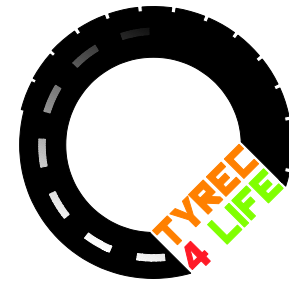




Progetto cofinanziato dall'Unione
Europea nell'ambito del
programma LIFE+
LIFE10ENV/IT/000390



TYREC4LIFE: Innovative technologies and environmental solutions for road pavements

Implementation of the «dry» technology

ing. Daniele Calorio – Brillada Vittorio & C.

Turin, September 18, 2015



PATRIMONIO
Città di Settimo Torinese s.r.l.



Impresa
BRILLADA VITTORIO&C

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CENTRO ESTERO INTERNAZIONALIZZAZIONE
PIEMONTE Agency for Investments, Export and Tourism



**DEVELOPMENT AND IMPLEMENTATION OF INNOVATIVE AND
SUSTAINABLE TECHNOLOGIES FOR THE USE OF SCRAP TYRE
RUBBER IN ROAD PAVEMENT
LIFE10 ENV IT 000390 « TyRec4Life »**

www.tyrec4life.eu

3. Experimental investigation and technology development

3.1: Characterization of bituminous binders

3.2: Characterization of bituminous mixtures

**3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing
prototype**

**3.4: Development of «dry» solutions for reduction of energy consumption
and emissions**

3.5: Reduced-scale test sections with «dry» technology

3.6: Reduced-scale test sections with «wet» technology



3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

1) Preparatory activities

- Literature review;
- Technical survey.



POLITECNICO & BRILLADA

2) Preliminary design of the prototype

- Assessment of current conditions;
- Selection of additional components;
- Layout definition.



BRILLADA

3) Laboratory screening study

- Analysis of the effects of production variables.



POLITECNICO

4) Final design of the prototype



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5) Construction and validation



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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

2) Preliminary design of the prototype



DESIGN CRITERION: Maximum flexibility in terms of:

- Mode of introduction of CR
- Quantity of CR in bituminous mixtures
- CR type



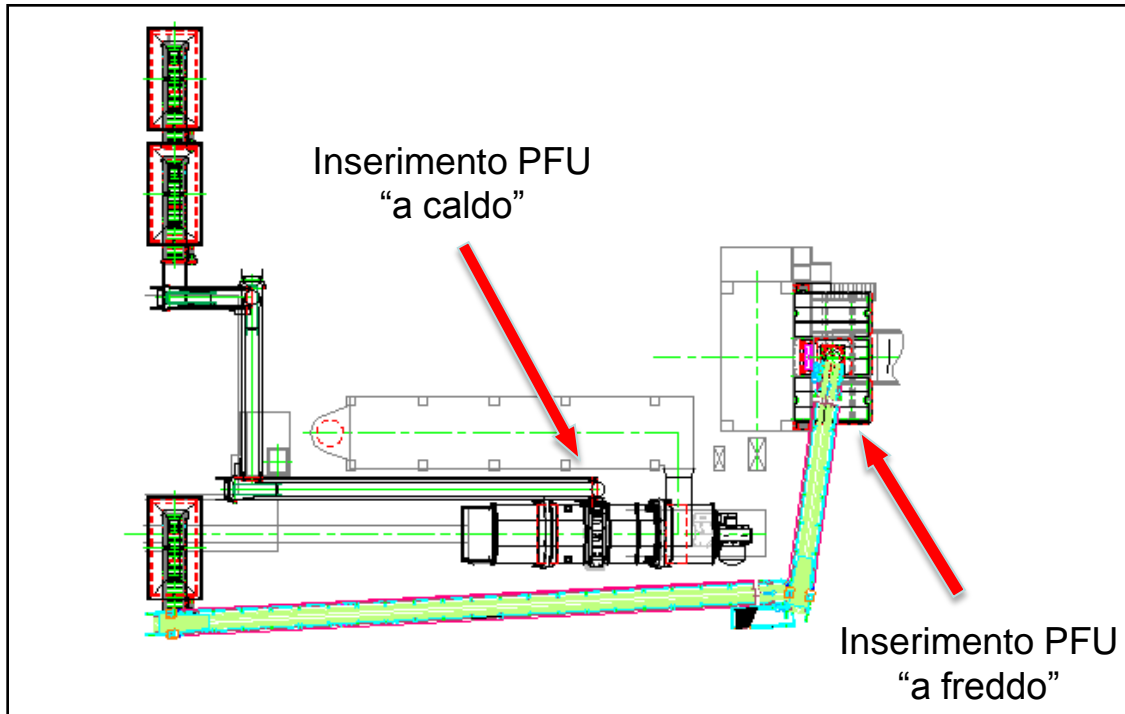
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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

