

**VICINITY MAP**

NTS

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THIS ROADWAY PROJECT MODIFIES CALIFORNIA DRIVE, BELLEVUE AVENUE, AND LORTON AVENUE IN THE CITY OF BURLINGAME, CA. THE IMPROVEMENTS INCLUDE:

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[illegible]

## GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, THE TECHNICAL SPECIFICATIONS SPECIAL PROVISIONS, THE CITY OF BURLINGAME DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, AND CALTRANS STANDARD PLANS AND SPECIFICATIONS DATED MAY 2010.
2. CONSTRUCTION CONTRACTOR AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE CITY ENGINEER SHALL BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL GIVE THE CITY OF BURLINGAME ENGINEERING DEPARTMENT AT LEAST THREE (3) WORKING DAYS ADVANCE NOTICE PRIOR TO BEGINNING OF ACTUAL WORK AND ALL REQUIRED INSPECTION REQUESTS, AT (650) 558-7230.
4. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF ANY DISCREPANCIES OR UNUSUAL CONDITIONS ASSOCIATED WITH EXISTING CONDITIONS, THE PLANS, DETAILS OR CONSTRUCTION NOTES FIVE (5) DAYS PRIOR TO FINALIZATION OF BIDS AND COMMENCEMENT OF ANY CONSTRUCTION.
5. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CITY ENGINEER.
6. NOTES APPEARING ON THESE PLANS SHALL BE CONSIDERED AS REFERRING TO INCIDENTAL WORK REQUIRED FOR THE ACTIVITIES SPECIFICALLY LISTED IN THE BID SCHEDULE. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR ACTIVITIES OTHER THAN THOSE LISTED IN THE BID SCHEDULE.
7. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT AND APPARATUS NOT SPECIFICALLY MENTIONED ON THE PLANS OR SPECIFICATIONS, BUT WHICH ARE NECESSARY TO COMPLETE THE CONTRACTED WORK.

## PERMITS AND REGULATIONS

1. CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS.
2. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY SOIL OR WATER CONTAMINATION NOTICED DURING CONSTRUCTION TO THE CITY OF BURLINGAME.
3. CONTRACTOR TO ADHERE TO ALL REQUIREMENTS OF THE SAN MATEO COUNTY HEALTH SERVICES AGENCY.
4. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND AGREEMENTS NECESSARY TO COMPLETE THE CONTRACTED WORK CONTAINED HEREIN.

## SURVEY NOTES

1. THE CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE CORRECTNESS OF THE EXISTING TOPOGRAPHY, UTILITIES, AND EXISTING CONDITIONS PRIOR TO BIDDING THE PROJECT.
2. CONSTRUCTION STAKING TO BE PROVIDED BY THE CONTRACTOR AND SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF CALIFORNIA. CONTRACTOR SHALL MAINTAIN STAKING POINTS AT ALL TIMES DURING CONSTRUCTION.

## EROSION CONTROL

1. UPON SATISFACTORY COMPLETION OF THE WORK, THE ENTIRE WORK SITE SHALL BE CLEANED AND LEFT FREE OF CONSTRUCTION WASTE, RUBBISH AND DEBRIS OF ANY NATURE TO THE SATISFACTION OF THE CITY ENGINEER.
2. EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY TO PREVENT SEDIMENT RUNOFF TO PUBLIC ROADWAY DRAINAGE FACILITIES, ADJACENT PROPERTIES AND THE SAN FRANCISCO BAY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES ON OR OFF THE PROJECT SITE AS A RESULT OF LACK OF DUST CONTROL.
4. DURING THE PROGRESS OF THE CONSTRUCTION WORK THE CONTRACTOR SHALL MAINTAIN THE PREMISES IN A NEAT AND CLEAN CONDITION, DISPOSING OF REFUSE IN A SATISFACTORY MANNER AS OFTEN AS DIRECTED OR AS MAY BE NECESSARY SO THAT THERE SHALL BE AT NO TIME ANY UNSIGHTLY ACCUMULATION OF RUBBISH AT THE JOB SITE.
5. DURING STORM EVENTS THE CONTRACTOR SHALL REMOVE/CLEAN ANY SEDIMENT FROM INLETS, ENSURE THAT THE DRAINS ARE DRAINING ADEQUATELY AND NOT CAUSING ANY FLOODING IN THE AREA OR CREATING HAZARD TO PEDESTRIANS AND VEHICLES.

## TREE PROTECTION

1. TREES AND SHRUBS WITHIN THE CITY EASEMENTS, RIGHT-OF-WAY AND ON PRIVATE PROPERTY ADJACENT TO THE PROJECT WORK SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL DEVELOP METHODS TO WORK AROUND ALL TREES.
2. CONTRACTOR TO CONTACT CITY ENGINEER, INSPECTOR, AND CITY ARBORIST TO IDENTIFY TREES TO BE PRUNED IN CITY RIGHT-OF-WAYS OR EASEMENTS AS REQUIRED FOR ACCESS TO PROJECT AREA.

## CONSTRUCTION NOTES

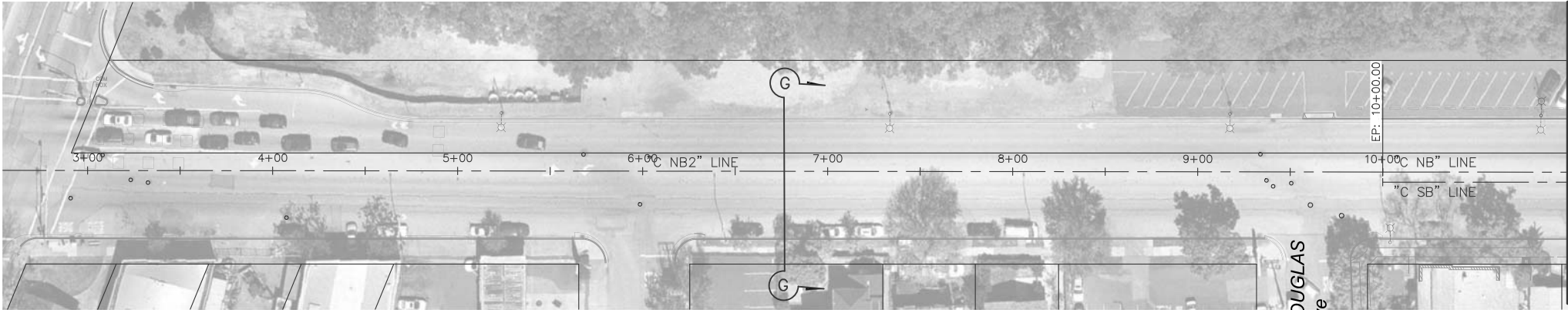
1. THE CONTRACTOR SHALL REPLACE OR REPAIR, AT CONTRACTOR'S EXPENSE, ALL DAMAGED, REMOVED OR OTHERWISE DISTURBED FACILITIES, WALLS, FENCES, SERVICES, UTILITIES, STRIPING, IMPROVEMENTS OR FEATURES OF WHATEVER NATURE, TO THEIR ORIGINAL CONDITION, WHETHER SHOWN ON THE PLANS OR NOT; PROVIDED SUCH REPAIR OR REPLACEMENT IS CAUSED BY CONTRACT WORK OPERATIONS.
2. ALL EXCAVATION SPOILS SHALL BE PLACED DIRECTLY INTO TRUCKS AND DISPOSED OF AT AN APPROVED DUMPSITE.
3. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN SANITARY FACILITIES FOR THE WORKERS AT THE CONSTRUCTION SITE.
4. AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL CLEAN AND SWEEP ROADWAYS AND ONSITE PAVED AREAS OF ALL MATERIALS ATTRIBUTED TO OR INVOLVED IN THE WORK. IN ADDITION, THE CONTRACTOR SHALL CLEAN AND SWEEP ROADWAYS AS NECESSARY TO ENSURE THAT VEHICLE AND PEDESTRIAN TRAVEL IS NOT ENDANGERED BY THE PRESENCE OF LOOSE MATERIALS. CONSTRUCTION SITE ENTRANCES SHALL BE KEPT FREE OF THESE MATERIALS. DAILY CLEANING AND SWEEPING OF THE ROADWAYS AND AREAS INVOLVED IN THE WORK SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT VEHICLE AND PEDESTRIAN TRAVEL ARE NOT ENDANGERED BY THE PRESENCE OF LOOSE MATERIALS. MECHANIZED STREET SWEEPING SHALL BE PERFORMED BI-WEEKLY. STREET SWEEPER SHALL BE A FULL-SIZED STREET SWEEPER EQUIPPED WITH WATER SPRAY BARS AND REAR PICK-UP BROOMS. IN ADDITION, VACUUM MAY REPLACE OR ADD TO THE BROOMS IF IT IS SUITABLE FOR MUNICIPALITIES AND FOR CONSTRUCTION SITE CLEANUP ON CITY STREETS. THE CONTRACTOR SHALL HAVE AN ADEQUATE STREET SWEEPER ONSITE BEFORE EXCAVATION WILL BE ALLOWED.
5. CONTRACTOR SHALL PROVIDE A CONSTRUCTION MANAGER OFFICE TRAILER NEAR THE CONSTRUCTION SITE. SEE PROJECT SPECIFICATIONS.
6. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER THE LOCATION OF CONTRACTOR-PROVIDED STAGING AREA AND STOCKPILE YARD. THE CITY IS NOT RESPONSIBLE FOR PROVIDING THE STAGING YARD AND THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY AND PUBLIC SAFETY AT ALL TIMES.
7. THE CONTRACTOR SHALL PREPARE A DETAILED CONSTRUCTION SITE STAGING PLAN AND PROVIDE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE TRAFFIC HANDLING & STAGE CONSTRUCTION PLANS HEREIN ARE INTENDED TO PROVIDE THE CONTRACTOR POTENTIAL OPTIONS FOR CONSTRUCTION PHASES & SEQUENCING.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION ACTIVITIES WITH NEARBY IMPACTED RESIDENCES, BUSINESSES, AGENCIES, UTILITY OWNERS, AND TRANSIT OPERATORS.

[illegible]

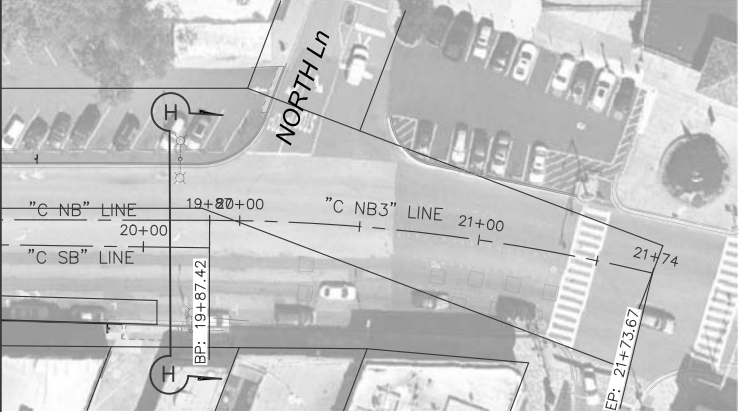
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GENERAL NOTES:

1. THE PRIMARY CONSTRUCTION ALIGNMENTS ARE "C NB," "C SB," "B WB," "B EB," "L SB," AND "L NB."
2. THE SECONDARY CONSTRUCTION ALIGNMENTS ARE "C1 LINE," "C2 LINE," "B1 LINE," AND "L1 LINE."
3. FOR ACCURATE RIGHT OF WAY, CONTRACT THE CITY OF BURLINGAME PUBLIC WORKS DEPARTMENT.

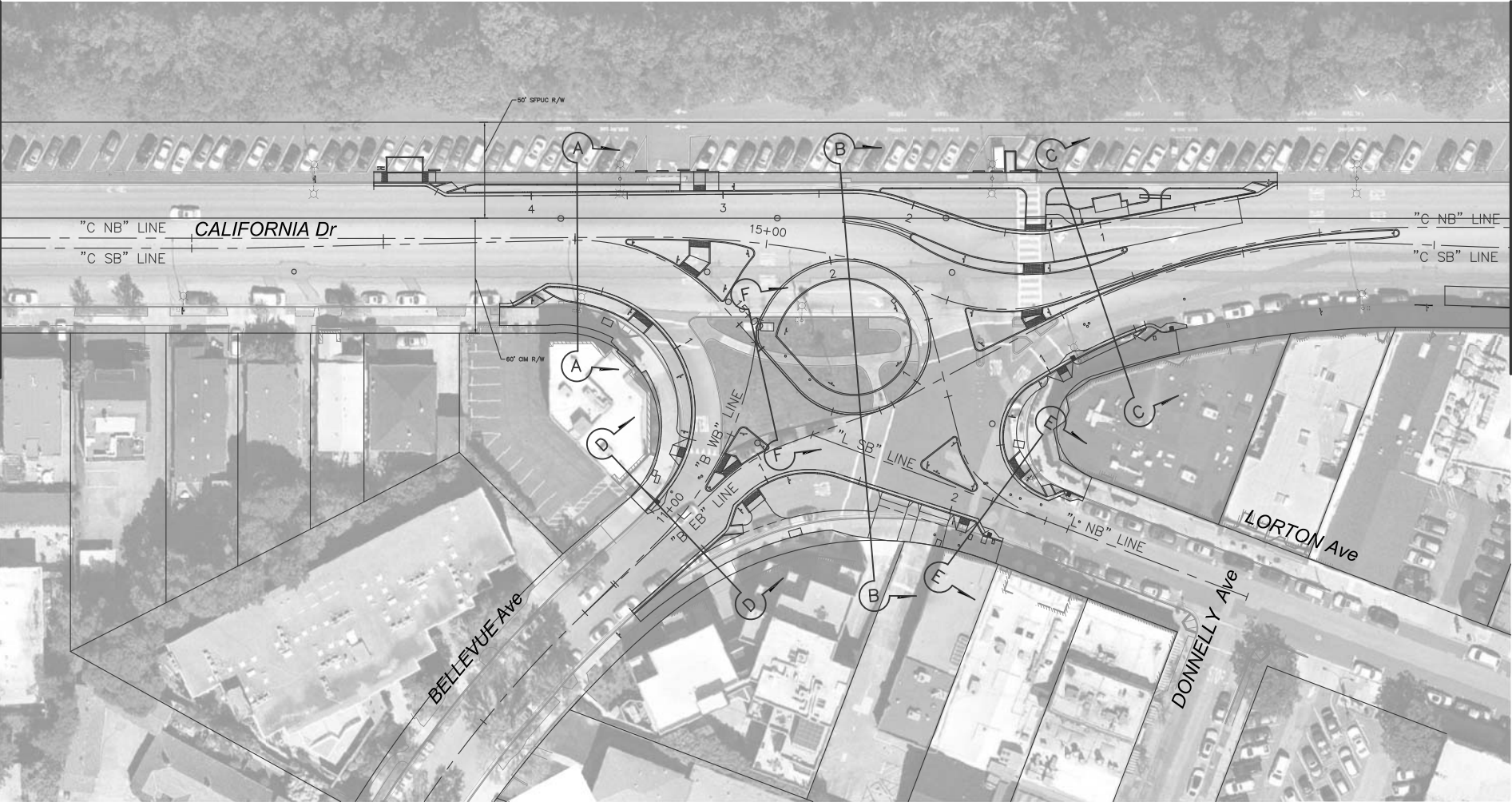


MATCHLINE  
19+00 "C NB" LINE  
SEE HC-03

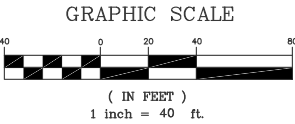
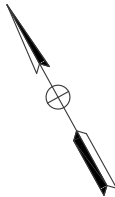


MATCHLINE  
11+00 "C NB" LINE  
SEE TX-01

MATCHLINE  
11+00 "C NB" LINE  
SEE HC-03



MATCHLINE  
19+00 "C NB" LINE  
SEE TX-01



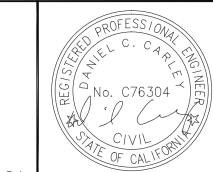
No.	REVISIONS	DATE	BY

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KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY DW  
DRAWN BY DW  
CHECKED BY DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

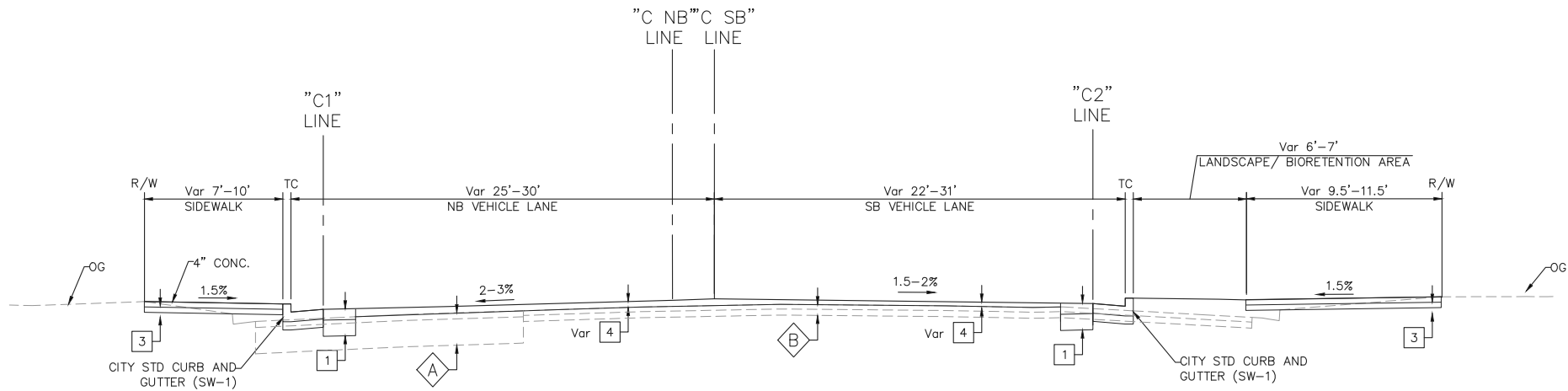


**TYPICAL CROSS SECTIONS  
KEY**

SHEET NO. 03  
OF 61 SHEETS

**TX-01**

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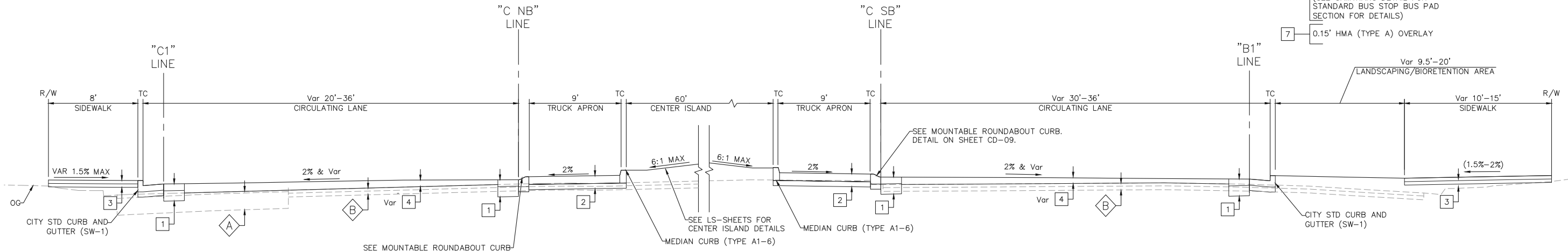
TYPICAL SECTION A-A - SB CALIFORNIA APPROACH

GENERAL NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SEE CONSTRUCTION DETAIL SHEETS FOR LIMITS OF CURB, SIDEWALK AND PAVEMENT IMPROVEMENTS.
- CONSTRUCT 0.5' AB (CLASS II) BELOW PROPOSED CURBS & 4" BELOW SIDEWALK/DRIVEWAY.
- PROJECT LINETYPES AND SYMBOLS PER CALTRANS STD PLAN A10A TO A10E.
- LANE WIDTHS VARY, SEE SIGNING AND STRIPING PLANS FOR DETAILS.
- FOR EXACT SLOPES AND GRADES SEE CONSTRUCTION DETAILS.
- PAVEMENT STRUCTURAL SECTION PROVIDED BASED ON WRECO'S PAVEMENT RECORD MEMO DATED 10/14/2016.
- EXISTING PAVEMENT SECTION VARIES. EXISTING SECTION IS ASSUMED TO BE 0.29' AC OVER 0.37' PCC FOR MUCH OF THE PROJECT AREA. SEE DM-01 FOR PAVEMENT REMOVAL AREAS AND DETAILS.
- SEQUENCE CONSTRUCTION OF STRUCTURAL SECTIONS TO ALLOW FOR FINAL LIFT OF 0.15' TO BE PLACED ACROSS ALL AREAS TO RECEIVE HMA.
- SEE CITY STANDARD DRAWING SW-1 FOR SIDEWALK, DRIVEWAY, AND CURB AND GUTTER DETAILS.
- SEE CALTRANS STANDARD PLANS A87A FOR MEDIAN CURB (TYPE A1-6).

TYPICAL PAVEMENT STRUCTURAL SECTION

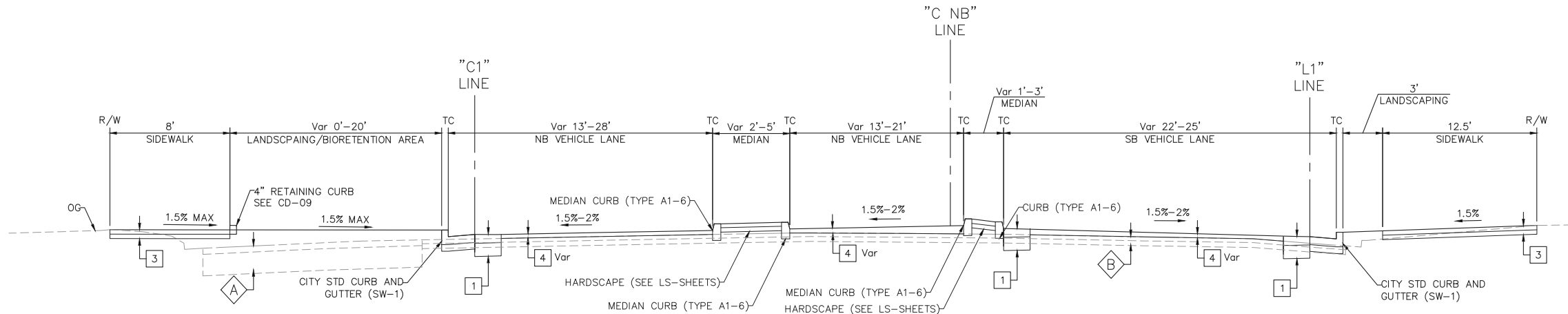
1	0.67' HMA (TYPE A) 1.00' AB (CLASS 2)	EXISTING SECTIONS A 0.37' AC 1.63' AB (CLASS 2)
2	0.75' PCC 0.5' AB (CLASS 2)	B 0.29' AC 0.37' PCC
3	0.33' PCC 0.33' AB (CLASS 2)	
4	0.15' COLD PLANE 0.15' Min. & Var HMA (TYPE A) OVERLAY	
5	0.15' COLD PLANE 0.15' HMA (TYPE A) OVERLAY	
6	0.95' PCC 0.40' AB (CLASS 2) (SEE SAMTRANS DETAIL FOR STANDARD BUS STOP BUS PAD SECTION FOR DETAILS)	
7	0.15' HMA (TYPE A) OVERLAY	



TYPICAL SECTION B-B - SB ROUNDABOUT CIRCULATORY ROADWAY

ABBREVIATIONS:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
HMA	HOT MIX ASPHALT
Min.	MINIMUM
NB	NORTHBOUND
OG	ORIGINAL GROUND
PCC	PORTLAND CEMENT CONCRETE
R/W	RIGHT OF WAY
SB	SOUTHBOUND
TC	TOP OF CURB
Var	VARIES



TYPICAL SECTION C-C - NB CALIFORNIA APPROACH



No.	REVISIONS	DATE	BY

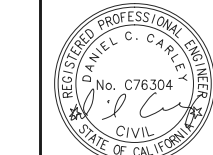
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**CALIFORNIA DRIVE  
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SAN MATEO COUNTY



CA

**TYPICAL CROSS SECTIONS**

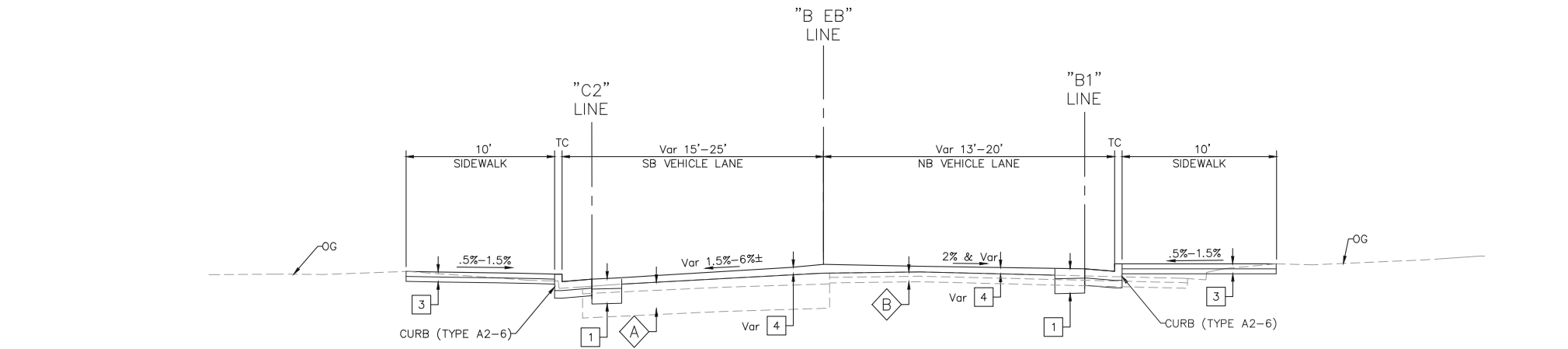
SHEET NO. 04  
OF 61 SHEETS

**TX-02**

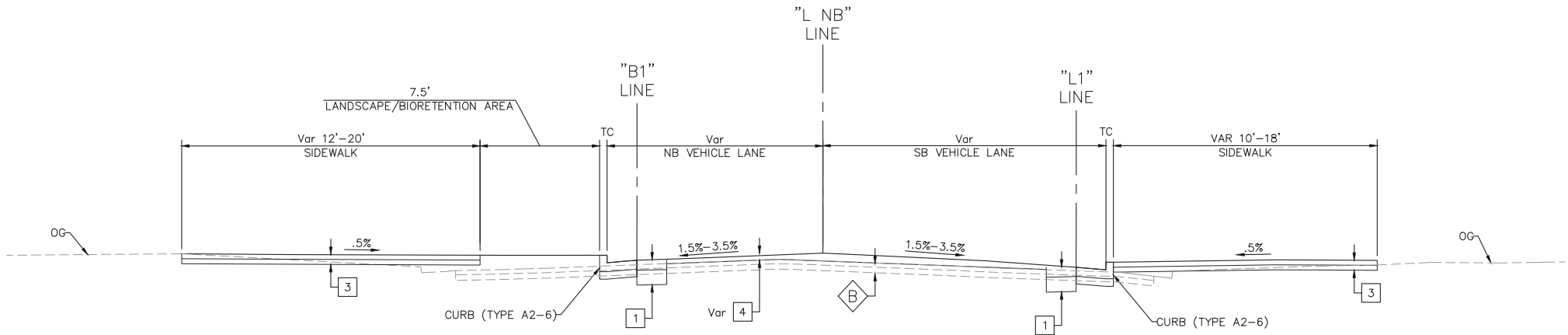


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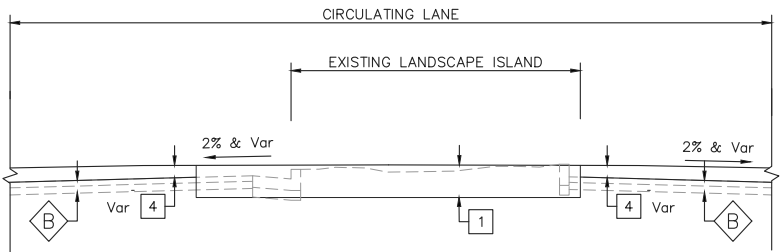
**GENERAL NOTES:**  
1. SEE TX-02 FOR GENERAL NOTES AND TYPICAL PAVEMENT STRUCTURAL SECTIONS.



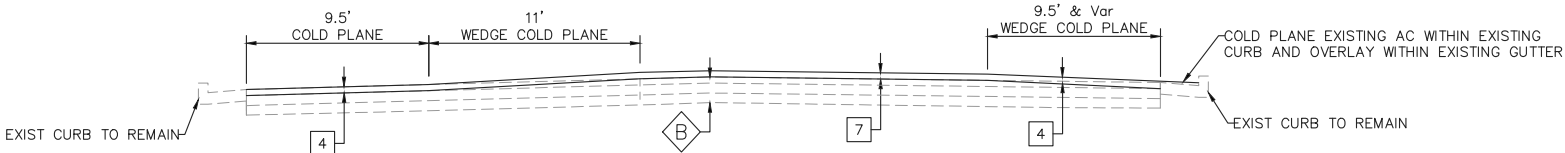
**TYPICAL SECTION D-D - BELLEVUE APPROACH**



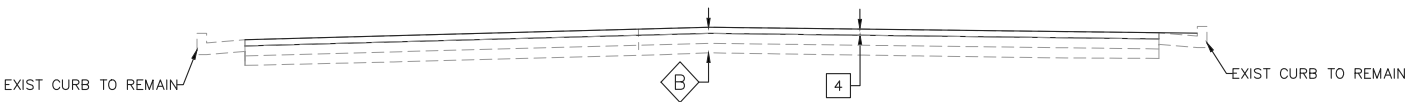
**TYPICAL SECTION E-E - LORTON APPROACH**



**TYPICAL SECTION F-F - CALIFORNIA DRIVE THROUGH EXISTING ISLAND**



**TYPICAL SECTION G-G - CALIFORNIA DRIVE - PAVEMENT WEDGE COLD PLANE AND HMA OVERLAY (BETWEEN OAK GROVE AVENUE AND SB ROUNDABOUT APPROACH)**



**TYPICAL SECTION H-H - CALIFORNIA DRIVE - PAVEMENT COLD PLANE AND HMA OVERLAY (BETWEEN NB ROUNDABOUT APPROACH AND BURLINGAME AVENUE)**

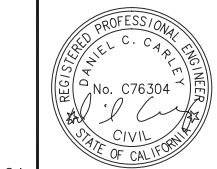


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**CALIFORNIA DRIVE  
ROUNDABOUT**  
PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY



**TYPICAL CROSS SECTIONS**

SHEET NO. 05  
OF 61 SHEETS

**TX-03**

1. FOR ALIGNMENT LINE DATA AND PROFILES, SEE SHEETS HC-02/HC-03/HC-04.
2. LOCATION OF NEW MONUMENT AS SHOWN IS APPROXIMATE. CONTRACTOR SHALL INSTALL NEW MONUMENT UPON COMPLETION OF BOUNDARY SURVEY AND FINAL LOCATION TO BE AS DIRECTED BY ENGINEER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING LICENSED SURVEYOR TO PERFORM A SURVEY TO DETERMINE ACTUAL RIGHT-OF-WAY EDGE LINES AND CENTERLINES, AND FOR PREPARING A RECORD OF SURVEY AND SUBMITTING TO THE SAN MATEO COUNTY SURVEYOR FOR REVIEW, APPROVAL, AND FILING. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

"C NB" LINE  
STA: 10+00.00  
OFF: 0.00  
N: 2039425.7017  
E: 6025949.5379

MAG SPIKE  
"C NB" LINE  
STA: 11+57.25  
OFF: 33.09LT-  
N: 2039378.1952  
E: 6026103.0488  
Elev: 27.55

INSTALL SURVEY MONUMENT AND CAN WITH CONCRETE COLLAR  
N: 2039122.23  
E: 6026428.80  
SEE GENERAL NOTE 2 THIS SHEET.

"C NB" LINE  
STA: 19+87.42  
OFF: 0.00  
N: 2038957.0502  
E: 6026805.2585

MAG SPIKE  
N: 2038954.97  
E: 6026893.80  
Elev: 33.05

SEE HC-02

SEE HC-03 AND HC-04

/ SEE HC-02 /

CALIFORNIA Dr

"C SB" LINE  
STA: 10+00.00  
OFF: 0.00  
N: 2039420.9068  
E: 6025946.8779

REBAR CAP  
"C SB" LINE  
STA: 15+46.46  
OFF: 1.17RT—  
N: 2039105.0030  
E: 6026361.4160  
Elev: 30.68

"C SB" LINE  
STA: 20+27.56  
OFF: 0.00  
N: 2038947.0442  
E: 6026799.7077

CUT MARK  
N: 2038907.45  
E: 6026534.27  
Elev: 31.33

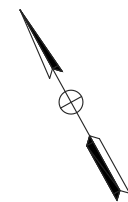
"L NB" LINE  
STA: 10+00.00  
OFF: 0.00  
N: 2038897.9127  
E: 6026515.0918

FND NAIL & TAG  
"L NB" LINE  
STA: 11+24.36  
OFF: 25.90LT  
N: 2038978.9331  
E: 6026413.6169  
Elev: 30.42

"B EB" LINE  
STA: 10+00.00  
OFF: 0.00-  
N: 2038989.1290  
E: 6026045.9115

MAG SPIKE  
"B EB" LINE  
STA: 10+99.76  
OFF: 28.33RT  
N: 2039007.6653  
E: 6026145.4598  
Elev: 30.19

1. THE COORDINATE SYSTEM IS BASED ON A RTK GPS ESTABLISHED CONTROL NETWORK ON SITE, USING NAD83 CCS ZONE 3 COORDINATES (EPOCH 2010.00). BASELINE CONTROL POINTS ESTABLISHED ON-SITE ARE LCC CP #101 (N 2039105.00, E 6026361.42 - GPS COORDINATE HELD HERE), A SET REBAR & CAP IN LAWN IN THE ISLAND BETWEEN BELLEVUE AVE AND LORTON AVE, LCC CP #102 (N 2038954.97, E 6026893.80), SET MAG NAIL IN AC PARKING LOT ON NORTHERLY SIDE OF CALIFORNIA DRIVE AND EAST OF NORTH LANE. DISTANCES AND COORDINATES AS SHOWN ON THIS SURVEY SHOULD BE CONSIDERED AS GROUND DISTANCES AND COORDINATES.
2. ELEVATIONS ARE BASED NAVD88, PER RTK GPS SURVEY ESTABLISHED CONTROL POINTS. SITE BENCHMARK WAS HELD AT LCC CP #101 (SEE ABOVE FOR DESCRIPTION), ELEVATION HELD AS 30.68 FEET, (NAVD88).
3. THIS SURVEY DOES NOT REPRESENT A COMPLETE BOUNDARY SURVEY. ALL PROPERTY CORNERS HAVE NOT BEEN SEARCHED FOR OR LOCATED (OTHER THAN THE FOUND STREET MONUMENTS SHOWN ON THE SURVEY), AND NEW CORNERS OR MONUMENTS HAVE NOT BEEN SET DURING THIS SURVEY. THE BOUNDARY (PROPERTY) LINES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON RECORD MAP INFORMATION AND THE PHYSICAL LOCATION OF EXISTING IMPROVEMENTS SUCH AS CURBS FENCE, SIDEWALKS, AND BUILDINGS. EASEMENTS ARE NOT SHOWN.
4. UTILITIES SHOWN ARE BASED UPON SURFACE OBSERVATIONS OF STRUCTURES AND USA MARKINGS FOUND IN FIELD. THE SURVEYOR ASSUMES NO RESPONSIBILITY FOR LOCATIONS, CAPACITIES OR FUNCTIONALITY OF ALL UTILITIES SHOWN HEREON. SOME UNDERGROUND UTILITIES MAY NOT BE SHOWN.



GRAPHIC SCALE

( IN FEET )  
1 inch = 40 ft.

No.	REVISIONS	DATE	BY

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KHA PROJECT 097515003	
DATE 12/27/2017	
SCALE AS SHOWN	
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

# CALIFORNIA DRIVE ROUNDBOUT

PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY



## HORIZONTAL CONTROL & KEY MAP

SHEET NO. 06  
OF 61 SHEETS

HC-01

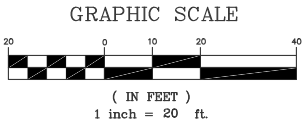
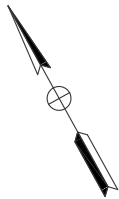
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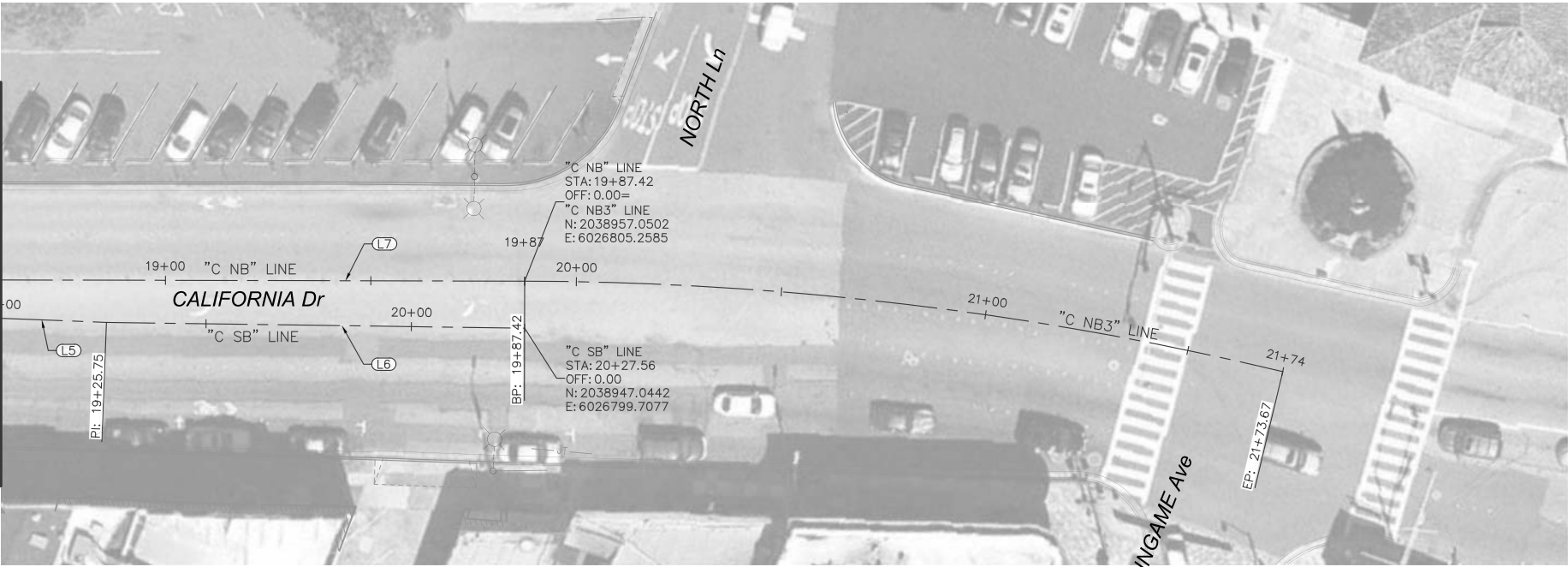
MATCHLINE  
12+90 "C NB" LINE  
SEE HC-03

LINE TABLE			
LINE	DESCRIPTION	LENGTH	BEARING
L1	"C SB" LINE	224.94	S60°58'50.12"E
L2	"C SB" LINE	174.26	S62°22'14.44"E
L11	"C NB" LINE	331.95	S60°55'22.33"E

LINE TABLE			
LINE	DESCRIPTION	LENGTH	BEARING
L5	"C SB" LINE	51.07	S58°46'42.00"E
L6	"C SB" LINE	101.81	S60°11'46.14"E
L7	"C NB" LINE	136.12	S60°51'18.41"E



MATCHLINE  
19+00 "C SB" LINE  
SEE HC-03



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KHA PROJECT 097515003	DATE 12/27/2017
SCALE AS SHOWN	DESIGNED BY DW
DRAWN BY DW	CHECKED BY DC
SAN MATEO COUNTY	

**CALIFORNIA DRIVE  
ROUNDBABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**



**HORIZONTAL CONTROL &  
KEY MAP**

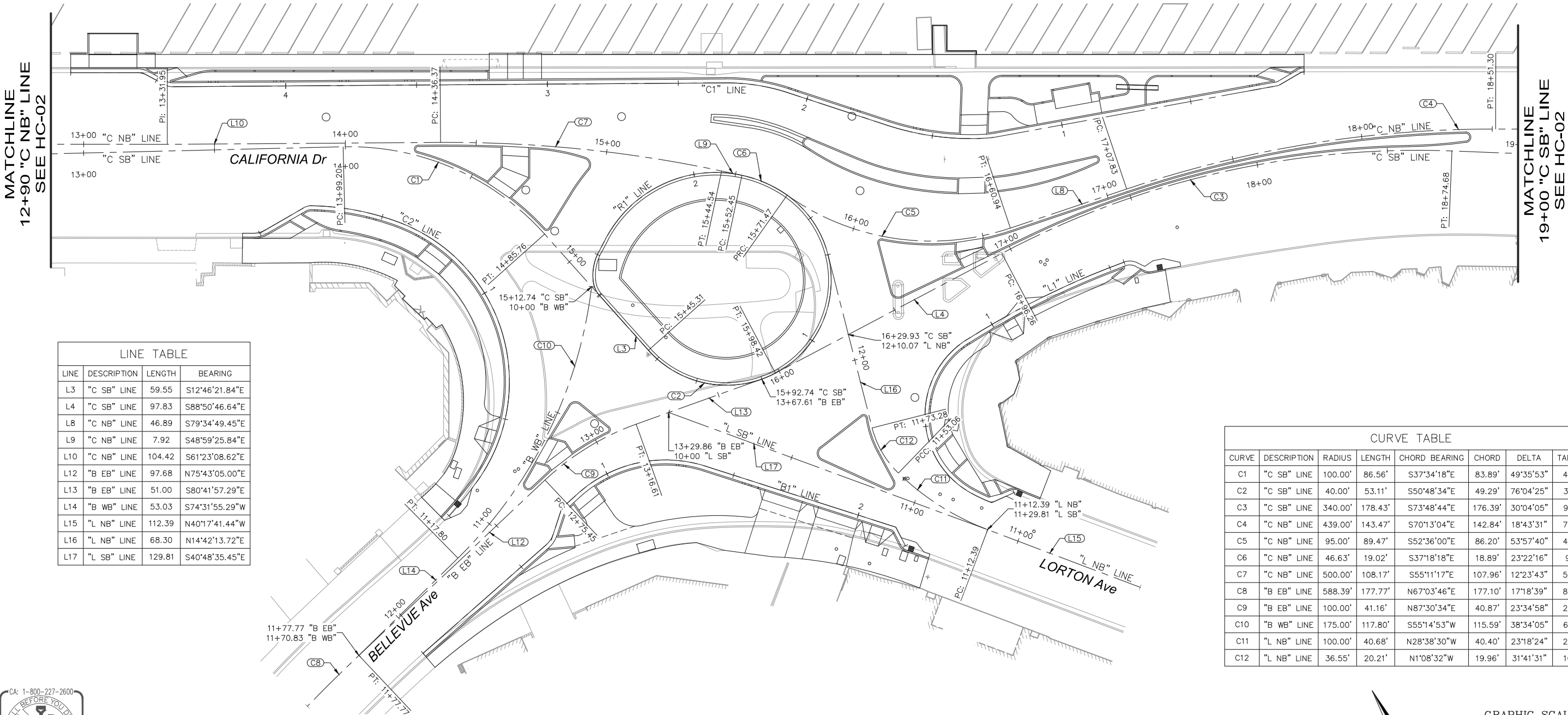
SHEET NO. 07  
OF 61 SHEETS

**HC-02**

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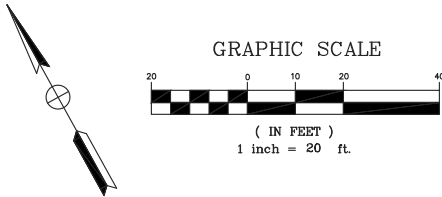
GENERAL NOTES:

1. THE PRIMARY CONSTRUCTION ALIGNMENTS ARE "C NB," "C SB," "B WB," "B EB," "L SB," AND "L NB."
2. THE SECONDARY CONSTRUCTION ALIGNMENTS ARE "C1 LINE," "C2 LINE," "B1 LINE," AND "L1 LINE." SEE HC-04.



LINE TABLE			
LINE	DESCRIPTION	LENGTH	BEARING
L3	"C SB" LINE	59.55	S12°46'21.84"E
L4	"C SB" LINE	97.83	S88°50'46.64"E
L8	"C NB" LINE	46.89	S79°34'49.45"E
L9	"C NB" LINE	7.92	S48°59'25.84"E
L10	"C NB" LINE	104.42	S61°23'08.62"E
L12	"B EB" LINE	97.68	N75°43'05.00"E
L13	"B EB" LINE	51.00	S80°41'57.29"E
L14	"B WB" LINE	53.03	S74°31'55.29"W
L15	"L NB" LINE	112.39	N40°17'41.44"W
L16	"L NB" LINE	68.30	N14°42'13.72"E
L17	"L SB" LINE	129.81	S40°48'35.45"E

CURVE TABLE							
CURVE	DESCRIPTION	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	"C SB" LINE	100.00'	86.56'	S37°34'18"E	83.89'	49°35'53"	46.20'
C2	"C SB" LINE	40.00'	53.11'	S50°48'34"E	49.29'	76°04'25"	31.29'
C3	"C SB" LINE	340.00'	178.43'	S73°48'44"E	176.39'	30°04'05"	91.32'
C4	"C NB" LINE	439.00'	143.47'	S70°13'04"E	142.84'	18°43'31"	72.38'
C5	"C NB" LINE	95.00'	89.47'	S52°36'00"E	86.20'	53°57'40"	48.36'
C6	"C NB" LINE	46.63'	19.02'	S37°18'18"E	18.89'	23°22'16"	9.64'
C7	"C NB" LINE	500.00'	108.17'	S55°11'17"E	107.96'	12°23'43"	54.30'
C8	"B EB" LINE	588.39'	177.77'	N67°03'46"E	177.10'	17°18'39"	89.57'
C9	"B EB" LINE	100.00'	41.16'	N87°30'34"E	40.87'	23°34'58"	20.88'
C10	"B WB" LINE	175.00'	117.80'	S55°14'53"W	115.59'	38°34'05"	61.23'
C11	"L NB" LINE	100.00'	40.68'	N28°38'30"W	40.40'	23°18'24"	20.62'
C12	"L NB" LINE	36.55'	20.21'	N1°08'32"W	19.96'	31°41'31"	10.37'



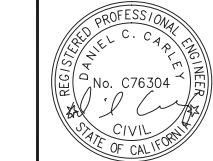
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KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE**  
**ROUNDBABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



**HORIZONTAL CONTROL &**  
**KEY MAP**  
**ROADWAY ALIGNMENTS**

SHEET NO. 08  
OF 61 SHEETS

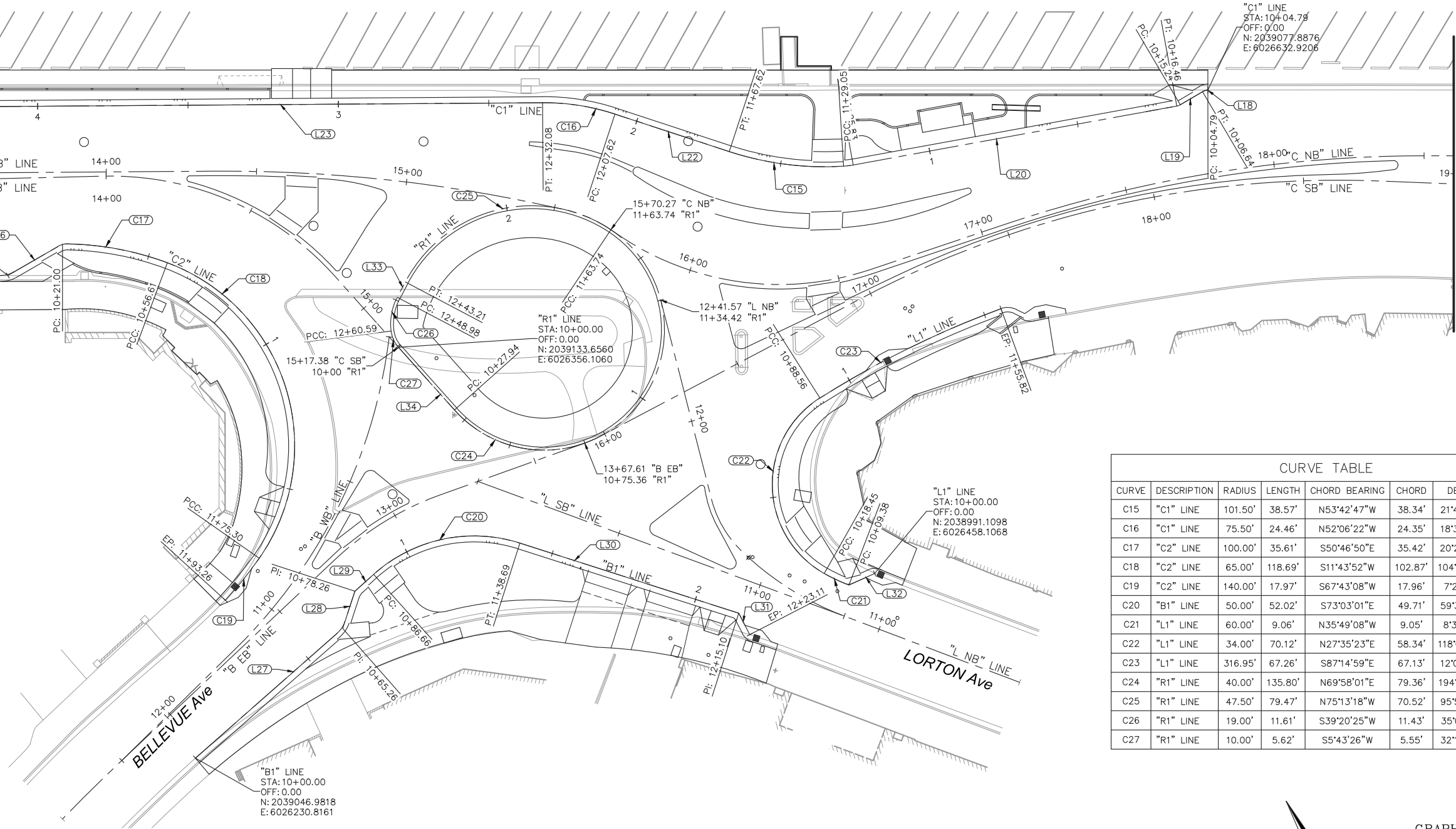
**HC-03**

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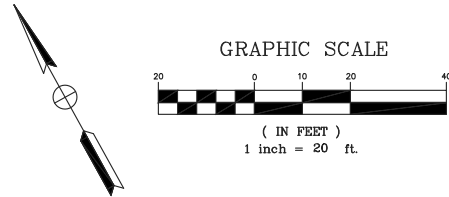
MATCHLINE  
17+00 "C NB" LINE  
SEE HC-02

LINE TABLE			
LINE	DESCRIPTION	LENGTH	BEARING
L18	"C1" LINE	0.00	N61°04'01.80"W
L19	"C1" LINE	8.59	S88°34'40.54"W
L20	"C1" LINE	109.36	N71°18'34.60"W
L22	"C1" LINE	40.00	N42°49'34.50"W
L23	"C1" LINE	212.81	N61°23'08.62"W
L24	"C1" LINE	11.15	N32°22'14.44"W
L25	"C1" LINE	27.50	N60°59'23.82"W
L26	"C2" LINE	21.00	N89°01'07.86"E
L27	"B1" LINE	65.26	N77°39'21.48"E
L28	"B1" LINE	13.00	N47°08'32.91"E
L29	"B1" LINE	8.41	N77°08'32.91"E
L30	"B1" LINE	76.41	S43°14'35.67"E
L31	"B1" LINE	8.01	S1°45'24.33"W
L32	"L1" LINE	9.38	N85°08'46.82"W
L33	"R1" LINE	5.77	S56°51'03.44"W
L34	"R1" LINE	27.94	S12°46'21.84"E



MATCHLINE  
19+00 "C SB" LINE  
SEE HC-02

CURVE TABLE						
CURVE	DESCRIPTION	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA
C15	"C1" LINE	101.50'	38.57'	N53°42'47"W	38.34'	21°46'25"
C16	"C1" LINE	75.50'	24.46'	N52°06'22"W	24.35'	18°33'34"
C17	"C2" LINE	100.00'	35.61'	S50°46'50"E	35.42'	20°24'04"
C18	"C2" LINE	65.00'	118.69'	S11°43'52"W	102.87'	104°37'19"
C19	"C2" LINE	140.00'	17.97'	S67°43'08"W	17.96'	7°21'13"
C20	"B1" LINE	50.00'	52.02'	S73°03'01"E	49.71'	59°36'51"
C21	"L1" LINE	60.00'	9.06'	N35°49'08"W	9.05'	8°39'18"
C22	"L1" LINE	34.00'	70.12'	N27°35'23"E	58.34'	118°09'43"
C23	"L1" LINE	316.95'	67.26'	S87°14'59"E	67.13'	12°09'32"
C24	"R1" LINE	40.00'	135.80'	N69°58'01"E	79.36'	194°31'15"
C25	"R1" LINE	47.50'	79.47'	N75°13'18"W	70.52'	95°51'22"
C26	"R1" LINE	19.00'	11.61'	S39°20'25"W	11.43'	35°01'16"
C27	"R1" LINE	10.00'	5.62'	S5°43'26"W	5.55'	32°12'43"



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KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY DW  
DRAWN BY DW  
CHECKED BY DC  
SAN MATEO COUNTY  
CA

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

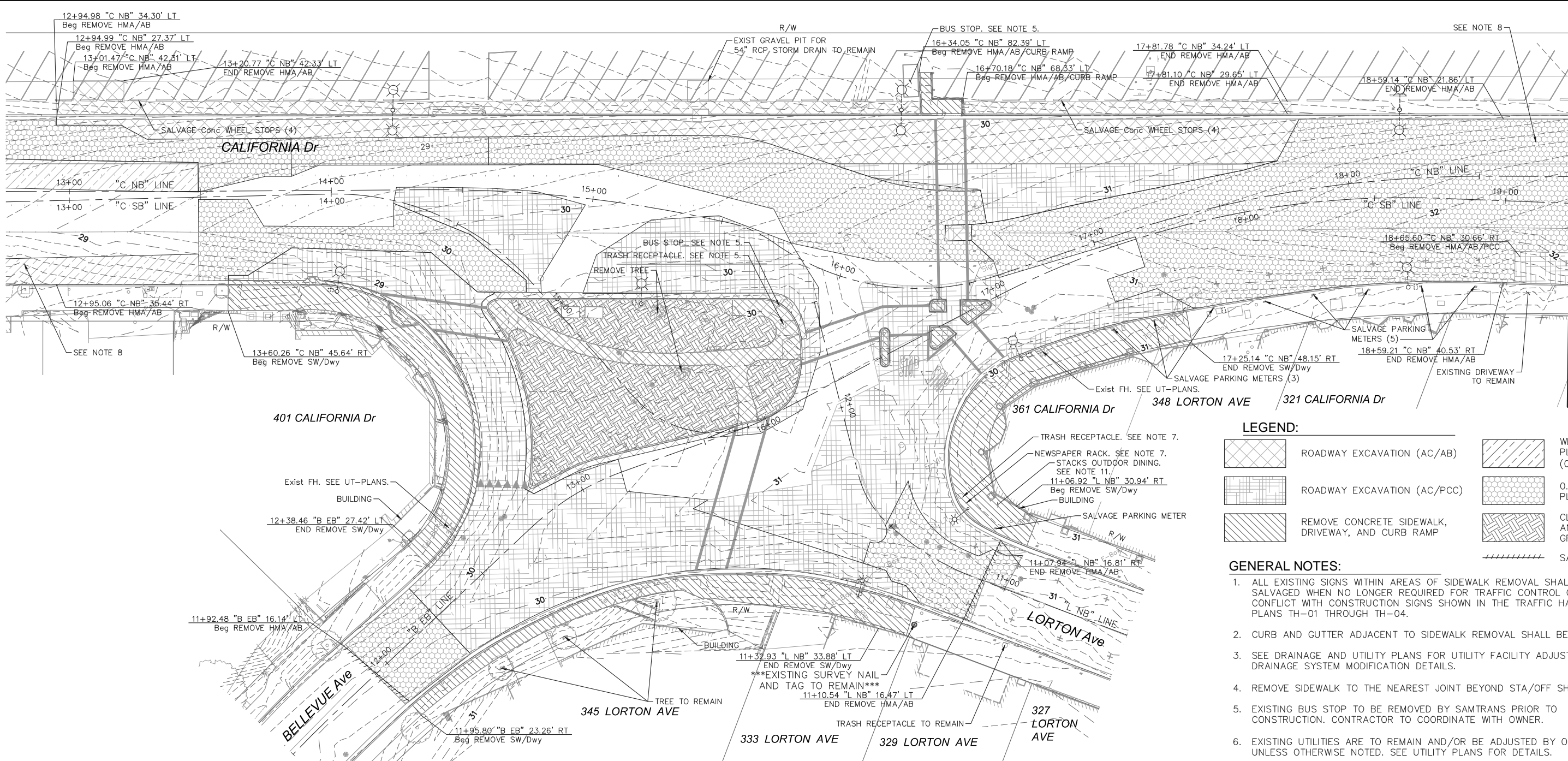


**HORIZONTAL CONTROL &  
KEY MAP**  
GUTTER LIP/EP ALIGNMENTS

SHEET NO. 09  
OF 61 SHEETS  
**HC-04**



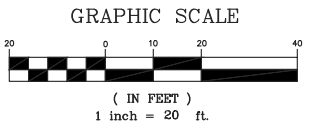
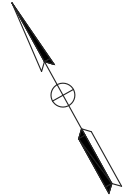
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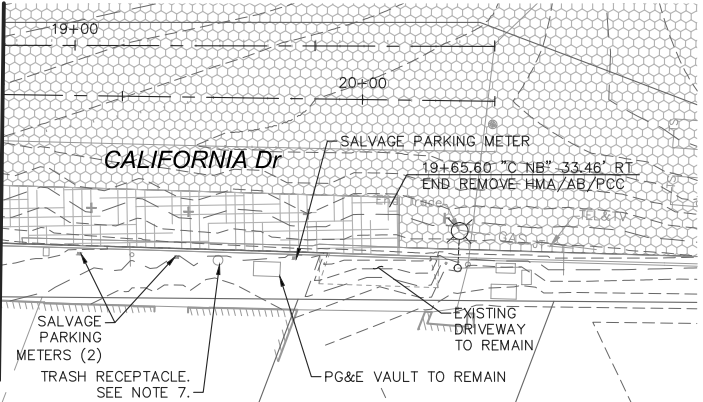
**LEGEND:**

	ROADWAY EXCAVATION (AC/AB)		WEDGE COLD PLANE AC (0.15' Max)
	ROADWAY EXCAVATION (AC/PCC)		0.15' COLD PLANE AC
	REMOVE CONCRETE SIDEWALK, DRIVEWAY, AND CURB RAMP		CLEARING AND GRUBBING
			SAWCUT

- GENERAL NOTES:**
- ALL EXISTING SIGNS WITHIN AREAS OF SIDEWALK REMOVAL SHALL BE SALVAGED WHEN NO LONGER REQUIRED FOR TRAFFIC CONTROL OR WHEN IN CONFLICT WITH CONSTRUCTION SIGNS SHOWN IN THE TRAFFIC HANDLING PLANS TH-01 THROUGH TH-04.
  - CURB AND GUTTER ADJACENT TO SIDEWALK REMOVAL SHALL BE REMOVED.
  - SEE DRAINAGE AND UTILITY PLANS FOR UTILITY FACILITY ADJUSTMENTS AND DRAINAGE SYSTEM MODIFICATION DETAILS.
  - REMOVE SIDEWALK TO THE NEAREST JOINT BEYOND STA/OFF SHOWN.
  - EXISTING BUS STOP TO BE REMOVED BY SAMTRANS PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE WITH OWNER.
  - EXISTING UTILITIES ARE TO REMAIN AND/OR BE ADJUSTED BY OWNER, UNLESS OTHERWISE NOTED. SEE UTILITY PLANS FOR DETAILS.
  - EXISTING AMENITIES WITHIN CITY RIGHT OF WAY TO BE SALVAGED BY THE CONTRACTOR AND DELIVERED TO THE CITY.
  - COLD PLANE EXISTING PAVEMENT TO THE LIMITS AS SHOWN ON PV-SHEETS.
  - SEE TH-PLANS FOR TRAFFIC HANDLING AND CONSTRUCTION STAGING PLANS.
  - EXISTING ASPHALT CONCRETE MAY CONTAIN PAVEMENT FABRIC, ENGINEERED PAVING MAT, OR OTHER CONTAMINATED MATERIALS. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF ENCOUNTERED MATERIALS.
  - COORDINATE WITH STACKS TO HAVE THEM REMOVE THEIR OUTDOOR FURNITURE AND LANDSCAPE PLANTERS PRIOR TO THE START OF DEMOLITION ACTIVITIES.
  - EXCAVATE EXISTING ISLAND TO THE DEPTH REQUIRED FOR THE PROPOSED PAVEMENT SECTION. IF LOOSE, UNSUITABLE SUBBASE IS ENCOUNTERED, EXCAVATE THE LOOSE, UNSUITABLE MATERIAL AND BACKFILL WITH MATERIAL AS APPROVED BY THE ENGINEER.



