

REPORT

To the Honorable Mayor and City Council
From the City Manager

July 11, 2005

Subject

Approval of Jefferson Avenue "Road Diet" lane configuration plan between Middlefield Road and Marshall Street

Recommendation

Approve the plan to modify the traffic lane and parking configuration on Jefferson Avenue, between Middlefield Road and Marshall Street, from two lanes in each direction with parallel parking on both sides, to a new configuration with one lane in each direction and a center left-turn lane, with angle parking on one side and parallel parking remaining on the other side.

Background

Dan Burden's presentation to Council last March on "Healthy Streets for Healthy People," along with his all-day workshop on "Walkable Communities" for staff, generated several ideas for changes to Downtown streets that could help create a more pedestrian-friendly traffic environment. During his visit, Mr. Burden accompanied staff to field review the existing traffic conditions on Jefferson Avenue between Middlefield Road and Broadway. Based on his field review, and upon being informed of the projected future traffic volumes, Mr. Burden did not hesitate to enthusiastically recommend a "Road Diet" for Jefferson Avenue. A Road Diet typically consists of reducing the number of through lanes for motor-vehicle traffic on a roadway, which encourages slower, but more consistent vehicle speeds. The results can be safer pedestrian crossings, smoother traffic flow, and thereby fewer accidents, especially accidents with injury. Incorporating a left-turn lane at intersections and major driveways in the road diet configuration typically minimizes the potential impact on traffic-carrying capacity, particularly when converting from four through lanes to a total of three lanes that include a center left-turn lane.

Staff proposes to modify the lane configuration on Jefferson Avenue between Middlefield Road and Marshall Street, (as described in the recommendation above and shown on the attached Plan), to make it more appealing to pedestrians and to customers of local businesses, to make it a more attractive public space, and to slow down traffic. The new configuration will facilitate and enhance the safety of the anticipated increase of pedestrians crossing Jefferson Avenue to be generated by Downtown revitalization, especially at the mid-block crosswalk near the Post Office. With the existing multiple through lane configuration, pedestrians at the mid-block crosswalk would often observe a driver in one lane stop for them, only to see a driver in the adjacent lane fail to stop or even slow down. With only one through lane in each direction, this multiple lane crossing problem will be mitigated somewhat. The new

configuration will also improve parking conditions by providing an additional eight angled on-street spaces in front of the businesses on the south side of Jefferson between the Post Office and Marshall Street.

With Downtown revitalization, left turns from Jefferson will occur at the entrance to the new Downtown Public Parking Garage (below the retail/cinema complex), and left turn volumes are likely to increase at Broadway and other intersections. Because vehicles waiting to make these left turns would frequently block the existing second traffic lane in each direction, replacing those two lanes with a single left-turn-only lane should not have a severe impact on through traffic flow. The road diet configuration will provide this separate lane for left turns at the Middlefield, Broadway, and Marshall intersections, and at the entrance to the new Public Parking Garage. This will increase traffic safety by reducing the potential for rear-end accidents associated with the existing configuration, where left turns share a lane with through traffic. The new configuration between Middlefield and Marshall will require transitional striping of the existing lane adjacent to the centerline to a left-turn-only lane, on eastbound Jefferson approaching Middlefield from the Caltrain underpass, and westbound approaching Marshall from Bradford, but no other changes beyond Middlefield or Marshall will be implemented at this time.

Providing left-turn-only lanes on Jefferson at the Middlefield intersection will allow modification of the traffic signal sequence to include: left-turn arrow signals separated from the through traffic signals in each direction on Jefferson, green signals for Jefferson through traffic in both directions simultaneously, "walk" signals for pedestrian crosswalks on both sides of Jefferson simultaneously, and shorter signal cycle lengths. These changes should reduce waiting time and significantly increase convenience for pedestrians at the intersection. The more efficient signal sequence allowing Jefferson through traffic in both directions to proceed simultaneously should help offset the loss of a through lane in each direction. Some relatively minor modifications of the signal equipment at the Jefferson/Middlefield intersection will be required to implement these changes.

