



STORMWATER CONTROL PLAN

for

**Mixed-use Building
Humboldt Street & Jefferson Street
Yountville, CA 94559**

APNs: 036-054-022 & 036-054-023

ams Project No. 06-1972-01

Prepared: January 25th, 2024

prepared for:

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Attachments

- Exhibit 'A' - Topographic Survey
- Exhibit 'B' - Grading & Drainage Plan
- Exhibit 'C' - Stormwater Control Plan

This Stormwater Control Plan was prepared using the template dated October 2018.

I. Project Data

Table 1. Project Data Form

Project Name/Number	Mixed-use Building
Application Submittal Date	January 25, 2024
Project Location	APNs: 036-054-022 and 036-054-023
Project Phase No.	N/A
Project Type and Description	Mixed-use Building
Total Project Site Area (acres)	0.249
Total New and Replaced Impervious Surface Area	0.249 acres/ 10,843 sf
Total Pre-Project Impervious Surface Area	0 sf
Total Post-Project Impervious Surface Area	0.226 acres/ 9,842 sf

II. Setting

A. Project Location and Description

The project consists of one Mixed-Use Building, Parking Lot and Sidewalk. Sidewalk will be constructed along Jefferson Street and Humboldt Street.

B. Existing Site Features and Conditions

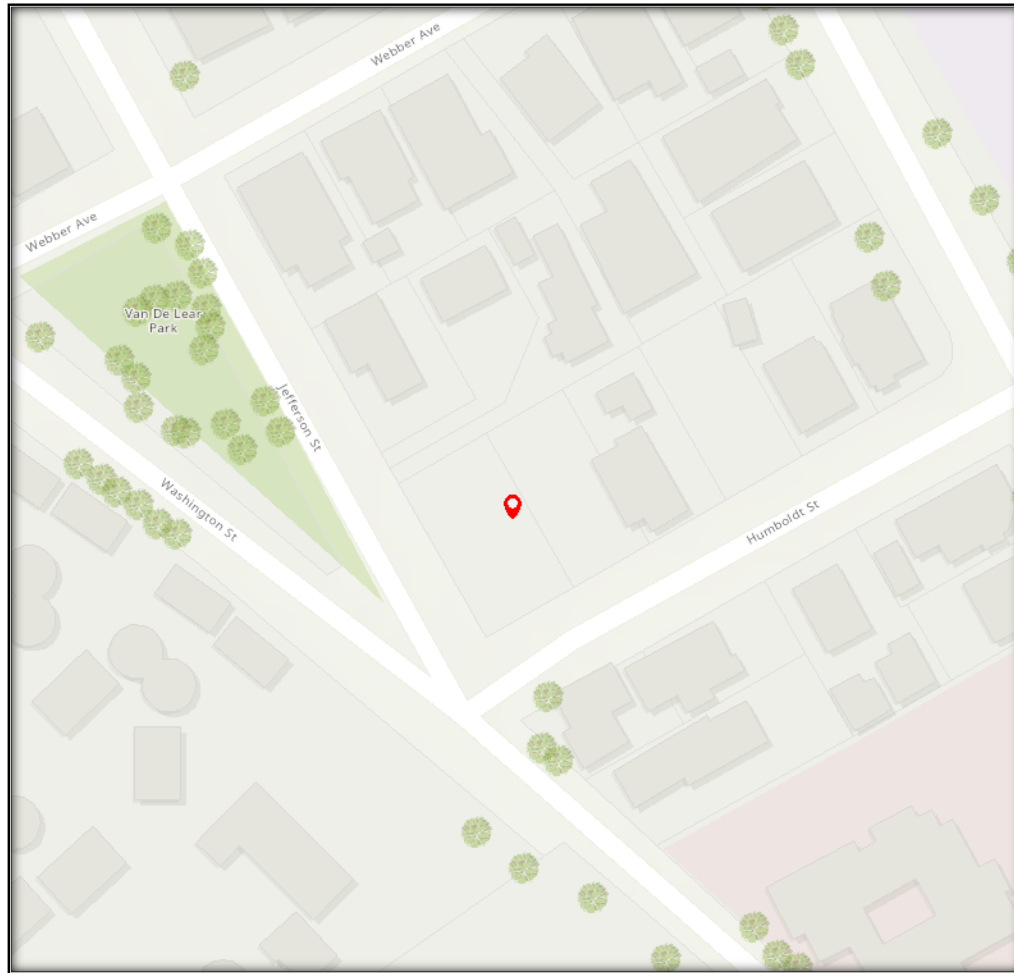
The 0.249 ± acre undeveloped Parcel slopes 1.3% from West to East towards Humboldt St. There is no Stormwater Drainage Structure or Municipal Storm Drain on Site. Soils is Coombs Gravelly Loam, Hydrologic Soil Group “C”.

C. Opportunities and Constraints for Stormwater Control

Soils are relatively impermeable, disposal of runoff to infiltration is not feasible on site. There is no City Storm Drain System for the Site.

