

**FINAL REPORT FOR 2021
ON THE CONDITION OF THE MUNICIPAL BEACHES
IN
THE CITY OF BRIGANTINE BEACH, ATLANTIC COUNTY, NEW JERSEY**



The September 11, 2021 view shows the magnitude of sand capture since 1944 attributable to the north Absecon Inlet jetty. The increased beach width begins at 5th Street South, greatly increases the width of beach at the Legacy Vacation Resort building at 15th Street South and continues with dune and beach expansion to this location. All the dune and beach area south of Legacy Resort has been generated as a result of sand trapping by the inlet jetty. *(photo by Ted Kingston 2021)*

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November 5, 2021

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Annual Report for 2021 to the City of Brigantine Beach on the Condition of Municipal Ocean Beaches

Introduction:

The nine survey locations established by the Stockton University Coastal Research Center along the Brigantine oceanfront beaches were surveyed twice during 2021. This report reviews the condition and status of the beaches from October 13, 2020 to October 7, 2021. Storm frequency during 2021 was low and those that did occur were of low intensity. The only tropical system to impact the Jersey shore was Tropical Storm Ida that passed on an inland track and was dominated by heavy rains inland in early September. As a strong hurricane Ida made landfall in Louisiana August 29, 2021 as a category 4 storm. This fall was likewise relatively calm with mild storms particularly a three-day long northeaster between Oct 10th through Oct 12th.

The US Army Corps of Engineers (USACE) completed the 2018 maintenance effort by placing 767,000 CY of material on the north end beaches by the end of March 2018 (Erik Rourke, USACE-NAP project manager). The recently completed work has raised the total to providing 3,867,000 CY of new sand to the Brigantine shoreline since 1996. Absecon Island received a general beach maintenance during 2020 using ebb-tidal delta sand supplies seaward of Absecon Inlet. Brigantine was not included in this effort.

Beach Monitoring Program Methodology

The CRC established a coastal monitoring program for the City of Brigantine in June 1992, commencing research on the beaches between two major northeast events that affected the Jersey shore in October 1991 and December 1992. The program collects data from nine shoreline-perpendicular beach profile stations, initially monitored on a quarterly basis, to analyze beach changes. Starting in 2008 the program was resumed at a survey frequency of twice annually. Beginning at a fixed reference position, a profile includes the dune system, beach, berm, nearshore and offshore to a water depth of approximately -15.0 feet (NAVD88). Table 1 lists the Brigantine sites where cross sections, photographs and field notes are presented.

**Table 1:
Beach Profile Locations**

- **Brig 134** - North end Green Acres undeveloped area (NJBPN #134)
- **Brig 220** - At the north end of the feeder beach, 1200 feet from road end
- **Brig 12** - 12th Street North
- **Brig 4** - 4th Street North (NJBPN #133)
- **Brig 5** - 5th Street South
- **Brig 15** - 15th Street South (NJBPN #132)
- **Brig 27** - 27th Street South
- **Brig 43** - 43rd Street South (NJBPN #131)
- **Brig 1** - 'South Beach' 600 feet north of the Absecon Inlet Jetty

Surveys Completed:

The CRC completed three surveys between October 2020 and October 2021.

- October 13 & 15, 2020 Survey 96
- Feb. 26 & April 7, 2021 Survey 97
- October 6 & 7, 2021 Survey 98

Annual & Seasonal Beach Changes:

Table 2 on the next page displays sand volume changes expressed in cubic yards per foot of beach (yds³/ft.), while shoreline changes are given in feet. Calculating the average volume change between adjacent profiles and multiplying by the distance separating the sites yields a net volume change expressed in cubic yards (yds³) for the distance between the two sites. Adding the cumulative volume change provides a net volume for the entire City of Brigantine beach over the entire length of surveyed cross section. Shoreline position changes are measured as the horizontal movement (toward the ocean (+) or toward land (-)) in the zero elevation point on each profile.

Last year the annual oceanfront beach survey comparison showed a modest sand volume loss of 97,213 cubic yards of material. This year loss turned into a gain of 88,573 cubic yards of sand dominated by gains across the southern half the Brigantine oceanfront. Losses were recorded between the feeder beach and 5th Street South with two sites showing 30 plus yds³/ft. in sand volume loss. The critical 12th Street North location presented a shoreline advance of 10 feet with a smaller net loss of 17.06 yds³/ft. for the year. Large gains representing over 200,000 cubic yards of material were recorded between 27th and 43rd Streets. Finally, the loss of 52,643 cubic yards between the NJ profile site and the feeder beach site within the northern natural area to the north actually becomes accretive to the Brigantine developed oceanfront due to sand transport south onto City beaches.

The total distance among the nine survey sites is 25,097 feet and this year the average accumulation rate amounted to 3.53 yds³/ft. for oceanfront development in Brigantine and the natural area shoreline.

Table 2
Brigantine Shoreline and Sand Volume Changes
October 2020 to October 2021

Profile	Shoreline Change (feet)	Volume Change (yds³/ft.)	Avg. Volume Change (yds³/ft.)	Distance Between (feet)	Net Volume Change (yds³)
Brig-134	22	2.18			
			-16.862	3,122	-52,643
Brig-220	-16	-35.90			
			-26.478	1,860	-49,248
Brig-12	10	-17.06			
			-23.535	1,951	-45,916
Brig-4	-49	-30.01			
			-17.004	1,805	-30,692
Brig-5	-20	-3.99			
			-1.281	2,729	-3,494
Brig-15	-23	1.43			
			18.326	3,042	55,748
Brig-27	115	35.22			
			31.917	4,132	131,881
Brig-43	-20	28.62			
			14.190	5,855	83,080
Brig-1	-6	-0.24			
			-0.236	601	-142
Absecon Jetty					
			Total Volume Change =		88,573

Table 3
Brigantine Shoreline and Volume Changes
April 7, 2021 to October 7, 2021

Profile	Shoreline Change (feet)	Volume Change (yds³/ft.)	Avg. Volume Change (yds³/ft.)	Distance Between (feet)	Net Volume Change (yds³)
Brig-134	76	14.42			
			-2.544	3,122	-7,942
Brig-220	0	-19.51			
			-11.221	1,860	-20,870
Brig-12	41	-2.93			
			-4.413	1,951	-8,610
Brig-4	-41	-5.90			
			2.208	1,805	3,985
Brig-5	9	10.31			
			8.531	2,729	23,280
Brig-15	-22	6.75			
			18.699	3,042	56,882
Brig-27	21	30.65			
			40.169	4,132	165,976
Brig-43	33	49.69			
			22.144	5,855	129,650
Brig-1	-30	-5.40			
			-5.403	601	-3,247
Absecon Jetty					
			Total Volume Change =		339,104

Table 3 shows the summer into the fall 2021 seasonal trend. Last year two unusual sand volume losses at 15th and 27th Streets South generated a net loss of 49,577 cubic yards for the six months. This summer season accretion was the rule with loss seen at the feeder beach site (-19.51 yds³/ft.) and declining losses at both 12th Street North and 4th Street North (-2.93 yds³/ft. and -5.90 yds³/ft.). Reversal to a sand volume gain was both rapid and convincing with a gross value of over 370,000 cubic yards deposited between 5th Street South and 43rd Street South. A small loss was observed between 43rd Street and the Jetty (3,247 cubic yards across 600 feet of oceanfront). The net gain for the season was 339,104 creating a very positive alternative to the last year's summer season.

