

800 Bancroft Way • Suite 101 • Berkeley, CA 94710 • (510) 704-1000
931 Mission Street • Santa Cruz, CA 95060 • (831) 457-9900
12020 Donner Pass Road • Unit B1 • Truckee, CA 96161 • (530) 550-9776
www.balancehydro.com • email: office@balancehydro.com

January 8, 2024

Shane Calkins, P.E.
Carlson, Barbee & Gibson, Inc.
2633 Camino Ramon #350
San Ramon, California 94583

RE: Summary of Peak Flow Control for the Campbell Technology Park, City of Campbell

Dear Shane Calkins:

Thank you again for providing Balance Hydrologics (“Balance”) the opportunity to assist with the modeling of the stormwater management infrastructure at the Campbell Technology Park Project (“Project”) in the City of Campbell. As you are aware, we have worked on numerous stormwater projects throughout the County, and we welcome the opportunity to apply that expertise to this site.

Balance staff has compiled a series of hydrologic modeling runs consistent with the guidance set forth by Santa Clara County’s Drainage Manual¹ (“Drainage Manual”) to assess the effectiveness of the proposed stormwater infrastructure for peak flow control. This report summarizes the work completed and peak flow management conclusions.

Project Description

The proposed Project will convert a 17-acre industrial park into a 73-lot residential neighborhood. The site is bounded by industrial areas, Edith Morley Park, a mobile home development, and California State Route 17 (CA-17). In pre-project conditions, the site is 76% impervious and drains via an existing storm drain network to the storm drain trunk line at Paseo de Palomas Lane.

In post-project conditions, impervious coverage will modestly increase by 2% to a total of 78%. Runoff will be routed to one of 31 proposed bioretention basins and ultimately conveyed to the pre-project point of discharge at Paseo de Palomas Lane via conventional gravity-flow storm drains. Therefore, existing drainage patterns are generally maintained in post-project conditions. Note that in both pre- and post-project conditions, emergency overland releases are located along the western edge of the site that allow

¹ County of Santa Clara, Drainage Manual, August 14, 2007. Available online at https://stgenpln.blob.core.windows.net/document/DrainageManual_Final.pdf (Accessed December 28, 2023)

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ponded water to flow west down the hillslope into the Caltrans CA-17 right-of-way; however, these overland releases are only utilized in the case that the adjacent storm drains fail. It is not anticipated that the overland releases are activated in typical storm conditions. The proposed bioretention basins have been sized for compliance with water quality requirements; see the Stormwater Control Plan (SWCP) prepared by CBG for additional information regarding the sizing and design of the basins. In addition to providing water quality treatment, the bioretention basins will detain stormwater runoff and thus reduce peak flow rates from the site.

Per the Santa Clara Valley Urban Runoff Pollution Prevention Program's C.3 Stormwater Handbook² and the City of Campbell Hydromodification Management Plan Applicability Map³, hydromodification management is not required for this site because of its location within a watershed with $\geq 65\%$ imperviousness.

Modeling Approach

All modeling was completed using the U.S. Army Corps of Engineers HEC-HMS software version 4.11 parameterized per the hydrograph method presented in the Drainage Manual. Model runs were developed for the 2-, 10-, and 100-year 24-hour design storms for both pre-project and post-project conditions. Model parameters include the following:

Pre-Project Drainage Management Areas (DMAs). As discussed above, the entirety of the site drains to the storm drain trunk line in Paseo de Palomas Lane. The site was modeled using three pre-project DMAs to better characterize the three main surface runoff patterns and associated storm drain connections (**Figure 1**).

Post-Project Drainage Management Areas. The grading plan divides the site into 31 sub-watersheds, each of which drain to an associated bioretention basin sized primarily for compliance with water quality requirements. These sub-watersheds were lumped into six DMAs (DMA 1 through DMA 6) for modeling purposes, all of which drain to the existing storm drain system at Paseo de Palomas Lane (**Figure 2**). Note that the naming convention used in this report does not correspond with the labels in **Appendix B**. See below for more details on the modeling approach for the bioretention basins.

SCS Curve Number Method. Soil infiltration and other losses were accounted for using the Soil Conservation Service (SCS) Curve Number (CN) method. The Project site was assumed to be underlain entirely by Hydrologic Soil Group (HSG) A; this is a conservative assumption since HSG A soils have high infiltration rates and result in comparatively low pre-project peak flow rates. Per Table E-1 of the Drainage Manual, the appropriate CN for the pervious area for both commercial zones and high-density residential zones is 44. Antecedent moisture conditions (AMCs) were used to translate CNs for use in the

² Santa Clara Valley Urban Runoff Pollution Prevention Program's C.3 Stormwater Handbook, 2016, available online at https://files.santaclaracounty.gov/migrated/SCVURPPP_C.pdf (accessed 12/29/2023).

³ Santa Clara Valley Urban Runoff Pollution Prevention Program's HMP Applicability Map, City of Campbell, 2010, Available online at chrome-extension: chrome-extension://efaidnbmnnibpcajpcgclefindmkaj/https://scvurppp.org/wp-content/uploads/2019/08/Campbell_HMP_Map.pdf (accessed 12/29/2023).

appropriate design storm as outlined in Table 4-1 and Table E-2 of the Drainage Manual: a CN of 49 was used for the 2-year storm events and a CN of 54 was used for the 10- and 100-year events. Initial abstraction was calculated using the procedure outlined in the Drainage Manual and is reported along with other model parameters in **Table 1**.

Table 1. Summary of HEC-HMS Model Parameters

	Area		Impervious Area (%)	Initial Abstraction	
	(ft ²)	(acres)		AMC II 1/2 (inches)	AMC II 1/4 (inches)
Pre-Project	752,870	17.3	76%		
DMA 1	486,310	11.2	80%	0.39	0.46
DMA 2	78,270	1.8	84%	0.31	0.37
DMA 3	188,290	4.3	62%	0.68	0.82
Post-Project	752,870	17.3	78%		
DMA 1	125,840	2.9	79%	0.39	0.47
DMA 2	220,160	5.1	81%	0.36	0.43
DMA 3	50,870	1.2	90%	0.22	0.26
DMA 4	16,940	0.4	55%	0.79	0.96
DMA 5	212,870	4.9	84%	0.31	0.37
DMA 6	126,200	2.9	60%	0.70	0.85

Lag Time. Lag times were calculated for each pre- and post-project DMA per the Drainage Manual guidance; however, due to the relatively small size of the watersheds and low basin roughness values, the calculated lag times are unreasonably short. A conservative but reasonable minimum lag time of 5 minutes was used for all DMAs.

Design Rainfall. Following the County isohyetal map and the Return Period-Duration-Specific Regional Equation, a mean annual precipitation of 16 inches was selected and used to calculate precipitation depths of 1.86, 3.80, and 4.72 inches for the 2-, 10-, and 100-year 24-hour storms, respectively. Twenty-four-hour rainfall distributions were sourced from Appendix D of the Drainage Manual.

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Bioretention Basins. Only the two largest basins (BR-15 and BR-23, located in DMA 2 and DMA 5, respectively) were modeled; these basins provide water quality treatment for approximately 57% of the Project area. The additional detention capacity provided by the remaining 29 basins was not included in this analysis. The detention storage in BR-15 and BR-23 includes the void volume within the rock and biosoil layers as well as six inches of ponding, using the conservative assumption of vertical basin walls. Outflow via the basins' underdrains was calculated based on the infiltration rate on the biosoil media. The three overflow inlets located in each basin were modeled as 18-inch by 18-inch riser structures with rim elevations 3 feet above the bottom of the basin.

Results

The HEC-HMS results for the various model runs are included in **Appendix A** and summarized in **Table 2** below.

Table 2. HEC-HMS Peak Flow Results

	Total Peak Flow		
	2-year <i>(cfs)</i>	10-year <i>(cfs)</i>	100-year <i>(cfs)</i>
Pre-Project	12.0	21.0	32.1
Post-Project (No Detention)	12.4	21.7	32.9
Post-Project (With Detention)	6.1	10.2	15.2

As shown in **Table 2**, without any detention, the slight increase in post-project impervious cover would increase peak flows. The proposed stormwater basins are successful in mitigating this increase and significantly reducing post-project peak flow rates to below pre-project values. Since the other 29 basins that account for just under half of the Project's detention volume were not included in the model, these results likely represent a very conservative estimate of peak flow reduction.

The maximum modeled ponding depths for BR-15 are 0.50 feet for the 10-year design storm and 0.75 feet for the 100-year design storm. The maximum modeled ponding depths for BR-23 are 0.14 feet for the 10-year design storm and 0.64 feet for the 100-year design storm.

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Closing

Thank you again for the opportunity to assist with this peak flow analysis.

Do not hesitate to contact Balance if you have any questions related to the modeling work or conclusions presented here.

Sincerely,

BALANCE HYDROLOGICS, Inc.

Edward D Ballman

Edward D. Ballman, P.E.
Principal Engineer

Claire Bareilles

Claire Bareilles, E.I.T.
Engineer / Hydrologist

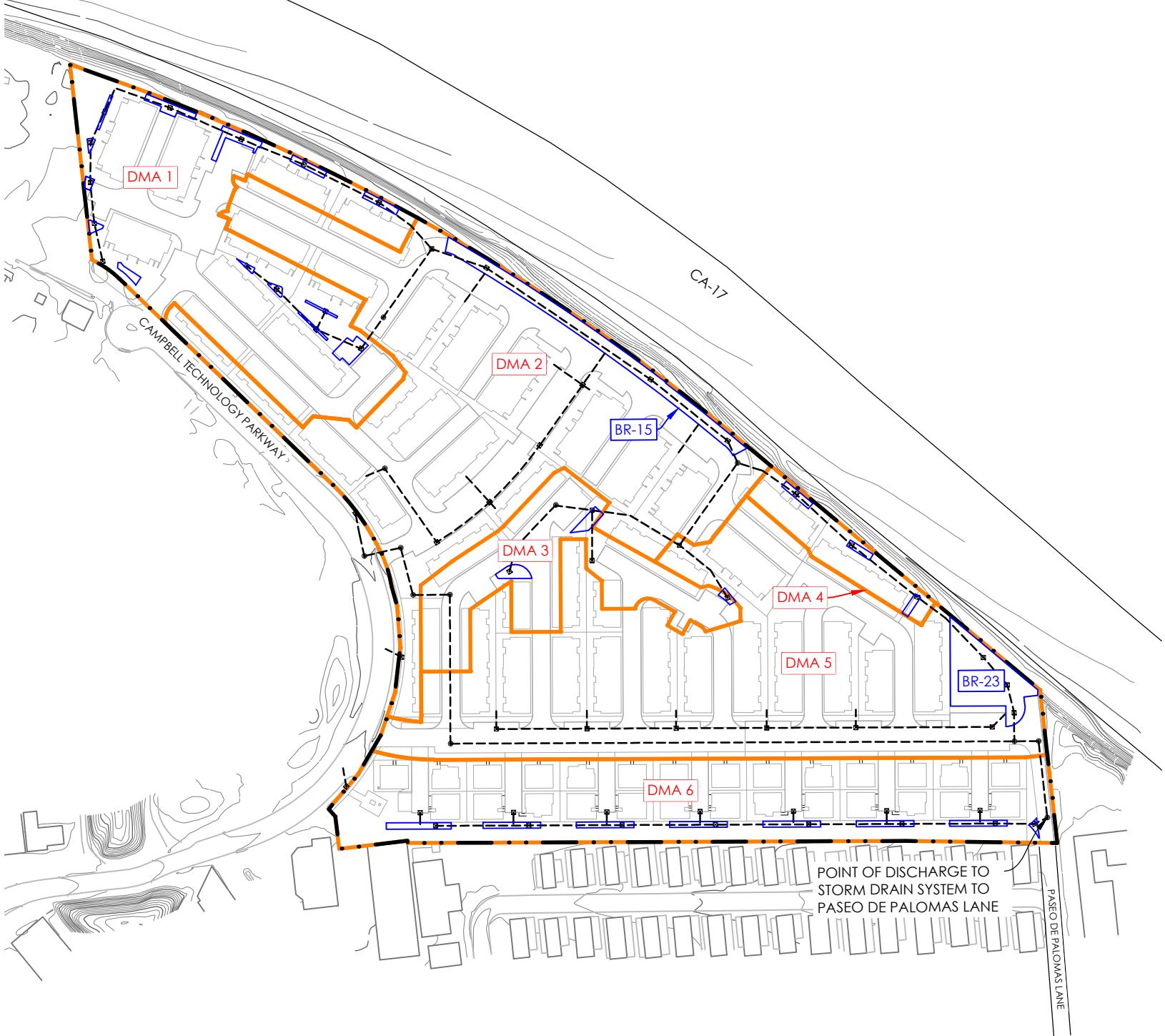
Camille Pauley

Camille Pauley, E.I.T., CFM
Engineer / Hydrologist



Enclosures: Appendix A: Summary of HEC-HMS Model Output
 Appendix B: Vesting Tentative Map





APPENDICES

APPENDIX A

Summary of HEC-HMS Model Output

Appendix A

HEC-HMS Model Output

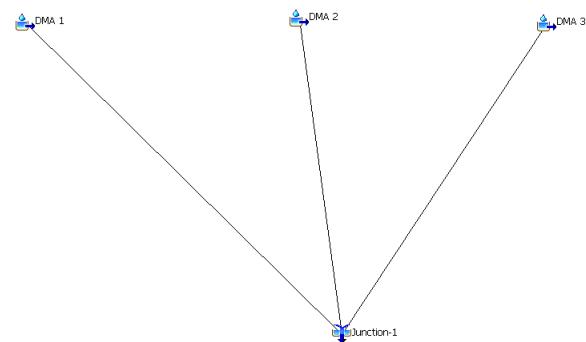


Figure A-1. Basin configuration for the pre-project HEC-HMS model.

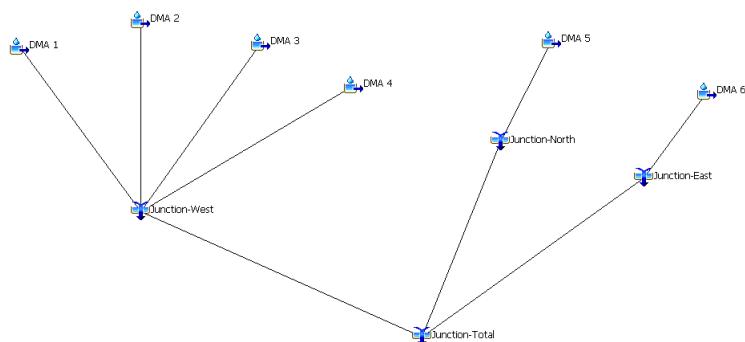


Figure A-2. Basin configuration for the post-project no detention HEC-HMS model.

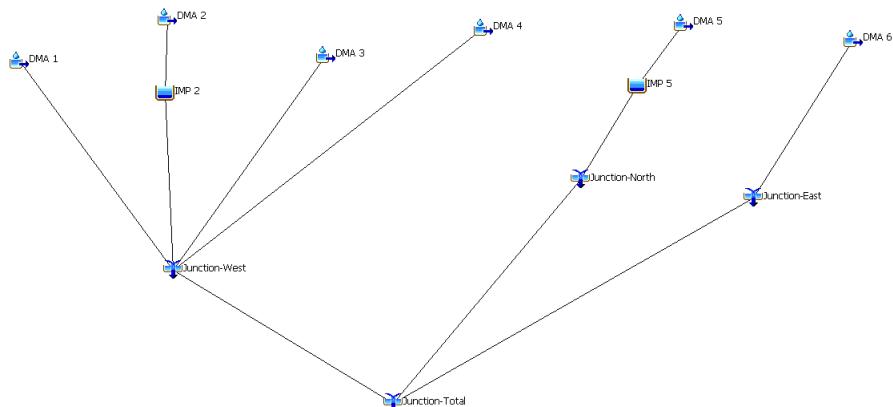
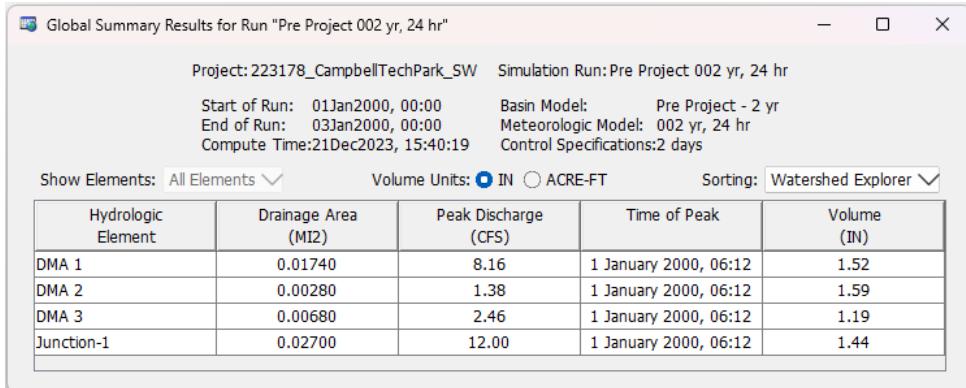
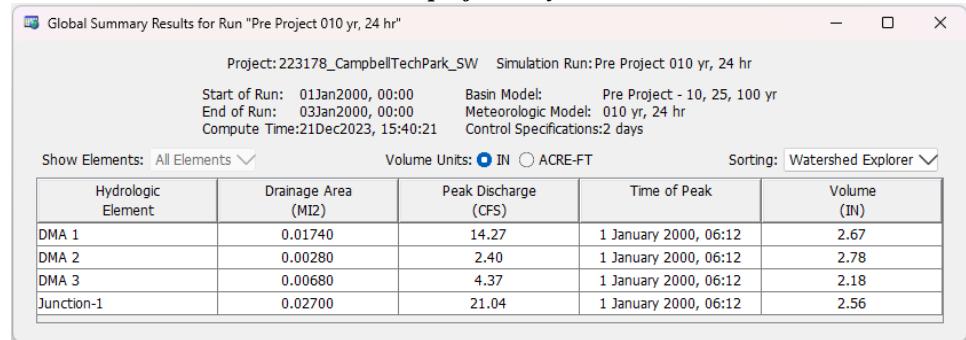


Figure A-3. Basin configuration for the post-project with detention HEC-HMS model.

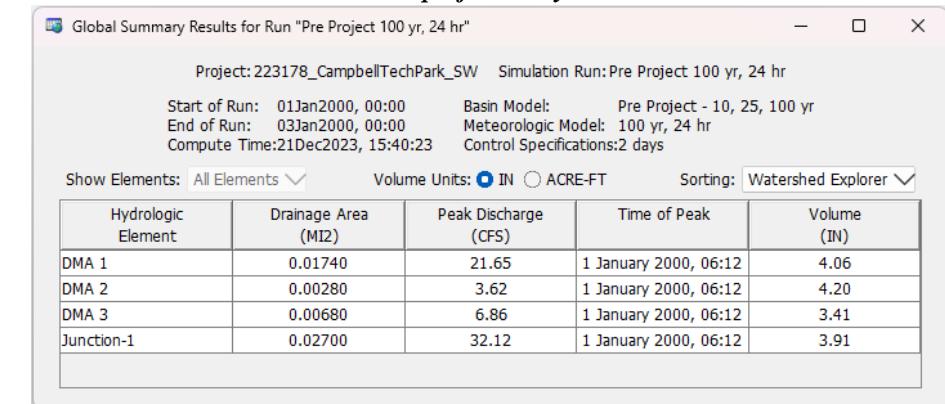
Pre-project 2-year



Pre-project 10-year



Pre-project 100-year



Post-project No Detention 2-year

Global Summary Results for Run "Post Project ND 002 yr, 24hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project ND 002 yr, 24hr

Start of Run: 01Jan2000, 00:00 Basin Model: Post Project ND - 2yr
 End of Run: 03Jan2000, 00:00 Meteorologic Model: 002 yr, 24 hr
 Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	3.75	1 January 2000, 06:12	1.54
DMA 3	0.00182	0.96	1 January 2000, 06:12	1.70
DMA 1	0.00451	2.09	1 January 2000, 06:12	1.50
DMA 4	0.00061	0.20	1 January 2000, 06:12	1.06
DMA 6	0.00453	1.58	1 January 2000, 06:12	1.15
Junction-West	0.01484	7.00	1 January 2000, 06:12	1.53
DMA 5	0.00764	3.81	1 January 2000, 06:12	1.61
Junction-North	0.00764	3.81	1 January 2000, 06:12	1.61
Junction-East	0.00453	1.58	1 January 2000, 06:12	1.15
Junction-Total	0.02701	12.39	1 January 2000, 06:12	1.49

Post-project No Detention 10-year

Global Summary Results for Run "Post Project ND 10 yr, 24hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project ND 10 yr, 24hr

Start of Run: 01Jan2000, 00:00 Basin Model: Post Project ND- 10,25,100
 End of Run: 03Jan2000, 00:00 Meteorologic Model: 010 yr, 24 hr
 Compute Time: 28Dec2023, 15:51:16 Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	6.56	1 January 2000, 06:12	2.70
DMA 3	0.00182	1.66	1 January 2000, 06:12	2.93
DMA 1	0.00451	3.66	1 January 2000, 06:12	2.65
DMA 4	0.00061	0.35	1 January 2000, 06:12	1.98
Junction-West	0.01484	12.22	1 January 2000, 06:12	2.68
DMA 5	0.00764	6.61	1 January 2000, 06:12	2.80
Junction-North	0.00764	6.61	1 January 2000, 06:12	2.80
DMA 6	0.00453	2.82	1 January 2000, 06:12	2.12
Junction-East	0.00453	2.82	1 January 2000, 06:12	2.12
Junction-Total	0.02701	21.65	1 January 2000, 06:12	2.62

Post-project No Detention 100-year

Global Summary Results for Run "Post Project ND 100 yr, 24hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project ND 100 yr, 24hr

Start of Run: 01Jan2000, 00:00 Basin Model: Post Project ND- 10,25,100
 End of Run: 03Jan2000, 00:00 Meteorologic Model: 100 yr, 24 hr
 Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	9.93	1 January 2000, 06:12	4.09
DMA 3	0.00182	2.48	1 January 2000, 06:12	4.39
DMA 1	0.00451	5.56	1 January 2000, 06:12	4.03
DMA 4	0.00061	0.55	1 January 2000, 06:12	3.15
Junction-West	0.01484	18.52	1 January 2000, 06:12	4.07
DMA 5	0.00764	9.97	1 January 2000, 06:12	4.23
Junction-North	0.00764	9.97	1 January 2000, 06:12	4.23
DMA 6	0.00453	4.45	1 January 2000, 06:12	3.34
Junction-East	0.00453	4.45	1 January 2000, 06:12	3.34
Junction-Total	0.02701	32.94	1 January 2000, 06:12	3.99

Post-project With Detention 2-year

Global Summary Results for Run "Post Project 002 yr, 24 hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project 002 yr, 24 hr

