



**CITY OF GLOUCESTER
CONSERVATION COMMISSION
MINUTES**

WEDNESDAY January 30, 2013 - 7:00 PM

**CITY HALL, KYROUZ AUDITORIUM
ROBERT GULLA, CHAIRMAN**

Members Present: Rob Gulla, Chair, Charles Anderson, Barry Gradwohl, John Feener, Robert Sherman

Staff: Lisa Press, Agent, Pauline Doody, Recording Clerk

Mr. Gulla informed the public the original ORAD is under appeal and after speaking with attorney's at the MACC, the commission was told that the meeting had to move forward. It is at the risk of the applicant.

A. Continuation- 28-2232- 47 Commercial Street Notice of Intent submitted by Sheree DeLorenzo, Beauport Gloucester LLC, to construct a hotel with associated utilities and parking in a coastal resource area. (Map 1 lot 33).

The DEP number for the project is 028-2232.

Presenter: Todd Morey, Beals Associates, Inc. 2 Thirteenth St, Charlestown, MA.

Mr. Morey presented a slide show of the site reviewing the project's parameters. The property is 1.85 acres with the building comprised of two structures. The older portion was built in 1910 and the newer portion in the 1950's. The footprint of the property is 49,000 square feet. The remainder of the property is made up of paved and scrub brush areas. The building extends just over the property line towards Pavilion Beach. On September 14th the Conservation Commission approved an ORAD application and issued an order of Resource Delineation. Peer reviews and site walks were held. The ORAD described coastal resource areas; Coastal beach, coastal bank on easterly edge against Fort Square, land under ocean delineated, land containing shellfish and eelgrass beds, and land subject to coastal storm flowage. There are three FEMA zones; 100 year flood plain extends to Elevation 9, Zone AO- area subject to flooding to a foot deep, and Velocity zone- describes wave velocity with heights and elevations up to elevation 12. The site ranges in elevation from 7.5 - 8 feet. The beach has a rounded shape. The land survey taken in September 2011 showed a low point of 5.8 up to 10.5 feet.

Today the sand is one foot higher. Beach elevations do fluctuate with the seasons. On September 24, 2012 an NOI was filed. DEP issued a file number with no comments. The project is a hotel within the building footprint. The footprint at garage level is 37,000 s.f. and above is 25,000 s.f. The hotel proper is roughly a 50 % reduction. Mr. Morey described the hotel layout. A primary goal of the design is provide a pedestrian friendly hotel. There are sidewalks that extend through Commercial St, Fort Square and around the hotel. The entire project is set back from the existing building. The seawall will be pushed back 8-10 back from the building face. The project will add 3400 s.f. of sand area. Site development plans were submitted. Two major changes came out of the peer review; the modification of the drainage system and the movement of the seawall from a concept design to final design.

Drainage: The exterior parking lot runoff will sheet flow to 4 catch basins. The catch basins will flow to a storm sceptor and then discharge to the municipal system. The city is in final designs of the drainage infrastructure and the hotel will tie into that system. The infiltration area takes the runoff from the roof and deck and brings it underground. It will reduce the volume of runoff on Commercial St.

The peer review wanted the ground water mounding to be reviewed. The worst case scenario was assumed; a high tide with a mean tide at elevation 4. The prior design was tested and it was found that the ground water came up to the bottom of infiltration chambers. Next a water quality volume of 1" rainfall was used running through the ground water mounding and it worked better. Now the infiltration

system overflow will come along the seawall and connect to Fort Square. The current outlet for the Fort Square drainage system is through the seawall onto the edge of Pavilion Beach. The pipe is maintained by the city.

Mr. Gulla asked what it means for the environment.

Mr. Morey stated it reduces the volume of water going into Commercial Street which reduces the amount of water flooding Commercial Street. The storm sceptor will be in place removing 82% of sediment. Currently, there is no sediment removal.

Seawall Design:

In the review of mapping dating back to 1835, it was noted that the shape and location of the beach has been consistent and stable. The decision was made not to change the design and stay with the vertical wall.

