CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

January 31, 2023

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM 87108

RE: Nuevo Atrisco – Tract B
Grading Plans & Drainage Report
Engineer's Stamp Date: 01/09/23
Hydrology File: K10D058

Dear Mr. Arfman:

Based upon the information provided in your submittal received 01/10/2023, the Grading Plans & Drainage Report are approved for Building Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

PRIOR TO CERTIFICATE OF OCCUPANCY:

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.
2. Please provide the executed paper Drainage Covenant (latest revision) printed on one-side only with Exhibit A and a check for **$25.00** made out to "**Bernalillo County**" for the stormwater quality ponds per Article 6-15(C) of the DPM to Hydrology for review at Plaza de Sol.
3. Please pay the Payment-in-Lieu of **$ 6,752.00** by emailing the attached approved Waiver Application from Stormwater Quality Volume Management On-site to PLNDRS@cabg.gov. Once this is received, a receipt will then produce and email back with instructions on how to pay online. Once paid, please email me proof of payment.

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 (Dough 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

PO Box 1293

Albuquerque

NM 87103

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City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

Project Title: Nuevo Atrisco **Building Permit #**_____ **Hydrology File #** K10D058
DRB# PR-2018-001405 **EPC#**_____
Legal Description: Tract B, Nuevo Atrisco City Address OR Parcel 7901 Central Ave. NW

Applicant/Agent: Isaacson & Arfman, Inc. **Contact:** Åsa Nilsson-Weber or Bryan J. Bobrick
Address: 128 Monroe Street NE **Phone:** (505) 268-8828
Email: asaw@iacivil.com or bryanb@iacivil.com

Applicant/Owner: City of Albuquerque **Contact:** _____
Address: _____ **Phone:** _____
Email: _____

TYPE OF DEVELOPMENT: ___PLAT (#of lots) __RESIDENCE __DRB SITE__X_ ADMIN SITE: ____
RE-SUBMITTAL: __X__YES _____ NO

DEPARTMENT: _____TRANSPORTATION _X__ HYDROLOGY/DRAINAGE
Check all that apply:

TYPE OF SUBMITTAL:

___ENGINEER/ARCHITECT CERTIFICATION
___PAD CERTIFICATION
___CONCEPTUAL G&D PLAN
_X_GRADING PLAN
_X_DRAINAGE REPORT
___DRAINAGE MASTER PLAN
___FLOOD PLAN DEVELOPMENT PERMIT APP.
___ELEVATION CERTIFICATE
___CLOMR/LOMR
___TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
___TRAFFIC CIRCULATION LAYOUT FOR DRB APPROVAL
___TRAFFIC IMPACT STUDY (TIS)
___STREET LIGHT LAYOUT
___OTHER (SPECIFY)
___PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_X_BUILDING PERMIT APPROVAL
___CERTIFICATE OF OCCUPANCY
___CONCEPTUAL TCL DRB APPROVAL
___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
___FLOOD PLAN DEVELOPMENT PERMIT
___OTHER (SPECIFY)_____

DATE SUBMITTED: January 9 2023

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
HYDROLOGY DEVELOPMENT SECTION

WAIVER APPLICATION FROM STORMWATER QUALITY VOLUME MANAGEMENT ON-SITE

GENERAL INFORMATION

APPLICANT: Isaacson & Arfman, Inc. DATE: 01/09/2023

DEVELOPMENT: Nuevo Atrisco

LOCATION: SW Corner of Central Ave. and Unser Blvd. SW

STORMWATER QUALITY POND VOLUME

Per the DPM Article 6-12 - Stormwater Quality and Low-Impact Development, the calculated sizing for required Stormwater Quality Pond volume is equal to the impervious area draining to the BMP multiplied by 0.42 inches for new development sites and by 0.26 inches for redevelopment sites.

The required volume is 2,434 cubic feet

The provided volume is 1,590 cubic feet

The deficient volume is 844 cubic feet

WAIVER JUSTIFICATION

Per the DPM Article 6-12(C), private off-site mitigation and payment-in-lieu may only be considered if management on-site is waived in accordance with the following criteria and procedures.

1. Management on-site shall be waived by the City Engineer if the following conditions are met:

a. Stormwater quality can be effectively controlled through private off-site mitigation or through an arrangement (approved by the City) to use a cooperator's existing regional stormwater management infrastructure or facilities that are available to control stormwater quality.
b. Any of the following conditions apply:
    i. The lot is too small to accommodate management on site while also accommodating the full plan of development.
    ii. The soil is not stable as demonstrated by a geotechnical report certified by a professional engineer licensed in the State of New Mexico.
    iii. The site use is inconsistent with the capture and reuse of stormwater.
    iv. Other physical conditions exist where compliance with on-site stormwater quality control leaves insufficient area.
    v. Public or private off-site facilities provide an opportunity to effectively accomplish the mitigation requirements of the Drainage Ordinance (Part 14-5-2 ROA 1994) as demonstrated on as-built construction drawings and an approved drainage report.
    vi. The developer constructs a project to replenish regional groundwater supplies at an off-site location.
    vii. A waiver to State water law or acquisition of water rights would be required in order to implement management on site.

2. The basis for requesting payment-in-lieu or private off-site mitigation is to be clearly demonstrated on the drainage plan.

This project's justification: Every reasonable effort has been made to provide stormwater quality volume within landscaped areas throughout the site.

Åsa Nilsson-Weber, P.E.

Professional Engineer or Architect

PAYMENT-IN-LIEU

Per the DPM Article 6-12(C)(1), the amount of payment-in-lieu is deficient volume (cubic feet) times $6 per cubic feet for detached single-family residential projects or $8 per cubic feet for all other projects.

AMOUNT OF PAYMENT-IN-LIEU = $ 6,752.00

THIS SECTION IS FOR CITY USE ONLY

[X] Waiver is approved. The amount of payment-in-lieu from above must be paid prior to Certificate of Occupancy.

[ ] Waiver is DENIED.

Renée C. Brissette 01/31/23

City of Albuquerque
Hydrology Section

JANUARY 9, 2023

Drainage Report

for

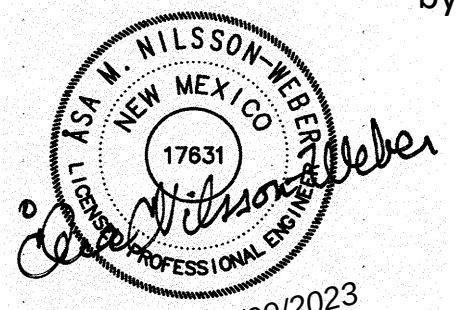
NUEVO ATRISCO

Tract B, Nuevo Atrisco
Central Ave. NW & Unser Blvd. NW
Albuquerque, NM

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/31/23
BY: René C. Brissette
HydroTrans # K10D058

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERROR OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

by



Isaacson & Arfman, Inc. EST 1980
Civil Engineering Consultants

128 Monroe Street NE
Albuquerque, NM 87108
505-268-8828 | www.iacivil.com

I&A Project No. 2470

PROJECT INFORMATION

LEGAL DESCRIPTION: TRACT B, NUEVO ATRISCO, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "9-K10", ELEVATION = 5117.72 FEET (NAVD 1988).

OFF-SITE FLOW: OFF-SITE FLOW FROM THE ADJACENT HOUSING PROJECT TO THE NORTH IS ROUTED THROUGH THIS PROPERTY WITHIN AN EXISTING STORM DRAIN SYSTEM WITH DRAINAGE EASEMENT. MINOR SURFACE FLOW IS ALSO ACCEPTED WITHIN A BLANKET DRAINAGE EASEMENT.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP 35001C0328J, MAP (REVISION DATE NOVEMBER 4, 2016), THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN. CENTRAL AVENUE ADJACENT TO THE PROPERTY IS ENCUMBERED BY ZONE AO (DEPTH 1').

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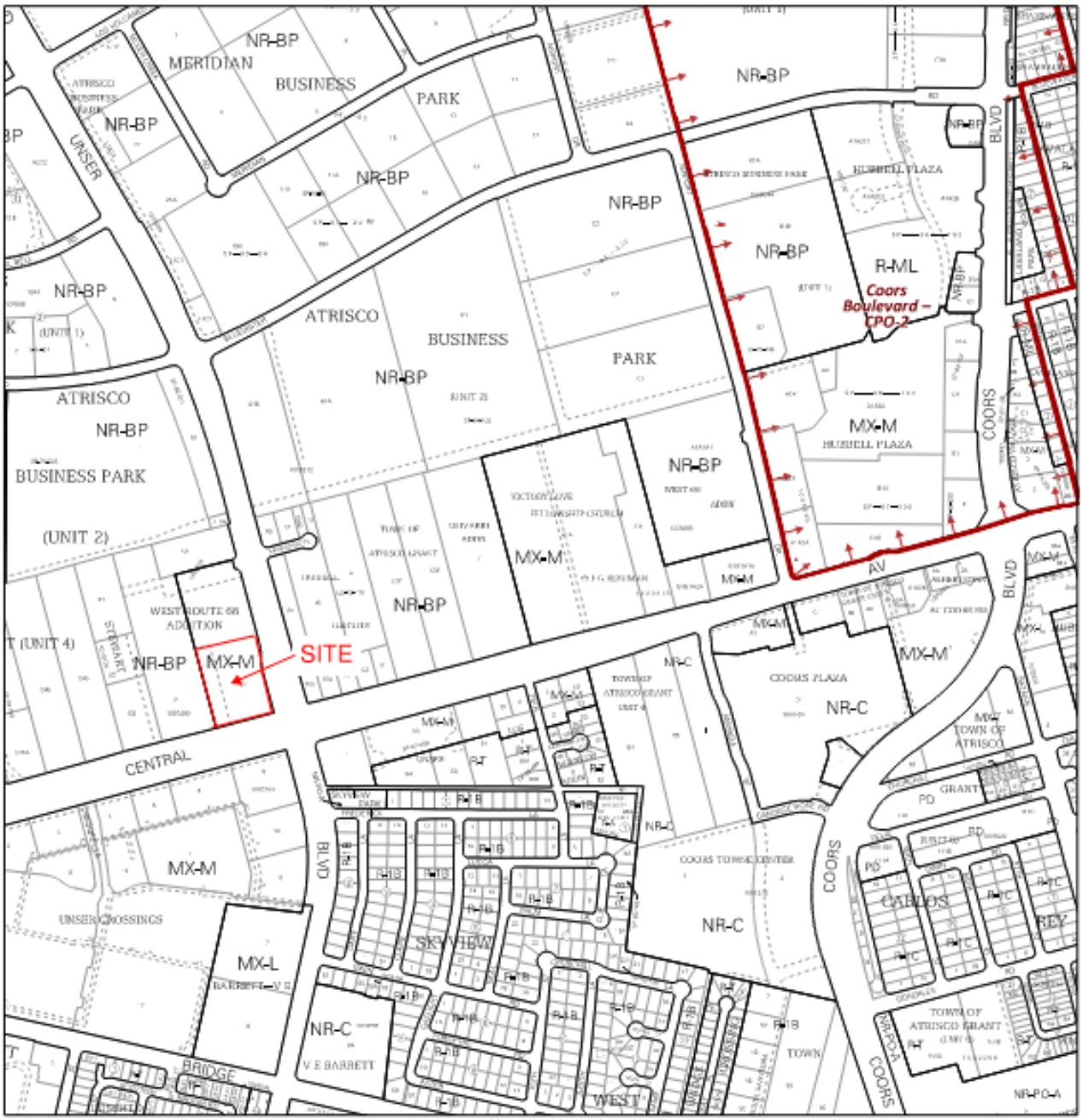


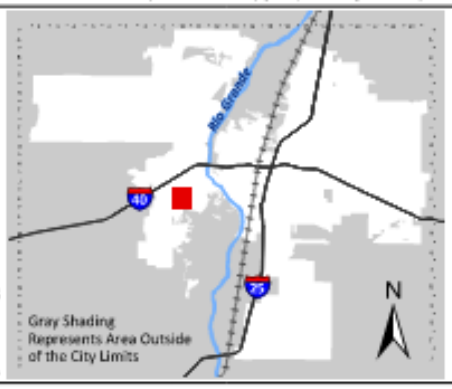
For more details about the Integrated Development Ordinance visit: http://www.cabq.gov/planning/codes-policies-regulations/integrated-development-ordinance

IDO Zone Atlas
May 2018

AGIS
Albuquerque Geographic Information System

IDO Zoning information as of May 17, 2018

The Zone Districts and Overlay Zones are established by the Integrated Development Ordinance (IDO).



Zone Atlas Page:

K-10-Z

- Easement
- Escarpment
- Petroglyph National Monument
- Areas Outside of City Limits
- Airport Protection Overlay (APO) Zone
- Character Protection Overlay (CPO) Zone
- Historic Protection Overlay (HPO) Zone
- View Protection Overlay (VPO) Zone

0 250 500 1,000 Feet

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth
	Regulatory Floodway Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	20.2 Cross Sections with 1% Annual Chance
	17.5 Water Surface Elevation
	Coastal Transect
	513 Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

N

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/28/2018 at 4:32:04 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

EXISTING CONDITIONS:

The site is a 3.1360-acre commercial property and is bound to the east by Unser Blvd, to the north and west by developed commercial property and to the south by Central Ave.

This property has previously been developed with structure(s) vehicle storage (see 2004 Google Earth image). In 2005, the property was mass graded and a paved parking lot constructed on a portion of the property (see 2018 Google Earth image). A storm drain system has been installed on this property with the development on the tract to the north.

Google Earth Image 2004

Google Earth Image 2018

DRAINAGE CRITERIA:

Per the 'West Central Ave. Frontage Road Complete Street Improvements' by WSP, with approval date 01/11/21 (COA HYDROLOGY FILE K09/D045), the property is located within sub-basin "TB212 LIBRARY". This report revises the land treatment percentages for allowable discharge from this site to 20% 'C', 80% 'D'. Per the AHYMO summary, 4.27 cfs per acre is the allowable discharge. See Appendix C for excerpts.

Storm drain improvements recently constructed (City Project No. 4383.91) includes a 48" storm drain provided for this site (passing flow under Central Avenue). The existing on-site storm drain system that was constructed with the commercial project to the north will be removed and relocated to accommodate the new site layout and will continue to drain to the system.

This property will be permitted a discharge rate of 13.4 cfs (4.27 cfs/ac. * 3.14 ac.)

PROPOSED CONDITIONS:

The proposed improvements include, commercial restaurant(s), retail/office, food park, parking, and landscaping.

A storm drain system has been installed on the site as part of the north commercial development (Tract A, Nuevo Atrisco) connecting to the Central Ave. storm drain. The storm drain shall be removed and relocated to fit the site layout.

Hydrology:

See Appendix A for a basin exhibit with basin summary table and calculations for the 100-year, 6-hour storm based on City of Albuquerque DPM, Article 6-2 Hydrology dated June 26, 2020.

The land treatments were calculated at 82% Type D and 18% Type B based on calculations performed in AutoCAD for the pervious areas as shown on the basin exhibit.

The developed discharge from this property is 11.9 cfs which is less than the 13.4 cfs allowable. Basins 1-4 and 7 will discharge 10.4 cfs to the new storm drain inlets and Basins 5 and 6 will discharge 1.5 cfs to Unser Blvd. and Central Ave.

Curb Openings:

See Appendix B for curb opening orifice and weir calculations and Appendix D for the grading plan.

Two-foot curb openings will be provided to accept water into the SWQ ponds in the medians throughout the site. Each curb opening has a capacity of accepting 2.3 cfs.

Storm Drain:

See Appendix B for storm drain calculations using Stormwater Studio 2021 software and Nyloplast inlet capacity charts and Appendix D sheet CG-502 for the storm drain layout.

Inlets with traffic rated grates in paved areas and domed grate in landscape areas will accept the flows into the new, re-routed storm drain system. This site will discharge 10.4 cfs and the north tract (Tract A, Nuevo Atrisco) will discharge 8.6 cfs to the storm drain system for a total of 19.0 cfs.

The onsite storm drain (8-in.-24-in.) will tie into a new manhole at an existing 48-inch rcp storm drain connecting to the Central Ave. storm drain system.

Storm Water Quality Volumes (SWQV):

See grading plan sheet CG-101 in Appendix D for SWQV pond calculations. For redevelopment sites, the City of Albuquerque SWQV is based on the 80th percentile storm event or 0.26".

A drainage covenant may be required for the SWQV ponds and other drainage improvements. If so, the original notarized form, Exhibit A and recording fee will be submitted.

CONCLUSIONS:

The following drainage-related improvements shall be constructed:

- Curb openings into SWQ ponds.
- SWQ ponds as shown on grading plan.
- Inlets with traffic rated grates in paved areas, domed grates in landscaped areas and pedestrian rated grates in the courtyard areas as shown on the storm drain plan.
- Storm drain system (8-in.-24-in. dia.) as shown on the storm drain plan.
- A 6-foot manhole at the connection to the existing 48-in. rcp storm drain.

APPENDIX A

BASIN MAP

DRAINAGE CALCULATIONS

NUEVO ATRISCO
BASIN EXHIBIT
10/20/2022

LAND TREATMENTS:
TOTAL AREA=136,601 SF
PERVIOUS AREA=24,284 SF
IMPERVIOUS AREA=112,317 SF

%B=18%
%D=82%

1"=60'

Allowable Discharge: 4.27 cfs/ac
Total allowable from site: 3.14 ac*4.27 cfs 13.4 cfs

Proposed Land Treatment: 18%B; 82%D

BASIN	AREA (SF)	AREA (AC)	Q100 (CFS)	TO STORM DRAIN (CFS)	TO OFFSITE (CFS)
1	37718	0.866	3.3	3.3	
2	15626	0.359	1.4	1.4	
3	36315	0.834	3.1	3.1	
4	26259	0.603	2.3	2.3	
5	3286	0.075	0.3		0.3
6	14046	0.322	1.2		1.2
7	3341	0.077	0.3	0.3	
TOTAL		3.136	11.9	10.4	1.50
			OK		

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Job Name:	**Nuevo Atrisco**
Client:	Maestas Development Group
Date Prepared:	7/22/2022
Date Modified:	10/19/2022
Precipitation Zone:	1

Stormwater Quality Multip: 0.26 (ENTER MULTIPLIER HERE)

For Zone 1

EA =	0.55	QpA =	1.54
EB =	0.73	QpB =	2.16
EC =	0.95	QpC =	2.87
ED =	2.24	QpD =	4.12

BASIN NO. 1 — **DESCRIPTION** — TO SD

Area of basin flows = 37718 SF = 0.87 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 6186 CF

Sub-basin Peak Discharge Rate:
Q_P = 3.3 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
670 CF

BASIN NO. 2 — **DESCRIPTION** — TO SD

Area of basin flows = 15626 SF = 0.36 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 2563 CF

Sub-basin Peak Discharge Rate:
Q_P = 1.4 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
278 CF

BASIN NO. 3 — **DESCRIPTION** — TO SD

Area of basin flows = 36315 SF = 0.83 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 5956 CF

Sub-basin Peak Discharge Rate:
Q_P = 3.1 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
645 CF

BASIN NO. 4 — **DESCRIPTION** — TO SD

Area of basin flows = 26259 SF = 0.60 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 4307 CF

Sub-basin Peak Discharge Rate:
Q_P = 2.3 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
467 CF

BASIN NO. 5 — **DESCRIPTION** — TO OFFSITE

Area of basin flows = 3286 SF = 0.08 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 539 CF

Sub-basin Peak Discharge Rate:
Q_P = 0.3 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
58 CF

BASIN NO. 6 — **DESCRIPTION** — TO OFFSITE

Area of basin flows = 14046 SF = 0.32 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 2304 CF

Sub-basin Peak Discharge Rate:
Q_P = 1.2 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
250 CF

BASIN NO. 7 — **DESCRIPTION** — TO SD

Area of basin flows = 3341 SF = 0.08 Ac.

The following calculations are based on Treatment %'s as shown in table to the right

Sub-basin Weighted Excess Precipitation:
Weighted E = 1.97 in.

