


## M E M O R A N D U M

TO: James W. Walsh, Director of Planning

FROM: Andrew G. Glines, PE 

DATE: May 26, 2020

RE: Linbias Path Subdivision

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Fuss & O'Neill (F&O) conducted a site walk on May 25, 2020 to observe the general status of the subdivision, recommend a bond amount for remaining work, and assist the Planning Board with determining if the subdivision is being constructed in accordance with the approved plan set prepared by Webby Engineering (dated March 3, 2016), landscape plans prepared by Wet Tech Land Design (dated March 5, 2016), and special permit (dated November 17, 2016). Please note that the decision references a plan set dated October 4, 2016 that was not provided to F&O, which is believed to include a road shift of 2.73 feet east and revised buffer along western property line. However, not having a plan(s) depicting these revisions did not affect F&O's ability to provide a bond estimate.

John Woods (Town Operations & Maintenance) as well as Jesse Boyle (Town Fire Department) will be conducting independent inspections of the subdivision.

A Bond Estimate was prepared by F&O for the remaining work for the subdivision and is enclosed. Unit prices are based on F&O's experience, recent public bids, and quotes provided by the developer. Only rough takeoffs were conducted by F&O based on the PDF plan set and field observations. A bond amount of \$75,000 is recommended.

Overall site conditions and erosion and sediment control measures were evaluated. Listed below are the items we observed as incomplete, deficient, or deviate from the approved plans. Not all action items listed must be addressed immediately, but will be tracked by F&O and the Town to ensure they are completed prior to final roadway acceptance.

1. A quote was provided by the developer, Mike Facchini, from Truax Corporation for paving the surface course, sidewalk, and berm. These items were broken out individually in the estimate (Photo 155527).
2. The existing catch basin inlet protection has holes in it and must be replaced. Since the drainage system has been exposed to sediment loads without inlet protection, a line item for cleaning the drainage structures (including drain manholes) has been included in the estimate (Photo 160706).
  - a. During maintenance, confirm hoods were/are installed on catch basins.
3. Riprap energy dissipator shall be installed at outfall behind Lots 2 & 3 (Photo 162504).

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4. Straw wattles shall be installed at the bottom of the hill to protect the bioretention basin from sedimentation, and at the outfall behind Lots 2 & 3. Sediment already accumulated within the bioretention basin and at the outfall must be removed. Sediment at the outfall location must be removed by hand in order to minimize any damage/disturbance of wetlands (Photo 160105).
5. Roadway shall be swept and a construction entrance installed/maintained during construction of Lot 6 (Photo 160852).
6. Erosion and sediment controls shall be maintained until subdivision lots are stabilized.
7. Loam and seed right-of-way, including preparing basin for plant material.
8. A quote was provided by the developer, Mike Facchini, from Capeway Wholesale Nursery for plant materials. The unit price for this items in the estimate was increased to account for installation costs. Install remaining street trees and plant material within bioretention basin in accordance with landscape plans prepared by Wet Tech Land Design, Inc (Photo 160352).
9. Install remaining portion of guard rail, and ensure 2 bolts per rail are installed at each post connection (Photo 160522).
10. Maintain plant material until roadway acceptance by Town.
11. Complete as-built survey and complete punch list items (to be determined) for roadway acceptance.
  - a. Drain Manhole No. 2 (DMH-2) could not be located during this inspection and is believed to be buried on Lot 2, outside of the roadway pavement. DMH-2 must be raised to finish grade and included in the as-built. If DMH-2 is not located within the right-of-way or drainage easement, drainage easement will need to be revised.
  - b. Drain Manhole No. 3 (DMH-3) could not be located during this inspection and may not have been installed. Located DMH-3 and raise cover to finish grade, or confirm DMH-3 was not installed. Pipe between DMH-2 and outfall (including DMH-3 if applicable) must be located within drainage easement.
  - c. Gate valve for fire hydrant could not be located during this inspection and is believed to be buried on Lot 2, outside of the roadway pavement. Gate valve must be raised to finish grade and included in the as-built. If the gate valve is not located within the right-of-way, an easement will need to be established (Photo 160438).

