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PARKMERCED

PHASE 1B STREET IMPROVEMENT PLANS

SAN FRANCISCO, SAN FRANCISCO COUNTY, CALIFORNIA

PROJECT DESCRIPTION

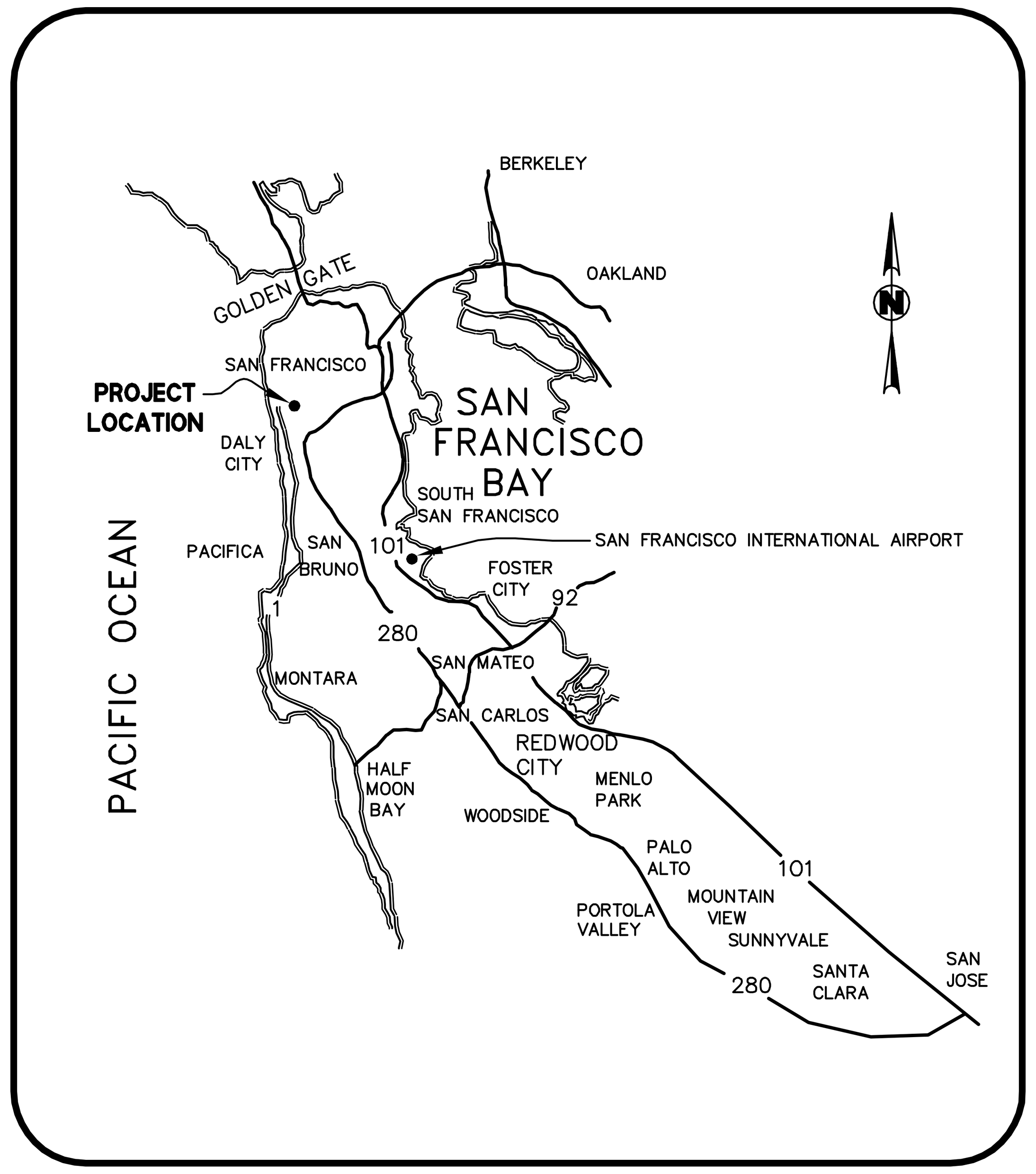
THE PROJECT IS LOCATED WITHIN THE PARKMERCED COMMUNITY IN SAN FRANCISCO, CA. THE COMPLETED PROJECT IS ENVISIONED TO BE FINISHED IN PHASES. THE SCOPE OF WORK FOR THIS PORTION OF THE STREET IMPROVEMENT PACKAGE IS THE FIRST OF MULTIPLE PERMITS NECESSARY FOR THE COMPLETE DEVELOPMENT AT PARKMERCED (SEE BELOW). THE SCOPE INCLUDES DEMOLITION OF EXISTING STREET AND UTILITIES AS WELL AS GRADING, PROPOSED UTILITIES AND STREET SIGNING AND STRIPING.

COMPLETE DEVELOPMENT

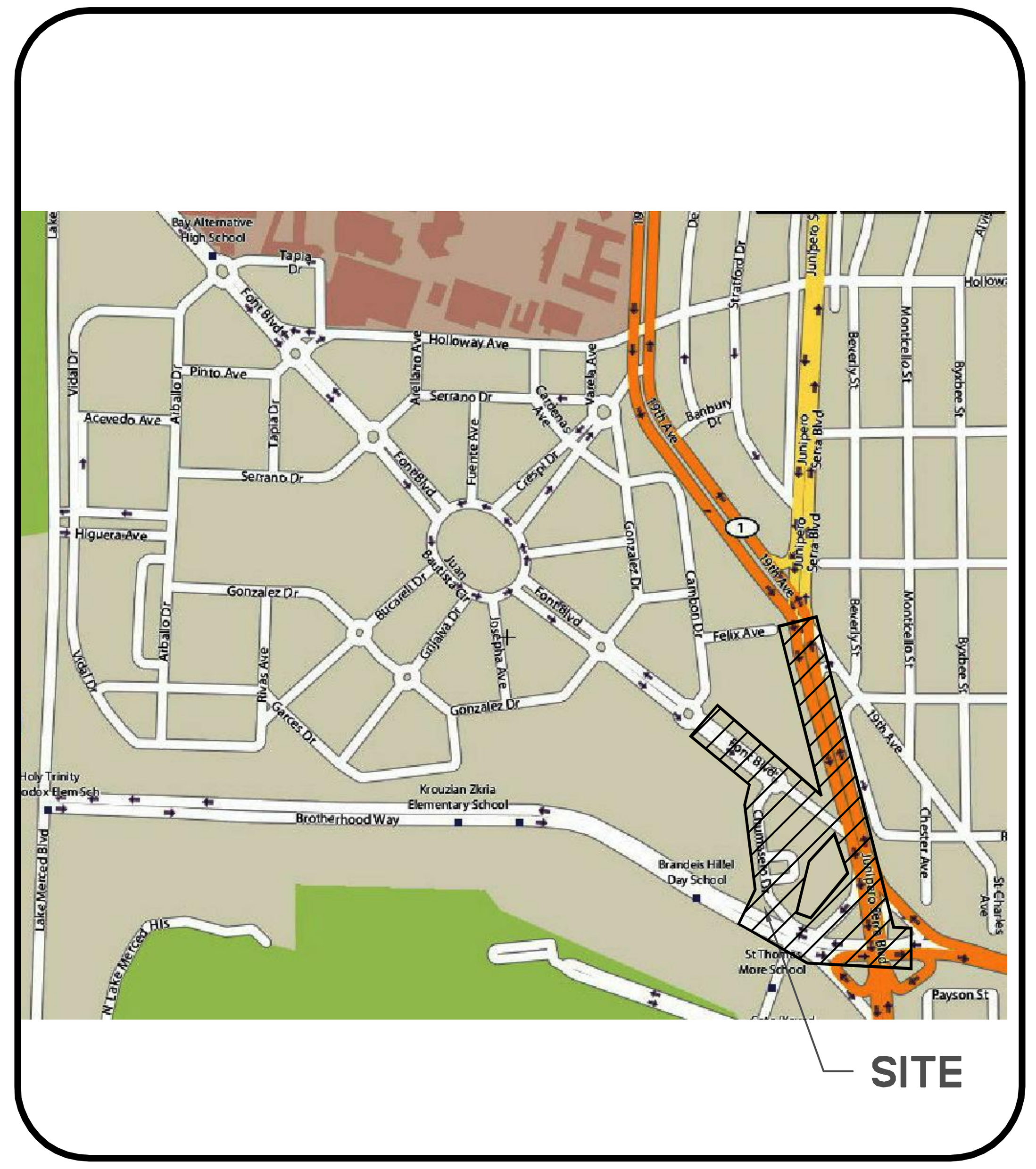
WHEN THE DEVELOPMENT OF THE SITE IS COMPLETE, THE PROJECT WILL INCLUDE 151 ACRES OVER 24 BLOCKS WITH 249 LOTS CONSISTING OF PRIVATE AND PUBLIC CONSTRUCTION INCLUDING RESIDENTIAL, COMMERCIAL, OPEN SPACE, RETAIL, AND SCHOOL IMPROVEMENTS.

LEGEND

	PROPOSED	EXISTING
PROPERTY LINE		
EASEMENT		
CENTERLINE		
CONTOUR LINE	105	105
SANITARY SEWER LINE		SS 8" SS
COMBINED SEWER LINE	12"CS	CS CS
ELECTRIC LINE	E	E
GAS LINE	G	G
JOINT TRENCH LINE	JT JT	JT JT
STORM DRAIN LINE		SD
STREET LIGHTING LINE		SL
TELEPHONE LINE	T T	T T
TV LINE		TV
LOW PRESSURE WATER LINE	12"LPW	LPW 8" LPW
SAN ANDREAS PIPLINE	36"SAP	LPW
RECYCLED WATER LINE	12"RW	RW
DRAINAGE DITCH		
SLOPE DESIGNATOR	TOP TOP / TOE TOE	
AREA DRAIN		
CATCH BASIN/MODIFIED CATCH BASIN		
MANHOLE/MODIFIED MANHOLE		
LOW PRESSURE/SAPL3 FIRE HYDRANT		
STREET LIGHT/LUMINAIRE		
WATER VALVE		
AIR RELEASE VALVE/BLOW OFF	Ⓐ	
AIR VENT	AV	
SPOT ELEVATION ON GRADE		× 101 101
RETAINING WALL		
DRIVEWAY		
MOUNTABLE CURB		
CURB & GUTTER		
VERTICAL CURB/CONC. BAND		
WATER METER		
BACKFLOW PREVENTER		
TRAFFIC SIGNAL		
TREE GRATE		
STREET MONUMENT		
TRANSFORMER		
SURVEYING CONTROL POINT		7331
PARKMERCED BLOCK NUMBER	BLOCK-01	



LOCATION MAP
NTS



VICINITY MAP
NTS

PROJECT INFORMATION

OWNER/SUBDIVIDER: MAXIMUS REAL ESTATE PARTNERS, LLC
ONE MARITIME PLAZA
1900
SAN FRANCISCO, CA 94111
(415) 584-4832

ENGINEER: BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300

PROPERTY DESCRIPTION:

A. RECORD OF SURVEY MAP OF PARKMERCED, SAN FRANCISCO. CALIFORNIA RECORDED IN BOOK "R" PAGES 15-19, OFFICIAL RECORDS AUGUST 21, 1951. ALSO ON FILE IN THE CITY OF SAN FRANCISCO BUREAU OF STREETS AND MAPPING AS MONUMENT MAPS T-14-36.

B. RECORD OF SURVEY MAP OF PARKMERCED, SAN FRANCISCO. CALIFORNIA RECORDED IN BOOK "O" PAGES 97-101, OFFICIAL RECORDS FEBRUARY 2, 1944. ALSO ON FILE IN THE CITY OF SAN FRANCISCO BUREAU OF STREETS AND MAPPING AS MONUMENT MAPS T-13-6.

ENGINEER'S STATEMENT

THESE IMPROVEMENT PLANS HAVE BEEN PREPARED BY ME OR UNDER MY DIRECTION IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICE.

Brian Scott
BRIAN SCOTT
P.E. #61034
BKF ENGINEERS

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61034
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

04/28/2017
DATE

ABBREVIATIONS

SYMBOL	DESCRIPTION
19TH	19TH AVENUE
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AVDO	ACEVEDO AVENUE
AD	AREA DRAIN
AGG	AGGREGATE
APN	ASSESSORS PARCEL NUMBER
APPROX.	APPROXIMATE
ARV	AIR RELEASE VALVE
AVE	AVENUE
AVG	AVERAGE
ABLO	ARBALLO AVENUE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWMS	AUTOMATED WASTE MANAGEMENT SYSTEM
AWWA	AMERICAN WATER WORKS ASSOCIATION
AWSS	AUXILIARY WATER SUPPLY SYSTEM
BA	BRIDGE ABUTMENT
BC	BEGINNING OF CURVE
BCD	BUCARELI DRIVE
BCR	BEGIN CURB RETURN
BHW	BROTHERHOOD WAY
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BO	BLOWOFF
BOS	BOTTOM OF SLOPE
BPM	BLUE PAVEMENT MARKER
BVC	BEGIN VERTICAL CURVE
BW	BACK OF WALK, BOTTOM OF WALL
BX	BOTTOM OF EXCAVATION
BU	BUBBLE UP STRUCTURE
CB	CATCH BASIN
CAMB	CAMBON DRIVE
CAST	CASTELO AVENUE
CC	CENTER TO CENTER or CENTER OF CURVE
CF	CUBIC FEET
C&G	CURB & GUTTER
CIP	CAST IRON PIPE
CL	CENTERLINE
CHUM	CHUMASERO DRIVE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT(ION)
CONT	CONTINUOUS, CONTINUATION
CONST	CONSTRUCT
CR	CURB RETURN/RAMP
CRA	CARDENAS AVENUE
CREA	CRESPI DRIVE EAST
CRWE	CRESPI DRIVE WEST
CS	COMBINED SEWER
CSA	COSTELLO AVENUE
CT	COURT
CUL	CULVERT
CY	CUBIC YARD
DI	DUCTILE IRON
DIA	DIAMETER
DIAZ	DIAZ AVENUE
DIP	DUCTILE IRON PIPE
DR	DRIVE
D/W	DRIVEWAY
(E)	EXISTING
E	ELECTRICAL
EA	EACH
EC	END OF CURVE
ECR	END OF CURB RETURN
EL	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVA	EMERGENCY VEHICLE ACCESS EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EW	EACH WAY
EX	EXISTING
(F)	FUTURE
F/C	FACE OF CURB
FTNO	FONT BOULEVARD NORTH
FTSO	FONT BOULEVARD SOUTH
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FI	FIELD INLET
FL	FLOW LINE
FM	FORCE MAIN
FP	FINISHED PAVEMENT
FT	FEET
FNTE	FUENTES AVENUE
FW	FIRE WATER
FS	FIRE SERVICE OR FINISHED SURFACE
FXA	FELIX AVENUE
G	GAS
GRCS	GARCES DRIVE
GALV	GALVANIZED
GB	GRADE BREAK
GCSO	GARCES DRIVE SOUTH
GE	GRATE ELEVATION
GRIJ	GRIJALVA DRIVE
GND	GROUND
GR	GRADE
GV	GATE VALVE
GONZ	GONZALEZ DRIVE
GZLM	GONZALEZ AT LAKE MERCED BLVD
HDWL	HEADWALL
HCP	HABITAT CONSERVATION PLAN
HGRA	HIGUERA DRIVE
HOLL	HOLLOWAY AVENUE
HORIZ	HORIZONTAL
HP	HIGH POINT
HPW	HIGH PRESSURE WATER
HV	HIGH VOLTAGE
ID	INSIDE DIAMETER
IN	INCHES
INV	INVERT
JB	JOINT BOX
JBNO	JUAN BAUTISTA NORTH
JBSO	JUAN BAUTISTA SOUTH
JSB	JUNIPERO SERRA BOULEVARD
JSPH	JOSEPHA AVE
JP	JOINT POLE
JT	JOINT TRENCH
L	LENGTH
LAT	LATERAL
LB	POUND(S)
LF	LINEAR FEET
LMB	LAKE MERCED BOULEVARD
LP	LOW POINT
LPW	LOW PRESSURE WATER
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MOD CB	MODIFIED CATCH BASIN
MOD MH	MODIFIED MANHOLE
MOD SWI	MODIFIED STORM WATER INLET
MON	MONUMENT
MVG	MODIFIED VALLEY GUTTER
N	NORTH
NE	NORTHEAST
NG	NATURAL GROUND
NO., #	NUMBER
NS01	NEW STREET 01
NS02	NEW STREET 02
NS03	NEW STREET 03
NS04	NEW STREET 04
NS05	NEW STREET 05
NS06	NEW STREET 06
NS07	NEW STREET 07
NS08	NEW STREET 08
NS09	NEW STREET 09
NS10	NEW STREET 10
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OH	OVERHEAD
O.R.	OLD RECORDS
(P)	PROPOSED
P	PAD
P.A.E.	PUBLIC ACCESS EASEMENT
PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
PCR	POINT OF CURVE RETURN
PE	PAD ELEVATION OR POLYETHYLENE
PG&E	PACIFIC GAS AND ELECTRIC
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PR	PROPOSED
PRV	PRESSURE REDUCING VALVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PSDE	PRIVATE STORM DRAIN EASEMENT
PS	PROTECTIVE SLOPE
PSSE	PRIVATE SANITARY SEWER EASEMENT
PSI	PRESSURE PER SQUARE INCH
PT	POINT
PNTO	PINTO AVENUE
PT&T	PACIFIC TELEPHONE AND TELEGRAPH (PACIFIC BELL)
P.U.E.	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RIM EL	RIM ELEVATION
RT	RIGHT
R.O.W.	RIGHT OF WAY
RW	RECLAIMED/RECYCLED WATER
RWL	RAIN WATER LEADER
S	SLOPE or SOUTH
SAP	SAN ANDREAS PIPELINE; SEE ARCHITECTURAL PLANS
SBSS	SAND BASED STRUCTURAL SOIL
SD	STORM DRAIN
SDCO	STORM DRAIN CLEAN OUT
SDDI	STORM DRAIN DROP INLET
SDE	STORM DRAIN EASEMENT
SDMH	STORM DRAIN MANHOLE
SE	SOUTHEAST
SEP	SEE ELECTRICAL PLANS
SF	SQUARE FEET
SQ. FT.	SQUARE FEET
SFS	SAN FRANCISCO STANDARDS
SHT	SHEET
SLP	SEE LANDSCAPE PLANS
SNS	STREET NAME SIGN
SERR	SERRANO DRIVE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSE	SANITARY SEWER EASEMENT
SSMH	SANITARY SEWER MANHOLE
SSFM	SANITARY SEWER FORCE MAIN
SSP	SEE STRUCTURAL PLANS
ST	STREET
STA	STATION
STD	STANDARD
S/W	SIDEWALK
SW	SOUTHWEST
SWI	STORM WATER INLET
T	TELEPHONE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEMP	TEMPORARY
TG	TOP OF GRATE
TP	TOP OF PAVEMENT
TPIA	TAPIA DRIVE
TW	TOP OF WALL
(TYP)	TYPICAL
UG	UNDER GROUND
VIDL	VIDAL DRIVE
VDNO	VIDAL DRIVE NORTH
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VRA	VARELA AVENUE
W/	WITH
W/O	WITHOUT
WL	WATERLINE
WM	WATER METER
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WATER
WH	WALL HEIGHT
XING	CROSSING

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REDWOOD CITY, CA 94065
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650-482-6399 (FAX)
BKF ENGINEERS / SURVEYORS / PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TITLE SHEET
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C1.00

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PLOT TIME: 4-28-2017 5:57 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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SHEET NUMBER	SHEET NAME
C1.00	TITLE SHEET
C1.01	SHEET INDEX
C1.02	NOTES LEGEND & ABBREVIATIONS
C1.03	TYPICAL STREET SECTIONS
C1.04	TYPICAL STREET SECTIONS
C1.05	TYPICAL STREET SECTIONS
C1.06	TYPICAL STREET SECTIONS
C1.07	HORIZONTAL CONTROL PLAN – KEY MAP
C1.08	HORIZONTAL CONTROL PLAN
C1.09	HORIZONTAL CONTROL PLAN
C1.10	HORIZONTAL CONTROL PLAN – FONT BOULEVARD
C1.11	HORIZONTAL CONTROL PLAN – CHUMASERO DRIVE
C1.12	HORIZONTAL CONTROL PLAN – BROTHERHOOD WAY
C1.13	HORIZONTAL CONTROL PLAN – BROTHERHOOD WAY
C1.14	HORIZONTAL CONTROL PLAN – JUNIPERO SERRA BOULEVARD
C1.15	HORIZONTAL CONTROL PLAN – JUNIPERO SERRA BOULEVARD
C1.16	HORIZONTAL CONTROL PLAN – CAMBON DRIVE
C2.00	EXISTING CONDITIONS & DEMOLITION PLAN – KEY MAP
C2.01	EXISTING CONDITIONS & DEMOLITION PLAN – FONT BOULEVARD
C2.02	EXISTING CONDITIONS & DEMOLITION PLAN – FONT BOULEVARD
C2.03	EXISTING CONDITIONS & DEMOLITION PLAN – CHUMASERO DRIVE
C2.04	EXISTING CONDITIONS & DEMOLITION PLAN – BROTHERHOOD WAY
C2.05	EXISTING CONDITIONS & DEMOLITION PLAN – BROTHERHOOD WAY
C2.06	EXISTING CONDITIONS & DEMOLITION PLAN – JUNIPERO SERRA BOULEVARD
C2.07	EXISTING CONDITIONS & DEMOLITION PLAN – JUNIPERO SERRA BOULEVARD
C2.08	EXISTING CONDITIONS & DEMOLITION PLAN – JUNIPERO SERRA BOULEVARD
C2.09	EXISTING CONDITIONS & DEMOLITION PLAN – CAMBON DRIVE
C3.00	GRADING PLAN – KEY MAP
C3.01	GRADING PLAN – NORTH
C3.02	GRADING PLAN – SOUTH
C3.03	GRADING PLAN AND PROFILE – FONT BOULEVARD
C3.04	GRADING PLAN AND PROFILE – FONT BOULEVARD
C3.05	GRADING PLAN AND PROFILE – CHUMASERO DRIVE
C3.06	GRADING PLAN AND PROFILE – CHUMASERO DRIVE
C3.07	GRADING PLAN AND PROFILE – BROTHERHOOD WAY
C3.08	GRADING PLAN AND PROFILE – BROTHERHOOD WAY
C3.09	GRADING PLAN AND PROFILE – BROTHERHOOD WAY
C3.10	GRADING PLAN AND PROFILE – JUNIPERO SERRA BOULEVARD
C3.11	GRADING PLAN AND PROFILE – JUNIPERO SERRA BOULEVARD
C3.12	GRADING PLAN AND PROFILE – JUNIPERO SERRA BOULEVARD
C3.13	GRADING PLAN AND PROFILE – CAMBON DRIVE
C3.14	INTERSECTION DETAIL
C3.15	INTERSECTION DETAIL
C3.16	INTERSECTION DETAIL
C3.17	INTERSECTION DETAIL
C3.18	INTERSECTION DETAIL
C3.19	INTERSECTION DETAIL
C3.20	INTERSECTION DETAIL
C3.21	BMP GRADING DETAIL – FONT BOULEVARD
C3.22	BMP GRADING DETAIL – FONT BOULEVARD
C3.23	BMP GRADING DETAIL – FONT BOULEVARD
C3.24	BMP GRADING DETAIL – FONT BOULEVARD
C3.25	STORM DRAIN & SANITARY SEWER CROSSINGS
C3.26	STORM DRAIN & SANITARY SEWER CROSSINGS
C3.27	STORM DRAIN & SANITARY SEWER CROSSINGS
C3.28	STORM DRAIN & SANITARY SEWER CROSSINGS
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C4.02	UTILITY PLAN – SOUTH
C4.03	UTILITY PLAN AND PROFILE – FONT BOULEVARD
C4.04	UTILITY PLAN AND PROFILE – FONT BOULEVARD
C4.05	UTILITY PLAN AND PROFILE – CHUAMSERO DRIVE
C4.06	UTILITY PLAN AND PROFILE – CHUMASERO DRIVE
C4.07	UTILITY PLAN AND PROFILE – BROTHERHOOD WAY
C4.08	UTILITY PLAN AND PROFILE – BROTHERHOOD WAY

SHEET NUMBER	SHEET NAME
C4.09	UTILITY PLAN AND PROFILE – JUNIPERO SERRA BOULEVARD
C4.10	UTILITY PLAN AND PROFILE – CAMBON DRIVE
C5.00	SIGNING, STRIPING & PAVING PLAN – KEY MAP
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C5.02	SIGNING, STRIPING & PAVING PLAN – CHUMASERO DRIVE
C5.03	SIGNING, STRIPING & PAVING PLAN – BROTHERHOOD WAY
C5.04	SIGNING, STRIPING & PAVING PLAN – BROTHERHOOD WAY
C5.05	SIGNING, STRIPING & PAVING PLAN – JUNIPERO SERRA BOULEVARD
C5.06	SIGNING, STRIPING & PAVING PLAN – JUNIPERO SERRA BOULEVARD
C5.07	SIGNING, STRIPING & PAVING PLAN – CAMBON DRIVE
C5.08	SAND BASED STRUCTURAL SOIL PLAN
C6.00	EROSION AND SEDIMENT CONTROL PLAN – KEY MAP
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C6.02	EROSION AND SEDIMENT CONTROL PLAN – SOUTH
C6.03	EROSION AND SEDIMENT CONTROL PLAN – DETAILS
C6.04	WATER POLLUTION CONTROL PLAN – JUNIPERO SERRA BOULEVARD
C6.05	WATER POLLUTION CONTROL PLAN – JUNIPERO SERRA BOULEVARD
C6.06	WATER POLLUTION CONTROL PLAN – JUNIPERO SERRA BOULEVARD
C6.07	WATER POLLUTION CONTROL QUANTITIES – JUNIPERO SERRA BOULEVARD
C7.00	CONSTRUCTION DETAILS
C7.01	CONSTRUCTION DETAILS
C7.02	CONSTRUCTION DETAILS
C7.03	CONSTRUCTION DETAILS
C7.04	CONSTRUCTION DETAILS
C7.05	CONSTRUCTION DETAILS
C7.06	CONSTRUCTION DETAILS
C7.07	CONSTRUCTION DETAILS
C7.08	CONSTRUCTION DETAILS
C7.09	CONSTRUCTION DETAILS
C7.10	CONSTRUCTION DETAILS
C7.11	CONSTRUCTION DETAILS
C7.12	CONSTRUCTION DETAILS
C7.13	CONSTRUCTION DETAILS
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C7.19	CONSTRUCTION DETAILS
C7.20	CONSTRUCTION DETAILS
C7.21	CONSTRUCTION DETAILS
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C7.33	CONSTRUCTION DETAILS
C7.34	CONSTRUCTION DETAILS
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C7.36	CONSTRUCTION DETAILS
C7.37	CONSTRUCTION DETAILS
C7.38	CONSTRUCTION DETAILS
C7.39	CONSTRUCTION DETAILS
C7.40	CONSTRUCTION DETAILS
C7.41	CONSTRUCTION DETAILS
C7.42	CONSTRUCTION DETAILS
C7.43	CONSTRUCTION DETAILS
C7.44	CONSTRUCTION DETAILS
C7.45	CONSTRUCTION DETAILS