Sub-basin Volume of Runoff:
V_{360} = 548 CF

Sub-basin Peak Discharge Rate:
Q_P = 0.3 cfs

LAND TREATMENT
A = 0%
B = 18%
C = 0%
D = 82%

Stormwater Quality Volume
59 CF

APPENDIX B

STORM DRAIN CALCULATIONS

INLET CAPACITY CHARTS

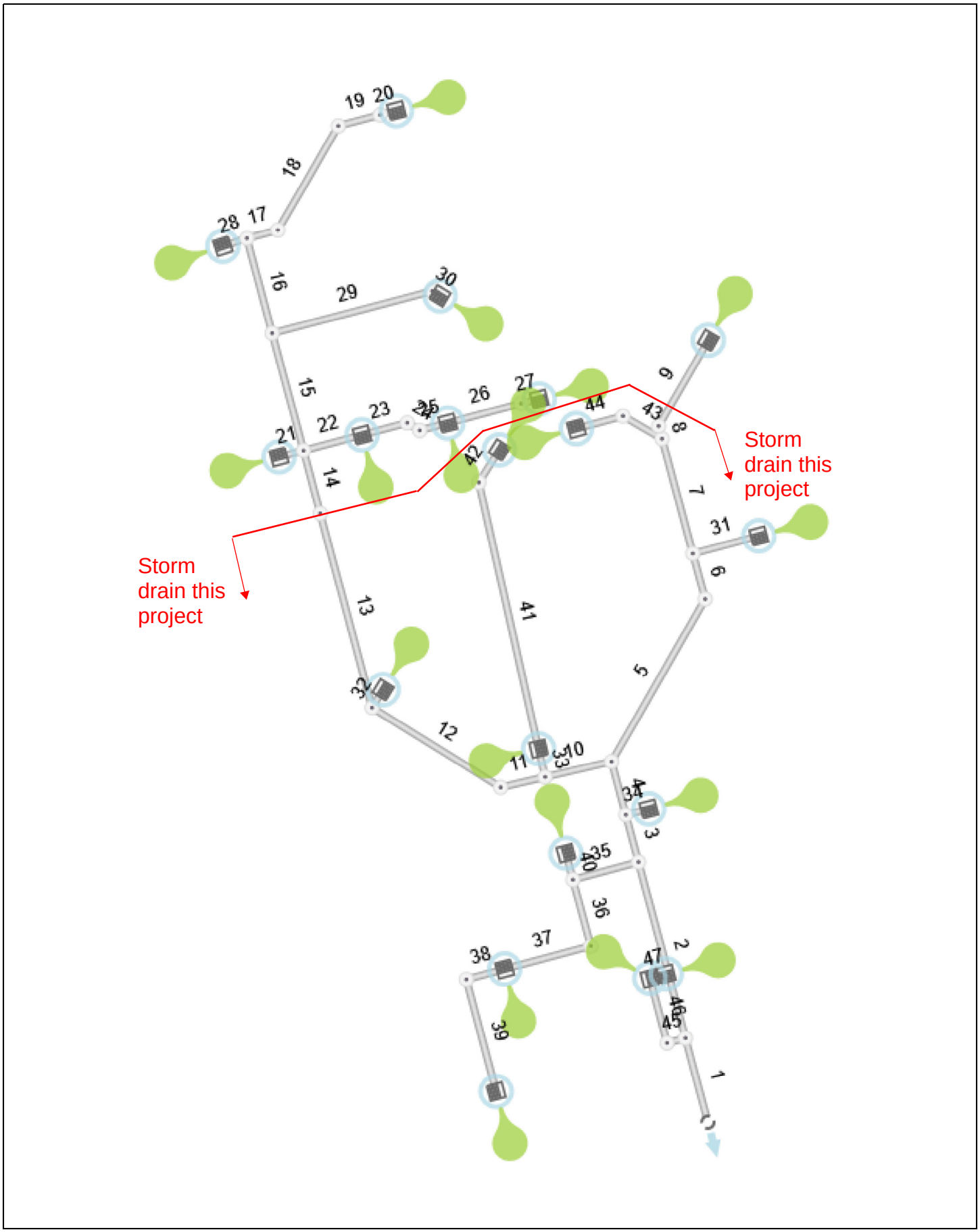
CURB OPENING CAPACITY CALCULATION

Plan View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-18-2022



Energy Grade Line Calculations

Project Name: NUEVO ATRISCO SD

Stormwater Studio 2021 v 3.0.0.25

10-21-2022

Line No	Line Size	Q	Downstream							Length	Upstream							Pipe		Junction		
			Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev		Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev	n Value	Enrgy Loss	HGLa Elev	EGLa Elev	Enrgy Loss
	(in)	(cfs)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
1	48	19.00	5093.60	2.20	7.08	5095.80	2.68	0.11	5095.91	56.90	5094.00	1.75	5.30	5095.75	3.58	0.20	5095.95	0.012	0.042	5095.80	5096.00	0.04
2	24	18.70	5094.00	1.67	2.80	5095.67	6.69	0.70	5096.36	119.00	5094.83	1.53[2]	2.58	5096.36	7.24	0.82	5097.18	0.012	0.816	5096.36	5097.18	0.00
3	24	16.40	5094.83	2.00	3.14	5096.92	5.22	0.42	5097.35	15.91	5094.94	2.00	3.14	5097.00	5.22	0.42	5097.42	0.012	0.071	5097.14	5097.56	0.14
4	24	13.30	5095.05	2.00	3.14	5097.39	4.23	0.28	5097.67	51.99	5095.30	2.00	3.14	5097.55	4.23	0.28	5097.83	0.012	0.153	5097.75	5098.03	0.21
5	18	4.40	5095.30	1.50	1.77	5097.97	2.49	0.10	5098.07	122.50	5096.53	1.50	1.77	5098.16	2.49	0.10	5098.25	0.012	0.183	5098.21	5098.30	0.05
6	18	4.40	5096.53	1.50	1.77	5098.25	2.49	0.10	5098.34	31.10	5096.83	1.46	1.75	5098.29	2.51	0.10	5098.39	0.012	0.044	5098.32	5098.42	0.04
7	12	3.40	5096.83	1.00	0.79	5098.25	4.33	0.29	5098.54	77.59	5097.57	1.00	0.79	5098.85	4.33	0.29	5099.14	0.012	0.603	5098.92	5099.21	0.07
8	12	3.00	5097.57	1.00	0.79	5099.08	3.82	0.23	5099.30	8.51	5097.65	1.00	0.79	5099.13	3.82	0.23	5099.35	0.012	0.052	5099.25	5099.48	0.12
9	12	3.00	5097.65	1.00	0.79	5099.34	3.82	0.23	5099.57	64.90	5099.00	0.73[2]	0.62	5099.73	4.85	0.37	5100.10	0.012	0.531	5099.73	5100.10	0.00
10	24	8.90	5095.30	2.00	3.14	5097.96	2.83	0.12	5098.08	50.99	5095.61	2.00	3.14	5098.02	2.83	0.12	5098.15	0.012	0.067	5098.07	5098.19	0.05
11	18	6.70	5095.61	1.50	1.77	5098.06	3.79	0.22	5098.28	23.31	5095.75	1.50	1.77	5098.14	3.79	0.22	5098.37	0.012	0.081	5098.26	5098.49	0.12
12	18	6.70	5095.75	1.50	1.77	5098.35	3.79	0.22	5098.58	99.00	5096.34	1.50	1.77	5098.70	3.79	0.22	5098.92	0.012	0.344	5098.83	5099.05	0.13
13	18	5.60	5096.34	1.50	1.77	5098.96	3.17	0.16	5099.11	131.30	5097.10	1.50	1.77	5099.28	3.17	0.16	5099.43	0.012	0.318	5099.31	5099.46	0.03
14	18	5.60	5097.10	1.50	1.77	5099.37	3.17	0.16	5099.53	42.45	5097.70	1.50	1.77	5099.47	3.17	0.16	5099.63	0.012	0.103	5099.54	5099.69	0.06
15	12	3.90	5097.70	1.00[3]	0.79	5099.46	4.97	0.38	5099.85	79.48	5098.40	1.00	0.79	5100.28	4.97	0.38	5100.66	0.012	0.813	5100.41	5100.79	0.13
16	12	3.10	5098.40	1.00	0.79	5100.65	3.95	0.24	5100.89	64.00	5099.00	1.00	0.79	5101.06	3.95	0.24	5101.30	0.012	0.414	5101.27	5101.51	0.21
17	8	0.80	5099.00	0.67	0.35	5101.46	2.29	0.08	5101.54	20.92	5099.50	0.67	0.35	5101.54	2.29	0.08	5101.62	0.012	0.078	5101.58	5101.66	0.04
18	8	0.80	5099.50	0.67	0.35	5101.61	2.29	0.08	5101.70	78.80	5101.20	0.66	0.35	5101.86	2.30	0.08	5101.94	0.012	0.247	5101.91	5101.99	0.05
19	8	0.80	5101.20	0.67	0.35	5101.94	2.29	0.08	5102.02	28.29	5101.80	0.42[2]	0.23	5102.22	3.44	0.18	5102.41	0.012	0.385	5102.22	5102.41	0.00
20	8	0.80	5101.80	0.35‡	0.19	5102.15	4.29	0.29	5102.43	10.93	5102.00	0.42[2]	0.23	5102.42	3.44	0.18	5102.61	0.012	0.174	5102.42	5102.61	0.00
21	12	0.90	5097.70	1.00	0.79	5099.68	1.15	0.02	5099.70	16.52	5098.00	1.00	0.79	5099.69	1.15	0.02	5099.71	0.012	0.009	5099.71	5099.73	0.02
22	8	0.80	5097.70	0.67	0.35	5099.65	2.29	0.08	5099.73	39.52	5098.00	0.67	0.35	5099.79	2.29	0.08	5099.88	0.012	0.148	5099.84	5099.92	0.04

Notes: Return Period = 100-yrs. [2] Critical depth. [3] Normal depth. ‡ Supercritical.

Project File: 2470 SD.sws

Energy Grade Line Calculations

Project Name: NUEVO ATRISCO SD

Stormwater Studio 2021 v 3.0.0.25

10-21-2022

Line No	Line Size	Q	Downstream							Length	Upstream							Pipe		Junction		
			Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev		Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev	n Value	Enrgy Loss	HGLa Elev	EGLa Elev	Enrgy Loss
	(in)	(cfs)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
23	8	0.60	5098.00	0.67	0.35	5099.89	1.72	0.05	5099.94	30.52	5098.30	0.67	0.35	5099.96	1.72	0.05	5100.00	0.012	0.064	5099.98	5100.03	0.03
24	8	0.60	5098.30	0.67	0.35	5100.00	1.72	0.05	5100.05	9.52	5098.40	0.67	0.35	5100.02	1.72	0.05	5100.07	0.012	0.020	5100.05	5100.09	0.03
25	8	0.60	5098.40	0.67	0.35	5100.06	1.72	0.05	5100.11	18.95	5098.60	0.67	0.35	5100.10	1.72	0.05	5100.15	0.012	0.040	5100.15	5100.19	0.04
26	8	0.30	5098.60	0.67	0.35	5100.19	0.86	0.01	5100.20	49.56	5099.10	0.67	0.35	5100.21	0.86	0.01	5100.22	0.012	0.026	5100.21	5100.23	0.00
27	8	0.30	5099.10	0.67	0.35	5100.22	0.86	0.01	5100.23	12.20	5099.20	0.67	0.35	5100.22	0.86	0.01	5100.24	0.012	0.006	5100.24	5100.25	0.02
28	12	2.30	5099.00	1.00	0.79	5101.43	2.93	0.13	5101.56	16.50	5099.50	1.00	0.79	5101.49	2.93	0.13	5101.62	0.012	0.059	5101.55	5101.68	0.06
29	8	0.80	5098.40	0.67	0.35	5100.74	2.29	0.08	5100.83	108.10	5100.00	0.67	0.35	5101.15	2.29	0.08	5101.23	0.012	0.404	5101.19	5101.27	0.04
30	8	0.80	5100.00	0.67	0.35	5101.23	2.29	0.08	5101.31	5.90	5100.20	0.67	0.35	5101.25	2.29	0.08	5101.33	0.012	0.022	5101.35	5101.44	0.11
31	8	1.00	5096.74	0.67	0.35	5098.35	2.87	0.13	5098.47	44.59	5097.50	0.67	0.35	5098.61	2.86	0.13	5098.73	0.012	0.261	5098.70	5098.83	0.09
32	8	1.10	5096.34	0.24‡	0.11	5096.58	9.94	1.54	5099.11	13.70	5099.00	0.49²	0.28	5099.49	3.96	0.24	5099.74	0.012	0.625	5099.49	5099.74	0.00
33	8	2.20	5095.61	0.67	0.35	5097.82	6.30	0.62	5098.44	20.08	5097.44	0.67	0.35	5098.39	6.30	0.62	5099.01	0.012	0.568	5098.62	5099.24	0.23
34	12	3.10	5095.05	1.00	0.79	5097.42	3.95	0.24	5097.66	15.52	5095.60	1.00	0.79	5097.52	3.95	0.24	5097.76	0.012	0.100	5097.60	5097.84	0.09
35	12	2.30	5095.33	1.00	0.79	5097.10	2.93	0.13	5097.23	44.29	5095.72	1.00	0.79	5097.26	2.93	0.13	5097.39	0.012	0.158	5097.37	5097.50	0.11
36	12	1.60	5095.72	1.00	0.79	5097.46	2.04	0.06	5097.53	45.36	5096.11	1.00	0.79	5097.54	2.04	0.06	5097.61	0.012	0.078	5097.59	5097.66	0.05
37	12	1.60	5096.11	1.00	0.79	5097.62	2.04	0.06	5097.68	58.29	5096.62	1.00	0.79	5097.72	2.04	0.06	5097.78	0.012	0.100	5097.77	5097.83	0.04
38	8	0.10	5096.62	0.67	0.35	5097.83	0.29	0.00	5097.83	25.83	5096.84	0.67	0.35	5097.83	0.29	0.00	5097.83	0.012	0.001	5097.83	5097.83	0.00
39	8	0.10	5096.84	0.67	0.35	5097.83	0.29	0.00	5097.83	76.20	5097.50	0.34	0.18	5097.84	0.56	0.00	5097.84	0.012	0.009	5097.84	5097.85	0.00
40	8	0.70	5095.72	0.67	0.35	5097.46	2.01	0.06	5097.53	17.78	5095.87	0.67	0.35	5097.51	2.01	0.06	5097.58	0.012	0.051	5097.54	5097.61	0.03
41	8	1.20	5097.40	0.67	0.35	5099.13	3.44	0.18	5099.31	177.59	5099.90	0.67	0.35	5100.88	3.44	0.18	5101.07	0.013	1.754	5101.00	5101.18	0.11
42	8	1.20	5099.90	0.67	0.35	5101.07	3.44	0.18	5101.26	45.00	5100.48	0.67	0.35	5101.52	3.44	0.18	5101.70	0.013	0.444	5101.64	5101.82	0.12
43	8	0.40	5097.57	0.67	0.35	5099.20	1.15	0.02	5099.22	29.39	5100.00	0.30	0.15	5100.30	2.65	0.11	5100.41	0.012	1.186	5100.30	5100.41	0.00
44	8	0.40	5100.00	0.22‡	0.10	5100.22	4.05	0.26	5100.41	31.46	5100.70	0.30	0.15	5101.00	2.65	0.11	5101.11	0.012	0.694	5101.00	5101.11	0.00

Notes: Return Period = 100-yrs. ² Critical depth. ‡ Supercritical.

Project File: 2470 SD.sws

Energy Grade Line Calculations

Project Name: NUEVO ATRISCO SD

Stormwater Studio 2021 v 3.0.0.25

10-21-2022

Line No	Line Size	Q	Downstream							Length	Upstream							Pipe		Junction		
			Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev		Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev	n Value	Enrgy Loss	HGLa Elev	EGLa Elev	Enrgy Loss
	(in)	(cfs)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
45	8	0.30	5094.00	0.67	0.35	5095.99	0.86	0.01	5096.00	10.40	5094.26	0.67	0.35	5095.99	0.86	0.01	5096.01	0.012	0.005	5096.00	5096.02	0.01
46	8	0.30	5094.26	0.67	0.35	5096.01	0.86	0.01	5096.02	60.51	5095.79	0.29	0.14	5096.08	2.10	0.07	5096.15	0.012	0.124	5096.11	5096.18	0.03
47	8	0.15	5095.78	0.14‡	0.05	5095.92	2.83	0.12	5096.18	8.14	5095.99	0.18	0.08	5096.17	1.91	0.06	5096.23	0.012	0.052	5096.23	5096.29	0.06

Notes: Return Period = 100-yrs. ‡ Supercritical.

