CITY OF NORTH MIAMI

PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT

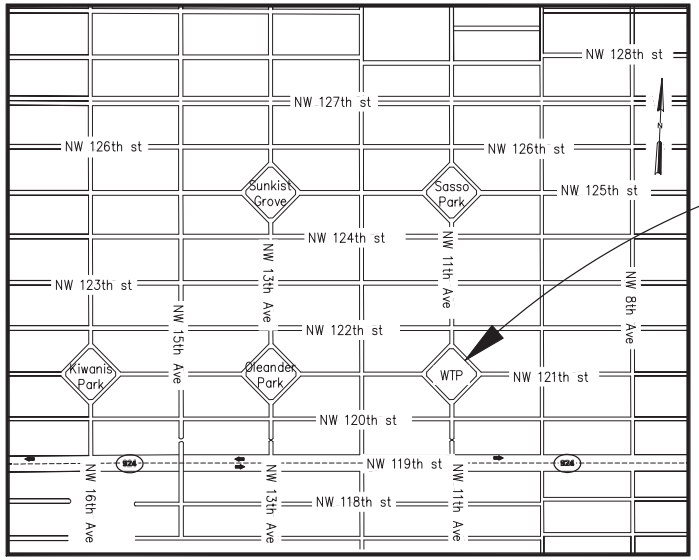
RELIABILITY IMPROVEMENTS
VOLUME B: WTP REHAB

VOLUME B: GENERAL, CIVIL, MECHANICAL AND STRUCTURAL

NORTH MIAMI FLORIDA

HAZEN AND SAWYER
Environmental Engineers & Scientists

4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771



PROJECT LOCATION:
12098 NORTHWEST 11th AVE
NORTH MIAMI, FLORIDA 33168

LOCATION MAP
NOT TO SCALE

JULY 2015
REQUEST FOR PROPOSAL

TITLE SHEET AND LOCATION MAP
SHEET 1 OF 335
DRAWING No. G-01

H&S PROJECT No.44238-004 – VOLUME B – WTP REHAB
REQUEST FOR PROPOSAL

PLOT DATE: 7/29/2015 2:57 PM BY: TBOCAS
XREFs: ..\..\Base\Location_Map
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LIST OF DRAWINGS
VOLUME A : FILTER REHAB

SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
		GENERAL
1	G-01	COVER SHEET
2	G-02	LIST OF DRAWINGS SHEET 1
3	G-03	LIST OF DRAWINGS SHEET 2
4	G-04	LIST OF DRAWINGS SHEET 3
5	G-05	ABBREVIATIONS, SYMBOLS AND LEGEND
		CIVIL
6	C-01	EXISTING SITE PLAN
7	C-02	STAGING PLAN AND PROJECT AREA LOCATION
8	C-03	CIVIL DETAILS
		MECHANICAL
9	M-01	EXISTING CONDITIONS LOWER PLAN
10	M-02	EXISTING CONDITIONS UPPER PLAN
11	M-03	EXISTING CONDITIONS PHOTOS – SHEET 1
12	M-04	EXISTING CONDITIONS PHOTOS – SHEET 2
13	M-05	EXISTING CONDITIONS PHOTOS – SHEET 3
14	M-06	EXISTING CONDITIONS PHOTOS – SHEET 4
15	M-07	FILTER DEMOLITION LOWER PLAN
16	M-08	FILTER POST-DEMOLITION LOWER PLAN
17	M-09	FILTER DEMOLITION UPPER PLAN
18	M-10	FILTER POST-DEMOLITION UPPER PLAN
19	M-11	FILTER DEMOLITION SECTION 1
20	M-12	FILTER POST-DEMOLITION SECTION 1
21	M-13	FILTER DEMOLITION SECTION 2
22	M-14	FILTER POST-DEMOLITION SECTION 2
23	M-15	FILTER DEMOLITION SECTION 3
24	M-16	FILTER POST-DEMOLITION SECTION 3
25	M-17	MECHANICAL PIPING SCHEMATIC
26	M-18	PROPOSED FILTERS LOWER PLAN AND LIFE SAFETY PLAN
27	M-19	PROPOSED FILTERS UPPER PLAN
28	M-20	PROPOSED FILTERS SECTION 1 AND HEAD ROOM CLEARANCE
29	M-21	PROPOSED FILTERS SECTION 2
30	M-22	PROPOSED FILTERS SECTION 3
31	M-23	PROPOSED FILTERS SECTION 4
32	M-24	DETAILS – SHEET 1
33	M-25	DETAILS – SHEET 2
		INSTRUMENTATION
34	I-01	SYMBOLS AND LEGEND
35	I-02	BLOCK DIAGRAM
36	I-03	PROCESS AND INSTRUMENTATION DIAGRAM FILTER NO. 1
37	I-04	PROCESS AND INSTRUMENTATION DIAGRAM FILTER NO. 2
38	I-05	PROCESS AND INSTRUMENTATION DIAGRAM FILTER NO. 3
39	I-06	PROCESS AND INSTRUMENTATION DIAGRAM FILTER NO. 4
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SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
		STRUCTURAL
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43	S-02	EXISTING CONDITIONS LOWER PLAN
44	S-03	EXISTING CONDITIONS UPPER PLAN
45	S-04	EXISTING CONDITIONS PHOTOS
46	S-05	FILTER DEMOLITION LOWER PLAN
47	S-06	FILTER DEMOLITION UPPER PLAN
48	S-07	FILTER DEMOLITION SECTION 1
49	S-08	FILTER DEMOLITION SECTION 2
50	S-09	PROPOSED FILTERS LOWER PLAN
51	S-10	PROPOSED FILTERS UPPER PLAN
52	S-11	SECTIONS
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54	S-13	DETAILS – SHEET 2
55	S-14	DETAILS – SHEET 3
56	S-15	DETAILS – SHEET 4
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58	E-02	GENERAL NOTES AND SPECIFICATIONS
59	E-03	ELECTRICAL SITE PLAN
60	E-04	ELECTRICAL DEMOLITION
61	E-05	ELECTRICAL PLAN PIPE GALLERY LOWER PLAN
62	E-06	ELECTRICAL PLAN PIPE GALLERY UPPER PLAN
63	E-07	ELECTRICAL PLAN SECOND FLOOR
64	E-08	EXISTING SINGLE LINE DIAGRAM
65	E-09	PROPOSED SINGLE LINE DIAGRAM
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69	E-13	MISCELLANEOUS ELECTRICAL STANDARD DETAILS SHEET 2

