CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

August 28, 2020

Caleb J. Flake, P.E.
McClure
1700 Swift Street, Suite 100
North Kansas City, MO 64116

RE: WAQ1 – Albuquerque
7300 Meridian Pl NW
Grading & Drainage Plan
Engineer's Stamp Date: 08/26/20
Hydrology File: H14D111

Dear Mr. Flake:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your resubmittal received 07/21/2020, the Grading & Drainage Plan is approved for Building Permit, Grading Permit, SO-19 Permit, and for action by the DRB on 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 approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist 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.

Also as a reminder, please provide Drainage Covenant for the stormwater quality ponds per Article 6-15(C) of the DPM prior to Permanent Release of Occupancy. There is a recording fee ($25, payable to Bernalillo County). Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996). Due to COVID-19, please follow the instructions:

Either email a pdf copy of the executed drainage covenant and the exhibit to clabadie@cabq.gov or either mail or drop off the originals. Please mail the $25.00 recording fee check made payable to Bernalillo County to:

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

Planning Dept./DRC
Attn: Charlotte LaBadie
600 2nd St. NW, Ste. 400
ABQ, NM, 87102

If you drop off the originals, there is a drop box outside the building labeled DRC. Once approved and recorded, Charlotte will email you a copy.

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 11/2018)

Project Title: WAQ1 - Albuquerque Building Permit #: _____ Hydrology File #: _____

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

Legal Description: All of lots 11, 12 & 13 of Lots 1 thru 23, Meridian Business Park, A subdivision in Albuquerque, Bernalillo County, New Mexico

City Address: 7300 Meridian Pl NW

Applicant: McClure Contact: Matt Eblen

Address: 1700 Swift Street (Suite 100)

Phone#: 913-307-2588 Fax#: _____ E-mail: meblen@mecresults.com

Owner: Angelo Brunacini Contact: _____

Address: 7550 Meridian Pl NW; Albuquerque, NM 87197

Phone#: 505-833-2928 Fax#: _____ E-mail: abrunacini@brunacini.com

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE ____ DRB SITE X ____ ADMIN SITE

IS THIS A RESUBMITTAL?: _____ Yes X _____ No

DEPARTMENT: _____ 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
X ____ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

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

DATE SUBMITTED: 7/16/2020 By: Matt Eblen

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

STA:10+08.36 LINE: STORM LINE D
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487247.76 E:1499960.21

STA:10+38.11 LINE: STORM LINE A
EXIST. CURB INLET
N:1487281.92 E:1500012.31
INSTALL 17.68 L.F. 24" HDPE (S)

STA:10+55.78 LINE: STORM LINE A
STA:10+00.00 LINE STORM LINE B
STA:10+00.00 LINE STORM LINE C
INSTALL 30" DIA. NYLOPLAST
N:1487264.91 E:1500017.12
INSTALL 89.19 L.F. 18" HDPE (S)
INSTALL 59.43 L.F. 12" HDPE (W)
INSTALL 69.85 L.F. 18" HDPE (E)
INSTALL 8.72 L.F. 6" HDPE (W)

STA:10+03.75 LINE: STORM LINE R
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487283.42 E:1500084.85
INSTALL 10.93 L.F. 6" HDPE (W)

STA:11+49.63 LINE: STORM LINE D
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487300.47 E:1500162.42
INSTALL 10.81 L.F. 6" HDPE (E)

STA:10+69.85 LINE: STORM LINE C
STA:10+00.00 LINE: STORM LINE D
STA:10+00.00 LINE: STORM LINE R
INSTALL 24" DIA. NYLOPLAST
N:1487279.71 E:1500085.38
INSTALL 3.75 L.F. 12" HDPE (N)
INSTALL 29.77 L.F. 12" HDPE (S)
INSTALL 79.78 L.F. 18" HDPE (E)

STA:11+44.97 LINE: STORM LINE A
STA:10+00.00 LINE: STORM LINE L
INSTALL 30" DIA. NYLOPLAST
N:1487179.08 E:1500041.39
INSTALL 66.07 L.F. 12" HDPE (S)
INSTALL 12.92 L.F. 12" HDPE (NE)

STA:10+29.77 LINE: STORM LINE D
INSTALL 18" DIA. NYLOPLAST
N:1487250.45 E:1500090.86
INSTALL 4.64 L.F. 6" HDPE (SE)

STA:10+12.92 LINE: STORM LINE L
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487186.20 E:1500052.17
INSTALL 4.27 L.F. 6" HDPE (S)

STA:12+11.05 LINE: STORM LINE A
STA:10+00.00 LINE: STORM LINE F
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/ SOLID TOP
N:1487115.53 E:1500059.47
INSTALL 34.97 L.F. 12" HDPE (S)
INSTALL 24.81 L.F. 12" HDPE (E)

STA:10+24.81 LINE: STORM LINE F
INSTALL 18" DIA. NYLOPLST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487121.96 E:1500083.44
INSTALL 5.98 L.F. 6" HDPE (N)

STA:10+05.13 LINE: STORM LINE K
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487060.74 E:1499980.24
INSTALL 5.49 L.F. 6" HDPE (S)

CONTRACTOR TO MAINTAIN
EXISTING 2648 CUBIC FEET
DETENTION VOLUME IN THIS AREA

STA:10+88.19 LINE: STORM LINE E
STA:10+00.00 LINE: STORM LINE K
INSTALL 18" DIA. NYLOPLAST JUNCTION STRUCTURE
W/ 18" SOLID TOP
N:1487057.55 E:1499984.26
INSTALL 61.42 L.F. 12" HDPE (S)
INSTALL 5.13 L.F. 12" HDPE (NW)

STA:12+46.01 LINE: STORM LINE A
STA:10+00.00 LINE: STORM LINE E
STA:10+00.00 LINE: STORM LINE O
INSTALL 18" DIA. NYLOPLAST JUNCTION STRUCTURE
W/ 18" SOLID TOP
N:1487081.89 E:1500069.02
INSTALL 75.17 L.F. 12" HDPE (S)
INSTALL 25.80 L.F. 12" HDPE (E)
INSTALL 88.19 L.F. 12" HDPE (W)

STA:10+25.80 LINE: STORM LINE O
INSTALL 18" DIA. NYLOPLST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487088.94 E:1500093.84
INSTALL 4.10 L.F. 6" HDPE (S)

STA:11+49.61 LINE: STORM LINE E
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEHIVE GRATE & 0.76" ORIFICE
N:1486996.58 E:1499976.84
INSTALL 15.84 L.F. 6" HDPE (SW)

STA:13+21.18 LINE: STORM LINE A
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/ SOLID TOP
N:1487009.58 E:1500089.54
INSTALL 19.65 L.F. 12" HDPE (E)

STA:13+40.83 LINE: STORM LINE A
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.76" ORIFICE
N:1487014.57 E:1500108.55
INSTALL 3.19 L.F. 6" HDPE (E)

PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR
(SPECIAL ORDER 19 ~ "SO-19")

1. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY
2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE & LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL "811" [OR (505) 260-1990] FOR THE LOCATION OF EXISTING UTILITIES
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. 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 IN ACCORDING TO TRAFFIC/STREET USE
6. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED
7. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS
8. CONTRACTOR MUST CONTACT AUGIE ARMIJO AT (505) 857-8607 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE AN INSPECTION

LEGEND

STR	PROPOSED STORM SEWER PIPE
	PROPOSED UNDERDRAIN
924	EXISTING 1' CONTOUR
925	EXISTING 5' CONTOUR
929	PROPOSED 1' CONTOUR
930	PROPOSED 5' CONTOUR

20 10 0 20

BY: EMCQUEEN
PLOT DATE: 8/26/2020 9:14 AM
P:\191313-000\06-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\191313-000 UTIL.DWG

ARCHITECT OF RECORD:
8131 METCALF
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OVERLAND PARK, KS 66204
www.brrarch.com
TEL: 913-262-9095
FAX: 913-262-9044

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TEL: 816-756-0444
FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM
7300 Meridian Pl NW
Albuquerque, NM 87121

Project Manager: CJF
Checked By: MVE
Drawn by: ELM
Document date: 06/18/2020
Project No. 30000481 MEC# 191313-000
Professional Seal

CALEB J. FLAKE
NEW MEXICO
24114
REGISTERED PROFESSIONAL ENGINEER
8/26/2020

Sheet Title
UTILITY PLAN (NORTH)

Sheet No.
C3.01

STA:15+02.70 LINE: STORM LINE G
INSTALL 24" DIA. 3'X2' NYLOPLAST CURB INLET
W/ 18" DRAIN BASIN & 0.95" ORIFICE
N:1486813.40 E:1499993.98

STA:10+15.61 LINE: STORM LINE J
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.95" ORIFICE
N:1486872.16 E:1500150.70
INSTALL 5.32 L.F. 6" HDPE (N)

STA:13+36.09 LINE: STORM LINE G
STA:10+00.00 LINE: STORM LINE J
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/ SOLID TOP
N:1486857.09 E:1500154.75
INSTALL 166.61 L.F. 12" HDPE (W)
INSTALL 15.61 L.F. 12" HDPE (N)

STA:12+94.00 LINE: STORM LINE G
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/ SOLID TOP
N:1486868.04 E:1500195.40
INSTALL 42.10 L.F. 12" HDPE (W)

