

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

September 10, 2018

Mark Goodwin, P.E.
Mark Goodwin & Associates
PO Box 90606
Albuquerque, NM, 87199

**RE: Juan Tabo Hills Estates
Revised Grading Plan
Engineer's Stamp Date: 9/7/18
Hydrology File- M21D018; DRB# 1005278**

Dear Mr. Goodwin:

Based on the submittal received on 9/7/18, the revised grading plan is approved for Amended Preliminary Plat, Final Plat, and Grading Permit.

If you have any questions, you can contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539

September 7, 2018
Dana Peterson, PE
Hydrology Division, Planning Dept.
Development and Building Services
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

**Re: Juan Tabo Hills Estates
Revised Grading Plan
Hydrology File-M21D018; DRB 1005278**

Attention Dana Peterson:

This letter is in response to your comment letter dated September 4, 2018:

1. A typical bank protection/ AMAFCA maintenance road detail showing a 2% cross slope has been added to the grading plan. Since there is no impervious areas in the park areas, the 100 year 10 day storm is equal to the 100 year 6 hour storm event. The required volume and provided volume and depression pond design details has been added to the grading plan. The AHYMO summary printout is attached. Land treatment value of C (100%) was assumed for each of the areas.
2. The armoring detail has been added to the plan and the limits defined.

Please call me if you have any questions.

Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

Diane Hoelzer, PE
Senior Engineer

DLH/dlh

f:\11039 JTH Estates/Hydro_ltr_11039_DP_DRB Final Plat_3.docx

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

September 4, 2018

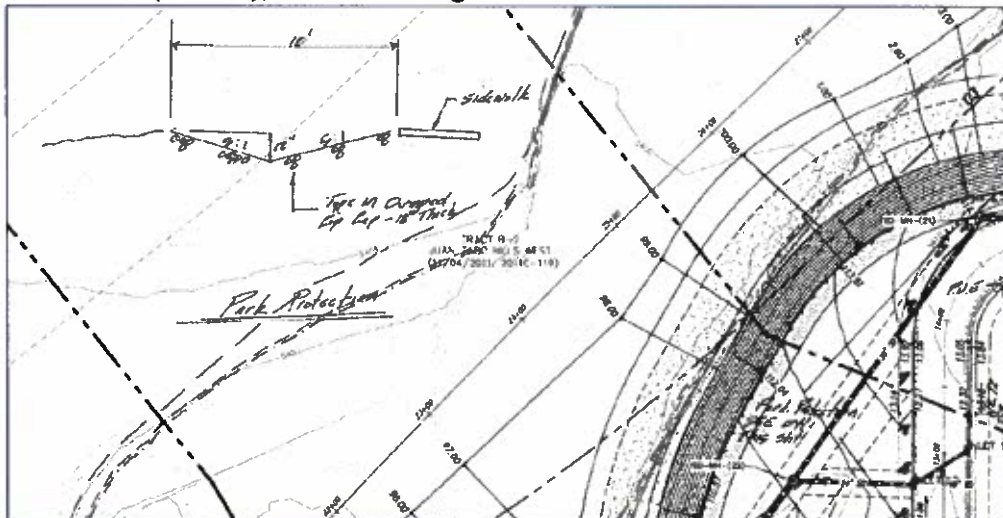
Diane Hoelzer, P.E.
Mark Goodwin & Associates
PO Box 90606
Albuquerque, NM, 87199

RE: **Juan Tabo Hills Estates**
Revised Grading Plan
Engineer's Stamp Date: 8/30/18
Hydrology File- M21D018; DRB# 1005278

Dear Ms. Hoelzer:

Based on the submittal received on 8/30/18, the revised grading plan cannot be approved until the following are corrected:

1. Provide self-ponding areas in the interspace (park) between the AMAFCA access road and the public road, or drain away from bank protection per AMAFCA direction. The contours and spot elevations should reflect the access road as sloping at 2% away from the top of shotcrete and back into the park area. If used, the ponding areas should be sized for the 10-day, 100-yr volume with supporting calculations provided. If this grading will be part of the landscaping plan, then the landscaping plan need to be included when resubmitting.
2. Provide rip-rap armoring at the outside bend of Sandia Sunset. If water surcharges out of the NMDOT inlet upstream near MH-47, flows will travel overland down Sandia Sunset and will likely jump the curb at this bend. Mark hand drew a detail and location of this on the previous submittal (sheet 5), but it did not get carried over this time:



CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

If you have any questions, you can contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dana Peterson', is written over a light blue horizontal line.

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

.. (s16.67h8.5v0T--&l8D

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)

INPUT FILE = C:\Program Files (x86)\AHYMO-S4\JTH_POND.DAT

- Ver. S4.01a, Rel: 01a

RUN DATE (MON/DAY/YR) = 09/05/2018
USER NO. = M-GoodwinMMSiteA90075759

COMMAND	HYDROGRAPH IDENTIFICATION	NO.	FROM ID	TO ID	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE =
START	LOCATION										
	NEW MEXICO										

	FILE: JHT_POND.DAT REV: 9-5-18 DLH										

	100 YEAR 6 HOUR STORM EVENT										

	RAINFALL TYPE= 1 NOAA 14										

	SUB BASIN 1										
	PARK AREA										

	COMPUTE NM HYD	100.10	-	1	0.00107	2.52	0.077	1.34408	1.500	3.684 PER IMP=	0.00

	SUB BASIN 2										
	PARK AREA										

	COMPUTE NM HYD	100.20	-	1	0.00147	3.47	0.106	1.34408	1.500	3.680 PER IMP=	0.00

	SUB BASIN 3										
	PARK AREA										

	COMPUTE NM HYD	100.30	-	1	0.00094	2.22	0.068	1.34408	1.500	3.686 PER IMP=	0.00

	SUB BASIN 4										
	PARK AREA										

	COMPUTE NM HYD	100.40	-	1	0.00135	3.18	0.097	1.34408	1.500	3.681 PER IMP=	0.00

	FINISH										

RAIN6= 2.600

TIME= 0.00

3354CF

4617CF

2962CF

4225CF



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Juan Tabo Hills Estates Building Permit #: _____ Hydrology File #: m-21/2018

DRB#: PR-2018-01388 (1005278) EPC#: _____ Work Order#: _____

Legal Description: Tract A Juan Tabo Hills / Tract 1-A-1 Juan Tabo Hills Unit 2

City Address: Juan Tabo and Tijeras Arroyo

Applicant: Eastside Development Contact: Rex Wilson

Address: PO Box 9470 ABQ NM 87119

Phone#: 899-6768 Fax#: _____ E-mail: rwilson2000@aol.com

Other Contact: Mark Goodwin + Associates PA Contact: Mark Goodwin

Address: PO Box 90006 ASO NM 87199

Phone#: 828-2200 Fax#: _____ E-mail: mark@goodwinengineers.com

TYPE OF DEVELOPMENT: 132 PLAT (# of lots) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL? X Yes _____ No (Response to Comments)

DEPARTMENT _____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
- ☒ GRADING PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- ☐ ELEVATION CERTIFICATE
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY) _____
- ☐ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

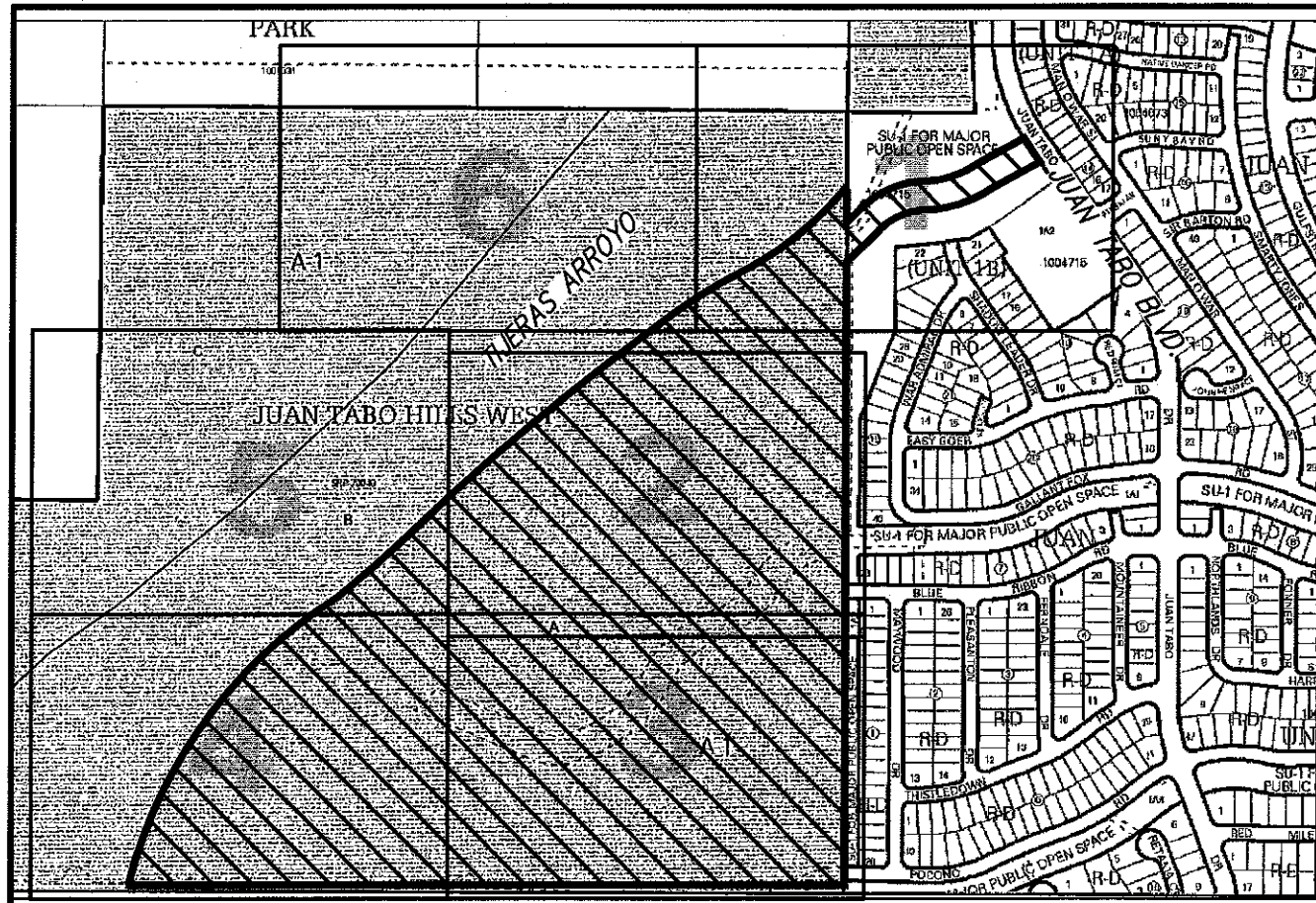
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☒ PRELIMINARY PLAT APPROVAL (Amendment)
- ☐ SITE PLAN FOR SUB'D APPROVAL
- ☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☒ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING/ PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR
- ☐ FLOODPLAIN DEVELOPMENT PERMIT
- ☐ OTHER (SPECIFY) _____