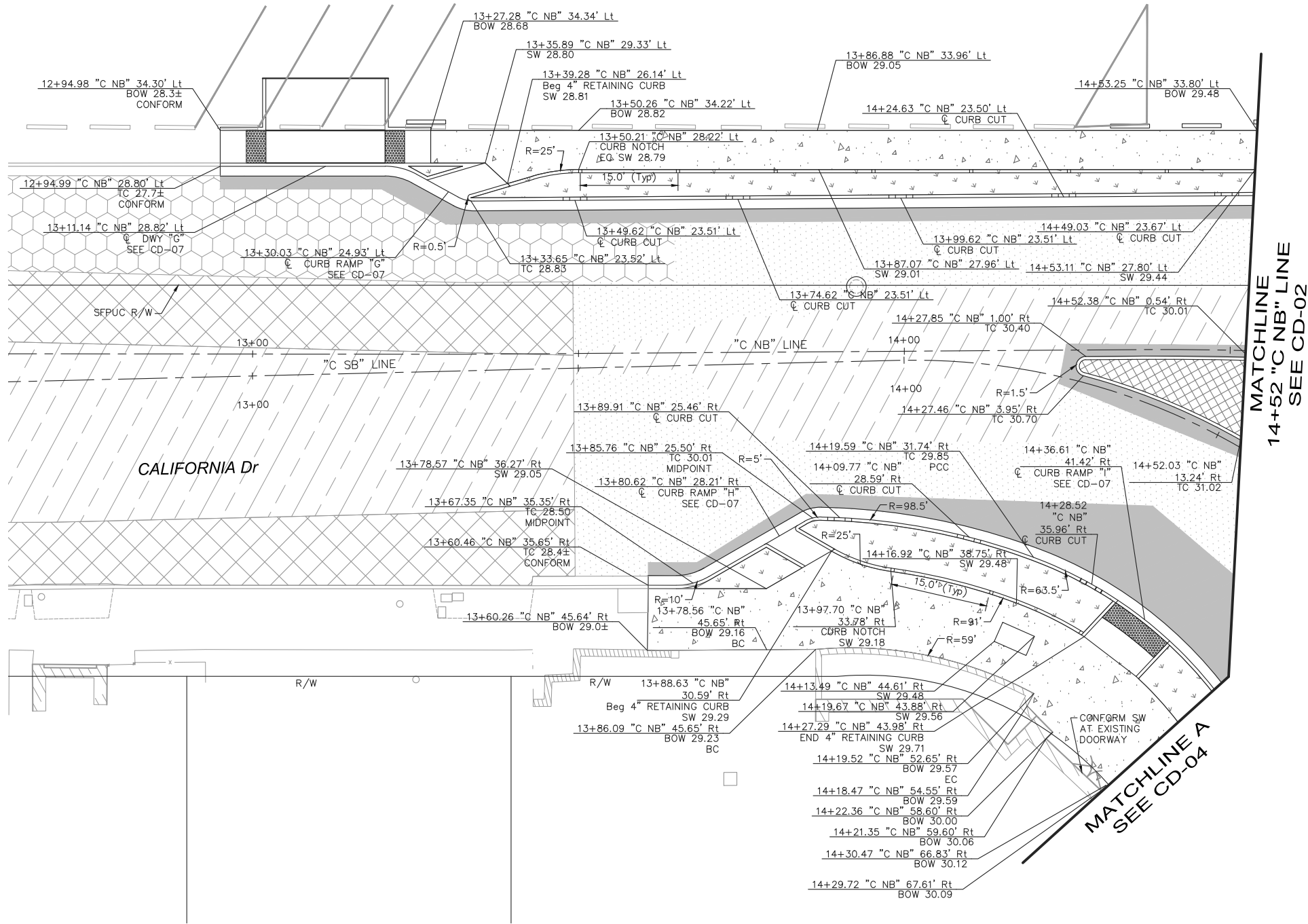
MATCHLINE  
19+25 "C SB" LINE  
SEE ABOVE



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 © 2015 KIMLEY-HORN AND ASSOCIATES, INC. 4637 CHABOT DRIVE, SUITE 300, PLEASANTON, CA 94588 PHONE: 925-398-4840 WWW.KIMLEY-HORN.COM	KHA PROJECT 097515003 DATE 12/27/2017 SCALE AS SHOWN DESIGNED BY DW DRAWN BY DW CHECKED BY DC	<b>CALIFORNIA DRIVE ROUNDBOUT</b> PREPARED FOR <b>CITY OF BURLINGAME</b> SAN MATEO COUNTY CA		<b>DEMOLITION PLAN</b>	SHEET NO. <u>10</u> OF <u>61</u> SHEETS  <b>DM-01</b>
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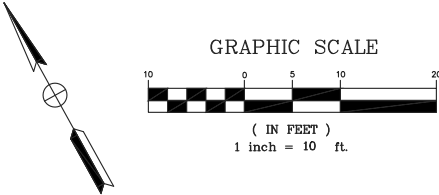
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**LEGEND:**

- 1 HMA PAVEMENT (SEE TX-02 FOR SECTION DETAILS)
- 2 TRUCK APRON (SEE SHEET CD-09)
- 3 CONCRETE SW/DRIVEWAY
- 4 COLD PLANE & HMA OVERLAY (SEE TX-02 FOR DETAILS)
- 5 COLD PLANE & HMA OVERLAY (SEE TX-02 FOR DETAILS)
- 6 BUS PAD (SEE TX-02 FOR DETAILS)
- 7 HMA OVERLAY (SEE TX-03 FOR DETAILS)
- WEDGE COLD PLANE & HMA OVERLAY (SEE TX-03 FOR DETAILS)
- LANDSCAPING/BIORETENTION AREAS (SEE D-SHEETS AND LS-SHEETS)
- HARDSCAPE (SEE HS-SHEETS)
- DETECTABLE WARNING SURFACE
- ROADSIDE SIGN (SEE SS-SHEETS)
- # PAVEMENT STRUCTURAL SECTION No. (SEE TX-01 FOR DETAILS)

- GENERAL NOTES:**
- ALL EXISTING SIGNS SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED FOR REMOVAL OR RELOCATION.
  - ALL SIGN LOCATIONS ARE APPROXIMATE. FINAL SIGN LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
  - ALL EXISTING STRIPING CONFLICTING WITH PROPOSED STRIPING SHALL BE REMOVED BY GRINDING PRIOR TO NEW STRIPING INSTALLATION.
  - ALL PEDESTRIAN PATHWAYS WITHIN SPLITTER ISLANDS ARE TO BE 0.35' PCC OVER 0.50' CLASS 2 AB.
  - SEE EL-SHEETS FOR STREET LIGHTING DETAILS.
  - SEE D-SHEETS FOR DRAINAGE IMPROVEMENTS.



				<b>KHA PROJECT</b> 097515003 <b>DATE</b> 12/27/2017 <b>SCALE</b> AS SHOWN <b>DESIGNED BY</b> DW <b>DRAWN BY</b> DW <b>CHECKED BY</b> DC		<b>CALIFORNIA DRIVE ROUNDABOUT</b> PREPARED FOR <b>CITY OF BURLINGAME</b> SAN MATEO COUNTY CA				<b>CONSTRUCTION DETAILS</b>		SHEET NO. 11 OF 61 SHEETS <b>CD-01</b>	
<b>No.</b>		<b>REVISIONS</b>		<b>DATE</b>		<b>BY</b>							

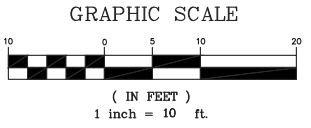
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MATCHLINE  
14+52 "C NB" LINE  
SEE CD-01

MATCHLINE  
16+92 "C NB" LINE  
SEE CD-03

MATCHLINE A  
SEE CD-04

MATCHLINE  
11+90 "L NB" LINE  
SEE CD-05



FOR NOTES AND LEGEND, SEE SHEET CD-01

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DRAWN BY DW  
CHECKED BY DC SAN MATEO COUNTY

**CALIFORNIA DRIVE  
ROUNDBABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**



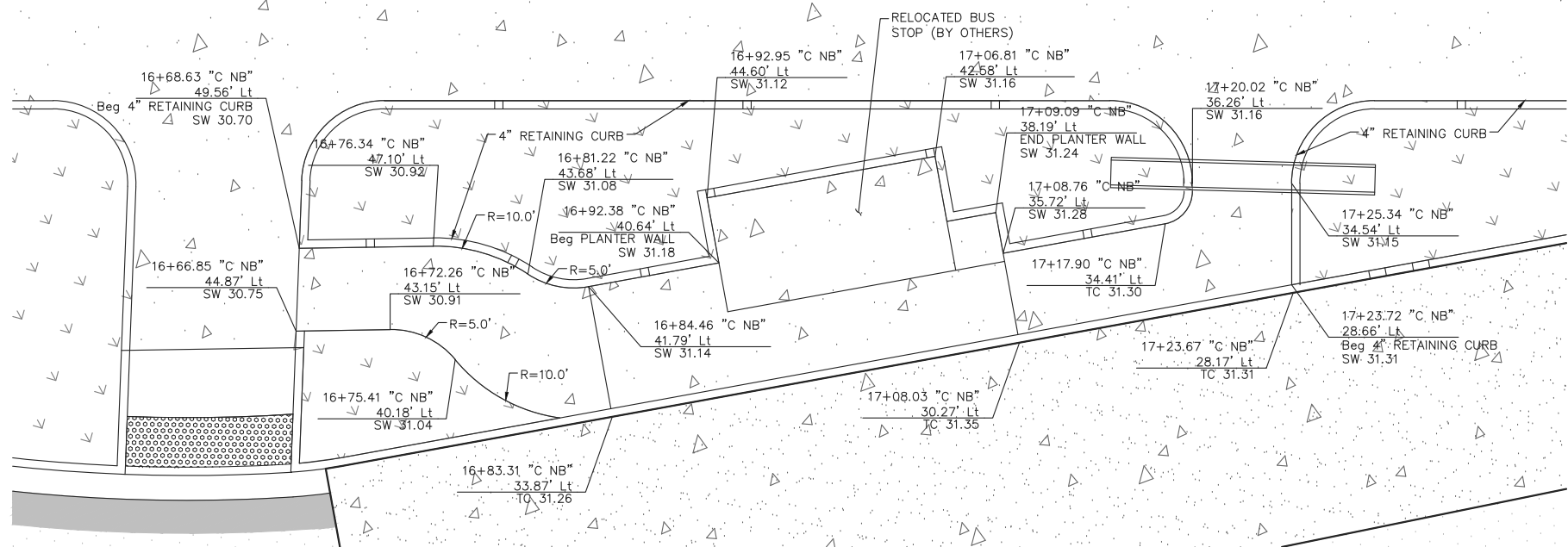
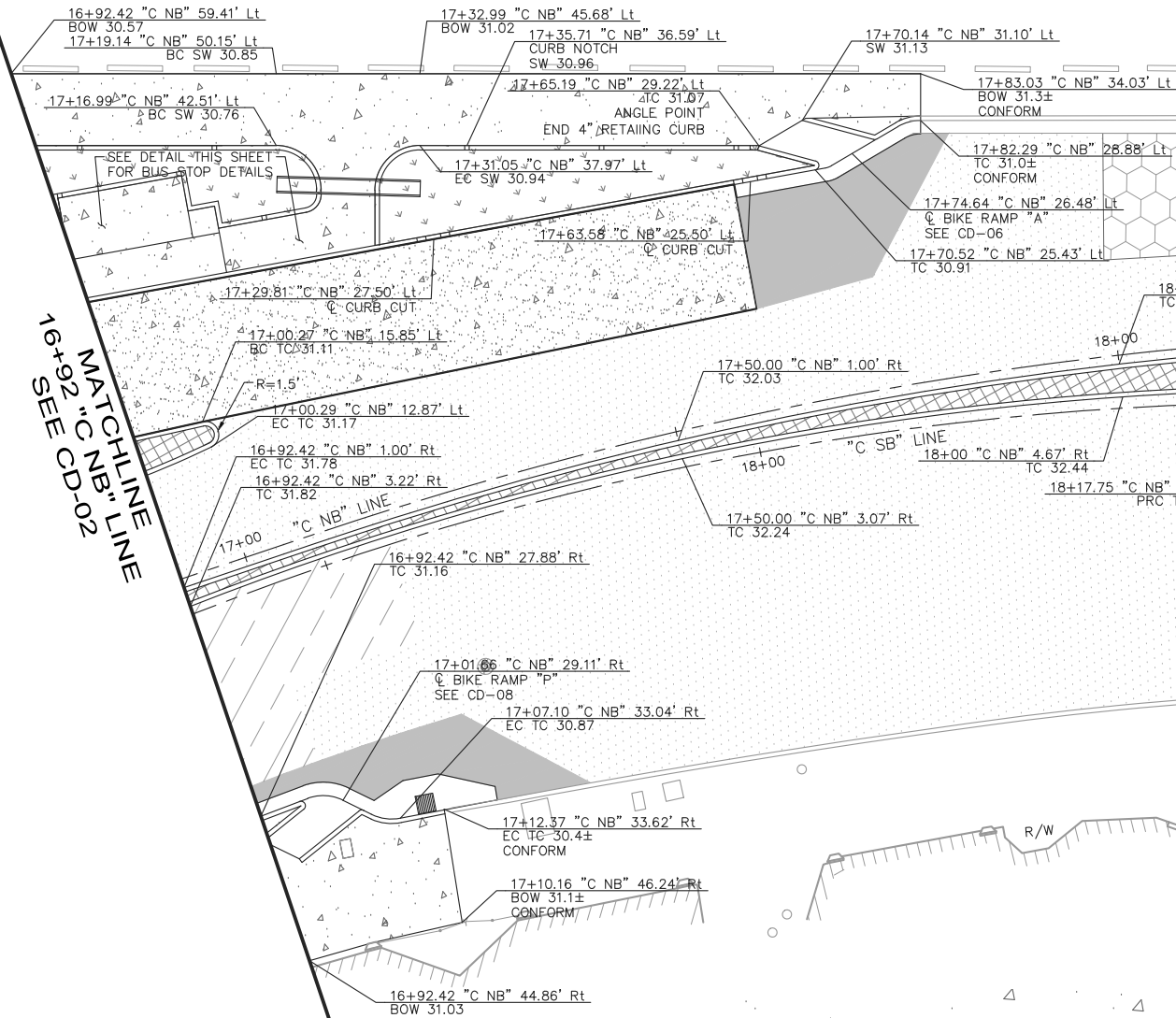
**CONSTRUCTION DETAILS**

SHEET NO. 12  
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**CD-02**

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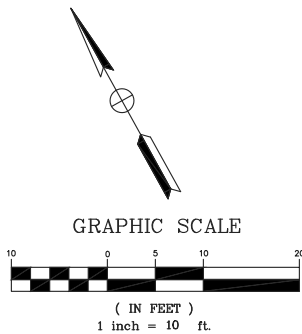


16+92.00 "C NB" LINE  
MATCH LINE  
SEE CD-02



BUS STOP GRADING DETAIL  
SCALE: 1"=5'

FOR NOTES AND LEGEND, SEE SHEET CD-01



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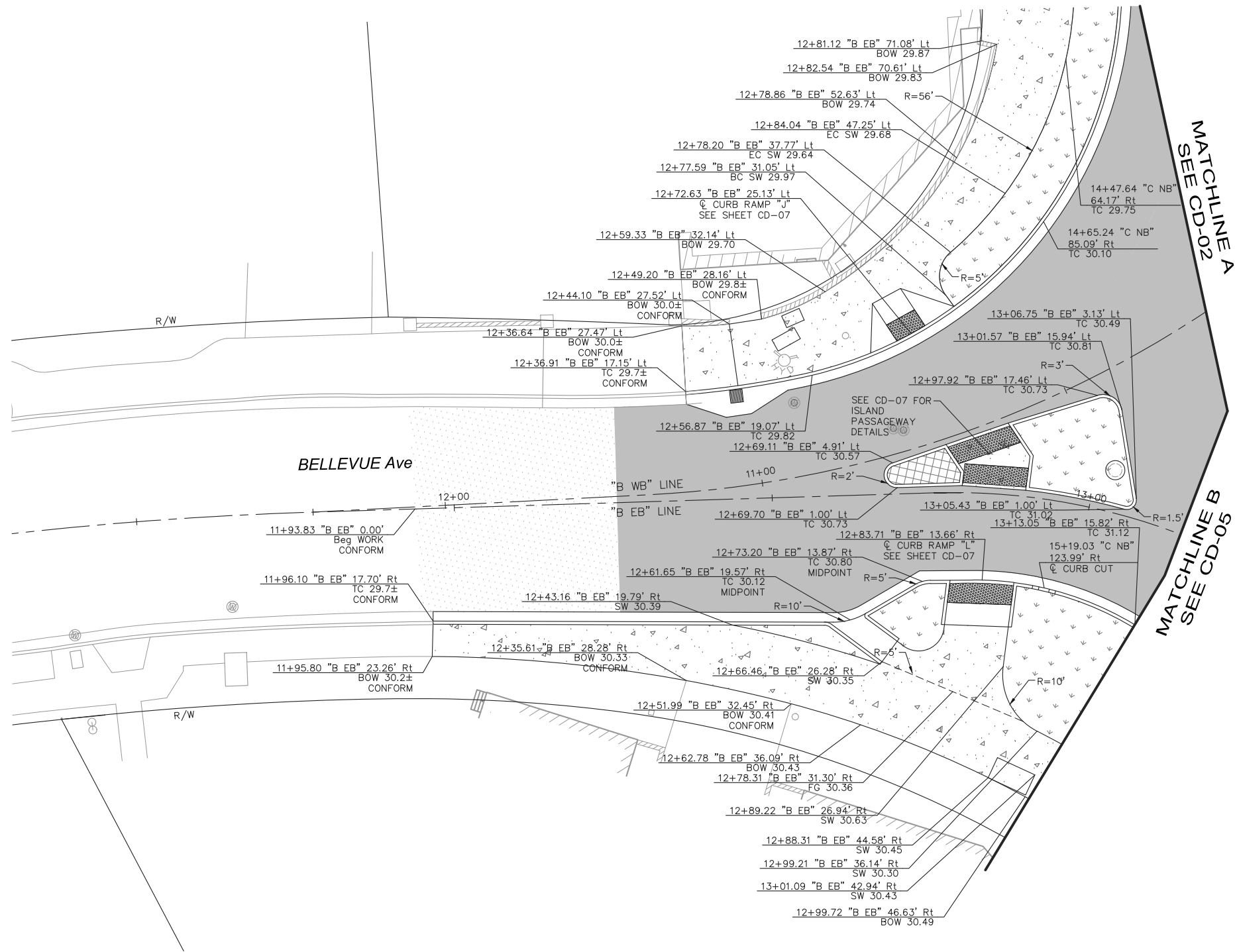
**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**



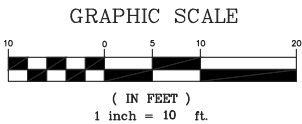
**CONSTRUCTION DETAILS**

SHEET NO. 13  
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**CD-03**

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**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA



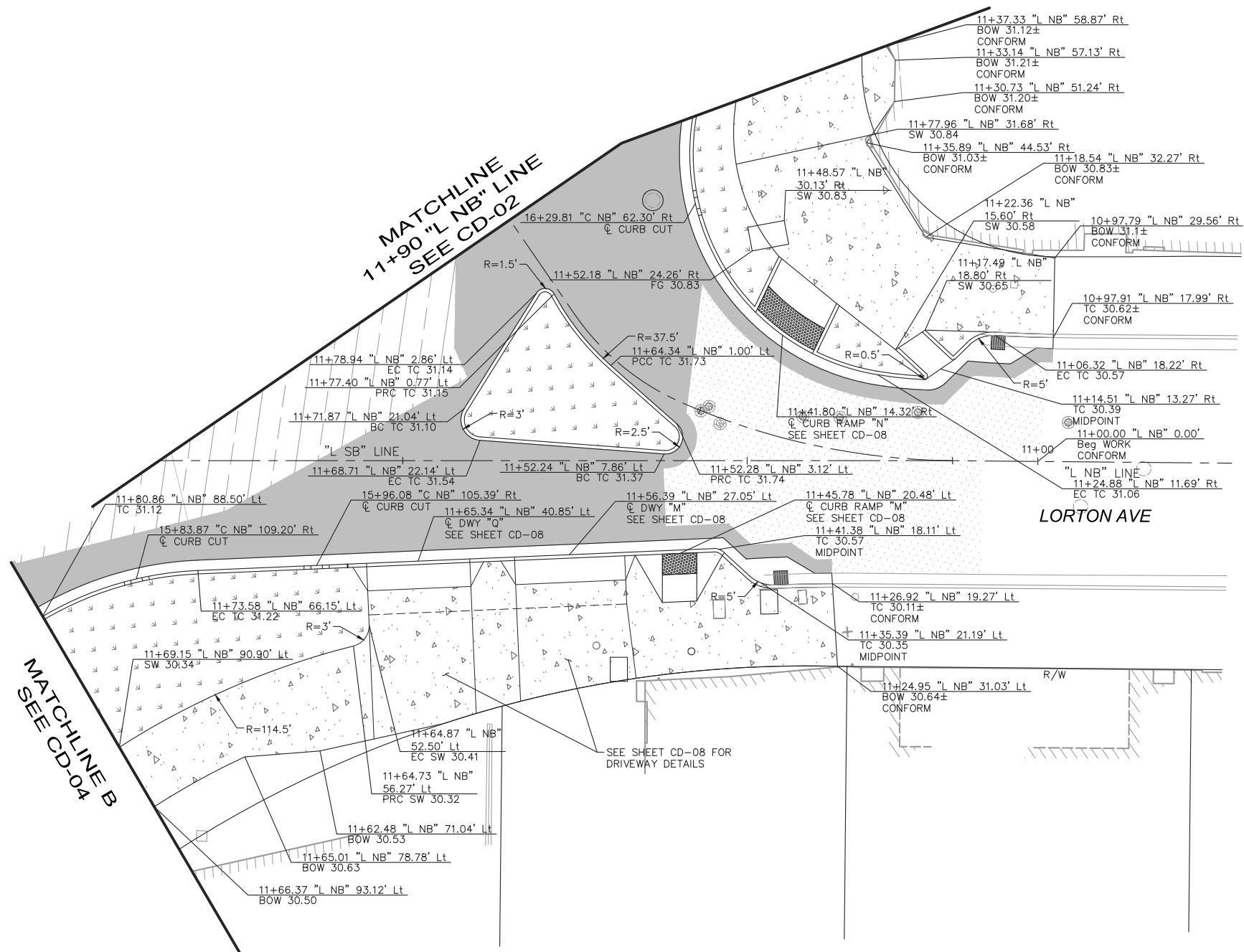
**CONSTRUCTION DETAILS**

SHEET NO. 14  
OF 61 SHEETS

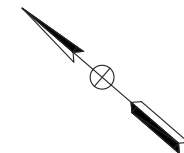
**CD-04**



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FOR NOTES AND LEGEND, SEE SHEET CD-01



**GRAPHIC SCALE**

( IN FEET )  
1 inch = 10 ft.

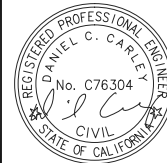
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KHA PROJECT 097515003	
DATE 12/27/2017	
SCALE AS SHOWN	
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

# CALIFORNIA DRIVE ROUNDBOUT

PREPARED FOR  
CITY OF BURLINGAME

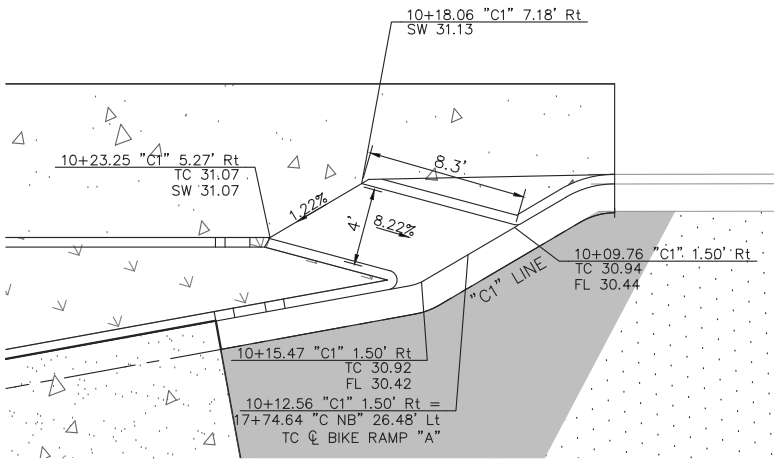


## CONSTRUCTION DETAILS

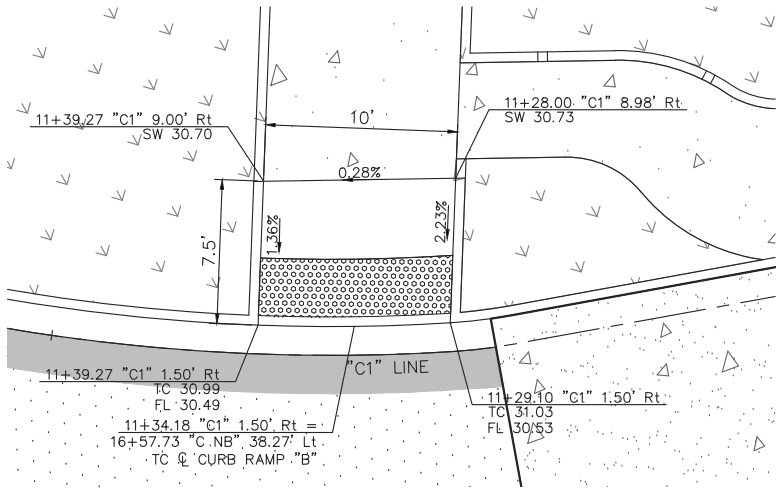
SHEET NO. 15  
OF 61 SHEETS

**CD-05**

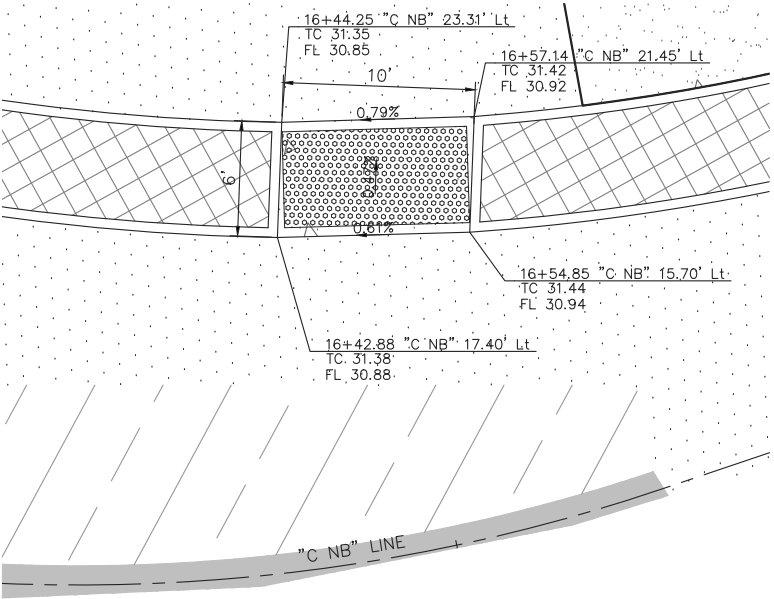
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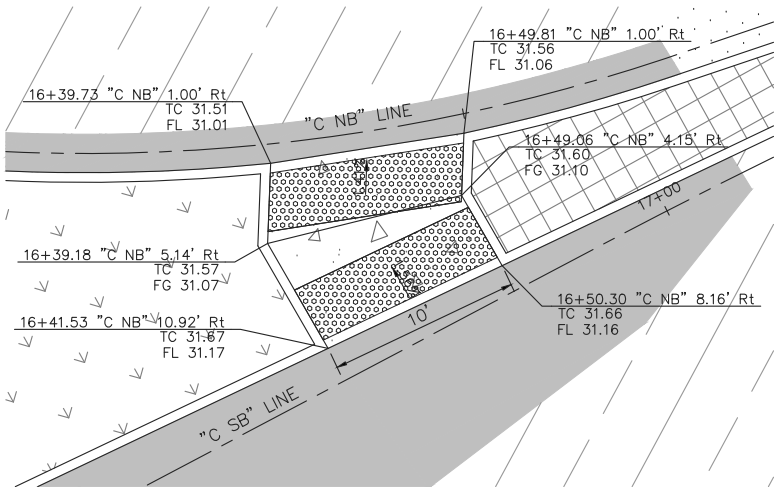
A - BIKE RAMP DETAIL



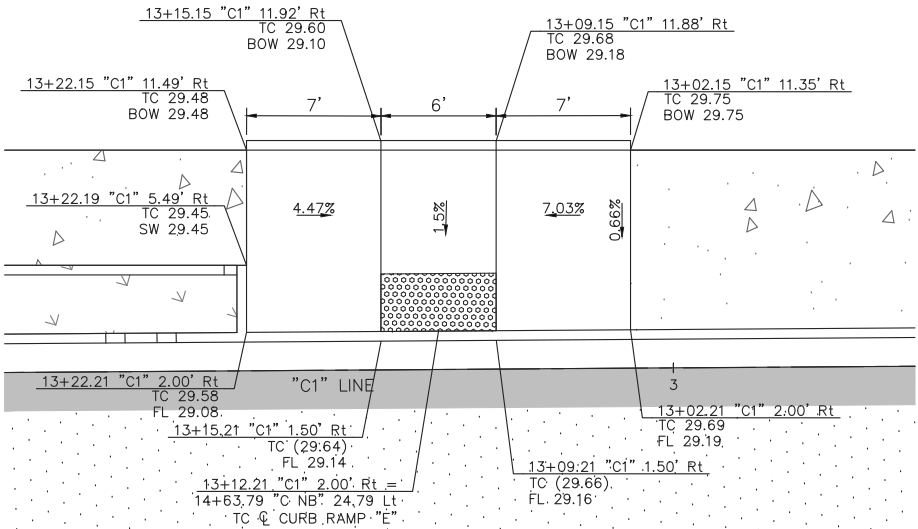
B - CURB RAMP DETAIL



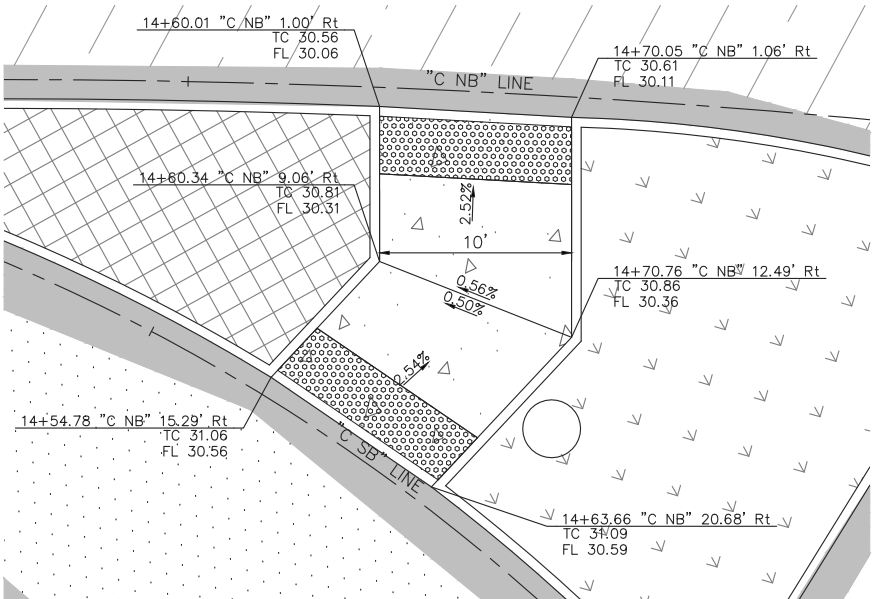
C - PASSAGEWAY DETAIL



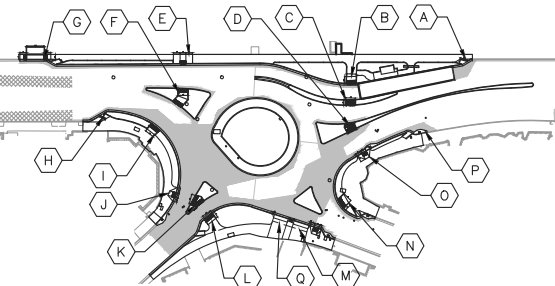
D - PASSAGEWAY DETAIL



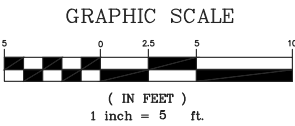
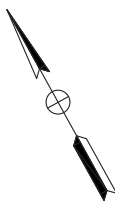
E - CURB RAMP DETAIL



F - PASSAGEWAY DETAIL



KEY MAP:  
NO SCALE



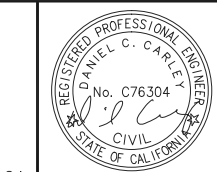
No.	REVISIONS	DATE	BY

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KHA PROJECT 097515003
DATE 12/27/2017
SCALE AS SHOWN
DESIGNED BY DW
DRAWN BY DW
CHECKED BY DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



**CONSTRUCTION DETAILS**  
**CURB AND PASSAGEWAY DETAILS**

SHEET NO. 16  
OF 61 SHEETS

**CD-06**

[illegible]

Plan view of a proposed road improvement project. The drawing shows a road layout with various stationing points, offsets, and elevations. Key features include:

- Stationing and Offsets:**
  - 10+71.57 "C2" 1.50' Rt. TC 29.89 FL 29.39
  - 10+76.71 "C2" 1.50' Rt. = 14+36.61 "C NB" 41.42' Rt TC @ CURB RAMP "I"
  - 10+81.85 "C2" 1.50' Rt. TC 29.96 FL 29.46
  - 10+70.10 "C2" 9.00' Rt. TC 29.71 SW 29.71
  - 10+67.40 "C2" 20.46' Rt. BOW 29.57± CONFORM
  - 10+67.48 "C2" 22.63' Rt. BOW 29.59± CONFORM
  - 10+75.73 "C2" 25.21' Rt. BOW 30.06± CONFORM
  - 10+94.60 "C2" 24.74' Rt. BOW 30.09± CONFORM
  - 10+81.78 "C2" 9.00' Rt. TC 29.78 SW 29.78
  - 10+76.03 "C2" 23.80' Rt. BOW 30.00± CONFORM
  - 10+94.29 "C2" 23.68' Rt. BOW 30.12± CONFORM
- Grades and Slopes:**
  - 7.4%
  - 3.88%
  - 0.73%
  - 10'
- Other Labels:**
  - "C2" LINE
  - 7.4'
  - 10'

[illegible]

Plan view of a proposed road improvement project. The diagram shows a road alignment with various stationing points and offsets. Key features include:

- Stationing and Offsets:**
  - 10+93.31 "B1" 1.50' Rt TC 31.06 FL 30.56
  - 10+88.12 "B1" 1.50' Rt = 12+83.71 "B EB" 13.66' Rt TC @ CURB RAMP "L"
  - 10+83.06 "B1" 1.50' Rt TC 30.92 FL 30.42
  - 10+82.13 "B1" 8.47' Rt TC 30.58 SW 30.58
  - 10+93.31 "B1" 8.53' Rt TC 30.65 SW 30.65
- Curve Data:**
  - "B1" LINE 1
  - 0.70%
- Other Features:**
  - A shaded area representing a proposed improvement or construction zone.
  - Various symbols (arrows, triangles) indicating road layout and boundaries.

10'

"B WB" LINE

12+86.24 "B EB" 11.25' Lt  
TC 30.62  
FL 30.12

12+89.85 "B EB" 6.37' Lt  
TC 30.76  
FG 30.26

"B EB" LINE 13+00

12+89.77 "B EB" 1.00' Lt  
TC 30.88  
FL 30.38

12+79.86 "B EB" 1.10' Lt  
TC 30.79  
FL 30.29

12+80.10 "B EB" 3.30' Lt  
TC 30.73  
FG 30.23

12+77.43 "B EB" 7.56' Lt  
TC 30.59  
FL 30.09

0.6%

GRAPHIC SCALE

( IN FEET )

1 inch = 5 ft.

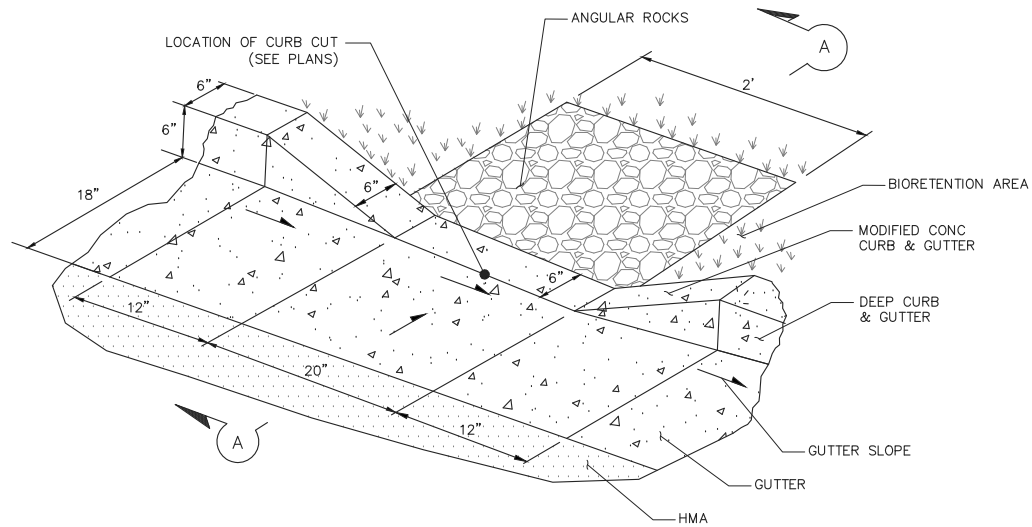
The graphic scale is a horizontal bar divided into alternating black and white segments. The segments are labeled with the following values from left to right: 5, 0, 2.5, 5, 10. The bar is divided into four equal segments, each representing 5 feet. The first segment is white, the second is black, the third is white, and the fourth is black. The total length of the bar is 20 feet.

SHEET NO. 17  
OF 61 SHEETS

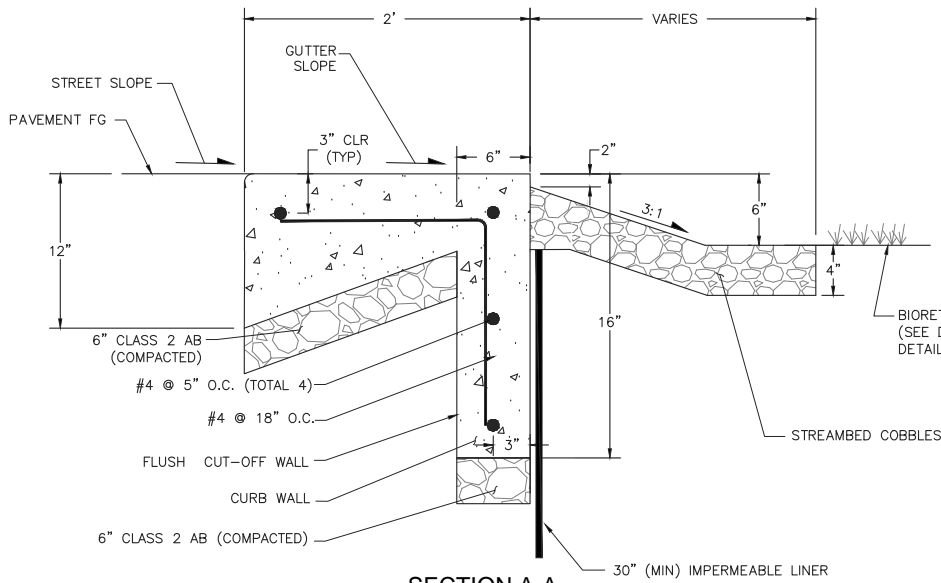
**CD-07**



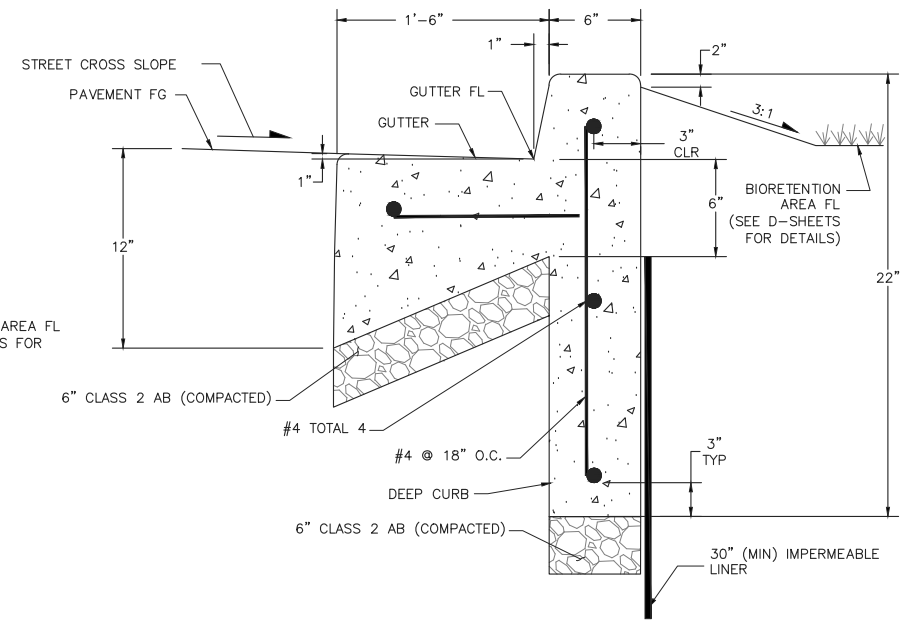
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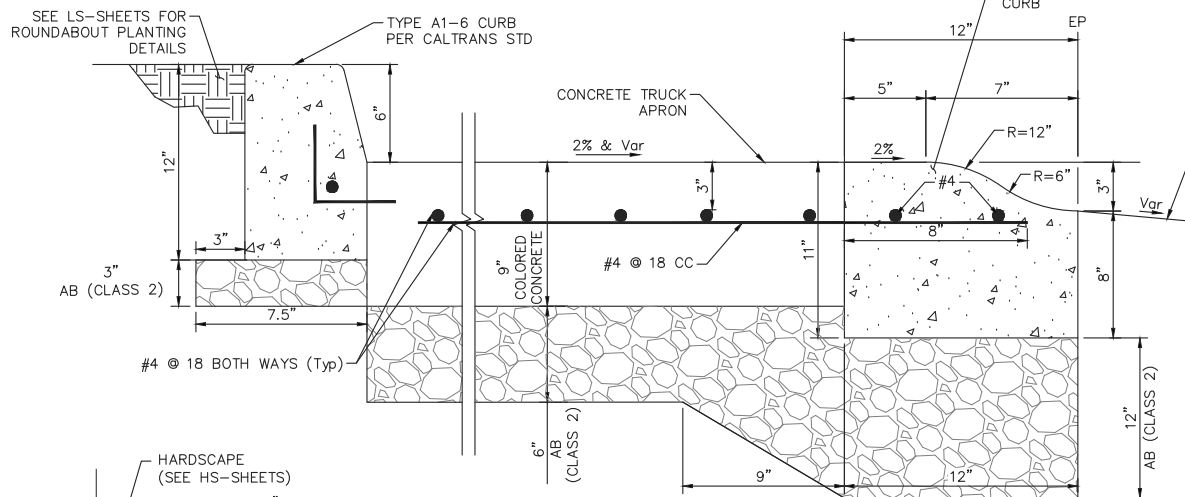
ISOMETRIC



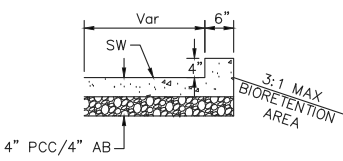
SECTION A-A



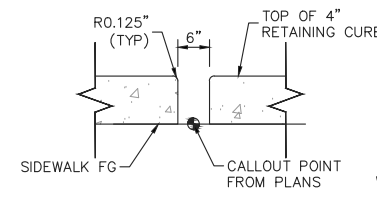
DEEP CURB AND GUTTER DETAIL



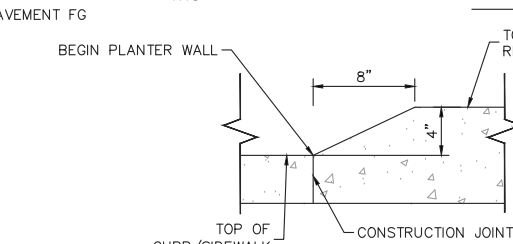
TRUCK APRON AND MOUNTABLE CURB DETAIL



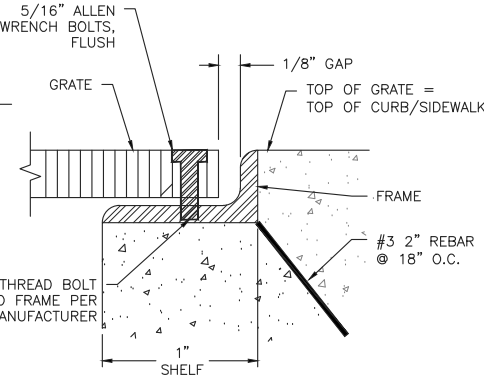
4" RETAINING CURB DETAIL



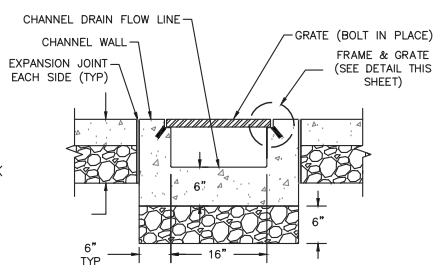
CURB NOTCH DETAIL



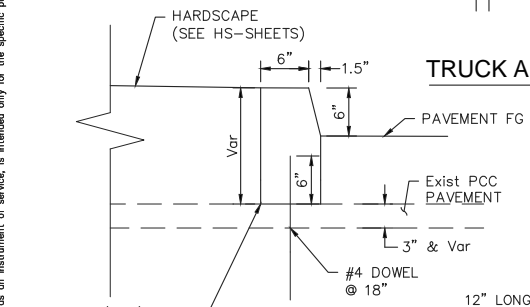
4" RETAINING CURB TRANSITION DETAIL



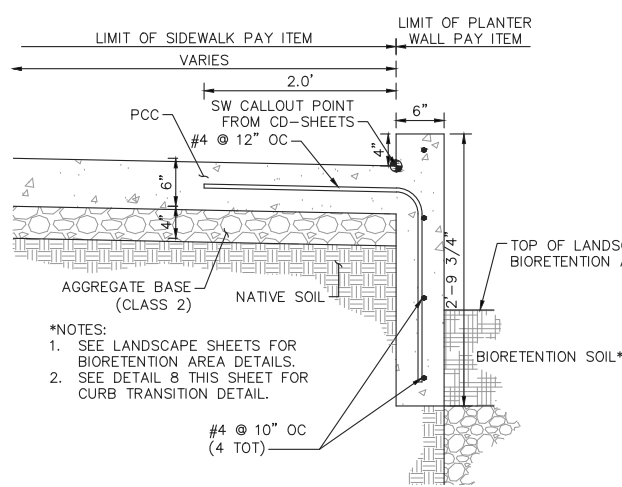
FRAME AND GRATE DETAIL



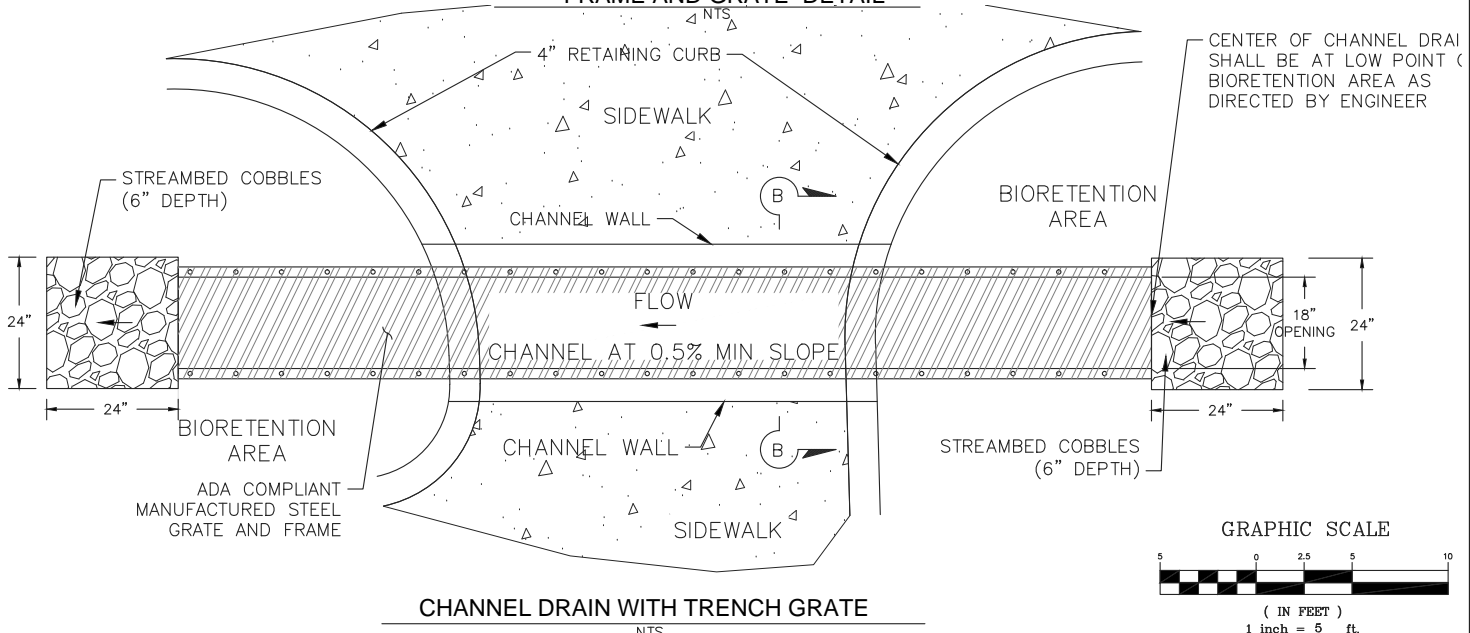
SECTION B-B



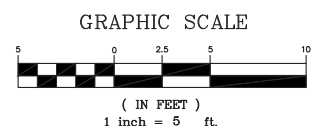
CURB DOWEL DETAIL



PLANTER WALL DETAIL



CHANNEL DRAIN WITH TRENCH GRATE

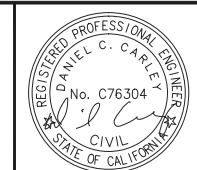


DRILL AND BOND DETAIL FOR CURBS AND CUT-OFF WALLS

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KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY DW  
DRAWN BY DW  
CHECKED BY DC

