

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

October 8, 2019

Matt Satches, P.E.
Bohannon Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

**RE: Westgate Community Center
10001 DeVargas Rd SW
Grading and Drainage Plan
Engineer's Stamp Date: 10/1/19
Hydrology File: M09D030**

Dear Mr. Satches:

PO Box 1293

Based on the submittal received on 9/3/19, the Grading and Drainage Plan is approved for Building Permit.

Albuquerque

Prior to Certificate of Occupancy (For Information):

NM 87103

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision*, will be required.
2. City acceptance and close-out of the public Work Order will be required, unless a financial guarantee has been posted.

www.cabq.gov

If you have any questions, please contact me at 924-3695 or dpeterson@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 11/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

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

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **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/ TRANSPORTATION _____ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

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

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- _____ 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: _____

October 1, 2019

Mr. Dana Peterson, PE
Senior Engineer
Planning Department
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87103

Re: Westgate Community Center - Hydrology File: M09D030
COA Hydrology Building Permit Approval Re-Submittal

Dear Mr. Peterson:

Enclosed for your review is a copy of the Westgate Community Center Drainage Management Plan and Grading Plan. Below is a brief description of how the comments from your response letter (dated 09/11/19) were addressed:

1. Provide an armored emergency overflow from Pond 1; it does not need to be concrete, but it does need to be designed and shown on the stamped grading plan, not the landscaping plan. SW2 is shown in section B-B as a 15' wide swale with unknown depth, but the manning's calculation shows a top width of 45' and a (flow?) depth of 1.63'. The hydraulic calculations must match the section to be constructed. Flow depth needs to be determined in the channel and adequate freeboard provided. Spillway flow depth needs to be determined via the weir equation and adequate freeboard provided along the south and east sides of the pond. Future buildings need to be considered in this design.

Response: Riprap emergency overflow has now been provided. SW2 has been redefined to reflect the appropriate swale cross-section of 15' wide and 1' deep. This spillway is to include 2"-4" rock downstream of the overflow. Weir and Manning's capacities are now provided on the Drainage Management Plan.

2. Check dams need to be sized and spaced such that the toe of the upstream dam equals the crest of the next downstream dam and provide a sag at midpoint. See NMDOT standards and specifications for temporary erosion and sediment control measures for more details and design standards regarding check dams.

Response: Check dam detail has been updated and placement is based on the crest of the downstream dam and toe of upstream dam per your comment.

3. Slope stabilization needs to be called out around the western future building pad as well as the berm/swale along the east property line; it may be more reasonable just to reword the general note on C-100 to say "reseed all disturbed areas, including staging areas, per CoA spec section 1012."

Response: General note has been updated to reflect this language.

Engineering 

Spatial Data 

Advanced Technologies 

Mr. Dana Peterson, PE
Senior Engineer
City of Albuquerque
October 1, 2019
Page 2

With this submittal, we are requesting City of Albuquerque Hydrology Site Plan for Building Permit Approval. If you have any questions or require further information, please feel free to contact me.

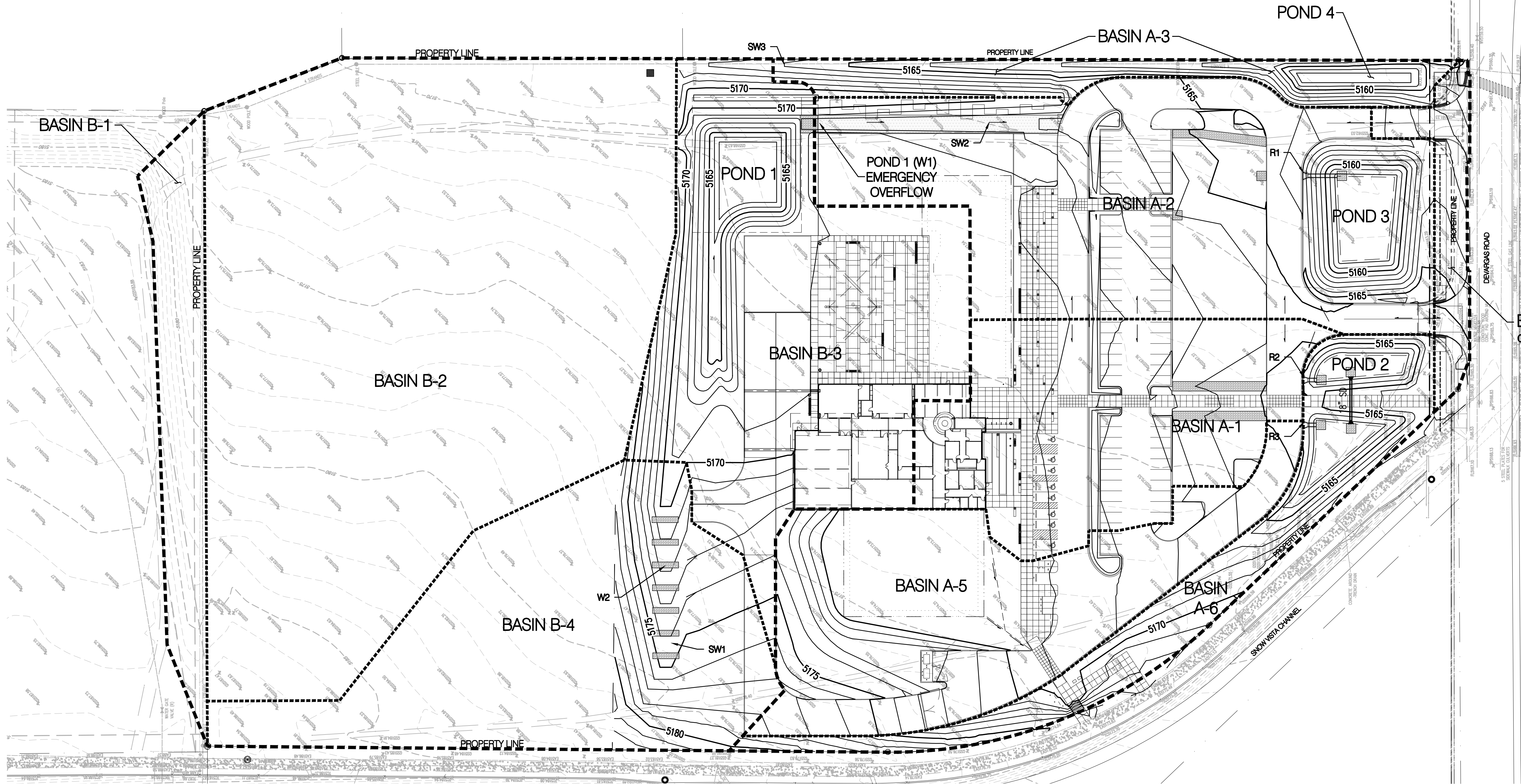
Sincerely,

A handwritten signature in blue ink, appearing to read 'Matt Satches', is written above the typed name.

