

**THOMAS FOWLER, P.E. LLC**

CIVIL ENGINEER: DESIGN AND PERMITTING SERVICES

October 28, 2025

To: Planning Board Member  
c/o Alexandra Sykes, City Planner  
City of Belfast Code & Planning Office  
131 Church Street  
Belfast, ME 04915

Subject: Multi-Family Site Plan Amendment  
Vine Place Apartments  
Randy Cornelius, Beyond the Meter, Inc  
Vine Street and Waldo Avenue (Tax Map 14, Lot 12-A, 16-A, 20)  
Belfast, Maine  
TFPE Project No. 25-023

Dear Belfast Planning Board Member:

On behalf of Randy Cornelius and Beyond the Meter Inc., we are writing to submit a Site Plan Amendment for multi-family housing (a permissible use in this district) located at property on Vine Street and Waldo Avenue (Tax Map 14, Lots 12-A, 16-A, and 20). This project includes:

- Building A: A new 3,855 square foot structure for 4 three-bedroom residential apartments near Vine Street
- Building B: A new 2,072 square foot structure for 4 two-bedroom residential apartments, and
- Building C: Renovation of the former New World Organics building into a 1,920 square foot structure for 2 residential apartments.

Other elements off the site plan include a new 7 space parking lot, grading and drainage improvements, landscape improvements, limited lighting (one pole and several path-level bollard lights), and utilities to serve the two new buildings. No changes to the Park Place commercial structure fronting on Waldo Avenue or its surrounding area are planned. The project is located in the Rte. 137 Mixed Use zoning district (Rte 137-MU). The three existing tax map lots, Lot 12-A, Lot 16-A, and Lot 20, have been merged into one single property. The applicant will work with the City of Belfast Assessor's Office to develop specific addresses for these buildings for convenience and for proper E-911 addressing. See the Site Plans enclosed in Attachment 1 for and the deed enclosed in Attachment 2 for details. An application form has been filed through the City of Belfast's Permit Portal.

**We have listed below the items from the City of Belfast ordinance Section 90-43(b) criteria for Site Plan review by the Planning Board and how we believe these criteria are met:**

*(1) Pollution. The proposed development will not result in undue water or air pollution.*

The intended use of the property represents no impact to floodplains and proposes no effluents. There will not be any change in the use of the site to result in undue risk of water or air pollution.

*(2) Sufficient Water...*

The project will utilize the existing municipal water supply, from Belfast Water District (BWD). BWD confirmed that there is an 8" water main along Vine Street in front of the property from which Buildings A and B will be

served by a new 2" service, as shown on the Site Plan. Building C is already served based on its prior use. Anticipated residential water usage at the site is 2,160 gallons per day (gpd), as described below.

**Table 1 – Estimated Water Demand**

# Units	Bedroom	Flow / Bedroom (gpd)	Total (gpd)
<b>Building A</b>			
4	3	90	1,080
<b>Building B</b>			
4	2	90	720
<b>Building C</b>			
2	2	90	360
<b>Grand Total</b>			<b>2,160</b>

Estimated water demand is based on the State of Maine Subsurface Wastewater Usage Guidelines for multi-family, which estimates 90 gpd for each bedroom. BWD confirmed they possess adequate supply to meet the project demand, as confirmed in Attachment 3. Initially when adequate supply was confirmed, 120 gpd for the first bedroom in each unit, then 90 gpd for each additional bedroom was estimated. However, Steve Wilson, CEO, LPI, stated 90 gpd could be the estimate for all bedrooms, which decreased the total by 480 gpd.

*(3) Municipal Water Supply...*

See response to (2) above.

*(4) Soil Erosion and Sediment Control...*

Much of the site work and infrastructure is already in place and will be utilized. New site work will consist of two new structures, new parking, and installation of new buffer plantings. Best management practices for erosion and sedimentation control will be followed. Temporary sediment control will be achieved using sediment control berms on the down gradient of existing impervious and proposed disturbance areas (see Site Plan in Attachment 1).

*(5) Highway or Public Road Congestion...*

The project will primarily utilize the existing 24' wide paved driveway off Vine Street, and a new paved parking lot for off-street parking. There are also two points of entry/exit available on the property on the Waldo Avenue side. Traffic at the site will consist of the daily entrance and egress of residents to and from the apartments. Using the ITE Trip Generation Manual, 11<sup>th</sup> Edition, for multifamily housing (low-rise) (Land Use Code 220), the estimated peak hour trip rate is 0.51 per dwelling unit, so with 10 dwelling units, the estimated peak hour trip rate is 5.1. Building C, which was previously a marijuana dispensary (ITE Trip Generation Manual Land Use Code 882) has an estimated peak hour trip rate of 18.92 for 1,000 SF. The structure is 1,920 SF, so it would be estimated there was a peak hour trip rate of 36.3. With the proposed development, at no time during the typical day or week is this traffic expected to result in unreasonable congestion or unsafe conditions.

*(6) Sewage Waste Disposal...*

The project will utilize municipal sewage waste disposal. There are two existing 6" PVC connections to the newly replaced 8" main in Vine Street. Building C will continue to utilize one of the 6" mains and Buildings A and B will extend the southerly lateral, add a new private manhole, and connect to the private line. The existing commercial building, Park Place, ties into the main in Vine Street as well, however, it has a separate connection that this project will not touch. Olver Associates confirmed that the Belfast Wastewater Treatment Plant has the capacity for this project. Please see the letter requesting confirmation, and the response from Olver Associates in Attachment 3.

*(7) Municipal Solid Waste and Sewage Waste Disposal...*

Solid waste will continue to be disposed of at a licensed facility by a private hauler, Casella, from the existing dumpster on of the property, which will be relocated as shown on the Site Plan in Attachment 1. This dumpster will be utilized by the residential and commercial buildings on the property. The applicant and Casella will increase removal frequency (currently once per week) if needed. See Item (6) above regarding municipal wastewater.

*(8) Aesthetic, Cultural and Natural Values...*

The property is in a moderately dense mixed use residential and commercial neighborhood. The site is within a district designated for mixed use, which lists over 100 allowable uses, many of which already exist in the vicinity of or on the site. Additionally, this project will help fill a need for rental housing. Buffers will be added as required and maintained where already existing to ensure this will not have an undue adverse effect on the scenic or natural beauty of the area.

*(9) Conformity with City ordinances and plans...*

Conformance with the Zoning Ordinance's Dimensional Standards is confirmed via a table on the lower left corner of the Site Plan. Based on our review of zoning and performance standards, the project as proposed is in compliance with the City's Floodplain regulations, Comprehensive plan, Zoning regulations, and the technical and performance standards to the extent the provisions of these various City codes and plans apply.

In this district, a commercial use requires 1 Acre, or 43,560 square feet of area. Multi-family housing on public sewer requires a minimum area of 21,780 square feet + 1,500 square feet for each additional unit. The total lot area is 158,098 square feet, however after subtracting easements, wetlands, and slopes over 20% the net lot area for this calculation is 123,544 square feet. Based on the calculations in the table below, zoning density would allow a maximum of 44 new dwelling units in a multi-family configuration, while this project proposes 10 new dwelling units.

**Table 2 – Commercial & Multi-Family Density Calculation**

Area Description	Area (square feet)
Total Lot Area	158,098 SF
Easements, wetlands, slopes >20%	34,544 SF
Net Lot Area	123,544 SF
Commercial Use	43,560 SF
Remaining Net Lot Area	79,984 SF
Multi-Family Minimum (up to 6 Units)	21,780 SF
Remaining Lot Area	58,204 SF
Additional Units @ 1,500 SF/Unit	58,204 SF / 1,500 SF/Unit = 38 Units
Total Allowable Multi-Family Density	6 Units + 38 Units = 44 Units
Total Proposed	10 Units

*(10) Financial and Technical Capacity...*

The parcel is currently owned by Beyond the Meter, Inc./Randy Cornelius. Randy Cornelius has provided a letter and description of his holdings and plan to cash finance the project in Attachment 3. In addition, Mr. Cornelius has already designed, built, and occupied new developments in the City of Belfast. He has also retained site engineering services from Thomas Fowler, P.E., LLC, an experienced local civil engineering firm, with a team of experienced consultants on surveying and natural resourced delineation. Based on this, we believe the

applicant has demonstrated both the financial and technical ability to undertake and complete the currently proposed project.

*(11) Surface Waters; Outstanding River segments...*

The proposed project is not in proximity to and will not affect the quality of any body of water or unreasonably affect the shoreline of any body of water.

*(12) Groundwater...*

The proposed project will not adversely affect the quantity or quality of the groundwater. There are no existing or proposed septic systems.

*(13) Flood areas...*

No portion of the project is located within a FEMA flood zone, or a flood plain area.

*(14) Freshwater Wetlands...*

See the Site Plan in Attachment 1 for Wetlands that were identified by Watershed Resource Consultants, LLC (WRC). These wetlands are classified as "wetlands not of special significance". The project will impact 4,032 SF of the wetland, which is less than the 4,300 SF permitting threshold with the Maine DEP. Based on prior approval documentation, we don't believe freshwater wetlands were filled to create the two existing structures on site.

*(15) Rivers or Streams...*

No rivers or streams are within or abutting the project area.

*(16) Stormwater...*

See Attachment 5.

*(17) Access to direct sunlight for abutting property owners for solar energy system...*

Based on existing topography and orientation, the proposed development will not limit the solar exposure of neighboring properties. No restrictions are needed.

*(18) Solid Waste Management...*

Randy Cornelius will continue to contract with a private solid waste hauler, Casella, to remove solid waste from the property on a regular basis. The existing dumpster will be relocated as seen on the site plan. It is accessible and will be utilized for all the buildings (new and existing). Currently solid waste is being removed from the site once a week. The applicant and Casella are prepared to increase that to twice a week if needed. Additionally, a larger dumpster that is 8 cubic yards has replaced the previous smaller one.

*(19) Exterior Lighting...*

Limited new exterior lighting is proposed around the new structure and parking area, with building mounted lights, one pole mounted light facing the new parking lot, and bollard lights on the path between the two buildings and along the new sidewalk. The building mounted wallpack lights will be less than 3,000k, downward directed, and full cut off, although we do not have a specific light fixture selected at this time. The existing parking lot is already lit by existing fixtures, with no change proposed. We anticipate that these lighting fixtures will continue to be adequate to light the existing parking and structures on site. See the Site Plan in Attachment 1 for proposed light pole locations.

*(20) Buffering of adjacent uses...*

The proposed multifamily development has one structure (Building A, 3,855 square feet) along Vine Street, and two structures to the rear of the lot that are approximately 2,146 square feet and 1,920 square feet. We understand that the residential use does not have a prescriptive landscape buffer requirement, but a

quantitative analysis of the buffers is presented below. In any case, the current site is well buffered and these will be enhanced where needed. The proposed residential portion of the parcel requires a front setback of 25 and a front buffer yard of 25 with a vegetated front buffer containing 50U – 30U (plant units). Regarding the commercial portion of this parcel, a front setback of 40' with a front buffer of 35', and a side setback of 25' with a side buffer of 25' is required. There are currently no prescriptive plant unit requirements for a nonresidential development.

The existing conditions far exceed the buffer standards of 15U-0U on the east side of the parcel and 30U-20U on the southeast portion, which is characterized by a large drainage ditch and wooded/brush area that far exceeds the buffer standards. No new buffer is proposed and no changes to the existing buffer are proposed. The new structure and parking will have no visual impact on that side.

On the west facing property line coming off Vine Street that separates the subject lot from map 014 lot 021, there is a residential home on the other side of the property line. Shrubs, gardens, and trees exist on the west side of the access road on the subject property. These have been planted by the neighbors as part of their garden. However, if they were to change their plantings and/or move, the applicant will take responsibility to ensure the buffer is still in compliance. There is approximately 176' of property line here with a side buffer requirement of 15U-0U per 100'; therefore, 26.25 planting units are required. There are 3 flowering trees (5U each), 3 flower gardens (2U each), and at least 7 bushes (1U each) for a total of at least 28 planting units.

On the north side of the property along Vine Street, there is a landscaped area in front of the proposed Building A, and an existing wooded area that will remain intact. The front property line is 219' long and the front buffer requirement is 50U-30U per 100'; therefore 109 planting units are required with 65 canopy tree units. There is a flower garden around the existing utility pole (5U) and two new canopy trees (10U each). The three newly planted canopy trees along the accessway will be moved to the front buffer (10U each). There is also a section along the property that is wooded and approximately 45' long with six canopy trees (10U each) and at least.

*(21) Noise...*

Noise generated by the proposed development will entail periodic vehicle access to and egress from the site. Given the site is a residential structure in a mixed-use neighborhood, additional noise levels attributable to on-site traffic are not anticipated to exceed existing levels.

*(22) Storage of Materials...*

All solid waste will be disposed of into the existing dumpster that will be and serviced regularly. The dumpster will be screened by fencing. The dumpster exceeds zoning setbacks.

*(23) Landscaping...*

New buffers area described in Item 20 above. The new parking lot is landscaped with existing vegetation to the east and south, and with new plantings to the west and north (toward Building A), as shown on the Site Plan.

*(24) Buffering of residential uses...*

Residential uses adjacent to the subject parcel are and will be adequately screened from the proposed use with buffers and landscaping as described above in Items 20 and 23.

*(25) Location of off-street parking. See chapter 98...*

The City of Belfast Code, Chapter 98 Technical Standards, Table 98-242 Schedule of Required Off-Street Parking, required 2 spaces per unit for a two-family structure, and 1.75 spaces per unit for a four-family structure. It also required on handicap accessible space for a new lot with 1-25 spaces. For the two-family structure, 4 parking spaces are required, and the four family structures each require 7 parking spaces, resulting

in a total of 18 spaces. The existing parking lot has 12 spaces, including on handicap accessible space, and 7 new spaces including 1 new handicap accessible space are proposed. No joint or on street parking is proposed. Perimeter landscaping and lighting is proposed as discussed in Items 19 and 23.

*(26) Hazardous Waste...*

No hazardous waste is to be generated or stored on site.

*(27) Prevention or Control of Air Pollution...*

No uses creating a risk of air pollution by dust, chemicals, odor, or otherwise are proposed.

*(28) Protection of Public Health and Safety...*

The project will not create a substantial risk to the public health or welfare. There is emergency vehicle access along the existing 24' wide driveway off Vine Street and through the two driveways off Waldo Avenue.. There are fire hydrants on either end of Vine Street, roughly 400' away on High Street and 500' away on Waldo Avenue. The Fire Chief requested addition of a fire hydrant along Vine Street, which is shown near the existing landscape bed on the applicant's frontage. There are two existing easements across the property that will not change. One is a 20' wide sewer easement coming from Vine Street, going along the existing access way, and continuing to Map 14 Lot 13. The other is a 50' wide special drainage easement going along the southeast part of the property. Both are shown on the site plan. A new sidewalk is proposed along the access off Vine Street to make it easier and safer for pedestrians and the residents. It will be requested that the City stripes a crosswalk across Vine Street to tie this into the existing walkable network of the neighborhood. A bike rack is also proposed between buildings B and C for the residents to use. This combination of improvements, in addition to the previously proposed path between Buildings A and B, provide several options for safe and convenient pedestrian access through and off the residential portion of the site.

*(29) Adequacy of Waste Disposal...*

See responses to items #18, #22, and #26 above.

*(30) Additional Standards for Development that may substantially affect the environment.*

There are no known additional standards that may substantially affect the environment.

**We have listed below the Section 90-132 Special Criteria for a multifamily housing project, and how we believe these standards are met:**

*The number of dwelling units that can be constructed on a property that includes the development of multi-family housing shall be based on net residential density. The following criteria shall not be included in the calculation of the lot area to determine net residential density and the maximum number of dwelling units that can be developed on the property.*

*(a) Land that is situated below the high annual tide or normal high-water mark of any waterbody.*

There is no land below the high annual tide or normal high-water mark on this property.

*(b) Land that is located within the 100-year flood plain as identified on the official Federal Emergency.*

There is no land within the 100-year flood plain on this property.

