM
CO CLEAN OUT	JB JUNCTION BOX	SV SOLENOID OPERATED VALVE
COL COLUMN	LLA LOW LEVEL ALARM	S/W SIDEWALK
CONC CONCRETE	LP LIGHT POST	TBT TURBIDIMETER
CONN CONNECT/CONNECTION	LPD LOW POINT DRAIN	TD TRENCH DRAIN
CR CONDENSATE RETURN	LSC LIMIT SWITCH CLOSED	TE TOP ELEVATION
CS CARBON STEEL	LSH LEVEL SWITCH HIGH	TP TURBIDITY PUMP
CU COPPER	LSO LIMIT SWITCH OPEN	TT TEMPERATURE TRANSMITTER
CV CHECK VALVE	LT LEVEL TRANSMITTER	TYP TYPICAL
CW CITY WATER	MAX MAXIMUM	UND UNDERDRAIN
DI DROP INLET	M MOTOR	UNO UNLESS NOTED OTHERWISE
DIA DIAMETER	MH MANHOLE	U/P UNDER PAVEMENT
DIP DUCTILE IRON PIPE	MIN MINIMUM	V VENT
DN DOWN	MTR METER	VERT VERTICAL
DWG DRAWING	N/A NOT APPLICABLE	VNM VENTURI METER
EL ELEVATION	NIC NOT IN CONTRACT	VTR VENT THROUGH ROOF
EOP EDGE OF PAVEMENT	NTS NOT TO SCALE	W WASTE
ER ECCENTRIC REDUCER	OC ON CENTER	W/ WITH
EXH EXHAUST	OD OUTSIDE DIAMETER	WCO WALL CLEAN OUT
EX EXISTING	OSD OPEN SITE DRAIN	WHA () WATER HAMMER ARRESTOR (SIZE)
EW EACH WAY	P POLE	WLS WATER LEVEL SENSOR
FCO FLOOR CLEAN OUT	PA PLANT AIR	WP WEATHER PROOF (NEMA 3R)
FD FLOOR DRAIN	PCHWR POTABLE CHILLED WATER RETURN	WLT WATER LEVEL TRANSMITTER
FDV FIRE DEPT. VALVE	PCHWS POTABLE CHILLED WATER SUPPLY	PI POINT OF INTERSECTION
FE MAGNETIC	PIV POST INDICATOR VALVE	XS POSITION INDICATOR
FGOO FLUSH GRADE CLEAN OUT	PL PLATE	XS POSITION SWITCH
FH FIRE HYDRANT	PRV PRESSURE REDUCING VALVE	ZT POSITION TRANSMITTER
FLG FLANGE	PS PUMP STATION	
FLT FLOW TRANSMITTER		
FRW FIRE WATER		

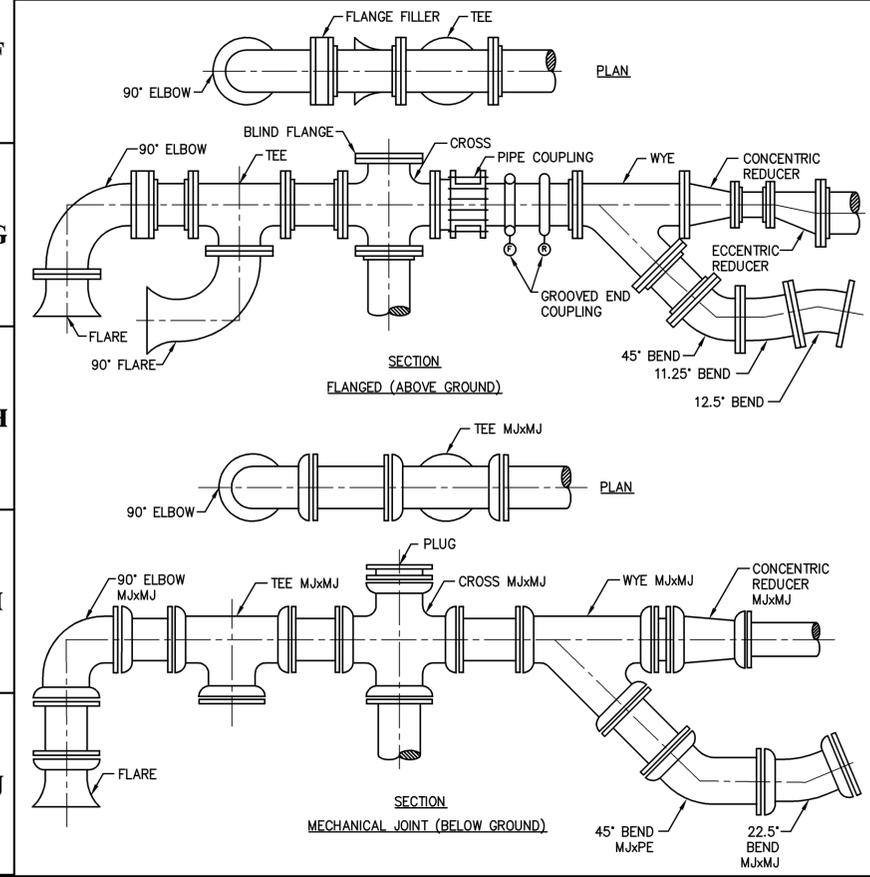
PIPING SYBOLOGY

DOUBLE LINE SYMBOL	SINGLE LINE SYMBOL	FEATURE
		FLANGED JOINT COMPLEX REPRESENTATION
		MECHANICAL JOINT SIMPLIFIED REPRESENTATION.
		MECHANICAL JOINT COMPLEX REPRESENTATION
		MECHANICAL JOINT RESTRAINED
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT SIMPLIFIED REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT REPRESENTATION
		BALL JOINT
		PLAIN END x PLAIN END PIPE COUPLING
		PLAIN END x PLAIN END PIPE COUPLING RESTRAINED
		FLANGE x PLAIN END PIPE COUPLING
		FLEXIBLE COUPLING OR EXPANSION JOINT (SLEEVE TYPE)
		FLEXIBLE COUPLING OR EXPANSION JOINT (BELLOWS TYPE)
		COUPLING FOR GROOVED END JOINTS: F - FLEXIBLE R - RIGID
		FLANGE GUARD
		FLANGE FILLER
		BUTT WELDED JOINT

