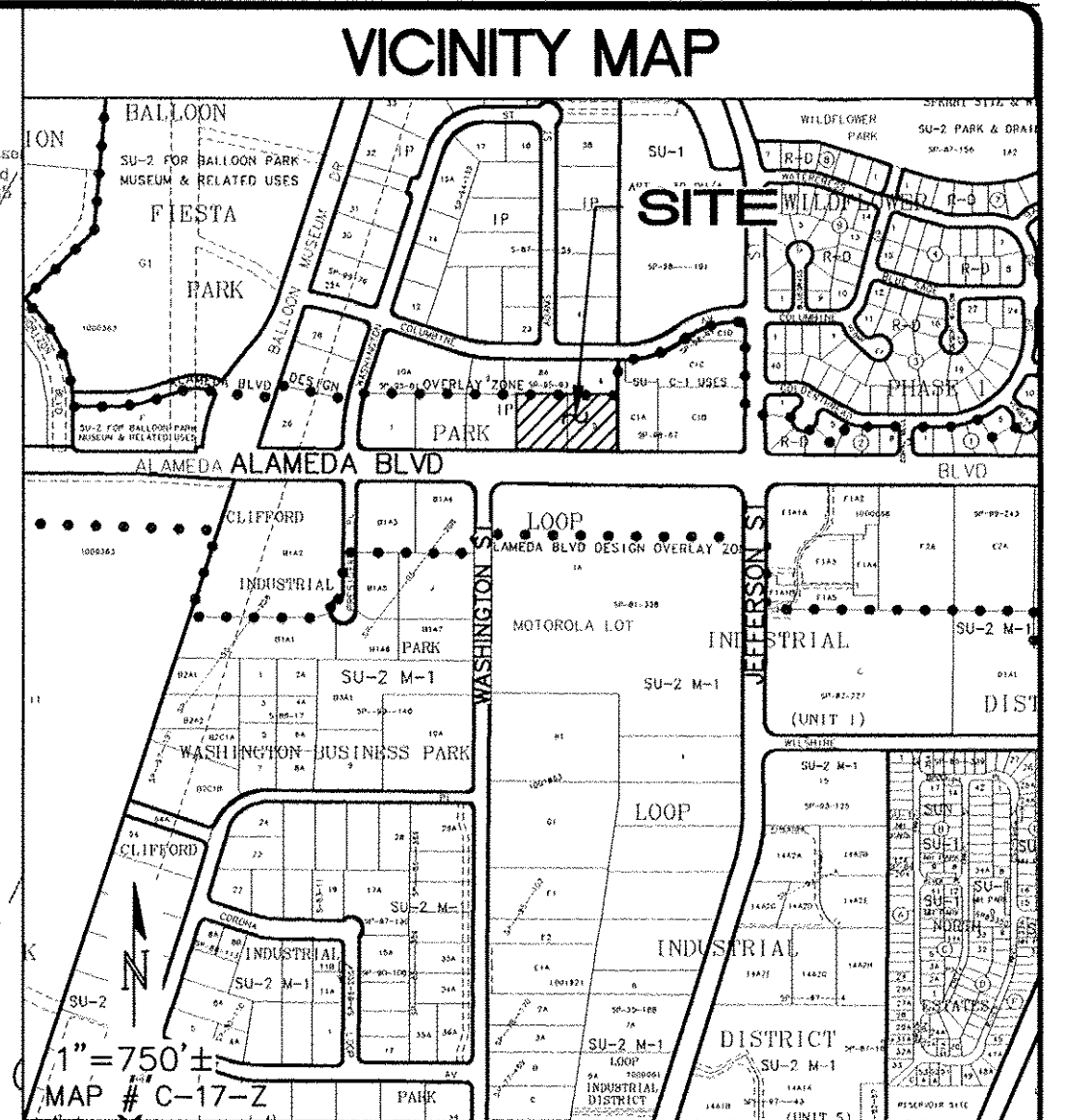
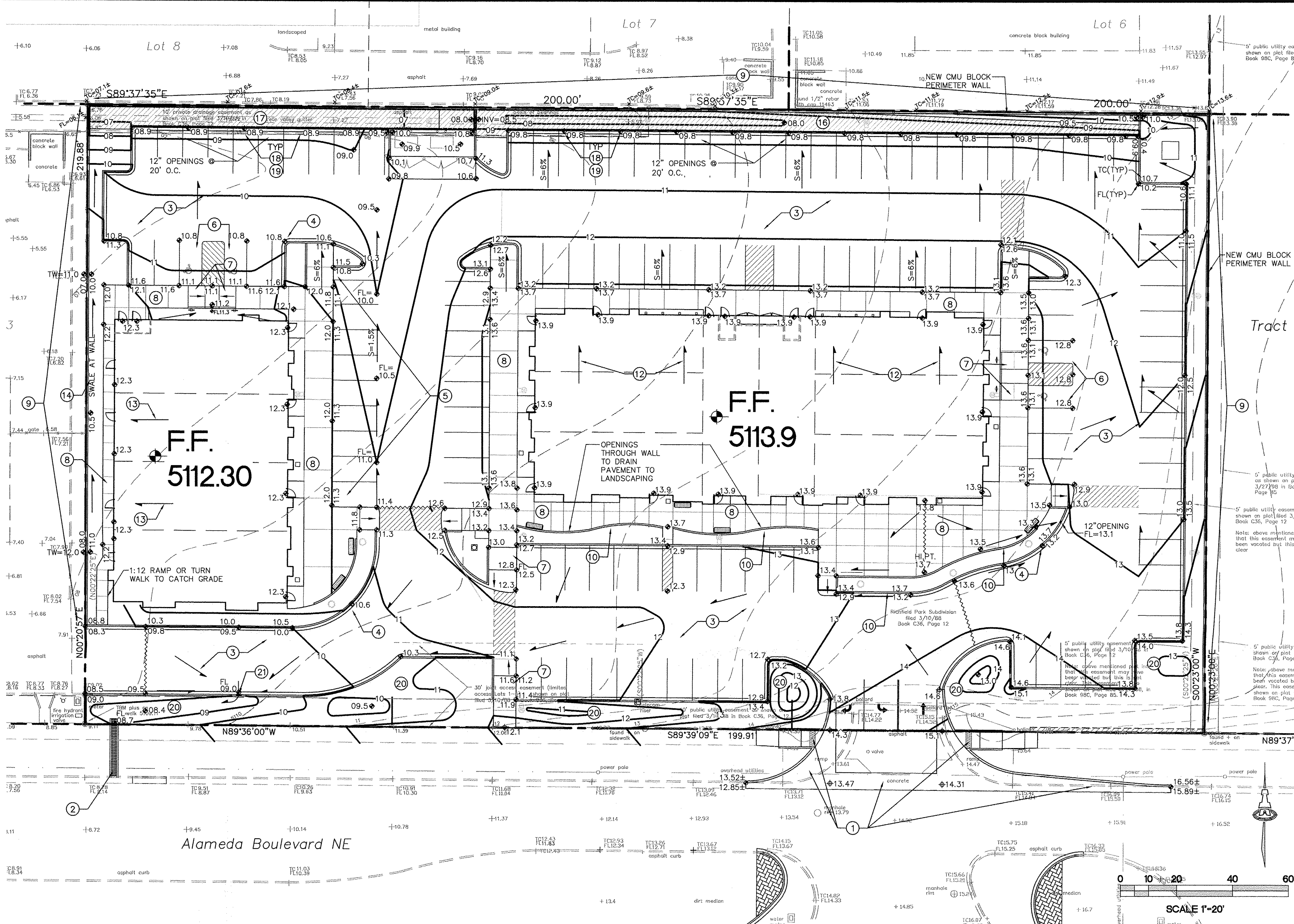