DATE SUBMITTED: 8/30/18 By: Diane Hoelzer PS

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

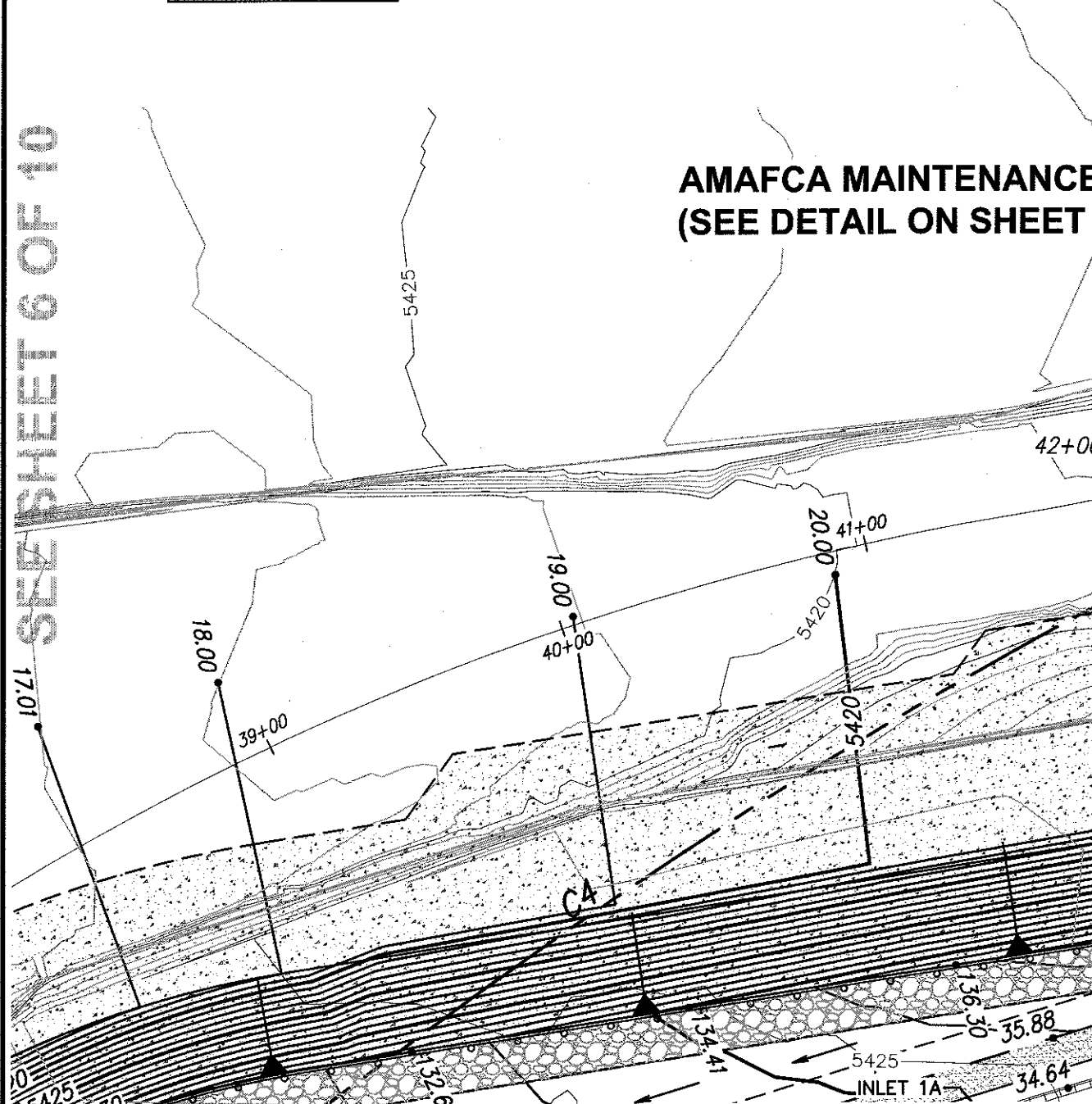


VICINITY MAP

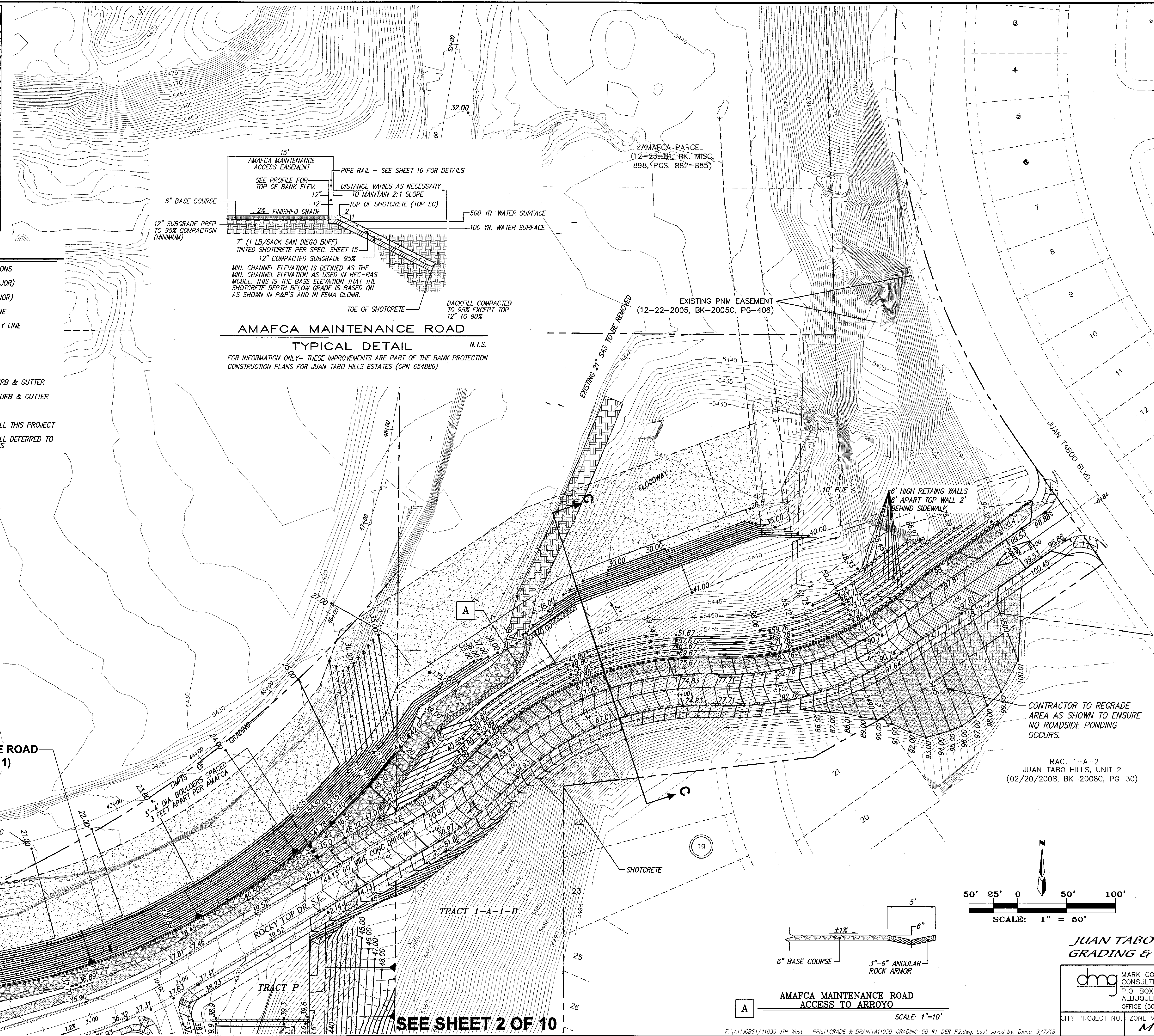
ZONE MAP: M-21

LEGEND		
EXIST. HANDRAIL	• 29.29	NEW SPOT ELEVATIONS
EXIST. CONCRETE CURB	— 5390	NEW CONTOUR (MAJOR)
EXIST. CONCRETE/SIDEWALK	— 5386	NEW CONTOUR (MINOR)
EXIST. WALL OR HEAD WALL	—	NEW BOUNDARY LINE
EXIST. TOP CURB/FLOWLINE	—	NEW RIGHT-OF-WAY LINE
EXIST. SPOT ELEV.	—	NEW LOT LINE
EXIST. GUY WIRE	—	NEW CENTERLINE
EXIST. MONITOR WELL	—	NEW EASEMENT
EXIST. OVERHEAD ELECTRIC	—	NEW STANDARD CURB & GUTTER
EXIST. POWER POLE	—	NEW MOUNTABLE CURB & GUTTER
EXIST. SANITARY SEWER MANHOLE	—	NEW SIDEWALK
EXIST. STORM DRAIN MANHOLE	—	NEW RETAINING WALL THIS PROJECT
EXIST. WATER VALVE	—	NEW RETAINING WALL DEFERRED TO THE HOME BUILDERS
EXIST. WATER METER	—	

BLOCK NUMBER INDENTITY	
6" BASE COURSE/AMAFCA ROAD	
10" PEDESTRIAN TRAIL	
AMAFCA UNIMPROVED ACCESS MAINT. ROAD	
3" - 6" ANGULAR ROCK ARMOR	



SEE SHEET 6 OF 10



SEE SHEET 2 OF 10

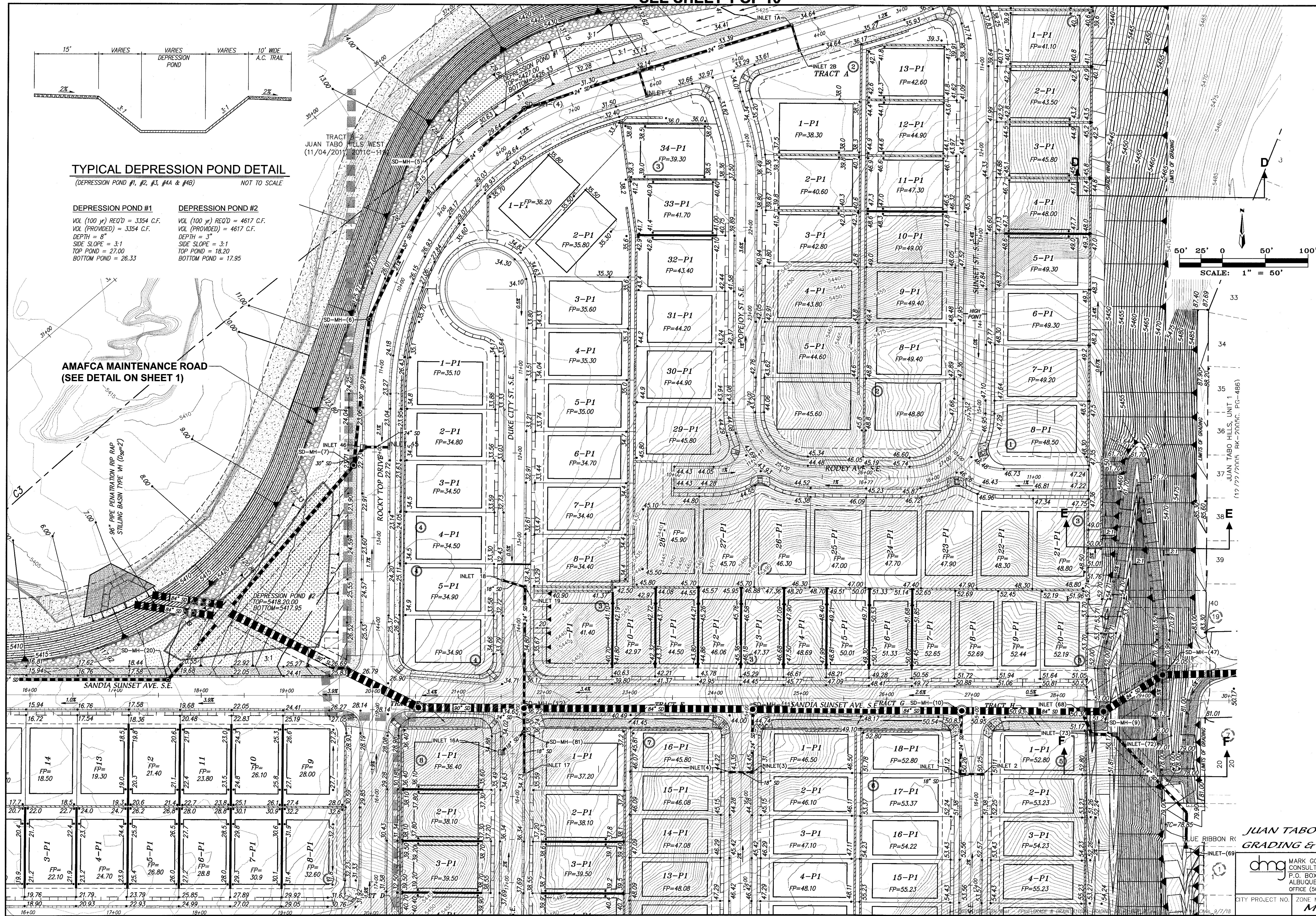
AS BUILT INFORMATION	
CONTRACTOR	DATE
STATIONED BY	DATE
ACCEPTANCE BY	DATE
FIELD CHECK BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
RECORDED BY	DATE
NO.	

