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PROJECT NAME Northern Bank Town Common Peer Review

DATE 12/1/2022

UPDATED:

PROJECT NO. 22015.0806

Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
Lot Standards (§173-220)						
1	C-200 ("N Bank Civil and LA Updated 11-14- 2022.PDF")	Lot Standards §173-220.A.b.	<p>The FBC states: <i>"Building façade(s) must be built parallel to any primary front lot line at or between the minimum and maximum front setbacks."</i></p> <p>While Buildings B, C, D, and E are all compliant, Building A is rotated such that its façade is not built parallel to the front lot line (along Great Rd). This rotation also complicates setback measurements, where portions of the facade is compliant while other portions are not.</p> <p>Utile recommends rotating / redesigning Building A such that it is built parallel to the primary front lot line at or between the minimum and maximum front setbacks. One of the primary intents of the FBC is to promote a Village Common district with a consistent street wall along primary streets for all private development; the rotation of Building A breaks this continuity.</p>			
2	C-200 ("N Bank Civil and LA Updated 11-14- 2022.PDF")	Lot Standards §173-220.A.c.	<p>The FBC states: <i>"Building façade(s) must be built-out to a percentage of the lots width as specified in §173-220 B. Standards for all Lots."</i></p> <p>Related to comment 1 above, Building A's rotation complicates the facade build-out percent calculations. Discounting this building's contribution to the facade build-out percent means that the remaining 4 buildings do not collectively meet the minimum facade build-out percent (~46% out of the minimum 60%).</p> <p>See recommendation for comment 1 above.</p>			
Building Standards (§173-221): BUILDING A						
3	Building A - Floor Plan (Page 3 of "N Bank Architectural Updated 11- 14-2022.PDF")	Building Standards §173-221.C.a.	<p>The FBC states: <i>"The primary massing(s) of a building must be of rectangular form with a single type of pitched roof and may be oriented either with the narrow end or long side toward the front lot line."</i></p> <p>Building A is rotated such that neither the Primary Massing's narrow end nor its long side are oriented toward the front lot line (along Great Rd).</p> <p>See recommendation for comment 1 above.</p>			
4	Building A - Floor Plan (Page 3 of "N Bank Architectural Updated 11- 14-2022.PDF")	Building Standards §173-221.C.b and c.	<p>The FBC states: <i>"Width of the primary massing is measured parallel to the facade, from the exterior plane of each side wall. Depth of the primary massing is measured perpendicularly from the facade as the maximum length the longest exterior side wall of a building."</i></p> <p>Related to comments 1, 2, and 3 above, the rotation of Building A also complicates the measurement of the Primary Massing's dimensions (i.e., width vs depth) since it is unclear which building side is considered front vs the side. If the long side is considered oriented front, then the primary massing exceeds the maximum width (currently 69'-5" out of the maximum 65').</p> <p>See recommendation for comment 1 above.</p>			
Building Standards (§173-221): BUILDING B						
5	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11- 14-2022.PDF")	Building Standards §173-221.B.a.	<p>The FBC states: <i>"Buildings are comprised of one or more primary massings and various optional building components that are assembled to make a single building complex."</i></p> <p>While labels are missing on the floorplan, this building appears to be comprised of 1 larger primary massing with its narrow end oriented toward the front lot line, one smaller primary massing with its long side oriented toward the front lot line, and one side addition appended to the end of the smaller primary massing. However, there is a 1-story ~9'-4" narrow strip at the middle that is neither a primary massing nor a permitted building component.</p> <p>Utile recommends removing, at minimum, the portion of this strip that is visible from the street and consequently preserving a simple farmhouse-like reading of 2 intersecting primary massings along Great Rd.</p>			
6	Building B - Elevations (Page 4 of "N Bank Architectural Updated 11- 14-2022.PDF")	Building Standards §173-221.G.b.	<p>The FBC states: <i>"For buildings with ground story commercial spaces, ground story fenestration is measured between two (2) feet and twelve (12) feet above the finished floor of the ground story."</i></p> <p>The façade of Building B does not meet the minimum fenestration percent (~33% out of the minimum 60%). The proponent suggests including the full height of the entrance storefront into the calculation of the fenestration percent, which would more or less meet the minimum percent.</p> <p>Utile deems this an acceptable deviation and defers to the Town's discretion.</p>			



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7	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11-14-2022.PDF")	Building Standards §173-221.J.b.i.	<p>The FBC states: <i>"Each primary massing must have at least one (1) principal entrance. The principal entrance of a building must be located on the façade for any building contributing toward the frontage build out calculation."</i></p> <p>The smaller of the 2 primary massings of this building (with its long side oriented toward the front lot line) does not have a principal entrance. Principal entrances on the facades of primary massings make ground floor commercial uses approachable and activate the public sidewalk.</p> <p>Utile recommends adding a principal entrance on the facade of this primary massing (with attendant footpaths, etc.).</p>			
8	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11-14-2022.PDF")	Building Standards §173-221.L.a.	<p>The FBC states: <i>"Building components are...permitted according to the following schedule."</i></p> <p>The side addition attached to the narrow end of the smaller primary massing does not meet the minimum setbacks from the façade and rear wall (currently showing 2'-4" out of the required 4'-0"). Setbacks for side and rear additions are intended to further reduce the scale of building assemblies.</p> <p>Utile recommends increasing both setbacks to meet the minimum 4'-0".</p>			
Building Standards (§173-221): BUILDING C						
9	Building C & D - Floor Plan (Page 11 of "N Bank Architectural Updated 11-14-2022.PDF")	Building Standards §173-221.K.	<p>The FBC table for Building Standards indicates that the maximum width of a primary massing with its long side oriented toward the front lot line is 65 ft.</p> <p>The width of the primary massing shown is 93'-6", exceeding the maximum of 65 ft. The maximum widths of primary massings with its long side oriented front is intended to reduce the perceived scale of buildings from the public realm.</p> <p>Utile recommends splitting this single primary massing into 2 primary massings that are offset from each other by the minimum required 8 ft, or alternatively, making the long, deep part of the building a primary massing and the side as another intersecting primary massing, etc.</p>			
Building Standards (§173-221): BUILDING C & D						
10	Building C & D - Floor Plan (Page 11 of "N Bank Architectural Updated 11-14-2022.PDF")	Building Standards §173-221.L.b.	<p>The FBC states: <i>"Building components that are not identified below are prohibited."</i></p> <p>A bridge connecting 2 buildings is not a permitted building component. Proponent has suggested that this bridge connecting buildings C and D reduces the number of elevators and stairs that would otherwise need to be duplicated.</p> <p>Utile deems this an acceptable deviation and defers to the Town's discretion.</p>			
APPLICATION						
11	5	Special Permit Application	The VC district + AWRD lot coverage is checked in the document signed on 9/13/2022 but not checked in the document signed on 10/6/2022. Please confirm.			
12	7	Special Permit Application	The required information and materials are not checked (e.g. the forms and checklists, summary table, existing conditions plan etc.). Please check as complete if provided.			
TRAFFIC STUDY						
13	PAGE 1		<p>The Traffic Impact Study states that the proposed buildings will consist of: 3,100 sf bank , a 7,600 sf grocery store, a 14,800 sf building with 7,400 sf of retail space on the first floor and 7,400 sf of office space on the second floor, a 6,000 sf building with 3,000 sf of retail space on the first floor and 3,000 sf of office space on the second floor, and a 3,100 coffee shop without a drive-through window However, the Site Plan shows that the proposed buildings include: 3,300 sf of bank, a 6,600 sf of grocery store, a 14,800 sf building with 7,400 sf of retail space on the first floor and 7,400 sf of office space on the second floor, a 6,000 sf building with 3,000 sf of retail space on the first floor and 3,000 sf of office space on the second floor, and a 3,500 coffee shop. The proposed gross area on the application, site plan and traffic study report shall be consistent.</p>			
14	COVID-19 ADJUSTMENT DATA		The Daily Traffic Volume of July 2022 at count station 4172 uses data from 07/01 to 07/22. We recommend updating to full-month count (MassDOT has traffic count of July 2022 from July 1st to July 31st)			



