

# CITY OF ALBUQUERQUE

*Planning Department*  
Brennon Williams, Director



*Mayor Timothy M. Keller*

April 20, 2021

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 93924  
Albuquerque, NM 87199

**RE: 2410 Mountain Rd. NW**  
**Grading and Drainage Plan**  
**Engineer's Stamp Date: 01/27/21**  
**Engineer's Certification Date: 04/16/21**  
**Hydrology File: J12D207A**

Dear Mr. Soule:

PO Box 1293

Based upon the information provided in your submittal received 04/16/2021 and site photos sent on 04/16/21, the Grading and Drainage Plan is approved for Building Permit and Building Pad Certification for 2410 Mountain Rd. NW. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

Albuquerque

Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

NM 87103

If you have any questions, please contact me at 924-3995 or [rbrissette@cabq.gov](mailto:rbrissette@cabq.gov).

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

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



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

**Project Title:** 2410 MOUNTAIN ROAD **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** LOT C, CASA DEVINE HOMES

**City Address:** 2410 MOUNTAIN ROAD

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Other Contact:** RIO GRANDE ENGINEERING **Contact:** DAVID SOULE

**Address:** PO BOX 93924 ALB NM 87199

**Phone#:** 505.321.9099 **Fax#:** 505.872.0999 **E-mail:** david@riograndeengineering.com

**TYPE OF DEVELOPMENT:** \_\_\_\_\_ PLAT ☒ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

Check all that Apply:

### DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE  
☐ TRAFFIC/ TRANSPORTATION

### TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION  
☒ PAD CERTIFICATION  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ 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?

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

### TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☒ 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  
☐ SO-19 APPROVAL  
☐ 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: \_\_\_\_\_



| Weighted E Method                                         |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
|-----------------------------------------------------------|--------------|-----------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------|-------------------|-------------|------------------------------------|-----------------------------|-------------|
| Basin                                                     | Area<br>(sf) | Area<br>(acres) | Treatment A<br>% (acres) | Treatment B<br>% (acres) | Treatment C<br>% (acres) | Treatment D<br>% (acres) | Weighted E<br>(sf-ft) | Volume<br>(sf-ft) | Flow<br>cfs | 100-YEAR 6-HR<br>Volume<br>(sf-ft) | 10-DAY<br>Volume<br>(sf-ft) | Flow<br>cfs |
| HISTORICAL                                                | 6020.00      | 0.138           | 100%                     | 0.1382                   | 0%                       | 0.000                    | 0%                    | 0.000             | 0%          | 0.000                              | 0.820                       | 0.007       |
| PROPOSED                                                  | 6020.00      | 0.138           | 0%                       | 0                        | 21%                      | 0.029                    | 18%                   | 0.025             | 61%         | 0.084                              | 1.775                       | 0.020       |
| 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              |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Where for 100-year, 6-hour storm(zone2)                   |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Ea= 0.82                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Eb= 0.8                                                   |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Ec= 1.03                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Ed= 2.33                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| Developed Conditions                                      |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| FLAT GRADING SCHEME                                       |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| EXISTING                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| PROPOSED                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| PROVIDED                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| PEAK FLOW                                                 |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| TOTAL FLOW                                                |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 0.24 CFS                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 311 CF                                                    |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 0.51 CFS                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 1207 CF                                                   |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 0.00 CFS                                                  |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |
| 1317 CF                                                   |              |                 |                          |                          |                          |                          |                       |                   |             |                                    |                             |             |

DRAINAGE NARRATIVE

THIS SITE IS AN IN FILL DEVELOPMENT. THE SITE IS GOVERNED BY A SUBDIVISION MASTER DRAINAGE PLAN. THE DRAINAGE SOLUTION REQUIRES RETENTION OF THE 100-YEAR, 10-DAY VOLUME. THE PROPOSED DEVELOPMENT PLACED PADS 1' ABOVE THE OVERFLOW AT THE STREET. THE SITE WILL RETAIN THE FLOW WITHIN 6- MC3500 STOR TECH INFILTRATION CHAMBERS. IT THE EVENT OF CLOGGING OR EXCESS FLOW THE SITE WILL OVERFLOW TO MOUNTAIN ROAD TO THE NORTH.

