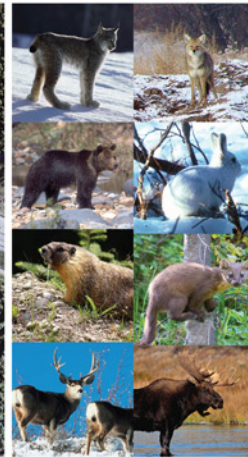


location and position Wildlife Crossing Vail Pass



wildlife variety



Denver - Vail region

SUMMARY

Landscape intervenes in the collision between the natural and human-dominated worlds of the West Vail pass. It reconnects landscapes with a charismatic wildlife that depends on this place.

From the landscape, the wildlife crossings needs to be experienced as an artificial construction, absorbed into the wilderness and the landscape. Three curves connect both parts of the valley split by the Interstate-70. The first curve is the actual bridge; the second curve is the ground level that advances over the bridge. The third curve is the continuation of the natural vegetation over the bridge that transforms from mature forest to shrubs on the centre of the bridge itself. This picture trademark is the starting point for the integration and design of the eco passage.

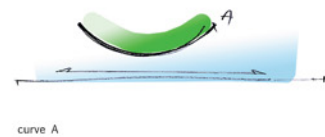
Prolonging the landscape trademark, 'curves' are the main organizing elements for the architecture of the load bearing structure itself. In cross section the curve 'contains' the landscape and the wildlife that overpasses. At the same time it is an 'inviting' shape in the perpendicular direction for the traffic that underpasses. In longitudinal direction a curve carries the over passing landscape and Wildlife. In the perpendicular direction it is a gesture with a generous height letting the highway landscape and traffic underpass. The size of the landscape and wilderness needs to reflect in the size and span of the wildlife crossing and contributes to a safe passage.

These two main organizing curves are combined to a double curved surface from which a thin shell structure is generated. This 'ideal' symmetrical surface combined with the not symmetrical geo contours derived from the sites topology and morphology generates a form that is both contexts sensitive and at the same time will follow the natural curves of the forces. A natural, and at the same time artificial shape, a 'Landscape' is created.

Landscape is a cost effective and innovative solution for road ecology. Combining proven technology with forward and state of the art materials and forward parametric design tools into a cost effective and feasible solution yet compelling to the public and suitable to the scale of the Great American landscape of the southern Rockies.

