

CITY OF ALBUQUERQUE



December 20, 2017

Mike Balaskovits, PE
Bohannon Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

**RE: El Vado / Casa Grande
Grading and Drainage Plan Revision 1
Engineer's Stamp Date: 11/7/16
Revision 1 Stamp Date: 12/14/17
Hydrology File: J12D028**

Dear Mr. Balaskovits:

Based on the information provided in the submittal received on 12/15/17 the revised Grading and Drainage Plan is approved for Building Permit.

PO Box 1293

Per the conditions of approval, letter dated: 12/7/16, the following will be required prior to requesting Hydrology approval for Certificate of Occupancy:

Albuquerque

1. The Certification will need to include a clear distinction between the improvements to be completed through Building Permit approval and those that are covered by the Work Order set, as discussed during the last DRC Meeting.

NM 87103

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required. If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

www.cabq.gov

Sincerely,

Dana M. Peterson
Senior Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: CASA GRANDE AND EL VADO DEVELOPMENT **Building Permit #:** **City Drainage #:** J12/D028
DRB#: **EPC#:** **Work Order#:**
Legal Description: Tract "A" Traction City Addition
City Address: 2400 & 2424 Central Ave. SW AND

Engineering Firm: Bohannon Huston, Inc **Contact:** Mike Balaskovits or Matt Satches
Address: 7500 Jefferson St. NE 87109
Phone#: 505-823-1000 **Fax#:** 505-798-7988 **E-mail:** mbalaskovits@bhinc.com

Owner: **Contact:**
Address:
Phone#: **Fax#:** **E-mail:**

Architect: Dekker / Perich / Sabatini **Contact:** Miriam Hicks
Address: 7601 Jefferson St NE, Suite 100 87109
Phone#: 505-761-9700 **Fax#:** 505-761-4222 **E-mail:** miriamh@dpsdesign.org

Other Contact: **Contact:**
Address:
Phone#: **Fax#:** **E-mail:**

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☐ ENGINEER/ ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☒ OTHER (SPECIFY) Drainage Management Plan

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

CHECK 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
☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY)

DATE SUBMITTED: 12-15-2017 **By:** Michael Balaskovits, PE

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

DEKKER
PERICH
SABATINI7601 JEFFERSON NE, SUITE 100
ALBUQUERQUE, NM 87109

505.761.9700 / DPSDESIGN.ORG

ARCHITECT

ENGINEER

PROJECT

CASA GRANDE
2400 & 2424 CENTRAL AVENUE, SW
ALBUQUERQUE, NM 87104

DRAINAGE NARRATIVE

SITE INTRODUCTION:

THE SITE IS LOCATED AT THE INTERSECTION OF CENTRAL AVE AND NEW YORK AVE. EAST OF THE ALBUQUERQUE AQUARIUM AND BIOPARK. THE APPROXIMATELY 2.8 ACRES OF THE ENTIRE DEVELOPMENT IS CURRENTLY FULLY DEVELOPED AND CONSISTS OF TWO COMPONENTS: THE EXISTING EL VADO SITE (SOUTHERN 1.32 ACRES) AND THE NEW CASA GRANDE TRACTS (NORTHERN 1.47 ACRES).

PER FEMA MAP PANEL #35001C0331H (THIS SHEET), THE SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE "A". THIS MEANS THAT THE SITE IS SUBJECT TO FLOODS ON AN AVERAGE OF 1 FOOT OR LESS.

THE TWO PROJECTS (EL VADO AND CASA GRANDE) WILL BE PERMITTED SEPARATELY HOWEVER THIS DRAINAGE MANAGEMENT PLAN WILL COVER THE DRAINAGE SCHEME FOR BOTH DEVELOPMENTS. STAMPED AND SIGNED GRADING AND DRAINAGE PLANS FOR BOTH PROJECTS WILL BE INCLUDED WITH THIS SUBMITTAL.

METHODOLOGY:

THE SITE IS LOCATED IN THE CITY OF ALBUQUERQUE. THEREFORE, THE DEVELOPMENT PROCESS MANUAL SECTION 22.2 WAS USED TO ANALYZE THE SITE'S PROPOSED DRAINAGE. PRECIPITATION ZONE 2 WAS USED DUE TO THE SITE LYING EAST OF THE RIO GRANDE AND WEST OF SAN MATEO. PER SECTION 22.2, THE ONSITE STORM DRAINS WERE SIZED BASED OFF OF MANNING'S EQUATION. THE ONSITE INLETS WERE SIZED WITH THE INLETS IN SUMP CONDITION AND USING MANUFACTURER PROVIDED NOMOGRAPHS.

EXISTING CONDITIONS:

THE CURRENT CONDITIONS OF THE SITE ARE EXTREMELY FLAT. BASED ON THE EXISTING SURVEY THERE ARE A NUMBER OF EXISTING INLETS LOCATED AT THE INTERSECTION OF CENTRAL AND NEW YORK AVE AS WELL AS TWO ADDITIONAL CURB INLETS LOCATED WITHIN NEW YORK AVE EAST OF THE SITE. THESE INLETS TIE TO AN EXISTING 18" RCP STORM DRAIN THAT RUNS DOWN NEW YORK AVE AND DRAINS TO THE EAST. BASED ON AS-BUILT INFORMATION, CITY OF ALBUQUERQUE SYSTEM MAPS AND THE SITE'S DESIGN SURVEY, THE SITE APPEARS TO DRAIN ENTIRELY INTO THIS EXISTING PIPE BY EITHER THE EXISTING INLETS AT CENTRAL OR THE INLETS FURTHER DOWN NEW YORK AVE. DURING LARGER STORM EVENTS, DRAINAGE APPEARS TO BE CONVEYED IN NEW YORK AVE, VIA SURFACE FLOW UNTIL IT HAS AN OPPORTUNITY TO DRAIN INTO FURTHER DOWNSTREAM INLETS.

