# CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



Mayor Timothy M. Keller

October 6, 2023

Troy Kelts, P.E. Galloway & Company 6162 S Willow Drive, Suite 320 Greenwood Village, CO 80111

# RE: Sonic – 98<sup>th</sup> & Bluewater Grading Plan & Drainage Report Engineer's Stamp Date: 10/06/23 Hydrology File: K09D048C

Dear Mr. Kelts:

PO Box 1293

Based upon the information provided in your submittal received 10/04/2023, the Grading Plan & Drainage Report are approved for Building Permit and Grading 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 CERTIFICATE OF OCCUPANCY:

- Albuquerque 1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.
- NM 87103
   Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for \$25.00 made out to "Bernalillo County" for the stormwater quality pond per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.
- <sup>www.cabq.gov</sup> 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 <u>rbrissette@cabq.gov</u>.

Sincerely,

Renée C. Brissette

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 11/2018)

| Project Title:                       | Building      | g Permit #: Hydrology File #:            |
|--------------------------------------|---------------|------------------------------------------|
|                                      |               | Work Order#:                             |
| Legal Description:                   |               |                                          |
| City Address:                        |               |                                          |
| Applicant:                           |               | Contact:                                 |
| Address:                             |               |                                          |
|                                      |               | E-mail:                                  |
| Owner:                               |               | Contact:                                 |
| Address:                             |               |                                          |
| Phone#:                              | Fax#:         | E-mail:                                  |
| TYPE OF SUBMITTAL: PLAT (            | # OF LOTS)    | RESIDENCE DRB SITE ADMIN SITE            |
| IS THIS A RESUBMITTAL?:              | Yes           | No                                       |
| DEPARTMENT: TRAFFIC/ TRA             | NSPORTATION   | HYDROLOGY/ DRAINAGE                      |
| Check all that Apply:                |               | TYPE OF APPROVAL/ACCEPTANCE SOUGHT:      |
| TYPE OF SUBMITTAL:                   |               | BUILDING PERMIT APPROVAL                 |
| ENGINEER/ARCHITECT CERTIFI           | CATION        | CERTIFICATE OF OCCUPANCY                 |
| PAD CERTIFICATION                    |               | PRELIMINARY PLAT APPROVAL                |
| CONCEPTUAL G & D PLAN                |               | SITE PLAN FOR SUB'D APPROVAL             |
| GRADING PLAN DRAINAGE MASTER PLAN    |               | SITE PLAN FOR BLDG. PERMIT APPROVAL      |
| DRAINAGE MASTER PLAN DRAINAGE REPORT |               | FINAL PLAT APPROVAL                      |
| FLOODPLAIN DEVELOPMENT PI            | ERMIT APPI IC | SIA/ RELEASE OF FINANCIAL GUARANTEE      |
| ELEVATION CERTIFICATE                |               | FOUNDATION PERMIT APPROVAL               |
| CLOMR/LOMR                           |               | GRADING PERMIT APPROVAL SO-19 APPROVAL   |
| TRAFFIC CIRCULATION LAYOU            | T (TCL)       | SO-19 APPROVAL<br>PAVING PERMIT APPROVAL |
| TRAFFIC IMPACT STUDY (TIS)           | - ()          | GRADING/ PAD CERTIFICATION               |
| OTHER (SPECIFY)                      |               | WORK ORDER APPROVAL                      |
| PRE-DESIGN MEETING?                  |               | CLOMR/LOMR                               |
|                                      |               | FLOODPLAIN DEVELOPMENT PERMIT            |
|                                      |               | OTHER (SPECIFY)                          |
|                                      |               |                                          |
| DATE SUBMITTED:                      | Bv            |                                          |

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:

# Galloway

# FINAL DRAINAGE CONFORMANCE LETTER

# SONIC – 98<sup>TH</sup> AND BLUEWATER

9701 N. Bluewater Rd. NW, Albuquerque, NM 87121

PREPARED FOR: B&B Merritt Real Estate Group 750 N. 17<sup>th</sup> St. Las Cruses, NM 88005

PREPARED BY: Galloway & Company, Inc. 5500 Greenwood Plaza Dr., Suite 200 Greenwood Village, CO 80126

DATE: **October 5, 2023** 







5500 Greenwood Plaza Boulevard, Suite 200 Greenwood Village, C0 80111 303.770.8884 • GallowayUS.com

October 5, 2023

Planning Department – Development & Building Services Division Albuquerque, New Mexico 600 2<sup>nd</sup> NW Albuquerque, NM 80419

### RE: Drainage Conformance Letter for Sonic – 98th and Bluewater

To Whom It May Concern,

This drainage conformance letter has been prepared for the proposed Sonic development at SW corner of 19<sup>th</sup> Street Northwest and Bluewater Road. The proposed development encompasses Parcel A, of the 98<sup>th</sup> / Bluewater Commercial Project. The purpose of this letter is to show that the proposed development complies with Chapter 6 of the Development Process Manual for City of Albuquerque (effective June 8, 2020) and Amole Hubbel Master Drainage Plan (2013).

The existing site is currently vacant, and the overall development area is 10.44 acres with Parcel A, the area of development, encompassing 1.44 acres. The site drains via surface flow from the northwest to southeast. 98th St currently drains from north to south in an existing swale/bar ditch. Per the conceptual drainage management plan, all of the basins within the 98th / Bluewater Commercial project drain into Volcano Rd and then eastward to an existing cattle guard inlet which connects to an existing 48" storm drain pipe. Per the 2013 Amole Hubbel Drainage Master Plan, this area is defined as part of basin TB204 with an imperviousness area of 90% and is allowed to discharge from the site at a rate of 4.27 cfs/acre.

The proposed improvements on Parcel A will include a 1,227 square foot fast food store, covered patio and associated paving, striping, drives, and landscaping. The proposed development has been calculated to have an imperviousness area of 65.72%. A majority of stormwater runoff from the proposed development will be captured by two curb openings located within the proposed easterly drive entrances. Flows will be conveyed to a proposed onsite water quality pond and eventually follow existing drainage patterns into Volcano Road. The pond has been designed to provide water quality for the tributary basin area.

The sub-basins encompassing the Parcel A project site are described below, a copy of the Proposed Drainage Management Plan Parcel A is included for reference.

**Basin B-1.1 (1.10 ac)** is on the west of the site. It consists of the drive aisles, parking areas, trash enclosure, walkways, and landscaped area. Runoff will flow overland through curb and gutter to either the north (Design Point 1) or south (Design Point 2) curb opening. Flow will then continue west to the onsite storm water quality (Design Point 3). In the event of an emergency or a storm event greater than the 100-year storm, runoff will flow out of the emergency spillway of the pond and into the private access drive (Design Point 4). The overall composite imperviousness of this basin is 68.97%. Direct runoff will be 2.45 cfs and 4.11 cfs during the 10-year and 100-year storm respectively.

**Basin B-1.2 (0.05 ac)** is in the center of the project area. It consists of the fast-food restaurant roof area, and cover patio. Runoff will be collected via a roof drain and be routed southeast to outlet into the landscaping area (Design Point 5). Flow will then continue over the southerly landscape area into the pivate access drive (Design Point 6). It will join with storm runoff that bypasses the water quality pond and flows within Private Drive. Then it will travel to the south existing storm sewer in Volcano Road. The overall composite imperviousness of this basin is 100.0%. Direct runoff will be 0.14 cfs and 0.22 cfs during the 10-year and 100-year storms respectively.