Impacts to coastal resources: there is a 100 foot buffer to the coastal beach- 38,850 s.f. feet. That is what is there today and is not being changed. Land subject to coastal storm flowage is 80,457 s.f. which represents the upland parcel. It is all disturbed and will remain the same. 3400 s.f. of additional beach area will be added.

Robert Fairbanks FEC Corporation ,42 Cobblestone Hill Road, Exeter, RI.

Mr. Fairbanks stated the seawall will be 400 feet long and will tie into the Fort Square concrete wall with a return at the west end. The wall will look like a concrete wall with a textured surface. The structure will be steel sheet piles. Each wall is 32 feet long that will be driven into the ground. They will be buried. The beach is between elevation 6 and elevation 11. The sidewalk is elevation 12. There is a 6 foot differential between the beach and sidewalk. To protect the wall stones will be buried along the front edge. If there is a loss of sand during a storm, the stones will stop the scouring. It is embedded in the soil and derives its strength from the soil around it. The stone is installed 2 feet below the beach level. The wall is designed to be able to loose all the sand down to the stone level and the stone will hold the wall. The design itself has taken into account the FEMA flood study. The top of the seawall is at 13 feet; one foot above the FEMA flood study findings. The US Core of Engineers recommends the stone be designed to resist the H10 wave, which is a 7 foot wave. It is a two layer system of 2500 pounds of stone. The finish will be concrete. A water lag has been applied to the wall for half the tide. The worst case loading that occurs behind the wall is during construction. For this temporary condition a 450 lbs ??? was designed replicating an excavator of 100,000lbs. Deflection is the concern; the depth and stiffness of the sheets were increased for the temporary condition. Scuppers set in the wall 1 inch above the sidewalk level will have the ability to flush water out.

Mr. Feener asked that since the wall is being set back 10 feet from where it is now, would the amount of stones need to be increased since the velocity of waves coming in will be changed because of the additional 10 feet of sand being created. The premise is, the beach has been stable for the past 100 years as things are now, but what is there now is being changed.

Mr. Fairbanks stated the stones were designed to withstand a worst case storm with all the sand being gone. It has been designed to what FEMA has as a maximum wave breaking on the stone. The new wall is 400 feet and the existing conditions are close to that figure. The vertical wall that is there now has been working well and that is why the new wall is also vertical.

Mr. Gulla asked why the wall isn't being designed with a slope to help deflect the velocity of the waves.

Mr. Morey stated that research has shown that the beach has been stable for 100 years with the existing conditions, so the design of the wall is replicating those conditions to keep the beach stable. The wall being set 10 feet further back will ensure that the wall will be hit less.

Lester Smith 3 Clock Tower Place, Suite 250, Maynard, MA.

Mr. Smith stated he will be speaking to a letter received from Dr. Paul Godfrey.

Coastal Engineering Structures & Erosion: Dr. Godfrey 's letter stated the beach is lower and narrower than the portion of the seawall and used that as evidence that the seawall was causing beach erosion.

Mr. Smith displayed a set of 10 figures of historic data, on ground surveys, and photographs that have been geo referenced. Pavilion Beach is a pocket beach. The photographs shows small tonal changes dating back from 1870 to 2011 and also shows the beach being very stable. Geologists use the past to tell the future and the past shows the existing seawall has not been causing erosion. Dr. Godfrey does not provide evidence that the seawall is causing erosion.

Mr. Feener asked again that if moving the seawall inward 10 feet will change flow of the tide and sediment that is caused by wave action.

Mr. Smith stated the extended beach will provide more dissipation of the wave energy.

Eel grass beds: Eel grass beds are sub-tidal and below the mean high water line. Dr. Godfrey indicated that any structures built in the intertidal zone will have severe effects on the eel beds and should be illegal. The work being done is not in the intertidal zone, but landward where there is an existing structure.

