



WATER TREATMENT PLANT PUBLIC HEARING

Tyngsborough, MA – February 18, 2021

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EXISTING WATER ISSUES

- **Hydraulic Issues**

- Lack of fire protection in Tyngsborough
- Inability to backfeed Tyngsborough if the wells are off-line

- **Water Quality Issues**

- Iron and manganese can cause brown water
- Mass DEP iron & manganese regulations prevent using the full capacity of the wells



MANGANESE LEVELS

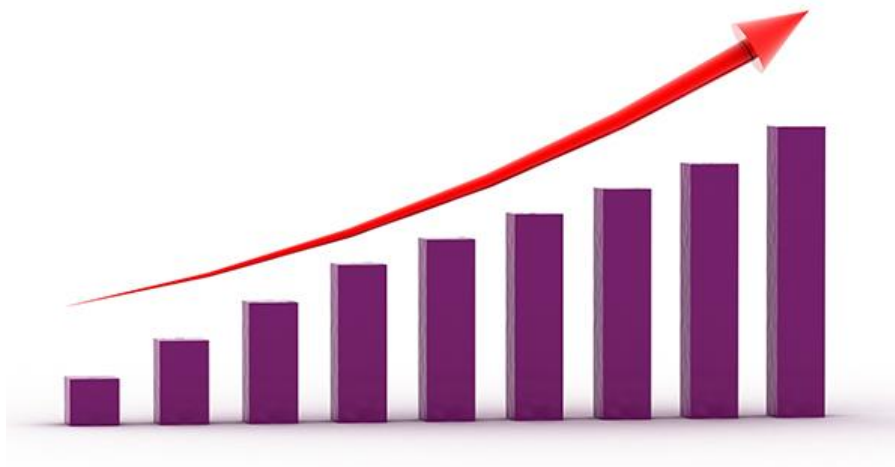
- High manganese is currently limiting the useable capacity of the Tyngsborough Wells to 1.35 MGD

Well	Current rate (gpm)	DEP approved rate (gpm)
1	140	389
2a	-	389
3	300	312
4 a&b	-	354
5	500	397
Total	940 (1.35 MGD)	1841 (2.65 MGD)

- Manganese treatment would allow using all 2.65 MGD

FINANCIAL CONCERNS

- **Increasing water rates in Lowell**
 - Up 40% this year
 - Customers will carry cost burden
 - Water needs will continue to increase
- **Dracut will spend ~\$1 Million to buy Lowell water this year**
- **Treatment plant will minimize purchased water**



EXISTING SITE DRAWBACKS

- 2006 flood resulted in approximately 40% of the Tynsgborough Wellfield being under water
- Only access is through flood zone via bridge crossing
- Unlikely to be permitted by agencies due to flood issues