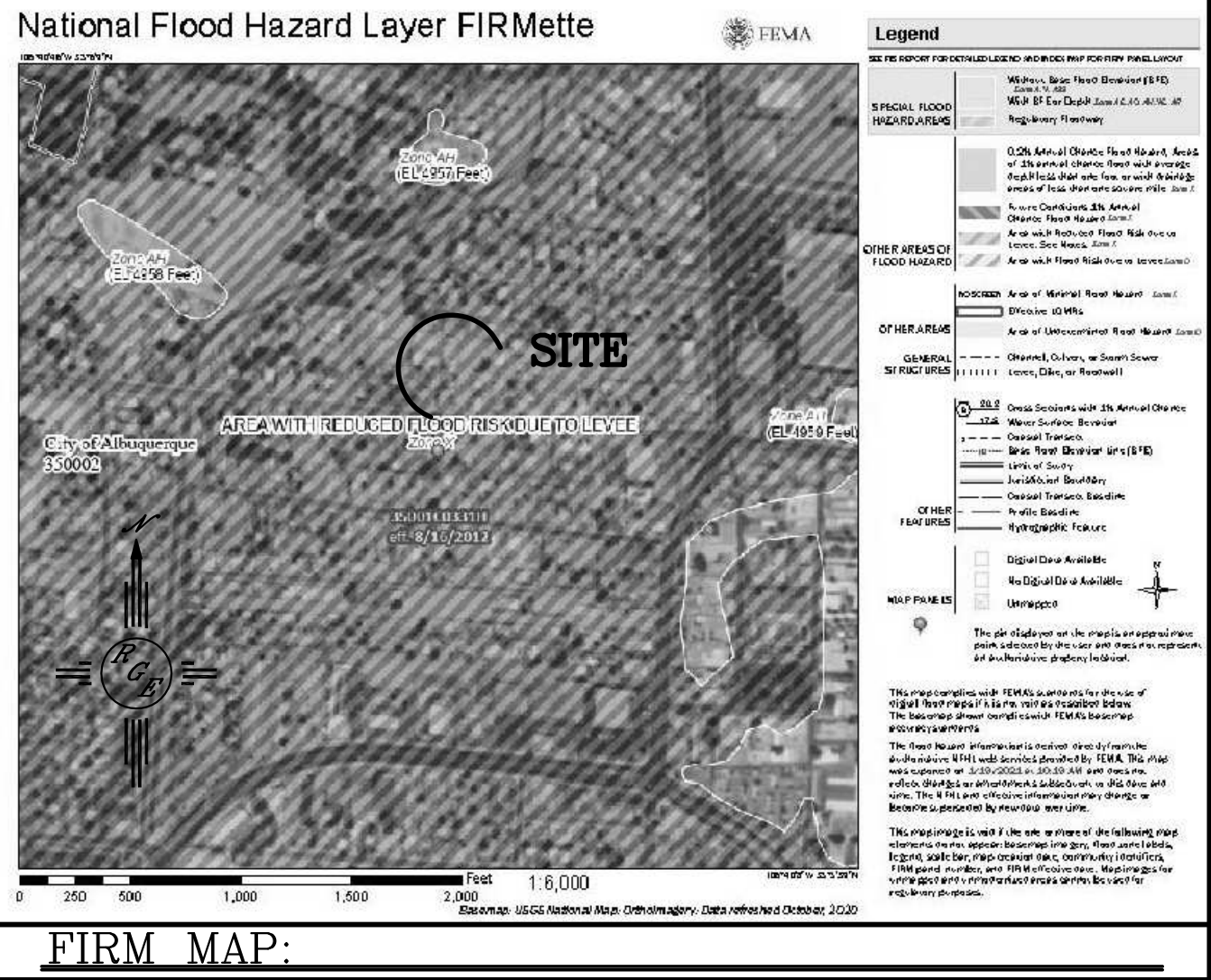
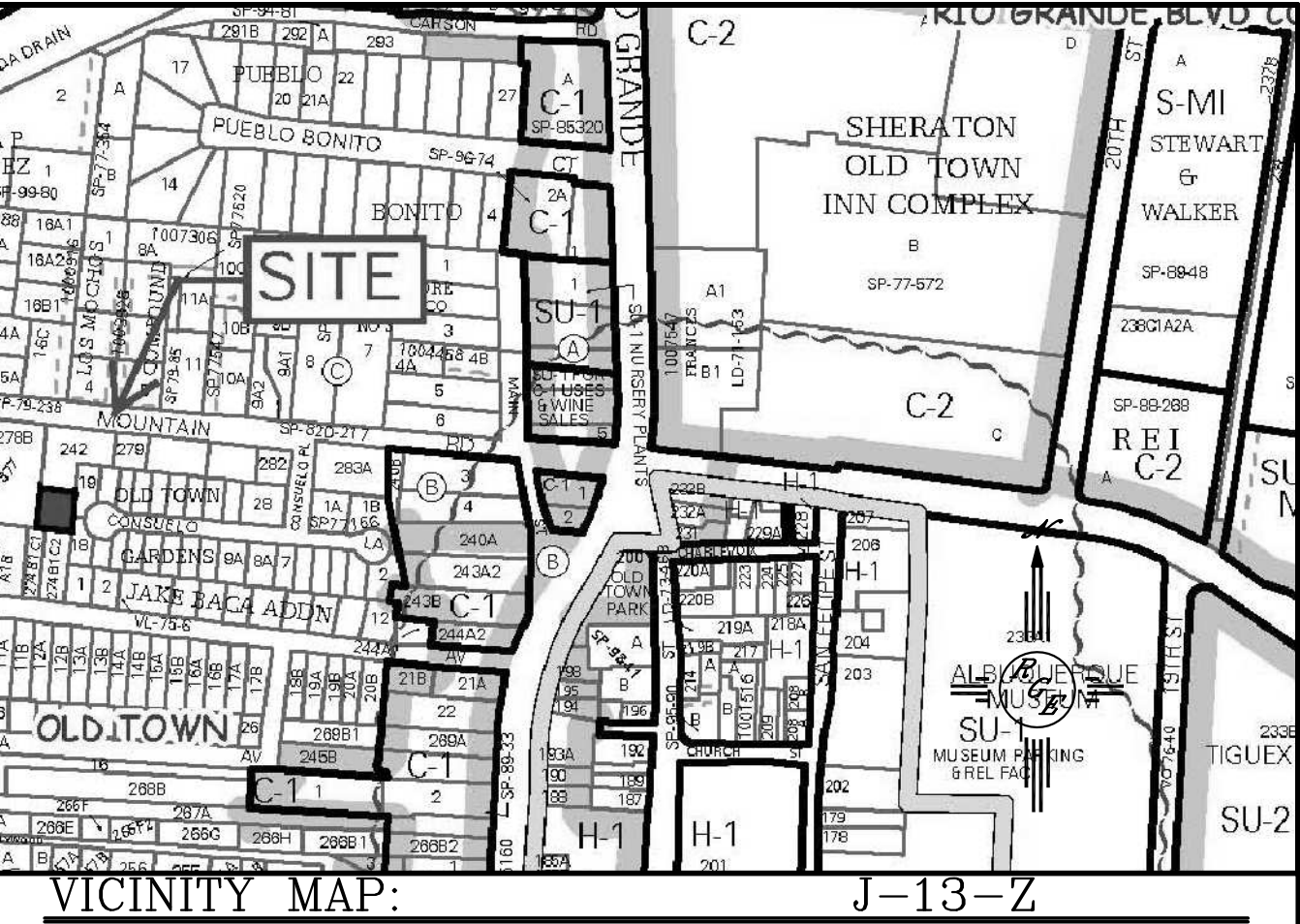
I, DAVID SOULE HAVE PERSONALLY INSPECTED THE SITE. I HEREBY CERTIFY THE PAD HAS BEEN CONSTRUCTED SUCH THAT IT IS IN SUBSTANTIAL CONFORMANCE TO THE APPROVED GRADING PLAN DATED 1/26/21