98<sup>th</sup> / Bluewater Commercial Development – Parcel A - Sonic MGS000001 – Albuquerque, NM October 5, 2023

**Basin B-1.3 (0.28 ac)** is located in the eastern portion of the project. The area consists of the easterly drive entrances and landscaping. Runoff will flow overland southeast into the private access drive at Design Point 6. Flow will join with storm runoff that bypasses the water quality pond and flows within Private Drive. Then it will travel south to the existing storm sewer in Volcano Road. The overall composite imperviousness of this basin is 46.41%. Direct runoff will be 0.56 cfs and 0.97 cfs during the 10-year and 100-year storms respectively.

As noted above, our site is allowed to discharge up to 4.27 cfs/acre into the downstream systems. Parcel A will be developed at a 64.74% pervious land treatment and will provide a water quality pond with a storage volume of 1,129 cubic feet, sized for the tributary basin B-1.1 per City of Albuquerque DPM. Per the drainage calculations table included on the Proposed Drainage Management Plan, Parcel A basins draining to the existing 48" storm drain in Volcano Rd will produce 5.30 cfs of flow for the 1.44 acres which is equal to a rate of 3.67 cfs/acre. This flow is less than the allowable discharge rate of 4.27 cfs/acre. New storm drain systems will be designed to capture the flows for the other parcels as identified in the drainage calculations table included on the conceptual drainage management plan.

I hereby affirm that the proposed drainage design of 98<sup>th</sup> / Bluewater Commercial Development – Sonic provides for grading and drainage elements which are capable of safely passing the 100-year storm, does not burden downstream systems, meets city requirements, and the intent of the 2013 Amole Hubbel Drainage Master Plan. This development will not adversely affect the existing drainage infrastructure. With this submittal we are requesting approval of drainage approval of Parcel A.

Sincerely, GALLOWAY lee

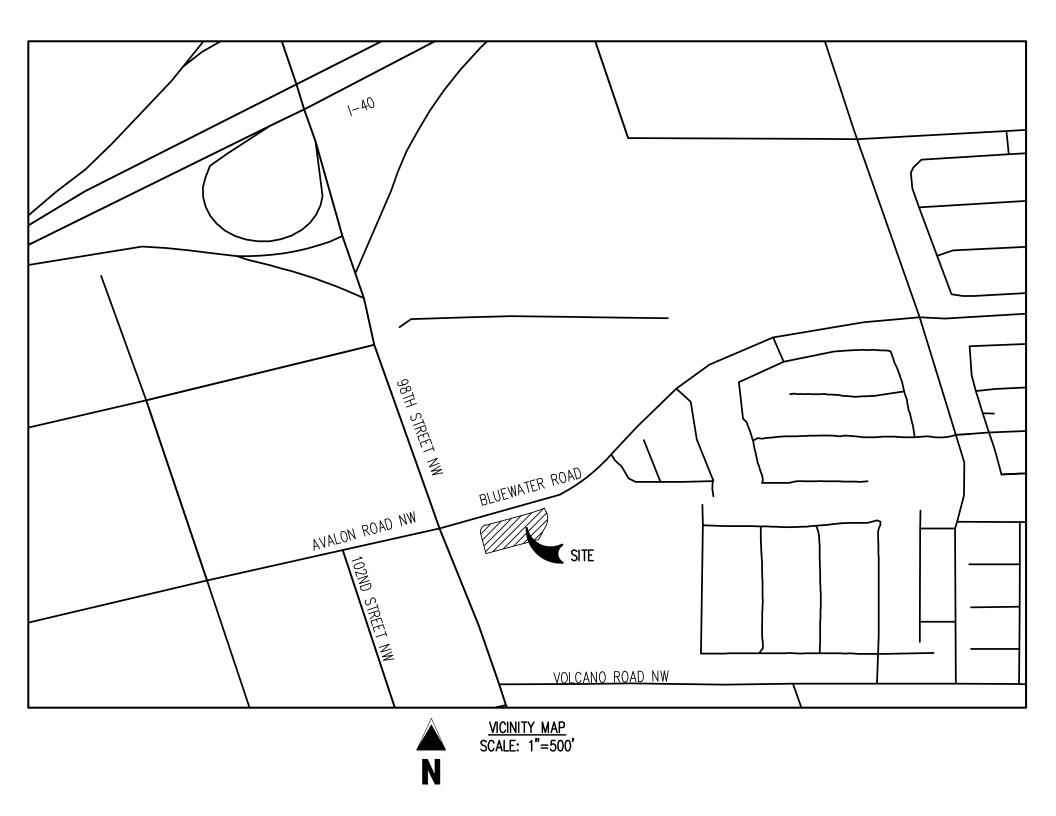
Troy Kelts, PE Civil Engineering Project Manager TroyKelts@GallowayUS.com (303) 770-8884

### **References**

- 1. Development Process Manual, City of Alburquerque, New Mexico. Effective June 8, 2020
- 2. <u>Amole Hubbel Drainage Master Plan,</u> 2013.
- 3. <u>Soil Map Bernalillo County as available through the Natural Resources Conservation Service</u> National Cooperative Soil Survey web site via Web Soil Survey 2.0.

### **Attachments**

- Vicinity Map
- Soils Map
- Drainage and Transportation Information Sheet
- Proposed Drainage Map
- 98th /Bluewater Commercial Development Conceptual Drainage Plan & Overall Storm Drain Plan





USDA Natural Resources

**Conservation Service** 

Web Soil Survey National Cooperative Soil Survey

MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:24.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available А misunderstanding of the detail of mapping and accuracy of soil Water Features line placement. The maps do not show the small areas of A/D Streams and Canals contrasting soils that could have been shown at a more detailed В scale. Transportation B/D Rails +++ Please rely on the bar scale on each map sheet for map С measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service US Routes  $\sim$ Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available ~ Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the А -Aerial Photography Albers equal-area conic projection, should be used if more A/D accurate calculations of distance or area are required. в This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. B/D Soil Survey Area: Bernalillo County and Parts of Sandoval and С Valencia Counties, New Mexico C/D Survey Area Data: Version 17, Sep 8, 2022 Soil map units are labeled (as space allows) for map scales D 1:50.000 or larger. Not rated or not available an ai Date(s) aerial images were photographed: Oct 22, 2021—Dec 2. Soil Rating Points 2021 А The orthophoto or other base map on which the soil lines were A/D compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor В shifting of map unit boundaries may be evident. B/D 



# Hydrologic Soil Group

| Map unit symbol           | Map unit name                                          | Rating | Acres in AOI | Percent of AOI |
|---------------------------|--------------------------------------------------------|--------|--------------|----------------|
| BCC                       | Bluepoint loamy fine<br>sand, 1 to 9 percent<br>slopes | A      | 0.6          | 11.1%          |
| PAC                       | Pajarito loamy fine sand,<br>1 to 9 percent slopes     | A      | 4.6          | 88.9%          |
| Totals for Area of Intere | est                                                    |        | 5.1          | 100.0%         |

# Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

# **Rating Options**

Aggregation Method: Dominant Condition Component Percent Cutoff: None Specified Tie-break Rule: Higher





# City of Albuquerque

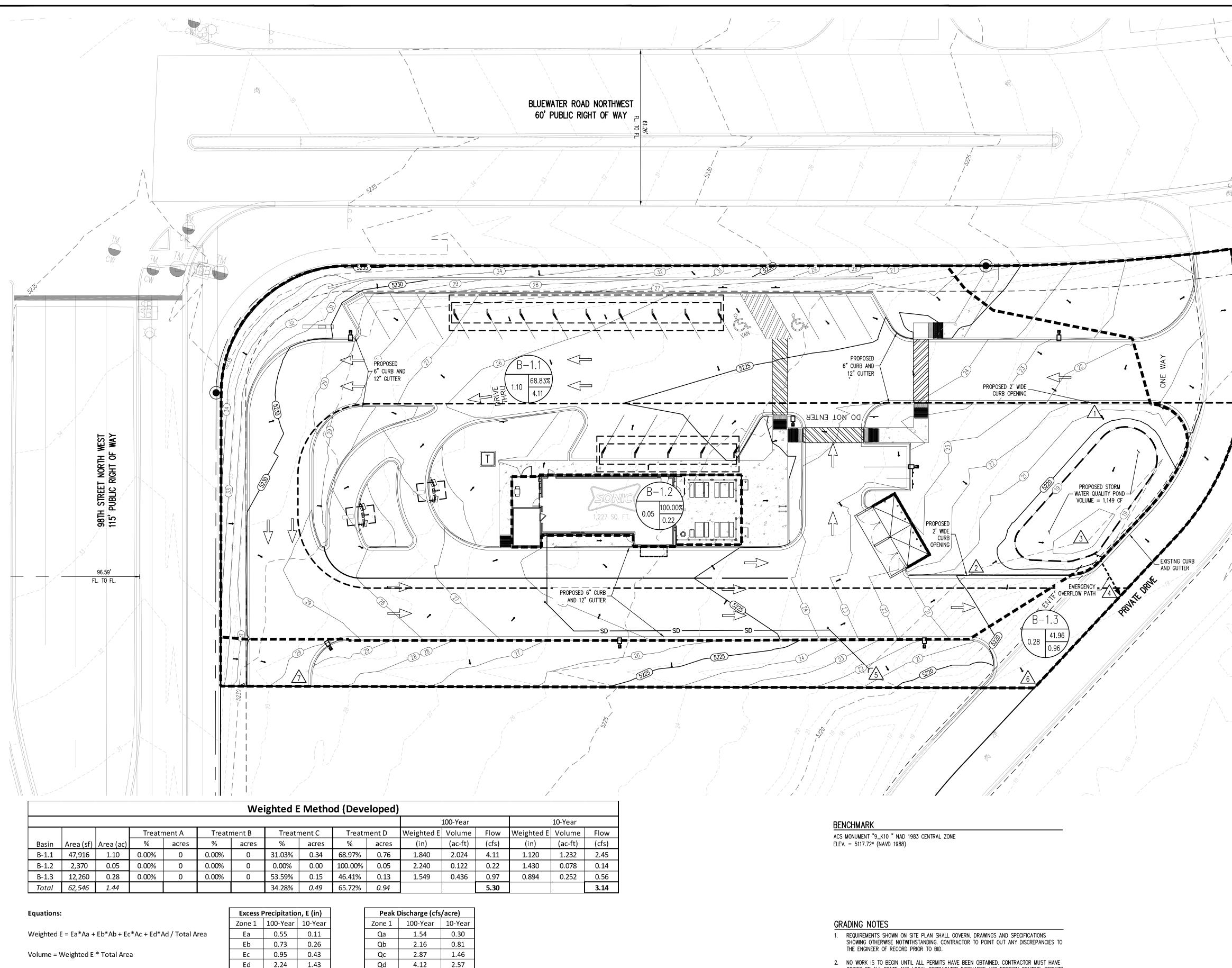
Planning Department Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

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|--------------------------------------|---------------|------------------------------------------|
|                                      |               | Work Order#:                             |
| Legal Description:                   |               |                                          |
| City Address:                        |               |                                          |
| Applicant:                           |               | Contact:                                 |
| Address:                             |               |                                          |
|                                      |               | E-mail:                                  |
| Owner:                               |               | Contact:                                 |
| Address:                             |               |                                          |
| Phone#:                              | Fax#:         | E-mail:                                  |
| TYPE OF SUBMITTAL: PLAT (            | # OF LOTS)    | RESIDENCE DRB SITE ADMIN SITE            |
| IS THIS A RESUBMITTAL?:              | Yes           | No                                       |
| DEPARTMENT: TRAFFIC/ TRA             | NSPORTATION   | HYDROLOGY/ DRAINAGE                      |
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| ELEVATION CERTIFICATE                |               | FOUNDATION PERMIT APPROVAL               |
| CLOMR/LOMR                           |               | GRADING PERMIT APPROVAL SO-19 APPROVAL   |
| TRAFFIC CIRCULATION LAYOU            | T (TCL)       | SO-19 APPROVAL<br>PAVING PERMIT APPROVAL |
| TRAFFIC IMPACT STUDY (TIS)           | - ()          | GRADING/ PAD CERTIFICATION               |
| OTHER (SPECIFY)                      |               | WORK ORDER APPROVAL                      |
| PRE-DESIGN MEETING?                  |               | CLOMR/LOMR                               |
|                                      |               | FLOODPLAIN DEVELOPMENT PERMIT            |
|                                      |               | OTHER (SPECIFY)                          |
|                                      |               |                                          |
| DATE SUBMITTED:                      | Bv            |                                          |

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:



 $Flow = Qa^*Aa + Qb^{**}Ab + Qc^*Ac + Qd^*Ad$ 

40,560

Total

### *Water Quality Calculations* Note: For new development site, SWQV = 0.34in Impervious Area (sf) SWQV Storm Water Storm Water Basin (in) Quality Vol (cf) Quality Vol (ac-ft) B-1.1 33,046 0.34 936 0.021 B-1.2 2,370 0.34 67 0.002 B-1.3 5.144 0.34 146 0.003

1,149

0.026

|                                  |               | -             |                 |                |  |
|----------------------------------|---------------|---------------|-----------------|----------------|--|
| Required Equivelent Curb Opening |               |               |                 |                |  |
|                                  | 100-Year Flow | Number of 2'  | Equivelent Open | Actual Flow    |  |
| Basin                            | (cfs)         | Curb Openings | Length (ft)     | Capacity (cfs) |  |
| B-1.1                            | 4.11          | 2             | 4               | 5.26           |  |
| B-1.2                            | 0.22          | 0             | 0               | 0              |  |
| B-1.3                            | 0.96          | 0             | 0               | 0              |  |

Curb Chase Capacity

Weir Equation:

 $Q = CLH^{3/2}$ 

Q = Flow C = 2.95 L = Length of weir H = Height of weir

2' Curb Chase Capacity (8" Curb) Q = 2.95\*2\*0.583<sup>3/2</sup> Q = 2.63 cfs

FOR THE FIRST 5'.

