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# Proposed Salang Tunnel Substation



Presented by:



September 2013

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## Outline of Presentation

- Background
- Objectives
- Field Investigation and Data Gathering
- Proposed Available Alternate Substation Sites
- Selected Substation Site
- Involved Parties
- Questions



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## Background

- Tetra Tech (Tt) was requested by USAID to provide technical sections for others to use as part of an EPC package to build a primary substation near the northern terminus of the Salang Tunnel in Afghanistan.
- The services for this request was performed by Tt under the Afghanistan Engineering Support Program (AESP) for USAID.



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## Objective

- Develop technical documents to extend work from the existing 220kV transmission line between Pul-e-Khumri SS and Chimtala SS to provide electrical power to customers and MoPW facilities at Salang Tunnel.
- USAID will deliver the technical documents to DABS and fund the work.
- DABS will solicit bids for the work and select an EPC contractor.



## Field Investigation & Data Gathering

- Olang O&M Base



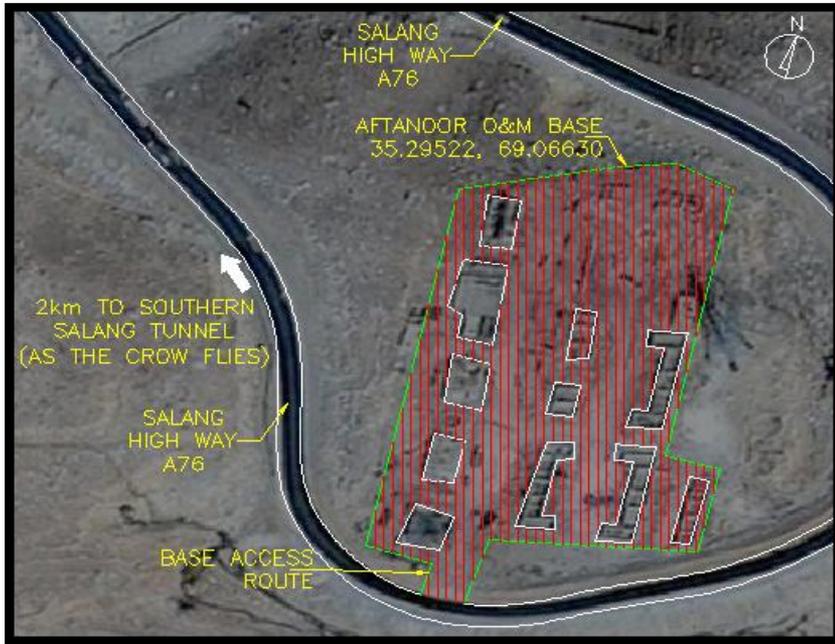


- Gawar Sang O&M base



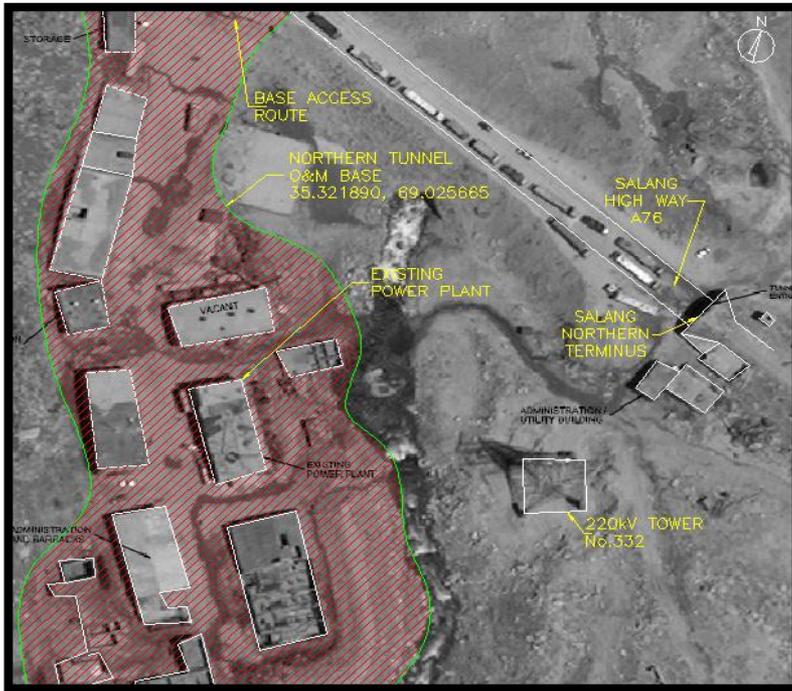


- Aftanor O&M Base





- Northern Salang Tunnel O&M Base

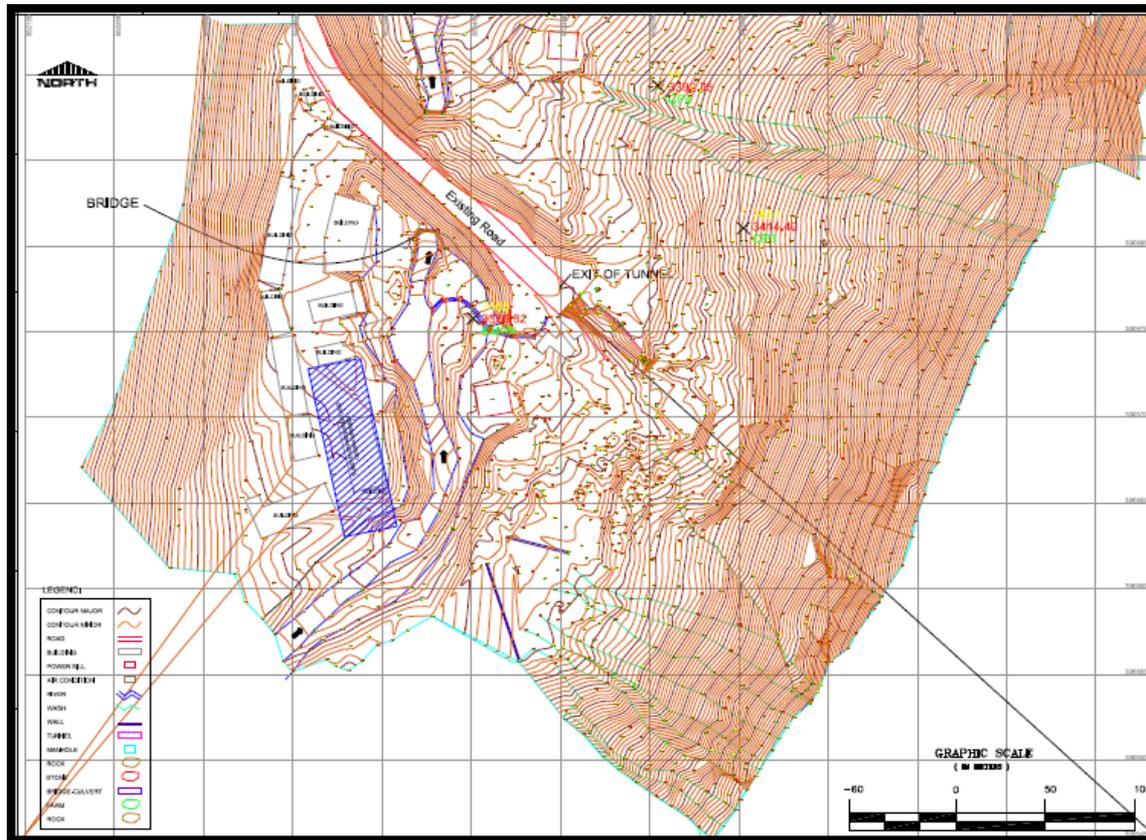




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## Substation at Northern Salang

