# *Exposition Right of Way*

*Transportation, Environmental Improvement, Recreation, and Education*

*The Exposition Right of Way (ROW) between Motor Avenue and Sepulveda Boulevard in West Los Angeles is a fallow strip of land with exciting opportunities.*

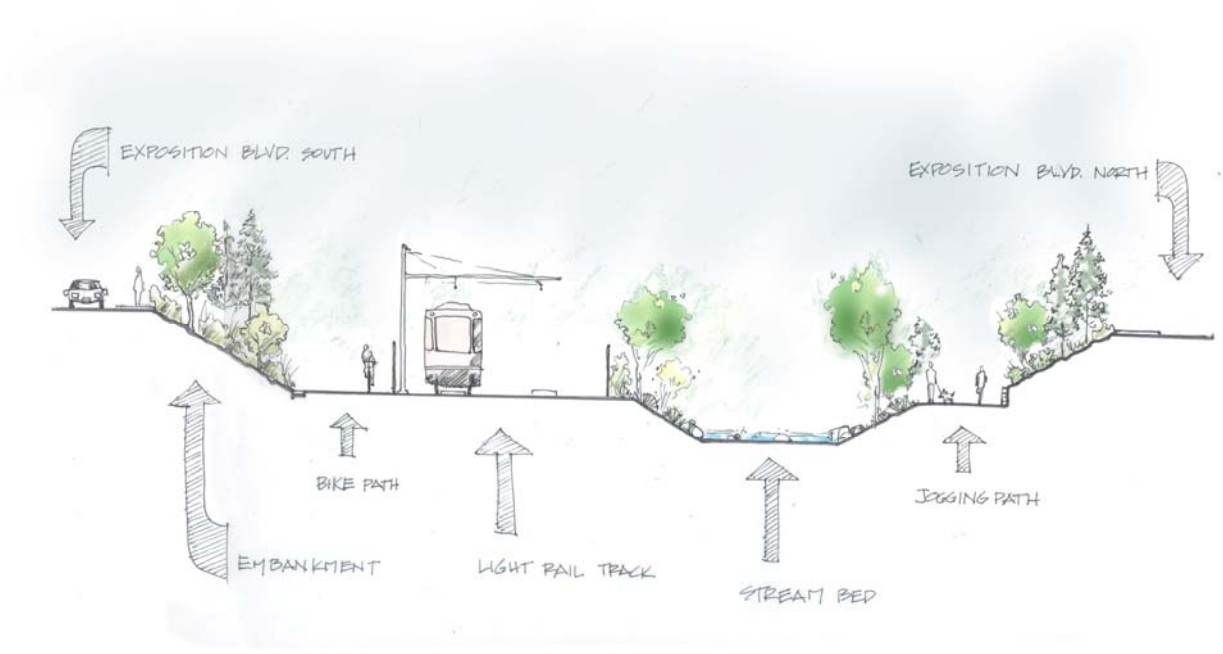
***First**, the 1 1/3 mile long strip can and should be used as a **transit parkway**. Transit on the ROW is currently undergoing Environmental Review.*

***Second**, the ROW provides a place to **clean Ballona Creek**, as has been legally mandated. Ballona Creek's "tributaries" (storm drains carrying Stone Canyon Creek, urban runoff and storm water) cross the ROW, where they can be filtered while irrigating and replenishing groundwater.*

***Third**, the ROW has ample space for **recreation**. Bicycle and walking paths could pass under Westwood Boulevard and Overland Avenue – along with the waterway – and the paths could connect to Palms Park, Palms Child Care Center and Palms Recreation Center, as well as the adjacent Palms-Rancho Park Library.*

***Fourth**, the water feature within the park would attract native plants, butterflies and birds, and provide a rich **outdoor education laboratory** for Overland Elementary School and others.*

*Our mass transit agencies and our water stewards are committed to public spaces and to environmental responsibility. The Exposition Right of Way offers a chance to reach their goals efficiently by combining public projects.*