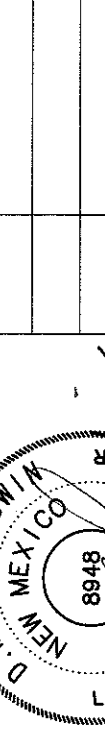
SURVEY INFORMATION	
FIELD NOTES	DATE
NO.	

ENGINEER'S SEAL	
BY	DATE
REVISIONS	DATE
DESIGN	DATE
DRAWN BY	DATE
CHECKED BY	DATE

NO.	DATE
1	01/17
2	01/17
3	01/17

SEE SHEET 10 OF 10



						ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
								FIELD NOTES		CONTRACTOR			
						NO.		BY	DATE	STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE.		WORK STAKED BY DATE	
									77.9' SE OF POWER POLE #B37 & 186.0' NW OF POWER POLE #B0.		FIELD NOTED BY DATE		
									STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22".		DRAWN BY DATE		
									X= 1,564,263.207, Y= 1,475,762.595, (MAD 83), Z= 5597.219 (MAD 1989).		CORRECTED BY DATE		
DESIGNED BY		JDH		DATE		01/17		MICRO-FILM INFORMATION		RECORDED BY		DATE	
DRAWN BY		ACH		DATE		01/17				NO.			
CHECKED BY		DWG		DATE		01/17							

HILLS ESTATES

DRAINAGE PLAN

GOODWIN & ASSOCIATES, P.A.
ENGINEERING ENGINEERS
90606
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

MAP NO.

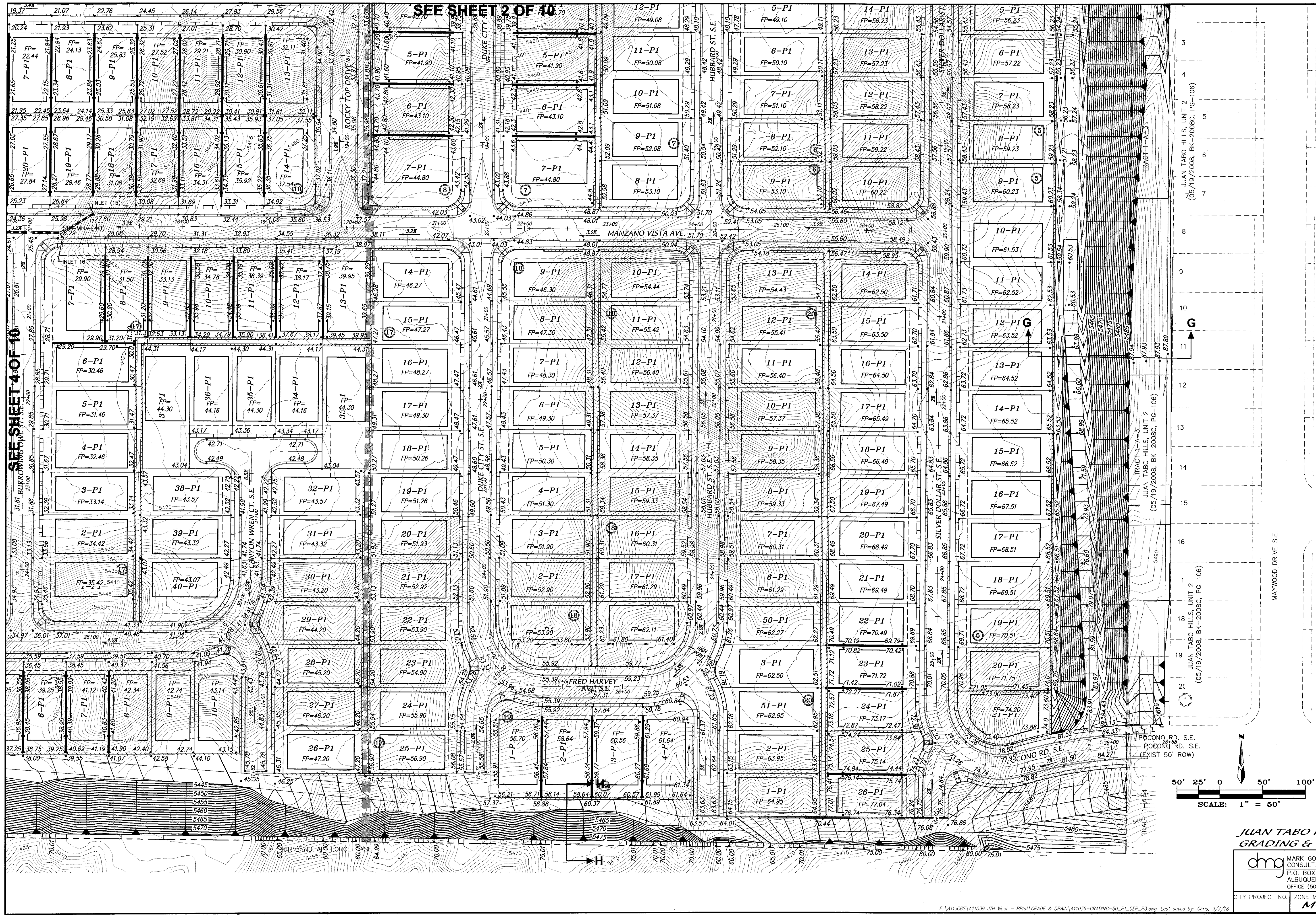
1-21-Z


SHEET

2

OF


10



ENGINEER'S SEAL				SURVEY INFORMATION				BENCH MARKS				AS BUILT INFORMATION			
				FIELD NOTES				STATION "5+422" IS LOCATED 8.7 MI. SE. OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 77.9' SE OF POWER POLE #337 & 186.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5+422". X= 1,564,263.207, Y= 1,475,762.595, (NAD 83), Z= 5597.219 (NAVD 1989).				CONTRACTOR			
				NO.	BY	DATE		NO.	BY	DATE	NO.	BY	DATE	NO.	BY
REVISIONS				DESIGN				MICRO-FILM INFORMATION				RECORDED BY			
NO.	DATE	REMARKS	BY	NO.	DATE	DATE		NO.	DATE	DATE		NO.	DATE	DATE	
						01/17									
						01/17									
						01/17									

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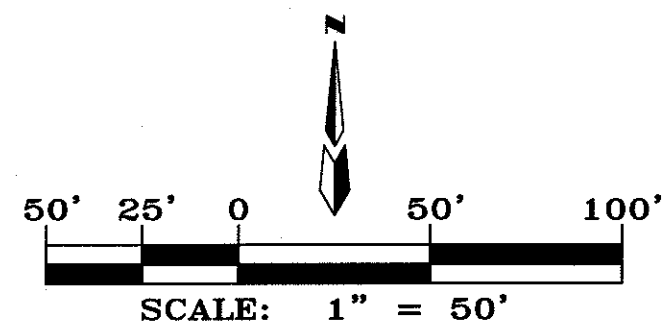
JUAN TABO HILLS EASTATES
GRADING & DRAINAGE PLAN

		MARK GOODWIN & ASSOCIATES, P.A. CONSULTING ENGINEERS P.O. BOX 90606 ALBUQUERQUE, NEW MEXICO 87199 OFFICE (505) 828-2200, FAX (505) 797-9539	
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
M-21-Z	3	10	

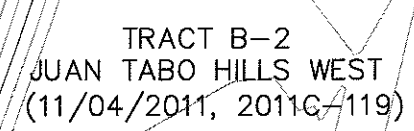


DEPRESSION POND #4A
VOL (100 yr) REQ'D = 2113 C.F.
VOL (PROVIDED) = 2463 C.F.
DEPTH = 6"
SIDE SLOPE = 3:1
TOP POND = 105.50
BOTTOM POND = 105.00

DEPRESSION POND #4B
VOL (100 yr) REQ'D = 2113 C.F.
VOL (PROVIDED) = 2944 C.F.
DEPTH = 6"
SIDE SLOPE = 3:1
TOP POND = 97.20
BOTTOM POND = 96.70



**AMAFCA MAINTENANCE ROAD
(SEE DETAIL ON SHEET 1)**



TRACT B-2
JUAN TABO HILLS WEST
(11/04/2011, 2011C-119)

TRAPIZOIDAL DITCH W/
#6 BOTTOM WIDTH & 3:1 SIDES
48" PIPE PENETRATION INV = 5.5
RIP RAP STILLING BASIN TYPE M
INV = 5381.0

TRACT 05

KIRTLAND AIR FORCE BASE



*JUAN TABO HILLS ESTATES
GRADING & DRAINAGE PLAN*

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
OFFICE (505) 828-2200, FAX (505) 797-9500

ZONE MAP NO.	SHEET	OF
<i>M-21-Z</i>	<i>4</i>	<i>1</i>

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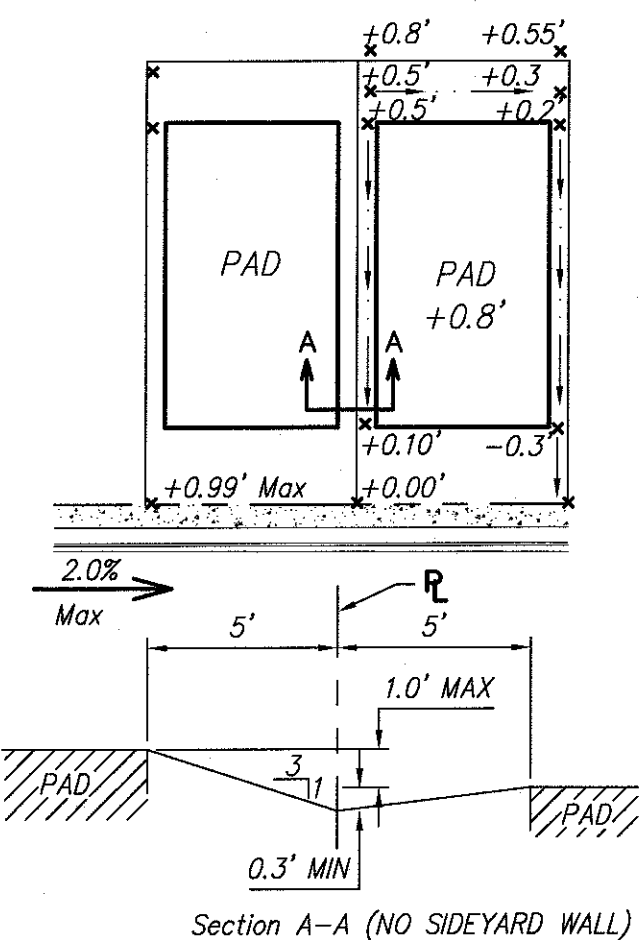
F:\A11JOBS\A11039 JTH West - PPlot\GRADE & DRAIN\A11039-GRADING-50_R1_DER_R2.dwg, Last saved by: Dione, 9/7/18

GRADING NOTES:

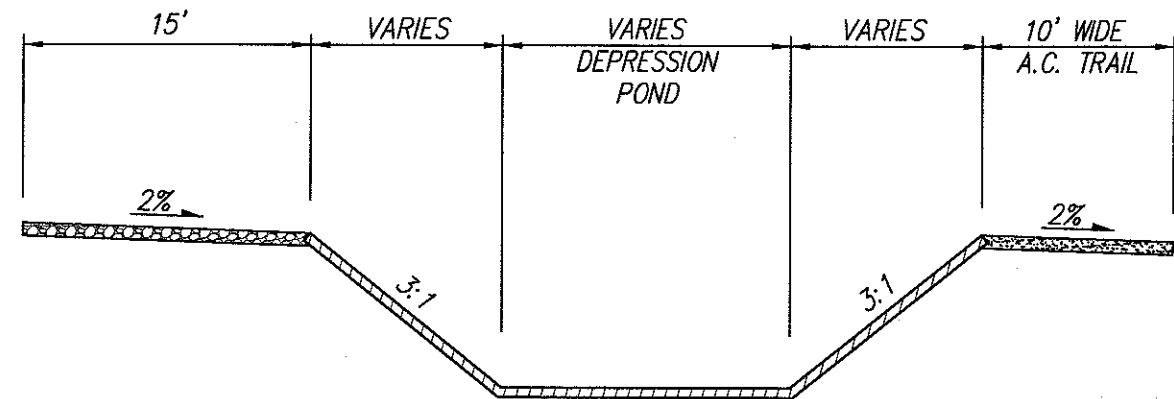
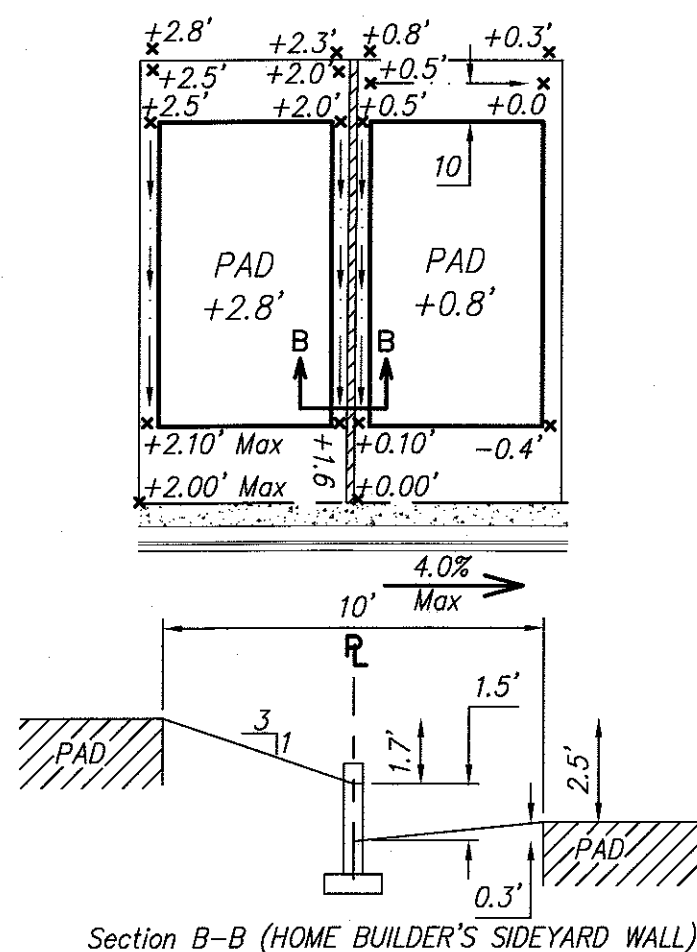
1. THE CONTRACTOR(S) MUST COMPLY WITH NPDES TEMPORARY CONSTRUCTION REQUIREMENTS AND OBTAIN A PERMIT. CONTRACTOR SHALL ALSO PROVIDE A COPY OF THE APPLICATION FOR PERMIT AND NOTICE OF TERMINATION TO THE OWNER.
2. THE CONTRACTOR(S) IS RESPONSIBLE FOR PREPARING AND MAINTAINING A SWPPP FOR THE DURATION OF INFRASTRUCTURE CONSTRUCTION AND UNTIL THE CITY OF ALBUQUERQUE ACCEPTS THE PUBLIC INFRASTRUCTURE. CONTRACTOR SHALL PROVIDE THE OWNER WITH A COPY OF THE SWPPP AT THE BEGINNING OF THE PROJECT AND AT THE TIME OF NOTICE OF TERMINATION.
3. THE CONTRACTOR(S) IS RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING EROSION CONTROLS FOR THE DURATION OF THE CONSTRUCTION OF THE PUBLIC INFRASTRUCTURE AND FOR THE REMOVAL OF THE EROSION CONTROLS WHERE DIRECTED TO DO SO BY THE OWNER AT THE TIME OF NOTICE OF TERMINATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING AND IS TO PROVIDE AN AS-BUILT SURVEY CERTIFIED BY A REGISTERED PROFESSIONAL SURVEYOR TO THE OWNER UPON COMPLETION OF THE CONSTRUCTION. THE EARTHWORK CONTRACTOR IS TO PROVIDE EARTHWORK SURVEY, AND THE WALL BUILDER IS TO PROVIDE WALL SURVEY.
5. EARTHWORK CONTRACTOR SHALL PREPARE ROUGH SUBGRADE FOR THE RETAINING WALL CONSTRUCTION AND PROVIDE SUFFICIENT BACKFILL MATERIAL STOCKPILED ON THE HIGH SIDE OF EACH WALL FOR THE WALL BUILDER TO COMPLETELY BACKFILL THE WALLS.
6. RETAINING WALLS ARE SHOWN FOR GRADING PURPOSES ONLY. RETAINING WALL DESIGN IS TO BE PERFORMED BY OTHERS, AND SHALL BE SUBMITTED TO THE CITY OF ALBUQUERQUE FOR REVIEW, APPROVAL, PERMIT, AND INSPECTION.
7. EARTHWORK CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION BY GEOTEST, INC. DATED JUNE 29, 2012.
8. TOPOGRAPHIC AND BOUNDARY SURVEY ARE BY ALDRICH LAND SURVEYING NOVEMBER 2011.
9. BENCHMARK USED IS AGRS BRASS CAP STAMPED "7-M21" HAVING AN ELEVATION OF 5498.07 (NGVD29).
10. FEMA SPECIAL FLOOD HAZARD ZONE ON THIS PROPERTY AS SHOWN ON LOMR CASE NO. 13-06-1053P EFFECTIVE JUNE 17, 2013.

FLOOD PLAIN LEGEND

TYPICAL LOT GRADING W/O SIDEYARD WALL

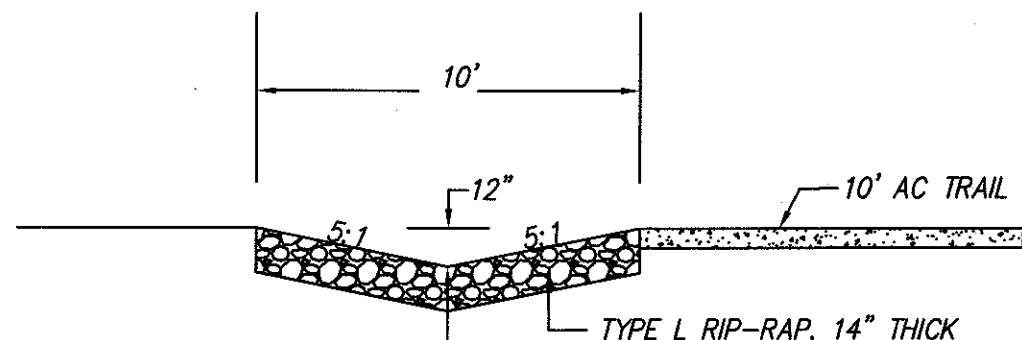


TYPICAL LOT GRADING WITH SIDEYARD WALL

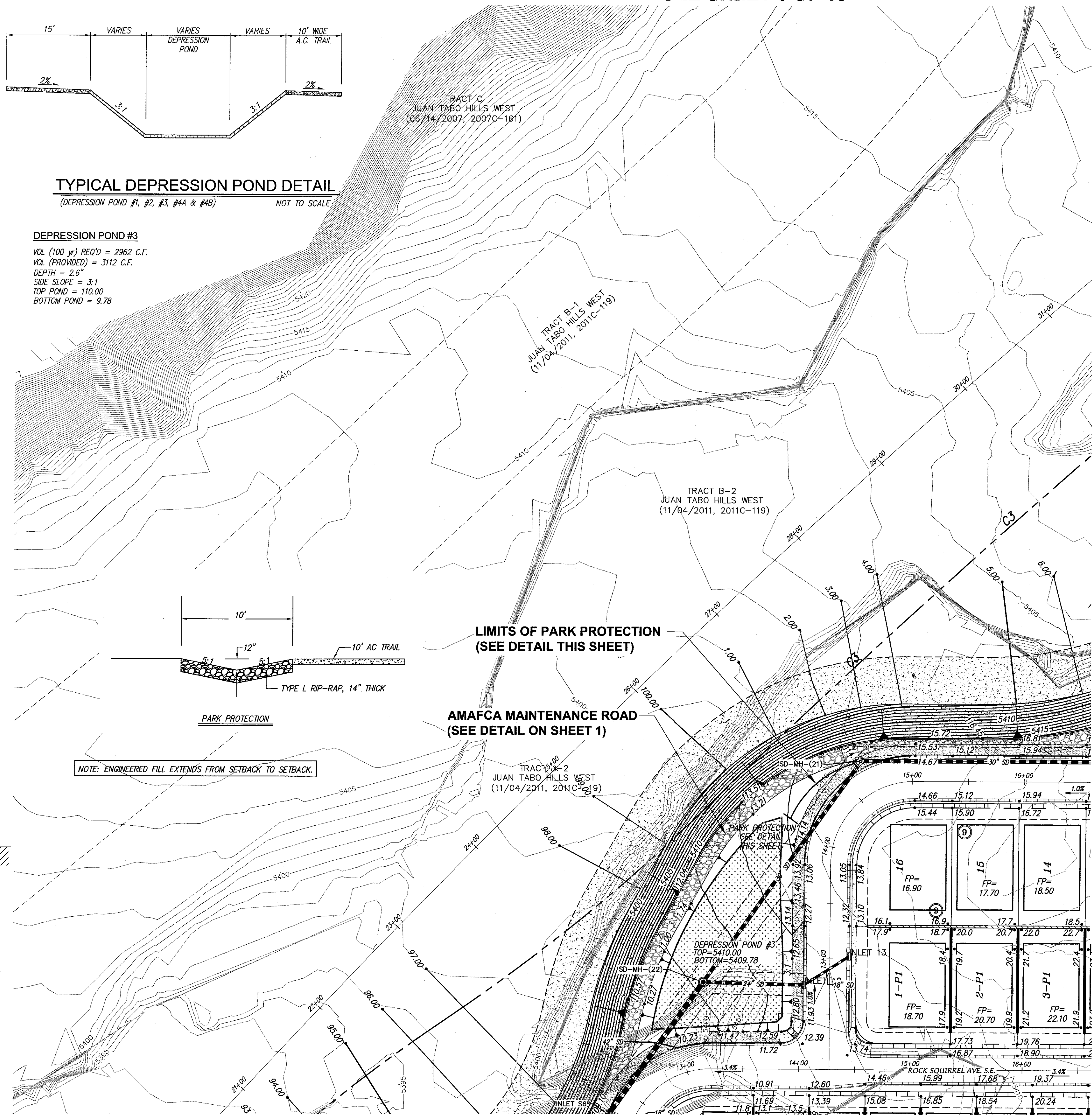


DEPRESSION POND #3

VOL (100 yr) REQ'D = 2962 C.F.
VOL (PROVIDED) = 3112 C.F.
DEPTH = 2.6'
SIDE SLOPE = 3:1
TOP POND = 110.00
BOTTOM POND = 9.78



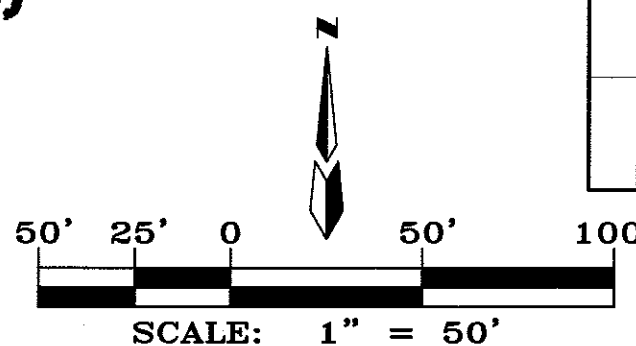
NOTE: ENGINEERED FILL EXTENDS FROM SETBACK TO SETBACK.



