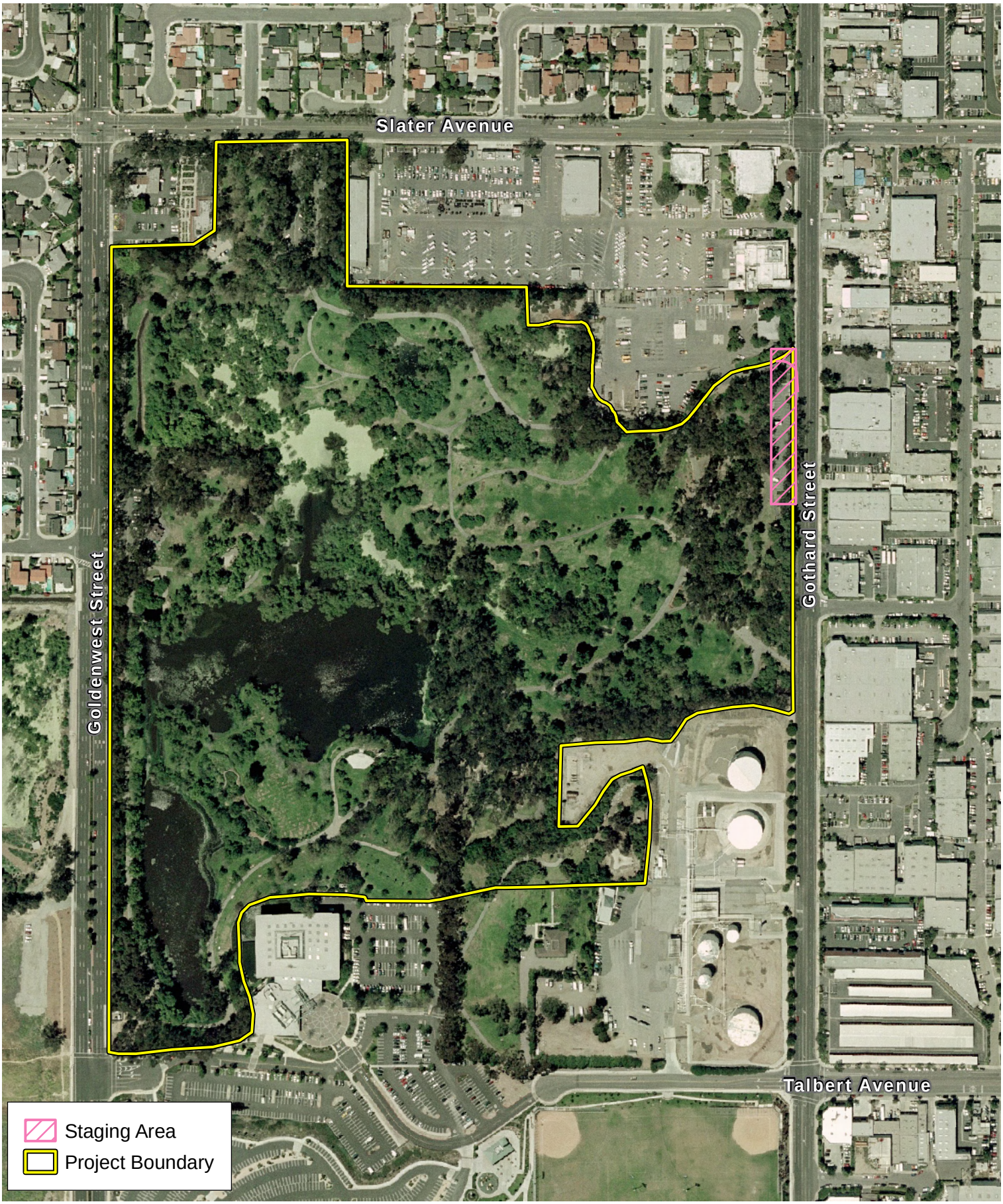

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Proposed Staging Area

Exhibit 7.5-1

Talbert Lake Diversion Project

2

400 200 0 400

Feet

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SC-3 The City of Huntington Beach will comply with the South Coast Air Quality Management District (SCAQMD) regulations, including Rule 402 (the Nuisance Rule) and Rule 403 (Fugitive Dust). To ensure that the project is in full compliance with both dust regulations and that there is no significant nuisance impact generated on the project site, the City of Huntington Beach Department of Public Works will be responsible for ensuring compliance with these regulations throughout project implementation. Mandatory measures set forth by these regulations include, but are not limited to:

