

Kings Branch

Stream Restoration and Flood Reduction Project

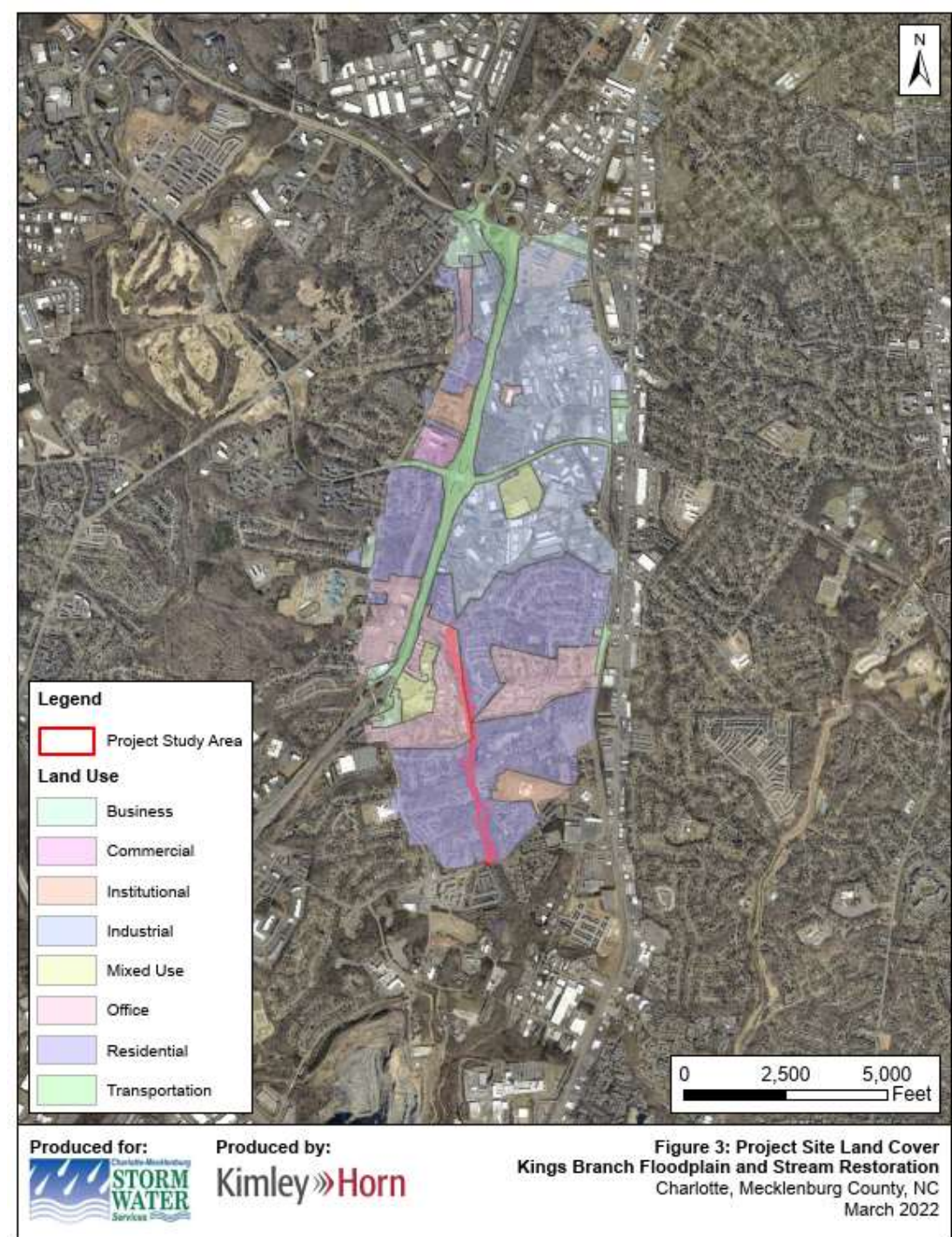
Jason Claudio-Diaz, P.E., CFM

Kimley»Horn



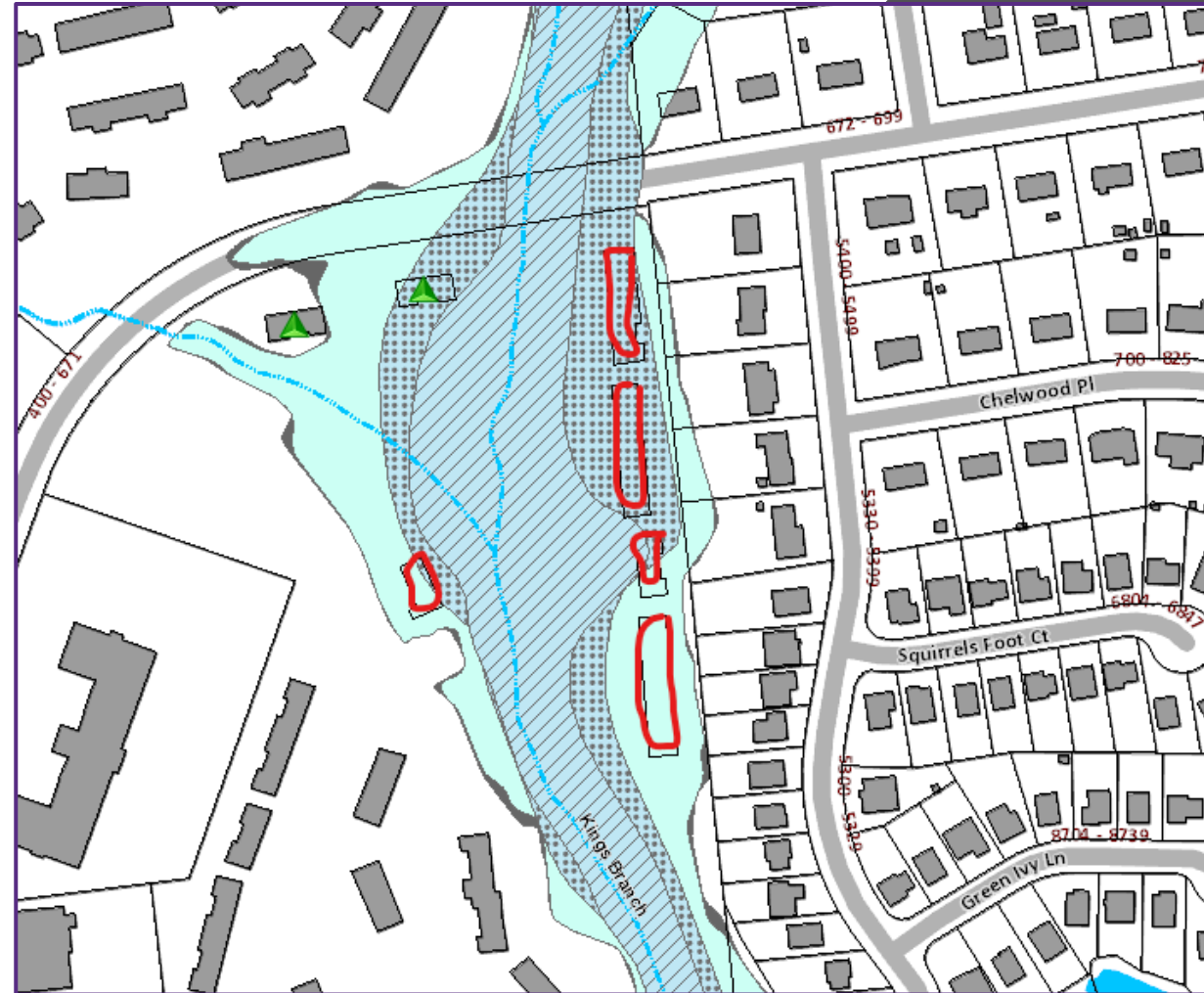
Kings Branch

- Charlotte, NC
- Archdale Drive to Arrowwood Road
- 2.7 square mile drainage area
- 39.5% Impervious