The proposed development includes Bio-Retention Facility to mitigate impacts from increased runoff.

Figure 1 Vicinity Map



III. Low Impact Development Design Strategies

A. Optimization of Site Layout

The Site is infill within the urbanized area. Existing trees around the Property are to be preserved.

B. Use of Permeable Pavements

Conventional Concrete and Asphalt are to be used to construct Sidewalks, Driveway and Parking Lot.

C. Dispersal of Runoff to Pervious Areas

D. Stormwater Control Measures

Runoff from Roof and Parking Lot will be routed to a rectangular Bio-Retention facility on the East side of the Property. The Facility will be designed and

constructed to the criteria in the BASMAA Post-Construction Manual (July 2014), including the following features:

- Surrounded by a Concrete Curb. Where adjacent to Pavement and Curb will be thickened and an impermeable vertical cutoff wall will be included.
- Each layer built flat, level, and to the elevations specified in the plans:
 - Bottom of Gravel Layer (BGL)
 - Top of Gravel Layer (TGL)
 - Top of Soil Layer (TSL)
 - Overflow Grate
 - Facility Rim
 - 12 inches of Class 2 permeable, Caltrans specification 68-2.02F(3)
- 18 inches sand/compost mix meeting BASMAA specifications.
- 4 in. dia. PVC SDR 35 perforated pipe underdrain, installed with the invert at the top of the Class 2 permeable layer with holes facing down, and connected to the overflow structure at that same elevation.
- 6-inch-deep reservoir between top of soil elevation and overflow grate elevation
- Concrete drop inlet with frame overflow structure, with grate set to specified elevation, drains to the gutter on Humboldt St.
- Plantings selected for water conservation.
- Irrigation system on a separate zone, with drip emitters and “smart” irrigation controllers.
- Sign identifying the facility as a stormwater treatment facility.

IV. Documentation of Drainage Design

A. Descriptions of Each Drainage Management Area

1. Table 2 - Drainage Management Areas

DMA Name	Surface Type	Area (square feet)
DMA-1	Roof	5,112
DMA-2	Paving	4,730
DMA-3	Landscaped	605

2. Drainage Management Area Descriptions

- **DMA-1:** Totals 5,112 square feet, drains the East Parking Area. Runoff will enter the bio-retention facility through curb cuts.
- **DMA-2:** Totals 4,730 square feet, drains to the Bio-Retention Facility through Curb Cuts.
- **DMA-3:** Totals 605 square feet that is a Landscaped Area, self-treating area.

B. Tabulation and Sizing Calculations

1. Table 3 - Information Summary for Bioretention Facility Design

Total Project Area (Square Feet)	10,843
DMA-1	5,112
DMA-2	4,730
DMA-3	605
IMP-1	396

2. Table 4 - Self-Treating Areas

DMA Name	Area (square feet)
DMA-3	605

3. Table 5 - Self-Retaining Areas

DMA Name	Area (square feet)
N/A	N/A

4. Table 6 - Areas Draining to Self-Retaining Areas

DMA Name	Area (square feet)	Post-project surface type	Runoff factor	Product (Area x runoff factor)[A]	Receiving self-retaining DMA	Receiving self-retaining DMA Area (square feet) [B]	Ratio [A]/[B]

5. Table 7 - Areas Draining to Bioretention Facilities

DMA Name	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor	Facility Name		
					IMP-1		
DMA-1	5,112	Roof	1	5,112	Sizing factor	Minimum Facility Size	Proposed Facility Size
DMA-2	4,730	Paving	1	4,730			
DMA-3	605						
Total>				9,842	0.04	393.68	396

V. Source Control Measures

A. Site activities and potential sources of pollutants

Landscape/ Outdoor Pesticide Use/Building and Grounds Maintenance

B. Table 8 - Source Control Table

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>
D2. Landscape/ Outdoor Pesticide Use/Building and Grounds Maintenance	<p>Existing mature trees to be retained. Landscaping will minimize irrigation and runoff and be selected for pest resistance and will minimize the need for fertilizers and pesticides.</p> <p>Plants will be selected appropriate to site soils, slopes, climate, sun, wind rain, land use, air movement, ecological consistency, and plant interactions.</p>	<p>Landscaping will be maintained using minimum or no pesticides.</p> <p>IPM information will be provided to new owners, lessees, and operators.</p>

VI. Stormwater Facility Maintenance

A. Ownership and Responsibility for Maintenance in Perpetuity

As required by the Municipal Regional Permit (MRP), the Owner will be responsible for Operations and Maintenance of the Stormwater Treatment Facility. The Owner agrees to give the Municipality a right of access for inspections.

The Owner is also required to conduct maintenance inspection annually and address any issues to the Treatment Facility accordingly.

B. Summary of Maintenance Requirements for Each Stormwater Facility

- Daily: Trash removal.
- After significant rain: Inlets will be inspected and trash/debris will be removed.