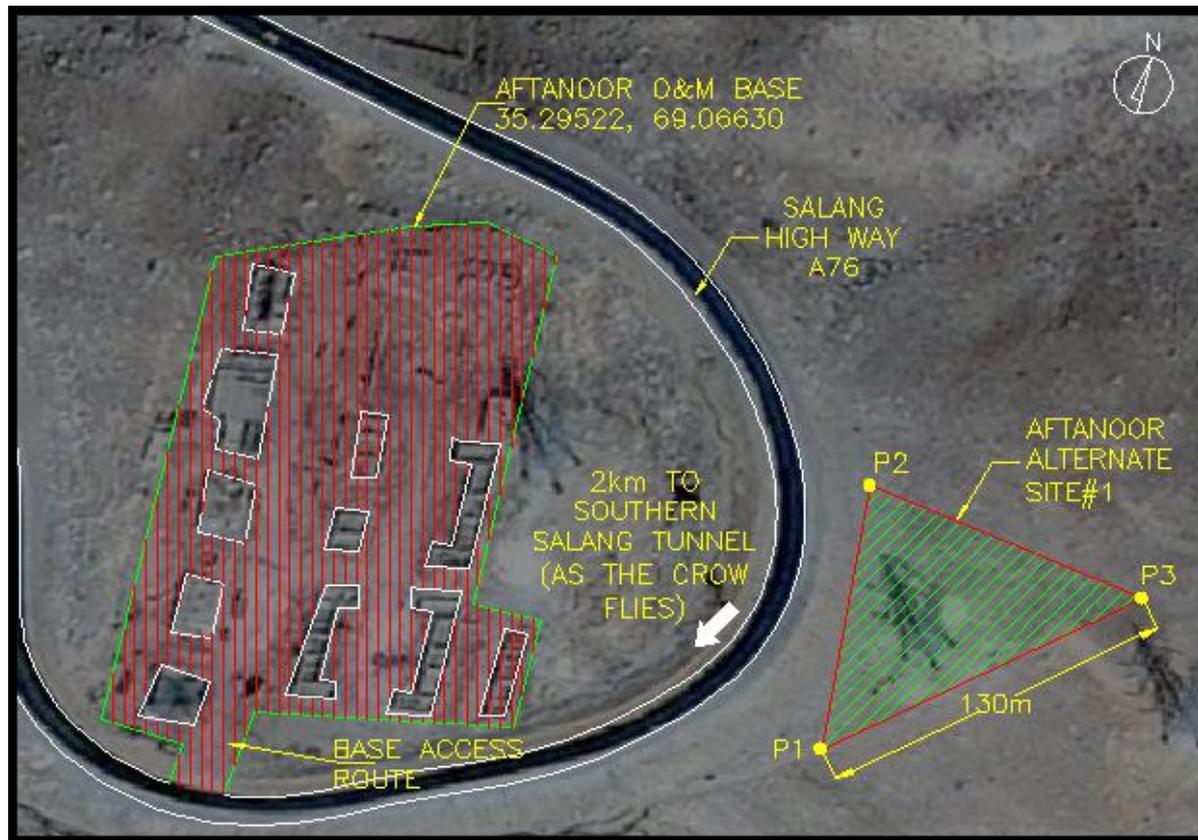


1. Lack of enough land.
2. Area prone to avalanches.
3. Not recommended by MoPW.



## Proposed Available Alternate Substation Sites

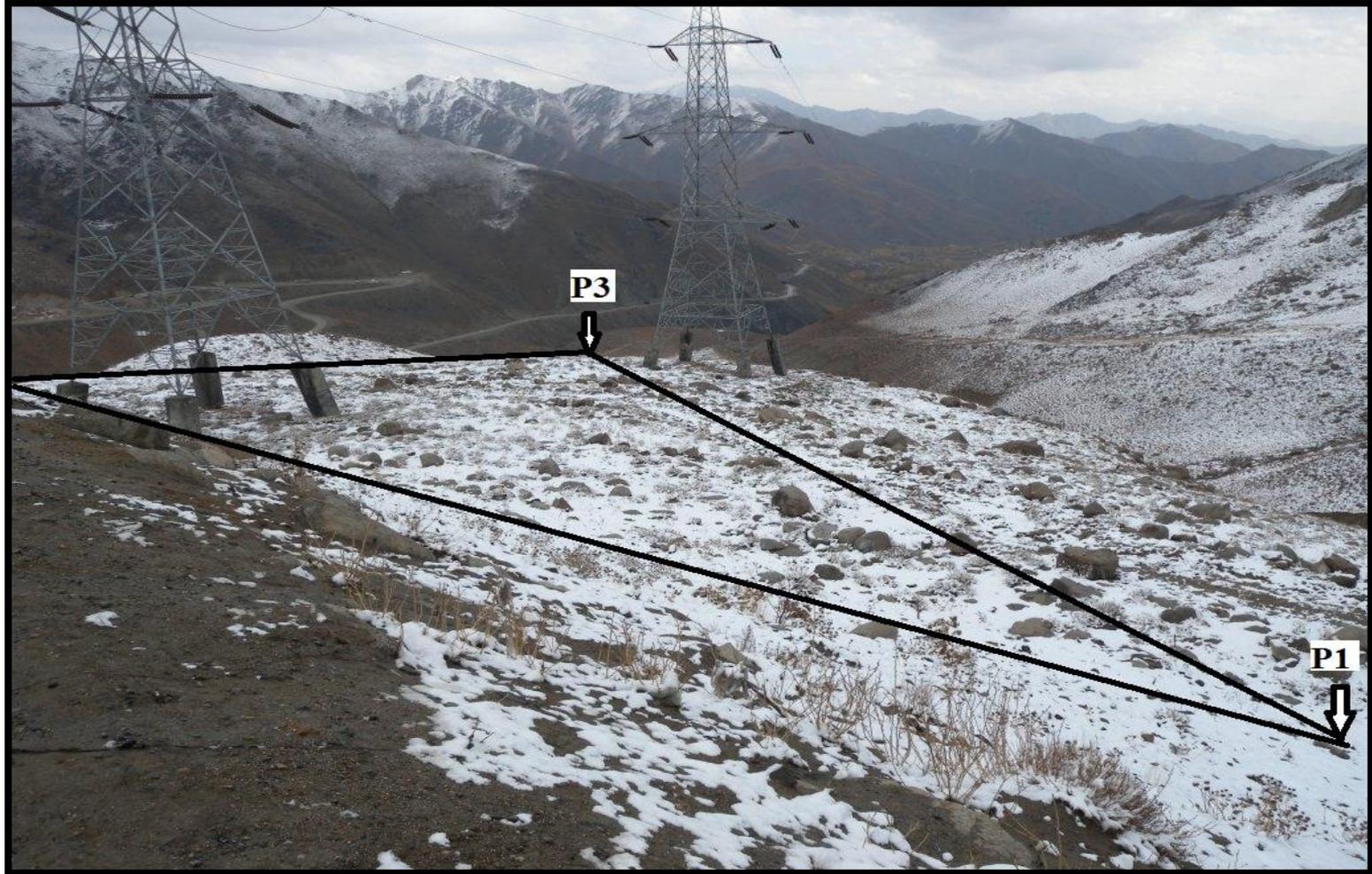
### Aftanor Site #1:





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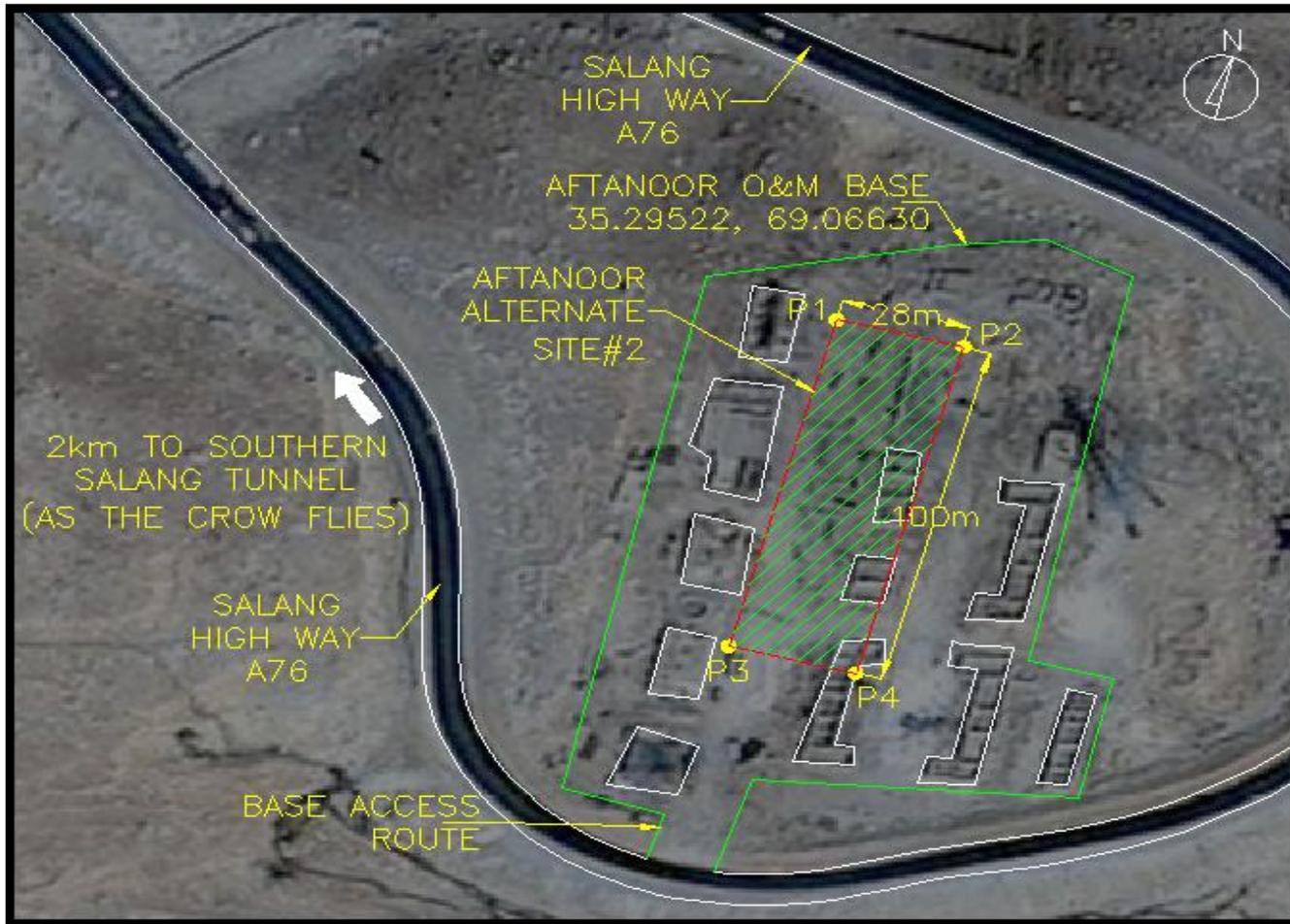
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## Aftanor Site #2:

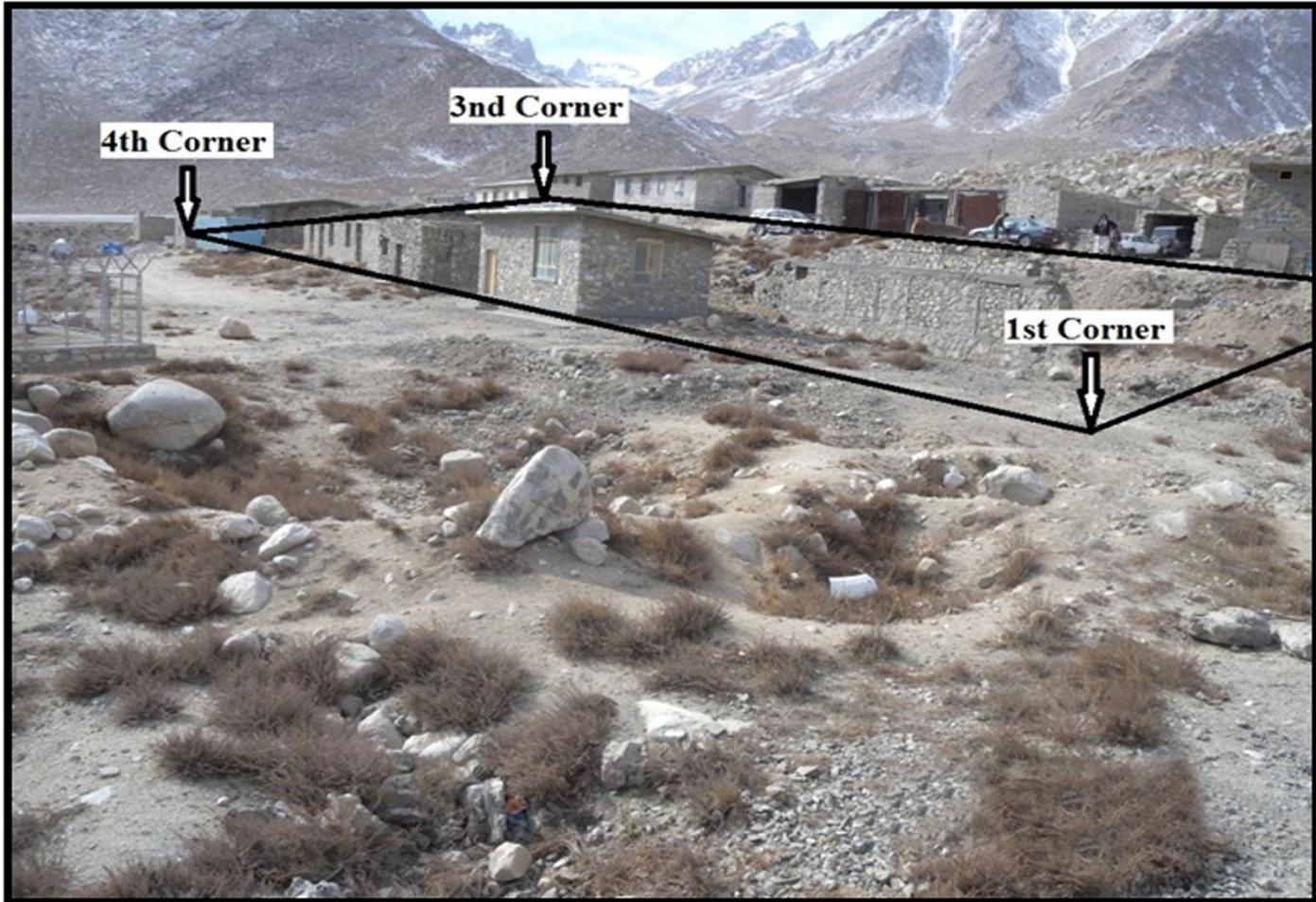


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## Aftanor Site #3:



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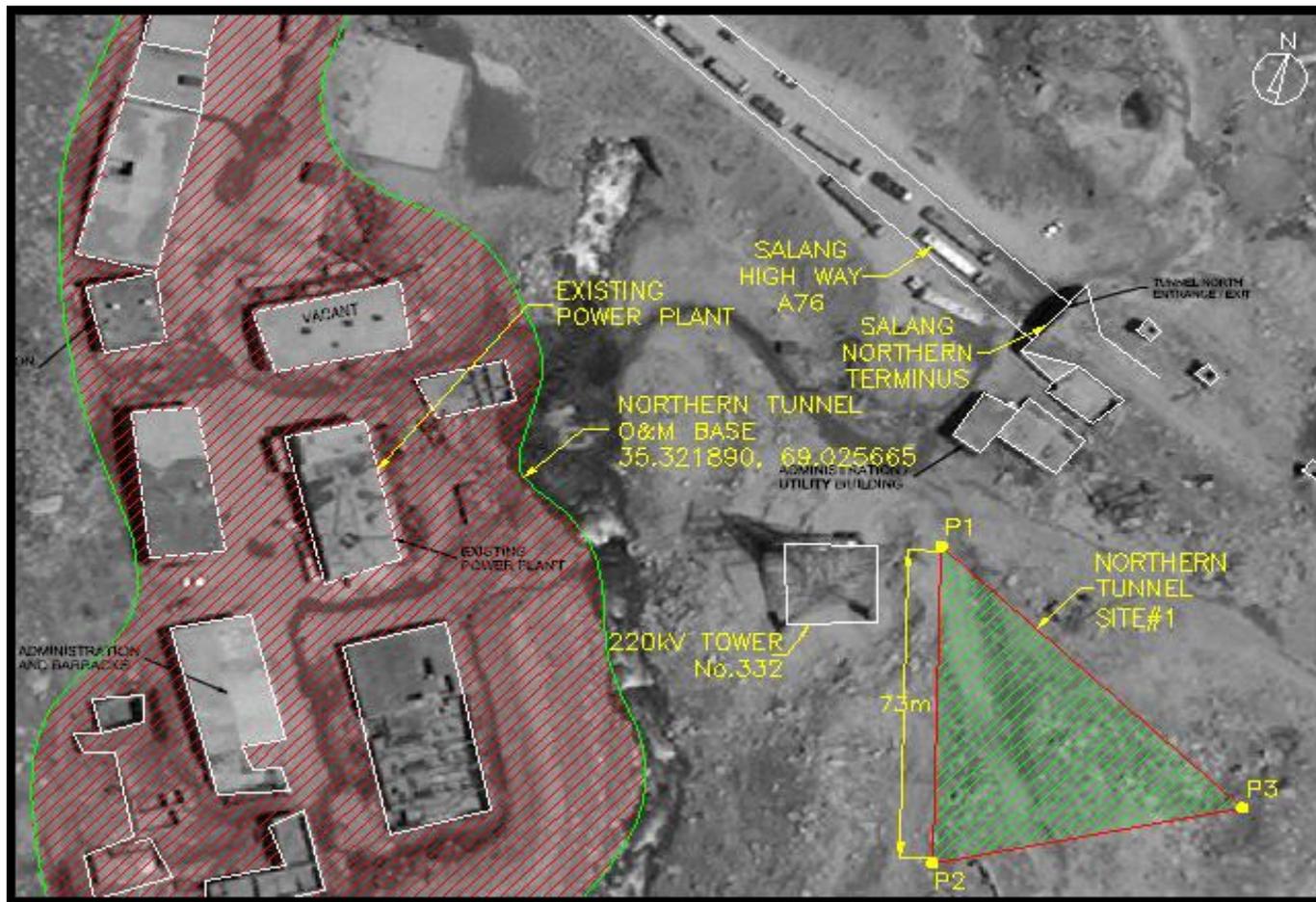
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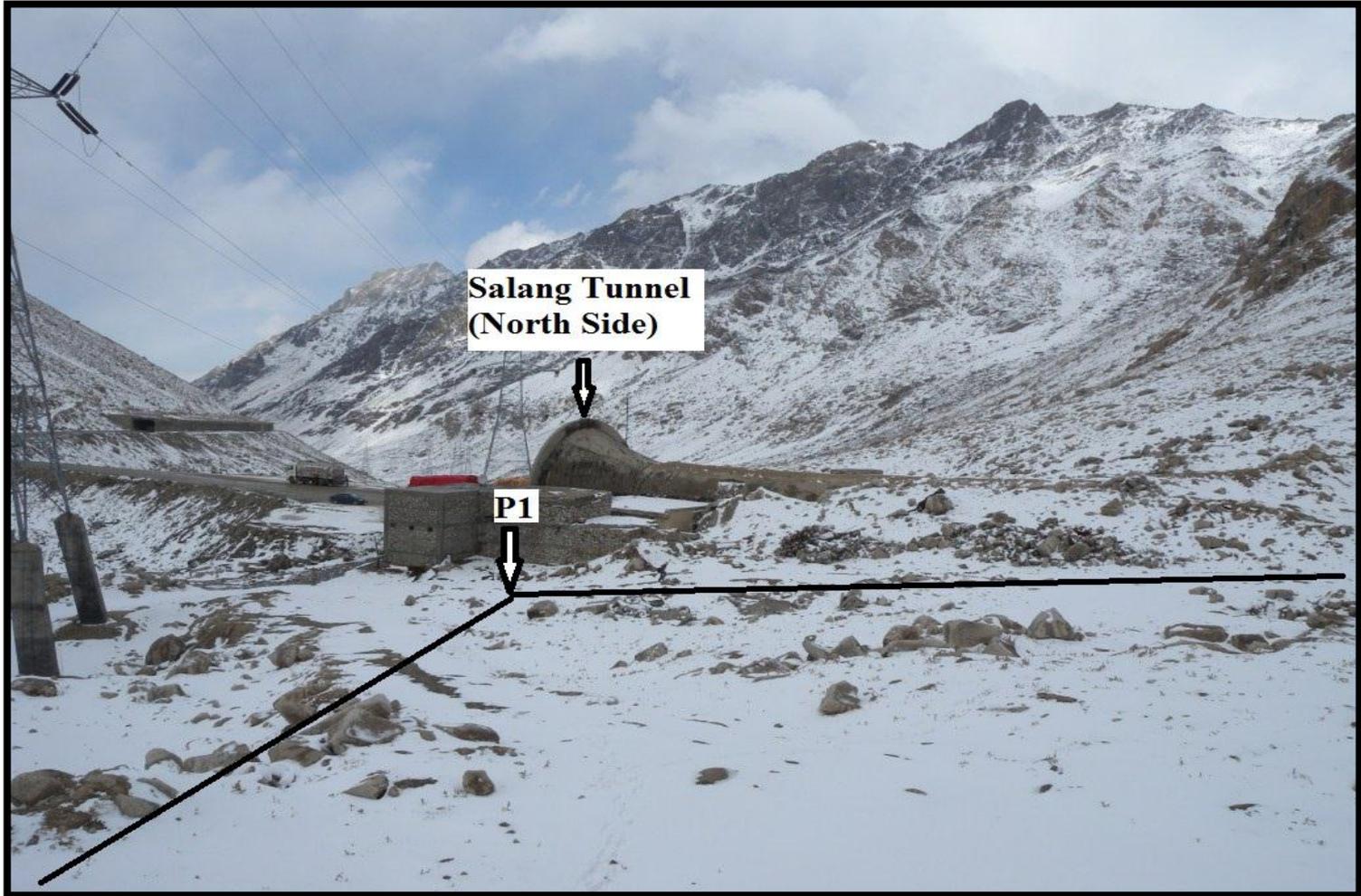
## Northern Tunnel Site #1:





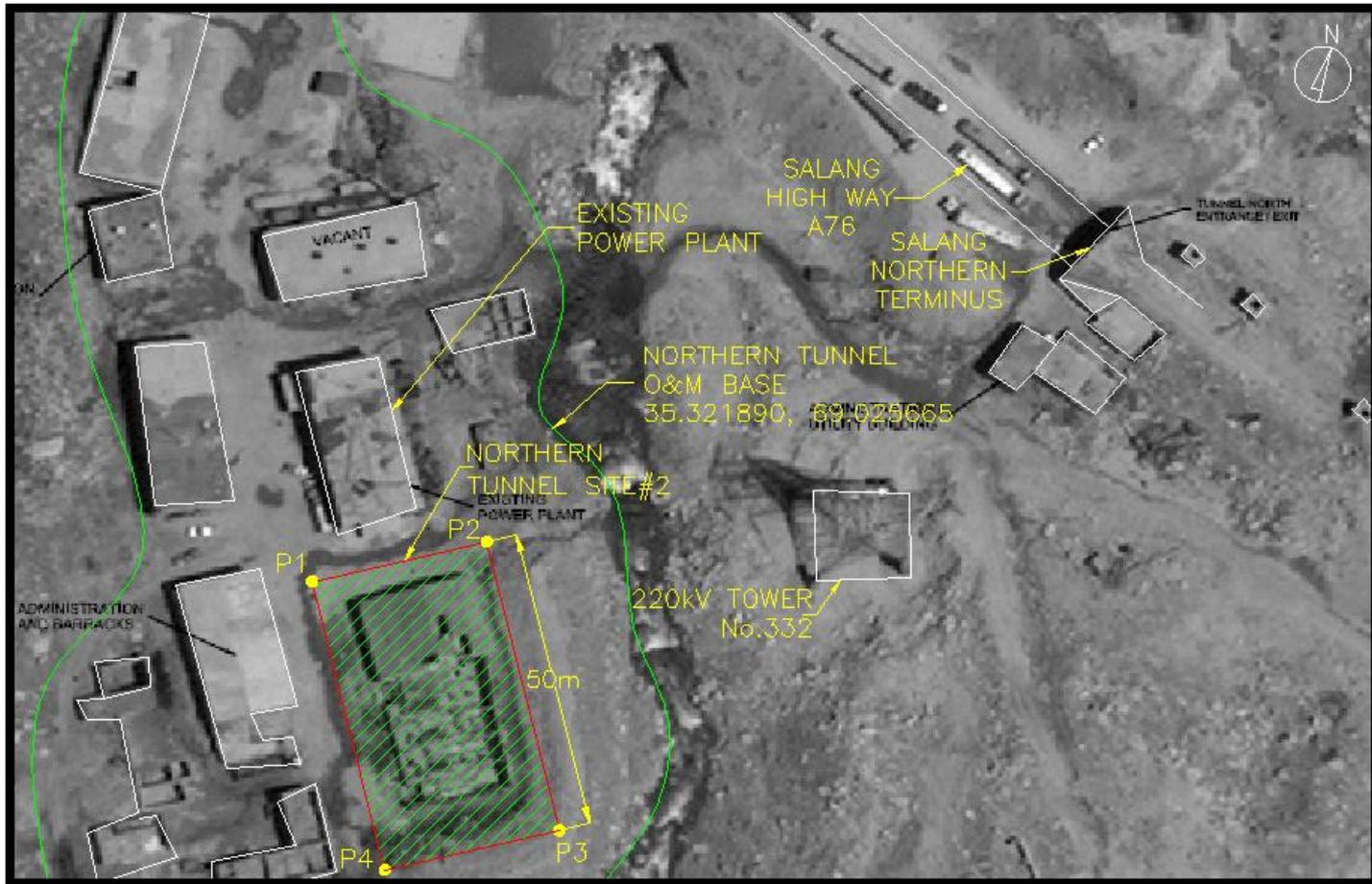
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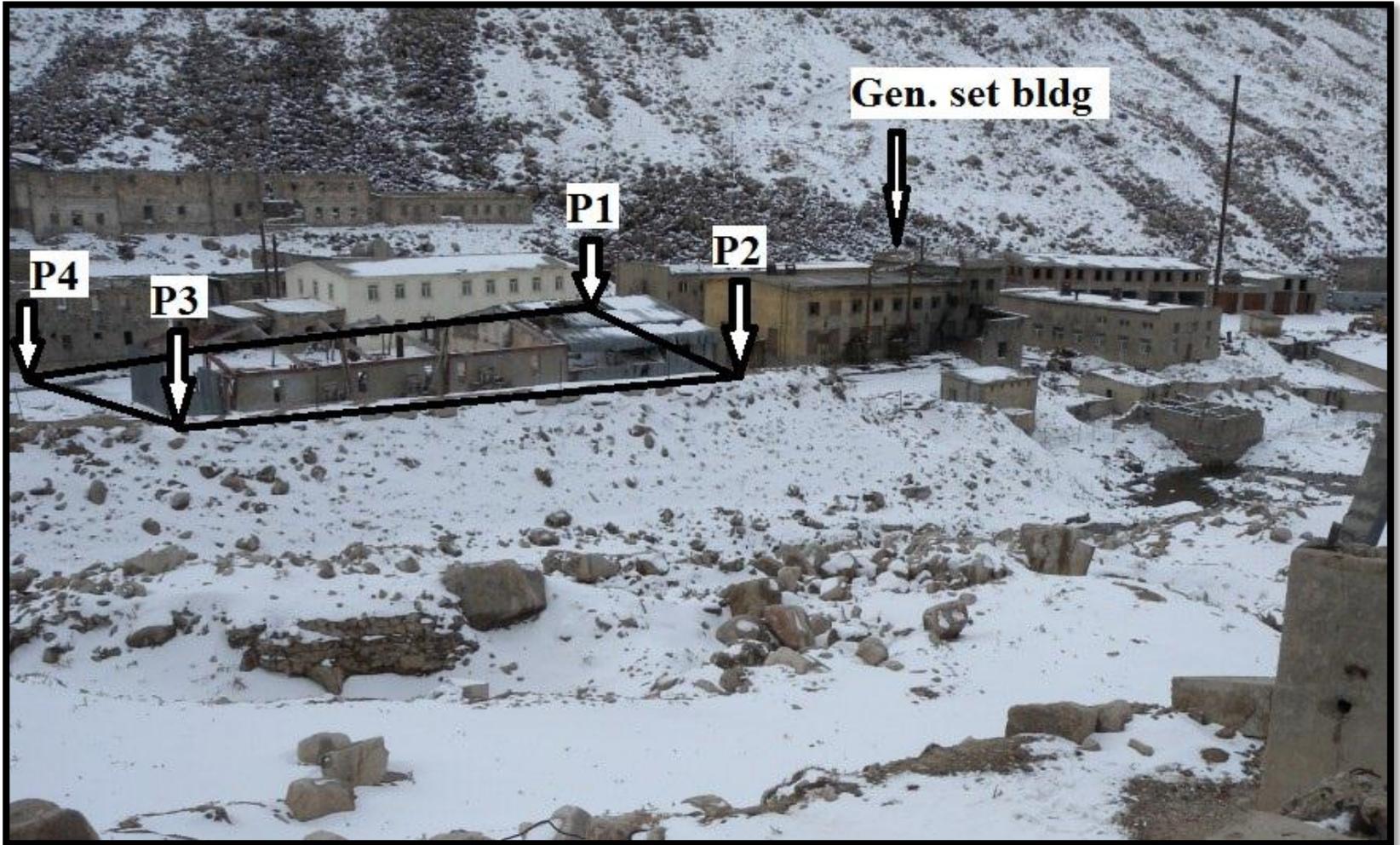
## Northern Tunnel Site #2:





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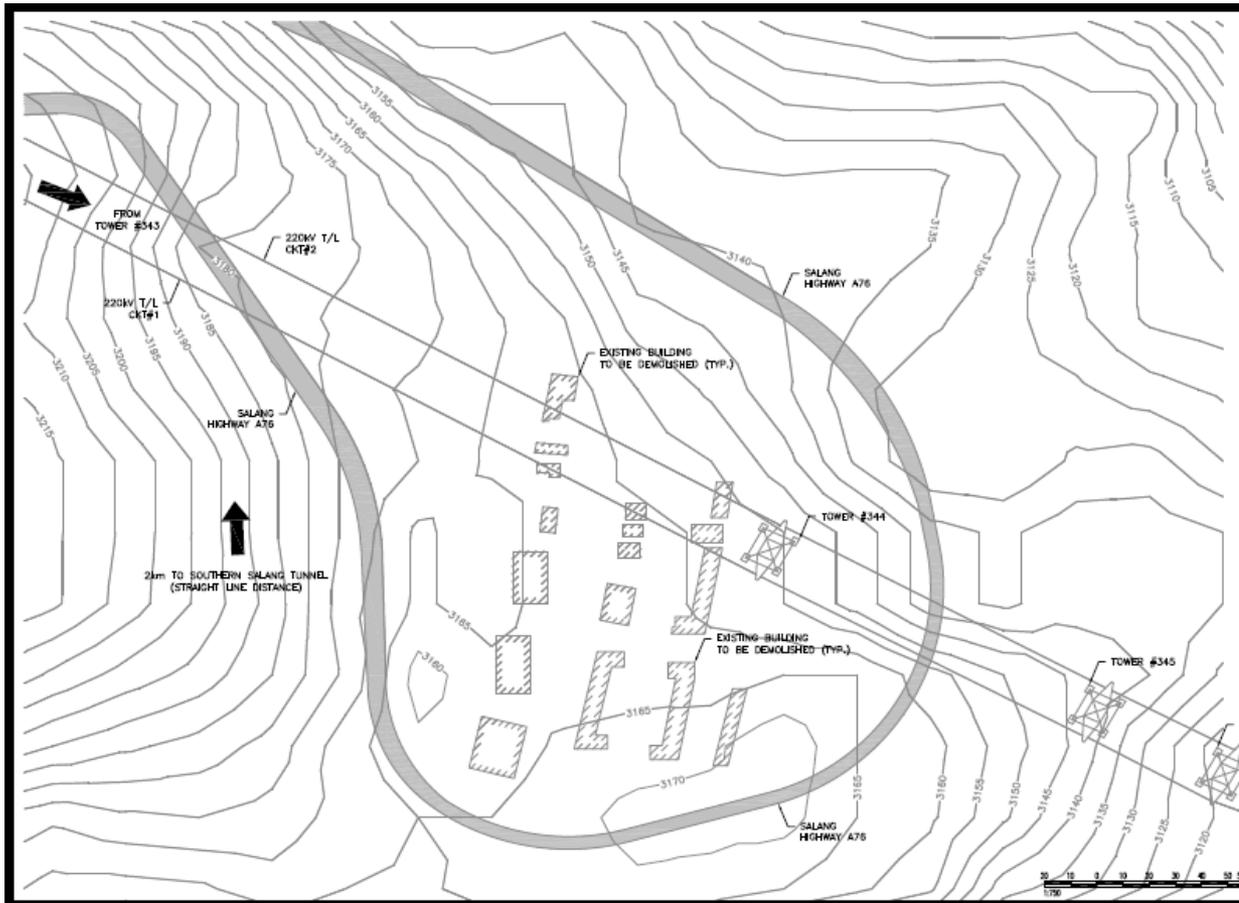