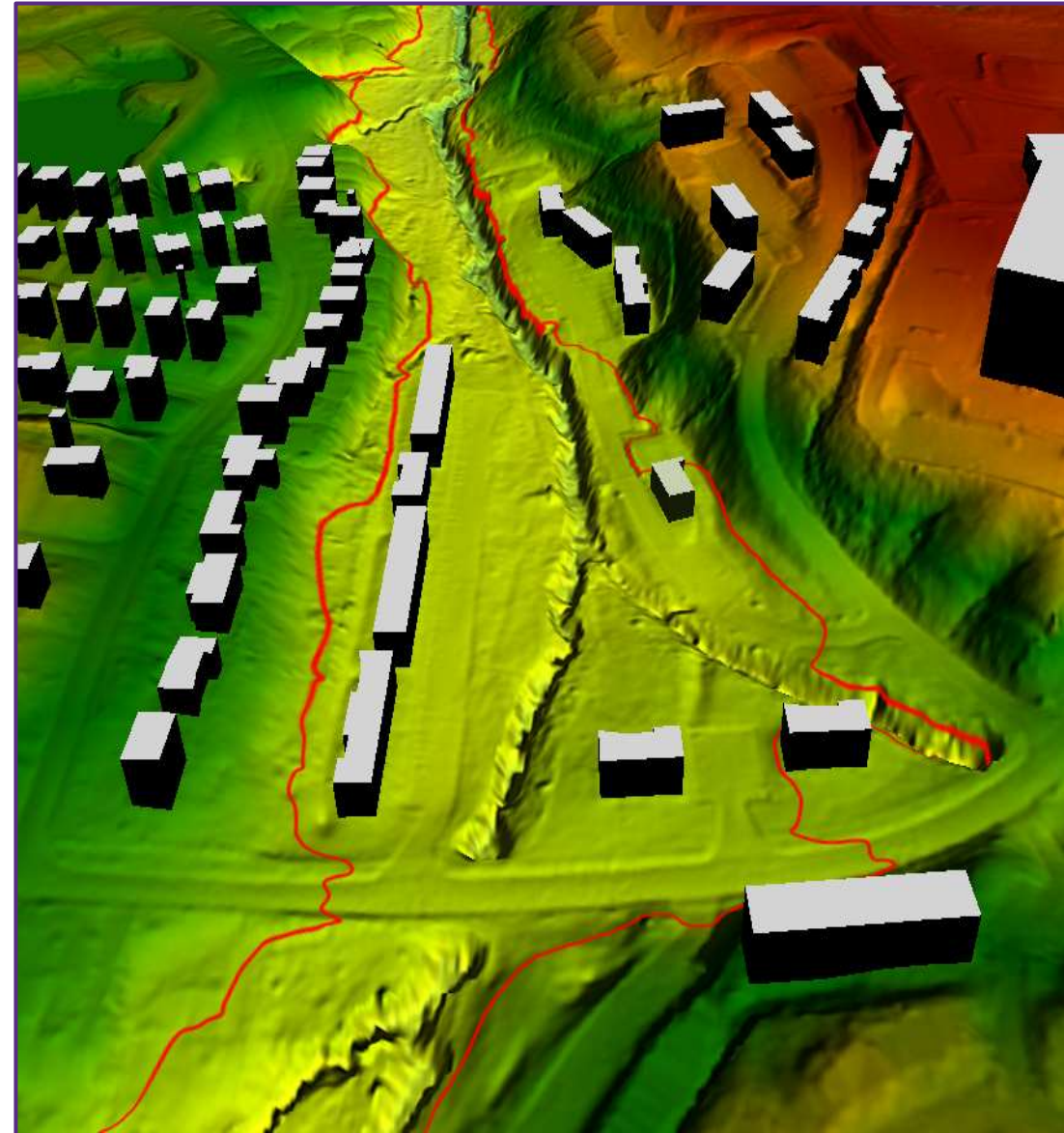
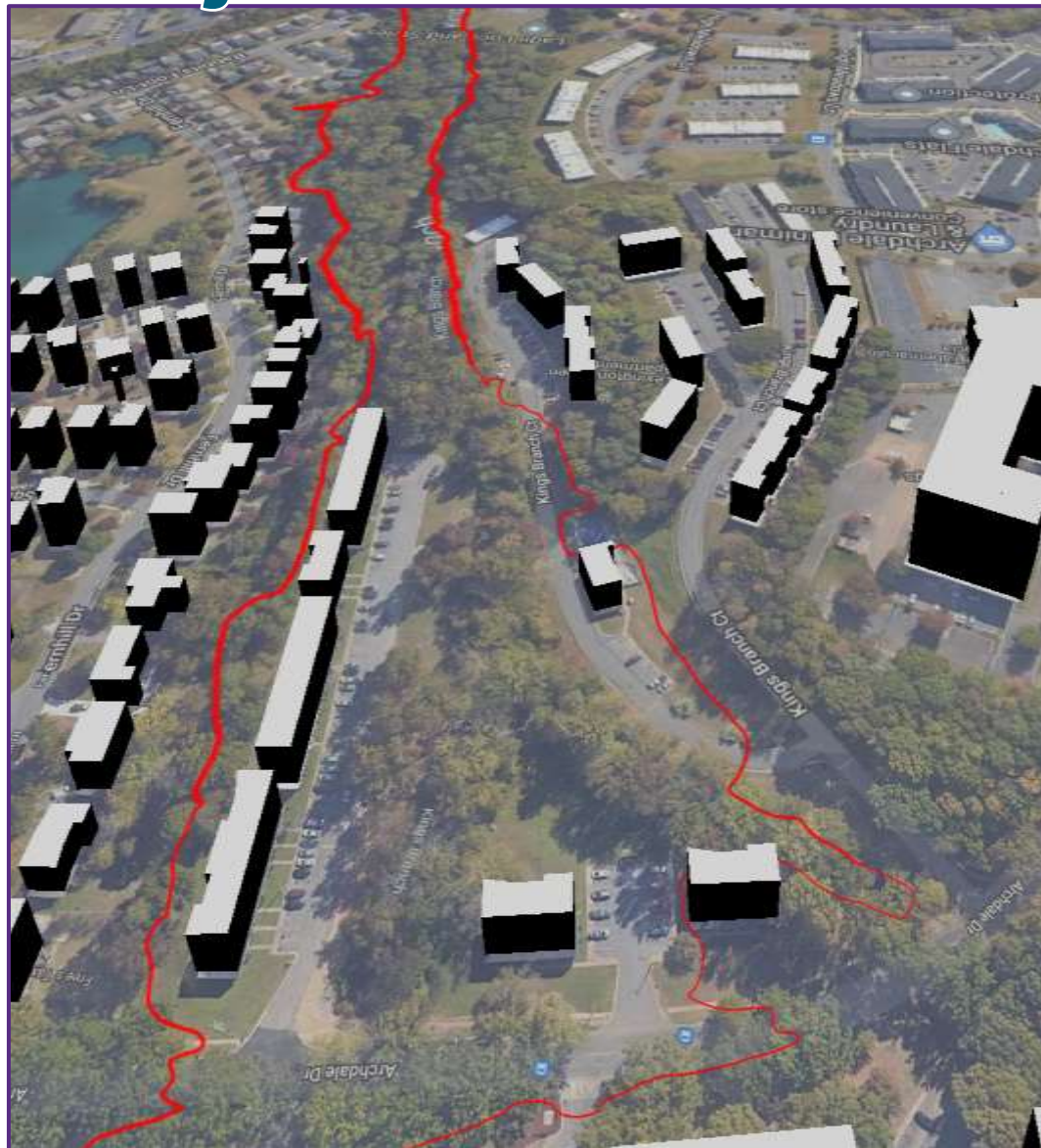


Lexington Green Apartments

- Located near I-77 off Archdale Drive in Charlotte NC
- 5 Apartment Buildings Located Within the Mapped SFHA
- FFE ~616'
- Effective FU 100yr ~620'



