CITY OF RIVERSIDE

City of Arts & Innovation

City Council Memorandum

TO: **HONORABLE MAYOR AND CITY COUNCIL** **DATE: NOVEMBER 19, 2024**

FROM: **PUBLIC WORKS DEPARTMENT** **WARDS: 1, 2, 3, 4, AND 5**

SUBJECT: **PRIORITIZATION OF THE TOP THREE RAILROAD GRADE SEPARATIONS ALONG THE BURLINGTON NORTHERN SANTA FE RAILROAD**

ISSUE:

Review and prioritize the top three potential grade separations amongst the existing Burlington Northern Santa Fe railroad crossings at: Adams Street, Jackson Street, Madison Street, Mary Street, Mission Inn Avenue, Spruce Street, and Tyler Street.

RECOMMENDATIONS:

That the City Council:

1. Approve the top three proposed Grade Separation Priority Ranking as follows: (1) Spruce Street, (2) Jackson Street, and (3) Mary Street at the existing Burlington Northern Santa Fe (BNSF) railroad crossings; and

2. Direct the Public Works Department to explore funding opportunities to begin the Project Approval and Environmental Documents phase of the Spruce Street grade separation.

COMMITTEE RECOMMENDATION:

The Mobility and Infrastructure Committee met on August 8, 2024, with Chair Conder, Vice Chair Hemenway and Member Perry present, to review and prioritize the top three potential grade separations amongst the existing BNSF railroad crossings at: Adams Street, Jackson Street, Madison Street, Mary Street, Mission Inn Avenue, Spruce Street, and Tyler Street. Following discussion it was moved by Member Perry and seconded by Vice Chair Hemenway to recommend that the City Council (1) approve the top three proposed Grade Separation Priority Ranking as follows: (a) Spruce Street, (b) Jackson Street, and (c) Mary Street at the BNSF railroad crossings; and (2) direct the Public Works Department to explore funding opportunities to begin the Project Approval and Environmental Documents (PA&ED) phase of the Spruce Street grade separation. The motion carried unanimously.

BACKGROUND:

On February 8, 2024, the Mobility & Infrastructure Committee received a report on the Prioritization of Railroad Grade Separations along the BNSF railroad at Jackson Street, Madison Street, Mary Street, Spruce Street, Tyler Street, and Mission Inn Avenue. Following discussion, it was moved by Member Perry and seconded by Vice Chair Hemenway to continue the proposed Grade Separation Priority Ranking item to address concerns expressed by residents of the Casa

Blanca neighborhood regarding the Madison Street crossing and for Public Works to expand the list of the grade separations under review to include Adams Street and Mission Inn Avenue. Staff was requested to return to Mobility and Infrastructure Committee with an updated report.

On August 8, 2024, the Mobility & Infrastructure Committee received the requested updated report on the Prioritization of Railroad Grade Separations along the BNSF railroad at Jackson Street, Madison Street, Mary Street, Spruce Street, Tyler Street, and Mission Inn Avenue. Following discussion it was moved by Member Perry and seconded by Vice Chair Hemenway to recommend that the City Council (1) approve the top three proposed Grade Separation Priority Ranking as follows: (a) Spruce Street, (b) Jackson Street, and (c) Mary Street at BNSF railroad crossings; and (2) direct the Public Works Department to explore funding opportunities to begin the Project Approval and Environmental Documents phase of the Spruce Street grade separation.

DISCUSSION:

The City of Riverside is impacted by two transcontinental rail lines, which serve as important corridors to move goods and people to their destinations. These two rail lines carry over 75% of the freight handled by the Ports of Long Beach and Los Angeles through the City of Riverside. At-grade railway crossings create traffic delays and some of the busiest crossings have an average of 3 hours of daily gate-down time while trains pass. Police, Fire, and EMT officials have reported that such crossings impact their service response times.

As such, it is desirable to consider separating train tracks from city streets at their crossing point, and redirecting the vehicle, pedestrian, and bicycle traffic above or below the busy railroad tracks. This type of project is referred to as a grade separation. Grade separations are both costly and complex works of engineering which require local, state and/or federal funds for the right-of-way, engineering, and construction phases. Due to the capital investment, project complexity, and community benefits, the Public Works Department relies on community and City Council feedback and support to prioritize grade separation projects.

