CITY OF NAPLES

Beach Outfall Project Community Meeting

Topic of Discussion

BEACH OUTFALL PROJECT

- Update on 3rd Avenue North Pump Station Design
- What to expect on directional drill project and schedule

TUESDAY
SEPTEMBER 13
3:00PM

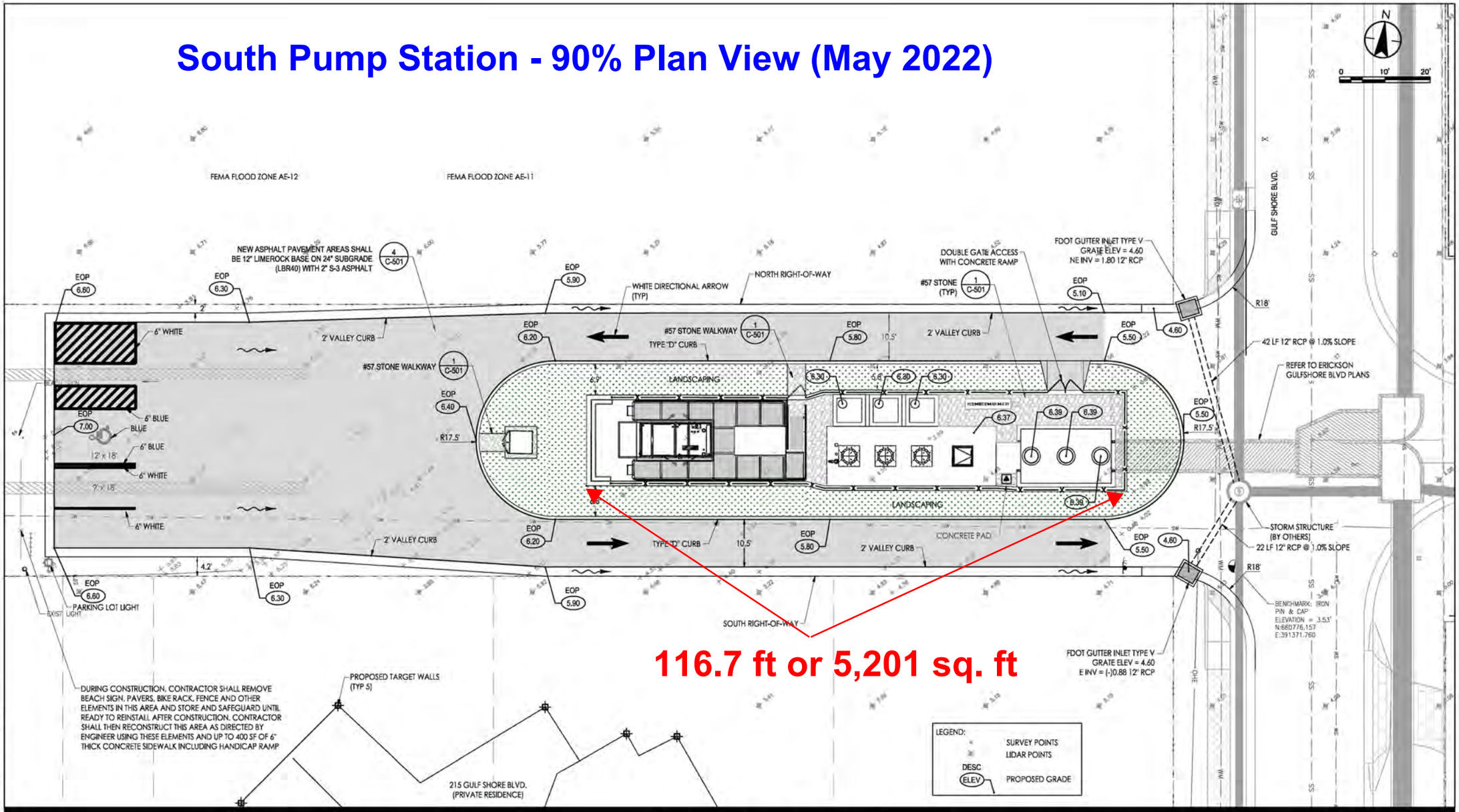
COUNCIL CHAMBERS
735 8TH ST S
NAPLES, FL 34102

Presentation begins at 3:00pm followed by Q & A session with staff

FOR MORE INFORMATION, CONTACT:
P: 239-213-1001
E: MBARNHART@NAPLESGOV.COM

TO JOIN VIA ZOOM
SCAN OR CLICK
QR CODE

South Pump Station - 90% Plan View (May 2022)



Revision	By	Appd.	YY.MM.DD
CITY OF NAPLES COMMENTS	KME	APPROVED	18.07.19

Issued	By	Appd.	YY.MM.DD
ISSUED 75% DESIGN DRAWINGS TO CITY (PRELIM REVIEW)	SAH	RC	21.06.17
ISSUED FINAL DESIGN	SAH	RC	20.03.14
ISSUED 60% DESIGN DRAWINGS	KME	APPROVED	19.03.14

Consultants

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Client/Project
CITY OF NAPLES
735 8th St S
NAPLES, FL
Naples Beach Restoration & Water Quality Improvement Project

File Name: 10606_C-103.dwg

Dwn.	Chkd.	Dsgn.	YYYY.MM
MPL	SAH	RC	2022.04

Title
PUMP STATION
PROPOSED PAVEMENT AND DRAINAGE PLAN

Project No.
177310606

Scale
AS NOTED

Revision

Drawing No.
C-103

SPS Plan Revision - Plan View (August 2022)

Revision	By	Appd.	YY.MM.DD
1 CITY OF NAPLES COMMENTS	KME	APPROVED	18.07.12

Issued	By	Appd.	YY.MM.DD
ISSUED 75% DESIGN DRAWINGS TO CITY (PRELIM REVIEW)	SAH	RC	21.05.17
ISSUED FINAL DESIGN	SAH	RC	20.02.14
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Scale AS NOTED
Revision
Drawing No. C-103

SPS Plan Revision - Plan View (September 2022)

Increased Ingress Width 7.1 ft. or 68%
66.7 ft or 2,492 sq. ft - Overall Reduction by 50 ft (43%) or 2,709 sq. ft total
FEMA FLOOD ZONE AE-12
FEMA FLOOD ZONE AE-11
NEW ASPHALT PAVEMENT AREAS SHALL BE 12" LIMEROCK BASE ON 24" SUBGRADE (LBR40) WITH 2" S-3 ASPHALT
PAVEMENT MARKINGS FDOT INDEX 711-001
NORTH RIGHT-OF-WAY
WHITE DIRECTIONAL ARROW (TYP)
SINGLE GATE ARRANGEMENT
2' VALLEY CURB
6" WHITE THERMOPLASTIC PAVEMENT MARKER
6" BLUE THERMOPLASTIC PAVEMENT MARKER
BEACH SIGN
12' x 18'
9' x 18'
LANDSCAPING
STORM STRUCTURE (BY OTHERS)
REFER TO ERICKSON GULFSHORE BLVD PLANS
GULF SHORE BLVD.
SOUTH RIGHT-OF-WAY
TYPE "D" CURB
#57 STONE (TYP)
DOUBLE GATE ARRANGEMENT
PARKING LOT LIGHT
EXIST. LIGHT
BENCHMARK: IRON PIN & CAP ELEVATION = 3.53' N:660776.157 E:391371.760
DURING CONSTRUCTION, CONTRACTOR SHALL REMOVE BEACH SIGN, PAVERS, BIKE RACK, FENCE AND OTHER ELEMENTS IN THIS AREA AND STORE AND SAFEGUARD UNTIL READY TO REINSTALL AFTER CONSTRUCTION. CONTRACTOR SHALL THEN RECONSTRUCT THIS AREA AS DIRECTED BY ENGINEER USING THESE ELEMENTS AND UP TO 400 SF OF 6" THICK CONCRETE SIDEWALK INCLUDING HANDICAP RAMP
PROPOSED TARGET WALLS (TYP 5)
215 GULF SHORE BLVD. (PRIVATE RESIDENCE)
LEGEND:
SURVEY POINTS
LIDAR POINTS
DESC ELEV PROPOSED GRADE
FLOW ARROW

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City of Naples

Title
PUMP STATION PROPOSED PAVEMENT AND DRAINAGE PLAN

Project No. 177310606
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Revision
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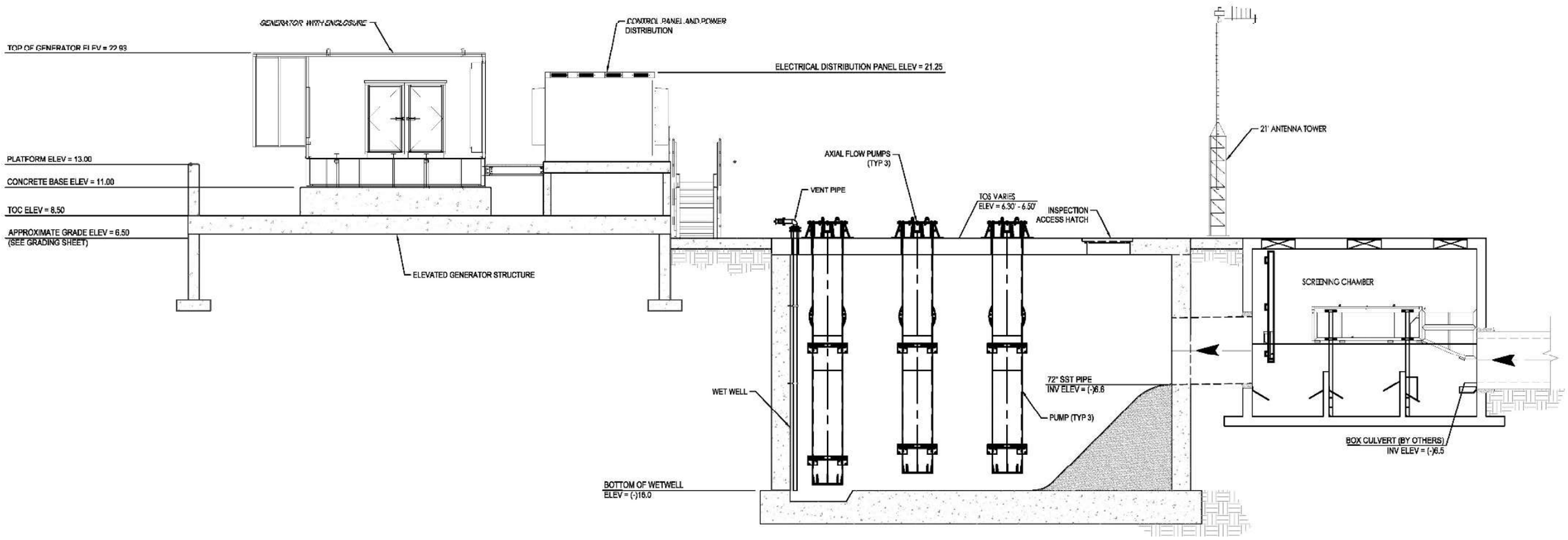
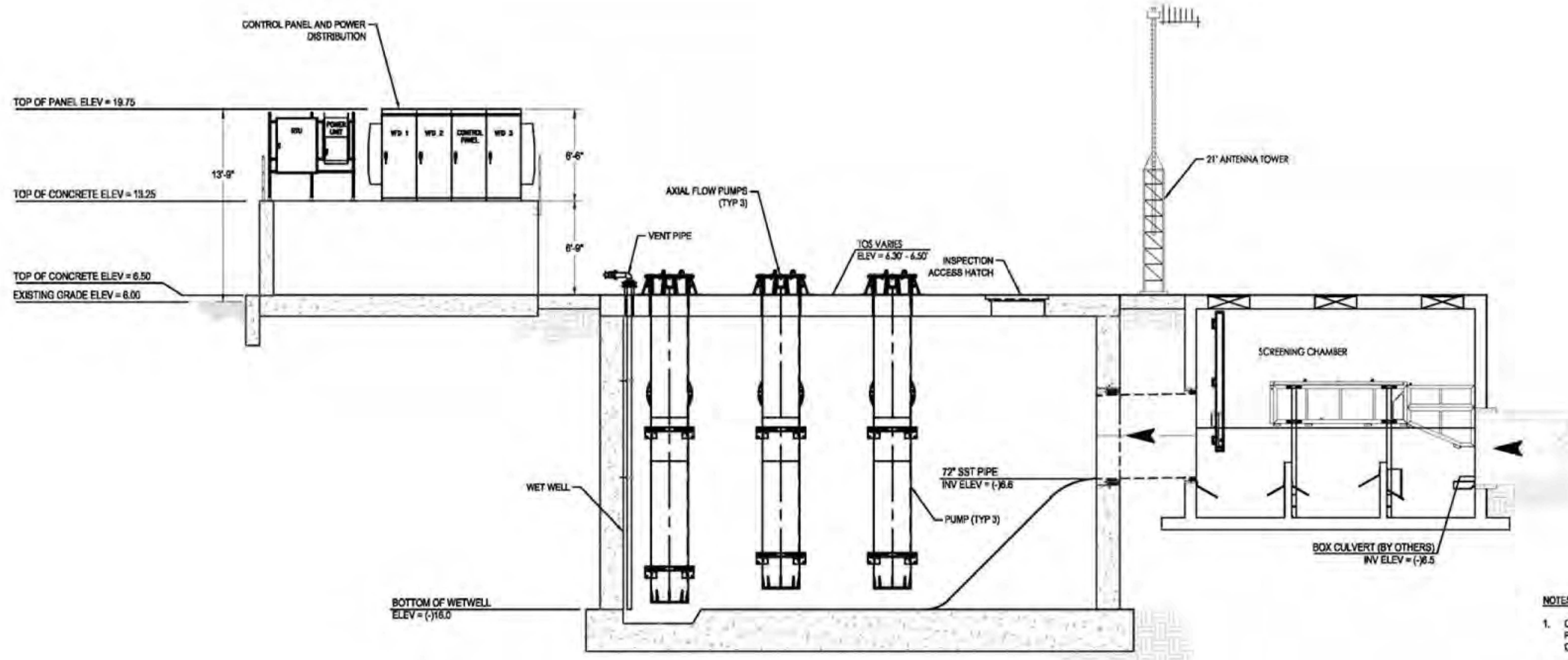
SPS Plan Revision – Section View (90% Plan May 2022)



