

CALIFORNIA COASTAL COMMISSION

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Staff: AM-LB A.M.
Staff Report: 5/17/00
Hearing Date: June 13-16, 2000
Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-00-161

APPLICANT: City of Los Angeles/Bureau of Sanitation

AGENT: Doug McPherson, City of Los Angeles/Bureau of Engineering

PROJECT LOCATION: Ballona Lagoon and Grand Canal, bounded by Washington Blvd., Pacific Ave., Via Dolce, and Via Marina, Venice, City and County of Los Angeles.

PROJECT DESCRIPTION: Install three new storm drains with filtered catch basins, reconstruct an existing storm drain and insert a filter into the existing catch basin, insert filters into two existing catch basins, and install stormceptors into three existing stormdrains.

LOCAL APPROVALS RECEIVED: City of Los Angeles Coastal Development Permit #00-01, March 7, 2000.

SUBSTANTIVE FILE: Coastal Development Permit #A-266-77 (ILA)
Coastal Development Permit #5-95-152, A1-3
Ballona Lagoon Enhancement Plan, California Coastal Conservancy & BLMP, August 1992
Conceptual Ballona Lagoon Enhancement Plan, California Coastal Conservancy & BLMP, March 1999

SUMMARY OF STAFF RECOMMENDATION:

The applicant proposes to improve the collection and quality of storm and urban water run-off into Ballona Lagoon and Marina del Rey Channel by installing three new storm drains with filtered catch basins and reconstructing an existing storm drain on the west bank of the lagoon. The project also includes inserting filters into two existing catch basins and installing stormceptors into three existing storm drains on the east bank of the lagoon. The project will not impede coastal access. The major issue of this staff report is water quality.

Staff recommends **APPROVAL** of the proposed development subject to five special conditions which 1) require use of construction Best Management Practices (BMPs); 2) require debris disposal site to be located outside of the coastal zone; 3) require implementation of structural best management practices (BMPs); 4) revegetate all disturbed areas with native vegetation upon completion of the project; 5) restrict construction of the project during the Least Tern nesting period.

STAFF RECOMMENDATION:

Staff recommends that the Commission **APPROVE** the permit application with special conditions.

Motion:

I move that the Commission approve CDP #5-00-161 pursuant to the staff recommendation.

Staff recommends a **YES** vote. This will result in adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

I. Approval with Conditions

The Commission hereby **GRANTS** a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is located between the nearest public road and the sea and is in conformity with the public access and public recreation policies of the Coastal Act, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of

time. Application for extension of the permit must be made prior to the expiration date.

3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. Special Conditions

1. Storage of Construction Materials, Mechanized Equipment and Removal of Construction Debris

The permittee shall comply with the following construction-related requirements:

- (a) No construction materials, debris, or waste shall be placed or stored where it may be subject to water or wind-borne erosion and dispersion.
- (b) Any and all debris resulting from construction activities shall be removed from the project site within 24 hours of completion of construction.
- (c) Erosion control/sedimentation Best Management Practices (BMPs) shall be used to control sedimentation impacts to coastal waters during construction. BMPs shall include, but are not limited to, placement of sandbags around drainage inlets to prevent runoff/sediment transport into the storm drain system and Ballona Lagoon and a pre-construction meeting to review procedural and BMP guidelines.
- (d) Construction debris and sediment shall be removed from construction areas each day that construction occurs to prevent the accumulation of

sediment and other debris that may be discharged into coastal waters. Debris shall be disposed of at a debris disposal site outside the coastal zone, pursuant to Special Condition No. 2.

2. Location of Debris Disposal Site

The applicant shall dispose of all demolition and construction debris resulting from the proposed project at an appropriate location outside the coastal zone. If the disposal site is located within the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place.

3. Structural Best Management Practices

- (a) The applicant shall implement structural Best Management Practices (BMPs) which will serve to minimize pollutant loads contained in runoff prior to entering the storm water conveyance system and Ballona Lagoon. The BMPs shall include, but are not limited to:
 - (i) Installation of filtration devices effective at trapping and/or mitigating contaminants such as petroleum hydrocarbons, heavy metals and particulates, in addition to trash and large debris. Selected BMPs shall be of a design capacity capable of treating the volume of runoff produced from each and every storm event up to and including 0.75 inches of rainfall in a 24-hour period.
 - (ii) Routine maintenance, including inspection and regular cleaning of approved BMPs, to ensure their effectiveness prior to, and during, each rainy season from November 1st through April 31st of each year. Debris and other water pollutants contained in BMP device(s) will be contained and disposed of in a proper manner on a regular basis. All BMP traps/separators and/or filters must be cleaned prior to the start of the winter storm season, no later than October 15th each year. The BMPs shall be maintained to uphold their functionality.
- (b) The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

4) **Revegetate with Native Species**

Upon completion of the proposed project the applicant will implement a revegetation plan to ensure the stability of the disturbed bank. The applicant will revegetate with Southern California dune and coastal strand species. A list of these species is found in chapter 7.2, tables 4&5 of the Ballona Lagoon Enhancement Plan, August 1992 (Exhibit #4). Non-native grasses and plants shall not be used to revegetate the site.

5) **Endangered Least Tern Nesting Period**

Construction within Ballona Lagoon shall not take place during the nesting period of the endangered Least Tern. The Least Tern nesting season extends from April 1st to mid August.

IV. **Findings and Declarations**

The Commission hereby finds and declares:

A. **Project Description and History**

The City of Los Angeles/Bureau of Sanitation is proposing to improve the storm drain system along the east and west banks of Ballona Lagoon and Grand Canal, bounded by Washington Blvd., Pacific Ave., Via Dolce, and Via Marina, in Venice, City and County of Los Angeles (Exhibit #2). Specifically, the proposed project includes the following elements: install three new storm drains with filtered catch basins and reconstruct an existing storm drain on the west bank of the lagoon; and insert filters into two existing catch basins and install stormceptors into three existing storm drains on the east bank of the lagoon (Exhibit #2). A stormceptor is a device that is placed inside a storm drain to intercept water run-off. It is intended to remove sediment and oil from the water, and store such pollutants for safe and easy removal (usually by vacuum truck) (Exhibit # 7). The filters that are proposed (*Ultra-Urban Filter with Oars Onboard*) are designed to capture oil, grease, trash, and sediment from water run-off before it enters the storm drain system. These filters are suspended from the drain into the catch basin. Solids are caught in a sediment and debris basket and oil and grease are captured in the filtration media (Exhibit #8).

The proposed improvements are designed to improve water run-off collection and quality and to provide protection from flooding during heavy rainfall. Currently, there is an existing storm drain system that discharges into Ballona Lagoon. However, the system does not provide adequate pollution reduction measures. The applicant states that the proposed project is necessary to decrease the potential of erosion on the banks of Ballona Lagoon, reduce storm-water pollution, improve water quality in the Lagoon, and prevent flooding on Pacific Avenue.

The construction of the new storm drains will require trenching, excavation, and disposal of approximately 200 cubic yards of fill. The applicant estimates that approximately 1000 square feet of the west bank will be disturbed to trench and install the three new storm drains and to replace the existing storm drain at Voyage Street. Once the storm drains are in place, the trenches will be backfilled with the natural soil that was excavated and planted with natural vegetation (as required in special condition #4).

The proposed new storm drains will outlet at the terminus of Jib Street, Outrigger Street, and Topsail Street (Exhibit #2). Twelve cubic yards of riprap at the outlet of the storm drains, with 4 cubic yards below the high-tide line, is proposed (Exhibit #3). The applicant states that this is necessary to prevent erosion of the bank at the storm drain outlets.

The proposed project also includes inserting filters into two existing catch basins at Washington Boulevard and Driftwood Street and installing stormceptors in the existing storm drains at Washington Boulevard and Via Dolce. These drains outlet into the Grand Canal. A stormceptor will be installed in a third existing drain at Topsail Mall, which drains into the Marina del Rey Channel (Exhibit #2). The insertion of filters does not require trenching or excavation and will not disturb the surrounding area.

