

**DELAWARE RIVER AND BAY AUTHORITY**

**PERSONNEL COMMITTEE MEETING**

**Tuesday, March 20, 2018**

Delaware Memorial Bridge Complex  
New Castle, Delaware

A public meeting of The Delaware River and Bay Authority's Personnel Committee Meeting was held on Tuesday, March 20, 2018, at the Delaware Memorial Bridge Complex, New Castle, Delaware.

Commissioners from New Jersey

Committee Chair Smith  
Commissioner Ransome, Committee Member  
Commissioner McCann, Committee Member  
Commissioner Wilson - Absent  
Commissioner Bennett

Chairperson Hogan

Legal Counsel

Phillip Norcross - NJ

Governors' Representatives

Craig Ambrose – NJ

Staff

Tom Cook  
Stephen Williams  
Victor Ferzetti  
Vince Meconi  
Charlotte Crowell  
Gerry Owens  
TJ Murray  
Michelle Hammel  
Jim Salmon  
Caroline Walker  
Michele Pyle  
John Sarro  
Tara Donofrio  
Joe Larotonda  
Toni deYoung  
Andrew Ritchie

Commissioners from Delaware

Vice-Chair Lathem  
Commissioner Carey, Committee Member  
Commissioner Decker, Committee Member  
Commissioner Ratchford  
Commissioner Ford

Vice-Chairperson Lowe

Mike Houghton – DE

Guests

William Cook, Esq., Brown Connery  
Tim Horn, Esq, Brown Connery  
Michelle Gasiorowski CPA, Bowman & CO.  
Randolf Brolo

1. Committee Chair Smith opened the Personnel Committee meeting at approximately 9:01am. The Deputy Executive Director (DED) reported that the public meeting of the Personnel Committee had been duly noticed in accordance with the Authority's Freedom of Information Regulations, read the Statement of Notice, and called the roll.
2. Committee Chair Smith called for a motion to accept the Personnel Committee Minutes from February 21, 2018. Commissioner McCann made a motion, Commissioner Ransome seconded, and the Committee Minutes were accepted.
3. Committee Chair Smith requested an Executive Session closed to the public to discuss matters of a confidential nature. A motion was made by Commissioner Ransome seconded by Commissioner Carey, and the Session was closed.

The following matters of a confidential nature were discussed:

- ) LITIGATION MATTERS
- ) PERSONNEL MATTERS

With no further business to discuss in the Executive Session, a motion to open the meeting to the public was made by Commissioner Lathem, seconded by Commissioner Carey and the Session was opened to the public.

4. With no further business to discuss, Commissioner Lathem made a motion to adjourn and the Personnel Committee adjourned at 9:28 am.

**DELAWARE RIVER AND BAY AUTHORITY**  
**AUDIT & GOVERNANCE COMMITTEE MEETING**

**Tuesday, March 20, 2018**

Delaware Memorial Bridge Complex

New Castle, Delaware

A public meeting of The Delaware River and Bay Authority's Audit & Governance Committee was held on Tuesday, March 20, 2018, at the Delaware Memorial Bridge Complex, New Castle, Delaware.

Commissioners from New Jersey

Commissioner Smith, Committee Member  
Commissioner McCann, Committee Member  
Commissioner Ransome  
Commissioner Bennett  
Committee Vice Chair Wilson - Absent  
Chairperson Hogan

Commissioners from Delaware

Commissioner Chair Carey  
Commissioner Decker, Committee Member  
Commissioner Lathem, Committee Member  
Commissioner Ford  
Commissioner Ratchford  
Vice-Chairperson Lowe

Legal Counsel

Phil Norcross – NJ

Mike Houghton – DE

Governor's Representative

Craig Ambrose - NJ

Staff

Tom Cook  
Steve Williams  
Victor Ferzetti  
Vince Meconi  
Gerry Owens  
Charlotte Crowell  
Michelle Hammel  
TJ Murray  
Jim Salmon  
Steve Williams  
Caroline Walker  
Michele Pyle  
Tara Donofrio  
Joe Larotonda  
John Sarro  
Toni deYoung