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN L.M.S.
CHECKED G.N.C.
PROJ. ENGR. G.A.B.

GEORGE A. BROWN P.E.
No. 56076

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SCALE N.T.S.

CLIENTS PROJECT: –
ENGINEERS PROJECT: 44238-004
CAD REFERENCE:44238-004BP3-G02A

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB
LIST OF DRAWINGS
SHEET 1

DATE: JULY 2015
SHEET: 2A OF 335
DRAWING: G-2A

REQUEST FOR PROPOSAL

PLOT DATE: 7/29/2015 2:56 PM BY: TBOCAS
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Addendum No. 1, RFP No. 45-08-15 Winson Water Treatment Plant Reliability Improvements

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VOLUME B : WTP REHAB

SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
		GENERAL
1	G-01	COVER SHEET
2A	G-2A	LIST OF DRAWINGS SHEET 1
2	G-02	LIST OF DRAWINGS SHEET 2
3	G-03	LIST OF DRAWINGS SHEET 3
4	G-04	ABBREVIATIONS, SYMBOLS AND LEGEND
5	G-05	GENERAL NOTES
6	G-06	EXISTING SITE PLAN
7	G-07	EXISTING SITE AERIAL AND ZONING MAP
8	G-08	PROPOSED SITE PLAN
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10	G-10	PROPOSED STAGING PLAN DEMOLITION PLAN – PHASE I
11	G-11	PROPOSED STAGING PLAN CONSTRUCTION PLAN – PHASE I
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15	G-15	PROPOSED STAGING PLAN CONSTRUCTION PLAN – PHASE III
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17	G-17	PROPOSED STAGING PLAN CONSTRUCTION PLAN – PHASE IV
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20	C-03	YARD PIPING – PROPOSED PLAN
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22	C-05	YARD PIPING – DETAILS SHEET 2
23	C-06	YARD PIPING – DETAILS SHEET 3
24	C-07	YARD PIPING – DETAILS SHEET 4
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30	C-13	SETBACK PLAN
31	C-14	PAVING, GRADING & DRAINAGE PROPOSED PLAN
32	C-15	SWALES DRAINAGE PROPOSED PLAN
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40	C-23	PAVING, GRADING & DRAINAGE SECTIONS – SHEET 3
41	C-24	PAVING, GRADING & DRAINAGE SECTIONS – SHEET 4
42	C-25	PAVING, GRADING & DRAINAGE SECTIONS – SHEET 5
43	C-26	PAVING, GRADING & DRAINAGE SECTIONS – SHEET 6
44	C-27	BREEZEWAY PLANS AND DETAILS
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51	C-34	CIVIL DETAILS SHEET 7
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54	C-37	CIVIL DETAILS SHEET 10
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59	C-42	CIVIL DETAILS SHEET 15
60	C-43	CIVIL DETAILS SHEET 16
61	C-44	CIVIL DETAILS SHEET 17
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74	M-13	LIME SLAKER AND SILO MODIFICATIONS DEMOLITION PHOTOS
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79	M-18	HIGH SERVICE PUMP STATION DEMOLITION PHOTOS – SHEET 4
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85	M-24	WATER STORAGE TANK 0.75 MG AND LP TANK PHOTOS
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87	M-26	WATER STORAGE TANK 1.5 MG DEMOLITION PHOTOS
88	M-27	SODIUM HYPOCHLORITE FACILITY DEMOLITION PLAN
89	M-28	SODIUM HYPOCHLORITE FACILITY DEMOLITION PHOTOS
90	M-29	COAGULANT FEED SYSTEM DEMOLITION PLAN AND PHOTOS
91	M-30	FLUORIDE FEED SYSTEM DEMOLITION PLAN AND PHOTOS
92	M-31	AMMONIA FEED SYSTEM DEMOLITION PLAN AND PHOTOS
93	M-32	RAW WATER WELL NO. 1 PROPOSED PLAN, SECTIONS AND DETAILS
94	M-33	RAW WATER WELL NO. 2 PROPOSED PLAN, SECTIONS AND DETAILS
95	M-34	RAW WATER WELL DETAILS
96	M-35	LIME CONTACTOR REHABILITATION PROPOSED PLAN
97	M-36	LIME CONTACTOR REHABILITATION SECTIONS AND DETAILS
98	M-37	LIME CONTACTOR REHABILITATION SECTIONS AND DETAILS
99	M-38	LIME CONTACTOR REHABILITATION DETAILS
100	M-39	LIME CONTACTOR REHABILITATION SECTIONS AND DETAILS
101	M-40	LIME SLAKER AND SILO MODIFICATIONS PLAN
102	M-41	LIME SLAKER AND SILO MODIFICATIONS PLANS
103	M-42	LIME SLAKER AND SILO MODIFICATIONS SECTION AND DETAILS
104	M-43	LIME SLAKER AND SILO MODIFICATIONS DIAGRAMS
105	M-44	MASTER PUMP STATION KEY PLAN
106	M-45	HIGH SERVICE PUMPS PLAN
107	M-46	BACKWASH AND TRANSFER PUMPS PLAN
108	M-47	MASTER PUMP STATION SECTIONS AND DETAILS
109	M-48	MASTER PUMP STATION SECTIONS
110	M-49	MASTER PUMP STATION SECTIONS AND DETAILS
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112	M-51	CHEMICAL HANDLING FACILITY KEY PLAN AND SIGNAGE
113	M-52	CHEMICAL HANDLING FACILITY ANTI-COAGULANT AND COAGULANT AID
114	M-53	CHEMICAL HANDLING FACILITY FLUORIDE AND AQUEOUS AMMONIA
115	M-54	CHEMICAL HANDLING FACILITY SECTIONS
116	M-55	CHEMICAL HANDLING FACILITY SECTIONS AND DETAILS
117	M-56	BACKWASH HOLDING BASIN PROPOSED PLAN
118	M-57	BACKWASH HOLDING BASIN SECTIONS AND DETAILS
119	M-58	BACKWASH BASIN SLUDGE PUMP PLAN AND SECTIONS
120	M-59	BACKWASH BASIN DECANT PUMP PLAN AND SECTIONS
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123	M-62	SODIUM HYPOCHLORITE FACILITIES PROPOSED PLAN
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140	M-79	MECHANICAL DETAILS SHEET 9
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143	S-03	NEW ADMINISTRATION BUILDING FIRST FLOOR PLAN
144	S-04	NEW ADMINISTRATION BUILDING SECOND FLOOR PLAN
145	S-05	NEW ADMINISTRATION BUILDING ROOF PLAN
146	S-06	NEW ADMINISTRATION BUILDING ROOF TRUSS PLANS
147	S-07	NEW ADMINISTRATION BUILDING ACCESS AND SIDEWALK
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155	S-15	AERATOR MIST PANEL IMPROVEMENTS SECTIONS AND DETAILS
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160	S-20	LIME SLAKER AND SILO MODIFICATIONS SECTIONS AND DETAILS
161	S-21	WASTE LIME SLUDGE PUMP STATION PROPOSED PLAN, SECTIONS AND DETAILS
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163	S-23	FILTER/OPS BUILDINGS STAIRS ELEVATIONS AND DETAILS
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175	S-35	BACKWASH HOLDING BASIN REHABILITATION PLANS AND DETAILS
176	S-36	BACKWASH HOLDING BASIN REHABILITATION DETAILS
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180	S-40	CHEMICAL INJECTION VAULT PLAN AND SECTION
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184	S-44	STRUCTURAL DETAILS SHEET 3
185	S-45	STRUCTURAL DETAILS SHEET 4
186	S-46	STRUCTURAL DETAILS SHEET 5
187	S-47	STRUCTURAL DETAILS SHEET 6
188	S-48	STRUCTURAL DETAILS SHEET 7
189	S-49	STRUCTURAL DETAILS SHEET 8