During the installation of the stormceptors, partial excavation of the roadway at Washington Blvd., Via Dolce, and Topsail Mall will occur. All construction debris shall be taken outside of the coastal zone for disposal unless the applicant applies for a coastal development permit for disposal in the Coastal Zone (Special Condition #2).

Presently, storm water and urban runoff along Pacific Avenue on the west bank collects and flows over the bank of Ballona Lagoon. This creates erosion problems and adds to the siltation and turbidity of the Lagoon. The proposed project will redirect runoff through the new catch basins into Ballona Lagoon.

The development located along the east bank and Grand Canal (new filters and stormceptors) does not divert water to a different location. The water will continue to discharge from existing drains.

There will not be an increase in volume of storm water discharges. In addition, the proposed storm drain improvements will not accommodate additional development or increase development intensity in the service area. The area is already fully developed. Instead, the proposed storm drain improvements are necessary to decrease polluted run-off into Ballona Lagoon and Marina del Rey Channel and reduce the risk of localized flooding.

The proposed construction is expected to take approximately 3½ months, with the anticipated completion in early November. No post-construction impacts to coastal access will result from the proposed project.

B. Ballona Lagoon

Ballona Lagoon is located in the Venice Peninsula area of the City of Los Angeles, adjacent to the Marina del Rey entrance channel (Exhibit #1). The lagoon is an artificially confined tidal slough connecting the Venice Canals to the Pacific Ocean via the Marina del Rey Harbor entrance channel. The lagoon is approximately 4,000 feet long and 150-200 feet wide (Exhibit #2). The area of open water and wetland within the lagoon is approximately 16 acres.

The tidal regime in Ballona Lagoon is restricted by an automated tide gate located at the south end of the lagoon. The Los Angeles County Department of Beaches and Harbors operates the tide gate. Three seven-foot diameter pipes connect the lagoon to the waters of the Marina del Rey entrance channel. At present, however, only the central pipe is fitted with an automated tide gate. The outer two pipes are kept closed. The automated tide gate limits the peak tidal elevation in Ballona Lagoon to approximately 2.65 feet above MSL. The low water level (MLLW) in the lagoon is recorded as -1.88 MSL.

The north end of Ballona Lagoon connects to the Grand Canal, which is part of the Venice Canals system (Exhibit #2). Five three-foot diameter pipes connect the Venice Canals and the Grand Canal, under Washington Blvd. All five pipes have slide gates on the north side of Washington Street, which are operated by the City of Los Angeles to allow flushing of the Venice Canals.

The banks of the lagoon are remnants of coastal sand dunes. The banks are generally steep, varying from 1:1 to 1:2, and are comprised primarily of sandy silt soils. Because of the steepness and composition of the banks, erosion is a significant problem, especially where street and path drains run into the lagoon. The proposed storm drains will contribute to the stabilization of the sandy bank by redirecting run-off into the drains rather than over the side of the bank.

A highly urbanized area of single and multiple family residential development surround Ballona Lagoon. The properties which adjoin the east and west banks of the lagoon are developed with single-family residences. On the east bank of the lagoon, a public access path and lagoon buffer area, both required by Coastal Development Permit A-266-77 (ILA), separate the residential development from the waters of the lagoon. Pursuant to Coastal Development Permit A-266-77 (ILA), each lagoon fronting lot owner on the east bank, as a condition of individual permits for developing their property, is required to offer to dedicate a 24 to 30 foot easement for habitat protection and public access as part of the forty foot wide lagoon buffer.

Approximately fifty privately owned lots exist on the west bank of the lagoon. The developed lots consist of single family residences. On the lagoon side of these lots there is an undeveloped City area (Esplanade) for public access. However, due to bank erosion, the majority of the length of the City Esplanade is submerged or within the intertidal area of the lagoon. In past permit actions the Commission has required 25 foot wide buffers between the easterly edge of the Esplanade and the development to ensure that adequate area exists

for future public access and habitat protection.

C) Water Quality

The Coastal Act contains policies that address development in or near coastal waters. The proposed project is located in and adjacent to the coastal waters of Ballona Lagoon. The Ballona wetlands system, including Ballona Lagoon, is habitat for many species of marine biota including the state and federally listed endangered least tern. The Commission has found that Ballona Lagoon is a sensitive habitat area that must be protected from negative impacts associated with development.

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states, in pertinent part:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials.

Sections 30230, 30231, and 30232 of the Coastal Act require that marine resources be maintained, enhanced, and restored in a manner that will sustain the biological productivity of all species of marine organisms in coastal waters, and that the biological productivity and water quality of Ballona Lagoon be maintained and restored by controlling runoff.

1. Construction Impacts to Water Quality

Storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or which may be discharged into coastal water via rain or

wind would result in adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. In addition, the use of machinery in coastal waters not designed for such use may result in the release of lubricants or oils that are toxic to marine life. Sediment discharged to coastal waters may cause turbidity, which can shade and reduce the productivity of eelgrass beds and foraging avian and marine species ability to see food in the water column. In order to avoid adverse construction-related impacts upon marine resources, Special Condition No. 1 outlines construction-related requirements to provide for the safe storage of construction materials and the safe disposal of construction debris.

Special Condition No. 2 requires that the applicant dispose of all demolition and construction debris at an appropriate location outside of the coastal zone and informs the applicant that use of a disposal site within the coastal zone will require an amendment or new coastal development permit.

Only as conditioned for appropriate storage of construction materials and equipment, and for location of an appropriate debris disposal site does the Commission find that the proposed development is consistent with Sections 30230, 30231 and 30232 of the Coastal Act.

2. Post-Construction Impacts to Water Quality

Pollutants such as sediments or toxic substances such as grease, motor oil, heavy metals, and pesticides are often contained within urban runoff entering the storm water system. The discharge of polluted runoff into Ballona Lagoon would have significant adverse impacts on the overall water quality of the Lagoon and the Marina del Rey Channel.

The proposed development would not result in a net increase in the volume of storm water discharged to coastal waters. The waters, and pollutants in the water that will be discharged through the new and improved, existing storm drains and outlets to Ballona Lagoon and Marina del Rey Channel are of the same type and quantity as that of the existing water flow. Therefore, the area drained is not increasing. The proposed new storm drain and pollution control measures will filter and clean water runoff within the existing system and divert water through catch basins instead of collecting and flooding over the Lagoon bank. The Commission finds that the proposed development will not result in additional pollutants entering the Lagoon and Channel, since the total amount of runoff will not be increased by the proposed storm drain improvements and additions.

Installation of the proposed improvements to the storm drain would reduce pollutants, such as trash, petroleum hydrocarbons, heavy metals, and organophosphates that are normally carried into coastal waters via storm drains. By catching even some pollutants, the project would reduce pollutant levels in runoff entering Ballona Lagoon

and the Marina del Rey Channel, thus minimizing to the extent feasible, cumulative adverse impacts upon water quality.

The applicant proposes to install three new storm drains with filtered catch basins and insert a filter into an existing catch basin on the west side of the Lagoon. The proposal includes inserting filters into two existing catch basins and installing stormceptors in three existing storm drains on the east side of the Lagoon. The implementation of such improvements would reduce the cumulative adverse impacts polluted run-off has upon Ballona Lagoon. The devices would not be completely successful. During heavy rainfall such devices are designed to allow storm-water to bypass the filtration system. This alleviates the possibility of the system backing up and flooding the streets. However, the applicant proposes improvements to the storm drain system that would have the capacity capable of treating the volume of run-off up to and including 0.75 inches of rainfall in a 24-hour period. This is expected to reduce quantities of grease, oil, and chemical pollutants, as well as solids that enter the Lagoon.

In order to find the development consistent with Coastal Act sections 30230, 30231, and 30232 it is necessary to impose Special Condition Three (3), which will ensure that the applicant incorporate Best Management Practices effective at mitigating pollutants of concern and require regular maintenance, inspection, and cleaning of approved BMPs. Only as conditioned does the Commission find the proposed development to be consistent with Sections 30230, 30231 and 30232 of the Coastal Act.

