GROWING FOR KANE

HEALTH - ECONOMY - FRESH FOOD

Why a new Food & Farm Ordinance?

- **1. Growing obesity issue**
  - 64% of Kane adults are overweight or obese
- **2. Low rates of fruit & vegetable consumption**
  - Healthy diets include more fruits & veggies. Only 14% of Kane adults eat the recommended servings each day!
- **3. Growing interest in local foods**
  - Locavore movement, community gardens, and farmers markets.
- **4. Opportunity to capture new federal and other dollars**

Vegetables grown in Kane County

What's the outcome?

- **Health Impact Assessment**
  - What impact would this policy have on the physical, mental, and social health of our residents?
- **Economic Analysis**
  - What impact would this policy have on our Kane economy?
- **Stakeholder Input**
  - What do our residents and businesses need for this to succeed?

Increasing local production of fruits and vegetables would:

- **HEALTH:** Improved physical and mental health of residents through better diets, more jobs, stronger communities
- **ECONOMY:** More than **$ 7 million dollars** added each year to county's overall economy and **103 jobs** are added
- **FRESH FOOD:** Connect Kane residents to Kane products and producers

Recommend creation of a **New Program:** *Growing for Kane*

- **New program designed to increase production of locally grown fruits, vegetable, dairy and meat. Supports:**
  - **Existing Businesses that want to expand to meet market demands**
  - **New entrepreneurs and young farmers**
- **Supports a "Grown in Kane" brand, Food distribution hub, and "Meet the Grower" events to link institutions to Kane growers**

Growing for Kane Ordinance

- Financial and technical support to farmers and land protection of farmland used to grow fruits and vegetables
- Creation of “Growing for Kane” Commission to assist in implementation
- Acceptance of public or private funds to support implementation

Ordinance has approval of Kane County Farm Bureau

Goals

- Expanded production of locally grown fruits & vegetables in order to meet local and regional demand
- Increased ability to capture funds currently available from public and private sources directed toward local food projects
- Support our existing producers and the next generation of Kane County producers

Why do we need this program?

- Better health for our residents
- Stronger Kane economy
- More connected communities (Urban, Suburban, and Rural)
- Healthier, stronger food system for all Kane County residents

Agricultural Drainage and Urbanization

How the Kane County Stormwater Ordinance Accommodates Both

Presented to the Kane County Agricultural Committee

Paul M. Schuch, P.E., Director
Water Resources Division

July 15, 2013

Agricultural versus Urban Hydrology

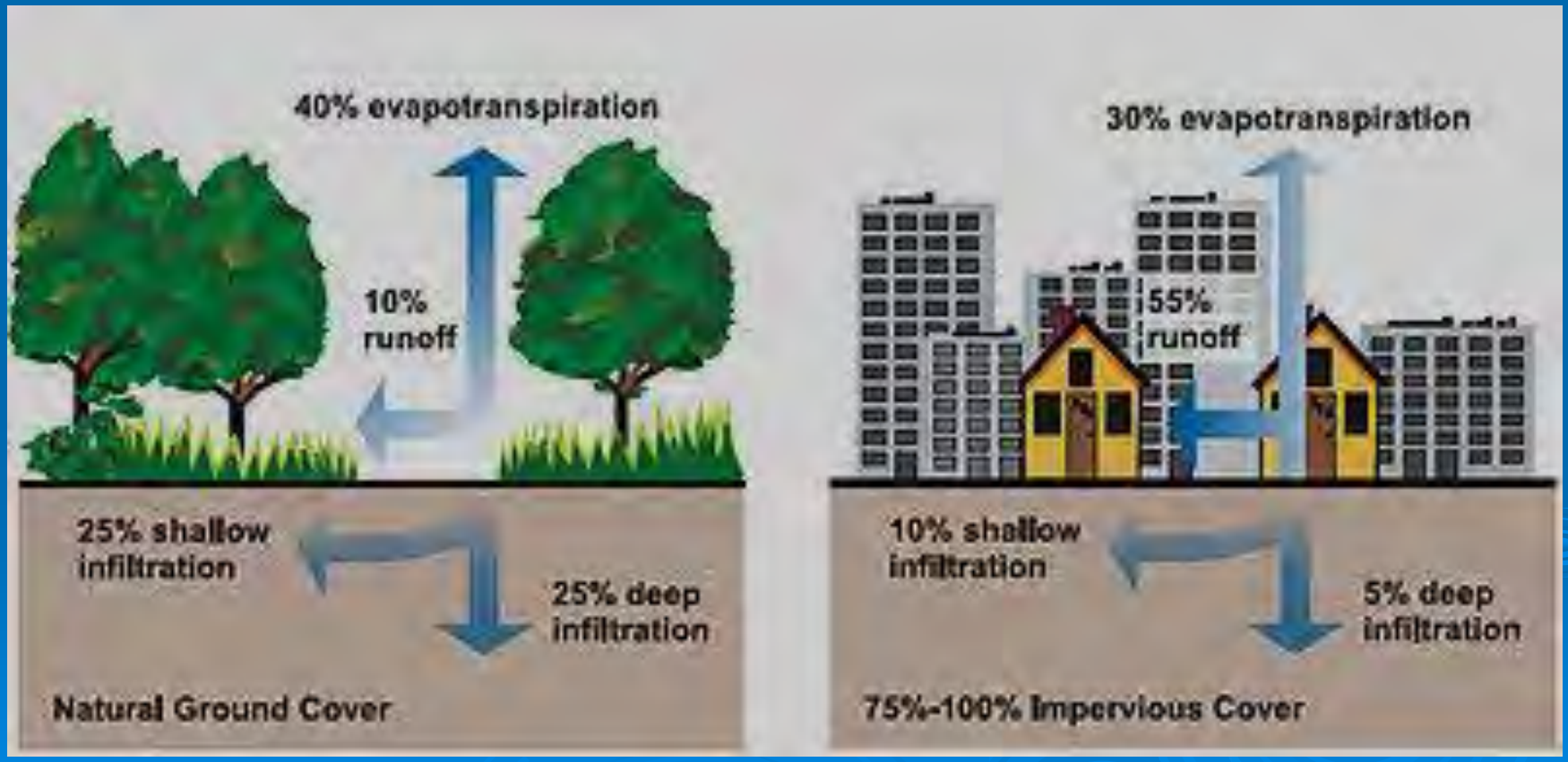
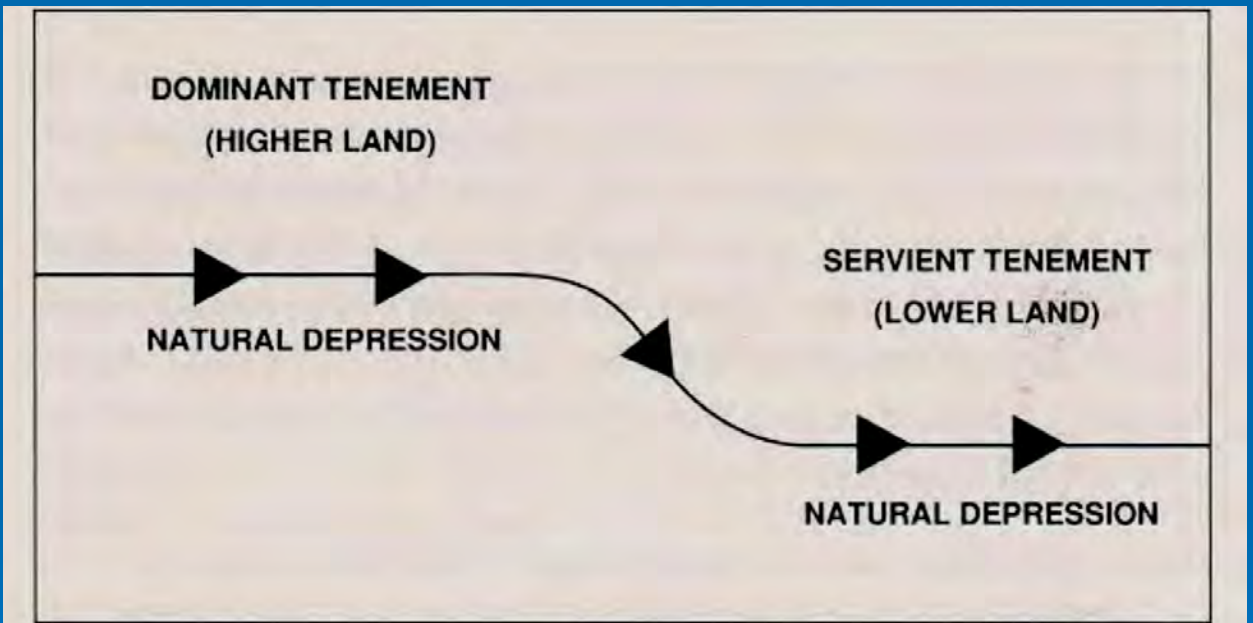


Illustration of Civil Law Rule

Water Runs Downhill



Where the natural flow is from one tract across another tract, the higher land is the dominant tenement, and the lower land is the servient tenement. Owners of dominant tenements have legal rights to have water drain off their lands. Owners of servient tenements have the duty of not obstructing the natural flow.

