

WARNING: VERIFY EXISTING FLOWLINE AND PAVEMENT OUT TO EXISTING BIKE LANE AND DRIVING LANE BEFORE LAYING OUT STORM INLETS OR DRIVEWAY. CONSULT DESIGN ENGINEER IF PROBLEMS APPEAR.

NOTE: MATCH EXISTING PAVEMENT BETWEEN FLOWLINE AND BIKE LANE IF POSSIBLE AT 6% OR FLATTER
SLOPE. OTHERWISE CONSULT DESIGN ENGINEER.



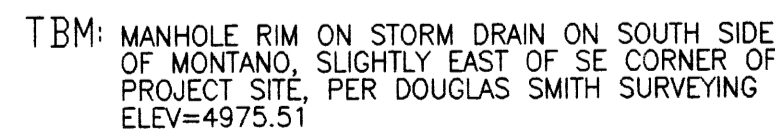
- A. DESIGN SURVEYING PER DOUGLAS SMITH SURVEYING DIFFERS FROM MONTANO RD AS-BUILT'S
- B. BEFORE START OF CONSTRUCTION, THOROUGHLY VERIFY EXISTING ELEVATIONS ALONG MONTANO RD, ESPECIALLY NEAR THE DRIVEWAY. CONSULT ENGINEER FOR REDESIGN AS APPROPRIATE
- C. WARNING: EXISTING FIBER OPTIC CABLE AND NATURAL GAS LINE UNDER SIDEWALK AT UNKNOWN DEPTHS, WHICH MAY AFFECT THIS PROJECT. PRE-DESIGN REQUEST TO NM ONE-CALL DID NOT RESULT IN THIS INFO.
- D. CONTRACTOR TO PROVIDE ALL SERVICES AS NEEDED FOR CONSTRUCTION BARRICADE & TRAFFIC CONTROL
- E. WORK IN MONTANO R.O.W. TO BE PER ARTERIAL SPECIFICATIONS
- F. CURB & GUTTER IN MONTANO TO BE STANDARD 8" C&G PER DWS 2415
- G. ALL CURB ONSITE TO BE 6" (0.50') ABOVE PAVING: ADD 0.50' TO TOP OF PAVING TO GET CURB

- (1) CONTACT COMCAST TO LOWER
EXIST. CATV & FIBER OPTICS MANHOLE
- (2) REMOVE EX. TYPE A INLET @ LO PT OF VERT CURVE
(EXISTING SWEEPER ON EAST SIDE)
REBUILD AS SINGLE "D" (COA DWG 2206).
CONNECT TO NEW SINGLE "A" INLET ±35 EAST
- (3) TEXTURED CONC. SW. SEE ARCH'L
- (4) NEW CONCRETE DRIVEPAD & GUTTER PER DWG 2420
AND GRADING PER THIS SHEET
- (5) NEW HC ACCESS PER COA DWG 2426, SEE ARCH'L
- (6) NEW TYPE "A" INLET (DWG 2201 ETC.) ELEV'S PER DETAIL
CONNECTED TO DOWNSTREAM "D" INLET W/ 18" RCP IN
CONNECTED 2 SITE DRAIN LINES AT BACK
PROPERTY & RE-USE EXIST CONNECTOR TO 60" STORM DRAIN
WARNING: FIBER OPTIC CABLE UNDER SIDEWALK
- (7) ASPHALT PAVING IN PARKING AREA
- (8) MEDIAN CURB & CUTTER (6" REVEAL) PER DWG 2415
- (9) 6" HEADER CURB PER DWG 2415, 6" REVEAL
- (10) CLEANOUT W/CAP IN DRAINAGE LINE
- (11) NEW 4" SEWER SERVICE PER COA DWG 2125
**WARNING: SET DEPTH TO CLEAR FIBER OPTIC CABLE,
GAS LINE, & DRAINAGE LINE
- (12) NEW 1-INCH WATER SERVICE PER COA DWG 2362
**WARNING: SET DEPTH TO CLEAR FIBER OPTIC CABLE,
GAS LINE, & DRAINAGE LINE
- (13) ±36.0 LF 18" RCP IV
- (13) NEW FIRE HYDRANT AT PROPERTY LINE, PER COA DWG 2340
FLANGE ELEV 4975.80
PRESSURE CONN., 6" GATE VALVE W/ TYPE B CAN,
APX 22 LF 6" WATERLINE
- (14) APX LIMIT SIDEWALK, TEXTURED CONCRETE, AND
CURB & GUTTER TO BE REPLACED SHOWN HATCHED
- (15) 9" CURB OPENING FOR DRAINAGE
- (16) SPLASH PAD, APX 2'x3'. SOLID CONCRETE OR
TUFF-TURF PAVING BLOCKS W/ ALL CELLS FILLED W/ GRAVEL