*(c) Management Agency flood maps adopted by the City of Belfast, reference Chapter 78, Floods. The Board, however, can consider information submitted by a registered land surveyor that demonstrates that the property in question lies at least two feet above the 100-year flood level.*

There is no land within the 100-year flood plain on this property.

- (d) *Land that is part of a publicly or privately owned street right-of-way or easement.*  
Easements for wastewater and drainage are deducted for the density calculation.
- (e) *Land that is part of a utility easement that benefits an off-site property or properties.*  
The property has a sewer easement as well as a special drainage easement. The area in these easements has been removed from the lot area for density calculations. See Division 16 Sec 102-633 above.
- (f) *Land meeting the definition of wetland or freshwater wetland as defined by the State Department of Environmental Protection or the U.S. Army Corps of Engineers.*  
Wetlands on the property were delineated by WRC. The wetland area has been removed from the lot area for density calculations. See Division 16 Sec 102-633 above.
- (g) *Land that has been created by filling or draining a pond or wetland.*  
No land on this lot has been created by filling or draining a pond or wetland.
- (h) *Land that is located on steep slopes that exceed a grade of 20%.*  
Land that is located on steep slopes, exceeding a grade of 20%, has been removed from the lot area for density calculations. See Table 2 in Item (g) in this letter, Division 16 Sec 102-633 above.

**We have listed below the Section 102-1121 Division 2 Environmental Standards, and how we believe these standards are met:**

**We have listed below the Section 98-249 Landscaping of parking areas, and how we believe these standards are met:**

- (1) *Perimeter Landscaping.*  
The existing buffer will remain on the south and east sides of the new parking lot. On the west side, the parking lot connected to the access way and then there is a buffer between the access way and neighbors. There will be new plantings between the new Building A and the parking area. All lighting is downward directed and full cut off, so additional landscaping to buffer the light is not needed. The parking spaces will be facing the new Building A, so will not face towards any of the neighbors.
- (2) *Landscaping within large parking areas.*  
There are no large parking areas proposed.
- (3) *Landscaping between parking lots and buildings.*  
Landscaping will be provided between the new parking area and Building A. See the Site Plan.
- (4) *Maintenance of landscaping.*  
The applicant will maintain all landscaping.
- (5) *Flexibility in requirements.*  
The applicant is not requesting any alternatives or changes to the required landscaping.

**Sec. 102-1122. Subsurface wastewater disposal. [Ord. No. 28-1997, § 701.1, 3-4-1997]**  
No subsurface wastewater disposal is proposed, therefore this standard is not applicable.

**Sec. 102-1123. Erosion control. [Ord. No. 28-1997, § 701.2, 3-4-1997]**

Site grading, drainage, and development has been designed by a Maine Licensed Professional Engineer, to minimize erosion of soil and sedimentation of water-courses and water bodies in accordance with best management practices as set forth in Maine Erosion and Sediment Control Handbook for Construction Best Management Practices, prepared by the Cumberland County Soil and Water Conservation District and the state department of environmental protection, 1991. See the Site Plans for details.

**Sec. 102-1124. Control of stormwater run-off. [Ord. No. 28-1997, § 701.3, 3-4-1997]**

See Attachment 5.

**Sec. 102-1125. Wastewater pollution. [Ord. No. 28-1997, § 701.4, 3-4-1997]**

Wastewater shall consist of strictly domestic wastewater. We have confirmed the treatment plant's capacity via telephone conversation with Olver Associates and anticipate bringing written confirmation of such to the Planning Board meeting.

**Sec. 102-1126. Air pollution. [Ord. No. 28-1997, § 701.5, 3-4-1997]**

This modest residential use does not anticipate any emission of dust, fly ash, fumes, vapors or gases.

**Sec. 102-1127. Odors. [Ord. No. 28-1997, § 701.6, 3-4-1997]**

No unusual odors are anticipated via this residential use.

**Sec. 102-1128. Glare. [Ord. No. 28-1997, § 701.7, 3-4-1997]**

Glare from new lighting shall be minimized by downward facing full cutoff light fixtures, vegetative buffering, and sighting of the buildings near existing dense vegetation.

**Sec. 102-1129. Noise. [Ord. No. 28-1997, § 701.8, 3-4-1997]**

This modest residential use does not anticipate any noise exceeding the limits set forth in this section.

**Sec. 102-1130. Gravel extraction. [Ord. No. 28-1997, § 710.09, 3-4-1997]**

No gravel extraction is planned, therefore this section is not applicable.

**Sec. 102-1131. Heating systems and oil storage tanks. [Ord. No. 28-1997, § 701.10, 3-4-1997]**

Heating and cooling of these structures are anticipated via electric heat pump, therefore this standard is not applicable.

**Sec. 102-1132. Burning of household trash, brush and stumps. [Ord. No. 28-1997, § 701.11, 3-4-1997]**

No burning of household trash shall be conducted as part of this project.

**Sec. 102-1133. Timber harvesting. [Ord. No. 28-1997, § 701.11, 3-4-1997]**

No timber harvesting is proposed in this project.

**Sec. 102-1134. Uses in wetlands. [Ord. No. 28-1997, § 701.13, 3-4-1997]**

The project proposes to fill 3,986 square feet of freshwater wetlands not of special significance, which is below the permitting threshold for the Maine Natural Resources Protection Act (NRPA).

**Sec. 102-1135. Uses in floodplains. [Ord. No. 28-1997, § 701.14, 3-4-1997]**

There is no known floodplain on this site.

**Sec. 102-1136. Soils. [Ord. No. 28-1997, § 701.15, 3-4-1997]**

The on-site soils, Peru fine sandy loams at 3 to 8 percent, are very common in Waldo County and are suitable for residential development and building siting.

**Sec. 102-1137. Significant groundwater well. [10-16-2018]**

There are no known significant groundwater wells in the vicinity of this project.

**Sec. 102-1138. Significant water intake or significant water discharge/outfall pipe. [10-16-2018]**

There are no known significant water intakes or discharges/outfalls in the vicinity of this project.

We look forward to discussing this with you at your next scheduled Planning Board meeting.

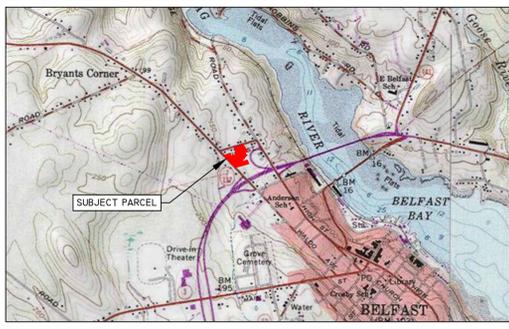
Sincerely,



Thomas A. Fowler, P.E.

**ATTACHMENT 1**

**PROJECT PLANS**



SUBJECT PARCEL SHOWN ON USGS 7-1/2 MINUTE QUADRANGLES BELFAST, MAINE SCALE = 1" = 2,000'

LEGEND	
	APPROXIMATE PROPERTY LINE
	ZONING SETBACK LINE
	WETLAND
	EXISTING CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EDGE OF VEGETATION
	NEW PERIMETER DRAIN
	NEW CULVERT
	EXISTING WATER LINE
	EXISTING SEWER
	EXISTING DRAIN
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD UTILITIES
	NEW WATER LINE
	NEW SEWER
	NEW UNDERGROUND ELECTRIC
	NEW SILT FENCE
	RELOCATED TREE
	NEW BUILDING
	EXISTING BUILDING
	EXISTING PAVEMENT
	NEW PAVEMENT
	EXISTING WATER VALVE
	NEW WATER VALVE
	OVERHEAD UTILITY POLE
	PROPERTY MARKER
	EXISTING CATCH BASIN
	PROPOSED CATCH BASIN
	STONES
	EXISTING LIGHT
	NEW BOLLARD LIGHT
	NEW POLE MOUNTED LIGHT
	HIGHWAY MONUMENT
	EXISTING SEWER MANHOLE
	NEW SEWER MANHOLE
	EXISTING TREE TO BE RELOCATED
	EXISTING TREE TO REMAIN

**PLAN AND SURVEY NOTES:**

- THIS IS A SITE PLAN AMENDMENT PREPARED FOR BEYOND THE METER, LLC, ON VINE STREET, TAX MAP 16, LOTS 12-A, 16-A, 20) IN BELFAST.
- EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED ON SEVERAL SOURCES INCLUDING:
  - TOPOGRAPHIC SURVEY DATA PROVIDED BY GOOD DEEDS, DATED JULY 16, 2025, PREPARED FOR RANDY CORNELIUS ON VINE STREET IN BELFAST, ME.
  - BOUNDARY SURVEY DATA PROVIDED BY ALAN PERRY, DATED 6/04/2025, PREPARED FOR BEYOND THE METER ON VINE STREET AND WALDO AVENUE IN BELFAST, ME.
  - BUILDING PLANS PREPARED FOR RANDY CORNELIUS BY VIKING LUMBER, 166 SEARSPORT AVE.
  - UTILITIES IN VINE STREET FROM VINE STREET SEWER PLAN AND PROFILE FOR THE CITY OF BELFAST BY OLVER ASSOCIATES INC., DATED AUGUST 2023.
  - PUBLIC DOMAIN DATA AVAILABLE THROUGH THE MAINE OFFICE OF GIS INCLUDING LIDAR ELEVATION CONTOURS, USGS TOPOGRAPHIC MAPPING AND ORTHOPHOTOGRAHY.
  - ADDITIONAL PARCEL AND ZONING INFORMATION IS DERIVED FROM THE TOWN OF BELFAST, MAINE ORDINANCES.
- ELEVATION CONTOUR LINES ON THIS PLAN REPRESENT 1' ELEVATION INTERVALS. ELEVATION DATUM IS NAVD 1988.
- THIS PLAN IS NOT A BOUNDARY SURVEY.
- ALL DATA IS IN U.S. STATE PLANE PROJECTION, MAINE EAST 1801 NAD83 (2011).
- VERTICAL DATUM IS MEAN SEA LEVEL (NAVD 1988).

**LOCAL ZONING & PERMIT NOTES:**  
THIS PROPERTY IS LOCATED IN THE CITY OF BELFAST ROUTE 157 ZONING DISTRICT.

I. LOT SIZE, SETBACKS, LOT COVERAGE ARE AS REQUIRED BELOW:

DESCRIPTION	(RESIDENTIAL MULTIFAMILY)		(COMMERCIAL 16,212 SF)	
	REQUIRED/PERMITTED	PROVIDED	REQUIRED/PERMITTED	PROVIDED
MINIMUM NET LOT SIZE	27,780 NET S.F. <sup>1</sup>	NOTE 2	43,560 NET S.F.	NOTE 2
MINIMUM FRONTAGE	150'	210'	150'	NOT CHANGED
FRONT SETBACK	30'	30'	40'	NOT CHANGED
SIDE SETBACK	25'	4.5'	25'	NOT CHANGED
REAR SETBACK	25'	25'	25'	NOT CHANGED
LOT COVERAGE	60%	48.9% <sup>3</sup>	65%	48.9% <sup>3</sup>
MAX STRUCTURE HEIGHT	45'	+24'	38'	NOT CHANGED
DENSITY	NOTE 2	10 UNITS	NOTE 2	NOTE 2
FRONT BUFFER	30'	30'	35'	NOT CHANGED
SIDE BUFFER	15'	15'	25'	NOT CHANGED
REAR BUFFER	20'	>20'	25'	NOT CHANGED

<sup>1</sup> 10 RESIDENTIAL UNITS TOTAL. 21,780 S.F. FOR FIRST 6 UNITS, THEN 1,500 S.F. EACH FOR ADDITIONAL 4 UNITS TOTALS 27,780 FOR THIS PROPOSAL.  
<sup>2</sup> TOTAL NET LOT AREA = 123,544 S.F., 43,560 S.F. REQUIRED FOR COMMERCIAL LEAVES 79,984 SF FOR RESIDENTIAL, WHICH ALLOWS FOR A DENSITY OF 44 UNITS.  
<sup>3</sup> 77,256 S.F. IMPERVIOUS OUT OF 198,098 S.F. TOTAL LOT AREA.

2. THIS PROJECT REQUIRES SITE PLAN APPROVAL FROM THE CITY OF BELFAST PLANNING BOARD.  
 3. TOTAL PROPOSED FRESHWATER WETLAND IMPACT IS 3,986 S.F. WHICH IS BELOW THE NRPA PERMITTING THRESHOLD.  
 4. TOTAL IMPERVIOUS ARE (SINCE 2005) FOR THIS PROJECT IS 18,718 S.F. TOTAL DISTURBED AREA IS 22,408. THESE ARE BOTH BELOW THE MAINE DEP STORMWATER MANAGEMENT PERMIT-BY-RULE STANDARDS.

THIS IS TO CERTIFY THAT AFTER REVIEWING THIS SITE PLAN AMENDMENT AND CONSIDERING EACH OF THE CRITERIA SET FORTH IN THE LAND USE CODE OF THE CITY OF BELFAST, MAINE, (CHAPTER 98, TECHNICAL STANDARDS, AND CHAPTER 102, ZONING), THE UNDERSIGNED HAVE MADE FINDINGS OF FACT ESTABLISHING THAT THIS PLAN AND ITS SUPPORTING INFORMATION HAVE MET THE CRITERIA SET FORTH AND IS THEREBY APPROVED.

UNDERSIGNED BY MEMBERS OF THE CITY OF BELFAST PLANNING BOARD.

1. \_\_\_\_\_ CHAIR

2. \_\_\_\_\_

3. \_\_\_\_\_

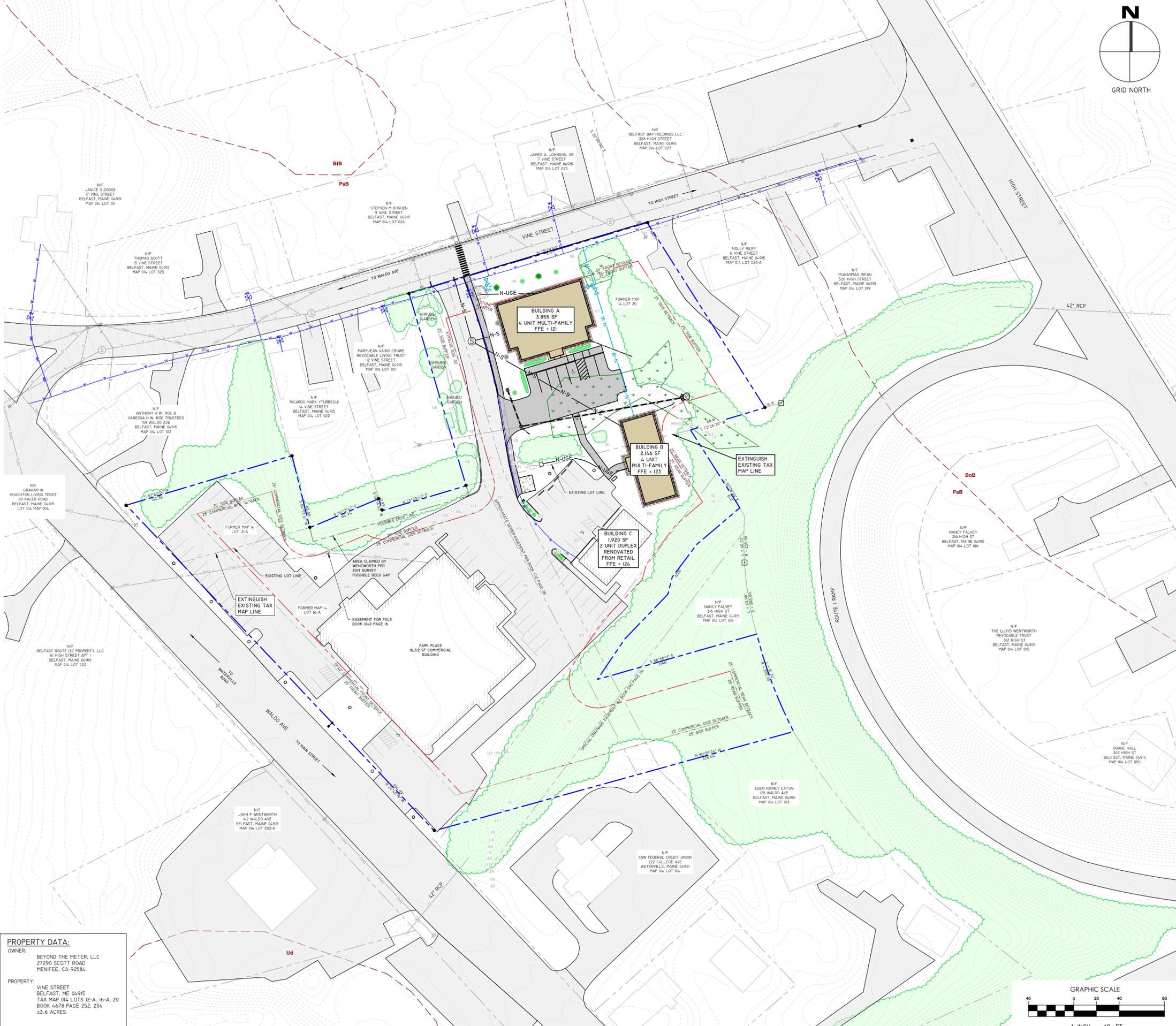
4. \_\_\_\_\_

5. \_\_\_\_\_

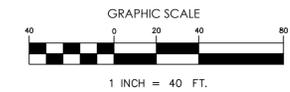
6. \_\_\_\_\_

7. \_\_\_\_\_

DATE: \_\_\_\_\_



**PROPERTY DATA:**  
 OWNER: BEYOND THE METER, LLC  
 27290 SCOTT ROAD  
 MENIFEE, CA 92584  
 PROPERTY: VINE STREET  
 BELFAST, ME 04915  
 TAX MAP 014 LOTS 12-A, 16-A, 20  
 BOOK L678 PAGE 252, 254  
 53.6 ACRES



