99% SEDIMENT YIELD REDUCTION IN TWO EASY STEPS

A CASE STUDY
ALDOT ENVIRONMENTAL

AN EVOLUTION OF THINKING, FOCUS, AND APPLICATION (PHILOSOPHY)
ENVIRONMENTAL VISION:

AN INTEGRATED ENVIRONMENTAL CULTURE...
ALDOT’S MISSION:

TO PROVIDE A TRANSPORTATION SYSTEM...
AN EVOLUTION OF THINKING, FOCUS, AND APPLICATION (TECHNICAL)
EFFECTIVENESS → COMMUNICATION
IMPLEMENTATION → WORK
CAUSE → WATER
SOURCE → EROSION
SYMPTOM → SEDIMENT
A = \text{sediment yield} \quad \text{tons/acre/year}
Project Mission:
- to add two lanes to a section of I20/59 in Tuscaloosa

- Widen to inside
- Governor priority
- April letting
A CASE STUDY

MISSION:
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A CASE STUDY
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ACTIVITIES:
A CASE STUDY
ACTIVITIES:

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ACTIVITIES:
POTENTIAL IMPACTS:

- IMPACTS TO HABITAT
- IMPACTS TO WATER QUALITY
- IMPACTS TO PRIVATE PROPERTY
- REGULATORY ACTIONS
- CIVIL ACTIONS
- EMBARRASSMENT
- LOSS OF TRUST AND GRACE
ENVIRONMENTAL RESPONSIBILITIES:

- REGULATORY
  - GENERAL PERMIT
  - TMDL –
    - 32% TURBIDITY REDUCTION
    - 60.8 NTU LIMITATION
- SOCIAL EXPECTATIONS
  - HURRICANE CREEKKEEPER
  - FRIENDS OF HURRICANE CREEK
  - BLACK WARRIOR RIVERKEEPER
  - CLEAN WATER PARTNERSHIP
- ALDOT COMMITMENT TO PROTECT THE ENVIRONMENT
MISSION → ACTIVITIES → potential IMPACTS → environmental RESPONSIBILITIES

HOW?
Project Mission:
- to add two lanes to a section of I20/59 in Tuscaloosa

- Widen to inside
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HOW?
THE FIVE PILLARS OF CONSTRUCTION STORMWATER MANAGEMENT

• **COMMUNICATION** - *THE* BEST MANAGEMENT PRACTICE.

• **WORK** - CONTRACTORS CAN DO JUST ABOUT ANYTHING.

• **WATER** - CLEAN WATER IN, CLEAN WATER OUT.

• **EROSION** - GREEN IS GOOD.

• **SEDIMENT** - SEDIMENT CONTROL ALONE IS INEFFECTIVE.
A = P K L S C P

A = sediment yield in tons/acre/year
A CASE STUDY
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A CASE STUDY
"WE CAN’T DICTATE THE CONTRACTOR’S MEANS AND METHODS… CAN WE?"

- WHY NOT?
- THE CONTRACTOR WORKS FOR US, RIGHT?
- WE HAVE DIFFERENT INTERESTS.
- WE HAVE EXPERTISE WHERE THEY DON’T.
“DIDN’T THAT SLOW PRODUCTION?”

• CONTRACTOR:
  • “WE MAY HAVE BEEN SHUT DOWN FOR A DAY AFTER A RAIN, NOT A WEEK.”
  • “UNLESS THE RAIN WAS FALLING, WE WERE WORKING.”
“DIDN’T THAT SLOW PRODUCTION?”

• CONTRACTOR:
  • “WE WOULD HAVE WAITED UNTIL APRIL TO START RATHER THAN LAST NOVEMBER… AND WE WOULD NOT HAVE BEEN SHIFTING TRAFFIC TODAY.”
  • “PRODUCTION WAS INCREASED BY AT LEAST 35%.”
“WHAT ABOUT QUALITY?”

“This is actually a better structural buildup.”

- Lyndi Blackburn, P.E.

ALDOT Asst. State Materials & Tests Engineer
“IF YOU DON’T MIND ME ASKIN’, HOW MUCH DID SHE SET YOU BACK?”

- SIGNIFICANT DIRECT CONTRACT COST INCREASES
  NOT CONSIDERING SAVINGS DUE TO IMPROVEMENTS IN -
  - SAFETY
  - REDUCTION IN TRAFFIC DELAYS
  - PRODUCTION
  - HEADACHE
DO YOU REALIZE WHAT WE JUST DID?

- ENVIRONMENTAL PROTECTION, WITH BENEFITS IN...
  - QUALITY
  - SAFETY
  - TRAFFIC
  - PRODUCTION
  - COST
“I HAVE NEVER SEEN A BETTER RUN ROAD PROJECT BY ALDOT.”

“THAT DOESN'T MEAN I BELIEVE THEY CAN BUILD THE EASTERN (BOONDOGLE EXPRESSWAY) BYPASS WITH THE SAME CONTROL. WE'LL SEE.”

- John Wathen
  Hurricane Creekkeeper Blog
  June, 2015
THE END...