VII. Construction Checklist

<i>Stormwater Control Plan Page #</i>	<i>Source Control or Treatment Control Measure</i>	<i>See Plan Sheet #s</i>
Storm Drain Inlets	Mark All Inlets with the words “No Dumping, Drains to Bay”.	Exhibit ‘B’
Drainage Management Area	DMAs 1 through 3.	Exhibit ‘C’
Hazardous Materials	Hazardous Material will not be stored outside and will be handled properly.	N/A

VIII. Certification

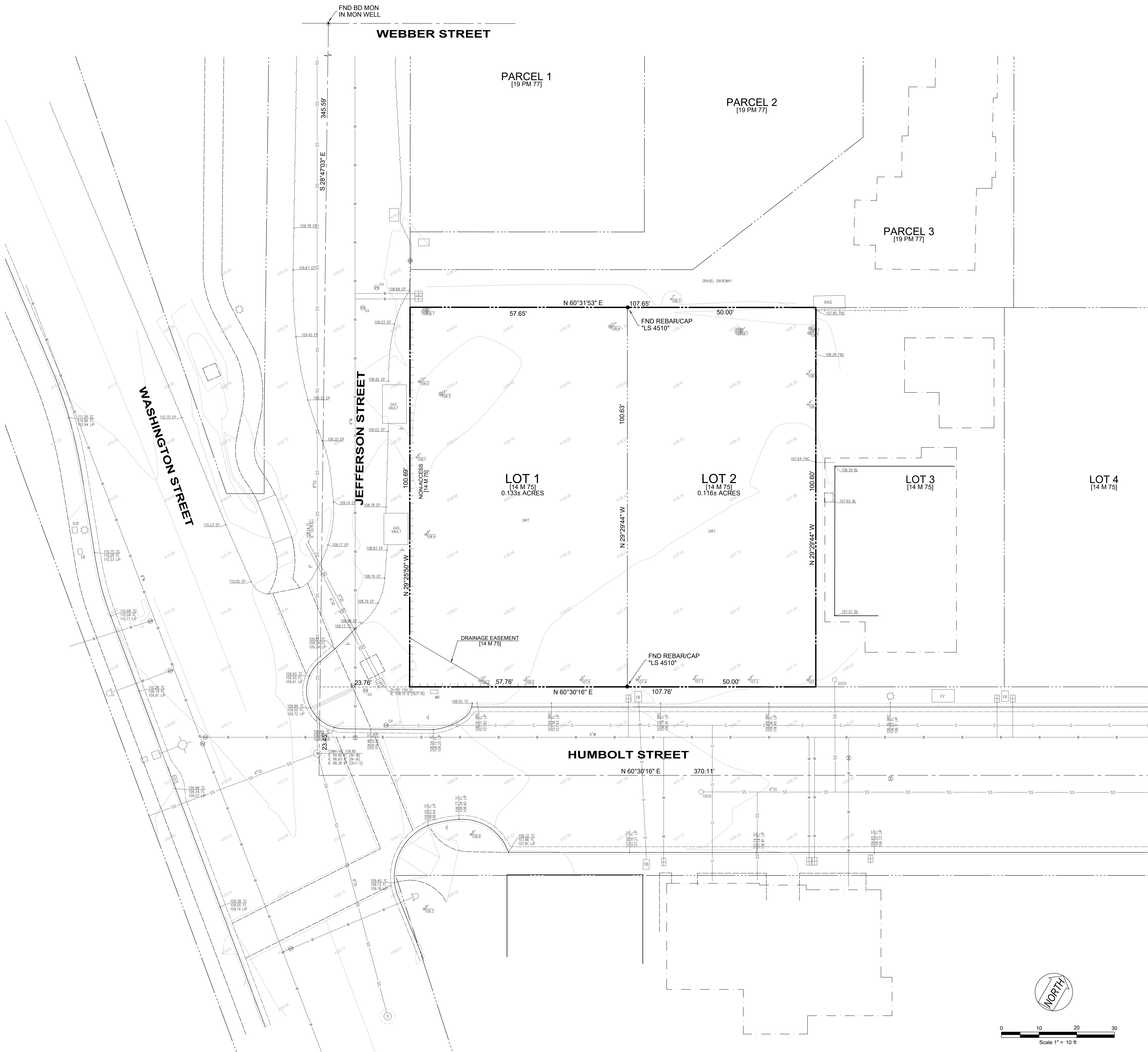
The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual*.

Attachments

- Exhibit 'A' - Topographic Survey
- Exhibit 'B' - Grading & Drainage Plan
- Exhibit 'C' - Stormwater Control Plan

Exhibit 'A'

Topographic Survey



- NOTES**
- All distances shown hereon are in U.S. Survey feet and decimals thereof.
 - This boundary and easements shown on this survey was based solely on the following recorded documents:

Final Map of Whitton Place filed for record on August 20th, 1985 in Book 14 of Maps at Pages 74-76, Napa County Records.

