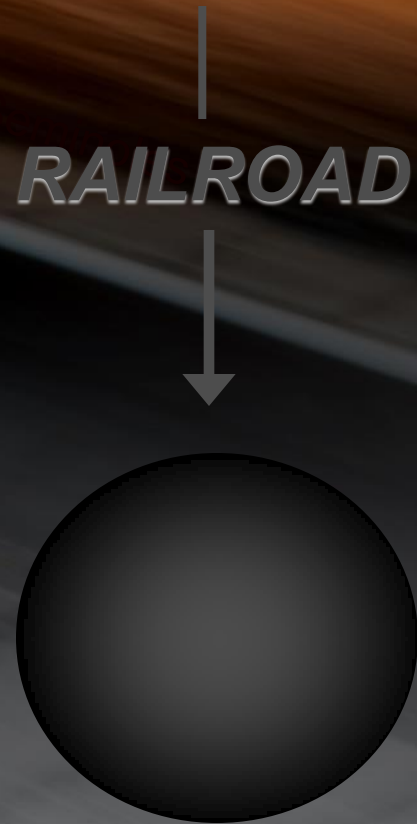


Coordinating with Freight Railroads

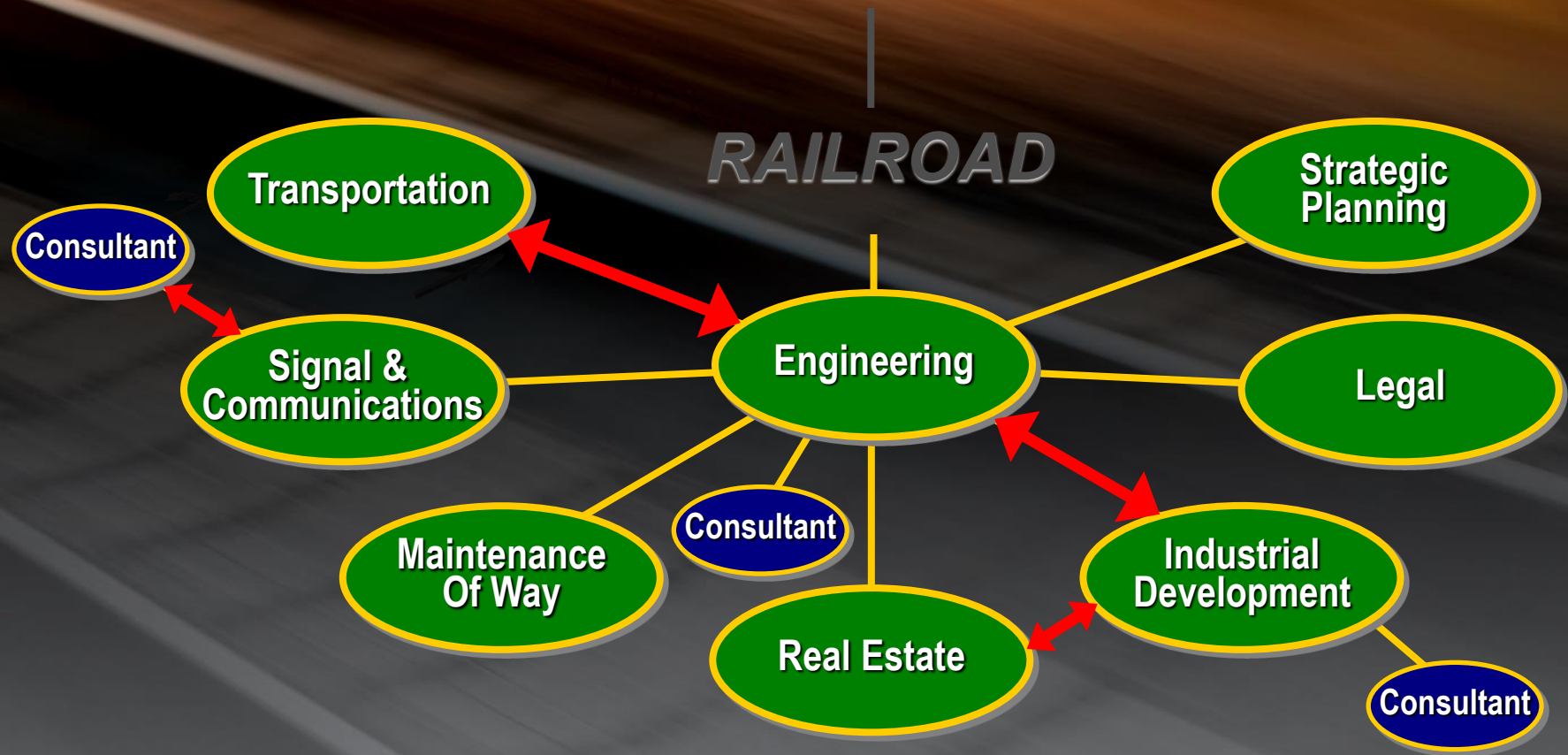
AMERICAN COUNCIL OF ENGINEERING COMPANIES
OF SOUTH CAROLINA /SCDOT FALL CONFERENCE
DECEMBER 7, 2016