Guests

Randolf Brolo  
Frederick Blue, Sr. VP – Voya  
Carl Goodwin, VP – Voya  
Tracy Watson, Service Manager- Voya  
Kevin Meserve, Investment Advisor – Voya  
Michael Beczkowski, Consultant - Bolton Partners

1. Committee Chair Carey opened the Audit & Governance Committee meeting at 9:30 a.m. The Deputy Executive Director (DED) reported that the public meeting of the Audit & Governance

Committee had been duly noticed in accordance with the Authority's Freedom of Information Regulations, read the Statement of Notice, and called the roll.

2. Committee Chair Carey called for a motion to accept the Audit & Governance Committee Minutes from January 17, 2017. Commissioner Decker made a motion, Commissioner McCann seconded. Before the vote, Commissioner Ratchford pointed out a typographical error from in the January minutes. The correction was accepted by consensus and the Committee minutes were accepted as amended.

3. Discussion Items:

- Deferred Compensation Investment Committee Annual Report:

The Executive Director (ED) introduced Michael Beczkowski, Bolton Partners, the Authority's Consultant assisting in plan governance of the Deferred Compensation Investment Committee. The following was presented and discussed:

- Background
- Vendor Search Items
- Plan Governance
- Plan Notes as of December 31, 2017
- Asset Allocation

Mr. Beckzkowski gave a brief background on the 401(a) mandatory and the 457(b) voluntary plans for the newly appointed members. He also reviewed the Plan Governance including the role of the Deferred Compensation Investment Committee which was formed in 2017; governance includes a committee charter, fiduciary acknowledgement letters, and an investment policy statement; The Committee meets no less than annually to review the performance of the investment options and upcoming Voya communication strategy. As of December 31, 2017, all investment options remain prudent. However, Mr. Beczkowski noted that the Voya Small Cap Opportunities is recommended to be on a Watch List due to recent underperformance, particularly on a risk adjusted basis, and turnover on the analyst and management team. He will review with the Investment Committee in June on the state of this investment option. Mr. Beczkowski highlighted several vendor search action items that were accomplished in 2017 such as reduced administrative fees by 50%, conducted a re-enrollment into age appropriate target date funds, implemented a transparent and equitable fee structure (fees are now shown in the participants' statements) and outsourced the majority of administrative responsibilities from the Authority (DROs, hardships, termination, withdrawals) to Voya. New Jersey General Counsel Norcross commented that the Authority should consider educating participants on living through retirement vs. living to retirement as it relates to disclosure of the target date funds and what happens when an employee reaches retirement. After a brief discussion, Mr. Beczkowski advised that Bolton will be reporting on the Voya fund at the end of June and no other recommendations were made at this time.

Mr. Beczkowski introduced Frederick Blue from Voya to discuss the Authority's plan statistics from 2017. Mr. Blue introduced his colleagues: Kevin Meserve, Investment Advisor for the

Authority, Carl Goodwin, VP and Tracy Watson, Service Manager. The following was presented and discussed:

- Consolidated Plan Asset Summary
- Consolidated Activity Highlights
- Individual Plan Assets
- Plan Contributions and Distributions
- Average Account Balance
- 401 (a) Mandatory Plan Investment Diversification
- 457 (b) Voluntary Plan Investment Diversification
- Next Steps

Mr. Blue highlighted the Authority's consolidated plan activity. He noted the positive growth in both investment plans. Mr. Blue noted how pleased he was that due to the Authority providing a re-enrollment process, it allowed employees to look at their asset allocation and put those funds into the correct target date fund. Mr. Blue noted the positive net cash growth between the investment plans and advised a key point is the Authority has an 88% participation rate in the 457(b) voluntary plan, doubling the average median. Mr. Blue discussed the next steps in saving more in the 457(b) investment plan by continuing to educate employees on the plans and the living through retirement.

