NORTH CAROLINA
Department of Transportation

Locally Administered Projects – Project Selection and Screening

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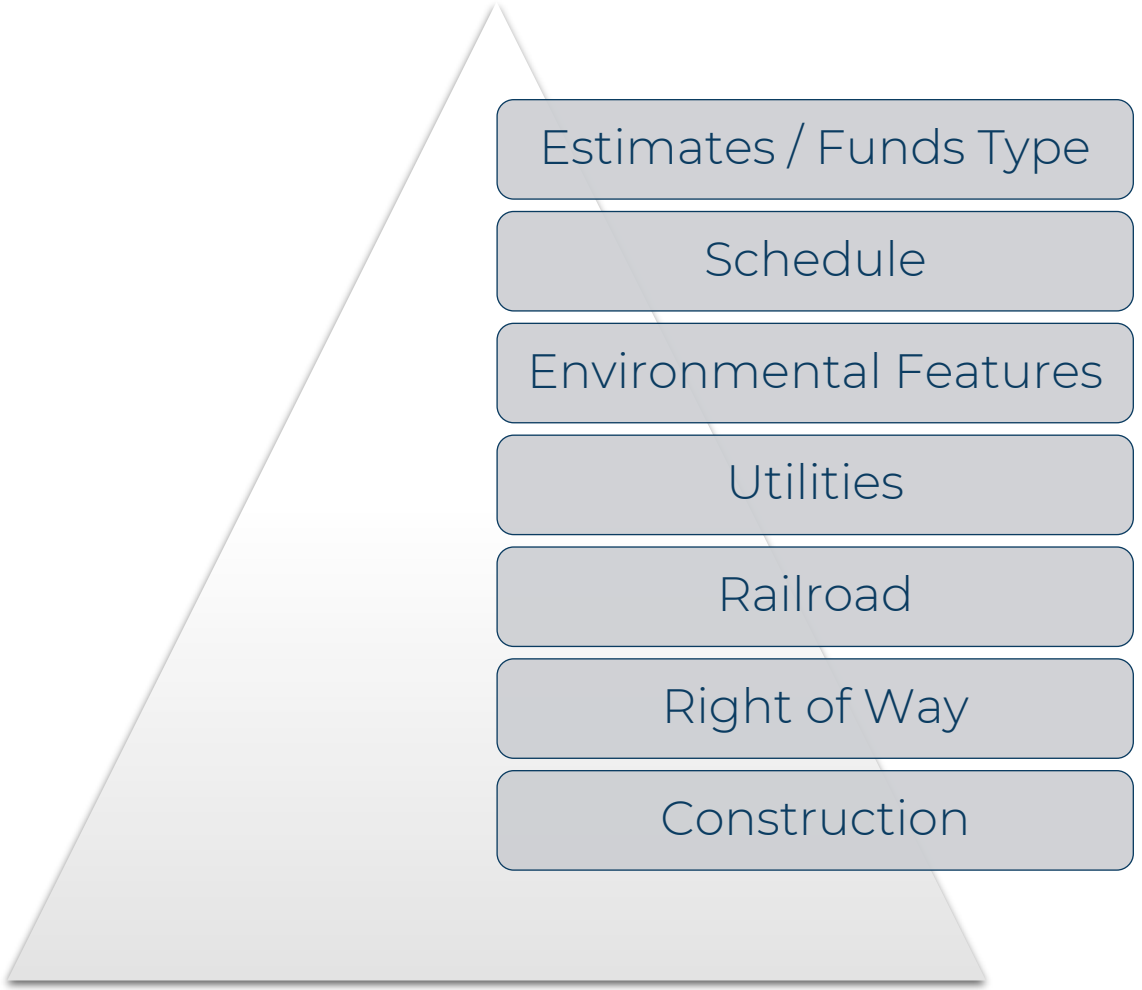
Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Screening Projects – Things to Consider



Estimates

- Initial estimates should ideally be based off quantities and conceptual design
- Rule of thumb estimates are very difficult in today's market.
- Use current prices and consider timing of project
- NCDOT publishes Average Bid Prices
- Contingencies
- Affect your programming/budgets and the STIP
- Account for NCDOT costs associated with the project

