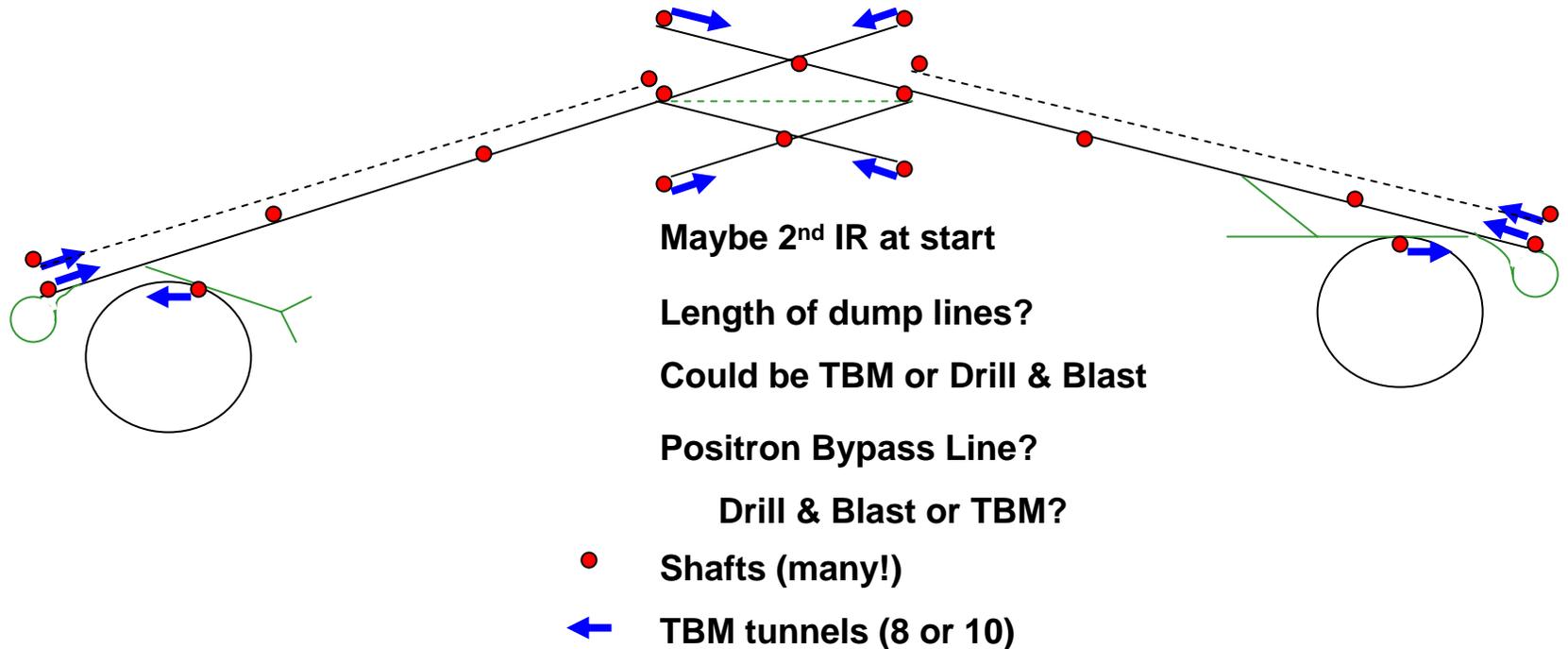


Sketch of Civil Construction Activities

use only for sizing production capacities for components

(my own view – definitely not to scale)



assumes adequate early construction funding
to allow a technically driven schedule

Outline of PHG Construction Schedule Model for generating component cost estimate

- **only a working model**
 - 7 years – after funding authorization => t0
through installation of all components
 - need to start installation of components
while civil construction continues:
 - t0+30 months: e- SRC, e+ Keep-Alive, RTML arcs
 - t0+33 months: DR t0+47 months.: start ML
 - t0+65 months: last sec ML & BDS
 - t0+78 mo.: t0+6.5 yrs.: last components delivered
 - t0+84 mo.: t0+7 yrs.: last component installed
- start commissioning each sub-systems as soon as its components are installed**

U.S. CryoModule & Klystron Production Model

- Bob Kephart's first guess at rate for 1/3 of total needed
- Ramp-up: R&D, Industrialization, Production