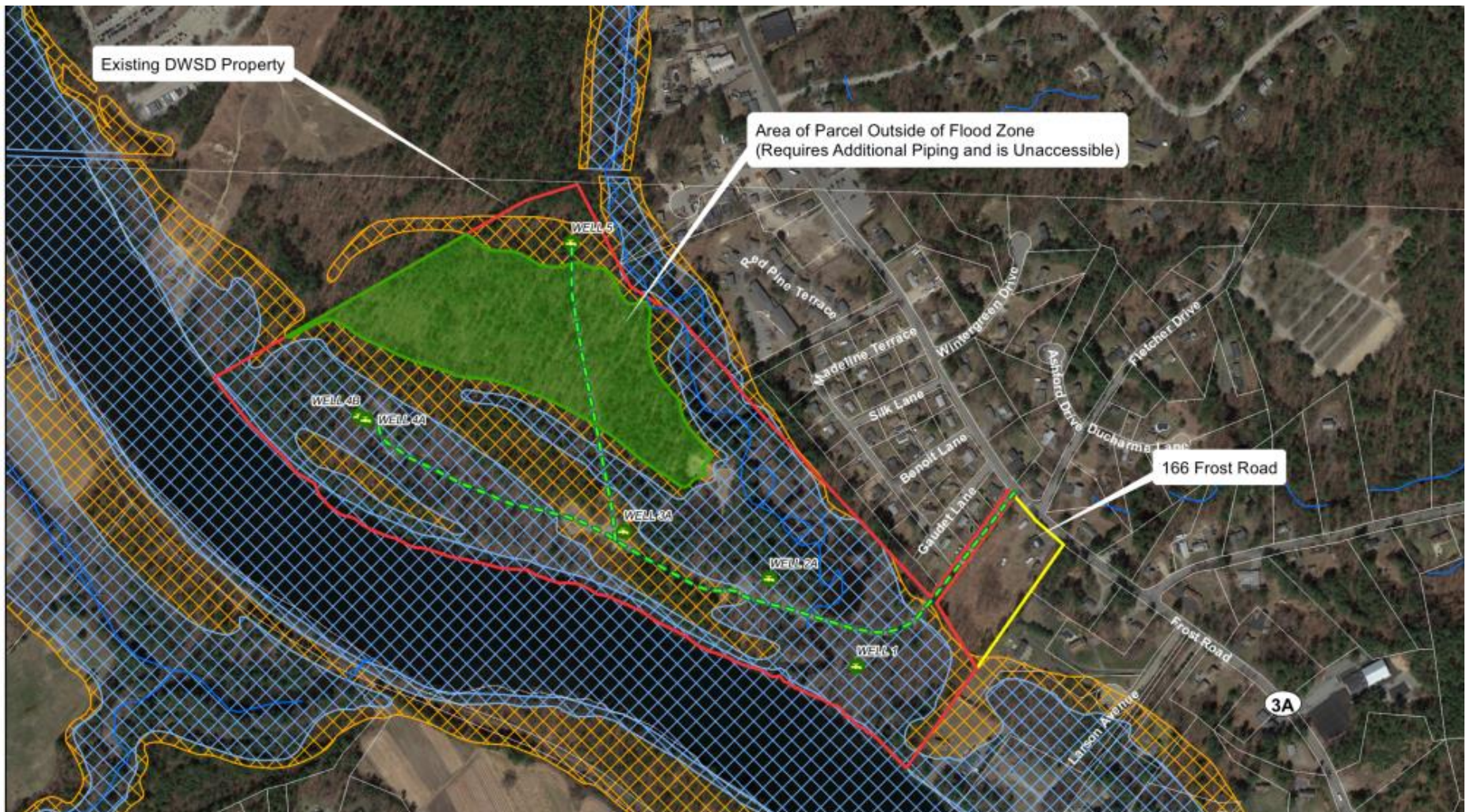


Well #1



Access Road to Well #4

WTP SITE SELECTION – FLOOD RISK/ACCESS

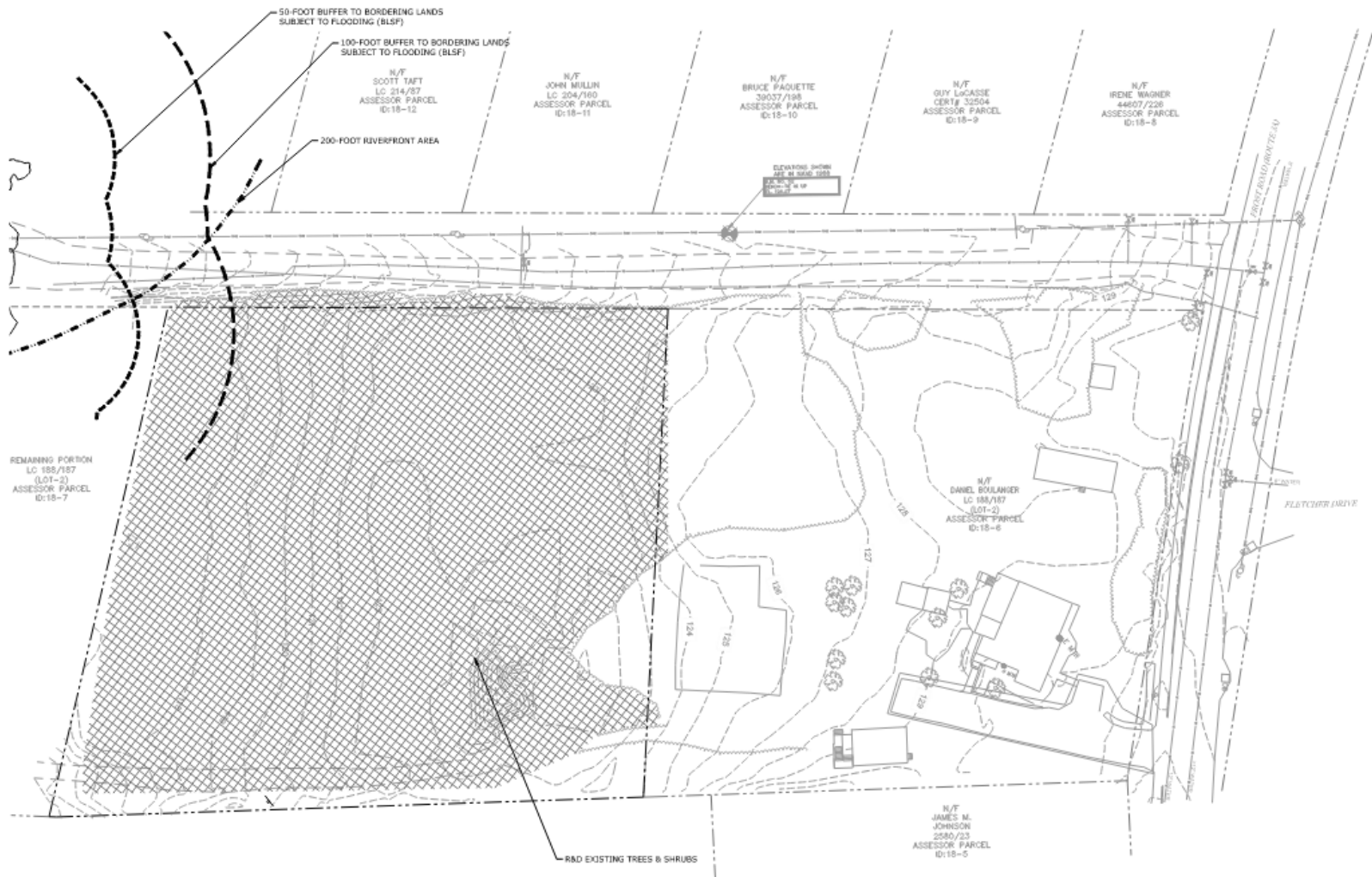


TREATMENT OVERVIEW

- Typical treatment technologies were piloted by independent third party and results were approved by MassDEP
- Selected technology utilizes pressure filter vessels with sand filter media inside
- Treatment process design is in technical review by MassDEP



