City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 17, 1991

DRB 91-224

Doug Copeland, P.E.
Easterling & Associates, Inc.
10131 Coors Boulevard, NW Suite H-7
Albuquerque, New Mexico 87114

RE: RIO GRANDE ALBUQUERQUE (J-9/D1B3)
RECEIVED NOVEMBER 5, 1991

Dear Mr. Copeland:

I have reviewed the conceptual grading plan dated October 23, 1991 and approve subject to the following:

- Concurrence from the adjacent property owners on the expansion and use of S.A.D. pond for the purpose of accommodating Tracts J and K developed storm water.
- Construction of all the retention ponds and berms identified on the subject plan with the first phase of development.
- Acceptance, by the owner(s), of maintenance responsibilities and legal liabilities of the temporary ponds and berms until such time that the permanent improvements are constructed.
- Review by the State Engineer's Office for any state requirements.
- Pursue a map revision for the existing flood plain impacting Tracts J and K.

If you should have any questions regarding this project, please feel free to call me at 768-2650.

Sincerely,

Fred J. Aguirre, P.E.
City Hydrologist

FJA/bsj
(WP+3080)

DRAINAGE INFORMATION SHEET J9/D1 B3

PROJECT TITLE: Rio Grande Albuquerque ZONE ATLAS/DRNG. FILE #: ~~K-9 + K 10~~

LEGAL DESCRIPTION: Tracts J + K of Atrisco Business Park

CITY ADDRESS: _____

ENGINEERING FIRM: Easterling + Associates CONTACT: Doug Copeland

ADDRESS: 10131 Coors Rd, N.W. Suite H-7/8 PHONE: 898-8021

OWNER: Rio Grande Albuquerque CONTACT: Bob Hoover

ADDRESS: 6901 Washington N.E. PHONE: 345-8511

ARCHITECT: Flatow, Moore, Bryan, Shaffer, McCabe CONTACT: Ross Small

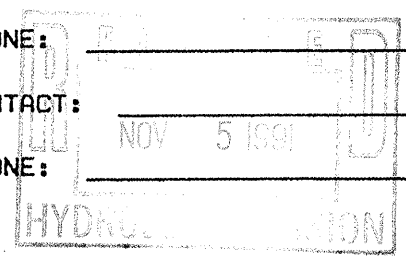
ADDRESS: 809 Copper N.W. PHONE: 766-6610

SURVEYOR: unknown CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: unknown CONTACT: _____

ADDRESS: _____ PHONE: _____



PRE-DESIGN MEETING:

X YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. Z-84-47-S

PROJ. NO. _____

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

X CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

X SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11-5-91

BY: Vancel Foesenger

DRAINAGE REPORT

EXISTING CONDITIONS

RIO GRANDE OF ALBUQUERQUE WILL BE CONSTRUCTED ON TRACTS J & K-1 OF THE ATRISCO BUSINESS PARK, ZONE MAP K-9 AND K-10, CONTAINING 53.96 ACRES MORE OR LESS. TRACTS J & K-1, HEREINAFTER REFERRED TO AS THE "PROJECT AREA," SLOPES FROM THE NORTHWEST TO THE SOUTHEAST AT AN AVERAGE SLOPE OF 1.7%. THE PROJECT IS CURRENTLY UNDEVELOPED RANGE LAND. THE PRINCIPAL ARROYO THROUGH THE SITE IS FED BY TWO ARROYO SYSTEMS EXTENDING NORTH OF I-40 TO THE LADERA INTERCEPTOR SYSTEM. FLOWS DOWN THE EASTERN ARROYO SYSTEM ARE CONVEYED UNDER I-40 BY THREE 6'X4' CBC AND ONE 30" CPC. FLOWS DOWN THE WESTERN ARROYO SYSTEM ARE CONVEYED UNDER I-40 BY TWO 10'X8' CBC AND ONE 30" CPC. THE TWO ARROYO SYSTEMS CONVERGE NORTHWEST OF THE PROJECT AREA AND FLOW ACROSS THE NORTHERN LOT LINE OF TRACT J APPROXIMATELY 900 FEET WEST OF UNSER BOULEVARD. THE ARROYO FANS OUT INTO ALLUVIAL DEPOSITS WITHIN THE PROJECT AREA. AS A CONSEQUENCE, THE EASTERN 1/3 OF THE PROJECT AREA IS CONTAINED WITHIN A 100 YEAR FLOOD PLAIN BOUNDARY PER FEMA FLOOD HAZARD MAP NO. 27.

