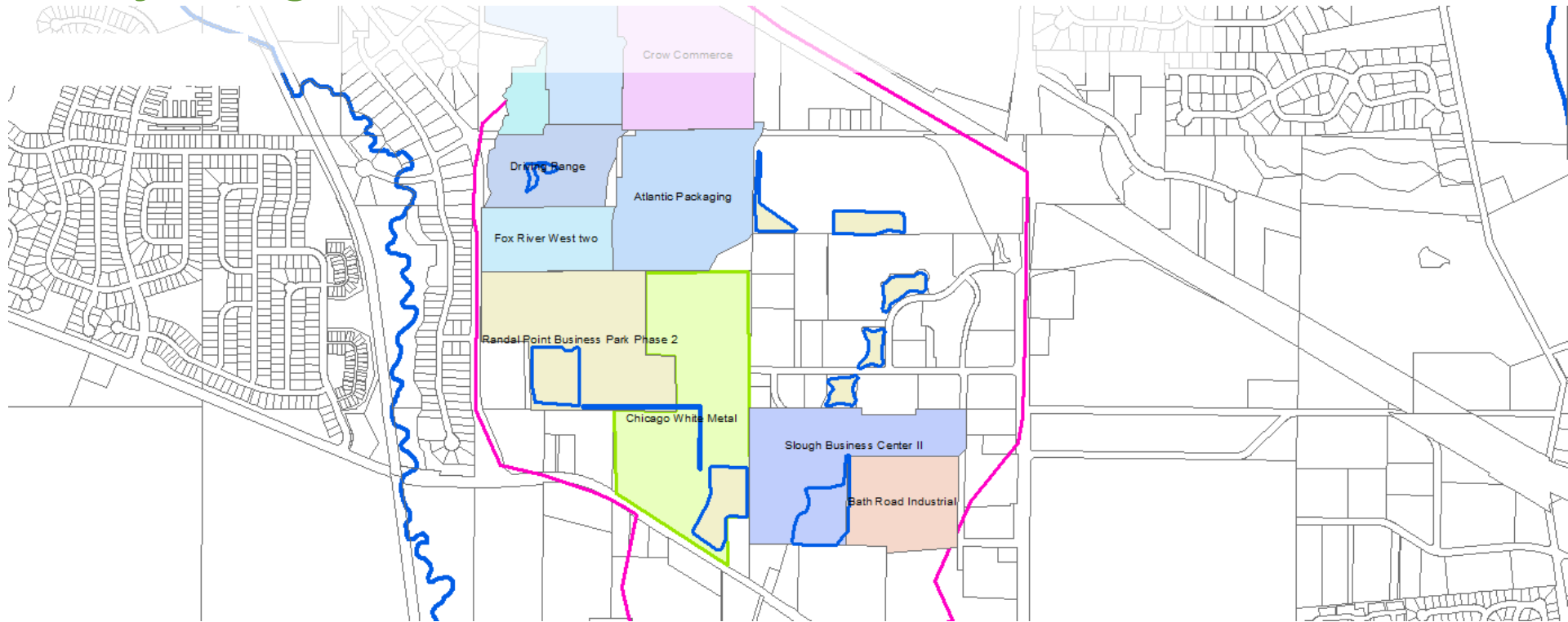


# Evolution of Aft Lane Watershed City of Elgin, IL

MARKET

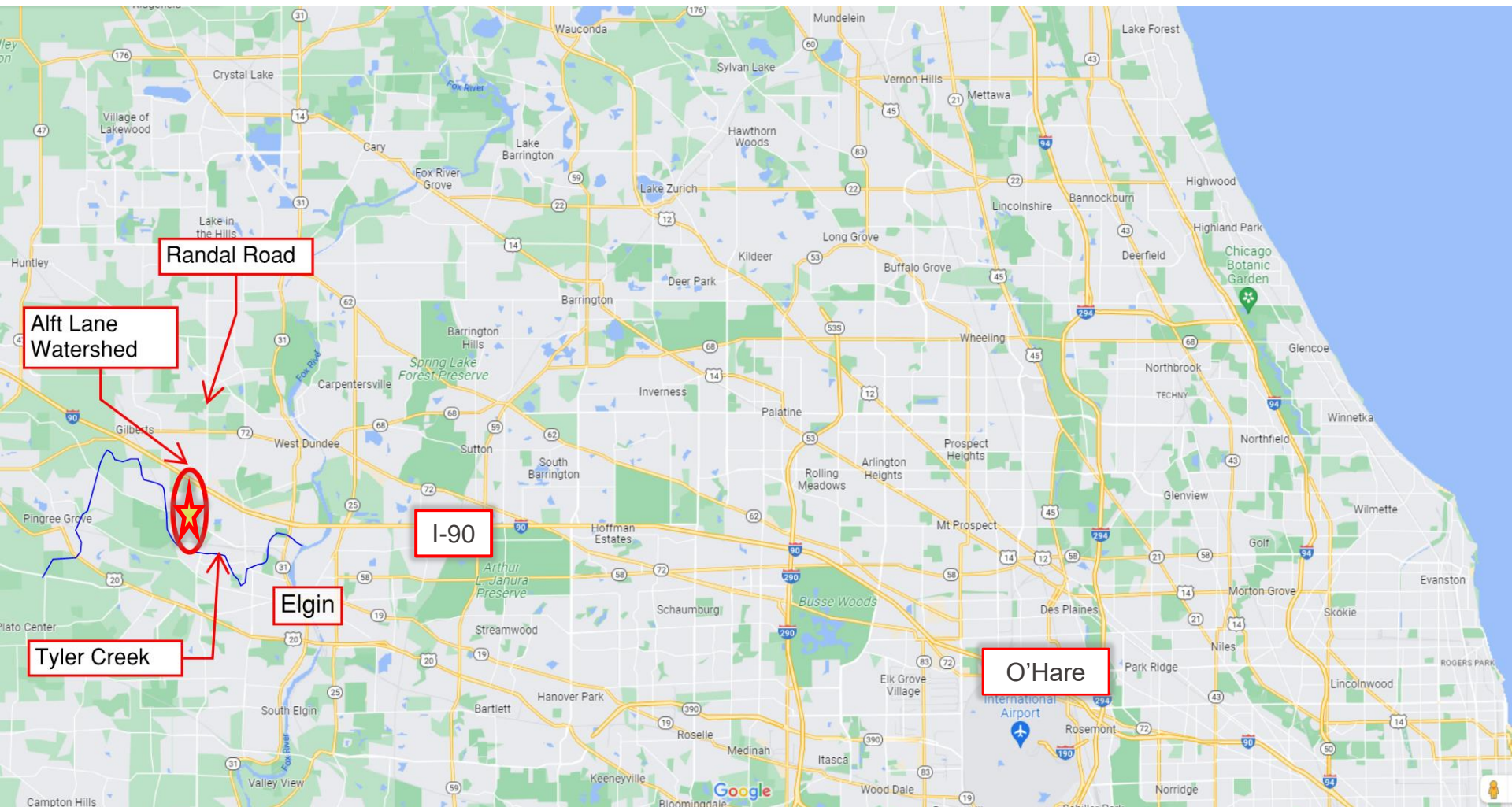


IAFSM - 2022



# PROJECT LOCATION

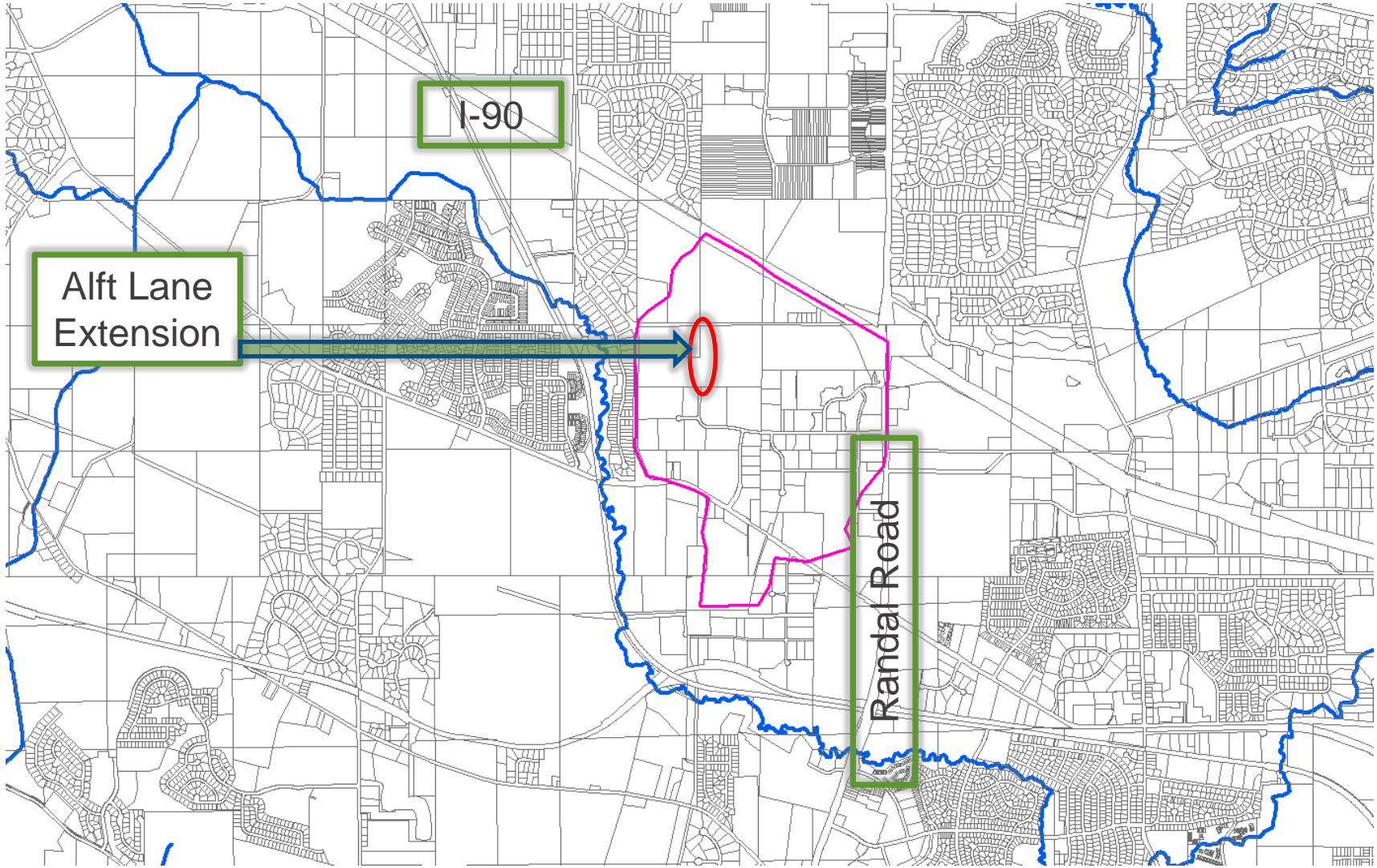
2



Alft Lane Watershed | Elgin, IL

# PROJECT LOCATION

3

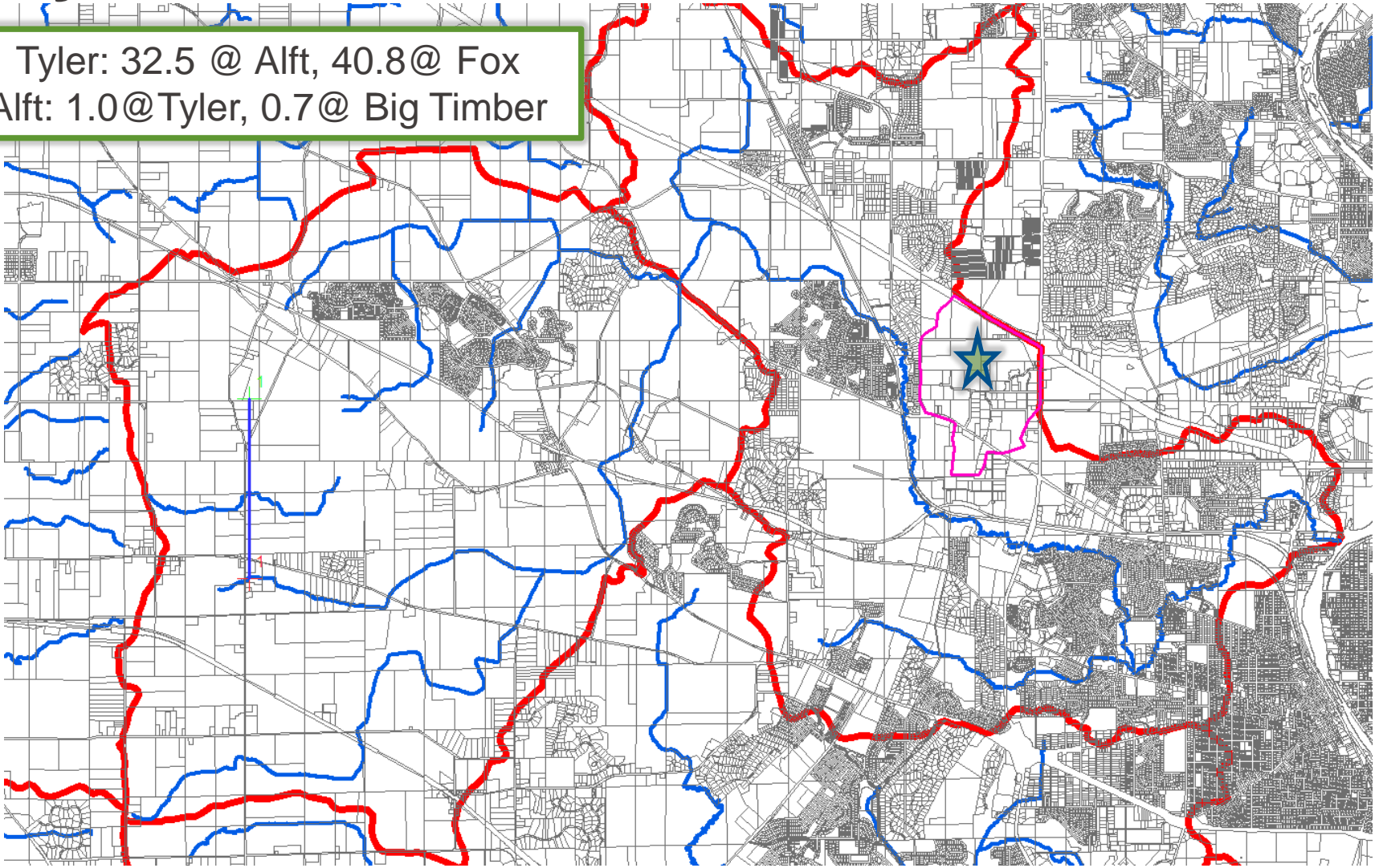




# Tyler Watershed (40.8 sq. mi.)

4