Matt Satches, PE
Engineer
Community Development and Planning

MHS
Enclosures

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WESTGATE COMMUNITY CENTER
Proposed Developed Conditions Basin Data Table
This table is based on the DPM Section 22.2, Zone: 1

Basin ID	Area	Area	Land Treatment Percentages				Q(100yr)	Q(100yr)	V(100yr)	V _(100yr-6hr)	V _(100yr-10day)	FIRST FLUSH
	(SQ. FT)	(AC.)	A	B	C	D	(cfs/ac.)	(CFS)	(inches)	(CF)	(CF)	(CF)
CURRENT ONSITE BASINS												
BASIN A-1	48209	1.11	0.0%	0.0%	15.0%	85.0%	4.15	4.59	1.82	7324	12344	1161
BASIN A-2	87769	2.01	0.0%	0.0%	20.0%	80.0%	4.07	8.20	1.77	12975	21577	1989
BASIN A-3	16007	0.37	0.0%	0.0%	100.0%	0.0%	2.87	1.05	0.99	1321	1321	0
BASIN A-4	9262	0.21	0.0%	0.0%	35.0%	65.0%	3.85	0.82	1.63	1256	1993	171
BASIN A-5	55201	1.27	0.0%	0.0%	20.0%	80.0%	4.07	5.16	1.77	8161	13570	1251
BASIN A-6	28423	0.65	0.0%	0.0%	95.0%	5.0%	2.95	1.92	1.04	2461	2635	40
BASIN B-1	18834	0.43	0.0%	0.0%	100.0%	0.0%	2.87	1.24	0.99	1554	1554	0
BASIN B-2	168651	3.87	0.0%	0.0%	100.0%	0.0%	2.87	11.11	0.99	13914	13914	0
BASIN B-3	79899	1.83	0.0%	0.0%	60.0%	40.0%	3.47	6.36	1.38	9202	13117	906
BASIN B-4	67940	1.56	40.0%	0.0%	60.0%	0.0%	2.24	3.49	0.77	4359	4359	0
TOTAL	580195	13.32	-	-	-	-	-	43.95	-	132517	120182	37135

WESTGATE COMMUNITY CENTER
Existing Developed Conditions Basin Data Table
This table is based on the DPM Section 22.2, Zone: 1

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					
EXISTING BASIN A	244871	5.62	100.0%	0.0%	0.0%	0.0%	1.29	7.25	0.44	8979	8979
EXISTING BASIN B	335324	7.70	100.0%	0.0%	0.0%	0.0%	1.29	9.93	0.44	12295	12295
TOTAL	580195	13.32	-	-	-	-	-	17.18	-	21274	21274

Concrete Rundown

Rundown #	Basin ID	Rundown Type	Actual Flow (Q100)	Min Weir** Length ft	Weir Opening Width ft	Weir Opening Height ft	Channel Height ft	Channel Width ft	Minimum Slope	Capacity* CFS
R1	A-2	Rectang	8.2	6.00	6.00	0.67	0.67	2.00	1.80%	11.18
R2	A-1	Rectang	4.6	4.00	6.00	0.67	0.67	2.00	4.90%	18.44
R3	A-5	Rectang	5.2	4.00	6.00	0.67	0.67	2.00	11.00%	27.63
Weir Eq: Q=2.65L(h ^{1.5}) - ** Capacity Based on Manning's Eq w/ N=0.013 - *										

Swale Table

Swale #	Basin ID	Actual Flow	Mannings N	Bottom Width FT	Top Width FT	Depth FT	Minimum Slope	Capacity* CFS	Velocity FPS
SW1	B-4	3.5	0.030	9.0	34.00	1.00	0.037	149.80	2.38
SW2	B-1, B-2, B-3, B-4	22.2	0.035	7.0	15.00	1.00	0.005	26.57	2.41
SW3	A-3	1.1	0.030	3.0	8.00	0.625	0.016	11.81	1.67
Capacity Based on Manning's Eq *									

Weir Table

Weir #	Basin ID	Weir Type	Actual Flow (Q100)	Weir Bottom Width ft	Weir Top Width ft	Weir Height ft	Capacity* CFS
W1	B-1, B-2, B-3	Trapezoid	22.2	7.00	15.00	1.00	27.03
W2 (Check Dams)	B-4	Trapezoid	3.5	21.50	34.00	0.50	13.12
Weir Eq: Q=2.65L(h ^{1.5}) - *							

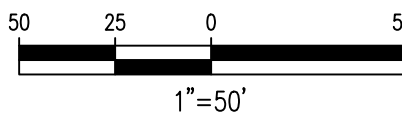
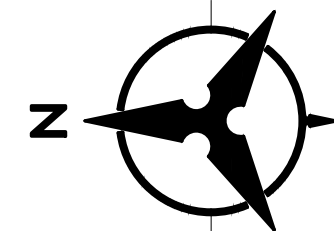
POND DATA:

POND 1:
(BASIN B-1, B-2, B-3, B-4)
VOLUME REQUIRED = 29,029 CF
VOLUME PROVIDED = 33,561 CF
TOP OF POND = 5168.00
MAX WATER SURFACE ELEVATION = 5167.75
EMERGENCY OVERFLOW ELEVATION = 5168.00

POND 2:
(BASIN A-1, A-5, A-6)
VOLUME REQUIRED = 17,945 CF
VOLUME PROVIDED = 9,585 CF
TOP OF POND = 5164.50
MAX WATER SURFACE ELEVATION = 5164.50*
* POND OVERFLOWS TO POND 3 (OVERFLOW VOL=8,360 CF)

POND 3: (FUTURE)
(BASIN A-2 & OVERFLOW OF BASIN A-1, A-5, A-6)
VOLUME REQUIRED = 21,335 CF
VOLUME PROVIDED = 24,678 CF
TOP OF POND = 5162.00
MAX WATER SURFACE ELEVATION = 5161.25

POND 4:
(BASIN A-4)
VOLUME REQUIRED (100YR-10DAY) = 1,321 CF
VOLUME PROVIDED = 3,024 CF
TOP OF POND = 5160.00
MAX WATER SURFACE ELEVATION = 5159.20



LEGEND

- PROPERTY LINE
- LIMITS OF GRADING
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED MAJOR-BASIN
- PROPOSED SUB-BASIN

100% CONSTRUCTION DOCUMENTS

Bohannan & Huston
www.bhinc.com 800.877.5332

PROPOSED DRAINAGE NARRATIVE

INTRODUCTION:

WESTGATE COMMUNITY CENTER IS LOCATED NORTH OF DEVARGAS ROAD, EAST OF SNOW VISTA CHANNEL AND WEST OF 98TH STREET. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF THE WESTGATE COMMUNITY CENTER AND REQUEST COA HYDROLOGY BUILDING & GRADING PERMIT APPROVAL.

EXISTING CONDITIONS:

THE SITE IS CURRENTLY UNDEVELOPED AND FREE DISCHARGES TO THE SOUTH INTO DEVARGAS ROAD. THE SITE CURRENTLY DRAINS FROM NORTHWEST TO SOUTHWEST. THE SITE IS BORDERED TO THE WEST BY THE SNOW VISTA CHANNEL. THIS CHANNEL AND THE WESTGATE SITE, ARE NOT LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE (FEMA FIRM MAP #35001C0336H).

