

4494

OZONE SPARGE SYSTEM



ConocoPhillips (76) Station No. 6419
6401 Dublin Boulevard
Dublin, CA 94568

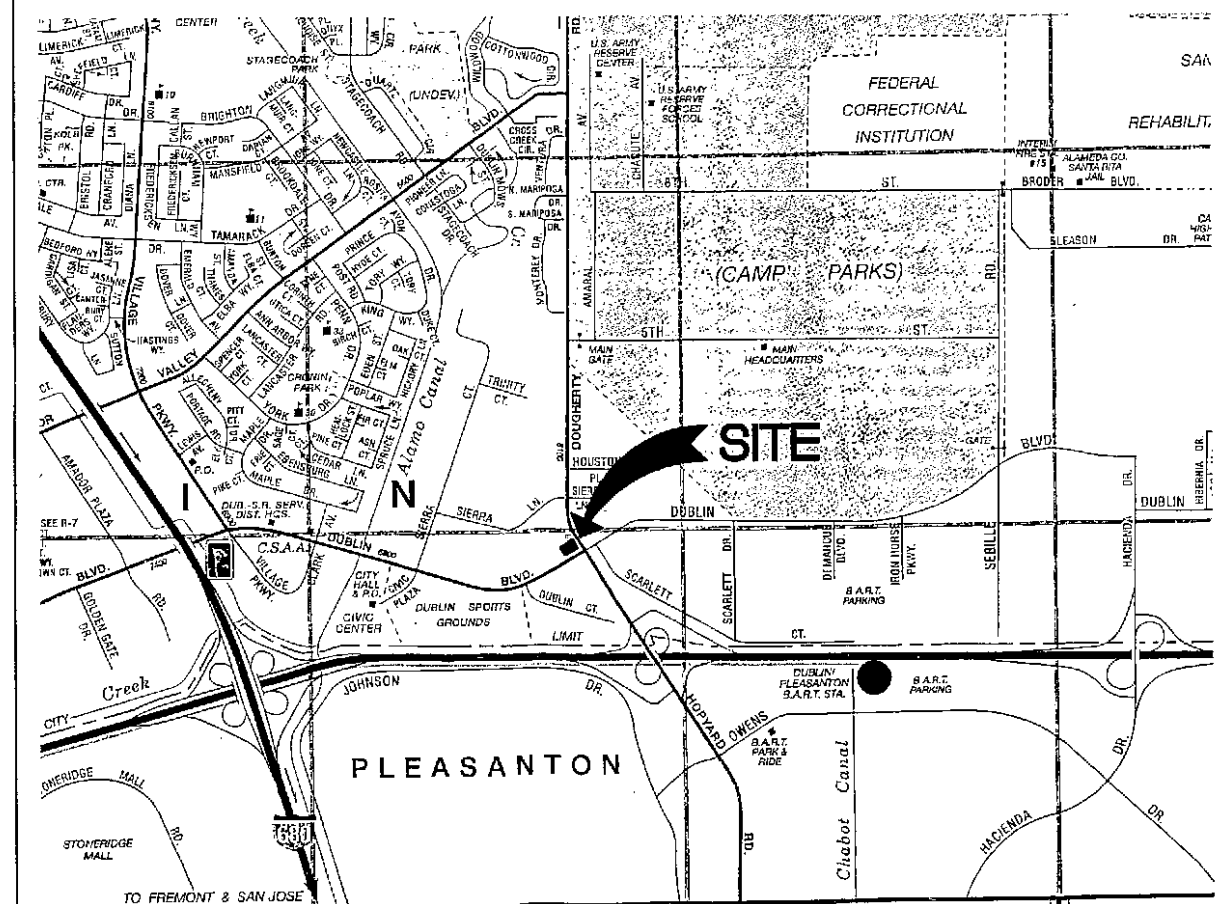
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9:31 am, Mar 23, 2009

Alameda County
Environmental Health

DRAWING INDEX

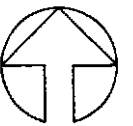
G0	DRAWING INDEX AND VICINITY MAP
G1	EXISTING SITE PLAN
G2	NEW CONSTRUCTION SITE PLAN
G3	CONSTRUCTION NOTES
G4	SYMBOLS AND LEGEND
G5	PROCESS FLOW DIAGRAM
G6	CONSTRUCTION DETAILS



VICINITY MAP

NOT TO SCALE

NORTH



PRELIMINARY
NOT FOR CONSTRUCTION
8-6-03

ConocoPhillips REPRESENTATIVE: DAVID DeWITT, ConocoPhillips
76 Broadway
Sacramento, CA 95818
(916) 558-7666

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REV #	REVISION	BY	DATE



Gettler - Ryan Inc.

