

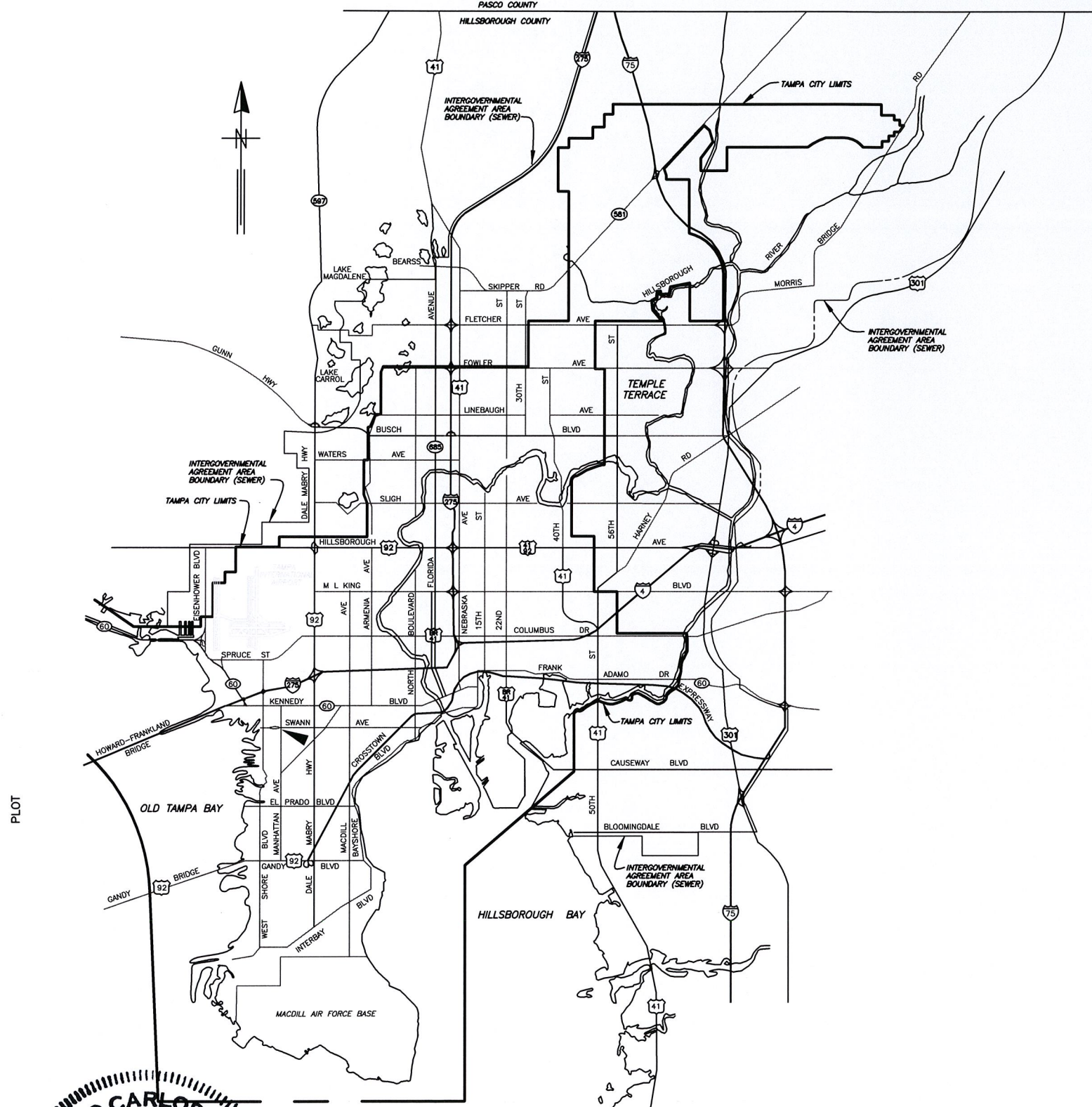
The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:
[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

LOCATION MAP



CITY of TAMPA



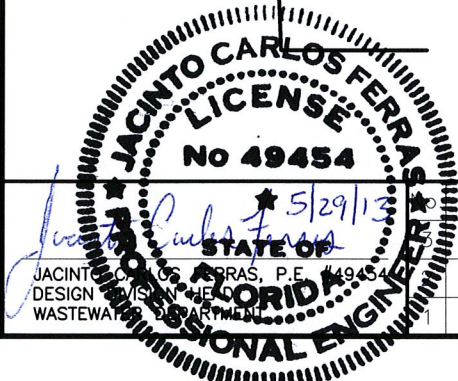
WASTEWATER DEPARTMENT

PLANS FOR
WASTEWATER MANHOLE REHABILITATION
CITY WIDE

CONTRACT No.
13-C-00014

PLOT

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\01 Cover.dwg
Layout - May 28, 2013 - 1:55pm CTB - WW.CTB



DATE	REVISIONS	DES: CB/JR DRN: GAP CKD: JF DATE: 05/29/13	CITY of TAMPA WASTEWATER DEPARTMENT	WASTEWATER MANHOLE REHABILITATION CITY WIDE COVER	W.O. 5895 SHEET 01 OF 27

GENERAL NOTES

B077-020

1. THE SCOPE OF THIS PROJECT SHALL CONSIST OF REHABILITATION OF 366 MANHOLES BY THE APPLICATION OF A STRUCTURAL COATING SYSTEM AND ALL APPURTENANCE ASSOCIATED WITH COMPLETION OF THE PROJECT.
2. ALL INVERT AND RIM ELEVATIONS PROVIDED ARE BASED ON RECORD DRAWINGS.
3. FOR THE MANHOLES IN FDOT MAINTAINED ROADWAYS, THE CONTRACTOR SHALL NOTIFY FDOT MAINTENANCE DIVISION AT 744-6038 A MINIMUM OF 48 HOURS PRIOR TO STARTING THE MANHOLE REHABILITATION WORK. FDOT CONSIDERS THIS WORK AS MAINTENANCE AND, AS A RESULT, A RIGHT-OF-WAY PERMIT IS NOT REQUIRED. THE CITY WILL OBTAIN THE SPECIAL-USE PERMIT FROM FDOT. HOWEVER, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL SIGNAGE IN ACCORDANCE TO FDOT INDEX 602 FOR ANY WORK ACTIVITY LOCATED 15' OR LESS FROM THE EDGE OF PAVEMENT, OR APPLICABLE FDOT INDEX DRAWINGS (MOST CURRENT EDITION).
4. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING THE NECESSARY ROAD CLOSURE AND RIGHT-OF-WAY PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE SPECIFIC ROADWAYS. THE TABLE ON THIS SHEET, LISTS THE CONTACT NAMES AND PHONE NUMBERS FOR THE AGENCIES WITH JURISDICTION OVER THE VARIOUS LOCATIONS THROUGHOUT THIS PROJECT.
5. IN ORDER TO OBTAIN ROADWAY CLOSURE OR RIGHT-OF-WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) INDEX DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIMES DURING NON-PEAK TRAFFIC HOURS. REFER TO SPECIFIC PROVISIONS FOR SPECIFIC TRAFFIC CONTROL REQUIREMENTS.
6. DURING THE MANHOLE'S INTERIOR CLEANING OPERATION, THE CONTRACTOR MUST PROVIDE A MEANS OF CAPTURING AND DISPOSING OF THE REMOVED DEBRIS. THIS METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
7. THE ONLY EXCAVATION NECESSARY FOR THIS PROJECT IS FOR THE REMOVAL AND REPLACEMENT OF THE MANHOLE FRAME AND COVERS AS INDICATED IN THE REHABILITATION SCHEDULE. FOR THESE CASES, THE CONTRACTOR IS REQUIRED TO CALL SUNSHINE AT 1-800-432-4770 TO DETERMINE UTILITY LOCATIONS PRIOR TO EXCAVATION.
8. ALL EXPOSED STEEL REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ANY DETERIORATION/RUST AND COATED WITH THE PROPOSED COATING SYSTEM.
9. OSHA STANDARD EQUIPMENT SUCH AS SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
10. ALL RING AND COVERS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
11. BYPASSING PUMPING WILL NOT BE REQUIRED FOR THE MANHOLE REHABILITATION AND BENCH RESTORATION. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.

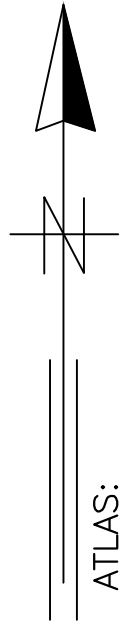
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02	Index
03	Plan Key
04	Schedule
05	Schedule
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25	Manhole Details K L AND M
26	Miscellaneous Details
27	Miscellaneous Details

PROPOSED MANHOLE COATING SYSTEM THICKNESS	
Location	Coating System
Manhole Barrel	175 MILS (MIN)
Manhole Bottom or Junction Chamber	250 MILS (MIN)
Manhole Benches	125 MILS (MIN)

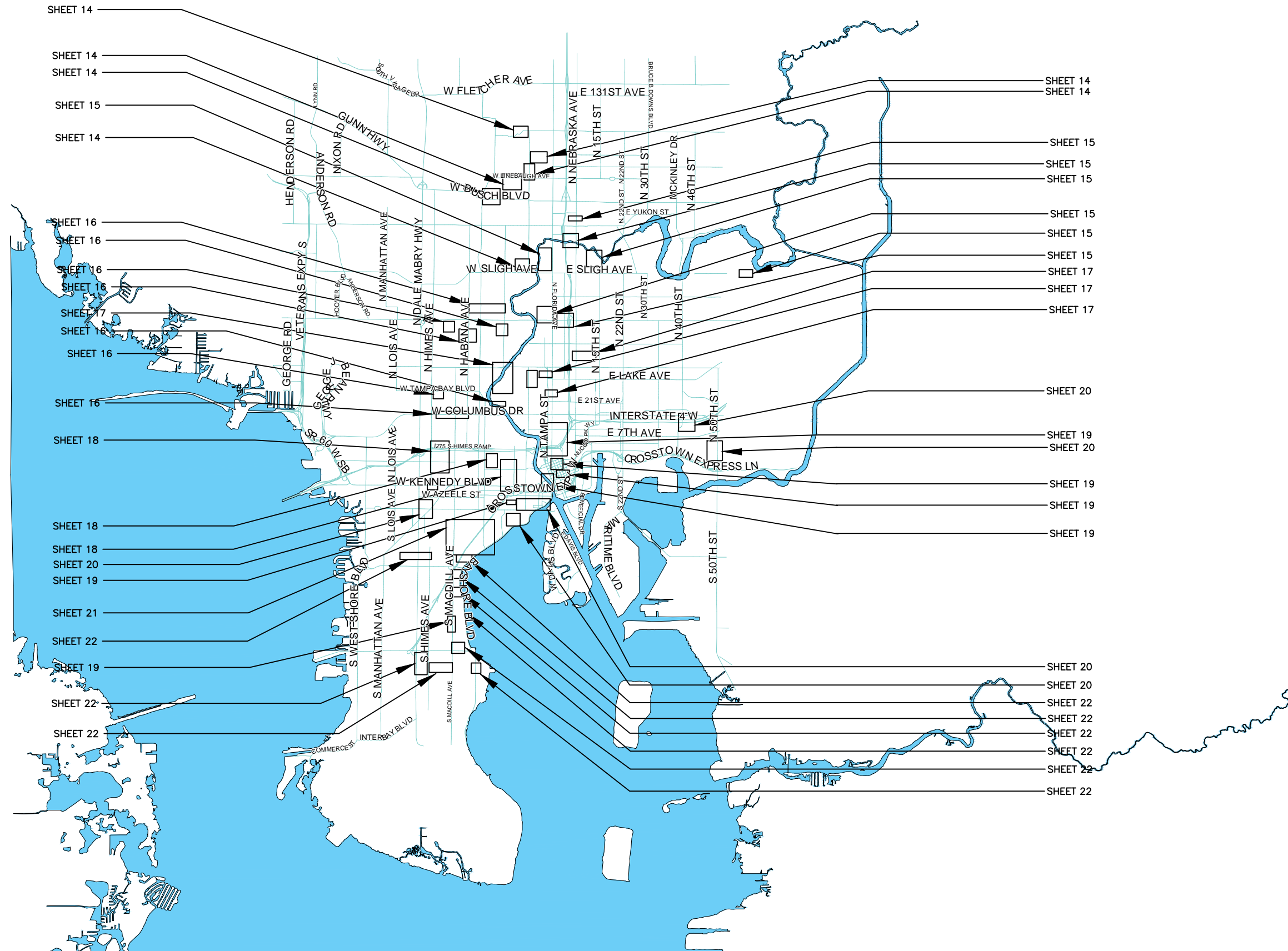
TRAFFIC OPERATIONS - CONTACTS NAMES			
Location	(Jurisdiction)	Contact Name	Phone Number
Columbus Dr, Jackson St, MacDill Ave, Country Club and N Blvd and including all other streets not mentioned	(City of Tampa)	David Houseman	274-5656
Himes Ave, and Sligh Ave	(County)	Amos Castillo	628-5025
Florida Ave, Hillsborough Ave, Kennedy Blvd	(FDOT)	James Meyer	744-6038

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\02 INDEX.dwg Layout: May 29, 2013 - 1:30pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CB/JR		WASTEWATER MANHOLE REHABILITATION CITY WIDE INDEX	W.O. 5895
	3			DRN: GP			SHEET
	2			CKD: JF			02
	1			DATE: 05/29/13			OF 27



ATLAS:



- LEGEND:**
- MANHOLES – TO BE REHABILITATED
 - MANHOLES – NO REHABILITATION REQUIRED
 - ⬤ EX. PUMP STATION

No.	DATE	REVISIONS
3		
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1		

DES: CB/JR
 DRN: GP
 CKD: JF
 DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN KEY

W.O. 5895
 SHEET 03 OF 27

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

Manhole Rehabilitation on Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
	K-10	106A-003	A		5.51	4	8	4.60	0	no (pavement)	
	K-10	106A-004	A		4.92	4	8	4.01	0	no (pavement)	
	K-10	106A-019	A		4.90	4	8	3.99	0	no (pavement)	
	K-10	106A-031	A		5.98	4	8	5.07	0	no (pavement)	
	K-10	106A-032	A		3.97	4	8	3.06	0	yes (small, pavement)	
	K-10	106A-033	A		5.41	4	8	4.50	0	no (pavement)	
	L-10	106A-096	A		4.22	4	8	3.31	0	yes (small, pavement)	
	L-10	106A-127	A		3.47	4	8	2.56	0	yes (small, pavement)	
	L-10	106A-137	A		6.32	4	8	5.41	0	no (pavement)	
	M-10	106A-212	A		4.65	4	8	3.74	0	no (pavement)	
	M-11	106A-242	A		7.47	4	18	6.14	0	no (pavement)	bench restoration required
	M-11	106A-251	A		7.52	4	18	6.19	0	no (pavement)	bench restoration required
	K-10	106A-273	C		13.87	4	8	12.96	0	yes (small, pavement)	
	M-10	106A-305	A		4.94	4	8	4.03	0	yes (small, pavement)	
	M-9	107A-002	A		13.43	4	8	12.52	0	yes (small, pavement)	
	M-9	107A-006	A		9.58	4	8	8.67	0	yes (small, pavement)	
	M-9	107A-007	A		8.41	4	8	7.50	0	no (grass)	
	M-9	107A-008	A		7.05	4	8	6.14	0	yes (small, grass)	
	M-9	107A-009	A		6.71	4	8	5.80	0	yes (small, grass)	
	M-9	107A-010	A		5.79	4	8	4.88	0	yes (small, grass)	
	M-9	107A-011	A		5.95	4	8	5.04	0	no (pavement)	
	M-9	107A-012	A		6.33	4	8	5.42	0	no (pavement)	
	M-9	107A-013	A		4.95	4	8	4.04	0	no (pavement)	
	M-9	107A-014	A		5.32	4	8	4.41	0	no (pavement)	
	M-9	107A-015	A		4.63	4	8	3.72	0	no (pavement)	
	M-9	107A-018	A		3.43	4	8	2.52	0	no (conc)	located in grass, but frame is raised & supported with conc
	M-9	107A-020	A		3.42	4	8	2.51	0	no (conc)	located in grass, but frame is raised & supported with conc
	M-9	107A-022	A		3.74	4	8	2.83	0	no (grass)	
	M-9	107A-029	A		2.56	4	8	1.65	0	yes (small, grass)	
	M-9	107A-034	A		5.20	4	8	4.29	0	no (pavement)	
	M-9	107A-035	A		5.00	4	8	4.09	0	no (pavement)	
	M-9	107A-036	A		5.00	4	8	4.09	0	no (pavement)	
	M-9	107A-037	A		4.50	4	8	3.59	0	no (pavement)	

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
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DES: CB/JR
 DRN: GP
 CKD: JF
 DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE SCHEDULE

W.O. 5895
 SHEET
04
 OF 27

Manhole Rehabilitation Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
M-9		107A-046	A		4.00	4	8	3.09	0	no (pavement)	
D-12		111A-006	A		6.91	4	21	5.45	0	yes (small, pavement)	
D-12		111A-007	A		13.80	4	21	12.35	0	yes (small, grass)	
D-12		111A-008	A		9.76	4	21	8.31	0	no (pavement)	
D-12		111A-009	A		9.48	4	21	8.03	0	yes (small, pavement)	
D-12		111A-011	A		10.01	4	8	9.10	0	no (pavement)	
D-13		111A-097	A		8.68	4	18	7.35	0	no (pavement)	
D-13		111A-098	A		11.32	4	18	9.99	0	yes (small, pavement)	
D-13		111A-182	A		5.39	4	18	4.06	0	yes (small, pavement)	
D-13		111A-183	A		3.60	4	15	2.40	0	yes (small, pavement)	
D-13		111A-184	A		3.22	4	15	2.02	0	yes (small, pavement)	
D-13		111A-185	A		4.89	4	15	3.69	0	yes (small, pavement)	
D-13		111A-186	A		5.71	4	12	4.63	0	yes (small, pavement)	
D-13		111A-187	A		9.99	4	8	9.08	0	yes (small, pavement)	
D-13		111A-189	A		8.59	4	12	7.51	0	yes (small, pavement)	
I-10		114A-033	A		13.68	4	10	12.68	0	no (pavement)	
H-16		130A-033	B		9.72	4	30	7.89	0	yes (small, pavement)	bench restoration required
H-16		130A-034	B		9.66	4	30	7.83	0	yes (small, pavement)	bench restoration required
H-16		130A-035	B		8.21	4	30	6.38	0	yes (small, pavement)	bench restoration required
H-16		130A-038	B		8.50	4	30	6.67	0	yes (small, pavement)	bench restoration required
H-16		130A-042	B		9.11	4	30	7.28	0	yes (small, pavement)	bench restoration required
H-16		130A-043	A		9.11	4	21	7.66	0	yes (small, pavement)	bench restoration required
H-16		130A-044	A		8.05	4	21	6.60	0	yes (small, pavement)	bench restoration required
H-16		130A-045	A		10.35	4	21	8.90	0	yes (small, pavement)	bench restoration required
H-16		130A-046	A		14.62	4	21	13.17	0	yes (small, pavement)	bench restoration required
H-16		130A-049	A		17.11	4	21	15.66	0	yes (small, pavement)	bench restoration required
E-16		139a-080	C		8.43	4	21	6.98	0	yes (small, pavement)	bench restoration required
B-12		183A-002	A		17.22	4	18	15.89	0	yes (small, pavement)	
B-12		183A-003	A		7.73	4	18	6.40	0	no (pavement)	
B-12		183A-008	A		15.71	4	18	14.38	0	no (pavement)	
B-12		183A-009	A		14.37	4	18	13.04	0	no (pavement)	
B-12		183A-016	A		14.94	4	12	13.86	0	no (pavement)	
B-12		183A-017	A		14.22	4	12	13.14	0	no (pavement)	

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JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
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DES: CB/JR
 DRN: GP
 CKD: JF
 DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
 SHEET
05
 OF 27

Manhole Rehabilitation on Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
	B-12	183A-018	A		12.50	4	10	11.50	0	no (pavement)	
	B-12	183A-019	A		9.75	4	10	8.75	0	no (pavement)	
	F-10	269A-002	A		13.97	4	12	12.89	0	yes (small, pavement)	
	F-10	269A-003	A		13.67	4	12	12.59	0	yes (small, pavement)	
	F-10	269A-004	A		13.59	4	12	12.51	0	yes (small, pavement)	
	H-15	311A-008	K		17.40	5	30	15.57	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	H-15	311A-009	K		16.37	5	30	14.54	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	H-15	311A-010	K		15.03	5	30	13.20	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	H-15	311A-030	K		11.68	5	30	9.85	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	H-15	311A-031	K		9.31	5	30	7.48	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	H-15	311A-032	K		7.77	5	30	5.94	0	no (pavement)	Remove Fiberglass liner system prior to proposed coating system; Bench Restoration Required
	F-12	314a-004	A		12.00	4	18	10.67	0	no (pavement)	
	F-13	314a-010	A		12.00	4	18	10.67	0	no (pavement)	
	F-13	314a-011	A		12.00	4	18	10.67	0	no (pavement)	
	F-13	314A-012	A		12.00	4	12	10.92	0	no (pavement)	
	F-13	314A-014	A		12.00	4	12	10.92	0	no (pavement)	
	F-13	314a-099	A		11.50	4	18	10.17	0	no (pavement)	
	B-11	330A-078	A		12.76	4	10	11.76	0	no (pavement)	
	B-11	330A-079	A		13.31	4	10	12.31	0	no (pavement)	
	B-11	330A-084	A		13.15	4	10	12.15	0	no (pavement)	
	B-11	330A-085	A		11.60	4	10	10.60	0	no (pavement)	
	C-11	331A-113	C		7.96	4	12	6.88	0	yes (small, pavement)	
	C-11	331A-132	C		15.56	4	10	14.56	0	no (pavement)	
	C-11	331A-137	C		4.31	4	8	3.40	0	yes (small, pavement)	
	B-11	331A-209	A		8.68	4	8	7.77	0	no (pavement)	
	C-11	331A-238	A		9.13	4	21	7.68	0	no (pavement)	
	B-11	331A-260	A		5.65	4	21	4.20	0	no (pavement)	bench restoration required
	B-11	331A-265	A		9.18	4	21	7.73	0	yes (small, pavement)	
	B-11	331A-270	A		7.60	4	21	6.14	0	no (pavement)	
	B-11	331A-271	A		7.43	4	21	5.98	0	yes (small, pavement)	

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JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
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DES: CB/JR
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
 SHEET
 06
 OF 27