George Zimmerman, P. E.
STV Incorporated

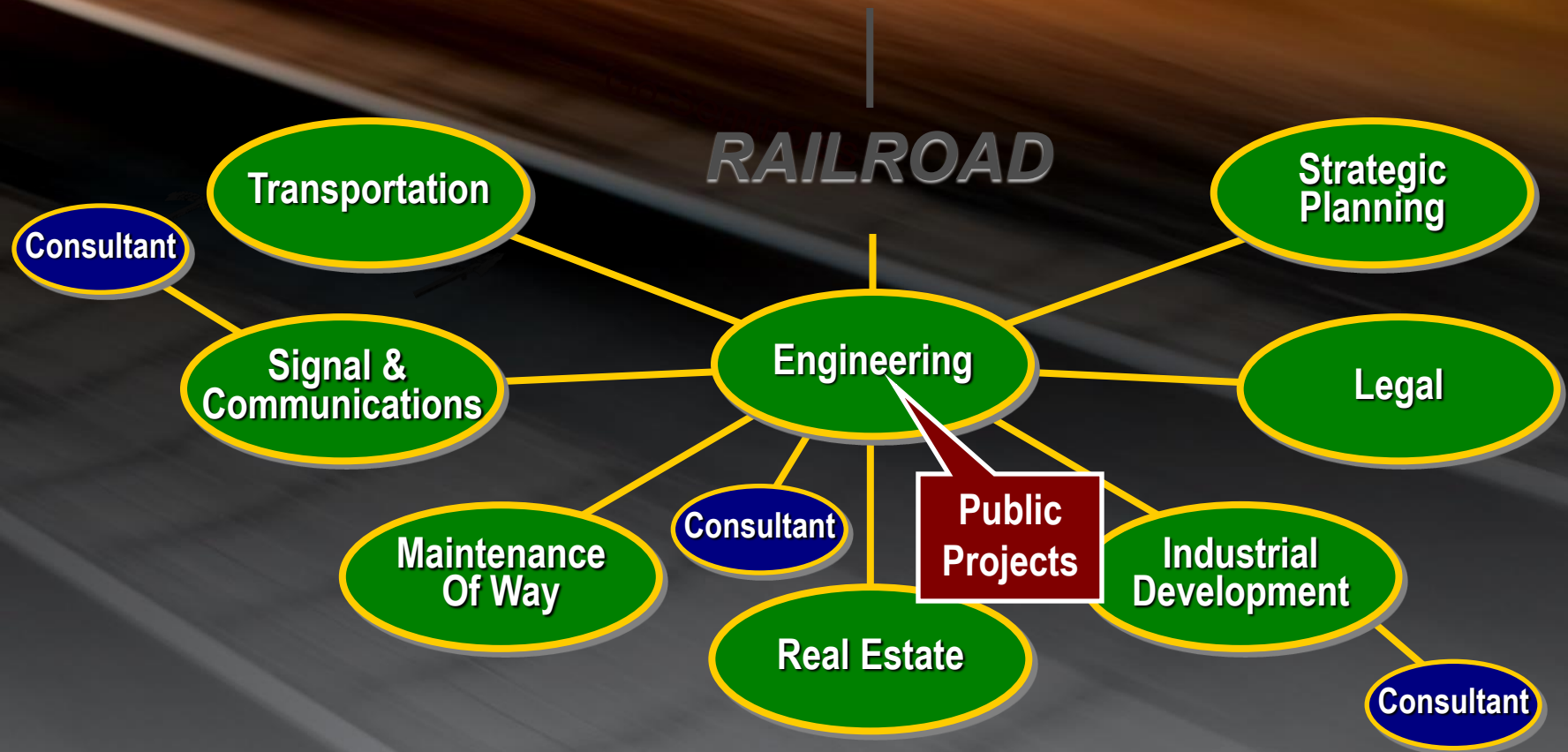
Railroad Organization



Railroad Organization



Railroad Organization



Public Projects

» Utility Encroachments – separate process

» Norfolk Southern

- *Usually thru Public Improvement Unit within Structures (or Design & Construction for larger projects)*
- *5 engineers, each w/ 3-6 states & 200–400 projects*
- *Utilize on-call consultants for reviews*
- *SC – Akyiaa M. Morrison (plus GA, AL, FL, MS, LA)*