- ### KEYED NOTES
- NEW SITE ACCESS, ADA RAMPS, ETC. WITHIN R.O.W. TO BE CONSTRUCTED BY PUBLIC WORK ORDER.
 - NEW COVERED SIDEWALK CULVERT (24" WIDE BOTTOM WIDTH) WITHIN R.O.W. TO BE CONSTRUCTED BY PUBLIC WORK ORDER.
 - CONSTRUCT NEW PAVING AT ELEVATIONS SHOWN. PROVIDE SMOOTH TRANSITION WHEN MATCHING EXISTING PAVEMENT.
 - SPOT ELEVATIONS WITHIN GUTTER AREA REPRESENT FLOWLINE. ADD 0.5" TYPICAL FOR TOP OF ADJACENT CURB OR WALK ELEVATIONS. SEE KEYED NOTE (4) FOR EXCEPTION.
 - CONSTRUCT 8" HIGH TURNED-DOWN WALK THIS AREA TO ACHIEVE GRADES SHOWN.
 - CONSTRUCT HANDICAP PARKING AREA AT ELEVATIONS SHOWN. SLOPE WITHIN HANDICAP PARKING AREA TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
 - CONSTRUCT 1:12 (MAX.) SIDEWALK RAMP TO ADA STANDARDS. SEE ARCHITECTURAL FOR DETAILS.
 - CONSTRUCT CONCRETE PEDESTRIAN WALKS AND PATIOS AT ELEVATIONS SHOWN.
 - CONSTRUCT PERIMETER CMU WALL (MAXIMUM RETAINING = 30") WITHIN PROPERTY TO ACHIEVE GRADES SHOWN. TOP OF PRIVACY WALL VARIES (MAXIMUM HEIGHT = 6' ABOVE HIGH-SIDE GRADE). SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.
 - CONSTRUCT GARDEN WALL / HIGH CURB (MAXIMUM RETAINING = 12") TO ACHIEVE GRADES SHOWN. SLOPE PAVEMENT TO DRAIN TO SIDES OR TO 4" DIA. PIPES PLACED THROUGH WALL/CURB AT LOW POINTS.
 - NOT USED
 - EAST BUILDING ROOF TO DISCHARGE NORTH THROUGH WALK DIRECTLY TO ASPHALT PAVEMENT. OWNER'S OPTION TO UTILIZE EITHER PIPES OR SIDEWALK TRENCH DRAINS. SEE ARCHITECTURAL AND PLUMBING PLAN(S) FOR ROOF DRAIN LOCATIONS AND SIZES.
 - WEST BUILDING ROOF TO BE COLLECTED WITHIN A DRAIN SYSTEM AND RELEASED TO THE WEST SWALE. SEE ARCHITECTURAL AND PLUMBING PLAN(S) FOR ROOF DRAIN LOCATIONS AND SIZES.
 - CONSTRUCT 4' WIDE X 12" DEEP X 6" DEPRESSED SHALLOW F.F. ROCK SWALE WITHIN LANDSCAPING THIS AREA TO DIRECT ROOF FLOW TO POND 2. SEE GENERAL NOTE 1.
 - CONSTRUCT 25 LF OF 18" WIDE (BOTTOM WIDTH) 'U' SHAPED CONCRETE CHANNEL TO PASS CONCENTRATED FLOW TO POND 'A'.
 - DETENTION POND 1. SEE SHEET CG-501 FOR DETAIL.
 - DETENTION POND 2. SEE SHEET CG-501 FOR DETAIL.
 - PROVIDE 12" WIDE OPENING(S) IN CURB.
 - CONSTRUCT 3.0' X 3.0' X 12" DEEP F.F. ROCK EROSION PROTECTION AT EACH CURB OPENING. SEE GENERAL NOTE 'I' ON SHEET CG-501.
 - DEPRESS LANDSCAPING TO ELEVATIONS SHOWN TO PROVIDE SHALLOW WATER HARVESTING AREA TO COLLECT MINOR FLOW. UTILIZE FOR LANDSCAPING AND RELEASE EXCESS TO PAVEMENT.
 - PROVIDE 24" WIDE OPENING IN CURB AT LOW POINT.