Urban Subdivisions have a Right to Drain Downstream

But not in a Manner that Floods Downstream Properties

Dry Detention Basin

Reduces Peak Stormwater Runoff, but does not Address the Volume of Stormwater Runoff nor Stormwater Pollutants

Wet Retention Basin

Same Peak Runoff reduction as a Dry Basin, but also can create Problems with Shoreline Erosion and Stagnant Water that wont Sustain a Balanced Ecosystem

Ideal Retention Basin

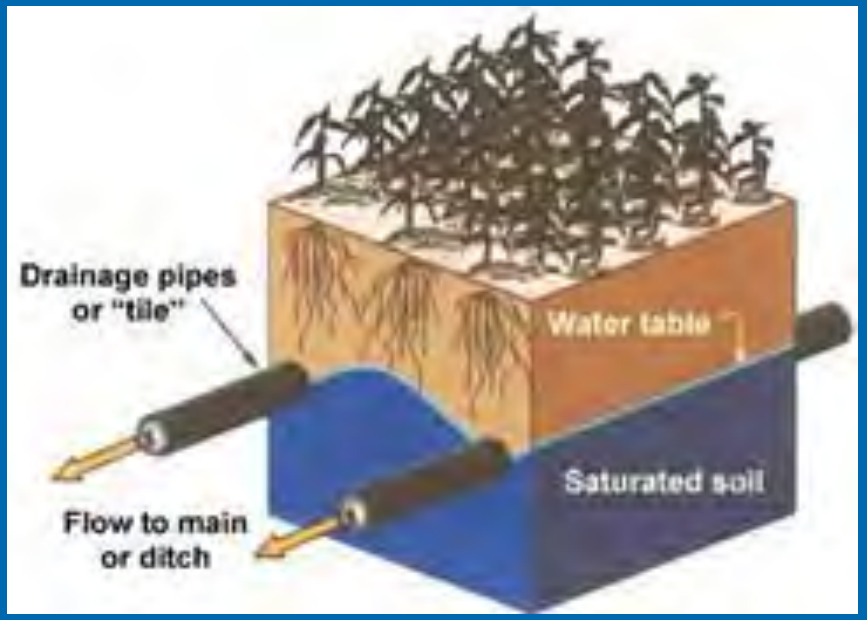
Peak Runoff Reduction, Stormwater Infiltration, Groundwater Recharge, Balanced Ecosystem, but needs Periodic Wetland Maintenance and still does not significantly Reduce the Runoff Volume and Lengthens the Duration of the Discharge onto Downstream Lands from Hours to Days

Crops do not Tolerate well the Prolonged Surface Drainage from Urban Runoff

Spring Planting
Summer Cultivation

Early Growth
Fall Harvest

Agricultural Drain Tiles must be Installed and Functioning to Control Soil Moisture



Drain Tiles Must be Deep Enough and have a Gravity Outfall to a Ditch or Stream and are not Sized for Urban Runoff

Shirewood Farm Subdivision

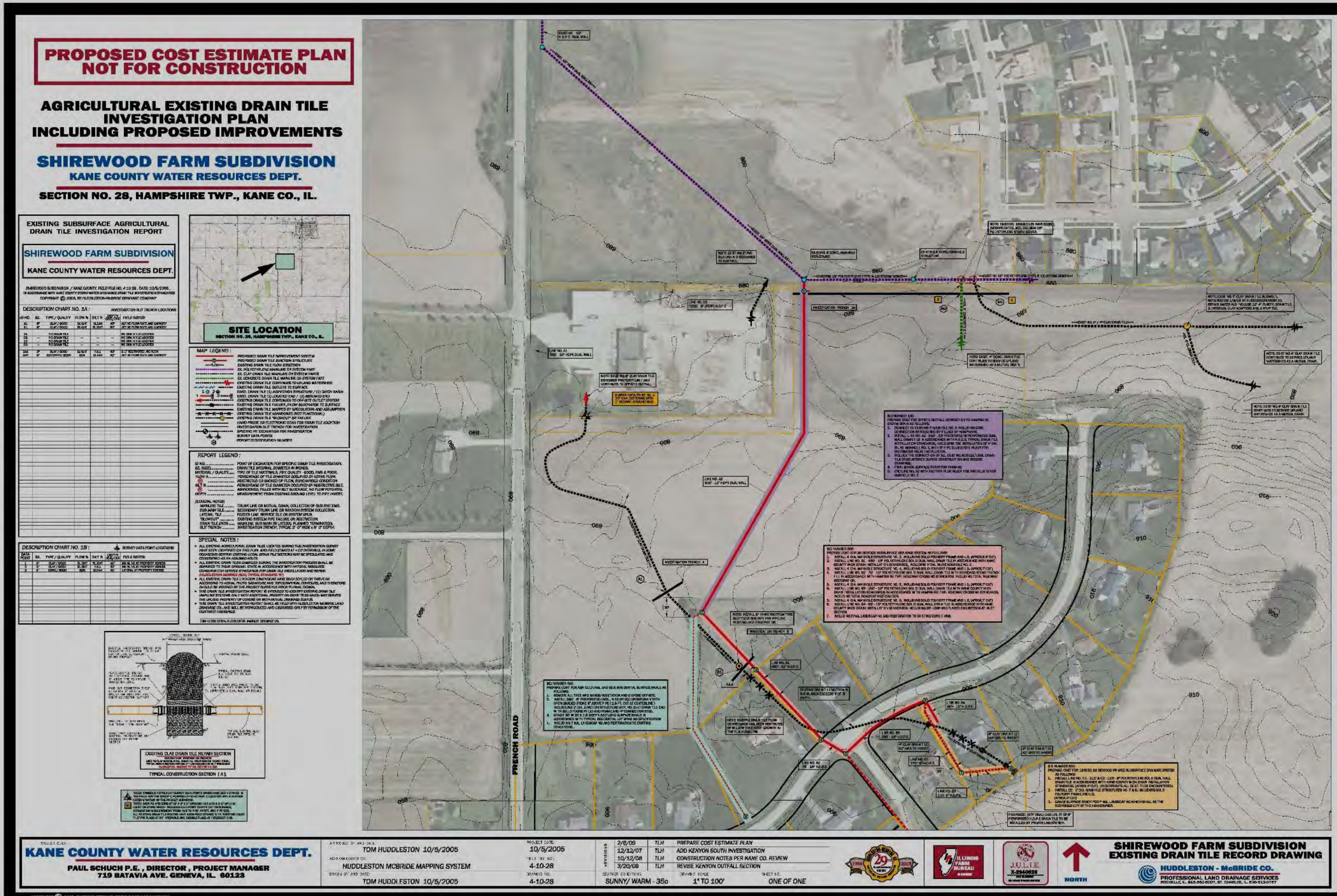
Hampshire Township, Section 23
2009 Cost-Share Project

Built in late 1970s/1980s

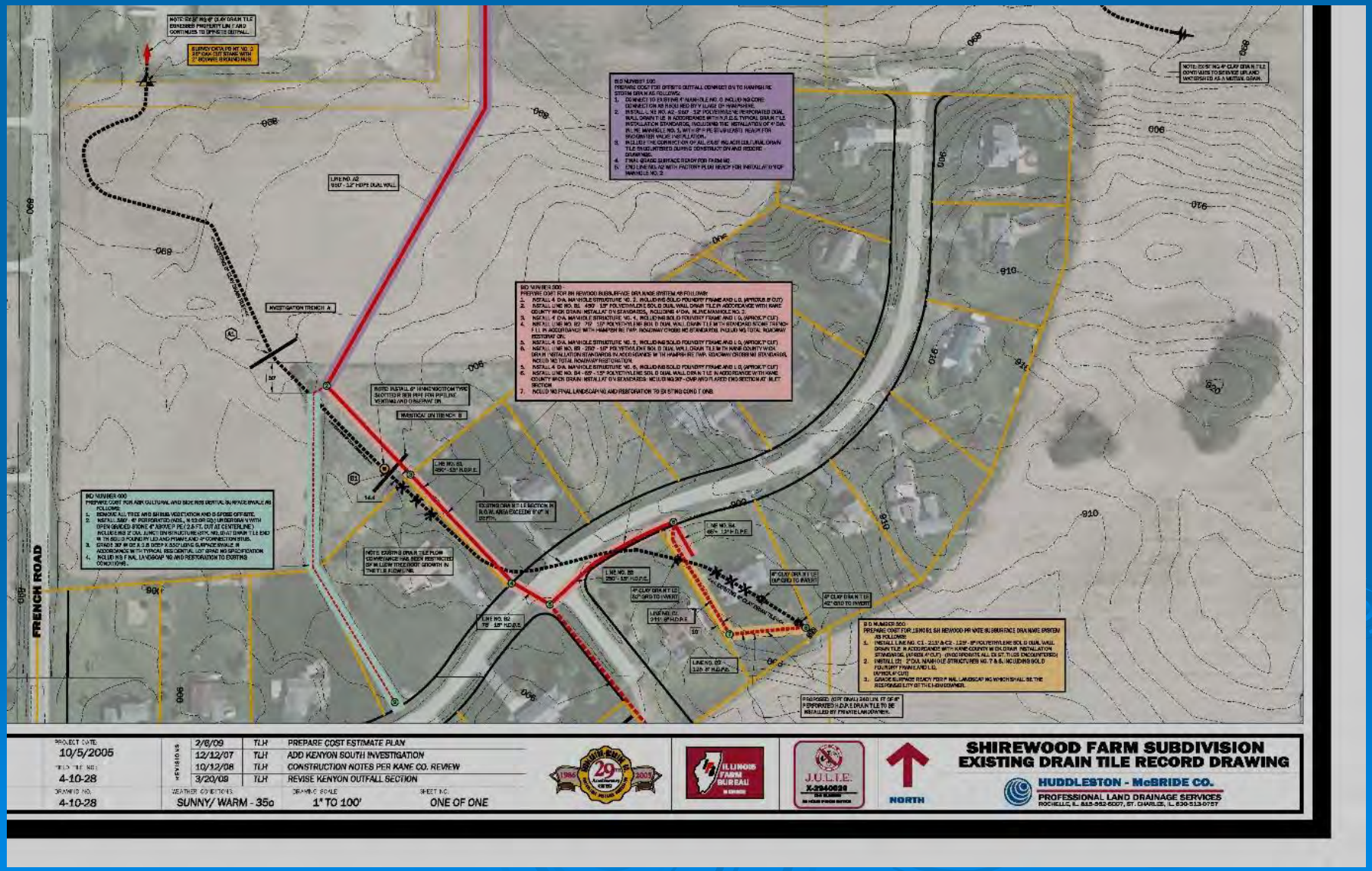
Historical Problems with:

- Flooding of Homes
- Flooding of basements
- Yard and Septic Flooding


AUG 7 2007


PROPOSED COST ESTIMATE PLAN
NOT FOR CONSTRUCTION
AGRICULTURAL EXISTING DRAIN TILE
INVESTIGATION PLAN
INCLUDING PROPOSED IMPROVEMENTS
SHIREWOOD FARM SUBDIVISION
KANE COUNTY WATER RESOURCES DEPT.
SECTION NO. 28, HAMPSHIRE TWP., KANE CO., IL.
EXISTING SUBSURFACE AGRICULTURAL
DRAIN TILE INVESTIGATION REPORT
SHIREWOOD FARM SUBDIVISION
KANE COUNTY WATER RESOURCES DEPT.
SITE LOCATION
MAP LEGEND:
REPORT LEGEND:
SPECIAL NOTES:
TYPICAL CONSTRUCTION SECTION [A]
FRENCH ROAD
KANE COUNTY WATER RESOURCES DEPT.
PAUL SCHUCH P.E., DIRECTOR, PROJECT MANAGER
719 BATAVIA AVE. GENEVA, IL. 60123
TOM HUDDLESTON 10/5/2005
HUDDLESTON MCBRIDE MAPPING SYSTEM
TOM HUDDLESTON 10/5/2005
10/5/2005
4-10-28
4-10-28
2/5/09 TLH PREPARE COST ESTIMATE PLAN
12/12/07 TLH ADD KENYON SOUTH INVESTIGATION
10/12/08 TLH CONSTRUCTION NOTES PER KANE CO. REVIEW
3/20/09 TLH REVISE KENYON OUTFALL SECTION
SUNNY/ WARM - 35o
1" TO 100'
ONE OF ONE
NORTH
SHIREWOOD FARM SUBDIVISION
EXISTING DRAIN TILE RECORD DRAWING
HUDDLESTON - McBRIDE CO.
PROFESSIONAL LAND DRAINAGE SERVICES

Drain Tile Investigation – Old Tiles and Proposed New Drain Tile System



Shirewood Farm Subdivision Problems Found

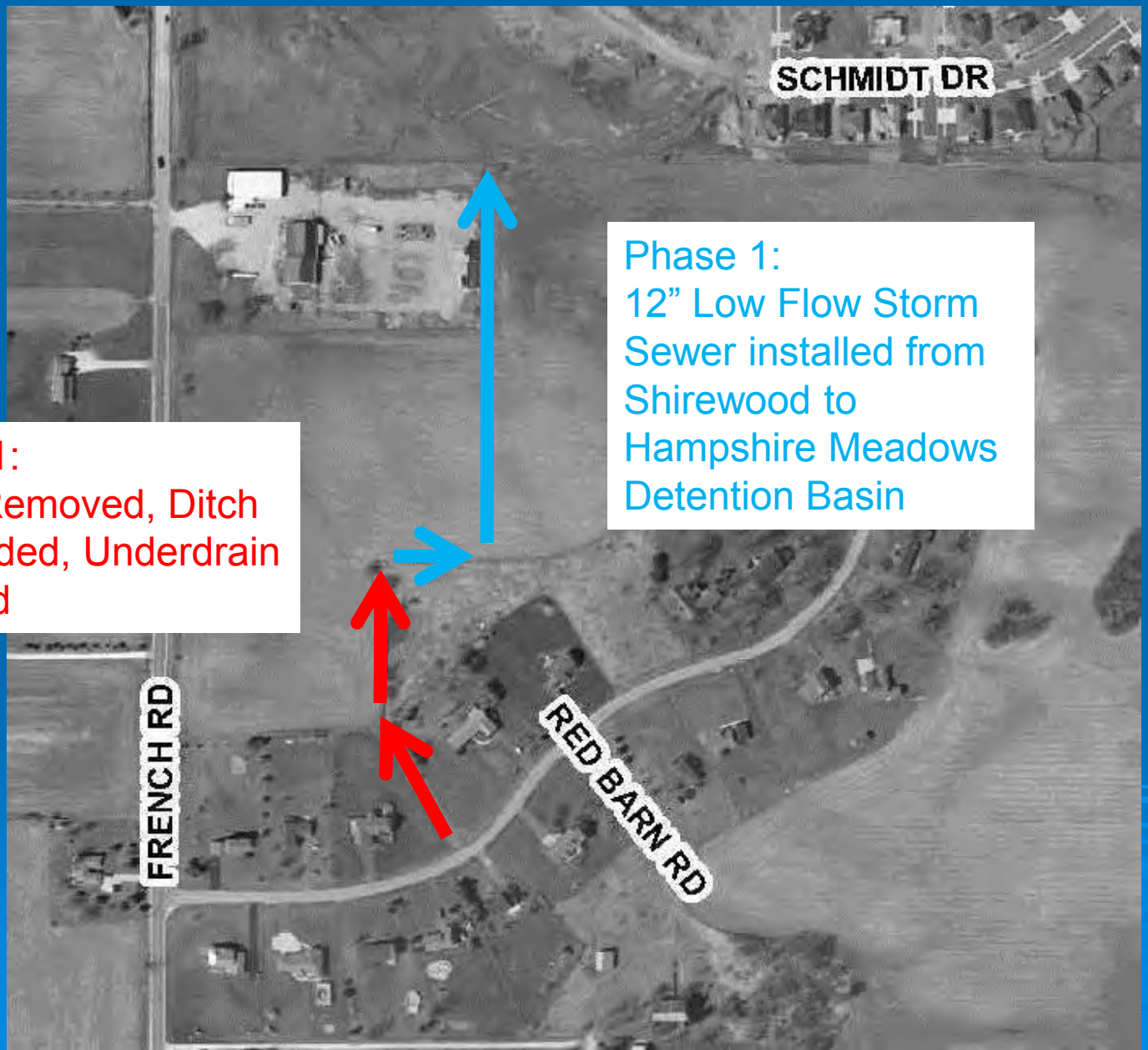
- Drainage Problems resulting from large upstream tributary area, closed depressions (low areas) within subdivision with no surface drainage outlet that have flooded more frequently in recent years.
- Original Stormwater and drain tile infrastructure in subdivision had little or no maintenance since originally constructed.
- Agricultural drainage systems were interrupted upstream and downstream, resulting in high groundwater issues.

Outlet Ditch from Subdivision
Dec 27, 2008


Flow Direction


FLOW DIRECTION

Phase 1 Emergency Work Spring 2009



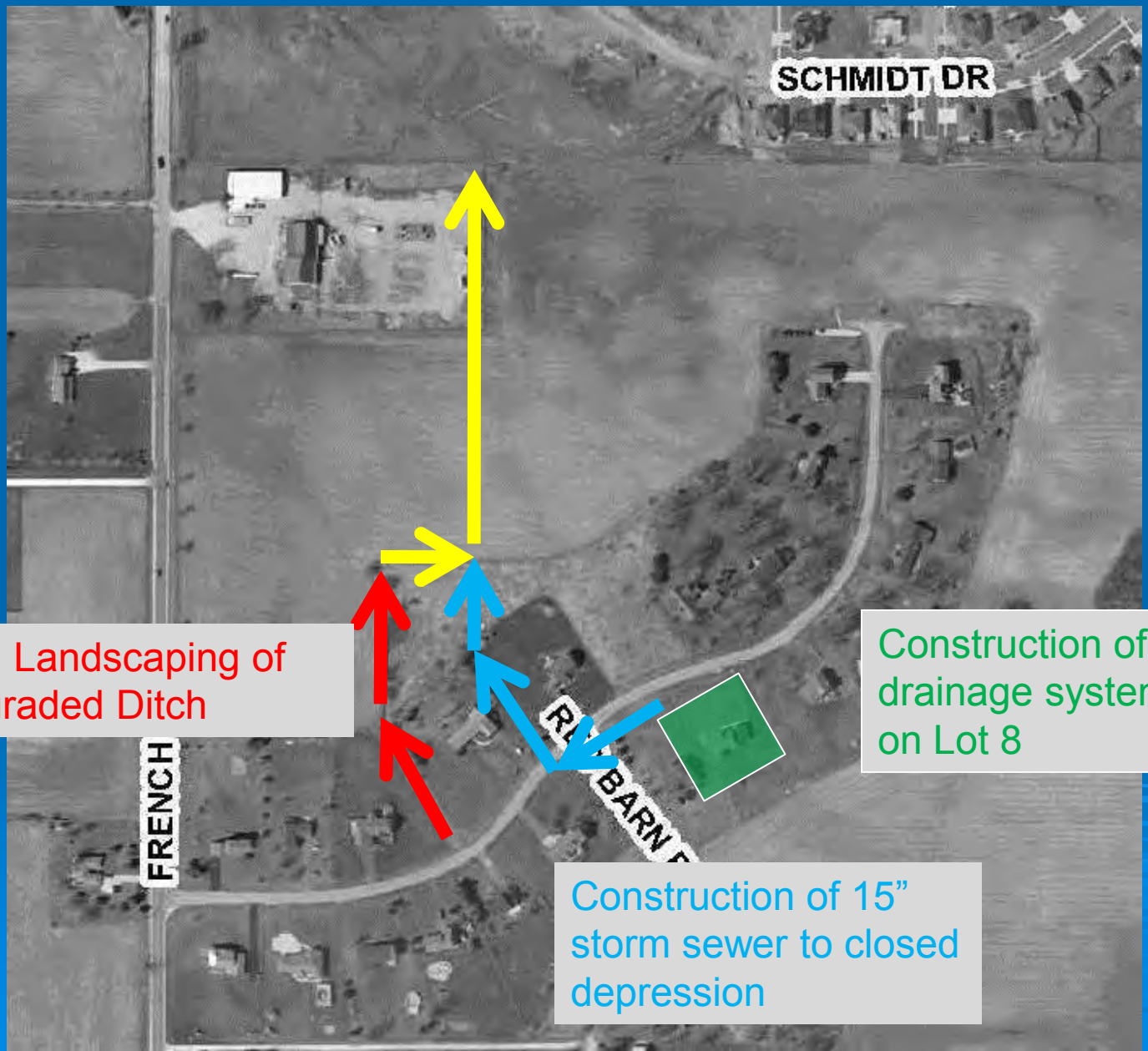
Phase 1:
Trees Removed, Ditch Re-Graded, Underdrain Installed