1364 North McDowell Boulevard Suite B2
Petaluma, CA 94954 (707) 789-3255



76 Broadway
Sacramento, CA 95818

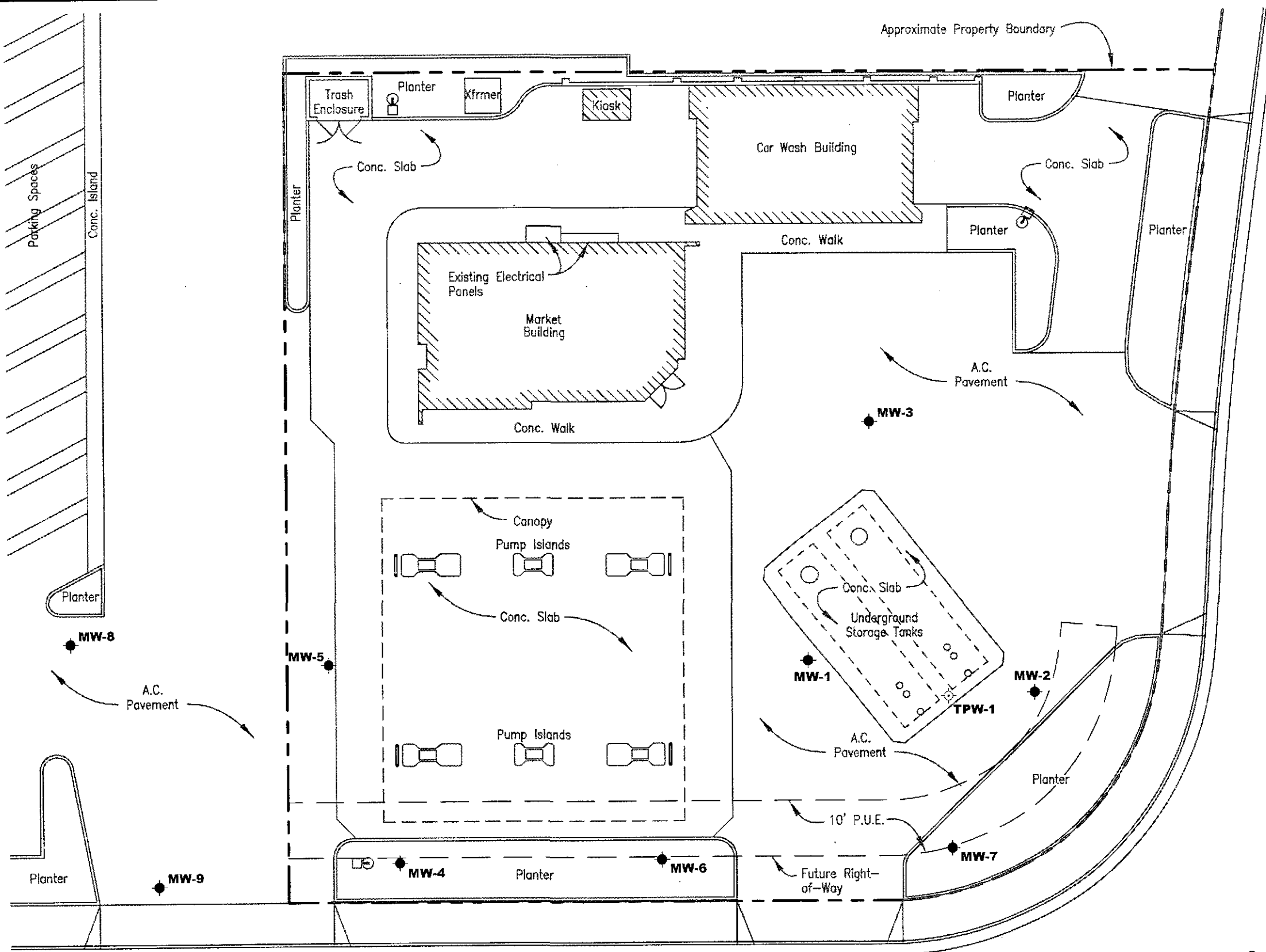
PROJECT: 140101.6
 FACILITY: ConocoPhillips (76) Station No. 6419
 6401 Dublin Boulevard
 Dublin, California 94568

DATE: PRELIM SHEET 1 of 7

TITLE:
**DRAWING INDEX
AND VICINITY MAP**

DRAWING No. **G0** A

FILE NAME: \\C:\pet-r\2\server\Remediation\Tosco\6419 Dublin\Drawings\6419 SPARSE.dwg | Layout Tab: G1

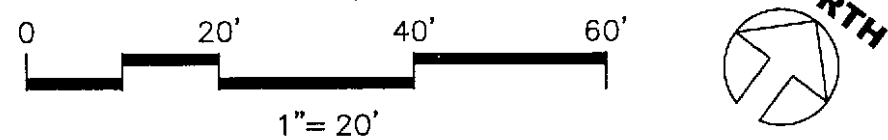


LEGEND
 ⬤ EXISTING GROUNDWATER MONITORING WELL

SITE SPECIFIC NOTES

- EXISTING BURIED PIPE AND UTILITY LOCATIONS SHOWN ARE APPROXIMATE AS DETERMINED FROM EXISTING RECORDS. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL BURIED PIPES AND UTILITIES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF CONSTRUCTION. NOTIFY UNDERGROUND SERVICE ALERT, PHONE 1-800-642-2444, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF WORK

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DUBLIN BOULEVARD **SITE PLAN**