## *For Transportation*

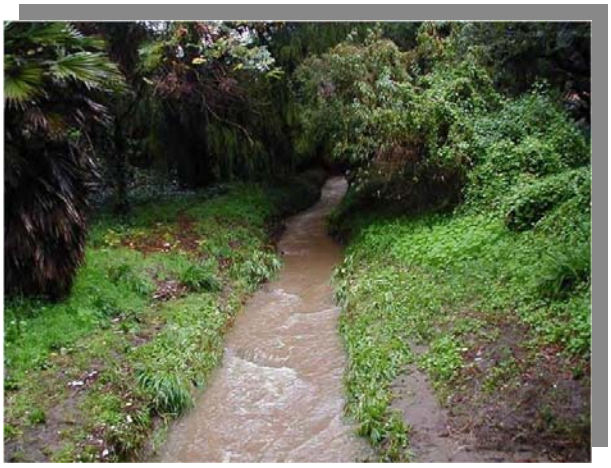

*The **broad and natural** Exposition Right of Way (ROW) south and west of Cheviot Hills provides a **unique opportunity** to put this public land to several simultaneous, beneficial uses consistent with our transit agencies' "planning principles" for the Exposition Transit Parkway:* [1]

- *To establish a multi-modal transit corridor combining a light rail transit alignment, a bikeway, streets and pedestrian linkages in a safe, balanced and cohesive parkway setting,*
- *To develop a transit parkway that encourages links, buffers, borders, paths and edges from the parkway into diverse communities along the alignment, and*
- *To develop designs that **promote sustainability of natural resources**.* [2]

*This section of the ROW between the Rosa Parks (formerly Santa Monica) Freeway and Sepulveda Boulevard is **uniquely wide** – up to 200 feet wide. (Light Rail trains only use about 30 feet of that space.) Most of the ROW in this area has not been sold off, narrowed or encroached upon by Exposition Boulevard.* [3] *Thus, there is room for the multiple uses contemplated.*

## *For Environmental Improvement*

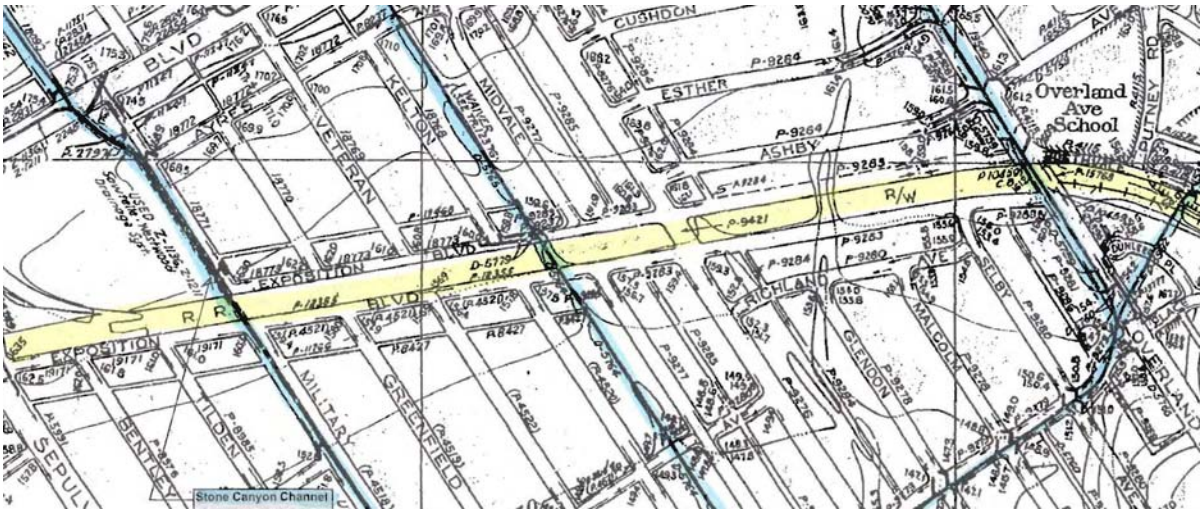
*Los Angeles hidden and forgotten streams are already being daylighted[4] in order to reduce the contaminant runoff into the Santa Monica Bay.[5] Applying some of the principles of daylighting to the creek and storm drains that cross the ROW would not only mitigate the increase in impervious surfaces brought by the tracks, but actually* ***improve the environment*** *– both physical and aesthetic.*



*The Military Avenue storm drain conveys a perennial creek – Stone Canyon Creek[6] (pictured at UCLA) – from the Santa Monica Mountains to Ballona Creek. It is one of several water courses crossing the nearly flat ROW (see map at bottom).[7] By opening the daily flow of the storm drains – i.e., by lowering the site's grade and allowing the storm drains' contents to flow parallel to the tracks flow (east to west, west to east, or both) –* ***significant environmental goals can be achieved****.*