Reducing the number of lanes across Jefferson Avenue (from four to three) increases pedestrian safety by: (1) reducing the number of travel lanes to be crossed, (2) reducing the crossing distance, and hence the amount of time a pedestrian is in the vehicular traveled way, (3) by allowing curb "bulb-outs" to be painted at the existing crosswalks to help emphasize pedestrian crossing areas, and (4) by slowing down traffic. Vehicular traffic speeds through the segment will likely decrease because of the increased "traffic friction" that will result from higher vehicle per lane density and the increased number of on-street parking spaces. With the current configuration of two lanes in each direction, a vehicle can pass to the left around another vehicle maneuvering in or out of the existing parallel spaces. With only one through lane in each direction, vehicles making parking maneuvers may block the through travel lane. However, through traffic can also briefly divert into the center turn lane to go around vehicles making parking maneuvers, and this will be less of a problem on the side with the new angled spaces, where less maneuvering is required.

Initially, improvements will be installed using pavement markings and lane lines, rather than more permanent construction features. If the new configuration is successful in

enhancing the Downtown pedestrian experience, and is supported by the community, some of the painted features like bulb-outs may be constructed with raised curb and other "streetscape" improvements in the future.

Fire Department vehicles using Jefferson Avenue to respond to emergencies will have the capability of triggering a green traffic signal as they approach each intersection in the road diet segment. This signal pre-emption equipment will be added at the Jefferson/Broadway intersection as part of the all-new traffic signal hardware to be installed there (separate project), and pre-emption equipment is already operational at the Jefferson signals at the Marshall and Middlefield intersections.

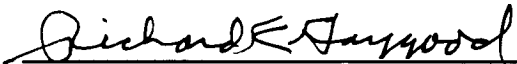
Installation of the Jefferson road diet lane configuration will occur when the roadway is re-striped after reconstruction of the pavement surface on the Cinema block (Middlefield to Broadway), which is currently anticipated late this year. Concurrently, slurry seal pavement resurfacing will be applied to the block between Broadway and Marshall to eradicate the existing striping plan, allowing installation of the road diet striping plan.

Alternatives

1. Do not reconfigure traffic and parking lanes as proposed. Jefferson Avenue parking and traffic lanes will remain as is. This could also require moving the mid-block crosswalk near the Post Office from the intended location to one that is less convenient to the proposed Paseo walkway, but safer, for pedestrians.
2. Reconfigure traffic and parking lanes on only a portion of the subject segment.
3. Direct staff to prepare a revised Plan incorporating Council direction.

Fiscal Impact

Total cost for the project is estimated at \$70,000. Most of this cost will be incurred for modifications to the traffic signals at the Middlefield/Jefferson intersection. Improvements will be installed primarily by the Contractor for the Cinema Streetscape Project. Funding for this project will come from the Traffic Signal Replacement/Upgrade Program as part of the Gas Tax Construction Fund, and Streetscape project funds from the Redevelopment Agency bond proceeds.