16.5 ft (Height above Ground)

SPS Plan Revision - Section View (August 2022)



A ELECTRICAL EQUIPMENT PLATFORM SECTION — NORTH

SCALE: 3/16" = 1'-0"   0 4' 8' 12'

NOTES:

1. COORDINATE BOX CULVERT CONNECTION TO SCREEN CHAMBER AND PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT AS NECESSARY FOR COMPLETE ASSEMBLY.
2. REFER TO DRAWING S-005 FOR STRUCTURAL ELEVATIONS.

13.25 ft (Height above Ground)

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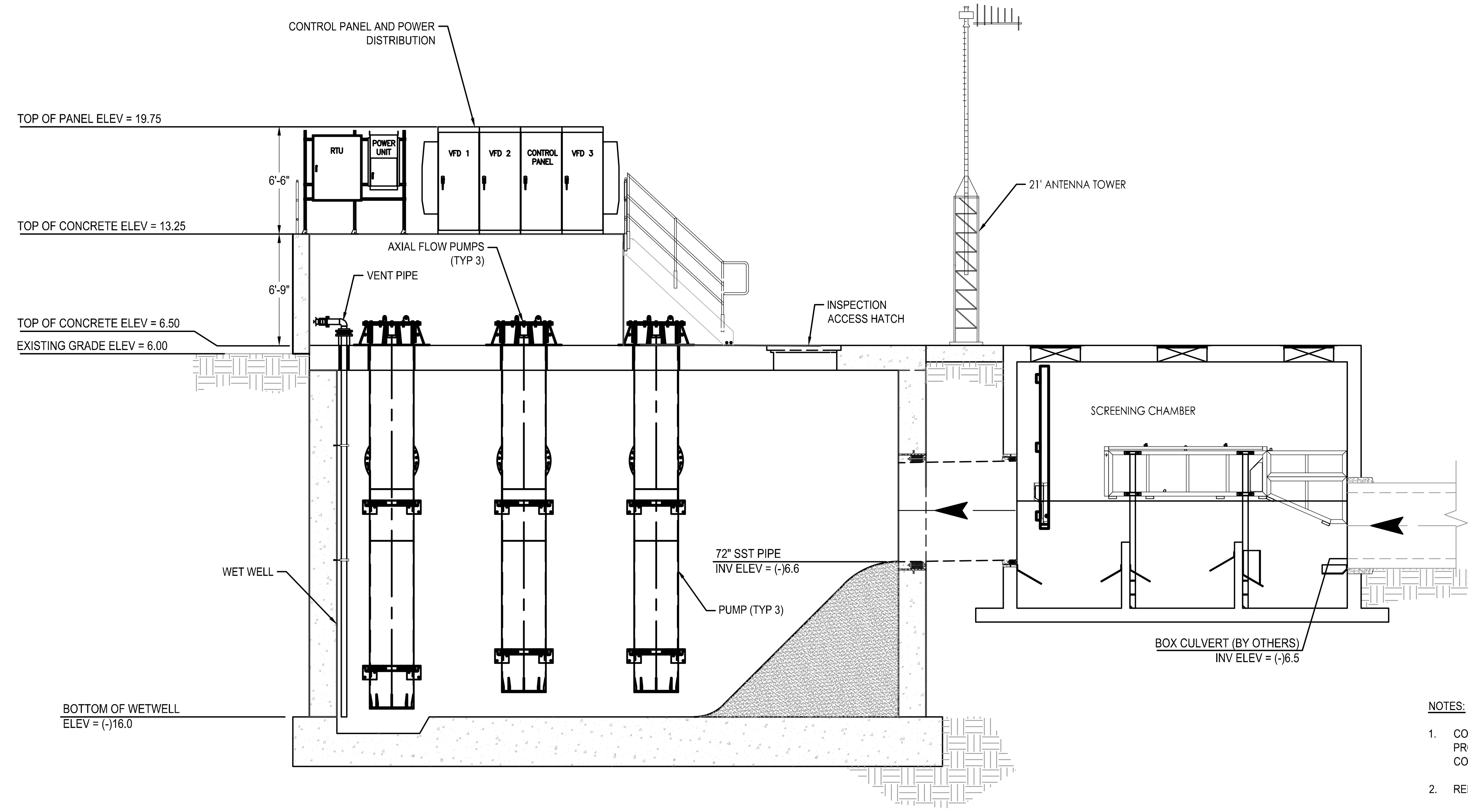
City of Naples

Title
PUMP STATION
PROPOSED GENERATOR SECTIONS

Project No. 177310606
Scale AS NOTED
Revision
Drawing No. C-301

SPS Plan Revision - Section View (September 2022)



(A) ELECTRICAL EQUIPMENT PLATFORM SECTION — NORTH
SCALE: 3/16" = 1-0'

NOTES:

1. COORDINATE BOX CULVERT CONNECTION TO SCREEN CHAMBER AND PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT AS NECESSARY FOR COMPLETE ASSEMBLY.
2. REFER TO DRAWING S-005 FOR STRUCTURAL ELEVATIONS.

13.25 ft (Height above Ground) - Overall Reduction by 3.25 ft (20%) Total

The diameter of the Axial draft tube is about 32 inches and extends 16-18 inches above top of concrete.

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PUMP STATION
PROPOSED GENERATOR SECTIONS

Project No. 177310606
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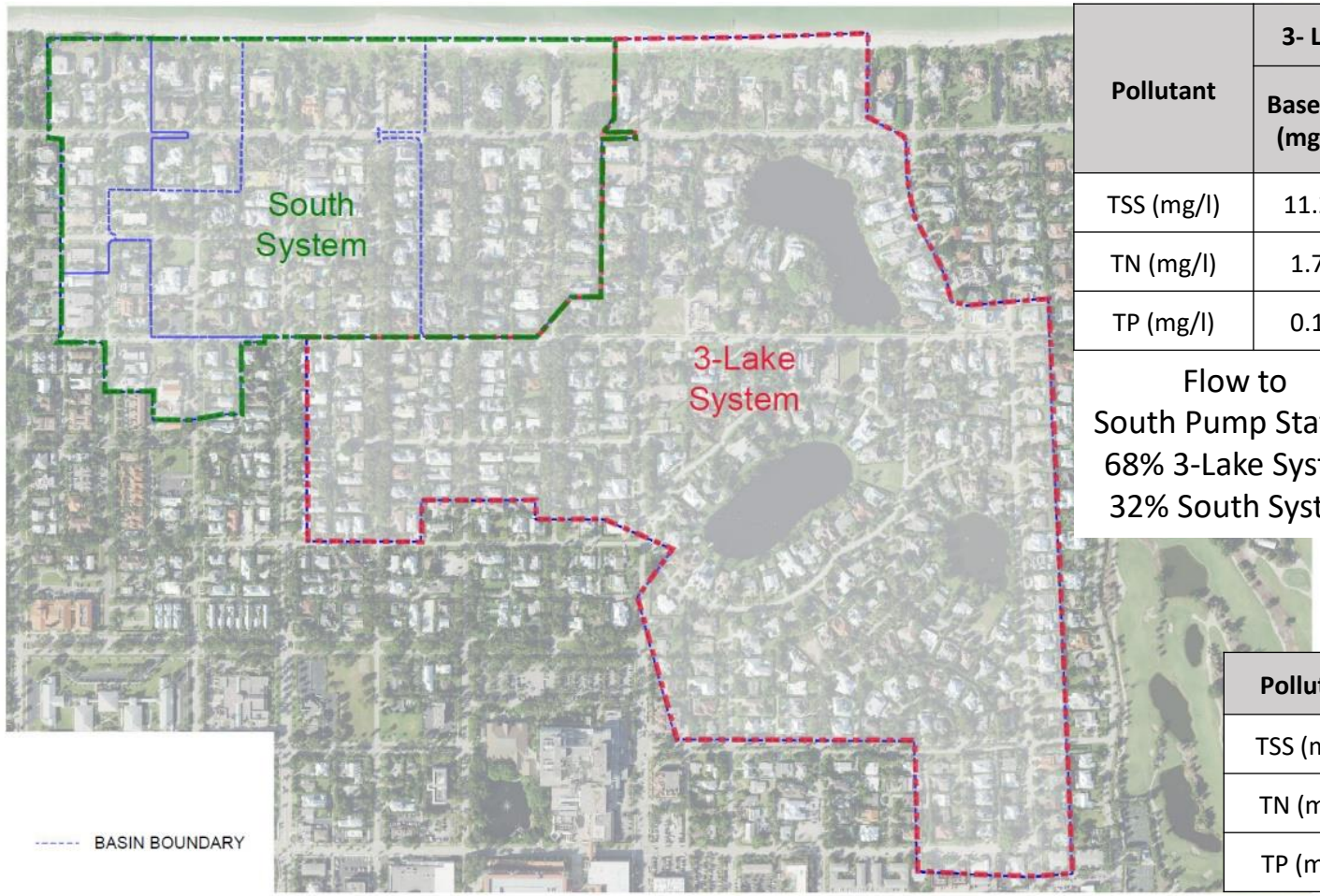
Water Quality Improvement Goals (April 2022)

