Project Update

Burton Way Median Green Streets & H₂O Efficient Landscape Design Feasibility Assessment

Presented by:
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Project Manager

April 18, 2018
Federal Government - USEPA
- Clean Water Act (1948, 1972)
- Protect water quality in waterbodies of the U.S.

California – Cal EPA – SWRCB - RWQCB
- MS4 Permit (Municipal Separate Storm Sewer System)
  - Phase I – 1990 adoption of NPDES
  - Phase II – 2003 General Permit for MS4

MS4 Permit:
- Limit pollutants (oil, pesticides, herbicides, sediment, trash, bacteria & metals)
- Degrade WQ, negatively impact aquatic and riparian habitat
Ballona Creek Watershed
Ballona Creek Watershed Management Group (BCWMG)

1. City of Los Angeles
2. LA County and Flood Control District
3. Beverly Hills
4. Culver City
5. Inglewood
6. Santa Monica
7. West Hollywood
EWMP approved 4/20/16
Recipes for MS4 Compliance
TMDLs - Trash, bacterial, metals. etc.
Compliance by 2021
• 2,081 ac-ft., $2.7B
• 87 ac-ft. (BH), $72M

Compliance Strategies
• LIDs – 11 ac-ft., $4M
• Green Streets – 39 ac-ft., $27M
• Regional Projects – 37 ac-ft., $41M
1. Low Impact Developments (LIDs)
   - Policy Amended **5-18-2015**
   - New Development/Re-Development
     - Plan Check
     - Site Designs & BMPs

2. Green Streets (Policy adopted **6-6-2015**)
   - NSMB Reconstruction - *Bioswales*
   - Burton Way Median (In Progress)

3. Regional Projects (Public & Private)
   - La Cienega Park (In Progress)
   - SW Compliance - Master Plan (In Progress)
CA DROUGHT

- Governor Brown Executive Order B-29-15 (April 1, 2015 – 25% Reduction)
- Executive Order B-37-16 (May 9, 2016 - reduce water waste & improve efficiency)
- Identified in EWMP as a potential site for green street project opportunity
- Conduct feasibility assessment to implement green street features and replace with drought tolerant plants
Initial Concept vs. Current Concept

**Initial Concept**
- Tributary Area: 19 acres
- Infiltration & Storage: 1.28 ac-ft.
- Cost: $3,127,000

**Current Concept**
- Tributary Area: 248 acres
- Infiltration & Storage: 9 ac-ft.
- Cost: $8,566,000

13x

2.7x
**Current Concept – Phase I**

**PHASE 1**

- Catch Basin (SK)
- Storm Drain (SK)
- Prop Piping
- City Boundary
- Landscape Treatment
- Diversion Structure
- Pretreatment
- Pump Well
- Bioswale

Bioswales are 15' wide (unlined). Bioswale planting may need to be replaced in future phases when additional flows are anticipated. Max bioswale capacity is about 4 acre-feet (full build out).

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**Burton Way Median Green Street Preliminary Cost Estimate for Phase I**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization (10%)</td>
<td>$178,000</td>
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<tr>
<td>Site Preparation</td>
<td>$147,000</td>
</tr>
<tr>
<td>Demolition</td>
<td>$8,000</td>
</tr>
<tr>
<td>Diversion to Swales</td>
<td>$450,000</td>
</tr>
<tr>
<td>Bioswale (15 Feet Wide)</td>
<td>$817,000</td>
</tr>
<tr>
<td>Art Lighting System</td>
<td>$8,000</td>
</tr>
<tr>
<td>Landscape and Irrigation System</td>
<td>$342,000</td>
</tr>
<tr>
<td>Contingency (10%)</td>
<td>$195,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,145,000</strong></td>
</tr>
</tbody>
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Note: estimate is in 2018 US dollars and does not include curb ramp improvements or design/permitting costs.
**Burton Way Median Green Street Preliminary Cost Estimate for Future Phase(s)**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Total Cost</th>
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</thead>
<tbody>
<tr>
<td>Mobilization (10%)</td>
<td>$531,000</td>
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<tr>
<td>Site Preparation</td>
<td>$24,000</td>
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<tr>
<td>Demolition</td>
<td>$5,000</td>
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<tr>
<td>Diversion to Swale</td>
<td>$1,182,000</td>
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<tr>
<td>Bioswale (15 Feet Wide)</td>
<td>$130,000</td>
</tr>
<tr>
<td>Subsurface Storage System</td>
<td>$3,910,000</td>
</tr>
<tr>
<td>Landscape and Irrigation System</td>
<td>$55,000</td>
</tr>
<tr>
<td>Contingency (10%)</td>
<td>$584,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>$6,421,000</strong></td>
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</tbody>
</table>

