Streamlining the Replacement Process for Low Impact Bridges

Background and Bridge Needs

PEF Workshop

Lacy D. Love

April 27, 2010

Streamlining the Replacement Process for Low Impact Bridges

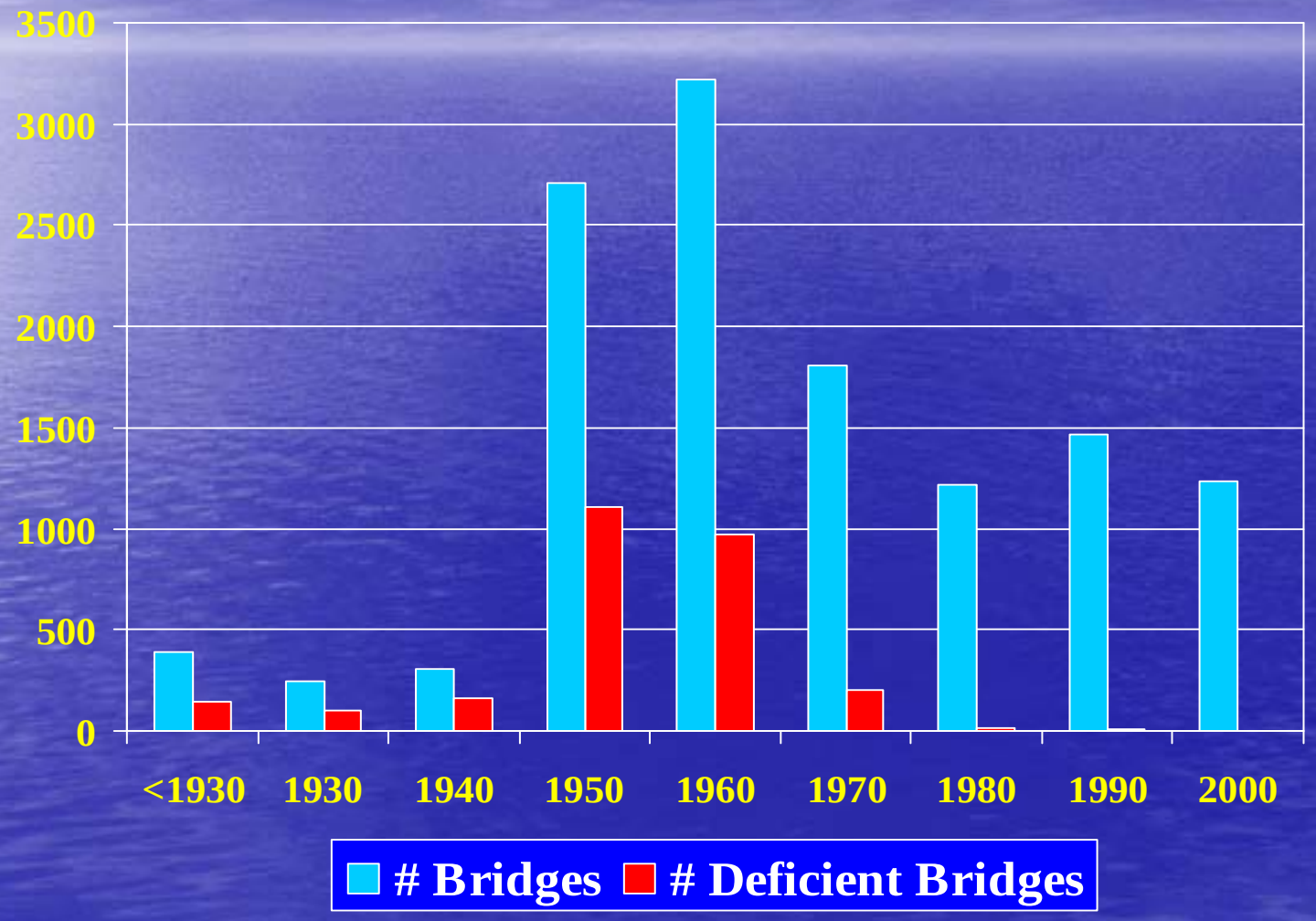
WHY?