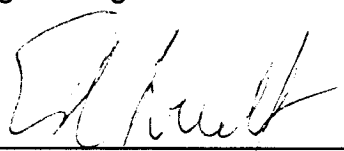
 Richard K. Haygood
 Traffic Engineer



 Chu Chang
 Manager, Engineering & Construction



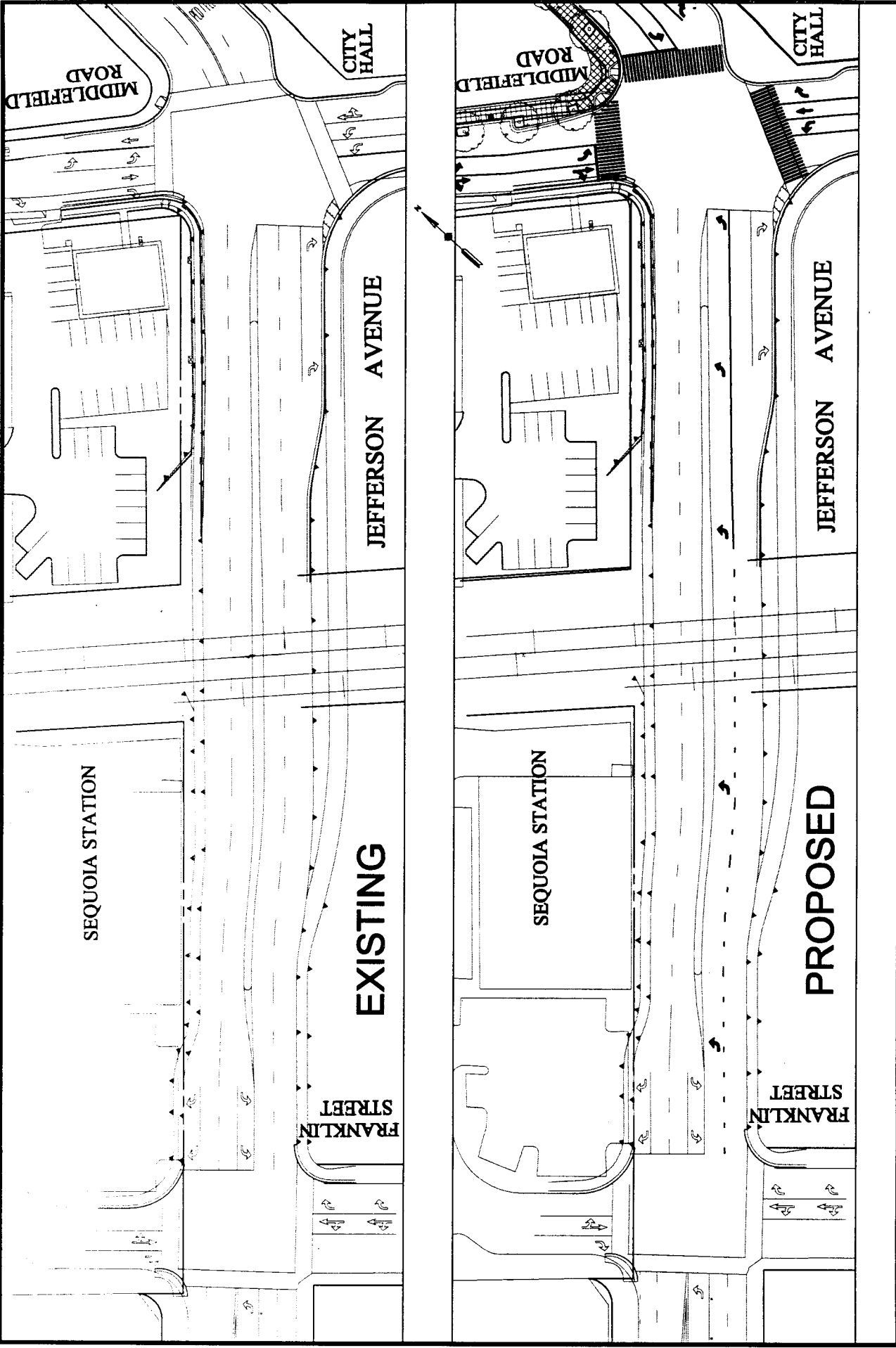
 Joel Patterson
 Community Development Services Director