LOCATED APX 20 FT WEST OF EAST PROPERTY LINE
FOR INFORMATION AND CONCEPT ONLY. BEFORE BUILDING, VERIFY ALL
ELEVATIONS, INCLUDING FIBER OPTIC & GAS LINES LOCATED UNDER SIDEWALK

N	EXISTING: ELECTRICITY
E	NEW, NATURAL
X	FINISHED FLOOR
FL	FINISHED GRADE
FF	FLOW LINE
FL	GAS, GRADE
INV	INVERT
PP UP	POWER POLE, UTILITY POLE
SS	SANITARY SEWER
SD	STORM DRAIN
SW	SIDEWALK
T	TELEPHONE
T	TOP
TA	TOP OF ASPHALT
TW	TOP OF WALL
TC	TOP OF CURB, CONCRETE
TP	TOP OF PAVING
W	WATER
X	WATER VALVE
Q	FIRE HYDRANT
5	NEW CONTOUR
5.4	NEW CONTOUR—PARTIAL
→	EXISTING CONTOURS
→	FLOW DIRECTION
==	NEW CURB AND GUTTER
==	EXISTING CURB AND GUTTER
35.36	NEW SPOT ELEVATION
86	(NEW) TOP OF CURB/SW
36	(NEW) TOP OF PAVING
75.07	EXISTING SPOT ELEVATION
==	PARKING BUMPER
☀	DEBRIS SCREENING INLET
==	SOLID PIPE FOR UNDER
.....	PERFORATED DRAIN PIPE
	PER DETAIL THIS SHEET



APPROVALS	NAME	DATE
A.C.E./HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		



LEGAL DESCRIPTION & PROJECT LOCATION: Lot 19A, Zapf-Van Addition No.10, Albuquerque, Bernalillo County, New Mexico. Located just east of the pocket park at NE corner of Montano Rd and Guadalupe Trail NW. Albuquerque Zoning Map F-14.

EXISTING CONDITIONS. The site contains just under 3/8 of an acre. Currently undeveloped, it is one of a few remaining such sites along Montano. Apparently the site was rough-graded and seeded during Montano construction – there are numerous small furrows in loose soil, and the site is now partly filled with grass and weeds. Practically it meets the conditions for soil treatment A (undeveloped) for the purposes of calculating runoff. The is nearly level but slopes slightly toward Montano, as do the sites on each side (pocket park on the west, existing residence on the east). These sites do not contribute runoff to the project site.

At the back of the site is a 9 ft wide acequia (irrigation ditch) right of way which obviously is not in use - there is no ditch and there are utility poles and guy wires in the middle of the acequia right of way. To the naked eye, it appears that existing grading directs runoff from this r.o.w. to the east and west. If not, then the r.o.w. contributes a minor amount of runoff to project site, which runoff will be passed through the site to the storm drain in Montano.

The entrance will require rebuilding/replacing an existing drainage inlet and lowering an existing CATV (with fiber optic cable) manhole, which is nearby in the sidewalk. This inlet is a Type A and although it is located in a sag location (low point of a vertical curve) it has a "sweeper" (ungrated surface opening) on the east side only. This will be replaced by a Type D inlet (on grade, no curb opening) and, per City of Albuquerque review requirements, a new Type A inlet will be added about 35 feet east of the existing one, just past the driveway entrance. To avoid disruption to recently rebuilt Montano Rd, the new A inlet will connect to the D inlet rather than to the 60-inch storm sewer located in the south driving area of Montano. Underdrains from the site "ponds" (see more below) will connect to the back of the new A inlet.

This sheet includes a signature block for work in the City right-of-way for use if needed with this project. However, there will be a separate submittal to the DRC (Design Review Committee) for the 2 storm drain inlets.

As to site drainage, preliminary discussion with Dan Hogan of the City of Albuquerque indicated 2 concerns the City had for this area. First, although the storm drain in Montano is new, it does not currently have capacity for all adjacent sites to have free discharge. Future improvements to pumping, permitting, and nearby facilities may alleviate this. Second, the City is concerned about keeping dirt, debris, and "floatables" out of the storm drain.

