CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

September 2, 2020

Verlyn Miller, P.E.
Miller Engineering Consultants, Inc
3500 Comanche NE Bldg. F
Albuquerque, NM 87107

RE: Fire Station #9 Drainage Outfall
Grading and Drainage Plan
Engineer's Stamp Date: 08/25/20
Hydrology File: H20D044

Dear Mr. Miller:

Based upon the information provided in your submittal received 08/27/20, the Grading & Drainage Plan is approved for Grading Permit, Paving Permit, and SO-19 Permit. Once the grading and paving of the project is complete, an engineering certification will be required.

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 10/2018)

Project Title: Fire Station #9 Drainage Outfall Building Permit #: _____ Hydrology File #: _____

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

Legal Description: _____

City Address: _____

Applicant: City of Albuquerque Contact: _____

Address: 1 Civic Plaza NW, Albuquerque, NM 87102

Phone#: 505-768-3000 Fax#: 505-768-3019 E-mail: _____

Other Contact: Miller Engineering Consultants, Inc. Contact: Verlyn A. Miller

Address: 3500 Comanche NE, Bldg. F, Albuquerque, NM 87107

Phone#: 505-8888-7500 Fax#: 505-888-3800 E-mail: vmiller@mecnm.com

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

IS THIS A RESUBMITTAL? _____ Yes X No

DEPARTMENT: X TRAFFIC/TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

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

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY
____ PRELIMINARY PLAT APPROVAL
____ 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
X SO-19 APPROVAL
X PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