PROPOSED CONDITIONS:

BOTH THE EL VADO SITE AND CASA GRANDE SITE ARE ALLOWED TO DISCHARGE ENTIRELY TO PUBLIC INFRASTRUCTURE.

THE DEVELOPED FLOWS FOR BOTH THE EL VADO SITE AND THE CASA GRANDE SITE WILL CONTINUE TO DRAIN TO THE EXISTING 18" STORM DRAIN. A PRELIMINARY GEOTECHNICAL REPORT WAS COMPLETED FOR THE SITE WHICH DESCRIBED VERY LOOSE TO LOOSE SOILS PRESENT. THIS COMBINED WITH SHALLOW GROUNDWATER, AND THE PROXIMITY TO EXISTING EARTHQUAKE FAULTS ZONES, THE SITE HAS POTENTIAL FOR LIQUEFACTION, LATERAL SPREADING AND SEISMIC SETTLEMENT, WHICH WOULD PREVENT ONSITE PONDING. SHALLOW WATER HARVESTING AREAS (LESS THEN 6") WILL BE PLACED THROUGHOUT THE LANDSCAPING AREAS AND MEDIAN ISLANDS IN AN ATTEMPT TO MEET THE "FIRST FLUSH" REQUIREMENTS BY THE CITY. HOWEVER DUE TO THE SOIL CHARACTERISTICS NOTED ABOVE THE REQUIRED FIRST FLUSH VOLUME WILL NOT BE MET. AS AN ALTERNATIVE TO THIS REQUIREMENT, WATER QUALITY INLETS/MANHOLES WILL BE INSTALLED ONSITE STEGICALLY PLACED UPSTREAM OF THE POINT OF CONNECTION TO THE CITY SYSTEM.

BASED ON THE PROPOSED SITE GRADING, THE SITE WILL BE DIVIDED INTO 13 ONSITE BASINS. BASIN 4 CONSISTS OF MOSTLY LAND WITHIN THE RIGHT OF WAY. AS SUCH WAS DESIGNED TO SURFACE FLOW AND DISCHARGE DIRECTLY TO CENTRAL AVE TO THE WEST.

BASIN 1 CONTRIBUTES TO A SMALL POND ALONG THE EASTERN PORTION OF THE CASA GRANDE PROPERTY. THIS THEN ULTIMATELY OUTFALLS INTO THE ADJACENT HAMMERHEAD ROAD. BASIN 2 AND 3 DISCHARGE INTO AREA INLETS WITHIN THE CASA GRANDE PARKING LOT. THIS FLOW THEN CONNECTS TO THE EXISTING STORM DRAIN WITHIN NEW YORK AVE. BASIN 5 DISCHARGES INTO A CURB INLET ALONG THE WESTERN PORTION OF THE CASA GRANDE SITE. THIS STORM DRAIN THEN DIRECTLY CONNECTS TO THE EXISTING STORM DRAIN WITHIN NEW YORK AVE. AS WELL.

BASINS 6, 7, 8, 9 AND 10 DISCHARGE TO AREA INLETS WITHIN THE FIRE ACCESS ROAD OR PARKING LOT. THIS FLOW THEN CONNECTS TO THE EXISTING STORM DRAIN AT THE SAME MANHOLE AS BASINS 2 AND 3. BASINS 9, 10, 11, AND 12 ARE ALL SMALL BASINS CONTRIBUTING TO SMALLER DOME INLETS AROUND THE POOL AREA AND COURTYARD ON THE EL VADO SITE. BASIN 13 INCLUDES THE AMPHITHEATER WHICH WILL CONNECT TO THE ONSITE STORM DRAIN. BASINS 11, 12, AND 13 ALL DISCHARGE TO THE BACK OF AN EXISTING INLET WITHIN CENTRAL AVE.

INLET 1 ON THE CASA GRANDE SITE IS A WATER QUALITY INLET PER THE CITY OF ALBUQUERQUE HYDROLOGY DEPARTMENT'S REQUIREMENT. THIS INLET WILL TREAT BASIN 2 AND 3

INLET 4 WITHIN THE MEDIAN LANDSCAPE IS ANOTHER PROPOSED WATER QUALITY INLET AND WILL BE USED TO TREAT BASINS 6, 7 AND 8.

A WATER QUALITY MANHOLE LOCATED ON THE WESTERN SIDE OF EL VADO WILL BE CONSTRUCTED PER THE SAME HYDROLOGY REQUIREMENT. THIS MANHOLE IS THE FURTHEST POINT DOWNSTREAM ON THE EL VADO SITE.

THIS DRAINAGE MANAGEMENT PLAN AND GRADING PLANS DEMONSTRATE THAT THE DRAINAGE ELEMENTS PROPOSED WITH THE PROJECT ARE CAPABLE OF SAFELY CONVEYING THE 100 YEAR, 6 HOUR STORM EVENT IN ACCORDANCE WITH THE DEVELOPMENT PROCESS MANUAL. WITH THIS SUBMITTAL WE ARE SEEKING CITY OF ALBUQUERQUE HYDROLOGY APPROVAL IN SUPPORT OF FOUNDATION PERMIT, BUILDING PERMIT APPROVAL AND PUBLIC WORK ORDER APPROVAL.

