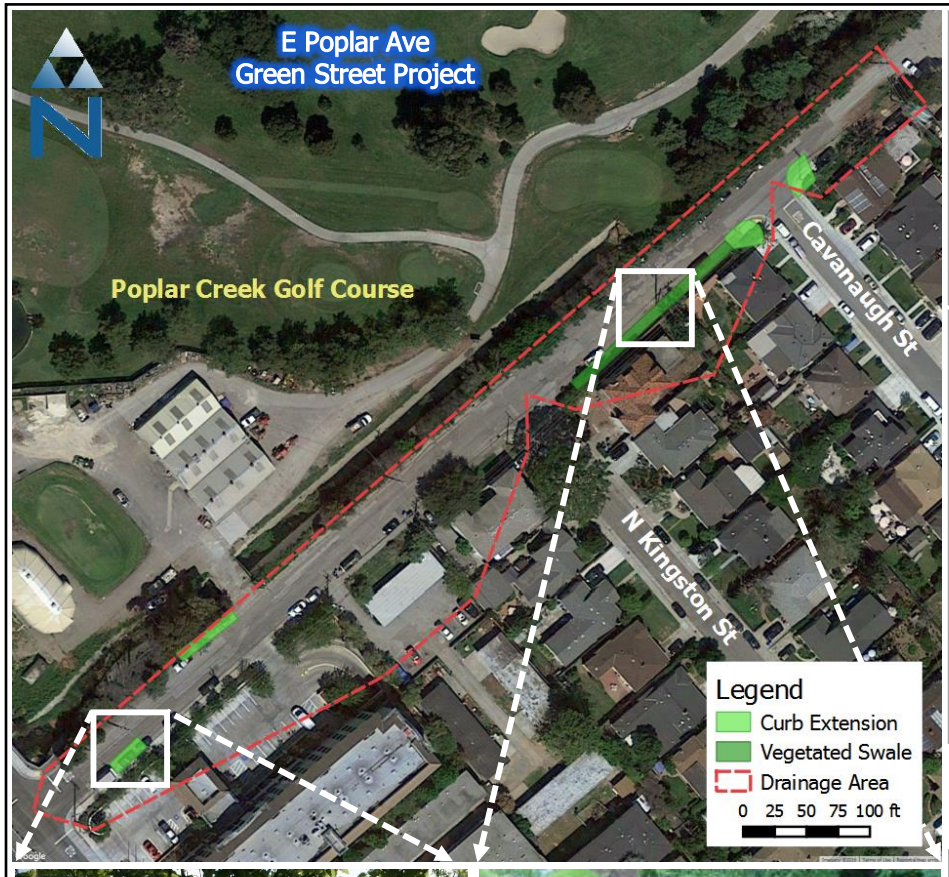
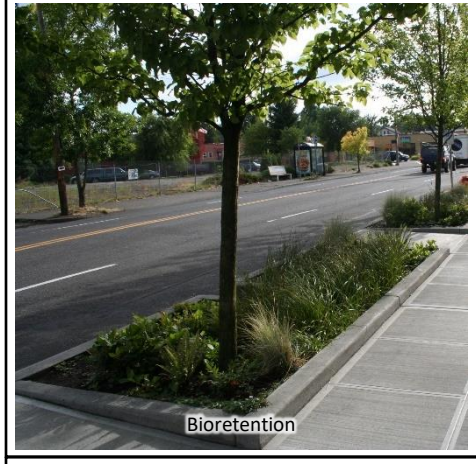




## Site Information

| | |
|---|---|
| Jurisdiction | City of San Mateo |
| Street Name | E Poplar Ave |
| Bounding Streets | N Bayshore Blvd / Cavanaugh St |
| Street Typology | Low-Density Residential |
| Capture Area (acres) | 1.67 |
| Impervious Area (%) | 70 |
| 85th Percentile Rainfall (in) | 0.85 |
| Generated Runoff (ac-ft) | 0.08 |

## Site Description:

The proposed project consists of green street improvements along East Poplar Avenue, east of the Bayshore Freeway (US-101). The street segment is approximately 850 feet long. The street is considered low-density residential with development primarily on the south side of the street. Curb extensions are recommended as the primary treatment type and can be placed in such a way to maximize street parking. Curb extensions can occupy "no parking" zones that border lot entrances to perform the same function while also capturing stormwater. In addition to curb extensions, a vegetated swale can be considered between North Kingston Street and Cavanaugh Street, where there currently is no gutter. This would not provide stormwater capture but would provide the added benefits of slowing flows and increased infiltration.

