

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
3. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.
4. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.
5. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.
6. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200.
7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.
8. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.
9. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.

GROUND WATER DISCHARGE

1. ALL GROUND WATER EXTRACTION AND SIMILAR WASTE DISCHARGES TO SURFACE WATER NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF SATE ORDER NO R9-2009-0002 NPDES CA6919002.
2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.
3. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2007-0034 NPDES NO. CA6919001.

SHEET INDEX

TITLE SHEET	SHEET 1
MAINTENANCE PLANS FOR ALVARADO UPPER CHANNEL	SHEET 2
MAINTENANCE BMPs NOTES	SHEET 3

TOPOGRAPHY SOURCE

CITY OF SAN DIEGO SANGIS 1999 2 FOOT CONTOURS, NAVD29

BENCHMARK

SOUTHEAST CORNER OF RESERVOIR DR. AND ALVARADO RD.  
I.E. 353.76

REFERENCE DRAWINGS

DRAINAGE CHANNEL - ALVARADO MEDICAL CENTER AS BUILT.....CITY OF SAN DIEGO DWG. NO. 13526-1-D

STORM WATER PROTECTION NOTES

1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R920070001; AND RISK LEVEL: CHECK ONE BELOW.
- ☒ WPCP
- |   |   |
|---|---|
| <input type="checkbox"/> CGP RISK LEVEL 1 | <input type="checkbox"/> CGP LUP TYPE 1 |
| <input type="checkbox"/> CGP RISK LEVEL 2 | <input type="checkbox"/> CGP LUP TYPE 2 |
| <input type="checkbox"/> CGP RISK LEVEL 3 | <input type="checkbox"/> CGP LUP TYPE 3 |
2. CHECK ONE:
- ☐ THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED.
- ☐ THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE.
- ☒ NOT APPLICABLE
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP OR SWPPP AS APPLICABLE.

WATER POLLUTION CONTROL PLAN FOR UPPER ALVERADO CREEK  
CHANNEL MAINTENANCE PROJECT PREPARED BY:  
McGRATH CONSULTING  
PO BOX 2488  
EL CAJON, CA. 92021  
(619) 250-2025  
PREPARED 01/22/2015

CONSTRUCTION CHANGE TABLE			
CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING

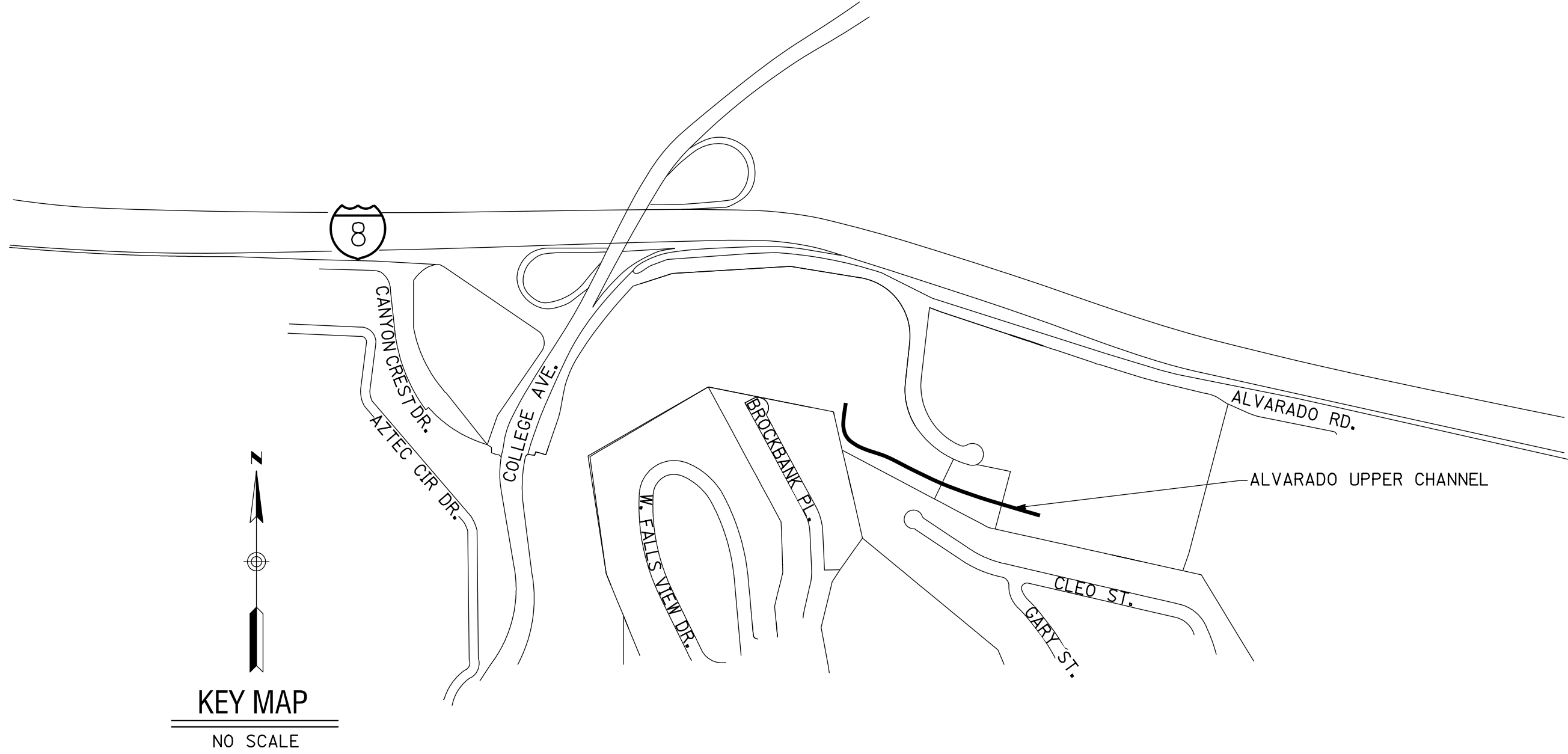
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO  
DEVELOPMENT SERVICES DEPARTMENT

