

COMMONWEALTH OF MASSACHUSETTS
Energy Facilities Siting Board

In the Matter of Colonial Gas Company)
d/b/a National Grid, Project Change Filing)

EFSB 05-02A

TENTATIVE DECISION
ON SAGAMORE GAS PIPELINE AUGMENTATION
PROJECT CHANGE FILING

Robert J. Shea
Presiding Officer
August 5, 2014

On the Decision:

John Young

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LIST OF ABBREVIATIONS

Colonial	Colonial Gas Company d/b/a National Grid
<u>Colonial Decision</u>	The final decision issued as <u>Colonial Gas Company</u> , 15 DOMSB 269 (2006)
CCC	Cape Cod Commission
Company	Colonial Gas Company d/b/a National Grid
dba	A-weighted decibels
Department	Department of Public Utilities
DRI	Development of Regional Impact
Eastern Segment	The non-contiguous portion of the Project that would consist of approximately 1.6 miles of twelve-inch diameter pipe in Harwich
EEA	Executive Office of Energy and Environmental Affairs
Final Decision	The final decision issued as <u>Colonial Gas Company</u> , 15 DOMSB 269 (2006)
MAOP	Maximum Allowable Operating Pressure
MEPA	Massachusetts Environmental Policy Act
Middle Segment	The non-contiguous portion of the Project that would consist of approximately 4.9 miles of twelve-inch diameter pipe in Yarmouth, Dennis, and Harwich
Notice	A Notice of Public Comment Hearing that was issued on May 29, 2013, and published in the Cape Cod Times and the Boston Globe on June 11 and June 18, 2013
Original Proceeding	The proceeding begun by the filing of a Petition by Colonial Gas Company seeking permission to construct the Project. The Petition was approved by the Siting Board on May 17, 2006.
PCF	The Project Change Filing that commenced the instant proceeding
Petition	The petition filed by the Company seeking to construct the Project.

Phases I and II	The portion of the Western Segment in Sandwich from Route 130 to Chase Road
Pipeline	Phases I and II of the Western Segment which, in total, would consist of approximately 4.4 miles of 20-inch diameter gas pipeline located in Sandwich along Service Road.
Project	Three new non-contiguous segments of natural gas pipeline, approximately 13.1 miles in combined length, to be constructed in the towns of Sandwich, Barnstable, Yarmouth, Dennis, and Harwich. The Project was approved by the Siting Board on May 17, 2006.
Project Change	The proposed realignment of Phase I and II of the Western Segment and the proposed use of hydrostatic pressure testing instead of pneumatic testing
Project Change Filing (or "PCF")	Company's submission of the proposed Project Change to the Siting Board on October 9, 2012
psig	Pounds per square inch gauge
Representative Hunt	State Representative Randy Hunt of Sandwich, an intervenor in the instant proceeding
Siting Board (or "Board")	The Massachusetts Energy Facilities Siting Board
Town	The Town of Sandwich
Western Segment	The non-contiguous portion of the Project that would consist of approximately 6.6 miles of 20-inch diameter pipe in Sandwich and Barnstable

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The Energy Facilities Siting Board (“Siting Board” or “Board”) hereby APPROVES, subject to the conditions set forth below, the project change (“Project Change”) proposed by Colonial Gas Company d/b/a National Grid (“Company” or “Colonial”).

I. SUMMARY OF APPROVED PROJECT AND PROJECT CHANGE REQUEST

A. Description of the Project as Approved by the Siting Board in 2006 and Current Status

On May 17, 2006, the Siting Board, acting pursuant to G.L. c. 164, § 69J, approved Colonial’s petition (“Petition”) to construct three new non-contiguous segments of natural gas pipeline approximately 13.1 miles in combined length in the towns of Sandwich, Barnstable, Yarmouth, Dennis, and Harwich (the “Project”). Colonial Gas Company, 15 DOMSB 269, 276 (2006) (“Colonial Decision” or “Final Decision”).¹ The three new pipeline segments were designed to augment the Company’s existing Sagamore Line, a 42-mile distribution pipeline located on Cape Cod. Colonial Decision at 276. The three segments were referred to as the Western Segment, the Middle Segment, and the Eastern Segment. Id. at 276-278. The Western Segment would consist of approximately 6.6 miles of 20-inch diameter pipe in Sandwich and Barnstable. The Middle Segment would consist of approximately 4.9 miles of twelve-inch diameter pipe in Yarmouth, Dennis, and Harwich. The Eastern Segment would consist of approximately 1.6 miles of twelve-inch diameter pipe in Harwich.

Colonial has further subdivided the Western Segment of the Project into three contiguous segments designated, west to east, as Phases I, II, and III. The Project Change would affect only Phases I and II of the Western Segment which, in total, would consist of approximately 4.4 miles of 20-inch diameter gas pipe located in Sandwich (“Pipeline”). Phase I (approximately 11,000 feet in length) would originate at the Algonquin Gas Transmission (“Algonquin”) take station in Sandwich (located approximately 190 feet west of Route 130) and continue eastward along Service Road to a tie in at the existing Sagamore Line at Quaker Meetinghouse Road in Sandwich where Phase II (an additional 12,000 feet) would begin and continue along Service

¹ The Siting Board proceeding in which the Colonial Decision was issued, EFSB 05-2, is referred to here as the “Original Proceeding.”

Road to another tie in with the existing Sagamore Line at Chase Road in Sandwich (Exh. NG-1, at 6).²

Construction of the Middle Segment has been completed and is currently operational. The Company indicated that following construction of Phases I and II of the Western Segment, Phase III of the Western Segment and the entirety of the Eastern Segment will be permitted and constructed as demand warrants (id. at 1).

B. Description of the Project Change Proposal

Pursuant to the Project Change, Colonial seeks to modify the Project in two key respects: (1) re-align the Pipeline route, moving the approved Pipeline location approximately 15 feet northward; and (2) change the method of testing the Pipeline from air pressure testing to water pressure testing to facilitate a potential future increase in the Maximum Allowable Operating Pressure (“MAOP”) from 270 pounds per square inch gauge (“psig”) to 575 psig (Exh. NG-1, at 1).

1. Realignment of the Pipeline Route

As originally approved, the Pipeline would be located along the northern paved edge of Service Road (Exh. NG-1, at 1). Pursuant to the Project Change, the Company seeks permission to move the Pipeline route approximately 15 feet northward, into the unpaved and largely wooded buffer area of the 100-foot-wide Service Road layout, just south of the fence marking the edge of the layout for Route 6 (id. at 1-6). Service Road is a two-lane roadway owned and maintained by the Town of Sandwich (“Town”) that lies parallel to, and directly south of U.S. Route 6, with a layout that is contiguous to the U.S. Route 6 layout (id. at 4-5, and at Figures 2, 5). The Company is proposing the Project Change in response to concerns expressed by the director of the Sandwich Department of Public Works (“DPW”) (who also is the Town Engineer), the director of the Sandwich Planning and Development Department (“Planning”), and the superintendent of the Sandwich Water District (id. at 4, and Appendix C). These Town

² Phase III, which is not at issue in this proceeding, would commence at the tie in at Chase Road and would continue into Barnstable and end at a point where an existing NSTAR right-of-way crosses Service Road just west of Route 149. Completion of Phase III would also complete the Western Segment.

officials requested the Pipeline realignment given the existing density of utilities within Service Road and their concerns regarding the Town's ability to protect and maintain existing utilities as well as construct additional utilities the Town is considering for the future, including a new water line and a new sewer line (id. at 4-6).³

The above-mentioned Town officials requested the realignment of the Pipeline route based on the following objectives: (1) ensuring the safety of the public and utility workers; (2) avoiding possible damage to or disruption of existing water supply and fire hydrant lines; and (3) reducing costs to the Town for installation, maintenance, and repair of its present and future utility and roadway infrastructure (id. at 5 and Appendix C). The DPW director asserted that the approved location would necessitate cutting the pavement to install the Pipeline and would not be allowed by the Town unless the road were in disrepair and/or scheduled for improvements (id. at Appendix C). The Planning director noted that the Project Change would further the Town's plan to build an off-road bicycle path as part of the Claire Saltonstall Bikeway (a Boston-to-Provincetown combined on-road and off-road route) (id.). The DPW director indicated that relocating the Pipeline alignment could provide a dual benefit by serving as a graded and cleared base that could be used for such an off-road bicycle path (id.).

In response to the request by the above-mentioned Town officials, the Company conducted engineering and environmental analyses of the requested realignment and determined that the realignment would be an improvement to the Company's originally proposed and approved Pipeline location (id. at 5). After completing its analyses, the Company decided to propose the requested realignment of the Pipeline route as part of the present Project Change Filing.

³ On portions of the north side of Service Road there is an existing 16-inch diameter water main and a fire hydrant line, located within a few feet of the approved Pipeline route (Exh. NG-1, at 5 and Appendix C); on the south side of Service Road there is an existing twelve-inch diameter gas pipeline (with a MAOP of 270 psig) and a six-inch diameter gas distribution main (id., Appendix A and E).

2. Change in Method of Testing the Pipeline

In the Final Decision, the Siting Board approved the Company's proposed pressure-test method of using air or nitrogen ("pneumatic testing"). In the Project Change, the Company proposes to pressure test the Pipeline using water ("hydrostatic testing"). Hydrostatic testing could qualify the Pipeline for operation at a MAOP of 575 psig rather than 270 psig as approved in the Final Decision.⁴ Despite the proposed changes in the testing method and the potentially increased MAOP, the Company stated that the Pipeline design, materials and construction method would not require any changes (Exh. NG-1, at 11). The Company indicated that it does not have any forthcoming plans to actually operate the Pipeline at a pressure above the previously approved MAOP of 270 psig (*id.* at 1-2). However, the Company noted that the increased MAOP would allow for greater gas delivery capacity on its system, if needed in the future (*id.* at 11).