**THOMAS FOWLER, P.E. LLC**  
 CIVIL ENGINEER: DESIGN AND PERMITTING SERVICES  
 P.O. BOX 117, 48-4, MARSHALL WHARF  
 BELFAST, ME 04915  
 207-322-5827  
 WWW.THOMASFOWLERPE.COM



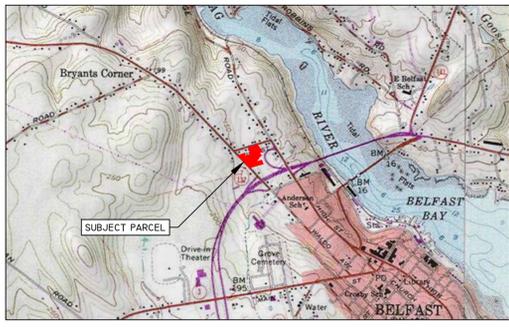
NOT FOR CONSTRUCTION

THOMAS A. FOWLER  
 No. 10449  
 LICENSED PROFESSIONAL ENGINEER  
 STATE OF MAINE

REV.	DESCRIPTION	DATE
1	UPDATE PER STAFF COMMENTS	10-28-25
0	ISSUED FOR PERMITTING	10-1-25

**PLAN TITLE: SITE PLAN AMENDMENT**  
**VINE PLACE APARTMENTS**  
 VINE STREET/WALDO AVE  
 TAX MAP 014 LOTS 12-A, 16-A, 20  
 RANDY CORNELIUS  
 27290 SCOTT ROAD  
 MENIFEE, CA 92584

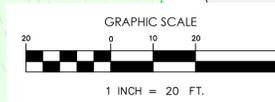
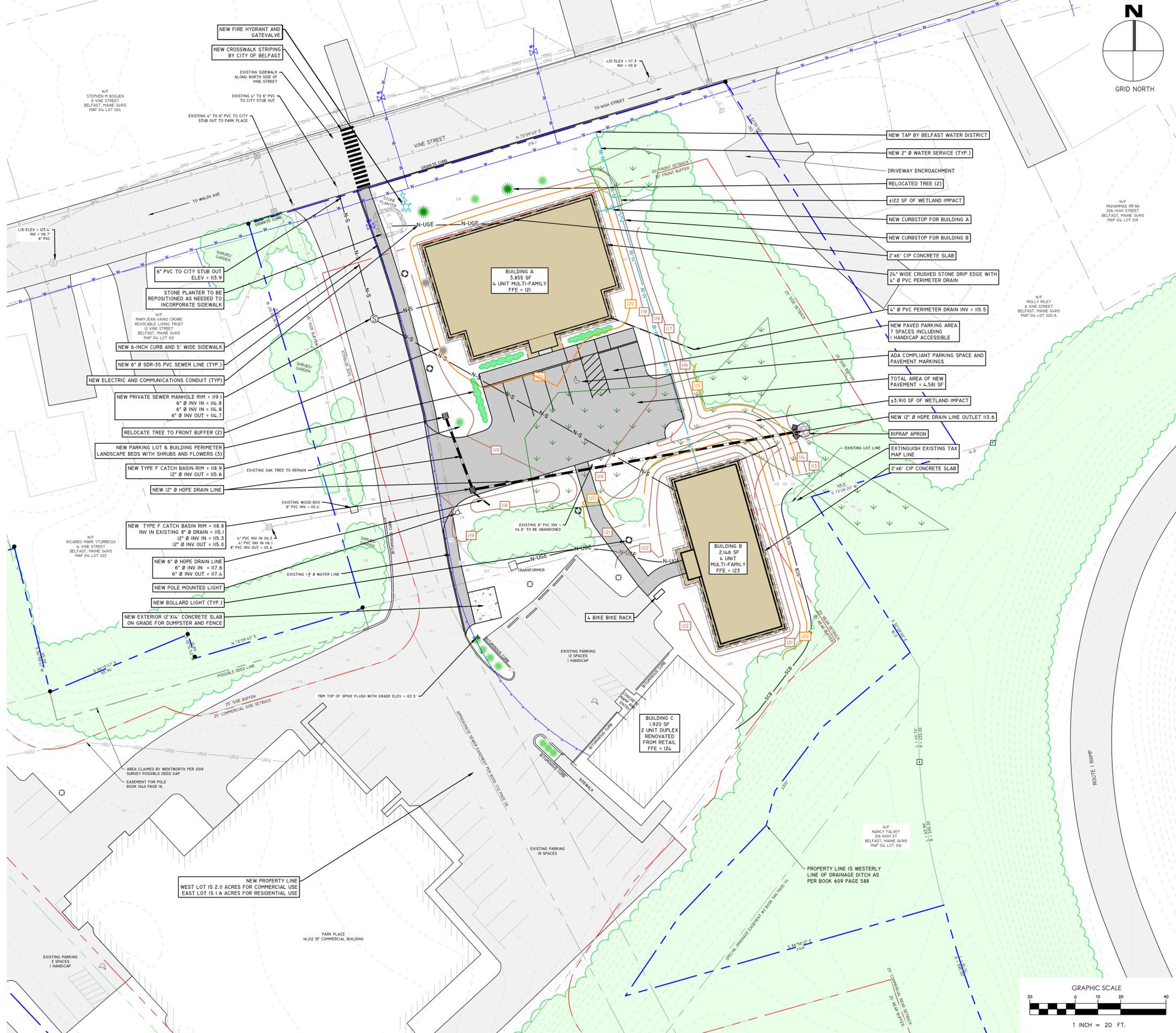
DRAWING SCALE: **1" = 40'**  
 PLAN DATE: **OCTOBER 28, 2025**  
 PROJECT NUMBER: **25-023**  
 SHEET NUMBER: **C1.1**



SUBJECT PARCEL SHOWN ON USGS 7-1/2 MINUTE QUADRANGLES BELFAST, MAINE SCALE = 1" = 2,000'

**LEGEND**

	APPROXIMATE PROPERTY LINE		NEW BUILDING
	ZONING SETBACK LINE		EXISTING BUILDING
	WETLAND		EXISTING PAVEMENT
	EXISTING CONTOUR		NEW PAVEMENT
	PROPOSED MAJOR CONTOUR		EXISTING WATER VALVE
	PROPOSED MINOR CONTOUR		NEW WATER VALVE
	EDGE OF VEGETATION		OVERHEAD UTILITY POLE
	NEW PERIMETER DRAIN		PROPERTY MARKER
	NEW CULVERT		EXISTING CATCH BASIN
	EXISTING WATER LINE		PROPOSED CATCH BASIN
	EXISTING SEWER		STONES
	EXISTING DRAIN		EXISTING LIGHT
	EXISTING UNDERGROUND ELECTRIC		NEW BOLLARD LIGHT
	EXISTING OVERHEAD UTILITIES		NEW POLE MOUNTED LIGHT
	NEW WATER LINE		EXISTING SEWER MANHOLE
	NEW SEWER		NEW SEWER MANHOLE
	NEW UNDERGROUND ELECTRIC		EXISTING TREE TO BE RELOCATED
	NEW SILT FENCE		EXISTING TREE TO REMAIN
	SOIL TYPE		
	RELOCATED TREE		



**THOMAS FOWLER, P.E. LLC**  
 CIVIL ENGINEER, DESIGN AND PERMITTING SERVICES  
 P.O. BOX 117, 48-4, MARSHALL WHARF  
 BELFAST, ME 04915  
 207-322-5827  
 WWW.THOMASFOWLERPE.COM



NOT FOR CONSTRUCTION

STATE OF MAINE  
 THOMAS A. FOWLER  
 No. 10449  
 LICENSED PROFESSIONAL ENGINEER

REV.	DESCRIPTION	DATE
1	UPDATE PER STAFF COMMENTS	10-28-25
0	ISSUED FOR PERMITTING	10-1-25

**PLAN TITLE: GRADING, DRAINAGE, UTILITY PLAN**  
**VINE PLACE APARTMENTS**  
 VINE STREET/WALDO AVE  
 TAX MAP 014 LOTS 12-A, 16-A, 20  
 PROJECT OWNER: RANDY CORNELIUS  
 27290 SCOTT ROAD  
 MENIFEE, CA 92584

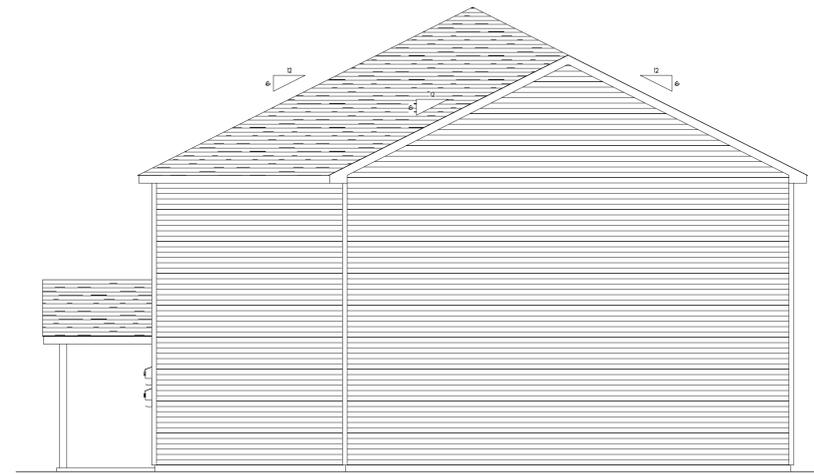
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**PLAN DATE: OCTOBER 28, 2025**  
**PROJECT NUMBER: 25-023**  
**SHEET NUMBER:**

**C1.2**

W:\Projects\2025\Projects\25-023 Multi-Family Residential\_Vine Pl\_Cornelius



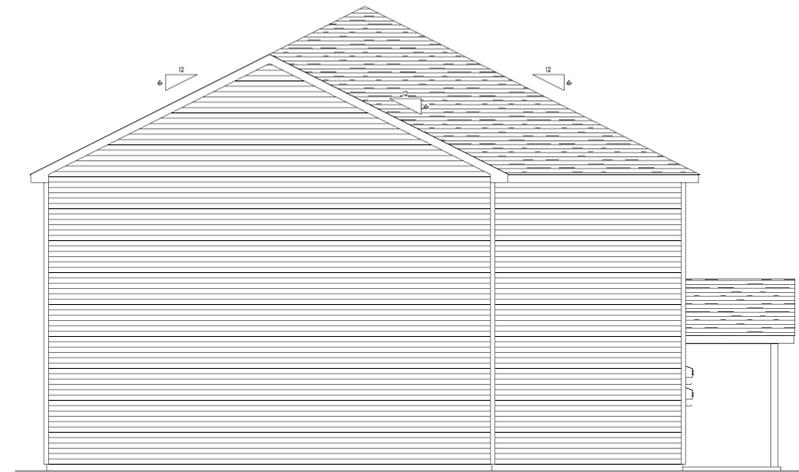
**FRONT ELEVATION**  
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**RIGHT ELEVATION**  
SCALE: 3/16" = 1'-0"



**REAR ELEVATION**  
SCALE: 3/16" = 1'-0"



**LEFT ELEVATION**  
SCALE: 3/16" = 1'-0"

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SCALE: AS NOTED

DRAWN BY: JS

DATE: 6/27/2025

Viking Lumber

166 Seaport Ave

Belfast, ME 04415

PHONE: 207-338-3480 FAX: 207-338-3480

EMAIL: jchase@vikinglumber.com



RANDY CORNELIUS

4-UNIT APT. BLDG.

BELFAST, ME

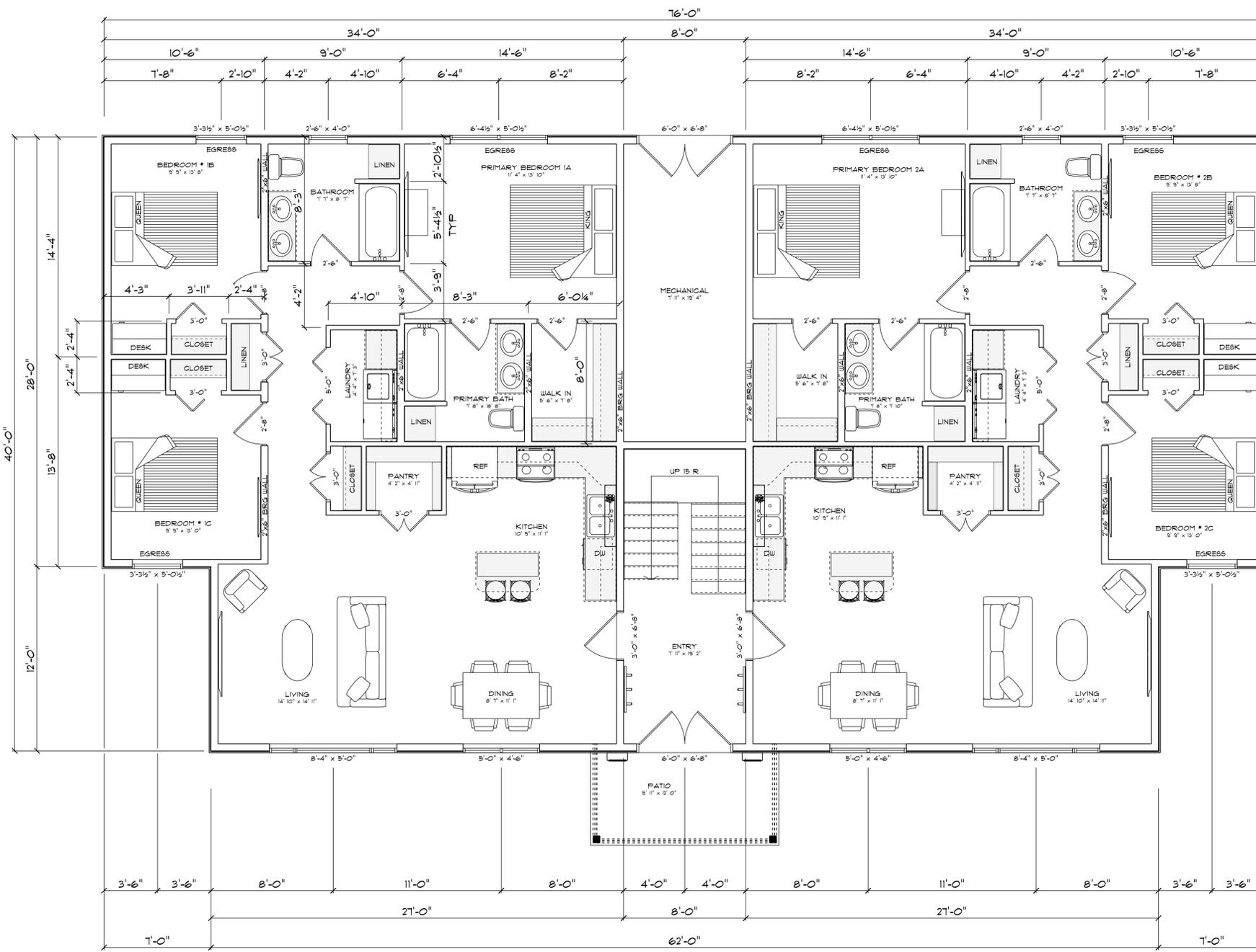
Project # B1444

Contractor/Owner: RANDY CORNELIUS

Job Name: 4-UNIT APT. BLDG.