No liability is assumed for matters of record not shown on said document that may affect the boundary lines, exceptions, or easements affecting the property.
 - The types, locations, sizes and/or depths of existing underground utilities as shown on this topographic survey were obtained from sources of varying reliability. The contractor is cautioned that only actual excavation will reveal the types, extent, sizes, locations and depths of such underground utilities. (A reasonable effort has been made to locate and delineate all unknown underground utilities.) However, the surveyor can assume no responsibility for the completeness or accuracy of its delineation of such underground utilities which may be encountered, but which are not shown on these drawings.
 - A.P.N.: 036-054-022 and 036-054-023
 - Basis of Bearings:
The bearing of North 60°34'50" East taken on the centerline of Webber Street as shown on that certain Final Map of Whitton Place filed for record on August 20th, 1985 in Book 14 of Maps at Pages 74-76, Napa County Records was taken as the Basis of all Bearings shown hereon.
 - Benchmark:
NGS Monument "E 468 Reset";
Elevation: 106.4 feet (GPS Observed) (Datum) NAVD 1988
 - Flood Zone Note:
The subject property is shown on the Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Number 060205 0413 E, dated September 26, 2008, as being located in Flood Zone "X".

Areas of determined to be outside the 0.2% annual chance flood.

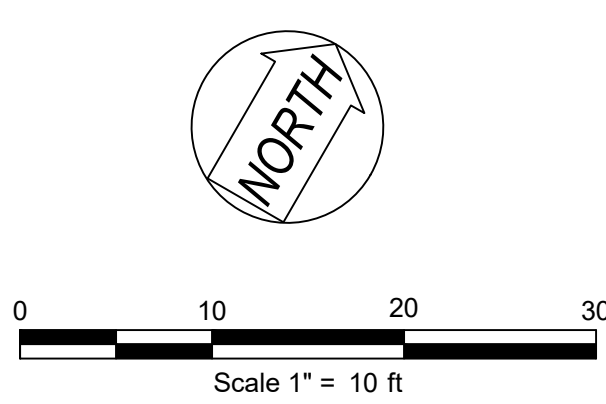
Information was obtained from the FEMA website (www.fema.gov) on July 11, 2022.

LEGEND

PROPERTY LINE	---
ADJACENT PROPERTY LINE	----
CENTERLINE	----
EASEMENT	----
NON-ACCESS	----
BUILDING LINE W/ DOOR	----
BUILDING OVERHANG	----
FOUND MONUMENT AS NOTED	●
FOUND IRON PIPE OR AS NOTED	●
BOLLARD LIGHT	○
LIGHT	○
STREET LIGHT	○
TRAFFIC SIGNAL POLE	○
TRANSFORMER	○
FIRE HYDRANT	○
STORM DRAIN MANHOLE	○
SANITARY SEWER MANHOLE	○
CLEAN OUT	○
GAS METER	○
VALVE	○
CATCH BASIN / DROP INLET	○
WATER METER	○
BACK FLOW PREVENTER	○
UTILITY BOX (SIZE VARIES)	○
SIGN	○
RECORD INFORMATION W/ REFERENCE	○
TREE W/ SIZE AND ELEVATION	○
SPOT ELEVATION	○
CONTOUR	○
INDEX CONTOUR	○
CURB	○
CURB & GUTTER	○
CONCRETE	○
FENCE	○
RETAINING WALL	○
EDGE OF PAVEMENT	○
SANITARY SEWER	○
STORM DRAIN	○
WATER	○
GAS	○
UNDERGROUND ELECTRIC	○

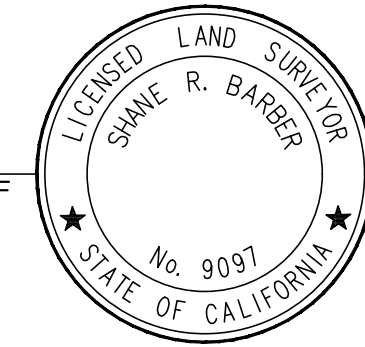
ABBREVIATIONS

BL	BUILDING
BRC	BACK OF ROLLED CURB
DI	DROP INLET
EB	ELECTRIC BOX
EP	EDGE OF PAVEMENT
EV	ELECTRIC VAULT
FL	FLOW LINE
FNC	FENCE
GV	GAS VALVE
LIP	LIP OF GUTTER
MB	MAIL BOX
IE	INVERT ELEVATION
RE	RIM ELEVATION
SLB	STREET LIGHT BOX
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
TC	TOP OF CURB