» CSX Transportation

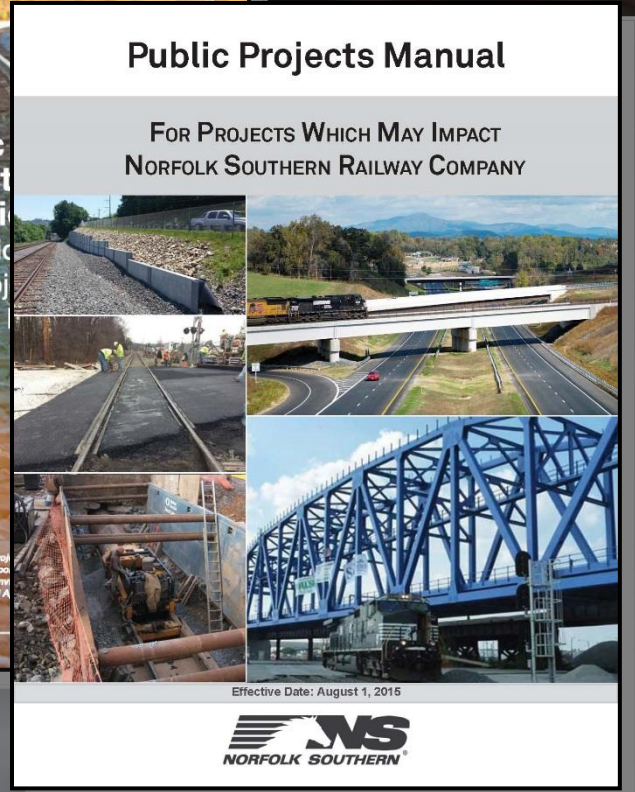
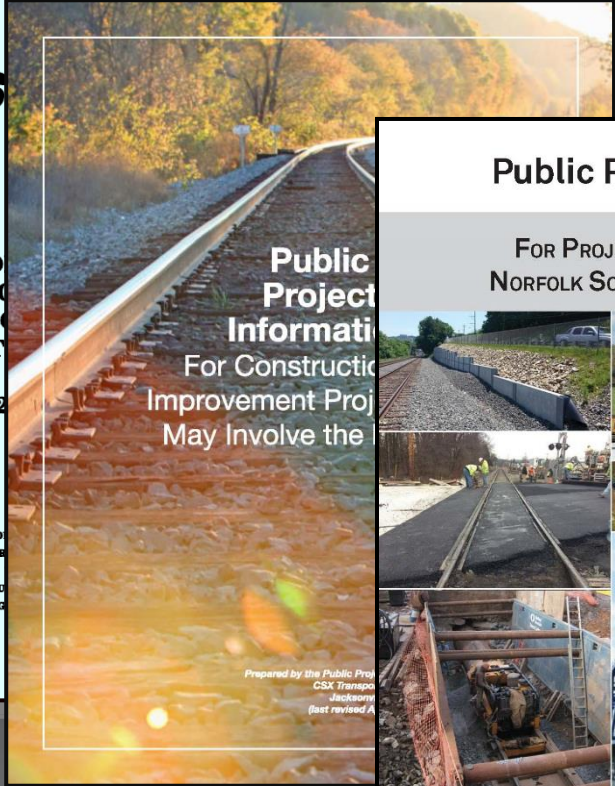
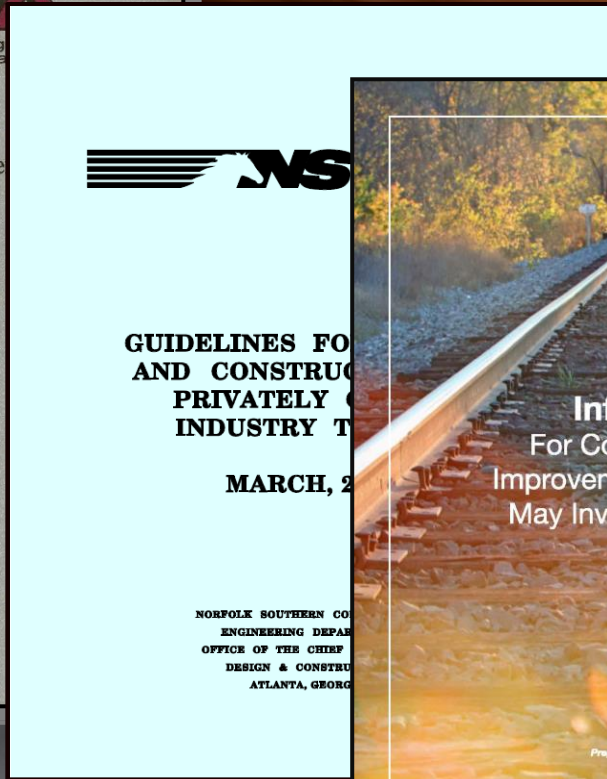
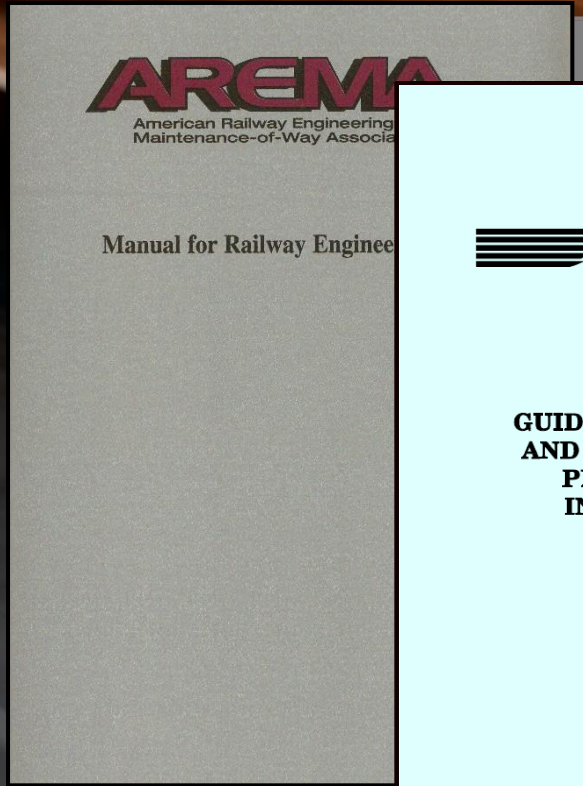
- *Thru Public Projects Unit within Design & Construction*
- *5 PM's, each w/ 3-6 states & hundreds of projects*
- *Utilize General Engineering Consultants (GECs) for entire process – require upfront PE Reimbursement Agreement*
- *SC – Doug Spitznagel (plus GA, TN, & AL)*

