## **US Highway 380 Route Comparison Matrix**

Key Factors	Proposed Green Option Cost Road to FM 1827	Proposed Bypass Option"A" Coit Road to FM 1827	Proposed Bypass Option "B" Coit Road to FM 1827	Comparative Evaluation (Negative and Positive Impacts)
Project Costs Source: Feasibility Update Oct. 4	<ul> <li>Proposed Green Option is approximately 11 miles in length. TxDOT's estimated cost is \$916 million, or \$83 million per mile. The estimate includes construction, ROW, and utility relocation.</li> <li>TxDOT's \$916 million estimate includes the cost to depress the ROW (approx. 1 mile) between Tucker Hill and Stonebridge Ranch neighborhoods and the required ROW (approximately 4 miles) east of US Highway 75.</li> </ul>	<ul> <li>Proposed Red Option "A" is approximately 16 miles in length. TxDOT's estimated cost is \$748 million, or \$47 million per mile. The estimate includes construction, ROW, and utility relocation.</li> <li>Is the \$103 million difference in cost between RED Option "A" and "B" the estimated cost to depress the ROW (approx. 1 mile) between Tucker Hill and Stonebridge Ranch neighborhoods?</li> </ul>	Proposed Red Option "B" is approximately 14 miles in length. TxDOT's estimated cost is \$645 million, or \$46 million per mile. The estimate includes construction, ROW, and utility relocation.	Red Option "B" appears to be the lowest cost option. However, some of the ROW and utility relocation cost could be reduced with development along the commercial corridor, and other Key Factors may prove the Green Option to be the best option.
Engineering Analysis	<ul> <li>Depressing the ROW between Tucker Hill and Stonebridge Ranch will reduce the right of way requirement and mitigating noise impacts. Cantilevering the service roads is an important design element in this approximate 1 mile section of the project.</li> <li>The 5 1/2 mile section from Custer Road and US Highway 75 should have no more than 5 on-and-off ramps designed for the project; Arterial RoadsCuster Road, Ridge Road, Lake Forest Drive, Harden Blvd., and Community Drive.</li> </ul>	<ul> <li>Depressing the ROW between Tucker Hill and Stonebridge Ranch will reduce the right of way requirement and mitigating noise impacts. Cantilevering the service roads is an important design element in this approximate 1 mile section of the project.</li> <li>The 5 1/2 mile section from Custer Road and US Highway 75 should have no more than 5 on-and-off ramps designed for the project; Arterial RoadsCuster Road, Ridge Road, Lake Forest Drive, Harden Blvd., and Community Drive.</li> <li>Additional engineering or relocation costs may be required to mitigate the impacts related to crossing the two major flood plains (Wilson Creek, and the East Fork of the Trinity River). See related comments under Water Resources and Flood Plains.</li> </ul>	<ul> <li>The 5 1/2 mile section from Custer Road and US Highway 75 should have no more than 5 on-and-off ramps designed for the project; Custer Road, Ridge Road, Lake Forest Drive, Harden Blvd., and Community Drive.</li> <li>Additional engineering or relocation costs may be required to mitigate the impacts related to crossing the two major flood plains (Wilson Creek, and the East Fork of the Trinity River). See related comments under Water Resources and Flood Plains.</li> </ul>	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option: The Green Option and Red Option "A" proposal to depress the ROW between Tucker Hill and Stonebridge Ranch, and east of US Highway 75 will significantly reduce the right of way requirement and mitigates noise impacts for both sections of the project. Cantilevering the service roads is also an important design element further reducing the project's ROW requirements.</li> <li>NEGATIVE IMPACT Red Options "A" and "B": Additional engineering or relocation costs may be required to mitigate the impacts related to constructing new crossings for two major flood plains (Wilson Creek and the East Fork of the Trinity River).</li> </ul>
Right of Way (ROW) Requirements	<ul> <li>The additional ROW requirement for US Highway 380 appears to be minimal when compared to that required for the proposed proposed Red Options "A" and "B". The per foot land costs are estimated to be twice the cost projected for proposed Red Options "A" and "B".</li> <li>The ROW for the Green proposal can meander north and south of US Highway 380's current alignment to minimize any disruption or displacement.</li> </ul>	The proposed Red Option "A" will need to purchase the full ROW, which is estimated to require 3 to 4 times the additional right of way required for US Highway 380.	The proposed Red Option "B" will need to purchase the full ROW, which is estimated to require 3 to 4 times the additional right of way required for US Highway 380.	MINIMAL COMPARATIVE IMPACT     Green Option: The Row requirement is incremental and has minimal impact on residential properties and communities. The additional ROW may be donated as development and redevelopment of property occurs during the 10 years leading up to the freeway's construction.      NEGATIVE IMPACT     Red Options "A" and "B": ROW requirements will require the relocation of families and impose significant impacts on adjoining residential properties. Greater weight should be given to the negative impacts placed on families when compared to commercial properties.