REV #	REVISION	BY	DATE

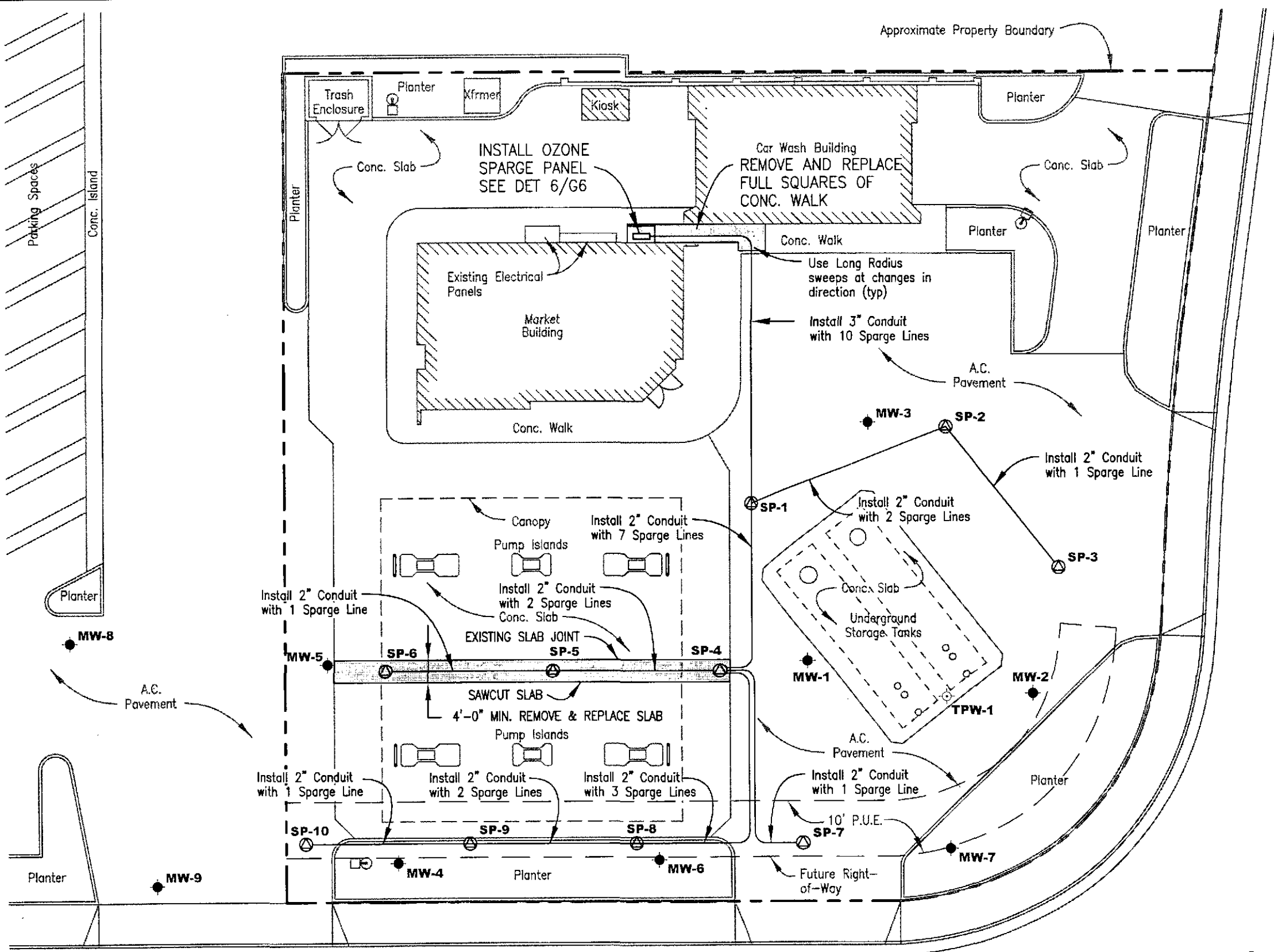
Gettler - Ryan Inc.
 1364 North McDowell Boulevard Suite B2
 Petaluma, CA 94954 (707) 789-3255

ConocoPhillips
 76 Broadway
 Sacramento, CA 95818

PROJECT: 140101.6
FACILITY: ConocoPhillips (76) Station No. 6419 6401 Dublin Boulevard Dublin, California 94568
DATE: PRELIM SHEET 2 of 7

TITLE: EXISTING SITE PLAN
DRAWING No. G1
A

FILE NAME: \\gnet-w2server\Remediation\Toaco\6419 Dublin\Drawings\6419 SPARGE.dwg | Layout Tab: G2



- LEGEND**
- ⊕ EXISTING GROUNDWATER MONITORING WELL
 - ⊙ NEW OZONE SPARGE POINT

SITE SPECIFIC NOTES

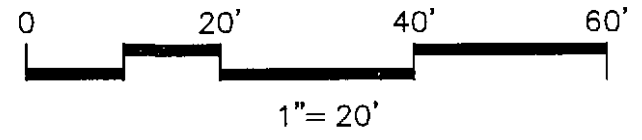
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DOUGHERTY ROAD

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DUBLIN BOULEVARD

SITE PLAN



REV #	REVISION	BY	DATE

Gettler - Ryan Inc.
 1364 North McDowell Boulevard Suite B2
 Petaluma, CA 94954 (707) 789-3255

ConocoPhillips
 76 Broadway
 Sacramento, CA 95818

PROJECT: 140101.6
FACILITY: ConocoPhillips (76) Station No. 6419 6401 Dublin Boulevard Dublin, California 94568
DATE: PRELIM SHEET 3 of 7

TITLE: NEW CONSTRUCTION SITE PLAN
DRAWING No. G2
A

Project Contacts

ConocoPhillips Representative: David DeWitt, (916) 558-7666
 ConocoPhillips District Manager: -
 ConocoPhillips Station Dealer: -
 Engineer: Gettler-Ryan Inc., Donald Foster (707) 789-3255
 Environmental Consultant: Gettler-Ryan Inc., David Vossler, (707) 789-3255