The City's strategy of prioritizing grade separation projects and completing early design has proven effective in securing local, state, and/or federal funds as demonstrated by the completion of six railroad grade separations since 2009. This strategy is exemplified by the Third Street grade separation when in April 2017 the City Council directed the Public Works Department to begin preliminary engineering design of the project. The Third Street grade separation is currently in right-of-way acquisition and final engineering design. The total estimated cost of the project is $86 million. In 2023, the Public Works Department was successful in securing $52 million in combined local, state, and federal grants, fully funding the project. Construction of the project is anticipated to start in mid-2026.

In September of 2023, the Public Works Department collected traffic counts (Table 1) and rail crossing data (Table 2) at Jackson, Madison, Mary, Spruce, and Tyler Streets crossings with BNSF railroad. Based on the traffic and rail crossing data including train accidents history, RCTC ranking, and freeway connectivity, the Public Works Department previously recommended the Madison Street/BNSF railroad crossing as the top ranked grade separation, and the Spruce Street/BNSF railroad crossing as the second ranked grade separation. However, several residents of the Casa Blanca neighborhood spoke against a grade separation at Madison Street. In response, the Committee requested the Public Works Department to engage and seek further comments from the community. The Committee further requested staff to expand the list of the grade separations under review, including Adams Street and Mission Inn Avenue, and return to Mobility and Infrastructure Committee with an updated report.

During the February 20, 2024, Community Action Group meeting, many residents of the Casa Blanca neighborhood continued to oppose a grade separation at Madison Street/BNSF out of concerns for increased traffic volumes and vehicle speeds through neighborhood. Thus, staff is recommending that Madison Street/BNSF be removed from the current priority list. Alternative design treatments including a grade separation will be studied as part of the General Plan Circulation Element alongside robust community engagement to fully understand public opinion.

In April of 2024, the Public Works Department collected additional traffic counts and rail crossing data at Adams Street/BNSF, and Mission Inn Avenue/BNSF railroad crossings.

Table 1 – Rail Crossing Traffic Data

Street/BNSF Rail Crossing	Average Daily Traffic Counts	Average Daily Pedestrian Counts	Average Daily Bicycle Counts	No. of School Buses**	No. of School Special Need Vans**	No. of Passenger Buses	TUMF Network
Adams Street	12,372	247	25	36	-	43	No
Jackson Street	7,884	218	31	-	8	2	No
Madison Street*	13,923	381	52	12	10	4	Yes
Mary Street	12,149	68	75	6	4	5	No
Mission Inn Avenue	5,074	182	101	16	-	18	No
Spruce Street	16,255	32	56	4	4	16	No
Tyler Street	15,407	79	36	6	2	88	No

**Madison St. crossing is on the TUMF Network making the project eligible for up to $20.01M in local TUMF funding*
***No. of school buses and Vans were obtained from Riverside and Alvord Unified School Districts, and in the case of Adams St. and Mission Inn Ave from automated traffic cameras/counts.*

Table 2 – Rail Crossing Data

Street/BNSF Rail Crossing	Average Daily Train Count	Gate Down Time (Minutes)	Train Accidents: Fatal/Non-Fatal (Past 10 Years)	2017 RCTC Priority Group	Railroad Quiet Zone	Freeway Connectivity	Estimated Cost ($MM)
Adams Street	90	140	0/0	1	Yes	Yes	150.0+
Jackson Street	90	156	0/0	3	Yes	No	60.0
Madison Street	90	184	2/0	1	Yes	Yes	60.0
Mary Street	90	180	0/0	3	Yes	No	60.0
Mission Inn Avenue	92	181	1/1	3	No*	Yes	75.0
Spruce Street	92	196	1/0	1	No*	Yes	75.0
Tyler Street	90	145	2/1	1	Yes	Yes	100.0+

**Spruce Street and Mission Inn Ave Crossings are future Quiet Zones in Preliminary Design*

Excluding Madison Street/BNSF railroad crossing, and utilizing a weighted score, which factors in data from Tables 1 and 2, and additional factors including proximity to schools and constructability, staff are now proposing the following revised priority ranking for the top three grade separation projects:

Grade Separation Priority Ranking at the BNSF railroad crossings:

1. Spruce Street
2. Jackson Street
3. Mary Street

A grade separation at Adams Street will require significant right-of-way acquisition from the auto dealerships; consequently, Adams Street is not recommended due to the impacts to the surrounding developments, comparatively lower gate down times, safety history, and costs.