CARSON P. EDGINGTON R.C.E. NO. 76519 DATE

MAINTENANCE PLANS FOR:  
ALVARADO UPPER CHANNELS MMP MAP # 64



WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

MAINTENANCE OF CONCRETE CHANNELS TO REMOVE ACCUMULATED SEDIMENT AND OTHER DEBRIS

STANDARD SPECIFICATIONS:	DESCRIPTION
DOCUMENT NO. PITS070112-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2012 EDITION
PITS070112-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2012 EDITION
PITS070112-04	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2012 EDITION
PITS070112-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD SPECIFICATIONS, 2010 EDITION
STANDARD DRAWINGS	DESCRIPTION
DOCUMENT NO. PITS070112-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION
PITS070112-05	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD PLANS, 2010 EDITION
CASQA MANUAL	CALIFORNIA STORMWATER QUALITY ASSOCIATION, STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK PORTAL: CONSTRUCTION, JANUARY 2015

LEGEND

EXISTING IMPROVEMENTS	SYMBOL
ITEM	
EXIST. CONTOURS	-----
EXIST. LOT LINE	-----
MULTI-HABITAT PLANNING AREA (MHPA)	-----
EXIST. CURB INLET	EQ
EXIST. STORM DRAIN MAIN	SD
EXIST. SEWER MAIN	S
EXIST. WATER MAIN	W
CHANNEL MAINTENANCE AREA	[Pattern]
ACCESS & LOADING AREA	[Pattern]
LOADING AREA	[Pattern]
BY-PASS PUMP	[Symbol]
TEMPORARY DIVERSION HOSE LINE	=====

STORM WATER MANAGEMENT BMPs

ITEM	SYMBOL
STREET SWEEPING AND VACUUMING DAILY	SEE CASQA MANUAL [SE-7]
SANDBAG BARRIER	SEE CASQA MANUAL [SE-8]
STORM DRAIN INLET PROTECTION	SEE CASQA MANUAL [SE-10]

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6103 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.