The Company stated that pre-operational hydrostatic pressure testing would preclude the need to test the line again to secure the higher MAOP in the future – which would otherwise require taking the Pipeline out of service for a period of time (*id.*). The Company noted that, if the Pipeline is qualified for a MAOP of 575 psig, then to effect the increase in operating pressure to 575 psig the Company would notify the Pipeline Engineering and Safety Division of the Department of Public Utilities (the "Department") and provide the Department with its plans for increasing the pressure in accordance with federal and Department regulations (RR-EFSB-9). The Company acknowledged that, with a successful pre-operational hydrostatic test and notice to the Department, it would not need to secure formal approval from the Department prior to increasing the operating pressure of the Pipeline (*id.*).

II. PROCEDURAL HISTORY

A. Project Approval in Original Proceeding: EFSB 05-2

Pursuant to G.L. c. 164, §69J, the Siting Board approved the petition of Colonial to construct the Project in the Final Decision.⁵ The Final Decision approved construction through

⁴ In order to test the Pipeline to qualify for a MAOP of 575 psig, the line must be pressurized to 862 psig (Exh. NG-1, at 11).

⁵ At the time of that decision, Colonial did business as KeySpan Energy Delivery New England (Colonial Decision at 276).

December 31, 2015. No appeal was taken from the Final Decision. After the Final Decision was issued, the General Court enacted statutes intended to stimulate job growth that extended the deadlines of many permits and approvals then in effect, including Siting Board approvals, for a period of four years beyond their original expiration date. Section 173 of Chapter 240 of the Acts of 2010; Sections 74 and 75 of Chapter 238 of the Acts of 2012. Consequently, the 2006 Siting Board approval of Project construction is effective through December 31, 2019.

B. The Filing of the Project Change and Related Events

In the fall of 2012, the Company filed notices or petitions relating to the proposed Project Change with three separate administrative agencies. On September 17, 2012, the Company submitted a Notice of Project Change regarding the revised route for the Pipeline to the Massachusetts Environmental Policy Act (“MEPA”) Office of the Executive Office of Energy and Environmental Affairs (“EEA”) (Exh. NG-1, at 2). On September 28, 2012, the Secretary of EEA issued a certificate finding that “the project change is insignificant and does not require the preparation of an Environmental Impact Report” (Exhs. NG-1, at Appendix B; NG-2, at 2-2, and Attachment H).

On October 9, 2012, the Company submitted the proposed Project Change (“Project Change Filing” or “PCF”), designated as EFSB 05-02A, to the Siting Board.

On October 15, 2012, the Company submitted a Development of Regional Impact (“DRI”) application to the Cape Cod Commission (“CCC”) for construction of the Pipeline (Exh. NG-2). The DRI application included the revised alignment and testing protocol as proposed in the PCF with the Siting Board (Exhs. NG-2, at 2-3 to 2-6; NG-14). The CCC held three public hearings in which the public had an opportunity to provide input (Exh. NG-17, at 3-4). The CCC issued a final decision on February 28, 2013, approving construction of the Pipeline, as described in the DRI (id.).⁶ This DRI submission to the CCC was

⁶ The DRI application describes the proposal for testing the Pipeline so that it may be qualified to operate at a MAOP of 575 psig (Exh. NG-2, at 2-4 through 2-6). The testing procedure described in the DRI application is identical to the testing procedure described in the PCF (id.). However, the final decision of the CCC does not specifically address the testing process (Exh. NG-17).

the first detailed review of the Western Segment of the Project by the CCC.⁷

C. Public Hearing, Discovery, Evidentiary Hearing, Briefs

Following approval of the DRI by the CCC, a significant number of local residents and officials expressed concerns about the PCF and urged the Siting Board to get additional public input. On June 3, 2013, State Representative Randy Hunt of Sandwich submitted a petition opposing the installation of the Pipeline on the north side of Service Road that was signed by approximately 1,100 local residents (Late-Filed Motion of Representative Hunt to Intervene at 1). Numerous additional objections from Sandwich residents were submitted by mail and email, including a letter from the Town of Sandwich Board of Selectmen dated April 16, 2013 (Exh. EFSB-LT-1).⁸ The Presiding Officer responded to the Selectmen's letter by correspondence dated May 17, 2013 (Exh. EFSB-LT-2).⁹

On May 29, 2013, the Siting Board issued a Notice of Public Comment Hearing ("Notice") for a public comment hearing at Sandwich High School on June 26, 2013.¹⁰

⁷ On March 17, 2006, KeySpan filed with the CCC an application seeking Master Plan approval of the entire 13.1 mile pipeline Project (including the Western Segment) and specific DRI approval for the first 12,000 feet of the pipeline in the Town of Yarmouth, referred to as Phase I of the Middle Segment. On August 10, 2006, the CCC denied both KeySpan's request for Master Plan approval of the entire 13.1-mile pipeline Project and its request for specific DRI approval of Phase I of the Middle Segment. In response, KeySpan filed an Application for a Certificate of Environmental Impact and Public Interest with the Siting Board on October 12, 2006, seeking an "override" regarding the CCC's denial of the Middle Segment, as well as other related local permits. On June 22, 2007, the Siting Board approved KeySpan's Certificate request in EFSB 06-1 that had the effect of granting DRI approval for construction Phase I of the Middle Segment.

⁸ The letter expressed the Board of Selectmen's concern over safety issues raised by the construction of the Pipeline. The Selectmen requested that the Siting Board consider "alternative routes" (Exh. EFSB-LT-1).

⁹ In his response, the Presiding Officer noted that the Pipeline route had already been approved in the Original Proceeding, and that no appeal had been taken from that decision (Exh. EFSB-LT-2, at 3). Therefore, the Company would retain the right to construct the Pipeline on the previously approved route if the Project Change were denied (*id.*).

¹⁰ The Company published the Notice in both the *Cape Cod Times* and the *Boston Globe* and distributed the Notice to various Town offices and municipal locations; copies of the

Representative Hunt intervened as an additional party in the Project Change proceeding, joining the parties in the Original Proceeding: the Towns of Yarmouth and Dennis (jointly); and Andrew Collentro, a Sandwich resident. The limited participants remained from the Original Proceeding: NSTAR Electric & Gas Corporation d/b/a NSTAR Electric; Russell and Suzanne Detore of Attleboro; and Diane Pinto of West Dennis.

The Siting Board staff and Representative Hunt issued several rounds of information requests to the Company. Both the Company and Representative Hunt submitted pre-filed testimony. Siting Board staff held an evidentiary hearing on November 12, 2013, at which Representative Hunt and his witnesses were present and participated. The Company and Representative Hunt submitted their initial briefs on December 23, 2013, and their reply briefs on January 10, 2014.

On May 6, 2014, the Siting Board staff distributed the Issues Memorandum to all Siting Board members, all parties, and all limited participants. On May 13, 2014, the Company and Representative Hunt submitted comments on the Issues Memorandum. In its comments, the Company represented that it had agreed to a number of visual mitigation and safety measures in this proceeding in addition to the conditions imposed by the CCC in its decision (Colonial Comments at 8).

The Siting Board held a public meeting on May 15, 2014, at which Representative Hunt and counsel for the Company addressed the Board. The Board discussed the matters raised in the Issues Memorandum and by the parties (Transcript of May 15, 2014, Public Meeting at 1-115). The Board directed the staff to prepare a tentative decision approving the Project Change with conditions (*id.* at 112, 115).

III. SCOPE OF REVIEW

A. Standard of Review for a Project Change

When presented with a project change filing, the Board has previously stated that it will not inquire further about the proposed change if the change does not appear to alter in any

Notice were also served by first class mail to owners of all property abutting the Pipeline ROW and to owners of land directly opposite on any public or private street as well as to abutters to the abutters within 300 feet of the edge of the ROW. The Company produced a return of service at the Public Comment Hearing attesting to the publication and service of Notice (Public Comment Hearing Tr. at 15).

substantive way either the assumptions or conclusions reached in the Board's underlying decision. Cape Wind Project Change, 16 DOMSB 194, 202 (2008) citing Berkshire Power Decision on Compliance, 7 DOMSB 423, 437 (1997); see also Fore River Project Change, 15 DOMSB 403, 409 (2006). In this case, the Board has chosen to conduct further inquiry, including: a public hearing and receipt of written public comments; additional opportunities for intervention; extensive discovery and the presentation of intervenor testimony; an evidentiary hearing; and initial and reply briefs. These steps have established a substantial record upon which the Board can apply its standard of review for a project change, described below.

Where the Siting Board determines that further inquiry is warranted, as in this case, the Siting Board focuses the additional inquiry on the issues raised by the proposed project change. Ruling on Intervenors' Request that Brockton Power's Project Change Filing be Treated as a New Petition, EFSB 07-7A/D.P.U. 07-58/07-59, at 12 (July 16, 2010); IDC Bellingham – Compliance, 11 DOMSB at 38-39 (noting that “expand[ing] the scope of review to matters other than the changes to the proposed facility presented in the [filing] would raise administrative efficiency concerns and could result in the relitigation of issues decided in the underlying case”). Where the Siting Board conducts further inquiry regarding a project change filing, the Siting Board's standard of review is grounded in and consistent with its broad statutory mandate to ensure a reliable supply of energy, with a minimum impact on the environment, and at the lowest possible cost – while according due recognition to its prior review and findings. See Box Pond Association v. Energy Facilities Siting Bd., 435 Mass, 408, 419 (2001).

B. Case Law on the Reconsideration of Previous Decisions

One of the issues disputed by the parties – described in more detail below – is whether the Siting Board, occasioned by the Project Change, should, in effect, reconsider the conclusion reached in the Final Decision that the Service Road route is superior to the alternative routes evaluated in the Original Proceeding. Pursuant to applicable statutes, parties to a final decision of the Siting Board may take an appeal from that decision directly to the Supreme Judicial Court. G.L. c. 25, § 5, and c. 164, § 69P. No appeal was submitted regarding the Final Decision.

The failure of a party to take an appeal, however, does not permanently preclude the Board from reexamining a particular conclusion it has reached. The Supreme Judicial Court has held that administrative agencies, such as the Board, have the power to reconsider previous

decisions. Stowe v. Bologna, 32 Mass.App.Ct. 612, 615 (1992) (citations omitted) aff'd 415 Mass. 20 (1993) (“In the absence of express or perceived statutory limitations, administrative agencies have an inherent authority to reconsider their decisions”). This power, however, must be “sparingly used” so that administrative decisions retain the “resolving force on which persons can rely.” Id. at 616. In support of its holding, the Stowe court noted that while an administrative decision has an adjudicatory component, it also frequently has a regulatory component that “may warrant reexamination in the light of changes in regulation, purpose, later decisional law, or applicable on-the-ground facts.” Id.