PIPING LEGEND

JACKETED LINE		3-WAY SOLENOID VALVE	
ELECTRIC TRACED LINE		TEMPERATURE GAUGE	
ELECTRIC CONTROL		PRESSURE GAUGE W/ RANGE	
EXISTING PROCESS OR UTILITY PIPE LINE		PRESSURE REGULATOR (DOWNSTREAM)	
FLANGE / TRICLOVER CONNECTION		PRESSURE RELIEF VALVE WITH SETTING	
UNION		PRESSURE RELIEF VALVE (PLAN VIEW)	
WELD CAP		ANGLE VALVE	
CAP		BLIND FLANGE	
REMOVABLE SWING PIECE (TRI-CLAMP)		FLEXIBLE HOSE	
GATE VALVE		HOSE BIBB	
BALL VALVE		DRINKING FOUNTAIN	
CHECK VALVE (ARROW INDICATES FLOW)		EYEWASH	
GLOBE VALVE		FLOOR DRAIN	
PLUG VALVE		DRAIN TRAP	
BUTTERFLY VALVE		HOT WATER	
DIAPHRAGM VALVE		COLD WATER	
OPEN CHANNEL FLOW		HYDRAULIC CONTROL	
FLOW DIRECTION		HOSE ADAPTER W/ CAP	
PIPE TURN DOWN		HOSE COUPLING W/ PLUG	
PIPE TURN UP		AIRCRAFT ADAPTER	
SIGHT FLOW INDICATOR (ROTARY)		MIXING STATION	
SIGHT FLOW INDICATOR (FLAPPER)		PID CONCENTRIC REDUCER	
RISE OR DROP		PID FLAT ON TOP REDUCER	
TRAP		PID FLAT ON BOTTOM REDUCER	
BRANCH-BOTTOM		PID MAIN PROCESS PIPE LINE	
BRANCH-TOP		PID SECONDARY PROCESS OR UTILITY PIPE LINE	
REDUCER		PID EXISTING MAIN PROCESS PIPE LINE	
CLEAN OUT		PID EXISTING SECONDARY PROCESS OR UTILITY PIPE LINE	
PIPE ANCHOR		PID INSULATED LINE (OPTIONAL: TYPE-THICKNESS)	
PIPE GUIDE		PID STEAM OR LIQUID TRACED LINE	
BALL VALVE TAP IN VERTICAL PIPE		PID PNEUMATIC CONTROL	
SOLENOID ACTUATOR			
SOLENOID ACTUATOR (GENERAL)			
TWO-WAY SOLENOID VALVE			

PIPING SYBOLOGY



REFERENCE LEGEND

DETAIL IDENTIFICATION SECTION OR DETAIL NUMBER TITLE SCALE: X' = X" SHEET NUMBER	SPECIALTY ITEM TYP. PIPING OR SUPPORT DETAIL 	DIRECTIONAL FLOW REFERENCE BLOCK CONNECT TO EXISTING
PIPING IDENTIFICATION SIZE MATERIAL INSTRUMENT TAG NUMBER I/O PANEL LOCATION EQUIPMENT TYPE NUMBER IDENTIFICATION	INSTRUMENT IDENTIFICATION ITEM TAG NUMBER EQUIPMENT TAG NUMBER EQUIPMENT TYPE EQUIPMENT NUMBER	ITEM LONG TAG NUMBER

PRIME ENGINEERING
INCORPORATED

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PROJECT:
NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION

PREPARED FOR:
FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

NO.	DATE	DESCRIPTION
0	9/15/2006	CONSTRUCTION DOCUMENTS



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DRAWING TITLE
MECHANICAL LEGEND

0711BFPUMPFSK:DB

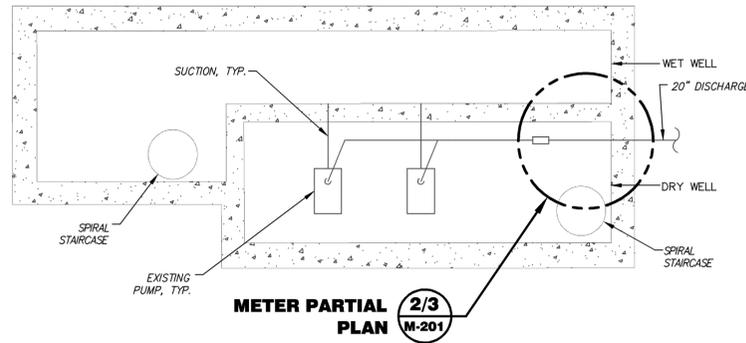
DRAWING DATE	09/15/06	DRAWN BY	ESD
DRAWING SCALE	NOT TO SCALE	DESIGNED BY	AJS
PROJECT NUMBER	06-2015-005	CHECKED BY	RBW
DRAWING NUMBER	M-001		