Individual Profile Descriptions

This section describes the changes documented at each of the beach profile locations starting with the March 2020 survey, the October 2020 survey, the February or April of 2021 survey and the October 2021 survey and includes annual photographs and cross-sections that show the semi-annual and annual comparisons (Figures 1 – 9).

• **Profile Brig-134: Green Acres - North end** (Figures 1a, 1b & 1c)

The profile line is located 4,752 feet north of the promenade at the north end of Brigantine Avenue. Located within the NJ Green Acres District, there has been no sand added to the site during any of the past nourishment projects. The closest sand placement activity occurred at the “feeder beach” almost 3,500 feet south of this location. This region is typically influenced by the changes associated with the Brigantine Inlet to the north. Aperiodic episodes of sand volumes being transported across the inlet from Little Beach and moving south adds to the beach in this region.

The dune has naturally been restored since Sandy as material has slowly increased the dune elevation and grasses have propagated on the primary dune ridge generated. Each survey shows more sand accumulating on the dune increasing its storm resistance. The past summer's sand accumulation on the beach amounted to 9.96 yds³/ft. widening the beach and adding to the dunes. Offshore the bar migrated almost to the foot of the beachface generating a 29.56 yds³/ft. fill close to shore but leaving a 33.05 yds³/ft. loss further seaward. This is normal cross shore transport during the accretional summer season.

Profile Brig-134: Green Acres - North end

(Figures 1a & 1b)



Figure 1a taken October 13, 2020 shows continued vegetation growth with modest sand accumulation in evidence.

Figure 1b taken October 6, 2021 showing a wider beach and intertidal area. The dune is better protected by the summer berm that developed this year.

City of Brigantine - Annual Comparison BRIG- 134 North End Green Acres (NJBPN#134)

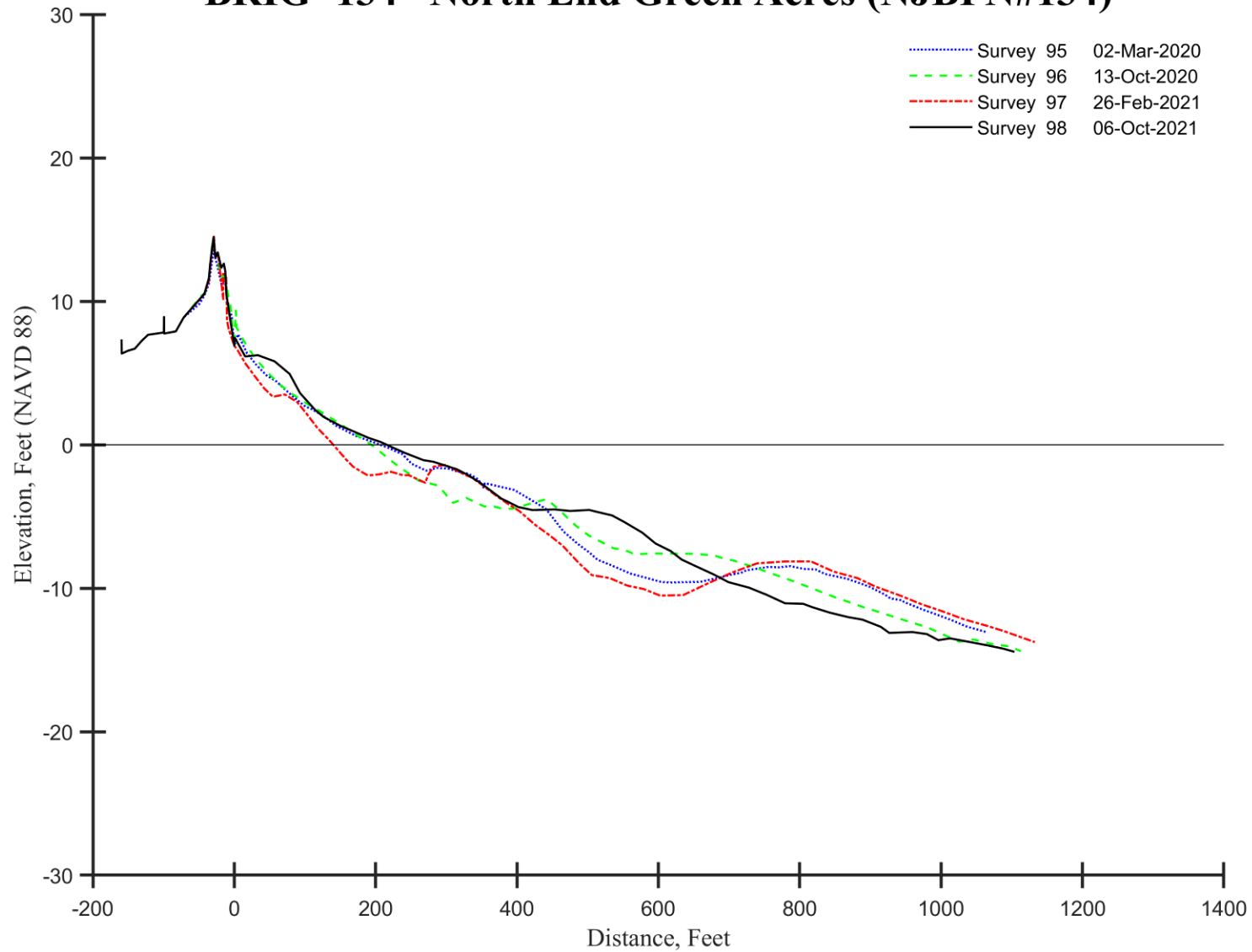


Figure 1c – The natural area beach has seen general sand accumulation on the dune and beach restoring the slope present in March 2020. Offshore sand moved landward from the bar crest seen in March 2021 toward the shallower water closer to the beach. Loss far offshore was compensated by gains closer to the shoreline (+29.56 yds³/ft. near the beach and -33.05 yds³/ft. offshore).

• **Profile Brig-220: Feeder Beach - Line 00+1200**

(Figures 2a, 2b & 2c)

The site defines the “feeder beach” portion of Brigantine’s engineered beach and is located 1,200 feet north of the promenade in the natural area. Sand shed from this location provides advance nourishment to the downdrift erosional “hotspot” that is located to the south along the revetment/promenade. Established in 1996 during the very first municipal beach project between the NJDEP and the City of Brigantine, the goal for this section of beach was to provide an available sand source for recreational beaches to the south. This sand source was intended to erode and move south into the developed portion of the project area to slow the rate of erosion in front of the revetment to a more sustainable loss and extend project benefits for a longer period.

The dunes and beach maintained their sand volumes this year with summer accumulation generating a tiny loss of 0.53 yds³/ft. An 18.98 yds³/ft. sand volume loss offshore was the result of bar migration onto the beach and due to sand transfer south onto the revetment beach fronting Brigantine Boulevard. Some retreat occurred on the beach between 2020 and Oct. 2021 (-15.5 feet with a 35.9 yds³/ft. loss in sand volume across the entire transect length).

Profile Brig-220: Feeder Beach - Line 00+1200

(Figures 2a & 2b)



Figure 2a taken October 13, 2020 and shows the dune grass propagating onto the upper dry beach. There have been no events impacting this dune in 2020.

Figure 2b taken October 6, 2021 looking toward the Brigantine development. The beach elevation and width remained constant, but sand moved south from the site during 2021 taken from offshore.