- COPIES OF ALL STATE AND LOCAL STORMWATER DISCHARGE AND EROSION CONTROL PERMITS ON SITE PRIOR TO ANY DISTURBANCE AND/OR GRADING ACTIVITY.
- 4. THIS DESIGN IS BASED ON A SOIL AND FOUNDATION INVESTIGATION. A COPY OF THIS REPORT IS AVAILABLE FOR INSPECTION BY THE CONTRACTORS.
- 5. ALL LANDSCAPING AREAS SHALL BE GRADED 0.10' WITH COMPANY APPROVED TOP SOIL TO A MINIMUM 2' DEPTH.
- 6. ALL SPOT GRADES SHOWN ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
- 7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING DEPOSITION OF ONSITE SEDIMENTS ONTO SURROUNDING PUBLIC STREETS DURING CONSTRUCTION. REFER TO EROSION CONTROL PLANS AND DETAILS FOR INFORMATION.
- 8. GENERAL CONTRACTOR TO PROVIDE BARRICADE PROTECTION WITH FLASHING LIGHTS AROUND ALL FOOTINGS, EXCAVATIONS AND ALL OFFSITE WORK.
- 9. SEE THE SITE SURVEY FOR SURVEY INFORMATION AND LEGAL DESCRIPTION.
- 10. THE PRIVATE REGIONAL STORM SYSTEM AND STORMWATER DETENTION FACILITY IS PRIVATELY OWNED AND MAINTAINED.
- 11. IN LANDSCAPING AREAS ADJACENT TO PROPOSED BUILDING, MINIMUM SLOPE SHALL BE 5%
- 12. ANY FILL MATERIAL REQUIRED TO BRING THE SITE TO GRADE SHALL BE CLEAN FILL DIRT APPROVED BY GEOTECHNICAL ENGINEER AND SHALL BE PLACED AND COMPACTED PER GEOTECHNICAL REPORT RECOMMENDATIONS.

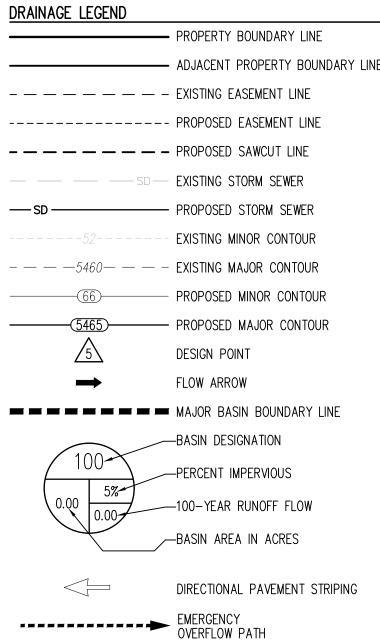
# SOIL PREPARATION AND PAVEMENT DESIGN NOTE SOIL PREPARATION AND PAVEMENT DESIGN SHALL BE PER RECOMMENDATIONS FROM A EXPLORATION AND ANALYSIS: PROPOSED SONIC RESTAURANT

**GEOTECHNICAL ENGINEER:** WESTERN TECHNOLOGIES INC.

**PROJECT NO:** 3222PJ163 **DATE:** AUGUST 25, 2022

SPECIFIC SOIL PREPARATION AT SITE STRUCTURES.

SCALE: 1"=20



# DRAINAGE MANAGEMENT PLAN

INTRODUCTION:

THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A FINAL DRAINAGE MANAGEMENT THE 98TH / BLUEWATER COMMERCIAL PROJECT PARCEL A, LOCATED AT THE SEQ OI ST AND BLUEWATER RD IN ALBUGUERQUE, NM. THE TOTAL SITE CONTAINS APPROXIM ACRES WITH PARCEL A CONTAINING 1.44 ACRES.

EXISTING HYDROLOGIC CONDITIONS: THE SITE IS CURRENTLY VACANT AND DRAINS VIA SURFACE FLOW FROM THE NORTH SOUTHEAST. 98TH ST CURRENTLY DRAINS FROM NORTH TO SOUTH IN AN EXISTING DITCH. PER THE CONCEPTUAL DRAINAGE MANAGEMENT PLAN, ALL OF THE BASINS W 98TH / BLUEWATER COMMERCIAL PROJECT DRAIN INTO VOLCANO RD AND THE EAST EXISTING CATTLE GUARD INLET WHICH CONNECTS TO AN EXISTING 48" STORM DRAIN THE 2013 AMOLE HUBBEL DRAINAGE MASTER PLAN, THIS AREA IS DEFINE AS BASIN IS ALLOWED TO DISCHARGE THE SITE AT A RATE OF 4.27 CFS/ ACRE.

# PROPOSED HYDROLOGIC CONDITIONS:

AS NOTED ABOVE, OUR SITE IS ALLOWED TO DISCHARGE UP TO 4.27 CFS/ACRE INT DOWNSTREAM SYSTEMS. PARCEL A WILL BE DEVELOPED AT A 64.74% PERVIOUS LAN AND WILL PROVIDE A WATER QUALITY POND WITH A STORAGE VOLUME OF 1,129 CF THE TRIBUTARY BASIN B-1.1 PER COA DPM. PER THE DRAINAGE CALCULATIONS TAK ON THIS SHEET, THE PARCEL A BASINS DRAINING TO THE EXISTING 48" STORM DRA VOLCANO RD WILL PRODUCE 5.29 CFS OF FLOW FOR THE 1.44 ACRS WHICH SI EQUA RATE OF 3.67 CFS/ACRE. THIS FLOW IS LESS THAN THE ALLOWABLE DISCHARGE RA CFS/ACRE. NEW STORM DRAIN SYSTEMS WILL BE DESIGNED IN ORDER TO CAPTURE FOR THE OTHER PARCELS AS IDENTIFIED IN THE DRAINAGE CALCULATIONS TABLE INC THE CONCEPTUAL DRAINAGE MANAGEMENT PLAN.

CONCLUSION: THE DRAINAGE MANAGEMENT PLAN FOR PARCEL A PROVIDES FOR GRADING AND DRA ELEMENTS WHICH ARE CAPABLE OF SAFELY PASSING THE 100 YEAR STORM, DOES I DOWNSTREAM SYSTEMS, MEET CITY REQUIREMENTS, AND THE INTENT OF THE 2013 DRAINAGE MASTER PLAN. THE PROPOSED IMPROVEMENTS TO THE SITE SHOULD NOT NEGATIVE IMPACTS TO FACILITIES DOWNSTREAM. WITH THIS SUBMITTAL WE ARE REQUESTING APPROVAL DRAINAGE APPROVAL OF PARCEL A.