10 General Requirements

- Contractor shall read and abide by the "Contractor Safety Handbook" provided by ConocoPhillips. Contractor shall provide a Site Specific Health and Safety Plan.
- Contractor is to comply with all Federal, State and local environmental laws and ordinances.
- Contractor is responsible for protecting the environment during construction by protecting trees and shrubs, containing any run-on or run-off, controlling dust, and containing any contamination caused by the contractor. ConocoPhillips will be responsible for the disposal of soils and produced waters at an approved facility. The contractor shall dispose of all construction debris, including pavement removed during construction.
- Drawings and notes supercede specifications—any conflict is to be brought to the attention of the ConocoPhillips Representative for resolution.
- The consultant is responsible for preliminary building permit fees (Plan Check and review fees) and for discharge permits (AQMD, NPDES, etc.). All other required construction permits and inspections (including all fees and bonds) for electrical, mechanical, and civil work shall be the responsibility of the contractor.
- It is the contractor's responsibility to verify all dimensions and conditions before starting work. The consultant's Project Manager shall be notified of any discrepancy.
- Construction areas are to be clearly marked with cones, barricades, or other approved safety markers as required by local codes to restrict access and provide a safe work area for the contractor, facility workers and customers.
- The contractor shall warrantee all materials and workmanship for a period of one year. Defects shall be corrected at no cost to ConocoPhillips.
- Contractor shall provide Consultant and ConocoPhillips with a copy of signed-off building permits and "AS-BUILT" drawings (accurately marked-up copies of original drawings) within 30 days of completion of construction.
- Contractor shall notify the ConocoPhillips Representative, the Consultant and the Station dealer/facility manager 48 hours prior to the start of work.

20 Site Work

21 Earthwork for trenching

- Existing pavement is to be saw cut when removed to provide a square vertical joint for repaving.
- Remove and store material encountered to obtain required sub-grade elevations, including pavement, obstructions visible on the ground surface, underground structures, and utilities indicated to be removed.
- Backfill trenches with bedding material after pipes have been tested. Hand tamp around pipes. Compact adequately to support surface material. (asphalt or concrete).
- Contractor shall make time and access allowances for ConocoPhillips to conduct adequate soil sampling. ConocoPhillips will provide, pay for, and direct all sampling and disposal of contaminated soil.

22 Well Installation

- Ozone Sparge Point Wells will be constructed by others prior to contractor starting project. Well boxes will be furnished and soft set by Sparge Point Installer. Contractor shall reset well boxes in concrete per details.
- Well construction will meet any and all municipal codes affecting well construction.
- Contractor is to permanently label all wells on both the well-head piping (permanent ink) and on the top of the well cover (letter punch) with letters and numbers as shown in drawing G2.

23 Paving

- Pavement shall be replaced with asphalt or concrete to match the existing pavement type.
- Thickness and strength is to meet trenching requirements and to avoid sagging or cracking of pavement.

30 Concrete

- Provide cast-in-place concrete, poured over a prepared subgrade, where shown on the drawings as needed for a complete and proper installation.
- Concrete shall be a minimum of 2500 psi and shall have a broom finish to match existing finish.

40 Process Equipment Installation

- Equipment shall be placed in accordance with the New Construction Site Plan (G2) and the Process Flow Diagram (G5).
- Tubing from the Ozone Sparge panel to each Sparge Point well head shall be a continuous run, without splices or connectors. Extreme care shall be taken to ensure that tubing is not cut, crimped, kinked or damaged in any way.
- Contractor shall exercise due care to protect equipment from theft or damage.

50 Equipment Enclosure

- Contractor shall furnish and install a steel enclosure around the new Ozone Sparge Panel. See Details on Drawing G6. Contractor shall provide shop drawings of proposed enclosure to ConocoPhillips Representative for approval prior to fabrication.
- Contractor shall furnish and install a Sesamee Bottom Digit resettable-combination lock for enclosure. Set Combination to 6-4-1-9.
- Consultant shall post the following signs: a.) Proposition 65 warning (in California), b.) No Smoking, and c.) Emergency contact telephone number for the consultant.
- Contractor shall furnish and post the following signs: a.) Emergency Shut Off switch sign

60 Piping and Valves

- Installation details are provided on Drawing G6, Construction Details.
- Ozone Sparge Tubing shall be installed in Conveyance Conduits sized as noted on plan. Underground Conveyance conduit shall be Schedule 40 PVC. Provide long radius sweeps at all changes in direction of Conveyance Conduit.
- Ozone Sparge Tubing shall be installed in continuous runs, without splices, from the Ozone Sparge Panel to each Ozone Sparge Point.
- Contractor shall provide permanent identification labels on each sparge line at the sparge panel.

