

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK

FEBRUARY 2022

MANATEE COUNTY PROJECT NO.
6045662 / WA#031

HDR Project No.
10233930

PREPARED BY:
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FL 34232

PROJECT DESIGNER:
JASON L. STARR, P.E.

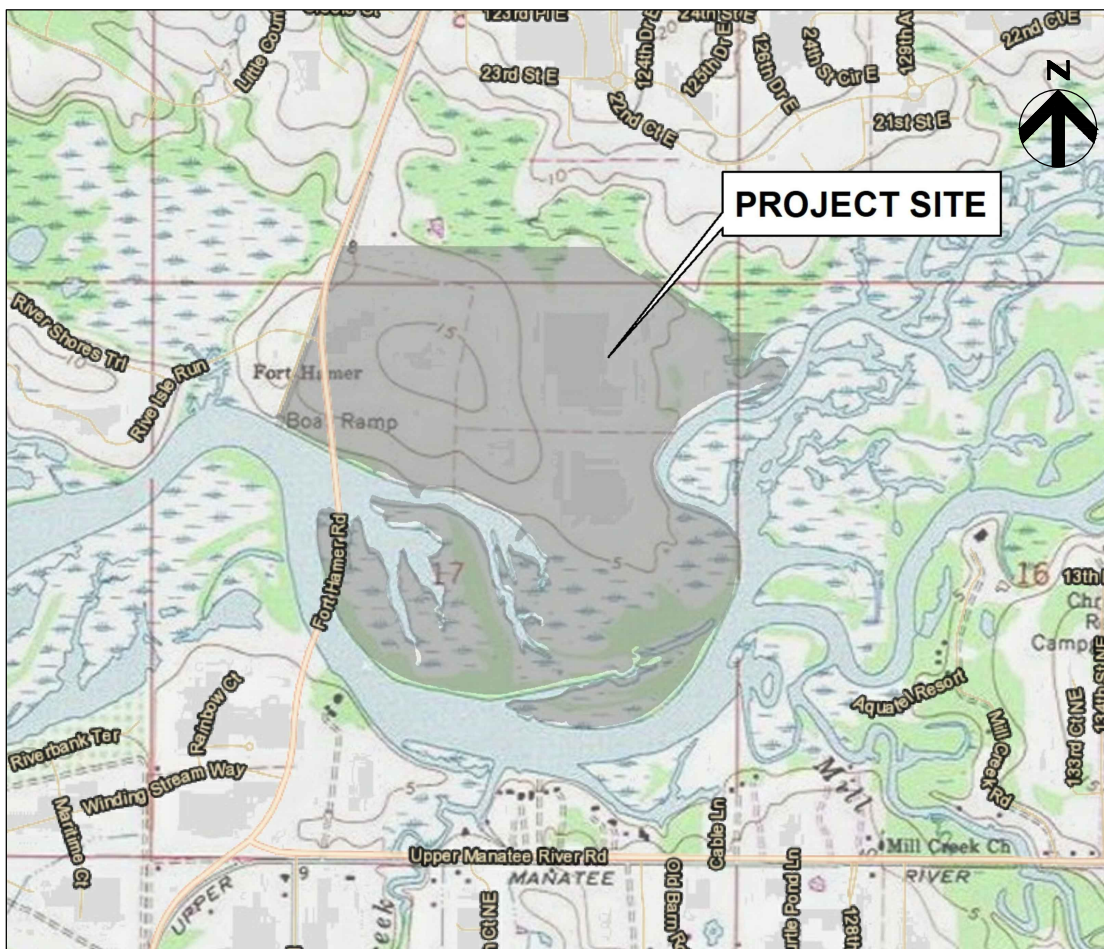
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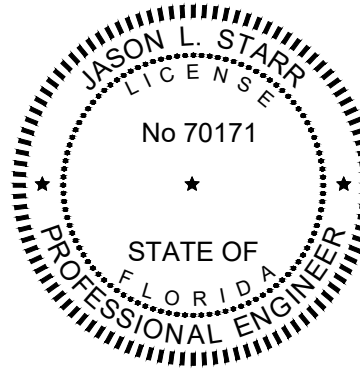
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Board of County Commissioners

- | | |
|------------|-----------------------|
| District 1 | James Stacher |
| District 2 | Reggie Bellamy |
| District 3 | Kevin Van Ostenbridge |
| District 4 | Misty Servia |
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| At-Large | George Kruse |



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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
JASON L. STARR, PE NO. 70171

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
G-101	COVER SHEET
G-102	SIGNATURE SHEET
G-103	GENERAL NOTES, ABBREVIATIONS & LEGEND
G-104	KEY PLAN SHEET
C-101	EXISTING CONDITIONS
C-102	OVERALL PROPOSED SITE PLAN
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HDR ENGINEERING, INC.
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SARASOTA, FL 34232
CA 4213

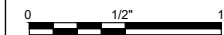
ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.

DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**



SIGNATURE SHEET

FILENAME | G-102.DWG
SCALE | NONE

SHEET
G-102

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL CONSTRUCTION NOTES:

- VERTICAL DATUM USED FOR THIS PLAN SET IS NAVD'88. EXISTING SURFACE CONTOURS SHOWN HEREIN WERE OBTAINED FROM THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD).**
- THE CONTRACTOR WILL COORDINATE WITH THE MANATEE COUNTY PARKS AND NATURAL RESOURCES DEPARTMENT (P&NR) DESIGNEE PRIOR TO ENTERING HIDDEN HARBOR PARK. HIDDEN HARBOR PARK CONTAINS RESTORATION AREAS ADJACENT TO THE MITIGATION AREAS THAT CANNOT BE DISTURBED. THE CONTRACTOR, IN COORDINATION WITH THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE, WILL ESTABLISH CONSTRUCTION HAUL ROADS TO ACCESS THE THREE (3) MITIGATION AREAS. THERE WILL BE NO DEPARTURE FROM THE ESTABLISHED HAUL ROADS. ANY TEMPORARY IMPROVEMENTS TO THE HAUL ROAD WILL BE COORDINATED WITH THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE.
- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RE-ESTABLISH THE HAUL ROAD(S) TO ITS ORIGINAL CONDITION, WHICH AT A MINIMUM WILL INCLUDE REMOVING TEMPORARY STABILIZATION OR FENCING AND SILTATION CONTROLS, AND WILL INCLUDE REPLANTING, AS DEEMED NECESSARY. ALL TRASH AND CONSTRUCTION DEBRIS WILL BE REMOVED FROM THE SITE DAILY.
- ACCESS POINTS TO ENTER HIDDEN HARBOR PARK WILL BE SECURED AT THE END OF EACH WORK DAY AND DURING PERIODS WHEN THE ROUTES ARE NOT BEING USED FOR CONSTRUCTION ACCESS PURPOSES.
- ALL WORK WITHIN HIDDEN HARBOR PARK WILL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK AND WILL ADHERE TO THE CONDITIONS AND STIPULATIONS OF ALL PERMITS CONTROLLING THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY FINES/ADMINISTRATIVE COSTS INCURRED BY THE OWNER FOR PERMIT VIOLATIONS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ANY PERMITS NOT PROVIDED, BUT OTHERWISE REQUIRED, FROM GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE PROJECT SITE OR ACTIVITIES.
- THE CONTRACTOR WILL COORDINATE WITH THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE PRIOR TO AND DURING EXCAVATION TO ENSURE WETLAND CREATION AREAS ARE CONSTRUCTED ACCORDING TO THE DESIGN SPECIFICATIONS ESTABLISHED BY THE CONSTRUCTION PLANS AND AS CONDITIONED BY THE PERMIT(S) ERP # _____ AND SECTION 404 _____.
- ANY MINOR DEVIATIONS TO THE DESIGN BASED ON EXISTING CONDITIONS SHALL BE ADAPTED IN THE FIELD, AS DIRECTED BY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE FAMILIAR WITH THE PERMIT CONDITIONS AND PROJECT DESIGN AND APPROVED TO OVERSEE THE MITIGATION CREATION.
- FIELD CONDITIONS MAY NECESSITATE CONFIGURATION AND GRADE DEVIATIONS. EXCAVATION DEPTHS AND CONTOURING MAY BE MODIFIED TO MEET UNEXPECTED OR UNKNOWN SOIL AND GROUNDWATER CONDITIONS, AS DIRECTED BY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE.
- THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE WILL WORK WITH THE CONTRACTOR TO CREATE "TIP UP MOUNDS" APPROPRIATE TO MIMIC NATURAL GROUND VARIATIONS CHARACTERISTIC OF THE TARGET WETLAND COMMUNITIES (SEE SHEET C-109).
- PLANTING WITHIN THE CREATION AREAS WILL BE SUPERVISED BY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE FAMILIAR WITH THE PERMIT CONDITIONS AND PROJECT DESIGN.
- TREE AND DEBRIS CLEARING WITHIN THE ENHANCEMENT AREA WILL BE SUPERVISED BY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE. DAMAGE OR REMOVAL OF HEALTHY NATIVE TREES OR PALMS WILL BE AVOIDED, IF PRACTICABLE. WHEN FEASIBLE, TRANSPLANTING OF PALMS OR OTHER NATIVE TREES OR SHRUBS WILL BE IMPLEMENTED.
- CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORT OF HIGH-CONTENT ORGANIC SOILS AND/OR MUCK SOILS FROM THE COUNTY'S 44th AVENUE EAST PROJECT TO THE HIDDEN HARBOR PARK (DISTANCE BETWEEN SITES IS APPROXIMATELY 6 MILES) AND FOR SPREADING THESE SOILS WITHIN THE FORESTED WETLAND CREATION AREAS. CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORTING EXCAVATED SOILS FROM HIDDEN HARBOR PARK TO THE MANATEE COUNTY LANDFILL AT LENA ROAD (DISTANCE BETWEEN SITES IS APPROXIMATELY 6 MILES) OR TO ANOTHER AGREED UPON OFFSITE LOCATION)
- THE CONTRACTOR WILL NOTIFY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE IMMEDIATELY IF CONFLICTS BETWEEN THE DRAWINGS AND THE ACTUAL CONDITIONS ARE DISCOVERED.
- CONTRACTOR WILL MAINTAIN A SET OF PLANS TO MARK ANY FIELD DEVIATIONS AND WILL DELIVER THESE PLANS TO THE COUNTY UPON COMPLETION OF CONSTRUCTION. FINAL PAYMENT BY THE COUNTY WILL NOT BE MADE UNTIL THIS REQUIREMENT IS SATISFIED.

- THE CONTRACTOR WILL PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR WILL BE CORRECTED TO THE SATISFACTION OF THE COUNTY AT THE CONTRACTOR'S EXPENSE. REIMBURSEMENT WILL NOT BE MADE BY THE COUNTY FOR THIS WORK.
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS OR PROPERTY CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT WILL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY. REIMBURSEMENT BY THE COUNTY WILL NOT BE MADE FOR THIS WORK.
- THE CONTRACTOR WILL ADHERE TO ALL WATER QUALITY STANDARDS PURSUANT TO SECTION 62-302 F.A.C.
- THE CONTRACTOR WILL ENSURE THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL BARRIERS SUCH AS SILT SCREEN AND FLOATING TURBIDITY BARRIERS AS REQUIRED BY THE SITE CONDITIONS AND ESTABLISHED IN THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (PER NPDES REQUIREMENTS APPROVED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION). PERMIT APPLICATIONS/FEEES AND THE INSTALLATION, MAINTENANCE AND REMOVAL OF EROSION CONTROL BARRIERS WILL BE INCLUDED IN THE BID PRICE. FAILURE TO INSTALL OR PROPERLY AND TIMELY MAINTAIN SUCH BARRIERS MAY RESULT IN ENFORCEMENT ACTIONS, WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40-D-A AND 40D-40, F.A.C.
- EROSION AND SEDIMENT CONTROL DEVICES WILL REMAIN IN PLACE UNTIL FINAL GRADING AND STABILIZATION OF THE SITE HAS BEEN COMPLETED.
- ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE REMOVED WITHIN SIX MONTHS OF FINAL WORK ACCEPTANCE OR UNTIL SOIL STABILIZATION IS ACHIEVED. NO EROSION OR SEDIMENT CONTROL DEVICES OF ANY SORT WILL REMAIN IN PLACE AFTER SIX MONTHS WITHOUT AGREEMENT BY THE COUNTY.
- FINAL CLEANUP ACTIVITIES WILL BE ACCOMPLISHED BY THE CONTRACTOR AS DIRECTED BY THE COUNTY PROJECT MANAGER OR THEIR DESIGNEE INCLUDING REMOVAL OF TRASH, DEBRIS, RUBBLE, SPOIL, AND/OR ALL CONSTRUCTION AND EROSION CONTROL MATERIALS. ALL EXPENSES INCURRED FOR THIS WORK WILL BE INCLUDED IN THE UNIT BID PRICE. ALL MATERIALS REMOVED WILL BE DISPOSED OF IN A LAWFUL MANNER.
- THE GOPHER TORTOISE HAS BEEN OBSERVED ONSITE. DUE TO THE POTENTIAL TO ENCOUNTER THE GOPHER TORTOISE, A PRE-CONSTRUCTION GOPHER TORTOISE SURVEY WILL BE REQUIRED WITHIN THE THREE MITIGATION AREAS. THIS SURVEY WILL BE PERFORMED BY A GOPHER TORTOISE AGENT (GTA), PER THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION GUIDELINES AND CHAPTER-68A-27 F.A.C.
- A FWC PERMIT IS NOT REQUIRED IF DEVELOPMENT AVOIDS IMPACTS TO TORTOISE BURROWS BY 25 FEET IN ALL DIRECTIONS FROM THE MOUTH OF THE BURROW. IF TORTOISE BURROWS ARE DISCOVERED WITHIN 25 FEET, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A GTA TO PERFORM A GOPHER TORTOISE RELOCATION. DUE TO THE LOW LIKELIHOOD OF ENCOUNTERING TORTOISES WITHIN THE MITIGATION AREAS, A 10 OR FEWER BURROW PERMIT ALLOWING ONSITE RELOCATION WOULD BE EXPECTED.
- IN AREAS IN PROXIMITY TO GOPHER TORTOISE BURROWS, THE CONTRACTOR WILL BE REQUIRED TO INSTALL SILT FENCE TO PREVENT THE GOPHER TORTOISE FROM ENTERING THE CONSTRUCTION ZONE DURING ACTIVITIES REQUIRING HEAVY MACHINERY.
- THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH THE REQUIREMENTS SET FORTH BY THE USFWS STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE (2013) INCLUDING DISTRIBUTION OF EDUCATIONAL BROCHURES AND PHOTOS AND PRESENTATION OF THE EDUCATION PLAN TO THE CONSTRUCTION CONTRACTOR CREW.