Section 30233 of the Coastal Act states, in part:

- (a) *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
 - (5) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (c) *In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...*

The proposed placement of riprap is subject to the requirements of Section 30233 of the Coastal Act. Section 30233 of the Coastal Act allows dredging and filling in coastal waters and wetlands only under very limited circumstances. Under this section, any approved filling of open coastal waters must be for an allowable use and mitigation measures must be provided to minimize adverse environmental effects. The approved project must also be

found to be the least environmentally damaging alternative.

12 cubic yards of riprap are proposed, with 4 cubic yards below the mean high tide line. The riprap will protect bank erosion as water run-off exits the storm drain and enters the Lagoon (Exhibit #3). Therefore, the proposed dredging is an allowable use pursuant to Section 30233(a)(5) of the Coastal Act.

The proposed project must also be the least environmentally damaging alternative. In this case, the proposed filling does not result in the reduction of intertidal habitat area. As stated above, the proposed riprap will protect the banks of the lagoon from erosion. Therefore, the proposed project can be found to be the least environmentally damaging alternative.

B) Habitat

Section 30240 of the Coastal Act states:

- (a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*
- (b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

Ballona Lagoon is a wetland that is protected under the Coastal Act policies stated above. Ballona Lagoon and the attached Venice Canals system is an Environmentally Sensitive Habitat Area (ESHA) as defined by Section 30107.5 of the Coastal Act. In addition to being important wetlands, the lagoon is a critical habitat area for the California least tern, Sterna antillarum browni. The California Least Tern is a State and federally listed endangered species. This habitat is critical for the California Least Tern to feed on small fish while nesting at the protected nesting site on Dockweiler Beach, located less than 2,000 feet west of Ballona Lagoon (Exhibit #1).

While not successful every year, the Least Tern Colony typically supports 80-100 pairs of birds. The Least Tern nesting season extends from April 1 to mid August. During this period, the Least Tern forage in surrounding coastal waters. As conditioned, to prevent the disruption of the Least Tern foraging in Ballona Lagoon, construction of the storm drains and riprap along the west bank of the Lagoon shall be restricted from April 1 to mid August.

Coastal Development Permit 5-95-152 and amendments (Ballona Lagoon Enhancement Plan) was approved by the Commission and implemented, among other things, a revegetation plan for the east bank of Ballona Lagoon. The Plan reestablished native plant species endemic to the Southern California coastal strand and dune regions. The native vegetation was used to support wetland habitat and

stabilize the sandy banks of the Lagoon. A conceptual plan for the enhancement of the west bank was completed in March 1999 by the Ballona Lagoon Marine Preserve, but has not yet been given Commission approval to begin work.

The applicant states that approximately 1000 square feet of the west bank of Ballona Lagoon will be disturbed during the construction phase of the project, including trenching and excavation of soils and removal of vegetation. The removal of vegetation from the sandy bank could lead to increased siltation and adversely impact the Lagoon habitat. To reduce the amount of silt and sand entering the Lagoon from the exposed bank, the applicant shall revegetate the bank with native plants endemic to Southern California dune and coastal strand species. A list of these plants is found in the August 1992 Ballona Lagoon Enhancement Plan Chapter 7.2, table 4 & 5 (Exhibit # 4).

Native vegetation is required because dune and coastal strand species are found to be rare habitat (as stated by the California Native Plant Society). These distinct communities are only found in small bands along beaches and beach dunes. They are disappearing because of increases in development along the coastline, recreation, and invasive exotic species (Exhibit #6). The clearance of the bank for this project affords the Commission the opportunity to request that native vegetation be planted to stabilize the bank of the Lagoon and increase the amount of rare dune and coastal strand habitat along the coastline. Some native species are currently present. These will not survive unless all the cleared area is replaced with native plants. Non-natives used to stabilize the bank will take over the disturbed site, as well as adjacent areas. For this reason staff is recommending use of native dune and coastal strand plants only.

Only as conditioned to restrict construction during the Least Turn nesting season and to revegetate disturbed areas along the banks, will the development be consistent with section 30240 of the Coastal Act.

C. PUBLIC ACCESS

Section 30604(c) of the Coastal Act requires that every coastal development permit issued for any development between the first public road and the sea include a specific finding regarding the conformity of the proposed development with the public access and recreation policies of Chapter 3 of the Coastal Act. A portion of the proposed development is located between the first public road and the sea.

Section 30212 of the Coastal Act states, in relevant part:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(2) Adequate access exists nearby.

The three new storm drains and the replacement of an existing storm drain will be developed between Pacific Avenue and the mean high tide line of Ballona Lagoon. Public access exists along the west side of the Lagoon along a well-worn, narrow footpath from Canal Court to Topsail Street. There is also access across the Lagoon by the pedestrian arched bridge at Lighthouse Street (Exhibit #5).

The remaining construction will take place on the east side of the Lagoon. This area is not within the first public road and the Lagoon; however, a public access path currently exists along the east bank of Ballona Lagoon (CDP #5-95-152). This path provides excellent public access along the east side of the lagoon. Also approved by the Commission in January 1996 was the construction of a new public viewing platform on top of the tide gate and pipes located at the south end of the lagoon adjacent to Via Marina (Exhibit #5). The public viewing platform (overlook) has been constructed with interpretive displays and regulatory signs regarding trail use, habitat protection, domestic pets, littering, etc.

Visual coastal access also exists along the subject site. During construction, views may be obstructed by equipment. Upon completion of the project, however, no visual impacts will remain, as all of the proposed storm drain improvements will exist below grade.

Upon completion, the proposed storm drain improvement will not interfere with existing coastal access conditions at the subject site. In addition, adequate access exists nearby. Therefore, the Commission finds the proposed development is consistent with Section 30212 of the Coastal Act.

D) GROWTH INDUCEMENT

Section 30254 of the Coastal Act states, in relevant part:

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division...

The proposed project will not increase the development potential of the area served by the proposed improvements. The project is located in a fully developed residential neighborhood of the City. Construction of the storm drains and improvements to the existing drains will not be pivotal to increasing development density in this area. Therefore, the Commission finds the proposed development will not be growth inducing and is consistent with Section 30254 of the Coastal Act.

E. LOCAL COASTAL PROGRAM

Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal development permit only if the project will not prejudice the ability of the local government

having jurisdiction to prepare a Local Coastal Program (LCP) which conforms with Chapter 3 policies of the Coastal Act:

(a) Prior to certification of the Local Coastal Program, a coastal development permit shall be issued if the issuing agency, or the Commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for such conclusion.

The City of Los Angeles does not have a certified Local Coastal Program for the Venice area. The Los Angeles City Council adopted a draft Land Use Plan (LUP) for Venice on October 29, 1999, and has submitted it for Commission certification. The proposed project, as conditioned, conforms with the draft Venice LUP. The proposed project, as conditioned, is also consistent with the Chapter 3 policies of the Coastal Act. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the City's ability to prepare a Local Coastal Program consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