SITE HISTORY:

SEVERAL DRAINAGE REPORTS AND STUDIES HAVE INCLUDED THE SITE WITHIN THEIR ANALYSIS. SAD 222 DRAINAGE REPORT PREPARED BY THE LARKIN GROUP DATED 9/12/2000 STATES THAT THE INFRASTRUCTURE WITHIN THE TOWER/SAGE DRAINAGE BASIN WAS INITIALLY SIZED PRIOR TO THE ADOPTION OF AHYMO. SINCE THE ADOPTION OF AHYMO, IT WAS FOUND THAT THE RUNOFF CONTRIBUTING TO INFRASTRUCTURE WITHIN THE TOWER/SAGE DRAINAGE BASIN, INCLUDING THE 98TH STREET STORM DRAIN, WAS MORE THAN INITIALLY THOUGHT. THE STORM DRAIN WITHIN 98TH STREET WAS SIZED TO CARRY RUNOFF GENERATED WITHIN THE 98TH STREET RIGHT OF WAY. THE PROPERTY OWNERS ALONG THE WEST EDGE OF 98TH STREET BETWEEN TOWER ROAD AND DEVARGAS ROAD ARE NOT INCLUDED WITHIN THE ANALYSIS OF SAD 222 AS THEY WILL MANAGE THEIR OWN RUNOFF ONSITE. THE AMOLE HUBBELL DRAINAGE MANAGEMENT PLAN FINAL FACILITIES REPORT DATED 7/22/1999 NOTES SIMILAR DRAINAGE ISSUES WITHIN THE TOWER/SAGE DRAINAGE BASIN. PER THE REPORT, THE CITY OF ALBUQUERQUE HAS RESTRICTED NEW DEVELOPMENT TO A RUNOFF RATE OF 1.29 CFS/ACRE. THIS WAS PROPOSED TO ALLEVIATE THE ISSUES DOWNSTREAM OF THE SITE. A NEW AMOLE HUBBELL DRAINAGE REPORT PREPARED BY WILSON & CO DATED 3/26/14 REANALYZED THE AGING 1999 REPORT. THIS NEWER REPORT DESCRIBES THE SITE'S RUNOFF AS DISCHARGING AT THE NORTHWEST CORNER OF 98TH STREET AND DEVARGAS ROAD AS ANALYSIS POINT SV16 AT A RATE OF 181 CFS. THIS ANALYSIS POINT INCLUDES THE TRAILER PARK TO THE EAST AS WELL AS PROPERTY ALONG THE WESTERN SIDE OF 98TH STREET. THE SAD 222 REPORT PREVIOUSLY STATED THAT THESE PROPERTIES WILL MANAGE THEIR OWN RUNOFF ONSITE. THESE ARE CONTRADICTING STATEMENTS. FURTHER ANALYSIS OF THE AS-BUILT OF SAD 222 SHOW THAT THE STORM DRAIN WITHIN 98TH STREET WAS DESIGNED TO HAVE A CAPACITY OF 59.30 CFS. THIS FLOW IS SIGNIFICANTLY LESS THAN THE 181 CFS THAT THE 2014 AMOLE HUBBELL DRAINAGE REPORT DESCRIBES.

THE STORM DRAIN WITHIN 98TH STREET IS UNDER CAPACITY AND CANNOT HANDLE DEVELOPED FLOWRATES FROM THE WESTGATE COMMUNITY CENTER SITE. AFTER MEETING WITH COA HYDROLOGY ON 8/7/2018 AND RESEARCHING THE AFOREMENTIONED REPORTS AND AS-BUILTS, IT WAS DETERMINED THAT THE SITE WILL BE REQUIRED TO RETAIN THE 100 YEAR - 6 HOUR STORM EVENT ONSITE.

METHODOLOGY:

THE HYDROLOGIC ANALYSIS PROVIDED WITH THIS DRAINAGE MANAGEMENT PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 22.2 OF THE DPM. THE SITE IS LOCATED WITHIN PRECIPITATION ZONE 1. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE SITE CONDITIONS.

PROPOSED CONDITIONS:

WESTGATE COMMUNITY CENTER IS BEING CONSTRUCTED IN PHASES. THE FIRST PHASE WILL CONSTRUCT THE CENTRAL PORTION OF THE BUILDING AND THE FIRST ROW OF PARKING. THE FUTURE BUILDOUT OF THE SITE IS INCLUDED WITHIN THE DESIGN OF THE ONSITE PONDS AND INFRASTRUCTURE.

THE SITE IS DIVIDED INTO 2 LARGE BASINS (BASIN A & BASIN B) GENERALLY SEPARATING THE SITE NORTH AND SOUTH.

BASIN A IS LOCATED ON THE SOUTH PORTION OF THE SITE. THIS BASIN DRAINS FROM NORTH TO SOUTH AND CONTAINS A PORTION OF THE PROPOSED BUILDING AS WELL AS THE PARKING LOT SOUTH OF THE BUILDING. THERE ARE VARIOUS CURB OPENINGS WITHIN THE PROPOSED PARKING AREA. THESE CURB OPENINGS ARE NOT SIZED FOR A DESIGN STORM EVENT. SUB-BASINS A-1, A-5, & A-6 ALL DRAIN TO PROPOSED POND 2 WITH A CUMULATIVE 100YR-6HR VOLUME OF APPROXIMATELY 17,945 CF. SUB-BASIN A-2 DRAINS TO PROPOSED POND 3 WITH A 100YR-6HR VOLUME OF APPROXIMATELY 12,975 CF. POND 2 AND POND 3 ARE LOCATED ALONG THE SOUTHERN PROPERTY LINE. THESE PONDS ARE SIZED TO RETAIN THE VOLUME FROM SUB-BASINS A-1, A-2, A-5, & A-6. POND 2 IS UNDERSIZED AND OVERFLOW FROM THIS POND CONTINUES INTO POND 3. SUB-BASIN A-3 IS A SMALL BASIN ON THE EAST SIDE OF THE SITE WHICH DRAINS TO PROPOSED POND 4 WITH A 100YR-10DAY VOLUME OF APPROXIMATELY 1,321 CF. SUB-BASIN A-4 IS WITHIN THE PROPOSED PUBLIC SIDEWALK ACCESS EASEMENT. THIS SUB-BASIN IS NOT RETAINED ONSITE, BUT DISCHARGES APPROXIMATELY 0.82 CFS INTO DEVARGAS ROAD.

