



Integrating Storm Water Practice with Coastal Restoration

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Big Canyon Creek Restoration and Water Quality Improvement Project



- ▶ Highly urbanized watershed
- ▶ Upstream of Upper Newport Bay Ecological Preserve
- ▶ Selenium TMDL

Elevated Selenium Concentrations Can Have Major Ecological Impacts



How Selenium Works: Natural Source Magnified by Land Use



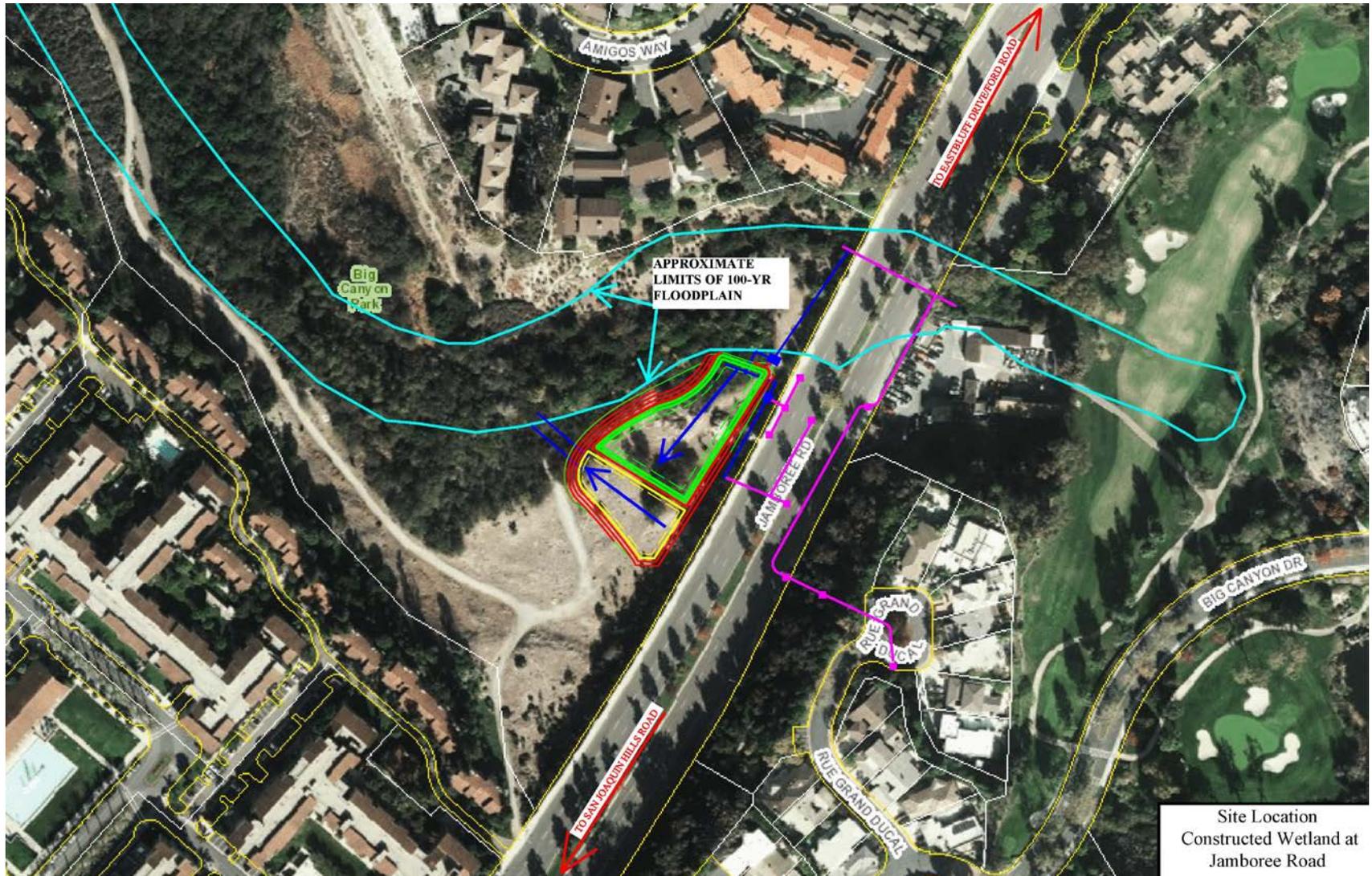
On-site Selenium Concentrations Exceed EPA Threshold



Selenium Hot Spot Identified Upstream



Original Design Not Fully Integrated



Opportunities for Collaboration to Restore Degraded Habitat



Watershed Approach



Fully Integrated Design Includes Water Quality Improvement and Habitat Restoration



