

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

January 14, 2022

Jesus Lopez, P.E.
Respec
5971 Jefferson St. NE
Albuquerque, NM 8710

**RE: Allaso Louisiana Apartments
Conceptual Drainage Report
Engineer's Stamp Date: 01/12/22
Hydrology File: C18D085**

Dear Mr. Lopez:

Based upon the information provided in your submittal received 11/11/2021, the Conceptual Grading & Drainage Plans are approved for action by the DRB for Site Plan for Building Permit and Platting action.

PRIOR TO BUILDING PERMIT:

1. Provide more detailed design as needed in order to obtain Hydrology's approval.

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 rbrissette@cabq.gov.

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 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:** _____

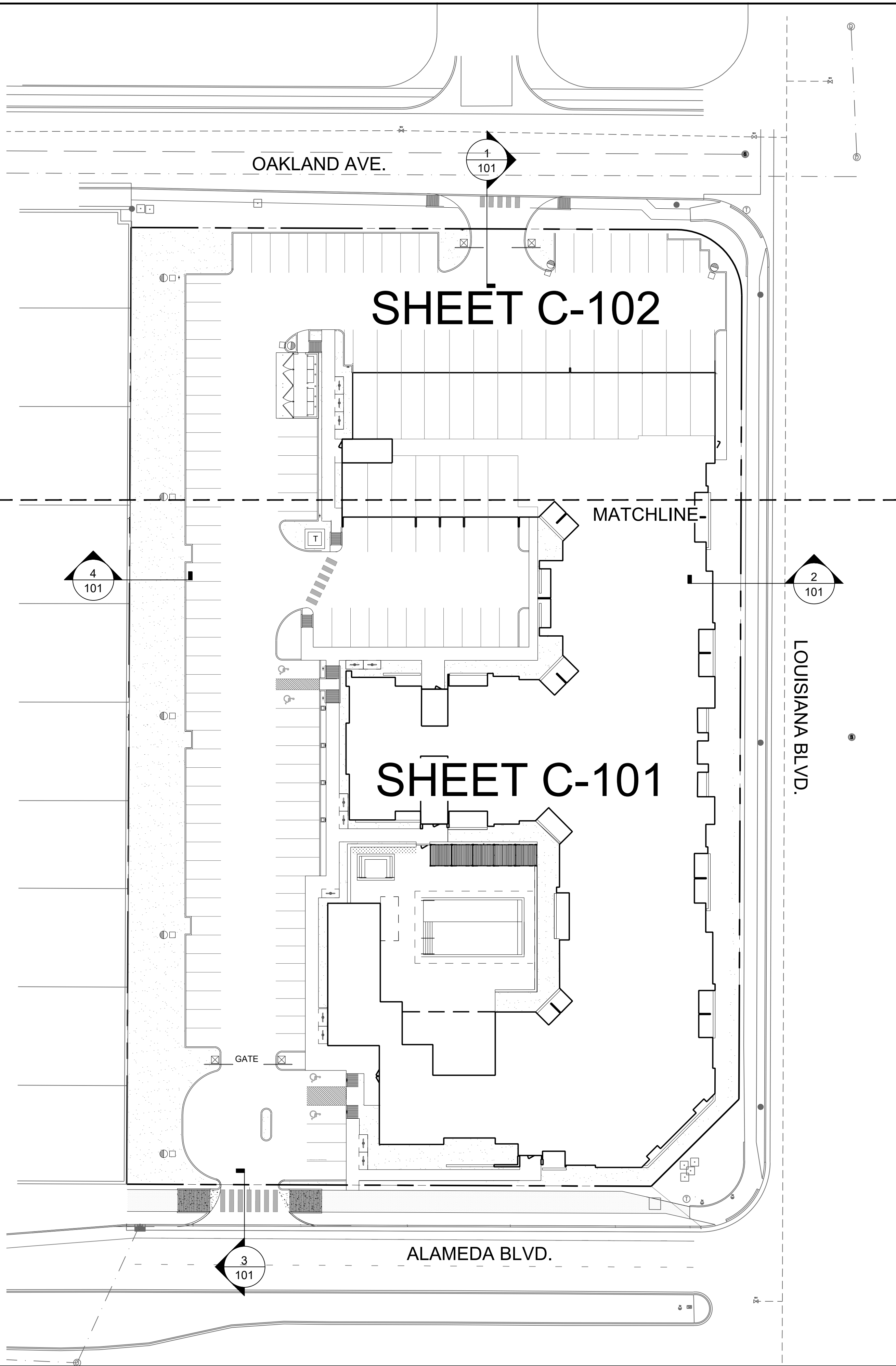
COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

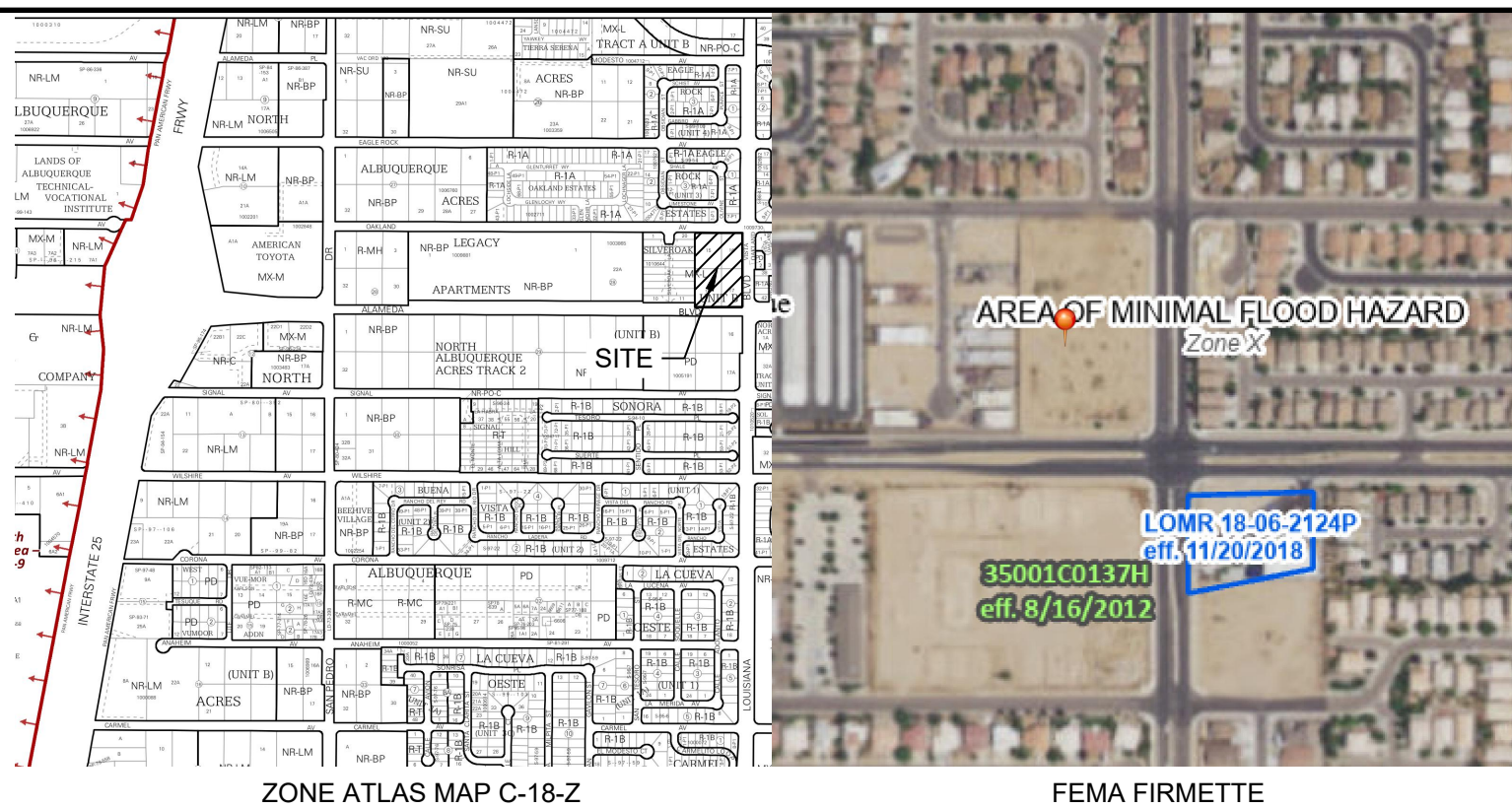
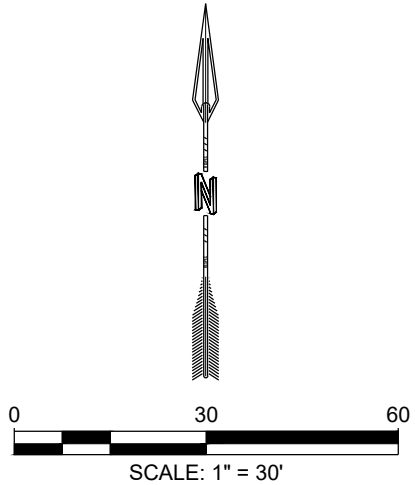
FEE PAID: _____