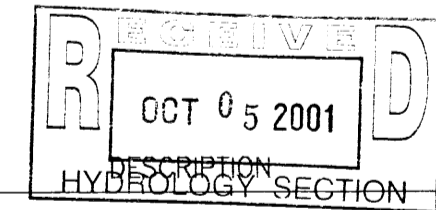
The calculated increase in runoff from the project site is very small and free discharge would have almost no impact of the Montano system. For calculation purposes the project does propose free discharge. In practice the proposed design ponds detain runoff and throttle peak flow, but in a way which would be very hard to quantify (and which would even then depend on details of landscape construction).

All site runoff will be routed to small swales and ponding areas within the landscaping. A system of underdrains and area inlets will drain the ponds and swales, directing flow slowly to the back of a storm drain inlet in the road right of way. Per Se Engineering used a similar underdrain system (without the area inlets) at the Norwest Bank at the SE corner of Skyline and Juan Tabo Blvd. That system seems to be working well. The area inlets will be raised above the pond bottoms and will be screened to prevent to entry of dirt, debris, and floatables. Under most small storms, the runoff will not reach the level of the inlets, and probably will not reach the underdrain pipe system. Instead the water will enter the gravel blanket surrounding the pipe, wetting the soil and providing moisture for the landscaping. If the underdrain system gets overloaded by an extraordinarily large storm, overflow will be to Montano and its storm drain. If the underdrain system ever coes fail the owner will have a nuisance to deal with, but there will be no real problem: no runoff will get into buildings, driveways won't wash out, etc.

As noted above, project design will actually detain runoff and reduce peak flow. The calculations below do not take this into account. The calculations are based on Albuquerque NM DPM (Development Process Manual) Chapter 22.2, for small watersheds.

CONDITION	A, sf	B, sf	C, sf	D, sf	Qp100yr-6hr	Vol100yr-6hr
Project-asphalt pvmt	5826	0	0	10222	1.35cfs	2123cf
Existing	16384	0	0	0	0.59	724

END OF REPORT TEXT



R

DATE _____

ARCHITECTURE INTERIORS PLANNING

2428 baylor drive se albuquerque, nm 87106

tel 505 . 247 . 9955 fax 505 . 247 . 1826

Drawn By:	VHGA Project No:
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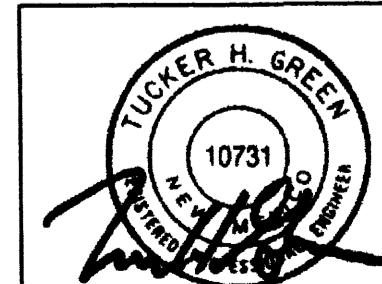
Checked By:	Date:
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1029 MONTANO RD. NW
ALBUQUERQUE, NEW MEXICO