Estimates

Preliminary Engineering
- Costs will likely exceed 15% of construction costs
  - Depends on timeline / schedule
  - Scope and scale of project

Right of Way
- Account for the cost of acquiring the parcels – PEF services can range from $5K-$10K per parcel
- Take time to look at the area and account for impacts and damages in your estimates – R/W costs have increased like everything else
- Costs are often out of your control

Utilities
- PUE needs – think about right of way impacts
- Relocation costs continue to increase
  - Rule of Thumb for some common utilities:
- Encroaching facilities vs. reimbursable

Duke Energy/Dominion Distribution Pole	$27,500.00
Clearing Per Acre	$50,000.00
Directional Boring up to 4" Per Linear Foot	$250.00
Transmission (115kv/230kv) Self-Supporting Steel Pole	$350,000.00
Transmission (500kv) Any Structure Type	$750,000.00

Estimates

Construction

TIP No.			TIP Number	Express Design		County:	
Route							
From							CONSTR. COST
Typical Section			Describe the ML Typical Section				$0
Number of Lanes			2 or 3 lanes, 4 or more lanes				
Drainage Type			Curb & Gutter, Shoulder				
				Date			
Prepared By:							
Requested By:							
Priced By:							

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount	
M			Mobilization	1	LS	$ -	$ -	(5% - Roadway, Str & Utilities)
M			Construction Surveying	1	LS	$ -	$ -	
G			Clearing and Grubbing		Acre	$ -	$ -	
G			Supplemental Clearing and Grubbing		Acre	$ -	$ -	
G			Reinforced Bridge Approach Fills (1 Br = 1 RBAF)		Each	$ -	$ -	
			Earthwork					
G			Unclassified Excavation		CY	$ -	$ -	
G			Borrow Excavation		CY	$ -	$ -	
G			Removal of Existing Pavement (Asphalt or Concrete)		SY	$ -	$ -	
			Drainage					
D			Drainage New Location - Typical Section / C&G / Shoulder (L or Y Line)		Miles	$ -	$ -	
D			Drainage Existing Location - Typical Section / C&G / Shoulder (L or Y Line)		Miles	$ -	$ -	
			Pavement (Asphalt or Concrete)					
P1			Fine Grading		SY	$ -	$ -	
P1			New Pavement		SY	$ -	$ -	
P1			Pavement Widening		SY	$ -	$ -	
P1			Pavement Resurfacing		SY	$ -	$ -	
P1			_"Average Asphalt Wedging		SY	$ -	$ -	
P1			Subgrade Stabilization		SY	$ -	$ -	
P2			1'-6" Concrete Curb and Gutter		LF	$ -	$ -	
P2			2'-6" Concrete Curb and Gutter		LF	$ -	$ -	
P2			4" Concrete Sidewalk		SY	$ -	$ -	
P2			5" Monolithic Islands		SY	$ -	$ -	
GR			Guardrail		LF	$ -	$ -	
GR			Guardrail End Units		EA	$ -	$ -	
GR			Guardrail Anchor Units		EA	$ -	$ -	
GR			Removal of Existing Guardrail		LF	$ -	$ -	
			Fencing					
R			Woven Wire		LF	$ -	$ -	
F			Chain Link		LF	$ -	$ -	
L			**Erosion Control**		Acres	$ -	$ -	
			Signing					
			Are there overhead signs?					
S			L or Y Line		Miles	$ -	$ -	
			Interchange Signing					
S			Diamond		Each	$ -	$ -	
S			Half Clover		Each	$ -	$ -	
S			SPUI		Each	$ -	$ -	
S			Flyover		Each	$ -	$ -	
S			Other.....		Each	$ -	$ -	
			Traffic Control					
			Night work					
			Phasing Sequence					
			Staged Construction					
Y			(L or Y Line)		Miles	$ -	$ -	
PM			Thermo and Pavement Marking (Typical Section - L or Y)		Miles	$ -	$ -	
T			New RR Signal with Gates		Each	$ -	$ -	
T			Rubber Railroad Crossing		Each	$ -	$ -	
Z			Traffic Signal (New)		Each	$ -	$ -	**Roadway**
Z			Traffic Signal (Upgrade)		Each	$ -	$ -	$ -
			STRUCTURES					
			Girder Type					
			Staged Construction					
			On-Site / Off-Site Detour					
			New Alignment Construction					
B			Bridge - (Length & Width)		SF	$ -	$ -	
B			Construction, Maintenance, & Removal of Temporary Structure		LS	$ -	$ -	
B			Removal of Existing Structure (Width x Length)		SF	$ -	$ -	
B			Bridge Approach Slabs (2 @ Width x Length)		SF	$ -	$ -	
			Walls					
W			Noise Walls (Length x Avg Height)		SF	$ -	$ -	
W			MSE Retaining Walls (Length x Avg Height)		SF	$ -	$ -	
W			Gravity Retaining Walls(Length x Avg Height)		SF	$ -	$ -	
			Culverts					
C			Number & Size of Barrels (New or Extension)		LF	$ -	$ -	
			Utility Construction					
U			Relocate Existing Water Line		LF	$ -	$ -	**Strs & Util**
U			Relocate Existing Sewer Line		LF	$ -	$ -	$ -
			Miscellaneous (10% Strs & Util)				$ -	$ -
			Miscellaneous (40% Roadway)				$ -	$ -