SHEET NUMBER	SHEET NAME
CS.01	CONSTRUCTION STAGING PLAN
CS.02	CONSTRUCTION STAGING PLAN
CS.03	CONSTRUCTION STAGING PLAN
CS.04A	CONSTRUCTION STAGING PLAN
CS.04B	CONSTRUCTION STAGING PLAN
CS.04C	CONSTRUCTION STAGING PLAN
CS.04D	CONSTRUCTION STAGING PLAN
CS.05	CONSTRUCTION STAGING PLAN
CS.06	CONSTRUCTION STAGING PLAN
TR.01	TEMPORARY ROAD – HORIZONTAL CONTROL PLAN
TR.02	TEMPORARY ROAD – EXISTING CONDITIONS AND DEMOLITION PLAN
TR.03	TEMPORARY ROAD – SITE PLAN
TR.04	TEMPORARY ROAD – PLAN AND PROFILE
TR.05	TEMPORARY ROAD – CURB RAMP GRADING PLAN
TR.06	TEMPORARY ROAD – GRADING PLAN STAGE 2
TR.07	TEMPORARY ROAD – TEMPORARY UTILITY PLAN
TR.08	TEMPORARY ROAD – UTILITY PROFILES
TR.09	TEMPORARY ROAD – SIGNING, STRIPING AND PAVING PLAN
TR.10	TEMPORARY ROAD – TEMPORARY TRAFFIC CONTROL PLAN
TR.11	TEMPORARY ROAD – EROSION CONTROL PLAN
TR.12	TEMPORARY ROAD – CONSTRUCTION DETAILS
WT1.00	TITLE SHEET – SAN ANDREAS PIPELINE NO. 3
WT2.00	SAPL NO. 3 PLAN & PROFILE – STA 1+00 TO STA 3+50
WT2.01	SAPL NO. 3 PLAN & PROFILE – STA 3+50 TO STA 8+50
WT2.02	SAPL NO. 3 PLAN & PROFILE – STA 8+50 TO STA 12+50
WT2.03	SAPL NO. 3 PLAN & PROFILE – STA 12+50 TO END
WT3.00	DETAIL – CONNECTION TO EXISTING 36" SAPL3
WT3.01	NOZZLE LAYOUT AND DETAILS
WT3.02	STEEL PIPE TYP. BEND, JOINT COATING & LINING DETAILS
WT3.03	STEEL PIPE DETAILS
WT3.04	BLOWOFF & AIR VALVE DETAILS
WT3.05	TRENCH & CONCRETE CAP DETAILS & APPURTENANCE SCHEDULE
WT3.06	CORROSION CONTROL DETAILS
WT3.07	PLAN, SECTION AND DETAILS FOR STEEL PIPE MANHOLE
WT3.08	27–INCH FRAME, GRATE & COVER FOR MANHOLE
WT3.09	LADDER RISER IN MANHOLE DETAIL
WT3.10	ALTERNATE HYDRANT CONFIGURATION DETAIL 1
WT3.11	ALTERNATE HYDRANT CONFIGURATION DETAIL 2
E1.00	ELECTRICAL LEGEND – SYMBOLS
E1.01	ELECTRICAL LEGEND – ABBREVIATIONS
E1.02	ELECTRICAL LEGEND – GENERAL NOTES
E1.03	ELECTRICAL DETAILS – SIGNAL HEAD MOUNTING
E1.04	ELECTRICAL DETAILS
E1.05	TRAFFIC SIGNAL INSTALLATION PLAN – BROTHERHOOD WAY & CHUMASERO DR
E1.06	CONDUIT AND WIRING SCHEDULE – BROTHERHOOD WAY & CHUMASERO DR
E1.07	TRAFFIC SIGNAL INSTALLATION PLAN – BROTHERHOOD WAY & THOMAS MORE DR
E1.08	CONDUIT AND WIRING SCHEDULE – BROTHERHOOD WAY & THOMAS MORE DR

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GENERAL NOTES

1. CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS AT THE JOB SITE FOR PUBLIC WORKS, AMBULANCE, POLICE, AND FIRE DEPARTMENTS, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.

2. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDER.

3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY PERTAINING TO "CONFINED SPACES". ANY MANHOLE, CULVERT, DROP INLET OR TRENCH (WHICH COULD CONTAIN AIR), THAT IS NOT READILY VENTILATED, MAY BE CONSIDERED A "CONFINED SPACE".

4. ENCROACHMENT PERMITS REQUIRED FOR WORK WITHIN EXISTING PUBLIC RIGHTS OF WAY SHALL BE OBTAINED BY THE CONTRACTOR.

5. THE OWNER'S SURVEYOR WILL PROVIDE CONSTRUCTION STAKES. THE NUMBER AND LOCATION OF STAKES REQUIRED SHALL BE DETERMINED BEFORE THE CONSTRUCTION BEGINS. ALL STAKING REQUESTS SHOULD BE DIRECTED TO THE OWNER A MINIMUM OF 48 HOURS PRIOR TO ACTUAL NEED. ANY ADDITIONAL STAKING OR RESTAKING WILL ONLY BE DONE AS DIRECTED AND AUTHORIZED BY THE OWNER OR HIS AUTHORIZED AGENT AT THE EXPENSE OF THE CONTRACTOR.

6. THE CONTRACTOR SHALL NOT DISTURB OR DESTROY ANY PERMANENT SURVEY POINTS WITHOUT THE CONSENT OF THE CITY AND COUNTY SURVEYOR. ANY PERMANENT MONUMENTS OR POINTS DISTURBED OR DESTROYED SHALL BE REPLACED BY A LICENSED ENGINEER OR SURVEYOR AT THE CONTRACTOR'S EXPENSE.

7. THE DEVELOPER/OWNER SHALL HAVE A JOB SUPERINTENDENT OR A DESIGNATED RESPONSIBLE REPRESENTATIVE ON THE JOB SITE ANYTIME WORK IS IN PROGRESS DURING THE CONSTRUCTION OF THE PROJECT. THE DEVELOPER/OWNER SHALL PROVIDE THE CITY ENGINEER WITH THE CONTACT INFO FOR THE DESIGNEE IN WRITING. THE NOTICE SHALL INCLUDE AN EMERGENCY NOTIFICATION PHONE NUMBER. THE CITY SHALL BE ADVISED IN WRITING IF THERE IS TO BE A CHANGE IN JOB-SITE REPRESENTATIVE.

8. A PRE-CONSTRUCTION MEETING OF ALL THE CONTRACTOR'S REPRESENTATIVES INVOLVED IN THE PROJECT WILL BE HELD PRIOR TO THE START OF CONSTRUCTION.

9. PRE CONSTRUCTION AND POST CONSTRUCTION VIDEO INSPECTIONS OF SANITARY SEWER, COMBINED SEWER AND STORM DRAIN ASSETS INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPE, FORCE MAINS, LATERALS, MANHOLES, BOXES, TUNNELS, ETC., SHALL BE PERFORMED BY CONTRACTOR IN ACCORDANCE WITH SFPUC AND NASSCO STANDARDS AND SUBMITTED TO SFPUC FOR REVIEW.

10. ALL SEWERS, LATERALS, MANHOLES, CATCH BASINS AND CULVERTS TO BE REUSED WITHIN PHASE BOUNDARY SHALL BE VIDEO INSPECTED AND TESTED BY CONTRACTOR AND SUBMITTED TO SFPUC FOR APPROVAL.

11. THE WORK SHOWN ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY AND COUNTY OF SAN FRANCISCO STANDARD PLANS & SPECIFICATIONS.

12. IT SHALL BE UNDERSTOOD THAT THE TERM "CITY ENGINEER" AS USED HEREIN IS THE CITY ENGINEER OF THE CITY OF SAN FRANCISCO OR HIS AUTHORIZED REPRESENTATIVE.

13. THE CONTRACTOR SHALL GIVE THE CITY ENGINEER TWO (2) WORKING DAYS ADVANCE NOTICE FOR INSPECTION SERVICES.

14. ALL REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS, REVISIONS SHALL BE ACCURATELY SHOWN ON REVISED PLANS.

15. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR THE ENTIRE PROJECT SITE AT ALL TIMES PER THE APPROVED PARKMERCED DUST CONTROL PLAN. THE SITE SHALL BE SPRINKLED AS NECESSARY TO PREVENT DUST NUISANCE. INCREASED WATERING SHALL BE REQUIRED WHEN WIND SPEEDS EXCEED 10 MPH OR WHEN DIRECTED BY THE CITY. IN THE EVENT THE CONTRACTOR NEGLECTS TO USE ADEQUATE MEASURES TO CONTROL DUST, THE CITY RESERVES THE RIGHT TO TAKE WHATEVER MEASURES ARE NECESSARY TO CONTROL DUST AND CHARGE THE COST TO THE CONTRACTOR.

16. NO PERSON SHALL, WHEN HAULING ANY EARTH, SAND, GRAVEL, DEBRIS, PAPER, OR ANY OTHER SUBSTANCE OVER ANY PUBLIC STREETS OR OTHER PUBLIC PLACE, ALLOW MATERIAL TO BLOW OR SPILL OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY. ALL LOADS LEAVING THE SITE SHALL BE COVERED.

17. THE CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION ENTRANCES TO PREVENT THE TRACKING OF SOIL, DUST, MUD, OR CONSTRUCTION DEBRIS ON PUBLIC STREETS.

18. DURING CONSTRUCTION, THE PUBLIC STREETS SHALL BE CLEANED AS OFTEN AS REQUIRED TO REMOVE ANY ACCUMULATION OF MUD & DEBRIS RESULTING FROM THIS CONSTRUCTION. IF IMPORT OR EXPORT OF DIRT IS NECESSARY, THE CONTRACTOR SHALL OBTAIN AN APPROVAL FOR THE HAULING ROUTE FROM THE CITY IF REQUIRED.

19. THE HAULING ROUTES SHALL BE STRICTLY ADHERED TO BY THE CONTRACTOR AND ALL SUBCONTRACTORS.

20. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, BKF ENGINEERS AT (650) 482-6300, BEFORE PROCEEDING WITH THE WORK IN QUESTION.

21. WHEN SPECIFICATIONS OR STANDARDS FROM DIFFERENT AUTHORITIES DIFFER FOR THE SAME SUBJECT MATTER, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED.

22. UPON SATISFACTORY COMPLETION OF THE WORK, THE ENTIRE WORK SITE SHALL BE CLEANED UP AND LEFT WITH A SMOOTH AND NEATLY GRADED SURFACE FREE OF CONSTRUCTION WASTE AND RUBBISH OF ANY NATURE BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF SAN FRANCISCO.

23. ALL CONSTRUCTION STAKING SHALL BE DONE BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA. UPON COMPLETION OF GRADING, THE CONTRACTOR SHALL REQUEST THE LICENSED LAND SURVEYOR TO CHECK THE GRADES AND CERTIFY THAT THE BUILDING PADS ARE GRADED TO WITHIN ± 0.10 FOOT OF FINISH PAD GRADE.

24. CONTRACTOR SHALL OBTAIN RIGHT OF ENTRY FROM ADJACENT PROPERTY OWNERS FOR WORK WITHIN ADJACENT PROPERTIES.

25. CONTRACTOR SHALL ARRANGE FOR REQUIRED INSPECTIONS BY THE CITY ENGINEER. NO DELAY OF WORK CLAIM WILL BE ALLOWED DUE TO CONTRACTOR'S FAILURE TO ARRANGE FOR REQUIRED CITY INSPECTIONS IN ADVANCE. CONTRACTOR SHALL PROVIDE NOTICE TO CITY ENGINEER A MINIMUM OF 2 WORKING DAYS IN ADVANCE OF REQUIRED INSPECTIONS.

26. CONTRACTOR SHALL RESTORE ALL WALLS, FENCES, SERVICES, UTILITIES, PAVEMENT & CURB MARKINGS IMPROVEMENTS OR FEATURES OF WHATEVER NATURE WHICH ARE DAMAGED DUE TO THE CONTRACTOR'S WORK TO THEIR PREVIOUS CONDITION.

27. EXISTING PEDESTRIAN WALKWAYS, BIKEPATHS AND HANDICAP ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.

28. IF ARCHAEOLOGICAL RESOURCES SUCH AS CHIPPED STONE OR GRINDSTONE, HISTORIC DEBRIS, BUILDING FOUNDATION, OR HUMAN BONE OR ANY OTHER INDICATORS OF CULTURAL RESOURCES ARE DISCOVERED DURING GROUND DISTURBING ACTIVITIES, LEAVE THE AREA IN QUESTION UNDISTURBED AND CONTACT A REPRESENTATIVE OF THE CITY TO DETERMINE THE APPROPRIATE COURSE OF ACTION.

29. ALL WORK SHALL CONFORM TO 2015 SAN FRANCISCO SUBDIVISION REGULATIONS, DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO, AND ALL APPLICABLE CITY AND COUNTY OF SAN FRANCISCO STANDARD SPECIFICATIONS AND PLANS. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER.

30. HAZARDOUS MATERIALS: UPON DISCOVERY OF HAZARDOUS MATERIAL THE CONTRACTOR SHALL PROMPTLY NOTIFY THE CITY IN WRITING OF ANY MATERIAL THAT THE CONTRACTOR BELIEVES MAY BE MATERIAL THAT IS HAZARDOUS WASTE, AS DEFINED IN SECTION 25117 OF THE HEALTH AND SAFETY CODE, THAT IS REQUIRED TO BE REMOVED TO A CLASS I, CLASS II, OR CLASS III DISPOSAL SITE IN ACCORDANCE WITH PROVISIONS OF EXISTING LAW.

31. SFFD WATER SUPPLY:

CONTRACTOR SHALL MAINTAIN AN ADEQUATE SFFD FIRE PROTECTION WATER SUPPLY DURING DEMOLITION AND CONSTRUCTION SUBJECT TO SFFD APPROVAL.

DEMOLITION OF EXISTING WATER MAINS AND FIRE HYDRANTS SHALL BE DEFERRED UNTIL PROPOSED FIRE HYDRANTS ARE FUNCTIONAL.

PRIOR TO CONSTRUCTION CONTRACTOR SHALL CONSULT WITH SFFD FOR EITHER A DIFFERENT TEMPORARY OR PERMANENT APPROVED WATER SUPPLY. REFER TO 2013 CALIFORNIA FIRE CODE CHAPTER 33 – "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" AND SF DEPARTMENT OF BUILDING INSPECTION INFORMATION SHEET NO. FS-04 "FIRE SAFETY REQUIREMENTS FOR 200-FRAME BUILDINGS DURING CONSTRUCTION." THE MINIMUM REQUIREMENTS FOR FIRE HYDRANTS IS 1500 GPM AT 20 PSI.

32. EXISTING UTILITY SERVICES, ACCESS, & OVERLAND FLOW: CONTRACTORS SHALL ENSURE THAT CONSTRUCTION DOES NOT INTERRUPT THE UTILITY SERVICE OR ACCESS TO EXISTING TENANTS OR RESIDENTS AT ANY POINT IN TIME OR DISRUPT THE APPROPRIATE CONVEYANCE OF OVERLAND FLOW OF STORMWATER AS DEFINED IN THE CITY SUBDIVISION REGULATIONS AND BY THE PUC.

33. CDD WILL PERFORM ALL CONNECTIONS TO EXISTING LPW MAINS OPERATED BY SFPUC WITH THE EXCEPTION OF THE SA3 LINE. CONTRACTOR TO PERFORM CONNECTIONS TO LPW MAINS OWNED AND OPERATED BY PARKMERCED.

34. CONTRACTOR SHALL POTHOLE WATER MAIN TIE-IN LOCATIONS AND PROVIDE SHOP DRAWINGS OF CONNECTION DETAILS FOR ENGINEER AND CITY REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

35. LOW PRESSURE WATER LINES AND RECYCLED WATER LINES SHALL BE DUCTILE IRON (CLASS 53). ALL DIP LINES SHALL HAVE AN EXTERIOR ZINC COATING. LOW PRESSURE WATER LINES 12" AND LARGER SHALL BE TR-FLEX PIPE.

36. STORM DRAIN, SANITARY SEWER, AND COMBINED SEWER MANHOLES SHALL BE PER CITY STANDARD PLAN 87,181 OR 87,182 OR 87,183 OR MODIFIED VERSIONS THEREOF AS INDICATED ON PLANS.

37. CATCH BASINS SHALL BE PER CITY STANDARD PLAN 87,188.

38. CURBS SHALL BE 6" PER CITY STANDARD PLAN 87,169.

39. DRIVEWAYS SHALL BE PER CITY STANDARD PLAN 87,171.

40. STANDARD CONSTRUCTION JOINTS FOR SIDEWALK & CURB SHALL BE PER CITY STANDARD PLAN 87,173 AND 87,174.

41. CONCRETE SIDEWALK FINISH AND SCORING PATTERN SHALL BE PER CITY OF SAN FRANCISCO STANDARDS AND PER CITY STANDARD PLAN 96,608.

42. CURB RAMPS SHALL BE PER CITY STANDARD PLANS CR-1 THRU CR-9.

43. SEE SHEETS C1.07 THRU C1.16 FOR HORIZONTAL CONTROL INFORMATION.

44. SEE SHEET SERIES C5.00 FOR SIGNING & STRIPING INFORMATION. WORK TO BE DONE BY SFMTA. CONTRACTOR SHALL COORDINATE SIGNING & STRIPING WITH SFMTA. SFMTA IS TO PROVIDE ALL SIGNAGE AND STRIPING UNLESS OTHERWISE NOTED. SIGN INSTALLATION SHALL BE PER THE CITY OF SAN FRANCISCO CITY STANDARDS. FOR SIGN DESIGNATION REFER TO MUTCD & MUTCD CALIFORNIA SUPPLEMENT.

45. SEE SHEETS C3.14 THRU C3.20 FOR CURB RAMP AND INTERSECTION GRADING DETAILS.

46. ALL UNDERGROUND UTILITIES & IRRIGATION SLEEVES SHALL BE INSTALLED PRIOR TO ANY PAVING OPERATION TAKING PLACE.

47. PER CITY STANDARD PLAN 87,195, THE CONTRACTOR SHALL ENCASE IN CONCRETE: 1) ALL NEW VCP SEWERS 15" OR LESS IN DIAMETER HAVING 15 FEET OR MORE OF COVER 2) ALL NEW VCP SEWERS 18" OR LARGER IN DIAMETER WITH 10 FEET OR MORE OF COVER.

48. ALL RCP SHALL BE RATED FOR D-2000 LOADING.

49. WATER LATERALS SHALL BE INSTALLED WITH A 30" MIN COVER.

50. SEWER LATERALS SHALL BE 6" VCP MIN AT 2% MIN SLOPE. SEE PLAN FOR ACTUAL SIZES.

51. DIMENSIONS SHOWN ARE TO CENTER OF PIPE/STRUCTURES UNLESS OTHERWISE NOTED.

52. FOR UTILITY CLEARANCES, REFER TO TYPICAL CROSS SECTIONS.

53. SUBGRADE R-VALUES = 50 PER GEOTECHNICAL REPORT.

EXISTING CONDITIONS

1. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED ON A FIELD SURVEY BY BKF ENGINEERS DATED FEBRUARY 4, 2015. GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS AND CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.

2. INFORMATION REGARDING EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM RECORD DATA KNOWN TO THE DESIGN ENGINEER AND IS NOT MEANT TO BE A FULL CATALOG OF EXISTING CONDITIONS. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THESE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.

3. ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF ANY CONSTRUCTION AFFECTING SAID LINES.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE EXISTENCE OF ANY AND ALL UNDERGROUND FACILITIES, WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF HIS OPERATIONS. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600, 48 HOURS PRIOR TO ANY EXCAVATION. WORK SHALL START WITHIN 5 DAYS AFTER THE ISSUANCE OF A USA INQUIRY IDENTIFICATION NUMBER. COMPLETE REMOVAL OF THE USA MARKINGS SHALL BE WITHIN 2 WORKING DAYS AFTER COMPLETION OF THE EXCAVATION, BACKFILL AND SURFACE REPLACEMENT OR FOURTEEN (14) CALENDAR DAYS FOLLOWING THE ISSUANCE OF THE INQUIRY IDENTIFICATION NUMBER, WHICHEVER IS EARLIER.

5. CONTACTING USA DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO DETERMINE LOCATION AND DEPTH OF BURIED UTILITIES OR REPAIR OF BURIED UTILITIES DAMAGED BY HIS OPERATION.

DEMOLITION

1. COORDINATE ABANDONMENT AND DISCONNECTION OF EXISTING IMPROVEMENTS WITH THE APPROPRIATE AGENCY.

2. CALL UNDERGROUND SERVICE ALERT (USA) AT (800)227-2600 FOR LOCATING EX UTILITIES IN THE VICINITY OF THE PROJECT SITE PRIOR TO COMMENCING ANY CONSTRUCTION WORK. POTHOLE IN THE VICINITY OF ALL PRIMARY DISTRIBUTION SYSTEMS. RELOCATION OF THE EXISTING UTILITIES AS A RESULT OF THIS PROJECT SHALL BE AT THE CUSTOMER'S EXPENSE. THE CONTRACTOR IS TO HAVE A FIELD MEETING WITH THE CITY UNDERGROUND ELECTRICAL INSPECTOR , BEFORE EXCAVATING IN THE PUBLIC RIGHT-OF-WAY CONTRACTOR MAY CONTACT UTILITIES ENGINEERING BY PHONE FOR ANY ASSISTANCE OR INFORMATION.

3. ITEMS DEMOLISHED ARE TO BECOME THE PROPERTY OF THE THE CONTRACTOR AND SHALL BE LAWFULLY DISPOSED OF OFF-SITE AND IN CONFORMANCE WITH THE CITY CONSTRUCTION & DEMOLITION DEBRIS REUSE AND RECYCLING PROGRAM.

4. CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ALL EXISTING BUILDINGS TO REMAIN WITHOUT INTERRUPTION.

5. CONTRACTOR SHALL COORDINATE LIMITS OF DEMOLITION OF DRY UTILITIES WITH THE JOINT TRENCH DRAWINGS. CONTRACTOR SHALL REMOVE VAULTS AND BOXES WITHIN THE PUBLIC RIGHT-OF-WAY AFTER UTILITIES HAVE BEEN ABANDONED.

EARTHWORK/GRADING

ALL GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE NOTES AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT (AND ANY UPDATES, ADDENDA, ETC.), PREPARED BY LANGAN TREADWELL ROLLO, TITLED:

GEOTECHNICAL INVESTIGATION PARKMERCED – PHASE 01B, BLOCK 20 SAN FRANCISCO CALIFORNIA PREPARED FOR PARKMERCED INVESTORS LLC 345 VIDAL DRIVE, SAN FRANCISCO, CALIFORNIA, 94123, DATED OCTOBER 16, 2015.

GEOTECHNICAL INVESTIGATION PARKMERCED – PHASE 01A, BLOCK 22 SAN FRANCISCO CALIFORNIA PREPARED FOR PARKMERCED INVESTORS LLC 345 VIDAL DRIVE, SAN FRANCISCO, CALIFORNIA, 94123, DATED OCTOBER 16, 2015.

AND LETTER PREPARED BY LANGAN TREADWELL ROLLO, TITLED:

GEOTECHNICAL RECOMMENDATIONS PARKMERCED – PHASE 1A AND 1B STREET IMPROVEMENT PLANS SAN FRANCISCO, CALIFORNIA, LANGAN PROJECT No.: 731646101.

6.

7. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT AT THE SITE DURING GRADING OPERATIONS AND SHALL PERFORM ALL TESTING DEEMED NECESSARY. THE GEOTECHNICAL ENGINEER SHALL OBSERVE GRADING OPERATIONS AND IDENTIFY THOSE CONDITIONS WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR AND THE CONSTRUCTION MANAGER.

8. EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHOULD BE PROVIDED AT LEAST 48 HOURS ADVANCE NOTIFICATION OF ANY EARTHWORK OPERATIONS.

9. CONTRACTOR SHALL CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES,THE CONTRACTOR SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.

10. ALL CUT AND FILL SLOPES AT THE BOUNDARY LINES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT ADJACENT FENCES WILL NOT BE DAMAGED.

11. ALL GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.

12. ALL GRADED SLOPES ARE MAXIMUM TWO (2) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL UNLESS OTHERWISE NOTED.

13. GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND CONDUCT INVESTIGATIONS AS REQUIRED TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.

14. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS, SURROUNDING LANDSCAPING AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC., AND TO AVOID THE CREATION OF ANY LOW SPOTS OR HAZARDOUS CONDITIONS OR ANY ABRUPT OR APPARENT CHANGES IN APPEARANCE, GRADES, OR CROSS SLOPES.

15. IMPORT FILL MATERIAL SHALL CONFORM TO THE SPECIFICATIONS AND REQUIREMENTS OF THE SOILS REPORT.

16. PROJECT SHALL CONFORM WITH SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS ORDER NO. 178940 REGARDING EXCAVATING AND RESTORING STREETS IN SAN FRANCISCO.

17. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND, WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM LACK OF ADEQUATE SHORING, BRACING AND SHEETING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND HE SHALL EFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, STRUCTURE AND/OR BORING OR JACKING PIT IS FIVE FEET OR MORE IN DEPTH THE CONTRACTOR SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS. CONTRACTOR SHALL SUBMIT A SHORING AND EXCAVATION PLAN FOR APPROVAL BY CITY PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DEWATERING IN COMPLIANCE WITH THE GEOTECHNICAL RECOMMENDATIONS, THE PROJECT SPECIFICATIONS, AND ALL LOCAL, STATE AND FEDERAL LAWS.