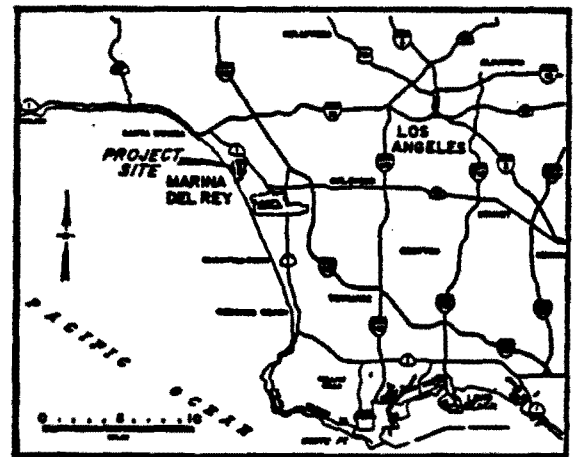
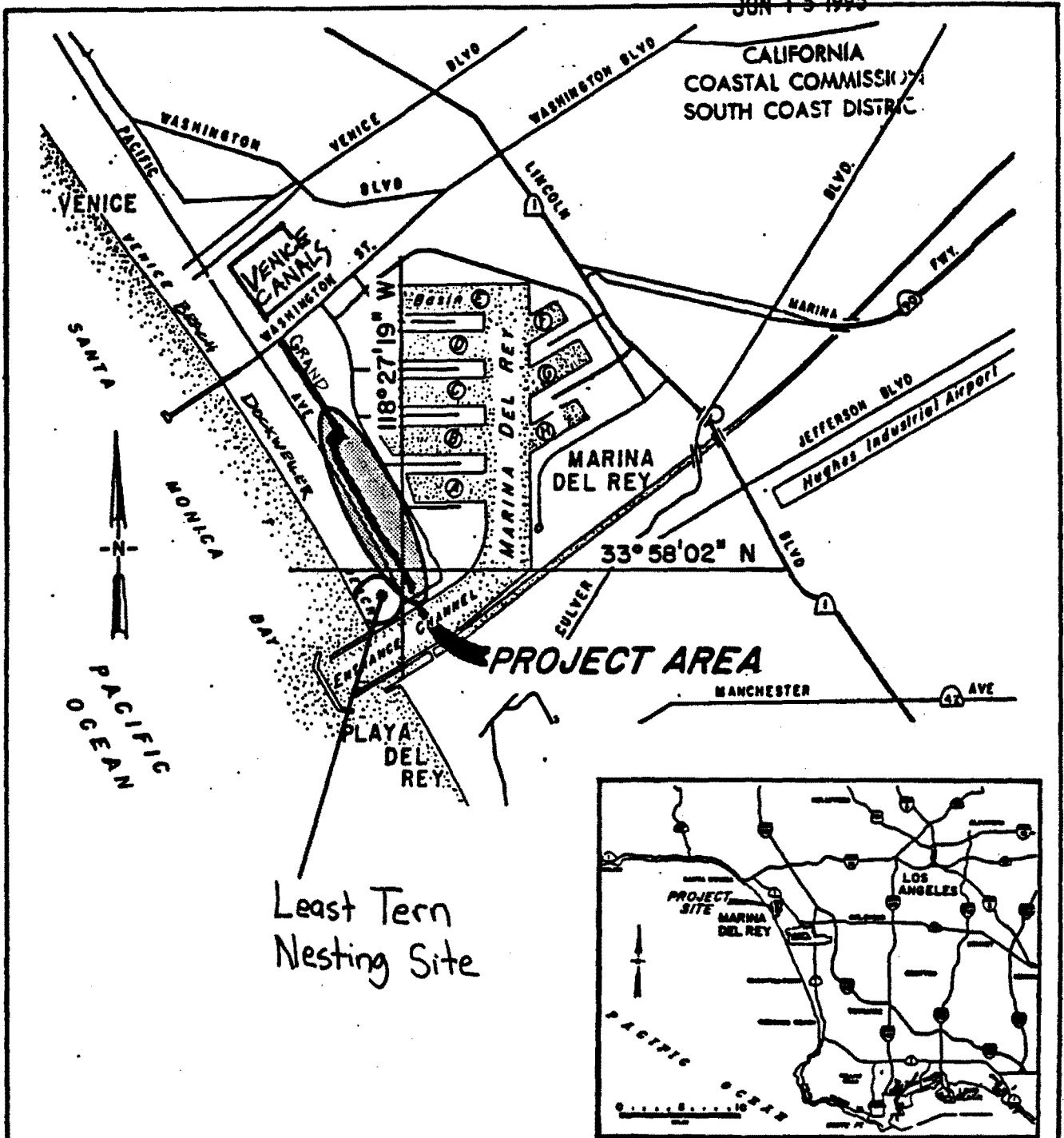
F. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse effect that the activity may have on the environment.

The proposed project, as conditioned, has been found consistent with the Chapter 3 policies of the Coastal Act. All adverse impacts have been minimized and there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project can be found consistent with the requirements of the Coastal Act to conform to CEQA.

RECEIVED

JUN 15 1995



PURPOSE: WETLAND RECLAMATION

DATUM:

ADJACENT PROPERTY OWNERS:
SEE ATTACHED LIST

VICINITY MAP



BALLONA LAGOON MARINE PRESERVE
P.O. BOX 9244
MARINA DEL REY, CA. 90295

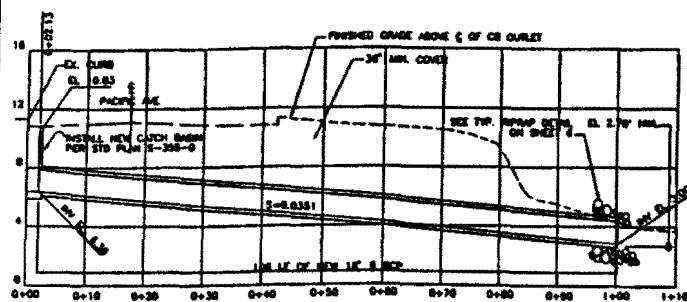
IN: MARINA DEL REY
AT: BALLONA LAGOON
COUNTY OF: LOS ANGELES
APPLICATION BY: BALLONA LAGOON
MARINE PRESERVE

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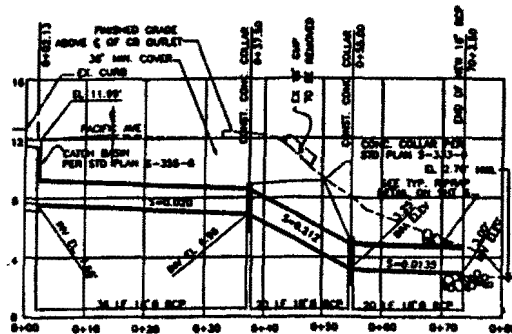
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5-00-161

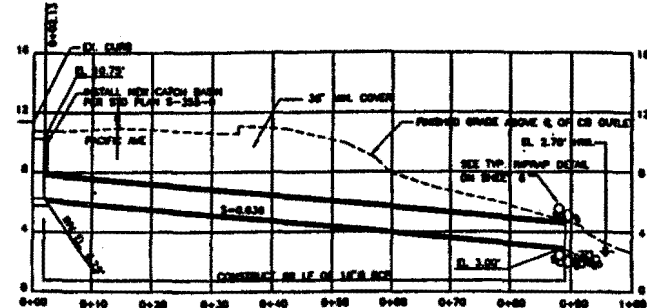
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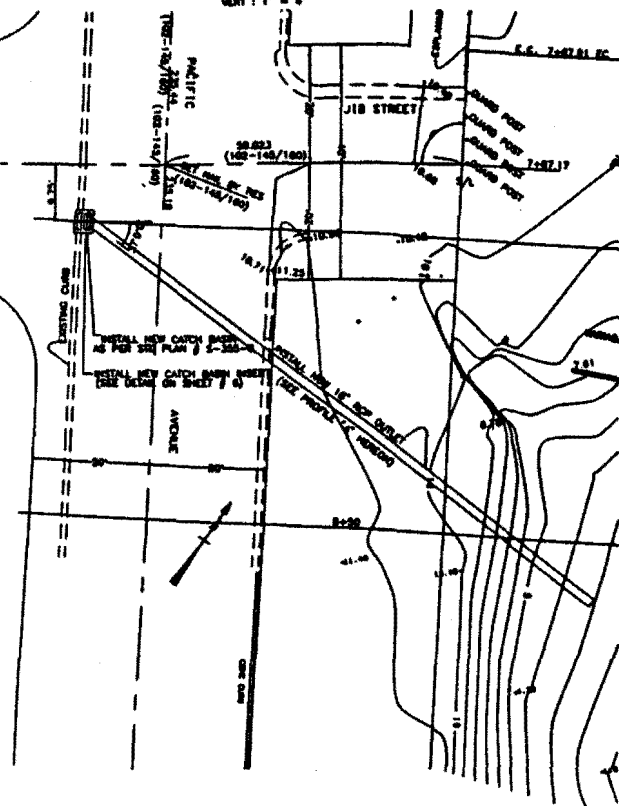
PROFILE "A" - JIB ST.