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8-6-03**

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REV #	REVISION	BY	DATE	 Gettler - Ryan Inc. 1364 North McDowell Boulevard Suite B2 Petaluma, CA 94954 (707) 789-3255	 ConocoPhillips 76 Broadway Sacramento, CA 95818	PROJECT: 140101.6	TITLE: CONSTRUCTION NOTES DRAWING No. G3
						FACILITY: ConocoPhillips (76) Station No. 6419	
						6401 Dublin Boulevard	
						Dublin, California 94568	
				DATE: PRELIM SHEET 1 of 7			

SITE SYMBOLS

- EXISTING GROUNDWATER WELL
- EXISTING DUAL GW/SVE WELL
- EXISTING SOIL BORING
- EXISTING RECOVERY WELL
- PROPOSED SVE WELL
- EXISTING SVE WELL
- EXISTING ASSVE WELL
- PROPOSED OZONE SPARGE POINT
- UTILITY POLE
- YARD OR AREA LIGHT
- MANHOLE
- CATCH BASIN
- S.C.O. SEWER CLEAN OUT
- WM WATER METER
- WV WATER VALVE
- TREE/SHRUB
- FIXED PROTECTION POST
- REMOVABLE PROTECTION POST
- SURVEY MONUMENT
- FENCE LINE
- RAILROAD TRACKS
- PROPERTY LINE
- E ELECTRIC LINE
- GAS LINE
- S SANITARY SEWER LINE
- SD STORM DRAIN LINE
- T TELEPHONE LINE
- W WATER LINE

INSTRUMENTATION, CONTROLS & EQUIPMENT

- LPS LOW PRESSURE SWITCH
- TI TEMPERATURE INDICATOR
- FLOW INDICATOR
- LAH LEVEL ALARM HIGH
- LSH LEVEL SWITCH HIGH
- LSL LEVEL SWITCH LOW
- VACUUM GAUGE
- P PRESSURE GAUGE
- CC CYCLE COUNTER
- TRANSFER PUMP
- SUMP PUMP
- FLOW TOTALIZER

ELECTRICAL SYMBOLS

- GROUND ROD
- LAMP

VALVES, FITTINGS & PIPING

- GATE
- GLOBE
- CHECK
- PLUG
- BALL VALVE - LINE DRAWING
- SAMPLE PORT
- BUTTERFLY OR DAMPER
- NEEDLE
- THREE WAY
- BLEED OR PURGE CONNECTION
- SOLENOID
- VACUUM RELIEF VALVE
- FOOT VALVE
- FLEXIBLE PIPE
- REGULATOR
- FLOAT VALVE SHUT OFF
- PRESSURE RELIEF VALVE
- EXPANSION JOINT/SLEEVE
- HOSE CONNECTION
- INLINE TRAP
- INLINE FILTER
- STRAINER (BASKET TYPE)
- PLUG
- PIPE CAP
- HOSE BIB

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8-6-03

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REV #	REVISION	BY	DATE

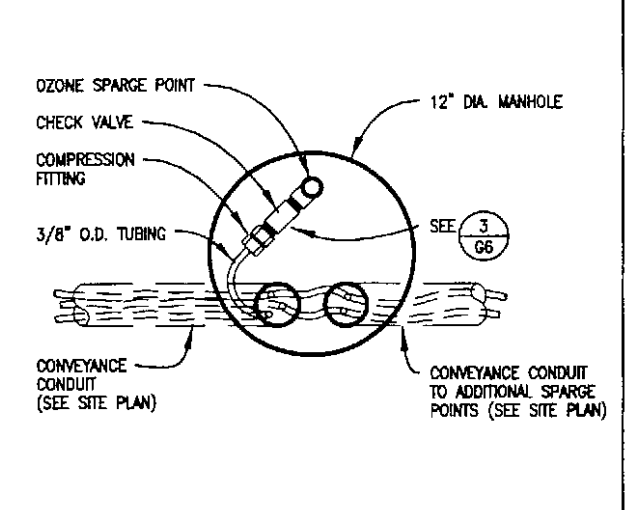
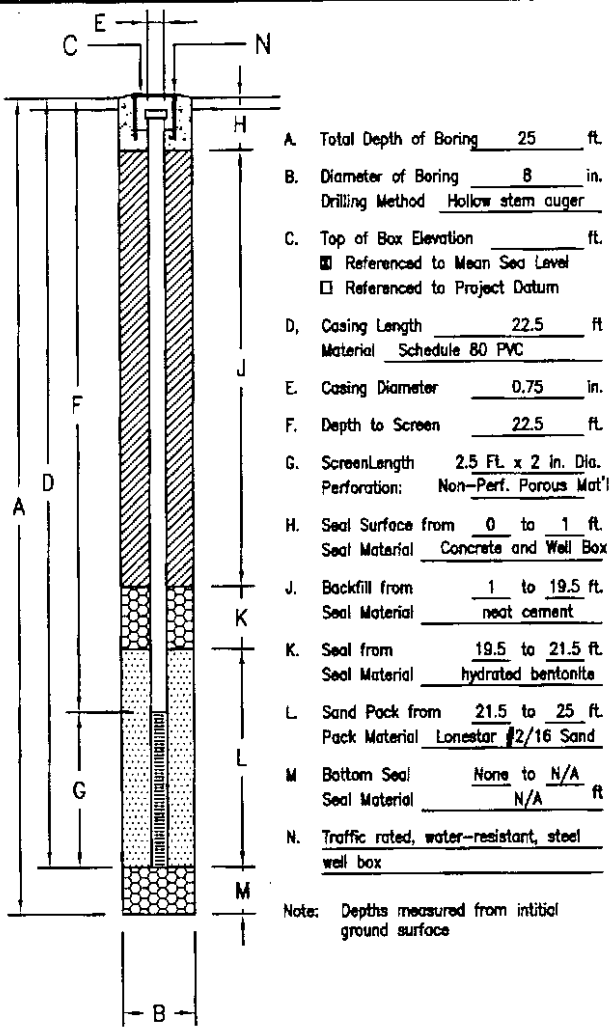
Gettler - Ryan Inc.