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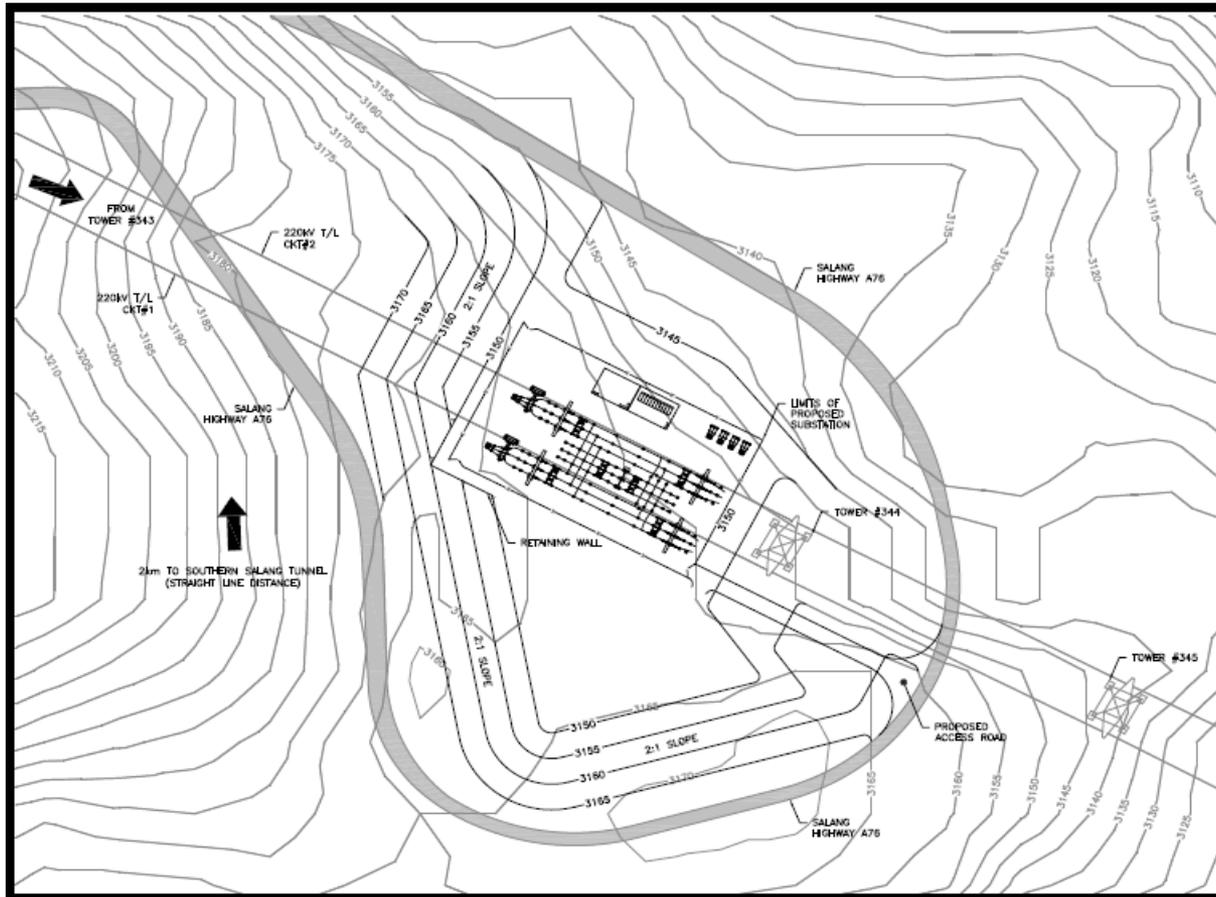
## Selected Substation Site



1. Flat location, minimized cut/fill
2. Accessibility
3. Constructability
4. Less apron to avalanches



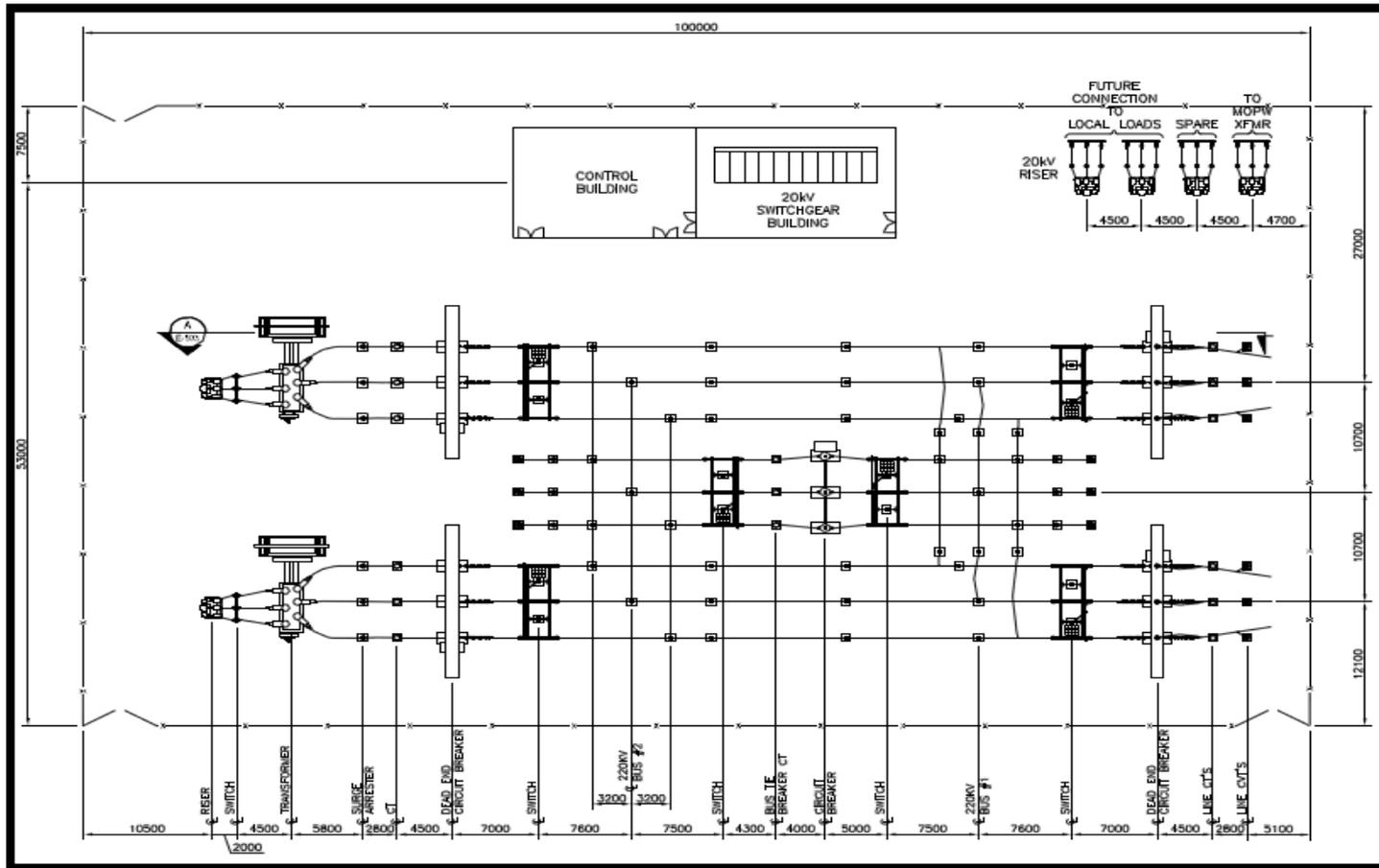
## Substation Site Layout



1. All existing buildings will be demolished by MoPW
2. Building demolish is part of contract
3. One construction season
4. Rubble dumping by MoPW

