Big-Picture Questions:

Why are we here?

Big-Picture Questions

- **Does my project need an NOI?**
  - Coverage under Ohio EPA's Construction General Permit
- **Does my project need a post-construction BMP?**
- **What type of BMP does my project need?**
- **How much area needs to be treated?**
- **How big does my BMP need to be and where am I going to fit it?**

Project Information Needs

Overview

- EDA (Total, Project, and Contractor)
- Treatment percent
- Area within the existing right-of-way
- Impervious area within project limits
- New impervious area in new permanent right-of-way
- Site Hydrology and Hydraulics
- Site limitations

EDA

Earth Disturbing Activity (EDA)

- EDA or Earth Disturbing Activity is any activity that exposes bare ground or an erodible material to storm water and anywhere seeding or sodding is being furnished.
- **Total EDA** = Contractor EDA + Project EDA
- **Project EDA**: most EDA that occurs within the project construction limits
- **Contractor EDA**: EDA from support activity such as field offices, batch plants, borrow/waste pits, and temporary access routes

Earth Disturbing Activity (EDA)

- Total EDA = Contractor EDA + Project EDA
- When Total EDA >= 1 ac.; CGP coverage; NOI required
- When Project EDA >= 1 ac.; post-construction BMP required
- Example:
  - Project EDA = 0.9 ac
  - Contractor EDA = 0.15 ac
  - Total EDA = 1.05 ac
  - NOI required
  - Post-Construction BMP not required

Treatment Percent

Treatment % Calculations

- Existing impervious area: 20%
- Impervious area in new R/W: 100%

- All area within existing R/W is considered impervious for post-construction BMP calculations
- In new R/W, grass is considered pervious and paved area is considered impervious

Treatment % Calculations

- **Weighted treatment calculation:**

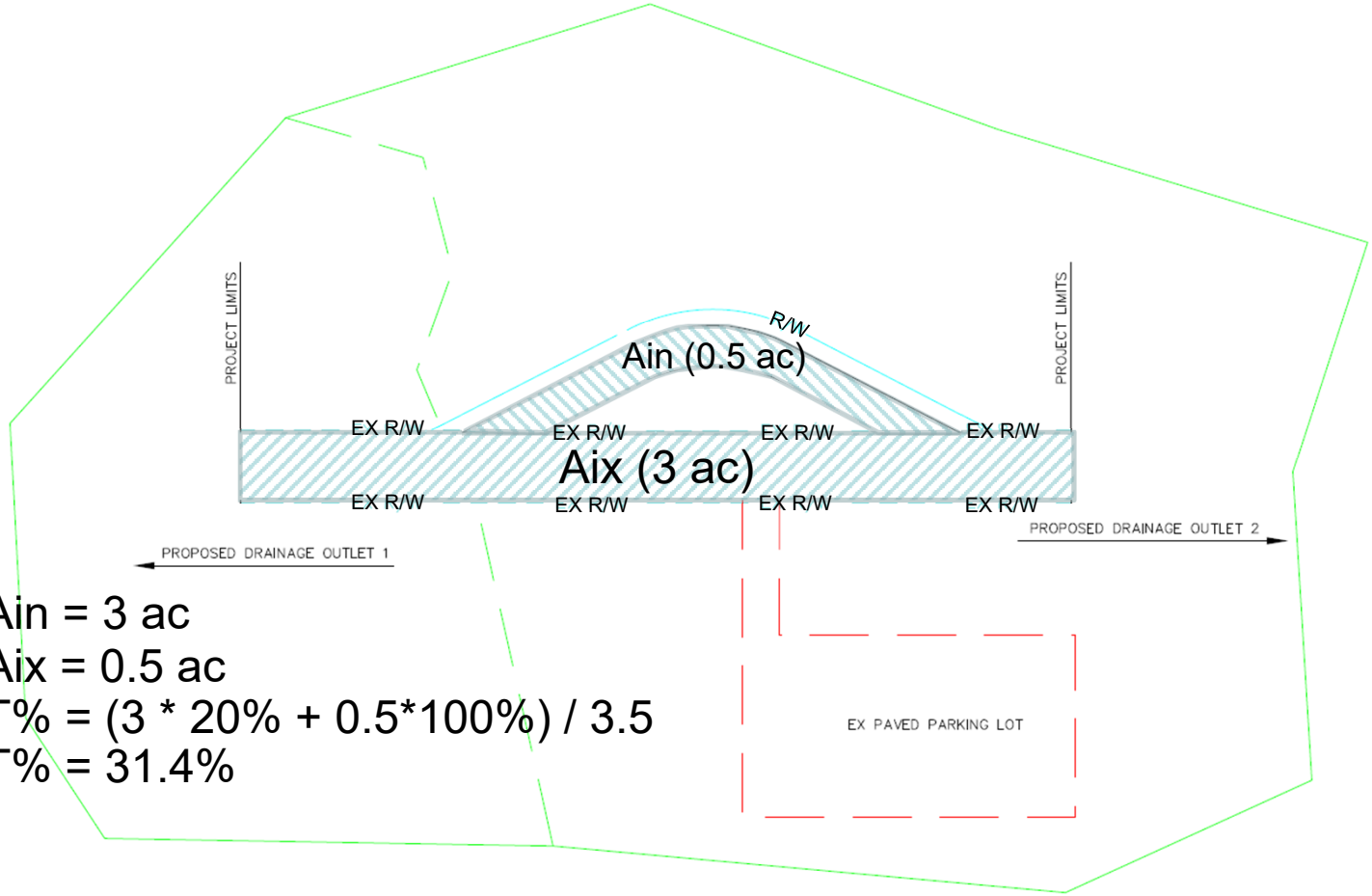
$$T\% = \frac{(Aix \times 20) + (Ain \times 100)}{(Aix + Ain)}$$