SEE SHEET 6 OF 10

SEE SHEET 4 OF 10


SEE SHEET 2 & 3 OF 10

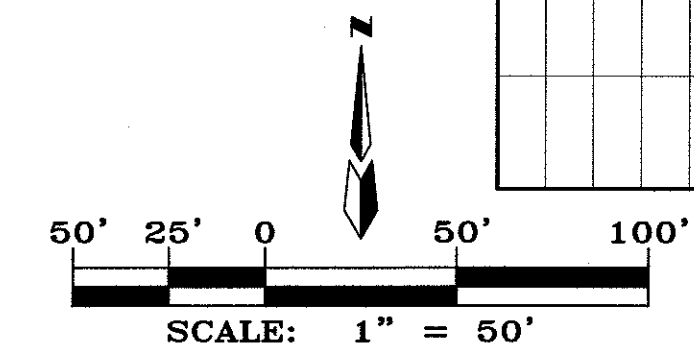
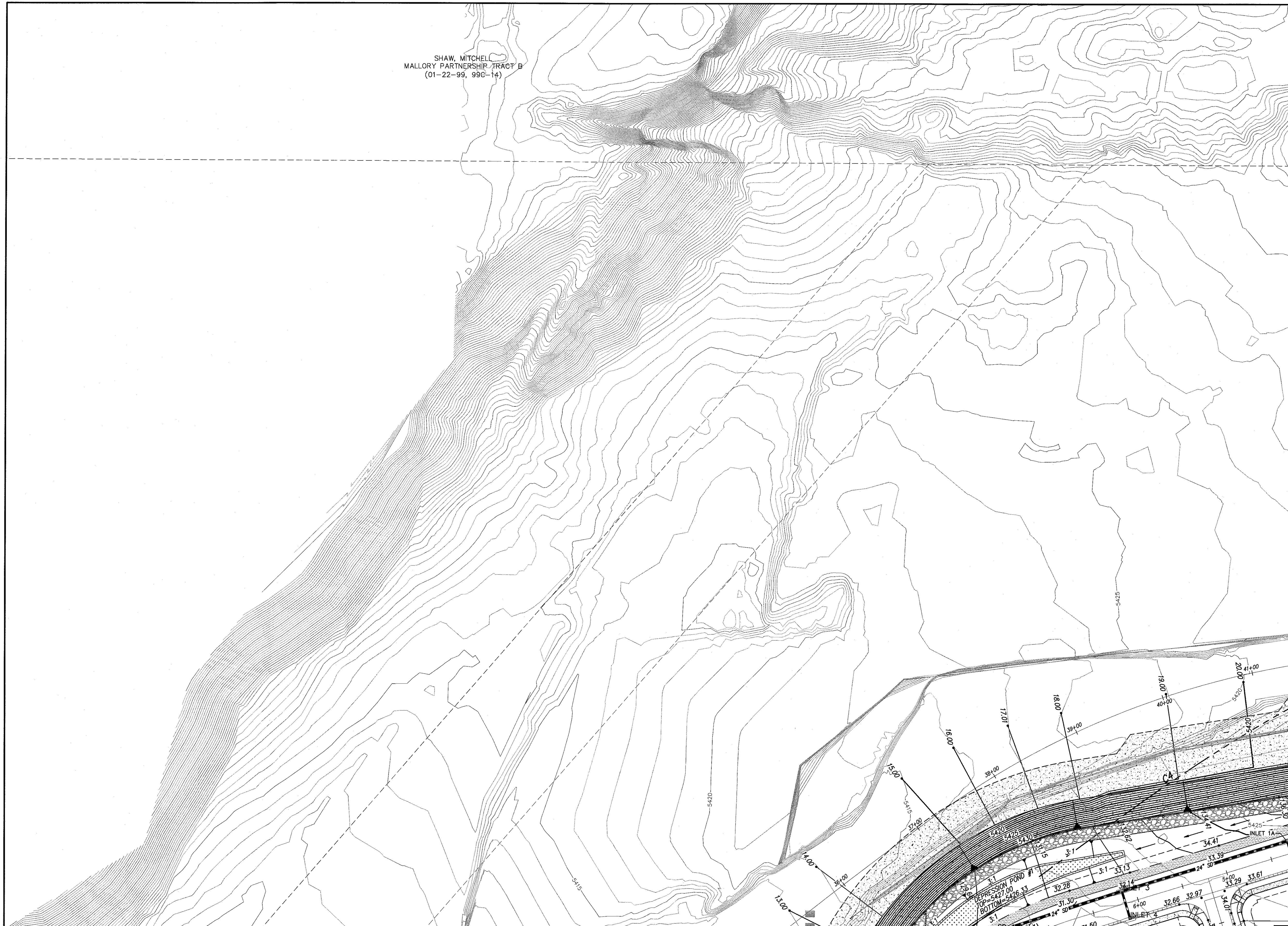


JUAN TABO HILLS ESTATES GRADING & DRAINAGE PLAN

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
OFFICE (505) 828-2200, FAX (505) 797-9539

CITY PROJECT NO. ZONE MAP NO. SHEET OF
M-21-Z 5 10

ENGINEER'S SEAL			SURVEY INFORMATION			BENCH MARKS			AS-BUILT INFORMATION					
			FIELD NOTES			STATION "S-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 72.9' SE OF POWER POLE #537 & 106.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "S-M22". X= 1,564,263.207, Y= 1,475,762.595, (NAD 83). Z= 5507.219 (NAVD 1989).			CONTRACTOR			MICRO-FILM INFORMATION		
			NO.	BY	DATE				WORK PERFORMED BY	DATE	RECORDED BY	DATE		
									INSPECTOR'S ACCEPTANCE BY	DATE				
									VERIFICATION BY	DATE				
									DRAWINGS APPROVED BY	DATE				
	NO.	DATE	REMARKS	BY	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	DATE	DATE			
			REVISIONS			JDH	ACH	DMG	01/17	01/17	01/17			
			DESIGN											



*JUAN TABO HILLS ESTATES
GRADING & DRAINAGE PLAN*

		MARK GOODWIN & ASSOCIATES, P.A. CONSULTING ENGINEERS	
P.O. BOX 90606 ALBUQUERQUE, NEW MEXICO 87199 OFFICE (505) 828-2200, FAX (505) 797-9539			
CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
	<i>M-21-Z</i>	<i>6</i>	<i>10</i>

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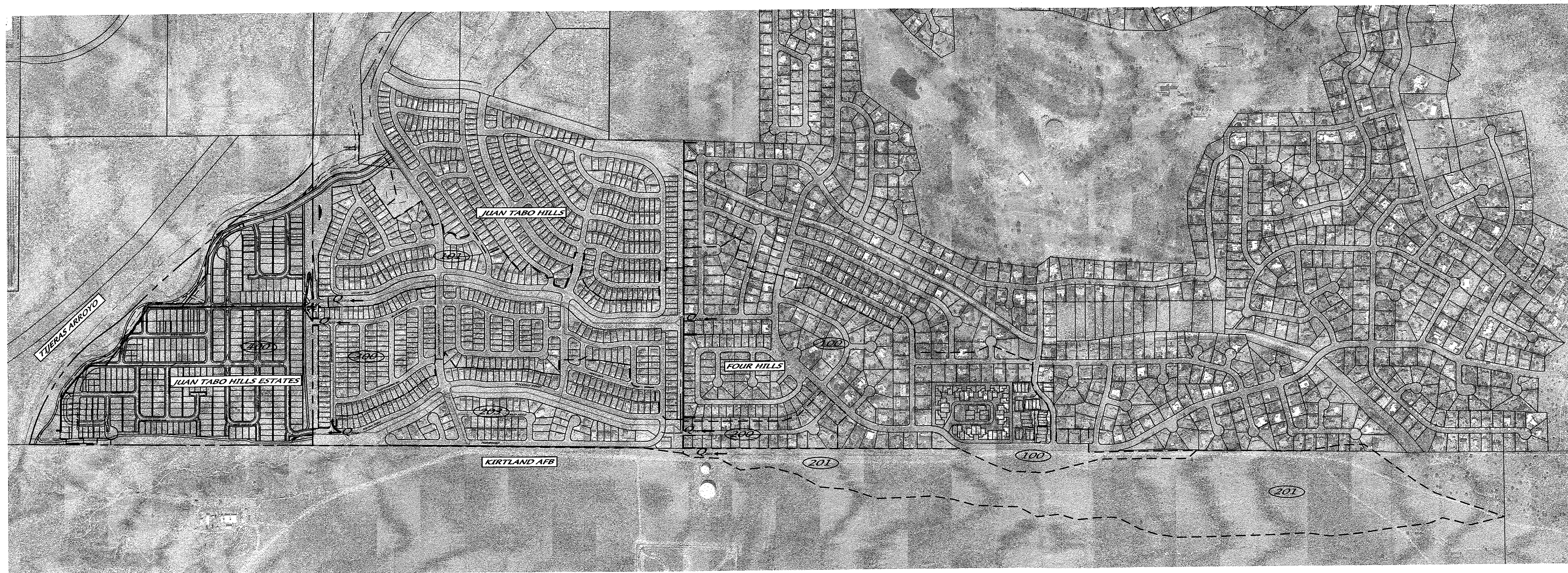
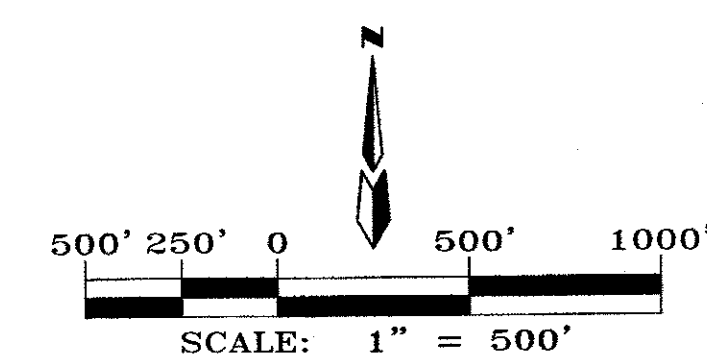
**Table 1: HYDROLOGY SUMMARY TABLE**

Table 1: HYDROLOGY SUMMARY TABLE									
AHYMO BASIN ID	Location	AREA		Ground Cover (%)			Q ₅₀ (cfs)	Water Quality/Volume (Ac-Ft)	
		Ac (Sg mi)	A	B	C	Increment		Increase	Sub Total
100	Four Hills	89.10	0.13922	8	18	38.7	1.3218		1.3218
101	Juan Tabo Hills	66.80	0.10438	0	19	32.2	1.0725		1.0725
200	Four Hills	9.00	0.01406	0	20	40	37.61	0.1390	1.4688
201	Kirkland	78.30	0.01628	100	0	0	27.64	0.0000	0.0000
203	Juan Tabo Hills	42.50	0.06841	0	22	35	172.59	0.5376	1.8131
300	Juan Tabo Hills	22.30	0.03484	0	14	29	99.75	0.4873	2.1004
400	JTH Estates	77.70	0.12141	0	9	41	50	343.61	1.4693
TOTAL C		383.70	0.50				1,291.92		5.893

LEGEND

- - - - - AHYMO BASIN BOUNDARY
 _____ SUB-BASIN BOUNDARY
 _____ NEW RCP STORM DRAIN
 (400) AHYMO BASIN NUMBER












AMENDED

JUAN TABO HILLS ESTATES
DRAINAGE BASIN MAP

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
OFFICE (505) 828-2200, FAX (505) 797-9539

CITY PROJECT NO.	ZONE MAP NO.	SHEET OF
	M-21-Z	7 10

[illegible]