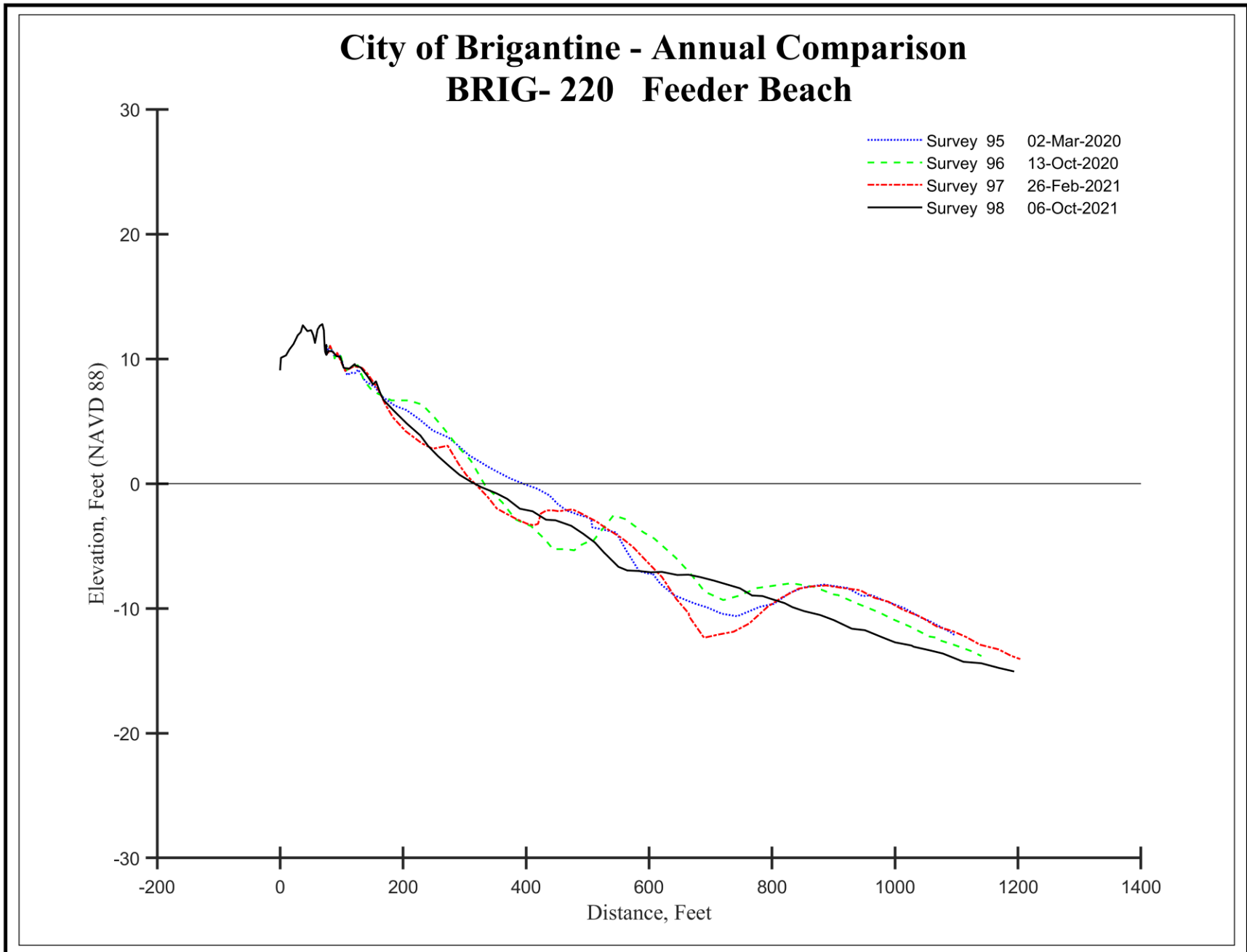


Figure 2c – The 2020 beach profile pair retreated by February 2021 taking about 15 feet of beach width. The high crested offshore bar in February moved landward filling in the existing trough moving sand toward the shoreline. The summer profile was quite uniform in slope all the way to the outermost survey point.

• **Profile Brig-12: 12th Street North**

(Figures 3a, 3b & 3c)

This profile site was established June 1992 along the north side of 12th Street North. The profile includes the road, promenade and bulkhead revetment structure that was completely reconstructed prior to the 1997 beach nourishment project. The Federal project placed sand here in February 2006, eventually adding 171.45 yds³/ft. of sand to the beach. This site is within a region of chronic erosion due to the orientation of the beach and revetment that protects the north end of Brigantine Blvd. As the beach retreats to the promenade the rock revetment protection is exposed. The hard structure revetment reflects wave energy, so return flow scours the beach elevation downward rapidly. Left unchecked, the erosion spreads rapidly south along the revetment towards oceanfront development near 8th Street North. The “feeder beach” was designed to alleviate this by providing advanced sand nourishment to this region in order to maintain a minimal beach seaward of the revetment and prevent exposure of the hard structure.

The April 2020 beach is marginally narrower and lower in elevation as can be seen in the cross sections below. The annual change saw a 10-foot shoreline advance seaward, but a 17.06 yds³/ft. sand volume loss dominated by changes offshore. The two photographs of this site below show over twice the bulkhead height exposed one year later, in Oct. 2021. The tiny dune line is gone at the survey site, but fence is still present further south along the promenade. The beachface slope is less steep providing a small shoreline advance. The offshore bar system migrated toward the beach generating most of the offshore sand loss (beach = -0.95 yds³/ft.; offshore = -16.11 yds³/ft.).

Profile Brig-12: 12th Street North

(Figures 3a & 3b)



Figure 3a taken October 16, 2013, 2020 with the sand fence at the swash limit and only about 25 feet of berm left to the promenade wall. The rocks remained buried.

Figure 3b taken October 6, 2021 shows an additional 3 feet of vertical bulkhead indicating beach loss. The dune fencing is gone from the site path but remains in place further south. The beach is actually a bit wider with a gentler slope offshore.

