raSmith

CREATIVITY BEYOND ENGINEERING



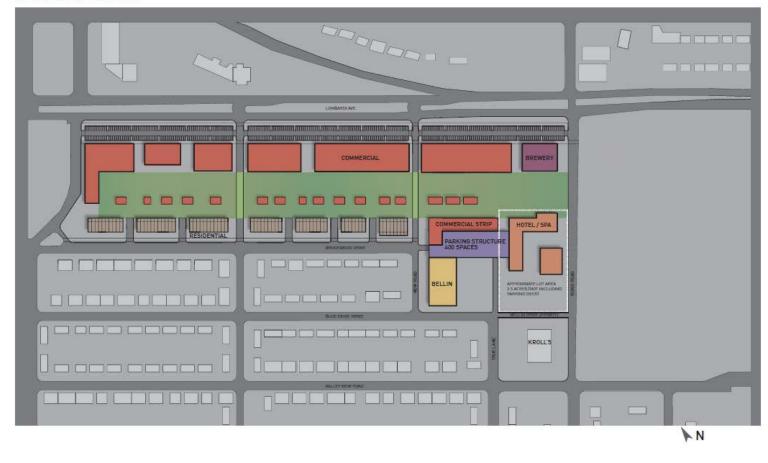
Stormwater Controls: Titletown District

| Titletown Limits



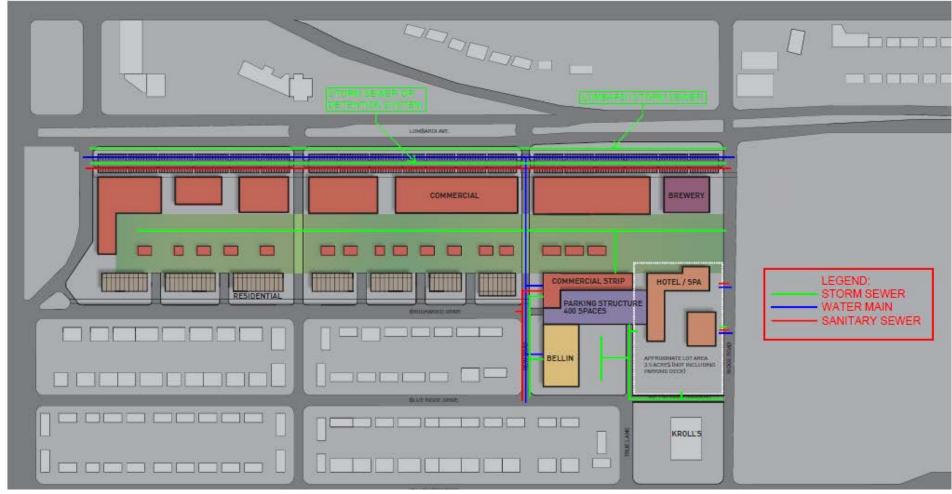


SITE PLAN





Proposal Utility Layout Exhibit_





Assumptions

- Existing Condition = Mostly Impervious
- Plaza = Park
- Park = Mostly pervious area
- Existing Condition VS Proposed = Less Impervious Area