GRADING & DRAINAGE PLAN

PER SE ENGINEERING
Drainage, Utilities, and Site Design

SHEET
R1 OF 1

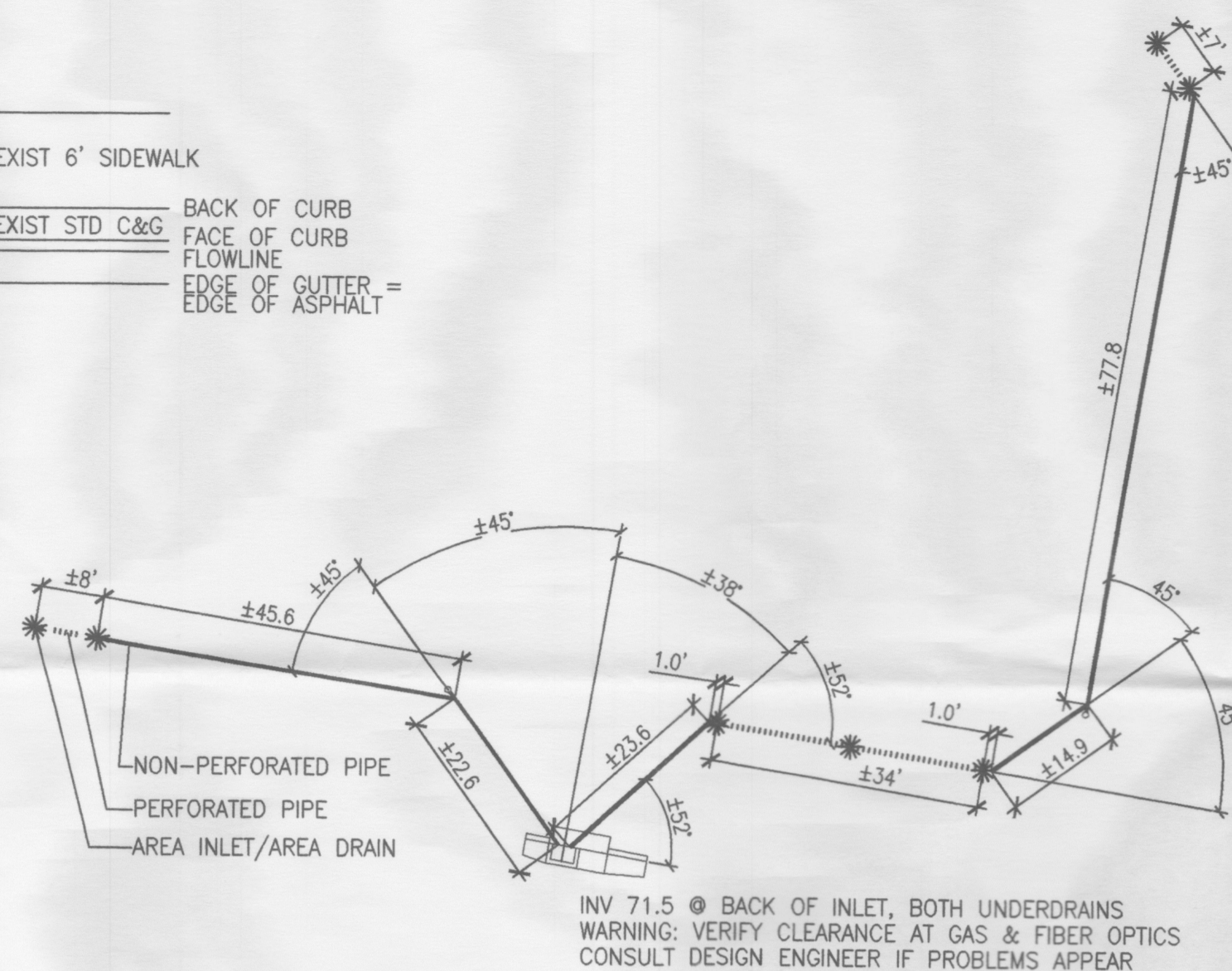
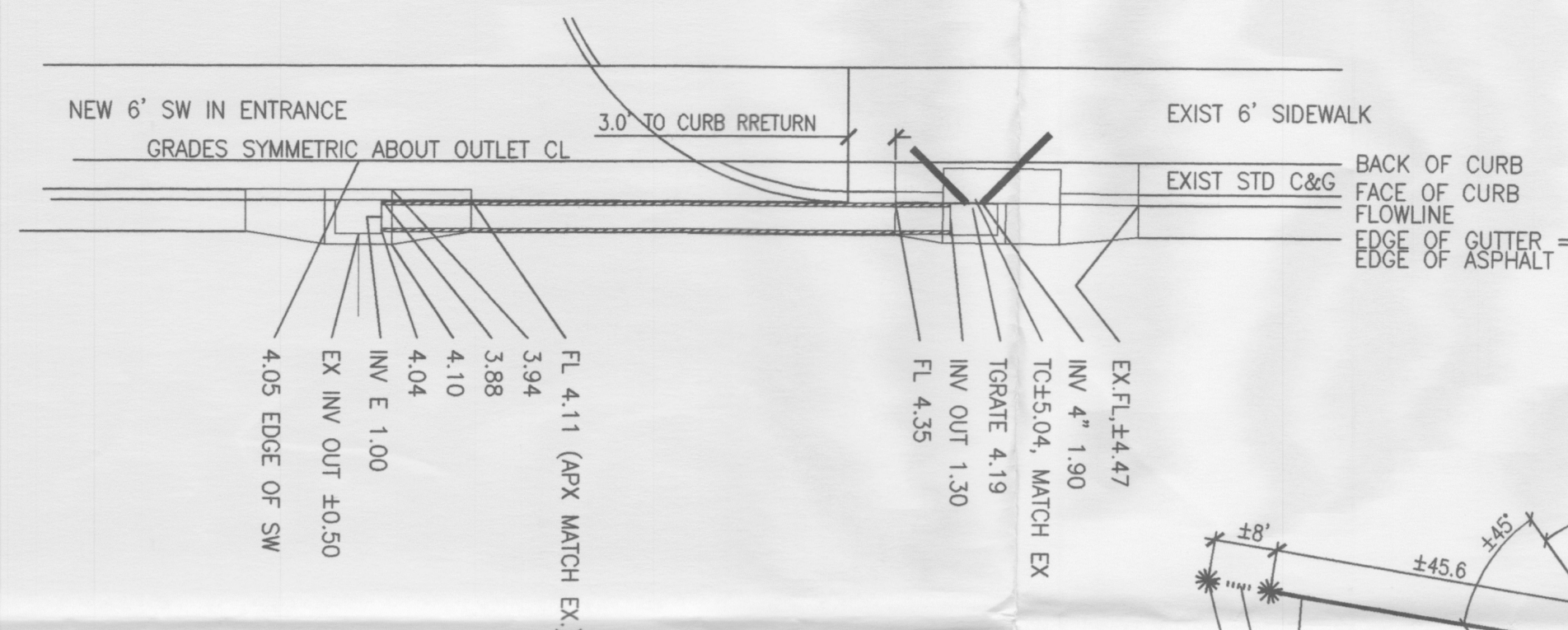