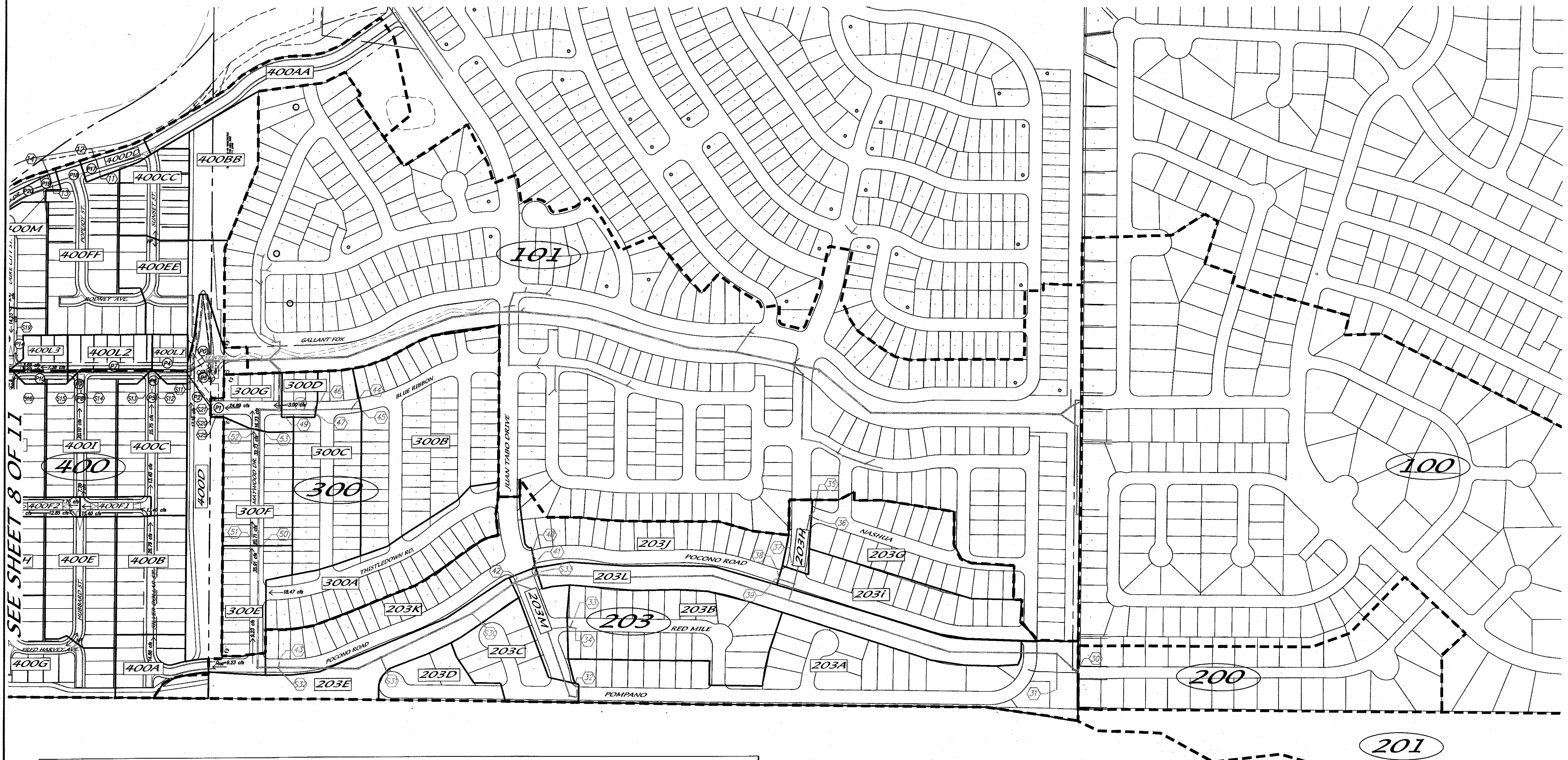
LEGEND	
	AHYMO BASIN BOUNDARY
	SUB-BASIN BOUNDARY
	NEW RCP STORM DRAIN
	AHYMO BASIN NUMBER
	SUB-BASIN NUMBER
	NEW INLET NUMBER
	EXISTING INLET NUMBER
	NEW RCP PIPE NUMBER
	HIGH POINT (WATERBLOCK)



CITY PROJECT NO.	ZONE MAP NO.	SHEET OF
	<i>M-21-Z</i>	<i>8 10</i>










ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		FIELD NOTES					
		NO.	BY	DATE	WORK STAKED BY	DATE	
					STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE, 77.9' SE OF POWER POLE #3537 & 108.0' NW OF POWER POLE #60. STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22". X= 1,584,263.207, Y= 1,475,792.595, (NAD 83), Z= 5597.719 (NAD 1988).		
					INSPECTOR'S FIELD VERIFICATION BY	DATE	
					CHECKED BY	DATE	
					MICRO-FILM INFORMATION	DATE	
					RECORDED BY	DATE	
					NO.		

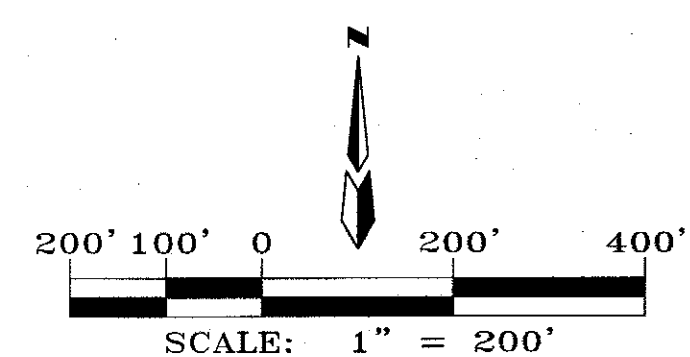
F:\A11JOBS\A11039 JTH West - PPA\GRADE & DRAIN\BASIN MAP\A11039-DRAINAGE-BASIN.dwg, 1/26/2017 1:21:15 PM, SPS



HYDROLOGY SUMMARY TABLE																					
HYDROLOGY										Street flows				Inlet Calcs			Split Flows				
AHYMO BASIN ID	SUB-BASIN ID	AREA (Ac)	Ground Cover (%)	Peak 100-YR Flow Q ₁₀₀ (cfs)			Location	Slope (%)	Depth (ft)	Velocity (fps)	Energy (ft)	Inlet ID #	Intercepted (cfs)	By-pass (cfs)	Path 1 Downstrm ID	Flow (cfs)	Path 2 Downstrm ID	Flow (cfs)			
		(Sq mi)	A	B	C	Incremental		Surface													
100		85.10	0.13622	8	18	35	39														
	100.1	ROUTED IN 54" pipe																			
		66.80	0.10439	0	19	39	42	282.50		0.00											
200		9.00	0.01406	0	20	40	40	37.61		0.00											
201		76.30	0.01828	100	0	0	0	27.64	11.84			30	37.61	0.00							
203		42.50	0.06641	0	22	45	33	172.59													
	203A	8.73						35.45	47.09		2.13	0.51	5.1	0.9	32	16.00	31.09	203M	15.54	203C	15.54
	203B	5.05						20.50	20.50		3.00	0.38	4.3	0.7	33 & 34	11.80	17.10	203M	17.10	-	-
	203C	2.19						16.86	16.86		2.00	0.48	sump	sump	S30	16.86	0.00	-	-	-	-
	203D	1.40						5.90	13.57		4.00	0.40	sump	sump	S31	13.57	0.00	-	-	-	-
	203E	3.33						13.51	0.00		4.00	0.40	sump	sump	S32	13.51	0.00	-	-	-	-
	203G	3.96						16.00	16.00		3.00	0.36	4.0	0.6	35 & 36	9.80	6.20	203H	16.20	-	-
	203H	0.50						2.03	8.26		1.40	0.40	3.0	0.5	37	5.10	3.16	203J	3.16	-	-
	203I	3.30						13.50	16.66		2.00	0.39	3.5	0.6	38 & 39	13.60	3.06	203J	3.06	-	-
	203L	4.04						16.40	19.46		4.00	0.36	4.5	0.7	40 & 41	14.00	5.46	203K	5.46	-	-
	203L	4.00						16.25	20.18		-	-	sump	sump	S33	16.25	0.00	-	-	-	-
	203M	1.25						5.07	22.10		1.00	0.58	4.0	0.8	42	8.80	12.30	203K	12.30	-	-
	203K	4.40						17.90	35.66		1.00	0.46	3.2	0.6	43	17.20	18.46	300E	9.23	400A	9.23
300		22.30	0.03484	0	14	29	57	99.75													
	300A	4.13						18.47	18.47		3.00	3.50	4.0	3.7		0.00	17.47	300E	18.47	-	-
	300B	8.00						35.78	35.78		2.00	0.49	4.5	0.8	44 & 45	18.00	17.78	300C	17.78	-	-
	300C	3.96						17.70	35.50		1.88	0.49	4.5	0.8	46 & 47	18.00	17.50	300D	17.50	-	-
	300D	0.52						2.33	19.80		3.43	0.38	4.5	0.7	48 & 49	16.80	3.00	300G	3.00	-	-
	300E	1.84						8.21	35.91		1.00	0.51	3.7	0.7	50 & 51	15.20	20.71	300F	20.71	-	-
	300F	2.69						12.02	32.73		1.00	0.50	3.7	0.7	52 & 53	16.00	16.73	300G	16.73	-	-
	300G	1.15						5.16	24.89		-	-	-	-		0.00	24.89	400.00	24.89	-	-

LEGEND

- | | |
|---|-------------------------|
|  | AHYMO BASIN BOUNDARY |
|  | SUB-BASIN BOUNDARY |
|  | NEW RCP STORM DRAIN |
|  | AHYMO BASIN NUMBER |
|  | SUB-BASIN NUMBER |
|  | NEW INLET NUMBER |
|  | EXISTING INLET NUMBER |
|  | NEW RCP PIPE NUMBER |
|  | HIGH POINT (WATERBLOCK) |