2) Preliminary design of the prototype



Double ring oven for the mixing of aggregates with CR

Layout

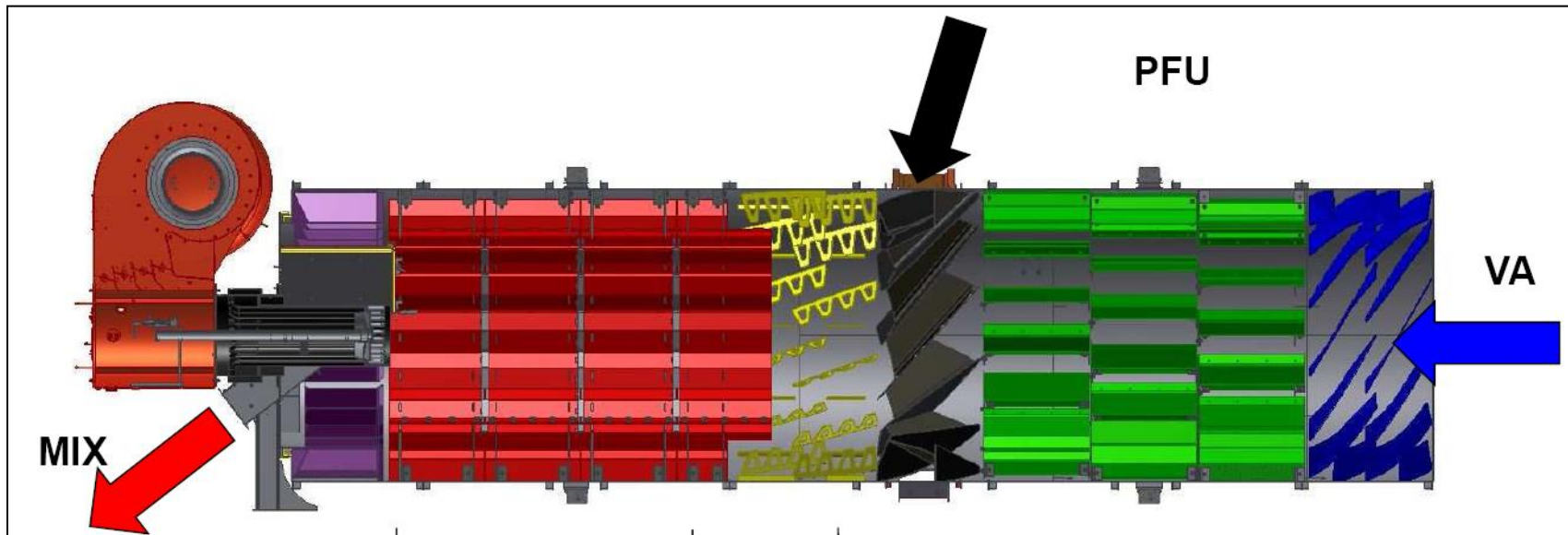


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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

2) Preliminary design of the prototype



Working scheme



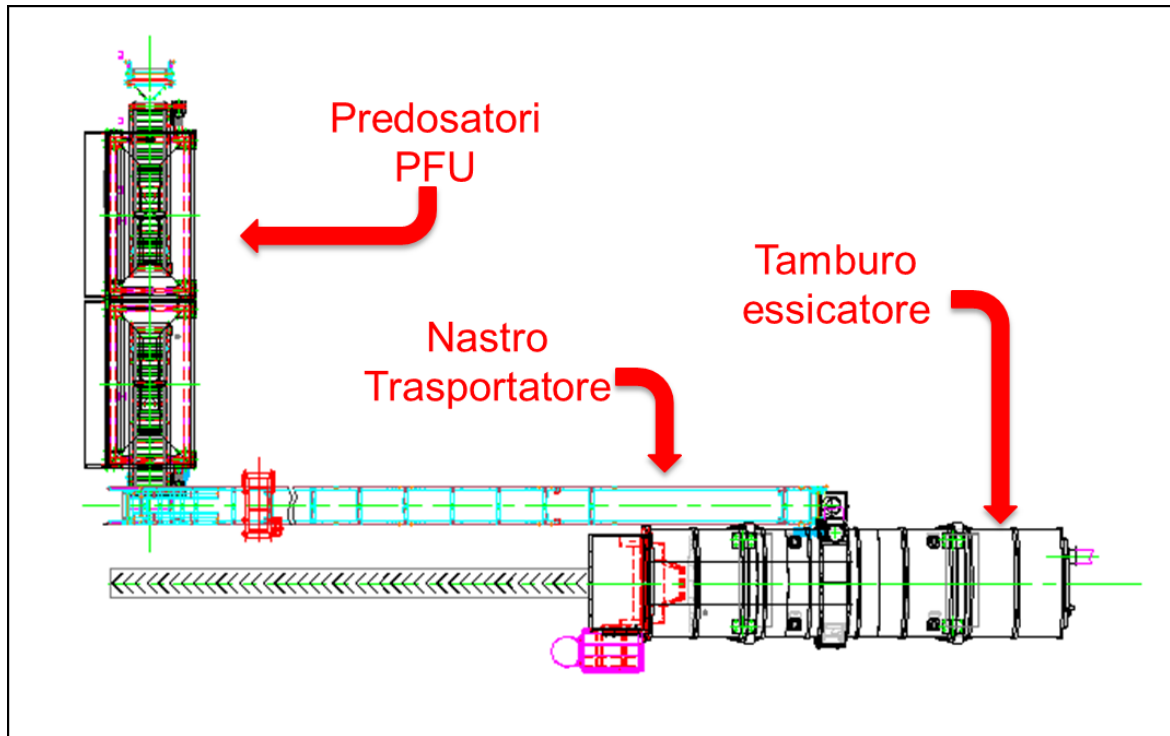
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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