The proposed improvements would capture 100% of the 85th percentile runoff volume (0.04 ac-ft) while providing flood risk mitigation, community enhancement, increased property values, and other multiple benefits.

**DISCLAIMER**: All elements of this conceptual design are planning-level. Locations of opportunities for placement of green infrastructure shown in the map are preliminary and subject to further site assessment and design. Percent imperviousness is based on best professional judgement. All design assumptions/parameters and cost estimates must be re-evaluated during the detailed design process.

## Design Summary

| Green Infrastructure Type | Design Width (ft) | Design Length (ft) | Capture Volume (ac-ft) |
|---|---|---|---|
| Bioretention (Curb Extension) | 8 | 230 | 0.080 |
| Vegetated Swale | 3 | 175 | - |

## Cost Estimate

| DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|
| Excavation/Hauling | 340 | CY | $50.00 | $17,000 |
| Bioretention | 1,840 | SF | $25.00 | $46,000 |
| Vegetated Swale | 525 | SF | $18.50 | $10,000 |
| Curbs and Gutters | 635 | LF | $22.00 | $14,000 |
| | | | CONSTRUCTION SUBTOTAL | $87,000 |
| Planning (20%), Mobilization (10%), Design (30%), Contingency (25%) | | | | $74,000 |
| | | | **TOTAL COST** | **$161,000** |

# Concept for a Green Street Retrofit for Stormwater Capture

**Site:** East Poplar Avenue (City of San Mateo)

San Mateo Countywide Water Pollution Prevention Program

PARADIGM ENVIRONMENTAL

## Site Information

| | |
|---|---|
| Jurisdiction | City of San Mateo |
| Address | 2720 Alameda de las Pulgas, San Mateo, CA 94403 |
| Co-Located Project | Beresford Park Parking Lot Resurfacing |
| Capture Area (acres) | 1.42 |
| Impervious Area (%) | 90 |
| 85th Percentile Rainfall (in) | 0.85 |
| Generated Runoff (ac-ft) | 0.09 |


Bioretention at a Parking Lot


## Design Summary

| Green Infrastructure Type | Design Width (ft) | Design Length (ft) | Capture Volume (ac-ft) |
|---|---|---|---|
| Bioretention (Rain Garden) | 8 | 260 | 0.090 |

## Cost Estimate

| DESCRIPTION | QUANTITY | UNIT | UNIT COST | TOTAL |
|---|---|---|---|---|
| Excavation/Hauling | 385 | CY | $50.00 | $19,000 |
| Bioretention | 2,080 | SF | $25.00 | $52,000 |
| Curbs and Gutters | 520 | LF | $17.25 | $9,000 |
| | | | CONSTRUCTION SUBTOTAL | $80,000 |
| Planning (20%), Mobilization (10%), Design (30%), Contingency (25%) | | | | $68,000 |
| | | | **TOTAL COST** | **$148,000** |

## Site Description:

The proposed project consists of low impact development (LID) retrofits at the parking lot of Beresford Park along Alameda de las Pulgas. LID will be implemented to capture stormwater from on-site. Bioretention is recommended as the primary treatment type. Implementation of LID improvements will coincide with a resurfacing project for the parking lot. The parking lot layout depicted in the figure above is conceptual in order to show how a rain garden can be implemented in a typical parking lot. Actual traffic flow and available area for parking stalls must be evaluated separately during the actual design phase.

The proposed improvements would capture 100% of the 85th percentile runoff volume (0.09 ac-ft) while providing flood risk mitigation, community enhancement, increased property values, and other multiple benefits. Additionally, signage can be implemented to provide opportunities for public education on green infrastructure.