BASIN B IS LOCATED ON THE NORTH PORTION OF THE SITE. THIS BASIN IS PRIMARILY UNDEVELOPED AND WILL CONTINUE TO BE UNDEVELOPED. SUB-BASINS B-1 AND B-2 DISCHARGE TO THE SOUTHEAST INTO POND 1. SUB-BASIN B-3 DISCHARGES TO THE NORTH AND EAST OF THE EXISTING BUILDING INTO POND 1 AS WELL. THE 100YR-6HR VOLUME REQUIRED FOR POND 1 IS APPROXIMATELY 29,029 CF. DURING A LARGER STORM EVENT, RUNOFF FROM POND 1 WILL OVERFLOW TO THE SOUTH INTO A LANDSCAPED AREA.

FIRST FLUSH VOLUME IS RETAINED WITHIN THE 100YR-6HR STORM EVENT.

SEE POND DATA THIS SHEET FOR MORE INFORMATION.

CONCLUSION:

THE SITE RETAINS THE 100 YEAR-6 HOUR STORM EVENT. THEREFORE, WE ARE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST BUILDING & GRADING PERMIT APPROVAL.

NO.	DATE	REVISIONS	CHECKED BY:

LEE GAMESKY ARCHITECTS P.C.

2412 MILES ROAD SE
ALBUQUERQUE, NM 87106
505.842.8865 FAX 842.1693
lee@ganm.com



WESTGATE COMMUNITY CENTER
Albuquerque, New Mexico

PROJECT ARCHITECT:
LEE GAMESKY, AIA

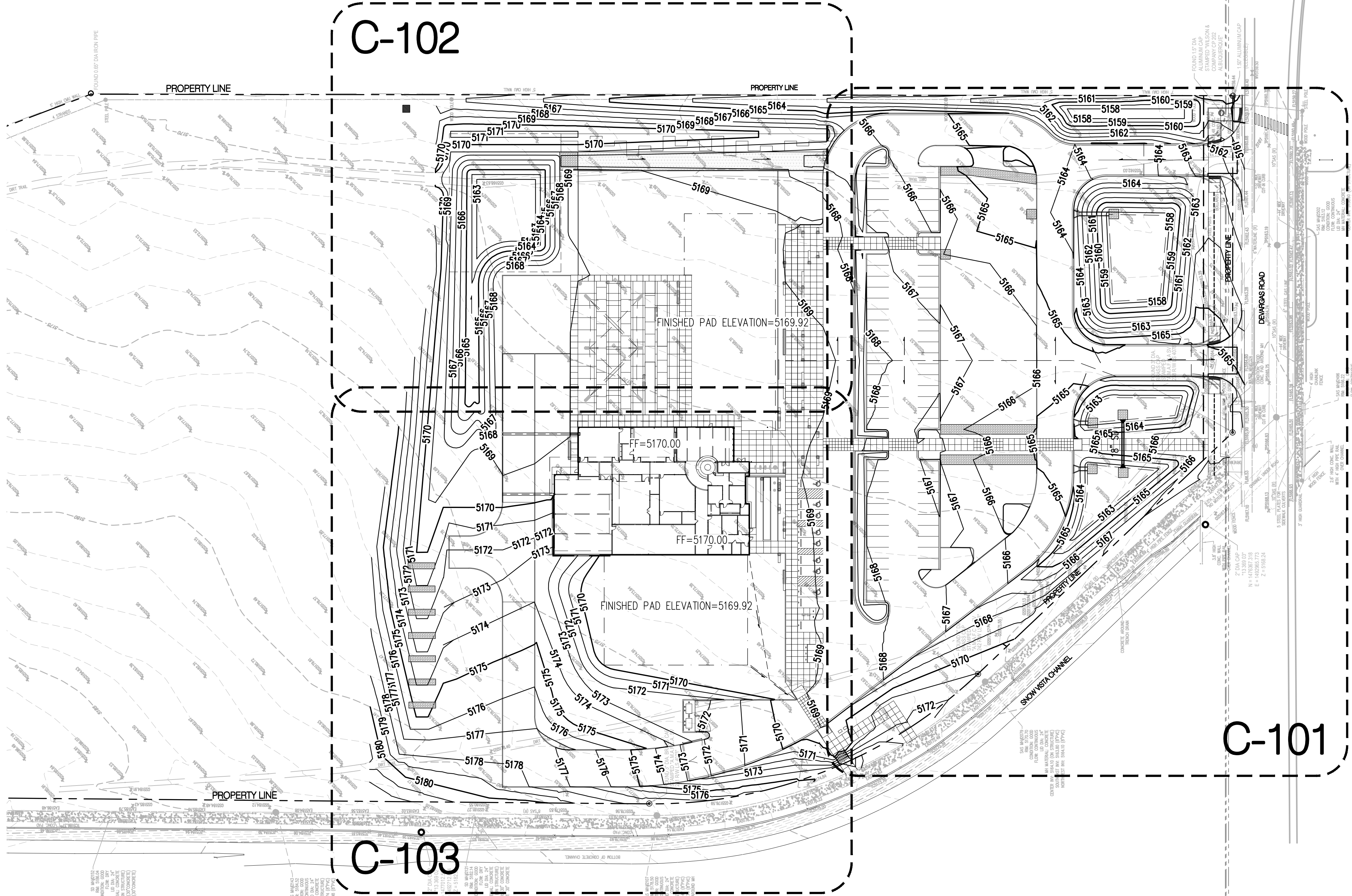
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DRAINAGE MANAGEMENT PLAN

By:
File:

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C-001

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LEGEND

- PROPERTY LINE
- 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
- TG=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
- SWALE FLOWLINE
- TOP OF BERM
- GRADE BREAK

NOTE

PRIOR TO CONSTRUCTION OF FUTURE PAD FOUNDATION, CONTRACTOR SHALL FIELD VERIFY PAD COMPACTION AND PREPARATION. SEPARATE BUILDING PERMIT SUBMITTALS WILL BE REQUIRED AT THAT TIME.

NOTE

CONTRACTOR SHALL PROVIDE AS-BUILT GRADING INFORMATION STAMPED BY A PROFESSIONAL SURVEYOR. AS-BUILT INFORMATION REQUIRED SHALL BE COORDINATED WITH THE ENGINEER AND SHALL BE SUFFICIENTLY DETAILED TO VERIFY THAT THE DRAINAGE WILL FUNCTION IN ACCORDANCE WITH THE DESIGN. AS-BUILT DATA SHALL BE PROVIDED AT LEAST 5 WORKING DAYS PRIOR TO CONTRACTOR'S REQUEST FOR PERMANENT CERTIFICATE OF OCCUPANCY. AT A MINIMUM, AS-BUILT DATA SHALL INCLUDE:

- ALL GRATES AND INVERTS OF CATCH BASINS
- APPROXIMATELY 75% OF ALL DESIGN SPOT ELEVATIONS & FINISHED FLOOR ELEVATIONS.

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

NOTE

ENDS OF ALL STORM DRAIN PIPES, CULVERTS, & CMP END SECTIONS (LARGER THAN 12") SHALL BE COVERED WITH STEEL BARS APPROXIMATELY 12" SQUARE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL. HYDRAULIC INTEGRITY SHALL NOT BE COMPROMISED. BARS TO BE PAINTED TO MATCH BUILDING.