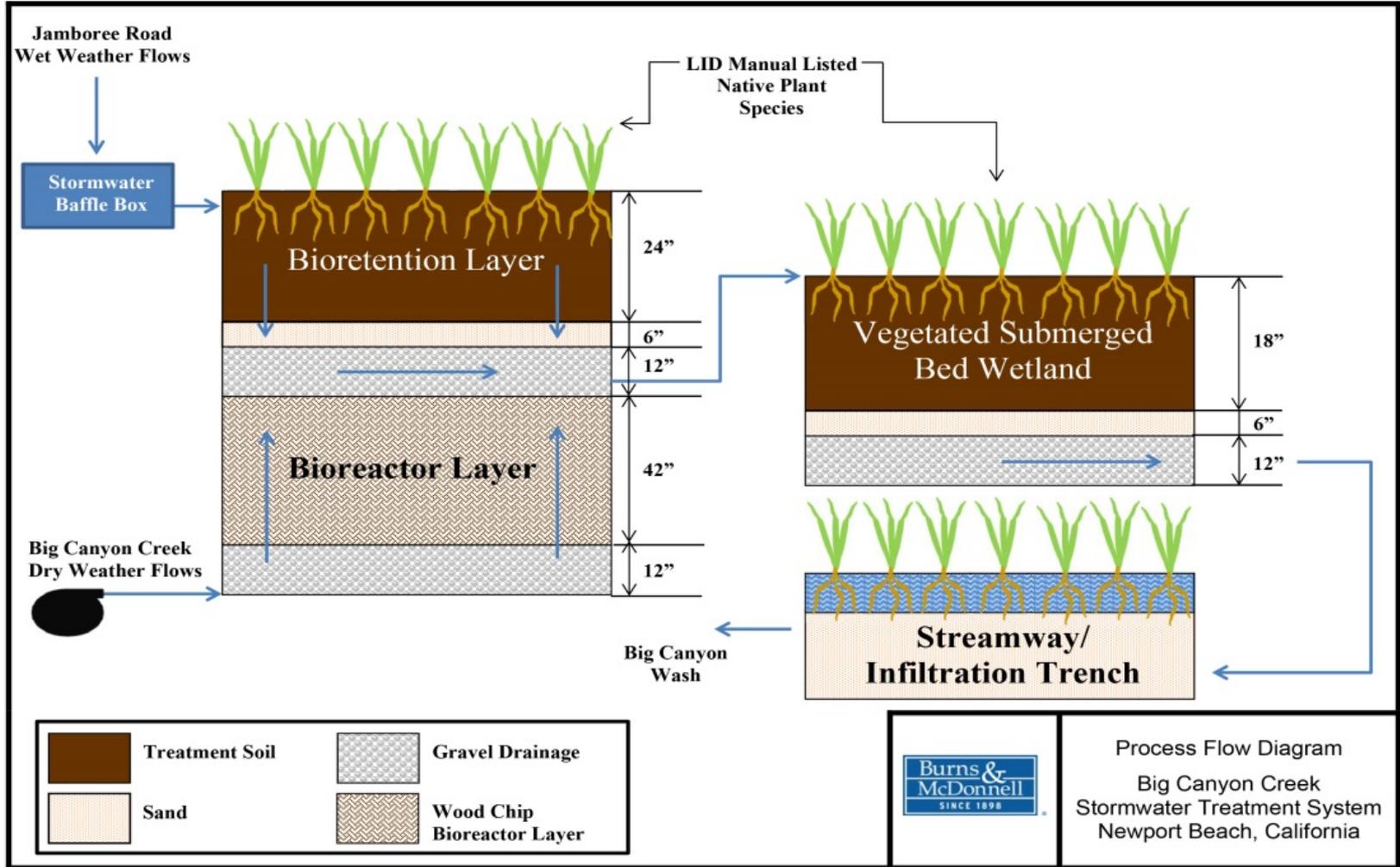
Current and Future Vision of Big Canyon Watershed





