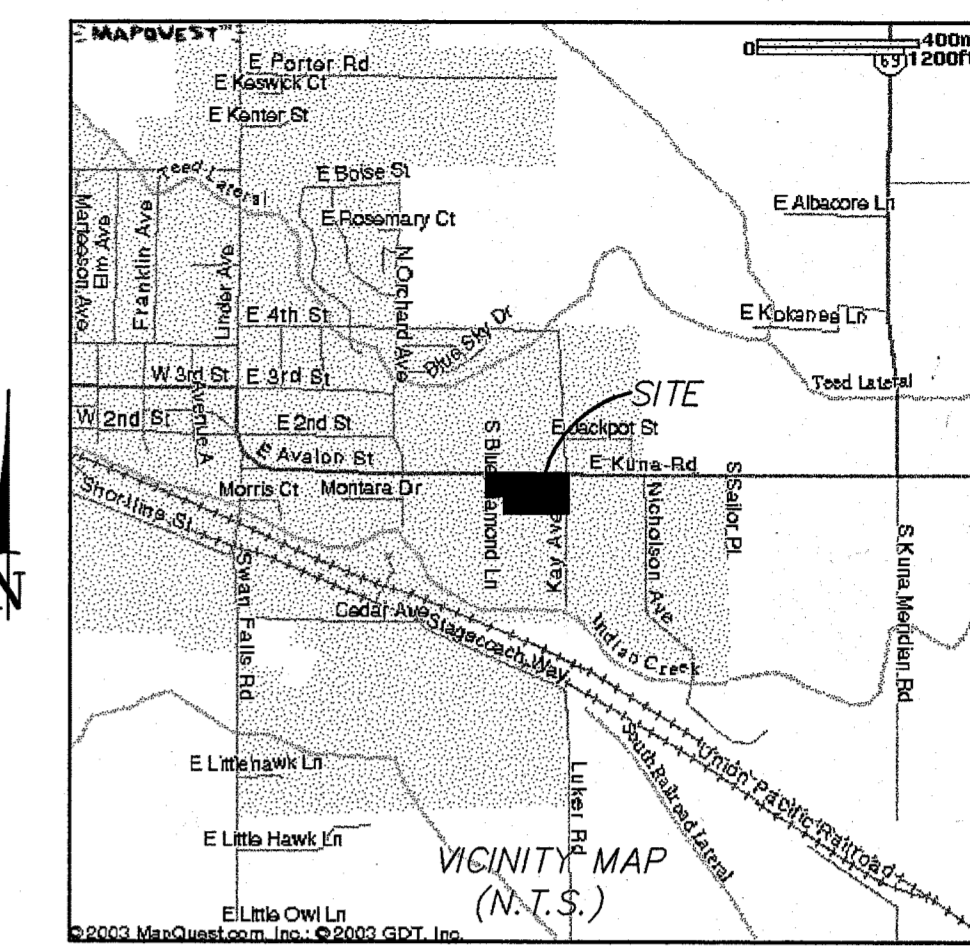