4. With no further business to discuss, Commissioner Carey made a motion to adjourn, and the Audit & Governance Committee adjourned at 10:05 a.m.

**DELAWARE RIVER AND BAY AUTHORITY**

**BUDGET & FINANCE COMMITTEE MEETING**

**Tuesday, March 20, 2018**

Delaware Memorial Bridge Complex  
New Castle, Delaware

A public meeting of The Delaware River and Bay Authority's Budget & Finance Committee Meeting was held on Tuesday, March 20, 2018 at the Delaware Memorial Bridge Complex, New Castle, Delaware.

Commissioners from New Jersey

Committee Chair Bennett  
Commissioner Smith, Committee Member  
Commissioner McCann  
Commissioner Ransome  
Commissioner Wilson - Absent

Commissioners from Delaware

Committee Vice-Chair Decker  
Commissioner Ratchford, Committee Member  
Commission Ford, Committee Member  
Commissioner Lathem  
Commissioner Carey

Chairperson Hogan

Vice-Chairperson Lowe

Legal Counsel

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Caroline Walker  
Michele Pyle  
Tara Donofrio  
Joe Larotonda  
John Sarro  
Toni deYoung

Guests

Randolf Brolo

5. Committee Chair Bennett opened the Budget & Finance Committee meeting at approximately 10:05 a.m. The Deputy Executive Director (DED) reported that the public meeting of the Budget & Finance Committee had been duly noticed in accordance with the Authority's Freedom of Information Regulations, read the Statement of Notice, and called the roll.

6. Committee Chair Bennett called for a motion to accept the Budget & Finance Committee Minutes from February 21, 2018. Commissioner Smith made a motion, Commissioner Ratchford seconded, and the Committee Minutes were accepted.

7. Action Items:

**- RESOLUTION 18-06 – AUTHORIZING AUTHORITY EXPENDITURES PURSUANT TO RESOLUTION 01-84 FOR THE PERIOD, JANUARY 1, 2018 THROUGH DECEMBER 31, 2018**

The Chief Financial Officer (CFO) presented and reported on the Over \$25,000 List. The Authority is replacing two Clubcar carryall utility vehicles at the Cape-May Lewes Ferry Terminals that have exceeded their useful life and meet the equipment replacement criteria in place. The purchase will be made via an authorized equipment dealer (Atlantic Tractor) at the competitively-bid state contract price. The replaced utility vehicles will be sold at public auction.

The Authority will be hiring a marine contractor to fabricate new stainless steel base sections, re-coat the steel top portions and seal the concrete bases of the jetty lighting towers at the Lewes Ferry Terminal. Quotes for the work were solicited from four contractors with Murtech, Inc. submitting the lowest bid to complete the work per DBRA specifications. Commissioner Decker questioned which state contract was being used to purchase the equipment. The CFO stated the Authority evaluated both state contracts and utilizes the lowest cost option.

After discussion, Commissioner Smith made a motion, Commissioner Decker seconded, and the Budget & Finance Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

**- RESOLUTION 18-07 – AUTHORIZES AN AGREEMENT BETWEEN THE DELAWARE RIVER AND BAY AUTHORITY AND MORRIS, NICHOLS, ARSHT & TUNNELL, LLP TO SERVE AS GENERAL LEGAL COUNSEL REPRESENTING THE AUTHORITY'S INTERESTS IN THE STATE OF DELAWARE**

Morris, Nichols, Arsht & Tunnell, LLP was recommended for award following evaluation. Staff evaluated the costs for services and determined the compensation to be fair and reasonable. Prior to beginning of discussion, Delaware Counsel stepped out of the room for the presentation of this Resolution.

After discussion, Commissioner Decker made a motion, Commissioner Smith seconded, and the Budget & Finance Committee recommended forwarding the Resolution to the full Board for

approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

4. With no further business to discuss, Commissioner Bennett made a motion to adjourn and the Budget & Finance Committee adjourned at 10:08 a.m.



