CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

March 16, 2022

Ronald Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, NM 87109

RE: Rutledge Office/Warehouse
9721 Rutledge Rd NE
Grading Plans and Drainage Report
Engineer's Stamp Date: 03/07/22
Hydrology File: D17D003AA7

Dear Mr. Bohannan:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 12/17/2021, the Grading Plans and Drainage Report are approved for Building Permit, Grading Permit, and for action by the DRB on Platting and Site Plan for Building Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PRIOR TO CERTIFICATE OF OCCUPANCY:

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.
2. AMAFCA is requiring a Maintenance and Encroachment License for maintenance of the swale and concrete rundown in the AMAFCA NDC ROW. This must be executed and recorded with the County. Hydrology will need email confirmation of this from AMAFCA.
3. Please provide the Drainage Covenant with Exhibit A for the stormwater quality ponds per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. Please submit the original copies along with the $ 25.00 recording fee check made payable to Bernalillo County to Marion G. Velasquez (mgvelasquez@cabq.gov) on the 4th floor of Plaza de Sol. Please note that Hydrology will need a pdf copy of the recorded Drainage Covenant prior to Hydrology's approval of Permanent Release of Occupancy.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: TRACT A-2-A & A-3-A JOURNAL CENTER 2 Building Permit #: _____ Hydrology File #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: TR A-3-A PLAT OF TRACTS A-1-A A-2-A A-3-A & A-4-A JOURNAL CENTER 2 UNIT 2 (EXCEL PORTION OUT TO R/W) CONT 2.7385 +/- AC

City Address: RUTLEDGE ST NE ALBUQUERQUE 87109

Applicant: TIERRA WEST, LLS Contact: VINCE CARRICA

Address: 5571 MIDWAY PARK PLACE NE, ALBUQUERQUE, NM 87109

Phone#: (505) 858-3100 Fax#: _____ E-mail: VCARRICA@TIERRAWESTLLC.COM

Other Contact: BRUNACINI DEVELOPMENT LTD CO Contact: ANGELO BRUNACINI

Address: _____

Phone#: (505) 833-2928 Fax#: _____ E-mail: ABRUNACINI@BRUNACINI.COM

TYPE OF DEVELOPMENT: ____ PLAT (# of lots) ____ RESIDENCE X DRB SITE ___ ADMIN SITE

IS THIS A RESUBMITTAL? ____ Yes X No

DEPARTMENT ____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
X CONCEPTUAL G & D PLAN
____ GRADING PLAN
X 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

X PRELIMINARY PLAT APPROVAL
X 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: 12.17.2021 By: VINCE CARRICA

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

DRAINAGE REPORT

For

RUTLEDGE OFFICE/WAREHOUSE DEVELOPMENT
9721 RUTLEDGE ROAD, NE
ALBUQUERQUE, NEW MEXICO

Prepared by

Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, New Mexico 87109

Prepared for

Brunacini Developmer
Albuquerque, NM

February 18, 2021

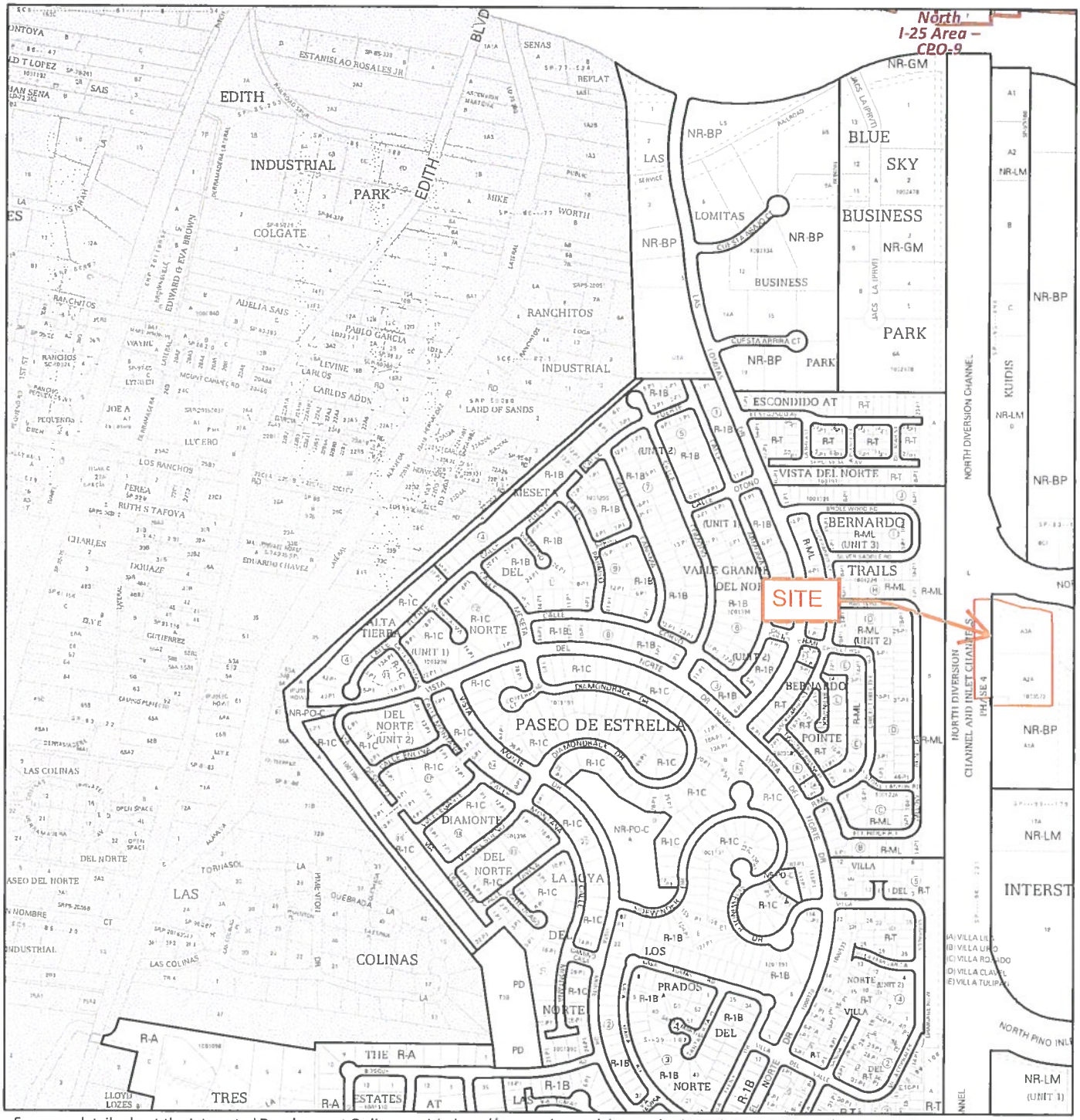
City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 03/16/22
BY: Renée C. Brissette
HydroTrans # D17D003AA7