NO.	DATE	ISSUED FOR	BY
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DESIGNED G.A.B.
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WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB
LIST OF DRAWINGS
SHEET 2

DATE: JULY 2015
SHEET: 2 OF 335
DRAWING: G-02

REQUEST FOR PROPOSAL

PLOT DATE: 7/29/2015 2:58 PM BY: TBOCAS
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Addendum No. 1, RFP No. 45-08-15 Winson Water Treatment Plant Reliability Improvements

LIST OF DRAWINGS
VOLUME C : WTP REHAB

SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
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2	G-02	LIST OF DRAWINGS SHEET 2
3	G-03	LIST OF DRAWINGS SHEET 3
		ARCHITECTURAL
190	A-01	NEW ADMINISTRATION BUILDING SCHEDULES
191	A-02	NEW ADMINISTRATION BUILDING LIFE SAFETY PLANS
192	A-03	NEW ADMINISTRATION BUILDING FIRST FLOOR PLAN
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194	A-05	NEW ADMINISTRATION BUILDING ROOF PLAN
195	A-06	NEW ADMINISTRATION BUILDING FIRST FLOOR REFLECTED CEILING PLAN
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214	A-25	STANDARD ARCHITECTURAL DETAILS SHEET 4
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227	I-12	CHEMICAL HANDLING FACILITY – FLUORIDE FEED SYSTEMS
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232	I-17	HYPOCHLORITE STORAGE AND FEED FACILITY
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235	I-20	SITE SECURITY AND TELEMETRY MODIFICATIONS
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237	I-22	INSTALLATION AND MISCELLANEOUS DETAILS SHEET 1
238	I-23	INSTALLATION AND MISCELLANEOUS DETAILS SHEET 2
239	I-24	INSTALLATION AND MISCELLANEOUS DETAILS SHEET 3
		ELECTRICAL
240	E-01	ELECTRICAL LEGEND AND SYMBOLS
241	E-02	ELECTRICAL NOTES
242	E-03	ELECTRICAL SITE PLAN EXISTING
243	E-04	ELECTRICAL SITE PLAN PROPOSED
244	E-05	EXISTING FACILITY SINGLE LINE DIAGRAM
245	E-06	PROPOSED FACILITY SINGLE LINE DIAGRAM SHEET 1 OF 2
246	E-07	PROPOSED FACILITY SINGLE LINE DIAGRAM SHEET 2 OF 2
247	E-08	EXISTING FILTER BUILDING FIRST FLOOR ELECTRICAL PLAN
248	E-09	EXISTING FILTER CONTROL ROOM ELECTRICAL PLAN
249	E-10	NEW ADMINISTRATION BUILDING FIRST FLOOR PLAN
250	E-11	NEW ADMINISTRATION BUILDING ELECTRICAL ROOM PLAN
251	E-12	NEW ADMINISTRATION BUILDING SECOND FLOOR PLAN
252	E-13	NEW ADMINISTRATION BUILDING ROOF POWER
253	E-14	NEW ADMINISTRATION BUILDING FIRST FLOOR LIGHTING
254	E-15	NEW ADMINISTRATION BUILDING SECOND FLOOR LIGHTING
255	E-16	NEW ADMINISTRATION BUILDING FIRST FLOOR FIRE ALARM PLAN
256	E-17	NEW ADMINISTRATION BUILDING SECOND FLOOR FIRE ALARM PLAN
257	E-18	NEW ADMINISTRATION BUILDING FIRE ALARM RISER AND CALCULATIONS
258	E-19	NEW ADMINISTRATION BUILDING FIRE ALARM NOTES AND LEGENDS
259	E-20	SECURITY ACCESS ELECTRICAL DETAILS SHEET 1
260	E-21	SECURITY ACCESS ELECTRICAL DETAILS SHEET 2
261	E-22	SECURITY ACCESS ELECTRICAL DETAILS SHEET 3
262	E-23	ELECTRICAL ROOM 1 DEMOLITION AND PROPOSED PLAN
263	E-24	ELECTRICAL ROOM 2 EQUIPMENT MODIFICATIONS
264	E-25	RAW WATER WELL NOS. 1 AND 2 POWER AND LIGHTING PLAN
265	E-26	AERATOR / LIME CONTACTOR ACCESS STAIRS POWER AND LIGHTING PLAN
266	E-27	LIME CONTACTOR POWER AND LIGHTING PLAN