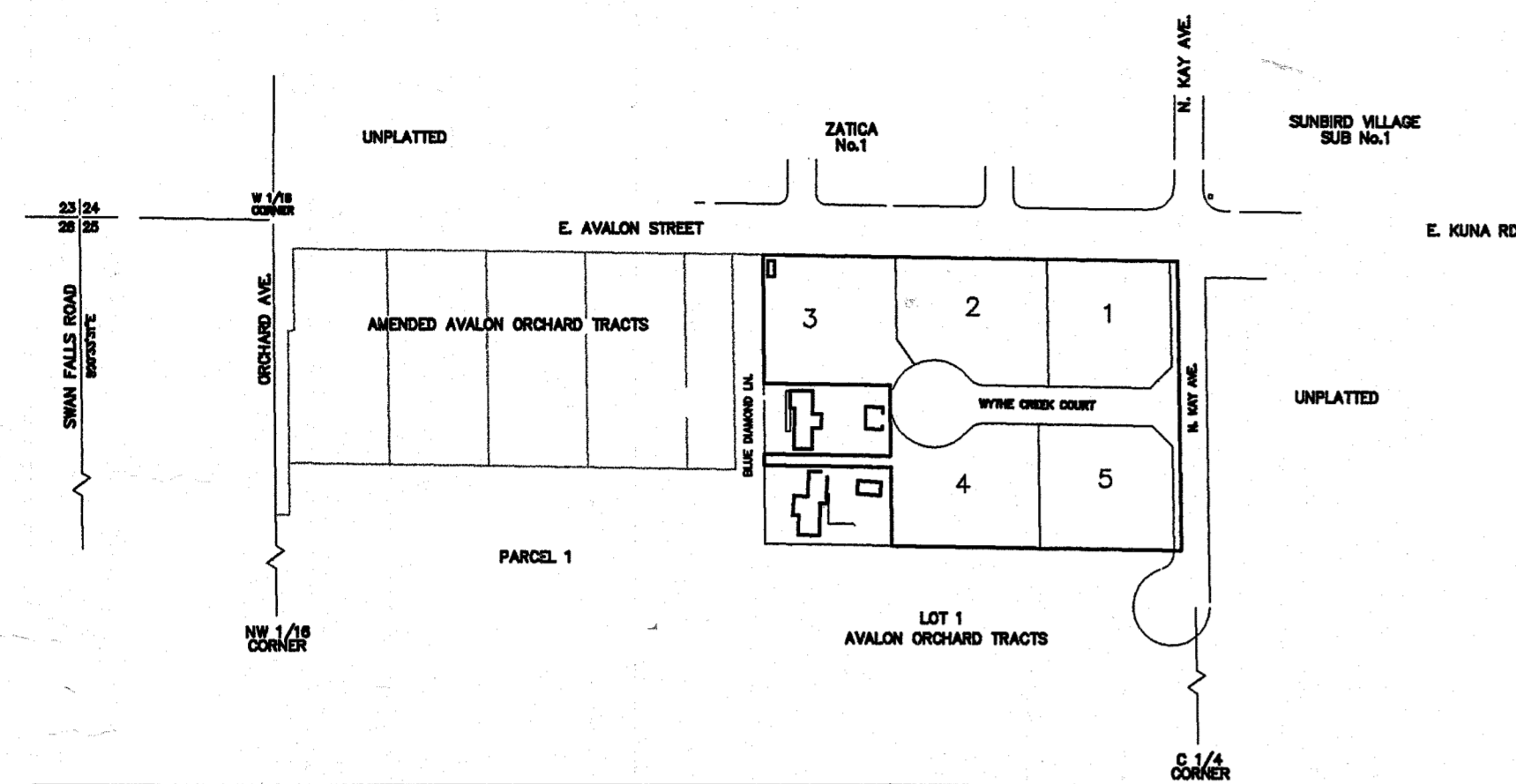