5620 FRIARS ROAD  
SAN DIEGO, CA 92110  
619-291-0707  
(FAX) 619-291-4165

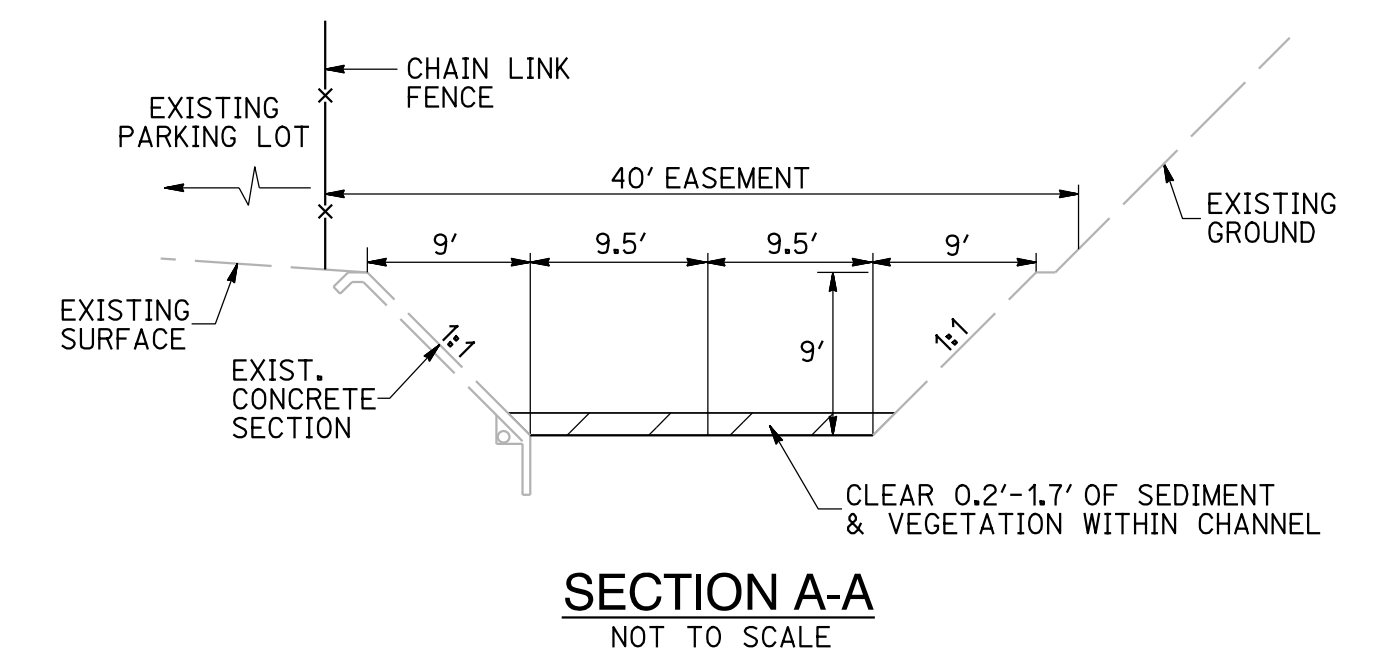
