

**Appendix M–
Addendum to Conceptual Water Quality
Management Plan (WQMP), Option 2A
Prepared by KWC Engineers dated August 16, 2013**



PA12-0037

**ADDENDUM to CONCEPTUAL
County of Orange/Santa Ana Region
Priority Project
Water Quality Management Plan (WQMP)**

Project Name:

Esperanza Hills – Aspen Way Option 2A (PA120037)

Vesting Tentative Tract Map 17522

APN 351-031-006, 351-031-004, 326-031-006 & 326-031-008

Prepared for:

Yorba Linda Estates, LLC

7114 East Stetson Drive, Suite 350

Scottsdale, AZ 85251

(480) 994-5262

Gary Lamb / Doug Wymore

Prepared by:

KWC Engineers

1880 Compton Ave.

Corona, CA 92881

(951) 734-2130

velia@kwcengineers.com

Victor Elia, P.E.

Date Prepared: August 16, 2013

**COUNTY OF ORANGE
OC PUBLIC WORKS / OC PLANNING**

APPROVED IN CONCEPT

**PRELIMINARY/CONCEPTUAL
WATER QUALITY MANAGEMENT PLAN**

This WQMP is only preliminary/conceptual and is not to be considered the final WQMP for this project. A final WQMP must be approved prior to the issuance of a grading or building permit. The stamping of this WQMP SHALL NOT be held to permit or be an approval of the violation of any provisions of any County Ordinance or State Law.

Reviewed By:

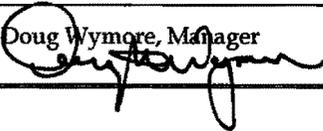
Date:

J T Yeaman
9-10-2013

Project Owner's Certification			
Planning Application No. (If applicable)	PA120037	Grading Permit No.	
Tract/Parcel Map and Lot(s) No.	VTTM 17522 Lots 1-340	Building Permit No.	
Address of Project Site and APN (If no address, specify Tract/Parcel Map and Lot Numbers)			APN 351-031-006, 351-031-004, 326-031-006 & 326-031-008

This Water Quality Management Plan (WQMP) has been prepared for Yorba Linda Estates, LLC by KWC Engineers. The WQMP is intended to comply with the requirements of the County of Orange NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan, including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner: Yorba Linda Estates, LLC			
Title	Manager, Wedge Partners, LLC, ITS Manager		
Company	Yorba Linda Estates, LLC		
Address	7114 East Stetson Drive, Suite 350, Scottsdale, AZ 85251		
Email	dwymore@q.com		
Telephone #	(602) 738-8181		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Owner Signature		Date	8/23/2013

Addendum to Conceptual Priority Project Water Quality Management Plan (WQMP)
Esperanza Hills – Option 2A

Preparer (Engineer):			
Title	Project Engineer	PE Registration #	64803
Company	KWC Engineers		
Address	1880 Compton Ave., Suite 100		
Email	velia@kwceengineers.com		
Telephone #	951-734-2130		
I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board.			
Preparer Signature	<i>Victor Elia</i>	Date	<i>8-22-13</i>
Place Stamp Here			

R:\09\1200\PRELIM\REPORTS\PRELIM_WQMP Option 2A\1200 Preliminary WQMP 2A 8-16-2013

Section I Addendum Description

Esperanza Hills Option 2A consists of an alternative entry street into the tract development as designed in Option 2. Vesting Tentative Tract Map No. 17522 C, sheet 1 of 1, on the following page, presents Option 2A as an alternative sheet to VTTM 17522 B. Option 2A proposes to connect the proposed Esperanza Hills Parkway to San Antonio Road just north of the Metropolitan Water District (MWD) easement instead of extending Aspen Way into the project site as proposed in Option 2. The remaining design of the tract is the same for Options 2 and 2A.

The project description of Option 2A remains the same as Option 2: 340 lots, 71.36 acres Impervious (onsite), four (4) WQMP basins and the conceptual drainage design remains the same. The potential stormwater pollutants, hydrologic conditions of concern, post development drainage characteristics, property ownership/management, watershed description, BMPs, Hydromodification control BMPs, non-structural and structural source control BMPs remain the same. In fact the discharge point of the site into the Un-named canyon south of the existing Aspen Way is the same. The difference that Option 2A proposes is the length and alignment of the entry road, the length and alignment of the storm drain culvert under Aspen Way/Esperanza Hills, slopes and landscaping along the entry road and the tributary area to the catch basins within the entry road. In Option 2 the entry street drains into the proposed Contech Urban Green Bio-filters located at the lowpoint in Aspen Way and in Option 2A the UG Bio-filters are located on the downstream end of Esperanza Hills Parkway just prior to San Antonio Road.