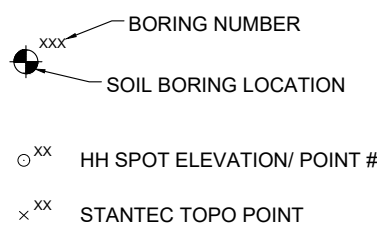
SOIL BORINGS:

- FOR GRAPHICAL LOCATIONS OF ALL BORINGS, REFER TO SHEET C-101. A COPY OF THE ENTIRE SOIL INVESTIGATION REPORTS ARE AVAILABLE FOR REVIEW BASED ON WRITTEN APPROVAL BY THE OWNER. SOIL INVESTIGATION REPORTS ARE NOT A PART OF THE CONSTRUCTION CONTRACT DOCUMENTS.
- SOIL INVESTIGATION DATA IS PROVIDED FOR THE INFORMATION AND CONVENIENCE OF THE CONTRACTOR FOR THE MEANS AND METHODS USED TO EXECUTE THE CONSTRUCTION OF THE PROJECT. THE OWNER AND ENGINEER DISCLAIM RESPONSIBILITY FOR THE ACCURACY, TRUE LOCATION AND EXTENT OF THE SOIL INVESTIGATION THAT IS USED BY CONTRACTOR. THE OWNER AND ENGINEER FURTHER DISCLAIM THE CONTRACTOR'S INTERPRETATION OF THE REFERENCED GEOTECHNICAL DATA FOR THE CONTRACTOR'S MEANS AND METHODS INCLUDING BUT NOT LIMITED SOIL VARIABILITY, SOIL-BEARING CAPACITY VALUES, SOIL STABILITY, AND THE PRESENCE, LEVEL, AND EXTENT OF SURFICIAL OR UNDERGROUND WATER. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SUBSURFACE AND GROUND WATER CONDITIONS PRIOR TO CONSTRUCTION.
- SURFACE ELEVATIONS SHOWN ON BORING LOGS ARE APPROXIMATE. CONTRACTOR SHALL CONDUCT HIS OWN SURVEYS FOR CURRENT ELEVATIONS.
- APPROXIMATE MHW LINE:
0.55' NAVD'88 / 1.49' NGVD'29

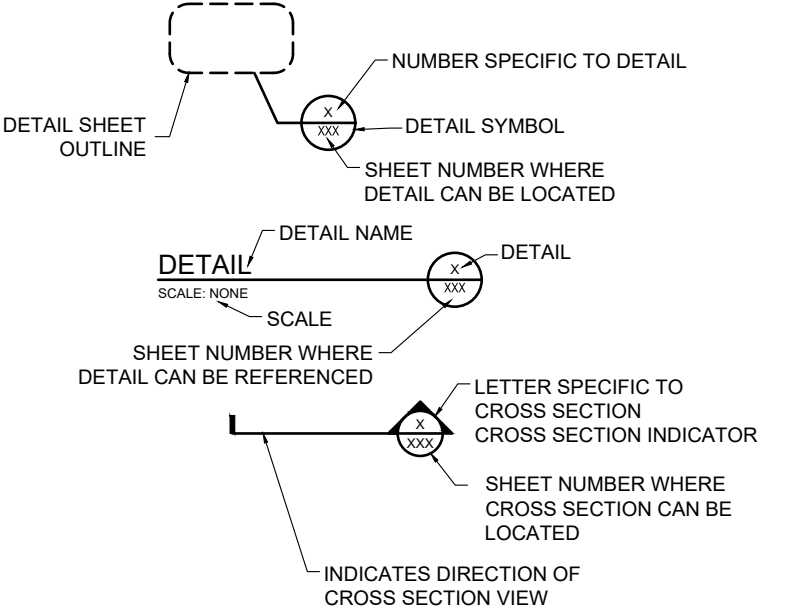
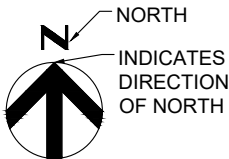
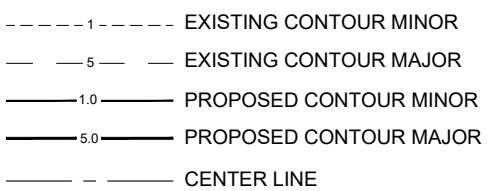
ABBREVIATIONS:

APPROX	=APPROXIMATE
CIR	= CIRCLE
CONC	= CONCRETE
CONST	= CONSTRUCT
E:	= EASTING
EL	=ELEVATION
EXIST	= EXISTING
N:	= NORTHING
PROP	= PROPOSED
STA	= STATION
UNK	= UNKNOWN

SYMBOLS LEGEND:



LINETYPE LEGEND:

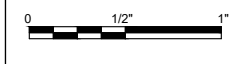


ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

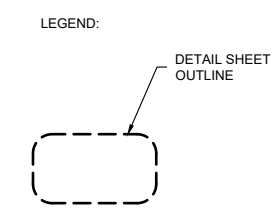
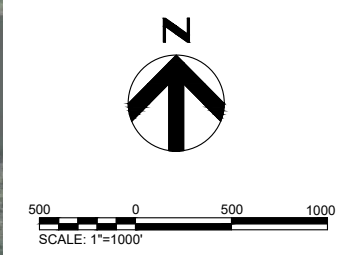
44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK



GENERAL NOTES, ABBREVIATIONS & LEGEND
FILENAME | G-103.DWG
SCALE | NONE

SHEET
G-103

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**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**

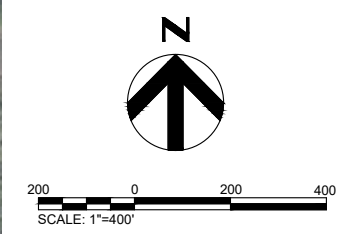
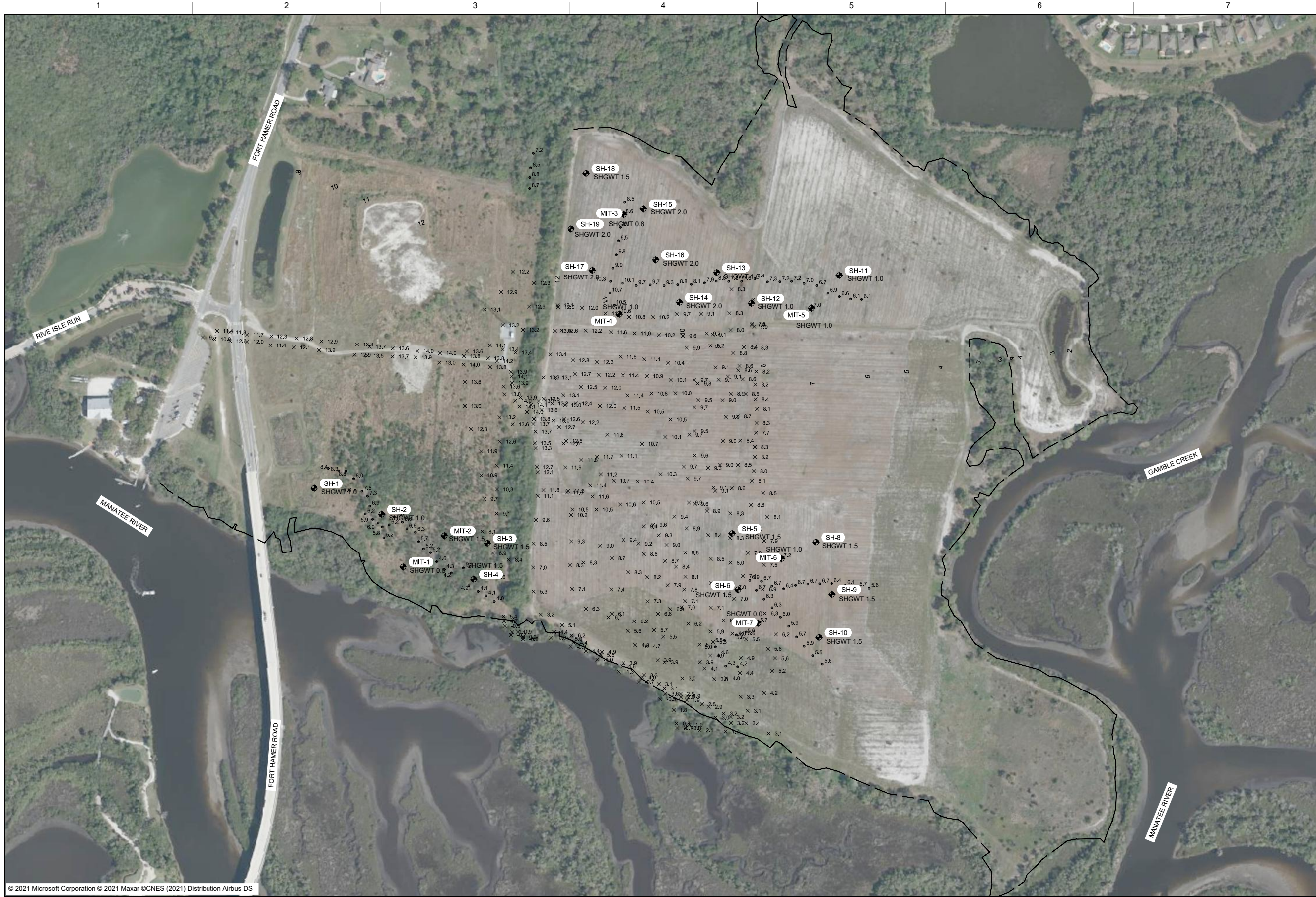


KEY PLAN SHEET

FILENAME | G-104.DWG
SCALE | 1" = 500'

SHEET
G-104

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- NOTE:**
- 1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - 2) BASED ON TOPOGRAPHIC SURVEY DATA RECEIVED FROM THE COUNTY, SHOWN AS STANTEC TOPO POINTS, LIDAR INFORMATION GENERALLY SHOWS THE RELATIVE GRADE OF THE EXISTING SITE. IT SHOULD BE UNDERSTOOD THAT LIDAR CONTOUR DATA DOES NOT NECESSARILY REPRESENT ACCURATE ELEVATION DATA.