Note: estimate is in 2018 US dollars and does not include design/permitting costs.
Phase I Cost Analysis ($2.1M)
- 152 acres, assumes rains 10x/year
- 127 ac-ft./yr. captured and treat in Phase I
- $16,500/ac-ft./yr.
- 3,800 ac-ft. assumes 30-yr project. --> *$552/AF for Compliance

Phase I & II Cost Analysis ($8.5M)
- 248 acres, assumes rains 10x/year
- 207 ac-ft./yr. captured, treat & reuse
- $34,300/ac-ft./yr. --> $4M underground storage tank
- 6,200 ac-ft. assumes 30-yr project. --> *$1,370/AF for Compliance

*Does not include O&M costs or any other costs incurred during 30-yr project
Burton Way Median – Potable Irrigation
- 16 ac-ft. in 2014
- $48,000 water cost ($6.66/HCF)
- $3,000/AF

Water Trucking Costs
- $182,500/Yr. (Burton Way & Sunset Medians)
- $91,250/Yr. per Median
- $6,050/AF
Phase I – Irrigation Cost ($2.1M Investment)

- 4.3 ac-ft. H₂O use (drought tolerant plants)
- $13,000/Yr. Water Cost
- 1 $806/AF
- Compliance Credit (4 ac-ft. bioswales infiltration)

Phase II Project - $8.5M (Storage facility – Capture, Treat & Reuse)

- 5 ac-ft. storage (1.63 MG)
- One (1) rain event, enough H₂O for whole year
- Compliance Credit (9 ac-ft. bioswales + storage tank)

- 50 ac-ft. assumes rains 10x/yr.
- Assumes 30-yr life project, total 1500 ac-ft.
- 1 $5,700/AF – ($806 Irrigation Savings) = $4900/AF

¹Does not include O&M or any other costs incurred during life of project
### Irrigation Costs Summary

<table>
<thead>
<tr>
<th>Irrigation Options</th>
<th>Cost ($/AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potable $\text{H}_2\text{O}$ Irrigation</td>
<td>$3,000/AF</td>
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<tr>
<td>Trucking Water</td>
<td>$6,050/AF</td>
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<tr>
<td><strong>Phase I Construction</strong></td>
<td><strong>$806/AF</strong></td>
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<tr>
<td>Phase II Construction</td>
<td>$4,900/AF</td>
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Estimated Timeline

- PWC – April 18, 2018
- FAC – April 19, 2018
- Community Meeting – May 2018
- City Council – June 2018

IF Approved:

- Design (PS&E) – Phase I & II
  - July 2018 – Jan 2019
- Bidding & Contract Award
  - Feb – April 2019 ~ (Tentative)
- Construction (Phase I Only)
  - May – Dec 2019 (Tentative)
- Commission accepts staff recommendation to move forward with current design
- Recommend to the City Council to implement **Phase I** Construction of **Burton Way Median Green Streets** and **Water Efficient** Landscape Design

- ✔️ H₂O Conservation Regulations
- ✔️ MS4 Permit Requirements
- ✔️ Help City Leverage against Regulatory Violations