267	E-28	LIME SLAKER AND SILO MODIFICATIONS POWER AND LIGHTING PLAN
268	E-29	MASTER PUMP STATION POWER AND LIGHTING PLAN
269	E-30	HIGH SERVICE PUMPS SECTION
270	E-31	BACKWASH AND TRANSFER PUMPS SECTION
271	E-32	INTERIM CHEMICAL STORAGE AND FEED SYSTEM POWER AND LIGHTING PLAN
272	E-33	CHEMICAL HANDLING FACILITY POWER AND LIGHTING PLAN
273	E-34	BACKWASH HOLDING BASINS POWER PLAN
274	E-35	WASTE LIME SLUDGE PUMP STATION POWER PLAN
275	E-36	SODIUM HYPOCHLORITE FACILITIES POWER AND LIGHTING
276	E-37	LIGHTNING PROTECTION SYSTEM
277	E-38	SITE LIGHTING PLAN
278	E-39	SITE SECURITY PLAN
279	E-40	SECURITY SCHEDULES
280	E-41	PANEL SCHEDULES ADMINISTRATION BUILDING
281	E-42	PANEL SCHEDULES PROCESS AREA SHEET 1
282	E-43	PANEL SCHEDULES PROCESS AREA SHEET 2
283	E-44	PANEL SCHEDULES PROCESS AREA SHEET 3
284	E-45	PANEL SCHEDULES PROCESS AREA SHEET 4
285	E-46	SCHEMATICS SHEET 1
286	E-47	SCHEMATICS SHEET 2
287	E-48	SCHEMATICS SHEET 3
288	E-49	ELECTRICAL CONTROL AND SIGNAL RISER DIAGRAMS 1
289	E-50	ELECTRICAL CONTROL AND SIGNAL RISER DIAGRAMS 2
290	E-51	ELECTRICAL CONTROL AND SIGNAL RISER DIAGRAMS 3
291	E-52	ELECTRICAL CONTROL AND SIGNAL RISER DIAGRAMS 4
292	E-53	ELECTRICAL CONTROL AND SIGNAL RISER DIAGRAMS 5
293	E-54	ELECTRICAL CONTROL AN SIGNAL RISER DIAGRAMS 6
294	E-55	ELECTRICAL CONTROL AN SIGNAL RISER DIAGRAMS 7
295	E-56	ELECTRICAL CONTROL AN SIGNAL RISER DIAGRAMS 8
296	E-57	DUCT BANK SECTIONS
297	E-58	DUCT BANK SCHEDULES
298	E-59	MANHOLES – E1 AND C1 CONDUIT RISERS
299	E-60	MANHOLES – E2 AND C2 CONDUIT RISERS
300	E-61	MANHOLES – E3 AND E4 CONDUIT RISERS
301	E-62	MANHOLES – C3 AND C4 CONDUIT RISERS
302	E-63	ELECTRICAL DETAILS SHEET 1
303	E-64	ELECTRICAL DETAILS SHEET 2
304	E-65	ELECTRICAL DETAILS SHEET 3
305	E-66	ELECTRICAL DETAILS SHEET 4
306	E-67	ELECTRICAL DETAILS SHEET 5
307	E-68	ELECTRICAL DETAILS SHEET 6
308	E-69	ELECTRICAL DETAILS SHEET 7
309	E-70	ELECTRICAL DETAILS SHEET 8
		HVAC
310	H-01	HVAC SYMBOLS, ABBREVIATIONS AND NOTES
311	H-02	NEW ADMINISTRATION BUILDING FIRST FLOOR – HVAC PLAN
312	H-03	NEW ADMINISTRATION BUILDING SECOND FLOOR – HVAC PLAN
313	H-04	NEW ADMINISTRATION BUILDING ROOF – HVACPLAN
314	H-05	CHEMICAL HANDLING FACILITY HVAC PLAN
315	H-06	HVAC SCHEDULES
316	H-07	HVAC DETAILS SHEET 1
317	H-08	HVAC DETAILS SHEET 2
		PLUMBING
318	P-01	PLUMBING SYMBOLS, ABBREVIATIONS, AND NOTES
319	P-02	NEW ADMINISTRATION BUILDING FIRST FLOOR SANITARY PLAN
320	P-03	NEW ADMINISTRATION BUILDING SECOND FLOOR SANITARY PLAN
321	P-04	NEW ADMINISTRATION BUILDING FIRST FLOOR POTABLE WATER PLAN
322	P-05	NEW ADMINISTRATION BUILDING SECOND FLOOR POTABLE WATER PLAN
323	P-06	NEW ADMINISTRATION BUILDING ROOF DRAINAGE PLAN
324	P-07	NEW ADMINISTRATION BUILDING SANITARY ISOMETRIC
325	P-08	NEW ADMINISTRATION BUILDING FIRST FLOOR POTABLE WATER ISOMETRIC
326	P-09	NEW ADMINISTRATION BUILDING SECOND FLOOR POTABLE WATER ISOMETRIC
327	P-10	PLUMBING DETAILS SHEET 1
328	P-11	LANDSCAPE ELEVATIONS – CODE MINIMUM
		LANDSCAPING
329	L-1	LANDSCAPE PLAN
330	L-2	LANDSCAPE NOTES
331	L-3	LANDSCAPE DETAILS
		IRRIGATION
332	IR-1	IRRIGATION PLAN
333	IR-2	IRRIGATION DETAILS
334	IR-3	IRRIGATION DETAILS & NOTES
335	IR-4	IRRIGATION NOTES