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERROR OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

02/18/2021

RONALD R BOHANNAN, PE #7868

TABLE OF CONTENTS



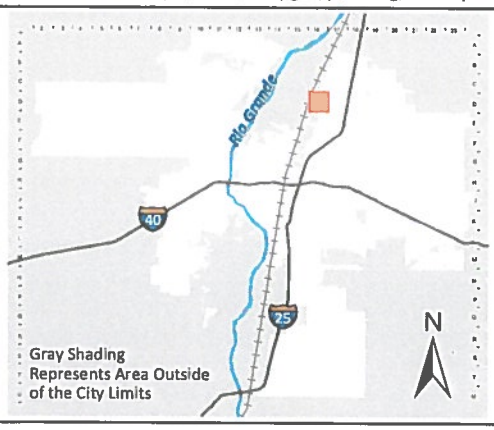
For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

IDO Zone Atlas
May 2018

Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

The Zone Districts and Overlay Zones are established by the Integrated Development Ordinance (IDO).



Zone Atlas Page:

D-16-Z

- Easement
- Escarpment
- Petroglyph National Monument
- Areas Outside of City Limits
- Airport Protection Overlay (APO) Zone
- Character Protection Overlay (CPO) Zone
- Historic Protection Overlay (HPO) Zone
- View Protection Overlay (VPO) Zone

Feet: 0 250 500 1,000


Journal Center Development
Office/Warehouse
Legend
NORTH
DIVERSION
CHANNEL
SITE
MASTHEAD
RUTLEDGE
HAWKINS
Masthead St NE
Masthead St NE
Washington St NE
Snapdragon St NE
Hawkins St NE
Thurston St NE
N
1000 ft
Google Earth

LOCATION

The proposed office / warehouse development is located off the west end of Rutledge Road and Masthead Road in the Journal Center in Albuquerque. It is comprised of approximately 4.7453 acres zoned NRBP. This report represents a drainage management and grading plan for approval by the City of Albuquerque, for grading and Building Permit submittal.

DRAINAGE BASIN DESIGNATION

The drainage basins for proposed conditions are as indicated on the BASIN MAP included in this report. The site is broken into 19 onsite drainage basins (including 4 first flush ponds) and three offsite upland basins.

EXISTING DRAINGE CONDITIONS

The site is currently vacant with the exception of an existing outdoor patio area in the middle portion along the east property line of the site. The site drains predominantly southeast to northwest. Runoff from the existing site is conveyed to the existing swale in AMAFCA right of way where it drains to the north to an existing surface rundown into the North Diversion Channel.

FIRM MAP

The site is not located in a designated flood plain as shown on the attached Flood Hazard Zone Map No. 35001C0136G dated 9/26/2008.

DESIGN-CRITERIA

The drainage plan presented in this report was prepared in accordance with the City of Albuquerque Drainage Ordinances and Chapter 6 of the Development Process Manual DPM. The hydrological analysis is based on the 100-year frequency, 24-hour duration storm, as Represented in Article 6-2(A), Hydrology, of the Development Process Manual. The plan will also include retention of the storm water quality in

National Flood Hazard Layer FIRMette

FEMA

106°36'33"W 35°10'9"N

106°35'55"W 35°9'39"N

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/14/2021 at 3:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

proposed on-site landscaped areas / storm water detention ponds. See attached Weighted E Table for excess precipitation values calculated for this site.

DEVELOPED-DRAINAGE CONDITIONS

The site is proposed to be developed as a single story 62,045 SF office / warehouse development with associated parking, drive aisles, landscaping and storm drainage first flush ponds.

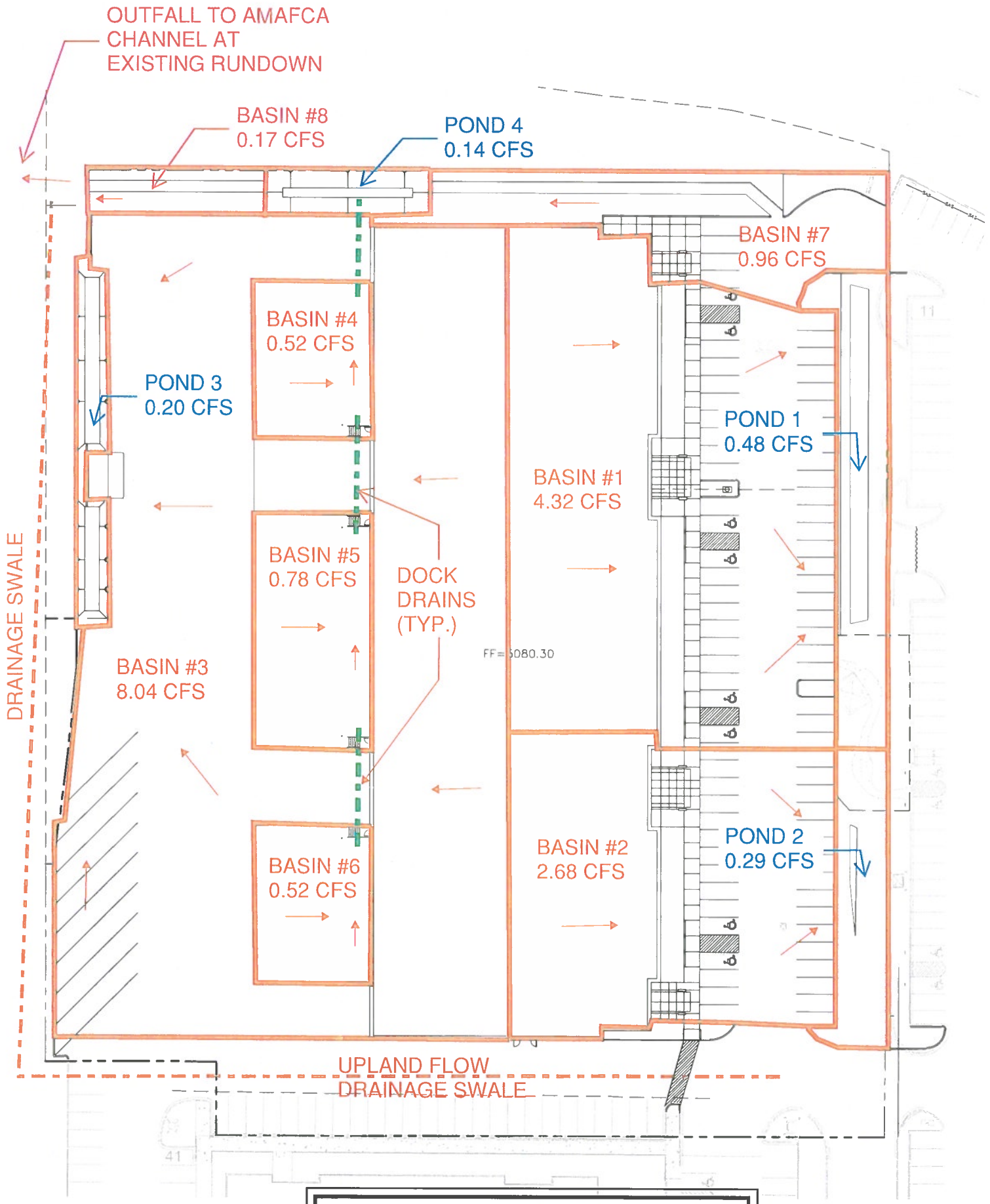
The runoff from the site is proposed to drain to onsite first flush ponds that will retain the required first flush volume and release remaining flows to the adjacent North Diversion Channel. Refer to enclosed Weighted E computation spreadsheet for developed conditions.