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15	COVID-19 ADJUSTMENT DATA		Please confirm the "4172: Monthly Hourly Volume for July 2019" is correct. It has been noticed that some count data were skipped/deleted from the original MassDOT counting data, please provide an explanation.			
16	COVID-19 ADJUSTMENT DATA		The COVID-19 correction factors in this report developed by comparing the MassDOT 2022 July count data at Station 4172 and expected 2022 average daily traffic volume predicted by applying annual growth factor of 1%. However, in the appendix, the calculated annual growth rate was 0.94%, please clarify.			
17			We concur with the seasonal adjustment rate used by the Applicant.			
18			The weekday traffic count for this report was conducted on Thursday and Friday when school was off-session. Based on MassDOT TIA guideline, Weekday traffic counts should be conducted on a "typical" Tuesday, Wednesday, or Thursday when school is in session (when possible) during weeks not containing a holiday.			
19			The baseline volume during Weekday PM Peak of below movements do not match the calculated adjusted baseline volume, please provide clarification if there's any other adjustment: - Great Rd westbound through (calculated 720 vpd, show as 752 vpd) and eastbound through (calculated 471 vpd, show as 481 vpd) at Great Rd and Robinson Rd intersection. - Great Rd westbound through (calculated 640 vpd, show as 673 vpd) and eastbound through (calculated 272 vpd, show as 293 vpd) at Great Rd and Meetinghouse Rd / Adams St intersection. - King St southbound through (calculated 431 vpd, show as 446 vpd), southbound left (calculated 113 vpd, show as 118 vpd) and King St northbound bare right (calculated 164 vpd, show as 181 vpd) at Great Rd and Goldsmith St / Driveway/King St intersection.			
20			The baseline volume during Saturday Mid-Day Peak of below movements do not match the calculated adjusted baseline volume, please provide clarification if there's any other adjustment: - Great Rd westbound through (calculated 619 vpd, show as 645 vpd), and eastbound through (calculated 578 vpd, show as 588 vpd) at Great Rd and Robinson Rd intersection. - Great Rd westbound through (calculated 524 vpd, show as 535 vpd), Great Rd westbound right (calculated 94 vpd, show as 95 vpd) and eastbound through (calculated 395 vpd, show as 399 vpd) at Great Rd and Meetinghouse Rd / Adams St intersection. - King St northbound left (calculated 166 vpd, show as 171 vpd) and northbound through (calculated 219 vpd, show as 225 vpd), southbound left (calculated 113 vpd, show as 118 vpd) and King St northbound bare right (calculated 164 vpd, show as 181 vpd) at Great Rd and King St intersection.			
21	PEDESTRIAN AND BICYCLE FACILITIES		The report states that "Sidewalks are provided along both sides of King Street southwest of Goldsmith Street, on Goldsmith Street, and on Great Road between Adams Street and Robinson Road." It has been noted that sidewalk along Goldsmith St only presents on the east side; sidewalks along both sides of Great Rd between Acton Toyota of Littleton south driveway and Meetinghouse Road.			
22			The report states that "Sidewalks are also provided on the northwest side of King Street northeast of Goldsmith Street,..." the majority part along northwest side of King Street northeast of Goldsmith Street is paved parking, the existing sidewalk along northwest side of King Street south to Great Rd ends at intersection of Stevens St.			
23	PUBLIC TRANSPORTATION		Littleton-Westford Commuter Rail Shuttle Service had been suspended due to COVID-19 from 3/16/20 and yet still remain.			
24	MOTOR VEHICLE CRASH DATA		The crash data reviewed in this report based on the latest 3 years of data available, we recommend expand to the latest 5 years of data based on the MassDOT preference.			
25			The crash data reviewed was obtained from MassDOT. We recommend obtaining and reviewing crash records from the Town of Littleton Police Department in addition to the MassDOT crash data.			
26			The report stated that there were 46 crashes recorded at the intersection of King Street and Great Road. However, after reviewing the crash record from MassDOT crash portal, we noted that there were a total of 56 crashed located at this intersection with 1 non-fatal injury during the 2017-2019 period. We recommend updating the crash analysis at this intersection to be consistent with MassDOT and Littleton Police Department record.			
27	VEHICLE SPEEDS		The speed zone description under this section is not clear and is misleading: "The speed limit on Great Road eastbound is posted at 25 miles per hour (mph) west of the site and changes to 35 mph at the west end of the site. The speed limit on Great Road westbound is posted at 45 mph east of the site and changes to 25 mph at the west end of the site." The 25 MPH speed limit on Great Road eastbound is posted at Great Road and Auman Street, approx. 245 feet west to intersection of King Street and Great Road and turns to 35 MPH from Robinson Road to the four-leg intersection with #221 & #222 Great Road Driveways. Same speed zone set up on the Great Road eastbound. Thus, the speed limit in the vicinity of site is 35 mph, 25 mph speed limit is posted from #287 Great Road to the intersection of Great Road and Auman Street, Great Road north to Auman Street and south to the intersection with #221Þ Driveways are under 45 mph speed limit.			



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28	SPECIFIC DEVELOPMENT BY OTHERS		The Report illustrated that no trips from King Street 550 project would be considered in the future condition because the 265-289 development would be ahead if 560 King Street Project. After checking the Littleton Town website, it has been noted that the Littleton Planning Board has approved the Special Permits, with conditions. Moreover, the site plans has been posted on the town website. Although the 550 King Street Project may start after this project, with considering of the potential significant impact on the traffic operation at the signalized intersection of King Street and Great Street, the applicant shall include the background development analysis of 550 King Street development in the report and shall include the generated trips of 550 King Street project in the later section of traffic operations analysis.			
29	EXISTING SITE TRIP GENERATION		The Existing Site Trip Generation in this report was developed by using 10th Edition Institute of Transportation Engineers (ITE), we recommend using 11th Edition ITE.			
30	EXISTING SITE TRIP GENERATION		The Existing Site Trip Generation in this report used Land Use Code (LUC) 943 - Automobile Parts and Service Center to estimate the number of trips associated with reoccupancy of the former vehicle service station on the #277 Great Road parcel. The previous vehicle service station was closed from November 2020. Given this, since the traffic count of this TIAS was conducted on July 2022, the traffic volume shall only include the trips generated by Barbershop, Subway and bank with drive through window. The trip generation rates for Automobile Parts and Service Center, if included within existing site trips, will cause an underestimate of Net New Project Trips, thus is not expected to present an accurate accurate assessment of the level of impact associated with the current proposed redevelopment.			
31	EXISTING SITE TRIP GENERATION		The TIAS used Land Use Code (LUC) 932 - High-Turnover (Sit-Down) Restaurant to estimate the number of trips associated with reoccupancy of the former Subway store on the #287 Great Road parcel. Given this previous use of the building, trip generation rates for LUC 932 are expected to underestimate the number of trips that were associated with the previous Subway Store. As a result, we recommend the Applicant use LUC 933 - Fast-Food Restaurant without Drive-Through Window to estimate the number of trips associated with reoccupancy of the former Subway store.			
32	NO-BUILD TRAFFIC VOLUMES		We recommend including 550 King Street Development project into No-Build Traffic Volume.			
33	PROJECT-GENERATED TRAFFIC		The Land use areas listed in this section do not match with the latest site plan. We recommend update the land use area in the TIAS to be consistent with site plan.			
34			The Pass-By rates used in the TIAS do not include in the latest edition of ITE, Please provide the reference. Based on the latest edition of ITE, there are no pass-by adjustment factor for the LUC 936 - Coffee/Donut Shop without Drive-Through Window and LUC 822 Stripe Retail Plaza (<40K). We recommend including new trips generate by renovated drive-in back (due to limited amount of historical data for walk-in bank), using average pass-by ratio of LUC 934 - Fast-Food Restaurant with Drive-Through Window for the coffee shop, LUC 850 - Supermarket for the grocery store and adopting a pass-by rate of 15 percent (15%) for the rest area of the site of the adjacent street traffic volume based on MassDOT guidelines.			
35	NET NEW PROJECT TRIP GENERATION		We recommend subtracting out the internal trips among the among multi-use developments in order to avoid overestimate the impacts on the adjacent roadways.			
36	TRIP DISTRIBUTION AND ASSIGNMENT		The Trip Distribution used in this TIAS is based on the existing travel patterns. After reviewing the existing traffic volumes, the trip distribution of King Street north leg and King Street south leg shall be at same percentage during both Weekday PM and Saturday Mid-Day peak periods. We agree with the trip distribution percentage along Great Road.			
37	SIGHT DISTANCE EVALUATION		The sight distance measurements were performed following the appropriate standards and we are generally in agreement that the recommended minimum lines of sight for safe operation based on the design speed along Great Road within the vicinity of project site are met.			
38	TRAFFIC OPERATION ANALYSIS - LEVELS OF SERVICE		The description of six levels of service of unsignalized and signalized intersection in the TIAS is not clear. We recommend referencing the description of each LOS from 6th Edition of HCM			
39	TRAFFIC OPERATION ANALYSIS - Analysis Results		We recommend including the #550 King Street Project into traffic operation analysis.			
40			Based on the LOS analysis of proposed development in the TIAS, the LOS of 2029 No-Build condition illustrated that the King Street and Great Road intersection already performing with poor operating characteristics (LOS E), and the proposed site development is expected to cause the operations and efficiency of this intersection measurably degrade to LOS F. In addition, it has been noted that long queue present on all approaches. More than that, the project of #550 King Street redevelopments will cause the intersection operation further worse. The applicant shall provide mitigation analysis to mitigate the impacts of the proposed development in a manner that avoids further degradation to the traffic performance.			
41			The TIAS concluded that "The study area intersections crash rates were observed to be lower than the MassDOT District 4 crash rates for unsignalized and signalized intersections except for the intersection of King Street with Great Road. No fatalities were reported over the five-year period reviewed." We recommend referencing the MassDOT District 3 state average crash rates Instead of the District 4 values as Littleton is located with District 3.			
42			This TIAS reviewed the three-year crash report from MassDOT during the 2017-2019 period, not five-year period.			
43			We recommend the Applicant providing an overview of proposed parking supply and layout in the TIAS based on MassDOT requirement.			
43			We concur that the proposed development is not expected to adversely impact traffic safety or operations within the study area.			
SITE PLANS						
44	C-200	§ 173-224	We concur that the calculated minimum number of parking spots meet the requirements of Littleton Zoning Bylaw, § 173-224 Site Standard of Village Common Area.			



