

Appendix A ~ ITB T-01721

TOTAL LOAD FOR GANTRIES AT WILLOW AVENUE WESTBOUND ONRAMP, WILLOW AVENUE EASTBOUND OFFRAMP, PLANT STREET WESTBOUND ONRAMP, PLANT STREET EASTBOUND OFFRAMP, 22ND STREET WESTBOUND ONRAMP, 22ND STREET EASTBOUND OFFRAMP, 50TH STREET WESTBOUND ONRAMP

1 LANE AND 2 SHOULDERS	QUANTITY	POWER (WATTS)	TOTAL (WATTS)
<b>CABINET EQUIPMENT</b>			
VES IMAGE SERVER (1 PER TOLL LOCATION) + MAINT. COMP.	1	300	300
LANE CONTROLLER (2 PER TOLL LOCATION)	2	325	650
MONITOR MOUSE AND KEYBOARD	1	75	75
KVM SWITCH	1	15	15
TS 8	1	8	8
SWITCH	2	85	170
SWITCH TRANSCEIVER, 1000BASE-LX, LC CONNECTOR	2	12	24
ENVIRONMENTAL MONITORING PROBE	1	25	25
RACK MOUNT UPS 5KVA	1	1000	1000
UPS SNMP WEB CARD	1	5	5
<b>LANE EQUIPMENT</b>			
24V POWER SUPPLY	3	40	120
PEEK IDRIS SYSTEM	1	100	100
REAR CAMERA	2	39	78
REAR CAMERA FLASH	2	150	300
FRONT CAMERA	1	39	39
FRONT CAMERA LIGHT	1	17	17
POWER SUPPLY	1	10	10
LIGHT SENSOR	1	10	10
GPS TIME SYNC UNIT (2 FOR WHOLE ROADWAY)	1	115	115
MODEMS (1 FOR 4 CAMERAS)	1	12	12
<b>UTILITY AND EXPANSION</b>			
	1	2000	2000
<b>TOTAL</b>			<b>5073</b>
<b>TOTAL LOAD (X 1.25)</b>			<b>6341</b>

TOTAL LOAD FOR GANTRIES AT WEST MAINLINE WESTBOUND, WEST MAINLINE EASTBOUND, 50TH STREET EASTBOUND OFFRAMP, EAST MAINLINE EASTBOUND