**DISCLAIMER**: All elements of this conceptual design are planning-level. Locations of opportunities for placement of green infrastructure shown in the map are preliminary and subject to further site assessment and design. Percent imperviousness is based on best professional judgement. All design assumptions/parameters and cost estimates must be re-evaluated during the detailed design process.

# Concept for a Low Impact Development Retrofit for Stormwater Capture

**Site:** Beresford Park Parking Lot (City of San Mateo)

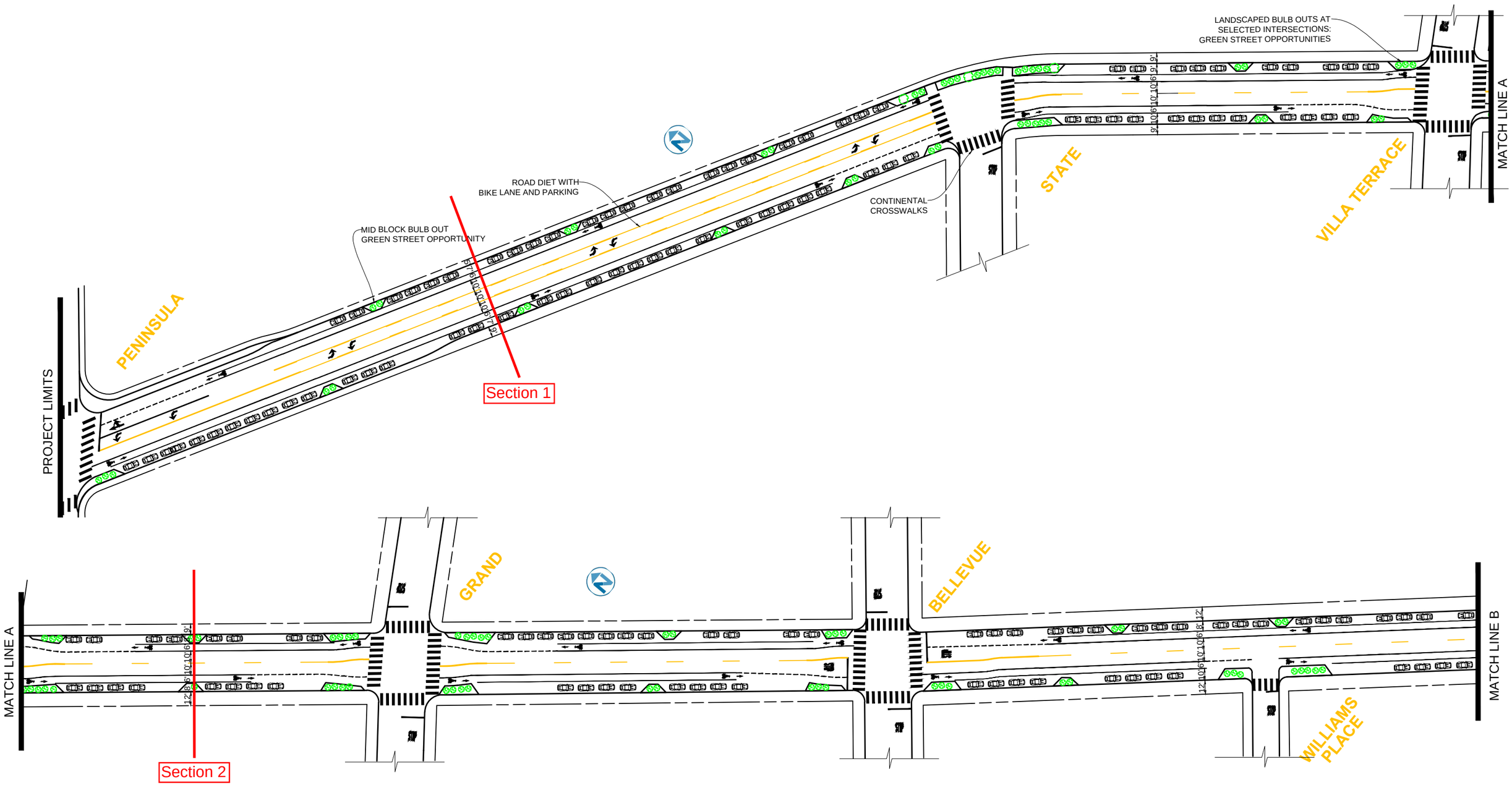
San Mateo Countywide Water Pollution Prevention Program

