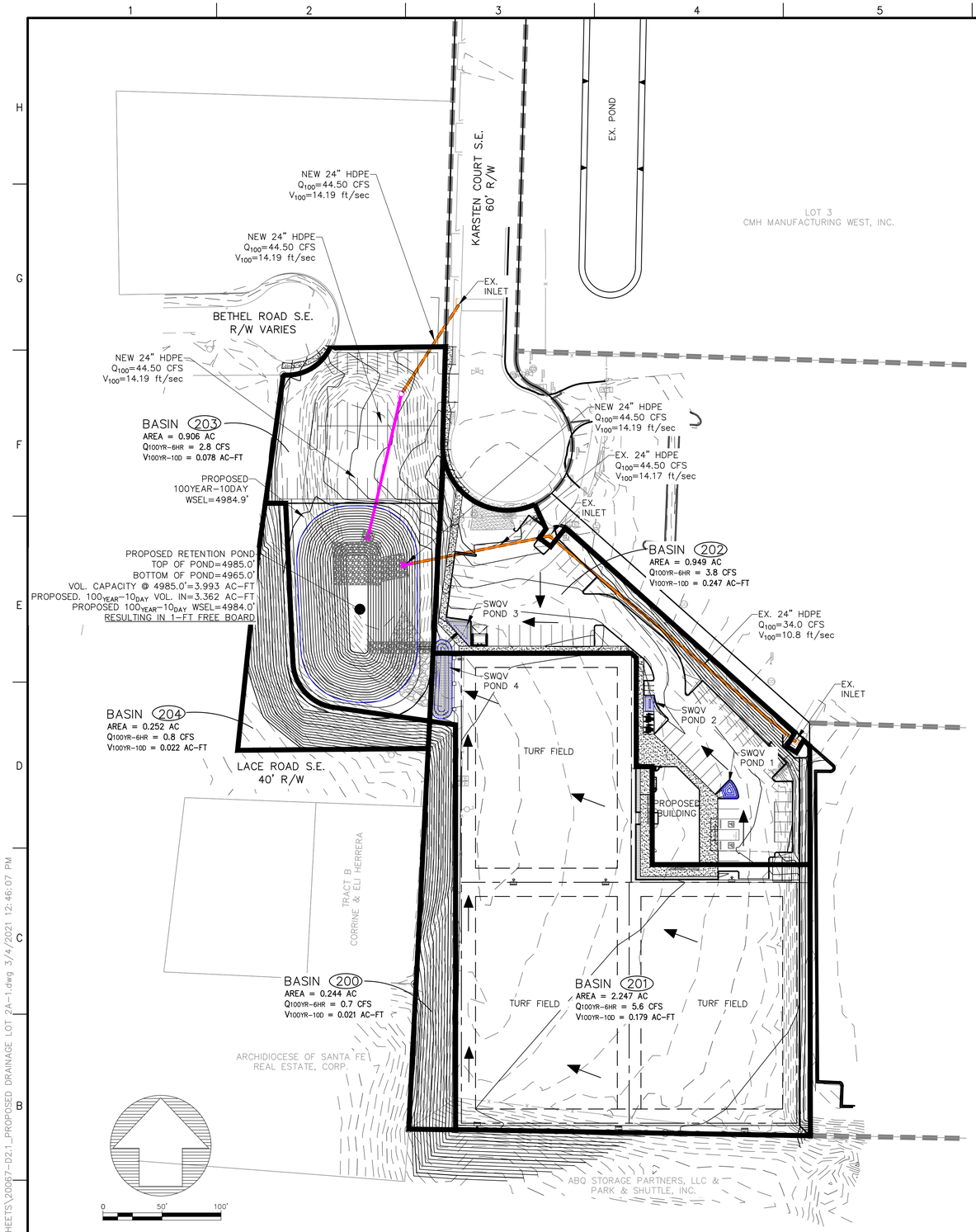
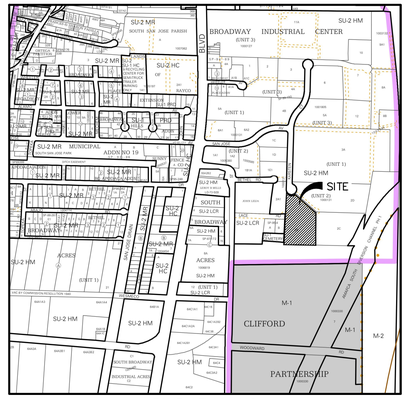