### LEGAL OBLIGATIONS TO CLEAN STORM DRAIN WATER

*In 1998, the State entered into a Consent Decree with the United States Environmental Protection Agency (EPA) and others to develop and enforce compliance plans for a variety of pollutants in our urban waterways. The Consent Decree requires that all Total Maximum Daily Loads (TMDLs) for the Los Angeles region be adopted by 2011.[8] So far, the California Environmental Protection Agency, Los Angeles Regional Water Quality Control Board (Water Board) has adopted several TMDLs, and it is about to adopt TMDLs for bacteria in Ballona Creek, Ballona Estuary, and Sepulveda Channel."[9] Implementing the TMDLs could cost millions or billions.[10] "Proposition O" provides up to a half billion dollars of funding.[11]*



*A water treatment system for a parallel culvert system has just been installed under a parking lot in Mar Vista Park,* [12] *leaving only the subject leg of the storm drain system untreated. Using the ROW is a golden opportunity for the City and County of Los Angeles (permit holders for these drains) to reduce TMDLs.*

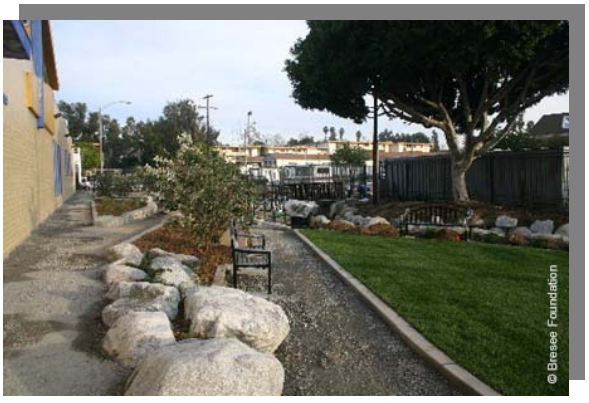
*A water feature along the Right of Way fits within the Water Board's plans. The Board:*

- *Is pursuing an "holistic view of regional water resources management by integrating planning for future wastewater, storm water, recycled water, and potable water needs and systems."*
- *Focuses on "**beneficial re-use of storm water**, including **groundwater infiltration."***
- *Anticipates "that **an integrated approach will incorporate and enhance other public goals**. These may include, but are not limited to, water supply, recycling and storage; environmental justice; **parks**, **greenways** and **open space**; and active and passive **recreational and environmental education opportunities.**"*
- *Includes among its strategies **"day lighting" sections of the tributaries that are now culverted**."*[13]

*A water feature would have many benefits, as follows.*

## BIOFILTRATION

*Biofiltration is a pollution control technique using living material to filter or chemically process pollutants. Common uses include processing waste water, capturing harmful chemicals or silt from surface runoff, and microbiotic oxidation of contaminants in air.*[14] *"Vegetated biofiltration swales intercept pollutants and sediments flowing off roads and parking areas toward the stream." (Pinkham, Daylighting, New Life for Buried Streams, p. 41.)*[15] *To find out if the biological filtration is beneficial (or necessary) in this area, we must find out how dirty the daily flow is in each storm drain. It is already under consideration for the Ballona Creek Watershed.* [16]




***Bimini Slough*** *(pictured) provides an example of biofiltration. The Bimini Slough Ecology Park covers what was previously Second Street between South Bimini Place and Juanita Avenue (near the intersection of Vermont Avenue and Third Street).*[17]

## GROUNDWATER REPLENISHMENT

*Stone Canyon Creek and the runoff in the several storm drains can be used to replenish groundwater through seepage.*

## WATER CONSERVATION

*The perennial Stone Canyon Creek can be used to irrigate foliage along the right of way.*

## INCREASING INFRASTRUCTURE LIFESPAN

*Bringing water to the surface and allowing it to percolate into the ground and be consumed by plants would reduce flows in the entire watershed, thereby reducing wear and tear on the existing storm water system and prolonging the lifespan of the valuable infrastructure.*

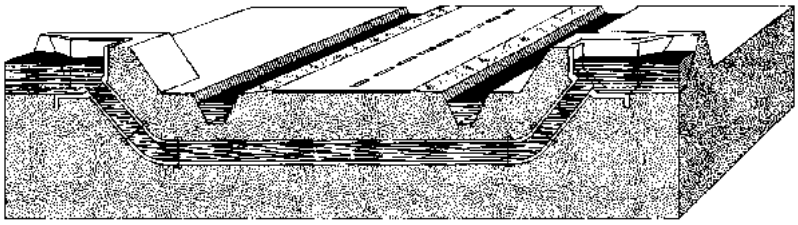
## AESTHETICS

*"The aesthetic and amenity value of water is quite high. At the local level, a creek can be a valuable attraction, even a focal point, in a public park. At a regional level, restored creeks can define a network of urban greenways and paths. Establishing such networks creates functional and habitat values as well. But it's important to not underestimate the intangible benefits, which often increase the more urban the site. People familiar with the Strawberry Creek project note that its local impact is out of proportion to its small size – the opportunity to hear the soothing sound of running water is a huge draw for people in the highly built-up environs."*[18]