TRAFFIC CONTROL PLAN

1. PRIOR TO COMMENCING ANY WORK, CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM SFMTA. THE TRAFFIC CONTROL PLAN SHALL ADDRESS ITEMS SUCH AS LIMITS OF TEMPORARY VEHICLE TRAVEL AND PARKING LANE CLOSURES, SIDEWALK CLOSURES, BUS STOP RELOCATIONS, SIGNAGE, FLAGGING, ETC. DURING VARIOUS PHASES OF THE CONSTRUCTION WORK. CONTRACTOR IS HEREBY NOTIFIED THAT SF MUNI ROUTE 57 OPERATES IN THE AREA OF THIS CONSTRUCTION PROJECT AND ANY DISRUPTIONS TO SERVICE MUST BE COORDINATED AND APPROVED BY SFMTA.

2. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE "REGULATIONS FOR WORKING IN SAN FRANCISCO STREETS", ALSO KNOWN AS THE "BLUE BOOK", WHICH CAN BE FOUND AT http://www.sfmta.com/services/streets-sidewalks/construction-regulations. THIS MANUAL ESTABLISHES RULES AND GUIDANCE SO THAT WORK CAN BE DONE BOTH SAFELY AND WITH THE LEAST POSSIBLE INTERFERENCE WITH PEDESTRIANS, BICYCLE, TRANSIT AND VEHICULAR TRAFFIC. IN ADDITION, ALL TRAFFIC CONTROL, WARNING AND GUIDANCE DEVICES MUST CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). IN ADDITION TO THE REGULATIONS IN THE MANUAL, CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CITY, STATE, AND FEDERAL CODES, RULES AND REGULATIONS. A SPECIAL TRAFFIC PERMIT (STP) IS REQUIRED IF CONTRACTOR CANNOT COMPLY WITH BLUE BOOK REQUIREMENTS.

3. CONSTRACTOR SHALL PROVIDE BARRICADES, BARRIERS AND FENCING IN ACCORDANCE WITH THE CAMUTCD TO PROTECT THE GENERAL PUBLIC AND TO PREVENT UNCONTROLLED ACCESS TO THE SITE AT ALL TIMES.

BASIS OF BEARINGS

1. THE BEARING OF NORTH 46° 36' 00" WEST BETWEEN THE FOUND MONUMENT AT THE INTERSECTION OF GARCES DRIVE AND BUCARELI DRIVE AND THE FOUND MONUMENT AT THE NORTHERLY INTERSECTION OF CRESPI DRIVE AND JUAN BAUTISTA CIRCLE AS SHOWN ON CITY AND COUNTY OF SAN FRANCISCO MONUMENT MAP T-13-6.

BENCHMARK

1. BM10510 – 2 1/2" DOMED BRASS DISK AT THE NORTHEAST CORNER OF LAKE MERCED BLVD & BROTHERHOOD WAY, STAMPED "T-0158." IN CONCRETE ISLAND FORMED BY NORTH BOUND LAKE MERCED BLVD & TURN LANES OF WEST BOUND BROTHERHOOD WAY. 10.3' NORTH OF NORTH FACE OF CURB OF HANDICAP RAMP IN ISLAND. 10.3' EAST OF PEDESTRIAN TRAFFIC SIGNAL. 6.7' EAST OF EAST FACE OF CURB OF LAKE MERCED BLVD. ELEVATION=52.034' (NAVD 88 DATUM)

VERTICAL DATUM STATEMENT: THE ELEVATIONS SHOWN ON THIS SURVEY WERE BASED ON THE CITY & COUNTY OF SAN FRANCISCO 2013 NAVD88 VERTICAL DATUM.

HORIZONTAL DATUM STATEMENT: ALL COORDINATES HEREIN ARE BASED ON THE CITY & COUNTY OF SAN FRANCISCO'S 2013 HIGH PRECISION NETWORK SURVEY AND REFLECT THE LOCAL CUSTOM COORDINATE SYSTEM CREATED BY SAID SURVEY AND REFERRED TO AS THE CITY & COUNTY OF SAN FRANCISCO COORDINATE SYSTEM (CCSF-CS)

UNAUTHORIZED CHANGES AND USES

1. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

UTILITY INFORMATION

COMBINED STORM SEWERS: (HYDRAULICS)	CITY OF SAN FRANCISCO 1 DR. CARLTON B. GOODLETT PLACE CITY HALL, ROOM 348 SAN FRANCISCO, CA 94102 (415) 554-8318
WATER:	CITY DISTRIBUTION DIVISION 1990 NEWCOMB AVE. SAN FRANCISCO, CA 94124 (415) 550-4911
POWER AND GAS:	PACIFIC GAS & ELECTRIC 863 CLAY STREET SAN FRANCISCO, CA 94108 (415) 695-3477
TELEPHONE:	AT&T 3475 "B" NORTH FIRST SAN JOSE, CA 95134 (408) 493-7104
CABLE:	COMCAST 2055 FOLSOM STREET SAN FRANCISCO, CA 94110 (415) 863-8500
FIRE PROTECTION:	CITY OF SAN FRANCISCO 698 SECOND STREET SAN FRANCISCO, CA 94107 (415) 558-6361

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

BKF
ENGINEERS / SURVEYORS / PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
NOTES LENGEND & ABBREVIATIONS
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. SCOTT No. 61034 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

Revisions	No.

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.02

DRAWING NAME: K:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C100-Title.dwg (C1.02)
PLOT TIME: 5-1-2017 11:44 AM PLOTTED BY: pich

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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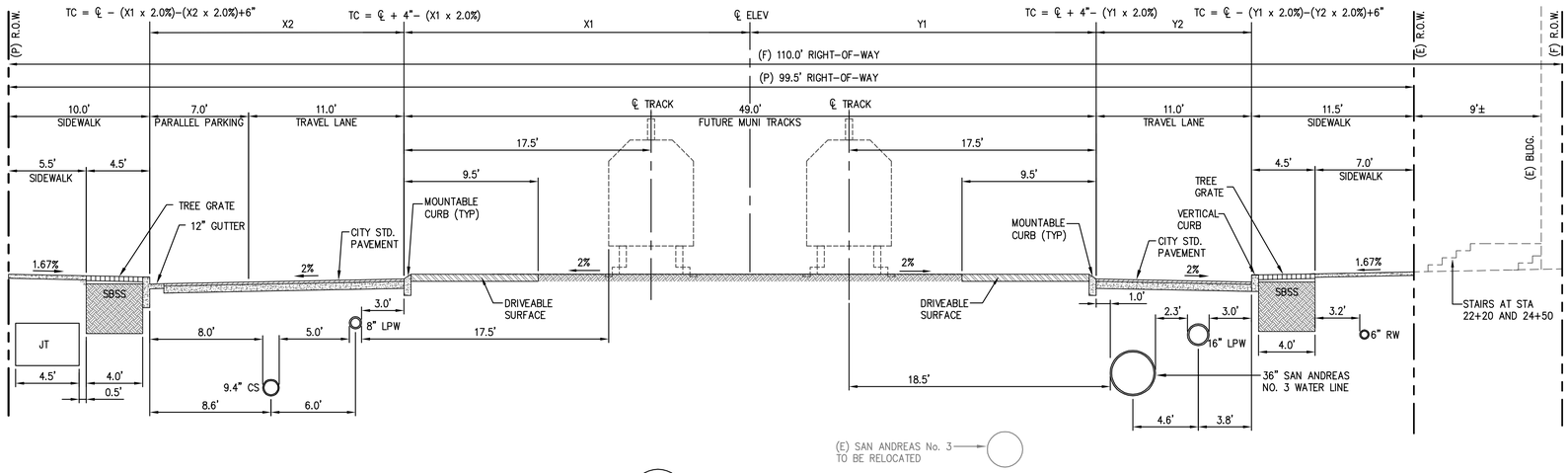
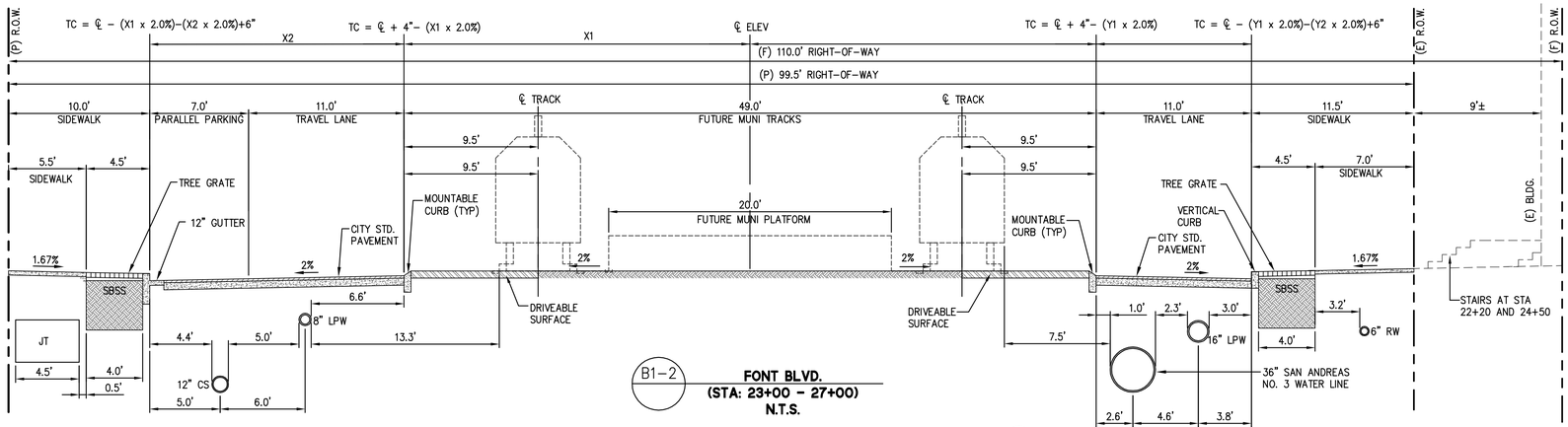


B1−1 **FONT BLVD.**
(STA: 20+50 − 23+00)
N.T.S.



B1−2 **FONT BLVD.**
(STA: 23+00 − 27+00)
N.T.S.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650−482−6300
650−482−6399 (FAX)

BKF ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TYPICAL STREET SECTIONS
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER — CHRISTOPHER M. KERN — No. 72681 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.03

DRAWING NAME: J:\Projects\20090086-12 SHEETS\PHASE-01B\PH01B-C100-Title.dwg (C1.03)
PLOT TIME: 4-25-2017 12:59 PM PLOTTED BY: bsun

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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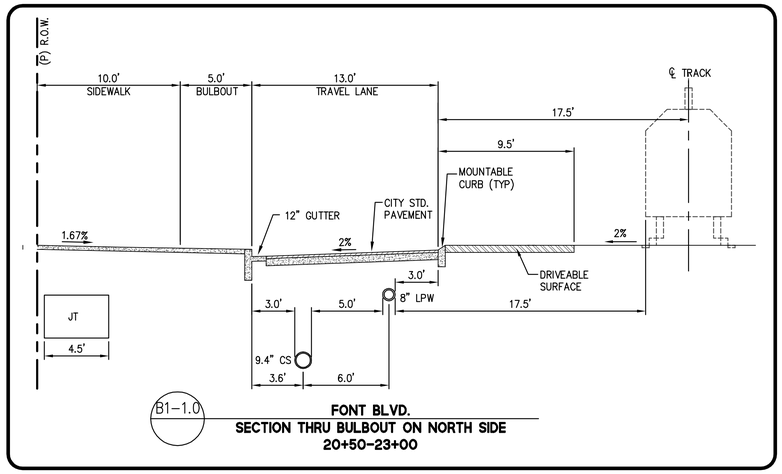
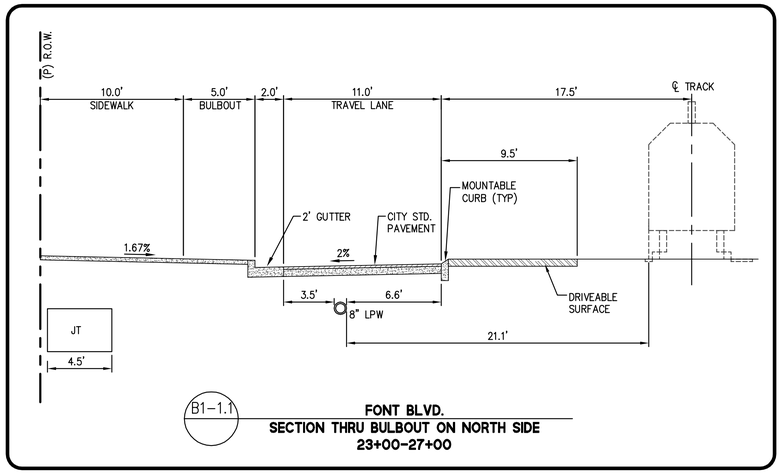


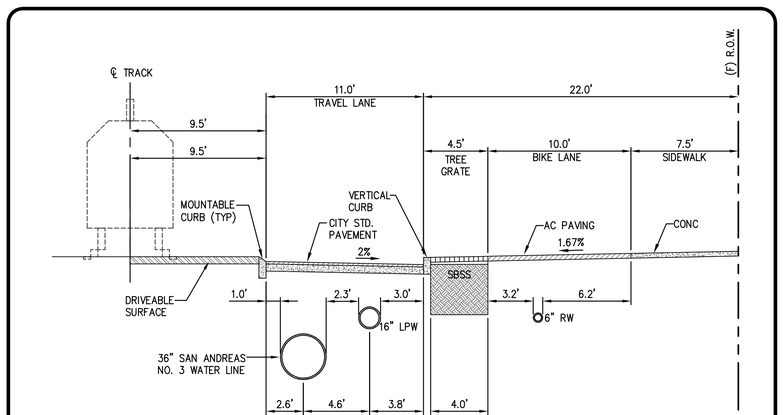
B1–1.0

FONT BLVD.
SECTION THRU BULBOUT ON NORTH SIDE
20+50–23+00



B1–1.1

FONT BLVD.
SECTION THRU BULBOUT ON NORTH SIDE
23+00–27+00



B1–2.1

FONT BLVD.
SECTION THRU SOUTH SIDE OF FONT BLVD AFTER
FUTURE STREET RIGHT-OF-WAY WIDENING (NIC)

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TYPICAL STREET SECTIONS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN SUN
No. C 69884
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.04

DRAWING NAME: J:\Sf\20\090086-12\SHEETS\PHASE-01B\PH01B-C100-Title.dwg (C1.04)
PLOT TIME: 4-28-2017 12:39 PM PLOTTED BY: sunn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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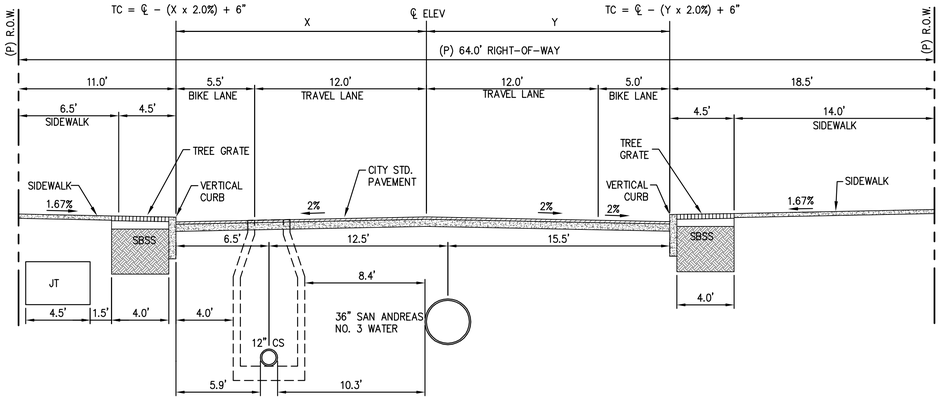
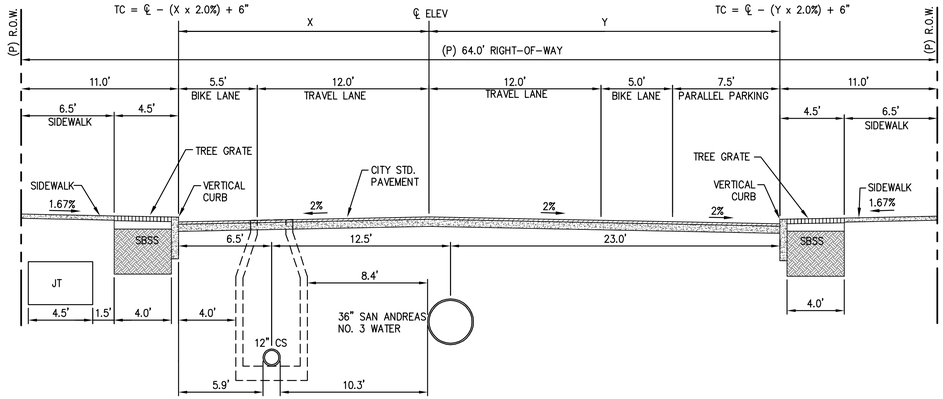
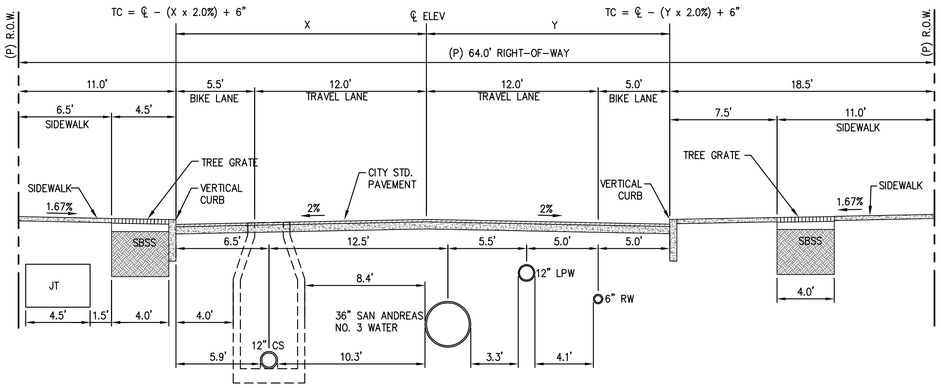


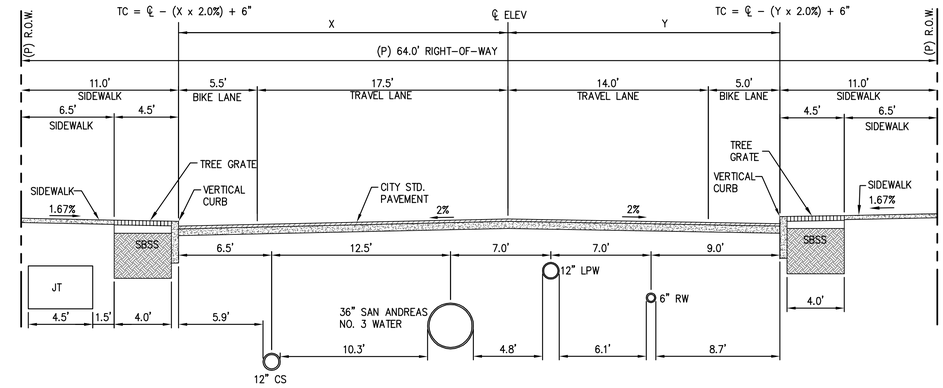
B2-1 **CHUMASERO DR.**
(STA: 10+50 – 11+75)
N.T.S.



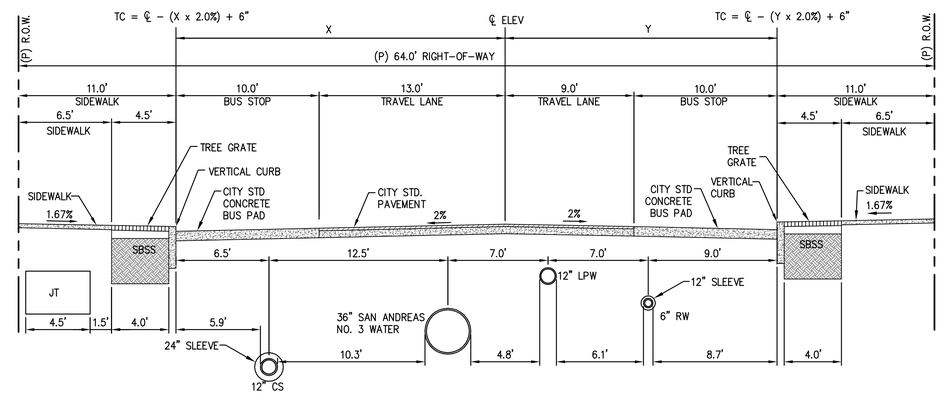
B2-2 **CHUMASERO DR.**
(STA: 11+80 – 12+40)
N.T.S.



B2-3 **CHUMASERO DR.**
(STA: 12+40 – 13+50)
N.T.S.



B2-4 **CHUMASERO DR.**
(STA 13+50 – 15+10)
N.T.S.



B2-5 **CHUMASERO DR.**
(STA 15+10 – 15+85)
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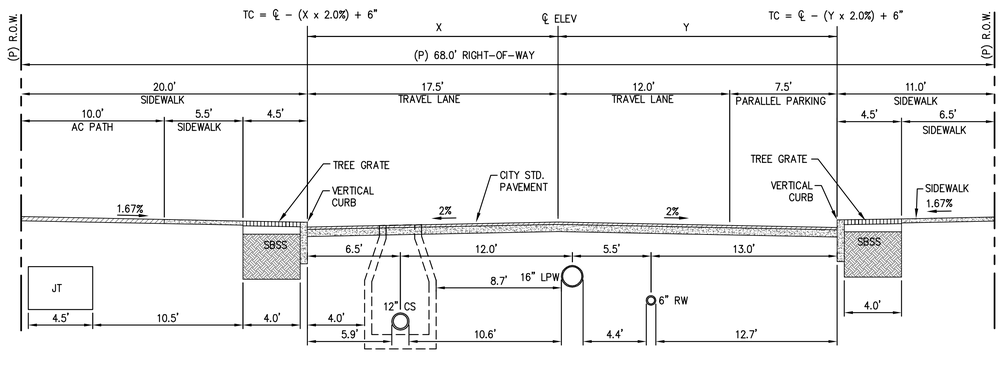

B2-6 **CHUMASERO DR.**
(STA: 17+00 – 18+10)
N.T.S.

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TYPICAL STREET SECTIONS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER WILLIAM SIEBS No. C-71181 CIVIL STATE OF CALIFORNIA Exp. 12/31/18

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.05

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PLOT TIME: 4-28-2017 12:39 PM PLOTTED BY: sum

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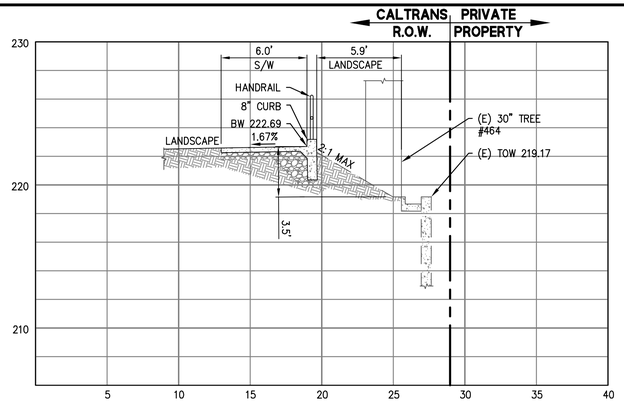
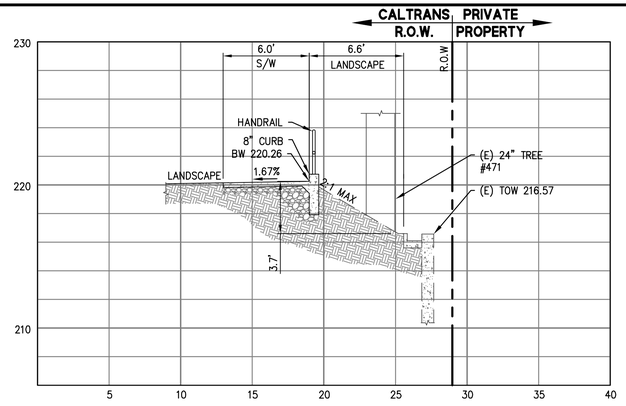
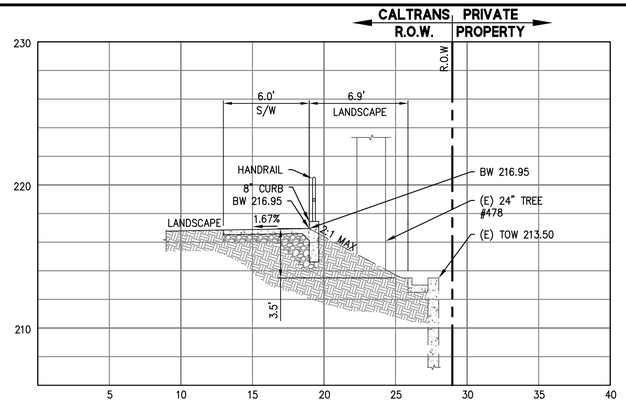
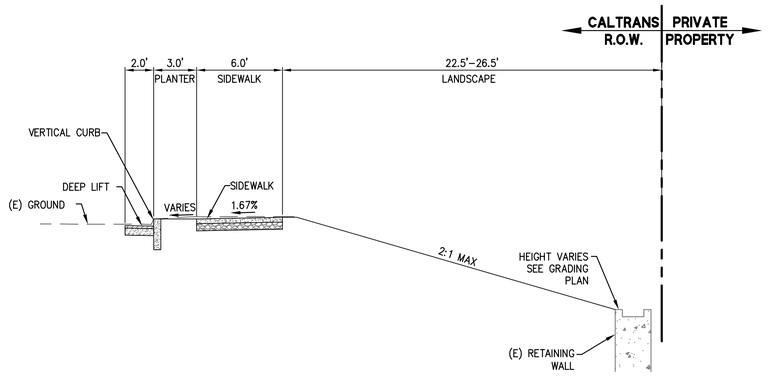
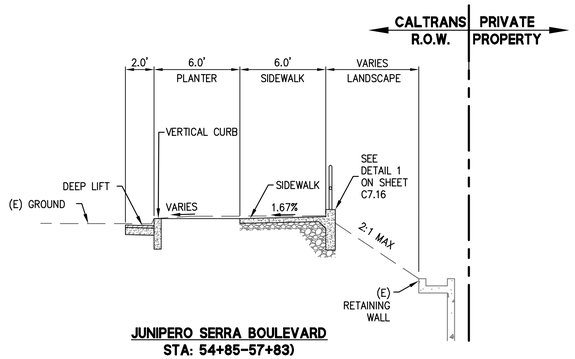




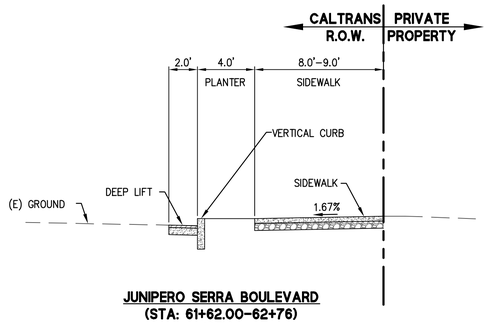




JUNIPERO SERRA BOULEVARD
(STA: 50+60–51+30)
N.T.S.