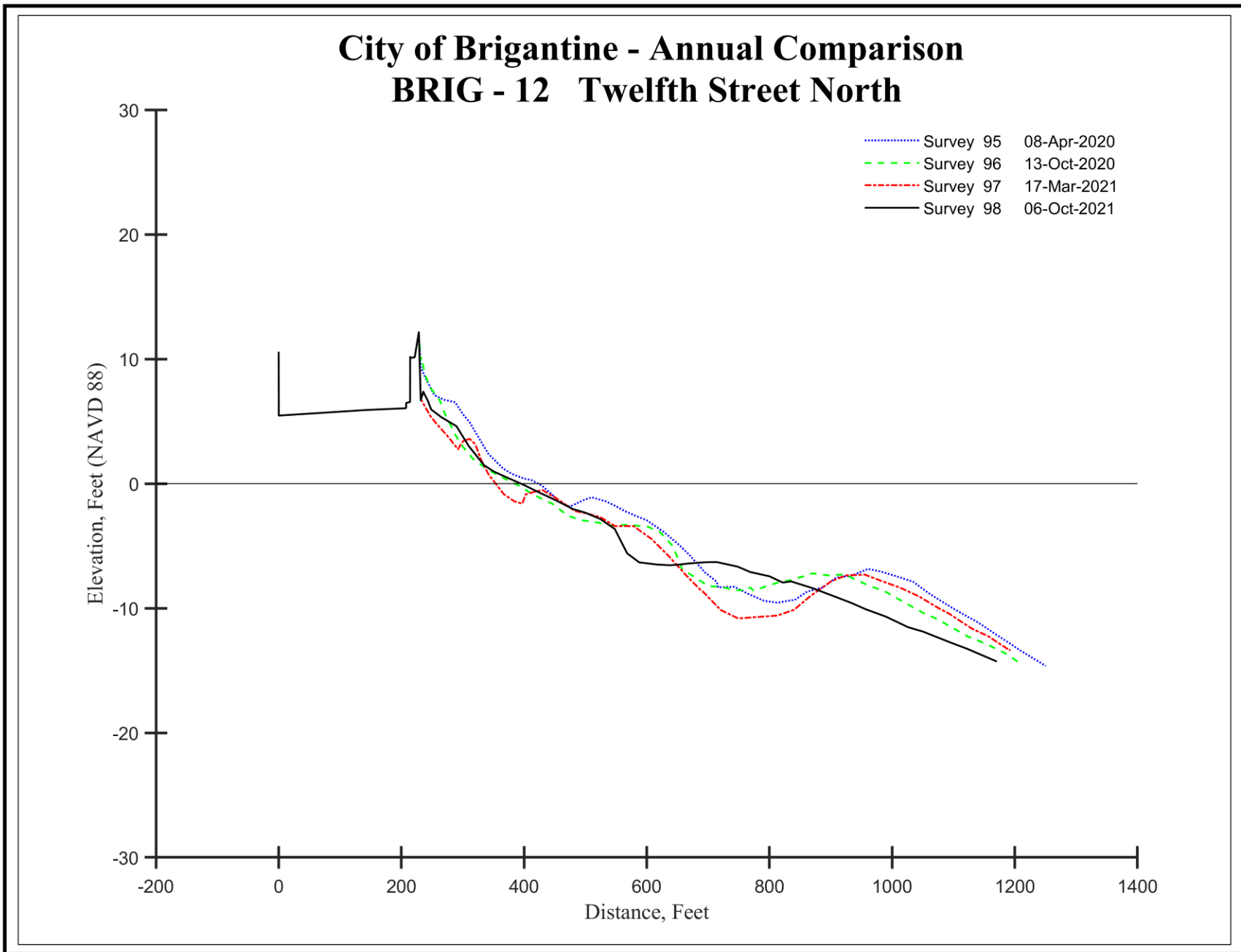


Figure 3c - This profile site was restored by the USACE project with 160.43 yds³/ft. March 17, 2021 saw the most reduced beach present with a bar present on the beachface. During the summer of 2021 the large offshore bar moved dramatically landward filling in the trough and generating a smoother gradient from the bulkhead out to sea.

- **Profile Brig-4: 4th Street North**

(Figures 4a & 4b)

Brig-4 was established as part of the New Jersey Beach Profile Network in 1986 and was included in the City's monitoring project in June 1992. The location is at the southern end of the original city engineered beach nourishment project area approximately 100 feet south of station 2800-00. The initial Federal project extended further south and placed 80.57 yds³/ft. of sand at this site in 2006 and again in 2018.

Last year the comparison for this survey (#93 to #94) found a -15.91 yds³/ft. in sand volume loss with most of the change seen at the dune and beachface. The April 2021 was the most erosional at the dune scarp of the four shown in the plots (figure 4c). Over the summer of 2021 a sizable beach berm was deposited generating a wider beach better protecting the dunes. Sand was deposited at the toe of the dunes reducing the dune toe slope and restoring the scarp.

Profile Brig-4: 4th Street North

(Figures 4a, 4b & 4c)



Figure 4a taken October 14, 2020 from the foredune crest shows the beach width and extensive area between the old primary dune to the right and this newer deposit of wind transported sand derived from the beach nourishment.

Figure 4b taken October 6, 2021 was taken at the seaward dune toe showing the width of the beach and sand having deposited at the erosional dune scarp from 2020.

City of Brigantine - Annual Comparison BRIG - 4 Fourth Street North (NJBPN #133)

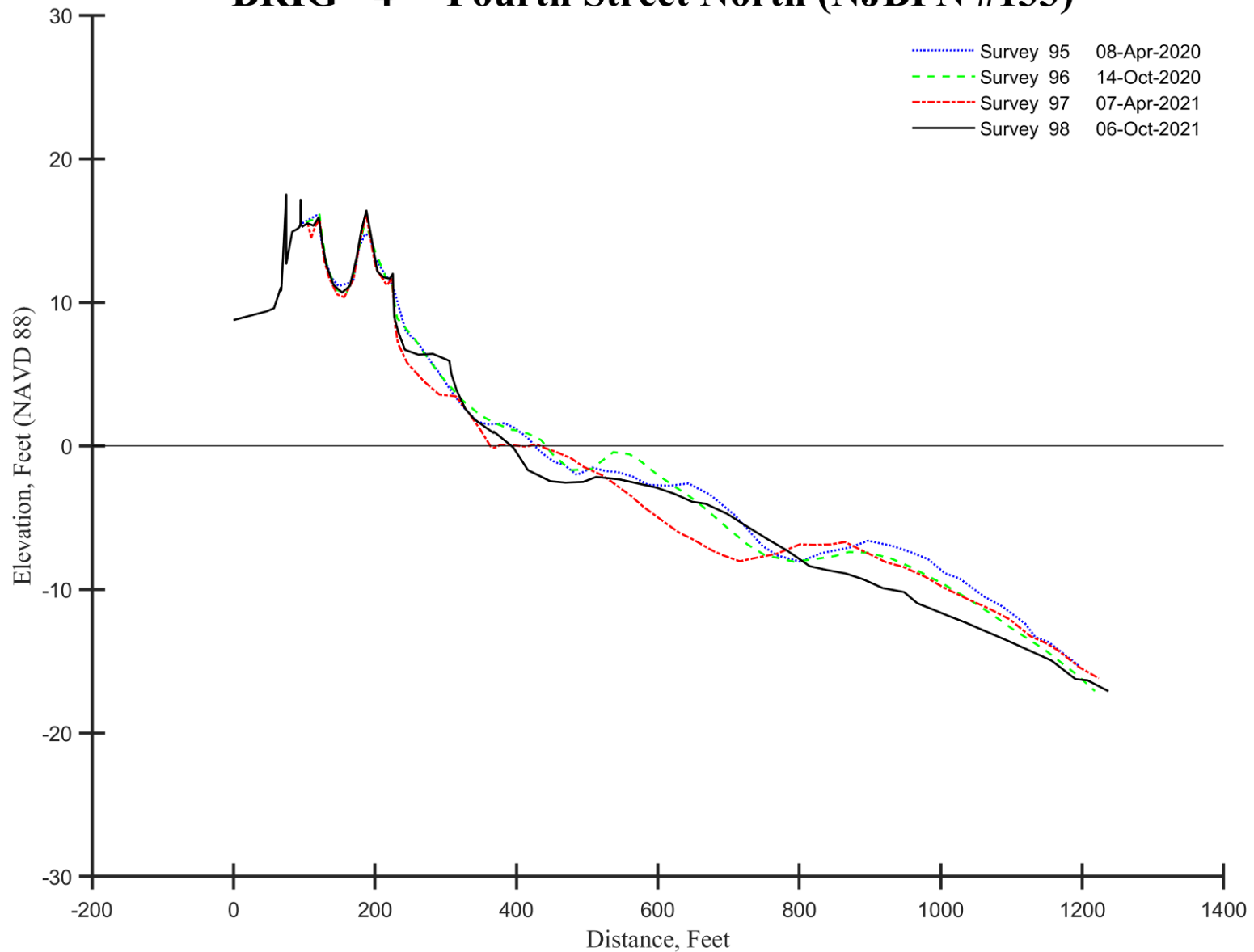


Figure 4c - Located south of the promenade, this site received sand in 2018. Loss in the dunes removed a small foredune in 2020. The April 2021 survey found the most erosional beach. Berm recovery occurred during the summer of 2021 including the movement of offshore sand landward.