Refer to the attached maps and exhibits for Option 2A:

- Option 2A Conceptual WQMP Site Plan for the proposed location of the UG Bio-filters (revised BMP location: N 2,272,609, E 6,101,765)
- Conceptual Site Plan, Option 2A
- Conceptual Entry Road, Option 2A
- Option 2A Conceptual Site Plan / Grady Study (Study #23)
- Design Capture Volume Sizing for the revised area #5
- WQMP BMP Sizing spreadsheet with revised area #5

DESIGN CONCEPT

THE DESIGN CONCEPT FOR ESPERANZA HILLS IS TO EMPHASIZE YOUR ARRIVAL TO AN EXCLUSIVE HIGH- END RESIDENTIAL COMMUNITY NESTLED IN ONE OF THE MOST PREMIER AND PRESTIGIOUS HILLTOP LOCATIONS IN YORBA LINDA.

THE STATELY SPANISH ARTICULATED GUARDHOUSE COMMANDS A LARGE ARRIVAL PLATEAU AT THE BASE OF A BOLD SLOPE WITH VIEW HOMES PERCHED HIGH ABOVE YOUR HEAVILY LANDSCAPED APPROACH OPENS UP AT ARRIVAL WITH STRONG EXPANSIVE VIEWS OF A CASCADING WATER RAPID ON YOUR LEFT AND A BROAD ARCHING SPANISH COLONNADE ON YOUR RIGHT BRIDGING ACROSS A WATER BODY OF DRAMATIC GEYSER FOUNTAINS. VIEWS THROUGH THE VINE LADEN COLONNADE REVEAL AN EXPANSIVE ASSOCIATION MAINTAINED CITRUS ORCHARD OR GRAPE VINEYARD BEYOND, PATHWAYS THROUGH, COMMUNITY STAGING AREA, A BABBLING BROOK, AND SPECIAL VIEWING LOCATIONS.

DRIVING THROUGH THE GATES, YOU ARE GREETED WITH A STRIKING DISPLAY OF WHITEWATER CASCADING DOWN THE OPPOSING SLOPE DISAPPEARING UNDER THE STREET BELOW. ALL STREETSCAPES, SLOPES, AND NEIGHBORHOOD PARKS WILL BE HARMONIOUSLY INTERWOVEN WITH THE NATURAL HILLSIDE BY UTILIZING AN ORGANIC USE OF CALIFORNIA OAKS, SYCAMORES, NATURAL SHRUBS AND GRASSES TO BUFFER HOMES AND REINFORCE VIEWS. PARKS AND TRAILS WILL ALSO BE USED TO PROMOTE NEIGHBORHOOD ACTIVITIES AND RESIDENT INTERFACE WITH THE NATURAL SITE AMENITIES INCLUDING CONNECTIONS TO REGIONAL TRAILS AND TOPOGRAPHIC HIGHLIGHTS.

**CONCEPTUAL SITE PLAN
SAN ANTONIO ROAD OPTION 2A
YORBA LINDA, CALIFORNIA**

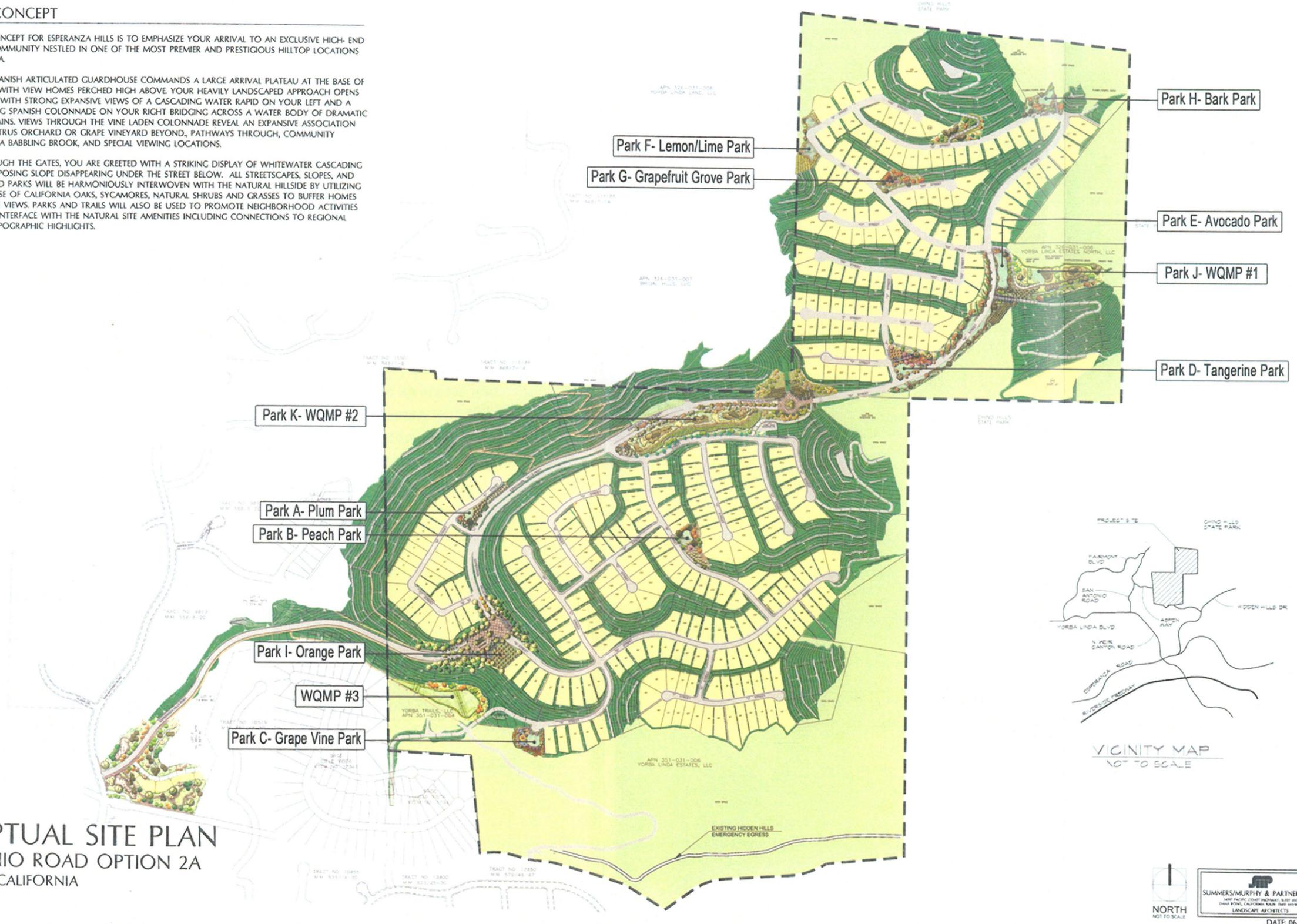
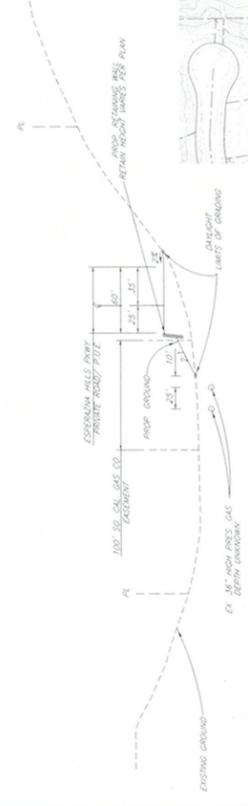