NOT ISSUED FOR CONSTRUCTION

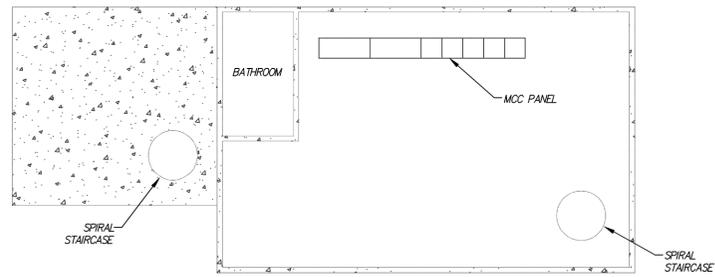
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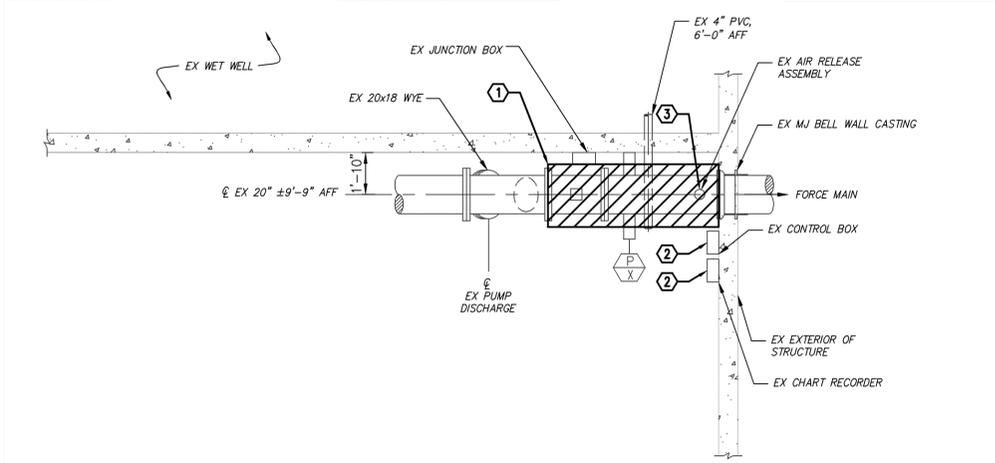


WET WELL / DRY WELL LEVEL

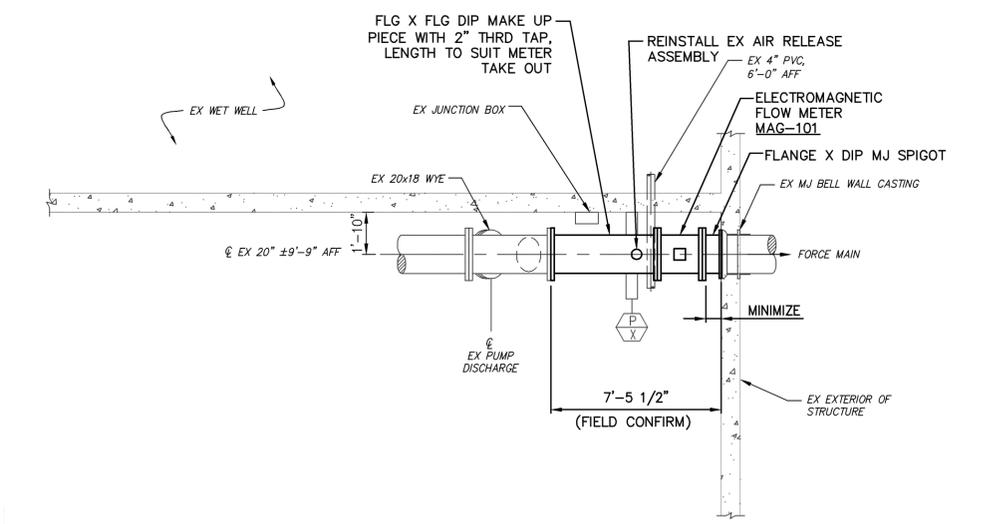


CONTROL LEVEL

1 EXISTING PUMP STATION FLOOR PLAN
M-201 SCALE: 1/8"=1'-0"



2 METER PARTIAL DEMOLITION PLAN
M-201 SCALE: 1/4"=1'-0"



3 METER PARTIAL PLAN
M-201 SCALE: 1/4"=1'-0"

NOTES:

1. FIELD CONFIRM ALL DIMENSIONS AND CONDITIONS PRIOR TO WORK.
2. CONTRACTOR RESPONSIBLE FOR INTERCEPTING ALL WASTEWATER FLOWS DURING CONSTRUCTION. SEE FLOW RANGE TABLE ON SHEET G-001 FOR APPROXIMATE BYPASS PUMPING REQUIREMENTS.

KEY NOTES: (THIS SHEET ONLY)

- 1 REMOVE EXISTING ULTRASONIC METER AND SPOOL (AS REQUIRED)
- 2 REMOVE EXISTING METER CONTROL BOXES AND CONDUCTORS (SEE ELECTRICAL).
- 3 REMOVE AND SALVAGE EX AIR RELEASE ASSEMBLY FOR REINSTALLATION ON NEW MAKE UP PIECE.

PRIME ENGINEERING
INCORPORATED
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ATLANTA, GEORGIA 30318
404-425-7100

PROJECT:
NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION
PREPARED FOR:
FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

REVISIONS	NO.	DATE	DESCRIPTION
	0	9/15/2006	CONSTRUCTION DOCUMENTS

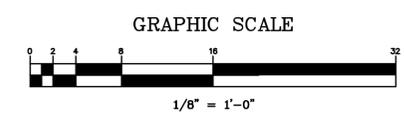
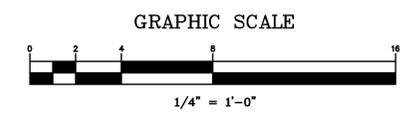


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DRAWING TITLE
MECHANICAL PLAN
0710ENFPUM-IPSK-DB

DRAWING DATE	09/15/06
DRAWN BY	ESD
DESIGNED BY	AJS
CHECKED BY	RBW
PROJECT NUMBER	06-2015-005
DRAWING NUMBER	M-201

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ELECTRICAL & INSTRUMENTATION LEGEND