NOTE

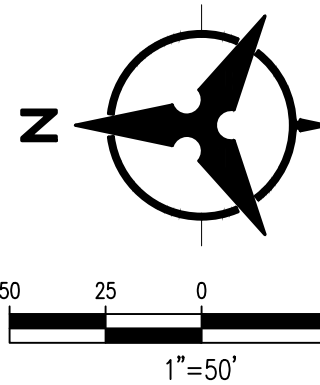
SIDEWALK CROSS-SLOPES SHALL BE AT A MINIMUM OF 1.0% AND A MAXIMUM OF 2.0%

NOTE

NO WORK SHALL BE ALLOWED IN THE PUBLIC ROW WITHOUT AN APPROVED WORK ORDER.

NOTE

RESEED ALL DISTURBED AREAS, INCLUDING STAGING AREAS, PER COA SPEC SECTION 1012.



100% CONSTRUCTION DOCUMENTS

Bohannon & Huston
www.bhinc.com 800.877.5332

GENERAL NOTES

- 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 STANDARD SPECIFICATIONS SHALL APPLY.
- 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.
- 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.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
- ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED 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.
- 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.
- 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.
- 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.
- 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.).
- 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.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE 1 HARD COPY AND 1 ELECTRONIC COPY OF THE EPA STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE APPROPRIATE SUBMITTAL FEE TO CITY OF ALBUQUERQUE TWO WEEKS PRIOR TO THE START OF SITE DISTURBANCE.

GRADING NOTES

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- 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 SPECIFICATIONS (FIRST PRIORITY), AND/OR THE ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
- EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- 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.
- THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.
- A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING 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.
- PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
- VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

NO.	DATE	REVISIONS	CHECKED BY:

LEE GAMESKY ARCHITECTS P.C.

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ALBUQUERQUE, NM 87106
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lee@ganm.com



WESTGATE COMMUNITY CENTER
Albuquerque, New Mexico

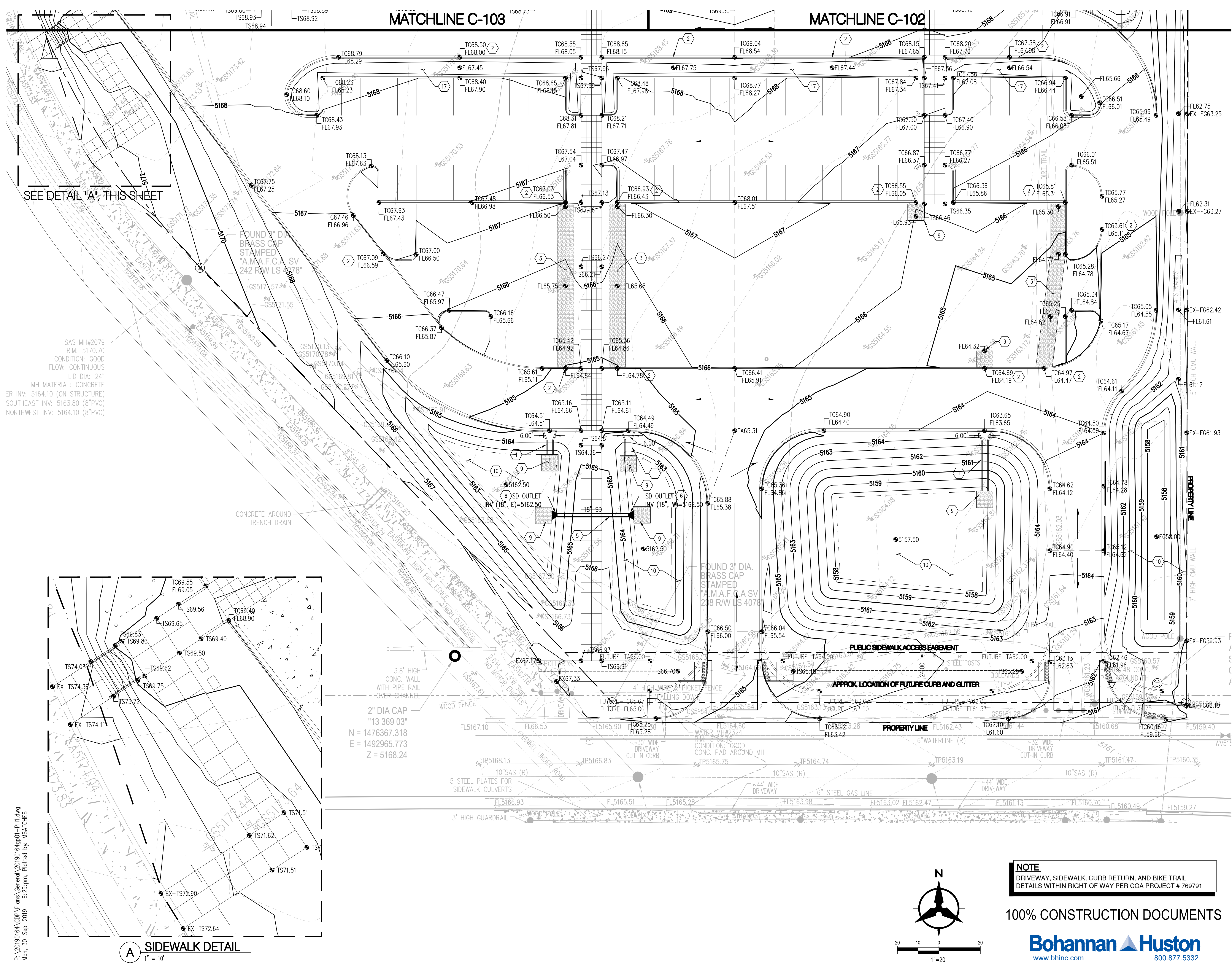
PROJECT ARCHITECT:
LEE GAMESKY, AIA

Project #:
Date: 16-01-AL
08.12.2019

OVERALL GRADING AND DRAINAGE PLAN

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Sheet: Of:
C-100



GRADING KEYED NOTES*

- INSTALL CONCRETE RUNDOWN PER DETAIL A, SHEET C-102.
- INSTALL CONCRETE CURB OPENING PER DETAIL B, SHEET C-102.
- INSTALL RIP RAP SWALE PER DETAIL E, SHEET C-102.
- INSTALL RIP RAP EMERGENCY OVERFLOW PER DETAIL H, SHEET, C-103.
- INSTALL HDPE (N12 WT. OR APPROVED EQUAL) STORM DRAIN PIPE. SEE PLAN FOR SIZE.
- INSTALL CMP END SECTION (CONTECH OR APPROVED EQUAL), SEE PLAN FOR SIZE.
- RETAINING WALL. SEE STRUCTURAL PLAN FOR DETAILS.
- INSTALL BERM PER SECTION A-A, SHEET C-102.
- INSTALL RIP-RAP PAD PER DETAIL C, SHEET C-102.
- RETENTION POND.
- BEGIN TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS. .
- END TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS. .
- INSTALL CONCRETE VALLEY GUTTER PER DETAIL D, SHEET C-102.
- INSTALL CONCRETE RUNDOWN PER DETAIL F, SHEET C-102. CENTER ON ROOF DRAIN.
- INSTALL 24" SIDEWALK CULVERT PER COA STD DWG 2236. REPLACE 2'X2' SECTION OF CHECKERED STEEL WITH PEDESTRIAN RATED GRATE. CENTER ON ROOF DRAIN.
- FUTURE PHASE, INSTALL STRUCTURAL FILL PER GEOTECH REPORT.
- DEPRESS LANDSCAPE ISLANDS.
- INSTALL RIPRAP CHECK DAMS PER DETAIL G, SHEET C-103. SEE PLAN FOR SPACING.