- Sweeping any dirt tracked from the project site onto public streets no less than once per day;
- Using particulate filters on all diesel equipment;
- Watering exposed surfaces a minimum of two times daily. If fugitive dust appears to be impacting adjacent residential land uses during times of high wind, additional watering will be conducted and/or grading activities will be halted;
- Covering all stockpiles of soil with tarps;
- Covering all trucks used to haul soil from the site with a tarp to reduce fugitive dust.

7.5.2 CONSTRUCTION APPROACH/PHASING

The Talbert Lake Diversion Project would be constructed in two phases: Phase 1 would consist of construction of the following: the channel diversion structure and water delivery infrastructure, the Central Park water distribution system, wetland treatment system, riparian habitats, and lake overflow weir modifications. Construction of the riparian habitats will result in the need to alter existing grades along the northern portion of the existing Talbert Lake (resulting in the Talbert Lake Interim Condition). Phase 1 construction is expected to have a total duration of up to 43 weeks.

Phase 2 of project construction is expected to proceed about 1 to 3 years after implementation of Phase 1. Phase 2 will consist of restoration of Talbert Lake to the ultimate condition through lake deepening, lake edge construction, and the implementation of enhancing water quality features (such as aeration pods and biofilters). Aesthetic project features will also be implemented in Phase 2, pending funding availability. Phase 2 construction is expected to have a duration of up to 23 weeks.

7.5.3 MATERIAL EXCAVATION

The material to be excavated during construction of the lake and wetlands would consist primarily of silts and sands below a layer of organic material. The organic material comprised of dead plants and nutrient-rich sediments can be up to 3 feet deep at the bottom of the wetlands. The wetland areas to be graded also have areas filled with large woody debris above and below the water surface that would be removed during excavation. A percentage of the organic material and debris would be reused for water treatment purposes in the proposed project design. The organic material is a good source of carbon that would encourage microbial growth and denitrification in the wetlands.

To minimize the impacts associated with construction views, green fencing will be placed around the areas of active construction operations to shield park users from views of equipment operations (PDF-6).

Given the existence of abandoned and active oil pipelines crossing the site, there is the potential for contaminated sediments to be encountered during project grading and excavation activities, although the risks associated with this potential would be minimized through careful project design of wetlands, lake location, and the generally shallow depth of excavation. A project design feature has been incorporated into the project (PDF-7), which would positively locate these lines prior to finalizing the grading plan. If encountered, any contaminated materials would be removed from the site and transported to a permitted disposal and/or recycling facility. This "dig and haul" approach is the most common and efficient method of remediating sediments contaminated by petroleum hydrocarbons; final disposal method will, however, be based upon site conditions and regulatory requirements.

Both phases of construction would cumulatively move approximately 173,000 cubic yards (cy) of material during construction (quantities would vary slightly between the diversion concepts), with approximately 89,000 cy of excess material disposed off site at the Frank R. Bowerman (FRB) Landfill at 11002 Bee Canyon Access Road, Irvine, California (a haul distance of approximately 24 miles). The remaining volume of material would be utilized on site as construction fill, or within the new topographic knoll feature of the proposed project adjacent to Talbert Lake. These quantities include both sediment removed by project grading and organic material removed during clearing and grubbing operations. For analytical purposes, it is assumed that all sediment excavated would: (1) be clean, (2) not pose a hazard to workers, or (3) require special handling. However, site investigations would be conducted in order to confirm the geolocation of existing oil lines crossing the site and to test site materials. If results of potholding and site-specific geotechnical investigations indicate the presence of contaminants, additional requirements and environmental processing may be required.

PDF-6 Green construction fencing shall be placed around the areas of active construction operations to shield views of construction activities from park users.