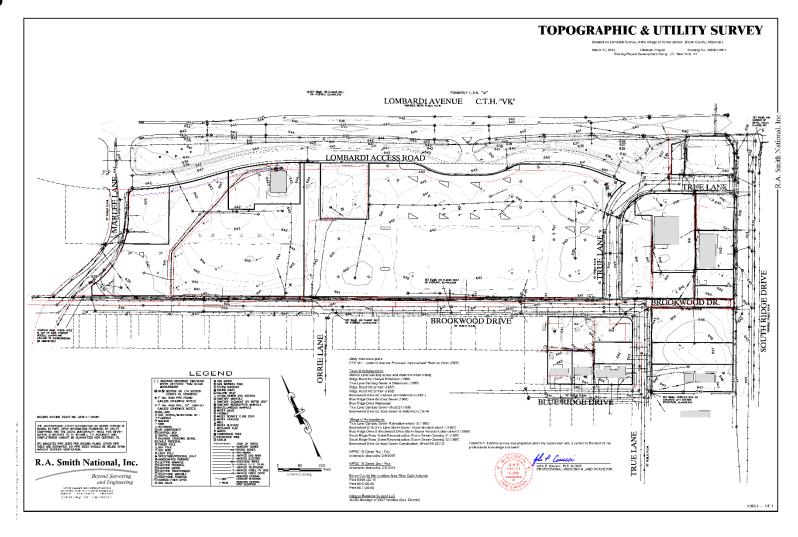


Assumptions

WRONG



Existing Conditions





Existing Conditions

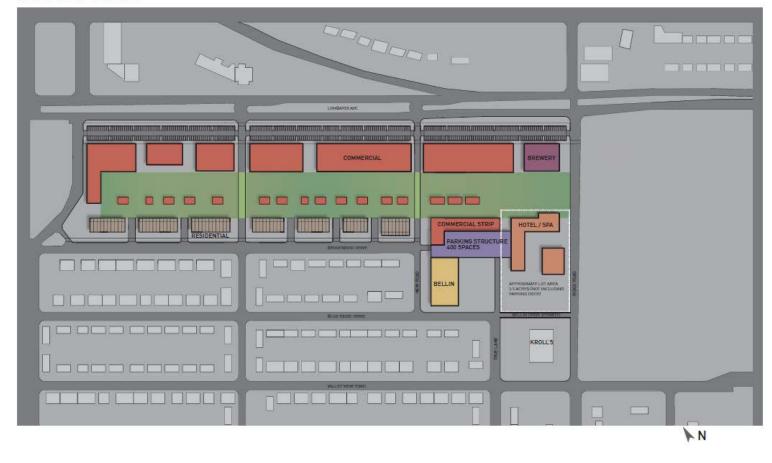






| RFP | Site Plan

SITE PLAN



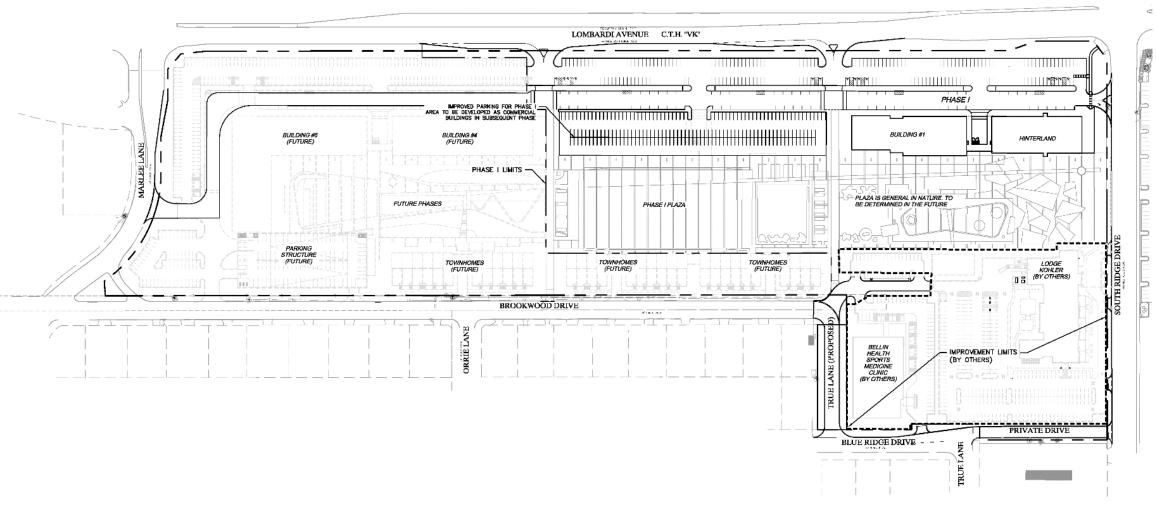




| Entering | Schematic Design



| "Final" | Site Plan #1







Stormwater Regulations

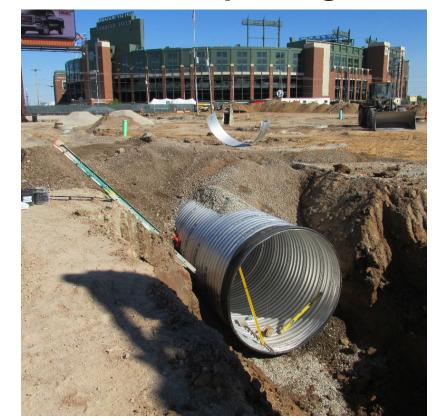