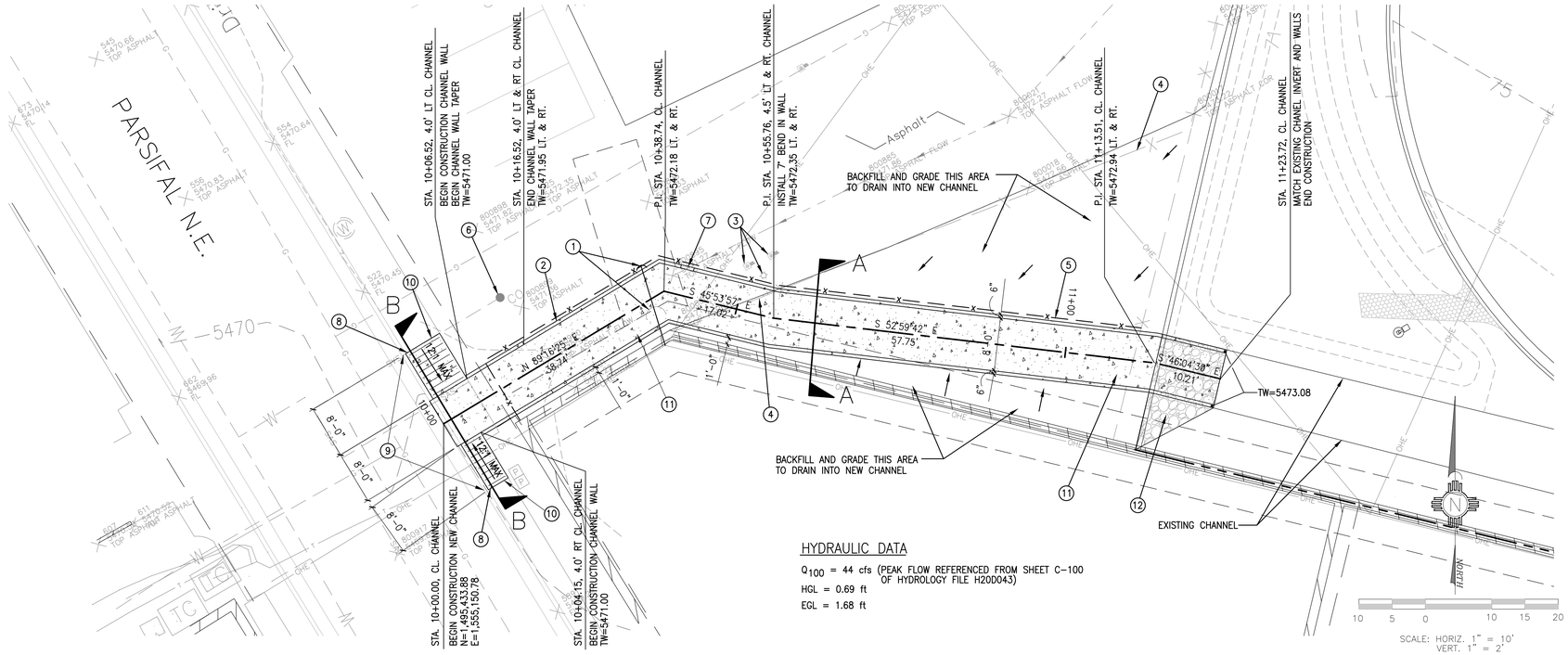
DATE SUBMITTED: _____ By: _____

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED:_____

FEE PAID:_____

Worksheet for Rectangular Channel - 1

Project Description		
Flow Element:	Rectangular Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Input Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01000	ft/ft
Bottom Width:	8.00	ft
Discharge:	44.00	ft^3/s
Results		
Normal Depth:	0.69	ft
Flow Area:	5.49	ft^2
Wetted Perimeter:	9.37	ft
Top Width:	8.00	ft
Critical Depth:	0.98	ft
Critical Slope:	0.00332	ft/ft
Velocity:	8.01	ft/s
Velocity Head:	1.00	ft
Specific Energy:	1.68	ft
Froude Number:	1.70	
Flow Type:	Supercritical	
GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	
GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:	N/A	
Profile Headloss:	0.00	ft
Downstream Velocity:	0.00	ft/s
Upstream Velocity:	0.00	ft/s
Normal Depth:	0.69	ft
Critical Depth:	0.98	ft
Channel Slope:	0.01000	ft/ft
Critical Slope:	0.00332	ft/ft