Potential reconsideration of the route selection is addressed in Sections IV.A.2 and 3, Section IV.B, and Section IV.C.2, below.

IV. REALIGNMENT OF THE PIPELINE ROUTE

A. Description

The Company’s PCF evaluated a range of issues relating to the proposed Pipeline realignment including: safety considerations, environmental impacts, construction methods, and cost. During the course of the proceeding, Representative Hunt and Siting Board staff asked additional questions about an alternative route that used both NSTAR’s right-of-way (“ROW”) and Route 130 (Exhs. EFSB-10; RHDC-03). This alternative route (“NSTAR ROW”) was evaluated previously in the Original Proceeding, but it was neither selected by the Company nor found by the Siting Board to be the preferred route. Colonial Decision at 311-315, 349.

1. Relocation Off Service Road

The Company stated that it would need to clear a ten- to 15-foot-wide strip of the Service Road layout from the existing 70- to 120-foot-wide wooded buffer area between the north side of Service Road and south side of Route 6 (Exh. NG-1, at 7-8). The land surface would be re-graded as needed, a trench dug, the Pipeline assembled and covered with fill, and the land re-seeded (id. at 7). The Company indicated that the construction methods for the Project Change would be similar to those of the originally approved Pipeline, although the off-road location would allow for longer sections of pipe to be used (id. at 10). The Company proposes to maintain the approved construction hours and related procedures included in the Final Decision (Exh. EFSB-7).

The PCF describes the proposed Pipeline location generally as 15 feet north of Service Road (Exh. NG-1, at 6). The Company subsequently indicated that, depending on the slope of the road's embankments in some places, it might be necessary to locate the Pipeline more than 15 feet north of Service Road or, alternatively, to place the Pipeline within the paved edge of the road to avoid construction difficulties (Exhs. EFSB-6; EFSB-14; EFSB-15; EFSB-19(1)). Due to the slope conditions, the Company indicated that the Pipeline would likely cross onto and off pavement several times.¹¹ The Company pledged to make every reasonable effort to stay off pavement, but stated that it would restore any roadway work areas with an application of asphalt for the full width of the road (Exh. EFSB-6).

Colonial stated that soil in the Service Road area is generally a mix of sand and gravel (Exh. EFSB-3). Due to the relative inability of sand to hold a steep slope, Colonial stated that finished slopes adjacent to the Pipeline must be less than 1:3 (that is, a rise of one foot for every three feet in length – or a maximum 33 percent grade) (*id.*). The Company intends to reduce the steep grades by cutting and filling, as needed, and the construction will also employ standard soil stabilization techniques (Exh. EFSB-18). In areas where less than three feet of cover can be maintained, the Company stated that the Pipeline will be protected with a concrete cap or a steel plate barrier installed above the pipe (Exh. EFSB-3).

Where in-road construction may still be needed with the Project Change, the Company indicated that the Pipeline would be located at least ten feet away from the existing water main (Exhs. EFSB-19; EFSB-21). The Company agreed to submit its plans to protect the Sandwich Water District mains to the district superintendent prior to starting work (Exh. EFSB-10, at 4).

2. Alternative Route Using NSTAR ROW

In the Original Proceeding, the Siting Board approved the Company's route along Service Road ("Primary Route") after considering the merits of a number of routing alternatives, including the NSTAR ROW route. Colonial Decision at 311-315, 325-330, 336-349. From the Algonquin take station at the intersection of Route 130 and Service Road in Sandwich, the NSTAR ROW route runs southerly along the side of Route 130 approximately one mile, then

¹¹ The Company assumed there would be eleven such instances in its estimate of the cost of providing mitigation measures (Exh. RHDC-01; RR-EFSB-7).

easterly on the NSTAR multi-circuit transmission ROW to its intersection with Service Road just to the west of the Route 6/Route 149 interchange. Id. at 309.

The Siting Board concluded that the Primary Route along Service Road would be preferable to the NSTAR ROW alternative route with respect to impacts relating to wetlands, water resources, land use and land resources, and comparable with respect to noise and traffic impacts. Overall, the Siting Board found the Primary Route to be preferable to the NSTAR ROW route with respect to environmental impacts. Colonial Decision at 347. The Siting Board found that the Primary Route would cost approximately \$1,000,000 less than the NSTAR ROW route and that the Primary Route would be slightly more reliable than the NSTAR ROW route, given the greater certainty with which the segment could be approved and constructed. Id. at 348-349. Ultimately, the Siting Board concluded “the Western Segment primary route would be superior to the alternative route with respect to providing a reliable energy supply to the Commonwealth with a minimum impact on the environment at the lowest possible cost.” Id. at 349.

3. Safety of Project Change Route Compared to the Approved Route on Service Road

The Company contends that the record in this proceeding establishes that the Pipeline is incrementally safer with the Project Change than the approved Service Road route (see Exhs. NG-1, at Section 3.5; EFSB-10; EFSB-11; EFSB-24; EFSB-25; EFSB-26; RHDC-29; RHDC-32; RR-EFSB-3; RR-EFSB-5; RR-RH-2). The Company noted that inadvertent “dig ins” are the principal cause of pipeline accidents across the country and that the Project Change would further reduce the risk of dig ins by keeping the Pipeline farther away from other road and utility work activities (Tr. at 49). The Project Change would also locate the Pipeline approximately 15 feet farther away from the residences on the south side of Service Road, providing somewhat greater distance than the approved route in the event of a pipeline incident.

Colonial stated that the overall safety of any pipeline is established by the safety of the design, the proper specification and fabrication of the pipe, its proper installation, the performance of necessary tests as installation is completed, and an ongoing program of testing and maintenance (id.). The Company described a number of features in the Project Change that are intended to ensure safety, including: pipeline design, operation, and maintenance in

accordance with state and federal regulations; high quality new steel pipe; factory coating for corrosion protection; use of certified welders; radiography of all welds; cathodic protection; use of at least three feet of cover over the pipe; visible markers conforming to U.S. Department of Transportation requirements; hydrostatic testing to almost three times the initial MAOP; monitoring by a computerized system of supervisory control and data acquisition (“SCADA”); an annual leak survey by vehicle; and internal inspection of the pipe with automated devices known as “pigs” (Exh. EFSB-10, at 12-13).

Colonial acknowledged that, in general, pavement would better distribute the weight of vehicles passing over a pipeline than would a pipeline covered only by soil. However, with the Project Change, the Pipeline would be located where vehicle travel normally does not occur on Service Road. Colonial stated that soil in the Service Road area is a sandy loam, capable of supporting a truck with a rating of 32,000 pounds per axle above the proposed Pipeline (with the anticipated MAOP of 270 psig) provided that at least three feet of soil cover the Pipeline (RR-EFSB-1; RR-EFSB-7). To provide extra protection for the Pipeline with the Project Change, the Company indicated that it would install cathodically protected steel plates where the Pipeline crosses the paved edge of Service Road (RR-EFSB-7).¹² This would provide added protection for the Pipeline in the event that a heavy truck were to drive off Service Road pavement directly above the point where the Pipeline crosses under the pavement (*id.*). The Company stated that the disadvantages of such plates would be their potential interference with future road paving work, and also the cost, which would be approximately \$48,400 assuming a total of eleven cross-over locations (*id.*).

The Company noted that some safety features and measures are common to both Service Road routes. For example, the Company referenced its emergency response planning and its Emergency Response Plan (“ERP”) (submitted annually for review and approval to the Department) in ensuring safety of the Pipeline (Exh. RHKL-1). The Company’s ERP covers a range of circumstances (*e.g.*, gas leaks, fires, explosions, etc.) for which an emergency response

¹² At a minimum, the Pipeline would need to cross Service Road in two locations to tie in to the Company’s existing Sagamore Line. Depending on the slope and soil conditions of the layout beyond the unpaved north shoulder of Service Road, the Company indicated that the final design of the Pipeline (to be developed in consultation with the chosen contractor) might require the Pipeline to remain under the pavement in additional locations (Exhs. EFSB-14; EFSB-15; EFSB-18).

may be necessary (*id.*). In connection with its ERP, the Company provides ongoing emergency, operating, and maintenance training to Company personnel. The Company stated that it would provide training to the Sandwich Fire Department and any other interested Town officials that would focus on communication and incident response relating to the Pipeline (Exh. EFSB-10(d)). The training would also involve a simulated incident to help prepare first responders for a variety of potential emergency scenarios, including matters of egress for abutters, access for Company personnel during heavy traffic conditions, and other scenarios identified by Representative Hunt and area residents.

4. Safety of Project Change Route Compared to the NSTAR ROW Route

In comparing the Service Road routes to the NSTAR ROW alternative route with regard to safety, Colonial indicated that the Pipeline would be safe in either location (Exh. EFSB-10). However, Colonial pointed out several factors where the safety profile of the two routes would differ in the event of a Pipeline break and fire. The Company stated that the response time along the NSTAR ROW would be delayed because the NSTAR high voltage lines serving the area most likely would need to be taken out of service before emergency vehicles could use water for firefighting (*id.* at 6). In addition, the Company noted that depending on the terrain and time of year, accessing and traveling along an electric transmission right of way could be more challenging for multiple emergency vehicles (*id.*).

Furthermore, the Company noted that the NSTAR ROW route has a sizeable residential area abutting its south side and that the homes are located relatively close to the edge of the ROW (*id.* at 6; Tr. at 52).¹³ The Company indicated that the proximity of the homes to the NSTAR ROW route would increase the potential for dig ins relative to the Service Road route, which has no developable land and no nearby homes on the north side of the street for Phases I and II (Tr. at 51-53). In addition, the portion of the NSTAR ROW route along Route 130 in

¹³ To evaluate the density of residential development near a pipeline, a factor in assessing risk, the Company compared the number of residences within 300 feet of potential alignments. There are 82 homes within that distance of the NSTAR ROW route and 68 homes along the Service Road route. The Company characterized these numbers as similar and both representative of a relatively low residential density (Tr. at 57-59).