Exhibit 11 – Conceptual Site Plan, Option 2A - San Antonio Road

VESTING TENTATIVE TRACT MAP NO. 17522 C COUNTY OF ORANGE



ESPERANZA HILLS
VESTING TENTATIVE TRACT MAP NO. 17522 C
COUNTY OF ORANGE

PREPARED FOR
YORBA LINDA ESTATES, LLC
7114 EAST STETSON DRIVE, SUITE 350
SCOTTSDALE, AZ 85251
(480) 994-5292

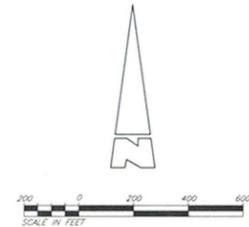
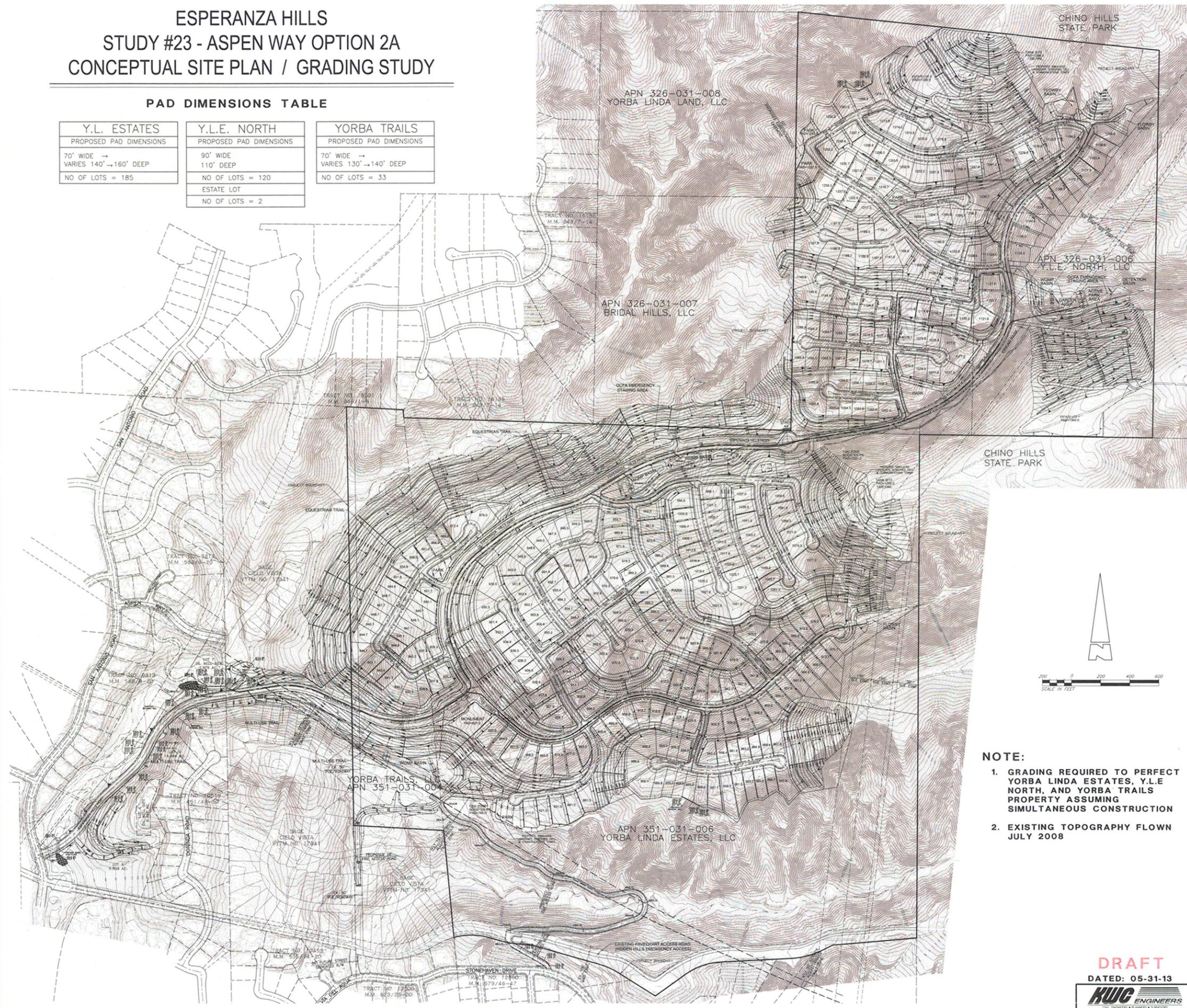
PREPARED BY
HWC ENGINEERS
1885 CENTRAL AVENUE, SUITE 100, COSTA MESA, CALIFORNIA 92626
(714) 440-1111