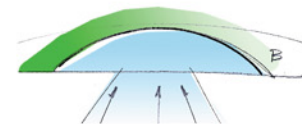
 landshape

ARCHITECTURAL CONCEPT



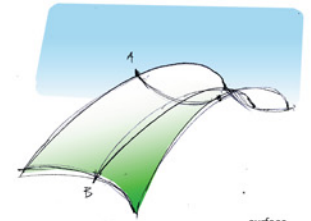
curve A

+

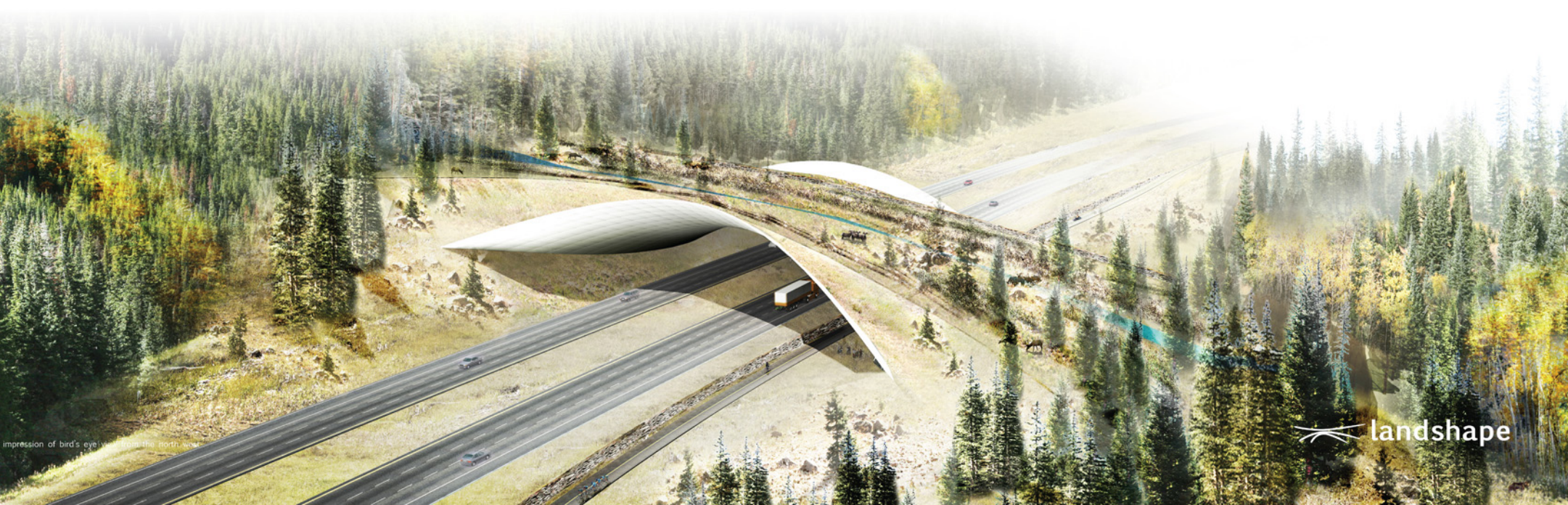


curve B

=

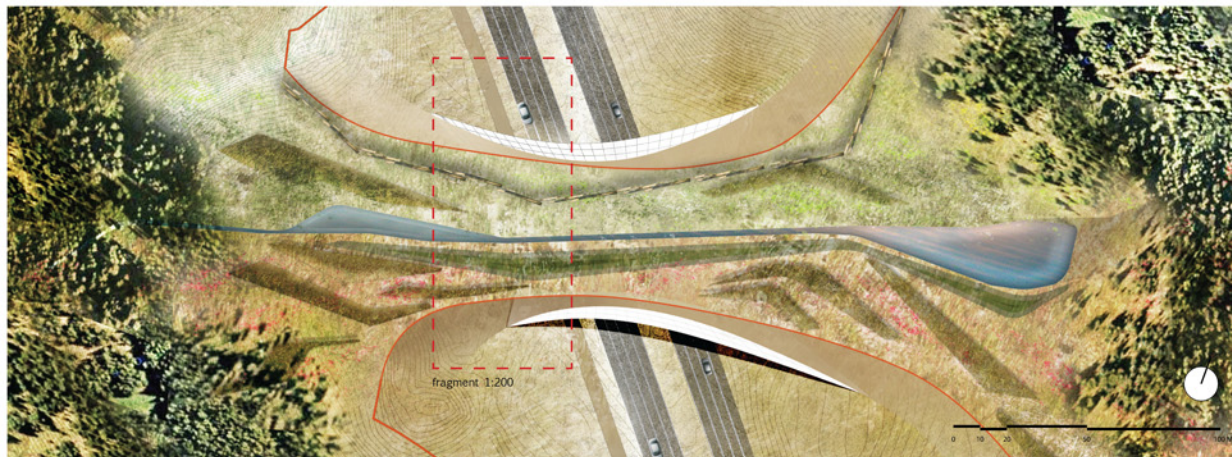


surface



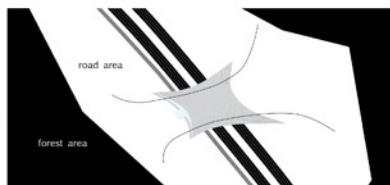
impression of bird's eye view from the north west