PROPOSED BASIN MAP

FLOOD INSURANCE RATE MAP
MAP NO. 35001C0342G
EFFECTIVE DATE: 09/26/2008



ZONE ATLAS MAP
PAGE M-14-Z

PROPOSED HYDROLOGY CALCULATION SUMMARY

Basin	Total Area (acres)	Land Treatement (%) A	B	C	D	Q_{100} (cfs)	$V_{100yr-6hr}$ (ac-ft)	$V_{100yr-24hr}$ (ac-ft)	$V_{100yr-4day}$ (ac-ft)	$V_{100yr-10day}$ (ac-ft)
200	0.244	0.0	0.0	100.0	0.0	0.7	0.021	0.021	0.021	0.021
201	2.247	0.0	90.0	5.0	5.0	5.6	0.166	0.169	0.173	0.179
202	0.949	0.0	5.0	15.0	80.0	3.8	0.163	0.182	0.205	0.247
203	0.906	0.0	0.0	100.0	0.0	2.8	0.078	0.078	0.078	0.078
204	0.252	0.0	0.0	100.0	0.0	0.8	0.022	0.022	0.022	0.022

PROPOSED $100_{YR}-10_{DAY}$ VOLUME INTO NEW POND
$=V_{BASIN\ 100} + V_{BASIN\ 101} + V_{BASIN\ 102} + V_{BASIN\ 103} + V_{BASIN\ 108} + V_{BASIN\ 201} + V_{BASIN\ 202} + V_{BASIN\ 203}$
$=0.207 + 0.048 + 1.427 + 0.969 + 0.207 + 0.179 + 0.247 + 0.078$
$=3.362$ AC-FT

PROPOSED HYDROLOGY SUMMARY

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 03/09/21
BY: Renée C. Brissette
HydroTrans #: M14D012J
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 ERRORS OR OMISSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

Storm Sewer Tabulation

Page 1

Station Line	To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
1	End	125.800	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	3.30	25.30	3.01	18	5.80	4971.50	4978.80	4973.00	4979.49	0.00	0.00	
2	1	89.248	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.30	54.49	3.64	24	5.80	4978.80	4983.98	4979.49	4984.61	0.00	0.00	

STORM SEWER TABULATION–STORM DRAIN EXTENSION FROM KARSTEN COURT

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)
1	End	9.929	0.00	0.00	0.00	0.00	0.00	0.0	0.6	0.0	44.50	44.27	14.19	24	3.83	4977.82	4978.20	4979.87	4980.17	0.00	4985.00
2	1	119.000	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	44.50	44.18	14.17	24	3.82	4978.20	4982.74	4980.64	4985.25	4985.00	4988.44
3	2	272.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	34.00	38.91	10.82	24	2.96	4982.84	4990.89	4987.81	4993.96	4988.44	4995.05

STORM SEWER TABULATION–STORM DRAIN EXTENSION FROM LOT 2B

DRAINAGE REPORT

Introduction

The site is located at the end of the cul-de-sacs of Karsten Court SE and Bethel Road SE with legal description being Lot 2A-1 of Broadway Industrial Center Subdivision, Unit 2. Lot 2A-1 is approximately 1.16 acres with the site being used as a temporary regional retention pond for the benefit to Lots 2B, 2C, and 2D. Refer to the Existing Basin Map for the Pond's watershed. The existing pond is oversized, since the original plan was to accept runoff from said Lots 2B, 2C, and 2D with each lot being developed with 90% impervious area. The temporary regional retention pond has excess capacity, since the proposed development of Lot 2B is only going to be 27% impervious. This plan proposes reducing the temporary regional retention pond's footprint and provide the volume required to retain the 100-year, 10-day volume.