GRADING LEGEND

---	PROPERTY LINE	---	PROPOSED CURB & GUTTER
---	PROJECT LIMITS OF GRADING	---	DIRECTION OF FLOW
---	EXISTING INDEX CONTOUR	---	WATER BLOCK/GRADE BREAK
---	EXISTING INTERMEDIATE CONTOUR	---	PROPOSED STORM DRAIN LINE
5025.25	EXISTING GROUND SPOT ELEVATION	---	PROPOSED STORM DRAIN MANHOLE
---	PROPOSED INDEX CONTOUR	---	PROPOSED STORM DRAIN INLETS
---	PROPOSED INTERMEDIATE CONTOUR	---	PROPOSED RETAINING WALL
26.75	PROPOSED FINISHED GRADE SPOT ELEVATION	---	EASEMENT
	TS=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK, TS=TOP OF GRADE, FGL=FINISH GROUND HIGH, FGL=FINISH GROUND LOW	---	PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)

Bohannon  Huston
www.bhinc.com 800.877.5332REVISIONS
12-14-2017 REVISIONS DUE TO ART RECONFIGURATIONDRAWN BY MHS
REVIEWED BY MJB
DATE 08/04/2016
PROJECT NO. 15-0147
DRAWING NAMEDRAINAGE
MANAGEMENT
PLAN

SHEET NO.

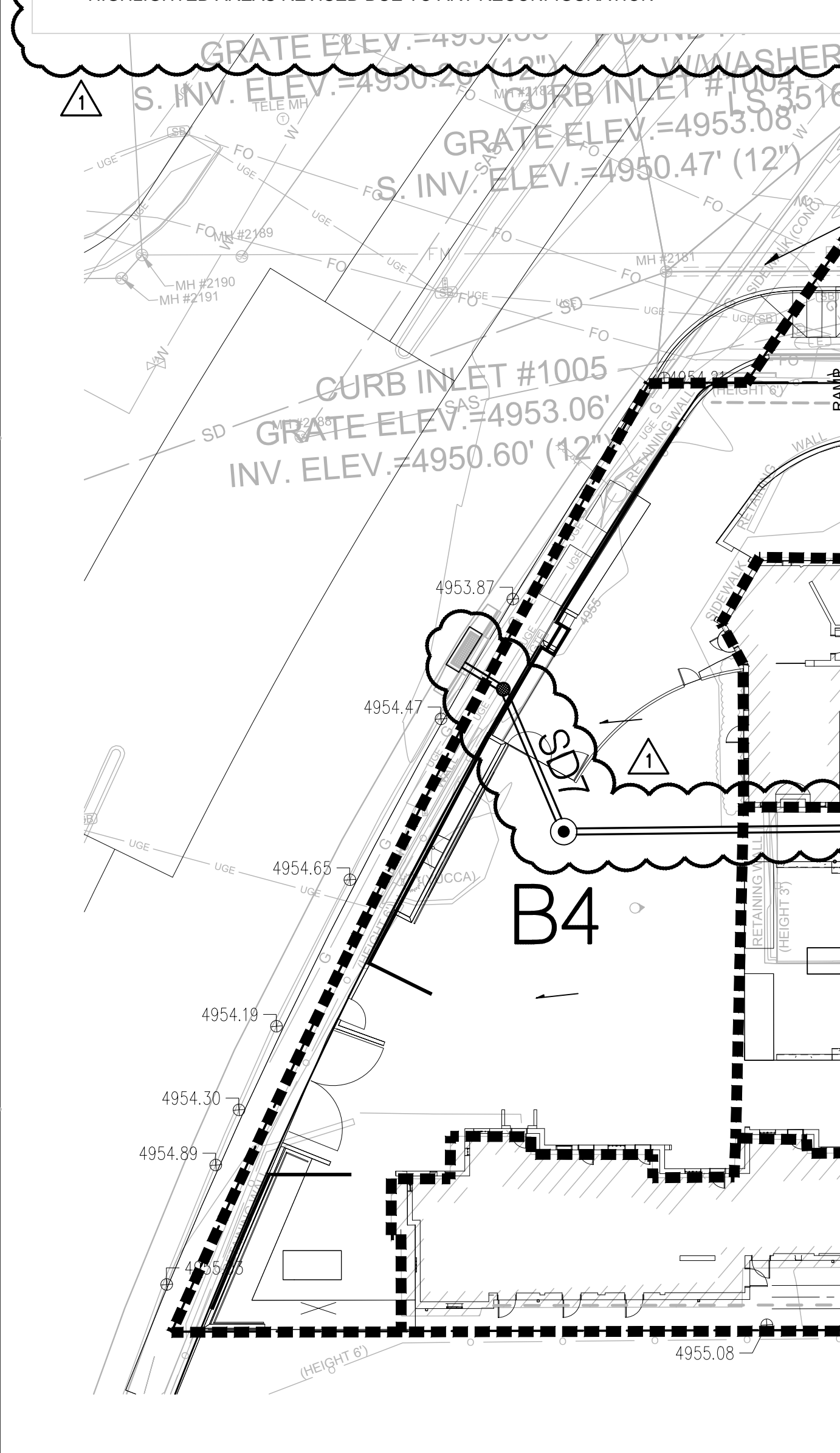
C001
OF

EL VADO / CASA GRANDE											
Developed Conditions Basin Data Table											
This table is based on the DPM Section 22.2, Zone: 2											
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages			Q(100yr) (cfs/ac)	Q(100yr) (CFS)	V(100yr) (inches)	V(100yr-6hr) (CF)	V(100yr-24hr) (CF)	
PROPOSED BASINS											
1	6801	0.16	0.0%	0.0%	54.0%	46.0%	3.86	0.60	1.59	899	1003
2	27418	0.63	0.0%	0.0%	5.0%	95.0%	4.62	2.91	2.07	4731	5599
3	10744	0.25	0.0%	0.0%	2.0%	98.0%	4.67	1.15	2.10	1880	2231
4	19180	0.44	0.0%	0.0%	5.0%	95.0%	4.62	2.04	2.07	3309	3917
5	8611	0.20	0.0%	0.0%	15.0%	85.0%	4.47	0.88	1.97	1415	1659
6	16189	0.37	0.0%	0.0%	8.0%	92.0%	4.58	1.70	2.04	2753	3250
7	2284	0.05	0.0%	0.0%	0.0%	100.0%	4.70	0.25	2.12	404	480
8	12812	0.29	0.0%	0.0%	0.0%	100.0%	4.70	1.38	2.12	2263	2691
9	2861	0.07	0.0%	0.0%	5.0%	95.0%	4.62	0.30	2.07	494	584
10	2389	0.05	0.0%	0.0%	5.0%	95.0%	4.62	0.25	2.07	412	488
11	3219	0.07	0.0%	0.0%	35.0%	65.0%	4.15	0.31	1.77	476	545
12	3548	0.08	0.0%	0.0%	35.0%	65.0%	4.15	0.34	1.77	524	601
13	5729	0.13	0.0%	0.0%	0.0%	100.0%	4.70	0.62	2.12	1012	1203
TOTAL	121785	2.8					12.73		174461	24250	

