

ITEM 5.4

CITY MANAGER'S REPORT JANUARY 10, 2022 CITY COUNCIL REGULAR MEETING

ITEM: REVIEW AND CONSIDER OPTIONS FOR ROUNDABOUT IMPROVEMENTS

RECOMMENDATION: Council to Consider Options for Roundabout Improvements near Mossdale Elementary School

SUMMARY:

At the December 13, 2021, City Council requested that staff evaluate improvements to the Towne Centre Drive and McKee Boulevard roundabout and the Brookhurst Boulevard and Golden Spike Trail roundabout. Staff evaluated the roundabouts using the California Manual on Uniform Traffic Control Devices (MUTCD) and reviewed available traffic accident reports. The following options are being presented to Council for review and consideration:

Option 1 – Install Splitter Islands

(approximate cost is \$200,000/roundabout)

- Setback crosswalks from the roundabout to enhance pedestrian visibility
- Provide refuge at the centerline to pedestrians
- Reduce traffic speeds
- Provide separation and guide traffic
- Increase space for mounting signs

Option 2 – Install Rectangular Rapid Flashing Beacons (RRFBs)

(approximate cost is \$60,000/roundabout)

- Increase driver awareness of pedestrians crossing
- Solar Powered and activated by a pedestrian-push-button

Option 3 – Remove and Replace Roundabouts

(approximate cost is \$1,000,000/roundabout)

- Demolition of concrete and landscape
- Reconstruction of sidewalk, curb, gutter, landscape, and utilities
- Negative impacts:
 - o Increased vehicle emissions
 - o Reduced intersection capacity resulting in traffic delays
 - o Traffic analysis required

Staff recommends that Council consider Option 1 as it provides enhanced pedestrian safety and maintains the opportunity to add Option 2 in the future, if needed.

BACKGROUND:

At the December 13, 2021, City Council requested that staff evaluate improvements to the Towne Centre Drive and McKee Boulevard roundabout and the Brookhurst Boulevard and Golden Spike Trail roundabout located near the Mossdale Elementary School. Staff evaluated the roundabouts using the California Manual on Uniform Traffic Control Devices (MUTCD) and reviewed available traffic accident reports.

Staff identified some initial options that will be installed as part of the approved Traffic Calming Capital Improvement Project (CIP) PS 22-16. Those initial improvements include the installation of the following items and will be completed in the coming weeks:

- Yellow ladder crosswalk striping at all crossings of the two roundabouts
- Updated school crossing signs with fluorescent yellow-green background for high-visibility
- No parking signs within the roundabout

Additionally, Staff evaluated the roundabouts using the California Manual on Uniform Traffic Control Devices (MUTCD) and reviewed available traffic accident reports. The following options are being presented to Council for review and consideration:

Option 1 – Install Splitter Islands

(approximate cost is \$200,000/roundabout)

- Setback crosswalks from roundabout to enhance pedestrian visibility
- Provide refuge at the centerline to pedestrians
- Reduce traffic speeds
- Provide separation and guide traffic
- Increase space for mounting signs

Option 2 – Install Rectangular Rapid Flashing Beacons (RRFBs)

(approximate cost is \$60,000/roundabout)

- Increase driver awareness of pedestrians crossing
- Solar Powered and activated by a pedestrian-push-button

Option 3 – Remove and Replace Roundabouts

(approximate cost is \$1,000,000/roundabout)

- Demolition of concrete and landscape
- Reconstruction of sidewalk, curb, gutter, landscape, and utilities
- Negative impacts:
 - o Increased vehicle emissions
 - o Reduced intersection capacity resulting in traffic delays
 - o Traffic analysis required

Staff recommends that Council consider Option 1 as it provides enhanced pedestrian safety of any single Option and maintains the opportunity to add Option 2 in the future, if needed.

REASON FOR RECOMMENDATION:

Staff is requesting that Council consider the proposed improvement for the Roundabouts near Mossdale Elementary School. Staff recommends that Council consider Option 1 as it provides enhanced pedestrian safety and maintains the opportunity to add Option 2 in the future, if needed.

FISCAL IMPACT:

The initial signage and striping improvements are included in the Traffic Calming CIP PS 22-16.

Staff estimates the approximate construction costs below for the three options presented to Council:

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|--|---|
| Option 1 – Install Splitter Islands | \$200,000/roundabout \$400,000 total |
| Option 2 – Install Rectangular Rapid Flashing Beacons (RRFBs) | \$60,000/roundabout \$120,000 total |
| Option 3 – Remove and Replace Roundabouts | \$1,000,000/roundabout \$2,000,000 total |


Staff will pursue the option selected by Council develop construction documents, secure bids for the project, return to Council for approval of the construction contract, and approval of related budget amendment.