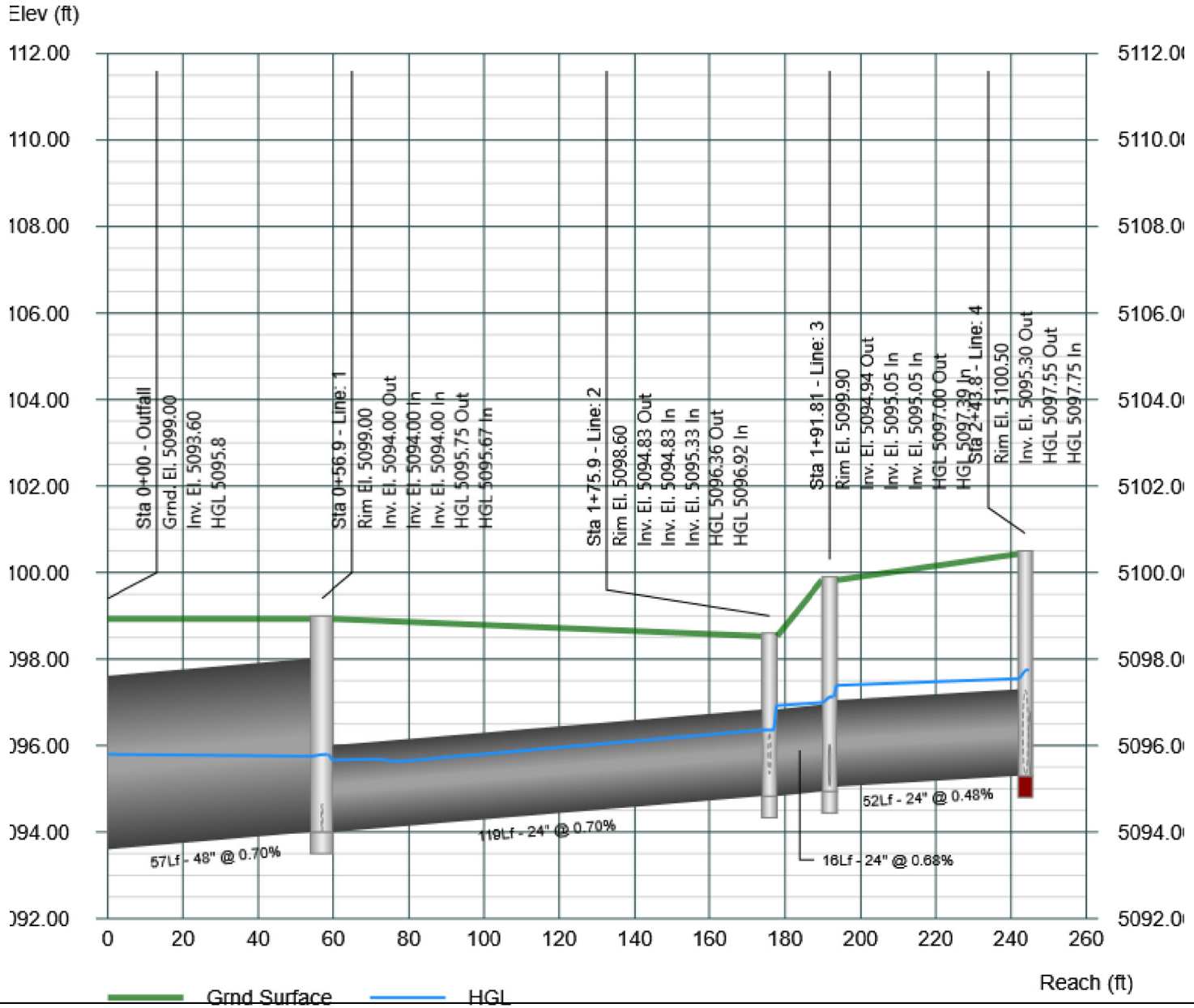
Project File: 2470 SD.sws

Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022

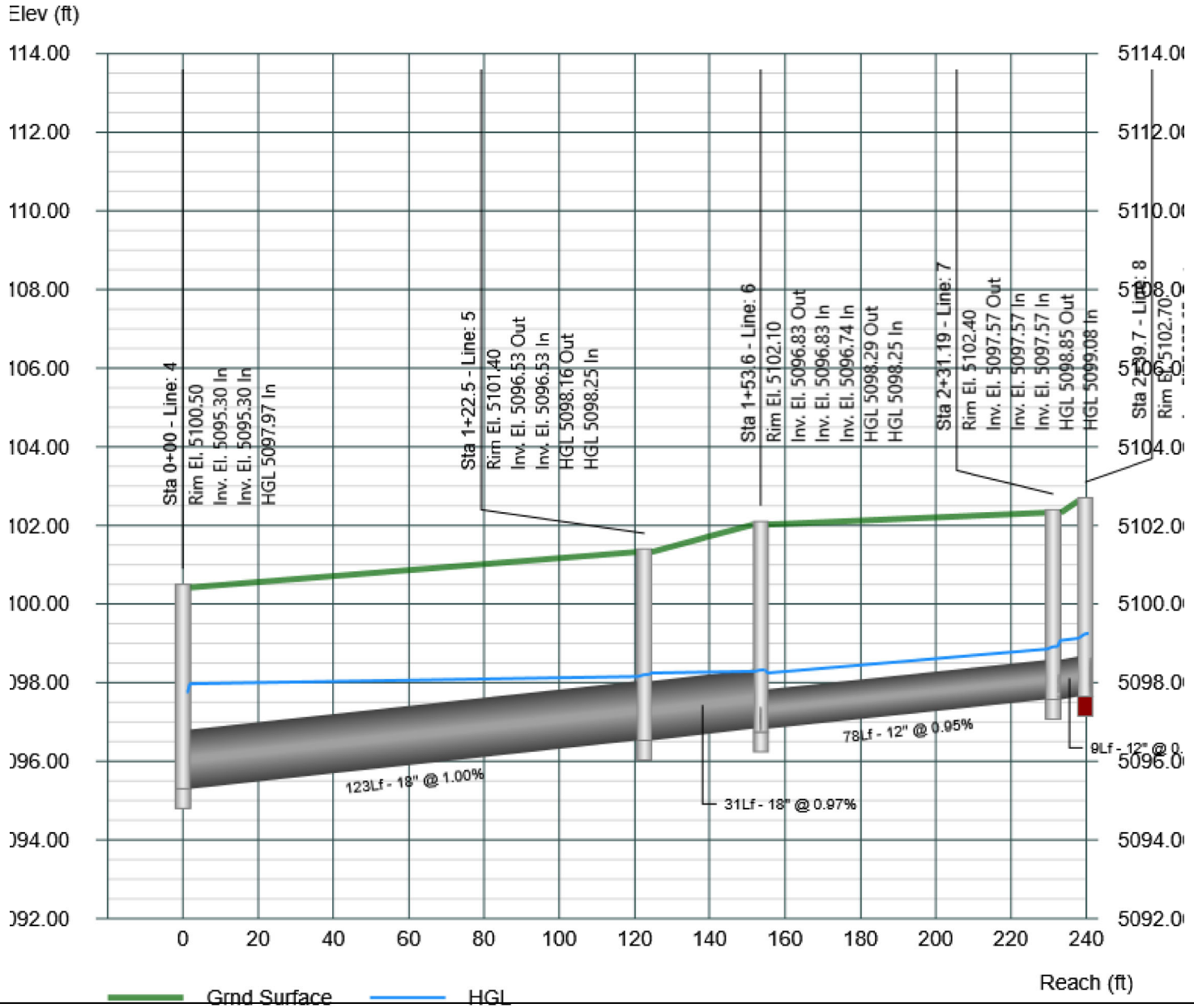


Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



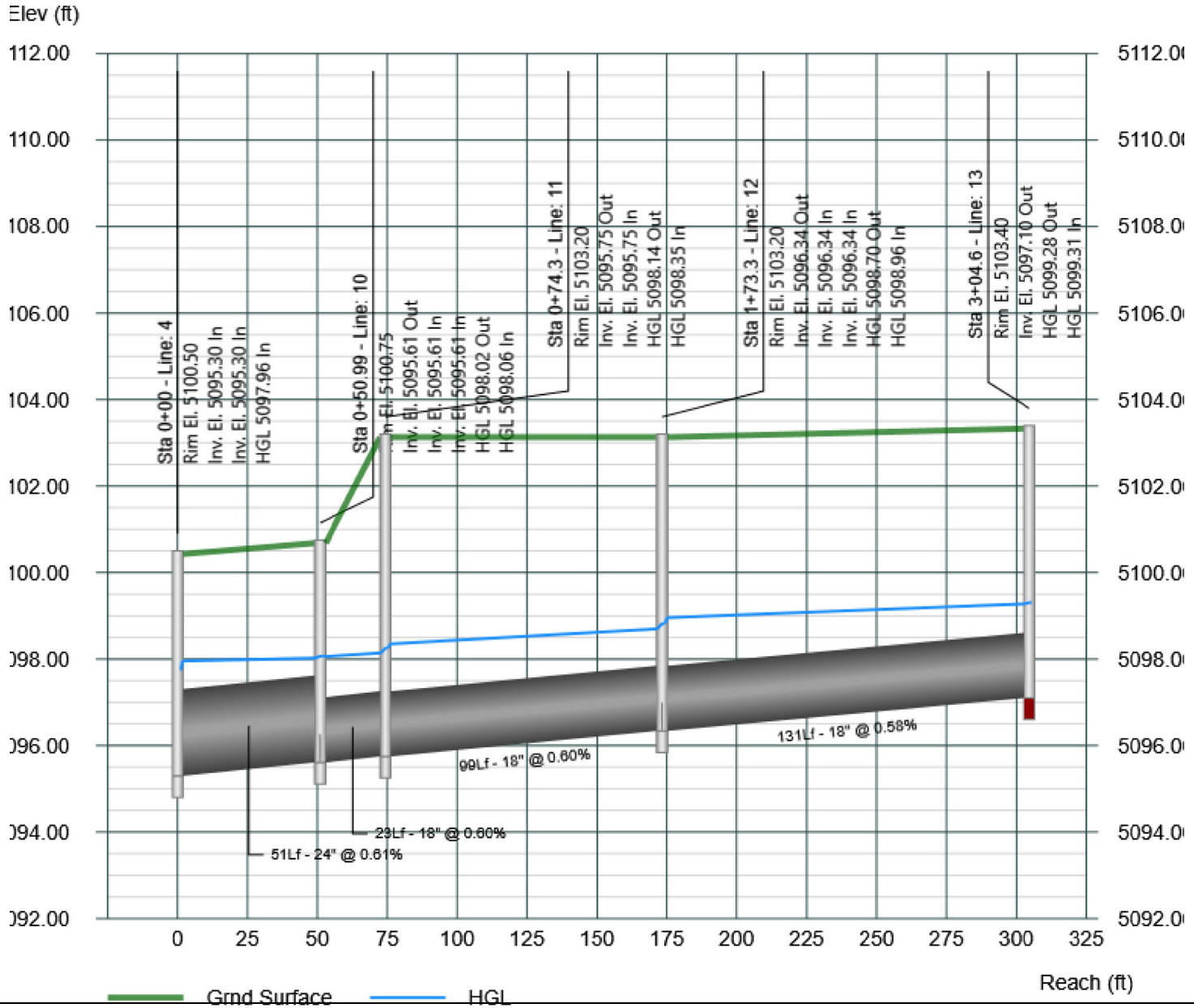
Project File: 2470 SD.sws

Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



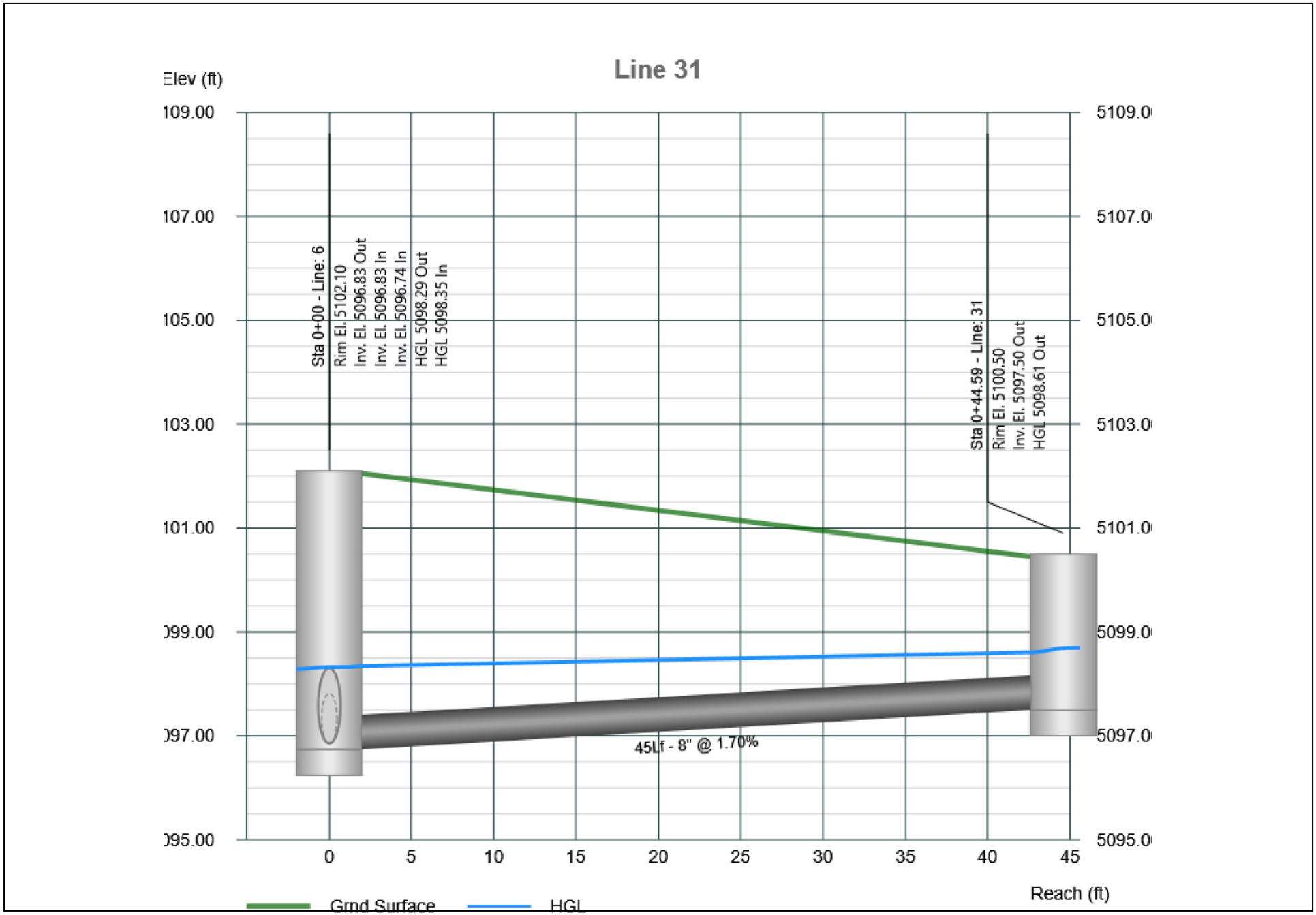
Project File: 2470 SD.sws

Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022

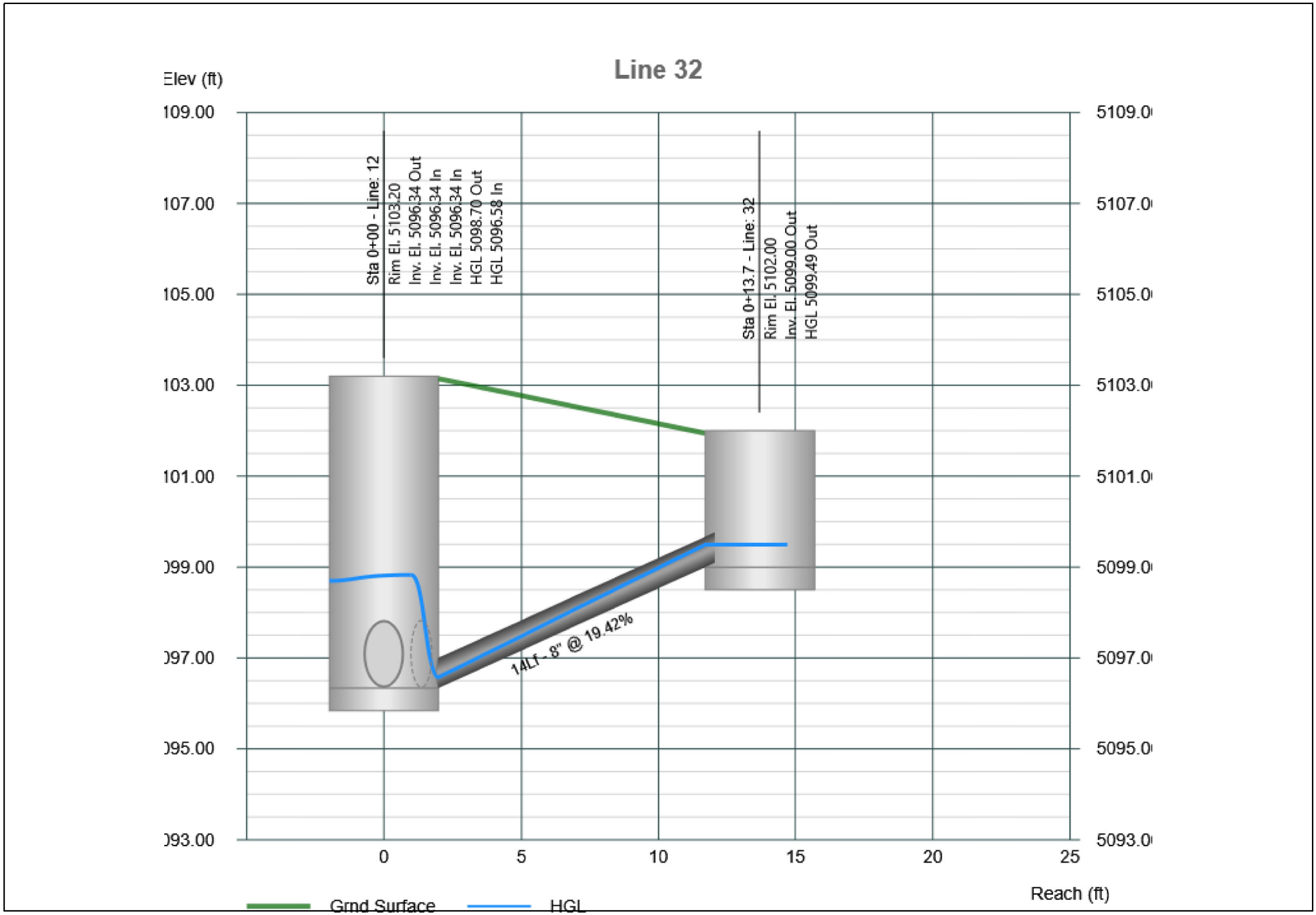


Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022

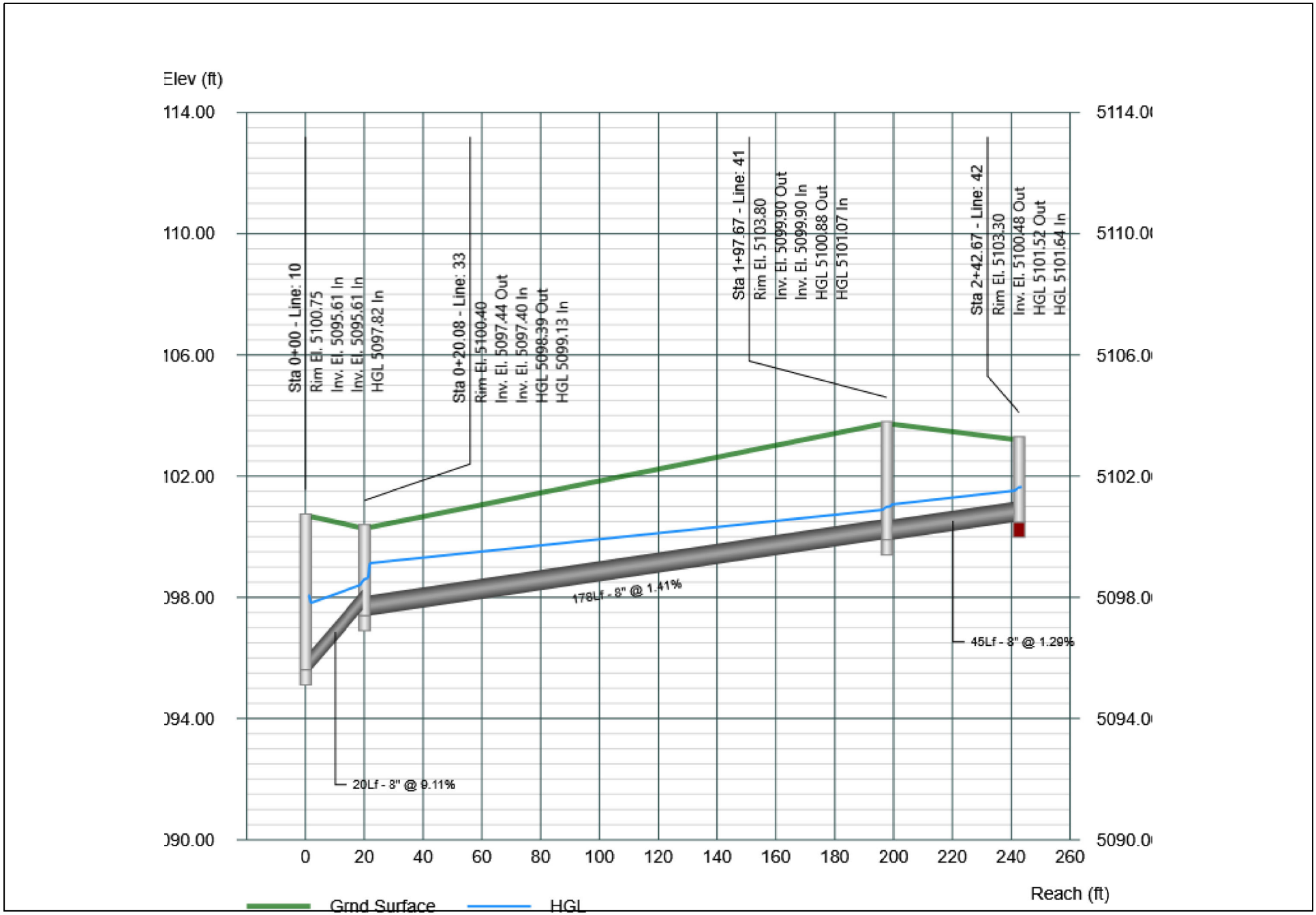


Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



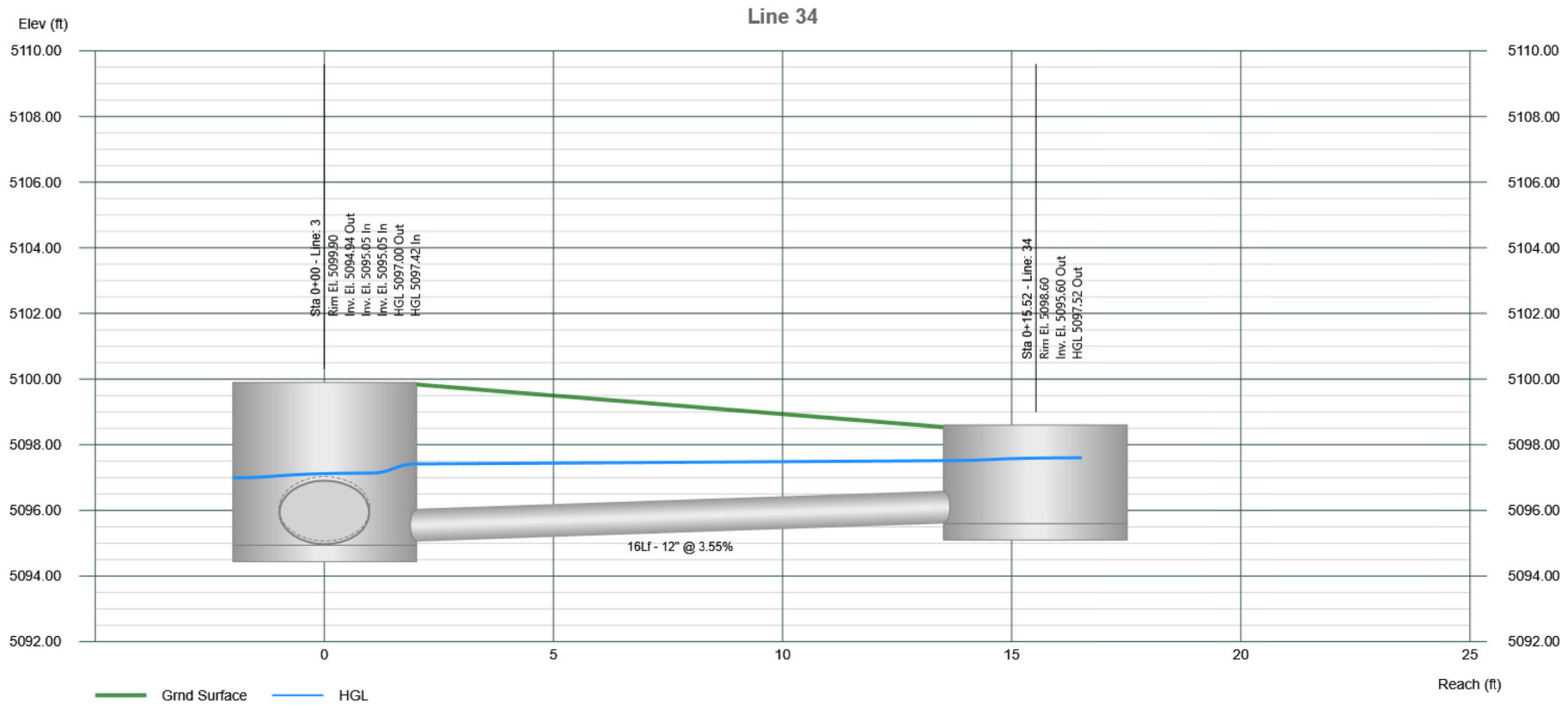
Project File: 2470 SD.sws

Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022

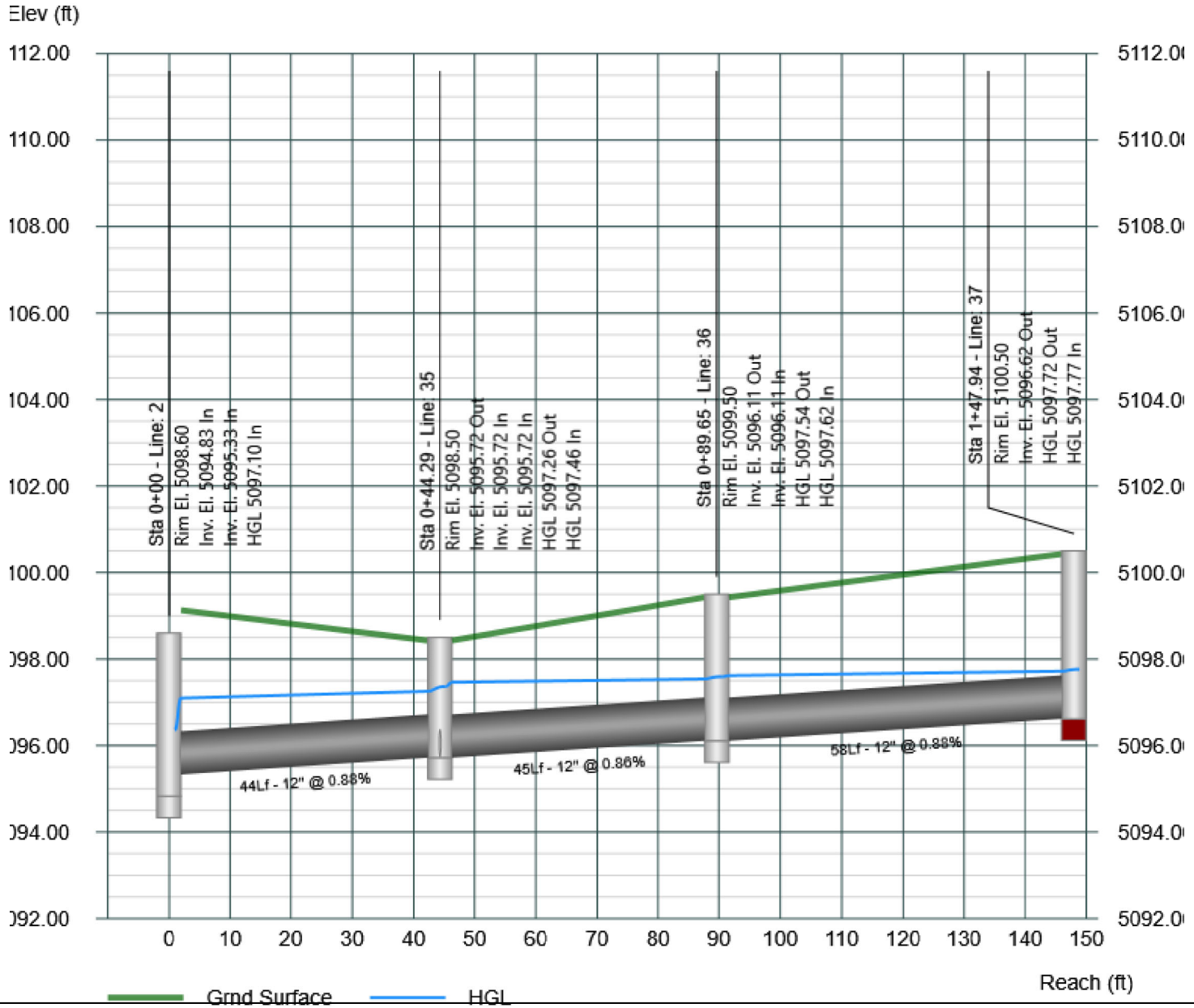


Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



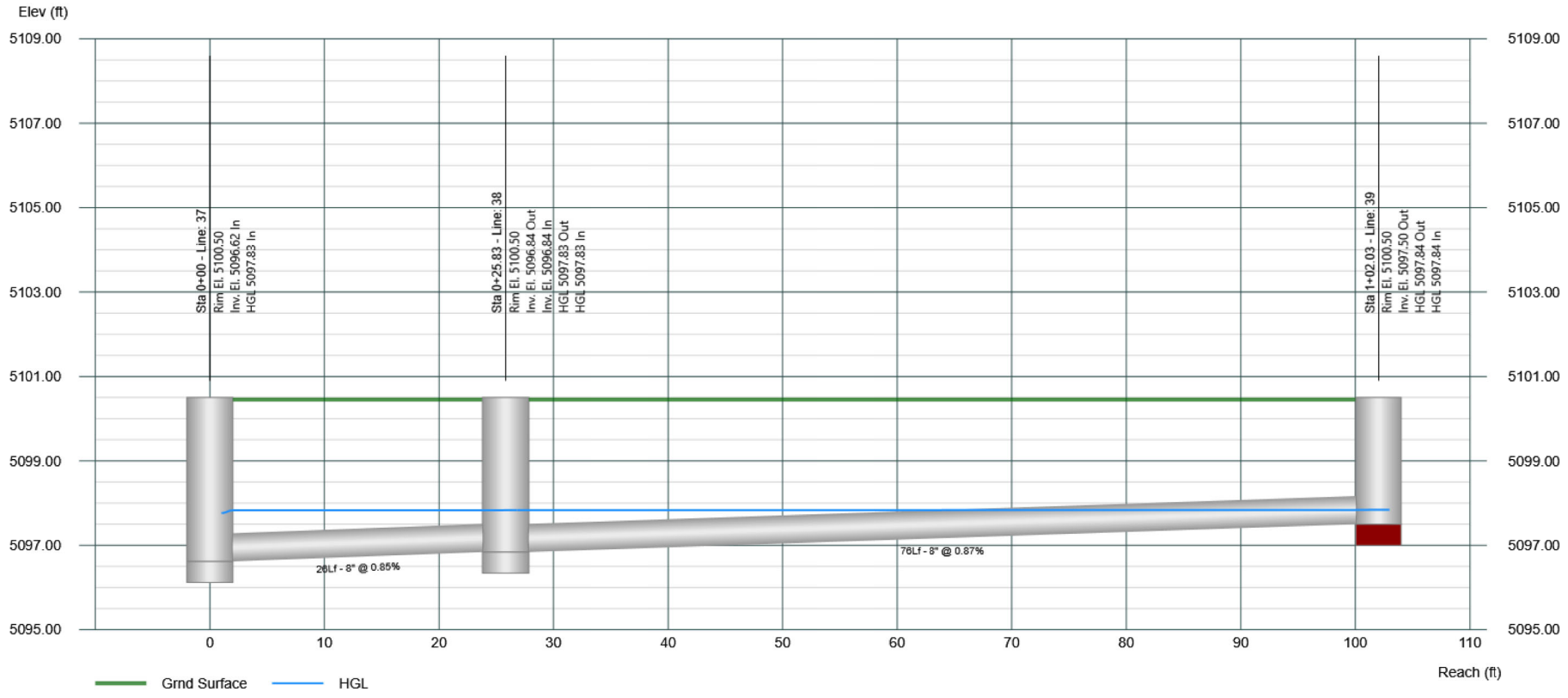
Project File: 2470 SD.sws

Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022

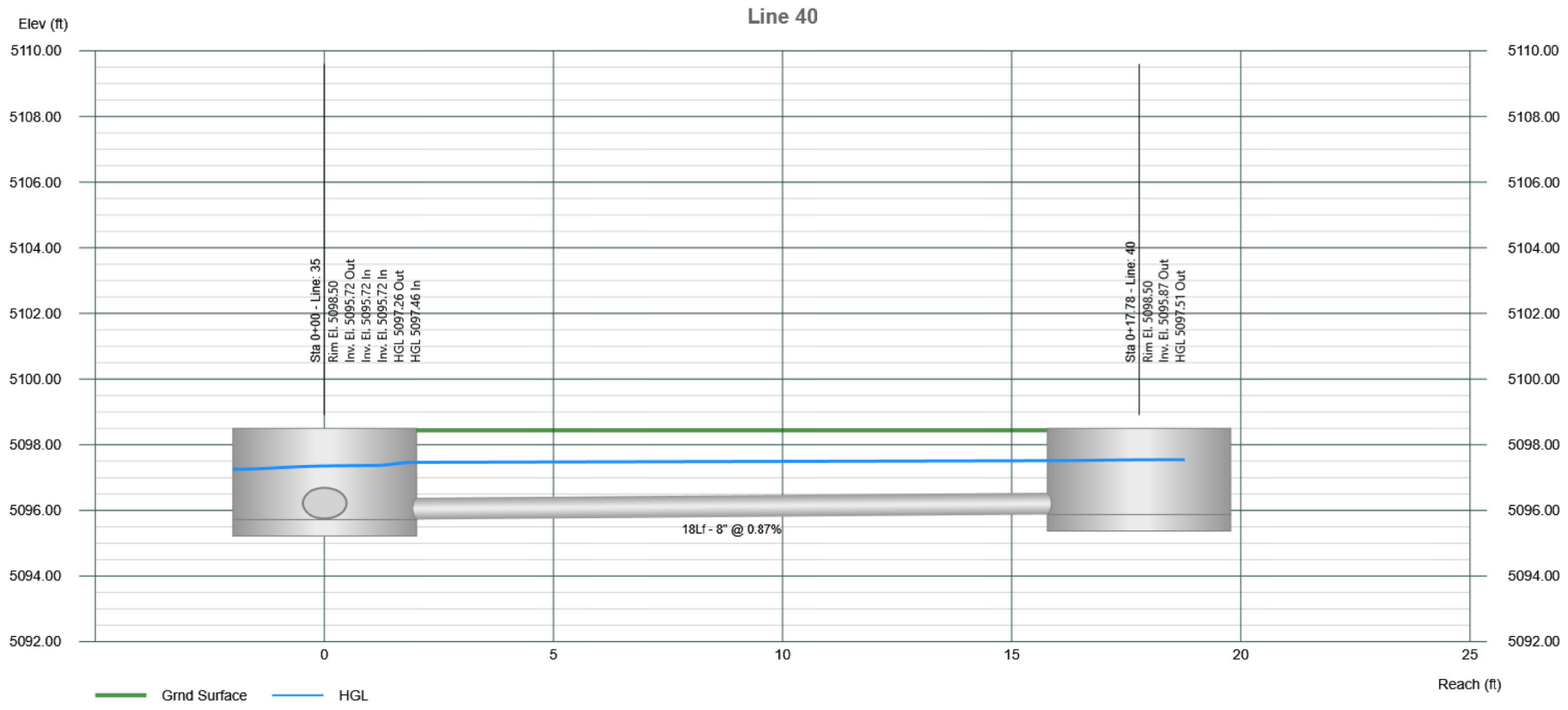


Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



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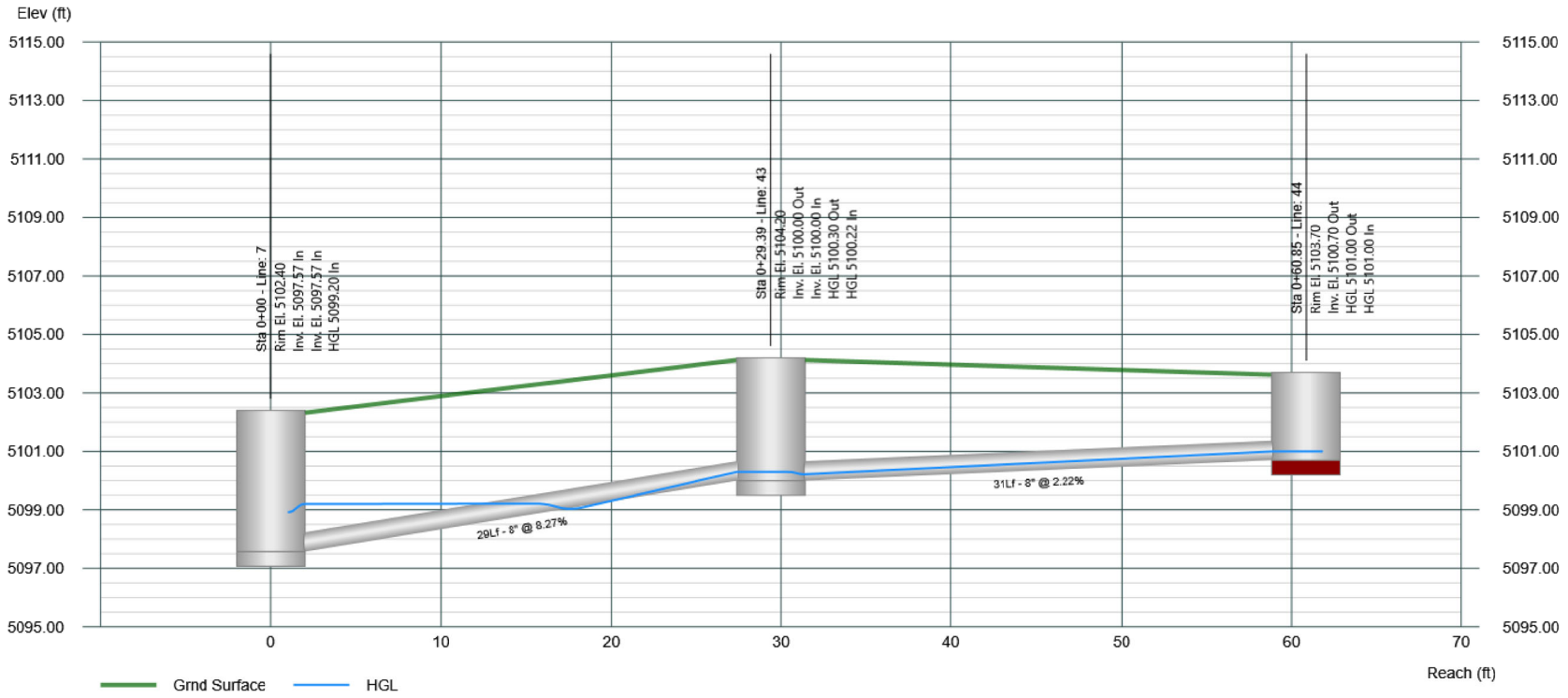
Profile View

Stormwater Studio 2021 v 3.0.0.25

Project Name: NUEVO ATRISCO SD

10-21-2022



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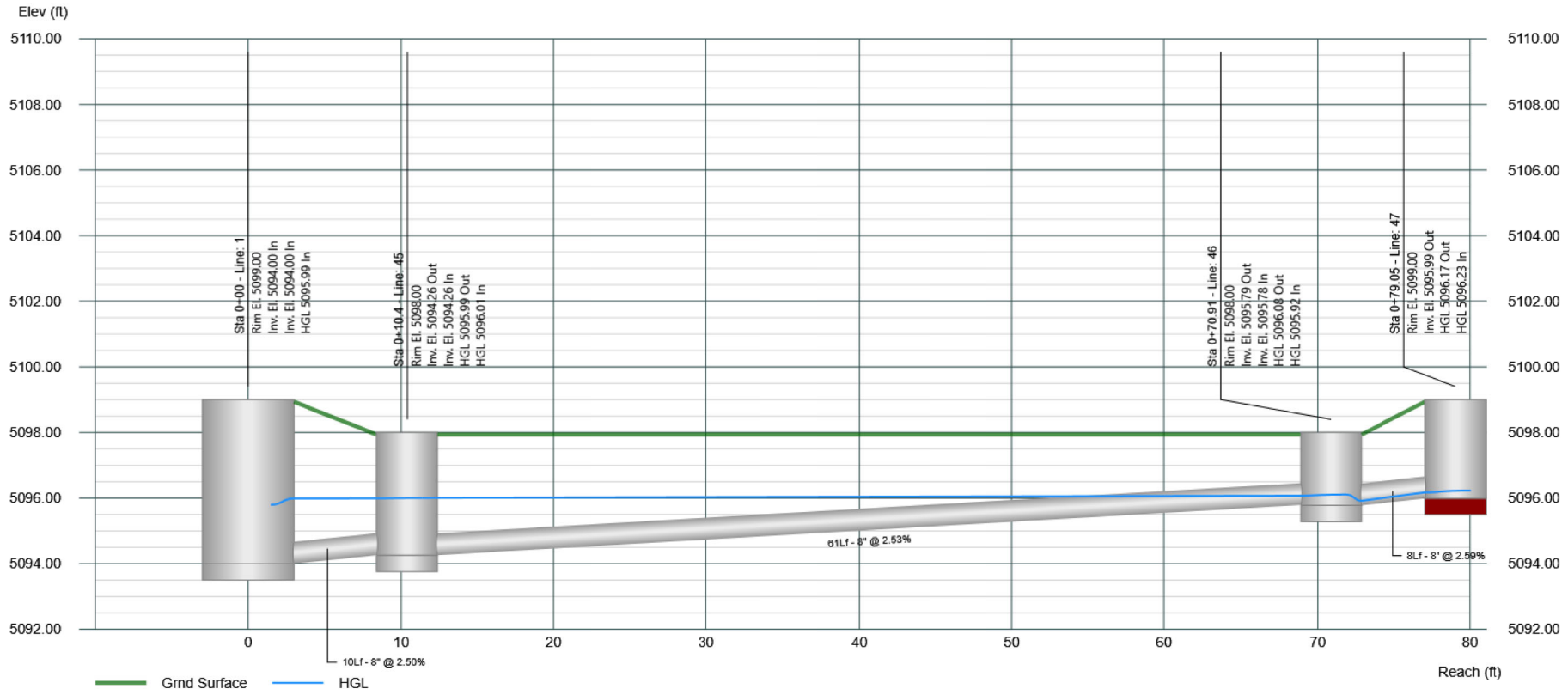
Profile View

Stormwater Studio 2021 v 3.0.0.25

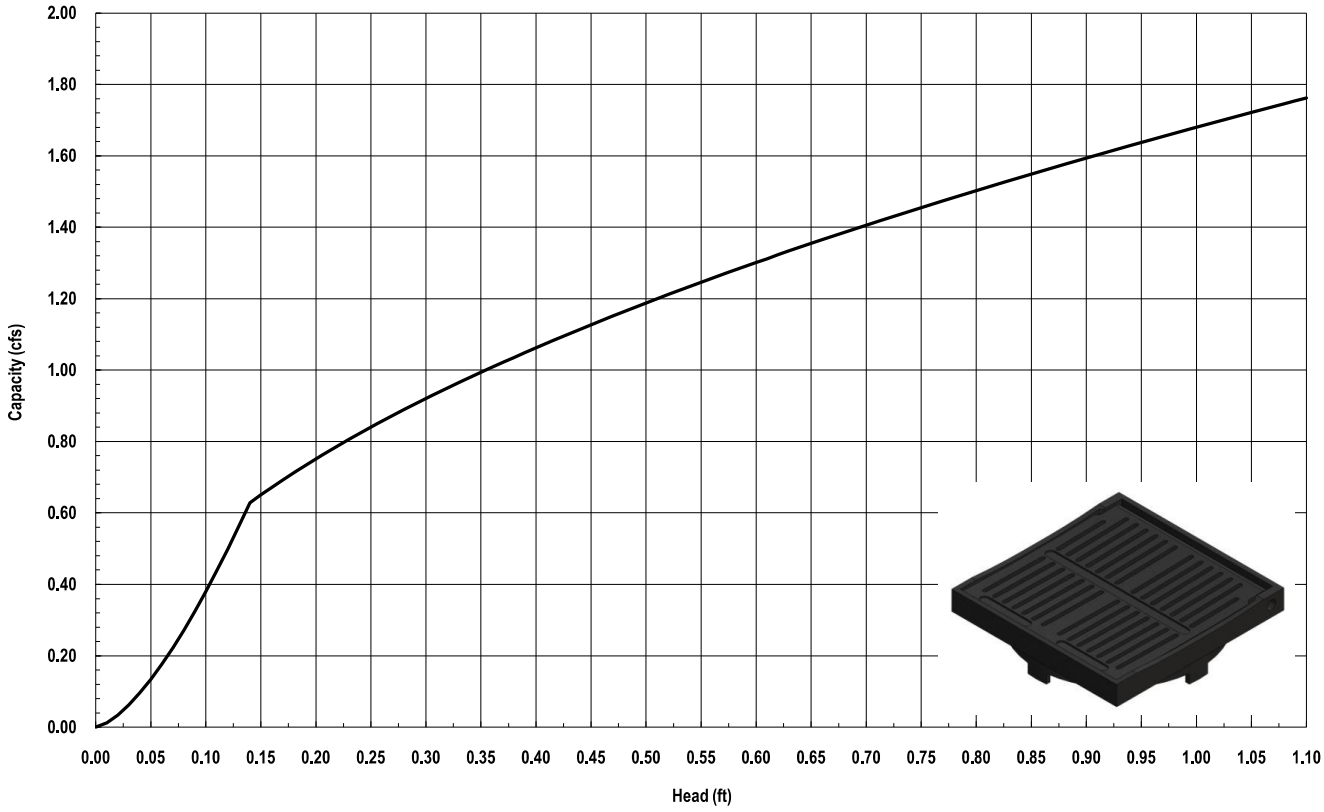
Project Name: NUEVO ATRISCO SD

10-21-2022



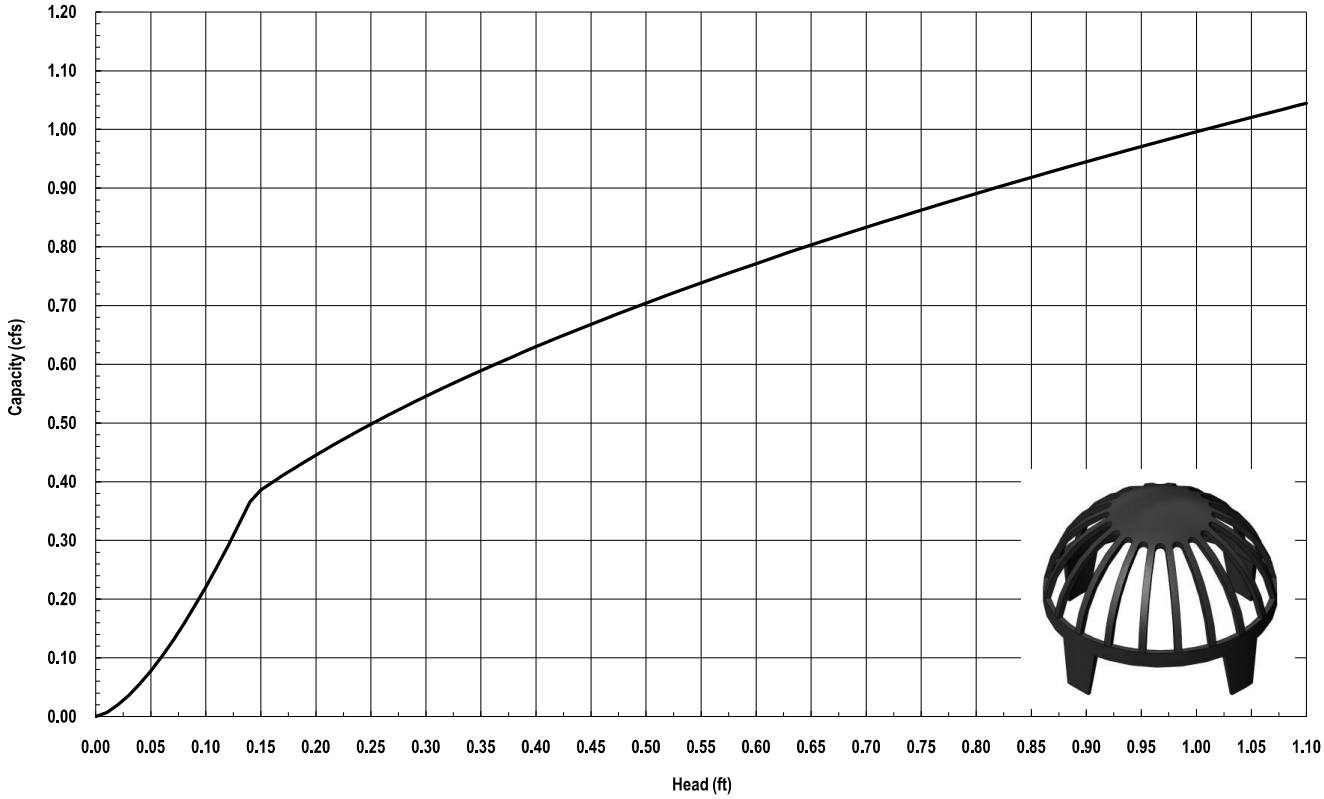
Project File: 2470 SD.sws

Nyloplast 12" Pedestrian Grate Inlet Capacity Chart



Nyloplast®
3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490

Nyloplast 8" Dome Grate Inlet Capacity Chart



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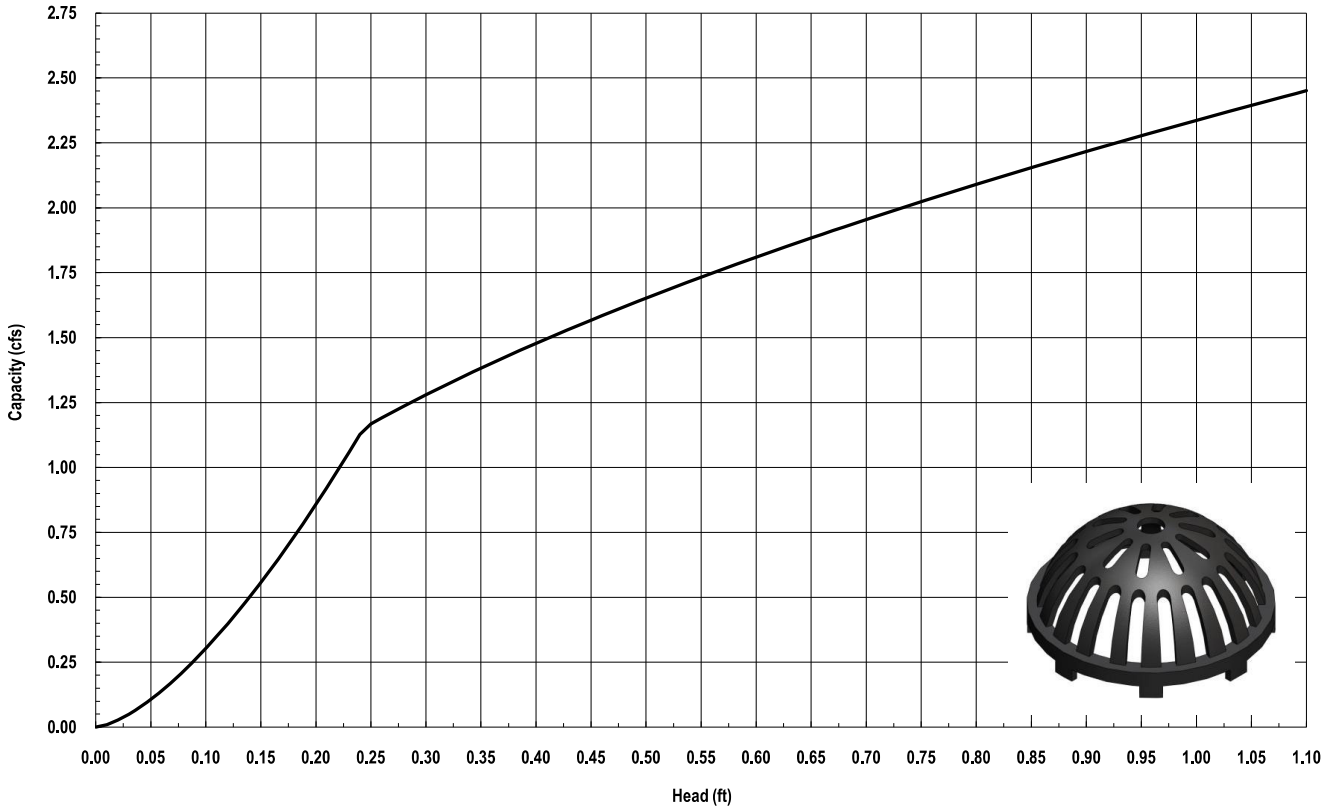
Nyloplast 12" Dome Grate Inlet Capacity Chart