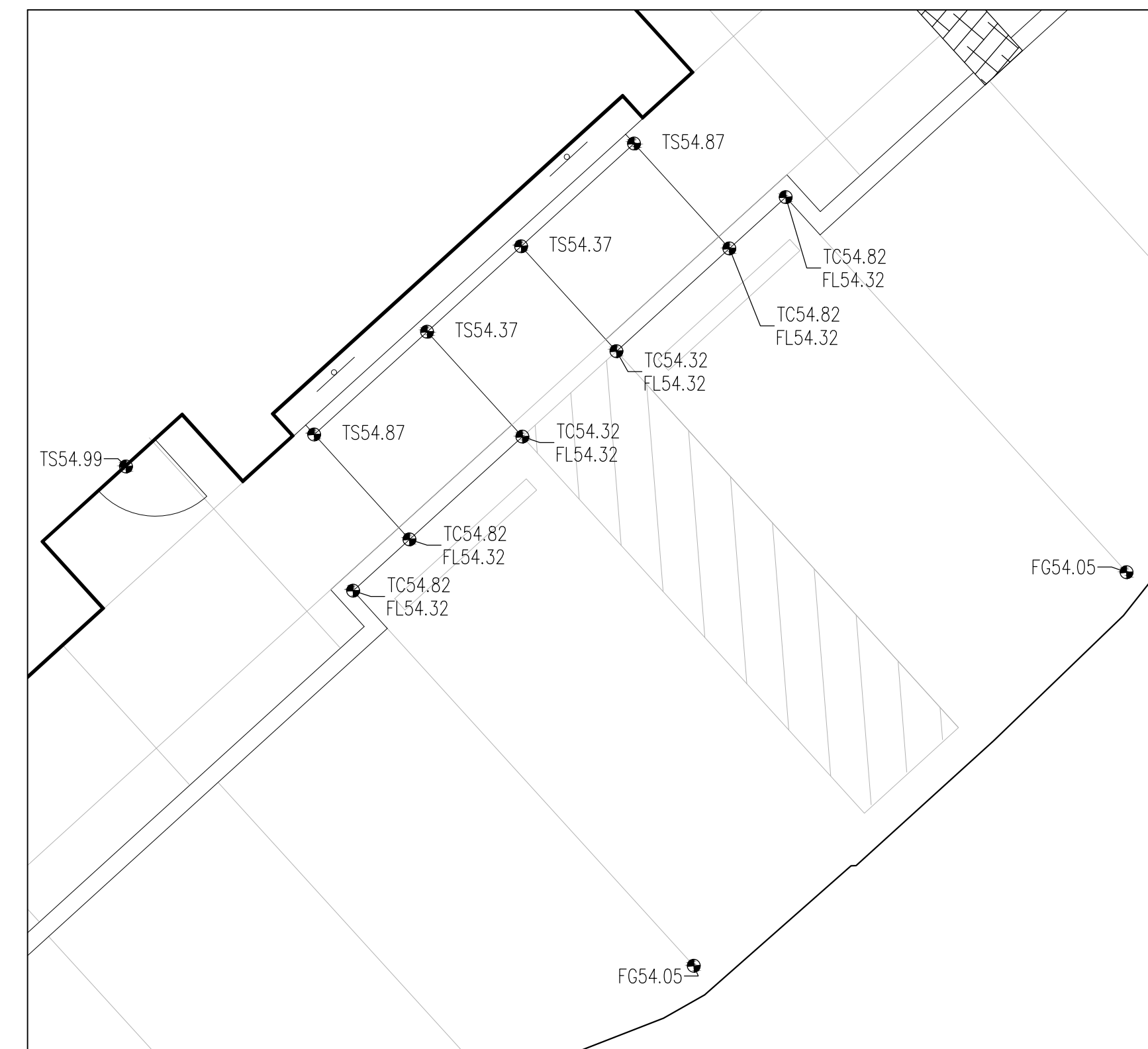
INLET TABLE					
Inlet #	INLET TYPE*	Basin	Actual Flow	Avail Head ft	Capacity** CFS
IN1	1-24" NYLOPLAST (DOME GRT)	B3	1.15	0.85	4.10
IN2	1-24" NYLOPLAST (DOME GRT)	B2	2.91	0.65	3.60
IN3	1-SGL COA TYPE C	B5	0.88	0.15	0.42
IN4	1-24" NYLOPLAST (DOME GRT)	B6	1.70	0.50	3.20
IN5	1-24" NYLOPLAST (DOME GRT)	B7	0.25	0.50	3.20
IN6	1-24" NYLOPLAST (DOME GRT)	B8	1.38	0.50	3.20
IN7	1-12" NYLOPLAST (DOME GRT)	B11	0.31	0.50	0.83
IN8	1-12" NYLOPLAST (DOME GRT)	B12	0.34	0.50	0.83
IN9	1-12" NYLOPLAST (DOME GRT)	B9	0.30	0.50	0.83
IN10	1-12" NYLOPLAST (DOME GRT)	B10	0.25	0.50	0.83
* - INLET PLACED IN SUMP CONDITION UNLESS OTHERWISE NOTED					
** - INLET CAPACITY INCLUDES 50% CLOGGING FACTOR ORIFICE AND WIER EQUATIONS					