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Existing and Planned Utilities	<ul> <li>This is a 10 to 15 year project. During this period utility will likely experience growth and upgrade their systems to meet customer demand in the commercial sector.</li> <li>Electric utilities will likely be relocated underground as their facilities are upgraded to meet customer demand. Upgrades will likely be installed outside the the proposed freeway ROW.</li> </ul>	Existing utilities primarily serve rural McKinney and incorporated properties. Utilities will be updated as growth demands. Commercial growth in this area is likely to lag the growth on US Highway 380.	Existing utilities primarily serve rural McKinney and incorporated properties. Utilities will be updated as growth demands. Commercial growth in this area is likely to lag the growth on US Highway 380.	MINIMAL COMPARATIVE IMPACT     Green Option: Business development and redevelopment along the freeway corridor will cause utility system upgrades and new services during the next 10 to 15 years. Utility relocations not related to the project should be backed out of the project's estimated utility costs.      NEGATIVE IMPACT Red Options "A" and "B": The majority, if not all, of the utility relocation costs will not be project related.
Traffic Analysis US Highway 380	<ul> <li>US Highway 380, proposed Green Option, currently well situated at Custer Road. The highway is positioned halfway between 121 Sam Rayburn Tollway (6.5 miles) and the proposed Collin County Northern Loop (5 miles)</li> <li>The projects goal is to provide east-to-west and west-to-east traffic relief on US Highway 380. The freeway would be designed to flow through McKinney at freeway speed (70 mph).</li> </ul>	<ul> <li>Traffic on proposed Red Option "A" will likely be assigned a lower Engineering Service Rating (lower speed limit) due to traffic slowing to negotiate curves west of US 75, between US 75 and US Highway 380's current alignment, and east of Tucker Hill.</li> <li>The Dallas North Tollway between Trinity Mills Road and Keller Springs Road may offer a comparative design. Crash data for this 65 mph stretch of the DNT should be considered and evaluated.</li> </ul>	<ul> <li>Traffic on proposed Red Option "B" will likely be assigned a lower Engineering Service Rating (lower speed limit) due to traffic slowing to negotiate curves west of US 75, between US 75 and US 380's current alignment, and and west of Custer Road.</li> <li>Red Option "B" has the higher safety risk than the Green and Red Option "A". The safety risk is in the design where Red Option "B" crosses Custer Road at an angle (Reference: TxDOT Alignment Revisions Evaluation 10/04).</li> </ul>	MINIMAL COMPARATIVE IMPACT     Green Option: The Green Option will     provide a straight line of travel designed for     freeway speed, up to 70 mph.      NEGATIVE IMPACT     Red Options "A" and "B":     Red Option "B" has a higher safety risk     than the other two options.  The road design will likely require lower     speed limit on Red Options "A" and "B" to     provide safe travel as drivers negotiate the     freeway curves and fight to remain in their     travel lanes.