Phase 1:
12” Low Flow Storm Sewer installed from Shirewood to Hampshire Meadows Detention Basin

Phase 1 Low Flow Storm Sewer Installation

Phase 1Completed Ditch Work

Phase 2 Scope of Work



Flooding in Closed Depression

Phase 2: New Drain Tile from Lot 8 Rear Yard to New Tile Outlet Across Farm Field to the North

Phase 2 Ditch Stabilization

Shirewood Farms Cost Summary

- Phase 1: Emergency Work –
  $33,947.08
  - (total does not include material donation, 5 separate contracts awarded for work)
- Phase 2: Non-Emergency Work - $72,943.10
  - (based on low bidder)

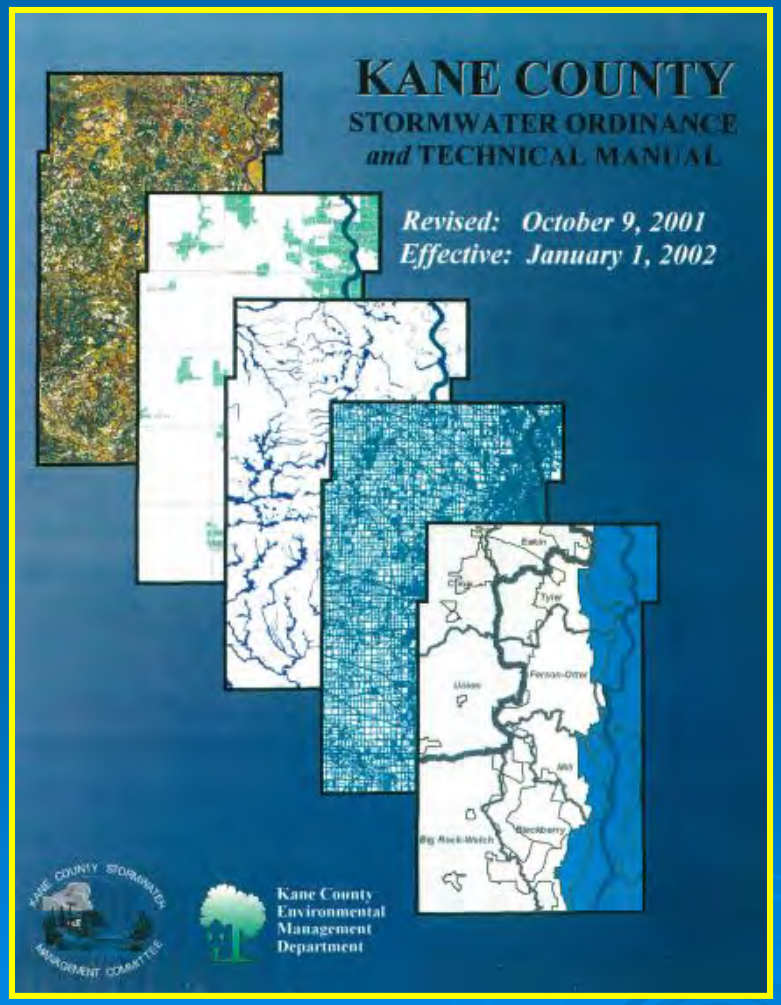
Shirewood Farms Cost-Share

- Kane County Cost-Share $31,887.02 (29.15%)
- Fee in Lieu of Detention $35,000 (32%)
- Hampshire Twp Road $5,000 (4.57%)
- Resident Contributions $35,003.16 (34.28%)

- Of resident contributions, $23,482 is from Lot 8

2002 Kane County Stormwater Ordinance

First in Illinois to Incorporate Agricultural Drainage



§ 202. Site runoff requirements
(a) Stormwater facilities shall be required and designed so that runoff exits the site at the point where it exited prior to development (unless a change is required and approved in writing by the Administrator) and in a manner so as not to increase flood damage downstream.

Concentrated discharges from new developments must enter conveyance systems capable of carrying the design flow rate without increasing flood damage, erosion or maintenance costs downstream.

(d) Stormwater systems shall properly incorporate and be compatible with existing subsurface and surface drainage systems including agricultural systems. Designs shall not cause damage to existing drainage systems or to existing adjacent or tributary agricultural land uses. The following principles and requirements shall be observed in the design:

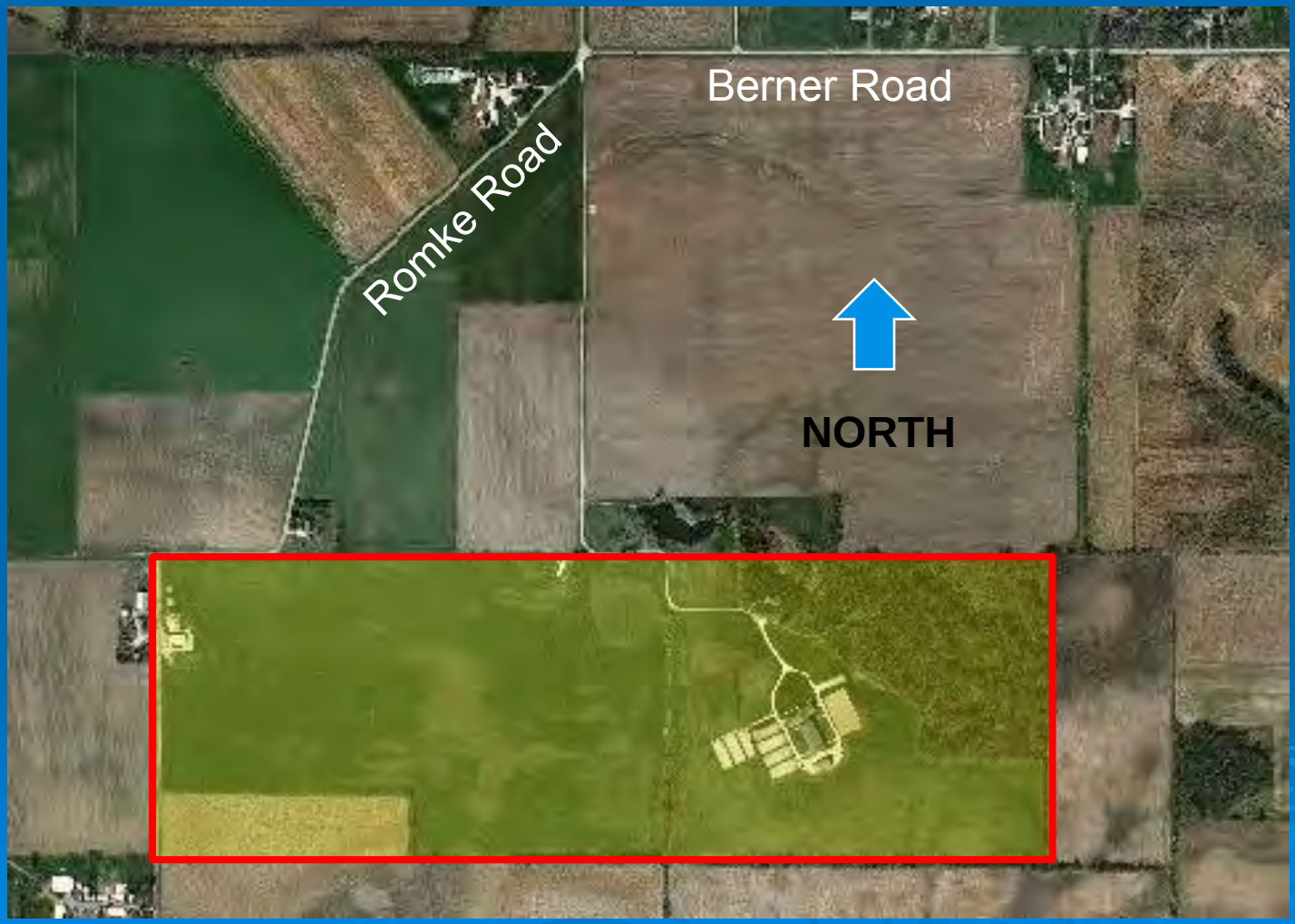
(1) Offsite outfall: Agricultural subsurface and surface drainage systems shall be evaluated with regard to their capacity and capability to properly convey low flow groundwater and site runoff storage facility release without damage to downstream structures and land uses. If the outfall drain tile and surface drainage systems prove to be inadequate it will be necessary to modify the existing systems or construct new systems which will not conflict with the existing systems and will not impact existing land uses.

(2) Onsite: Agricultural drainage systems shall be evaluated in accordance with Article 5. All existing onsite agricultural drain tile not serving a beneficial use shall be abandoned by trench removal prior to other development and recorded on record drawings. If any existing drain tiles continue to upland watersheds the developer must maintain drainage service during construction until new storm sewers can be installed for a permanent connection.