Tyler: 32.5 @ Alft, 40.8@ Fox  
Alft: 1.0@Tyler, 0.7@ Big Timber

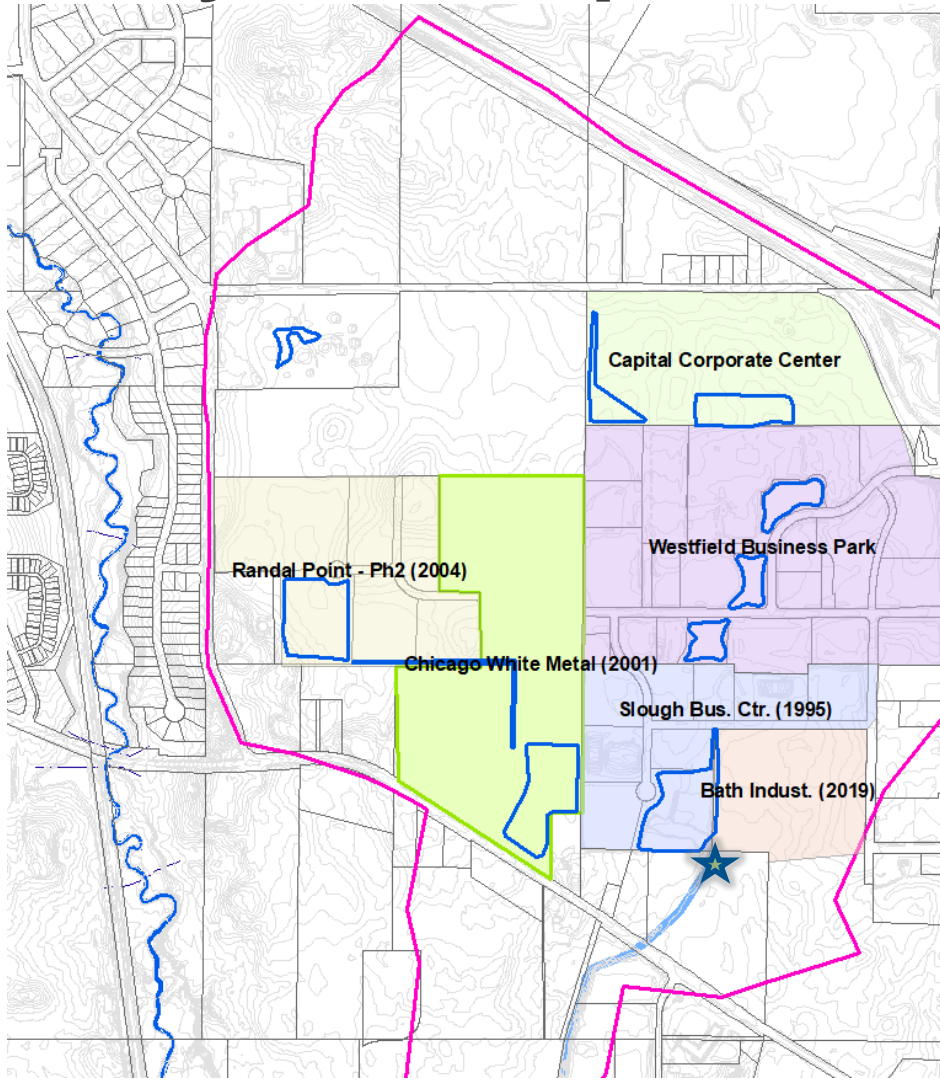


# Key Points

- Looking at development on a watershed scale.
- Interaction between developments.
- Kane County stormwater ordinance requirement that requires discharge to channel or sewer rather than surface discharge at property limits.