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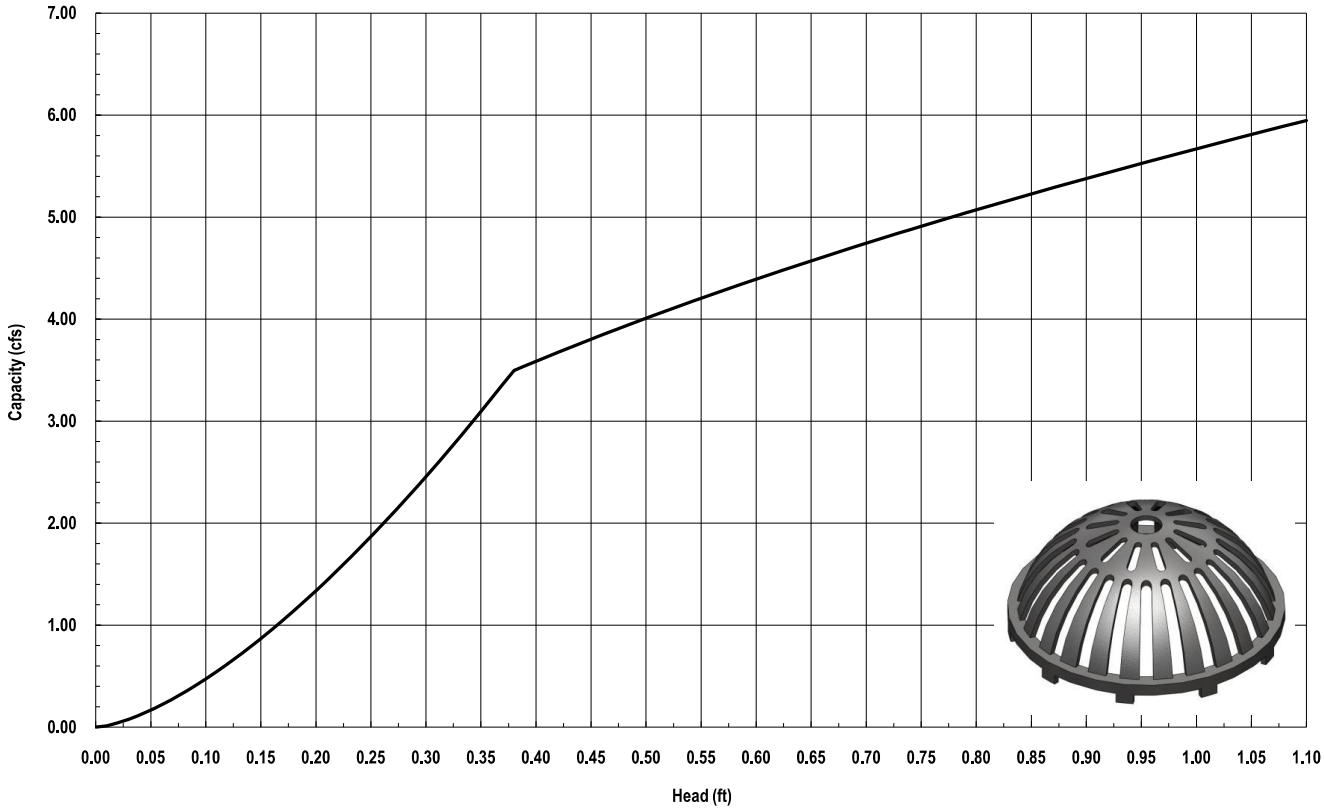
Nyloplast 18" Dome Grate Inlet Capacity Chart



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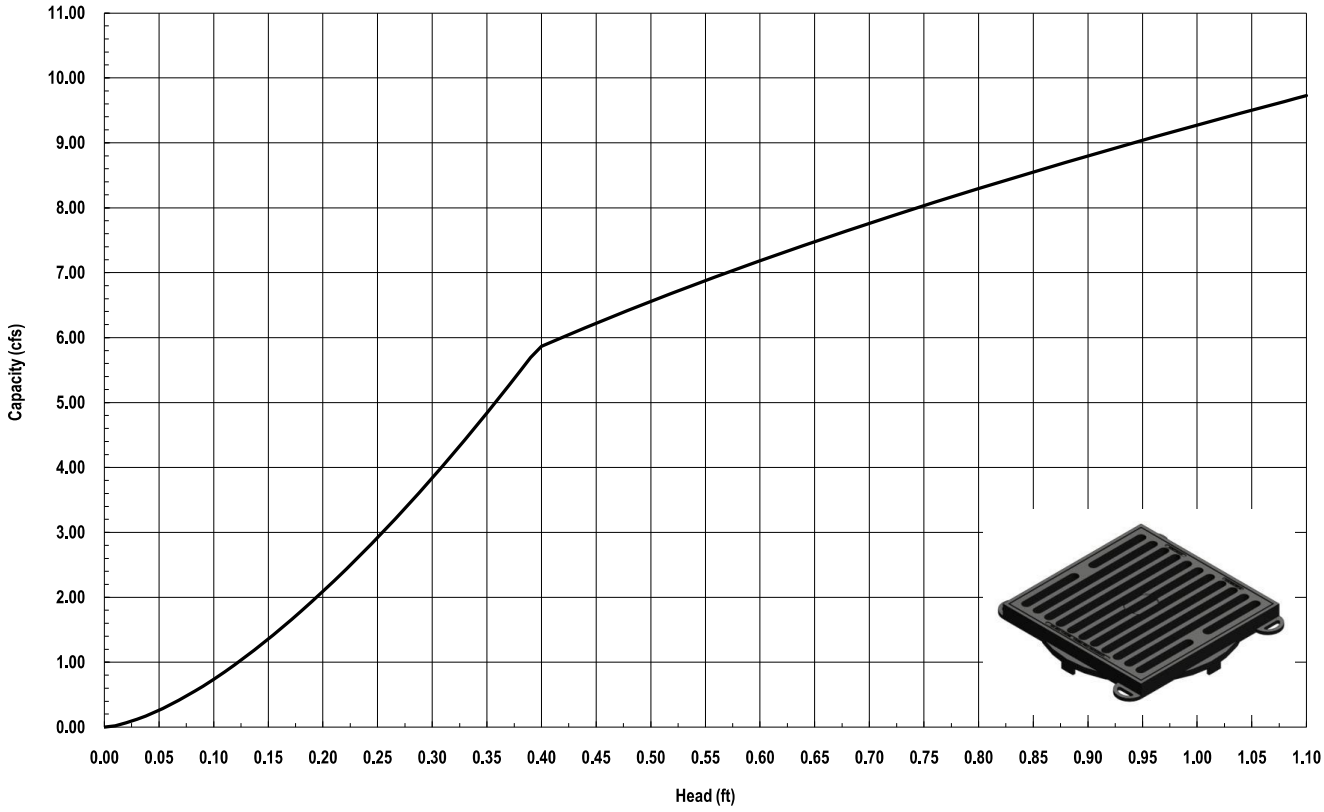
Nyloplast 2' x 2' Road & Highway Grate Inlet Capacity Chart



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Nuevo Atrisco (Tract B)
2' Curb Opening Calculations

Q = CA * (2*g*h)^.5

Q	=	Discharge in cfs
C	=	Discharge coefficient from Handbook of Hydraulics, King and Brater, 5th Edition
A	=	Area of opening in square feet
g	=	32.2 ft/sec
h	=	Depth of water measured from the center of the opening

ORIFICE EQUATION - SOLVE FOR Q

Q = C*A * (2*g*h) ^ 0.5

Where	Q	=	2.41	cfs	
	C	=	0.6		
	A	=	1.00	sq.ft.	2'x0.5'
	g	=	32.2	ft/sec^2	
	h	=	0.25	ft	depth of flow at opening from the center of orifice

Weir Report

2-FOOT CURB OPENING WEIR CAPACITY

Rectangular Weir

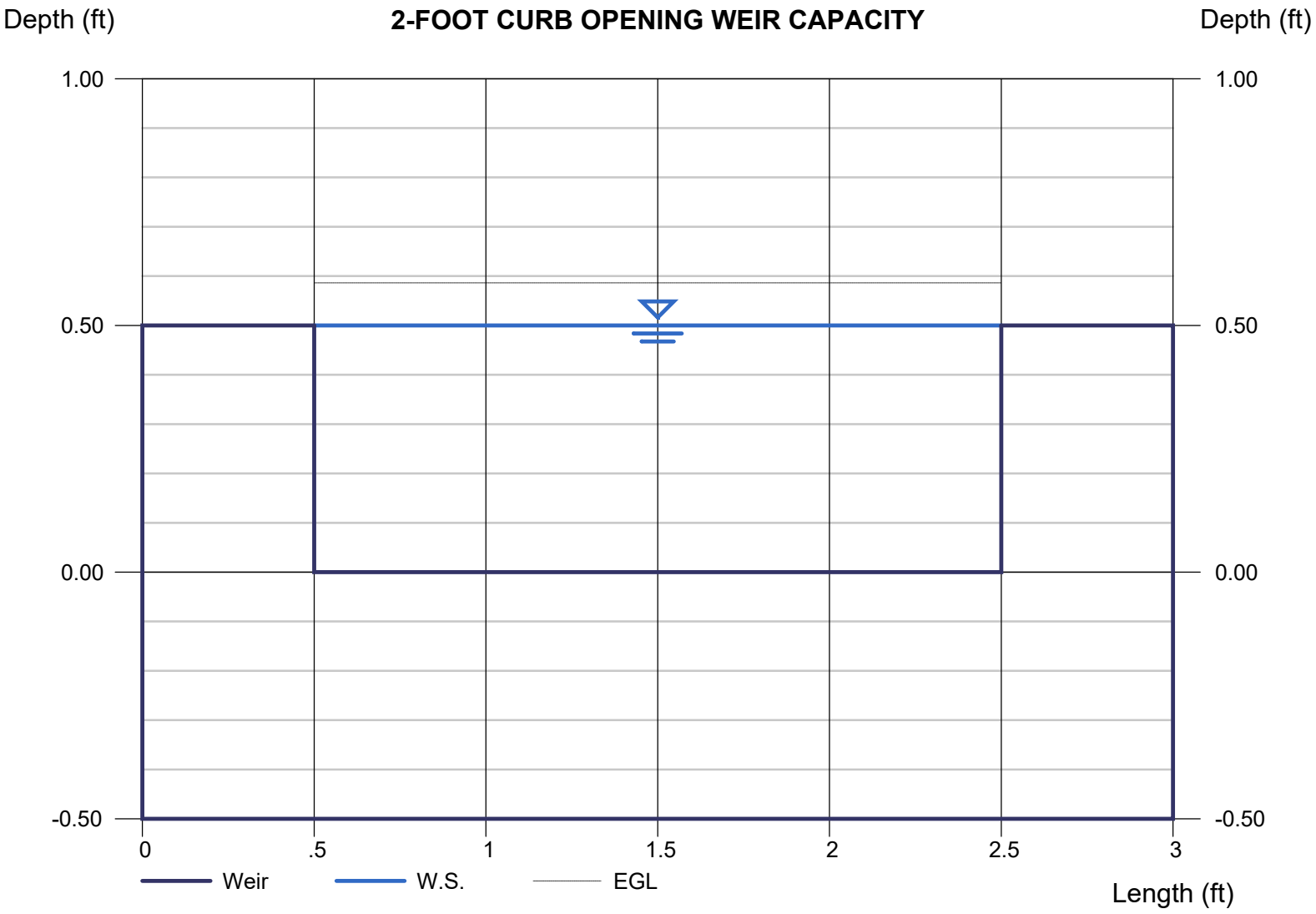
Crest	= Sharp
Bottom Length (ft)	= 2.00
Total Depth (ft)	= 0.50

Calculations

Weir Coeff. Cw	= 3.33
Compute by:	Known Depth
Known Depth (ft)	= 0.50

Highlighted

Depth (ft)	= 0.50
Q (cfs)	= 2.355
Area (sqft)	= 1.00
Velocity (ft/s)	= 2.35
Top Width (ft)	= 2.00



APPENDIX C

EXCERPTS FROM 'WEST CENTRAL AVE. FRONTAGE ROAD COMPLETE STREET IMPROVEMENTS' BY WSP

West Central Avenue Frontage Road Complete Street Improvements
City of Albuquerque Project: A/E 6321.93
CN A300849

Drainage Report

December 2020

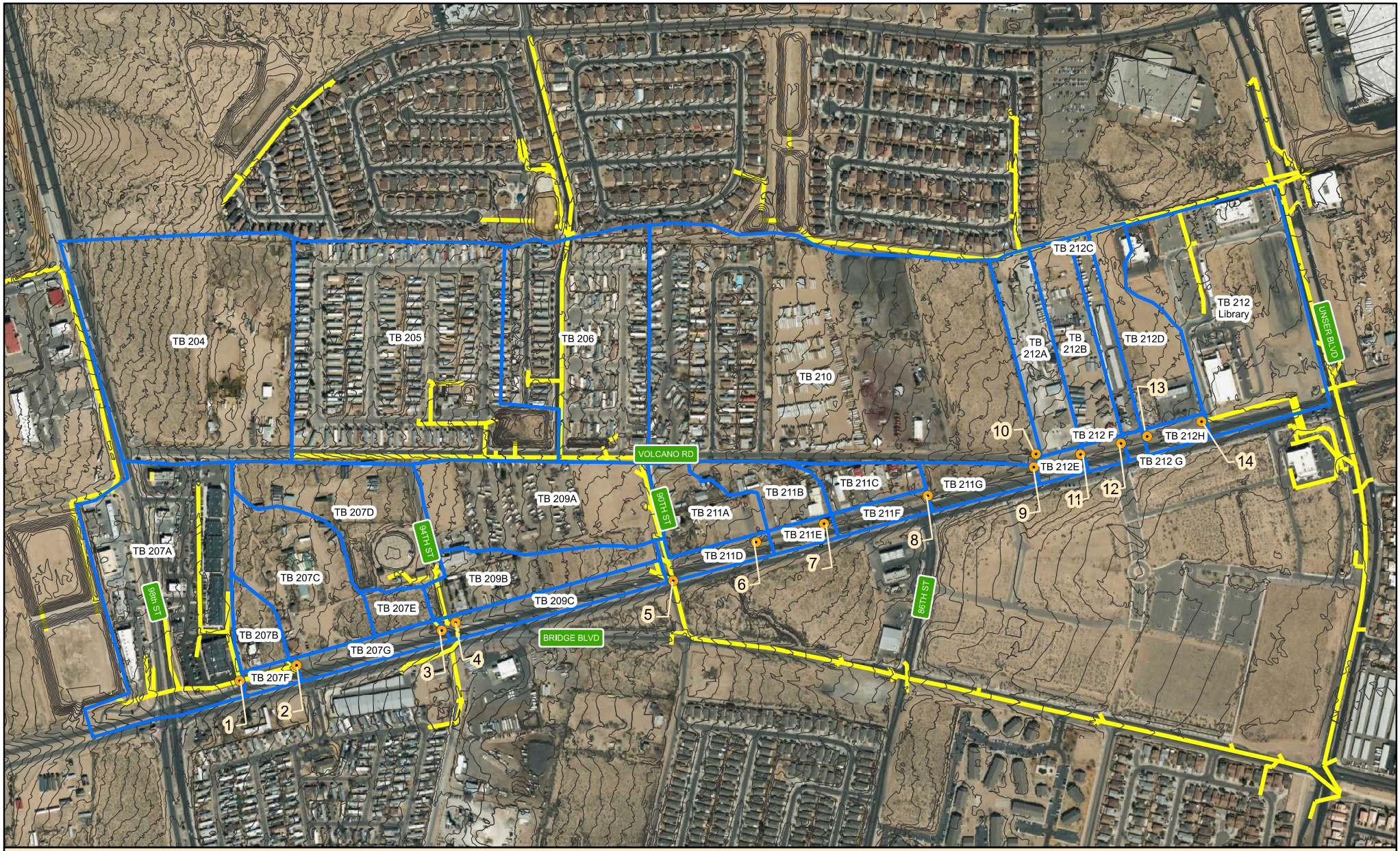
City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/11/21
BY: Renée C. Brissette
HydroTrans # K09D045

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY CITY ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM REQUIRING CORRECTION, OR ERROR OR DIMENSIONS IN PLANS, SPECIFICATIONS, OR CONSTRUCTIONS. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.