| E                                                                                                                | 5500 Greenwood Plaza Blvd.<br>Greenwood Village, CO 8011<br>303.770.8884<br>GallowayUS.com                                                                                                 | ., Suite 200<br>11                                                                           |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|                                                                                                                  | PRELIMINA<br>PRELIMINA<br>NOTFORCE                                                                                                                                                         | RT DOMESTION                                                                                 |
|                                                                                                                  | COPYRIGHT<br>THESE PLANS ARE AN INSTRUM<br>AND ARE THE PROPERTY OF G.<br>NOT BE DUPLICATED, DISCLOSI<br>WITHOUT THE WRITTEN CONSE<br>COPYRIGHTS AND INFRINGEME<br>ENFORCED AND PROSECUTED. | IENT OF SERVICE<br>ALLOWAY, AND MAY<br>ED, OR REPRODUCED<br>ENT OF GALLOWAY.<br>ENTS WILL BE |
| PLAN FOR<br>PF THE 98TH<br>MATELY 10.50                                                                          |                                                                                                                                                                                            |                                                                                              |
| IWEST TO<br>SWALE/BAR<br>MTHIN THE<br>IWARD TO AN<br>I PIPE. PER<br>I TB204 AND                                  |                                                                                                                                                                                            |                                                                                              |
| TO THE<br>ND TREATMENT<br>SIZED FOR<br>BLE INCLUDED<br>NN IN<br>AL TO A<br>NTE OF 4.27<br>THE FLOWS<br>CLUDED ON | AGEMENT PLAN                                                                                                                                                                               | <b>BLUEWATER ROAD</b>                                                                        |
| AINAGE<br>NOT BURDEN<br>AMOLE HUBBEL<br>HAVE ANY                                                                 | AGEN                                                                                                                                                                                       | 3LUEW.                                                                                       |

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| Project No: | MGS000001    |
|-------------|--------------|
| Drawn By:   | AJP          |
| Checked By: | DMP          |
| Date:       | OCTOBER 2023 |

PROPOSED DRAINAGE MANAGEMENT PLAN - PARCEL A

GEOTECHNICAL REPORT PREPARED FOR THIS SITE AS FOLLOWS: GEOTECHNICAL ENGINEERING

THE CONTRACTOR MUST FULLY REVIEW THIS REPORT PRIOR TO CONSTRUCTION. INFORMATION IN THE GEOTECHNICAL REPORT SUPERSEDES ANY CONFLICTING INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. REFER TO GENERAL STRUCTURAL NOTES FOR CAUTION - NOTICE TO CONTRACTOR

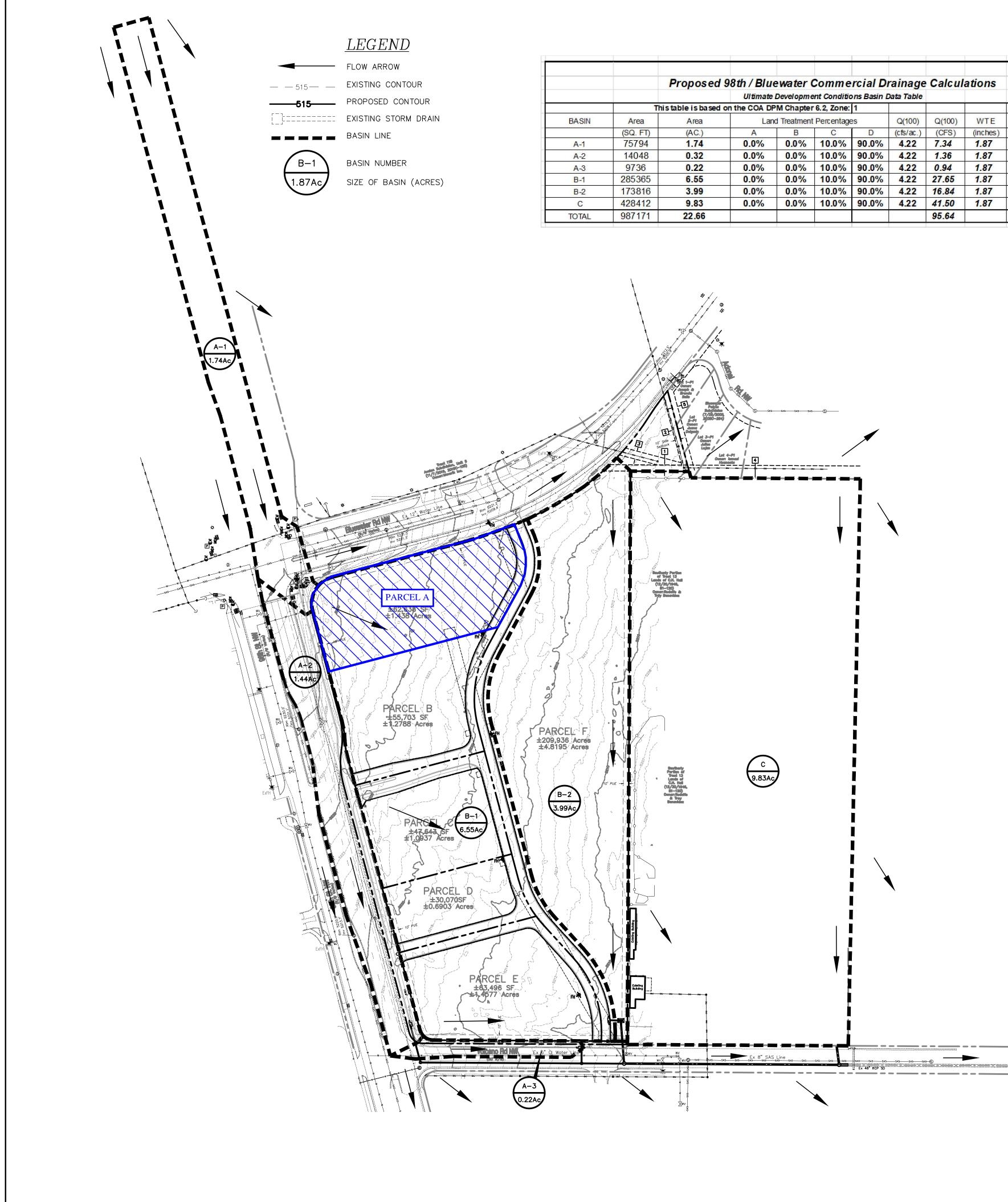
1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE Know what's below. ENGINEER PRIOR TO CONSTRUCTION.



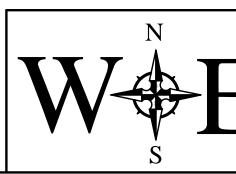
Call before you dig.