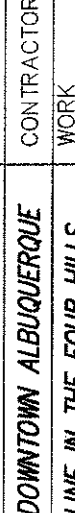


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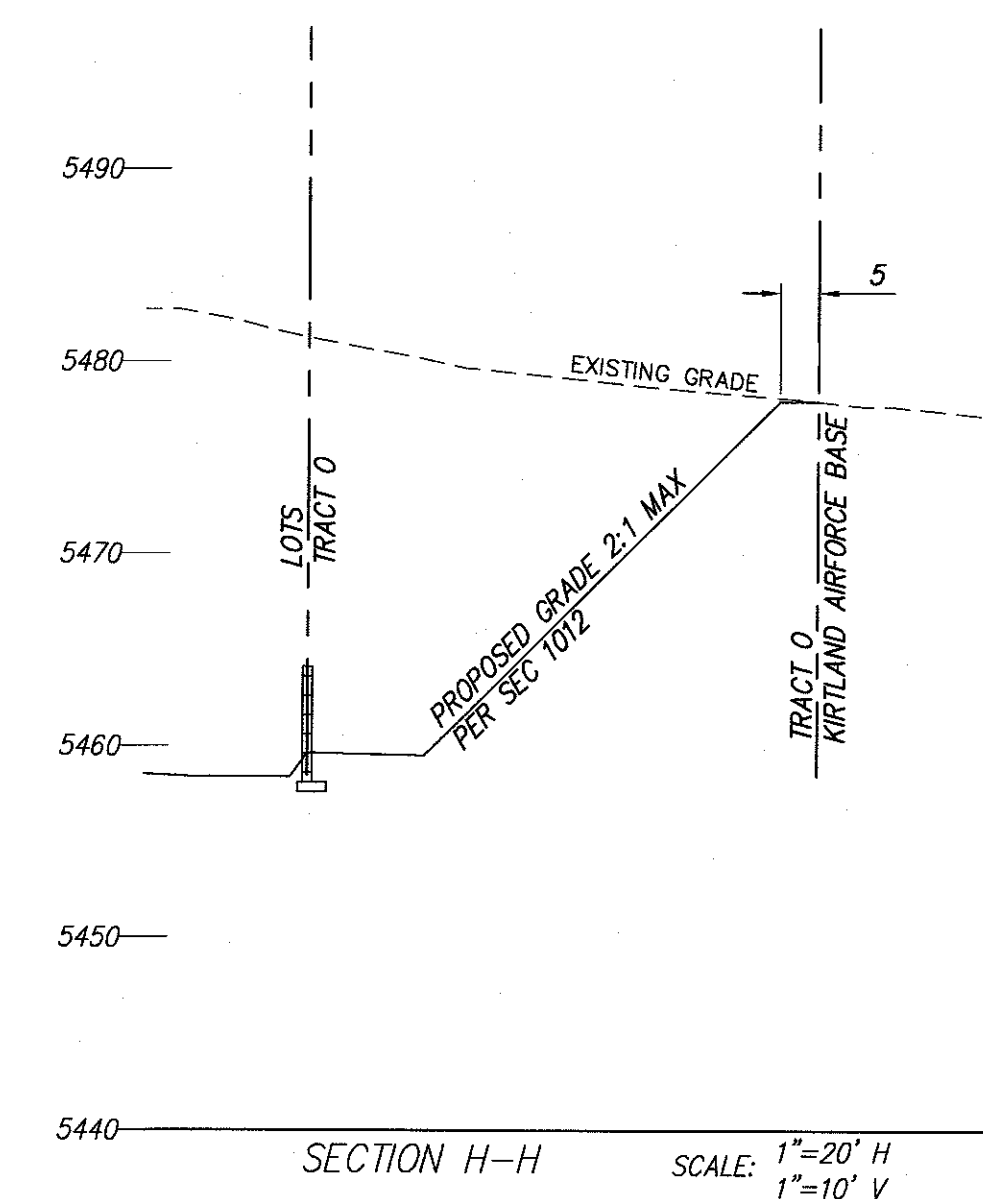
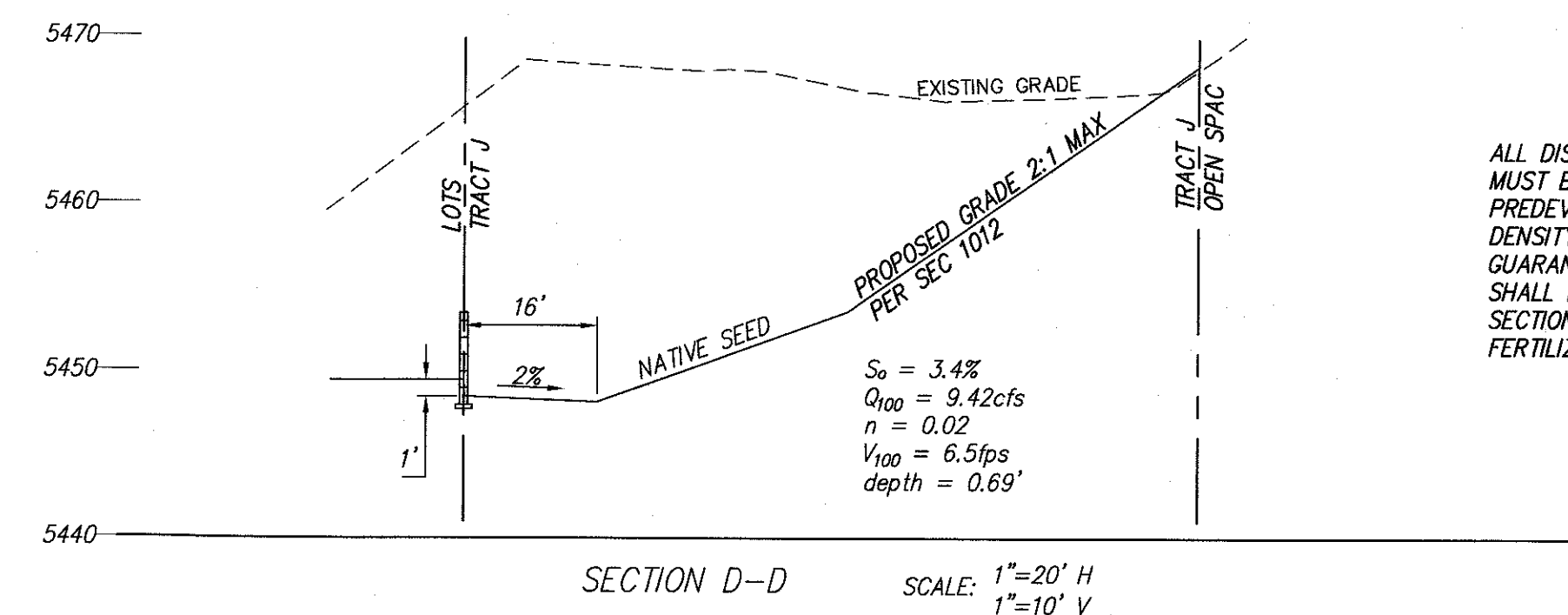
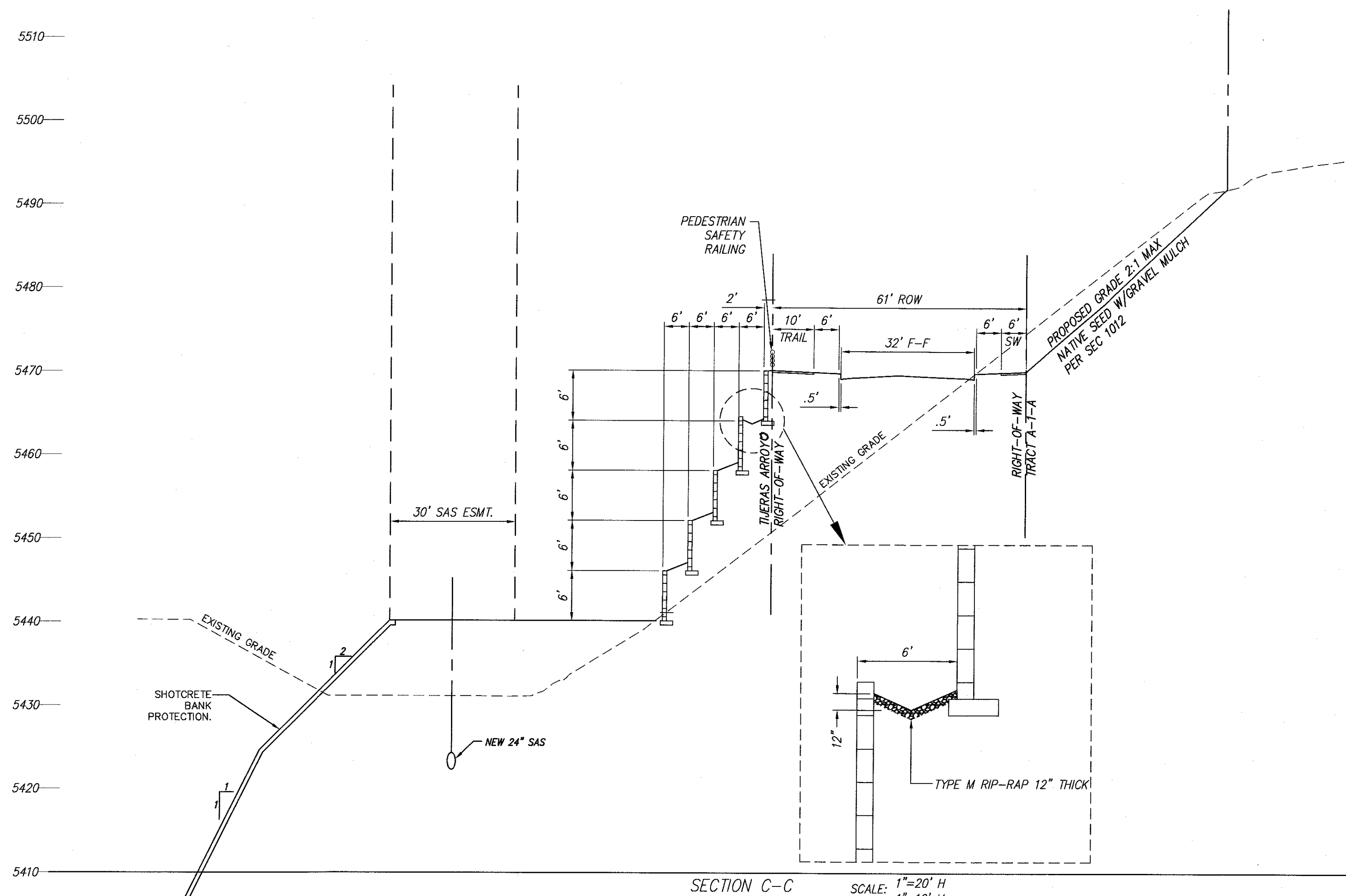
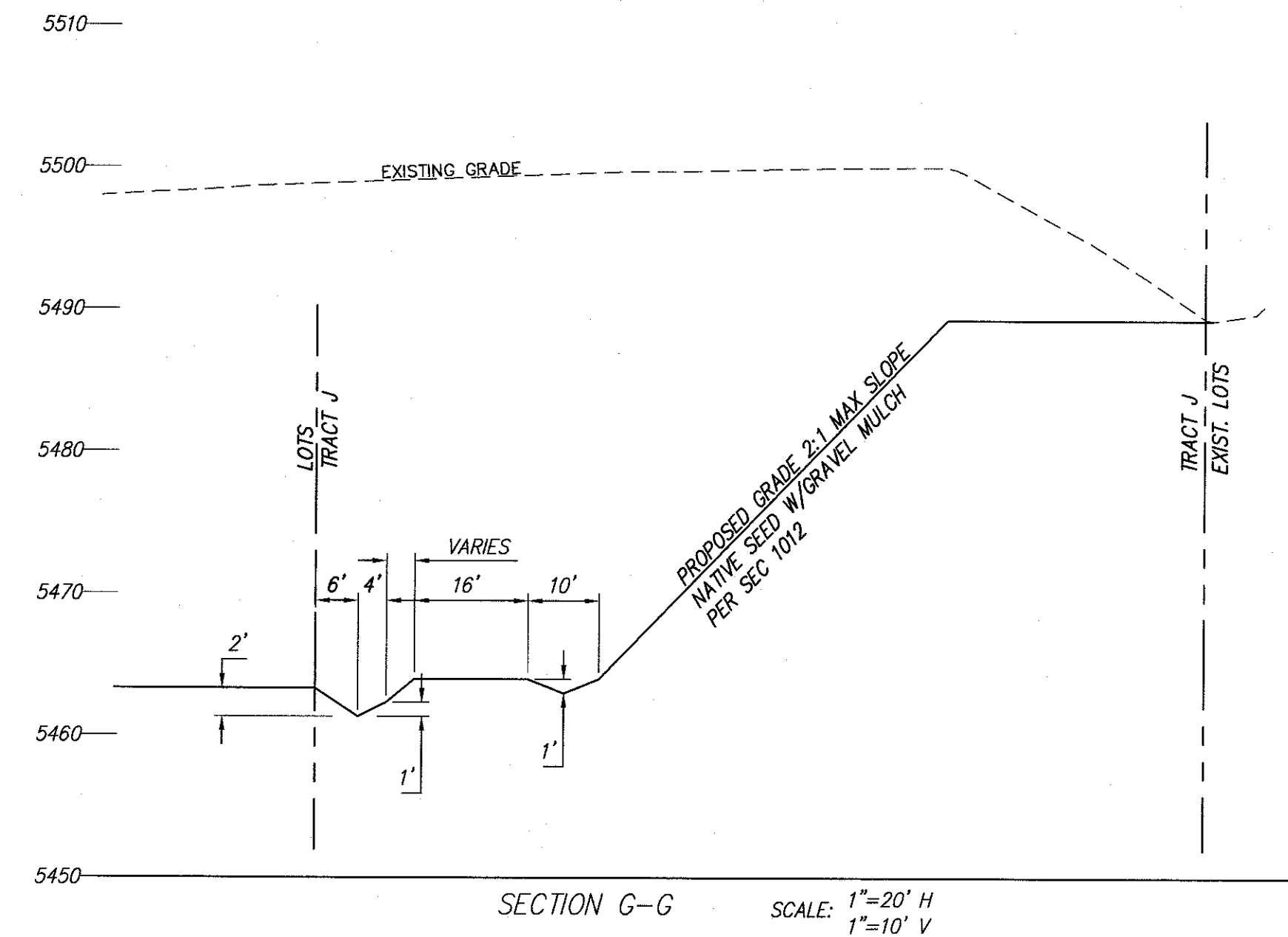
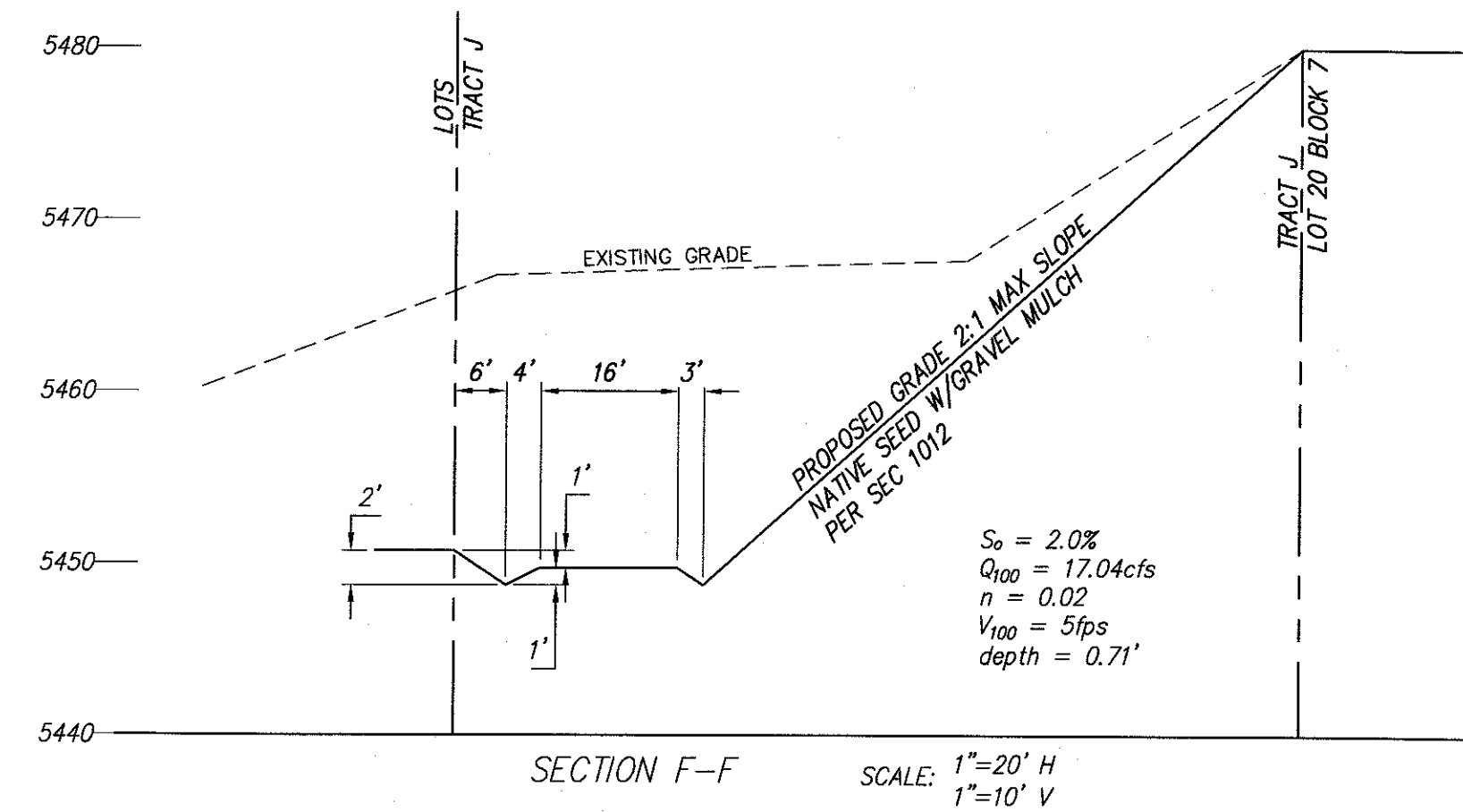
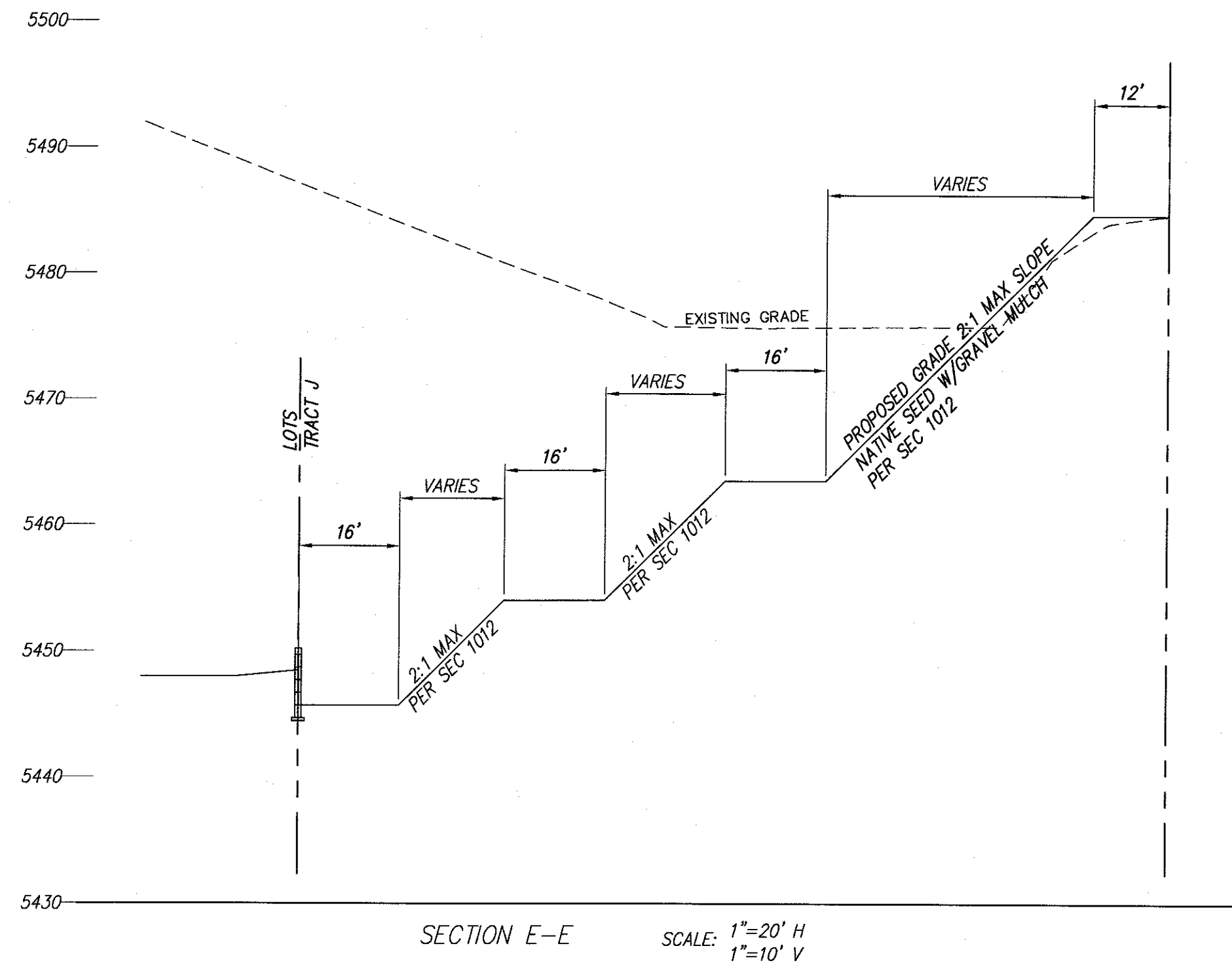
JUAN TABO HILLS ESTATES
OFF-SITE DRAINAGE SUB-BASINS 1

