How A Transportation Project Gets Built

Long-Range Planning
Determining the Need

Program Development
Funding the Projects

Project Planning
Minimizing the Impacts

Project Design
Design & ROW

Construction, Maintenance, Operations
Building & Maintaining the Road

Long-Range Planning – It’s Just The Beginning
It is about the **SYSTEM**; not just about a single project.

All Modes: Highway, Public Transportation & Transit and Rail, Bicycle, Pedestrian, Aviation, and Ferry

Connectivity of Activity Centers, Emergency Centers and Routes, Institutions, and Economic Generators

**Assessment of Existing Conditions & Providing Solutions** to Projected Future Travel Demand

**Long-Range Transportation Planning Includes:**

- Monitoring Existing Conditions;
- Forecasting Future Population and Growth;
- Assessing Land Uses and Transportation Connectivity;
- Identifying Current and Future Transportation Needs;
- Developing Long-range and Short-range Programs for Capital Improvements;
- Estimating Impacts of Recommended Future Improvements; and
- Developing an achievable plan and helps to secure project funding
Federal Legislation:

1916, Federal-Aid Road Act: Federal-Aid Highway Program began.

1921-1925: Congress adopted federal-aid highway system and begins establishing routes.


1956, Federal-Aid Highway Act: Congress established Highway Trust Fund, (HTF). The National Interstate system was born!

1962, Federal-Aide Act: Required the formation of an MPO for any urbanized area; Established requirement to have a long-range plan in Metropolitan Areas; and 3-C’s are established: Continuing, Cooperative, and Comprehensive.

1982, Surface Transportation Act: Sought to unify Highway, Transit, Transportation Safety Programs under one bill. Congress creates a mass Transit Account; adds bicycle/pedestrian projects, recreational trails, and funding for freight and passenger rail.

1991, ISTEA: Intermodal Surface Transportation Efficiency Act Congress commits to a national intermodal transportation system, increased role of MPOs in funding decisions; and required Comprehensive Regional and Statewide long-term transportation plans.

1995, National Highway System Designation Act Legislation dedicated 160,000 miles of roadway to the National Highway System (NHS). NHS was developed by the US DOT in cooperation with states, local officials, and MPOs.

1998, TEA-21: Transportation Equity Act for the 21st Century Authorization that introduced Seven planning factors to be included in regional transportation plans. These are still in use today:

2005, SAFETEA–LU Safe Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
1. Support economic vitality of the metropolitan planning areas;
2. Increase safety and security for motorized and non-motorized users;
3. Increase the accessibility and mobility options for people and freight;
4. Protect and enhance the environment, energy conservation and quality of life;
5. Enhance the integration of connectivity
6. Promote efficient system
7. Preservation of existing transportation system.

Key Point for Planning:
TEA-21 and SAFETEA-LU provided the documentation that required states to develop Long-Range Transportation Planning that included both municipal and rural entities actively participating in cooperative efforts with the Department of Transportation.

2005, SAFETEA –LU
Safe Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users

- Changed the structure and requirements of longstanding programs;
- Introduced new initiatives;
- Added oversight responsibilities;
- Enhanced safety, reduced traffic congestion;
- Improved freight movement;
- Increased intermodal connectivity;
- Protected the environment.
MAP 21
2012: Moving Ahead for Progress In the 21st Century

1. Creates a performance-based surface transportation program.

2. Builds on, highway, transit, bike, and pedestrian programs and policies established in 1991, ISTEA.

3. Consolidates the program structure reducing the number of programs.

4. Expands NHS (National Highway System) to include principal arterials.

5. Changes funding distribution scheme – individual programs versus lump sum for core Highway Trust Fund programs.

6. Builds on an aggressive Highway Safety Improvement Program.

7. Accelerates project delivery and promotes innovative funding.
In 2015, Congress Continued emphasis on performance-based planning (started in MAP-21)

“a **strategic approach** that uses **system information** to make investment and policy **decisions** to achieve national performance **goals**.”
Fast Act Freight Provisions

- Accelerating **Project delivery**
- Focusing on **innovation and technology** over the next 5 years
- Establishes the National Highway Freight Program (NHFP) to enhance **efficient movement of goods**
- Requires establishment of the National Highway Freight Network (NHFN)
  - Primary Highway **Freight System** (PHFS)
  - Critical **Rural and Urban Freight Corridors**
  - ID Portions of the Interstate System that are not part of the PHFS
- Setup **National funding** for the NHFP
• Investing in improvements that **strengthen economic competitiveness**, reduce congestion, reduce the cost of freight transportation, improve reliability, and increase productivity rural and urban areas

• Improving the **state of good repair**, efficiency and productivity of the NHFN

• Improving Statewide corridor planning to address highway **freight connectivity**

• Reducing the **environmental impacts** of freight movement on the NHFN
MTPs
Metropolitan Transportation Plans

&

CTPs
Comprehensive Transportation Plans
The MTP: Establishes how the region plans to invest in the transportation system using both short and long-range strategies.