**DELAWARE RIVER AND BAY AUTHORITY**

**ECONOMIC DEVELOPMENT COMMITTEE MEETING**

**Tuesday, March 20, 2018**

Delaware Memorial Bridge Complex  
New Castle, Delaware

A public meeting of The Delaware River and Bay Authority's Economic Development Committee Meeting was held on Tuesday, March 20, 2018 at the Delaware Memorial Bridge Complex, New Castle, Delaware.

Commissioners from New Jersey

Committee Vice-Chair Ransome  
Commissioner Wilson - Absent  
Commissioner Bennett, Committee Member  
Commissioner Smith  
Commissioner McCann

Chairperson Hogan

Commissioners from Delaware

Committee Chair Ford  
Commissioner Ratchford, Committee Member  
Commissioner Carey, Committee Member  
Commissioner Decker  
Commissioner Lathem

Vice-Chairperson Lowe

Legal Counsel

Phillip Norcross - NJ

Mike Houghton – DE

Governors' Representatives

Craig Ambrose – NJ

Staff

Tom Cook  
Stephen Williams  
Victor Ferzetti  
Vince Meconi  
Charlotte Crowell  
Gerry Owens  
Jim Salmon  
TJ Murray  
Michelle Hammel  
Caroline Walker  
Michele Pyle  
John Sarro  
Tara Donofrio

Guests

Randolf Brolo

8. Committee Chair Ford opened the Economic Development Committee meeting at approximately 10:08 am. The Deputy Executive Director (DED) reported that the public meeting of the Economic Development Committee had been duly noticed in accordance with the Authority's Freedom of Information Regulations, read the Statement of Notice, and called the roll.

9. Committee Chair Ford called for a motion to accept the Economic Development Committee Minutes from February 21, 2018. Commissioner Ratchford made a motion, Commissioner Ransome seconded, and the Committee Minutes were accepted.

3. Action Items presented by the Deputy Executive Director (DED):

**RESOLUTION 18-08 LEASE AMENDMENT BETWEEN THE  
DELAWARE RIVER AND BAY AUTHORITY AND LASSONDE PAPPAS AND  
COMPANY, INC. (FORMERLY KNOW AS CLEMENT PAPPAS AND  
COMPANY, INC.) AT THE SALEM BUSINESS CENTRE**

Lassonde Pappas and Company, LLC is currently a tenant in the Salem Business Centre located at 1 Collins Drive. They began leasing space in 2006 with 46,483 square feet. Lassonde Pappas desires to lease an additional 9.834 square feet. The new lease space would run concurrent with the existing. The space has never been fit out, finished and occupied. The usefulness and marketability of the space is minimal. Lassonde Pappas could make the space useful and they have agreed to take the space at no cost in exchange for finishing and fitting out the space. The cost of the fit out and the costs savings in not having to pay the proportionate utility expense over the remaining 4 years of the lease term is nearly equal. They would be here through 2022 with a saving of improvements. Commissioner Decker inquired of their business; they are in the fruit business, private label.

Commissioner Ransome made a motion, Commissioner Carey seconded, and the Economic Development Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

Vice Chair Lowe inquired if the Delaware River and Bay Authority is still actively marketing the Salem Business Centre for sale at which DED replied yes; we are working with a broker, Jackson-Cross.

Commissioner Lathem inquired of unoccupied space in this Centre. With this agreement, less than 4,500 sq.ft. remains unoccupied in the building.

**RESOLUTION 18-09 LEASE AGREEMENT AND AMENDMENT TO  
LEASE AGREEMENT BETWEEN THE DELAWARE RIVER AND BAY  
AUTHORITY AND CAPE MAY BREWERY LLC.**

The Delaware River and Bay Authority operates a retail building at the Cape May Airport commonly referred to as Building 96 that sits along point road, with multi tenants. Cape May Brewing currently leases Units 5, 6, 7 & 8 in the building at the Cape May Airport. Cape May Brewing would like to continue to lease the space and operate a tour, tap room and sales office from the space. The term of the lease coordinates with the remaining term of Building 97 lease so that they will both expire at the same time. There is one 3 year option the tenant will have.