REQUEST FOR PROPOSAL

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN H.F.M.
CHECKED J.N.M.
PROJ. ENGR. G.A.B.

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Certificate of Authorization Number: 2771

SCALE: NTS

CLIENTS PROJECT: –
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-G03

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB
LIST OF DRAWINGS
SHEET 3

DATE: JULY 2015
SHEET: 3 OF 335
DRAWING: G-03

PLOT DATE: 7/29/2015 2:58 PM BY: TBOCAS
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Addendum No. 1, RFP No. 45-08-15 Winson Water Treatment Plant Reliability Improvements

SYMBOLS

- SOLENOID VALVE
- MOTOR OPERATED VALVE
- BALL VALVE
- BUTTERFLY VALVE/DAMPER
- DIAPHRAGM VALVE
- CHECK VALVE
- GATE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- GLOBE VALVE
- HOSE BIBB (PLAN)
- HOSE BIBB (ELEVATION)
- REDUCER (SINGLE LINE)
- REDUCER (DOUBLE LINE)
- VENTURI METER
- UNION
- MECHANICAL COUPLING
- HARNESSED MECHANICAL COUPLING
- GROOVED COUPLING
- FLANGED JOINT
- MECHANICAL JOINT
- PIPE SUPPORT
- FIRE HYDRANT
- MANHOLE
- SEALED MANHOLE
- EXISTING STRUCTURE OR UTILITY
- NEW STRUCTURE OR UTILITY–THIS CONTRACT
- EXISTING PIPELINE (DOUBLE LINE IF SCALE OF DRAWING PERMITS)
- IF SCALE OF DRAWING PERMITS)
- NEW PIPELINE–THIS CONTRACT (DOUBLE LINE SLUICE GATE
- SLIDE GATE
- STOP LOG
- PIPE MATERIAL CHANGE
- PROPERTY LINE
- PROPOSED STORM WATER SWALE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED SIDEWALK
- PROPOSED PAVERS
- MILL EXISTING ASPHALT AND RESURFACE
- PROPOSED CONCRETE PAVEMENT

ABBREVIATIONS

VALVES, FITTINGS, ETC.

ARV	AIR RELIEF VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BV	BALL VALVE
CLV	CHLORINE GAS VALVE UNDER VACUUM
CPLG	COUPLING
CV	CHECK VALVE
EXP. JT.	EXPANSION JOINT
FD	FLOOR DRAIN
FDA	FOOD AND DRUG ADMINISTRATION
FH	FIRE HYDRANT
FLG, F	FLANGE
FTG	FITTING
GV	GATE VALVE
HB	HOSE BIBB
HIC	HAND INDICATING CONTROL
LR	LONG RADIUS
MC	MECHANICAL COUPLING
MJ	MECHANICAL JOINT
NPT	NATIONAL PIPE THREAD
PE	PLAIN END
PO	PUSH ON
PRV	PRESSURE RELIEF VALVE
P.S.	PUMP STATION
PV	PLUG VALVE
RD	ROOF DRAIN
RJ	RESTRAINED JOINT
SOV	SOLENOID OPERATED VALVE
THD	THREADED
VAC	VACUUM

PIPING

CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CPLG, C	COUPLING
CU	COPPER
DIP	DUCTILE IRON PIPE
FM	FORCE MAIN
FRP	FIBERGLASS REINFORCED PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHYLENE
IPS	IRON PIPE SIZE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PVC	POLYVINYLCHLORIDE
RCP	REINFORCED CONCRETE PIPE
RCPP	REINFORCED CONCRETE PRESSURE PIPE