STA:12+60.91 LINE: STORM LINE G
STA:10+00.00 LINE: STORM LINE M
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/SOLID TOP
N:1486836.25 E:1500204.64
INSTALL 36.92 L.F. 12" HDPE (W)
INSTALL 33.11 L.F. 12" HDPE (N)

STA:10+36.92 LINE: STORM LINE M
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.95" ORIFICE
N:1486825.94 E:1500169.19
INSTALL 4.56 L.F. 6" HDPE (W)

STA:12+13.64 LINE: STORM LINE G
STA:10+00.00 LINE: STORM LINE N
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/ SOLID TOP
N:1486790.87 E:1500217.84
INSTALL 47.27 L.F. 18" HDPE (N)
INSTALL 37.95 L.F. 12" HDPE (W)

STA:10+37.95 LINE: STORM LINE N
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.95" ORIFICE
N:1486780.27 E:1500181.40
INSTALL 4.23 L.F. 6" HDPE (W)

STA:11+28.66 LINE: STORM LINE G
STA:10+00.00 LINE: STORM LINE H
STA:10.00.00 LINE: STORM LINE Q
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/SOLID TOP
N:1486709.27 E:1500241.58
INSTALL 38.97 L.F. 12" HDPE (W)
INSTALL 5.48 L.F. 12" HDPE (NE)
INSTALL 84.98 L.F. 18" HDPE (N)

STA:10+05.48 LINE: STORM LINE Q
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.95" ORIFICE
N:1486713.39 E:1500245.18
INSTALL 5.13 L.F. 6" HDPE (E)

STA:10+38.97 LINE: STORM LINE H
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.95" ORIFICE
N:1486698.38 E:1500204.16
INSTALL 3.13 L.F. 6" HDPE (SW)

STA:10+06.13 LINE: STORM LINE P
INSTALL 18" DIA. NYLOPLAST INLET
W/ 18" BEEHIVE GRATE & 0.72" ORIFICE
N:1486685.70 E:1500325.28
INSTALL 11.51 L.F. 6" HDPE (E)

STA:10+39.43 LINE: STORM LINE G
STA:10+00.00 LINE: STORM LINE P
INSTALL 18" DIA. NYLOPLAST JUNCTION
STRUCTURE W/SOLID TOP
N:1486679.59 E:1500325.72
INSTALL 89.23 L.F. 24" HDPE (W)
INSTALL 6.13 L.F. 12" HDPE (N)

STA:10+00.05 LINE: STORM LINE G
EXIST. CURB INLET
N:1486648.99 E:1500350.51
INSTALL 39.38 L.F. 24" HDPE (NW)

SAS MH
RIM=5104.28

SAS MH
RIM=5102.79

SD MH
RIM=5102.34

SAS MH
RIM=5101.95

CONC.
RUNDOWN

PRIVATE DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY
NOTICE TO CONTRACTOR
(SPECIAL ORDER 19 ~ "SO-19")

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	PROPOSED UNDERDRAIN
924	EXISTING 1' CONTOUR
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20 10 0 20

BY: EMCQUEEN
PLOT DATE: 8/26/2020 9:14 AM
P:\191313-000\06-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\191313-000 UTIL.DWG

brr
ARCHITECT OF RECORD:
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OVERLAND PARK, KS 66204
www.brrarch.com
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FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM
7300 Meridian Pl NW
Albuquerque, NM 87121

Project Manager: CJF
Checked By: MVE
Drawn by: ELM
Document date: 06/18/2020

Project No.
30000481 MEC# 191313-000

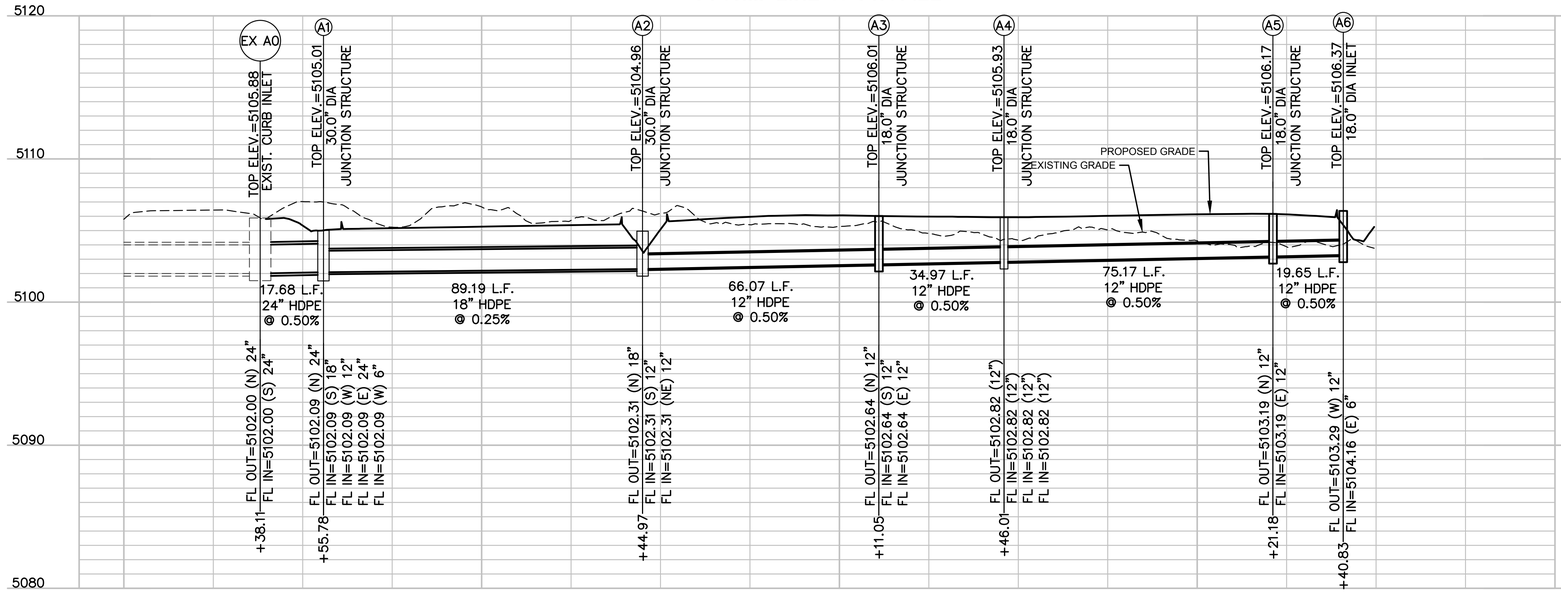
Professional Seal

CALEB J. FLAKE
NEW MEXICO
24114
REGISTERED PROFESSIONAL ENGINEER
8/26/2020

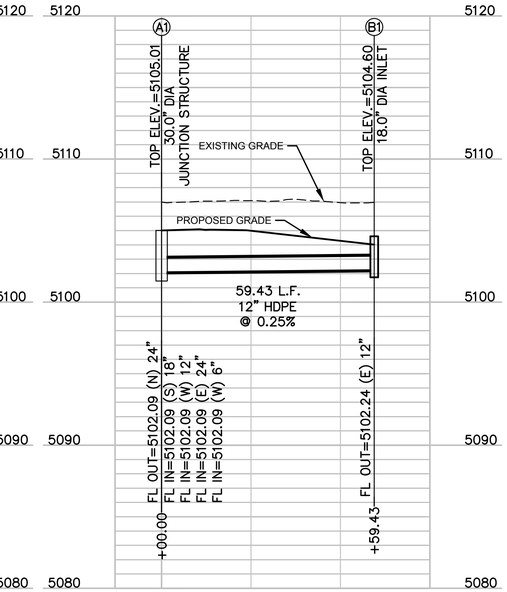
Sheet Title
UTILITY PLAN (SOUTH)

Sheet No.
C3.02

STORM LINE A PROFILE



STORM LINE B PROFILE



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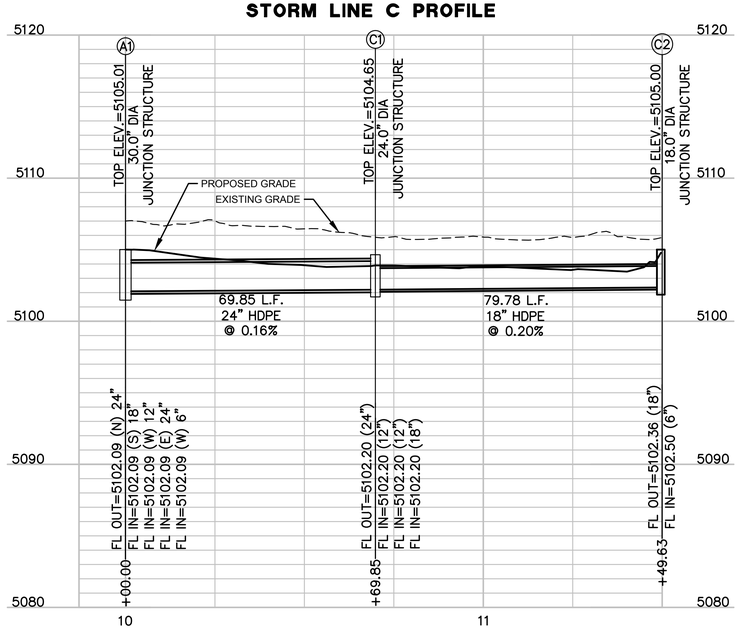