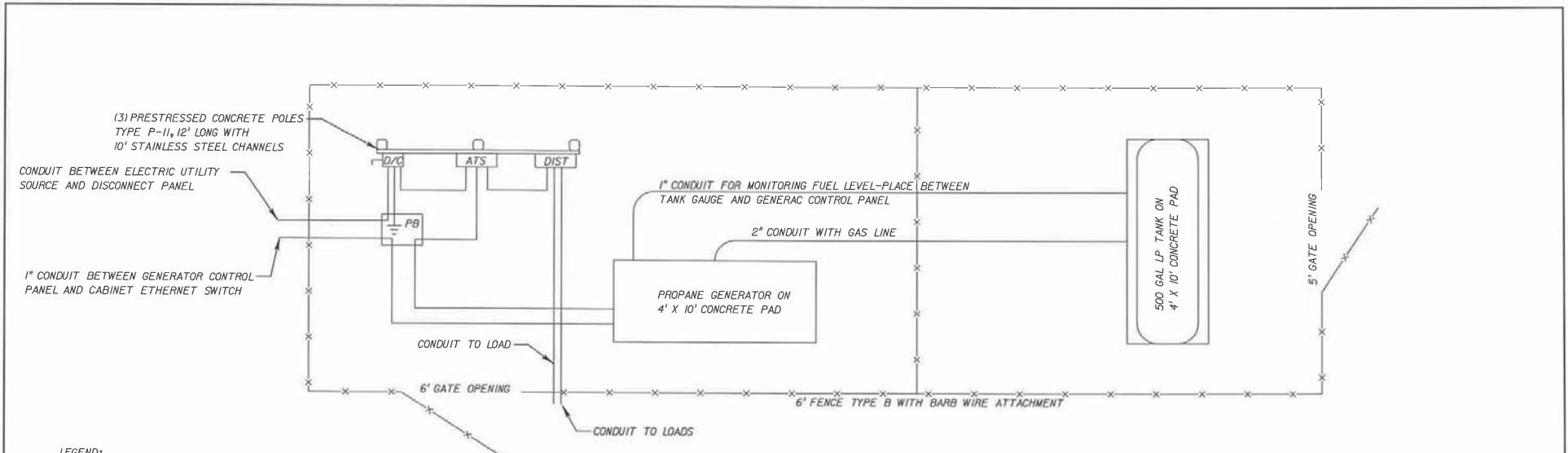
2 LANES AND 2 SHOULDERS	QUANTITY	POWER (WATTS)	TOTAL (WATTS)
<b>CABINET EQUIPMENT</b>			
VES IMAGE SERVER (1 PER TOLL LOCATION) + MAINT. COMP.	1	300	300
LANE CONTROLLER (2 PER TOLL LOCATION)	2	325	650
MONITOR MOUSE AND KEYBOARD	1	75	75
KVM SWITCH	1	15	15
TS 8	1	8	8
SWITCH	2	85	170
SWITCH TRANSCEIVER, 1000BASE-LX, LC CONNECTOR	2	12	24
ENVIRONMENTAL MONITORING PROBE	1	25	25
RACK MOUNT UPS 5KVA	1	1000	1000
UPS SNMP WEB CARD	1	5	5
<b>LANE EQUIPMENT</b>			
24V POWER SUPPLY	6	40	240
PEEK IDRIS SYSTEM	1	100	100
REAR CAMERA	3	39	117
REAR CAMERA FLASH	3	150	450
FRONT CAMERA	2	39	78
FRONT CAMERA LIGHT	2	17	34
POWER SUPPLY	1	10	10
LIGHT SENSOR	1	10	10
GPS TIME SYNC UNIT (2 FOR WHOLE ROADWAY)	1	115	115
MODEMS (1 FOR 4 CAMERAS)	1	12	12
<b>UTILITY AND EXPANSION</b>			
	1	2000	2000
<b>TOTAL</b>			<b>5450</b>
<b>TOTAL LOAD (X 1.25)</b>			<b>6812</b>

TOTAL LOAD FOR THE GANTRY AT EAST MAINLINE

3 LANES AND 2 SHOULDERS	QUANTITY	POWER (WATTS)	TOTAL (WATTS)
<b>CABINET EQUIPMENT</b>			
VES IMAGE SERVER (1 PER TOLL LOCATION) + MAINT. COMP.	1	300	300
LANE CONTROLLER (2 PER TOLL LOCATION)	2	325	650
MONITOR MOUSE AND KEYBOARD	1	75	75
KVM SWITCH	1	15	15
TS 8	1	8	8
SWITCH	2	85	170
SWITCH TRANSCEIVER, 1000BASE-LX, LC CONNECTOR	2	12	24
ENVIRONMENTAL MONITORING PROBE	1	25	25
RACK MOUNT UPS 5KVA	1	1000	1000
UPS SNMP WEB CARD	1	5	5
<b>LANE EQUIPMENT</b>			
24V POWER SUPPLY	8	40	320
PEEK IDRIS SYSTEM	1	100	100
REAR CAMERA	4	39	156
REAR CAMERA FLASH	4	150	600
FRONT CAMERA	3	39	117
FRONT CAMERA LIGHT	3	17	51
POWER SUPPLY	2	10	20
LIGHT SENSOR	1	10	10
GPS TIME SYNC UNIT (2 FOR WHOLE ROADWAY)	1	115	115
MODEMS (1 FOR 4 CAMERAS)	2	12	24
<b>UTILITY AND EXPANSION</b>			
	1	2000	2000
<b>TOTAL</b>			<b>5785</b>
<b>TOTAL LOAD (X 1.25)</b>			<b>7231</b>