3) Final design of the prototype



Elimination of the «cold» CR feeding option

Layout



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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

5) Construction and validation – Transportation of components





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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

5) Construction and validation – Assembly of the prototype





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3.3.1 & 3.3.2: Development and construction of a full-scale «dry» mixing prototype

5) Construction and validation – End of installation





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- 3.5: Reduced-scale test sections with «dry» technology
- 3.4: Development of «dry» solutions for reduction of



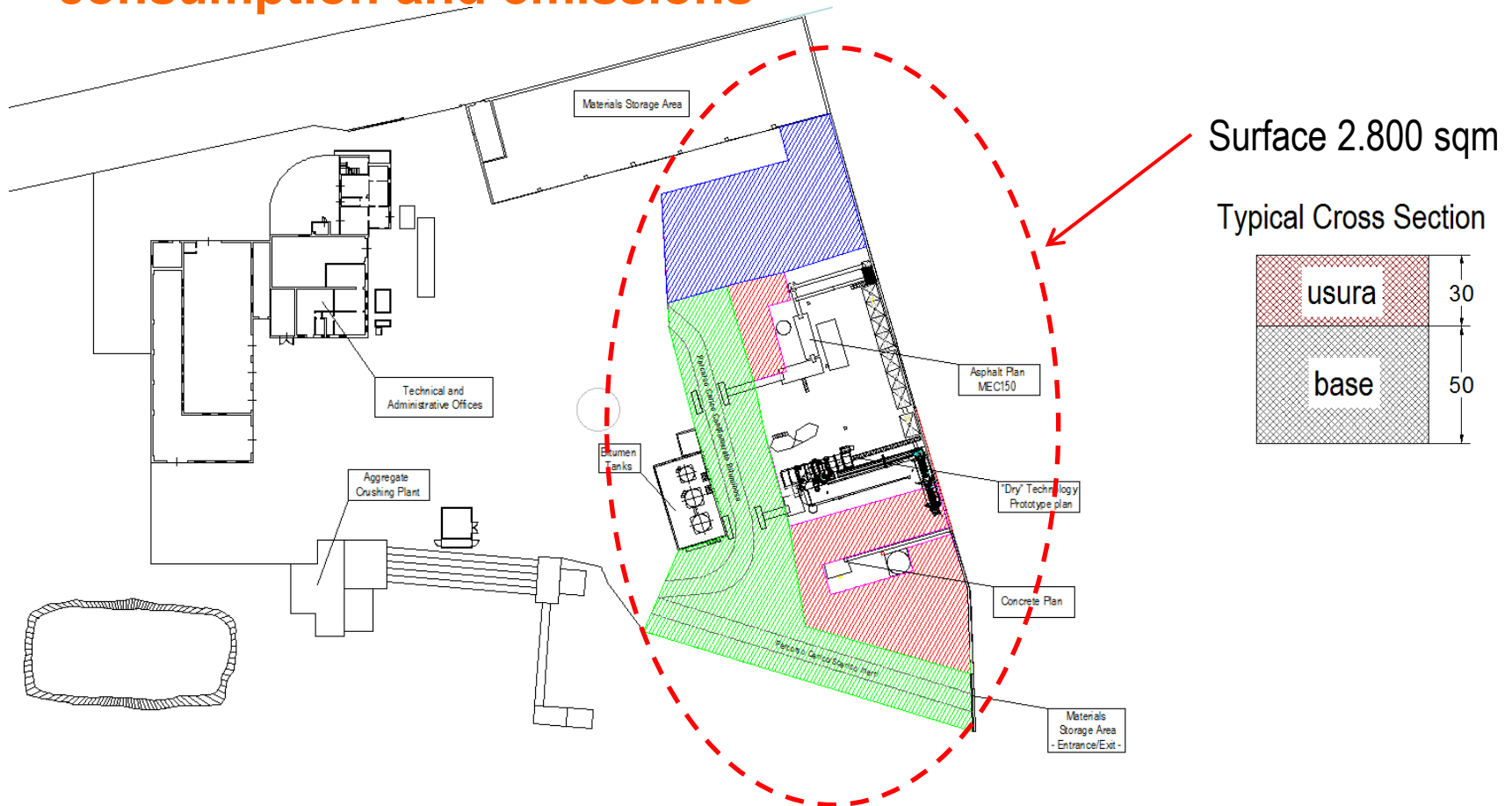
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3.5: Reduced-scale test sections with «dry» technology