PROJECT NOTES

PROPERTY: THE PROPERTY, APPROXIMATELY 2.0 ACRES, IS AN UNDEVELOPED COMMERCIAL PROPERTY LOCATED IN ALBUQUERQUE (ZONE ATLAS PAGE C-17-2) ON THE NORTH SIDE OF ALAMEDA BLVD., WEST OF WASHINGTON ST. NE. ALAMEDA BLVD. BORDERS THE PROPERTY TO THE SOUTH. DEVELOPED COMMERCIAL PROPERTY BORDERS THE PROPERTY TO THE NORTH AND WEST. UNDEVELOPED PROPERTY (TEMPORARY OVERFLOW PARKING FOR ADJACENT PROPERTY) BORDERS THE PROPERTY TO THE EAST. THE PROPERTY, WHICH SLOPES TO THE NORTHWEST AT APPROX. 2%, IS SPARSELY COVERED WITH NATIVE VEGETATION.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS CONSIST OF TWO COMMERCIAL BUILDINGS WITH ASSOCIATED PAVED PARKING AND LANDSCAPING.

LEGAL: LOTS 5A, RICHFIELD PARK SUBDIVISION, ALBUQUERQUE, NEW MEXICO.
ADDRESS: 4545 ALAMEDA BLVD. NE
ZONE MAP: C-17
FLOOD ZONE: PER BERNALILLO COUNTY FIRM MAP #35001C0136G DATED SEPTEMBER 26, 2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2-PERCENT-ANNUAL-CHANCE FLOODPLAIN.

BENCHMARK: CITY OF ALBUQUERQUE 12-C17, AN ALUMINUM DISK LOCATED AT THE NNW QUADRANT OF THE INTERSECTION OF WASHINGTON ST. AND WASHINGTON PL. NE ELEVATION: 5110.62 NAVD 1988.

OFF-SITE: NO OFF-SITE DRAINAGE AFFECTS THIS PROPERTY.

DRAINAGE - EXISTING:
CURRENTLY, UNDEVELOPED FLOW DRAINS AS SHEETFLOW TO THE NORTHWEST CORNER AND PASSES INTO THE ADJACENT DEVELOPED PROPERTY VIA AN EXISTING ASPHALT DRAINAGE CHANNEL WITH CONCRETE VALLEY GUTTER (DRAINAGE EASEMENT). FLOW IS THEN DIRECTED WEST TO OUTLET TO WASHINGTON STREET AND PASSES INTO EXISTING IMPROVED CHANNELS WHICH DIRECT FLOW TO AN AMAFCA CHANNEL.

DRAINAGE - PROPOSED:
PER THE MASTER DRAINAGE PLAN FOR THE RICHFIELD PARK SUBDIVISION PREPARED BY ESPEY, HUSTON & ASSOC. (1986), LOTS ARE TO FREE DISCHARGE INTO THE PUBLIC STREET SYSTEM WHICH CONVEYS RUNOFF TO THE EXISTING AMAFCA CHANNEL LOCATED ALONG THE WEST BOUNDARY OF RICHFIELD PARK. TRACT D-1. AN EXCEPTION TO THE FREE DISCHARGE LIMITS THE PEAK DISCHARGE FOR LOTS 4 AND 5 TO 2.11 CFS PER ACRE (4.22 CFS TOTAL ALLOWABLE DISCHARGE FOR THIS PROPERTY) DUE TO THE CAPACITY LIMITATIONS OF THE EXISTING DRAINAGE CHANNEL AT THE NORTHWEST CORNER OF THE PROPERTY.