Start of Run: 01Jan2000, 00:00 Basin Model: Post Project - 2 yr
End of Run: 03Jan2000, 00:00 Meteorologic Model: 002 yr, 24 hr
Compute Time: 28Dec2023, 14:46:25 Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	3.75	1 January 2000, 06:12	1.54
IMP 2	0.00790	0.75	1 January 2000, 07:06	1.52
DMA 3	0.00182	0.96	1 January 2000, 06:12	1.70
DMA 1	0.00451	2.09	1 January 2000, 06:12	1.50
DMA 4	0.00061	0.20	1 January 2000, 06:12	1.06
DMA 6	0.00453	1.58	1 January 2000, 06:12	1.15
Junction-West	0.01484	3.82	1 January 2000, 06:12	1.52
DMA 5	0.00764	3.81	1 January 2000, 06:12	1.61
IMP 5	0.00764	0.87	1 January 2000, 07:04	1.60
Junction-North	0.00764	0.87	1 January 2000, 07:04	1.60
Junction-East	0.00453	1.58	1 January 2000, 06:12	1.15
Junction-Total	0.02701	6.11	1 January 2000, 06:12	1.48

Post-project With Detention 10-year

Global Summary Results for Run "Post Project 010 yr, 24 hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project 010 yr, 24 hr

Start of Run: 01Jan2000, 00:00 Basin Model: Post Project - 10, 25, 100 y
End of Run: 03Jan2000, 00:00 Meteorologic Model: 010 yr, 24 hr
Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	6.56	1 January 2000, 06:12	2.70
IMP 2	0.00790	0.98	1 January 2000, 07:10	2.68
DMA 3	0.00182	1.66	1 January 2000, 06:12	2.93
DMA 1	0.00451	3.66	1 January 2000, 06:12	2.65
DMA 4	0.00061	0.35	1 January 2000, 06:12	1.98
Junction-West	0.01484	6.49	1 January 2000, 06:12	2.67
DMA 5	0.00764	6.61	1 January 2000, 06:12	2.80
Junction-North	0.00764	1.15	1 January 2000, 07:08	2.79
DMA 6	0.00453	2.82	1 January 2000, 06:12	2.12
IMP 5	0.00764	1.15	1 January 2000, 07:08	2.79
Junction-East	0.00453	2.82	1 January 2000, 06:12	2.12
Junction-Total	0.02701	10.24	1 January 2000, 06:12	2.62

Post-project With Detention 100-year

Global Summary Results for Run "Post Project 100 yr, 24 hr"

Project: 223178_CampbellTechPark_SW Simulation Run: Post Project 100 yr, 24 hr

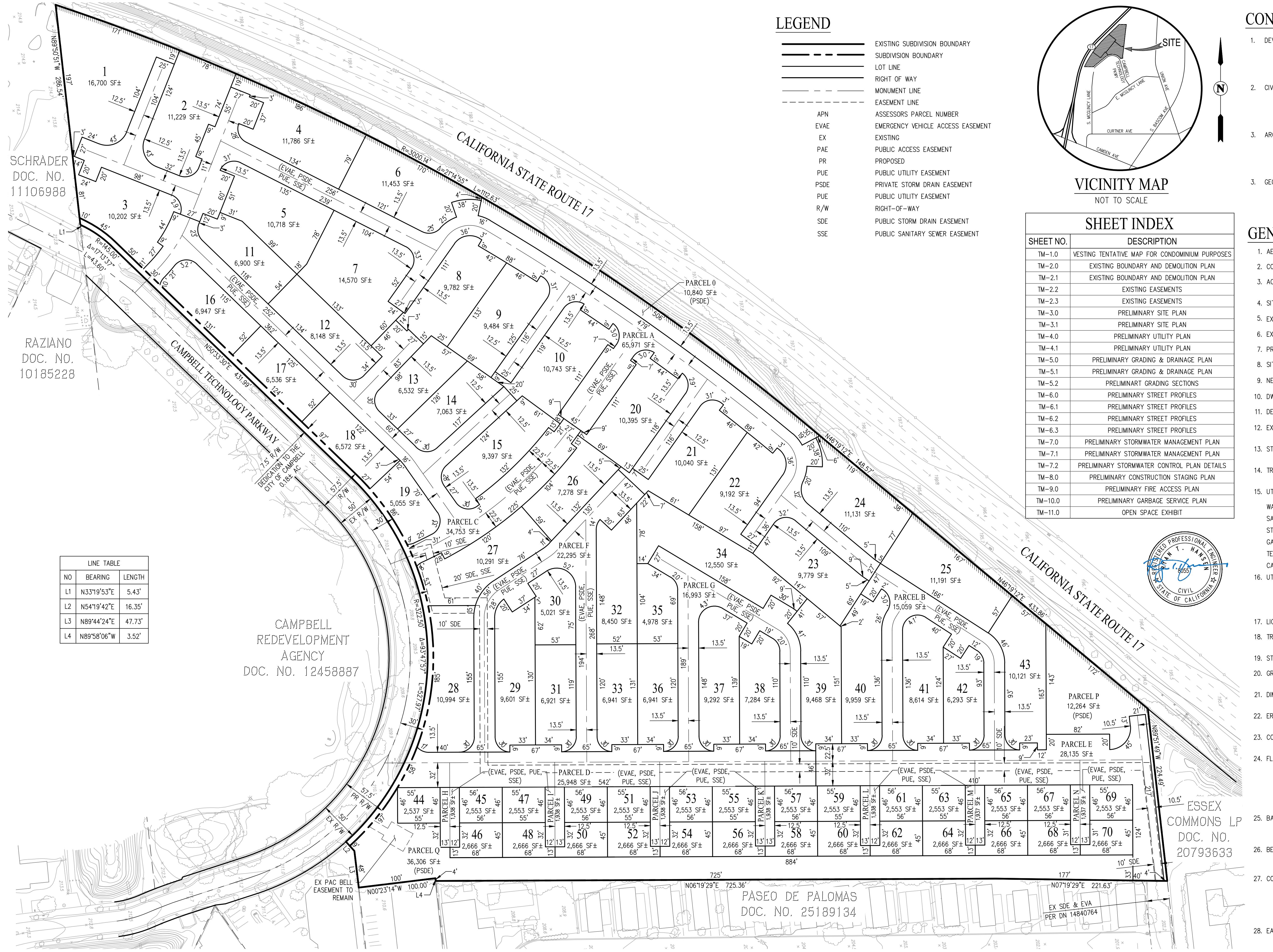
Start of Run: 01Jan2000, 00:00 Basin Model: Post Project - 10, 25, 100 y
End of Run: 03Jan2000, 00:00 Meteorologic Model: 100 yr, 24 hr
Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: 2 days

Show Elements: All Elements IN ACRE-FT Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DMA 2	0.00790	9.93	1 January 2000, 06:12	4.09
IMP 2	0.00790	5.03	1 January 2000, 06:20	4.08
DMA 3	0.00182	2.48	1 January 2000, 06:12	4.39
DMA 1	0.00451	5.56	1 January 2000, 06:12	4.03
DMA 4	0.00061	0.55	1 January 2000, 06:12	3.15
Junction-West	0.01484	10.19	1 January 2000, 06:16	4.06
DMA 5	0.00764	9.97	1 January 2000, 06:12	4.23
Junction-North	0.00764	2.88	1 January 2000, 06:40	4.22
DMA 6	0.00453	4.45	1 January 2000, 06:12	3.34
IMP 5	0.00764	2.88	1 January 2000, 06:40	4.22
Junction-East	0.00453	4.45	1 January 2000, 06:12	3.34
Junction-Total	0.02701	15.17	1 January 2000, 06:12	3.99

APPENDIX B

Vesting Tentative Map



LEGEND

—————	EXISTING SUBDIVISION BOUNDARY
— — — — —	SUBDIVISION BOUNDARY
—————	LOT LINE
—————	RIGHT OF WAY
————— — — — — —	MONUMENT LINE
— — — — — — — — —	EASEMENT LINE
APN	ASSESSORS PARCEL NUMBER
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
EX	EXISTING
PAE	PUBLIC ACCESS EASEMENT
PR	PROPOSED
PUE	PUBLIC UTILITY EASEMENT
PSDE	PRIVATE STORM DRAIN EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT-OF-WAY
SDE	PUBLIC STORM DRAIN EASEMENT
SSE	PUBLIC SANITARY SEWER EASEMENT

CONTACTS

- | | |
|---------------------------|---|
| 1. DEVELOPER: | BAYWEST DEVELOPMENT GROUP INC.
JASON LAUB
90 RAILROAD AVE
CAMPBELL, CA 95008
(925) 998-6060 |
| 2. CIVIL ENGINEER: | CARLSON, BARBEE & GIBSON, INC.
RYAN HANSEN P.E.
2633 CAMINO RAMON, SUITE 350
SAN RAMON, CA 94583
(925) 866-0322 |
| 3. ARCHITECT | KTGY GROUP, INC.
JILL WILLIAMS
1814 FRANKLIN ST, SUITE 400
OAKLAND, CA 94612
(510) 463-2045 |
| 3. GEOTECHNICAL ENGINEER: | ENGEO
2010 CROW CANYON PLACE, SUITE 250
SAN RAMON, CA
(925)-866-9000 |
- ## GENERAL NOTES
1. AERIAL TOPOGRAPHY: BY GEOMAPS DATED MAY 25, 2023

2. CONTOUR INTERVAL: 1 FOOT

3. ACCESSORS PARCEL NO.: 412-29-010, 412-29-011, 412-29-012, 412-29-015

4. SITE ADDRESS: 635, 655, 675, 695 CAMPBELL TECHNOLOGY PARKWAY

5. EXISTING/PROPOSED ZONING: HD-MU (HIGH DENSITY MIXED-USE) & P-D (PLANNED DEVELOPMENT)

6. EXISTING LAND USE: COMMERCIAL

7. PROPOSED LAND USE: RESIDENTIAL

8. SITE AREA: 17.28 AC±

9. NET LOT AREA: 17.10 AC±

10. DWELLING UNITS: 290 UNITS

11. DENSITY: 16.96 DU/AC (NET)

12. EXISTING STRUCTURES: EXISTING STRUCTURES ON THE SITE WILL BE DEMOLISHED PRIOR TO CONSTRUCTION.

13. STREET TREES: STREET TREES SHALL BE PROVIDED AS REQUIRED BY THE CITY AND WILL BE PRIVATELY MAINTAINED.

14. TREES: ALL EXISTING TREES WITHIN THE DEVELOPMENT OF THE SITE ARE TO BE REMOVED UNLESS OTHERWISE NOTED.

15. UTILITY PROVIDERS:

 - WATER: SAN JOSE WATER COMPANY
 - SANITARY SEWER: WEST VALLEY SANITATION DISTRICT
 - STORM DRAIN: CITY OF CAMPBELL
 - GAS & ELECTRIC: PG&E
 - TELEPHONE: TBD
 - CABLE TV: TBD

16. UTILITY:

ALL ONSITE DOMESTIC WATER MAINS WILL BE PUBLIC UP TO EACH INDIVIDUAL METER. SANITARY SEWER WILL BE PUBLIC UP TO THE UNIT CLEANOUT. THE STORM DRAIN SYSTEM SERVING JUST THE RESIDENTIAL DEVELOPMENT WILL BE PRIVATE. THE STORM DRAIN SYSTEM SERVING THE UPSTREAM OFFSITE RUNOFF WILL BE PUBLIC.

17. LIGHTING: ALL LIGHTING ON PRIVATE STREETS SHALL BE PRIVATELY MAINTAINED.

18. TRASH: INDIVIDUAL TRASH CAN PICKUP IS TO BE PROVIDED BY WEST VALLEY COLLECTION AND RECYCLING.

19. STREETS: ALL ONSITE STREETS ARE TO BE PRIVATE AND PRIVATELY MAINTAINED.

20. GRADING: PROPOSED GRADING AS SHOWN IS PRELIMINARY, FINISHED GRADING IS SUBJECT TO FINAL DESIGN.

21. DIMENSIONS: ALL PARCEL AND LOT DIMENSIONS SHOWN ARE APPROXIMATE AND SUBJECT TO CHANGE WITH FINAL DESIGN.

22. EROSION CONTROL: EROSION CONTROL WILL BE PREPARED PER CITY STANDARDS AND ABAG RECOMMENDATIONS.

23. COMMON AREAS: COMMON AREAS ARE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

24. FLOOD ZONE: ZONE X (SHADE): AREAS OF MINIMAL FLOOD HAZARD. AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

SOURCE: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP. MAP NUMBERS 06085C0239H & 06085C0237H

DATED: MAY 18, 2009

25. BASIS OF BEARING: THE BASIS OF BEARINGS FOR THIS SURVEY IS BETWEEN FOUND MONUMENTS ON CAMPBELL TECHNOLOGY PARKWAY, THE BEARING BEING N50°33'30"E PER PARCEL MAP (716 M 25).

26. BENCHMARK: THE BENCHMARK FOR THIS SURVEY IS A BRASS DISK SET IN CONCRETE BEING NGS MONUMENT DESIGNATION U 176 RESET, PID HS3127, HAVING AN NAVD88 PUBLISHED ELEVATION OF 195.29 FEET.

27. CONDOMINIUM MAP: A CONDOMINIUM PLAN WILL BE RECORDED FOR LOTS 1 THROUGH 43. THE SUBDIVISION IS A CONDOMINIUM PROJECT AS DEFINED IN SECTION 4285 ET. SEQ. OF THE CIVIL CODE OF THE STATE OF CALIFORNIA AND FILED PURSUANT TO THE SUBDIVISION MAP ACT. THE TOTAL NUMBER OF CONDOMINIUM DWELLING UNITS SHALL BE NO MORE THAN 263 RESIDENTIAL CONDOMINIUM UNITS FOR LOTS 1 THROUGH 43.

28. EASEMENTS: PARCELS A THROUGH N ARE TO INCLUDE THE FOLLOWING PUBLIC AND PRIVATE EASEMENTS TO SERVE ONSITE PRIVATE AND PUBLIC FACILITIES AND PROVIDE GRANT ACCESS AS NOTED: EVAE, PSDE, PUE, SDE AND SSF. EASEMENTS MAY CHANGE SUBJECT TO FINAL DESIGN



**CARLSON,
BARBEE &
GIBSON, Inc.**



Campbell Technology Park LLC

Campbell Technology Park

Campbell, CA # 2023-0039

DESIGN REVIEW

JANUARY 15, 2023

VESTING TENTATIVE MAP FOR CONDOMINIUM PURPOSES

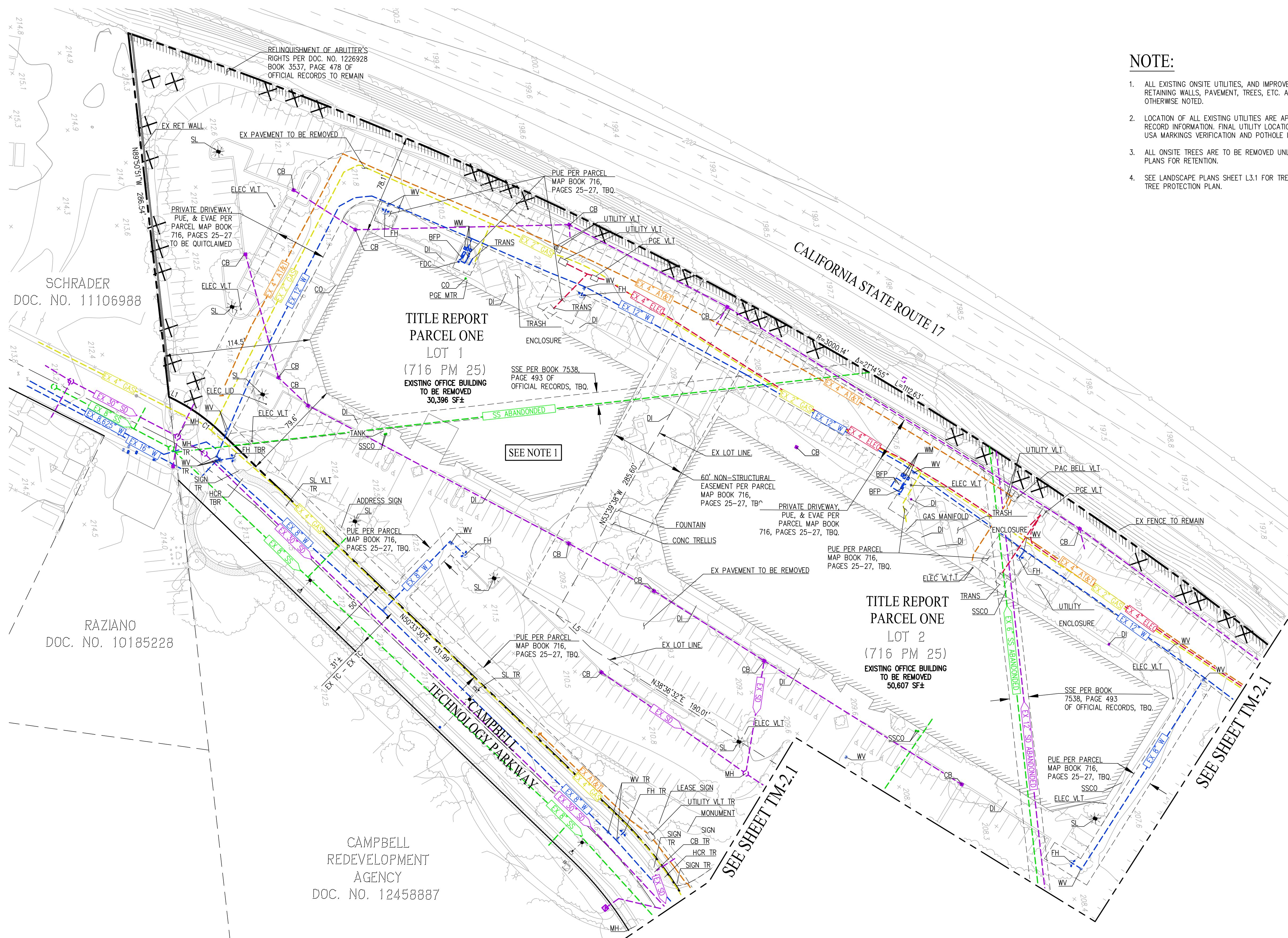
TM-1.0

LEGEND

	BOUNDARY LINE
	MONUMENT LINE
	EASEMENT LINE
	ADJACENT PROPERTY LINE
	EXISTING LOT LINE
	RETAINING WALL
	EXISTING STORM DRAIN MAIN
	EXISTING WATER MAIN
	EXISTING SANITARY SEWER MAIN
	EXISTING GAS LINE
	EXISTING UNDERGROUND ELECTRIC
	EXISTING AT&T LINE
	EXISTING STORM DRAIN MANHOLE
	EXISTING STORM DRAIN FIELD INLET
	EXISTING FIRE HYDRANT
	EXISTING BACK FLOW
	EXISTING PRESSURE INDICATOR VALVE
	EXISTING FIRE DEPARTMENT CONNECTION
	EXISTING WATER VALVE
	EXISTING SANITARY SEWER CLEANOUT
	EXISTING UTILITY BOX/VAULT
	EXISTING STREET LIGHT
	EXISTING TREE TO BE REMOVED
	NORTH
	SOUTH
	EAST
	WEST
	BLDG
	BFP
	CB
	CONC
	DWY
	DI
	ELEC
	EX
	FDC
	FH
	FS
	GM
	HCR
	LAT
	PB
	PIV
	PL
	PP
	PUE
	SL
	SSCO
	SSE
	TBR
	TBQ
	TR
	UTIL
	VLT
	WLE
	WM
	WS
	WV

NOTE:

- ALL EXISTING ONSITE UTILITIES, AND IMPROVEMENTS NOT LIMITED TO BUILDINGS, RETAINING WALLS, PAVEMENT, TREES, ETC. ARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- LOCATION OF ALL EXISTING UTILITIES ARE APPROXIMATE BASED ON FIELD AND RECORD INFORMATION. FINAL UTILITY LOCATIONS AND DEPTHS ARE SUBJECT TO USA MARKINGS VERIFICATION AND POTHOLE INVESTIGATIONS.
- ALL ONSITE TREES ARE TO BE REMOVED UNLESS NOTED ON THE LANDSCAPE PLANS FOR RETENTION.
- SEE LANDSCAPE PLANS SHEET L3.1 FOR TREE NUMBERS, TREE REMOVAL, AND TREE PROTECTION PLAN.