» Shortlines – General Manager

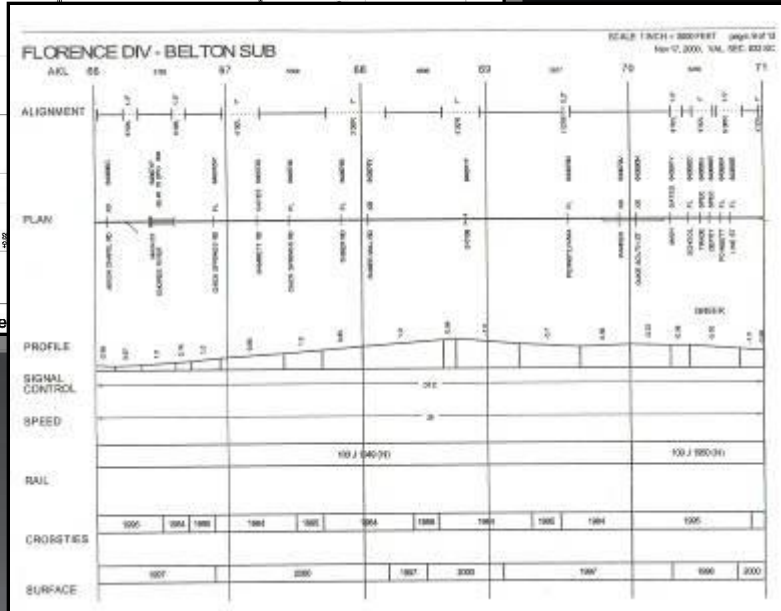
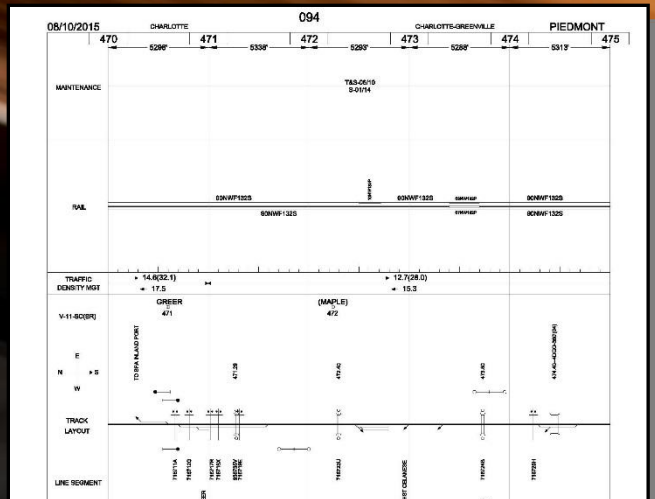
Design & Construction Considerations

- » Terminology
- » Guidelines, Manuals & Sources of Data
- » Overhead Bridges
- » Grade Crossings
- » Parallel Encroachments
- » Suggestions

Guidelines and Manuals



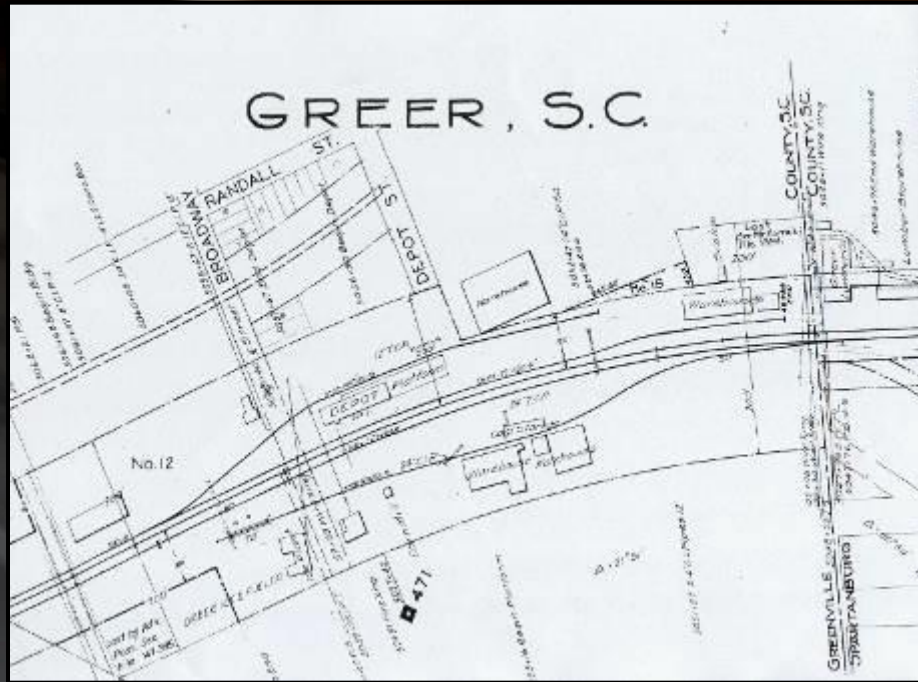
Sources of Data (Track Chart)



