EXECUTIVE SUMMARY

Safer Local Streets through Traffic Calming

Line Street is a neighborhood street that is difficult to access, small in size and local in scale. Though a minor arterial, Line Street is an important connection between three major arterials: Rutledge, King and Meeting. The one-way street design does not reflect the area’s neighborhood character. Also, the intersection of Line and King Streets stands as one of the top five most dangerous on the Peninsula for bikes and pedestrians in the last four years according to Police crash data.

The conversion of streets from one-way to two-way is an essential traffic calming measure that prioritizes local multimodal transportation safety and neighborhood character over regional throughput of automobiles. Through the lens of complete streets, the City of Charleston has taken proactive steps to prioritize corridors for the safe accommodation of all modes of travel.

The city’s Planning and Transportation Departments identified Line Street between Rutledge Avenue and King Street as a short-term project to implement an adopted 2015 study to convert the Coming Street and St. Phillip Street corridor to two-way. Acknowledging that Line Street is owned by the city, staff determined that it was imperative to identify “lighter, quicker, cheaper” opportunities to begin the project.

Through adding traffic calming elements including pedestrian signals, reflective markings and signage, conversion to two-way would match the neighborhood context, add safety features, move toward implementation of the Coming-St. Phillip conversion, maintain on-street parking, and calm traffic.

The Design Division was approached to lead the conceptualization of project. Through analyzing existing conditions, leading a walking tour, identifying placemaking and multimodal accommodations, emphasizing additional traffic calming measures, developing design alternatives, and creating design graphics to support the concept, staff was well equipped to go back to the community and City Council with a plan of action. All of these materials are contained in this report.

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**TRAFFIC CALMING & PLACEMAKING**

Using traffic calming devices for creative placemaking:
The Line Street Conversion strategy calls upon contemporary placemaking practices, such as the creative painting of crosswalks and curb extensions, as well as conventional traffic calming devices, like speed tables and the conversion of the street direction. Bicycle infrastructure is also added.

**ONE-WAY TO TWO-WAY STREET CONVERSION**

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**PAINTED CURB EXTENSIONS**

Painted curb extensions can be used to increase visibility of pedestrians at intersections. Space is added along the sidewalk for waiting, walking, or seating. Painted curb extensions are often paired with bollards or flexible post delineators for higher visibility.

*Photo: Streetplans.com, Painted curb extension by JC Walks in Jersey City, N.J.*

**ARTISTIC CROSSWALKS**

Artistic crosswalks are used to increase visibility of the crossing and create a sense of community / continuity throughout a neighborhood or district. The City of Charleston’s Department of Traffic and Transportation (T&T) has guidelines for artistic crosswalk projects within the city.

*Photo: Charleston Moves, King Street Artistic Crosswalk *

**RAISED CROSSWALKS**

Raised crosswalks, also called speed tables, elevate the pedestrian and give motorists a physical reason to slow down. The textured pattern can increase pedestrian comfort and be aesthetically pleasing. These work well for mid-block crossings.

*Photo: North American City Transportation Officials (NACTO), speed table.*

**STOP SIGNS & SHARROWS**

Though not an official traffic calming device, the addition of shared-lane arrows, also called Sharrows, and stop signs along Line Street will slow down traffic and remind motorists that bicycles belong in the roadway. Sharrows also provide route guidance for cyclists, especially between the future Lowline and College of Charleston.

*Photo: Eric Gilliland, Shared Lane Arrows.*
**STREET CONVERSION STRATEGIES**

**SPRING / CANNON TWO-WAY CONVERSION OVERVIEW**

In 1997, the City of Charleston held a workshop for residents, businesses, and institutions in the area along Spring and Cannon Streets, which resulted in the Spring Cannon Corridor Plan that was adopted by City Council in 1998. Twenty years later the project was completed and both streets were opened improving the system of sidewalks and pedestrian crossings, modifying the traffic system to bring back a residential feel and enhancing commercial uses along the two streets.

Map adapted from the 2007 Spring Cannon One Way Pair Traffic Study, Carter Burgess.