THE UNSER BOULEVARD STORM DRAIN WAS CONSTRUCTED IN ACCORDANCE WITH THE SAD 214 IMPROVEMENT PLANS, (C.O.A. PROJECT 1658), AND IS CURRENTLY INTERCEPTING OVERLAND FLOWS FROM THE PROJECT AREA AND CONVEYING THEM TO THE "UNSER POND." THE OFF-SITE IMPROVEMENTS REFERENCED IN THE SAD 214 IMPROVEMENT PLAN, CONSISTING OF TWO-9.2 AC-FT TEMPORARY RETENTION PONDS AND DRAINAGE CHANNEL, TO BE LOCATED ALONG THE WESTERN BOUNDARY OF THE ATRISCO BUSINESS PARK, HAVE NOT BEEN CONSTRUCTED BY OTHERS AS PREVIOUSLY INDICATED. IT IS GENERALLY UNDERSTOOD THAT THE OFF-SITE IMPROVEMENTS ARE NEEDED IN ORDER TO COMPLEMENT THE UNSER STORM DRAIN SYSTEM AND PROTECT THE DOWNSTREAM WATERSHED SOUTH OF THE UNSER POND.

PROPOSED IMPROVEMENTS

1. OFF-SITE FLOWS - WEST OF ATRISCO BUSINESS PARK

   OFF-SITE FLOWS FROM WEST OF THE ATRISCO BUSINESS PARK WILL BE INTERCEPTED AND ROUTED TO TEMPORARY RETENTION PONDS LOCATED ALONG THE WEST BOUNDARY. THESE PONDS ARE SIZED TO RETAIN THE EXISTING CONDITION 100-YEAR, 10-DAY STORM AS DEFINED BY SECTION 22.2 OF THE CITY OF ALBUQUERQUE DRM AUGUST 1991 VERSION. FLOWS FROM THESE AREAS WILL BE INTERCEPTED IN THE FUTURE BY PROPOSED SYSTEMS 502.06 AND 500.02 AS DEFINED IN THE WEST BLUFF DRAINAGE PLAN AND CONVEYED TO THE AMOLE SYSTEM THUS ELIMINATING THE NEED FOR THESE PONDS.

2. ATRISCO BUSINESS PARK WEST OF UNSER BOULEVARD

   INDIVIDUAL LOT PONDING WILL BE REQUIRED AS DEVELOPMENT OCCURS TO COMPLY WITH THE UNSER BLVD./SAD 214 DRAINAGE PLAN. THE ALLOWABLE DEVELOPED RELEASE RATES NOTED ON THIS PLAN ARE PER THE UNSER BLVD./SAD 214 PLAN. AT THE PRESENT TIME, TRACT T, TRACT J, TRACT K-1, LOT 1, AND LOT 2 ARE SUBJECT TO A VOLUME CONSTRAINT DUE TO THE FACT THAT THE UNSER POND CURRENTLY SERVES AS AN OUTFALL FOR THIS AREA AND WAS SIZED ONLY TO ACCEPT RUNOFF FROM THE AREA WEST OF UNSER BOULEVARD IN AN UNDEVELOPED CONDITION. THE PRELIMINARY DESIGN REPORT FOR AMOLE DEL NORTE STORM DIVERSION FACILITIES INDICATES THE UNSER POND WILL BE EXPANDED IN THE FUTURE FROM THE CURRENT SIZE (8.5 AC-FT) TO APPROXIMATELY 20 ACRE-FEET AND BECOME A PERMANENT FACILITY. RIO GRANDE OF ALBUQUERQUE PROPOSES TO EXPAND THE UNSER POND TO PROVIDE THE VOLUME REQUIRED TO ACCEPT AND RETAIN THE DEVELOPED RUNOFF FROM THE PROJECT AREA (TRACT J AND TRACT K-1). LOT 1 IS CURRENTLY PARTIALLY DEVELOPED. THIS REPORT ASSUMES THAT THE STORM WATER DISCHARGE FROM LOT 1 IS IN COMPLIANCE WITH THE SAD 214 DRAINAGE PLAN. TRACT T AND LOT 2 ARE CURRENTLY UNDEVELOPED AND WILL BE REQUIRED TO CONSTRUCT ON-SITE RETENTION PONDS UNTIL SUCH TIME AS THE UNSER POND IS CONVERTED FROM A RETENTION POND TO A DETENTION POND. THE CITY HAS PLANS TO CONSTRUCT A STORM DRAIN IN UNSER BOULEVARD FROM THE UNSER POND TO THE FUTURE AMOLE CHANNEL. THIS CONNECTION WILL CONVERT THE UNSER POND FROM A RETENTION FACILITY TO A PERMANENT DETENTION FACILITY. WHEN THIS OCCURS THE VOLUME CONSTANTS WILL BE REMOVED FROM TRACT T, LOT 1, AND LOT 2.