- LEGEND:**
- JD LINE (ERP 43041367.000)
 - - - EXISTING LIDAR CONTOUR
 - XXX BORING NUMBER
 - SOIL BORING LOCATION
 - XX HH SPOT ELEVATION/ POINT #
 - × XX STANTEC TOPO POINT

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DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**

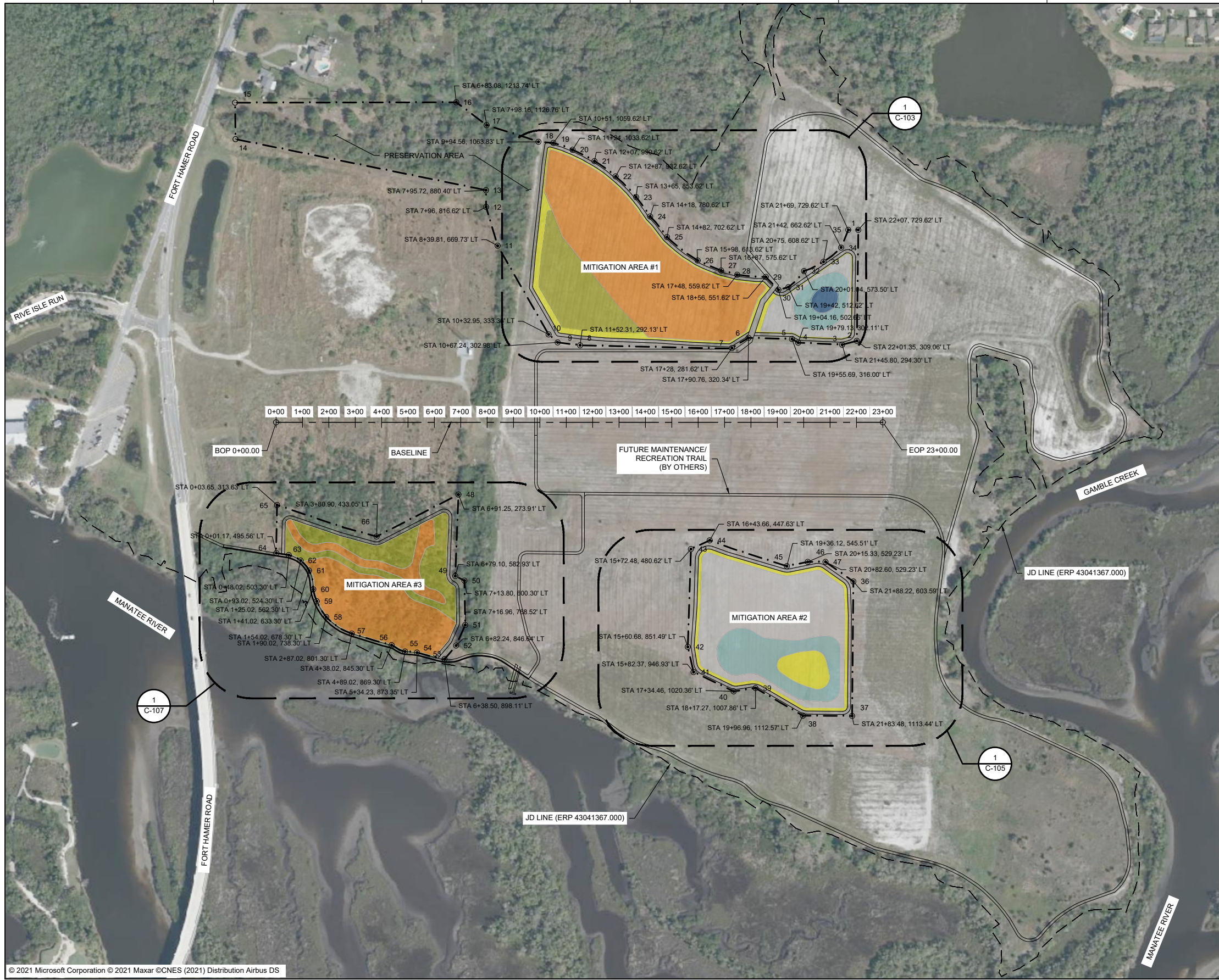


EXISTING CONDITIONS

FILENAME | C-101.DWG
SCALE | 1"=400'

SHEET
C-101

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LEGEND:

- JD LINE (ERP 43041367.000)
- ▭ MITIGATION BOUNDARY
- ZONE 1 (SHORT HYDROPERIOD)
- ZONE 2 (INTERMEDIATE HYDROPERIOD)
- ZONE 3 (LONG HYDROPERIOD)
- ZONE 4 (DEEP HYDROPERIOD)
- PRESERVATION AREA
- SWAMP HARDWOOD
- CYPRESS SWAMP

NOTE:
1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.

SCALE: 1"=400'

MITIGATION AREAS BOUNDARY COORDINATES TABLES

MITIGATION AREA #1		
POINT NO.	NORTHING	EASTING
1	1161199.687	519817.936
2	1160779.119	519812.285
3	1160764.362	519756.729
4	1160772.175	519590.062
5	1160786.064	519566.625
6	1160790.404	519401.694
7	1160751.687	519338.936
8	1160762.192	518763.240
9	1160773.043	518678.170
10	1160803.425	518643.882
11	1161139.796	518450.740
12	1161286.687	518406.936
13	1161350.463	518406.648
14	1161543.846	517457.107
15	1161682.154	517455.259
16	1161683.805	518294.014
17	1161596.823	518409.095
18	1161533.889	518605.492
19	1161529.687	518661.936
20	1161503.687	518734.936
21	1161460.687	518817.936
22	1161402.687	518897.936
23	1161323.687	518975.936
24	1161250.687	519028.936
25	1161172.687	519092.936
26	1161083.687	519208.936
27	1161045.687	519297.936
28	1161029.687	519358.936
29	1161021.687	519466.936
30	1160972.726	519515.094
31	1160982.687	519552.936
32	1161043.559	519611.969
33	1161078.687	519685.936
34	1161132.687	519752.936
35	1161199.687	519779.936

MITIGATION AREA #2		
POINT NO.	NORTHING	EASTING
36	1159866.471	519799.148
37	1159356.625	519794.414
38	1159357.492	519607.891
39	1159462.201	519428.201
40	1159449.701	519345.389
41	1159523.138	519193.306
42	1159618.569	519171.616
43	1159989.446	519183.407
44	1160022.432	519254.588
45	1159924.558	519547.050
46	1159940.835	519626.260
47	1159940.835	519693.535

MITIGATION AREA #3		
POINT NO.	NORTHING	EASTING
48	1160196.158	518302.183
49	1159887.130	518290.030
50	1159869.769	518324.737
51	1159701.547	518327.891
52	1159623.422	518293.169
53	1159571.954	518249.430
54	1159596.763	518144.948
55	1159600.763	518099.948
56	1159624.763	518048.948
57	1159668.763	517897.948
58	1159731.763	517800.948
59	1159791.763	517764.948
60	1159836.763	517751.948
61	1159907.763	517735.948
62	1159945.763	517703.948
63	1159966.763	517658.948
64	1159974.183	517612.107
65	1160156.434	517614.577
66	1160037.016	517991.828

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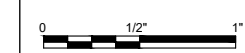
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44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK

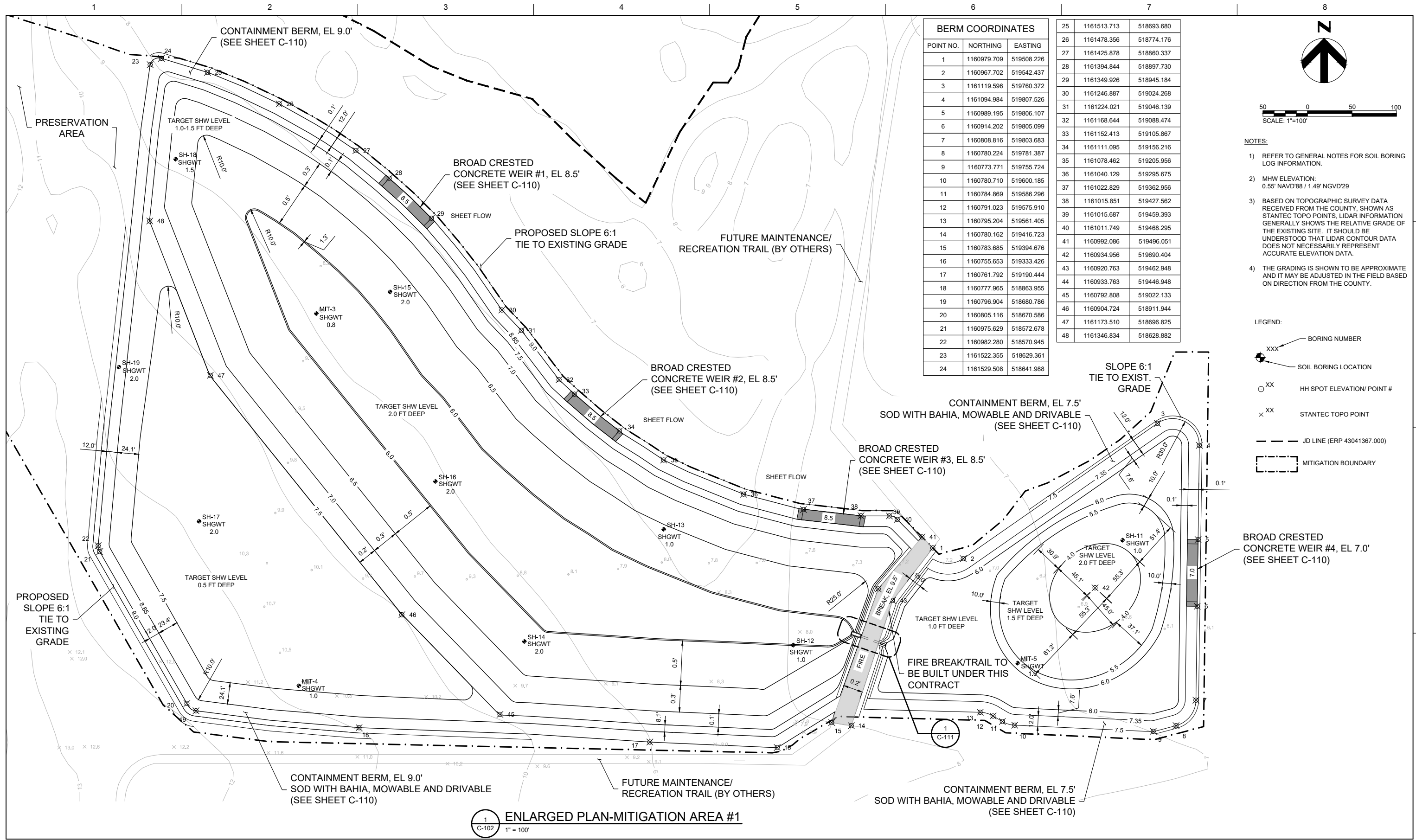


FILENAME | C-102.DWG
SCALE | 1"=400'

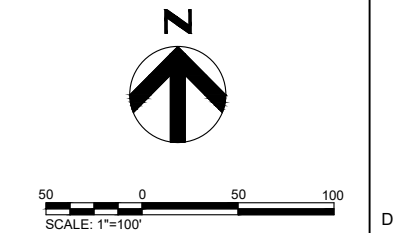
SHEET
C-102

OVERALL PROPOSED SITE PLAN

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BERM COORDINATES		
POINT NO.	NORTHING	EASTING
1	1160979.709	519508.226
2	1160967.702	519542.437
3	1161119.596	519760.372
4	1161094.984	519807.526
5	1160989.195	519806.107
6	1160914.202	519805.099
7	1160808.816	519803.683
8	1160780.224	519781.387
9	1160773.771	519755.724
10	1160780.710	519600.185
11	1160784.869	519586.296
12	1160791.023	519575.910
13	1160795.204	519561.405
14	1160780.162	519416.723
15	1160783.685	519394.676
16	1160755.653	519333.426
17	1160761.792	519190.444
18	1160777.965	518863.955
19	1160796.904	518680.786
20	1160805.116	518670.586
21	1160975.629	518572.678
22	1160982.280	518570.945
23	1161522.355	518629.361
24	1161529.508	518641.988
25	1161513.713	518693.680
26	1161478.356	518774.176
27	1161425.878	518860.337
28	1161394.844	518897.730
29	1161349.926	518945.184
30	1161246.887	519024.268
31	1161224.021	519046.139
32	1161168.644	519088.474
33	1161152.413	519105.867
34	1161111.095	519156.216
35	1161078.462	519205.956
36	1161040.129	519295.675
37	1161022.829	519362.956
38	1161015.851	519427.562
39	1161015.687	519459.393
40	1161011.749	519468.295
41	1160992.086	519496.051
42	1160934.956	519690.404
43	1160920.763	519462.948
44	1160933.763	519446.948
45	1160792.808	519022.133
46	1160904.724	518911.944
47	1161173.510	518696.825
48	1161346.834	518628.882



- NOTES:**
- REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29
 - BASED ON TOPOGRAPHIC SURVEY DATA RECEIVED FROM THE COUNTY, SHOWN AS STANTEC TOPO POINTS. LIDAR INFORMATION GENERALLY SHOWS THE RELATIVE GRADE OF THE EXISTING SITE. IT SHOULD BE UNDERSTOOD THAT LIDAR CONTOUR DATA DOES NOT NECESSARILY REPRESENT ACCURATE ELEVATION DATA.
 - THE GRADING IS SHOWN TO BE APPROXIMATE AND IT MAY BE ADJUSTED IN THE FIELD BASED ON DIRECTION FROM THE COUNTY.