T% = Treatment %

Aix = Project EDA that is inside the existing right-of-way (acres)

Ain = New impervious area inside new permanent right-of-way minus any impervious area that is removed inside new permanent right-of-way

Aix or Ain?



Ain = 3 ac
Aix = 0.5 ac
T% = (3 * 20% + 0.5*100%) / 3.5
T% = 31.4%

New Impervious Area

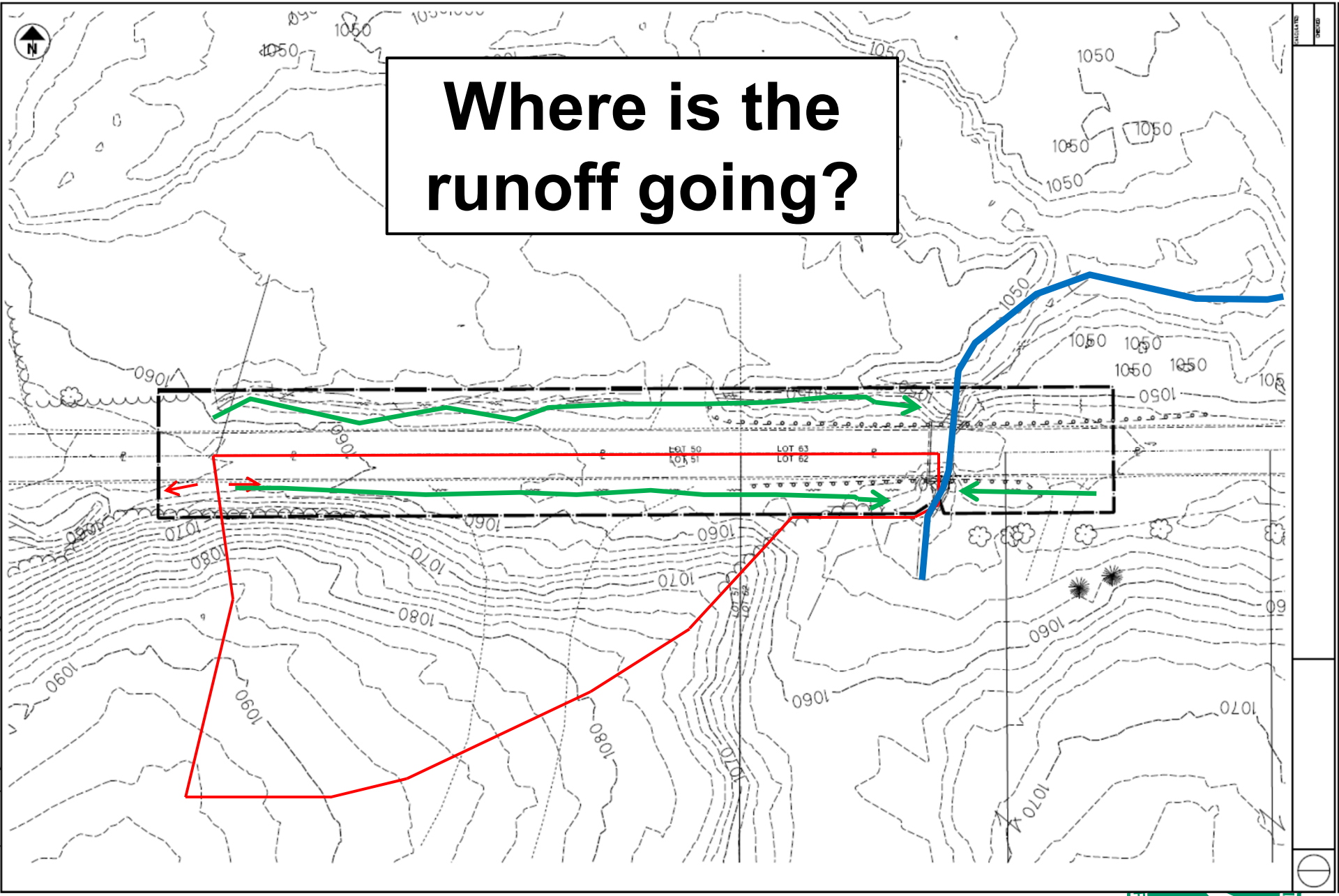
- **ODOT L&D Vol. 2, Section 1115.3:**
  - Quantity treatment not required for:

"Sites where one or less acre of new impervious area is created in new permanent right-of-way are being acquired for the project."

Hydrology, Hydraulics, and Site Conditions

Preliminary Analyses

- Where is the runoff going?
- How much runoff is there?
- Where is available space for a BMP?
- What are the project site constraints for BMPs?