3. PROJECT AREA (TRACTS J/K-1)

   THE PROJECT AREA WILL BE DEVELOPED AS A PLANNED COMMUNITY INDUSTRIAL PARK. THE ON-SITE GRADING WILL BE DESIGNED IN SUCH A WAY SO AS TO DRAIN MOST OF THE DEVELOPED RUNOFF INTO AN INTERIOR WATER FEATURE SCHEME CONSISTING OF 10 INTERCONNECTED RESERVOIRS. EACH RESERVOIR WILL HAVE A STANDING POOL OF WATER WITH SUFFICIENT STORM WATER STORAGE VOLUME TO DETAIN THE 100 YEAR - 6 HOUR PEAK FLOW. THE RESERVOIR SYSTEM WILL BE CONSTRUCTED IN SUCH A MANNER THAT THE 100 YEAR - 6 HOUR DEVELOPED FLOW RATE FROM THE SITE DOES NOT EXCEED THE ALLOWABLE RATE OF 56.6 CFS TO UNSER BOULEVARD OR THE EXISTING STORM DRAIN IN UNSER BOULEVARD. THE FLOOD STAGE IN EACH RESERVOIR WILL BE DISSIPATED WITHIN A 10 HOUR PERIOD AFTER THE RAINFALL EVENT HAS PASSED. RESERVOIR 510 WILL BE CONNECTED TO THE EXISTING STORM DRAIN MANHOLE AT THE INTERSECTION OF UNSER BOULEVARD AND BLUEWATER ROAD. THE OUTLET STRUCTURES WILL CONSIST OF OVERFLOW WIER AND ORIFICE PLATE PIPE INLET TO ALLOW FOR UNIFORM REGULATION OF FLOW THROUGH THE RESERVOIR SYSTEM. THE RESERVOIRS WILL BE CONSTRUCTED WITH 4-5 FEET DEEP STANDING POOLS OF WATER THAT WILL BE RECIRCULATED THROUGHOUT THE LENGTH OF THE WATER FEATURE. NO FENCING WILL BE PROVIDED SINCE THE RESERVOIRS WILL BE A PERMANENT FEATURE WITHIN THE SITE.

REF:
1. WEST BLUFF DRAINAGE PLAN, ANDREWS, ASBURY & ROBERT.
2. DRAINAGE PLAN FOR THE DESIGN OF SAD-214 UNSER BOULEVARD, SCANLON & ASSOCIATES.
3. PRELIMINARY DESIGN REPORT FOR AMOLE DEL NORTE STORM DIVERSION FACILITIES. TIERRA BAYITA DRAINAGE FACILITIES, GREINER, OCTOBER 31, 1990.