Sandwich is an area with commercial development that is also subject to concerns about third party dig ins (Tr. at 52).¹⁴

Conversely, the NSTAR ROW may be advantageous relative to Service Road with respect to access and egress safety issues. There are 28 homes located directly on Service Road and 69 homes with single-street access to Service Road (Exh. EFSB-10(b) at 3). In the event of a Pipeline fire near the point of intersection of such access with Service Road, egress by road would likely be delayed until the fire is extinguished. In contrast, the egress routes for residential areas along the NSTAR ROW do not cross or approach the NSTAR ROW route (Exhs. EFSB-10(b); RH-1, at 4).

5. Environmental Impacts

With regard to land use and visual impacts, the Project Change would require a total of approximately five acres of vegetation removal (including scrub oak, pitch pine, and various understory species) within a ten- to 15-foot wide strip along its 4.4-mile length; after construction, the area would be rough graded, stabilized, and reseeded with a field mix (Exh. NG-1, at 6-7). With the Project Change, some residents along Service Road would experience a reduction of visual buffer from Route 6, and Colonial will offer screening plantings at no cost to the residents directly along Service Road between Route 130 and Chase Road (Exh. EFSB-8). The plantings would typically be native cedar and/or pine, and would usually be planted on the homeowner's property (Exh. EFSB-8). The Company filed details of this plan with the CCC on January 15, 2013 (Exh. EFSB-9(S2) at 1, att. E). The Company indicated that planting trees for visual buffer along the north side of Service Road would be problematic

¹⁴ Additional difficulties cited by the Company with respect to using the NSTAR ROW include: (1) the requirement for legislative approval of the route, associated with its location partly on lands protected by Article 97; (2) a need for consent from NSTAR; (3) a need to obtain an easement for such construction from at least 58 of the approximately 71 property owners along the route; and (4) the increased difficulty in tying the new segments back to the existing Sagamore Pipeline (Exh. RHDC-03). Colonial Decision at 314-315. The Company noted the potential for delay resulting from these factors. In addition, the Company stated that it would need to design the Pipeline in a way to minimize the adverse effect of induced current from the power lines on the Pipeline's cathodic protection system (Exhs. RHDC-02; Tr. 59-64, 100-110; RR-EFSB-6).

because roots near the Pipeline and near the municipal water lines are undesirable, as are tree branches near the existing overhead utility lines (Exh. RHDC-27).

The proposed change in Pipeline construction method would also lead to some changes in related construction noise along Service Road (Exh. EFSB-7). First, power equipment would be used to clear trees at the start of the job, potentially including chain saws, feller bunchers (mechanical tree harvesters), trucks, and wood chippers (id.). Second, there would be a reduced need for pavement saws or vehicles used for pavement removal (id.). Colonial stated that the bulk of the work, including trenching, pipe placement, welding, and backfilling, would generate a similar amount of noise whether the Pipeline were located underneath Service Road or approximately 15 feet to the north (id.). The Company noted that it did not receive any noise complaints relating to the 4.9 miles of construction along the Middle Segment, where homes are typically closer to the street (id.).

According to the Company, existing vegetation between Route 6 and Service Road may provide as much as two A-weighted decibels (“dBA”) of attenuation of traffic noise, assuming that the woods are considered “dense” (Exh. RHDC-27). The modeling used by the Company indicates that removal of ten to 15 feet of vegetation would reduce the attenuation effect by about 0.2 to 0.3 dBA at sensitive receptor locations south of Service Road, which the Company characterized as an imperceptible difference (id.; Exh. EFSB-10(i)). The Company proposes to collect pre-construction and post-construction noise measurements, to be shared with the Town and interested abutters, to further substantiate its noise analysis (Exh. RHDC-27).

Colonial’s original plan to locate the Pipeline at the edge of Service Road would have necessitated the closure of one lane of traffic during typical construction work and the closure of both lanes of traffic for certain activities (Exh. NG-1, at 9). With the Project Change, the Company indicated that traffic flow would be maintained at all times in the eastbound lane, and that westbound lane closures would be far less frequent, with less resulting traffic congestion (id.; Exh. EFSB-29). The Company proposes to work Monday through Friday but would like the flexibility to work on Saturdays as well, in order to meet its installation schedule (Exh. EFSB-22). The Company promises to develop a traffic management plan in consultation

with the Town and to submit the plan to the Siting Board in accordance with Condition A of the Original Decision (Exh. EFSB-29).¹⁵

The area north of Service Road is mapped Priority Habitat for eastern box turtle (a species of Special Concern) by the Natural Heritage and Endangered Species Program (“NHESP”) (Exhs. NG-1, at 7; EFSB-31). The Project Change location was reviewed with the NHESP and the prior turtle protection plan from the original Pipeline location was updated to include seasonal limits on clearing and pre-work “turtle sweeps” by trained personnel. NHESP informed the Company that with the updated turtle protection plan, the Project Change would not result in a “take” of eastern box turtle (Exh. EFSB-31; NG-12). The Certificate issued by the Secretary of EEA on the Project Change finds that no adverse impacts to this state-listed species are expected (Exh. NG-1, at app. A).

There appear to be no wetlands along the modified Pipeline route, and trench depths of six to seven feet are well above typical depths to groundwater (Exh. EFSB-31). To reduce the potential for long-term impacts to groundwater from accidental fuel spills, the Company agreed during the CCC review to fuel all equipment and perform necessary maintenance at a commercial fuel station or the contractor’s facility (id.).

A prior cultural resource sensitivity assessment conducted by the Company in 2006 determined that Service Road and its environs are categorized as a “low-sensitivity area” due to the prior disturbance of the area during construction of Route 6 and Service Road (Exh. NG-1, at 9). Therefore, the Company indicated that the Project Change, like the original design, would not adversely affect cultural resources (id.; Exh. EFSB-31).

6. Project Change Cost

The Company estimated that the decreased need for pavement cutting, removal and restoration of the Project Change would more than offset the additional costs for vegetation removal, mitigation and earth work (Exh. NG-1, at 6). Based on bids already received, the

¹⁵ A modeling analysis performed by the Company indicated that the Pipeline would reduce the amount of liquefied natural gas (“LNG”) trucking (and the resulting traffic impacts) to the Company’s South Yarmouth LNG facility from off-Cape sources (Exhs. NG-1, at 12-13; NG-1, app. E, at 3).

Company stated that the Project Change would be approximately \$375,000 to \$450,000 less costly than the originally approved Pipeline (Exh. EFSB-34).

B. Positions of the Parties

1. Representative Hunt's Argument

Representative Hunt acknowledges Board precedent against re-litigating previously adjudicated issues, but he poses the following questions: “Isn’t it important to address issues as they arise whether they have administrative efficiency concerns or not? As situations and times change isn’t it important to do the right job?” (Hunt Reply Brief at 5). He further questions the Company’s assertion that that the Project Change Filing “is not a vehicle for the re-litigation of issues that have already been fully and fairly determined” (emphasis provided) (*id.* at 5-6). Representative Hunt asserts that “Everything should be ‘on the table,’ even the issue of which proposed path is the better option,” and that in his view, heretofore, the issues have “not been fully and fairly determined” (*id.* at 6).

Representative Hunt argues that the proposed Pipeline presents numerous critical issues that have not been adequately addressed by the Company. These issues include: the safety and means of egress for area residents during a potential Pipeline incident; Pipeline safety; threats to the Town Water District’s water main; fire protection adequacy; visual/noise impacts; traffic; cost; and various alleged procedural deficiencies. He cautions that approval of the Pipeline should not be granted until all such questions have been fully addressed and answered completely (Hunt Brief at 12). Ultimately, Representative Hunt concludes, “Service Road is not the best option for this proposal and that other locations need to be considered and evaluated...” (*id.*).

One of Representative Hunt’s primary concerns about the Pipeline is safety and, in particular, the limitations on egress for the residents who live on Service Road and on the various cul-de-sacs off Service Road (Exhs. EFSB-10(b); RH-1, at 4). There are 28 homes located directly on Service Road and 69 homes with single-street access to Service Road (Exh. EFSB-10(b) at 3). Representative Hunt argues that a Pipeline fire or explosion at or near the point of intersection of one of the single-street-access roads with Service Road would trap the residents (especially seniors, young children, and those with disabilities) in their subdivisions

(id.; Exh. RH-1, at 4; Hunt Brief at 2).¹⁶ Representative Hunt raises similar concerns with respect to the clients residing at the Spaulding Rehabilitation Hospital and the Mary McCarthy Hospice House, both located on Service Road (Hunt Brief at 10). This situation is exacerbated by a lack of a water main and fire hydrants along an approximately two-mile length of Service Road (Hunt Reply Brief at 7; Exh. EFSB-10(f) at 6).

Representative Hunt notes that high-pressure gas pipelines can be dangerous, as demonstrated by tragic incidents in recent years in San Bruno, California, and Sissonville, West Virginia; and even locally on Whites Path in South Yarmouth where an incident in 1991 caused property damage, injuries and shut down Route 6 (Hunt Reply Brief at 14; RR-EFSB-8).¹⁷ He contends that even with accepted safety practices “bad things can happen” (Hunt Brief at 9). Representative Hunt argues that the co-location of fire hydrants should be a required safety condition for allowing a high-pressure gas pipeline on Service Road (id.).

Representative Hunt alleges that, by failing to seek “input or permission from the Sandwich Board of Selectmen for placing the proposed pipeline within the Service Road layout,” the Company did not follow G.L. c. 164 §§ 70 and 70A (id. at 1). Representative Hunt acknowledges support for the Project Change by officials at the Sandwich Water District, the Planning Department, and the DPW, but he “question[s] the motives of a few local town officials

¹⁶ Representative Hunt calls attention to a November 2012 gas leak which, he asserts, happened on Service Road near Mill Street and in which, he contends, “property owners were not allowed to leave their homes and were trapped on Mill Street for a number of hours” (Hunt Brief at 7). The Hunt Brief does not cite to the record in support of this assertion (id.).