• **Profile Brig-5: 5th Street South**

(Figures 5a, 5b & 5c)

This profile station was selected and established at 5th Street South in December 1998. The location is approximately midway between the end of the initial (1997) project beach at 4th Street North and the established site at 15th Street South. This site has a well-developed dune system composed of three significant ridges. The dune system is more expansive than along the northern engineered beach at approximately 225 feet in width. The initial Federal project placed a small volume of sand on this beach in 2006 and no sand has been placed this far south during any subsequent USACE maintenance projects.

The annual changes were relatively modest (-0.93 yds³/ft. on the beach and -3.06 yds³/ft. offshore). The 20-foot shoreline retreat moved the zero elevation point landward. However, during the past summer sand accumulated on the beach (+1.65 yds³/ft. and was added offshore (+8.66 yds³/ft.) and the shoreline advanced 9 feet seaward. The fill close to the shoreline was 34.45 yds³/ft. at the cost of 25.73 yds³/ft. lost as the bar moved landward providing the trough fill material.

Profile Brig-5: 5th Street South

(Figures 5a & 5b)



Figure 5a photo on October 14, 2020 shows evidence of wind deposition on the foredune seaward slope with an unchanged beach width stretching seaward.



Figure 5b photo taken October 6, 2021 shows more sand added to the dune toe by the end of the summer. Offshore sand moved landward filling the bar trough generated during the winter.

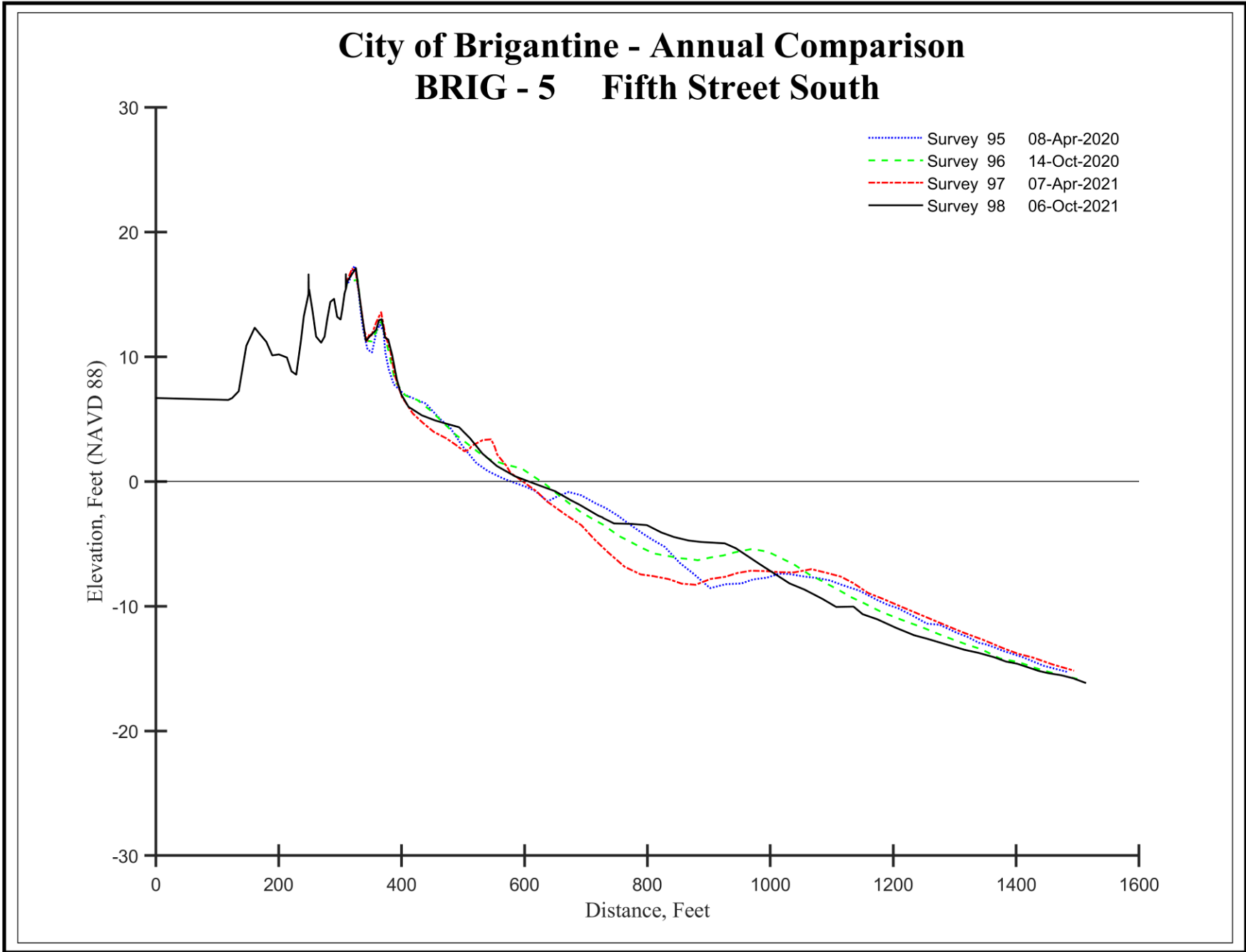


Figure 5c - The 5th Street South site had dune growth documented in the small foredune area. Cross shore sand transport built up the beachface slope, added to the foredune, and filled in the trough developed as of the April survey. Most of that sand came from the bar position in April further offshore.

• **Profile Brig-15: 15th Street South**

(Figures 6a, 6b & 6c)

At 15th Street South, the dune is interrupted by the Legacy Vacation Resort. Shore protection for the oceanfront properties is limited in this section between 14th and 15th Street South to the aging exposed wooden bulkhead. North of 14th Street South and south of 15th Street South any bulkhead is buried below a well-developed dune system that provides significant storm protection for oceanfront properties. This site was located near the nodal point for the City beaches both from a geographical location and sand deposition and erosion perspective. No sand has been placed here directly during any previous beach nourishment efforts as natural sand accumulation due to southerly littoral transport has been sufficient to produce an increasingly wider beach since 1997. Beach nourishment has shifted the original node between erosion and deposition further north to approximately 5th Street South.

Between October 2020 and October 2021, the beach berm eroded back to a storm-generated gentle slope offshore that rebounded by October 2021 with the deposition of an enormous berm on the beachface. The summer accretion amounted to 14.57 yds³/ft. with the offshore region providing at least 7.82 yds³/ft. The steeper beachface slope resulted in a 22-foot shoreline retreat. The offshore bar trough filled in adding 23.92 yds³/ft. as further seaward the lost bar crest produced a sand volume loss there of 30.21 yds³/ft. More evidence of cross shore sand movement.

Profile Brig-15: 15th Street South

(Figures 6a & 6b)



Figure 6a taken October 15, 2020 back near the bulkhead showing the beach modifications made by the Resort near the bulkhead in front of the building. The beach width remains 2-3 times that present in 1996 prior to beach nourishment.

Figure 6b taken October 15, 2021 on the landward area of this site and shows the entire beach width now 3 to 4 times that present prior to beach nourishment.

