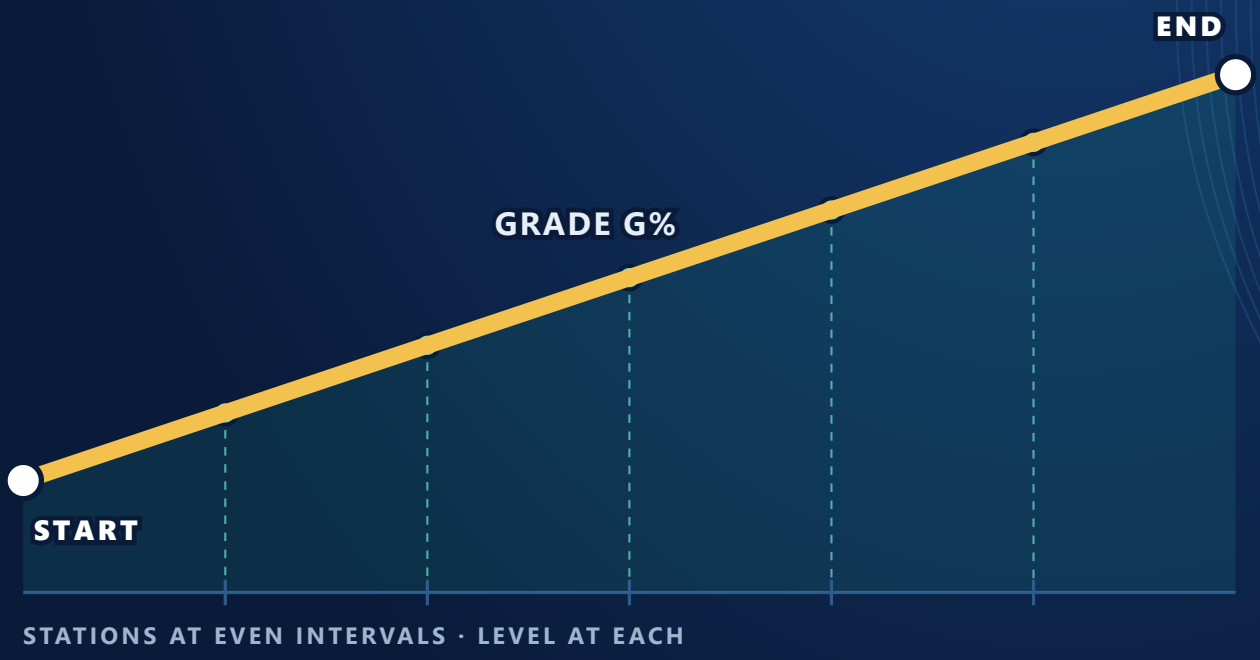
Vertical Alignment on Straight Line

Finished road levels and grades along a straight vertical alignment.



Sample Project

Client: Urban City

PREPARED & SUBMITTED BY

SP Consultant

in Joint Venture with USF Consultants

info@spconsultant.example

shahidpervaiz.net

ISSUE

November 2026

Road Grade Elevations — Straight Vertical Grade

Design report · Generated 11/5/2026 3:17:34 PM

1. Project

Project / road	Sample Project
Prepared by	SP Consultant
Date	11/5/2026

2. Input data

Method	Sta1, Elev1, Sta2, Elev2 given
Sta 1	0+000
Elev 1	3.50 m
Sta 2	0+100
Elev 2	5.00 m
Grade	1.5000%
Compute at	Single station — 0+050
Elevation type	Elevation at C/L
Decimal places	2

3. Method

Grade from two known points: $G = (Elev_2 - Elev_1) / (Sta_2 - Sta_1) = 1.5000\%$

Elevation at any station: $Elev = Elev_{ref} + G \times (Sta - Sta_{ref})$, with Sta_{ref} = 0+000.00 and $Elev_{ref}$ = 3.500 m.

4. Summary

Grade	1.5000% (rising)

5. Results

0+050.00 → Elevation = **4.25 m**

Generated with the Road Grade Elevation Calculator — https://shahidpervaiz.net/EngineeringDesignTools/vertical_alignment_design_straight_calculator. Results should be checked by a qualified engineer before use.

Sample report: illustrative data, not for design use