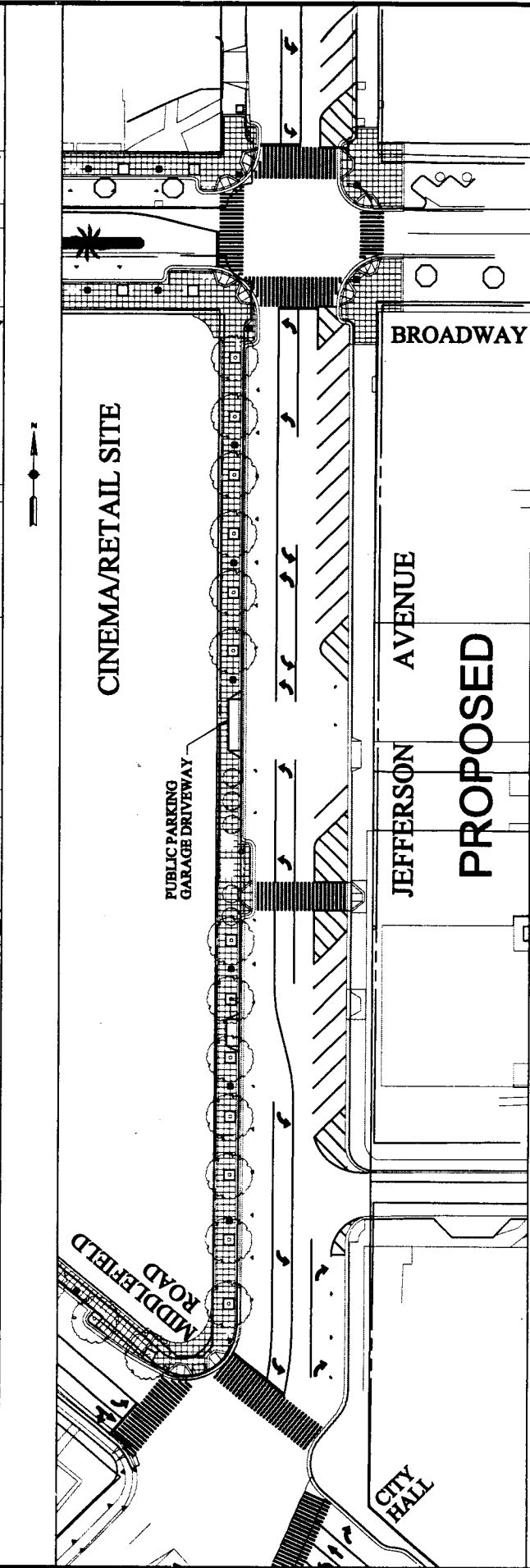
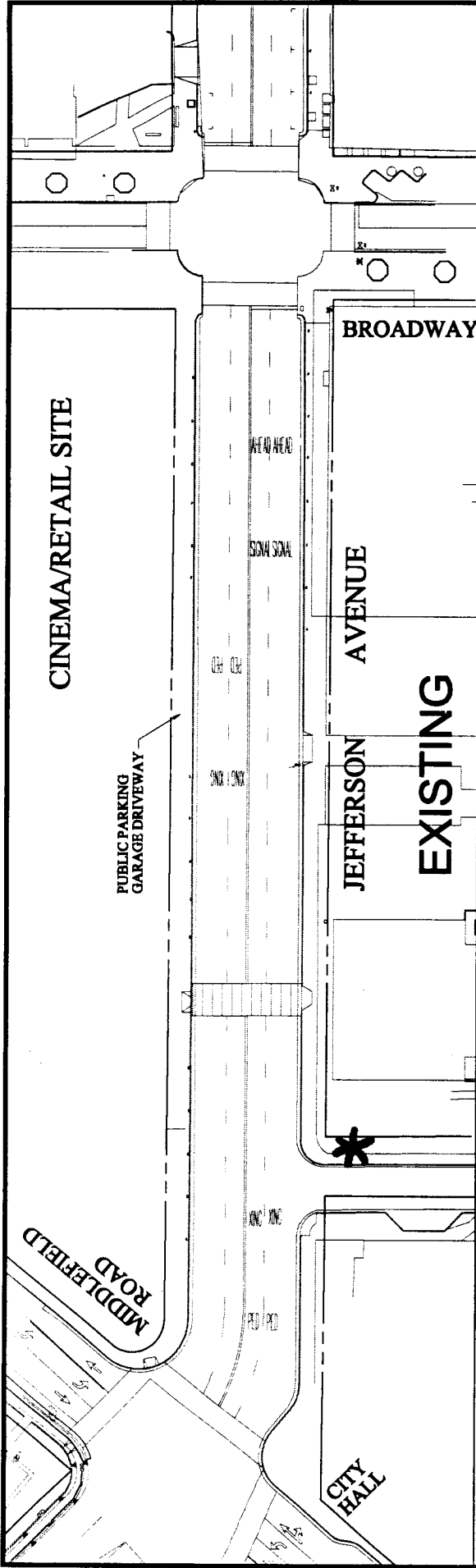
 Ed Everett
 City Manager