- Water Quantity: Exempt from Village & State requirements
- Water Quality: 40% TSS removal for parking areas & roads





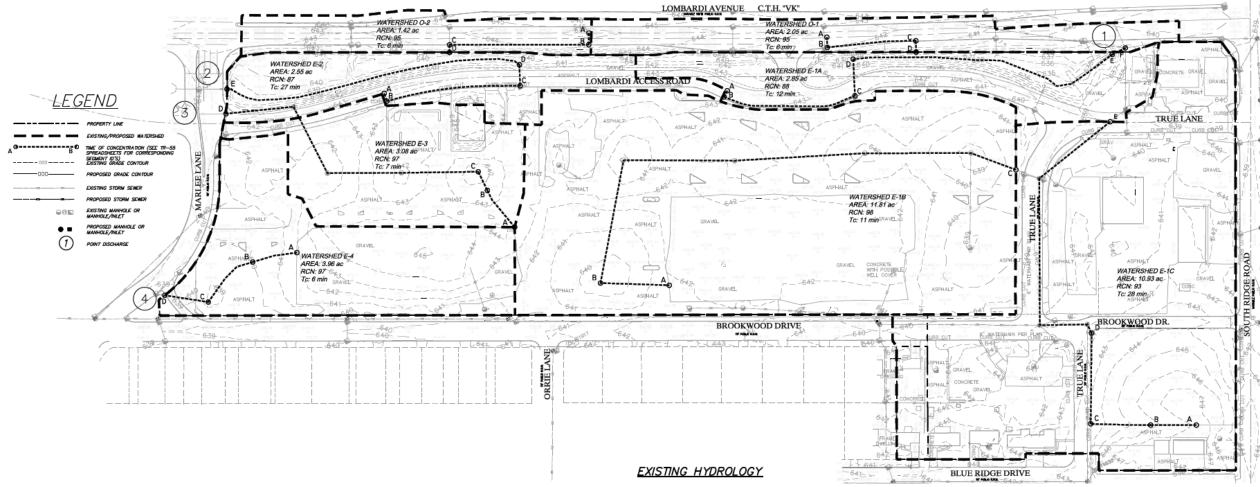
Stormwater Regulations

- What we did and why.
- Water Quantity: Matched 2-yr, 10yr & 25-yr Pre-Construction to Post-Construction Flow
- Water Quality: >40% TSS removal for parking lots & drives