 landshape



detailed site plan, scale 1:1000

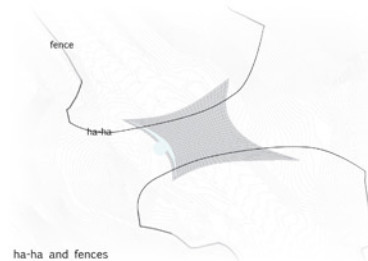
LANDSCAPE CONCEPT



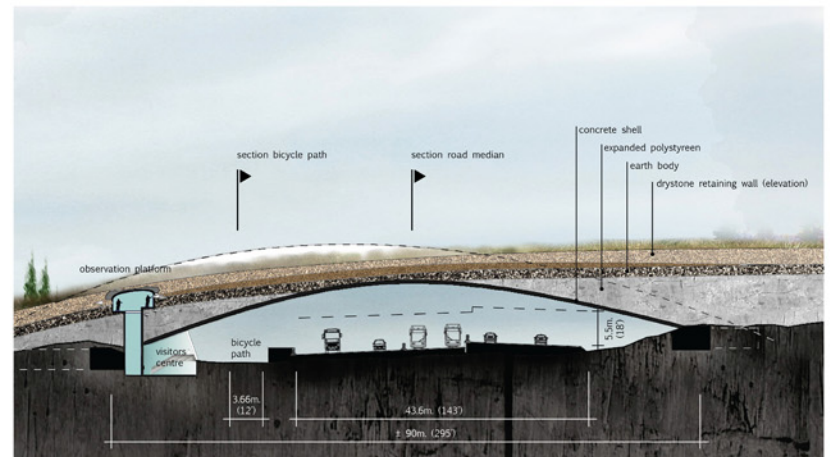
dense forest area - open area



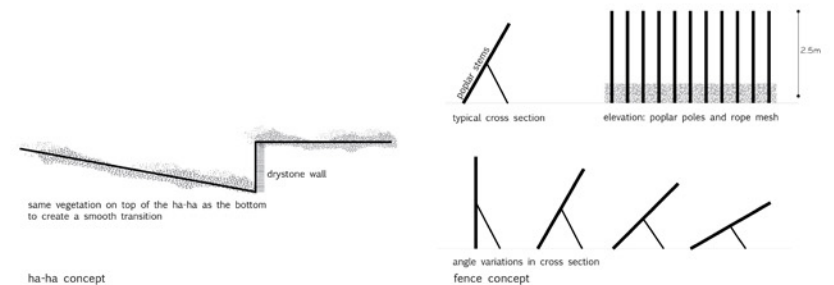
lines across wildlife crossing: vegetation and water



ha-ha and fences



longitudinal section



ha-ha concept

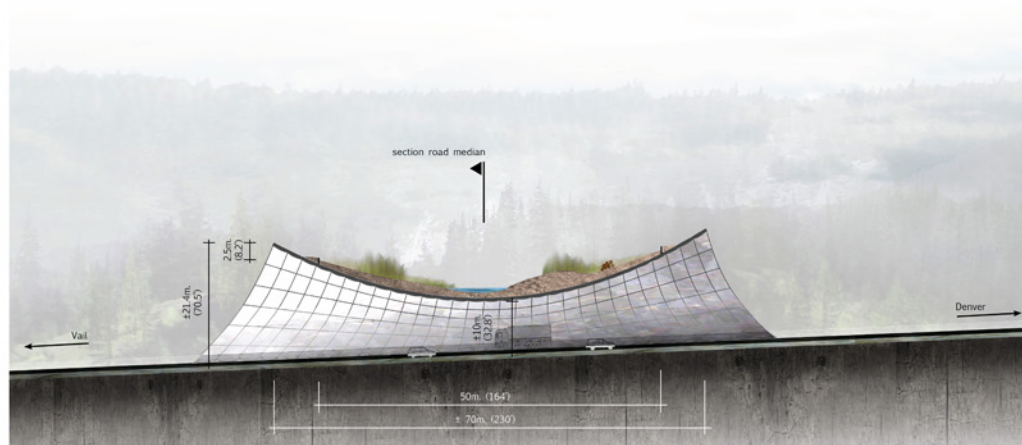
fence concept



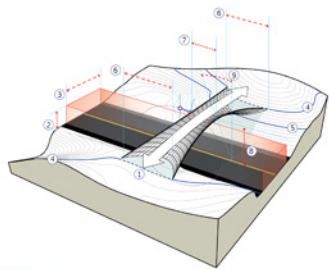
Concept Plan Legend

1. Zone with drywalls of the locally available rock debris against the concrete wall
2. Tree stumps and snags
3. Zone with shrubs as a guiding structure containing *Populus tremulus*, *Pinus contorta* and a underbush of *Vaccinium scoparium*
4. Zone with a vegetation of herbs and grasses
5. Zone with a wet swampy strip next to the stream on the ecoduct
6. Zone with the stream and the pool
7. Zone with a small hill
8. Observation point
9. Zone with dry short heather vegetation and open spaces
10. Zone with drywalls of the locally available rock debris against the concrete wall