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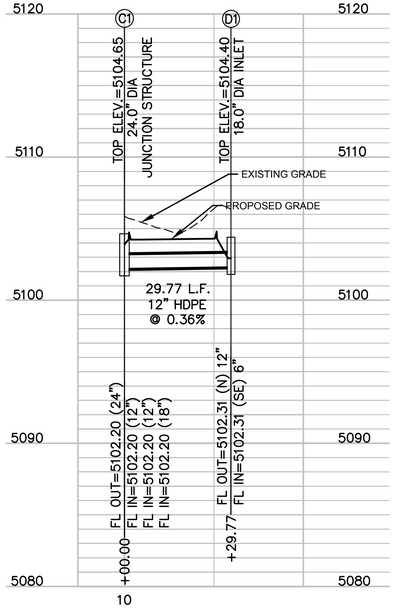

HORIZ. SCALE
20 10 0 20

VERT. SCALE
5 2.5 0 5

brr

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30000481 MEC# 191313-000

Professional Seal

CALEB J. FLAKE
NEW MEXICO
24114
REGISTERED PROFESSIONAL ENGINEER
8/26/2020

Sheet Title
UTILITY PROFILES-1

Sheet No.
C3.03

PLOT DATE: 8/27/2020 8:24 AM
BY: EMCQUEEN
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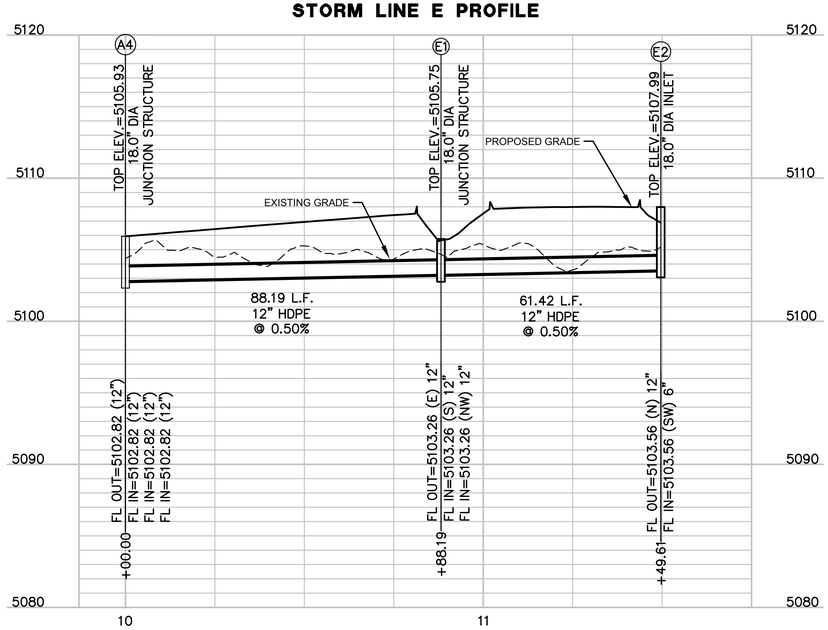
STORM LINE E PROFILE



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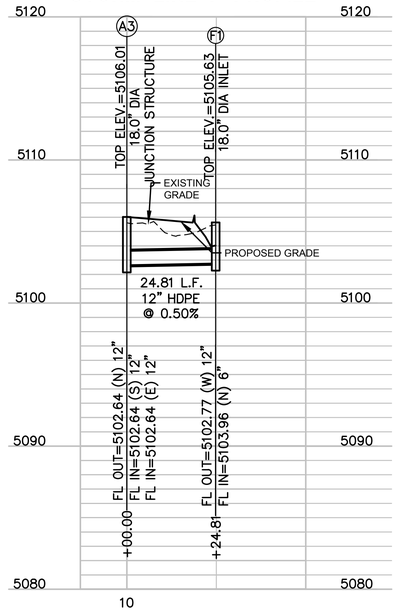

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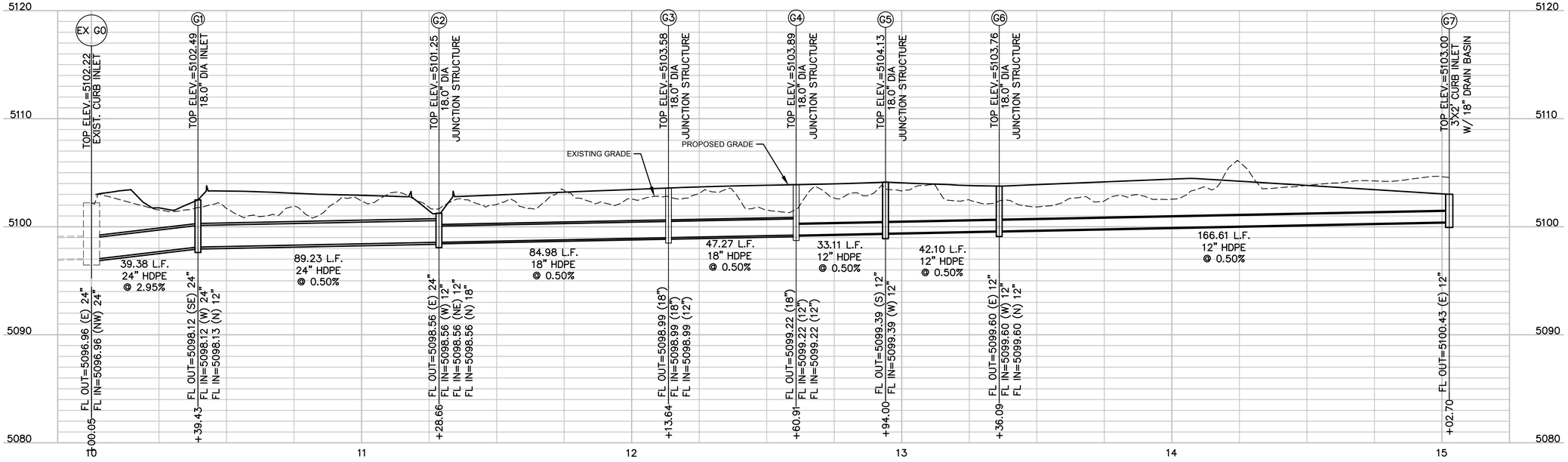

HORIZ. SCALE
20 10 0 20

VERT. SCALE
5 2.5 0 5

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NEW MEXICO
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REGISTERED PROFESSIONAL ENGINEER
8/26/2020

Sheet Title
UTILITY PROFILES-2

Sheet No.
C3.04

PLOT DATE: 8/26/2020 9:15 AM
BY: EMCQUEEN
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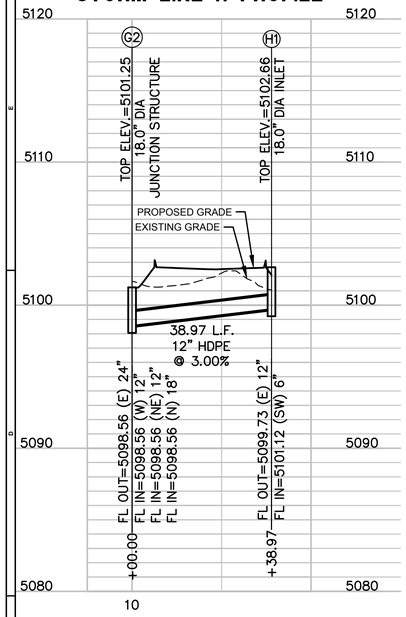
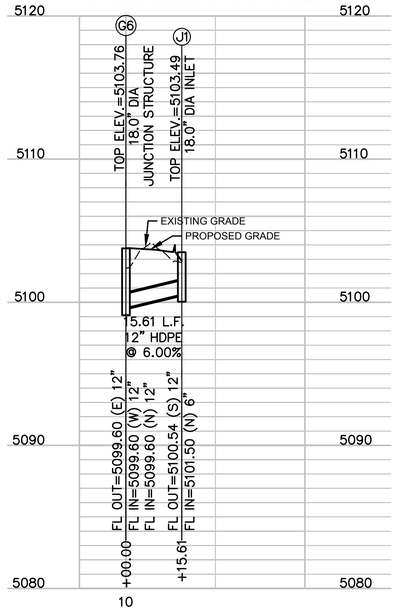
STORM LINE H PROFILE



STORM LINE J PROFILE



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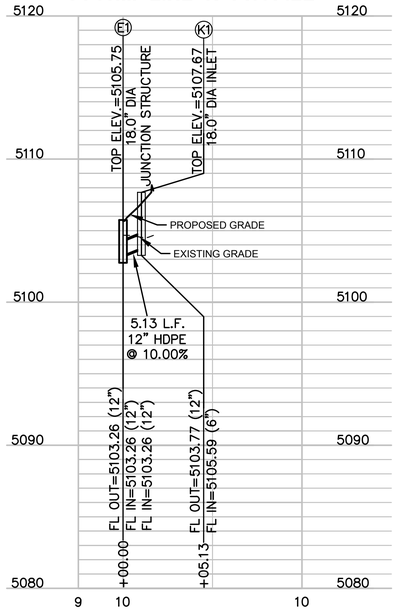