CEMENT FALLS PARK SUBDIVISION KUNA, IDAHO DECEMBER 2, 2003



GENERAL NOTES:

- 1 - ALL CONSTRUCTION IN OR OUT OF THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE 2003 EDITION OF THE I.S.P.W.C. AND THE ACHD SUPPLEMENTAL SPECIFICATIONS. NO EXCEPTIONS TO DISTRICT POLICY, STANDARDS, AND THE I.S.P.W.C. WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED BY ACHD IN WRITING.
- 2 - ALL DISTANCES AND DATA SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATION MAY BE MADE PRIOR TO THE START OF THE WORK.
- 3 - GENERAL LOCATION OF UTILITIES ARE SHOWN ON THE PLANS. THEY ARE TO BE USED FOR GENERAL INFORMATION ONLY AND DO NOT DESIGNATE EXACT UTILITY LOCATION. UTILITIES SHOWN ARE NOT INCLUSIVE OF ALL UTILITIES THAT EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE APPROPRIATE UTILITY COMPANY OR DIGLINE FIELD LOCATE ANY UTILITY INSTALLATIONS WHICH MIGHT BE AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING WORK IN THAT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICE OF EXISTING UTILITIES AND FOR RESTORING ANY UTILITIES DAMAGED DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. THE DIGLINE PHONE NUMBER IS 1-800-342-1585.
- 4 - RIGHT-OF-WAY PERMITS MUST BE SECURED FROM ACHD AND/OR ITD PRIOR TO BEGINNING CONSTRUCTION WITHIN ANY PUBLIC RIGHT-OF-WAY.
- 5 - CONCRETE COLLARS SHALL BE PROVIDED AROUND ALL MANHOLES AND VALVE BOXES WITHIN PAVED AREAS.
- 6 - ALL TOPS OF VALVE BOXES AND SEWER MANHOLES SHALL BE SET OR ADJUSTED TO BE FLUSH WITH THE SLOPE OF THE FINISHED STREET GRADES. THE ROADWAY CONTRACTOR SHALL INSTALL AND ADJUST ALL SPACERS, GRADE RINGS, MANHOLE RINGS AND LIDS, AND CONCRETE COLLARS. CONTRACTOR SHALL CONTACT CITY OF KUNA 24 HOURS PRIOR TO POURING CONCRETE COLLARS.
- 7 - ALL UTILITIES INCLUDING SERVICE LINES WITHIN STREET TRAVEL WAYS SHALL BE IN PLACE PRIOR TO CURB, GUTTER, SIDEWALK, AND STREET CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL AFFECTED UTILITY OWNERS PRIOR TO CONSTRUCTION.
- 8 - ALL CONTRACTOR PERSONNEL WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BARRICADES, SAFETY DEVICES, AND TRAFFIC CONTROL WITHIN AND AROUND THE PROJECT.
- 9 - WORK SUBJECT TO APPROVAL BY THE CITY OF KUNA MUST BE INSPECTED AND APPROVED PRIOR TO BACKFILLING TRENCHES FOR WATER AND SEWER PIPE.
- 10 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A CONSTRUCTION TRAFFIC CONTROL PLAN FOR ANY WORK THAT WILL CAUSE DISRUPTION TO TRAFFIC. THE TRAFFIC CONTROL PLAN SHALL BE APPROVED BY ACHD OR ITD.
- 11 - MISCELLANEOUS SMALL STRUCTURES SUCH AS FENCES, MAILBOXES SIGNS, IRRIGATION AND DRAINAGE FACILITIES, AND UTILITY POLES, LINES AND APPURTENANCES WHEN NECESSARY TO REMOVE OR DISTURB, SHALL BE REPLACED OR RECONSTRUCTED TO EQUAL OR BETTER THAN THEIR CONDITION PRIOR TO DISTURBANCE.
- 12 - PRIOR TO ANY CONSTRUCTION INCLUDING POT-HOLING FOR LOCATION, A PRECONSTRUCTION MEETING WILL BE HELD WITH CITY STAFF IN ATTENDANCE TO REVIEW CONDITIONS OF CONSTRUCTION, SCHEDULE, AND INSPECTION PLANS.
- 13 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF INSPECTIONS REQUIRED BY THE CITY OF KUNA PUBLIC WORKS DEPT. CITY STAFF SHALL BE NOTIFIED PRIOR TO ALL TESTING CONDUCTED ON THE PROJECT. AT THE CITY'S DISCRETION, TEST SAMPLING EVENTS OR MONITORING SHALL BE ATTENDED BY CITY PERSONNEL.