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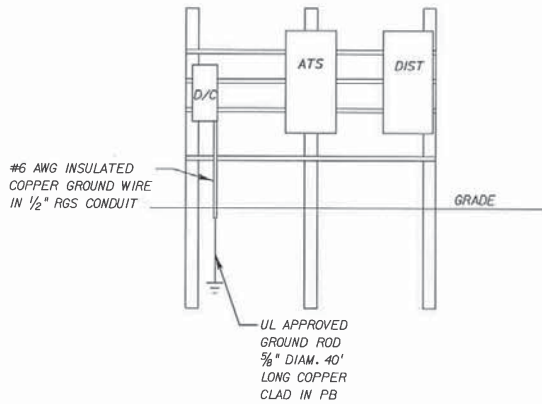
REVISIONS				<b>HNTB</b> 10210 Highland Manor Drive - Suite 140 - Tampa, FL 33610 (813) 246-5527 - Cert. of Auth. No. EB6500 Engineer of Record: Malcolm Y. Tomatani, P.E. No: 65465	TAMPA - HILLSBOROUGH EXPRESSWAY AUTHORITY			SHEET NO.  IT-18
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
				SR 618	HILLSBOROUGH		<b>GANTRY</b> <b>ELECTRICAL REQUIREMENTS</b>	



**LEGEND:**

D/C: DISCONNECT  
 ATS: AUTOMATIC TRANSFER SWITCH  
 DIST: DISTRIBUTION PANEL  
 PB: PULLBOX

ELECTRIC SERVICE PANELS FRONT ELEVATION VIEW  
 NOT ALL CONDUITS SHOWN FOR CLARITY



**GENERATOR LAYOUT NOTES:**

1. ALL ELECTRICAL CONNECTIONS SHALL BE IN ACCORDANCE WITH NEC, NESC, AND LOCAL CODES.
2. THE MAIN DISCONNECT SHALL BE NEMA 3R, POLE MOUNTED.
3. ALL SERVICE EQUIPMENT SHALL BE UL APPROVED.
4. REFER TO FDOT INDEX NO. 802, I7504, AND I7725.
5. MAINTAIN A MINIMUM OF 15' SEPARATION BETWEEN LP TANK AND IGNITION SOURCE.
6. AT THE EAST MAINLINE LOCATION, A STEP DOWN TRANSFORMER IS REQUIRED AT THE GANTRY SITE.

LOCATION	CABINET LOAD*	E6 RACK POWER OUTLET PANEL LOAD	TOTAL LOAD	GENERATOR RATING
WILLOW AVE WB	6.3 KW	2.4 KW	8.7 KW	35 KW
WILLOW AVE EB	6.3 KW	2.4 KW	8.7 KW	
PLANT AVE WB	6.3 KW	2.4 KW	8.7 KW	45 KW
PLANT AVE EB	6.3 KW	2.4 KW	8.7 KW	
WEST ML WB	6.8 KW	2.4 KW	9.2 KW	35 KW
WEST ML EB	6.8 KW	2.4 KW	9.2 KW	
22ND ST WB	6.3 KW	2.4 KW	8.7 KW	35 KW
22ND ST EB	6.3 KW	2.4 KW	8.7 KW	
50TH ST WB	6.3 KW	2.4 KW	8.7 KW	35 KW
50TH ST EB	6.8 KW	2.4 KW	9.2 KW	
EAST ML WB	7.2 KW	2.4 KW	9.6 KW	35 KW
EAST ML EB	6.8 KW	2.4 KW	9.2 KW	