PDF-7 Detailed on-site geotechnical investigations will be conducted prior to finalization of project plans and specifications to confirm the location of existing oil lines crossing the site and to test all sediments for contamination, consistent with City specifications and requirements.

7.5.4 PUBLIC ACCESS DURING CONSTRUCTION

Public access to the Talbert Lake section of Central Park would be restricted at some access points during the 66 weeks (includes both Phase 1 and Phase 2) of project construction. Access to the facilities along the perimeter of the project area (including the library, Park Bench Café restaurant, tot lot playground, and exercise trail) would be maintained during construction. Public access would be maintained around the entire park perimeter during construction by phasing the grading operations in the northeastern corner of the project site. A Public Access Plan will be developed during final design (PDF-8).

PDF-8 The City of Huntington Beach will develop a Public Access Plan prior to construction in order to maximize construction access.

7.5.5 PROJECT CONSTRUCTION

The project's overall construction duration (Phases 1 and 2) is estimated to be approximately 66 weeks (32 weeks for construction of the channel diversion, wetland treatment system, and water distribution system; 8–11 weeks for construction of riparian area and water modification; and 23 weeks for Ultimate Talbert Lake construction). The disturbance area used to estimate on-the-ground project impacts incorporates the margins of all project grading with the addition of

a 20-foot margin for slope laybacks and equipment mobility; this totals 33.28 acres within Central Park (disturbance limits shown on Exhibit 12.7-1).

Channel Diversion Construction (Phase 1 Construction)

Exhibits 7.5-2 through 7.5-7 illustrate the construction disturbance footprints for Diversion Concepts 1 through 6. Concepts 1 through 3 are based upon utilization of either the full rubber dam, partial rubber dam, or low-flow channel modifications (respectively) within the EGGWC, with diverted water delivery to Central Park occurring via the existing water line in Goldenwest Street, as described in Section 7.4.1. Diversion Concepts 4 through 6 utilize the same diversion methods to take flows out of the channel, at the same locations, but the diversion pump station for these concepts connects via a new pipeline to the existing storm drain system just south of the intersection of Gothard Street and Warner Avenue. Table 7.5-1 illustrates the construction footprint required for diversion construction, and the linear-foot length of the connector pipelines needed for water delivery purposes for each Diversion Concept.

TABLE 7.5-1
CONSTRUCTION FOOTPRINT REQUIRED/LINEAR-FOOT LENGTH OF CONNECTOR PIPELINES NEEDED

Diversion Concept	Construction Footprint, Diversion (sf)	Connector Length (lf)
1	3,000	110
2	6,750	1,115
3	4,800	1,115
4	3,000	2,800
5	6,750	1,500
6	4,800	1,500

sf = square feet
lf = linear feet

Source: Holloway 2008c.

Excavated materials requiring off-site disposal range from approximately 300 to 1,100 cy, depending upon the diversion concept.

Construction staging would occur at the existing parking lot just south of the intersection of Gothard Street and Slater Avenue, and site access would be provided by means of the paved pathway adjacent to this parking lot. A flagperson would be provided if necessary whenever construction activities require the hauling of materials off-site from the staging area (PDF-9) to ensure public safety.

PDF-9 A flagperson will be provided, if necessary, at the truck ingress and egress point from the Gothard Street staging area to ensure public safety during off-site materials disposal activities.

Central Park Water Distribution System (Phase 1 Construction)

If the existing water line in Goldenwest Street is used to deliver diverted water to the Central Park components of the project, construction of the water distribution infrastructure at Central Park would consist of a installing: a connection between the water line and the park; 2,600 linear feet of water line to the discharge points at the upstream end of each of the three wetland trains; and two valve boxes for flow control. If the existing storm drain off Slater Avenue is used

to deliver diverted flow to Central Park, construction of the water distribution system would consist of these same project features, with the addition of a pump station located adjacent to the existing swale at the northwestern corner of the park to send flows to each wetland train. The total amount of material excavated for system construction is 1,945 cy, with 462 cy disposed off site at the FRB Landfill.