AS SHOWN ON THE BASIN EXHIBIT, THE PROPERTY WILL BE DIVIDED INTO THE FOLLOWING SUB-BASINS:

SUB-BASINS LA1, LA2 AND LA3 ARE LANDSCAPED AREAS WITH WATER HARVESTING PROVIDED TO ACCOMMODATE THE 100-YEAR STORM FOR EACH AREA.

SUB-BASIN O1 WILL GENERATE 0.1 CFS TO PASS TO THE ADJACENT PROPERTY TO THE WEST TO FOLLOW HISTORIC FLOWPATHS.

SUB-BASIN B1 WILL DISCHARGE APPROXIMATELY 1.9 CFS TO ALAMEDA BLVD. AS APPROVED BY COA (SEE CONCEPTUAL GRADING PLAN LETTER OF APPROVAL DATED JUNE 5, 2012).

SUB-BASINS B2 AND B3 WILL BE ROUTED THROUGH DETENTION POND 1 WHICH WILL DISCHARGE AT A PEAK RATE OF 2.9 CFS TO POND 2.

SUB-BASIN B4 WILL JOIN WITH THE DISCHARGE FROM POND 2 TO DISCHARGE AT A PEAK RATE OF 4.0 CFS TO THE EXISTING DRAINAGE EASEMENT (4.22 ALLOWABLE). SEE SHEET CG-501 FOR AHYMO SUMMARY.

PROPOSED BASINS

LEGEND

+8.63	EXISTING SPOT ELEVATION
5110	EXISTING CONTOUR
13.5	PROPOSED SPOT ELEVATION
13	PROPOSED CONTOUR
FL	FLOW LINE
FF	FINISHED FLOOR
78.3±	EXISTING ELEVATION (±) TO MATCH. PROVIDE SMOOTH TRANSITION.
	PROPOSED RETAINING WALL
	GRADE BREAK

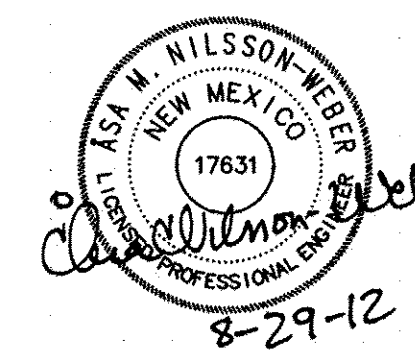
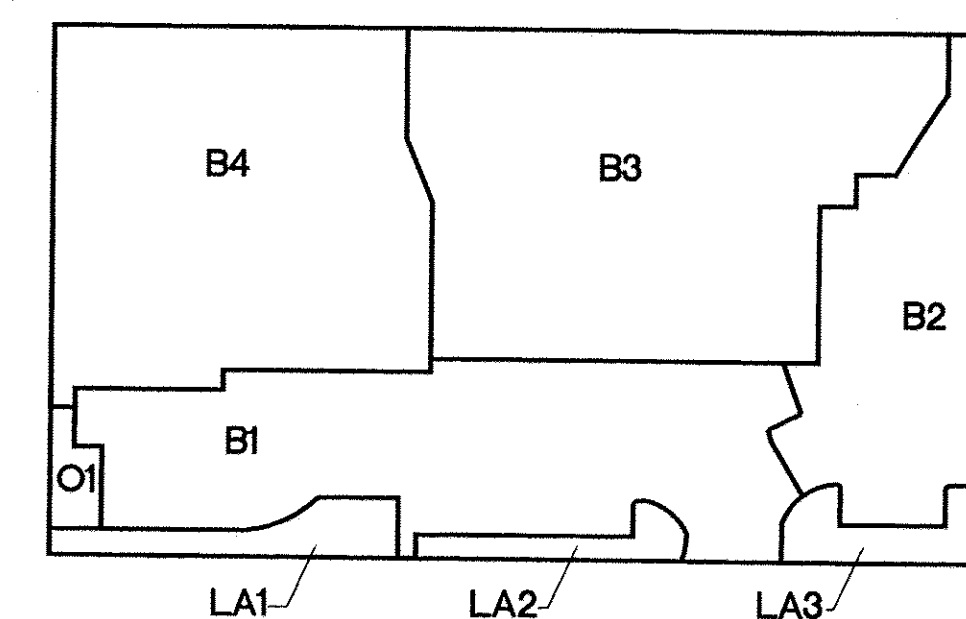
TC= TOP OF CURB
FL= FLOWLINE OF CURB
FG= FINAL GRADE OF POND
(SEE GENERAL NOTE C)
TRW= TOP OF RETAINING
EX= EXISTING GRADE