¹⁷ According to the Company, on June 10, 1991, a contractor apparently working for the Town of Yarmouth was grading the roadway along the north shoulder of Whites Path in Yarmouth when the grading machine “scuffed into” (i.e., punctured) the existing ten-inch steel, 200-psig gas main causing a leak (RR-EFSB-8). The Company crew responded to the incident at 10:30 a.m. (id.). The gas main ignited at 12:28 p.m., while two Company technicians were in the trench attempting repairs (id.). Both technicians were burned and were taken to the hospital with non-life-threatening injuries (id.). The gas main was shut down approximately one hour after ignition (id.). The ignition damaged an overhead electric line; the Yarmouth fire and police departments shut down Whites Path; and the Mass DOT shut down a portion of the eastbound lane of Route 6 (id.). Since this incident, the Company has implemented some new safety procedures to prevent injury to personnel working on high-pressure gas leaks (id.).

who have put the concerns of a bike path ahead of those issues and concerns of area residents” (Hunt Reply Brief at 1).

Representative Hunt notes that the Company still does not have a final design and has not yet selected a contractor even though it has been working on the Pipeline proposal for almost twelve years, making the Company’s Pipeline cost estimates unreliable in his view (*id.* at 8, 13). Representative Hunt argues that the NSTAR ROW route is not as costly or burdensome as characterized by the Company and that it should be evaluated more carefully before a potential Pipeline along Service Road – with or without the Project Change – is approved and built (*id.* at 5-6).¹⁸

Representative Hunt argues that that potential damage to the asbestos-cement water main along Service Road by construction of the Pipeline would have “an extremely negative health impact” (*id.* at 11). He observes that, notwithstanding this concern, slope conditions north of Service Road may necessitate retaining the Pipeline route close to or within Service Road in a few locations, potentially damaging the asbestos-cement water main despite the Company’s best intentions (Hunt Brief at 4).

With regard to the removal of trees and brush, Representative Hunt asserts that this would be “devastating to the character of the roadway, to the community, and to area residents” and would diminish property values (*id.* at 3; Hunt Reply Brief at 8). Representative Hunt dismisses the Company’s proposed visual mitigation measures as inadequate; he also criticizes the sound study performed by the Company, as the readings were taken only in the late fall and, he asserts, are not representative of conditions for different times of the year (Hunt Brief at 6).

Representative Hunt is concerned with traffic – whether the Pipeline is located under or north of Service Road (Hunt Reply Brief at 10). He asserts that the Company has not performed a traffic study to determine the effects of the Pipeline construction (Hunt Brief at 3-4). With a reduced vegetated visual buffer between Service Road and Route 6, Representative Hunt posits that motorists stuck in traffic on Route 6 would more easily see the opportunity to detour onto Service Road as a cut-through route (Hunt Reply Brief at 4). Representative Hunt also warns

¹⁸ Representative Hunt asserts: “Our understanding is that the EFSB never did reject the NSTAR right-of-way as the preferred pipeline route” (Hunt Brief at 10). In fact, in the Final Decision, the Siting Board found that the Service Road route was a superior route in comparison with the alternative routes evaluated, including the NSTAR ROW. See Colonial Decision at 349.

that potential Saturday work hours should not be allowed under any circumstances given the heavy traffic that occurs on summer weekends in the area (id. at 9).

2. The Company's Argument

The Company asserts that the Siting Board's precedent of not revisiting prior findings from earlier decisions is appropriate and should not be modified in this proceeding. The Company contends that the established review practice of the Siting Board in project change cases is sound as it effectively balances a number of objectives, including: (1) allowing the Siting Board and project proponents to retain as much finality as possible in final decisions; (2) avoiding the time and effort of duplicating the review of resolved matters; (3) allowing flexibility to make changes to projects as necessary while providing all parties with the opportunity to explore proposed changes and present evidence as required; and (4) ensuring that a given project, as changed, would contribute to a reliable supply of energy for consumers in Massachusetts at the lowest possible cost and with a minimum environmental impact. The Company also cites two Supreme Judicial Court cases involving the Siting Board as supporting the view that the final order of an administrative agency in an adjudicatory proceeding precludes relitigation of the same issues between the same parties. Company Brief at 10, citing Box Pond, 435 Mass. at 419; City Council of Agawam v. Energy Facilities Siting Bd., 437 Mass. 821, 829 (2002).

The Company asserts that Representative Hunt's arguments "do not rely on substantial evidence; instead, they base their concerns on conjecture, mischaracterizations of the Company's Project, and speculative theories" (Company Reply Brief at 3). The Company asserts that nowhere in Representative Hunt's Brief does he make a claim that the Project Change is an inferior proposal as compared to the Pipeline approved previously by the Siting Board (Company Reply Brief at 1-2). The Company views the majority of Representative Hunt's issues as relating to the Pipeline generally – not to the proposed Project Change – which it regards as the appropriate focus of this proceeding (Company Reply Brief at 1-2).

The Company argues that the record in this proceeding establishes that: (1) the Company would safely construct, operate and maintain the Pipeline in accordance with all applicable federal and state safety regulations; (2) the Pipeline does not present any unique or otherwise unprecedented safety considerations as compared to natural gas pipelines in other areas of the

Company's service territory; and (3) with the Project Change Filing, the Pipeline is incrementally safer than the approved Service Road route (see Exhs. NG-1, at Section 3.5; EFSB-10; EFSB-11; EFSB-24; EFSB-25; EFSB-26; RHDC-29; RHDC-32; RR-EFSB-3; RR-EFSB-5; RR-RH-2).

The Company avers that safety is of paramount importance and that the Company's track record is excellent. National Grid (the parent company of Colonial Gas) owns more than 4,000 gas main segments with a 20-inch or larger diameter throughout its Massachusetts service territory – including both urban and rural residential areas (Exhs. RHDC-29; Attachment RHDC-29; RR-EFSB-5). The Company notes that National Grid's Massachusetts distribution system includes a number of locations where: (1) there are three gas lines in a residential area on the same street (at least two of which are high-pressure lines) (Exh. RHPS-8); and (2) there are high-pressure gas distribution pipelines in residential areas where municipal water supply is not available for fire suppression purposes (RR-RH-2).

The Company does not dispute that the hypothetical incident scenarios contemplated by Representative Hunt are possible; rather, the Company contends that such scenarios are extremely unlikely events and that the Company takes great care to avoid and minimize such risks in full compliance with strict federal, state, and Company standards to which the Pipeline would be designed, constructed, operated and maintained (Company Reply Brief at 6). With regard to the pipeline incidents in San Bruno, California, and Sissonville, West Virginia, the Company asserts that it has provided detailed descriptions of those incidents, explained the lessons learned, and prepared an extensive list of precautions that would be taken by the Company to minimize the likelihood of similar events ever occurring on Service Road (Exh. EFSB-10(p), (q); Company Initial Brief at 13-14).

With respect to environmental impacts, the Company asserts that the Project Change would be comparable to, or better than, the originally approved Pipeline. The Company contends that any additional environmental impacts would be limited to the visual impacts from the clearing of vegetation and that such impacts would be minimized and mitigated by the Company's visual mitigation program (Exh. NG-1, at 7, 10).

The Company cites the record in the proceeding as establishing that noise impacts would be properly minimized. The strip of vegetation to be removed is a small portion of the typically 100-foot wide vegetated area between Service Road and Route 6 (Exh. EFSB-10(i)). The

Company asserts that noise levels decrease with distance and are also reduced by the blocking effects of intervening terrain, structures, and solid fencing (id.). The Company notes that there are wide variations in existing ambient noise levels over the course of a day and seasonally, and as a function of traffic levels and speed, road surface conditions, and weather conditions (id.). Although thick stands of trees can provide some attenuation of traffic noise from Route 6, the Company asserts that it is a decidedly second-order effect (Exh. EFSB-10, (i); Company Brief at 21). The Company asserts that its noise study establishes that the proposed removal of ten to 15 feet of trees would not cause a discernible change in noise levels at residences along the south side of Service Road (Exh. EFSB-10, (i); Company Brief at 21).

The Company indicates that the Project Change would decrease traffic impacts as compared to the approved location (Company Brief at 22). Furthermore, the Company would develop a comprehensive traffic management plan (“TMP”) to be used during construction with input from the Town and the Massachusetts Department of Transportation. The TMP will be submitted to the Siting Board in accordance with the Siting Board’s original approval of the Project in the Final Decision (Exhs. NG-1 at 10; EFSB-29). The Company also asserts that the Project would reduce the need for LNG trucking on Cape Cod, which would help reduce traffic (Exh. NG-1, at 12-13, and at Appendix E; Company Brief at 23).

The Company represents that it would use best construction practices for the Pipeline’s construction (Exh. EFSB-10(m); Company Brief at 23). The Company states that it has shown that it will take steps to minimize the risk of adverse impacts to existing utilities in Service Road during construction of the Pipeline. As an initial matter, the Company argues that it routinely performs work in close proximity to existing utilities and is experienced in implementing measures to protect those utilities (Exh. EFSB-10(c)). The Company’s gas distribution line installation and maintenance projects in urban areas typically involve work in the vicinity of cement or asbestos-cement water mains, sewer mains, and storm-water systems; thus, the Company believes its engineers and contractors possess all the necessary experience to deal with such issues (id.)

In response to Representative Hunt’s assertion that Company has not followed G.L. c. 164, § 70, the Company argues that his concerns are “premature and misplaced” (Company Reply Brief at 12-13). The Company contends that G.L. c. 164, § 70 imposes an affirmative obligation on the Company to “put all such streets, lanes and highways in as good

repair as they were in when opened” (*id.*, citing G.L. c. 164, § 70; *Boston Gas Company v. City of Newton*, 425 Mass. 697, 699-700 (1997)). The Company asserts that neither Section 70 nor Section 70A requires the Company to seek “guidance and permission” from the Town Board of Selectmen prior to obtaining approval from the Siting Board. The Company claims that it is committed to seeking approval from the Town Board of Selectmen in due course, subsequent to the Siting Board’s approval of the Project Change.

Overall, Colonial believes that relative to the approved route, the Project Change will address concerns raised by the Town of Sandwich, provide a minor cost advantage, provide an incremental safety benefit, and improve service reliability. For these reasons, the Company urges the Siting Board to approve the Project Change. (Exh. NG-1, at 10; Company Brief at 26-27).