Status of NCDOT Bridges

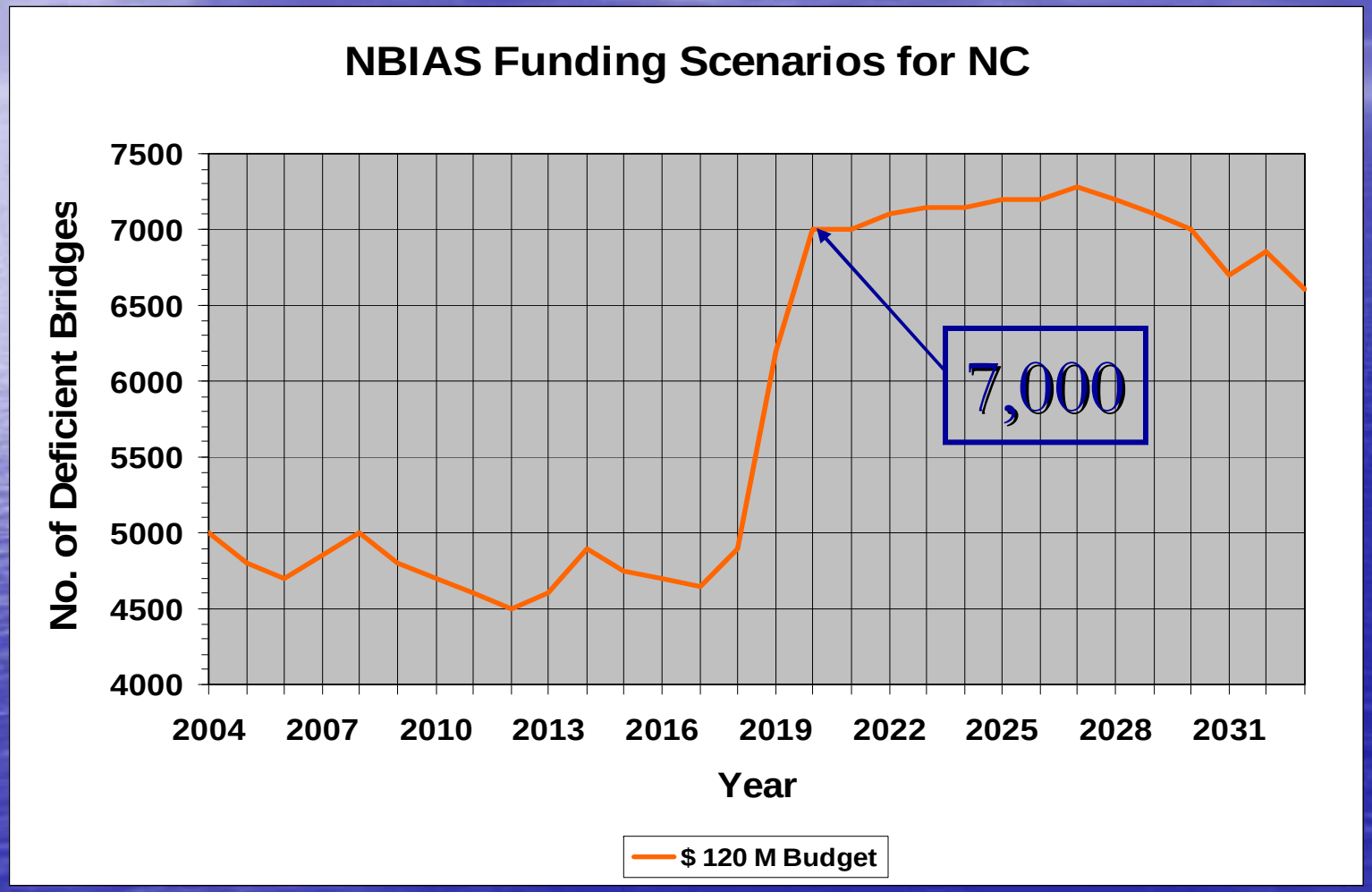
- **17,399 Total Structures including concrete culverts and metal structures (pipes) that have a span length of 20' or more; state-owned and maintained.**
- **~ 12,714 state-owned and maintained Bridges**
- **~ 35% increase in deck area in 20 years**
- **~ 2,766 bridges qualify for FHWA Funds (80% on Sec Rd)**
- **~ 838 bridges are programmed in 7-year STIP (~1,928 unfunded)**
- **~ 4,800 with timber components**

Age of NCDOT Bridges

(not including culverts)



Future Trend – Deficient Bridges



Low Impact Bridge Replacements

Mission:

- Improve the efficiency of the environmental review process for low-impact bridge replacement projects

Target:

- Deliver low-impact bridges – 1 year
- Delivery method – Division Managed Process with PEF