Lgth	___ Miles			
		Contract Cost	$ -	$ -
		E. & C. 16%	$ -	$ -
		Construction Cost	$ -	$ -

	Description	Quantity	Unit	
	Mobilization	1	LS	$
	Construction Surveying	1	LS	$
	Clearing and Grubbing		Acre	$
	Supplemental Clearing and Grubbing		Acre	$
	Reinforced Bridge Approach Fills (1 Br = 1 RBAF)		Each	$
	Earthwork			
	Unclassified Excavation		CY	$
	Borrow Excavation		CY	$
	Removal of Existing Pavement (Asphalt or Concrete)		SY	$
	Drainage			
	Drainage New Location - Typical Section / C&G / Shoulder (L or Y Line)		Miles	$
	Drainage Existing Location - Typical Section / C&G / Shoulder (L or Y Line)		Miles	$
	Pavement (Asphalt or Concrete)			
	Fine Grading		SY	$
	New Pavement		SY	$
	Pavement Widening		SY	$
	Pavement Resurfacing		SY	$
	_"Average Asphalt Wedging		SY	$
	Subgrade Stabilization		SY	$
	1'-6" Concrete Curb and Gutter		LF	$
	2'-6" Concrete Curb and Gutter		LF	$
	4" Concrete Sidewalk		SY	$
	5" Monolithic Islands		SY	$
	Guardrail		LF	$
	Guardrail End Units		EA	$
	Guardrail Anchor Units		EA	$
	Removal of Existing Guardrail		LF	$

Estimates

Construction

TIP No.			**TIP Number**	**Express Design**		County:		
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M			Mobilization	1	LS	$ -	$ -	(5% - Roadway, Str & Utilities)
			Miscellaneous (10% Strs & Util)				$ -	$ -
			Miscellaneous (40% Roadway)				$ -	$ -
Lgth	**___ Miles**				**Contract Cost**		$ -	$ -
					E. & C. 16%		$ -	$ -
					Construction Cost		**$** -	$ -

- 5% included for Mobilization
- 10% Miscellaneous (Contingency) for Structure and Utility Items
- 40% Miscellaneous (Contingency) for Roadway Items
- 16% Engineering and Contingency for overall project – 10% CEI and 6% contingency (overruns)

Note: Contract administration costs – can exceed 20% of construction costs for local projects: E&C = ~26%