ATTACHMENTS:

- A. Exhibit Option 1 – Install Splitter Islands
- B. Exhibit Option 2 – Install Rectangular Rapid Flashing Beacons (RRFBs)
- C. Exhibit Option 3 – Remove and Replace Roundabouts

**CITY MANAGER'S REPORT
JANUARY 10, 2022 CITY COUNCIL REGULAR MEETING
REVIEW AND CONSIDER OPTIONS FOR ROUNDABOUTS IMPROVEMENTS**

APPROVALS:



Angel Abarca
Assistant Engineer

1/4/22
Date




Brad Taylor
Land Development Manager

1/4/22
Date




Michael King
Director of Public Works

1/4/22
Date



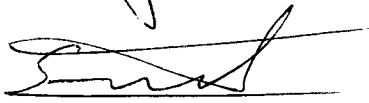
Glenn Gebhardt
City Engineer

1/4/22
Date



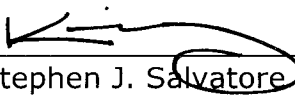
Cari James
Director of Finance

1/4/2022
Date



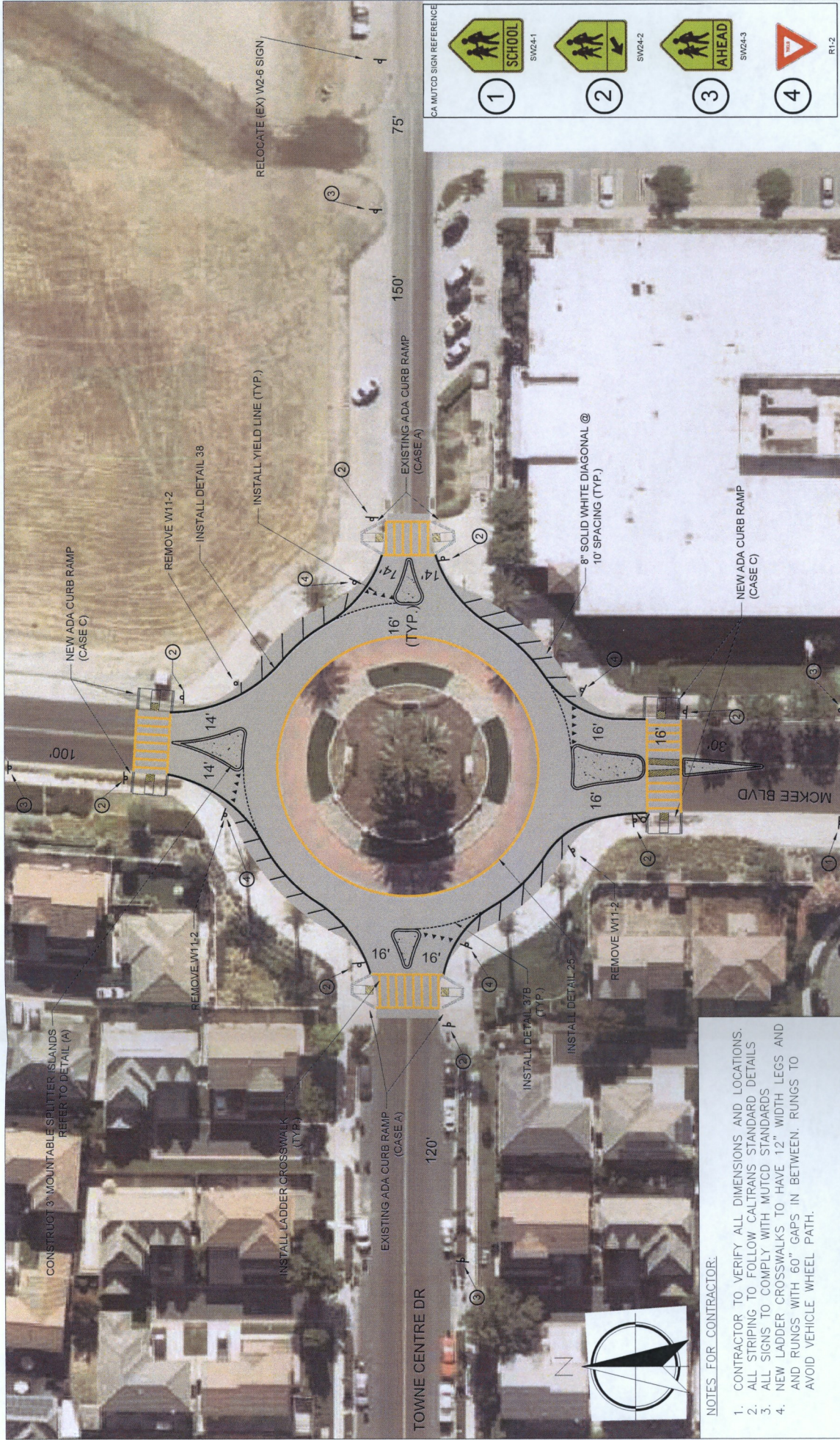
Salvador Navarrete
City Attorney

1-4-2022
Date

 FOR

Stephen J. Salvatore
City Manager

1-6-2022
Date



CA MUTCD SIGN REFERENCE

| | | | |
|---|--|--------------|--------|
| 1 | | SCHOOL | SW24-1 |
| 2 | | SCHOOL AHEAD | SW24-2 |
| 3 | | SCHOOL AHEAD | SW24-3 |
| 4 | | YIELD | R1-2 |

NOTES FOR CONTRACTOR:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS.