Dune formation: Dr Godfrey recommends that the building and seawall on the lot be removed and have the commission require that this area revert back to a coastal dune. The waters protection act states to look at what is on the ground today.

Third Party Peer Review:

Phil Paradis, BETA Group, 315 Norwood Park South, Norwood, MA.

Mr. Paradis stated BETA Group reviewed the storm water management plan. Cheryl Coviello of Vine Associates reviewed the seawall issues and coastal resource impacts. The September 24 submission was reviewed and comments were submitted on November 14. A revised set of plans was submitted on December 21 which addressed the majority of the comments. The initial concerns were calculation issues, ground water mounding, trench drain, back walkway did not have discharge treatment. All the issues have been addressed and the plan meets storm water management regulations. A final **swift** plan must be provided as well as a ground water dewatering plan for the operation.

Cheryl Coviello, Vine Associates, 372 Merrimack St., Newburyport

Ms. Coviello stated the original application for the seawall was conceptual. The revised submittal of the wall design uses the steel sheet material. Additional information is needed regarding the protective measures that will be in place during demolition and construction of the wall. The seawall is appropriate for the site.

Mr. Gulla asked for input regarding the construction of a flat wall opposed to a curve wall for the site.

Ms. Coviello stated the type of wall design is very site specific. With the depth of the sheet pile wall being driven into the ground, there is no need to worry about erosion. The wall is progressing in an appropriate way.

Public Comment:

Michael Faherty-111 Main St, Representing Mortillaro Lobster Inc. & Vincent & Gino Mortillaro

Attorney Faherty informed the Commission that his clients do not believe the delineation is proper, an appeal has been filed and reserve the right that if the issue is decided and goes back to DEP before an Order of Conditions issued that an opportunity to present evidence on the existence of a barrier beach, coastal dune in addition to the resource areas that have been delineated. There are resource areas of coastal beach, buffer zone to coastal beach, land subject to flooding, land subject to coastal storm flowage, and land subject to tidal action. The discussions are revolving around how the building and property are going to be protected. The act was established to protect the resource areas. The discussion entails moving the seawall 10 feet to protect the beach. The building is driven by economic factors and has nothing to do with wetlands protection. There is no protection for buildings being taken down. The site will be vacant, the impervious surfaces will be gone and when the work starts it will be a barrier beach. The construction of Birdseye building was in 1945. The cold storage building next to the Birdseye building was constructed in 1967. All the properties were bought out at that time except for the Mortillaro's property. In the presentation it was stated that the proposed wall is 400 feet long, in

basically the same location and will have the same affect on the site. There is no significant wall in front of the parking lot at this time. This application has had significant changes all in response to the peer review. The City of Gloucester has undertaken infrastructure improvements in Commercial St and Fort Square. The application is relying on all the infrastructure applications solving all the drainage issues. The design for Commercial St. won't be done until March and it has to come in front of the Conservation Commission. It is being assumed that it will be in place. It is a giant leap of faith. The people deserve an individual critique. It states in the Wetlands protection Act that all other permits are needed first. Storm water is an enormous issue and it is being assumed that it will be taken care of by somebody else and has been pulled off the plans.

Site being the same: The parking lot is now covered with beach sand- 23,000 s.f., Birdseye building is 21,500 s.f., cold storage building 36,000 s.f. Plan 602 shows the line of the existing seawall: The proposal is to dig out the soil to bury stones and add two feet of cover. It has been proposed that no activities will have any alteration effect seaward of the wall and the work will be done from inside of the wall. It is physically impossible to drive sheet metal down 22 feet, operating a machine over the wall without having any alteration of the area. Working with beach sand requires a shoring trench. Wave action is going to scour the wall. Missing in the presentation is the amount of fill that will put on the parking lot. It will require up to 3 feet of fill. The whole site is being raised up and the cap on the wall will be at 13 feet. This situation is impossible to build without coming onto the beach area. Loose granular sand will be placed on site and will wash away first, beach is being added and that is considered to be an "alteration" in the regulations.