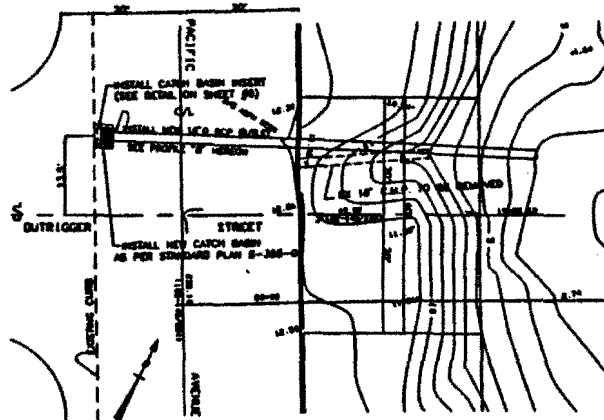
PROFILE "B" - OUTRIGGER ST.



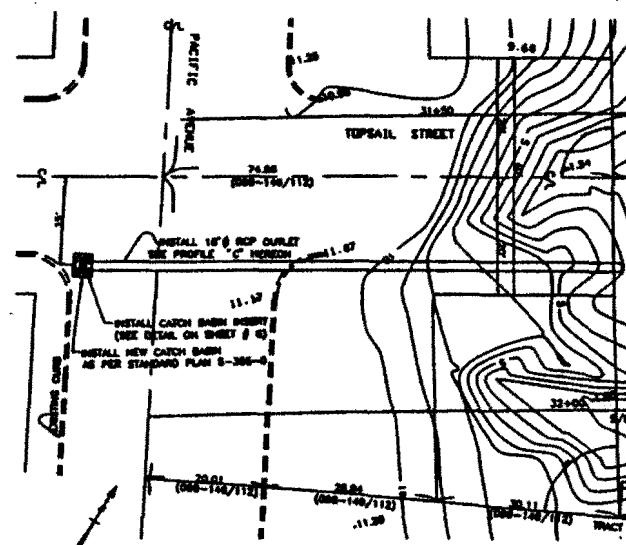
PROFILE "C" - TOPSAIL ST.



NEW CATCH BASIN AND INSERT UNIT 3 AT JIB STREET
SCALE: 1" = 10'



NEW CATCH BASIN AND INSERT UNIT 4 AT OUTRIGGER STREET
SCALE: 1" = 10'



NEW CATCH BASIN AND INSERT UNIT 5 AT TOPSAIL STREET
SCALE: 1" = 10'

PROJECT NO.	5-00-161
DATE	10/1/78
DESIGNED BY	J. L. BROWN
CHECKED BY	J. L. BROWN
APPROVED BY	J. L. BROWN
SCALE	1" = 10'
CITY OF LOS ANGELES	ENGINEERING
SECTION	5

COASTAL COMMISSION

5-00-161

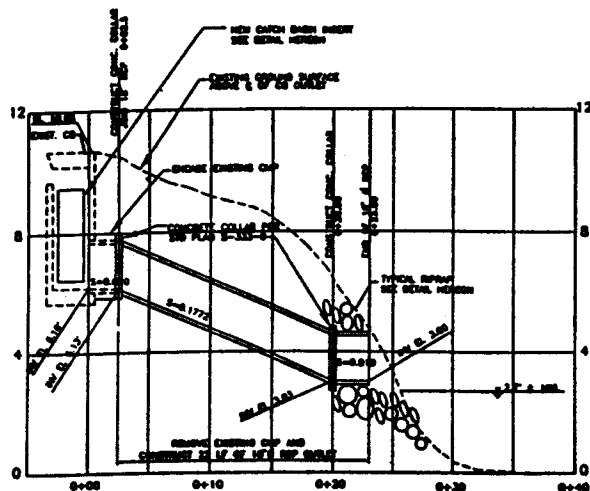
EXHIBIT # 3

PAGE 1 OF 2

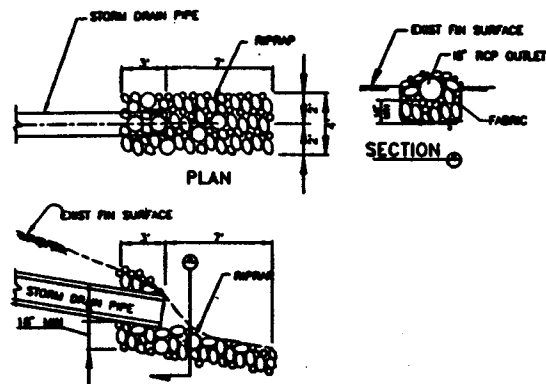
SCALES: HORIZ: 1" = 100' VERT: 1" = 4' SHEET 4 OF 6 SHEETS INDEX NUMBER

90% DESIGN

5

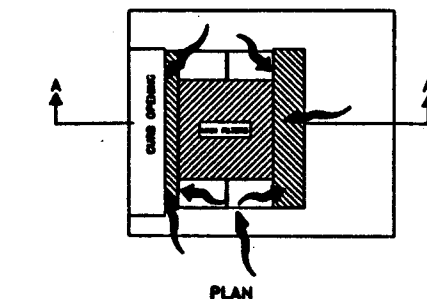


PROFILE "D"- VOYAGE STREET
SCALE
HORIZONTAL: 1"=5'
VERTICAL: 1"=2'

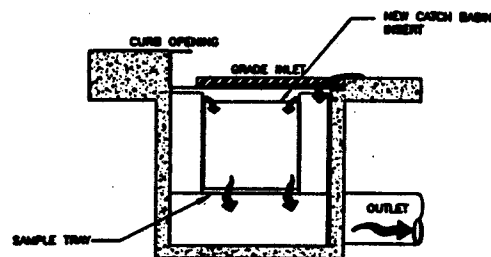


LONGITUDINAL SECTION

TYPICAL RIPRAP DETAIL
SCALE: 1"=4'



PLAN

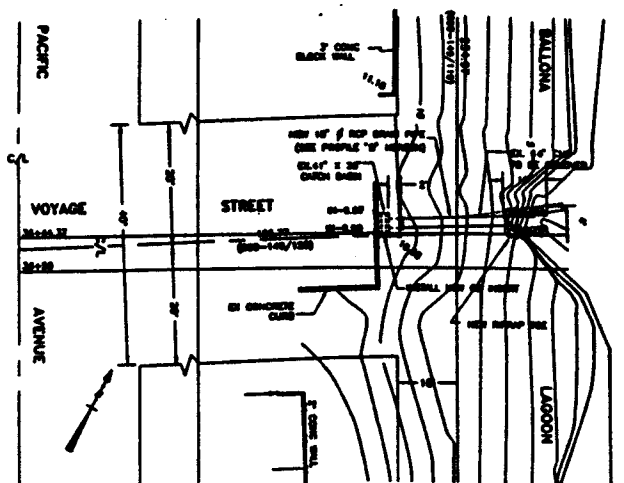


SECTION A-A

CATCH BASIN INSERT DETAILS
SCALE: 1/2"

NOTES

1. CATCH BASIN INSERT SHALL BE CAPABLE OF HANDLING THE FIRST THREE-QUARTER INCH OF RUNOFF FROM A STORM EVENT.
2. CATCH BASIN INSERT SHALL BE MADE OF A FILTRATION SYSTEM THAT WILL ENABLE THE RETRIEVAL OF POLLUTANTS WITHOUT ALLOWING THE CAPTURED CONTAMINANTS TO BE RELEASED.
3. CATCH BASIN INSERTS SHALL BE CAPABLE OF HANDLING LOW TO MAXIMUM CAPACITY OF THE DRAINAGE SYSTEM.
4. CATCH BASIN INSERT UNITS SHALL BE ULTRA-URBAN FILTER FROM AISTECH INDUSTRIES, INC. FROM FOSDA, FILTER, CD -300 FROM REMEDIAL SOLUTIONS OR EQUAL. UNITS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.



