Drainage Narrative

Introduction

The project site is located in southwest Albuquerque at 1100 Second Street SW. The site is bounded by the railroad tracks and facilities yard to the east and north, First Street and Second Street to the west, and Rail yard property to the south. The site is not located within a designated FEMA flood plain map, see firm map 35001C0334G.

Existing Conditions

The existing site topography generally slopes from east to west. A Grading and Drainage plan was completed by Isaacson & Arfman, P.A. for the site in May of 2013. From this plan the northeastern portion of the site (basin 101) is approximately 0.6 acres and drains to the south to a retention pond in the center of the site. The pond has a design storage of 2625 CF and has a peak flow rate of 4.6 cfs. Basin 102 is also from the previous grading & Drainage Plan, and drains to the south west through Basin 104. The site is still currently grading as it was intended in this report. This report did not analyze the portion of property to the west of the parking lot and south of Basin 102. This area has been calculated and follows a similar grading scheme as the previous basins draining from northeast to southwest. Basin 103 discharges to 1st street. Basin 102 drains through 104 and discharges to Second Street.

Interim Conditions

The proposed site will maintain the general flow from northeast to southwest. The existing retention pond will be moved from basin 101 and relocated to proposed basin 202 and will be a detention pond. The existing pond will be filled in so that area can be utilized as extra parking. The proposed pond will retain runoff from Basin 201 and will have a retaining volume equal to the existing pond. This retention area exceeds the first flush requirements for MS4 permitting. An inlet will be installed in the pond and will discharge the runoff that's excess of the existing retention volume. The outlet pipe will discharge to the inlet located at the southern end of First Street. The Proposed runoff will not exceed the existing runoff reaching Second Street. Basins 203 will continue to drain from northeast to southwest and will discharge to Second Street where it is currently discharging. Basin 203 will continue to drain from east to west and will discharge to First Street where it is currently discharging.

Pond 1

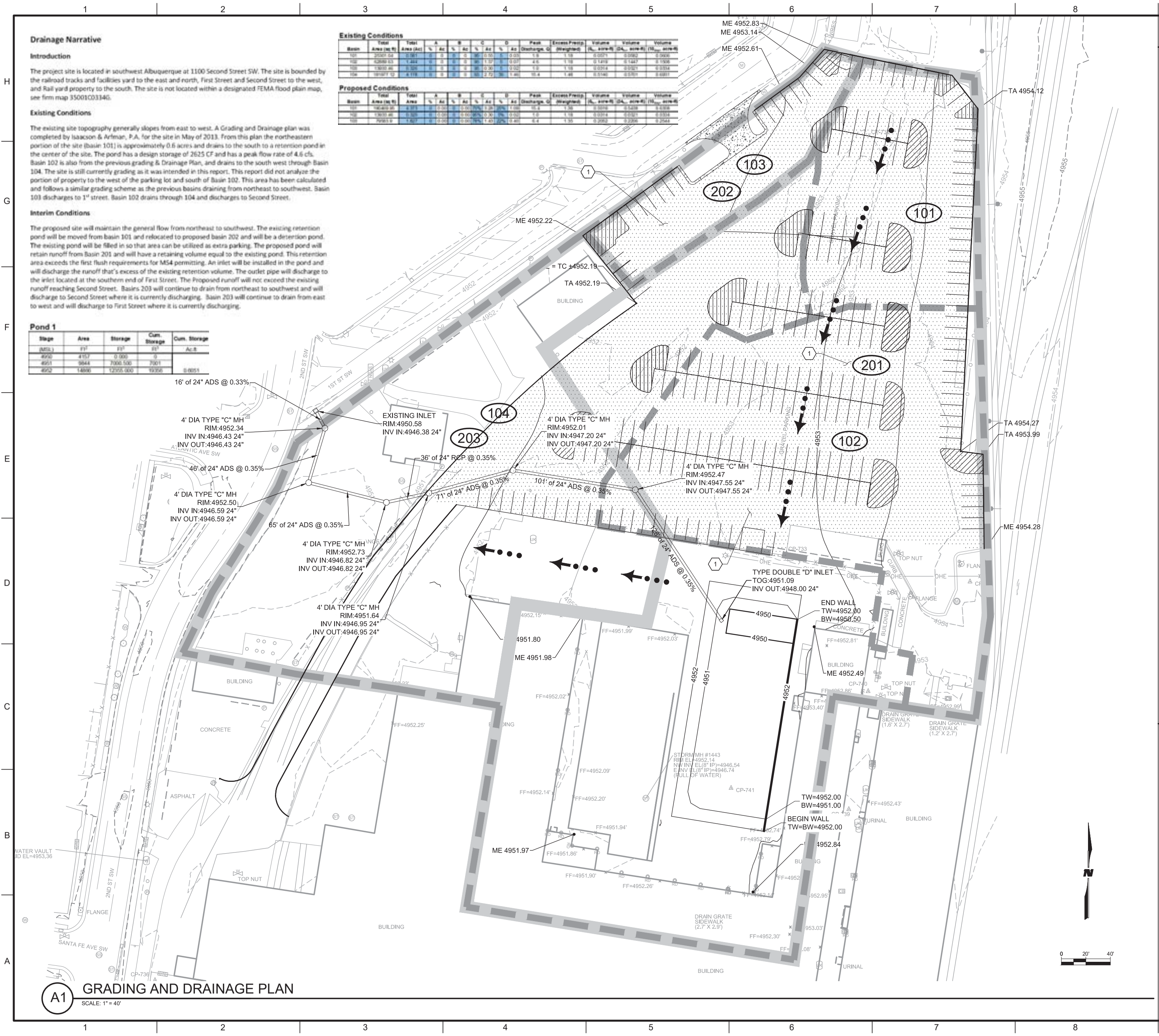
Stage	Area	Storage	Cum. Storage	Cum. Storage
(MSL)	Ft²	Ft³	Ft³	Ac-ft
4950	4157	0.000	0	
4951	9844	7000.500	7001	
4952	14866	12355.000	19356	0.6051