Tyler Street Construction Complexity:

On June 20, 2006, the City Council authorized the Public Works Department to complete the engineering studies necessary to determine the feasibility and cost effectiveness of mid- and long-term strategies to improve the Tyler Street/SR 91 interchange traffic congestion. Upon completion of the conceptual plans, the Public Works Department met with Caltrans representatives in December 2006 to review the alternatives and begin project development including assessment and selection of the alternatives and environmental work. After reviewing the site and conceptual alternatives, Caltrans staff expressed concern regarding the need for several design exceptions, the geometrics of the new rail crossing, and the freeway off ramp. Caltrans recommended that the project be evaluated through their Value Analysis (VA) process.

The Public Works Department retained Value Management Strategies to coordinate and facilitate the VA workshop. Seventeen Caltrans representatives and three City staff members with experience in highway design and traffic engineering attended the five-day workshop. Representatives from the Development Department and other stakeholders also attended the opening and closing sessions.

The VA team established congestion reduction as the overall goal for the study and grade separating the rail crossing as a secondary goal. During the data collection phase, the VA team noted that even without the impacts of the rail crossing, congestion is significant during off-peak hours. This emphasizes the need to concentrate on improving other geometric deficiencies.

The VA team analyzed lowering the BNSF tracks to achieve a grade separation, but the tracks are already close to the railroad's maximum 1% grade, thus, this is not a viable solution. A more traditional grade separation, either by raising or lowering the road, was also determined to be difficult due to the close proximity of the tracks to the freeway. Consequently, the VA team was able to develop only one railroad grade separation alternative. Ultimately, the VA team recommended that improvements to the Tyler Street/State Route 91 Interchange would more effectively reduce congestion. Given ongoing developments along Tyler Street, a decision to advance alternatives for the Tyler Street Interchange would require additional analysis.

STRATEGIC PLAN ALIGNMENT:

This item aligns with **Strategic Priority 6 – Infrastructure, Mobility, and Connectivity** by improving safety, circulation, and providing critical infrastructure for our community to thrive and is in accordance with **Goal 6.2** – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

Furthermore, this project aligns with each of the four Cross-Cutting Threads as follows:

1. **Community Trust** – Riverside is transparent and makes decisions based on sound policy,

inclusive community engagement, involvement of City Boards and Commissions, and timely and reliable information. This report has been updated with new data collected in the field and the recommendations have been aligned with community feedback.

2. **Equity** – Grade separations provide a safe and reliable roadway network to schools, shopping centers and to various neighborhoods. They also improve the quality of life of nearby residents and the air quality by eliminating the train horn and vehicle idling at the railroad tracks.

3. **Fiscal Responsibility** – Pursuit of grant funding leverages City funds to secure State and Federal funding to construct large and complicated projects. Grant pursuit shows the City is responsive to community priorities by pursuing available funding opportunities to expedite critical infrastructure projects.

4. **Innovation** – The Public Works Department will continue to study alternatives for the Madison Street at-grade crossing, including a potential grade separation, as part of the General Plan Update in order to meet community needs and desires.

5. **Sustainability & Resiliency** – Grade separations improve walkability and bike-ability along a roadway by separating pedestrian and bicycle traffic from the railroad tracks, thereby encouraging more sustainable modes of transportation. Grade separations additionally eliminate idling at the intersection during the train's crossing which can help to improve air quality.

FISCAL IMPACT:

There is no fiscal impact associated with this report.

Prepared by:	Farshid Mohammadi, Engineering Manager
Approved by:	Gilbert Hernandez, Public Works Director
Certified as to availability of funds:	Kristie Thomas, Finance Director/Assistant Chief Financial Officer
Approved by:	Kris Martinez, Assistant City Manager
Approved as to form:	Jack Liu, Interim City Attorney

Concurs with;

Chuck Conder, Chair
Mobility & Infrastructure Committee

Attachments:
1. Rail Crossings
2. Presentation