Runoff from three upland basins (currently developed) will either be routed through the subject site or be routed in existing paved swales west to the North Diversion Channel Road right of way. The upland flows from Basin OS-1 will be routed through the subject site to the northwest corner where it will be intercepted by a proposed concrete channel to the existing North Diversion Channel concrete rundown. Runoff from upland basins OS-2 and OS-3 will continue to be routed in existing paved drainage swale located in drive aisles and roadways of existing developed sites adjacent to the subject site. The upland flows will be routed via a proposed earthen drainage swale within the North Diversion Channel Road right of way and intercepted by the proposed concrete channel noted above, and to the existing North Diversion Channel concrete rundown. The earthen swale location will coincide with the proposed roadside swale noted in the attached 95% preliminary North Diversion Channel Roadway Plans prepared by TY-LIN International and provided by COA Department of Municipal Development. See attached Sheet 6 of 103 Channel Road Phase 2 Roadway Typical Sections.

SUMMARY

The proposed grading and drainage plan for the proposed development of the existing undeveloped Tracts A-2-A and A-3-A property includes surface flows of runoff to onsite water quality and ponds. The ponds will retain first flush volumes for the

developed portion of the lot and the pond will exit the site to the west where it will follow historic drainage path to the North Diversion Channel rundown via a proposed concrete rundown. Runoff from upland basins will also be routed to the proposed concrete channel which is proposed to be connected to the existing concrete rundown on the North Diversion Channel. The storm drain capacity downstream of the site is sufficient to carry the historic runoff.



ONSITE DRAINAGE BASIN MAP


Legend
SITE
AP-1
12.15
CFS
OS-1
12.15
CFS
OS-2
3.93
CFS
AP-2
3.93
CFS
AP-3
38.87
CFS
OS-3
34.94
CFS
Rutledge Rd NE
OFFSITE BASIN MAP
N
500 ft
Google Earth

Weighted E Method

Zone #2

Onsite Developed Basins

												100-Year		
Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
				%	(acres)	%	(acres)	%	(acres)	%	(acres)			
1	41007.00	0.941	0.00147	0%	0	0%	0.000	7%	0.065897	93%	0.875	2.051	0.161	4.32
2	25137.00	0.577	0.00090	0%	0	0%	0.000	4%	0.023083	96%	0.554	2.080	0.100	2.68
3	74496.00	1.710	0.00267	0%	0	0%	0.000	0%	0	100%	1.710	2.120	0.302	8.04
4	4820.00	0.111	0.00017	0%	0	0%	0.000	0%	0	100%	0.111	2.120	0.020	0.52
5	7200.00	0.165	0.00026	0%	0	0%	0.000	0%	0	100%	0.165	2.120	0.029	0.78
6	4820.00	0.111	0.00017	0%	0	0%	0.000	0%	0	100%	0.111	2.120	0.020	0.52
7	10506.00	0.241	0.00038	0%	0	0%	0.000	45%	0.108533	55%	0.133	1.675	0.034	0.96
8	2044.00	0.047	0.00007	0%	0	0%	0.000	67%	0.031439	33%	0.015	1.457	0.006	0.17
Pond 1	6704.00	0.154	0.00024	0%	0	0%	0.000	100%	0.153903	0%	0.000	1.130	0.014	0.48
Pond 2	4075.00	0.094	0.00015	0%	0	0%	0.000	100%	0.093549	0%	0.000	1.130	0.009	0.29
Pond 3	2810.00	0.065	0.00010	0%	0	0%	0.000	100%	0.064509	0%	0.000	1.130	0.006	0.20
Pond 4	1940.00	0.045	0.00007	0%	0	0%	0.000	100%	0.044536	0%	0.000	1.130	0.004	0.14
Total	185559.00	4.260	0.00666										0.704	19.11

POND No.	1st Flush Vol. (Cu.Ft.)	Pond Capacity (Cu.Ft.)
1	1,303	6,717
2	824	1,673
3	2,545	2,749
4	773	1,390

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Weighted E Method

Zone #2

Offsite Developed Basins

												100-Year		
Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
				%	(acres)	%	(acres)	%	(acres)	%	(acres)			
OS-1	122,778	2.819	0.00440	0%	0	0%	0.000	25%	0.704649	75%	2.114	1.873	0.440	12.15
OS-2	39,686	0.911	0.00142	0%	0	0%	0.000	25%	0.227766	75%	0.683	1.873	0.142	3.93
OS-3	350,569	8.048	0.01257	0%	0	0%	0.000	23%	1.85103	77%	6.197	1.892	1.269	34.94
Total	513,033	11.778	0.01840										1.851	51.01

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

VOLUME CALCULATIONS

Rutledge Office/Warehouse

POND #1

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

Ab =	1,585.00	B.O.P.=	5075.00
At =	3,328.00	T.O.P. =	5078.00
Dt =	3.00		
C =	581.00		
B Elev. =	5,075.00		

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5075.00	0	0	0.000
5075.50	0.50	0.0199	0.000
5076.00	1.00	0.0431	0.000
5076.50	1.50	0.0696	0.000
5077.00	2.00	0.0994	0.000
5077.80	2.80	0.1542	0.000

Orifice Equation

Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	10
Area (ft^2)=	0.545415391
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

VOLUME CALCULATIONS

Rutledge Office/Warehouse

POND #2

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D^2

C = (At - Ab) / Dt

Ab =	142.00	B.O.P.=	5076.00
At =	1,880.00	T.O.P. =	5078.50
Dt =	2.50		
C =	695.20		
B Elev. =	5,076.00		