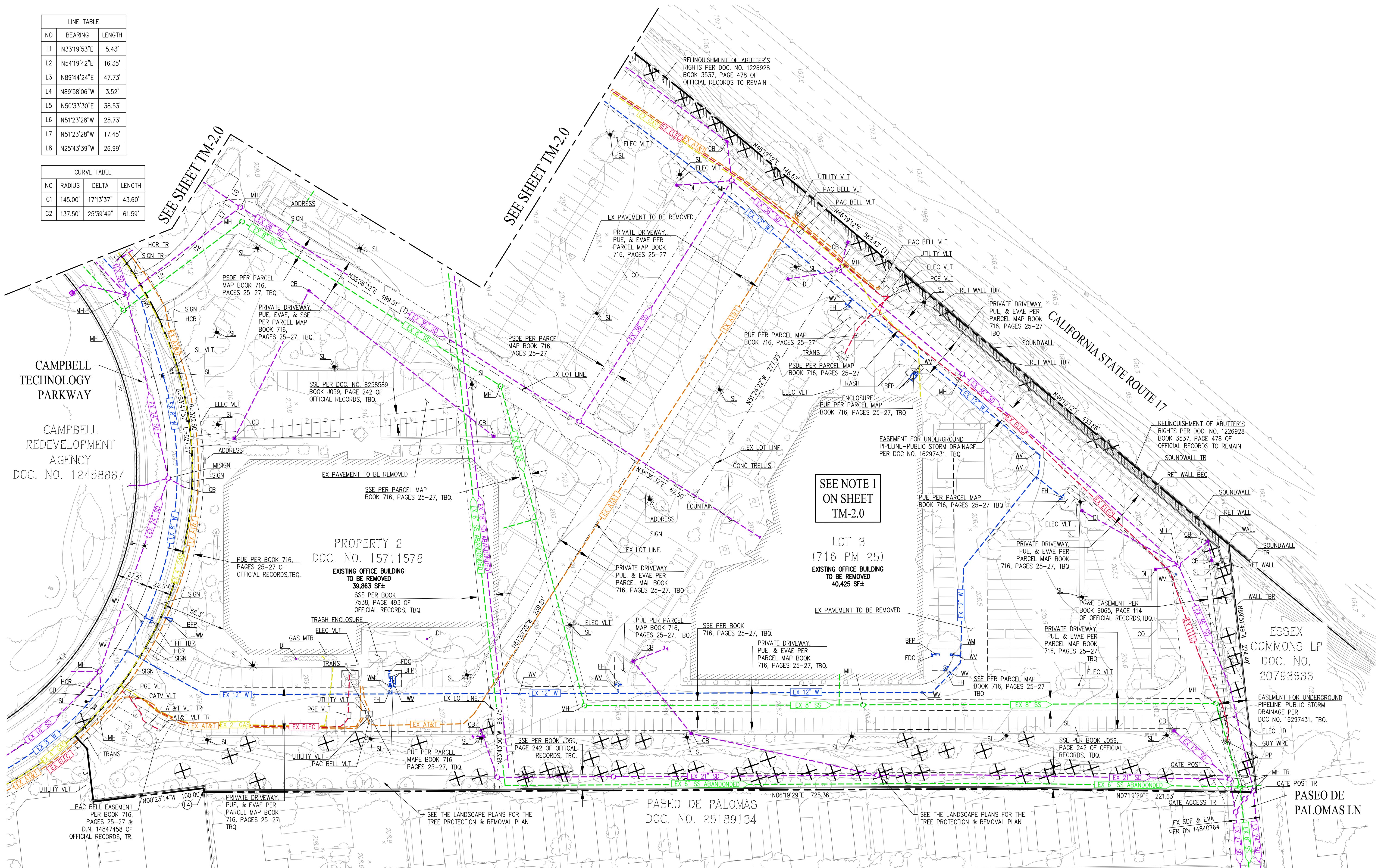


LINE TABLE		
NO	BEARING	LENGTH
L1	N33°19'53"E	5.43'
L2	N54°19'42"E	16.35'
L3	N89°44'24"E	47.73'
L4	N89°58'06"W	3.52'
L5	N50°33'30"E	38.53'
L6	N51°23'28"W	25.73'
L7	N51°23'28"W	17.45'
L8	N25°43'39"W	26.99'

CURVE TABLE			
NO	RADIUS	DELTA	LENGTH
C1	145.00'	17°13'37"	43.60'
C2	137.50'	25°39'49"	61.59'

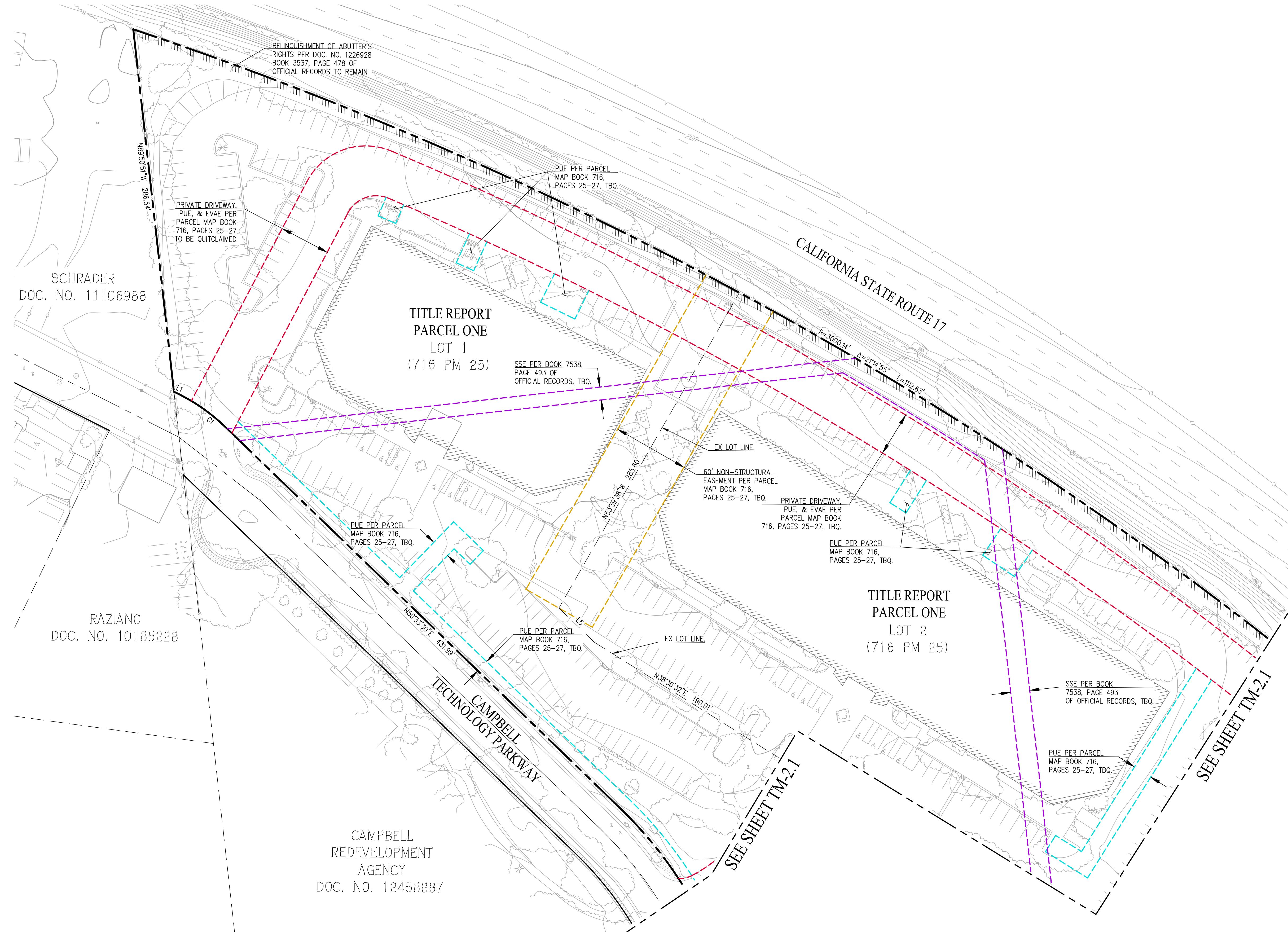
LINE TABLE		
NO	BEARING	LENGTH
L1	N33°19'53"E	5.43'
L2	N54°19'42"E	16.35'
L3	N89°44'24"E	47.73'
L4	N89°58'06"W	3.52'
L5	N50°33'30"E	38.53'
L6	N51°23'28"W	25.73'
L7	N51°23'28"W	17.45'
L8	N25°43'39"W	26.99'

CURVE TABLE			
NO	RADIUS	DELTA	LENGTH
C1	145.00'	17°13'37"	43.60'
C2	137.50'	25°39'49"	61.59'



LEGEND

	BOUNDARY LINE
	MONUMENT LINE
	EASEMENT LINE
	ADJACENT PROPERTY LINE
	EXISTING LOT LINE
	EXISTING PRIVATE DRIVEWAY, PUE, & EVAE EASEMENT PER BOOK 716
	EXISTING PUBLIC UTILITY EASEMENT PER BOOK 716
	EXISTING NON-STRUCTURAL EASEMENT PER BOOK 716
	EXISTING SANITARY EASEMENT PER BOOK 7538
	EXISTING SANITARY SEWER EASEMENT PER BOOK 716
	EXISTING SANITARY EASEMENT PER BOOK J059
	EXISTING STORM DRAIN EASEMENT PER BOOK 716
	EXISTING PG&E EASEMENT PER BOOK 9065
	EXISTING
	EMERGENCY VEHICLE ACCESS EASEMENT
	PUBLIC UTILITY EASEMENT
	STORM DRAIN EASEMENT
	SANITARY SEWER EASEMENT
	TO BE QUITCLAIMED
	TO REMAIN



LINE TABLE		
NO	BEARING	LENGTH
L1	N33°19'53"E	5.43'
L2	N54°19'42"E	16.35'
L3	N89°44'24"E	47.73'
L4	N89°58'06"W	3.52'
L5	N50°33'30"E	38.53'
L6	N51°23'28"W	25.73'
L7	N51°23'28"W	17.45'
L8	N25°43'39"W	26.99'

CURVE TABLE		
NO	RADIUS	DELTA
C1	145.00'	171°37"
C2	137.50'	253°49"
		43.60'
		61.59'



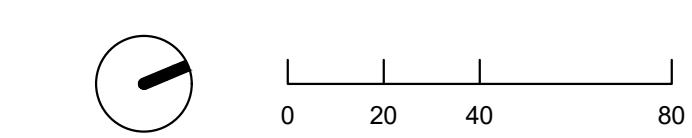
cbg
CARLSON,
BARBEE &
GIBSON, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS

GATES
+ASSOCIATES
LANDSCAPE ARCHITECTURE
LAND PLANNING - URBAN DESIGN

**Campbell
Technology
Park LLC**

Campbell Technology Park
Campbell, CA #2023-0039

DESIGN REVIEW
JANUARY 15, 2023



EXISTING EASEMENTS

TM-2.2

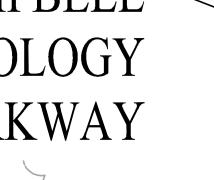
LINE TABLE		
NO	BEARING	LENGTH
L1	N33°19'53"E	5.43'
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L3	N89°44'24"E	47.73'
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L7	N51°23'28"W	17.45'
L8	N25°43'39"W	26.99'

CURVE TABLE			
NO	RADIUS	DELTA	LENGTH
C1	145.00'	17°13'37"	43.60'
C2	137.50'	25°39'49"	61.59'

SEE SHEET TM-2.0

SEE SHEET T

CAMPBELL
TECHNOLOGY
PARKWAY



CAMPBELL
REDEVELOPMENT
AGENCY

DOC NO. 12453227

PROPERTY 2
16, DOC. NO. 157115

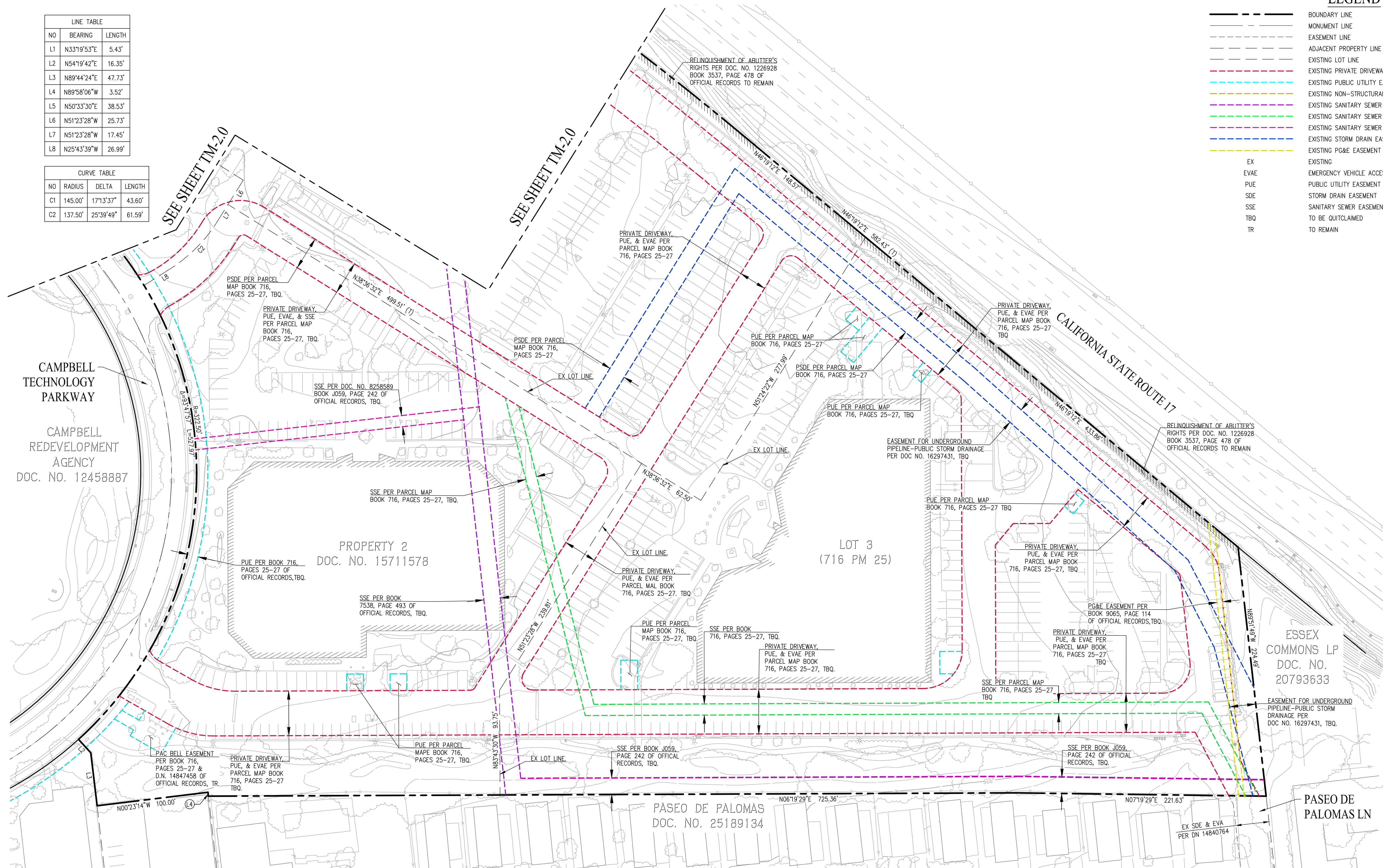
LOT 3
(716 PM 2

ESSEX
COMMONS LP
DOC. NO.
20793633

PASEO DE PALOMAS UN

LEGEND

BOUNDARY LINE
MONUMENT LINE
EASEMENT LINE
ADJACENT PROPERTY LINE
EXISTING LOT LINE
EXISTING PRIVATE DRIVEWAY, PUE, & EVAE EASEMENT PER BOOK 716
EXISTING PUBLIC UTILITY EASEMENT PER BOOK 716
EXISTING NON-STRUCTURAL EASEMENT PER BOOK 716
EXISTING SANITARY SEWER EASEMENT PER BOOK 7538
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EXISTING SANITARY SEWER EASEMENT PER BOOK J059
EXISTING STORM DRAIN EASEMENT PER BOOK 716
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EXISTING
EMERGENCY VEHICLE ACCESS EASEMENT
PUBLIC UTILITY EASEMENT
STORM DRAIN EASEMENT
SANITARY SEWER EASEMENT
TO BE QUITCLAIMED
TO REMAIN





CAMPBELL
REDEVELOPMENT
AGENCY
DOC. NO. 12458837

A directional road sign for California State Route 17. The sign is oriented diagonally, pointing towards the top right. It features a large diamond-shaped symbol at the top. Below the diamond, two arrows point in opposite directions: one arrow points straight ahead, and another arrow points to the right. The text "CALIFORNIA STATE ROUTE 17" is printed vertically along the left side of the sign.

ESSEX
COMMONS LP
DOC. NO.
20793633



The logo for Carlson, Barbee & Gibson, Inc. It features a blue square containing the lowercase letters "cbg". To the right of the square, the company name "CARLSON, BARBEE & GIBSON, Inc." is written in a blue, sans-serif font.



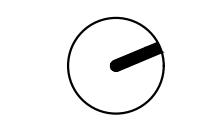
Campbell Technology Park LLC

Campbell Technology Park

Campbell, CA # 2023-0039

DESIGN REVIEW

JANUARY 15, 2023

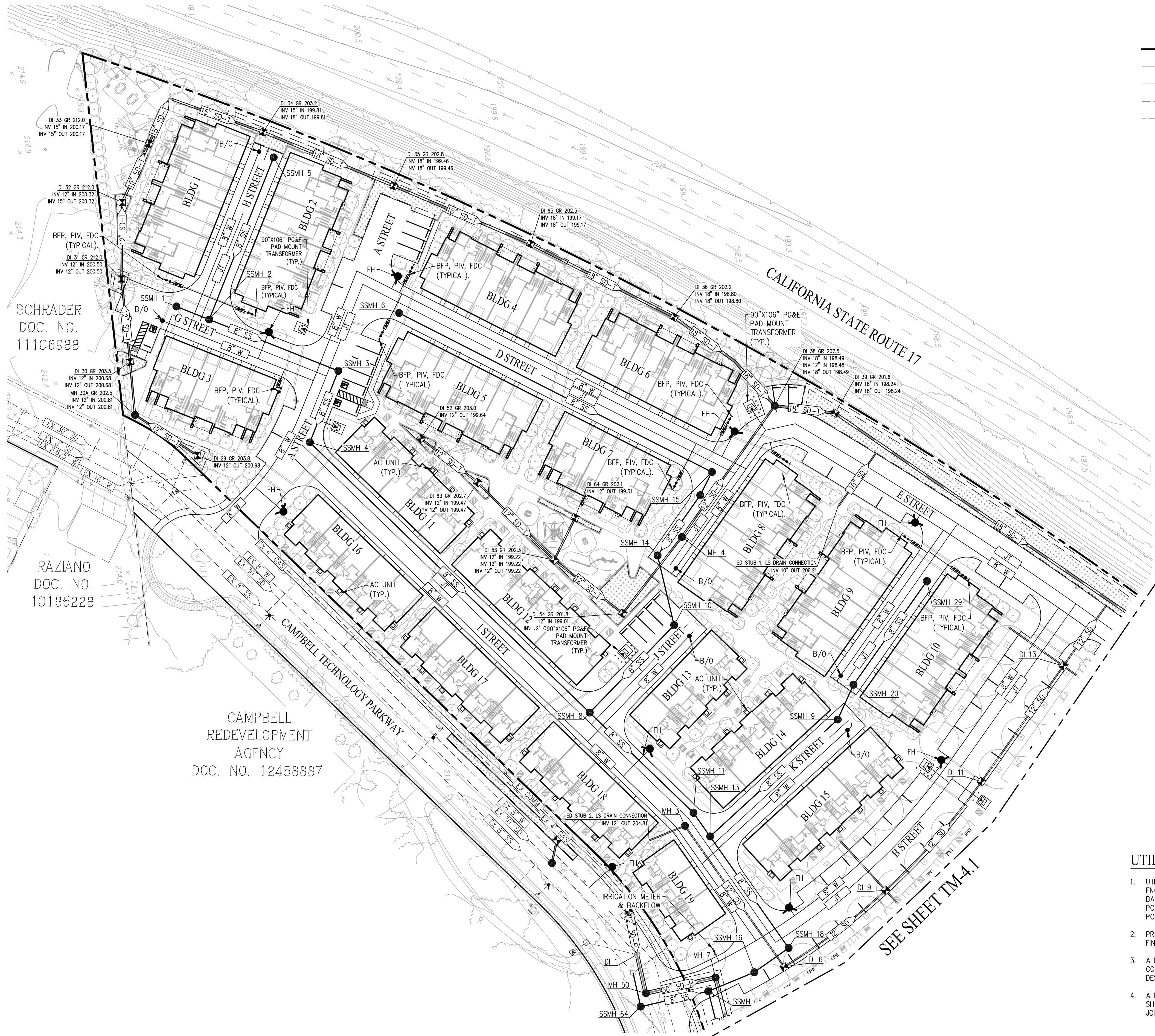


A horizontal number line starting at 0 and ending at 80. There are four tick marks labeled 0, 20, 40, and 80. The segments between the tick marks are equal in length.

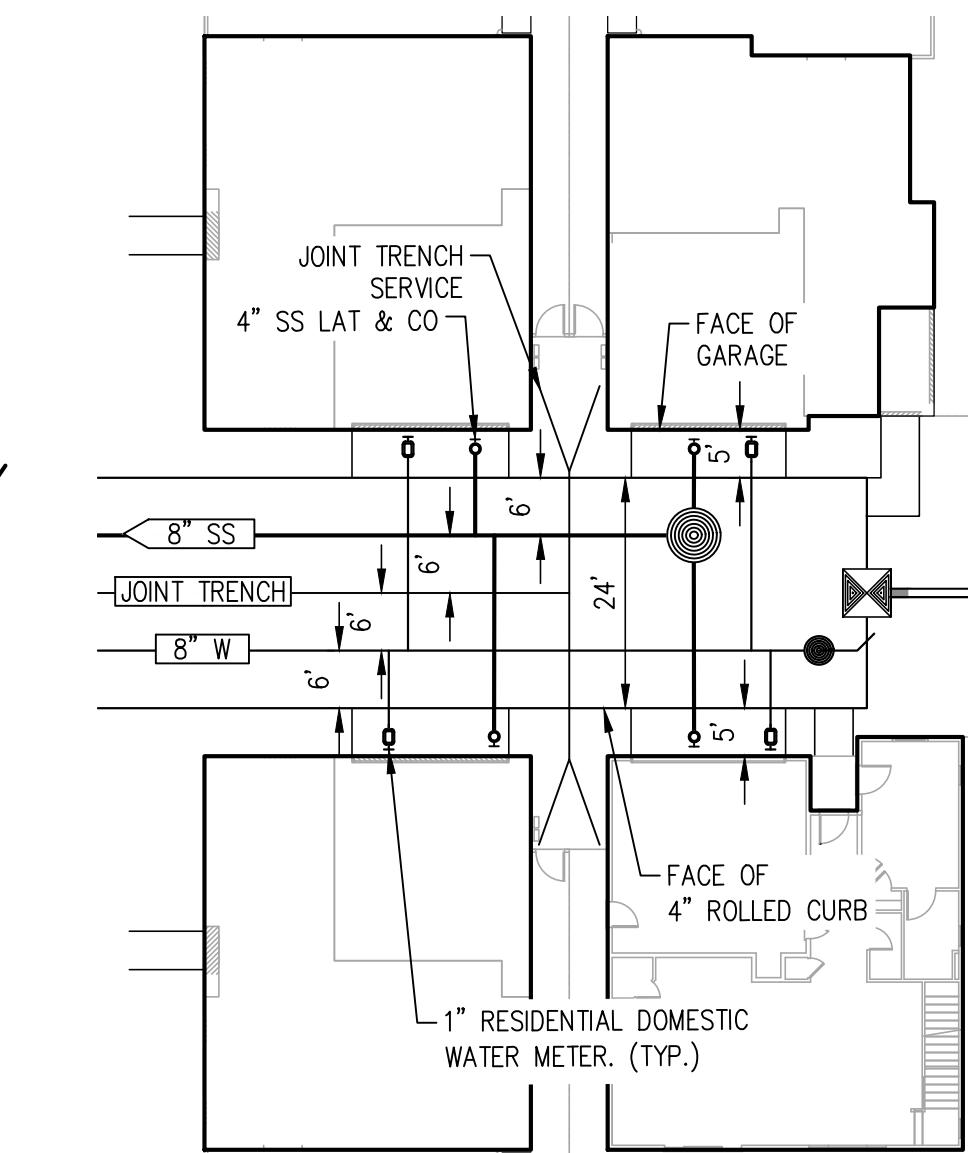
PRELIMINARY SITE PLAN

TM-3.1

H:\3737-000\ACAD\TM\TM-3.DWG

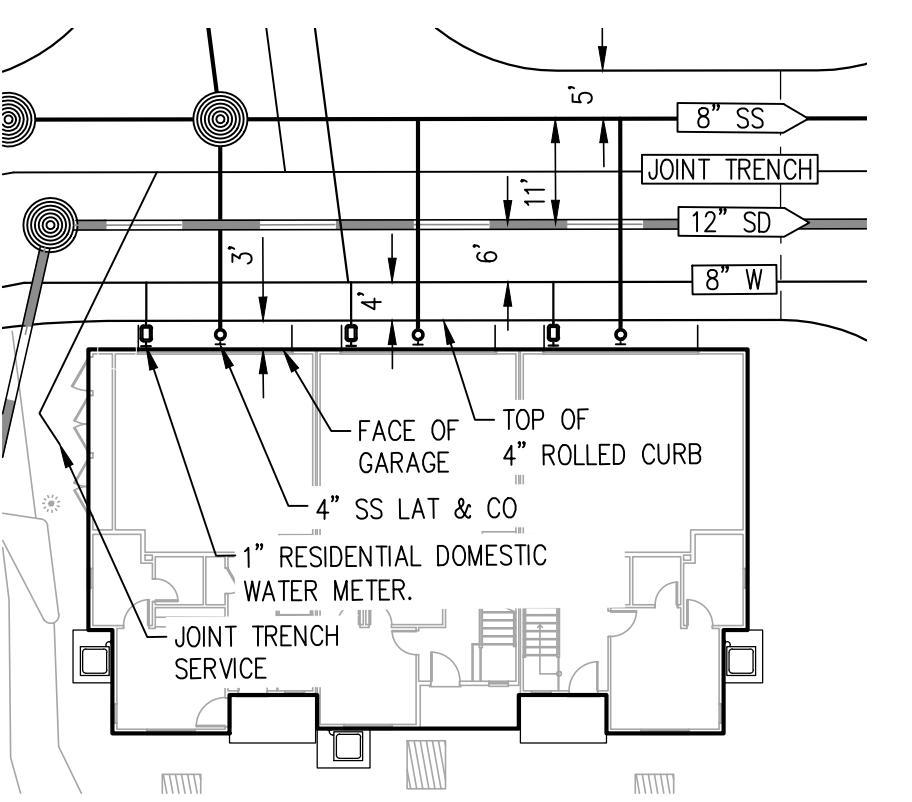


LEGEND:			ABBREVIATIONS	
<u>EXISTING</u>	<u>PROPOSED</u>	<u>DESCRIPTION</u>		
_____	-----	PROPERTY LINE	BFP	BACK FLOW PREVENTER
_____	_____	RIGHT OF WAY	BLDG	BUILDING
- - - EX W - - -	8" W	WATER MAIN	B/O	BLOW OFF VALVE
- - - EX SS > - - -	8" SS	SANITARY SEWER PIPE	CB	CATCH BASIN
- - - EX SD > - - -	12" SD	STORM DRAIN PIPE (UNTREATED)	DI	DRAIN INLET
	12" SD-T	STORMWATER PIPE (TREATED)	ELEC	ELECTRICAL
	12" SD-P	STORMWATER PIPE (PUBLIC)	EX	EXISTING
	JT	JOINT TRENCH	FDC	FIRE DEPARTMENT CONNECTION
□	☒	STORM DRAIN INLET	FH	FIRE HYDRANT
○	○	MANHOLE	FS	FIRE SERVICE
●	●	FIRE HYDRANT	JT	JOINT TRENCH
	☒☒	BACK FLOW PREVENTER	LAT	LATERAL
	□□	FIRE DEPARTMENT CONNECTION	LS	LANDSCAPE
	◎	POST INDICATOR VALVE	PIV	POST INDICATOR VALVE
	[grid]	BIO-RETENTION AREA	PP	POWER POLE
	□□	90"X106" PG&E PAD MOUNT TRANSFORMER	SL	STREET LIGHT
	□	50"X52" PG&E PAD MOUNT TRANSFORMER	SS	SANITARY SEWER
×		VALVE	SSCO	SANITARY SEWER CLEAN OUT
← →		STREET LIGHT	UTIL	UTILITY
□ J		UTILITY BOX/VAULT	VLT	VAULT
	□	AC UNIT	WM	WATER METER
			WS	WATER SERVICE
			WV	WATER VALVE