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45	C-200	§173-33	Load zones and facilities should be added to the plans. Per Littleton Zoning Bylaw, § 173-33. Loading requirements, Adequate off-street loading facilities and space must be provided to service all needs created by new construction, whether through new structures or additions to old ones, and by change of use of existing structures. Facilities shall be so sized and arranged that no trucks need back onto or off of a public way or be parked on a public way while loading, unloading or waiting to do so.			
46	C-200	§173-220	The sidewalk between Building C rear door and parking lot is only 5-foot wide. At least 20-foot-wide setback shall be provided between the Building edge and rear-side parking lot to meet the Littleton Zoning Bylaw and provide comfort and safe walking environment for the pedestrians on the sidewalks. When development occurs on any lot abutting a sidewalk that is less than 10 feet in total width, buildings must be setback an additional distance and a sidewalk at least 10 feet in width must be provided within the frontage area. The minimum and maximum front setbacks are increased accordingly.			
47	C-200		The Littleton ladder truck used for the turning movements has a steering angle of 45.6 feet. We have concerns of the turning movements within the proposed parking lot area. The applicant shall provide a turning movement check as such to ensure the driveways within parking lot could accommodate emergency vehicles and could accommodate regular parking maneuvers.			
48	C-200	§ 173-177	We recommend adding bicycle parking on the plan for each building per zoning code § 173-177. Bicycle parking shall be provided for all new developments, and shall be at least 50% sheltered from the elements. At least two bicycle parking or storage spaces shall be created for each commercial use within the site.			
49	C-200		Direction arrow shall be provided within parking lot to clarify one-way/ two-way aisle.			
50	C-200		We recommend placing the stop bars at site exit driveways back of sidewalk. The stop bar shall be placed at lease 4 feet from roadway edge.			
51	C-200		Sidewalk and walkways are only provided surrounding the proposed buildings, however, there's no other walk path/pedestrian accommodations provided for parking lot. Also, there is a median island in front of building B and C providing separations between parking rows, the three wheelchair ramps on the east, west and north ends of sidewalk lead only to parking spots without connecting to any walkways. To increase walkability and reduce conflicts between pedestrians and motor vehicles, we recommend providing walking path along the outer edge of whole parking lot area and add high-visibility crosswalk and additional wheelchair ramps within parking area.			
52	C-200		There are several merging area within parking lot, we recommend adding stop bars on minor streams.			
53	C-200		There are no turning movements provided for trash vehicles accessing the designated dumpster/recycling area. Figures showing the turning movements for dumpster/recycling pick-up should be provided at the designated areas within parking lot.			
54	C-200	700 CMR 13.01	MassDOT Vehicular Access Permit will be required for modification of curb cuts and for curb improvements within the State ROW.			
55	C-200	PDDG 15.2.3	Per MassDOT PDDG Section 15.2.3, a driveway for commercial uses with retail customers and regular visitors must have a nominal width of 30 feet, revise to provide a 30 foot wide driveway entrance measured at the SHLO			
56	C-200		Who will maintain the proposed sidewalk beyond Town ROW on Robinson Rd? The proposed sidewalk appears to have a stub extend to the existing edge of pavement on Robinson Rd. If this is for a future mid block crossing, a wheelchair ramp should be proposed.			
57	C-200	Urban Land Institute/Mass Smart Parking Bylaw	The aisle width in the proposed parking lots are 20' wide. Urban Land Institue Chapter 7 recommends a 23' aisle for two-way 90 degree parking and the Massachusetts Smart Parking Model Bylaw requires 24'. The applicant provide documentation to justify the 20' aisle width or revise the aisle with to meet design standard.			
58	C-200		What is the width of the buffer between the existing edge of pavement and the 10 foot sidewalk along Great Road? A 3 foot minimum should be proposed in order to provide for an adequate area for grass to grow and be maintained.			
59	C-200		The wheelchair ramp associated with the handicap spot nearest the bank building should propose the detectable warning panel flush with the edge of curb and not perpendicular to the parking lot as currently shown.			
60	C-200	PROWAG R302.3	Per PROWAG Section R302.3, all wheelchair ramps should provide for a minimum of 4' level sidewalk area beyond the ramps, the ramp outside building D in front of the handicap spaces looks very close to the sidewalk corner. Verify 4' is provided.			
61	C-200		Although the parking offset from the state layout line is met at 20' the first parking spaces nearest Great Road between buildings D and E the spaces may be difficult to navigate in and out of as traffic also enters the parking lot from Great Road. We recommend removing these spaces given the provided spaces exceeds what is required.			
62	C-200	§173-17	The Applicant should clearly show and label the right-of-way lines on the plans and show the demarcation between State Highway Layout and Town layout lines			
63	C-200		Who is the intended owner of the sidewalk along Great Road and will the applicant be responsible for maintenance (repairs, snow removal, etc.)?			
64	C-200		What is expected to happen in the grass triangle at the corner of Robinson Road and Great Road (area where UP#1 is located)?			
65	C-200		Where are deliveries anticipated to occur for the retail tenants? The parking lot design is very tight and there are no designated loading zones shown on the plans.			
66	C-200	§38-16.C.5.	The Applicant shall show a number in square feet of the land area to be disturbed on the site plan.			
67	C-200		All buildings are labeled except for the bank. Please label the bank as building A.			



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68	C-200		The legend has a hatch for bituminous pavement but it is not shown on the plans. Please revise plans to be consistent with the legend.			
69	C-300		One accessible space symbol near building B is shown, but the other accessible space symbols are not shown on the grading plan. Please be consistent with labeling.			
70	C-300	§38-16.C.7.	Erosion control notes indicate that inlet protection around existing storm drainage inlets with and immediately down gradient of the work limits and as shown on plan. The plan does not show or callout locations for inlet protection on existing or proposed inlets. It is recommended to provide inlet protection on proposed structures since they will be installed during earth disturbing activities. Locations of erosion control measures shall be shown on the plans.			
71	C-300		Watershed plans indicate that a portion of the site discharges to Great Road under existing and proposed conditions. Sedimentation barrier should be wrapped around the whole site including Great Road side of the site.			
72	C-300		A construction fence should be added to the plan to show how the project will be contained.			
73	C-300		The pipe angles entering the manhole at PDMH 18 do not seem constructable. Please revise drainage layout with constructable pipe angles.			
74	C-300		AD-1 to PDMH 19 has no slope. We recommend providing a minimum of 0.5% slope for all drainage pipes.			
75	C-300		Most of the manholes associated with the infiltration systems and detention system do not show pipes connecting to the structure and the system. Also, they are not detailed. Manholes should be detailed and aligned with the system pipes so the connection and functionality is clear.			
76	C-300		PDMH 12 and PDMH 13 are located in the assessable aisle for handicap parking. We recommend locating manhole covers outside of the accessible aisles.			
77	C-300	MA Stormwater Handbook Vol 2 Chp 2	PCB 9, AD 11, and AD 12 directly discharges to the detention system. All closed drainage shall have pretreatment before entering the detention system except for roof drains.			
78	C-300		How do AD 7 & 8 connect into the drainage system? Do they connect using a tee? We recommend providing a drainage structure instead of a tee.			
79	C-300	MA Stormwater Handbook Vol 2 Chp 2	No test pits are provided at the location for infiltration system 1B. Test pits should be provided at infiltration BMPs to confirm localized soil and groundwater conditions.			
80	C-300,C-501	ADA/MAAB REGULATIONS	There is not enough detailed grading to verify that the accessible parking spaces and sidewalks meets ADA/MAAB requirements, but the handicap ramp detail and parking stall striping detail notes ADA requirements would be met in construction. We defer to the Board if this is acceptable.			
81	C-300/C-501	§38-16.C.7.	There is a detail of a stabilized construction entrance but the location is not shown on the plans. Locations of erosion control measures shall be shown on the plans.			
82	C-300/C-503	ADA/MAAB REGULATIONS	The detail for the area drain indicates pedestrian safe grate. Please confirm area drain grates are ADA and heel compliant.			
83	C-300/C-503		Special manhole detail PDMH 9 and PDMH 9 on sheet C-300 have different invert and weir elevations. Please revise to show consistent information.			
84	C-300/C-503		Special manhole detail PDMH 14 is shown as PDMH 13 on C-300. Please revise to show consistent information.			
85	C-300/C-503		Special manhole detail PDMH 14 and Pipe detention system detail have different inverts. Please confirm. If Pipe detention section is correct then the bottom 6" of stone will be permanently filled with water due to the impervious liner. We recommend an underdrain at the bottom of the system to prevent the system from permanently having water at the bottom.			
86	C-300/C-504		Pipe sections detail include inspection ports. The location of the inspection ports should be shown on the site plans.			
87	C-400		The existing water service line towards Building A at the northwest corner of the lot does not have any proposed callouts. Please indicate if this will be abandoned and how it will be abandoned.			
88	C-400		In front of building B the drain, gas, and water are running parallel and are very close to each other. Are there concerns with future access? Can the drain or water be replaced in the future without impacting the gas?			
89	C-400		Hydrant west of building B is missing a gate valve. Please add gate valve.			
90	C-400		Proposed 8" water is connecting to an existing 12" water line in front of Building B. Has this been coordinated with the water department? Should the 12" water continue along Great Road and reduce onsite?			
91	C-400		For proposed water all bends, fittings(reducers, tees, etc), and tapping sleeve and valves should be called out on the plans.			
92	C-400		All proposed and existing sewer inverts shall be shown on the plans. There are potential utility conflicts between the sewer services at Building C and D and the proposed drainage.			
93	C-400		We recommend encasing sewer lines in concrete when crossing water lines.			
94	C-400		Provide or confirm 10' separation between water and sewer lines between buildings D and E.			
95	C-501		The handicap ramp detail shows 1:12 (8.33%) max slope for the up-ramp and 1:20(5%) max slope for the sidewalk. We recommend max 7.5% slope and 4.5% respectively to allow for construction tolerance.			
96	C-501	ADA/MAAB REGULATIONS	Sidewalk and handicap ramp details should indicate max cross slopes. We recommend 1.5% cross slope to allow for construction tolerance.			
97	C-502		Domestic service connection detail indicates 4.5' min cover for water service. We recommend a 5' min of cover for water to prevent freezing.			



Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
98	C-503/L-503		Protection Bollards are shown on C-503 but are not shown on the c-sheets. Granite bollards are different and are shown on L-503 but are not shown on the L-sheets. The L-sheets callout Bollard light which are not detailed on the plans. Please revise and confirm bollard detail and location.			
99	C-503		Drain Manhole detail refers to Concord Public works. Please revise to not refer to other Town's Public Works.			
100	C-504		Required water quality flows or model for each Stormwater Treatment unit should be provided in the detail to confirm correct size unit is proposed.			
ZONING BYLAWS						
101		§173-18.D.	Adequate access to each structure for fire and service equipment shall be provided. Confirm this has been reviewed and coordinated with the Littleton Fire Department.			
102		§173-17	Service entries are checked off in the application but only one service entry is shown to Building B. Do the rest of the buildings not have service entries?			
103		§173-222.i.	Rain Gardens and bioswales should be installed to infiltrate runoff from parking lots, throughfares, entry plazas, dining patios, and other impervious surfaces. Rain gardens were not proposed for this project. The applicant has stated that rain gardens are not feasible for the site. We defer to the board if this is acceptable.			
104		§173-222.j.	Where vegetative solutions are not feasible, porous concrete or porous asphalt should be used for sidewalks, parking lots, entry plazas, and dining patios to infiltrate stormwater. Porous pavement was not proposed for this project. Pervious pavers were used in some locations which are similar to porous pavement. We defer to the board if this is acceptable.			
105		§38-17.C.5	Estimated seasonal high groundwater elevation should be done between November and April per the Stormwater bylaw. The test pits were performed in May. Season high groundwater appears to be measured based on redoximorphic features instead of actual groundwater elevation. We feel since this method was used and was less than a month later, the seasonal high groundwater should be acceptable. We defer to the board if this is acceptable.			
STORMWATER REPORT						
106			It appears that the Great Road and Robinson Road peak rates are mislabeled in Table 1.2.1.. Also, the post development peak rates do not match the table. Please revise roadway names to match with the correct peak rates and revise table to use current peak rates.			
107	Recharge Calcs	MA Stormwater Handbook Vol 3 Chp 1	MA Stormwater Handbook notes that the required recharge volume shall be calculated from the impervious areas covering the soil type at the post-development site. Revise calculation to include all impervious areas not just new impervious areas.			
108	Recharge Calcs	MA Stormwater Handbook Vol 3 Chp 1	MA Stormwater Handbook notes that porous pavement is considered impervious when calculating required water quality volume and required recharge volume. Porous pavers are similar to porous pavement and should be considered impervious for calculations.			
109	Recharge Calcs		The total recharge volume for the systems is noted 12,498 cf in the report. Please provide backup such as HydroCAD storage tables to confirm this number.			
110	Test Pits		TP-5 indicated seasonal high groundwater is 32" below grade which appears to be elevation 275.33. The bottom of infiltration system 1C is at elevation 277.1. This is less than 2' separation to groundwater please revise to provide 2' separation to groundwater.			
111	HydroCAD		A minimum Tc of 6 minutes should be used.			
112	HydroCAD		Existing Pond 1B indicates the bottom is at elevation 277 but there are no 277 contours at Pond 1B on the site plans. Please revise.			
113	HydroCAD		Proposed Pond 1A is taking credit for infiltration. There is less than 2' separation to groundwater therefore exfiltration cannot be used.			
114	HydroCAD		For proposed Pond 1A the outlet pipe should be modeled with the grate and for proposed Pond 1B the outlet pipe should be modeled with the weir to confirm peak elevation and peak rates. This should be modeled in the same pond as devises(grate, weir, orifice) routed through the pipe.			
115	HydroCAD		Post Development Basin 1B has many warnings including storage exceeded, basin 1C exceeded, WQU exceeded. HydroCAD does not give accurate results when warnings are triggered. Based on these warnings the basin as well as other structures/systems are failing. Please revise to have a working model with no warnings.			
116	Subcatchment Plans	§38-17.C.7.	The Applicant is required to add the existing and proposed ground surfaces with runoff coefficient for each on a site plan. Please add these to the drainage maps.			
117	SW checklist		This project should be considered as a new development because no existing site features are to remain and all standards should be fully met.			
118	SW checklist		The project attenuates peak flows for storms greater than the 10 year storm and has less than 4 feet of separation to groundwater. Therefore, a mounding analysis should be provided.			
119	ILSF Calcs	Hydrology Handbook for Conservation Commissioners	No infiltration should be accounted for within the ILSF. The curve number should be 98 or 100 for the bottom of the basin. Revise calcs using correct curve number for the bottom of the ILSF. This applies to Stormwater HydroCAD calcs as well.			
120	ILSF/Post Development Subcatchment Plan	Hydrology Handbook for Conservation Commissioners	The post construction ILSF limit should be provided on this plan similar to existing conditions.			
O&M PLAN						
121	O&M Plan	§38-18.B.3	The O&M Plan shall be signed by the responsible parties. We defer to the board whether this be made a condition of approval.			



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PROJECT NAME Northern Bank Town Common Peer Review

DATE 12/1/2022

UPDATED:

PROJECT NO. 22015.0806

Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
122	O&M Plan		Snow storage locations have not been identified on the site plans. We recommend these locations be shown on the plans. Snow storage should not be allowed in the new ILSF or upgradient to it.			
123	O&M Plan		Area drains should be included in the catch basin and manhole inspection section.			
124	O&M Plan		The O&M plan should include maintenance of the pervious pavers and new ILSF.			
MassDEP COMMENTS						
125			Field work appears to have occurred in June and October of 2022. The Applicant should confirm whether this ILSF is likely to contain breeding habitat for vernal pool obligate species and confirm whether this area was investigated for the presence of breeding activity during the spring breeding season. An additional description of the site working completed to determine the lack of vernal pool obligate species should be submitted.			
126			Test pits are required at the location of any infiltration BMP, one sample for every 5,000 sf of basin to verify seasonal high groundwater and soil type. While there appear to be soil logs, a test pit per basin does not appear to be shown on the plans and does not appear to be situated at each infiltrating BMP. Please provide additional information for where BMPs are situated and confirm the depth is at least 2 ft to seasonal high groundwater and/or bedrock. A detail on the separation from SHGW should also be provided. See V2, Ch2, p88 of the MA Stormwater Handbook.			
PLANNING BOARD COMMENTS						
127	P. 122		When you return, please confirm colors of buildings - will they be same colors as depicted?			
128	P. 123		Why no rain water gardens?			
129			What remediation will take place when removing the old gas tanks at the former gas station?			
130			Are you providing charging stations for electric cars?			
131			What about timing with the Sewer, what does the build time look like?			
132			Did you show us the lighting on the plans or did I miss that?			
133			Cross cut plans are supposed to be submitted as well for site review?			
134			What are you planning for signage?			
135	P.249		Stormwater plan isn't checked for tree box filters. I'd like to see those used along great road trees to protect them from the gas fumes and dirt.			
RESIDENTS' COMMENTS						
136			Where will it be documented regarding the "not able to develop zone" on the green space frontage on Robinson Road?			
137			Continuation of the bank's sidewalk from the corner of Robinson Road to the end of their property line at 25 Robinson Road (this is for safety reasons).			
138			Documentation that there will not be parking on Robinson Road during construction. All vehicles need to park on job site.			
CONSERVATION COMMISSION'S COMMENTS						
139			How long/often there might be standing water in the "new" ILSF area – I'm concerned that long time flooding will kill the trees and I'm not sure if the storage being assumed in this sort of area needs to show drawdown after (72?) hours.			
DISABILITY COMISSION'S COMMENT						
140			Is the project ADA and MAAB compliant? We want to be sure the best things are being done for the Town with projects regarding Disability accessibility.			
SUSTAINABILITY COMMITTEE'S COMMENTS						
141	EV Chargers for visitors/customers		EV chargers, principally Level 3 fast charging stations (e.g. EVGo or Electrify America) and Level 2 charging stations, should be provided for visitors. To ease future growth, the electrical infrastructure should be in place for installation of chargers at locations throughout the parking facilities.			
142	Native plantings		Only native plants should be used, with attention to water use and tree species longevity in changing climate. Landscape design should be environmentally friendly, and drought resistant, with limited lawn and possibly incorporating areas such as a pollinator garden.			
143	Pedestrian connection		Traffic solutions should prioritize pedestrian and bicycle connections to the Common and surrounding area.			
144			LEED certification of buildings			
145	Lighting		Low energy and downward facing lighting should be used to minimize the effect of artificial lighting on local fauna, save energy, and preserve access to nighttime skies.			

Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
146	Low impact development practices		e.g. permeable pavement and water management. In June of 2018, the town of Littleton received a Regulatory Analysis for Low Impact Development as a product of a Municipal Vulnerability Preparedness grant. This analysis, as well as the Summary of Findings from the Community Resilience Building Workshop, is available at https://www.littletonma.org/town-administrator/pages/municipal-vulnerability-preparedness . We urge the Planning Board, as well as the Select Board, to review the regulatory analysis for potential improvements in existing policies and requirements that would lead to better procedures and incentives promoting sustainable development.			
147	Accessible/universal design		The ADA sets minimum standards for buildings and facilities. Universal design incorporates inclusive elements and accessible features in the design, creating coherent, usable spaces that benefit all.			
148	Open space gathering areas		Public gathering areas are an important part of a resilient community. Open space and social gathering areas with sun shelters, benches, and picnic tables, and connectivity throughout the property via pedestrian paths will help to bring a human scale to the development.			