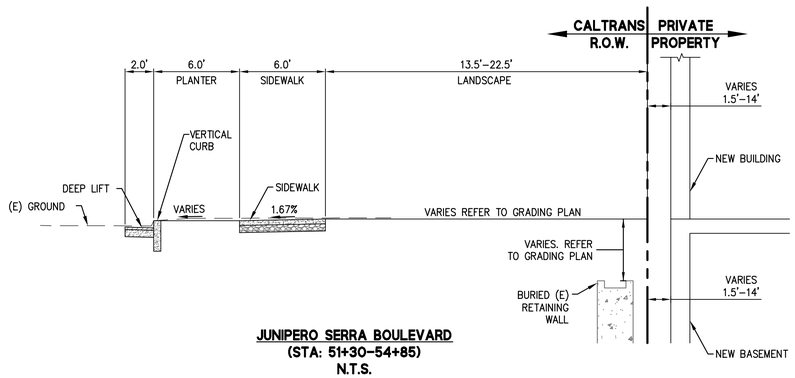
JUNIPERO SERRA BOULEVARD
STA: 54+85–57+83)
N.T.S.



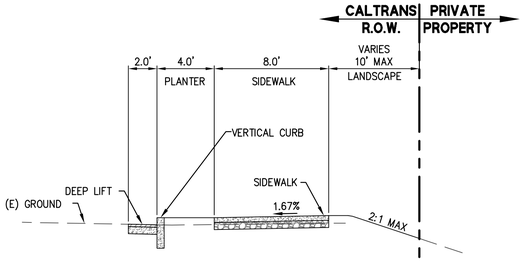
JUNIPERO SERRA BOULEVARD
(STA: 61+62.00–62+76)
N.T.S.

NOTE:
1. EXISTING CURB TO BE REPLACED AT CURRENT CURB LOCATION
2. VERTICAL CURB SHALL BE CALTRANS TYPE A1–6, PER CALTRANS STD PLAN A87A.
3. DEEP LIFT SHALL BE HOT MIX ASPHAULT PER CALTRANS SPECIFICATIONS

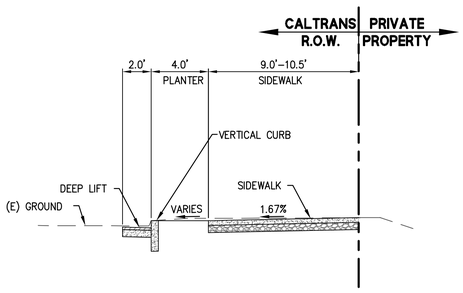
NOTE:
1. EXISTING CURB TO BE REPLACED AT CURRENT CURB LOCATION
2. VERTICAL CURB SHALL BE CALTRANS TYPE A1–6, PER CALTRANS STD PLAN A87A.
3. DEEP LIFT SHALL BE HOT MIX ASPHAULT PER CALTRANS SPECIFICATIONS



JUNIPERO SERRA BOULEVARD
(STA: 51+30–54+85)
N.T.S.



JUNIPERO SERRA BOULEVARD
(STA: 59+00–61+62)
N.T.S.



JUNIPERO SERRA BOULEVARD–EXIT RAMP
(STA: 1+00–4+75)
N.T.S.

NOTE:
EXISTING CURB TO BE REPLACE IN PLACE.

NOTE:
EXISTING CURB TO BE REPLACE IN PLACE.

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TYPICAL STREET SECTIONS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO



No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.06

DRAWING NAME: J:\Projects\20090086-12 SHEETS\PHASE_01B\PH01B-C100-Title.dwg (C1.06)
PLOT DATE: 4-25-2017 12:59 PM PLOTTED BY: Jun

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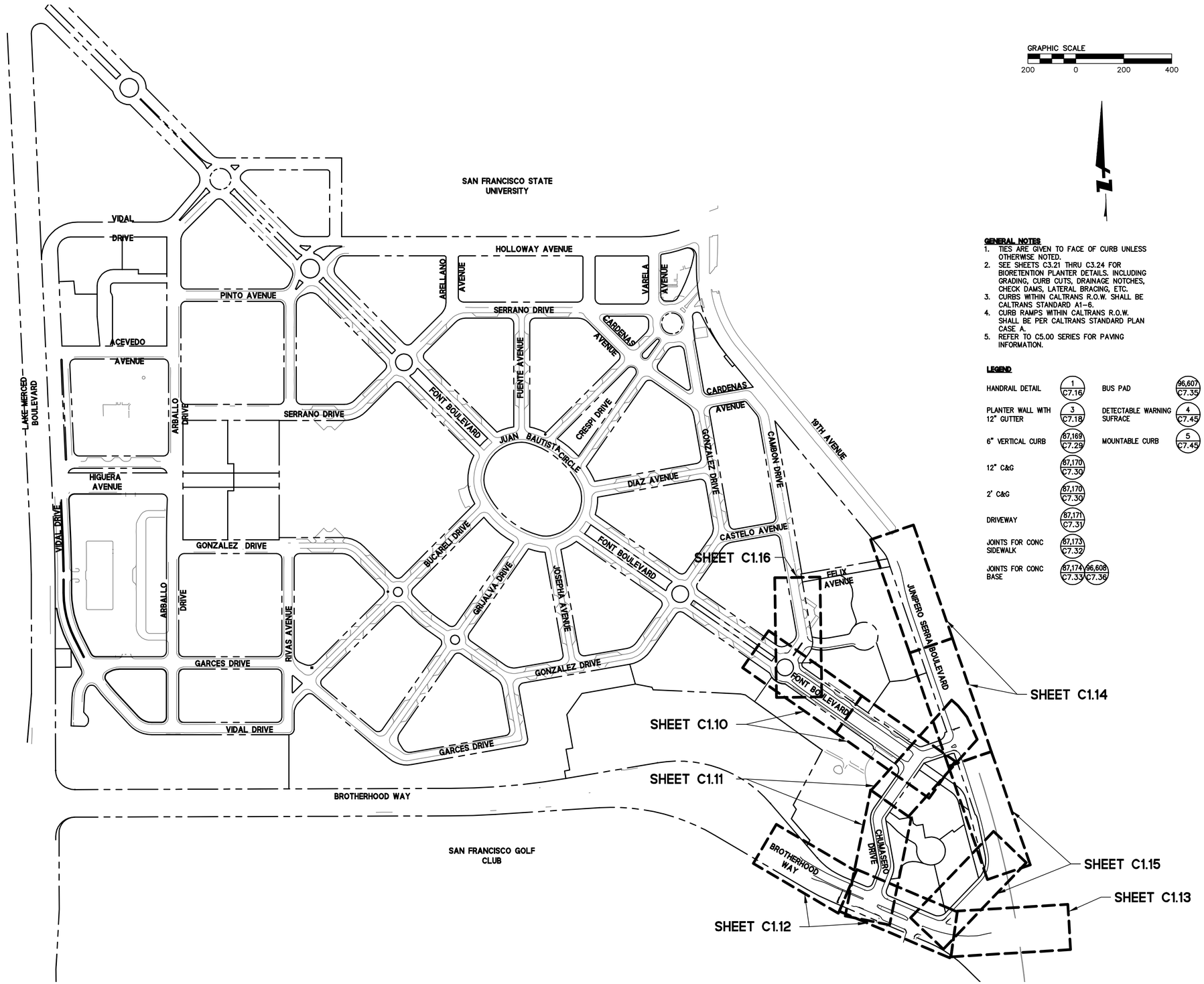

GENERAL NOTES

1. TIES ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE SHEETS C3.21 THRU C3.24 FOR BIORETENTION PLANTER DETAILS. INCLUDING GRADING, CURB CUTS, DRAINAGE NOTCHES, CHECK DAMS, LATERAL BRACING, ETC.
3. CURBS WITHIN CALTRANS R.O.W. SHALL BE CALTRANS STANDARD A1-6.
4. CURB RAMPS WITHIN CALTRANS R.O.W. SHALL BE PER CALTRANS STANDARD PLAN CASE A.
5. REFER TO C5.00 SERIES FOR PAVING INFORMATION.

LEGEND

HANDRAIL DETAIL	1 / C7.16	BUS PAD	96,607 / C7.35
PLANTER WALL WITH 12" GUTTER	3 / C7.18	DETECTABLE WARNING SUFRACE	4 / C7.45
6" VERTICAL CURB	87,169 / C7.29	MOUNTABLE CURB	5 / C7.45
12" C&G	87,170 / C7.30		
2' C&G	87,170 / C7.30		
DRIVEWAY	87,171 / C7.31		
JOINTS FOR CONC SIDEWALK	87,173 / C7.32		
JOINTS FOR CONC BASE	87,174 / C7.33	96,608 / C7.36	

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PHASE 1B STREET IMPROVEMENT PLANS
HORIZONTAL CONTROL PLAN – KEY MAP

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61089
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.07

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C101-HC.dwg (C1.07)
PLOT TIME: 4-28-2017 1:02 PM PLOTTED BY: burn

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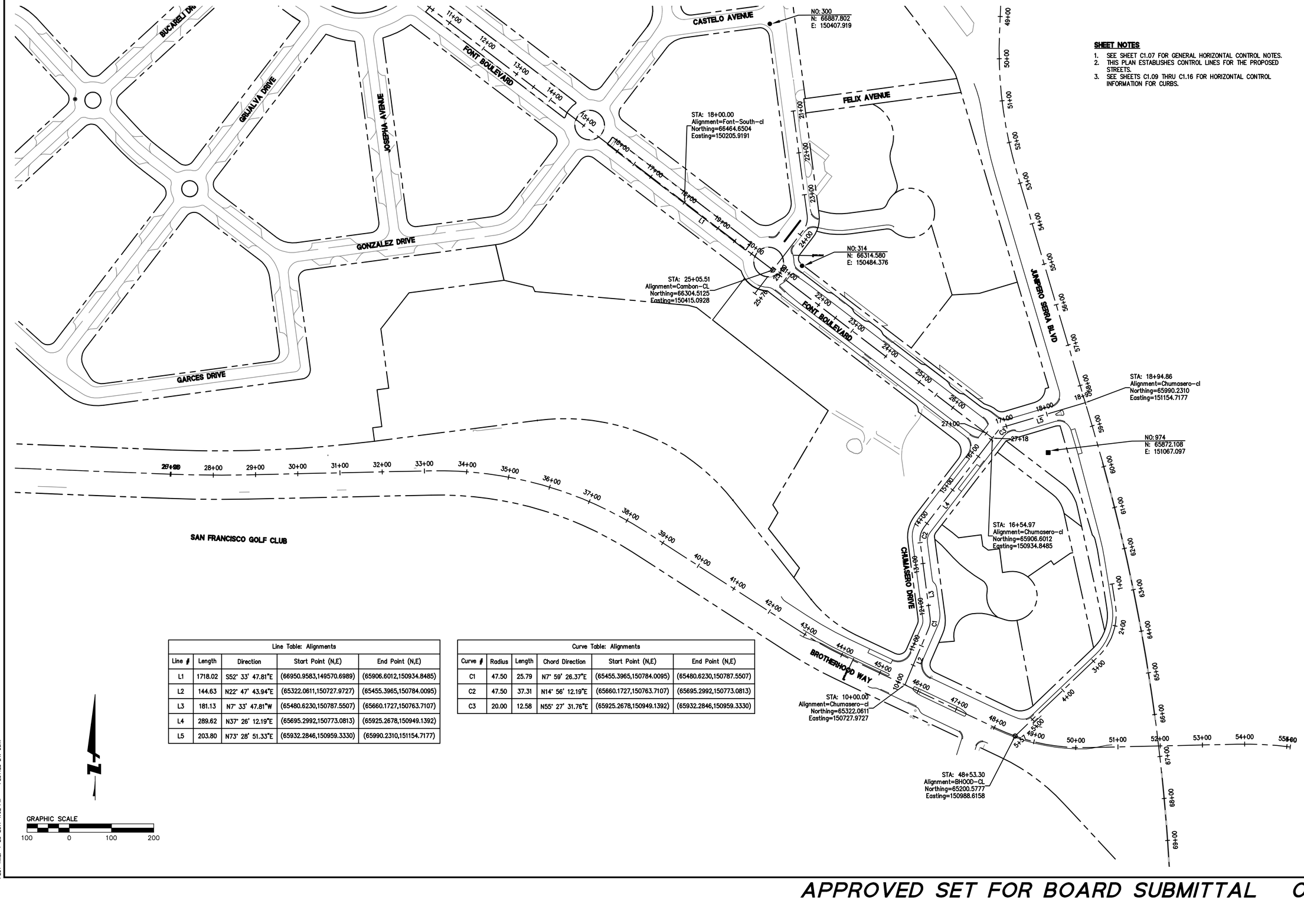

SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. THIS PLAN ESTABLISHES CONTROL LINES FOR THE PROPOSED STREETS.
3. SEE SHEETS C1.09 THRU C1.16 FOR HORIZONTAL CONTROL INFORMATION FOR CURBS.

Line Table: Alignments				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L1	1718.02	S52° 33' 47.81"E	(66950.9583,149570.6989)	(65906.6012,150934.8485)
L2	144.63	N22° 47' 43.94"E	(65322.0611,150727.9727)	(65455.3965,150784.0095)
L3	181.13	N7° 33' 47.81"W	(65480.6230,150787.5507)	(65660.1727,150763.7107)
L4	289.62	N37° 26' 12.19"E	(65695.2992,150773.0813)	(65925.2678,150949.1392)
L5	203.80	N73° 28' 51.33"E	(65932.2846,150959.3330)	(65990.2310,151154.7177)

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point (N,E)	End Point (N,E)
C1	47.50	25.79	N7° 59' 26.37"E	(65455.3965,150784.0095)	(65480.6230,150787.5507)
C2	47.50	37.31	N14° 56' 12.19"E	(65660.1727,150763.7107)	(65695.2992,150773.0813)
C3	20.00	12.58	N55° 27' 31.76"E	(65925.2678,150949.1392)	(65932.2846,150959.3330)

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PHASE 1B STREET IMPROVEMENT PLANS
HORIZONTAL CONTROL PLAN - OVERVIEW
SAN FRANCISCO, CALIFORNIA

SAN FRANCISCO

PROFESSIONAL ENGINEER — Nima Lotfi — No. 72781 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

OCT FOR REVIEW

No.	Revisions

Date: 05/01/17
Scale: 1"=100'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.08

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\Engr90\20090086-10\SHEETS\PHASE-01B\PH01B-C101-HC.dwg (C1.08)
PLOT TIME: 4-28-2017 1:02 PM PLOTTED BY: Sum

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FONT BOULEVARD

Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L1	8.56	N37° 25' 52.34"E	(66394.780,150424.413)	(66394.780,150429.615)
L2	4.15	S37° 25' 52.34"W	(66358.946,150465.350)	(66358.946,150462.831)
L3	88.28	S52° 33' 38.99"E	(66253.644,150473.130)	(66253.644,150543.222)
L4	66.23	S52° 33' 47.81"E	(66211.957,150553.319)	(66211.957,150605.905)
L5	27.23	N52° 33' 47.81"W	(66202.585,150631.541)	(66202.585,150609.921)
L6	33.52	S52° 33' 47.81"E	(66164.228,150641.636)	(66164.228,150668.248)
L7	109.52	S52° 33' 47.81"E	(66083.605,150678.376)	(66083.605,150765.334)
L8	99.53	S52° 33' 47.81"E	(66037.798,150754.362)	(66037.798,150833.393)
L9	23.51	N52° 33' 47.81"W	(66028.426,150856.074)	(66028.426,150837.409)
L10	51.37	S52° 33' 47.81"E	(65981.481,150866.169)	(65981.481,150906.954)
L11	513.45	N52° 33' 47.81"W	(66266.669,150912.523)	(66266.669,150504.828)
L12	513.45	S52° 33' 47.82"E	(65915.641,150475.042)	(65915.641,150882.736)
L13	573.62	S52° 33' 47.81"E	(65910.631,150415.716)	(65910.631,150871.185)

Curve Table					
Curve #	Length	Radius	Cord Direction	Start Point (N,E)	End Point (N,E)
C1	6.43	60.00	N86° 03' 58.20"W	(66382.982,150412.505)	(66383.423,150406.094)
C2	13.52	13.00	N67° 13' 02.52"E	(66382.982,150412.505)	(66387.983,150424.413)
C3	13.95	13.50	S7° 50' 09.03"W	(66358.946,150462.831)	(66345.736,150461.013)
C4	23.01	60.00	N10° 46' 15.35"W	(66323.265,150465.288)	(66345.736,150461.013)
C5	18.42	20.00	S26° 10' 22.12"E	(66323.265,150465.288)	(66307.309,150473.130)
C6	5.86	10.00	S69° 20' 30.97"E	(66253.644,150543.222)	(66251.607,150548.624)
C7	4.02	20.00	N80° 22' 08.48"W	(66250.936,150552.576)	(66251.607,150548.624)
C8	4.02	20.00	N24° 45' 27.15"W	(66207.269,150606.545)	(66210.909,150604.866)
C9	5.86	10.00	S35° 47' 04.66"E	(66207.269,150606.545)	(66202.585,150609.921)
C10	5.86	10.00	S69° 20' 30.97"E	(66186.033,150631.541)	(66183.996,150636.943)
C11	4.02	20.00	N80° 22' 08.48"W	(66183.326,150640.895)	(66183.996,150636.943)
C12	11.71	20.00	N35° 47' 04.66"W	(66154.861,150675.000)	(66164.228,150668.248)
C13	5.86	10.00	S35° 47' 04.66"E	(66154.861,150675.000)	(66150.178,150678.376)
C14	5.86	10.00	S69° 20' 30.97"E	(66083.605,150765.334)	(66081.568,150770.737)
C15	4.02	20.00	N80° 22' 08.48"W	(66080.897,150774.689)	(66081.568,150770.737)
C16	4.02	20.00	N24° 45' 27.15"W	(66033.110,150834.033)	(66036.750,150832.354)
C17	5.86	10.00	S35° 47' 04.66"E	(66033.110,150834.033)	(66028.426,150837.409)
C18	5.86	10.00	S69° 20' 30.97"E	(66014.137,150856.074)	(66012.100,150861.476)
C19	4.02	20.00	N80° 22' 08.48"W	(66011.429,150865.428)	(66012.100,150861.476)
C20	8.82	30.00	S60° 59' 00.01"E	(65981.481,150906.954)	(65977.220,150914.637)
C21	4.76	3.00	S74° 35' 26.93"W	(66295.394,150461.805)	(66294.258,150457.684)
C22	51.77	400.00	N56° 16' 15.13"W	(66266.669,150504.828)	(66295.394,150461.805)
C23	34.80	60.00	N45° 46' 25.23"E	(66270.327,150433.098)	(66294.258,150457.684)
C24	5.59	3.00	S9° 00' 00.11"W	(66270.327,150433.098)	(66265.570,150432.344)
C25	57.08	400.00	S48° 28' 30.88"E	(66265.570,150432.344)	(66227.762,150475.042)
C26	24.94	60.00	S76° 55' 27.13"E	(66269.044,150379.847)	(66263.442,150403.966)
C27	12.66	20.00	N70° 41' 51.75"W	(66259.327,150415.716)	(66263.442,150403.966)

JUNIPERO SERRA BOULEVARD

Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L45	531.34	N16° 30' 48.81"W	(66528.018,151093.116)	(66528.018,150942.085)
L46	6.40	N16° 31' 08.67"W	(65970.161,151104.075)	(65970.161,151102.254)
L47	0.76	N16° 31' 08.67"W	(65962.096,151085.043)	(65962.096,151084.828)
L48	60.19	N16° 30' 48.81"W	(65925.592,151137.795)	(65925.592,151120.687)
L49	204.26	S14° 44' 04.66"E	(65670.343,151137.795)	(65670.343,151189.747)
L50	115.06	S9° 09' 26.66"E	(65509.152,151199.818)	(65509.152,151218.129)
L51	210.88	S46° 15' 12.19"W	(65248.734,151179.677)	(65248.734,151027.337)
L52	25.46	S46° 15' 12.19"W	(65230.869,151050.566)	(65230.869,151032.174)

Curve Table					
Curve #	Length	Radius	Cord Direction	Start Point (N,E)	End Point (N,E)
C74	72.98	293.00	N14° 58' 24.09"W	(66675.890,150910.180)	(66746.210,150891.373)
C75	151.42	1000.00	S12° 10' 32.49"E	(66675.890,150910.180)	(66528.018,150942.085)
C76	6.01	3.00	N73° 54' 22.72"W	(65970.161,151102.254)	(65971.562,151097.398)
C77	6.04	3.00	N41° 07' 31.56"E	(65960.204,151100.741)	(65964.022,151104.075)
C78	14.10	48.50	N89° 33' 39.97"W	(65960.204,151100.741)	(65960.312,151086.687)
C79	2.13	1.50	S57° 12' 20.19"E	(65961.371,151085.043)	(65960.312,151086.687)
C80	2.13	1.50	S24° 15' 09.60"W	(65963.882,151085.632)	(65962.096,151084.828)
C81	14.10	49.50	N56° 51' 55.54"E	(65963.882,151085.632)	(65971.562,151097.398)
C82	48.67	500.00	N11° 56' 45.66"W	(65622.746,151199.818)	(65670.343,151189.747)
C83	33.60	30.00	N78° 20' 12.58"E	(65242.291,150996.126)	(65248.734,151027.337)
C83	125.72	130.00	N18° 32' 52.76"E	(65394.550,151179.677)	(65509.152,151218.129)
C84	33.60	30.00	N78° 20' 12.58"E	(65242.291,150996.126)	(65248.734,151027.337)
C85	52.70	500.00	S66° 33' 36.35"E	(65263.246,150947.795)	(65242.291,150996.126)
C86	6.34	3.00	S14° 14' 38.90"E	(65230.869,151032.174)	(65225.807,151033.458)

CAMBON DRIVE

Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L53	1.57	S7° 34' 07.66"E	(66447.044,150503.990)	(66447.044,150504.197)
L54	2.22	S76° 16' 33.27"E	(66425.523,150523.048)	(66425.523,150525.208)
L55	4.90	S76° 16' 33.06"E	(66403.783,150516.740)	(66403.783,150521.496)
L56	2.45	N37° 31' 46.76"E	(66395.888,150489.491)	(66395.888,150490.983)

Curve Table					
Curve #	Length	Radius	Cord Direction	Start Point (N,E)	End Point (N,E)
C88	29.98	25.00	S41° 55' 20.47"E	(66447.044,150504.197)	(66426.051,150523.048)
C89	28.88	25.00	S70° 37' 36.85"W	(66404.945,150516.740)	(66395.888,150490.983)

CHUMASERO DRIVE

Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L14	72.12	N23° 32' 40.55"E	(65462.387,150739.157)	(65462.387,150767.966)
L15	186.63	N7° 33' 47.81"W	(65663.321,150770.203)	(65663.321,150745.639)
L16	192.84	N37° 26' 12.19"E	(65868.574,150759.547)	(65868.574,150876.769)
L17	33.22	N37° 26' 12.19"E	(65936.127,150903.413)	(65936.127,150923.608)
L18	13.31	S69° 24' 12.20"E	(65972.537,150914.637)	(65972.537,150927.096)
L19	20.43	S52° 33' 47.81"E	(65957.275,150932.218)	(65957.275,150948.443)
L20	101.88	N73° 28' 51.33"E	(65981.302,150975.209)	(65981.302,151072.883)
L21	84.64	N23° 32' 40.55"E	(65461.786,150771.525)	(65461.786,150805.337)
L22	55.96	N7° 33' 47.81"W	(65551.783,150810.183)	(65551.783,150802.817)
L23	88.89	N7° 33' 47.81"W	(65658.580,150792.771)	(65658.580,150781.071)
L24	288.30	N37° 26' 12.19"E	(65911.904,150787.581)	(65911.904,150962.837)
L25	4.97	N73° 28' 51.33"E	(65923.844,150978.128)	(65923.844,150982.896)
L26	82.76	N73° 28' 51.33"E	(65945.826,151004.052)	(65945.826,151083.395)

Curve Table					
Curve #	Length	Radius	Cord Direction	Start Point (N,E)	End Point (N,E)
C28	48.07	30.00	N69° 27' 03.82"E	(65381.146,150698.807)	(65396.272,150739.157)
C29	16.29	30.00	N7° 59' 26.37"E	(65462.387,150767.966)	(65478.320,150770.203)
C30	55.37	70.50	S14° 56' 12.19"W	(65715.457,150759.547)	(65663.321,150745.639)
C31	47.12	30.00	N7° 33' 47.81"W	(65868.574,150876.769)	(65910.631,150871.185)
C32	19.60	35.00	S68° 36' 29.73"E	(65915.641,150882.736)	(65908.585,150900.751)
C33	3.03	3.00	N66° 23' 30.27"E	(65908.585,150900.751)	(65909.748,150903.413)
C34	3.03	3.00	N8° 28' 54.10"E	(65936.127,150923.608)	(65939.000,150924.036)
C35	19.60	35.00	N36° 31' 05.90"W	(65939.000,150924.036)	(65954.549,150912.523)
C36	5.88	20.00	N60° 59' 00.01"W	(65969.696,150932.218)	(65972.537,150927.096)
C37	28.25	30.00	S79° 32' 28.24"E	(65957.275,150948.443)	(65952.334,150975.209)
C38	47.12	30.00	N28° 29' 01.26"E	(65981.302,151072.883)	(66018.591,151093.116)
C39	53.87	35.00	S20° 32' 56.18"E	(65384.189,150771.525)	(65338.580,150788.622)
C40	35.29	65.00	N7° 59' 26.37"E	(65461.786,150805.337)	(65496.307,150810.183)
C41	14.45	20.00	N28° 16' 05.13"W	(65551.783,150802.817)	(65564.239,150796.120)
C42	7.23	10.00	S28° 16' 05.13"E	(65570.466,150792.771)	(65564.239,150796.120)
C43	25.92	33.00	S14° 56' 12.19"W	(65682.984,150787.581)	(65658.580,150781.071)
C44	18.87	30.00	S55° 27' 31.76"W	(65922.430,150978.128)	(65911.904,150962.837)
C45	7.23	10.00	N85° 48' 51.35"W	(65923.327,150989.948)	(65923.844,150982.896)
C46	14.45	20.00	S85° 48' 51.35"E	(65923.327,150989.948)	(65922.295,151004.052)
C47	47.16	30.00	N61° 30' 58.74"W	(65925.596,151120.702)	(65945.841,151083.390)