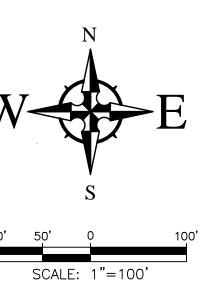
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

Sheet 1 of 1



|    |                      | Proposed            | 98th / Blue   | ewater (    | Comme        | rcial D     | rainage    | Calcul | ations   |           |                        |                         |
|----|----------------------|---------------------|---------------|-------------|--------------|-------------|------------|--------|----------|-----------|------------------------|-------------------------|
|    |                      |                     | Ultimate      | Developme   | ent Conditio | ons Basin L | Data Table |        |          |           |                        |                         |
|    | TI                   | nistable is based ( | on the COA DP | M Chapter   | 6.2, Zone:   | 1           |            |        |          |           |                        |                         |
|    | Area                 | Area                | Lan           | d Treatment | Percentage   | es          | Q(100)     | Q(100) | WTE      | V(100)360 | V(100) <sub>1440</sub> | V(100) <sub>10day</sub> |
| (5 | SQ. FT)              | (AC.)               | A             | B           | C            | D           | (cfs/ac.)  | (CFS)  | (inches) | (CF)      | (CF)                   | (CF)                    |
| 7  | 75794                | 1.74                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 7.34   | 1.87     | 11824     | 14098                  | 20919                   |
| 1  | 14048                | 0.32                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 1.36   | 1.87     | 2191      | 2613                   | 3877                    |
|    | 9736                 | 0.22                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 0.94   | 1.87     | 1519      | 1811                   | 2687                    |
| 20 | 85365                | 6.55                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 27.65  | 1.87     | 44517     | 53078                  | 78761                   |
| 1  | 73816                | 3.99                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 16.84  | 1.87     | 27115     | 32330                  | 47973                   |
| 42 | 28 <mark>4</mark> 12 | 9.83                | 0.0%          | 0.0%        | 10.0%        | 90.0%       | 4.22       | 41.50  | 1.87     | 66832     | 79685                  | 118242                  |
| 98 | 87171                | 22.66               |               |             |              |             |            | 95.64  |          | 153999    | 183614                 | 272459                  |







# FIRM MAP 35001C0328J

Per FIRM Map 35001C0328J, dated November 4, 2016, the site is located outside of the 0.2% Annual Chance Floodplain.

# DRAINAGE MANAGEMENT PLAN

# INTRODUCTION

# The purpose of this submittal is to provide a final drainage management plan for the 98th / Bluewater Commercial Project, located at the SEQ of 98th St and Bluewater Rd in Albuquerque, NM.. The site contains approximately 10.50 acres.

EXISTING HYDROLOGIC CONDITIONS

The site is currently vacant and drains via. surface flow from northwest to southeast. 98th St currently drains from north to south in an existing swale/bar ditch. Per the Basin Map this sheet, all of these Basins drain into Volcano Ŕd and then eastward to an existing cattle guard inlet which connects to an existing 48" Storm Drain pipe. Per the 2013 Amole Hubbell Drainage Master Plan, this area is defined as Basin TB204 and is allowed to discharge the site at a rate of 4.27 cfs/acre.

# PROPOSED HYDROLOGIC CONDITIONS

As noted above, our site is allowed to discharge up to 4.27 cfs/acre into the downstream systems. This accounts for the developed flows from our site at a +/-90% pervious land treatment. Each of the three parcels will need to provide Water Quality ponding per the current COA DPM. Per the Drainage Calculations Table this sheet, all of the basins draining to the existing 48" Storm Drain in Volcano Rd will be at the rate of 4.22 cfs/acre, which is less than the allowable discharge rate of 4.27 cfs/acre. New Storm Drain systems will be designed in order to capture the flows as identified in the Drainage Calculations table.

# CONCLUSION

This drainage management plan provides for grading and drainage elements which are capable of safely passing the 100 year storm, does not burden downstream systems, meet city requirements, and the intent of the 2013 Amole Hubbell Drainage Master Plan. The proposed improvements to the site should not have any negative impacts to facilities downstream. With this submittal, we are requesting Preliminary and Final Plat approval.



# NOT FOR CONSTRUCTION

# CAUTION:

ALL EXISTING UTILIT RESEARCH, AS-BUI PROVIDED BY OTHI **RESPONSIBILITY OF** NECESSARY FIELD INCLUDING ANY EX LOCATION OF UTILI TO STARTING THE SHALL BE COORDIN ENGINEER.

\_\_\_\_

# PUBLIC WORKS DIVISION ENGINEERING GROUP 98th / Bluewater Commercial Development CONCEPTUAL DRAINAGE MANAGEMENT PLAN MO./DAY/YR. MO./DAY/YR. DESIGN REVIEW COMMITTEE CITY ENGINEER APPROVAL Wooten Engineering PO Box 15814 Rio Rancho, N.M. 87174 Phone: (505) 980-3560 CITY PROJECT NO. ZONE MAP NO. SHEET #

\_\_\_\_

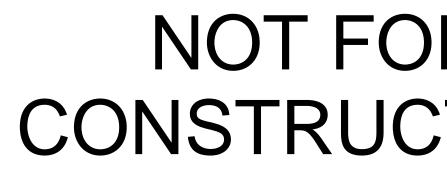
10/20/2021 r 2021 r 2021 21015 r 2021 DATE: DATE: JOB DATE: DATE:

REMARKS *REVISIONS* 

3 of 4

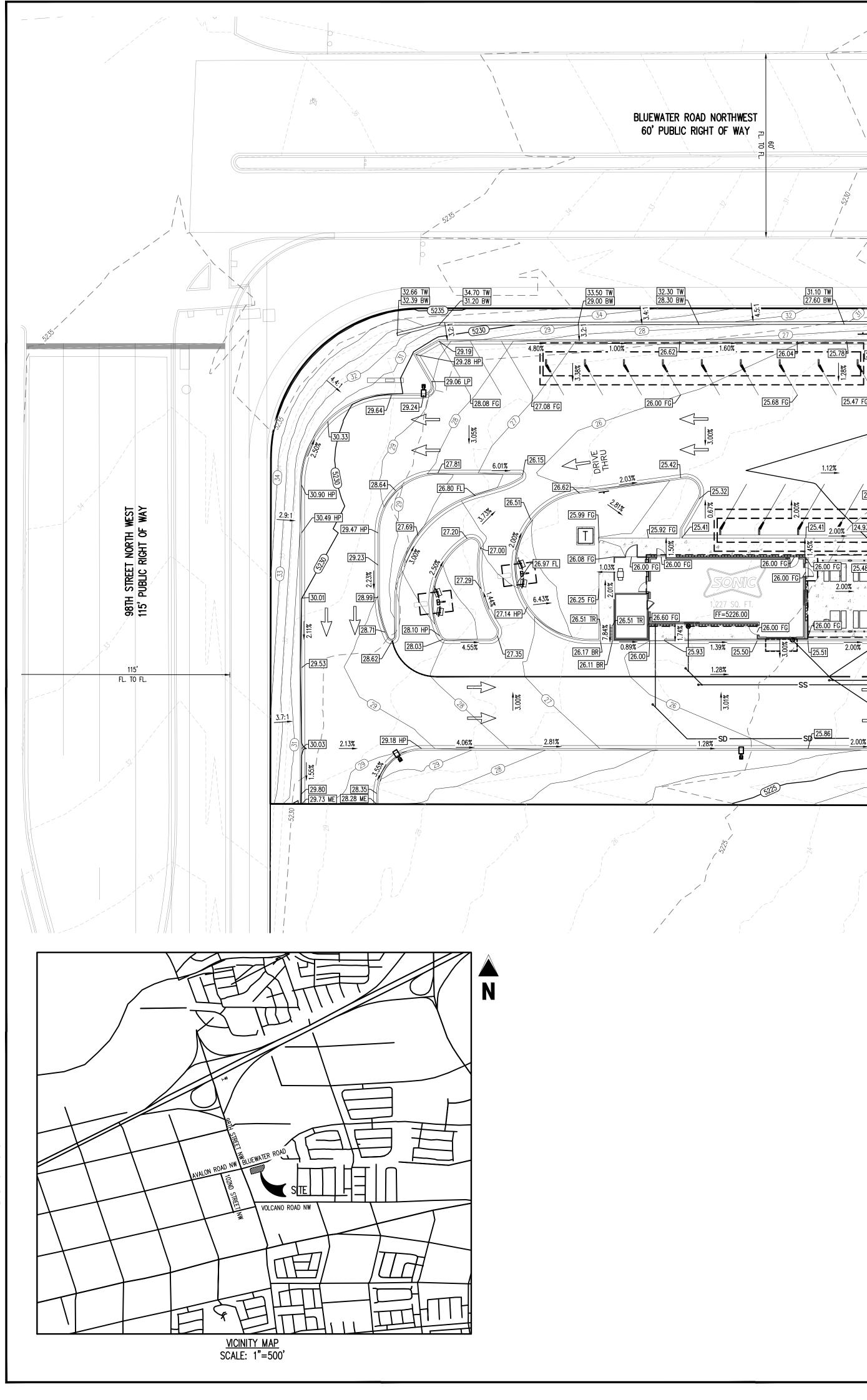








| N                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                   |                                                                                                                                                   | Y                                                                                                | INFORMATION        |                                |                              |                                           |                             | INFORMATION     | DATE                       |           |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------|--------------------------------|------------------------------|-------------------------------------------|-----------------------------|-----------------|----------------------------|-----------|--------------------------------|
| E<br>S<br>20' 0 40'<br>SCALE: 1"=40'                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |                                                                                                                                                   |                                                                                                  | AS BUILT INFOR     | CONTRACTOR                     | STAKED BY<br>INSPECTOR'S     | ACCEPTANCE BY<br>FIELD<br>VFRIEICATION BY | DRAWINGS<br>CORRECTED BY    | -FILM ,         | RECORDED BY                | NO.       |                                |
| REMOVAL AND REPLACEMENTS, SAW-<br>AN, AND LONGITUDINAL JOINTS SHALL<br>HS. PATCHES SHALL BE REGULAR AND<br>H FOUR STRAIGHT SIDES. FINISHED PA<br>WITH EXISTING PAVEMENT SURFACE, WI<br>COAT. CARE MUST BE TAKEN TO AV<br>EARANCE OF SURROUNDING PAVEMENT<br>ATCH MUST BE EXPANDED TO COVER | NOT BE PLACED<br>SQUARE OR<br>VEMENT SURFACE<br>TH NO SPILLOVER OF<br>DID DAMAGING THE                                                                                                                                                                                            |                                                                                                                                                   |                                                                                                  | BENCH MARKS        | A.C.S. MONUMENT "7-K9"; Type 3 | STANDARD A.C.S. BRASS TABLET | DNE-N.A.D. 198                            | N=1,482,904.725             | E=1,496,061.706 | PUB. EL=5140.082 NAVD 1988 | RID FACTO | DELIA ALPHA ANGLE =-076.38.12" |
|                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                   |                                                                                                  | SURVEY INFORMATION | FIELD NOTES                    | NO. BY DATE                  |                                           |                             |                 |                            |           |                                |
| 30" SD<br>INSTALL 35 LF 30" SD                                                                                                                                                                                                                                                             | INSTALL 16 LF 48" SD                                                                                                                                                                                                                                                              |                                                                                                                                                   |                                                                                                  | ENGINEER'S SEAL    |                                |                              |                                           | TOD<br>1689<br>7-ESS<br>10/ | 1014<br>120     |                            | 02        |                                |
| Line<br>As sas sas sas sas 4<br>INSTALL 6' DIA MANHOLE PER<br>COA STANDARDS.                                                                                                                                                                                                               | 8"SD Ex 48" RCP SD                                                                                                                                                                                                                                                                | SASSAS                                                                                                                                            | SAS                                                                                              |                    |                                |                              |                                           | SIGN                        | October         | October                    | -         | DATE: October 2021             |
| R                                                                                                                                                                                                                                                                                          | <b>CAUTION:</b><br>ALL EXISTING UTILITIES SH<br>RESEARCH, AS-BUILTS, SU<br>PROVIDED BY OTHERS. IT<br>RESPONSIBILITY OF THE C<br>NECESSARY FIELD INVESTIC<br>INCLUDING ANY EXCAVATIO<br>LOCATION OF UTILITIES AN<br>TO STARTING THE WORK. A<br>SHALL BE COORDINATED W<br>ENGINEER. | JRVEYS OR INFOR<br>SHALL BE THE S<br>ONTRACTOR TO C<br>GATIONS PRIOR TO<br>N, TO DETERMINE<br>D OTHER IMPROV<br>ANY CHANGES FR<br>VITH AND APPROV | MATION<br>OLE<br>ONDUCT ALL<br>O AND<br>THE ACTUAL<br>EMENTS, PRIOR<br>OM THIS PLAN<br>ED BY THE |                    |                                |                              |                                           | DES                         | ED B            | DRAWN BY: RG               |           | CHECKED BY: JTW                |
| CTION                                                                                                                                                                                                                                                                                      | 98th / Bluev                                                                                                                                                                                                                                                                      | CITY OF ALE<br>PUBLIC WOR<br>ENGINEERIN<br>VATER COM<br>(ERALL STOR)<br>CITY ENGINEER AP                                                          | ks division<br>NG GROUP<br>Mercial D<br>M DRAIN PL                                               | ev                 | ,                              |                              |                                           | I                           | M0./            | DAY/                       | ÝR.       |                                |
| Wooten Engineering<br>PO Box 15814<br>Rio Rancho, N.M. 87174<br>Phone: (505) 980-3560                                                                                                                                                                                                      | CITY PROJECT NO.                                                                                                                                                                                                                                                                  |                                                                                                                                                   | ZONE MAP NO.                                                                                     |                    | SHI                            | EET                          |                                           | of                          | <sup>-</sup> 4  |                            |           |                                |



15. 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.

"811" [(505) 260–1990] FOR THE LOCATION OF EXISTING UTILITIES.

16. BACKFILL COMPACTION SHALL BE 95%.

GEOTECHNICAL REPORT RECOMMENDATIONS.

29.02 TW

25.29 FG

27.60 BW

25.47 FG

1.12%

FF=5226.00

1.28% -

25.50

<u>п</u>

25.37 FG

2.00%

25.48 FG

26.47 TW 26.14 BW

24.04 24.00 BR

-SS\_SS

6.46%

GRADING NOTES

a minimum 2' depth.

OWNED AND MAINTAINED.

FOR THE FIRST 5'.

RIGHT-OF-WAY.

DIVISION.

∕ 5.14%

4.44%

419.74 CO

19.02

25.64 ME

25.40 ME

23.44

3 84%

CURB CUT

19.94 FL

19.39 ME

PROPOSED WATER

QUALITY POND

1.00%

6.35%

- 17. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
- 18. FOR EXCAVATION AND BARRICADING INSPECTIONS, CONTACT DMD CONSTRUCTION SERVICES

# SOIL PREPARATION AND PAVEMENT DESIGN NOTE SOIL PREPARATION AND PAVEMENT DESIGN SHALL BE PER RECOMMENDATIONS FROM A

- EXPLORATION AND ANALYSIS: PROPOSED SONIC RESTAURANT

- **GEOTECHNICAL ENGINEER:** WESTERN TECHNOLOGIES INC. **PROJECT NO:** 3222PJ163 **DATE:** AUGUST 25, 2022
- THE CONTRACTOR MUST FULLY REVIEW THIS REPORT PRIOR TO CONSTRUCTION. INFORMATION SPECIFIC SOIL PREPARATION AT SITE STRUCTURES.