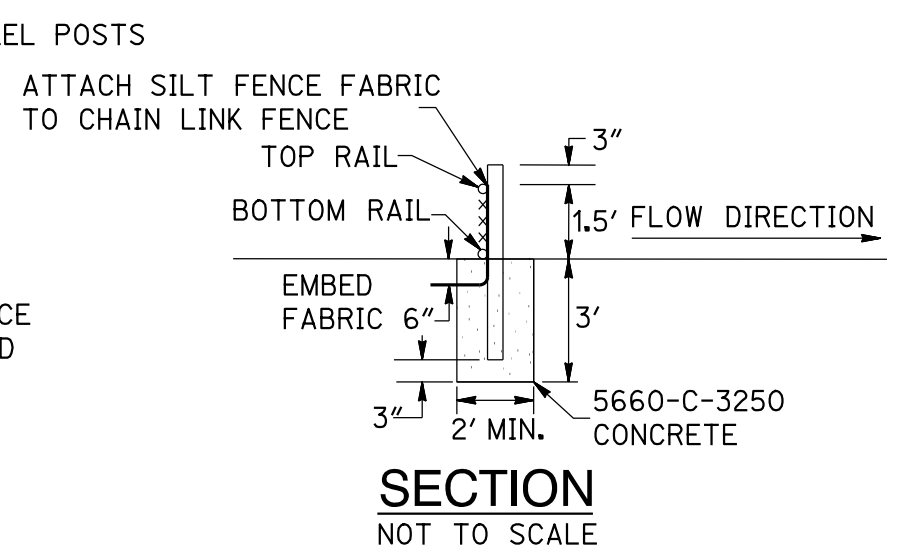
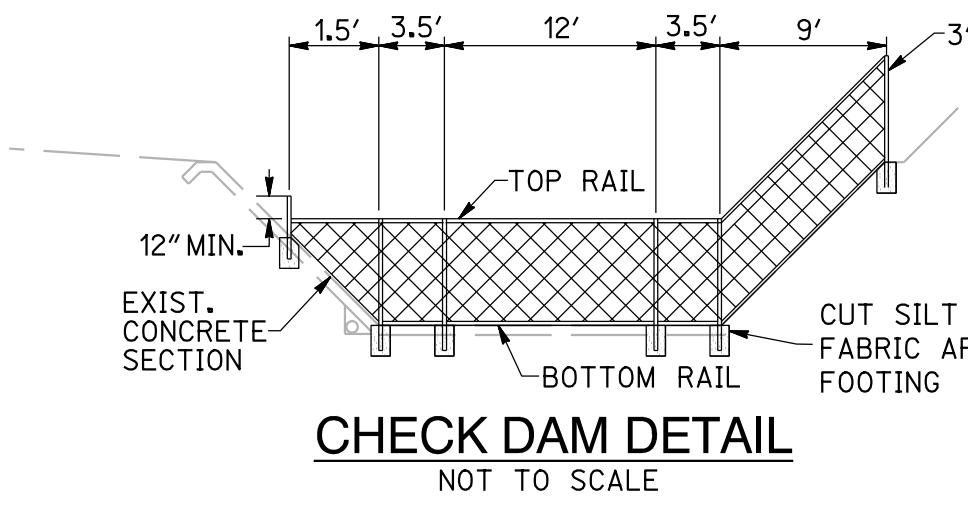
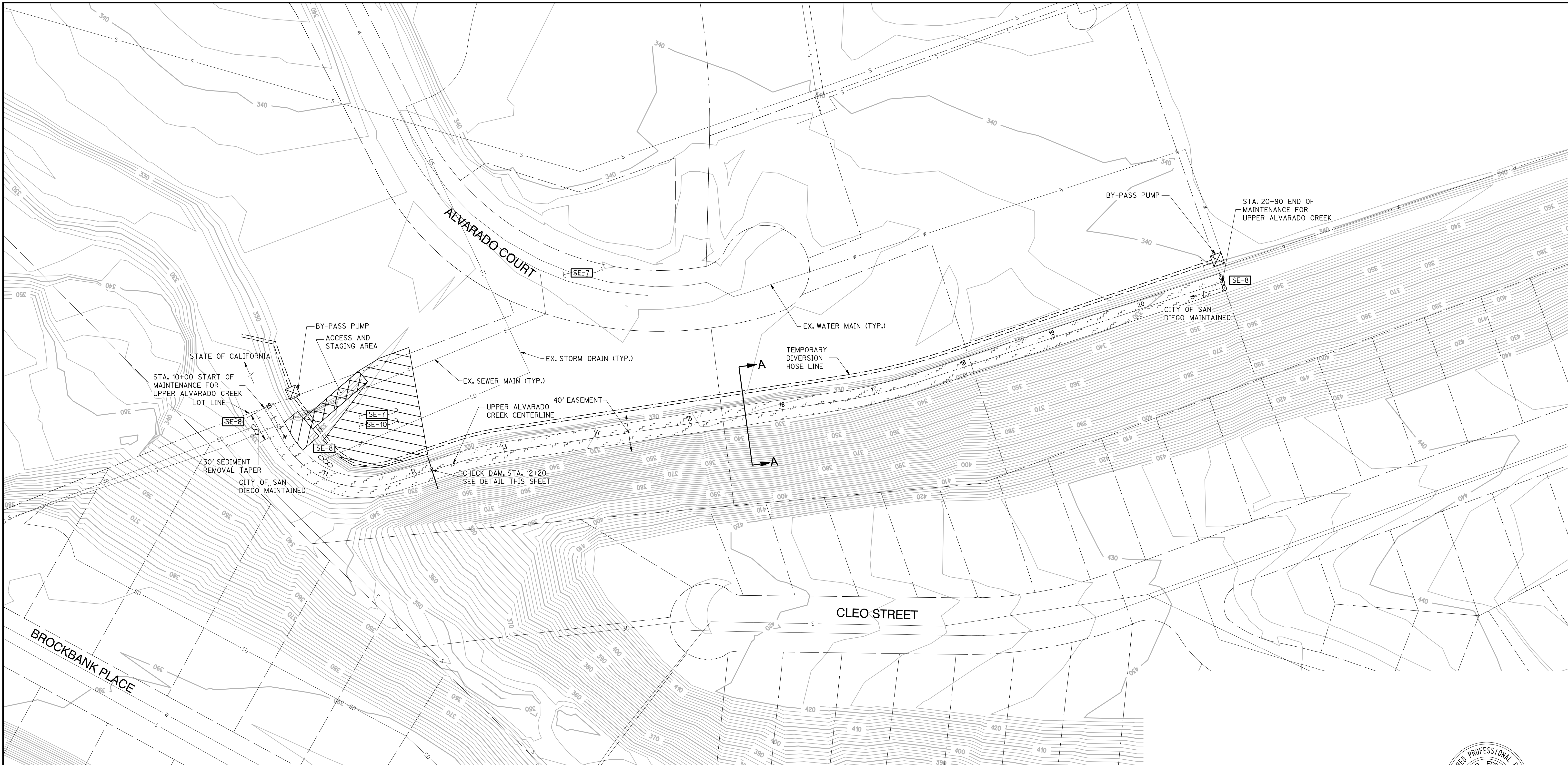


STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)

CONSTRUCTION SITE STORM WATER PRIORITY: \_\_\_\_\_

MAINTENANCE PLANS FOR:				
ALVARADO UPPER CHANNEL MMP MAP # 64 UPPER REACH 2				
CITY OF SAN DIEGO, CALIFORNIA TRANSPORTATION AND STORM WATER DEPARTMENT SHEET 1 OF 3 SHEETS				I.O. NO. _____ P.T.S NO. _____
FOR CITY ENGINEER				V.T.M. _____
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				
CONTRACTOR _____ DATE STARTED _____				-1-D
INSPECTOR _____ DATE COMPLETED _____				



- NOTES
1. CHAIN LINK FENCE SHALL BE 2" MESH, 9 GAGE GALVANIZED STEEL WIRE, PLACED ON THE UPSTREAM SIDE OF THE POSTS AND RAILS.
  2. SECURE FENCE TO RAILS WITH 12 GAGE GALVANIZED STEEL WIRE LOOPED AT 6" OC.
  3. POSTS SHALL BE 3" STEEL PIPE, 5.79 LB/FT. FILL WITH MORTAR AFTER PLACING.
  4. CHAIN LINK FENCE SHALL BE SECURED TO POSTS WITH 9 GAGE WIRE CLIPS AT 9" OC.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE



MAINTENANCE PLANS FOR:				
ALVARADO UPPER CHANNEL MMP MAP #64 UPPER REACH 2				
CITY OF SAN DIEGO, CALIFORNIA TRANSPORTATION AND STORM WATER DEPARTMENT SHEET 2 OF 3 SHEETS				I.O. NO. _____ P.T.S. NO. _____ V.T.M. _____
FOR CITY ENGINEER _____ DATE _____				
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
				XXXX-XXXX NAD83 COORDINATES
				XXX-XXXX LAMBERT COORDINATES
AS-BUILTS				
CONTRACTOR _____		DATE STARTED _____		
INSPECTOR _____		DATE COMPLETED _____		