Manhole Rehabilitation Schedule	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
B-11	331A-274	A		5.88	4	21	4.43	0	no (pavement)	
D-13	335A-009	M		0.00	4	36	0.00	30	no (pavement)	
D-12	335A-021	A		6.70	4	8	5.79	0	no (grass)	
D-12	336A-005	A		5.46	4	12	4.38	0	yes (small, grass)	
D-11	336A-006	A		5.40	4	12	4.32	0	yes (small, grass)	
D-11	336A-010	A		6.10	4	12	5.02	0	no (pavement)	
E-11	337A-024	A		4.92	4	10	3.92	0	no (pavement)	
E-11	337A-026	A		5.38	4	10	4.38	0	yes (small, pavement)	
E-11	337A-028	A		5.99	4	10	4.99	0	no (pavement)	
E-10	337A-032	A		5.49	4	10	4.49	0	no (pavement)	
E-10	337A-033	A		6.00	4	10	5.00	0	no (pavement)	
E-10	337A-035	A		5.00	4	10	4.00	0	no (pavement)	
E-10	337A-036	A		4.27	4	10	3.27	0	no (pavement)	
E-10	337A-038	A		1.96	4	8	1.05	0	yes (small, grass)	
E-11	337A-039	A		11.86	4	10	10.86	0	no (pavement)	
F-11	338A-175	A		8.35	4	12	7.27	0	no (pavement)	
F-11	338A-179	A		8.31	4	12	7.23	0	yes (small, pavement)	
F-11	338A-180	A		8.11	4	12	7.03	0	yes (small, pavement)	
F-11	338A-182	A		6.67	4	12	5.59	0	yes (small, pavement)	
F-11	338A-183	A		4.78	4	12	3.70	0	no (pavement)	
F-11	338A-184	A		4.81	4	12	3.73	0	no (pavement)	
F-11	338A-185	A		8.65	4	12	7.57	0	no (pavement)	
F-10	338A-210	A		17.39	4	10	16.39	0	no (pavement)	
F-10	338A-223	A		12.53	4	8	11.62	0	no (pavement)	
F-10	338A-225	A		9.58	4	8	8.67	0	no (pavement)	
F-10	338A-226	A		7.20	4	8	6.29	0	no (pavement)	
F-10	338A-229	A		6.18	4	8	5.27	0	no (pavement)	
C-12	343A-002	A		8.27	4	15	7.07	0	yes (small, pavement)	
E-12	351A-019	D		16.59	4	36	11.51	30	yes (small, grass)	
E-12	351A-020	D		18.06	4	36	12.98	30	yes (small, grass)	
E-12	351A-021	D		18.19	4	36	13.11	30	yes (small, pavement)	
E-12	351A-031	D		18.65	4	36	13.57	30	yes (small, pavement)	
E-12	351A-036	D		18.66	4	36	13.58	30	yes (small, pavement)	
E-12	351A-039	D		18.95	4	36	13.87	30	yes (small, pavement)	

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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DES: CB/JR
DRN: GP
CKD: JF
DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
SHEET
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OF 27

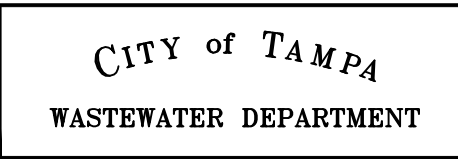
Manhole Rehabilitation on Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
E-12		352A-005	A		4.40	4	18	3.07	0	yes (small, pavement)	
E-12		352A-009	A		6.11	4	18	4.78	0	no (pavement)	
E-12		352A-029	A		4.58	4	12	3.50	0	no (pavement)	
E-12		352A-031	A		8.40	4	12	7.32	0	no (pavement)	
E-12		352A-032	A		8.40	4	12	7.32	0	no (pavement)	
F-12		352A-042	A		3.96	4	12	2.88	0	yes (small, pavement)	
F-12		352A-043	A		7.09	4	12	6.01	0	yes (small, pavement)	
D-12		356A-035	A		8.12	4	24	6.54	0	yes (small, pavement)	
D-12		356A-036	A		10.86	4	24	9.28	0	yes (small, pavement)	
D-12		356A-037	A		9.25	4	24	7.67	0	yes (small, pavement)	
D-12		356A-039	A		5.47	4	24	3.89	0	no (pavement)	frame replace in-house 2012
D-12		356A-040	A		8.69	4	21	7.24	0	yes (small, pavement)	
D-12		356A-041	A		7.87	4	12	6.79	0	no (pavement)	
D-12		356A-045	A		5.00	4	12	3.92	0	no (pavement)	
D-12		356A-049	A		5.00	4	12	3.92	0	yes (small, pavement)	
D-12		356A-099	A		6.76	4	21	5.30	0	yes (small, pavement)	bench restoration required
D-12		356A-100	A		7.22	4	21	5.77	0	no (pavement)	frame replace in-house 2012
D-12		356A-101	A		3.40	4	21	1.95	0	yes (small, pavement)	bench restoration required
D-12		356A-102	A		3.58	4	20	2.17	0	yes (small, pavement)	bench restoration required
G-12		359A-003	A		5.00	4	12	3.92	0	no (pavement)	
G-12		359A-005	A		5.49	4	12	4.41	0	no (pavement)	
G-12		359A-007	A		4.29	4	12	3.21	0	no (pavement)	
G-12		359A-009	A		3.49	4	8	2.58	0	no (pavement)	
G-12		359A-056	A		6.78	4	8	5.87	0	no (pavement)	
G-12		359A-061	A		6.58	4	8	5.67	0	no (pavement)	
G-12		359A-067	A		6.08	4	8	5.17	0	no (pavement)	
G-11		360A-003	L		0.00	4	48	0.00	50	yes (large, grass)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-032	L		0.00	4	48	0.00	50	yes (large, pavement)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-046	L		0.00	4	48	0.00	50	yes (large, pavement)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-077	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-078	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-079	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
G-11		360A-080	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required

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WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
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Manhole Rehabilitation on Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
	G-11	360A-088	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-089	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-121	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-122	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-123	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-124	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-125	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-140	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-141	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-143	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	G-11	360A-144	L		0.00	4	48	0.00	50	yes (large, brick)	MH T-lock lined, rehab brick cone section, Bench Restoration Required
	H-10	364A-011	A		9.02	4	8	8.11	0	no (pavement)	
	G-10	364A-059	A		9.20	4	18	7.87	0	no (pavement)	
	G-10	364A-073	A		8.14	4	18	6.81	0	no (pavement)	
	H-10	365A-001	A		10.29	4	21	8.84	0	no (pavement)	
	G-10	365A-003	A		12.86	4	18	11.53	0	no (pavement)	
	G-10	365A-014	A		9.29	4	18	7.96	0	no (pavement)	
	G-12	367A-046	A		13.22	4	18	11.89	0	no (pavement)	
	G-12	367A-057	A		12.06	4	10	11.06	0	no (pavement)	
	G-12	367A-067	A		4.00	4	8	3.09	0	no (pavement)	
	I-11	368A-049	A		10.12	4	24	8.54	0	no (pavement)	
	I-11	368A-050	A		11.35	4	24	9.77	0	no (pavement)	
	I-11	368A-059	A		10.51	4	24	8.93	0	no (pavement)	
	I-11	368A-067	A		10.10	4	24	8.52	0	no (pavement)	
	I-11	368A-068	A		5.23	4	8	4.32	0	yes (small, grass)	
	I-11	368A-070	A		10.23	4	24	8.65	0	no (pavement)	
	I-11	368A-071	A		10.30	4	24	8.72	0	no (pavement)	
	I-11	368A-072	A		9.92	4	24	8.34	0	no (pavement)	
	I-11	368A-081	A		8.06	4	12	6.98	0	no (pavement)	
	I-11	368A-086	A		7.93	4	12	6.85	0	no (pavement)	
	I-11	368A-087	A		7.52	4	10	6.52	0	no (pavement)	
	H-11	368A-094	A		7.52	4	10	6.52	0	no (pavement)	
	H-11	368A-100	A		7.51	4	8	6.60	0	no (pavement)	

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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 DRN: GP
 CKD: JF
 DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

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Manhole Rehabilitation on Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
	H-11	368A-116	A		4.50	4	8	3.59	0	no (pavement)	
	H-11	368A-120	A		7.66	4	8	6.75	0	no (pavement)	
	I-10	369A-181	A		3.15	4	8	2.24	0	no (pavement)	
	H-10	369A-185	A		7.06	4	18	5.73	0	yes (small, pavement)	
	H-10	369A-188	A		7.74	4	18	6.41	0	no (pavement)	
	H-10	369A-191	A		8.92	4	18	7.59	0	yes (small, pavement)	
	H-10	369A-195	A		10.10	4	18	8.77	0	no (pavement)	
	H-10	369A-202	A		10.80	4	18	9.47	0	no (pavement)	
	H-10	369A-203	A		11.24	4	18	9.91	0	no (pavement)	
	H-10	369A-209	A		11.16	4	18	9.83	0	no (pavement)	
	I-12	370A-009	C		10.17	4	12	9.09	0	no (pavement)	
	I-12	370A-010	C		4.13	4	8	3.22	0	yes (small, grass)	
	I-12	370A-011	C		3.63	4	8	2.72	0	yes (small, grass)	
	I-12	370A-015	C		9.46	4	12	8.38	0	no (pavement)	
	I-12	370A-025	C		4.12	4	10	3.12	0	yes (small, pavement)	
	I-12	370A-026	A		8.21	4	10	7.21	0	no (pavement)	
	I-12	370A-027	A		11.02	4	10	10.02	0	no (pavement)	
	I-12	370A-028	A		0.00	4	10	0.00	0	no (pavement)	bench restoration & bench lining ONLY
	I-12	370A-029	A		7.94	4	10	6.94	0	no (pavement)	
	I-12	370A-187	C		11.25	4	12	10.17	0	yes (small, pavement)	
	I-12	371A-017	C		6.81	4	8	5.90	0	no (pavement)	
	I-12	371A-018	A		6.00	4	8	5.09	0	no (pavement)	
	I-12	371A-032	A		4.00	4	8	3.09	0	yes (small, pavement)	
	I-12	371A-035	A		4.00	4	8	3.09	0	no (pavement)	
	I-12	371A-036	A		4.00	4	8	3.09	0	yes (small, pavement)	
	I-11	371A-037	A		4.00	4	8	3.09	0	no (pavement)	
	I-11	371A-042	A		4.00	4	8	3.09	0	no (pavement)	
	I-12	371A-046	A		8.00	4	8	7.09	0	no (pavement)	
	I-12	371A-057	A		5.00	4	8	4.09	0	yes (small, pavement)	
	I-12	371A-058	A		5.00	4	8	4.09	0	no (pavement)	

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JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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DES: CB/JR
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
 SHEET
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Manhole Rehabilitation Schedule	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
I-12	371A-066	A		5.00	4	8	4.09	0	no (pavement)	
J-11	371A-098	A		5.00	4	8	4.09	0	no (pavement)	
J-11	371A-099	A		5.00	4	8	4.09	0	no (pavement)	
J-11	371A-105	A		4.00	4	8	3.09	0	no (pavement)	
J-11	371A-107	C		8.15	4	12	7.07	0	no (pavement)	
J-11	371A-108	C		4.69	4	12	0.61	0	yes (small, pavement)	
J-11	371A-122	A		5.00	4	8	4.09	0	no (pavement)	
J-10	371A-168	A		12.98	4	10	11.98	0	no (pavement)	
K-10	371A-231	A		4.77	4	8	3.86	0	no (sidewalk)	
K-10	371A-232	A		5.05	4	8	4.14	0	no (grass)	
K-10	371A-233	A		4.66	4	8	3.75	0	no (sidewalk)	
I-12	371A-399	C		3.81	4	8	2.90	0	no (brick)	
I-12	371A-400	C		6.45	4	8	5.54	0	no (brick)	
I-12	374A-016	A		12.56	4	24	10.98	0	no (pavement)	
I-12	374A-022	A		4.00	4	8	3.09	0	no (pavement)	
I-12	374A-025	A		13.83	4	24	12.25	0	no (pavement)	
I-12	374A-053	C		11.38	4	20	9.97	0	no (pavement)	
H-12	374A-060	C		8.17	4	20	6.76	0	no (pavement)	
H-12	374A-061	C		8.22	4	20	6.81	0	no (pavement)	
H-12	374A-068	A		5.00	4	18	3.67	0	no (pavement)	
H-12	374A-074	A		4.00	4	8	3.09	0	no (pavement)	
H-12	374A-080	A		4.00	4	10	3.00	0	no (pavement)	
H-12	374A-084	A		4.00	4	8	3.09	0	no (pavement)	
H-12	374A-086	A		3.82	4	8	2.91	0	no (pavement)	
H-12	374A-102	A		3.49	4	8	2.58	0	no (pavement)	
H-12	374A-104	A		4.41	4	8	3.50	0	no (pavement)	
H-12	374A-107	A		5.18	4	8	4.27	0	no (pavement)	
H-12	374A-109	A		5.18	4	8	4.27	0	no (pavement)	
H-12	374A-111	A		4.08	4	8	3.17	0	no (pavement)	
H-12	374A-112	A		3.75	4	8	2.84	0	no (pavement)	
H-12	374A-116	A		4.60	4	10	3.60	0	no (pavement)	
H-12	374A-121	A		3.80	4	8	2.89	0	no (pavement)	
H-12	374A-128	A		3.20	4	8	2.29	0	no (pavement)	
H-12	374A-138	A		5.00	4	10	4.00	0	no (pavement)	

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
SHEET
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Manhole Rehabilitation on Schedule	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
H-12	374A-139	A		5.00	4	10	4.00	0	no (pavement)	
H-12	374A-140	A		5.00	4	10	4.00	0	no (pavement)	
H-12	374A-141	A		4.47	4	10	3.47	0	no (pavement)	
H-12	374A-143	A		3.25	4	8	2.34	0	no (pavement)	
H-12	374A-144	A		3.15	4	8	2.24	0	no (pavement)	
K-9	387A-098	A		10.74	4	36	8.66	0	no (pavement)	bench restoration required
K-9	387A-099	A		9.85	4	36	7.77	0	no (pavement)	bench restoration required
K-9	387A-100	A		10.03	4	36	7.95	0	yes (small, pavement)	bench restoration required
K-9	387A-101	A		9.23	4	36	7.15	0	no (pavement)	bench restoration required
K-9	387A-102	A		8.49	4	36	6.41	0	no (pavement)	bench restoration required
K-9	387A-103	A		7.69	4	36	5.61	0	no (pavement)	bench restoration required
K-9	387A-104	A		6.98	4	36	4.90	0	no (pavement)	bench restoration required
K-9	387A-108	A		8.28	4	36	6.20	0	no (pavement)	bench restoration required
K-9	387A-109	A		7.49	4	36	5.41	0	no (pavement)	bench restoration required
K-9	387A-123	A		7.66	4	36	5.58	0	no (pavement)	bench restoration required
K-9	387A-126	A		7.02	4	36	4.94	0	no (pavement)	
J-10	388A-001	A		11.15	4	24	9.57	0	yes (small, pavement)	bench restoration required
J-10	388A-004	A		8.53	4	24	6.95	0	no (pavement)	bench restoration required
J-10	388A-006	A		9.84	4	24	8.26	0	no (pavement)	bench restoration required
J-10	388A-007	A		8.00	4	12	6.92	0	yes (small, pavement)	bench restoration required
J-10	388A-008	A		4.00	4	8	3.09	0	no (pavement)	
J-10	388A-009	A		4.00	4	8	3.09	0	no (pavement)	
J-10	388A-010	A		9.83	4	18	8.50	0	no (pavement)	bench restoration required
J-10	388A-012	A		10.29	4	24	8.71	0	yes (small, pavement)	bench restoration required
J-10	388A-013	A		4.32	4	8	3.41	0	no (pavement)	bench restoration required
J-10	388A-016	A		11.12	4	24	9.54	0	no (pavement)	bench restoration required
J-10	388A-017	A		12.01	4	24	10.43	0	no (pavement)	bench restoration required
J-10	388A-022	A		13.12	4	24	11.54	0	no (pavement)	bench restoration required
J-10	388A-026	A		8.13	4	10	7.13	0	no (pavement)	bench restoration required

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

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DES: CB/JR
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
SHEET
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Manhole Rehabilitation Schedule	Atlas	Manhole #	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
J-10		388A-027	A		7.50	4	10	6.50	0	no (pavement)	bench restoration required
J-10		388A-028	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-031	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-032	C		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-033	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-034	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-035	A		5.06	4	8	4.15	0	no (pavement)	
J-10		388A-036	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-040	A		5.00	4	8	4.09	0	no (grass)	partially covered by fence
J-10		388A-044	A		5.00	4	8	4.09	0	no (pavement)	
J-10		388A-047	A		10.50	4	24	8.92	0	yes (small, pavement)	
J-10		388A-056	A		4.58	4	8	3.67	0	no (brick)	
J-10		388A-059	A		10.36	4	24	8.78	0	no (brick)	
J-10		388A-060	A		10.89	4	24	9.31	0	yes (small, brick)	
J-10		388A-063	A		3.59	4	8	2.68	0	no (brick)	
J-10		388A-065	A		11.68	4	24	10.10	0	yes (small, brick)	
J-10		388A-069	A		13.30	4	24	11.72	0	no (brick)	
J-10		388A-070	A		5.23	4	8	4.32	0	no (brick)	
J-10		388A-077	A		12.85	4	24	11.27	0	no (brick)	
J-10		388A-078	A		13.48	4	24	11.90	0	yes (small, pavement)	
J-10		388A-094	A		12.45	4	24	10.87	0	no (pavement)	
J-10		388A-095	A		11.59	4	24	10.01	0	no (pavement)	
J-10		388A-100	A		10.40	4	24	8.82	0	no (pavement)	
J-10		388A-101	A		5.54	4	8	4.63	0	no (pavement)	
J-10		388A-114	A		12.48	4	24	10.90	0	no (pavement)	
J-10		388A-120	A		4.33	4	8	3.42	0	no (pavement)	
J-10		388A-123	A		12.08	4	24	10.50	0	no (pavement)	
J-10		388A-133	A		11.79	4	24	10.21	0	no (pavement)	bench restoration required
J-10		388A-149	A		12.09	4	24	10.51	0	no (pavement)	
J-10		388A-150	C		10.85	4	24	9.27	0	no (pavement)	
J-10		388A-169	A		6.83	4	8	5.92	0	no (pavement)	

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Rehabilitation Schedule.dwg Layout- May 29, 2013 - 1:29pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

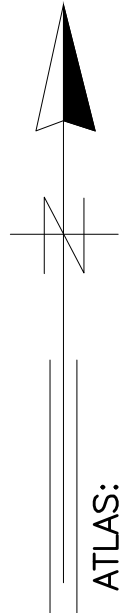
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DRN: GP
CKD: JF
DATE: 05/29/13