Project Goals



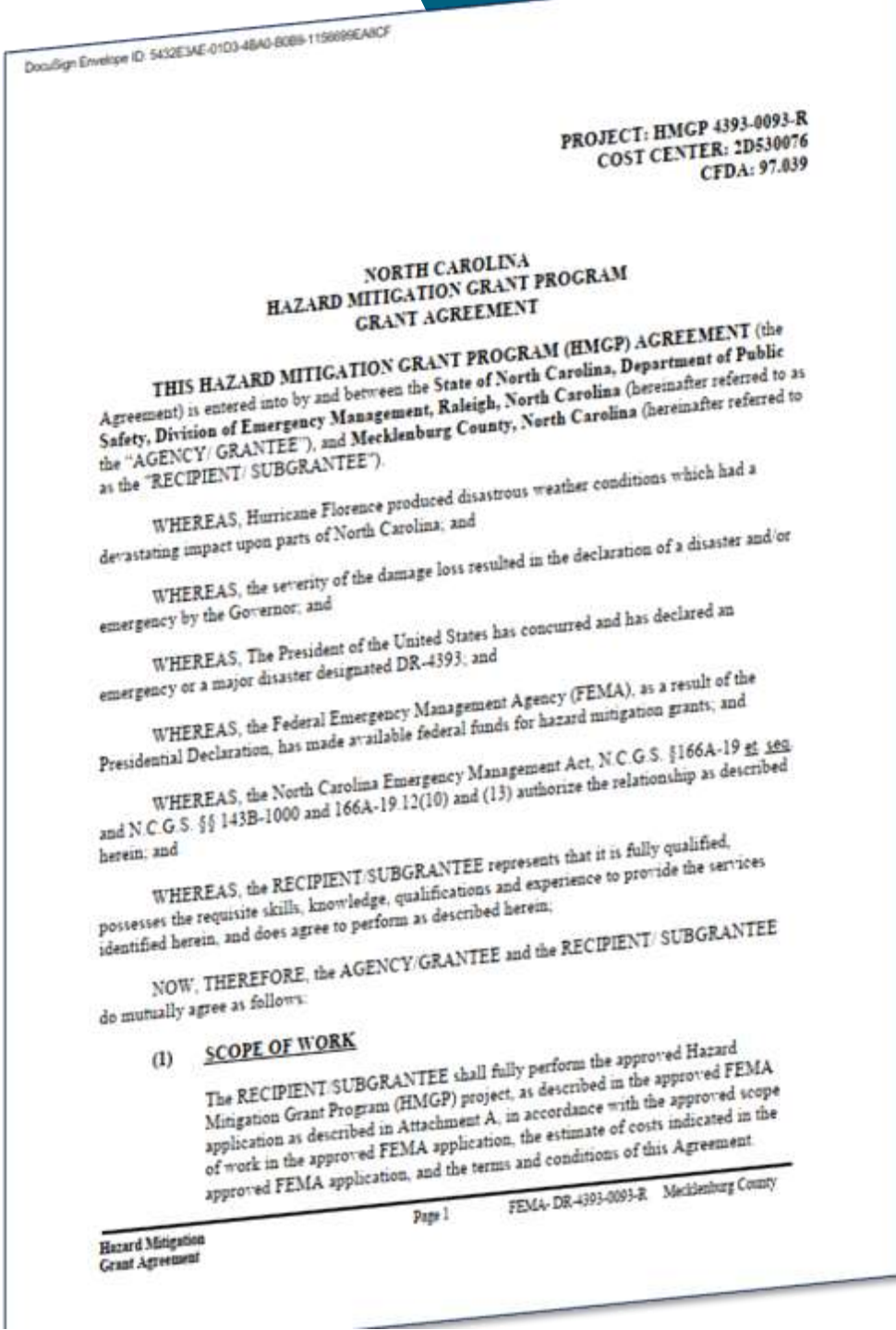
Feasibility Study

- Prepared in 2018 (by others)
- Recommendations
 - NCD Enhancement I and Priority 2 Restoration
 - Remove private failing, unpermitted pedestrian bridge
 - Address backwater issue in upstream area
 - Relocate sanitary sewer @ Lexington Green Apartments



FEMA Hazard Mitigation Grant

- State of NC, Dept. of Public Safety, and Division of Emergency Management
- Total Award for \$3,054,000
- Phase 1 - Design \$380,000
- Phase 1 - Expiration Dec 15, 2022 extended to Dec 15, 2023
- Kimley-Horn selected Oct 2021