Wetland Treatment System (Phase 1 Construction)

Construction of the wetlands portion of the natural treatment system would involve the creation of wetland cells as well as shallow water ponds. Activities required to construct all three wetland trains would include clearing and grubbing activities; initial pond excavation; installation of aeration and mixing systems; and landscaping and planting. Installation of 280 linear feet of pipeline that connects the downstream segment of the final wetland train to Talbert Lake would complete the flow path through the project.

The planting of the wetland treatment system would be one of the most important phases of wetland construction. The establishment of vegetation in each wetland cell would be a critical part of meeting the project water quality objectives. The planting for each wetland cell would be accomplished through the use of light equipment and hand tools. However, the inspection and monitoring of the vegetation would last up to five years after construction is complete.

Talbert Lake

Interim Condition (Phase 1 Construction).

Construction of the Interim Condition for Talbert Lake, included in Phase 1 of project implementation, includes clearing and grubbing; modifying the overflow weir; grading and earthfilling for establishment of the new riparian habitat areas; dewatering, landscaping and planting; and lake edge construction at the northern portion of the Talbert Lake site. About 4,800 cy of material would be excavated as part of this phase, with about 10,000 cy of material used on site to construct the riparian areas, and the balance of the material disposed off site.

Ultimate Condition (Phase 2 Construction)

Construction of the Talbert Lake ultimate condition, planned for implementation in Phase 2 of construction, would include the following construction activities: clearing and grubbing; dewatering; excavating and stockpiling; exporting and hauling excess material; constructing the subsurface wetland berm between the wetlands and the lake, the lake overflow weir, the pump station for circulation, and the pipeline to biofilters; installing biofilters; installing a blower for aeration, the aeration lines, and pods; planting the wetlands; constructing the lake edge; and landscaping and planting. About 62,000 cy of material would be excavated for the Talbert Lake Ultimate Condition; about half of this volume would be used on site to create the new topographic hill feature near the library, with the remaining volume to be disposed off site.

Channel Diversion Concept 1, Impact Footprint

Exhibit 7.5-2

Talbert Lake Diversion Project

2

150 75 0 150

Feet

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Channel Diversion Concept 2, Impact Footprint