CALIFORNIA DRIVE  
ROUNDABOUT  
PREPARED FOR  
CITY OF BURLINGAME  
SAN MATEO COUNTY  
CA

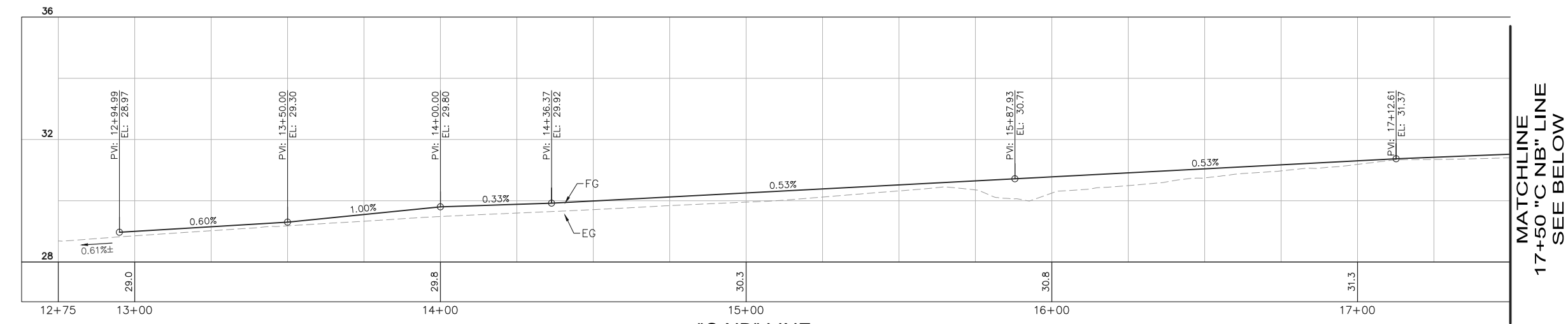


CONSTRUCTION DETAILS  
CURB AND PASSAGEWAY DETAILS

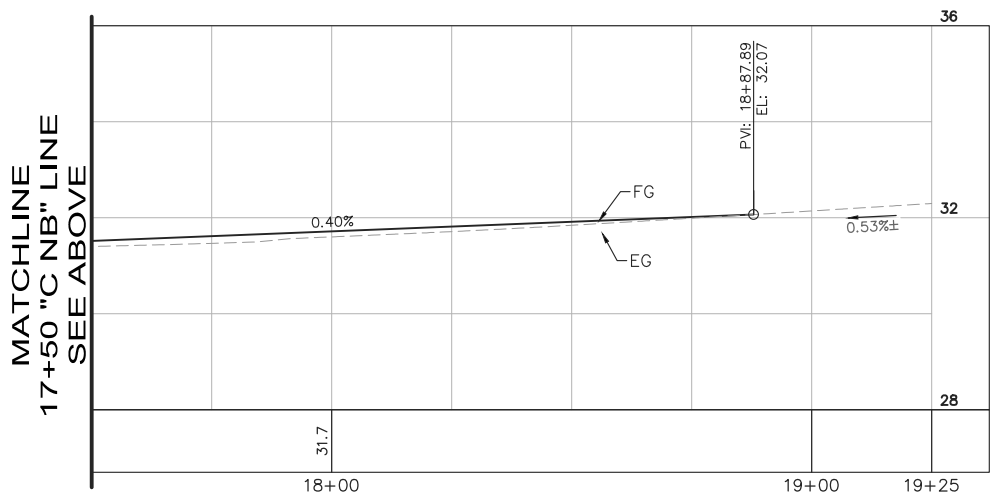
SHEET NO. 19  
OF 61 SHEETS  
CD-09



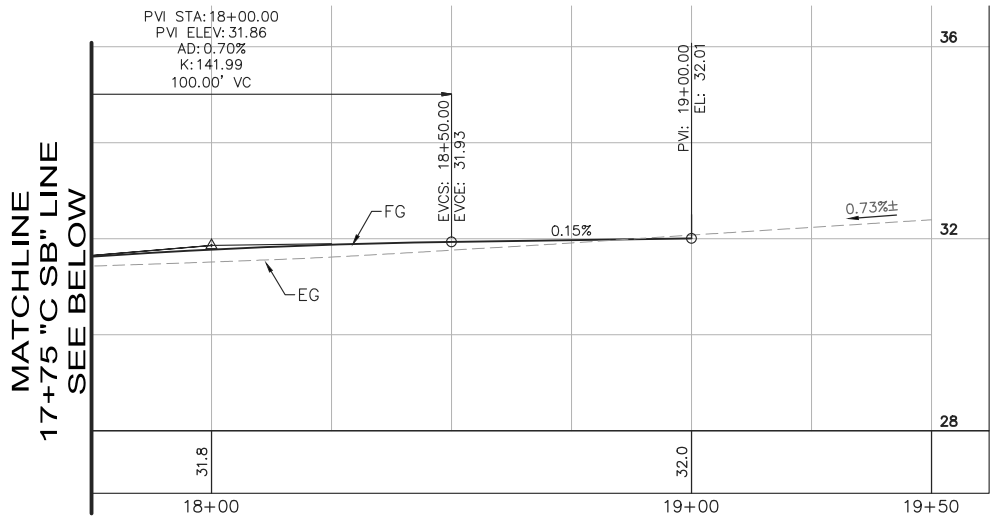
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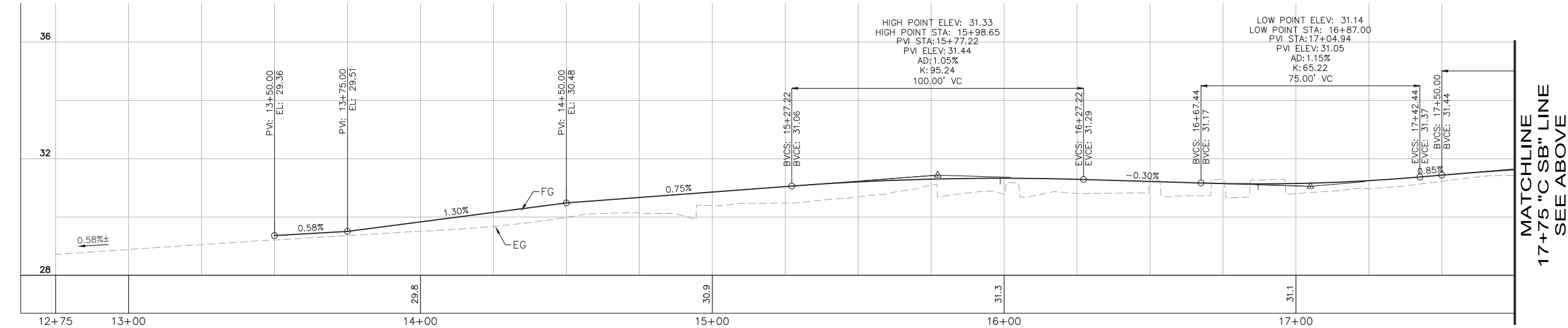
"C NB" LINE  
(CALIFORNIA Dr)



"C NB" LINE  
(CALIFORNIA Dr)



"C SB" LINE  
(CALIFORNIA Dr)



"C SB" LINE  
(CALIFORNIA Dr)

SCALE

HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 2'

No.	REVISIONS	DATE	BY

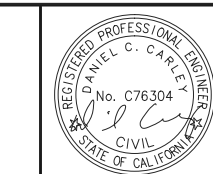
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DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

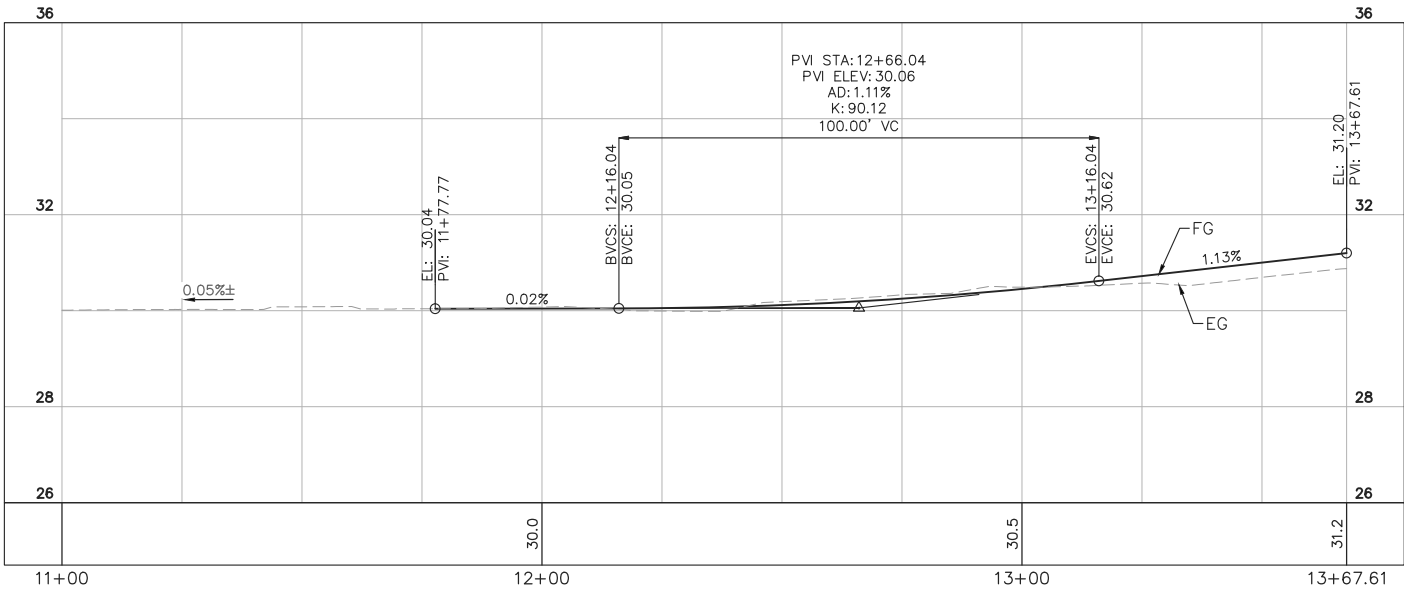


**ROADWAY PROFILES**

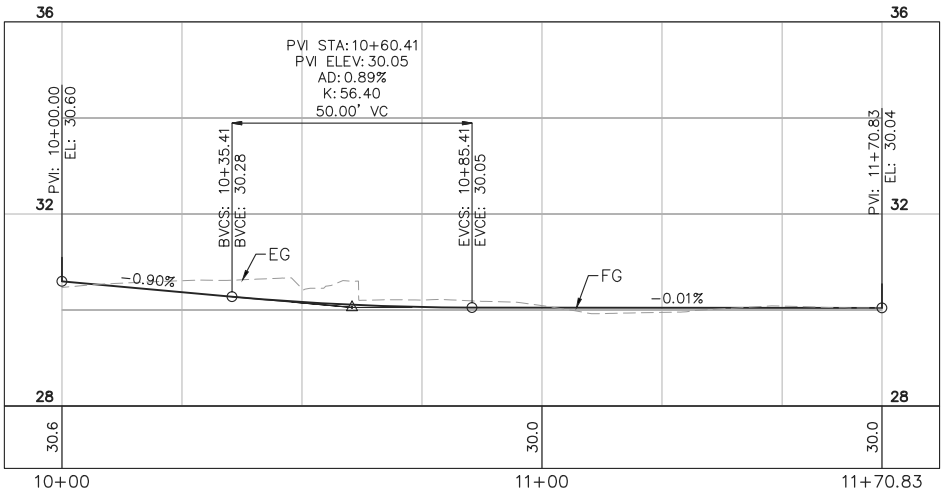
SHEET NO. 20  
OF 61 SHEETS

**PR-01**

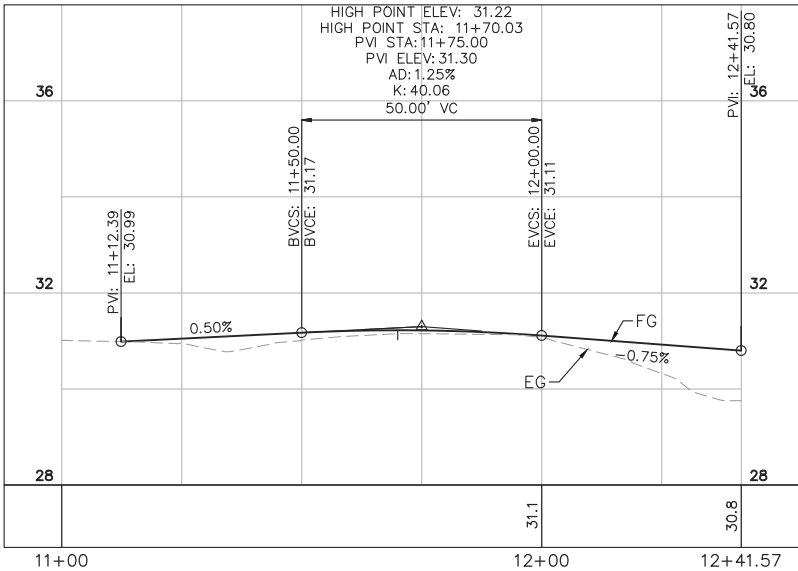
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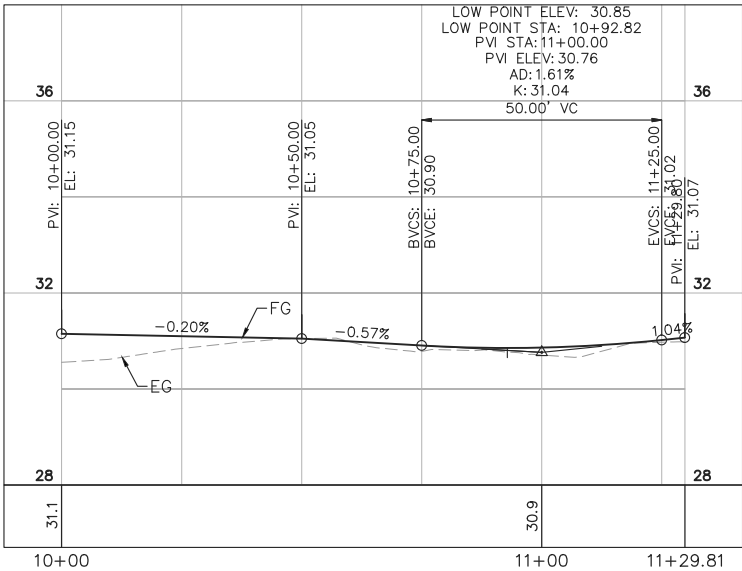
"B EB" LINE  
(BELLEVEUE Ave)



"B WB" LINE  
(BELLEVEUE Ave)



"L NB" LINE  
(LORTON Ave)



"L SB" LINE  
(LORTON Ave)



No.	REVISIONS	DATE	BY

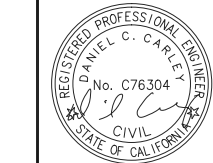
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KHA PROJECT 097515003
DATE 12/27/2017
SCALE AS SHOWN
DESIGNED BY DW
DRAWN BY DW
CHECKED BY DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



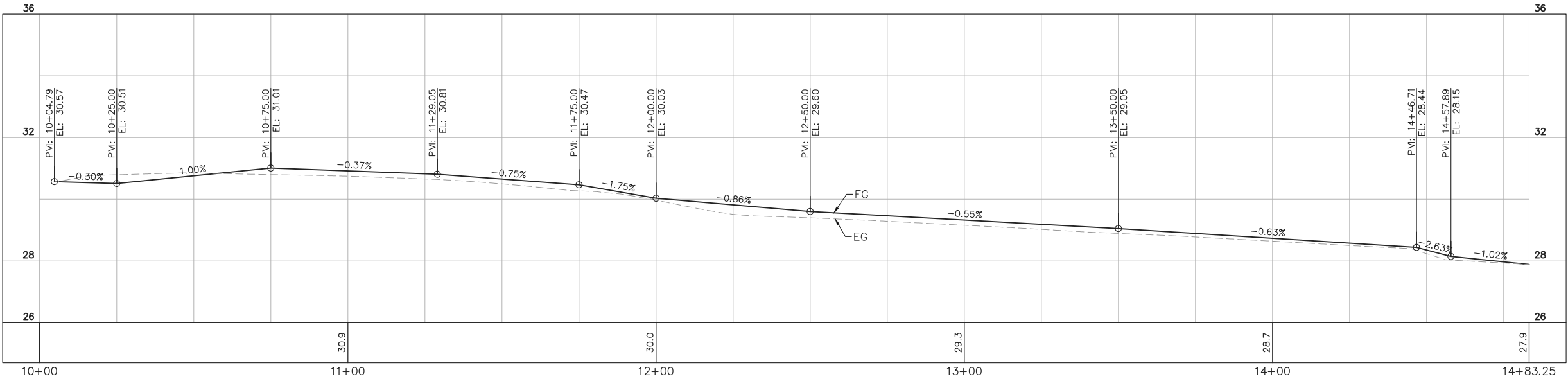
**ROADWAY PROFILES**

SCALE  
HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 2'

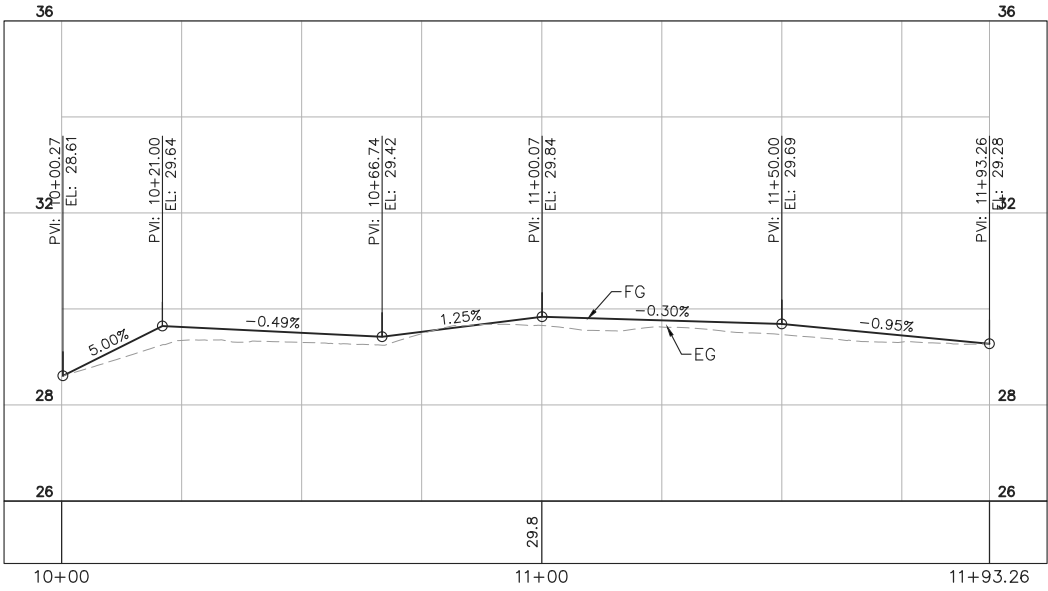
SHEET NO. 21  
OF 61 SHEETS

**PR-02**

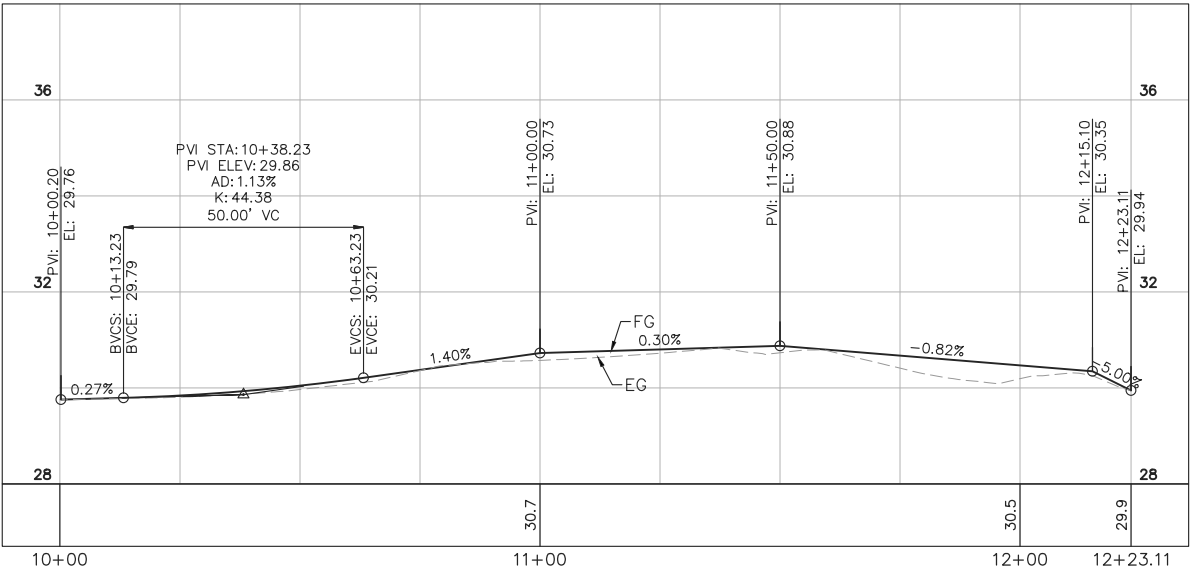
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"C1" LINE  
(CALIFORNIA Dr NB RIGHT GUTTER LIP)



"C2" LINE  
(CALIFORNIA Dr SB RIGHT GUTTER LIP)



"B1" LINE  
(BELLEVUE Ave EB RIGHT GUTTER LIP)



SCALE  
HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 2'

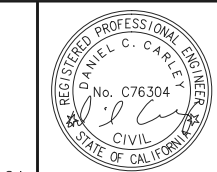
No.	REVISIONS	DATE	BY

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SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



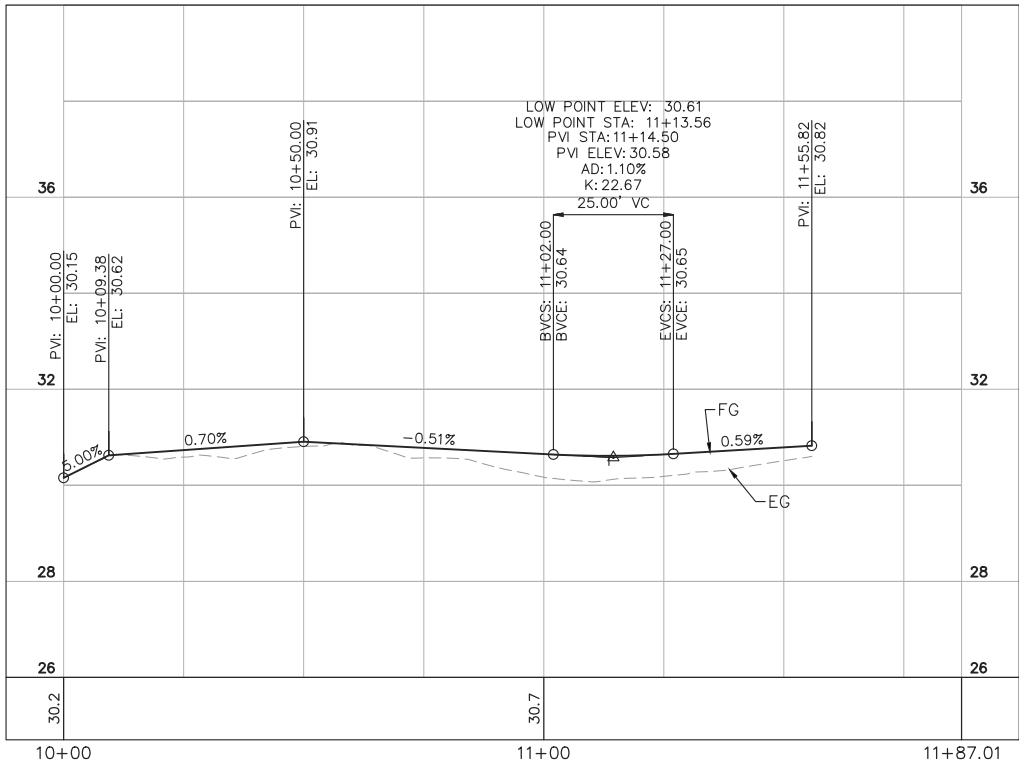
CA

**CURB PROFILES**

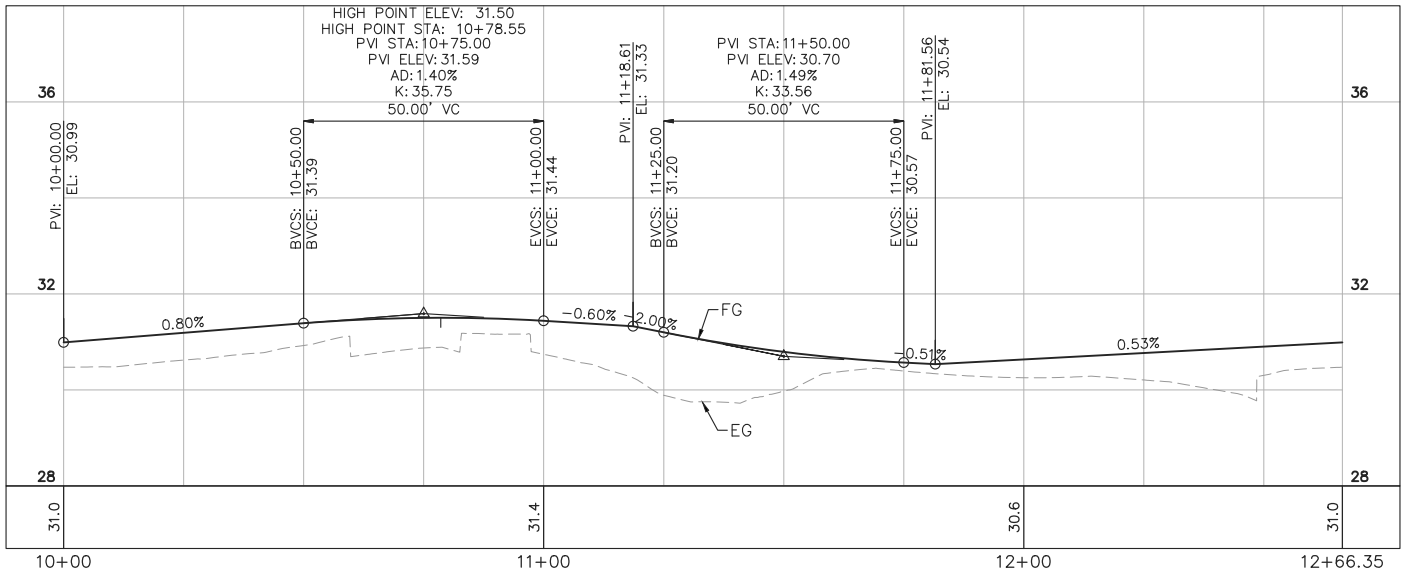
SHEET NO. 22  
OF 61 SHEETS

**PR-03**

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"L1" LINE  
(LORTON Ave NB RIGHT GUTTER LIP)



"R1" LINE  
(ROUNDAABOUT CENTER ISLAND BOTTOM CURB FACE)



No.	REVISIONS	DATE	BY

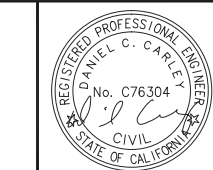
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SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDAABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



**CURB PROFILES**

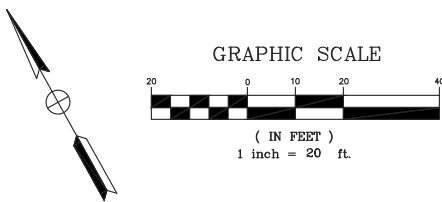
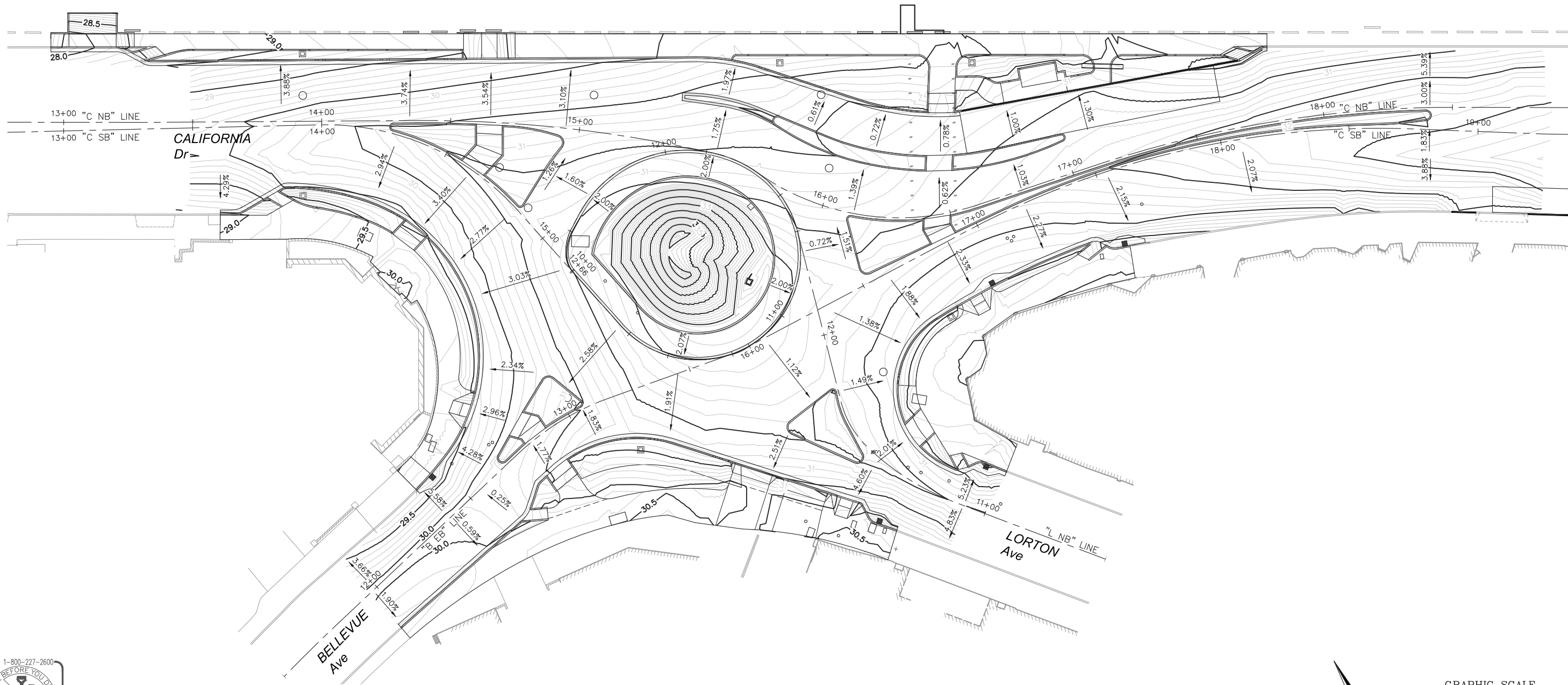
**SCALE**  
HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 2'

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OF 61 SHEETS

**PR-04**

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GENERAL NOTES:  
1. SEE GR-02 FOR LANDSCAPE & BIORETENTION AREA CONTOUR GRADING.



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**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA



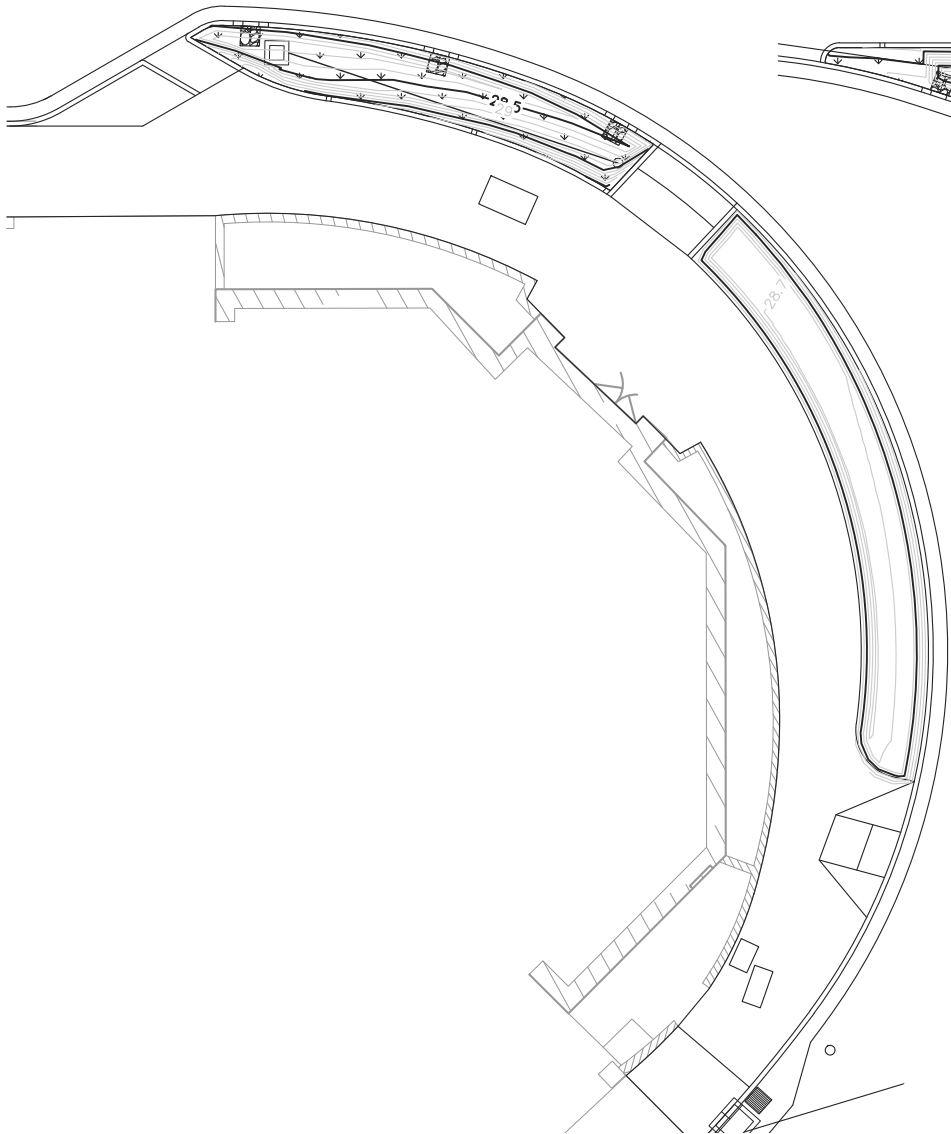
**CONTOUR GRADING**

SHEET NO. 24  
OF 61 SHEETS

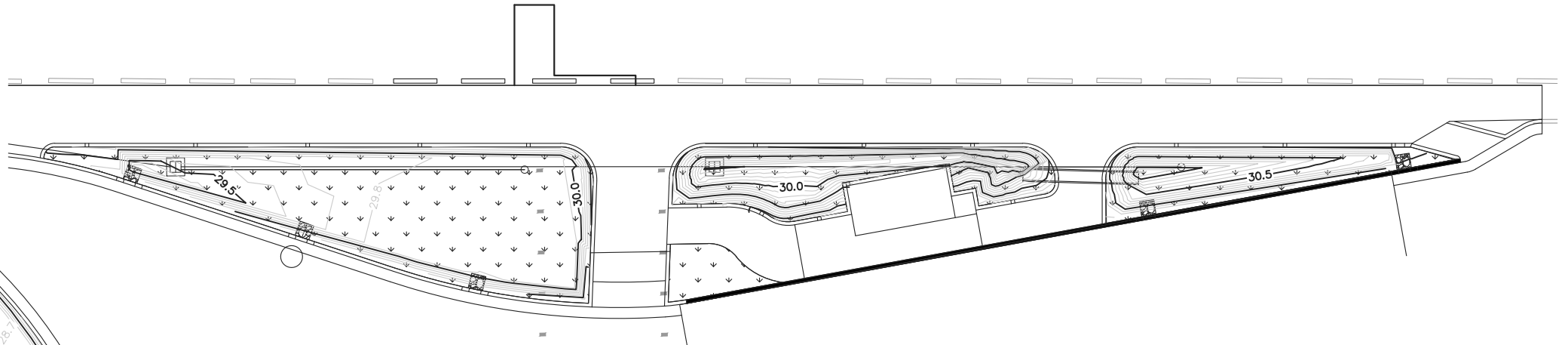
**GR-01**



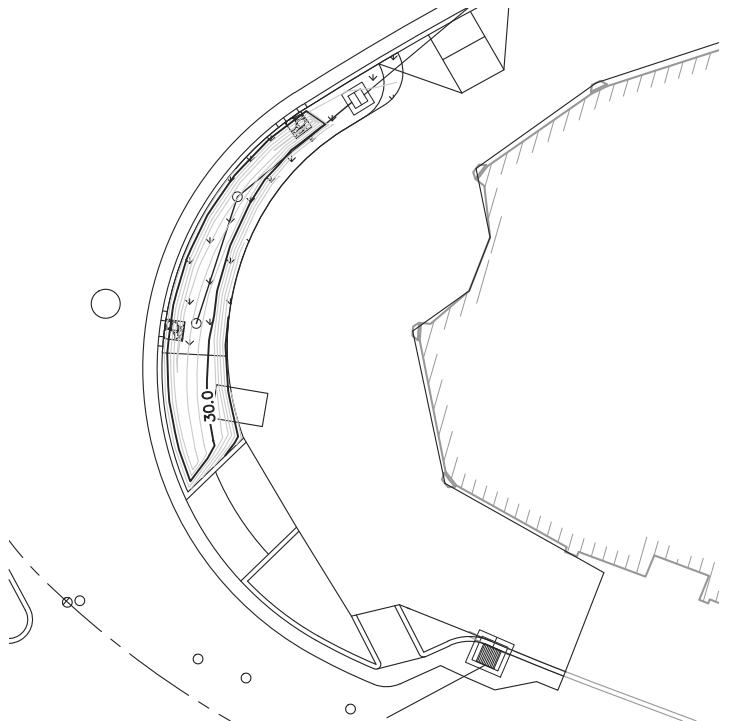
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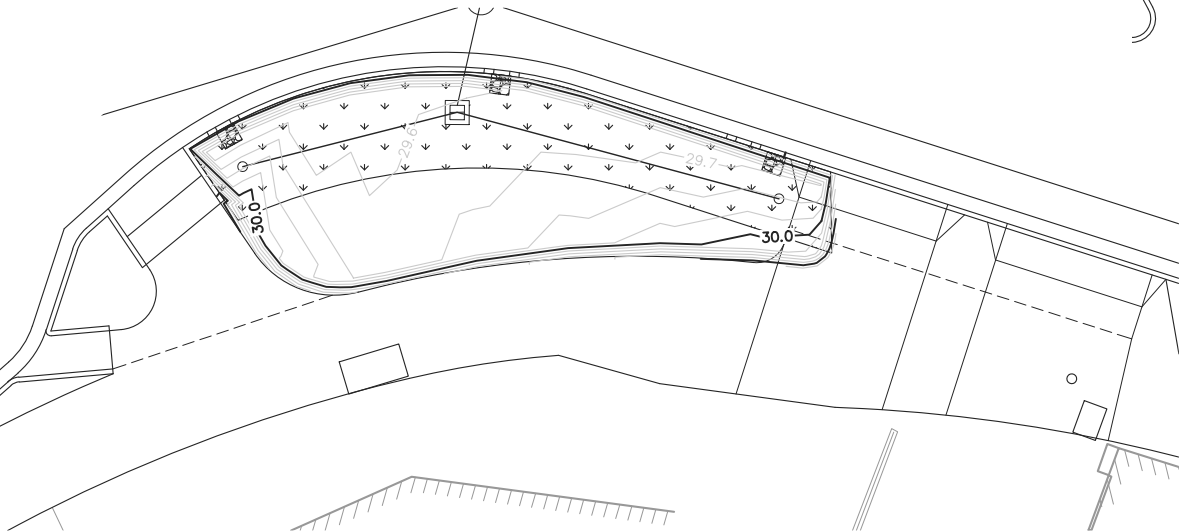
CALIFORNIA DRIVE / BELLEVUE AVENUE - NORTHWEST CURB RETURN GRADING DETAIL



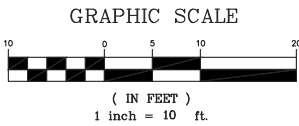
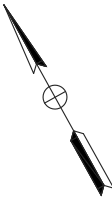
CALIFORNIA DRIVE - NORTHEAST BULBOUT GRADING DETAIL



LORTON AVENUE - CURB RETURN GRADING DETAIL



BELLEVUE AVENUE / LORTON AVENUE - BULBOUT GRADING DETAIL



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**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA



**CONTOUR GRADING**

SHEET NO. 25  
OF 61 SHEETS

**GR-02**

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CONSTRUCTION NOTES

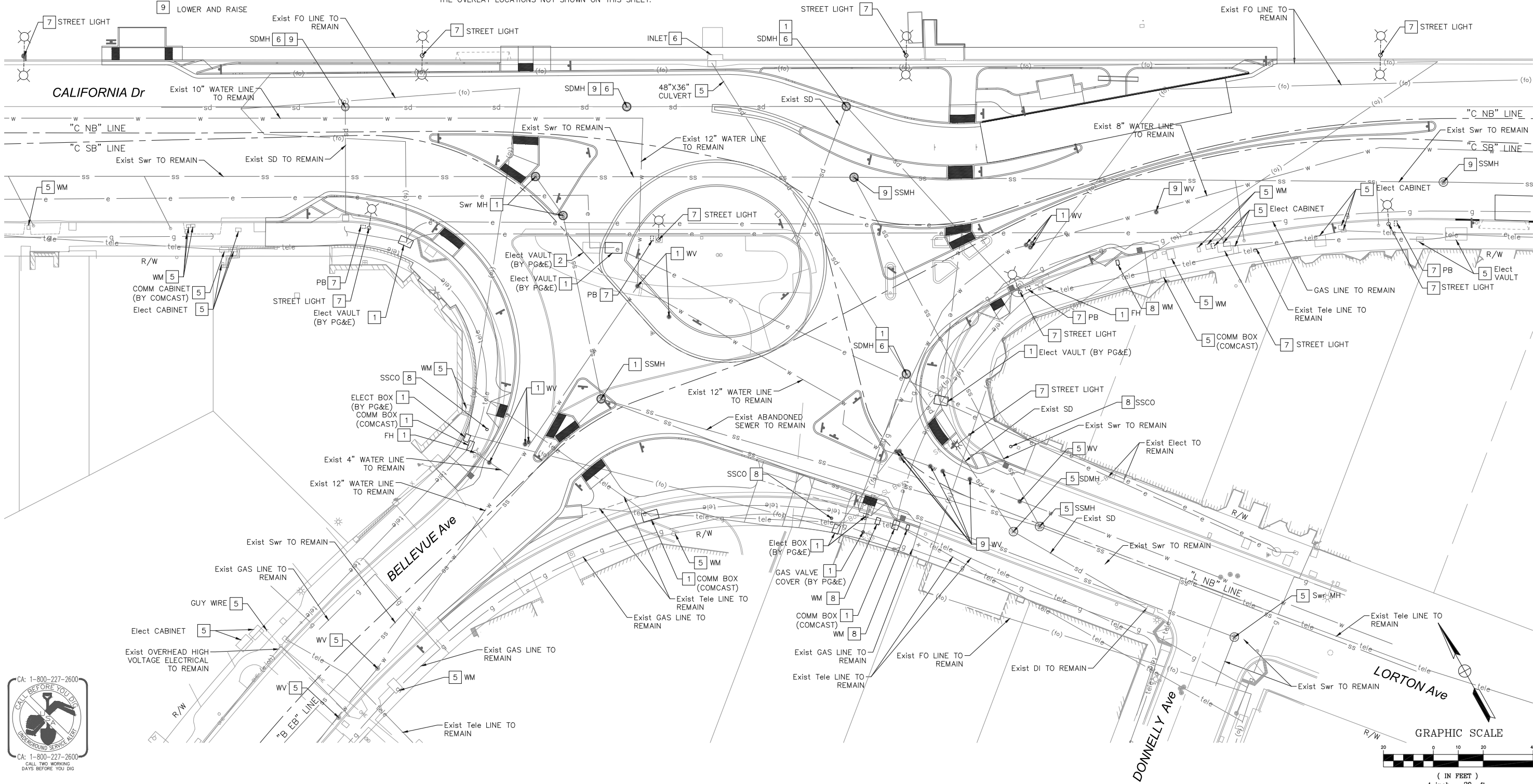
- 1 ADJUST TO GRADE
- 2 REMOVE UTILITY FACILITY
- 3 INSTALL UTILITY FACILITY
- 4 RELOCATE UTILITY FACILITY
- 5 TO REMAIN
- 6 SEE D-SHEETS FOR DETAILS
- 7 SEE EL-SHEETS FOR DETAILS
- 8 INSTALL NEW WATER METER BOX
- 9 LOWER AND RAISE

NOTES

- 1. ALL UTILITIES TO REMAIN UNLESS OTHERWISE NOTED.
- 2. ALL UTILITIES SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.
- 3. SEE D-SHEETS FOR DRAINAGE DETAILS.
- 4. SEE EL-SHEETS FOR LIGHTING AND ELECTRICAL DETAILS.
- 5. LOCATIONS OF EXISTING UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY CONFLICTS WITH THE PROPOSED WORK MUST BE IMMEDIATELY IDENTIFIED AND WORK STOPPED UNTIL ENGINEER DIRECTS WORK TO COMMENCE.
- 6. SEE PV-SHEETS FOR DETAILS ON UTILITY LID ADJUSTMENTS WITHIN THE OVERLAY LOCATIONS NOT SHOWN ON THIS SHEET.

LEGEND AND ABBREVIATIONS

	EXISTING	PROPOSED
DI	DRAINAGE INLET	
FO	FIBER OPTIC	— (fo) —
TELE	TELEPHONE/COMM	— tele —
SD	STORM DRAIN	— sd —
Swr	SEWER	— ss —
	GAS	— g —



No.	REVISIONS	DATE	BY

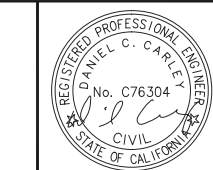
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4637 CHABOT DRIVE, SUITE 300, PLEASANTON, CA 94588  
PHONE: 925-398-4840  
WWW.KIMLEY-HORN.COM

KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

SAN MATEO COUNTY

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**



**UTILITY PLAN**

SHEET NO. 26  
OF 61 SHEETS

**U-01**

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OCTOBER 2017

CONSTRUCTION NOTES

- 1

REMOVE STORM DRAIN FACILITY
- 2

INSTALL DI TYPE I
- 3

INSTALL DI TYPE GO
- 4

INSTALL 12" PVC
- 5

INSTALL 4" PPP
- 6

ADJUST SD MH COVER TO GRADE
- 7

INSTALL COUNTY STANDARD MH

- 8

CAP DI
- 9

CONVERT DI TO MH
- 10

INSTALL CLEANOUT

ABBREVIATIONS

- AB

AGGREGATE BASE
- CO

CLEANOUT
- CLR

CLEARANCE
- COMM

COMMUNICATION
- CULV

CULVERT
- DI

DRAINAGE INLET
- DIA

DIAMETER
- EXIST

EXISTING
- FL

FLOW LINE
- FO

FIBER OPTIC
- HDPE

HIGH DENSITY POLYETHYLENE
- LF

LINEAR FEET
- MH

MANHOLE
- MIN

MINIMUM
- NO

NUMBER
- OC

ON CENTER
- PPP

PLASTIC PERFORATED PIPE
- PVC

POLYVINYL CHLORIDE
- RCP

REINFORCED CONCRETE PIPE
- SD

STORM DRAIN
- SS

SANITARY SEWER
- TC

TOP OF COVER
- TELE

TELEPHONE
- TG

TOP OF GRATE
- TYP

TYPICAL
- UD

UNDERDRAIN
- W

WATER

LEGEND

- DRAINAGE INLET

EXISTING

PROPOSED
- FIBER OPTIC

(fo)
- TELEPHONE/COMM

tele
- STORM DRAIN

sd

SD
- SEWER

ss
- GAS

g
- CLEANOUT
- MANHOLE
- CURB CUT LOCATION  
(SEE CD-SHEETS)

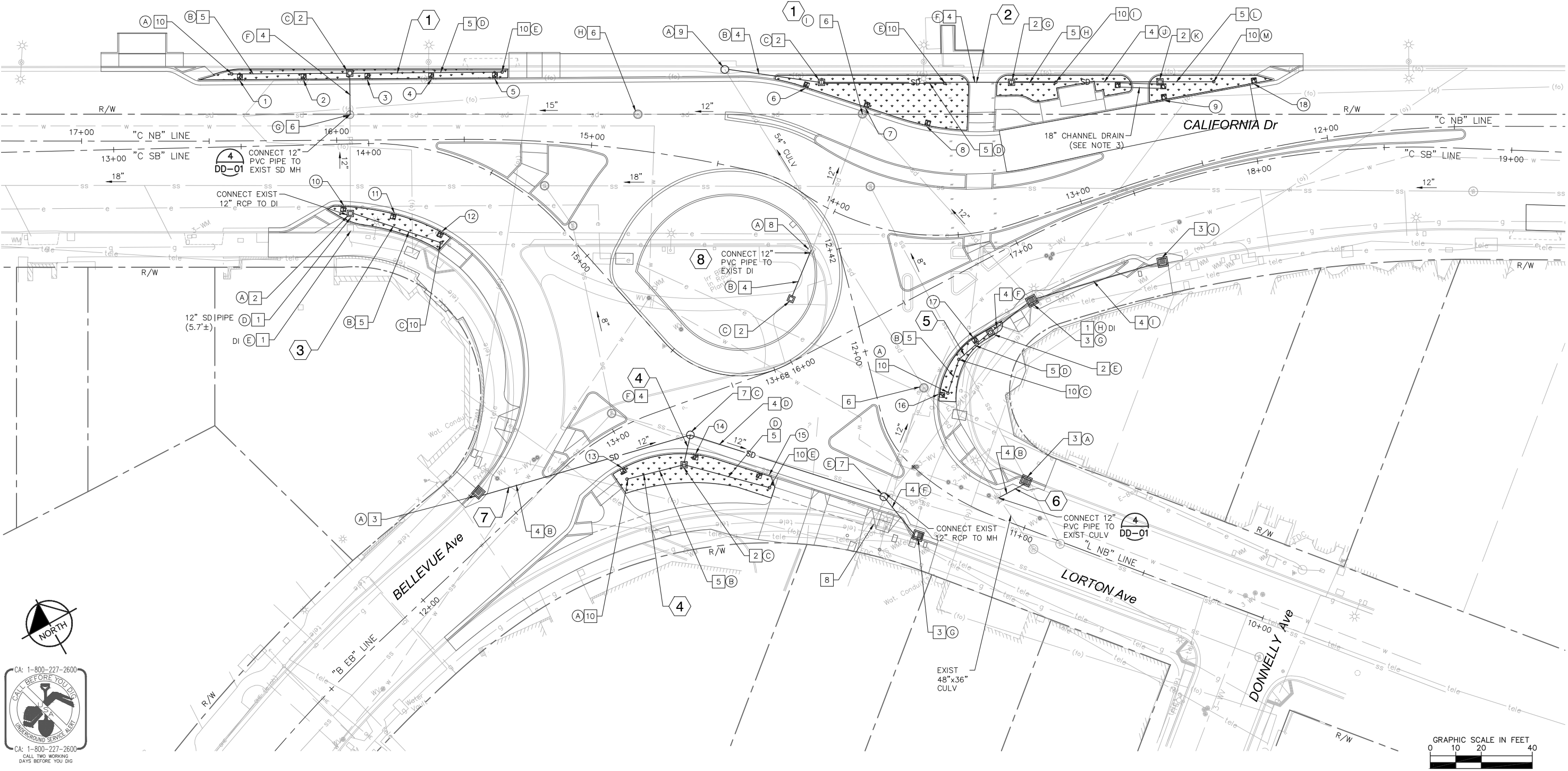
#
- DRAINAGE ITEM

A
- DRAINAGE SYSTEM NO.

#
- BIORETENTION AREA

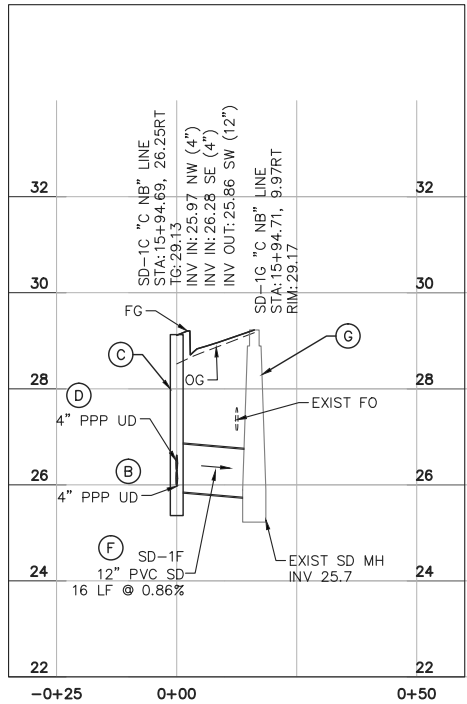
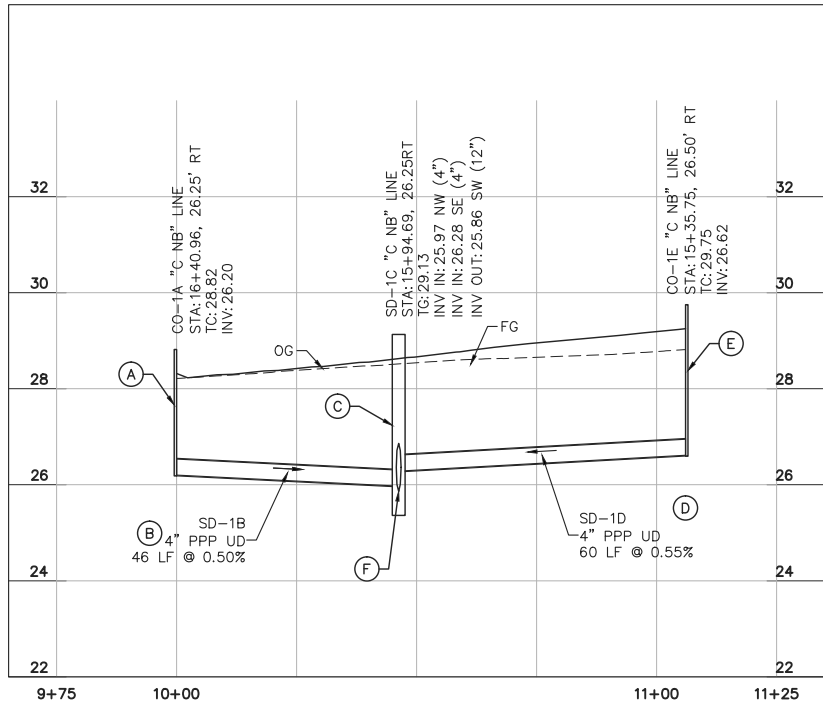
NOTES

1. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN OR NOT WITH THE APPROPRIATE UTILITY AGENCIES PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY OWNERS 48 HOURS PRIOR TO CONSTRUCTION.
3. SEE CD-09 FOR CHANNEL DRAIN DETAIL.
4. SEE CD-SHEETS FOR CURB CUT DETAILS AND LOCATIONS.
5. SEE COUNTY STANDARD DRAWING B-1 FOR TYPE GO INLET DETAILS.
6. SEE COUNTY STANDARD DRAWING B-12 FOR STORM DRAIN MANHOLE DETAILS.
7. SEE SHEET DD-02 FOR TRENCH & BACKFILL DETAILS.