Other Federal Legislation and Core Objectives (MTP, TIP, NEPA, Title VI, E.O. 12898, E.O. 13166 Economic Vitality)

MTP’s Study

• Highway Element
• Metropolitan Transit Element
• Rail Element
• Bicycle and Pedestrian Element
• Aviation Element
• Safety and Security Element
• Congestion Management Element

Programs:
• NHPP
• STP
• CMAQ
• HSIP
• PL

• Fiscal Constraint Element
• Freight Element
• Population and Economic Study
• Environmental Mitigation Element
• Public Involvement Element
• Environmental Justice Element
• Title VI
MTP’s and Implementation: Unified Planning Work Plan

MPO FY 20XX-20XX

UPWP Task List (Summarized)

• Develop Performance Measures for MAP 21
• 2040 MTP Integration into CTP
• Studies and Plan Development
• Data Collection for Transit System
• Support Ozone Advance Program
• Update Vehicle Occupancy Rate Report
• Expand GIS Resources and Website Maintenance and Development
• Develop 2016 UPWP
• Support Recipients to Implement Transportation Alternative Grant (TAP) Projects
• Coordinate with NCDOT in Development of FY 2015-2021 Metropolitan Transportation Improvement Program (TIP).
5 Core Responsibilities Through MPOs

1. Fair and impartial setting:  ✔
   Membership decisions, select the host agency and meeting locations.

2. Identify and evaluate alternative transportation improvement options:  ✔
   Studies, model analysis, project review and feedback to transportation agencies.

3. Prepare/Maintain MTP:  ✔
   Update and development of long-range transportation plan for the planning area.

4. Develop TIP:  ✔
   Fiscally constrained short-range plan (four years). Involves project prioritization and selection of projects slated for federal funding.

5. Involve the Public:  ✔
   CAC, public drop-in sessions, workshops, special events, surveys, website, and outreach.
The Bottom Line for MPO Transportation
Stakeholders regarding Deadlines, Requirements, Public Processes, Policy and Agency Guidelines?

Where Transportation Funding is concerned ....
Compliance = Funded
Non-Compliance = Unfunded

MPO Compliance Required For:
— MTP
— TIP: 4 Year Fiscally Constrained Plan
— Meeting Air Quality Standards
— Certification Reviews
North Carolina G.S. 136-66.2. Development of a coordinated transportation system and provisions for streets and highways in and around municipalities.

A Comprehensive Transportation Plan (CTP) Is...

Multimodal Plan That Includes:
- Highways
- Public Transportation and Rail
- Bicycle Facilities
- Pedestrian Facilities

Recommendations Show Facilities As:
- Existing
- Needs Improvement
- Recommended

Roadways classified by Highway Categories:
- Freeways
- Expressways
- Boulevards
- Other Major and Minor Thoroughfares

Is Consistent with an MPO’s MTP

Elements of the Plan:

Technical Report
- Facilities Inventory
- Problem Statements
- Project Recommendations
# MTPs and CTPs

## Metropolitan Plans
- Highway Element
- Metropolitan Transit Element
- Rail Element
- Bicycle and Pedestrian Element
- Aviation Element
- Safety and Security Element
- Congestion Management Element
- Fiscal Constraint Element
- Freight Element
- Population and Economic Study
- Environmental Mitigation Element
- Public Involvement Element
- Environmental Justice Element

## Comprehensive Plans
- Highway mode
  - Highway Improvements and Facility Types
- Public Transportation and Rail modes
  - Transit, Aviation, Ferry, and Rail Corridors
- Bicycle and Pedestrian modes
  - Sidewalks, Bicycle, and Multiuse Paths

## CTP Study Analysis Process Includes:
- Deficiency and Congestion Analysis
- Bridge and Crash Locations
- Population growth and Land use Plans
- Environmental Screening
- All Existing multimodal modal plans
- Public Involvement
- Environmental Justice and Title VI Assessments
CTP Recommendations in Metrolina

Source: 2017 Metrolina MPO CTPs
CTP Recommendations & MTP Projects in Metrolina

Legend
CTP Projects
MTP Projects
Major Roadways
MPO Boundaries in Metrolina Region

Source: 2017 Metrolina MPO CTPs & 2040 MTPS for CRMPO, CRTPO and GCLMPO
Transportation Planning Documents – Long-Range Plan

2040 Statewide Plan
County and Municipal CTPs
(25-30 Year Plan)

MTP
(MPO 20-30 Year Plan)

TIP (4 Year Plan)

Consistency Required Between MPO and State Plans
Each state must submit a STIP to FHWA and FTA for review and approval at least every four years for review and approval. The STIP includes all the projects planned for implementation with the funds expected from FHWA and FTA for a four-year period, as well as all regionally significant projects which require action by FHWA or FTA or that are located in a nonattainment or maintenance area, regardless of the funding source. The STIP also includes each MPO’s TIP, and all of the projects included in the first four years of that TIP. Both the STIP and the TIP must be fiscally constrained.