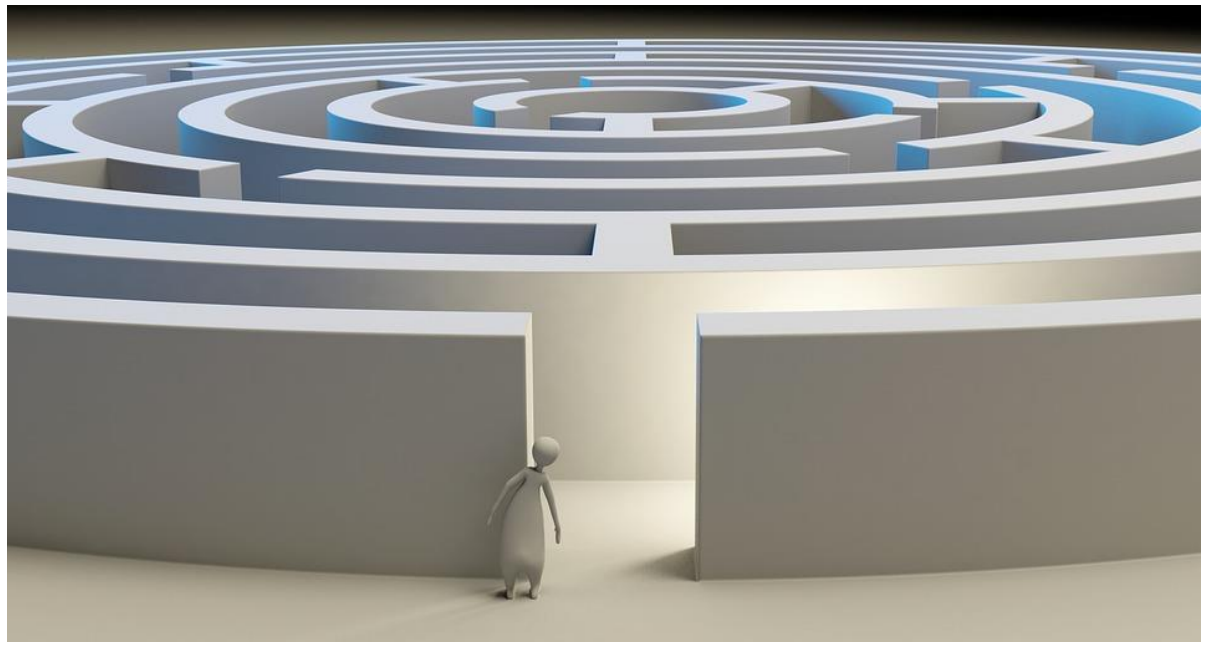
Schedule

- Be realistic when setting schedules – It's going to take longer than you anticipate
- Locally Administered Projects are in the STIP and must have a schedule!
  - LAP's affect the programming of the STIP
- Program all phases initially – PE, R/W and Construction
- Project delivery is a major emphasis with NCDOT
- When milestones are missed continually, everyone looks bad
- Expect the unexpected

Schedule

What to Consider

- NCDOT / FHWA requirements
- Administrative Actions and Timelines
  - STIP amendments, Municipal Agreements, funding requests/approvals, reviews, etc.
- Railroad
- Environmental Requirements
- Right of Way
- Utilities



Schedule

Environmental

- Utilize your technical experts!
- Use GIS and other available resources
  - NCDOT ATLAS Screening Templates – training and resources available online
- Threatened / Endangered Species
  - Survey windows and moratoriums
  - Time for consultations
- Planning and Environmental Documentation Process!

Schedule

Right of Way

- Must follow the Uniform Act
- Condemnations
- Unique Issues – multiple owners, title issues, etc.
- Septic Impacts
- Availability of resources – acquisition, appraisals

Utilities

- Power companies will not begin engineering until hydro designs are complete
- Don't forget about underground utilities / shared use on poles
- Utility company scheduling of work – remember, you aren't the only impact to them
- Even a small project can have a big effect on utilities
- Needs to be complete before construction begins

IT'S GOING TO TAKE LONGER THAN YOU THINK!!

Why is Screening Important for Project Selection

- Any project can be successful, takes proper planning
- Estimates / Schedule
- What are my risks?
- Major Milestones
- Cost / Time savings
- Consult NCDOT

Our Mission

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Our Goals

- Make transportation safer/Vision Zero
- Improve the reliability and connectivity of the transportation system
- Deliver and maintain our infrastructure effectively and efficiently
- Provide great customer service
- Be a great place to work
- Be a transparent and accountable organization
- Be a diverse and inclusive organization
- Be an innovative organization

Contact Us

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Thank you!