4/16/21

### EROSION CONTROL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
- REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



### LEGAL DESCRIPTION:

LOT "C", CASAS DEVINE HOMES

### NOTES:

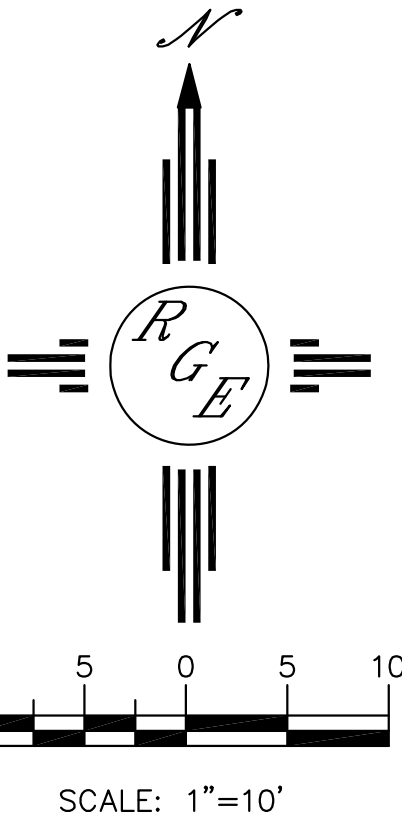
- ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
- ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.
- INFILTRATOR SYSTEM INSTALLATION SHALL BE CERTIFIED AS TO BEING CONSTRUCTED ACCORDING TO MANUFACTURORS SPECIFICATIONS