Traffic Analysis Arterial Roads	<ul> <li>US Highway 380 (proposed Green Option) at Custer Road is currently located halfway between 121 Sam Rayburn Tollway (6.5 miles) and the proposed Collin County Northern Loop (5 miles).</li> <li>Conforms with One MCKinney 2040 Comprehensive Plan.</li> <li>The buildout of the Comprehensive Plan's arterial roads north of US Highway 380's current alignment will relieve traffic local traffic issues, including arterials south of US Highway 380. East-west roads north of US Highway 380 (Bloomdale Road, Laud Howell Parkway, and an unnamed arterial) are not currently improved as arterial roads.</li> </ul>	<ul> <li>US Highway 380's proposed Red Option "A" will be 2 miles north of its current location, which then puts 121 Sam Rayburn Tollway 8.5 miles south and the proposed Collin County Northern Loop within 3 miles to the north.</li> <li>The Red Option "A" interchange with US Highway 75 will be 2.6 miles further north and 1 mile further east of its current location.</li> <li>Does not relieve traffic on Virginia Parkway and Eldorado Parkway as travelers from Frisco traverse the City of McKinney.</li> </ul>	<ul> <li>US Highway 380's proposed Red Option "A" will be 2 miles north of its current location, which then puts 121 Sam Rayburn Tollway 8.5 miles south and the proposed Collin County Northern Loop within 3 miles to the north.</li> <li>The Red Option "A" interchange with US Highway 75 will be 2.6 miles further north and 1 mile further east of its current location.</li> <li>Does not relieve traffic on Virginia Parkway and Eldorado Parkway as travelers from Frisco traverse the City of McKinney.</li> <li>Increases traffic in the Town of Prosper on 1st Street, Prosper Trail, and Frontier Parkway as commuters travel between Proposed Red Option "B" to Preston Road to travel north.</li> </ul>	MINIMAL COMPARATIVE IMPACT     Green Option: Centrally located between 121 Sam Rayburn Tollway and the proposed Collin County Northern Loop. Conforms with One McKinney 2040 Comprehensive Plan      NEGATIVE IMPACT Red Options "A" and "B": Increases traffic in Town of Prosper on 1st Street, Prosper Trail and Frontier Parkway. Does not relieve traffic on arterials in McKinney sooth of existing US Highway 380.

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Existing and Planned Residential Developments	One McKinney 2040 Comprehensive Plan Takes a proactive approach to the planning process by reaching out to the community to gather public input in developing its Land Use Plan.	Red Option "A" would create a freeway barrier and negative impacts which are inconsistent with the development patterns and character envisioned by the One McKinney 2040 Comprehensive Plan. For example, the Northridge District is divided creating a north and south Northridge District. The high school attendance area is also divided into an area south of proposed Red Option "A" and the other south of the proposed freeway.  Imposes negative impacts on upwards of 11 residential developments many of which are in their planning or construction phase.	<ul> <li>Red Option "B" would create a freeway barrier and negative impacts which are inconsistent with the development patterns and character envisioned by the One McKinney 2040 Comprehensive Plan. For example, the Northridge District is divided creating a north and south Northridge District. The high school attendance area is also divided into an area south of proposed Red Option "B" and the other south of the proposed freeway.</li> <li>Conflicts with the Town of Prosper's Comprehensive Plan and the planned residential development in the southeast corner of the Town's corporate limits.</li> <li>This option would impact upwards of 11 residential developments many of which are in their planning or construction phase. This option would also divide the Walnut Grove community.</li> </ul>	MINIMAL COMPARATIVE IMPACT Green Option: The Green Option conforms with One McKinney 2040 Comprehensive Plan.      NEGATIVE IMPACT Red Options "A" and "B": The Red Options conflicts with and does not support the Town of Prosper's Comprehensive Plan, and One McKinney 2040 Comprehensive Plan. The Options will negatively impact a significant number of yet to be completed residential developments, and the high school attendance area is negatively impacted as well.
Existing and Planned Commercial Developments	The project should consider the current businesses located along US 380, but it should be weighted by the fact that this project is 10 to 15 years out and much of US Highway 380's commercial corridor will experience redevelopment or growth under the City of McKinney's 2040 Plan. The City of McKinney should be able to minimize further impacts in the Green Option's commercial corridor.	Existing or planned significant commercial developments are not currently planned along Red Option "A".	Existing or planned significant commercial developments are not currently planned along Red Option "B".	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option: The commercial corridor will likely go through a transition over the next 10 to 15 years. Impact on commercial properties can me minimized through planning and zoning by the City of McKinney during the 10 plus years leading up to construction.</li> <li>NEGATIVE IMPACT Red Options "A" and "B": Commercial development is likely to occur along this corridor for several years after construction.</li> </ul>