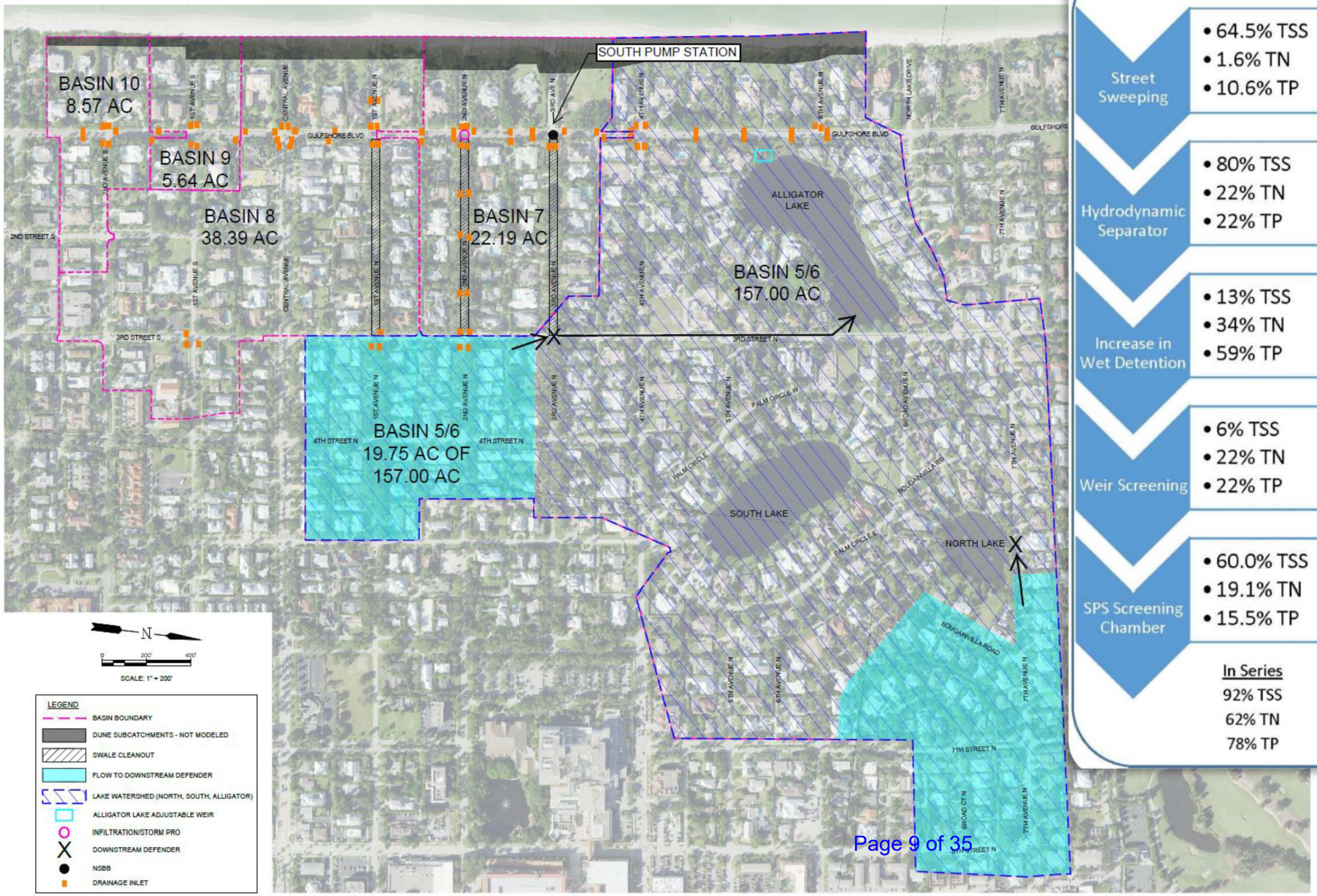


Pollutant	3- Lake System		South System	
	Baseline (mg/L)	% Removal	Baseline (mg/L)	% Removal
TSS (mg/l)	11.23	92%	47.10	79%
TN (mg/l)	1.70	62%	4.91	42%
TP (mg/l)	0.15	78%	0.79	46%

Flow to South Pump Station:
68% 3-Lake System
32% South System

Pollutant	Discharge	
TSS (mg/l)	3.86	mg/L
TN (mg/l)	1.35	mg/L
TP (mg/l)	0.16	mg/L

BMP TREATMENT TRAIN



3-Lake System Treatment Train

Street Sweeping	• 64.5% TSS • 1.6% TN • 10.6% TP
Hydrodynamic Separator	• 80% TSS • 22% TN • 22% TP
Increase in Wet Detention	• 13% TSS • 34% TN • 59% TP
Weir Screening	• 6% TSS • 22% TN • 22% TP
SPS Screening Chamber	• 60.0% TSS • 19.1% TN • 15.5% TP

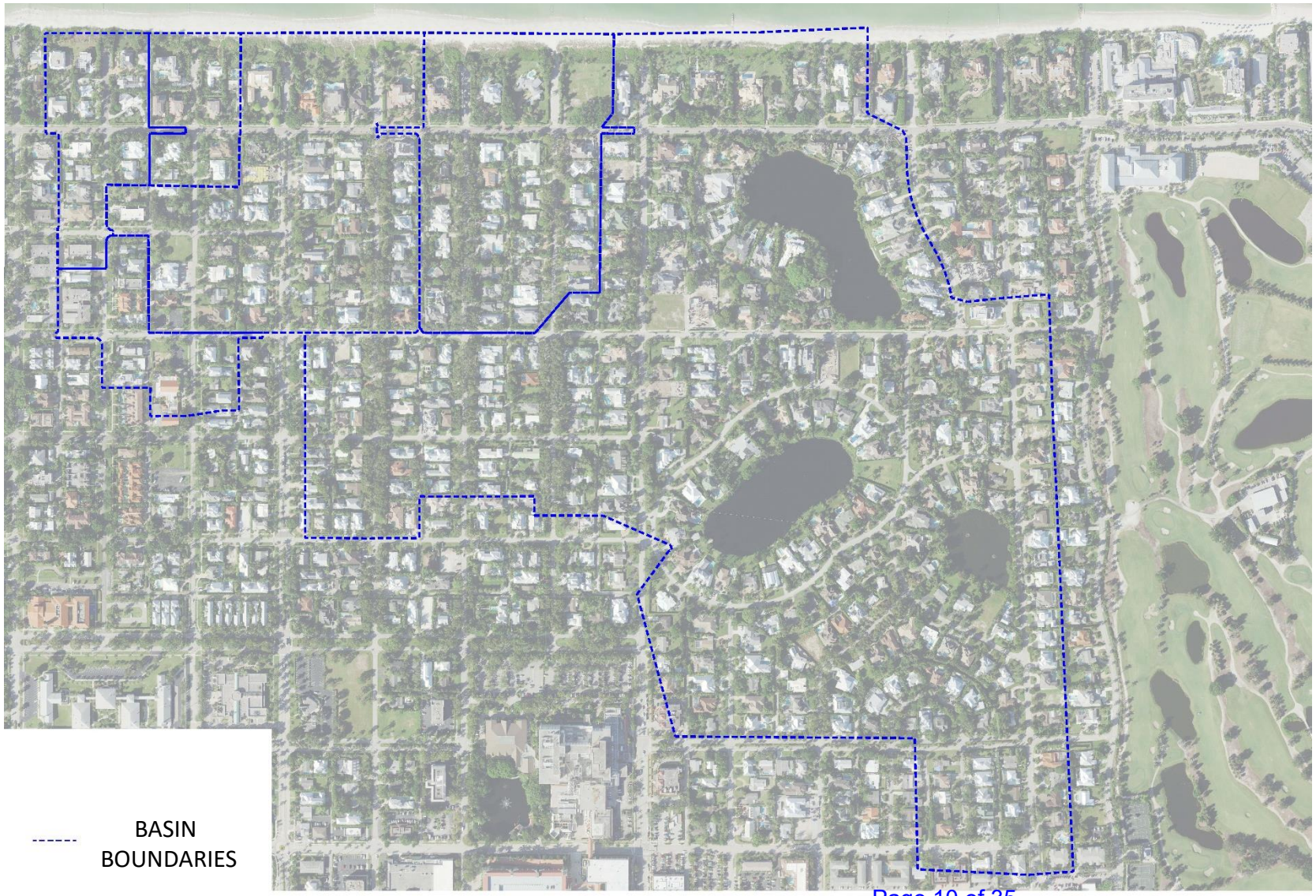
In Series
92% TSS
62% TN
78% TP

South System Treatment Train

Street Sweeping	• 18% TSS • 0.9% TN • 3.4% TP
Inlet Filter Baskets	• 74% TSS • 60% TN • 71% TP
SPS Screening Chamber	• 60.0% TSS • 19.1% TN • 15.5% TP

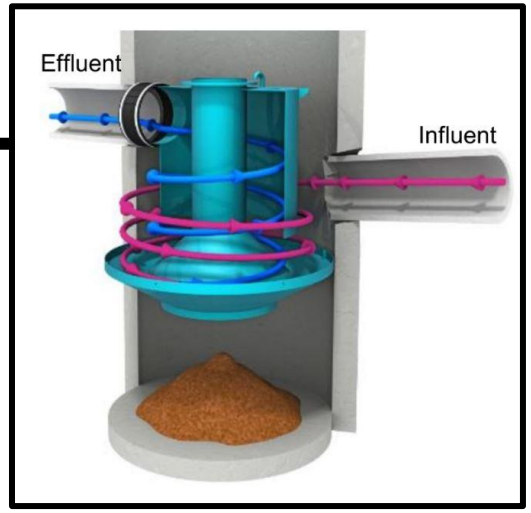
In Series
79% TSS
42% TN
46% TP

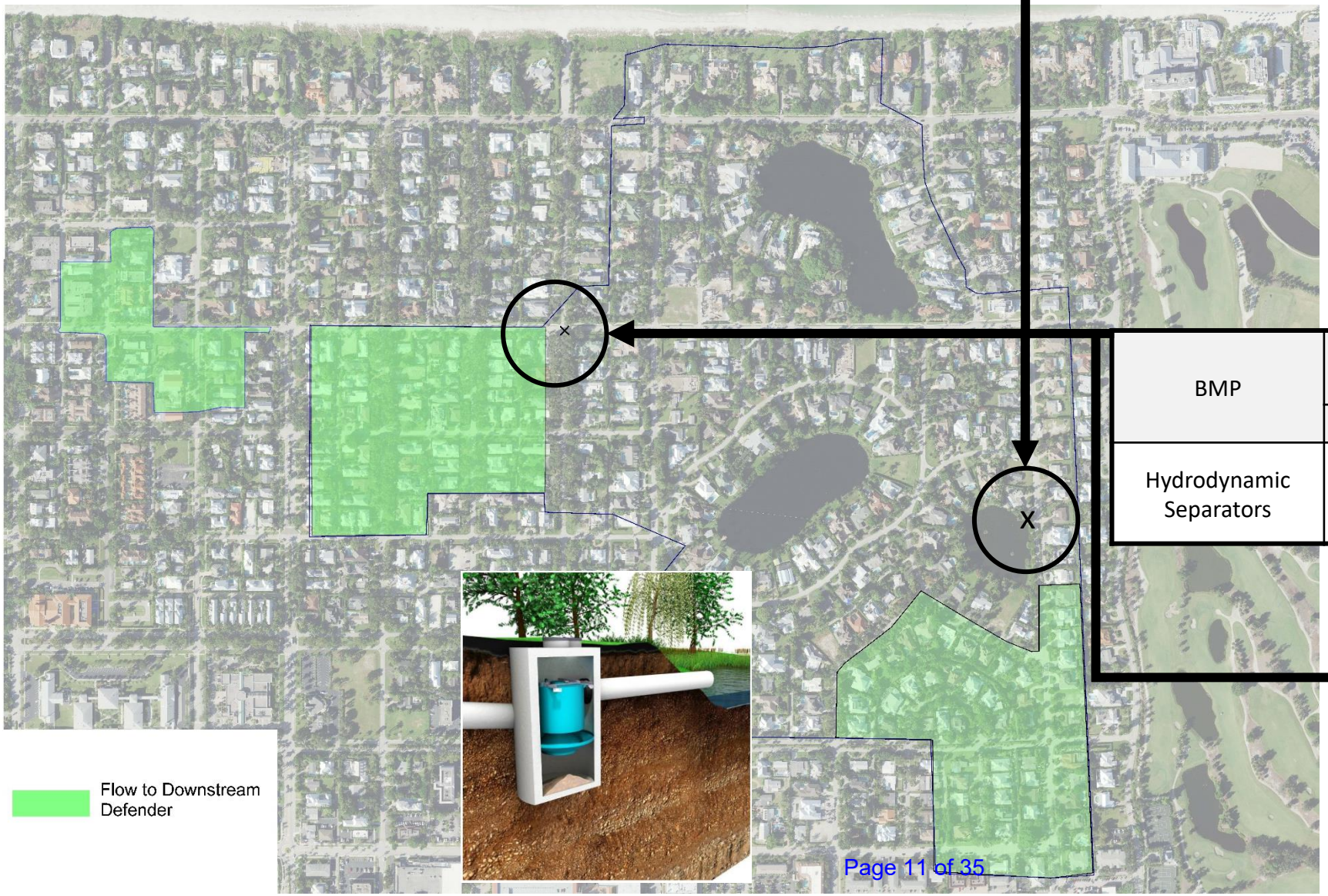
BMP – Increase in Street Sweeping



Street Sweeping	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
3-Lake System	5336 64.5%	20 1.6%	13 10.6%	$1	$226	$353
South System	2854 18%	14 1.00%	9 3.90%	$1	$168	$262