*Ample space would remain for picnic tables, walking paths, or benches for watching nature. A waterway might encourage more urban flora and fauna, making the experience even more welcoming.*

## INVERTED SIPHON

*Inverted siphons are essentially U-shaped pipes passing fluid under an obstruction by force of water pressure. In use since ancient Roman times, inverted siphons move water under obstructions, be they roads[19] or rivers.[20] Inverted siphons are used in California for fresh water[21] and Los Angeles for sewerage.[22] Some Inverted siphons are even historical objects listed in the National Register.[23] At least one inverted siphon is apparently used to clean water.[24]*



*During heavy rains, an "inverted siphon" could be used to pass the storm drain under the light-rail line, feeding overflow (i.e., more than the Expo Creek/Slough/Swale can carry) directly into the extant storm drains.[25]*

## *For Recreation*

***Parkland** is possible for most of this area, especially where the tracks will take up only 15% of the width (30 feet of 200). Palms Park abuts the right of way. A walkway from the National Boulevard/Overland Avenue intersection provides park access to Palms, Westdale, and Westside Village, while a pedestrian bridge[26] connects Palms Park to the Country Club Highlands[27] section of Cheviot Hills. Sloped paths for bicycles and pedestrians, both north and south of the tracks, could connect Palms Park to the Right of Way.*

*The ROW has sufficient space for **bike, jogging and pedestrian paths** in most of this area.*

*Much of the ROW near Cheviot Hills is in a lovely, natural valley. Near Cheviot Drive, where the ROW rises to street level and above, it can and should be lowered to prepare to pass under Overland Avenue. (The rise near Bradbury, Rountree and Putney was needed to keep pond water off the tracks. The storm drain eliminated the need.[28]) Lowering the tracks from this point westward, under Overland Avenue, would **widen and extend the parkway and could connect Palms Park** with the broad ROW to the west in Westwood Gardens, where we understand that the land abutting the ROW is City-owned. Further west, where both north and south roadways of Exposition Boulevard have been built (with two-way traffic and parking), the City might consider making those streets one-way to further widen available parkland. This park would serve several communities which would be best connected by underpasses, not by overpasses.*

## For Education

*Across the country, communities are capitalizing on similar conditions to create stimulating learning environments near schools. Boulder, Colorado's Crest View Elementary School (pictured) converted a concrete culvert next to a playground into a wetland environment with wildlife observation stations where students can go on a field trip everyday of the year.[29] Faced with the possibility of rebuilding damaged culverts following the Loma Prieta Earthquake, Berkeley residents successfully lobbied for daylighting Strawberry Creek next to Thousand Oaks Elementary School, providing a similar runoff based learning laboratory.[30]*


OUTDOOR CLASSROOM SETTINGS

## Conclusion

*The combined funding and construction efforts from agencies building Expo and agencies responsible for cleaning the water could make two worthy projects more economical and more feasible. Parks money (e.g., Quimby funds) should also be considered. Along with the obvious benefit of connecting neighbors along the flattest, most direct route from Downtown Los Angeles to Downtown Santa Monica,[31] the Exposition Right of Way can clean and conserve water, feed and encourage desirable plants and wildlife, beautify an Olmstead-type parkway, and provide enhance recreational opportunities.*

## Compiled by:

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[1] *The Exposition Metro Line Construction Authority is studying potentially reviving this Right of Way to extend the Exposition Line from Culver City to Santa Monica. (http://buildexpo.org/phase2.htm.)*

[2] *"The concept for the Exposition Transit Parkway has historical roots in Olmsted and Bartholemew's plan for 'Parks Playgrounds and Beaches of Los Angeles.' This comprehensive master plan, published in 1930, describes existing and proposed recreational open spaces and the parkways that were meant to link them. Translating this planning ideal for an urban transit parkway into the 21st century suggests a new set of guiding principles." (Mid-City/Exposition LRT Project, Final EIS/EIR, section 2.4.2.1.1f Planning Principles, p. 2.4-11. http://www.mta.net*

/projects_programs/exposition/pdf/2005_feis/Chapter%202%20Alternatives%20Considered.pdf.)