PARADIGM ENVIRONMENTAL

# SAN MATEO DR - PENINSULA AVE TO TILTON AVE

# DRAFT 10-6-14

CONCEPTUAL- NOT FOR CONSTRUCTION

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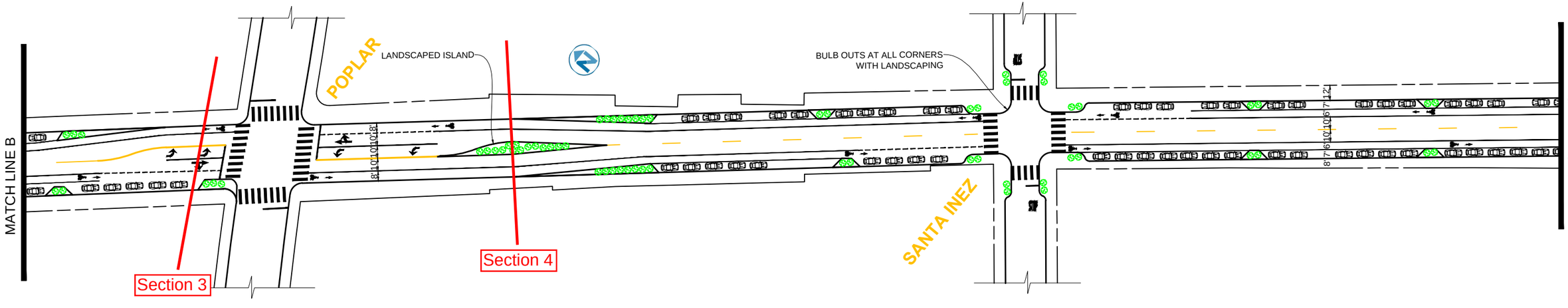
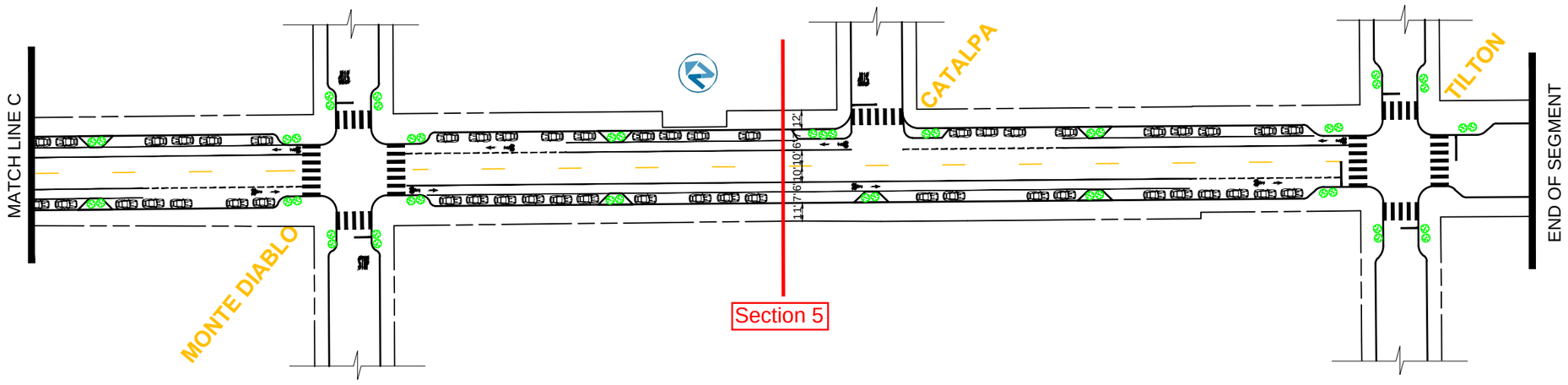
# SAN MATEO DR - PENINSULA AVE TO TILTON AVE
# DRAFT 10-6-14
CONCEPTUAL- NOT FOR CONSTRUCTION




NELSON NYGAARD