City of Brigantine - Annual Comparison BRIG - 15 Fifteenth Street South (NJBPN #132)

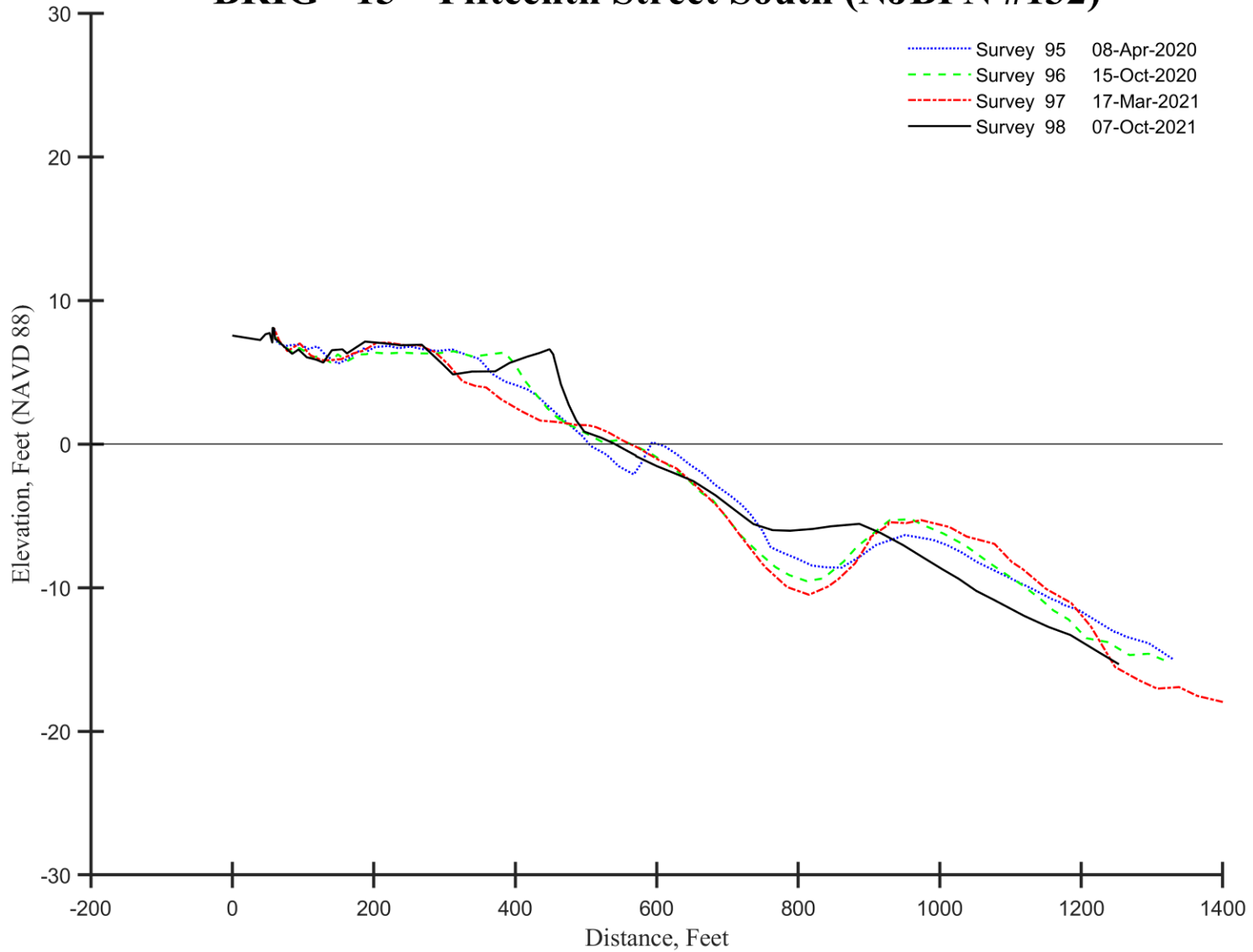


Figure 6c - At 15th Street South sand has been transported south to this location derived from the beach nourishment efforts further north since 1996. The offshore bar was extremely large in the March 2021 survey. The berm is quite impressive as well with a sharp ridge and 8-foot crest elevation. The bar crest offshore moved into the trough, filling it (the trough gained 23.92 yds³/ft. as the crest area lost 30.21 yds³/ft.).

• **Profile Brig-27: 27th Street South**

(Figures 7a, 7b & 7c)

This site was established in 1992 for the city's beach monitoring program. The location was selected to fill a void between two pre-existing NJBPN sites, located at 15th Street South and 43rd Street south. In contrast to 15th Street South, Brig-27 has a well-established dune system nearly 400 feet wide supported by a 300-foot wide beach. Multiple dune ridges provide significant storm protection against storm wave damage to the oceanfront properties. The Absecon Inlet jetty has created a region of sand accumulation that extends north past this site. The jetty will continue to trap sand moving south transported by longshore currents towards the inlet providing a source of sand to feed this dune system and continue seaward growth of the beach for the foreseeable future.

In 2020 this site lost both sand volume and suffered shoreline retreat dominated by the March to October 2020 interval. By April 2021 sand had already begun to accumulate in the offshore region and advancing the 2020 139-foot shoreline retreat 100 feet back toward the ocean. The annual gain in sand volume was 35.22 yds³/ft. evenly split between the beach and dunes and the offshore region. April to October 2021 saw an additional 30.65 yds³/ft. of sand volume added mostly offshore accompanied by a 21-foot shoreline advance.

Profile Brig-27: 27th Street South

(Figures 7a & 7b)



Figure 7a Photo taken October 15, 2020 presents the same perspective as 2019 with a dune system most NJ shore towns would envy. The beach remains of significant width.



Figure 7b Photo taken October 15, 2021 at the seaward dune toe that grades into the wide back beach zone.

