City of Arts & Innovation

Transportation Board

TO: **TRANSPORTATION BOARD** **DATE: MAY 7, 2025**

FROM: **PUBLIC WORKS DEPARTMENT** **WARDS: 5**

SUBJECT: **REQUEST FOR SPEED HUMPS ON ORCHARD STREET**

ISSUE:

Consider speed humps along Orchard Street between Jefferson Street and Verde Street.

RECOMMENDATION:

That the Transportation Board deny the appeal requesting speed humps along Orchard Street between Jefferson Street and Verde Street.

BACKGROUND:

The Neighborhood Traffic Management Program (NTMP) was designed to provide general guidelines for the assessment of traffic issues on local, collector, and arterial roadways throughout the City as well as outline various traffic mitigation measures which may serve as suitable solutions to demonstrated traffic issues.

As part of the Neighborhood Traffic Management Program (NTMP), the city re-instated a formal Speed Hump Policy Guidelines and Procedure on May 7, 2024, to effectively address concerns related to speeding on residential streets. The goal of this policy is to enhance neighborhood safety by implementing traffic calming measures, such as speed humps, to reduce vehicle speeds on eligible residential streets. This policy aims to unite neighborhoods and identify appropriate measures to improve travel behavior for the benefit of affected communities. Speed humps are a potential secondary option for residential designated streets. A website outlining details of the Speed Hump Program has been developed – Speed Hump Program | Public Works

A speed hump is an elongated mound in the roadway pavement surface extending across the traveled way designed perpendicular to the traffic flow. The purpose of a speed hump is to regulate traffic speeds by providing minor vertical deflection while driving through it. Speed humps are still considered experimental roadway features; therefore, additions, alterations, or removals of all speed humps may occur at any time.

DISCUSSION:

The city received a petition from the residents on Orchard Street requesting speed humps. The petition and roadway conditions on Orchard Street between Jefferson Street and Verde Street (Attachment 1 – Location Map) were reviewed for consistency with the City's Speed Hump Program. The petition reflects that 28 of the 33 residents (85%) support speed humps, which meets the minimum requirement of 70% of the residents. There were no signatures opposing the speed hump proposal. Staff investigated speeds, volumes, and street geometrics. Comparing staff's investigation of Orchard Street with the City's set guidelines for speed humps resulted in 6 out of 8 criteria being met. Based on the requirement to meet all 8 criteria, Orchard Street does not qualify for speed humps per the City approved policy. A summary of the findings is provided via Attachment 2 and staff have provided all this information to the residents along Orchard Street. However, a letter of appeal (Attachment 10) was submitted to staff requesting for proposed speed humps to be reviewed by the Transportation Board.

Because the roadway does not meet the established criteria for speed hump installation and because staff are not aware of mitigating circumstances that would merit overriding the established criteria, staff recommend denial of the appeal. The preliminary cost estimate for the speed hump installation is $28,640.

Orchard Street is a two-way (one lane in each direction) residential street located between Jefferson Street to the west, and Verde Street to the east. It is approximately 1,500 feet in length and 36 feet wide, which meets the minimum required length of ¼ mile (1,320) and does not exceed the maximum width of 40 feet. There are 33 homes on both sides of the street meeting the minimum requirement of sixteen (16) homes for a double-loaded street. Attachment 3 illustrates the potential four speed hump locations along Orchard Street.

There was one speed survey and traffic count conducted on Orchard Way as part of staff's investigation. The radar survey measured an 85th percentile speed of 33 mph on Orchard Street which does not meet the 37-mph minimum required by the city program. The corresponding 24-hour two-way volume count indicated a total volume of 2,343 vehicles per day, which exceeds the maximum threshold of 1,999 vehicles per day. The estimated vertical grade is in the range of 0.57%-1.19% along Orchard Street, which is below the maximum eight (8) percent vertical grade threshold. Several photos of Orchard Street are included in Attachment 5. Despite existing 25 MPH posted speed limit signs, vehicular speeding continues to persist with an 85th percentile speed of 33 mph (8 mph over the prima facie speed limit of 25 MPH).

The Riverside Fire Department (RFD) has provided a general comment regarding proposed speed humps in consideration of potential impacts to emergency response times, if any. The RFD has requested the city to consider installing a Speed Bump (Type II) of Standard Plan 257 for new speed hump installations. The Type II Speed Bump has gaps in the middle to allow emergency vehicles to bypass speed humps on the roadway during an urgent emergency call. Golden Avenue between Pierce Street and Cypress Avenue currently has Type II Speed Bumps installed and there have not been any concerns with its utilization.