C. Analysis and Findings on Pipeline Realignment

Although it could have opted to proceed with construction of the approved route for the Pipeline without further review by the Siting Board, the Company initiated the PCF after it considered and ultimately followed the recommendations of several Town officials who urged the Company to realign the Pipeline north of Service Road rather than place it under the pavement on Service Road. These officials advanced several reasons for the Pipeline realignment, including protecting and maintaining existing utilities under Service Road, leaving room for future utility lines, enhancing public and worker safety, avoiding damage to the recently repaved road, and, and facilitating the construction of a long-planned, off-road bicycle path. In marked contrast, Representative Hunt and many Service Road area residents have voiced numerous concerns about the Project Change, including those related to safety, environmental impacts, traffic, and costs.

Service Road area residents have been far more engaged in the Project Change proceeding than they were in the Original Proceeding. In this proceeding, the Siting Board has performed a full and thorough review of the Project Change, including a public comment hearing in Sandwich, opportunities for additional intervention, and testimony by intervenor witnesses. Over the Company’s objections, the Siting Board allowed Representative Hunt to pose a number of questions to the Company about the merits of an alternative route along the NSTAR ROW, which had been previously rejected by the Board in the Final Decision.

The primary issue, among many raised by Representative Hunt, is safety relating to the Project Change. It is apparent that many of Representative Hunt's safety concerns are relevant to the approved route as well. Safety concerns are also central to Representative Hunt's recommendation for the Company and the Siting Board to reconsider use of the NSTAR ROW instead of Service Road for the Pipeline route.

By asking the Board to reconsider the use of the NSTAR ROW, Representative Hunt is seeking reconsideration of an issue decided in the Final Decision. As noted above, the power to reconsider Siting Board decisions must be "sparingly used." Stowe v. Bologna, 32 Mass.App.Ct. 612, 615 (1992) (internal citations omitted) aff'd 415 Mass. 20 (1993). A distinction must be made, however, between reconsidering an earlier decision and developing a record on the issue as to whether such reconsideration is appropriate. The Board does not agree with the Company that the limitations on reconsidering earlier decisions should constrain the Board from developing a complete record on the issues raised by Representative Hunt. To the contrary, allowing Representative Hunt to introduce evidence on safety and other issues has assisted the Board in addressing whether this case constitutes one of those rare instances that justify reconsidering an earlier decision.

Consequently, while the Board is mindful of the judicial and statutory constraints in revisiting the Original Decision, the Board has allowed the parties in this proceeding to develop a comprehensive record that informs the questions before the Board. These questions address not only which Service Road route is superior, but also whether any new facts or circumstances since issuance of the Final Decision warrant the use of the NSTAR ROW alternative instead of one of the Service Road route options. The Board believes that the comprehensive scope of review (including the NSTAR ROW alternative) permitted in this proceeding is warranted given the numerous safety-related concerns raised by Service Road residents during the public comment hearing and by Representative Hunt.

Accordingly, in this Decision, the Board considers not only whether the PCF should be approved, but also whether Representative Hunt has presented a sufficient case for reconsidering issues already decided: i.e., whether the NSTAR ROW should be used rather than the Service

Road ROW. Following this determination, the Board then considers the second aspect of the PCF concerning the method of pipeline testing and the resulting implications for MAOP.¹⁹

1. Comparison of Project Change Route and Approved Route

With regard to safety of the Service Road route options, the Board notes that many safety-related features included in the Project Change are typical of the Company's general approach for constructing pipelines, and do not reflect unique measures that would be undertaken specifically for the Project Change. For example, typical measures included in the Project Change include: the use of high quality steel pipe with factory coating for corrosion protection; proper installation; performance tests; an ongoing program of testing and maintenance; and strict compliance with applicable state and federal safety regulations (Exh. EFSB-10, at 12-13).

The Company has offered some safety features specifically for the Project Change such as the placement of steel plates above the Pipeline to provide additional protection in any areas where it crosses the paved edge of Service Road. In addition, the Company has agreed to use remotely operated shut-off valves (in addition to manual valves) along the Pipeline that would allow sections of the Pipeline to be isolated immediately in the event of an incident (Exh. EFSB-10(a)).

The record indicates that relative to the approved route, the Project Change enhances safety in several respects. First, by moving the Pipeline approximately 15 feet farther away from Service Road area residents, the Project Change would provide increased distance for residents and their homes from the location of any potential Pipeline incident. The homes on the south side of Service Road would typically be 120 to 150 feet or more from the work area for the Project Change route (Exh. EFSB-7). As noted by the Company, the additional 15-foot distance from homes is not significantly different from that provided by the approved route, but it would make the Pipeline "incrementally safer."²⁰

¹⁹ Given that the Pipeline could be tested either hydrostatically or pneumatically for any of the three route options, the method of Pipeline testing does not affect the Board's determination of a preferred route.

²⁰ By comparison, the Company's existing twelve-inch, 270 MAOP gas pipeline, built approximately 50 years ago, lies approximately 35 to 40 feet closer to Service Road area residents than the Project Change location (Exh. NG-1, at Figure 4; Tr. at 77-78).

The approved route would place the Pipeline in close proximity to other utilities under Service Road such as water supply and fire hydrant lines, and near future utilities under consideration, such as new sewer lines. The realignment of the Pipeline 15 feet north of the paved edge of Service Road would provide a safety improvement by placing the Pipeline farther away from these other utilities in Service Road and the related risk of damage to the Pipeline from accidental contact by work on these other utility lines. The record shows that nationwide, incidents involving high-pressure pipelines are most often caused by dig ins by a third party (Exh. EFSB-10). Therefore, installation away from existing utilities and potential future utility locations serves to enhance safety.

The Project Change location 15 feet north of Service Road is in an area not expected to be used for other utilities; in fact, the request to move the Pipeline to this area was specifically intended to retain adequate space under Service Road for installation of other utilities. The increased separation between utilities resulting from the Project Change would also help protect the other utility lines from construction or maintenance work on the Pipeline. Given the apparent susceptibility of the existing asbestos-cement water mains to damage this benefit is significant, and one of the primary factors cited by the Town officials in recommending the Project Change. By avoiding potential damage to water supply or fire hydrant lines the Project Change provides an additional safety benefit.²¹

One potential safety advantage of keeping the Pipeline under the road as part of the approved route is the added protection from heavy vehicle loads offered by the pavement. However, the Company has calculated that placing the Pipeline under three feet of soil with the Project Change would also provide adequate protection and meet applicable state and federal

Representative Hunt's witness acknowledged the existing pipeline raises many of the same safety-related issues alleged for the new Pipeline (Tr. at 165-166).

²¹ The record demonstrates that the Company has ample prior experience working in areas of asbestos-cement pipe, and there is no reason to doubt its ability to conduct Pipeline construction work required by either the approved route or the Project Change (Exh. EFSB 10(c)).

requirements (RR-EFSB-1; RR-EFSB-7).²² To provide added safety, the Company is willing to install steel plates at each location where the Pipeline would cross under the edge of pavement, thus providing much of the protection afforded by pavement and its weight distribution properties.

With regard to incident response, Representative Hunt asserts that the absence of fire hydrants and public water supply lines for approximately two miles of the Project Change route is a safety risk and a reason for the Board to question the Project Change. However, given use of the same roadway, there is no difference between the approved route and the Project Change route with regard access to water supplies for fire-fighting purposes. The record indicates that, in fact, National Grid has a number of high-pressure pipelines on its system in Massachusetts in residential areas where public water supplies and fire hydrants are unavailable (Exh. RHPS-8; RR-RH-2). We note as well that the record indicates that there is no regulatory requirement regarding the co-location of high-pressure pipelines of the type proposed in the PCF (or previously approved) with water and hydrant lines (Exhs. EFSB-27; RHDC-08; RR-RH-2).²³ Additionally, as part of the Project Change the Company has proposed to provide training for first responders in Sandwich and to organize a mock incident to prepare area residents as to how to respond to such a situation.

With respect to egress of area residents in the event of a Pipeline incident, both the Project Change route and the approved route have similar characteristics. However, given the location of the Project Change route 15 feet away from the paved edge of Service Road, there may be some incremental ability to use Service Road in the event of a Pipeline incident. We agree with Representative Hunt that having more than one means of egress during an incident affords a greater degree of public safety. But taking all of the factors into account, the evidence

²² In the event that less than three feet of cover is required for construction, the Company shall comply with all applicable state and federal regulations, in consultation with the Director of the Pipeline Engineering and Safety Division of the Department. The Siting Board notes that steel plates, rather than concrete caps, are better suited in such a situation because the steel plates provide more protection than concrete.

²³ The Town has indicated that it may develop additional utilities along the Pipeline route in the future. If it does so, the Siting Board encourages the Town to consider extending the existing water supply infrastructure, including fire hydrants, along the length of the Pipeline.

indicates that overall, the Project Change would enhance public and worker safety relative to the approved route.

Turning to environmental impacts, the record shows that the ten- to 15-foot strip of vegetation that would be removed from the wooded buffer area between Route 6 and Service Road totals approximately five acres (Exh. NG-1, at 7). In granting a certificate for the Project Change, the EEA Secretary determined that the proposed removal of vegetation is well below MEPA review thresholds for land alteration and that the Project Change impact is insignificant and would not require additional MEPA review (Exh. NG-1, at Appendix B).

Given the relatively limited proportion of the existing 70-120-foot wide vegetated buffer that would be removed, the diminution of the remaining wooded area to buffer both views of and noise from Route 6 affecting Service Road areas area residents would be modest. Indeed, the record shows that the projected noise increase of 0.2 to 0.3 dBA is considered imperceptible to human hearing (Exhs. RHDC-27; EFSB-10(i)). However, as noted by some area residents, the removal of even a narrow strip of vegetation may affect the appearance of Service Road itself, resulting in less of a woodland area aesthetic, which is a valued characteristic of the road.

To mitigate visual impacts, the Company proposes to offer the installation of evergreen buffer vegetation to abutting residents, which would effectively mitigate loss of visual buffer. The Siting Board directs the Company to offer to residents directly along Service Road between Route 130 and Chase Road screening plantings on the property of these residents, free of charge, as detailed by the Company in a filing with the CCC.