- » Subdivision
- » Milepost (5 mi./pg.)
- » Rail (wt.)
- » Rail traffic (mgt)
- » Layout (no. tracks)
- » Crossing info
- » Alignment (curves)
- » Profile (grades)
- » Speed (mph)
- » Maintenance

Sources of Data (Valuation Map)

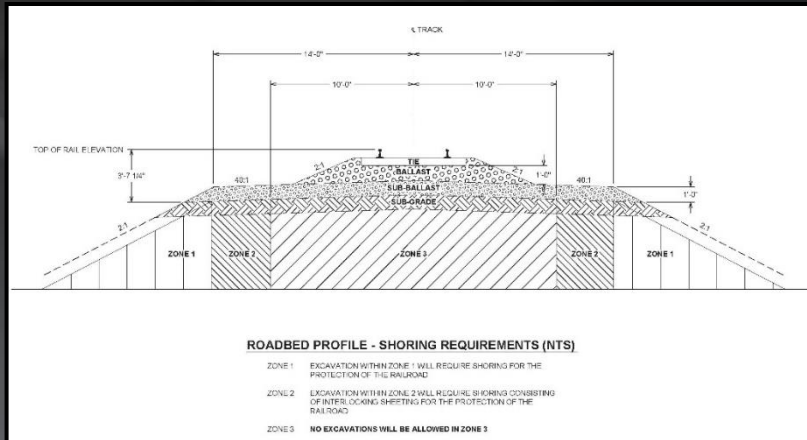
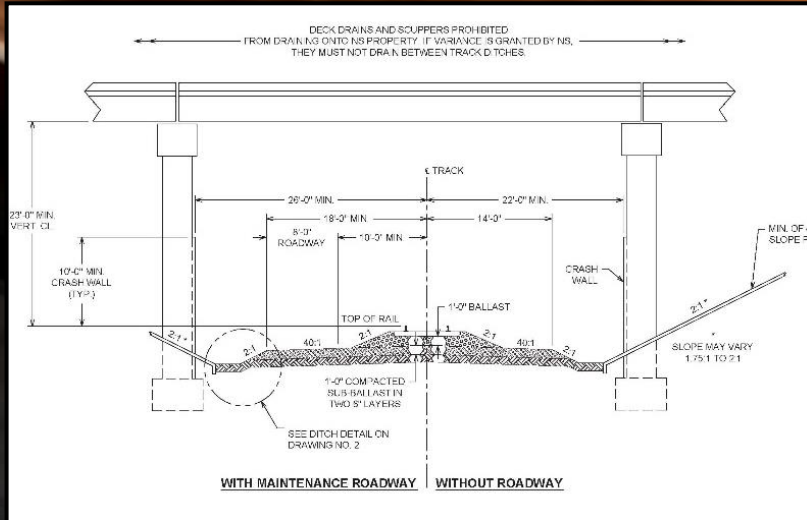
- » 1916 (random updates)
- » Original alignment
- » Some property info
- » R/W width
- » Drainage structures
- » RR Utilities
- » Crossings
- » Historical resource



Other Sources of Data

- » Timetable
- » Previous Plans
- » Railroad Files (*helps to know history of the line*)
- » FRA Grade Crossing Inventory
- » FRA Track Safety Standards
- » Suppliers

Overhead Bridges



- » Horiz. Clearances (13'-25')
- » Future Track(s)?
- » Crashwalls
- » Vert. Clearances (23' min.)
- » Drainage (from Bridge & Roadway)
- » Sight Lines to RR Signals
- » Demolition Plan
- » Shoring Requirements