Costs and Economic Development	Upgrading US Highway 380 to a freeway will have significant costs, including time of delay. However, the economic growth the City of McKinney will experience from the Green Option's commercial corridor will significantly offset the costs associated with the projects construction. Additionally, once the corridor is selected and the right of way defined commercial investment and development will begin.	Red Option "A" will also have significant costs. Economic development will lag the development US Highway 380 will experience. Speculators may begin to purchase property along the corridor but investors will withhold development along the corridor until they are assured a return on their investment; e.g., Red Option "A" is nearing completion.	Red Option "B" will also have significant costs. Economic development will lag the development US Highway 380 will experience. Speculators may begin to purchase property along the corridor but investors will withhold development along the corridor until they are assured a return on their investment; e.g.,Red Option "B" is nearing completion.	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option: While the project will incur significant construction and disruption of businesses during construction, the long term financial benefits and perception of McKinney as a city planning for its future far outweigh the project's costs.</li> <li>NEGATIVE IMPACT Red Options "A" and "B": Economic growth in these two options will be delayed until the freeway project nears completion.</li> </ul>
Land Use and Parkland	<ul> <li>Conforms to One McKinney 2040 plan. Greenbelt Park (future) is planned as part of Wilson Creek's Flood Plain.</li> <li>The Green Option impacts significantly less acreages of land as compared to all other options.</li> </ul>	Red Option "A" will negatively impact the On McKinney 2040 plan for trails and open space amenities along Wilson Creek and Stover Creek.	<ul> <li>Red Option "B" will negatively impact the On McKinney 2040 plan for trails and open space amenities along Wilson Creek.</li> <li>Conflicts with the Town of Prosper's Comprehensive Plan</li> </ul>	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option: Significantly impacts less acreages of land. Supports One McKinney 2040 Plan for trails and open space amenities.</li> <li>NEGATIVE IMPACT Red Options "A" and "B": Impacts One McKinney Plan for trails and open space. Conflicts with the Town of Prosper's Comprehensive Plan.</li> </ul>

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Water Resources and Flood Plains	The bridges crossing the two major waterways and flood plains at Wilson Creek and the East Fork of the Trinity River will require widening or reconstruction to accommodate the the proposed limited access highway and service roads.	Reference - FEMA revised flood maps for Collin County on June 7, 2017 Wilson Creek  A new bridge would be required at Wilson Creek and its flood plain.  East Fork of the Trinity River  As Option "A" crosses US 75 a significant bridge will be required as it enters and crosses the East Fork of the Trinity River and its sizable flood plain.  The freeway turns south and parallels the east side of the East Fork of the Trinity River. An elevated 3 mile highway may be required through the river's sizable flood plain.  The interchange where Option "A" rejoins US Highway 380's current alignment is located within or adjacent to the East Fork of the Trinity River and its sizable flood plain. The design will need to consider the future growth of the river's sizable flood plain caused by growth and development in northern Collin County.  One McKinney 2040 Comprehensive Plan  Proposed Option "A" will negatively impact the Wilson Creek flood plain which would otherwise give the Northridge District opportunities to incorporate natural open space as an amenity for residents. Trail connections along these creeks would link these newer neighborhoods to the jobs in the Medical District and the people and amenities in Stonebridge Ranch and other existing neighborhoods.	Reference - FEMA revised flood maps for Collin County on June 7, 2017 Wilson Creek  New bridge would be required at Wilson Creek and its flood plain.  The undeveloped lots in Tucker Hill lie within Wilson Creek's flood plain which FEMA defines as a Special Flood Hazard Area (SFHA) - High Risk. Structures located within the SFHA have a 26 percent chance of flooding during the life of a 30 year mortgage.  Construction of a freeway through the SFHA may add sufficient water runoff to impose additional risk to current property owners. The freeway and growth and development may expand the high risk SFHA to include additional Tucker Hill properties/homes.  East Fork of the Trinity River  As Option "B" crosses US 75 a significant bridge will be required as it enters and crosses the East Fork of the Trinity River and its sizable flood plain.  The freeway turns south and parallels the east side of the East Fork of the Trinity River and its sizable flood plain.  The interchange where Option "B" rejoins US Highway 380's current alignment is located within or adjacent to the East Fork of the Trinity River and its sizable flood plain. The design will need to consider the future growth of the river's sizable flood plain caused by growth and development in northern Collin County.  One McKinney 2040 Comprehensive Plan  Proposed Option "B" will negatively impact the Wilson Creek flood plain which would otherwise give the Northridge District opportunities to incorporate natural open space as an amenity for residents. Trail connections along these creeks would link these newer neighborhoods to the jobs in the Medical District and the people and amenities in Stonebridge Ranch and other existing neighborhoods.	MINIMAL COMPARATIVE IMPACT Green Option: Will require the widening or reconstruction of freeway bridges and service roads at two major waterways.      NEGATIVE IMPACT Red Options "A" and "B": The feasibility may not have used FEMA's revised flood maps for Collin County. The maps, dated June 7, 2017, have enlarged to Special Flood Hazard Area (SFHA) to include the undeveloped lots and a number of homes in Tucker Hill. Runoff from proposed Option "B" and development in northern Collin County may substantially increase the flood area in future years.  The proposed Red Options "A" and "B" conflict with the One Mckinney 2040 Comprehensive Plan and its plan to incorporate the natural open space as an important resource for residents.