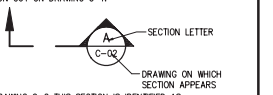
GENERAL

AA	AQUEQUS AMMONIA
A/C	AIR CONDITIONER
AB	ANCHOR BOLT
AIR	AIR SCOUR
AL, ALUM	ALUMINUM
∠	ANGLE
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
BD	BASIN DRAIN
BLDG	BUILDING
BLK.	BLOCK
BS	BACKWASH SUPPLY
BOTT	BOTTOM
BP	BID PACKAGE
BWW	BACKWASH WASTE
BWS	BACKWASH SUPPLY
CB	CATCH BASIN
CC	CENTER TO CENTER
CHK'D	CHECKERED
CHLOR, CL_2	CHLORINE
℄	CENTER LINE
CLR.	CLEAR
CO	CLEAN OUT
CO.	COMPANY
COL	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
DEC	DECANT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DR	DRAIN
DWG	DRAWING
DWL.	DOWEL
EA	EACH
ECC	ECCENTRIC
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT
EL ELEV	ELEVATION
ELEC.	ELECTRIC
EPA	ENVIRONMENTAL PROTECTION AGENCY
EQUIP	EQUIPMENT
EW	EACH WAY
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FILTER DRAIN
FE	FIRE EXTINGUISHER OR FILTER EFFLUENT
FF	FINISHED FLOOR
FI	FILTER INFLUENT OR FILTER FEED
FIG	FIGURE
FIN	FINISH
FL	FLOOR
FT	FOOT
FTG	FOOTING
FW	FILTERED WATER
GALV	GALVANIZED
GD	GRAVITY DRAIN
GR	GRADE
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HYPOCHLORITE SOLUTION
HSP	HIGH SERVICE PUMP
HSPS	HIGH SERVICE PUMP STATION
HWH	HOT WATER HEATER
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
IF	INSIDE FACE
INF	INFLUENT
INJ	INJECTION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
IQ	IRRIGATION QUALITY
ISO	ISOLATION
JB	JUNCTION BOX
JT, J	JOINT
LAT.	LATERIAL
LBS	POUNDS
LBS/FT	POUNDS PER FOOT
LG	LONG
LGTH	LENGTH
LN	LINE
LOC	LOCATION
LP	LOW POINT OR LIQUID PETROLEUM
L.P.	LIGHT POLE
LWL	LOW WATER LEVEL
MAX	MAXIMUM
MB	MAILBOX
MECH, M	MECHANICAL
MFGR	MANUFACTURER
MG	MILLON GALLON
MH	MANHOLE
MIN	MINIMUM
MO	MASONRY OPENING
NIC	NOT IN CONTRACT
No.	NUMBER
NSF	NATIONAL SCIENCE FOUNDATION
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
P	POLYMER
OPNG	OPENING
P/L, ℙ	PROPERTY LINE
PC	POINT OF CURVATURE
PI	PRESSURE INDICATOR (GAUGE)
P.I.	POINT OF INTERSECTION
PO	POLYMER SOLUTION
POT	POTABLE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVT	PAVEMENT
PW	POTABLE WATER
R/W, ROW	RIGHT OF WAY
RAD, R	RADIUS
RECIR	RECIRCULATION
RED	REDUCER
REHAB	REHABILITATION
REINF	REINFORCING
REQ'D	REQUIRED
REST.	RESTRAINED
REV	REVISION
RJ	RESTRAINED JOINT
RW	RAW WATER
SA	SAMPLE WATER
SAN	SANITARY
SECT	SECTION
℄	SECTION LINE
SH	SODIUM HYPOCHLORITE
SHT	SHEET
SL	SAMPLE LINE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSS	SURFACE SCOUR SUPPLY
STA	STATION
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
T&B	TOP AND BOTTOM
TBD	TO BE DETERMINED
TEMP	TEMPORARY
THK	THICK
TI	TEMPERATURE INDICATOR
TOC	TOP OF CONCRETE
TOS	TOP OF SLAB
TYP	TYPICAL
VERT	VERTICAL
VTR	VENT THROUGH ROOF
W	WIDE
W/	WITH
W/L	WATER LEVEL
W/MO	WITH MOTOR OPERATOR
W/O	WITH OUT
WTR	WATER
WWF	WELDED WIRE FABRIC

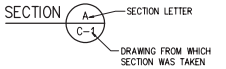
SECTION AND DETAIL IDENTIFICATION

SECTION IDENTIFICATION

(1) SECTION CUT ON DRAWING C–1:

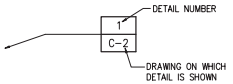


(2) ON DRAWING C–2 THIS SECTION IS IDENTIFIED AS:

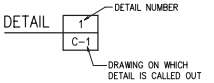


DETAIL IDENTIFICATION

(1) DETAIL CALL–OUT ON DRAWING C–1 AS:

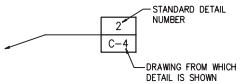


(2) ON DRAWING C–2 THIS DETAIL IDENTIFIED AS:

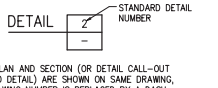


STANDARD DETAIL IDENTIFICATION

(1) DETAIL CALL–OUT ON PLAN OR SECTION:



(2) ON DRAWING C–4 THIS DETAIL IDENTIFIED AS:



NOTE: IF PLAN AND SECTION (OR DETAIL CALL–OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A DASH.

NOTES:

(1) ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL SHEETS.

(2) FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.

* DENOTES DIMENSIONS OR ELEVATIONS DEPENDENT ON EQUIPMENT SUPPLIED.

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN L.M.S.
CHECKED J.N.M.
PROJ. ENGR. G.A.B.

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Certificate of Authorization Number: 2771

SCALE: NTS

CLIENTS PROJECT: –
ENGINEERS PROJECT: 44238–004
CAD REFERENCE: 44238–004BP3–G04

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB

ABBREVIATIONS, SYMBOLS AND LEGEND

DATE: JULY 2015
SHEET: 4 OF 335
DRAWING: G–04

REQUEST FOR PROPOSAL

PLOT DATE: 7/24/2015 11:08 AM BY: TBOCAS

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Addendum No. 1, RFP No. 45-08-15 Winson Water Treatment Plant Reliability Improvements

GENERAL NOTES:

1. DRAWINGS THAT ILLUSTRATE EXISTING STRUCTURES, PIPING, ELECTRICAL AND EQUIPMENT ARE BASED UPON RECORD DRAWINGS AVAILABLE UPON REQUEST FOR GENERAL INFORMATIONAL PURPOSES ONLY. REFERENCE THE SECTION ENTITLED "SUMMARY OF WORK".