BMP – Hydrodynamic Separators

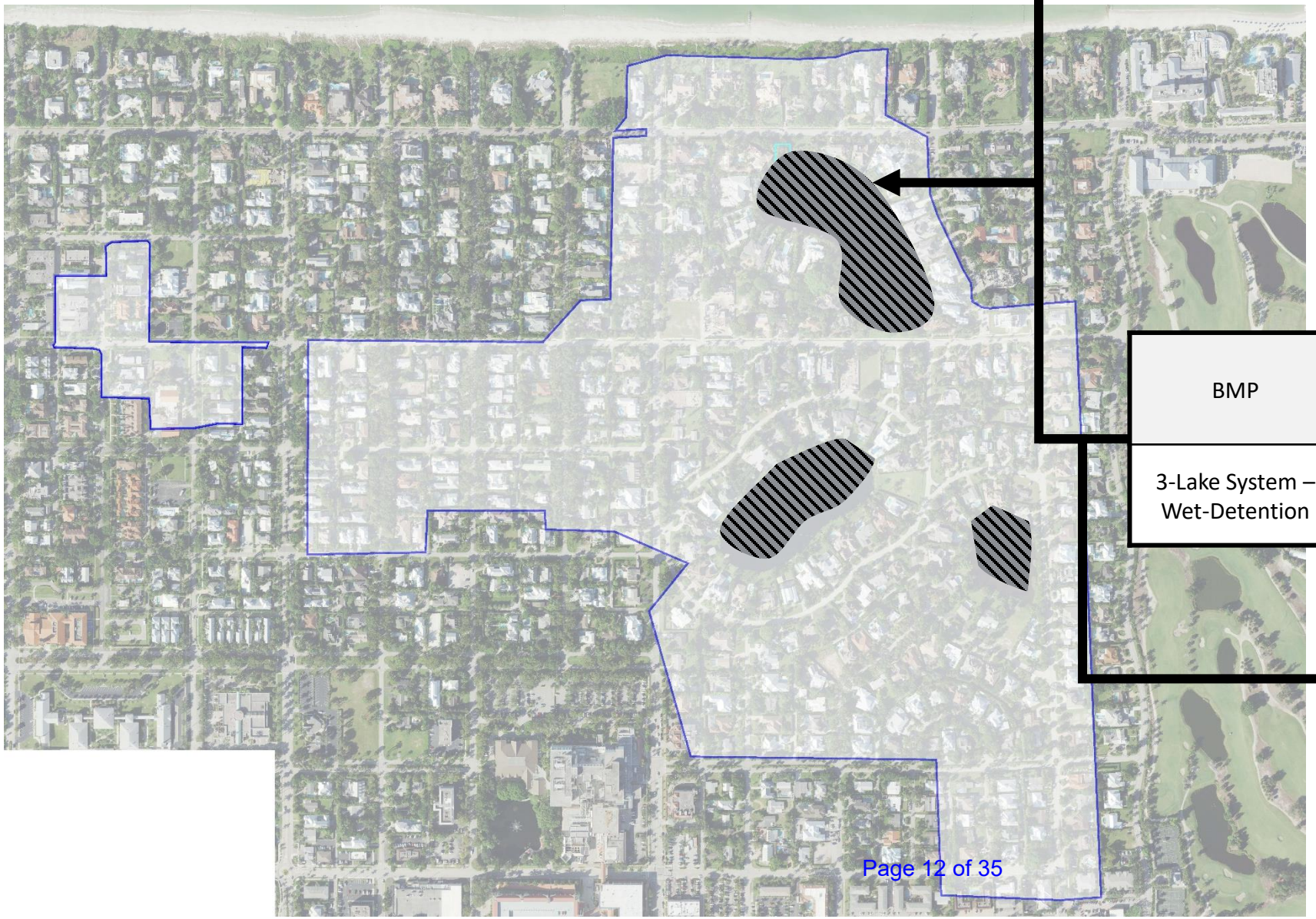


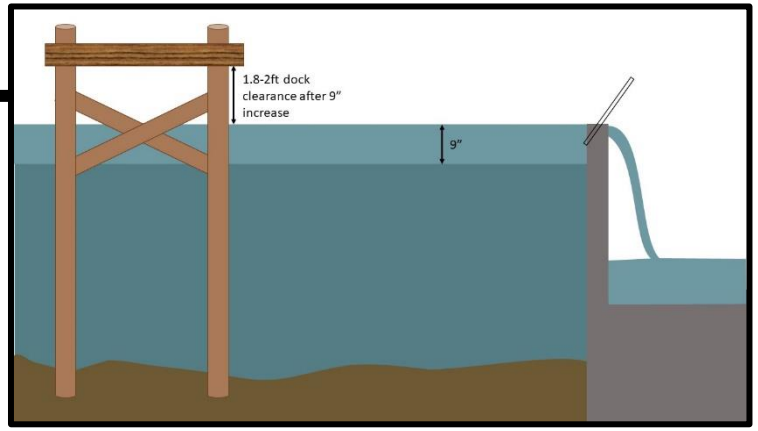


BMP	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
Hydrodynamic Separators	613 80%	78 22%	6 22%	$20	$154	$1,988

BMP	Costs	
	Construction Costs	Annual Operation Cost
Hydrodynamic Separators	$189,800	$2,500

BMP – Increase in Wet Detention

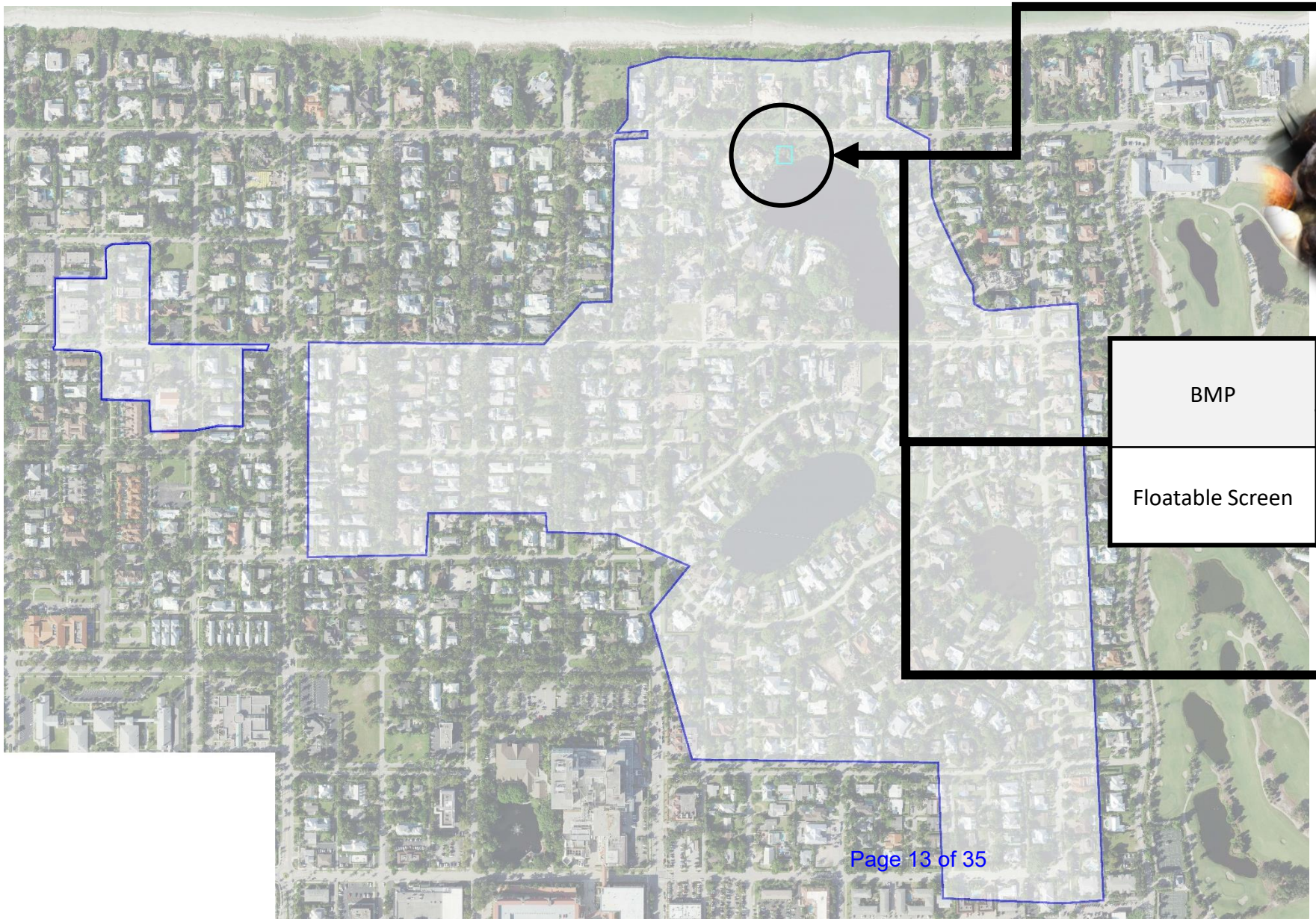


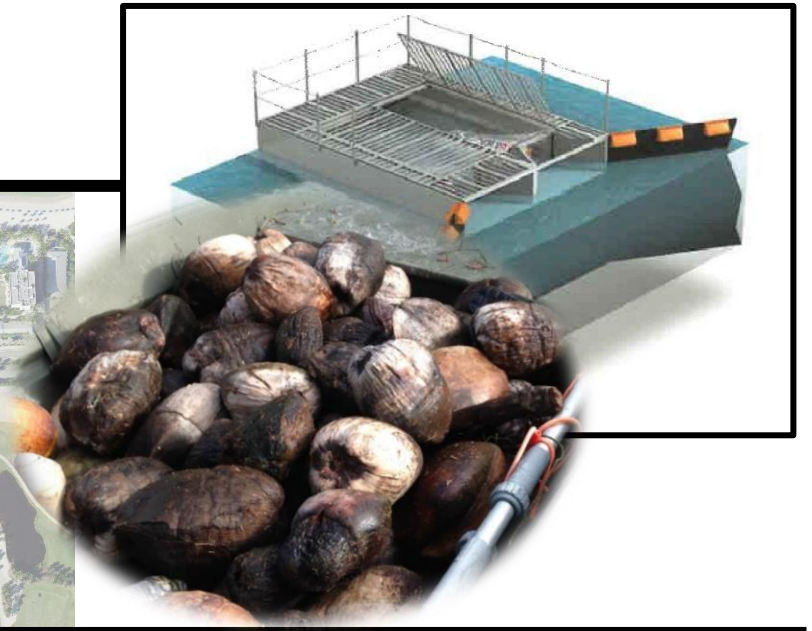


BMP	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
3-Lake System – Wet-Detention	250 12.5%	375.8 34%	51.6 59%	$5	$3	$24

BMP	Costs	
	Construction Costs	Annual Operation Cost
3-Lake System – Wet Detention	$5,000	$500