Easements



Prepared By:
Kimley»Horn



Kings Branch Stream Restoration Parcel Easements

Figure 1
 Mecklenburg County, NC
 11/16/2021

Project Constraints



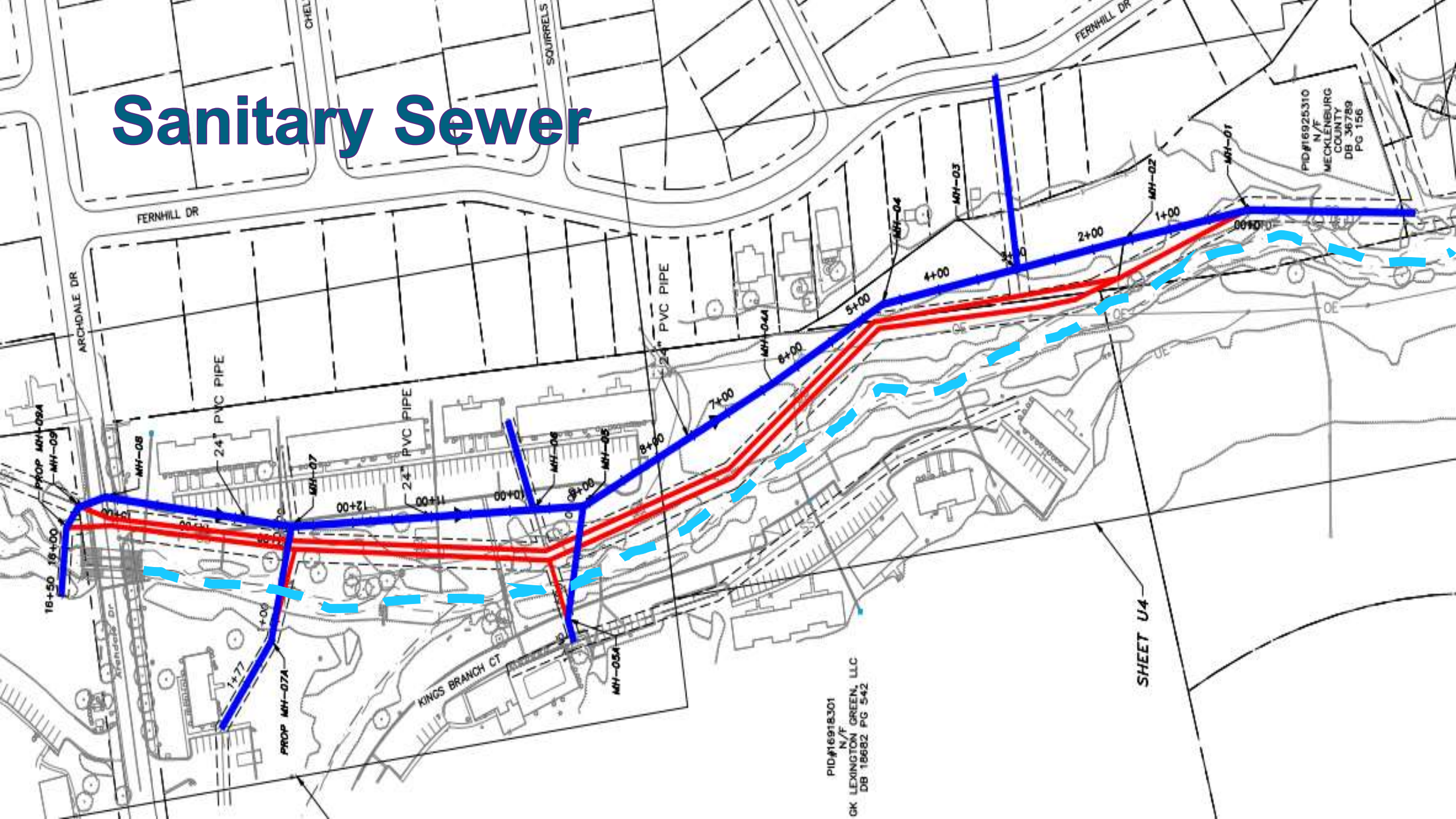
Project Constraints



Project Constraints



Sanitary Sewer

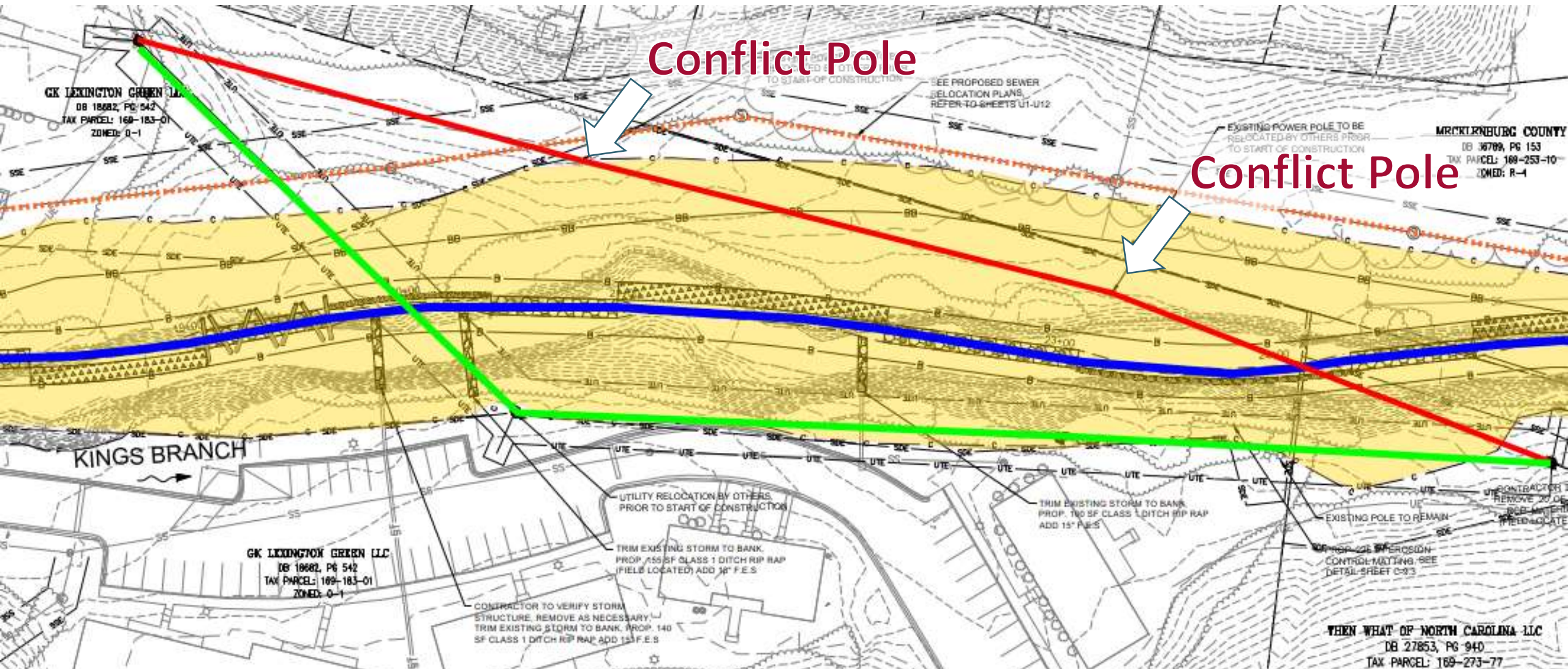


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MECKLENBURG