NAME: N:\Projects\W0110-Titan_Development\W0110-2102-Titan Alameda Louisiana Apartments3.DWG\Sheets\C-100 OVERALL GRADING.dwg PLOT DATE: Jan 12, 2022 3:38pm

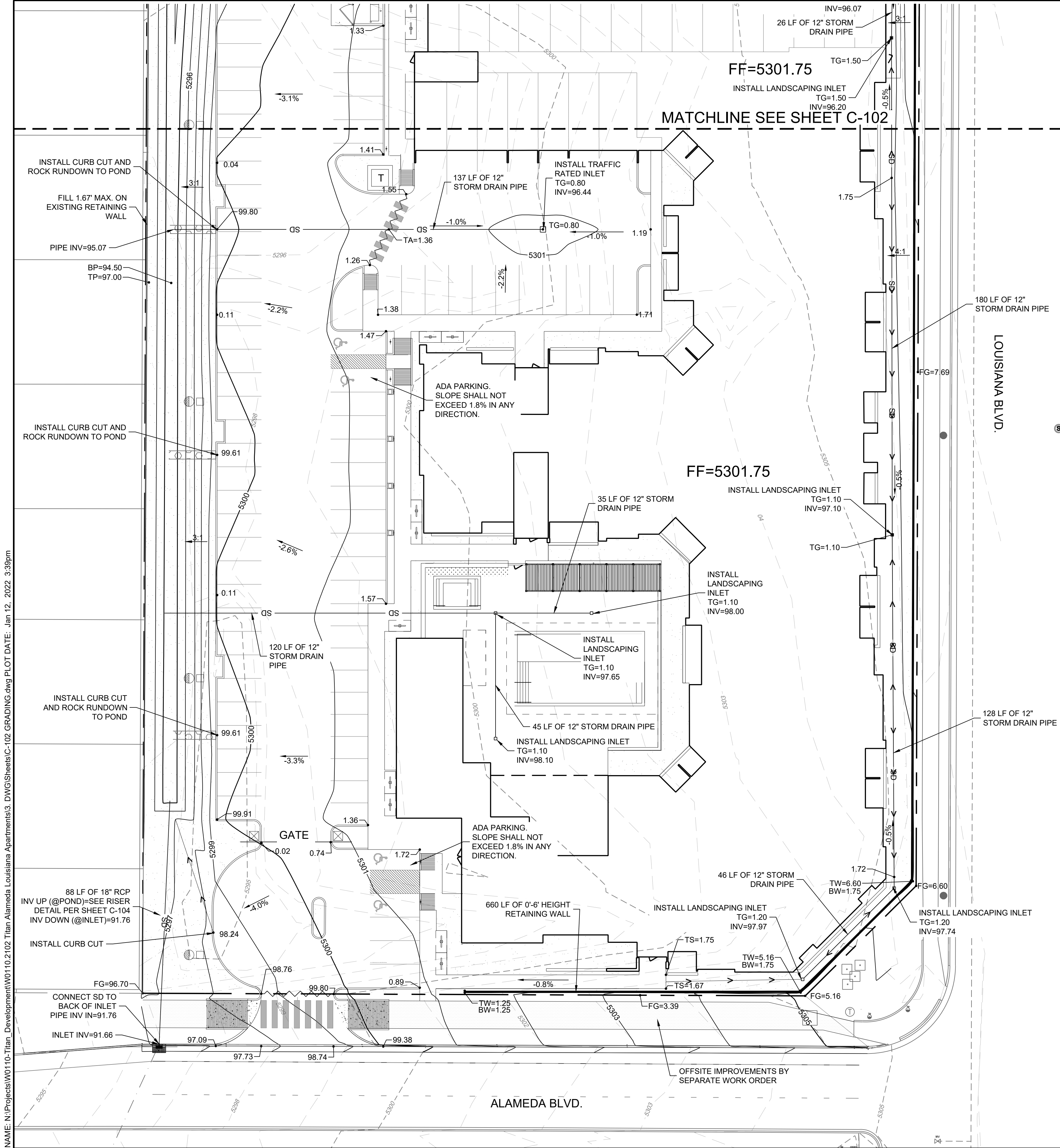
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City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
PRELIMINARY APPROVED
DATE: 01/14/22
BY: *Renee C. Brissette*
HydroTeam # C18D085
THESE PLANS AND/OR REPORT ARE
CONFIDENTIAL ONLY. MORE INFORMATION MAY
BE NEEDED IN THEM AND SUBMITTED TO
HYDROLOGY FOR BUILDING PERMIT APPROVAL.