GENERAL NOTES

- COORDINATE WORK WITH SITE PLAN AND UTILITY PLAN.
- ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- FINAL GRADES SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- MINIMUM SLOPES SHALL BE 1% UNLESS OTHERWISE NOTED.
- EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. ALL UTILITIES SHOULD BE FIELD VERIFIED AND LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES.
- THE ENVIRONMENTAL PROTECTION AGENCY REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR PROJECTS WHERE CONSTRUCTION ACTIVITIES (INCLUDING OTHER LAND-DISTURBING ACTIVITIES) DISTURB ONE ACRE OR MORE.
- ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES, TYPICAL.
- WHERE NEW GRADES ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS TO EXISTING INFRASTRUCTURE SHALL BE SMOOTH, SHALL ALLOW FOR POSITIVE DRAINAGE AS INTENDED ON PLAN AND SHALL MEET ADA REQUIREMENTS.
- ALL PERMANENT EROSION PROTECTION TO BE 12" DEPTH OF 6" AVG. DIA. FRACTURED FACED ROCK (F.F. ROCK) OVER GEOTEX 50 NON-WOVEN GEOTEXTILE. OVEREXCAVATE AS REQ'D SO THAT TOP OF EROSION PROTECTION = PROPOSED GRADE (SEE GENERAL NOTE C).
- OWNER SHALL MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO MAINTAIN GRADES, IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.
- LANDSCAPED AREAS SHALL BE DEPRESSED TO RETAIN MOISTURE THAT FALLS ON THEM FOR INFILTRATION. DO NOT DEPRESS LANDSCAPING WITHIN 10' OF BUILDING.

NOTICE TO CONTRACTOR:

PONDS 1 AND 2, INCLUDING LENGTH, WIDTH, ELEVATIONS, OUTLET SIZE INVERT ELEVATIONS, ETC. HAVE BEEN SPECIFICALLY DESIGNED TO LIMIT DISCHARGE TO THE MAXIMUM ALLOWABLE DISCHARGE RATE OF 4.22 CFS. THESE PONDS MUST BE CONSTRUCTED PER PLANS IN ORDER TO RECEIVE ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY.