BROTHERHOOD WAY

Line Table				
Line #	Length	Direction	Start Point (N,E)	End Point (N,E)
L28	111.98	S64° 38' 32.91"E	(65381.146,150597.613)	(65381.146,150698.807)
L29	176.10	N64° 38' 32.91"W	(65338.580,150947.755)	(65338.580,150788.622)
L30	110.92	S64° 38' 32.91"E	(65348.005,150589.116)	(65348.005,150689.345)
L31	25.36	N72° 23' 00.00"W	(65431.360,150521.209)	(65431.360,150497.036)
L32	109.90	N64° 38' 32.91"W	(65390.554,150687.203)	(65390.554,150587.890)
L33	5.06	S25° 21' 27.09"W	(65311.798,150749.098)	(65311.798,150746.932)
L34	114.29	N64° 38' 32.91"W	(65317.318,150855.038)	(65317.318,150751.761)
L35	5.06	N25° 21' 27.09"E	(65253.072,150870.701)	(65253.072,150872.868)
L36	114.27	S64° 38' 32.91"E	(65247.549,150764.774)	(65247.549,150868.037)
L37	5.00	S64° 38' 32.91"E	(65315.982,150640.316)	(65315.982,150644.834)
L38	104.40	S64° 38' 33.46"E	(65268.719,150661.893)	(65268.719,150756.237)
L39	89.95	S64° 38' 32.91"E	(65212.887,150771.744)	(65212.887,150853.029)
L40	40.66	S17° 51' 39.16"W	(65156.265,150862.554)	(65156.265,150850.085)
L41	7.70	N18° 11' 27.25"E	(65175.963,150894.153)	(65175.963,150896.557)
L42	4.98	S64° 38' 32.91"E	(65183.591,150919.298)	(65183.591,150923.796)
L43	12.00	S64° 38' 32.91"E	(65215.618,150933.910)	(65215.618,150944.752)
L44	35.50	N78° 43' 01.75"E	(65178.550,151170.093)	(65178.550,151204.905)

Curve Table					
Curve #	Length	Radius	Cord Direction	Start Point (N,E)	End Point (N,E)
C48	15.78	29.00	S41° 15' 00.26"E	(65530.765,150435.158)	(65519.049,150445.433)
C49	116.98	858.50	S60° 44' 19.40"E	(65486.242,150495.634)	(65429.105,150597.613)
C50	116.85	892.50	S60° 53' 30.60"E	(65452.308,150487.098)	(65395.506,150589.116)
C51	7.85	2.50	N25° 21' 27.09"E	(65343.487,150687.203)	(65348.005,150689.345)
C52	19.95	75.00	S64° 45' 50.35"E	(65439.839,150479.046)	(65431.360,150497.036)
C53	15.02	75.00	N66° 38' 45.69"W	(65417.740,150534.976)	(65423.684,150521.209)
C54	55.83	897.50	S62° 41' 27.32"E	(65417.740,150534.976)	(65392.128,150584.579)
C55	4.64	2.00	N64° 34' 52.35"W	(65390.554,150587.890)	(65392.128,150584.579)
C56	3.14	2.00	S70° 21' 27.09"W	(65317.318,150751.761)	(65316.367,150749.098)
C57	10.97	50.00	N58° 21' 16.79"W	(65262.626,150864.362)	(65268.372,150855.038)
C58	10.94	78.50	N48° 04' 23.05"W	(65255.320,150872.497)	(65262.626,150864.362)
C59	2.42	2.00	N9° 21' 43.05"W	(65253.072,150872.868)	(65255.320,150872.497)
C60	3.14	2.00	N70° 21' 27.09"E	(65247.549,150868.037)	(65248.500,150870.701)
C61	10.95	50.00	S58° 22' 13.63"E	(65302.217,150755.472)	(65296.488,150764.774)
C62	10.99	78.50	S48° 05' 19.89"E	(65309.550,150747.303)	(65302.217,150755.472)
C63	2.42	2.00	S9° 21' 39.17"E	(65311.798,150746.932)	(65309.550,150747.303)
C64	11.71	20.00	S81° 25' 19.94"E	(65315.982,150644.834)	(65314.260,150656.252)
C65	5.86	10.00	N81° 25' 16.07"W	(65313.399,150661.960)	(65314.260,150656.252)
C66	7.95	10.00	N41° 51' 21.52"W	(65262.949,150761.406)	(65268.719,150756.237)
C67	15.91	20.00	S41° 51' 25.39"E	(65262.949,150761.406)	(65251.410,150771.744)
C68	21.75	17.00	N27° 59' 10.95"W	(65194.962,150862.554)	(65212.887,150853.029)
C69	27.98	16.50	N66° 46' 27.17"E	(65175.963,150896.557)	(65185.722,150919.298)
C70	6.00	1.91	S25° 21' 27.09"W	(65220.757,150933.910)	(65217.303,150932.273)
C71	218.98	472.75	S77° 54' 43.94"E	(65215.618,150944.752)	(65170.171,151156.966)
C72	13.22	75.00	N83° 46' 03.39"E	(65170.171,151156.966)	(65171.604,151170.093)
C73	13.06	75.00	S83° 42' 15.76"W	(65179.979,151217.866)	(65178.550,151204.905)

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PHASE 1B STREET IMPROVEMENT PLANS
HORIZONTAL CONTROI PLAN
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. SCOTT No. 61034 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.09

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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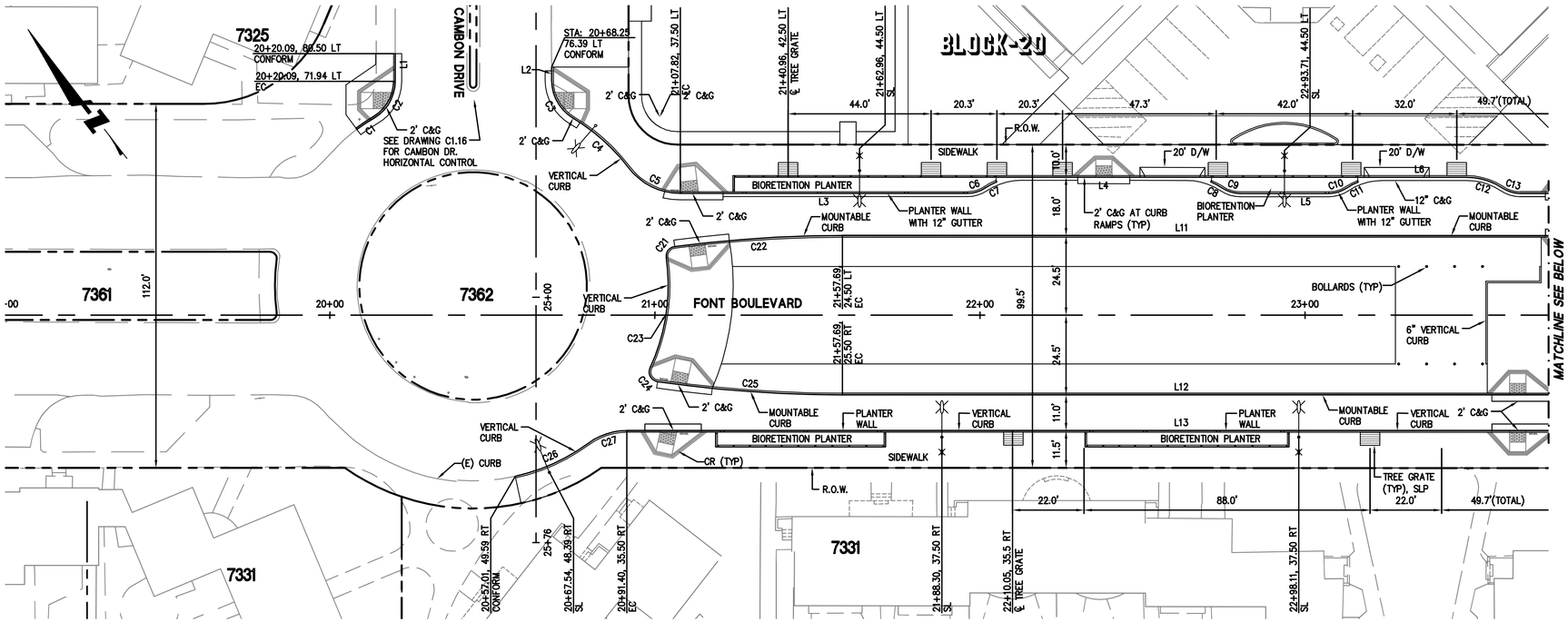

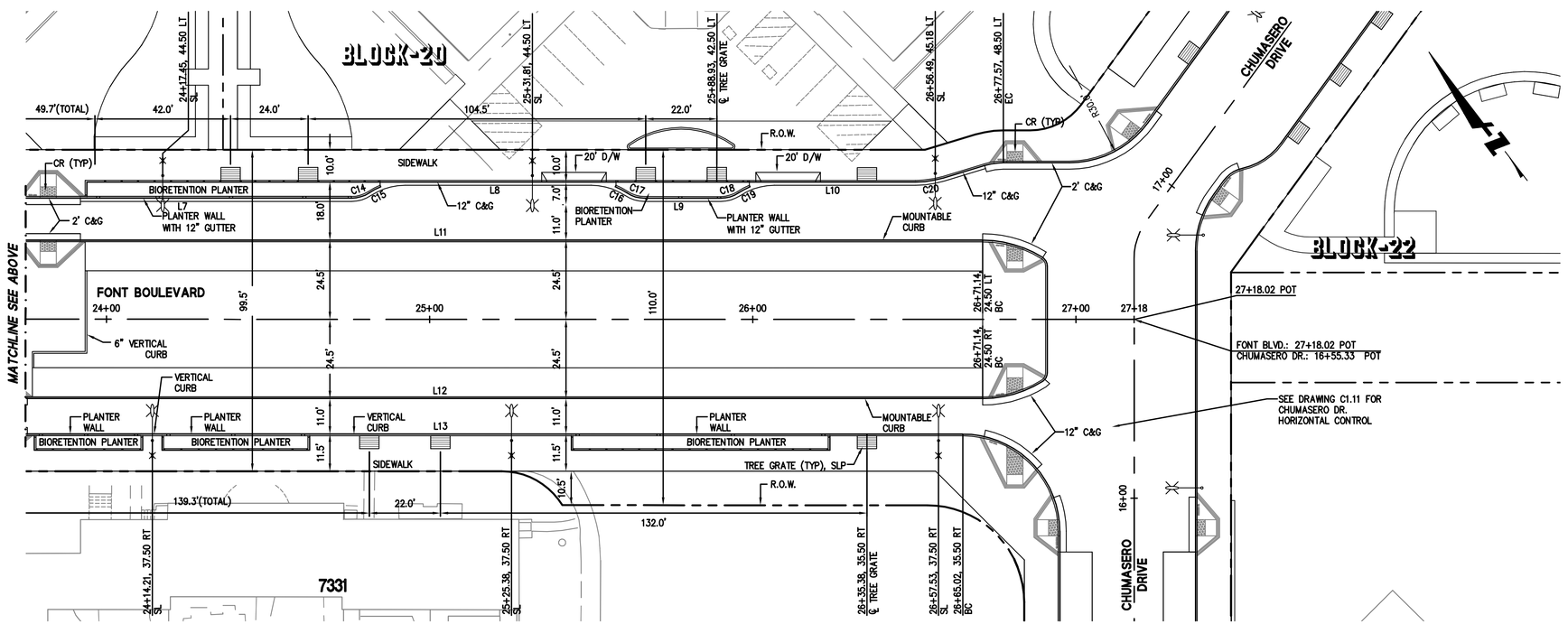



GRAPHIC SCALE
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SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
3. SEE SHEET C1.08 FOR ALIGNMENT DATA.
4. SEE SHEET C1.09 FOR LINE AND CURVE TABLES.
5. SEE C5.00 SERIES FOR PAVING INFORMATION.

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HORIZONTAL CONTROL PLAN – FONT BOULEVARD
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REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KERN — No. C 61009 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.10

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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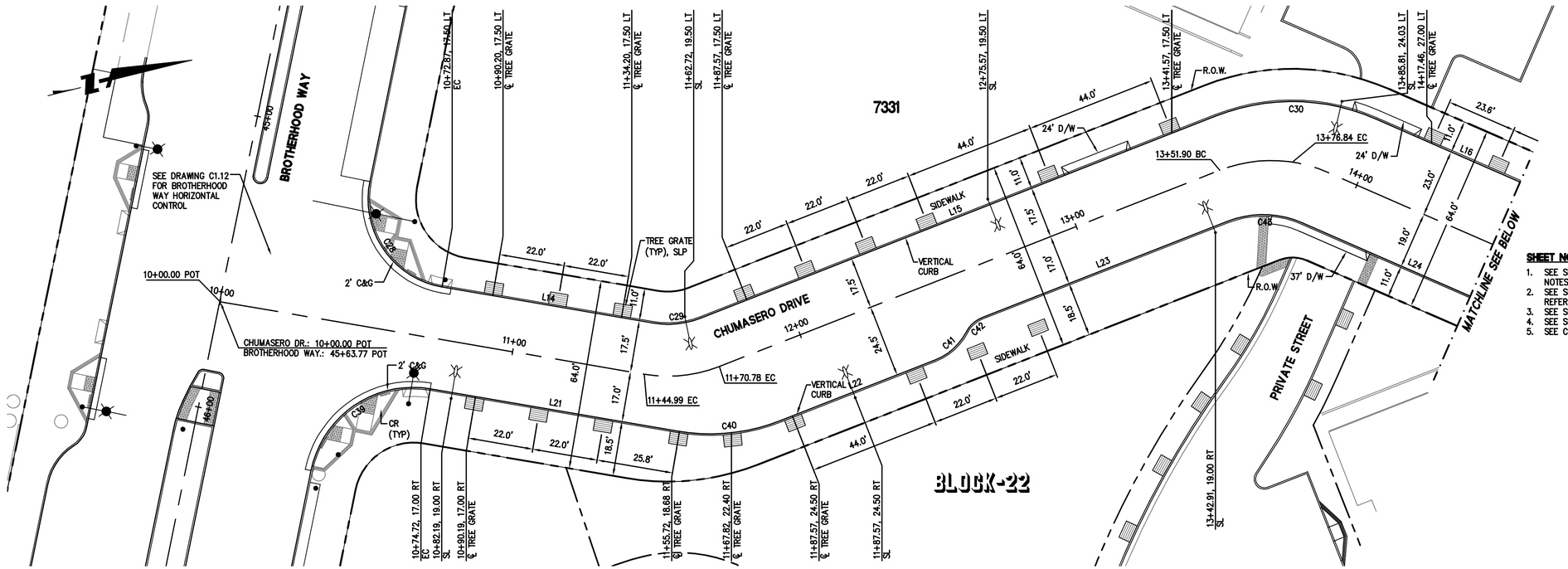

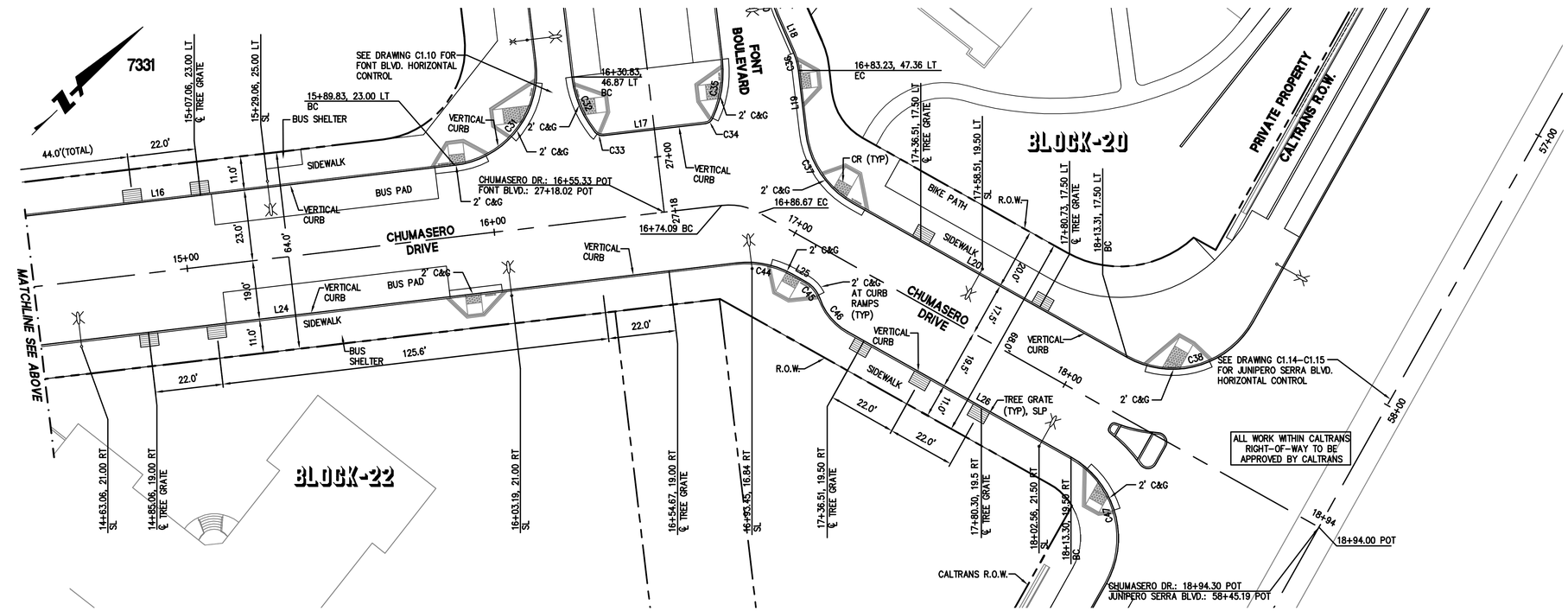



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SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
3. SEE SHEET C1.08 FOR ALIGNMENT DATA.
4. SEE SHEET C1.09 FOR LINE AND CURVE TABLES.
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HORIZONTAL CONTROL PLAN – CHUMASERO DRIVE
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. GIBBS — No. C61191 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
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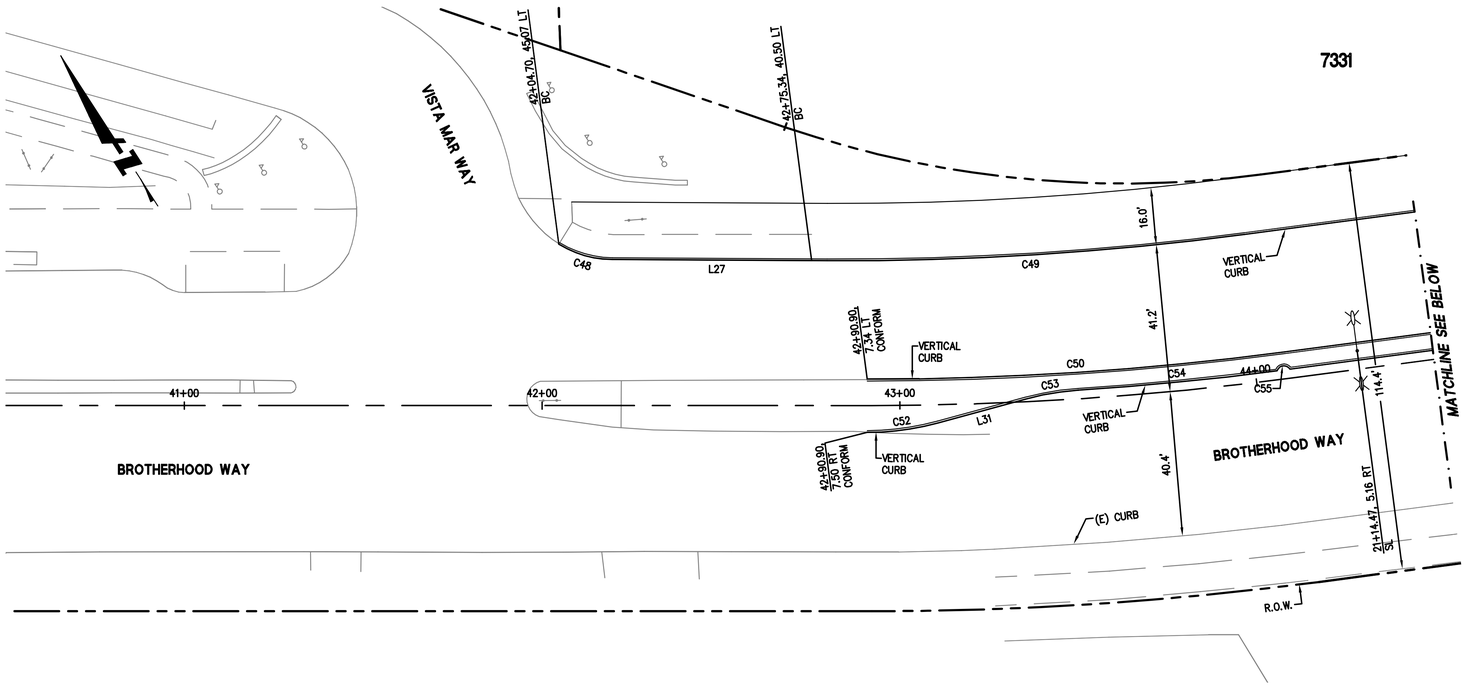

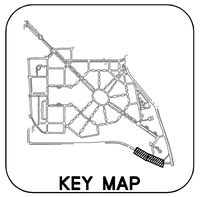

GRAPHIC SCALE
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SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
3. SEE SHEET C1.08 FOR ALIGNMENT DATA.
4. SEE SHEET C1.09 FOR LINE AND CURVE TABLES.
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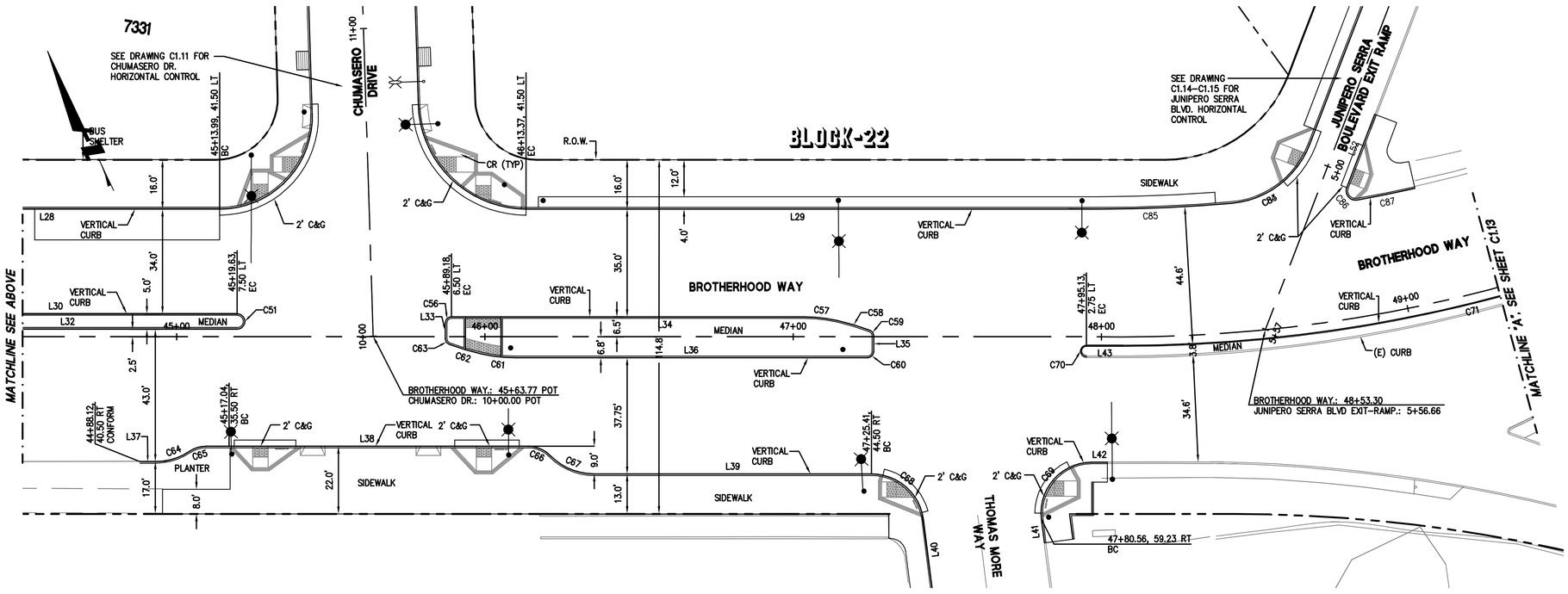