*NOT ALL KEYED NOTES ARE USED ON THIS SHEET

LEGEND

---	PROPERTY LINE
---	LIMITS OF GRADING
---	EXISTING INDEX CONTOUR
---	EXISTING INTERMEDIATE CONTOUR
● EX5025.25	EXISTING GROUND SPOT ELEVATION
---	PROPOSED INDEX CONTOUR
---	PROPOSED INTERMEDIATE CONTOUR
● XX.XX	PROPOSED FINISHED GRADE SPOT ELEVATION
---	TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK, TG=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
---	TOP OF BERM
● XX.XX	FUTURE SPOT ELEVATION

NO.	DATE	REVISIONS	CHECKED BY:

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Albuquerque, New Mexico

PROJECT ARCHITECT:
LEE GAMESKY, AIA

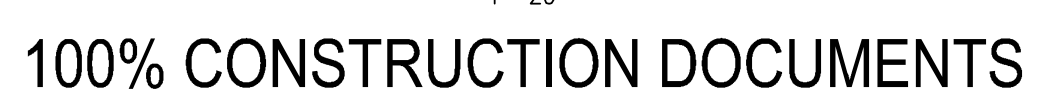
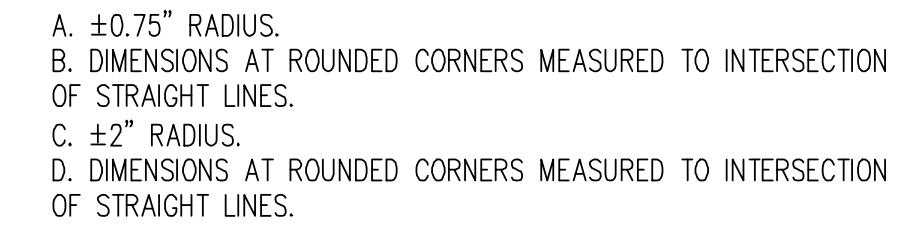
Project #:
24572

Date:
08.12.2019

GRADING AND DRAINAGE - SOUTH

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File:	C-101	

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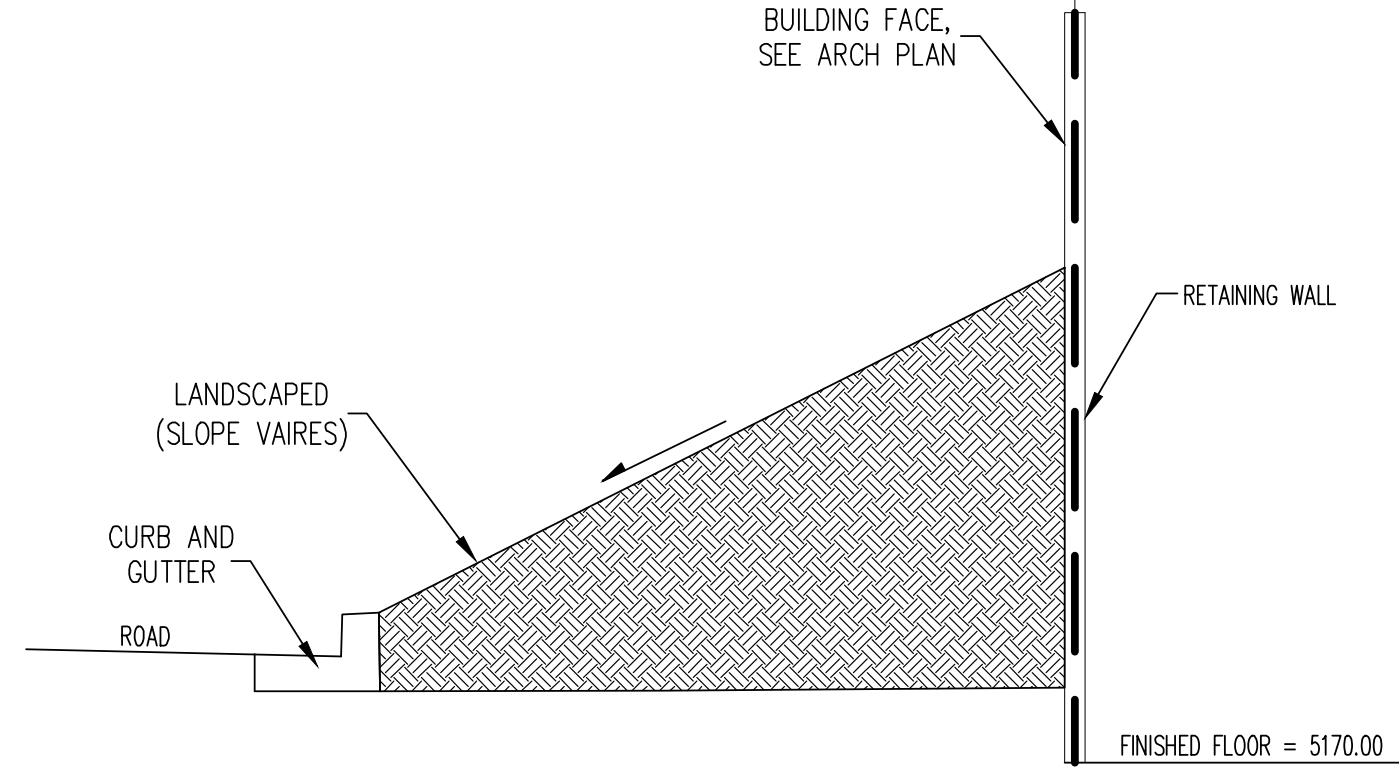
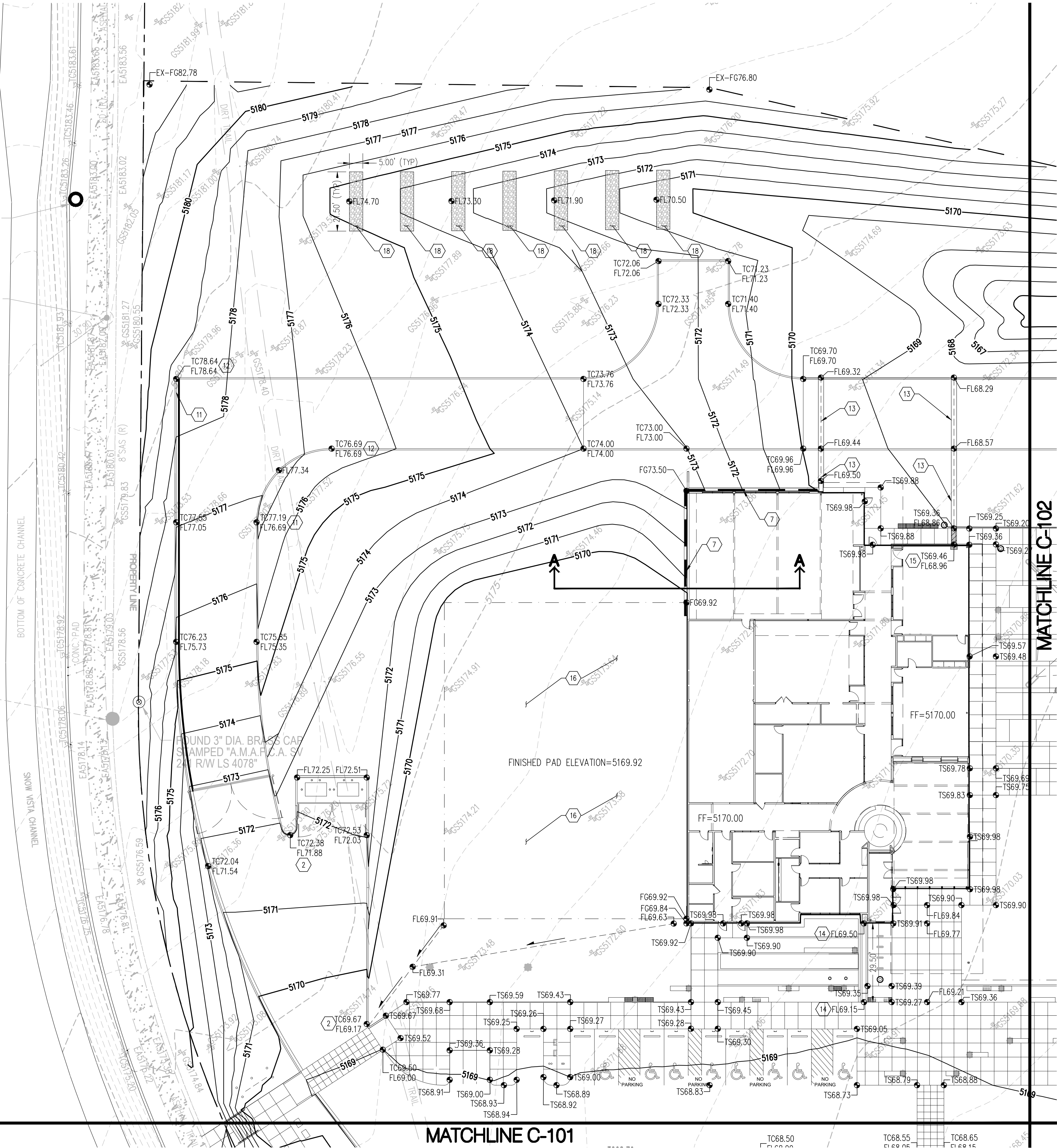
GRADING AND DRAINAGE - EAST