Ground water: What is the mechanism being provided for the ground water to go back and forth through the barrier? What happens to the ground water?? How does it go back and forth?

The Mortillaro's concerns are storm damage prevention and flooding. The scuppers along the top and will be 1" above the sidewalk. There is difference in the current wall height and the proposed. At the end of a wall, water seeks its own level and seeks its next location. Water coming in from ocean will come in and run down to Fort Square. The Mortillaro's property is at the conjunction of Fort Square and Commercial St and has lobster pounds at the ground water level. There will be an exhilarated affect from the wall and flooding will occur. At the infrastructure site visit held with the city, it was said the water lines, sewer lines will be replaced and a new sewage pump station would be installed. Questions were raised about the drainage and the answer was there is not a lot that can be done. It is what it is. No changes will be made to the existing drainage system. Attorney Faherty submitted an article to the commission about NJ beaches being rebuilt for their review and consideration. The article states that seawalls are part of the solution, but if there are not dunes and an active beach in front it, will not work.

Mr. Feener stated for clarification that the reduction of the impervious surface and the infiltration devices in the plan help retain the storm water and will have a negative affect on flooding issues.

Attorney Faherty stated in the original plan it was an infiltration plan treating the parking lot, then just the roof drains and it is being reduced further. Instead of having an overflow tank, it will be direct discharge along the sidewalk.

Dr. Peter Rosen: 30 Mann St, Hingham, MA.

Dr. Rosen discussed the impacts of the proposed seawall on the resource area. It is a vertical wall with a stone apron and 24 inches of sand on top. The sand has been described as adding beach. The stone apron will have impact on wave action on the beach. An impermeable layer is being created. It is important that sand can flow through the sand and beach. The 8 foot segment is impermeable and will be saturated. The affect is the erodability of the sand. It will adjacent to a vertical seawall and causes reflection of waves. Pavilion Beach fluctuates vertically. The elevation of the sand at back of the beach goes up and down. The stones will be exposed in a short time after construction. Continuous nourishment of the beach will extend the beach, not what has been presented.

Mr. Gulla asked for the cause or affect of the remaining resource if the stones are exposed.

Dr. Rosen stated it could end up like a runway of reflective water off of the vertical seawall increasing the erosion.

Mr. Feener stated the core samples previously taken showed a silt layer. Would that be the same type of layer as the rocks?

Mr. Rosen stated the rocks will reduce the impermeability to a greater extent.

Mr. Sherman asked if Dr. Rosen agreed with Dr. Godfrey 's solution to remove the existing building and allow a dune to form.

Dr. Rosen stated that solution would allow the barrier beach to function as a barrier beach and would allow dunes to grow and sand to be stored. It would create a natural barrier. It is an ideal solution.

Mr. Sherman asked if a natural sand dune would form between Fort Square and the Chamber of Commerce building.

Dr. Rosen stated yes, it is the tendency for them to migrate landward.

Attorney Faherty stated the size of the building is driving the location of the wall and believe the building needs to further landward. 10 feet is not enough.

Joel Favazza, 111 Main St, Suite A

Mr. Favazza presented a slideshow of photographs challenging Epsilon's statement that Pavilion Beach has not changed and has been stable over the last 100 years. The photographs displayed a larger, longer, and a higher elevated beach that exists today. He stated that the idea that Pavilion Beach has not changed is false and isn't still changing is false

Nathanial Mulcahy 33 Middle St

Mr. Mulcahy displayed photos from 1966 and current photos showing beach loss. He concurred with Mr. Favazza that Pavilion Beach is changing and would return to the cut if left to natural tendencies. The current Birdseye building is acting like a seawall. The new seawall built after 1967 has accelerated the deterioration of the beach.