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SAN FRANCISCO

PROFESSIONAL ENGINEER — CHRISTOPHER A. VILLAIN — No. 72651 — Exp. 12/31/18 — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
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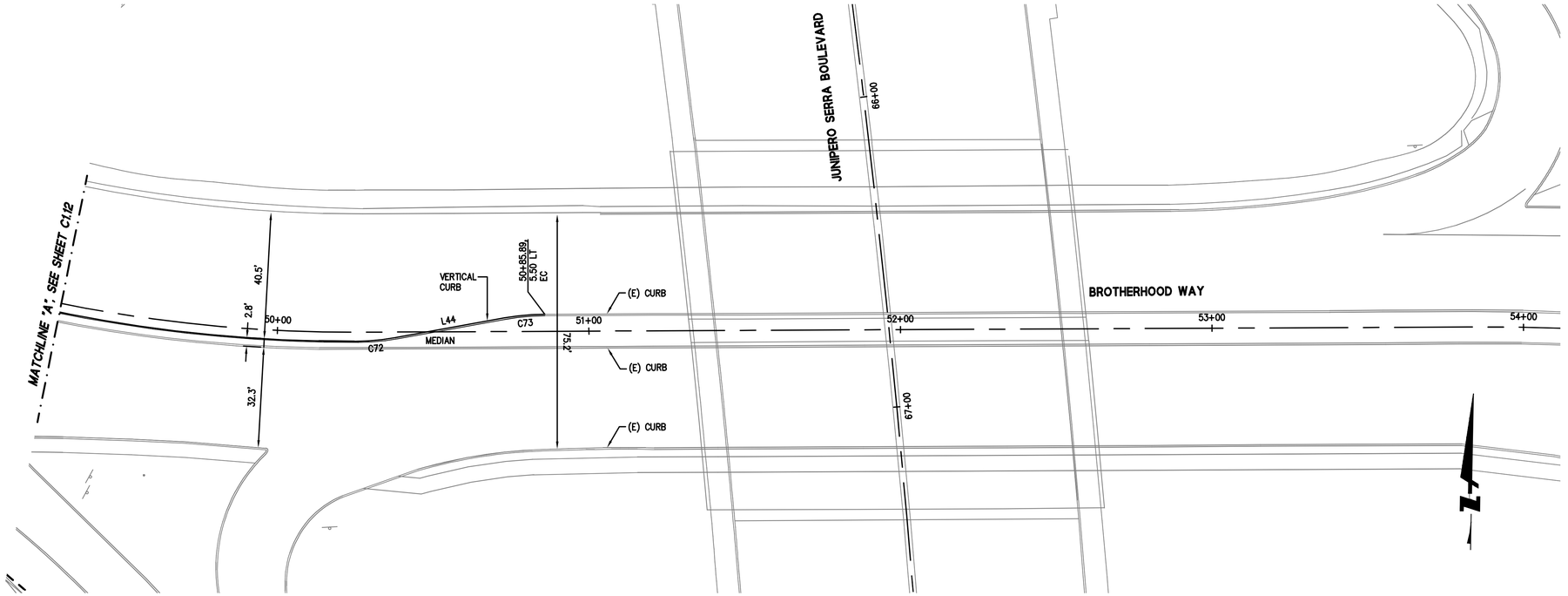



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SHEET NOTES

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2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
3. SEE SHEET C1.08 FOR ALIGNMENT DATA.
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SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN SIEBE No. 56861 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

CERTIFICATION

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C1.13

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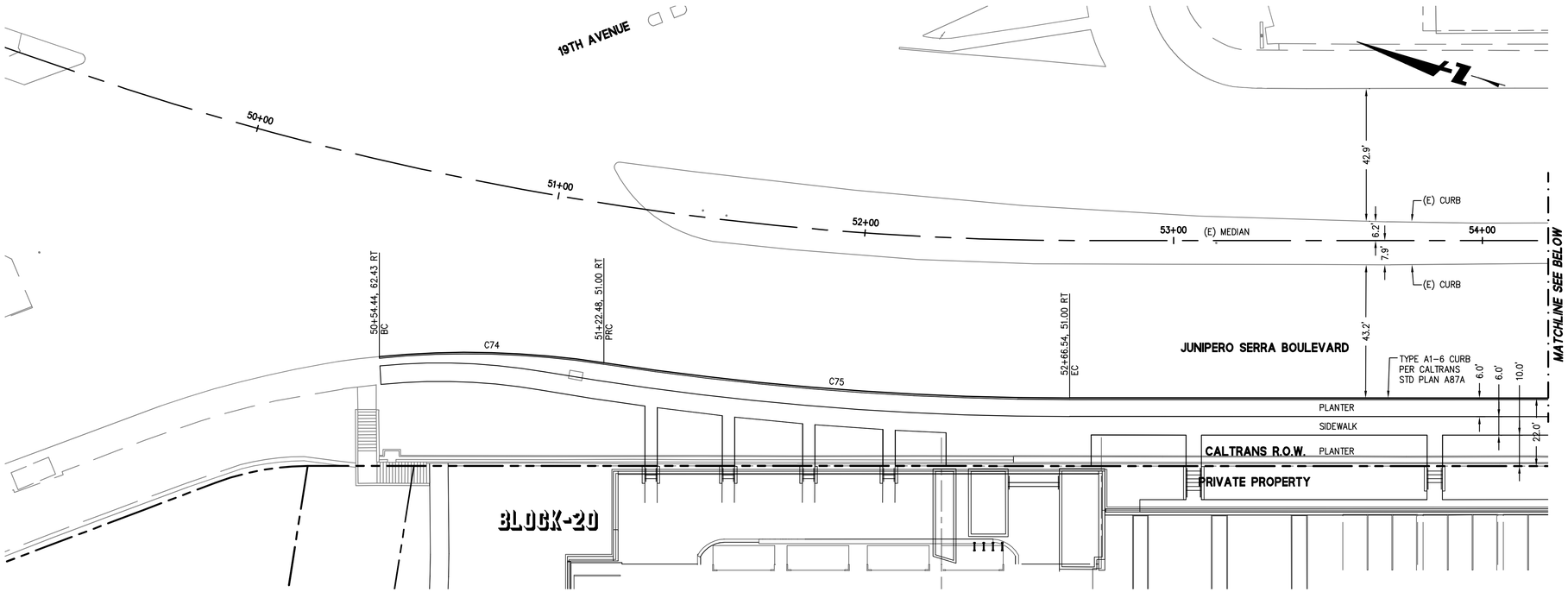

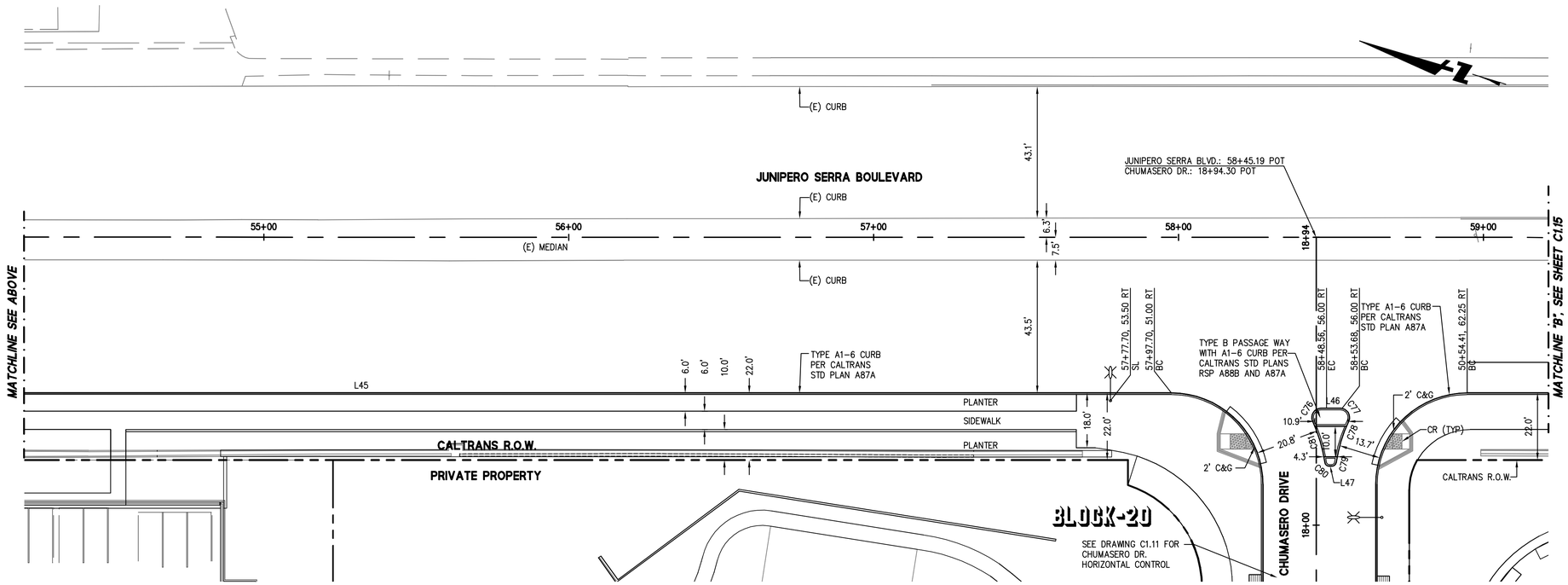



GRAPHIC SCALE
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SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
3. SEE SHEET C1.08 FOR ALIGNMENT DATA.
4. SEE SHEET C1.09 FOR LINE AND CURVE TABLES.
5. SEE C5.00 SERIES FOR PAVING INFORMATION.

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PHASE 1B STREET IMPROVEMENT PLANS
HORIZONTAL CONTROL PLAN - JUNIPERO SERRA BLVD
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. KNOW
No. C61009
EXP. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C1.14

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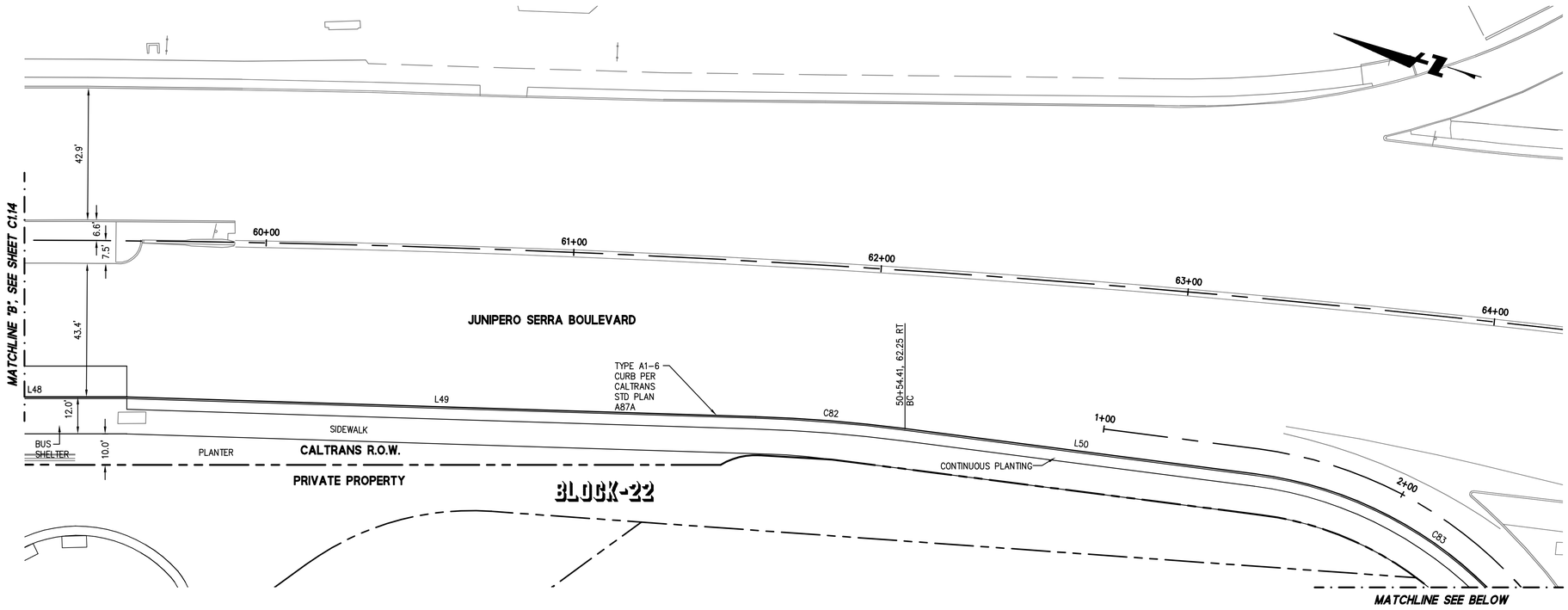

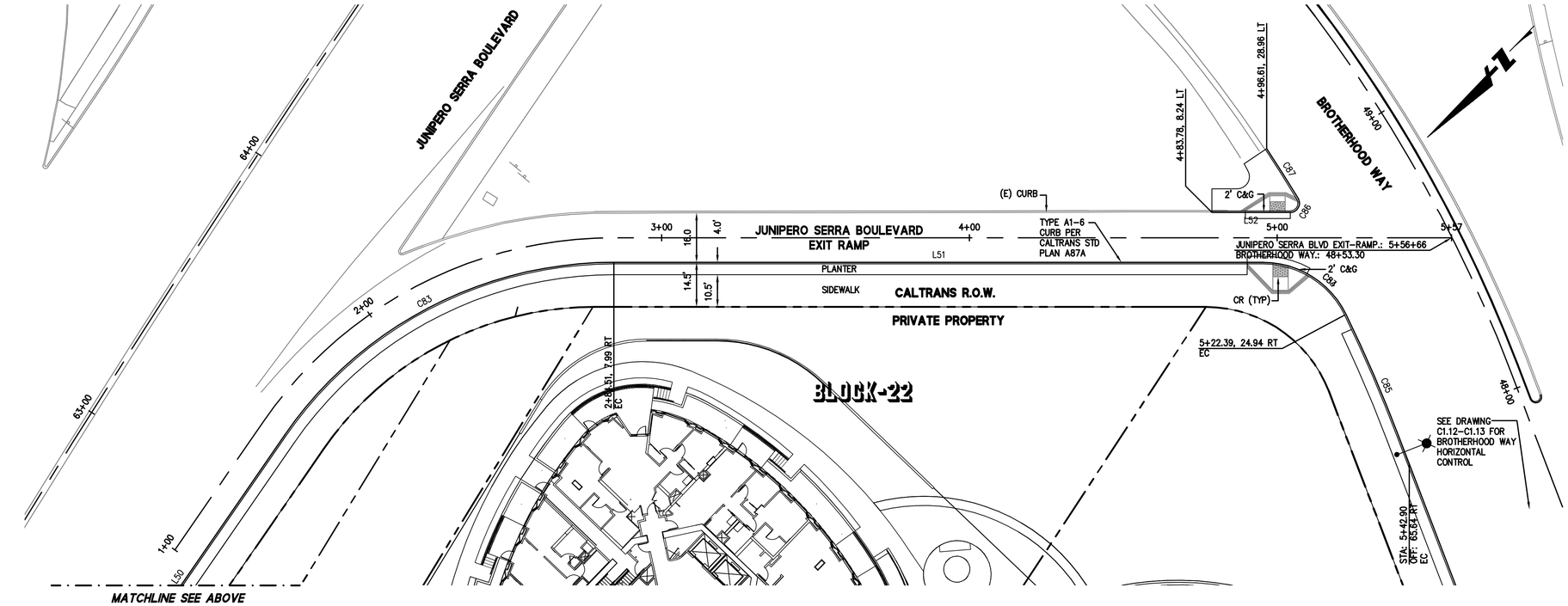



GRAPHIC SCALE
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SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
2. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
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HORIZONTAL CONTROL PLAN - JUNIPERO SERRA BLVD
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SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KERN — No. 73691 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

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Date: 05/01/17
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C1.15

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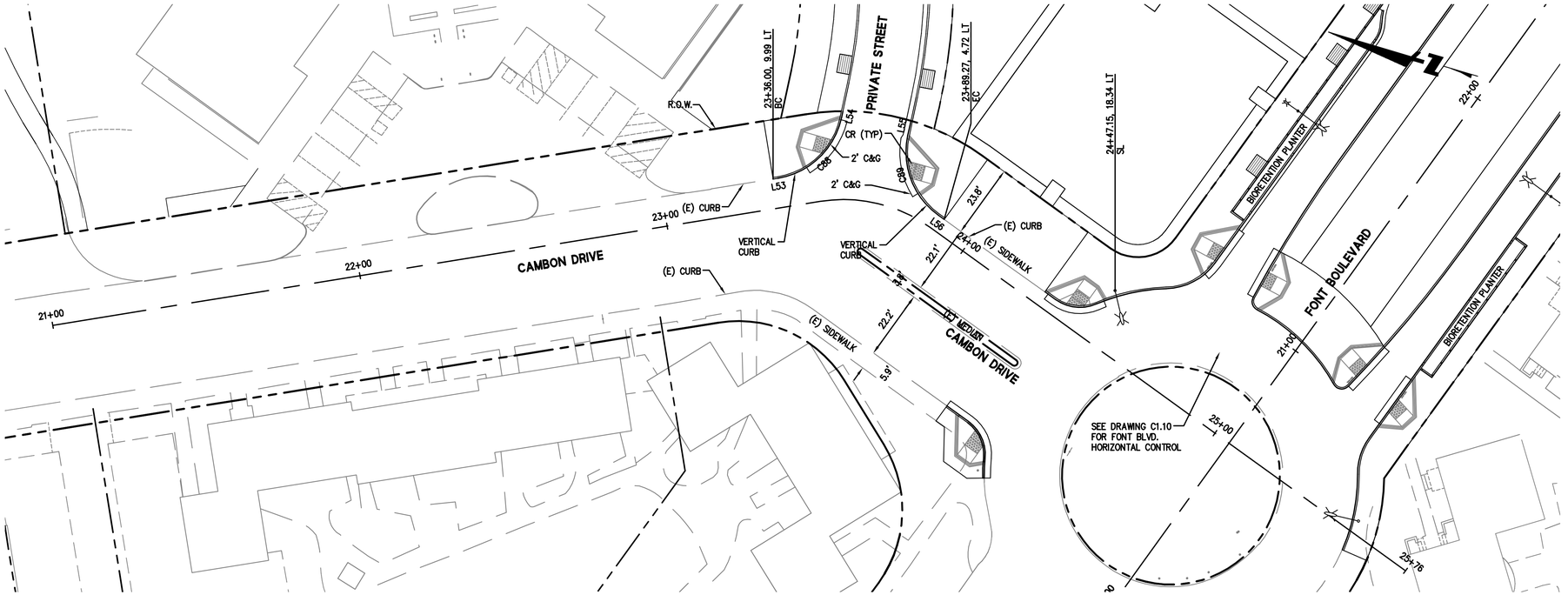



GRAPHIC SCALE

20 0 20 40

SHEET NOTES

1. SEE SHEET C1.07 FOR GENERAL HORIZONTAL CONTROL NOTES.
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PHASE 1B STREET IMPROVEMENT PLANS
HORIZONTAL CONTROL PLAN - CAMBON DRIVE

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61095
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
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Job No: 20090086

Drawing Number:

C1.16

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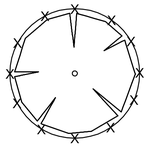
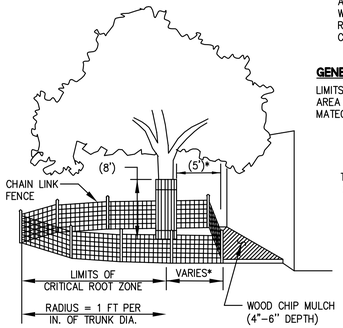
CRITICAL ROOT ZONE (C.R.Z)
RADIUS = 12 mm PER mm
(1 FT. PER INCH)
OF TRUNK DIAMETER

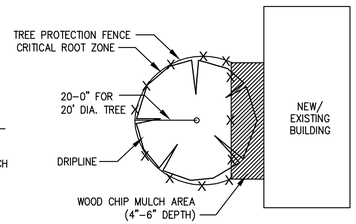


INDIVIDUAL TREE



*AS NEEDED TO PROVIDE NECESSARY WORK SPACE. IF LESS THAN 5', THEN ADD BOARDS STRAPPED TO TRUNK.

MODIFIED TYPE-A CHAIN LINK



PLAN VIEW

1 — TREE PROTECTION FENCE
NTS

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR EXCAVATION).
2. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
3. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER, AND THE ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK.
4. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF THE CONSTRUCTION TO THE CORRECT CONTROL INADEQUACIES.
5. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH HAS REACHED SIX (6) INCHES.
6. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS: ONE QUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE TRADE CONTRACTOR TO IMMEDIATELY CONTRACT THE CONSTRUCTION MANAGER.

GENERAL NOTES:

LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE COLLEGE OF SAN MATEO DISTRICT.

GRAPHIC SCALE
200 0 200 400

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PHASE 1B STREET IMPROVEMENT PLANS
EXISTING CONDITIONS & DEMOLITION - KEY MAP
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — BRIAN K. SUEN — No. 72015 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

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C2.00

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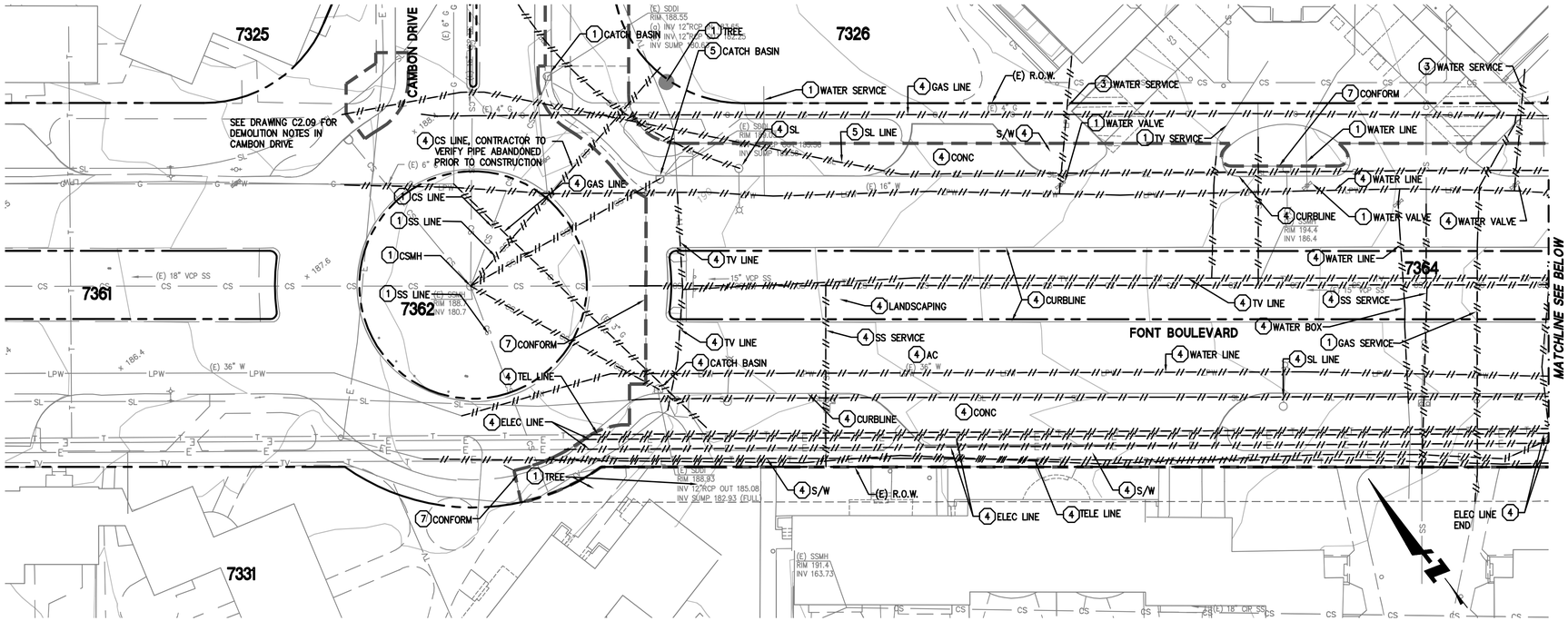

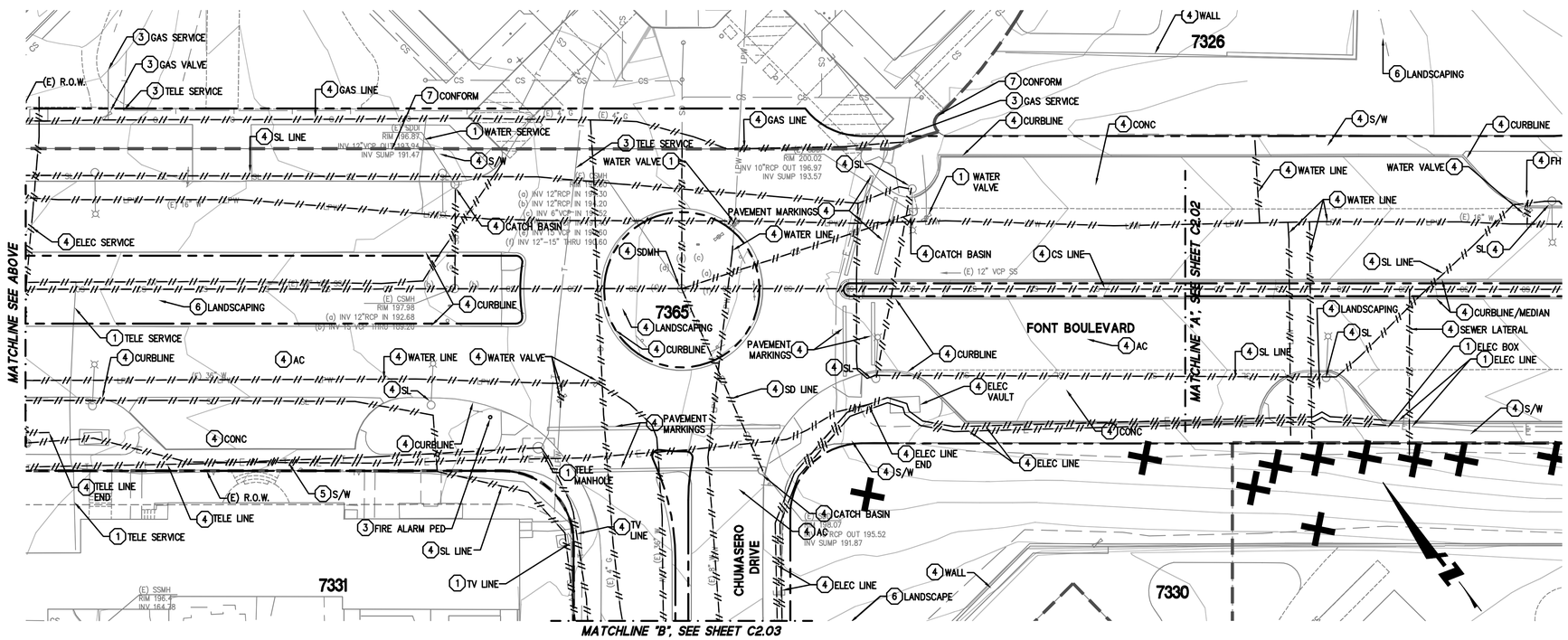


KEY MAP

GRAPHIC SCALE
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SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED, UNDER SEPARATE PERMIT BY OTHERS, TYP.
- (1) EXISTING UTILITY/FEATURE TO REMAIN. PROTECT AS NECESSARY DURING CONSTRUCTION
- (2) ADJUST EXISTING FEATURE/UTILITY TO GRADE
- (3) EXISTING UTILITY/FEATURE TO BE REPLACED
- (4) EXISTING FEATURE TO BE REMOVED
- (5) ABANDON EXISTING FEATURE/UTILITY
- (6) CLEAR & GRUB
- (7) SAWCUT
- (8) GRIND/MILL
- (9) SALVAGE