Exhibit 7.5-3

Talbert Lake Diversion Project

2

150 75 0 150

Feet

BonTerra CONSULTING

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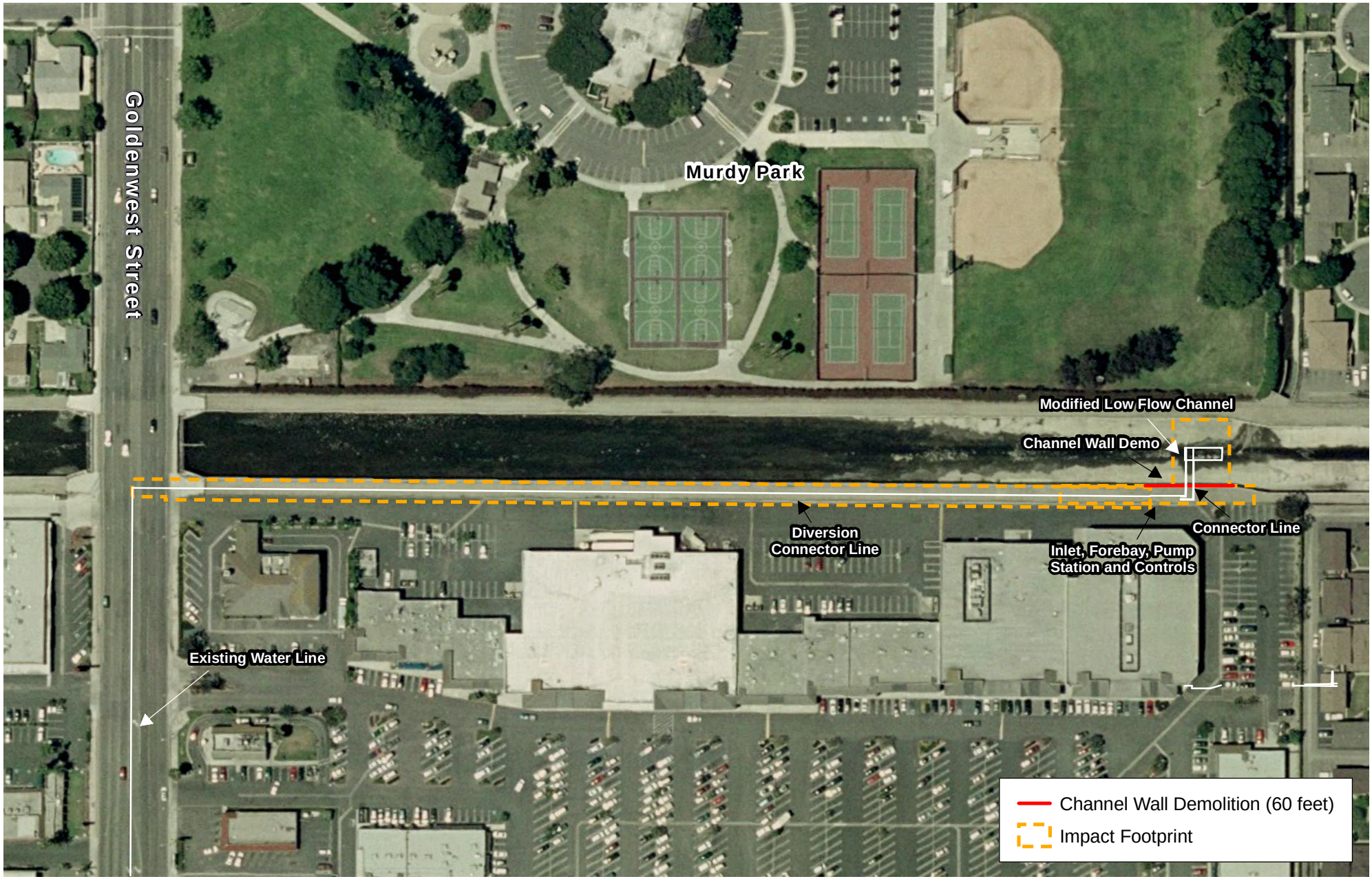

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Channel Diversion Concept 3, Impact Footprint