BMP – Aluminum Floatables Screen

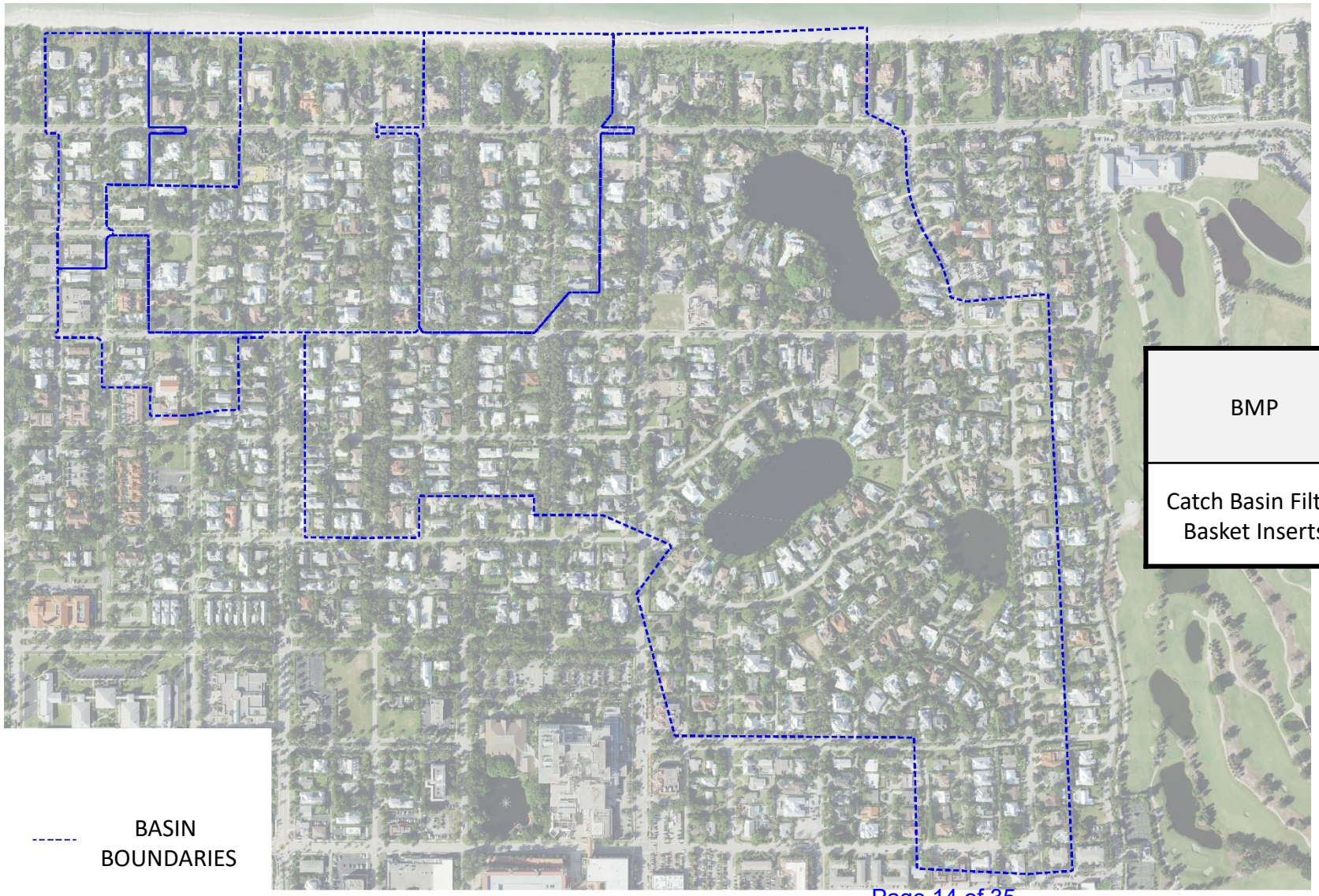




BMP	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
Floatable Screen	500 6%	106.5 22%	7.9 22%	$3	$9	$178

BMP	Costs	
	Construction Costs	Annual Operation Cost
Aluminum Floatables Screen	$18,000	$500

BMP – Catch Basin Filter Basket Inserts

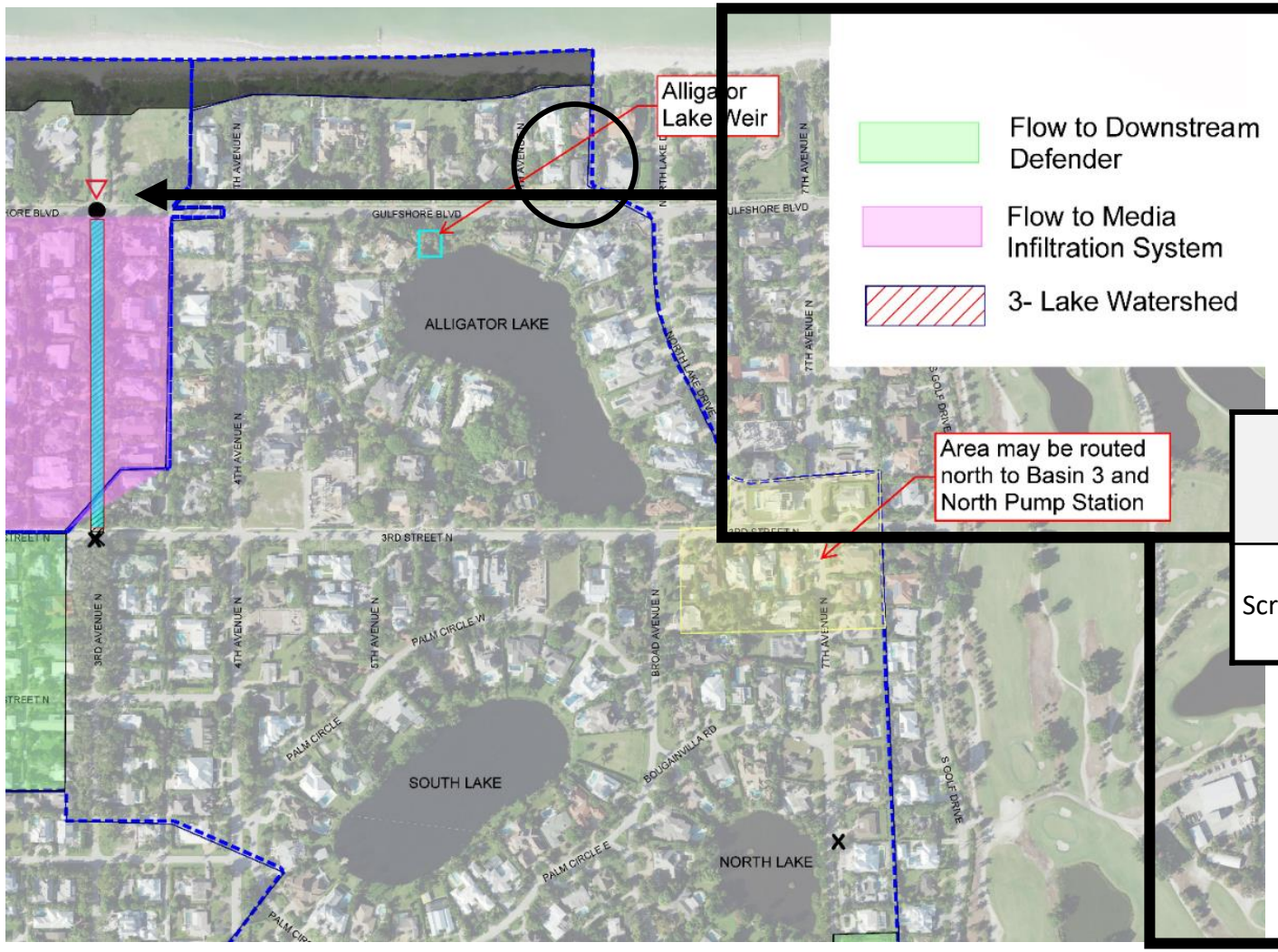


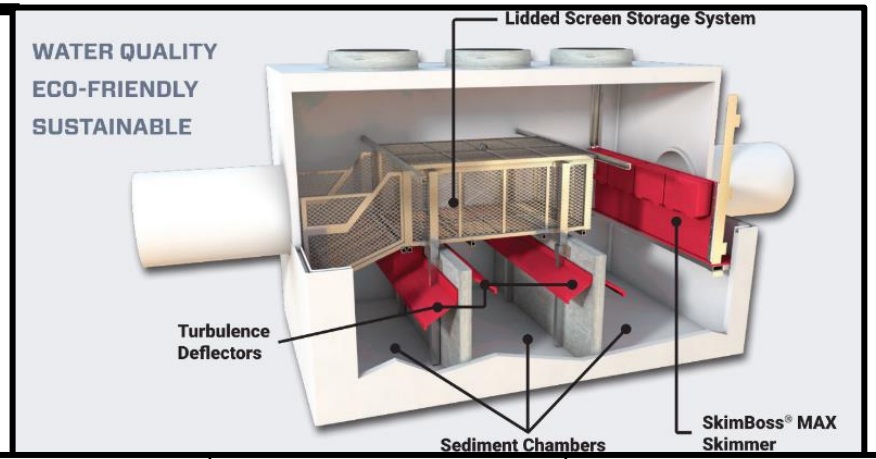
High Capacity Curb Inlet Basket (Deep Catch Basins)

BMP	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
Catch Basin Filter Basket Inserts	4,511 74%	460 60%	85 71%	$4	$37	$198

BMP	Costs	
	Construction Costs	Annual Operation Cost
Catch Basin Filter Basket Inserts	$261,800	$3,795

BMP – Screening Chamber





BMP	Annual Reduction (lbs/yr) / (Percent)			20-Yr Costs per lb		
	TSS	TN	TP	TSS	TN	TP
Screening Chamber	6,115 60%	333 19.1%	31 15.5%	$2	$43	$466

BMP	Costs	
	Construction Costs	Annual Operation Cost
Screening Chamber	$188,300	$5,000

Alternatives

Alternative	Pump Station Location	Total Flow % Consolidated to Pump Station		System Re-Routing	Outfalls to Remain
		5-yr	25-yr		
1	3rd Avenue N	77%	41%	To Moorings Bay & Naples Bay	Outfall 2 (Private Contribution)
2	6th Avenue N ("North System") and 3rd Avenue N ("South System)	96%	69%	-	Outfall 2 (Private Contribution)
3	Vicinity of Naples Beach Hotel & Golf Club ("North System") and 3rd Avenue N ("South System)	100%	77%	-	-

Alternatives: Conceptual Flow Schematics

5-yr	77%
25-yr	41%

5-yr	96%
25-yr	69%

5-yr	100%
25-yr	77%

Alternatives Evaluation & Ranking

- Ranking by City Engr & Natural Resource Depts and Engr Team
- Meetings with Stakeholders
  - Conservancy of SWFL and Waterkeeper Alliance
  - Permitting Agencies (SFWMD, FDEP)
- Sensitivity Analysis
- Ranking Scale

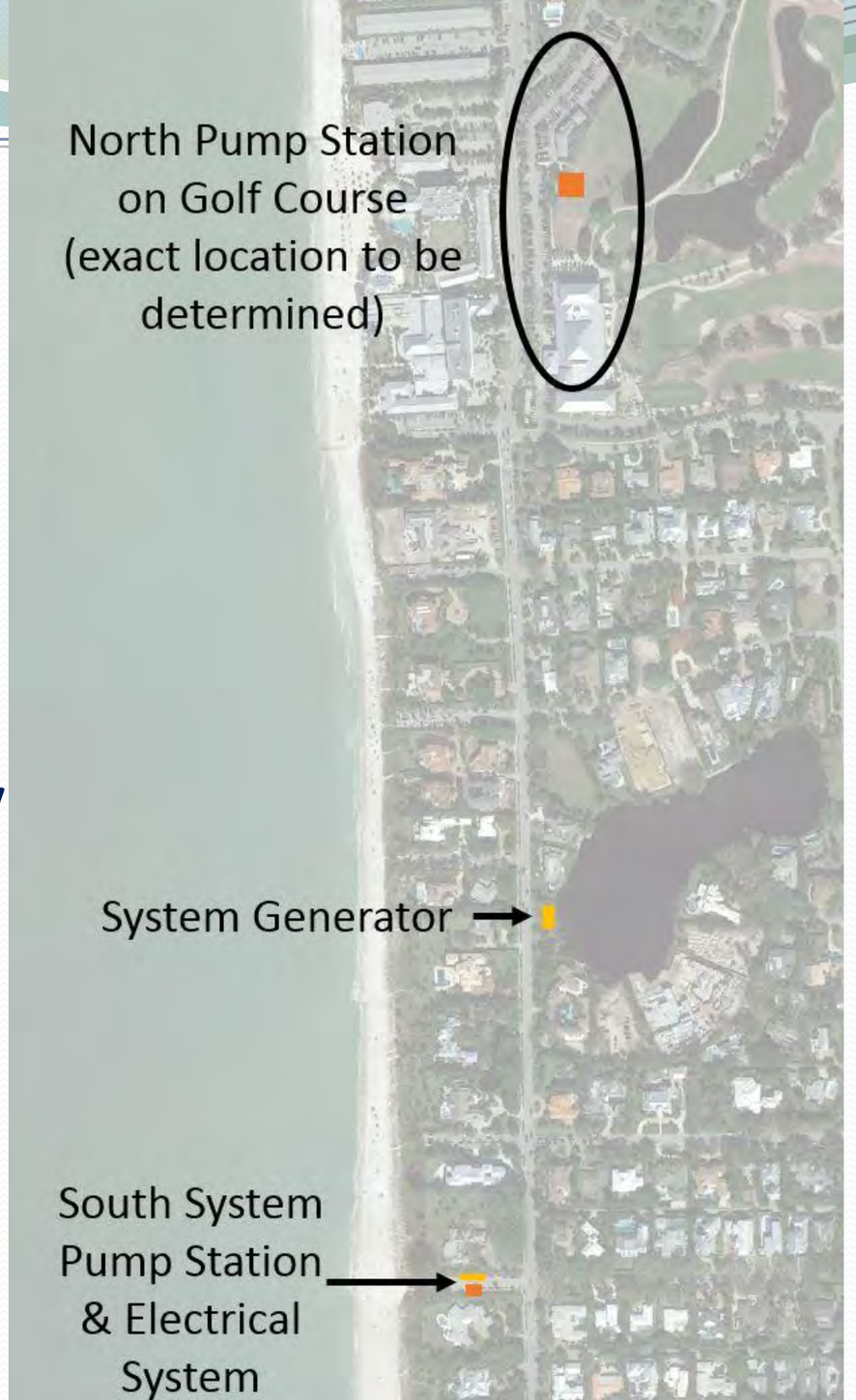
Ranking	Description
-7 / +7	Significant comparative negative/positive project impact
-4 / +4	Medium comparative negative/positive project impact
0	Neutral impact for project