Overhead Bridges



- » Equipment Clearances
- » Protection of signals
- » Drainage during construction
- » Track structure fouling
- » Good demolition planning
- » Clean ballast section

Grade Crossings



- » DOT collaboration w/
Railroad
- » Active or passive
- » Approach profile
- » Sight distance
- » Drainage
- » Utilities
- » 1-800 sign
- » Crossing material
- » Constr. staging

Parallel Encroachments



- » Multiple Railroads
- » Right of Way
- » Railroad insurance
- » Right of entry
- » RR S&C and Fiber Optics
- » Blasting
- » Drainage onto the RR
- » RR culvert connections
- » Don't paint the rail!

Suggestions

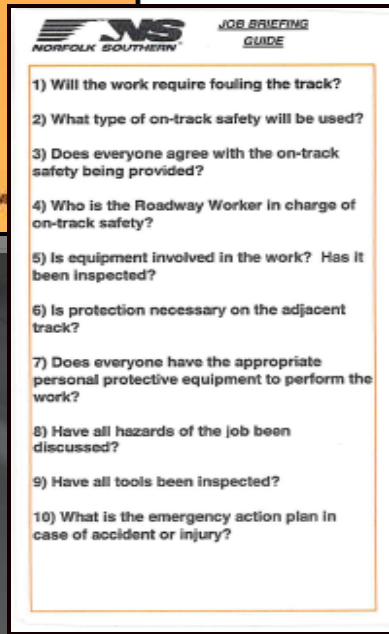
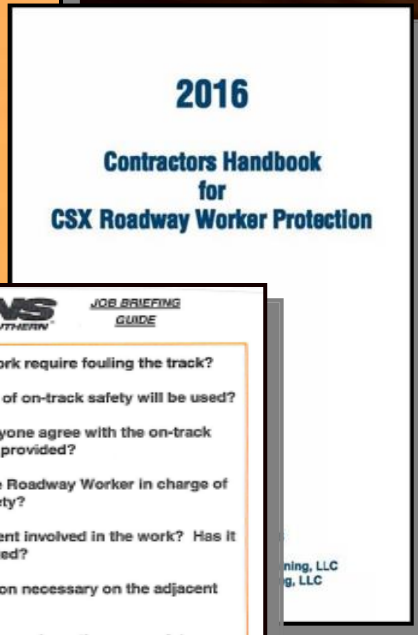
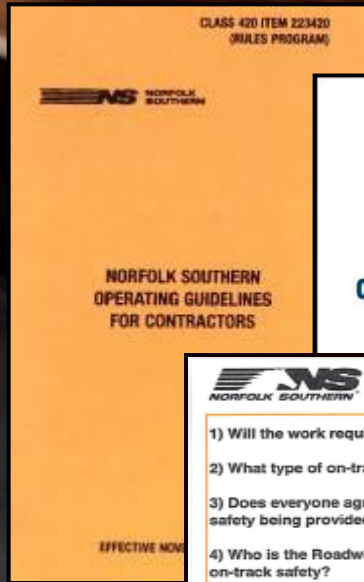
- » Avoid assuming railroads will act in “public interest”
- » Designate a senior person to build a relationship
- » Make initial contact to discuss overview
- » Understand the process and allow sufficient time
- » Follow the guidelines
- » Include the milepost and file number on everything
- » Limit submittals
- » Drainage, drainage, drainage
- » How are you going to build that?
- » Track and bridge is a small part – consider operations and signals & communications

Suggestions

- » Eliminate grade crossings
- » Understand railroad right of way ownership
- » Multiple railroads complicate things exponentially
- » Initial response is always “no”
- » Avoid “explaining” the “benefits” of your project
- » Short line general manager may be driving the train
- » A Memorandum of Understanding has loopholes
- » Coordinate locally during construction
- » They never forget
- » Safety! Safety! Safety!

Safety

(Railway Roadway Worker Protection Training)



Safety

**Before anyone in this room sets foot
on Railroad right of way, make sure
you have been Safety trained and
have checked in with the
Railroad Flagman**

***“....expect a train at any time, on
any track, from any direction,
without any warning...”***

QUESTIONS?