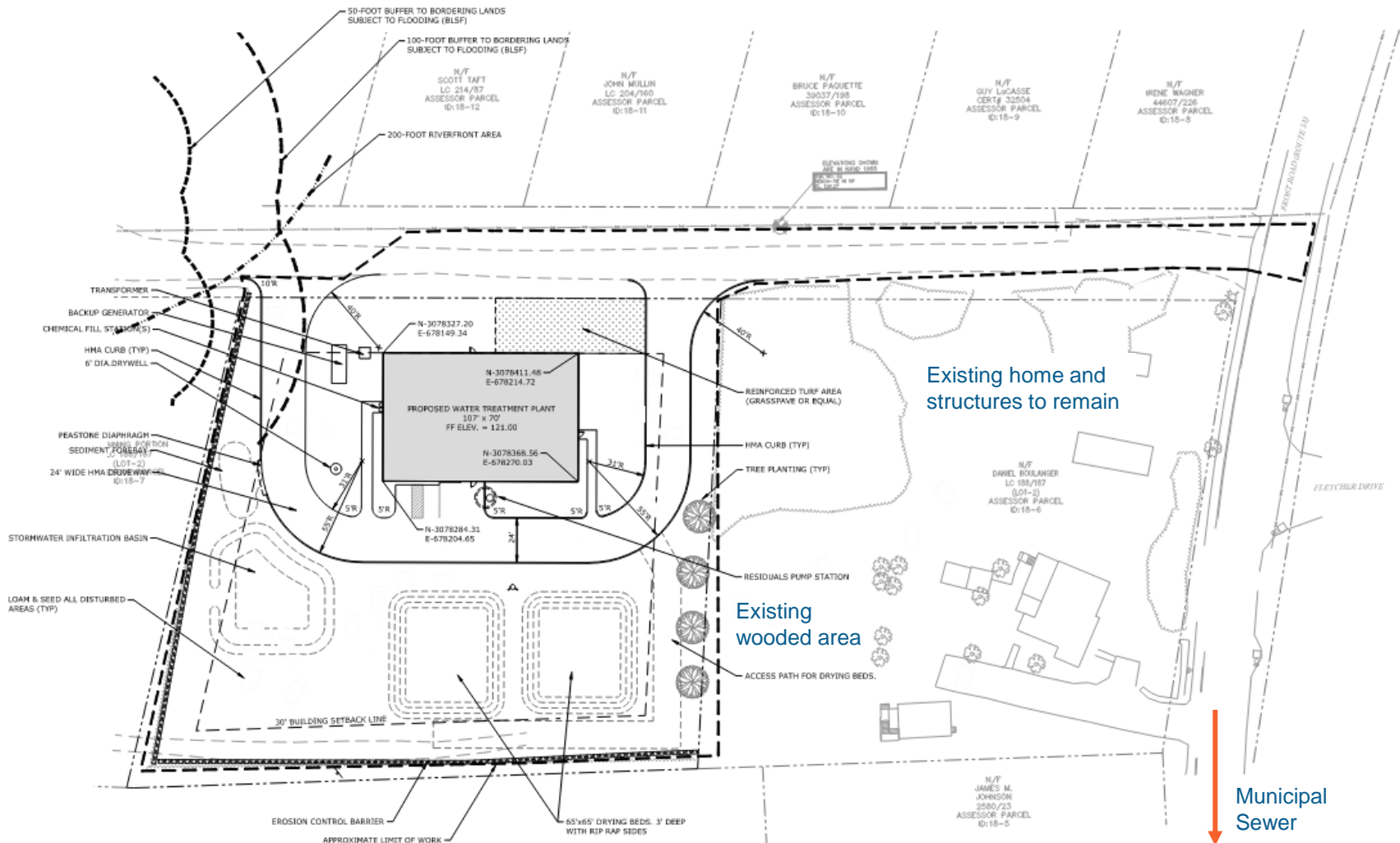
166 FROST ROAD SITE PLAN



- Demolish existing trees & shrubs as needed

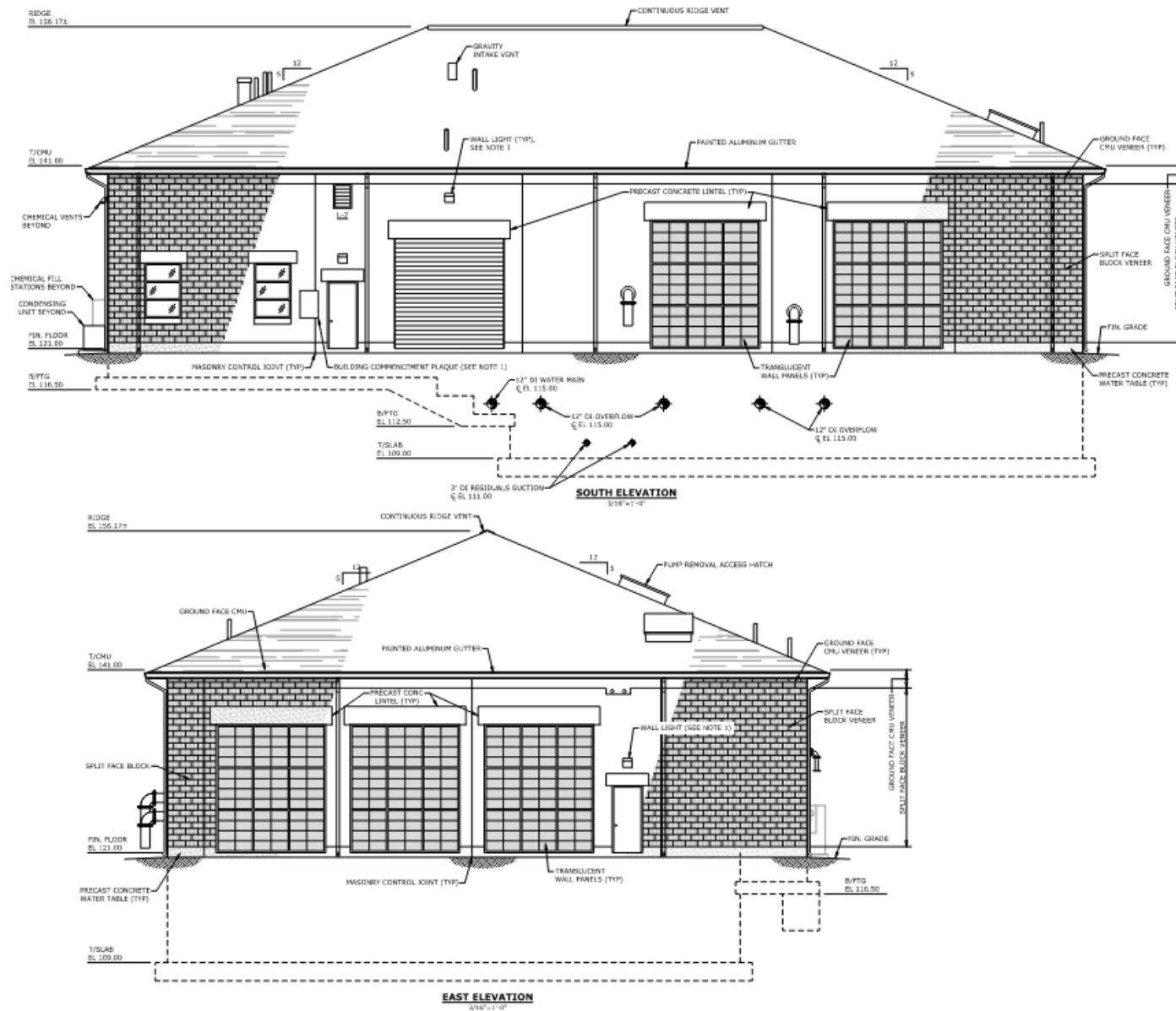
166 FROST ROAD SITE PLAN

- Proposed building 107' x 70'
- Municipal sewer nearby for domestic waste



Existing wooded area

ARCHITECTURAL ELEVATIONS



MANGANESE TREATMENT PLANT DESIGN

- **Addressing concerns:**

- Noise
- Odor
- Traffic
- Appearance