STORM DRAIN PIPE TABLE					
PIPE #	INLET/SD/BASIN	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs
SD1	IN-1, SD-2	12	1.00%	4.21	4.06
SD2	IN-2	12	1.00%	4.21	2.91
SD3	IN-3	12	2.50%	6.66	0.88
SD4	IN-4, SD-5	12	1.00%	4.21	4.19
SD5	IN-5, SD-6	12	1.00%	4.21	2.49
SD6	IN-6, SD-9	12	0.50%	2.98	2.25
SD7	SD-8	12	0.50%	2.98	0.96
SD8	IN-8, B13	8	0.50%	1.01	0.96
SD9	SD-10, SD-12	12	0.50%	2.98	0.86
SD10	IN-10, SD-11	8	0.50%	1.01	0.58
SD11	IN-9	8	0.50%	1.01	0.30
SD12	IN-7	8	0.50%	1.01	0.31
Capacity Based on Manning's Eq w/ N=0.011					

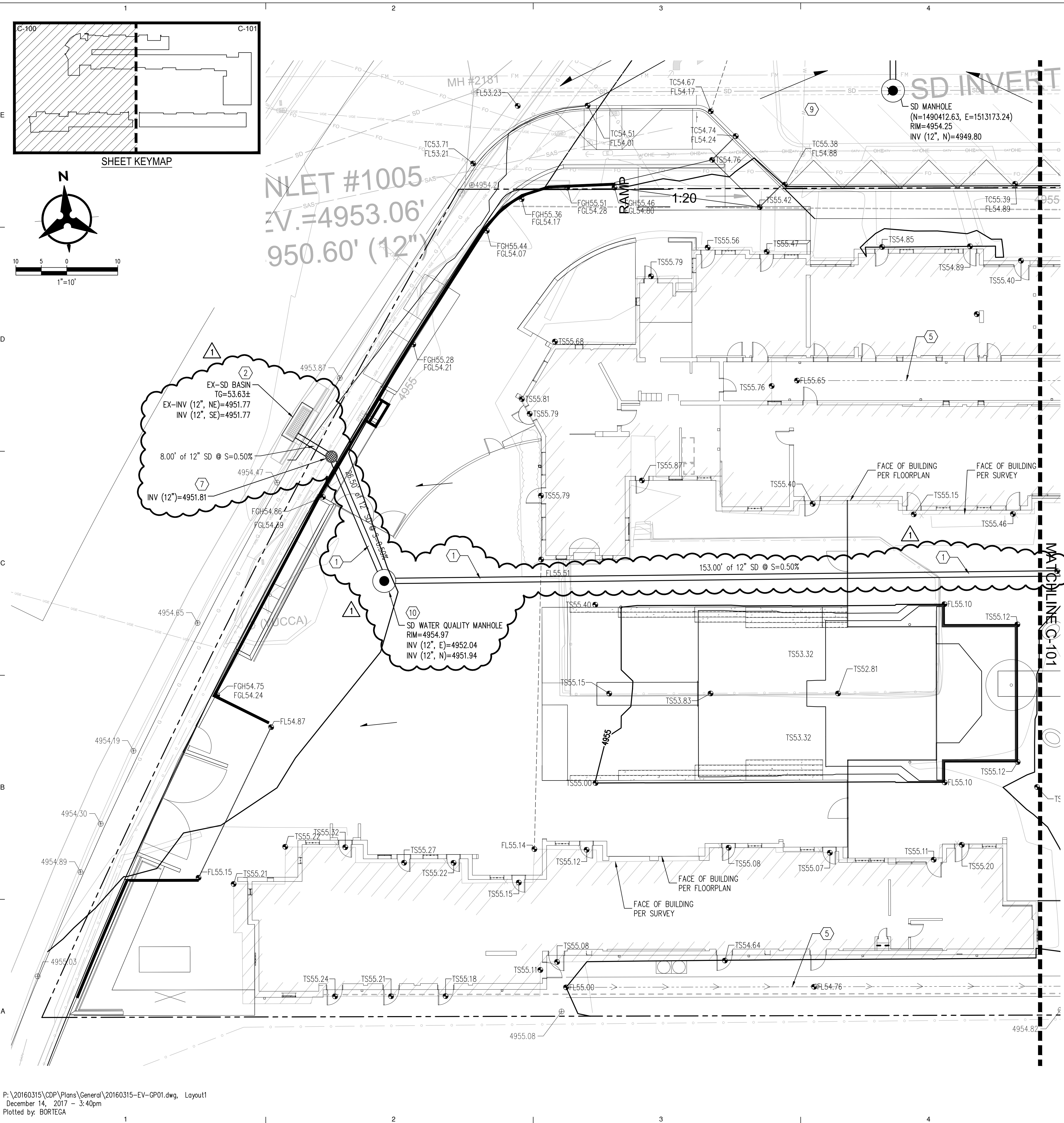
* HIGHLIGHTED AREAS REVISED DUE TO ART RECONFIGURATION



EL VADO / CASA GRANDE											
Existing Conditions Basin Data Table											
This table is based on the DPM Section 22.2, Zone: 2											
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q(100yr) (cfs/ac.)	Q(100yr) (CFS)	V(100yr) (inches)	V(100yr-6hr) (CF)	V(100yr-24hr) (CF)
			A	B	C	D					
El Vado	57530	1.32	0.0%	13.0%	13.0%	74.0%	4.18	5.52	1.82	8711	10131
Casa Grande	64262	1.48	0.0%	4.0%	4.0%	92.0%	4.54	6.70	2.03	10854	12825
TOTAL	121792	2.8					12.22			19565	22955