GENERAL LINEWORK SYMBOLS

- NEW FACILITIES
- EXISTING FACILITIES TO REMAIN
- EXISTING FACILITIES TO BE REMOVED
- EQUIPMENT OR PACKAGE BOUNDARY

CIRCUIT AND RACEWAY SYMBOLS

- RACEWAY IDENTIFIER—SEE RACEWAY SCHEDULE, REF. 1
- RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED UON.
- RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL CONCEALED IN WALL OR ABOVE CEILING UON.
- RACEWAY OR WIRING SYSTEM IN OR UNDER FLOOR, OR CONCEALED IN OR BEHIND STRUCTURE OR EQUIPMENT
- RACEWAY OR WIRING SYSTEM TURNED TOWARD THE VIEWER (UP ON PLAN DRAWINGS)
- RACEWAY OR WIRING SYSTEM TURNED AWAY FROM THE VIEWER (DOWN ON PLAN DRAWINGS)
- RACEWAY OR WIRING SYSTEM CHANGE IN ELEVATION OR DISTANCE FROM VIEWER
- CONDUIT STUB AND CAP
- DUCT BANK, REINFORCED CONCRETE UON. DUCT BANK IDENTIFIER—SEE DUCT BANK SCHEDULE, REF. 6. EXAMPLE: DUCT BANK 123
- MANHOLE (MH) OR HANDHOLE (HH)
- JUNCTION BOX WITH OPTIONAL IDENTIFIER.
- PULL BOX WITH OPTIONAL IDENTIFIER
- HOME RUN — SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION. EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

- LIGHTING, RECEPTACLE, AND MISCELLANEOUS BRANCH CIRCUITING NOT SPECIFIED IN RACEWAY SCHEDULE. RUNS WITHOUT HATCH LINES SHALL CONTAIN TWO WIRES OF MINIMUM SIZE REQUIRED BY THE SPECS FOR THAT SYSTEM UNLESS OTHERWISE NOTED. OTHER CONDUCTOR QUANTITY SPECIFIED WITH HATCH LINES:
- NEUTRAL CONDUCTOR, IF USED—HALF STROKE PHASE CONDUCTORS, AS APPLICABLE—FULL STROKE
- EQUIPMENT GROUNDING CONDUCTOR ALWAYS REQUIRED. FOR MINIMUM SIZE PERMITTED REFER TO NEC TABLE 250-95.
- CONDUIT FILL PER NEC OR MINIMUM SIZE OF 3/4 INCH EXPOSED, 1 INCH ALL OTHER INSTALLATIONS, EXCEPT FLEX — 3/4 INCH.

GROUNDING SYMBOLS

- GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)
- GROUND ROD AND WELL
- GROUND CONNECTION, BOLTED TYPE
- GROUND CONNECTION, COMPRESSION TYPE
- GROUNDING CONDUCTOR

LIGHTING SYMBOLS

- NOTE: LIGHTING FIXTURE SHAPES AND SCALE ARE REPRESENTED WHERE POSSIBLE. THE EXAMPLES SHOWN BELOW ARE TYPICAL APPLICATIONS.
- 16'-6" CEILING HEIGHT
ROOM NUMBER (ARCH DWGS)
OPTIONAL ROOM TITLE
 - FIXTURE TYPE IDENTIFIER. TYPE APPLIES TO ALL FIXTURES OF THE SAME SHAPE WITHIN A ROOM OR AN AREA UNLESS OTHERWISE NOTED. REFER TO LIGHTSPEC, REF. 5
 - NUMBER OF SIMILAR FIXTURE
PENDANT MOUNTING HEIGHT, FLOOR TO BOTTOM OF FIXTURE, OR AHAP
NUMBER OF LAMPS/LAMP WATTAGE
 - FIXTURE TYPE
- FLUORESCENT FIXTURES:
- RECESSED IN CEILING. J-BOX, FLEX, AND CONNECTION SHOWN.
 - FLOODLIGHT (AIMED AS INDICATED)
 - FLUORESCENT STRIPLIGHT. J-BOX SHOWN.
 - FIXTURE ON UNSWITCHED CIRCUIT (NIGHT LIGHT etc.)
"n" = NON-SWITCHED CIRCUIT
- INCANDESCENT/HID FIXTURES:
- RECESSED OR SURFACE
 - POLE OR STANCHION MOUNTED
 - WALL MOUNTED
 - DIRECTIONAL LIGHT
 - POLE-MOUNTED AREA LIGHT. ONE POLE AND TWO FIXTURES SHOWN. OPTIONAL POLE NUMBER SHOWN. EXAMPLE: POLE NUMBER 14.
 - EMERGENCY LIGHTING UNIT, SELF-CONTAINED
- EXIT LIGHTS. DARK QUADRANTS INDICATE FACES ILLUMINATED:
- SURFACE ON CEILING
 - WALL MOUNTED, AT +8'0 UON
 - WITH DIRECTIONAL ARROWS
- LIGHTING CONTROL:
- LTG CIRCUIT IDENTIFIER: WHEN SHOWN ADJACENT TO FIXTURE IDENTIFIES CIRCUIT NUMBER AND SWITCH. eg. CIRCUIT 3, CONTROLLED BY SWITCH a.
"n" = NON-SWITCHED CIRCUIT

DISTRIBUTION EQUIPMENT SYMBOLS

- GENERAL: APPROXIMATE SHAPE AND SCALE REPRESENTED WHERE POSSIBLE, HOWEVER EXACT SIZE AND NUMBER OF SECTIONS IS ESTIMATED
- FLOOR-STANDING DISTRIBUTION ASSEMBLY, SUCH AS A SWITCHBOARD, TRANSFORMER, OR MOTOR CONTROL CENTER
 - EQUIPMENT NUMBER (EXAMPLE)
 - WALL-MOUNTED DISTRIBUTION ASSEMBLY, SUCH AS PANELBOARD, MOTOR STARTER PANEL, OR TERMINAL CABINET
 - EQUIPMENT NUMBER (EXAMPLE)