Location: BELFAST, ME

Page # 1



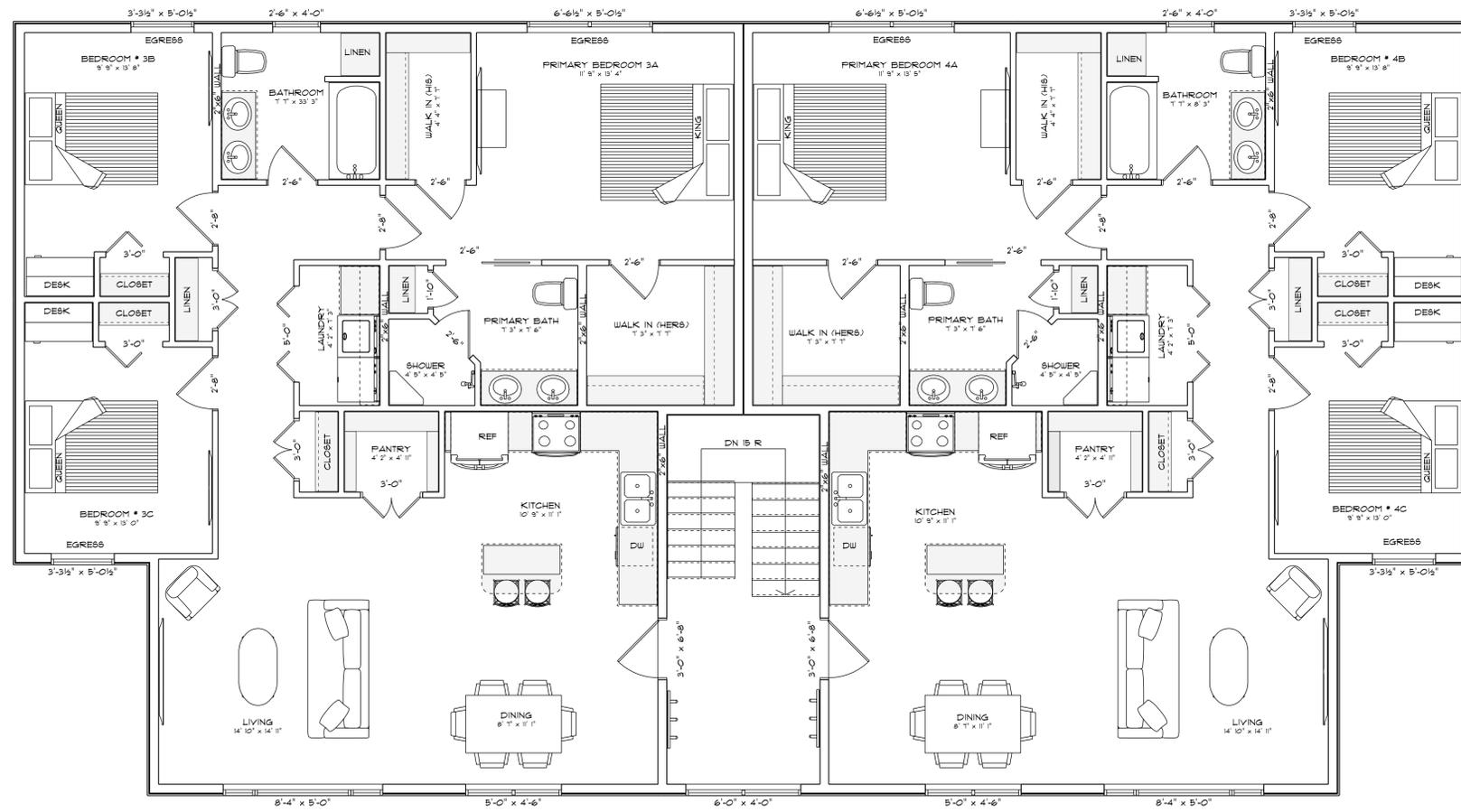
**MAIN FLOOR**  
SCALE: 1/4" = 1'-0"

<p>Project # <b>B1444</b></p>		<p>Contractor/Owner: <b>RANDY CORNELIUS</b></p>		<p>Job Name: <b>4-UNIT APT. BLDG.</b></p>		<p>Location: <b>BELFAST, ME</b></p>		<p>Project # <b>2</b></p>	
<p>Contractor/Owner: <b>RANDY CORNELIUS</b></p>		<p>Job Name: <b>4-UNIT APT. BLDG.</b></p>		<p>Location: <b>BELFAST, ME</b></p>		<p>Project # <b>2</b></p>		<p>Scale: AS NOTED Drawn By: JS Date: 6/27/2025</p>	
<p>Contractor/Owner: <b>RANDY CORNELIUS</b></p>		<p>Job Name: <b>4-UNIT APT. BLDG.</b></p>		<p>Location: <b>BELFAST, ME</b></p>		<p>Project # <b>2</b></p>		<p>Scale: AS NOTED Drawn By: JS Date: 6/27/2025</p>	
<p>Contractor/Owner: <b>RANDY CORNELIUS</b></p>		<p>Job Name: <b>4-UNIT APT. BLDG.</b></p>		<p>Location: <b>BELFAST, ME</b></p>		<p>Project # <b>2</b></p>		<p>Scale: AS NOTED Drawn By: JS Date: 6/27/2025</p>	



**Viking Lumber**  
166 Seaport Ave  
Belfast, ME 04415  
PHONE: 207-338-3480 FAX:  
EMAIL: jchase@vikinglumber.com

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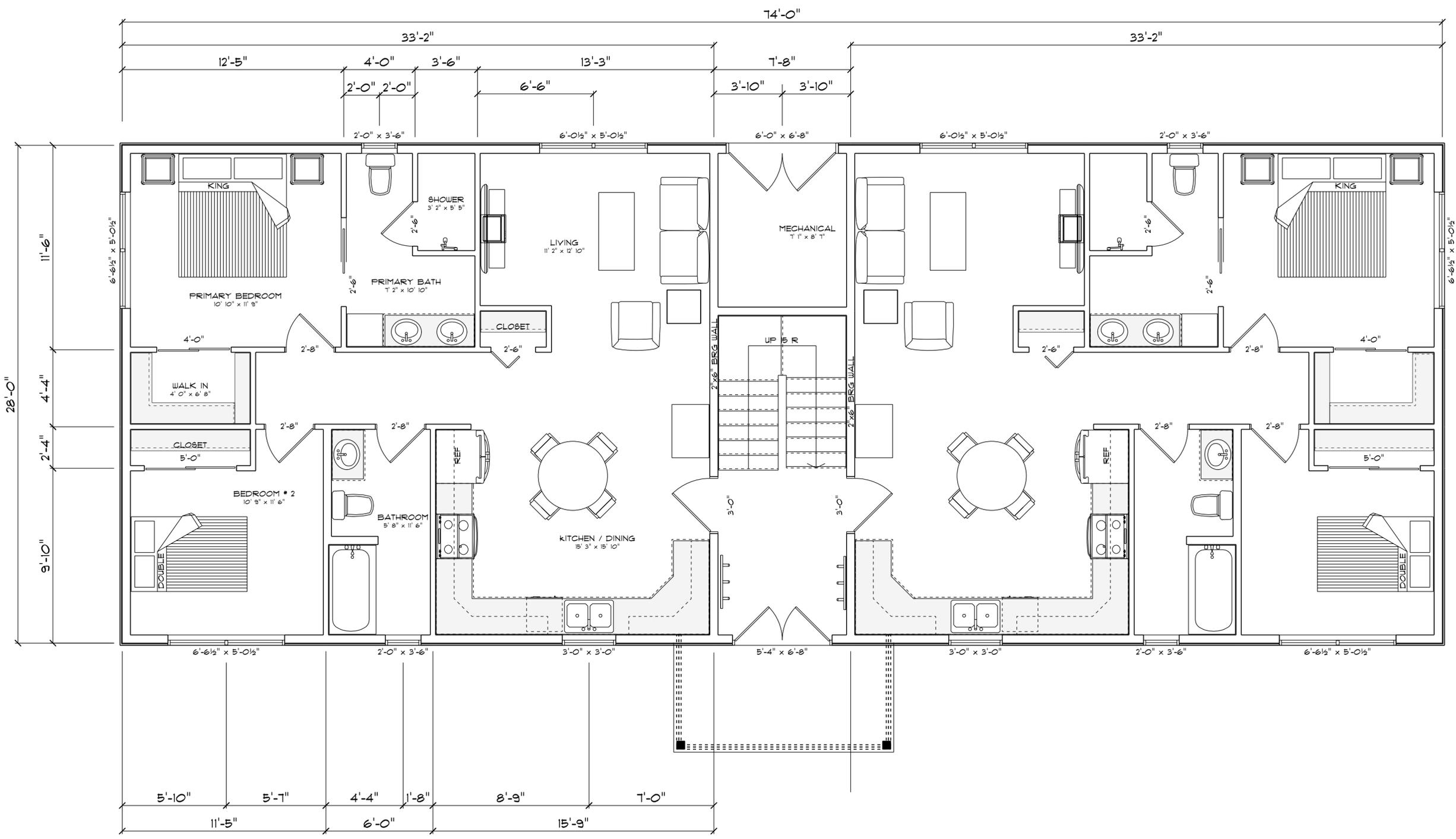
2ND FLOOR  
SCALE: 1/4" = 1'-0"

<p>Project: B1444</p>		<p>Contractor/Owner: RANDY CORNELIUS</p>		<p>Location: BELFAST, ME</p>	
<p>Job Name: 4-UNIT APT. BLDG.</p>		<p>Scale: AS NOTED</p>		<p>Drawn By: JS</p>	
<p>Date: 6/27/2025</p>		<p>Phone: 207-338-3480</p>		<p>Fax: 207-338-3480</p>	
<p>Email: jchase@vikinglumber.com</p>		<p>Viking Lumber 166 Seaport Ave Belfast, ME 04415</p>		<p>DISCLAIMER: THESE DRAWINGS ARE PROVIDED BY VIKING LUMBER COMPANY AS A SERVICE TO ITS CUSTOMERS AND ARE INTENDED FOR INFORMATIONAL AND ILLUSTRATIVE PURPOSE ONLY. THE INFORMATION PRESENTED IN THESE DRAWINGS HAS NOT BEEN PREPARED OR REVIEWED BY VIKING LUMBER COMPANY AS AN ARCHITECTURAL OR ENGINEERING DRAWING. VIKING LUMBER COMPANY SUGGESTS THAT ITS CUSTOMERS OBTAIN THE SERVICES OF A REGISTERED ARCHITECT TO OBTAIN TECHNICAL BLUEPRINTS FOR ACTUAL CONSTRUCTION. THESE DRAWINGS ARE NOT TO BE USED AS A BASIS FOR CONSTRUCTION AND VIKING LUMBER COMPANY WILL ASSUME NO RESPONSIBILITY IF THEY ARE SO USED.</p>	
<p>Page: 3</p>		<p>DATE: 6/27/2025</p>			





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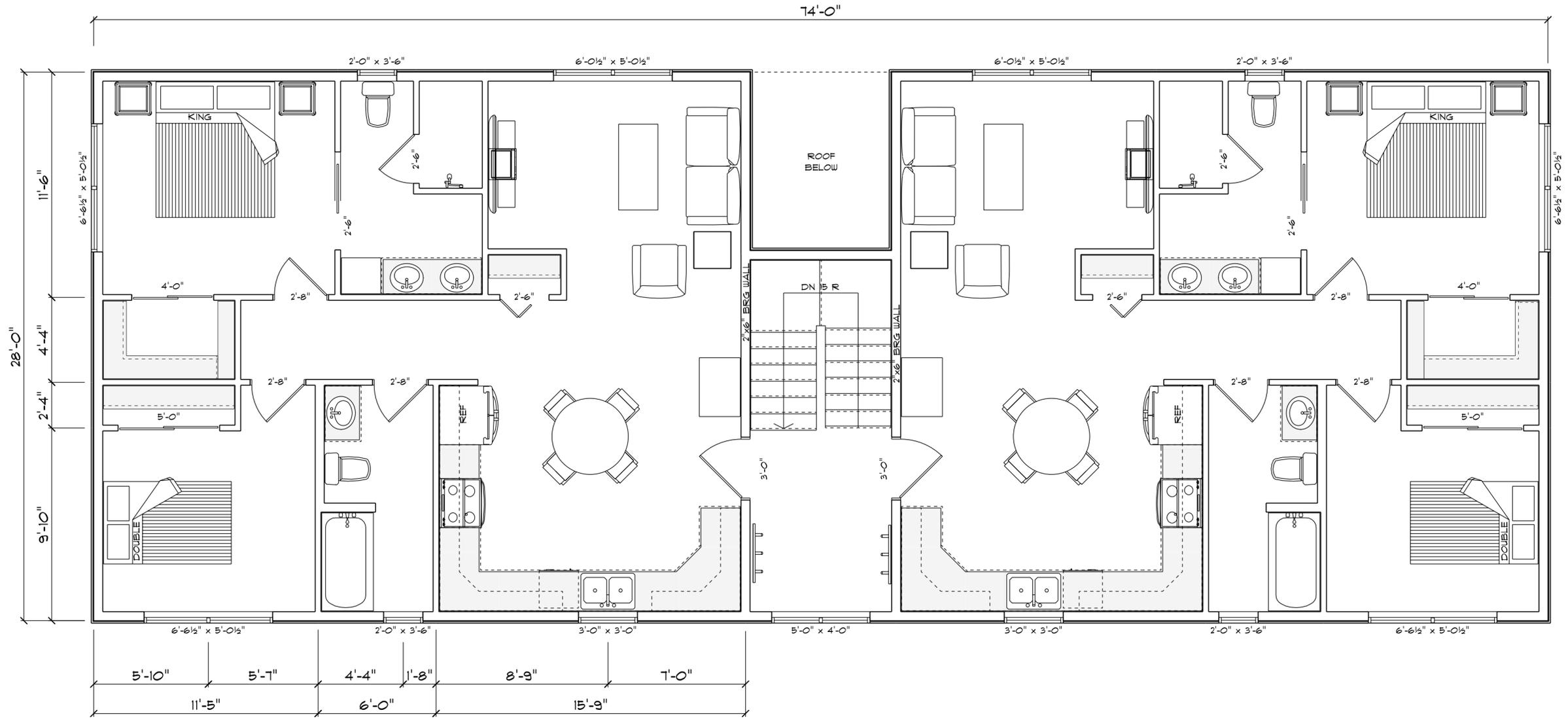
**MAIN FLOOR**  
 SCALE: 1/4" = 1'-0"

**Viking Lumber**  
 166 Seaport Ave  
 Belfast, ME 04415  
 PHONE: 207-338-3480 FAX:  
 EMAIL: jones@vikinglumber.com



Contractor/Owner: **RANDY CORNELIUS**  
 Job Name: **4-UNIT APT. BLDG.**  
 Location: **BELFAST, ME**

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**2ND FLOOR**  
 SCALE: 1/4" = 1'-0"

**Viking Lumber**  
 166 Seaport Ave  
 Belfast, ME 04415  
 PHONE: 207-339-3490 FAX:  
 EMAIL: jones@vikinglumber.com



Contractor/Owner: **RANDY CORNELIUS**  
 Job Name: **4-UNIT APT. BLDG.**  
 Location: **BELFAST, ME**

**ATTACHMENT 2**

**DEED**

ERECORDED

Instr # 2025-8425

ATTEST: Stacy L Grant, Waldo Co Registry of Deeds

**WARRANTY DEED**

**DLN#** 3172525

**Beyond The Meter, Inc., a California Corporation, of Menifee, County of Riverside, State of California, for consideration paid, GRANTS to Beyond The Meter, Inc., a California Corporation, with a mailing address of 27290 Scott Road, Menifee, California, 92584, with Warranty Covenants, a certain lot or parcel of land, with any buildings or improvements thereon, situated in Belfast, County of Waldo and State of Maine, more particularly bounded and described as follows:**

**Parcel One:**

A certain lot or parcel of land together with the buildings thereon situated in Belfast, County of Waldo and State of Maine, bounded and described as follows:

Bounded northerly by Vine Street; easterly by land now or formerly occupied by James Noyes; southerly by land now or formerly of Manley O. Wilson and westerly by Waldo Avenue.