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EXISTING CONDITIONS & DEMOLITION PLAN - FONT BOULEVARD
SAN FRANCISCO, SAN FRANCISCO COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN D. STOKLE No. 73691 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
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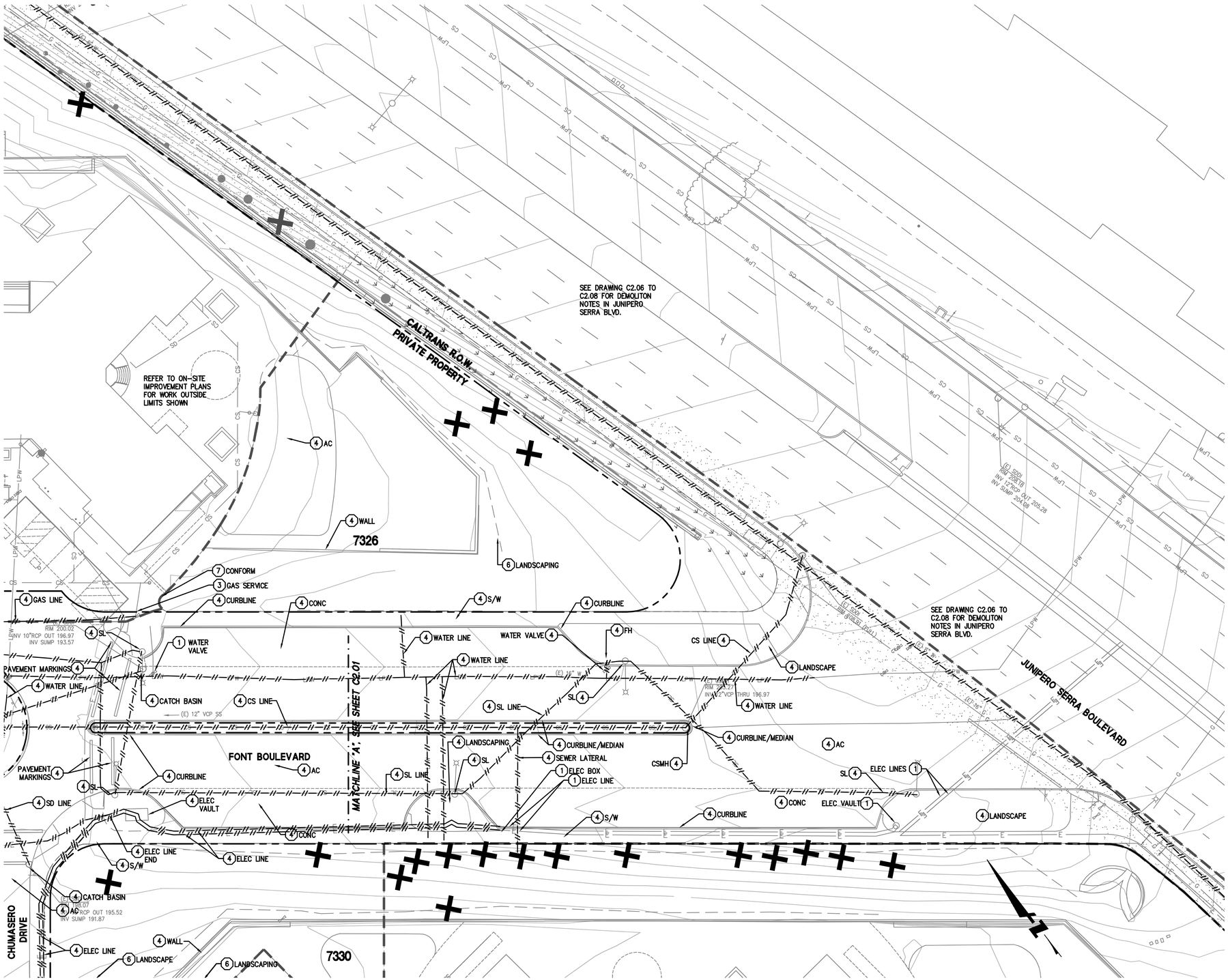



GRAPHIC SCALE

20 0 20 40

SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
- EXISTING FEATURE TO BE REMOVED
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- (6) CLEAR & GRUB
- (7) SAWCUT
- (8) GRIND/MILL
- (9) SALVAGE

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PHASE 1B STREET IMPROVEMENT PLANS
EXISTING CONDITIONS & DEMOLITION PLAN – CHUMASERO DRIVE
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JUSTIN R. SCOTT
No. 61098
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C2.02

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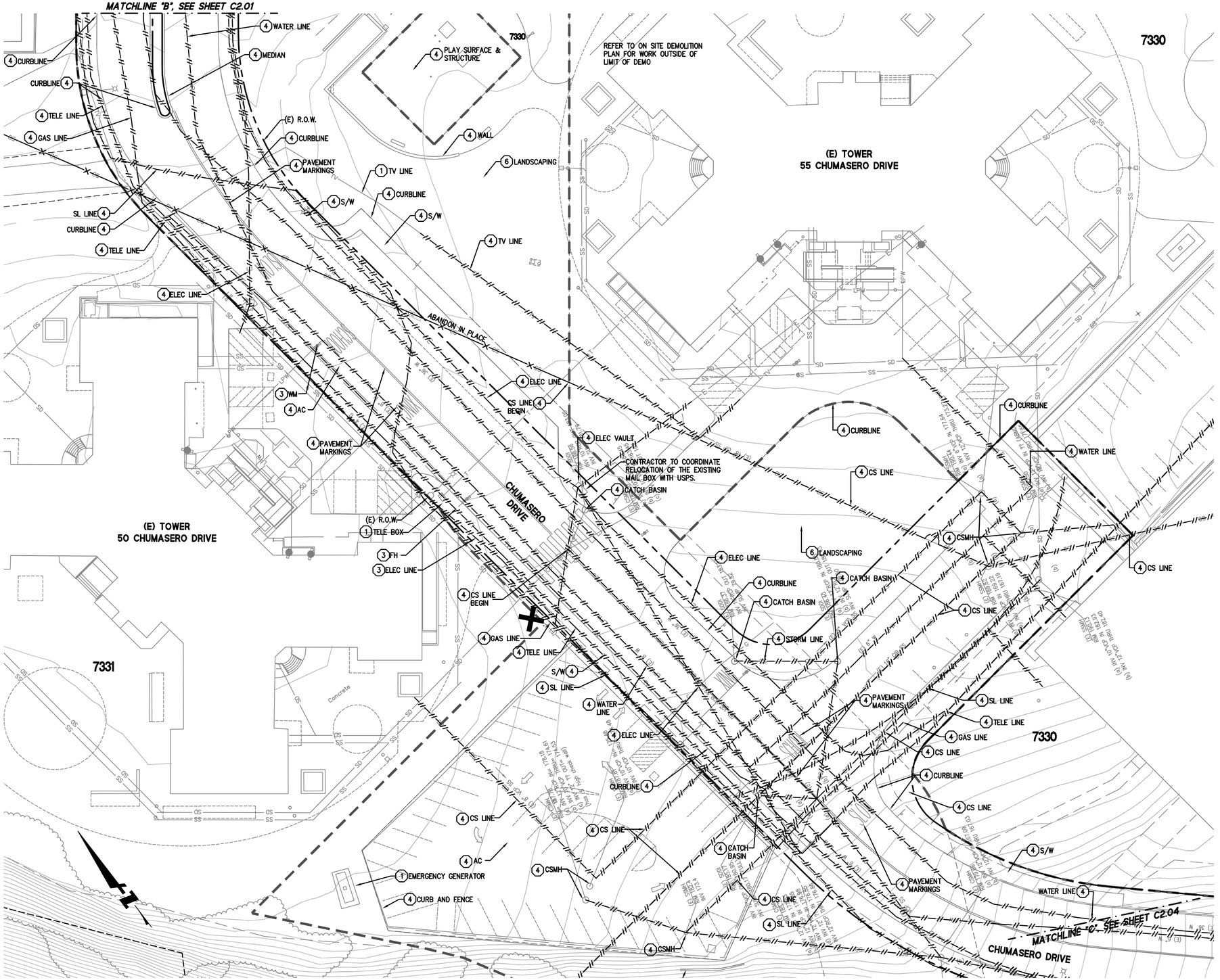



GRAPHIC SCALE

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SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED, UNDER SEPARATE PERMIT BY OTHERS, TYP.
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- (9) SALVAGE

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PHASE 1B STREET IMPROVEMENT PLANS
EXISTING CONDITIONS & DEMOLITION PLAN - CHUMASERO DRIVE
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — THOMAS HUI — No. 73419 — CIVIL — STATE OF CALIFORNIA — 10/31/18

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Approved: BS
Job No: 20090086

Drawing Number:

C2.03

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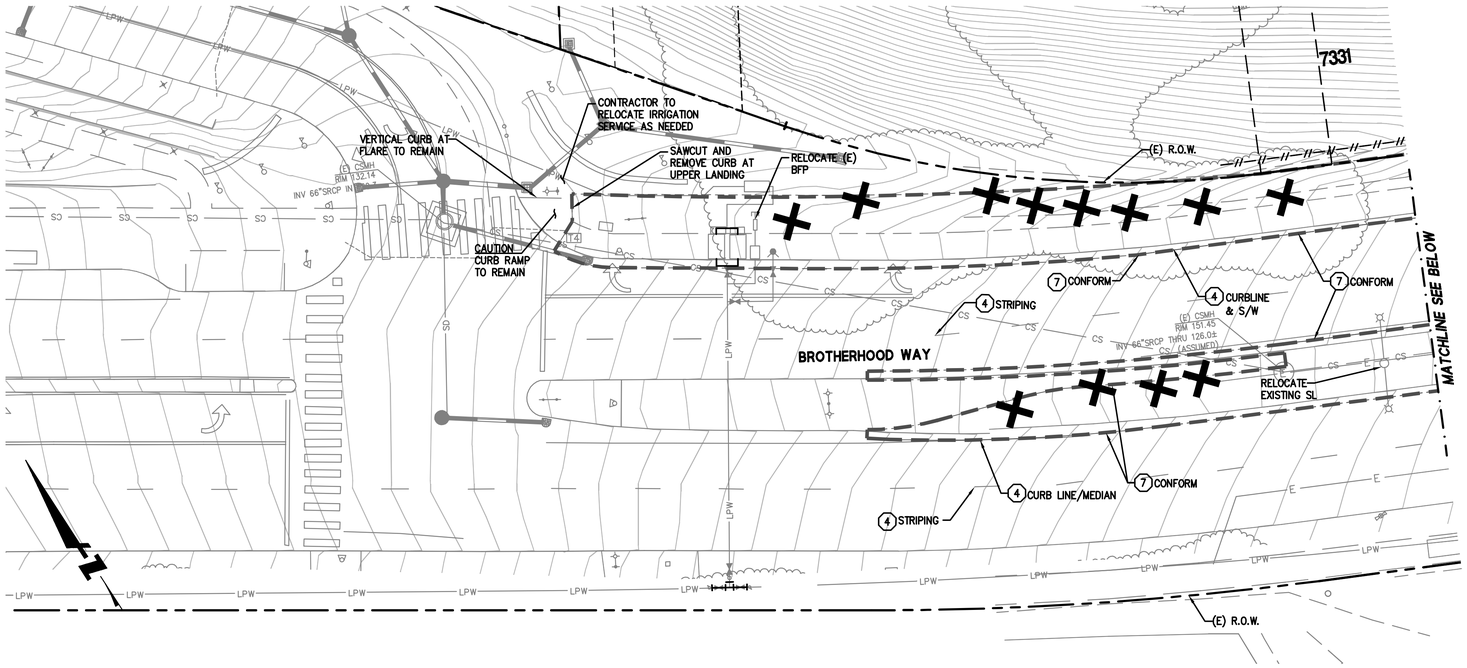

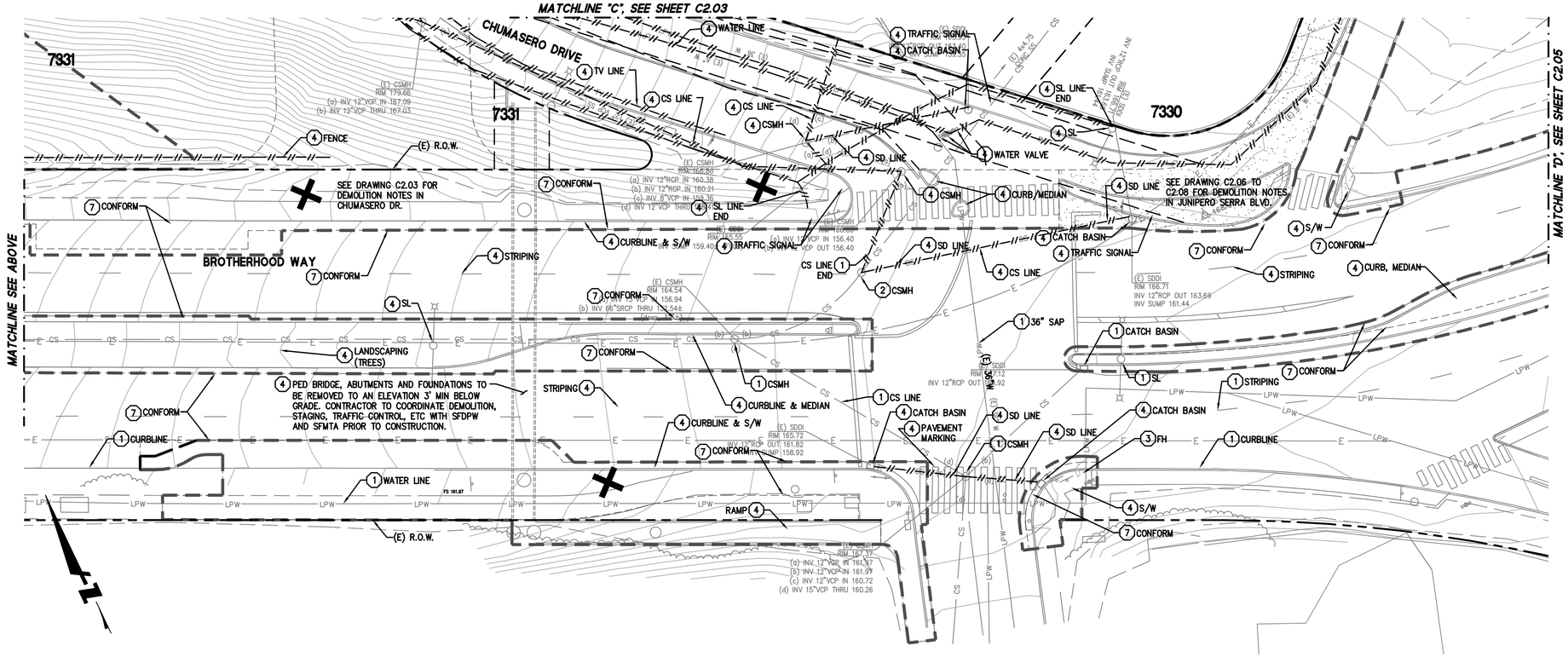



GRAPHIC SCALE

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SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
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EXISTING CONDITIONS & DEMOLITION PLAN - BROTHERHOOD WAY
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61099
Exp. 12/31/18
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STATE OF CALIFORNIA

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C2.04

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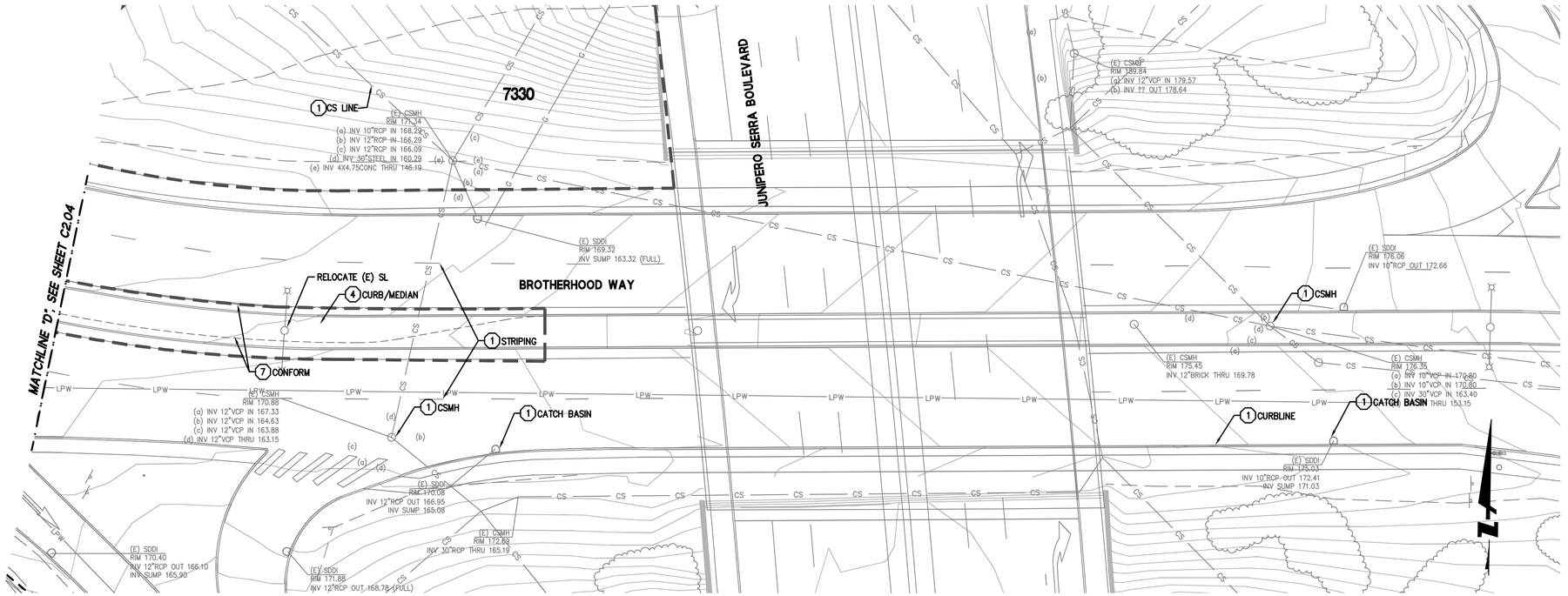



KEY MAP

GRAPHIC SCALE

20 0 20 40

SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
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EXISTING CONDITIONS & DEMOLITION PLAN - BROTHERHOOD WAY
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SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. KNOX
No. C61344
12/31/18
CIVIL
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No.	Revisions

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Approved: BS
Job No: 20090086

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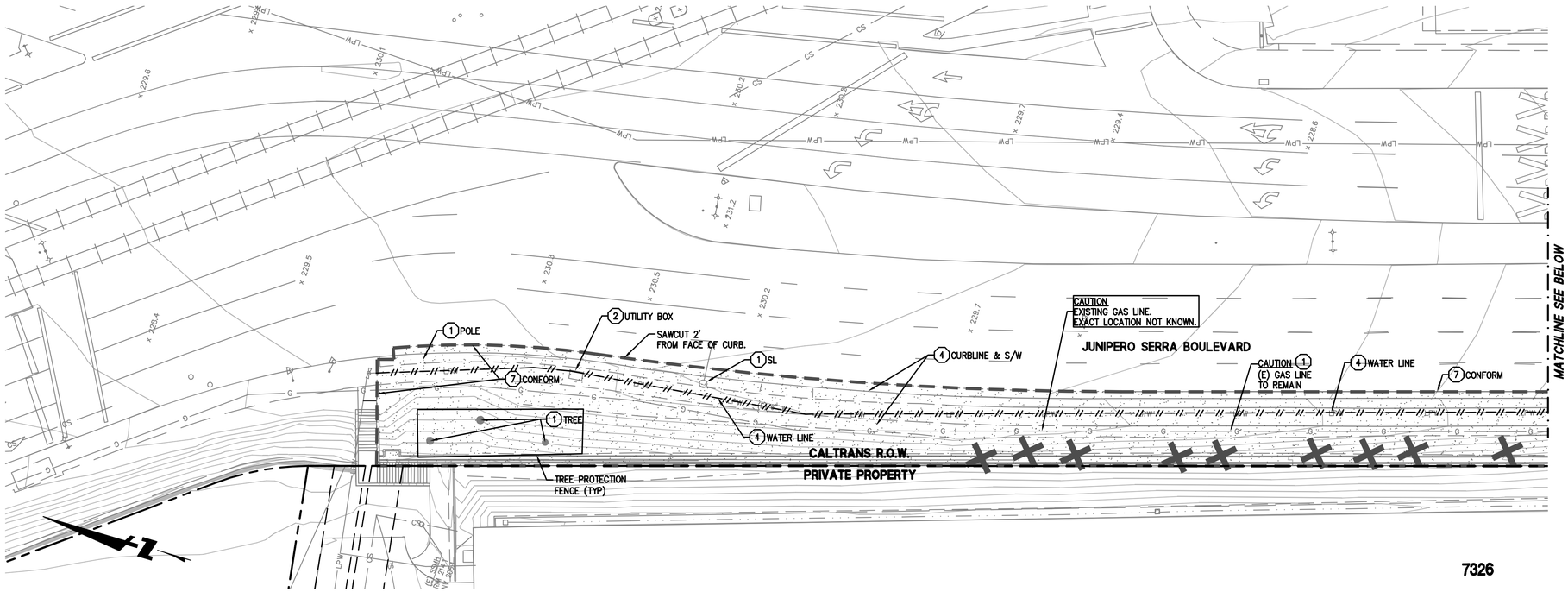

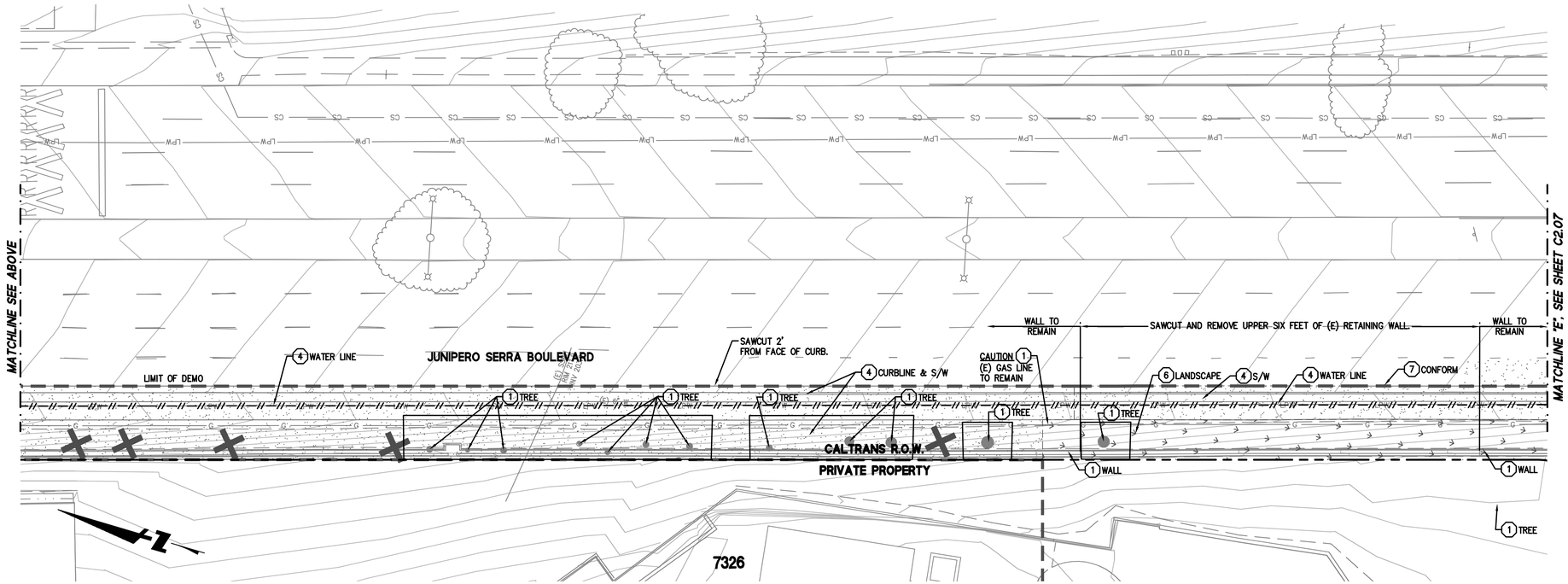



KEY MAP

GRAPHIC SCALE

20 0 20 40

SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

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- (9) SALVAGE

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PHASE 1B STREET IMPROVEMENT PLANS
EXISTING CONDITIONS & DEMOLITION PLAN – JUNIPERO SERRA BLVD
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SAN FRANCISCO COUNTY



No.	Revisions

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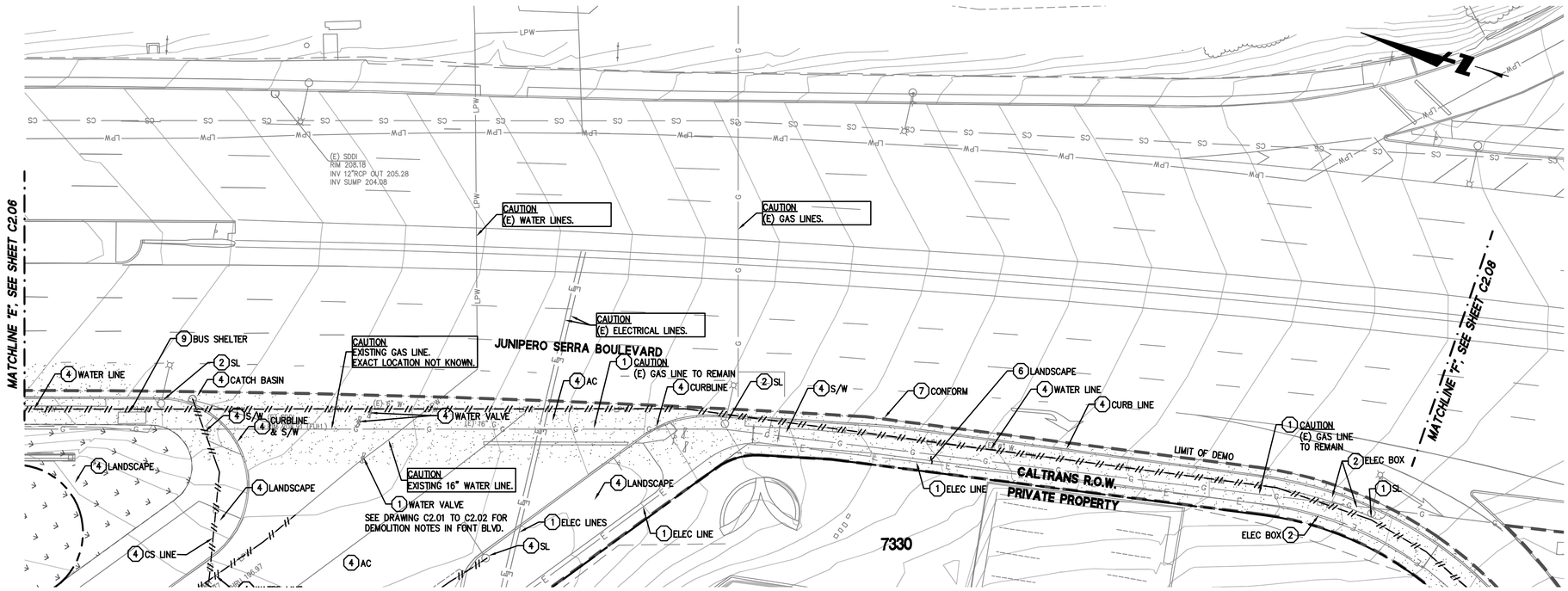