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5076.00	0	0	0.000
5076.50	0.50	0.0036	0.000
5077.00	1.00	0.0112	0.000
5077.50	1.50	0.0228	0.000
5078.00	2.00	0.0384	0.000

Orifice Equation

Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	10
Area (ft^2)=	0.545415391
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

VOLUME CALCULATIONS

Rutledge Office/Warehouse

POND #3

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D^2

C = (At - Ab) / Dt

Ab =	1,033.00	B.O.P.=	5073.50
At =	2,634.00	T.O.P. =	5075.00
Dt =	1.50		
C =	1067.33		
B Elev. =	5,073.50		

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5073.50	0	0	0.000
5074.00	0.50	0.0149	0.000
5074.50	1.00	0.0360	0.000
5075.00	1.50	0.0631	0.000

Orifice Equation

Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	10
Area (ft^2)=	0.545415391
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

VOLUME CALCULATIONS

Rutledge Office/Warehouse

POND #4

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D^2

C = (At - Ab) / Dt

Ab =	350.00	B.O.P.=	5076.00
At =	1,500.00	T.O.P. =	5077.50
Dt =	1.50		
C =	766.67		
B Elev. =	5,076.00		

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5076.00	0	0	0.000
5076.50	0.50	0.0062	0.000
5077.00	1.00	0.0168	0.000
5077.50	1.50	0.0319	0.000

Orifice Equation

Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	10
Area (ft^2)=	0.545415391
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

TIERRA WEST, LLC

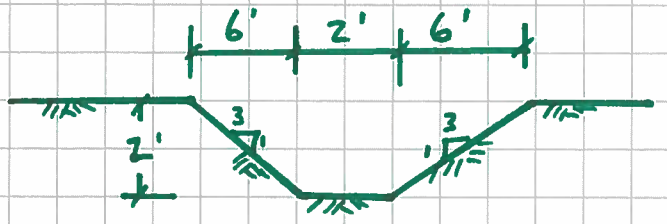
Project RUTLedge office/WAREHOUSE Date 2/18/22

Project No.

Meeting Purpose Sheet No 1 of 1

Attendees

EARTHEN CHANNEL CALCS:



S = 0.50%

n = 0.025 (EARTHEN)

A = 16 ft²

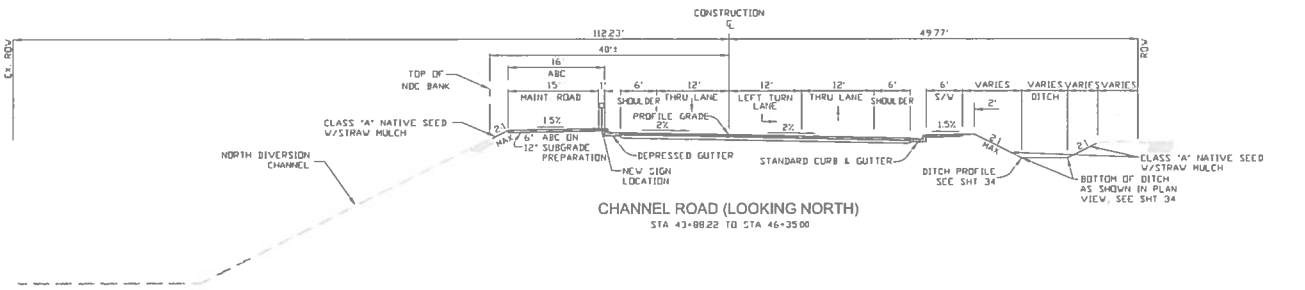
P = 14.66 ft

$$Q = A\frac{1.49}{n}\left(\frac{A}{P}\right)^{2/3}\sqrt{S} = (16)\frac{1.49}{0.025}\left(\frac{16}{14.66}\right)^{2/3}\sqrt{0.005} = 71.48\ cfs$$

V = 4.47 ft/sec

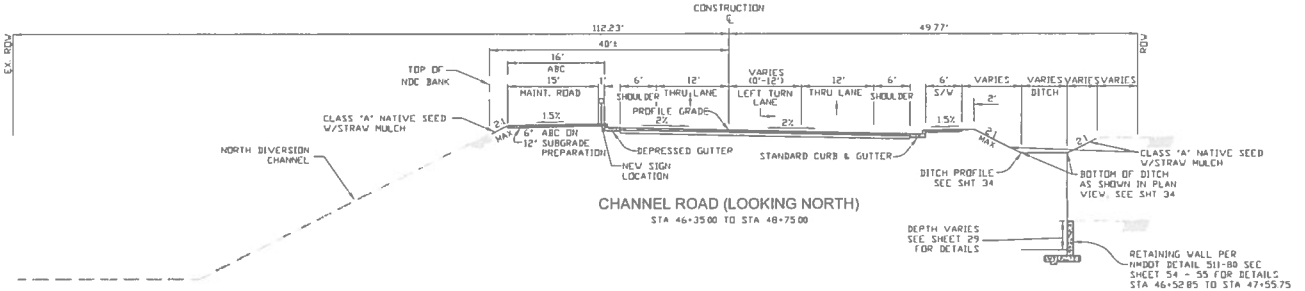
$Q_{REQ.}$ (AP-3) = 38.87 cfs ≤ $Q_{CAPACITY}$ = 71.48 cfs ✓

5571 Midway Park Place NE • Albuquerque, NM 87109 • (505) 858-3100 • (505) 858-1118 Fax • 1-800-245-3102 • twllc@tierrawestllc.com



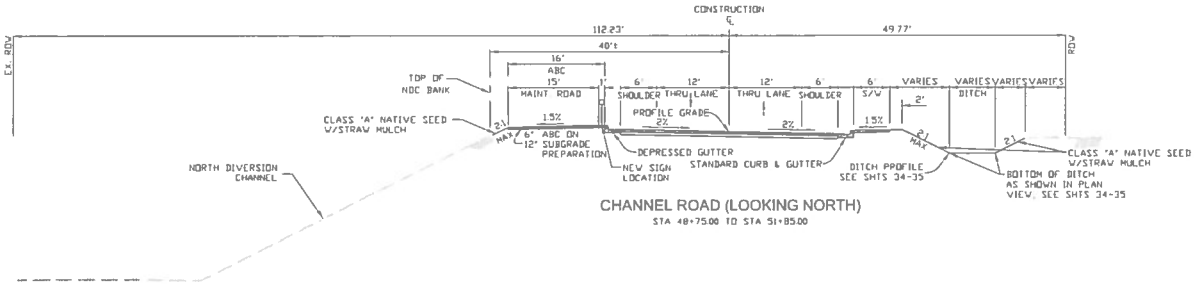
CHANNEL ROAD (LOOKING NORTH)