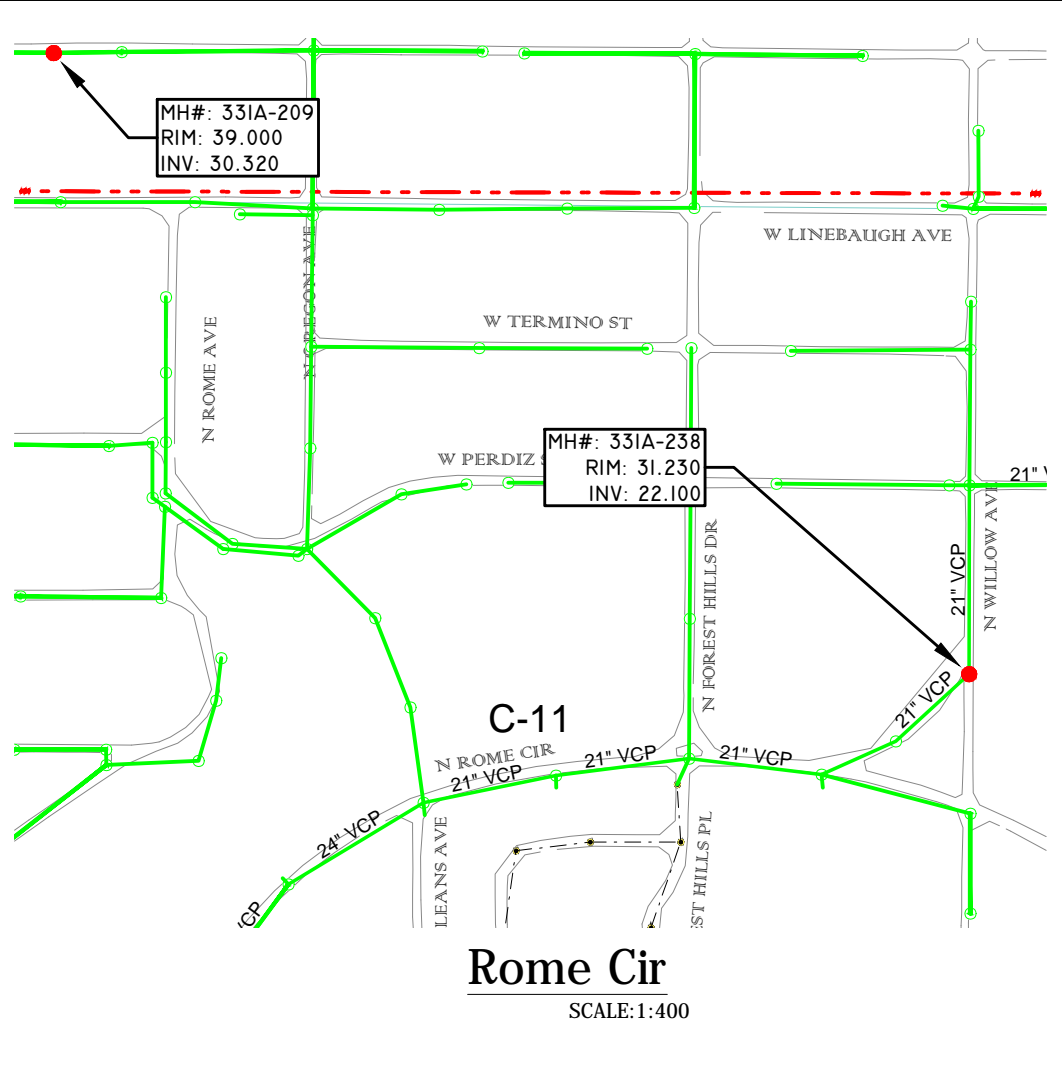
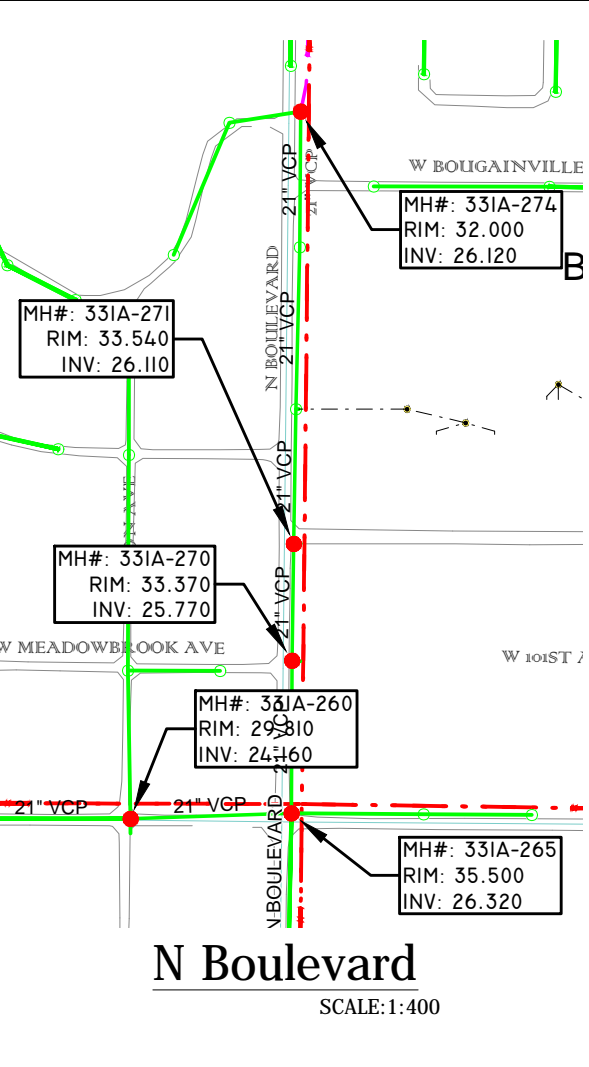
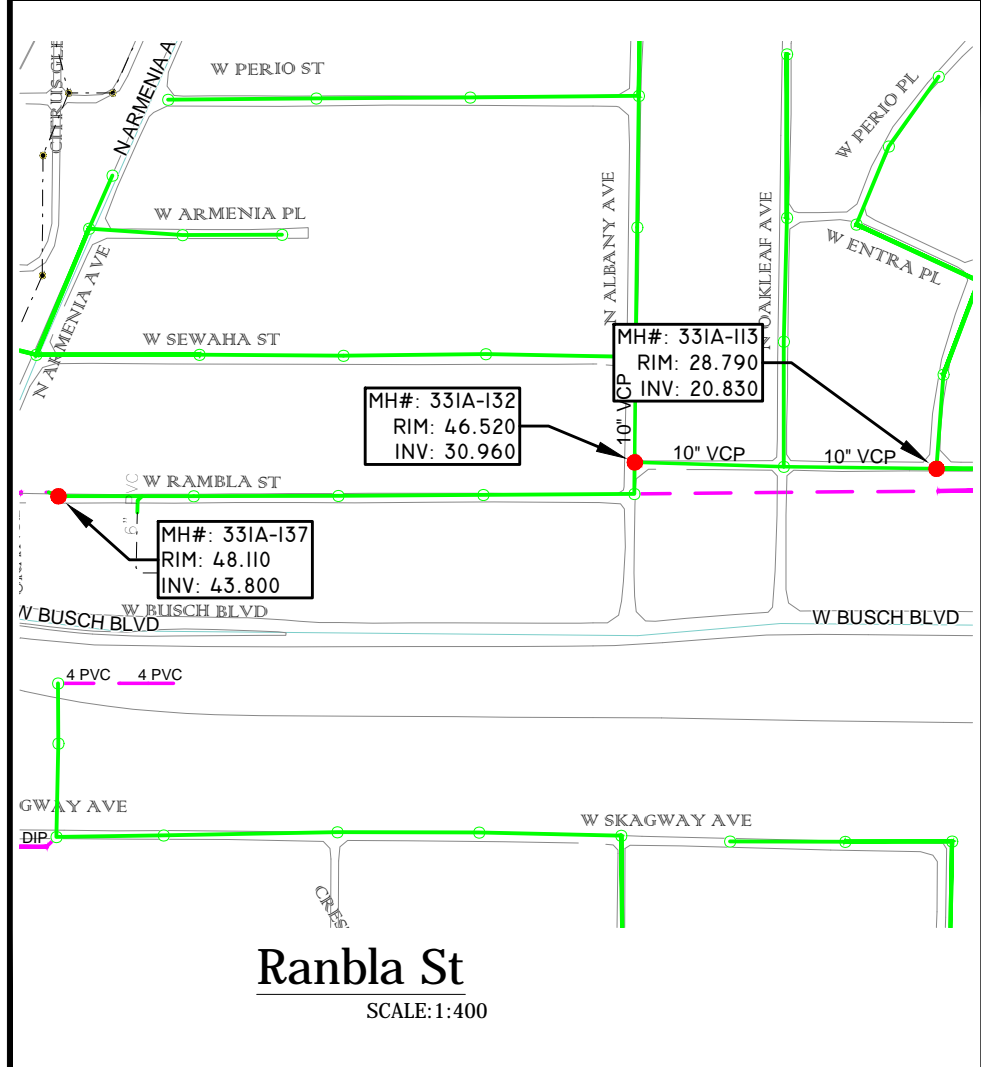
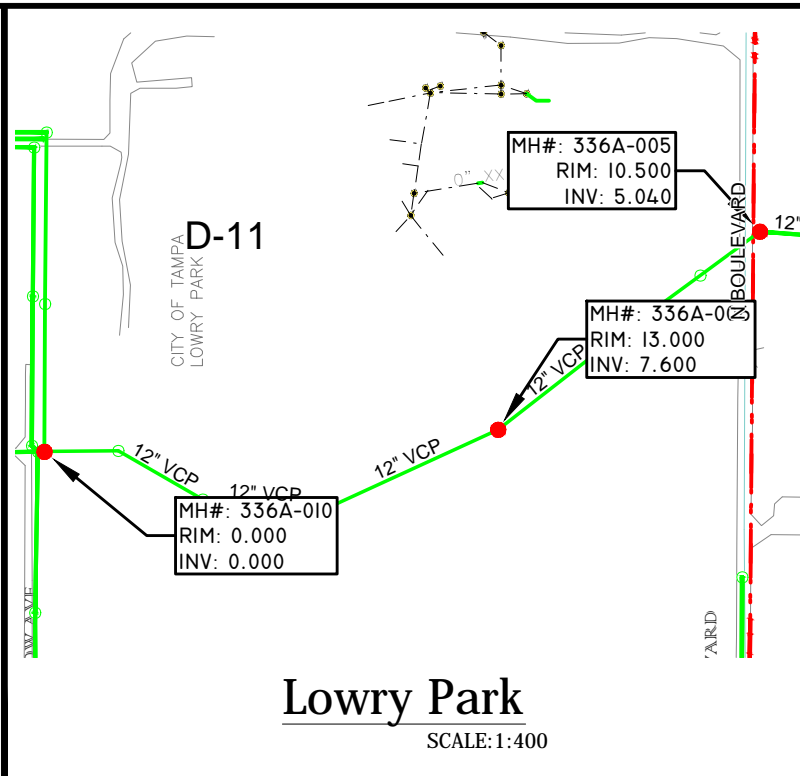
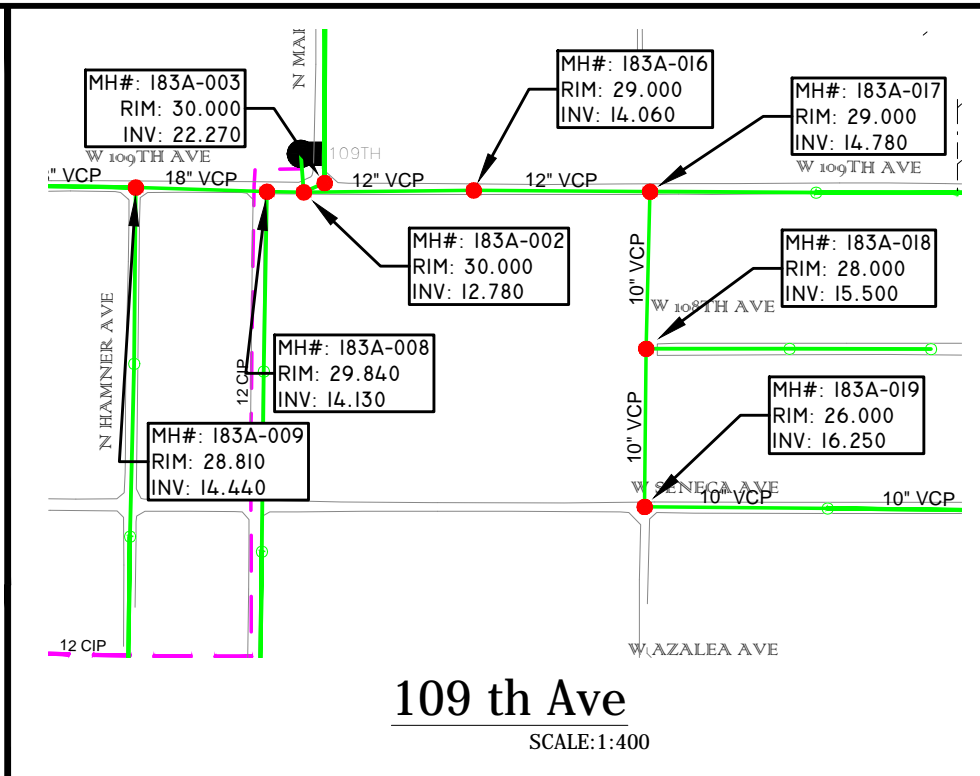
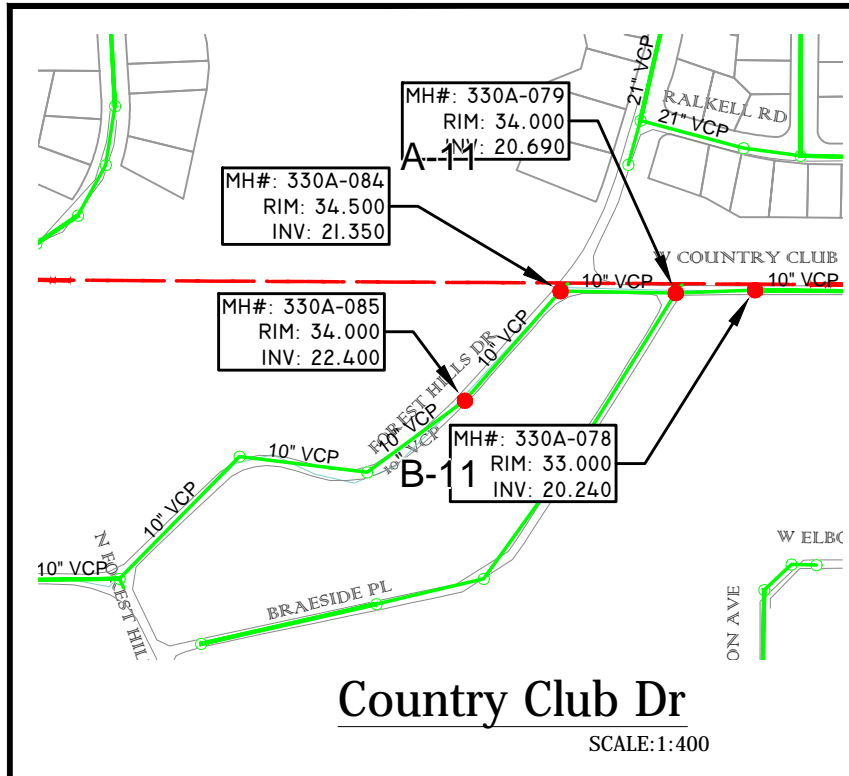
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
SCHEDULE

W.O. 5895
SHEET
13
OF 27



ATLAS:



LEGEND:

- MANHOLES – TO BE REHABILITATED
- MANHOLES – NO REHABILITATION REQUIRED
- ⦿ EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

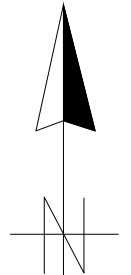
No.	DATE	REVISIONS
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DES: CB/JR
DRN: GP
CKD: JF
DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

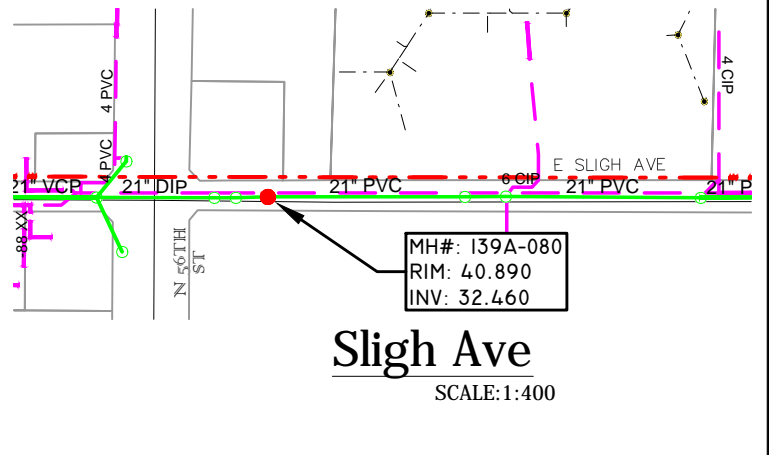
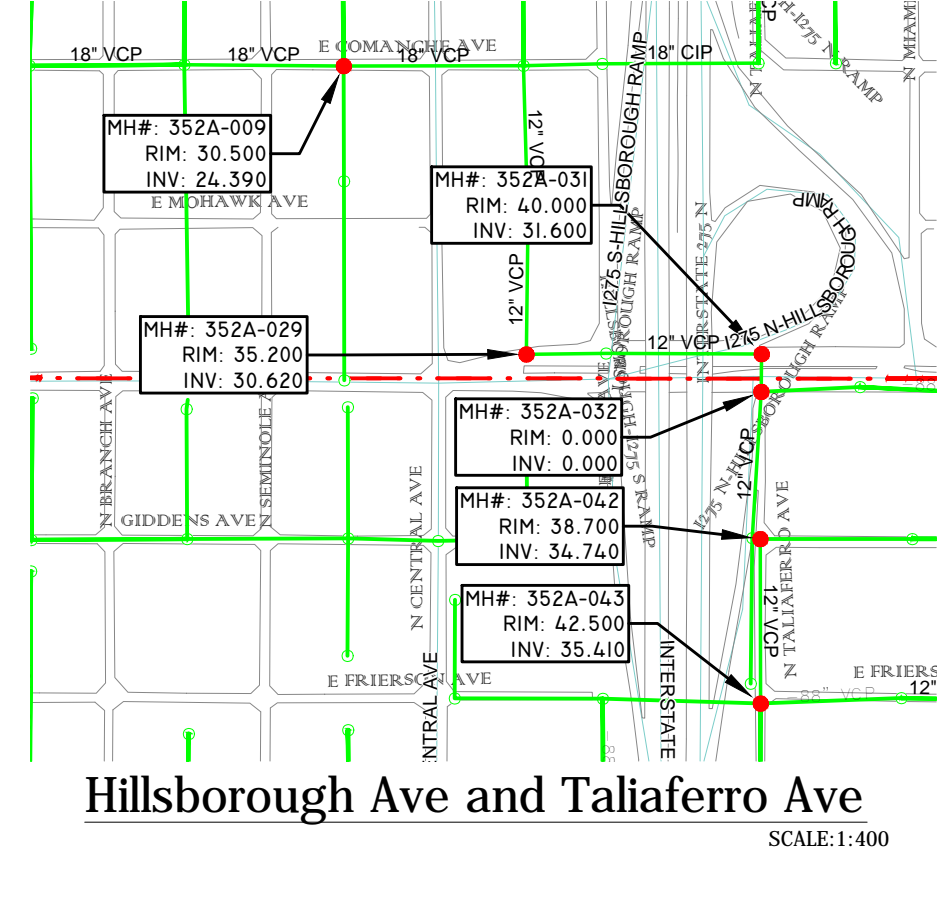
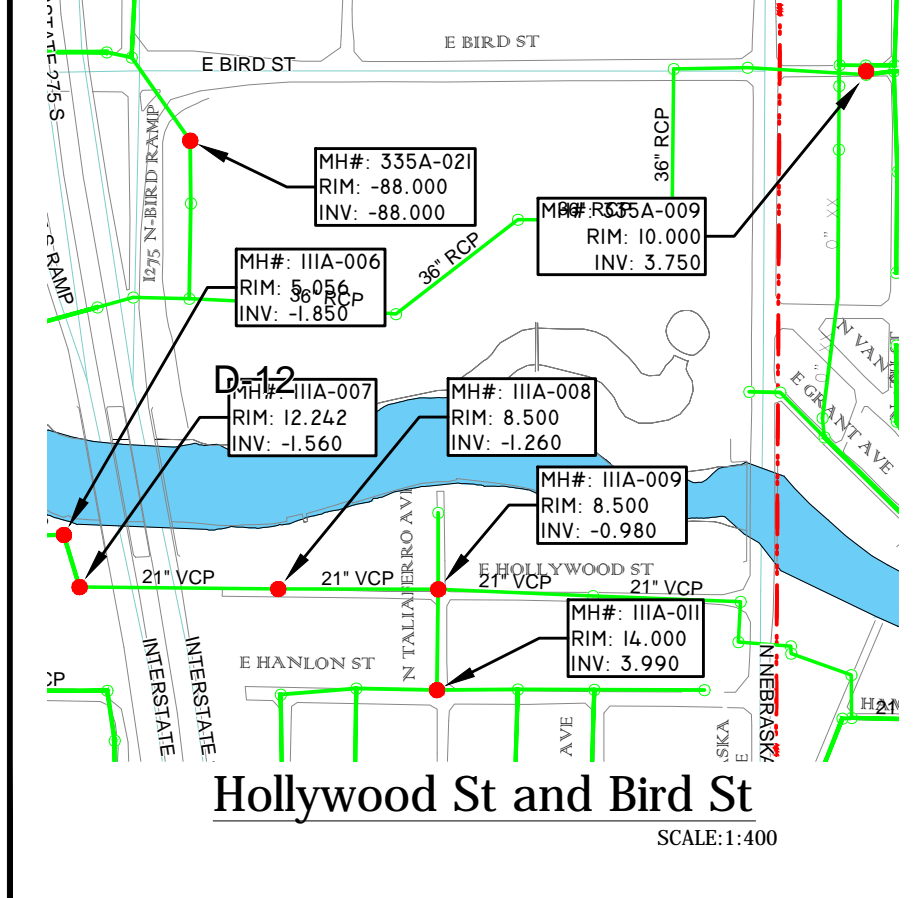
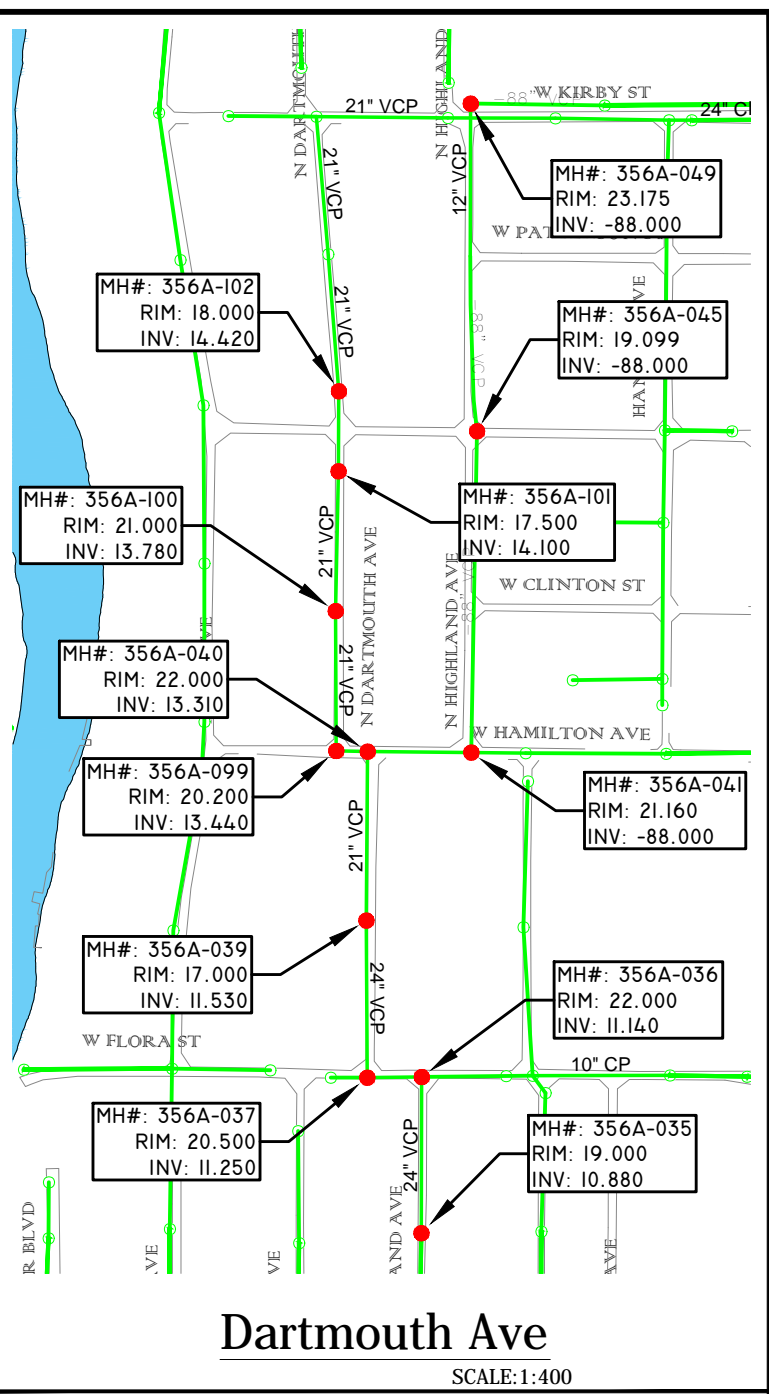
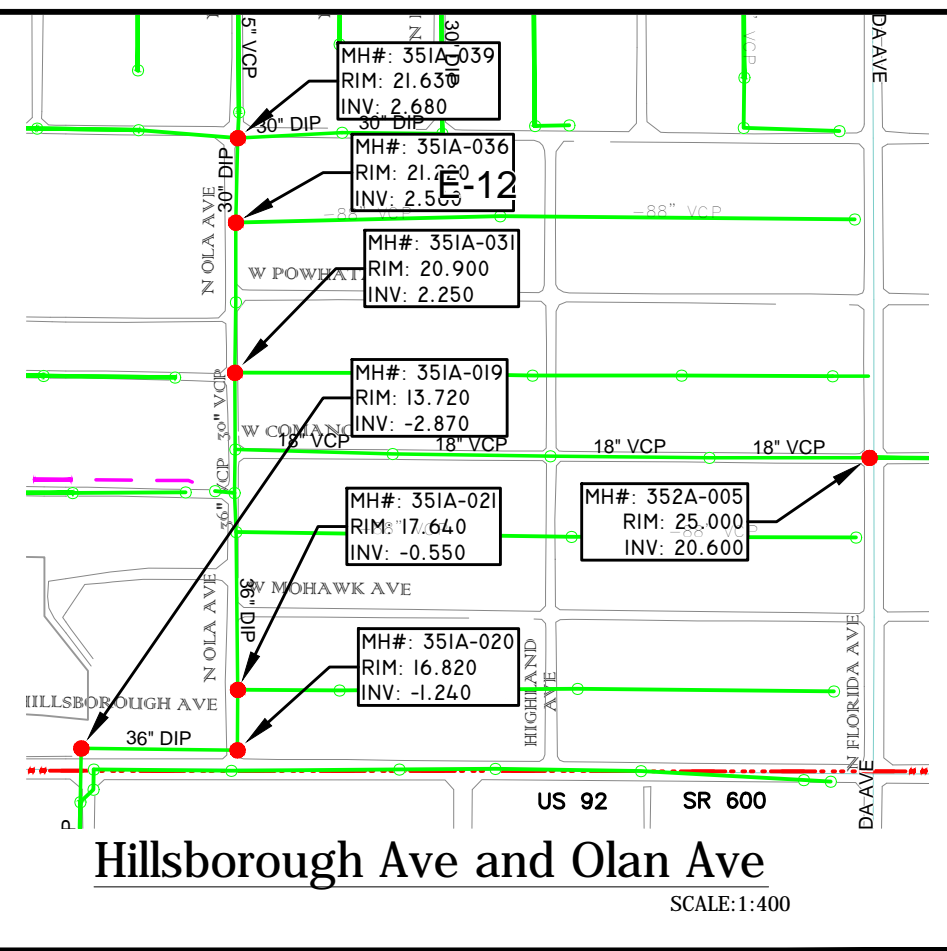
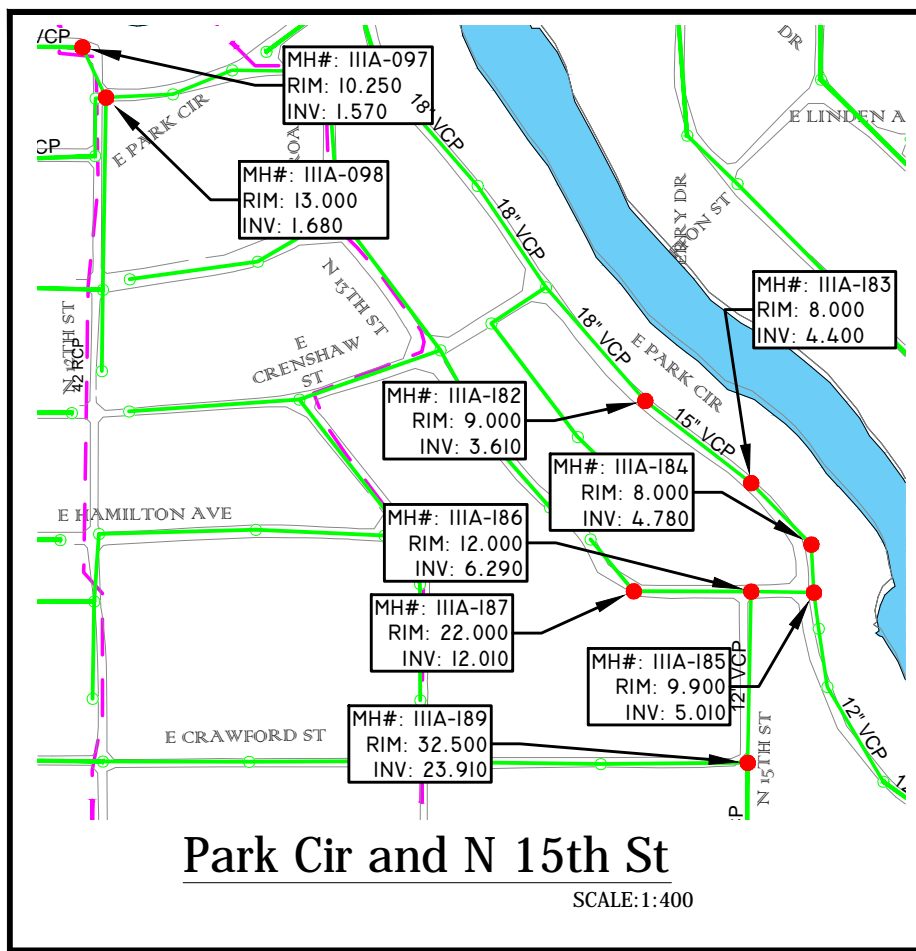
WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN

W.O. 5895
SHEET
14
OF 27



ATLAS:

- LEGEND:**
- MANHOLES – TO BE REHABILITATED
 - MANHOLES – NO REHABILITATION REQUIRED
 - ⦿ EX. PUMP STATION



User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

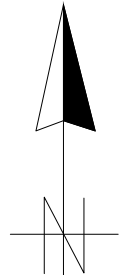
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DRN: GP
CKD: JF
DATE: 05/29/13

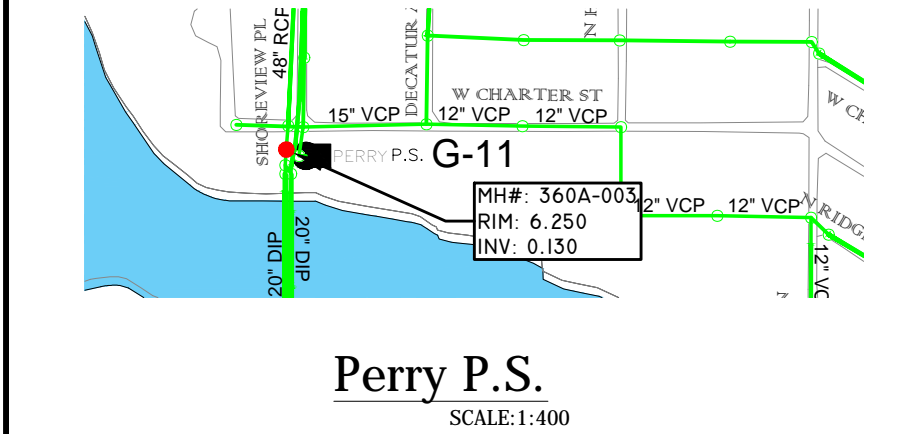
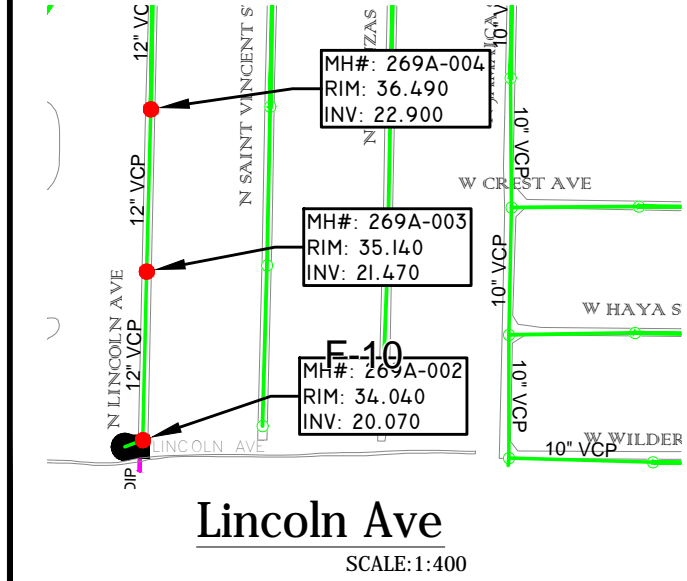
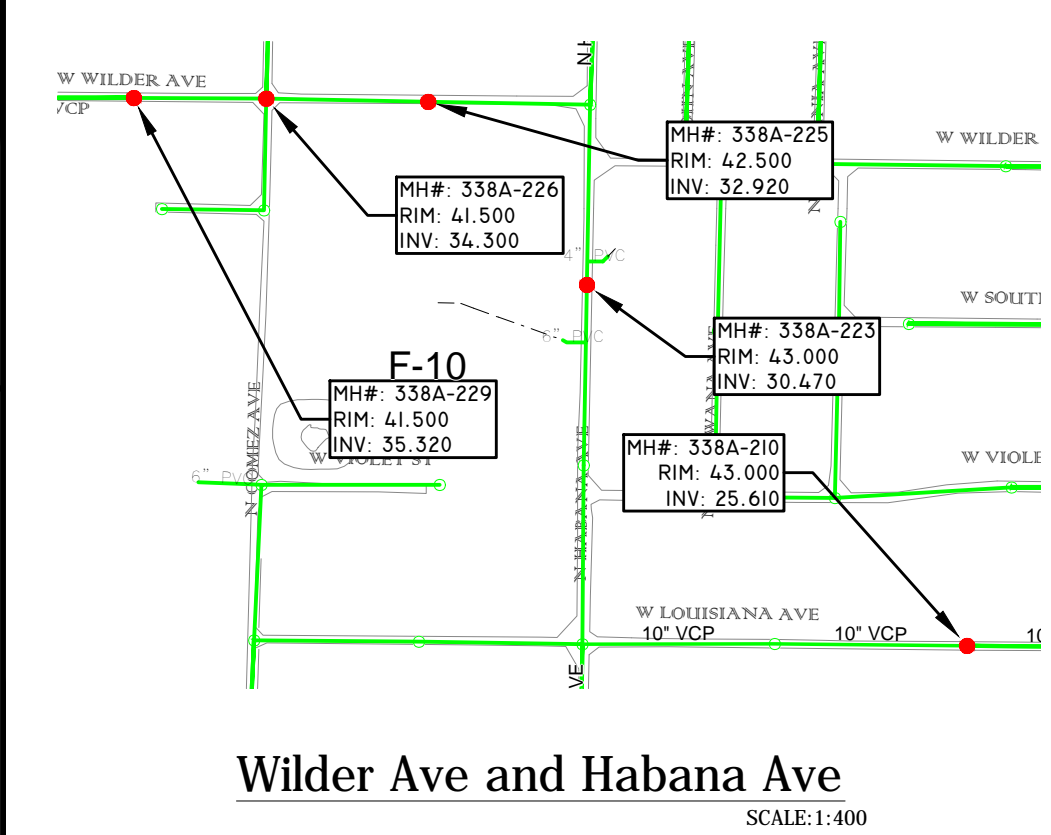
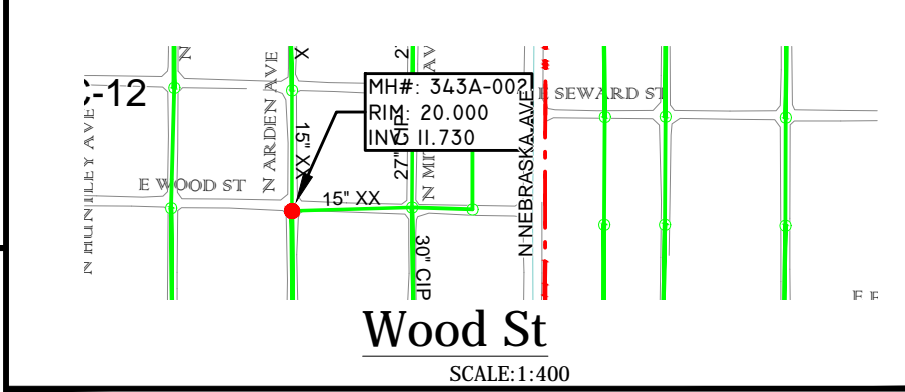
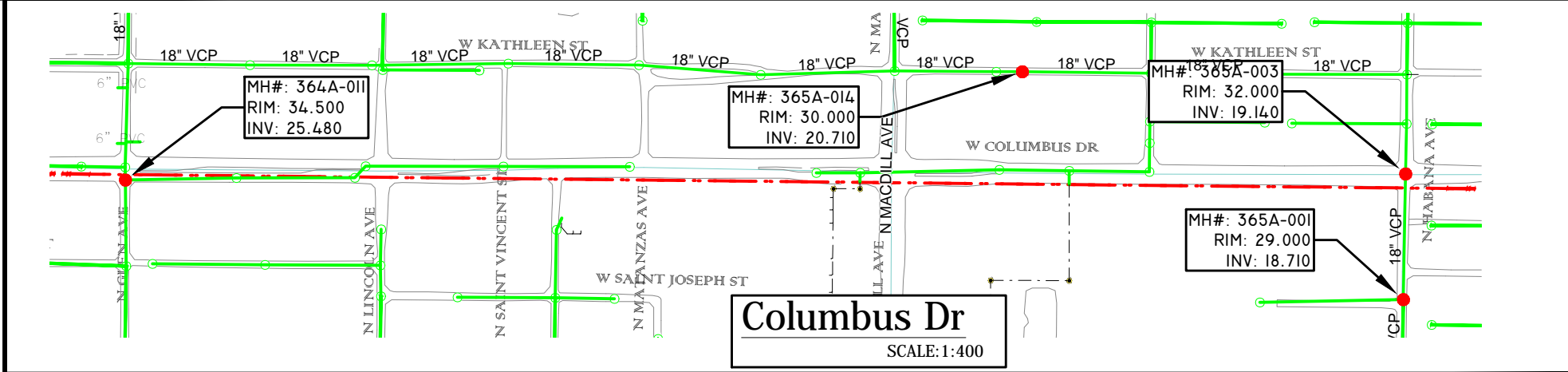
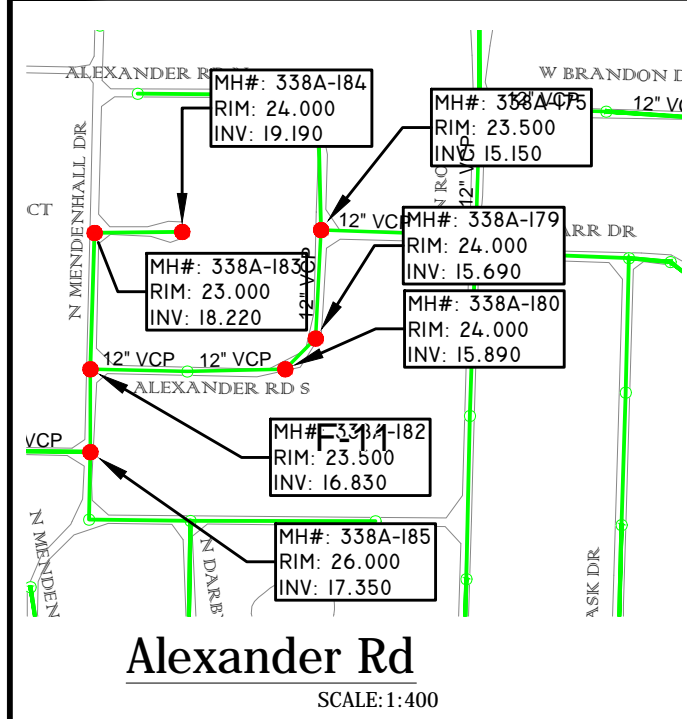
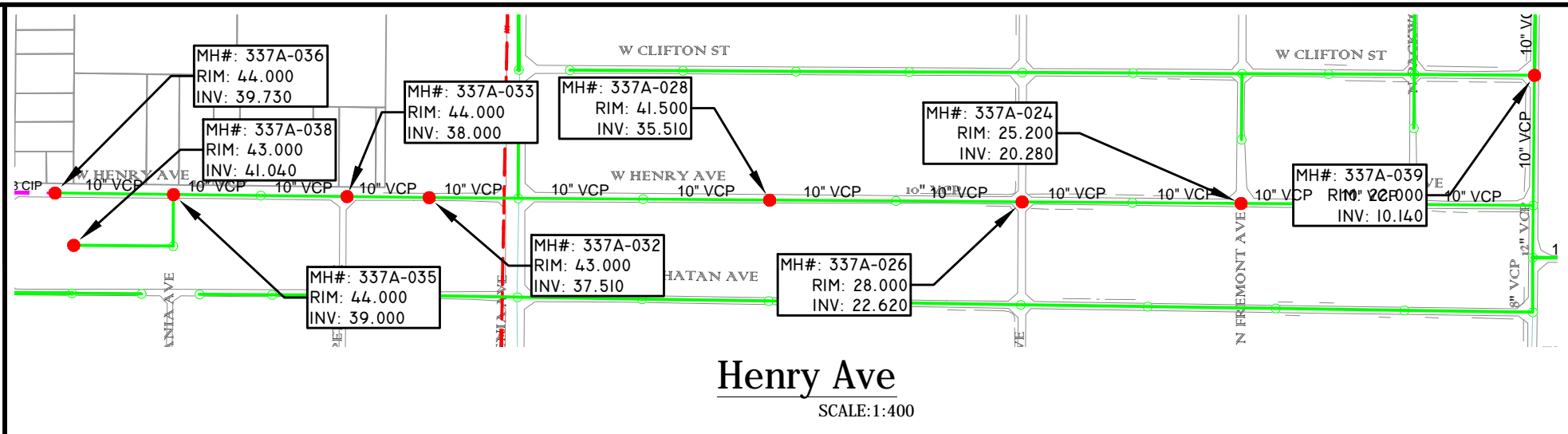
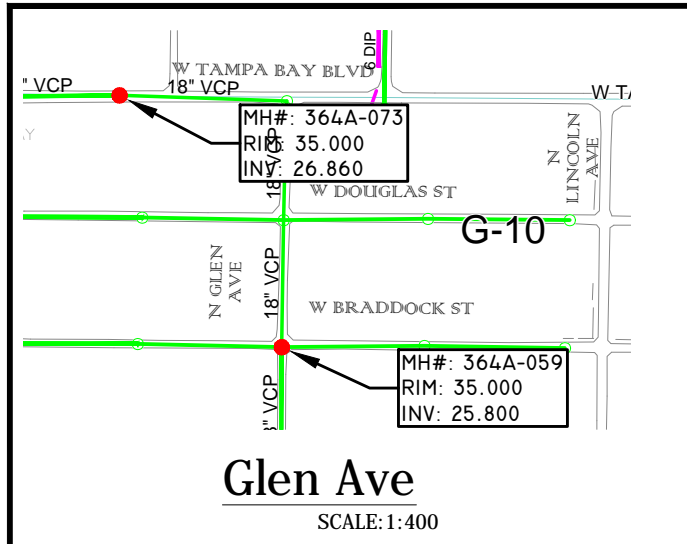
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (2)

W.O. 5895
SHEET
15
OF 27



ATLAS:



- LEGEND:**
- MANHOLES - TO BE REHABILITATED
 - MANHOLES - NO REHABILITATION REQUIRED
 - ⦿ EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

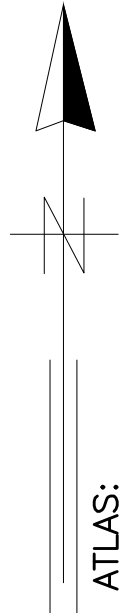
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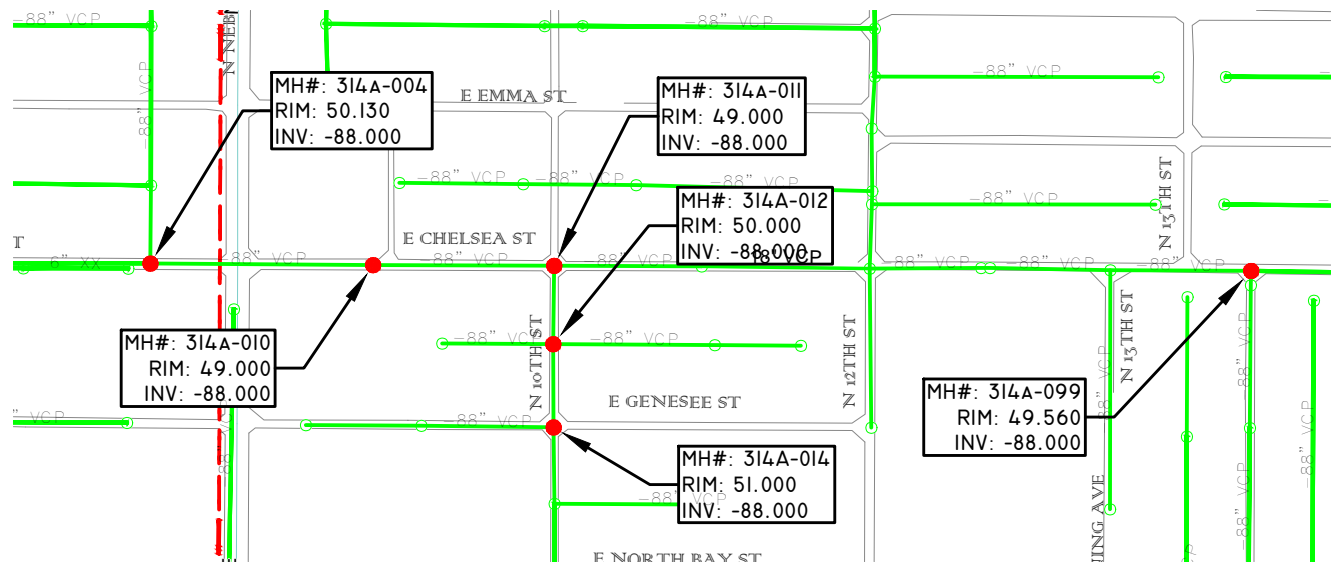
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (3)

W.O. 5895
SHEET
16
OF 27

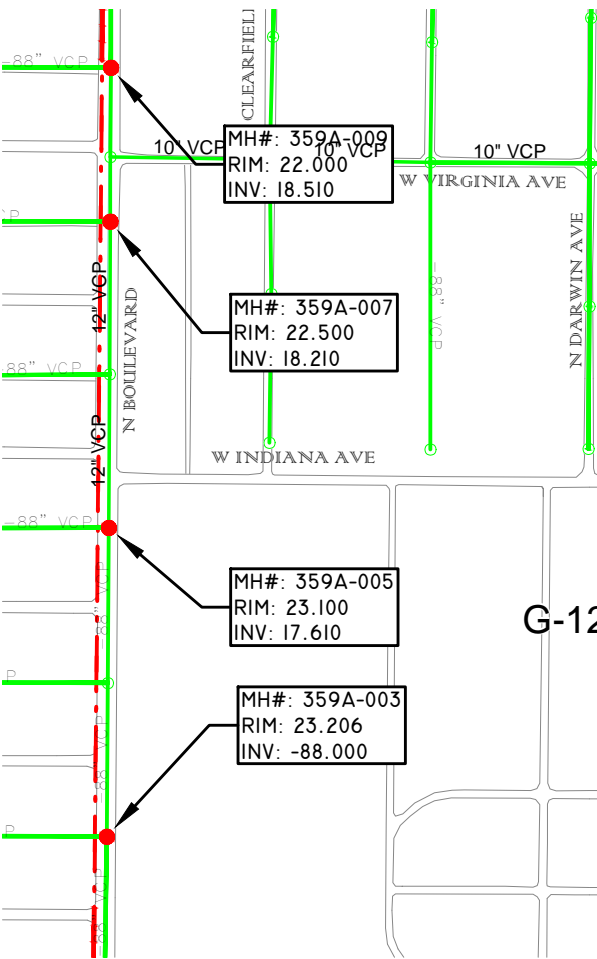


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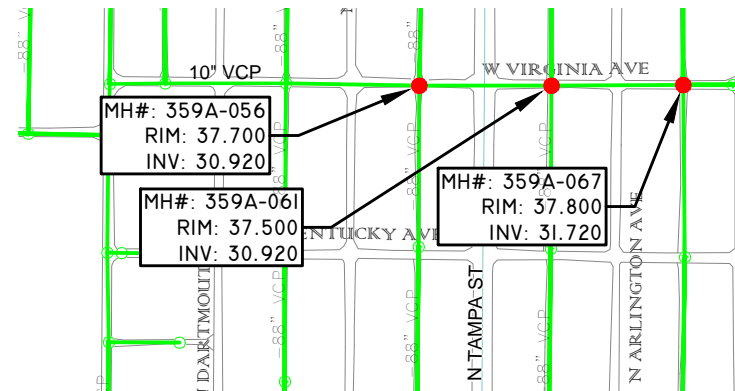
Chelsea St and 10th St