Low Impact Bridge Replacements

Vision:

- Flexible yet consistent and predictable
- Quick and efficient
- Avoids and minimizes impacts to resources
- Helps maintain safe mobility
- Complies with laws and regulations
- Frees up time and talent for more complex projects

Low Impact Bridge Replacements

Requested assistance from Interagency Leadership Team (ILT) – October 2008

- NCDOT
- NCDENR
- NCDCR
- NC Commerce
- NCWRC
- NOAA Fisheries
- NC Agriculture
- USACE
- EPA
- FHWA
- USFWS

Collaborative Effort

- Requested partnership help to look at streamline environmental/permitting process
- Biggest opportunity is low-impact bridges with minimal environmental impacts
- Consistent with ILT Strategic Plan – Activity B1 *"Determine ways to accelerate projects with smaller scopes of impact…review programmatic approaches to handle different laws…"* and B2 *"Focus on broader conservation efforts rather than individual projects."*

Initial Workshop for Understanding

Participants:

DCR

DENR – DMF, DWQ, DCM

EPA

FHWA

USACE

USFWS

NCDOT

WRC

Collaborative Effort

- Formed a team of core group to refine process and develop implementation actions

Team Members:

NCDOT - Ken Pace, Bill Goodwin, Jay Johnson, Elizabeth Lusk

USACE - Bill Biddlecome, John Thomas

DENR / DCM - Doug Huggett

DENR / DWQ - Brian Wrenn

FHWA - Tom Drda, Donna Dancausse

Advisors - Lacy Love, Scott McLendon, Amy Simes

What is a "low impact bridge"?

- On existing horizontal alignment
- No additional travel lanes – except one lane going to two lanes, no new bike lanes or pedestrian
- No on-site traffic (off-site detours) – unless staged construction
- Uses USACE nationwide permit 3 and/or CAMA general permit; includes situations with trout streams and non-trout streams in trout counties
- Qualifies as PCE or State minimum criteria
- Hydraulic opening: as large or larger
- Bridge to Bridge Replacements
- Could involve Outstanding Resource Waters (ORW's)

And also "Could" include….

- **T & E: none or "no effect" or "may affect not likely to adversely affect"**
- **Could be eligible for historic register**
- **4(f) De Minimus or less (minor impacts to parks, historic properties, wildlife refuges)**

But should not include…..

- FEMA CLOMR Required
- On-site Detour Required
- Major Utilities to relocate
- Water supply intake within 1 mile
- FERC Permit Required
- Coast Guard Authorization Required

What does one look like?

Sampson County Bridge #46

Or maybe this one?