Commissioner Ford made a motion, Commissioner Carey seconded, and the Economic Development Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

**RESOLUTION 18-10 AUTHORIZES A LEASE AGREEMENT BETWEEN  
THE DELAWARE RIVER AND BAY AUTHORITY AND THE MILLVILLE  
ARMY AIRFIELD MUSEUM AT THE MILLVILLE AIRPORT**

The Delaware River and Bay Authority owns a facility located at 31 Reeves Street on the Millville Airport. The space has been unrented for as long as the DRBA has operated the airport and is in need of renovations. The MAAM plans on acquiring grants and donation along with utilizing volunteers to renovate and restore the building. The lease term was based upon an evaluation of the FMV of the building and the planned investment by the MAAM. They will request an extension of a 10 year term. They are hoping to invest \$51,000. Delaware River and Bay in turn gets a building, unable to rent, with improvements done at no cost to us. This will also improve the image of the airport as it is now unsightly, located across the street from our administration building.

Commissioner Decker inquired of our overview in the process. DED noted the City of Millville will handle the permits, etc; we would not be involved. They would apply for the appearance of the building, meeting the Historic District guidelines.

Commissioner Ford made a motion, Commissioner Ransom seconded, and the Economic Development Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

**RESOLUTION 18-11 COST-SHARING AGREEMENT BETWEEN THE  
DELAWARE RIVER AND BAY AUTHORITY AND NEW CASTLE COUNTY**

In 2014, DNREC contacted both the Authority and New Castle County to advise of potential liability under Delaware Hazardous Substance Cleanup Act and request that the parties enter into a VCP Agreement for purposes of conducting a remedial investigation into the potential contamination. Resolution 15-22 authorized a cost share agreement between the Authority and the County for the purposes of conducting the remedial investigation associated with the VCP. In 2017, the Authority and the County engaged in Environmental Investigation Consultant who has been conducting the remedial investigation. DNREC has requested additional remedial investigation. DNREC has requested additional remedial investigation under the terms of the VCP. The Authority and the County have each allocated an additional \$50,000 toward the costs associated with the VCP Agreement for continued investigation. There is no discussion of liability; this is just the investigation.

Staff Attorney gave the Board background on this military site. Contaminations have gotten into the water and the wells. Each year the EPA determines water contaminants, creating new ones; therefore, this is an ongoing issue.

Commissioner Decker wanted to confirm this does not increase our liability; Staff Counsel stated it would not. It would be our responsibility to recover costs of damages in the future. Time limit was inquired; no time limit but to address DNREC as necessary.

Commissioner Ratchford made a motion, Commissioner Carey seconded, and the Economic Development Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

4. Committee Chair Ford requested an Executive Session closed to the public to discuss matters of a confidential nature. A motion was made by Commissioner Ransome seconded by Commissioner Carey, and the Session was closed.

The following matters of a confidential nature were discussed:

) LEASE NEGOTIATIONS

With no further business to discuss in Executive Session, a motion to open the meeting to the public was made by Commissioner Ford, seconded by Commissioner Carey and the Session was opened to the public.

5. With no further business to discuss, Commissioner Ford made a motion to adjourn and the Economic Development Committee adjourned at 11:13 a.m.

**DELAWARE RIVER AND BAY AUTHORITY**

**PROJECTS COMMITTEE MEETING**

**March 20, 2018**

Delaware Memorial Bridge Complex  
New Castle, Delaware

A public meeting of The Delaware River and Bay Authority's Projects Committee was held on Tuesday, March 20, 2018 at the Delaware Memorial Bridge Complex, New Castle, Delaware.