# Early Developments

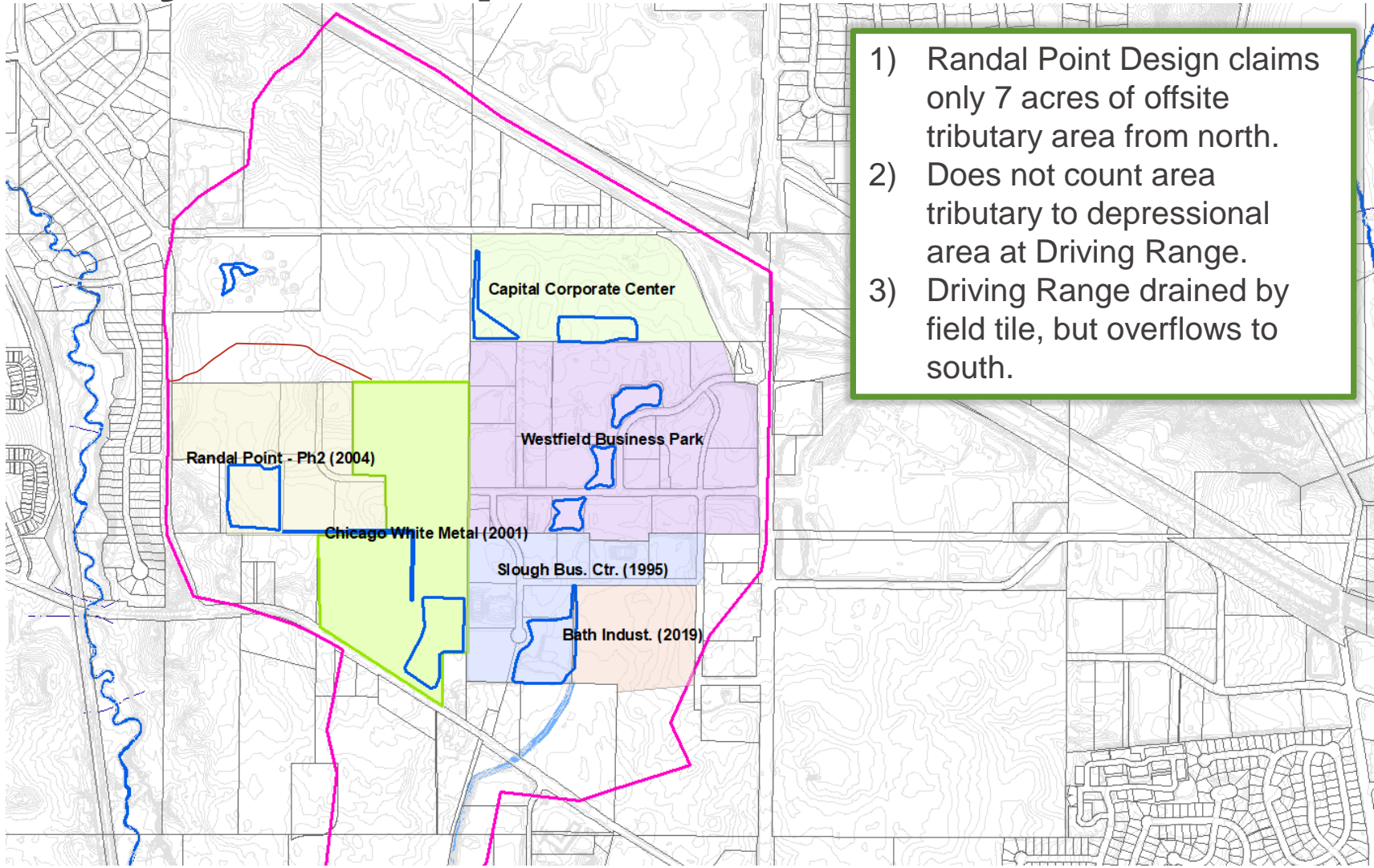
6



- 1) 15" Outlet from Westfield Bypasses Slough Business Center Basin and outlet at beginning of open channel that leads to Tyler Creek
- 2) Expansion of Slough Basin for Bath Industrial avoids disturbing 15" outlet.
- 3) CWM basin, first of two phases
- 4) Randal Point basin originally planned to be interlinked with CWM basin but changed to independent basin and restrictor from CWM resized.
- 5) Outlets combined downstream of restrictor and piped to channel.
- 6) Randal Point has overflow ditch.

# Early Developments

7



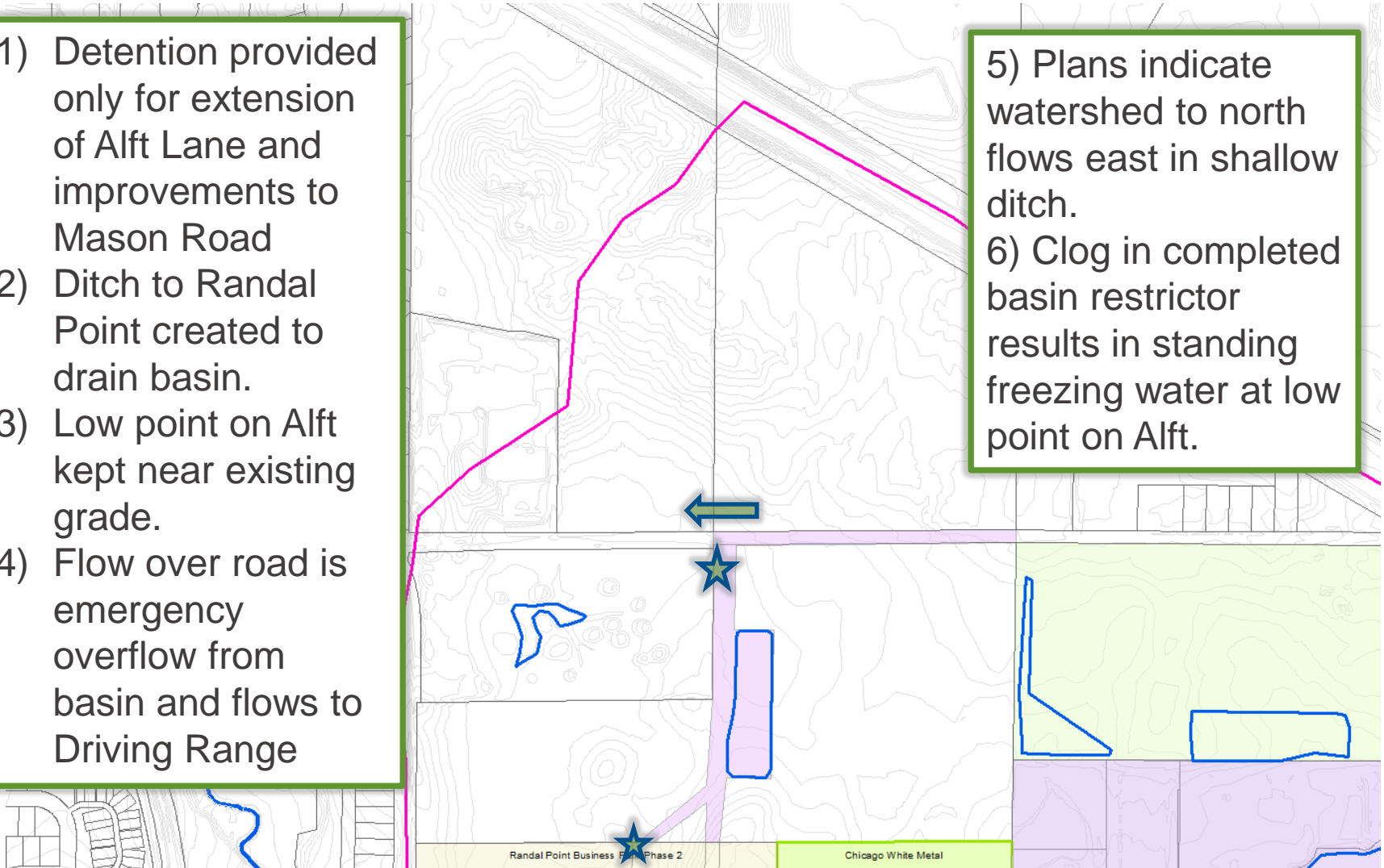


# Alft Lane Extension to Mason

8

- 1) Detention provided only for extension of Alft Lane and improvements to Mason Road
- 2) Ditch to Randal Point created to drain basin.
- 3) Low point on Alft kept near existing grade.
- 4) Flow over road is emergency overflow from basin and flows to Driving Range

- 5) Plans indicate watershed to north flows east in shallow ditch.
- 6) Clog in completed basin restrictor results in standing freezing water at low point on Alft.