- LEGEND:**
- XXX - BORING NUMBER
 - - SOIL BORING LOCATION
 - XX - HH SPOT ELEVATION/ POINT #
 - × XX - STANTEC TOPO POINT
 - - - - - JD LINE (ERP 43041367.000)
 - --- --- MITIGATION BOUNDARY

1 ENLARGED PLAN-MITIGATION AREA #1
 1" = 100'



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER 6045662	

JASON STARR, P.E.
 P.E. LICENSE NUMBER 70171

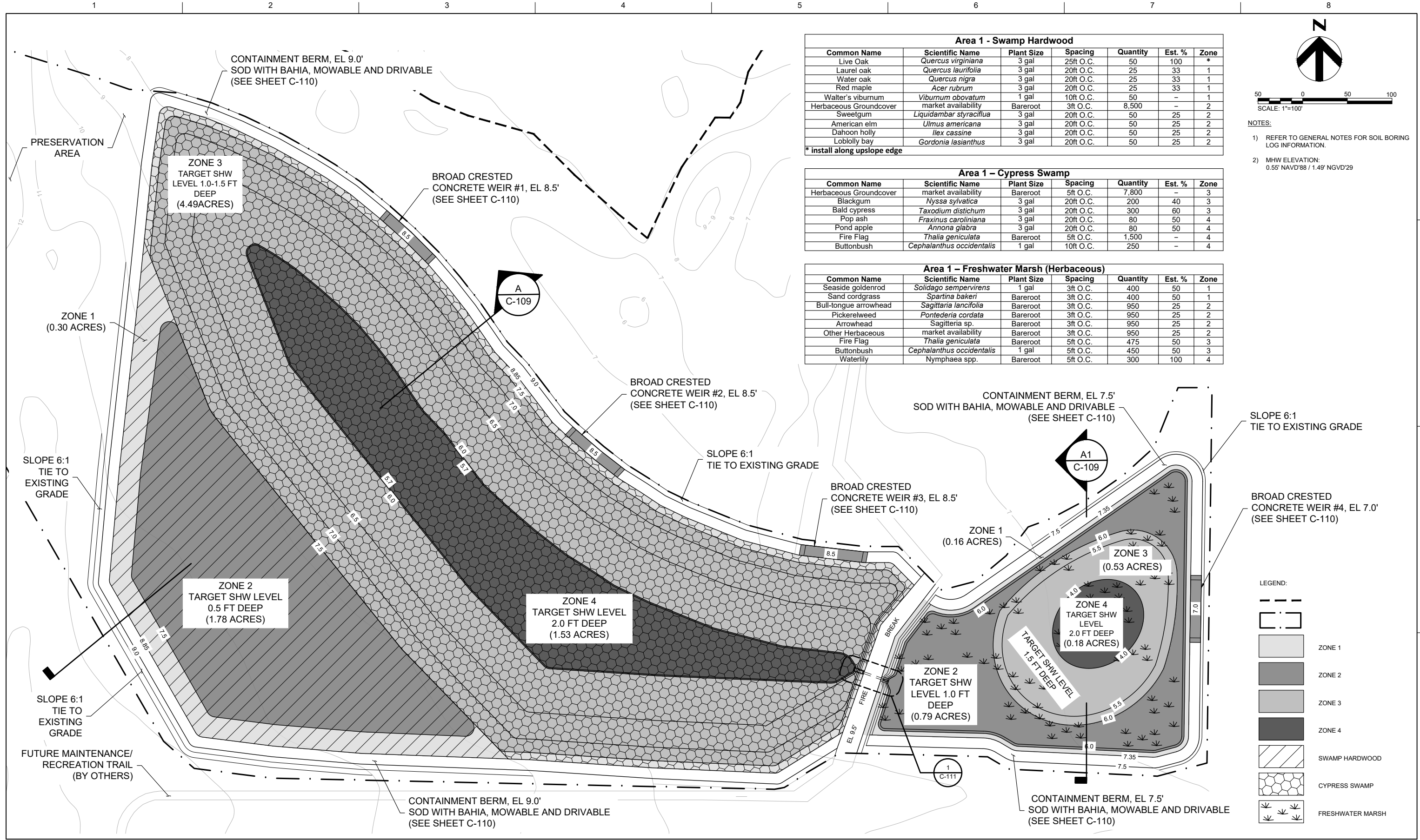
44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK



FILENAME C-103.DWG
 SCALE 1" = 100'

SHEET C-103

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



Area 1 - Swamp Hardwood

Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Live Oak	<i>Quercus virginiana</i>	3 gal	25ft O.C.	50	100	*
Laurel oak	<i>Quercus laurifolia</i>	3 gal	20ft O.C.	25	33	1
Water oak	<i>Quercus nigra</i>	3 gal	20ft O.C.	25	33	1
Red maple	<i>Acer rubrum</i>	3 gal	20ft O.C.	25	33	1
Walter's viburnum	<i>Viburnum obovatum</i>	1 gal	10ft O.C.	50	-	1
Herbaceous Groundcover	market availability	Bareroot	3ft O.C.	8,500	-	2
Sweetgum	<i>Liquidambar styraciflua</i>	3 gal	20ft O.C.	50	25	2
American elm	<i>Ulmus americana</i>	3 gal	20ft O.C.	50	25	2
Dahoon holly	<i>Ilex cassine</i>	3 gal	20ft O.C.	50	25	2
Loblolly bay	<i>Gordonia lasianthus</i>	3 gal	20ft O.C.	50	25	2

* install along upslope edge

Area 1 - Cypress Swamp

Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Herbaceous Groundcover	market availability	Bareroot	5ft O.C.	7,800	-	3
Blackgum	<i>Nyssa sylvatica</i>	3 gal	20ft O.C.	200	40	3
Bald cypress	<i>Taxodium distichum</i>	3 gal	20ft O.C.	300	60	3
Pop ash	<i>Fraxinus caroliniana</i>	3 gal	20ft O.C.	80	50	4
Pond apple	<i>Annona glabra</i>	3 gal	20ft O.C.	80	50	4
Fire Flag	<i>Thalia geniculata</i>	Bareroot	5ft O.C.	1,500	-	4
Buttonbush	<i>Cephalanthus occidentalis</i>	1 gal	10ft O.C.	250	-	4

Area 1 - Freshwater Marsh (Herbaceous)

Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Seaside goldenrod	<i>Solidago sempervirens</i>	1 gal	3ft O.C.	400	50	1
Sand cordgrass	<i>Spartina bakeri</i>	Bareroot	3ft O.C.	400	50	1
Bull-tongue arrowhead	<i>Sagittaria lancifolia</i>	Bareroot	3ft O.C.	950	25	2
Pickeralweed	<i>Pontederia cordata</i>	Bareroot	3ft O.C.	950	25	2
Arrowhead	<i>Sagittaria sp.</i>	Bareroot	3ft O.C.	950	25	2
Other Herbaceous	market availability	Bareroot	3ft O.C.	950	25	2
Fire Flag	<i>Thalia geniculata</i>	Bareroot	5ft O.C.	475	50	3
Buttonbush	<i>Cephalanthus occidentalis</i>	1 gal	5ft O.C.	450	50	3
Waterlily	<i>Nymphaea spp.</i>	Bareroot	5ft O.C.	300	100	4

N

50 0 50 100
SCALE: 1"=100'

NOTES:

- REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
- MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29



PROJECT MANAGER JASON STARR, P.E.		
DESIGN P.E.	J. STARR	
DESIGN P.W.S.	S. SWANSON	
PROJECT NUMBER 6045662		
ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

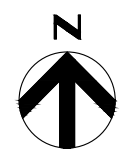
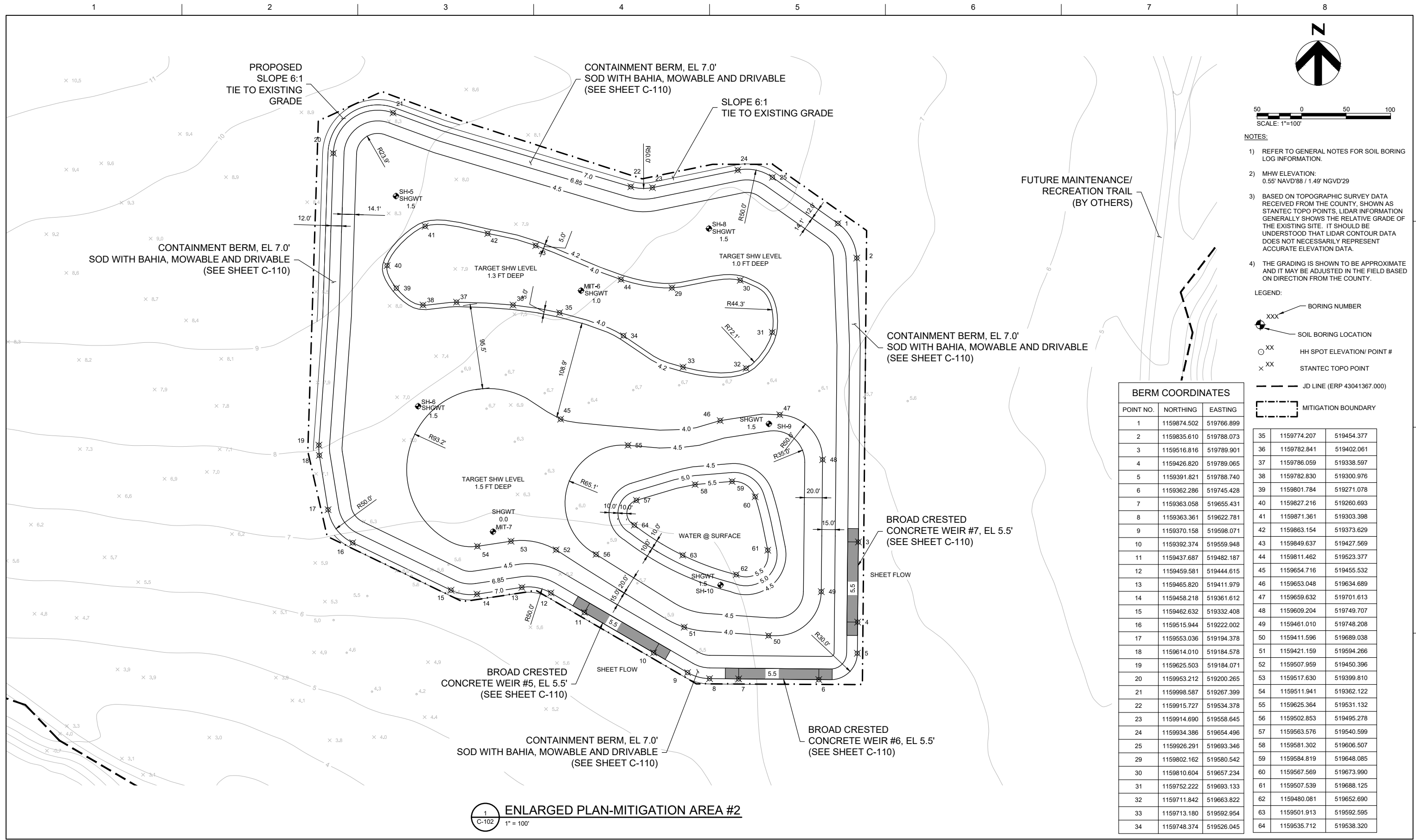
**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**

FILENAME C-104.DWG
SCALE 1" = 100'

MITIGATION AREA #1-PLANTING SHEET

SHEET
C-104

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



- NOTES:**
- 1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - 2) MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29
 - 3) BASED ON TOPOGRAPHIC SURVEY DATA RECEIVED FROM THE COUNTY, SHOWN AS STANTEC TOPO POINTS. LIDAR INFORMATION GENERALLY SHOWS THE RELATIVE GRADE OF THE EXISTING SITE. IT SHOULD BE UNDERSTOOD THAT LIDAR CONTOUR DATA DOES NOT NECESSARILY REPRESENT ACCURATE ELEVATION DATA.
 - 4) THE GRADING IS SHOWN TO BE APPROXIMATE AND IT MAY BE ADJUSTED IN THE FIELD BASED ON DIRECTION FROM THE COUNTY.