STA 43+88.22 TO STA 46+35.00



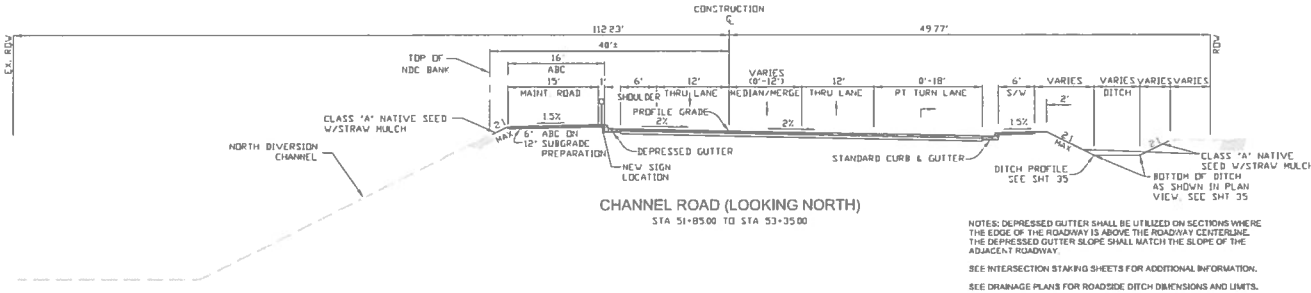
CHANNEL ROAD (LOOKING NORTH)

STA 46+35.00 TO STA 48+75.00



CHANNEL ROAD (LOOKING NORTH)

STA 48+75.00 TO STA 51+85.00



CHANNEL ROAD (LOOKING NORTH)

STA 51+85.00 TO STA 53+35.00

NOTES: DEPRESSED GUTTER SHALL BE UTILIZED ON SECTIONS WHERE THE EDGE OF THE ROADWAY IS ABOVE THE ROADWAY CENTERLINE. THE DEPRESSED GUTTER SLOPE SHALL MATCH THE SLOPE OF THE ADJACENT ROADWAY.

SEE INTERSECTION STAKING SHEETS FOR ADDITIONAL INFORMATION.

SEE DRAINAGE PLANS FOR ROADSIDE DITCH DIMENSIONS AND LIMITS.

2" AC (ARTERIAL ASPHALT SP-III)
TACK COAT
2" AC (ARTERIAL ASPHALT SP-III)
12" ABC (95% COMPACTION)
12" SUBGRADE PREPARATION (95% COMPACTION)

R-VALUE ≥ 50
TOTAL THICKNESS = 16 INCHES

PAVEMENT STRUCTURAL SECTION A

CHANNEL ROAD STA 43+88.22 TO 84+69.27

1.75" AC (ARTERIAL ASPHALT TYPE SP-III)
TACK COAT
1.75" AC (ARTERIAL ASPHALT SP-III)
12" ABC (95% COMPACTION)
12" SUBGRADE PREPARATION (95% COMPACTION)

R-VALUE ≥ 41
TOTAL THICKNESS = 13.5 INCHES

PAVEMENT STRUCTURAL SECTION B

HAWKINS ROAD & MASTHEAD ROAD

3" AC (ARTERIAL ASPHALT SP-III)
12" SUBGRADE PREPARATION (95% COMPACTION)

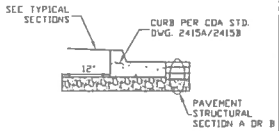
R-VALUE ≥ 50
TOTAL THICKNESS = 15 INCHES

TEMPORARY STRUCTURAL SECTION

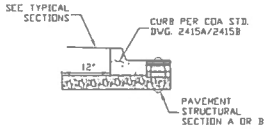
EL PUEBLO CONNECTION STA 1+00.00 TO 6+47.43

3" TYPE C
12" SUBGRADE PREPARATION (95% COMPACTION)

TRAIL PAVEMENT STRUCTURAL SECTION



STANDARD CURB DETAIL



MEDIAN CURB DETAIL

260-1990

T-Y LIN INTERNATIONAL
engineers | planners | scientists
500 4th Street NW Suite 403
Bank of America Centre
Albuquerque, NM 87102

AS BUILT INFORMATION
CONTRACTOR — DATE
ACTIVITY — DATE
STARTED BY
COMPLETED BY
INSPECTED BY
COMPLETED BY

MICRO-FILM INFORMATION
RECORDED BY — DATE

BENCH MARKS
ALBUQUERQUE GEODAPHIC REFERENCE SYSTEM
15.016 (1 3/4" ALUMINUM DISK)
NM STATE PLANE COORDINATES
2009
CENTRAL ZONE, NAD 1983
ELEVATION= 5092.856 (NAVD 1988)
SW QUADRANT OF OSUNA RD. NE. &
THE NORTH DIVISION CHANNEL EPOXIED
TO TOP OF CONCRETE BASE OF STREET
LIGHT STANCHION