By:	Sheet: Of:
File:	C-102

2" DIA CAP
"13 369 02"
1477012.503
1492712.654
Z = 5182.98

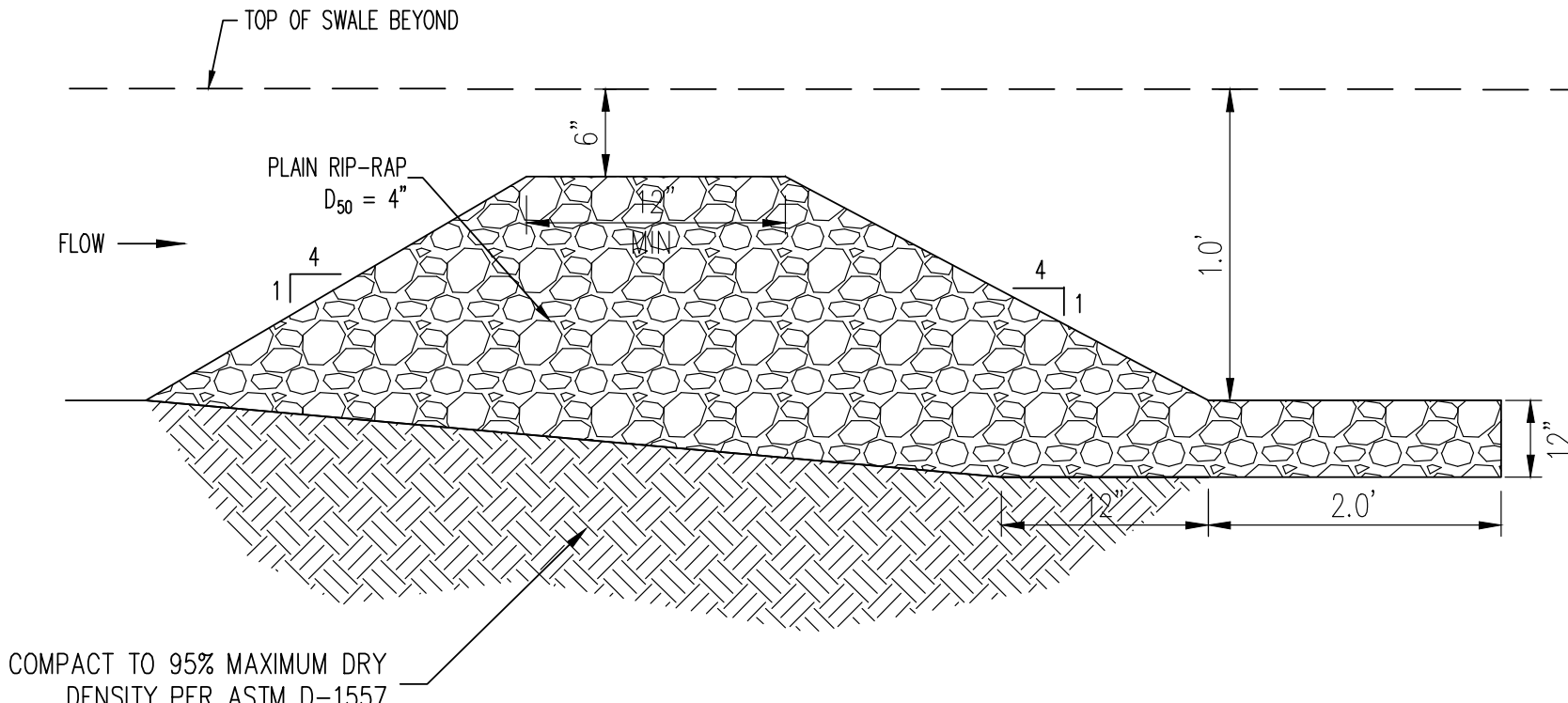
SD MH#2121
RIM: 5182.14
CONDITION: GOOD
FLOW: DRY
LID DIA: 24"
RIAL: CONCRETE
ON STRUCTURE)
30" CONCRETE
30" CONCRETE