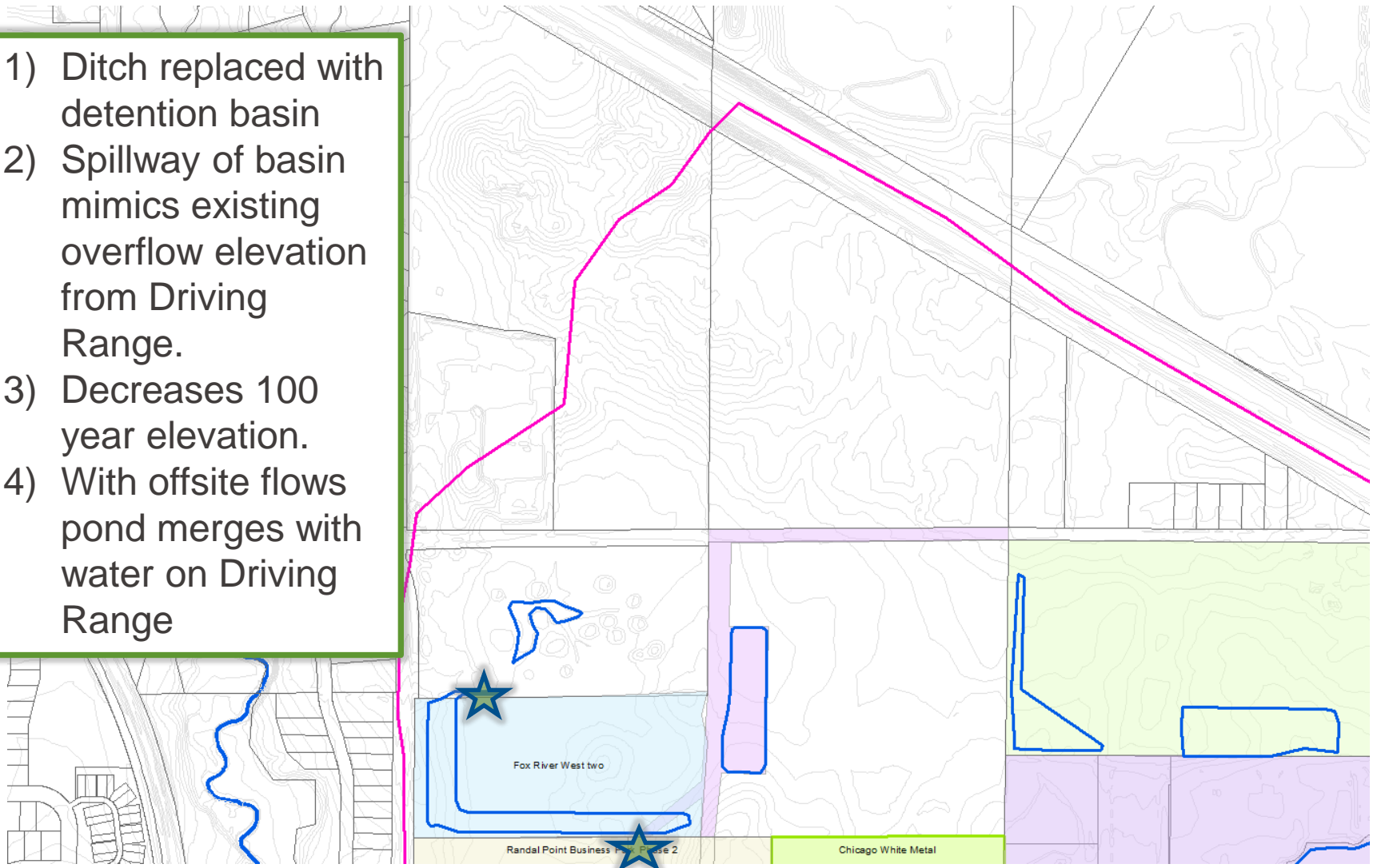




# Fox River West Two

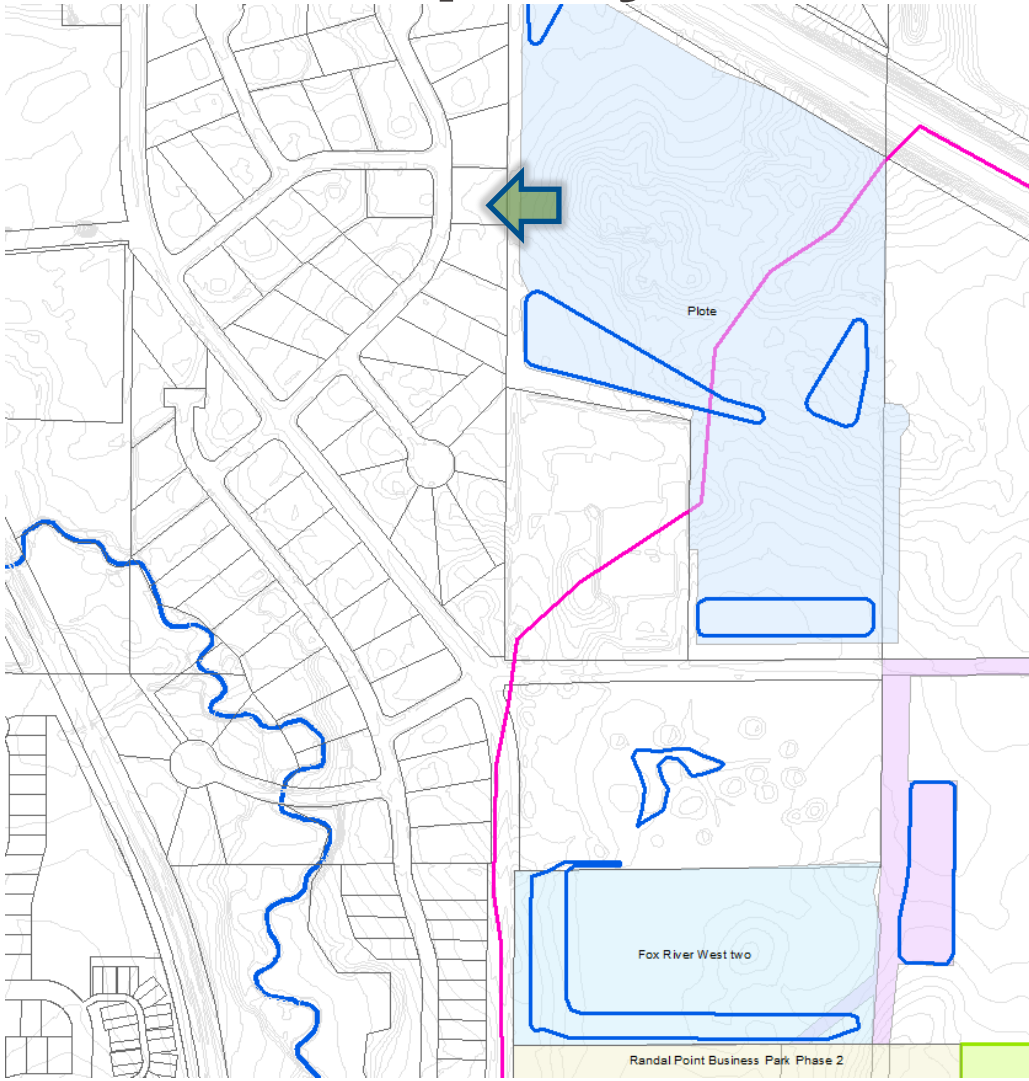
9

- 1) Ditch replaced with detention basin
- 2) Spillway of basin mimics existing overflow elevation from Driving Range.
- 3) Decreases 100 year elevation.
- 4) With offsite flows pond merges with water on Driving Range