**LINE STREET TWO-WAY CONVERSION STRATEGY**

**COMING STREET TWO-WAY CONVERSION OVERVIEW**

In 2015, the city studied the conversion of Coming and St. Phillip Streets as well as a portion of and Line Street. Though the plan was approved by the neighborhoods of Cannonborough and Elliotborough as well as City Council, various challenges including state roadway ownership have delayed implementation.

Map from the 2012 Coming Street Two-Way Conversion Analysis, Stantec Consulting Services, Inc.

**Timeline of two-way conversions in Charleston:**

1994 Upper King Street
2004 Wentworth Street and Beaufain Street
2008 Rutledge Avenue and Ashley Avenue
2017 Spring Street and Cannon Street
2019 Line Street
**UPDATE BUS STOP**

Improvements can be made to the existing bus stop such as an entry pad and roadway paint in the bus area.

**IMPROVE PEDESTRIAN CROSSING**

Crossing Rutledge Avenue can be difficult for pedestrians. Curb extensions will help slow traffic at the crossing.

**REFRESH CROSSWALKS**

Adding new paint to existing ladder crosswalks at Ashe Street and Coming Street will increase visibility of the crossing.

**ADD CROSSWALKS**

Rose Lane and Todd Street do not have a crosswalk currently.
REFRESH CROSSWALKS
New paint to existing ladder crosswalks at Ashe Street and Coming Street will increase visibility of the crossing.

ADD RAISED CROSSWALK
A raised crosswalk at the Percy Street intersection will not only provide a crossing along Line Street, but will also aide in traffic calming.

EXISTING ONE-WAY
The existing configuration of Line Street has two, east-bound travel lanes and on-street parking along the south side.

PROPOSED TWO-WAY
The proposed two-way configuration will have one east-bound travel lane and one west-bound travel lane. The on-street parking will remain along the south side.
ST PHILIP STREET ROUTE

As indicated in the People Pedal Plan, St. Philip Street is the preferred north-south route for cyclists.

PAINT, NOT CURB WORK

There is enough space between the existing curbs on Line Street to convert the road to two-way. A painted yellow center line and signage will complete the conversion.

ACCESS FROM KING STREET

Cyclists and motorists will now be able to access Line Street west-bound at King Street.

ACCESS TO THE LOWLINE

Sharrow placement along Line Street will indicate to motorists that bicycles belong on the street and are likely to be present. They also mark a bicycle route between the Lowcountry Lowline and St. Philip Street.
SAFE INTERSECTIONS
Perspective rendering of the Line Street intersection at St. Philip Street looking towards King Street. This shows sharrow, a painted crosswalk, and new stop bars.

BICYCLE INFRASTRUCTURE
While not as safe and comfortable as true bike lanes, sharrow (shared-lane arrows) indicate to motorists that bicycles belong on the street and are likely to be present. They also mark a bicycle route.

Residents at the Cannonborough Elliotborough Neighborhood Association meeting favored the use of sharrow so the two-way conversion could occur along the entire project area.
ENLIVEN THE SIDEWALK SPACE

Perspective rendering of the Line Street intersection at Percy Street. This shows a painted curb extension with vertical bollards and outdoor seating.

PLACEMAKING IMPROVEMENTS

We recommend several street improvements that can have a strong placemaking effect. New crosswalks and painted curb extensions, especially if painted in interesting designs and coupled with outdoor seating, can enliven the street space and promote building occupancy by local businesses (corner stores, for example). While these may not be included in the basic street conversion budget, this plan accounts for their eventual installation and promotes such opportunities.
PEOPLE PEDAL PLAN

Design Division also developed two alternatives for bicycle infrastructure to implement the People Pedal Plan: one with shared lane arrows, or “sharrows,” and another with a contra-flow bicycle lane between King Street and St. Phillip Street. This option would convert Line Street to two-way between Rutledge Avenue and St. Philip Street.

SPACE FOR CYCLISTS

The segment between St. Philip Street and King Street would remain one-way eastbound. A buffered, contraflow bike lane would allow cyclists to safely travel westbound between King Street and the future Lowcountry Lowline to the College of Charleston using St. Philip Street.

PROPOSED BIKE LANE

A buffered, contraflow bike lane would connect cyclists from King Street to St. Philip Street. All existing street parking would remain.