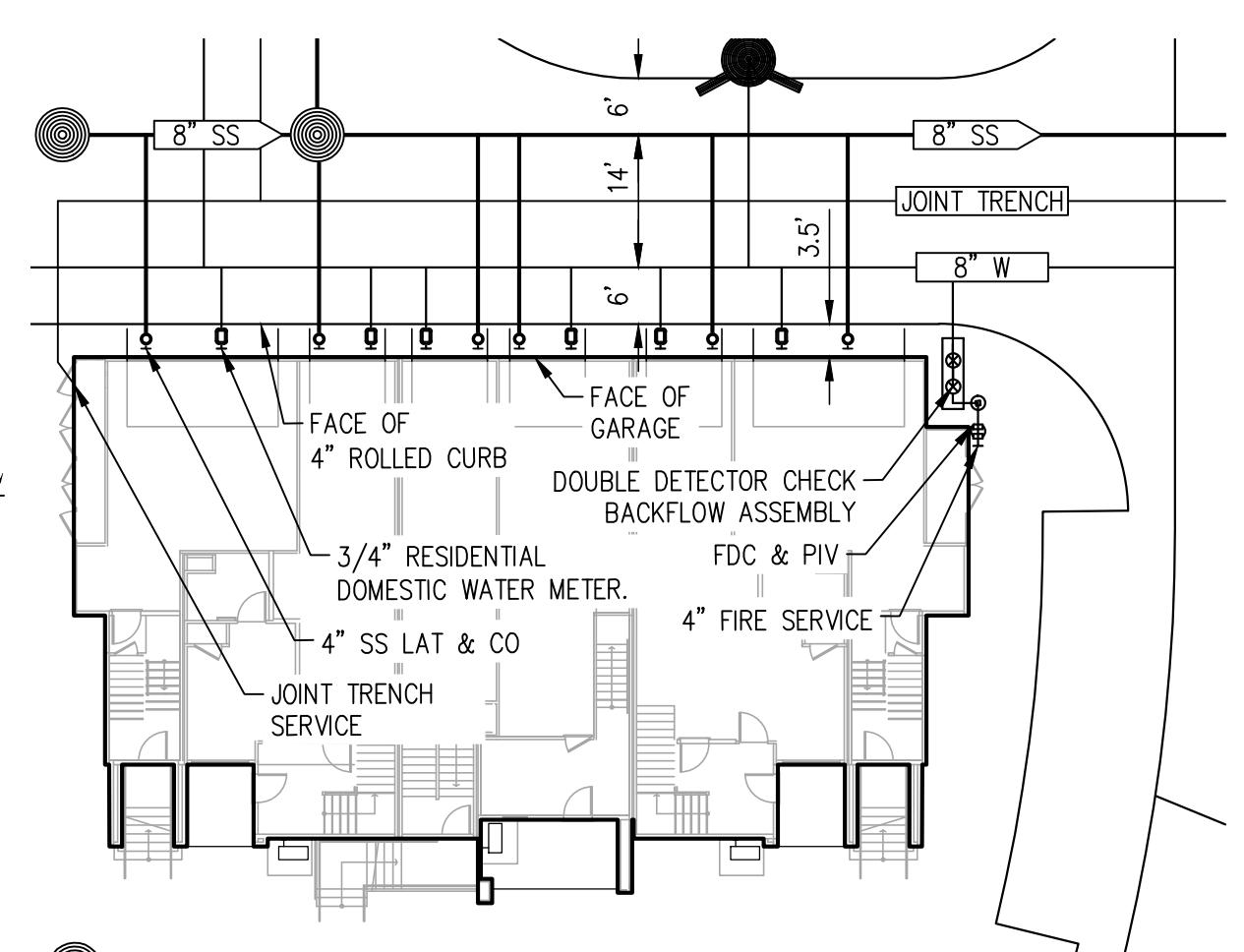


TYPICAL SINGLE FAMILY SERVICE DETAIL

BLDG'S 46-73
SCALE 1" = 20'



TYPICAL TOWNHOME SERVICE DETAIL

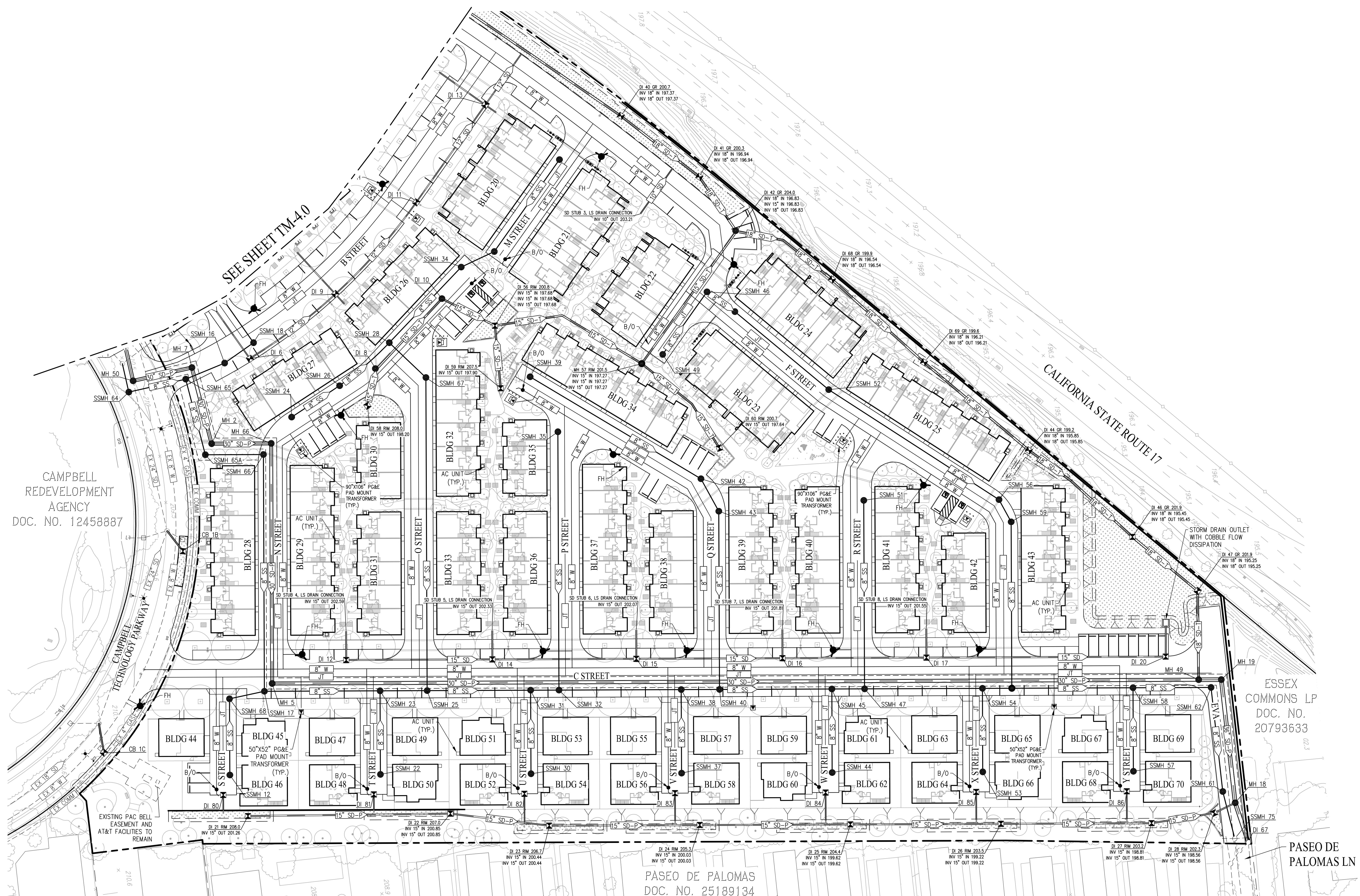


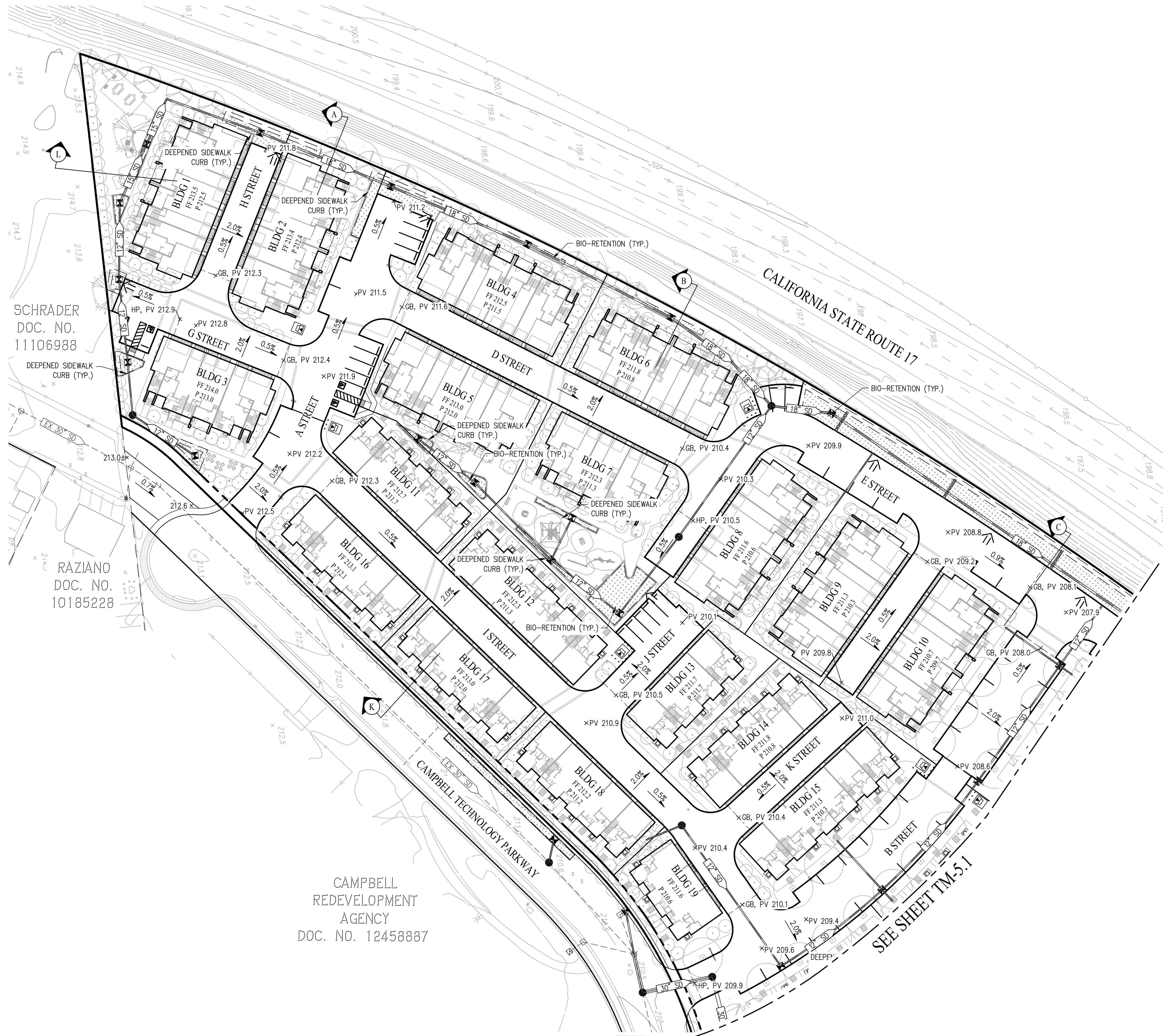
TYPICAL PIGGYBACK SERVICE DETAIL

BLDG'S 1-10, 20-24
SCALE 1" = 20'

UTILITY NOTES:

1. UTILITY LAYOUT AS SHOWN IS PRELIMINARY AND SUBJECT TO FINAL ENGINEERING DESIGN. EXISTING UTILITY LOCATIONS ARE APPROXIMATE BASED ON RECORD INFORMATION AND FIELD SURVEY DATA. UTILITY POINT OF CONNECTIONS SHALL BE VERIFIED WITH USA MARKINGS AND POTHOLE INFORMATION.
 2. PRELIMINARY DOMESTIC AND FIRE SERVICE SIZES ARE SUBJECT TO FINAL PLUMBING ENGINEERS DESIGN.
 3. ALL BUILDING STORM DRAIN, WATER, AND SEWER POINT OF CONNECTIONS ARE SUBJECT TO FINAL BUILDING PLUMBING ENGINEERS DESIGN.
 4. ALL JOINT TRENCH MAINS AND TRANSFORMER LOCATIONS HAVE BEEN SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO THE FINAL JOINT TRENCH CONSULTANTS DESIGN