10-05-2001

RASTER FILE: E:\0prj\VanG\1021Montano\1021MontVic.TIF
RASTER FILE: E:\0prj\VanG\1021Montano\1021MontFema0001.TIF
I:\VanG\1021Mont\1029MontanoDrn4.dwg DATE: 10/05/01 TIME: 08:25 T. GREEN

WARNING: VERIFY EXISTING FLOWLINE AND PAVEMENT OUT TO EXISTING BIKE LANE AND DRIVING LANE BEFORE LAYING OUT STORM INLETS OR DRIVEWAY. CONSULT DESIGN ENGINEER IF PROBLEMS APPEAR.

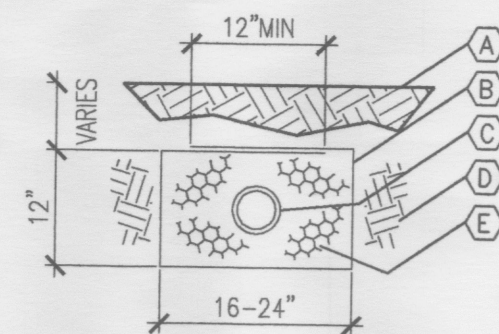
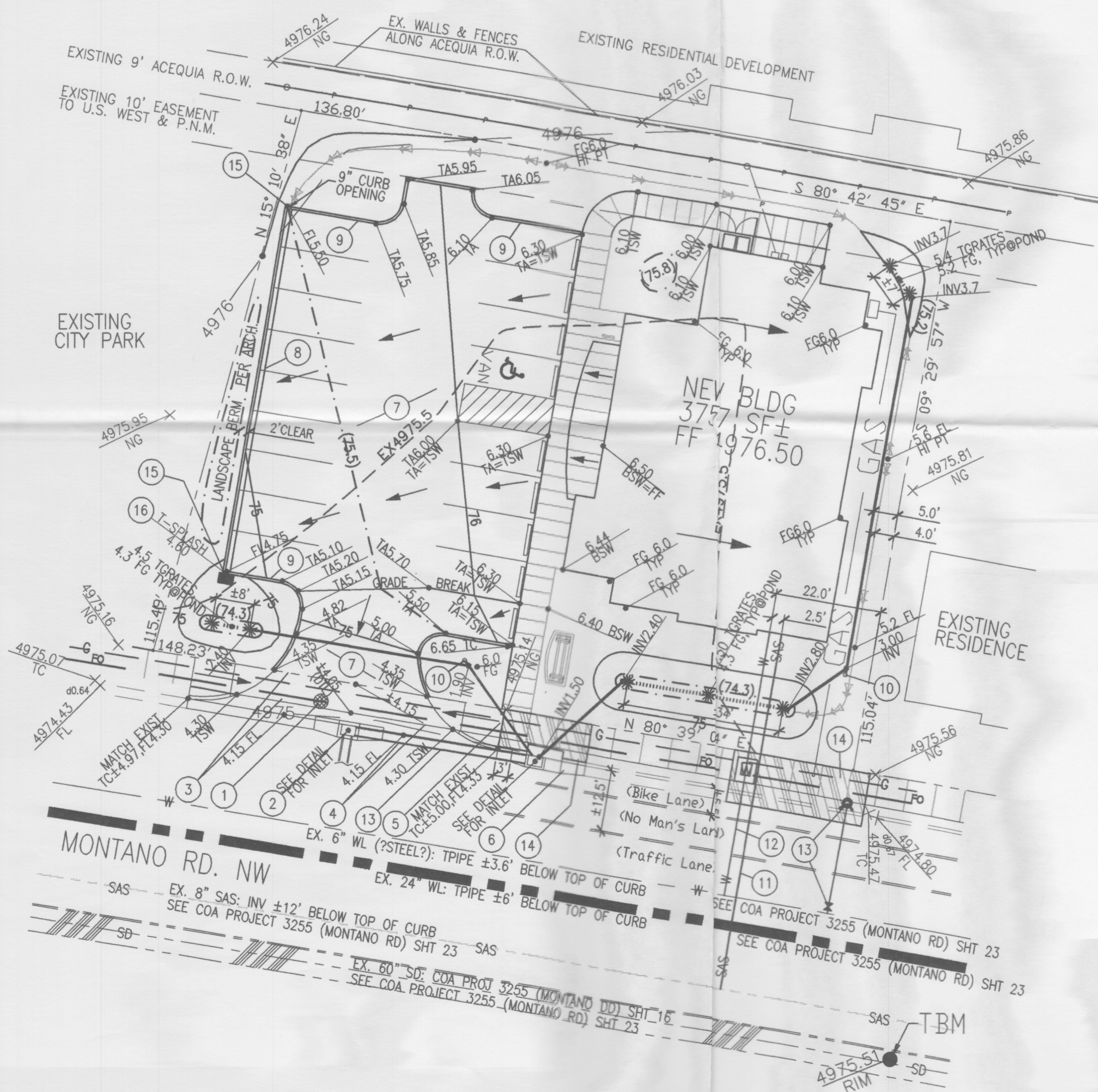
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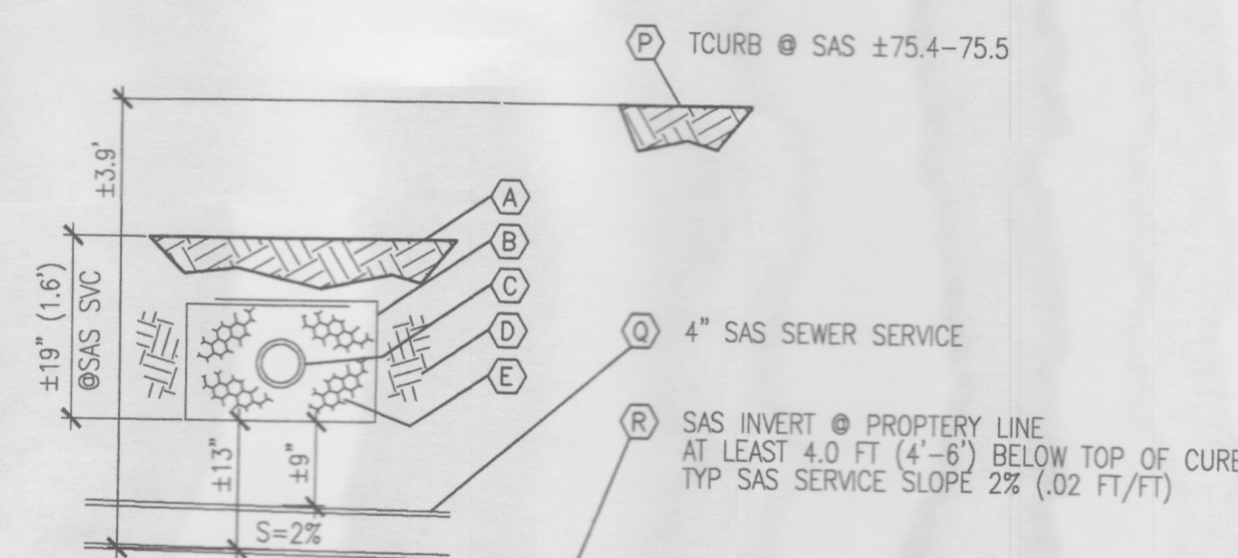
GENERAL NOTES

- A. DESIGN SURVEYING PER DOUGLAS SMITH SURVEYING DIFFERS FROM MONTANO RD AS-BUILTS
- B. BEFORE START OF CONSTRUCTION, THOROUGHLY VERIFY EXISTING ELEVATIONS ALONG MONTANO RD, ESPECIALLY NEAR THE DRIVEWAY. CONSULT ENGINEER FOR REDESIGN AS APPROPRIATE
- C. WARNING: EXISTING FIBER OPTIC CABLE AND NATURAL GAS LINE UNDER SIDEWALK AT UNKNOWN DEPTHS, WHICH MAY AFFECT THIS PROJECT. PRE-DESIGN REQUEST TO NM ONE-CALL DID NOT RESULT IN THIS INFO.
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- F. CURB & GUTTER IN MONTANO TO BE STANDARD 8" C&G PER DWG 2415
- G. ALL CURB ONSITE TO BE 6" (0.50') ABOVE PAVING; ADD 0.50' TO TOP OF PAVING TO GET CURB