WIRING DEVICE SYMBOLS

- GENERAL: UNLESS OTHERWISE NOTED, ALL SWITCHES ARE WALL MOUNTED AT 4'-0"
- SINGLE POLE SWITCH. 20 AMP UNLESS OTHERWISE NOTED.
 - GANGED SWITCHES—IN COMMON BOX, WITH COMMON WALL PLATE
 - SWITCH SUPERScript MODIFIER. LOWER CASE LETTER. INDICATES CIRCUIT CONTROLLED—a,b,c,etc. MAY BE COMBINED WITH CIRCUIT NUMBER. EXAMPLE: 1a, 4b, etc.
 - SWITCH SUBSCRIPT MODIFIER. UPPER CASE LETTER OR NUMBER:
 - 2 = DOUBLE POLE
 - 3 = THREE WAY
 - 4 = FOUR WAY
 - K = KEY OPERATED
 - MC = MOMENTARY CONTACT, THREE POSITION
 - MS = MANUAL (MOTOR) STARTER OR SWITCH
 - R = RHEOSTAT (DIMMER, SPEED CONTROL)
- GENERAL: UNLESS OTHERWISE NOTED, ALL RECEPTACLES ARE 125 VOLT, SINGLE PHASE, STRAIGHT BLADE, NON-LOCKING, GROUNDING STYLE, MOUNTED AT +1'-6".
- DUPLEX RECEPTACLE, 2 POLE, 3 WIRE
 - RECEPTACLE MODIFIERS:
 - F = FLOOR MOUNTED
 - H = HAZARDOUS AREA, EXPLOSION PROOF
 - WP = OUTDOOR, WEATHER PROOF
 - SPECIAL OUTLET OR JACK FOR DO PROBE
 - RECESSED FLOOR RECEPTACLE—ANY RECEPTACLE INSIDE A SQUARE. eg DUPLEX
 - SURFACE FLOOR RECEPTACLE—ANY RECEPTACLE INSIDE A TRIANGLE. eg DUPLEX
 - GANGED RECEPTACLES—IN COMMON BOX, WITH COMMON WALL PLATE. eg DUPLEX
 - WELDING RECEPTACLE, 60A, 600V AC, 4 WIRE

MOTOR AND EQUIPMENT SYMBOLS

- MOTOR CONNECTION
- MOTOR STARTER, INDIVIDUAL—NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
- COMBINATION MOTOR STARTER—NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
- DISCONNECT, NON-FUSED. PROVISION FOR CLASS R FUSES.
- UNLESS OTHERWISE NOTED, DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE. MOUNT AT 4'-8" TO CENTER UON.
- FIELD INSTRUMENT CONNECTION
- HAND STATION, CONFIGURATION ACCORDING TO CONTROL DIAGRAMS.

TELEPHONE SYSTEM SYMBOLS

- GENERAL: UNLESS OTHERWISE NOTED, TELEPHONE OUTLETS ARE MOUNTED AT +1'-2", MATCHING RECEPTACLE HEIGHT.
- EXTERNAL LINE OR PLANT PHONE SYSTEM OUTLET
 - MODIFIERS:
 - A = ATTENDANT'S CONSOLE
 - F = FUTURE INSTRUMENT
 - J = JACK, PLUG-IN TYPE
 - W = WALL INSTRUMENT. +5'-0"
 - CONDUIT, SIZED AS NOTED
 - MODIFIERS: T = TELEPHONE