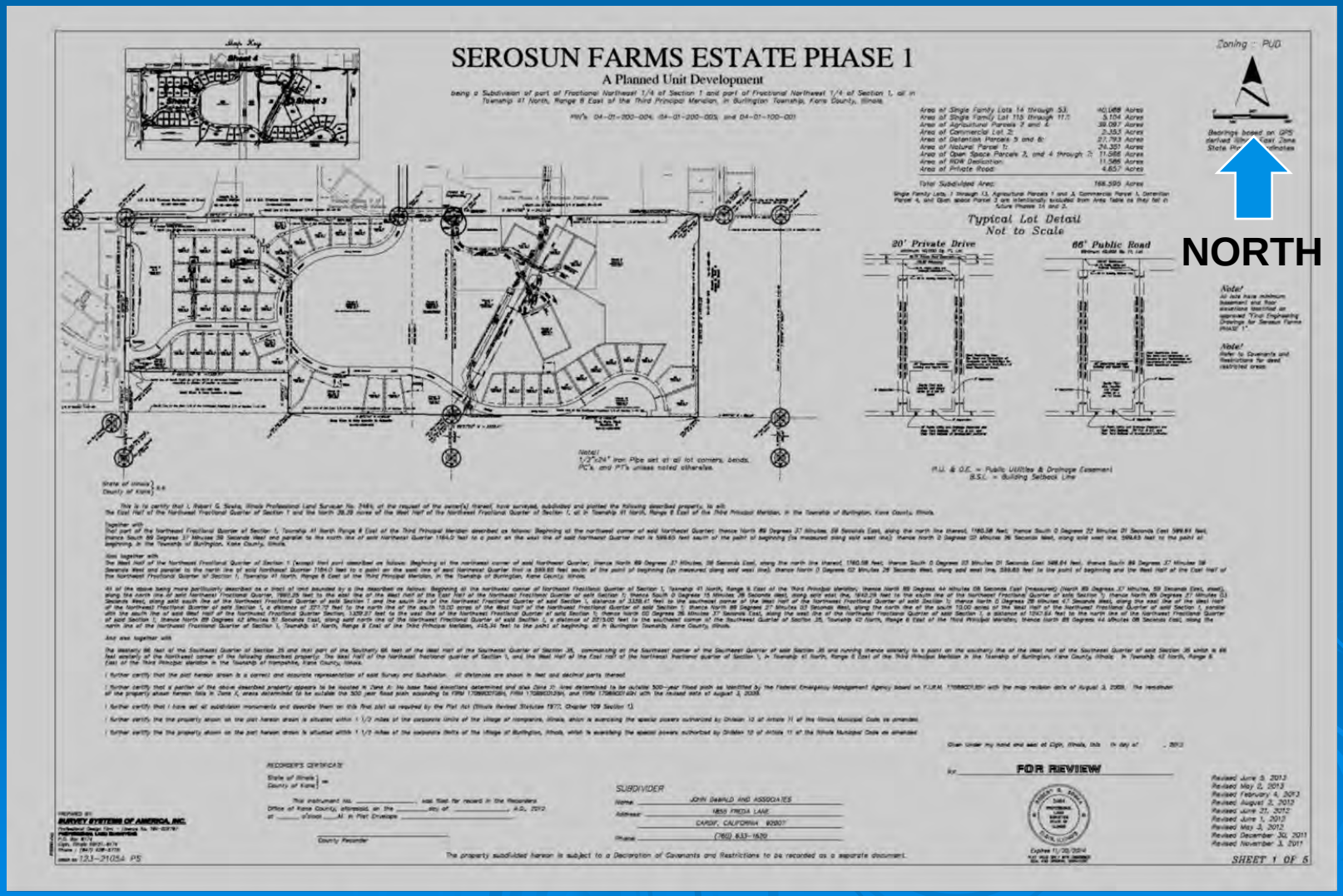
(3) . . . . All existing tributary drain tiles shall be incorporated into the new stormwater system including observation structures located at the limits of the site and shall provide a free flow discharge. Agricultural tributary surface conveyance shall be accepted by the new development with consideration given to water quality and sediment filtering control.

