

Gravel and Lightly Surfaced Road Rehabilitation

Alberta Protocol Stakeholder Consultations ~ DATE KB1
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Slide 1

KB1

Insert Date

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Gravel and Lightly Surfaced Road Rehabilitation

- Seed Materials
 - Good Practice Guidance
 - CDM protocols
 - Project evaluations
- Technical Review
 - Alberta process with gov't and industry stakeholders

Gravel and Lightly Surfaced Road Rehabilitation

- Project Condition
 - Use of road rehabilitation equipment
 - Recycling of aggregate without significant stone fracturing or base contamination
 - Reduction in quantity of new material used
- Baseline Condition
 - Resurfacing of the road using all new materials
 - Production / transportation of materials results in GHG emissions due to fossil fuel combustion

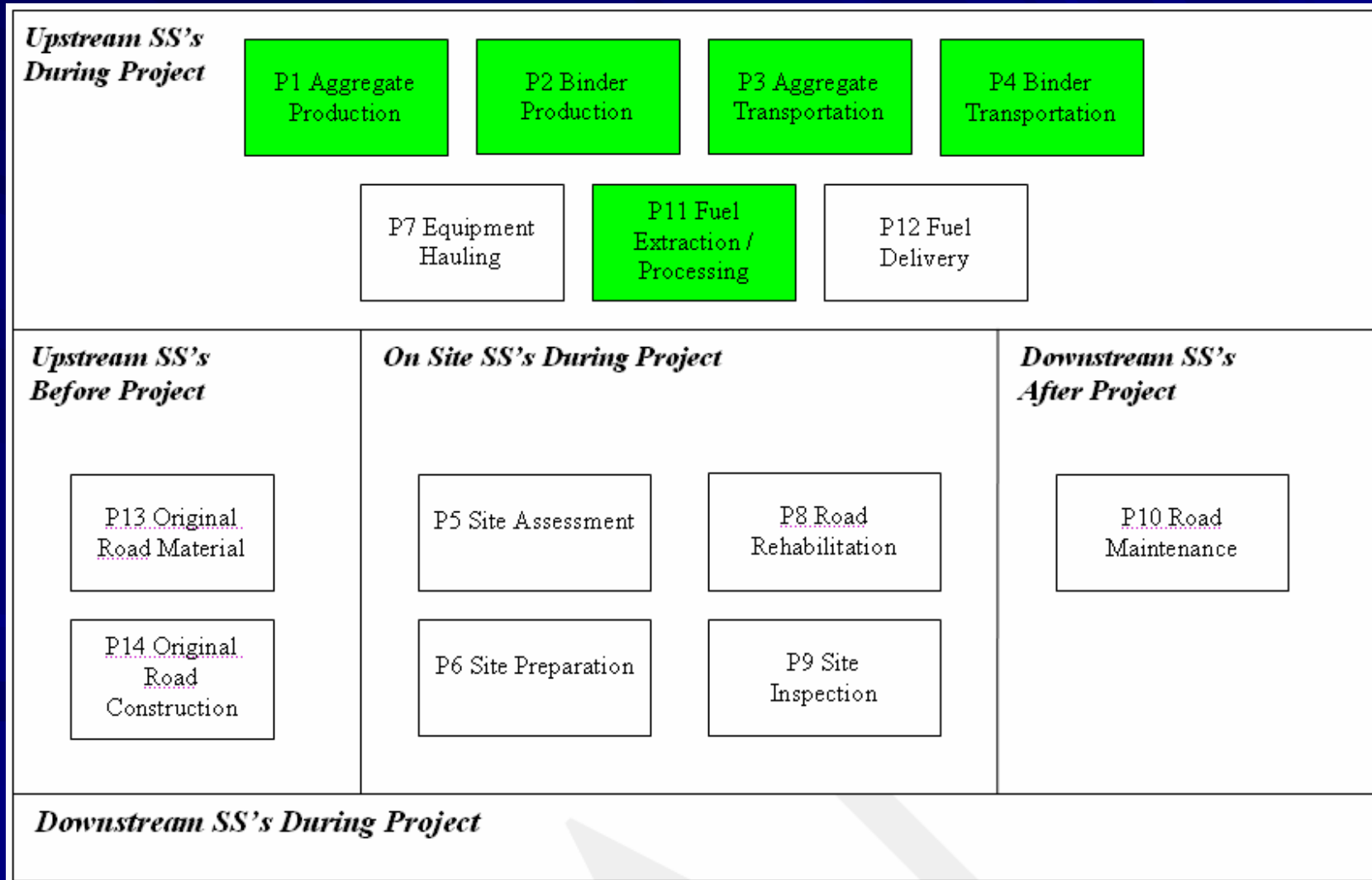
Gravel and Lightly Surfaced Road Rehabilitation

- Functional Equivalence
 - Equivalent energy production
 - No change to the product or service
- Emission Reduction Mechanisms
 - Reduce use of fossil-fuel derived energy in road rehabilitation
 - By recovering aggregate from existing road bed, mixing with new materials and redepositing the material
- Applicability criteria
 - Must involve the recovery, recycling and re-depositing of materials from existing roads, including some supplementation with new materials as part of the road rehabilitation
 - Rehabilitated road must meet or exceed specifications for traditional resurfacing according to the relevant standard
 - Quantification of reduction must be based on actual measurement and monitoring