# Plote Property

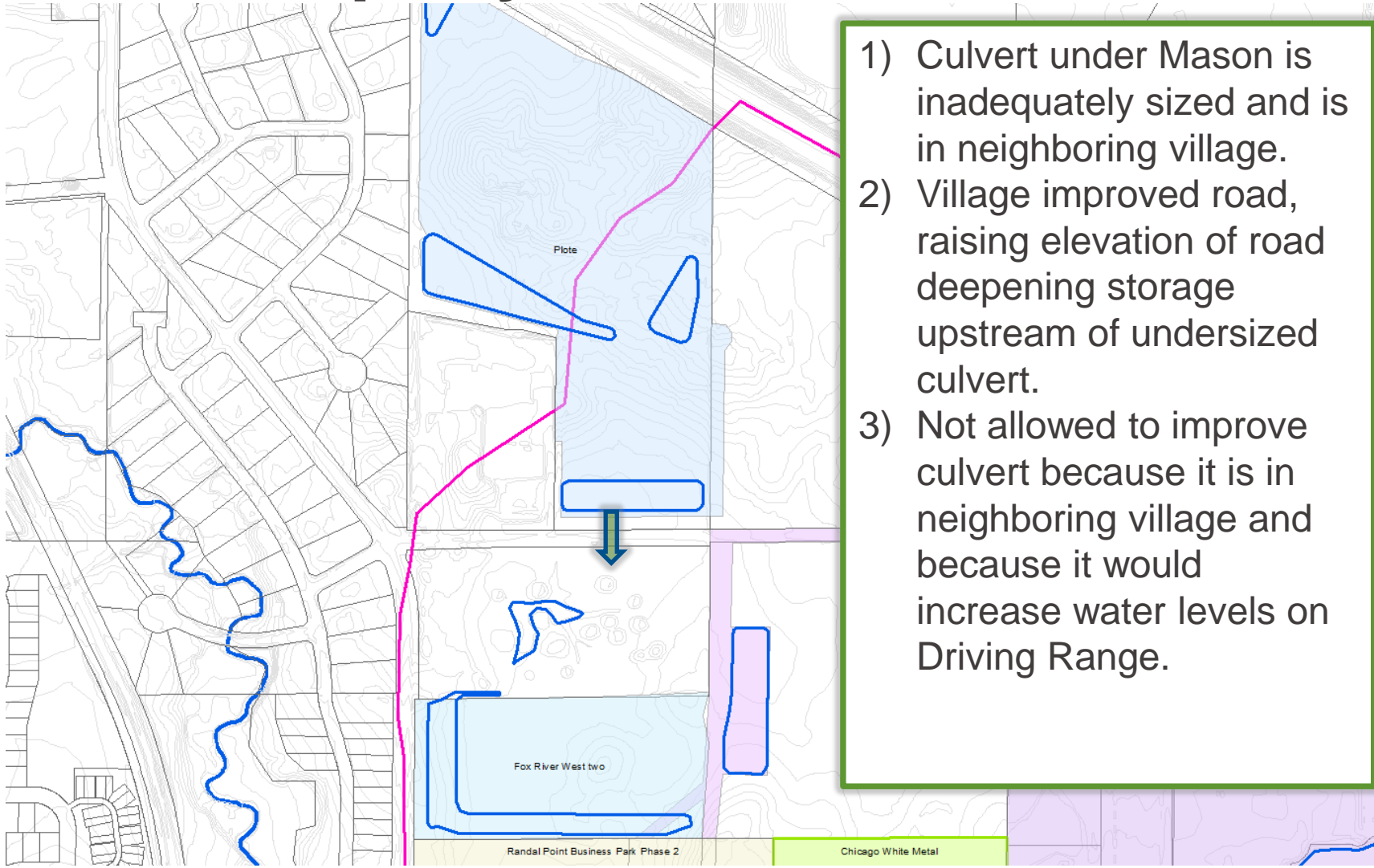
10



- 1) Developing master plan for future development. In county but within Elgin planning jurisdiction.
- 2) Directed to honor watershed divide and discharge 2 basins to west.
- 3) Existing development to east is in neighboring community and no drainage easement exists to accept discharge
- 4) Community refuses to accept increased runoff volume across residential lots and undersized road ditches