MAINTENANCE BMPs

1. ALL BEST MANAGEMENT PRACTICES (BMPs) WILL BE IMPLEMENTED PRIOR TO OR CONCURRENT WITH CONSTRUCTION AND MAINTAINED THROUGHOUT THE PROJECT. A QUALIFIED CONTACT PERSON WILL BE RESPONSIBLE FOR IMPLEMENTING THE WATER POLLUTION CONTROL PLAN (WPCP). ALL WORK SHALL BE COMPLETED BETWEEN SEPTEMBER 15TH AND FEBRUARY 15TH UNLESS AN EXTENSION IS GRANTED IN CONFORMANCE WITH ALL APPLICABLE PERMITS.
2. CONTRACTOR WILL LIMIT ALL CONSTRUCTION RELATED ACTIVITIES TO THE PROJECT FOOTPRINT.
3. EXISTING VEGETATION TO BE PRESERVED IN PLACE SHALL BE CLEARLY MARKED WITH A BUFFER AREA FOLLOWING THE GUIDANCE OF BMP FACT SHEET EC-2.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUCH ON STREETS AND OTHER PAVED SURFACES DUE TO EXCAVATION ACTIVITIES. STREET SWEEPING AND VACUUMING WILL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET SE-7.
5. WEATHER TRIGGERED ACTION PLAN SHALL BE IMPLEMENTED WHEN THERE IS A FORECASTED 50% OR GREATER CHANCE OF LIKELY PRECIPITATION OF 0.1INCH OR GREATER BY THE NATIONAL WEATHER SERVICE FORECAST.
6. CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER AFTER EACH RUNOFF -PRODUCING RAINFALL.
7. TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES WILL BE REMOVED UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.
8. HAZARDOUS MATERIALS USED DURING MAINTENANCE WILL NOT BE STORED WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. A REGISTERED FIRST-RESPONSE, PROFESSIONAL HAZARDOUS MATERIALS CLEAN-UP/REMEDATION SERVICE SHALL BE LOCALLY AVAILABLE ON CALL.
9. SPILLS SHALL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET WM-4. SPILL CLEANUP MATERIALS SHALL BE AVAILABLE ONSITE AT ALL TIMES.
10. THE CONTRACTOR SHALL PROVIDE EQUIPMENT NECESSARY TO EXTINGUISH SMALL BRUSH FIRES (FROM SPARKING VEHICLES, ETC.) ON-SITE DURING ALL PHASES OF PROJECT ACTIVITIES, ALONG WITH TRAINED PERSONNEL FOR USE OF SUCH EQUIPMENT.
11. THE CONTRACTOR SHALL MONITOR THE 5 DAY WEATHER FORECAST. IF ANY PRECIPITATION IS FORECASTED, THE SITE SHALL BE SECURED TO PREVENT ANY CONSTRUCTION RELATED MATERIALS FROM LEAVING THE SITE AND ENTERING THE CHANNELS. NO CONSTRUCTION ACTIVITIES SHALL OCCUR DURING RAIN EVENTS.
12. SAMPLING AND ANALYSIS, MONITORING AND REPORTING, AND POST-MAINTENANCE MANAGEMENT OF THE PROJECT SHALL BE CONDUCTED AS DETERMINED NECESSARY BY THE CITY OF SAN DIEGO.
13. CHANNELS WILL BE INSPECTED WITHIN 72 HOURS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IF SUBSTANTIAL EROSION HAS OCCURRED, EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER WILL BE IMPLEMENTED TO REMEDIATE EROSION AREAS AND TO MINIMIZE FUTURE EROSION.
14. CONTRACTOR SHALL PROVIDE TRAINING FOR ALL PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ONSITE BMPs.
15. THE QUALIFIED CONTACT PERSON WILL ASSIGN A MONITOR FOR DAILY INSPECTION OF THE BMPs EACH MORNING. THE MONITOR WILL CHECK THE NATIONAL WEATHER SERVICE FORECAST, COMPLETE BMP INSPECTION CHECKLIST, PERFORM ANY NECESSARY BMP MAINTENANCE/REPAIRS, AND REPORT THE RESULTS TO THE QUALIFIED CONTACT PERSON. COMPLETED INSPECTION CHECKLIST WILL BE KEPT WITH THE WPCP.
16. PREVIOUSLY UNDISTURBED STAGING AREAS WILL BE REVEGETATED WITHIN 30 DAYS OF COMPLETION OF MAINTENANCE ACTIVITIES. THE REVEGETATED AREAS WILL BE MONITORED FOR A PERIODS OF NOT LESS THAN 25 MONTHS AFTER PLANTING.
17. FINAL LOCATION OF CHANNEL CENTERLINE WILL BE DETERMINED IN THE FIELD AND COORDINATED WITH THE NECESSARY PROJECT SPECIALIST (BIOLOGIST, HISTORICAL MONITOR, ETC.)

ADDITIONAL MAINTENANCE REQUIREMENTS

1. THE CITY SHALL NOTIFY CALIFORNIA DEPARTMENT OF FISH & WILDLIFE (CDFW), IN WRITING, AT LEAST FIVE DAYS PRIOR TO INITIATION OF CONSTRUCTION PRIOR TO COMPLETION OF CONSTRUCTION (PROJECT) ACTIVITIES. NOTIFICATION SHALL BE SENT TO CDFW'S SOUTH COAST OFFICE, ATTN: STREAMBED ALTERATION PROGRAM-SM\* 1600-2011-0271-R5.
2. AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.
3. PRIOR TO COMMENCING ANY MAINTENANCE ACTIVITY WHICH MAY IMPACT SENSITIVE BIOLOGICAL RESOURCES, THE MONITORING BIOLOGIST SHALL VERIFY THAT THE FOLLOWING ACTIONS HAVE BEEN TAKEN, AS APPROPRIATE:
- FENCING, FLAGGING, SIGNAGE OR OTHER MEANS TO PROTECT SENSITIVE RESOURCES TO REMAIN AFTER MAINTENANCE HAS BEEN IMPLEMENTED;
  - NOISE ATTENUATION MEASURES NEEDED TO PROTECT SENSITIVE WILDLIFE ARE IN PLACE AND EFFECTIVE; AND/OR
  - NESTING BIRDS HAVE BEEN IDENTIFIED AND NECESSARY MAINTENANCE SETBACKS HAVE BEEN ESTABLISHED IF MAINTENANCE IS TO OCCUR BETWEEN JANUARY 15 AND AUGUST 31.
4. IF ANY WILDLIFE IS ENCOUNTERED DURING THE COURSE OF MAINTENANCE, SAID WILDLIFE SHALL BE ALLOWED TO LEAVE THE MAINTENANCE AREA UNHARMED.