12 JULY 2022
DATE

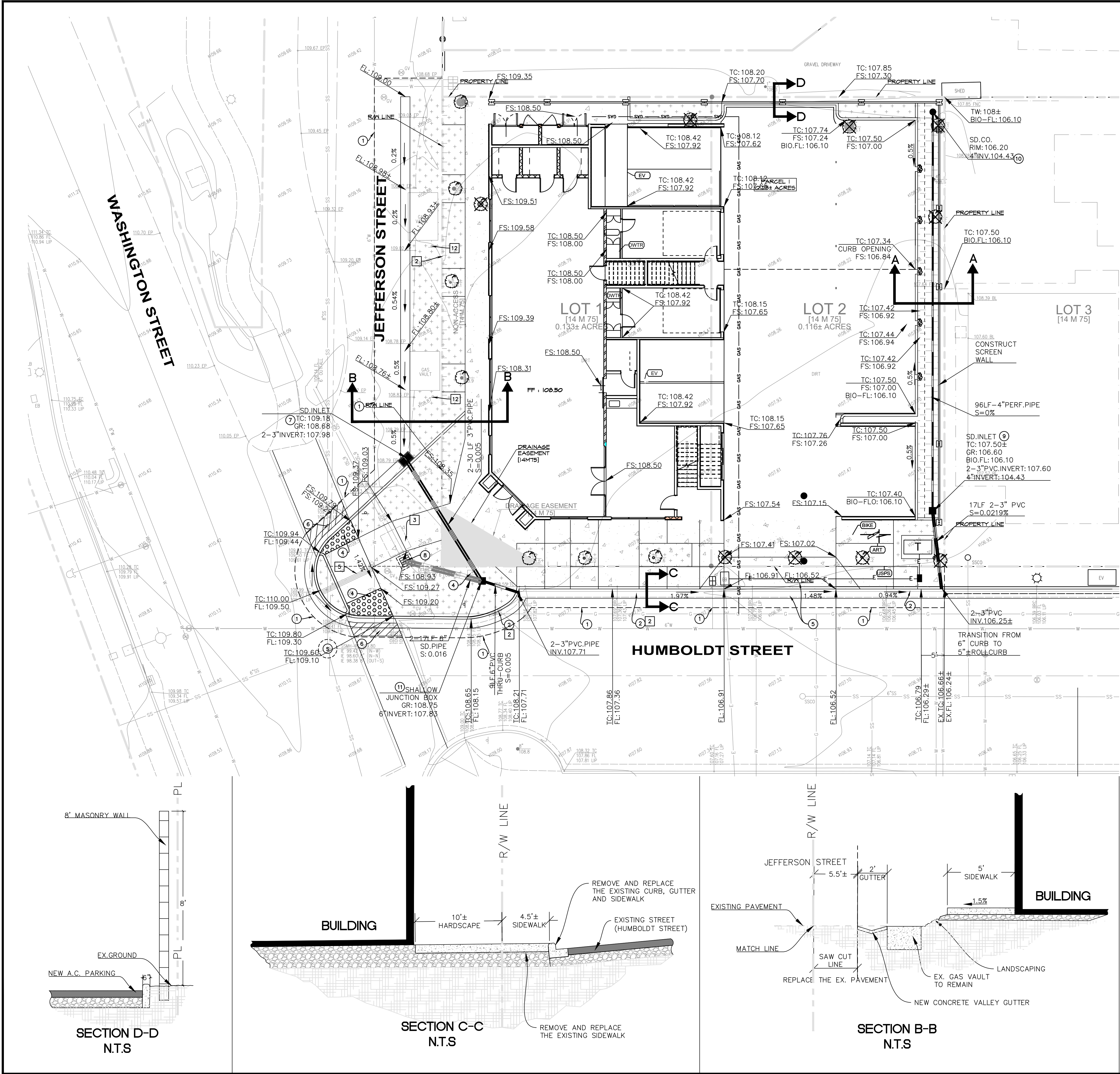
PREPARED BY OR UNDER THE SUPERVISION OF
SHANE R. BARBER, L.S. 9097
shane@barbersurveying.com