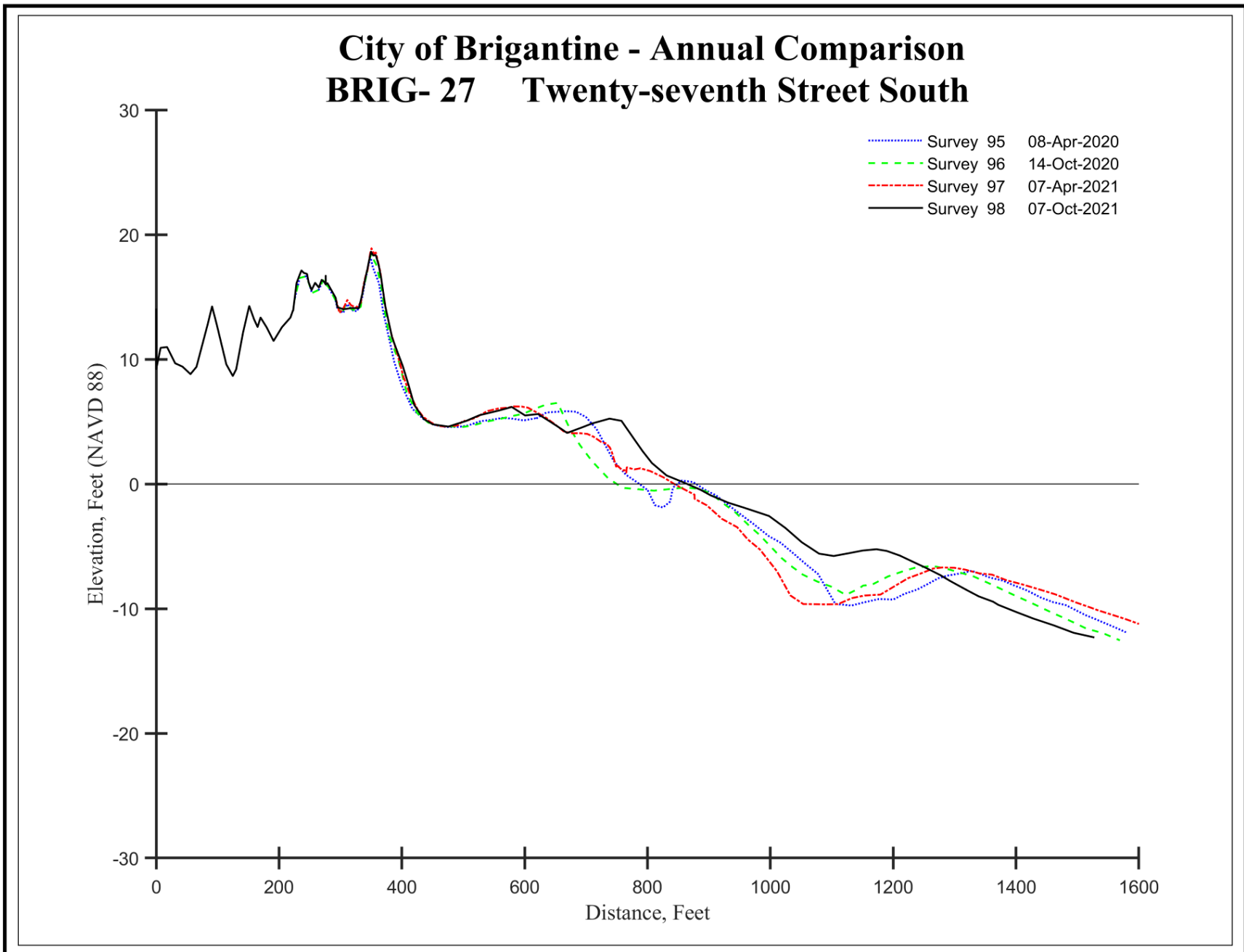


Figure 7c - 27th Street South survey saw beach retreat and sand volume losses in 2020 that were completely recovered in 2021. The berm and summer beachface slope match that present in April 2020 for a shoreline position with a much wider berm. The large offshore bar trough filled in with sand derived from offshore positions of the earlier bars surveyed.

- **Profile Brig-43: 43rd Street South**

(Figures 8a, 8b & 8c)

This site was established in 1986 as part of the New Jersey Beach Profile Network and was incorporated in the City's monitoring project in June 1992. The profile is in an area dominated by the sand retention characteristics produced by the Absecon Inlet jetty. Sand retention benefits extend from the Absecon Inlet jetty to about 5th Street South. In 1986 the end of 43rd Street was the start of the dry beach with little dune growth. The present shoreline here is almost a half mile seaward of the shoreline position before the inlet jetty was built in 1944. The dune system occupies over 800 feet of width between the development and the seaward toe of the dune. The current recreation beach berm extends over 600 feet seaward of the dune toe.

The annual beach sand volume and shoreline position continued to increase and advance seaward in 2021. The annual gain was 28.62 yds³/ft. dominated by a 49.69 yds³/ft. gain between April and October 2021. The shoreline retreated 20 feet over the year but had advanced 33 feet seaward between April and October 2021. The berm shown on the cross sections for this site is a dramatic indication of sand accumulation this past summer. Dune growth at the toe was substantial (+4.73 yds³/ft. deposited as a new foredune).

Profile Brig-43: 43rd Street South

(Figures 8a & 8b)



Figure 8a Photo taken October 15, 2020 from closer to the dunes. Sand blows across a 500-foot wide beach and streams into the dune system adding to the shore protection every year.

Figure 8b Photo taken October 15, 2021 at the seaward dune toe position looking north across the sand plain that comprises this beach area in Brigantine.

City of Brigantine - Annual Comparison BRIG- 43 Forty-third Street South (NJBPN #131)

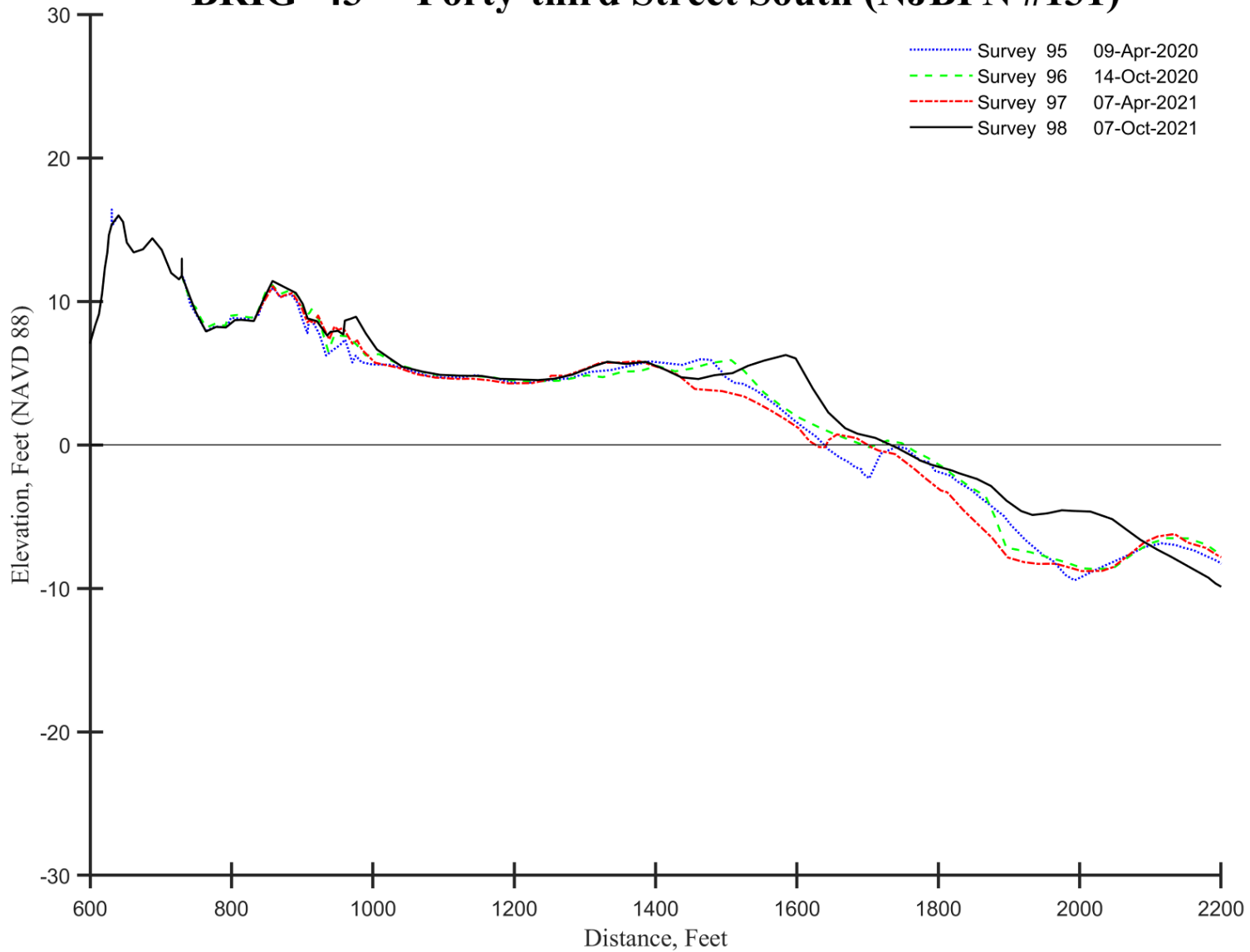


Figure 8c – This site continued to add sand to the beach, dunes and offshore areas. The tiny foredune became a reasonable small feature by Oct. 2021. Berm accumulation was extensive and distal offshore bar sand filled in the deep trough landward (+57.37 yds³/ft. added as 12.96 yds³/ft. moved from the crest into the trough).