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12. It should also be noted that the fire hydrant adjacent to the cul-de-sac was not installed at the location depicted on the plans. Although F&O does not have any specific objections to this location, it is recommended that the Town Planner confirm that the Fire Department does not object to the installed location.



Photo 1: Subdivision overview

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Photo 2: Catch basin requiring sediment removal and inlet protection



Photo 3: Outfall requiring sediment removal, riprap, and wattles

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Photo 4: Bioretention basin requiring sediment removal and wattles



Photo 5: Roadway in front of Lot 2

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Photo 6: Bioretention basin



Photo 7: Guard rail and bioretention basin

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Photo 8: Hydrant where gate valve could not be located

Based on our observations at the site, and subject to the satisfactory completion of the above items, we believe that the work is being completed according to the approved plans and special permit conditions. Removing sediment from the outfall and installing inlet protection on catch basins is the most time sensitive action item, and it is recommended that the Planning Board get a commitment from Mike Facchini to complete this work immediately as a condition of releasing the final lot for development. Otherwise, action items lists above are minor in nature and/or in process of being resolved/constructed, therefore we recommend that the Planning Board allow Mike Facchini to continue with development of the subdivision.

Please call me at (800) 286-2469 ext. 4540 if you have any questions.

Enclosures:

Bond Estimate, dated May 26, 2020

c: Mike Facchini, Developer  
John Woods, Town Operations & Maintenance  
Jesse Boyle, Town Fire Department

ITEM DESCRIPTION	QUANTITY	UNIT OF		TOTAL	Percent Completed	Total Remaining
		MEASUREMENT	UNIT COST			
<b>ROADWAY</b>						
Asphalt - 1.5" Surface Course	1	LS	\$18,000	\$18,000	0	\$18,000
Asphalt - Berm (725 LF +/-)	1	LS	\$3,500	\$3,500	0	\$3,500
Asphalt - Sidewalk (725 LF +/-)	1	LS	\$8,000	\$8,000	0	\$8,000
<b>DRAINAGE</b>						
Inlet Protection	2	EA	\$200	\$400	0	\$400
Vac/Clean Drainage Strutures	1	LS	\$1,000	\$1,000	0	\$1,000
Riprap Energy Dissipator	1	EA	\$500	\$500	0	\$500
Straw Wattles	200	LF	\$5	\$1,000	0	\$1,000
Erosion Control and Maintenance	1	LS	\$2,500	\$2,500	0	\$2,500
<b>LANDSCAPING</b>						
Loam ROW (Spread/Respread)	1	LS	\$1,000	\$1,000	0	\$1,000
Hydroseed Right-of-Way	1	DAY	\$1,200	\$1,200	0	\$1,200
Prep basin for planting	1	LS	\$2,000	\$2,000	0	\$2,000
Street Trees	15	EA	\$400	\$6,000	60	\$2,400
Bioretention Basin Plant Material	1	LS	\$6,000	\$6,000	0	\$6,000
Timber Guard Rail	275	LF	\$30	\$8,250	80	\$1,650
Landscaping Maintenance	1	LS	\$2,500	\$2,500	0	\$2,500
<b>GENERAL</b>						
Demobilization	1	LS	\$2,500	\$2,500	0	\$2,500
As-Built Survey	1	LS	\$5,000	\$5,000	0	\$5,000
Misc Work/Cleanup/Punch List	1	LS	\$4,000	\$4,000	0	\$4,000
Street Monuments	10	EA	\$200	\$2,000	0	\$2,000
As-Built/Acceptance Plan	1	LS	\$2,500	\$2,500	0	\$2,500
<b>TOTAL</b>				\$77,850		\$67,650
<b>10% Contingencies</b>				\$7,785		\$6,765
<b>TOTAL</b>				\$85,635		\$74,415