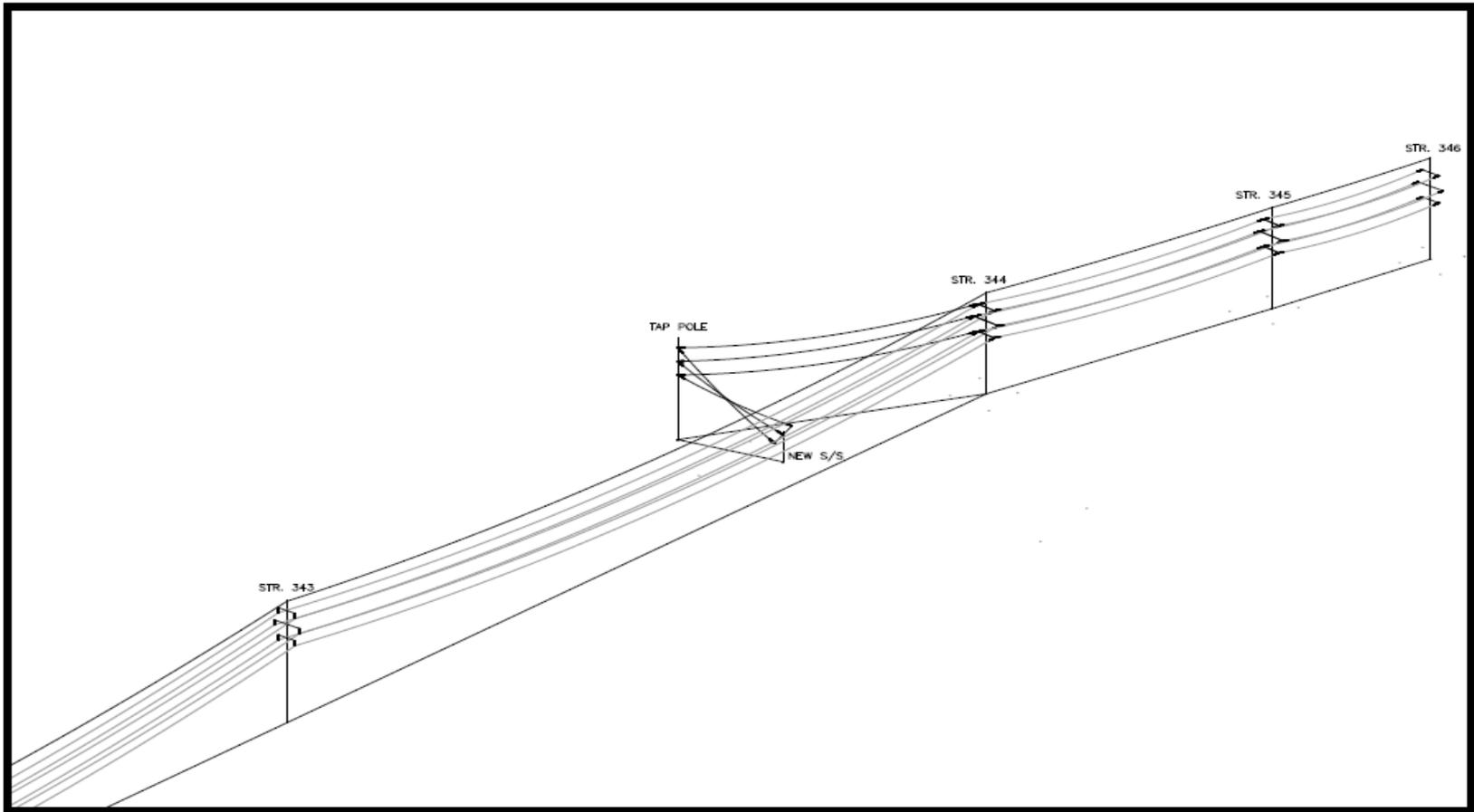


## Substation General Arrangement-GA





## 220kV Transmission Line Tap

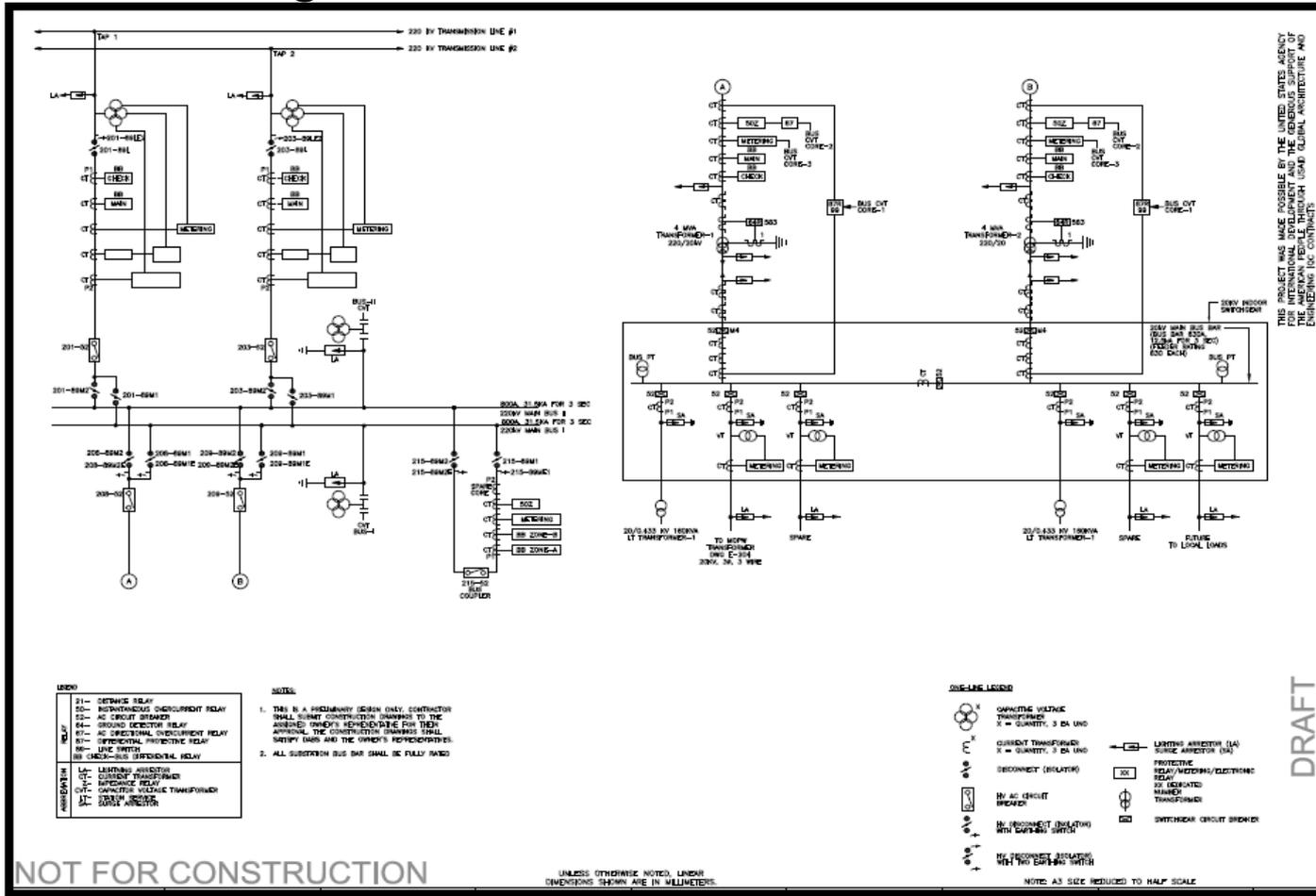




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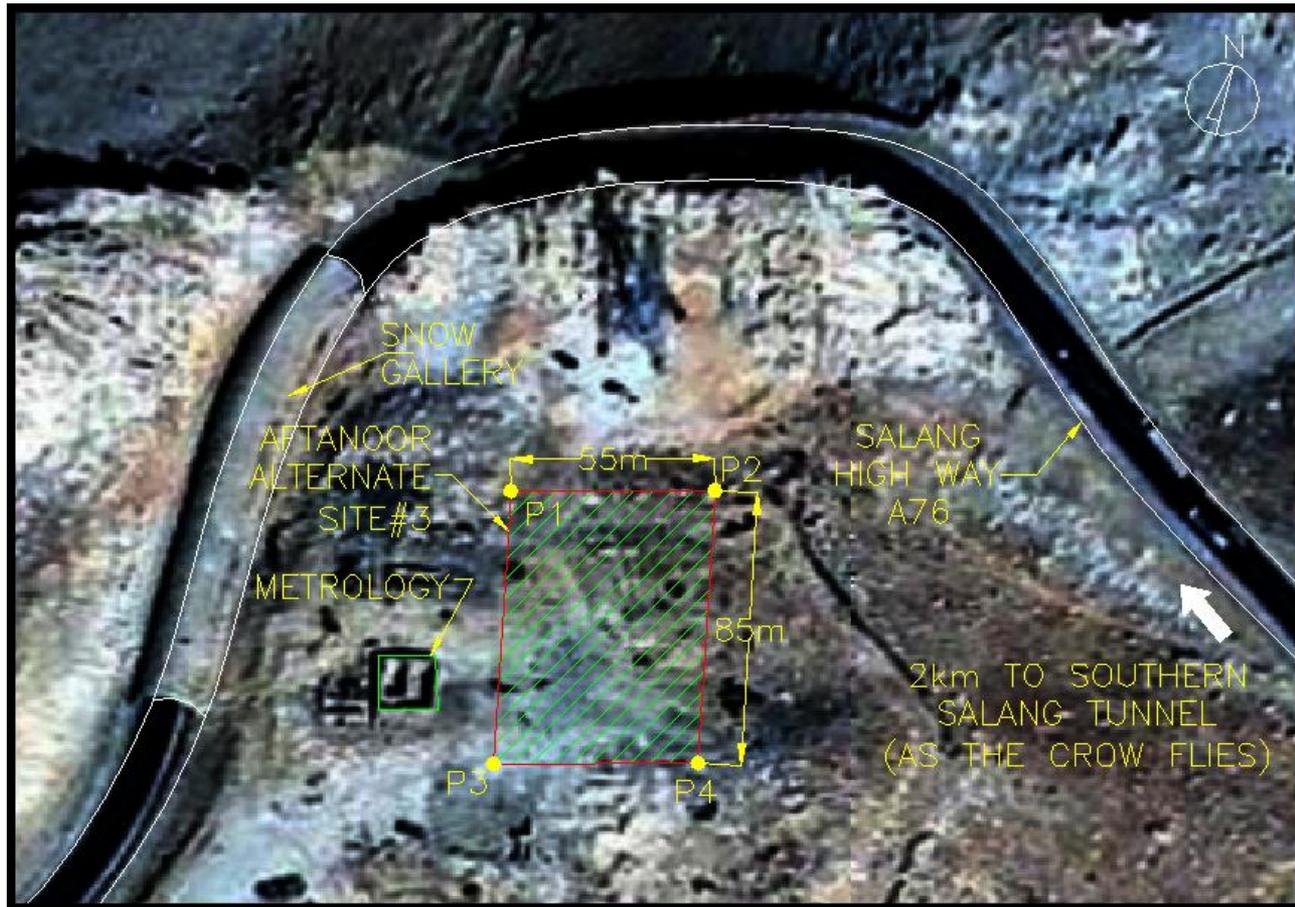
# Single Line Diagram







## Contractor laydown area

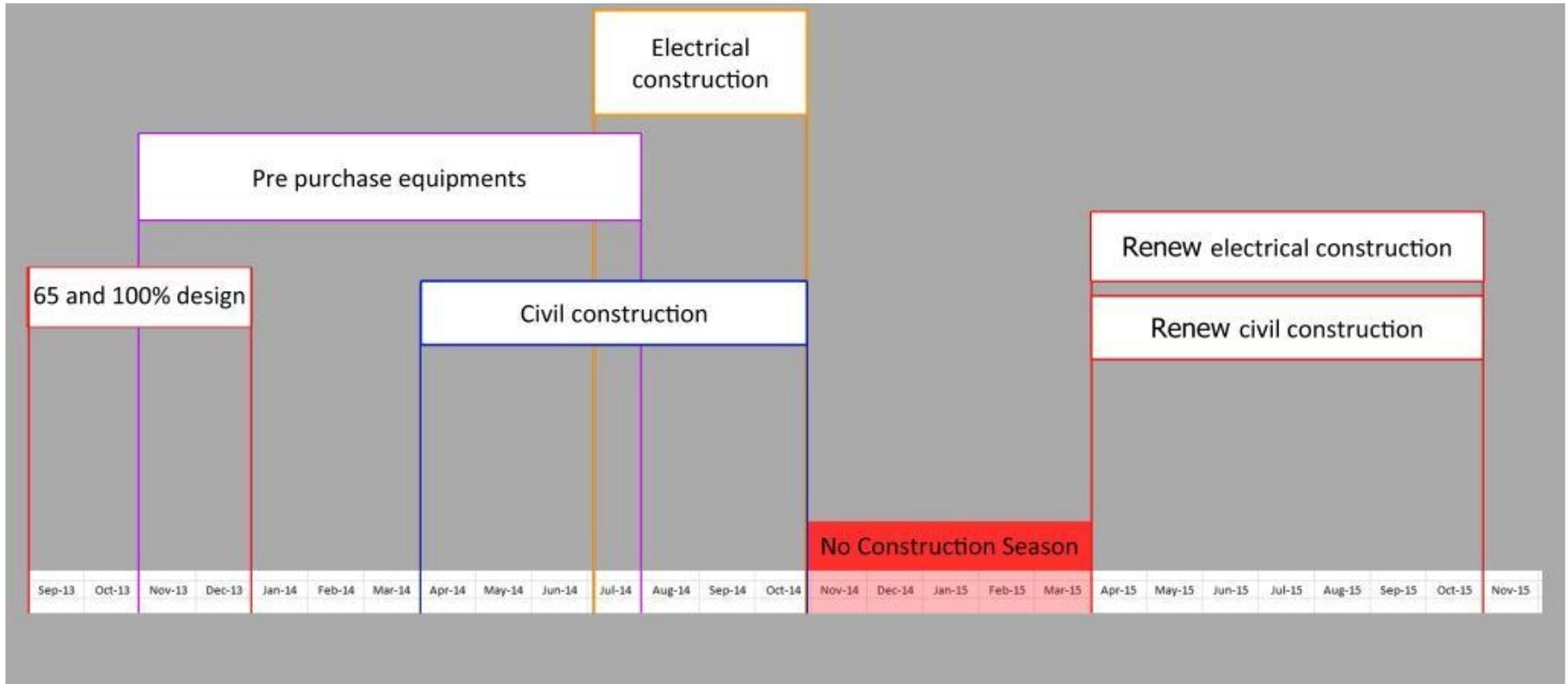




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## Timeline for construction





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## Involved Parties

1. MoPW
2. Da Afghanistan Breshna Sherkat-DABS
3. USAID
4. ISAF

Agreement needed from MoPW and DABS to proceed



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**Thank You!**

Questions?