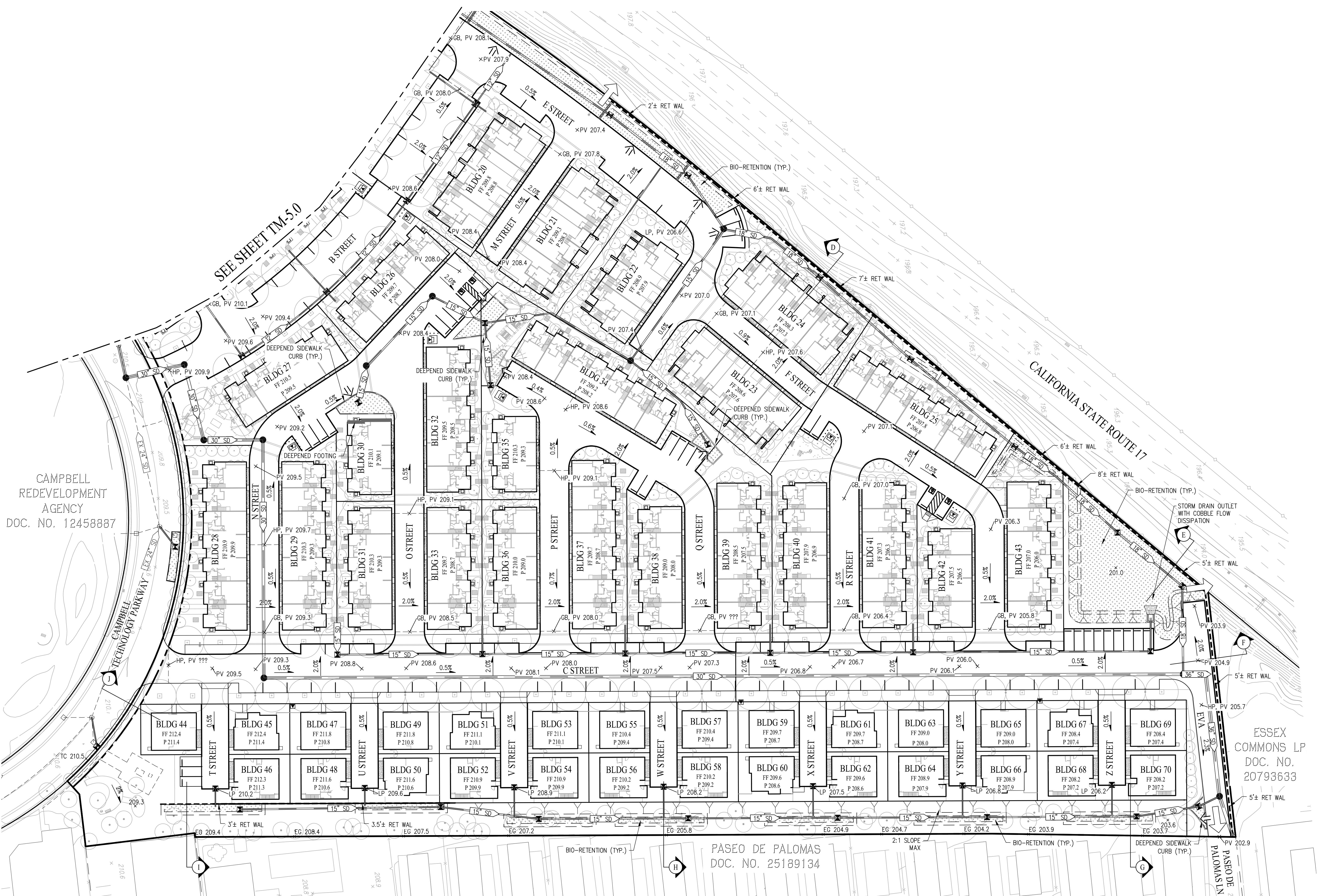


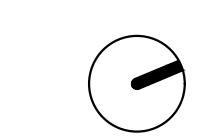
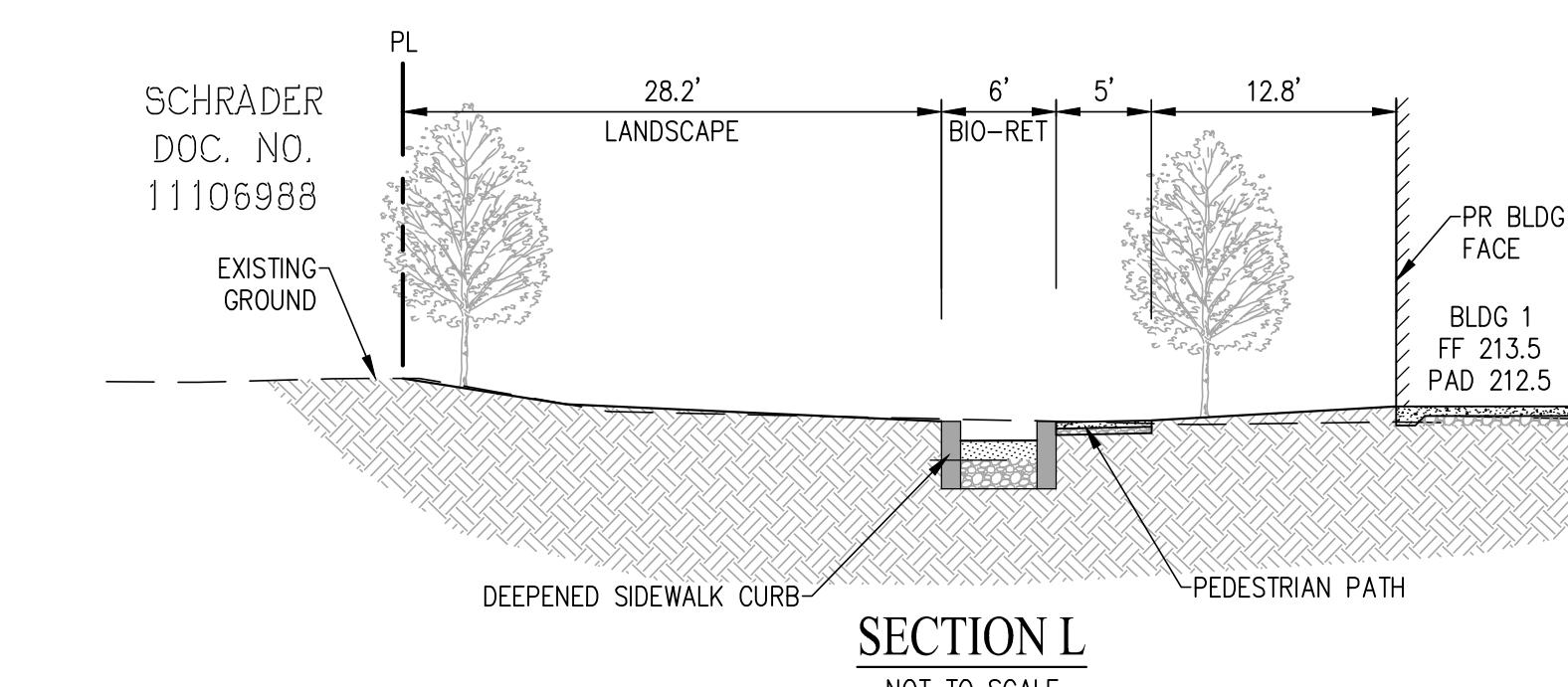
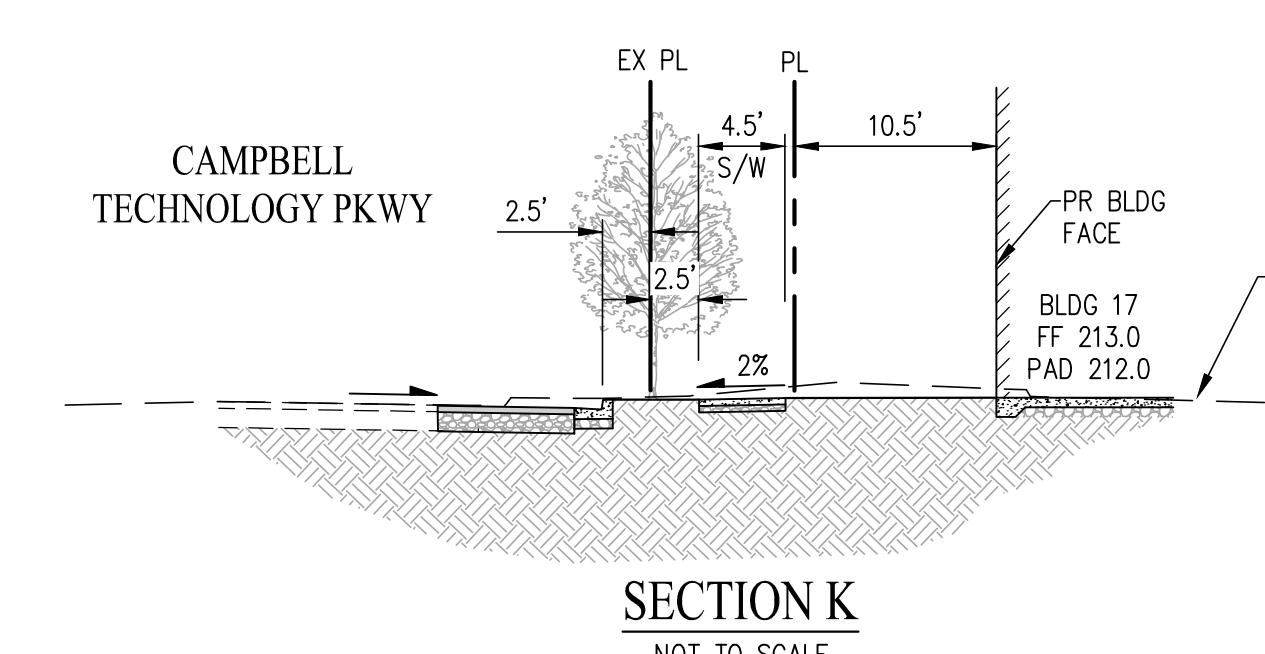
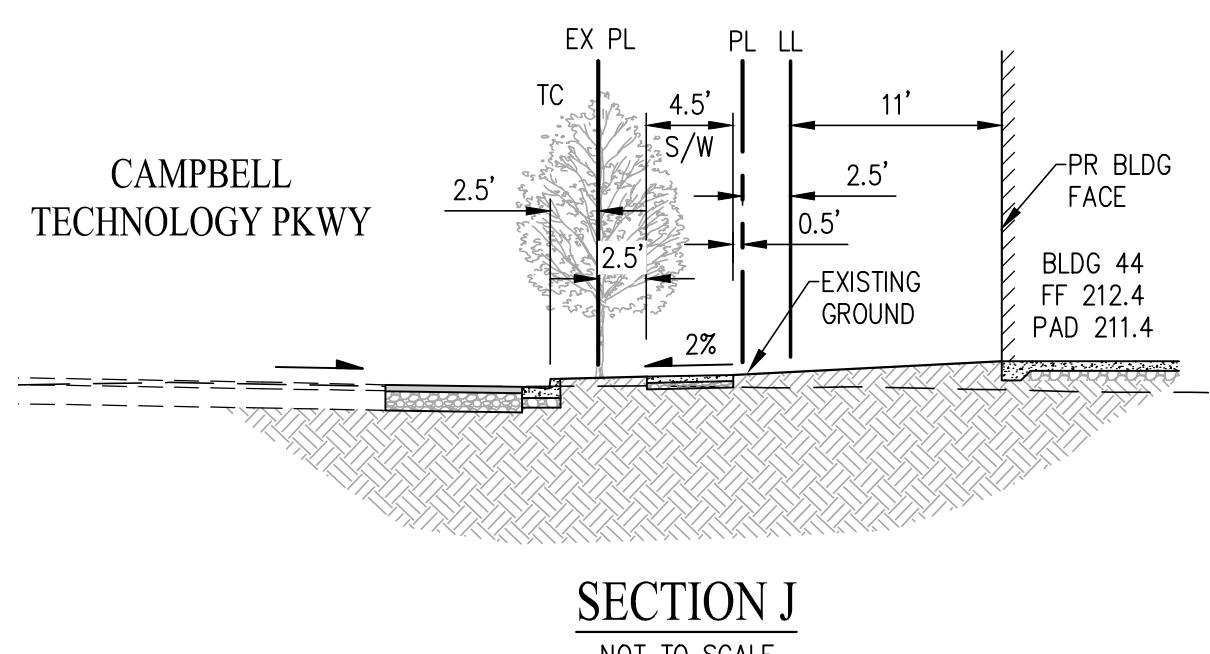
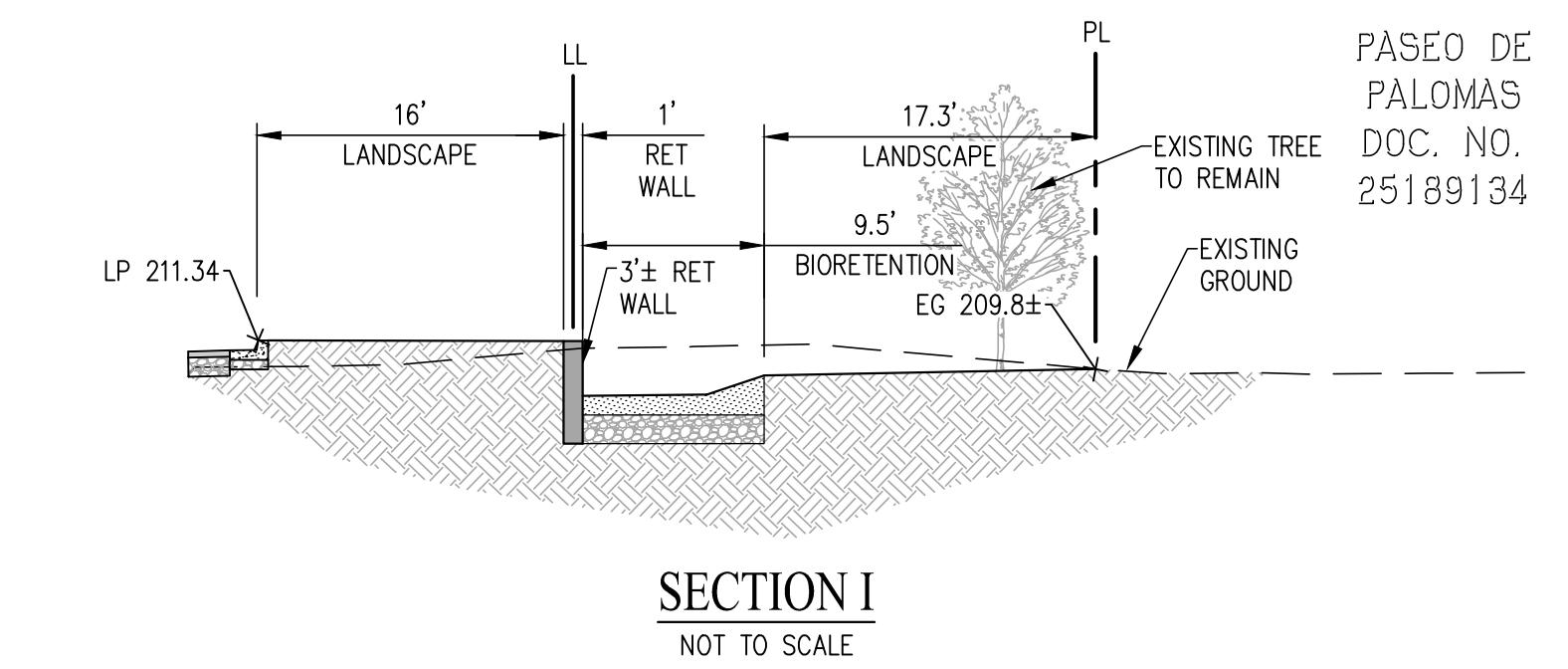
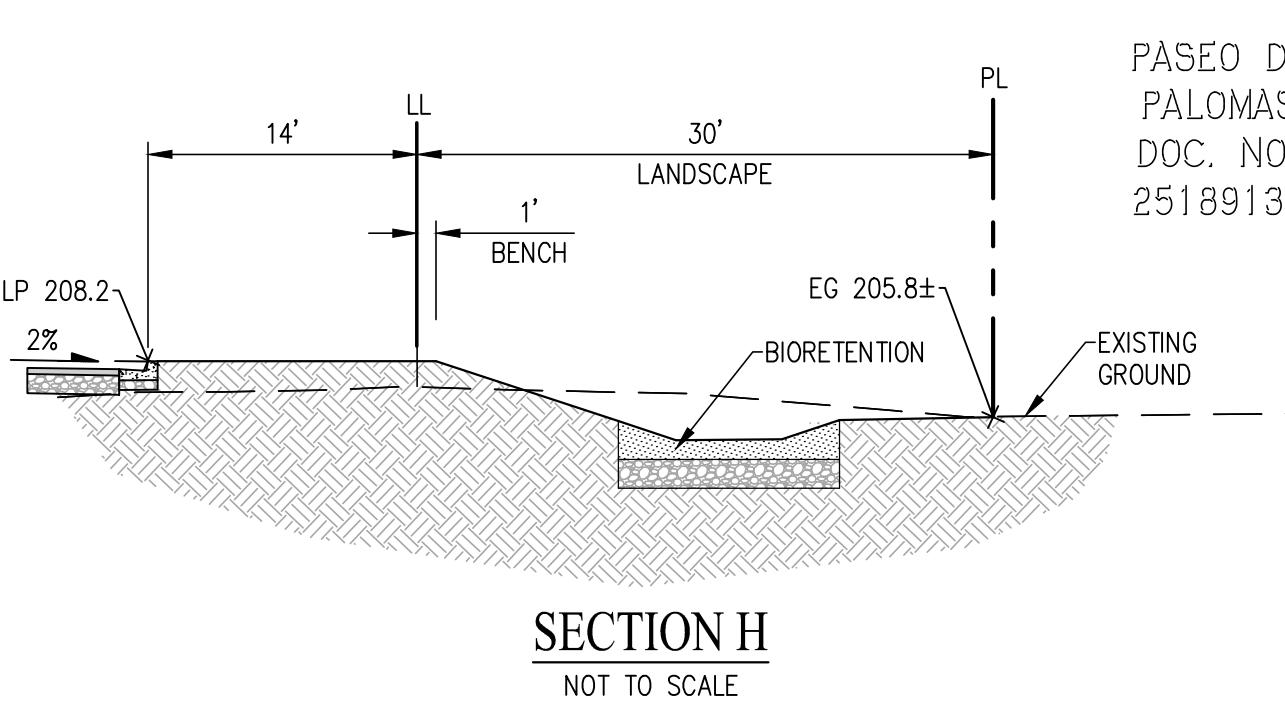
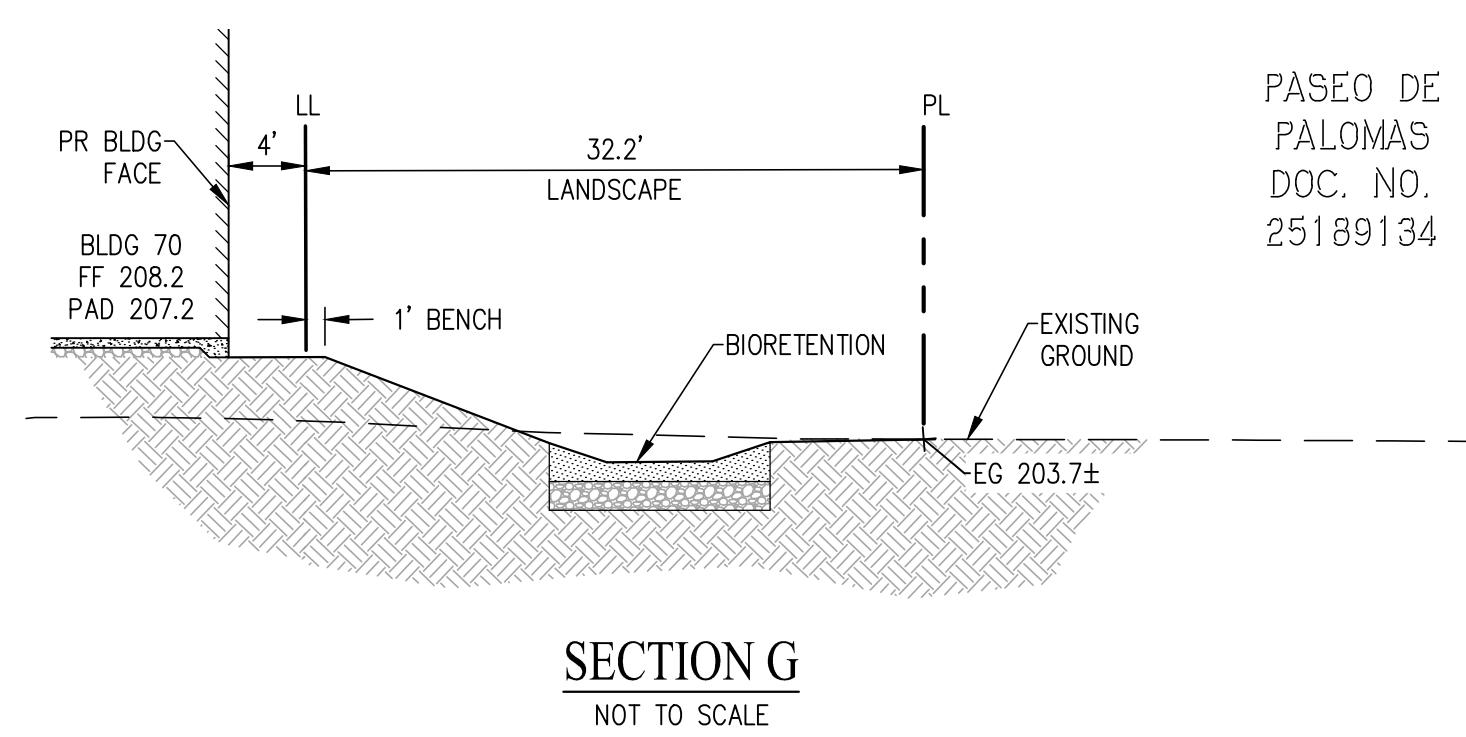
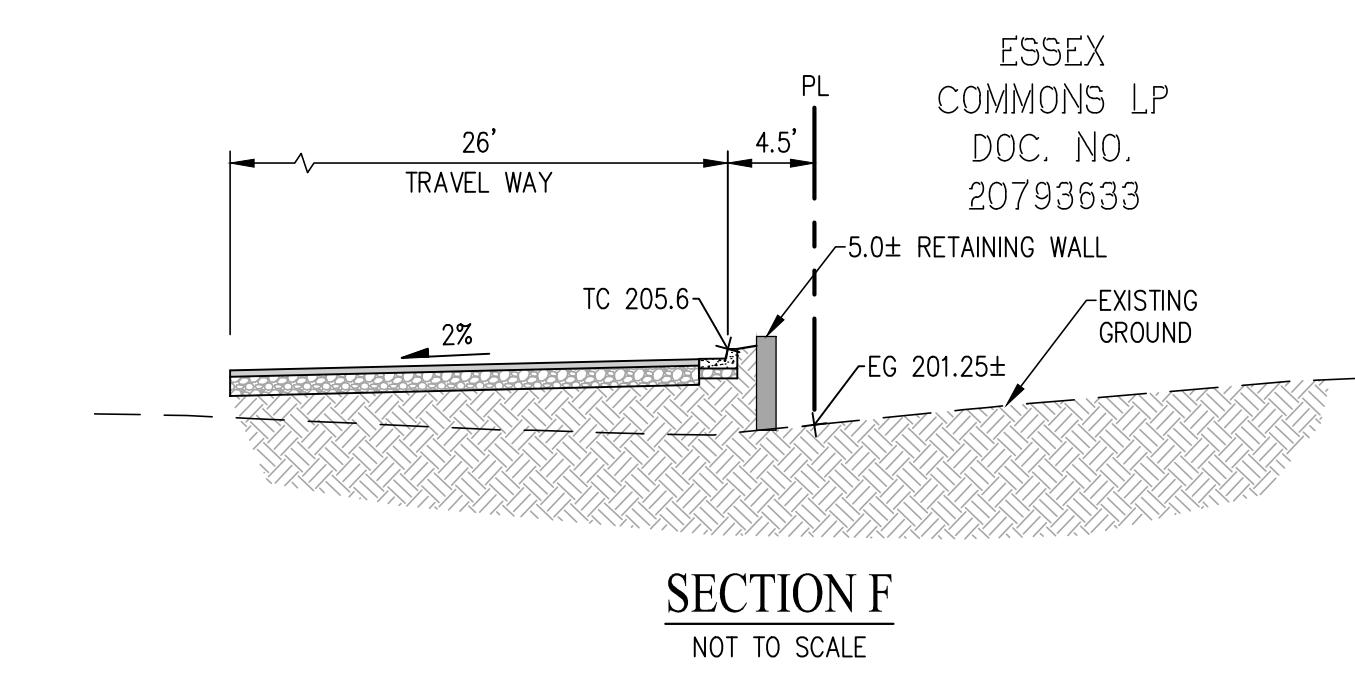
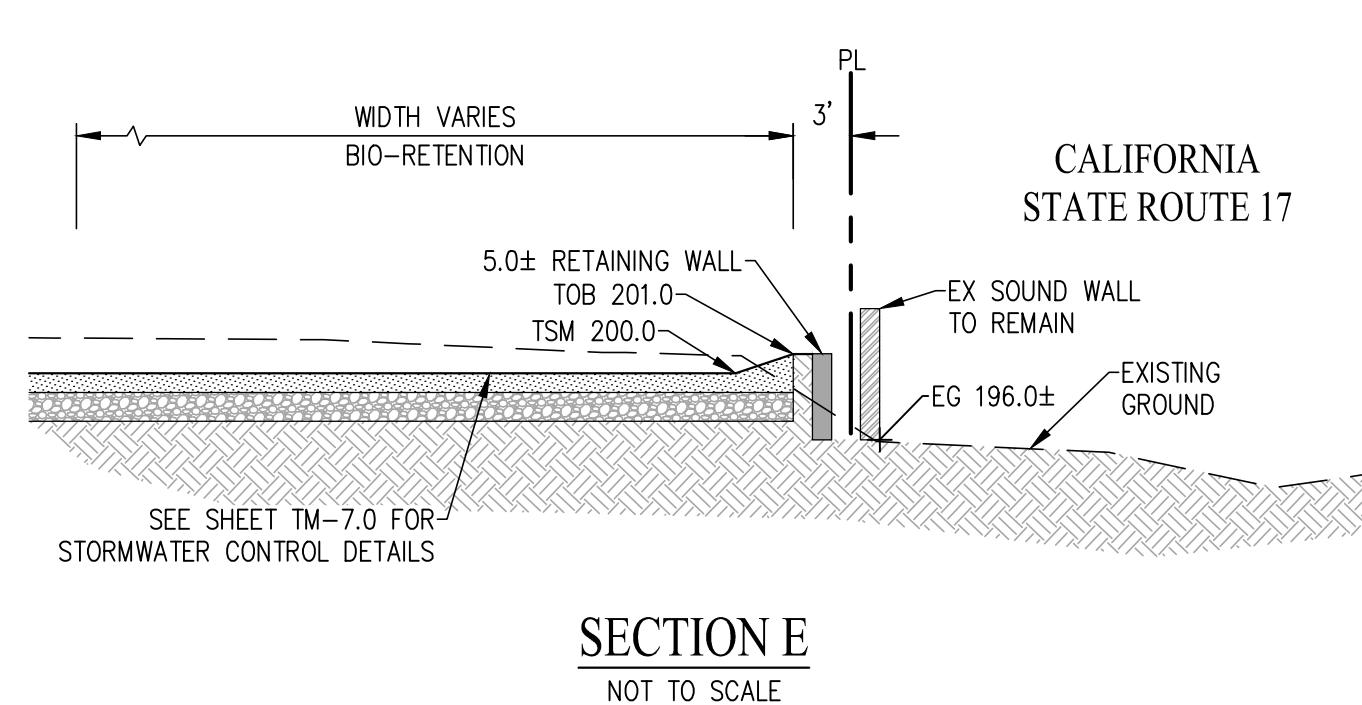
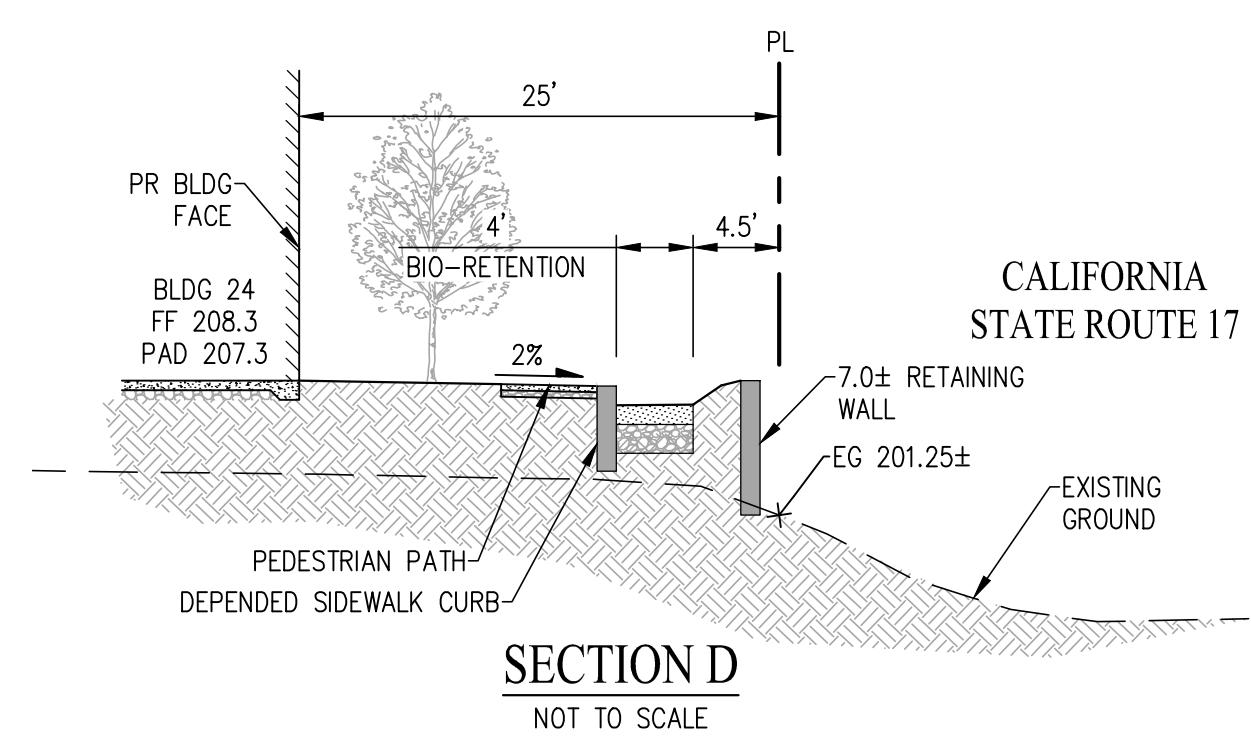
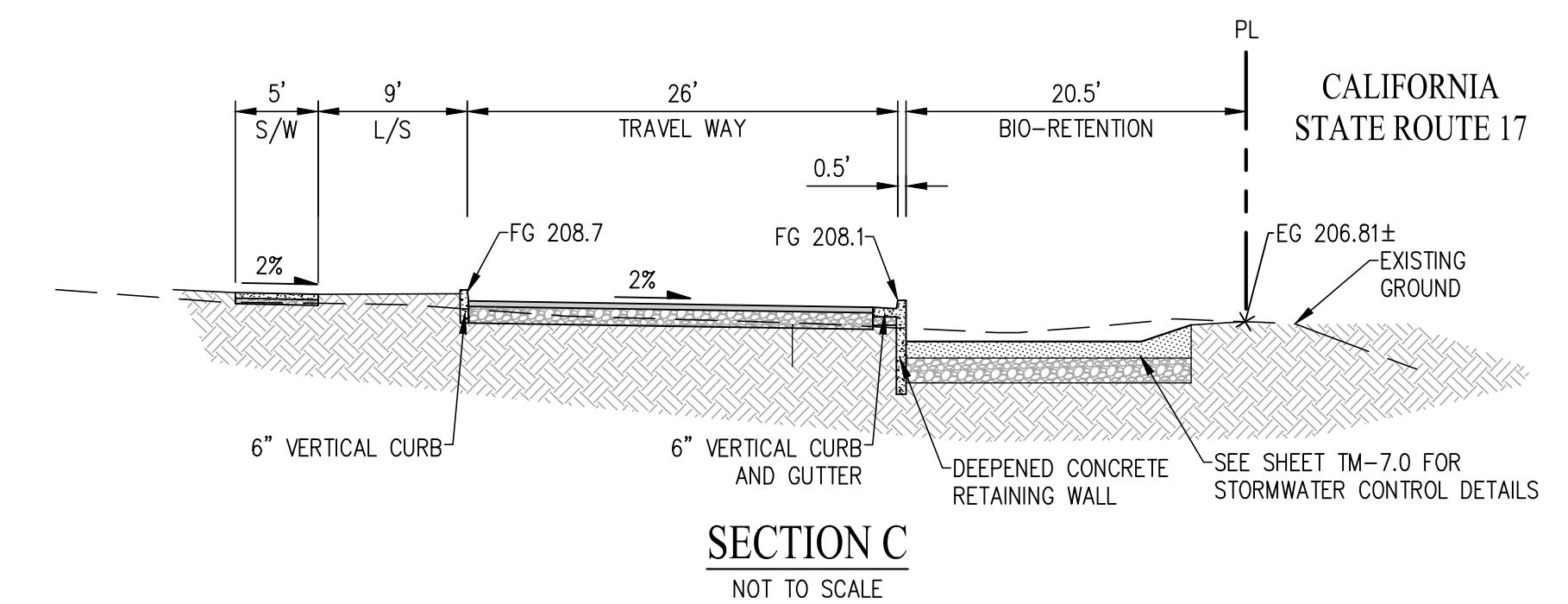
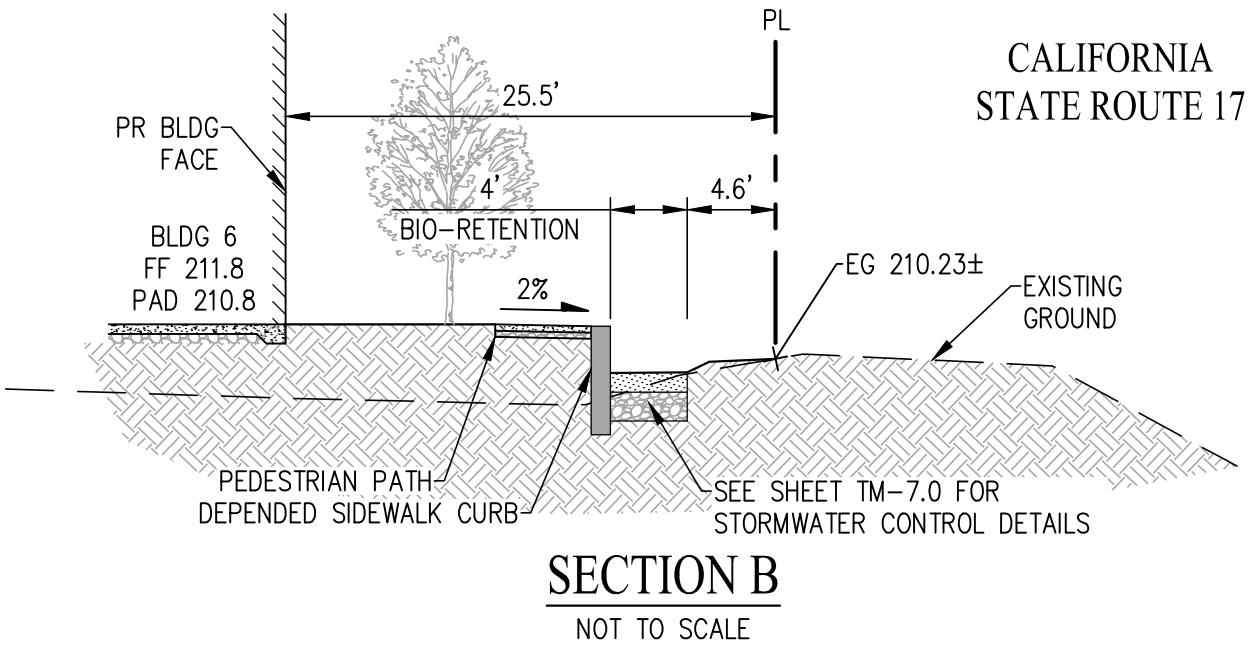
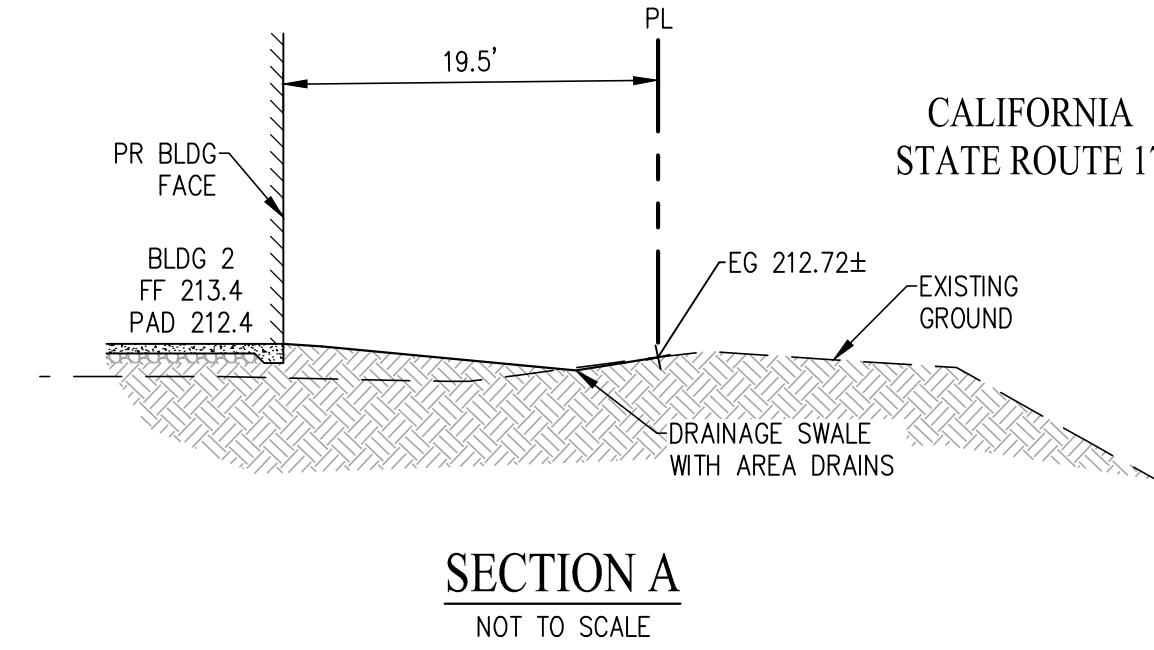
LEGEND:		ABBREVIATIONS
EXISTING	PROPOSED	DESCRIPTION
—	—	PROPERTY LINE
—	—	RIGHT OF WAY
—	—	STORM DRAIN
—	—	TRENCH DRAIN
—	—	RETAINING WALL
—	—	DEEPENED SIDEWALK CURB
—	—	DEEPENED FOOTING
EX SD	12" SD	EXISTING GRADE
—	—	FACE OF CURB
—	—	FINISHED FLOOR
—	—	GRADE BREAK
—	—	HIGH POINT
—	—	LATERAL
—	—	LOT LINE
—	—	LOW POINT
—	—	LANDSCAPE
—	—	PROPOSED
—	—	PAVEMENT
—	—	RW
—	—	RETAINING
—	—	SD
—	—	SDMH
—	—	SL
—	—	STND
—	—	TCB
—	—	WALL
—	—	W/B
■	■	STORM DRAIN FIELD INLET
●	●	MANHOLE
●	●	AREA DRAIN
■■■■■	■■■■■	BIO-RETENTION AREA
□	□	CURB CUT/SLOT DRAIN
↑	↑	DIRECTION OF OVERLAND RELEASE