Alternatives Evaluation & Ranking

Evaluation Criteria	Weight	Alternative 1		Alternative 2		Alternative 3	
		Raw	Weighted	Raw	Weighted	Raw	Weighted
Technical	**40%**		**1.15**		**1.08**		**1.63**
Meets Project Objectives	15%	4	0.60	4	0.75	6	0.90
Technical Complexity (Pipeline Consolidation)	5%	-6	-0.30	-5	-0.25	-4	-0.20
Operational Integrity and Reliability (Pump Station)	7.5%	6	0.45	4	0.30	4	0.30
Constructability	7.5%	4	0.30	3	0.23	5	0.38
Scalability	5%	2	0.10	4	0.20	5	0.25
Financial	**30%**		**0.30**		**0.15**		**0.30**
Capital Expenditure (CAPEX)	15%	-1	-0.15	-3	-0.45	-3	-0.45
Effectiveness per Dollar Spent	15%	3	0.45	4	0.60	5	0.75
Non-Technical	**30%**		**1.30**		**1.23**		**1.68**
Social Considerations	7.5%	4	0.30	2	0.15	5	0.38
Environmental Impact	10%	4	0.40	5	0.50	6	0.60
Regulatory Approvals (Permitting)	5%	6	0.30	4	0.20	5	0.25
Health & Safety (Flood Protection, Public Safety, Recreation, etc)	7.5%	4	0.30	5	0.38	6	0.45
	100%		**2.8**		**2.5**		**3.6**

Preferred Alternative

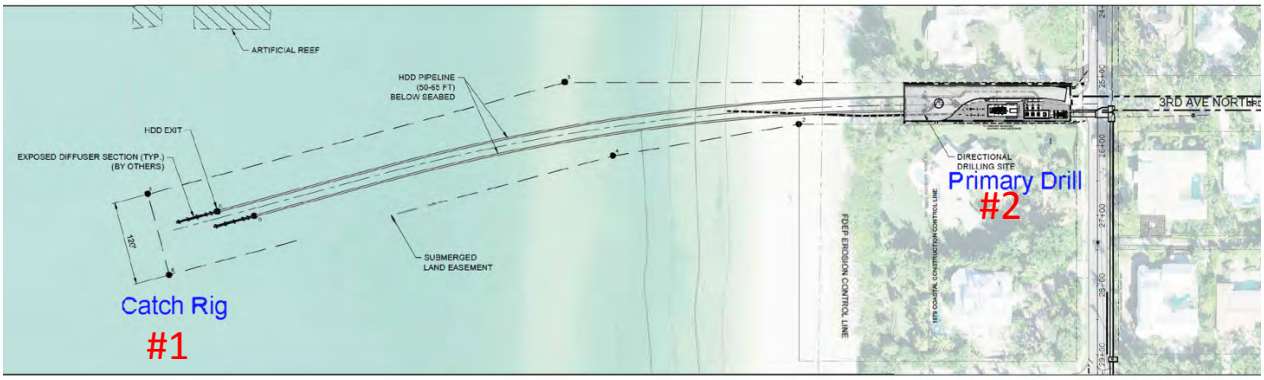
- Alternative 3: Two pump stations
- Removes All City Outfalls (9)
- Routes Outfall 5 to Alligator Lake (Additional WQ Treatment)
- Significantly Improves Nearshore Water Quality
- Highest Effectiveness per Dollar Spent (100% / 77% of flows treated)
- Eliminates Adverse Impacts to Environmental Resources
- Scalable



Gulf of Mexico Set Up

Plan Design & Solution

Pull Pipe from Water or Land – Both can be done



Catch Rig: Universal 250x400 – will be placed on jack-up barge (#1)

-Potential Pilot Hole Rig - A

Barge and Drill Rig Gulf of Mexico Set-up

Catch Rig #1

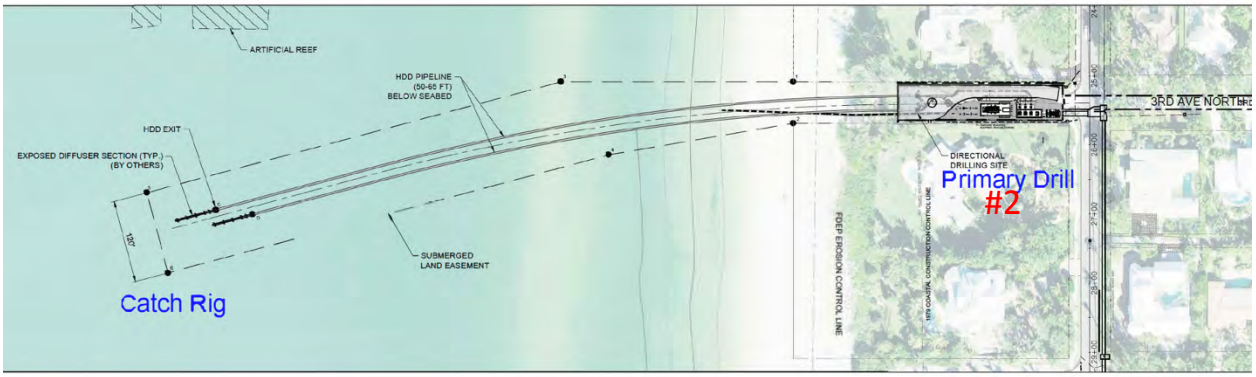
Primary Drill #2

American Auger DD440-T
440,000 ft/lbs of drilling thrust

Land Side Set Up

Plan Design & Solution

Pull Pipe from Water or Land – Both can be done



Pilot Hole Construction

During progress meetings, DBE has mentioned that we would like to mobilize either a Ditch Witch JT100 or the Universal 250x400 drill rig to perform the initial pilot hole construction. For visual reference on the above graphic, these are the 2 single small lines extending from the land into the water with a curved horizontal radius.

The JT 100 is a versatile drill that allows for a small footprint to be maintained. As you can see in the photo above, this rig is able to self-load rod baskets by using its onboard crane arm, without needing a separate excavator and stack of rods that double the width of our footprint. Using the available 100,000 ft/lbs of torque (or 250,000 ft/lbs with the Uni rig), this machine will be used to construct the pilot hole, which is approximately 8-9 inches in diameter. However, during this initial portion of hole construction, the ocean floor will not be breached by the tooling. This will prevent a release of bentonite drill mud into the Gulf which could create a turbid event. A breach will not occur until a casing is installed. Moreover, DBE will turn off the down-hole mud pump when there are between 1-3 drill rods remaining before exiting the surface. This will also ensure the heavier drill mud stays within the bore hole and keeps it from collapsing.

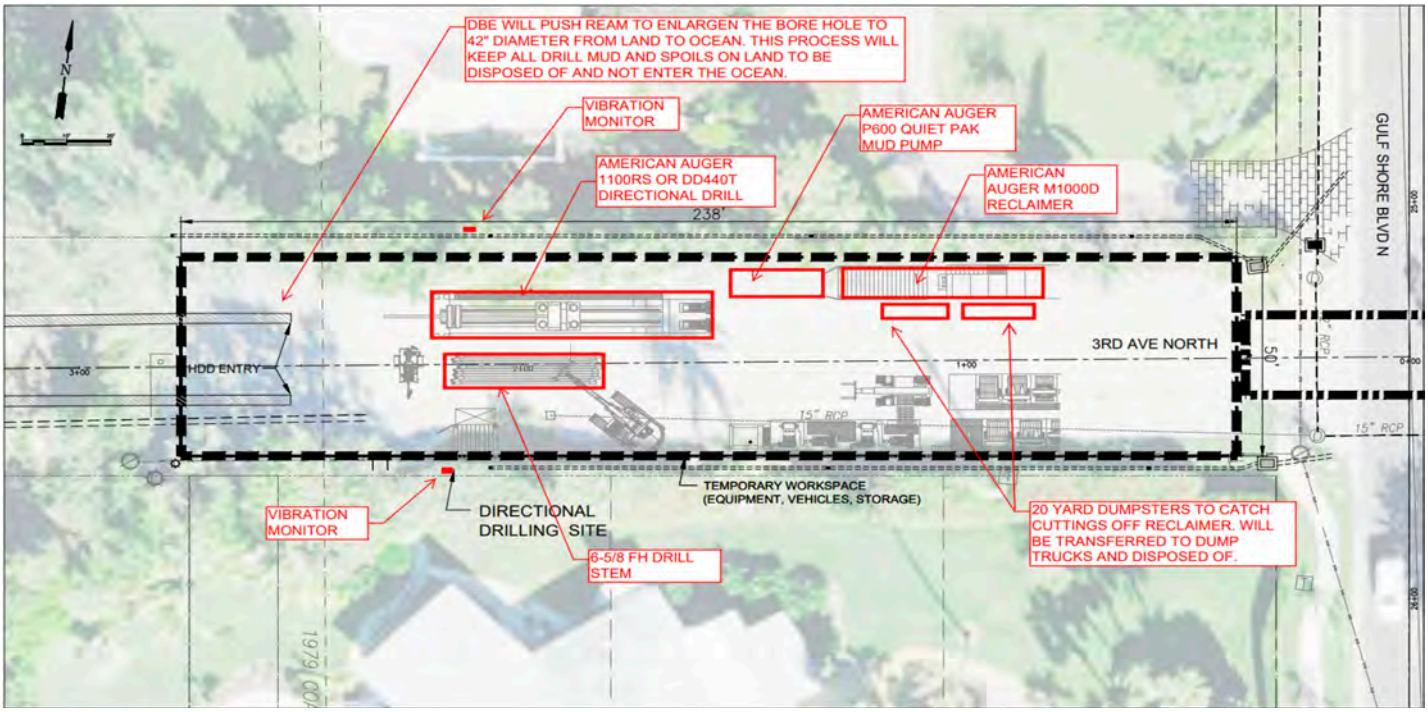
Enlarging the Bore Hole

Once each pilot hole is constructed with the shown horizontal radius, the drill rods will be disconnected land-side and will be hooked up to a maxi rig with either 440,000 or 1.1 million ft/lbs of torque to ream and enlarge the pilot hole to approximately 42-inches in diameter. Depending on the deployment status of our maxi rigs, DBE will either mobilize the American Augers DD440-T or DD1100-RS. Each machine provides more than enough torque to ream the bore holes to prescribed diameter before readying the pipe(s) for pullback. DBE does not plan to breach the ocean floor with drill tooling until a steel conductor casing is driven from the barge into the ocean floor which will be used to contain drill mud and allow the tooling to be connected to the barge-based drill rig. The Universal 250x400 that may have been relocated from land-side to the barge after pilot hole construction (if this is the rig used), will help the land-based rig to rotate the drill string, but its main purpose will be to pull the pipes into final positioning from the ocean.