- LEGEND:**
- XXX - BORING NUMBER
 - - SOIL BORING LOCATION
 - XX - HH SPOT ELEVATION/ POINT #
 - × XX - STANTEC TOPO POINT
 - - JD LINE (ERP 43041367.000)
 - - MITIGATION BOUNDARY

BERM COORDINATES

POINT NO.	NORTHING	EASTING
1	1159874.502	519766.899
2	1159835.610	519788.073
3	1159516.816	519789.901
4	1159426.820	519789.065
5	1159391.821	519788.740
6	1159362.286	519745.428
7	1159363.058	519655.431
8	1159363.361	519622.781
9	1159370.158	519598.071
10	1159392.374	519559.948
11	1159437.687	519482.187
12	1159459.581	519444.615
13	1159465.820	519411.979
14	1159458.218	519361.612
15	1159462.632	519332.408
16	1159515.944	519222.002
17	1159553.036	519194.378
18	1159614.010	519184.578
19	1159625.503	519184.071
20	1159953.212	519200.265
21	1159998.587	519267.399
22	1159915.727	519534.378
23	1159914.690	519558.645
24	1159934.386	519654.496
25	1159926.291	519693.346
29	1159802.162	519580.542
30	1159810.604	519657.234
31	1159752.222	519693.133
32	1159711.842	519663.822
33	1159713.180	519592.954
34	1159748.374	519526.045
35	1159774.207	519454.377
36	1159782.841	519402.061
37	1159786.059	519338.597
38	1159782.830	519300.976
39	1159801.784	519271.078
40	1159827.216	519260.693
41	1159871.361	519303.396
42	1159863.154	519373.629
43	1159849.637	519427.569
44	1159811.462	519523.377
45	1159654.716	519455.532
46	1159653.048	519634.689
47	1159659.632	519701.613
48	1159609.204	519749.707
49	1159461.010	519748.208
50	1159411.596	519689.038
51	1159421.159	519594.266
52	1159507.959	519450.396
53	1159517.630	519399.810
54	1159511.941	519362.122
55	1159625.364	519531.132
56	1159502.853	519495.278
57	1159563.576	519540.599
58	1159581.302	519606.507
59	1159584.819	519648.085
60	1159567.569	519673.990
61	1159507.539	519688.125
62	1159480.081	519652.690
63	1159501.913	519592.595
64	1159535.712	519538.320

ENLARGED PLAN-MITIGATION AREA #2
1" = 100'



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER 6045662	

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK



FILENAME | C-105.DWG
SCALE | 1" = 100'

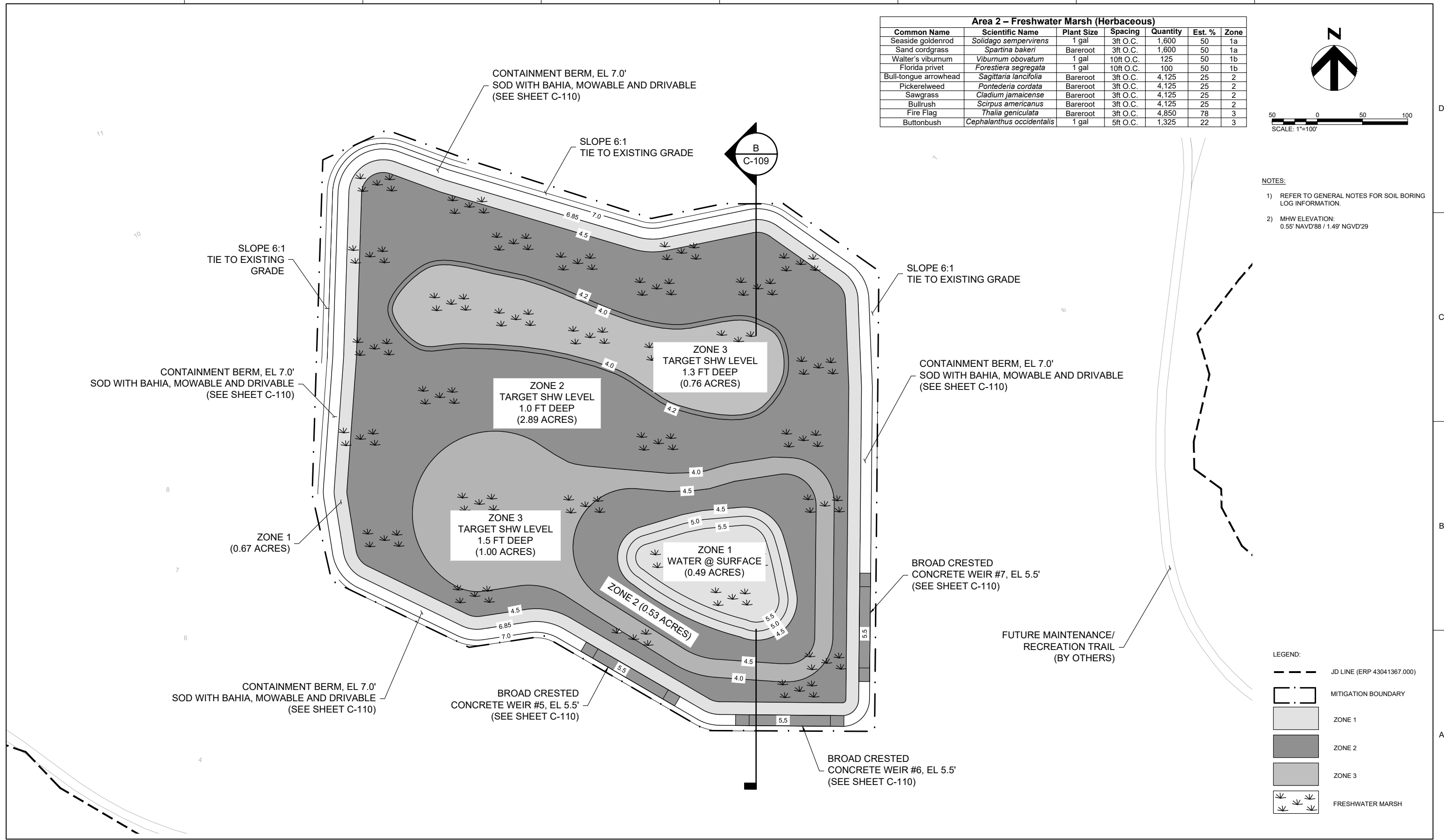
SHEET
C-105

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

Area 2 – Freshwater Marsh (Herbaceous)						
Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Seaside goldenrod	<i>Solidago sempervirens</i>	1 gal	3ft O.C.	1,600	50	1a
Sand cordgrass	<i>Spartina bakeri</i>	Bareroot	3ft O.C.	1,600	50	1a
Walter's viburnum	<i>Viburnum obovatum</i>	1 gal	10ft O.C.	125	50	1b
Florida privet	<i>Forestiera segregata</i>	1 gal	10ft O.C.	100	50	1b
Bull-tongue arrowhead	<i>Sagittaria lancifolia</i>	Bareroot	3ft O.C.	4,125	25	2
Pickerelweed	<i>Pontederia cordata</i>	Bareroot	3ft O.C.	4,125	25	2
Sawgrass	<i>Cladium jamaicense</i>	Bareroot	3ft O.C.	4,125	25	2
Bullrush	<i>Scirpus americanus</i>	Bareroot	3ft O.C.	4,125	25	2
Fire Flag	<i>Thalia geniculata</i>	Bareroot	3ft O.C.	4,850	78	3
Buttonbush	<i>Cephalanthus occidentalis</i>	1 gal	5ft O.C.	1,325	22	3



- NOTES:
- 1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - 2) MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29



LEGEND:

- JD LINE (ERP 43041367.000)
- MITIGATION BOUNDARY
- Zone 1 (light gray)
- Zone 2 (medium gray)
- Zone 3 (dark gray)
- FRESHWATER MARSH (grass symbol)



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER	JASON STARR, P.E.
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**



FILENAME C-106.DWG
SCALE 1" = 100'

SHEET
C-106

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



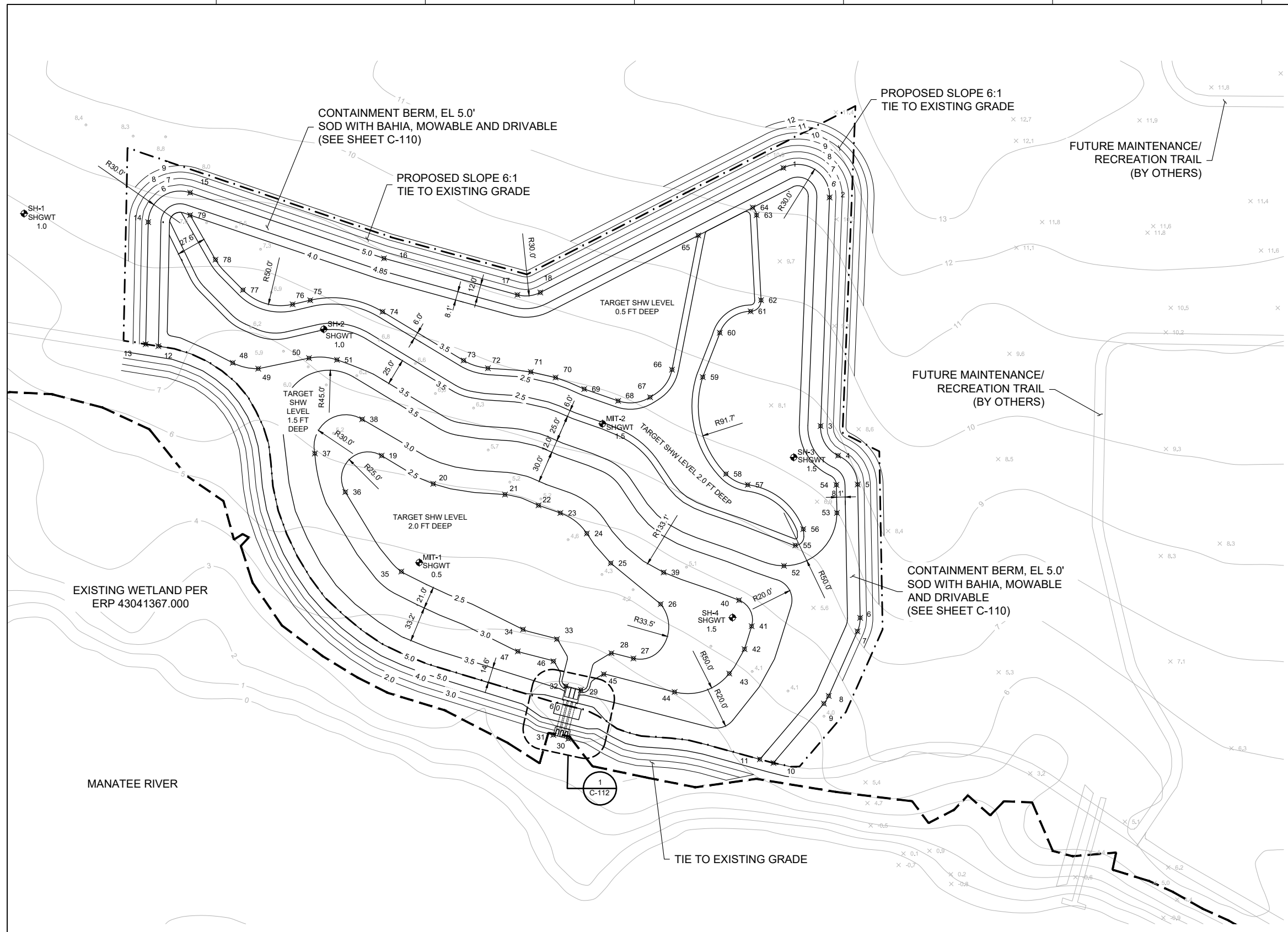
- LEGEND:**
- XXX BORING NUMBER
 - SOIL BORING LOCATION
 - XX HH SPOT ELEVATION/ POINT #
 - XX STANTEC TOPO POINT
 - JD LINE (ERP 43041367.000)
 - MITIGATION BOUNDARY

- NOTES:**
- 1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - 2) MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29
 - 3) BASED ON TOPOGRAPHIC SURVEY DATA RECEIVED FROM THE COUNTY, SHOWN AS STANTEC TOPO POINTS. LIDAR INFORMATION GENERALLY SHOWS THE RELATIVE GRADE OF THE EXISTING SITE. IT SHOULD BE UNDERSTOOD THAT LIDAR CONTOUR DATA DOES NOT NECESSARILY REPRESENT ACCURATE ELEVATION DATA.
 - 4) THE GRADING IS SHOWN TO BE APPROXIMATE AND IT MAY BE ADJUSTED IN THE FIELD BASED ON DIRECTION FROM THE COUNTY.

