



# POTENTIAL SHAFT SITE LAYOUTS FOR THE JOLLYVILLE WATER TRANSMISSION MAIN

# Why Do We Need Shaft Sites?

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- Construction of tunnels
- Provide needed safety to workers
- Long-term tunnel operation/maintenance

In order to construct the Jollyville Transmission Mains, 4 total shafts are needed - one at the WTP4 site, one at the Jollyville Reservoir and two intermediate shafts.

Because of the presence of the Balcones Canyonlands Preserve (BCP) the two intermediate shafts will be located near the points the tunnel enters and leaves the BCP land.

# Types of Shaft Sites

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- ▣ “Working” shaft, approximately 30-40 feet, activities include excavating materials, insertion and retrieval of equipment, placing pipe into the tunnel and grouting pipe.
- ▣ “Access and Retrieval” shaft, approximately 20- 30 feet, activities include insertion and retrieval of equipment, placing pipe into the tunnel and grouting pipe.
- ▣ A “Ventilation-specific” shaft, approximately 6-8 feet, provides fresh air underground to workers, ventilation for equipment and is commonly used to grout.

*All shafts would allow access for maintenance and operations*

# Site Layout Jollyville Reservoir



Offsite  
staging area  
required

Crew  
parking  
offsite

# Site Layout Spicewood Springs

(Spicewood Springs Access/Retrieval Shaft)

Alternative 2 or 3

## Step 1 – Mobilization and shaft sinking

- \* 60 Work days (24 to sink shaft)
- \* 150+ Excavated Material haul trucks

\*10-20 Equipment /material trucks



- Special Considerations**
- Offsite staging area required
  - Crew bused to site
  - Work hours 8am – 3pm (all 4 steps)

# Site Layout Spicewood Springs

(Spicewood Springs Access/Retrieval Shaft)

Alternative 2 or 3

## Step 2 – Tunnel Boring Machine Retrieval

\* 20 Work days

\* 10 -20 Equipment /material trucks



- Special Considerations**
- Offsite staging area required
  - Flaggers for special loads
  - Tunnel Equip cleanup offsite

# Site Layout Spicewood Springs

(Spicewood Springs Access/Retrieval Shaft)

Alternative 2 or 3

## Step 3 – Pipe Placement

\* 250 Work days (approx 1 year)

\* 250 Pipe trucks

\* 1-2 trucks per work day



- Special Considerations**
- Offsite staging area required
  - Crew bused to site
  - Flaggers for long trucks

# Site Layout Spicewood Springs

(Spicewood Springs Access/Retrieval Shaft)

Alternative 2 or 3

## Step 4 – Backfill Grouting

- \* 60 Work days (approx 3 mos.)
- \* 3-5 trucks per work day

\* 200 Bulk Cement trucks



### Special Considerations

- Offsite staging area required
- Crew bused to site