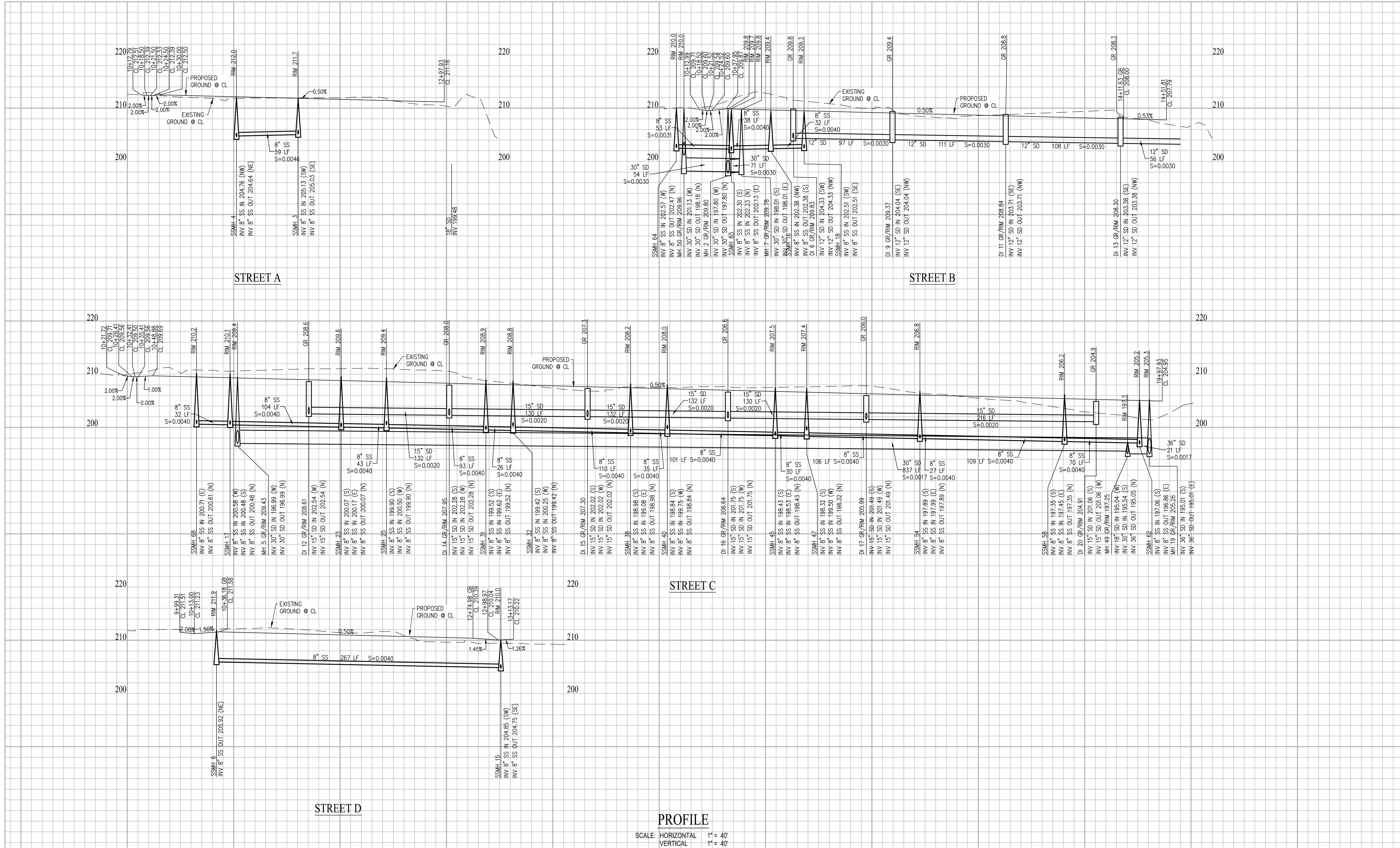
PRELIMINARY ESTIMATED ROUGH GRADING EARTHWORK SUMMARY			
DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)
ROUGH GRADING	10,000	23,000	13,000 (F)
UTILITY & BIORETENTION SPOILS	8,000	0	8,000 (C)
TOTAL	18,000	23,000	5,000 (F)

NOTE:

1. ROUGH GRADING AND EARTHWORK QUANTITIES ARE PRELIMINARY AND SUBJECT TO FINAL DESIGN.
2. ALL REQUIRED ADA ACCESSIBLE UNITS FOR THE PROPOSED TOWNHOMES WILL BE DESIGNED PER CBC REQUIREMENTS. SEE SHEET TM-3.0 FOR PRELIMINARY ACCESSIBLE UNIT LOCATIONS.
3. MAXIMUM DEPTH OF CUT IS ROUGHLY 8' AND THE MAXIMUM DEPTH OF FILL IS ROUGHLY 9'. THE MAXIMUM DEPTHS OF CUT AND FILL ARE PRELIMINARY AND ARE SUBJECT TO THE FINAL DESIGN.







cbg CARLSON,
BARBEE &
GIBSON, Inc.
CIVIL ENGINEERS • SURVEYORS • PLANNERS



Campbell Technology Park LLC

Campbell Technology Park

Campbell, CA # 2023-0039

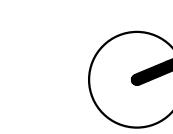
Campbell Tech # 2023-003

PROFILE

SCALE: HORIZONTAL 1" =
VERTICAL 1" =

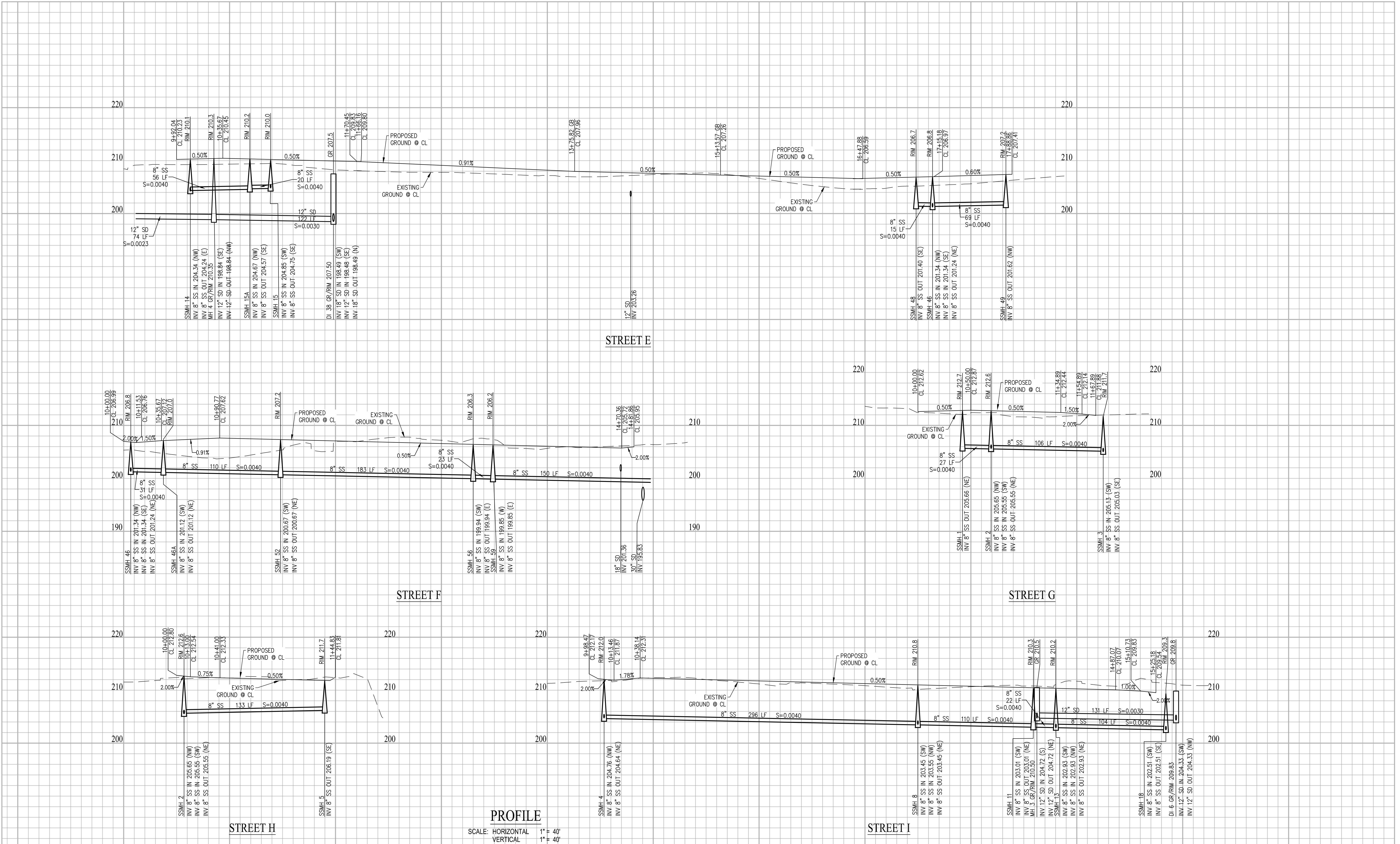
DESIGN REVIEW

JANUARY 15, 2023



A horizontal number line starting at 0 and ending at 80. Major tick marks are present at 0, 20, 40, and 80.

PRELIMINARY STREET PROFILES



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CARLSON,
BARBEE &
GIBSON, Inc.



Campbell Technology Park LLC

Campbell Technology Park

Campbell, CA # 2023-0039

DESIGN REVIEW

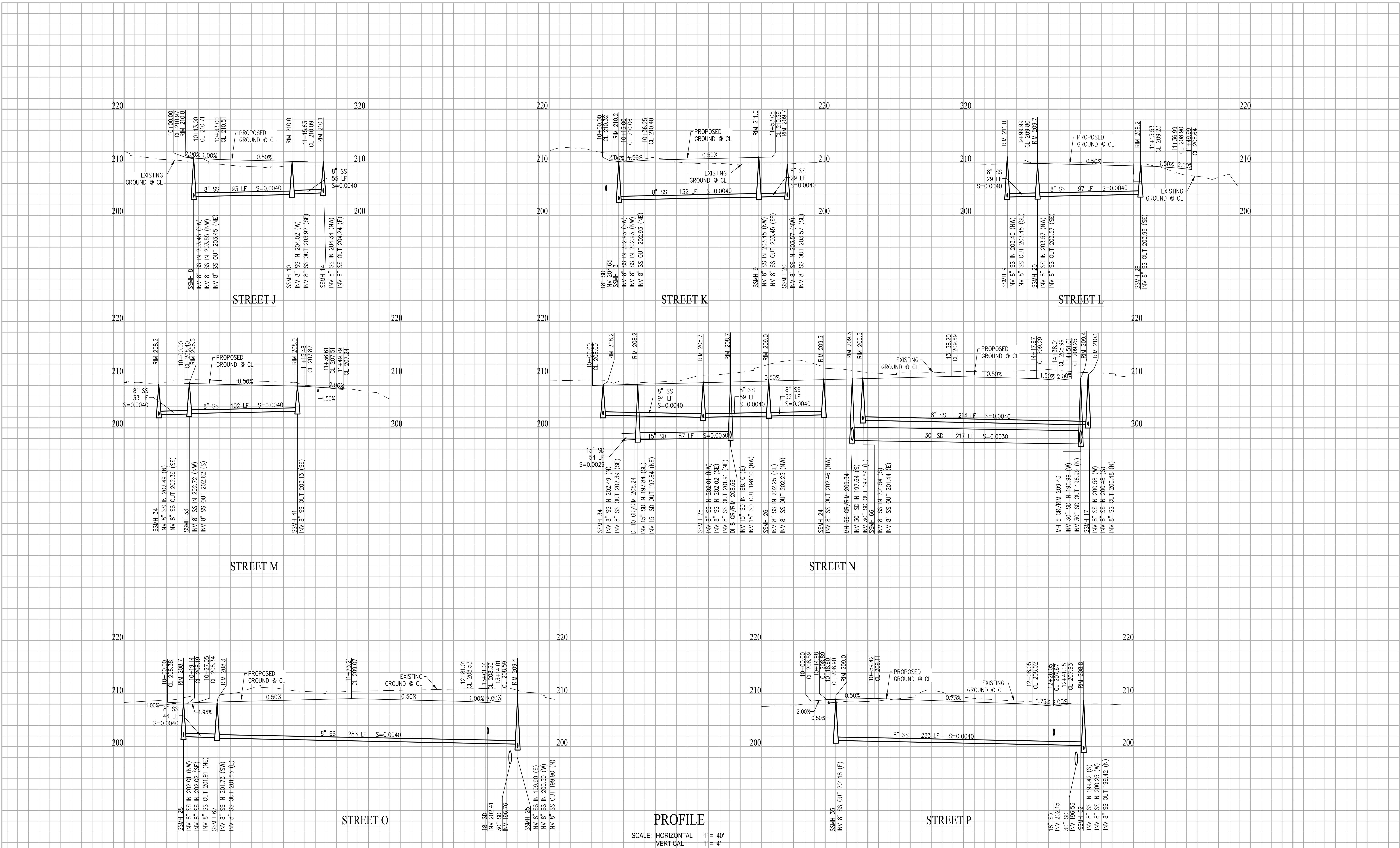
JANUARY 15, 2023

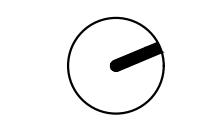
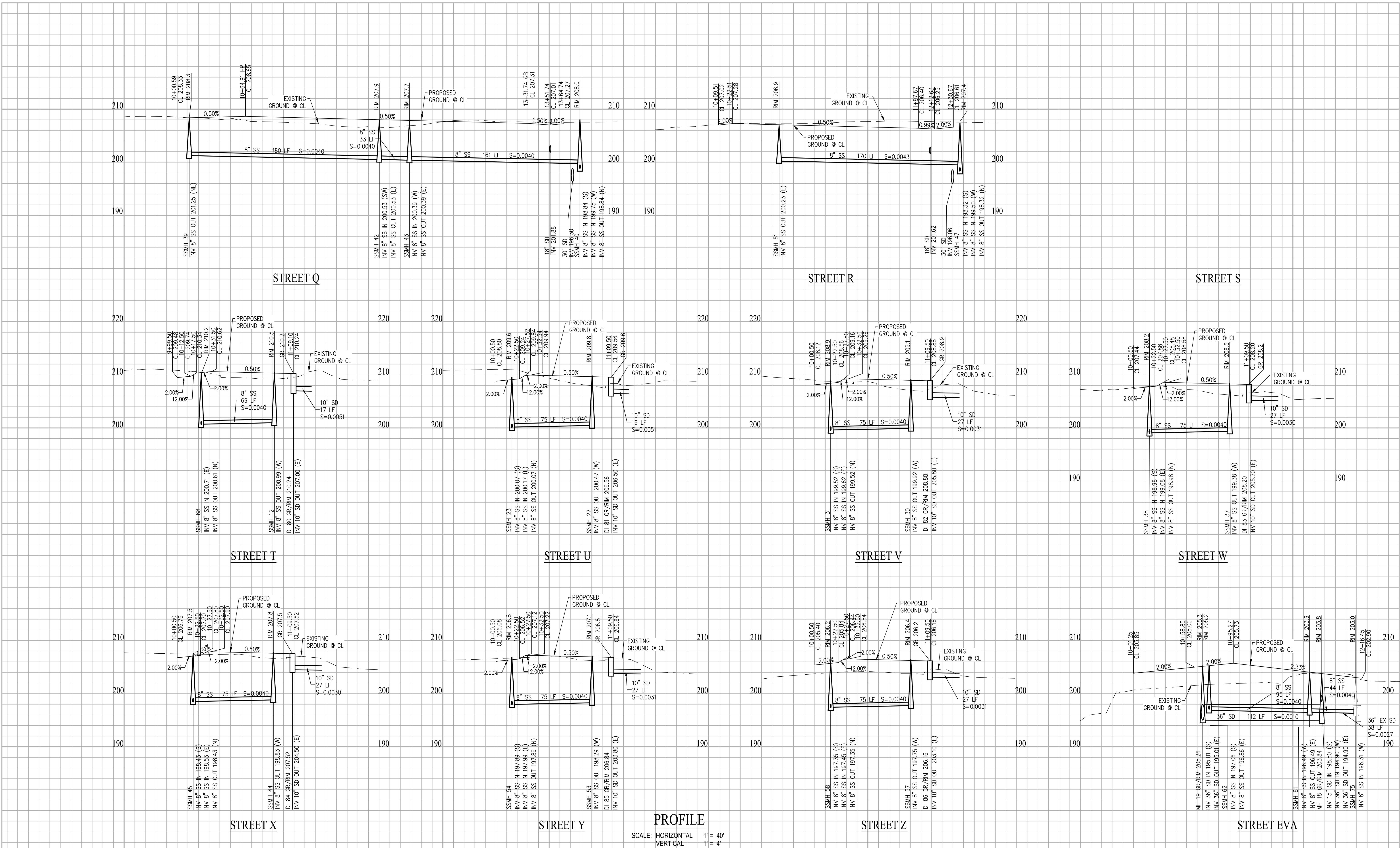