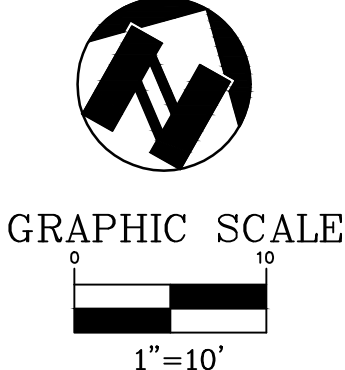
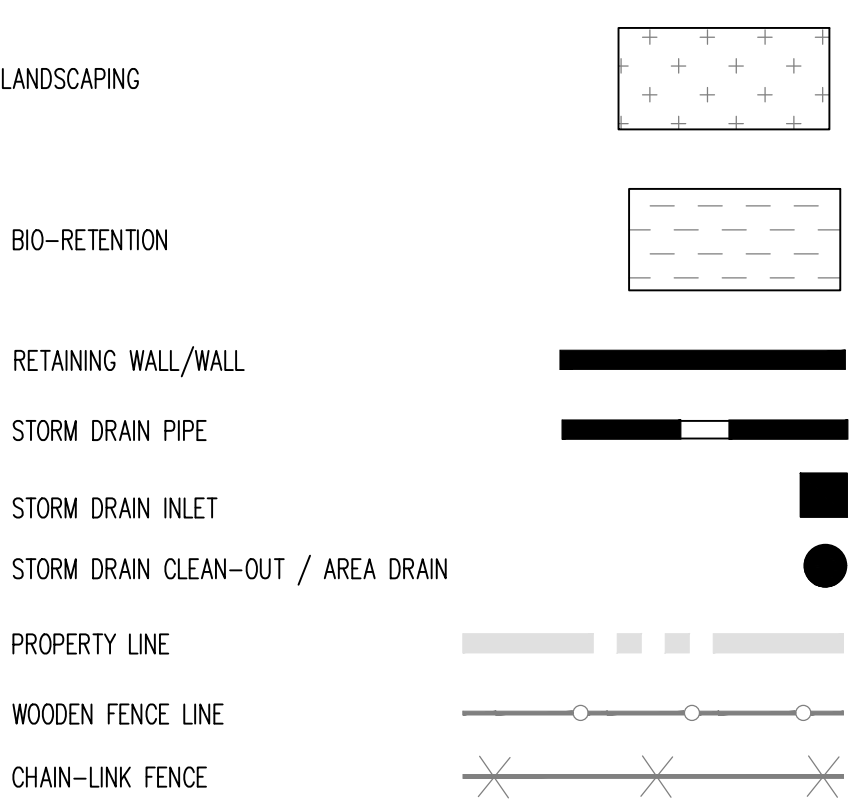
SHEET 1 OF 1	PROJECT 22-2640	TOPOGRAPHIC SURVEY HUMBOLT STREET	NAPA COUNTY	CALIFORNIA	associates, inc. PLANNING ENGINEERING SURVEYING	801 YONACIO VALLEY ROAD SUITE 100 WALNUT CREEK, CA 94596 925-943-2777 FAX 925-943-2778	DESCRIPTION	DATE	REV #	BY
							DESIGNED: AS	△		
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Exhibit 'B'