BERM COORDINATES

POINT NO.	NORTHING	EASTING
1	1160137.649	518234.104
2	1160109.775	518277.770
3	1159893.759	518269.275
4	1159865.750	518285.830
5	1159838.524	518304.319
6	1159712.475	518306.682
7	1159699.728	518304.102
8	1159638.665	518276.963
9	1159631.422	518272.409
10	1159575.359	518224.766
11	1159578.784	518211.929
12	1159969.175	517643.722
13	1159971.070	517631.758
14	1160086.423	517634.138
15	1160114.219	517673.755
16	1160052.204	517856.857
17	1160017.685	517982.909
18	1160019.925	518004.521
19	1159865.731	517854.607
20	1159839.079	517903.385
21	1159828.980	517971.158
22	1159818.764	518002.835
23	1159811.566	518023.454
24	1159792.237	518048.481
25	1159764.139	518071.075
26	1159725.456	518118.200
27	1159674.105	518092.490
28	1159679.048	518071.711
29	1159644.396	518042.867
30	1159598.150	518030.974
31	1159601.781	518016.854
32	1159648.027	518028.746
33	1159692.295	518020.197
34	1159701.494	517988.201
35	1159756.218	517873.219
36	1159831.356	517820.329
37	1159867.778	517791.536
38	1159900.125	517836.270
39	1159755.428	518121.055
40	1159729.131	518192.255

41	1159704.545	518204.150
42	1159682.880	518197.426
43	1159659.824	518183.056
44	1159642.419	518131.389
45	1159659.214	518064.519
46	1159671.452	518016.929
47	1159680.770	517983.276
48	1159953.435	517713.992
49	1159947.929	517738.050
50	1159957.915	517786.033
51	1159956.272	517812.405
52	1159761.604	518234.711
53	1159811.604	518284.711
54	1159838.147	518284.222
55	1159780.959	518245.519
56	1159796.282	518252.906
57	1159838.191	518200.475
58	1159848.456	518179.876
59	1159939.957	518157.977
60	1159981.903	518174.057
61	1160002.110	518203.168
62	1160012.633	518213.066
63	1160093.019	518208.850
64	1160100.236	518205.194
65	1160073.871	518153.778
66	1159946.973	518128.943
67	1159920.932	518108.257
68	1159917.491	518078.047
69	1159928.682	518045.993
70	1159939.545	518018.948
71	1159944.848	517995.564
72	1159948.346	517954.993
73	1159955.678	517932.035
74	1160001.783	517855.493
75	1160012.583	517787.180
76	1160008.710	517770.527
77	1160022.282	517723.617
78	1160050.948	517697.693
79	1160093.013	517673.708



1 ENLARGED PLAN-MITIGATION AREA #3
C-102 1" = 100'



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER 6045662	

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK



FILENAME C-107.DWG
SCALE 1" = 100'

SHEET
C-107

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

Area 3 – Cypress Swamp

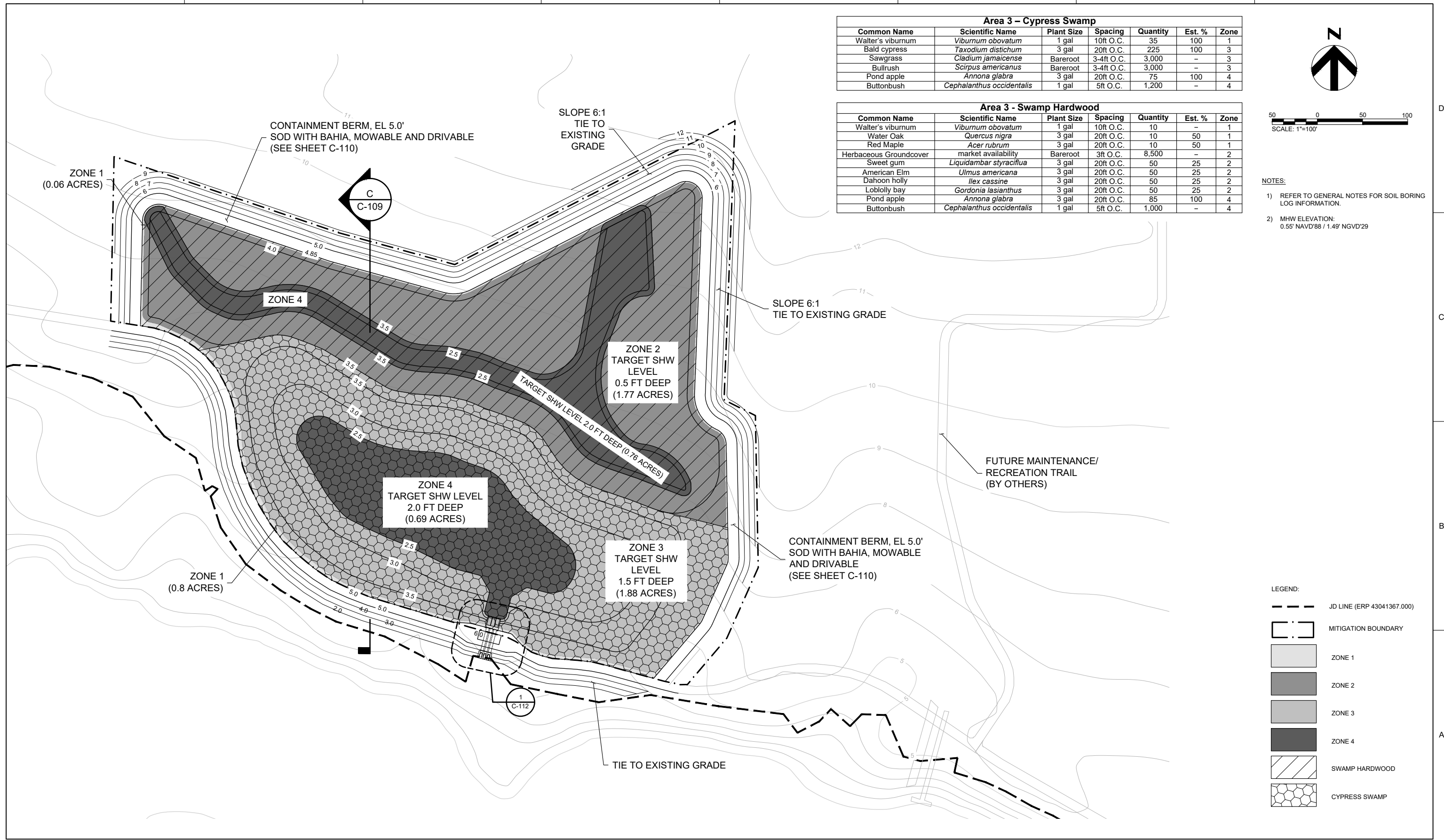
Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Walter's viburnum	<i>Viburnum obovatum</i>	1 gal	10ft O.C.	35	100	1
Bald cypress	<i>Taxodium distichum</i>	3 gal	20ft O.C.	225	100	3
Sawgrass	<i>Cladium jamaicense</i>	Bareroot	3-4ft O.C.	3,000	-	3
Bullrush	<i>Scirpus americanus</i>	Bareroot	3-4ft O.C.	3,000	-	3
Pond apple	<i>Annona glabra</i>	3 gal	20ft O.C.	75	100	4
Buttonbush	<i>Cephalanthus occidentalis</i>	1 gal	5ft O.C.	1,200	-	4

Area 3 - Swamp Hardwood

Common Name	Scientific Name	Plant Size	Spacing	Quantity	Est. %	Zone
Walter's viburnum	<i>Viburnum obovatum</i>	1 gal	10ft O.C.	10	-	1
Water Oak	<i>Quercus nigra</i>	3 gal	20ft O.C.	10	50	1
Red Maple	<i>Acer rubrum</i>	3 gal	20ft O.C.	10	50	1
Herbaceous Groundcover	market availability	Bareroot	3ft O.C.	8,500	-	2
Sweet gum	<i>Liquidambar styraciflua</i>	3 gal	20ft O.C.	50	25	2
American Elm	<i>Ulmus americana</i>	3 gal	20ft O.C.	50	25	2
Dahoon holly	<i>Ilex cassine</i>	3 gal	20ft O.C.	50	25	2
Loblolly bay	<i>Gordonia lasianthus</i>	3 gal	20ft O.C.	50	25	2
Pond apple	<i>Annona glabra</i>	3 gal	20ft O.C.	85	100	4
Buttonbush	<i>Cephalanthus occidentalis</i>	1 gal	5ft O.C.	1,000	-	4



- NOTES:
- 1) REFER TO GENERAL NOTES FOR SOIL BORING LOG INFORMATION.
 - 2) MHW ELEVATION: 0.55' NAVD'88 / 1.49' NGVD'29



LEGEND:

- JD LINE (ERP 43041367.000)
- MITIGATION BOUNDARY
- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- SWAMP HARDWOOD
- CYPRESS SWAMP



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER	JASON STARR, P.E.
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

**44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK**

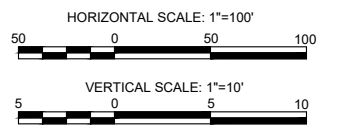
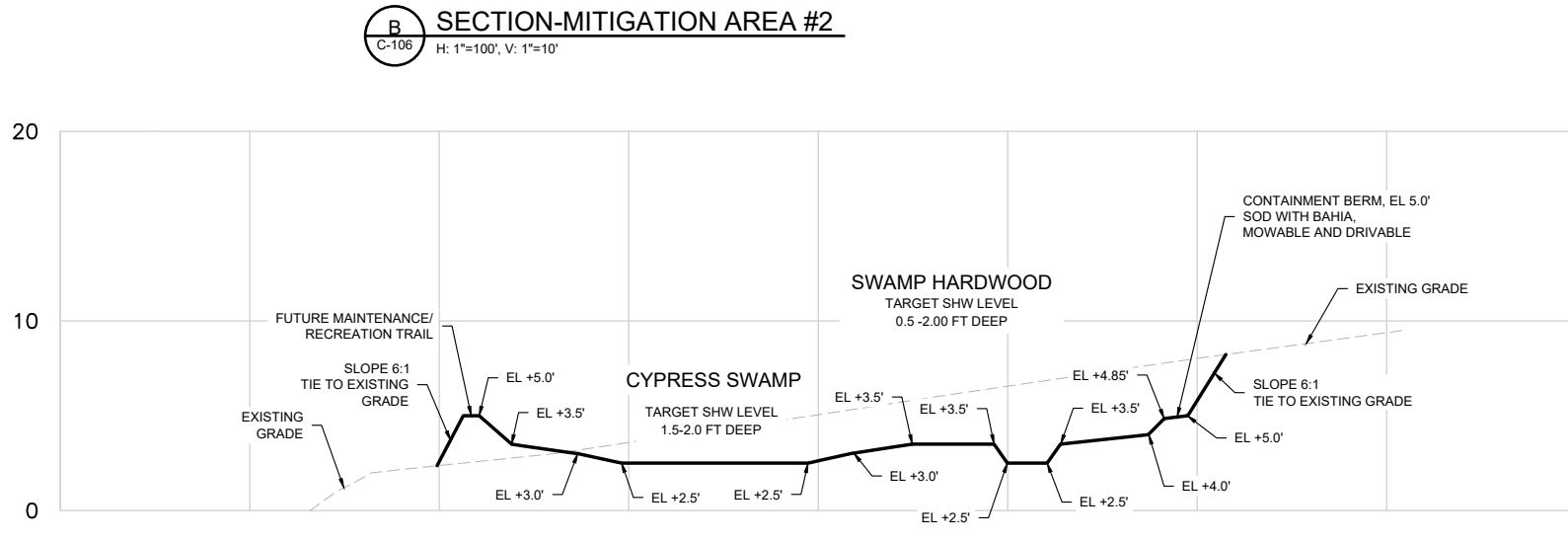
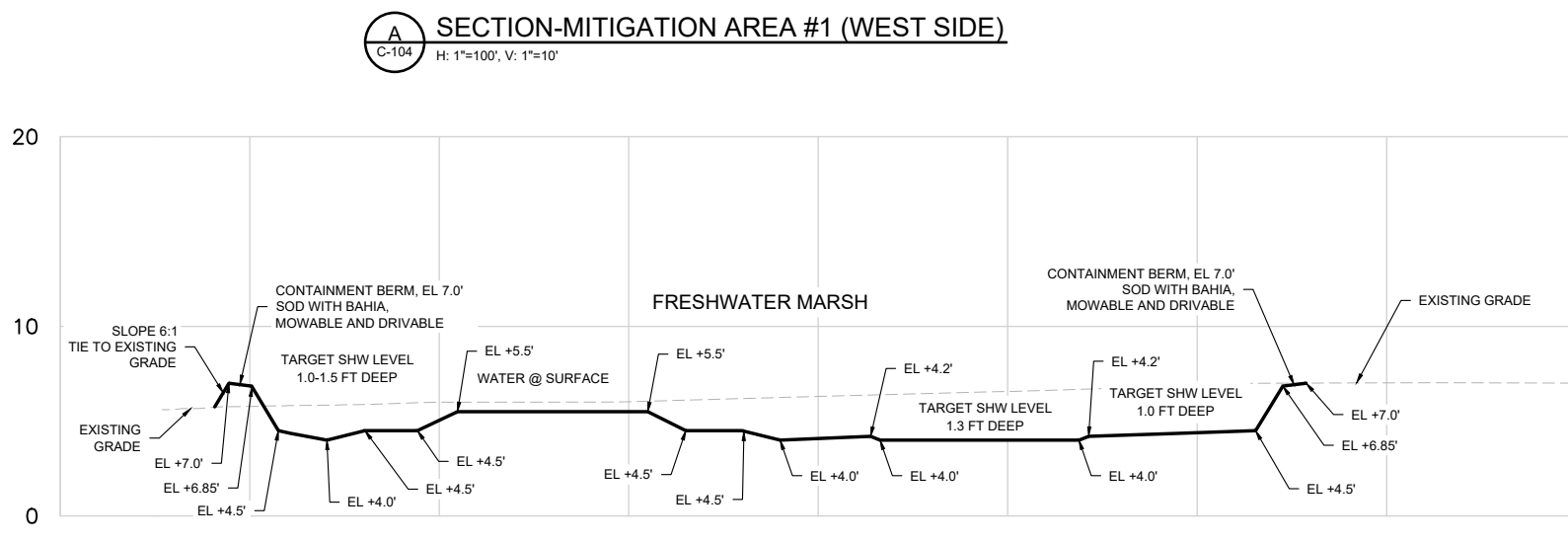
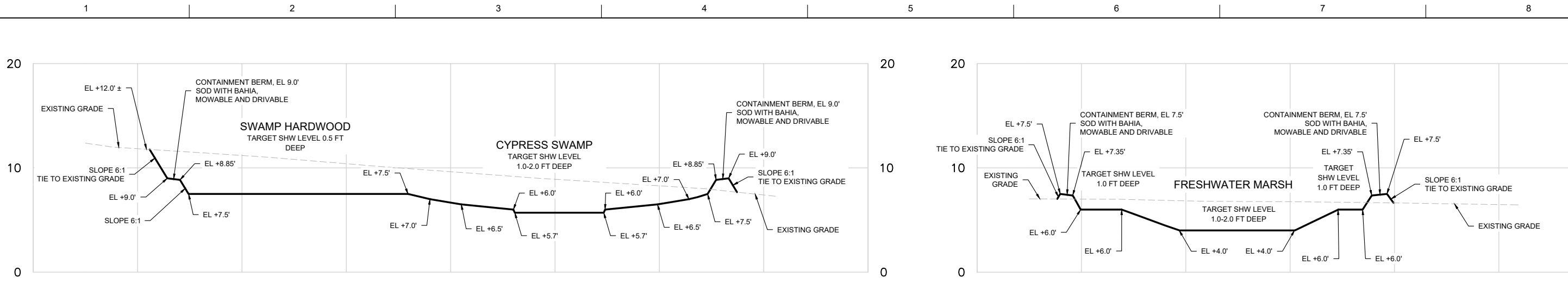