In addition to the drill rig based on land, DBE will also be placing a mud reclaimer (American Augers MCD-1000), otherwise known as a recycler within the beachside parking area during construction. This machine mixes bentonite with water to create drilling mud that is pumped through the drill stem to lubricate our downhole tooling and to build a wall cake that keeps the hole from collapsing as we push ream the hole. Through a closed loop system, the mud is flowed back from the drill head to the entry pit where it is pumped into the recycler and crosses over numerous varying sieve size screens with shakers to remove dirt, sand and other downhole particulates from the liquid mud that will be sent back to the drill head once cleaned. This prevents DBE from having to continually make more mud, which causes more waste for disposal when complete. For reference, please see the proposed site plan in page 7 below.

Recycler Unit

American Augers
MCD-1000 Mud Reclaimer



Staging & Pulling Pipe

DBE intends to pull the new stormwater discharge pipes from the jack-up barge staged approximately 1,300 feet offshore of 3rd Ave. North. To accomplish this, FPVC pipe will be moved from the anticipated staging area at the WTP near the airport to the southeast corner of the Gulf Shore Blvd & 3rd Ave. North intersection. Pipe will be transported to the jobsite using a pipe trailer and offloaded in the grass a few sticks at a time. This will allow the fusion and stacking to begin. The operation is anticipated to begin just after we've initiated the pilot hole construction so that impact to the area is minimized.

Once unloaded at the construction site, DBE and Underground Solutions will close a small portion of the road to begin fusion operations, within a 200 LF portion of the southern travel lane (from west to east) along 3rd Avenue North. Pipe joints will be thermally butt fused and staged in 180 LF segments in the area identified below, within City ROW between the edge of pavement and the royal trees.

We will stack pipe in 180 LF segments a total of 3 levels high; 3 on bottom, 2 in the middle and 1 on top. Each pipe will be lashed to the others so they will not fall or slide out. These segments will be stacked on 4x4 or 6x6 lumber perpendicular to the travel lane and flow of the swale. There is a stormwater catch basin at the intersection that lies just above the existing grade of the swale. This is a likely culprit for street flooding, but by placing the lumber perpendicular, the water may continue to flow toward the catch basin, under our fused pipe segments if there is a rain event. Moreover, if the street begins to flood, DBE will have a vacuum unit onsite that can assist in sucking up overflow and discharging it directly into the storm system.

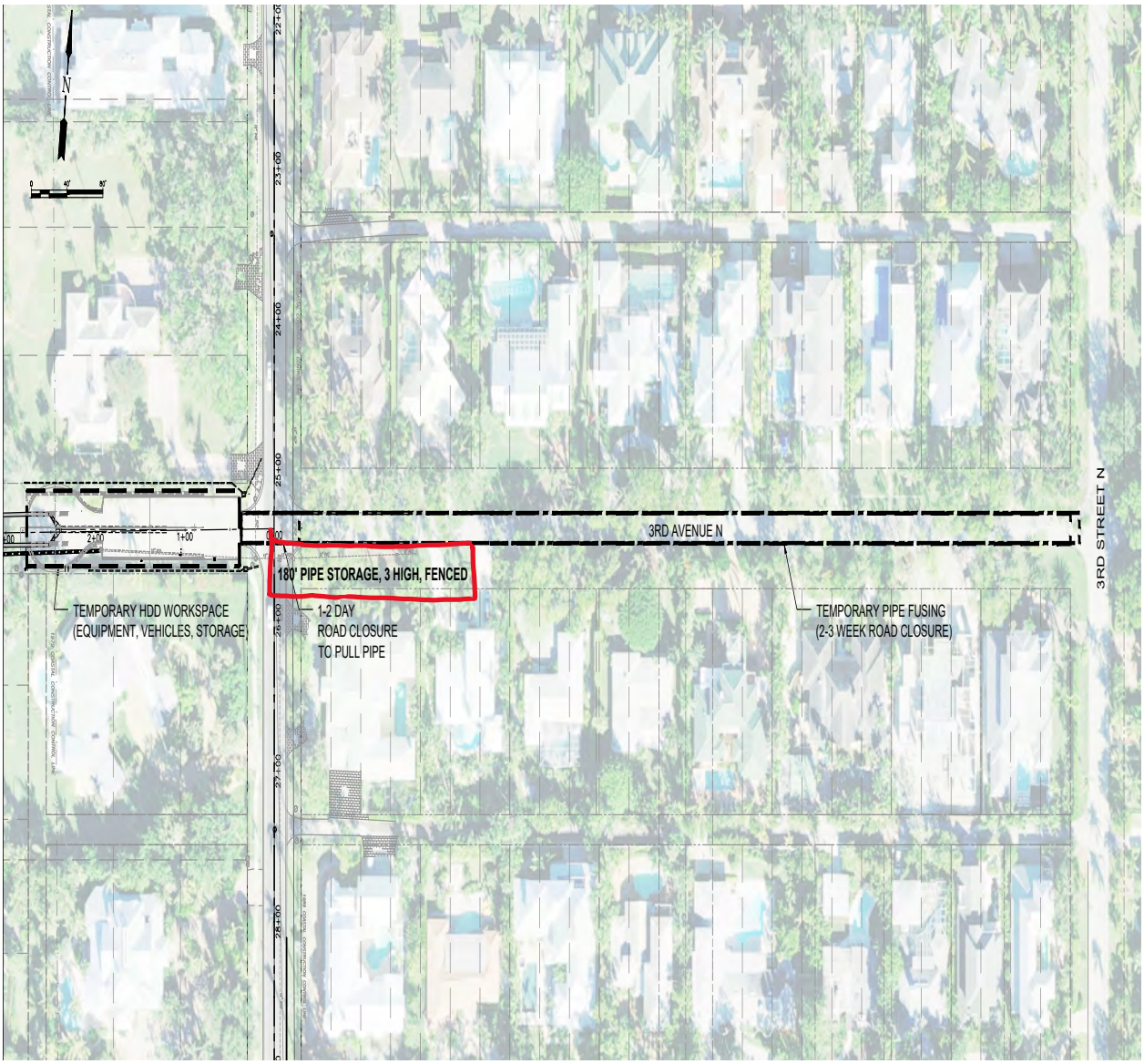
The day before each pipe pullback, DBE will close down 3rd Ave. North so that the 180 foot lengths may be fused into a single 800-900 LF segment. This segment will take up an entire travel lane of 3rd Ave. North from Gult Shore Blvd to 3rd Street North. This leaves a single 180 LF segment left to be attached to complete the pipe string. However, DBE must close down Gulf Shore Blvd entirely to north/southbound traffic to pull the pipe across the street and into the bore entry pit. Once the segment is lying across Gulf Shore, the final piece can be fused on to complete the approximately 1,100 LF discharge line. The closings will have to occur twice to accommodate each new discharge line, a maximum of 2 days per occurance.

The Universal 250x400 drill will extend its drill string from the exit pit on the ocean floor all the way to the entry pit on land and connect to the pipe string pull-head using a swivel. Once attached and pulled into position at the entry pit on land, DBE will begin filling the pipe with ballast water as it enters the mudline. This will reduce vertical forces on the pipe and ensure it stays at the bottom of the hole, instead of floating along the top causing more friction.

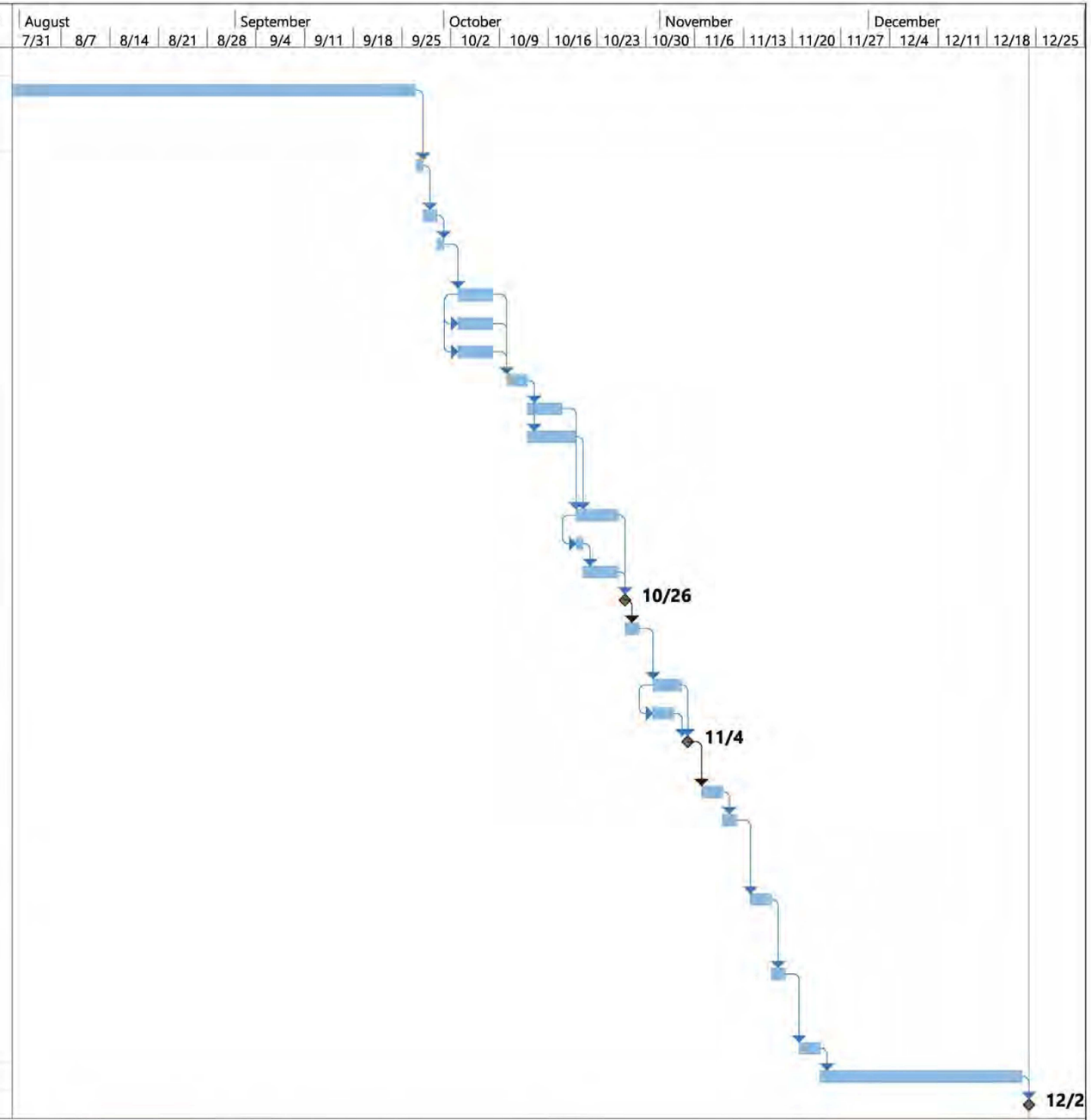
Once pulled into place, the segment will be capped for pressure testing. The drill rig(s) will be moved north or south, depending on which line is installed first for horizontal separation, and the process repeated to install the 2nd and final stormwater discharge line. Upon both lines

being pulled into final position, am official pressure test will be conducted, the ends capped under water and landside, and buried on land until the subsequent pump station construction is ready to connect onto them for commissioning.

DBE will then restore the asphalt through mill & resurfacing, replace landscaping that was disturbed, and reopen the beach parking areas on 3rd Avenue North.