- 14 - ALL WATER VALVES WILL BE PLACED SO AS NOT TO CONFLICT WITH ANY CONCRETE CURB, GUTTER, VALLEY GUTTER, AND SIDEWALK IMPROVEMENTS.
- 15 - THE FIRE HYDRANTS SHALL BE DRY BARREL FIRE HYDRANTS CONFORMING TO AWWA C-509. HYDRANTS SHALL HAVE A 5-FT SETTING, MIN. 5-1/4 INCH VALVE OPENING, 150 PSI WORKING PRESSURE, ONE 4-1/2 INCH DIA. NATIONAL STANDARD PUMPER NOZZLE, AND TWO 2-1/2 INCH DIA. NATIONAL STANDARD THREAD FIRE HOSE NOZZLES. FIRE HYDRANTS SHALL BE A CLOW MEDALLION HYDRANT, WATEROUS PACER 100 HYDRANT, OR MUELLER A423.
- 16 - ALL MATERIAL PLACED AS FILL OR BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH I.S.P.W.C. STANDARD SPECIFICATIONS.
- 17 - ROADWAY CONSTRUCTION WILL MEET SPECIFIC DETAILS AND REQUIREMENTS SHOWN ON THE PLANS, I.S.P.W.C. SPECIFICATIONS AND THE FOLLOWING I.S.P.W.C. STANDARD DRAWINGS:
 1. CURB TERMINUS, DRAWING NO. SD-707
 2. VERTICAL CURB AND GUTTER, DRAWING NO. SD-701.
 3. PEDESTRIAN RAMP, DRAWING NO. SD-712A.
 4. SIDEWALKS, DRAWING NO. SD-709.
 5. VALLEY GUTTER, DWG NO. SD-708.
- 18 - CONTRACTOR SHALL COORDINATE WITH IDAHO POWER AS WELL AS ALL OTHER UTILITY COMPANIES INCLUDING INTERMOUNTAIN GAS AND QWEST PRIOR TO START OF CONSTRUCTION.
- 19 - IRRIGATION PIPE AND BOX SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTIONS 601 AND 602 OF I.S.P.W.C.

- 9 - ALL WATER PIPE SHALL BE C900 CONFORMING TO SDR18, CLASS 150 PVC.
- 10 - ALL WATER DISTRIBUTION LINES, SERVICE, HYDRANTS AND OTHER APPURTENANCES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE I.S.P.W.C. STANDARDS DIVISION 400. PIPE AND OTHER MATERIAL SHALL BE INSTALLED IN A WORKMANLIKE MANNER BY PERSONS PROPERLY QUALIFIED TO PERFORM SAID WORK AND SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. FINAL PRESSURE TESTS SHALL BE WITNESSED AND APPROVED BY CITY OF KUNA STAFF.
- 11 - ALL WATER MAINS SHALL BE DISINFECTED ACCORDING TO THE "STANDARDS FOR DISINFECTING WATER MAINS" PREPARED BY THE AMERICAN WATER WORKS ASSOCIATION. THE WATER SYSTEM SHALL CONFORM WITH THE "IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS" PREPARED BY THE DIVISION OF ENVIRONMENTAL OF THE IDAHO DEPARTMENT OF HEALTH AND WELFARE.
- 12 - SEWER SYSTEM CONSTRUCTION SHALL MEET THE REQUIREMENTS SHOWN ON THE PLANS, I.S.P.W.C. SPECIFICATIONS, AND THE FOLLOWING I.S.P.W.C. STANDARD DRAWINGS:
 1. STANDARD MANHOLE TYPE A, DRAWING NO. SD-501
 2. STANDARD SEWER SERVICE CONNECTIONS FOR NEW DEVELOPMENT PROJECTS, DRAWING NO. SD-511A

WATER/SEWER:

- 1 - 1-1/2" WATER SERVICES SHALL BE INSTALLED TO EACH COMMERCIAL SITE WITH 18" WATER METER SETTER, 20" METER TILE, AND A 20" WATER METER LID WITH KNOCK OUT PLATE FOR TOUCH READ METER. ALL WATER SERVICES SHALL BE CONSTRUCTED PER I.S.P.W.C. SD-401 AND CITY OF KUNA STANDARDS. SEE PLAN FOR SERVICE SPACING.
- 2 - 8" DIAMETER SDR 35 ASTM D3034 SEWER MAIN SHALL BE INSTALLED IN STREET ROW. SEWER SERVICE LINES SHALL BE INSTALLED AND STUBBED OUT TO 5 FT. BEYOND EACH PROPERTY LINE.
- 3 - THE SEWER MAIN SHALL BE PRESSURE TESTED IN ACCORDANCE WITH I.S.P.W.C. 500.3.4.C AND DEFLECTION TESTED IN ACCORDANCE WITH SECTION 500.G. THE FINAL PRESSURE TEST SHALL BE WITNESSED AND APPROVED BY CITY OF KUNA STAFF.
- 4 - MAINTAIN HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAIN AND NON POTABLE WATER LINES IN ACCORDANCE WITH ISPCW.
- 5 - MINIMUM DEPTH OF COVER FOR WATERLINES UNLESS OTHERWISE SHOWN ON THE PLANS SHALL BE 4.0 FEET FROM FINISH GRADE.
- 6 - THRUST BLOCKS SHALL BE PLACED AT ALL DIRECTION CHANGES IN THE PRESSURE PIPE.
- 7 - DISTANCES SHOWN ALONG PIPELINES ARE HORIZONTAL DISTANCES AND ARE NOT PIPE LENGTH.
- 8 - ALL GATE VALVES SHALL BE LOCATED ADJACENT TO TEES OR CROSSES.

STREET LIGHTING/SIGNING:

- 1 - STREET LIGHTING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF KUNA STANDARDS.
- 2 - WYTHE CREEK COURT SHALL HAVE A STREET NAME SIGN AT THE INTERSECTION WITH KAYE AVENUE. KAY AVENUE SHALL HAVE A STREET SIGN AT THE INTERSECTION WITH AVALON. A STOP SIGN SHALL ALSO BE PLACED AT BOTH INTERSECTION AS WELL. COORDINATE SIGN SPECIFICATIONS (SIZE/MATERIAL) WITH CITY OF KUNA STAFF.
- 3 - ALL POWER LINES MUST BE UNDERGROUND ON THE INTERIOR AND EXTERIOR OF ALL SUBDIVISIONS PER CITY OF KUNA.

BM #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	10000.38	10000.91	2896.58	AL. CAP. CENTER OF KAY/AVALON INT.
2	9935.01	10020.33	2893.31	BRASS CAP. NE CORNER OF KAY/AVALON INT.
3	10059.89	10025.93	2893.41	BRASS CAP. SE CORNER OF KAY/AVALON INT.
4	10017.75	8690.81	2700.98	BRASS CAP 1/8TH CNR. CENTER OF ORCHARD/AVALON INT.

* THE CAPACITY REQUIREMENTS FOR TRENCHES 1 THROUGH 4 ARE MET IN 3 FOOT OF DEPTH. AN ADDITIONAL FOOT OF DEPTH HAS BEEN ADDED TO EACH TRENCH TO MEET ACHD'S REQUIREMENT FOR 1 FOOT OF FREEBOARD.

PER TEST HOLES DUG AT VARIOUS LOCATIONS AROUND THE SITE, SEASONAL HIGH GROUNDWATER IS LOWER THAN 2676.00. THE BOTTOM OF THE DEEPEST INFILTRATION TRENCH (# 4) IS NO DEEPER THAN 2683.50

DRAINAGE CALCULATIONS:

September 4, 2003	
DRAINAGE AREA	7,912 ft ²
RUNOFF COEFFICIENT	0.9
WIDTH OF TRENCH	6 ft
LENGTH OF TRENCH	92 ft
AREA OF INFILTRATION	552 ft ²
ASSUMED PERCOLATION RATE	9.0 in/yr
DEPTH OF SEEPAGE TRENCH	4 ft
VOID RATIO	40%

100-YEAR STORM DURATION	STORM INTENSITY (in/hr)	RUNOFF RATE (cfs)	RUNOFF VOLUME (ft ³)	PERC. VOLUME (ft ³)	STORAGE REQUIRED (ft ³)	STORAGE +15% SED. (ft ³)
1 hour	1.08	0.18	532	358	561	645