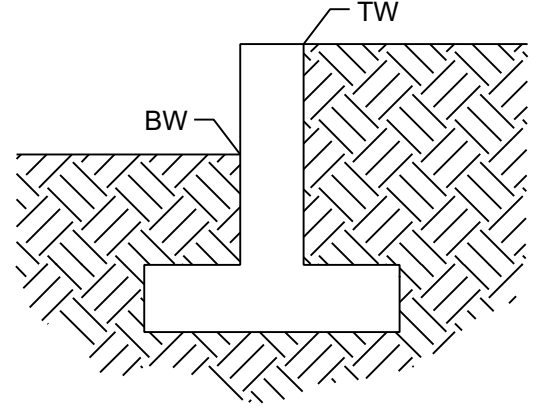


DESIGNED JMS DRAWN JMS CHECKED JL DATE 1.12.2022		REVISION	
RESPEC 5971 Jefferson Street Suite 101 Albuquerque, NM 87110 Water and Natural Resources respec.com 505.253.9718			
STAMP 01/12/2022 THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED			
PROJECT NAME: ALLASO LOUISIANA APARTMENTS			
SHEET TITLE: OVERALL GRADING			
DRB			
SHEET NUMBER: C-100			



SPOT ELEVATION SYMBOLS

- 66.00 FLOWLINE
- EG=66.00 EXISTING GROUND
- TP=66.00 TOP OF POND
- BP=66.00 BOTTOM OF POND
- TS=66.00 TOP OF SIDEWALK
- TA=66.00 TOP OF ASPHALT
- BW=66.00 BOTTOM OF WALL (SEE SCHEMATIC BELOW)
- TW=66.00 TOP OF WALL (SEE SCHEMATIC BELOW)
- TBC=66.00 TOP BACK OF CURB
- FG=66.00 FINISHED GROUND
- TG=66.00 TOP OF GRATE



RIP RAP SPECIFICATIONS

RIP RAP SHALL BE OVER FILTER MATERIAL AND CONSIST OF RIP RAP AND CRUSHED ROCK MEETING THE FOLLOWING GRADATION OR ENGINEER-APPROVED EQUAL:

MAX DIMENSION	% SMALLER
12"	100
9"	50-60
6"	35-45
3"	10

FILTER MATERIAL SHALL CONSIST OF CRUSHED ROCK MEETING THE FOLLOWING GRADATION OR ENGINEER-APPROVED EQUAL:

U.S. STANDARD SIEVE SIZE	% PASS BY WT
1"	100
3/4"	45-65
#4	25-45
#40	0-20
#200	0-5

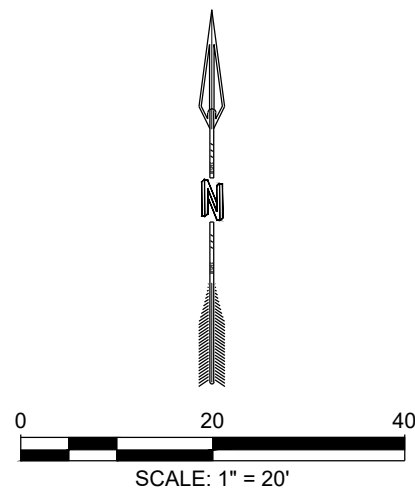
FILTER MATERIAL SHALL BE PLACED UNDER THE RIP RAP CHANNEL AND COMPACTED INTO SURFACE VOIDS OF THE RIP RAP. THE SUBGRADE SHALL BE PROCESSED TO A 12" MIN. DEPTH AND COMPACTED TO 95% MIN. RELATIVE DENSITY PER ASTM D 1557. THE FILTER MATERIAL SHALL BE TAMPED AND SHAPED TO FORM A SMOOTH, EVEN, AND FIRM FOUNDATION FOR THE OVERLAYING RIP RAP. THE CONTRACTOR'S OPERATIONS AND METHODS OF PLACING SHALL PREVENT SEGREGATION OF THE MATERIALS. THE FILTER MATERIAL SHALL BE PLACED AND TAMPED IN THE VOIDS OF THE RIP RAP.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMITS OF DISTURBANCE
- PROPOSED WATER BLOCK
- PROPOSED SWALE
- SLOPE ARROW
- PROPOSED RIP RAP PER SPEC
- PROPOSED RETAINING WALL
- PROPOSED STEM WALL
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN CLEANOUT

GRADING NOTES

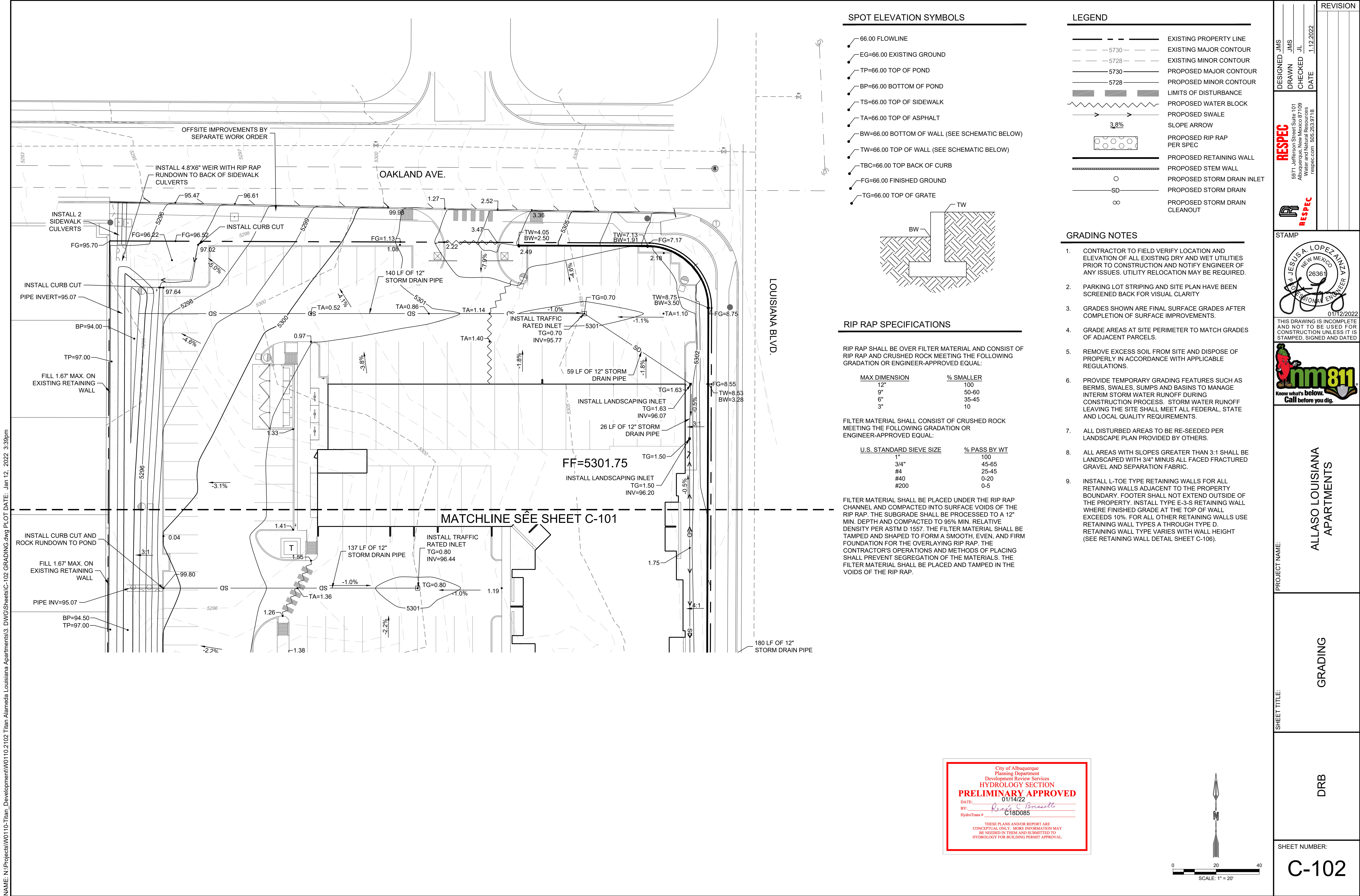
- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
- PARKING LOT STRIPING AND SITE PLAN HAVE BEEN SCREENED BACK FOR VISUAL CLARITY
- GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS.
- GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
- REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- PROVIDE TEMPORARY GRADING FEATURES SUCH AS BERMS, SWALES, SUMPS AND BASINS TO MANAGE INTERIM STORM WATER RUNOFF DURING CONSTRUCTION PROCESS. STORM WATER RUNOFF LEAVING THE SITE SHALL MEET ALL FEDERAL, STATE AND LOCAL QUALITY REQUIREMENTS.
- ALL DISTURBED AREAS TO BE RE-SEEDED PER LANDSCAPE PLAN PROVIDED BY OTHERS.
- ALL AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE LANDSCAPED WITH 3/4" MINUS ALL FACED FRACTURED GRAVEL AND SEPARATION FABRIC.
- INSTALL L-TOE TYPE RETAINING WALLS FOR ALL RETAINING WALLS ADJACENT TO THE PROPERTY BOUNDARY. FOOTER SHALL NOT EXTEND OUTSIDE OF THE PROPERTY. INSTALL TYPE E-3-S RETAINING WALL WHERE FINISHED GRADE AT THE TOP OF WALL EXCEEDS 10%. FOR ALL OTHER RETAINING WALLS USE RETAINING WALL TYPES A THROUGH TYPE D. RETAINING WALL TYPE VARIES WITH WALL HEIGHT (SEE RETAINING WALL DETAIL SHEET C-106).