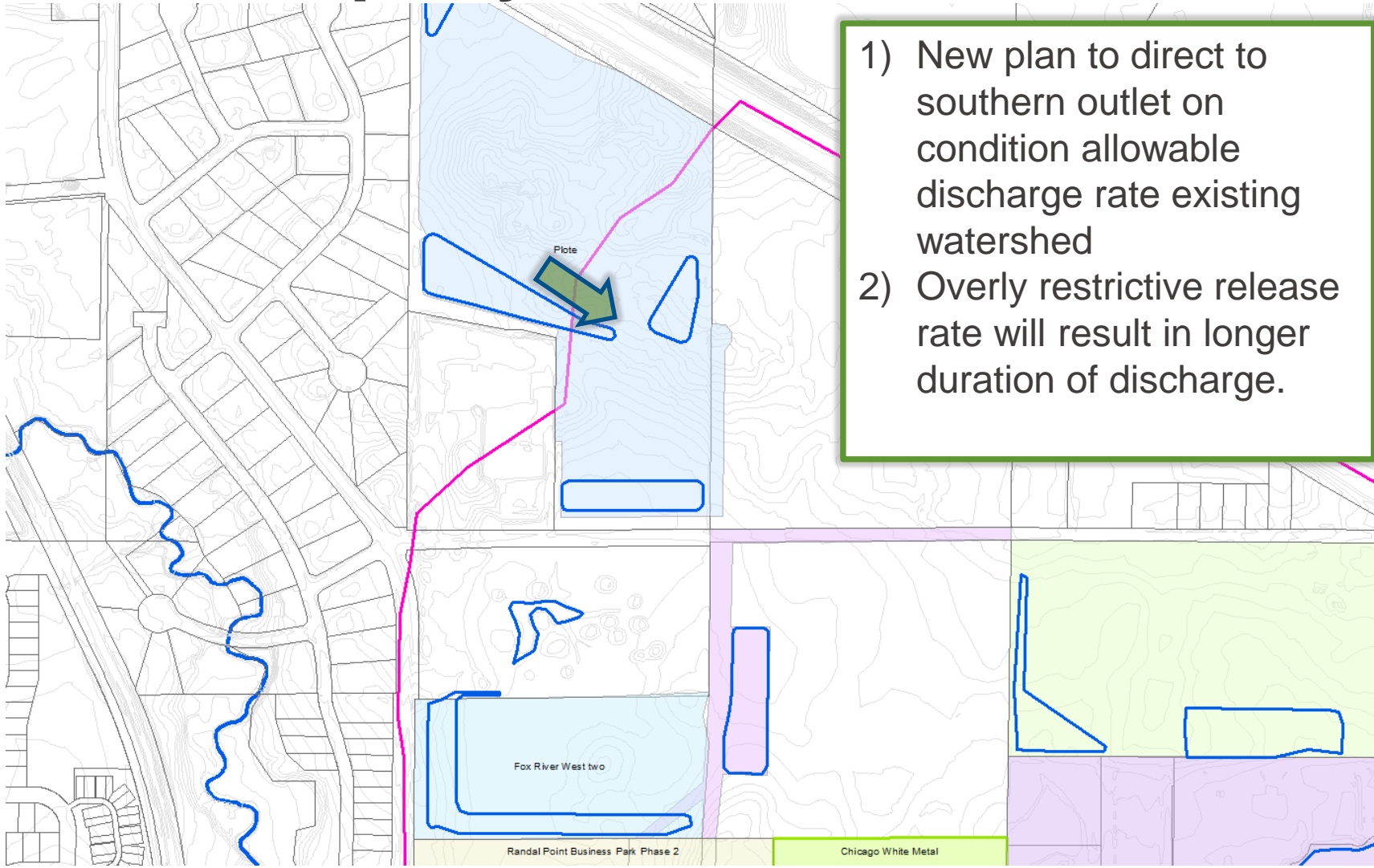
# Plote Property

11



# Plote Property

12

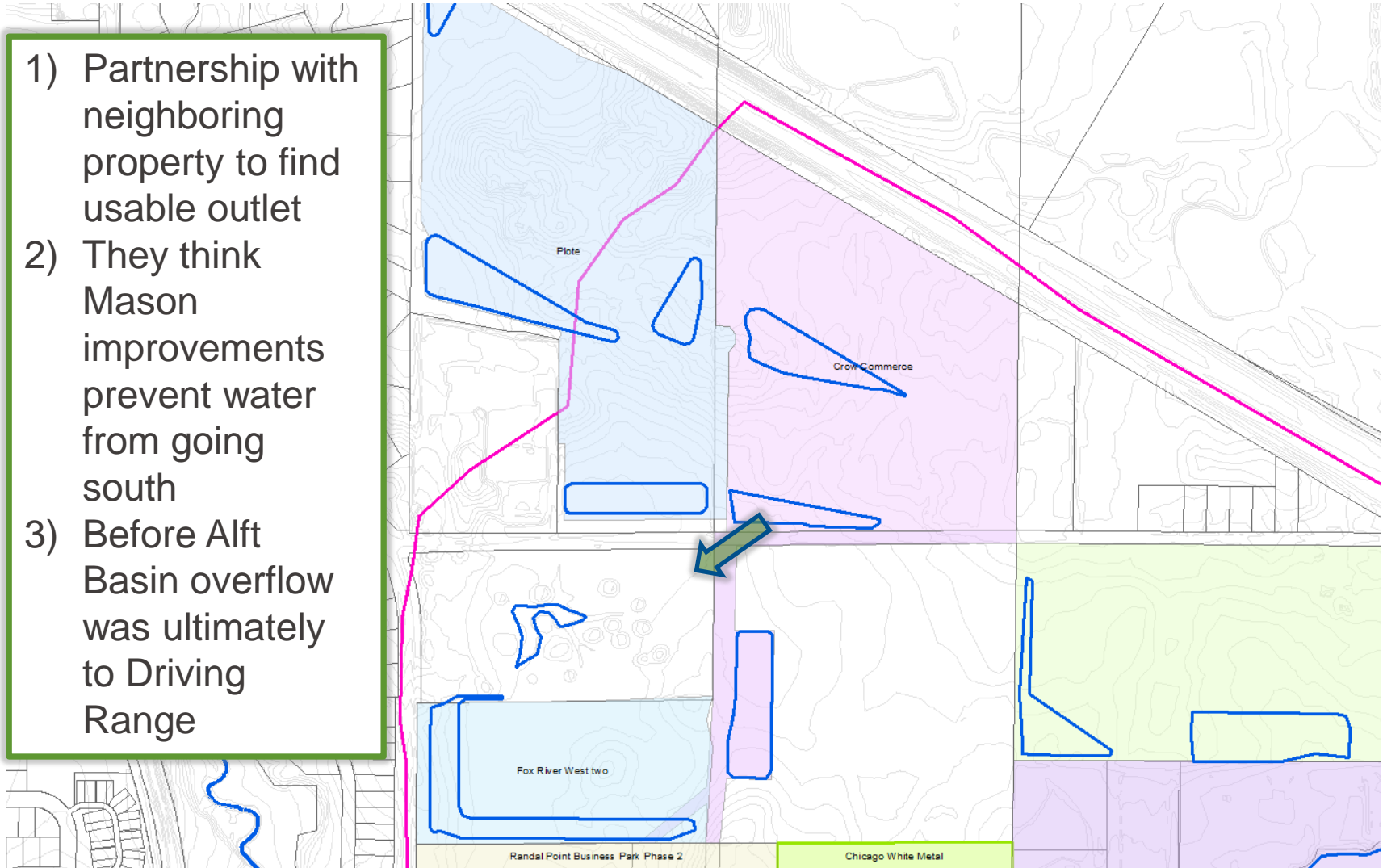




# Crow & Plote

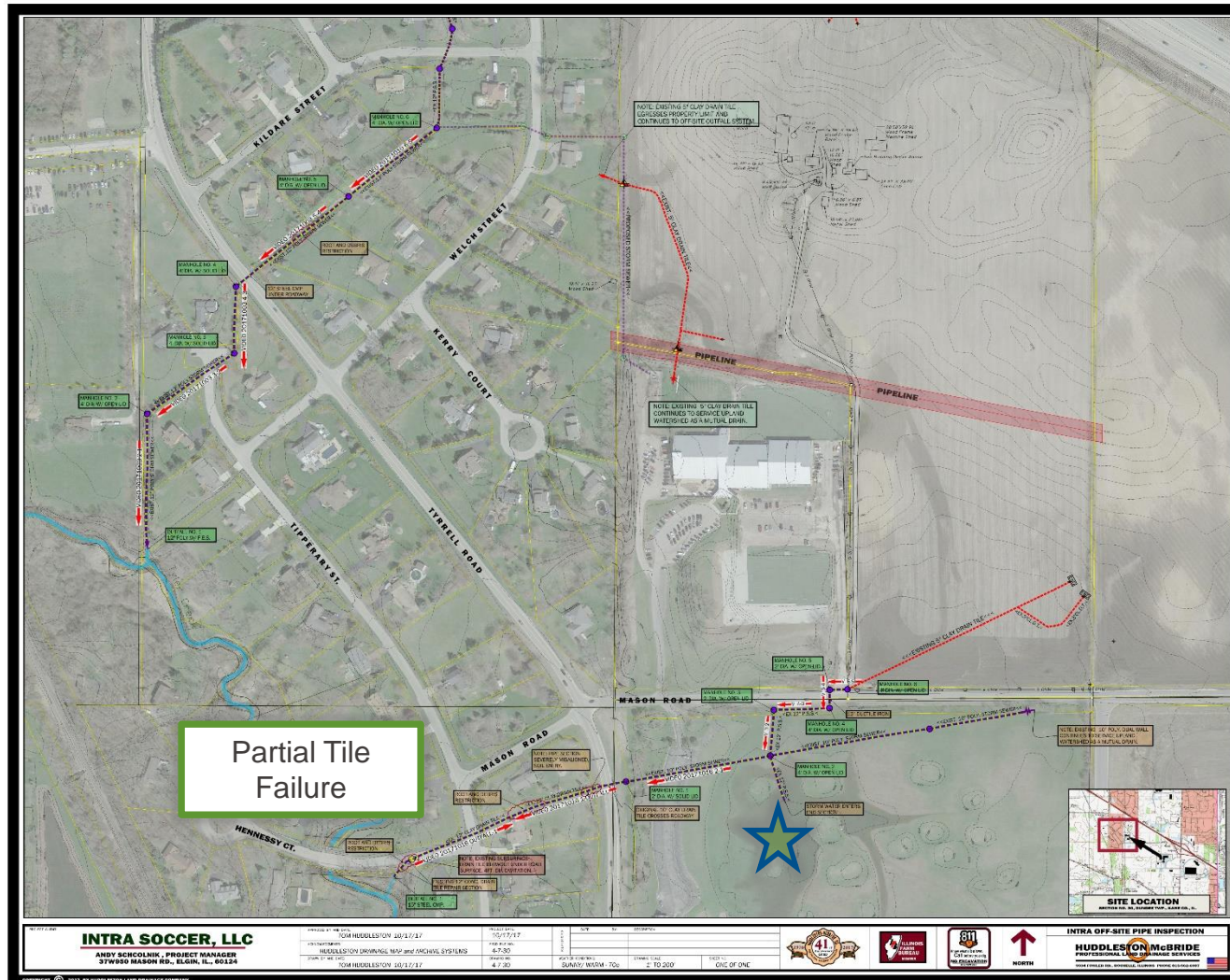
13

- 1) Partnership with neighboring property to find usable outlet
- 2) They think Mason improvements prevent water from going south
- 3) Before Alft Basin overflow was ultimately to Driving Range



# Driving Range Field Tile

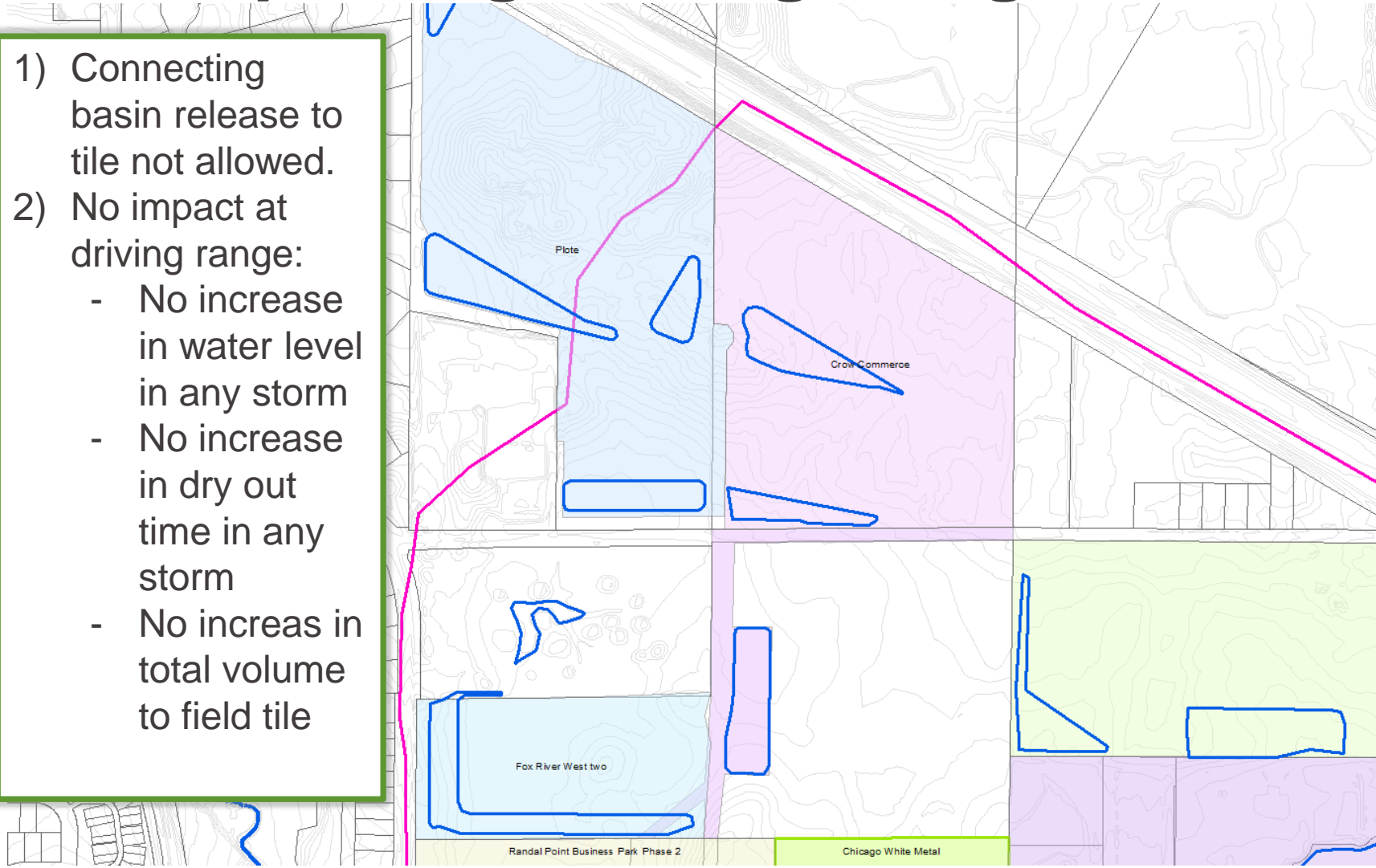
14



# Not impacting Driving Range

15

- 1) Connecting basin release to tile not allowed.
- 2) No impact at driving range:
  - No increase in water level in any storm
  - No increase in dry out time in any storm
  - No increases in total volume to field tile