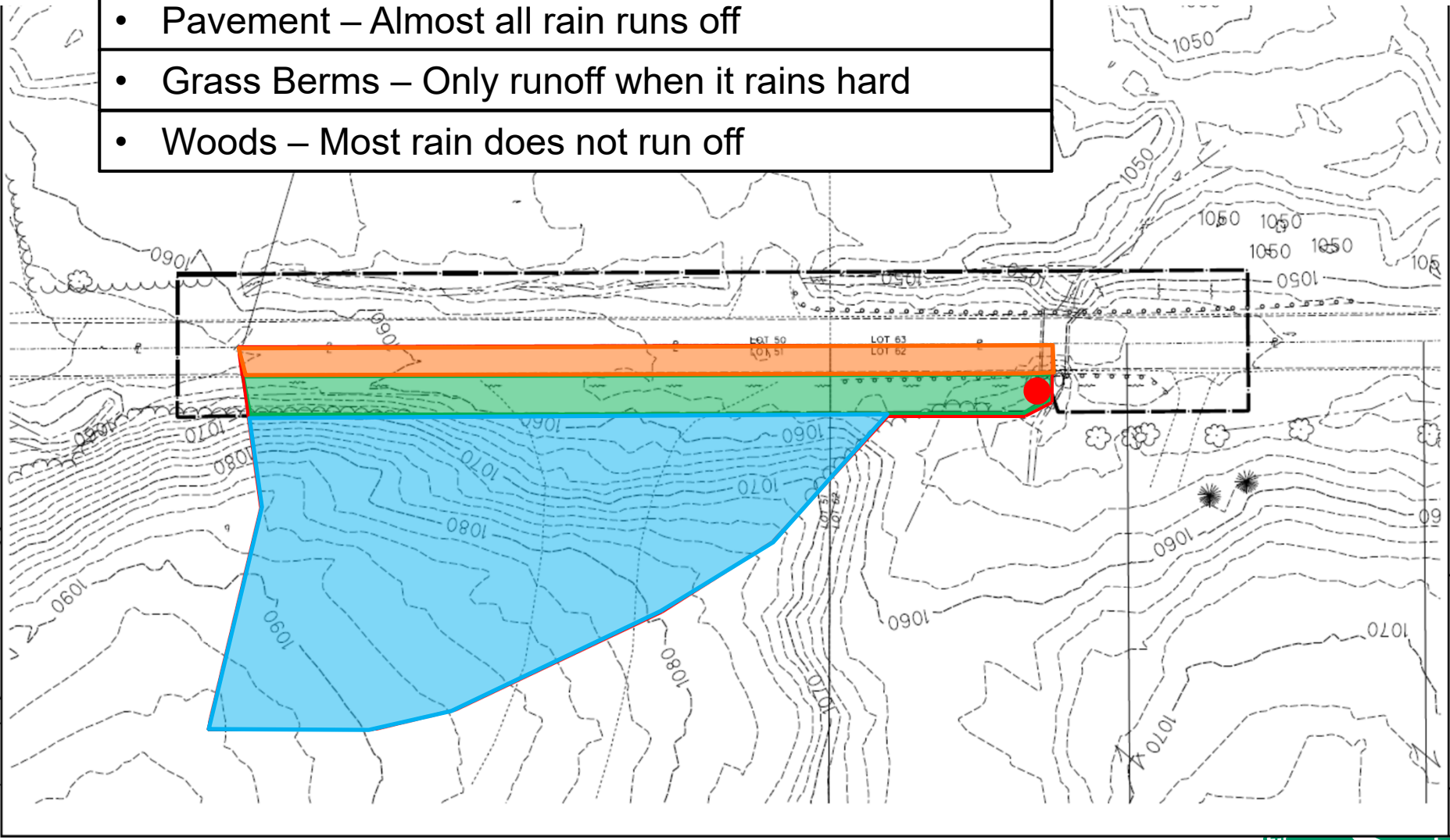

Where is the runoff going?
N
1050
1060
1070
1080
1090
LOT 50
LOT 51
LOT 63
LOT 62

Where is the runoff going?

- **Flow direction**
- **Contours / topography**
- **Conveyance**
  - Pipes
  - Ditches
  - Culverts
- **Streams or discharge points**

How much runoff is there?

- Pavement – Almost all rain runs off
- Grass Berms – Only runoff when it rains hard
- Woods – Most rain does not run off



How much runoff is there?

- % Impervious (C)
- Land Use (C)
- Precipitation depth or intensity (i)
- Tributary area (A)

- Peak Flow Rate
- Water Quality Volume

Where is there available space for a BMP with the least negative impacts?

- Limits of right-of-way
- Project limits
- Paved area
- Clear Zone
- Structures
- Utilities
- Green Space

What are the project site constraints for BMPs?

- Available space
- Floodplain
- High bedrock
- High groundwater
- Soil permeability
- High downstream tailwater
- Available hydraulic drop
- Curb and gutter or sheet flow

Summary

- **Project EDA**: EDA that occurs within the project construction limits
- **Contractor EDA**: EDA from support activity
- **Aix = Project EDA in existing R/W**
- **Ain = New impervious area in new permanent R/W, not grass**
- **Know how water moves on the site**
- **Know site constrains**

Questions ?

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