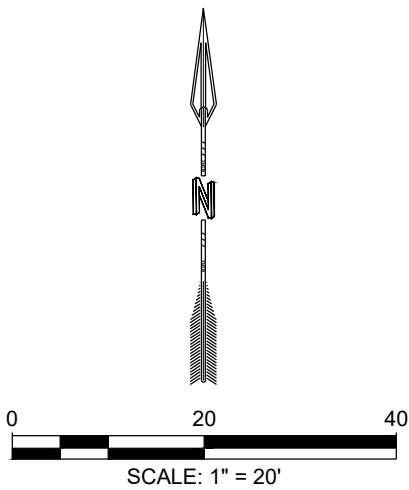
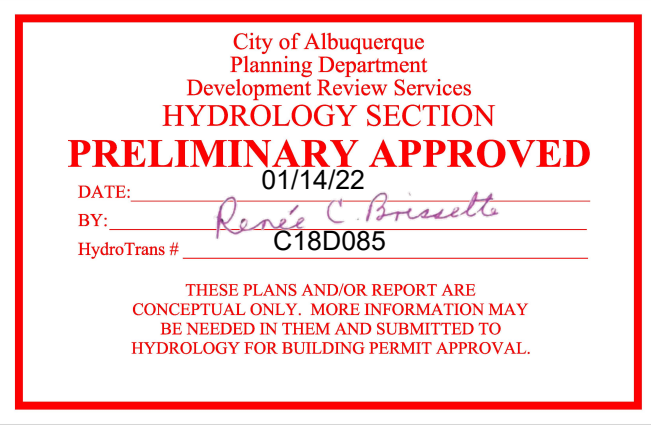
NAME: N:\Projects\W010-Titan_Development\W010-2102-Titan Alameda Louisiana Apartments3.DWG\Sheets\C-102 GRADING.dwg PLOT DATE: Jan 12, 2022 3:39pm