COUNTY
DB 36789
PG 156

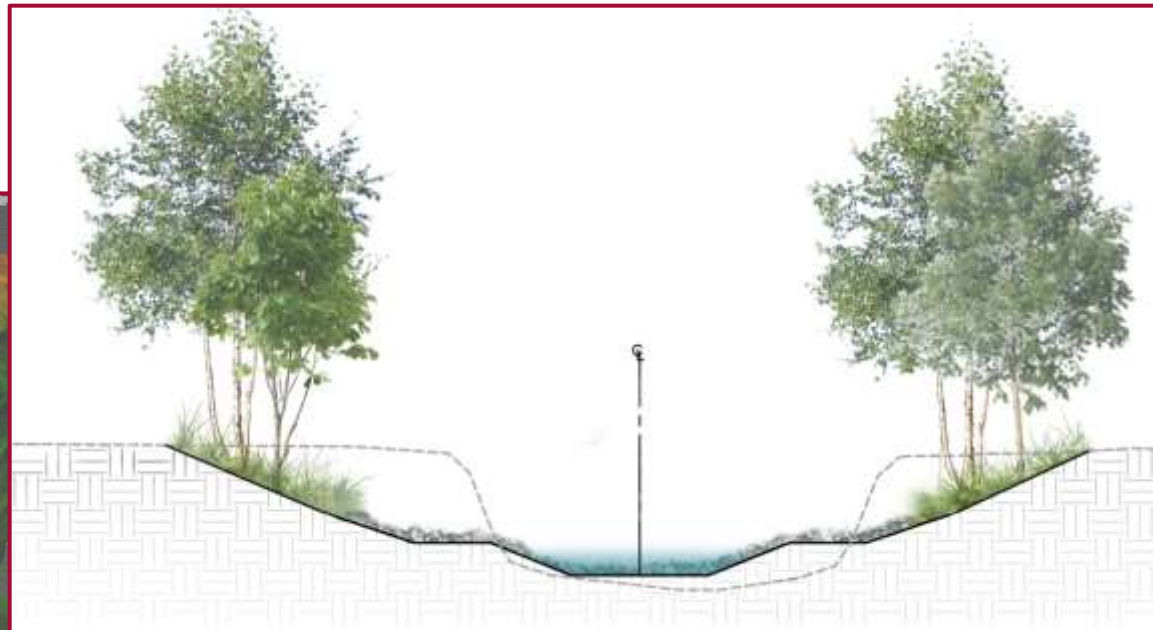
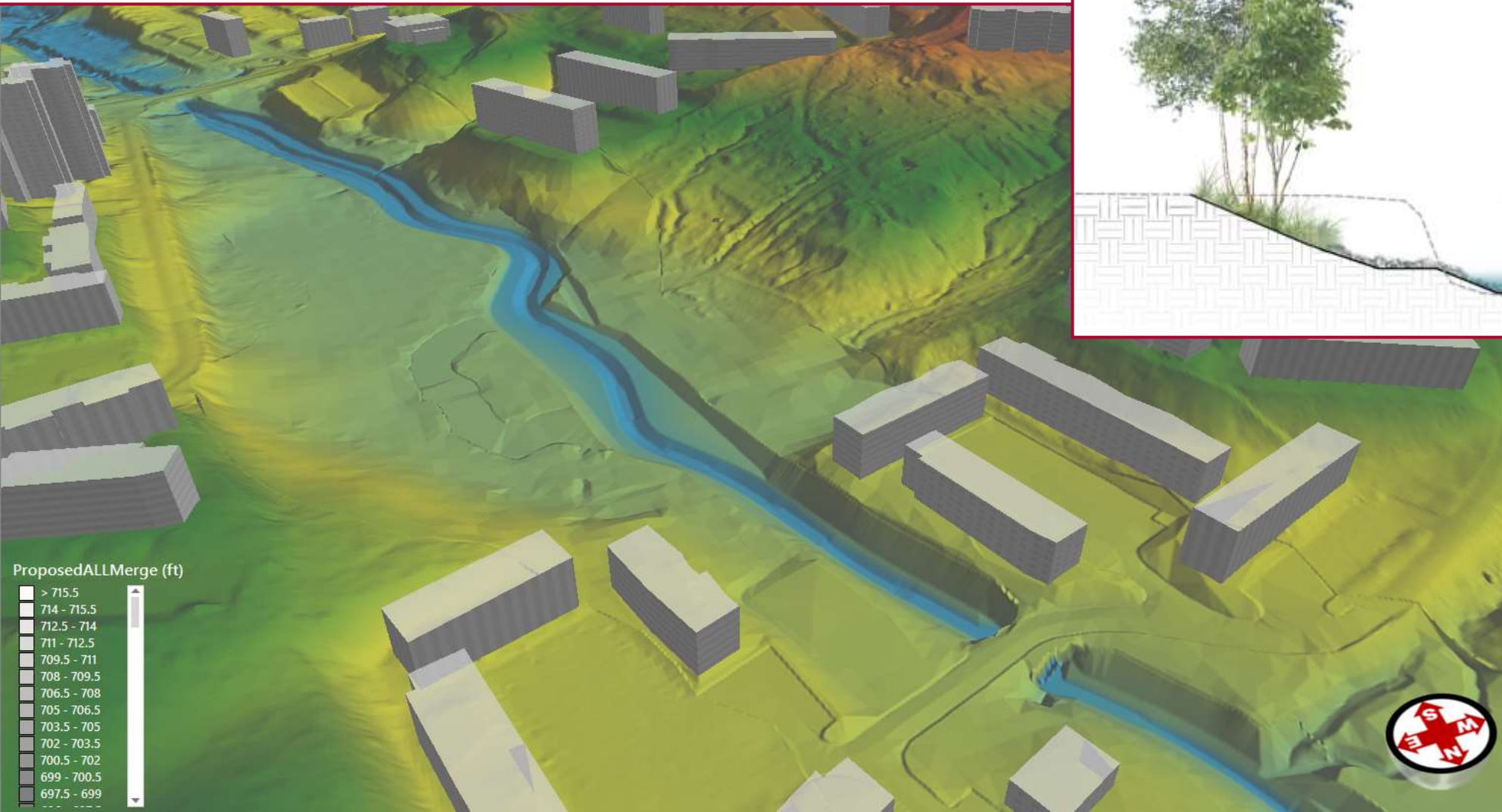
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SHEET U4