3.4: Development of «dry» solutions for reduction of energy consumption and emissions





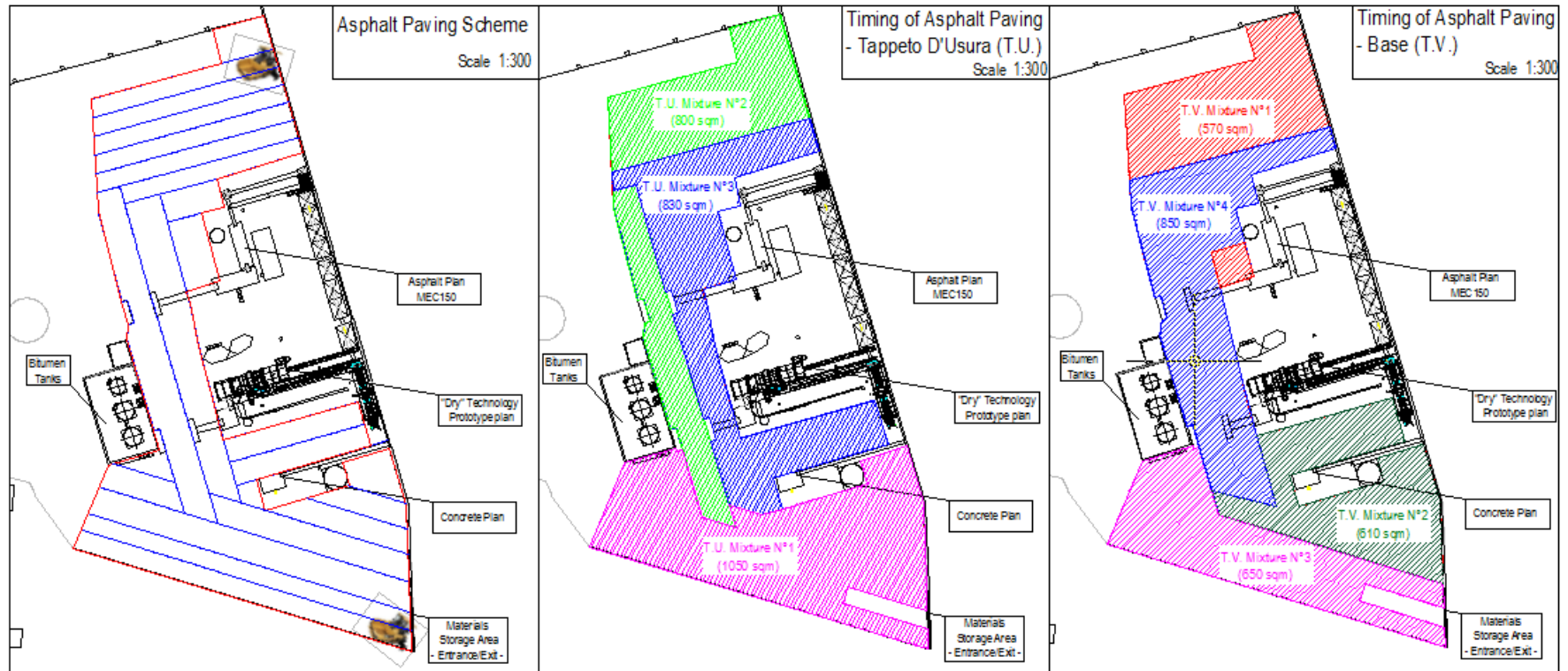
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“Ultrafine” CR 0-0.4 mm



“Coarse” CR 1-4 mm





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**Thanks for your attention and
for your interest in the
TYREC4LIFE project**