Grading & Drainage Plan



LEGEND



SECTION DETAILS

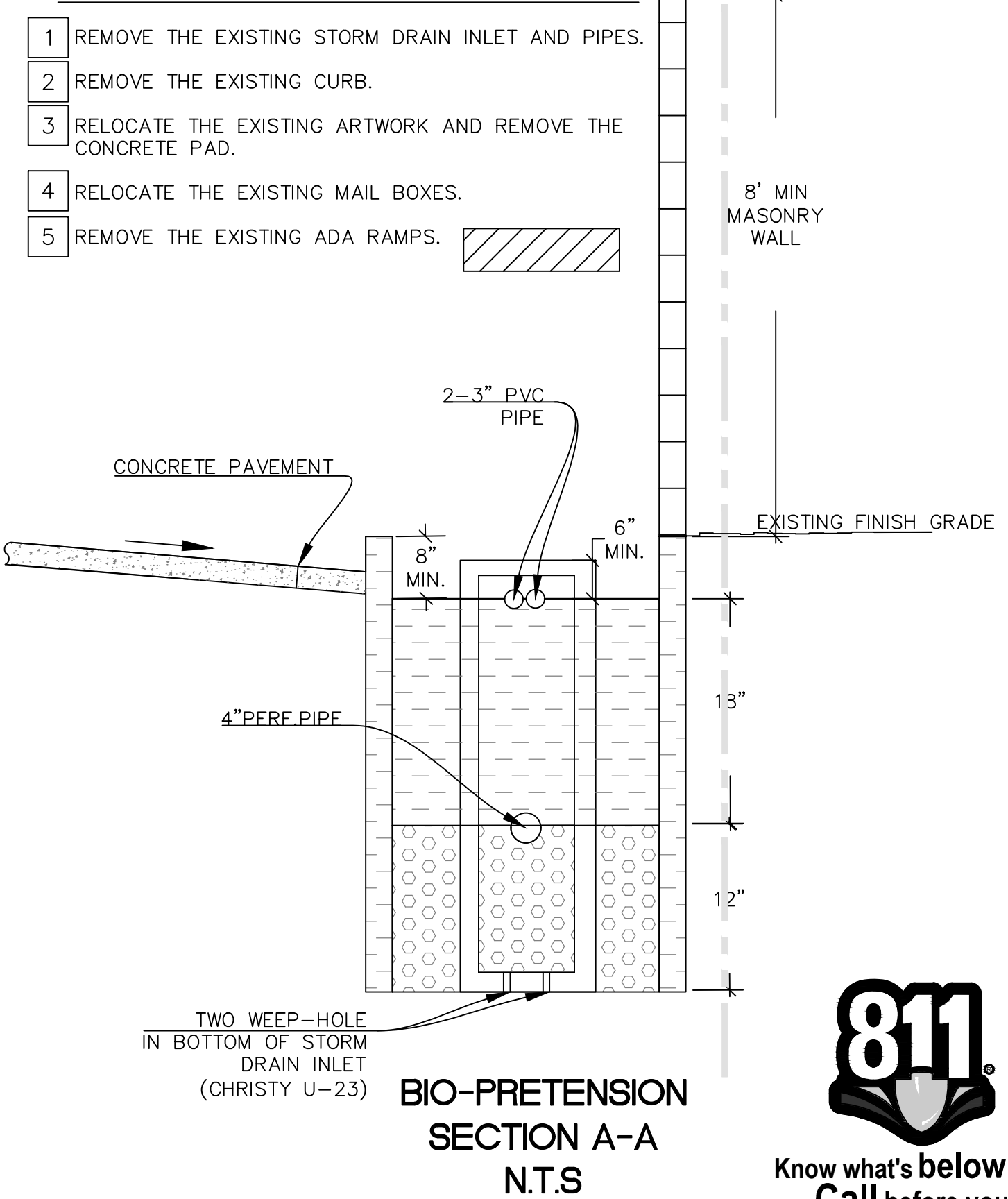


CONSTRUCTION NOTES

- 1 SAW CUT (2' MIN.). REMOVE AND REPLACE THE EXISTING PAVEMENT WITH FULL DEPTH A.C., MATCH EXISTING.
- 2 CONSTRUCT CONCRETE CURB AND GUTTER PER THE CITY OF NAPA'S STANDARD & SPECIFICATIONS, STD. DRW. #S-1A.
- 3 CONSTRUCT CONCRETE SIDEWALK PER CITY OF NAPA'S STANDARDS & SPECIFICATIONS, STD. DRW. #S-4.
- 4 CONSTRUCT NEW ADA RAMPS WITH TRUNCATED DOMES (YELLOW) PER THE CITY OF NAPA'S STANDARDS AND SPECIFICATIONS.
- 5 CONSTRUCT CONCRETE DRIVEWAY PER THE CITY OF NAPA'S STD. DRW. #S-5.
- 6 REMOVE AND REPLACE THE EXISTING PAVERS (3' MIN.). THE COLOR, PATTERN AND SECTIONS SHALL MATCH THE EXISTING PAVERS.
- 7 CONSTRUCT SHALLOW STORM DRAIN INLET PER THE CITY OF NAPA'S STD. DRW. #D-2A.
- 8 ADJUST THE EXISTING STORM DRAIN INLET & REPLACE THE EX.GRATE W./SOLID LID.
- 9 CONSTRUCT STORM DRAIN INLET CHRISTY U-23.
- 10 CONSTRUCT STORM DRAIN CLEANOUT.
- 11 CONSTRUCT SHALLOW JUNCTION BOX.
- 12 THE EXISTING GAS POLES REMAIN AND PROTECTED DURING THE CONSTRUCTION.

DEMOLITION NOTES

- 1 REMOVE THE EXISTING STORM DRAIN INLET AND PIPES.
- 2 REMOVE THE EXISTING CURB.
- 3 RELOCATE THE EXISTING ARTWORK AND REMOVE THE CONCRETE PAD.
- 4 RELOCATE THE EXISTING MAIL BOXES.
- 5 REMOVE THE EXISTING ADA RAMPS.