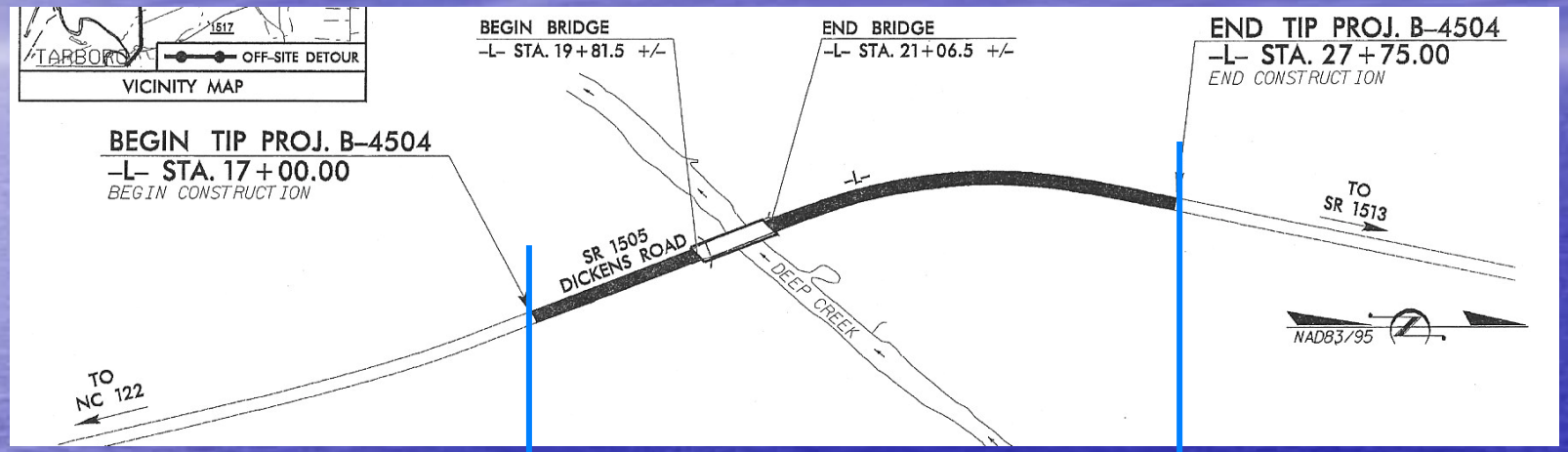
Duplin County Bridge #120

Key Process Improvements

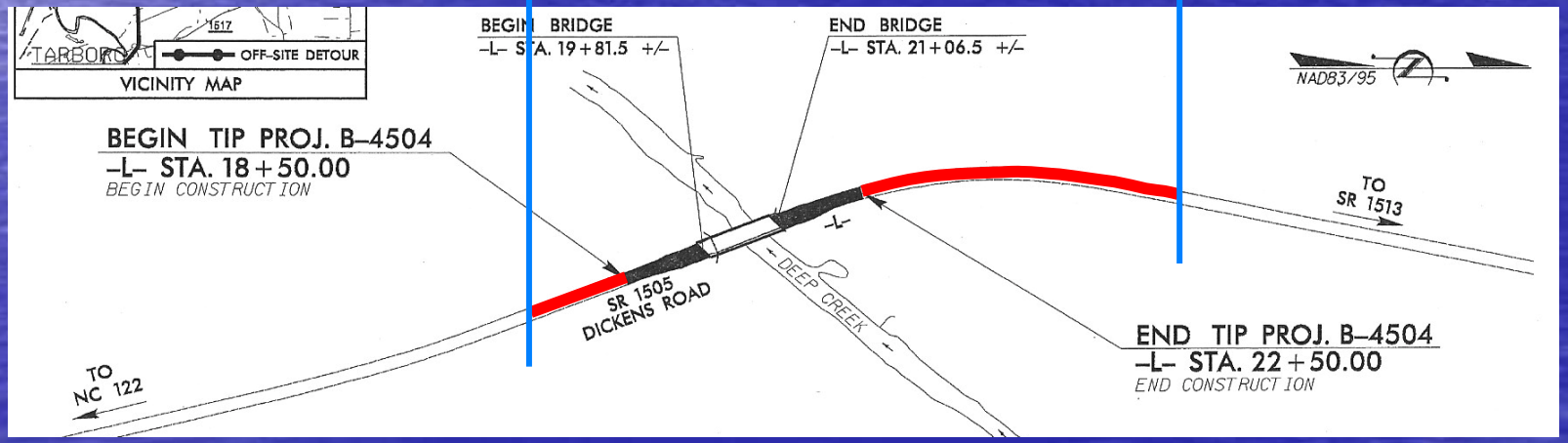
- NCDOT better defined process
- Select "Right" bridges that meet Low-impact Bridge criteria and fall under USACE NW 3
- Early communication and coordination
- Batching of projects
- DWQ Water Quality Certification
- CAMA General Permit
- Trout Stream Standard Requirements & Clarification
- Historical & Archeological Review
- Development of Master Spreadsheet for all agencies to use

