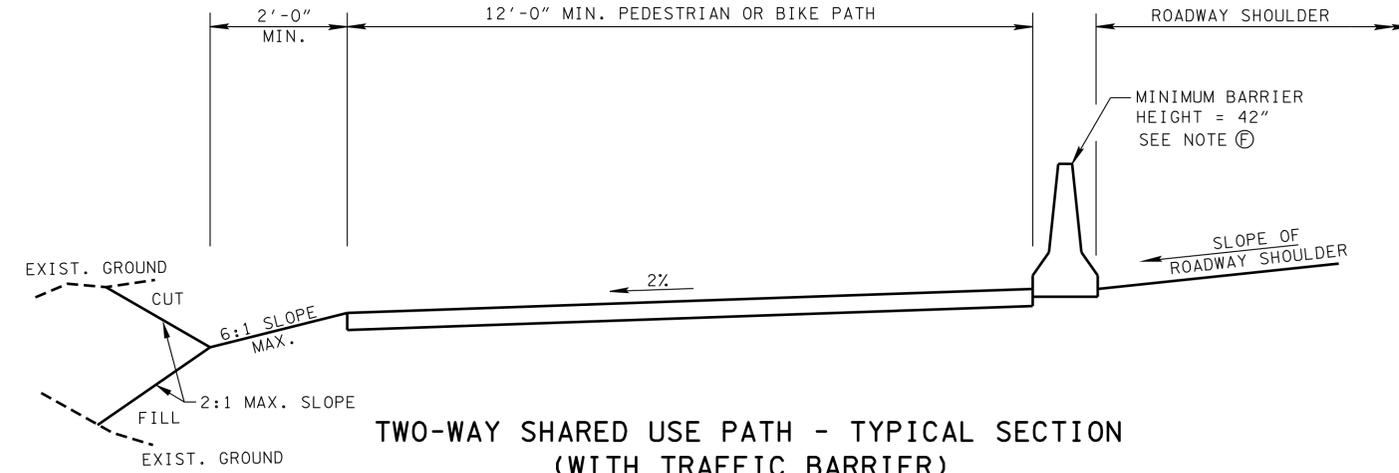
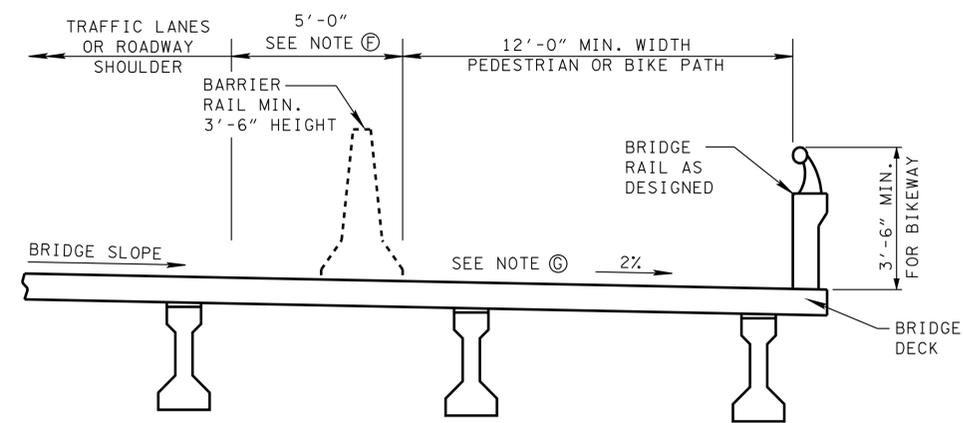


**TWO-WAY SHARED USE PATH - TYPICAL SECTION
(WITHOUT TRAFFIC BARRIER)**



**TWO-WAY SHARED USE PATH - TYPICAL SECTION
(WITH TRAFFIC BARRIER)**



**SHARED USE PATH - BRIDGE SECTION
DESIGN SPEED < 45 MPH**

NOTE: A MINIMUM DISTANCE OF 5'-0" FROM THE EDGE OF THE SHOULDER TO THE EDGE OF THE PEDESTRIAN OR BIKE PATH SHALL BE MAINTAINED.