Could not hear John's question, not using microphone

The seawall on the Dogbar, Ten Pound Island, and the Fort change the fluid dynamics of the harbor. The deposit lines in Pavilion Beach under the water are not perpendicular to the beach, but are at angles off of Pavilion Beach. The beach is subject to Long Shore Transport. As the wave fronts come parallel to the beach, there is deadening of flow which causes Long Shore transport, and the dominant wave forms and dominant fluid dynamics have the flow of the water along Pavilion Beach, not perpendicular to it, but parallel to it. It accelerates the erosion. If a dune were allowed to grow, the beach would restore itself to previous levels. The dune would protect the businesses along Commercial St and the inner harbor. It would strengthen Stacy Boulevard which is being weakened by the absence of sand. The main point of impact for the city is at Pavilion Beach for any storm surge. The main function of Pavilion Beach is a coastal barrier and is the first line of defense

Ms. Press stated the commission cannot go back in history. It is existing conditions and the commission looks at the base versus proposed.

Mr. Mulcahy informed the commission that if the existing position is a seawall of the length of the current Birdseye building and is causing rapid loss of Pavilion Beach and damage to Stacy Boulevard, a longer seawall as proposed will accelerate the loss further. It is important for the commission to understand where the primary point of impact will be for the city.

Attorney Faherty stated that during his presentation he asked someone to point out one sentence in the act of the regulations that supports the position the commission is taking. In the NOI it says the building will be demolished and everything will be taken up to the virgin soil and then a structure will be rebuilt. There is nothing in the statute that supports the position the commission is taking. The base is going to be removed and there is no protection. Point out the section in the act that protects a building that is being leveled and says today's standards to not have to be applied. Apply the current law to the vacant site. There is precedent on this committee where buildings have been pushed back. This is a substantial change.

Mr. Feener stated that at the end of a project, the commission must find that it will be less impactful or

the same.

James Tarantino 26 Fort Square

Mr. Tarantino stated doubling the size of the seawall will have catastrophic ramifications to the boulevard and Harbor Cove and should be strongly considered. Mr. Tarantino read and submitted a letter to the commission in opposition because the resource area has not been definitively determined and a request a continuance of the NOI. Several names were attached to the submitted letter.

Nathaniel Mulchay 33 Middle St.

Mr. Mulcahy further support Dr. Godfrey qualifications by informing the board that the dune areas in NJ that followed Dr. Godfreys nourishment and preservation, program were spares the brunt of damage during Hurricane Sandy.

Denise Foley, 57 Western Ave

Ms. Foley stated she is a native of Gloucester and has watched Pavilion beach change over the years. It is not a stable beach.

Sonny Robinson, 20 Harvard St Gloucester

Ms. Robinson stated a critical study should be done looking forward 50-100 years. Given what is known now about rising sea levels and their impacts on the coast, the storms that have occurred and will keep occurring and the larger seawall that will be impenetrable and will not allow the needed exchange. A critical study should be done. The commission responsibility is to protect the wetlands not to look at a proposal. The seawall along the Fort and the Tavern is being undermined.

Mr. Gulla stated this commission is here to review the resource area and the impacts of this project on the resource. The public is not speaking towards the right issues. What is the impact of this project going to be on the resource area?

Ms. Press stated the commission needs to come up with questions for the applicant and the third party reviewer. Next meeting should be started with a review of the performance standards for the resource areas. Does this project meet the performance standards or not. The applicant should address that and the third party reviewer.

Mr. Feener stated he would like two questions answered at the next meeting.

1. "What cause or affect that will definitively happen when the wall is within 10 feet regarding the waves and sediment and how it might affect eel grass.
2. Documentation on how much storm flow from the impervious area is leaving the site?

Mr. Gulla stated the commission would like to hear how the resource will not be affected. The beach is changing, why? Is this project going to affect the changes?

Motion: To continue the project at 47-61 Commercial Street Notice of Intent submitted by Sheree DeLorenzo, Beauport Gloucester LLC, to construct a hotel with associated utilities and parking in a coastal resource area. (Map 1 lot 33) to February 6, 2012.

1st: John Feener

2nd: Barry Gradwohl

Vote: Approved 5-0