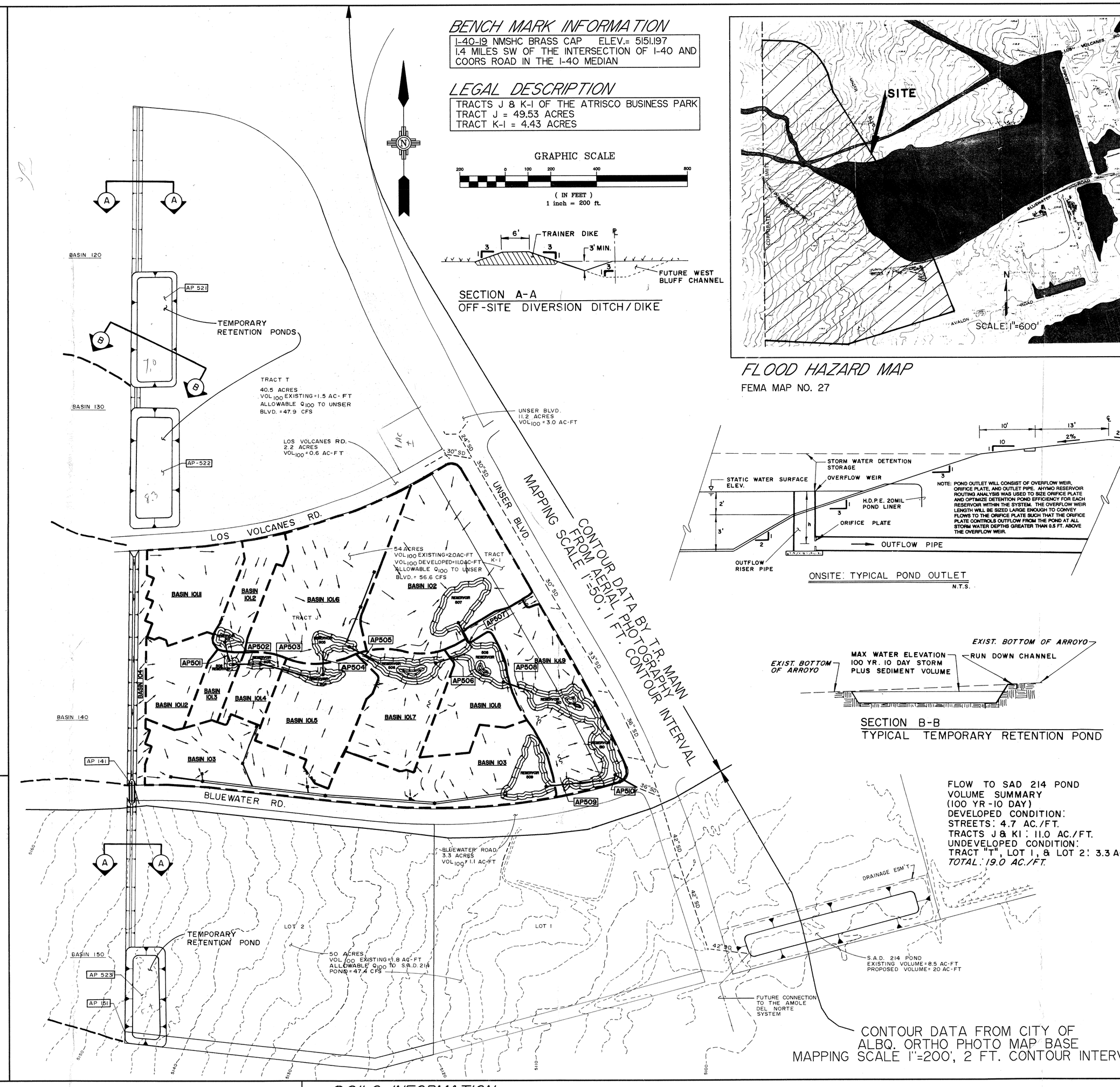
BASIN DATA

BASIN I.D.	AREA (ACRES)	LAND TREATMENTS (PERCENT) TYPE A	TYPE B	TYPE C	TYPE D
ONSITE - DEVELOPED CONDITIONS					
101.11	3.97	0.0 %	0.0 %	35.5 %	64.5 %
101.12	2.38	0.0 %	0.0 %	41.2 %	58.8 %
101.20	1.73	0.0 %	0.0 %	19.7 %	80.3 %
101.30	1.04	0.0 %	0.0 %	25.0 %	75.0 %
101.40	1.28	0.0 %	0.0 %	40.5 %	59.0%
101.50	4.15	0.0 %	0.0 %	36.0 %	64.0 %
101.60	6.77	0.0 %	0.0 %	43.8 %	56.2 %
101.70	3.76	0.0 %	0.0 %	27.3 %	72.7 %
101.80	3.19	0.0 %	0.0 %	39.0 %	61.0 %
101.90	5.89	0.0 %	0.0 %	46.7 %	53.3 %
102.00	8.79	0.0 %	0.0 %	50.0 %	50.0 %
103.00	10.05	0.0 %	0.0 %	37.4 %	62.6 %
104.00	0.99	0.0 %	0.0 %	100.00 %	0.0 %
OFFSITE DRAINAGE BASINS					
120.00	150.00	95.5 %	0.0 %	0.0 %	4.5 %
130.00	183.00	96.6 %	0.0 %	0.0 %	3.4%
140.00	56.00	100.0 %	0.0 %	0.0 %	0.0 %
150.00	93.00	100.0 %	0.0 %	0.0 %	0.0 %

HYDROLOGY DATA

ANALYSIS POINT	DESCRIPTION	PEAK FLOWS (100 YEAR / 6 HOUR) INFLOW (cfs)	OUTFLOW (cfs)	RUNOFF VOLUME (AC-FT) (100 YEAR / 10 DAY)	DETENTION / RETENTION VOLUME (AC-FT)
ONSITE - DEVELOPED CONDITIONS					
ANALYSIS POINT 501.00	RESERVOIR 501 - OUTLET	31.27 cfs	22.93 cfs		0.1043 AC-FT (DETENTION)
ANALYSIS POINT 502.00	RESERVOIR 502 - OUTLET	26.28 cfs	24.14 cfs		0.0601 AC-FT (DETENTION)
ANALYSIS POINT 503.00	RESERVOIR 503 - OUTLET	27.30 cfs	25.84 cfs		0.0644 AC-FT (DETENTION)
ANALYSIS POINT 504.00	RESERVOIR 504 - OUTLET	39.21 cfs	31.66 cfs		0.1892 AC-FT (DETENTION)
ANALYSIS POINT 505.00	RESERVOIR 505 - OUTLET	53.88 cfs	44.70 cfs		0.1837 AC-FT (DETENTION)
ANALYSIS POINT 506.00	RESERVOIR 506 - OUTLET	56.94 cfs	44.50 cfs		0.4623 AC-FT (DETENTION)
ANALYSIS POINT 507.00	RESERVOIR 507 - OUTLET	31.86 cfs	7.47 cfs		0.5562 AC-FT (DETENTION)
ANALYSIS POINT 508.00	RESERVOIR 508 - OUTLET	59.19 cfs	49.78 cfs		0.6080 AC-FT (DETENTION)
ANALYSIS POINT 509.00	RESERVOIR 509 - OUTLET	37.24 cfs	7.93 cfs		0.6984 AC-FT (DETENTION)
ANALYSIS POINT 510.00	RESERVOIR 510 - OUTLET	72.15 cfs	53.55 cfs	10.96 AC-FT	1.065 AC-FT (DETENTION)
OFFSITE - EXISTING CONDITIONS					
ANALYSIS POINT 521	TEMPORARY RETENTION POND FOR BASIN 120	129.0 cfs	0.0 cfs	7.0 AC-FT	8.60 AC-FT (RETENTION) 2/
ANALYSIS POINT 522	TEMPORARY RETENTION POND FOR BASIN 130	170.0 cfs	0.0 cfs	8.3 AC-FT	10.20 AC-FT (RETENTION) 2/
ANALYSIS POINT 141	CONCENTRATION POINT - FLOWS FROM BASIN 140	72.2 cfs	72.0 cfs	2.0 AC-FT	-
ANALYSIS POINT 151	CONCENTRATION POINT - FLOWS FROM BASIN 150	78.0 cfs	78.0 cfs	3.4 AC-FT	-
ANALYSIS POINT 523	TEMPORARY RETENTION POND FOR BASINS 140 & 150	150.0 cfs	0.0 cfs	5.4 ACFT	6.60 AC-FT (RETENTION) 2/
ANALYSIS POINT 524	SAD 214 POND (UNSER POND)	177.0 cfs 1/	0.0 cfs	19.0 AC-FT	20.0 AC-FT (RETENTION) 2/