SCALE:1:400



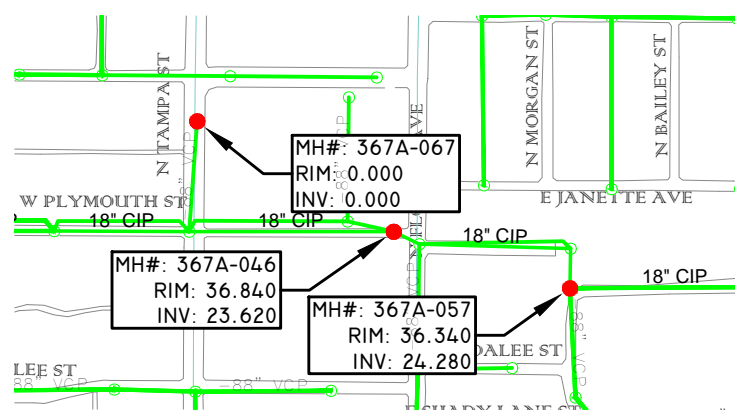
N Blvd and Indiana Ave

SCALE:1:400



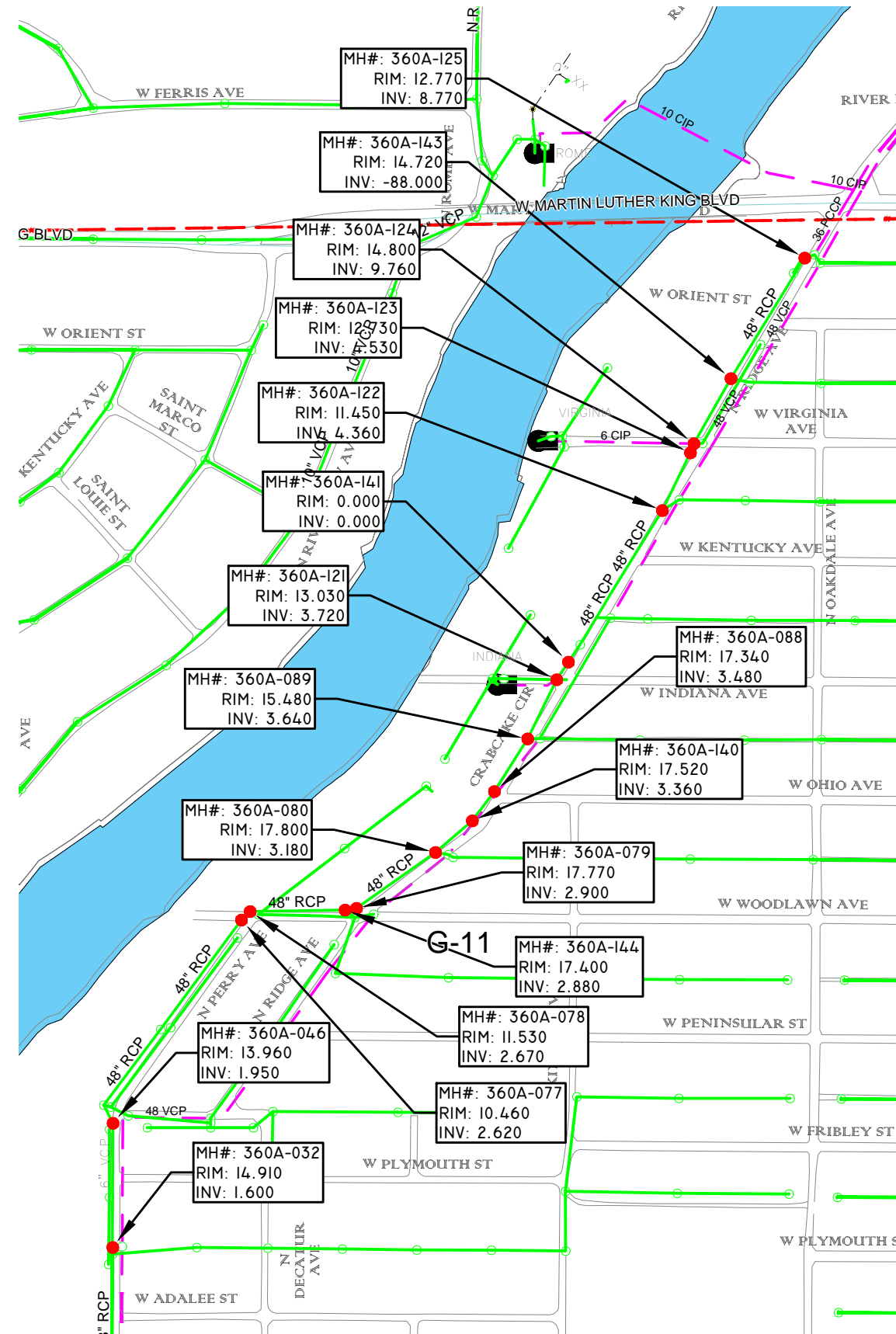
N Boulevard and Ridge Ave

SCALE:1:400



Plymouth St

SCALE:1:400



Ridge Ave south of MLK

SCALE:1:400

LEGEND:

- MANHOLES - TO BE REHABILITATED
- MANHOLES - NO REHABILITATION REQUIRED
- ⦿ EX. PUMP STATION

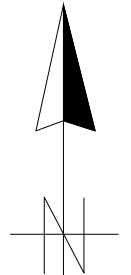
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DES: CB/JR
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CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
 CITY WIDE
 PLAN (4)

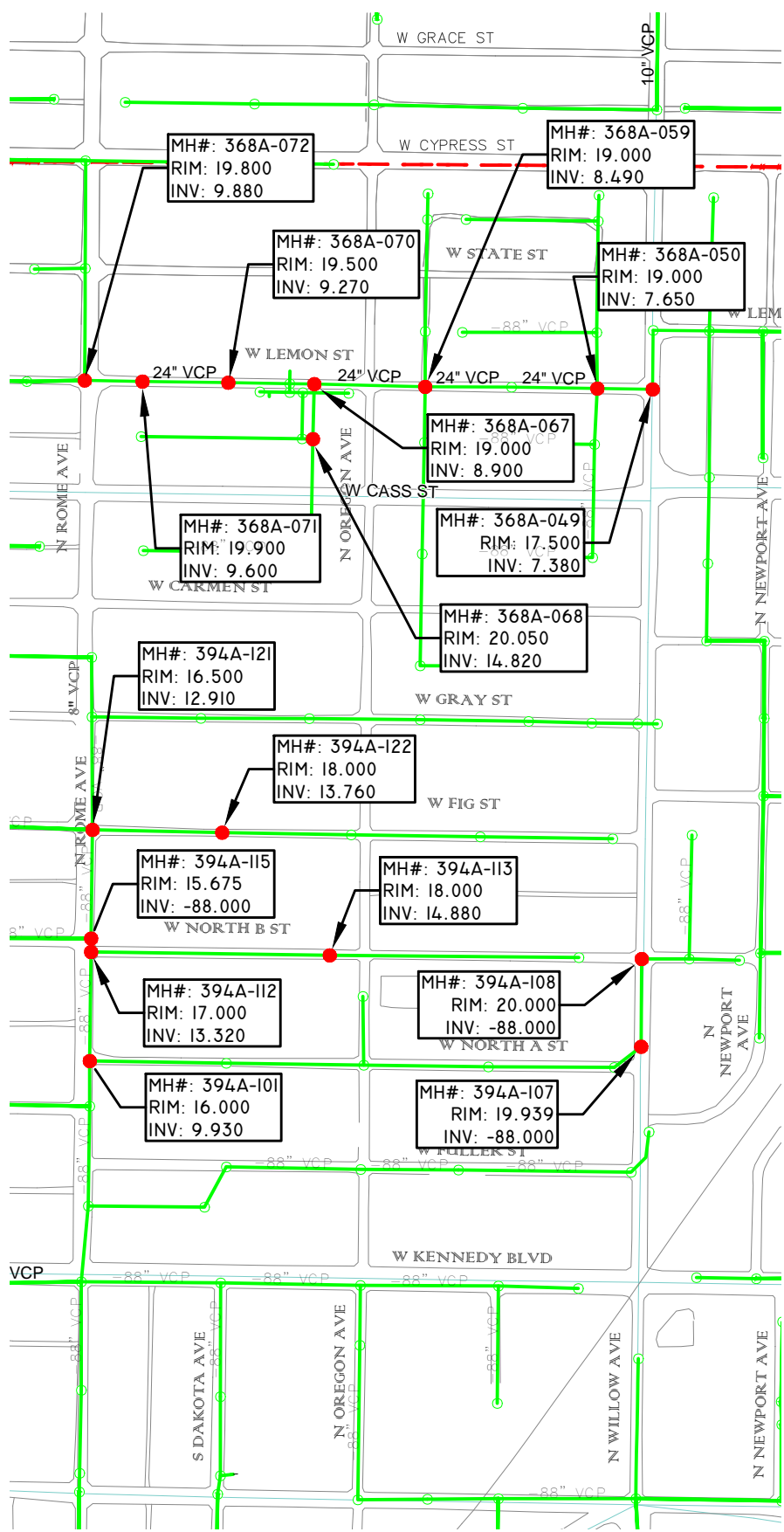
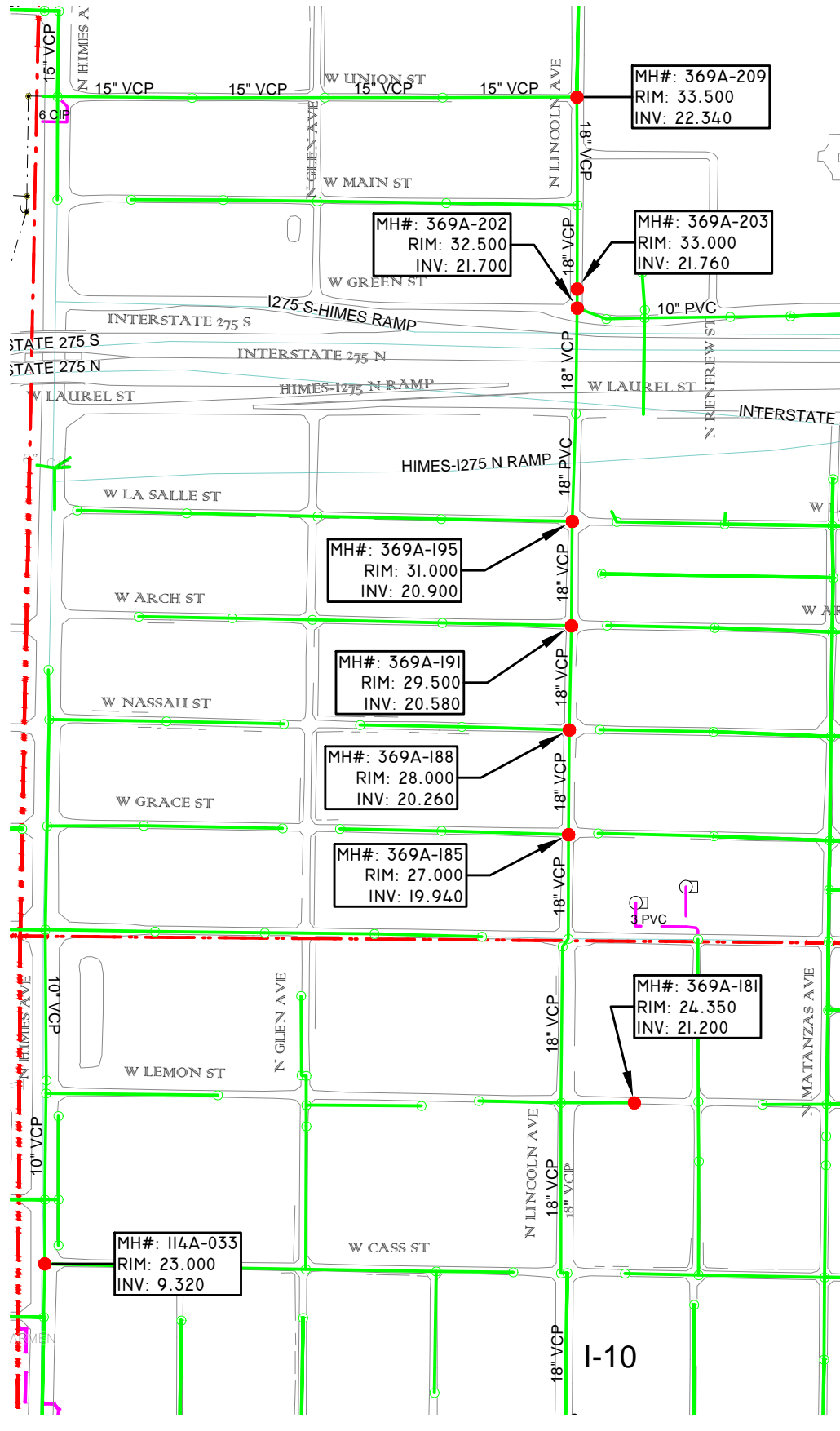
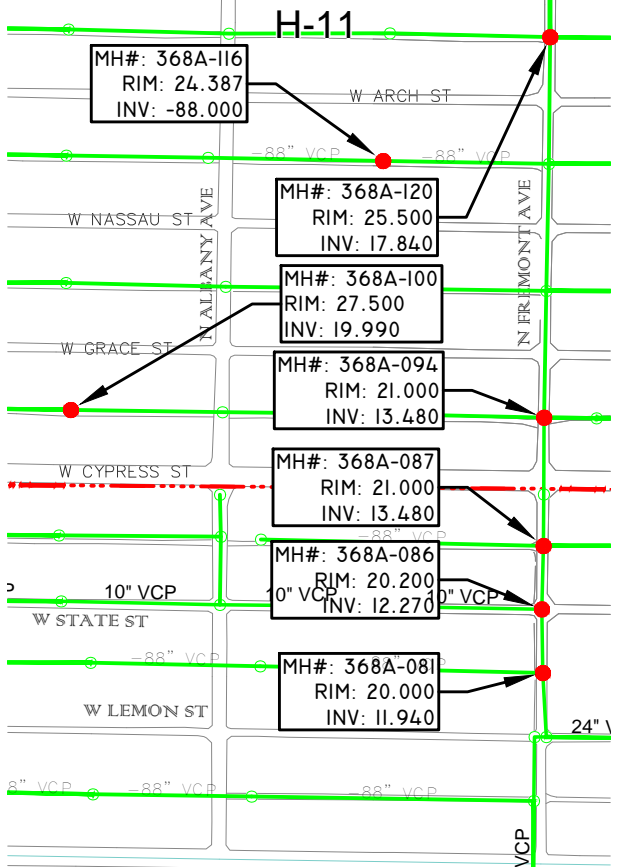
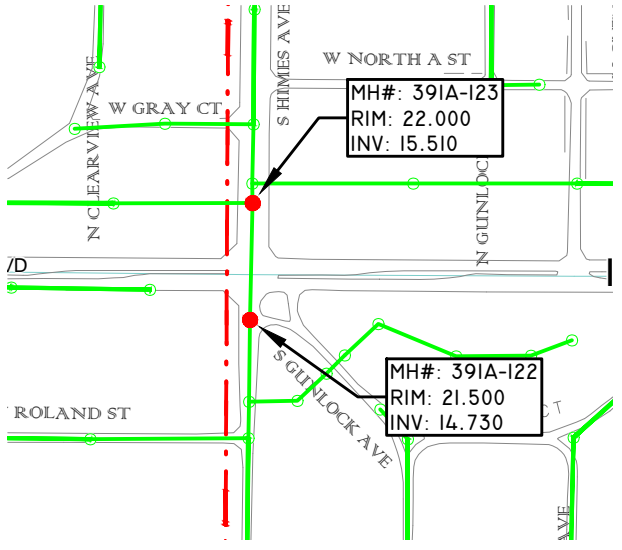
W.O. 5895
 SHEET
 17
 OF 27



ATLAS:

LEGEND:

- MANHOLES - TO BE REHABILITATED
- MANHOLES - NO REHABILITATION REQUIRED
- ⦿ EX. PUMP STATION



No.	DATE	REVISIONS
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JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

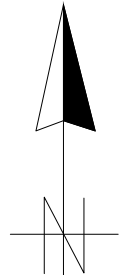
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CKD: JF
DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

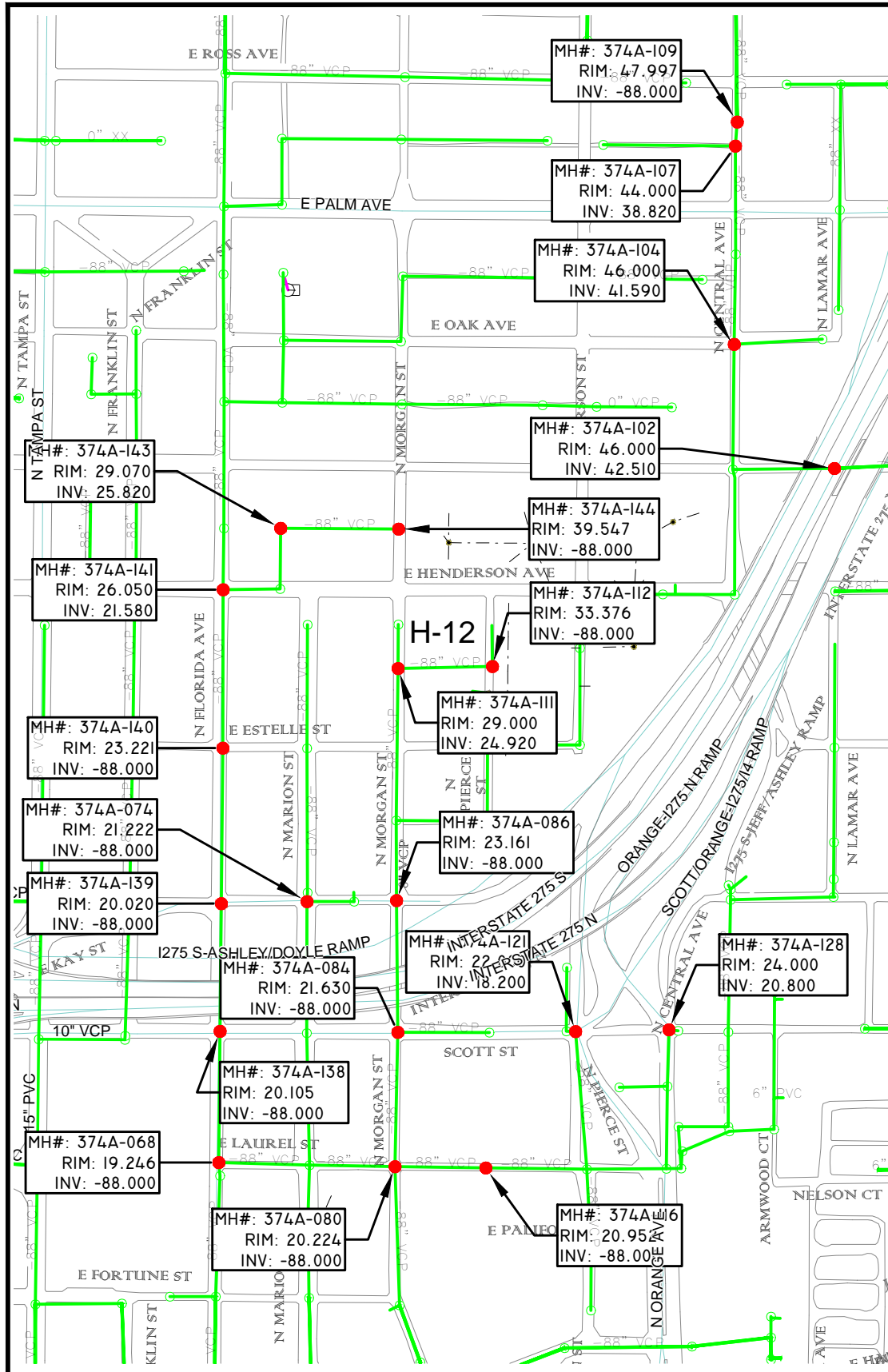
WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (5)

W.O. 5895
SHEET
18
OF 27

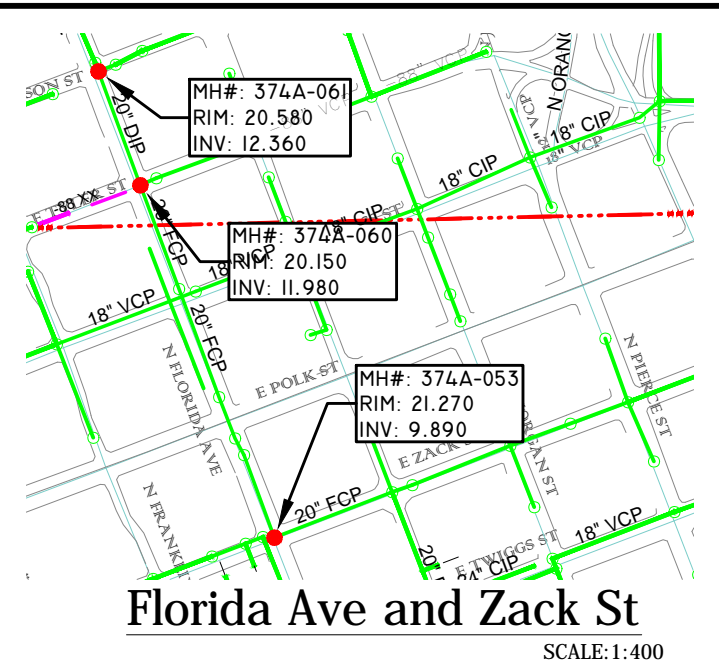
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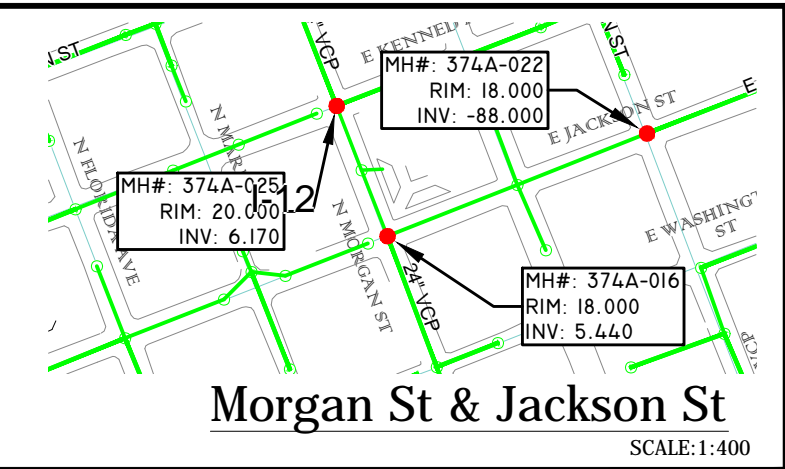
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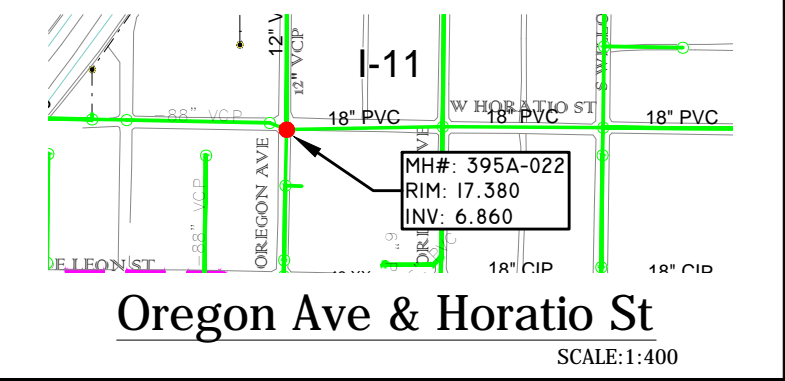
Florida Ave and Morgan St
SCALE:1:400