2. ALL STRIPING TO FOLLOW CALTRANS STANDARD DETAILS
3. ALL SIGNS TO COMPLY WITH MUTCD STANDARDS
4. NEW LADDER CROSSWALKS TO HAVE 12" WIDTH LEGS AND RUNGS WITH 60" GAPS IN BETWEEN. RUNGS TO AVOID VEHICLE WHEEL PATH.

DEPARTMENT OF PUBLIC WORKS
LATHROP, CALIFORNIA

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| DRAWN BY: | A.A. |
| CHECKED BY: | TBD |
| PROJ. MGR.: | A.A. |
| DATE: | DECEMBER 2021 |
| SCALE: | 1" = 20' |
| FILE NO.: | CIP PS 22-14 |

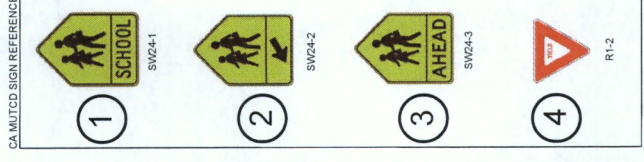
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TOWNE CENTRE DRIVE AND MCKEE BOULEVARD
ROUNDABOUT IMPROVEMENTS

3" MOUNTABLE SPLITTERS



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2. ALL STRIPING TO FOLLOW CALTRANS STANDARD DETAILS
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4. NEW LADDER CROSSWALKS TO HAVE 12" WIDTH LEGS AND RUNGS WITH 60" GAPS IN BETWEEN. RUNGS TO AVOID VEHICLE WHEEL PATH.



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LATHROP, CALIFORNIA

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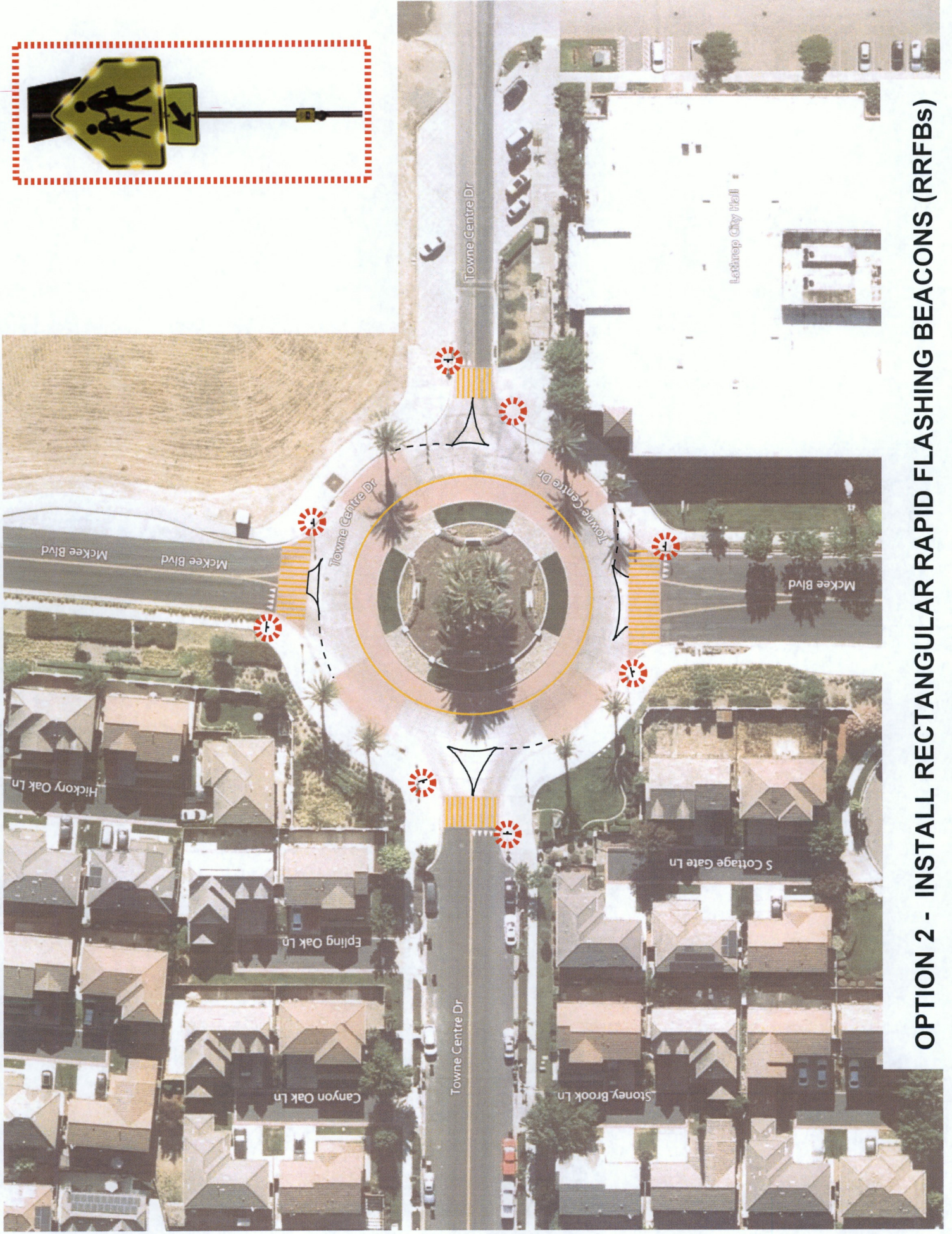