1/ Q taken from Drainage Plan for the Design of S.A.D. - 214 / Unser Boulevard
2/ 100 year / 10 day storm runoff plus estimated sediment accumulation



FLOOD HAZARD MAP

FEMA MAP NO. 27

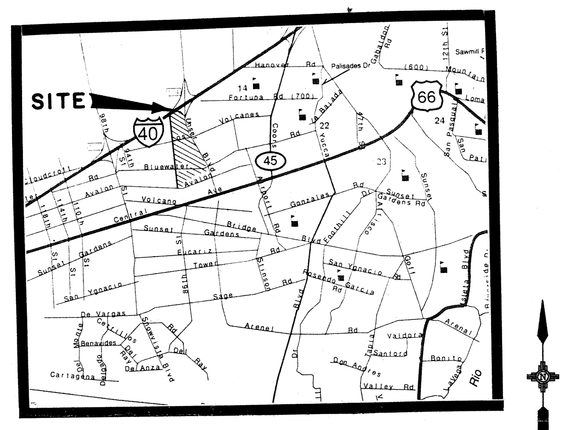
ONSITE TYPICAL POND OUTLET
N.T.S.

SECTION B-B
TYPICAL TEMPORARY RETENTION POND

FLOW TO SAD 214 POND
VOLUME SUMMARY
(100 YR-10 DAY)
DEVELOPED CONDITION:
STREETS: 4.7 AC./FT.
TRACTS J & K1 : 11.0 AC./FT.
UNDEVELOPED CONDITION:
TRACT "T", LOT 1, & LOT 2: 3.3 AC./FT.
TOTAL: 19.0 AC./FT.

VICINITY MAP

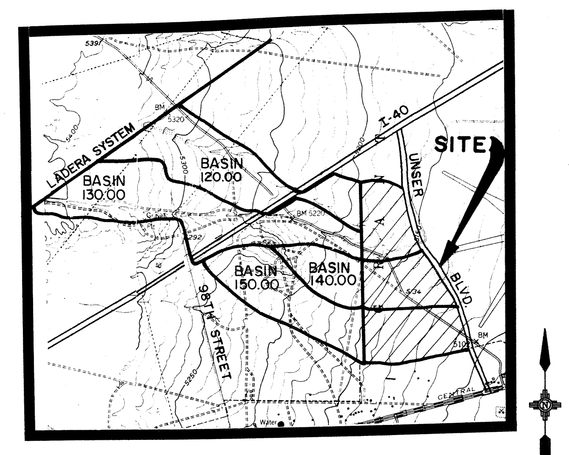
ZONE ATLAS MAP NO. K-9, K-10



SCALE: 1"=500'

BASIN BOUNDARIES FOR OFFSITE FLOWS

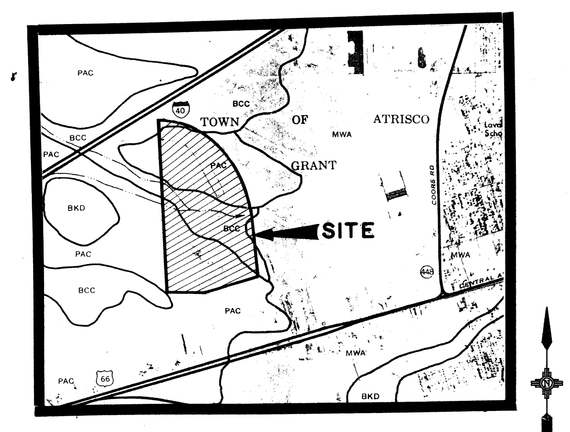
U.S. GEOLOGICAL SURVEY QUADRANGLES:
- ALBUQUERQUE WEST, NEW MEXICO, 1972
- LA MESITA NEGRA SE, NEW MEXICO, 1954



SCALE: 1"=2000'

SOILS MAP

SOIL SURVEY U.S.D.A., S.C.S. BERNALILLO COUNTY, MAP NO. 29 & 30



SCALE: 1"=2000'

SOILS INFORMATION

FROM SOIL SURVEY U.S.D.A., S.C.S.