Excepting and reserving from the above described premises so much of the same as was conveyed to the State of Maine by instrument dated April 21, 1962 recorded in Waldo Registry of Deeds in Book 598, Page 376.

Also Excepting the premises as described in a deed from Lloyd H. Wentworth to F. Mark Gregory and John Goldfrank, dated August 19, 1985 and recorded January 2, 1986 in the Waldo County Registry of Deeds in Book 880 and Page 322.

Being the same premises as conveyed in a deed from Douglas G. Wentworth, Personal Representative of the Estate of Lloyd H. Wentworth to Beyond The Meter, Inc., dated July 15, 2021 and recorded in the Waldo County Registry of Deeds in Book 4678, Page 252.

**Parcel Two:**

A certain lot or parcel of land situated in Belfast, County of Waldo, and State of Maine more particularly bounded and described no follows, to wit:

Beginning at an iron stake on the southerly side of Vine Street at the northeasterly corner of a parcel of land conveyed by Avis Bradstreet to Joseph H. Nickerson by deed dated May 15, 1967 and recorded in the Waldo County Registry of Deeds in Book 657, Page 444; thence southerly along the westerly line of said Nickerson two hundred (200) feet, more or less, to the southerly bound of the herein granted premises, it being either land of the State of Maine, as used for highway purposes or the northerly boundary of other land of L. H. Wentworth, Inc.; thence westerly along said other land of L. H. Wentworth, Inc. two hundred seventy (270) feet, more or less, to the southeasterly corner of land of William and Joan Harmon; thence northerly along the

NO TRANSFER TAX PAID

easterly line of said Harmon two hundred (200) feet, more, or less, to the southerly bound of Vine Street; thence easterly along said Vine Street two hundred fifty (250) feet, more or less, to the point of beginning. Containing one (1) acre, more or less.

Subject to those rights and easements granted to Central Maine Power Company, et al in Waldo Registry Book 1040, Page 16, Book 4349, Page 156 and Book 4349, Page 157.

Subject to those rights and easements granted to Keyes Fiber Federal Credit Union by instrument recorded in Waldo Registry Book 1712, Page 118.

**Parcel Three:**

A certain lot or parcel of land situated in Belfast, County of Waldo, and State of Maine, bounded and described as follows:

Beginning on the easterly line of Waldo Avenue at the northwesterly corner of the premises conveyed to the grantors herein, Elmer L. Jackson et us, by deed of Adelia S. Simmons dated September 2, 1948, recorded in Waldo Registry of Deeds in Book 458, Page 94, thence generally south-easterly along the line of Waldo Avenue to the southwestly corner of said premises conveyed to us by Adelia S. Simmons by deed aforesaid; thence easterly along the southerly bound of said premises to the westerly line of a drainage ditch as shown on the right-of-way map of the State of Maine filed, or to be filed, in the Waldo Registry of Deeds for the cloverleaf intersection of the new bridge; thence generally northerly and northeasterly by the westerly line of said drainage ditch to the northerly line of said land conveyed by Adelia S. Simmons to us by deed aforesaid; thence westerly by said northerly line to the place of beginning.

Also, a certain lot or parcel of land situated in Belfast, County of Waldo and State of Maine, bounded and described as follows to wit:

Beginning on the easterly side of Waldo Avenue at a bolt in a rock, which bolt marks the northwesterly corner of the premises conveyed by Clarence F. Wyman, to Ralph R. Hurd and Viola F. Hurd by deed dated June 10, 1941, recorded in Waldo Registry of Deeds in Book 430, Page 101, and which bolt also marks the southwestly corner of the premises conveyed by Elmer L. Jackson and Ella G. Jackson to Lloyd H. Wentworth and June N. Wentworth by deed dated May 21, 1963, recorded in Waldo Registry of Deeds in Book 609, Page 588; thence easterly by a line of bolts in rocks and by the southerly bound of said land conveyed by Elmer L. Jackson and Ella G. Jackson to Lloyd H. Wentworth and June N. Wentworth by deed aforesaid to the westerly line of the ramp leading from the Belfast by-pass northerly back to High Street; thence southerly by the westerly line of said ramp to the center line of lot 15 in the second division of lots in said Belfast; thence westerly by the center line of said lot 15, being also the southwestly bound of the premises conveyed by Clarence F. Wyman to Ralph R. Hurd and Viola F. Hurd by deed aforesaid, to a stone marker on the easterly side of Waldo Avenue, said marker marking the southwestly corner of land conveyed by Clarence F. Wyman to Ralph R. Hurd and Viola F. Hurd by deed aforesaid; thence northerly by Waldo Avenue one hundred (100) feet, more or less, to the place of beginning.

Being the same premises as conveyed in a deed from L. H. Wentworth, Inc. to Beyond The Meter Inc., dated July 15, 2021 and recorded in the Waldo County Registry of Deeds in Book 4678, Page 254.

In Witness whereof Beyond The Meter Inc. has caused this instrument to be executed in its company name, by Randall Cornelius, its Member, duly authorized this 24<sup>th</sup> day of Sept., 2025.

Beyond The Meter Inc.

Randall Cornelius

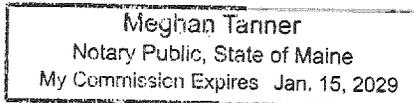
By: Randall Cornelius, It's Member

Sept. 24<sup>th</sup>, 2025

Witness  
STATE OF Maine  
COUNTY OF Waldo, ss.

Personally appeared Randall Cornelius, authorized Member of Beyond The Meter Inc. and he acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of Beyond The Meter Inc.

Before me,



[Signature]  
Notary Public

Print Name

**ATTACHMENT 3**

**CAPACITY LETTERS**

**BELFAST WATER DISTRICT**

**BELFAST WASTEWATER DEPARTMENT / OLVER ASSOCIATES**



Thomas Fowler &lt;tom@terrafirmaengineering.com&gt;

---

## Vine Street Capacity

---

Elisabeth Parker <elisabeth@thomasfowlerpe.com>  
To: Thomas Fowler <tom@thomasfowlerpe.com>

Tue, Sep 16, 2025 at 8:32 AM



Elisabeth R. Parker  
Civil Engineer  
207-408-8901

----- Forwarded message -----

From: **Frank Short** <frank@belfastwater.org>  
Date: Tue, Sep 16, 2025 at 8:13 AM  
Subject: RE: Vine Street Capacity  
To: Elisabeth Parker <elisabeth@thomasfowlerpe.com>

Good morning, Elisabeth

There is an 8-inch C.I. water main on the same side of the street as your project on Vine Street being feed in two directions more than adequate to serve your project. The service line running to the existing building is a 1-inch service line, that would not be adequate to serve 6 units. I would recommend running a 2-inch service line on the High Street side of building A to feed both of the two 4-unit buildings, A and B. 1 ½ service lines are not commonly used so a 2-inch line is recommended. A utility easement may be necessary unless both curb stops for A and B are located within the city of Belfast right of way. 2-inch meters would be required for the 4-unit buildings and the existing building can remain the same. I would be glad to provide an estimate for the 2-inch service and water meter installations when the time comes, please feel free to contact me with any questions or concerns you may have.

*Frank Short*

Frank D. Short, Superintendent

Belfast Water District

[41 Wight Street](#)

PO Box 506

Belfast, ME 04915

207-338-1200 Tel.

207-338-0444 Fax

---

**From:** Elisabeth Parker <elisabeth@thomasfowlerpe.com>

**Sent:** Friday, September 12, 2025 1:36 PM

**To:** Frank Short <frank@belfastwater.org>

**Cc:** Thomas Fowler <tom@thomasfowlerpe.com>

**Subject:** Vine Street Capacity

Hi Frank,

We're working on a site plan for Tax Map 014 Lots 12-A, 16-A, and 20. There are no changes proposed to the existing commercial building, however, there are two new 4 unit structures proposed as well as a change of use of the small building from retail to a two unit residential structure. I have attached a draft of the plan showing where a new 1 1/2" service would come from the main along Vine Street to one of the new buildings, and the second new building would have a connection off the existing 1 1/2" service.

Can you confirm that the Belfast Water District would have the capacity for this?

Thanks,

Elisabeth

--



Elisabeth R. Parker

Civil Engineer

207-408-8901



# THOMAS FOWLER, P.E. LLC

CIVIL ENGINEER: DESIGN AND PERMITTING SERVICES

October 15, 2025

To: Travis Jones, Assistant Operations Manager  
City of Belfast Sewer Department  
Olver Associates, Inc.  
290 Main St  
PO Box 679  
Winterport, Maine 04496

Subject: Multi-Family Site Plan Amendment for Vine Place Apartments  
Randy Cornelius, Beyond the Meter, Inc.  
Vine Street and Waldo Avenue (Tax Map 14, Lot 12-A, 16-A, 20)  
Belfast, Maine 04915

Dear Travis:

On behalf of Randy Cornelius and Beyond the Meter Inc., we are applying for a Site Plan Amendment for multi-family housing (a permissible use in this district) located at property on Vine Street and Waldo Avenue (Tax Map 14, Lots 12-A, 16-A, and 20). The project will be located in the Rte. 137 Mixed Use zoning district (Rte 137-MU) and will include:

- Building A: A new 3,855 square foot structure for 4 three-bedroom residential apartments near Vine Street
- Building B: A new 2,072 square foot structure for 4 two-bedroom residential apartments, and
- Building C: Renovation of the former New World Organics building into a 1,920 square foot structure for 2 residential apartments.

As part of its Site Plan review criteria, the City of Belfast Planning Board asks the applicant to demonstrate that there is sufficient capacity in the municipal water and sewer system to accommodate the anticipated new dwelling units. As proposed, the Belfast Water District (BWD) has confirmed that there is an 8" water main along Vine Street in front of the property from which Buildings A and B will be served by a new 2" service, as shown on the Site Plan (attached). Building C is already served based on its prior use. Anticipated residential water usage at the site is 2,640 gallons per day (gpd), see Table 1.

The project will utilize municipal sewage waste disposal. There are two existing 6" PVC connections to the newly replaced 8" main in Vine Street. Building C will continue to utilize one of the 6" mains and Buildings A and B will extend the southerly lateral, add a new private manhole, and connect to the private line.

**Table 1 – Estimated Water Demand**

# Units	Bedroom	Flow / Bedroom (gpd)	Total (gpd)
<b>Building A</b>			
4	1 <sup>st</sup>	120	480
4	2	90	720
<b>Building B</b>			
4	1 <sup>st</sup>	120	480
4	1	90	360
<b>Building C</b>			
2	1 <sup>st</sup>	120	240
2	2	90	360
<b>Grand Total</b>			<b>2,640</b>

*Estimated water demand is based on the State of Maine Subsurface Wastewater Usage Guidelines for multi-family, which estimates 120 gpd for the first bedroom in each unit, then 90 gpd for each additional bedroom. BWD confirmed they possess adequate supply to meet the project demand, as confirmed in Attachment 3.*

Olver Associates has confirmed in a telephone conversation that the Belfast Wastewater Treatment Plant would have the capacity for this project. We are writing to request written confirmation to present to the Planning Board that the sewer design as here proposed, and discussed in phone conversation with you, meets both the capacity and design requirements for the City. Please feel free to contact me if you have any questions.

Thank you.

Sincerely,

James Clark

Terra Firma Professional Engineering  
P.O. Box 117  
48-4 Marshall Wharf  
Belfast, Maine 04915  
209-322-5827



Thomas Fowler &lt;tom@terrafirmaengineering.com&gt;

---

## Cornelius--Vine Street Apartments

---

**Travis Jones** <travis@olverassociatesinc.com>

Wed, Oct 15, 2025 at 3:19 PM

To: Jim Clark &lt;jim@terrafirmaengineering.com&gt;

Cc: Thomas Fowler &lt;tom@terrafirmaengineering.com&gt;, Bub Fournier &lt;directorplanning@cityofbelfast.org&gt;, Steve Wilson &lt;ceo@cityofbelfast.org&gt;

Hi Jim,

Thank you for your letter regarding the Vine Place Apartments project.

I've reviewed the proposed addition of the two new structures and the conversion of the third building as outlined. Based on our previous site discussion and the information provided, the Belfast Wastewater Treatment Facility does have the capacity to accommodate the anticipated flow from this development.

The proposed sewer design, including the connection of Buildings A and B to a new private manhole as shown in your plans, is consistent with what was discussed during our earlier site visit. I appreciate you including that detail in the final submittal.

At this time, I don't have any additional comments or concerns. Please feel free to reach out if any further coordination is needed. Cheers.

-Travis

Travis Jones

ASSISTANT OPERATIONS MANAGER

OLVER ASSOCIATES INC.

[290 Main St](#)

PO Box 679

WINTERPORT, MAINE 04496

207-479-3330 – C

207-223-2232 – O

---

**From:** Jim Clark <jim@terrafirmaengineering.com>

**Sent:** Wednesday, October 15, 2025 2:06 PM

**To:** Travis Jones <travis@olverassociatesinc.com>

**Cc:** Thomas Fowler <tom@terrafirmaengineering.com>

**Subject:** Cornelius--Vine Street Apartments

**ATTACHMENT 4**  
**FINANCIAL CAPACITY**



September 26, 2025

To whom it may concern,

I Randall Cornelius currently have a grounding modest, holdings of (18) real estate properties in the state of Maine within the counties of Aroostook, Waldo, and Knox with valuations more than \$8,000,000 prior to 2024. I also have no mortgages and these holdings are liquid. Annual Maine property taxes are +\$75,000 on all these farms, residential homes, and commercial centers.

In addition, I have stock ownership in (4) California corporations totaling more than value of \$15,000,000. In as such: 100% owner of Meterman, Inc., a utility company located in Riverside County, California for 35 years still actively operating and performing utility repairs and new installations for Gas, Water, Electrical, and Sewer. [www.metermaninc.com](http://www.metermaninc.com)

To Build: I plan on using liquid funds from my various banks, at cash balances \$1,200,000.

Costs: The current estimate from 00 Vine Street project designing and building a 6,000 sqft. (4 plex) apartment is \$1,015,000 in total including earthworks to finish.

Back Up: I have real estate reserves of 8,000,000 with no current mortgages or liens of any sort – if falling under hardships.

- Respectfully

Randy Cornelius



4 Messages  
Confidential owne...



### WELLS FARGO

#### Account Summary

CORNERS INC Accounts ▾ Set as default

Customize

#### Cash Accounts

\$867,278.04  
Total available balance

BUSINESS CHECKING ██████████	\$844,074.49 Available balance
BUSINESS MARKET RATE SAVINGS ██████████	\$23,203.55 Available balance

#### Account Disclosures

Deposit products offered by Wells Fargo Bank, N.A. Member FDIC.

Equal Housing Lender



New Message



4 Messages  
Confidential owne...



Please Review

Hi, I'm Erica. How can I help?