DETAIL "B": SCALE 1"=5



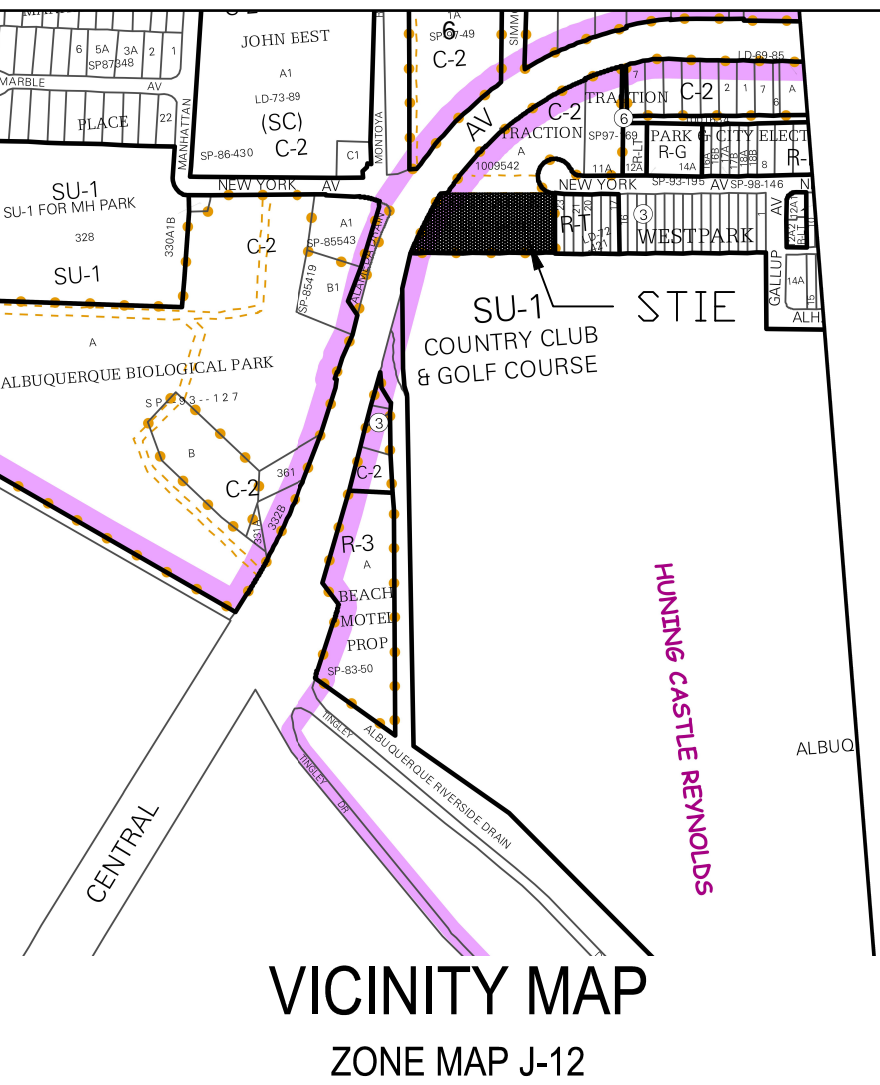
P:\20160315\CDP\Plans\General\20160315-EV-GP01.dwg, Layout1
December 14, 2017 - 3:40pm
Plotted by: BORTEGA

GRADING KEYNOTES

1. INSTALL HDPE (N12 WT, OR APPROVED EQUAL) STORM DRAIN PIPE
2. CONNECT TO EXISTING SINGLE COA TYPE "C" STORM DRAIN INLET PER COA WORK ORDER # 634780.
3. INSTALL NEW 24" DOME NYLOPLAST STORM DRAIN INLET.
4. INSTALL CURB OPENING PER DETAIL E5, SHEET C101.
5. INSTALL CONCRETE VALLEY GUTTER PER COA STD DWG 2421.
6. INSTALL SIDEWALK CULVERT PER COA STD DWG 2236.
7. INSTALL NYLOPLAST STORM DRAIN INLET WITH SOLID COVER.
8. INSTALL PRE-FABRICATED STORM DRAIN WATER TIGHT FITTING, SEE PLAN FOR SIZE.
9. CONSTRUCTED UNDER COA WORK ORDER #634780.
10. INSTALL NEW STORMCEPTOR STC450i WATER QUALITY STRUCTURE WITH GRATE PER MANUFACTURERS RECOMMENDATIONS.
11. 4" ROOF DRAIN LINE CONSTRUCTED AT A MINIMUM 1% SLOPE.