WESTERN SHORE OUTLET AND PIPE RECONSTRUCTION
SCALE: 1"=10'

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EXHIBIT # 3

PAGE 2 2

SCALES: HORIZ. 1"=40 FEET VERT. 1"=4 FEET INDEX NUMBER

90% DESIGN

6

CITY OF LOS ANGELES
JANUARY 1, 1991

BALLONA LAGOON DEMONSTRATION PROJECT
W.A. DEMALIVE
CATCH BASIN & OUTLET DETAILS

Table 4. Suggested sand dune pilot planting regime for Ballona Lagoon

Scientific Name	Common Name	Number	Cost	Information
<i>Abronia Maritima</i>	Sand verbena	10	\$75	Seedlings or direct seeding.
<i>Abronia umbellata</i>	Sand verbena	10	75	Seedlings or direct seeding.
<i>Ambrosia chamissonis</i>		10	75	Seedlings
<i>Atriplex leucophylla</i>		10	75	Seedlings
<i>Camissonia cheiranthifolia</i> <i>ssp. suffruticosa</i>		10	75	Seedlings
<i>Distichlis spicata</i>	Salt grass	10	75	Plugs
<i>Dithyrea maritima</i>	Spectacle pod	10	75	Seedlings
<i>Erysimum suffrutescens</i>	Wallflower	10	75	Seedlings or direct seeding.
<i>Eriogonum parvifolium</i>	Wild Buckwheat	10	75	Seedlings
<i>Haplopappus ericoides</i>	Heather goldenbush	10	75	Seedlings
<i>Isomeris arborea</i> <i>var arborea</i>	Bladderpod	10	75	Seedlings
<i>Lupinus chamissonis</i>	Bush lupine	10	75	Seedlings-scarify seed for improved germination.
<i>Phacelia douglasii</i> <i>var cryptantha</i>		10	75	Seedlings
<i>Phacelia viscida</i>		10	75	Seedlings
<i>Salvia mellifera</i>	Black sage	10	75	Cuttings, seedlings
<i>Rhus integrifolia</i>	Lemonade berry	10	75	Seedlings

Table 5. Suggested salt marsh plants for revegetation program

Scientific name	Common name	Planting elevation feet MSL	Cost per unit	Planting unit
<i>Salicornia virginica</i>	Pickleweed	0.5 - 1.9	\$1.80	Plug
<i>Jaumea carnosa</i>	Jaumea	0.5 - 1.9	\$1.80	Plug
<i>Batis maritima</i>	Saltwort	0.5 - 1.9	\$3.35	Seedling
<i>Limonium californicum</i>	Sea lavender	1.5 - 2.0	\$3.35	Seedling
<i>Monanthocloe littoralis</i>	Shoregrass	1.5 - 2.5	\$1.80	Plug
<i>Suaeda californica</i>	Sea blite	1.5 - 2.5	\$3.35	Seedling
<i>Distichlis spicata</i>	Salt grass	2.0 - 6.5	\$1.80	Plug
<i>Salicornia subterminali</i>	Glasswort	2.0 - 3.0	\$3.35	Seedling
<i>Frankeni grandifolia</i>	Alkali heath	3.5 - 4.5	\$3.35	Seedling

Most of these plants may not be available through commercial nurseries, and will have to be custom grown. These plants could either be grown by the landscape contractor or through a local nursery. Possible sources include the following:

Mockingbird Nursery
Producers
1645 Jackson Street
Riverside, CA 92504

Tree of Life Nursery
P.O. Box 736
San Juan Capistrano
CA 92693

Environmental Seed
P.O. Box 5904
El Monte, CA 91734

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Pedestrian
Arched
Bridge

East
Bank

Public
Viewing
Platform

West
Bank

CONSTRUCT
STORMCATCHER UNIT 3
SEE PLAN & PROFILE ON SHEET NO. 4

CONSTRUCT
STORMCATCHER UNIT 1
SEE PLAN & PROFILE ON SHEET NO. 3
CATCH BASIN INSERT
UNIT 1
SEE TYP. DETAIL ON
SHEET NO. 8
CONSTRUCT
STORMCATCHER UNIT 2
SEE PLAN & PROFILE ON SHEET NO. 4
CATCH BASIN INSERT
UNIT 2
SEE TYP. DETAIL ON SHEET NO. 4

PIPE RECONSTRUCT & CS INSERT UNIT 6
SEE PLAN & PROFILE "D" ON SHEET NO. 6

NEW CATCH BASIN AND INSERT
UNIT 6
SEE PLAN & PROFILE "C" ON SHEET NO. 6

NEW CATCH BASIN AND INSERT
UNIT 4
SEE PLAN & PROFILE "B" ON SHEET NO. 5

NEW CATCH BASIN AND INSERT
UNIT 3
SEE PLAN & PROFILE "A" ON SHEET NO. 5

EX. RELIEF SEWER

SITE PLAN
SCALE 1"=100'

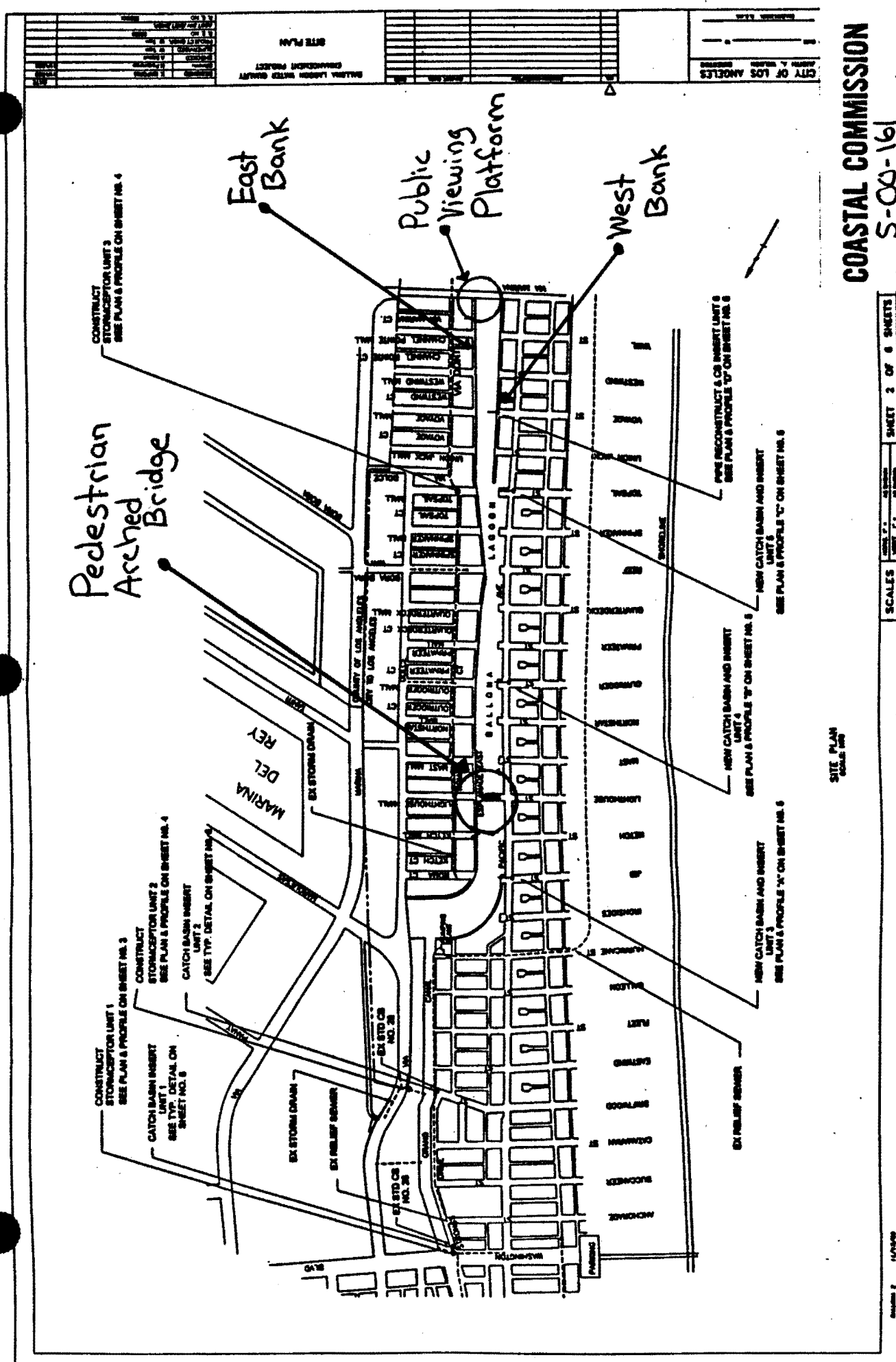
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EXHIBIT # 5

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SCALES: HORIZONTAL 1"=100' VERTICAL 1"=20' SHEET 2 OF 6 SHEETS

DATE: 1/1/00





Photograph courtesy of California Department of Parks and Recreation.