### LEGEND

- XXXX--- EXISTING CONTOUR
- XXXX--- EXISTING INDEX CONTOUR
- XXXX--- PROPOSED CONTOUR
- XXXX--- PROPOSED INDEX CONTOUR
- XXXX--- SLOPE TIE
- XXXX--- EXISTING SPOT ELEVATION
- XXXX--- PROPOSED SPOT ELEVATION
- XXXX--- BOUNDARY
- XXXX--- CENTERLINE
- XXXX--- RIGHT-OF-WAY
- XXXX--- PROPOSED 4" PVC SD
- XXXX--- EARTHEN SWALE W/GRAVEL @ INVERT
- ===== EXISTING CURB AND GUTTER
- ===== PROPOSED CMU RETAINING WAL-DESIGN BY OTHERS

### CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



|                            |                                                                                                          |                         |
|----------------------------|----------------------------------------------------------------------------------------------------------|-------------------------|
| ENGINEER'S SEAL            | LOT "C", CASAS DEVINE                                                                                    | DRAWN BY: WCVJ          |
|                            | 2410 MOUNTAIN ROAD                                                                                       | DATE: 1-19-21           |
| DAVID SOULE<br>P.E. #14522 | GRADING AND DRAINAGE PLAN                                                                                | 21021004-LAYOUT-1-19-21 |
|                            | Rio Grande Engineering<br>1606 CENTRAL AVENUE SE<br>SUITE 201<br>ALBUQUERQUE, NM 87106<br>(505) 872-0999 | SHEET # 1 OF 2          |
|                            |                                                                                                          | JOB # 21021004          |





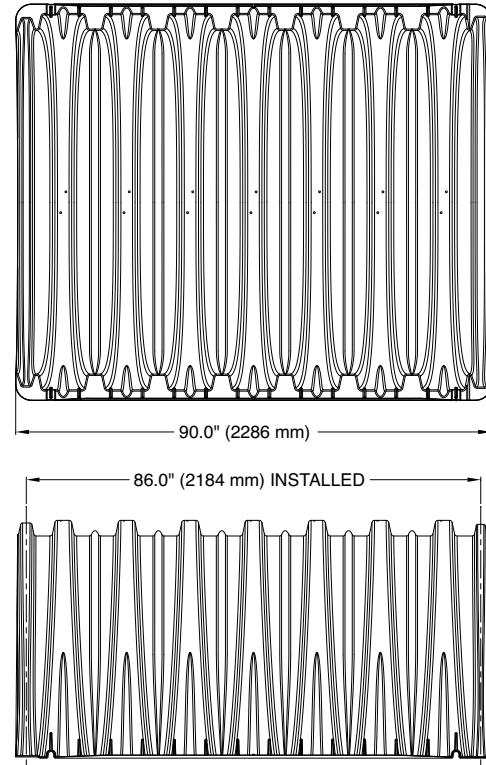
**StormTech**  
Detection • Service • Water Quality  
A division of **ZDS**

## StormTech MC-3500 Chamber

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| StormTech MC-3500 End Cap (not to scale) |                                                  |
|------------------------------------------|--------------------------------------------------|
| Nominal End Cap Specifications           |                                                  |
| Size (L x W x H)                         | 26.5" (673 mm) x 71" (1803 mm) x 45.1" (1145 mm) |
| End Cap Storage                          | 15.6 ft³ (0.44 m³)                               |
| Min. Installed Storage*                  | 46.9 ft³ (1.33 m³)                               |
| Weight                                   | 43 lbs (19.5 kg)                                 |

\*This assumes a minimum of 12" (305 mm) of stone above, 9" (229 mm) of stone below, 9" (229 mm) row spacing, 6" (152 mm) of stone perimeter, and 40% stone porosity.



