

**52nd Avenue Feasibility Study
Alternatives Evaluation
1/29/2021**

| | Alignment Alternatives | | | | Design Options for RR Crossing | |
|---|--|---|---|---|---|--|
| | Alternative 1 Bicycle and Pedestrian Crossing Only | Alternative 2 Existing Alignment, New Grade- Separated Road | Alternative 3 Northern Alignment, New Grade- Separated Road | Alternative 4 No connection across rail; Neighborhood bike/ped only | Design Option 1 Over Railroad | Design Option 2 Under Railroad |
| Criteria | | | | | | |
| Multimodal Travel | | | | | | |
| Pedestrian comfort and safety | Would provide a connectivity across RR without being adjacent to vehicles | Providing vehicular connectivity across the RR will likely increase traffic, causing pedestrians to walk next to higher volumes of freight and passenger vehicles | Providing vehicular connectivity across the RR will likely increase traffic, causing pedestrians to walk next to higher volumes of freight and passenger vehicles | All alternatives include existing sidewalk and bicycle facility improvements; Alt 4 does not increase vehicular traffic on 52nd | | Pedestrian comfort and safety is lower in an underpass |
| Bicyclist comfort and safety | Provides connectivity through a crossing with no vehicular access | | | Reduced vehicular traffic as a results of no connectivity across railroad | | Bicyclist comfort and safety is lower in an underpass |
| Convenience and connectivity to adjacent local multimodal infrastructure | | | Realignment moves connectivity north | Connectivity remains the same | | |
| Convenience and connectivity to adjacent regional multimodal infrastructure | | | Alignment to the north does not provide connections to existing regional multimodal infrastructure. | | | |
| Transit connections and functionality | Provides additional opportunities for ped/bike connections to transit | Provides additional opportunities for additional bus service and ped/bike connections to transit | Provides additional opportunities for additional bus service and ped/bike connections to transit | Connectivity remains the same; does not allow for any additional regional connections across the RR | | |
| Accommodation of freight travel patterns | Does not accommodate vehicular traffic connection | Provides connection for existing freight traffic on 52nd | Provides freight connection, but new travel pattern; more curves/turns | Does not provide any vehicular connection | | |
| Community and Environment | | | | | | |
| Community support | | | | | | |
| Property impacts (based on ROW needed and include business and residential) | Some ROW impacts from touchdown of bridge | More residential impacts | More industrial/commercial impacts | No new alignment | | Worse than 1 |
| Potential for hazardous materials impacts | Some ground disturbance; moderate risk. | Significant ground disturbance; highest risk | Significant ground disturbance; highest risk | Minimal ground disturbance; lowest hazmat risk | | Excavation increases chances of hazmat encounters |
| Aesthetic impacts | Elevated crossing would have moderate impacts to existing views | New roadway alignment would have considerable impacts to existing views | New roadway alignment would have considerable impacts to existing views, but moving alignment to the north mitigates some of it | No change to existing viewshed | More impactful to existing views | |
| Drainage challenges | Some drainage improvements required with addition of curb, gutter, and pedestrian bridge | Significant drainage challenges with crossing the RR | Significant drainage challenges with crossing the RR | No substantial revisions to storm sewer system proposed; minimal storm drainage improvements with addition of curb and gutter | | Pump station required to list stormwater to river; low point collects all up-basin flows; mitigation of contaminated groundwater likely required |
| Vehicular and freight connectivity | Does not accommodate vehicular traffic connection | Provides connection for vehicular traffic across RR | Provides connection for vehicular traffic across RR | Does not provide any vehicular connection | Provides connection for vehicular traffic across RR | Provides connection for vehicular traffic across RR |
| Noise impacts | A ped/bike crossing would not increase noise levels | Providing freight/passenger vehicle connectivity through residential neighborhood will increase traffic and will have more noise impacts than not providing a connection along 52nd | Providing freight/passenger vehicle connectivity through residential neighborhood has more noise impacts than not providing a connection | Noise levels would remain as they are today | | Underpass results in lower noise impacts to nearby receptors |
| Other | | | | | | |
| Utility impacts | Moderate impacts from providing a ped/bike bridge due to touchdowns | Providing adequate travel lanes/multimodal facilities results in a larger footprint and likely more utility impacts. Overhead powerline relocations required due to widening existing 52nd. | Less relocation than Alt 2, but will still require some relocations | Minimal impacts due to not crossing the RR | | Excavation increases chances of utility impacts |
| Cost | A ped/bike bridge over the RR costs less to construct than a full roadway crossing, either over or under | Providing a new roadway connection across the RR is more costly than the other options | Providing a new roadway connection across the RR is more costly than the other options | Most affordable as there would be no RR crossing | | Underpass is more expensive than an overpass in this location |
| Ease of maintenance | Additional maintenance with ped/bike bridge will be required | RR crossing will add substantial maintenance costs/ requirements | RR crossing will add substantial maintenance costs/ requirements | | | Underpass is more challenging for maintenance purposes, particularly with pump station for storm water |
| Inter-agency coordination needs (Railroads/Adams County/ PUC) | Moderate coordination needed due to crossing of RR | Most coordination needed due to new roadway crossing of RR | Most coordination needed due to new roadway crossing of RR | No additional coordination needed | | RRs do not prefer underpasses for grade-separated crossings. May not allow it at all |