**Net Worth** **\$338,683.91**

Customize Net Worth

**Banking** **\$233,221.03**

**Bank of America**

**FDIC** FDIC-Insured - Backed by the full faith and credit of the U.S. Government

Adv Relationship Banking - **\$73,856.77**

Advantage Savings - **\$159,364.26**

**Investments** **\$105,462.88**

*Investment products are not insured by the FDIC; are not deposits; and may lose value.*

Accounts   Pay & Transfer   Deposit Checks   Research   Trade



New Message

<i>PROPERTY:</i>	<i>ACRES</i>	<i>Valuation</i>
2 SENNETTS PARK, SEARSPORT	0.73	\$ 720,000.00
22 BLACK RD S., SEARSPORT	0.19	\$ 130,000.00
317 W. MAIN ST, SEARSPORT	1.84	\$ 90,000.00
0 BELMONT AVENUE, BELFAST (merged with 25 belmont ave)	1.2	\$ 540,000.00
25 BELMONT AVE, BELFAST	0.57	
18 OLD SEARSPORT AVE, BELFAST	88	\$ 460,000.00
52 POORS MILL, BELFAST	78	\$ 400,000.00
83 POORS MILL, BELFAST	120	\$ 380,000.00
87 / 87a POORS MILL, BELFAST	2.4	\$ 1,100,000.00
70 FRONT ST., BELFAST	0.42	\$ 75,000.00
147 WALDO AVE, BELFAST (park place)	2.64	\$ 105,000.00
153 WALDO AVE, BELFAST (park place)	0.23	\$ 1,900,000.00
0 VINE ST., BELFAST (next to park place)	1.15	\$ 450,000.00
42 CHESTNUT, CAMDEN	0.2	\$ 400,000.00
1031 N. MAIN STREET, WINTERPORT	3.51	\$ 200,000.00
MOOSEHEAD TRAIL, Waldo	114	\$ 200,000.00
224 STATE ST, VAN BUREN		\$ 200,000.00
37 Norumbega, Stockton Springs	2.21	\$ 650,000.00
<b>TOTAL:</b>	<b>417.29</b>	<b>\$ 8,000,000.00</b>

**ATTACHMENT 5**  
**STORMWATER NARRATIVE**



## STORMWATER DRAINAGE MEMO

Project: Vine Place Apartments  
Beyond the Meter, Inc. / Randy Cornelius  
Vine Street and Waldo Avenue Property (Tax Map 14 Lots 12-A, 16-A, and 20)  
Belfast, Maine 04915  
TFPE Project No. 25-023

### Project & Site Description

This project consists of construction of a new 3,855 square foot, 4-bedroom apartment building on Vine Street, a new 7-space parking lot to serve that structure, a new 2,072 square foot, 4-bedroom apartment building adjacent to a previously developed commercial structure, and renovation of an existing 1,920 square foot structure (formerly New World Organics) to a 2-unit apartment building, and associated utilities.

The parcel slated for development has frontage on both Vine Street and Waldo Avenue and is an aggregate of three tax parcels, Map 14, Lots 12-A, 16-A, and 20. This parcel has a long-standing multi-use office space on Waldo Ave (now known as Park Place) and a commercial structure previously developed for New World Organics, a marijuana dispensary. These two structures have parking and public utilities serving them and roadway connections from both abutting streets. The property slopes generally from west to east, and north to south with a major drainage way running through it from southwest to northeast between Waldo Ave and High Street.

### Impervious & Lot Coverage Area Summary

Area Description	Area (s.f.)
Existing Impervious	65,218
Proposed Impervious	12,038
Total Impervious	77,256
Total Property Area	158,098
Lot Coverage (Total Impervious / Total Property Area)	48.9 %

The project site consists of two drainage areas, one west of Waldo Avenue (45.5 acres) and one between Waldo Avenue and High Street (7.0 Acres). The area west of Waldo Ave consists of 1.71 acres of impervious area and the area between Waldo Ave and High Street consists of 2.88 acres of impervious area. In total, in the existing conditions, impervious area comprises 4.59 acres of impervious, or 8.7% of the total area. In the proposed condition, 0.28 acres of impervious area are added, yielding a total area of 4.87 acres and percentage of 9.3%, an increase of 0.6% over the combined drainage areas.

## Drainage Summary

All runoff from this property and the surrounding area flows to a significant drainageway that flows between Waldo Ave and High Street. The off-site contributing drainage area west of Waldo Avenue is approximately 45.5 acres and is mostly wooded with some developed area along Waldo Avenue. This area drains beneath Waldo Avenue via a 42" diameter reinforced concrete pipe (RCP) culvert, where it discharges to the large drainageway running southwest to northeast through the subject property. Drainage from the subject property enters this drainage way at various spots, with the proposed development area entering the drainageway on the northeast corner of the property. The contributing drainage area between Waldo Avenue and High Street, including the entirety of the subject property (3.6 acres), is approximately 7.0 acres. The drainageway continues northeast off the subject property on inside the Route One off-ramp right-of-way. At the intersection of the Route One off-ramp and High Street, runoff drains beneath High Street via another 42" RCP.

We used HydroCAD modeling software to model the peak runoff from the 2, 10, 25, and 50-year storm events to the High Street culvert in the pre and post-development conditions, and show an approximately 0.04 cfs increase in each modeled storm event, which is insignificant (0.07% – 0.2%) in the model. These HydroCAD data sheets follow this memo. The previous owner's engineer modeled the capacity of the existing High Street culvert at 141.57 cfs. As can be seen from the table below, and the previous owner's engineer's data, the modeled peak flows to the High Street culvert from the largest modeled storm, a 50-year event, is only 43% of the culvert's capacity. Runoff from the subject property flows directly to the public drainage way and culvert without crossing any private property.

	2-Year (cfs)	10-Year (cfs)	25-Year (cfs)	50-Year (cfs)
High St 42" RCP Pre-Development	17.91	37.63	51.01	61.12
High St 42" RCP Post-Development	17.95	37.67	51.05	61.16

## Flooding

This project is not in a mapped flood zone based on FEMA Flood Insurance Rate Map (FIRM) for Belfast.

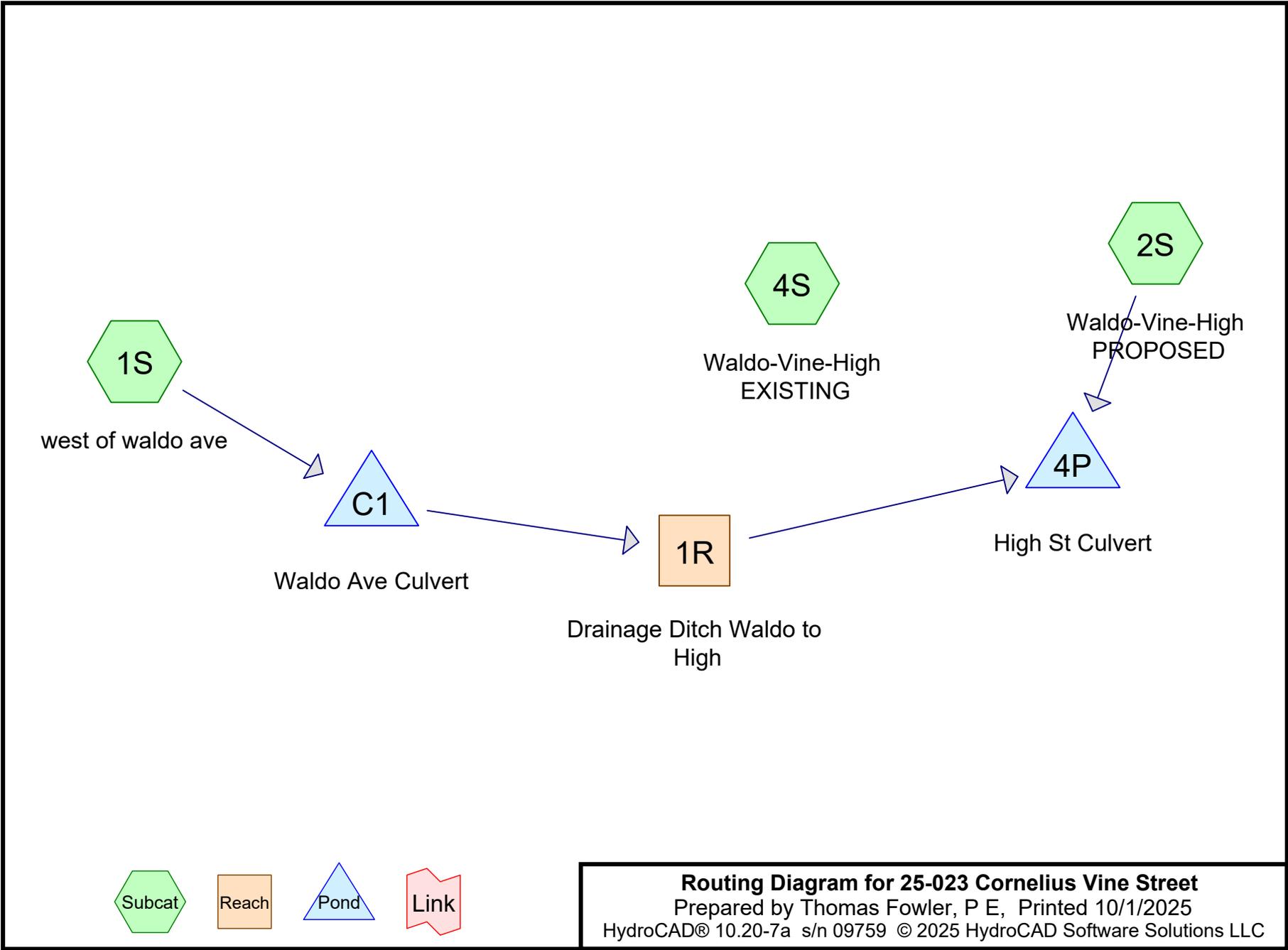
## Summary

Based on the insignificant peak flow increase (0.07% - 0.2%) and the excess capacity in the existing public drainage system, we believe the runoff from this project is more than adequately managed by the drainage system in place.

Signed,



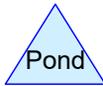
Thomas A. Fowler, P.E.



Subcat



Reach



Pond



Link

**Routing Diagram for 25-023 Cornelius Vine Street**  
 Prepared by Thomas Fowler, P E, Printed 10/1/2025  
 HydroCAD® 10.20-7a s/n 09759 © 2025 HydroCAD Software Solutions LLC

**25-023 Cornelius Vine Street**

Prepared by Thomas Fowler, P E

HydroCAD® 10.20-7a s/n 09759 © 2025 HydroCAD Software Solutions LLC

Type III 24-hr 2-Year Rainfall=3.20"

Printed 10/1/2025

Page 1

**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 8.75% Impervious, Inflow Depth > 0.97" for 2-Year event  
 Inflow = 17.92 cfs @ 13.30 hrs, Volume= 4.254 af  
 Outflow = 17.91 cfs @ 13.31 hrs, Volume= 4.254 af, Atten= 0%, Lag= 0.3 min  
 Primary = 17.91 cfs @ 13.31 hrs, Volume= 4.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 101.57' @ 13.31 hrs Surf.Area= 302 sf Storage= 177 cf

Plug-Flow detention time= 0.1 min calculated for 4.240 af (100% of inflow)  
 Center-of-Mass det. time= 0.1 min ( 869.7 - 869.6 )

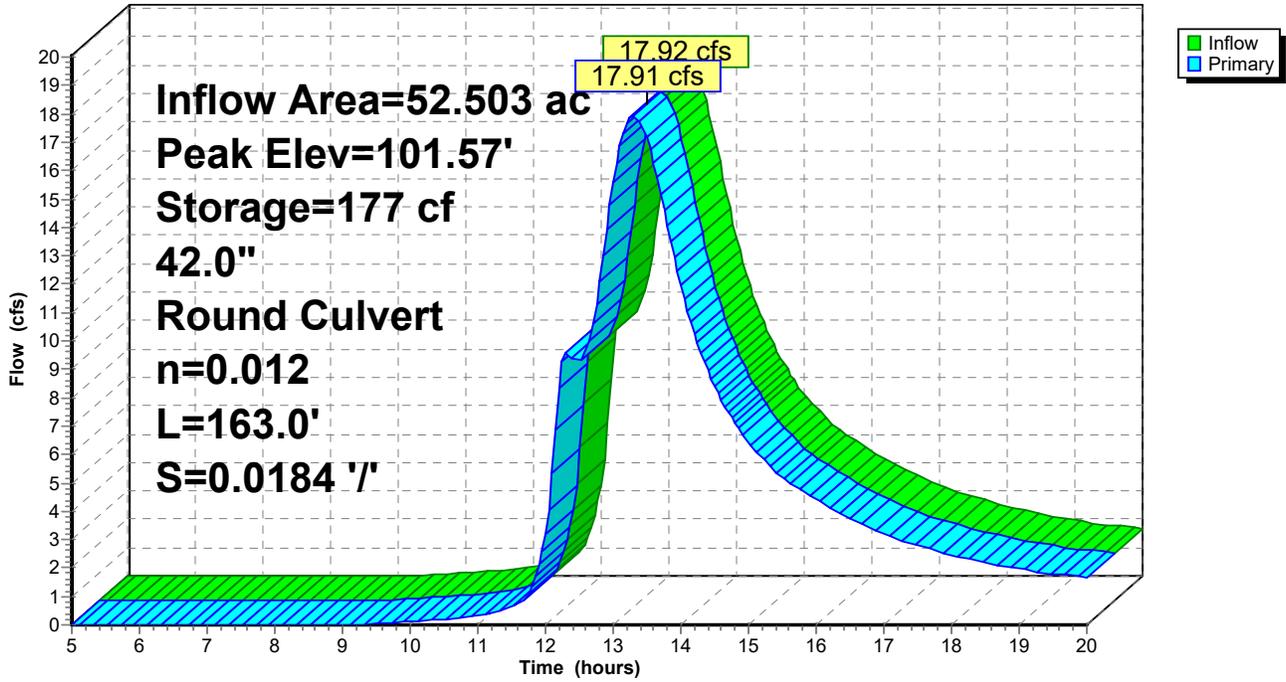
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=17.90 cfs @ 13.31 hrs HW=101.57' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 17.90 cfs @ 4.27 fps)

### Pond 4P: High St Culvert

Hydrograph



**25-023 Cornelius Vine Street**

Type III 24-hr 10-Year Rainfall=4.65"

Prepared by Thomas Fowler, P E

Printed 10/1/2025

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Page 3

**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 8.75% Impervious, Inflow Depth > 1.96" for 10-Year event  
 Inflow = 37.65 cfs @ 13.23 hrs, Volume= 8.554 af  
 Outflow = 37.63 cfs @ 13.24 hrs, Volume= 8.554 af, Atten= 0%, Lag= 0.5 min  
 Primary = 37.63 cfs @ 13.24 hrs, Volume= 8.554 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 102.42' @ 13.24 hrs Surf.Area= 614 sf Storage= 560 cf

Plug-Flow detention time= 0.2 min calculated for 8.554 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 855.8 - 855.6 )