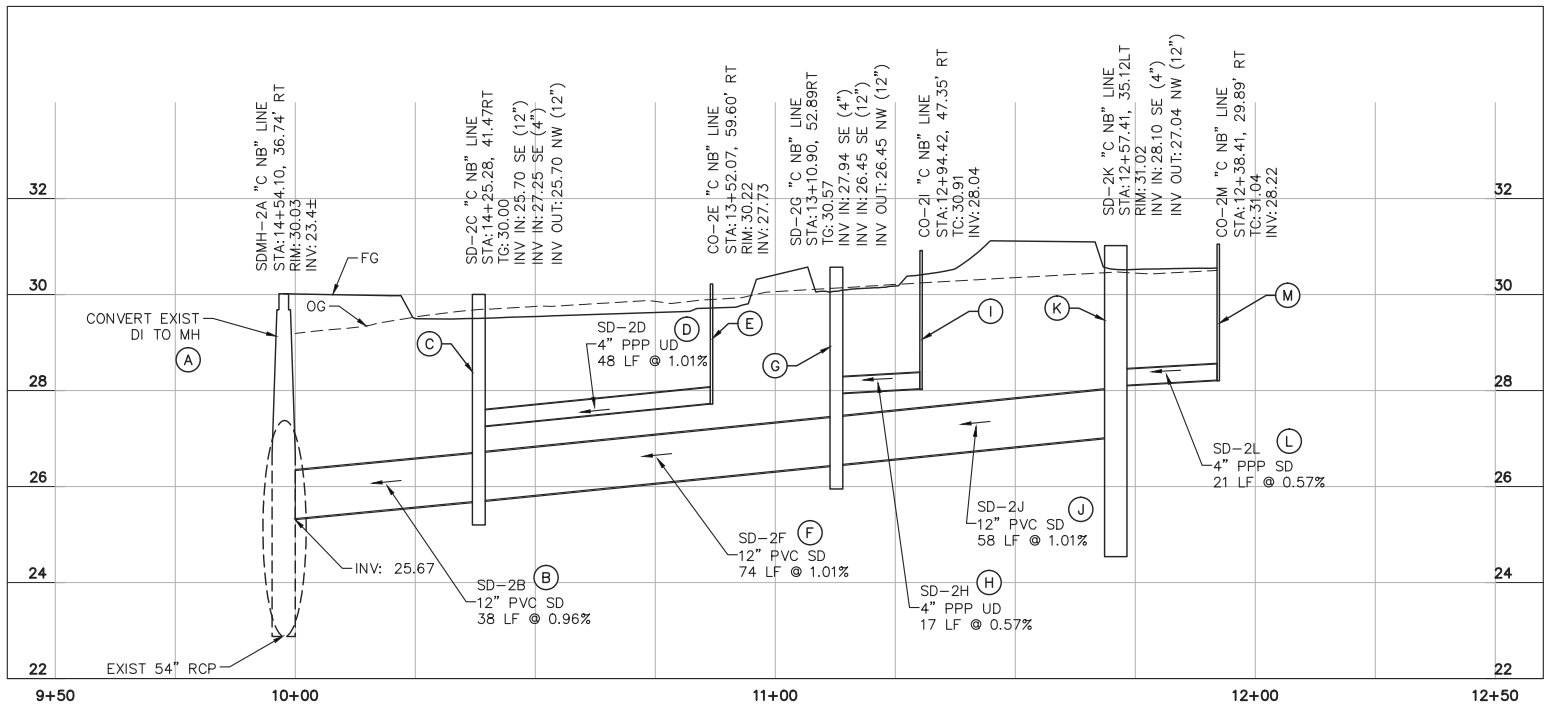


<div><div><div></div><div>WRECO</div><div>1000 Broadway, Suite 475 Oakland, California 94607 (510) 836-5188</div></div><div><div>KHA PROJECT 097515003</div><div>DATE 12/27/2017</div><div>SCALE AS SHOWN</div><div>DESIGNED BY LC</div><div>DRAWN BY LC</div><div>CHECKED BY GL</div></div><div>CALIFORNIA DRIVE ROUNDBOUT PREPARED FOR CITY OF BURLINGAME SAN MATEO COUNTY CA</div></div>				DRAINAGE PLANS		SHEET NO. 27 OF 61 SHEETS D-01
No.	REVISIONS	DATE	BY			

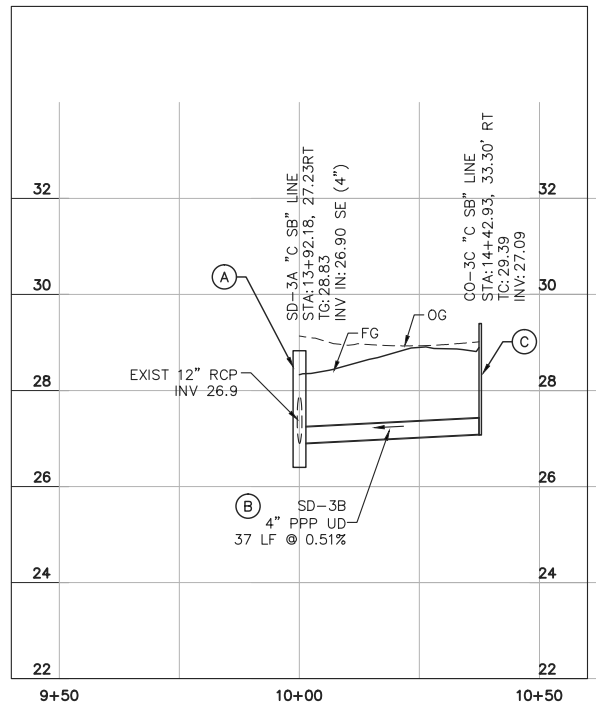
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**DRAINAGE SYSTEM 1**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



**DRAINAGE SYSTEM 2**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



**DRAINAGE SYSTEM 3**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'

## NOTES

- LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND MINIMUM DEPTHS OF COVER HAVE BEEN ASSUMED.
- CONTRACTOR SHALL POTHOLE EXISTING UTILITIES TO VERIFY NECESSARY CLEARANCES AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER. CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE LOCATION OF IMPROVEMENTS TO AVOID CONFLICTS, SUBJECT TO THE APPROVAL OF THE ENGINEER.



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DRAWN BY	LC
CHECKED BY	GL

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

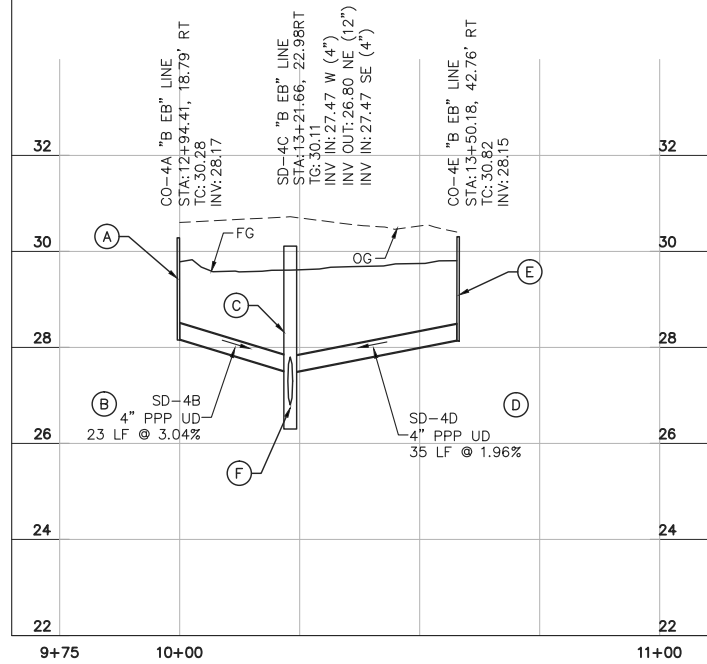
CA

**DRAINAGE PROFILES**

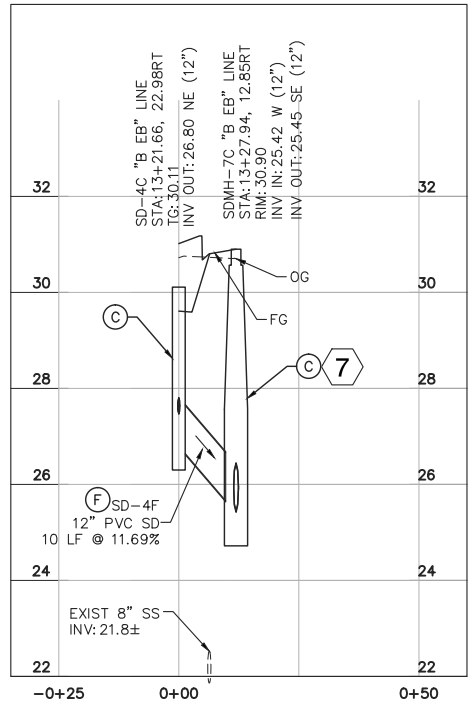
SHEET NO. 28  
OF 61 SHEETS

**DP-01**

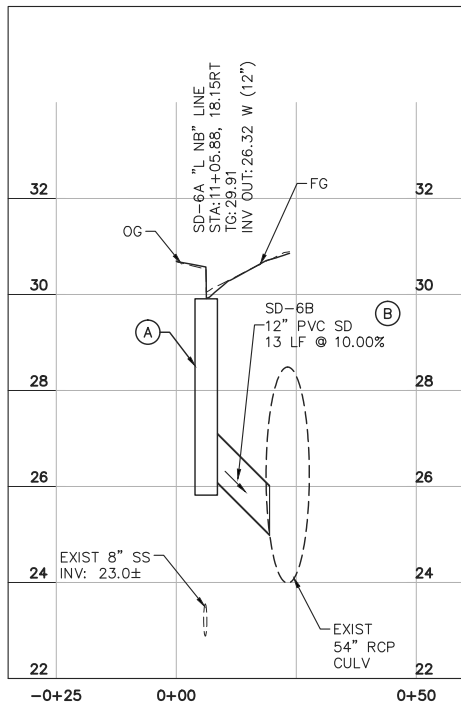
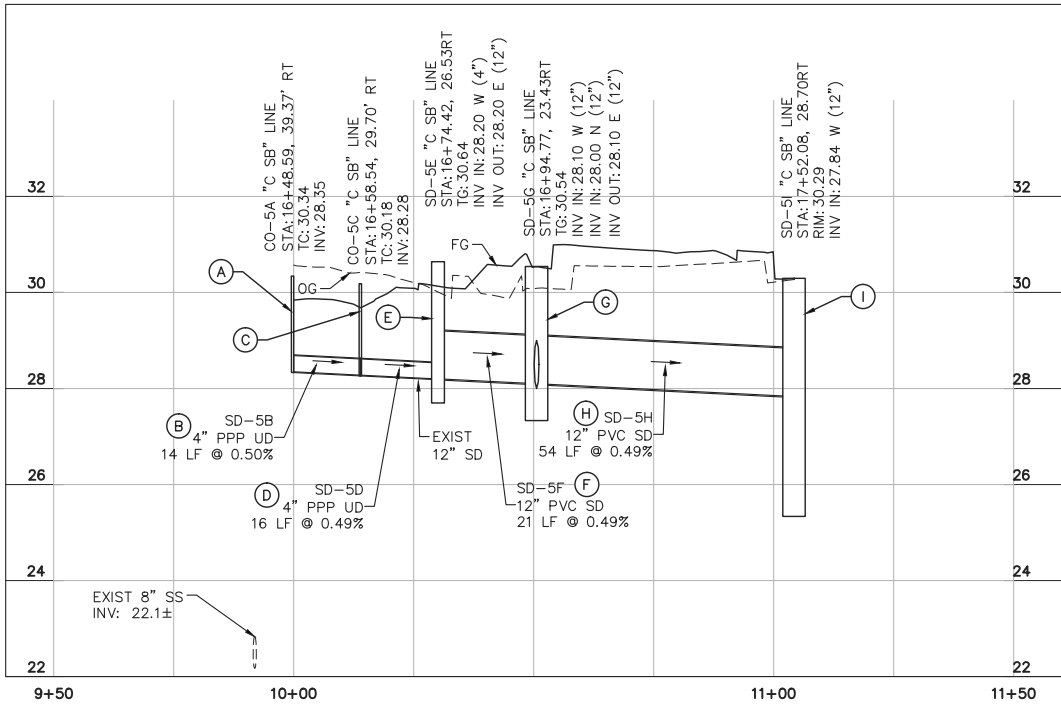
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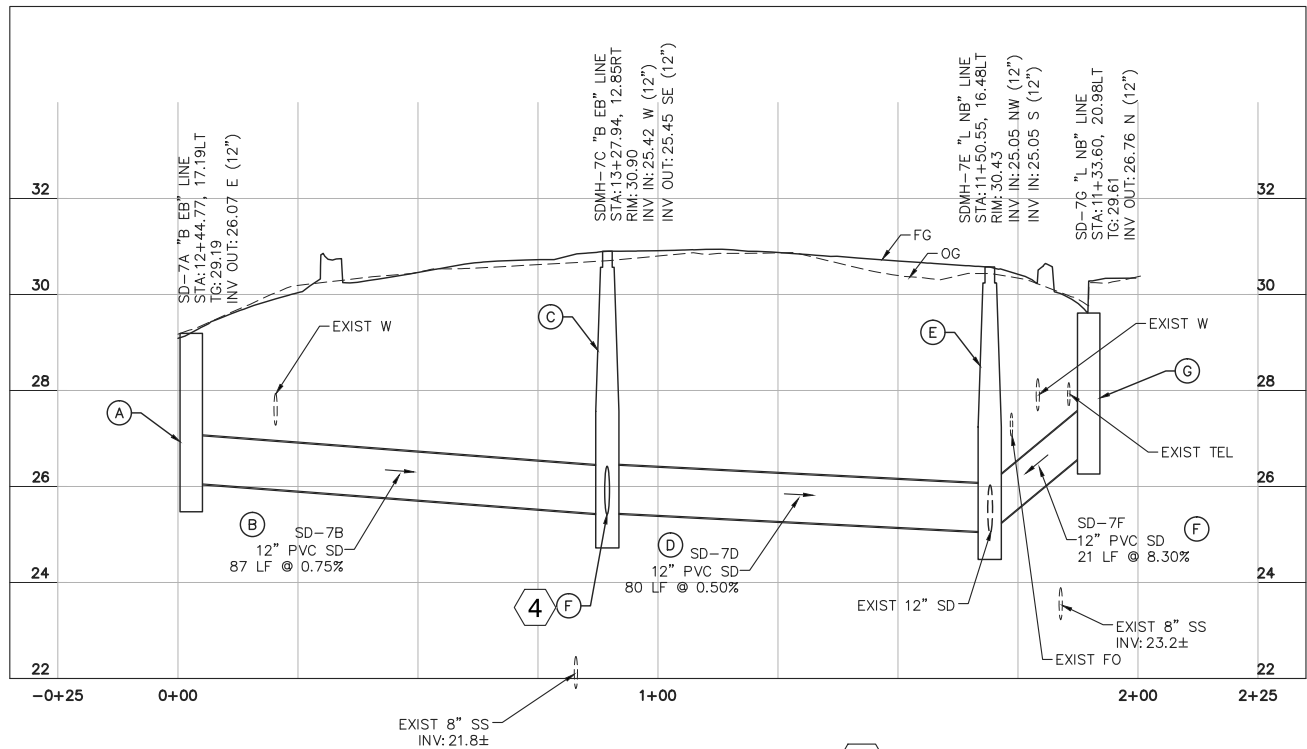
**DRAINAGE SYSTEM 4**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



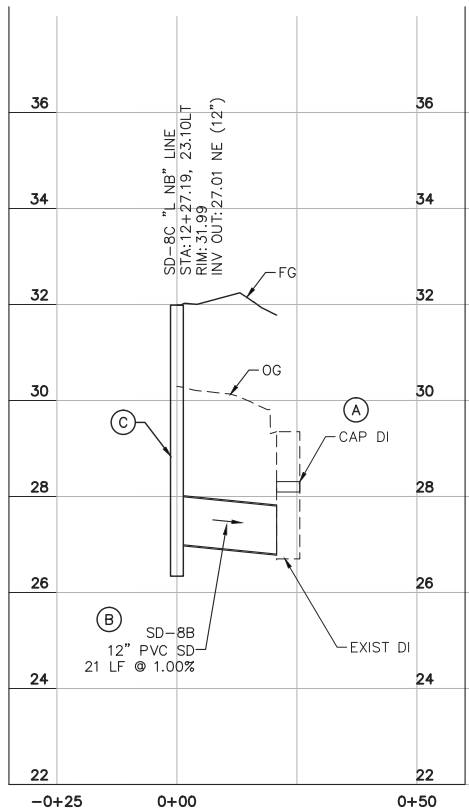
**DRAINAGE SYSTEM 5**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



**DRAINAGE SYSTEM 6**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



**DRAINAGE SYSTEM 7**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'



**DRAINAGE SYSTEM 8**  
HORIZONTAL: 1"=20', VERTICAL: 1"=2'

- NOTES**
- LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND MINIMUM DEPTHS OF COVER HAVE BEEN ASSUMED.
  - CONTRACTOR SHALL POTHOLE EXISTING UTILITIES TO VERIFY NECESSARY CLEARANCES AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER. CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE LOCATION OF IMPROVEMENTS TO AVOID CONFLICTS, SUBJECT TO THE APPROVAL OF THE ENGINEER.



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DATE 12/27/2017
SCALE AS SHOWN
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DRAWN BY LC
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**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA

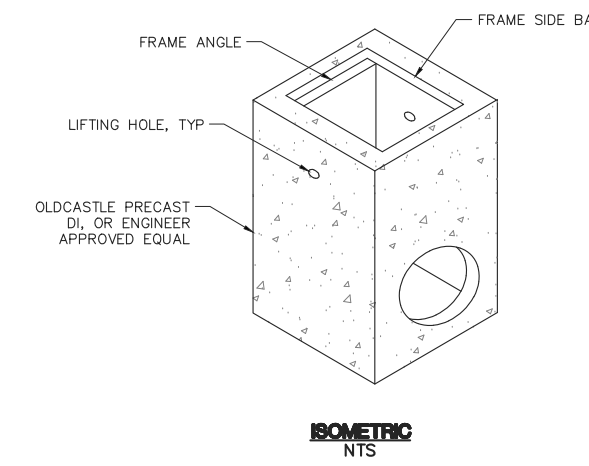
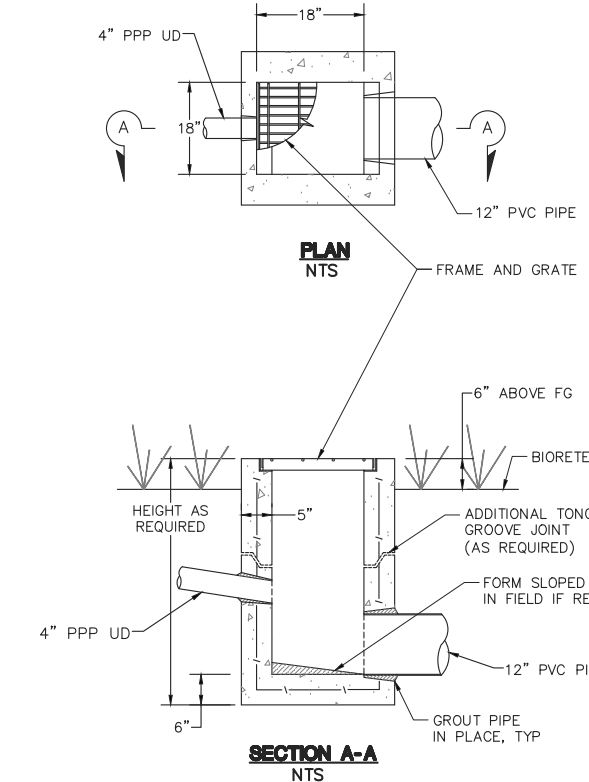
**DRAINAGE PROFILES**

SHEET NO. 29  
OF 61 SHEETS

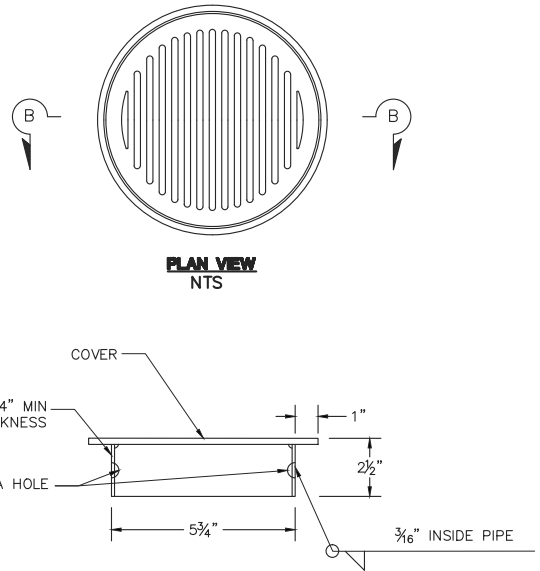
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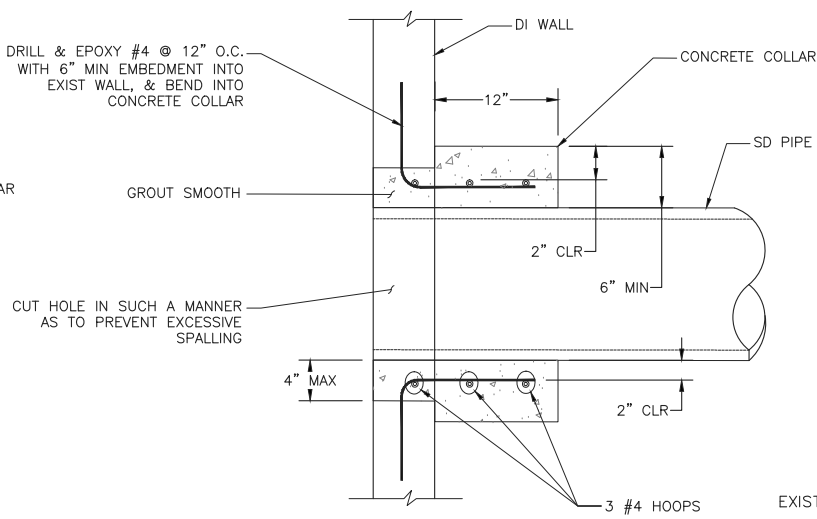
NOTE  
1. SEE CD-SHEETS FOR CUT-OFF WALL, 4" RETAINING CURB, AND DEEP CURB DETAILS.



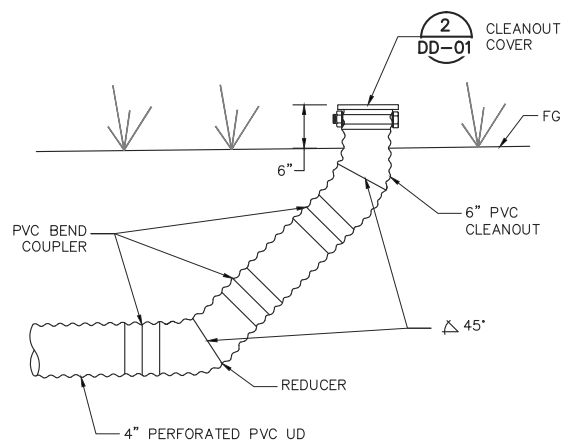
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DD-01  
DI TYPE I  
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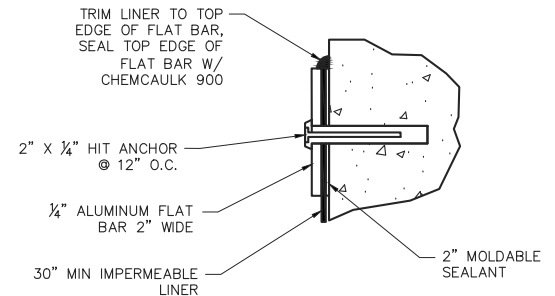
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DD-01  
CLEANOUT COVER  
NTS



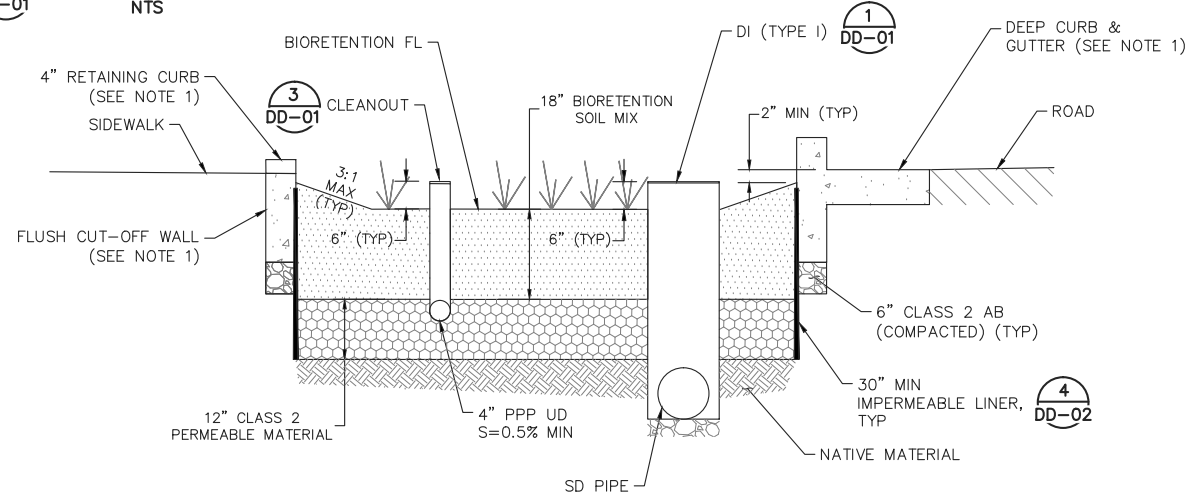
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DD-01  
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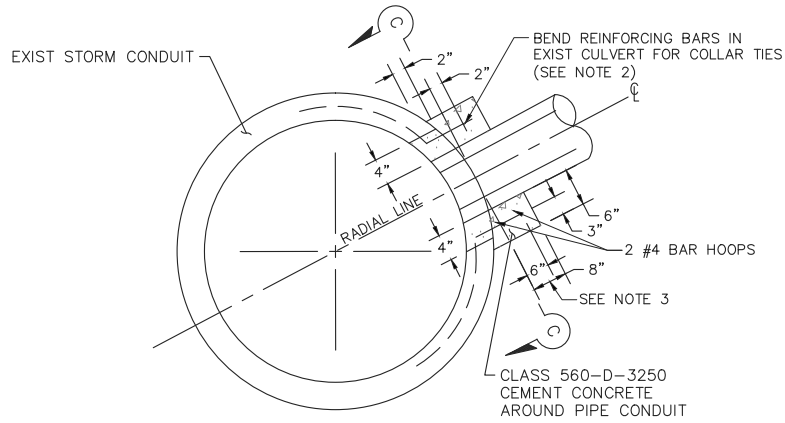
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NTS



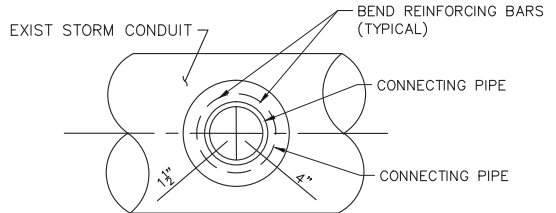
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IMPERMEABLE LINER  
ASSEMBLY AND ATTACHMENT  
NTS



6  
DD-01  
BIORETENTION AREA TYPICAL SECTION  
NTS



7  
DD-01  
CONNECTION DETAIL  
NTS



SECTION C-C  
NTS



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**wreco**  
1000 Broadway, Suite 475  
Oakland, California 94607  
(510) 836-5188

KHA PROJECT 097515003
DATE 12/27/2017
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DRAWN BY LC
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**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA

**DRAINAGE DETAILS**

SHEET NO. 30  
OF 61 SHEETS

**DD-01**





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LEGEND:

- CONSTRUCTION AREA
- MAINTAIN DRIVEWAY ACCESS
- TEMPORARY PAVEMENT (0.50' HMA (TYPE A), 0.50' CLASS 2 AGGREGATE BASE)
- TEMPORARY STRIPING DETAIL (PAINT)
- TEMPORARY PAVEMENT MARKING (PAINT)
- TEMPORARY ROADSIDE SIGN LOCATION
- TEMPORARY CHANNELIZER (SURFACE MOUNTED) SPACED 10' O.C.
- TEMPORARY INLINE CRASH CUSHION
- TEMPORARY RAILING (TYPE K)
- DIRECTION OF TRAFFIC
- TEMPORARY NOISE AND DUST FENCE (SEE DETAIL ON TH-04)

STAGE 1	
TRAFFIC	1. SHIFT SOUTHBOUND CALIFORNIA DR TRAFFIC AND REDUCE TO 11' LANES.
	2. CLOSE INTERSECTION ACCESS BETWEEN CALIFORNIA DR, BELLEVUE AVE, AND LORTON AVE
	3. RESTRICT STREET PARKING ALONG CALIFORNIA DR AND BELLEVUE AVE WITHIN PROJECT AREA FOR REMAINING TRAFFIC CONTROL STAGES.
CONSTRUCTION	1. REMOVE EXISTING PARK AND SIDEWALK.
	2. CONSTRUCT PAVEMENT, CENTER ISLAND AND SPLITTER ISLANDS ALONG CALIFORNIA DR.
	3. CONSTRUCT PAVEMENT, CURB RETURNS, SIDEWALK, AND SPLITTER ISLAND ON BELLEVUE AVE AND LORTON AVE.

CONSTRUCTION NOTES (THIS SHEET ONLY):

- 1

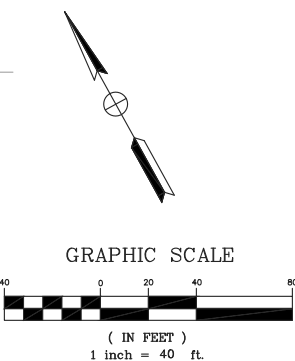
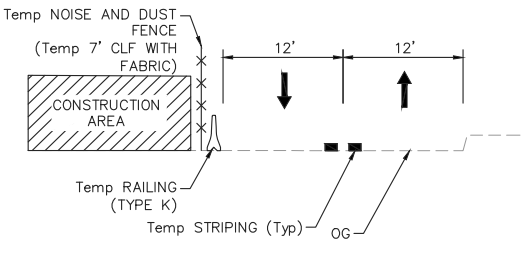
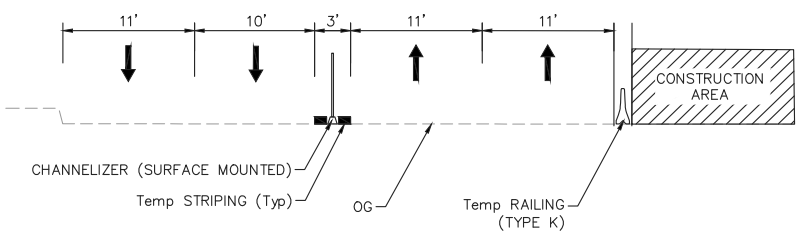
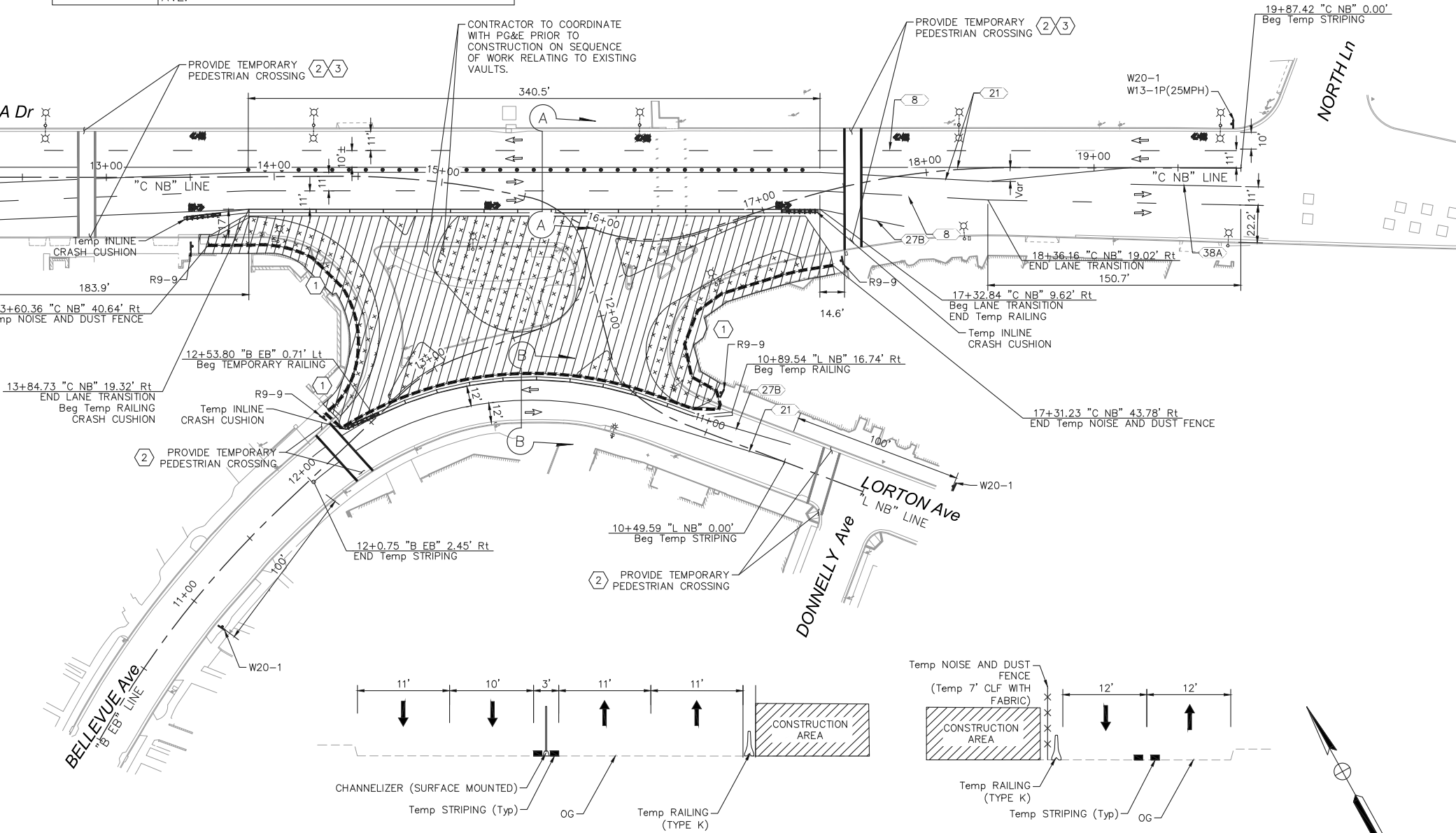
MAINTAIN ACCESS TO EXISTING BUSINESS ENTRANCES AND ADA ACCESSIBLE PATH (6' Min) AROUND CONSTRUCTION WORK AREA. CONSTRUCT TEMPORARY TIMBER WALKWAY THROUGH CONSTRUCTION ZONE AS REQUIRED. SEE DETAIL ON TH-04.
- 2

PROVIDE TEMPORARY PEDESTRIAN CROSSING. CROSSING TO INCLUDE 10' CLEAR WIDTH, 12" WHITE PAINTED CROSSWALK STRIPING AND ADA COMPLIANT TEMPORARY HMA RAMPS AT THE EXISTING CURB, OR TEMPORARY RAMPS AS APPROVED BY THE ENGINEER. TEMPORARY RAMPS TO BE PLACED OUTSIDE OF VEHICULAR TRAVELED WAY.
- 3

PROVIDE TEMPORARY SOLAR RRFB. PLACE TO PROVIDE ADA ACCESS AROUND TEMPORARY RRFB, AND TO PUSH BUTTON AND TEMPORARY RAMP. PLACE TEMPORARY RRFB SUCH THAT THE FACE OF THE TEMPORARY FOUNDATION IS 2' MIN BEHIND THE EXISTING TC.

GENERAL NOTES (ALL TRAFFIC CONTROL SHEETS):

- SPECIFIC WORK CALLED OUT ON TRAFFIC CONTROL SHEETS (KEYED NOTES) ARE INTENDED TO ASSIST THE CONTRACTOR IN DETERMINING MINIMUM WORK REQUIRED DURING THIS STAGE AND IS NOT A COMPREHENSIVE LIST OF ALL WORK THAT IS REQUIRED OR MAY BE COMPLETED DURING SAID STAGE.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS DURING CONSTRUCTION.
- CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING AND PAVEMENT MARKINGS THAT CONFLICTS WITH NEW STRIPING AND MARKINGS, OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL REMOVE OR COVER ALL EXISTING SIGNAGE THAT CONFLICT WITH THE TRAFFIC HANDLING PLANS AS SHOWN OR AS DIRECTED BY THE ENGINEER. INSTALL ROADSIDE SIGNS PER SIGN PLANS WHERE CONSTRUCTION OCCURS.
- SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER. SIGNS TO BE LOCATED ON PERMANENT PAVEMENT SHALL BE MOUNTED IN FREE STANDING SUPPORTS AS APPROVED BY THE ENGINEER AND SHALL NOT PENETRATE THE PAVEMENT SURFACE.
- ALL TEMPORARY PAVEMENT DELINEATION SHALL BE REMOVED PRIOR TO INSTALLATION OF THE PERMANENT PAVEMENT DELINEATION.
- CURB RAMPS SHALL BE ADA COMPLIANT THROUGHOUT CONSTRUCTION.
- ALL TEMPORARY RAILING (TYPE K) SHALL BE STAKED PER CALTRANS Std T3B.
- SURFACE UTILITY FEATURES WITHIN TEMPORARY ROADWAY OR SIDEWALK AREAS SHALL BE ADJUSTED TO GRADE OF TEMPORARY ROADWAY OR SIDEWALK.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



THIS PLAN ACCURATE FOR TRAFFIC CONTROL ONLY

No.	REVISIONS	DATE	BY

**Kimley»Horn**

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KHA PROJECT  
097515003

DATE  
12/27/2017

SCALE AS SHOWN

DESIGNED BY DW

DRAWN BY DW

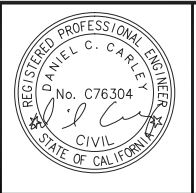
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CALIFORNIA DRIVE  
ROUNDBABOUT

PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY

CA



TRAFFIC HANDLING & STAGE  
CONSTRUCTION PLANS  
STAGE 1

SHEET NO. 32  
OF 61 SHEETS

TH-01

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LEGEND:

- CONSTRUCTION AREA
- MAINTAIN DRIVEWAY ACCESS
- TEMPORARY PAVEMENT (0.50' HMA (TYPE A), 0.50' CLASS 2 AGGREGATE BASE)
- TEMPORARY STRIPING DETAIL (PAINT)
- TEMPORARY PAVEMENT MARKING (PAINT)
- TEMPORARY ROADSIDE SIGN LOCATION
- TEMPORARY CHANNELIZER (SURFACE MOUNTED) SPACED 10' O.C.
- TEMPORARY INLINE CRASH CUSHION
- TEMPORARY RAILING (TYPE K)
- DIRECTION OF TRAFFIC
- TEMPORARY NOISE AND DUST FENCE (SEE DETAIL ON TH-04)



TEMPORARY PAVEMENT MARKING (PAINT)

TEMPORARY ROADSIDE SIGN LOCATION

TEMPORARY CHANNELIZER (SURFACE MOUNTED) SPACED 10' O.C.

TEMPORARY INLINE CRASH CUSHION

TEMPORARY RAILING (TYPE K)

DIRECTION OF TRAFFIC

TEMPORARY NOISE AND DUST FENCE  
(SEE DETAIL ON TH-04)

STAGE 2	
TRAFFIC	1. REDUCE CALIFORNIA DR TO TWO LANES IN CONSTRUCTION ZONE. 2. SHIFT SOUTHBOUND CALIFORNIA DR TRAVEL LANES INTO COMPLETED STAGE 1 AND REDUCE TO ONE LANE. 3. MODIFY TRAFFIC CONTROL OF BELLEVUE AND LORTON AVE FROM STAGE 1.
CONSTRUCTION	1. CONSTRUCT NORTH PORTION OF ROUNDABOUT. 2. CONSTRUCT SPLITTER ISLANDS ALONG CALIFORNIA DR.

CONSTRUCTION NOTES (THIS SHEET ONLY):

- 1

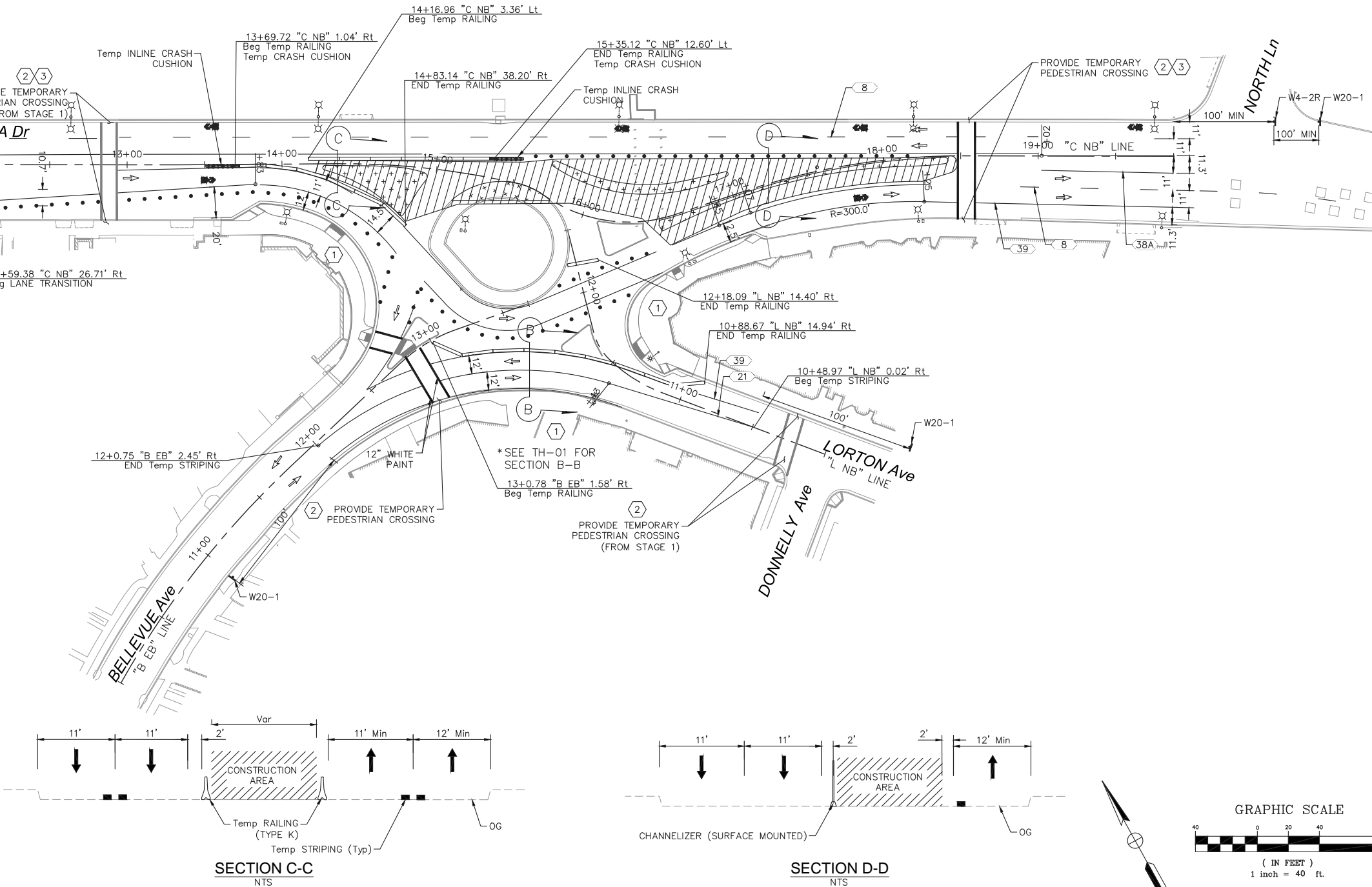
MAINTAIN ACCESS TO EXISTING BUSINESS ENTRANCES AND ADA ACCESSIBLE PATH (6' Min) AROUND CONSTRUCTION WORK AREA. CONSTRUCT TEMPORARY TIMBER WALKWAY THROUGH CONSTRUCTION ZONE AS REQUIRED. SEE DETAIL ON TH-04.
- 2

PROVIDE TEMPORARY PEDESTRIAN CROSSING. CROSSING TO INCLUDE 10' CLEAR WIDTH, 12" WHITE PAINTED CROSSWALK STRIPING AND ADA COMPLIANT TEMPORARY HMA RAMPS AT THE EXISTING CURB, OR TEMPORARY RAMPS AS APPROVED BY THE ENGINEER. TEMPORARY RAMPS TO BE PLACED OUTSIDE OF VEHICULAR TRAVELED WAY.
- 3

PROVIDE TEMPORARY SOLAR RRFB. PLACE TO PROVIDE ADA ACCESS AROUND TEMPORARY RRFB, AND TO PUSH BUTTON AND TEMPORARY RAMP. PLACE TEMPORARY RRFB SUCH THAT THE FACE OF THE TEMPORARY FOUNDATION IS 2' MIN BEHIND THE EXISTING TC.

GENERAL NOTES (ALL TRAFFIC CONTROL SHEETS):

- SPECIFIC WORK CALLED OUT ON TRAFFIC CONTROL SHEETS (KEYED NOTES) ARE INTENDED TO ASSIST THE CONTRACTOR IN DETERMINING MINIMUM WORK REQUIRED DURING THIS STAGE AND IS NOT A COMPREHENSIVE LIST OF ALL WORK THAT IS REQUIRED OR MAY BE COMPLETED DURING SAID STAGE.
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- CONTRACTOR SHALL REMOVE OR COVER ALL EXISTING SIGNAGE THAT CONFLICT WITH THE TRAFFIC HANDLING PLANS AS SHOWN OR AS DIRECTED BY THE ENGINEER. INSTALL ROADSIDE SIGNS PER SIGN PLANS WHERE CONSTRUCTION OCCURS.
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- CURB RAMPS SHALL BE ADA COMPLIANT THROUGHOUT CONSTRUCTION.
- ALL TEMPORARY RAILING (TYPE K) SHALL BE STAKED PER CALTRANS Std T3B.
- SURFACE UTILITY FEATURES WITHIN TEMPORARY ROADWAY OR SIDEWALK AREAS SHALL BE ADJUSTED TO GRADE OF TEMPORARY ROADWAY OR SIDEWALK.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



SECTION C-C  
NTS

THIS PLAN ACCURATE FOR TRAFFIC CONTROL ONLY

SECTION D-D  
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No.	REVISIONS	DATE	BY

**Kimley»Horn**

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**CALIFORNIA DRIVE  
ROUNDABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



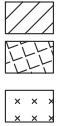
**TRAFFIC HANDLING & STAGE  
CONSTRUCTION PLANS  
STAGE 2**

SHEET NO. 33  
OF 61 SHEETS

**TH-02**

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LEGEND:



- CONSTRUCTION AREA
- MAINTAIN DRIVEWAY ACCESS
- TEMPORARY PAVEMENT (0.50' HMA (TYPE A), 0.50' CLASS 2 AGGREGATE BASE)
- TEMPORARY STRIPING DETAIL (PAINT)



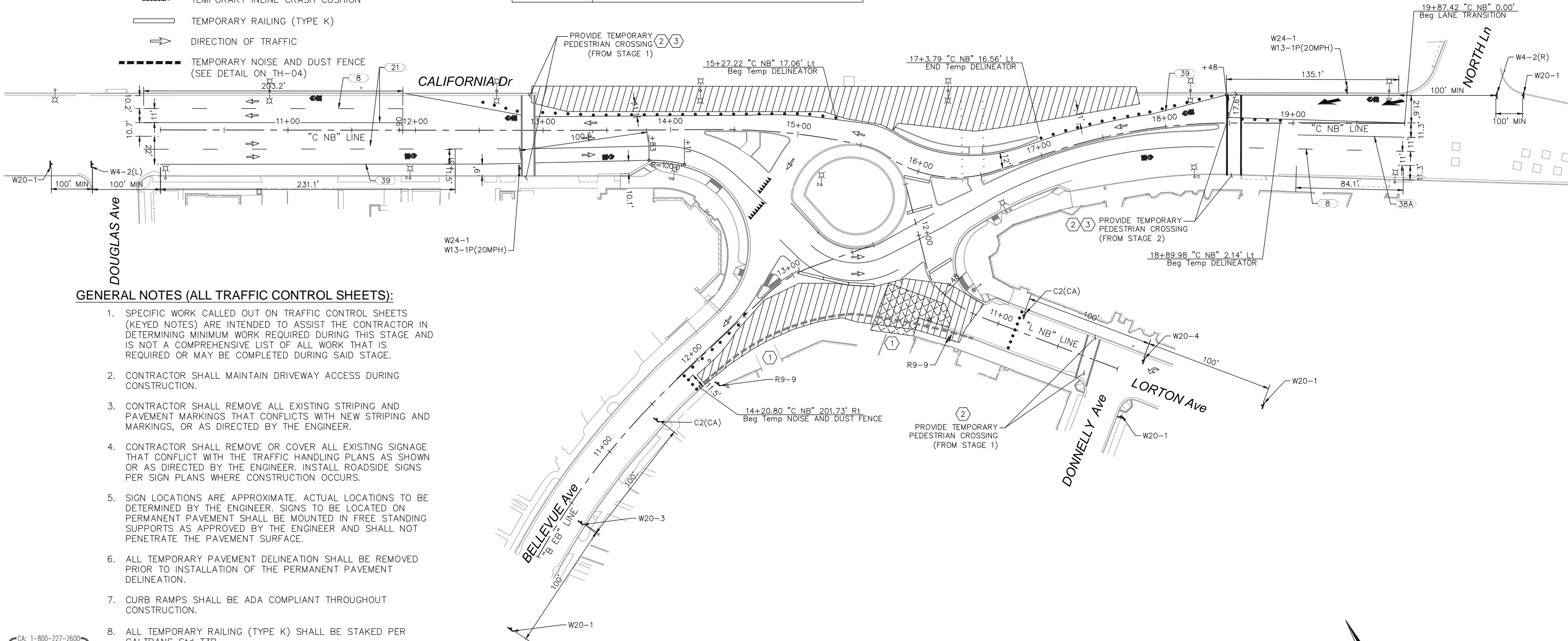
- TEMPORARY PAVEMENT MARKING (PAINT)
- TEMPORARY ROADSIDE SIGN LOCATION
- TEMPORARY CHANNELIZER (SURFACE MOUNTED) SPACED 10' O.C.
- TEMPORARY INLINE CRASH CUSHION
- TEMPORARY RAILING (TYPE K)
- DIRECTION OF TRAFFIC

- TEMPORARY NOISE AND DUST FENCE (SEE DETAIL ON TH-04)

STAGE 3	
TRAFFIC	1. SHIFT NORTHBOUND CALIFORNIA DR TRAFFIC TO COMPLETED STAGE 2 AND REDUCE TO ONE LANE. 2. SHIFT SOUTHBOUND CALIFORNIA DR TRAFFIC TO COMPLETED STAGE 2. 3. CLOSE LORTON AVE AFTER DONNELLY AVE AND CLOSE BELLEVUE AVE TO NORTHBOUND TRAFFIC.
CONSTRUCTION	1. CONSTRUCT CURB AND BULBOUT IMPROVEMENTS ALONG CALIFORNIA DR. 2. CONSTRUCT SPLITTER ISLAND, CURB, AND BULBOUT IMPROVEMENTS ALONG LORTON AVE/BELLEVUE AVE.

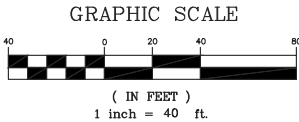
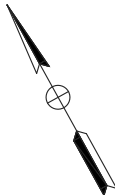
CONSTRUCTION NOTES (THIS SHEET ONLY):

1. MAINTAIN ACCESS TO EXISTING BUSINESS ENTRANCES AND ADA ACCESSIBLE PATH (6' Min) AROUND CONSTRUCTION WORK AREA. CONSTRUCT TEMPORARY TIMBER WALKWAY THROUGH CONSTRUCTION ZONE AS REQUIRED. SEE DETAIL ON TH-04.
2. PROVIDE TEMPORARY PEDESTRIAN CROSSING. CROSSING TO INCLUDE 10' CLEAR WIDTH, 12" WHITE PAINTED CROSSWALK STRIPING AND ADA COMPLIANT TEMPORARY HMA RAMPS AT THE EXISTING CURB, OR TEMPORARY RAMPS AS APPROVED BY THE ENGINEER. TEMPORARY RAMPS TO BE PLACED OUTSIDE OF VEHICULAR TRAVELED WAY.
3. PROVIDE TEMPORARY SOLAR RRFB. PLACE TO PROVIDE ADA ACCESS AROUND TEMPORARY RRFB, AND TO PUSH BUTTON AND TEMPORARY RAMP. PLACE TEMPORARY RRFB SUCH THAT THE FACE OF THE TEMPORARY FOUNDATION IS 2' MIN BEHIND THE EXISTING TC.



GENERAL NOTES (ALL TRAFFIC CONTROL SHEETS):

- SPECIFIC WORK CALLED OUT ON TRAFFIC CONTROL SHEETS (KEYED NOTES) ARE INTENDED TO ASSIST THE CONTRACTOR IN DETERMINING MINIMUM WORK REQUIRED DURING THIS STAGE AND IS NOT A COMPREHENSIVE LIST OF ALL WORK THAT IS REQUIRED OR MAY BE COMPLETED DURING SAID STAGE.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS DURING CONSTRUCTION.
- CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING AND PAVEMENT MARKINGS THAT CONFLICTS WITH NEW STRIPING AND MARKINGS, OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL REMOVE OR COVER ALL EXISTING SIGNAGE THAT CONFLICT WITH THE TRAFFIC HANDLING PLANS AS SHOWN OR AS DIRECTED BY THE ENGINEER. INSTALL ROADSIDE SIGNS PER SIGN PLANS WHERE CONSTRUCTION OCCURS.
- SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER. SIGNS TO BE LOCATED ON PERMANENT PAVEMENT SHALL BE MOUNTED IN FREE STANDING SUPPORTS AS APPROVED BY THE ENGINEER AND SHALL NOT PENETRATE THE PAVEMENT SURFACE.
- ALL TEMPORARY PAVEMENT DELINEATION SHALL BE REMOVED PRIOR TO INSTALLATION OF THE PERMANENT PAVEMENT DELINEATION.
- CURB RAMPS SHALL BE ADA COMPLIANT THROUGHOUT CONSTRUCTION.
- ALL TEMPORARY RAILING (TYPE K) SHALL BE STAKED PER CALTRANS Std T3B.
- SURFACE UTILITY FEATURES WITHIN TEMPORARY ROADWAY OR SIDEWALK AREAS SHALL BE ADJUSTED TO GRADE OF TEMPORARY ROADWAY OR SIDEWALK.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



THIS PLAN ACCURATE FOR TRAFFIC CONTROL ONLY

No.	REVISIONS	DATE	BY

**Kimley»Horn**

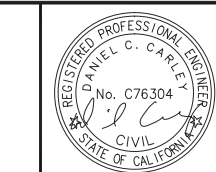
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KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDBOUT**

PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



**TRAFFIC HANDLING & STAGE  
CONSTRUCTION PLANS  
STAGE 3**

SHEET NO. 34  
OF 61 SHEETS

**TH-03**

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LEGEND:

- CONSTRUCTION AREA
- MAINTAIN DRIVEWAY ACCESS
- TEMPORARY PAVEMENT (0.50' HMA (TYPE A), 0.50' CLASS 2 AGGREGATE BASE)
- TEMPORARY STRIPING DETAIL (PAINT)
- TEMPORARY "YIELD" PAVEMENT MARKING (PAINT)
- TEMPORARY "STOP" PAVEMENT MARKING (PAINT)
- TEMPORARY PAVEMENT MARKING (PAINT)
- TEMPORARY ROADSIDE SIGN LOCATION
- TEMPORARY CHANNELIZER (SURFACE MOUNTED) SPACED 10' O.C.
- TEMPORARY INLINE CRASH CUSHION
- TEMPORARY RAILING (TYPE K)
- DIRECTION OF TRAFFIC

STAGE 4	
TRAFFIC	1. ESTABLISH FULL ROUNDABOUT YIELD CONTROL AT INTERSECTION.
CONSTRUCTION	1. PLACE FINAL HMA LIFT. COLD PLANE AND CONFORM TO EXISTING PAVEMENT.
	2. COLD PLANE AND OVERLAY REMAINING AREAS TO OAK GROVE AVE AND BURLINGAME AVE.
	3. INSTALL FINAL PAVEMENT MARKINGS AND PAVEMENT DELINEATION.
	4. INSTALL FINAL ROADSIDE SIGNS.