SHEET
1 OF 1
SHEETS

ESPERANZA HILLS STUDY #23 - ASPEN WAY OPTION 2A CONCEPTUAL SITE PLAN / GRADING STUDY

PAD DIMENSIONS TABLE

Y.L. ESTATES	Y.L.E. NORTH	YORBA TRAILS
PROPOSED PAD DIMENSIONS	PROPOSED PAD DIMENSIONS	PROPOSED PAD DIMENSIONS
70' WIDE → VARIES 140' → 160' DEEP	90' WIDE 110' DEEP	70' WIDE → VARIES 130' → 140' DEEP
NO OF LOTS = 185	NO OF LOTS = 120	NO OF LOTS = 33
	ESTATE LOT	
	NO OF LOTS = 2	



NOTE:

1. GRADING REQUIRED TO PERFECT YORBA LINDA ESTATES, Y.L.E NORTH, AND YORBA TRAILS PROPERTY ASSUMING SIMULTANEOUS CONSTRUCTION
2. EXISTING TOPOGRAPHY FLOWN JULY 2008

DRAFT
DATED: 05-31-13



R:\DATA\2013\PRELIM\KWC\Working Study - ENDO OVERALL Conceptual Site Plan Grading Study 23 - San Antonio Ave. 05/31/2013 11:04