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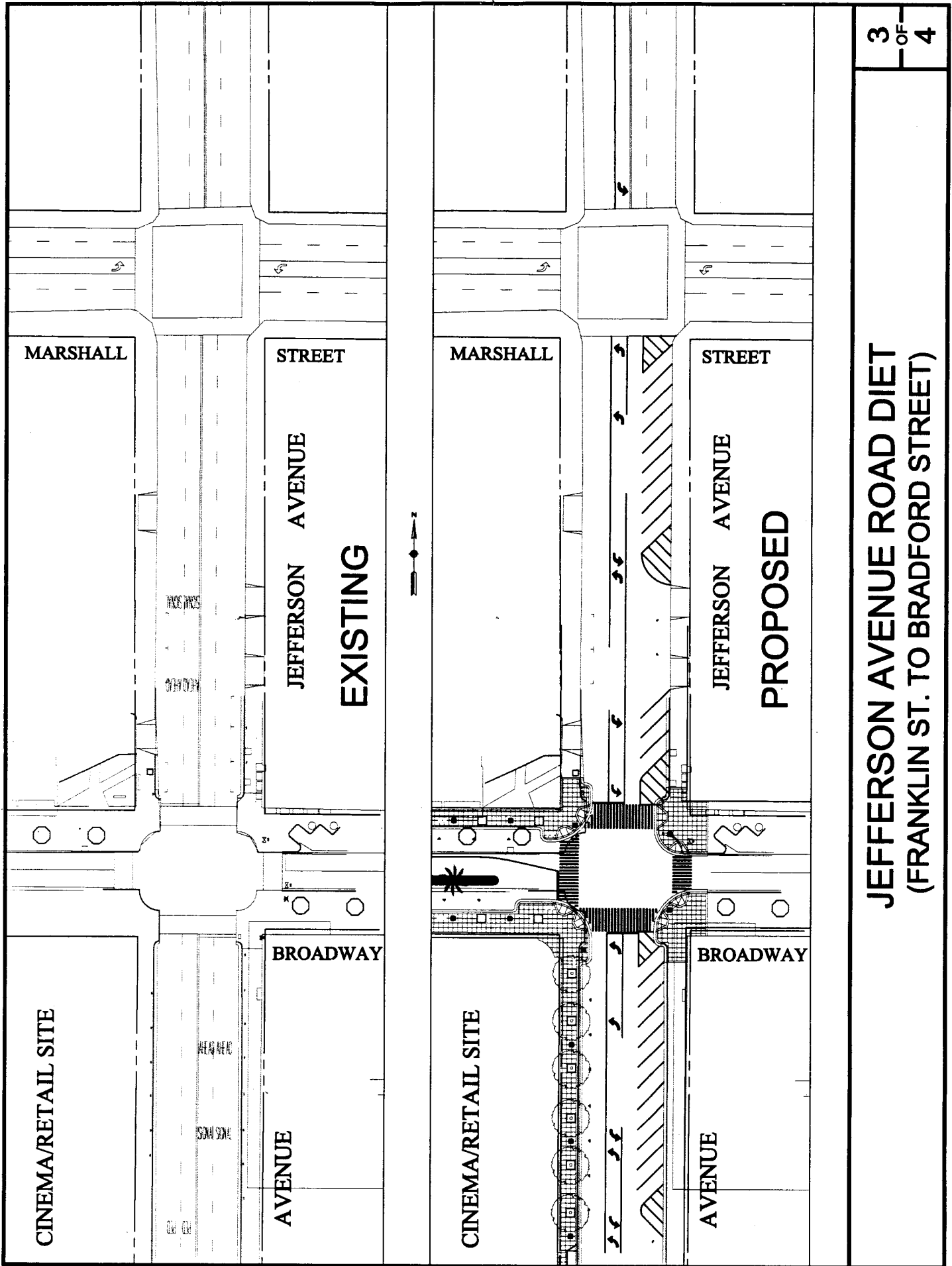