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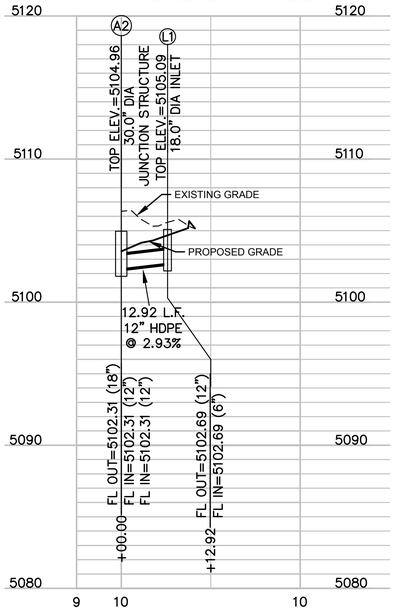

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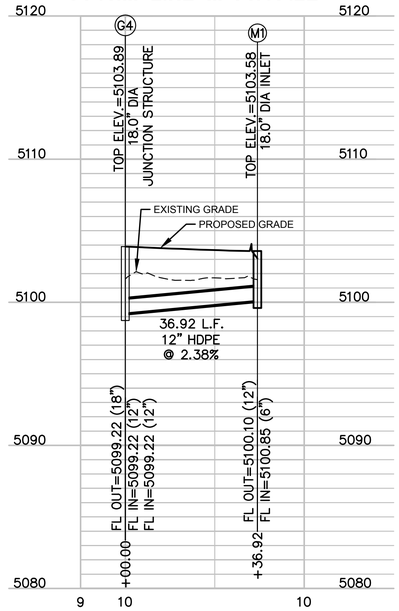

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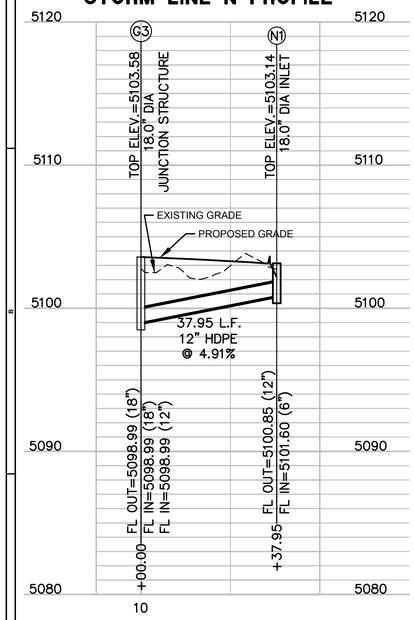

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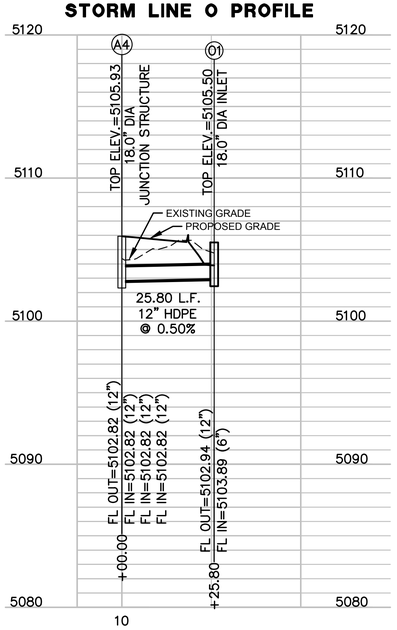

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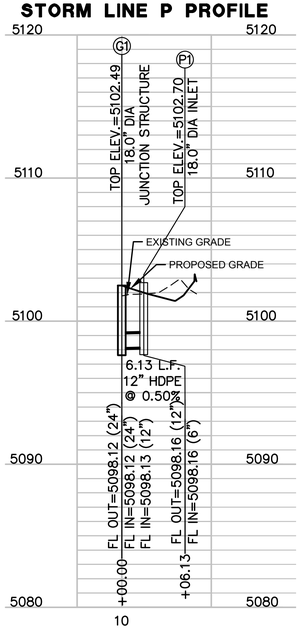

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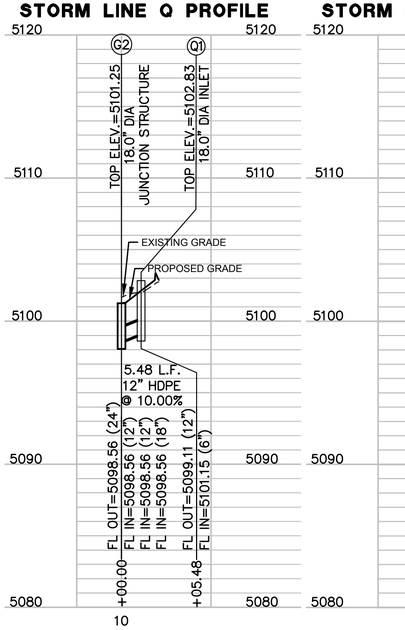

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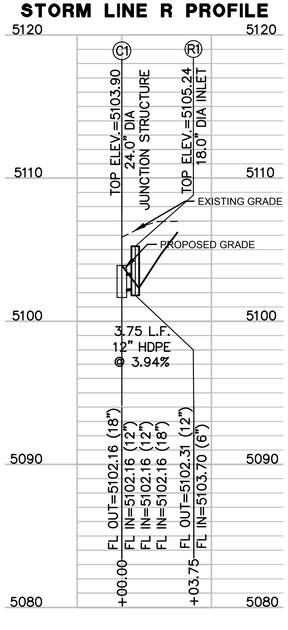

HORIZ. SCALE
20 10 0 20

VERT. SCALE
5 2.5 0 5

brr

ARCHITECT OF RECORD:

8131 METCALF
SUITE 300
OVERLAND PARK, KS 66204

www.brrarch.com

TEL: 913-262-9095
FAX: 913-262-9044

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1700 SWIFT STREET
SUITE 100
NORTH KANSAS CITY, MO 64116

www.mecresults.com

TEL: 816-756-0444
FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM

7300 Meridian Pl NW
Albuquerque, NM 87121

Project Manager:
CJF
Checked By:
MVE
Drawn by:
ELM
Document date:
06/18/2020

Project No.
30000481 MEC# 191313-000

Professional Seal

CALEB J. FLAKE
NEW MEXICO
24114
REGISTERED PROFESSIONAL ENGINEER
8/26/2020

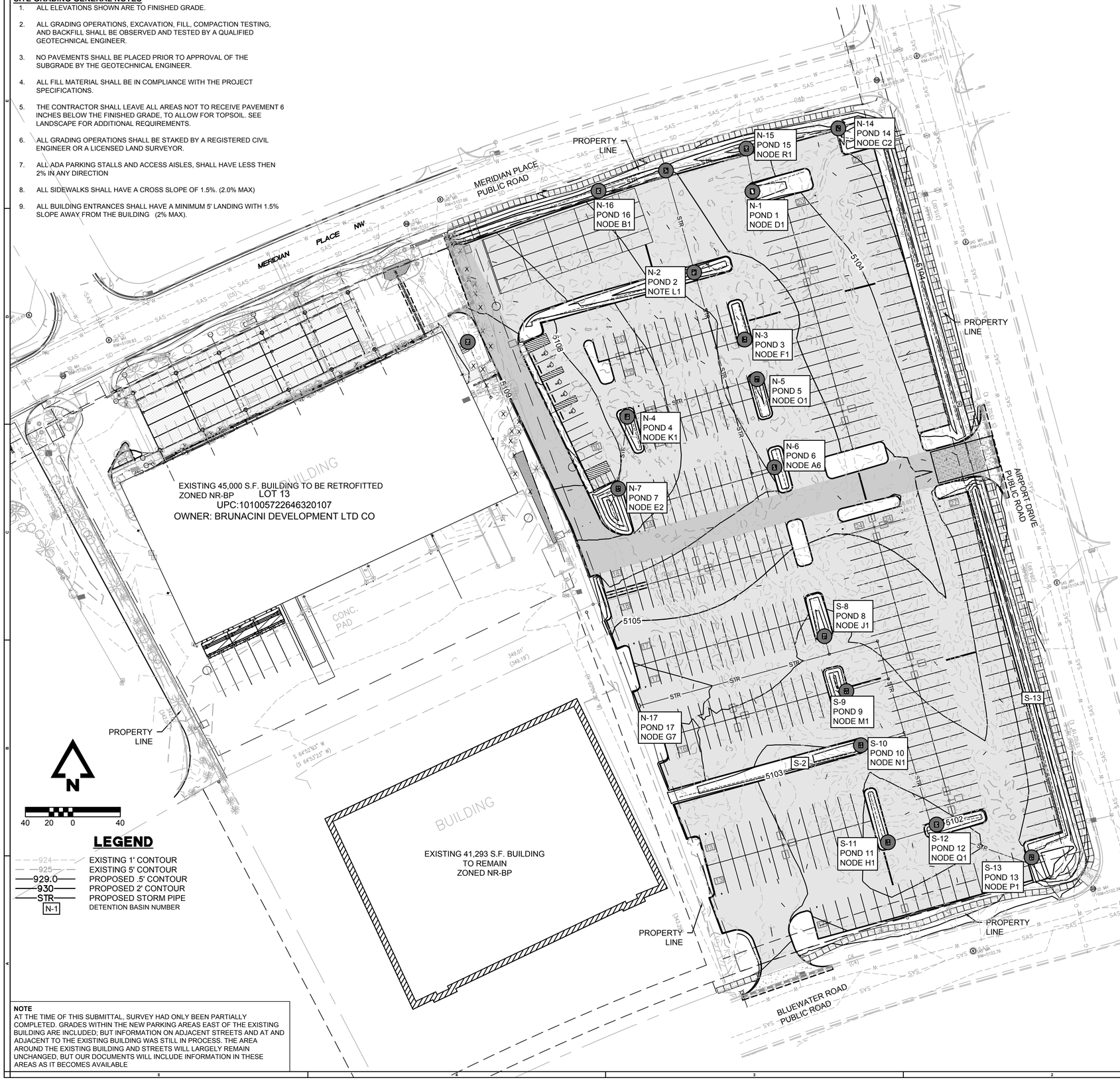
Sheet Title
UTILITY PROFILES-3

Sheet No.
C3.05

PLOT DATE: 8/26/2020 9:16 AM
BY: EMCQUEEN
P:\191313-000\06-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\191313-000 UTIL-PROF.DWG