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**BROOKHURST BLVD AND GOLDEN SPIKE TRAIL
ROUNDABOUT IMPROVEMENTS**

3" MOUNTABLE SPLITTERS

SHEET NO. 1 OF 1



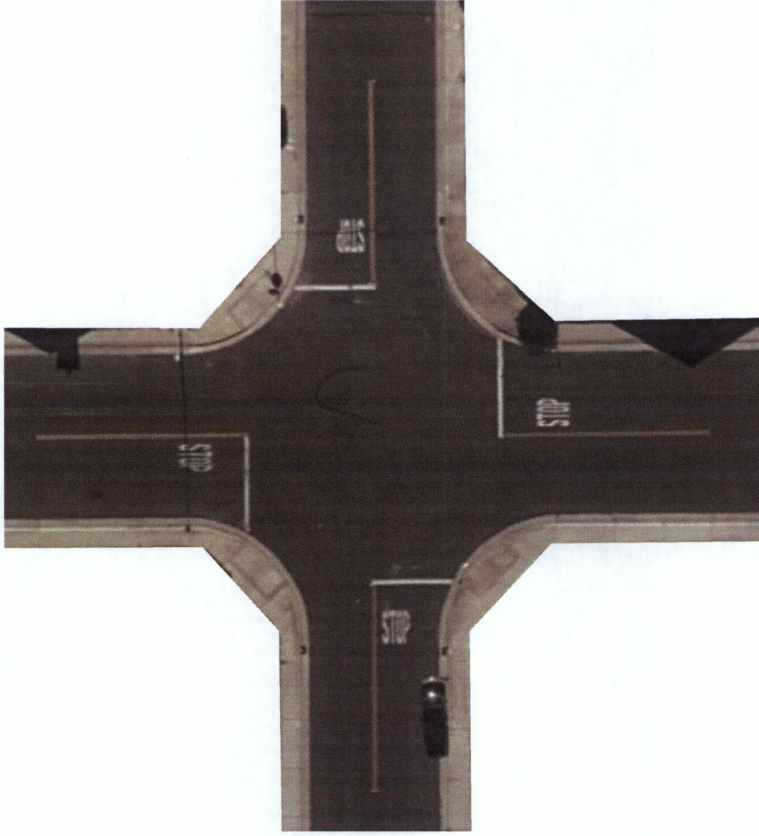
OPTION 2 - INSTALL RECTANGULAR RAPID FLASHING BEACONS (RRFBs)



TOWNE CENTRE DR AND MCKEE BLVD



BROOKHURST BLVD AND GOLDEN SPIKE TRAIL



TYPICAL ALL-WAY STOP INTERSECTION

OPTION 3 - REMOVE AND REPLACE ROUNDABOUTS