**JEFFERSON AVENUE ROAD DIET
(FRANKLIN ST. TO BRADFORD STREET)**

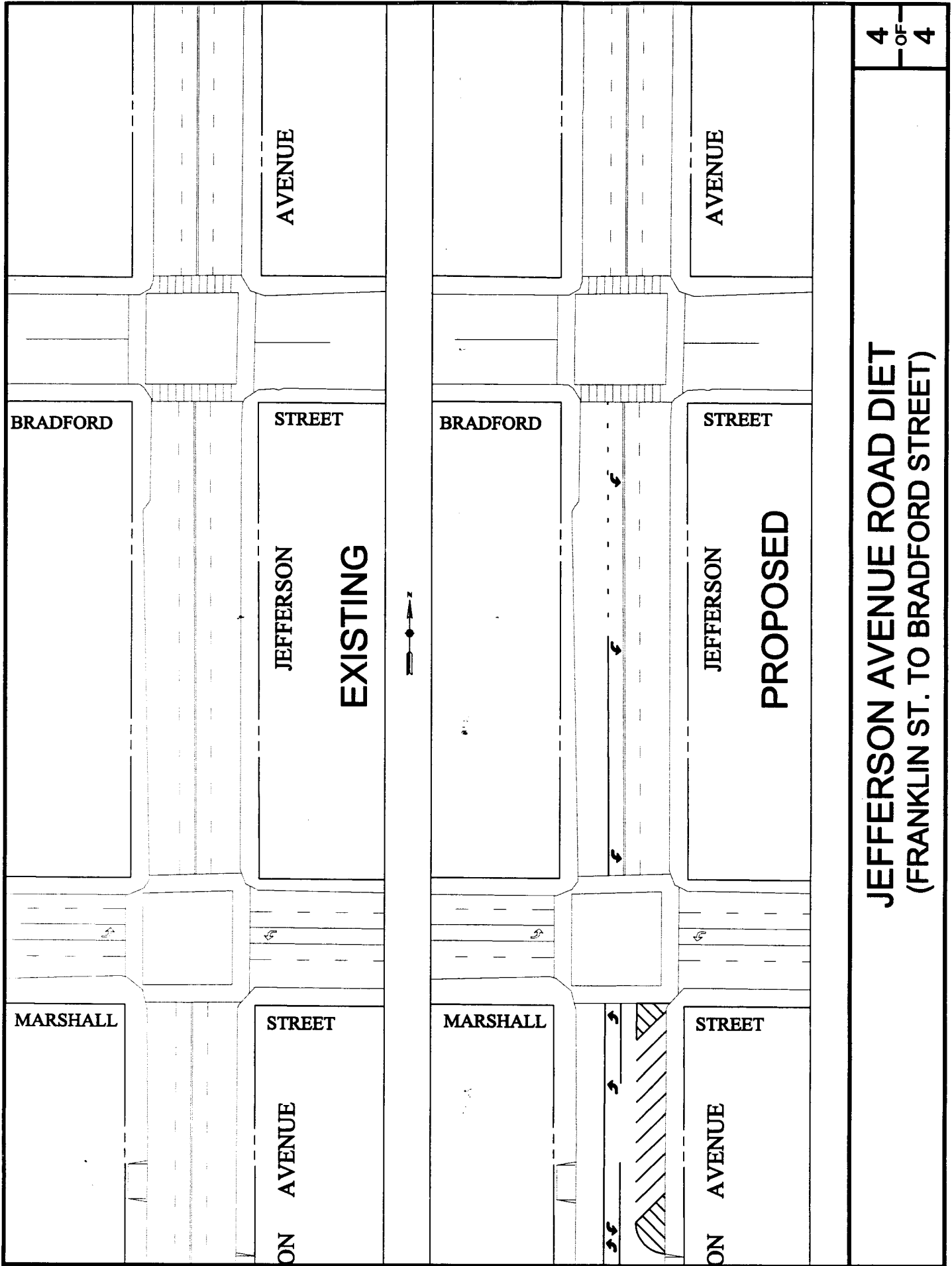


**JEFFERSON AVENUE ROAD DIET
(FRANKLIN ST. TO BRADFORD STREET)**

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**JEFFERSON AVENUE ROAD DIET
(FRANKLIN ST. TO BRADFORD STREET)**



JEFFERSON AVENUE ROAD DIET
 (FRANKLIN ST. TO BRADFORD STREET)