

SCRCOG

STP - Urban Application

Town or Agency: _____

Street: _____ Route No.: _____

Project Title or Name: _____

Contact Person: _____ Phone Number: _____

Each proposal must include the following:

- Letter from Chief Elected Official indicating she/he will seek local legislative approval when required**
- Project description** (see Part 1 of the application)
- Project cost estimate** (see Part 2 of the application)

General requirements:

- Roads must be on the Federal-Aid system**
(Check your federal functional classification map or call SCRCOG)
 - Urban areas: federal functional classification of *collector* or higher
 - Rural areas: federal functional classification of *major collector* or higher

Return to: Judy Gott
Executive Director
SCRCOG
127 Washington Ave.,
4th Floor West
North Haven, CT 06473

Part 1:

Project Description

Each proposal must be fully and clearly defined. At a minimum the applicant must supply the following materials for each proposal:

I. Written Description of Proposed Improvement

Provide a brief written description of the proposed improvement and why it is needed.

II. Project Location Map

Indicate the general location of the project on a suitable map. (an 8 1/2 x 11 sheet is adequate)

III. Preliminary Project Plans

Preliminary project plans, drawn at a scale of 1" = 100 feet or larger, should be submitted. The following items should be depicted on the plan or plans.

- All proposed improvements
 - drainage
 - culverts
 - sidewalks
 - traffic signals, etc.
- Existing edge of pavement
- Proposed new edge of pavement
- Project limits
- Existing property lines
- Proposed new property lines
- Utilities

This plan should be considered as a "conceptual" or "sketch" plan in which a high degree of accuracy is not required. An adequate base map for the plan would be your town assessor's maps (usually available on an air photo base at 1" = 100 feet).

IV. Preliminary Cross-Section

Provide one or more typical cross-sections (not to scale) depicting the following:

1. Pavement width (federal guidelines require at least 30 feet)
2. Sidewalk location and width
3. Utility pole placement
4. Snow shelf location and width
5. Right-of-way lines

V. Roadway Data

Provide the following information: (SCRCOG staff can help provide this information)

1. Traffic volumes: daily and peak hour

2. Speed data: posted speed, average vehicle speed, 85th percentile speed
3. Accident data: latest 3 years available
4. Local design standards

VI. General

Provide the following information:

1. Any reports or engineering studies
2. Any news articles or public comments on the problem or project

VII. Additional Questions

In addition to the basic materials requested above, the applicant should answer the questions below which are intended to address basic issues about existing conditions, project management, impacts on private property, utilities, wetlands, etc. You may provide your answer in the space provided below or submit separate answer sheets.

(a) Functional Classification

Indicate the functional classification of the road as designated for the Federal-Aid system.

Urban Areas		Rural Areas	
<input type="checkbox"/>	Principal Arterial	<input type="checkbox"/>	Principal Arterial
<input type="checkbox"/>	Minor Arterial	<input type="checkbox"/>	Minor Arterial
<input type="checkbox"/>	Collector	<input type="checkbox"/>	Major Collector
<input type="checkbox"/>	Local (not eligible)	<input type="checkbox"/>	Minor Collector (not eligible)
		<input type="checkbox"/>	Local (not eligible)

(SCRCOG staff can assist in providing the above information)

(b) Design

1. Has any survey or design work already been done? Explain

2. Will the design be done by town forces or by a consulting firm?

(c) Rights-of-Way

1. Existing ROW (feet):
Proposed ROW (feet):
(50 feet is the minimum allowed in most federal projects)

2. Generally describe the nature and extent of the ROW impacts (e.g. 10-15 strip takes, 1 total)

3. If you anticipate that there will be ROW impacts, please supply the following:
 - a. a copy of the zoning map for the area, and
 - b. a copy of the assessor's map for the project area (including the parcel numbers)
4. How many takings will result in nonconforming lots that will require a zoning variance?
5. Do you anticipate any problems obtaining the zoning variance?
6. How many families and/or businesses will be displaced ?

(d) Pavement

1. Existing pavement type and width:
2. Will existing pavement be left as is, overlaid, reconstructed or recycled?
3. Proposed new pavement structure. Describe type & depth of each course including the base.

The DOT minimum standards for pavement are:

collectors	arterials	
3"	4"	Superpave 0.5 inch (previously Class 1 bituminous concrete)
6"	6"	Superpave 1.5 inch (previously Class 4 bituminous concrete)
10"	14"	Suitable subbase

(e) Utilities

1. List all utilities and their owners within the project area (gas, water, sewer, electric, telephone, cable TV, etc.)

2. If any of these utilities are likely to be affected by the project, please explain the nature and extend of the impact.