SITE GRADING GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE.
2. ALL GRADING OPERATIONS, EXCAVATION, FILL, COMPACTION TESTING, AND BACKFILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER.
3. NO PAVEMENTS SHALL BE PLACED PRIOR TO APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
4. ALL FILL MATERIAL SHALL BE IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS.
5. THE CONTRACTOR SHALL LEAVE ALL AREAS NOT TO RECEIVE PAVEMENT 6 INCHES BELOW THE FINISHED GRADE, TO ALLOW FOR TOPSOIL. SEE LANDSCAPE FOR ADDITIONAL REQUIREMENTS.
6. ALL GRADING OPERATIONS SHALL BE STAKED BY A REGISTERED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.
7. ALL ADA PARKING STALLS AND ACCESS AISLES, SHALL HAVE LESS THEN 2% IN ANY DIRECTION
8. ALL SIDEWALKS SHALL HAVE A CROSS SLOPE OF 1.5%. (2.0% MAX)
9. ALL BUILDING ENTRANCES SHALL HAVE A MINIMUM 5' LANDING WITH 1.5% SLOPE AWAY FROM THE BUILDING (2% MAX).



LEGEND

924	EXISTING 1' CONTOUR
925	EXISTING 5' CONTOUR
929.0	PROPOSED .5' CONTOUR
930	PROPOSED 2' CONTOUR
STR	PROPOSED STORM PIPE
N-1	DETENTION BASIN NUMBER

NOTE
AT THE TIME OF THIS SUBMITTAL, SURVEY HAD ONLY BEEN PARTIALLY COMPLETED. GRADES WITHIN THE NEW PARKING AREAS EAST OF THE EXISTING BUILDING ARE INCLUDED; BUT INFORMATION ON ADJACENT STREETS AND AT AND ADJACENT TO THE EXISTING BUILDING WAS STILL IN PROCESS. THE AREA AROUND THE EXISTING BUILDING AND STREETS WILL LARGELY REMAIN UNCHANGED, BUT OUR DOCUMENTS WILL INCLUDE INFORMATION IN THESE AREAS AS IT BECOMES AVAILABLE

DRAINAGE PLAN

THE FOLLOWING ITEMS CONCERNING THE LOT 11 & LOT 12 MERIDIAN BUSINESS PARK GRADING AND DRAINAGE PLAN ARE CONTAINED BELOW:

1. VICINITY MAP
2. GRADING PLAN
3. CALCULATIONS

THE PROPOSED IMPROVEMENTS, AS SHOWN BY THE VICINITY MAP, ARE LOCATED ON THE SOUTH SIDE OF MERIDIAN PLACE NW, ON THE WEST SIDE OF AIRPORT DRIVE NW AND ON THE NORTH SIDE OF BLUEWATER ROAD NW. THE SITE IS UNDEVELOPED AND SLOPES FROM NORTH TO SOUTH AT AN APPROXIMATE SLOPE OF 0.5%. THE SITE IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE ACCORDING TO EFFECTIVE MAPPING FROM F.E.M.A.

THE MASTER DRAINAGE PLAN FOR THIS SUBDIVISION WAS PREPARED BY EASTERLING AND ASSOCIATES. THIS PLAN ESTABLISHED A MAXIMUM SITE DISCHARGE RATE OF 0.10 CFS/ACRE AND REQUIRES TEMPORARY DIVERSION DITCHES AND PONDS TO CONTROL THE RUNOFF GENERATED FROM EACH LOT.

THE SITE IS BOUNDED ON THREE (3) SIDES BY PUBLIC RIGHT-OF-WAY, AND ON THE FOURTH SIDE BY PREVIOUSLY DEVELOPED SITES (INCLUDING LOT 13, FOR WHICH THE PARKING LOT IMPROVEMENTS ARE BEING DEVELOPED). THEREFORE, OFF-SITE FLOWS ARE NOT CONSIDERED SIGNIFICANT.

THE GRADING PLAN SHOWS:

1. THE EXISTING AND PROPOSED GRADES, INDICATED BY CONTOURS AT 0.5' INTERVALS (REFERENCE GENERAL NOTE ON THIS SHEET REGARDING STATE OF SURVEY AT THE TIME OF SUBMITTAL).
2. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
3. THE LIMIT AND CHARACTER OF EXISTING IMPROVEMENTS, AND
4. THE LIMIT AND CHARACTERR OF PROPOSED IMPROVEMENTS.

THE PROPOSED IMPROVEMENTS CONSIST OF PARKING AND ASSOCIATED LANDSCAPING ON LOTS 11 & 12 AS WELL AS TENANT IMPROVEMENTS TO LOT 13 (INCLUDING CANOPIES ON THE NORTH AND SOUTH SIDE OF THE EXISTING BUILDING). THE RUNOFF FROM LOTS 11 & 12 INTO THE NORTHERN AND SOUTHERN PONDS. THE NORTHERN PONDS ARE DIVIDED INTO SUB-PONDS (N-1, N-2, N-3, N-4 & N-5) AND THE SOUTHERN PONDS ARE DIVIDED INTO SUB-PONDS (S-1, S-2, S-3 & S-4). EACH POND IS LOCATED WITHIN DEPRESSED ISLANDS WITHIN THE PARKING AREAS, AND WILL EVENTUALLY DISCHARGE INTO PUBLIC STORM SEWERS ALONG MERIDIAN PLACE NW (NORTHERN PONDS) AND BLUEWATER ROAD NW (SOUTHERN PONDS). THE RESPECTIVE RATES OF DISCHARGE FOR THE ACCUMULATED NORTHERN AND SOUTHERN PONDS ARE 0.26 AND 0.26 (BOTH OF WHICH ARE LESS THAN THE 0.1 CFS/ACRE REQUIREMENT PER THE MASTER PLAN).

THE CALCULATIONS ANALYZE THE EXISTING AND PROPOSED CONDITIONS FOR THE 6-HOUR, 100 YEAR RAINFALL EVENT. PER DISCUSSIONS WITH CITY, THE ANALYSIS IS IN ACCORDANCE WITH CHAPTER 6-"DRAINAGE, FLOOD CONTROL AND EROSION CONTROL" DEVELOPMENT PROCESS MANUAL. AS SHOWN BY THESE CALCULATIONS, THE RATE AND VOLUME OF RUNOFF WILL INCREASE BUT THE POND(S) WITH CONTROLLED OUTLETS WILL MITIGATE THE INCREASE. THIS PLAN IS IN CONFORMANCE WITH THE MASTER DRAINAGE PLAN.

CALCULATIONS

PRECIPITATION ZONE 1

TOTAL SITE AREA (NORTHERN) = 2.65 ACRES, TOTAL SITE AREA (SOUTHERN) = 2.76 ACRES

NORTHERN BASIN AREA = 2.65 ACRES

EXISTING CONDITIONS
LAND TREATMENTA = 100%
EQN 6.1: E = [(0.55*2.65)]/2.65 = 0.55 INCHES
EQN 6.2: V360 = (0.55*2.65)/12 = 0.122 ACRE FEET
EQN 6.6: Qp = (1.54*2.65) = 4.08 CFS

PROPOSED CONDITIONS
LAND TREATMENT B = 82.8% (2.19 ACRES), D = 17.2% (0.46 ACRES)
EQN 6.1: E = [(0.93*0.46) + (2.24*2.19)]/2.65 = 2.01 INCHES
EQN 6.2: V360 = (2.01*2.65)/12 = 0.444 ACRE FEET
EQN 6.6: Qp = (2.16*0.46) + (4.12*2.19) = 10.02 CFS

INCREASE IN VOLUME OF RUNOFF = 0.322 ACRE FEET
INCREASE IN RATE OF RUNOFF = 5.94 CFS

POND VOLUME (NORTHERN BASINS)
Tc = 0.2 HR, Ad = 2.43 ACRES, At = 2.65 ACRES, 0.25(Ad/At) = 0.229 HR
Tb = 2.107*E*(At/Qp) - 0.25(Ad/At) = 0.891 HR
Tp = (0.7*Tc) + ((1.6-(Ad/At))/12) = 0.197 HR
Vrequired = 19,776 CF