New Process – Tier Design

Old Standard

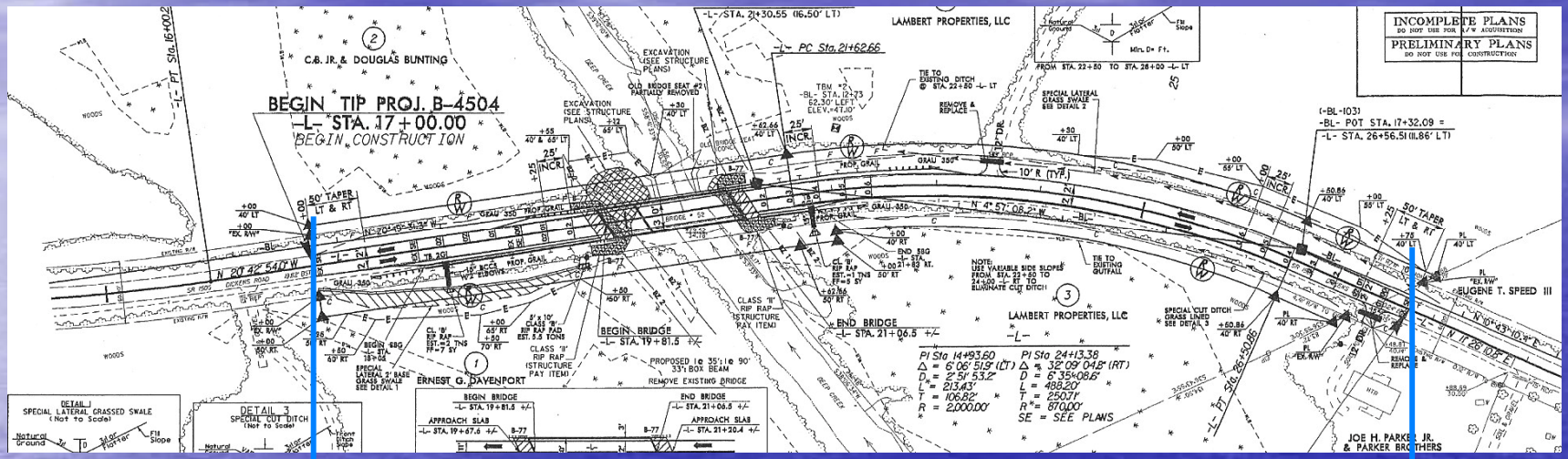


New Standard

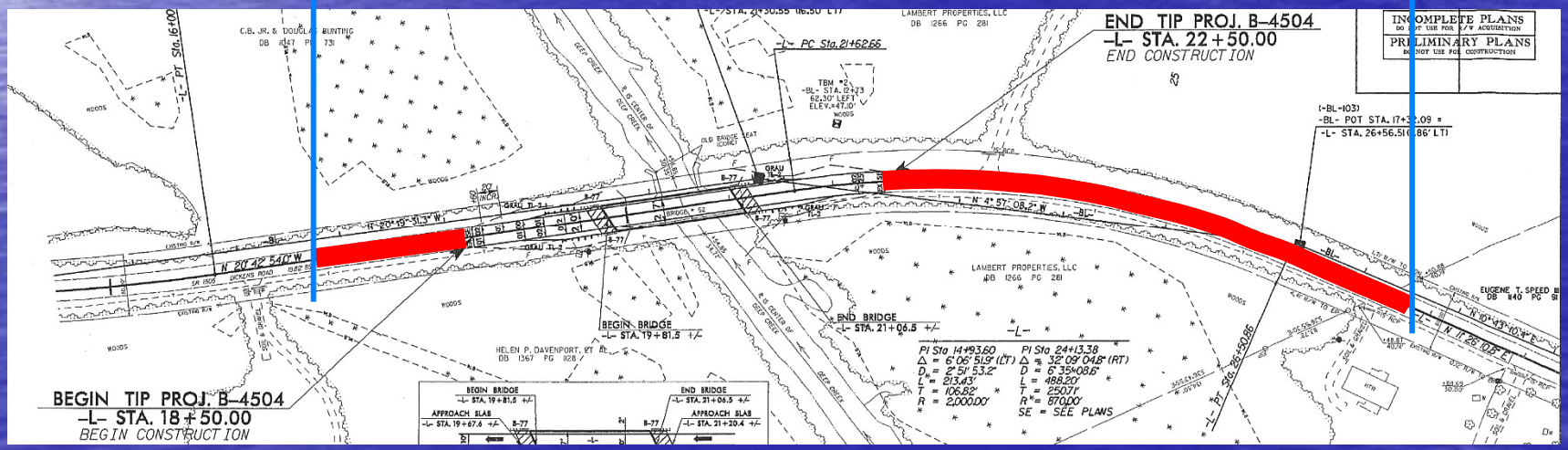


New Process – Tier Design

Old Standard



New Standard



Before – Rutherford 5

After - Rutherford 5

Before – Rutherford 5

After - Rutherford 5

Benefits

- Cost Savings (Time is Money)
- More efficient Process
- Safety
- Keeps agency staff from being overwhelmed
- Allows focus on broader conservation efforts and high environmental impact projects – Goal of ILT
- Collaborative effort between partners for common purpose

What's the plan?

- Train everyone on Manual developed by Streamlining Team
- Each NCDOT Division to identify 2 bridges to be done as pilots to test new methodology – January 2010
- Streamlining Team to review process and make modifications to process as needed – July 2010
- NCDOT to identify additional funds to increase the number of bridges replaced by this process
- Document time/cost savings – October 2010
- Streamlining Team/ILT review Program annually to continually adjust/improve process

Questions ?