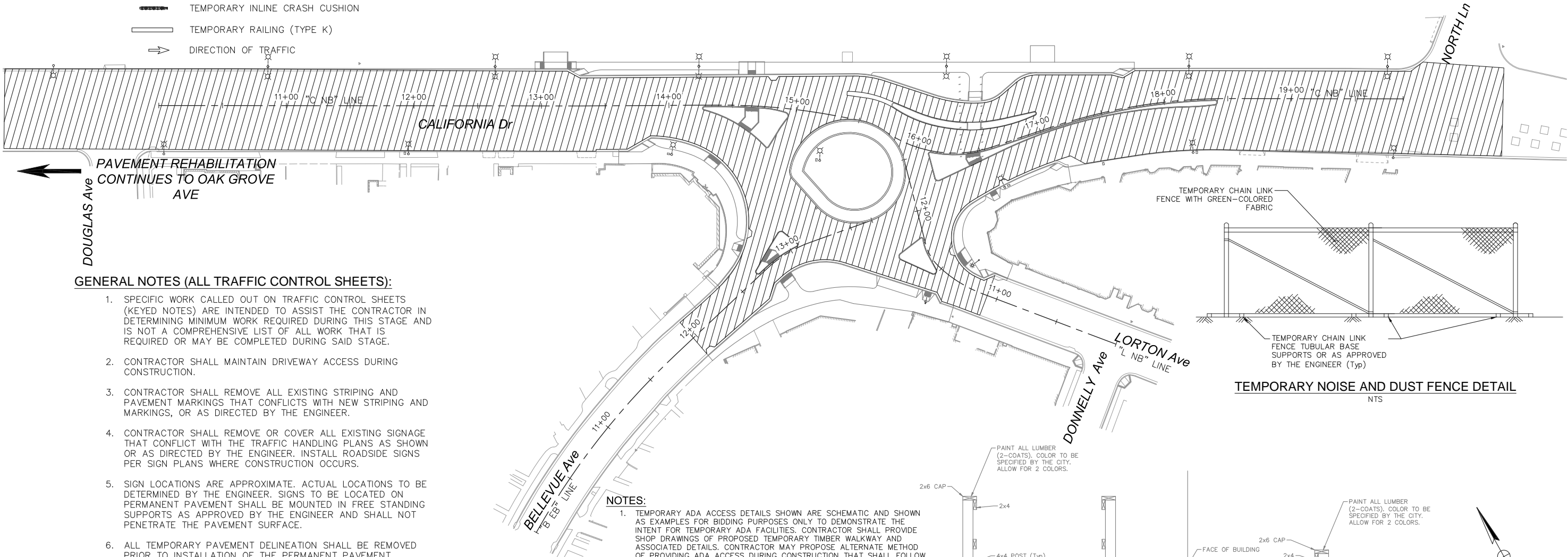
CONSTRUCTION NOTES (THIS SHEET ONLY):

- 1

MAINTAIN ACCESS TO EXISTING BUSINESS ENTRANCES AND ADA ACCESSIBLE PATH (6' Min) AROUND CONSTRUCTION WORK AREA. CONSTRUCT TEMPORARY TIMBER WALKWAY THROUGH CONSTRUCTION ZONE AS REQUIRED. SEE DETAIL ON TH-04.
- 2

PROVIDE TEMPORARY PEDESTRIAN CROSSING. CROSSING TO INCLUDE 10' CLEAR WIDTH, 12" WHITE PAINTED CROSSWALK STRIPING AND ADA COMPLIANT TEMPORARY HMA RAMPS AT THE EXISTING CURB, OR TEMPORARY RAMPS AS APPROVED BY THE ENGINEER. TEMPORARY RAMPS TO BE PLACED OUTSIDE OF VEHICULAR TRAVELED WAY.
- 3

PROVIDE TEMPORARY SOLAR RRFB. PLACE TO PROVIDE ADA ACCESS AROUND TEMPORARY RRFB, AND TO PUSH BUTTON AND TEMPORARY RAMP. PLACE TEMPORARY RRFB SUCH THAT THE FACE OF THE TEMPORARY FOUNDATION IS 2' MIN BEHIND THE EXISTING TC.



GENERAL NOTES (ALL TRAFFIC CONTROL SHEETS):

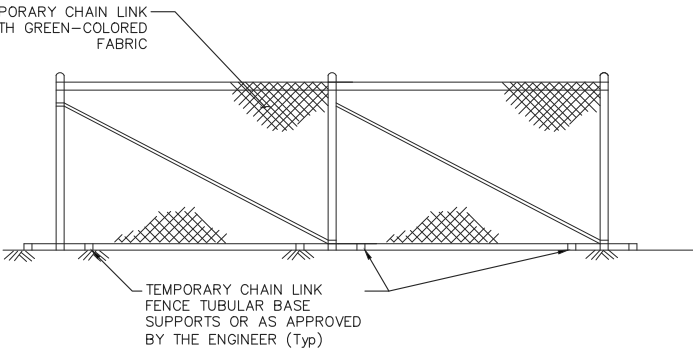
- SPECIFIC WORK CALLED OUT ON TRAFFIC CONTROL SHEETS (KEYED NOTES) ARE INTENDED TO ASSIST THE CONTRACTOR IN DETERMINING MINIMUM WORK REQUIRED DURING THIS STAGE AND IS NOT A COMPREHENSIVE LIST OF ALL WORK THAT IS REQUIRED OR MAY BE COMPLETED DURING SAID STAGE.
- CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS DURING CONSTRUCTION.
- CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING AND PAVEMENT MARKINGS THAT CONFLICTS WITH NEW STRIPING AND MARKINGS, OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL REMOVE OR COVER ALL EXISTING SIGNAGE THAT CONFLICT WITH THE TRAFFIC HANDLING PLANS AS SHOWN OR AS DIRECTED BY THE ENGINEER. INSTALL ROADSIDE SIGNS PER SIGN PLANS WHERE CONSTRUCTION OCCURS.
- SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER. SIGNS TO BE LOCATED ON PERMANENT PAVEMENT SHALL BE MOUNTED IN FREE STANDING SUPPORTS AS APPROVED BY THE ENGINEER AND SHALL NOT PENETRATE THE PAVEMENT SURFACE.
- ALL TEMPORARY PAVEMENT DELINEATION SHALL BE REMOVED PRIOR TO INSTALLATION OF THE PERMANENT PAVEMENT DELINEATION.
- CURB RAMPS SHALL BE ADA COMPLIANT THROUGHOUT CONSTRUCTION.
- ALL TEMPORARY RAILING (TYPE K) SHALL BE STAKED PER CALTRANS Std T3B.
- SURFACE UTILITY FEATURES WITHIN TEMPORARY ROADWAY OR SIDEWALK AREAS SHALL BE ADJUSTED TO GRADE OF TEMPORARY ROADWAY OR SIDEWALK.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



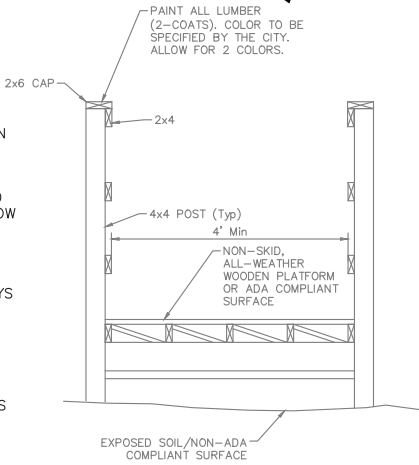
NOTES:

- TEMPORARY ADA ACCESS DETAILS SHOWN ARE SCHEMATIC AND SHOWN AS EXAMPLES FOR BIDDING PURPOSES ONLY TO DEMONSTRATE THE INTENT FOR TEMPORARY ADA FACILITIES. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF PROPOSED TEMPORARY TIMBER WALKWAY AND ASSOCIATED DETAILS. CONTRACTOR MAY PROPOSE ALTERNATE METHOD OF PROVIDING ADA ACCESS DURING CONSTRUCTION THAT SHALL FOLLOW THE REQUIREMENTS BELOW.
- REQUIREMENTS FOR TEMPORARY TIMBER WALKWAY:
  - MAINTAIN SAFE ADA ACCESS FROM CROSSWALKS TO ALL DOORWAYS AND PRIVATE PROPERTY ACCESS LOCATIONS.
  - TIMBER PLATFORMS, RAILINGS AND TEMPORARY BRIDGES TO BE IN-PLACE AT THE TIMES REQUIRED AS SHOWN IN THE PROJECT SPECIFICATIONS.
  - PROVIDE WATER FILLED BARRIERS OR K-RAIL TO SEPARATE WORK AREA FROM TRAFFIC.
  - INCLUDED NON-SKID, ALL-WEATHER SURFACE FOR ALL ADA PATHS OF TRAVEL.
  - ALL JOINTS BETWEEN TIMBER PANELS/PLYWOOD SHEETS SHALL BE TAPED.

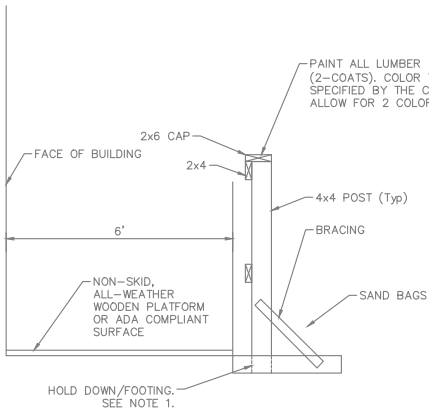
THIS PLAN ACCURATE FOR TRAFFIC CONTROL ONLY



TEMPORARY NOISE AND DUST FENCE DETAIL  
NTS



TEMPORARY TIMBER WALKWAY DETAILS  
NTS



GRAPHIC SCALE  
( IN FEET )  
1 inch = 40 ft.

No.	REVISIONS	DATE	BY

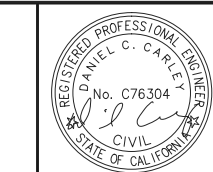
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PHONE: 925-398-4840  
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KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

SAN MATEO COUNTY

**CALIFORNIA DRIVE  
ROUNDABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**








**TRAFFIC HANDLING & STAGE  
CONSTRUCTION PLANS  
STAGE 4**

SHEET NO. 35  
OF 61 SHEETS

**TH-04**

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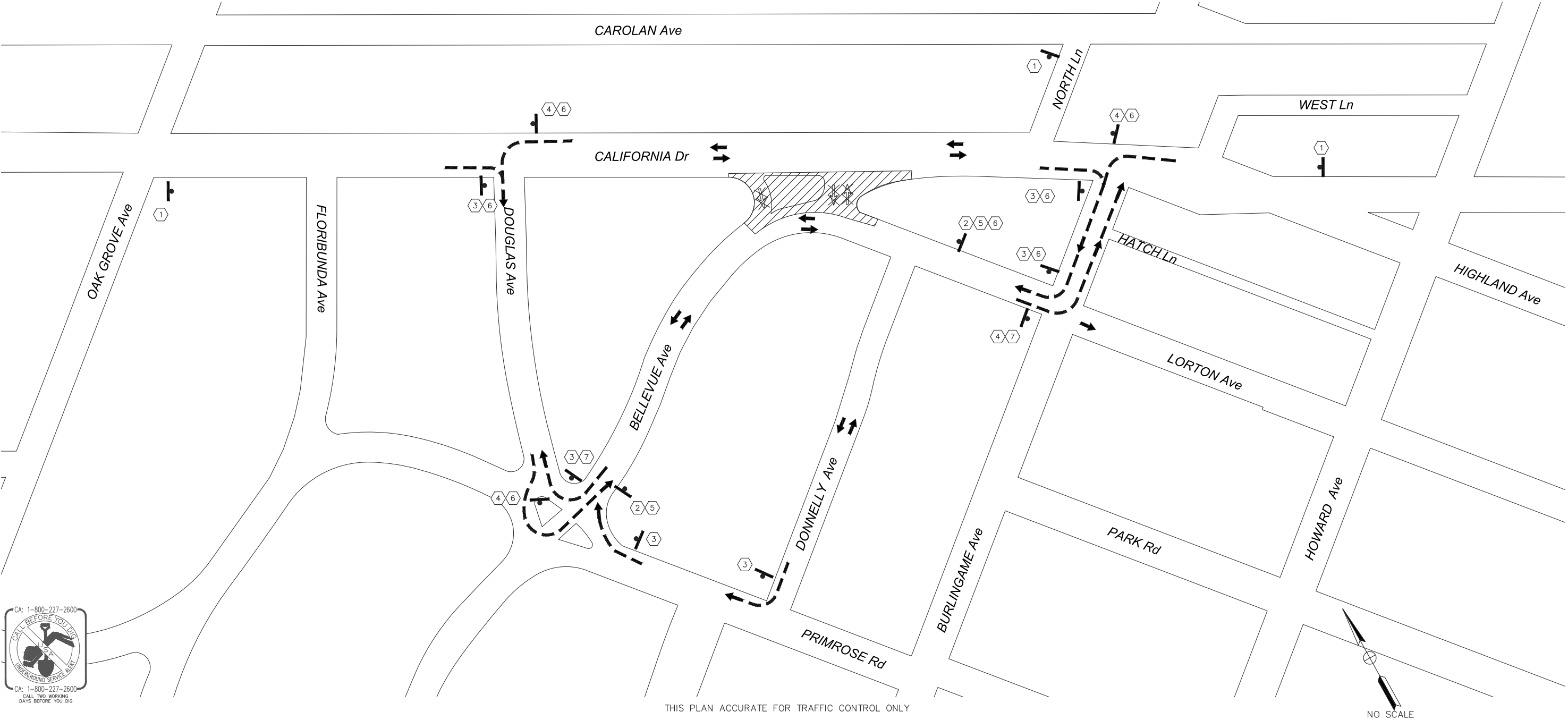
LEGEND:

-  ROAD CLOSED
-  DIRECTION OF DETOUR
-  TEMPORARY CONSTRUCTION AREA SIGN
-  TEMPORARY CONSTRUCTION AREA SIGN No.
-  CONSTRUCTION AREA

CONSTRUCTION NOTES (THIS SHEET ONLY):

1. SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. ALL DETOUR ROUTE SIGNING MUST BE IN PLACE PRIOR TO CLOSURE OF CALIFORNIA/BELLEVUE INTERSECTION.

ADVANCED WARNING AND DETOUR SIGNS			
SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE (L x D)
1	W20-1	ROAD WORK AHEAD	48"x48"
2	W20-3	ROAD CLOSED AHEAD	48"x48"
3	M4-10R	DETOUR (Rt ARROW)	48"x18"
4	M4-10L	DETOUR (Lt ARROW)	48"x18"
5	SC3(CA)	DETOUR (UP ARROW)	48"x18"
6	CUSTOM	BELLEVUE AVENUE	36"x18"
7	CUSTOM	CALIFORNIA AVENUE	36"x18"



No.	REVISIONS	DATE	BY

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**CALIFORNIA DRIVE  
ROUNDBABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**  
SAN MATEO COUNTY  
CA








**DETOUR PLAN  
STAGE 1 & 2**

SHEET NO. 36  
OF 61 SHEETS  
**DE-01**

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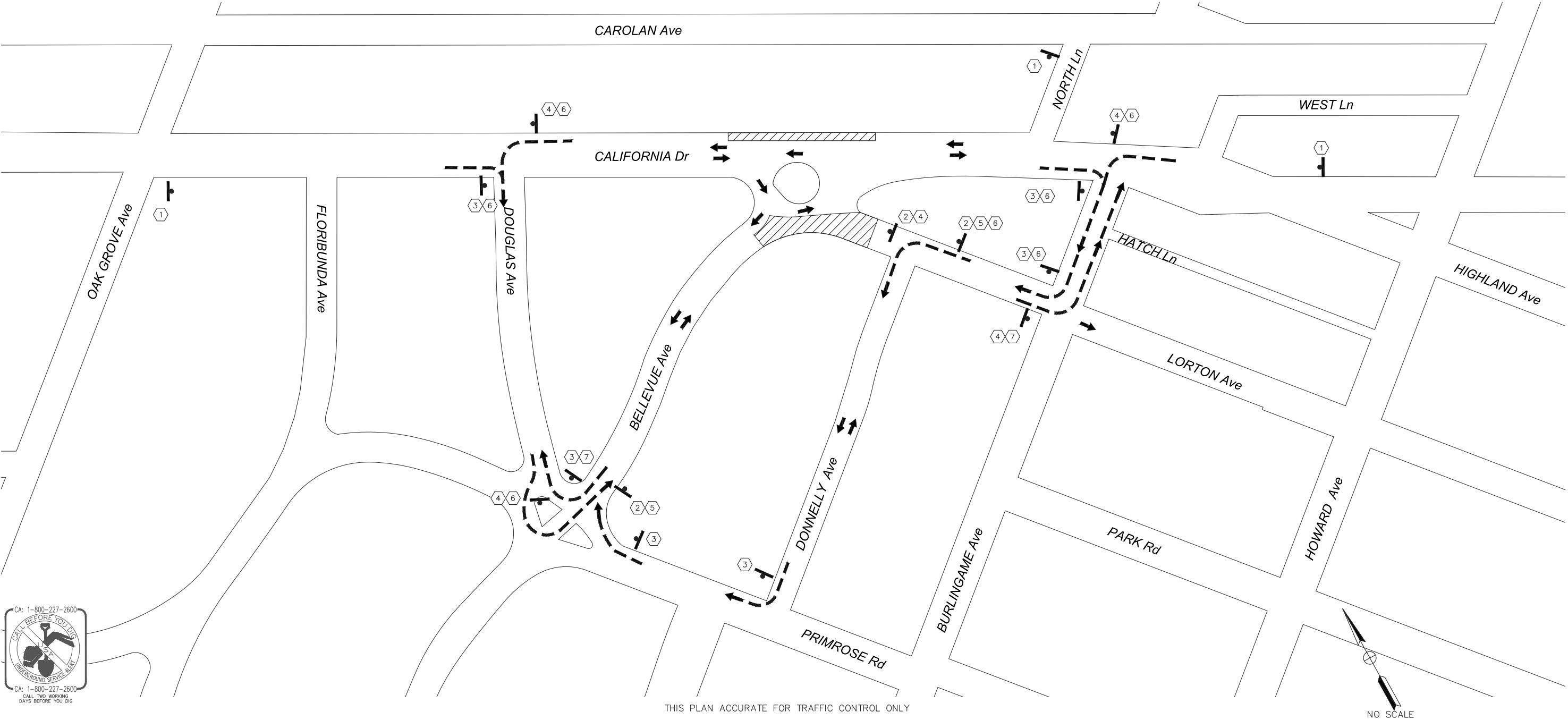
LEGEND:

-  ROAD CLOSED
-  DIRECTION OF DETOUR
-  TEMPORARY CONSTRUCTION AREA SIGN
-  TEMPORARY CONSTRUCTION AREA SIGN No.
-  CONSTRUCTION AREA

CONSTRUCTION NOTES (THIS SHEET ONLY):

1. SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. ALL DETOUR ROUTE SIGNING MUST BE IN PLACE PRIOR TO CLOSURE OF CALIFORNIA/BELLEVUE INTERSECTION.

ADVANCED WARNING AND DETOUR SIGNS			
SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE (L x D)
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4	M4-10L	DETOUR (Lt ARROW)	48"x18"
5	SC3(CA)	DETOUR (UP ARROW)	48"x18"
6	CUSTOM	BELLEVUE AVENUE	36"x18"
7	CUSTOM	CALIFORNIA AVENUE	36"x18"



THIS PLAN ACCURATE FOR TRAFFIC CONTROL ONLY

NO SCALE



No.	REVISIONS	DATE	BY

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KHA PROJECT	097515003
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SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDBABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**  
SAN MATEO COUNTY  
CA



DETOUR PLAN  
STAGE 3

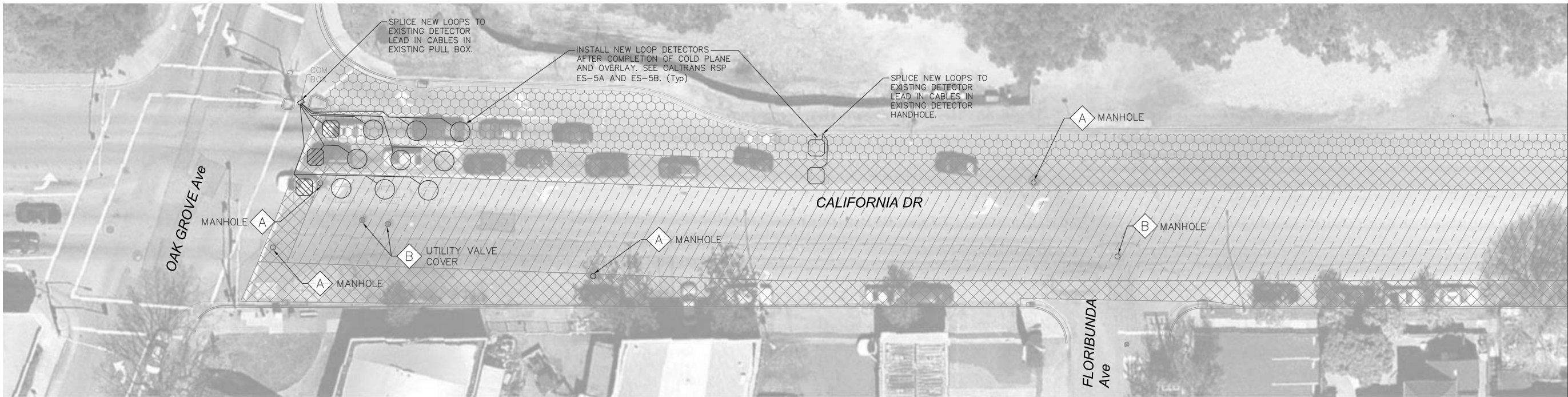
SHEET NO. 37  
OF 61 SHEETS

DE-02

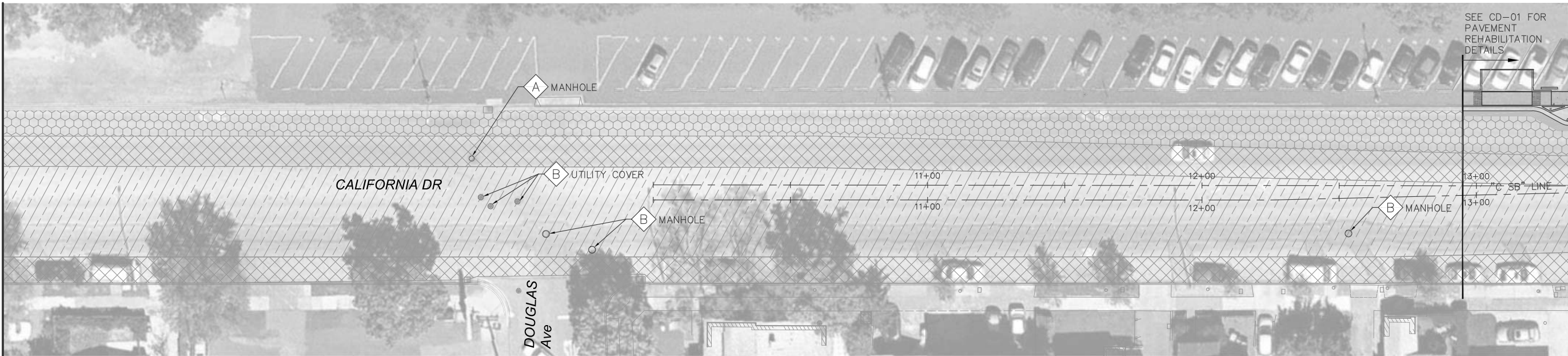


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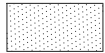
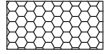






MATCHLINE SEE ABOVE



MATCHLINE SEE BELOW

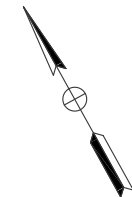


#### LEGEND:

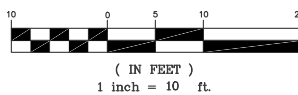
-  1. HMA PAVEMENT (SEE TX-02 FOR SECTION DETAILS)
-  4. COLD PLANE & HMA (TYPE A) OVERLAY DEPTH VARIES (SEE TX-02 FOR DETAILS)
-  5. 0.15' COLD PLANE
-  0.15' HMA (TYPE A) OVERLAY (SEE TX-02 FOR DETAILS)
-  WEDGE COLD PLANE (0.15' Max)
-  0.15' HMA (TYPE A) OVERLAY (SEE TX-03 FOR DETAILS)
-  0.15' HMA (TYPE A) OVERLAY
-  A LOWER AND RAISE MANHOLE OR UTILITY COVER
-  B ADJUST TO GRADE

#### NOTES:

1. THE CONTRACTOR SHALL CALL USA AT LEAST 48 HOURS BEFORE STARTING CONSTRUCTION FOR LOCATING UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. VERIFY UTILITY LOCATIONS PRIOR TO PERFORMING WORK. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITIES WITH AND ADJACENT TO THE PROJECT AREA, INCLUDING BOTH THOSE SHOWN AND NOT SHOWN IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
2. TIE OUT ALL MANHOLES, WATER VALVE COVERS, CLEAN OUTS, PULL BOXES, 5G BOXES, AND MONUMENTS, THEN PROVIDE DATA TO THE CITY REPRESENTATIVE 14 DAYS PRIOR TO ANY SURFACE REHABILITATION.
3. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN A MINIMUM OF 10 WORKING DAYS PRIOR TO BEGINNING COLD PLANE CONSTRUCTION. DO NOT START WORK WITHOUT TRAFFIC CONTROL PLAN APPROVED BY THE CITY.
4. CONTRACTOR SHALL PROTECT MONUMENTS IN PLACE AND SHALL NOTIFY THE CITY INSPECTOR IF ANY ARE IDENTIFIED WITHIN THE LIMITS OF THE WORK.
5. CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING PAINT OR THERMOPLASTIC OUTSIDE OF PAVEMENT REHABILITATION LIMITS, OR LIMITS OF PROPOSED STRIPING AS SHOWN ON SS-SHEETS.
6. COLD PLANE AND EXACT DIGOUT LIMITS SHALL BE MARKED AND CONFIRMED, IN THE FIELD BY THE CITY INSPECTOR PRIOR TO CONSTRUCTION. THE MINIMUM WIDTH OF EXISTING PAVEMENT BETWEEN GUTTER AND PROPOSED DIGOUT LIMITS SHALL NOT BE LESS THAN 1'. IF LESS THAN 1' OF EXISTING PAVEMENT WILL REMAIN BETWEEN DIGOUT AREA AND GUTTER LIP, DIGOUT LIMITS SHALL EXTEND TO THE LIP OF GUTTER.
7. UNLESS OTHERWISE NOTED, ALL UTILITIES ARE TO REMAIN.
8. SEE SS-SHEETS FOR SIGNING AND STRIPING PLANS.
9. INSTALL DETECTOR LOOPS PER CALTRANS RSP ES-5A AND ES-5B. SPLICE NEW LOOPS WITH EXISTING DETECTOR LEAD IN CABLES IN EXISTING PULL BOXES OR DETECTOR HANDHOLES. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER THE LOCATION AND TYPE OF PROPOSED LOOPS PRIOR TO INSTALLATION.
10. CONTRACTOR TO ADJUST UTILITY LIDS/MANHOLES TO GRADE OF NEW FINISH GRADE OF HMA OVERLAY.
11. COLD PLANE TO INCLUDE EXISTING AC WITHIN EXISTING CONCRETE GUTTER (WHERE PRESENT). HMA OVERLAY TO INCLUDE FILLING EXISTING CONCRETE GUTTER TO THE FACE OF EXISTING CURB WHEN EXISTING LIP OF GUTTER IS NOT PRESENT.



#### GRAPHIC SCALE



No.	REVISIONS	DATE	BY

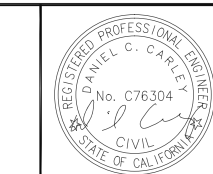
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CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



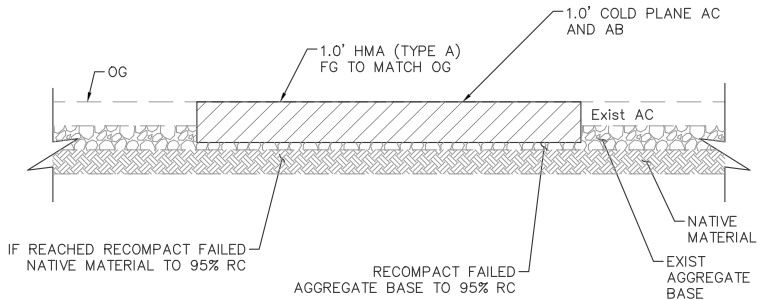
**PAVEMENT  
REHABILITATION PLANS**

SHEET NO. 38  
OF 61 SHEETS

**PV-01**



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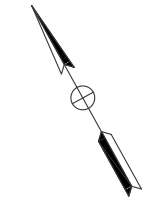
BASE FAILURE REPAIR (DIGOUT) DETAIL

LEGEND:

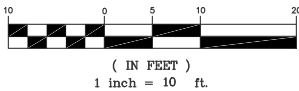
- 1 HMA PAVEMENT (SEE TX-02 FOR SECTION DETAILS)
- 4 COLD PLANE & HMA (TYPE A) OVERLAY DEPTH VARIES (SEE TX-02 FOR DETAILS)
- 5 0.15' COLD PLANE 0.15' HMA (TYPE A) OVERLAY (SEE TX-02 FOR DETAILS)
- WEDGE COLD PLANE (0.15' Max) 0.15' HMA (TYPE A) OVERLAY (SEE TX-03 FOR DETAILS)
- 0.15' HMA (TYPE A) OVERLAY
- A LOWER AND RAISE MANHOLE OR UTILITY COVER
- B ADJUST TO GRADE

NOTES:

- THE CONTRACTOR SHALL CALL USA AT LEAST 48 HOURS BEFORE STARTING CONSTRUCTION FOR LOCATING UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. VERIFY UTILITY LOCATIONS PRIOR TO PERFORMING WORK. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITIES WITH AND ADJACENT TO THE PROJECT AREA, INCLUDING BOTH THOSE SHOWN AND NOT SHOWN IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
- TIE OUT ALL MANHOLES, WATER VALVE COVERS, CLEAN OUTS, PULL BOXES, 5G BOXES, AND MONUMENTS, THEN PROVIDE DATA TO THE CITY REPRESENTATIVE 14 DAYS PRIOR TO ANY SURFACE REHABILITATION.
- CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN A MINIMUM OF 10 WORKING DAYS PRIOR TO BEGINNING COLD PLANE CONSTRUCTION. DO NOT START WORK WITHOUT TRAFFIC CONTROL PLAN APPROVED BY THE CITY.
- CONTRACTOR SHALL PROTECT MONUMENTS IN PLACE AND SHALL NOTIFY THE CITY INSPECTOR IF ANY ARE IDENTIFIED WITHIN THE LIMITS OF THE WORK.
- CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING PAINT OR THERMOPLASTIC OUTSIDE OF PAVEMENT REHABILITATION LIMITS, OR LIMITS OF PROPOSED STRIPING AS SHOWN ON SS-SHEETS.
- COLD PLANE AND EXACT DIGOUT LIMITS SHALL BE MARKED AND CONFIRMED, IN THE FIELD BY THE CITY INSPECTOR PRIOR TO CONSTRUCTION. THE MINIMUM WIDTH OF EXISTING PAVEMENT BETWEEN GUTTER AND PROPOSED DIGOUT LIMITS SHALL NOT BE LESS THAN 1'. IF LESS THAN 1' OF EXISTING PAVEMENT WILL REMAIN BETWEEN DIGOUT AREA AND GUTTER LIP, DIGOUT LIMITS SHALL EXTEND TO THE LIP OF GUTTER.
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- CONTRACTOR TO ADJUST UTILITY LIDS/MANHOLES TO GRADE OF NEW FINISH GRADE OF HMA OVERLAY.
- COLD PLANE TO INCLUDE EXISTING AC WITHIN EXISTING CONCRETE GUTTER (WHERE PRESENT). HMA OVERLAY TO INCLUDE FILLING EXISTING CONCRETE GUTTER TO THE FACE OF EXISTING CURB WHEN EXISTING LIP OF GUTTER IS NOT PRESENT.

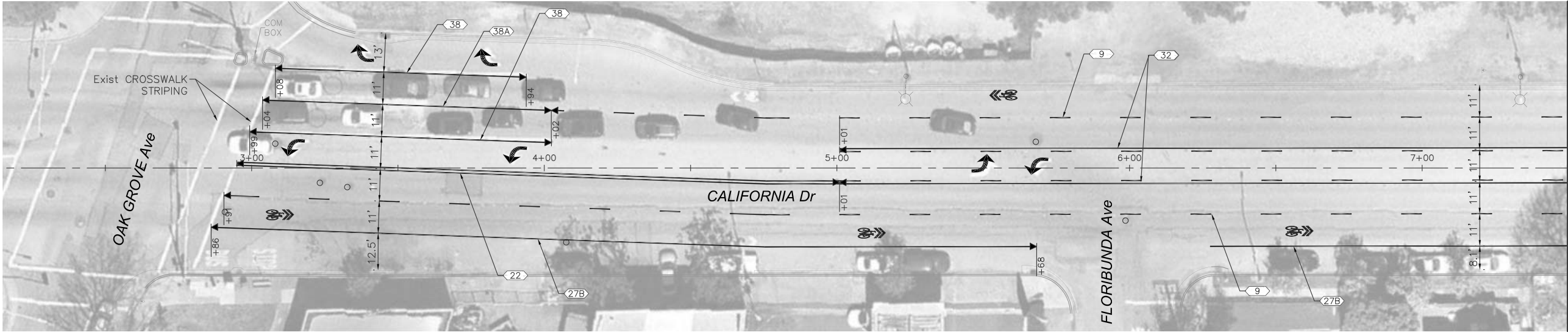


GRAPHIC SCALE

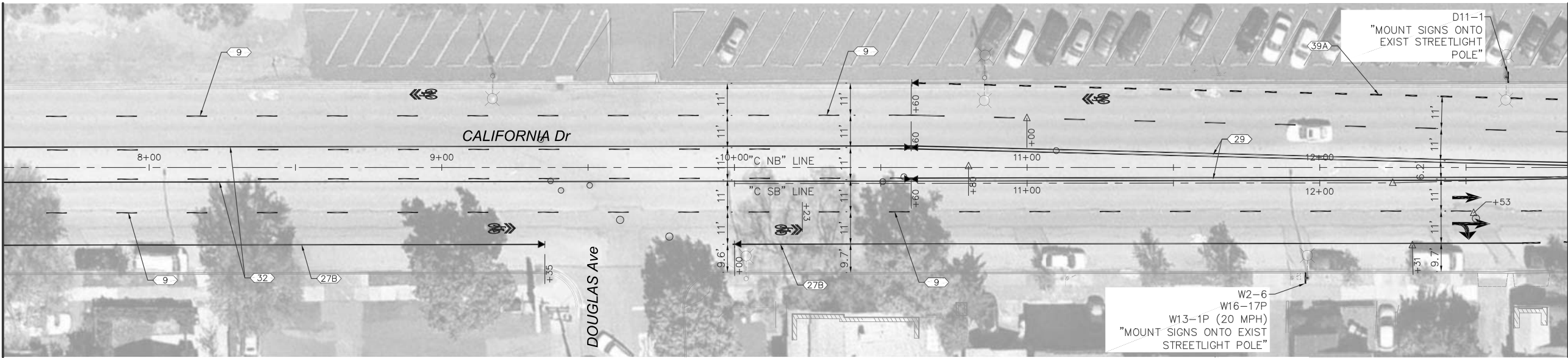


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MATCHLINE SEE BELOW



MATCHLINE SEE ABOVE

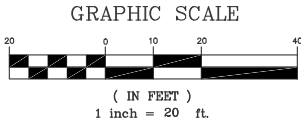
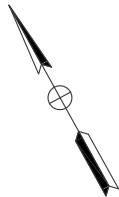
MATCHLINE  
12+85 "C NB" LINE  
SEE SS-02

LEGEND:

- SS PROPOSED STRIPING DETAIL (SEE CALTRANS REVISED STANDARD PLANS)  
SS EXISTING STRIPING DETAIL (SEE CALTRANS REVISED STANDARD PLANS)  
X STRIPING DETAIL CHANGE  
X STRIPING DETAIL LIMIT  
Δ STRIPING ANGLE POINT  
S PROPOSED SHARROW MARKING  
I PROPOSED TYPE I 10' ARROW  
L PROPOSED TYPE IV (L) ARROW  
L PROPOSED TYPE VII (L) ARROW  
R PROPOSED TYPE VII (R) ARROW

GENERAL NOTES:

- ALL EXISTING SIGNS SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED FOR REMOVAL OR RELOCATION.
- ALL SIGN LOCATIONS ARE APPROXIMATE. FINAL SIGN LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
- ALL EXISTING STRIPING CONFLICTING WITH PROPOSED STRIPING SHALL BE REMOVED BY GRINDING PRIOR TO NEW STRIPING INSTALLATION.



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
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4637 CHABOT DRIVE, SUITE 300, PLEASANTON, CA 94588  
PHONE: 925-398-4840  
WWW.KIMLEY-HORN.COM

KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY DW  
DRAWN BY DW  
CHECKED BY DC

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA



**SIGNING & STRIPING PLANS**

SHEET NO. 40  
OF 61 SHEETS

**SS-01**

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MATCHLINE  
12+85 "C NB" LINE  
SEE SS-01

MATCHLINE  
19+00 "C SB" LINE  
SEE SS-01

\*NOTE: INSTALL OBJECT MARKER (TYPE K-1)(CA),  
EMBEDDED IN SOIL, IN FRONT OF R6-4a SIGN.

D1 - ENTRANCE LINE DETAIL  
NO SCALE

D2- YIELD LINE DETAIL  
NO SCALE

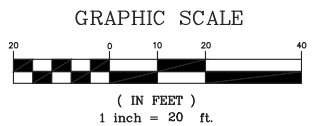
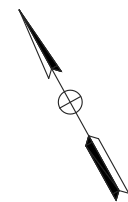
D3 - CROSSWALK DETAIL  
NO SCALE

#### LEGEND:

- SS PROPOSED STRIPING DETAIL  
(SEE CALTRANS REVISED STANDARD PLANS)
- SS EXISTING STRIPING DETAIL  
(SEE CALTRANS REVISED STANDARD PLANS)
- STRIPING CHANGE
- STRIPING LIMIT
- ANGLE POINT
- PROPOSED SHARROW MARKING
- PROPOSED TYPE I 10' ARROW
- PROPOSED TYPE IV (L) ARROW
- PROPOSED TYPE VII (L) ARROW
- PROPOSED TYPE VII (R) ARROW
- ROADSIDE SIGN (SINGLE POST)

#### GENERAL NOTES:

- ALL EXISTING SIGNS SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED FOR REMOVAL OR RELOCATION.
- ALL SIGN LOCATIONS ARE APPROXIMATE. FINAL SIGN LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
- ALL EXISTING STRIPING CONFLICTING WITH PROPOSED STRIPING SHALL BE REMOVED BY GRINDING PRIOR TO NEW STRIPING INSTALLATION.
- ALL PROPOSED STRIPING SHALL BE THERMOPLASTIC.



**Kimley»Horn**

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**CALIFORNIA DRIVE  
ROUNDBABOUT**  
PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY

CA



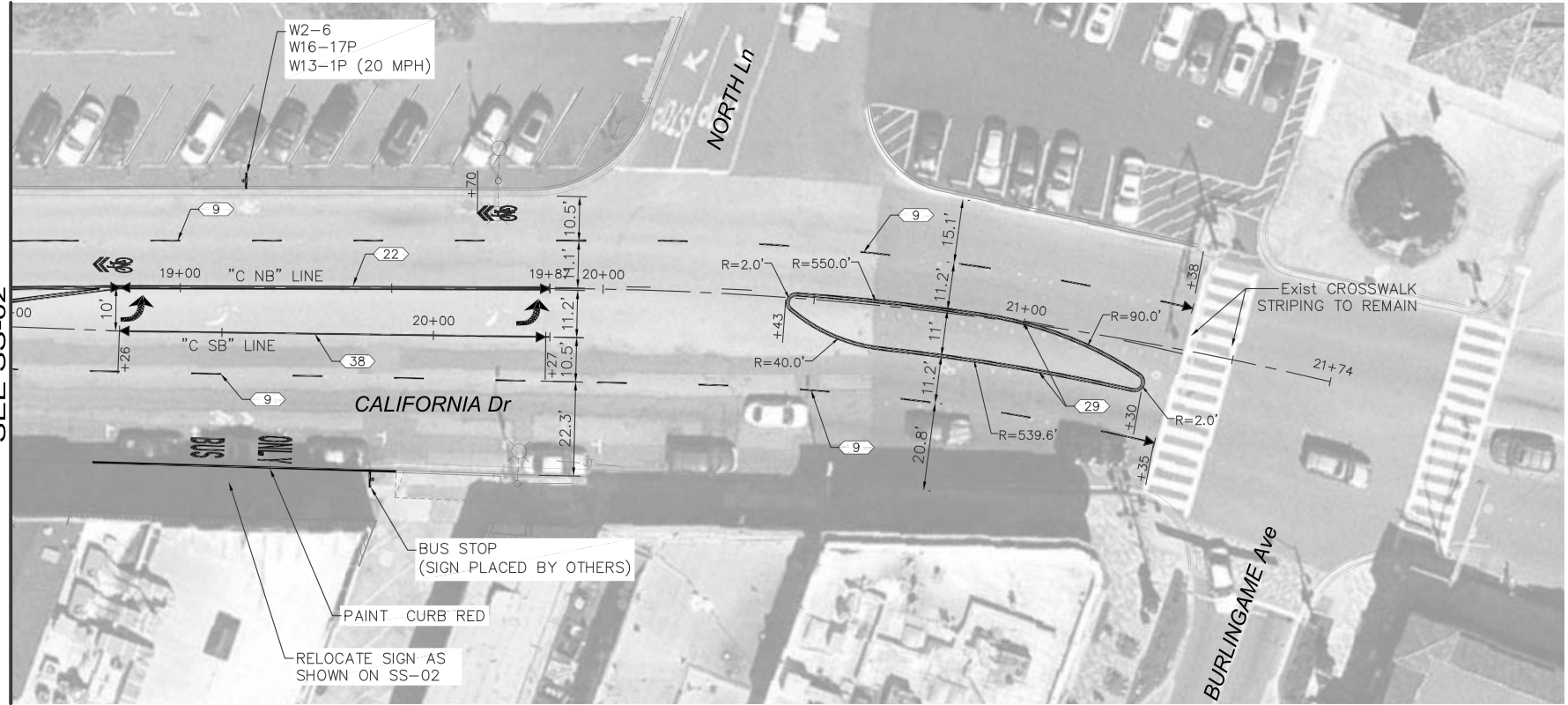
**SIGNING & STRIPING PLANS**

SHEET NO. 41  
OF 61 SHEETS

**SS-02**

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MATCHLINE 19+00 "C SB" LINE  
SEE SS-02



#### LEGEND:

- PROPOSED STRIPING DETAIL (SEE CALTRANS REVISED STANDARD PLANS)
- EXISTING STRIPING DETAIL (SEE CALTRANS REVISED STANDARD PLANS)
- STRIPING DETAIL CHANGE
- STRIPING DETAIL LIMIT
- STRIPING ANGLE POINT
- PROPOSED SHARROW MARKING
- PROPOSED TYPE I 10' ARROW
- PROPOSED TYPE IV (L) ARROW
- PROPOSED TYPE VII (L) ARROW
- PROPOSED TYPE VII (R) ARROW

#### GENERAL NOTES:

- ALL EXISTING SIGNS SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED FOR REMOVAL OR RELOCATION.
- ALL SIGN LOCATIONS ARE APPROXIMATE. FINAL SIGN LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
- ALL EXISTING STRIPING CONFLICTING WITH PROPOSED STRIPING SHALL BE REMOVED BY GRINDING PRIOR TO NEW STRIPING INSTALLATION.

STRIPING SCHEDULE		
DETAIL	PATTERN OR LEGEND	INSTALL (LF)
(9)	LANE LINE	2915
(22)	NO PASSING ZONE - TWO DIRECTION	360
(25)	LEFT EDGELINE	750
(27B)	RIGHT EDGELINE	1005
(29)	MEDIAN ISLAND	560
(32)	TWO-WAY LEFT TURN LANES	560
(38)	CHANNELIZING LINE	290
(38A)	CHANNELIZING LINE	1095
(39A)	INTERSECTION LINE (BIKE LANE LINE)	615
(40)	LANE LINE EXTENSIONS THROUGH INTERSECTIONS	50
TOTAL		8200

ALL STRIPING IS TO BE THERMOPLASTIC UNLESS OTHERWISE NOTED

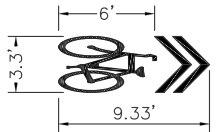
#### SIGN SCHEDULE

MUTCD CODE	DESCRIPTION	INSTALL	SALVAGE	RELOCATE	SIZE
R1-1	STOP	-	3	-	"30x30"
R1-2	YIELD	7	-	1	30"x30"x30"
R1-6	IN-STREET PED CROSSING	5	-	2	12"x36"
R3-2	NO LEFT TURN	-	-	-	24"x24"
R4-7	KEEP RIGHT	4	-	-	24"x30"
R4-11	BICYCLES MAY USE FULL LANE	4	-	-	30"x30"
R5-1	DO NOT ENTER	-	2	-	30"x30"
R6-1(R)	ONE WAY	1	-	-	54"x18"
R6-4a	ROUNDAABOUT DIRECTIONAL (3 CHEVRONS)	4	-	-	48"x24"
R25A (CA)	LOADING ONLY	1	-	-	12"x18"
R26 (CA)	NO PARKING ANYTIME	-	2	-	12"x18"
R32 (CA)	TIMED PARKING	-	3	-	12"x18"
W2-6	ROUNDAABOUT WARNING	3	-	-	30"x30"
W11-2	PEDESTRIAN	-	1	4	30"x30"
W11a-2	PEDESTRIAN CROSSWALK	-	1	-	30"x30"
W12-1	DOUBLE ARROW	1	-	-	30"x30"
W13-1P	ADVISORY SPEED (20 MPH)	3	-	-	18"x18"
W13-1P	ADVISORY SPEED (25 MPH)	-	1	-	18"x18"
W16-7P	DOWNWARD DIAGONAL ARROW	2	2	2	24"x12"
W16-17P	ROUNDAABOUT	3	-	-	24"x12"
G8-1	STREET NAME	4	-	-	VAR"x18"
D11-1	BIKE ROUTE	7	-	-	24"x18"
M6-1	DIRECTIONAL ARROW (RIGHT)	-	-	1	-
I-8	LIBRARY	-	-	1	-
OM1-1	OBJECT MARKER	-	2	-	18"x18"
OM2-1H	OBJECT MARKER	4	-	-	12"x6"
-	WALK YOUR BIKE (SPECIAL)	4	-	-	24"x18"
-	BIKE ROUTE (SPECIAL)	-	1	-	-
-	STREET NAME	-	3	-	-
-	LORTON AVE NEXT RIGHT	-	1	-	-
-	KEEP RIGHT	-	2	-	-
-	CITY HALL AND CITY LIBRARY	-	-	2	-
TOTAL		57	24	13	

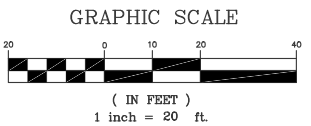
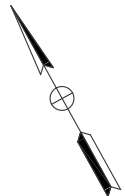
#### MARKING SCHEDULE

PATTERN OR LEGEND	INSTALL/REFRESH	
	No.	TOTAL SQ. FT.
4" WHITE (THERMOPLASTIC)	45	15
12" WHITE (D1) (THERMOPLASTIC)	-	72
WHITE (D2) (THERMOPLASTIC)	-	99
24" WHITE (D3) (THERMOPLASTIC)	418	836
(THERMOPLASTIC) TYPE I (10')	7	98
(THERMOPLASTIC) TYPE VII (L)	5	135
(THERMOPLASTIC) TYPE VII (R)	3	81
(THERMOPLASTIC) TYPE IV (L)	7	105
(THERMOPLASTIC) TYPE IV (R)	2	30
(THERMOPLASTIC) "SHARROW"	21	242
(THERMOPLASTIC) BUS WORD	1	20
(THERMOPLASTIC) ONLY WORD	1	22
TOTAL		1755

\*FOR ADDITIONAL DETAILS, SEE CALTRANS Std PLAN A24C.



SHARROW DETAIL  
NO SCALE



No.	REVISIONS	DATE	BY

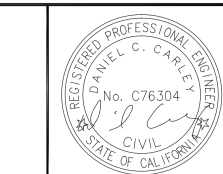
**Kimley»Horn**

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PHONE: 925-398-4840  
WWW.KIMLEY-HORN.COM

KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

**CALIFORNIA DRIVE  
ROUNDAABOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY



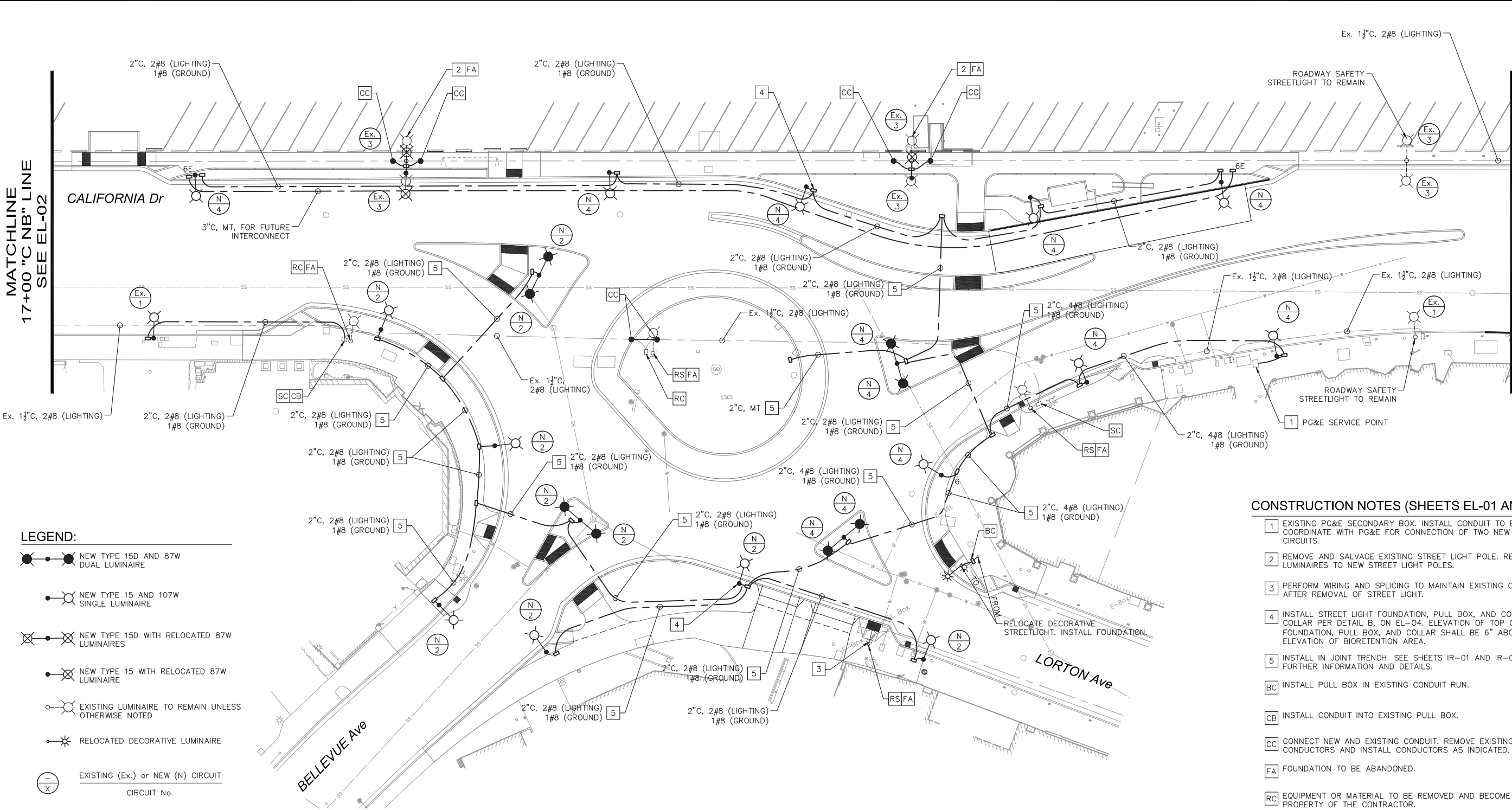
**SIGNING & STRIPING PLANS**

SHEET NO. 42  
OF 61 SHEETS

**SS-03**



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LEGEND:

- NEW TYPE 15D AND 87W DUAL LUMINAIRE
- NEW TYPE 15 AND 107W SINGLE LUMINAIRE
- NEW TYPE 15D WITH RELOCATED 87W LUMINAIRES
- NEW TYPE 15 WITH RELOCATED 87W LUMINAIRE
- EXISTING LUMINAIRE TO REMAIN UNLESS OTHERWISE NOTED
- RELOCATED DECORATIVE LUMINAIRE
- EXISTING (Ex.) or NEW (N) CIRCUIT
- CIRCUIT No.

CONSTRUCTION NOTES (SHEETS EL-01 AND EL-02)

- EXISTING PG&E SECONDARY BOX. INSTALL CONDUIT TO BOX AND COORDINATE WITH PG&E FOR CONNECTION OF TWO NEW LIGHTING CIRCUITS.
- REMOVE AND SALVAGE EXISTING STREET LIGHT POLE. RELOCATE LUMINAIRES TO NEW STREET LIGHT POLES.
- PERFORM WIRING AND SPLICING TO MAINTAIN EXISTING CIRCUIT AFTER REMOVAL OF STREET LIGHT.
- INSTALL STREET LIGHT FOUNDATION, PULL BOX, AND CONCRETE COLLAR PER DETAIL B, ON EL-04. ELEVATION OF TOP OF FOUNDATION, PULL BOX, AND COLLAR SHALL BE 6" ABOVE ELEVATION OF BIORETENTION AREA.
- INSTALL IN JOINT TRENCH. SEE SHEETS IR-01 AND IR-02 FOR FURTHER INFORMATION AND DETAILS.
- INSTALL PULL BOX IN EXISTING CONDUIT RUN.
- INSTALL CONDUIT INTO EXISTING PULL BOX.
- CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.
- FOUNDATION TO BE ABANDONED.
- EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
- REMOVE AND SALVAGE EQUIPMENT.

GENERAL NOTES

- ALL NEW PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED ON PLAN.
- EXISTING CONDUIT LIGHTING SHALL BE MAINTAINED UNTIL NEW STREET LIGHTING IS INSTALLED AND ENERGIZED.
- SEE SHEET DD-02 FOR STANDARD TRENCH DETAIL.