dmg MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90606
ALBUQUERQUE, NEW MEXICO 87199
OFFICE (505) 828-2200, FAX (505) 797-9539

CITY PROJECT NO.	ZONE MAP NO. M-21-Z	SHEET OF 9 10
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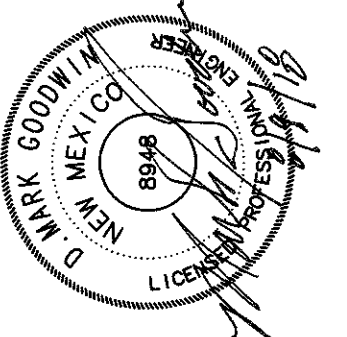
ENGINEER'S SEAL			SURVEY INFORMATION			FIELD NOTES			BENCH MARKS			AS BUILT INFORMATION		
			NO.	BY	DATE									
						STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE. 71.9' SE OF POWER POLE #5337 & 188.0' NW OF POWER POLE #80.			CONTRACTOR			DATE		
						STATION IS A STANDARD K15 BRASS DISH SET IN A CONCRETE MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22".			INSPECTOR'S			DATE		
						X= 1,584,263.207, Y= 1,475,762.595, (NAD 83), Z= 5592.219 (NAD 1988)			FIELD LANCE BY			DATE		
									VERIFICATION BY			DATE		
DESIGNED BY <i>JDH</i>			DATE <i>01/17</i>						CORRECTED BY			DATE		
DRAWN BY <i>ACH</i>			DATE <i>01/17</i>						MICRO-FILM			INFORMATION		
CHECKED BY <i>DWG</i>			DATE <i>01/17</i>						RECORDED BY			DATE		
									NO.					

F:\A11039\A11039 JTH WEST - PPLAT\GRADE & DRAIN\SECTIONS.DWG, 8/9/2018 10:24:33 AM, SPS



ALL DISTURBED AREA IN TRACT J AND O
MUST BE REVEGETATED TO 70% OF
PREDEVELOPMENT GROUND COVER
DENSITY PRIOR TO RELEASE OF FINANCIAL
GUARANTEES. NATIVE SEED AND MULCH
SHALL BE APPLIED IN ACCORDANCE WITH
SECTION 1012 AND WILL INCLUDE
FERTILIZER AND SUPPLEMENTAL WATER.

ENGINEER'S SEAL			SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
				FIELD NOTES				
			NO.	BY	DATE			
						STATION "5-M22" IS LOCATED 8.7 MI. SE OF DOWNTOWN ALBUQUERQUE		
						ON THE EAST SIDE OF THE MUNICIPAL LIMITS LINE IN THE FOUR HILLS		
						SUBDIVISION AREA. STATION IS 600 FT. EAST OF MUNICIPAL LIMITS LINE,		
						77.9' SE OF POWER POLE #537 & 186.0' NW OF POWER POLE #60.		
						STATION IS A STANDARD ACS BRASS DISK SET IN A CONCRETE		
						MONUMENT IN THE GROUND. STATION IS STAMPED "5-M22".		
						X= 1,564,263.207, Y= 1,472,762.595, (NAD 83), Z= 5597.219 (NAVD 1988).		
							NO.	
DESIGNED BY	JDH	DATE	01/17					
DRAWN BY	ACH	DATE	01/17					
CHECKED BY	DMG	DATE	01/17					



AMENDED

JUAN TABO HILLS ESTATES

GRADING & DRAINAGE PLAN

dmg MARK GOODWIN & ASSOCIATES, P.A.
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CITY PROJECT NO. ZONE MAP NO. SHEET OF
M-21-Z 10 10