SHEET NAME

GRADING AND DRAINAGE DETAILS

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates

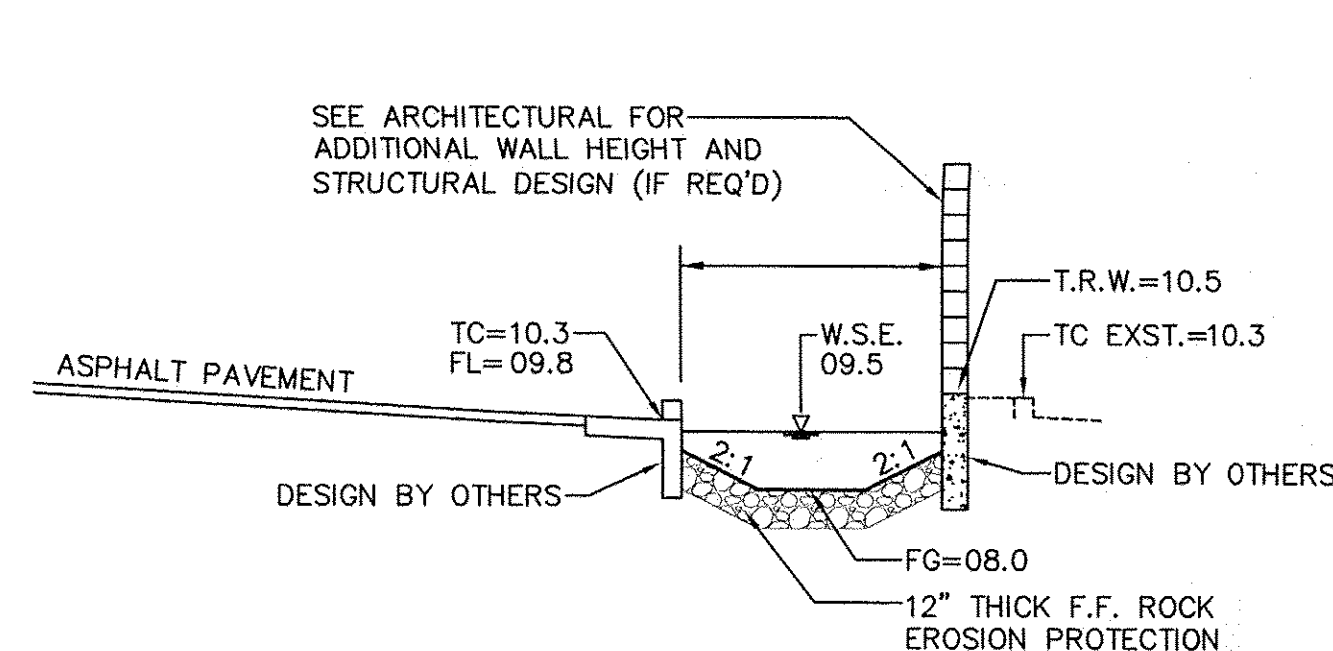
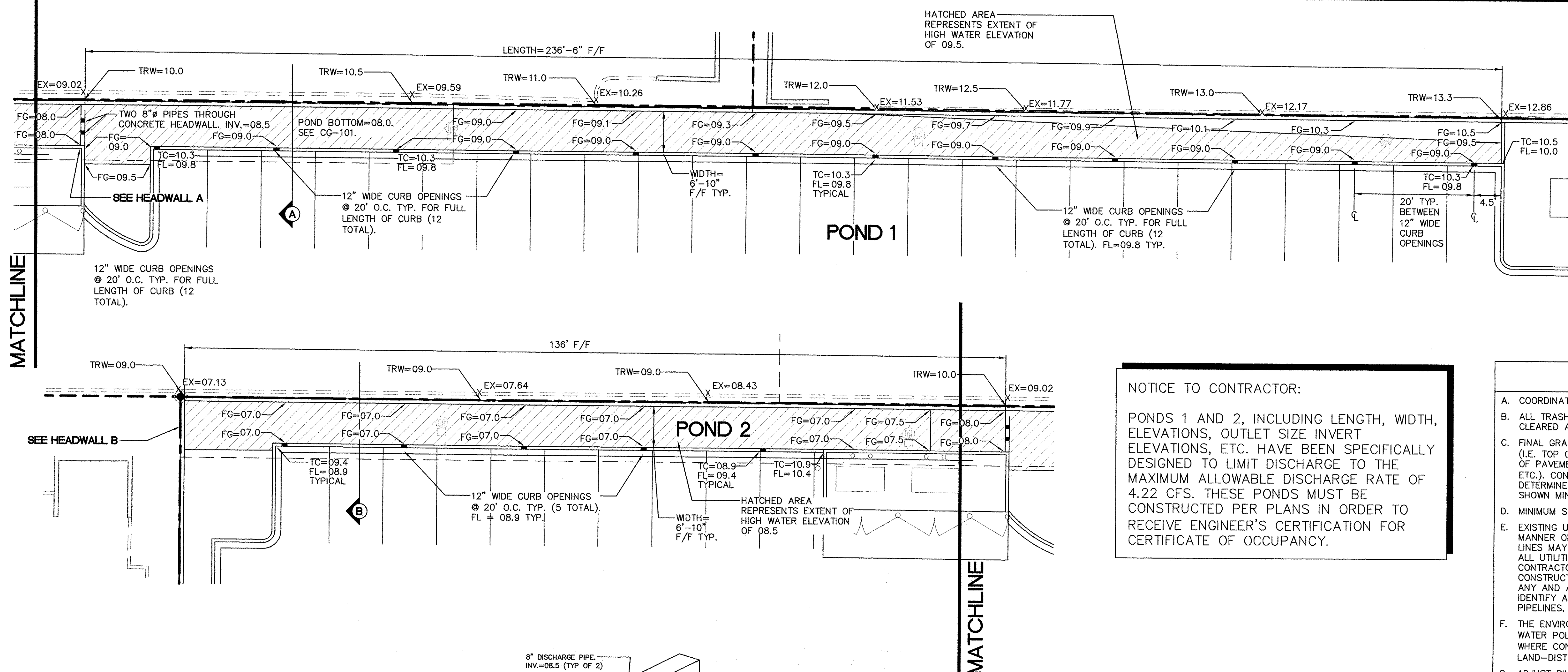
128 Monroe Street N.E.