SURVEY INFORMATION
NO. | FIELD NOTES BY | DATE
1 | PRECISION SURVEYS | 2009

ENGINEER'S SEAL

95% REVIEW

PRELIMINARY
NOT FOR CONSTRUCTION

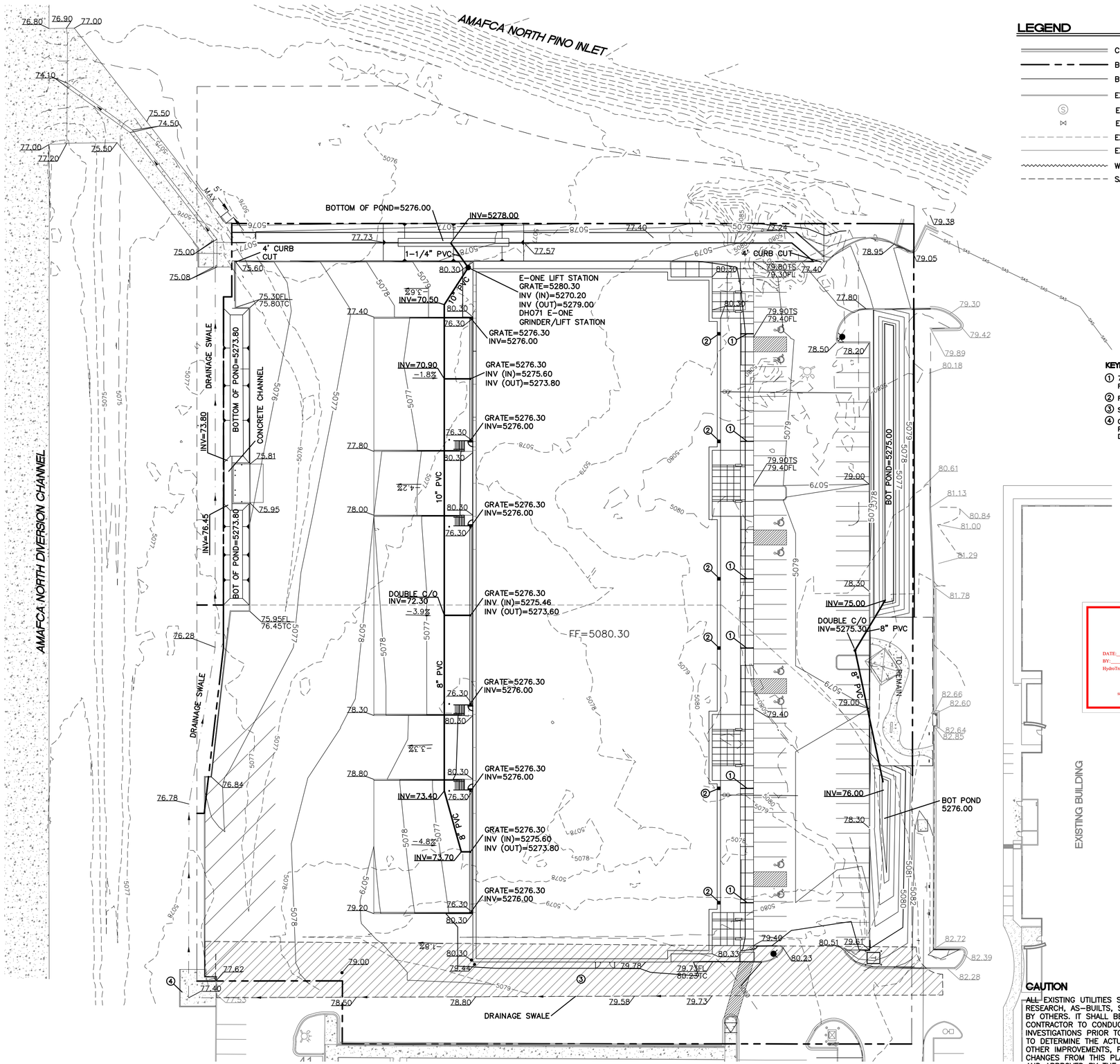
NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED BY	B.LONG		DATE 08/2017
DRAWN BY	B.LONG		DATE 08/2017
CHECKED BY	E.FROBERG		DATE 08/2017

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

TITLE: CHANNEL ROAD - PHASE 2
ROADWAY TYPICAL SECTIONS

Design Review Committee | City Engineer Approval | Last Design Update

City Project No. 6920.92 | Zone Map No. C16, C17, D16, D17 | Sheet 6 Of 103

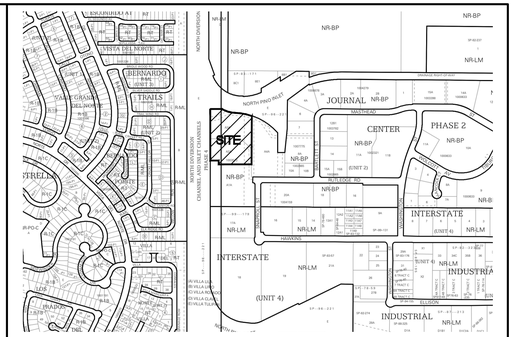


LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- BUILDING
- EXISTING CURB & GUTTER
- EXISTING SAS MH
- EXISTING GATE VALVE
- EXISTING WATERLINE
- EXISTING SAS
- WATER BLOCK
- SAWCUT LINE

KEYED NOTES

1. 7'X7' TUBE STEEL THRU SIDEWALK FOR ROOF DRAIN (REF. ARCHITECTURAL SHEETS)
2. ROOF DRAIN (REF. ARCHITECTURAL SHEETS)
3. SAWCUT AND REMOVE EXISTING PAVING
4. CONCRETE RUNDOWN TO BE CONSTRUCTED PER AMAFCA STANDARDS IN THE NORTH DIVERSION CHANNEL RIGHT-OF-WAY



VICINITY MAP D-16Z, D-17Z

FLOOD MAP 35001C0136G

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF RIO RANCHO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONNECTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.
6. ALL SLOPES NOT STABILIZED AT THE END OF THE PROJECT SHALL BE STABILIZED IN ACCORDANCE WITH COA SPECS OR ¾" GRAVEL

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 03/16/22
BY: Renée C. Brissette
HydroTrans # D17D003AA7

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF ANY VIOLATION OF STATE LAWS, ORDINANCES OR POLICY THAT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERROR OF DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTION. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

CAUTION

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

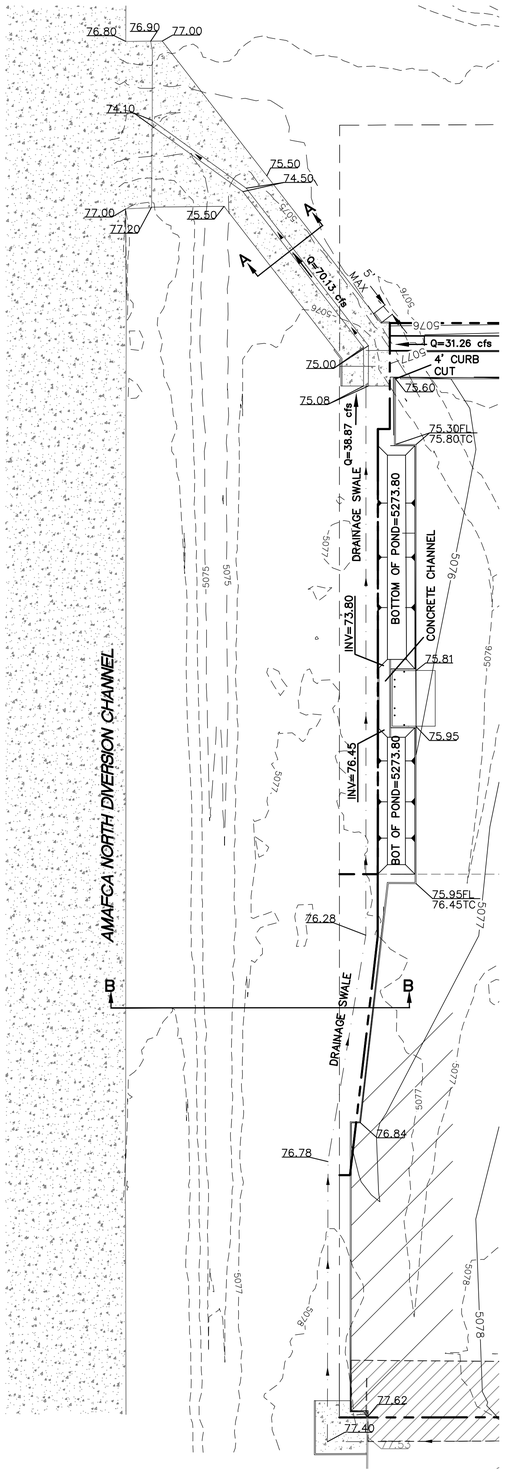
ENGINEER'S SEAL
RONALD R. BOHANNAN NEW MEXICO 7868 PROFESSIONAL ENGINEER
3-7-22
RONALD R. BOHANNAN P.E. #7868