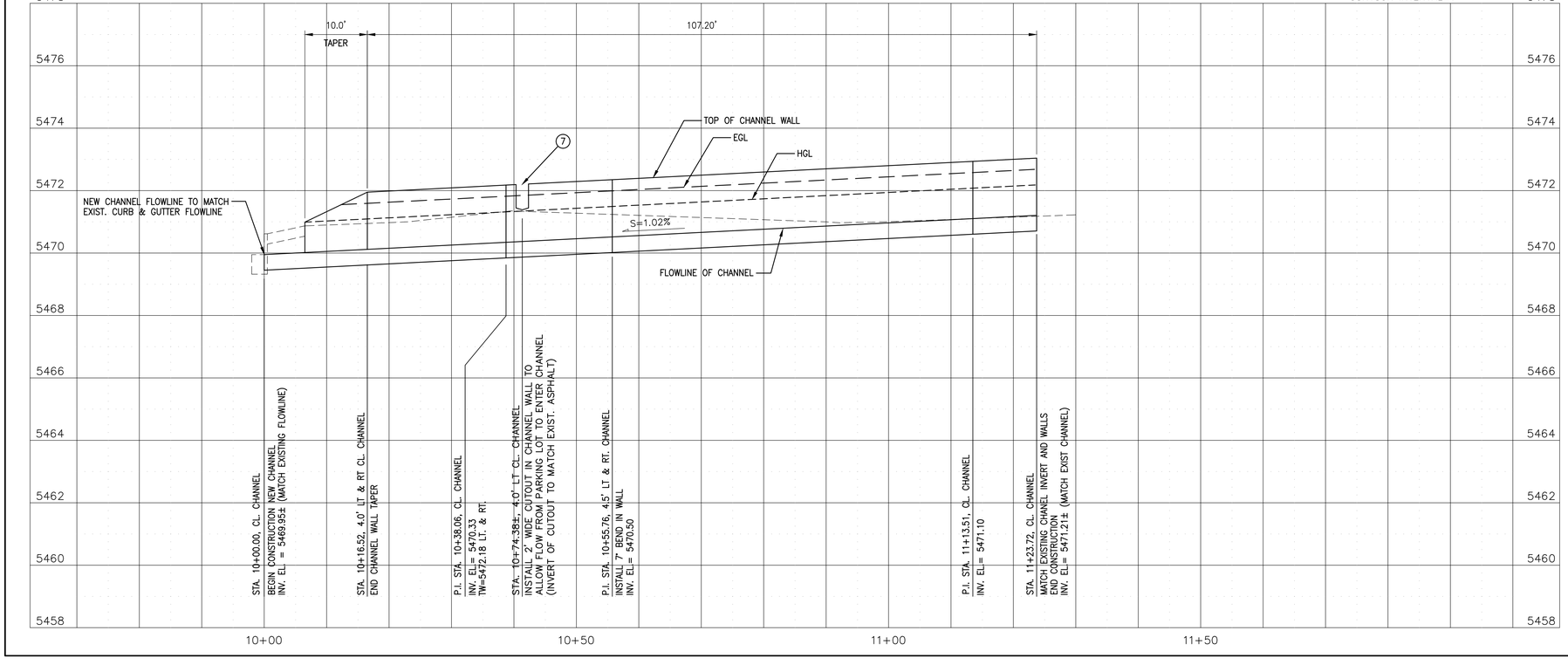


HYDRAULIC DATA

Q_{100} = 44 cfs (PEAK FLOW REFERENCED FROM SHEET C-100 OF HYDROLOGY FILE H20D043)

HGL = 0.69 ft

EGL = 1.68 ft



KEYED NOTES

1. EXISTING GUY WIRE TO BE RELOCATED OUTSIDE OF NEW CHANNEL.
2. SAW CUT EXISTING ASPHALT AS NECESSARY FOR INSTALLATION OF NEW CONCRETE CHANNEL.
3. EXISTING LIGHT POLE AND BOLLARDS TO REMAIN.
4. REMOVE EXISTING CHAIN LINK FENCE AND RETURN TO OWNER.
5. INSTALL NEW 6' HIGH CHAIN LINK FENCE TO BE LOCATED 6" FROM FACE OF CHANNEL WALL.
6. EXISTING SEWER CLEANOUT TO REMAIN.
7. INSTALL 2' WIDE CUTOUT IN CHANNEL WALL TO ALLOW FLOW FROM PARKING LOT TO ENTER CHANNEL.
8. SAW CUT EXISTING SIDEWALK AND INSTALL NEW HANDICAP RAMP TO MATCH EXISTING SIDEWALK WIDTH.
9. REMOVE AND DISPOSE OF EXISTING CONCRETE SIDEWALK, CURB & GUTTER IN THIS AREA TO ALLOW FOR INSTALLATION OF NEW CONCRETE CHANNEL AND HANDICAP RAMPS.
10. MATCH EXISTING SIDEWALK ELEVATION.
11. NEW CONCRETE CHANNEL PER COA STD DWG 2260, SEE SECTION A-A ON SHEET C501.
12. REMOVE AND DISPOSE OF EXISTING RIP RAP.

AS BUILT INFORMATION

CONTRACTOR DATE
WORK STARTED BY
INSPECTORS DATE
ACCEPTANCE BY
AS BUILTS DATE
VERIFICATION BY
DRAWINGS DATE
DOCUMENTED BY

MICRO-FILM INFORMATION

RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION

TEMPORARY BENCH MARK

PROJECT BENCHMARK CP 100 IS A TERRA CONTROL 1/2" REBAR WITH PLASTIC CAP STAMPED "TERRA CONTROL" ELEVATION=5157.63 FEET (NAVD 1988 VERTICAL DATUM).

ENGINEER'S SEAL

CHERILYN A. MILLER II
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER
3/25/22

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
1	9-2-20	ADDED HGL AND EGL TO PLAN	
DESIGNED BY:		VAM	DATE: OCTOBER 2018
DRAWN BY:		MEC	DATE: OCTOBER 2018
CHECKED BY:		VAM	DATE: OCTOBER 2018

MILLER ENGINEERING CONSULTANTS
Engineers • Planners
3500 COMANCHE, NE
BUILDING F
ALBUQUERQUE, NM 87107
(505)888-7500
(505)888-3800 (FAX)
WWW.MECNM.COM

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY
AND CITY OF ALBUQERQUE

FIRE STATION 9
OUTFALL CHANNEL

Design Review Committee	ABCWUA Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
-	H-20-Z	C-101	2

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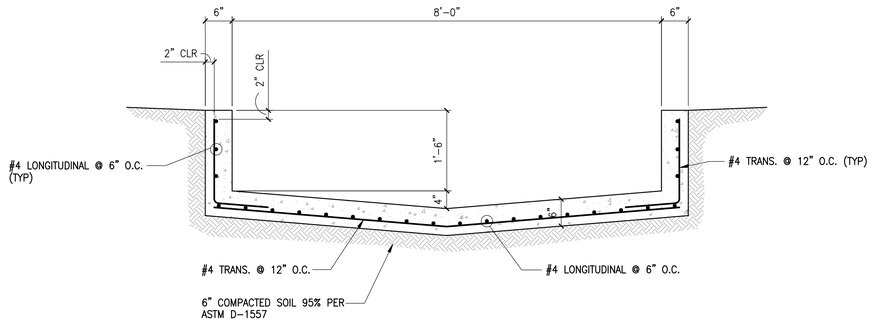
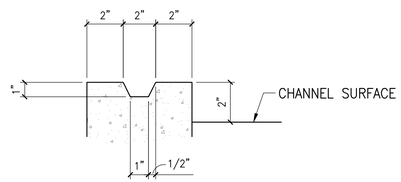
CHANNEL-C101 9/2/20 1:1