- **Profile Brig-1: South Beach**

(Figure 9a, 9b & 9c)

This site is located 600 feet from the Absecon Inlet jetty, established to determine if sand is retained, eroded and or bypasses the structure into the inlet channel. After years of observation at this structure including the inlet shoreline, sand moves around the Absecon jetty in cycles of retention on this segment of the beach, erosion of the beach accompanied with bypassing of the jetty. Once the beach width has expanded seaward to near the seaward end of the jetty it becomes increasingly exposed to storm erosion which moves sand offshore to the inlet's ebb shoal system or onto the inlet channel shoreline inside the jetty. Current dune configuration at this site extends over 1000 feet seaward of the development with about 300 feet of additional dry beach width.

Berm growth dominated the summer of 2021 adding a prominent berm feature. The dunes and beach lost 0.09 yds³/ft. above the zero-elevation position this summer and 5.31 yds³/ft. offshore between the losses far offshore and fill close to the beach as sand migrated landward during the summer. The new, steeper berm slope caused the beachface toe to retreat 30 feet between April and October 2021. The annual change was a 6-foot shoreline retreat and a near balance between a beach sand volume gain and the offshore loss (net = -0.24 yds³/ft.)

Profile Brig-1: South Beach

(Figure 9a, 9b & 9c)



Figure 9a Photo taken on October 14, 2020 near the seaward toe of the dunes looking at Atlantic City across the dry beach. The shoreline moved 29 feet seaward in 2020.



Figure 9b Photo taken October 7, 2021 at a similar spot to the 2020 photograph on the left. New grass growth is evident.

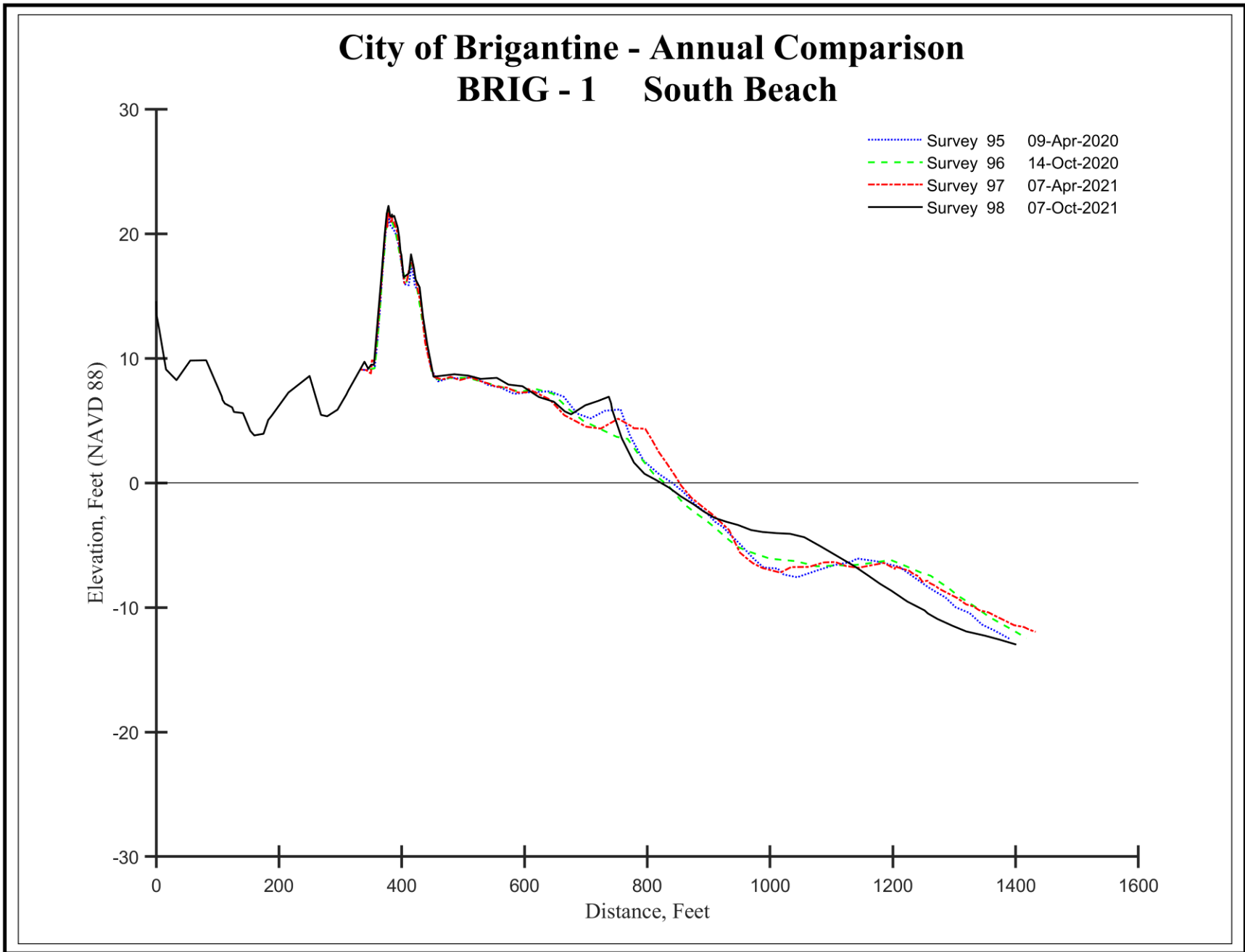


Figure 9c – Positioned 600 feet north of the inlet jetty, this site has seen sand accumulate between most surveys perhaps because there have been few serious northeast storms to drive bar sand into Absecon Inlet. During 2021 this site lost sand volume (-0.09 yds³/ft. on the beach and -5.31 yds³/ft. offshore. The beachface zero elevation position also moved 30 feet landward.

Summary:

In 2018 the USACOE added 767,000 cubic yards of new sand derived from Brigantine Inlet borrow site deposited from the “feeder beach” north of development to a point south of 4th Street North. The beach along the promenade bulkhead has retreated to a point where the revetment rocks are beginning to be exposed. The beach width is still suitable for recreational use, but not sufficient as a wave barrier. Any storm event will see wave runup to the bulkhead and more sand loss. Dune sand remains as a small deposit south of the 12th Street North profile site. Sand did remain stable between 4th Street North and 15th Street South with minor shoreline changes and some on-beach gains in sand driven by sand migration from the offshore bar crests toward the shoreline.

The beach south of 15th Street South gained a large volume of material as sand moved landward from beyond the survey distance offshore and resulting from southerly transport along the beachfront to this highly depositional portion of the Brigantine municipal shoreline. Just the deposition between 27th and 43rd Streets South amounted to 165,976 cubic yards spread across the 4,132-foot distance between the two sites. That volume reduces to 40.17 yds³/ft. of sand added to every foot of shoreline between the two profile sites.

The last sentence in the paragraph above is convincing evidence to consider the case for discussing using the extensive deposits along the southern Brigantine shoreline to augment the shore protection for the northern erosional beaches. This would reduce the need to mobilize a hydraulic dredge and its support crew. We recommend an open discussion with the City Council should they decide to become involved in the case for sand back-passing from this area of constant accumulation back to the northern shoreline subject to chronic erosion.