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
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PHONE: 925-398-4840  
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KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY RJD  
DRAWN BY BDP  
CHECKED BY KGA

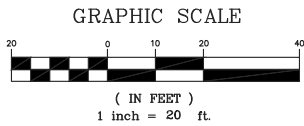
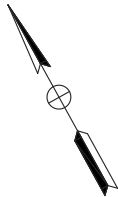
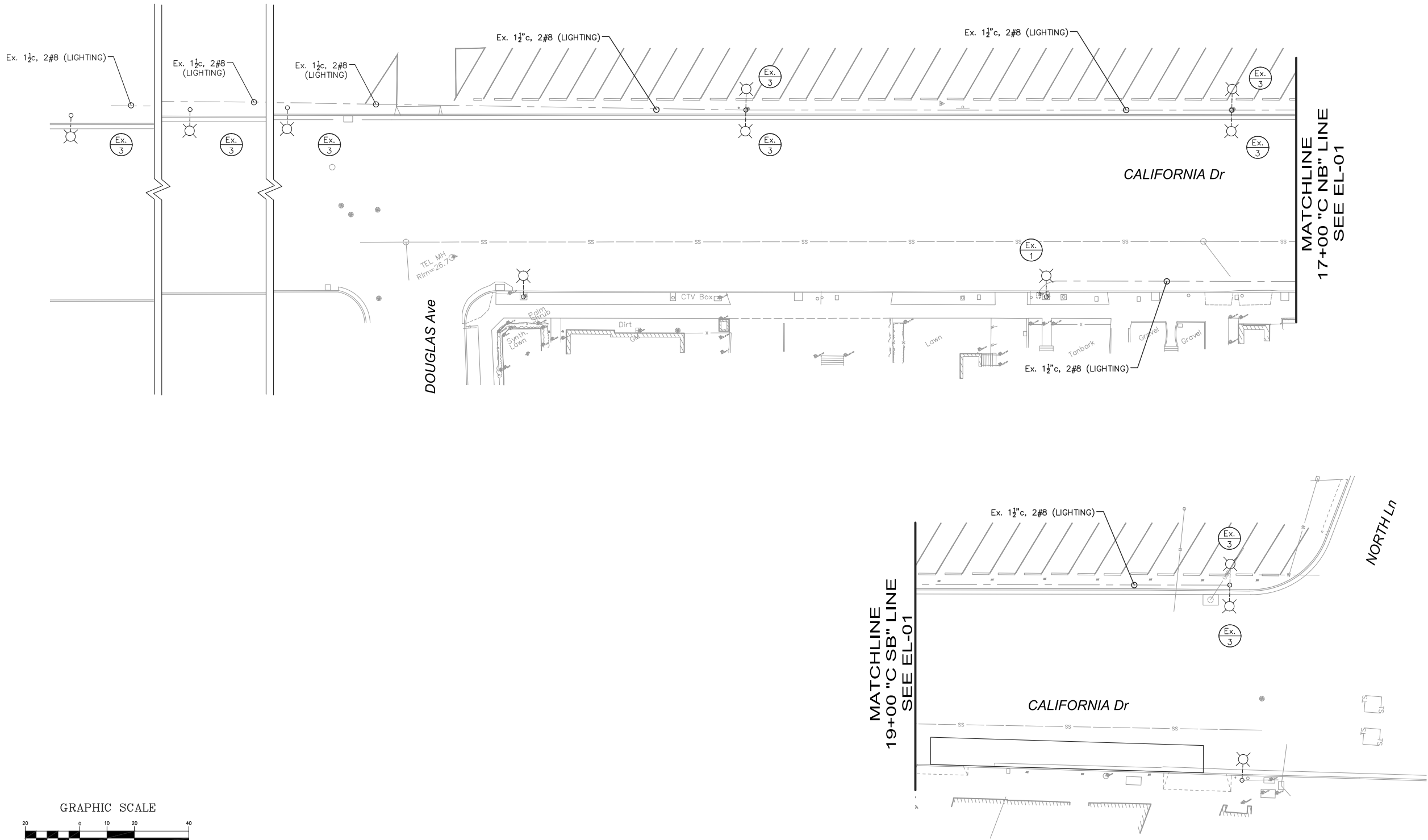
**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**  
SAN MATEO COUNTY  
CA



**LIGHTING PLAN**

SHEET NO. 43  
OF 61 SHEETS  
**EL-01**

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KHA PROJECT  
097515003  
DATE  
12/27/2017  
SCALE AS SHOWN  
DESIGNED BY RJD  
DRAWN BY BDP  
CHECKED BY KGA

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

SAN MATEO COUNTY

CA

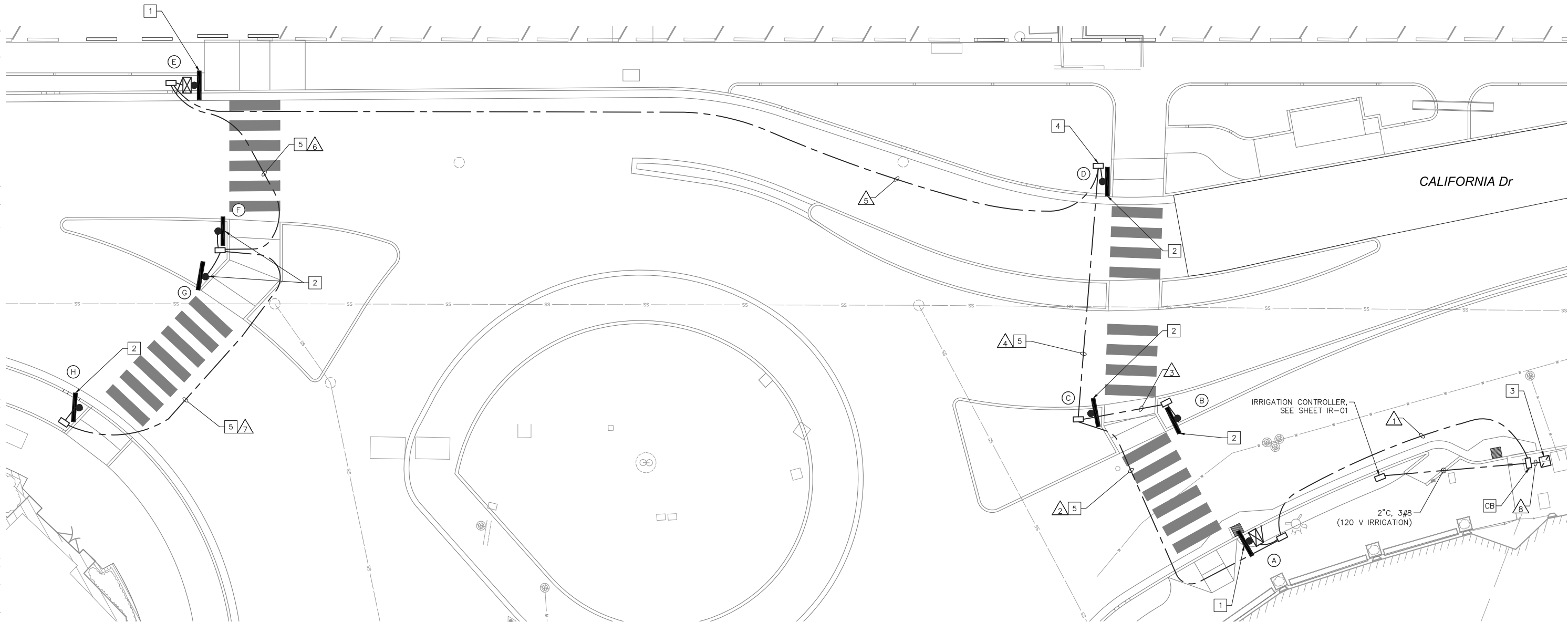


**CALIFORNIA DRIVE APPROACH  
SAFETY LIGHTING**

SHEET NO. 44  
OF 61 SHEETS

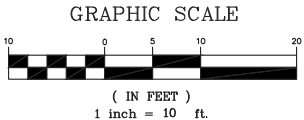
**EL-02**

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CONSTRUCTION NOTES

- FURNISH AND INSTALL RRFB ASSEMBLY ON 1-B POLE PER DETAIL A, SHEET EL-04. FURNISH AND INSTALL POLE MOUNTED RRFB CONTROL ENCLOSURE PER RRFB MANUFACTURER RECOMMENDATION.
- FURNISH AND INSTALL RRFB ASSEMBLY ON 1B POLE PER DETAIL A, SHEET EL-04.
- FURNISH AND INSTALL TWO CIRCUIT BREAKERS (15A,120V,1P) FOR RRFB, AND ONE CIRCUIT BREAKER (20A,120V,1P) FOR IRRIGATION IN EXISTING SERVICE ENCLOSURE.
- INSTALL 1-B FOUNDATION, PULL BOX, AND CONCRETE COLLAR PER DETAIL C, ON EL-04. ELEVATION OF TOP OF FOUNDATION, PULL BOX, AND COLLAR SHALL BE 6" ABOVE ELEVATION OF BIORETENTION AREA.
- INSTALL IN JOINT TRENCH. SEE SHEETS IR-01 AND IR-02 FOR FURTHER INFORMATION AND DETAILS.



LEGEND

- EXISTING SERVICE ENCLOSURE
- RRFB CONTROL ENCLOSURE
- RRFB ASSEMBLY

CONDUCTOR SCHEDULE

AWG OR CABLE	CIRCUIT	CONDUIT RUNS							
		1	2	3	4	5	6	7	8
4C#18	RRFB LIGHT BAR		2	1	1		2	1	
#14	PPB		4	2	2		4	2	
#8	RRFB CONTROL ENCLOSURE POWER	4	2	2	2	2			4
#8	IRRIGATION CONTROL POWER								2
#8	GROUND	1	1	1	1	1	1	1	1
	CONDUIT SIZE (IN)	2"	2"	2"	2"	2"	2"	2"	2"E
	CONDUIT FILL %	9%	17%	11%	11%	5%	13%	8%	13%

ALL CONDUIT AND CONDUCTORS ARE NEW UNLESS NOTED OTHERWISE  
E - EXISTING

POLE AND EQUIPMENT SCHEDULE

INSTALLATION NUMBER	STANDARD		PPB	FRONT SIDE SIGNS	RRFB	ADDITIONAL EQUIPMENT
	TYPE	HEIGHT				
(A)	1-B	10'		W11-2 W16-7P(LEFT)	1	RRFB CONTROLLER AND CABINET ENCLOSURE
(B)	1-B	10'		W11-2 W16-7P(RIGHT)	1	
(C)	1-B	10'		W11-2 W16-7P(RIGHT)	1	
(D)	1-B	10'		W11-2 W16-7P(LEFT)	1	
(E)	1-B	10'		W11-2 W16-7P(LEFT)	1	RRFB CONTROLLER AND CABINET ENCLOSURE
(F)	1-B	10'		W11-2 W16-7P(RIGHT))	1	
(G)	1-B	10'		W11-2 W16-7P(RIGHT)	1	
(H)	1-B	10'		W11-2 W16-7P(LEFT)	1	

\* ALL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE

GENERAL NOTES

- ALL NEW PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED ON PLAN.

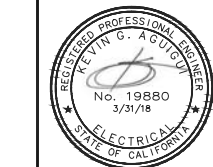
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SAN MATEO COUNTY

**CALIFORNIA DRIVE  
ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**



**RECTANGULAR RAPID  
FLASHING BEACON PLAN**

SHEET NO. 45  
OF 61 SHEETS

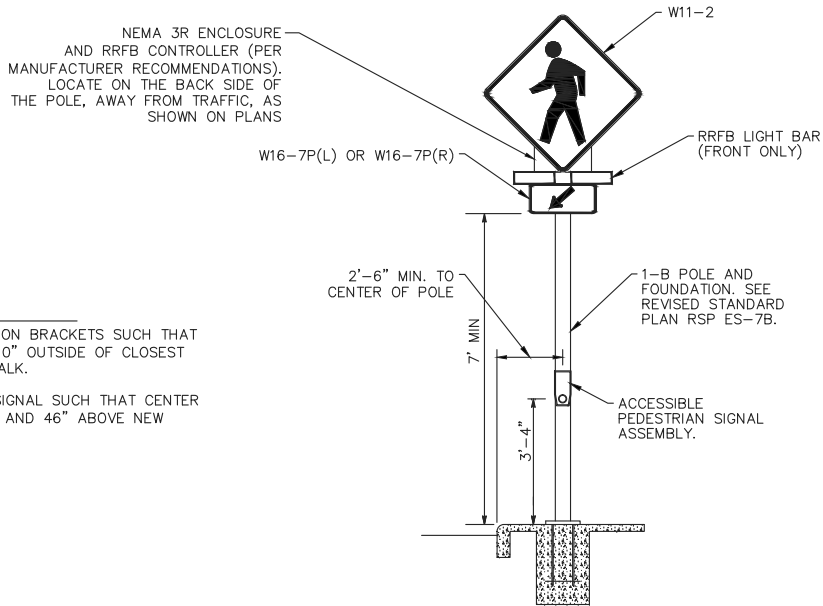
**EL-03**



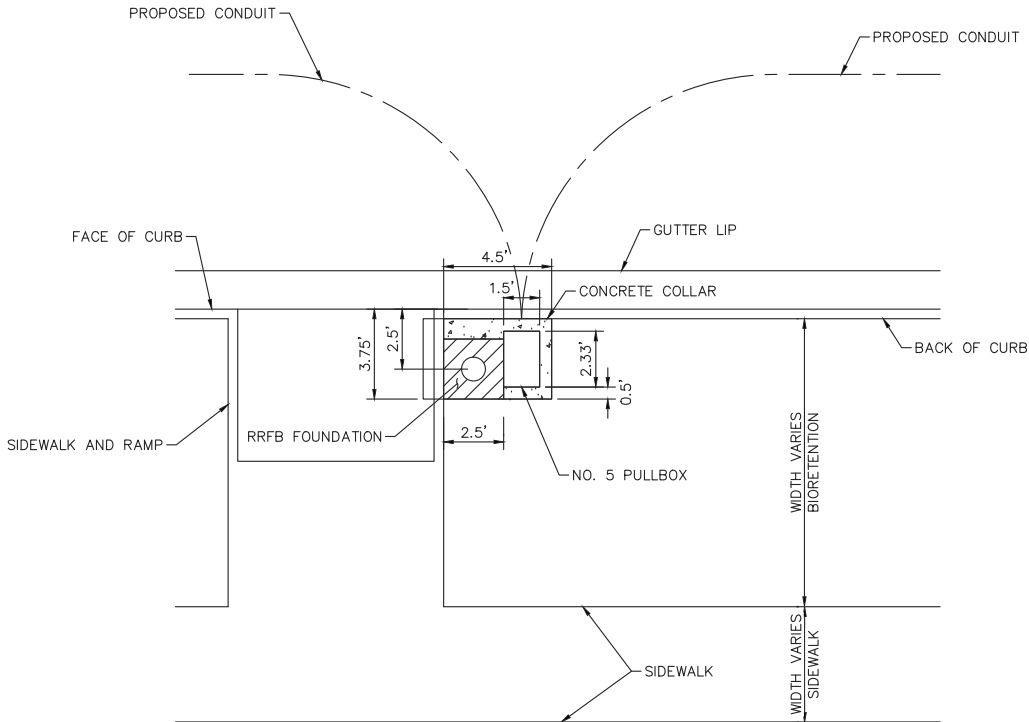
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NOTES (DETAIL A ONLY)

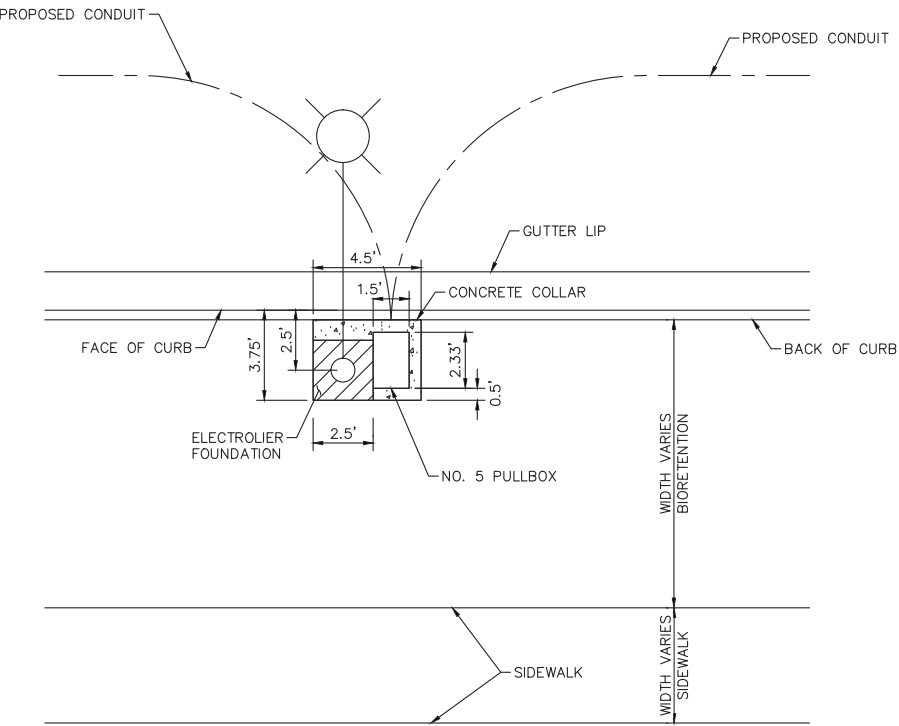
1. INSTALL PUSH BUTTON ON EXTENSION BRACKETS SUCH THAT PUSH BUTTON IS NO MORE THAN 10" OUTSIDE OF CLOSEST EDGE OF THE BACK OF THE SIDEWALK.
2. INSTALL ACCESSIBLE PEDESTRIAN SIGNAL SUCH THAT CENTER OF PUSH BUTTON IS BETWEEN 40" AND 46" ABOVE NEW SIDEWALK SURFACE.



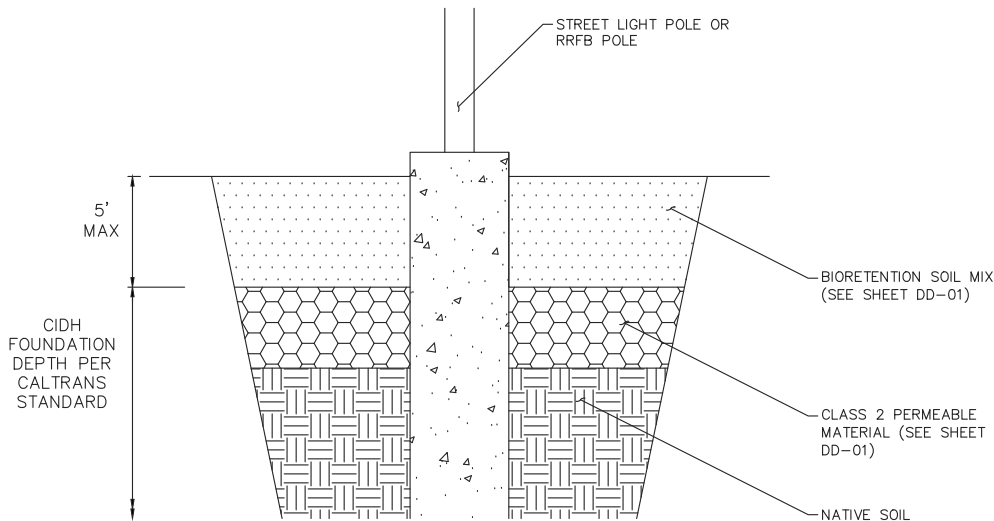
**DETAIL A**  
**RRFB ASSEMBLY ON 1-B POLE**  
N.T.S.



**DETAIL C**  
**1-B POLE AND PULL BOX**  
**IN BIORETENTION AREA INSTALLATION DETAIL**  
N.T.S.



**DETAIL B**  
**LED STREET LIGHT AND PULL BOX**  
**IN BIORETENTION AREA INSTALLATION DETAIL**  
N.T.S.



**DETAIL D**  
**POLE FOUNDATION IN BIORETENTION AREA**  
N.T.S.



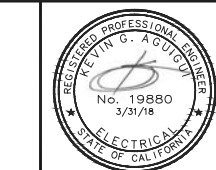
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**CALIFORNIA DRIVE**  
**ROUNDBOUT**  
PREPARED FOR  
**CITY OF BURLINGAME**

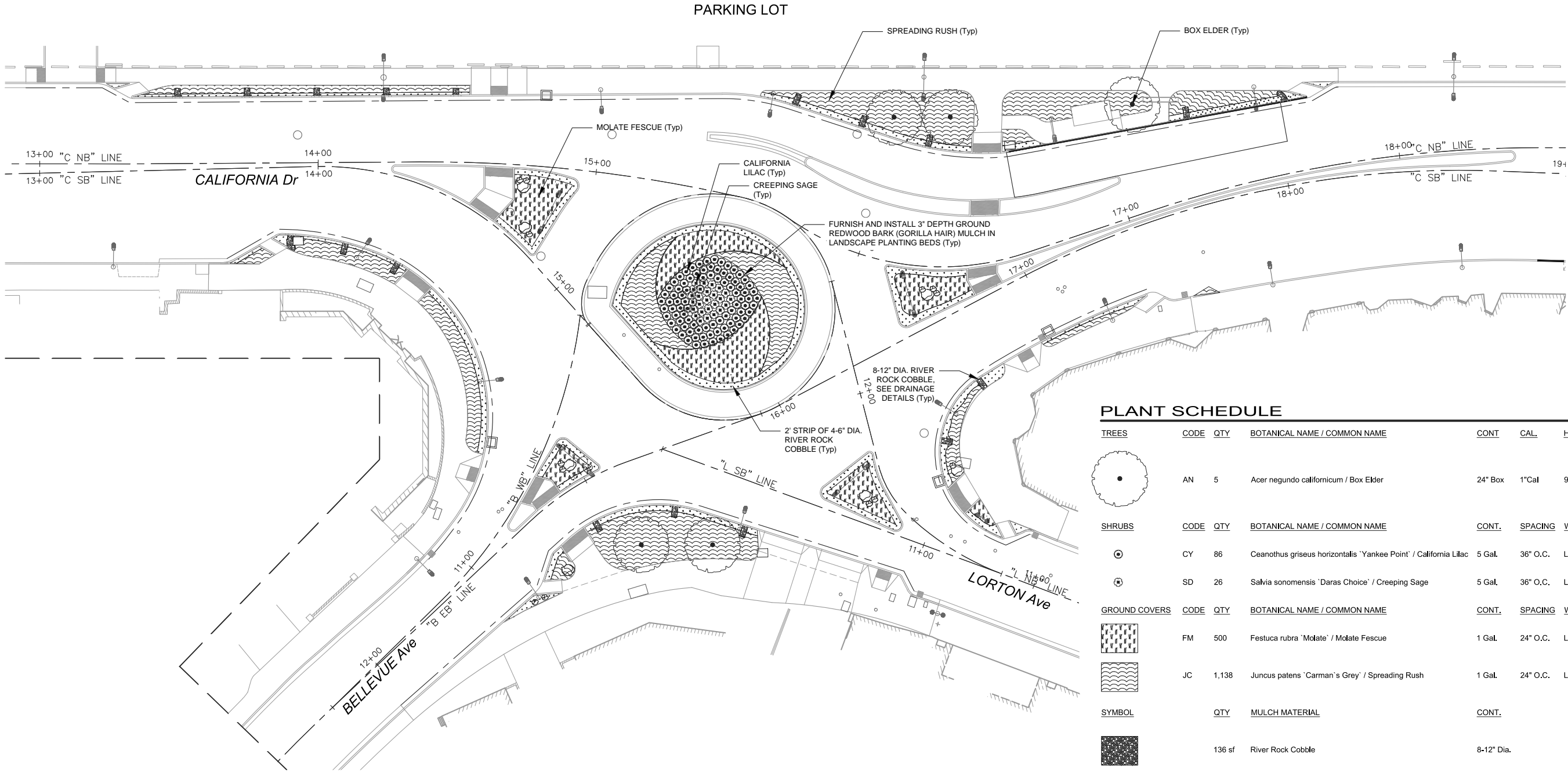
SAN MATEO COUNTY



**ELECTRICAL DETAILS**

SHEET NO. 46  
OF 61 SHEETS  
**EL-04**

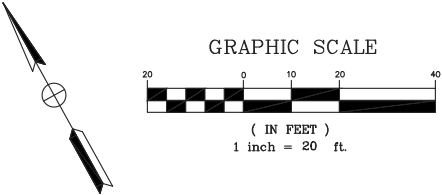
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PLANT SCHEDULE

<u>TREES</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>CAL.</u>	<u>HEIGHT/SPREAD</u>	<u>WUCOLS</u>
	AN	5	Acer negundo californicum / Box Elder	24" Box	1"Cal	9'-10' H x 3'-4' W	M
<u>SHRUBS</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>SPACING</u>	<u>WUCOLS</u>	
	CY	86	Ceanothus griseus horizontalis 'Yankee Point' / California Lilac	5 Gal.	36" O.C.	L	
	SD	26	Salvia sonomensis 'Daras Choice' / Creeping Sage	5 Gal.	36" O.C.	L	
<u>GROUND COVERS</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>SPACING</u>	<u>WUCOLS</u>	
	FM	500	Festuca rubra 'Molate' / Molate Fescue	1 Gal.	24" O.C.	L	
	JC	1,138	Juncus patens 'Carman's Grey' / Spreading Rush	1 Gal.	24" O.C.	L	
<u>SYMBOL</u>	<u>QTY</u>	<u>MULCH MATERIAL</u>	<u>CONT.</u>				
	136 sf	River Rock Cobble	8-12" Dia.				
	2,027 sf	River Rock Cobble	4-6" Dia.				
	20	Fieldstone Boulders - Brown	4-2' Dia.				

- GENERAL NOTES:
- SEE DRAINAGE PLANS FOR BIORETENTION AREA LOCATIONS AND DETAILS.
  - ALL LANDSCAPE PLANTING BEDS ARE TO RECEIVE A MIN. DEPTH OF 3" GROUND REDWOOD BARK (GORILLA HAIR) MULCH.



I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN Michael P. Madsen  
MICHAEL P. MADSEN, LLA 5798

No.

REVISIONS

DATE

BY

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KHA PROJECT  
097515003

DATE  
12/27/2017

SCALE AS SHOWN

DESIGNED BY DW

DRAWN BY DW

CHECKED BY DC

CALIFORNIA DRIVE  
ROUNDBOUT

PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY

CA

LANDSCAPE ARCHITECT

Michael P. Madsen

8/31/2019

12/27/2017

STATE OF CALIFORNIA

LANDSCAPE PLAN

SHEET NO. 47  
OF 61 SHEETS

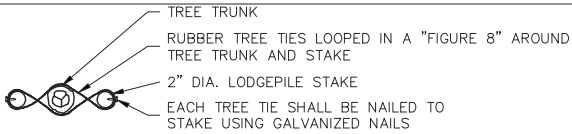
LS-01

Plotted By: Cogswell, Joe    Layout: LS-02    December 22, 2017    12:09:08pm    K:\SND\_TRANS\097515003-California Dr Roundabout-JP\08 CADD\PlanSheets\LS-01 Landscape Plan\_515003.dwg

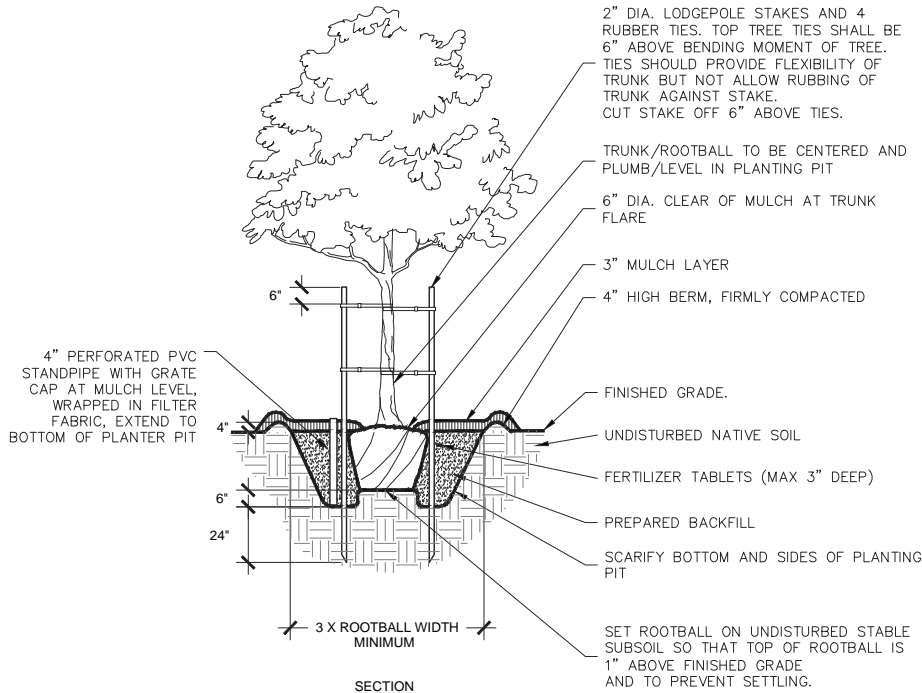
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NOTES:

1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. DOUBLE STAKE ALL TREES #15 (15 GAL.) SIZE AND LARGER.
3. FOR SINGLE STAKED TREES, PLACE STAKE ON WINDWARD SIDE OF TREE.
4. FOR DOUBLE STAKED TREES, PLACE STAKES PERPENDICULAR TO WINDWARD SIDE OF TREE.
5. LOCATE ALL STAKES OUTSIDE OF ROOTBALL. DO NOT DRIVE STAKES INTO ROOTBALL. STAKE SHALL BE DRIVEN MIN. 24" INTO NATIVE SOIL AT BOTTOM OF PLANTING PIT.
6. REMOVE ANYTHING (IE. BURLAP, WIRES, STRAPS, ETC.) THAT COULD GIRDLE TREE OR RESTRICT TREE GROWTH.



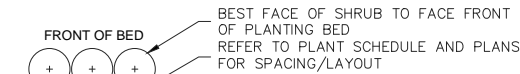
PLAN



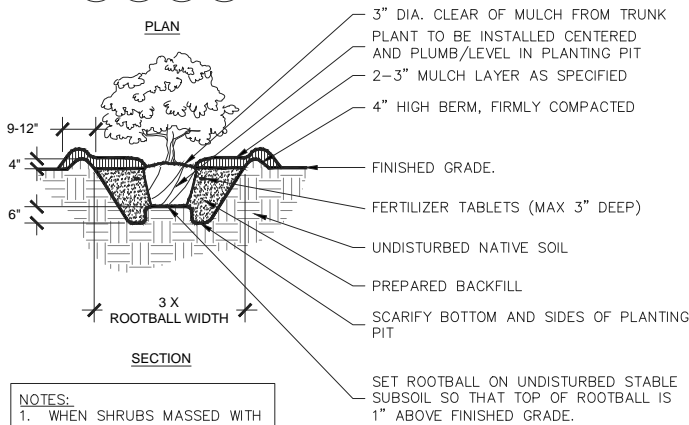
SECTION

A TYPICAL TREE PLANTING

NTS



PLAN



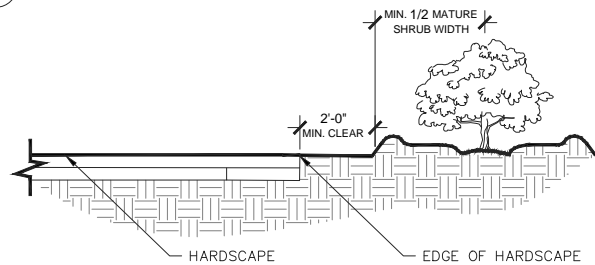
SECTION

NOTES:

1. WHEN SHRUBS MASSES WITH GROUNDCOVER BEDS, ENTIRE BED TO BE AMENDED.
2. WHEN SHRUBS ARE USED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS/HEIGHT

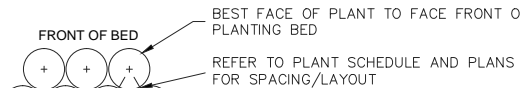
B TYPICAL SHRUB PLANTING

NTS

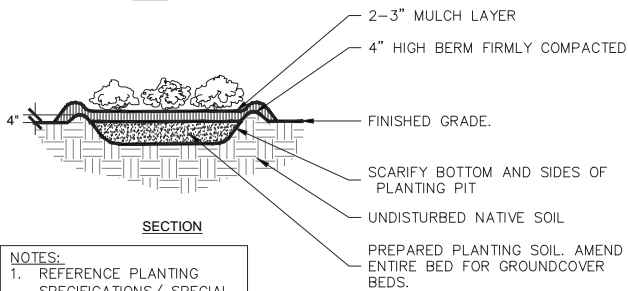


C SHRUB PLANTING AT HARDSCAPE

NTS



PLAN



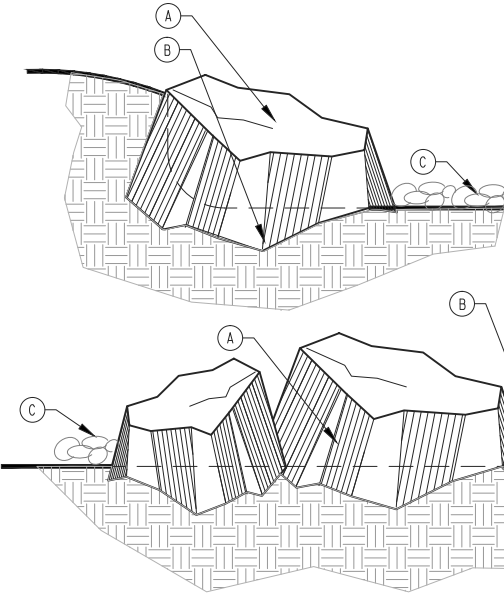
SECTION

NOTES:

1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

D TYPICAL GROUNDCOVER PLANTING

NTS



E DECORATIVE LANDSCAPE ROCK

SECTION

NTS



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SAN MATEO COUNTY



LANDSCAPE DETAILS

SHEET NO. 48  
OF 61 SHEETS

LS-02

## LS-03







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PART 1 GENERAL

1.1 SUMMARY

- A. THE SCOPE OF WORK INCLUDES ALL LABOR, MATERIALS, TOOLS, SUPPLIES, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY FOR, AND INCIDENTAL TO PERFORMING ALL OPERATIONS IN CONNECTION WITH FURNISHING, DELIVERY, AND INSTALLATION OF PLANTING SOIL AND /OR THE MODIFICATION OF EXISTING SITE SOIL FOR USE AS PLANTING SOIL, COMPLETE AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- B. THE SCOPE OF WORK IN THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
1. LOCATE, PURCHASE, DELIVER AND INSTALL IMPORTED PLANTING SOIL AND SOIL AMENDMENTS.
  2. FINE GRADE PLANTING SOIL.
  3. INSTALL COMPOST INTO PLANTING SOIL.
  4. CLEAN UP AND DISPOSAL OF ALL EXCESS AND SURPLUS MATERIAL.

1.2 CONTRACT DOCUMENTS

- A. SHALL CONSIST OF SPECIFICATIONS, GENERAL CONDITIONS, AND THE DRAWINGS. THE INTENT OF THESE DOCUMENTS IS TO INCLUDE ALL LABOR, MATERIALS, AND SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE DOCUMENTS ARE TO BE CONSIDERED AS ONE. WHATEVER IS CALLED FOR BY ANY PARTS SHALL BE AS BINDING AS IF CALLED FOR IN ALL PARTS.

1.3 RELATED DOCUMENTS AND REFERENCES

- A. RELATED DOCUMENTS:
1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION I SPECIFICATIONS, APPLY TO WORK OF THIS SECTION.
  2. RELATED SPECIFICATION SECTION
    - a. PLANTING SPECIFICATIONS
    - b. IRRIGATION SPECIFICATIONS
- B. REFERENCES: THE FOLLOWING SPECIFICATIONS AND STANDARDS OF THE ORGANIZATIONS AND DOCUMENTS LISTED IN THIS PARAGRAPH FORM A PART OF THE SPECIFICATION TO THE EXTENT REQUIRED BY THE REFERENCES THERETO. IN THE EVENT THAT THE REQUIREMENTS OF THE FOLLOWING REFERENCED STANDARDS AND SPECIFICATION CONFLICT WITH THIS SPECIFICATION SECTION THE REQUIREMENTS OF THIS SPECIFICATION SHALL PREVAIL. IN THE EVENT THAT THE REQUIREMENTS OF ANY OF THE FOLLOWING REFERENCED STANDARDS AND SPECIFICATIONS CONFLICT WITH EACH OTHER THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
1. ASTM: AMERICAN SOCIETY OF TESTING MATERIALS CITED SECTION NUMBERS.
  2. U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, 2003. NATIONAL SOIL SURVEY HANDBOOK, TITLE 430-VI. AVAILABLE ONLINE.
  3. US COMPOSTING COUNCIL [WWW.COMPOSTINGCOUNCIL.ORG](http://www.compostingcouncil.org) AND [HTTP://COMPOSTINGCOUNCIL.ORG/ADMIN/WP-CONTENT/PLUGINS/ WP-PDFUPLOAD/PDF/191/LANDSCAPEARCH\\_SPECS.PDF](http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/191/LANDSCAPEARCH_SPECS.PDF).
  4. METHODS OF SOIL ANALYSIS, AS PUBLISHED BY THE SOIL SCIENCE SOCIETY OF AMERICA ([HTTP://WWW.SOILS.ORG/](http://www.soils.org/)).
  5. UP BY ROOTS: HEALTHY SOILS AND TREES IN THE BUILT ENVIRONMENT. 2008. J. URBAN. INTERNATIONAL SOCIETY OF ARBORICULTURE, CHAMPAIGN, IL.

1.4 VERIFICATION

- A. ALL SCALED DIMENSIONS ON THE DRAWINGS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS AND QUANTITIES, AND SHALL IMMEDIATELY INFORM THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN THE INFORMATION ON THE DRAWINGS AND THE ACTUAL CONDITIONS, REFRAINING FROM DOING ANY WORK IN SAID AREAS UNTIL GIVEN APPROVAL TO DO SO BY THE OWNER'S REPRESENTATIVE.

1.5 PERMITS AND REGULATIONS

- A. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATED TO THIS SECTION OF THE WORK UNLESS PREVIOUSLY EXCLUDED UNDER PROVISION OF THE CONTRACT OR GENERAL CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES BEARING ON THE OPERATION OR CONDUCT OF THE WORK AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT A CONFLICT EXISTS BETWEEN PERMIT REQUIREMENTS AND THE WORK OUTLINED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING INCLUDING A DESCRIPTION OF ANY NECESSARY CHANGES AND CHANGES TO THE CONTRACT PRICE RESULTING FROM CHANGES IN THE WORK.
- B. WHEREVER REFERENCES ARE MADE TO STANDARDS OR CODES IN ACCORDANCE WITH WHICH WORK IS TO BE PERFORMED OR TESTED, THE EDITION OR REVISION OF THE STANDARDS AND CODES CURRENT ON THE EFFECTIVE DATE OF THIS CONTRACT SHALL APPLY, UNLESS OTHERWISE EXPRESSLY SET FORTH.
- C. IN CASE OF CONFLICT AMONG ANY REFERENCED STANDARDS OR

SECTION: PLANTING SOIL

CODES OR AMONG ANY REFERENCED STANDARDS AND CODES AND THE SPECIFICATIONS, THE MORE RESTRICTIVE STANDARD SHALL APPLY OR OWNER'S REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.

- D. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATION TITLE 23 WATERS, DIVISION 2 DEPARTMENT OF WATER RESOURCES CHAPTER 2.7 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, 492.5 SOIL MANAGEMENT REPORT.

1. WHERE REQUIREMENTS OF SPECIFICATION SECTION PLANTING SOIL ARE MORE STRINGENT THAN THE CALIFORNIA CODE, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

1.6 PROTECTION OF WORK, PROPERTY AND PERSON

- A. THE CONTRACTOR SHALL ADEQUATELY PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES OR INJURY DUE TO THE CONTRACTOR'S ACTIONS.

1.7 CHANGES IN WORK

- A. THE OWNER'S REPRESENTATIVE MAY ORDER CHANGES IN THE WORK, AND THE CONTRACT SUM ADJUSTED ACCORDINGLY. ALL SUCH ORDERS AND ADJUSTMENTS PLUS CLAIMS BY THE CONTRACTOR FOR EXTRA COMPENSATION MUST BE MADE AND APPROVED IN WRITING BEFORE EXECUTING THE WORK INVOLVED.
- B. ALL CHANGES IN THE WORK, NOTIFICATIONS AND CONTRACTOR'S REQUEST FOR INFORMATION (RFI) SHALL CONFORM TO THE CONTRACT GENERAL CONDITION REQUIREMENTS.

1.8 CORRECTION OF WORK

- A. THE CONTRACTOR SHALL RE-EXECUTE ANY WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT AND SHALL REMEDY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP UPON WRITTEN NOTICE FROM THE OWNER'S REPRESENTATIVE, AT THE SOONEST POSSIBLE TIME THAT CAN BE COORDINATED WITH OTHER WORK AND SEASONAL WEATHER DEMANDS BUT NOT MORE THAN 180 (ONE HUNDRED AND EIGHTY) DAYS AFTER NOTIFICATION.

1.9 DEFINITIONS

- A. ACCEPTABLE DRAINAGE: DRAINAGE RATE IS SUFFICIENT FOR THE PLANTS TO BE GROWN. NOT TOO FAST AND NOT TOO SLOW. TYPICAL RATES FOR INSTALLED PLANTING SOIL ARE BETWEEN 1 – 5 INCHES PER HOUR. TURF SOILS ARE OFTEN HIGHER, BUT DRAINAGE RATES ABOVE 2 – 3 INCHES PER HOUR WILL DRY OUT VERY FAST. IN NATURAL UNDISTURBED SOIL A MUCH LOWER DRAINAGE RATE, AS LOW AS 1/8TH INCH PER HOUR CAN STILL SUPPORT GOOD PLANT GROWTH. WETLAND PLANTS CAN GROW ON TOP OF PERCHED WATER LAYERS OR EVEN WITHIN SEASONAL PERCHED WATER LAYERS, BUT COULD BECOME UNSTABLE IN HIGH WIND EVENTS.
- B. AMENDMENT: MATERIAL ADDED TO TOPSOIL TO PRODUCE PLANTING SOIL MIX. AMENDMENTS ARE CLASSIFIED AS GENERAL SOIL AMENDMENTS, FERTILIZERS, BIOLOGICAL, AND PH AMENDMENTS.
- C. BIOLOGICAL AMENDMENT: AMENDMENTS SUCH AS MYCORRHIZAL ADDITIVES, COMPOST TEA OR OTHER PRODUCTS INTENDED TO CHANGE THE SOIL BIOLOGY.
- D. COMPACTED SOIL: SOIL WHERE THE DENSITY OF THE SOIL IS GREATER THAN THE THRESHOLD FOR ROOT LIMITING, AND FURTHER DEFINED IN THIS SPECIFICATION.
- E. COMPOST: WELL DECOMPOSED STABLE ORGANIC MATERIAL AS DEFINED BY THE US COMPOSTING COUNCIL AND FURTHER DEFINED IN THIS SPECIFICATION.
- F. DRAINAGE: THE RATE AT WHICH SOIL WATER MOVES THROUGH THE SOIL TRANSITIONING THE SOIL FROM SATURATED CONDITION TO FIELD CAPACITY. MOST OFTEN EXPRESSED AS SATURATED HYDRAULIC CONDUCTIVITY (KSAT); UNITS ARE INCHES PER HOUR).
- G. END OF WARRANTY ACCEPTANCE: THE DATE WHEN THE OWNER'S REPRESENTATIVE ACCEPTS THAT THE PLANTS AND WORK IN THIS SECTION MEET ALL THE REQUIREMENTS OF THE WARRANTY. IT IS INTENDED THAT THE MATERIALS AND WORKMANSHIP WARRANTY FOR PLANTING, PLANTING SOIL, AND IRRIGATION (IF APPLICABLE) WORK RUN CONCURRENT WITH EACH OTHER, AND FURTHER DEFINED IN THIS SPECIFICATION.
- H. EXISTING SOIL: MINERAL SOIL EXISTING AT THE LOCATIONS OF PROPOSED PLANTING AFTER THE MAJORITY OF THE CONSTRUCTION WITHIN AND AROUND THE PLANTING SITE IS COMPLETED AND JUST PRIOR TO THE START OF WORK TO PREPARE THE PLANTING AREA FOR SOIL MODIFICATION AND/OR PLANTING, AND FURTHER DEFINED IN THIS SPECIFICATION.
- I. FERTILIZER: AMENDMENT USED FOR THE PURPOSE OF ADJUSTING SOIL NUTRIENT COMPOSITION AND BALANCE.
- J. FINE GRADING: THE FINAL GRADING OF THE SOIL TO ACHIEVE EXACT CONTOURS AND POSITIVE DRAINAGE, OFTEN ACCOMPLISHED BY HAND RAKES OR DRAG RAKES OTHER SUITABLE DEVICES, AND FURTHER DEFINED IN THIS SPECIFICATION, AND FURTHER DEFINED IN THIS SPECIFICATION.
- K. FINISHED GRADE: SURFACE OR ELEVATION OF PLANTING SOIL AFTER FINAL GRADING AND 12 MONTHS OF SETTLEMENT OF THE SOIL, AND FURTHER DEFINED IN THIS SPECIFICATION.
- L. GRADED SOIL: SOIL WHERE THE A HORIZON HAS BEEN STRIPPED AND RELOCATED OR RE-SPREAD; CUTS AND FILLS DEEPER THAN 12 INCHES, AND FURTHER DEFINED IN THIS SPECIFICATION.
- M. INSTALLED SOIL: PLANTING SOIL AND EXISTING SITE SOIL THAT IS SPREAD AND OR GRADED TO FORM A PLANTING SOIL, AND FURTHER DEFINED IN THIS SPECIFICATION.
- N. MINOR DISTURBANCE: MINOR GRADING THAT ONLY ADJUSTS THE A HORIZON SOIL, MINOR SURFACE COMPACTION IN THE TOP 6 INCHES OF THE SOIL, APPLICATIONS OF FERTILIZERS, INSTALLATION OF UTILITY PIPES SMALLER THAN 18 INCHES IN DIAMETER THRU THE SOIL ZONE.
- O. OWNER'S REPRESENTATIVE: THE PERSON OR ENTITY, APPOINTED BY THE OWNER TO REPRESENT THEIR INTEREST IN THE REVIEW AND APPROVAL OF THE WORK AND TO SERVE AS THE CONTRACTING AUTHORITY WITH THE CONTRACTOR. THE OWNER'S REPRESENTATIVE MAY APPOINT OTHER PERSONS TO REVIEW AND APPROVE ANY ASPECTS OF THE WORK.
- P. PED: A CLUMP OR CLOD OF SOIL HELD TOGETHER BY A COMBINATION OF CLAY, ORGANIC MATTER, AND FUNGAL HYPHAE, RETAINING THE ORIGINAL STRUCTURE OF THE HARVESTED SOIL.

Q. PLANTING SOIL: TOPSOIL, OR PLANTING SOIL MIXES WHICH ARE IMPORTED OR EXISTING AT THE SITE, OR MADE FROM COMPONENTS THAT EXIST AT THE SITE, OR ARE IMPORTED TO THE SITE; AND FURTHER DEFINED IN THIS SPECIFICATION.

R. POOR DRAINAGE: SOIL DRAINAGE THAT IS SLOWER THAN THAT TO WHICH THE PLANTS CAN ADAPT. THIS IS A WIDE RANGE OF METRICS, BUT GENERALLY IF THE SOIL IS TURNING GRAY IN COLOR IT IS REASONABLE PREFERABLE TO EITHER TO PLANT MOISTURE ADAPTIVE PLANTS AT SMALLER SIZES THAT ARE YOUNG IN AGE WITH SHALLOW ROOT BALLS OR LOOK AT OPTIONS TO IMPROVE THE DRAINAGE

S. SCARIFY: LOOSENING AND ROUGHENING THE SURFACE OF SOIL AND SUB SOIL PRIOR TO ADDING ADDITIONAL SOIL ON TOP, AND FURTHER DEFINED IN THIS SPECIFICATION.

T. SOIL FRACTURING: DEEP LOOSENING THE SOIL TO THE DEPTHS SPECIFIED BY USING A BACK HOE, AND FURTHER DEFINED IN THIS SPECIFICATION.

U. SOIL HORIZONS: AS DEFINED IN THE USDA NATIONAL SOIL SURVEY HANDBOOK  
[HTTP://WWW.NRCS.USDA.GOV/WPS/PORTAL/NRCS/DETAIL/SOILS/SCIENTISTS/?CID=NRCS142P2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrCS142P2_054242).

V. SOIL TILLING: LOOSENING THE SURFACE OF THE SOIL TO THE DEPTHS SPECIFIED WITH A ROTARY TINE TILLING MACHINE, ROTO TILLER, (OR SPADE TILLER), AND FURTHER DEFINED IN THIS SPECIFICATION.

W. SUBGRADE: SURFACE OR ELEVATION OF SUBSOIL REMAINING AFTER COMPLETING EXCAVATION, OR TOP SURFACE OF A FILL OR BACKFILL, BEFORE PLACING PLANTING SOIL.

X. SUBSTANTIAL COMPLETION ACCEPTANCE: THE DATE AT THE END OF THE PLANTING, PLANTING SOIL, AND IRRIGATION INSTALLATION (IF APPLICABLE) WHERE THE OWNER'S REPRESENTATIVE ACCEPTS THAT ALL WORK IN THESE SECTIONS IS COMPLETE AND THE WARRANTY PERIOD HAS BEGUN. THIS DATE MAY BE DIFFERENT THAN THE DATE OF SUBSTANTIAL COMPLETION FOR THE OTHER SECTIONS OF THE PROJECT, AND FURTHER DEFINED IN THIS SPECIFICATION.

Y. TOPSOIL: NATURALLY PRODUCED AND HARVESTED SOIL FROM THE A HORIZON OR UPPER LAYERS OR THE SOIL AS FURTHER DEFINED IN THIS SPECIFICATION.

Z. UNDISTURBED SOIL: SOILS WITH THE ORIGINAL A HORIZON INTACT THAT HAVE NOT BEEN GRADED OR COMPACTED.

1.10 SUBMITTALS

- A. SEE THE CONTRACT GENERAL CONDITIONS FOR POLICY AND PROCEDURES RELATED TO SUBMITTALS.
- B. SUBMIT ALL PRODUCT SUBMITTALS EIGHT WEEKS PRIOR TO THE START OF THE SOIL WORK.
- C. PRODUCT DATA AND CERTIFICATES: FOR EACH TYPE OF MANUFACTURED PRODUCT, SUBMIT DATA AND CERTIFICATES THAT THE PRODUCT MEETS THE SPECIFICATION REQUIREMENTS, SIGNED BY THE PRODUCT MANUFACTURER, AND COMPLYING WITH THE FOLLOWING:

1. SUBMIT MANUFACTURERS OR SUPPLIER'S PRODUCT DATA AND LITERATURE CERTIFIED ANALYSIS FOR STANDARD PRODUCTS AND BULK MATERIALS, COMPLYING WITH TESTING REQUIREMENTS AND REFERENCED STANDARDS AND SPECIFIC REQUESTED TESTING.
    - a. FOR EACH COMPOST PRODUCT SUBMIT THE FOLLOWING ANALYSIS BY A RECOGNIZED LABORATORY:
      - 1.) PH
      - 2.) SALT CONCENTRATION (ELECTRICAL CONDUCTIVITY)
      - 3.) MOISTURE CONTENT %, WET WEIGHT BASIS
      - 4.) PARTICLE SIZE % PASSING A SELECTED MESH SIZE, DRY WEIGHT BASIS
      - 5.) STABILITY CARBON DIOXIDE EVOLUTION RATE MG CO2-C PER G OM PER DAY
      - 6.) SOLVITA MATURITY TEST
      - 7.) PHYSICAL CONTAMINANTS (INERTS) %, DRY WEIGHT BASIS
      - 8.) US EPA CLASS A STANDARD, 40CFR § 503.13, TABLES 1 AND 3 LEVELS CHEMICAL CONTAMINANTS MG/KG (PPM)
    - b. FOR COARSE SAND PRODUCT SUBMIT THE FOLLOWING ANALYSIS BY A RECOGNIZED LABORATORY:
      - 1.) PH
      - 2.) PARTICLE SIZE DISTRIBUTION (PERCENT PASSING THE FOLLOWING SIEVE SIZES):

3/8 INCH (9.5 MM)  
NO 4 (4.75 MM)  
NO 8 (2.36 MM)  
NO 16(1.18 MM)  
NO 30 (.60 MM)  
NO 50 (.30 MM)  
NO 100 (.15 MM)  
NO 200 (.075 MM)
- D. SAMPLES: SUBMIT SAMPLES OF EACH PRODUCT AND MATERIAL, WHERE REQUIRED BY PART 2 OF THE SPECIFICATION, TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. LABEL SAMPLES TO INDICATE PRODUCT, CHARACTERISTICS, AND LOCATIONS IN THE WORK. SAMPLES WILL BE REVIEWED FOR APPEARANCE ONLY.

1. SUBMIT SAMPLES A MINIMUM OF 8 WEEKS PRIOR TO THE ANTICIPATED DATE OF THE START OF SOIL INSTALLATION.
  2. SAMPLES OF ALL TOPSOIL, COARSE SAND, COMPOST AND PLANTING SOIL SHALL BE SUBMITTED AT THE SAME TIME AS THE PARTICLE SIZE AND PHYSICAL ANALYSIS OF THAT MATERIAL.
- E. SOIL TESTING FOR IMPORTED AND EXISTING TOPSOIL, EXISTING SITE SOIL TO BE MODIFIED AS PLANTING SOIL AND PLANTING SOIL MIXES.
1. TOPSOIL, EXISTING SITE SOIL AND PLANTING SOIL MIX TESTING-SUBMIT SOIL TEST ANALYSIS REPORT FOR EACH SAMPLE OF TOPSOIL, EXISTING SITE SOIL AND PLANTING SOIL FROM AN APPROVED SOIL-TESTING LABORATORY AND WHERE INDICATED IN PART 2 OF THE SPECIFICATION AS FOLLOWS:
    - a. SUBMIT TOPSOIL, PLANTING SOIL, COMPOST, AND COARSE SAND FOR TESTING AT LEAST 8 WEEKS BEFORE SCHEDULED INSTALLATION OF PLANTING SOIL MIXES. SUBMIT PLANTING SOIL MIX TEST NO MORE THAN 2 WEEKS AFTER THE APPROVAL OF

THE TOPSOIL, COMPOST AND COARSE SAND. DO NOT SUBMIT TO THE TESTING LABORATORY, PLANTING SOIL MIXES, FOR TESTING UNTIL ALL TOPSOIL, COMPOST AND COARSE SAND HAVE BEEN APPROVED.

b. IF TESTS FAIL TO MEET THE SPECIFICATIONS, OBTAIN OTHER SOURCES OF MATERIAL, RETEST AND RESUBMIT UNTIL ACCEPTED BY THE OWNER'S REPRESENTATIVE.

c. ALL SOIL TESTING WILL BE AT THE EXPENSE OF THE CONTRACTOR.

2. SUBMIT ALL TESTING REQUIRED BY CALIFORNIA CODE OF REGULATION TITLE 23 WATERS, DIVISION 2 DEPARTMENT OF WATER RESOURCES CHAPTER 2.7 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, 492.5 SOIL MANAGEMENT REPORT.

3. PROVIDE A PARTICLE SIZE ANALYSIS (% DRY WEIGHT) AND USDA SOIL TEXTURE ANALYSIS. SOIL TESTING OF PLANTING SOIL MIXES SHALL ALSO INCLUDE USDA GRADATION (PERCENTAGE) OF GRAVEL, COARSE SAND, MEDIUM SAND, AND FINE SAND IN ADDITION TO SILT AND CLAY.

4. PROVIDE THE FOLLOWING OTHER SOIL PROPERTIES:
- a. PH AND BUFFER PH.
  - b. PERCENT ORGANIC CONTENT BY OVEN DRIED WEIGHT.
  - c. NUTRIENT LEVELS BY PARTS PER MILLION INCLUDING: PHOSPHORUS, POTASSIUM, MAGNESIUM, MANGANESE, IRON, ZINC AND CALCIUM. NUTRIENT TEST SHALL INCLUDE THE TESTING LABORATORY RECOMMENDATIONS FOR SUPPLEMENTAL ADDITIONS TO THE SOIL FOR OPTIMUM GROWTH OF THE PLANTINGS SPECIFIED.
  - d. SOLUBLE SALT BY ELECTRICAL CONDUCTIVITY OF A 1:2 SOIL WATER SAMPLE MEASURED IN MILLIOHM PER CM.
  - e. CATION EXCHANGE CAPACITY (CEC).

1.11 OBSERVATION OF THE WORK

A. THE OWNER'S REPRESENTATIVE MAY OBSERVE THE WORK AT ANY TIME. THEY MAY REMOVE SAMPLES OF MATERIALS FOR CONFORMITY TO SPECIFICATIONS. REJECTED MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE COST OF TESTING MATERIALS NOT MEETING SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR.

B. THE OWNER'S REPRESENTATIVE SHALL BE INFORMED OF THE PROGRESS OF THE WORK SO THE WORK MAY BE OBSERVED AT THE FOLLOWING KEY TIMES IN THE CONSTRUCTION PROCESS. THE OWNER'S REPRESENTATIVE SHALL BE AFFORDED SUFFICIENT TIME TO SCHEDULE VISIT TO THE SITE. FAILURE OF THE OWNER'S REPRESENTATIVE TO MAKE FIELD OBSERVATIONS SHALL NOT RELIEVE THE CONTRACTOR FROM MEETING ALL THE REQUIREMENTS OF THIS SPECIFICATION.

1. EXISTING SOIL CONDITIONS REVIEW: PRIOR TO THE START OF ANY SOIL MODIFICATION THAT WILL UTILIZE OR MODIFY THE EXISTING SOIL.
2. EXCAVATION REVIEW: OBSERVE EACH AREA OF EXCAVATION PRIOR TO THE INSTALLATION OF ANY PLANTING SOIL.
3. COMPLETION OF SOIL MODIFICATIONS REVIEW: UPON COMPLETION OF ALL SOIL MODIFICATION AND INSTALLATION OF PLANTING SOIL.
4. COMPLETION OF FINE GRADING AND SURFACE SOIL MODIFICATIONS REVIEW: UPON COMPLETION OF ALL SURFACE SOIL MODIFICATIONS AND FINE GRADING BUT PRIOR TO THE INSTALLATION OF SHRUBS, GROUND COVERS, OR LAWNS.

1.12 PRE-CONSTRUCTION CONFERENCE

- A. SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE OWNER'S REPRESENTATIVE AT LEAST SEVEN (7) DAYS BEFORE BEGINNING WORK TO REVIEW ANY QUESTIONS THE CONTRACTOR MAY HAVE REGARDING THE WORK, ADMINISTRATIVE PROCEDURES DURING CONSTRUCTION AND PROJECT WORK SCHEDULE.

1.13 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: THE INSTALLER SHALL BE A FIRM HAVING AT LEAST 5 YEARS OF EXPERIENCE OF A SCOPE SIMILAR TO THAT REQUIRED FOR THE WORK, INCLUDING THE PREPARATION, MIXING AND INSTALLATION OF SOIL MIXES TO SUPPORT PLANTING. THE INSTALLER OF THE WORK IN SECTION: PLANTING, SHALL BE THE SAME FIRM INSTALLING THE WORK IN THIS SECTION.

1. INSTALLER FIELD SUPERVISION: WHEN ANY PLANTING SOIL WORK IS IN PROGRESS, INSTALLER SHALL MAINTAIN, ON SITE, AN EXPERIENCED FULL-TIME SUPERVISOR WHO CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.