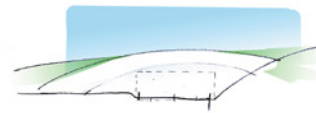




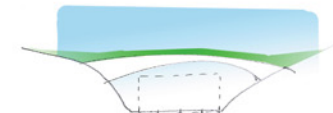
ADAPTABILITY CONCEPT



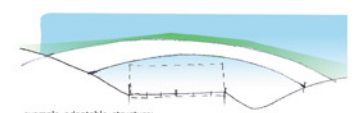
1. desired crossing path
 2. required clearance height
 3. required clearance width
 4. contour line for shell edge
 5. contour line for shell bottom
 6. width of crossing at extremes
 7. width of crossing at mid-span
 8. desired elevation at mid-span
 9. tilt angle of edge arc
- design parameters



- landscape 1, span 60m.
 - 4 lane road
 - clearance 5.5m.
- adaptable structure example 1



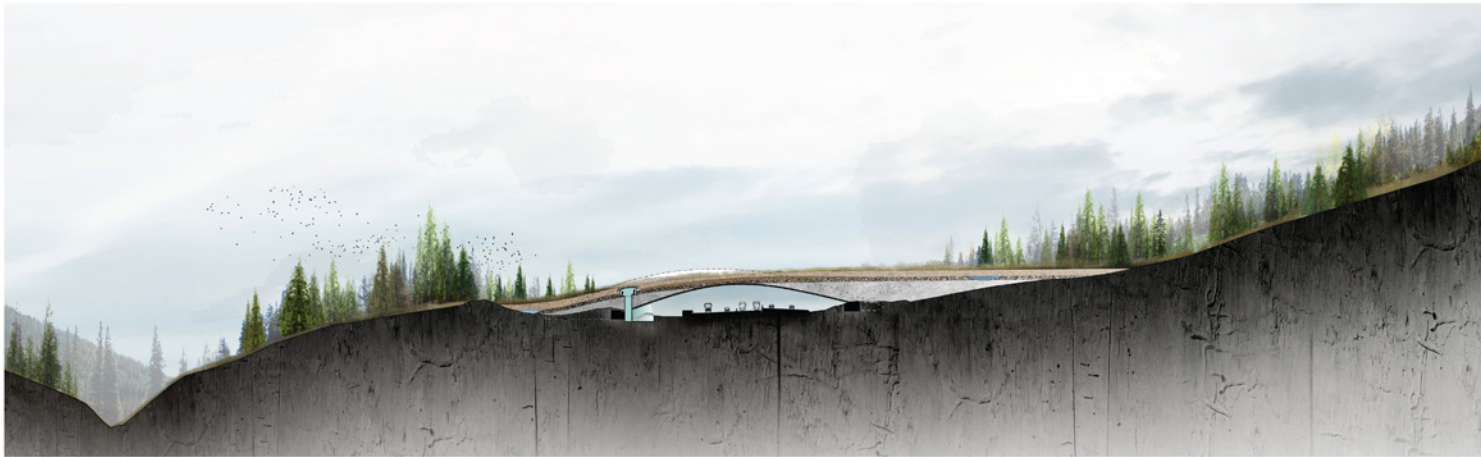
- landscape 2, span 40m.
 - 4 lane road
 - clearance 7m.
- adaptable structure example 2



- example adaptable structure:
- landscape 3, span 100m.
 - 6 lane road
 - clearance 5.5m.
- adaptable structure example 3

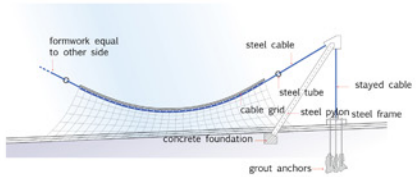


impression of driver's perspective direction Vail

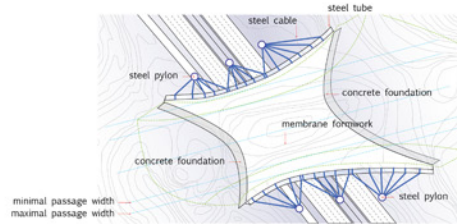


longitudinal section

STRUCTURAL CONCEPT



structural section during construction



concrete form structure plan



structural model of HYPAR concrete form