N
3RD AVENUE N
3RD STREET N
180' PIPE STORAGE, 3 HIGH, FENCED
TEMPORARY HDD WORKSPACE
(EQUIPMENT, VEHICLES, STORAGE)
1-2 DAY
ROAD CLOSURE
TO PULL PIPE
TEMPORARY PIPE FUSING
(2-3 WEEK ROAD CLOSURE)

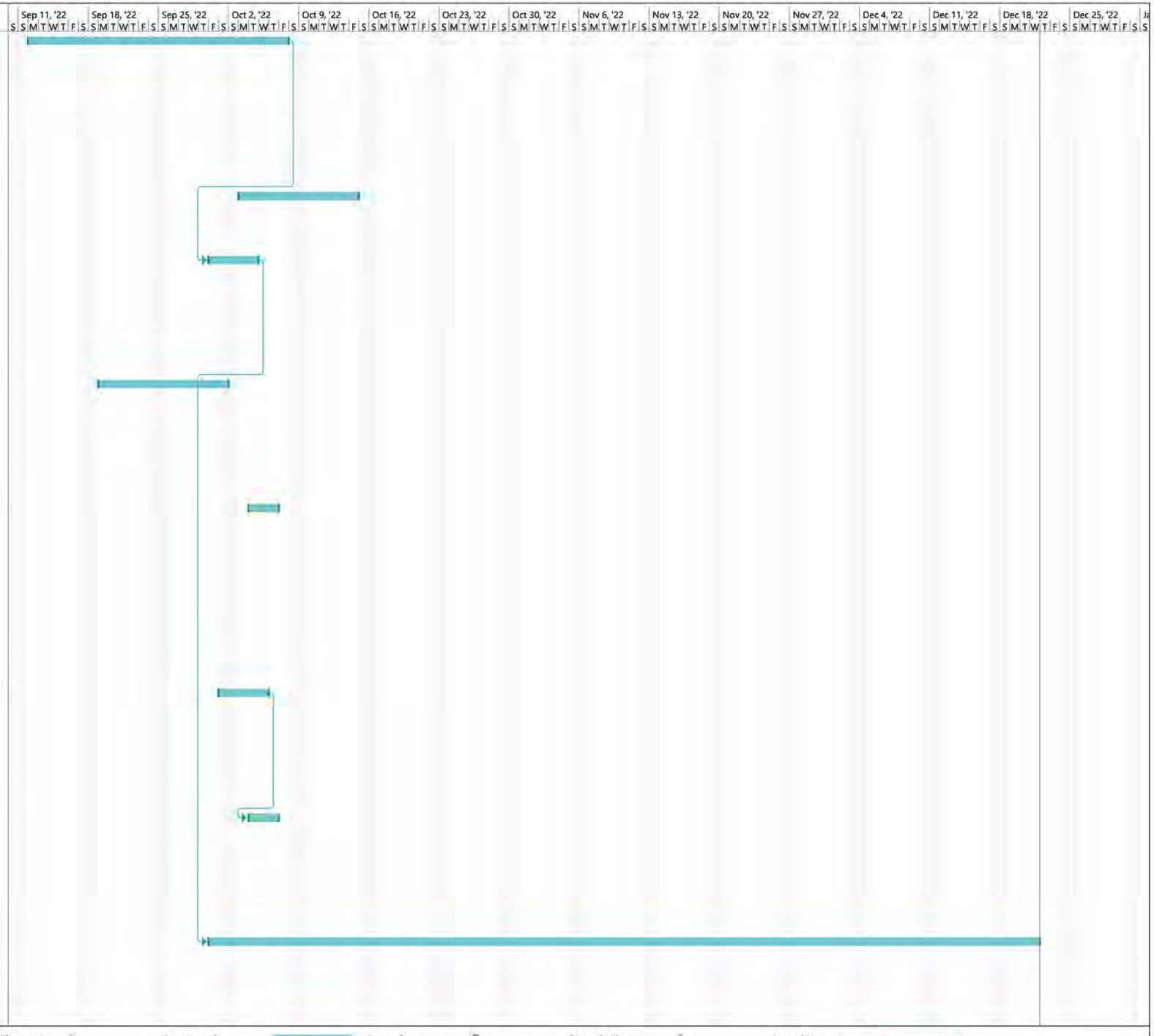
ID	Task Mode	Task Name	Duration	Start	Finish	% Complete	Predecessors
1		**Contract Date**	0 days	Mon 2/28/22	Mon 2/28/22	0%	
2		FPVC Materials Lead Time (project to begin prior to pipe delivery task 14)	151 days	Mon 2/28/22	Mon 9/26/22	0%	1
3		Pre-construction Video Survey	1 day	Tue 9/27/22	Tue 9/27/22	0%	2
4		Site Survey	2 days	Wed 9/28/22	Thu 9/29/22	0%	3
5		Confirm Permits & Utility Locates	1 day	Fri 9/30/22	Fri 9/30/22	0%	4
6		Mobilize: Drill Set-up	5 days	Mon 10/3/22	Fri 10/7/22	0%	5
7		Wire Line Grid	5 days	Mon 10/3/22	Fri 10/7/22	0%	6SS
8		Environmental Monitoring	5 days	Mon 10/3/22	Fri 10/7/22	0%	6SS
9		**HDD #1 - Pilot Shot**	3 days	Mon 10/10/22	Wed 10/12/22	0%	6,7,8
10		**HDD #2 - Pilot Shot**	3 days	Thu 10/13/22	Mon 10/17/22	0%	9
11		Float Jack-up Barge Into Place, Weld & Drive Casing	5 days	Thu 10/13/22	Wed 10/19/22	0%	9
12		**HDD #1**				0%	
13		Ream #1	4 days	Thu 10/20/22	Tue 10/25/22	0%	10,11
14		Material Delivery	1 day	Thu 10/20/22	Thu 10/20/22	0%	13SS
15		Begin Pipe Fusion #1	3 days	Fri 10/21/22	Tue 10/25/22	0%	14
16		Pull-back #1	1 day	Wed 10/26/22	Wed 10/26/22	0%	13,15
17		Move Rig for 2nd Shot	2 days	Thu 10/27/22	Fri 10/28/22	0%	16
18		**HDD #2**				0%	
19		Ream #2	4 days	Mon 10/31/22	Thu 11/3/22	0%	17
20		Begin Pipe Fusion #2	3 days	Mon 10/31/22	Wed 11/2/22	0%	19SS
21		Pull-back #2 daylight savings time 11/6	1 day	Fri 11/4/22	Fri 11/4/22	0%	19,20
22		De-Mob Drill	3 days	Mon 11/7/22	Wed 11/9/22	0%	21
23		Pressure Test New 30-inch Discharge Lines	2 days	Thu 11/10/22	Fri 11/11/22	0%	22
24		**Completion Tasks**				0%	
25		Beach Parking Restoration, Backfilling & Compaction	3 days	Mon 11/14/22	Wed 11/16/22	0%	23
26		Asphalt Trench Restoration and Mill & Resurface	2 days	Thu 11/17/22	Fri 11/18/22	0%	25
27		Landscaping	3 days	Mon 11/21/22	Wed 11/23/22	0%	26
28		Punch List/Asbuilts	21 days	Thu 11/24/22	Thu 12/22/22	0%	27
29		Final Completion	1 day	Fri 12/23/22	Fri 12/23/22	0%	28



Project: City of Naples Schedule
Date: Thu 7/21/22

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		Mobilize JT 100 or Uni 250x400 HDD Rig for Pilot Hole Construction; Reclaimer & Tooling	20 days	Mon 9/12/22	Fri 10/7/22		
2		Fusible PVC Pipe Delivery & Fusion	10 days	Mon 10/3/22	Fri 10/14/22		
3		Relocate Pilot / Catch Rig to Naples Landing for loading on Jack-up Barge	3 days	Fri 9/30/22	Tue 10/4/22	1	
4		Mobilize Jack-up Barge from LA to Naples Landing & load HDD Rig	11 days	Mon 9/19/22	Sat 10/1/22		
5		Mobilize American Auger 440 T to 3rd Street N. along with Support Equipment (excavators & loader)	3 days	Tue 10/4/22	Thu 10/6/22		
6		Float Jack-up Barge into pipe exit position & extend spuds	4 days	Sat 10/1/22	Wed 10/5/22		
7		Float Support Barge with frac tanks & Anchor next to jack-up barge	3 days	Tue 10/4/22	Thu 10/6/22	6	
8		Mobilize 21' skiff boat for personnel transport	59 days	Fri 9/30/22	Wed 12/21/22	3	



Project: Equipment & Material
Date: Tue 5/17/22

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

TEMPORARY PEDESTRIAN WALKWAY

4TH AVE N

EXISTING CROSSWALK

SIDEWALK CLOSED AHEAD

DETOUR

SIDEWALK CLOSED

LEO

LEO TO ASSIST WITH PEDESTRIANS CROSSING THE ROAD

Gulf Shore Blvd S

Gulf Shore Blvd N

Central Ave

1st Ave S

1st Ave N

2nd Ave N

3rd Ave N

4th Ave N

5th Ave N

6th Ave N

S Lake Dr

2nd St S

3rd St S

3rd St N

LEGEND

= WORK AREA

= CHANNELIZING DEVICE

= PED WALKWAY ROUTE

MOT provided by: Bob's BARRICADES, INC. COMPLETE WORKSITE TRAFFIC CONTROL

PLAN NOT TO SCALE

FDOT

This Certifies that
CAMERON BERGER

Has Completed a Florida Department of Transportation Approved Temporary Traffic Control (TTC) Advanced (Refresher) Course.

Date Expires: 08/20/2025 Certificate # 76723
Instructor: Ronald C. Appel FDOT Provider # 134

A&SW Consultants, Inc.
Phone: 386-788-9899
5545 Benchmark Lane
Sanford , FL 32773
www.FloridaMOT.com
nicolle@aswconsultants.com

TEMPORARY TRAFFIC CONTROL SHALL COMPLY WITH THE CURRENT EDITION OF THE FDOT DESIGN STANDARDS (102-600 SERIES INDEX NUMBERS) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

PIPE FUSION & STAGING

PANEL 1 | PANEL 2
3RD AVE E/B CLOSED | FOLLOW DETOUR

PANEL 1 | PANEL 2
3RD AVE W/B CLOSED | FOLLOW DETOUR

PANEL 1 | PANEL 2
ROAD CLOSED AHEAD | FOLLOW DETOUR

PIPE STAGING ALONG EDGE OF PAVEMENT, WITHIN UTILITY EASEMENT 180'

PANEL 1 | PANEL 2
3RD AVE E/B CLOSED | FOLLOW DETOUR

PANEL 1 | PANEL 2
3RD AVE W/B CLOSED | FOLLOW DETOUR

VARIABLE MESSAGE BOARDS LABELED (A) TO DISPLAY THE FOLLOWING MESSAGE 7 DAYS PRIOR TO WORK COMMENCEMENT:

PANEL 1	PANEL 2
ROAD TO BE CLOSED	MM/DD/YY THRU MM/DD/YY

VARIABLE MESSAGE BOARD LABELED (B) TO DISPLAY THE FOLLOWING MESSAGE 7 DAYS PRIOR TO WORK COMMENCEMENT:

PANEL 1	PANEL 2
BEACH ACCESS CLOSED	MM/DD/YY THRU MM/DD/YY

TEMPORARY TRAFFIC CONTROL SHALL COMPLY WITH THE CURRENT EDITION OF THE FDOT DESIGN STANDARDS (102-600 SERIES INDEX NUMBERS) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

LEGEND

= WORK AREA

= VARIABLE MESSAGE BOARD

TEMPORARY SIGN SUPPORT NOTES:

1. All signs shall be post mounted when work operations exceed one day except for:
   a. Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the APL.
   b. Pedestrian advanced warning or pedestrian regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the APL.
   c. Median barrier mounted signs per Index 700-013.

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PIPE PULLBACK
APPROX 8 HOUR DURATION

PANEL 1	PANEL 2
ROAD CLOSED AHEAD	FOLLOW DETOUR

PANEL 1	PANEL 2
S/B GULFSHOR CLOSED	FOLLOW DETOUR

PANEL 1	PANEL 2
3RD AVE W/B CLOSED	FOLLOW DETOUR

PANEL 1	PANEL 2
ROAD CLOSED AHEAD	FOLLOW DETOUR

PANEL 1	PANEL 2
3RD AVE W/B CLOSED	FOLLOW DETOUR

PANEL 1	PANEL 2
N/B GULFSHOR CLOSED	FOLLOW DETOUR

VARIABLE MESSAGE BOARDS LABELED (A) TO DISPLAY THE FOLLOWING MESSAGE 7 DAYS PRIOR TO WORK COMMENCEMENT:

PANEL 1	PANEL 2
ROAD-SIDEWALK TO BE	CLOSED MM/DD/YY XXAM-XXPM

TEMPORARY TRAFFIC CONTROL SHALL COMPLY WITH THE CURRENT EDITION OF THE FDOT DESIGN STANDARDS (102-600 SERIES INDEX NUMBERS) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

LEGEND

= WORK AREA

= VARIABLE MESSAGE BOARD

TEMPORARY SIGN SUPPORT NOTES:

1. *All signs shall be post mounted when work operations exceed one day except for:*
   a. *Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the APL.*
   b. *Pedestrian advanced warning or pedestrian regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the APL.*
   c. *Median barrier mounted signs per Index 700-013.*

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End of Presentation

Q & A

Thank you