PROTECTING AND RESTORING NATIVE DUNE PLANTS

by Bruce Cowan

The various species of plants which stabilize the sand dunes along the California coast are a unique and gradually disappearing resource. Most are restricted to this very limited habitat. Together they comprise a community of plants which evolved over thousands of years, each species co-existing in harmony with the others. In addition to being of scientific value, the dune plant community is esthetically pleasing with its subtle blend of texture and form. During certain months of the year, especially late spring to early summer, natural dunes are ablaze with color as the dune wildflowers come into bloom.

Most California coastal sand dunes originated from glaciated and eroded sediments that were carried by rivers from mountains to the Pacific Ocean and subsequently were deposited along the shore. Sand moving inland with the prevailing winds gradually formed interesting contours and a variety of micro-habitats. Plant species which colonize the

primary dunes (those nearest the ocean) are able to withstand strong blasts of salt winds. They catch drifting sand and actually help to build the dunes as well as to stabilize them. The wind is relentless, however, and there is a continual movement of sand toward the land. The primary dunes, however, with their plant cover, create some resistance against the wind, thus slowing down the velocity of the sand and creating a habitat more favorable to the other species of plants. The result is the formation of larger secondary dunes behind the primary dunes, stabilized by their own characteristic species of dune plants. These in turn may offer additional protection so that trees and other less wind-resistant plants can exist in their shelter. Dunes may thus create a more favorable climate for several miles inland.

With their cover of vegetation intact, sand dunes are beautiful and beneficial; without it they become mountains of destruction, migrating with the wind,

AN INDEX TO THE FIRST TWO YEARS OF FREMONTIA
VOLS. 1 AND 2 (APRIL 1972 - JANUARY 1975)

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swallowing trees, roads, and even houses that lie in their path. Native dune plants have been able to adapt to the harsh conditions of their environment for countless ages, as long as they are required to share the dunes only with the rabbits and the lizards, the wind and the rain. Unfortunately they have not been equipped to cope with twentieth century modern man.

Our native dune plants are disappearing for three major reasons. (1) They are too fragile to survive impact and cannot withstand dune buggies, motorcycles, or excessive trampling; (2) they are being eliminated directly by road construction and real estate developments; and (3) exotic plant species which are used to stabilize dunes within developed areas are invading native habitats and crowding out the natives. These exotics include mainly Hottentot-fig ice plant (*Carpobrotus edulis*) and European beach grass (*Ammophila arenaria*). In some places along the coast the South American pampas grass (*Cortaderia atacamensis*) is becoming a menace to all native plant life.

Unless sand dunes are protected from encroaching developments and heavy recreation, and unless some measures are taken to prevent the intrusion and gradual takeover by exotic species, most native dune plants may well disappear within a few decades. With care and planning, however, it may be possible to set aside areas—even near developments—where native species can be preserved and restored.

First let's consider individual species that occur on dunes and determine how they fit into the overall pattern. Probably the best example of natural dune environment can be found at Salinas River State Beach, in Monterey County, where plant succession in primary and secondary dunes may be easily

observed. From May to July you will see a dazzling display of wildflowers equal to the spectacle of an alpine meadow.

Perhaps the hardest pioneer of all is the little purple-flowered beach pea (*Lathyrus littoralis*), which may occur just above the high-tide line. Forming a dense carpet, it just manages to keep from being buried by fresh sand. Along with beach pea is an abundance of yellow sand-verbena (*Abronia latifolia*), and the pink-flowered native sea-fig *Carpobrotus aequilaterus* (syn. *C. chilensis*), smaller in leaf and flower than the naturalized *C. edulis*. Superimposed upon large sections of the primary dunes are extensive patches of brilliant orange or red seaside painted cup (*Castilleja latifolia*). On the higher areas silvery fronds of beach sagewort (*Artemisia pycnocephala*) wave in the wind. Also found are the golden beach poppy (*Eschscholzia maritima*), sea-rocket (*Cakile maritima*), beach morning-glory (*Convolvulus soldanella*), and coast buckwheat (*Eriogonum latifolium*). During the peak of bloom the effect is a mosaic of strong and brilliant colors.

A few hundred feet inland the larger secondary dunes loom, looking like sturdy chaparral-covered hills. Their appearance is misleading, for the cover of fragile woody and semi-woody vegetation is all that holds them in place. Destroy the plant life and the dunes soon run rampant. The species dominating the secondary dunes is mock heather (*Haplopappus ericoides*), a delicate shrub of the composite family with feathery green foliage and a mantle of tiny yellow flowers in early fall. Also found in this zone are the silvery-leafed, purple-flowered beach lupine (*Lupinus chamissonis*), pink sand verbena (*Abronia umbellata*), the rare and endangered coast wall-flower (*Erysimum ammophilum*), and at least one species of *Dudleya* perched valiantly on the crests. In lower and moister portions you may find lizard tail (*Eriophyllum staechadifolium*), and yellow bush lupine (*Lupinus arboreus*).

Dune at Marina Dunes destroyed by off-road vehicles.
Photographs by the author.

Exotic Species

Whenever a dune is disturbed by man and the native plant cover destroyed, the dune soon begins to migrate. If buildings and other man-made structures are in the vicinity, the sand must be stabilized to prevent disaster. It is not easy to restore the native plants to their former habitat; it is far simpler to install large amounts of European beach grass or Hottentot-fig ice plant. Either of these exotics stabilizes the sand very effectively. They are tough, withstand a certain amount of abuse, and spread rapidly—often into undisturbed habitats where they

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PLANTS OF THE COASTAL STRAND AND THE EL SEGUNDO DUNES

As the population of California has grown over the last century, many of our native plants have suffered from the effects of human intrusion. One of the most severely impacted communities is that known as the Coastal Strand community. This assemblage of unusual and attractive plants, as the name indicates, is only found in a narrow band on the beaches and sand dunes of the Pacific Coast. Because of this distribution, the total area it occupies has always been small, but in recent years the extent of this community has been sharply reduced. Perhaps as much as any California ecosystem, this specialized and geographically restricted community has suffered from the effects of development, invasion by exotic weeds and the recreational use of our shoreline.

In the southern portion of the state, the Coastal Strand has suffered greater losses than elsewhere due to a higher concentration of people, ease of access, urbanization and heavy recreational uses of the beaches. The shoreline on the western edge of Los Angeles County at one time probably supported a continuous strip of Coastal Strand vegetation from the Palos Verdes Peninsula to the Ventura County Line. On the shores of Santa Monica Bay, it has been estimated that there were approximately 36 square miles of Coastal Strand habitat at the turn of the century.

In contrast, at the present time there only exists a small fraction of the original extent of this community, about 300 acres. The majority of this acreage occurs on the property of the Los Angeles International Airport and is known as the El Segundo Dunes.

An interesting similarity between the deserts and the Coastal Strand is the fact that a number of plant genera are found in both areas. One of the most striking examples, as well as one of the most beautiful plants on the dunes, is the genus Abronia, the sand verbenas. In southern California Abronia maritima and A. umbellata occur as Coastal Strand endemics, while several other species are inhabitants of the deserts. When undisturbed, these sand verbenas can cover the dunes with their prostrate stems, sending up colorful rose to purple flowers. The genus Camissonia of the evening primrose family is widely distributed throughout our deserts, but one species, C. cheiranthifolia, commonly known as the beach primrose, is restricted to the dunes of the Pacific Coast from Baja California to Oregon. It is one of the brightest of the dune endemics, with brilliant yellow flowers which age to a pinkish-orange color.