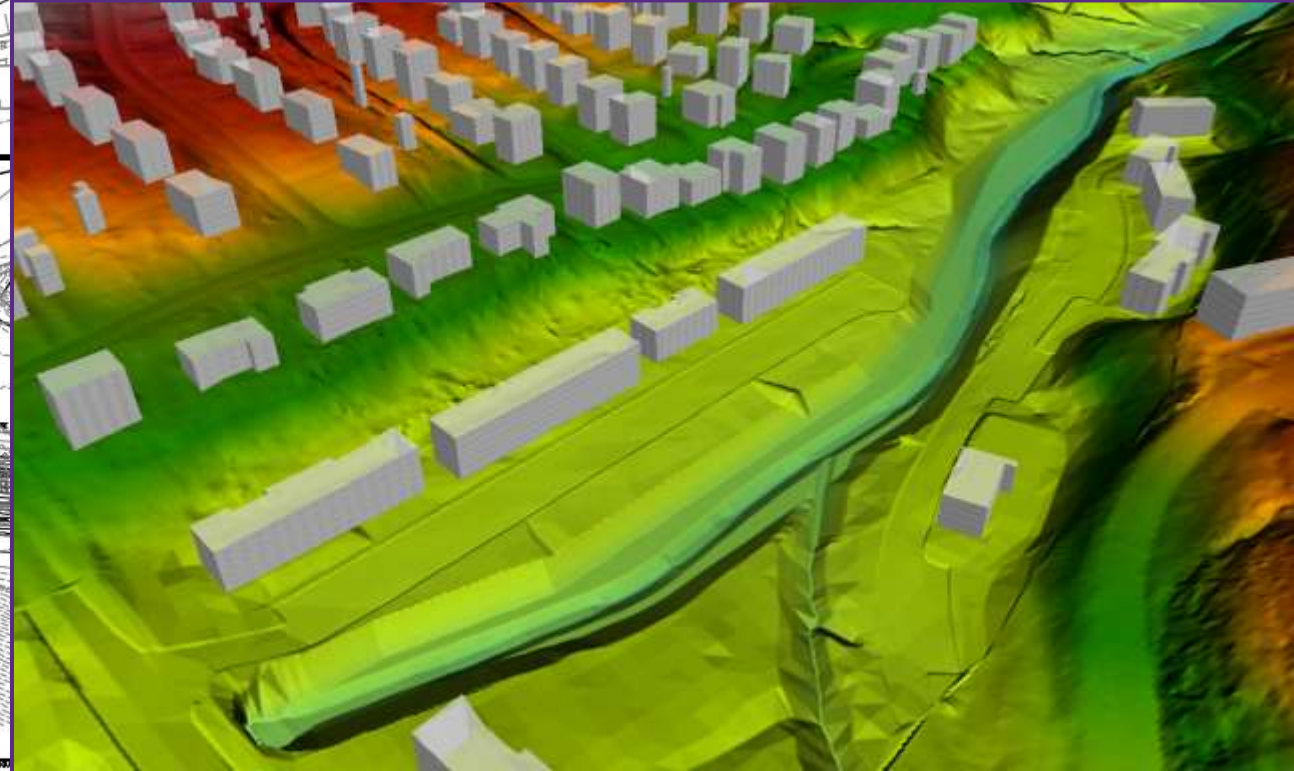
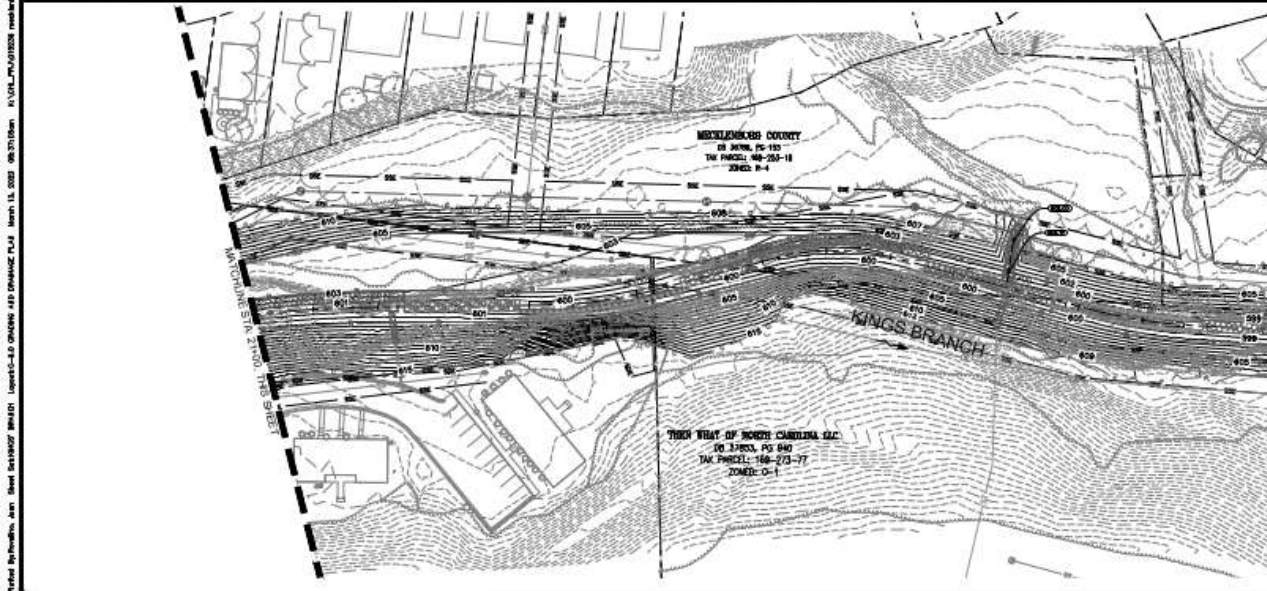
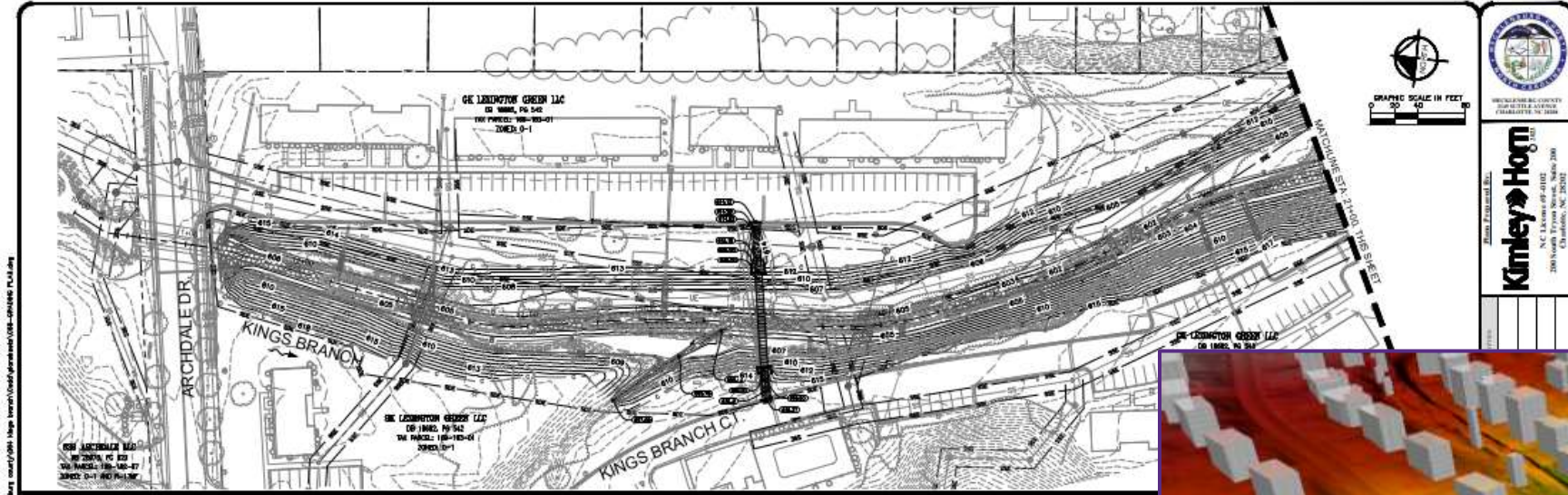
Overhead Electric



Design



Grading Iterations



Flood Reductions

| Address | LAG (ft) | HEC-RAS XS Station | 100-year exist | | 100-year future | |
|--------------|-------------|-----------------------|-------------------|------------------|-------------------|------------------|
| | | | Effective (ft) | Proposed (ft) | Effective (ft) | Proposed (ft) |
| 642 Archdale | 615.85 | 19940 | 620.34 | 614.71 | 620.57 | 615.24 |
| 644 Archdale | 615.85 | 19710 | 620.29 | 614.28 | 620.51 | 614.84 |
| 646 Archdale | 615.10 | 19610 | 619.89 | 613.34 | 620.09 | 613.89 |
| 648 Archdale | 613.88 | 19485 | 616.49 | 612.05 | 616.88 | 612.40 |



Questions?

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