Exhibit 7.5-4

Talbert Lake Diversion Project

2

150 75 0 150

Feet

BonTerra CONSULTING

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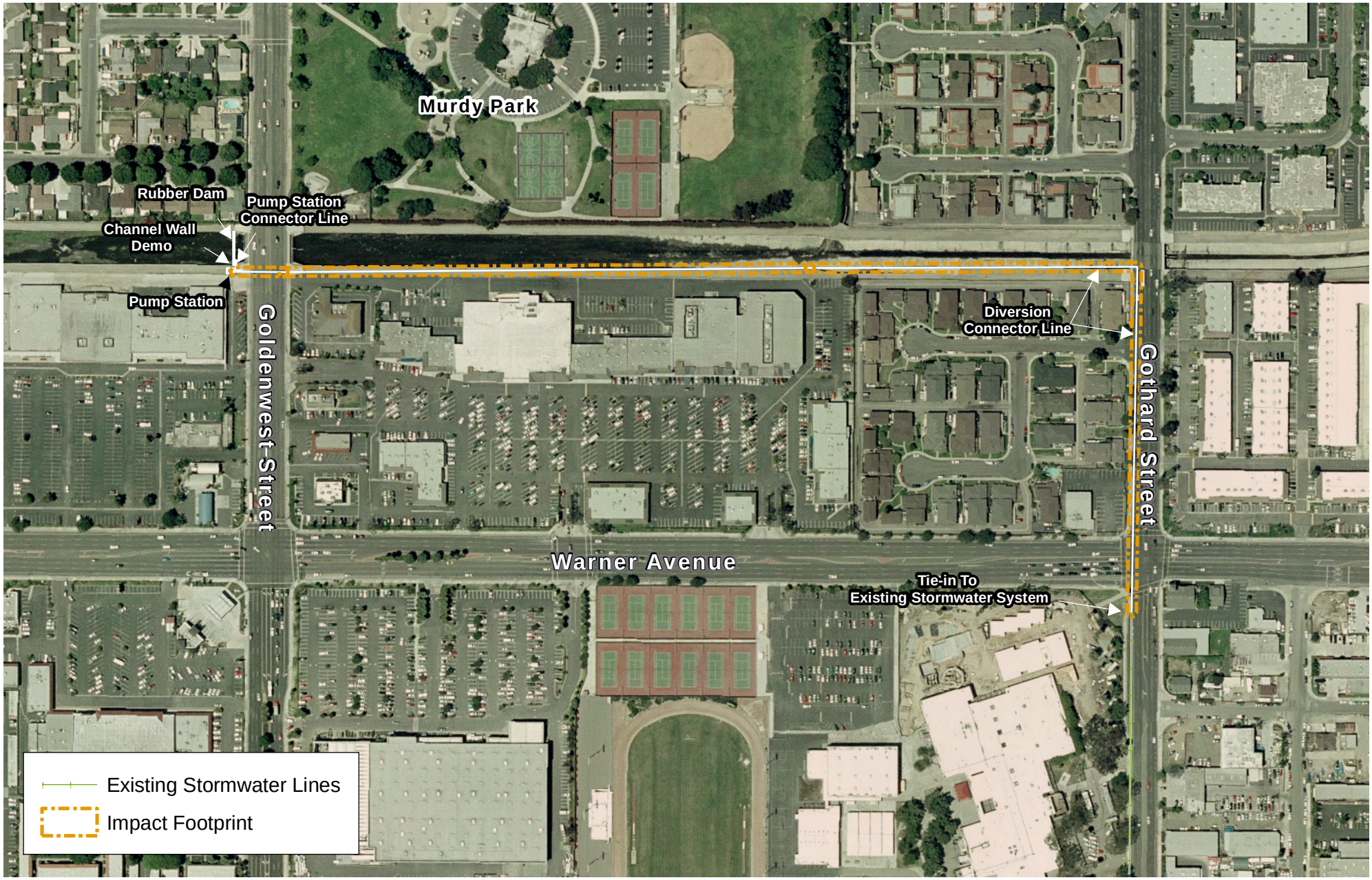

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Channel Diversion Concept 4, Impact Footprint

Exhibit 7.5-5

Talbert Lake Diversion Project

2

150 75 0 150

Feet

BonTerra CONSULTING

R:/Projects/Pace/J002/Graphics/MND/Ex7.5-5_Diversion_Alt4_Impacts_031408.pdf

Exhibit 7.5-6 Channel Diversion Concept 5, Impact Footprint

D:/Projects/Pace/J002/Diversion_Alt6_Impacts_031408.mxd

Channel Diversion Concept 6, Impact Footprint

Exhibit 7.5-7

Talbert Lake Diversion Project

2

150 75 0 150

Feet

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R:/Projects/Pace/J002/Graphics/MND/Ex7.5-7_Diversion_alt6_Impacts_031408.pdf

7.6 PROJECT OPERATION AND MAINTENANCE REQUIREMENTS

A detailed Operations and Maintenance (O&M) Plan would be developed by the City of Huntington Beach as the proposed project completes final design (SC-1).

7.6.1 WETLAND TREATMENT SYSTEM

Operations and maintenance of the wetland treatment trains would involve passive wetland management through adjusting the overall ecosystem on a long-term basis within the wetland treatment cells. The wetland cells would be monitored monthly to evaluate plant cover. Plant cover evaluation would track the surface area covered and the average plant height. Flow paths through each wetland cell would also be monitored to ensure there is no short circuiting and that the water appears to be moving through the wetland at a uniform depth and velocity. Removal of exotic species would occur in the wetland cells to encourage dominance by the desired plant species.

Maintenance of the wetland and pond system would include periodic sediment removal in the initial wetland forebays at the beginning of each wetland treatment system and the final pond located adjacent to Talbert Lake (PDF-10). Settling of suspended solids in the first ponds of each wetland treatment system would eventually require removal to maintain the desired operating depth. After significant storm events, maintenance activities would involve trash and debris removal from the initial wetland ponds in the upper reaches where storm water discharges directly into the wetlands. The engineered ponds within the wetland treatment system may require occasional maintenance to repair or replace coarse bubble diffuser lines, rock gabion walls, and cross-flow dispersion nets.