Northern Bank Proposal FBC Review

November 30, 2022

Contents

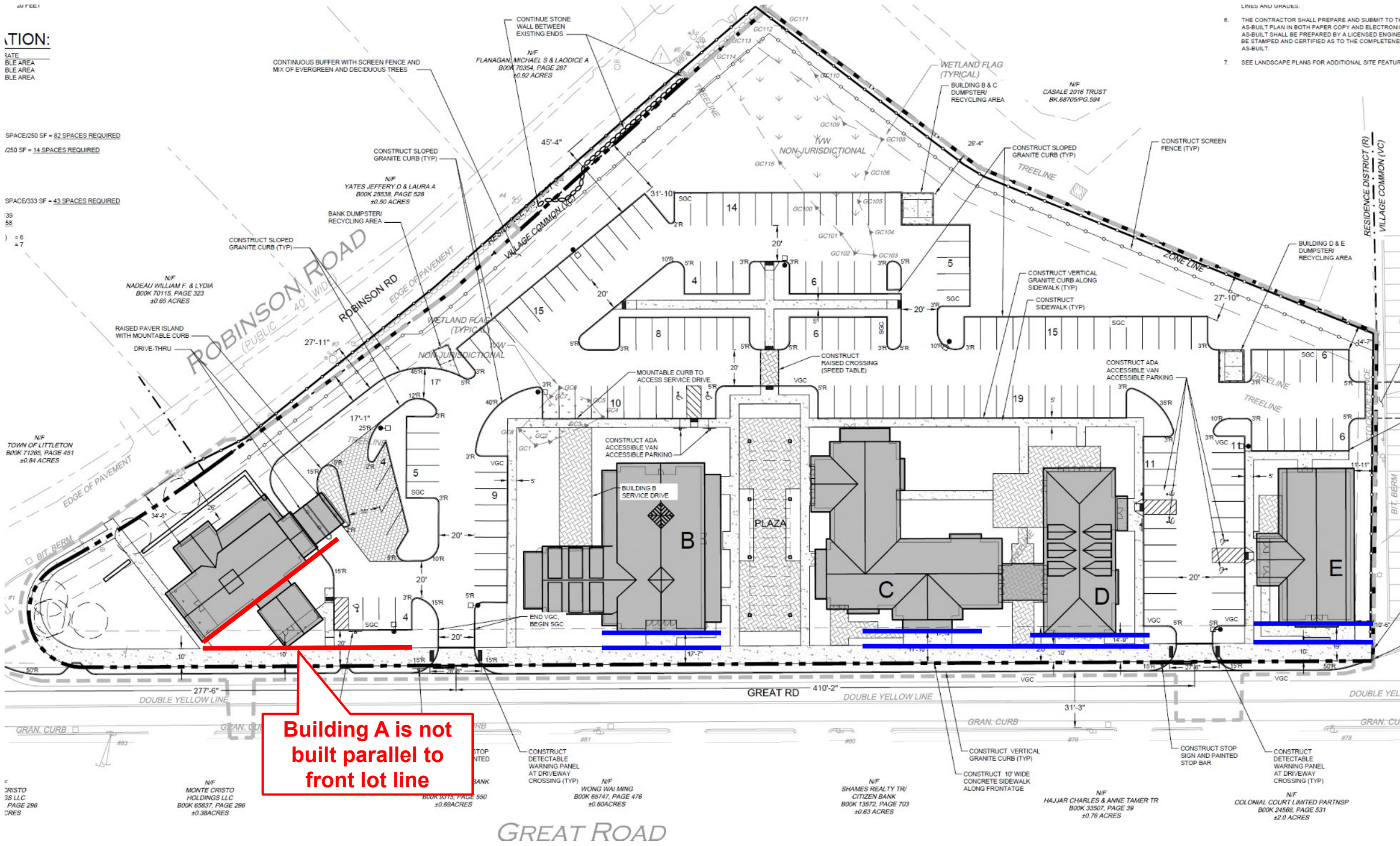
- **Lot Standards:** Comments 1 - 2
- **Building Standards:** Comments 3 - 10

NOTE: Comments 1 - 3 are most critical.

Lot Standards (§173-220)

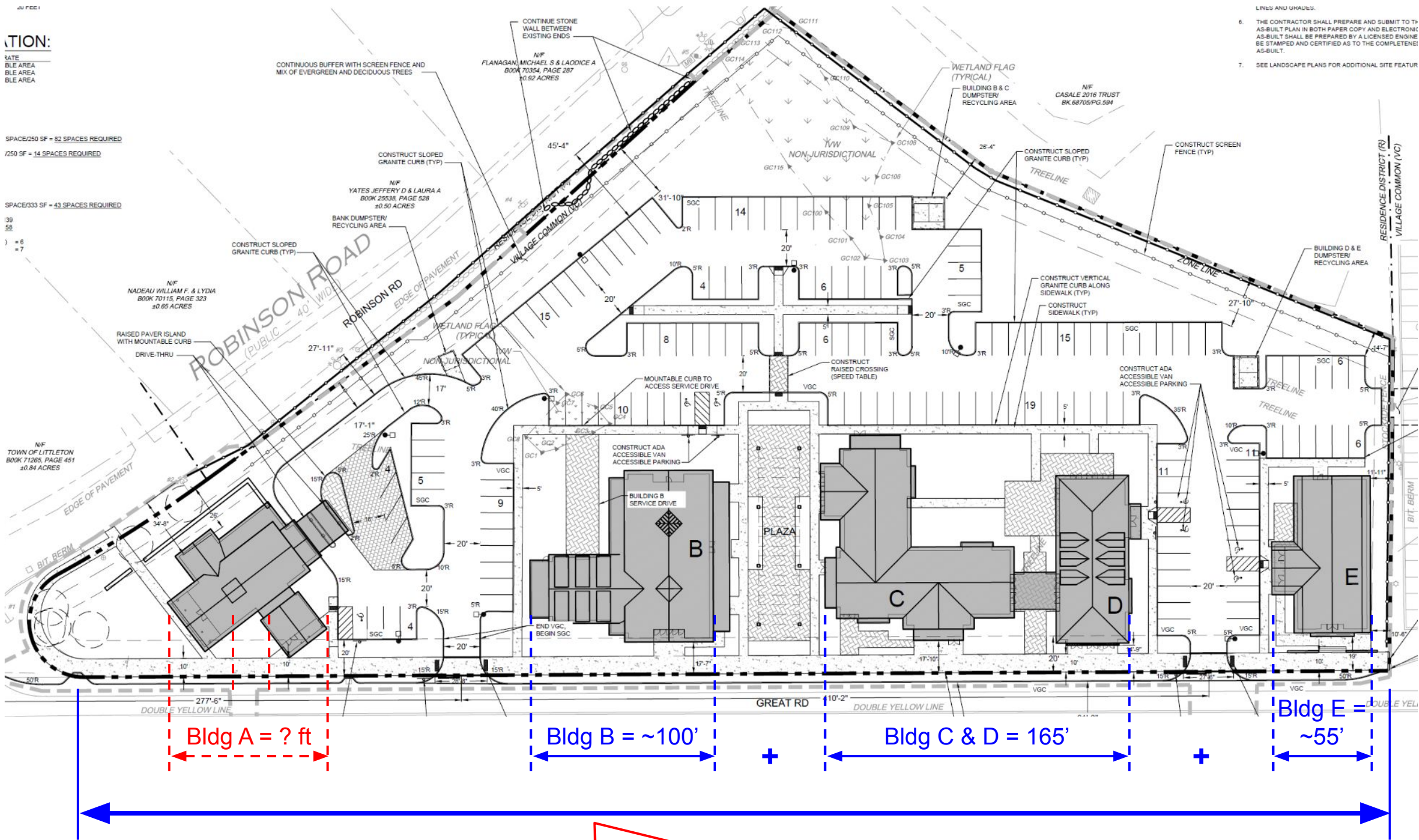
Comment #1: Not all buildings are built parallel to the front lot line

Comment #1	
Sheet No.	C-200 ("N Bank Civil and LA Updated 11-14-2022.PDF")
FBC Section	Lot Standards §173-220.A.b.
FBC Text	<i>"Building façade(s) must be built parallel to any primary front lot line at or between the minimum and maximum front setbacks."</i>
Utile Comment	While Buildings B, C, D, and E are all compliant, Building A is rotated such that its façade is not built parallel to the front lot line (along Great Rd). This rotation also complicates setback measurements, where portions of the facade is compliant while other portions are not.
Utile Recommendation	Utile recommends rotating / redesigning Building A such that it is built parallel to the primary front lot line at or between the minimum and maximum front setbacks. One of the primary intents of the FBC is to promote a Village Common district with a consistent street wall along primary streets for all private development; the rotation of Building A breaks this continuity.