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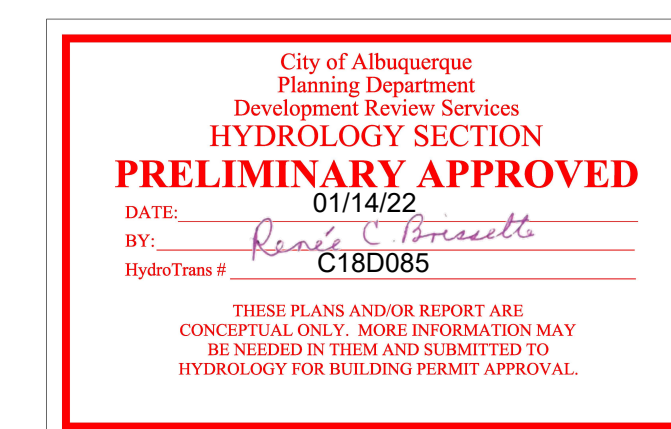
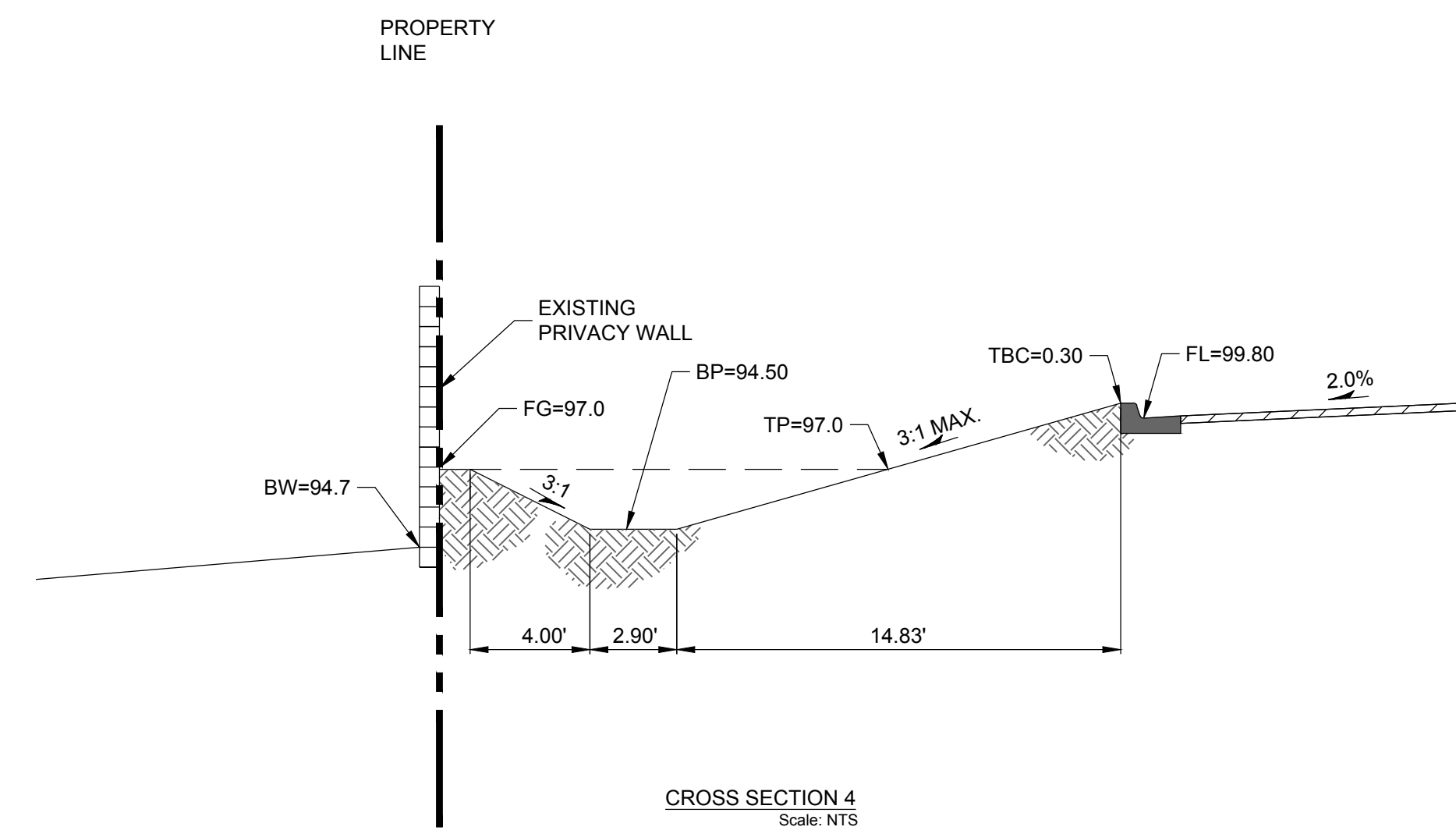
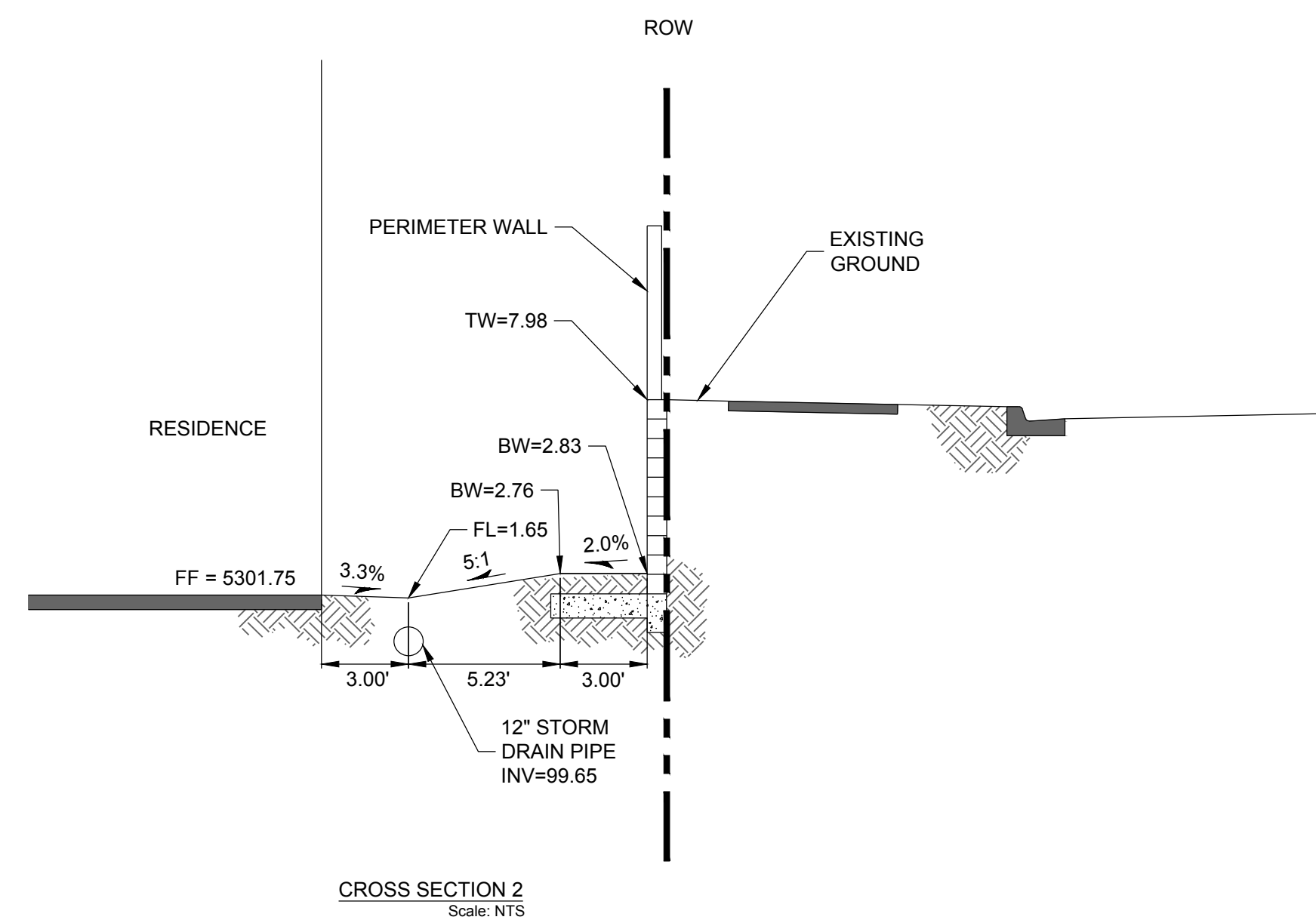
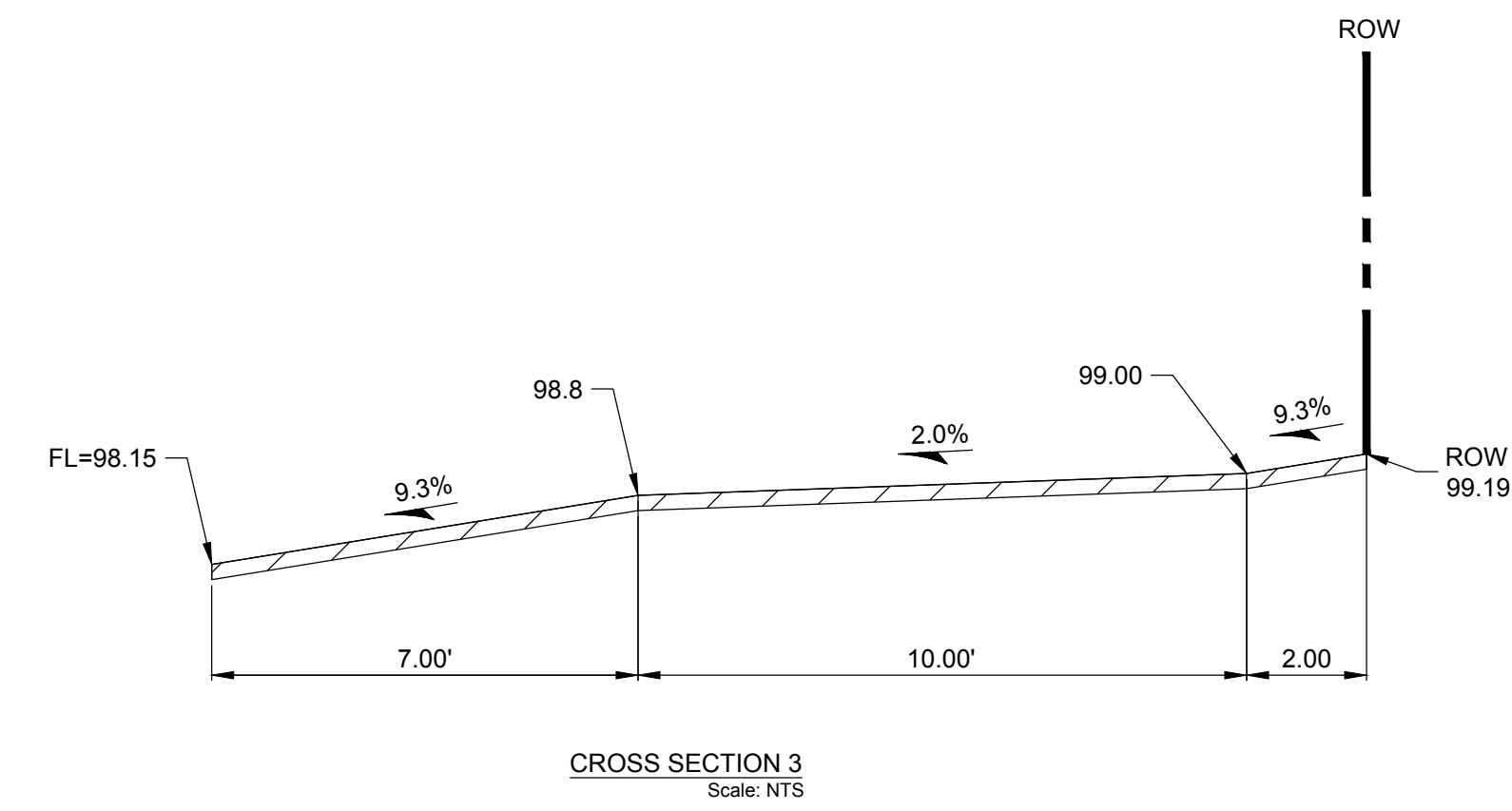