Frequent maintenance activities required for sustaining an effective wetland treatment system would include monitoring inflow and outflow water quality, maintaining water levels, and monitoring inflow and outflow discharge. Engineered access would be provided to the monitoring stations throughout the wetlands in order to avoid disrupting or harming wetland vegetation during monitoring activities.

PDF-10 Forebays have been designed into the upstream end of each wetland train to concentrate sediment-removal maintenance operations in a designated area, avoiding impact to riparian habitat.

7.6.2 TALBERT LAKE

Maintenance personnel from the City of Huntington Beach Public Works Department would patrol all shoreline areas weekly and note any changes in the water quality and clarity.

Talbert Lake would require maintenance, including debris removal, shoreline cleaning, and aquatic plant maintenance on an as needed basis. Floating debris, shoreline debris, and any larger branches from trees in the water or other debris too far from the shore shall be removed individually, by hand, in a manner that affords minimal disruption to on-site habitats (PDF-11). Shoreline landscape erosion must be identified and remediated before it has a chance to become problematic. Aquatic plant maintenance would involve management of algae and aquatic weeds, and maintenance of height and density of desired plant species.

Lake water quality features (such as aeration pods, biofilters, and wetland planters) would also require periodic maintenance to function properly. Aeration equipment maintenance would involve monthly inspection of air compressors, aeration valves, and diffusers. Maintenance of the biofilters would involve periodic backwashing every six months or sooner (if needed).

Backwash effluent would be discharged into the sanitary sewer system by means of a tie-in to the nearest line that services park restrooms. The biofilter discharge pipe should be cleaned out once a year to remove particles that accumulate in the pipe system of the biofilter (PDF-12). The wetland planters would require periodic removal of trash and debris.

PDF-11 Debris and vegetation will be removed from open water areas manually or in a manner that avoids disruption to on-site habitats.

PDF-12 Biofilter backwash discharges will be sent to the sanitary sewer system for disposal during maintenance operations.

7.6.3 EAST GARDEN GROVE – WINTERSBURG CHANNEL DIVERSION

Maintenance of the EGGWC in-channel diversion structure would include weekly inspections and checks after any storm event, with maintenance as required to maintain system performance. Access to the diversion structure would be via the Orange County Flood Control District's (OCFCD's) access road alongside the EGGWC. Typical maintenance procedures would involve removal of sediment, trash, and debris that accumulate on the upstream side of the structure. These materials would be disposed at the FRB Landfill or other appropriate County landfill. The inlets that convey water from the channel to the forebay shall be inspected, and any material that is clogging or has the potential to clog the inlets shall be removed.

The forebay located beneath the access road would require periodic maintenance to remove sediment, trash, and debris that has accumulated. The pipeline from the forebay to the pump station shall be checked regularly to be kept clear of any obstructions.

The pump station would be kept in a reliable condition by regularly scheduled inspections and preventative maintenance measures. Regular inspections would examine the pump motor, the generator, the valves, and the electrical system for any visual damage. Preventative maintenance would be conducted on a regular basis to install replacement parts and to conduct a detailed inspection of the pump station equipment. A record of all pump station inspections and maintenance would be kept by maintenance personnel.

8. SURROUNDING LAND USES AND SETTING

Central Park consists of 356.8 acres of open space surrounded by residential development to the north, industrial development to the east, and residential development to the south and west. A detailed description of the surrounding area can be found in Section 7.2-1.

9. OTHER PREVIOUS RELATED ENVIRONMENTAL DOCUMENTATION

None.

10. OTHER AGENCIES WHOSE APPROVAL IS REQUIRED (AND PERMITS NEEDED)

Proposed project implementation will require the following permits:

- State of California Department of Fish and Game (CDFG), Section 1602 Agreement application for Streambed Alteration (also known as a Streambed Alteration Agreement)
- California Regional Water Quality Control Board (RWQCB), Santa Ana Region, Section 401 certification

- U.S. Army Corps of Engineers, Section 404 permit
- County of Orange, Flood Control District, Channel Diversion
- Orange County Water District