GENERAL NOTES

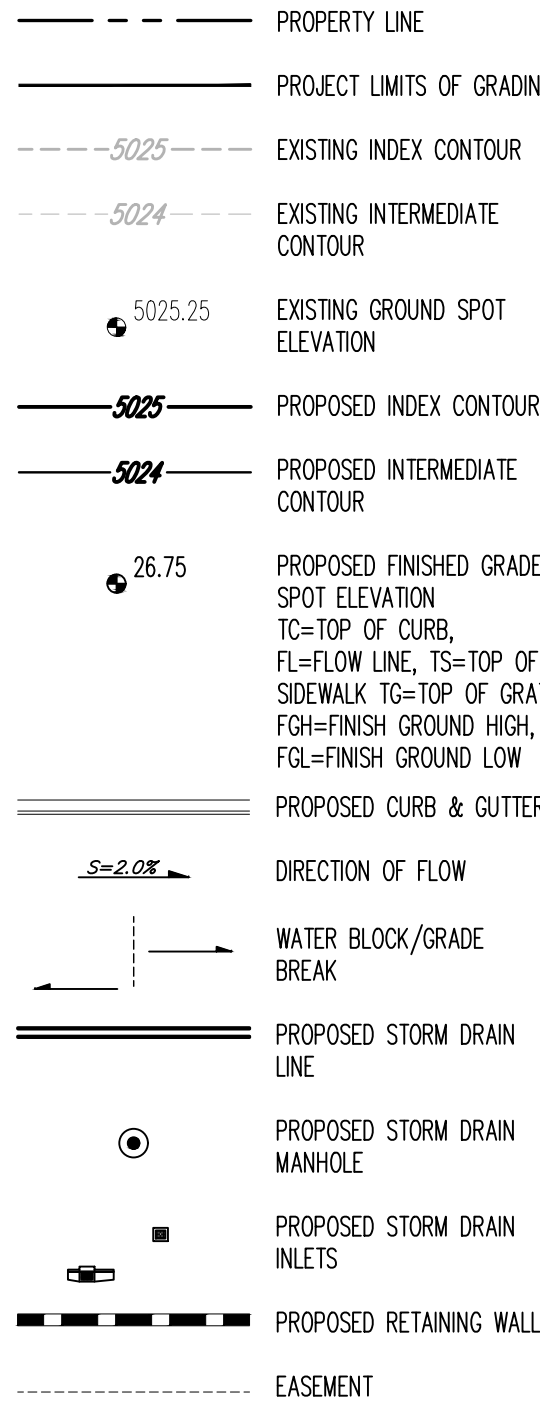
- A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT, WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
- B. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
- C. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- D. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
- E. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATING WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
- F. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
- G. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES, RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- H. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
- I. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
- J. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
- K. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
- L. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
- M. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
- N. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.
- O. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- P. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- Q. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION". ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).



GENERAL NOTES (CONT.)

- R. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- S. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.
- T. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.
- U. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE, ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
- V. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
- W. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.
- X. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

GRADING LEGEND



NOTE:
HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS TO CONCRETE MANHOLES AND CONCRETE DROP INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

Bohannon & Huston
www.bhinc.com 800.877.5332

2415 PRINCETON DR. NE SUITE G-2
ALBUQUERQUE, NM 87107
505.843.7587
www.designplusllc.com

DESIGN PLUS LLC

18187
12-14-13
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

DATE: _____

REVISIONS

NO.	REVISIONS DUE TO ART RECONFIGURATION
1	

CAD DWG FILE: _____

DRAWN BY: MHS

CHECKED BY: MJB

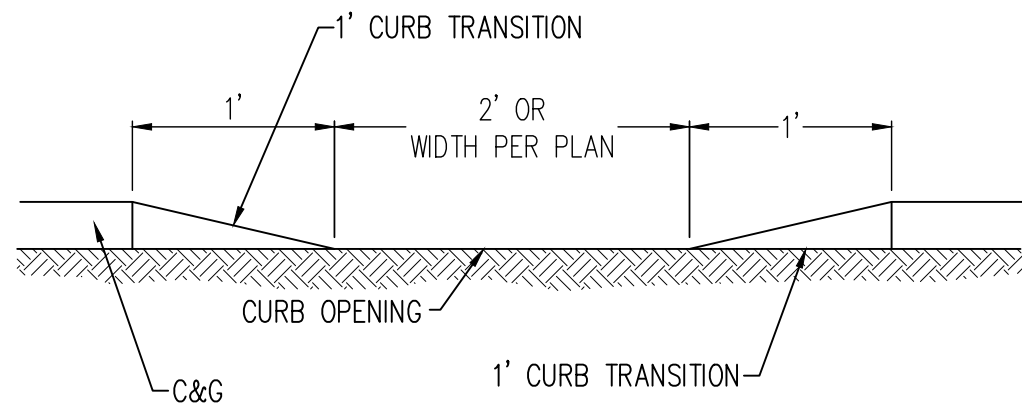
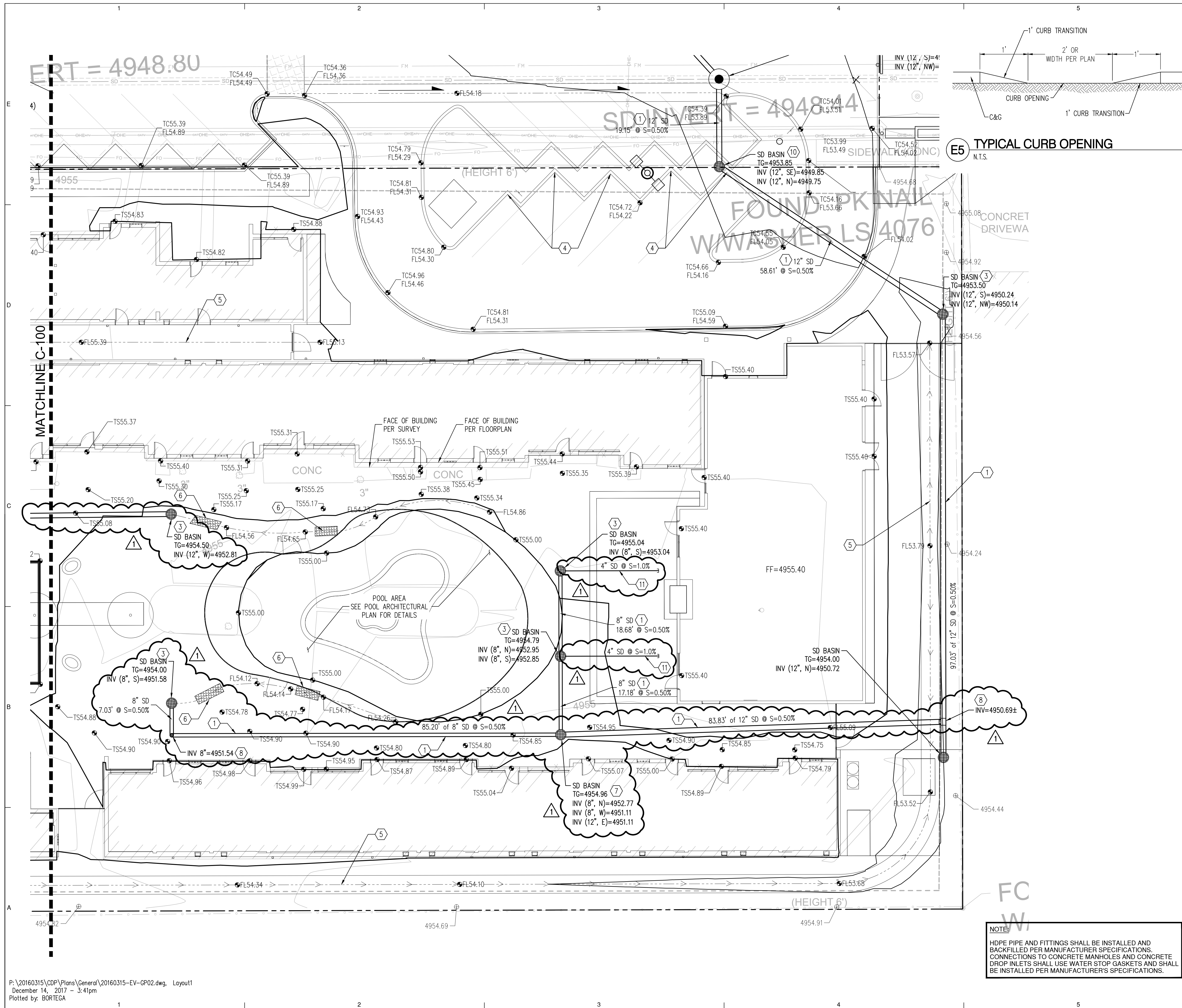
COPYRIGHT: DESIGN PLUS, LLC