Existing Conditions

Basin	Total Area (sq ft)	Total Area (Ac)	A %	A Ac	B %	B Ac	C %	C Ac	D %	D Ac	Peak Discharge, Q	Excess Precip. (Weighted)	Volume (V_{6hr}, acre-ft)	Volume (V_{24hr}, acre-ft)	Volume (V_{10day}, acre-ft)
101	25301.04	0.581	0	0	0	0	95	0.55	5	0.03	1.9	1.18	0.0571	0.0582	0.0606
102	62889.63	1.444	0	0	0	0	95	1.37	5	0.07	4.6	1.18	0.1419	0.1447	0.1506
103	13933.46	0.320	0	0	0	0	95	0.30	5	0.02	1.0	1.18	0.0314	0.0321	0.0334
104	181977.12	4.178	0	0	0	0	65	2.72	35	1.46	10.4	1.48	0.5140	0.5701	0.6001

Proposed Conditions

Basin	Total Area (sq ft)	Total Area	A %	A Ac	B %	B Ac	C %	C Ac	D %	D Ac	Peak Discharge, Q	Excess Precip. (Weighted)	Volume (V_{6hr}, acre-ft)	Volume (V_{24hr}, acre-ft)	Volume (V_{10day}, acre-ft)
101	190469.95	4.373	0	0.00	0	0.00	75%	3.28	25%	1.09	15.4	1.38	0.5016	0.5439	0.6306
102	13933.46	0.320	0	0.00	0	0.00	95%	0.30	5%	0.02	1.0	1.18	0.0314	0.0321	0.0334
103	79583.9	1.827	0	0.00	0	0.00	78%	1.43	22%	0.40	6.4	1.35	0.2052	0.2206	0.2544



A1 GRADING AND DRAINAGE PLAN

SCALE: 1" = 40'

KEYNOTES

1. INSTALL ASPHALT MILLINGS PER DETAIL SHEET ----

VICINITY MAP
ZONE ATLAS MAP NO. 64

FEMA FLOODPLAIN
FIRM #35001C0334G

SOILS MAP
NRCS SOIL SURVEY, BERNALILLO COUNTY

LEGEND

▒	RECYCLED MILLINGS
▓	CONCRETE
▬ ▬ ▬	EXISTING BASIN
▬▬▬	PROPOSED BASIN
-x-x-x-	WROUGHT IRON FENCE
—o—	CHAIN LINK FENCE
— — —	EXISTING MAJOR CONTOUR
- - - -	EXISTING MINOR CONTOUR
———	PROPOSED MAJOR CONTOUR
———	PROPOSED MINOR CONTOUR
• • • →	SWALE ARROW
1XX	EXISTING BASIN I.D.
2XX	PROPOSED BASIN I.D.

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CONSULTANTS

SEAL

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24897

PROJECT NAME

THE YARDS
PARKING LOT
IMPROVEMENTS

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	17-600-045-01
DESIGNED BY:	JEL
DRAWN BY:	SDO
CHECKED BY:	XXX
DATE:	

SHEET TITLE

GRADING AND
DRAINAGE PLAN

SHEET NO:

C-103

6/17/2019 M:\MSD\17-600-045-01\2_Disciplines_SHEETS\2_Sheets - civil\17604501-GD.dwg