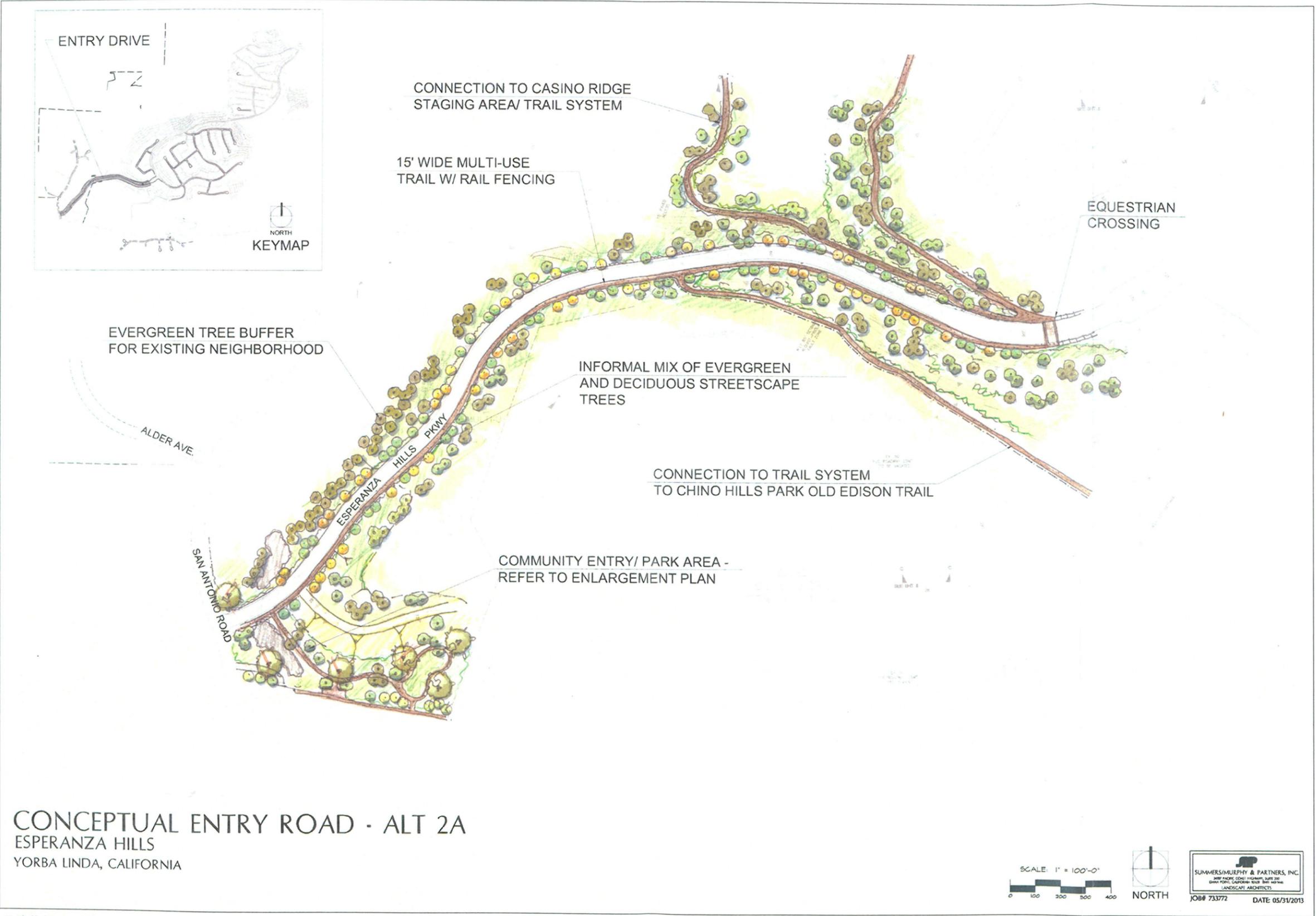
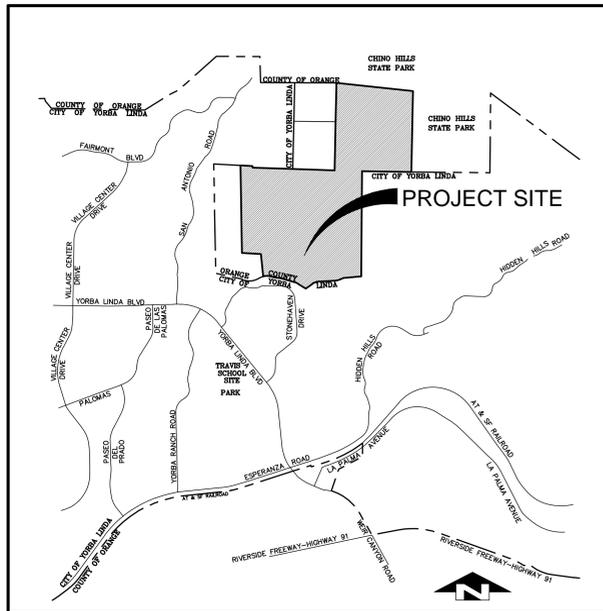
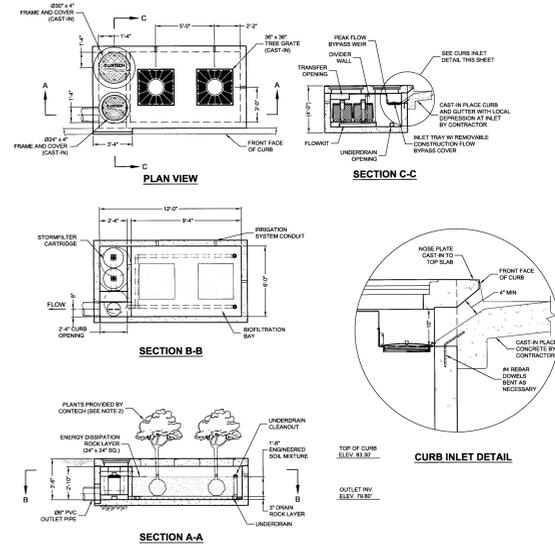