Serosun Farms Unit 1
Hampshire Twp. Section 35

Serosun Farms Unit 1



Serosun Farms Unit 1 Final Plat

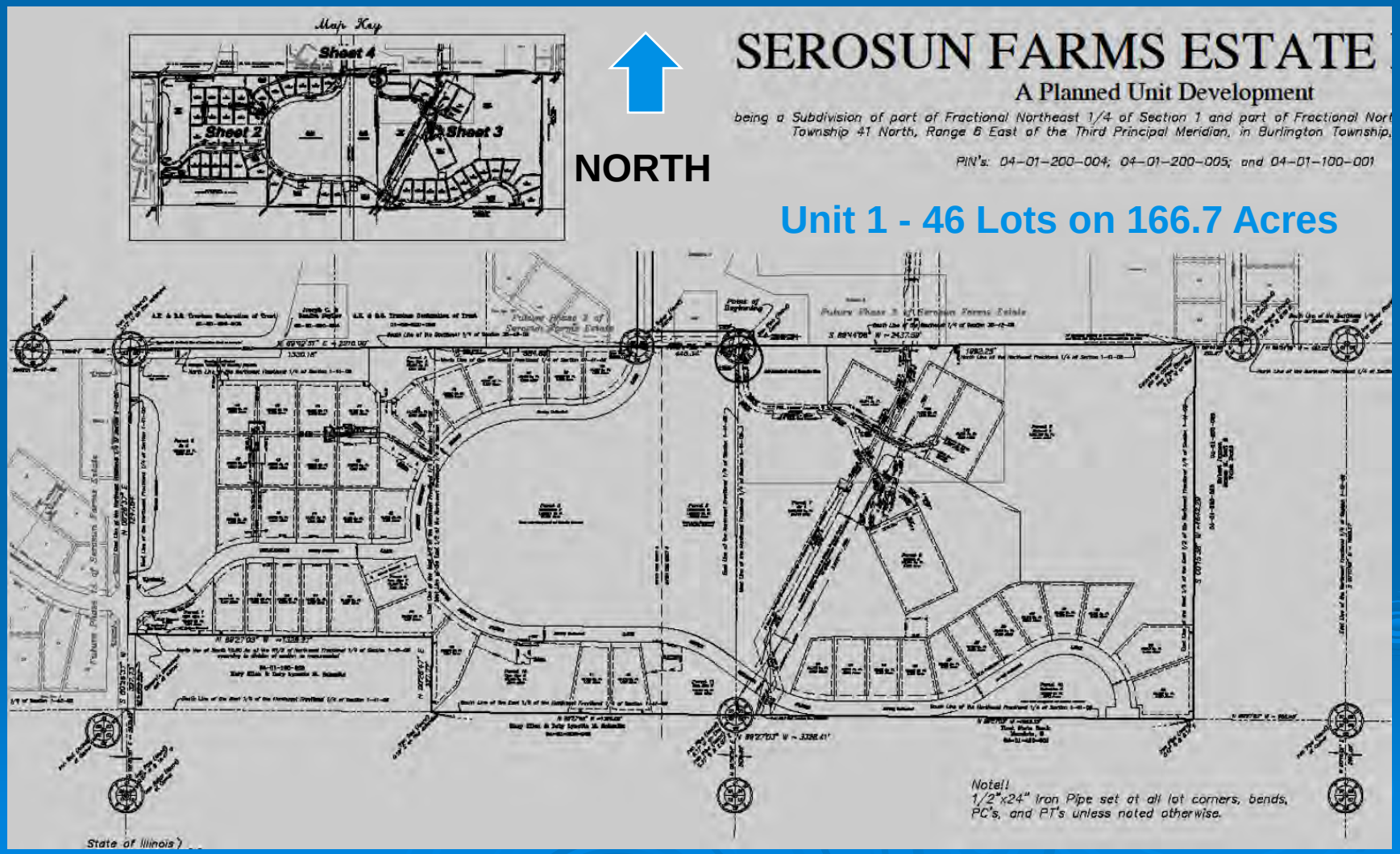


SEROSUN FARMS ESTATE PHASE 1

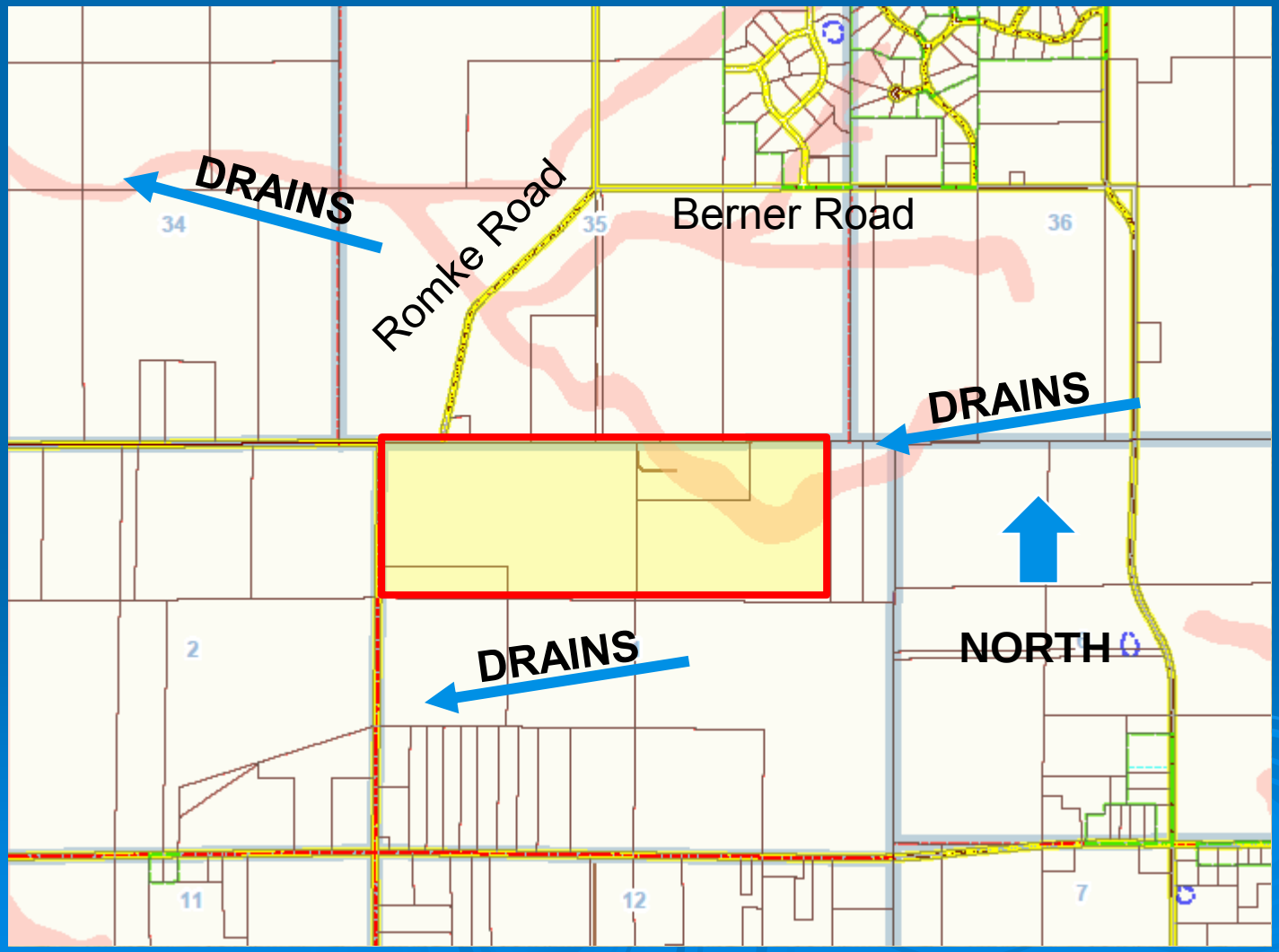
A Planned Unit Development

NORTH

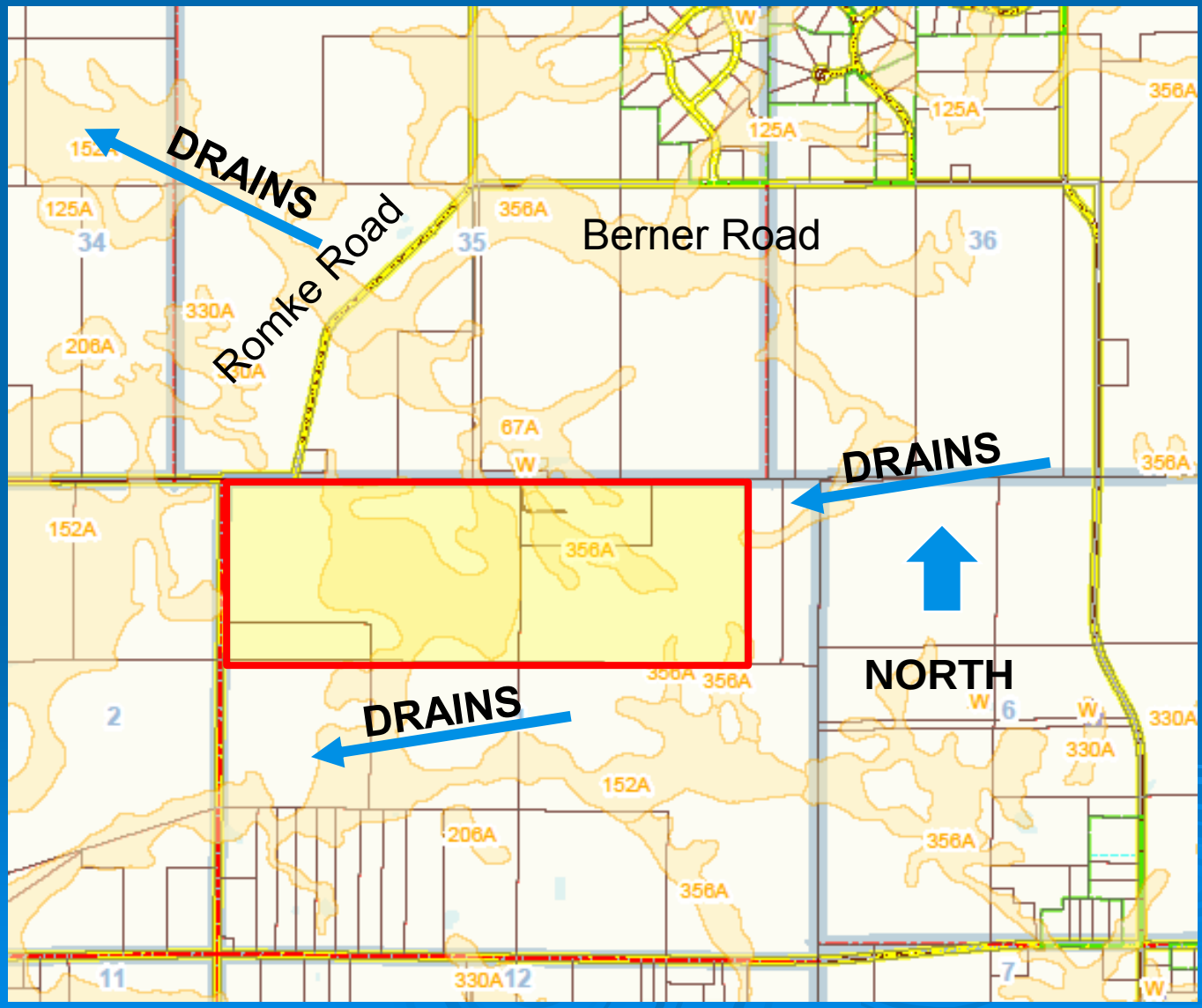
Serosun Farms Unit 1



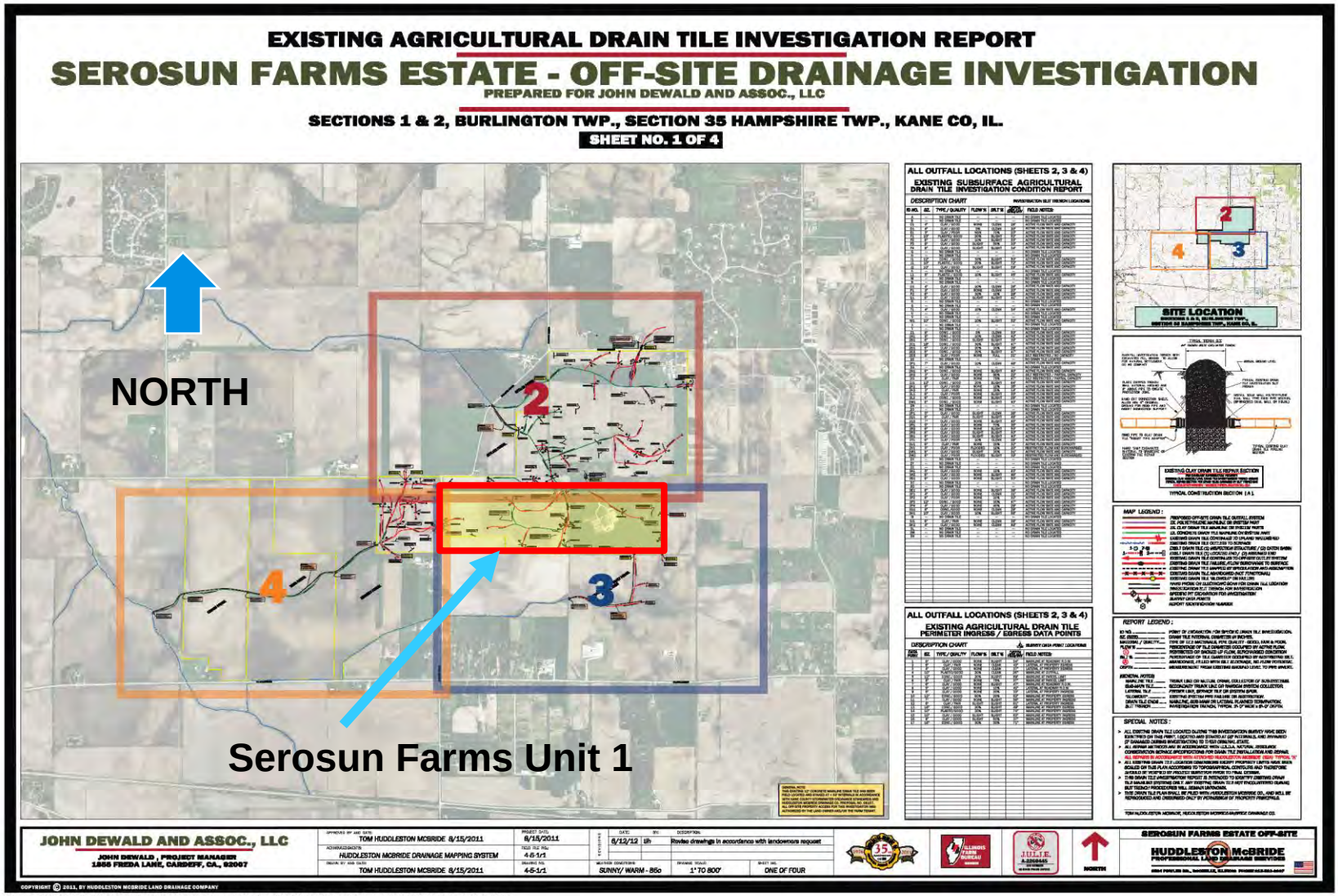
Serosun Farms Unit 1 Floodplain



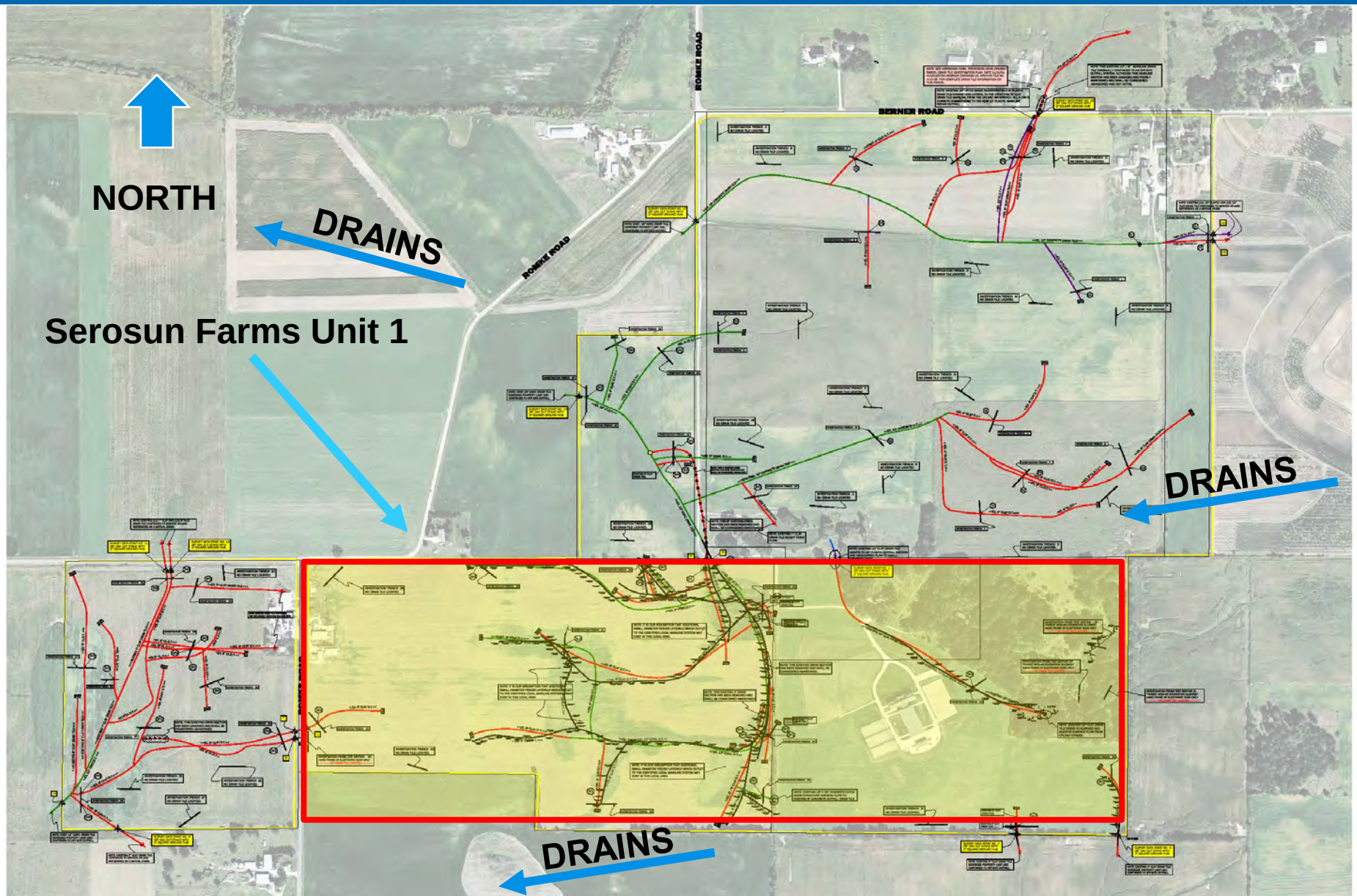
Serosun Farms Unit 1 Hydric Soils