Some of the plants in the Coastal Strand community have developed close coevolutionary ties with other organisms. A famous example involves Eriogonum parvifolium, the Dune Buckwheat, the only plant species used by the female El Segundo Blue Butterfly for laying her eggs. This insect is on the federal endangered species list and is restricted to the El Segundo Dunes. It has been the subject of recent research by entomologists. Other rare species of insects have also been found to be endemic to dune habitats. They, like the El Segundo Blue, presumably have developed close ties with the endemic plants. The specialized nature of such insect/plant relationships implies that a number of these insects can be expected to be rare or endangered.

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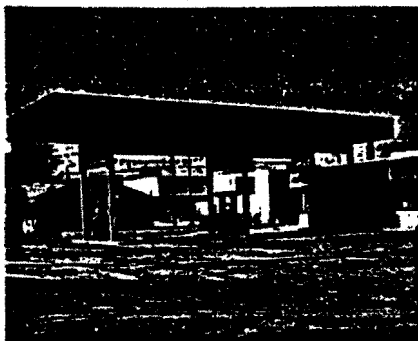
The normal physical conditions of the Coastal Strand community present a severe challenge to plant life, with constantly shifting sands, strong winds and salt spray. The members of this community have evolved to tolerate these conditions with their prostrate stems, deep roots and frequently succulent growth habit. A number of strand species, like plants of the Coastal Salt Marsh community, could probably be classified as halophytes, plants which have physiologically adapted to survive the osmotic stress of salty environmental conditions. The sea rockets, Cakile edentula and C. maritima, and the sand verbena Abronia maritima are succulent, indicating that they probably have this ability.

Perhaps ironically, sand dune natives seem unable to deal with the environments of the more inland areas of the state. They, having evolved in a relatively open habitat, are probably poorly equipped to engage in the intense competition for light, space and water which occurs in the chaparral, coastal sage and other communities. It may also be that they have not evolved the tolerance for cold temperatures required for survival away from the moderate climate of the coast.

Moreover, these plants are poorly adapted to withstand the man-caused stresses which have been recently imposed on them. Many, such as Eriogonum parvifolium, Camissonia and Abronia, have weak or brittle stems and cannot tolerate the foot traffic common at beaches. The spread of various exotic weeds, such as certain grasses and Hottentot Fig, Carpobrotus edulis, a member of the

carpetweed family, has been detrimental to many Coastal Strand areas, for the native species appear unable to compete for space with the intruders. None of the natives, of course, can handle the combination of housing, power plants, piers and other developments which has inflicted tremendous losses of acreage upon the strand habitat.

From the foregoing, it can be seen that the the coastal dune habitat, like all of our natural areas, supports a complex ecosystem composed of numerous species of animals and plants entwined in a network of complex relationships, a fact often ignored by developers and their consultants. Any disturbance to one component of the system is likely to send out a ripple of effects that could harm the other components. Thus the specialized physical environment of coastal dune areas serves as the backdrop for a stage with rare endemic plants and rare endemic insects as the actors in a potential ecological "tragedy". The entire ecosystem is precariously balanced, with some species not far from extinction.



STORMWATER RUN-OFF POLLUTION CONTROL

The Stormceptor® System is a stormwater interceptor that efficiently removes sediment and oil from stormwater run-off, and stores the pollutants for safe and easy removal. The versatile Stormceptor product line consists of In-Line, Inlet, and Submerged designs. Unit sizes range from the 450 gallon Inlet Stormceptor to the 7200 gallon In-Line (and Submerged design) Stormceptor.



Designed to capture stormwater run-off pollution at the source, Stormceptor protects our water resources from Total Petroleum Hydrocarbons (TPH) and everyday run-off pollution. Its patented internal by-pass prevents the resuspension and scouring of trapped pollutants during infrequent high-flow storm events.

APPLICATIONS

Stormceptor is most commonly used in environments where local, regional or national regulations require water quality devices. Locations that generate significant amounts of motor vehicle related contaminants and/or are prone to petroleum spills are the most common applications.



Stand alone device: Stormceptor is generally used in highly developed urbanized areas where land use is too restrictive for conventional Best Management Practices (BMP's). Such areas include commercial and industrial properties, transportation and distribution centers and highway and roadway applications. For retrofit applications, the Stormceptor's vertical orientation allows installation with minor disruption to existing utilities.



Treatment Train Approach: Stormceptor is often installed as a stand-alone device for capturing stormwater run-off pollution. However, it can also be installed as an upstream treatment train device to make ponds, wetlands, infiltration systems and other conventional BMP's more effective. This extends the maintenance interval of conventional structures and may prevent contamination of water resources in the event of TPH spills.

LOWER LIFE CYCLE COSTS

The vertically oriented Stormceptor is designed to fit easily in a small space allowance in new or existing storm drains, with minimal disturbance to existing utilities. The precast concrete Stormceptor arrives at the job site in easy to assemble concrete components. Once excavation is complete, installation generally takes less than half a day.

Stormceptor is readily inspected from the surface through the identifiable Stormceptor cover. Routine maintenance and cleaning is done from the surface by a vacuum truck, normally once a year. With Stormceptor there is never a worry about clogging or replacing expensive filters.

Stormceptor also eliminates the need for catch basin sediment traps and reduces the frequency of scheduled sewer flushing.

The Stormceptor System is designed to capture stormwater pollution in

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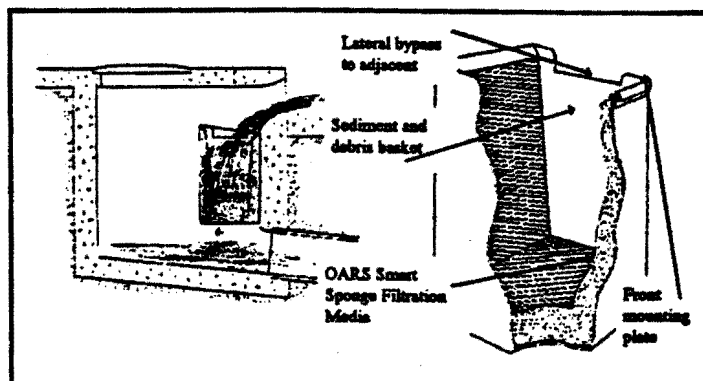
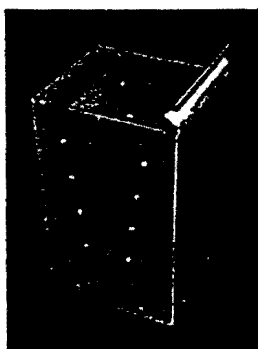
Narrative Description

The Ultra-Urban™ Filter with OARS® OnBoard, developed and manufactured by AbTech Industries, is an innovative low-cost BMP that helps meet NPDES requirements with effective filtration, efficient application, and moderate maintenance. The Ultra-Urban™ Filter captures oil and grease, trash and sediment from stormwater runoff before it enters the storm drain system. The Ultra-Urban™ Filter is ideal for municipal, industrial, and construction applications. The filter comes in 2 standard designs, one a modular unit geared toward curb openings, and the other, a single unit designed for typical drop in drains.

The Ultra-Urban™ Filter is designed for use in storm drains that experience oil and grease pollution accompanied by sediment and debris. Trash and sediment accumulate in the internal basket while oil and grease is captured in the filtration media. Field tests have proven that the proprietary OARS® Smart Sponge filtration media will remove up to 80% of the oil and grease in stormwater runoff - from low concentrations typical of residential areas to high levels associated with illegal dumping of used motor oil. The oil will permanently bond within the Smart Sponge and become permanently encapsulated eliminating the possibilities of leaching or leaking back into the environment.

Specifications

Series CO1414



The Ultra-Urban™ Filter is made of a high strength corrugated plastic available for retrofitting into curb opening (inlet) stormdrains. The Ultra-Urban™ Filter, Series CO1414 have perforated slots on each side of the module, which allow the installer the ability to modify in the field to create the lateral overflow of stormwater to additional Ultra-Urban™ Filter modules in the stormdrain. In high flow situations, modules will allow stormwater bypass to occur, eliminating any possibility of flooding. All modules in the CO1414 series have common outer dimensions of 14" x 14" x 23", as shown in the sketch above.