DESIGN NOTES

- ① A MINIMUM DESIGN SPEED OF 20 MPH SHOULD BE USED. WHEN A DOWNGRADE EXCEEDS 4 PERCENT, OR WHERE STRONG PREVAILING TAILWINDS EXIST, A DESIGN SPEED OF 30 MPH OR MORE IS ADVISABLE.
- ② DESIRABLE MINIMUM RADII FOR PAVED SHARED USE PATHS

DESIGN SPEED (V)	BASED ON 15° LEAN ANGLE MINIMUM RADIUS (R)	BASED ON 2% SUPERELEVATION RATES AND 20° LEAN ANGLE MINIMUM RADIUS (R)
12	36	30
20	100	90
25	156	155
30	225	260
- ③ GRADES ON SHARED-USE PATHS GREATER THAN 5% ARE UNDESIRABLE. WHEN IT IS NECESSARY TO EXCEED THE 5% GRADE RECOMMENDATION, THE FOLLOWING GRADE RESTRICTIONS AND GRADE LENGTHS ARE SUGGESTED.

5-6% FOR UP TO 800'	9% FOR UP TO 200'
7% FOR UP TO 400'	10% FOR UP TO 100'
8% FOR UP TO 300'	11+% FOR UP TO 50'
- ④ MINIMUM STOPPING SIGHT DISTANCE VS. GRADES FOR VARIOUS DESIGN SPEEDS.

$$S = \frac{V^2}{30(f \pm G)} + 3.67V$$

WHERE : S = STOPPING SIGHT DISTANCE (ft)
V = VELOCITY (mph)
f = COEFFICIENT OF FRICTION (USE 0.25)
G = GRADE (ft/ft) (RISE/RUN)
- ⑤ REFER TO AASHTO "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES" FOR ADDITIONAL DESIGN REQUIREMENTS.

GENERAL NOTES

- Ⓐ UNDER CERTAIN CONDITIONS IT MAY BE NECESSARY OR DESIRABLE TO INCREASE THE WIDTH OF A SHARED USE PATH TO 12 FEET, OR EVEN 14 FEET, DUE TO SUBSTANTIAL USE BY BICYCLE, JOGGERS, SKATERS AND PEDESTRIANS, USE BY LARGE MAINTENANCE VEHICLES, AND/OR STEEP GRADES.
- Ⓑ THE MINIMUM WIDTH OF A ONE-DIRECTIONAL SHARED USE PATH IS 6 FEET.
- Ⓒ 3 FEET OR MORE IS DESIRABLE TO PROVIDE CLEARANCE FROM TREES, POLES, WALLS, FENCES, GUARDRAILS, OR OTHER LATERAL OBSTRUCTIONS. WHERE THE PATH IS ADJACENT TO CANALS, DITCHES OR SLOPES STEEPER THAN 3:1, A WIDER SEPARATION SHOULD BE CONSIDERED.
- Ⓓ THE VERTICAL CLEARANCE TO OBSTRUCTIONS SHOULD BE A MINIMUM OF 8 FEET. HOWEVER, VERTICAL CLEARANCE MAY NEED TO BE GREATER TO PERMIT PASSAGE OF MAINTENANCE AND EMERGENCY VEHICLES. IN UNDERCROSSINGS AND TUNNELS, 10 FEET IS DESIRABLE FOR ADEQUATE VERTICAL SHY DISTANCE.
- Ⓔ DITCH SHOULD BE LOCATED PROPERLY BETWEEN THE SHARED USE PATH AND ROADWAY TO INSURE THAT WATER DOES NOT FLOW ONTO THE ROADWAY OR SHOULDER. ALSO DITCH SHOULD BE SUFFICIENT ENOUGH TO REMOVE THE ADDITIONAL RUNOFF.
- Ⓕ WHEN THE DISTANCE BETWEEN THE EDGE OF SHOULDER AND THE SHARED USE PATH IS LESS THAN 7 FEET AND/OR THE ROADWAY DESIGN SPEED EXCEEDS 45 MILES PER HOUR, A BARRIER RAIL IS REQUIRED. BARRIER RAIL SHOULD BE CONSIDERED ON A CASE BY CASE BASIS IF THE DISTANCE IS GREATER THAN 5 FEET. BARRIER RAIL USED SHALL BE (NCHRP 350) TEST LEVEL III COMPLIANT.
- Ⓖ ON ALL BRIDGE DECKS, SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT BICYCLE-SAFE EXPANSION JOINTS ARE USED AND DECKING MATERIALS THAT MAY BECOME SLIPPERY WHEN WET ARE AVOIDED.
- Ⓗ SEE ROADWAY PLANS FOR PAVEMENT DETAILS.
- Ⓘ SEE STD. DWG. T-M-10 FOR SIGNING AND PAVEMENT MARKINGS.
- Ⓙ CLEAR ZONE SHOULD BE MAINTAINED BETWEEN THE ROADWAY AND THE SHARED USE PATH. IF CLEAR ZONE CAN NOT BE ACHIEVED AN APPROPRIATE BARRIER SHOULD BE CONSIDERED FOR SPEED LESS THAN 45 MPH.