Prepared for:
City of Albuquerque
Department of Municipal Development
Engineering Division

Prepared by:

FARSHAD H. OMIDVARAN
NEW MEXICO
10720
REGISTERED PROFESSIONAL ENGINEER
12/18/2020



Legend

- Analysis Points
- Basin Boundary*
- 2' Contour - 2010 LiDAR
- Exist. Storm Drain
- TBXXX Basin ID

* Overall basin names came from the Amole-Hubbell and were subdivided

0 250 500 1,000 1,500 2,000 Feet

N

Figure 3
West Central Complete Streets
A/E #6321.93
Drainage Basin Map

```
COMPUTE NM HYD              ID=1   HYD NO=TB212H   DA=0.001502 SQ MI
                            PER A=0   PER B=0  PER C=10  PER D=90
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=1   CODE=1
*
*
* Total Flow from Basin (TB212D + TB212H)
ADD HYD                     ID=1  HYD NO=TB212ESUMB ID I=1   ID II=2
PRINT HYD                   ID=1   CODE=1
*
** Total Flow from Basins (TB210, TB211, TB212) at the Cul-de-sac
ADD HYD                     ID=1  HYD NO=TB212FSUMB ID I=1   ID II=3
PRINT HYD                   ID=1   CODE=1
*
*
*S AP 14
*
*S APTB4a at the Cul-de-Sac
*
*
****Route HYD TB212SUM to Sub-Basin TB212Library Through a Pipe
COMPUTE RATING CURVE    CID=1   VS NO=1 CODE=-1   SLP=0.018
                                DIA=60 IN   N=0.013
*
ROUTE MCUNGE                ID=3  HYD NO=TB212GSUMBRT  INFLOW ID=1
                            DT=0 HR  LENGTH=500 FT
                            NS=0  SLOPE=0.020
*
PRINT HYD                   ID=3   CODE=1
*
**
*** Sub-BASIN TB212Library ****
*
COMPUTE LT TP               LCODE=1   UPLAND/LAG TIME METHOD
                            NK=1   ISLOPE=1
                            LENGTH=1210 FT   SLOPE=0.015   K=2.0
COMPUTE NM HYD              ID=2   HYD NO=TB212Library   DA=0.02883 SQ MI
                            PER A=0   PER B=0  PER C=20  PER D=80
                            TP=0.0   MASSRAIN=-1
*
PRINT HYD                   ID=2   CODE=1
*
*
```

```
COMPUTE NM HYD       TB212H  -    1     0.00150      4.25      0.159     1.98448    1.530    4.422 PER IMP=  90.00
ADD HYD         TB212ESUMB  1& 2  1     0.01071     27.91      1.014     1.77589    1.530    4.073
ADD HYD         TB212FSUMB  1& 3  1     0.13031    292.51     12.324     1.77338    1.580    3.508
*S AP 14
*S APTB4a at the Cul-de-Sac
ROUTE MCUNGE    TB212GSUMBRT   1    3     0.13031    292.55     12.324     1.77329    1.590    3.508 CCODE =    0.2
COMPUTE NM HYD  TB212Library   -    2     0.02883     78.74      2.896     1.88314    1.530    4.267 PER IMP=  80.00
ADD HYD         TB212SUMA  2& 3  1     0.15914    364.15     15.219     1.79319    1.570    3.575
*S APTB5
ADD HYD         TB212SUMB 13& 1  1     0.70440    579.55     62.346     1.65955    1.590    1.286
*S APTB6
ROUTE MCUNGE    TB212SUMBRT    1    2     0.70440    579.00     62.339     1.65939    1.610    1.284 CCODE =    0.2
ADD HYD         TB215SUMA 10& 2  1     2.16451   1405.84    173.548     1.50335    1.630    1.015
```

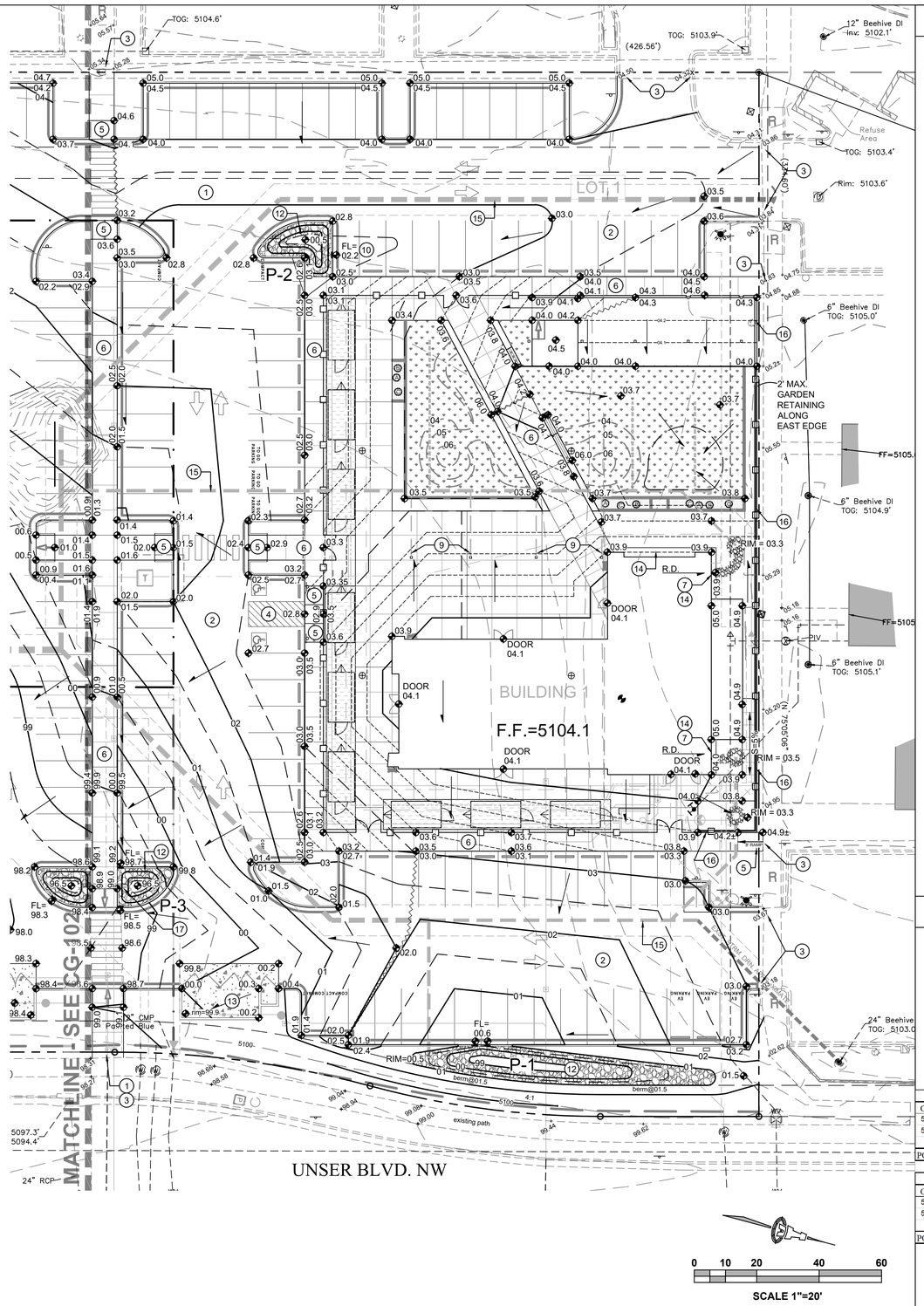


```
                    FROM  TO              PEAK       RUNOFF          TIME TO    CFS
               HYDROGRAPH  ID  ID        AREA    DISCHARGE     VOLUME     RUNOFF    PEAK    PER
COMMAND        IDENTIFICATION  NO.  NO.   (SQ MI)    (CFS)      (AC-FT)   (INCHES)  (HOURS)   ACRE    NOTATION

COMPUTE NM HYD       TB215  -    2     0.11272     189.09      8.644     1.43788    1.650    2.621 PER IMP=  36.70
ADD HYD         TB215SUMB  1& 2 10     2.27723    1592.94    182.192     1.50011    1.640    1.093
COMPUTE NM HYD       TB217  -    1     0.01861      49.92      1.844     1.85781    1.530    4.191 PER IMP=  80.10
ROUTE MCUNGE      TB217RT   1    2     0.01861      49.94      1.844     1.85774    1.550    4.193 CCODE =    0.2
COMPUTE NM HYD       TB220  -    1     0.03690      94.82      3.453     1.75457    1.530    4.015 PER IMP=  71.00
ADD HYD         TB220SUM  2& 1  1     0.05551     144.13      5.297     1.78915    1.540    4.057
COMPUTE NM HYD       TB218  -    2     0.03573      70.73      2.166     1.13688    1.530    3.093 PER IMP=  17.12
ROUTE MCUNGE      TB218RT   2    3     0.03573      70.76      2.166     1.13683    1.550    3.094 CCODE =    0.2
COMPUTE NM HYD       TB219  -    2     0.02285      57.17      2.039     1.67313    1.530    3.909 PER IMP=  64.00
ADD HYD         TB219SUM  2& 3  2     0.05858     127.35      4.205     1.34601    1.540    3.397
ADD HYD         TB221SUMA  1& 2  1     0.11409     271.48      9.502     1.56162    1.540    3.718
*S APTB8
ROUTE MCUNGE    TB221SUMART    1    2     0.11409     270.92      9.500     1.56126    1.550    3.710 CCODE =    0.2
COMPUTE NM HYD       TB221  -    1     0.05769     133.47      5.028     1.63429    1.550    3.615 PER IMP=  60.54
ADD HYD         TB221SUMB  2& 1  1     0.17178     404.39     14.528     1.58579    1.550    3.678
ROUTE MCUNGE    TB221SUMBRT    1    2     0.17178     398.57     14.499     1.58258    1.590    3.625 CCODE =    0.2
```

APPENDIX D

GRADING PLANS
STORM DRAIN PLAN



KEYED NOTES

THESE NOTES ARE REFERENCED ON SHEETS CG-101 AND CG-102. NOT ALL NOTES ARE USED ON EACH SHEET. SEE CG-501 FOR GRADING AND DRAINAGE DETAILS (PER UNDERLINED TEXT). SEE ADA COMPLIANCE NOTES THIS SHEET FOR TARGET SLOPES AND MAXIMUM SLOPES.

1. NO WORK SHALL BE PERFORMED IN THE PUBLIC R/W WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT.
2. NEW PAVING AT ELEVATIONS SHOWN. SLOPES AND CROSS-SLOPES VARY TO ACHIEVE ADA COMPLIANCE, REQUIRED PIPE COVERAGE, DRAINAGE, ETC. ELEVATIONS SHOWN IN GUTTER REPRESENT FLOWLINE. ADD 6" TYPICAL FOR ADJACENT TOP OF WALK / TOP OF CURB ELEVATION UNLESS NOTED. 0.5' AND 0.1' DESIGN CONTOURS SHOWN DASHED WHERE NECESSARY TO CLARIFY GRADING CONCEPT. SEE LEGEND FOR ADDITIONAL INFORMATION.
3. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT.
4. ADA COMPLIANT PARKING SPACES AND ACCESS AISLES AT ELEVATIONS SHOWN.
5. ADA COMPLIANT CURB RAMP AT ELEVATIONS SHOWN.
6. ADA COMPLIANT PEDESTRIAN ACCESS WALK AT ELEVATIONS SHOWN.
7. ROOF DISCHARGE TO BE RELEASED AT GRADE. CONSTRUCT 3' WIDE ANGULAR ROCK SWALE (SEE CG-501 FOR DETAIL) FROM BUILDING TO LANDSCAPE DOMED STORM DRAIN INLET.
8. CONCENTRATED ROOF DISCHARGE TO 12" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER COA STD. DWG. 2236. CONSTRUCT 3' WIDE ANGULAR ROCK SWALE FROM BUILDING TO EXISTING STORM DRAIN INLET.
9. COVERED PATIO DISCHARGE TO BE PIPED DIRECTLY TO STORM DRAIN. SEE ARCHITECTURAL FOR DOWNSPOUT LOCATIONS.
10. 18" CURB WIDE OPENING TO PASS FLOW. SLOPE GUTTER AT IN DIRECTION OF FLOW (EACH CURB OPENING LOCATION).
11. GRADE 1' DEEP TEMPORARY SEDIMENT POND THIS AREA.
12. STORMWATER QUALITY RETENTION POND AT ELEVATIONS SHOWN. TYPICAL SIDESLOPE = 2:1. ALL STORMWATER QUALITY PONDING VOLUMES WILL BE VERIFIED AS PART OF AS-BUILT CERTIFICATION. PONDS WHICH DO NOT PROVIDE THE REQUIRED VOLUME WILL BE CORRECTED AT CONTRACTOR'S EXPENSE. GRADES SHOWN REFLECT FINAL GRADES INCLUDING EROSION PROTECTION.
13. DUMPSTER PAD SLOPED TO INTERIOR SANITARY SEWER DRAIN INLET(S). SEE UTILITY PLAN FOR CONTINUATION.
14. 12" WIDE (MINIMUM) CONCRETE APRON ADJACENT TO BUILDING. TOP OF APRON AT BUILDING = 0.1' BELOW FINISH FLOOR ELEVATION. SLOPE APRON AWAY FROM BUILDING AT 2% SLOPE. SEE ARCHITECTURAL.
15. PRIVATE STORM DRAIN SYSTEM. SEE SHEET CG-501 FOR SIZES / SLOPES / INLET INFORMATION / MATERIALS.
16. GRADE TRANSITION WALL(S) (RETAINING < 30") TO ACHIEVE GRADE DIFFERENCE SHOWN. FINISH GRADE ON BOTH SIDES OF WALL ARE SHOWN. RETAINING HEIGHT VARIES. STRUCTURAL DESIGN TO BE PROVIDED BY WALL CONTRACTOR.
17. TWO 6" DIA. PIPES THROUGH WALK. FLOWLINE ELEVATION = 5098.0 BOTH SIDES.

STORMWATER QUALITY

FOR REDEVELOPMENT SITES, THE CABQ STORMWATER QUALITY VOLUME (SWQV) IS BASED ON THE 80TH PERCENTILE STORM EVENT OR 0.26". THE ESTIMATED IMPERVIOUS AREA FOR THIS PROPERTY IS CALCULATED AS 112,317 SF. THE TOTAL REQUIRED SWQV= 0.26" * TYPE 'D' AREA: 0.26/12 * 112,317 SF = 2,434 CF.

SWQV PONDS WILL BE CONSTRUCTED THROUGHOUT THE PROPERTY WITHIN SURFACE PONDS. THE TOTAL PROVIDED SWQV=1,190 CF FOR LOTS 1 AND 2. WHEN LOT 3 DEVELOPS, IT WILL PROVIDE 400 CF OF ADDITIONAL SWQV.

IN-LIEU PAYMENT WILL BE PROVIDED FOR THE DEFICIENT SWQV OF 844 CF (2,434 CF - 1,590 CF) = 844 CF @ $8 / CF = $6,748.

POND P-1		
Contour	Area	Volume
5099.00	80	
5100.50	540	465 CF
POND VOLUME =		**465** CF

POND P-3		
Contour	Area	Volume
5096.50	35	
5098.30	124	143 CF
POND VOLUME =		**143** CF

POND P-2		
Contour	Area	Volume
5100.50	30	
5102.00	183	160 CF
POND VOLUME =		**160** CF

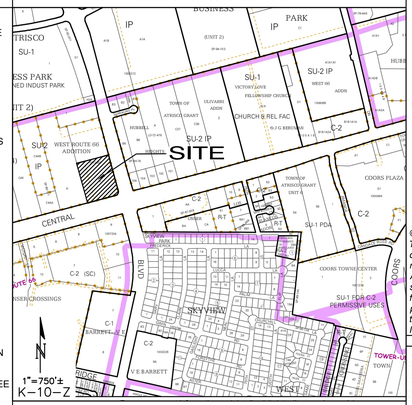
POND P-4		
Contour	Area	Volume
5096.0	56	
5097	350	203 CF
5097.3	1111	219 CF
POND VOLUME =		**422** CF

LOT 3 WILL BE REQUIRED TO PROVIDE 400 CF OF STORMWATER QUALITY VOLUME WHEN IT DEVELOPS.

EROSION PROTECTION NOTES

INSTALL 4" AVG. DIA. X 8" DEPTH EROSION PROTECTION TO EXTENTS SHOWN. ANGULAR ROCK MUST BE PLACED TO PERMIT STORMWATER TO PASS SMOOTHLY. HAND PLACE AT CURB OPENINGS AND SWALES TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY. SEE CG-501 FOR DETAIL.

VICINITY MAP K-10



PROJECT INFORMATION

PROPERTY: THE SITE IS A PARTIALLY DEVELOPED COMMERCIAL PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP K-10. THE SITE IS BOUND TO THE EAST BY UNSER BLVD, TO THE NORTH AND WEST BY DEVELOPED COMMERCIAL PROPERTY AND TO THE SOUTH BY CENTRAL AVE.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE, COMMERCIAL RESAURANTS(S), RETAIL/OFFICE, FOOD PARK, PARKING, AND LANDSCAPING.

LEGAL: TRACT B, NUEVO ATRISCO, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "9-K10", ELEVATION = 5117.72 FEET (NAVD 1988).

OFF-SITE FLOW: OFF-SITE FLOW FROM THE ADJACENT HOUSING PROJECT IS ROUTED THROUGH THIS PROPERTY WITHIN AN EXISTING STORM DRAIN SYSTEM WITH DRAINAGE EASEMENT. MINOR SURFACE FLOW IS ALSO ACCEPTED WITHIN A BLANKET DRAINAGE EASEMENT.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP 35001C0328J, MAP (REVISION DATE NOVEMBER 4, 2016), THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN. CENTRAL AVENUE ADJACENT TO THE PROPERTY IS ENCUMBERED BY ZONE AO (DEPTH 1').

SEE DRAINAGE REPORT FOR ADDITIONAL INFORMATION AND CALCULATIONS.

ADA COMPLIANCE

SIDEWALK(S) AND RAMP(S):
* LONGITUDINAL SLOPE SHALL NOT EXCEED 20:1 (5% SLOPE).
* TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%

ACCESSIBLE RAMP(S):
* TARGET LONGITUDINAL SLOPE = 7% LONGITUDINAL SLOPE SHALL NOT EXCEED 12:1 (8.3%).
* TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%

ACCESSIBLE PARKING: TARGET SLOPE = 1% TO 1.5%. SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION

LEGEND

39	PROPOSED 1.0' CONTOUR
38.5	PROPOSED 0.5' CONTOUR
38.2	PROPOSED 0.1' CONTOUR
37.5	PROPOSED SPOT ELEVATION
	SURFACE FLOW DIRECTION
FF = 5237.5	FINISH FLOOR ELEVATION
	PROPOSED STORM DRAIN / INLET
P-X	STORMWATER QUALITY POND

Isaacson & Arfman, Inc.
Civil Engineering Consultants
128 Monroe Street NE
Albuquerque, NM 87108
505-268-8828 | www.iacivil.com

JOSHUA M. NILSSON-WEBER NEW MEXICO 17831 PROFESSIONAL ENGINEER
01/09/2023
Engineer

NUEVO ATRISCO
201 Unser Blvd NW
Albuquerque, NM 87121

No	Description	Date

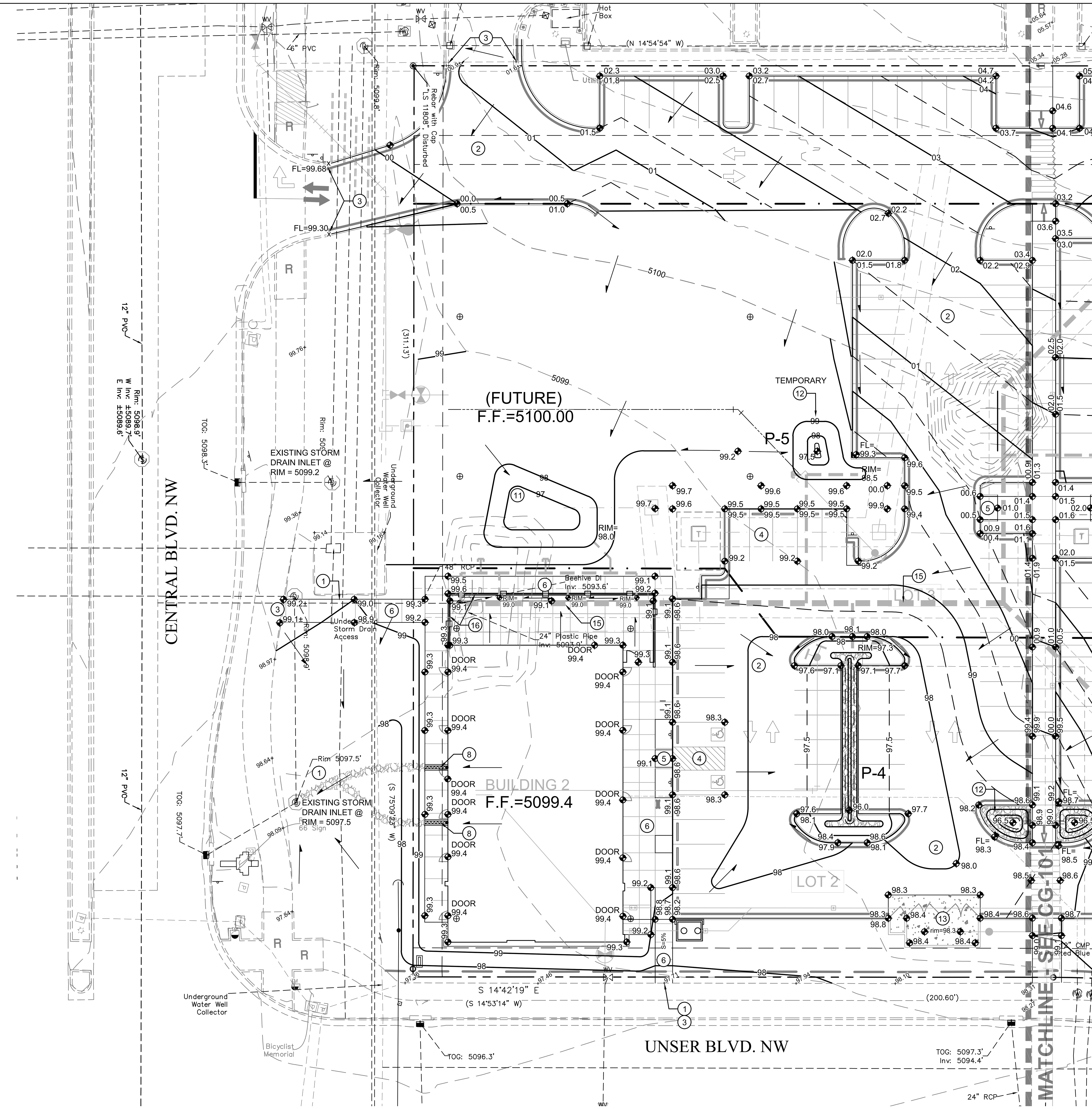
ISSUE: -
PROJECT NUMBER: IA 2470
FILE:
DRAWN BY: BJB
CHECKED BY: ANW
DATE: OCTOBER, 2022

SHEET TITLE

GRADING & DRAINAGE PLAN 1 OF 2

SHEET NUMBER

CG-101



0 10 20 40 60

SCALE 1"=20'

KEYED NOTES

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17. TWO 6" DIA. PIPES THROUGH WALK. FLOWLINE ELEVATION = 5098.0 BOTH SIDES.