SHEET TITLE

GRADING PLAN

C-100

SHEET ____ OF ____



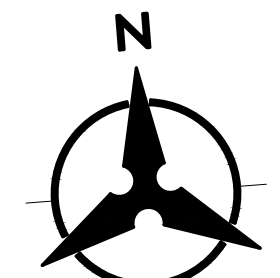
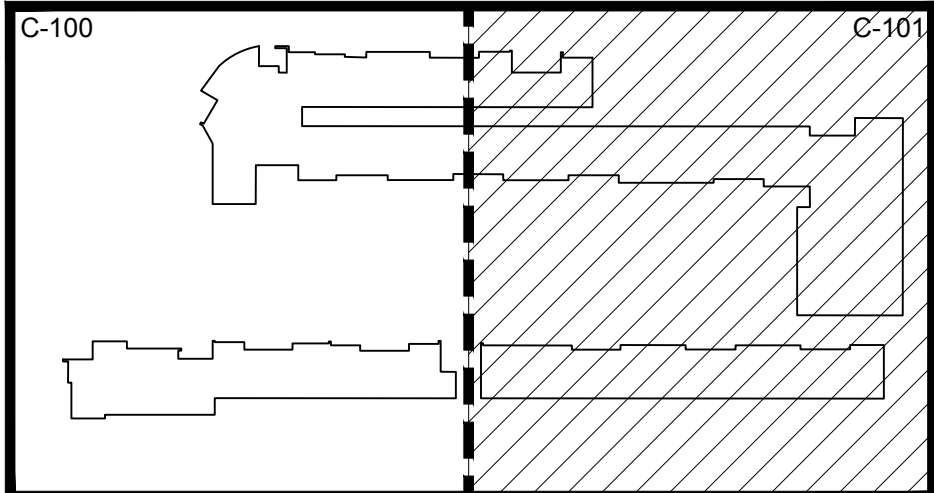
E5 TYPICAL CURB OPENING
N.T.S.

GRADING KEYNOTES

1. INSTALL HDPE (N12 WT, OR APPROVED EQUAL) STORM DRAIN PIPE
2. CONNECT TO EXISTING SINGLE COA TYPE "C" STORM DRAIN INLET PER COA WORK ORDER # 634780.
3. INSTALL NEW 24" DOME NYLOPLAST STORM DRAIN INLET.
4. INSTALL CURB OPENING PER DETAIL E5, SHEET C101.
5. INSTALL CONCRETE VALLEY GUTTER PER COA STD DWG 2421.
6. INSTALL SIDEWALK CULVERT PER COA STD DWG 2236.
7. INSTALL NYLOPLAST STORM DRAIN INLET WITH SOLID COVER.
8. INSTALL PRE-FABRICATED STORM DRAIN WATER TIGHT FITTING, SEE PLAN FOR SIZE.
9. CONSTRUCTED UNDER COA WORK ORDER #634780.
10. INSTALL NEW STORMCEPTOR STC450I WATER QUALITY STRUCTURE WITH GRATE PER MANUFACTURERS RECOMMENDATIONS.
11. 4" ROOF DRAIN LINE CONSTRUCTED AT A MINIMUM 1% SLOPE.

GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING GROUND SPOT ELEVATION
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FINISHED GRADE SPOT ELEVATION
- TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK, TQ=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT
- PROPOSED WATER HARVESTING AREAS (FIRST FLUSH REQUIREMENT)



1"=10'

NOTE:
HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS TO CONCRETE MANHOLES AND CONCRETE DROP INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.



DATE:

REVISIONS

REVISIONS DUE TO ART RECONFIGURATION

CAD DWG FILE:

DRAWN BY: MHS

CHECKED BY: MJB

COPYRIGHT:
DESIGN PLUS, LLC

SHEET TITLE

GRADING
PLAN

C-101

SHEET ____ OF ____