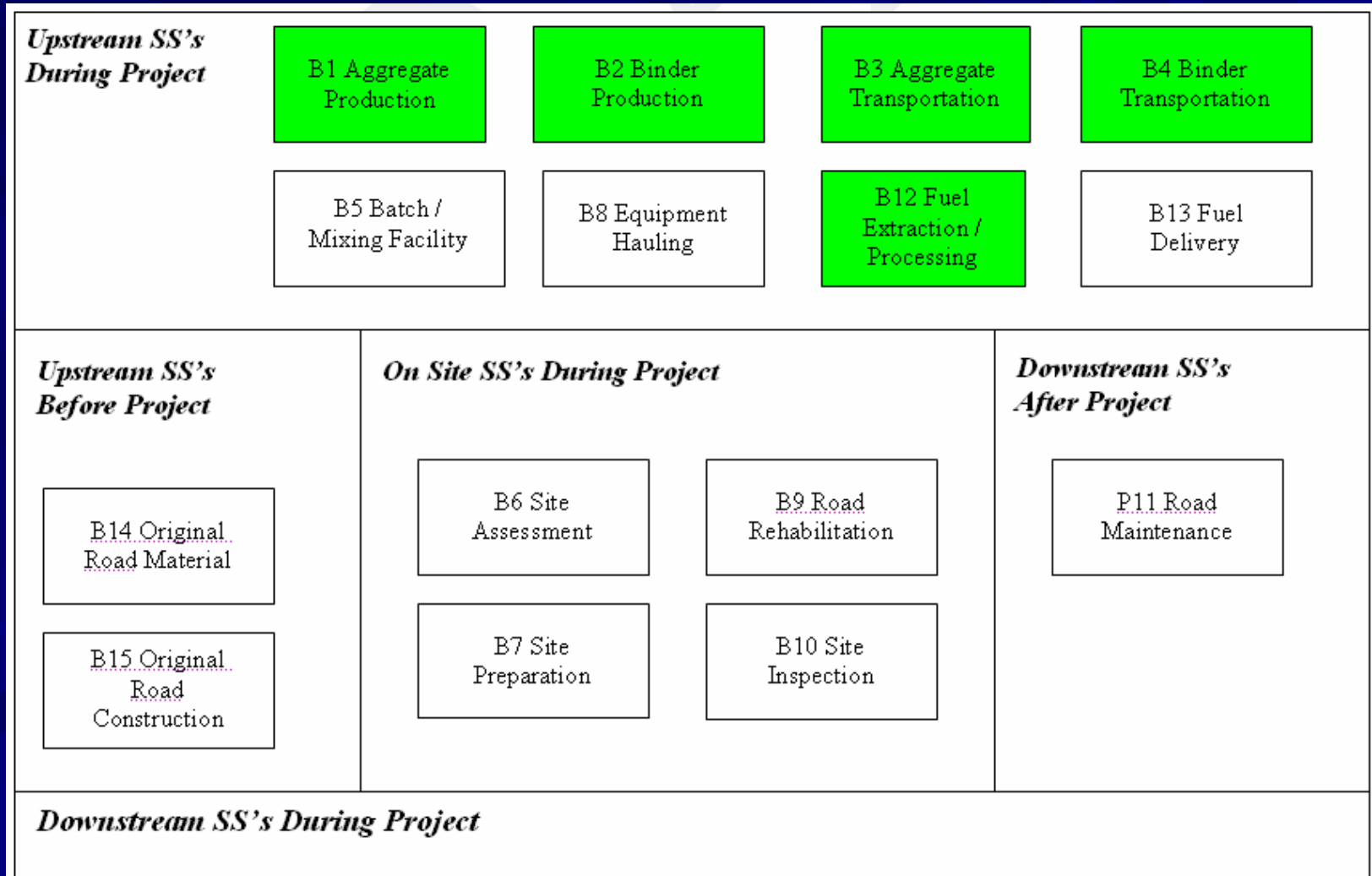
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- Flexibility mechanisms
 - Calculation of aggregate transportation distances may employ regional average distances from a mining site
 - Sufficient evidence must be provided
 - Site specific emission factor usage

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$$\text{Emission Reduction} = \text{Emissions}_{\text{Baseline}} - \text{Emissions}_{\text{Project}}$$

$$\begin{aligned} \text{Emissions}_{\text{Baseline}} = & \text{Emissions}_{\text{Aggregate Production}} + \text{Emissions}_{\text{Oil Production}} \\ & + \text{Emissions}_{\text{Transportation Aggregate}} + \text{Emissions}_{\text{Transportation Oil}} \\ & + \text{Emissions}_{\text{Fuel Extract / Process}} \end{aligned}$$

$$\begin{aligned} \text{Emissions}_{\text{Project}} = & \text{Emissions}_{\text{Aggregate Production}} + \text{Emissions}_{\text{Oil Production}} \\ & + \text{Emissions}_{\text{Transportation Aggregate}} + \text{Emissions}_{\text{Transportation Oil}} \\ & + \text{Emissions}_{\text{Fuel Extract / Process}} \end{aligned}$$

- **Data Capture**

- Volume of fossil fuel consumed
- Mass of aggregate used
- Length of road being rehabilitated
- Volume of each type of binder used
- Number of loads and distance driven per job

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- Questions and Comments
 - Technical issues?
 - Policy concerns?
 - Customization questions?
 - Linkage issues?