September 4, 2003	
DRAINAGE AREA	7,475 ft ²
RUNOFF COEFFICIENT	0.9
WIDTH OF TRENCH	6 ft
LENGTH OF TRENCH	92 ft
AREA OF INFILTRATION	521 ft ²
ASSUMED PERCOLATION RATE	9.0 in/yr
DEPTH OF SEEPAGE TRENCH	4 ft
VOID RATIO	40%

100-YEAR STORM DURATION	STORM INTENSITY (in/hr)	RUNOFF RATE (cfs)	RUNOFF VOLUME (ft ³)	PERC. VOLUME (ft ³)	STORAGE REQUIRED (ft ³)	STORAGE +15% SED. (ft ³)
1 hour	1.08	0.16	509	369	553	638

September 4, 2003	
DRAINAGE AREA	11,891 ft ²
RUNOFF COEFFICIENT	0.9
WIDTH OF TRENCH	6 ft
LENGTH OF TRENCH	146 ft
AREA OF INFILTRATION	876 ft ²
ASSUMED PERCOLATION RATE	9.0 in/yr
DEPTH OF SEEPAGE TRENCH	4 ft
VOID RATIO	40%

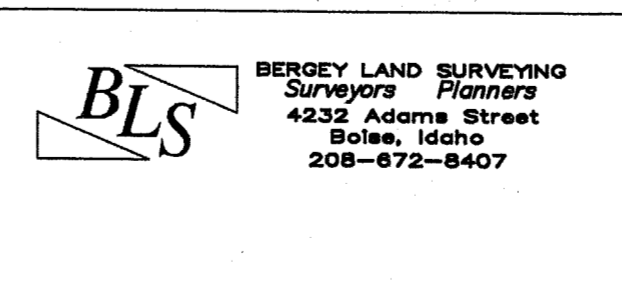
100-YEAR STORM DURATION	STORM INTENSITY (in/hr)	RUNOFF RATE (cfs)	RUNOFF VOLUME (ft ³)	PERC. VOLUME (ft ³)	STORAGE REQUIRED (ft ³)	STORAGE +15% SED. (ft ³)
1 hour	1.08	0.28	937	564	882	1,014

September 4, 2003	
DRAINAGE AREA	11,256 ft ²
RUNOFF COEFFICIENT	0.9
WIDTH OF TRENCH	8 ft
LENGTH OF TRENCH	135 ft
AREA OF INFILTRATION	810 ft ²
ASSUMED PERCOLATION RATE	9.0 in/yr
DEPTH OF SEEPAGE TRENCH	4 ft
VOID RATIO	40%

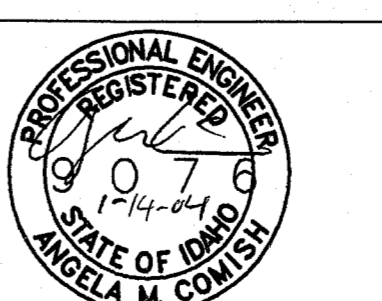
100-YEAR STORM DURATION	STORM INTENSITY (in/hr)	RUNOFF RATE (cfs)	RUNOFF VOLUME (ft ³)	PERC. VOLUME (ft ³)	STORAGE REQUIRED (ft ³)	STORAGE +15% SED. (ft ³)
1 hour	1.08	0.25	897	540	699	809

REV.	DESCRIPTION	BY	DATE
1	added row table	amc	10/4/03
2	changed street light note	amc	10/7/03
3	changed gen.note 1 and revised drain calcs	amc	10/23/03

CEMENT FALLS PARK SUBDIVISION



ENGINEERING with a MISSION
ANGELA M. COMISH, P.E.
1523 W. HAYS, BOISE, ID 83702
PHONE: (208) 385-9381



COVER SHEET

DRAWN BY: CRT	CHECKED BY: AMC
SCALE: 1" = 20'	
DATE: NOV. 11, 2003	
JOB NUMBER	SHEET 1 OF 5
DWG:	

CEMENT FALLS