In order to substantiate the Company's claim that the noise impacts of removing the vegetation would be imperceptible, the Siting Board directs the Company to work with the Town to perform pre-construction noise measurements and post-construction noise measurements for each phase of the Western Segment, no more than six months following completion of the respective phases. The Company shall select comparable and appropriate time periods and appropriate noise metrics to evaluate changes in noise levels coming from Route 6 at residential property lines south of Service Road. An increase of three dBA or more will be considered a perceptible increase. The results of the Company's analysis must be submitted to the Siting Board for appropriate action and shared with the Town and interested abutters.

The removal of vegetation and the off-road construction associated with the Project Change would take place in an area where the NHESP has confirmed the presence of the eastern

box turtle and required the Company to implement a turtle protection plan to avoid a prohibited take of this species of Special Concern (Exhs. NG-1, at 7; EFSB-31). The Siting Board directs the Company to adhere to the requirements of the turtle protection plan. With regard to the vegetation to be removed, the record indicates that this would not involve any state-listed flora or so-called “specimen trees.”²⁴

Turning to traffic impacts, the Company is proposing similar mitigation measures for the Project Change as approved by the Siting Board in the Final Decision, including a traffic management plan. The record shows that the off-road construction focus of the Project Change would present fewer traffic impacts than the approved route due to the less frequent or more limited need for lane closures during construction (Exh. NG-1, at 9).

The request by Town officials for the Company to pursue the Project Change stems, in part, from the Town’s interest in creating an off-road bicycle path along Service Road that would be facilitated by the Project Change (Exh. NG-1, at Appendix C). While the benefits of such a path are incidental to the purpose of constructing the Pipeline and have not been quantified in the PCF, the Board finds that the development of the off-road path could potentially provide air quality and traffic mitigation benefits as well as an important transportation and recreational resource for the Town and the broader Cape Cod region.

The additional land alterations involved with the Project Change might suggest a greater potential to disturb cultural resources than would occur with the approved route. However, based on the Company’s cultural resource study performed in the Original Proceeding, neither route is expected to pose any significant cultural resource concerns given prior disturbances to the area from construction of both Service Road and Route 6.

With or without the Project Change, diesel construction equipment emits particulate pollution. In cases filed since the Original Proceeding, the Siting Board has typically required retrofitting certain older diesel equipment to reduce particulate emissions. The record shows that the cost of requiring such a condition would be minimal (Company Comments on Issues Memorandum at 8). The Siting Board directs the Company to ensure that all diesel-powered

²⁴ The CCC’s Model Bylaws and Regulations defines specimen tree as “a native, introduced or naturalized tree which is important because of its impact on community character, its significance in the historic/cultural landscape or its value in enhancing the effects of wildlife habitat.”

non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project Change construction must have U.S. Environmental Protection Agency-verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. Prior to the commencement of construction, the Company shall submit to the Siting Board certification of compliance with this condition and a list of retrofitted equipment, including type of equipment, make/model, model year, engine horsepower, and the type of emission control technology installed.

In view of the above environmental considerations, the Siting Board finds that the Project Change, as mitigated, presents comparable overall environmental impacts to those associated with the Pipeline using the approved route.

With regard to cost, the record shows that the Project Change is anticipated to cost approximately \$375,000 to \$450,000 less than the approved route (Exh. EFSB-34). The cost advantage stems from reduced cutting and repair of pavement, offset by greater costs for tree clearing and grading.

Considering environmental impacts, cost, and reliability, as well as safety, the Siting Board finds that, with the conditions described below, the Project Change would be advantageous relative to the approved route with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

2. PCF Route vs. NSTAR ROW

As noted above, Representative Hunt asserts that the NSTAR ROW alternative route has safety advantages relative to the Project Change route and should be re-considered by the Board in this proceeding. The Siting Board permitted Representative Hunt to explore this issue in discovery and to further address the issue in the testimony of his witnesses, during his cross-examination of Company witnesses and in briefs.

Representative Hunt points out that there are no roads that end in a cul-de-sac crossing the NSTAR ROW route and that the NSTAR ROW route provides more flexibility than the Project Change route regarding egress in the event of a Pipeline incident. However, a number of other safety-related considerations are disadvantageous for the NSTAR ROW relative to the Project Change route. The risk of inadvertent dig ins on the NSTAR ROW route is greater due to

the highly developed area along Route 130 (part of the NSTAR ROW route) and ongoing development activity along Route 130. Also, the two routes have a similar number of homes, so avoidance of residential areas is not achieved with the NSTAR ROW route (Tr. at 57-59). In addition, homes along the NSTAR ROW route are, on average, significantly closer to the potential pipeline than would be the case with the Project Change. The closer proximity of homes to the Pipeline on the NSTAR ROW could increase the risk of damage to life and property in the event of a serious incident, as well as raise the potential for inadvertent dig ins of the Pipeline.

Additional safety-related complications could arise on the NSTAR ROW from co-locating the Pipeline in an electric transmission corridor. As noted by the Company, access by emergency vehicles to the NSTAR ROW and subsequent firefighting activity could not commence until the transmission lines were de-energized (Exh. EFSB-10, at 6). The Company also noted an added safety complication of the NSTAR ROW route in that it would need to design the Pipeline to minimize the adverse effects of induced current on the Pipeline's cathodic protection system from the power lines (RR-EFSB-6).

Overall, the safety profile of the NSTAR ROW is not advantageous relative to the Project Change route. Additional difficulties noted by the Company with using the NSTAR ROW include: (1) the requirement for legislative approval of the route, associated with its location partly on lands protected by Article 97; (2) a need for consent from NSTAR; (3) a need to obtain legal authority for such construction from at least 58 of the approximately 71 property owners along the route; and (4) the increased difficulty in tying the new segments back to the existing Sagamore Pipeline (Exh. RHDC-03). Colonial Decision at 314-315. The Company noted the potential for delay resulting from these factors.

The additional review of the NSTAR ROW afforded in this proceeding does not alter the finding in the Final Decision that the NSTAR ROW alternative route is inferior to the approved Service Road route. As found above, with the Project Change resulting overall in an improved Pipeline route relative to the approved route, the NSTAR ROW alternative fares even worse by comparison to the Project Change than it did previously relative to the approved route. Accordingly, the Siting Board finds no reason to alter our previous findings with respect to the NSTAR ROW alternative, or further study the NSTAR ROW alternative, as suggested by Representative Hunt.

Considering environmental impacts, cost, reliability, and safety, the Siting Board finds that, with the conditions described in Section VI, the Project Change route would be advantageous with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

V. PIPELINE TESTING

A. Proposed Change of Pipeline Testing Method

1. Hydrostatic Testing Procedure

Pursuant to the Project Change, hydrostatic testing of the Pipeline would proceed as follows: the newly constructed pipe would be filled with potable water, pressurized to the test pressure, stabilized, and monitored for at least twelve hours (Exh. NG-1, at 13). Approximately 180,000 gallons of water would be required for the hydrostatic test, which the Sandwich Water District indicated it would provide (id.). The water would be tested before being drained from the pipe and, with satisfactory test results, discharged through a fabric filter into an upland area (id.). The inside of the Pipeline would then be dried and cleaned (id.).

2. Significance of Pre-Operational Hydrostatic Testing

Allowing the Company to test the Pipeline hydrostatically so that it may qualify for a MAOP of 575 psig before it is operational may prevent future delays and service impacts (Exh. NG-1, at 11). If the pressure is increased after the Pipeline becomes operational, such an increase may be effected without removing the Pipeline from service and potentially interrupting natural gas supply to customers (id.). Once the Pipeline has qualified for a MAOP of 575 psig the Company would not need to secure formal approval from the Pipeline Safety Division of the Department in order to increase the Pipeline pressure (RR-EFSB-9).

3. Pressure-Related Safety Regulation

The Pipeline Safety and Engineering Division of the Department would oversee the operation of the Pipeline, and has the authority to suspend or restrict the use of the Pipeline if it finds that operation of the Pipeline, whether as a result of increased pressure or otherwise, is a threat to public safety (RR-EFSB-9). The Pipeline Safety and Engineering Division implements a comprehensive set of federal and state statutes and regulations designed to ensure pipeline

safety. Furthermore, there are both federal and Commonwealth statutes through which the Town and its residents may seek to obtain relief from pipeline conditions they consider unsafe. The Commonwealth statute is G.L. c. 164, 105A, and the federal statute is 49 U.S.C. § 60121(a)(1). These statutes are discussed in detail below.

B. Position of the Parties

1. Representative Hunt's Argument

Representative Hunt raises a number of objections to the Company's proposal to test the Pipeline so that it may qualify for a MAOP of 575 psig (Exh. RH-1). Representative Hunt asserts, "We do not believe that [installing] the 270 psig is the real intent here nor should it be treated that way. Installing a 575 psig pipeline is the real purpose of this project" (Hunt Brief at 11). He further contends, "high pressure pipelines do not belong in residential neighborhoods" (Exh. RH-1, at 3). At the higher operating pressure, Representative Hunt asserts that the "impact zone" of a Pipeline incident would be expanded, threatening additional Service Road residents (Hunt Brief at 8). Finally Representative Hunt argues that the testing should be done when the need for any pressure increase arises – not years in advance – as the Pipeline's integrity should be re-validated when the change actually occurs (id.).

2. The Company's Argument

According to Colonial, a Pipeline with a MAOP of 270 psig can meet its current and reasonably foreseeable demand (Exh. NG-1, at 11). However, if demand were to increase substantially in the future, higher pressure operations of the Pipeline could be warranted (Exh. NG-1, at 11; Tr. at 98-99).

The Company asserts that the principal advantage to qualifying the Pipeline for 575 psig before it is operational is that it would avoid the need for testing in the future, which could involve service interruptions for customers at that time (Exh. NG-1, at 11; Tr. at 98-99). Colonial states that any increase in Pipeline pressure would be conducted with the oversight of the Pipeline Safety and Engineering Division of the Department (RR-EFSB-9). The Company acknowledges that it would not need to secure formal approval from the Department in order to increase the Pipeline pressure once it is qualified at the 575 psig MAOP following a successful pressure test (RR-EFSB-9).