MITIGATION AREA #3-PLANTING SHEET

FILENAME | C-108.DWG
SCALE | 1" = 100'

SHEET
C-108

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER	JASON STARR, P.E.
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
 P.E. LICENSE NUMBER 70171

**44TH AVENUE EAST MITIGATION
 @ HIDDEN HARBOR PARK**

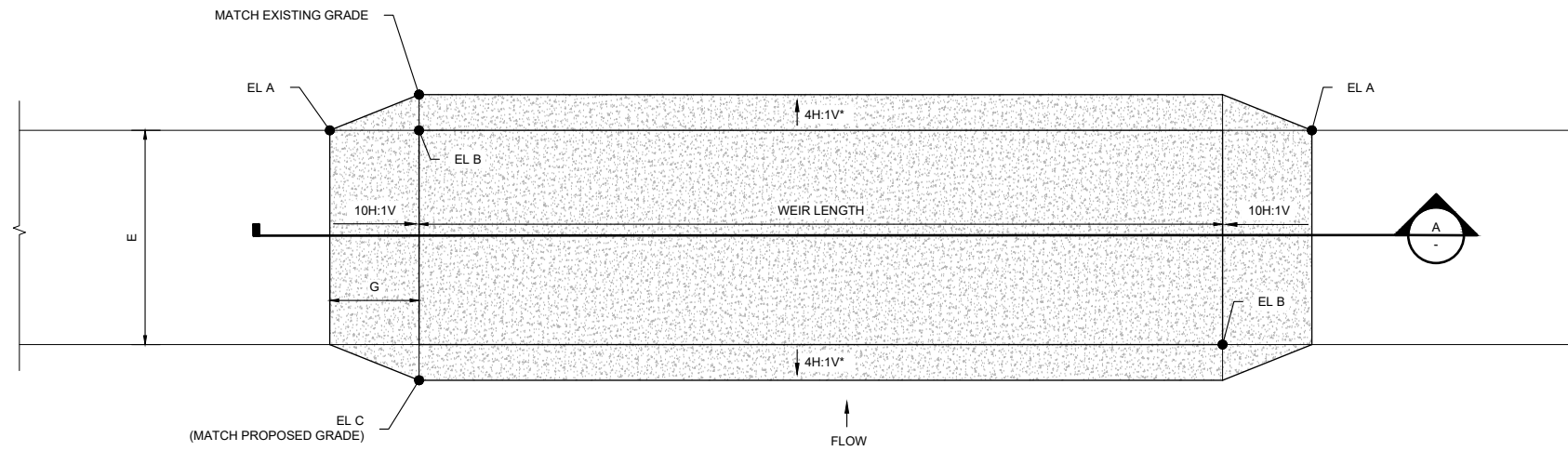


FILENAME | C-109.DWG
 SCALE | AS NOTED

SHEET
 C-109

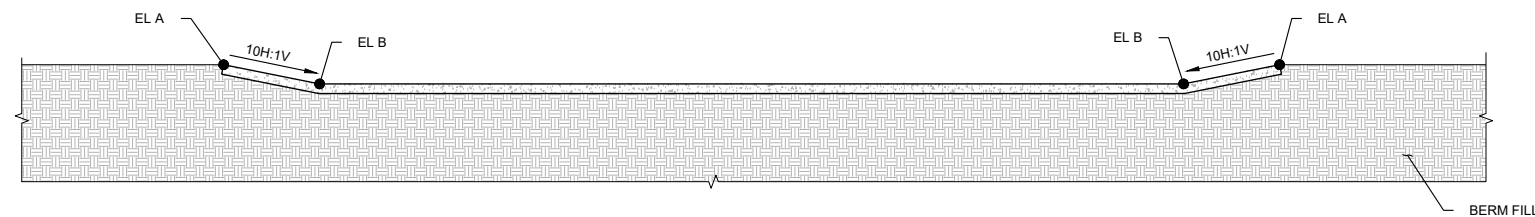
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WEIR TABLE						
OVERFLOW WEIR #	EL A	EL B	EL C	E	G	WEIR LENGTH
1	9.0'	8.5'	7.5'	12.0'	5.0'	65.0'
2	9.0'	8.5'	7.5'	12.0'	5.0'	65.0'
3	9.0'	8.5'	7.5'	12.0'	5.0'	65.0'
4	7.5'	7.0'	6.5'	12.0'	5.0'	65.0'
5	7.0'	5.5'	4.5'	12.0'	15.0'	90.0'
6	7.0'	5.5'	4.5'	12.0'	15.0'	90.0'
7	7.0'	5.5'	4.5'	12.0'	15.0'	90.0'



* OR 3H:1V

1 PLAN - BROAD CRESTED CONCRETE WEIR
NOT TO SCALE



1 SECTION - BROAD CRESTED CONCRETE WEIR
NOT TO SCALE

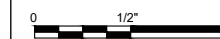


ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

44TH AVENUE EAST MITIGATION
@ HIDDEN HARBOR PARK

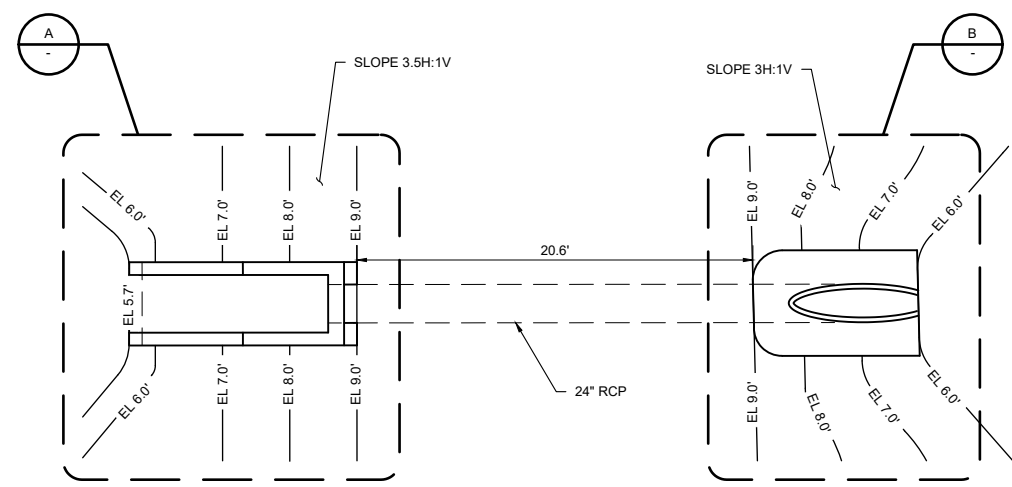


BROAD CRESTED CONCRETE WEIR
DETAILS

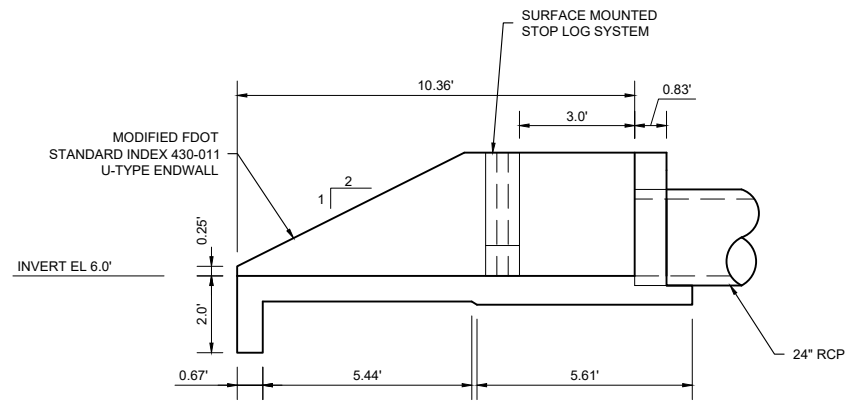
FILENAME C-110.DWG
SCALE AS NOTED

SHEET
C-110

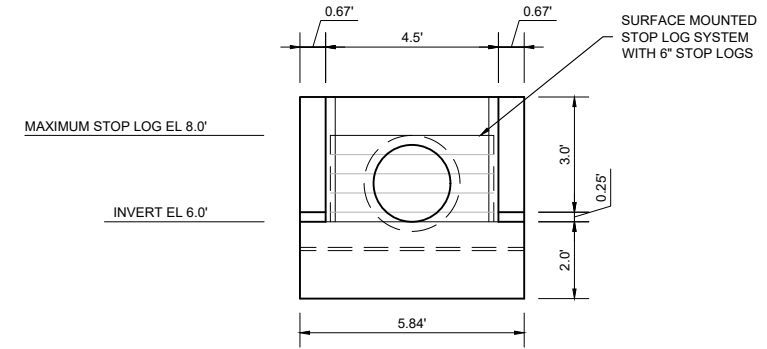
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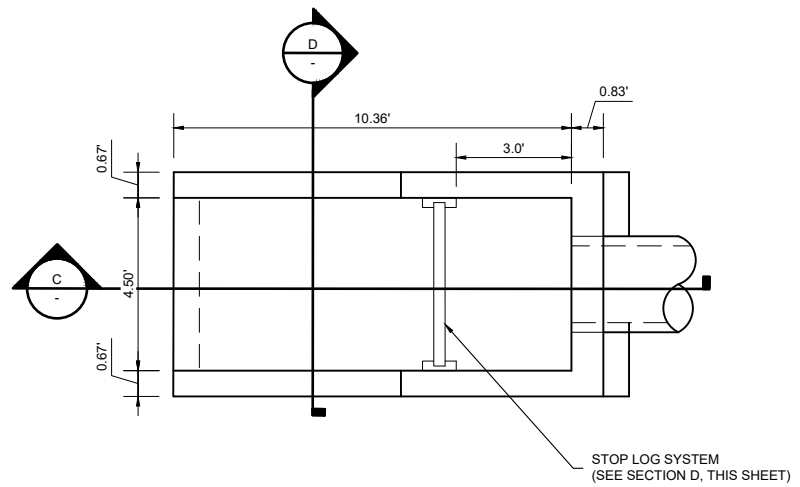
1
C-103
PLAN - STOP LOG CONTROL STRUCTURE @ MITIGATION AREA #1
1" = 10'



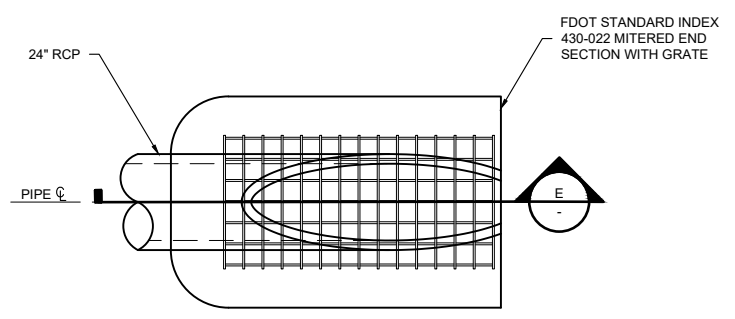
C
SECTION C - STOP LOG CONTROL STRUCTURE
1" = 5'