Exhibit 19 – Conceptual Entry Road – Option 2A

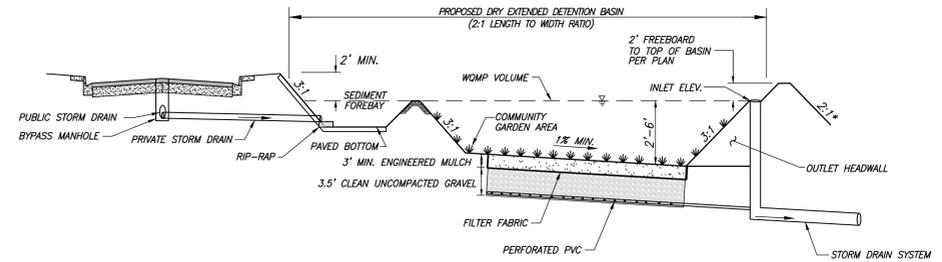
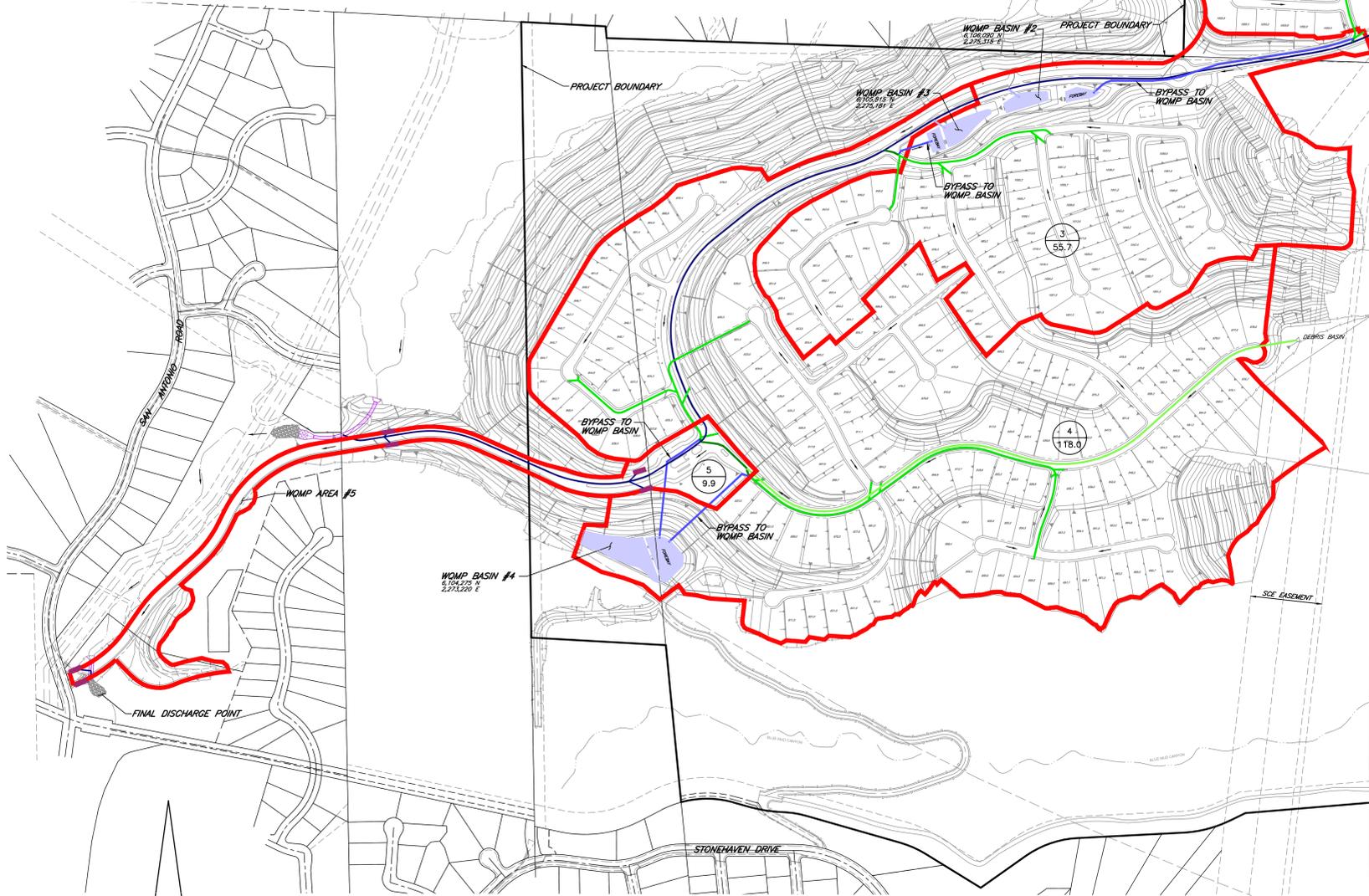
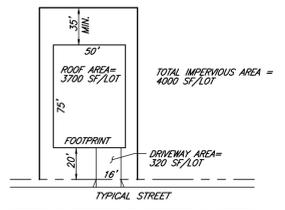
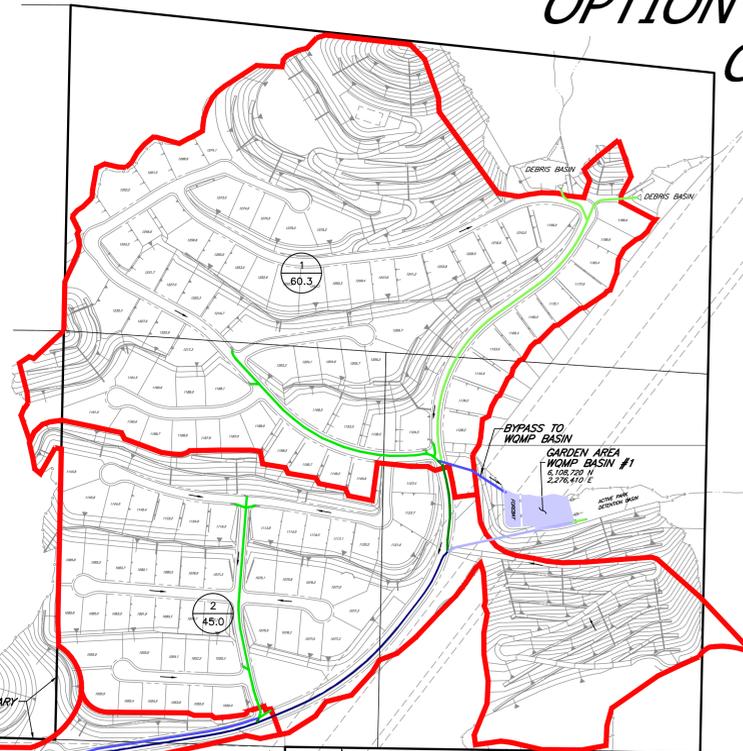
ESPERANZA HILLS OPTION 2A SAN ANTONIO ROAD CWQMP BMP EXHIBIT