\*SEE GANTRY ELECTRICAL REQUIREMENT SHEET IT-18  
 FOR CABINET LOAD BREAKDOWN

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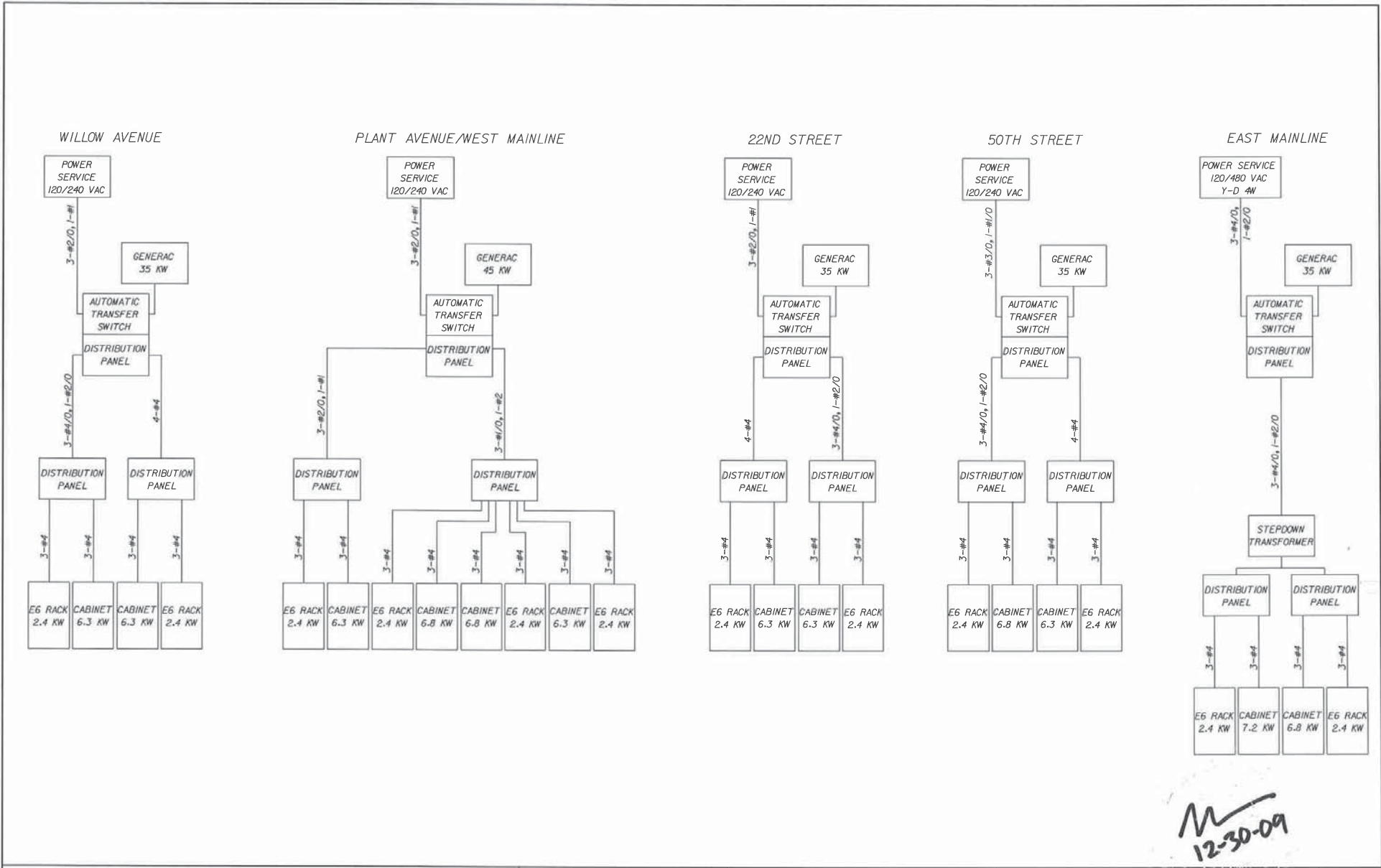
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**HNTB**  
 10210 Highland Manor Drive - Suite 140 - Tampa, FL 33610  
 (813) 246-5627 - Cert. of Auth. No. EB6500  
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TAMPA - HILLSBOROUGH EXPRESSWAY AUTHORITY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 618	HILLSBOROUGH	

**GENERATOR PAD DETAIL**

SHEET NO.  
 IT-22



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12-30-09

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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**POWER LINE DIAGRAMS**

SHEET NO.
17-23