Commissioners from New Jersey

Committee Chair Ransome  
Commissioner Bennett, Committee Member  
Commissioner McCann, Committee Member  
Commissioner Smith  
Commissioner Wilson - Absent

Commissioners from Delaware

Committee Vice Chair Ratchford  
Commissioner Ford, Committee Member  
Commissioner Lathem, Committee Member  
Commissioner Carey  
Commissioner Decker

Chairperson Hogan

Vice-Chairperson Lowe

Legal Counsel

Philip Norcross - NJ

Mike Houghton - DE

Governors' Representatives

Craig Ambrose – NJ

Staff

Tom Cook  
Stephen Williams  
Victor Ferzetti  
Vince Meconi  
Charlotte Crowell  
Gerry Owens  
TJ Murray  
Michelle Hammel  
Jim Salmon  
Caroline Walker  
Michele Pyle  
John Sarro  
Tara Donofrio  
Alyona Stakhovskaya

Guests

Randolf Brolo

1. Committee Chair Ransome opened the Projects Committee meeting at approximately 11:12 am and reported that the public meeting of the Projects Committee had been duly noticed in accordance with the Authority's Freedom of Information Regulations and that there was a quorum.

2. Committee Chair Ransome called for a motion to accept the Projects Committee Minutes from February 21, 2018. Chair Ransome made a motion, Commissioner Ford seconded, and the Committee Minutes were accepted.

3. Resolutions:

) RESOLUTION 18-12 - AUTHORIZES AN AGREEMENT BETWEEN THE AUTHORITY AND DUFFIELD ASSOCIATES, INC. TO PROVIDE AUTHORITY-WIDE ENVIRONMENTAL CONSULTING SERVICES

The purpose of this Resolution is to authorize an agreement with Duffield Associates, Inc. to provide Authority-wide environmental consulting services. The Authority reviewed the proposal submissions for each firm and utilized criteria to establish a ranked list, with Duffield Associates being ranked highest. The Authority conducted an analysis of the market to analyze the costs for the Services and negotiated with Duffield Associates to provide the Services at compensation determined to be fair and reasonable.

After discussion, Committee Chair Ransome made a motion, Commissioner Lathem seconded, and the Committee recommended forwarding the Resolution to the full Board for approval. The Resolution will be presented to the full Board for consideration at the March meeting later today.

4. Bid Openings: NONE

5. Contract Close-Out Actions: NONE

6. Contractor Payment (through February): The COO reviewed for the Committee the monthly construction contractor payments to be made for the work completed through February.

7. Miscellaneous Items/Updates:

) EXTENSION OF AGREEMENT CS-13-08A GENERAL ENGINEERING CONSULTING SERVICES FOR THE DELAWARE MEMORIAL BRIDGE, FIRST AND SECOND STRUCTURES (HNTB CORPORATION)

) EXTENSION OF AGREEMENT CS-13-08B GENERAL ENGINEERING CONSULTING SERVICES FOR THE DELAWARE MEMORIAL BRIDGE, FIRST AND SECOND STRUCTURES (WSP USA)

We have two identical requests to extend the contracts with our bridge general engineering consultants HNTB and WSP for 2 additional years. The contracts began in 2014 and the term is for 4 years with an option to renew for 2 additional years. The 4

year term expires in September and we would like to exercise this option for 2 years. As I mentioned last month, there are 2 reasons why we would like to extend these contracts. First of all, the firms have done very satisfactory work in the last 3.5 years. Second, we currently have 4 out of our 5 general engineering contracts (GECs) expiring this year and one early in 2019. It is extremely labor-intensive for our engineering staff to engage in the procurement process for all of these contracts at the same time. It would be better to stagger the GECs so that a couple of them come up for renewal or replacement each year. The authorizing resolutions for both contracts have identical language that specifies that exercising the renewal clause requires the approval of the Projects Committee and the Chair and the Vice Chair of the Board. Staff therefore recommends the approval of the 2 year extension of the contracts with HNTB and WSP as our bridge general engineering consultants.

A motion was made by Committee Chair Ransome, seconded by Commissioner McCann and the Projects Committee concurred with the recommendation to renew the contracts with HNTB and WSP for 2 years.