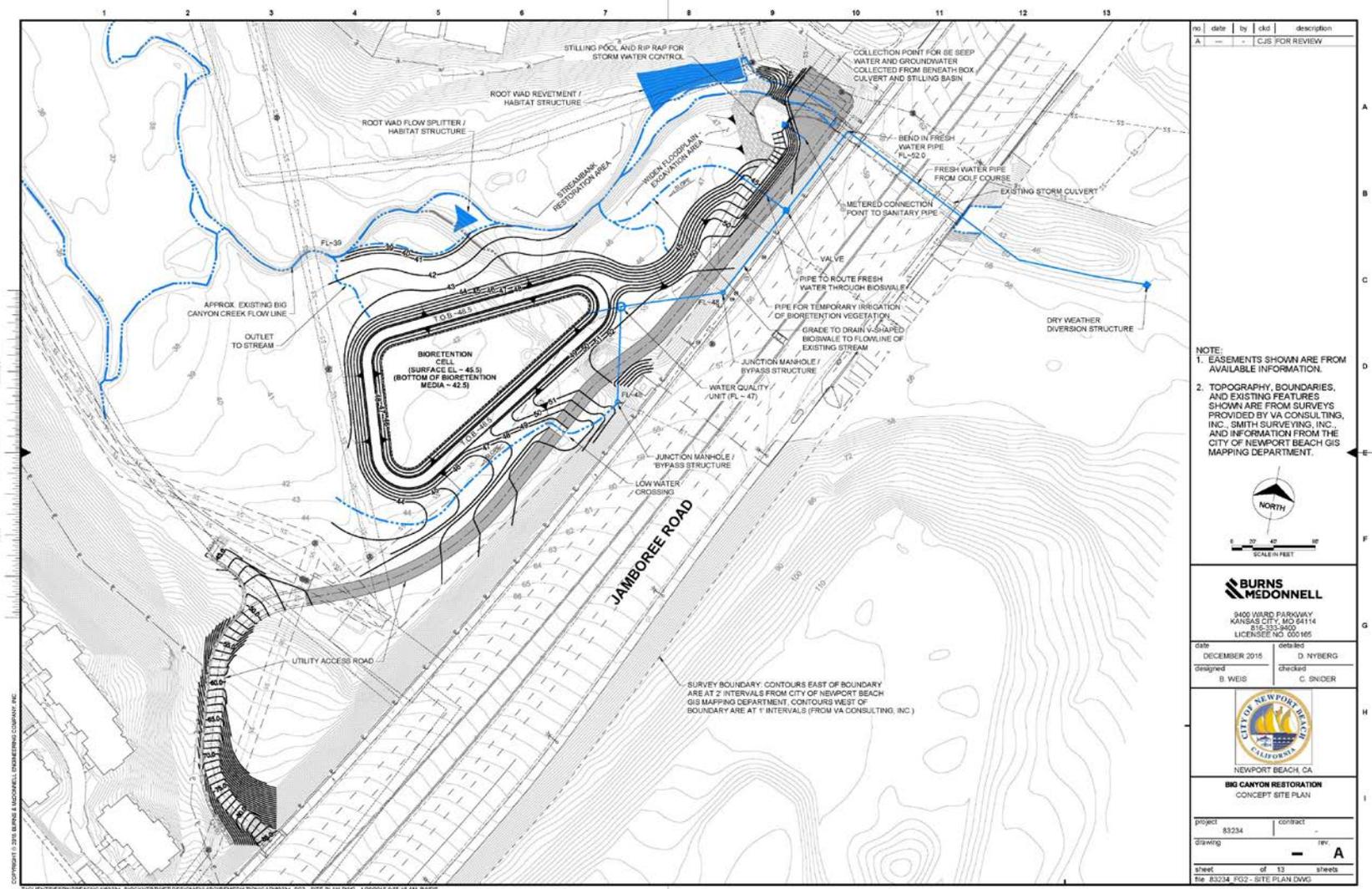
Original Design

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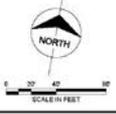


Revised Big Canyon Conceptual Plan



| no | date | by | chkd | description |
|----|------|----|------|----------------|
| A | - | - | - | CJS FOR REVIEW |

NOTE:
 1. EASEMENTS SHOWN ARE FROM AVAILABLE INFORMATION.
 2. TOPOGRAPHY, BOUNDARIES, AND EXISTING FEATURES SHOWN ARE FROM SURVEYS PROVIDED BY VA CONSULTING, INC. SMITH SURVEYING, INC. AND INFORMATION FROM THE CITY OF NEWPORT BEACH GIS MAPPING DEPARTMENT.



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| | | | |
|---------------|-----------|----------|-------------|
| date | DESIGNER | DATE | DESIGNED BY |
| DECEMBER 2015 | D NYBERG | 12/15/15 | B WEIS |
| checked | C. SNIDER | | |



BIG CANYON RESTORATION
 CONCEPT SITE PLAN

| | | | |
|---------|---------------------------|----------|---|
| project | 83234 | contract | - |
| drawing | - | rev. | A |
| sheet | of 33 | streets | |
| file | 83234_P02 - SITE PLAN.DWG | | |

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