Albuquerque, New Mexico 87108

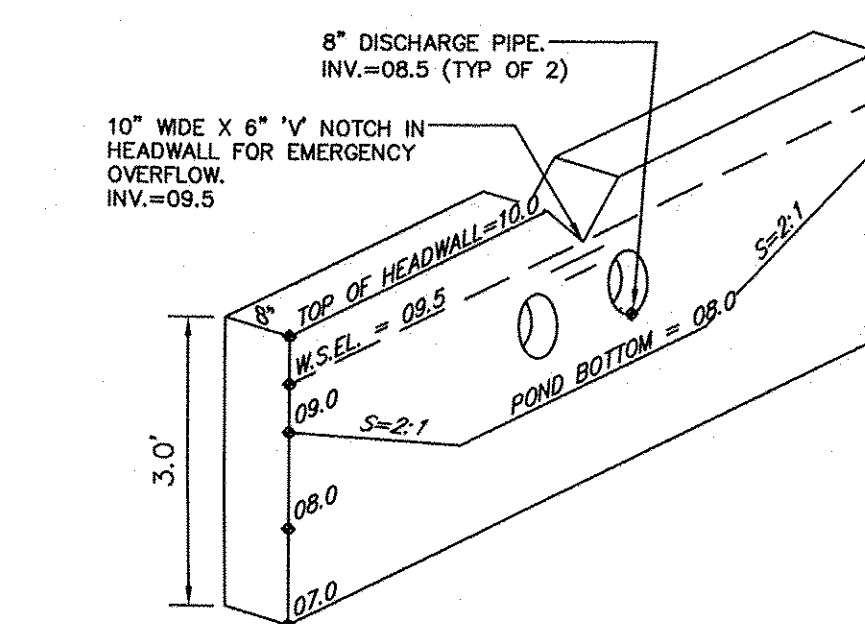
Ph. 505-268-8828 www.iacivil.com

1918 CG-101.dwg

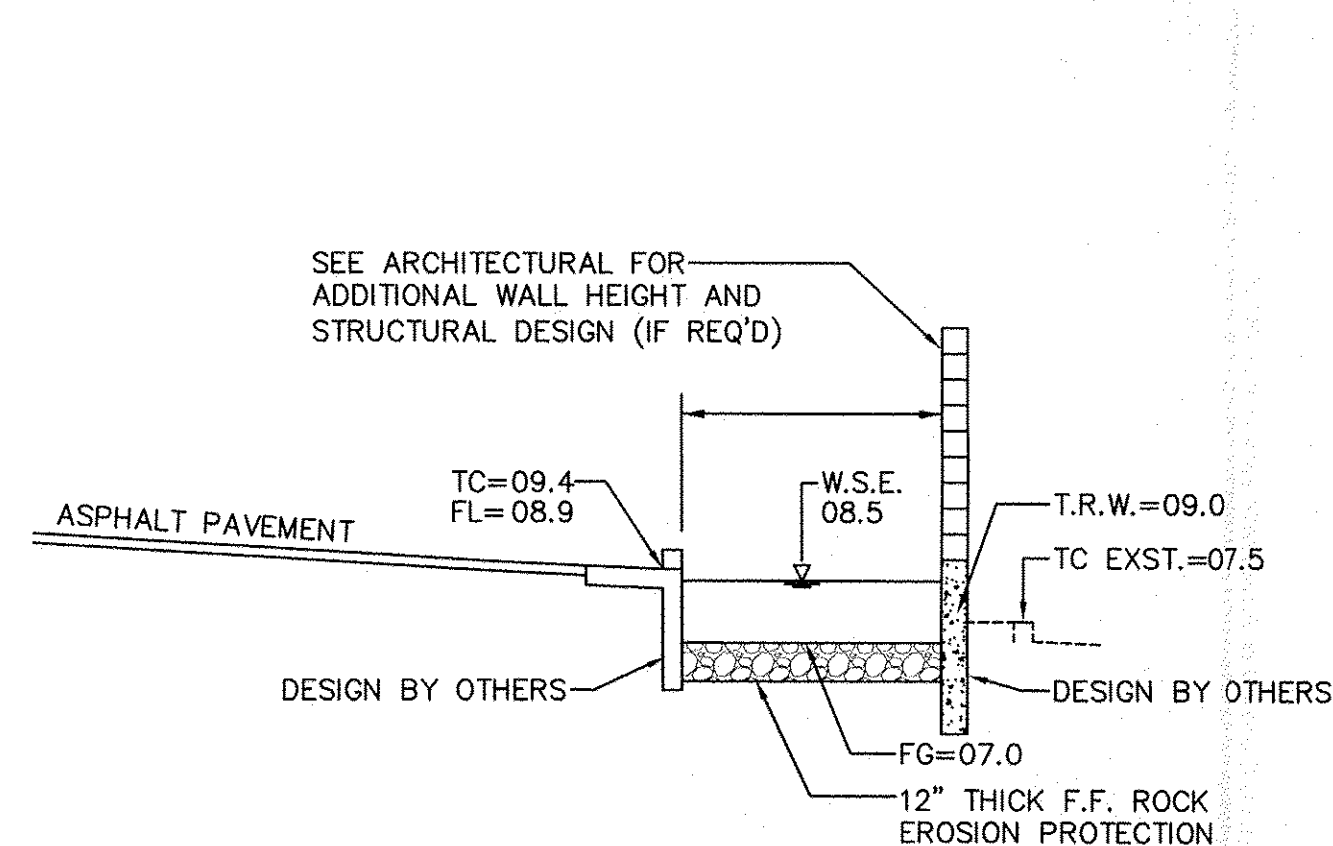
Aug 30, 2012



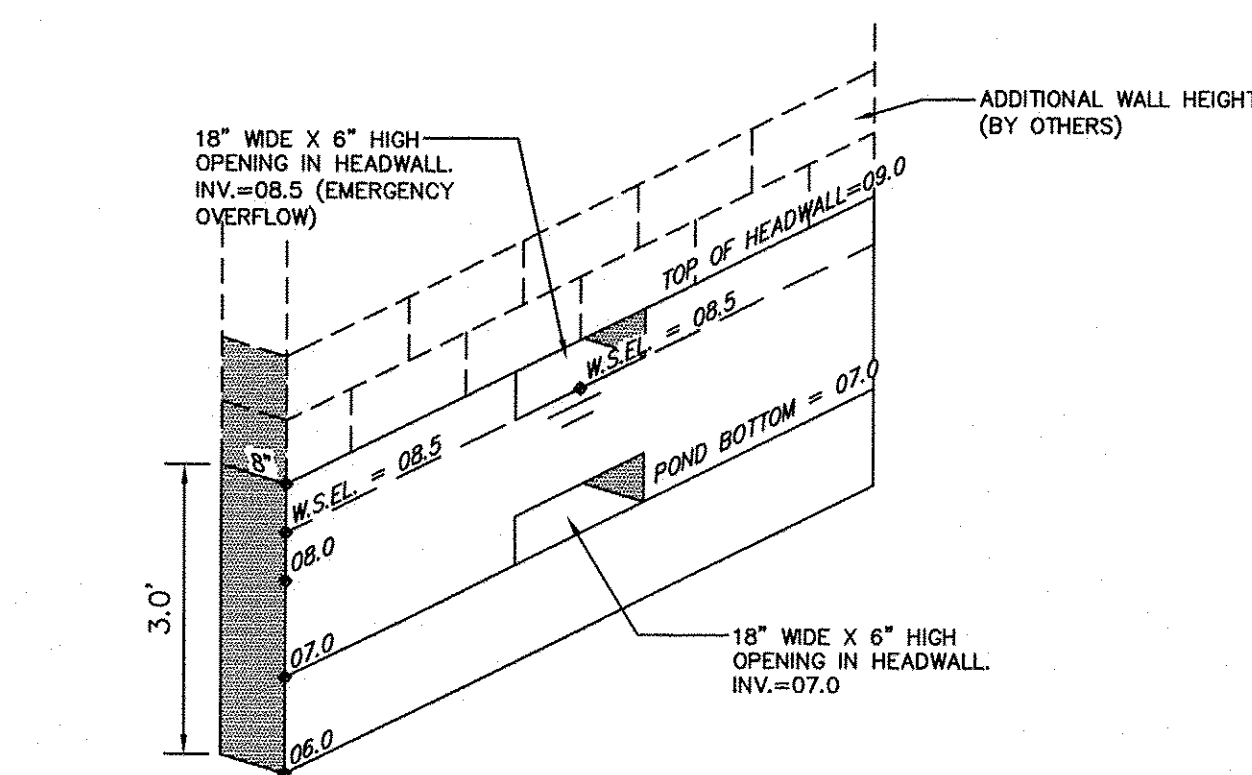
POND 1 SECTION A



HEADWALL A: BETWEEN PONDS 1 AND 2



POND 2 SECTION B



HEADWALL B: BETWEEN PONDS 1 AND 2 AT NW CORNER

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*S RICHFIELD PARK, LOT 5A									
*S DEVELOPED CONDITIONS									
*S 100-YR, 6-HR STORM									
*S 1918P.DAT									
*S JULY 2012									
*S BY GERRY DONART									
*S ISAACSON & ARFMAN, P.A.									

START									
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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE
B2	COMPUTE NM HYD	B2	-	1	0.00048	1.28	0.050	1.97645	4.195 PER IMP= 88.00
B3	COMPUTE NM HYD	B3	-	2	0.00093	2.50	0.100	2.01991	4.216 PER IMP= 92.00
B4	COMPUTE NM HYD	B4	-	3	0.00081	2.19	0.087	1.99822	4.195 PER IMP= 90.00