## ) LARGE SHIP PASSING UNDER THE BRIDGE

About 2 months ago we became aware that a ship, the Zhen Hua 16, would be passing under the bridge in March, carrying the extra tall cranes to the port of Philadelphia. Vice Chairman Lowe is very familiar with this issue due to his day job as a pilot. We have attended several meetings and participated in multiple conference calls convened by the Coast Guard to plan for this ship's passage. It is the Coast Guard that has the final say as to whether a ship gets to pass under the bridge. The matter is much more complicated than measuring the height of the bridge and the ship and calculating the difference between the two. The Coast Guard and the pilots have been relying on charts from the National Oceanic & Atmospheric Administration that say the bridge's clearance at high tide is 188 feet, which means that the clearance is a little over 193 feet at low tide. The height of the ship plus cranes was announced as approximately 189 feet, which means that the ship will fit under the bridge only at low tide, and then only by a few feet.

The first issue was that those clearance figures are based on the bridge as originally designed. Given that our spans are now 50 and 68 years old, we believed that they have sagged somewhat. The bridge also slopes, and the towers of the crane are about 100 feet apart, so we cannot rely on only the clearance figure at the channel's mid-point, which is not the same point as the mid-point of the bridge. So we asked WSP, one of the bridge general engineering consultants, to resurvey both spans for the entire 800 feet width of the channel. We also asked them to computer model the bridge at different temperatures. The warmer the weather, the lower the clearance as the steel expands. At 80 degrees outside, the bridge will be about a foot and a half lower than at 40 degrees outside. We also had them model the bridge at maximum load conditions, in other words, how much would the bridge sag if it were jammed with bumper to bumper

backed up vehicles. It turns out that under such conditions, the bridge might sag another 4½ feet. The latter number made it clear that, to be 100% sure that the bridge does not sag under maximum load conditions, we need to keep traffic off the bridge for 30 minutes or so while the ship passes underneath. Given the inconvenience to the public, we have worked with the Coast Guard to select a passage time when traffic is relatively low. Keeping traffic off the bridge will also eliminate the risk of rubber-necking accidents.

Finally, we installed a piece of electronic equipment called an air gap sensor on the underside the bridge. Since we installed the sensor on March 1, we have been receiving 24/7 readings on exactly how much clearance there is between the water level and the lowest point on the bridge. The interesting thing we have seen already over just a 2-week period is a nearly 7 feet variance between the maximum vertical clearance numbers at the low tide times each day. Tidal conditions vary with wind, weather, and phases of the moon. When the Zhen Hua passage occurs, which is currently scheduled for low tide this Thursday at about midnight, we expect the vessel to clear by about 4½ feet, assuming the tides are back to normal after the current storm. However, we will not rely merely on projections. Thursday night we will have a temporary command post set up in the Julia Building with our engineering, maintenance, and police staffs along with the Coast Guard. We will be in communication with the ship's pilot, plus the pilot can read the air gap sensor data himself off the website. That way, the pilot will know exactly how much clearance there is when approaching the bridge. I want to conclude by saying, and I know our Executive Director will second this notion, that Vice Chairman Lowe has been invaluable to staff during this process.

We have already learned that a similar ship will be coming up the river this time next year, so the investments we have made in the survey and the air gap sensor will have future utility as well. And even after that, now that the Panama Canal has been expanded, we can probably expect to see more, larger and taller vessels coming up the river on a more regular basis. This is also the reason why we are making an investment into installing the ship collision system on the bridge.

#### 8. Open Discussion/Other Issues:

##### ) SNOW STORMS

The Board discussed the accident involving several tractor-trailers on the bridge during last week's snow storm and how the Authority has revised its snow storm preparedness. The CEO stated that DRBA police would arrange for towing companies to be on-call during future storms, and that the snow plowing process is being reviewed.

9. With no further business to discuss, Committee Chair Ransome made a motion to adjourn seconded by Commissioner Ratchford and the Projects Committee adjourned at 11:33 a.m.