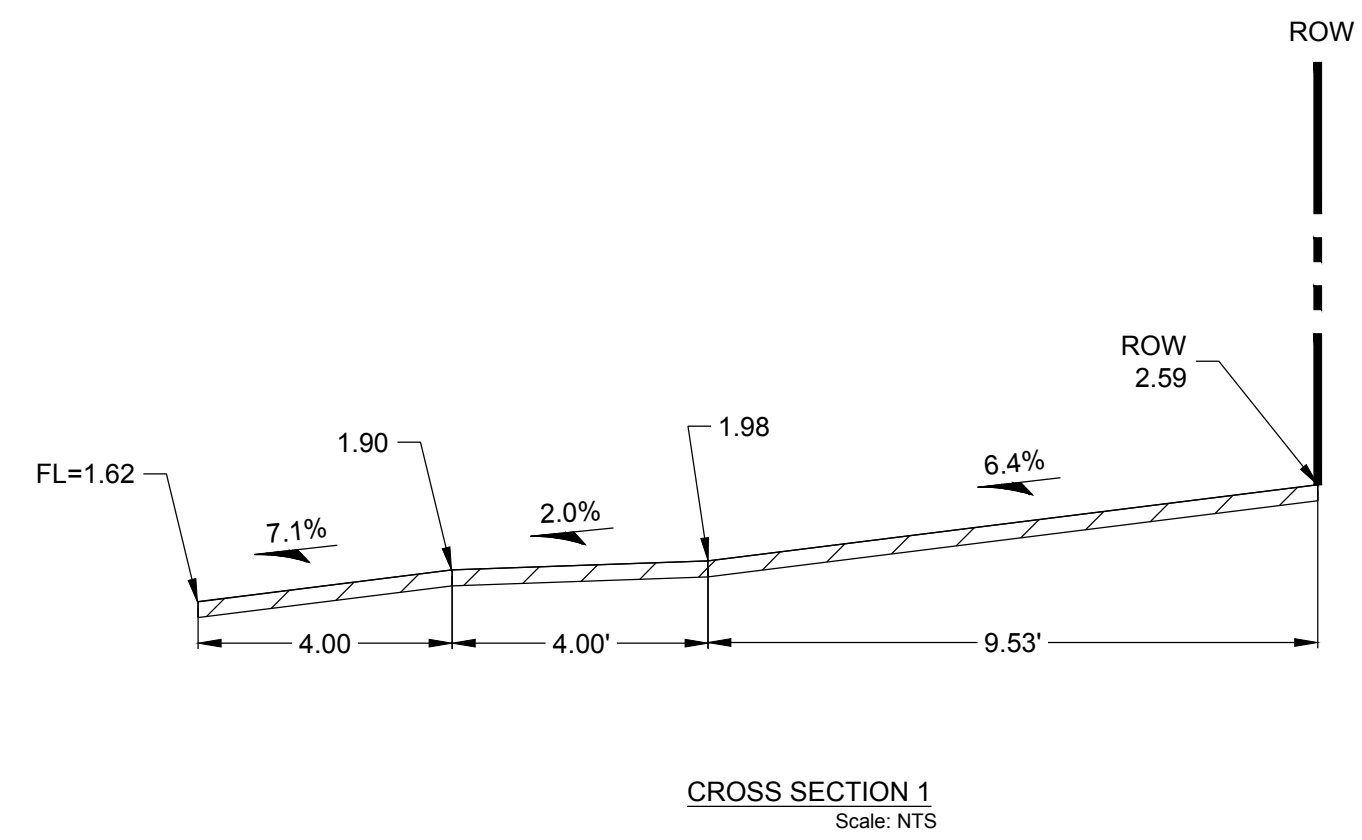
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PROJECT NAME: SHEET TITLE: SHEET NUMBER:	ALLASO LOUISIANA APARTMENTS GRADING DRB C-101