A grading plan for Lot 2B was approved under hydrology file No. M14D012I with engineer's stamp dated 12/01/2020, which showed the proposed improvements on Lot 2B being approximately 27% impervious. The plan for Lot 2-A as shown on this sheet is a resubmitted for grading permit approval. The original plan for the proposed pond reconfiguration was submitted on 7/31/2020; therefore, the requirements for this grading plan should comply with the old DPM.

Methodology

Hydrologic procedures presented in the Hydrology Section of the DMP, Section 22.2, revised April 7, 1993 were followed.

Existing Condition

The existing site is located on Lot 2A-1 of the Broadway Industrial Center. The Broadway Industrial Center Master Plan allows Lots 2B, 2C, and 2D to discharge into the temporary regional retention pond located on this site, which is sized to retain the 100-year, 10-day storm event. The Master Plan was prepared by Mark Goodwin & Associates and is dated 9-24-1997. There are two existing pipes that outfall into said regional pond: 1) 24" HDPE pipe penetrating the pond from the west, and 2) 24" RCP pipe penetrating the pond from the north as shown on approved Sheet D-1.0 under Hydrology File No. M14D012I with engineer's stamp dated 12/01/2020. The following basins contribute runoff to said regional pond: Basin 100, 101, 102, 103, 104, 106, and 108 with a combined $Volume_{100yr-10day}$=3.189 ac-ft. The total pond capacity is 3.977 ac-ft. Basin 105 and 107 discharges to the adjacent lots to the West and Lace Road SE.

Proposed Condition

Improvements includes reconfiguring the temporary regional pond and provide 50 parking spaces to be used for Lot 2-B. The total proposed 100-year, 10day volume for the new pond is 3.362 ac-ft and the pond is designed with a volume capacity of 3.993 ac-ft with Top of Pond elevation at 4985.0. The 100-year, 10-day WSEL is 4984.0' which is 1-foot below the top of pond resulting in 1-foot freeboard. The two existing pipes that outlet into the existing temporary regional pond will be extended to the new pond's side-slope as shown on Sheet C-6 and C-7. The pipe extensions have been analyzed and are properly sized to convey the $Q_{100year}$-6_{hr} flow rates. Storing the first flush is not required for this site, since there is approximately zero impervious area. Hydrologic and hydraulic analysis are included on this sheet.

Conclusion

The purpose of this grading and drainage plan is to reduce the temporary regional retention pond's footprint, since the 100-year, 10-day proposed volume is less than originally planned under the said Master Plan prepared by Mark Goodwin & Associates. By reducing the pond's footprint Lot 2A-1 will add 50 parking spaces which will be used by Lot 2-B.

The hydrology and hydraulic analysis have been prepared to meet the design criteria under the old DPM, since the original submittal was on 7/31/2020. This plan seeks grading permit approval.

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ROBERT J. FIERRO
NEW MEXICO
20585
2-5-21
PROFESSIONAL ENGINEER

PROJECT NAME
KRAEMER FIELDS
BROADWAY INDUSTRIAL CENTER
SUBDIVISION, UNIT 2
ALBUQUERQUE, NEW MEXICO

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	20067
DESIGNED BY:	RJF
DRAWN BY:	RJS
CHECKED BY:	RJF
DATE:	FEBRUARY 2021

SHEET TITLE
PROPOSED
BASIN MAP
LOT 2A-1

SHEET NO:
D-2.1

Z:\2020\20067\CADD\SHEETS\20067-D2.1_PROPOSED DRAINAGE LOT 2A-1.dwg 3/4/2021 12:46:07 PM