[3] On September 7, 1939, the LA Times reported "[o]f three plans for opening and widening of Exposition Blvd. westward of Vermont, the City Council yesterday adopted one which provides for a divided roadway, each side 35 feet wide, with elimination of one track of the Santa Monica Air Line, the plan subject to approval by the State Department of Public Works."

[4] "In urban design and urban planning, daylighting is the redirection of a stream into an above-ground channel. Typically, the goal is to restore a stream of water to a more natural state. Daylighting is intended to improve the riparian environment for a stream which had been previously diverted into a culvert, pipe, or a drainage system." (http://en.wikipedia.org/wiki/Daylighting_%28streams%29.) An Exposition waterway would not entail daylighting in the technical sense because it is not true stream restoration, i.e., it would not restore stream functions, most importantly sediment transport and flooding. It would, however, create a water feature with habitat values.

[5] See "The Lost Streams of Los Angeles, Uncovering our wet and wild past. Is it safe, or even possible, to let the water flow again?" (LA Weekly 11/8/06) http://www.laweekly.com/general/features/the-lost-streams-of-los-angeles/14973/. Without implying any endorsement or approval, we wish to indicate that Jessica Hall, Ballona Creek Watershed Coordinator, Santa Monica Bay Restoration Commission, has visited the site and preliminarily considers the project feasible.

[6] Stone Canyon Creek is being restored upstream. The website for the restoration project (http://www.birdsofwestwood.com/creek.htm) reports that the project is led by Rafe Sagarin, Research Biologist in the UCLA Institute of the Environment http://www.ioe.ucla.edu/, and is made possible by a grant from the Southern California Wetlands Recovery Project's Small Grants Program http://www.scwrp.org/. Collaborators on the project include Mark Abramson, Heal the Bay's Stream Team Manager http://www.healthebay.org/, Jessica Hall of Santa Monica Bay Restoration Commission http://www.santamonicabay.org/smbay/default.aspx, the Ballona Watershed Taskforce, and Travis Longcore (Geography Professor) of the Urban Wildlands Group http://www.urbanwildlands.org/.

[7] The drains, with their size and inlet elevations (where known), are: Bradbury/Rountree (56 ft^2 flow area, elevation 154 ft), Overland (105 ft^2 flow area, el. 160 ft), Midvale/Kelton (60 ft^2 flow area, el. 158 ft), and Military (160 ft).

[8] http://cityofla.org/san/wpd/Siteorg/program/TMDLs/tmdlhistory.htm.

[9] "This TMDL and its Implementation Plan are created in response to the 303(d) current listing (2002) of the Ballona Creek Estuary, Ballona Creek, and Sepulveda Canyon as impaired water bodies with respect to coliform bacteria." Ballona Creek Bacteria TMDL, Technical Memorandum - TMDL Appendix (2/17/06), p. 4. (Hereinafter "Technical Memo.")

[10] "The [California Environmental Protection Agency, Los Angeles Regional Water Quality Control Board] staff said the total cost could range from the low millions to $1.75 billion if

*agencies installed the most high-technology filters in the storm drains." ("State Adopts Plan to Keep Trash Out of L.A. River Environment: Officials order local governments to reduce the amount of litter that reaches storm drains. Critics say the mandate is too costly to implement." L.A. Times 1/26/01.)*

[11] *www.lastormwater.org/WPD/general/measure_o/background.htm.*

[12] *http://www.westsidecities.org/COGnews/WWQP-MarVistaPark.htm.*

[13] *Technical Memo, p. 7.*

[14] *http://en.wikipedia.org/wiki/Biofilter.*

[15] *http://www.rmi.org/images/other/Water/W00-32_Daylighting.pdf.*

[16] *See Lower Ballona Creek Watershed Ecosystem Restoration Reconnaissance Study, U.S. Army Corps of Engineers, Los Angeles District, September 2002 , p. 23 (emphasis added): "Opportunity: An evaluation of the existing flood control structure can be performed to assess opportunities for improving hydraulic connectivity and circulation with adjoining riparian and wetland habitats and improving instream habitat while maintaining the flood control function of the channel.* ***Opportunities for modification or removal of concrete and daylighting culverts can be assessed****."*

[17] *See website for Bimini Slough Ecology Park at http://www.bresee.org/park_03/.*