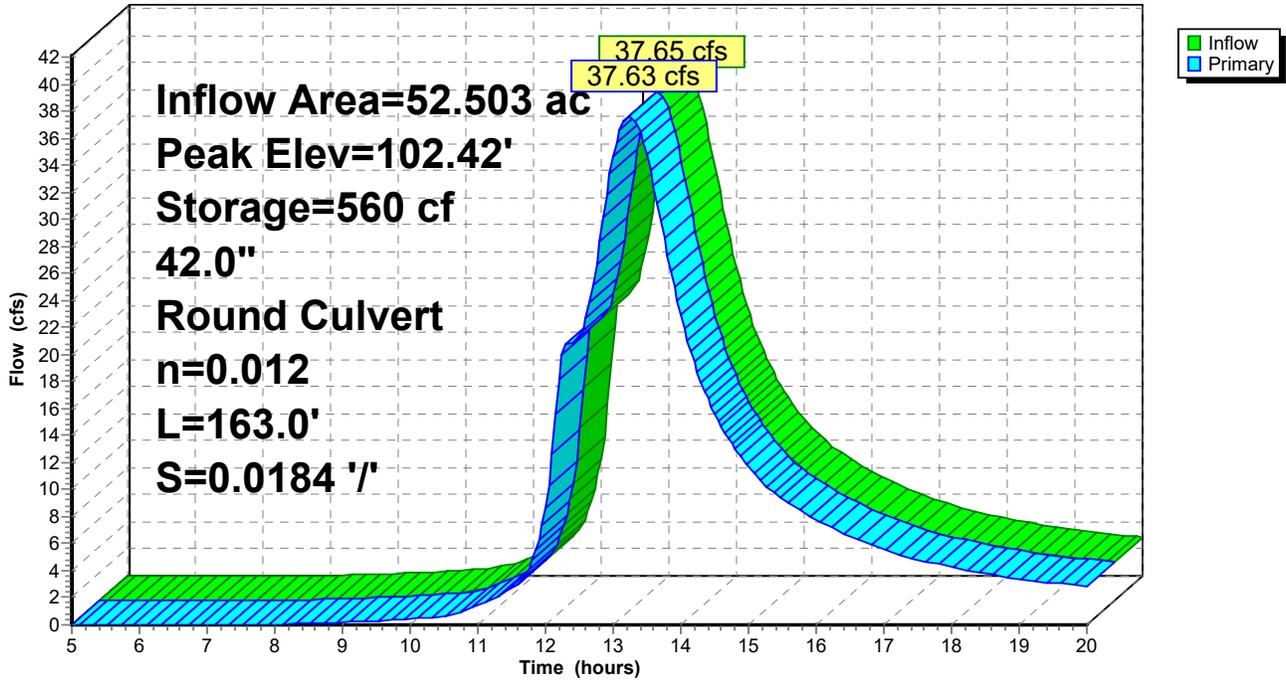
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=37.61 cfs @ 13.24 hrs HW=102.42' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 37.61 cfs @ 5.30 fps)

### Pond 4P: High St Culvert

Hydrograph



**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 8.75% Impervious, Inflow Depth > 2.63" for 25-Year event  
 Inflow = 51.04 cfs @ 13.21 hrs, Volume= 11.511 af  
 Outflow = 51.01 cfs @ 13.22 hrs, Volume= 11.511 af, Atten= 0%, Lag= 0.6 min  
 Primary = 51.01 cfs @ 13.22 hrs, Volume= 11.511 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 102.97' @ 13.22 hrs Surf.Area= 864 sf Storage= 961 cf

Plug-Flow detention time= 0.2 min calculated for 11.511 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 849.7 - 849.5 )

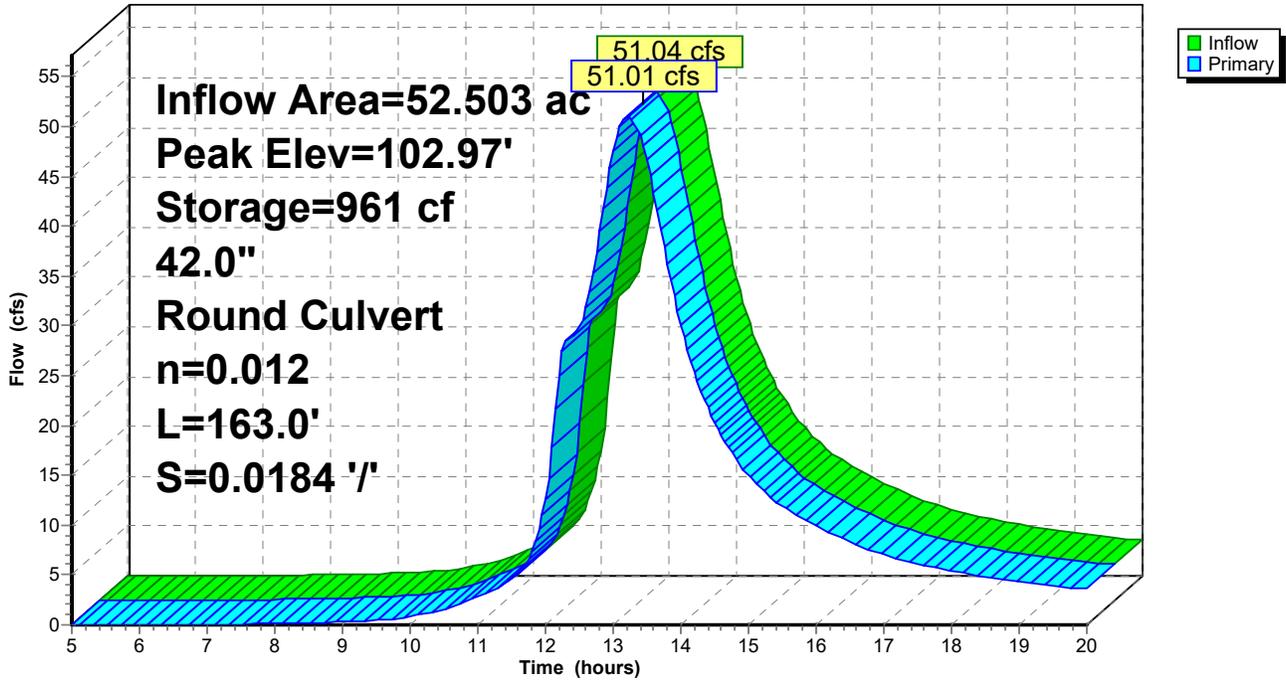
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=50.96 cfs @ 13.22 hrs HW=102.97' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 50.96 cfs @ 5.86 fps)

### Pond 4P: High St Culvert

Hydrograph



**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 8.75% Impervious, Inflow Depth > 3.16" for 50-Year event  
 Inflow = 61.19 cfs @ 13.22 hrs, Volume= 13.807 af  
 Outflow = 61.12 cfs @ 13.24 hrs, Volume= 13.807 af, Atten= 0%, Lag= 1.4 min  
 Primary = 61.12 cfs @ 13.24 hrs, Volume= 13.807 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 103.48' @ 13.24 hrs Surf.Area= 1,148 sf Storage= 1,479 cf

Plug-Flow detention time= 0.2 min calculated for 13.807 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 845.9 - 845.7 )

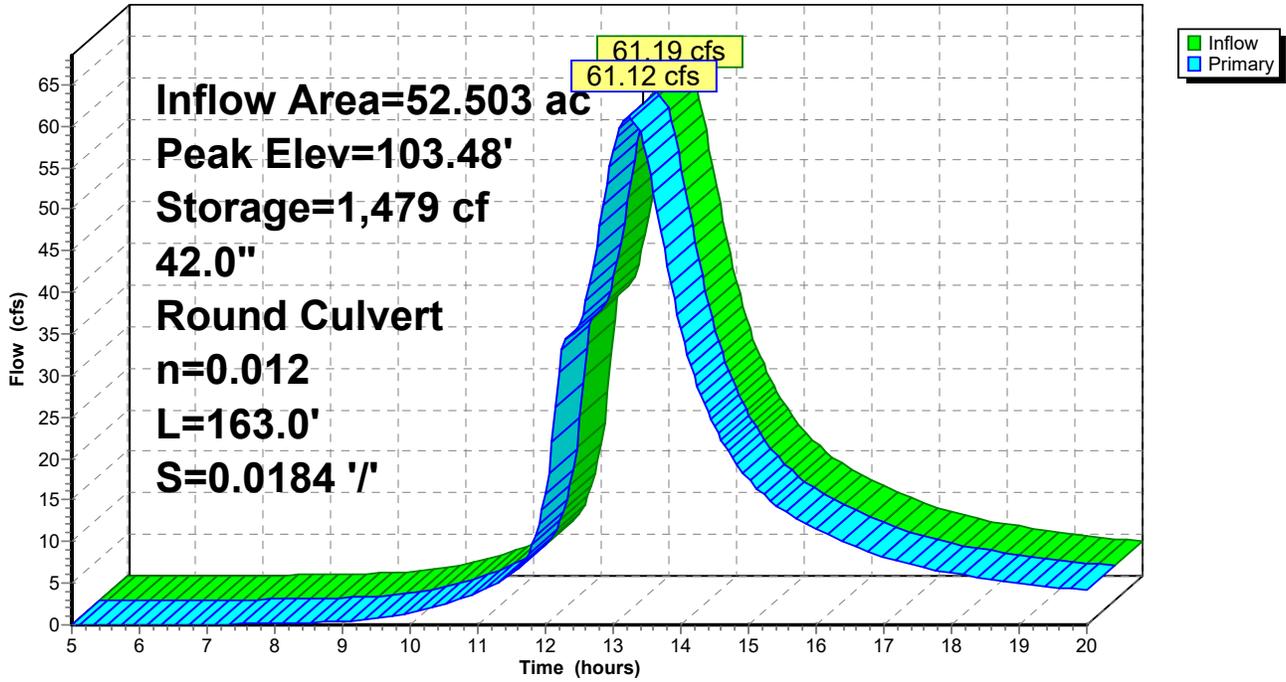
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=61.09 cfs @ 13.24 hrs HW=103.48' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 61.09 cfs @ 6.35 fps)

### Pond 4P: High St Culvert

Hydrograph



**25-023 Cornelius Vine Street**

Prepared by Thomas Fowler, P E

HydroCAD® 10.20-7a s/n 09759 © 2025 HydroCAD Software Solutions LLC

Type III 24-hr 2-Year Rainfall=3.20"

Printed 10/1/2025

Page 2

**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 9.28% Impervious, Inflow Depth > 0.98" for 2-Year event  
 Inflow = 17.96 cfs @ 13.30 hrs, Volume= 4.294 af  
 Outflow = 17.95 cfs @ 13.31 hrs, Volume= 4.294 af, Atten= 0%, Lag= 0.3 min  
 Primary = 17.95 cfs @ 13.31 hrs, Volume= 4.294 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 101.58' @ 13.31 hrs Surf.Area= 303 sf Storage= 178 cf

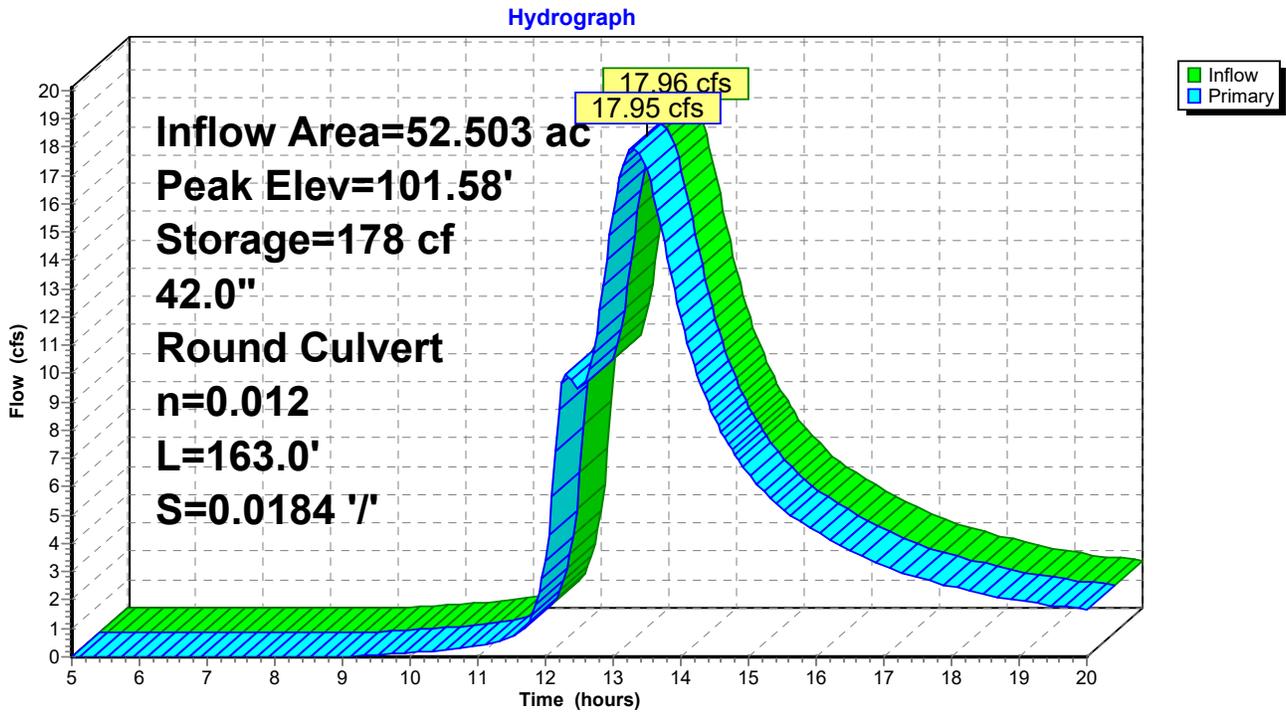
Plug-Flow detention time= 0.1 min calculated for 4.279 af (100% of inflow)  
 Center-of-Mass det. time= 0.1 min ( 868.6 - 868.5 )

Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=17.94 cfs @ 13.31 hrs HW=101.58' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 17.94 cfs @ 4.27 fps)

### Pond 4P: High St Culvert



**25-023 Cornelius Vine Street**

Prepared by Thomas Fowler, P E

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Type III 24-hr 10-Year Rainfall=4.65"

Printed 10/1/2025

Page 4

**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 9.28% Impervious, Inflow Depth > 1.97" for 10-Year event  
 Inflow = 37.69 cfs @ 13.23 hrs, Volume= 8.606 af  
 Outflow = 37.67 cfs @ 13.24 hrs, Volume= 8.606 af, Atten= 0%, Lag= 0.5 min  
 Primary = 37.67 cfs @ 13.24 hrs, Volume= 8.606 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 102.42' @ 13.24 hrs Surf.Area= 615 sf Storage= 561 cf

Plug-Flow detention time= 0.2 min calculated for 8.606 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 855.0 - 854.8 )

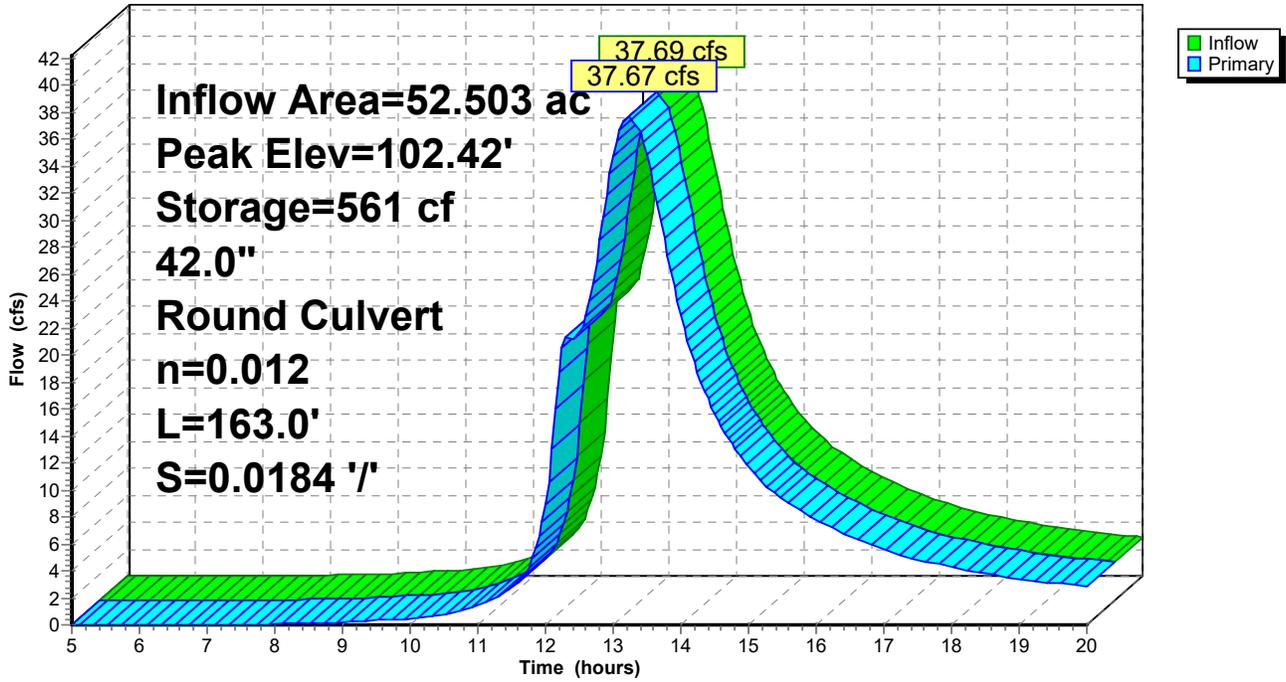
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=37.65 cfs @ 13.24 hrs HW=102.42' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 37.65 cfs @ 5.30 fps)