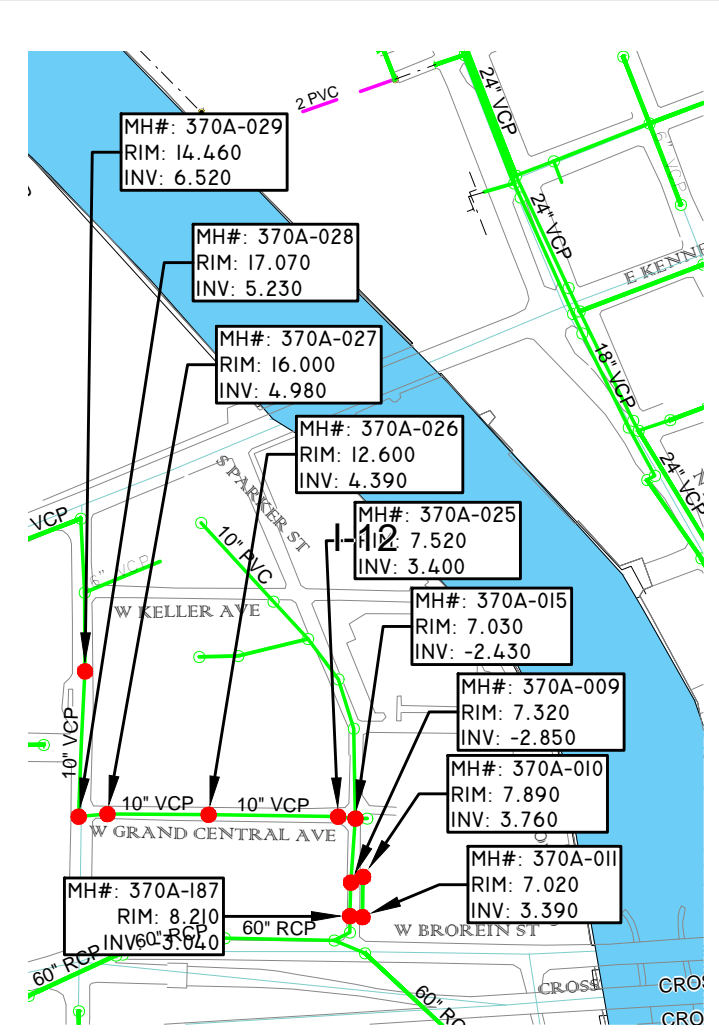
Florida Ave and Zack St
SCALE:1:400



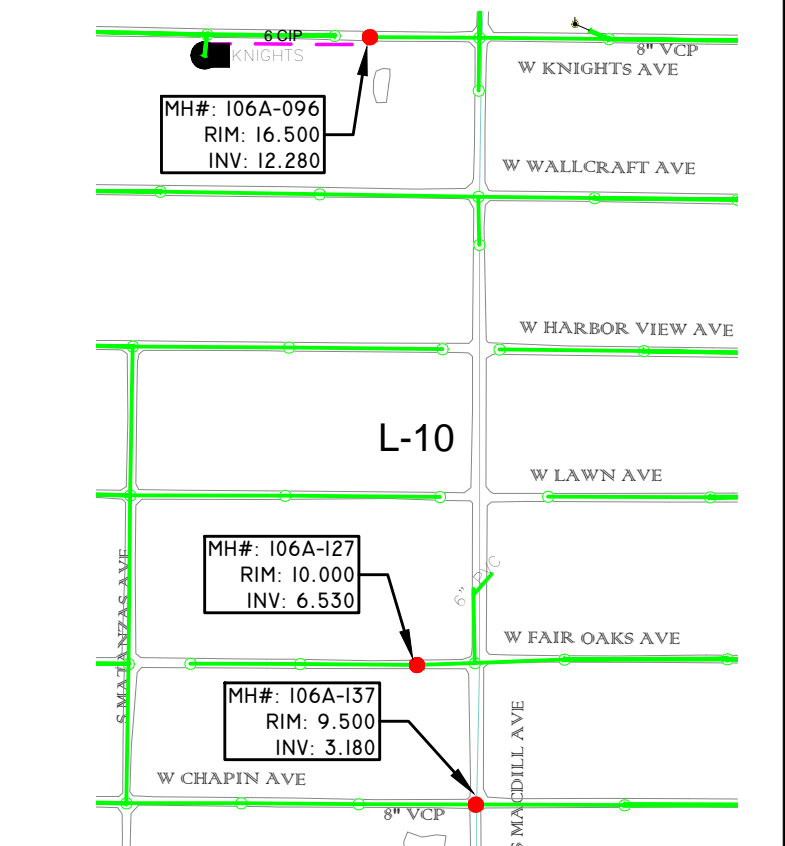
Morgan St & Jackson St
SCALE:1:400



Oregon Ave & Horatio St
SCALE:1:400



Grand Central Ave & Parker St
SCALE:1:400



Knight Ave & MacDill Ave
SCALE:1:400

- LEGEND:**
- MANHOLES - TO BE REHABILITATED
 - MANHOLES - NO REHABILITATION REQUIRED
 - ⦿ EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout- May 29, 2013 - 12:17pm

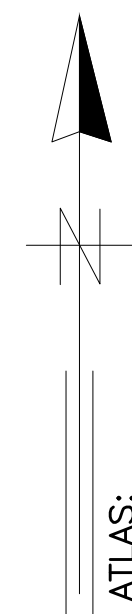
JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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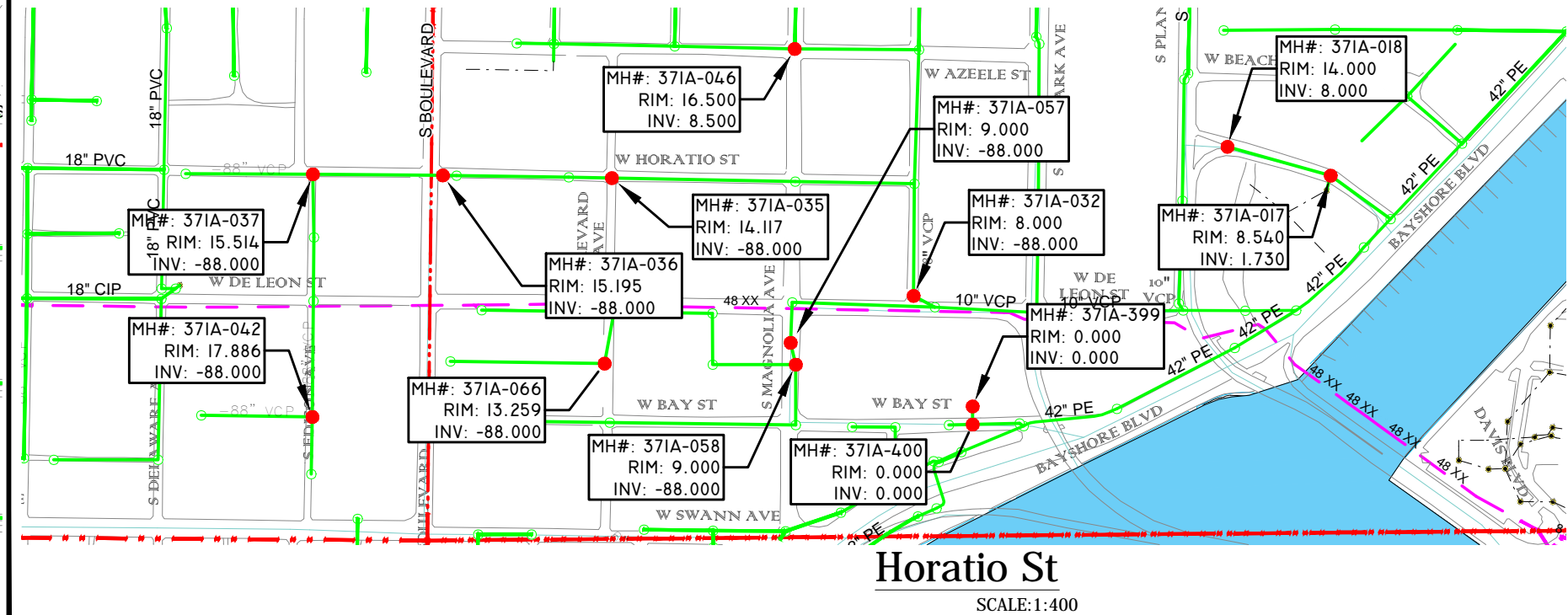
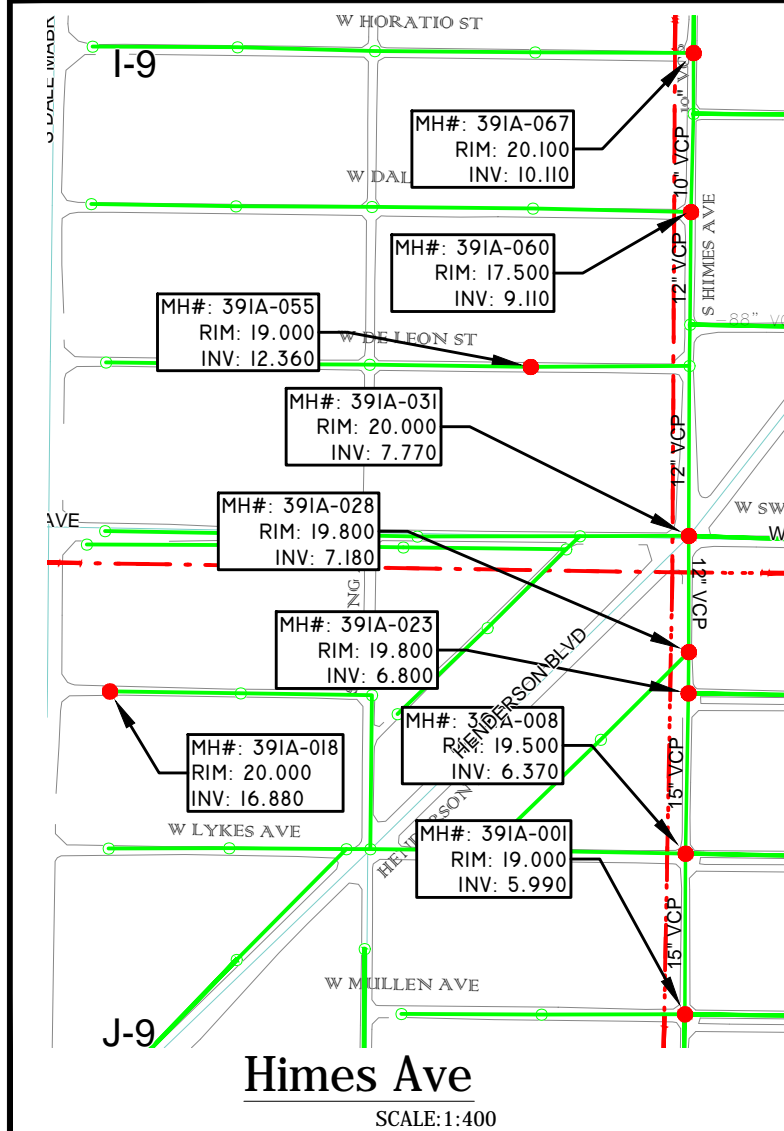
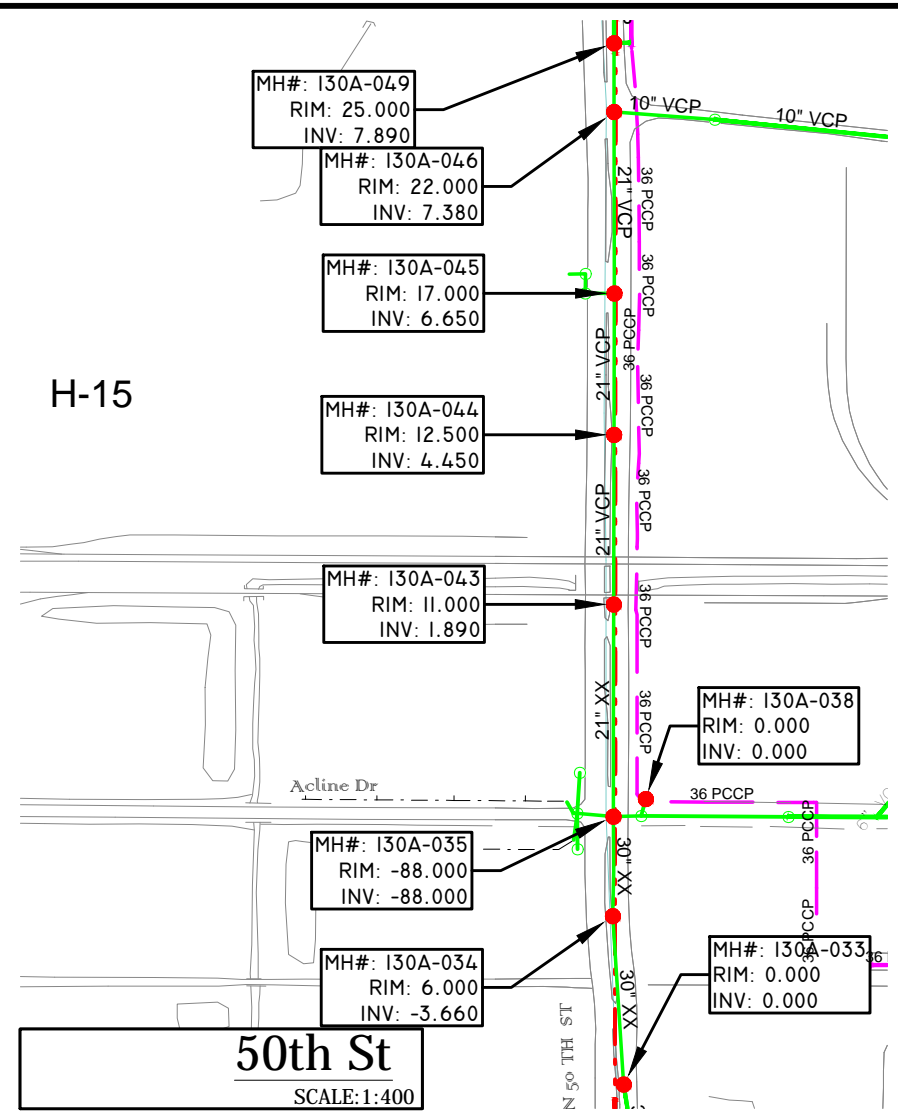
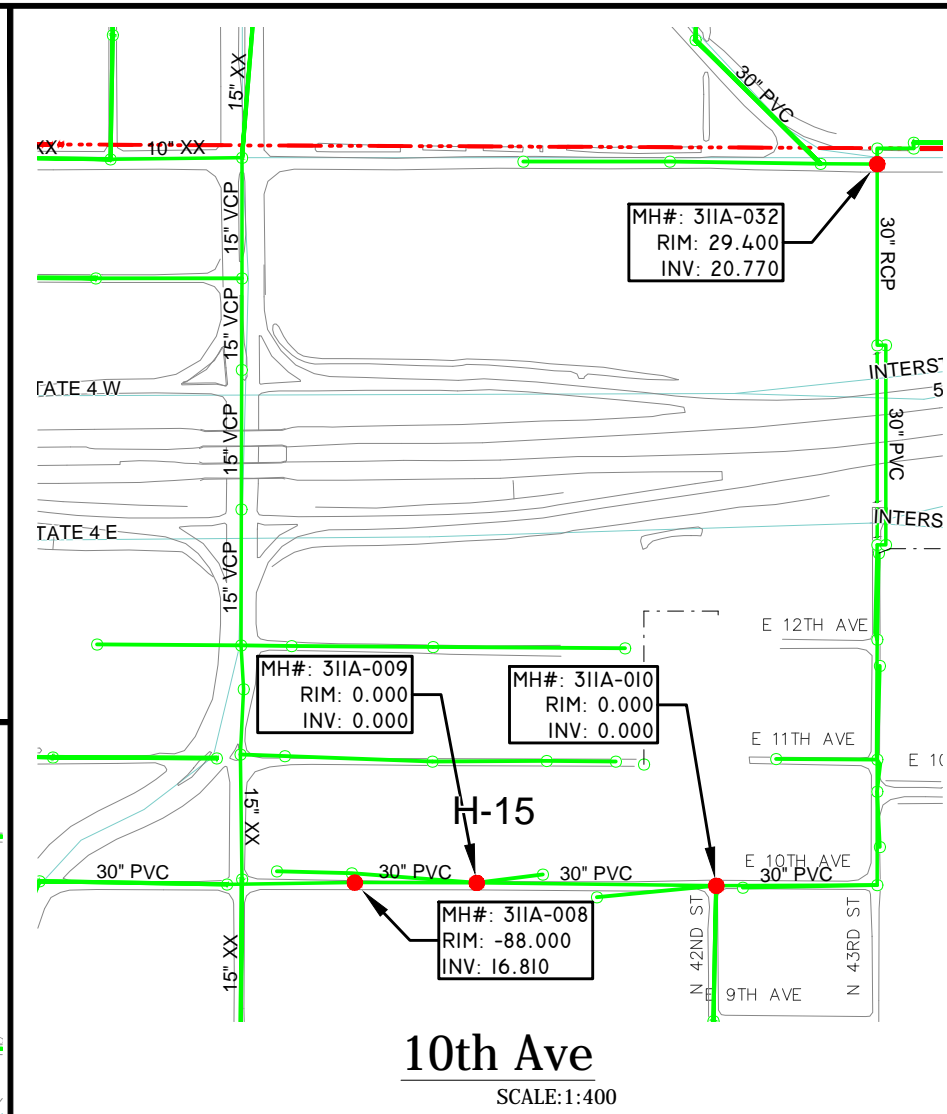
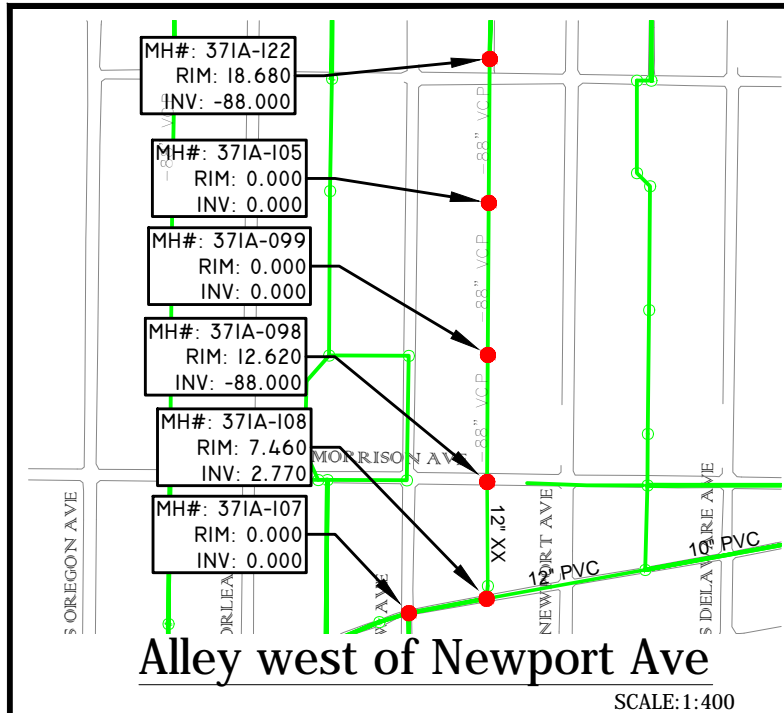
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DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (6)
W.O. 5895
SHEET
19
OF 27



ATLAS:



- LEGEND:**
- MANHOLES - TO BE REHABILITATED
 - MANHOLES - NO REHABILITATION REQUIRED
 - ⦿ EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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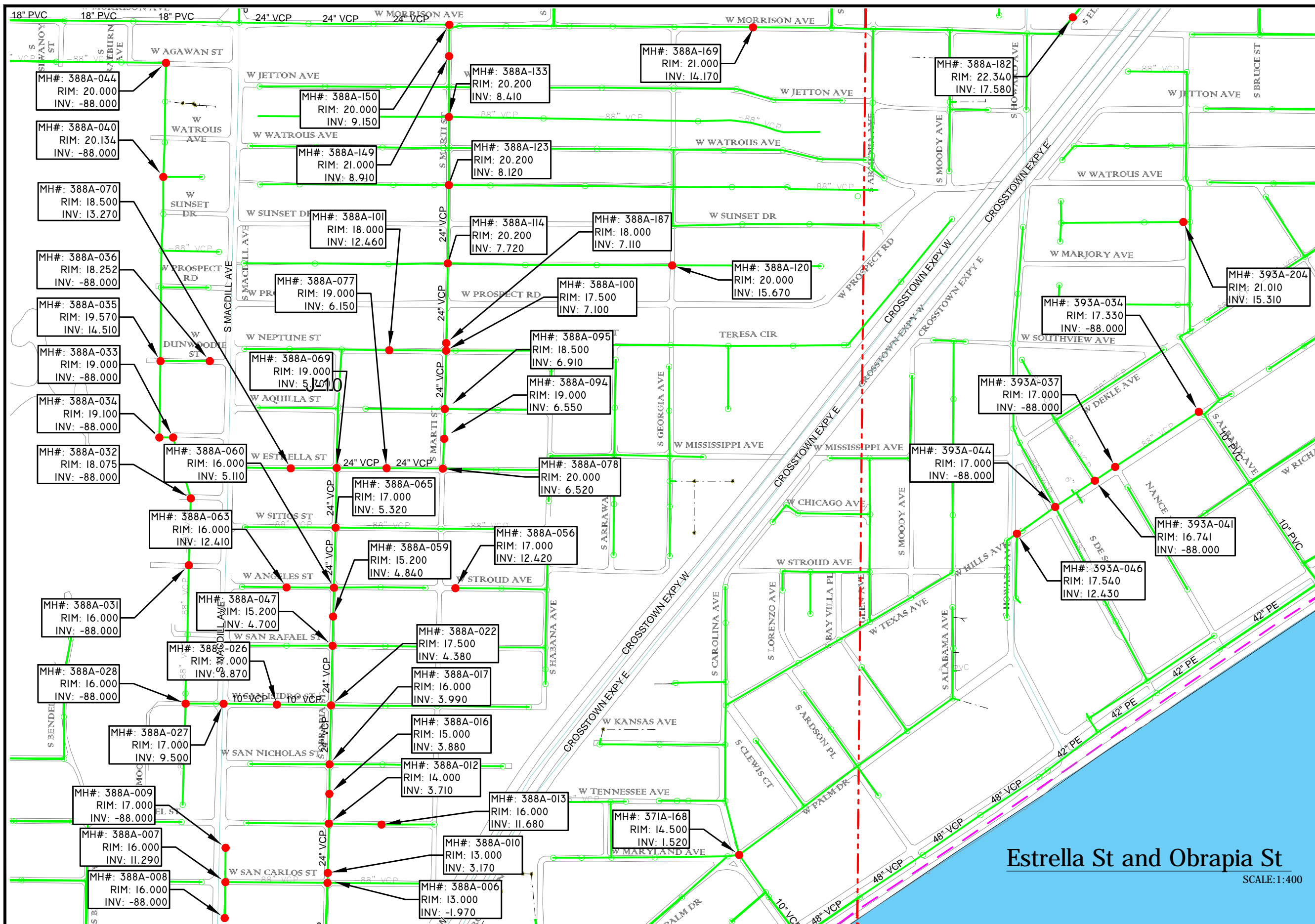
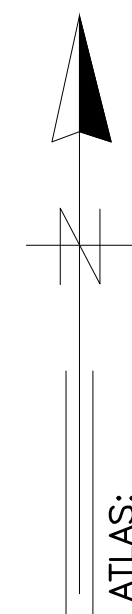
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (7)

W.O. 5895
SHEET
20
OF 27

B077-###



Estrella St and Obrapia St

SCALE:1:400

- LEGEND:**
- MANHOLES - TO BE REHABILITATED
 - MANHOLES - NO REHABILITATION REQUIRED
 - EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Project Plan.dwg Layout: May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

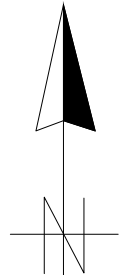
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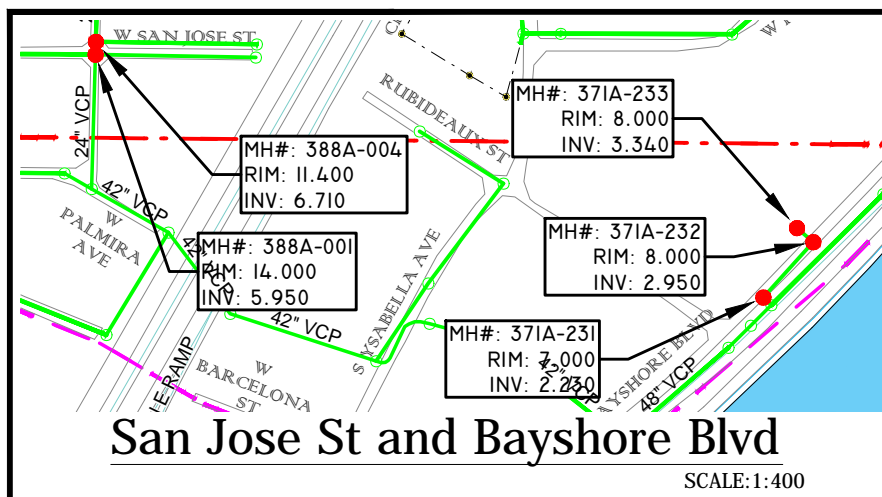
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (8)