| Amount of Stone Per Chamber |                        |               |               |               |
|-----------------------------|------------------------|---------------|---------------|---------------|
| ENGLISH<br>tons (yd³)       | Stone Foundation Depth |               |               |               |
|                             | 9 in.                  | 12 in.        | 15 in.        | 18 in.        |
| <b>MC-3500</b>              | 9.1 (6.4)              | 9.7 (6.9)     | 10.4 (7.3)    | 11.1 (7.8)    |
| <b>End Cap</b>              | 4.1 (2.9)              | 4.3 (3.1)     | 4.6 (3.2)     | 4.8 (3.4)     |
| METRIC kg (m³)              | <b>229 mm</b>          | <b>305 mm</b> | <b>381 mm</b> | <b>457 mm</b> |
| <b>MC-3500</b>              | 8220 (4.9)             | 8831 (5.3)    | 9443 (5.6)    | 10054 (6.0)   |
| <b>End Cap</b>              | 3729 (2.2)             | 3933 (2.3)    | 4136 (2.5)    | 4339 (2.6)    |

NOTE: Assumes 12" (305 mm) of stone above, and 9" (229 mm) between chambers/end caps.

CHAMBERS SHALL MEET ASTM F 2419 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

NOMINAL 3/4" - 2 INCH (19 mm - 51 mm) CLEAN, CRUSHED, ANGULAR STONE (ASHTO M43 8.0 & 4.4 STONE SIZES ALLOWED)

MC-3500 CHAMBER

COMPACTED FILL MATERIALS

PAVEMENT

NONWOVEN GEOTEXTILE ALL AROUND ANGULAR STONE

MC-3500 END CAP

6" MIN. (152 mm)

12' MIN. (305 mm)

24' (610 mm) MIN.

6.5' (156 mm) MIN.

40' (1013 mm) MIN.

9' (229 mm) MIN.

9" (229 mm) MIN.

9" (229 mm) MIN.

12' (305 mm) MIN.

- NOTES:
1. THIS CROSS SECTION PROVIDES GENERAL INFORMATION FOR THE MC-3500 CHAMBER. STORMTECH MC-3500 CHAMBERS MUST BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE MC-3500 DESIGN MANUAL AND MC-3500 CONSTRUCTION GUIDE.
  2. PROPERLY INSTALLED MC-3500 CHAMBERS PROVIDE THE LOAD FACTORS SPECIFIED IN THE ASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR EARTH AND LIVE LOADS WITH CONSIDERATION FOR IMPACT AND MULTIPLE PRESENCES.
  3. PERIMETER STONE MUST ALWAYS BE BROUGHT UP EVENLY WITH BACKFILL OF BED. PERIMETER STONE MUST EXTEND HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH STRAIGHT OR SLOPED SIDEWALLS.

  
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S150909 06/12

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CATCH BASIN OR MANHOLE

SUMP DEPTH TBD BY DESIGN ENGINEER

COVER PIPE CONNECTION TO END CAP WITH ADS 601 NON-WOVEN GEOTEXTILE (OR EQUAL)

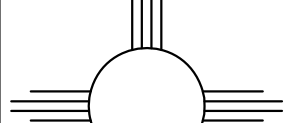
OPTIONAL INSPECTION PORT LOCATION PER ENGINEER'S DRAWING

STORMTECH END CAP (MC-3500 SHOWN)

24" (600 mm) HDPE ACCESS PIPE REQUIRED

2 LAYERS OF ADS 315 WTM WOVEN GEOTEXTILE (OR EQUAL) BETWEEN FOUNDATION STONE AND CHAMBERS  
MC-3500 - 8.3' (2.5 m) WIDE STRIPS  
MC-4500 - 10.3' (3.1 m) WIDE STRIPS



|                                                                                       |                                                                       |                                                 |                         |
|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------|-------------------------|
|  | ENGINEER'S<br>SEAL                                                    | LOT "C", CASAS DEVINE<br><br>2410 MOUNTAIN ROAD | DRAWN<br>BY WCWJ        |
|                                                                                       | 1/27/21                                                               |                                                 | DATE<br>1-19-21         |
|  | 2700 N. 1ST AVE. SUITE 201<br>ALBUQUERQUE, NM 87106<br>(505) 872-0989 | GRADED AND<br>DRAINAGE DETAILS                  | 21021004-LAYOUT-1-19-21 |
|                                                                                       |                                                                       | SHEET #<br><br>—                                | JOB #<br>21021004       |