LEGEND

Symbol	Description
39 (solid line)	PROPOSED 1.0' CONTOUR
38.5 (dashed line)	PROPOSED 0.5' CONTOUR
37.5	PROPOSED SPOT ELEVATION
(arrow)	SURFACE FLOW DIRECTION
FF = 5237.5	FINISH FLOOR ELEVATION
(heavy dashed line)	PROPOSED STORM DRAIN / INLET

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LICENSED PROFESSIONAL ENGINEER
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Engineer

NUEVO ATRISCO
201 Unser Blvd NW
Albuquerque, NM 87121

ISSUE: -
PROJECT NUMBER: IA 2470
FILE:
DRAWN BY: BJB
CHECKED BY: ANW
DATE: OCTOBER, 2022

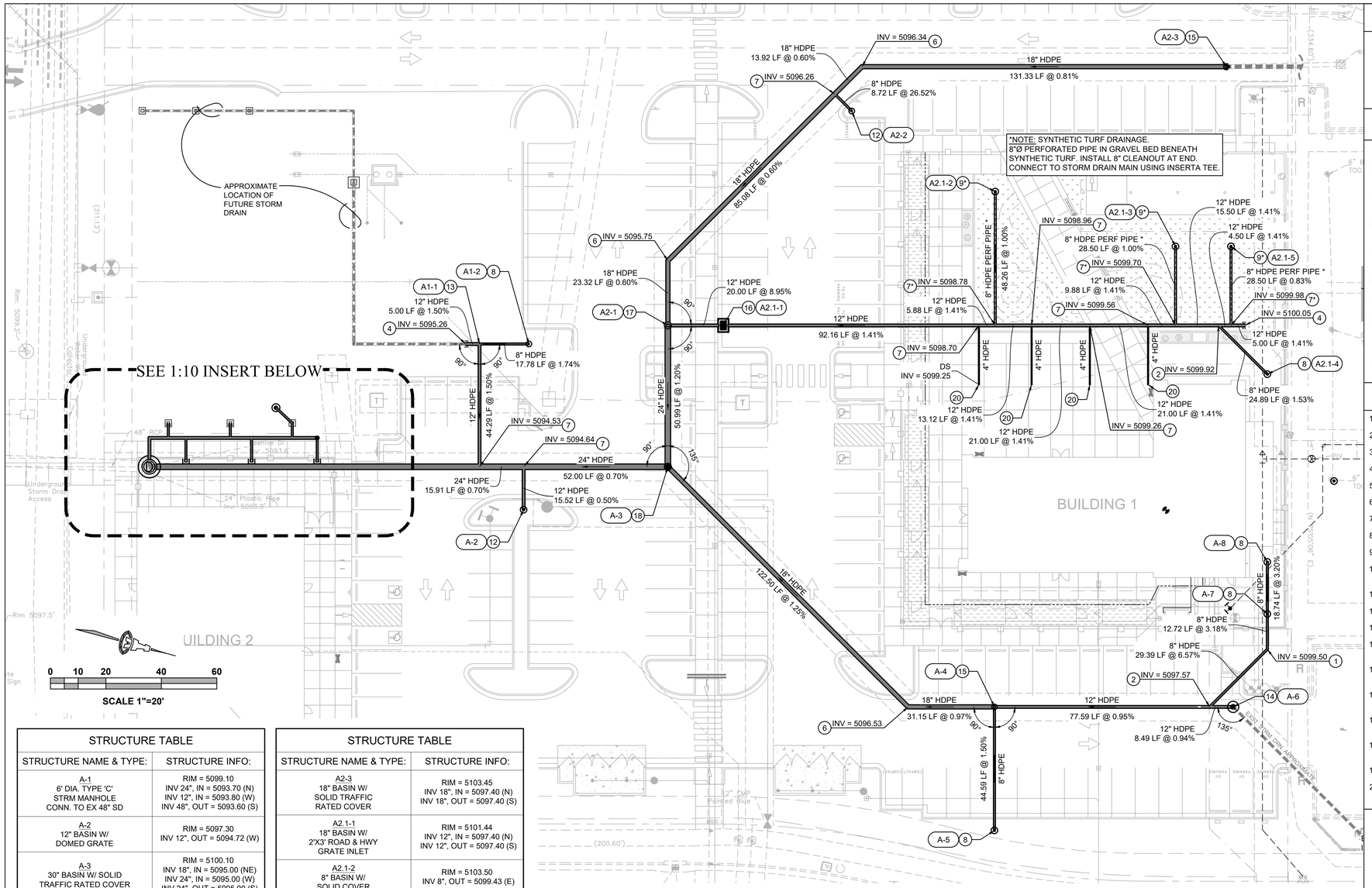
No	Date	Description

SHEET TITLE

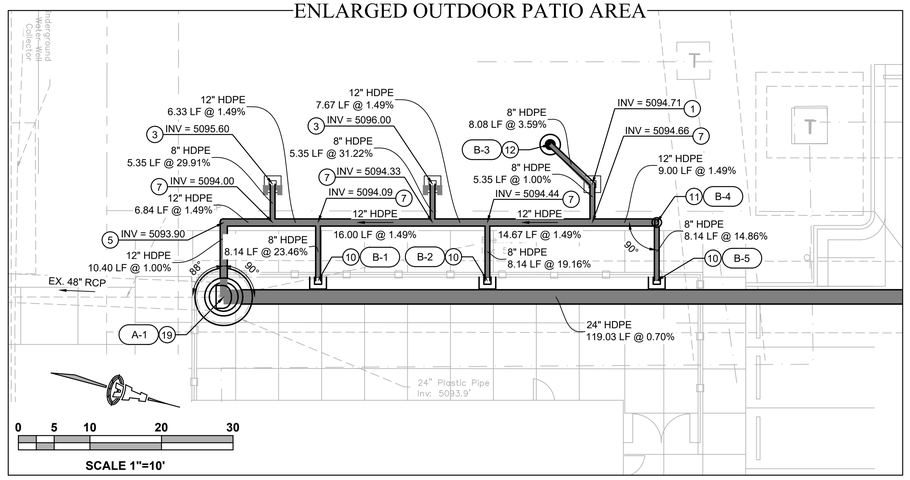
GRADING & DRAINAGE PLAN 2 OF 2

SHEET NUMBER

CG-102



ENLARGED OUTDOOR PATIO AREA



STRUCTURE TABLE

STRUCTURE NAME & TYPE:	STRUCTURE INFO:
A-1 6' DIA. TYPE 'C' STRM MANHOLE CONN. TO EX 48" SD	RIM = 5099.10 INV 24", IN = 5093.70 (N) INV 12", IN = 5093.80 (W) INV 48", OUT = 5093.60 (S)
A-2 12" BASIN W/ DOMED GRATE	RIM = 5097.30 INV 12", OUT = 5094.72 (W)
A-3 30" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5100.10 INV 18", IN = 5095.00 (NE) INV 24", IN = 5095.00 (W) INV 24", OUT = 5095.00 (S)
A-4 18" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5102.00 INV 12", IN = 5096.83 (N) INV 8", IN = 5096.83 (E) INV 18", OUT = 5096.83 (S)
A-5 8" BASIN W/ DOMED GRATE	RIM = 5100.50 INV 8", OUT = 5097.50 (W)
A-6 15" BASIN W/ SOLID TRAFFIC RATED COVER CONN. TO EX. STM	RIM = 5102.75 INV 12", IN = 5097.65 (NE) INV 12", OUT = 5097.65 (S)
A-7 8" BASIN W/ DOMED GRATE	RIM = 5103.30 INV 8", IN = 5099.90 (W) INV 8", OUT = 5099.90 (E)
A-8 8" BASIN W/ DOMED GRATE	RIM = 5103.50 INV 8", OUT = 5100.50 (E)
A1-1 15" BASIN W/ DOMED GRATE	RIM = 5098.50 INV 8", IN = 5095.19 (N) INV 12", IN = 5095.19 (S) INV 12", OUT = 5095.19 (E)
A1-2 8" BASIN W/ DOMED GRATE	RIM = 5098.50 INV 8", OUT = 5095.50 (S)
A2-1 24" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5100.85 INV 18", IN = 5095.61 (W) INV 12", IN = 5095.61 (N) INV 24", OUT = 5095.61 (E)
A2-2 12" BASIN W/ DOMED GRATE	RIM = 5102.00 INV 8", OUT = 5099.00 (SW)

STRUCTURE TABLE

STRUCTURE NAME & TYPE:	STRUCTURE INFO:
A2-3 18" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5103.45 INV 18", IN = 5097.40 (N) INV 18", OUT = 5097.40 (S)
A2.1-1 18" BASIN W/ 2'X3' ROAD & HWY GRATE INLET	RIM = 5101.44 INV 12", IN = 5097.40 (N) INV 12", OUT = 5097.40 (S)
A2.1-2 8" BASIN W/ SOLID COVER	RIM = 5103.50 INV 8", OUT = 5099.43 (E)
A2.1-3 8" BASIN W/ SOLID COVER	RIM = 5103.75 INV 8", OUT = 5100.15 (E)
A2.1-4 8" BASIN W/ DOMED GRATE	RIM = 5103.30 INV 8", OUT = 5100.30 (SW)
A2.1-5 8" BASIN W/ SOLID COVER	RIM = 5103.70 INV 8", OUT = 5100.38 (E)
B-1 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)
B-2 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)
B-3 TEMP. 12" BASIN W/ DOMED GRATE	RIM = 5098.00 INV 8", OUT = 5095.00 (NE)
B-4 12" BASIN W/ SOLID COVER	RIM = 5099.05 INV 8", IN = 5094.79 (E) INV 12", OUT = 5094.79 (S)
B-5 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)

LEGEND

- PROPOSED TRAFFIC RATED INLET
- PROPOSED DRAIN BASIN WITH GRATE

STORM DRAIN GENERAL NOTES

A. INSTALL ALL STORM DRAIN INLETS, PIPE AND FITTINGS PER MANUFACTURER'S SPECIFICATIONS.

B. PROPOSED INLETS IN LANDSCAPE AREAS CONSIST OF A NYLOPLAST BASIN (SIZE PER PLAN) AND A LOCKING GRATE. SEE KEYED NOTES AND DETAILS THIS SHEET.

C. PROPOSED INLETS IN COURTYARD AREA CONSIST OF A 12" NYLOPLAST INLINE DRAIN WITH 8" OUTLET, AND A LOCKING GRATE. SEE KEYED NOTES AND DETAILS THIS SHEET.

D. PROPOSED MANHOLES IN TRAFFIC AREA CONSIST OF A NYLOPLAST BASIN WITH LOCKING SOLID TRAFFIC RATED GRATE.

E. PROPOSED INLET IN TRAFFIC AREA CONSISTS OF A NYLOPLAST BASIN WITH 2'X3' TRAFFIC RATED GRATE.

F. ALL STORM DRAIN LINES AND FITTINGS TO BE ADS N-12WT WATERTIGHT.

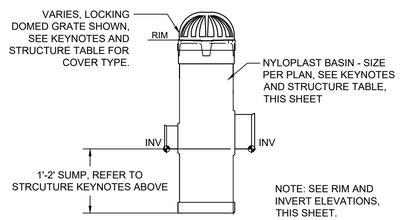
G. INSTALL PIPE WITH SLOPES AND INVERTS PER PLAN.

H. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT PROPERTY OWNER PUT IN PLACE INSPECTION AND MAINTENANCE CRITERIA SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.

I. STORM DRAIN PIPE LENGTHS NOTED ON PLAN ARE TO CENTER OF BASINS OR INLINE DRAINS.

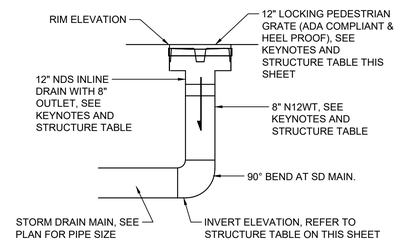
KEYED NOTES

1. 8" 45° BEND
2. 8"X12" 45° WYE
3. 8" STUB FOR FUTURE CONNECTION
4. 12" STUB FOR FUTURE CONNECTION
5. 12" 90° BEND
6. 18" 45° BEND
7. INSERTA TEE CONNECTION TO LARGER STORM LINE.
8. 8" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 1' SUMP
9. 8" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID COVER AND CONCRETE COLLAR, 1' SUMP
10. 12" DIA. INLINE DRAIN W/ 8" OUTLET; LOCKING GRATE (ADA COMPLIANT & HEEL PROOF) AND CONCRETE COLLAR
11. 12" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID COVER AND CONCRETE COLLAR, 2' SUMP
12. 12" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 2' SUMP
13. 15" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 2' SUMP
14. 15" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID TRAFFIC RATED COVER AND CONCRETE COLLAR, 2' SUMP
15. 18" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID TRAFFIC RATED COVER AND CONCRETE COLLAR, 2' SUMP
16. 18" DIA. NYLOPLAST DRAIN BASIN W/ 2'X3' ADS ROAD & HIGHWAY TRAFFIC RATED GRATE (LOCKING) AND CONCRETE COLLAR, 2' SUMP
17. 24" DIA. NYLOPLAST DRAIN BASIN W/ SOLID TRAFFIC RATED COVER (LOCKING) AND CONCRETE COLLAR, 2' SUMP
18. 30" DIA. NYLOPLAST DRAIN BASIN W/ SOLID TRAFFIC RATED COVER (LOCKING) AND CONCRETE COLLAR, 2' SUMP
19. REMOVE EXISTING INLET STRUCTURE. CONSTRUCT 6' DIA. TYPE 'C' MANHOLE PER C.O.A.
20. EXTEND COVERED PATIO DRAINS. INSTALL TO CONNECT TO STORM DRAIN MAIN USING INSERTA TEE. SEE ARCHITECTURAL PLANS FOR SPECIFIC DRAIN LOCATIONS.



ADS NYLOPLAST BASIN

SCALE: N.T.S.



IN-LINE DRAIN

SCALE: N.T.S.

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17631
PROFESSIONAL ENGINEER
01/09/2023

Engineer

NUEVO ATRISCO
201 Unser Blvd NW
Albuquerque, NM 87121

No	Description	Date

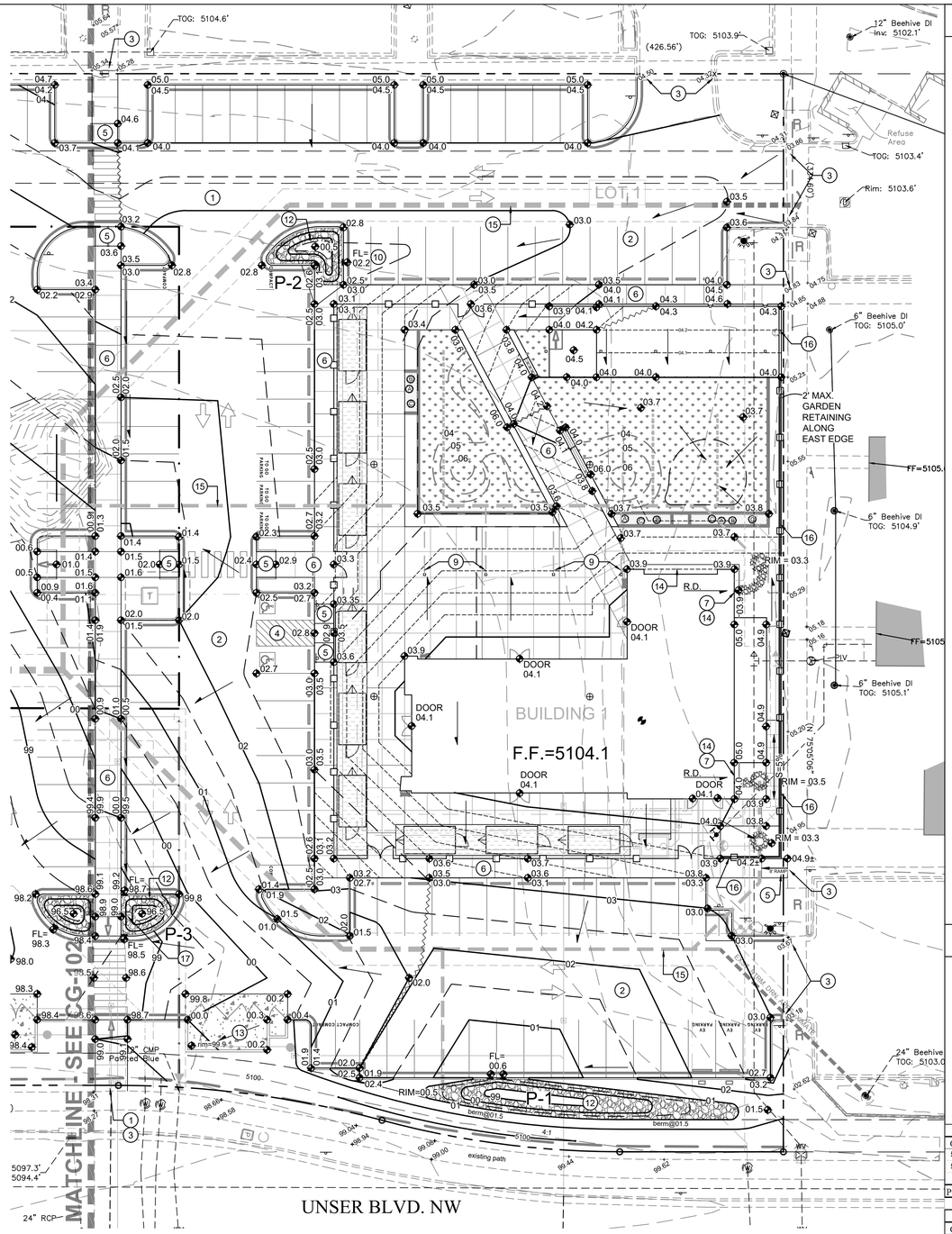
ISSUE: -
PROJECT NUMBER: IA 2470
FILE:
DRAWN BY: BJB
CHECKED BY: ANW
DATE: OCTOBER, 2022

SHEET TITLE

STORM DRAIN PLAN

SHEET NUMBER

CG-501



KEYED NOTES

THESE NOTES ARE REFERENCED ON SHEETS CG-101 AND CG-102. NOT ALL NOTES ARE USED ON EACH SHEET. SEE CG-501 FOR GRADING AND DRAINAGE DETAILS (PER UNDERLINED TEXT). SEE ADA COMPLIANCE NOTES THIS SHEET FOR TARGET SLOPES AND MAXIMUM SLOPES.

1. NO WORK SHALL BE PERFORMED IN THE PUBLIC R/W WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT.
2. NEW PAVING AT ELEVATIONS SHOWN. SLOPES AND CROSS-SLOPES VARY TO ACHIEVE ADA COMPLIANCE, REQUIRED PIPE COVERAGE, DRAINAGE, ETC. ELEVATIONS SHOWN IN GUTTER REPRESENT FLOWLINE. ADD 6" TYPICAL FOR ADJACENT TOP OF WALK / TOP OF CURB ELEVATION UNLESS NOTED. 0.5' AND 0.1' DESIGN CONTOURS SHOWN DASHED WHERE NECESSARY TO CLARIFY GRADING CONCEPT. SEE LEGEND FOR ADDITIONAL INFORMATION.
3. PROVIDE SMOOTH TRANSITION TO EXISTING PAVEMENT.
4. ADA COMPLIANT PARKING SPACES AND ACCESS AISLES AT ELEVATIONS SHOWN.
5. ADA COMPLIANT CURB RAMP AT ELEVATIONS SHOWN.
6. ADA COMPLIANT PEDESTRIAN ACCESS WALK AT ELEVATIONS SHOWN.
7. ROOF DISCHARGE TO BE RELEASED AT GRADE. CONSTRUCT 3' WIDE ANGULAR ROCK SWALE (SEE CG-501 FOR DETAIL) FROM BUILDING TO LANDSCAPE DOMED STORM DRAIN INLET.
8. CONCENTRATED ROOF DISCHARGE TO 12" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT PER COA STD. DWG. 2236. CONSTRUCT 3' WIDE ANGULAR ROCK SWALE FROM BUILDING TO EXISTING STORM DRAIN INLET.
9. COVERED PATIO DISCHARGE TO BE PIPED DIRECTLY TO STORM DRAIN. SEE ARCHITECTURAL FOR DOWNSPOUT LOCATIONS.
10. 18" CURB WIDE OPENING TO PASS FLOW. SLOPE GUTTER AT IN DIRECTION OF FLOW (EACH CURB OPENING LOCATION).
11. GRADE 1' DEEP TEMPORARY SEDIMENT POND THIS AREA.
12. STORMWATER QUALITY RETENTION POND AT ELEVATIONS SHOWN. TYPICAL SIDESLOPE = 2:1. ALL STORMWATER QUALITY PONDING VOLUMES WILL BE VERIFIED AS PART OF AS-BUILT CERTIFICATION. PONDS WHICH DO NOT PROVIDE THE REQUIRED VOLUME WILL BE CORRECTED AT CONTRACTOR'S EXPENSE. GRADES SHOWN REFLECT FINAL GRADES INCLUDING EROSION PROTECTION.
13. DUMPSTER PAD SLOPED TO INTERIOR SANITARY SEWER DRAIN INLET(S). SEE UTILITY PLAN FOR CONTINUATION.
14. 12" WIDE (MINIMUM) CONCRETE APRON ADJACENT TO BUILDING. TOP OF APRON AT BUILDING = 0.1' BELOW FINISH FLOOR ELEVATION. SLOPE APRON AWAY FROM BUILDING AT 2% SLOPE. SEE ARCHITECTURAL.
15. PRIVATE STORM DRAIN SYSTEM. SEE SHEET CG-501 FOR SIZES / SLOPES / INLET INFORMATION / MATERIALS.
16. GRADE TRANSITION WALL(S) (RETAINING < 30") TO ACHIEVE GRADE DIFFERENCE SHOWN. FINISH GRADE ON BOTH SIDES OF WALL ARE SHOWN. RETAINING HEIGHT VARIES. STRUCTURAL DESIGN TO BE PROVIDED BY WALL CONTRACTOR.
17. TWO 6" DIA. PIPES THROUGH WALK. FLOWLINE ELEVATION = 5098.0 BOTH SIDES.

STORMWATER QUALITY

FOR REDEVELOPMENT SITES, THE CABQ STORMWATER QUALITY VOLUME (SWQV) IS BASED ON THE 80TH PERCENTILE STORM EVENT OR 0.26". THE ESTIMATED IMPERVIOUS AREA FOR THIS PROPERTY IS CALCULATED AS 112,317 SF. THE TOTAL REQUIRED SWQV= 0.26" * TYPE 'D' AREA: 0.26/12 * 112,317 SF = 2,434 CF.

SWQV PONDS WILL BE CONSTRUCTED THROUGHOUT THE PROPERTY WITHIN SURFACE PONDS. THE TOTAL PROVIDED SWQV=1,190 CF FOR LOTS 1 AND 2. WHEN LOT 3 DEVELOPS, IT WILL PROVIDE 400 CF OF ADDITIONAL SWQV.

IN-LIEU PAYMENT WILL BE PROVIDED FOR THE DEFICIENT SWQV OF 844 CF (2,434 CF - 1,590 CF) = 844 CF @ $8 / CF = $6,748.