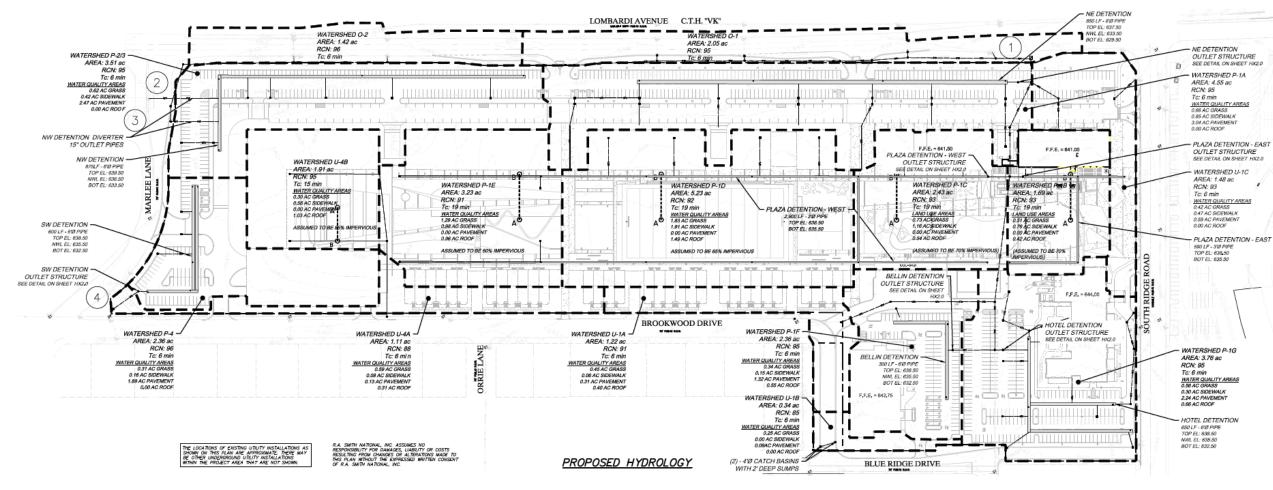
| Existing | Hydrology





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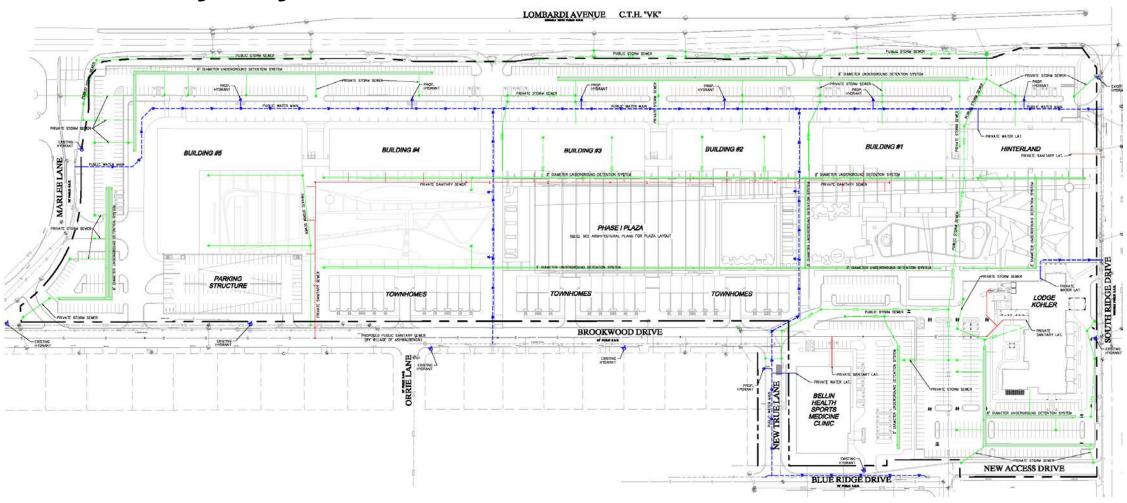
Proposed Hydrology





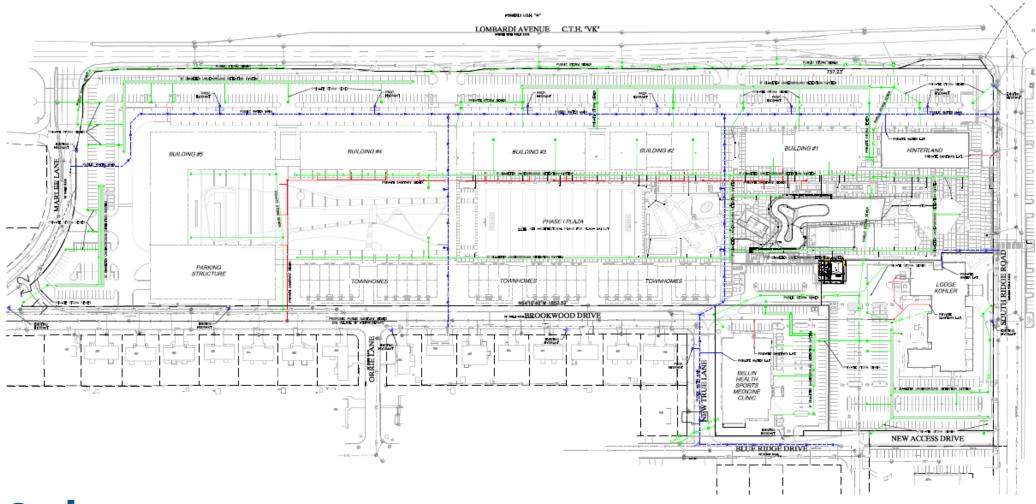
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Proposed PUD Utility Layout