2. FIELD OBSERVATIONS INDICATE THAT FIELD CONDITIONS DO NOT FULLY MATCH THE ABOVE REFERENCED RECORD DRAWINGS.

3. EXISTING SITE PLAN IS BASED UPON A BOUNDRY AND TOPOGRAPHIC SURVEY PREPARED BY CRAVEN THOMPSON AND ASSOCIATES, INC. (CTA) DATED 03-10-10 AND LABELED CTA PROJECT No. 10-0013-001

4. ALL ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD '29) AND REFERENCED TO MIAMI-DADE COUNTY BENCHMARK N-384, A PK NAIL IN SQUARE BRASS WASHER, TOP OF CURB INLET STRUCTURE AT SOUTHEAST CORNER OF N.W. 17 AVENUE AND N.W. 119 STREET. ELEVATION = 12.52.

5. YARD PIPING DRAWINGS WERE GENERATED FROM A COMBINATION OF NEW TOPOGRAPHIC SURVEY DATA AND EXISTING RECORD DRAWINGS, COORDINATES PROVIDES ARE FOR GENERAL INFORMATION AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PREPARATION OF PIPE SYSTEM LAYOUT SUBMITTALS FOR ENGINEER REVIEW, COMMENT AND ACCEPTANCE. REFERENCE THE SECTIONS ENTITLED "SUMMARY OF WORK", "FIELD ENGINEERING", "SUBMITTALS" AND "PIPING, GENERAL" FOR ADDITIONAL DETAILS AND REQUIREMENTS.

6. LOCATION, SIZE, MATERIAL, ALIGNMENT AND ELEVATIONS OF EXISTING FACILITIES HAVE BEEN DETERMINED FROM AVAILABLE RECORDS. THIS INFORMATION IS FURNISHED AS A GUIDE FOR THE CONTRACTOR. THE ENGINEER AND THE OWNER DO NOT GUARANTEE THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DETERMINING THE LOCATION AND PROTECTING ALL TYPES OF UTILITIES AND STRUCTURES ENCOUNTERED DURING THE COURSE OF OPERATION ON THIS PROJECT.

7. CONTRACTOR RETAINS FULL RESPONSIBILITY FOR FIELD VERIFICATION OF ALL IMPROVEMENTS TO BE REMOVED FOR THIS WORK. VERIFICATION SHALL INCLUDE STRUCTURAL, ARCHITECTURAL, HVAC, PLUMBING, PROCESS PIPING, ELECTRICAL, IRRIGATION, CONTROLS, EQUIPMENT, FILTER MEDIA AND ANY AND ALL OTHER EXISTING EQUIPMENT WITHIN THE BOUNDARY OF THE WORK, WHETHER SHOWN OR NOT.

8. THE CONTRACTOR IS REQUIRED TO OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ANY DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS.

9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY REQUIRED PLAN DEVIATIONS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEWATERING PERMIT FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT IF REQUIRED.

11. RESTRAINED JOINT PIPE SHALL BE USED FOR ALL PIPING ON THIS PROJECT. THRUST BLOCKS SHALL NOT BE PERMITTED.

12. CONTRACTOR SHALL PROVIDE A MINIMUM VERTICAL CLEARANCE OF 6" BETWEEN ALL LINES THAT CROSS. CROSSINGS WITH POTABLE WATER LINES SHALL BE AS SHOWN ON THE DRAWINGS.

13. THE CONTRACTOR SHALL RECORD ELEVATIONS OF EXISTING BURIED UTILITIES AT ALL ENCOUNTERED CROSSINGS WITH NEW WORK.

14. ALL CONNECTIONS TO EXISTING PIPING SHALL BE MADE UNDER THE DIRECTION OF THE CITY.

15. MINIMUM DEPTH OF COVER FOR ALL UNDERGROUND PIPING SHALL BE 36" EXCEPT WHERE SHOWN OTHERWISE ON PLANS.

16. PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.

17. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE WORK FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE.

18. THE CONTRACTOR SHALL ADJUST TO FINAL GRADE ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND HOLES, PULL BOXES, INLETS AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAID WITH ASPHALT.

19. EXISTING BURIED PIPE AND CONDUIT 2" DIAMETER AND SMALLER IS NOT NECESSARILY SHOWN. ELECTRICAL AND INSTRUMENTATION DUCT BANKS NOT SHOWN. WHEN EXCAVATING, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO UNDERGROUND UTILITIES.

20. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS TO VERIFY LOCATIONS AND ELEVATIONS OF UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THE WORK. THE NUMBER OF EXPLORATORY EXCAVATIONS SHALL BE SUFFICIENT TO DETERMINE ALIGNMENT, LOCATION AND ELEVATION.

21. THE WORK TO BE PERFORMED UNDER THESE CONTRACT DOCUMENTS IS AT A FUNCTIONING WATER TREATMENT PLANT WITH A PERMITED WATER SUPPLY WELLFIELD. THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS, REGULATORY AGENCIES, AND FACILITY OPERATIONS STAFF AT ALL TIMES.

22. CONTRACTOR SHALL REFER TO DIVISION 1 FOR FIELD ENGINEERING, SURVEY CONTROL AND RECORD DRAWING REQUIREMENTS.

23. THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF N.W. 121 STREET BEARING NORTH 87°08'29" EAST. SAID LINE BEING BASED ON THE FLORIDA STATE PLANE EAST ZONE SYSTEM AS COMPUTED USING REAL TIME KINEMATICS (RTK) VECTOR OBSERVATIONS AS OBTAINED USING A TRIMBLE R8 ROVER AS OBSERVED FROM A NATIONAL GEODETIC STATION (NGS) STATION AC2415" (H-120) AND FROM TWO CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) "LAURDERDALE" AND "MIAMI 3", AS OPERATED BY FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) STATE-WIDE PERMANENT REFERENCE NETWORK.