VICINITY MAP



CONTECH URBAN GREEN BIO-FILTER
(NOT TO SCALE)



WQMP BASIN SECTION:
DRY EXTENDED DETENTION BASIN
(NOT TO SCALE)

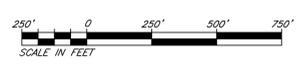
LEGEND

- WQMP BASIN TRIBUTARY AREA BOUNDARY
- A1
4.7 BASIN NUMBER
- TRIBUTARY AREA (ACRES)
- PROPOSED WQMP BASINS
- OFFSITE STORM DRAIN FROM DEBRIS BASINS
- UNTREATED STORM DRAIN PIPE
- >2-YR FLOW BYPASS STORM DRAIN PIPE
- UNTREATED STORM DRAIN PIPE TO WQMP BASIN
- TREATED STORM DRAIN PIPE FROM WQMP BASIN
- TREATED STORM DRAIN MAINLINE PIPE
- PROPOSED CONTECH U.G. BIO-FILTERS
- PROPOSED FLOW DIRECTION

WQMP BASIN SUMMARY TABLE			
BASIN	AREA (AC)	OWNERSHIP	MAINTENANCE
1	0.8	H.O.A.	H.O.A.
2	0.4	H.O.A.	H.O.A.
3	0.5	H.O.A.	H.O.A.
4	1.4	H.O.A.	H.O.A.

NOTES

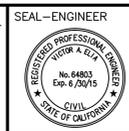
1. ALL NATURAL AND MANUFACTURED SLOPES NOT INCLUDED WITHIN RESIDENTIAL LOTS SHALL BE MAINTAINED BY THE H.O.A.
2. ALL STORM DRAIN SYSTEMS WITHIN PRIVATE STREETS SHALL BE MAINTAINED BY COUNTY OF ORANGE, PUBLIC WORKS, EXCEPT FOR PIPES TO AND FROM WQMP BASINS.



PREPARED FOR
YORBA LINDA ESTATES, L.L.C.
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(408) 994-5262

MARK	BY	DATE	REVISIONS	APPR.	DATE

APPROVED BY COUNTY OF ORANGE
COMMUNITY DEVELOPMENT DEPARTMENT



SEAL-ENGINEER
KUC ENGINEERS
1880 COMPTON AVENUE, SUITE 100 • ORANGE, CA 92668-3370 • 951-734-2130
PREPARED BY: VICTOR A. ELIA
R.C.E. NO. 64803
DATE: 6/30/15