8

PRELIMINARY STREET PROFILES

TM-6.1





0 20 40 80



LEGEND

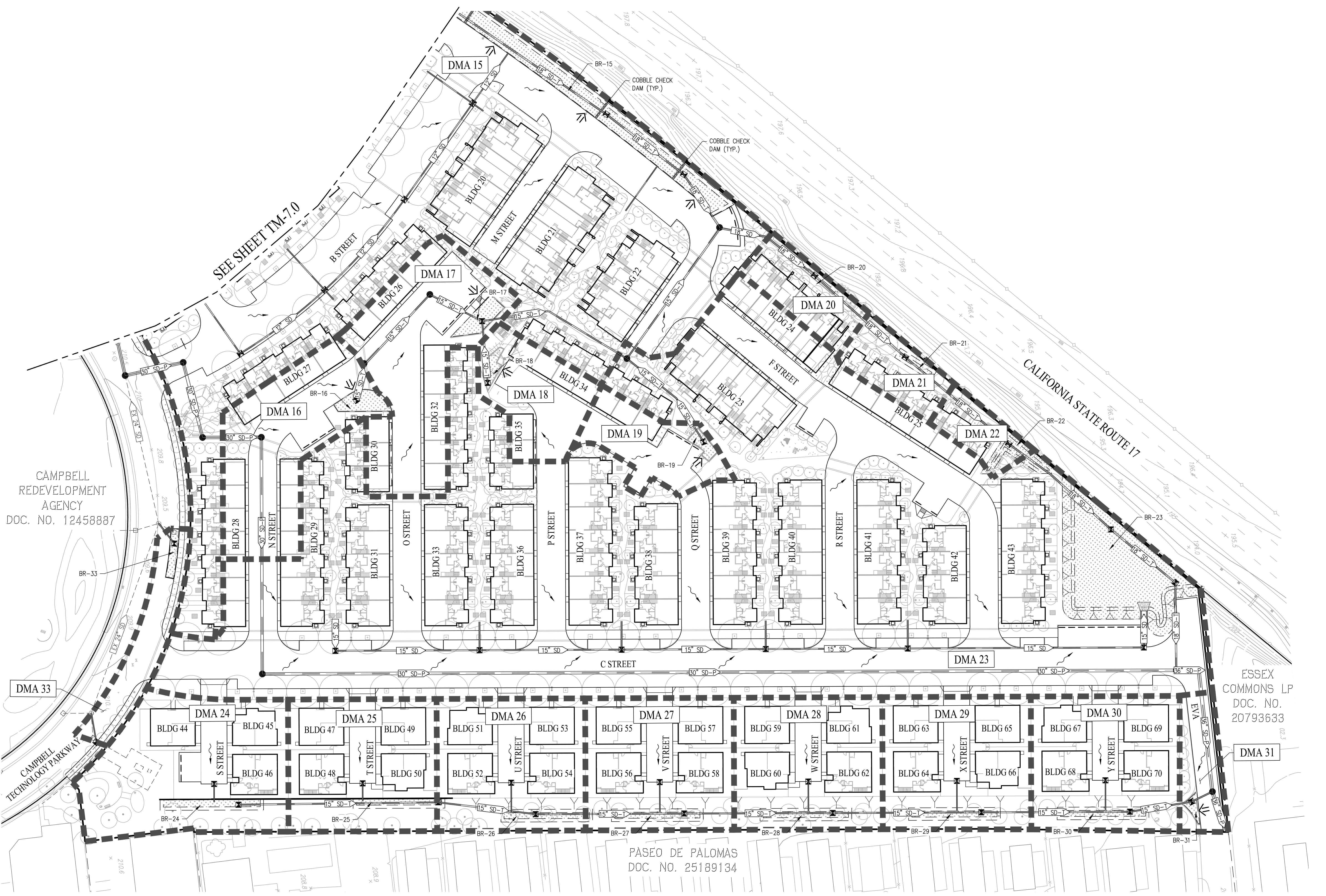
- - - EX SD - - -	EXISTING STORM DRAIN
— 12" SD —	STORM DRAIN PIPE (UNTREATED)
— 12" SD-T —	STORMWATER PIPE (TREATED)
— 12" SD-P —	STORMWATER PIPE (PUBLIC)
— DMA BOUNDARY —	DMA BOUNDARY
[hatched area]	BIORETENTION AREA
DMA 1	DRAINAGE MANAGEMENT AREA LABEL
— COBBLE CHECK DAM —	COBBLE CHECK DAM
— RUNOFF DIRECTION —	RUNOFF DIRECTION
— Curb cut/slot drain —	CURB CUT/SLOT DRAIN
● STORM DRAIN MANHOLE	STORM DRAIN MANHOLE
■ STORM DRAIN FIELD INLET	STORM DRAIN FIELD INLET
● AREA DRAIN	AREA DRAIN

ABBREVIATIONS

BR	BIORETENTION
DMA	DRAINAGE MANAGEMENT AREA
EX	EXISTING
FC	FACE OF CURB
LAT	LATERAL
PR	PROPOSED
SD	STORM DRAIN
TC	TOP OF CURB