24. THE ABOVE MENTIONED RTK VECTOR OBSERVATIONS WERE PROCESSED AND COORDINATES WERE CALCULATED UTILIZING F.D.O.T. "VECTOR NT" LEAST SQUARE ADJUSTMENT SOFTWARE FROM THE FOLLOW REFERENCE STATIONS:

F.D.O.T. – "LAUDERDALE"	N: 677867.5511	E: 927328.4435 (LAUD)
F.D.O.T. – "MIAMI 3"	N: 509427.4891	E: 931640.1497 (MIAMI)
NGS – "AC2415"	N: 570080.0519	E: 896958.5443 (H-120)

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN G.P.B.
CHECKED J.N.M.
PROJ. ENGR. G.A.B.

GEORGE A. BROWN P.E.
No. 56076

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE: NTS

CLIENTS PROJECT: –
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-G05

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB
GENERAL NOTES

DATE: JULY 2015
SHEET: 5 OF 335
DRAWING: G-05

REQUEST FOR PROPOSAL

PLOT DATE: 7/24/2015 11:08 AM BY: TBOCAS

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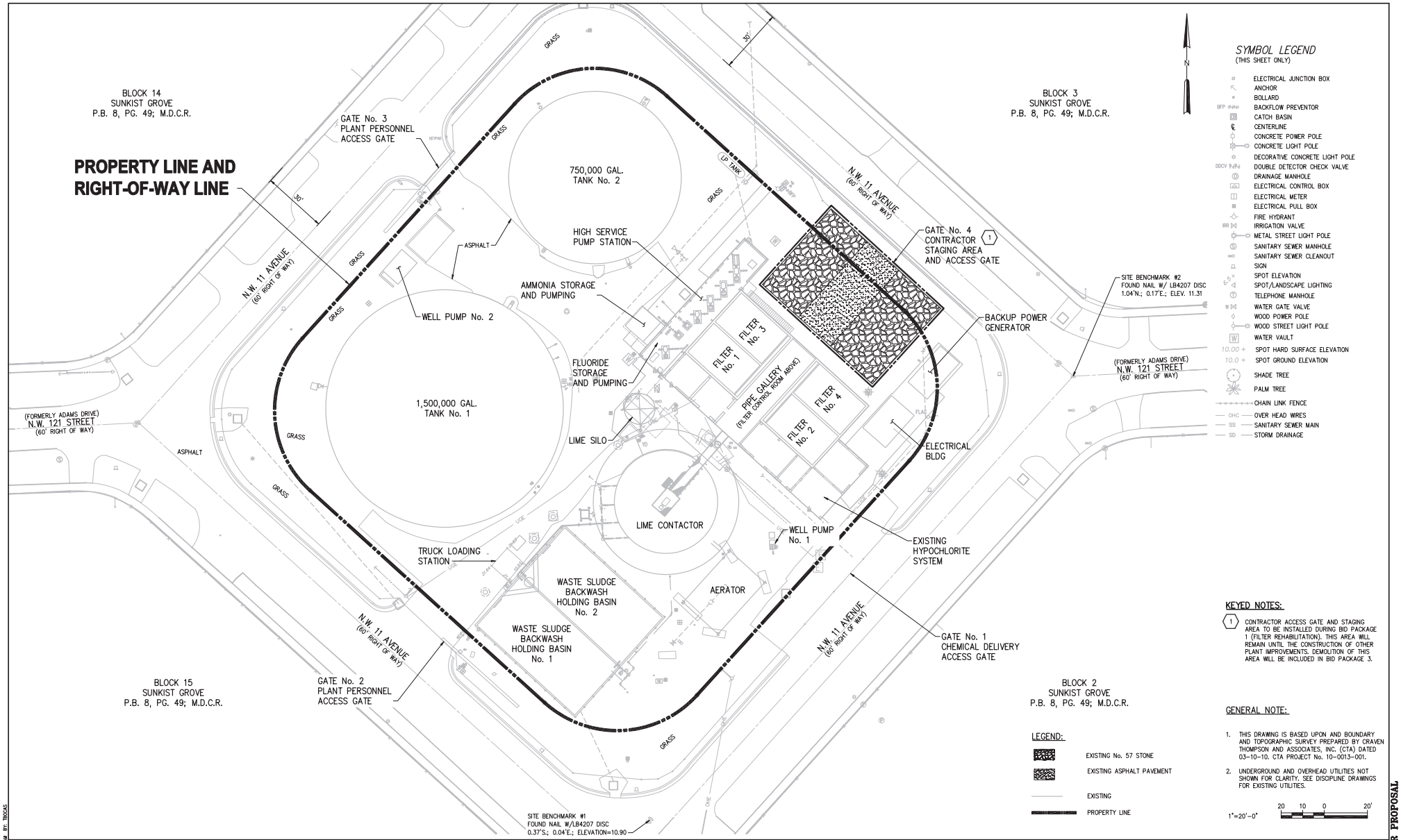

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN L.M.S.
CHECKED J.N.M.
PROJ. ENGR. G.A.B.

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Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE 1"=20'-0"

CLIENTS PROJECT: –
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-G06

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS – VOLUME B: WTP REHAB
EXISTING SITE PLAN

DATE: JULY 2015
SHEET: 6 OF 335
DRAWING: G-06

REQUEST FOR PROPOSAL

PLOT DATE: 7/24/2015 11:08 AM BY: TBOCAS

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