[18] *Pinkham, "Daylighting, New Life for Buried Streams," p. 7.*

[19] *"[A]n inverted siphon . . . carries the [Catskill Aqueduct] water down to and then under Route 301 . . . ." "Hiking: East Hudson Highlands" (New Jersey Record 4/20/04).*

[20] *"A new Croton Aqueduct – built in conjunction with the New Croton Dam – three times as large as the old one and following a different route, was completed in 1893 . . . . One of its remarkable features is the inverted siphon that carries it 300 feet below the surface of the Harlem River, but that engineering feat pales when compared with a similar tunnel, 13 feet in diameter, that carries the Catskill system's water under the Hudson River." ("City's Water System: A Wonder of Engineering," N.Y. Times 12/14/86.)*

[21] *"The inverted siphon that will replace the irrigation dams is 850 feet long and consists of three parallel concrete pipes." ("Babbitt to Visit Calfed Project Interior Secretary Seeks to Highlight Removal of Four Irrigation Dams that Impeded Spring Spawning Runs of Chinook Salmon," Contra Costa Times 7/13/98.)*

[22] *An inverted siphon is being used for sewerage adjacent to the Exposition Right of Way on Phase 1 of the Expo Metro Line where the East Central Interceptor Sewer dips to pass under a large storm drain beneath Jefferson Boulevard east of La Cienega Boulevard. See "Initial Study/Negative Declaration for Jefferson / La Cienega Air Treatment Facility" City of Los Angeles, Department of Public Works, Bureau of Engineering, Environmental Group http://eng.lacity.org/techdocs/emg/Jefferson-La%20Cienega_ND.pdf. The Bureau of Engineering discusses inverted siphons extensively in http://eng.lacity.org/techdocs/sewer-ma/f200.pdf.*

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[23] *"In Arkansas, two flood-control projects in Poinsett County – the Marked Tree Lock and Siphons and the Rivervale Inverted Siphon – are on the National Register." ("Huge Elephant, Brothel On Historic Register," New Orleans Times Picayune, 9/8/96.)*

[24] *"The plan also provides for construction of a water quality control berm to stop runoff from entering Smith and Bybee lakes and an inverted syphon system designed to filter oil and other debris from the water before it passes downstream into the lakes." ("Wetlands Pacts May Resolve Rivergate Actions," The Oregonian 2/21/88.)*

[25] *Diverting water could be via an inlet chamber: when the water level is below a chamber wall, the water would only flow into the stream, when the water level is high, it would overflow into the siphon.*

[26] *The eastern section of the tracks was apparently lowered between Northvale and Palms Park for the construction of the 10 Freeway in the early 1960s. Lowering the tracks made the valley between Palms Park and Country Club Highlands steeper, necessitating a pedestrian bridge. Long-time Northvale Avenue resident (and Light Rail for Cheviot member) Patsy Flanigan was instrumental in obtaining the bridge.*

[27] *West Los Angeles' Cheviot Hills neighborhood is a fusion of several residential tracts that were developed beginning in the early-1920s: Country Club Highlands (1923), Cheviot Hills (1924), and Monte-Mar Vista (1926). These three tracts retained their separate identities through the 1930s. In 1939 a fourth tract was added to the south: Cheviot Knolls. (Compiled by Jonathan Weiss at http://www.cheviothills.org/aboutcheviot.htm.)*

[28] *The Los Angeles and Independence Railway connected Los Angeles with Santa Monica in 1875 when the area was pastoral. Maps from that era (and later) show a pond fed by creeks or streams where Bradbury and Rountree now intersect Northvale. See maps compiled by Jonathan Weiss and currently posted on the Cheviot Hills website at http://cheviothills.org/history_files/Rincon%20de%20los%20Bueyes%20-%201875.pdf ; http://cheviothills.org/history_files/USGS%20Map%20-%201896.pdf; and http://cheviothills.org/history_files/sawtelle25%20-%20zoom.pdf. See also Ballona Watershed Green Map published by architect and urban designer Isabelle Duvivier at http://www.lagreenmap.org/map_ballona.htm and http://www.lagreenmap.org/2_ball_sec_e3.htm.*

[29] *http://schools.bvsd.org/crestview/habitat.shtml.*

[30] *Pinkham, "Daylighting, New Life for Buried Streams," pp. 18, et seq.*

[31] *In 1908, the line was electrified and christened the "Santa Monica Air Line," since "air line" denoted the most direct route. http://en.wikipedia.org/wiki/Air_Line_Railroad*

[32] *For brevity, cited authorities and sources are not attached. Please see http://www.lightrailforcheviot.org/ where that information may be posted or linked.*