Comment #2: Facade build-out percent is insufficient

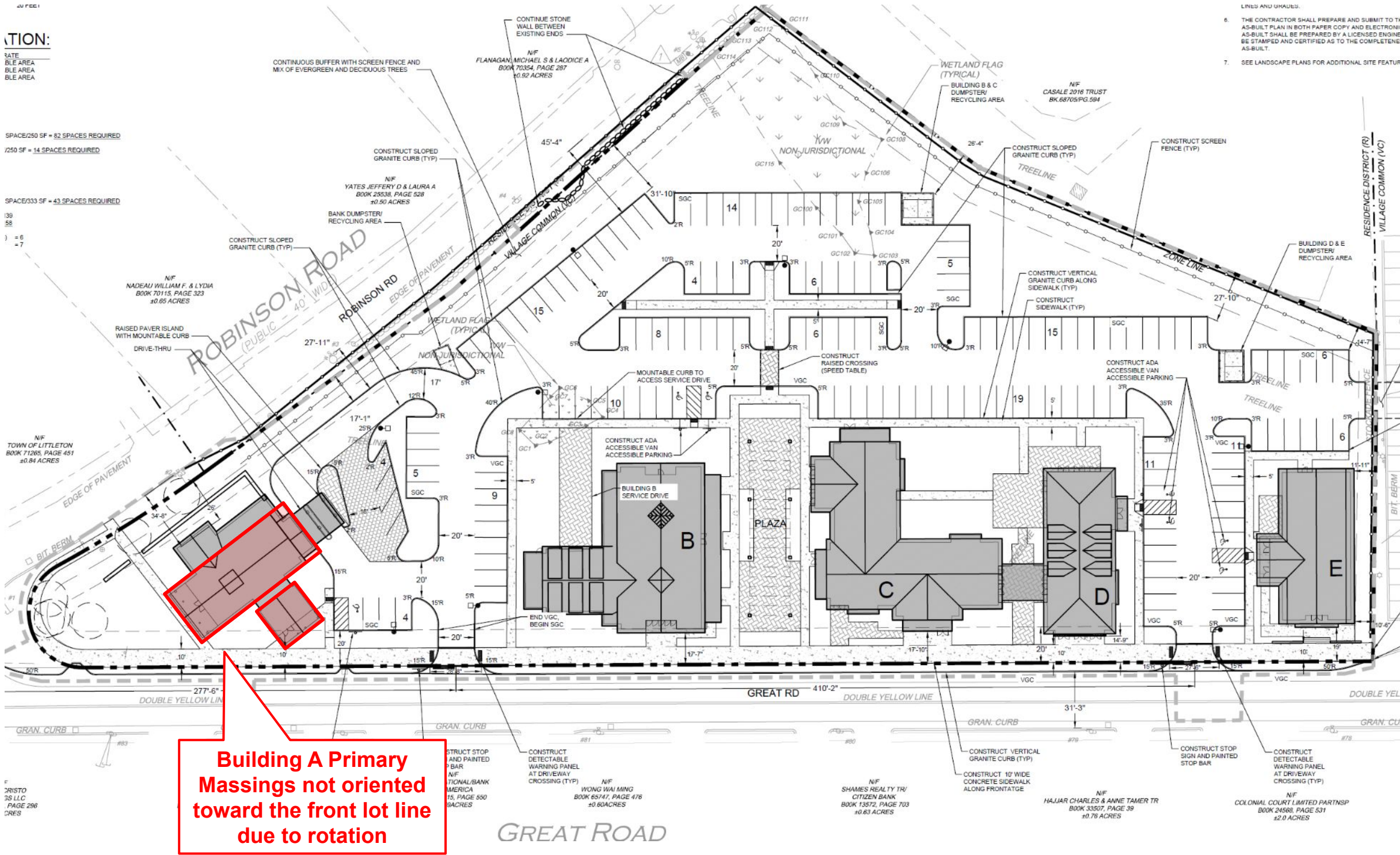
Comment #2	
Sheet No.	C-200 ("N Bank Civil and LA Updated 11-14-2022.PDF")
FBC Section	Lot Standards §173-220.A.c.
FBC Text	"Building façade(s) must be built-out to a percentage of the lots width as specified in §173-220 B. Standards for all Lots."
Utile Comment	Related to comment 1 above, Building A's rotation complicates the facade build-out percent calculations. Discounting this building's contribution to the facade build-out percent means that the remaining 4 buildings do not collectively meet the minimum facade build-out percent (~46% out of the minimum 60%).
Utile Recommendation	See recommendation for comment 1 above.



Building Standards (§173-221)

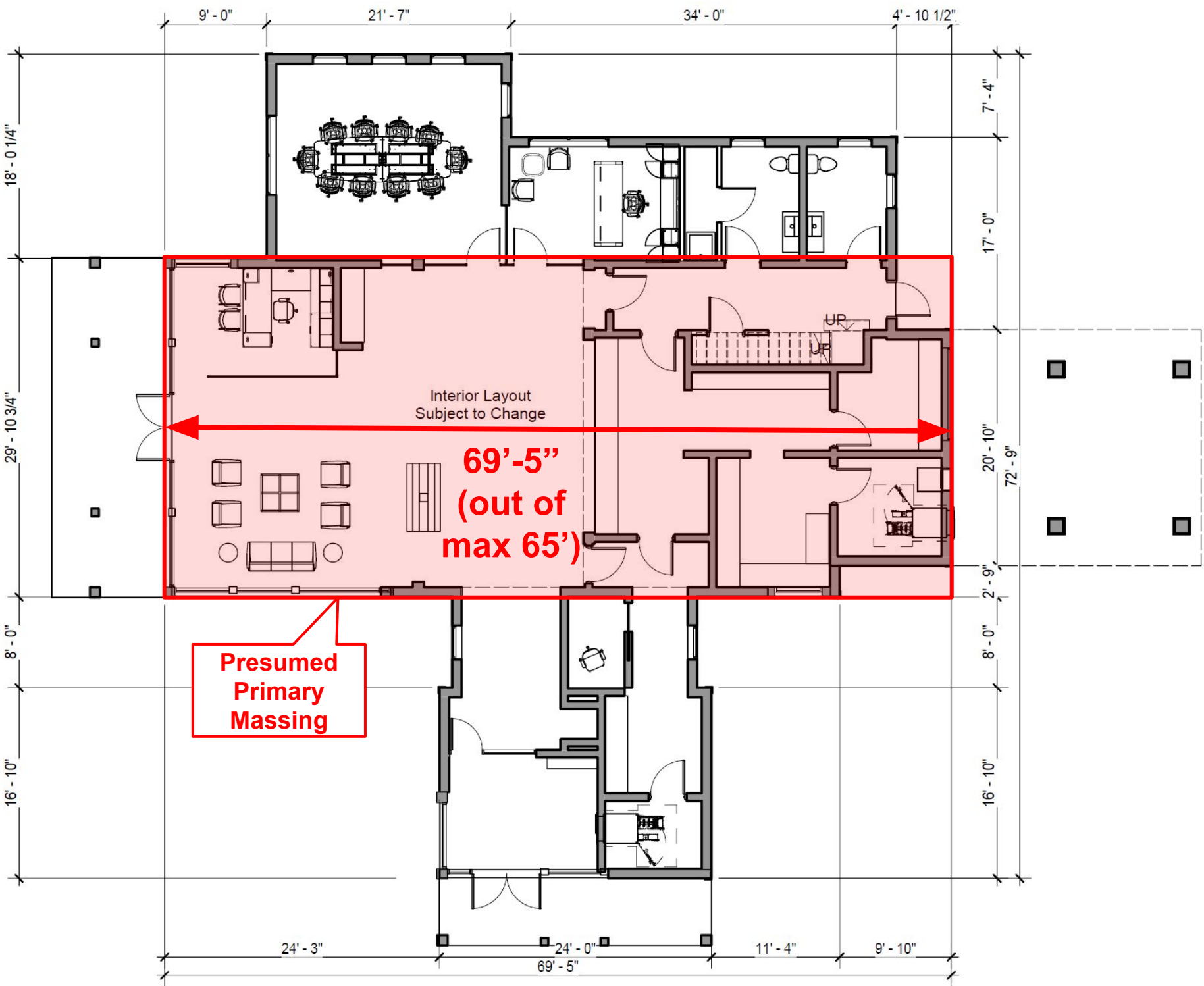
Comment #3: Building A is not oriented toward the front lot line

Comment #3	
Sheet No.	Building A - Floor Plan (Page 3 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.C.a.
FBC Text	<i>"The primary massing(s) of a building must be of rectangular form with a single type of pitched roof and may be oriented either with the narrow end or long side toward the front lot line."</i>
Utile Comment	Building A is rotated such that neither the Primary Massing's narrow end nor its long side are oriented toward the front lot line (along Great Rd).
Utile Recommendation	See recommendation for comment 1 above.