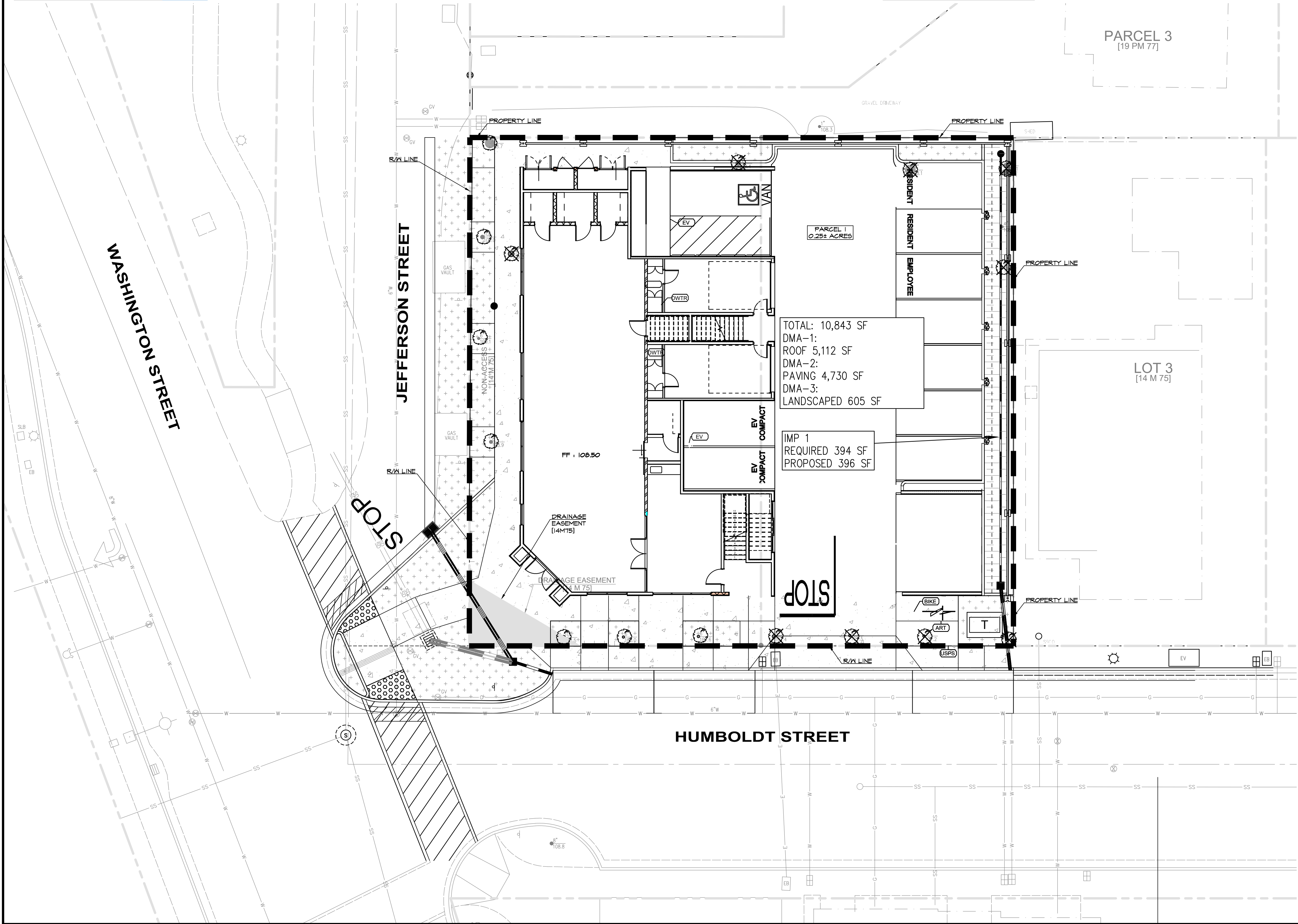
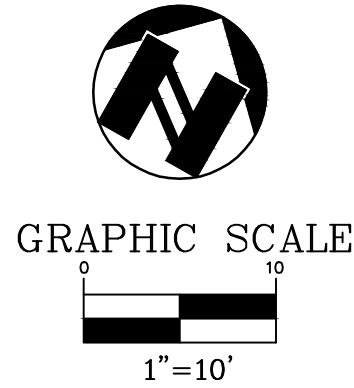
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								SCALE:	1"= 10'	DESIGNED:	AS	DRAWN:	TY	CHECKED:	AS

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Exhibit 'C'

Stormwater Control Plan

Total Site Area:		10843				BIORETENTION FACILITIES										
DMA Names	Square Feet	Self-Treating	Self-Retaining	Runoff Factor	Drains to Self-Retaining	Name of Receiving DMA	Facility 1	Facility 2	Facility 3	Facility 4	Facility 5	Facility 6	Facility 7	Facility 8	Facility 9	Facility 10
DMA-1	5,112	0	0	1	0	IMP-1	5112									
DMA-2	4,730	0	0	1	0	IMP-1	4730									
DMA-3	605	403														
Total DMAs	10447	403	0		0		9842	0	0	0	0	0	0	0	0	0
Sizing Factor							0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Minimum Size							393.68	0	0	0	0	0	0	0	0	0
Total Facilities	396	Step 7: Enter Facility Footprints				Footprint on Exhibit	396									
DMAs + Facilities	10843						OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK		Step 8: Iterate sizes of facility footprints and DMAs until all footprints are at least the minimum AND DMAs + Facilities equals Total Site Area														
		Step 9: Check to make sure Areas Draining to each Receiving Self-Retaining Area do not exceed maximum 2:1 ratio.														
		Step 10: Check results on this spreadsheet are consistent with what is shown on the SCP Exhibit.														



LEGEND:

- BIO-RETENTION AREA
- LANDSCAPED AREAS/ SELF-TREATING AREA



STORMWATER CONTROL PLAN
MIXED-USE BUILDING

801 YGNACIO VALLEY ROAD
SUITE 220
WALNUT CREEK, CA 94596
925-943-2777 FAX 925-943-2778

YOUNTVILLE
NAPA COUNTY
CALIFORNIA

SW-1
OF
PROJECT

22-2640

DATE: 06-26-23
SCALE: 1"= 10'
DESIGNED: AS
DRAWN: TY
CHECKED: AS
PROJ. MGR: AS

DESCRIPTION

DATE

BY

REV #

ams
associates, inc.

ENGINEERING SURVEYING

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