Serosun Farms Tile Investigation both Onsite and Offsite

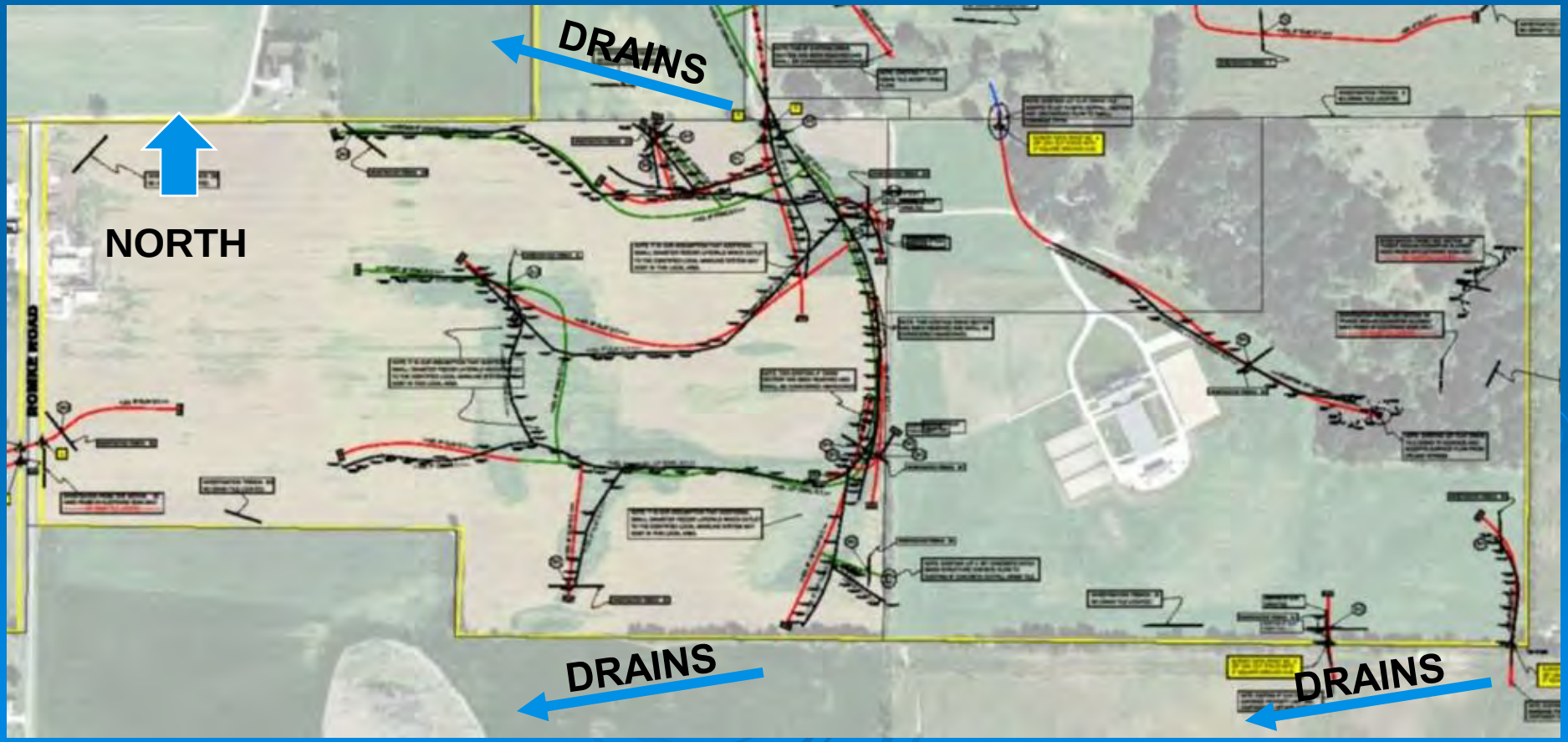


Serosun Farms Unit 1

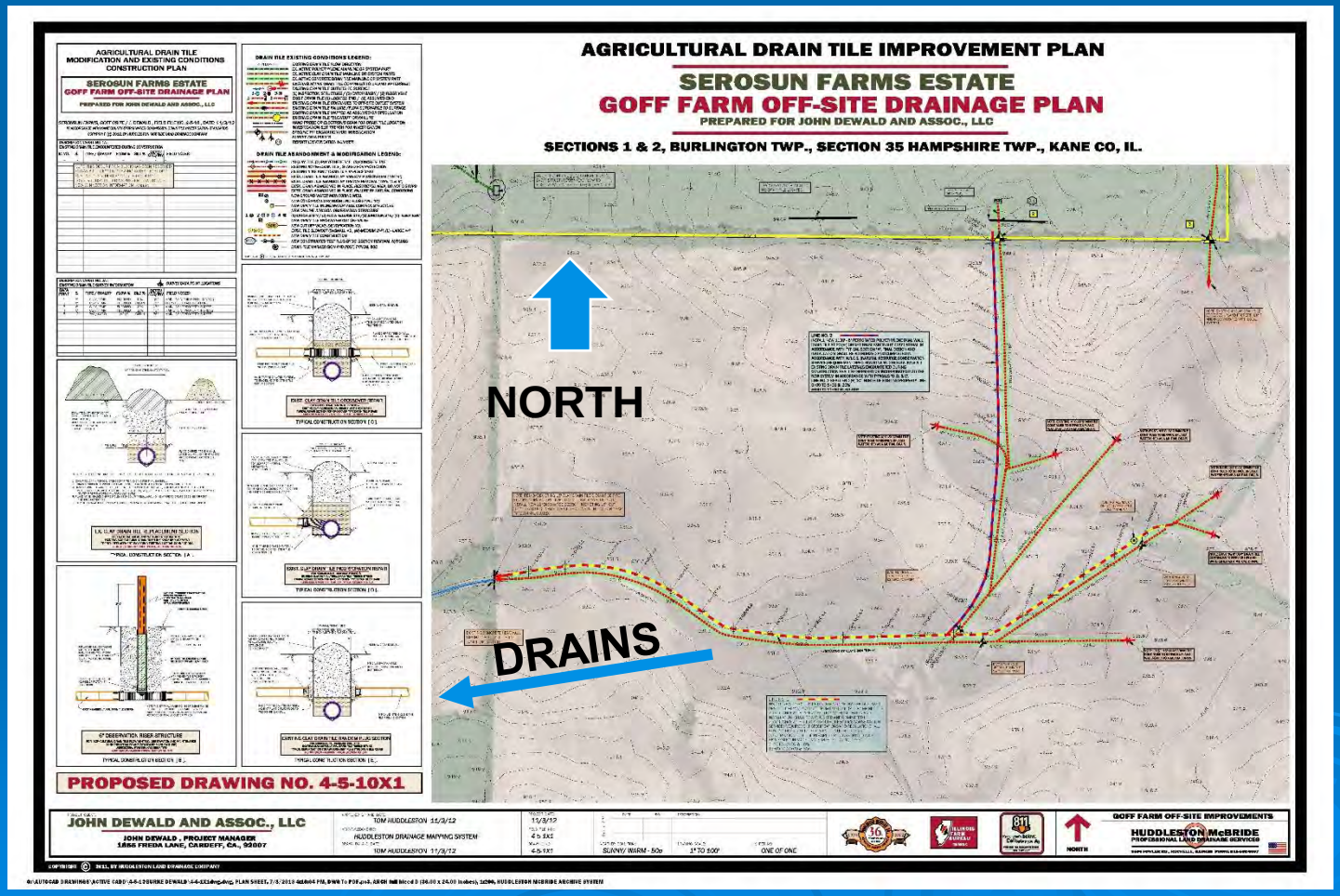


Serosun Farms Unit 1
Onsite Tile Investigation

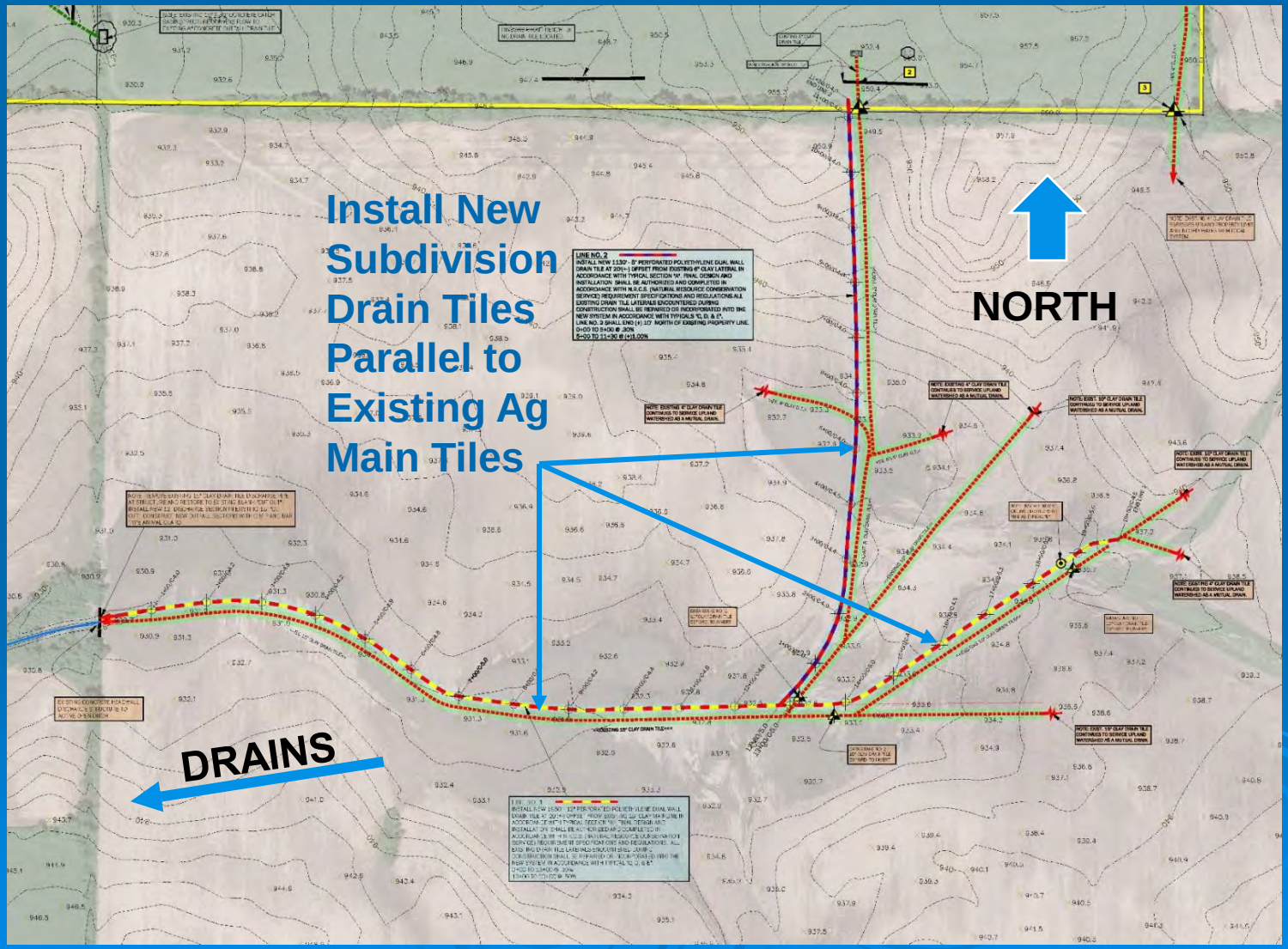
Remove old Ag Tiles by Slit Trenching and Replace with New Subdivision Tiles in Easements and Road Rights-of-way



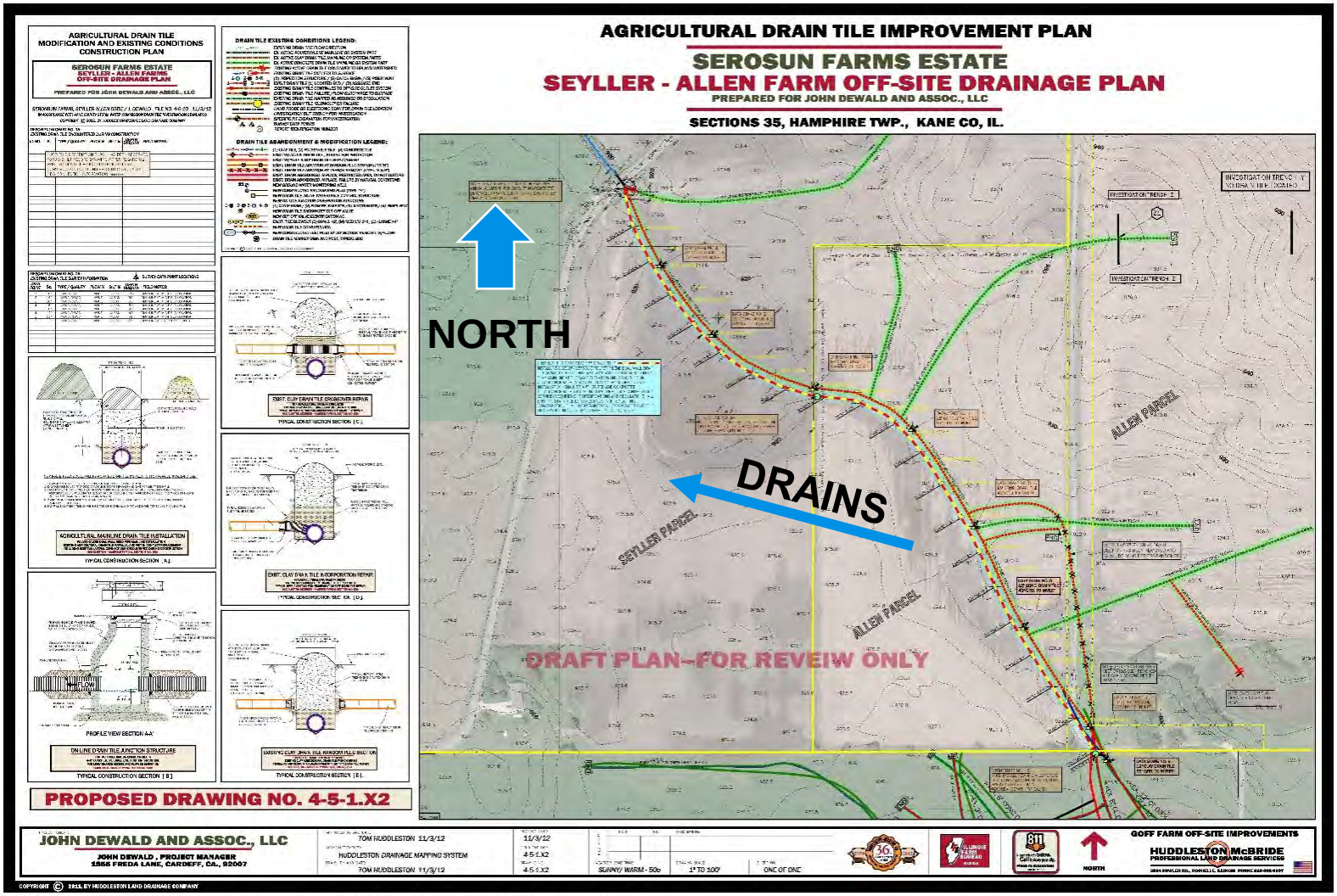
Serosun Farms Phase 1 - Southwest Offsite Drain Tile Improvements



Serosun Farms Phase 1 - Southwest Offsite Drain Tile Improvements



Serosun Farms Phase 1 – Northwest Offsite Drain Tile Improvements



Serosun Farms Phase 1 – Northwest Offsite Drain Tile Improvements

Crops do not Tolerate well the Prolonged Surface Drainage from Urban Runoff

Spring Planting
Summer Cultivatio

Early Growth
Fall Harvest

Successful Agricultural Drainage !

The End

Paul M, Schuch, P.E., CFM
Kane County Director Water Resources
schuchpaul@co.kane.il.us

Drain Tile Plugged with Tree Roots – Not Good!