*S ADD LANDSCAPE AREA 7 & B3									
ADD HYD	B3.1	16	2	11	0.00140	3.78	0.150	2.00482	1.530 4.209

POND 1	COMPUTE NM HYD	B3.1	16	2	11	0.00140	3.78	0.150	2.00482

ADD HYD	B4.1	20	3	21	0.00222	4.78	0.236	1.99754	1.570 3.368

POND 2	COMPUTE NM HYD	B4.1	20	3	21	0.00222	4.78	0.236	1.99754
*S *****AP1*****									
ROUTE RESERVOIR	B4.2	21	30	0.00222	4.09 *	0.236	1.99754	1.670	2.880 AC-FT= 0.023
*S *****AP2*****									
B1	COMPUTE NM HYD	B1	-	4	0.00070	1.87 **	0.074	1.97645	4.175 PER IMP= 88.00
LA1	COMPUTE NM HYD	LA1	-	5	0.00008	0.16	0.004	0.98469	1.540 3.090 PER IMP= 0.00
LA2	COMPUTE NM HYD	LA2	-	6	0.00005	0.10	0.003	0.98469	1.540 3.216 PER IMP= 0.00
LA3	COMPUTE NM HYD	LA3	-	7	0.00008	0.16	0.004	0.98469	1.540 3.090 PER IMP= 0.00
*S *****O1*****									
O1	COMPUTE NM HYD	O1	-	8	0.00003	0.09	0.003	1.80983	1.530 4.414 PER IMP= 72.00

* POND 1 PEAK DISCHARGE TO DRAINAGE EASEMENT (4.22 CFS ALLOWED)

** BASIN B1 PEAK DISCHARGE TO ALAMEDA BLVD.