PEIR ENVIRONMENTAL MITIGATION MEASURES

GENERAL MITIGATION MEASURE 1 OF THE MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) ADOPTED FOR THE MMP REQUIRES ALL OF THE MITIGATION MEASURES IDENTIFIED IN THE PROGRAM EIR (PEIR) BE INCLUDED WITH THE MAINTENANCE DOCUMENTS AND CONTRACT SPECIFICATIONS FOR EACH MAINTENANCE ACTIVITY. TO FULFILL THIS REQUIREMENT, THE MMRP IS INCLUDED IN ITS ENTIRETY AS ATTACHMENT A TO THIS IMP.

ALVARADO (UPPER) CHANNEL - MMP MAP NO. 64  
IMP MAINTENANCE METHODOLOGY TABLE

FACILITY/CHANNEL	ALVARADO (UPPER) CHANNEL (UR4) (6300 - 6540 ALVARADO ROAD)	
DIMENSIONS	ALVARADO (UPPER) CHANNEL TRAPEZOIDAL, CONCRETE-LINED 1,000' LENGTH APPROX. 30' TOP WIDTH 8-9' BOTTOM WIDTH 2-24" IN DEPTH 2-24" OF SEDIMENT 500-700 CUBIC YARDS MAXIMUM CUBIC YARDS: 1000	ALVARADO (UPPER) CHANNEL TRAPEZOIDAL, CONCRETE-LINED 100' LENGTH APPROX. 35' TOP WIDTH 25' BOTTOM WIDTH 10" IN DEPTH 1-4" OF SEDIMENT
MAINTENANCE METHOD	MECHANIZED SEDIMENT & VEGETATION REMOVAL	
EQUIPMENT (EQUIPMENT WILL BE EQUIVALENT OR SMALLER IN SIZE/TYPE)	• DOZER (CAT D6) • FRONT-END LOADER (CAT 966) • DUMP TRUCKS (803/804 SERIES 10/12 YD) • TRACK STEER W/AUGER ATTACHMENT (CAT 289) • GRADALL (5100 SERIES) • EXCAVATOR (320 W/THUMB ATTACHMENT) • MINI-EXCAVATOR • CONCRETE PUMPING TRAILER • CONCRETE TRUCK • BACKHOE • CHECK-DAM • 4"OR 6"TRASH PUMPS (WACKER OR GODWIN - FOR DRY WEATHER FLOW DIVERSION)	
SCHEDULE	IN CHANNEL WORK WILL TAKE 7 DAYS - 7 DAYS A WEEK; 6:00 AM TO 6:00 PM;	
STAFFING	10 TO 14 PEOPLE	
MAINTENANCE PROCEDURE		
CHANNEL SEQUENCE	1. ALVARADO (UPPER- SOIL) CHANNEL (STATION 10+00 TO 20+90)	
ACCESS & LOADING AREA(S)	ALVARADO (UPPER) CHANNEL ACCESS & LOADING AREA - (STATION 10+00 TO 12+20) - DOZER ENTER/EXIT(S) CHANNEL EASEMENT FROM EXISTING PAVED ASPHALT PARKING LOT VIA EXISTING CONCRETE RAMP. LOADING AREA - (STATION 10+00 TO 12+20) - FRONT-END LOADER LOADS TRUCKS IN CHANNEL AT BASE OF RAMP. IF CHANNEL BOTTOM IS TOO UNSTABLE TO SAFELY LOAD TRUCKS, MATERIAL WILL BE BUCKETED FROM CHANNEL WITH GRADALL OR EXCAVATOR AND LOADED DIRECTLY INTO HAUL TRUCKS AND TAKEN IMMEDIATELY TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL)	
STAGING AREA	DOZER AND FRONT-END LOADER EQUIP WILL BE STAGED ON SITE ON THE PAVED, ASPHALT PARKING LOT. ALL MATERIALS WILL BE HAULED IMMEDIATELY TO A LEGAL DISPOSAL SITE (MIRAMAR LANDFILL).	
METHODOLOGY	1. DRY WEATHER FLOW DIVERSION BERM (TIGER DAM, SANDBAGS, AND/OR VISQUEEN), DIVERSION PIPES, & PUMPS WILL BE PLACED AT EASTERN LIMITS OF CHANNEL CLEANING. DIVERSION PIPES WILL BE PLACES ON NORTHERN SIDE OF CHANNEL AND EXTENDED TO A DISCHARGE AREA JUST WEST OF THE WESTERLY MAINTENANCE LIMITS. DOZER PUSHES VEGETATION & SEDIMENT TO FRONT-END LOADER STATIONED INSIDE OF CHANNEL WITHIN ACCESS & LOADING AREA. 2. DRY WEATHER DIVERSION PIPES & PUMPS WILL BE PLACED AT WESTERN LIMITS OF CHANNEL CLEANING. DIVERSION PIPES WILL PLACED ON NORTHERN SIDE OF CHANNEL AND EXTENDED TO A DISCHARGE AREA JUST WEST OF THE WESTERLY MAINTENANCE LIMITS. 3. DOZER ENTER/EXIT(S) CHANNEL AT ACCESS & LOADING AREA. 4. DOZER PUSHES VEGETATION & SEDIMENT TO FRONT-END LOADER STATIONED INSIDE OF CHANNEL WITHIN ACCESS & LOADING AREA. 5. FRONT-END LOADER SCOOPS MATERIAL & LOADS MATERIAL INTO WAITING DUMP TRUCK LOCATED AT BOTTOM OF ACCESS RAMP. 6. DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE. 7. FRONT-END LOADER AND DOZER EXIT CHANNEL. 8. BACKHOE ENTERS CHANNEL AND DIGS FOUR, THREE FOOT DEEP HOLES FOR CHECK-DAM (SEE SHEET 2, CHECK-DAM DETAIL). 9. AT STATION (12+20.00) CONCRETE IS PUMPED FROM PUMPING TRAILER INTO HOLES AROUND STEEL POSTS THAT SUPPORT CHECK-DAM. 10. DRY WEATHER DIVERSION BERM, DIVERSION PIPES, & PUMPS REMOVED.	
POST-MAINTENANCE	1. DEMOBILIZE EQUIPMENT. 2. REMOVE TEMPORARY CONSTRUCTION BMPs	
OTHER NOTES	1. SWEEPERS WILL SWEEP ADJACENT PUBLIC RIGHTS-OF-WAY AND IMMEDIATE TRUCK LOADING SITES NIGHTLY. 2. EQUIPMENT FUELED OUTSIDE CHANNEL & LOCATED AT LEAST 150' FROM WATERS OF US/STATE. 3. GODWIN PUMP WILL HAVE VISQUEEN CONTAINMENT BASIN CONSTRUCTED BENEATH IT WITH SAND BAGS TO A HEIGHT OF TWELVE INCHES (12"). CREATING 'BUNKER EFFECT' TO CAPTURE ANY FLUID SPILLAGE FROM MACHINE. WITH CONTAINMENT BASIN PRECAUTIONS IN PLACE, PUMP WILL BE REFUELED IN-PLACE ON A DAILY BASIS.	