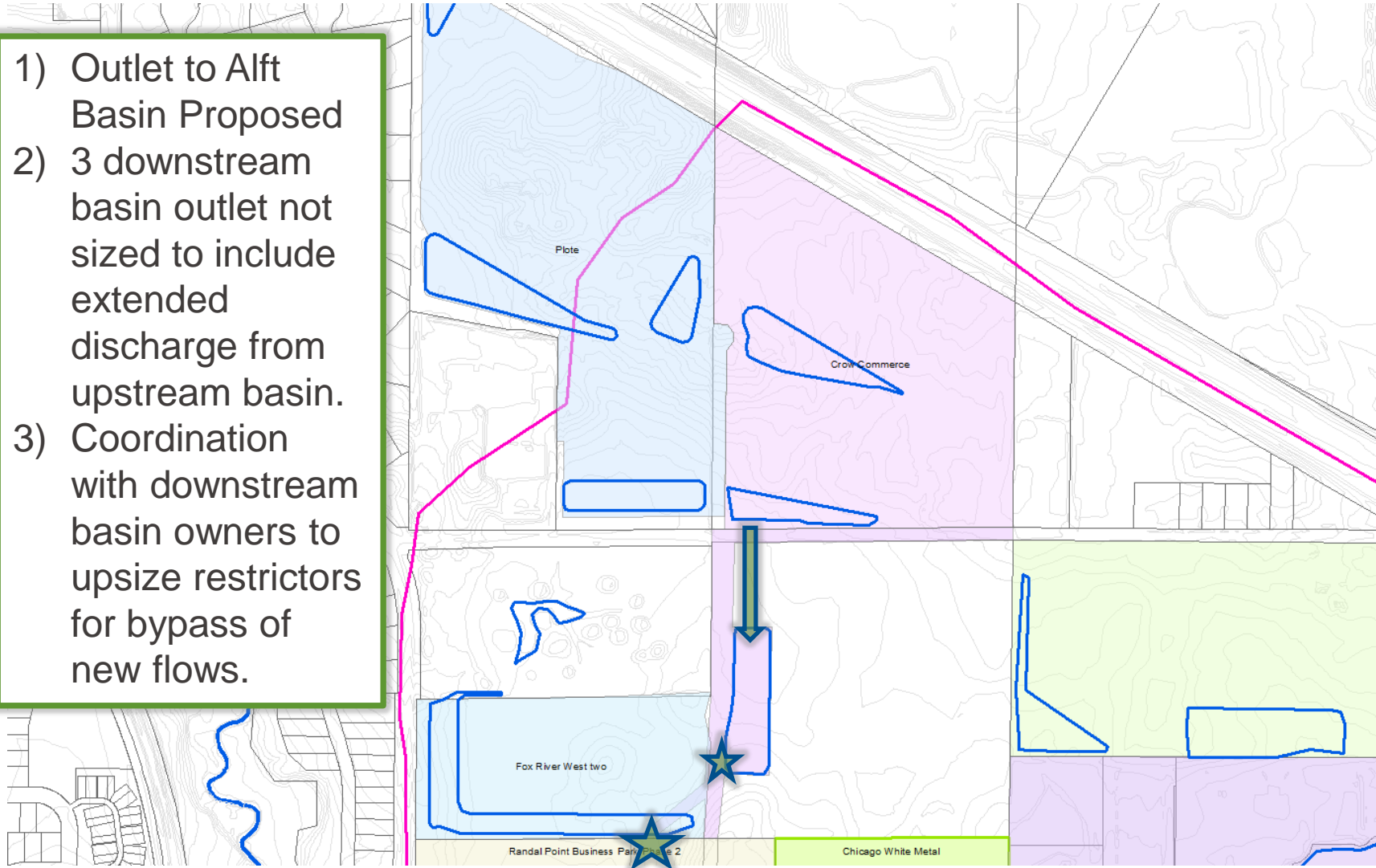




# Positive outlet

16

- 1) Outlet to Alft Basin Proposed
- 2) 3 downstream basin outlet not sized to include extended discharge from upstream basin.
- 3) Coordination with downstream basin owners to upsize restrictors for bypass of new flows.