Comment #4: Building A primary massing is unclear & potentially too wide

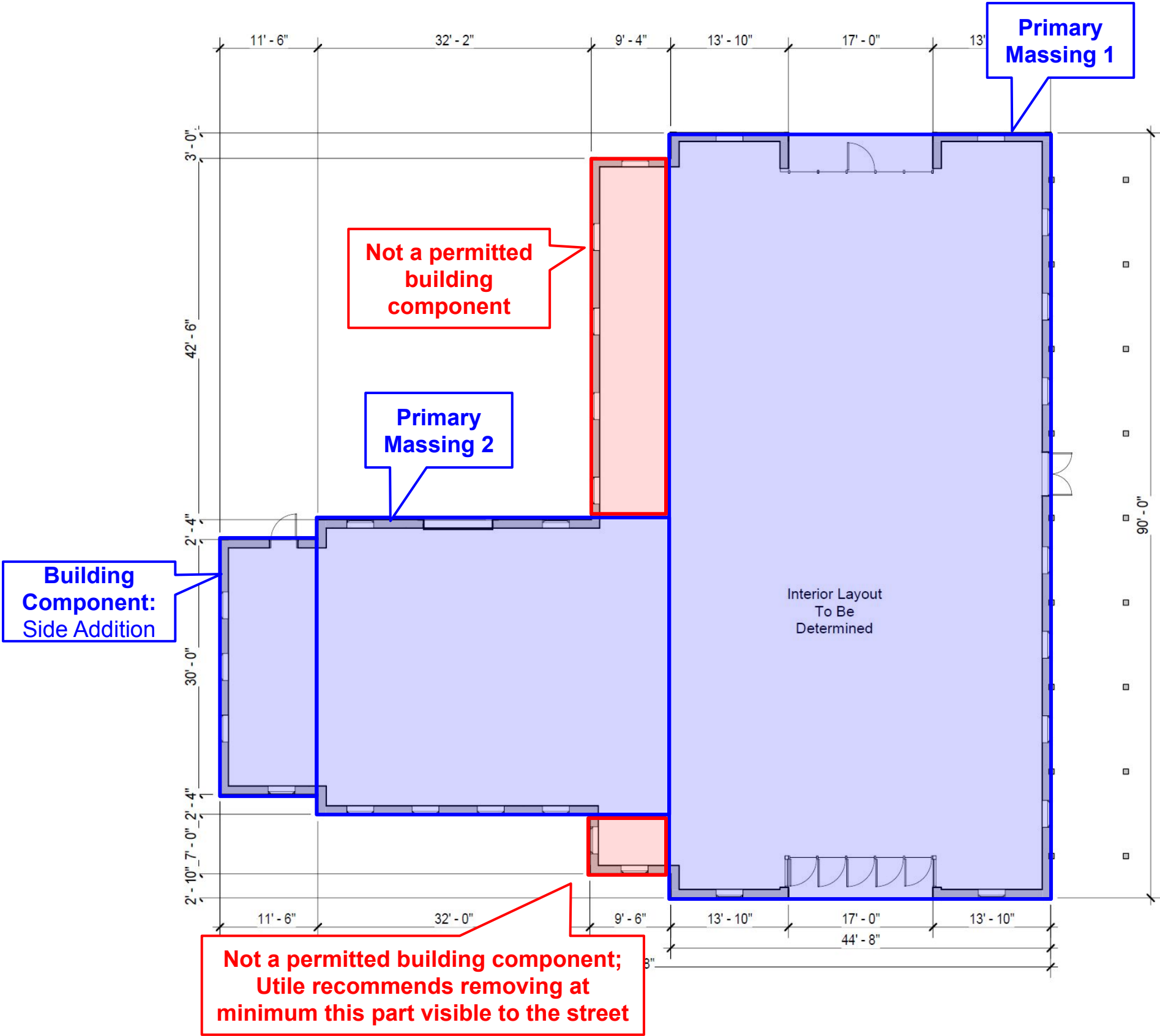
Comment #4	
Sheet No.	Building A - Floor Plan (Page 3 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.C.b and c.
FBC Text	<i>"Width of the primary massing is measured parallel to the facade, from the exterior plane of each side wall. Depth of the primary massing is measured perpendicularly from the facade as the maximum length the longest exterior side wall of a building."</i>
Utile Comment	Related to comments 1, 2, and 3 above, the rotation of Building A also complicates the measurement of the Primary Massing's dimensions (i.e., width vs depth) since it is unclear which building side is considered front vs the side. If the long side is considered oriented front, then the primary massing exceeds the maximum width (currently 69'-5" out of the maximum 65').
Utile Recommendation	See recommendation for comment 1 above.



First Floor Plan
Building A - 3,319 SF

Comment #5: Building B has a prohibited building component

Comment #5	
Sheet No.	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.B.a.
FBC Text	<i>"Buildings are comprised of one or more primary massings and various optional building components that are assembled to make a single building complex."</i>
Utile Comment	While labels are missing on the floorplan, this building appears to be comprised of 1 larger primary massing with its narrow end oriented toward the front lot line, one smaller primary massing with its long side oriented toward the front lot line, and one side addition appended to the end of the smaller primary massing. However, there is a 1-story ~9'-4" narrow strip at the middle that is neither a primary massing nor a permitted building component.
Utile Recommendation	Utile recommends removing, at minimum, the portion of this strip that is visible from the street and consequently preserving a simple farmhouse-like reading of 2 intersecting primary massings along Great Rd.



Comment #6: Building B fenestration percent is insufficient

Comment #6	
Sheet No.	Building B - Elevations (Page 4 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.G.b.
FBC Text	<i>"For buildings with ground story commercial spaces, ground story fenestration is measured between two (2) feet and twelve (12) feet above the finished floor of the ground story."</i>
Utile Comment	The façade of Building B does not meet the minimum fenestration percent (~33% out of the minimum 60%). The proponent suggests including the full height of the entrance storefront into the calculation of the fenestration percent, which would more or less meet the minimum percent.
Utile Recommendation	Utile deems this an acceptable deviation and defers to the Town's discretion.



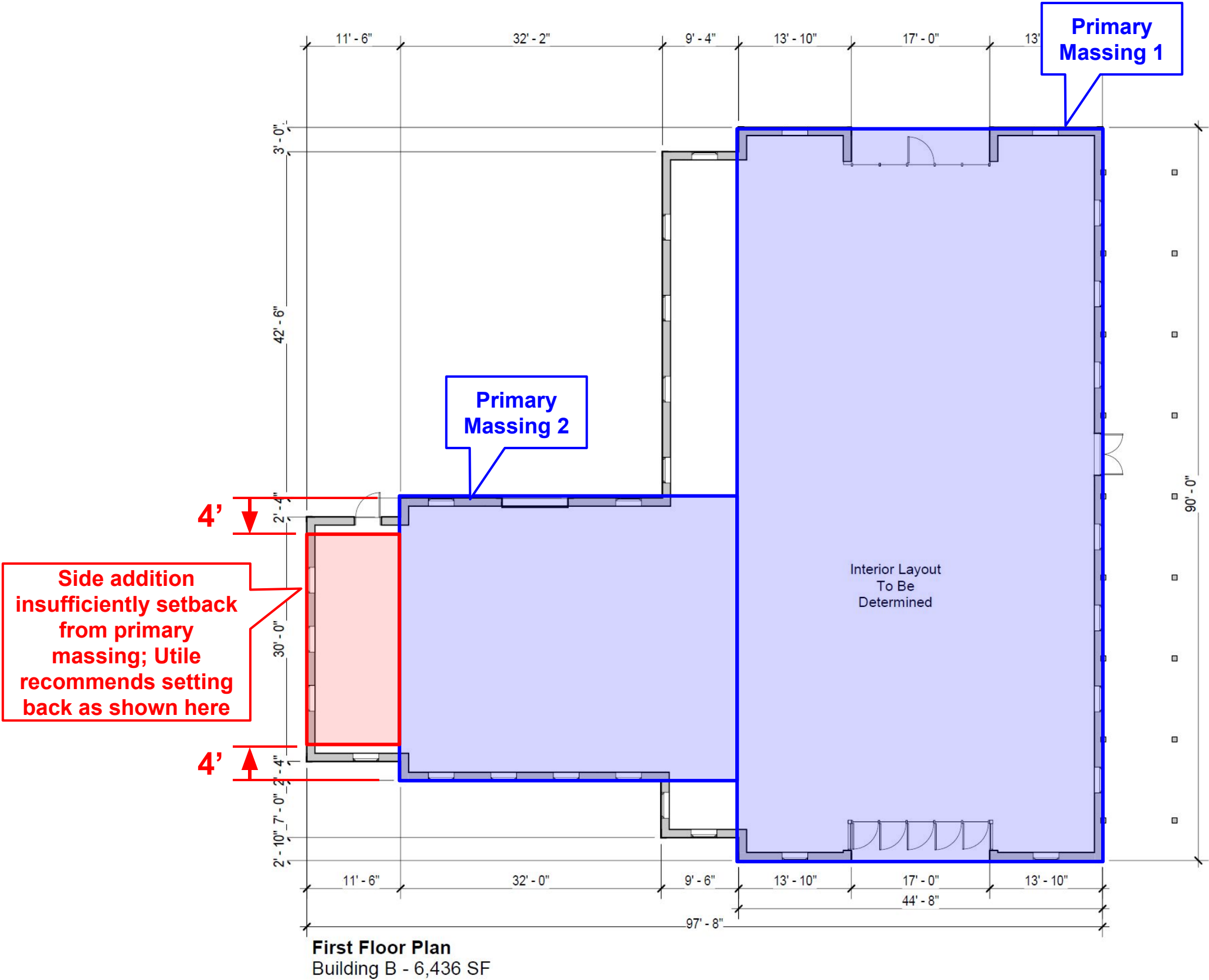
Comment #7: Building B primary massing is missing principal entrance

Comment #7	
Sheet No.	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.J.b.i.
FBC Text	<i>"Each primary massing must have at least one (1) principal entrance. The principal entrance of a building must be located on the façade for any building contributing toward the frontage build out calculation."</i>
Utile Comment	The smaller of the 2 primary massings of this building (with its long side oriented toward the front lot line) does not have a principal entrance. Principal entrances on the facades of primary massings make ground floor commercial uses approachable and activate the public sidewalk.
Utile Recommendation	Utile recommends adding a principal entrance on the facade of this primary massing (with attendant footpaths, etc.).