- (1) CONTACT COMCAST TO LOWER
EXIST. CATV & FIBER OPTICS MANHOLE.
- (2) REMOVE EX. TYPE A INLET @ 40' LT OF VERT CURVE
(EXISTING SWEEPER ON EAST SIDE)
REBUILD AS SINGLE "D" (COA DWG 2206).
CONNECT TO NEW SINGLE "A" INLET ±35 EAST
- (3) TEXTURED CONC. SW. SEE ARCH'L
- (4) NEW CONCRETE DRIVEPAD & GUTTER PER DWG 2420
AND GRADING PER THIS SHEET
- (5) NEW HC ACCESS PER COA DWG 2426, SEE ARCH'L
- (6) NEW TYPE "A" INLET (DN 21" INLET). ELV.'S PER DETAIL
TO CONFORM TO "A" INLET FIBER @ 18" RCP IV
CONNECT 2 SITE DRAIN LINES AT BACK
PROTECT & RE-USE EXIST CONNECTOR TO 60" STRORM DRAIN
WARNING: FIBER OPTIC CABLE UNDER SIDEWALK
- (7) ASPHALT PAVING IN PARKING AREA
- (8) MEDIAN CURB & CUTTER (6" REVEAL) PER DWG 2415
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FLANGE ELV 4975.80
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APPX 22 LF 6" WATERLINE
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CURB & GUTTER TO BE REPLACED SHOWN HATCHED
- (15) 9" CURB OPENING FOR DRAINAGE
- (16) SPLASH PAD, APX 2'x3'. SOLID CONCRETE OR
TUFF-TURF PAVING BLOCKS W/ ALL CELLS FILLED W/ GRAVEL



USED NEAR STRUCTURES: ALSO CONNECTS UNDERDRAINS TO COA INLET
NOTE NO GRAVEL OR FILTER FABRIC



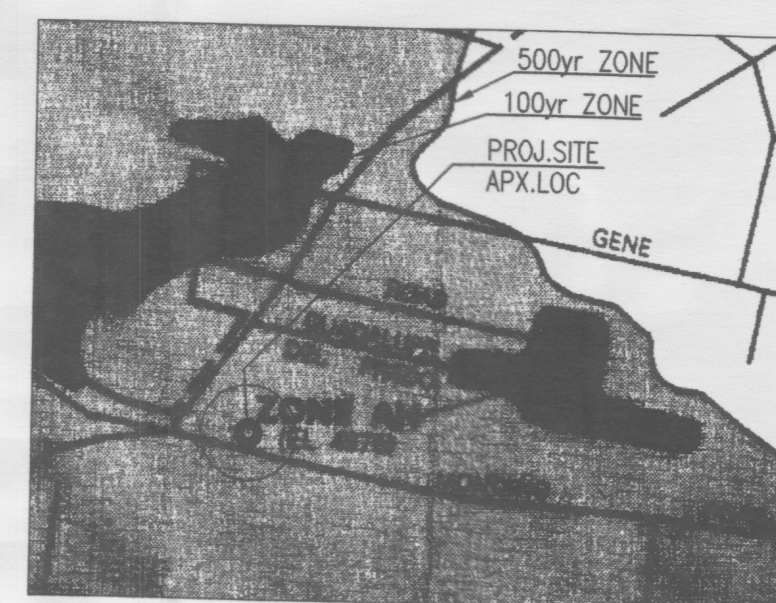
LOCATED APX 20 FT WEST OF EAST PROPERTY LINE
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ELEVATIONS, INCLUDING FIBER OPTIC & GAS LINES LOCATED UNDER SIDEWALK

E	EXISTING:	ELECTRICITY
N	NEW	NATURAL
FF	FINISHED	FLOOR
FG	FINISHED	GRADE
FL	FLOW	LINE
G	GAZE	GRADE
INV	INVERT	
P	POWER	POLE, UTILITY
UP	SEWER	
S	SANITARY	SEWER
SD	STORM	DRAIN
SW	SIDEWALK	
T	TELEPHONE	
T	TOP	OF
TA	TOP	OF ASPHALT
TW	TOP	OF WALL
TC	TOP	OF CURB, CONCRETE
TP	TOP	OF PAVING
W	WATER	
W	WATER	VALVE
Q	FIRE	HYDRANT
5	NEW	CONTOUR



TBM: MANHOLE RIM ON STORM DRAIN ON SOUTH SIDE
OF MONTANO, SLIGHTLY EAST OF SE CORNER OF
PROJECT SITE, PER DOUGLAS SMITH SURVEYING
ELEV=4975.51

APPROVALS	NAME	DATE
A.C.E./HYDROLOGY		
INSPECTOR		
A.C.E./FIELD		



FLOOD ZONE MAP (SEPT 1996)
FEMA PANEL 35001C0 119



VICINITY MAP
ZONING MAP F-14

LEGAL DESCRIPTION & PROJECT LOCATION: Lot 19A, Zapf-Van Addition No.10, Albuquerque, Bernalillo County, New Mexico.
Located just east of the pocket park at NE corner of Montano Rd and Guadalupe Trail NW. Albuquerque Zoning Map
F-14.