POND VOLUME AND DISCHARGES
POND 1 VOLUME = 1,625.86 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*3.23)] = 0.0273 CFS
POND 2 VOLUME = 1,940.61 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.84)] = 0.0256 CFS
POND 3 VOLUME = 781.41 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.73)] = 0.0251 CFS
POND 4 VOLUME = 669.18 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*3.16)] = 0.0270 CFS
POND 5 VOLUME = 781.41 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.69)] = 0.0249 CFS
POND 6 VOLUME = 703.18 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.74)] = 0.0251 CFS
POND 7 VOLUME = 1,922.90 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*3.06)] = 0.0265 CFS
POND 14 VOLUME = 4,108.70 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0024) [SQ(2*32.2*3.22)] = 0.0272 CFS
POND 15 VOLUME = 1,859.59 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.36)] = 0.0233 CFS
POND 16 VOLUME = 984.03 CF, 0.76" ORIFICE (AREA = 0.0032 SF), OUTFLOW = 0.6 (0.0032) [SQ(2*32.2*2.55)] = 0.0242 CFS

TOTAL OUTFLOW = 0.2561 CFS, ALLOWABLE OUTFLOW = 2.65*0.1 = 0.265 CFS

SOUTHERN BASIN AREA = 2.76 ACRES

EXISTING CONDITIONS
LAND TREATMENTA = 100%
EQN 6.1: E = [(0.55*2.76)]/2.65 = 0.55 INCHES
EQN 6.2: V360 = (0.55*2.76)/12 = 0.127 ACRE FEET
EQN 6.6: Qp = (1.54*2.76) = 4.25 CFS

PROPOSED CONDITIONS
LAND TREATMENT B = 82.8% (2.29 ACRES), D = 17.2% (0.47 ACRES)
EQN 6.1: E = [(0.93*0.47) + (2.24*2.29)]/2.76 = 2.02 INCHES
EQN 6.2: V360 = (2.02*2.65)/12 = 0.465 ACRE FEET
EQN 6.6: Qp = (2.16*0.47) + (4.12*2.29) = 10.45 CFS

INCREASE IN VOLUME OF RUNOFF = 0.338 ACRE FEET
INCREASE IN RATE OF RUNOFF = 6.20 CFS

POND VOLUME (SOUTHERN BASINS)
Tc = 0.2 HR, Ad = 2.53 ACRES, At = 2.76 ACRES, 0.25(Ad/At) = 0.229 HR
Tb = 2.107*E*(At/Qp) - 0.25(Ad/At) = 0.895 HR
Tp = (0.7*Tc) + ((1.6-(Ad/At))/12) = 0.197 HR
Vrequired = 20,700 CF

POND VOLUME AND DISCHARGES
POND 8 VOLUME = 1,349.41 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*3.42)] = 0.0438 CFS
POND 9 VOLUME = 1,165.88 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*3.92)] = 0.0469 CFS
POND 10 VOLUME = 2,523.74 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*2.47)] = 0.0372 CFS
POND 11 VOLUME = 4,365.76 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*2.90)] = 0.0404 CFS
POND 12 VOLUME = 4,470.03 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*2.87)] = 0.0402 CFS
POND 13 VOLUME = 9,635.37 CF, 0.72" ORIFICE (AREA = 0.0028 SF), OUTFLOW = 0.6 (0.0028) [SQ(2*32.2*4.52)] = 0.0289 CFS
POND 17 VOLUME = 1,860.71 CF, 0.95" ORIFICE (AREA = 0.0049 SF), OUTFLOW = 0.6 (0.0049) [SQ(2*32.2*2.57)] = 0.0380 CFS

TOTAL OUTFLOW = 0.2755 CFS, ALLOWABLE OUTFLOW = 2.76*0.1 = 0.276 CFS

TOTAL VOLUME
TOTAL VOLUME PROVIDED (NORTH AND SOUTH BASINS) = 40,596.10 CF
TOTAL VOLUME REQUIRED (NORTH AND SOUTH BASINS) = 40,446.00 CF

ARCHITECT OF RECORD:
8131 METCALF
SUITE 300
OVERLAND PARK, KS 66204
www.brrarch.com
TEL: 913-262-9095
FAX: 913-262-9044

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1700 SWIFT STREET
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NORTH KANSAS CITY, MO 64116
www.mecresults.com
TEL: 816-756-0444
FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM
7300 Meridian Pl NW
Albuquerque, NM 87121

Project Manager: CJF
Checked By: MVE
Drawn by: ELM
Document date: 06/18/2020

Project No.
30000481 MEC# 191313-000

Professional Seal
CALEB J. FLAKE NEW MEXICO 24114 REGISTERED PROFESSIONAL ENGINEER
8/26/2020

Sheet Title
STORM SEWER CALC SHEET

Sheet No.
C3.06

PLOT DATE: 8/26/2020 9:16 AM
BY: EMCQUEEN
P:\191313-000\06-DRAWINGS\CIVIL\SITE PLAN SHEETS\191313-000 GRAD.DWG

JOINT DIMENSIONS								
						TRANS. JOINTS	LONG. JOINTS	
D	a	b	c	d	e	f - min.	f - min.	g
5"	1"	1-3/4"	1-1/2"	1"	2"	1/4 D	1/3 D	1/2 D
6"	1"	2-1/4"	1-1/2"	1"	2-1/2"	1/4 D	1/3 D	1/2 D
8"	1"	3"	2"	1-1/2"	3-1/4"	1/4 D	1/3 D	1/2 D

TYPE 5 EXPANSION JOINT

TYPE 6 TRANSITION JOINT
CONCRETE TO ASPHALT

GENERAL NOTES:

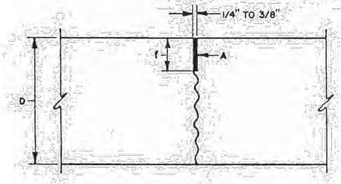
1. THICKNESS OF SLAB SHALL BE AS INDICATED ON DRAWINGS. SEE TABLE ABOVE.
2. DAILY CONCRETE PLACEMENT SHALL TERMINATE AT A JOINT.

CONSTRUCTION NOTES:

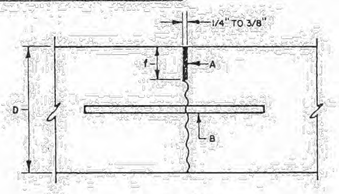
A. JOINT FILLER, INSTALL PER MANF. INSTR. OVER BACKER ROD OR JOINT TAPE.
B. 3/4" Ø 16" SMOOTH DOWELL BAR @ 12" O.C., 1/2 GREASED 1/2 PAINTED.
C. NO. 4 DEFORMED BARS, 3'-0" LONG AT 2'-0" O.C.
D. THICKNESS OF SLAB.
E. COMPRESSIBLE FILLER FULL HEIGHT.

CITY OF ALBUQUERQUE	
REVISIONS	PAVING CONCRETE JOINTS TYPES 5 & 6 DWG. 2451 DEC 1992

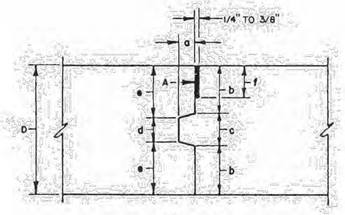
JOINT DIMENSIONS								
						TRANS. JOINTS	LONG. JOINTS	
D	a	b	c	d	e	f - min.	f - min.	g
5"	1"	1-3/4"	1-1/2"	1"	2"	1/4 D	1/3 D	1/2 D
6"	1"	2-1/4"	1-1/2"	1"	2-1/2"	1/4 D	1/3 D	1/2 D
8"	1"	3"	2"	1-1/2"	3-1/4"	1/4 D	1/3 D	1/2 D



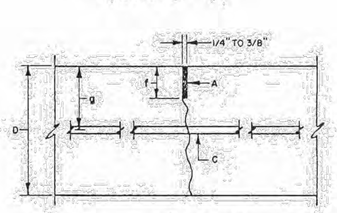
TYPE 1
SAWED JOINT
(LONGITUDINAL OR TRANSVERSE)



TYPE 2
DOWELED JOINT
(TRANSVERSE)
ARTERIAL/COLLECTOR STREETS ONLY



TYPE 3
KEYED JOINT
(LONGITUDINAL OR TRANSVERSE)



TYPE 4 ALTERNATE
TIED JOINT
(LONGITUDINAL OR TRANSVERSE)

GENERAL NOTES:

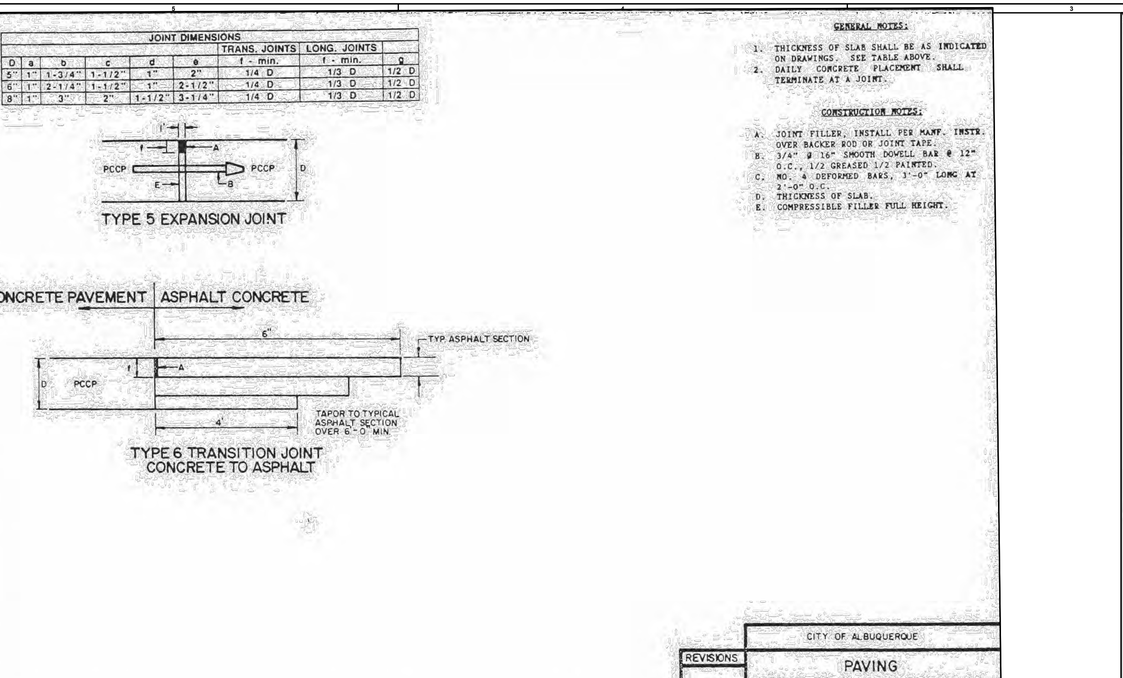
1. THICKNESS OF SLAB SHALL BE AS INDICATED ON DRAWINGS. SEE TABLE ABOVE.
2. DAILY CONCRETE PLACEMENT SHALL TERMINATE AT A JOINT.

CONSTRUCTION NOTES:

A. JOINT FILLER, INSTALL PER MANF. INSTR. OVER BACKER ROD OR JOINT TAPE.
B. 3/4" Ø 16" SMOOTH DOWELL BAR @ 12" O.C., 1/2 GREASED 1/2 PAINTED.
C. NO. 4 DEFORMED BARS, 3'-0" LONG AT 2'-0" O.C.
D. THICKNESS OF SLAB.

CITY OF ALBUQUERQUE	
REVISIONS 12/15/92	PAVING CONCRETE JOINTS DWG. 2450 AUG 1986

NYLOPLAST 2 FT X 2FT CURB INLET STRUCTURE: 30 _ _ AGS _ _ X



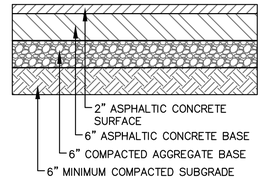
1 - 12" - 30" FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5 - ALL CURB INLET GRATE OPTIONS (STANDARD & DIAGONAL) SHALL MEET H-20 LOAD RATING

DRAWN BY	EBC	MATERIAL	
DATE	01-23-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-10-16		
DWG SIZE	A	SCALE 1:50	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

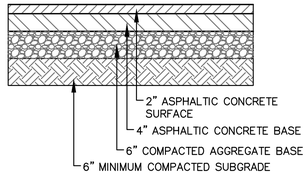
TITLE
DRAIN BASIN WITH 2 FT X 2 FT CURB INLET
QUICK SPEC INSTALLATION DETAIL

DWG NO. 7002-110-032 REV H



ALL ASPHALT, AGGREGATE BASE AND COMPACTION REQUIREMENT SHALL ADHERE TO THE CITY OF ALBUQUERQUE REQUIREMENTS.

HEAVY DUTY ASPHALT PAVEMENT DETAIL



ALL ASPHALT, AGGREGATE BASE AND COMPACTION REQUIREMENT SHALL ADHERE TO THE CITY OF ALBUQUERQUE REQUIREMENTS.

LIGHT DUTY ASPHALT PAVEMENT DETAIL

brr
ARCHITECT OF RECORD:
8131 METCALF
SUITE 300
OVERLAND PARK, KS 66204
www.brrarch.com
TEL: 913-262-9095
FAX: 913-262-9044

Consultants
McCLURE
making lives better.
ENGINEER OF RECORD: CALEB FLAKE
1700 SWIFT STREET
SUITE 100
NORTH KANSAS CITY, MO 64116
www.mecresults.com
TEL: 816-756-0444
FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM
7300 Meridian Pl NW
Albuquerque, NM 87121

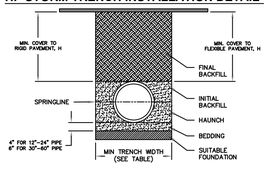
Project Manager: CJF
Checked By: MVE
Drawn by: ELM
Document date: 06/18/2020
Project No.: 30000481 MEC# 191313-000
Professional Seal

CALEB J. FLAKE NEW MEXICO 24114 REGISTERED PROFESSIONAL ENGINEER
8/26/2020

Sheet Title: DETAILS
Sheet No.: C5.03

PLOT DATE: 8/26/2020 9:16 AM
BY: EMCQUEEN
P:\191313-000\06-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\191313-000 DET1.DWG

HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS". LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE SPRINGLINE OF THE PIPE. ADDITIONAL RESTRICTIONS ARE IN THE LATEST ADDITION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER AS AN ALTERNATIVE AND AT THE DISCRETION OF HTE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE 90% OF MAXIMUM DENSITY PER ASTM D1557 OR AS SHOWN ON THE PLANS. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE, 6" (150mm) FOR 30"-60" (750mm-900mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATIONS TO ENGINEER. MATERIAL SHALL BE COMPACTED TO A DENSITY OF NOT LESS THEN 90% OF MAXIMUM DENSITY PER ASTM D-1557. CLASS IV MATERIALS AS DEFINED IN ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) 12" (300mm) FROM APPROVED CLASS I OR I MATERIAL COMPACTED TO 85% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER H, IS 12" (300mm) WITH LESS THAN FOUR FEET (1200mm) AND 24" (600mm) OF COVER FOR 1500mm DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO BOTTOM OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

*VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITION COVER

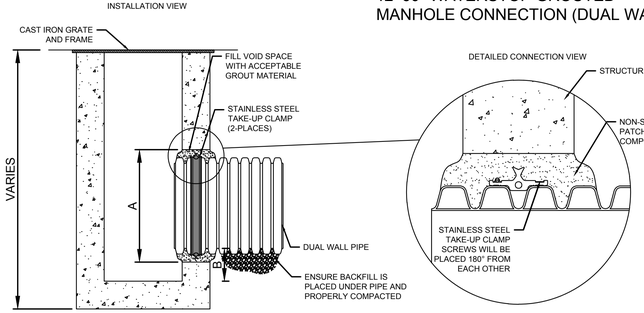
TABLE 3, MAXIMUM COVER FOR HP STORM PIPE, ft

PIPE DIA	CLASS I COMPACTED	CLASS II 90%	CLASS III 90%
12" (300mm)	41 (12.5m)	21 (6.4m)	16 (4.9m)
15" (375mm)	42 (12.8m)	21 (6.4m)	16 (4.9m)
18" (450mm)	44 (13.4m)	21 (6.4m)	17 (5.2m)
24" (600mm)	37 (11.3m)	18 (5.5m)	14 (4.3m)
30" (750mm)	39 (11.9m)	19 (5.8m)	15 (4.6m)
36" (900mm)	29 (8.8m)	14 (4.3m)	11 (3.4m)
42" (1050mm)	30 (9.1m)	14 (4.3m)	11 (3.4m)
48" (1200mm)	29 (8.8m)	14 (4.3m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	14 (4.3m)	10 (3.0m)

FILL HEIGHT TABLE GENERATED USING ASHTO SECTION 12 LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

REVISIONS	CITY OF ALBUQUERQUE
	DRAINAGE
	HP PP STORM TRENCH INSTALLATION
	DWG. 2240 MAY 2020

12'-60" WATERSTOP GROUTED MANHOLE CONNECTION (DUAL WALL)



PIPE SIZE (IN)	PIPE OD (IN)	"A" MIN WALL DIA (IN)	"B" MIN. DISTANCE PIPE INVERT TO STRUCTURE INVERT (IN)
12	14.5	19.50	3.7
15	17.6	23.00	4.0
18	21.2	26.50	4.2
24	27.8	33.25	4.5
30	35.1	40.50	5.2
36	41.1	47.00	5.5
42	47.7	53.00	5.7
48	53.6	59.00	5.7
60	66.3	72.00	6.4

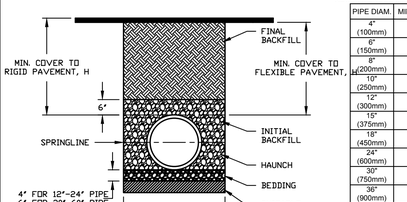
NOTES:
PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST ENSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

COA WATERSTOP GROUTED MANHOLE CONNECTION DETAIL

DRAWN BY	ABC
DATE	
APPD BY	ENG
DATE	NTS
DWG SIZE	

RECOMMENDED MINIMUM TRENCH WIDTHS



PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS*

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
** SEE BACKFILL REQUIREMENTS IN NOTE 6