3. Are there any plans to expand or improve existing utilities within the next five years?

(f) Storm Water Drainage System and Under Drains

If you propose to modify, replace, or install a system, please indicate the nature and extent of improvements. Provide a rough estimate of the improvements needed (e.g. length of new storm sewer pipe, number of new catch basis, etc.)

(g) Culverts, Bridges & Other Crossings

Identify any existing crossings that are likely to be modified (e.g. extended), rehabilitated, or replaced as part of the project. Indicate the type of improvement needed and the reason for it. If any existing crossings have inadequate hydraulic capacity, please indicate:

(h) Railroad Grade Crossings

Identify any existing crossings and indicate if any modifications are needed.

(i) Sidewalks

Provide a rough estimate of the number of linear feet of sidewalk to be replaced or constructed. Specify the type of material.

What percentage of the above is for "replacement" of existing sidewalk?

(j) Parks, Cemeteries, Historic Structures

Identify any parks, cemeteries, or historic structures that are likely to be affected by the project.

(k) Wetlands

Identify any wetlands that are likely to be affected by the project (Locate them on a map if that is more appropriate).

(l) Hazardous or Contaminated Sites

Identify any known or suspected sites that are likely to be affected by the project. If the project includes work in the vicinity of a gas station or other facility with underground storage tanks, the locations should be identified. (Locate them on a map if that is more appropriate).

(m) Traffic Signals

Identify any intersections where traffic signals will need to be modified, replaced, or installed. If it is an old signal you should consider replacement rather than modification in your cost estimate. Indicate who is responsible for maintenance, ownership, and electrical cost.

(n) Curbing

Providing a rough estimate of the number of linear feet of new curbing to be installed. Specify the type of curbing. If you are going to reuse existing granite curb, please indicate.

(o) Retaining Walls

If you anticipate using retaining walls, please provide a rough estimate of the height, length, and type of materials.

(p) Transit, Pedestrians, and Bicyclists

Identify if the proposed project supports the region's transit system and, if it is supportive, explain why.

Identify how pedestrian mobility and safety issues may be improved by the proposed project.

Indicate if the proposed project supports bicycle mobility and safety and, if it is supportive, explain why.

Part 2:

Cost Estimates

All proposals for SCRCOG's STP-Urban Program must include a cost estimate based on the general procedures provided below.

In order to develop a program of projects that we can finance within the limits of available funds, we must receive project cost estimates that are reasonably accurate and not subject to significant increases upon completion of design.

Therefore, we are requiring the following:

1. **Design costs.** As the CDOT policy allows participation in all phases of the project, an estimate of the design costs should be included in the estimate of project costs. Design costs which exceed CDOT guidelines relative to construction costs will not be eligible for reimbursement.
2. **Right of way costs.** A preliminary estimate of the number of properties impacted and the extent of right of way required should be included. An estimate of the market value of the anticipated acquisitions should be provided if donations are not envisioned. Your local assessor can provide information to assist in the preparation of these estimates.
3. **Detailed Estimate Required.** All estimates must be developed from a detailed list of construction contract items, estimated quantities of those items, and unit prices based on recent bid prices for similar projects. The sample cost data supplied in this document are in **English units**, however, a town may prepare its quantity and cost estimate using **metric units**.
 - *Individual Unit Costs.* The recommended unit prices included in this part are based on average unit prices for road improvement projects awarded by the Connecticut Department of Transportation (CDOT). If a town chooses to use a different set of unit prices it must **document** that the prices are based on recent bids for projects that are similar in nature and scale.
4. **Include Itemized Cost Sheet with Application.** An itemized cost estimate sheet must be included as part of the proposal. The latest CDOT unit process are on the CDOT web site www.ct.gov/dot/cwp/view.asp?a=2288&q=259474.
 - A town may substitute its own cost estimating form for the list of contract items included with documentation as noted above.
5. **Use Specified Cost Factors.** All estimates **must include the specified factors** for minor items, inflation, contingencies, incidentals, and trafficperson hourly rates.
 - *Minor Items (20% or less):* Minor items include materials and services not normally identified *early* in the design process. As per the latest CDOT cost estimating guidelines, the following should be applied depending upon the status of the design:

Less than 30% design completion – Add 20% of Roadway and Structure items

30-65% design completion – Add 10% of Roadway + Structure +Environmental + Traffic Items

More than 65% design completion – No additive required since the estimate is based on actual quantity take-offs.