NAME: N:\Projects\W0110-Titan_Development\W0110-2102-Titan Alameda Louisiana Apartments\3. DWG\Sheets\C-102 GRADING.dwg PLOT DATE: Jan 12, 2022 3:39pm



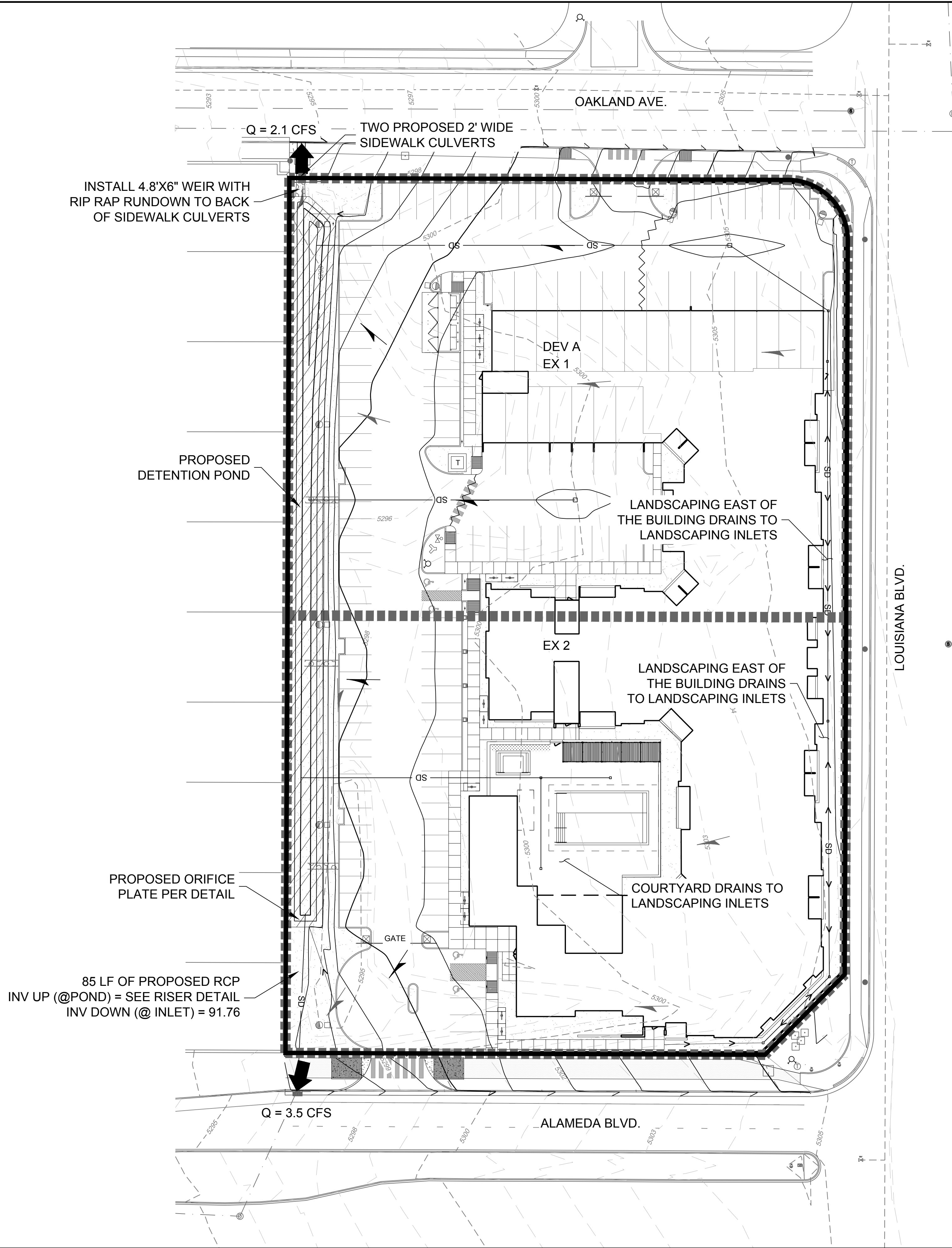
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PROJECT NAME: ALLASO LOUISIANA APARTMENTS			
SHEET TITLE: GRADING			
SHEET NUMBER: C-102			



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SHEET TITLE:		CROSS SECTION	
SHEET NUMBER:		DRB	

NAME: N:\Projects\W0110-Tian, Development\W0110-2102-Tian Alameda Louisiana Apartments3, DWG\Sheets\C-104 DRAINAGE.dwg PLOT DATE: Jan 13, 2022 8:56am

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DRAINAGE SUMMARY

Background
Lots 15-18, Block 28, Tract A, Unit B, North Albuquerque Acres are located at the northwest corner of Alameda Blvd. and Louisiana Blvd. in Albuquerque, New Mexico, and contain approximately 2.78 acres. The site is currently undeveloped and does not appear to receive offsite flows.

The proposed development is an approximately 108-unit apartment complex containing 1 building, an asphalt paved parking lot, and landscaping areas. The drainage intent under developed conditions is to reduce the developed stormwater discharge to below the levels specified in the approved "North Albuquerque Acres Master Drainage Plan" (Resource Technology, 1998).

Methodology
The assumptions and criteria including land treatment types and impervious areas as well as the hydrologic analysis for the site were performed in accordance with the city of Albuquerque Development Process Manual (DPM). AHYMO-S4 (April 2018) was used to develop peak flow rates for the 100-year 24-hour design storm in accordance with Section 6 of the DPM. Hydraulic calculations were performed per section 6 of the DPM.

Existing Conditions
The existing site is currently undeveloped with moderate vegetation and has mild slopes from east to west ranging from 0% to 15%. The existing flows appear to collect in small retention ponds and possibly against the privacy wall at the west property boundary and with eventual surface flow into Alameda Blvd to the south and Oakland Avenue to the north. The ponds do not appear to be sized to accommodate the 100-year 24-hour design storm. However, no signs of ponding against the west end retaining wall were visible at the time of site exploration.

The allowable discharge for the site is governed by the North Albuquerque Acres Master Drainage Plan (NAAMPD). Lots 15 and 16 (Basin EX 1) are within NAAMPD developed basin 117.2 while Lots 17-18 (Basin EX 2) are in developed basin 117.3. For developed basins 117.2 and 117.3, NAAMPD used land treatment percentages of 0% Type A, 34%, Type B, 16% Type C, and 50% Type D. These land treatments result in an allowable discharge of 4.6 cfs into Alameda Blvd and an additional 4.6 cfs into Oakland Blvd -- a total allowable discharge of 9.2 cfs for the site.

Proposed Conditions
In general, Basin DEV A will surface drain via sheet flow, concentrated gutter flows, and storm drain pipe towards the pond along the west portion of the site. Landscaping inlets will capture the flows on the east side of the building. All flows from the site will be directed into the pond. The pond will discharge to a stormdrain inlet in Alameda Blvd via an 18" reinforced concrete pipe with an orifice plate on the upstream end of the pipe. The pond will also discharge into Oakland Ave via a weir and two sidewalk culverts. The proposed stormwater discharge into Alameda Blvd and Oakland Ave is at or below the developed flows specified in the NAAMPD.

Water quality requirements will be met by retaining the required water quality volume in the pond below the orifice of the outlet pipe (see the pond riser detail). Calculations for the required water quality retention volume can be found on this sheet.

DRAINAGE CALCULATIONS

AHYMO INPUT: ALLOWABLE DISCHARGE (PER NAAMP)					
Subbasin	Area (ac)	Treatment Type Area (%)			
		A	B	C	D
EX 1	1.40	0.0%	34.0%	16.0%	50.0%
EX 2	1.38	0.0%	34.0%	16.0%	50.0%

AHYMO INPUT: PROPOSED CONDITIONS									
Subbasin	Area (ac)	Treatment Type Area (ac)				Treatment Type Area (%)			
		A	B	C	D	A	B	C	D
DEV A	2.78	0.00	0.31	0.31	2.16	0.0%	11.2%	11.2%	77.6%

Pond Routing Table (AHYMO Input)							
Elev.	Area (sq. ft.)	Vol (cu. ft.)	Cum. (cu. ft.)	Cum. (ac. ft.)	Orifice Outflow into Alameda Blvd (cfs)	Weir Outflow into Oakland Blvd (cfs)	Cum Outflow (cfs)
0.0	140	0	0	0.000	0.0	0	0.0
0.5	850	248	248	0.006	0.0	0	0.0
1.0	1910	690	938	0.022	0.0	0	0.0
1.5	2990	1225	2163	0.050	0.0	0	0.0
1.85	3760	1181	3344	0.077	0.0	0	0.0
2.0	4090	589	3933	0.090	1.5	0	1.5
2.5	5210	2325	6258	0.144	3.0	0	3.0
3.0	6340	2888	9145	0.210	4.1	4.6	8.6

Notes: The water quality volume retained in the pond is highlighted.