Staff has prepared an exhibit showing potential locations for the installation of speed humps. The locations are selected based on having adequate spacing between curves and intersections and adequate sight distance to allow for proper signing on each approach. Utility covers and driveways in the street are also avoided. Staff selected locations where signs may be placed on existing poles or streetlights to minimize the impacts of the signs on the neighborhood. A total of four (4)

potential locations were found for speed humps. Each speed hump installed would potentially add an additional delay of 10 (ten) seconds to emergency vehicles. However, the usage of the Type II Speed Bumps would significantly minimize if not eliminate delays for emergency vehicles.

A review of our traffic accident records for the past three years on Orchard Street from 2022 through 2024 shows four reported traffic collisions. One of the traffic collisions was a speed-related collision.

The City's Speed Hump Policies, Guidelines, and Procedures are included in Attachment 6. Attachment 7 illustrates the City's Standard Plan Detail No. 251 – Speed Bump (Type II).

The Institute of Transportation Engineers (ITE) has also published some Guidelines for the Design and Application of Speed Humps. One of the guidelines worth mentioning is the spacing for speed humps (see Attachment 8). The exhibit displays a properly designed speed hump spacing in the range of 150–500-foot space on each side prior to the speed hump.

The Federal Highway Administration (FHWA) Engineering Speed Management Countermeasures offers an excellent resource for speed humps studies and resulting speed reduction effectiveness (Attachment 9). As documented, speed humps can be effective at reducing speeds in the range of 5-13 mph.

Conclusion**:**

Orchard Street meets 6 of the 8 criteria of the City's adopted policy for speed humps. It exceeds the maximum average daily traffic (ADT) threshold of 1,999 vehicles per day. The observed ADT was 2,343 vehicles during a typical Tuesday (2/11/25) and the observed 85th percentile speed was 33 mph. Based on the requirement to meet all 8 criteria, Orchard Street does not qualify for speed humps per the City approved policy. A summary of the findings is provided via Attachment 2 and staff have provided all this information to the residents along Orchard Street. However, a letter of appeal (Attachment 10) was submitted to city staff requesting for proposed speed humps to be reviewed by the Transportation Board. If speeds humps are approved, then there is a potential to add four (4) speed humps as shown in Attachment 3. If speed humps are not approved, then alternate traffic calming measures can be considered such as installation of stop ahead signage & striping, centerline striping, and / or spot police enforcement.

STRATEGIC PLAN ALIGNMENT:

The proposed speed humps on Orchard Street align with **Strategic Priority 2 – Community Well-Being** and **Goal 2.4** - Support programs and innovations that enhance community safety, encourage neighborhood engagement, and build public trust.

This item aligns with each of the five Cross Cutting Threads as follows:

1. **Community Trust** – As part of the Neighborhood Traffic Management Program (NTMP), the Speed Hump Program establishes community Trust through the transparent methodology and public process set forth at multiple public meetings. The proposed speed humps are based on engineering judgement, cited benefits, and public interest.

2. **Equity** – The Speed Hump Program provides safe usage of the public right of way for all roadway users including vehicles, bicycles, and pedestrians. Proposed restoration of the

use of speed humps as a secondary mitigation measure option under the NTMP for local 25 MPH streets and the qualifying criteria apply to all eligible neighborhoods and street segments.

3. **Fiscal Responsibility** – The proposed speed humps technical qualifying criteria will aid in reducing potential annual project costs by targeting 25 MPH local streets experiencing both high traffic volumes and substantial speeding to provide a traffic calming and increase safety at the most impacted locations.

4. **Innovation** – The proposed Speed Bump (Type II) design will create gaps on each speed hump which minimizes, if not eliminate, impacts to emergency response times for emergency vehicles.

5. **Sustainability & Resiliency** – The use of speed humps as part of the NTMP will provide another potential traffic calming tool to reduce speeding and increase safety in residential neighborhoods. Speed humps serve as a sustainable, lasting, and physical deterrent to vehicle speeding.

FISCAL IMPACT:

The fiscal impact of this action for the cost of installation of speed humps, signage and pavement markings is estimated at $28,640. Funding is available in the Public Works Department, Traffic Engineering budget, Speed Hump Traffic Calming account number 9927230-440313, to cover this cost, pending outcomes of other speed hump requests.

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Attachments:

1. Location Map
2. Speed Hump Criteria Checklist
3. Potential Locations
4. Traffic Count Data
5. Street View Photos
6. Speed Hump Program Policies, Procedures, and Guidelines
7. Standard Plan No. 251 – Speed Bump (Type II)
8. Speed Hump Spacing Exhibit from ITE Speed Hump Guidelines
9. FHWA Engineering Speed Management Countermeasures – Speed Humps
10. Appeal Letter
11. Presentation
12. Neighborhood Traffic Management Program (NTMP) Brochure