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Petaluma, CA 94954 (707) 789-3255

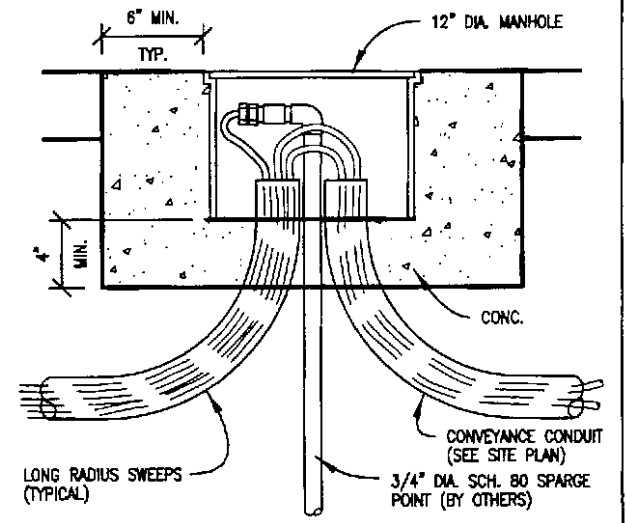
76 Broadway
Sacramento, CA 95818

PROJECT: 140101.6	
FACILITY: ConocoPhillips (76) Station No. 6419	
6401 Dublin Boulevard Dublin, California 94568	
DATE: PRELIM	SHEET 1 of 7

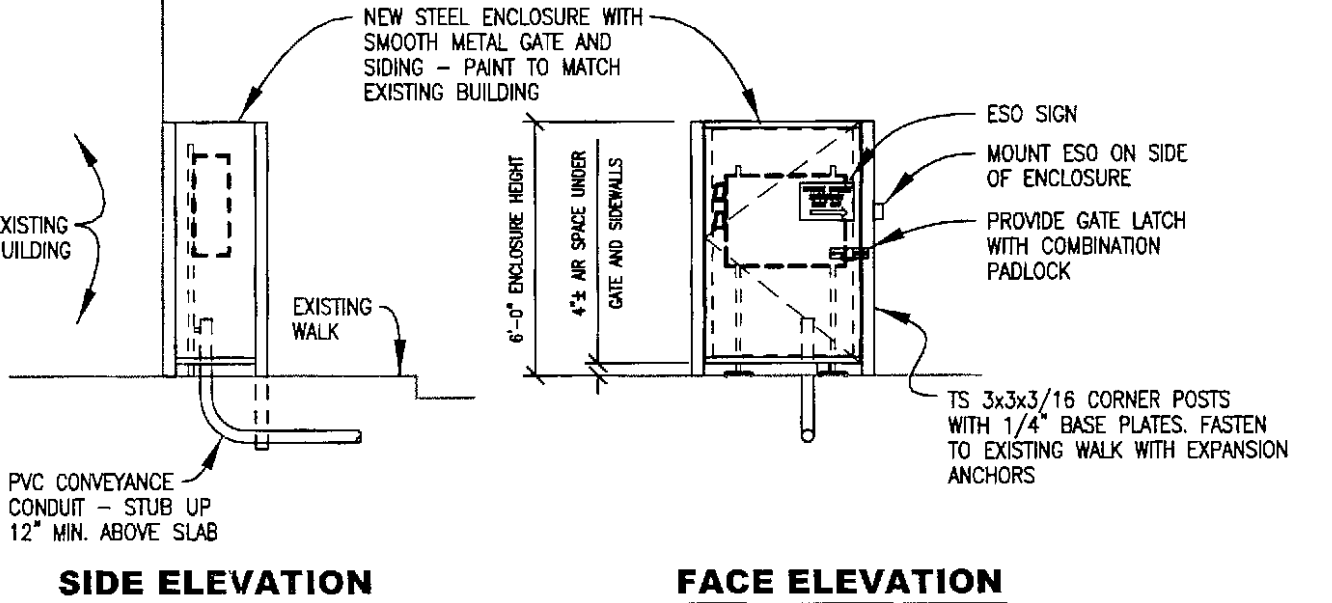
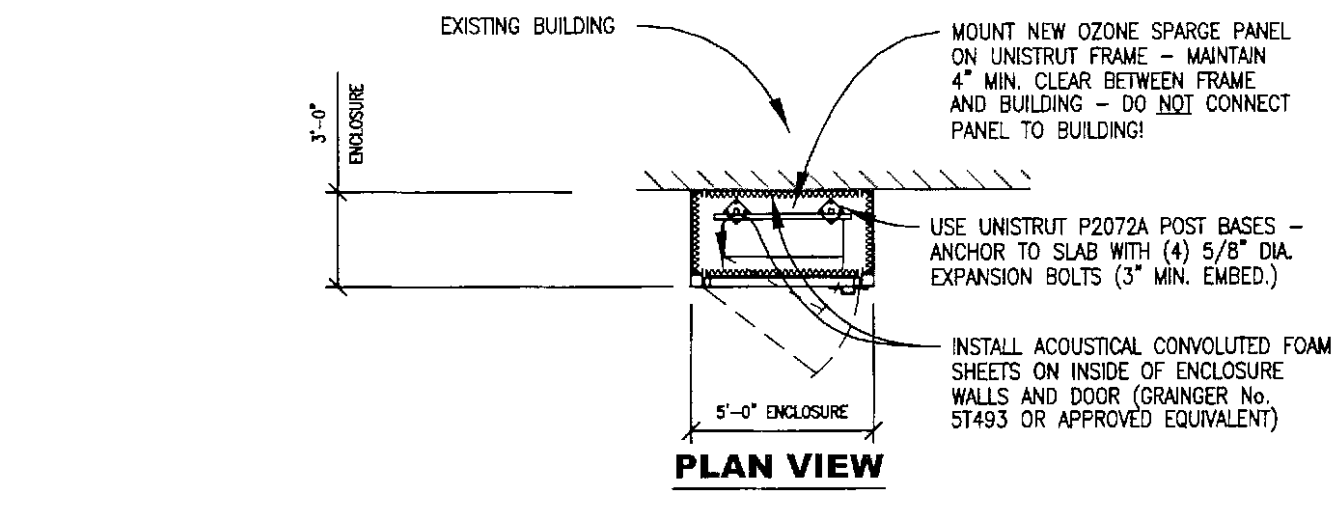
SYMBOLS AND LEGEND	
DRAWING No. G4	A