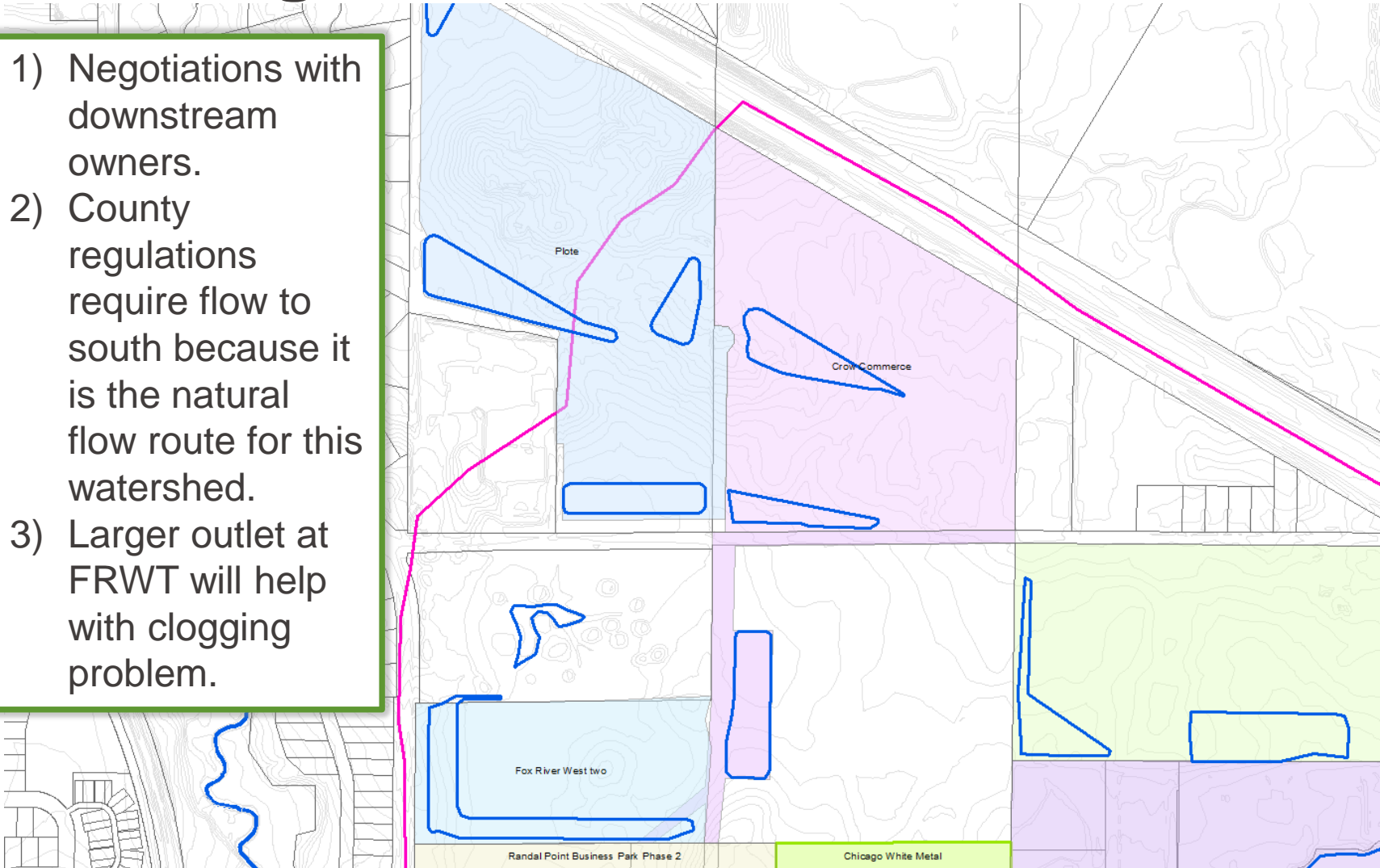




# Working with owners

17

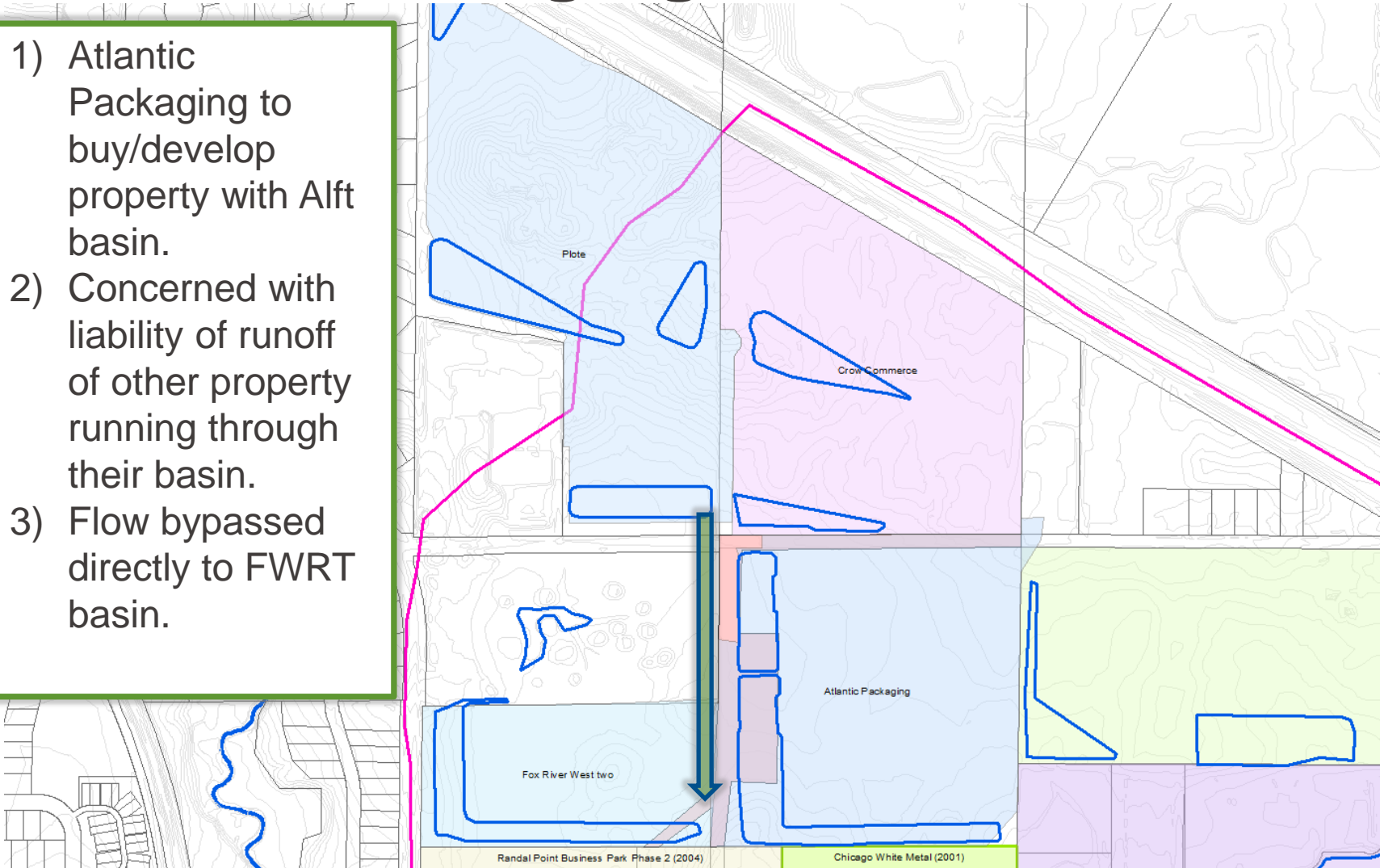
- 1) Negotiations with downstream owners.
- 2) County regulations require flow to south because it is the natural flow route for this watershed.
- 3) Larger outlet at FRWT will help with clogging problem.



# Atlantic Packaging

18

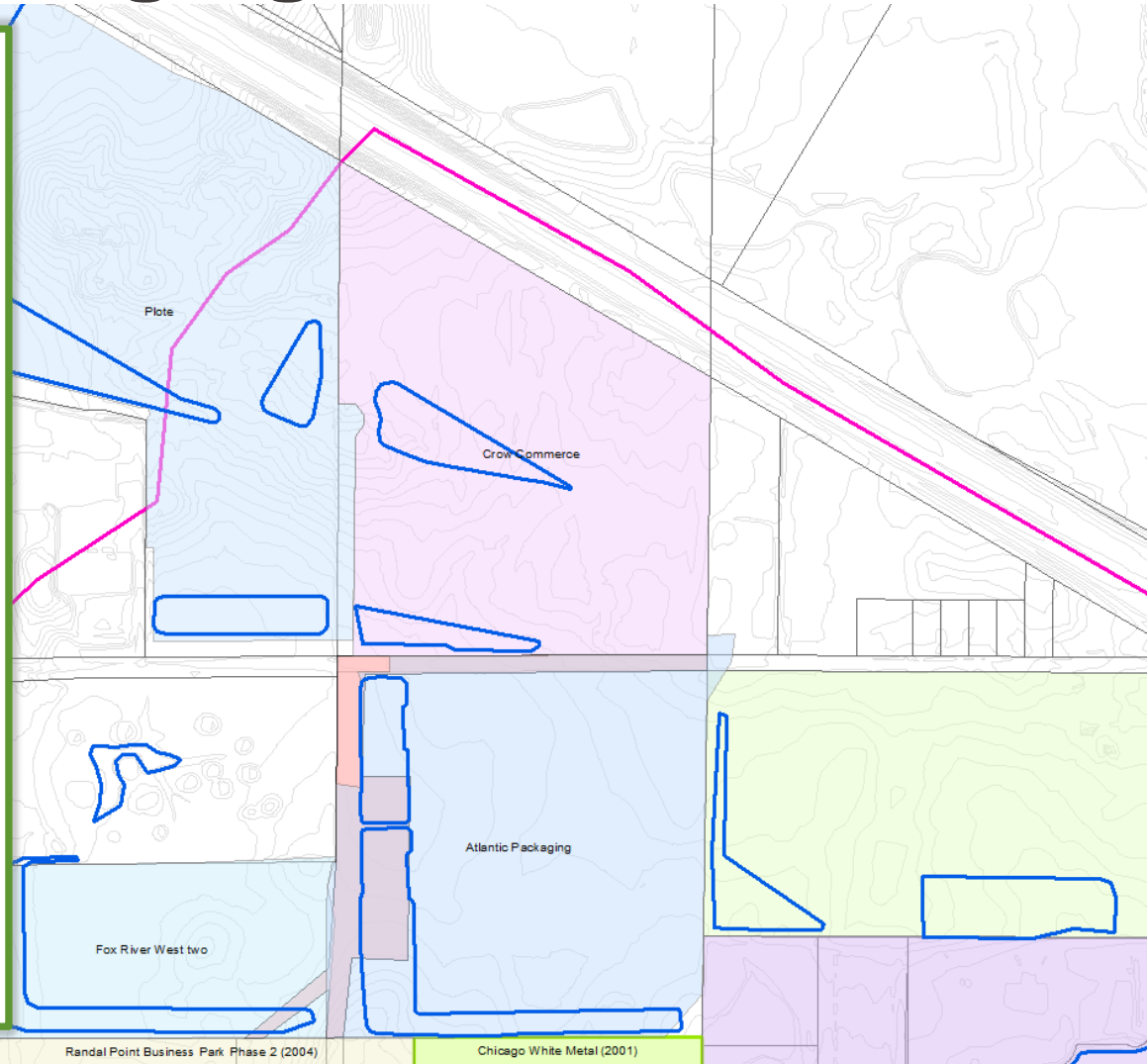
- 1) Atlantic Packaging to buy/develop property with Alft basin.
- 2) Concerned with liability of runoff of other property running through their basin.
- 3) Flow bypassed directly to FWRT basin.



# Atlantic Packaging

19

- 1) Proposed basin provides depressional and detention storage for site as well as Alft and Mason.
- 2) To get volume to fit they need to raise high water level above low point on Alft.
- 3) Site over-restricts discharge to maintain required volume to compensate for portion of Alft that is bypassed to FRWT



# Conclusions

- Always review regional topography to identify offsite tributary area.
- Just because you see an area sloping away, it still may be a depressional area that overflows in your direction. Identify how all adjoining areas reach a channel.
- While not always required by ordinance, offsite areas should be considered in sizing of detention basin orifice, rather than just assuming it will pass over the emergency spillway.



# QUESTIONS FROM THE AUDIENCE



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