Proposed Final Utility Layout





Hydrology Results

Table 5 – Discharge Rates Summary

Point Discharge 1

Storm Event	Existing	Proposed
2-yr	52.35	37.95
10-yr	78.69	69.80
25-yr	91.68	89.27

Point Discharge 2

Storm Event	Existing	Proposed
2-yr	2.54	0.00
10-yr	4.19	1.65
25-yr	4.71	3.07

Point Discharge 3

Storm Event	Existing	Proposed
2-yr	9.64	8.77
10-yr	14.57	12.93
25-yr	17.02	14.95

Point Discharge 4

Storm Event	Existing	Proposed
2-yr	12.99	10.09
10-yr	19.62	15.75
25-yr	22.91	20.42

TOTAL SITE

Storm Event	Existing	Proposed
2-yr	72.81	56.21
10-yr	109.65	98.95
25-yr	127.84	126.32





| SLAMM Results



Table 8 – Proposed SLAMM Output

	Total Suspended Solids	Percent Reduction
Proposed Site w/o Controls	6,443 lbs.	
Proposed Site with Controls	2,533 lbs.	60.69%

^{*}See appendix G for computer generated calculations





Construction

And the Pipe Rolls in......





Construction

Isn't the water supposed to be inside the pipe?





Construction

Making room for the snow melt piping





| Titletown | Construction





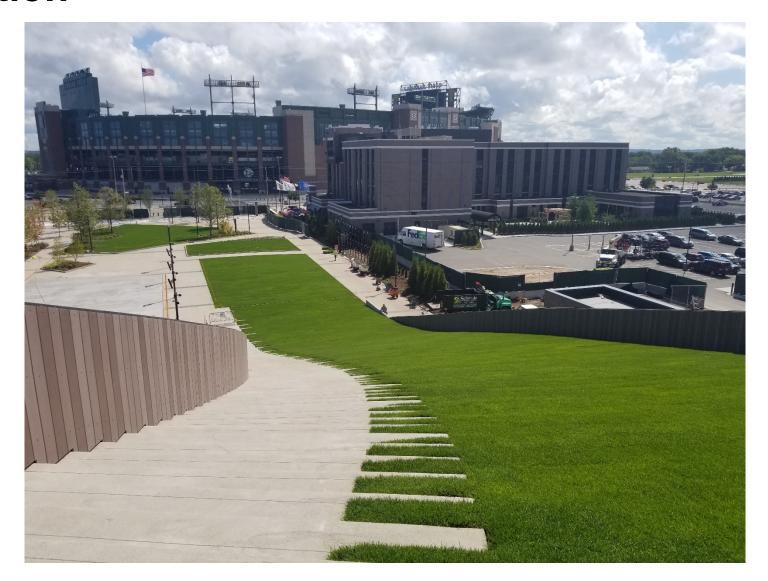
Construction

It looks like the system is going to get tested.





| Titletown | Construction





Stormwater Management Future



- Modify SWMP to incorporate revised Phase II site plan
- Develop a new SWMP for Parcels south of Brookwood







| "Final" | Site Plan #2...55





Titletown Stormwater Controls: Titletown District