GENERAL ABBREVIATIONS

- | | | | |
|--------|--|--------|--|
| AR | ALARM RELAY | M | MOTOR CONTACTOR |
| AS | AMMETER SELECTOR SWITCH | mA | MILLIAMPERE |
| A, AMP | AMP(S), AMPERE(S) | MAX | MAXIMUM |
| AC | ALTERNATING CURRENT | MCC | MOTOR CONTROL CENTER |
| AFF | ABOVE FINISHED FLOOR | MCP | MOTOR CONTROL PANEL/MOTOR CIRCUIT |
| AHAP | AS HIGH AS POSSIBLE | MECH | MECHANICAL PROTECTOR |
| AIC | AMPS INTERRUPTING CAPACITY, SYMM. | MFR | MANUFACTURE(R) |
| AL | ALUMINUM | MH | MANHOLE |
| AT | AMPERE TRIP | MIC | MICROPHONE |
| AF | AMPERE FRAME | MIN | MINIMUM |
| AUTO | AUTOMATIC | MISC | MISCELLANEOUS |
| AUX | AUXILIARY | mM | MILLIMETER |
| AWG | AMERICAN WIRE GAUGE | mV | MILLIVOLT |
| BC | BARE COPPER CONDUCTOR | MCM | MILLI CIRCULAR MILLS |
| BKR | BREAKER | MPR | MOTOR PROTECTION RELAY |
| | | MTR | MOTOR |
| C | CONDUCTOR/CONTACTOR | N/A | NOT APPLICABLE |
| CAP | CAPACITOR | NC | NORMALLY CLOSED |
| CB | CIRCUIT BREAKER | NEUT,N | NEUTRAL |
| CKT | CIRCUIT | NIC | NOT IN CONTRACT |
| CLG | CEILING | NO. | NUMBER |
| CR | CONTROL RELAY | NOM | NOMINAL |
| CND | CONDUIT | NP | NAMEPLATE |
| CONC | CONCRETE | NTS | NOT TO SCALE |
| CONT | CONTROL | | |
| CPT | CONTROL POWER TRANSFORMER | OC | ON CENTER |
| CT | CURRENT TRANSFORMER | OD | OUTSIDE DIAMETER |
| CU | COPPER | OH | OVERHEAD |
| | | OL'S | OVERLOADS |
| D | DIAMETER | OT | OILTIGHT |
| DB | DUCT BANK | | |
| DC | DIRECT CURRENT | P | POLE |
| DET | DETAIL | PA | PUBLIC ADDRESS |
| DIAG | DIAGRAM | PB | PUSHBUTTON, PULLBOX |
| DS | DISCONNECT SWITCH | PF | POWER FACTOR |
| DWG | DRAWING | PH | PHASE |
| | | PLC | PROGRAMMABLE LOGIC CONTROLLER |
| EA | EACH | PNL | PANEL |
| EL | ELEVATION | PP | POWER PANEL |
| ELEC | ELECTRIC(AL) | PR | PAIR |
| EMER | EMERGENCY | PRI | PRIMARY |
| ENCL | ENCLOSURE/ENCLOSED | PT | POTENTIAL TRANSFORMER |
| EP | EXPLOSIONPROOF | PVC | POLYVINYL CHLORIDE |
| EQPT | EQUIPMENT | PWR | POWER |
| EX | EXISTING | | |
| FDR | FEEDER | RCPT | RECEPTACLE |
| FLA | FULL LOAD AMPS | REF | REFERENCE |
| FR | FORWARD/REVERSE | REQD | REQUIRED |
| FS | FLOW SWITCH | RMS | ROOT MEAN SQUARE |
| FU | FUSE | RTD | RESISTANCE TEMPERATURE DETECTOR |
| FUT | FUTURE | | |
| FVNR | FULL VOLTAGE NON-REVERSING | SCH | SCHEDULE |
| FVR | FULL VOLTAGE REVERSING | SEC | SECONDARY |
| | | SEL | SELECTOR |
| GALV | GALVANIZED | SPDT | SINGLE POLE DOUBLE THROW |
| GEN | GENERATOR | SPEC | SPECIFICATION |
| GFI | GROUND FAULT INTERRUPTER | SPKR | SPEAKER |
| GRD | GROUND | SS | SPEED SWITCH |
| GRS | GALVANIZED RIGID STEEL | SUB | SUBSTATION |
| H | HIGH | SW | SWITCH |
| HGT | HEIGHT | SYMM | SYMMETRICAL |
| HH | HANDHOLE | SYS | SYSTEM |
| HID | HIGH INTENSITY DISCHARGE | SYS | SOLENOID OPERATED VALVE |
| HP | HORSEPOWER | SPB | SIGNAL PULL BOX |
| HS | HAND SWITCH | | |
| HVAC | HEATING, VENTILATION, AND AIR CONDITIONING | TB | TERMINAL BOX |
| HZ | HERTZ (CYCLES PER SECOND) | TEL | TELEPHONE |
| HOA | HAND/OFF/AUTO | TEMP | TEMPERATURE |
| HMH | HIGH VOLTAGE MANHOLE | TFR | TRANSFORMER |
| ICOM | INTERCOM HANDSET | TH | THERMOSTAT |
| ID | INSIDE DIAMETER | TSH | TEMPERATURE SWITCH HIGH |
| IMC | INDIVIDUAL MOTOR CONTROLLER | TV | TELEVISION |
| INTLK | INTERLOCK | TYP | TYPICAL |
| INST | INSTANTANEOUS INSTRUMENT | TR | TIMING RELAY |
| INSTR | INSTRUMENT | U/G | UNDERGROUND |
| I/O | INPUT-OUTPUT | UON | UNLESS OTHERWISE NOTED |
| JB | JUNCTION BOX | | |
| KV | KILOVOLT | V | VOLT |
| KVA | KILOVOLT-AMPERE | VA | VOLTAMPERE |
| KVAR | KILOVOLT-AMPERE REACTIVE | VAR | VOLTAMPERE REACTIVE |
| KW | KILOWATT | VFD | VARIABLE FREQUENCY DRIVE |
| KWH | KILOWATT-HOUR | VS | VOLTMETER SELECTOR SWITCH |
| L-O-R | LOCAL-OFF-REMOTE | W | WATT, WIRE, WIDE |
| L | LONG | W/ | WITH |
| LC | LIGHTING CONTACTOR | W/O | WITHOUT |
| LCS | LOCAL CONTROL STATION | WP | WEATHERPROOF |
| LP | LEGEND PLATE | WSH | OVERLOAD TORQUE SWITCH |
| LOS | LOCK-OUT STOP | WSH | SHEAR PIN LIMIT SWITCH |
| LSL | LEVEL SWITCH LOW | | |
| LTG | LIGHTING | XS | MISCELLANEOUS (VIBRATION, ETC.) SWITCH |
| LV | LOW VOLTAGE | ZS | POSITION (LIMIT) SWITCH |
| LSH | LEVEL SWITCH HIGH | | |

PRIME ENGINEERING
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PROJECT: NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION
PREPARED FOR: FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

NO.	DATE	DESCRIPTION
0	9/15/2006	CONSTRUCTION DOCUMENTS



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ELECTRICAL & INSTRUMENTATION LEGEND

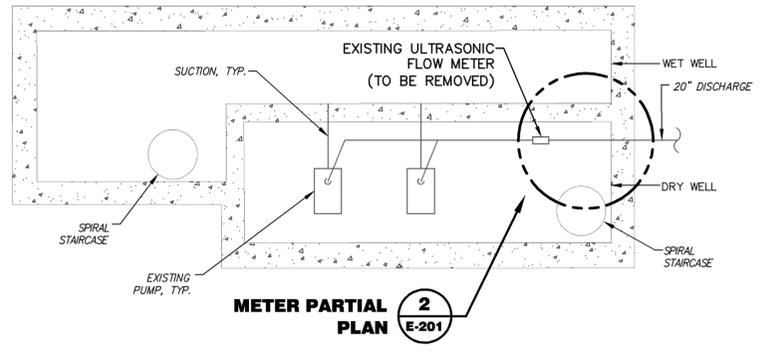
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DRAWING SCALE	NOT TO SCALE
PROJECT NUMBER	06-2015-005
DRAWING NUMBER	E-001
DRAWN BY	CDR
DESIGNED BY	CDR
CHECKED BY	AKR
NOT ISSUED FOR CONSTRUCTION	