CONCEPTUAL
PLANNING APPLICATION NO. PA 120037
ESPERANZA HILLS OPTION 2A
CWQMP BMP EXHIBIT
COUNTY OF ORANGE

SHEET NO.
1
1 OF 1 SHEETS

Worksheet B: Simple Design Capture Volume Sizing Method – Area #5

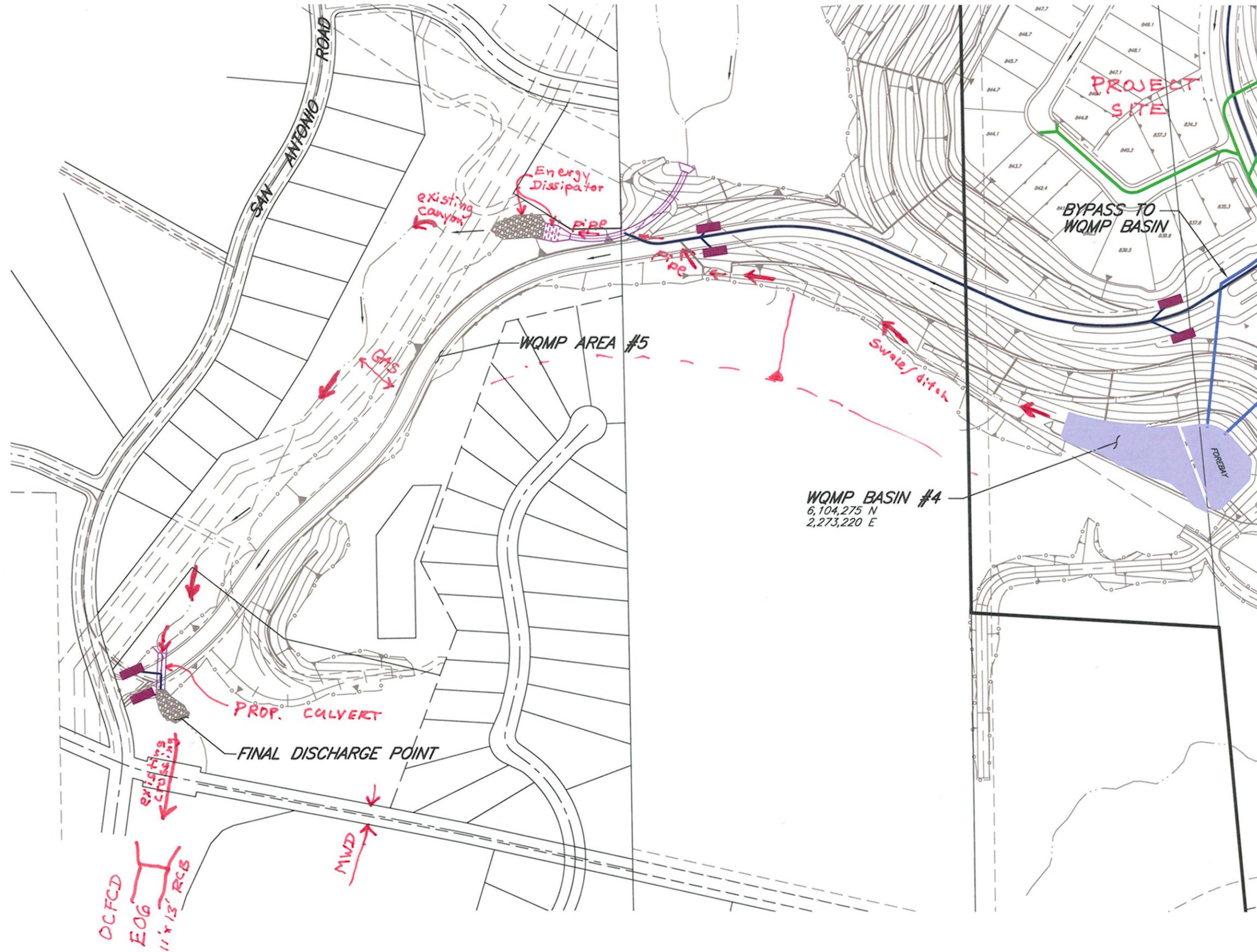
Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, d (inches)	$d=$	0.9	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	$d_{HSC}=$	0	inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}=$	0.9	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), A (acres)	$A=$	9.87	acres
2	Enter Project Imperviousness, imp (unitless)	$imp=$.67	
3	Calculate runoff coefficient, $C= (0.75 \times imp) + 0.15$	$C=$	0.65	
4	Calculate runoff volume, $V_{design}= (C \times d_{remainder} \times A \times 43560 \times (1/12))$	$V_{design}=$	21,105	cu-ft

BASIN	Total Area (A) (sf)	Area (ac)	Area of Streets (sf)	Number of Lots	Imperious Area of Each Lot (sf)	Lot Impervious Area (sf) =# lots x sf	Total Impervious Area (sf) =imp st + imp lots	Total Impervious Area (ac)	Imperviousness (ratio)	Perviousness (ratio) =1-imp.	Runoff Coefficient = (0.75 x imp) + 0.15	Storm Depth (d) (inches) map	Design Capture Volume (cu.-ft.) = C x d x A / 12	Design Capture Volume (ac.-ft.)
1	2,627,029	60.3	341,466	72	4,000	288,000	629,466	14.45	0.24	0.76	0.33	0.9	64,962	1.49
2	1,961,119	45.0	248,690	49	4,000	196,000	444,690	10.21	0.23	0.77	0.32	0.9	47,076	1.08
3	2,424,202	55.7	417,820	71	4,000	284,000	701,820	16.11	0.29	0.71	0.37	0.9	66,750	1.53
4	5,140,522	118.0	744,286	148	4,000	592,000	1,336,286	30.68	0.26	0.74	0.34	0.9	132,997	3.05
5	429,769	9.9	289,238	0			289,238	6.64	0.67	0.33	0.65	0.9	21,105	0.48
Total	12,582,641	288.9	2,041,499	340		1,360,000	3,401,499	78.09	0.27	0.73	0.35		311,784	7.16

BASIN	Forebay Area (sf)	Forebay Depth (ft)	Forebay Volume Provided (ac-ft)	25% of Design Capture Volume (ac-ft)	Basin Area (sf)	Basin Depth (ft)	Basin Volume Provided (ac-ft)	75% of Design Capture Volume (ac.-ft.)	Total Basin Area (ac)
1	6,468	3.0	0.45	0.37	21,700	2.5	1.25	1.12	0.8
2	4,971	3.0	0.34	0.27	8,372	5.0	0.96	0.81	0.4
3	4,000	5.0	0.46	0.38	13,225	4.0	1.21	1.15	0.5
4	20,306	2.5	1.17	0.76	29,673	4.0	2.72	2.29	1.4
Total	35,745		2.41	1.79	72,970	15.5	6.15	5.37	3.1

ESPERANZA HILLS - WQMP OPTION 2A

DRAINAGE PATH FROM BASIN 4



DCFC
EOG
11' x 13' RCB