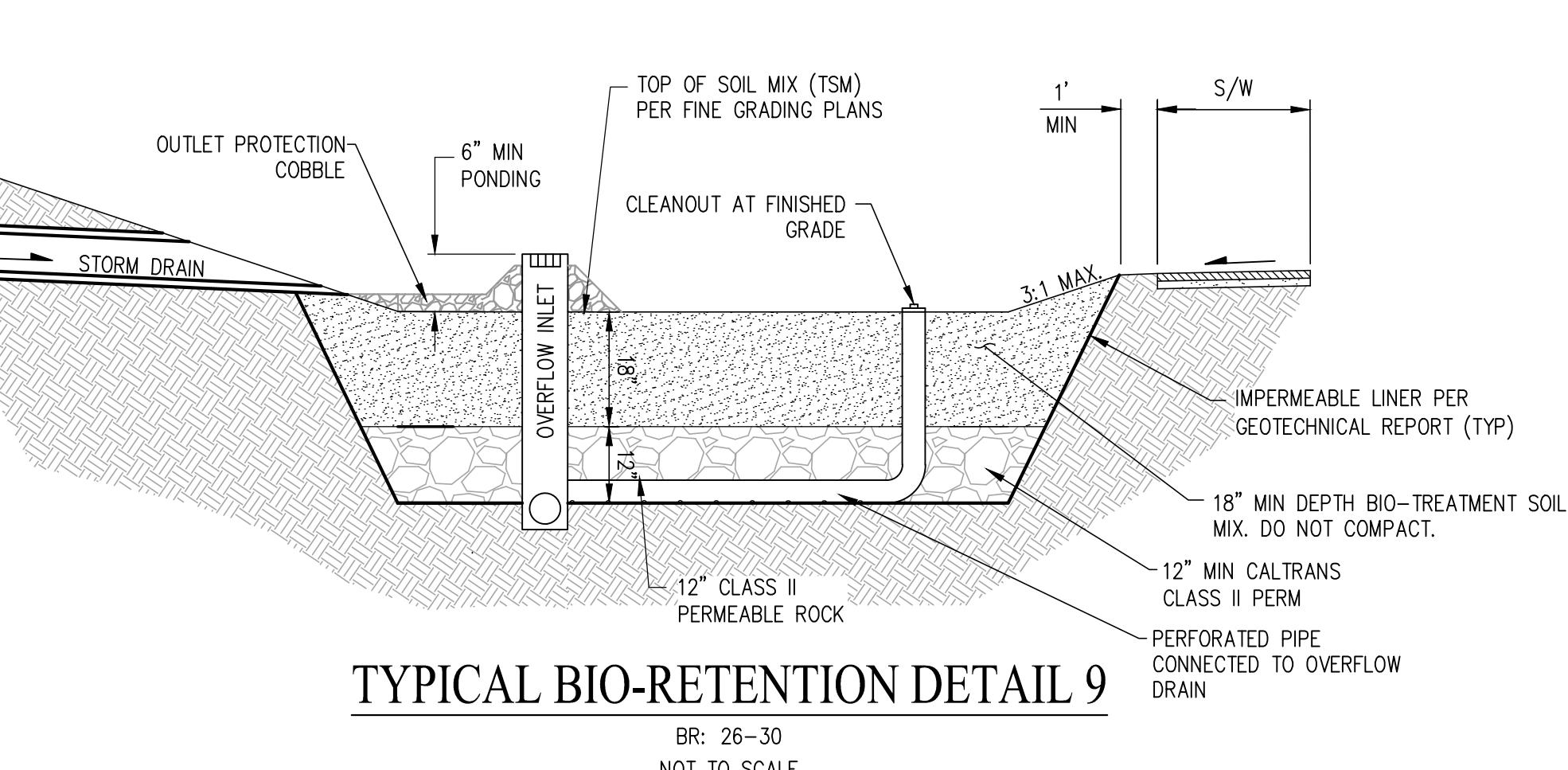
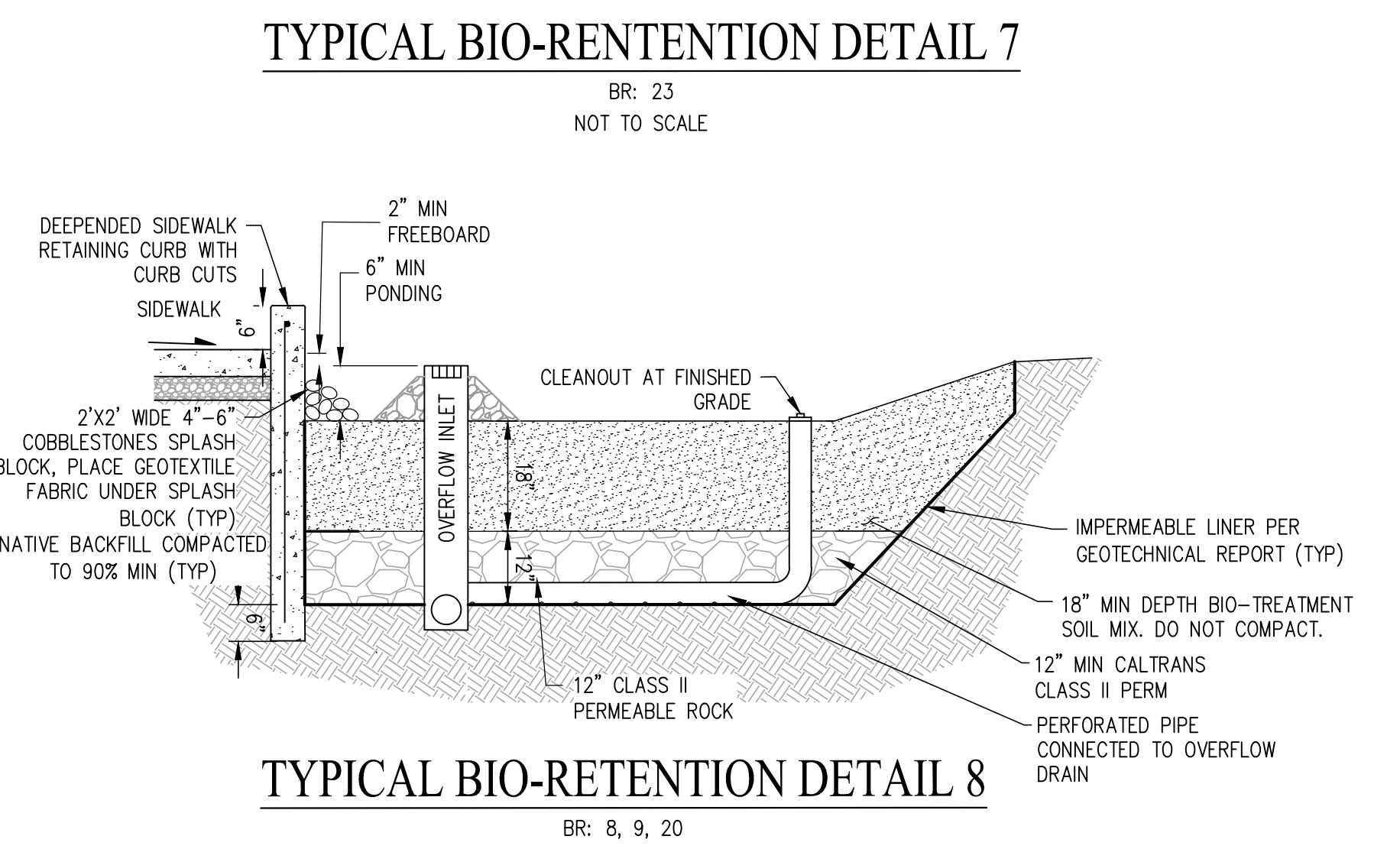
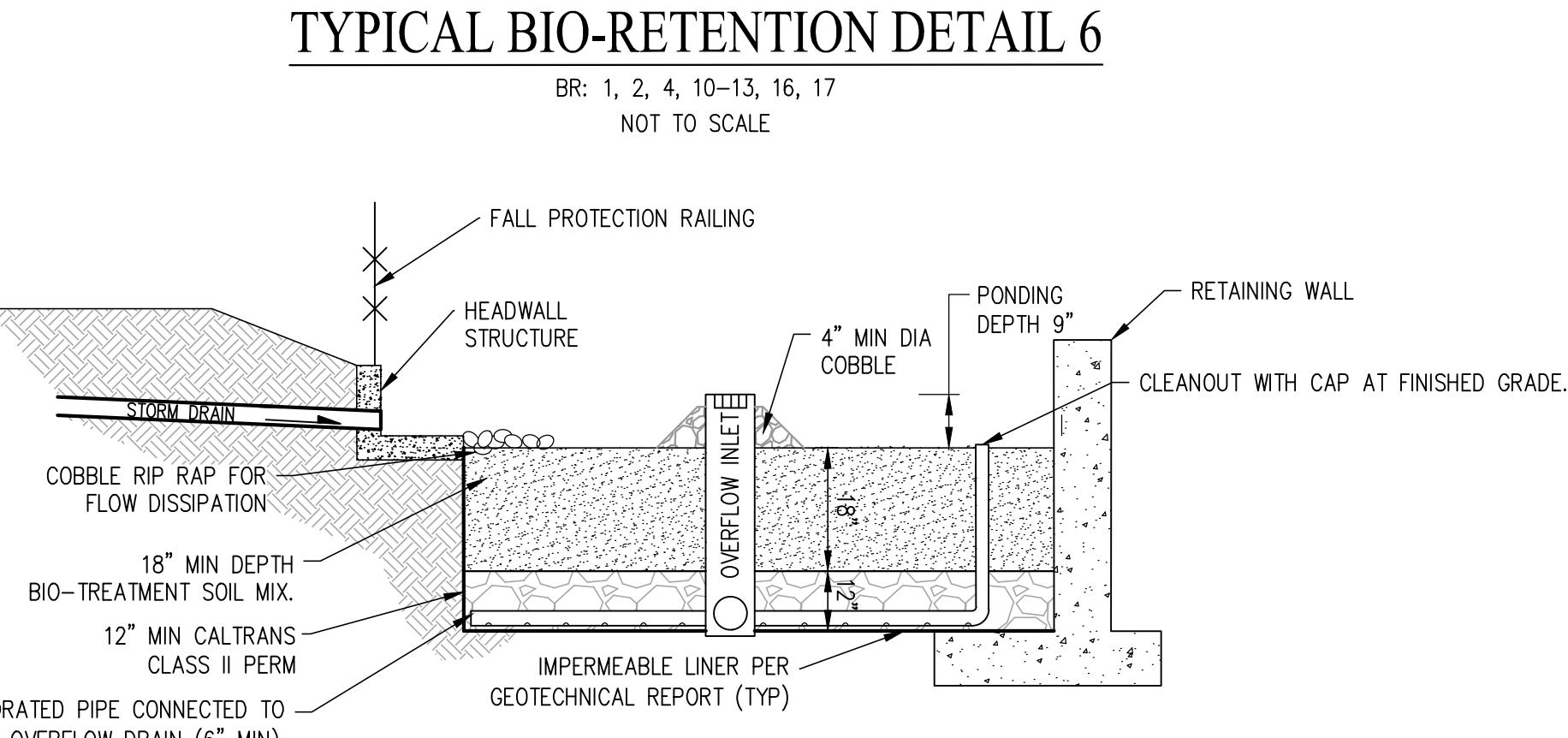
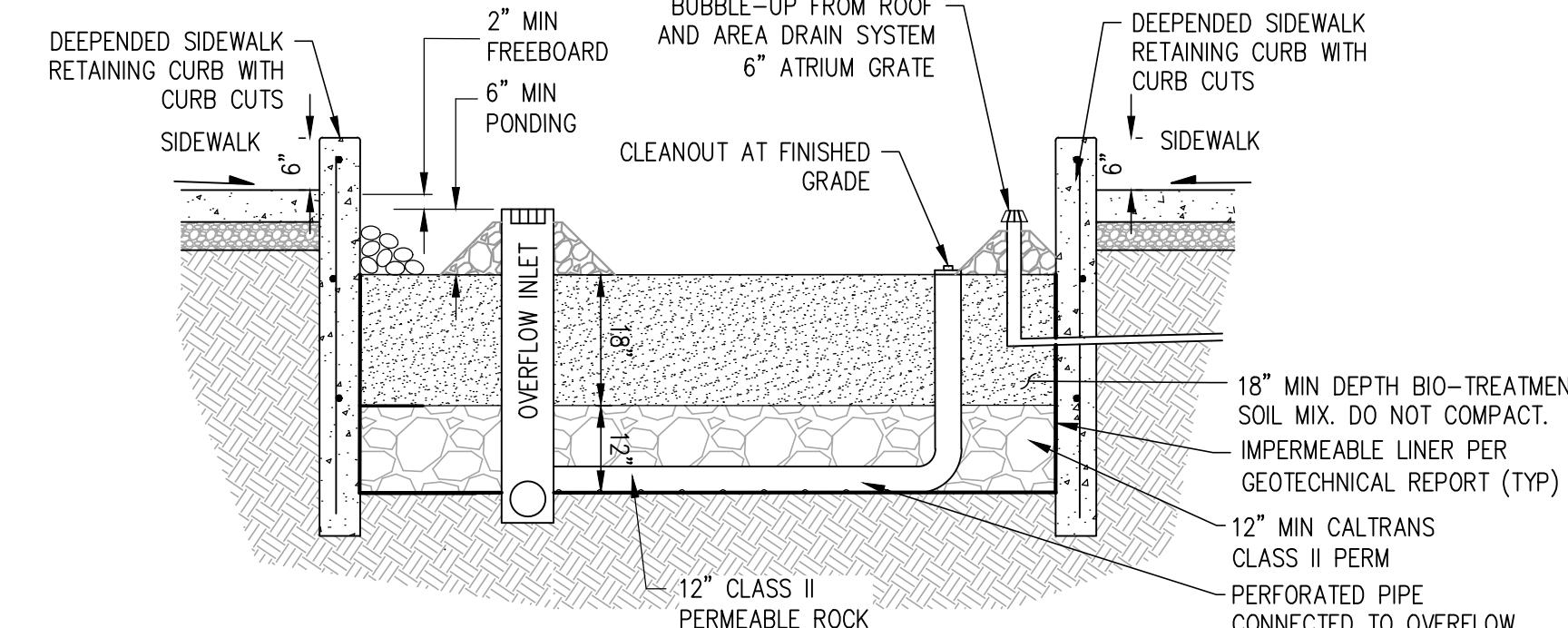
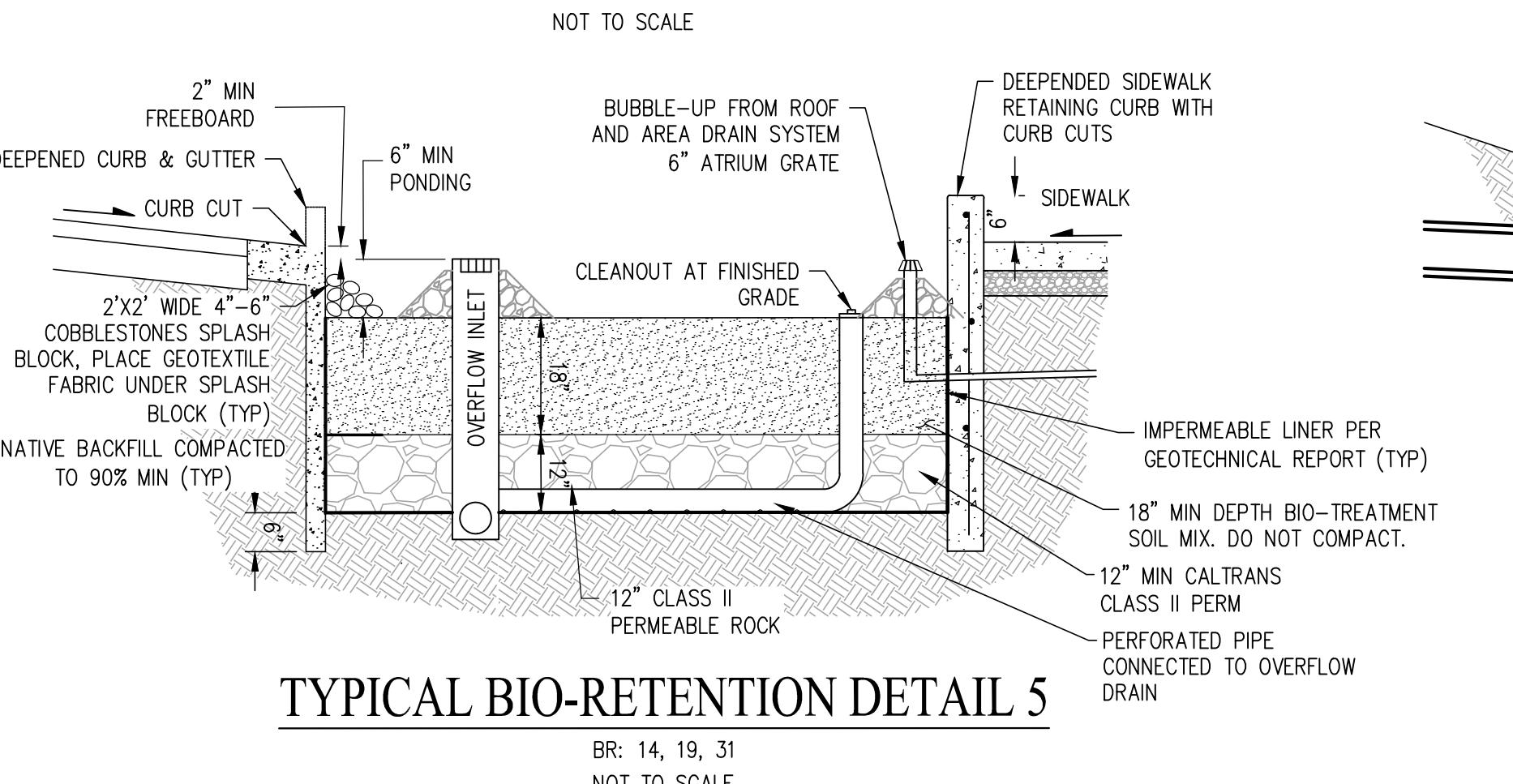
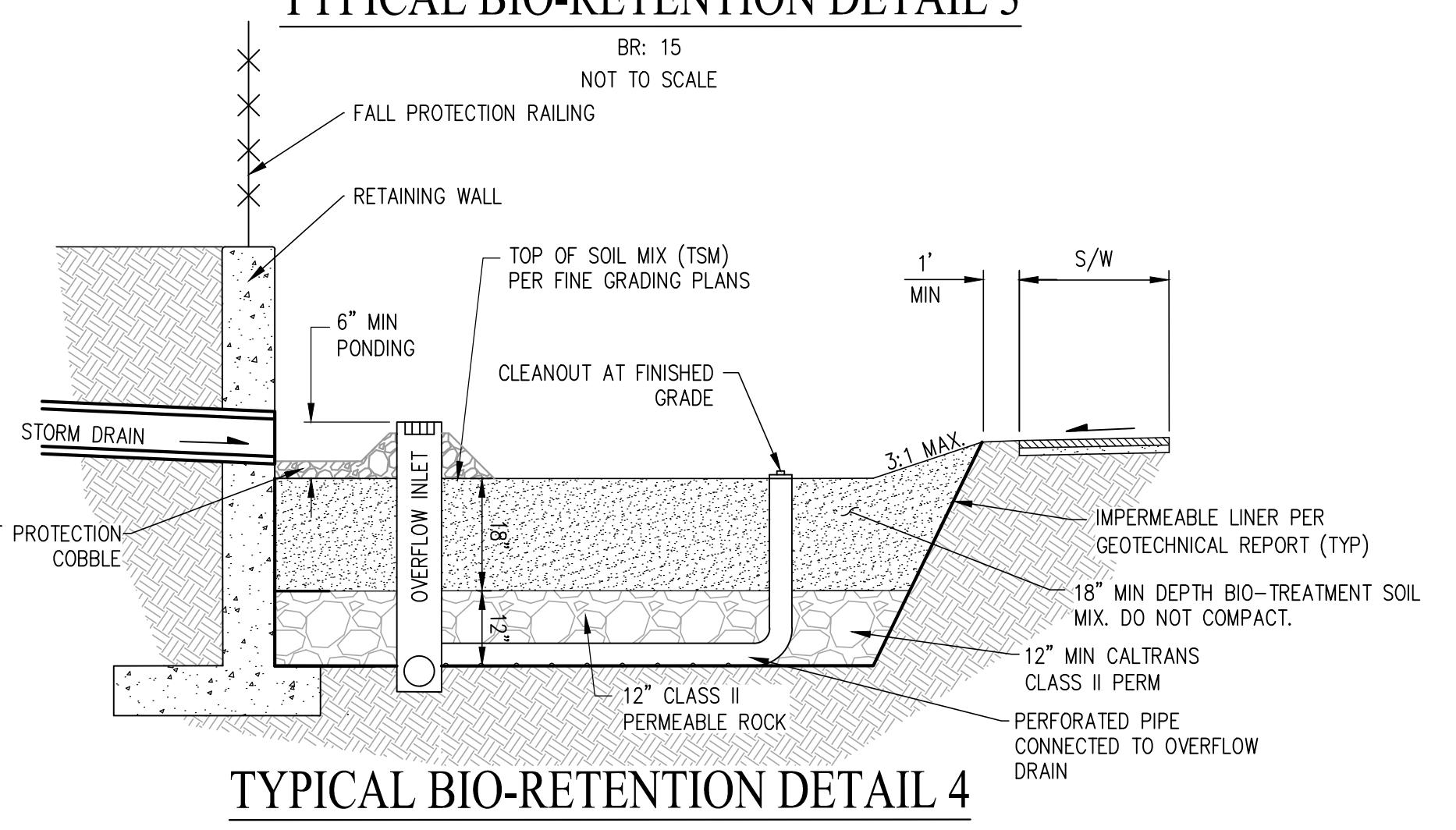
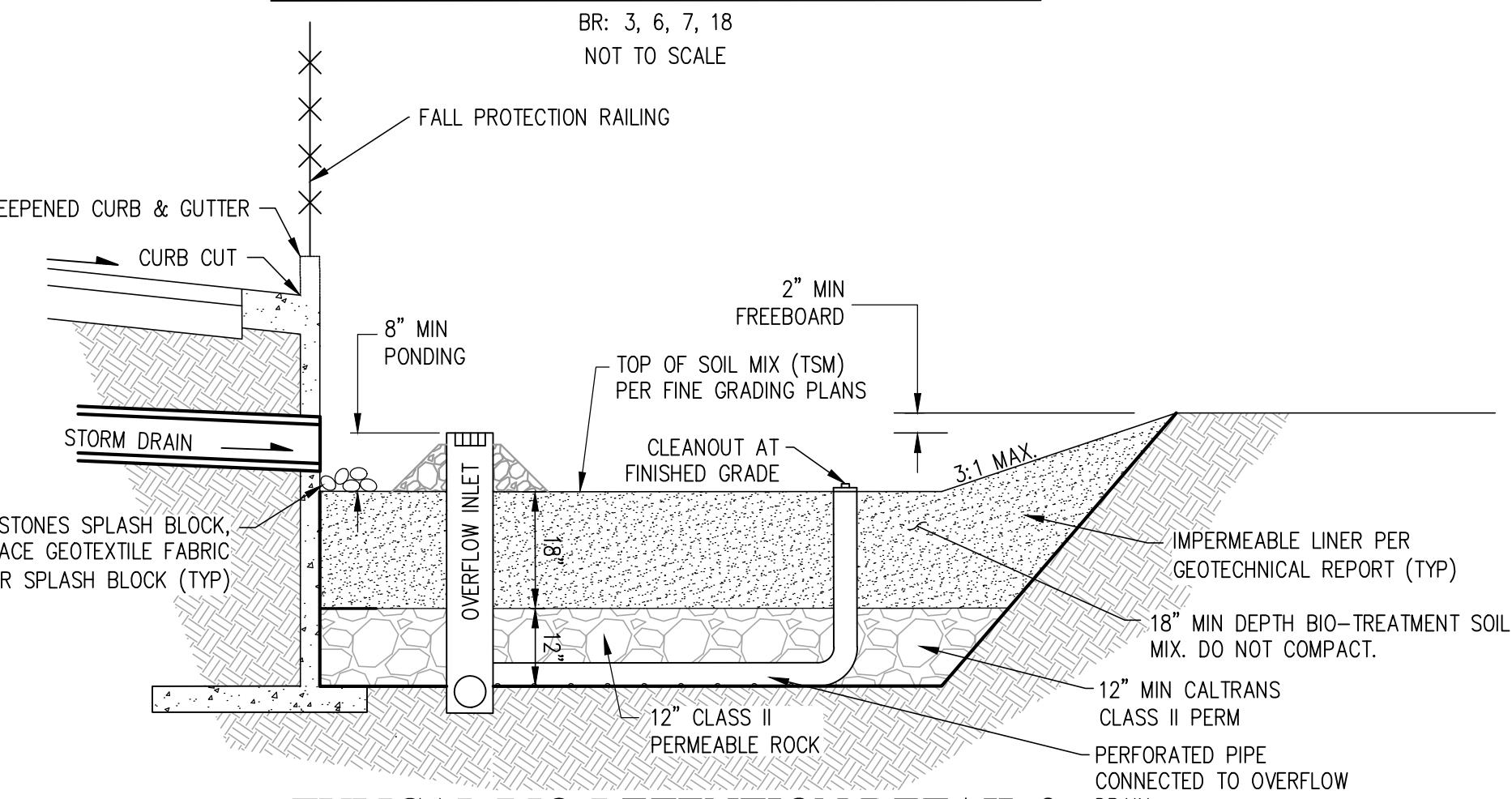
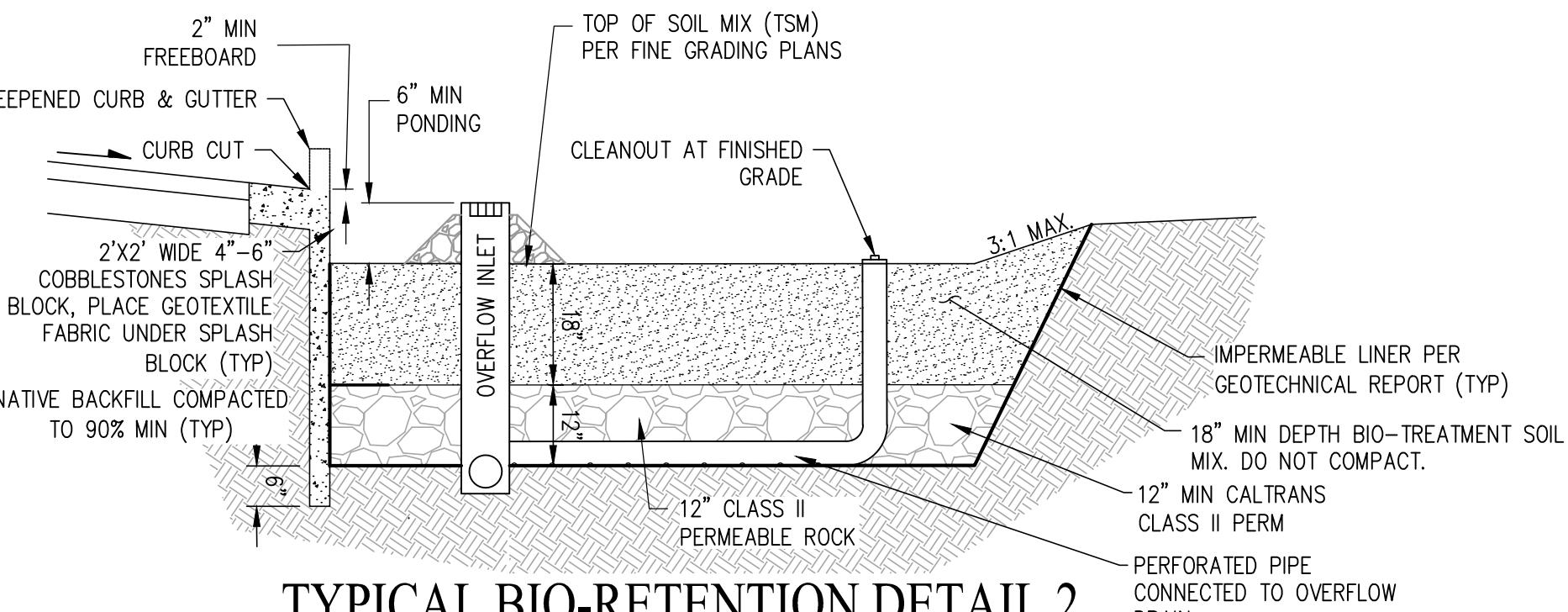
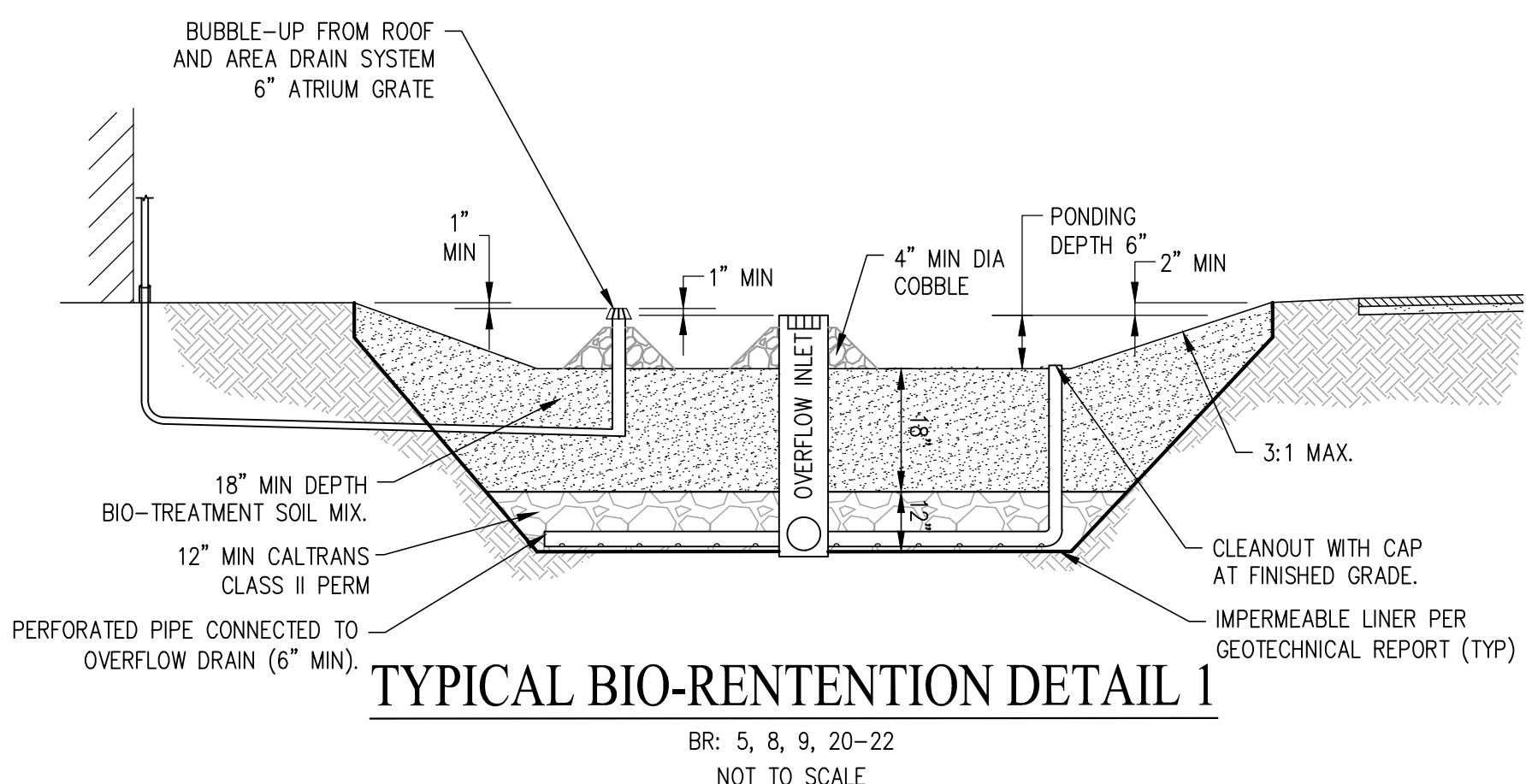
NOTE

1. STORM DRAIN LAYOUT AND DMA TREATMENT AREAS ARE SUBJECT TO CHANGE WITH FINAL SITE GRADING AND DRAINAGE PLAN. EXACT DOWNSPOUT LOCATIONS ARE UNKNOWN.
2. BIO-RETENTION AREAS HAVE BEEN DESIGNED PER THE SANTA CLARA COUNTY C.3 GUIDANCE MANUAL.
3. BIO-RETENTION AREAS HAVE BEEN SIZED USING THE 4% METHOD AND COMBINATION FLOW & VOLUME SIZING PER CHAPTER 5 OF THE SANTA CLARA COUNTY C.3 GUIDANCE MANUAL.
4. SITE DESIGN MEASURES INCLUDES MARKING CLUSTERING STRUCTURES & PAVEMENT SOURCE CONTROL MEASURES SHALL INCLUDE MARKING ALL INLETS WITH LABELS NOTING ALL DRAINING FLOWS TO THE BAY.
5. THIS PROJECT HAS SUBMITTED AN SB 330 APPLICATION PRIOR TO JUNE 30, 2023. THEREFOR, THE PROJECT IS SUBJECT TO MRP 2.0 REQUIREMENTS PROVIDED THE PROJECT REMAINS IN COMPLIANCE WITH THE REQUIREMENTS OF SB 330.



PRELIMINARY STORMWATER TREATMENT SUMMARY TABLE									
DMA	TREATMENT TYPE	DMA AREA (SF)	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF) (IMPERVIOUS + PERVIOUS X 0.1)	SIZING METHOD	REQUIRED BIORETENTION (SF)	PROVIDED BIORETENTION (SF)	MINIMUM PONDING DEPTH PROVIDED (IN)
1	BIORETENTION	7,107	4,883	2,224	5,105	4%	204	204	6
2	BIORETENTION	4,312	2,939	1,373	3,076	4%	123	123	6
3	BIORETENTION	2,325	1,435	890	1,524	4%	61	61	6
4	BIORETENTION	3,474	2,902	572	2,959	4%	118	118	6
5	BIORETENTION	3,280	2,528	752	2,603	4%	104	104	6
6	BIORETENTION	15,383	13,991	1,392	14,130	4%	565	656	6
7	BIORETENTION	24,361	21,496	2,865	21,783	4%	871	871	6
8	BIORETENTION	7,174	4,292	2,882	4,580	4%	183	183	6
9	BIORETENTION	7,174	4,292	2,882	4,580	4%	183	183	6
10	BIORETENTION	3,954	3,299	655	3,365	4%	135	135	6
11	BIORETENTION	5,730	4,864	866	4,951	4%	198	198	6
12	BIORETENTION	5,764	3,590	2,174	3,807	4%	152	152	6
13	BIORETENTION	5,359	3,017	2,342	3,251	4%	130	130	6
14	BIORETENTION	30,499	27,334	3165	27,651	4%	1106	1106	6
15	BIORETENTION	219,002	176,741	42261	180,967	COMBO	6644	6644	9
16	BIORETENTION	16,473	14,455	2018	14,657	4%	586	586	6
17	BIORETENTION	18,988	17,771	1,217	17,893	4%	716	716	6
18	BIORETENTION	7,473	6,638	835	6,722	4%	269	269	6
19	BIORETENTION	7,149	6,340	809	6,421	4%	257	257	6
20	BIORETENTION	6,587	3,993	2,594	4,252	4%	170	170	6
21	BIORETENTION	5,952	2,813	3139	3,127	4%	125	125	6
22	BIORETENTION	4,270	2,416	1854	2,601	4%	104	104	6
23	BIORETENTION	212,464	183,168	29,296	186,098	4%	7444	7444	8
24	BIORETENTION	21,892	13,368	8,524	14,220	4%	569	569	6
25	BIORETENTION	16,456	9,716	6740	10,390	4%	416	416	6
26	BIORETENTION	16,456	9,716	6,740	10,390	4%	416	416	6
27	BIORETENTION	16,456	9,716	6740	10,390	4%	416	416	6
28	BIORETENTION	16,456	9,716	6740	10,390	4%	416	416	6
29	BIORETENTION	16,456	9,716	6740	10,390	4%	416	416	6
30	BIORETENTION	16,456	9,716	6,740	10,390	4%	416	416	6
31	BIORETENTION	5,040	3,350	1,690	3,519	4%	141	141	6
32	BIORETENTION	16,080	11,025	5,055	11,531	4%	461	662	6
33	BIORETENTION	6,309	5,222	1,087	5,331	4%	213	312	6
TOTAL	-	772,311	606,458	165,853	623,043	-	24,327	24,719	-

EQUIVALENT OFFSITE TREATMENT AREA SUMMARY			
CRITERIA	TOTAL AREA (SF)	TOTAL IMPERVIOUS AREA (SF)	TOTAL PVIOUS AREA (SF)
REQUIRED EQUIVALENT OFFSITE TREATMENT AREA (NEW AND/OR REPLACED IMPERVIOUS SURFACE)	19523	13455	6068
PROVIDED EQUIVALENT OFFSITE TREATMENT AREA (DMA 32 & 33)	22389	16247	6142



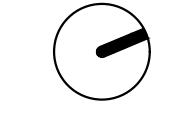
CARLSON,
BARBEE &
GIBSON, Inc.



CAMPBELL
TECHNOLOGY
PARK LLC

CAMPBELL TECHNOLOGY PARK
CAMPBELL, CA #2023-0039

DESIGN REVIEW
JANUARY 15, 2023



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PRELIMINARY STORMWATER CONTROL
PLAN DETAILS

TM-7.2