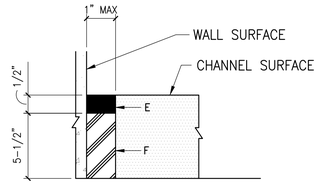


GENERAL NOTES:

1. CHANNEL DEPTHS EXCEEDING 2'-0" WILL REQUIRE SEPARATE DESIGN FOR FLOOR AND WALLS.
2. TYPE B LINING WILL BE USED ONLY WHERE NO UTILITIES ARE LOCATED OR PROPOSED.
3. UP TO 16'-0" WIDTH USE 4" INVERTED CROWN. 16'-0" WIDTH AND OVER USE 6" INVERTED CROWN.
4. WARNING: THESE WALLS ARE NOT DESIGNED TO SUPPORT THE ADDITION OF GARDEN OR RETAINING TYPE OF WALLS. A SEPARATE DESIGN MUST BE SUBMITTED FOR THE ENGINEER'S APPROVAL IN SUCH INSTALLATIONS.
5. THE OUTSIDE OF DRAINAGE WALLS SHALL NOT EXTEND BEYOND EASEMENT LINES OR RIGHT-OF-WAY LINES.
6. UNLESS OTHERWISE DETAILED ON PLANS, ISOLATE UPSTREAM AND DOWNSTREAM ENDS OF LINING FROM OTHER STRUCTURES AND FACILITIES USING THE EXPANSION JOINT DETAIL, THIS SHEET.
7. 6" CONC. BLOCK WITH CORES FILLED WITH CONC. AND NO. 4 REBARS INSERTED INTO CORES AT 1'-6" O.C., MAY BE SUBSTITUTED FOR FORMED CONC. WALLS.



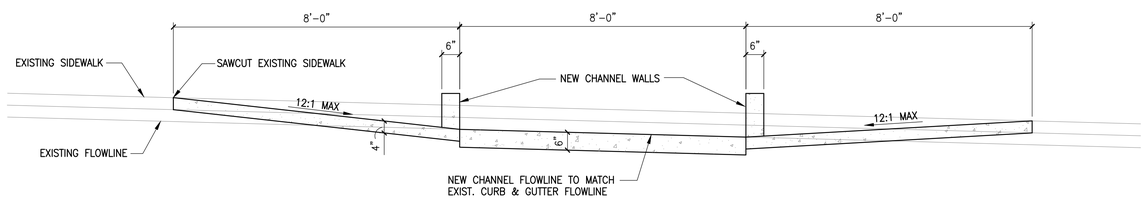
KEYWAY DETAIL



EXPANSION JOINT DETAIL

SECTION A-A

COA DWG 2260 N.T.S.



SECTION B-B

N.T.S.

AS BUILT INFORMATION

CONTRACTOR DATE
WORK STAKED BY
INSPECTORS DATE
ACCEPTANCE BY
AS-BUILTED DATE
VERIFICATION BY
DRAWINGS DATE
CORRECTED BY

MICRO-FILM INFORMATION

RECORDED BY DATE
NO.

BENCH MARKS

SURVEY INFORMATION

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ENGINEER'S SEAL

CERLYN A. MILLER II — NEW MEXICO — 14507 — REGISTERED PROFESSIONAL ENGINEER — 8/25/2020

NO.	DATE	REMARKS	BY
REVISIONS			
DESIGN			VAM
DESIGNED BY:		DATE:	OCTOBER 2018
DRAWN BY:		DATE:	OCTOBER 2018
CHECKED BY:		DATE:	OCTOBER 2018

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ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY AND CITY OF ALBUQERQUE

FIRE STATION 9
TYPICAL DETAILS

Design Review Committee	ABCWUA Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No. -
Zone Map No. H-20-Z
Sheet C-501 Of 2

CHANNEL-C503/26/20 1:1

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