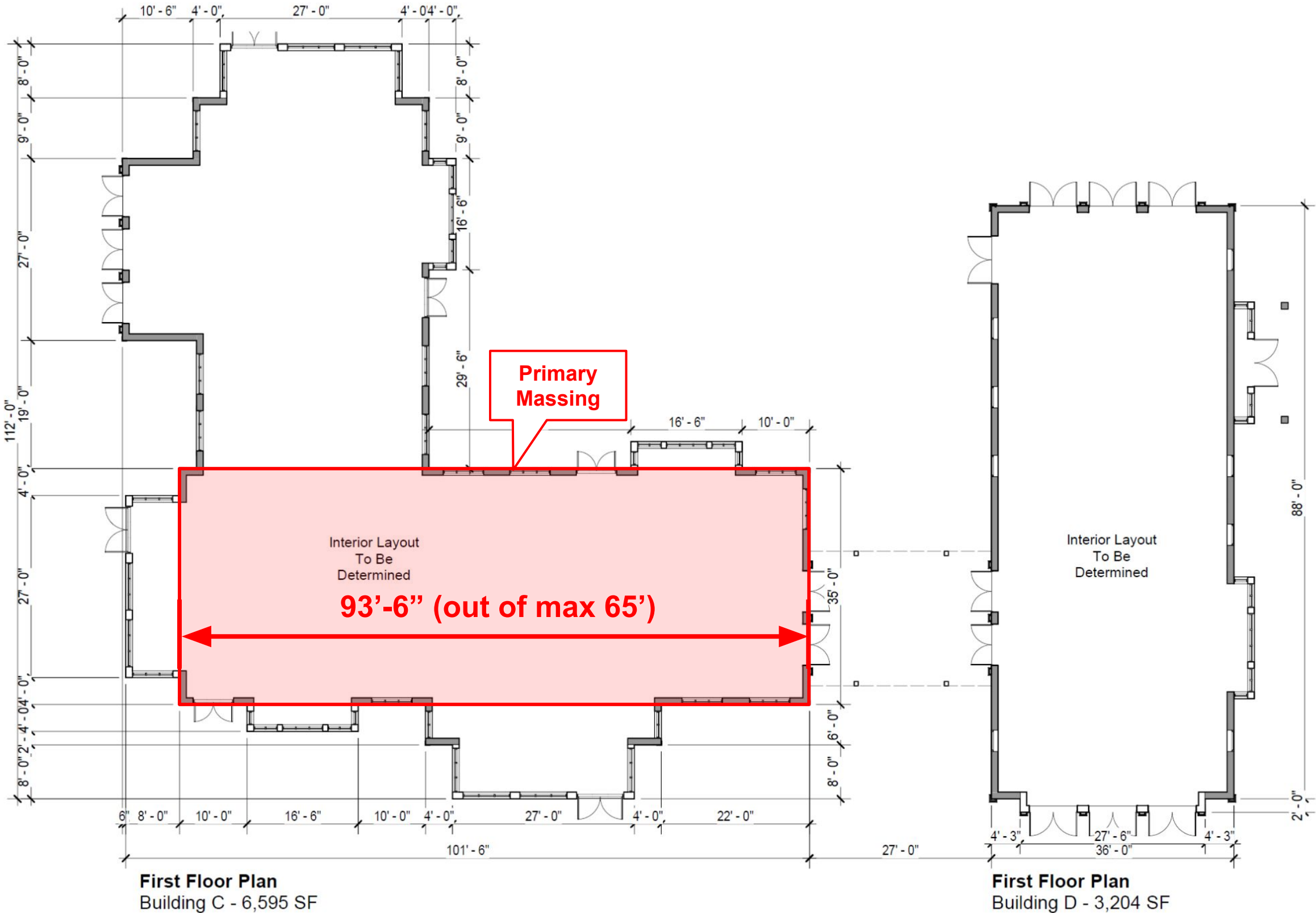
Comment #8: Building B building component has inadequate setback

Comment #8	
Sheet No.	Building B - Floor Plan (Page 6 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.L.a.
FBC Text	<i>"Building components are...permitted according to the following schedule."</i>
Utile Comment	The side addition attached to the narrow end of the smaller primary massing does not meet the minimum setbacks from the façade and rear wall (currently showing 2'-4" out of the required 4'-0"). Setbacks for side and rear additions are intended to further reduce the scale of building assemblies.
Utile Recommendation	Utile recommends increasing both setbacks to meet the minimum 4'-0".



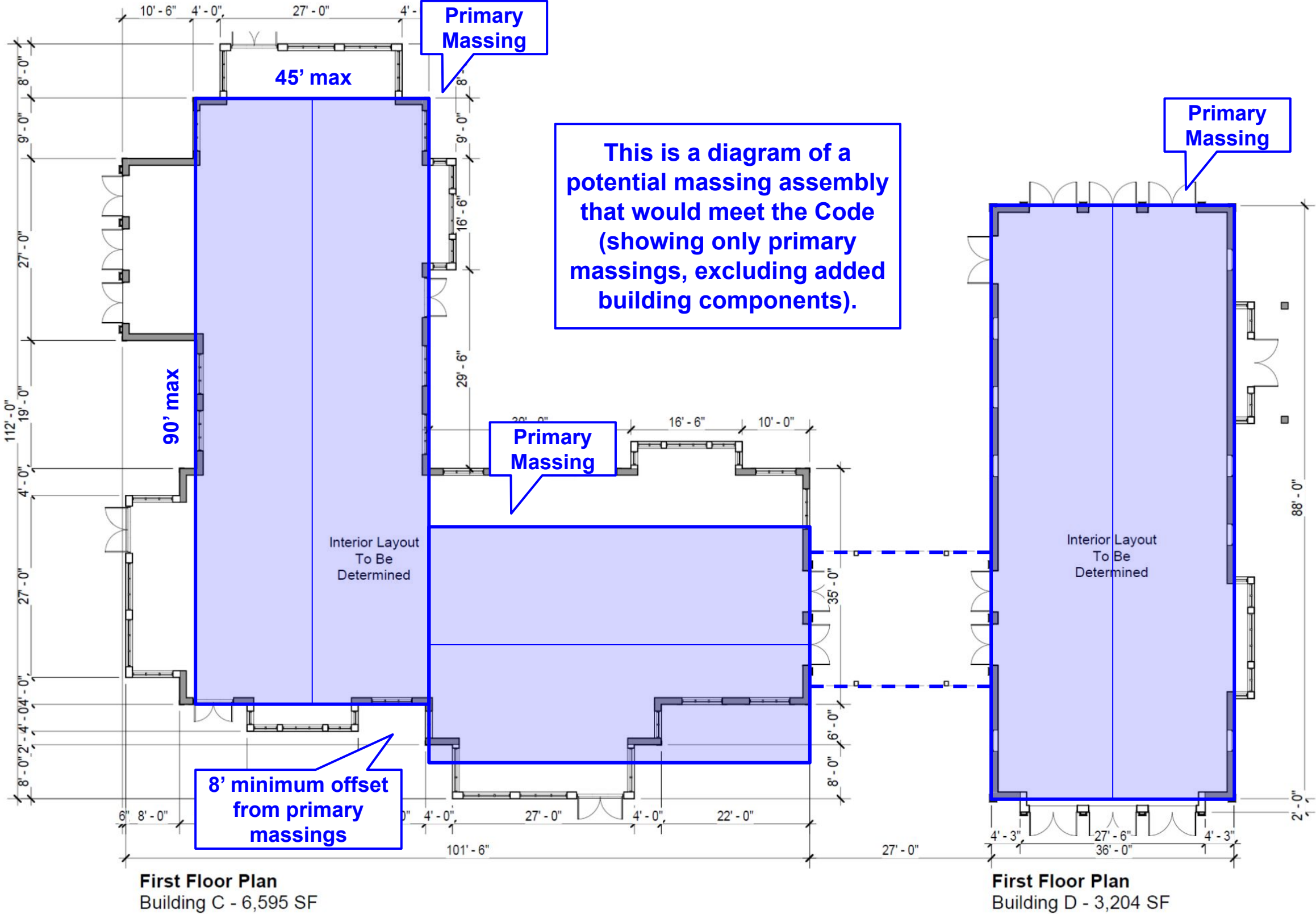
Comment #9: Building C primary massing exceeds maximum width

Comment #9	
Sheet No.	Building C & D - Floor Plan (Page 11 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.K.
FBC Text	The FBC table for Building Standards indicates that the maximum width of a primary massing with its long side oriented toward the front lot line is 65 ft.
Utile Comment	The width of the primary massing shown is 93'-6", exceeding the maximum of 65 ft. The maximum widths of primary massings with its long side oriented front is intended to reduce the perceived scale of buildings from the public realm.
Utile Recommendation	Utile recommends splitting this single primary massing into 2 primary massings that are offset from each other by the minimum required 8 ft, or alternatively, making the long, deep part of the building a primary massing and the side as another intersecting primary massing, etc.



Comment #9: Building C primary massing exceeds maximum width

Comment #9	
Sheet No.	Building C & D - Floor Plan (Page 11 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.K.
FBC Text	The FBC table for Building Standards indicates that the maximum width of a primary massing with its long side oriented toward the front lot line is 65 ft.
Utile Comment	The width of the primary massing shown is 93'-6", exceeding the maximum of 65 ft. The maximum widths of primary massings with its long side oriented front is intended to reduce the perceived scale of buildings from the public realm.
Utile Recommendation	Utile recommends splitting this single primary massing into 2 primary massings that are offset from each other by the minimum required 8 ft, or alternatively, making the long, deep part of the building a primary massing and the side as another intersecting primary massing, etc.



Comment #10: Buildings C & D bridge is a prohibited building component

Comment #10	
Sheet No.	Building C & D - Floor Plan (Page 11 of "N Bank Architectural Updated 11-14-2022.PDF")
FBC Section	Building Standards §173-221.L.b.
FBC Text	<i>"Building components that are not identified below are prohibited."</i>
Utile Comment	A bridge connecting 2 buildings is not a permitted building component. Proponent has suggested that this bridge connecting buildings C and D reduces the number of elevators and stairs that would otherwise need to be duplicated.
Utile Recommendation	Utile deems this an acceptable deviation and defers to the Town's discretion.