W.O. 5895
SHEET
21
OF 27

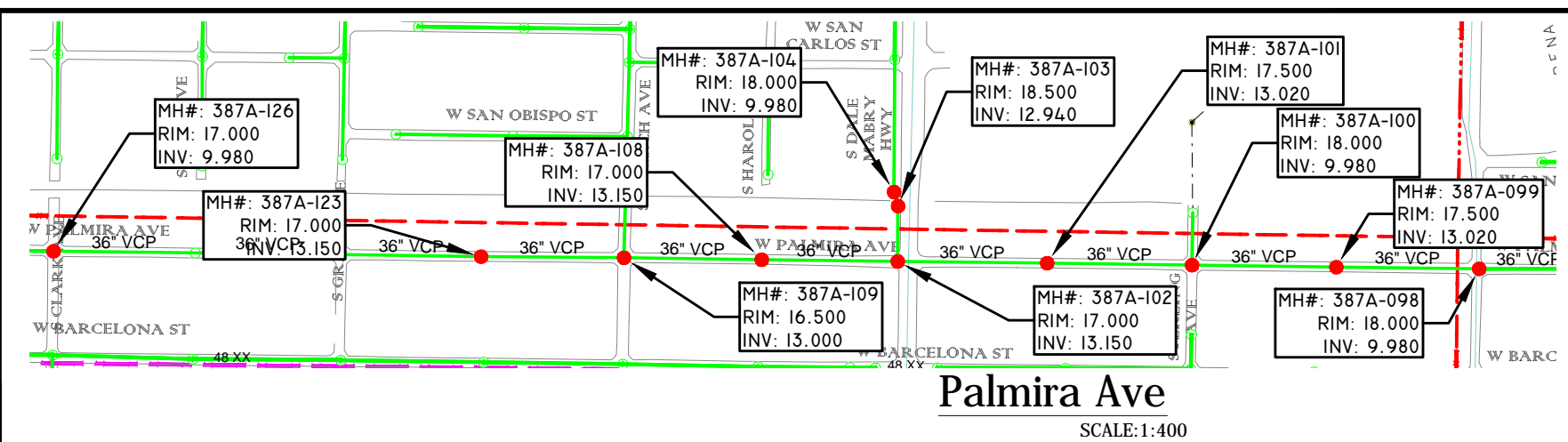


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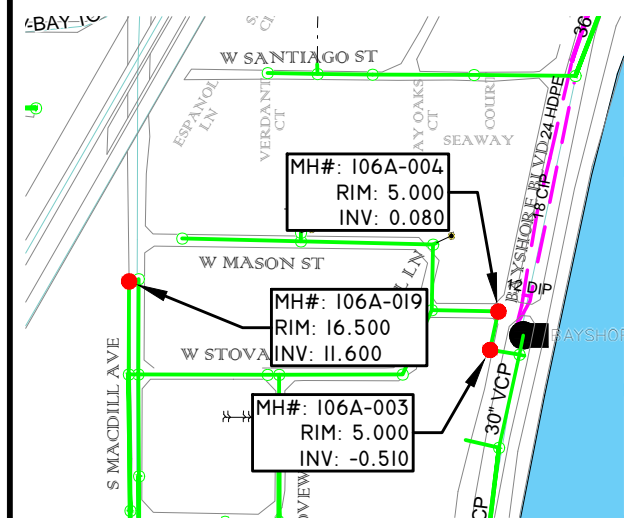
San Jose St and Bayshore Blvd

SCALE:1:400



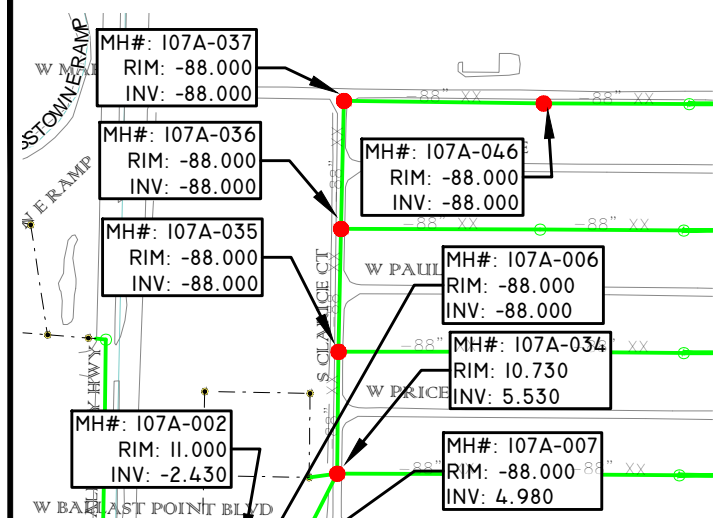
Palmira Ave

SCALE:1:400



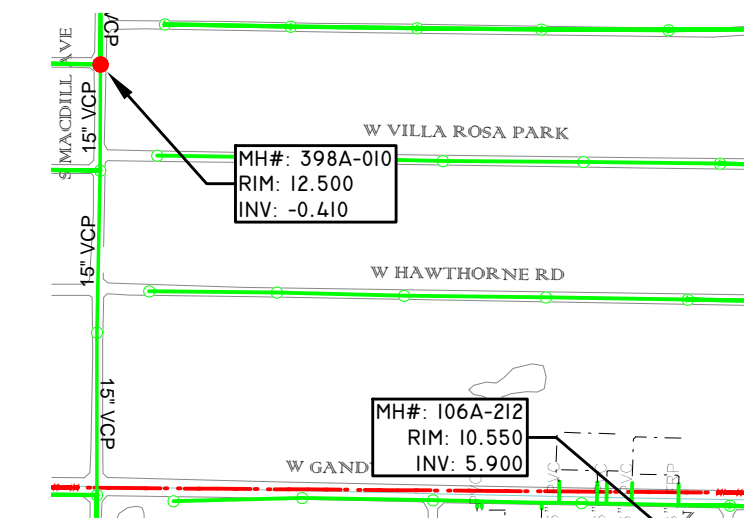
MacDill Ave and Bayshore Blvd

SCALE:1:400



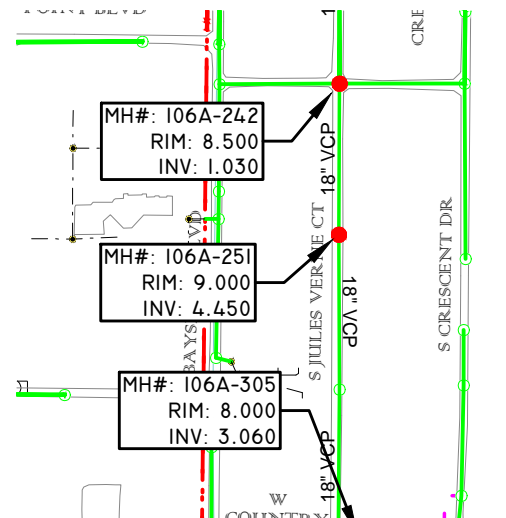
Sterling Ave

SCALE:1:400



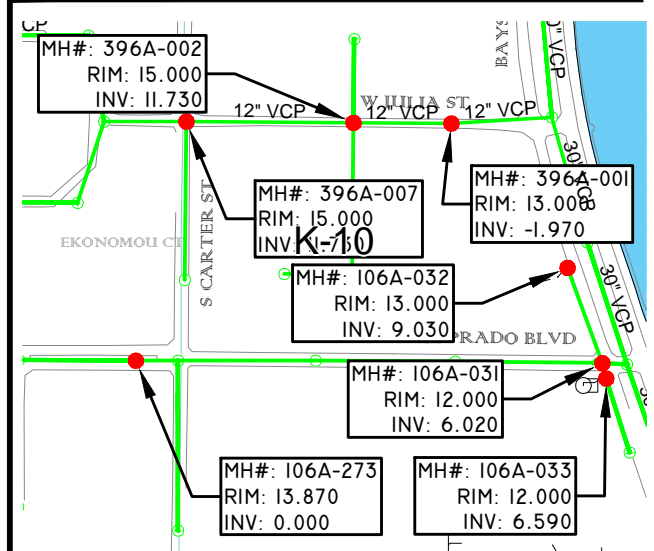
MacDill Ave

SCALE:1:400



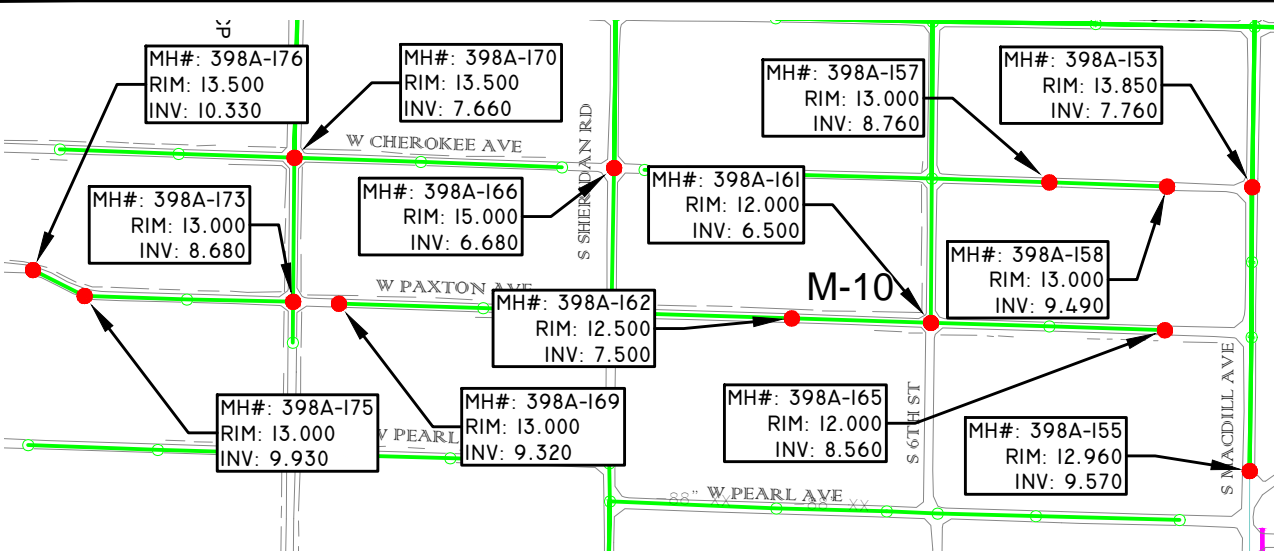
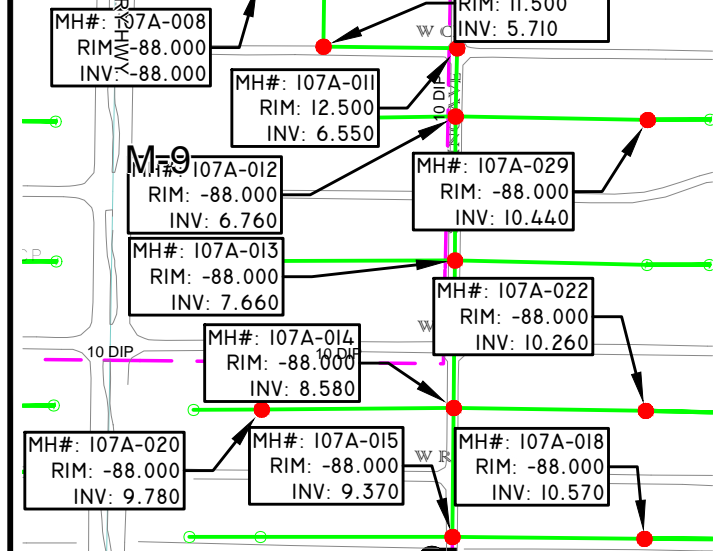
Jules Verne Ct

SCALE:1:400



Carter St and Bayshore Blvd

SCALE:1:400



Cherokee Ave and Paxton Ave

SCALE:1:400

- LEGEND:**
- MANHOLES - TO BE REHABILITATED
 - MANHOLES - NO REHABILITATION REQUIRED
 - ⦿ EX. PUMP STATION

User: ssh5 Drawing Name: K:\WW_Projects\2013\5895 FY13 Manhole Rehabilitation\DWG\Plant Plan.dwg Layout- May 29, 2013 - 12:17pm

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

DES: CB/JR
DRN: GP
CKD: JF
DATE: 05/29/13

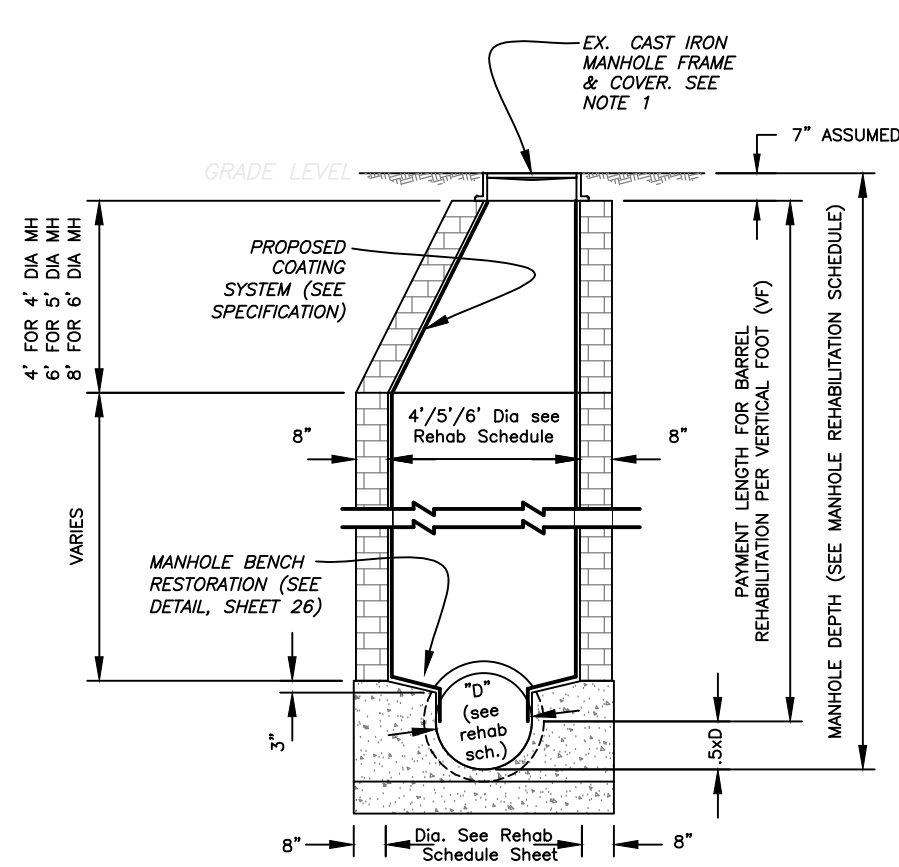
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
PLAN (9)

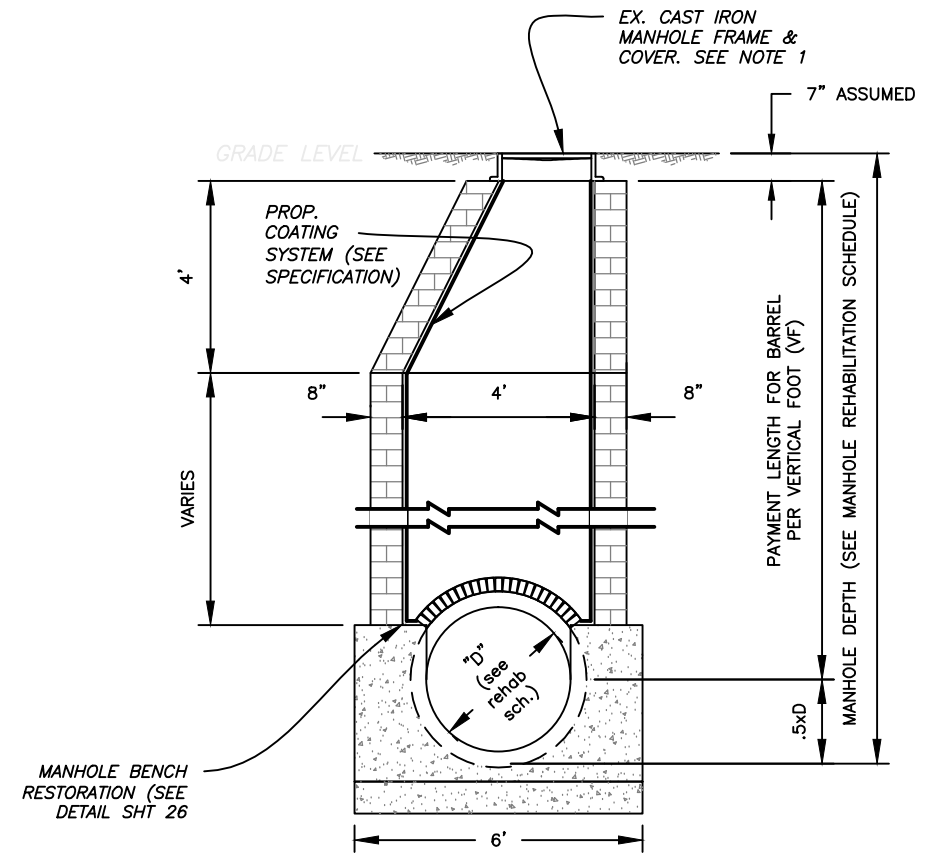
W.O. 5895
SHEET
22
OF 27

NOTES

1. SEE MANHOLE FRAME AND COVER REPLACEMENT DETAILS ON SHEET 27, FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. IT IS THE ENGINEER'S INTENT THAT THE MANHOLE REHABILITATION AND BENCH RESTORATION WILL NOT REQUIRE BYPASS PUMPING. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.
3. THERE IS A SEPARATE PAY ITEM FOR THE BENCH RESTORATION.
4. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESS.



TYPE "A"
BRICK MANHOLE
NOT TO SCALE



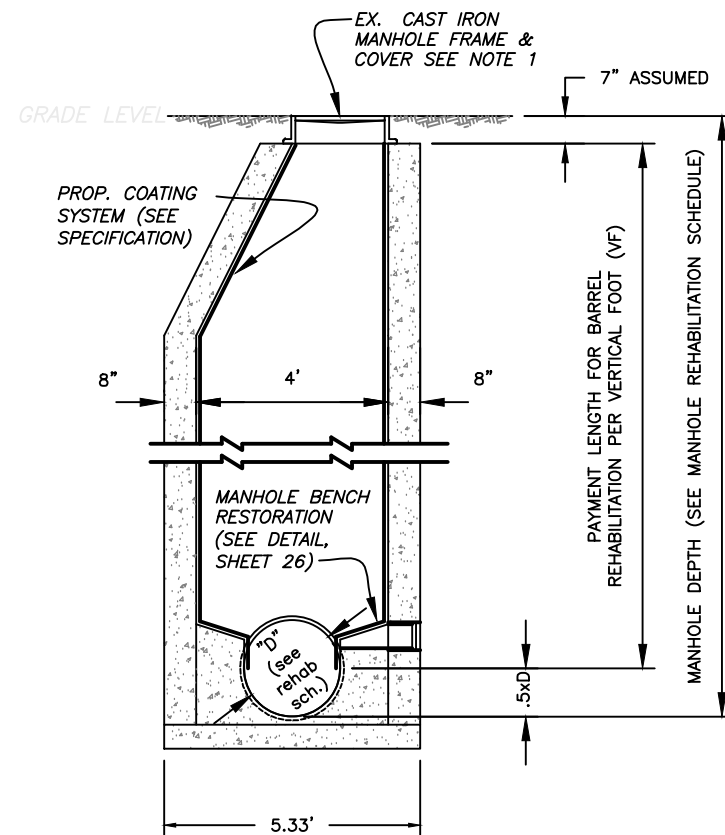
TYPE "B"
BRICK MANHOLE
NOT TO SCALE

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Details.dwg Layout: May 29, 2013 - 12:24pm

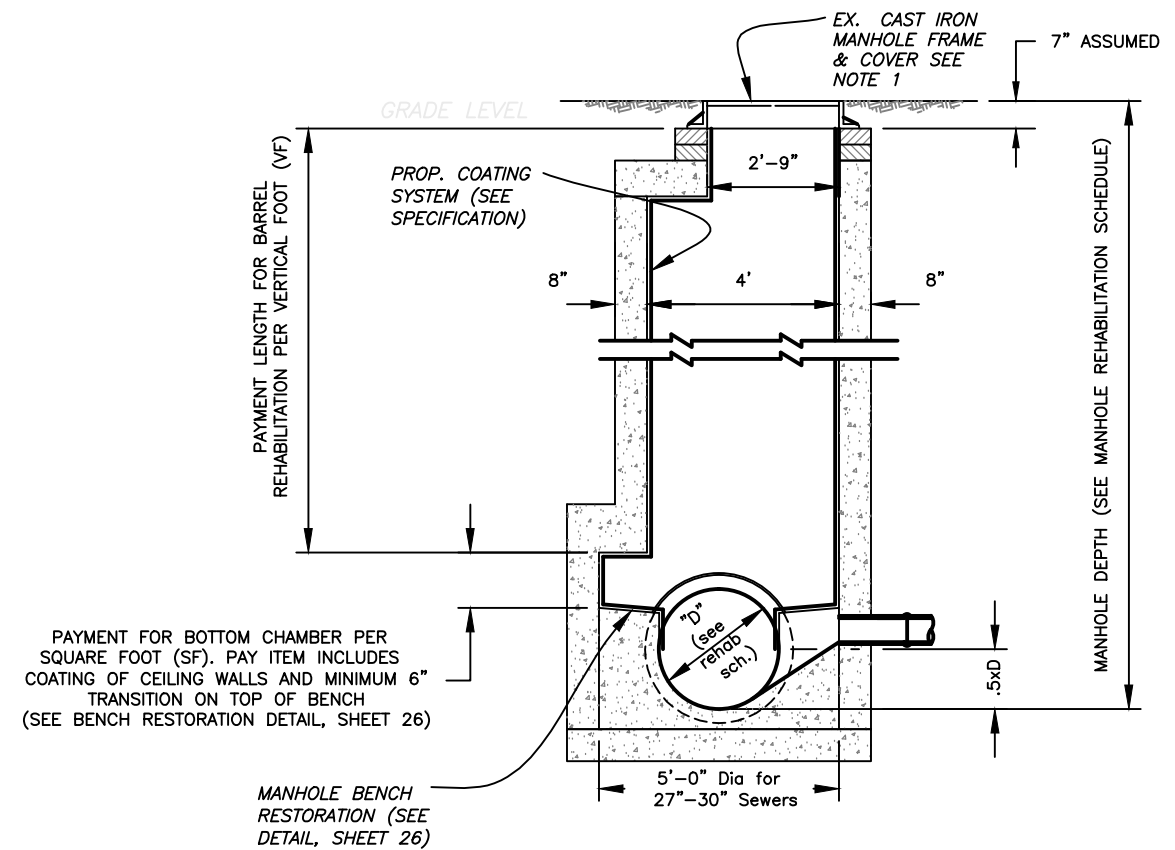
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.		DES: CB/JR	CITY of TAMPA WASTEWATER DEPARTMENT	WASTEWATER MANHOLE REHABILITATION CITY WIDE MANHOLE DETAILS A AND B	W.O. 5607
	3		DRN: GAP			SHEET 23
	2		CKD: JF			of 27
	1		DATE: 05/29/13			

NOTES

1. SEE MANHOLE FRAME AND COVER REPLACEMENT DETAILS ON SHEET 27, FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. IT IS THE ENGINEER'S INTENT THAT THE MANHOLE REHABILITATION AND BENCH RESTORATION WILL NOT REQUIRE BYPASS PUMPING. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.
3. THERE IS A SEPARATE PAY ITEM FOR THE BENCH RESTORATION.
4. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESS.