- *Inflation (10% per year – assume 3 years or to the estimated year of construction)*
- *Contingencies and Incidentals:* Incidentals include construction survey, construction inspection, redesign necessitated by problems found in the field, materials testing, & miscellaneous items. CDOT guidelines require the following:

<u>Project Value</u>	<u>Incidentals</u>	<u>Contingencies</u>
Less than \$1 million	25%	10%
\$1-5 Million	21%	10%
\$5-50 Million	15%	10%
Over \$50 Million	12%	7%

Percentages are applied to the sum of Roadway Items + Structure Items + Environmental Items + Traffic Items + Lump Sum Items.

- *Trafficperson :* In many instances this item is largely underestimated. During the estimating process, Towns need to first determine who will be on site during construction (Police Officers or Uniformed Flaggers) and how long their services will be needed. The estimated hours need to be multiplied by the following rates: State, Town (City) Police Officer - \$75 per hour; Uniformed Flagger - \$55 per hour.

Example: Assume a construction duration of 5 months (100 working days) and a need for 1 Police Officer and 1 Flagger.

Police Officer: (100 days) x (8 hrs/day) x (\$75/hr) = \$60,000

Flaggers: (100 days) x (8 hrs/day) x (\$55/hr) = \$44,000

Total Trafficperson Cost = \$104,000

- *Other Underestimated items:* Many projects show large increases in the following items at project completion. Careful consideration of these items during estimating is critical to accurate estimates of the costs of the project.

Underestimated items:

- Controlled Material Handling
- Disposal of controlled material
- Rock Excavation
- Turf Establishment
- Pavement Markings

- *Utilities:* The cost of utility work is often difficult to ascertain prior to design. Projects on local roads requiring utility work may not require payment to the utility for relocation work. Work performed by the South Central Regional Water Authority is part of the project costs. It is

suggested that SCRCOG be contacted after a preliminary assessment of the utility work to insure reimbursable costs are included in the estimate.

- *Lump Sum items:* Anticipated lump sum items which are project specific should be identified and an estimate of costs established. The CDOT guidelines attached outline percentages to be applied at design completion for general lump sum items applicable to all projects.
- *Other Costs:* The CDOT guidelines attached to this document should be carefully reviewed to insure that all costs are anticipated and included in the estimate.

Cost Summary: Sheet 1 - PE, ROW, & CN Costs

TOWN: _____
 PROJECT: _____

1. Traditional Roadway Project on "Local" Road

	COST	Federal Share		State Share		Local Share	
Design			80%		10%		10%
R.O.W. ^(A)			80%		10%		10%
Construction ^(B)			80%		10%		10%
TOTAL			---		---		---

2. Traditional Roadway Project on "State" Road

	COST	Federal Share		State Share		Local Share	
Design			80%		20%		0%
R.O.W.			80%		20%		0%
Construction ^(B)			80%		20%		0%
TOTAL			---		---		---

3. Pavement Rehabilitation Projects

	COST	Federal Share		State Share		Local Share	
Design	-----	-----	0%	-----	0%	-----	100%
Construction ^(B)			80%	-----	0%		20%
TOTAL			---	-----	---		---

(A) Towns may opt to administer the Right-of-Way Phase. However, if assistance from the Connecticut Department of Transportation is needed, the Department will assist towns in the process but delays in project scheduling may occur.

(B) Enter Construction Cost from line 17 of construction cost summary sheet (page 11).

Cost Summary: Sheet 2 - Construction Costs

Town: _____

Project: _____

1.	Construction Items (from your itemized estimate)		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
2.	Environmental Compliance Items		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
3.	Trafficperson (See page 9)		
4.	SUM of 1 thru 3		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
5.	Minor Items (20% or less. See page 8 & 9)		
6.	SUM of 4 and 5		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
	Lump sum items (estimate as % of line 6 using percentages suggested below)		
7.	Clearing & grubbing	2%	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
8.	Mobilization	8%	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
9.	Maintenance & protection of traffic (Trafficperson not included, See Item 14)	3%	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
10.	Construction Staking	1%	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
11.	SUM of 6 thru 10		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
12.	Contingencies (10 % of line 10 - see page 9)	10%	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
13.	Incidentals (15% or 21% of line 11 - see page 9)		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
14.	SUM of 11 thru 13		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
15.	Utilities (enter only if on State roads or RWA)		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>