3 OZONE SPARGE POINT - PLAN VIEW
 G6 NOT TO SCALE

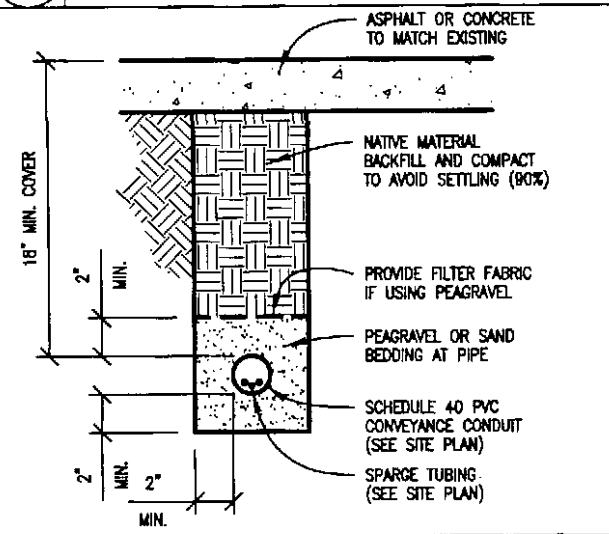


4 OZONE SPARGE POINT - SECTION VIEW
 G6 NOT TO SCALE

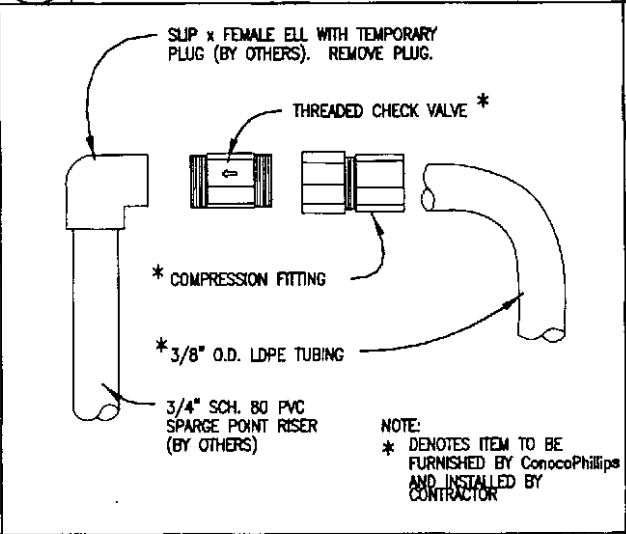


6 OZONE SPARGE PANEL ENCLOSURE DETAILS
 G6 NOT TO SCALE

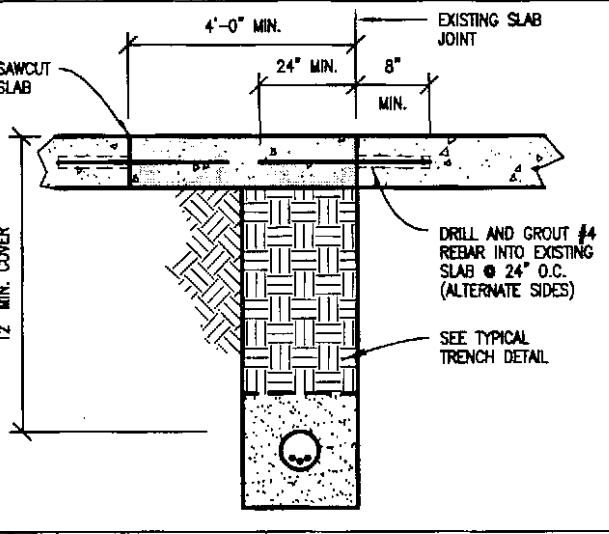
1 OZONE SPARGE WELL CONSTRUCTION DETAIL
 G6 NOT TO SCALE



2 TYPICAL TRENCH DETAIL - IN PAVEMENT
 G6 NOT TO SCALE



5 OZONE SPARGE POINT CONNECTION
 G6 NOT TO SCALE



7 DRIVE SLAB TRENCH PATCH
 G6 NOT TO SCALE

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 8-6-03

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Gettler - Ryan Inc.
 1364 North McDowell Boulevard Suite B2
 Petaluma, CA 94954 (707) 789-3255