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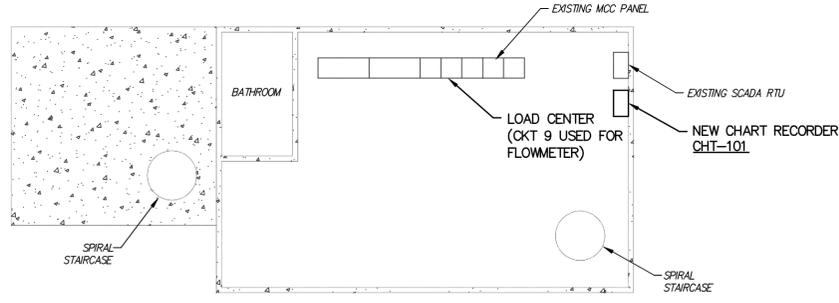
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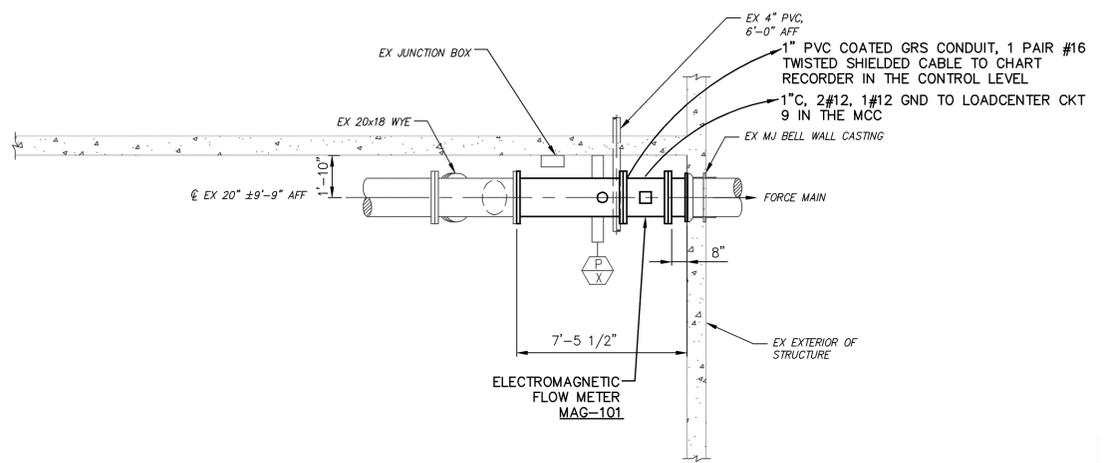
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WET WELL / DRY WELL LEVEL



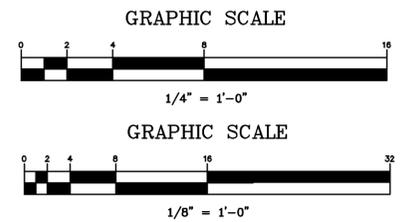
1 EXISTING PUMP STATION FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 METER PARTIAL PLAN
SCALE: 1/4" = 1'-0"

NOTES:

- ALL EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL, MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE PVC COATED RIGID, MINIMUM OF 1".
- ALL FITTINGS SHALL BE CAST WITH THREADED HUBS. ALL CONNECTIONS SHALL BE COMPRESSION TYPE.
- THE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES, AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY PROVIDING SERVICE. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND/OR INSPECTIONS AS REQUIRED BY FULTON COUNTY.
- ALL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH 600 VOLT TYPE THWN-2 INSULATION.
- ALL EXISTING CONDUITS SHALL BE USED IF PERMITTED.
- THE NEW ELECTROMAGNETIC FLOW METER MAG-101 SHALL BE 20" KROHNE IFS 4000 KC. SIGNAL CONVERTER SHALL BE UNIT MOUNTED. NEW ELECTROMAGNETIC FLOW METER MAG-101 WILL NOT BE SUBMERGENCE RATED SINCE THE UNIT SHALL BE LOCATED IN DRY WELL.
- CIRCUIT 9 LOCATED INSIDE OF EXISTING MCC LOADCENTER SUPPLIES THE EXISTING FLOW METER POWER AND SHALL BE USED TO SUPPLY POWER FOR THE NEW ELECTROMAGNETIC FLOW METER MAG-101.
- THE NEW ELECTROMAGNETIC FLOW METER MAG-101 SIGNAL SHALL BE WIRED UP TO THE EXISTING DEXTOR FORTSON RTU ANALOG INPUT 1.
- THE EXISTING CHART RECORDER SHALL BE REPLACED WITH NEW 8" CIRCULAR CHART RECORDER CHT-101 PROGRAMMED TO ACCEPT 4-20mA TO RECORD FLOW RATES. IT SHALL BE MOUNTED UPSTAIRS AT THE CONTROL LEVEL. CONTRACTOR SHALL RUN 1" C FROM NEW CHART RECORDER CHT-101 TO NEW ELECTROMAGNETIC FLOW METER MAG-101. PROVIDE SPLITTER TO SEND FLOW METER 4-20mA SIGNAL TO THE EXISTING SCADA SYSTEM LOCATED AT THE CONTROL LEVEL. EXISTING CIRCUIT IN THE LOADCENTER FOR THE OLD CHART RECORDER SHALL BE USED FOR THE NEW CHART RECORDER CHT-101. RUN 2#12, 1#12 GND IN 3/4" C FROM LOADCENTER TO NEW CHART RECORDER CHT-101.
- PROVIDE NEW 3/4" CONDUIT BETWEEN NEW CHART RECORDER CHT-101 AND EXISTING SCADA PANEL W/ 1 PAIR #16 SHIELDED TWISTED CABLE.
- GROUND NEW ELECTROMAGNETIC FLOW METER MAG-101 TO GROUND GRID.