2. INSTALLER'S FIELD SUPERVISOR SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE AS A FIELD SUPERVISOR INSTALLING SOIL, SHALL BE TRAINED AND PROFICIENT IN THE USE OF FIELD SURVEYING EQUIPMENT TO ESTABLISH GRADES AND CAN COMMUNICATE IN ENGLISH WITH THE OWNER'S REPRESENTATIVE.

3. THE INSTALLER'S CREW SHALL BE EXPERIENCED IN THE INSTALLATION OF PLANTING SOIL, PLANTINGS, AND IRRIGATION (WHERE APPLICABLE) AND INTERPRETATION OF PLANTING PLANS, SOIL INSTALLATION PLANS, AND IRRIGATION PLANS (WHERE APPLICABLE).

4. SUBMIT 3 REFERENCES OF PAST PROJECTS AND EMPLOYEE TRAINING CERTIFICATIONS THAT SUPPORT THAT THE CONTRACTORS MEET ALL OF THE ABOVE INSTALLER QUALIFICATIONS AND APPLICABLE LICENSURES.

B. SOIL TESTING LABORATORY QUALIFICATIONS: AN INDEPENDENT LABORATORY, WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT THE TESTING INDICATED AND THAT SPECIALIZES IN USDA AGRICULTURAL SOIL TESTING, PLANTING SOIL MIXES, AND THE TYPES OF TESTS TO BE PERFORMED. GEOTECHNICAL ENGINEERING TESTING LABS SHALL NOT BE USED.

C. ALL DELIVERED AND INSTALLED PLANTING SOIL SHALL CONFORM TO THE APPROVED SUBMITTALS SAMPLE COLOR, TEXTURE AND APPROVED TEST ANALYSIS.

1. THE OWNER'S REPRESENTATIVE MAY REQUEST SAMPLES OF THE DELIVERED OR INSTALLED SOIL BE TESTED FOR ANALYSIS TO CONFIRM THE PLANTING SOIL CONFORMS TO THE APPROVED MATERIAL.

2. ALL TESTING SHALL BE PERFORMED BY THE SAME SOIL LAB THAT PERFORMED THE ORIGINAL PLANTING SOIL TESTING.

3. TESTING RESULTS SHALL BE WITHIN 10% PLUS OR MINUS OF THE VALUES MEASURED IN THE APPROVED PLANTING SOIL MIXES.

4. ANY PLANTING SOIL THAT FAILS TO MEET THE ABOVE CRITERIA, IF REQUESTED BY THE OWNER'S REPRESENTATIVE, SHALL BE REMOVED AND NEW SOIL INSTALLED.

1.14 SITE CONDITIONS

A. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF ALL SURFACE AND SUBSURFACE CONDITIONS, AND TO NOTIFY THE OWNER'S REPRESENTATIVE, IN WRITING, OF ANY CIRCUMSTANCES THAT WOULD NEGATIVELY IMPACT THE HEALTH OF PLANTINGS. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

1. SHOULD SUBSURFACE DRAINAGE OR SOIL CONDITIONS BE ENCOUNTERED WHICH WOULD BE DETRIMENTAL TO GROWTH OR SURVIVAL OF PLANT MATERIAL, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING, STATING THE CONDITIONS AND SUBMIT A PROPOSAL COVERING COST OF CORRECTIONS. IF THE CONTRACTOR FAILS TO NOTIFY THE OWNER'S REPRESENTATIVE OF SUCH CONDITIONS, THEY SHALL REMAIN RESPONSIBLE FOR PLANT MATERIAL UNDER THE WARRANTEE CLAUSE OF THE SPECIFICATIONS.

2. THIS SPECIFICATION REQUIRES THAT ALL PLANTING SOIL AND IRRIGATION (IF APPLICABLE) WORK BE COMPLETED AND ACCEPTED PRIOR TO THE INSTALLATION OF ANY PLANTS.

1.15 SOIL COMPACTION - GENERAL REQUIREMENTS

A. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE DEFINED IN THIS SPECIFICATION, THE FOLLOWING PARAMETERS SHALL DEFINE THE GENERAL DESCRIPTION OF THE THRESHOLD POINTS OF SOIL COMPACTION IN EXISTING, MODIFIED OR INSTALLED SOIL AND SUBSOIL.

1. STANDARD PROCTOR METHOD ASTM D 698

B. THE FOLLOWING ARE THRESHOLD LEVELS OF COMPACTION AS DETERMINED BY EACH METHOD.

1. ACCEPTABLE COMPACTION: GOOD ROOTING ANTICIPATED, BUT INCREASING SETTLEMENT EXPECTED AS COMPACTION IS REDUCED AND/OR IN SOIL WITH A HIGH ORGANIC MATTER CONTENT.
  - a. STANDARD PROCTOR METHOD – 75–85% SOIL BELOW 75% IS UNSTABLE AND WILL SETTLE EXCESSIVELY.
2. ROOT LIMITING COMPACTION: ROOT GROWTH IS LIMITED WITH FEWER, SHORTER AND SLOWER GROWING ROOTS.
  - a. STANDARD PROCTOR METHOD – ABOVE APPROXIMATELY 85%.
3. EXCESSIVE COMPACTION: ROOTS NOT LIKELY TO GROW BUT CAN PENETRATE SOIL WHEN SOIL IS ABOVE FIELD CAPACITY.
  - a. STANDARD PROCTOR METHOD – ABOVE 90%.

1.16 DELIVERY, STORAGE, AND HANDLING

A. WEATHER: DO NOT MIX, DELIVER, PLACE OR GRADE SOILS WHEN FROZEN OR WITH MOISTURE ABOVE FIELD CAPACITY.

B. PROTECT SOIL AND SOIL STOCKPILES, INCLUDING THE STOCKPILES AT THE SOIL BLENDER'S YARD, FROM WIND, RAIN AND WASHING THAT CAN ERODE SOIL OR SEPARATE FINES AND COARSE MATERIAL, AND CONTAMINATION BY CHEMICALS, DUST AND DEBRIS THAT MAY BE DETRIMENTAL TO PLANTS OR SOIL DRAINAGE. COVER STOCKPILES WITH PLASTIC SHEETING OR FABRIC AT THE END OF EACH WORKDAY.

C. ALL MANUFACTURED PACKAGED PRODUCTS AND MATERIAL SHALL BE DELIVERED TO THE SITE IN UNOPENED CONTAINERS AND STORED IN A DRY ENCLOSED SPACE SUITABLE FOR THE MATERIAL AND MEETING ALL ENVIRONMENTAL REGULATIONS. BIOLOGICAL ADDITIVES SHALL BE PROTECTED FROM EXTREME COLD AND HEAT. ALL PRODUCTS SHALL BE FRESHLY MANUFACTURED AND DATED FOR THE YEAR IN WHICH THE PRODUCTS ARE TO BE USED.

D. DELIVER ALL CHEMICAL AMENDMENTS IN ORIGINAL, UNOPENED CONTAINERS WITH ORIGINAL LABELS INTACT AND LEGIBLE, WHICH STATE THE GUARANTEED CHEMICAL ANALYSIS. STORE ALL CHEMICALS IN A WEATHER PROTECTED ENCLOSURE.

E. BULK MATERIAL: COORDINATE DELIVERY AND STORAGE WITH OWNER'S REPRESENTATIVE AND CONFINED MATERIALS TO NEAT PILES IN AREAS ACCEPTABLE TO OWNER'S REPRESENTATIVE.

1.17 EXCAVATING AND GRADING AROUND UTILITIES

A. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD, AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH THE EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING.

B. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER THAT WILL AVOID DAMAGE. HAND EXCAVATE AS REQUIRED. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.

C. NOTIFICATION OF THE LOCAL UTILITY LOCATOR SERVICE, IS REQUIRED FOR ALL PLANTING AREAS. THE CONTRACTOR IS RESPONSIBLE FOR KNOWING THE LOCATION AND AVOIDING UTILITIES THAT ARE NOT COVERED BY THE LOCAL UTILITY LOCATOR SERVICE.

PART 2 PRODUCTS

2.1 IMPORTED TOPSOIL

A. IMPORTED TOPSOIL DEFINITION: FERTILE, FRIABLE SOIL CONTAINING LESS THAN 5% TOTAL VOLUME OF THE COMBINATION OF SUBSOIL, REFUSE, ROOTS LARGER THAN 1 INCH DIAMETER, HEAVY, STICKY OR STIFF CLAY, STONES LARGER THAN 2 INCHES IN DIAMETER, NOXIOUS SEEDS, STICKS, BRUSH, LITTER, OR ANY SUBSTANCES DELETERIOUS TO PLANT GROWTH. THE PERCENT (%) OF THE ABOVE OBJECTS SHALL BE CONTROLLED BY SOURCE SELECTION NOT BY SCREENING THE SOIL. TOPSOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND THE SUPPORT OF VEGETATIVE GROWTH. IMPORTED TOPSOIL SHALL NOT CONTAIN WEED SEEDS IN QUANTITIES THAT CAUSE NOTICEABLE WEED INFESTATIONS IN THE FINAL PLANTING BEDS. IMPORTED TOPSOIL SHALL MEET THE FOLLOWING PHYSICAL AND CHEMICAL CRITERIA:

1. SOIL TEXTURE: USDA LOAM, SANDY CLAY LOAM OR SANDY LOAM WITH CLAY CONTENT BETWEEN 15 AND 25% AND A COMBINED CLAY/SILT CONTENT OF NO MORE THAN 55%.
2. PH VALUE SHALL BE BETWEEN 5.5 AND 7.0.
3. PERCENT ORGANIC MATTER (OM): 2.0–5.0%, BY DRY WEIGHT.

No.	REVISIONS			DATE	BY

	
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DRAWN BY DW	CHECKED BY DC

CALIFORNIA DRIVE ROUNDAABOUT PREPARED FOR CITY OF BURLINGAME SAN MATEO COUNTY	CA
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4. SOLUBLE SALT LEVEL: LESS THAN 2 MMHO/CM.
5. SOIL CHEMISTRY SUITABLE FOR GROWING THE PLANTS SPECIFIED.
- B. IMPORTED TOPSOIL SHALL BE A HARVESTED SOIL FROM FIELDS OR DEVELOPMENT SITES. THE ORGANIC CONTENT AND PARTICLE SIZE DISTRIBUTION SHALL BE THE RESULT OF NATURAL SOIL FORMATION, MANUFACTURED SOILS WHERE COARSE SAND, COMPOSTED ORGANIC MATERIAL OR CHEMICAL ADDITIVES HAS BEEN ADDED TO THE SOIL TO MEET THE REQUIREMENTS OF THIS SPECIFICATION SECTION SHALL NOT BE ACCEPTABLE.
- C. IMPORTED TOPSOIL FOR PLANTING SOIL SHALL NOT HAVE BEEN SCREENED AND SHALL RETAIN SOIL PEDS OR CLODS LARGER THAN 2 INCHES IN DIAMETER THROUGHOUT THE STOCKPILE AFTER HARVESTING.
- D. PROVIDE A ONE GALLON SAMPLE FROM EACH IMPORTED TOPSOIL SOURCE WITH REQUIRED SOIL TESTING RESULTS. THE SAMPLE SHALL BE A MIXTURE OF THE RANDOM SAMPLES TAKEN AROUND THE SOURCE STOCKPILE OR FIELD.

## 2.2 COMPOST

- A. COMPOST: BLENDED AND GROUND LEAF, WOOD AND OTHER PLANT BASED MATERIAL, COMPOSTED FOR A MINIMUM OF 9 MONTHS AND AT TEMPERATURES SUFFICIENT TO BREAK DOWN ALL WOODY FIBERS, SEEDS AND LEAF STRUCTURES, FREE OF TOXIC MATERIAL AT LEVELS THAT ARE HARMFUL TO PLANTS OR HUMANS. SOURCE MATERIAL SHALL BE YARD WASTE TRIMMINGS BLENDED WITH OTHER PLANT OR MANURE BASED MATERIAL DESIGNED TO PRODUCE COMPOST HIGH IN FUNGAL MATERIAL.
1. COMPOST SHALL BE COMMERCIALY PREPARED COMPOST AND MEET US COMPOST COUNCIL STA/MECC CRITERIA OR AS MODIFIED IN THIS SECTION FOR "COMPOST AS A LANDSCAPE BACKFILL MIX COMPONENT".
- [HTTP://COMPOSTINGCOUNCIL.ORG/ADMIN/WP-CONTENT/PLUGINS/WP-PDFUPLOAD/PDF/191/LANDSCAPEARCH\\_SPECS.PDF](http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/191/LANDSCAPEARCH_SPECS.PDF)
2. COMPOST SHALL COMPLY WITH THE FOLLOWING PARAMETERS:
- a. PH: 5.5 – 8.0.
  - b. SOIL SALT (ELECTRICAL CONDUCTIVITY): MAXIMUM 5 DS/M (MMHOS/CM).
  - c. MOISTURE CONTENT %, WET WEIGHT BASIS: 30 – 60.
  - d. PARTICLE SIZE, DRY WEIGHT BASIS: 98% PASS THROUGH 3/4 INCH SCREEN OR SMEAR.
  - e. STABILITY CARBON DIOXIDE EVOLUTION RATE: MG CO2-C/ G OM/ DAY < 2.
  - f. SOLVITA MATURITY TEST: > 6.
  - g. PHYSICAL CONTAMINANTS (INERTS), %, DRY WEIGHT BASIS: <1%.
  - h. CHEMICAL CONTAMINANTS, MG/KG (PPM): MEET OR EXCEED US EPA CLASS A STANDARD, 40CFR § 503.13, TABLES 1 AND 3 LEVELS.
  - i. BIOLOGICAL CONTAMINANTS SELECT PATHOGENS FECAL COLIFORM BACTERIA, OR SALMONELLA, MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR § 503.32(A) LEVEL REQUIREMENTS.
- B. PROVIDE A ONE GALLON SAMPLE WITH MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.

## 2.3 COARSE SAND

- A. CLEAN, WASHED, SAND, FREE OF TOXIC MATERIALS
1. COARSE CONCRETE SAND, ASTM C-33 FINE AGGREGATE, WITH A FINES MODULUS INDEX OF 2.8 AND 3.2.
2. COARSE SANDS SHALL BE CLEAN, SHARP, NATURAL COARSE SANDS FREE OF LIMESTONE, SHALE AND SLATE PARTICLES. MANUFACTURED COARSE SAND SHALL NOT BE PERMITTED.
3. PH SHALL BE LOWER THAN 7.0.
4. PROVIDE COARSE SAND WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:
- | SIEVE             | PERCENT PASSING |
|-------------------|-----------------|
| 3/8 INCH (9.5 MM) | 100             |
| NO 4 (4.75 MM)    | 95 – 100        |
| NO 8 (2.36 MM)    | 80 – 100        |
| NO 16 (1.18 MM)   | 50 – 85         |
| NO 30 (.60 MM)    | 25 – 60         |
| NO 50 (.30 MM)    | 10 – 30         |
| NO 100 (.15 MM)   | 2 – 10          |
| NO 200 (0.75 MM)  | 2–5             |
- B. PROVIDE A ONE GALLON SAMPLE WITH MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.

## 2.4 LIME

- A. ASTM C 602, AGRICULTURAL LIMESTONE CONTAINING A MINIMUM 80 PERCENT CALCIUM CARBONATE EQUIVALENT AND AS FOLLOWS:
1. CLASS: CLASS T, WITH A MINIMUM 99 PERCENT PASSING THROUGH NO. 8 (2.36-MM) SIEVE AND A MINIMUM 75 PERCENT PASSING THROUGH NO. 60 (0.25-MM) SIEVE.



2. PROVIDE LIME IN FORM OF DOLOMITIC LIMESTONE.
- B. PROVIDE MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.

## 2.5 MODIFIED EXISTING SOIL (SOIL SUITABLE FOR PLANTING WITH INDICATED MODIFICATION)

- A. GENERAL DEFINITION: SURFACE SOIL IN THE AREAS DESIGNATED ON THE SOILS PLAN AS MODIFIED EXISTING SOIL HAS BEEN ALTERED AND OR GRADED BEFORE OR DURING THE CONSTRUCTION PROCESS BUT IS STILL CONSIDERED ACCEPTABLE FOR PLANTING AND LONG TERM HEALTH OF THE PLANTS SPECIFIED WITH THE PROPOSED MODIFICATIONS. MODIFICATIONS RESPOND TO THE SOIL PROBLEMS EXPECTED OR ENCOUNTERED. THE OWNER'S REPRESENTATIVE SHALL VERIFY THAT THE SOIL IN THE DESIGNATED AREAS IS SUITABLE FOR MODIFICATION AT THE BEGINNING OF PLANTING BED PREPARATION WORK IN THAT AREA.
1. THE OWNER'S REPRESENTATIVE SHALL VERIFY THAT THE SOIL IN THE DESIGNATED AREAS IS SUITABLE FOR THE SPECIFIED MODIFICATION AT THE BEGINNING OF PLANTING BED PREPARATION WORK IN THAT AREA. IN THE EVENT THAT THE WORK OF THIS PROJECT CONSTRUCTION HAS DAMAGED THE EXISTING SOIL IN AREAS DESIGNATED FOR MODIFICATION TO THE POINT WHERE THE SOIL IS NO LONGER SUITABLE TO SUPPORT THE PLANTS SPECIFIED WITH THE SPECIFIED MODIFICATION, THE OWNER'S REPRESENTATIVE MAY REQUIRE FURTHER MODIFICATION OF THE DAMAGED SOIL UP TO AN INCLUDING REMOVAL AND REPLACEMENT WITH SOIL OF EQUAL QUALITY TO THE SOIL THAT WOULD HAVE RESULTED FROM THE MODIFICATION. DAMAGE MAY INCLUDE FURTHER COMPACTION, CONTAMINATION, GRADING, CREATION OF HARD PAN OR DRAINAGE PROBLEM, AND LOSS OF THE O, AND OR A HORIZON.
2. GENERAL REQUIREMENTS FOR ALL SOIL MODIFICATIONS:
- a. TAKE SOIL SAMPLES, TEST FOR CHEMICAL PROPERTIES, AND MAKE APPROPRIATE ADJUSTMENTS.
  - b. UNLESS OTHERWISE INSTRUCTED, REMOVE ALL EXISTING PLANTS, ROOT THATCH, AND NON-SOIL DEBRIS FROM THE SURFACE OF THE SOIL USING EQUIPMENT THAT DOES NOT ADD TO THE COMPACTION IN THE SOIL.
  - c. ALL SOIL GRADING, TILLING AND LOOSENING MUST BE COMPLETED AT TIMES WHEN THE SOIL MOISTURE IS BELOW FIELD CAPACITY. ALLOW SOIL TO DRAIN FOR AT LEAST TWO DAYS AFTER ANY RAIN EVENT MORE THAN 1 INCH IN 24 HOURS, OR LONG ENOUGH SO THAT THE SOIL DOES NOT MAKE THE HAND MUDDY WHEN SQUEEZED.
  - d. PROVIDE PRE-EMERGENT WEED CONTROL AFTER THE SOIL WORK IS COMPLETE AND PLANTS PLANTED BUT PRIOR TO ADDING MULCH TO THE SURFACE, IF INDICATED BY WEED TYPE AND DEGREE OF THREAT.
- B. MODIFIED EXISTING SOIL – COMPACTED SUBSOIL
1. DESCRIPTION OF CONDITION TO BE MODIFIED: DEEP SOIL COMPACTION THE RESULT OF PREVIOUS GRADING, FILLING AND DYNAMIC OR STATIC COMPACTION FORCES. ORIGINAL A HORIZON LIKELY REMOVED OR BURIED. THE SOIL ORGANIC MATTER, PH AND CHEMISTRY IN THE A HORIZON IS LIKELY NOT SUITABLE FOR THE PROPOSED PLANTS AND SHOULD BE MODIFIED AS REQUIRED.
2. SOIL RIPPING:
- a. STEP ONE: AFTER GRADING AND REMOVING ALL PLANTS AND DEBRIS FROM THE SURFACE, USING A TRACKED DOZER OR SIMILAR LARGE GRADING EQUIPMENT, LOOSEN THE SOIL BY DRAGGING A RIPPING SHANK OR CHISEL THRU THE SOIL TO DEPTHS OF 24 INCHES WITH RIPPING SHANKS SPACED 18 INCHES OR LESS APART IN TWO DIRECTIONS. THE NUMBER OF SHANKS PER PULL IS DEPENDENT ON THE DEGREE OF SOIL COMPACTION AND THE SIZE OF THE DOZER.
- e. STEP 2: SPREAD 3-4 INCHES OF COMPOST OVER THE RIPPED AREA AND TILL INTO THE TOP 6 INCHES OF THE SOIL SURFACE.

## 2.6 PLANTING SOIL MIXES

- A. GENERAL DEFINITION: MIXES OF EXISTING SOIL OR IMPORTED TOPSOIL, COARSE SAND, AND OR COMPOST TO MAKE A NEW SOIL THAT MEETS THE PROJECT GOALS FOR THE INDICATED PLANTING AREA. THESE MAY BE MIXED OFF-SITE OR ONSITE, AND WILL VARY IN MIX COMPONENTS AND PROPORTIONS AS INDICATED.
- B. PLANTING MIX – MODERATELY SLOW DRAINING SOIL FOR TREES AND SHRUB BEDS

1. A MIX OF IMPORTED TOPSOIL, COARSE SAND AND COMPOST. THE APPROXIMATE MIX RATIO SHALL BE:
- | MIX COMPONENT               | % BY MOIST VOLUME |
|-----------------------------|-------------------|
| IMPORTED TOPSOIL UNSCREENED | 45 – 50%          |
| COARSE SAND                 | 40 – 45%          |
| COMPOST                     | 10%               |
2. FINAL TESTED ORGANIC MATTER BETWEEN 2.75 AND 4% (BY DRY WEIGHT).
3. MIX THE COARSE SAND AND COMPOST TOGETHER FIRST AND THEN ADD TO THE TOPSOIL. MIX WITH A LOADER BUCKET TO LOOSELY INCORPORATE THE TOPSOIL INTO THE COARSE SAND/COMPOST MIX. DO NOT OVER MIX! DO NOT MIX WITH A SOIL BLENDING MACHINE. DO NOT SCREEN THE SOIL CLUMPS OF SOIL, COMPOST AND COARSE SAND WILL BE PERMITTED IN THE OVERALL MIX.
4. AT THE TIME OF FINAL GRADING, ADD FERTILIZER IF REQUIRED TO THE PLANTING SOIL AT RATES RECOMMENDED BY THE TESTING RESULTS FOR THE PLANTS TO BE GROWN.
5. PROVIDE A ONE GALLON SAMPLE WITH TESTING DATA THAT INCLUDES RECOMMENDATIONS FOR CHEMICAL ADDITIVES FOR THE TYPES OF PLANTS TO BE GROWN. SAMPLES AND TESTING DATA SHALL BE SUBMITTED AT THE SAME TIME.

## 2.7 PRE-EMERGENT HERBICIDES

- A. CHEMICAL HERBICIDES ARE DESIGNED TO PREVENT SEEDS OF SELECTIVE PLANTS FROM GERMINATING. EXACT TYPE OF HERBICIDE SHALL BE BASED ON THE SPECIFIC PLANTS TO BE CONTROLLED AND THE MOST EFFECTIVE DATE OF APPLICATION.
- B. SUBMIT REPORT OF EXPECTED WEED PROBLEMS AND THE RECOMMENDATION OF THE MOST EFFECTIVE CONTROL FOR APPROVAL BY OWNER'S REPRESENTATIVE. PROVIDE MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.

## PART 3 EXECUTION

### 3.1 SITE EXAMINATION

- A. PRIOR TO INSTALLATION OF PLANTING SOIL, EXAMINE SITE TO CONFIRM THAT EXISTING CONDITIONS ARE SATISFACTORY FOR THE WORK OF THIS SECTION TO PROCEED.
1. CONFIRM THAT THE SUBGRADE IS AT THE PROPER ELEVATION AND COMPACTED AS REQUIRED. SUBGRADE ELEVATIONS SHALL SLOPE TOWARD THE UNDER DRAIN LINES AS SHOWN ON THE DRAWINGS.
2. CONFIRM THAT SURFACE ALL AREAS TO BE FILLED WITH PLANTING SOIL ARE FREE OF CONSTRUCTION DEBRIS, REFUSE, COMPRESSIBLE OR BIODEGRADABLE MATERIALS, STONES GREATER THAN 2 INCHES DIAMETER, SOIL CRUSTING FILMS OF SILT OR CLAY THAT REDUCES OR STOPS DRAINAGE FROM THE PLANTING SOIL INTO THE SUBSOIL; AND/OR STANDING WATER. REMOVE UNSUITABLE MATERIAL FROM THE SITE.
3. CONFIRM THAT NO ADVERSE DRAINAGE CONDITIONS ARE PRESENT.
4. CONFIRM THAT NO CONDITIONS ARE PRESENT WHICH ARE DETRIMENTAL TO PLANT GROWTH.
5. CONFIRM THAT UTILITY WORK HAS BEEN COMPLETED PER THE DRAWINGS.
6. CONFIRM THAT IRRIGATION WORK, WHICH IS SHOWN TO BE INSTALLED BELOW PREPARED SOIL LEVELS, HAS BEEN COMPLETED.
- B. IF UNSATISFACTORY CONDITIONS ARE ENCOUNTERED, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY TO DETERMINE CORRECTIVE ACTION BEFORE PROCEEDING.

### 3.2 COORDINATION WITH PROJECT WORK

- A. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER WORK THAT MAY IMPACT THE COMPLETION OF THE WORK.
- B. PRIOR TO THE START OF WORK, PREPARE A DETAILED SCHEDULE OF THE WORK FOR COORDINATION WITH OTHER TRADES.
- C. COORDINATE THE RELOCATION OF ANY IRRIGATION LINES, HEADS OR THE CONDUITS OF OTHER UTILITY LINES THAT ARE IN CONFLICT WITH TREE LOCATIONS. ROOT BALLS SHALL NOT BE ALTERED TO FIT AROUND LINES. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS ENCOUNTERED.

### 3.3 GRADE AND ELEVATION CONTROL

- A. PROVIDE GRADE AND ELEVATION CONTROL DURING INSTALLATION OF PLANTING SOIL. UTILIZE GRADE STAKES, SURVEYING EQUIPMENT, AND OTHER MEANS AND METHODS TO ASSURE THAT GRADES AND CONTOURS CONFORM TO THE GRADES INDICATED ON THE PLANS.

### 3.4 SITE PREPARATION

- D. EXCAVATE TO THE PROPOSED SUBGRADE. MAINTAIN ALL REQUIRED ANGLES OF REPOSE OF THE ADJACENT MATERIALS AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY THIS SPECIFICATION. DO NOT OVER EXCAVATE COMPACTED SUBGRADES OR ADJACENT PAVEMENT OR STRUCTURES. MAINTAIN A SUPPORTING 1:1 SIDE SLOPE OF COMPACTED SUBGRADE MATERIAL ALONG THE EDGES OF ALL PAVING AND STRUCTURES WHERE THE BOTTOM OF THE PAVING OR STRUCTURE IS ABOVE THE BOTTOM ELEVATION OF THE EXCAVATED PLANTING AREA.
- E. REMOVE ALL CONSTRUCTION DEBRIS AND MATERIAL INCLUDING ANY CONSTRUCTION MATERIALS FROM THE SUBGRADE.
- F. CONFIRM THAT THE SUBGRADE IS AT THE PROPER ELEVATION AND COMPACTED AS REQUIRED. SUBGRADE ELEVATIONS SHALL SLOPE APPROXIMATELY PARALLEL TO THE FINISHED GRADE AND/OR TOWARD THE SUBSURFACE DRAIN LINES AS SHOWN ON THE DRAWINGS.
- G. IN AREAS WHERE PLANTING SOIL IS TO BE SPREAD, CONFIRM SUBGRADE HAS BEEN SCARIFIED.
- H. PROTECT ADJACENT WALLS, WALKS AND UTILITIES FROM DAMAGE OR STAINING BY THE SOIL. USE 1/2 INCH PLYWOOD AND OR PLASTIC SHEETING AS DIRECTED TO COVER EXISTING CONCRETE, METAL AND MASONRY WORK AND OTHER ITEMS AS DIRECTED DURING THE PROGRESS OF THE WORK.
1. AT THE END OF EACH WORKING DAY, CLEAN UP ANY SOIL OR DIRT SPILLED ON ANY PAVED SURFACE.
2. ANY DAMAGE TO THE PAVING OR SITE FEATURES OR WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

### 3.5 SOIL MOISTURE

- A. VOLUMETRIC SOIL MOISTURE LEVEL, IN BOTH THE PLANTING SOIL AND THE ROOT BALLS OF ALL PLANTS, PRIOR TO, DURING AND AFTER PLANTING SHALL BE ABOVE PERMANENT WILT POINT AND BELOW FIELD CAPACITY FOR EACH TYPE OF SOIL TEXTURE WITHIN THE FOLLOWING RANGES.
- | SOIL TEXTURE                      | PERMANENT WILTING POINT | FIELD CAPACITY |
|-----------------------------------|-------------------------|----------------|
| SAND, LOAMY SAND, SANDY LOAM      | 5 – 8%                  | 12 – 18%       |
| LOAM, SANDY CLAY, SANDY CLAY LOAM | 14 – 25%                | 27 – 36%       |
| CLAY LOAM, SILT LOAM              | 11 – 22%                | 31 – 36%       |
| SILTY CLAY, SILTY CLAY LOAM       | 22 – 27%                | 38 – 41%       |
- B. THE CONTRACTOR SHALL CONFIRM THE SOIL MOISTURE LEVELS WITH A MOISTURE METER (DIGITAL SOIL MOISTURE METER, DSM500 BY GENERAL SPECIALTY TOOLS AND INSTRUMENTS, OR APPROVED EQUIVALENT). IF MOISTURE IS FOUND TO BE TOO LOW, THE PLANTING HOLES SHALL BE FILLED WITH WATER AND ALLOWED TO DRAIN BEFORE STARTING ANY PLANTING OPERATIONS. IF THE MOISTURE IS TOO HIGH, SUSPEND PLANTING OPERATIONS UNTIL THE SOIL MOISTURE DRAINS TO BELOW FIELD CAPACITY.

### 3.6 PLANTING SOIL AND PLANTING SOIL MIX INSTALLATION

- A. PRIOR TO INSTALLING ANY PLANTING SOIL FROM STOCKPILES OR PLANTING SOIL MIXES BLENDED OFF SITE, THE OWNER'S REPRESENTATIVE SHALL APPROVE THE CONDITION OF THE SUBGRADE AND THE PREVIOUSLY INSTALLED SUBGRADE PREPARATION AND THE INSTALLATION OF SUBSURFACE DRAINAGE.
- B. ALL EQUIPMENT UTILIZED TO INSTALL OR GRADE PLANTING SOILS SHALL BE WIDE TRACK OR BALLOON TIRE MACHINES RATED WITH A GROUND PRESSURE OF 4 PSI OR LESS. ALL GRADING AND SOIL DELIVERY EQUIPMENT SHALL HAVE BUCKETS EQUIPPED WITH 6 INCH LONG TEETH TO SCARIFY ANY SOIL THAT BECOMES COMPACTED.
- C. IN AREAS OF SOIL INSTALLATION ABOVE EXISTING SUBSOIL, SCARIFY THE SUBGRADE MATERIAL PRIOR TO INSTALLING PLANTING SOIL.
1. SCARIFY THE SUBSOIL OF THE SUBGRADE TO A DEPTH OF 3 – 6 INCHES WITH THE TEETH OF THE BACK HOE OR LOADER BUCKET,

- TILLER OR OTHER SUITABLE DEVICE.
2. IMMEDIATELY INSTALL THE PLANTING SOIL. PROTECT THE LOOSENEED AREA FROM TRAFFIC. DO NOT ALLOW THE LOOSENEED SUBGRADE TO BECOME COMPACTED.
3. IN THE EVENT THAT THE LOOSENEED AREA BECOMES OVERLY COMPACTED, LOOSEN THE AREA AGAIN PRIOR TO INSTALLING THE PLANTING SOIL.
- D. INSTALL THE PLANTING SOIL IN 12 – 18 INCH LIFTS TO THE REQUIRED DEPTHS. APPLY COMPACTING FORCES TO EACH LIFT AS REQUIRED TO ATTAIN THE REQUIRED COMPACTION. SCARIFY THE TOP OF EACH LIFT PRIOR TO ADDING MORE PLANTING SOIL BY DRAGGING THE TEETH OF A LOADER BUCKET OR BACKHOE ACROSS THE SOIL SURFACE TO ROUGHEN THE SURFACE.
- E. PHASE WORK SUCH THAT EQUIPMENT TO DELIVER OR GRADE SOIL DOES NOT HAVE TO OPERATE OVER PREVIOUSLY INSTALLED PLANTING SOIL. WORK IN ROWS OF LIFTS THE WIDTH OF THE EXTENSION OF THE BUCKET ON THE LOADER. INSTALL ALL LIFTS IN ONE ROW BEFORE PROCEEDING TO THE NEXT. WORK OUT FROM THE FURTHEST PART OF EACH BED FROM THE SOIL DELIVERY POINT TO THE EDGE OF THE EACH BED AREA.
- F. WHERE POSSIBLE PLACE LARGE TREES FIRST AND FILL PLANTING SOIL AROUND THE ROOT BALL.
- G. INSTALLING SOIL WITH SOIL OR MULCH BLOWERS OR SOIL SLINGERS SHALL NOT BE PERMITTED DUE TO THE OVER MIXING AND SOIL PED BREAKDOWN CAUSE BY THIS TYPE OF EQUIPMENT.
- H. WHERE TRAVEL OVER INSTALLED SOIL IS UNAVOIDABLE, LIMIT PATHS OF TRAFFIC TO REDUCE THE IMPACT OF COMPACTION IN PLANTING SOIL. EACH TIME EQUIPMENT PASSES OVER THE INSTALLED SOIL IT SHALL REVERSE OUT OF THE AREA ALONG THE SAME PATH WITH THE TEETH OF THE BUCKET DROPPED TO SCARIFY THE SOIL. COMPLY WITH THE PARAGRAPH "COMPACTION REDUCTION" IN THE EVENT THAT SOIL BECOMES OVER COMPACTED.
- I. THE DEPTHS AND GRADES SHOWN ON THE DRAWINGS ARE THE FINAL GRADES AFTER SETTLEMENT AND SHRINKAGE OF THE COMPOST MATERIAL. THE CONTRACTOR SHALL INSTALL THE PLANTING SOIL AT A HIGHER LEVEL TO ANTICIPATE THIS REDUCTION OF PLANTING SOIL VOLUME. A MINIMUM SETTLEMENT OF APPROXIMATELY 10 – 15% OF THE SOIL DEPTH IS EXPECTED. ALL GRADE INCREASES ARE ASSUMED TO BE AS MEASURED PRIOR TO ADDITION OF SURFACE COMPOST TILL LAYER, MULCH, OR SOB.

### 3.7 COMPACTION REQUIREMENTS FOR INSTALLED OR MODIFIED PLANTING SOIL

- A. COMPACT INSTALLED PLANTING SOIL TO THE COMPACTION RATES INDICATED COMPACT EACH SOIL LIFT AS THE SOIL IS INSTALLED.
- B. INSTALLED PLANTING SOIL MIX AND RE-SPREAD EXISTING SOIL SHALL HAVE A SOIL DENSITY THROUGH THE REQUIRED DEPTH OF THE INSTALLED LAYERS OF SOIL, SUCH THAT THE PENETROMETER READS APPROXIMATELY 75 TO 250 PSI AT SOIL MOISTURE APPROXIMATELY THE MID-POINT BETWEEN WILT POINT AND FIELD CAPACITY. THIS WILL BE APPROXIMATELY BETWEEN 75 AND 82% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.
- C. MAINTAIN MOISTURE CONDITIONS WITHIN THE PLANTING SOIL DURING INSTALLATION OR MODIFICATION TO ALLOW FOR SATISFACTORY COMPACTION. SUSPEND OPERATIONS IF THE PLANTING SOIL BECOMES WET. APPLY WATER IF THE SOIL IS OVERLY DRY.
- D. PROVIDE ADEQUATE EQUIPMENT TO ACHIEVE CONSISTENT AND UNIFORM COMPACTION OF THE PLANTING SOILS. USE THE SMALLEST EQUIPMENT THAT CAN REASONABLY PERFORM THE TASK OF SPREADING AND COMPACTION. USE THE SAME EQUIPMENT AND METHODS OF COMPACTION USED TO CONSTRUCT THE PLANTING SOIL MOCKUP.
- E. DO NOT PASS MOTORIZED EQUIPMENT OVER PREVIOUSLY INSTALLED AND COMPACTED SOIL EXCEPT AS AUTHORIZED BELOW.
1. LIGHT WEIGHT EQUIPMENT SUCH AS TRENCHING MACHINES OR MOTORIZED WHEEL BARROWS IS PERMITTED TO PASS OVER FINISHED SOIL WORK.
2. IF WORK AFTER THE INSTALLATION AND COMPACTION OF SOIL COMPACTS THE SOIL TO LEVELS GREATER THAN THE ABOVE REQUIREMENTS, FOLLOW THE REQUIREMENTS OF THE PARAGRAPH "OVER COMPACTION REDUCTION" BELOW.

### 3.8 OVER COMPACTION REDUCTION

- A. ANY SOIL THAT BECOMES COMPACTED TO A DENSITY GREATER THAN THE SPECIFIED DENSITY AND/OR THE DENSITY IN THE APPROVED MOCKUP SHALL BE DUG UP AND REINSTALLED. THIS REQUIREMENT INCLUDES COMPACTION CAUSED BY OTHER SUB-CONTRACTORS AFTER THE PLANTING SOIL IS INSTALLED AND APPROVED.
- B. SURFACE ROTO TILLING SHALL NOT BE CONSIDERED ADEQUATE TO REDUCE OVER COMPACTION AT LEVELS 6 INCHES OR GREATER BELOW FINISHED GRADE.

### 3.9 INSTALLATION OF CHEMICAL ADDITIVES

- A. FOLLOWING THE INSTALLATION OF EACH SOIL AND PRIOR TO FINE GRADING AND INSTALLATION OF THE COMPOST TILL LAYER, APPLY CHEMICAL ADDITIVES AS RECOMMENDED BY THE SOIL TEST, AND APPROPRIATE TO THE SOIL AND SPECIFIC PLANTS TO BE INSTALLED.
- B. TYPES, APPLICATION RATES AND METHODS OF APPLICATION SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ANY APPLICATIONS.

### 3.10 FINE GRADING

- A. THE OWNER'S REPRESENTATIVE SHALL APPROVE ALL ROUGH GRADING PRIOR TO THE INSTALLATION OF COMPOST, FINE GRADING, PLANTING, AND MULCHING.
- B. GRADE THE FINISH SURFACE OF ALL PLANTED AREAS TO MEET THE GRADES SHOWN ON THE DRAWINGS, ALLOWING THE FINISHED GRADES TO REMAIN HIGHER (10 – 15% OF DEPTH OF SOIL MODIFICATION) THAN THE GRADES ON THE GRADING PLAN, AS DEFINED IN PARAGRAPH PLANTING SOIL INSTALLATION, TO ANTICIPATE SETTLEMENT OVER THE FIRST YEAR.
- C. UTILIZE HAND EQUIPMENT, SMALL GARDEN TRACTORS WITH RAKES, OR SMALL GARDEN TRACTORS WITH BUCKETS WITH TEETH FOR FINE GRADING TO KEEP SURFACE ROUGH WITHOUT FURTHER COMPACTION. DO NOT USE THE FLAT BOTTOM OF A LOADER BUCKET TO FINE GRADE, AS IT WILL CAUSE THE FINISHED GRADE TO BECOME OVERLY SMOOTH AND OR SLIGHTLY COMPRESSED.
- D. PROVIDE FOR POSITIVE DRAINAGE FROM ALL AREAS TOWARD THE EXISTING INLETS, DRAINAGE STRUCTURES AND OR THE EDGES OF PLANTING BEDS. ADJUST GRADES AS DIRECTED TO REFLECT ACTUAL CONSTRUCTED FIELD CONDITIONS OF PAVING, WALL AND INLET ELEVATIONS. NOTIFY THE OWNER'S REPRESENTATIVE IN THE EVENT THAT

- CONDITIONS MAKE IT IMPOSSIBLE TO ACHIEVE POSITIVE DRAINAGE.
- E. PROVIDE SMOOTH, ROUNDED TRANSITIONS BETWEEN SLOPES OF DIFFERENT GRADIENTS AND DIRECTION. MODIFY THE GRADE SO THAT THE FINISH GRADE BEFORE ADDING MULCH AND AFTER SETTLEMENT IS ONE OR TWO INCHES BELOW ALL PAVING SURFACES OR AS DIRECTED BY THE DRAWINGS.
- F. FILL ALL DIPS AND REMOVE ANY BUMPS IN THE OVERALL PLANE OF THE SLOPE. THE TOLERANCE FOR DIPS AND BUMPS IN SHRUB AND GROUND COVER PLANTING AREAS SHALL BE A 2 INCH DEVIATION FROM THE PLANE IN 10 FEET. THE TOLERANCE FOR DIPS AND BUMPS IN LAWN AREAS SHALL BE A 1 INCH DEVIATION FROM THE PLANE IN 10 FEET.

### 3.11 INSTALLATION OF COMPOST TILL LAYER

- A. AFTER PLANTING SOIL MIXES ARE INSTALLED IN PLANTING BED AREAS AND JUST PRIOR TO THE INSTALLATION OF SHRUB OR GROUNDCOVER PLANTINGS, SPREAD 3 – 4 INCHES OF COMPOST OVER THE BEDS AND ROTO TILL INTO THE TOP 4 – 6 INCHES OF THE PLANTING SOIL. THIS STEP WILL RAISE GRADES SLIGHTLY ABOVE THE GRADES REQUIRED IN PARAGRAPH "FINE GRADING". THIS SPECIFICATION ANTICIPATES THAT THE RAISE IN GRADE DUE TO THIS TILLING WILL SETTLE WITHIN A FEW MONTHS AFTER INSTALLATION AS COMPOST BREAKS DOWN. ADDITIONAL SETTLEMENT AS DEFINED IN PARAGRAPH "PLANTING SOIL AND PLANTING SOIL MIX INSTALLATION" MUST STILL BE ACCOUNTED FOR IN THE SETTING OF FINAL GRADES.

### 3.12 CLEAN-UP

- A. DURING INSTALLATION, KEEP THE SITE FREE OF TRASH, PAVEMENTS REASONABLY CLEAN AND WORK AREA IN AN ORDERLY CONDITION AT THE END OF EACH DAY. REMOVE TRASH AND DEBRIS IN CONTAINERS FROM THE SITE NO LESS THAN ONCE A WEEK.

1. IMMEDIATELY CLEAN UP ANY SPILLED OR TRACKED SOIL, FUEL, OIL, TRASH OR DEBRIS DEPOSITED BY THE CONTRACTOR FROM ALL SURFACES WITHIN THE PROJECT OR ON PUBLIC RIGHT OF WAYS AND NEIGHBORING PROPERTY.
- B. ONCE INSTALLATION IS COMPLETE, WASH ALL SOIL FROM PAVEMENTS AND OTHER STRUCTURES. ENSURE THAT MULCH IS CONFINED TO PLANTING BEDS AND THAT ALL TAGS AND FLAGGING TAPE ARE REMOVED FROM THE SITE. THE OWNER'S REPRESENTATIVE SEALS ARE TO REMAIN ON THE TREES AND REMOVED AT THE END OF THE WARRANTY PERIOD.
1. MAKE ALL REPAIRS TO GRADES, RUTS, AND DAMAGE TO THE WORK OR OTHER WORK AT THE SITE.
2. REMOVE AND DISPOSE OF ALL EXCESS PLANTING SOIL, SUBSOIL, MULCH, PLANTS, PACKAGING, AND OTHER MATERIAL BROUGHT TO THE SITE BY THE CONTRACTOR.

### 3.13 PLANTING SOIL AND MODIFIED EXISTING SOIL PROTECTION

- A. THE CONTRACTOR SHALL PROTECT INSTALLED AND/OR MODIFIED PLANTING SOIL FROM DAMAGE INCLUDING CONTAMINATION AND OVER COMPACTION DUE TO OTHER SOIL INSTALLATION, PLANTING OPERATIONS, AND OPERATIONS BY OTHER CONTRACTORS OR TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION UNTIL ACCEPTANCE. UTILIZE FENCING AND MATTING AS REQUIRED OR DIRECTED TO PROTECT THE FINISHED SOIL WORK. TREAT, REPAIR OR REPLACE DAMAGED PLANTING SOIL IMMEDIATELY.
- B. LOOSEN COMPACTED PLANTING SOIL AND REPLACE PLANTING SOIL THAT HAS BECOME CONTAMINATED AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PLANTING SOIL SHALL BE LOOSENEED OR REPLACED AT NO EXPENSE TO THE OWNER.
1. TILL AND RESTORE GRADES TO ALL SOIL THAT HAS BEEN DRIVEN OVER OR COMPACTED DURING THE INSTALLATION OF PLANTS.
2. WHERE MODIFIED EXISTING SOIL HAS BECOME CONTAMINATED AND NEEDS TO BE REPLACED, PROVIDE IMPORTED SOIL THAT IS OF SIMILAR COMPOSITION, DEPTH AND DENSITY AS THE SOIL THAT WAS REMOVED.

### 3.14 PROTECTION DURING CONSTRUCTION

- A. THE CONTRACTOR SHALL PROTECT PLANTING AND RELATED WORK AND OTHER SITE WORK FROM DAMAGE DUE TO PLANTING OPERATIONS, OPERATIONS BY OTHER CONTRACTORS OR TRESPASSERS.
1. MAINTAIN PROTECTION DURING INSTALLATION UNTIL THE DATE OF PLANT ACCEPTANCE (SEE SPECIFICATIONS SECTION – PLANTING). TREAT, REPAIR OR REPLACE DAMAGED WORK IMMEDIATELY.
- B. DAMAGE DONE BY THE CONTRACTOR, OR ANY OF THEIR SUB-CONTRACTORS TO EXISTING OR INSTALLED PLANTS, OR ANY OTHER PARTS OF THE WORK OR EXISTING FEATURES TO REMAIN, INCLUDING LARGE EXISTING TREES, SOIL, PAVING, UTILITIES, LIGHTING, IRRIGATION, OTHER FINISHED WORK AND SURFACES INCLUDING THOSE ON ADJACENT PROPERTY, SHALL BE CLEANED, REPAIRED OR REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. THE OWNER'S REPRESENTATIVE SHALL DETERMINE WHEN SUCH CLEANING, REPLACEMENT OR REPAIR IS SATISFACTORY. DAMAGE TO EXISTING TREES SHALL BE ASSESSED BY A CERTIFIED ARBORIST.

### 3.15 SUBSTANTIAL COMPLETION ACCEPTANCE

- A. UPON WRITTEN NOTICE FROM THE CONTRACTOR, THE OWNERS REPRESENTATIVE SHALL REVIEW THE WORK AND MAKE A DETERMINATION IF THE WORK IS SUBSTANTIALLY COMPLETE.
- B. THE DATE OF SUBSTANTIAL COMPLETION OF THE PLANTING SOIL SHALL BE THE DATE WHEN THE OWNER'S REPRESENTATIVE ACCEPTS THAT ALL WORK IN PLANTING, PLANTING SOIL, AND IRRIGATION INSTALLATION SECTIONS IS COMPLETE.

### 3.16 FINAL ACCEPTANCE / SOIL SETTLEMENT

- A. AT THE END OF THE PLANT WARRANTY AND MAINTENANCE PERIOD, (SEE SPECIFICATION SECTION – PLANTING) THE OWNER'S REPRESENTATIVE SHALL OBSERVE THE SOIL INSTALLATION WORK AND ESTABLISH THAT ALL PROVISIONS OF THE CONTRACT ARE COMPLETE AND THE WORK IS SATISFACTORY.
1. RESTORE ANY SOIL SETTLEMENT AND OR EROSION AREAS TO THE GRADES SHOWN ON THE DRAWINGS. WHEN RESTORING SOIL GRADES REMOVE PLANTS AND MULCH AND ADD SOIL BEFORE RESTORING THE PLANTING. DO NOT ADD SOIL OVER THE ROOT BALLS OF PLANTS OR ON TOP OF MULCH.
- B. FAILURE TO PASS ACCEPTANCE: IF THE WORK FAILS TO PASS FINAL ACCEPTANCE, ANY SUBSEQUENT OBSERVATIONS MUST BE RESCHEDULED AS PER ABOVE. THE COST TO THE OWNER FOR ADDITIONAL OBSERVATIONS WILL BE CHARGED TO THE CONTRACTOR AT THE PREVAILING HOURLY RATE OF THE OWNER'S REPRESENTATIVE.

END OF SECTION 32 9100

No.	REVISIONS	DATE	BY		

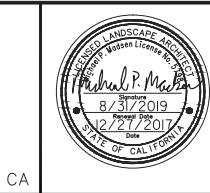
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KHA PROJECT 097515003
DATE 12/27/2017
SCALE AS SHOWN
DESIGNED BY DW
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CHECKED BY DC

CALIFORNIA DRIVE  
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PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY

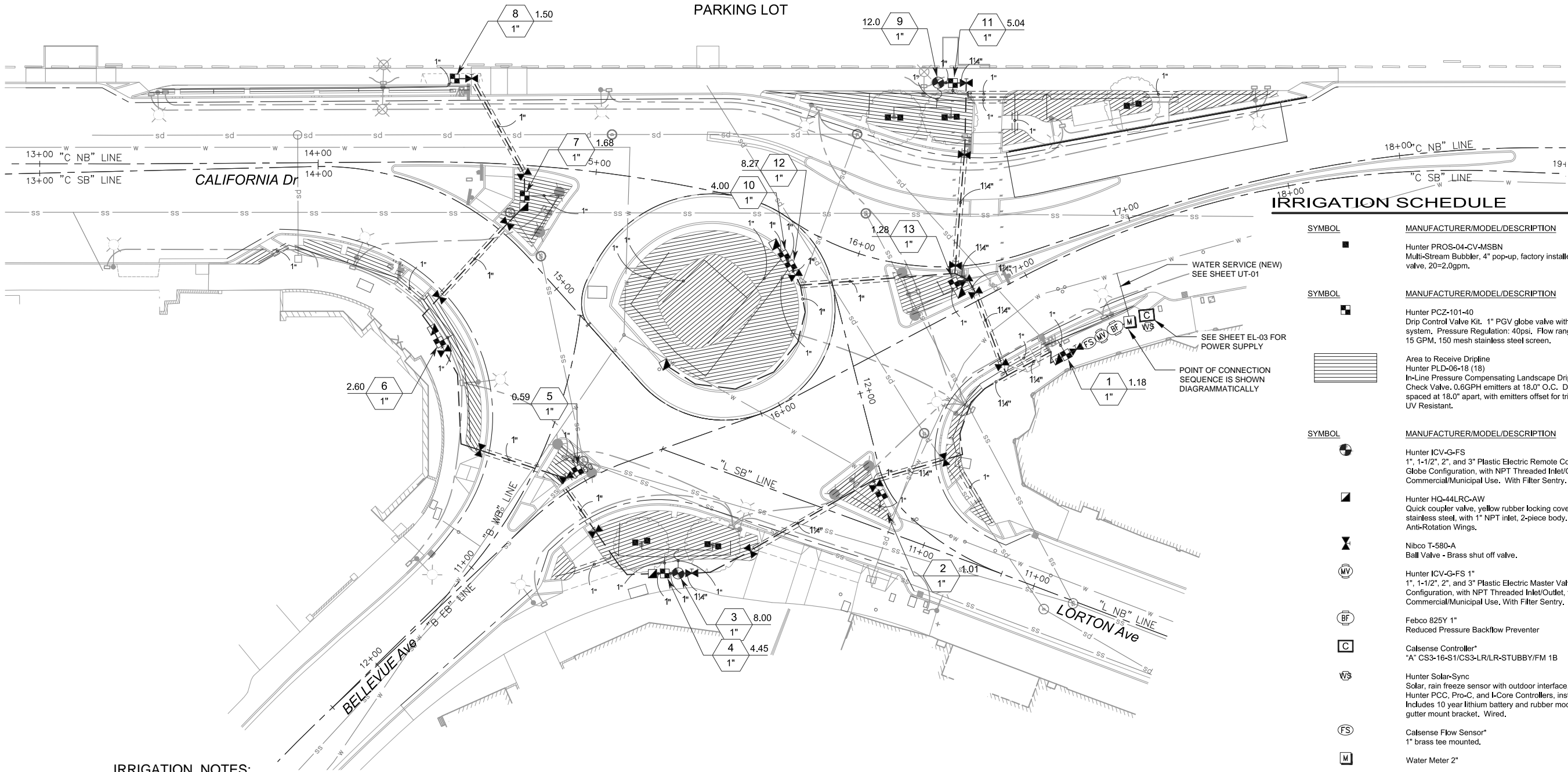


LANDSCAPE  
SPECIFICATIONS

SHEET NO. 53  
OF 61 SHEETS

LS-07

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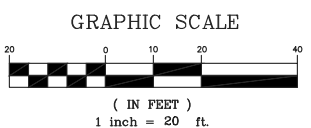
### IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
■	Hunter PROS-04-CV-MSBN Multi-Stream Bubbler, 4" pop-up, factory installed drain check valve, 20=2.0gpm.	10
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
■	Hunter PCZ-101-40 Drip Control Valve Kit. 1" PGV globe valve with 1" HY100 filter system. Pressure Regulation: 40psi. Flow range: 0.5 GPM to 15 GPM. 150 mesh stainless steel screen.	11
▨	Area to Receive Dripline Hunter PLD-06-18 (18) In-Line Pressure Compensating Landscape Dripline with Built-In Check Valve. 0.6GPH emitters at 18.0" O.C. Dripline laterals spaced at 18.0" apart, with emitters offset for triangular pattern. UV Resistant.	7,113 s.f.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
⊙	Hunter ICV-G-FS 1", 1-1/2", 2", and 3" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. With Filter Sentry.	2
■	Hunter HQ-44LRC-AW Quick coupler valve, yellow rubber locking cover, red brass and stainless steel, with 1" NPT inlet, 2-piece body. Acme Key with Anti-Rotation Wings.	7
⊙	Nibco T-580-A Ball Valve - Brass shut off valve.	20
⊙	Hunter ICV-G-FS 1" 1", 1-1/2", 2", and 3" Plastic Electric Master Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use, With Filter Sentry.	1
⊙	Febco 825Y 1" Reduced Pressure Backflow Preventer	1
⊙	Calsense Controller* *A CS3-16-S1/CS3-LR/LR-STUBBY/FM 1B	1
⊙	Hunter Solar-Sync Solar, rain freeze sensor with outdoor interface, connects to Hunter PCC, Pro-C, and I-Core Controllers, install as noted. Includes 10 year lithium battery and rubber module cover, and gutter mount bracket. Wired.	1
⊙	Calsense Flow Sensor* 1" brass tee mounted.	1
⊙	Water Meter 2"	1
---	Irrigation Lateral Line: PVC Schedule 40	1,116 l.f.
---	Irrigation Mainline: PVC Schedule 40	755.7 l.f.
---	Pipe Sleeve: PVC Schedule 40	390.0 l.f.
⊙	Valve Callout	
⊙	Valve Number	
⊙	Valve Flow	
⊙	Valve Size	

### IRRIGATION NOTES:

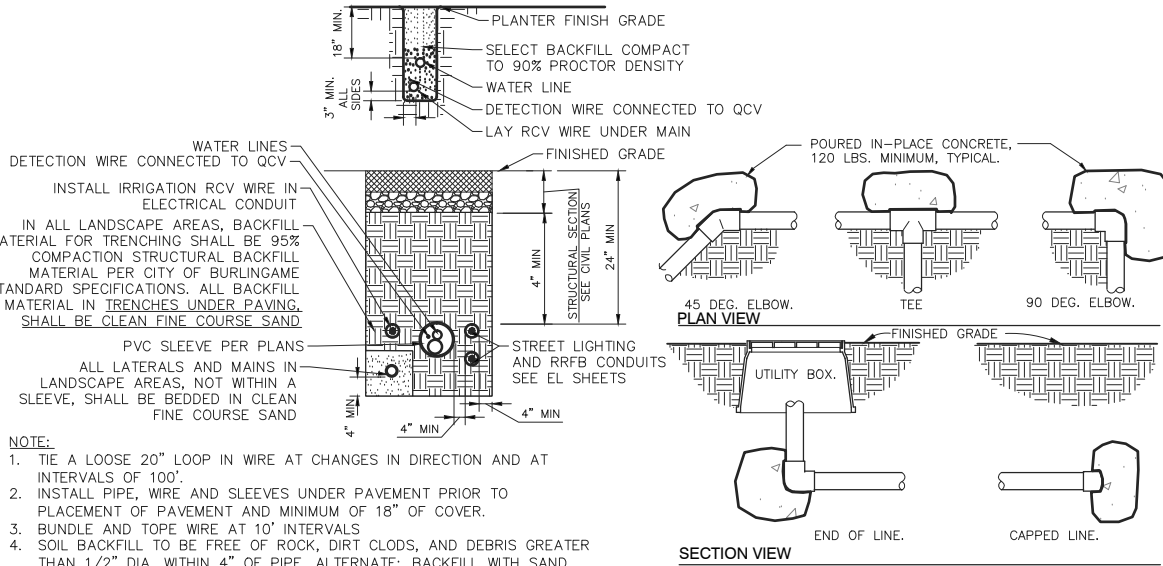
1. LOCATIONS OF IRRIGATION METER, POINT OF CONNECTION SEQUENCE, CONTROLLER, MAIN LINE, LATERAL LINE, AND ASSOCIATED APPURTENANCES ARE SHOWN DIAGRAMMATICALLY.
2. ALL IRRIGATION EQUIPMENT IS TO BE INSTALLED WITHIN THE PROJECT LIMITS OF CONSTRUCTION. VERIFY ALL LAYOUTS IN FIELD WITH CITY'S REPRESENTATIVE.
3. CONTRACTOR TO CUT, CAP, CONNECT, ADJUST, ABANDON, REPLACE, REPAIR, RELOCATE, AND/OR SALVAGE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE NEW IMPROVEMENTS.
4. CONTRACTOR TO FIELD LOCATE AND VERIFY EXISTING IRRIGATION PRIOR TO DEMOLITION AND COORDINATE WITH CITY STAFF TO TIE EXISTING IRRIGATION INTO PROPOSED IRRIGATION IMPROVEMENTS.
5. CONTRACTOR TO ADJUST ALL HEADS AS NEEDED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, FENCES, ETC. VERIFY ALL HEAD LAYOUT WITH CITY'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.
6. CONTRACTOR TO REFERENCE SHEET UT-01 FOR ALL UTILITIES AND POTENTIAL CONFLICTS.