MASTER MAINTENANCE PLAN (MMP) PROTOCOL REQUIREMENTS:

1. BIO-1: RESTRICT VEHICLES TO ACCESS DESIGNATED IN THE MMP.
2. BIO-2: FLAG AND DELINEATE ALL SENSITIVE BIOLOGICAL RESOURCES TO REMAIN WITHIN OR ADJACENT TO MAINTENANCE AREA PRIOR TO INITIATION OF MAINTENANCE ACTIVITIES IN ACCORDANCE WITH THE SITE SPECIFIC INDIVIDUAL BIOLOGICAL ASSESSMENT (IBA), INDIVIDUAL HYDROLOGY AND HYDRAULIC ASSESSMENT (IHHA), AND/OR INDIVIDUAL MAINTENANCE PLAN (IMP) PREPARED FOR THE WORK.
3. BIO-3: CONDUCT A PRE-MAINTENANCE MEETING ON SITE PRIOR TO THE START OF ANY MAINTENANCE ACTIVITY THAT OCCURS WITHIN OR ADJACENT TO SENSITIVE BIOLOGICAL RESOURCES. THE PRE-MAINTENANCE MEETING SHALL INCLUDE A QUALIFIED BIOLOGIST, FIELD ENGINEER, PLANNER, EQUIPMENT OPERATORS/SUPERINTENDENT AND OTHER KEY PERSONNEL CONDUCTING OR INVOLVED IN CHANNEL MAINTENANCE ACTIVITIES. THE QUALIFIED BIOLOGIST SHALL POINT OUT OR IDENTIFY SENSITIVE BIOLOGICAL RESOURCES TO BE AVOIDED DURING MAINTENANCE, FLAG/DELINEATE SENSITIVE RESOURCES TO BE AVOIDED, REVIEW SPECIFIC MEASURES TO PROTECT SENSITIVE BIOLOGICAL RESOURCES AS NECESSARY. THE BIOLOGIST SHALL ALSO REVIEW THE PROPOSED EROSION CONTROL METHODS TO CONFIRM THEY WILL NOT POSE RISK TO WILDLIFE (E.G., NON-BIODEGRADABLE BLANKETS MAY ENTANGLE WILDLIFE).
4. BIO-4: AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.
5. BIO-5: CONDUCT APPROPRIATE PRE-MAINTENANCE SURVEYS IF MAINTENANCE IS PROPOSED DURING THE BREEDING SEASON OF A SENSITIVE ANIMAL SPECIES (JANUARY 15 TO AUGUST 31). IF SENSITIVE ANIMAL SPECIES COVERED BY THE PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) ARE IDENTIFIED, THEN APPLICABLE MEASURES FROM THE MITIGATION MONITORING AND REPORTING PLAN (MMRP) SHALL BE IMPLEMENTED UNDER THE DIRECTION OF A QUALIFIED BIOLOGIST TO AVOID SIGNIFICANT DIRECT AND/OR INDIRECT IMPACTS TO IDENTIFIED SENSITIVE ANIMAL SPECIES. IF SENSITIVE ANIMAL SPECIES ARE IDENTIFIED DURING PRE-MAINTENANCE SURVEYS THAT ARE NOT COVERED BY THE PEIR, SWD SHALL CONTACT THE APPROPRIATE WILDLIFE AGENCIES AND ADDITIONAL ENVIRONMENTAL REVIEW UNDER CEQA WILL BE REQUIRED.
6. BIO-6: REMOVE ARUNDO THROUGH ONE, OR A COMBINATION OF, THE FOLLOWING METHODS: (1) FOLIAR SPRAY (SPRAYING HERBICIDE ON LEAVES AND STEMS WITHOUT CUTTING FIRST) WHEN ARUNDO OCCURS IN MONOTYPIC STANDS, OR (2) CUT AND PAINT (CUTTING STEMS CLOSE TO THE GROUND AND SPRAYING OR PAINTING HERBICIDE ON CUT STEM SURFACE) WHEN ARUNDO IS INTERMIXED WITH NATIVE PLANTS. WHEN SEDIMENT SUPPORTING ARUNDO MUST BE REMOVED, THE SEDIMENT SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO REMOVE THE RHIZOMES, WHEREVER FEASIBLE. FOLLOWING REMOVAL OF SEDIMENT CONTAINING RHIZOMES, LOOSE RHIZOME MATERIAL SHALL BE REMOVED FROM THE CHANNEL AND DISPOSED OFFSITE. AFTER THE INITIAL TREATMENT, THE AREA OF REMOVAL SHALL BE INSPECTED ON A QUARTERLY BASIS FOR UP TO TWENTY YEARS, OR UNTIL NO RESPROUTING IS OBSERVED DURING AN INSPECTION. IF RESPROUTING IS OBSERVED, THE CUT AND PAINT METHOD SHALL BE APPLIED TO ALL RESPROUTS.
7. BIO-7: AVOID MECHANIZED MAINTENANCE WITHIN 300 FEET OF A COOPER'S HAWK NEST, 900 FEET OF A NORTHERN HARRIER'S NEST, OR 500 FEET OF ANY OTHER RAPTOR'S NEST UNTIL ANY FLEDGLINGS HAVE LEFT THE NEST.
8. WM-1: DISPOSE AND TRANSPORT COMPOSTABLE GREEN WASTE MATERIAL TO AN APPROVED COMPOSTING FACILITY, IF AVAILABLE.
9. WM-2: RE-USE EXCAVATED MATERIAL, WHENEVER POSSIBLE, AS FILL MATERIAL, AGGREGATE SAND REPLENISHMENT, OR OTHER RAW MATERIAL USES. RE-USED MATERIAL (AGGREGATES, SOIL, SAND OR SILT) SHALL BE DOCUMENTED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
10. WM-3: SEPARATE WASTE TIRES FROM EXCAVATED MATERIAL AND TRANSPORT THEM TO AN APPROPRIATE DISPOSAL FACILITY. IF MORE THAN NINE TIRES ARE IN A VEHICLE OR WASTE BIN AT ANY ONE TIME, THEY SHALL BE TRANSPORTED UNDER A COMPLETED COMPREHENSIVE TRIP LOG (CTL) TO DOCUMENT THAT THE TIRES WERE TAKEN TO AN APPROPRIATE DISPOSAL FACILITY.
11. WM-4: LOG AND TRANSPORT ANY HAZARDOUS MATERIALS ENCOUNTERED DURING MAINTENANCE TO A HAZARDOUS WASTE STORAGE, RECYCLING, TREATMENT OR DISPOSAL FACILITY. PERSONNEL HANDLING HAZARDOUS MATERIALS SHALL HAVE THE APPROPRIATE TRAINING TO HANDLE, STORE, TRANSPORT, AND/OR DISPOSE THE MATERIAL. HAZARDOUS MATERIALS (E.G., MACHINE OIL, MERCURY SWITCHES, AND REFRIGERANT GASES) SHALL BE REMOVED FROM APPLIANCES AND DISPOSED IN ACCORDANCE WITH THIS PROTOCOL.
12. WQ-2: PREVENT OFF-SITE SEDIMENT TRANSPORT DURING MAINTENANCE THROUGH THE USE OF EROSION AND SEDIMENT CONTROLS WITHIN STORM WATER FACILITIES, ALONG ACCESS ROUTES AND AROUND STOCKPILE/STAGING AREAS. INSTALL BMPs SUCH AS SILT FENCES, FIBER ROLLS, GRAVEL BAGS; TEMPORARY SEDIMENT BASINS; STABILIZED MAINTENANCE ACCESS POINTS (E.G., SHAKER PLATES); CONTAINMENT BARRIERS (E.G., SILT FENCE, FIBER ROLLS AND/OR BERMS) FOR MATERIAL STOCKPILES; AND PROPERLY FITTED COVERS FOR MATERIAL TRANSPORT VEHICLES. REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.
13. WQ-3: STORE BMP MATERIALS ON-SITE TO PROVIDE COMPLETE PROTECTION OF EXPOSED AREAS AND PREVENT OFF-SITE SEDIMENT TRANSPORT.
14. WQ-4: PROVIDE TRAINING FOR PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ON-SITE BMPs.
15. WQ-7: AVOID STORING HAZARDOUS MATERIALS USED DURING MAINTENANCE WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
16. WQ-8: STORE MAINTENANCE-RELATED TRASH IN AREAS AT LEAST 50 FEET FROM STORM WATER FACILITIES, AND REMOVE ANY TRASH RECEPTACLES REGULARLY (AT LEAST WEEKLY).
17. WQ-10: INSPECT EARTHEN-BOTTOM STORM WATER FACILITIES WITHIN 30 DAYS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IMPLEMENT EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER, SUCH AS FIBER BLANKETS, TO REMEDIATE SUBSTANTIAL EROSION WHICH HAS OCCURRED AND TO MINIMIZE FUTURE EROSION.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE \_\_\_\_\_



MAINTENANCE PLANS FOR:				
ALVARADO UPPER CHANNEL MMP MAP #64 UPPER REACH 2				
CITY OF SAN DIEGO, CALIFORNIA TRANSPORTATION AND STORM WATER DEPARTMENT SHEET 3 OF 3 SHEETS				I.O. NO. _____ P.T.S NO. _____
____ FOR CITY ENGINEER _____ DATE _____				V.T.M. _____
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
				XXXX-XXXX NAD83 COORDINATES
				XXX-XXXX LAMBERT COORDINATES
AS-BUILTS				
CONTRACTOR _____		DATE STARTED _____		
INSPECTOR _____		DATE COMPLETED _____		

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