8. GENERAL CONTRACTOR TO PROVIDE BARRICADE PROTECTION WITH FLASHING LIGHTS AROUND ALL FOOTINGS, EXCAVATIONS AND ALL OFFSITE WORK. 9. SEE THE SITE SURVEY FOR SURVEY INFORMATION AND LEGAL DESCRIPTION.

10. THE PRIVATE REGIONAL STORM SYSTEM AND STORMWATER DETENTION FACILITY IS PRIVATELY

11. IN LANDSCAPING AREAS ADJACENT TO PROPOSED BUILDING, MINIMUM SLOPE SHALL BE 5%

12. ANY FILL MATERIAL REQUIRED TO BRING THE SITE TO GRADE SHALL BE CLEAN FILL DIRT APPROVED BY GEOTECHNICAL ENGINEER AND SHALL BE PLACED AND COMPACTED PER

13. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY

14. PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL, DIAL

- SEDIMENTS ONTO SURROUNDING PUBLIC STREETS DURING CONSTRUCTION. REFER TO EROSION CONTROL PLANS AND DETAILS FOR INFORMATION.

7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING DEPOSITION OF ONSITE

1. REQUIREMENTS SHOWN ON SITE PLAN SHALL GOVERN. DRAWINGS AND SPECIFICATIONS

4. THIS DESIGN IS BASED ON A SOIL AND FOUNDATION INVESTIGATION. A COPY OF THIS

ON SITE PRIOR TO ANY DISTURBANCE AND/OR GRADING ACTIVITY.

REPORT IS AVAILABLE FOR INSPECTION BY THE CONTRACTORS.

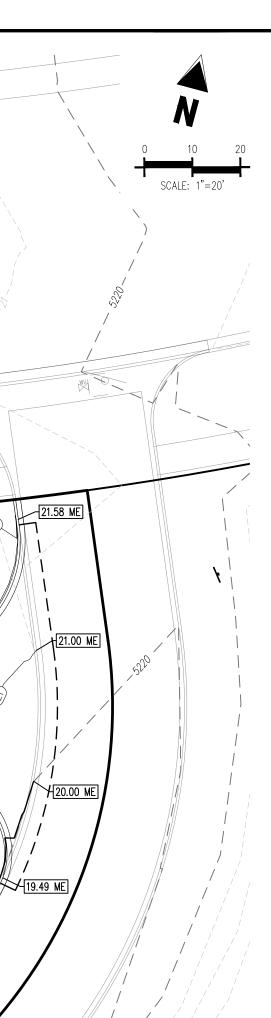
6. ALL SPOT GRADES SHOWN ARE TO FLOWLINE UNLESS OTHERWISE NOTED.

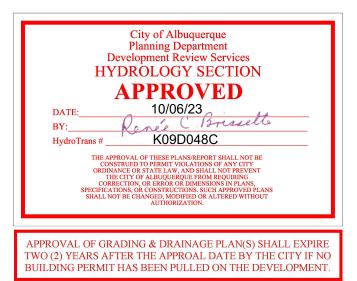
SHOWING OTHERWISE NOTWITHSTANDING. CONTRACTOR TO POINT OUT ANY DISCREPANCIES TO THE ENGINEER OF RECORD PRIOR TO BID.

COPIES OF ALL STATE AND LOCAL STORMWATER DISCHARGE AND EROSION CONTROL PERMITS

2. NO WORK IS TO BEGIN UNTIL ALL PERMITS HAVE BEEN OBTAINED. CONTRACTOR MUST HAVE

5. ALL LANDSCAPING AREAS SHALL BE GRADED 0.10' WITH COMPANY APPROVED TOP SOIL TO





# GRADING LEGEND

| ADING LLGLIND      |                             |
|--------------------|-----------------------------|
| — — — 5460 — — — – | EXISTING MAJOR CONTOUR      |
|                    | EXISTING MINOR CONTOUR      |
| (5465)             | PROPOSED MAJOR CONTOUR      |
|                    | PROPOSED MINOR CONTOUR      |
| 15.00              | PROPOSED SPOT ELEVATION     |
| FL                 | PROPOSED FLOWLINE ELEVATION |
| FF                 | FINISHED FLOOR              |
| FG                 | FINISHED GRADE              |
| HP                 | HIGH POINT                  |
| LP                 | LOW POINT                   |
| ME                 | MATCH EXISTING              |
| BR                 | BOTTOM OF RAMP              |
| TR                 | TOP OF RAMP                 |
|                    |                             |

# BENCHMARK

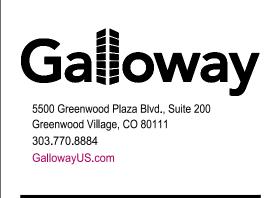
ACS MONUMENT "9\_K10 " NAD 1983 CENTRAL ZONE ELEV. = 5117.72\* (NAVD 1988)

# <u>FLOODPLAIN</u>

THIS SITE IS IN AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE OF FLOOD HAZARD BASED ON NAVD 88 AND AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT ADMINISTRATIONS (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR BERNALILLO COUNTY, NEW MEXICO, MAP NO. 35001C0328J, HAVING A MAP REVISED DATE OF NOVEMBER 4, 2016.

# LEGAL DESCRIPTION

TRACT A, OF AVALON SUBDIVISION UNIT 5, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON MARCH 29, 2022, IN PLAT BOOK 2022C, FOLIO 39 AS DOCUMENT NO. 2022045240.





### COPYRIGHT THESE PLANS ARE AN INSTRUMENT OF SERVICE AND ARE THE PROPERTY OF GALLOWAY, AND MAY NOT BE DUPLICATED, DISCLOSED, OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF GALLOWAY. COPYRIGHTS AND INFRINGEMENTS WILL BE ENFORCED AND PROSECUTED.



| GROUP       |              |  |
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| THE MERRITT | SONIC # 6954 |  |

| JEWATER RD NW | ERQUE, NM 87121 |
|---------------|-----------------|
| 01 BLUEWA     | BUQUERQI        |
| 97            | AL              |

| #<br>_A_ | Date<br>10/5/2023 | Issue / Description<br>2ND HYD SUBMITTAL | Init.<br>TDK |
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| Project No: | MGS000001  |
|-------------|------------|
| Drawn By:   | JKS        |
| Checked By: | DMP        |
| Date:       | 10/02/2023 |
|             |            |

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Sheet 5 of 18

GRADING PLAN

GEOTECHNICAL REPORT PREPARED FOR THIS SITE AS FOLLOWS: GEOTECHNICAL ENGINEERING

IN THE GEOTECHNICAL REPORT SUPERSEDES ANY CONFLICTING INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. REFER TO GENERAL STRUCTURAL NOTES FOR

# CAUTION - NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE Know what's below. ENGINEER PRIOR TO CONSTRUCTION.



Call before you dig.

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.