RUTLEDGE OFFICE/WAREHOUSE
ALBUQUERQUE, NM

RUTLEDGE SPEC BUILDING GRADING AND DRAINAGE PLAN

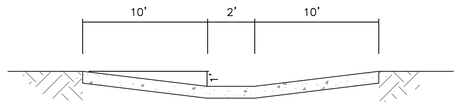
TIERRA WEST, LLC
5571 MIDWAY PARK PL NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY pm
DATE 3-7-22
DRAWING
SHEET # GR-1
JOB # 2021051

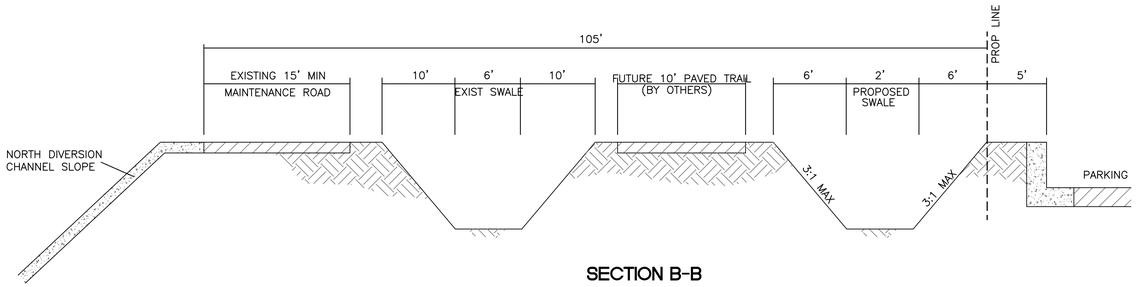


NOTES

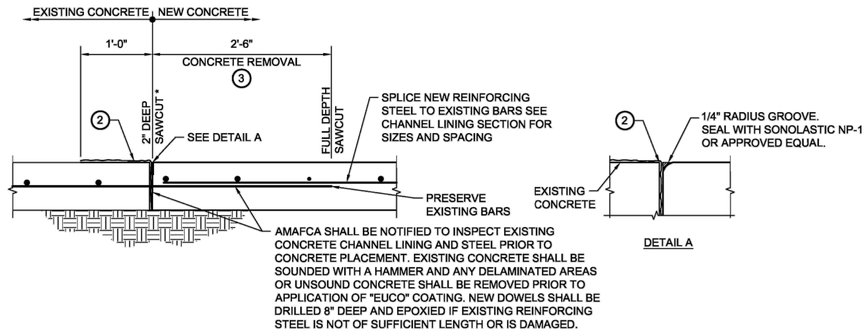
SEE CHANNEL RUNDOWN DETAILS ON SHEET GR-3



SECTION A-A
NTS



SECTION B-B
NTS



NEW TO EXISTING CHANNEL LINING CONSTRUCTION JOINT DETAILS

AMAFCA GENERAL NOTES

1. AMAFCA'S PROJECT MANAGER SHALL BE NOTIFIED 48 HOURS PRIOR TO START OF ANY WORK AND PRIOR TO FINAL INSPECTION OF THE WORK WITHIN THE AMAFCA RIGHT-OF-WAY OR EASEMENT. TELEPHONE NUMBER IS 884-2215.
2. NO WORK WILL BE PERFORMED IN THE AMAFCA RIGHT-OF-WAY OR EASEMENT BETWEEN MAY 15 AND OCTOBER 15 WITHOUT WRITTEN PERMISSION FROM AMAFCA.
3. ALL SUBGRADE, BACKFILL AND EMBANKMENT SHALL BE COMPACTED TO 95% (MODIFIED PROCTOR) WITHIN THE AMAFCA RIGHT-OF-WAY OR EASEMENT. TESTING REPORTS SHALL BE PROVIDED TO AMAFCA.
4. CERTIFIED AS-BUILT PLANS MUST BE SUBMITTED TO AMAFCA FOR THE CONSTRUCTION WITHIN THE AMAFCA RIGHT-OF-WAY OR EASEMENT.
5. CONTRACTOR SHALL PROVIDE A CERTIFICATE OF LIABILITY INSURANCE IN THE AMOUNT OF $2,000,000.00, NAMING AMAFCA AS ADDITIONAL INSURED, PRIOR TO STARTING WORK.
6. ALL DISTURBED GROUND AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SECTION 1012 NATIVE GRASS SEEDING, AS CURRENTLY UPDATED.
7. ANY EXISTING SURVEY CONTROL MONUMENTS THAT ARE MOVED OR DESTROYED AS A RESULT OF THE CONSTRUCTION SHALL BE REPLACED BY A LICENSED SURVEYOR AT THE OWNER'S EXPENSE.
8. THE MAXIMUM WHEEL LOAD ALLOWED IN THE AMAFCA CHANNEL IS 12,000 POUNDS.
9. NO TRACKED VEHICLES WILL BE ALLOWED IN THE AMAFCA CHANNEL WITHOUT WRITTEN PERMISSION FROM AMAFCA.

APPROVED FOR CONSTRUCTION WITHIN AMAFCA RIGHT-OF-WAY / EASEMENT:

(FOR AMAFCA)

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 03/16/22
BY: Renée C. Brissette
HydroTrans #: D17D003AA7

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY FROM REQUIRING THE CORRECTION OF CORRECTIONS, OR ERROR OR OMISSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION

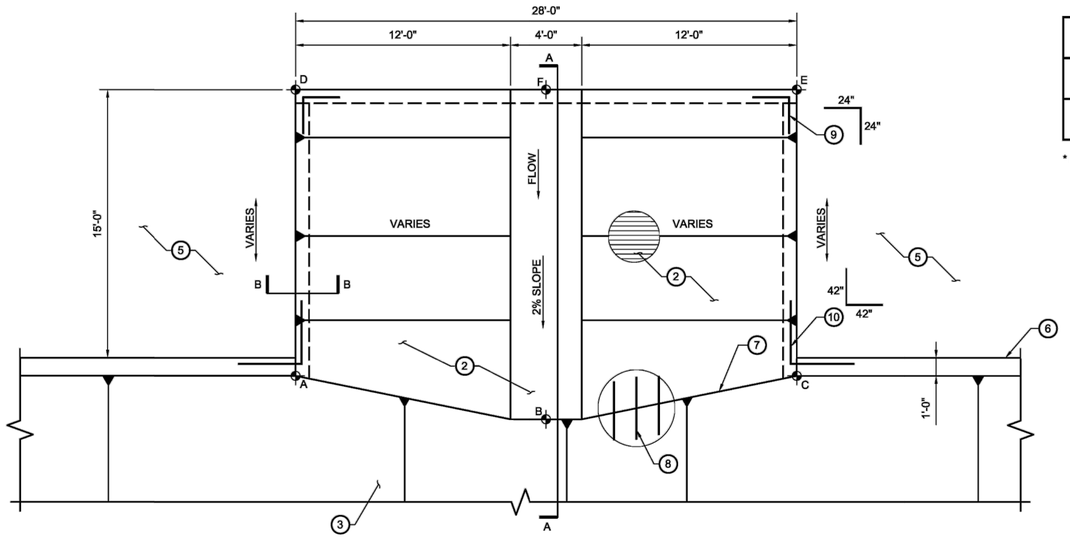
ENGINEER'S SEAL
RONALD R. BOHANNAN
NEW MEXICO
7868
PROFESSIONAL ENGINEER
3-7-22
RONALD R. BOHANNAN
P.E. #7868

RUTLEDGE OFFICE/WAREHOUSE
ALBUQUERQUE, NM

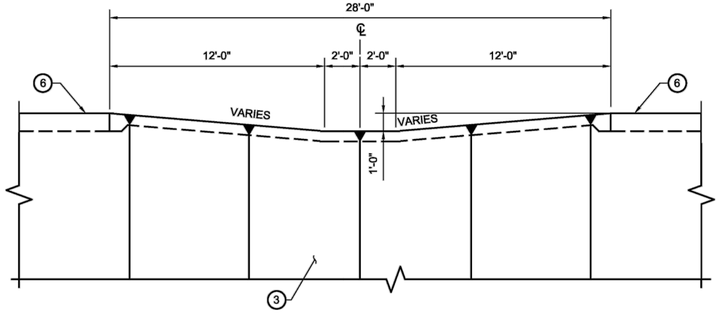
CHANNEL SECTIONS

TIERRA WEST, LLC
5571 MIDWAY PARK PL NE
ALBUQUERQUE, NEW MEXICO 87109
(505) 858-3100
www.tierrawestllc.com

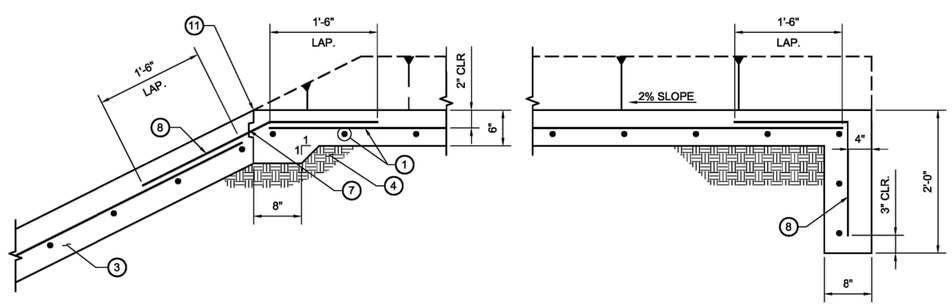
DRAWN BY: pm
DATE: 3-7-22
DRAWING
SHEET #: GR-2
JOB #: 2021051



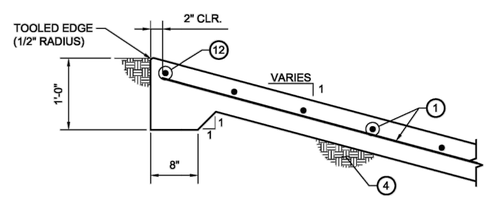
CONCRETE CHANNEL RUNDOWN PLAN
NO SCALE



RUNDOWN ELEVATION
NO SCALE



RUNDOWN SECTION A-A
NO SCALE



RUNDOWN SECTION B-B
NO SCALE

RUNDOWN SPOT ELEVATION SCHEDULE

RUNDOWN LOCATION (STA.)	A	B	C	D*	E*	F

* NOTE: THE DOWNSTREAM SPOT ELEVATION "D" OR "E" SHALL BE 6" (MIN.) HIGHER THAN SPOT ELEVATION "F". THE UPSTREAM SPOT ELEVATION "D" OR "E" SHALL BE 3" (MIN.) HIGHER THAN SPOT ELEVATION "F".

KEYED NOTES

1. RUNDOWNS SHALL BE CONSTRUCTED OF 6" THICK CONCRETE WITH #5 BARS AT 15" O.C. CONCRETE SHALL BE TINTED TO MATCH CHANNEL COLOR.
2. EXPOSED CONCRETE SURFACE OF THE RUNDOWN SHALL BE FINISHED WITH A TINE FINISH TRANSVERSE TO RUNDOWN FLOW
3. 8" CHANNEL LINING
4. COMPACTED SUBGRADE - 95% MODIFIED PROCTOR, SAME CONDITIONING AS UNDER CHANNEL LINING
5. MAINTENANCE ROAD
6. CHANNEL SILL
7. ALLOWABLE CONSTRUCTION JOINT WITH KEYWAY
8. #5 DOWEL @ 15" O.C.
9. #5 CORNER BAR, TYP.
10. #8 CORNER BAR, TYP.
11. TOOLED 1/4" RADIUS BOTH SIDES WITH NP-1 SEALANT OR APPROVED EQUAL
12. #8 ON 6" SAND SHAIR

DESIGN DATA

A. CAST-IN-PLACE CONCRETE:	F'C = 3000 PSI
B. REINFORCING STEEL:	ASTM A615 GRADE 60
C. MOISTURE AND DENSITY CONTROL:	ASTM D-1557 ALL FILL MATERIAL SHALL BE PLACED IN HORIZONTAL LIFTS OF 8" MAXIMUM AND COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY. THE MOISTURE CONTENT SHALL BE OPTIMUM TO ±2 PERCENT.

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

AMAFCA
STANDARD DETAILS

CHANNEL RUNDOWN
PLAN AND DETAILS

REV	DATE	DESCRIPTION	CHKD

P:\080313\Struct\ACAD\Submittals\100% Final\8-12-08\Acad dwg\AMAFCA-108.dwg
August 12, 2008 - 9:25am

ISSUE DATE: 8-12-2008

DRAWING NO. 108 | MAP NO. | SHEET OF