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I COMPACTED	CLASS I DUMPED	CLASS II 95%	CLASS II 90%	CLASS III 95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	18 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
	COVER HEIGHTS TO MATCH TN #01	AGC	09/20/17	CMF

TRENCH INSTALLATION DETAIL (N-12 PER AASHTO)
DRAWING NUMBER: STD-101

ADS — ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

DRAWN BY	TJR
DATE	12/29/16
APPD BY	
DATE	
SCALE	NTS
SHEET	1 OF 1

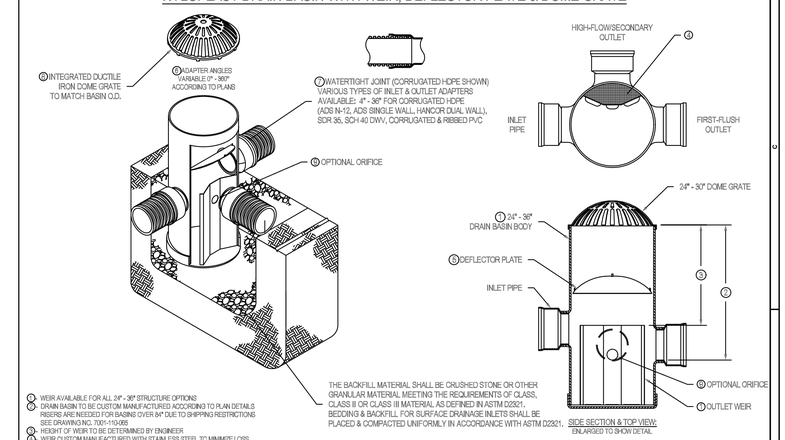
ELEVATION TABLE (NYLOPLAST DRAIN BASINS)

POND	OUTFLOW NODE	"A"	"B"	"C"	"A-C"	Orifice (in)
1	D1	5103.79	5101.31	5100.56	3.23	0.76
2	L1	5105.53	5103.44	5102.69	2.84	0.76
3	F1	5105.94	5103.96	5103.21	2.73	0.76
4	K1	5108.00	5105.59	5104.84	3.16	0.76
5	O1	5105.83	5103.89	5103.14	2.69	0.76
6	A6	5106.15	5104.16	5103.41	2.74	0.76
7	E2	5105.53	5103.22	5102.47	3.06	0.76
8	J1	5104.17	5101.50	5100.75	3.42	0.95
9	M1	5104.02	5100.85	5100.10	3.92	0.95
10	N1	5103.32	5101.60	5100.85	2.47	0.95
11	H1	5103.27	5101.12	5100.37	2.90	0.95
12	Q1	5103.27	5101.15	5100.40	2.87	0.95
13	P1	5102.90	5099.13	5098.38	4.52	0.72
14	C2	5103.46	5100.99	5100.24	3.22	0.76
15	R1	5104.75	5102.32	5101.57	3.18	0.76
16	B1	5104.60	5102.24	5102.09**	2.36	0.76
17	G5	5103.00	N/A	5100.43	2.57	0.95

"C" - FLOWLINE OF BOTH THE INCOMING UNDERDRAIN AND THE OUTGOING ORIFICE/PIPE

* - POND 17 IS A CURB INLET, BUT WILL HAVE AN ORIFICE AT THE ELEVATION NOTED IN THE TABLE
** - ELEVATION "C" FOR OUTFLOW NODE B1 TIES IN TO STRUCTURE A1.

NYLOPLAST DRAIN BASIN WITH WEIR, DEFLECTOR PLATE & DOME GRATE

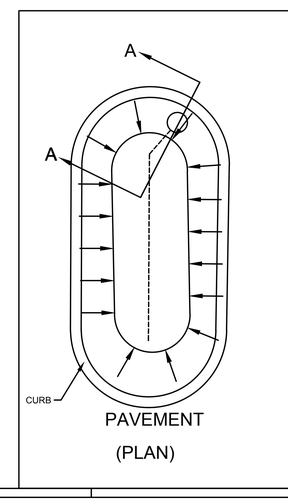


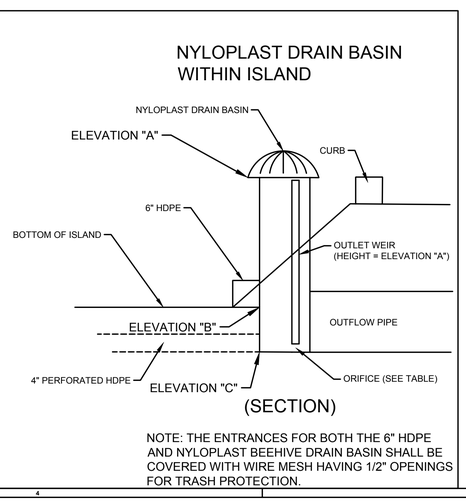
① WEIR AVAILABLE FOR ALL 24" - 36" STRUCTURE OPTIONS
② DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
RISERS ARE NEEDED FOR BASINS OVER 8' DUE TO SHIPPING RESTRICTIONS
SEE DRAWING NO. 7001-110305
③ HEIGHT OF WEIR TO BE DETERMINED BY ENGINEER
④ WEIR CUSTOM MANUFACTURED WITH STAINLESS STEEL TO MINIMIZE LOSS OF OUTLET PIPE OPEN AREA
⑤ DEFLECTOR PLATE CUSTOM MANUFACTURED WITH STAINLESS STEEL PER ENGINEER'S DESIGN TO PROTECT WEIR OUTLET FROM GRATE INLET ABOVE
⑥ ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
⑦ DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
⑧ DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
⑩ ORIFICE HOLE OR NOTCH TO BE CUT DURING FABRICATION PROCESS. SIZE AND INVERT ELEVATION MUST BE PROVIDED BY ENGINEER

DRAWN BY	NMH
DATE	04-17-20
APPD BY	NMH
DATE	04-17-20
MATERIAL	
PROJECT NO./NAME	
DWG SIZE	A
SCALE	1:40
SHEET	1 OF 1
DWG NO.	7004-110-146
REV	A

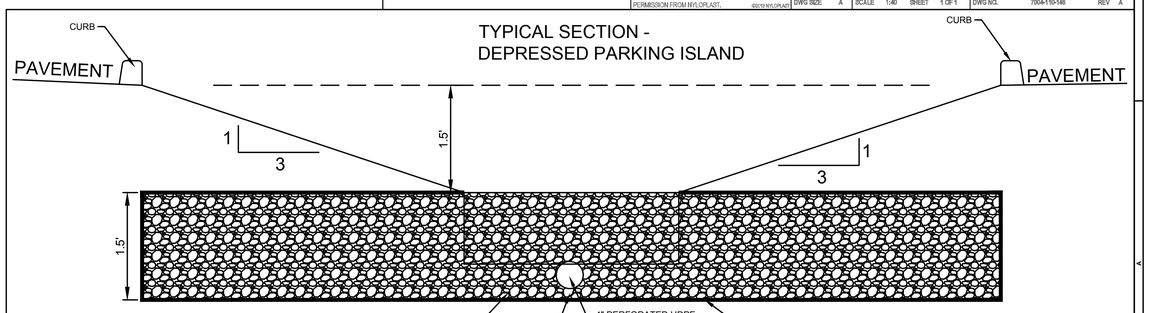
Nyloplast — 3130 VERONA AVE, BUFORD, GA 30518, PHN (770) 932-2443, FAX (770) 932-2490, www.nyloplast-us.com

TITLE: DRAIN BASIN WITH WEIR, DEFLECTOR PLATE AND DOME GRATE QUICK SPEC INSTALLATION DETAIL





NOTE: THE ENTRANCES FOR BOTH THE 6" HDPE AND NYLOPLAST BEEHIVE DRAIN BASIN SHALL BE COVERED WITH WIRE MESH HAVING 1/2" OPENINGS FOR TRASH PROTECTION.



NOTE: 4" PERFORATED UNDERDRAINS SHALL BE AT THE BOTTOM OF ALL DEPRESSED ISLANDS

brr
ARCHITECT OF RECORD:
8131 METCALF
SUITE 300
OVERLAND PARK, KS 66204
www.brrarch.com
TEL: 913-262-9095
FAX: 913-262-9044

Consultants
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ENGINEER OF RECORD: CALEB FLAKE
1700 SWIFT STREET
SUITE 100
NORTH KANSAS CITY, MO 64116
www.mecresults.com
TEL: 816-756-0444
FAX: 816-756-1763

Revisions

NO.	DATE	DESCRIPTION

WAQ1 - Albuquerque, NM

WAQ1 - Albuquerque, NM
7300 Meridian Pl NW
Albuquerque, NM 87121

Project Manager: CJF
Checked By: MVE
Drawn by: ELM
Document date: 06/18/2020
Project No. 30000481 MEC# 191313-000
Professional Seal

8/26/2020

Sheet Title: DETAILS
Sheet No. C5.04

PLOT DATE: 8/26/2020 9:16 AM
BY: EMCQUEEN
P:\191313-000\06-DRAWINGS\CIVIL\CONSTRUCTION DOCUMENTS\191313-000 DETL.DWG