FLOOD ZONE INFORMATION: Per FEMA Community Panel 35001C0 119 (Sept 1996) the site is not in a 100-year flood area. At that time the site was in a 500-year flood zone. Since then there has been a major reconstruction of Montano Rd, including the installation of a 60" (5ft) diameter storm drain. Drainage conditions are better now but the flood plain maps have not been revised.

EXISTING CONDITIONS. The site contains just under 3/8 of an acre. Currently undeveloped, it is one of a few remaining such sites along Montano. Apparently the site was rough-graded and seeded during Montano construction - there are numerous small furrows in loose soil, and the site is now partly filled with grass and weeds. Practically it meets the conditions for soil treatment A (undeveloped) for the purposes of calculating runoff. The is nearly level but slopes slightly toward Montano, as do the sites on each side (pocket park on the west, existing residence on the east). These sites do not contribute runoff to the project site.

At the back of the site is a 9 ft wide acequia (irrigation ditch) right of way which obviously is not in use - there is no ditch and there are utility poles and guy wires in the middle of the acequia right of way. To the naked eye, it appears that existing grading directs runoff from this r.o.w. to the east and west. If not, then the r.o.w. contributes a minor amount of runoff to project site, which runoff will be passed through the site to the storm drain in Montano.

PROPOSED CONDITIONS: The site will developed as an office building with associated asphalt parking and landscaping.

The entrance will require rebuilding/replacing an existing drainage inlet and lowering an existing CATV (with fiber optic cable) manhole, which is nearby in the sidewalk. This inlet is a Type A and although it is located in a sag location (low point of a vertical curve) it has a "sweeper" (ungrated surface opening) on the east side only. This will be replaced by a Type D inlet (on grade, no curb opening) and, per City of Albuquerque review requirements, a new Type A inlet will be added about 35 feet east of the new Type D inlet, just past the driveway entrance. To avoid disruption to recently built Montano Rd, the new A inlet will connect to the D inlet rather than to the 60-inch storm sewer located in the south driving area of Montano. Underdrains from the site "ponds" (see more below) will connect to the back of the new A inlet.

This sheet includes a signature block for work in the City right-of-way for use if needed with this project. However there will be a separate submittal to the DRC (Design Review Committee) for the 2 storm drain inlets.

As to site drainage, preliminary discussion with Don Hogan of the City of Albuquerque indicated 2 concerns the City had for this area. First, although the storm drain in Montano is new, it does not currently have capacity for all adjacent sites to have free drainage. Future improvements to pumping, permitting, and nearby facilities may alleviate this. Second, the City is concerned about keeping dirt, debris, and "floatables" out of the storm drain.

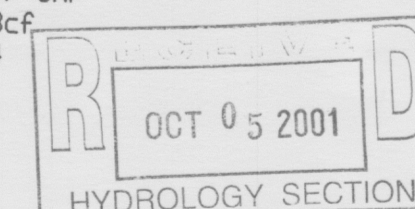
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As noted above, project design will actually detain runoff and reduce peak flow. The calculations below do not take this into account. The calculations are based on Albuquerque NM DPM (Development Process Manual) Chapter 22.2, for small watersheds.

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Project-asphalt pvm	5826	0	0	10222	1.35cfs	2123cf
Existing	16384	0	0	0	0.59	724

END OF REPORT TEXT



R	DATE	DESCRIPTION
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Van H. Gilbert Architect P.C.

ARCHITECTURE INTERIORS PLANNING

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tel 505 . 247 . 9955 fax 505 . 247 . 1826

Drawn By:	VHGA Project No:
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Checked By:	Date:
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1029 MONTANO RD. NW
ALBUQUERQUE, NEW MEXICO

GRADING & DRAINAGE PLAN

PER SE ENGINEERING
Drainage, Utilities, and Site Design
905 Palomas NE Albuquerque NM 87108
(505) 232-9394

SHEET
DR1 OF 1