AHYMO OUTPUT: EXISTING CONDITIONS				
Subbasin	A (ac)	Q (cfs)	V (acft)	Q/A (cfs/ac)
EX 1	1.40	4.6	0.193	3.3
EX 2	1.38	4.6	0.190	3.3

AHYMO OUTPUT: PROPOSED CONDITIONS				
Subbasin	A (ac)	Q (cfs)	V (acft)	Q/A (cfs/ac)
DEV A	2.78	10.6	0.492	3.8
DEV A (ROUTED)	2.78	5.6	0.492	2.0

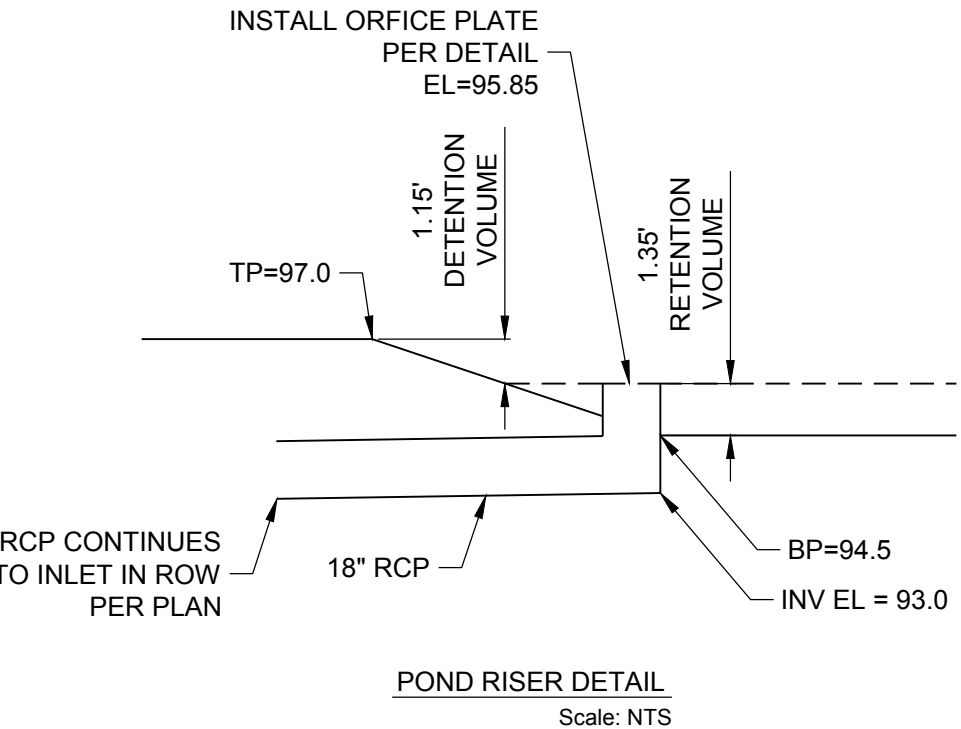
Maximum Storage and Discharge during the 100-year 24-hour Event				
Max. Water Surface Elev.	Max. Storage (ac. ft.)	Peak Discharge (cfs)		
		Orifice Discharge into Alameda Blvd	Weir Discharge into Oakland Blvd	Cum. Discharge
2.74	0.175	3.5	2.1	5.6

DRAINAGE SUMMARY		
Subbasin	Allowable (cfs)	Provided (cfs)
DEV A (ROUTED)	9.2	5.6

WATER QUALITY PONDING, DEV A				
Area (ac)	% Imp.	Imp. Area (ac)	WQ Depth (in)	Required WQ Vol (cu ft)
2.78	77.6%	2.16	0.42	3287
				Provided WQ Vol (cu ft)
				3344

LEGEND

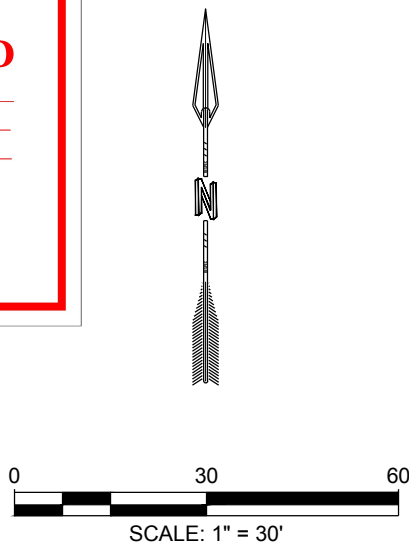
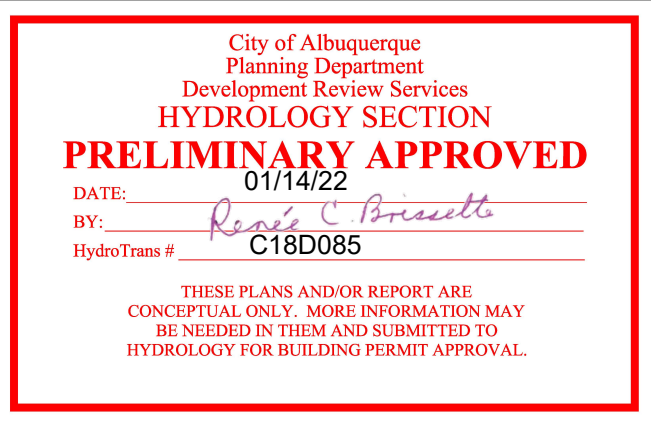
- PROPERTY LINE
- 5380 ----- EX CONTOUR MAJOR
- 5379 ----- EX CONTOUR MINOR
- 5380 ----- PROP CONTOUR MAJOR
- 5379 ----- PROP CONTOUR MINOR
- ===== EXISTING SUBBASIN PER NAAMPD
- ===== PROPOSED SUBBASIN
- ===== PROPOSED SWALE
- ===== EXISTING FLOW ARROW
- ===== PROPOSED FLOW ARROW
- ===== PROPOSED DISCHARGE LOCATION



POND RISER DETAIL
Scale: NTS

Orifice Flow Calcs: Pond Outfall Pipe		
Q _o = .6A ^{1/2} g ^{1/2} h		0.785
A = Open area of grate (sq. ft)		32.2
g = 32.2 (ft/s ²)		
h = Hydraulic head (ft)		
Q _o = Capacity (cfs)		
Pond Elev	Hydraulic Head (ft)	Capacity (cfs)
1.85	0	0.0
2.0	0.15	1.5
2.5	0.65	3.0
3.0	1.15	4.1

Weir Flow Calcs: Pond Spillway	
Q _w = 2.7P(h) ^{1.5}	
P = Perimeter (ft)	4.80
h = Head (ft)	0.5
2.7 = coefficient of discharge	
Q _w = Capacity (cfs)	4.6



DESIGNED JMS
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6971 Jefferson Street Suite 101
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STAMP
JESUS A. LOPEZ ANZA
NEW MEXICO
26361
PROFESSIONAL ENGINEER
01/12/2022
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Know what's below.
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PROJECT NAME:
ALLASO LOUISIANA
APARTMENTS

SHEET TITLE:
DRAINAGE

DRB

SHEET NUMBER:
C-104