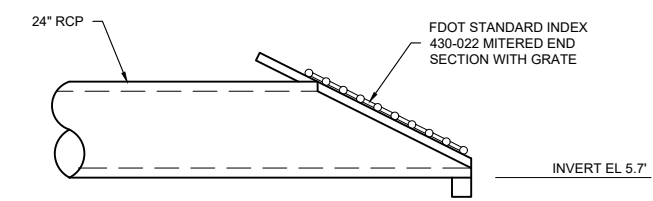
D
SECTION D - STOP LOG CONTROL STRUCTURE
1" = 5'



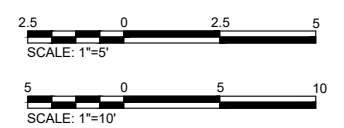
A
DETAIL A - STOP LOG CONTROL STRUCTURE
1" = 5'



B
DETAIL B - MITERED END SECTION
1" = 5'



E
SECTION E - MITERED END SECTION
1" = 5'



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK

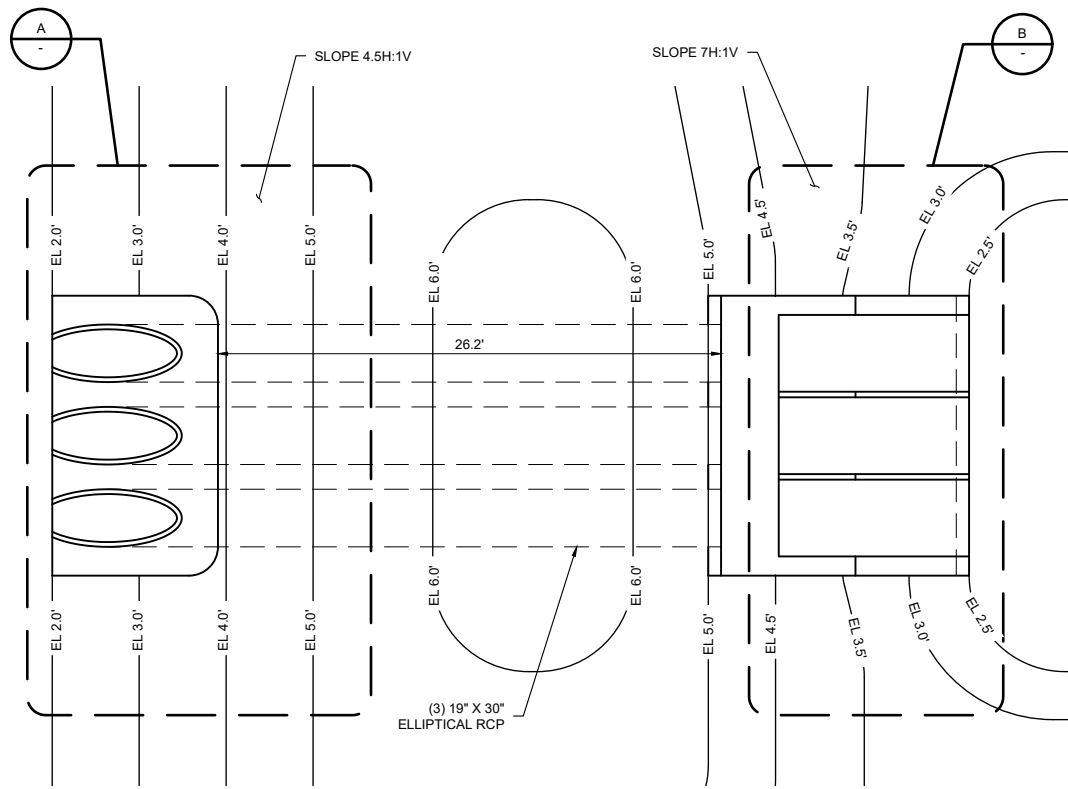


FILENAME C-111.DWG
SCALE AS NOTED

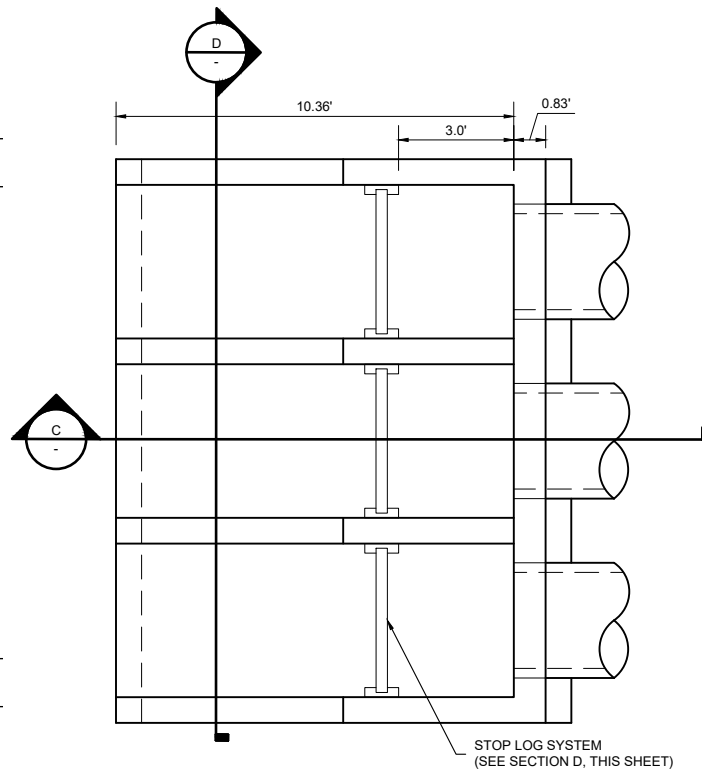
SHEET
C-111

STOP LOG CONTROL STRUCTURE DETAILS (1 OF 2)

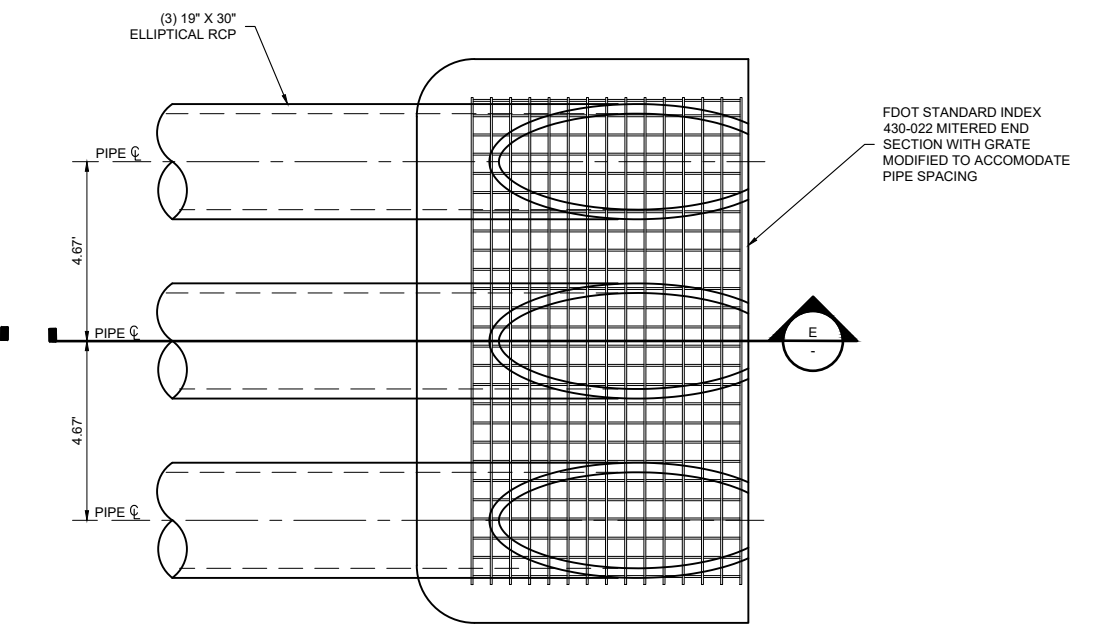
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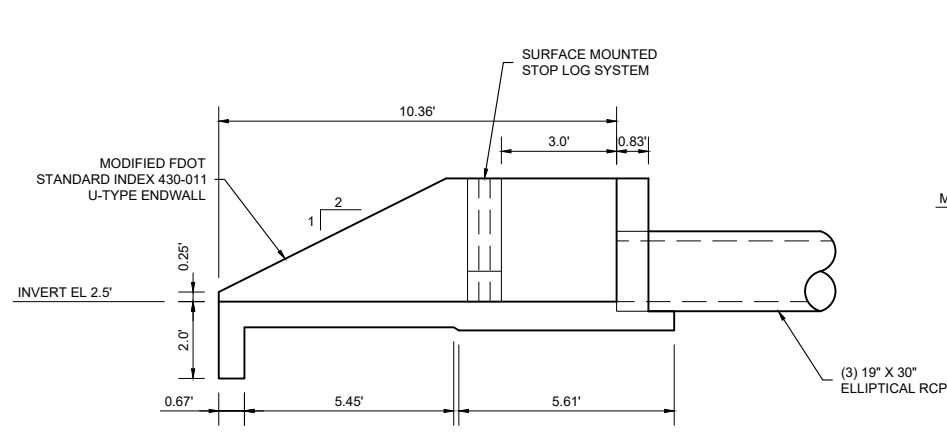
1
C-107
PLAN - STOP LOG CONTROL STRUCTURE @ MITIGATION AREA #3
1" = 10'



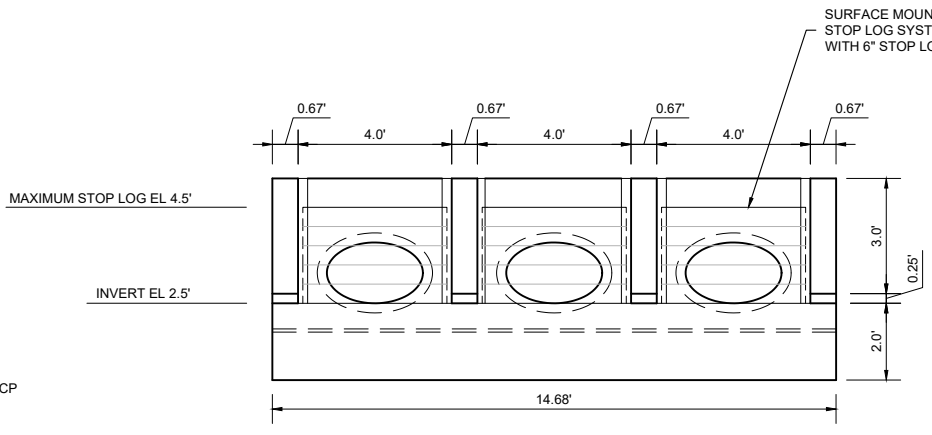
A
DETAIL A - STOP LOG CONTROL STRUCTURE
1" = 5'



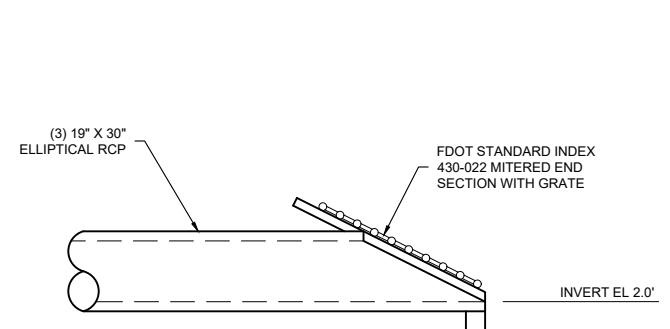
B
DETAIL B - MITERED END SECTION
1" = 5'



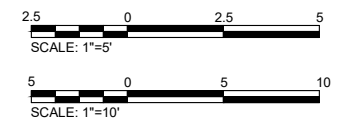
C
SECTION C - STOP LOG CONTROL STRUCTURE
1" = 5'



D
SECTION D - STOP LOG CONTROL STRUCTURE
1" = 5'



E
SECTION E - MITERED END SECTION
1" = 5'



ISSUE	DATE	DESCRIPTION
A	02/2022	60% PERMIT DRAWINGS

PROJECT MANAGER JASON STARR, P.E.	
DESIGN P.E.	J. STARR
DESIGN P.W.S.	S. SWANSON
PROJECT NUMBER	6045662

JASON STARR, P.E.
P.E. LICENSE NUMBER 70171

44TH AVENUE EAST MITIGATION @ HIDDEN HARBOR PARK

STOP LOG CONTROL STRUCTURE DETAILS (2 OF 2)



FILENAME | C-112.DWG
SCALE | AS NOTED

SHEET
C-112

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