FINAL LOCATION FOR ALL SLEEVES TO BE CONFIRMED IN THE FIELD WITH THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.



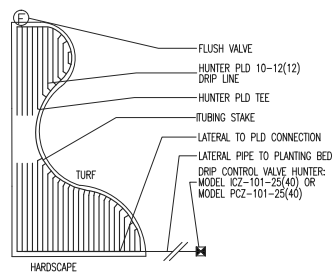
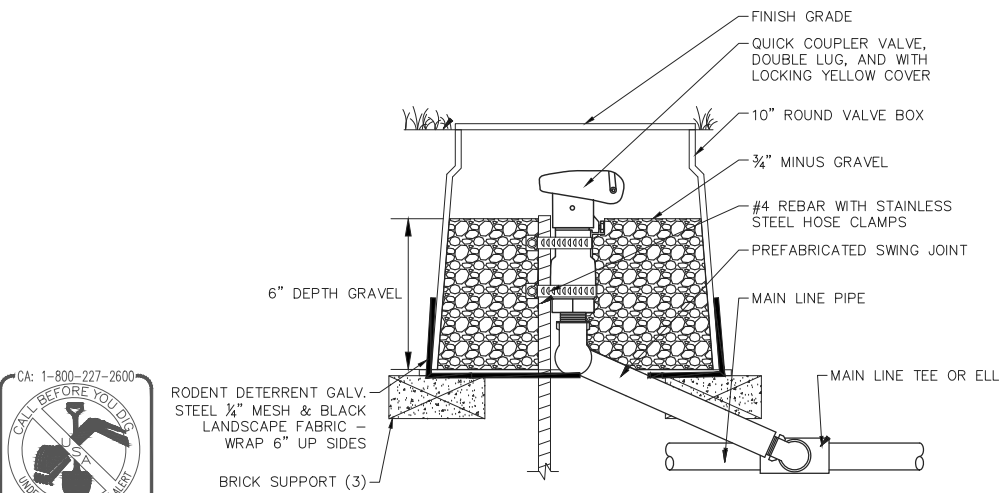
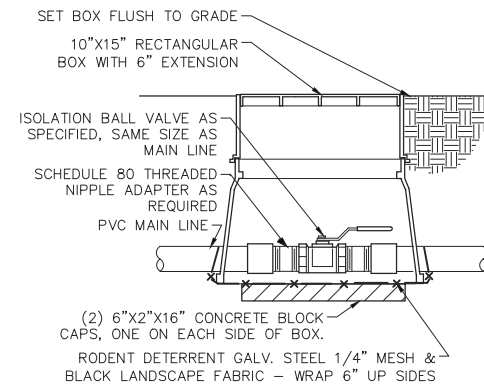
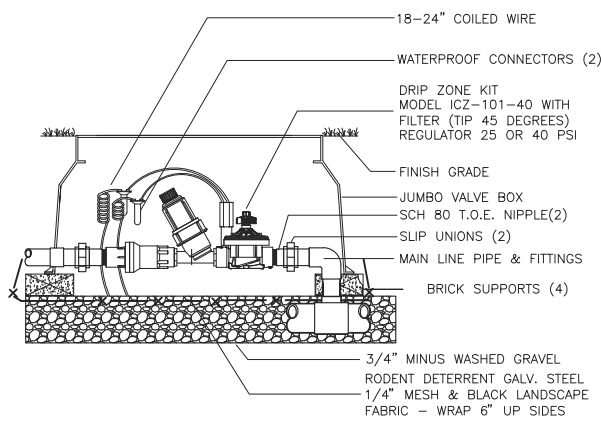
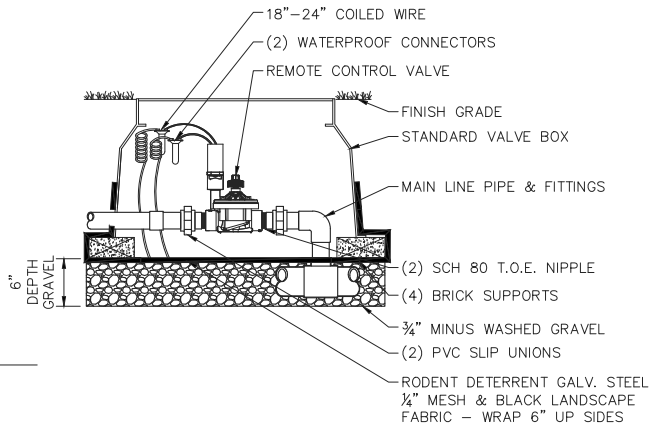
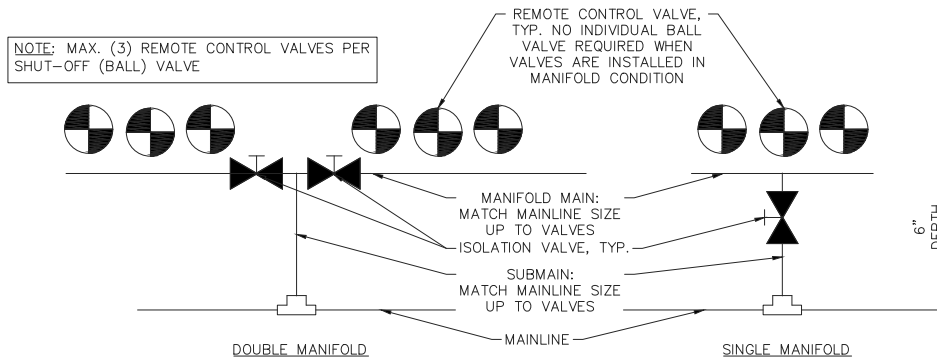
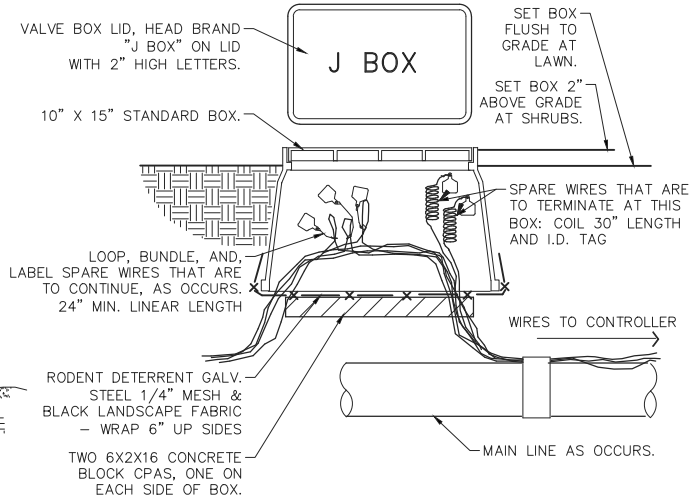
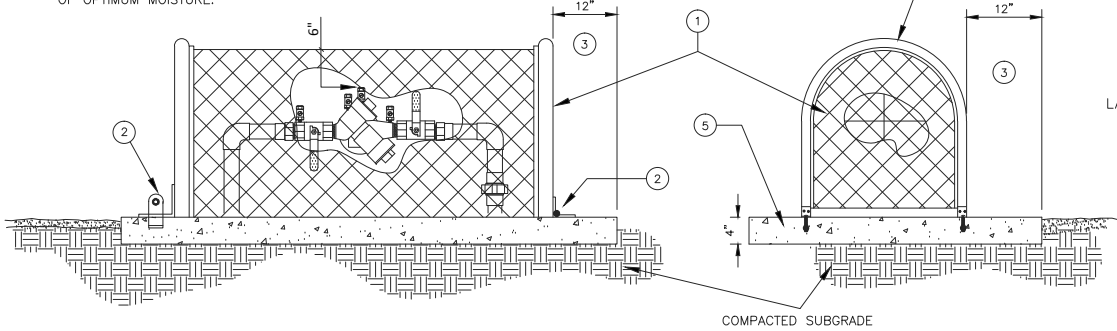
 © 2015 KIMLEY-HORN AND ASSOCIATES, INC. 4637 CHABOT DRIVE, SUITE 300, PLEASANTON, CA 94588 PHONE: 925-398-4840 WWW.KIMLEY-HORN.COM				<p>KHA PROJECT 097515003</p> <p>DATE 12/27/2017</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY DW</p> <p>DRAWN BY DW</p> <p>CHECKED BY DC</p>		<p>CALIFORNIA DRIVE ROUNDBABOUT</p> <p>PREPARED FOR CITY OF BURLINGAME</p> <p>SAN MATEO COUNTY</p> <p>CA</p>				<p>IRRIGATION PLAN</p>		<p>SHEET NO. 54 OF 61 SHEETS</p> <p>IR-01</p>	
No.	REVISIONS	DATE	BY										

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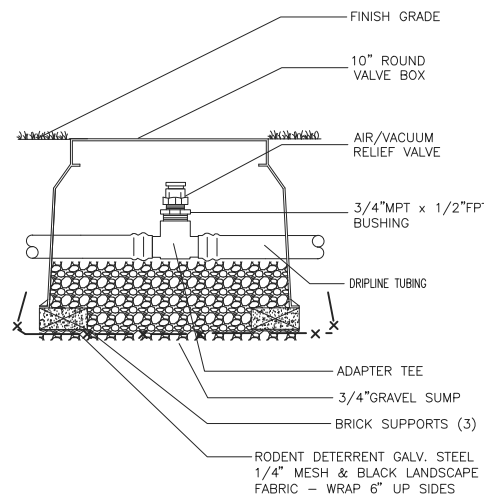
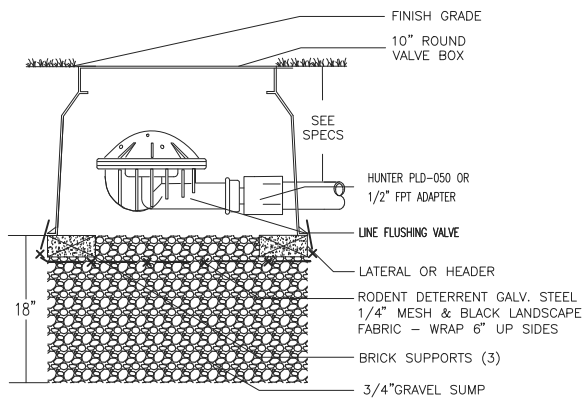


#### BACKFLOW PREVENTION DEVICE NOTES

1. PROVIDE PRE-MANUFACTURED ENCLOSURE SIZED TO FIT RBPB UNIT SPECIFIED. ACCEPTABLE MANUFACTURERS ARE LEMEUR "BF" SERIES, BFDI "GUARDSHACK" UNITS, OR APPROVED EQUAL.
2. MODIFY PRE-MANUFACTURED UNITS FASTENING SYSTEMS WITH HEAVY DUTY HINGES AND ANCHORING BOLT SYSTEM. SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. PAD TO BE 1' MIN. LARGER THAN ENCLOSURE.
4. SUBMIT CUT SHEETS FOR APPROVAL. UNIT TO HAVE POWDER COATED PAINT FINISH, COLOR SELECTED FROM MANUFACTURER'S STD. COLORS.
5. CONCRETE PAD FOR ENCLOSURE TO BE MAG 8 CONCRETE. COMPACT SUBGRADE TO 95% OF OPTIMUM MOISTURE.



- NOTES:
1. SIZE EMITTER FLOW AND SPACING BASED ON PLANT AND SOIL TYPE.
  2. ROW SPACING OF PLD TUBING BASED ON PLANT AND SOIL TYPE.
  3. STAKE TUBING DOWN EVERY 5' AND WITHIN 1" OF ALL FITTING OUTLETS.
  4. DO NOT EXCEED VELOCITY OF 5 FPS WITHIN TUBING. IF SIZE OF DRIP AREA CREATES VELOCITIES GREATER THAN 5 FPS USE STANDARD LATERAL PIPE TO CREATE SUPPLY HEADER FOR THE DRIP AREA.
  5. INSTALL FLUSH VALVE AT POINT FURTHEST FROM SUPPLY POINT.
  6. THROUGHLY FLUSH LATERAL AND DRIPLINE PRIOR TO FINAL CONNECTIONS.
  7. TEST DRIP LINE FOR PROPER OPERATION PRIOR TO COVERING.



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KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

SAN MATEO COUNTY

CALIFORNIA DRIVE  
ROUNDBABOUT  
PREPARED FOR  
CITY OF BURLINGAME

CA



IRRIGATION CALCS & DETAILS

SHEET NO. 55  
OF 61 SHEETS

IR-02











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2. RECLAIMED WATER CONSTANT PRESSURE MAIN LINES SHALL CROSS AT LEAST TWELVE (12) INCHES BELOW POTABLE WATER LINES.
    - a. IF A CONSTANT PRESSURE RECLAIMED WATER MAIN LINE MUST BE INSTALLED ABOVE A POTABLE WATER LINE OR LESS THAN TWELVE (12) INCHES BELOW A POTABLE WATER LINE, THEN RECLAIMED WATER LINE SHALL BE INSTALLED WITHIN AN APPROVED PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND TEN (10) FEET FROM EACH SIDE OF THE CENTER OF THE POTABLE LINE, FOR A TOTAL OF TWENTY (20) FEET. THE SLEEVE SHALL BE COLOR-CODED (PURPLE) FOR USE WITH RECLAIMED WATER.
  3. LATERAL LINES: 12 INCHES BELOW FINISH GRADE AND 18 INCHES BELOW PAVED AREAS IN SCHEDULE 40 PVC SLEEVES.
  4. CONTROL WIRING: TO THE SIDE OF PRESSURE MAIN LINE AND 24 INCHES BELOW PAVED AREAS IN SCHEDULE 40 PVC SLEEVES.
  - F. ON NEW ON-SITE SYSTEMS (POST-METER), THE REQUIRED HORIZONTAL SEPARATION BETWEEN POTABLE WATER LINES, RECLAIMED WATER CONSTANT PRESSURE MAIN LINES AND SEWER LINES SHALL BE A MINIMUM OF FOUR (4) FEET APART AS DIRECTED BY THE PROJECT ENGINEER AND/ OR REGULATORY AGENCY. MEASUREMENTS SHALL BE BETWEEN FACING SURFACES, NOT PIPE CENTERLINES.
  - G. WHEN TRENCHING THROUGH AREAS OF IMPORTED OR MODIFIED SOIL, DEPOSIT IMPORTED OR MODIFIED SOILS ON ONE SIDE OF TRENCH AND SUBSOIL ON OPPOSITE SIDE.
  - H. BACKFILL THE TRENCH PER THE REQUIREMENTS IN PARAGRAPHS "BACKFILLING AND COMPACTING" BELOW.
- 3.3 PIPE INSTALLATION**
- A. GENERAL PIPE INSTALLATION
1. EXERCISE CAUTION IN HANDLING, LOADING AND STORING, OF PLASTIC PIPE AND FITTINGS TO AVOID DAMAGE.
    - a. THE PIPE AND FITTINGS SHALL BE STORED UNDER COVER UNTIL USING, AND SHALL BE TRANSPORTED IN A VEHICLE WITH A BED LONG ENOUGH TO ALLOW THE LENGTH OF PIPE TO LAY FLAT SO AS NOT TO BE SUBJECTED TO UNDUE BENDING OR CONCENTRATED EXTERNAL LOAD AT ANY POINT.
  - b. ALL PIPE THAT HAS BEEN DENTED OR DAMAGED SHALL BE DISCARDED UNLESS SUCH DENT OR DAMAGED SECTION IS CUT OUT AND PIPE REJOINED WITH A COUPLING.
2. TRENCH DEPTH SHALL BE AS SPECIFIED ABOVE FROM THE FINISH GRADE TO THE TOP OF THE PIPE.
3. INSTALL A DETECTABLE PIPE LOCATOR TAPE 2 TO 8 INCHES ABOVE ALL MAIN LINE PIPES.
- B. POLYVINYL CHLORIDE PIPE (PVC) INSTALLATION
1. UNDER NO CIRCUMSTANCE IS PIPE TO REST ON CONCRETE, ROCK, WOOD BLOCKS, CONSTRUCTION DEBRIS OR SIMILAR ITEMS.
  2. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.
  3. INSTALL ASSEMBLIES AND PIPE TO CONFORM TO RESPECTIVE DETAILS AND WHERE SHOWN DIAGRAMMATICALLY ON DRAWINGS, USING FIRST CLASS WORKMANSHIP AND BEST STANDARD PRACTICES AS APPROVED. ALL FITTINGS THAT ARE NECESSARY FOR PROPER CONNECTIONS SUCH AS SWING JOINTS, OFFSETS, AND REDUCING BUSHINGS THAT ARE NOT SHOWN ON DETAILS SHALL BE INSTALLED AS NECESSARY AND DIRECTED AS PART OF THE WORK.

- 3.4 TRENCHING, DIRECTIONAL BORING, AND SLEEVING REVIEW:**
- A. UPON COMPLETION AND INSTALLATION OF ALL TRENCHING, DIRECTIONAL BORING, AND SLEEVING, ALL INSTALLED IRRIGATION CONTROL WIRING, LINES AND FITTINGS SHALL BE VISUALLY OBSERVED BY THE OWNER'S REPRESENTATIVE UNLESS OTHERWISE AUTHORIZED. DO NOT COVER ANY WIRES, LINES OR FITTINGS UNTIL THEY HAVE BEEN TESTED AND OBSERVED BY THE OWNER'S REPRESENTATIVE.
- 3.5 FLUSHING**
- A. OPENINGS IN PIPING SYSTEM DURING INSTALLATION ARE TO BE CAPPED OR PLUGGED TO PREVENT DIRT AND DEBRIS FROM ENTERING PIPE AND EQUIPMENT. REMOVE PLUGS WHEN NECESSARY TO FLUSH OR COMPLETE SYSTEM.
- B. AFTER COMPLETION AND PRIOR TO THE INSTALLATION OF ANY TERMINAL FITTINGS, THE ENTIRE PIPELINE SYSTEM SHALL BE THOROUGHLY FLUSHED TO REMOVE DIRT, DEBRIS OR OTHER MATERIAL.

- 3.6 HYDROSTATIC PRESSURE TESTING**
- A. AFTER FLUSHING, AND THE INSTALLATION OF VALVES THE FOLLOWING TESTS SHALL BE CONDUCTED IN THE SEQUENCE LISTED BELOW. THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT; MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS AND ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
- B. WATER PRESSURE TESTS SHALL BE PERFORMED ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.

- C. IMMEDIATELY PRIOR TO TESTING, ALL IRRIGATION LINES SHALL BE PURGED OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
- D. TEST ALL PRESSURE MAIN LINE AT 150 PSI. FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
- E. RE-TEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, WILL BE REPAIRED IMMEDIATELY FOLLOWING THE TEST. ALL PIPE SHALL BE RE-TESTED UNTIL FINAL WRITTEN ACCEPTANCE.
- F. THE CONTRACTOR IS RESPONSIBLE FOR PROVING DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
- G. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

#### 3.7 BACKFLOW PREVENTER TESTING

- A. THE BACKFLOW PREVENTER SHALL BE TESTED ACCORDING TO PROCEDURES AND RESULTS PER THE REQUIREMENTS OF THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA OR AMERICAN WATER WORKS ASSOCIATION WHICHEVER IS MORE STRINGENT.
- B. TESTING SHALL BE PERFORMED BY A BACKFLOW PREVENTION ASSEMBLY TESTER WITH A CURRENT CERTIFICATION FROM THE AMERICAN BACKFLOW PREVENTER ASSOCIATION.

#### 3.8 BACKFILLING AND COMPACTING

- A. IRRIGATION TRENCHES SHALL BE CAREFULLY BACKFILLED WITH MATERIAL APPROVED FOR BACKFILLING AND FREE OF ROCKS AND DEBRIS ONE (1) INCH IN DIAMETER AND LARGER. WHEN BACK FILLING TRENCHES IN AREAS OF IMPORTED OR MODIFIED PLANTING SOIL, REPLACE ANY EXCAVATED SUBSOIL AT THE BOTTOM AND THE IMPORTED SOIL OR MODIFIED PLANTING SOIL AT THE TOP OF THE TRENCH.
- B. BACKFILL SHALL BE COMPACTED WITH APPROVED EQUIPMENT TO THE FOLLOWING DENSITIES
1. BACKFILL UNDER PAVEMENT AND WITHIN 2 FEET OF THE EDGE OF PAVEMENT: COMPACT TO 95% OR GREATER OF MAXIMUM DRY DENSITY STANDARD PROCTOR.
  2. BACKFILL OF SUBSOIL UNDER IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: BETWEEN 85 AND 90% OF MAXIMUM DRY DENSITY STANDARD PROCTOR.
  3. BACKFILL OF IMPORTED PLANTING MIXES OR MODIFIED EXISTING PLANTING SOIL: COMPACT TO THE REQUIREMENTS OF THE ADJACENT PLANTING MIX OR PLANTING SOIL AS SPECIFIED IN SECTION "PLANTING SOIL".
- C. FINISH GRADE OF ALL TRENCHES SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS OR OTHER IRREGULARITIES. DISPOSE OF EXCESS SOIL OR DEBRIS OFF SITE AT CONTRACTOR'S EXPENSE.
- D. ANY SETTLING OF BACKFILL MATERIAL DURING THE MAINTENANCE OR WARRANTY PERIOD SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPLACEMENT OR REPAIR OF SOIL, LAWN, AND PLANT MATERIAL OR PAVING SURFACE.

#### 3.09 RESURFACING PAVING OVER TRENCHES

- A. RESTORE ALL SURFACES AND REPAIR EXISTING UNDERGROUND INSTALLATIONS DAMAGED OR CUT AS A RESULT OF THE EXCAVATION TO THEIR ORIGINAL CONDITION, SATISFACTORY TO THE OWNER'S REPRESENTATIVE.
- B. TRENCHES THROUGH PAVED AREAS SHALL BE RESURFACED WITH SAME MATERIALS QUALITY AND THICKNESS AS EXISTING MATERIAL. PAVING RESTORATION SHALL BE PERFORMED BY THE PROJECT PAVING SUB-CONTRACTOR OR AN APPROVED CONTRACTOR SKILLED IN PAVING WORK.
- C. THE COST OF ALL PAVING RESTORATION WORK SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR UNLESS THE TRENCHING THRU THE PAVING WAS, BY PREVIOUS AGREEMENT, PART OF THE GENERAL

#### PROJECT RELATED CONSTRUCTION.

#### 3.10 INSTALLATION OF EQUIPMENT

- A. GENERAL:
1. ALL EQUIPMENT SHALL BE INSTALLED TO MEET ALL INSTALLATION REQUIREMENTS OF THE PRODUCT MANUFACTURER. IN THE EVENT THAT THE MANUFACTURES REQUIREMENTS CANNOT BE IMPLEMENTED DUE TO PARTICULAR CONDITION AT THE SITE OR WITH OTHER PARTS OF THE DESIGN, OBTAIN THE OWNER'S REPRESENTATIVE'S WRITTEN AUTHORIZATION AND APPROVAL FOR ANY MODIFICATIONS.
  2. INSTALL ALL EQUIPMENT AT THE APPROXIMATELY AT THE LOCATION(S) AND AS DESIGNATED AND DETAILED ON THE DRAWINGS. VERIFY ALL LOCATIONS WITH THE OWNER'S REPRESENTATIVE.
  3. INSTALL ALL VALVES WITHIN A VALVE BOX OF SUFFICIENT SIZE TO ACCOMMODATE THE INSTALLATION AND SERVICING OF THE EQUIPMENT. GROUP VALVES TOGETHER WHERE PRACTICAL AND LOCATE IN SHRUB PLANTING AREAS.
  4. ALL SPRINKLER IRRIGATION SYSTEMS THAT ARE USING WATER FROM POTABLE WATER SYSTEMS SHALL REQUIRE BACKFLOW PREVENTION. ALL BACKFLOW PREVENTION DEVICES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY LOCAL CODES AND THE HEALTH DEPARTMENT.

#### B. PRESSURE REGULATOR:

1. SET REGULATOR FOR REQUIRED PSI PER MANUFACTURER'S SPECIFICATIONS.

#### C. CHECK VALVE:

1. INSTALL CHECK VALVES APPROXIMATELY AT THE LOCATIONS NECESSARY TO PREVENT LOW HEAD RUN OFF.

#### D. REMOTE CONTROL VALVES:

1. INSTALL ONE REMOTE CONTROL VALVE PER VALVE BOX.
2. REMOTE CONTROL VALVE MANIFOLDS AND QUICK COUPLER VALVES SHALL BE SEPARATE ALLOWING USE OF A QUICK COUPLER WITH ALL REMOTE CONTROL VALVES SHUT OFF.
3. INSTALL BOXES NO FARTHER THAN 12 INCHES FROM EDGE OF PAVING AND PERPENDICULAR TO EDGE OF PAVING AND PARALLEL TO EACH OTHER. ALLOW 12 INCHES CLEARANCE BETWEEN ADJACENT VALVE BOXES.

#### E. QUICK COUPLER VALVE:

1. INSTALL EACH QUICK COUPLER VALVE IN ITS OWN VALVE BOX.
2. INSTALL THRUST BLOCKS ON QUICK COUPLERS.
3. PLACE NO CLOSER THAN 12 INCHES TO ADJACENT PAVING.
4. INSTALL 18 INCHES OFF SET FROM MAIN LINE.

#### F. SPRINKLER HEADS:

1. ALL MAIN LINES AND LATERAL LINES, INCLUDING RISERS, SHALL BE FLUSHED AND PRESSURE TESTED BEFORE INSTALLING SPRINKLER HEADS.
2. INSTALL SPECIFIED SPRINKLER HEADS AS SHOWN IN DETAILS AT LOCATIONS SHOWN ON THE DRAWINGS. ADJUST LAYOUT FOR FULL COVERAGE, SPACING OF HEADS SHALL NOT EXCEED THE MAXIMUM SPACING RECOMMENDED BY THE MANUFACTURER.
3. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE DESIGNATED ON THE DRAWINGS OR DETAILS.

#### G. IRRIGATION CONTROLLERS:

1. REMOTE CONTROL VALVES SHALL BE CONNECTED TO CONTROLLER IN NUMERICAL SEQUENCE AS SHOWN ON THE DRAWINGS.
2. CONTROLLER SHALL BE TESTED WITH COMPLETE ELECTRICAL CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY POWER TO THE CONTROLLER FOR OPERATION AND TESTING PURPOSES.
3. CONNECTIONS TO CONTROL WIRING SHALL BE MADE WITHIN THE PEDESTAL OF THE CONTROLLER. ALL WIRE SHALL FOLLOW THE PRESSURE MAIN INSOFAR AS POSSIBLE.
4. ELECTRICAL WIRING SHALL BE IN A RIGID GRAY PVC PLASTIC CONDUIT FROM CONTROLLER TO ELECTRICAL OUTLET. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL WIRING TO THE CONTROLLER, IN ORDER TO COMPLETE THIS INSTALLATION. A DISCONNECT SWITCH SHALL BE INCLUDED.

#### H. WIRING:

1. LOW VOLTAGE
  - a. CONTROL WIRING BETWEEN CONTROLLER AND ELECTRICAL VALVES SHALL BE INSTALLED IN THE SAME TRENCH AS THE MAIN LINE WHERE PRACTICAL. THE WIRE SHALL BE BUNDLED AND SECURED TO THE LOWER QUADRANT OF THE TRENCH AT 10 FOOT INTERVALS WITH PLASTIC ELECTRICAL TAPE.
  - b. WHEN THE CONTROL WIRING CANNOT BE INSTALLED IN THE SAME MAIN LINE TRENCH IT SHALL BE INSTALLED A MINIMUM OF 18 INCHES BELOW FINISH GRADE AND A BRIGHT COLORED PLASTIC RIBBON WITH SUITABLE MARKINGS SHALL BE INSTALLED IN THE TRENCH 6 INCHES BELOW GRADE DIRECTLY OVER THE WIRE.
  - c. AN EXPANSION LOOP SHALL BE PROVIDED EVERY 500 FEET IN A BOX AND INSIDE EACH VALVE BOX. EXPANSION LOOP SHALL BE FORMED BY WRAPPING WIRE AT LEAST EIGHT (8) TIMES AROUND A ¾ INCH PIPE AND WITHDRAWING PIPE.
  - d. PROVIDE ONE CONTROL WIRE TO SERVICE EACH VALVE IN SYSTEM.
  - e. RUN TWO (2) SPARE #14 - 1 WIRES FROM CONTROLLER ALONG ENTIRE MAIN LINE TO LAST ELECTRIC REMOTE CONTROL VALVE ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT CONTROLLER AND WIRE STUB TO BE LOCATED IN A BOX.
  - f. ALL CONTROL WIRE SPLICES NOT OCCURRING AT CONTROL VALVE SHALL BE INSTALLED IN A SEPARATE SPLICE VALVE BOX.
  - g. WIRE MARKERS (SEALED, 1 INCH TO 3 INCH SQUARE) ARE TO IDENTIFY CONTROL WIRES AT VALVES AND AT TERMINAL STRIPS OF CONTROLLER. AT THE TERMINAL STRIP MARK EACH WIRE CLEARLY INDICTING VALVE CIRCUIT NUMBER.
2. HIGH VOLTAGE
  - a. ALL ELECTRICAL WORK SHALL CONFORM TO LOCAL CODES, ORDINANCES AND ANY AUTHORITIES HAVING JURISDICTION. ALL HIGH VOLTAGE ELECTRICAL WORK TO BE PERFORMED BY LICENSED ELECTRICIAN.
  - b. THE CONTRACTOR SHALL PROVIDE 120-VOLT POWER CONNECTION TO THE AUTOMATIC CONTROLLER UNLESS NOTED OTHERWISE ON DRAWINGS.
3. VALVE BOXES:
  1. INSTALL ONE VALVE BOX FOR EACH TYPE OF VALVE INSTALLED AS PER THE DETAILS.
  2. GRAVEL SUMP SHALL BE INSTALLED AFTER COMPACTION OF ALL TRENCHES. FINAL PORTION OF GRAVEL SHALL BE PLACED INSIDE VALVE BOX AFTER VALVE IS BACKFILLED AND COMPACTED.
  3. PERMANENTLY LABEL VALVE NUMBER AND OR CONTROLLER LETTER ON TOP OF VALVE BOX LID USING A METHOD APPROVED BY THE OWNERS REPRESENTATIVE.
4. TRACER WIRE:
  1. TRACER WIRE SHALL BE INSTALLED WITH NON-METALLIC PLASTIC IRRIGATION MAIN LINES WHERE CONTROLLER WIRES ARE NOT BURIED IN THE SAME TRENCH AS THE MAIN LINE.
  2. THE TRACER WIRE SHALL BE PLACED ON THE BOTTOM OF THE TRENCH UNDER THE VERTICAL PROJECTION OF THE PIPE WITH SPLICED JOINTS SOLDERED AND COVERED WITH INSULATION TYPE TAPE.
  3. TRACER WIRE SHALL BE OF A COLOR NOT USED FOR VALVE WIRING. TERMINATE WIRE IN A VALVE BOX. PROVIDE ENOUGH LENGTH OF WIRE TO MAKE A LOOP AND ATTACH WIRE MARKER WITH THE DESIGNATION "TRACER WIRE".
5. DRIP INSTALLATION:
  1. CLAMP FITTINGS WITH OETIKER CLAMPS OR APPROVED EQUAL WHEN OPERATING PRESSURE EXCEEDS SPECIFIC DRIP TUBING FITTING REQUIREMENTS.
  2. WHEN INSTALLING DRIP TUBING, INSTALL SOIL STAPLES AS LISTED BELOW:
    - a. SANDY SOIL - ONE STAPLE EVERY THREE (3') FEET AND TWO (2) STAPLES ON EACH CHANGE OF DIRECTION (TEE, ELBOW, OR CROSS).
    - b. LOAM SOIL - ONE STAPLE EVERY FOUR (4') FEET AND TWO (2) STAPLES ON EACH CHANGE OF DIRECTION (TEE, ELBOW, OR CROSS).
    - c. CLAY SOIL - ONE STAPLE EVERY FIVE (5') FEET AND TWO (2) STAPLES ON

EACH CHANGE OF DIRECTION (TEE, ELBOW, OR CROSS).

3. CAP OR PLUG ALL OPENINGS AS SOON AS LINES HAVE BEEN INSTALLED TO PREVENT THE INTRUSION OF MATERIALS THAT WOULD OBSTRUCT THE PIPE. LEAVE IN PLACE UNTIL REMOVAL IS NECESSARY FOR COMPLETION OF INSTALLATION.
4. THOROUGHLY FLUSH ALL WATER LINES BEFORE INSTALLING VALVES AND OTHER HYDRANTS.

#### 3.11 ADJUSTMENT AND COVERAGE TEST

##### A. ADJUSTMENT:

1. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS, VALVES AND ALL OTHER EQUIPMENT TO ASCERTAIN THAT THEY FUNCTION ACCORDING TO THE MANUFACTURER'S DATA.
2. ADJUST ALL SPRINKLER HEADS NOT TO OVERSPRAY ONTO WALKS, ROADWAYS AND BUILDINGS WHEN UNDER MAXIMUM OPERATING PRESSURE AND DURING TIMES OF NORMAL PREVAILING WINDS.

##### B. COVERAGE TEST:

1. THE CONTRACTOR SHALL PERFORM THE COVERAGE TEST IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AFTER ALL SPRINKLER HEADS HAVE BEEN INSTALLED, FLUSHED AND ADJUSTED. EACH SECTION IS TESTED TO DEMONSTRATE UNIFORM AND ADEQUATE COVERAGE OF THE PLANTING AREAS SERVICED.
2. ANY SYSTEMS THAT REQUIRE ADJUSTMENTS FOR FULL AND EVEN COVERAGE SHALL BE DONE BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. ADJUSTMENTS MAY ALSO INCLUDE REALIGNMENT OF PIPES, ADDITION OF EXTRA HEADS, AND CHANGES IN NOZZLE TYPE OR SIZE.
3. THE CONTRACTOR AT NO ADDITIONAL COST SHALL IMMEDIATELY CORRECT ALL UNAUTHORIZED CHANGES OR IMPROPER INSTALLATION PRACTICES.
4. THE ENTIRE IRRIGATION SYSTEM SHALL BE OPERATING PROPERLY WITH WRITTEN APPROVAL OF THE INSTALLATION BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING ANY PLANTING OPERATIONS.

#### 3.12 REPAIR OF PLANTING SOIL

- A. ANY AREAS OF PLANTING SOIL INCLUDING IMPORTED OR EXISTING SOILS OR MODIFIED PLANTING SOIL WHICH BECOME COMPACTED OR DISTURBED OR DEGRADED AS A RESULT OF THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL BE RESTORED TO THE SPECIFIED QUALITY AND COMPACTION PRIOR TO BEGINNING PLANTING OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER. RESTORATION METHODS AND DEPTH OF COMPACTION REMEDIATION SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.

#### 3.13 CLEAN-UP

- A. DURING INSTALLATION, KEEP THE SITE FREE OF TRASH, PAVEMENTS REASONABLY CLEAN AND WORK AREA IN AN ORDERLY CONDITION AT THE END OF EACH DAY. REMOVE TRASH AND DEBRIS IN CONTAINERS FROM THE SITE NO LESS THAN ONCE A WEEK.
1. IMMEDIATELY CLEAN UP ANY SPILLED OR TRACKED SOIL, FUEL, OIL, TRASH OR DEBRIS DEPOSITED BY THE CONTRACTOR FROM ALL SURFACES WITHIN THE PROJECT OR ON PUBLIC RIGHT OF WAYS AND NEIGHBORING PROPERTY.
- B. ONCE INSTALLATION IS COMPLETE, WASH ALL SOIL FROM PAVEMENTS AND OTHER STRUCTURES.
1. MAKE ALL REPAIRS TO GRADES RUTS, AND DAMAGE TO THE WORK OR OTHER WORK AT THE SITE.
  2. REMOVE AND DISPOSE OF ALL EXCESS SOIL, PACKAGING, AND OTHER MATERIAL BROUGHT TO THE SITE BY THE CONTRACTOR.

#### 3.14 PROTECTION

- A. THE CONTRACTOR SHALL PROTECT INSTALLED IRRIGATION WORK FROM DAMAGE DUE TO OPERATIONS BY OTHER CONTRACTORS OR TRESPASSERS.
1. MAINTAIN PROTECTION DURING INSTALLATION UNTIL ACCEPTANCE. TREAT, REPAIR OR REPLACE DAMAGED WORK IMMEDIATELY. THE OWNER'S REPRESENTATIVE SHALL DETERMINE WHEN SUCH TREATMENT, REPLACEMENT OR REPAIR IS SATISFACTORY.

#### 3.15 PRE-MAINTENANCE OBSERVATION

- A. ONCE THE ENTIRE SYSTEM SHALL BE COMPLETELY INSTALLED AND OPERATIONAL

AND ALL PLANTING IS INSTALLED, THE OWNER'S REPRESENTATIVE SHALL OBSERVE THE SYSTEM AND PREPARE A WRITTEN PUNCH LIST INDICATING ALL ITEMS TO BE CORRECTED AND THE BEGINNING DATE OF THE MAINTENANCE PERIOD.

- B. THIS IS NOT FINAL ACCEPTANCE AND DOES NOT RELIEVE THE CONTRACTOR FROM ANY OF THE RESPONSIBILITIES IN THE CONTRACT DOCUMENTS.

#### 3.16 GENERAL MAINTENANCE AND THE MAINTENANCE PERIOD

- A. GENERAL MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER INSTALLATION OF IRRIGATION SYSTEM. THE GENERAL MAINTENANCE AND THE MAINTENANCE PERIOD SHALL INCLUDE THE FOLLOWING:
1. ON A WEEKLY BASIS THE CONTRACTOR SHALL KEEP THE IRRIGATION SYSTEM IN GOOD RUNNING ORDER AND MAKE OBSERVATIONS ON THE ENTIRE SYSTEM FOR PROPER OPERATION AND COVERAGE. REPAIR AND CLEANING SHALL BE DONE TO KEEP THE SYSTEM IN FULL OPERATION.
  2. RECORDS OF ALL TIMING CHANGES TO CONTROL VALVES FROM INITIAL INSTALLATION TO TIME OF FINAL ACCEPTANCE SHALL BE KEPT AND TURNED OVER TO THE OWNER'S REPRESENTATIVE AT THE TIME OF FINAL ACCEPTANCE.
  3. DURING THE LAST WEEK OF THE MAINTENANCE PERIOD, PROVIDE EQUIPMENT FAMILIARIZATION AND INSTRUCTION ON THE TOTAL OPERATIONS OF THE SYSTEM TO THE PERSONNEL WHO WILL ASSUME THE RESPONSIBILITY FOR RUNNING THE IRRIGATION SYSTEM.
  4. AT THE END OF THE MAINTENANCE PERIOD, TURN OVER ALL OPERATIONS LOGS, MANUALS, INSTRUCTIONS, SCHEDULES, KEYS AND ANY OTHER EQUIPMENT NECESSARY FOR OPERATION OF THE IRRIGATION SYSTEM TO THE OWNER'S REPRESENTATIVE WHO WILL ASSUME RESPONSIBILITY FOR THE OPERATIONS AND MAINTENANCE OF THE IRRIGATION SYSTEM.
- B. THE MAINTENANCE PERIOD FOR THE IRRIGATION SYSTEM SHALL COINCIDE WITH THE MAINTENANCE PERIOD FOR THE PLANTING. (SEE SPECIFICATION SECTION "PLANTING")

#### 3.17 SUBSTANTIAL COMPLETION ACCEPTANCE

- A. UPON WRITTEN NOTICE FROM THE CONTRACTOR, THE OWNERS REPRESENTATIVE SHALL REVIEW THE WORK AND MAKE A DETERMINATION IF THE WORK IS SUBSTANTIALLY COMPLETE.
- B. THE DATE OF SUBSTANTIAL COMPLETION OF THE IRRIGATION SHALL BE THE DATE WHEN THE OWNER'S REPRESENTATIVE ACCEPTS THAT ALL WORK IN PLANTING, PLANTING SOIL, AND IRRIGATION INSTALLATION SECTIONS IS COMPLETE.

#### 3.18 FINAL ACCEPTANCE / SYSTEM MALFUNCTION CORRECTIONS

- A. AT THE END OF THE PLANT WARRANTEE AND MAINTENANCE PERIOD, (SEE SPECIFICATION SECTION "PLANTING") THE OWNER'S REPRESENTATIVE SHALL INSPECT THE IRRIGATION WORK AND ESTABLISH THAT ALL PROVISIONS OF THE IRRIGATION SYSTEM ARE COMPLETE AND THE SYSTEM IS WORKING CORRECTLY.
1. RESTORE ANY SOIL SETTLEMENT OVER TRENCHES AND OTHER PARTS OF THE IRRIGATION SYSTEM.
  2. REPLACE, REPAIR OR RESET ANY MALFUNCTIONING PARTS OF THE IRRIGATION SYSTEM.
- B. THE CONTRACTOR SHALL SHOW ALL CORRECTIONS MADE FROM PUNCH LIST. ANY ITEMS DEEMED NOT ACCEPTABLE SHALL BE REWORKED AND THE MAINTENANCE PERIOD WILL BE EXTENDED.
- C. THE CONTRACTOR SHALL SHOW EVIDENCE THAT THE OWNER'S REPRESENTATIVE HAS RECEIVED ALL CHARTS, RECORDS, DRAWINGS, AND EXTRA EQUIPMENT AS REQUIRED BEFORE FINAL ACCEPTANCE.
- D. FAILURE TO PASS REVIEW: IF THE WORK FAILS TO PASS FINAL REVIEW, ANY SUBSEQUENT OBSERVATIONS MUST BE RESCHEDULED AS PER ABOVE. THE COST TO THE OWNER FOR ADDITIONAL OBSERVATIONS WILL BE CHARGED TO THE CONTRACTOR AT THE PREVAILING HOURLY RATE OF THE REVIEWER.

#### END OF SECTION

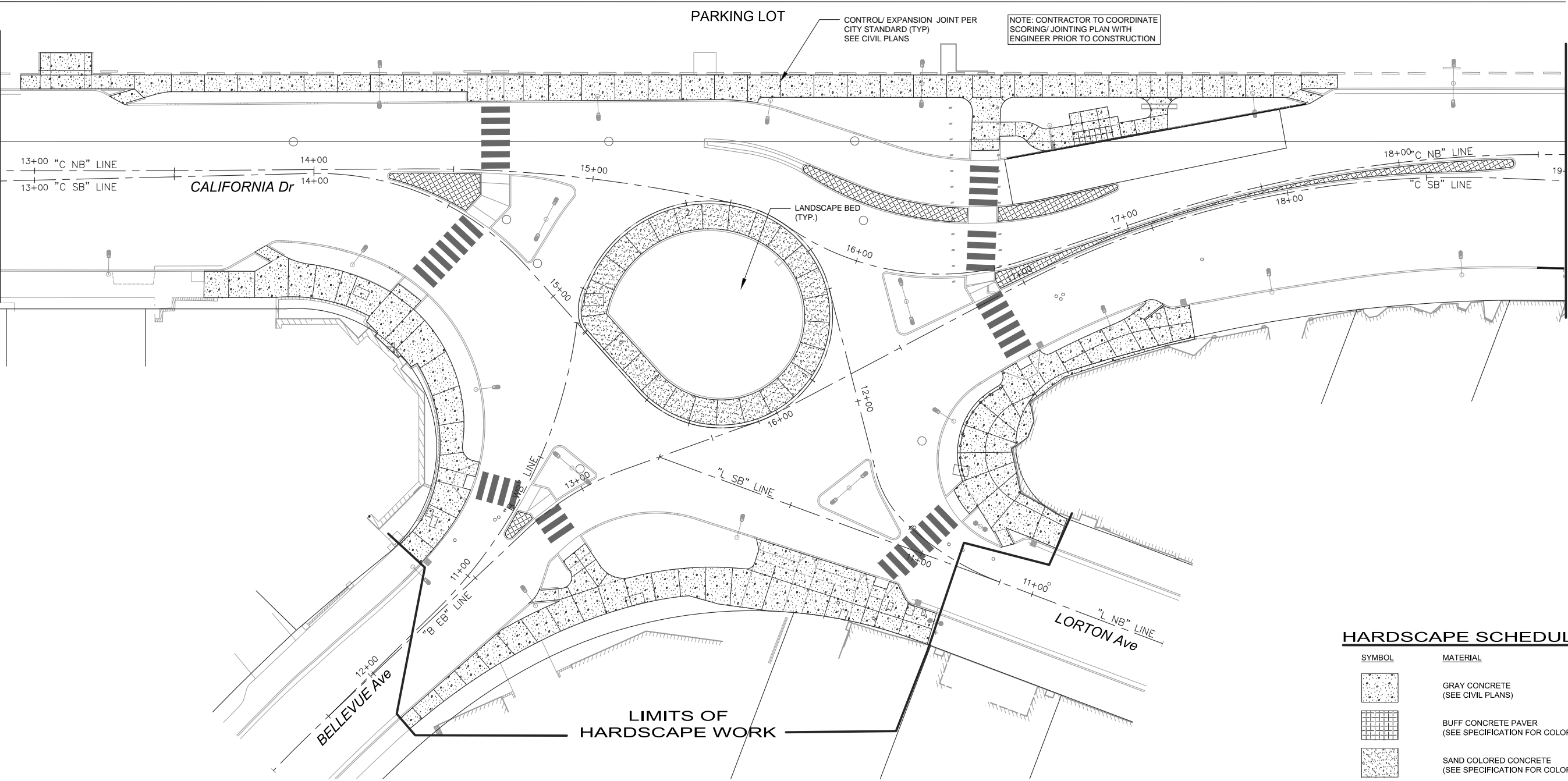
	<b>CALIFORNIA DRIVE ROUNABOUT</b> PREPARED FOR <b>CITY OF BURLINGAME</b> SAN MATEO COUNTY		SHEET NO. <u>59</u> OF <u>61</u> SHEETS <b>IR-06</b>
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LIMITS OF  
HARDSCAPE WORK

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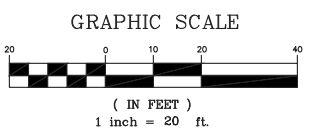


NOTE: CONTRACTOR TO COORDINATE  
SCORING/ JOINTING PLAN WITH  
ENGINEER PRIOR TO CONSTRUCTION

CONTROL/ EXPANSION JOINT PER  
CITY STANDARD (TYP)  
SEE CIVIL PLANS

HARDSCAPE SCHEDULE

SYMBOL	MATERIAL
	GRAY CONCRETE (SEE CIVIL PLANS)
	BUFF CONCRETE PAVER (SEE SPECIFICATION FOR COLOR AND FINISH)
	SAND COLORED CONCRETE (SEE SPECIFICATION FOR COLOR AND FINISH)
	PEDESTRIAN RAILING (SEE DETAIL A ON SHEET HS-02)
	LIGHT POLES (SEE ELECTRICAL PLANS)



No.	REVISIONS	DATE	BY

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KHA PROJECT	097515003
DATE	12/27/2017
SCALE	AS SHOWN
DESIGNED BY	DW
DRAWN BY	DW
CHECKED BY	DC

CALIFORNIA DRIVE  
ROUNDBOUT  
PREPARED FOR  
CITY OF BURLINGAME

SAN MATEO COUNTY

CA



HARDSCAPE PLAN

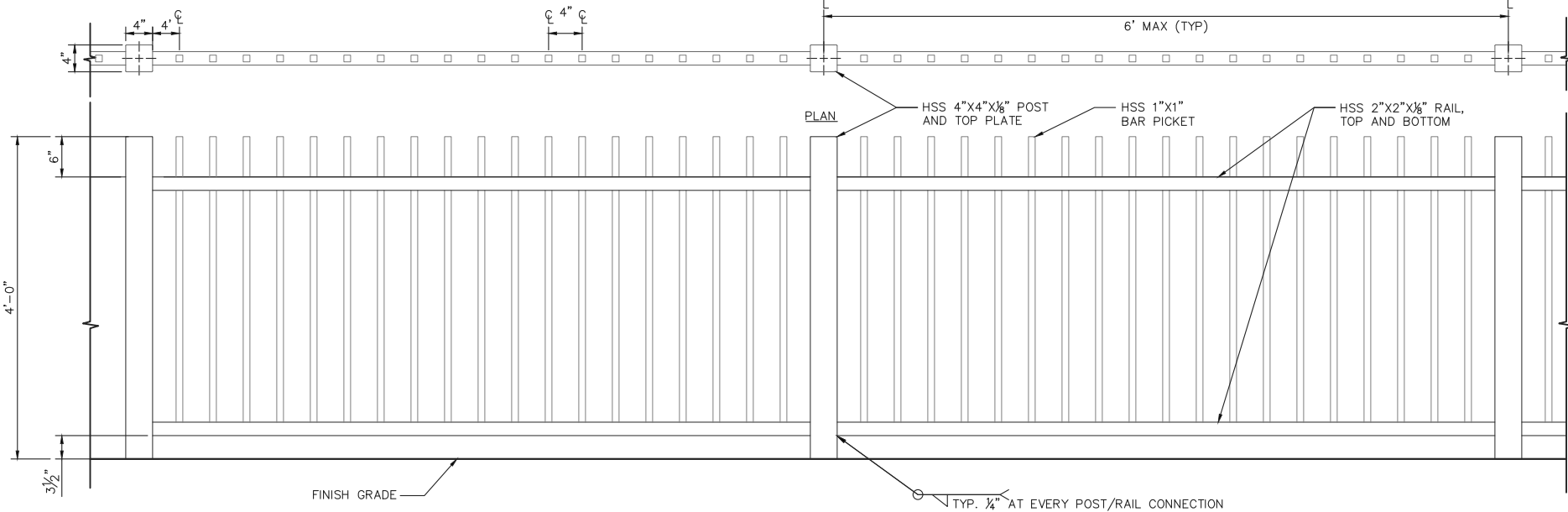
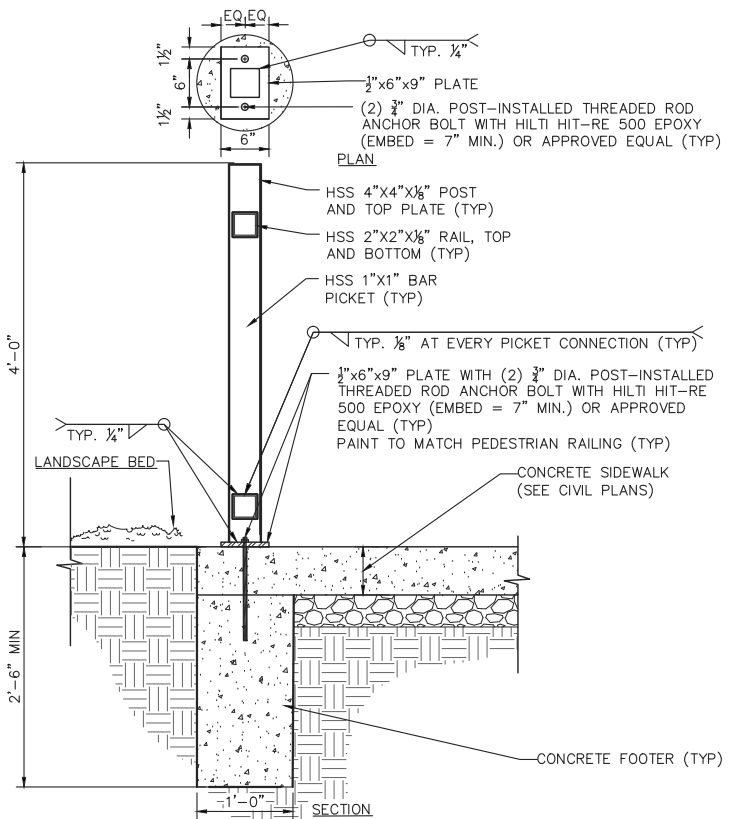
SHEET NO. 60  
OF 61 SHEETS

HS-01

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RAILING FABRICATION NOTES:

1. ALL PEDESTRIAN RAILING AND COMPONENTS FABRICATED FROM STEEL
2. POST SPACING TO VARY WHEN TOTAL RAILING LENGTH REQUIRES (CONTRACTOR TO FIELD VERIFY POTENTIAL UTILITY CONFLICTS TO DETERMINE FENCE, POST AND FOOTING LOCATION MODIFICATIONS REQUIRED).
3. ASSEMBLY COLOR: DARK BRONZE
4. CAP ENDS OF POSTS. GRIND ALL WELDS FLUSH TO SURFACE. SEE SPECIFICATIONS FOR ADDITIONAL WELDING NOTES.
5. ALL FENCE GATE ELEMENTS TO BE HOT-DIP GALVANIZED PER ASTM A123 AT A RATE OF 2 OZ. / SQUARE FOOT.
6. ALL STEEL SHALL CONFORM TO ASTM A529, GRADE 50 OR ASTM A36 UNLESS NOTED OTHERWISE.
7. DESIGN, FABRICATION, AND ERECTION OF STEEL PEDESTRIAN RAILING SHALL CONFORM TO THE LATEST AISC CODE AND SPECIFICATIONS, INCLUDING THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS.
8. WELDING SHALL COMPLY WITH THE REQUIREMENTS OF THE SPECIAL PROVISIONS. ALL WELD SIZES NOT INDICATED ON PLANS SHALL COMPLY WITH THE LATEST AWS D1.1 UNLESS OTHERWISE NOTED. ALL WELDS SHALL BE CONTINUOUS.
9. FINISHES:
  - A. ALL RAILING COMPONENTS SHALL RECEIVE ONE COAT OF JASSCO PREP AND PRIMER AFTER GALVANIZATION AND PRIOR TO APPLICATION OF PRIMER.
  - B. PRIMER COATING FOR FENCE COMPONENTS SHALL CONSIST OF VISTA POINT METAL PRO COATING PRIMER / FINISH. SURFACES IN DIRECT CONTACT WITH CONCRETE OR MORTAR SHALL NOT RECEIVE PRIMER COATING.
  - C. ALL RAILING COMPONENTS TO BE FINISHED WITH TWO COATS OF SHERWIN-WILLIAMS CO. SEMI-GLOSS PRO-INDUSTRIAL (HIGH PERFORMANCE) PAINT OR APPROVED EQUAL. COLOR TO BE MATTE BLACK. SUBMIT METAL COLOR SAMPLES PRIOR TO FABRICATION FOR APPROVAL BY ENGINEER.
  - J. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,600 PSI AT 28 DAYS.



FOR INFORMATION ONLY  
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND STRUCTURAL CERTIFICATION FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO FABRICATION AND INSTALLATION.



A

PEDESTRIAN RAILING

SCALE: N.T.S.

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HARDSCAPE DETAILS

SHEET NO. 61  
OF 61 SHEETS

HS-02