SOIL SERIES AND MAP SYMBOLS	DEGREE AND KIND OF LIMITATIONS FOR: SEPTIC TANK ABSORPTION FIELDS	SEWAGE LAGOONS	SHALLOW EXCAVATIONS	DWELLINGS WITHOUT BASEMENTS	SANITARY LANDFILL (TRENCH TYPE)	LOCAL ROAD AND STREETS	SUITABILITY AS SOURCE OF: ROAD FILL	SAND	GRAVEL	TOPSOIL	SOIL FEATURES AFFECTING: POND RESERVOIR AREAS	DIKES, LEVEES, AND OTHER EMBANKMENTS	HYDROLOGIC SOIL GROUP
Pajarito: PAC, PbB.....	Slight.....	Severe: seepage.	Slight.....	Slight.....	Severe: seepage.	Slight.....	Good.....	Poor: excess fines.	Unsuited.....	Good.....	Seepage.....	Piping.....	B
*Bluepoint: Bh, BcA, BCC, Bd3, BKD, For Wink part of Bd3, see Wink series; for Kokan part of BKD, see Kokan series.	Slight if slope is 1 to 8 percent, moderate if 8 to 15.	Severe: seepage.	Severe: cut-banks cave.	Slight if slope is 1 to 8 percent, moderate if 8 to 15.	Moderate: too sandy.	Slight if slope is 1 to 8 percent, moderate if 8 to 15.	Good.....	Fair: excess fines.	Unsuited..	Poor: too sandy.	Seepage.....	Piping; seepage..	A

PAC—Pajarito loamy fine sand, 1 to 9 percent slopes. This nearly level to moderately sloping soil is on the East and West Mesas. It has the profile described as representative of the series.

Included with this soil in mapping are areas of Bluepoint, Madurez, and Wink soils. On about 30 percent of the acreage are areas where the surface layer is fine sandy loam.

Runoff is slow, and the hazard of soil blowing is severe. This soil is used for range, watershed, wildlife habitat, and community development. Dryland capability subclass VIIe; native plant community 6.

BCC—Bluepoint loamy fine sand, 1 to 9 percent slopes. This soil is nearly level to moderately sloping. It has the profile described as representative of the series, but on about 10 percent of the acreage the surface layer is sand. Included in mapping are areas of Madurez, Pajarito, and Wink soils, which make up about 15 percent of the unit.

Runoff is slow, and the hazard of soil blowing is severe. This soil is used for range, watershed, wildlife habitat, recreation, and community development. Dryland capability subclass VIIe; native plant community 2.

NO.	REVISIONS	BY	DATE

RIO GRANDE OF ALBUQUERQUE CONCEPTUAL GRADING AND DRAINAGE PLAN

REF. SAD 214 & ATRISCO BUSINESS PARK WEST OF UNSER ROAD

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7/8
ALBUQUERQUE, NEW MEXICO 87114
(505) 898-8021 FAX (505) 898-8501

DOUGLAS M. EASTERLING 9498 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 11 OF 11
DWC / VSF	BRG	DWC	
JOB NO.: 3271 A	DATE: OCT. 1991		

OCT.25,'91 DATE

FILE

PROJ. MGR.		BY	
80	60	90	100

QUALITY ASSURANCE

1:60" = 1'-0" SCALE

DOUGLAS W. COPELAND NEW MEXICO 9396 REGISTERED PROFESSIONAL ENGINEER

FMBSM
RIO GRANDE OF ALBUQUERQUE

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS
1200 Cuerro Rd., NW, Suite H-778
ALBUQUERQUE, NEW MEXICO 87114
(505) 898-5025 FAX (505) 898-8501

Flatow Moore Bryan Shaffer McCabe
Architects Interior Designers
Landscape Architects Planners
Albuquerque, New Mexico

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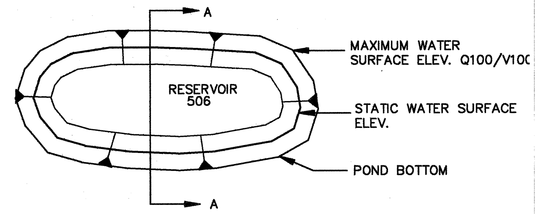
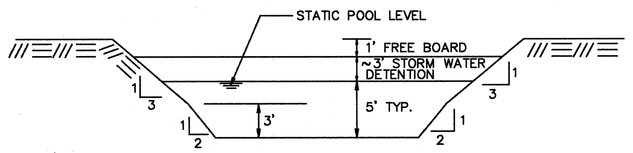
CONCEPTUAL GRADING & DRAINAGE MASTER PLAN

FLATOW MOORE BRYAN SHAFFER MCCABE Architects Engineers Planners Interior Designers Landscape Architects
909 Copper Avenue NE - PO Box 1986 Albuquerque, New Mexico 87103 - (505) 766-6012
88080

LEGEND





SECTION A–A TYPICAL WATER FEATURE

29.0 PROPOSED GRADE

F.F.E.=5131.0 FINISHED FLOOR ELEVATIONS

BASIN 101.2 DRAINAGE BASIN BOUNDARY

BASIN 104
BASIN 101.11
BASIN 101.2
BASIN 101.6
BASIN 102
BASIN 101.12
BASIN 101.3
BASIN 101.4
BASIN 101.5
BASIN 101.7
BASIN 101.8
BASIN 101.9
BASIN 103

LOS VOLCANES RD. N.W.
64' R.O.W.