### Pond 4P: High St Culvert

Hydrograph



**25-023 Cornelius Vine Street**

Type III 24-hr 25-Year Rainfall=5.55"

Prepared by Thomas Fowler, P E

Printed 10/1/2025

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Page 6

**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 9.28% Impervious, Inflow Depth > 2.64" for 25-Year event  
 Inflow = 51.08 cfs @ 13.21 hrs, Volume= 11.568 af  
 Outflow = 51.05 cfs @ 13.22 hrs, Volume= 11.568 af, Atten= 0%, Lag= 0.6 min  
 Primary = 51.05 cfs @ 13.22 hrs, Volume= 11.568 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 102.97' @ 13.22 hrs Surf.Area= 865 sf Storage= 963 cf

Plug-Flow detention time= 0.2 min calculated for 11.529 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 849.0 - 848.8 )

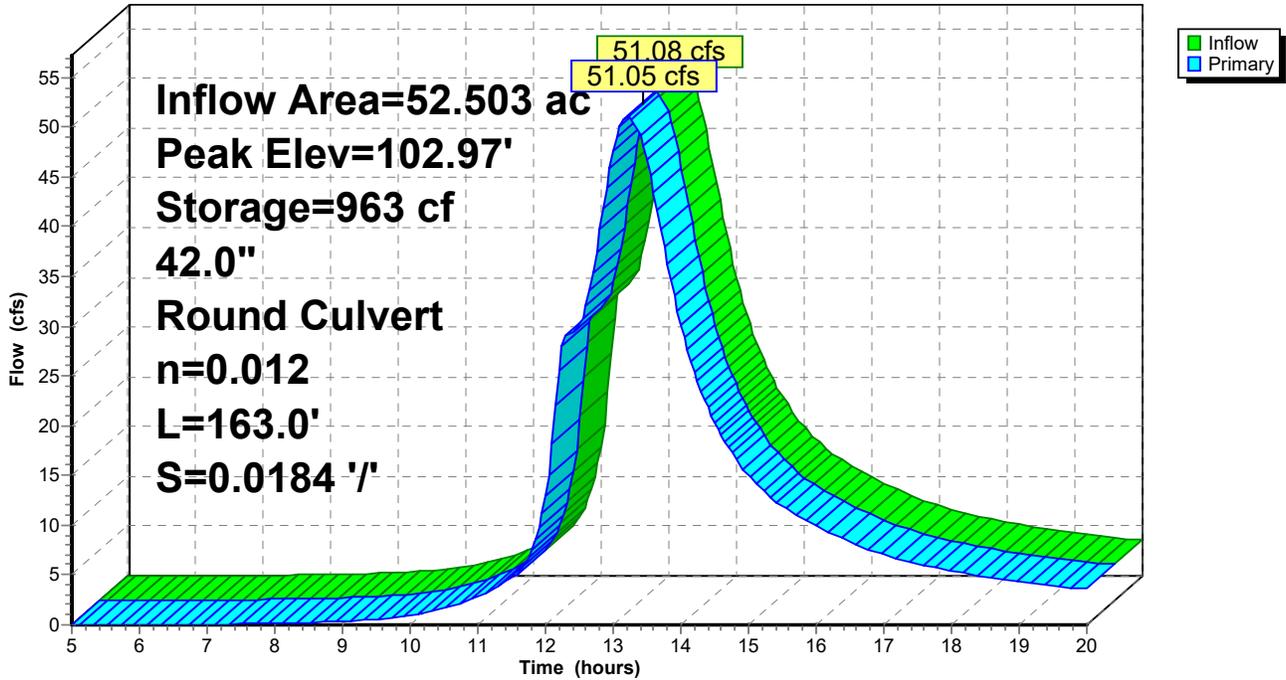
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 ' S= 0.0184 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=51.01 cfs @ 13.22 hrs HW=102.97' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 51.01 cfs @ 5.86 fps)

### Pond 4P: High St Culvert

Hydrograph



**Summary for Pond 4P: High St Culvert**

Inflow Area = 52.503 ac, 9.28% Impervious, Inflow Depth > 3.17" for 50-Year event  
 Inflow = 61.23 cfs @ 13.22 hrs, Volume= 13.868 af  
 Outflow = 61.16 cfs @ 13.24 hrs, Volume= 13.868 af, Atten= 0%, Lag= 1.4 min  
 Primary = 61.16 cfs @ 13.24 hrs, Volume= 13.868 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2  
 Peak Elev= 103.49' @ 13.24 hrs Surf.Area= 1,149 sf Storage= 1,483 cf

Plug-Flow detention time= 0.2 min calculated for 13.821 af (100% of inflow)  
 Center-of-Mass det. time= 0.2 min ( 845.3 - 845.1 )

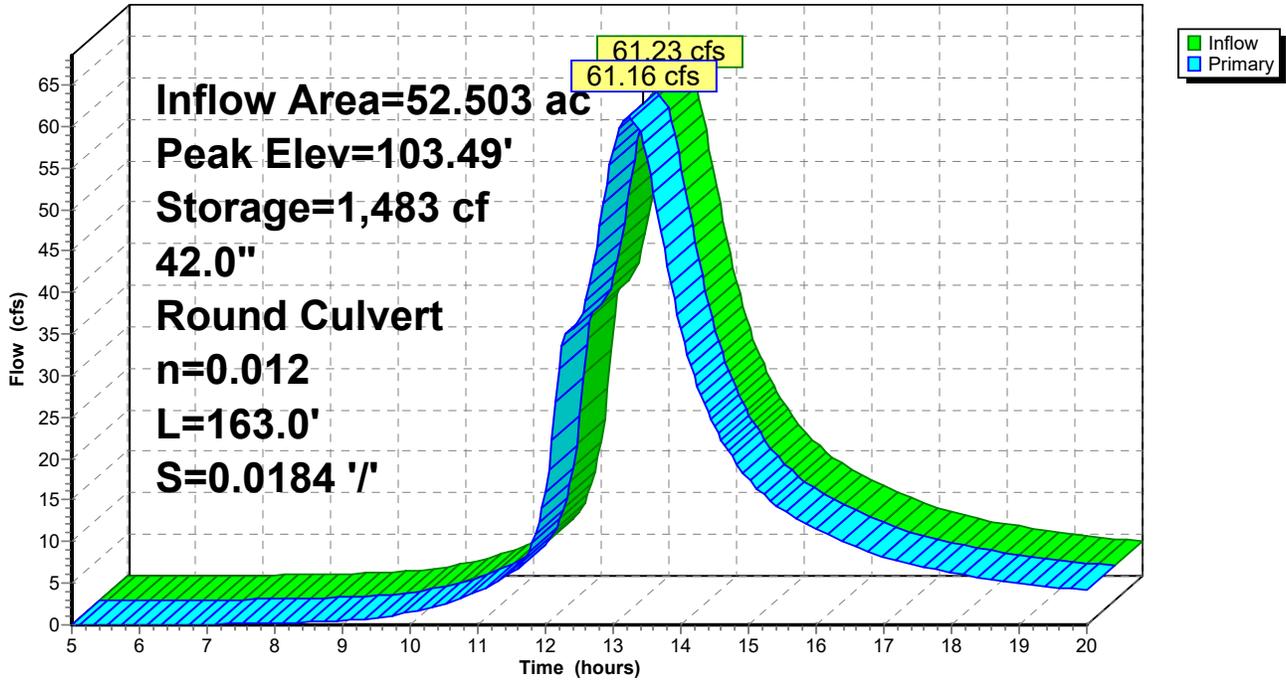
Volume	Invert	Avail.Storage	Storage Description			
#1	100.00'	2,153 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
100.00	0	0.0	0	0	0	
101.00	150	48.0	50	50	185	
102.00	450	82.0	287	337	543	
103.00	880	115.0	653	990	1,069	
104.00	1,472	171.0	1,163	2,153	2,352	

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	<b>42.0" Round RCP_Round 42"</b> L= 163.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 97.00' S= 0.0184 ' / ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 9.62 sf

**Primary OutFlow** Max=61.13 cfs @ 13.24 hrs HW=103.49' (Free Discharge)  
 ↑1=RCP\_Round 42" (Inlet Controls 61.13 cfs @ 6.36 fps)

### Pond 4P: High St Culvert

Hydrograph



**ATTACHMENT 6**

**TYPICAL LIGHT FIXTURE EXAMPLE**



Color: Bronze

Weight: 15.0 lbs

Project:

Type:

Prepared By:

Date:

**Driver Info**

Type	Constant
120V	1.25A/1.00A/0.83A
208V	0.72A/0.58A/0.48A
240V	0.63A/0.50A/0.83A
277V	0.54A/0.43A/0.36A
Input Watts	99.4-151.4W

**LED Info**

Watts	150/120/100W
Color Temp	3000/4000/5000K
Color Accuracy	80-84 CRI
L70 Lifespan	100,000 Hours
Lumens	15,009-22,117 lm
Efficacy	132.4-163.1 lm/W

**Technical Specifications**

**Field Adjustability**

**Field Adjustable:**

Field Adjustable Light Output:

150W/120W/100W (factory default: 150W)

Color Temperature Selectable:

3000K, 4000K and 5000K (factory default:4000K)

Optics Adjustable:

Type III, Type IV and Type V i(factory default: Type III)

**Compliance**

**UL Listed:**

Suitable for wet locations. Suitable for mounting within 4 ft (1.2m) of the ground.

**IESNA LM-79 & LM-80 Testing:**

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**IP Rating:**

Ingress protection rating of IP66 for dust and water

**Trade Agreements Act Compliant:**

This product is a product of Cambodia and a "designated country" end product that complies with the Trade Agreements Act

**DLC Listed:**

This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities. Designed to meet DLC 5.1 requirements.

DLC Product Code: S-MZV4GY

**Performance**

**Lifespan:**

100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

**Wattage Equivalency:**

150W: Replaces up to 400W Metal Halide (MH) or 400W High Pressure Sodium (HPS)

120W: Replaces up to 400W Metal Halide (MH) or 310W High Pressure Sodium (HPS)

100W: Replaces up to 400W Metal Halide (MH) or 310W High Pressure Sodium (HPS)

**Electrical**

**Driver:**

Constant Current, Class 1, 120-277V, 50/60 Hz:

150W: 120V: 1.25A, 208V: 0.72A, 240V: 0.63A, 277V: 0.54A

120W: 120V: 1.0A, 208V: 0.58A, 240V: 0.5A, 277V: 0.43A

100W: 120V: 0.83A, 208V: 0.48A, 240V: 0.42A, 277V: 0.36A

**Dimming Driver:**

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims down to 10%.

**THD:**

4.16% at 120V, 6.59% at 277V

**Power Factor:**

99.8% at 120V, 96.3% at 277V

**7-Pin Receptacle with Shorting Cap:**

ANSI C136.41 7-pin receptacle, compatible with wireless control systems

**Photocell:**

120V-277V 3-Pin Twistlock photocell included. Photocell is compatible with 120V - 277V.

**Surge Protection:**

6 kV

**Construction**

**IES Classification:**

The Type III distribution is ideal for roadway, general parking and other area lighting applications where a larger pool of lighting is required. It is intended to be located near the side of the area, allowing the light to project outward and fill the area.

## Technical Specifications (continued)

### Cold Weather Starting:

The minimum starting temperature is -40°F (-40°C)

### Maximum Ambient Temperature:

Suitable for use in up to 104°F (40°C)

### Lens:

Polycarbonate lens

### Housing:

Die-cast aluminum

### Effective Projected Area:

1 Fixture: 0.4

2 Fixtures: 0.8

3 Fixtures: 1.4

4 Fixtures: 1.4

### Finish:

Formulated for high durability and long-lasting color

### Gaskets:

High-temperature silicone gaskets

### Green Technology:

Mercury and UV free. RoHS-compliant components.

## LED Characteristics

### LEDs:

Long-life, high-efficacy, surface-mount LEDs

### Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

## Optical

### BUG Rating:

Type 3

150W: B3 U0 G3

120W: B3 U0 G3

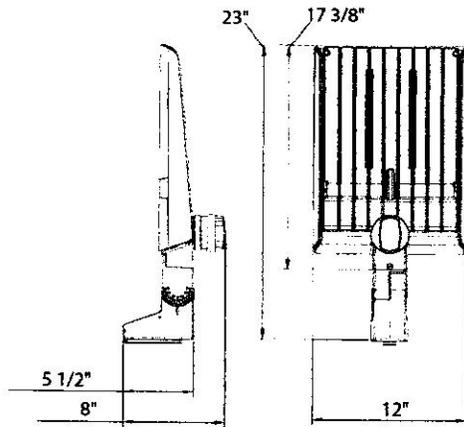
100W: B3 U0 G2

## Other

### 5-Year Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

## Dimensions



## Features

- DLC Premium listed
- Adjustable Universal Pole Mount
- Includes three (3) Interchangeable Lenses (Types III, IV, V)
- 7-Pin Receptacle with Shorting Cap + 3-Pin Twistlock Photocell
- IP66 Rated
- 100,000-Hour LED lifespan
- 5-Year, limited warranty

## Ordering Matrix

Family	Optics	Wattage	Mounting	Color Temp	Finish	Driver	Options
A22	Blank = Type III Installed, Type IV and Type V Included	150X 150X = 150/120/100W 320X = 320/280/250W	Blank = Universal Adjustable Pole Mount	Blank = 3000/4000/5000K CCT Adjustable	Blank = Bronze	Blank = 120-277V, 0-10V Dimming	Blank = 7-Pin Receptacle with Shorting Cap + 3-Pin Twistlock Photocell



Project:

Type:

Prepared By:

Date:

Square steel poles drilled for 2 Area Lights at 180°. Designed for ground mounting. Poles are stocked nationwide for quick shipment. Protective packaging ensures poles arrive at the job site good as new.

Color: Bronze

Weight: 136.7 lbs

Technical Specifications

Compliance

CSA Listed:

Suitable for wet locations

Construction

Shaft:

46,000 p.s.i. minimum yield.

Hand Holes:

Reinforced with grounding lug and removable cover

Base Plates:

Slotted base plates 36,000 p.s.i.

Shipping Protection:

All poles are shipped in individual corrugated cartons to prevent finish damage

Color:

Bronze powder coating

Height:

20 ft

Weight:

137 lbs

Gauge:

11

Wall Thickness:

1/8"

Shaft Size:

4"

Hand Hole Dimensions:

3" x 5"

Bolt Circle:

8 1/2"

Base Dimension:

8"

Anchor Bolt:

Anchor bolt kits are sold separately. Order [ABK4-11-BCK-S4](#) for anchor bolt kits.

Anchor Bolt Templates:

WARNING Template must be printed on 11" x 17" sheet for actual size. CHECK SCALE BEFORE USING. Templates shipped with anchor bolts and available [online](#).

Max EPA's/Max Weights:

70MPH 10.7 ft/360 lb.

80MPH 7.0 ft/350 lb.

90MPH 4.3 ft/350 lb.

100MPH 2.5 ft/350 lb.

110MPH 1.1 ft/350 lb.

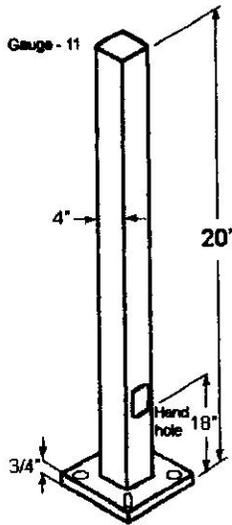
120MPH 0.1 ft/340lb

Other

Terms of Sale:

Pole Terms of Sale is available [online](#).

**Dimensions**



**Features**

- Designed for ground mounting
- Heavy duty TGIC polyester coating
- Reinforced hand holes with grounding lug and removable cover for easy wiring access
- Pole caps, base covers & bolts are sold separately
- Custom manufactured for each application