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Social and Community Impacts	Conforms with One McKinney 2040.	Creates an island for residents north of US Highway 380 and south of the proposed Red Option "A".	<ul> <li>Proposed Red Option "B" conflicts with ManeGait. ManeGait provides therapeutic horsemanship services to clients throughout Collin County.</li> <li>Creates an island for residents north of US Highway 380 and south of the proposed Red Option "B".</li> </ul>	MINIMAL COMPARATIVE IMPACT     Green Option: Conform with One     McKinney 2040.      NEGATIVE IMPACT     Red Options "A" and "B": Imposes     significant unmitigated social and     community impacts.
Stakeholder and Public Input	Most recent TxDOT citizen survey showed residents in the cities of Frisco, Prosper and McKinney prefer the Green alignment.	Residents north of US Highway oppose the proposed Red Option "A". Many residents south of 380 support the proposed Red Option "A", but their commitment to use the proposed Red Option "A" would be limited at best.	<ul> <li>Residents north of US Highway oppose the proposed Red Option "A". Many residents south of 380 support the proposed Red Option "A", but their commitment to use the proposed Red Option "A" would be limited at best.</li> <li>The Town of Prosper is on the record opposed to the proposed Red Option "B" crossing Custer Road.</li> </ul>	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option: The majority of those completing the survey commenting on the five earlier proposed routes support improving US Highway 380 in its current alignment.</li> <li>NEGATIVE IMPACT Red Options "A" and "B": Indications are most people living south of US Highway 380 would no drive north to use proposed Red Alignment "A" or "B".</li> </ul>
Proximity to High Schools	• None	<ul> <li>Proposed Red Option "A" conflicts with the City of McKinney's 2040 Comprehensive Plan. Option "A" will divide the plan's Northridge District which does not support the goal of locating school sites where they best serve households with school-age children and follow the development pattern described in the plan's Preferred Scenario.</li> <li>Prosper Independent School District has plans to build a high school on Bloomdale east of Custer. The campus will be located north of the proposed Red Option "A". Students south of Red Option "A" will need to cross the proposed freeway to reach the campus. Some students will travel the service roads from Lake Forest (eastern PISD boundary) to reach the campus.</li> </ul>	<ul> <li>Proposed Red Option "B" conflicts with the City of McKinney's 2040 Comprehensive Plan. Option "B" will divide the plan's Northridge District which does not support the goal of locating school sites where they best serve households with school-age children and follow the development pattern described in the plan's Preferred Scenario.</li> <li>Prosper Independent School District (PISD) has plans for two high school. one is located east of Custer Road and the other is west of Custer Road.</li> <li>The planned Bloomdale campus east of Custer will be located on the north side of the proposed Red Option "B". Students south of the Red Option "B" will need to cross the proposed freeway to reach the campus. Some students will travel to service roads from Lake Forest (eastern PISD boundary) to reach the campus.</li> <li>The second campus is planned west of Custer Road on 1st Street.</li> </ul>	MINIMAL COMPARATIVE IMPACT Green Option: No planned or existing high school sites.      NEGATIVE IMPACT Red Options "A" and "B": The proposed options conflict with the City of McKinney's Comprehensive Plan adopted on 10/02.2018. The proposed options also present considerable public safety risks for students residing west of Lake Forest Drive and south of the Red Options "A" and "B". Young student drivers will travel east and west on on the proposed freeway or freeway service roads to reach the campus.
Proximity to Cemeteries	• None	• None	There are three cemeteries located west of Custer Road; Horn, Walnut Grove, and Ware. Horn Cemetery lies within 90 feet of the proposed Red Option "B".	<ul> <li>MINIMAL COMPARATIVE IMPACT Green Option and Red Option "A": There are no cemeteries within close proximity of the Green Option and Red Option "A"</li> <li>NEGATIVE IMPACT Red Option "B": There three cemeteries within close proximity to Red Option "B".</li> </ul>