UNSER BLVD. N.W.
156' R.O.W.

BLUEWATER RD. N.W.
64' R.O.W.

RESERVOIR 501
RESERVOIR 502
RESERVOIR 503
RESERVOIR 504
RESERVOIR 505
RESERVOIR 506
RESERVOIR 507
RESERVOIR 508
RESERVOIR 509
RESERVOIR 510

AP501 AP502 AP503 AP504 AP505 AP506 AP507 AP508 AP509 AP510

STORM DRAIN
PRIVATE STORM DRAIN
TEMPORARY DITCH DIKE DRAINAGE WAY
TEMPORARY CMP CROSSING STRUCTURE
7' PUBLIC UTILITY EASEMENT
24'-0" DRAINAGE SET BACK

NOTE: BUILDING ROOF DRAIN SYSTEM WILL BE CONNECTED DIRECTLY TO STORM DRAIN PIPE WHEN EVER POSSIBLE.

CONCEPTUAL GRADING AND DRAINAGE MASTER PLAN

SCALE: 1"=60'-0"

FM·BSM

RIO GRANDE
OF
ALBUQUERQUE

NOV. 5, '91 DATE

FILE

PROJ MGR BY

30 60 90 100

QUALITY ASSURANCE

1:60" = 1'-0" SCALE

EASTERLING & ASSOCIATES, INC.
CONSULTING ENGINEERS

Flatow Moore Bryan Shaffer McCabe

Architects Interior Designers
Landscape Architects Planners
Albuquerque, New Mexico
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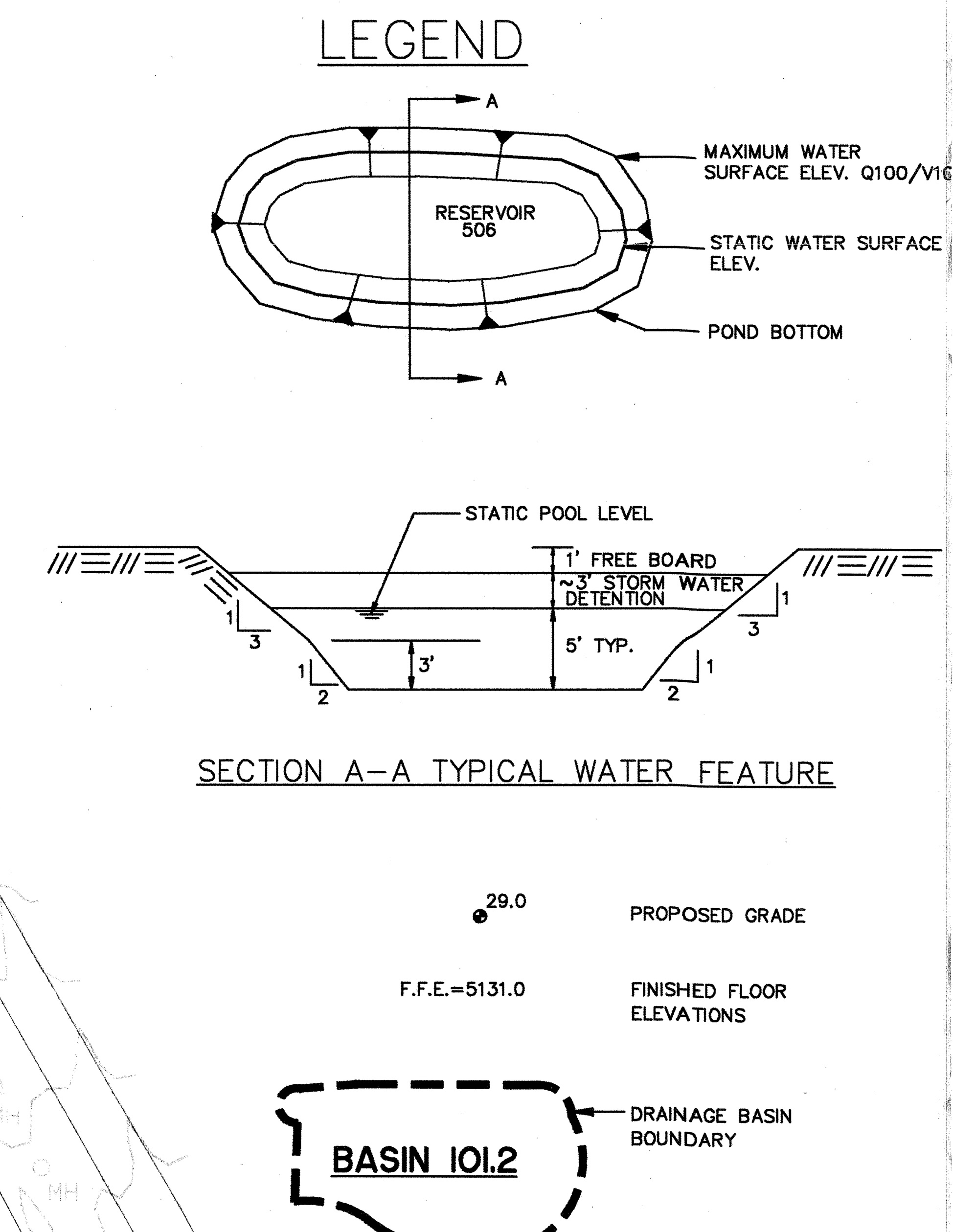
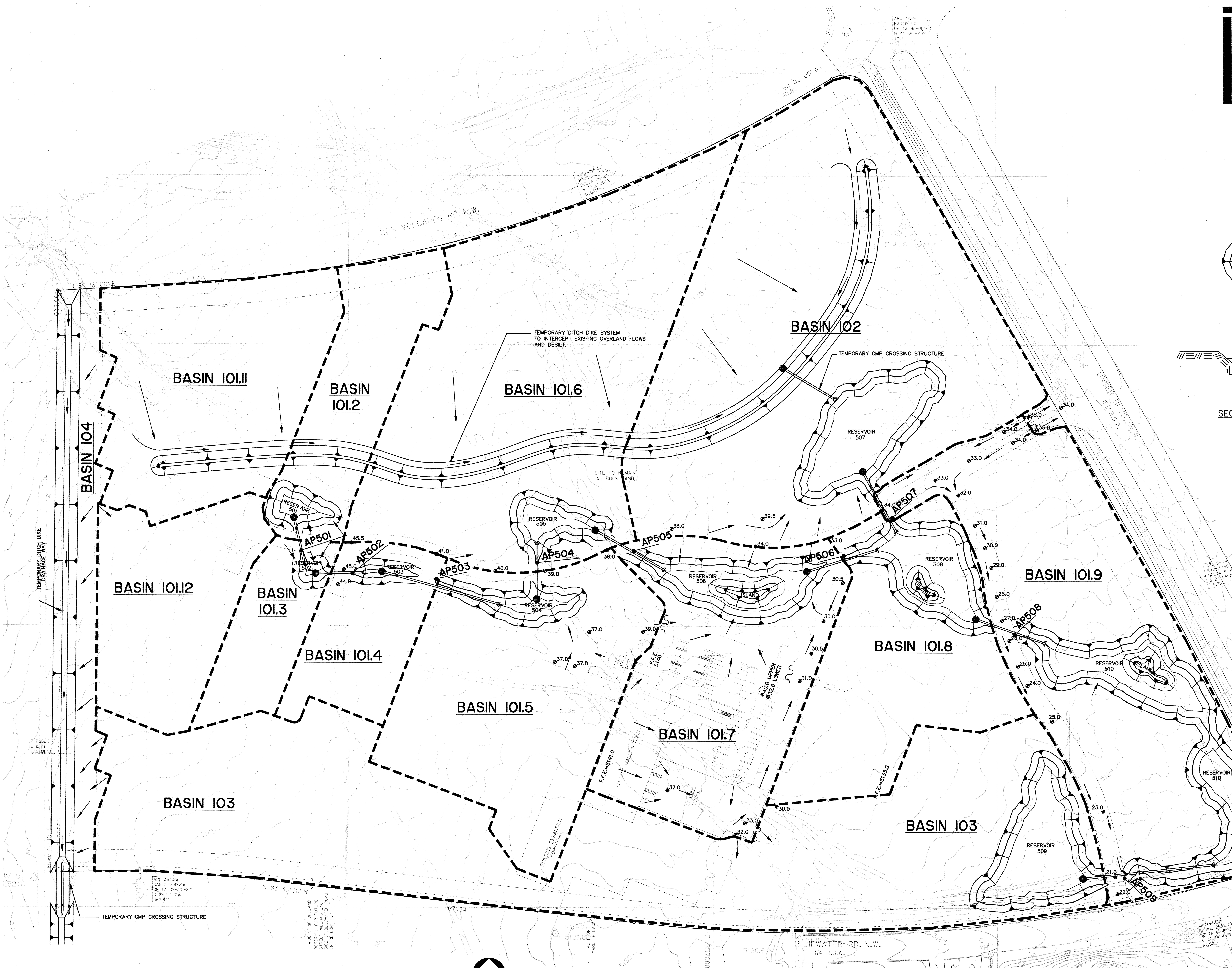
DOUGLAS W. COPELAND
NEW MEXICO
9398
REGISTERED PROFESSIONAL ENGINEER

PHASE I - CONCEPTUAL GRADING & DRAINAGE PLAN





PHASE I - CONCEPTUAL GRADING & DRAINAGE PLAN