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PROJECT:
NORTH FULTON PUMP STATION UPGRADES - MORGAN FALLS PUMP STATION
PREPARED FOR:
FULTON COUNTY DEPARTMENT OF PUBLIC WORKS

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ELECTRICAL & INSTRUMENTATION PLAN
0711ENFPUMPSTK.DB

DRAWING DATE	09/15/06
DRAWN BY	CDR
DRAWING SCALE AS SHOWN	CDR
PROJECT NUMBER	06-2015-005
CHECKED BY	AKR
DRAWING NUMBER	E-201

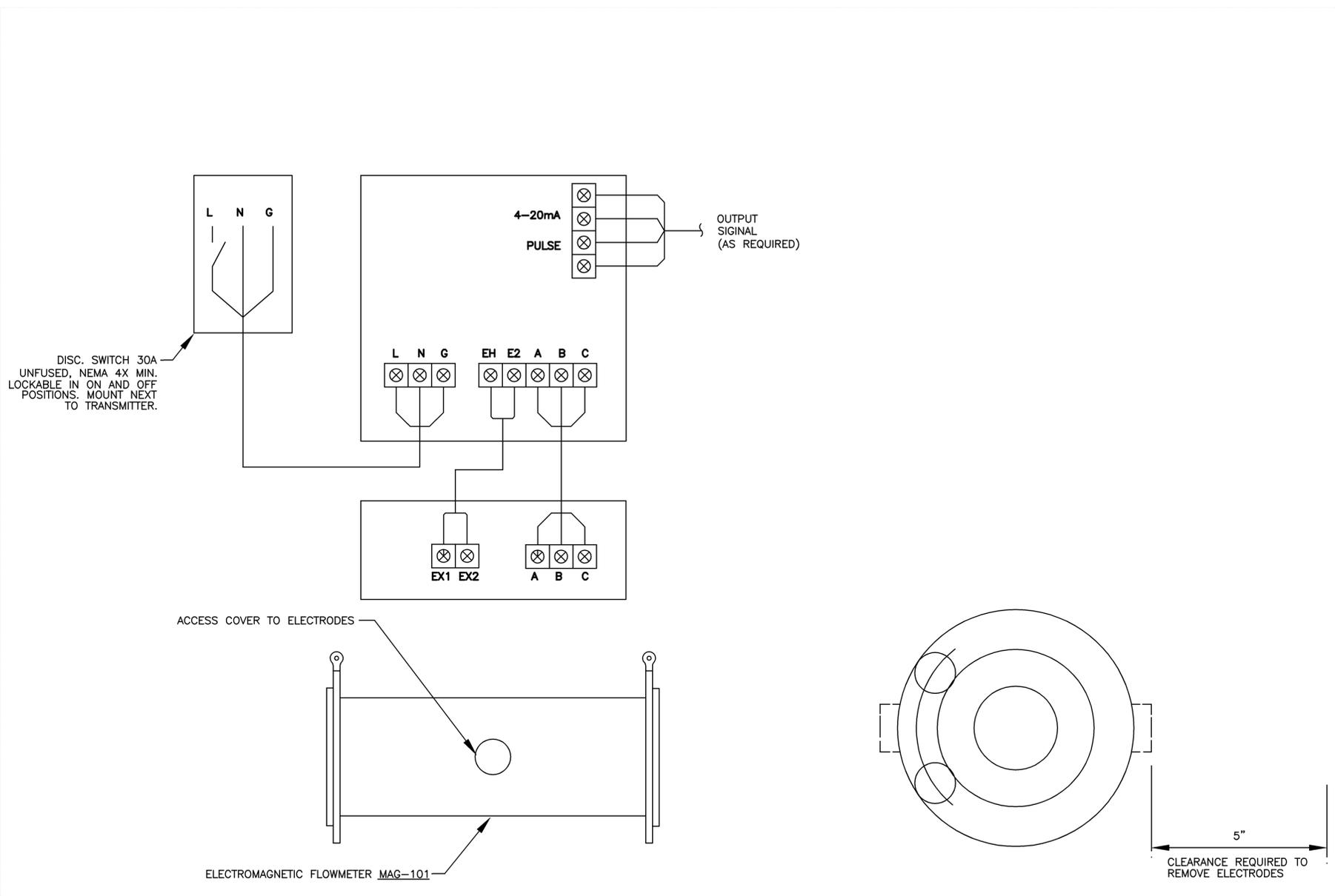
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1 FLANGED MOUNTED ELECTROMAGNETIC FLOW METER
E-401 SCALE: NOT TO SCALE

- NOTES:**
1. REPLACE OLD ULTRASONIC FLOW METER WITH NEW ELECTROMAGNETIC FLOW METER MAG-101.
 2. NEW ELECTROMAGNETIC FLOW METER MAG-101 SHALL GET ITS POWER FROM THE EXISTING CIRCUIT 9 OF MCC LOADCENTER LOCATED IN THE CONTROL ROOM.
 3. THE FLOW RATE SHALL BE CONNECTED UP TO ANALOG INPUT 1 ON THE DEXTOR FORTSON RTU.
 4. RUN SHIELDED TWISTED PAIR IN 1" CONDUIT FOR 4-20mA FLOW SIGNAL.
 5. REUSE EXISTING POWER CONDUIT AND CONDUCTORS TO POWER THE NEW ELECTROMAGNETIC FLOW METER MAG-101. IF FIELD CONDITIONS PERMITS. IF NEW CONDUIT IS REQUIRED, RUN 3 #12 CONDUCTORS IN 1" CONDUIT.
 6. RUN 3 #12 CONDUCTORS IN 1" CONDUIT FOR POWER FROM FLOW METER DISCONNECT TO FLOW METER.
 7. NEW ELECTROMAGNETIC FLOW METER MAG-101 SHALL BE PROVIDED WITH ITS OWN FLOW DISPLAY.
 8. NEW ELECTROMAGNETIC FLOW METER MAG-101 AND NEW CHART RECORDER QHT-101 MUST RECORD AND TOTALIZE IN ENGLISH UNITS.

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DRAWING TITLE
ELECTRICAL & INSTRUMENTATION DETAILS
07TTFNFUMPSK-DB

DRAWING DATE	09/15/06	DRAWN BY	CDR
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