ConocoPhillips
 76 Broadway
 Sacramento, CA 95818

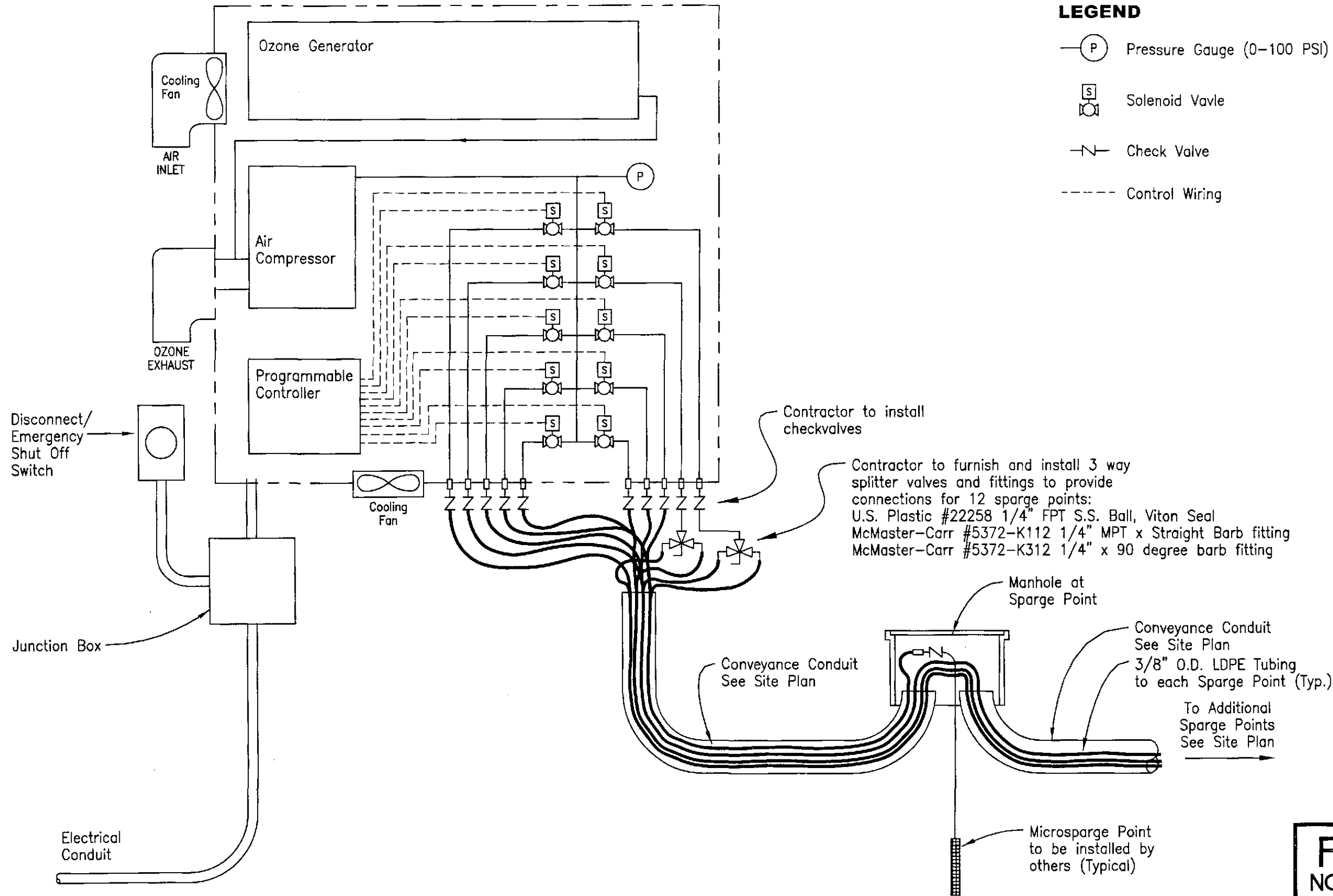
PROJECT: 140101.6
FACILITY: ConocoPhillips (76) Station No. 6419
6401 Dublin Boulevard
Dublin, California 94568
DATE: PRELIM SHEET 1 of 7

TITLE: CONSTRUCTION DETAILS
DRAWING No. G6
A

OZONE SPARGE PANEL

LEGEND

- (P)— Pressure Gauge (0-100 PSI)
- (S)— Solenoid Valve
- |/|— Check Valve
- Control Wiring



Contractor to install checkvalves

Contractor to furnish and install 3 way splitter valves and fittings to provide connections for 12 sparge points:
 U.S. Plastic #22258 1/4" FPT S.S. Ball, Viton Seal
 McMaster-Carr #5372-K112 1/4" MPT x Straight Barb fitting
 McMaster-Carr #5372-K312 1/4" x 90 degree barb fitting

Manhole at Sparge Point

Conveyance Conduit See Site Plan

Conveyance Conduit See Site Plan
 3/8" O.D. LDPE Tubing to each Sparge Point (Typ.)

To Additional Sparge Points See Site Plan

Microsparge Point to be installed by others (Typical)

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 8-6-03

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Gettler - Ryan Inc.
 1364 North McDowell Boulevard Suite B2
 Petaluma, CA 94954 (707) 789-3255

ConocoPhillips
 76 Broadway
 Sacramento, CA 95818

PROJECT: 140101.6
FACILITY: ConocoPhillips (76) Station No. 6419 6401 Dublin Boulevard Dublin, California 94568
DATE: PRELIM SHEET 1 of 7

TITLE: PROCESS FLOW DIAGRAM
DRAWING No. G5
A