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<td>Future Goals, Strategies, Fiscally Constrained Projects</td>
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<td>Transportation Investments Fiscally Constrained (Obligated)</td>
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<td>NCDOT, RPO, MPO, Participating Counties and Municipalities</td>
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<td>Future System Needs and Project Proposals Not Fiscally Constrained</td>
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Transportation Plans and Core Responsibilities

**MTP’s**

Long-Range
20-30 Years

**CTP’s**

North Carolina Statewide Transportation Plan
August 2012

<table>
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<th>Table 1 FY 2012-2018 MTP Projects to be completed</th>
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<tr>
<td><strong>2012-2018</strong></td>
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<tr>
<td>Project Location</td>
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**FED**

**State**

**STIP**

NCDOT
From Policy to Projects
2040 Plan

Prepared by
ATKINSON

North Carolina DOT
Division of Transportation
Transportation Planning Bureau
August 2012
Current CTP Process

Comprehensive Transportation Planning Process (con’t)

Sheet 2 of 2, Last Edited 6/11/12
* = critical path points
*must be completed by CTP end date
NC Communities and Transportation Planning

Develop Vision
Analyze Alternatives
Develop Final Plan
Adopt Plan

Needs Assessment
CTP Process

Develop CTP Vision

Conduct Needs Assessment

Analyze Alternatives

Develop Final Plan

Adopt Final Plan
Purpose
To establish **partnerships** needed to produce community **consensus on future transportation improvements** compatible with the community desires visions, goals and objectives, and their local policies.
Purpose
To establish current and future deficiencies for the overall (multi-modal) transportation system and survey public input.
Data Collection and Projection

Base Year Data
- Population
- Land Use Patterns
- Traffic Data (AADT)
- Vehicle Crash History
- Roadway and Bridge Conditions
- Housing and Employment Data
- Environmental Features
- Input From Local Policy Boards, Steering Committees and Public
- Current Funded TIP Projects

Future Year Data
- Project future traffic, population, land use, employment and housing.
- Analyze local traffic patterns.
  - Travel Demand models
  - Hand-Allocation
  - Trend-line Analysis
  - Projections based on nearby land use
- Identify and map existing & future capacity deficiencies.
- Examine environmentally sensitive areas, i.e., wetlands, floodplains, historic structures, threatened and endangered species.
Purpose
To develop, evaluate, and recommend *draft CTP strategies* that address transportation deficiencies in a way that is acceptable to the primary planning partners.
Purpose
To complete documentation of the draft CTP plan for endorsement by the local decision-makers and receive public comments
Purpose

To complete final adoption by all required local and state partners and our the NC Board of Transportation

Output

- Mutually Adopted Comprehensive Transportation Plan
Comprehensive Transportation Plans – CTP’s

Series of Maps

Study Report
Long-Range Planning – It’s Just The Beginning

How A Transportation Project Gets Built

- Long-Range Planning
  - Determining the Needs
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  - Building & Maintaining the Road

ncdot.gov
It is about the **SYSTEM**; It is not just about a single project.
CTP 2.0 Improvements

CTP 2.0 Committee
NCDOT & MPO/RPO Partners

- Problem Statement
- Report Committee
- Map Committee

Report Committee

- New Report Templates
  1. Core Report
  2. Rec Sheets
  3. Rec Tables
  4. Rec List
  5. CTP Inventory

Map Committee

- New Map Templates
  1. Recommendation Map(Hwy)
  2. Facility Type Map(Hwy)
  3. Bike & Ped Map
  4. PTD and Rail Map
  5. Analysis maps for all modes

Summary Plan/Report & Online Appendices
TPB’s CTP 2.0 Coordination with DOT Business Units

- **SPOT**: Align STI Categories and Control of Access Facility Definitions
- **Traffic**: Align Multi-Modal Definitions and Apply Statewide Data to long range planning
- **Bike & Ped**: Apply Statewide Freight Plan impacts
- **Public Trans**: Inform MPO or County level CTPs
- **Rail**: Inform MPO or County level CTPs
- **Freight**: Inform MPO or County level CTPs
Open Discussion