MH#2107
5178.50
ON: GOOD
NTINUOUS
DIA: 24"
CONCRETE
RUCTURE)
7 (8"PVC)
3 (8"PVC)
OUND MH

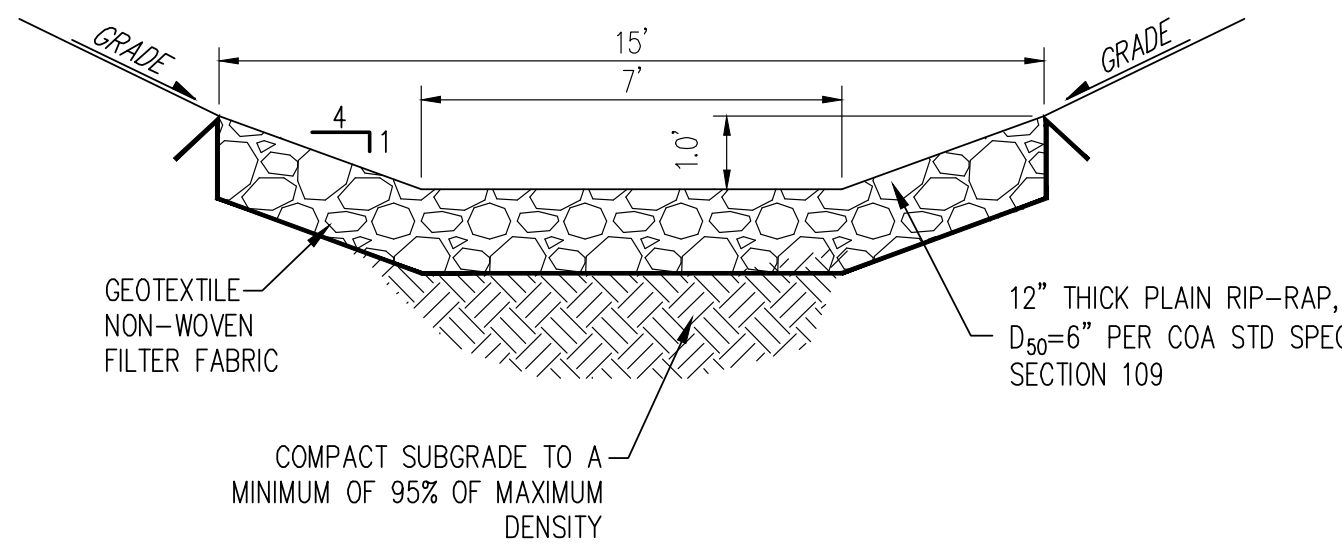


A-A RETAINING WALL DETAIL
NOT TO SCALE

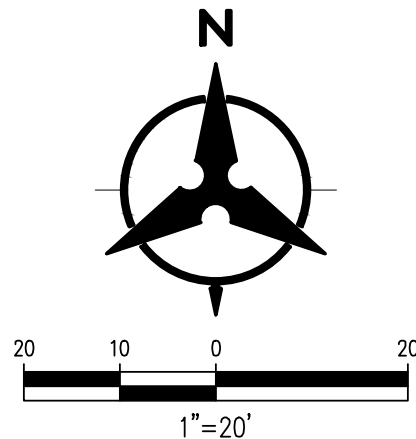
- NOTES:
1. SEE PLANS FOR LOCATION OF DAMS.
 2. CHECK DAMS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN THE DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE CHECK DAM.
 3. TOE ELEVATION OF UPSTREAM CHECK DAM TO MATCH THE ELEVATION OF THE CREST OF DOWNSTREAM CHECK DAM.
 4. PROVIDE SAG AT MIDPOINT OF CHECK DAM.
 5. REFER TO NMDOT STD DWG 603 FOR TYPICAL CHECK DAM EROSION CONTROL FEATURES.



G CHECK DAM
NOT TO SCALE



H EMERGENCY OVERFLOW WEIR
NOT TO SCALE



100% CONSTRUCTION DOCUMENTS

GRADING KEYED NOTES*

1. INSTALL CONCRETE RUNDOWN PER DETAIL A, SHEET C-102.
2. INSTALL CONCRETE CURB OPENING PER DETAIL B, SHEET C-102.
3. INSTALL RIP RAP SWALE PER DETAIL E, SHEET C-102.
4. INSTALL RIP RAP EMERGENCY OVERFLOW PER DETAIL H, SHEET, C-103.
5. INSTALL HDPE (N12 WT. OR APPROVED EQUAL) STORM DRAIN PIPE. SEE PLAN FOR SIZE
6. INSTALL CMP END SECTION (CONTECH OR APPROVED EQUAL), SEE PLAN FOR SIZE.
7. RETAINING WALL. SEE STRUCTURAL PLAN FOR DETAILS.
8. INSTALL BERM PER SECTION A-A, SHEET C-102.
9. INSTALL RIP-RAP PAD PER DETAIL C, SHEET C-102.
10. RETENTION POND.
11. BEGIN TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS. .
12. END TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS. .
13. INSTALL CONCRETE VALLEY GUTTER PER DETAIL D, SHEET C-102.
14. INSTALL CONCRETE RUNDOWN PER DETAIL F, SHEET C-102. CENTER ON ROOF DRAIN.
15. INSTALL 24" SIDEWALK CULVERT PER COA STD DWG 2236. REPLACE 2'X2' SECTION OF CHECKERED STEEL WITH PEDESTRIAN RATED GRATE. CENTER ON ROOF DRAIN.
16. FUTURE PHASE, INSTALL STRUCTURAL FILL PER GEOTECH REPORT.
17. DEPRESS LANDSCAPE ISLANDS.
18. INSTALL RIPRAP CHECK DAMS PER DETAIL G, SHEET C-103. SEE PLAN FOR SPACING.

*NOT ALL KEYED NOTES ARE USED ON THIS SHEET

LEGEND

- | | |
|-------------|--|
| --- | PROPERTY LINE |
| --- | LIMITS OF GRADING |
| --- | EXISTING INDEX CONTOUR |
| --- | EXISTING INTERMEDIATE CONTOUR |
| ● EX5025.25 | EXISTING GROUND SPOT ELEVATION |
| --- | PROPOSED INDEX CONTOUR |
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| --- | DIRECTION OF FLOW |
| --- | WATER BLOCK/GRADE BREAK |
| --- | PROPOSED STORM DRAIN LINE |
| ● | PROPOSED STORM DRAIN MANHOLE |
| ■ | PROPOSED STORM DRAIN INLETS |
| --- | TOP OF BERM |
| ● XX.XX | FUTURE SPOT ELEVATION |

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PROJECT ARCHITECT: LEE GAMESKY, AIA	Project #: 16-01-AL Date: 08.12.2019
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GRADING AND DRAINAGE - WEST

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