C. Analysis and Findings Regarding Pressure Test Changes

The proposal to pressure-test the Pipeline so that it qualifies for a MAOP of 575 psig raises two issues. First, would it be safe to test the Pipeline, in the manner proposed, at the proposed pressure?²⁵ Second, would it be safe to operate the Pipeline at 575 psig?

The record indicates no risks from the hydrostatic pressure testing procedure itself. A successful test would result in discharge of all the potable water supplied by the Sandwich DPW for the test to a nearby upland area, without any anticipated environmental impacts. In the event that the Pipeline failed the proposed hydrostatic test, a small amount of the potable water would be lost through leakage and the remaining water would be discharged as planned, again without environmental impacts.

The PCF requests permission to test the Pipeline so that it qualifies for a MAOP of 575 psig. The PCF does not request permission to operate the Pipeline at 575 psig at this time. Nevertheless, once the Pipeline has qualified for a MAOP of 575 psig, the Company would not need to secure formal approval from the Pipeline Safety Division of the Department in order to increase the Pipeline's pressure (RR-EFSB-9). Therefore, allowing the Company to test the Pipeline to establish a MAOP of 575 psig could result in the Pipeline operating at that pressure in the future.

Allowing the Company to test the Pipeline hydrostatically so that it may qualify for a MAOP of 575 psig before it is operational could provide a significant reliability benefit. In the event that the Pipeline pressure should or must be increased in the future, such an increase may be effected without removing the Pipeline from service and thereby disrupting natural gas supply to customers. Consequently, we conclude that it is appropriate to allow the Company to perform a hydrostatic test with the intent of qualifying the Pipeline for a MAOP of 575 psig.

Whether the Board chooses to allow the Pipeline to actually operate at up to 575 psig is a separate issue. The Siting Board observes that there are numerous regulatory safety measures in place that protect the public. The Pipeline Safety and Engineering Division of the Department would oversee the operation of the Pipeline and implement a comprehensive set of federal and

²⁵ As mentioned above, in order to test the pipeline so that it would qualify for an MAOP of 575 psig, the pipeline must be pressurized to 862 psig: i.e., one and one-half times the MAOP of 575 psig.

state statutes and regulations designed to ensure pipeline safety. This Division of the Department also has the authority to suspend or restrict the use of the Pipeline if it finds that operation of the Pipeline, whether as a result of increased pressure or otherwise, is a safety concern.

In addition, as mentioned above, there are both federal and Commonwealth statutes through which Sandwich residents may seek to obtain relief from pipeline conditions they may consider unsafe. 49 U.S.C. § 60121(a)(1); G.L. c. 164, § 105A. The Commonwealth statute provides that either the selectmen of a town in which a gas company operates or 20 of the company's customers may file a written complaint with the Department regarding, among other things, the "pressure at which [natural] gas is being or shall be stored, transported, or distributed." Subsequent to the filing of a complaint, the Department is required to notify the gas company and to "give a public hearing to such petition and to such company." G.L. c. 164, § 105A. After the hearing, the Department may make such order "as it may deem necessary." G.L. c. 164, § 105A.

The federal statute, 49 U.S.C. § 60121(a)(1), provides that a "person may bring a civil action in an appropriate district court of the United States for an injunction against another person . . . for a violation of this chapter or a regulation prescribed or order issued under this chapter." The chapter in question is 49 U.S.C. Chapter 601, which addresses pipeline safety.

Although there are numerous safeguards against risks that could be caused by operation of the Pipeline above 270 psig, we concur with Representative Hunt that additional review by the Siting Board is warranted if such a pressure increase for the Pipeline is actually sought by the Company. For example, if the Company were to seek to increase the pressure several years hence, there could be a legitimate question as to whether re-testing would be appropriate. Thus, if the Company seeks to operate the Pipeline at a MAOP in excess of 270 psig in the future, the Siting Board directs it to request permission to do so from the Board in a compliance filing. In such filing, the Company must inform the Board of the reason for the proposed increase in pressure and any relevant information for the Board to consider regarding the safety of the proposed pressure increase, including whether there is cause to re-test the Pipeline at that time. Upon receipt and review of such request, the Board will determine whether the pressure increase sought is approved, approved with conditions, or denied.

VI. DECISION

Consistent with the Siting Board's directive to Colonial in the Final Decision to inform the Board of any changes to the Project, other than minor variations, the Company has informed the Siting Board of two such changes: the relocation of Phases I and Phase II of the Western Segment of the proposed Pipeline to a path that is generally 15 feet north of Service Road rather than beneath Service Road; and the testing of the proposed Pipeline hydrostatically for a MAOP of 575 psig rather than pneumatically for a MAOP of 270 psig. In Section IV, above, the Board found that, with the imposition of certain conditions, locating Phase I and Phase II of the Western Segment of the proposed Pipeline would be advantageous with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. In that section, the Board also found that the evidence in this proceeding would not justify the Board's reconsideration of the decision made in the Original Proceeding to allow the Pipeline to be located along Service Road rather than the NSTAR ROW route. In Section V, above, the Board found that allowing the Company to test the Pipeline hydrostatically so that it qualifies for a MAOP of 575 psig before it is operational would provide a significant reliability benefit.

Accordingly, based on the findings articulated above, the Board approves the PCF subject to compliance with Conditions (A) through (F) in the Final Decision and the following additional conditions:

(G) In order to minimize environmental impacts, the Siting Board directs the Company to ensure that all diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of construction of Phases I and II of the Western Segment must have U.S. Environmental Protection Agency-verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. Prior to commencement of construction, the Company shall submit to the Siting Board certification of compliance with this condition and a list of retrofitted equipment, including type of equipment, make/model, model year, engine horsepower, and the type of emission control technology installed.

(H) In order to minimize visual impacts, the Siting Board directs the Company to offer to residents directly along Service Road between Route 130 and Chase Road screening

plantings on the property of these residents, at no cost to the homeowner, as detailed by the Company in a filing with the CCC on January 15, 2013. Typical plantings shall be native evergreens and would generally be planted on the homeowner's property.

(I) In order to enhance Pipeline safety, the Siting Board directs the Company to install steel plates above the Pipeline at locations where the Pipeline would cross under the edge of pavement on Service Road.

(J) The Siting Board directs the Company to work with the Town of Sandwich to perform pre-construction noise measurements and post-construction noise measurements for each phase of the Western Segment, no more than six months following completion of the respective phases. In order to substantiate the claim that the noise impacts of removing the vegetation would be imperceptible. The Company shall select comparable and appropriate time periods and appropriate noise metrics to evaluate changes in noise levels coming from Route 6 at residential property lines south of Service Road. An increase of three dBA or more will be considered a perceptible increase. The results of the Company's analysis must be submitted to the Siting Board for appropriate action and shared with the Town and interested abutters.

(K) The Company is directed to sponsor a simulated incident for the benefit of first responders in Sandwich. The training will enable the Company and first responders to plan for a variety of potential scenarios, including matters of egress for abutters, as well as matters of access for Company personnel in the event of challenging traffic conditions.

(L) The Siting Board directs the Company to provide specific training to the members of the Sandwich Fire Department and any other interested Town officials focusing on: response to an incident relating to the two 270-psig pipelines along Service Road; communication among the parties in the event of such an incident; and the parties' responsibilities during such an incident.

(M) The Company is directed to install remote-operated shut-off valves along the Pipeline.

(N) The Pipeline shall be designed, installed, operated and maintained in accordance with all federal and state regulations as well as the Company's internal guidelines, which in certain instances go beyond federal and state safety regulations.

(O) The Siting Board directs the Company to implement a turtle protection plan to avoid a prohibited take of this species of Special Concern and to adhere to the requirements of the turtle protection plan.

(P) The Company is hereby directed to provide the Siting Board with a certified cost estimate for construction of the Pipeline, prior to construction, which explains any cost changes relative to the information presented in this proceeding. In addition, the Company is directed to provide the Siting Board with a final cost of Pipeline construction within 60 days of its completion.

(Q) The Siting Board directs the Company to conduct all construction work between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, excluding holidays, from after Labor Day to before Memorial Day. To the extent the Company finds that construction is necessary outside of these weekday hours or on weekends or holidays, or during the period from Memorial Day through Labor Day, the Company shall seek written permission from the relevant Town of Sandwich authorities prior to the commencement of such work, and provide the Siting Board with a copy of such permission. If the Company and Town officials are not able to agree on such request, the Company may file a written request for authorization to the Siting Board prior to performing such construction, provided that it also notifies the relevant Town of Sandwich authorities in writing of such request.

(R) The Board incorporates by reference the conditions imposed by the CCC in its approval of the DRI. Consequently, the conditions imposed on the Project by the CCC are now part of the Project. A project change filing would be required in order to construct the Project in a manner inconsistent with the Project description.

(S) If the Company seeks to operate the Pipeline at a MAOP in excess of 270 psig in the future, the Siting Board directs that the Company must request permission to do so from the Board in a compliance filing. In such filing, the Company must inform the Board of the reason for the proposed increase in pressure and any relevant information for the Board to consider regarding the safety of the proposed pressure increase, including whether there is cause to re-test the Pipeline at that time. Upon receipt and review of such request, the Board will determine whether the pressure increase sought is approved, approved with conditions, or denied.

Findings in this decision are based upon the Project change information provided by the Company examined in light of findings the Siting Board made in the Final Decision. Because the

Project changes outlined in this decision pertain to the facility approved by the Siting Board in the Original Proceeding, the Company must construct and operate its facility in conformance with its proposals presented in the Original Proceeding; the only modifications permitted are those set forth in this decision. The activities described in this Project Change approval are authorized within the time authorized for the Project as a whole, which is December 31, 2019.

The Siting Board requires the Company to notify the Siting Board of any further changes other than minor variations to the proposal so that the Siting Board may decide whether to inquire further into a particular issue. The Company is obligated to provide the Siting Board with sufficient information on changes to the proposed Project to enable the Siting Board to make these determinations.

Robert J. Shea
Presiding Officer

Dated this 5th day of August, 2014