TYPE "C"
CONCRETE MANHOLE
NOT TO SCALE



TYPE "D"
CONCRETE MANHOLE
NOT TO SCALE

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Details.dwg Layout: May 29, 2013 - 12:24pm

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	
	3	
	2	
	1	

DES: CB
DRN: GAP
CKD: JF
DATE: 02/08/12

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
MANHOLE DETAILS C AND D

W.O. 5607
SHEET
24
of 27

NOTES

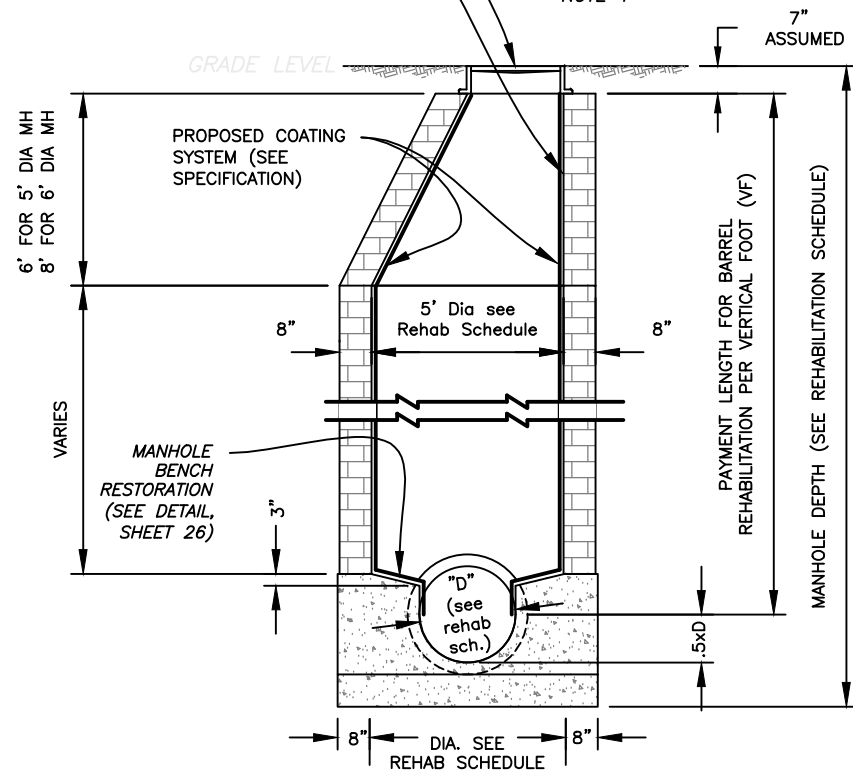
1. SEE MANHOLE FRAME AND COVER REPLACEMENT DETAILS ON SHEET 27, FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. IT IS THE ENGINEER'S INTENT THAT THE MANHOLE REHABILITATION AND BENCH RESTORATION WILL NOT REQUIRE BYPASS PUMPING. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.
3. THERE IS A SEPARATE PAY ITEM FOR THE BENCH RESTORATION.
4. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESS.
5. CONTRACTOR SHALL REMOVE ALL CIPP FIBERGLASS LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF COATING SYSTEM. PAYMENT FOR THE REMOVAL OF THE CIPP FIBERGLASS LINER WILL BE MADE AT THE CONTRACT ITEM UNIT PRICE PER VERTICAL FOOT (VF) OF LINER REMOVED.
6. CONTRACTOR SHALL REMOVE T-LOCK LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF CPP EPOXY PASTE COATING SYSTEM. IT IS NOT THE ENGINEERS INTENT TO REMOVE FIRMLY ATTACHED LINER. AFTER REMOVAL OF THE T-LOCK LINER, EXISTING EMBEDDED TEE'S SHALL BE CUT, GROUND AND SMOOTHED OVER PRIOR TO APPLICATION OF CPP EPOXY COATING SYSTEM. PAYMENT FOR THE REMOVAL OF DELAMINATING LINER WILL BE A SEPARATE PAY ITEM PER SQUARE FOOT (SF) OF LINER REMOVED.
7. PROVIDE A 6" MIN. STRIP OF PROPOSED COATING SYSTEM OVER EDGE OF EXISTING LINER. SURFACE PREPARATION AND APPLICATION OF COATING SYSTEM SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR INTERFACING WITH T-LOCK LINER.

EX. CURED IN PLACE FIBERGLASS LINER TO BE REMOVED PRIOR TO APPLICATION OF COATING SYSTEM. SEPARATE PAY ITEM FOR REMOVAL OF EXISTING LINER PER VERTICAL FOOT(VF) REMOVED. (SEE NOTE 5)

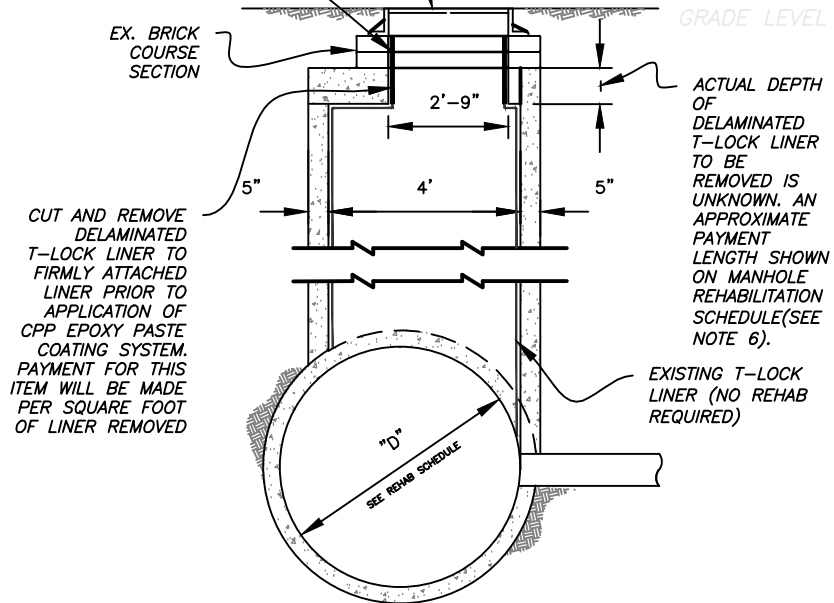
EX. CAST IRON MANHOLE FRAME & COVER. SEE NOTE 1

PROPOSED CPP EPOXY PASTE COATING SYSTEM. PROVIDE 6" MIN. COATING THICKNESS TRANSITION OVER EXISTING T-LOCK LINER. PAYMENT FOR THIS ITEM IS INCLUDED IN THE MANHOLE REHABILITATION COST PER SQUARE FOOT. (SF)(SEE NOTE 6)

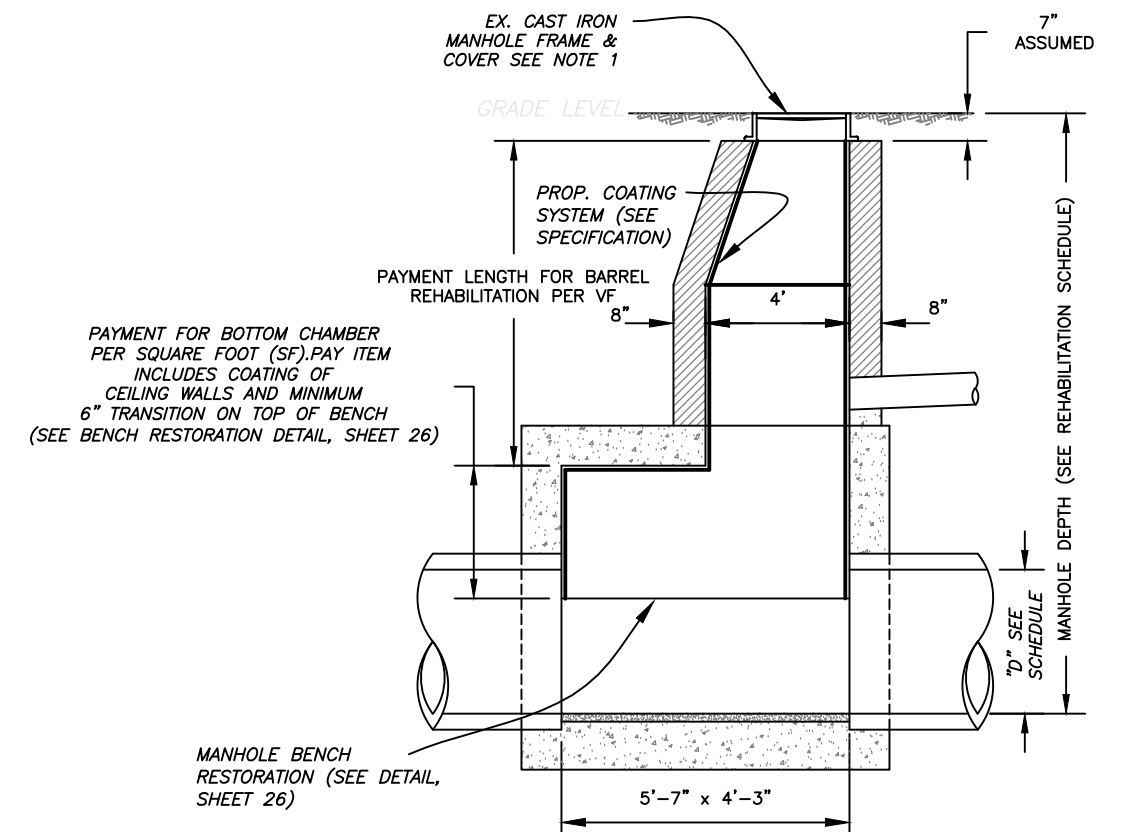
EX. CAST IRON MANHOLE FRAME & COVER SEE NOTE 1



TYPE "K"
BRICK MANHOLE WITH EX. FIBERGLASS LINER
 NOT TO SCALE



TYPE "L"
CONCRETE OR BRICK MANHOLE WITH T-LOCK LINING
 NOT TO SCALE



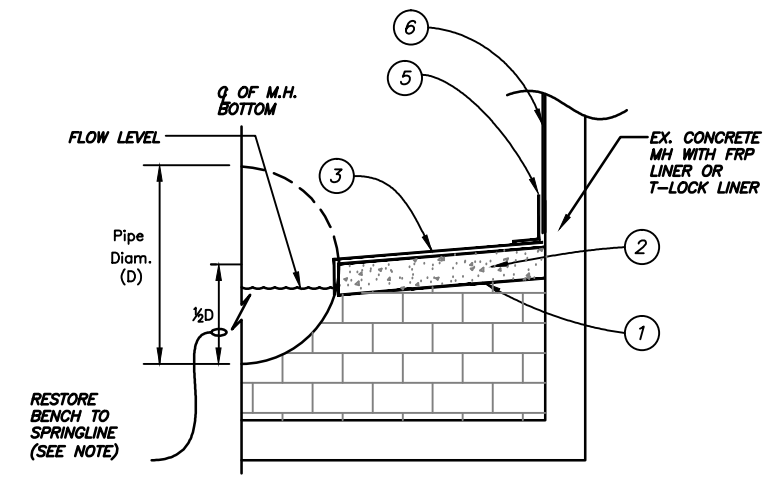
TYPE "M"
CONCRETE MANHOLE
 NOT TO SCALE

User: ssh5 Drawing Name: K:\WW_Projects\2013\2013_5895 FY13 Manhole Rehabilitation\DWG\Manhole Details K, L, and M.dwg Layout- May 29, 2013 - 12:38pm

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.		DES: CB/JR	CITY of TAMPA WASTEWATER DEPARTMENT	WASTEWATER MANHOLE REHABILITATION CITY WIDE MANHOLE DETAILS K L AND M	W.O. 5607
	3		DRN: GAP			SHEET 25
	2		CKD: JF			of 27
	1		DATE: 05/29/13			

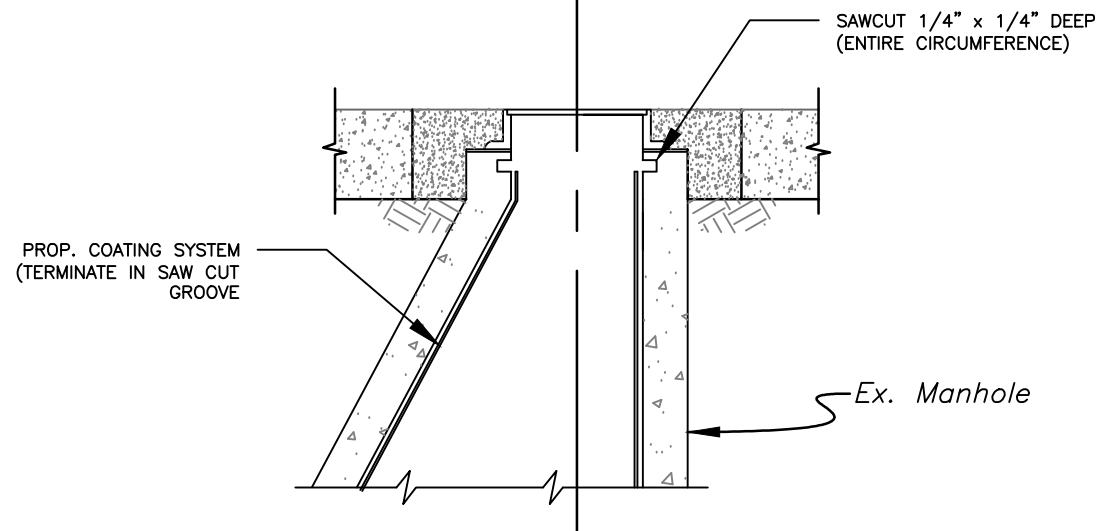
NOTES

1. REMOVE ALL DEBRIS AND LOOSE BRICKS FROM THE TOP OF THE BENCH.
2. INSTALL A MINIMUM 1" THICK ACCELERATED HYDRAULIC CEMENT OVER EXISTING BENCH. ALLOW CEMENT TO CURE (MIN. 24 HRS. UNLESS OTHERWISE APPROVED BY THE ENGINEER).
3. OVERLAY BENCHES WITH PROPOSED COATING SYSTEM.
4. PROVIDE 6" COATING THICKNESS TRANSITION. PAYMENT FOR THIS ITEM IS INCLUDED IN THE MANHOLE REHABILITATION COST PER VERTICAL FOOT.
5. PROVIDE A 6" MIN. STRIP OF PROPOSED COATING SYSTEM ON BOTTOM EDGE OF FRP LINING OR PLASTIC T-LOCK LINING. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESSES. SURFACE PREPARATION AND APPLICATION OF COATING SYSTEM SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR INTERFACING WITH FRP LINERS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE MANHOLE BENCH RESTORATION TYPE A ONLY.
6. CONTRACTOR SHALL PROTECT EXISTING INTEGRITY OF FRP LINER OR T-LOCK LINER THROUGHOUT MANHOLE.

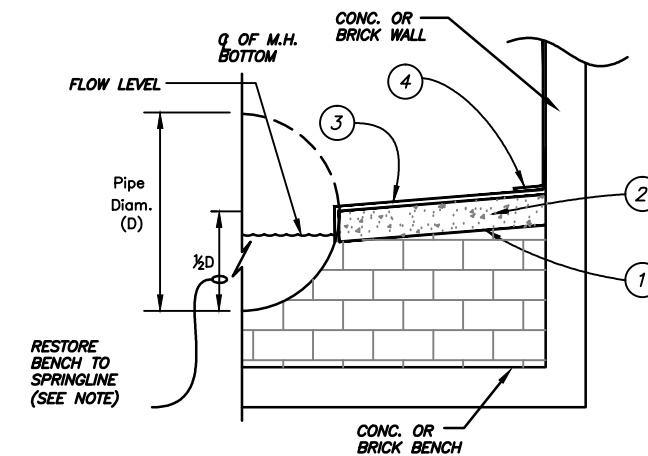


MANHOLE BENCH RESTORATION FOR LINED MANHOLES
NOT TO SCALE

(X) - SEE CORRESPONDING NOTES ABOVE



COATING TERMINATION DETAIL
NOT TO SCALE



TYPICAL MANHOLE BENCH RESTORATION DETAIL
NOT TO SCALE

(X) - SEE CORRESPONDING NOTES ABOVE

ww.ctb

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.		DES: CB/JR	CITY of TAMPA WASTEWATER DEPARTMENT	WASTEWATER MANHOLE REHABILITATION CITY WIDE MISCELLANEOUS DETAILS	W.O. 5607
	3		DRN: GP			SHEET
	2		CKD: JF			26
	1		DATE: 05/29/13			of 27

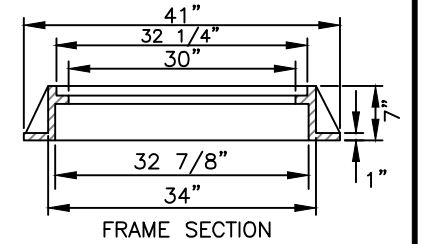
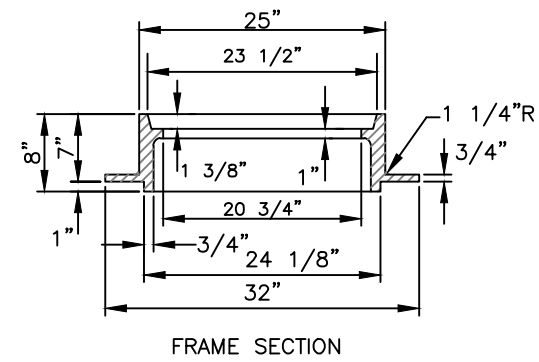
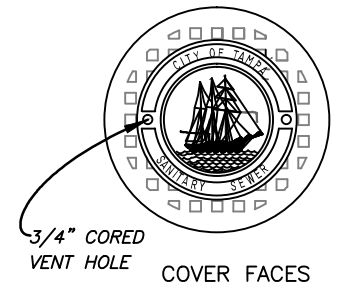
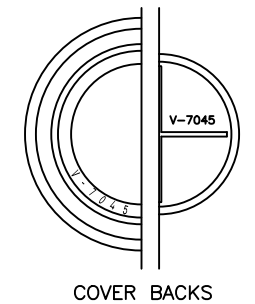
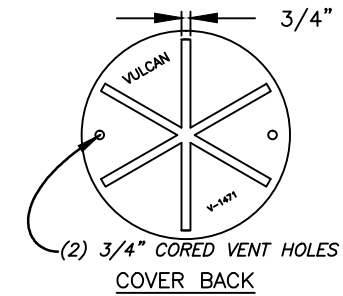
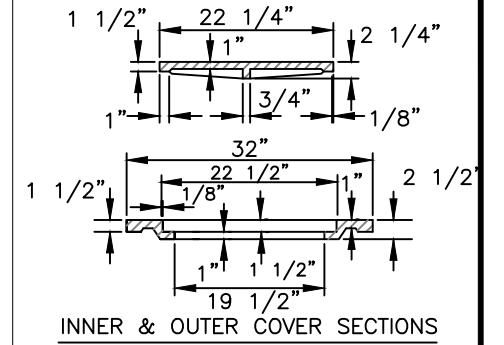
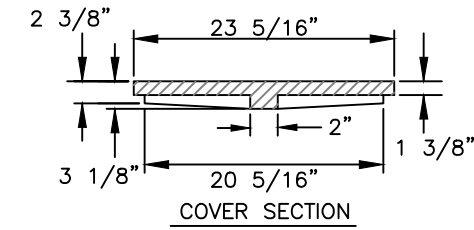
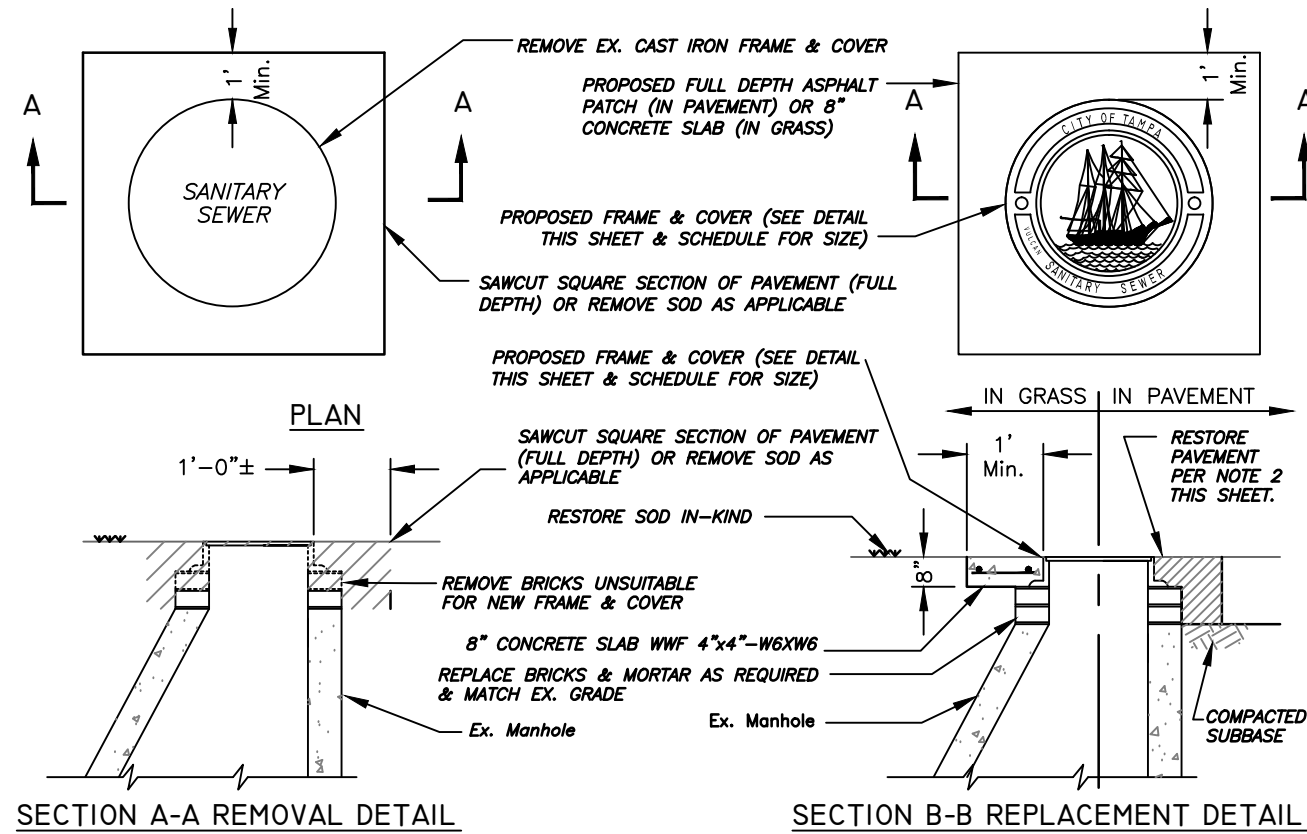
NOTES

1. FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. PAVEMENT RESTORATION SHALL CONSIST OF 8" ABC-3 ASPHALT BASE AND 2" TYPE S-1 ASPHALT PAYMENT, UNLESS OTHERWISE NOTED. IF LOCATED IN D.O.T. ROW, AN ADDITIONAL 1 1/2" SUPER PAVE ASPHALT IS REQUIRED.

B077-045

SMALL COVER DETAIL

LARGE COVER DETAIL



FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER:
VULCAN FOUNDRY NO. V-1471,
U.S. FOUNDRY NO. 575-AT, OR EQUAL

FOR MH'S OF SEWERS 27" OR GREATER IN DIAMETER:
VULCAN FOUNDRY NO. V-7045,
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

HEAVY DUTY CAST IRON MANHOLE FRAME & COVER DETAILS

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

No.		
3		
2		
1		

DES: CB/JR
DRN: GP
CKD: JF
DATE: 05/29/13

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER MANHOLE REHABILITATION
CITY WIDE
MISCELLANEOUS DETAILS

W.O. 5607
SHEET
27
of 27