POND P-1		
Contour	Area	Volume
5099.00	80	
5100.50	540	465 CF
POND VOLUME =		**465** CF

POND P-3		
Contour	Area	Volume
5096.50	35	
5098.30	124	143 CF
POND VOLUME =		**143** CF

POND P-2		
Contour	Area	Volume
5100.50	30	
5102.00	183	160 CF
POND VOLUME =		**160** CF

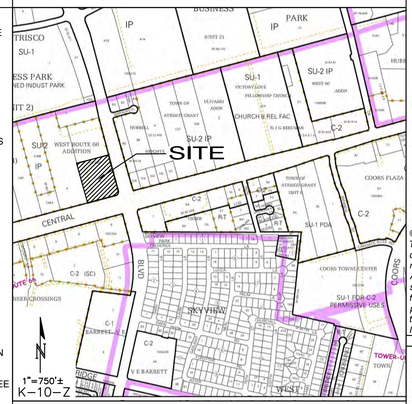
POND P-4		
Contour	Area	Volume
5096.0	56	
5097	350	203 CF
5097.3	1111	219 CF
POND VOLUME =		**422** CF

LOT 3 WILL BE REQUIRED TO PROVIDE 400 CF OF STORMWATER QUALITY VOLUME WHEN IT DEVELOPS.

EROSION PROTECTION NOTES

INSTALL 4" AVG. DIA. X 8" DEPTH EROSION PROTECTION TO EXTENTS SHOWN. ANGULAR ROCK MUST BE PLACED TO PERMIT STORMWATER TO PASS SMOOTHLY. HAND PLACE AT CURB OPENINGS AND SWALES TO ENSURE RUNOFF CAN BE CAPTURED AND CONVEYED PROPERLY. SEE CG-501 FOR DETAIL.

VICINITY MAP K-10



PROJECT INFORMATION

PROPERTY: THE SITE IS A PARTIALLY DEVELOPED COMMERCIAL PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP K-10. THE SITE IS BOUND TO THE EAST BY UNSER BLVD, TO THE NORTH AND WEST BY DEVELOPED COMMERCIAL PROPERTY AND TO THE SOUTH BY CENTRAL AVE.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE, COMMERCIAL RESAURANTS(S), RETAIL/OFFICE, FOOD PARK, PARKING, AND LANDSCAPING.

LEGAL: TRACT B, NUEVO ATRISCO, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "9-K10", ELEVATION = 5117.72 FEET (NAVD 1988).

OFF-SITE FLOW: OFF-SITE FLOW FROM THE ADJACENT HOUSING PROJECT IS ROUTED THROUGH THIS PROPERTY WITHIN AN EXISTING STORM DRAIN SYSTEM WITH DRAINAGE EASEMENT. MINOR SURFACE FLOW IS ALSO ACCEPTED WITHIN A BLANKET DRAINAGE EASEMENT.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP 35001C0328J, MAP (REVISION DATE NOVEMBER 4, 2016), THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN. CENTRAL AVENUE ADJACENT TO THE PROPERTY IS ENCUMBERED BY ZONE AO (DEPTH 1').

SEE DRAINAGE REPORT FOR ADDITIONAL INFORMATION AND CALCULATIONS.

City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/31/23
BY: Ricardo Bourgette
HydroTrans # K10D058
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ADA COMPLIANCE

SIDEWALK(S) AND RAMP(S):
* LONGITUDINAL SLOPE SHALL NOT EXCEED 20:1 (5% SLOPE).
* TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%

ACCESSIBLE RAMP(S):
* TARGET LONGITUDINAL SLOPE = 7% LONGITUDINAL SLOPE SHALL NOT EXCEED 12:1 (8.3%).
* TARGET CROSS SLOPE = 1% TO 1.5%. CROSS SLOPE SHALL NOT EXCEED 2%

ACCESSIBLE PARKING: TARGET SLOPE = 1% TO 1.5%. SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION

LEGEND

39	PROPOSED 1.0' CONTOUR
38.5	PROPOSED 0.5' CONTOUR
38.2	PROPOSED 0.1' CONTOUR
37.5	PROPOSED SPOT ELEVATION
	SURFACE FLOW DIRECTION
FF = 5237.5	FINISH FLOOR ELEVATION
	PROPOSED STORM DRAIN / INLET
P-X	STORMWATER QUALITY POND

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ISSUE: -	PROJECT NUMBER: IA 2470
	FILE:
	DRAWN BY: BJB
	CHECKED BY: ANW
	DATE: OCTOBER, 2022

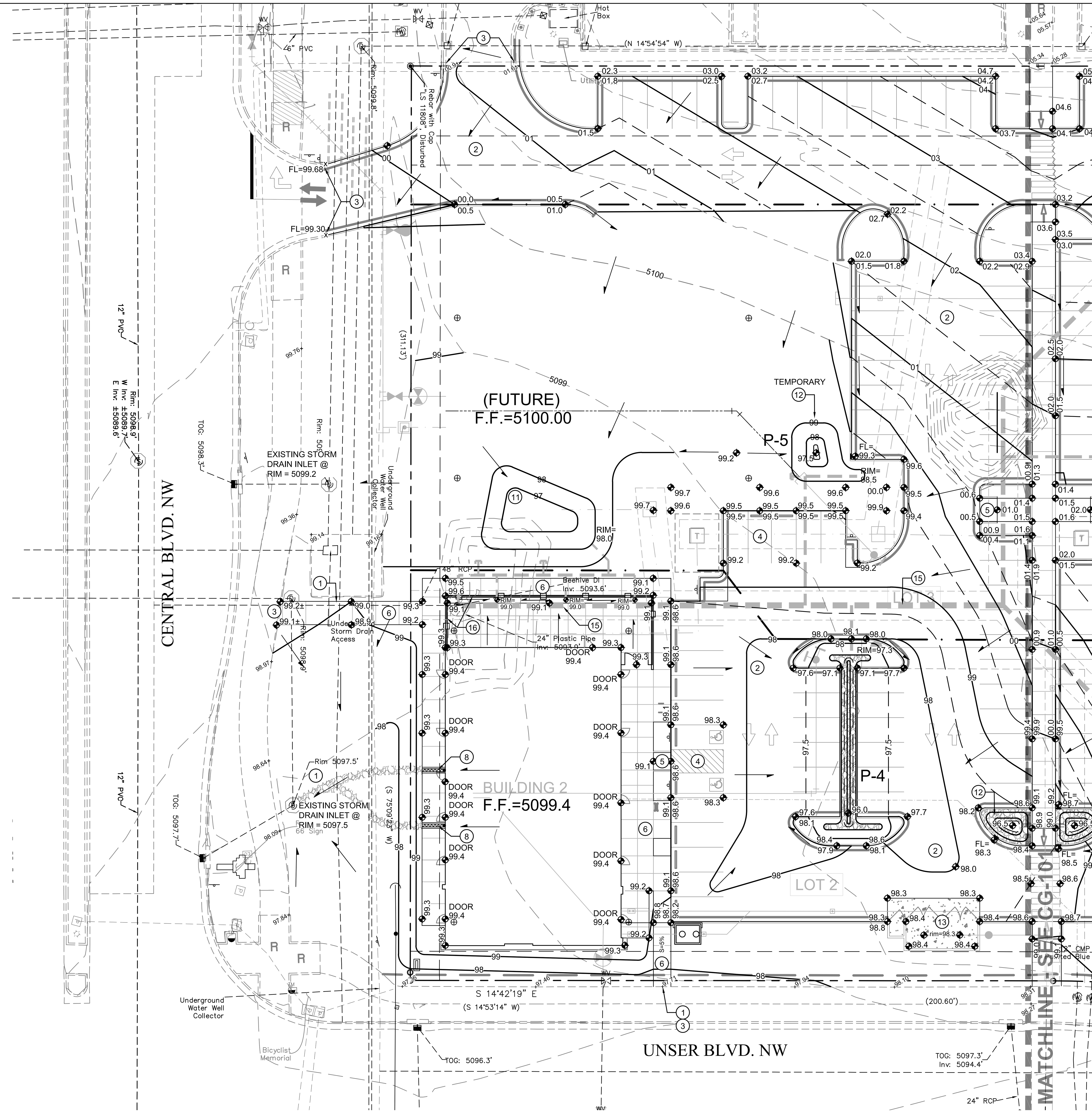
No	Date	Description

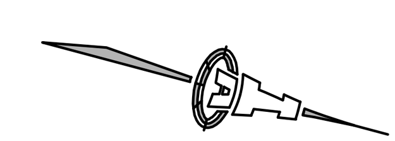
SHEET TITLE

GRADING & DRAINAGE PLAN 1 OF 2

SHEET NUMBER

CG-101





0 10 20 40 60

SCALE 1"=20'

KEYED NOTES

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City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 01/31/23
BY: Renée C. Brissette
HydroTrans # K10D058

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LEGEND

——39——	PROPOSED 1.0' CONTOUR
- - -38.5- - -	PROPOSED 0.5' CONTOUR
37.5	PROPOSED SPOT ELEVATION
——→	SURFACE FLOW DIRECTION
FF = 5237.5	FINISH FLOOR ELEVATION
- - - -⊙- - -	PROPOSED STORM DRAIN / INLET

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Engineer

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No	Date	Description

ISSUE: -
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FILE:
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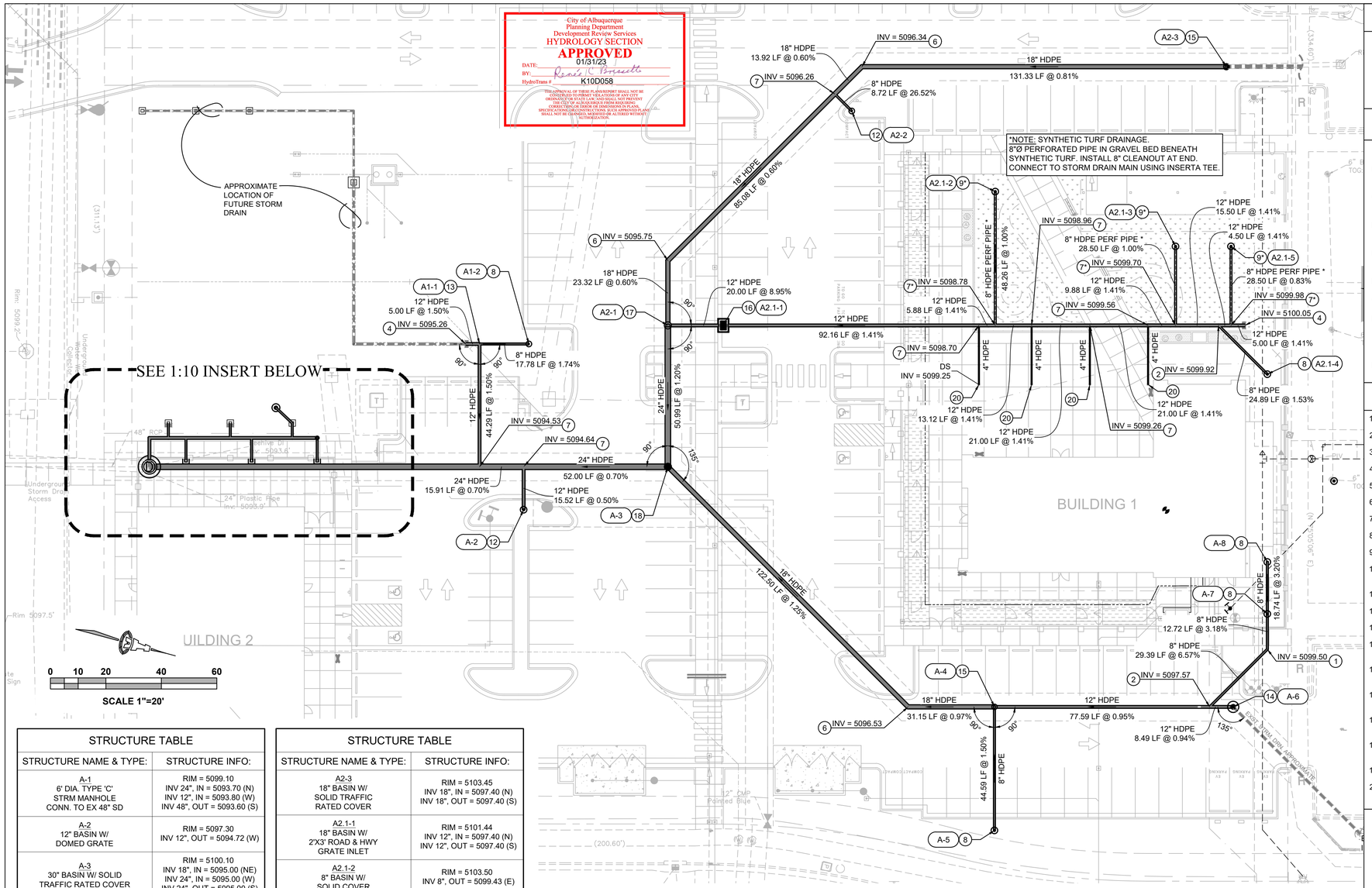
CHECKED BY: ANW
DATE: OCTOBER, 2022

SHEET TITLE

GRADING & DRAINAGE PLAN 2 OF 2

SHEET NUMBER

CG-102



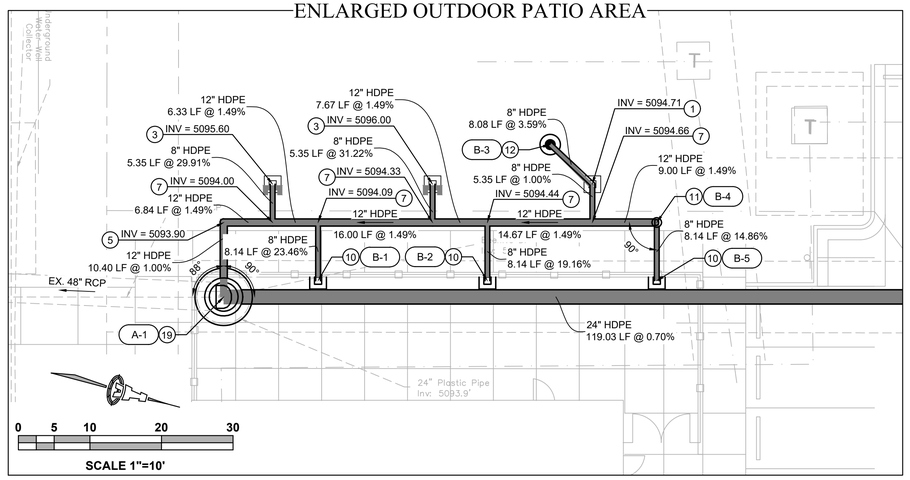
STRUCTURE TABLE

STRUCTURE NAME & TYPE:	STRUCTURE INFO:
A-1 6' DIA. TYPE 'C' STRM MANHOLE CONN. TO EX 48" SD	RIM = 5099.10 INV 24", IN = 5093.70 (N) INV 12", IN = 5093.80 (W) INV 48", OUT = 5093.60 (S)
A-2 12" BASIN W/ DOMED GRATE	RIM = 5097.30 INV 12", OUT = 5094.72 (W)
A-3 30" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5100.10 INV 18", IN = 5095.00 (NE) INV 24", IN = 5095.00 (W) INV 24", OUT = 5095.00 (S)
A-4 18" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5102.00 INV 12", IN = 5096.83 (N) INV 8", IN = 5096.83 (E) INV 18", OUT = 5096.83 (S)
A-5 8" BASIN W/ DOMED GRATE	RIM = 5100.50 INV 8", OUT = 5097.50 (W)
A-6 15" BASIN W/ SOLID TRAFFIC RATED COVER CONN. TO EX. STM	RIM = 5102.75 INV 12", IN = 5097.65 (NE) INV 12", OUT = 5097.65 (S)
A-7 8" BASIN W/ DOMED GRATE	RIM = 5103.30 INV 8", IN = 5099.90 (W) INV 8", OUT = 5099.90 (E)
A-8 8" BASIN W/ DOMED GRATE	RIM = 5103.50 INV 8", OUT = 5100.50 (E)
A1-1 15" BASIN W/ DOMED GRATE	RIM = 5098.50 INV 8", IN = 5095.19 (N) INV 12", IN = 5095.19 (S) INV 12", OUT = 5095.19 (E)
A1-2 8" BASIN W/ DOMED GRATE	RIM = 5098.50 INV 8", OUT = 5095.50 (S)
A2-1 24" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5100.85 INV 18", IN = 5095.61 (W) INV 12", IN = 5095.61 (N) INV 24", OUT = 5095.61 (E)
A2-2 12" BASIN W/ DOMED GRATE	RIM = 5102.00 INV 8", OUT = 5099.00 (SW)

STRUCTURE TABLE

STRUCTURE NAME & TYPE:	STRUCTURE INFO:
A2-3 18" BASIN W/ SOLID TRAFFIC RATED COVER	RIM = 5103.45 INV 18", IN = 5097.40 (N) INV 18", OUT = 5097.40 (S)
A2.1-1 18" BASIN W/ 2'X3' ROAD & HWY GRATE INLET	RIM = 5101.44 INV 12", IN = 5097.40 (N) INV 12", OUT = 5097.40 (S)
A2.1-2 8" BASIN W/ SOLID COVER	RIM = 5103.50 INV 8", OUT = 5099.43 (E)
A2.1-3 8" BASIN W/ SOLID COVER	RIM = 5103.75 INV 8", OUT = 5100.15 (E)
A2.1-4 8" BASIN W/ DOMED GRATE	RIM = 5103.30 INV 8", OUT = 5100.30 (SW)
A2.1-5 8" BASIN W/ SOLID COVER	RIM = 5103.70 INV 8", OUT = 5100.38 (E)
B-1 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)
B-2 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)
B-3 TEMP. 12" BASIN W/ DOMED GRATE	RIM = 5098.00 INV 8", OUT = 5095.00 (NE)
B-4 12" BASIN W/ SOLID COVER	RIM = 5099.05 INV 8", IN = 5094.79 (E) INV 12", OUT = 5094.79 (S)
B-5 12" INLINE DRAIN W/ 8" OUTLET & PED. GRATE (ADA COMPLIANT & HEEL PROOF)	RIM = 5099.00 INV 8", OUT = 5096.00 (W)

ENLARGED OUTDOOR PATIO AREA



LEGEND

- PROPOSED TRAFFIC RATED INLET
- PROPOSED DRAIN BASIN WITH GRATE

STORM DRAIN GENERAL NOTES

A. INSTALL ALL STORM DRAIN INLETS, PIPE AND FITTINGS PER MANUFACTURER'S SPECIFICATIONS.

B. PROPOSED INLETS IN LANDSCAPE AREAS CONSIST OF A NYLOPLAST BASIN (SIZE PER PLAN) AND A LOCKING GRATE. SEE KEYED NOTES AND DETAILS THIS SHEET.

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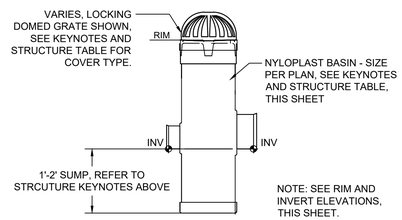
H. STORM DRAIN SYSTEM WILL REQUIRE REGULAR MAINTENANCE TO ENSURE PROPER FUNCTIONING DURING STORM EVENTS. ENGINEER RECOMMENDS THAT PROPERTY OWNER PUT IN PLACE INSPECTION AND MAINTENANCE CRITERIA SCHEDULED TO OCCUR MONTHLY AND AFTER EACH STORM EVENT.

I. STORM DRAIN PIPE LENGTHS NOTED ON PLAN ARE TO CENTER OF BASINS OR INLINE DRAINS.

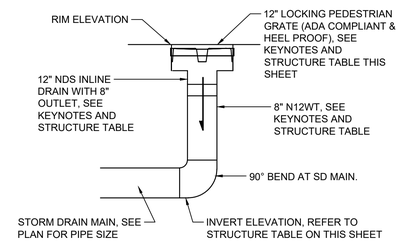
KEYED NOTES

1. 8" 45° BEND
2. 8"X12" 45° WYE
3. 8" STUB FOR FUTURE CONNECTION
4. 12" STUB FOR FUTURE CONNECTION
5. 12" 90° BEND
6. 18" 45° BEND
7. INSERTA TEE CONNECTION TO LARGER STORM LINE.
8. 8" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 1' SUMP
9. 8" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID COVER AND CONCRETE COLLAR, 1' SUMP
10. 12" DIA. INLINE DRAIN W/ 8" OUTLET; LOCKING GRATE (ADA COMPLIANT & HEEL PROOF) AND CONCRETE COLLAR
11. 12" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID COVER AND CONCRETE COLLAR, 2' SUMP
12. 12" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 2' SUMP
13. 15" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING DOME GRATE AND CONCRETE COLLAR, 2' SUMP
14. 15" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID TRAFFIC RATED COVER AND CONCRETE COLLAR, 2' SUMP
15. 18" DIA. NYLOPLAST DRAIN BASIN W/ LOCKING SOLID TRAFFIC RATED COVER AND CONCRETE COLLAR, 2' SUMP
16. 18" DIA. NYLOPLAST DRAIN BASIN W/ 2'X3' ADS ROAD & HIGHWAY TRAFFIC RATED GRATE (LOCKING) AND CONCRETE COLLAR, 2' SUMP
17. 24" DIA. NYLOPLAST DRAIN BASIN W/ SOLID TRAFFIC RATED COVER (LOCKING) AND CONCRETE COLLAR, 2' SUMP
18. 30" DIA. NYLOPLAST DRAIN BASIN W/ SOLID TRAFFIC RATED COVER (LOCKING) AND CONCRETE COLLAR, 2' SUMP
19. REMOVE EXISTING INLET STRUCTURE. CONSTRUCT 6' DIA. TYPE 'C' MANHOLE PER C.O.A.
20. EXTEND COVERED PATIO DRAINS. INSTALL TO CONNECT TO STORM DRAIN MAIN USING INSERTA TEE. SEE ARCHITECTURAL PLANS FOR SPECIFIC DRAIN LOCATIONS.



ADS NYLOPLAST BASIN

SCALE: N.T.S.



IN-LINE DRAIN

SCALE: N.T.S.

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No	Description	Date

ISSUE: -
PROJECT NUMBER: IA 2470
FILE:
DRAWN BY: BJB
CHECKED BY: ANW
DATE: OCTOBER, 2022

SHEET TITLE
STORM DRAIN PLAN

SHEET NUMBER
CG-501