KEY MAP

GRAPHIC SCALE
20 0 20 40

SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED, UNDER SEPARATE PERMIT BY OTHERS, TYP.
- (1) EXISTING UTILITY/FEATURE TO REMAIN. PROTECT AS NECESSARY DURING CONSTRUCTION
- (2) ADJUST EXISTING FEATURE/UTILITY TO GRADE
- (3) EXISTING UTILITY/FEATURE TO BE REPLACED
- (4) EXISTING FEATURE TO BE REMOVED
- (5) ABANDON EXISTING FEATURE/UTILITY
- (6) CLEAR & GRUB
- (7) SAWCUT
- (8) GRIND/MILL
- (9) SALVAGE

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PHASE 1B STREET IMPROVEMENT PLANS
EXISTING CONDITIONS & DEMOLITION PLAN - JUNIPERO SERRA BLVD
SAN FRANCISCO, SAN FRANCISCO COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NIKOLAS LINDSAY
No. 72181
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

CHECKED

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C2.07

DRAWING NAME: J:\Projob\20090086-101\SHEETS\PHASE-01B\PH01B-C201-Demo.dwg (C2.07)
PLOTTING: Apr 25, 2017 1:03 PM PLOTTED BY: bam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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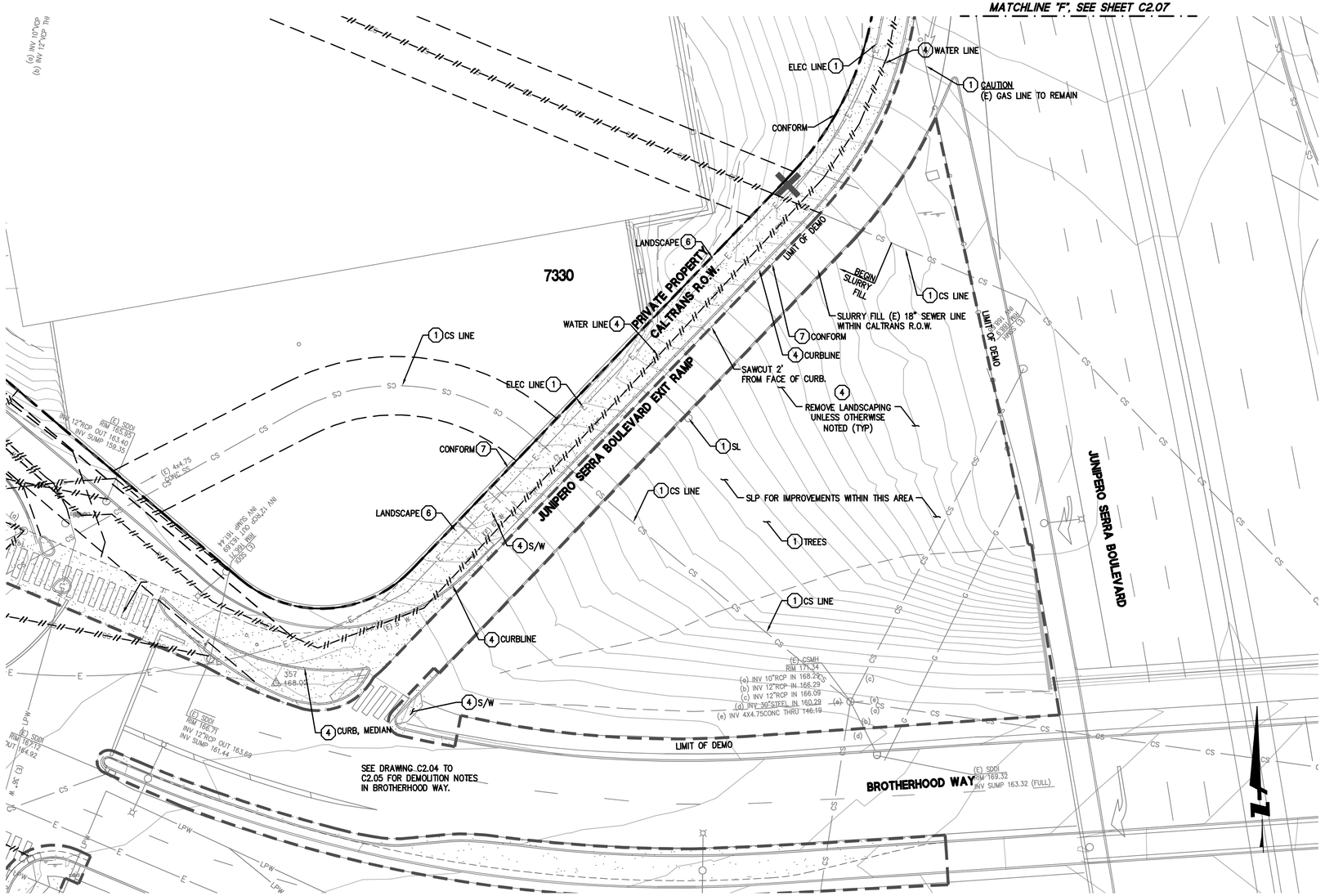



GRAPHIC SCALE
20 0 20 40

SHEET NOTES

SEE JOINT TRENCH PLANS FOR ADDITIONAL DEMOLITION WORK.

LEGEND

- APPROXIMATE LIMIT OF DEMO/WORK
- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED, UNDER SEPARATE PERMIT BY OTHERS, TYP.
- (1) EXISTING UTILITY/FEATURE TO REMAIN. PROTECT AS NECESSARY DURING CONSTRUCTION
- (2) ADJUST EXISTING FEATURE/UTILITY TO GRADE
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- (4) EXISTING FEATURE TO BE REMOVED
- (5) ABANDON EXISTING FEATURE/UTILITY
- (6) CLEAR & GRUB
- (7) SAWCUT
- (8) GRIND/MILL
- (9) SALVAGE

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EXISTING CONDITIONS & DEMOLITION PLAN – JUNIPERO SERRA BLVD
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER T. KIM — No. 61884 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C2.08

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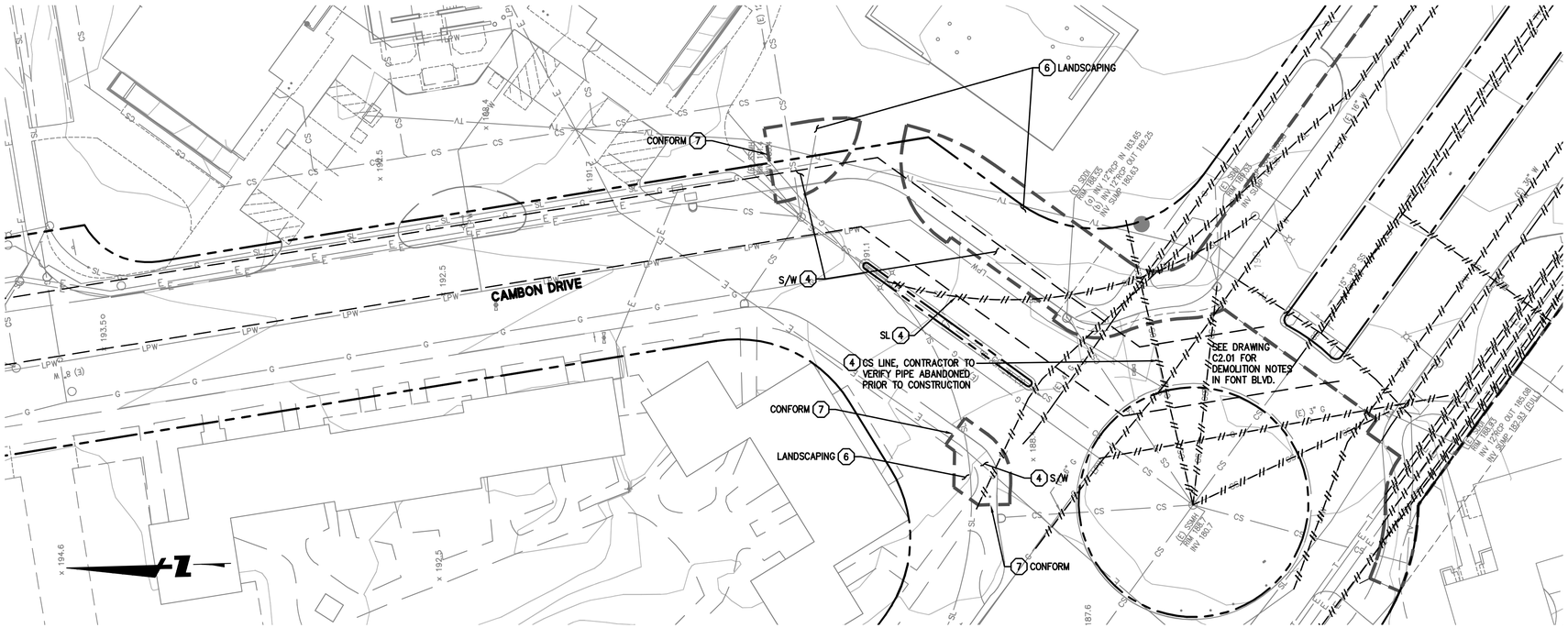
CAMBON DRIVE
6 LANDSCAPING
CONFORM 7
S/W 4
SL 4
4 CS LINE, CONTRACTOR TO VERIFY PIPE ABANDONED PRIOR TO CONSTRUCTION
SEE DRAWING C2.01 FOR DEMOLITION NOTES IN FONT BLVD.
CONFORM 7
LANDSCAPING 6
4 S/W
7 CONFORM
(E) 15" RCP
(E) 18" RCP
(E) 24" RCP
(E) 30" RCP
(E) 36" W
(E) 3" G
(E) STORM MH
RIM 188.63
INV 180.63
INV 178.03 OUT 185.98
INV 30.48E 182.93 (12"W)

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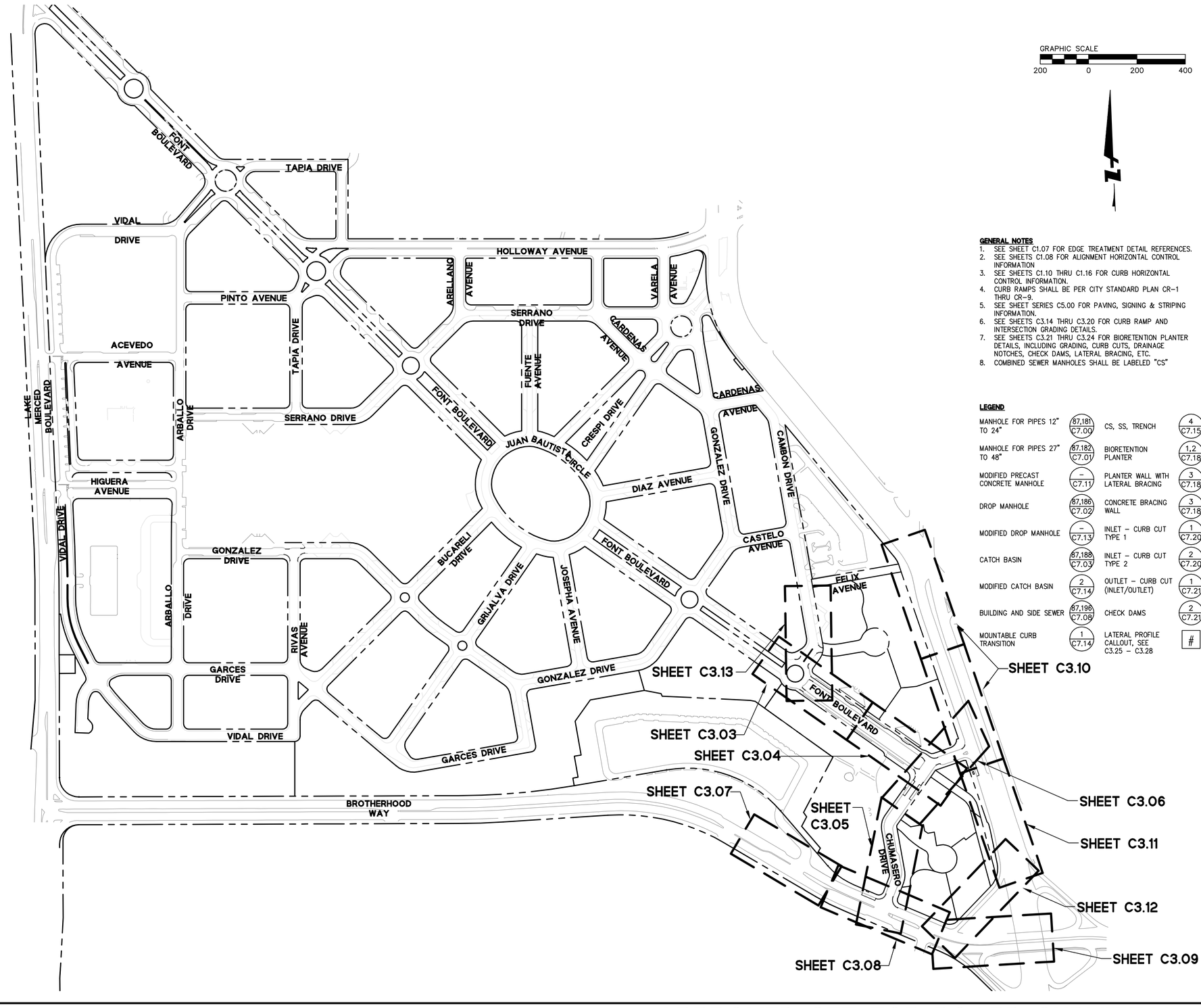

GRAPHIC SCALE
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GENERAL NOTES

1. SEE SHEET C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
2. SEE SHEETS C1.08 FOR ALIGNMENT HORIZONTAL CONTROL INFORMATION
3. SEE SHEETS C1.10 THRU C1.16 FOR CURB HORIZONTAL CONTROL INFORMATION.
4. CURB RAMPS SHALL BE PER CITY STANDARD PLAN CR-1 THRU CR-9.
5. SEE SHEET SERIES C5.00 FOR PAVING, SIGNING & STRIPING INFORMATION.
6. SEE SHEETS C3.14 THRU C3.20 FOR CURB RAMP AND INTERSECTION GRADING DETAILS.
7. SEE SHEETS C3.21 THRU C3.24 FOR BIORETENTION PLANTER DETAILS, INCLUDING GRADING, CURB CUTS, DRAINAGE NOTCHES, CHECK DAMS, LATERAL BRACING, ETC.
8. COMBINED SEWER MANHOLES SHALL BE LABELED "CS"

LEGEND

MANHOLE FOR PIPES 12" TO 24"	87,181 / C7.00	CS, SS, TRENCH	4 / C7.15
MANHOLE FOR PIPES 27" TO 48"	87,182 / C7.01	BIORETENTION PLANTER	1,2 / C7.18
MODIFIED PRECAST CONCRETE MANHOLE	– / C7.11	PLANTER WALL WITH LATERAL BRACING	3 / C7.18
DROP MANHOLE	87,186 / C7.02	CONCRETE BRACING WALL	3 / C7.18
MODIFIED DROP MANHOLE	– / C7.13	INLET – CURB CUT TYPE 1	1 / C7.20
CATCH BASIN	87,188 / C7.03	INLET – CURB CUT TYPE 2	2 / C7.20
MODIFIED CATCH BASIN	2 / C7.14	OUTLET – CURB CUT (INLET/OUTLET)	1 / C7.21
BUILDING AND SIDE SEWER	87,196 / C7.08	CHECK DAMS	2 / C7.21
MOUNTABLE CURB TRANSITION	1 / C7.14	LATERAL PROFILE CALLOUT, SEE C3.25 – C3.28	#

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – KEY MAP
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER BRIAN D. STOKLE No. C 61935 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.00

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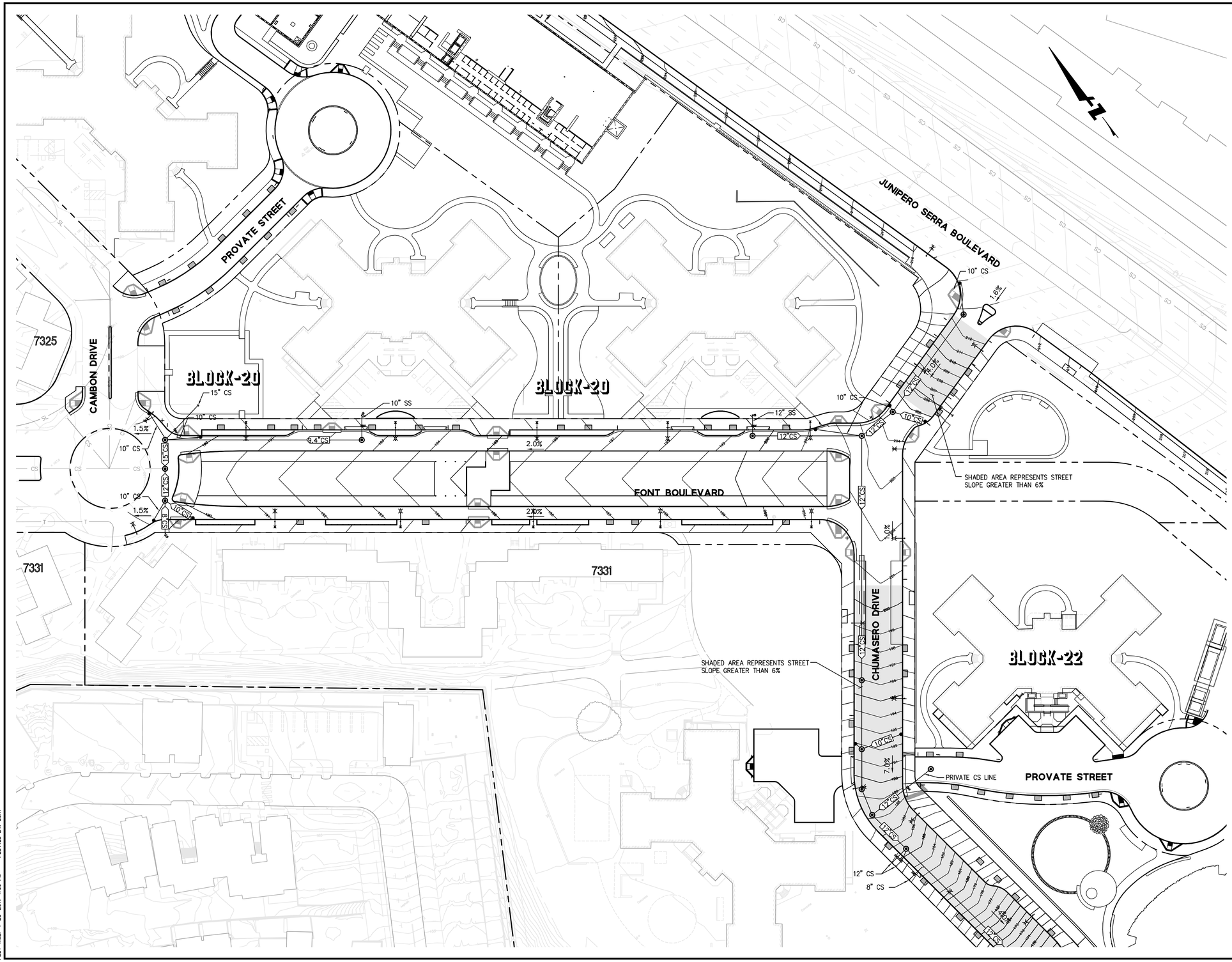

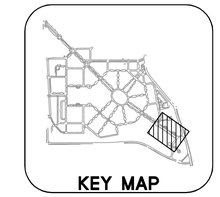

GRAPHIC SCALE

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN – NORTH

SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C3.01

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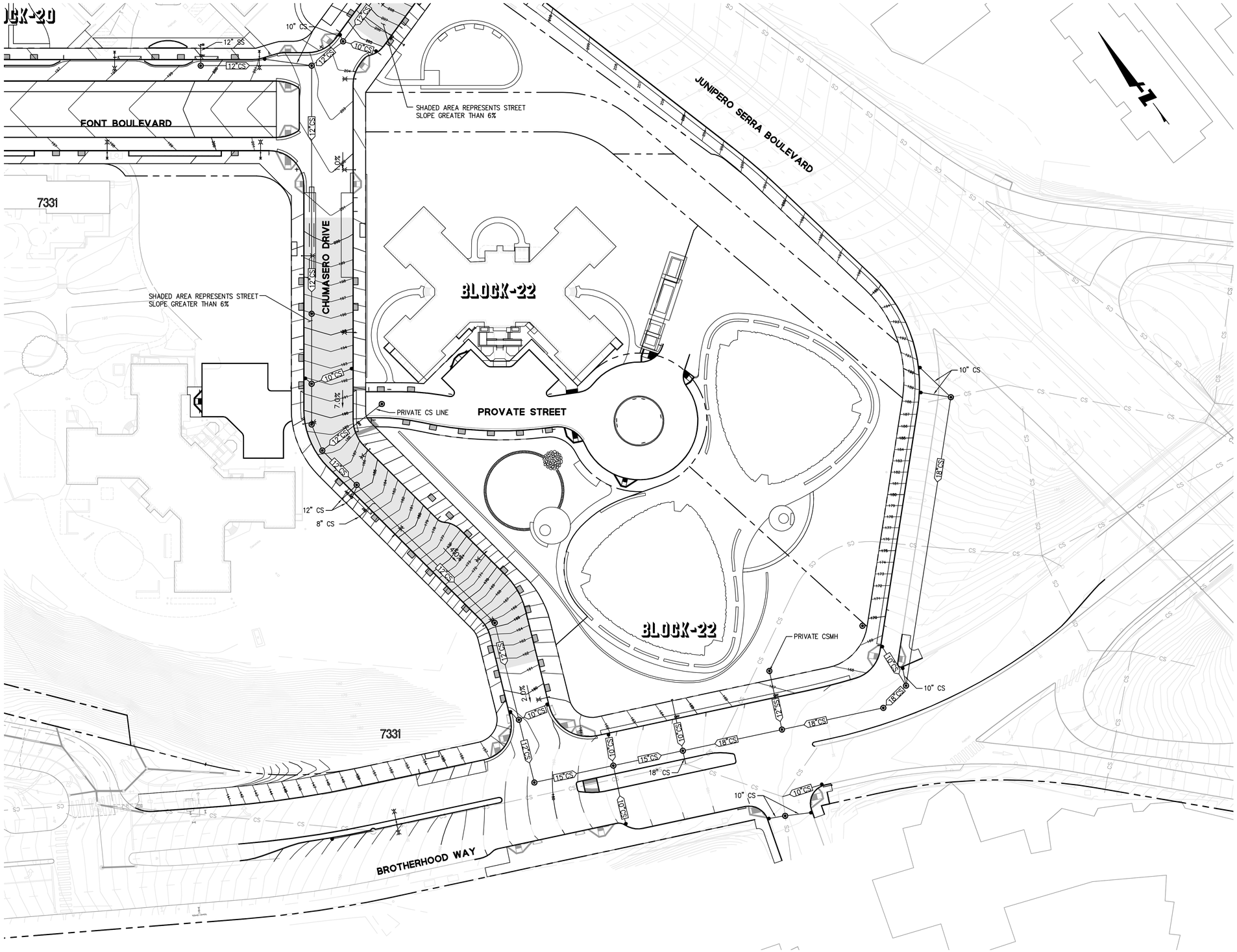

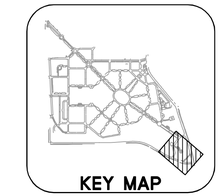

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN – SOUTH

SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C3.02

DRAWING NAME: \\Bkf-rc\data\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C300-GD.dwg (C3.02)
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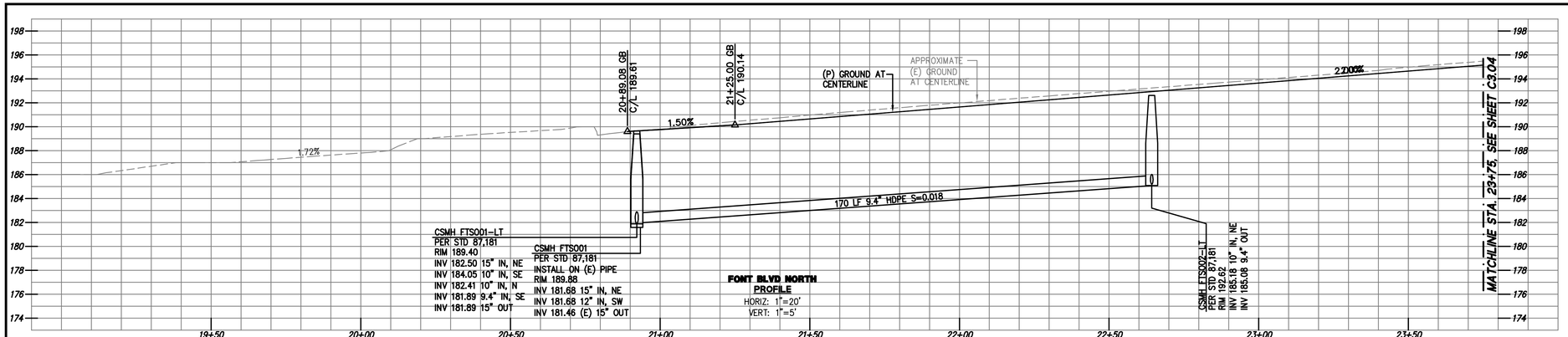

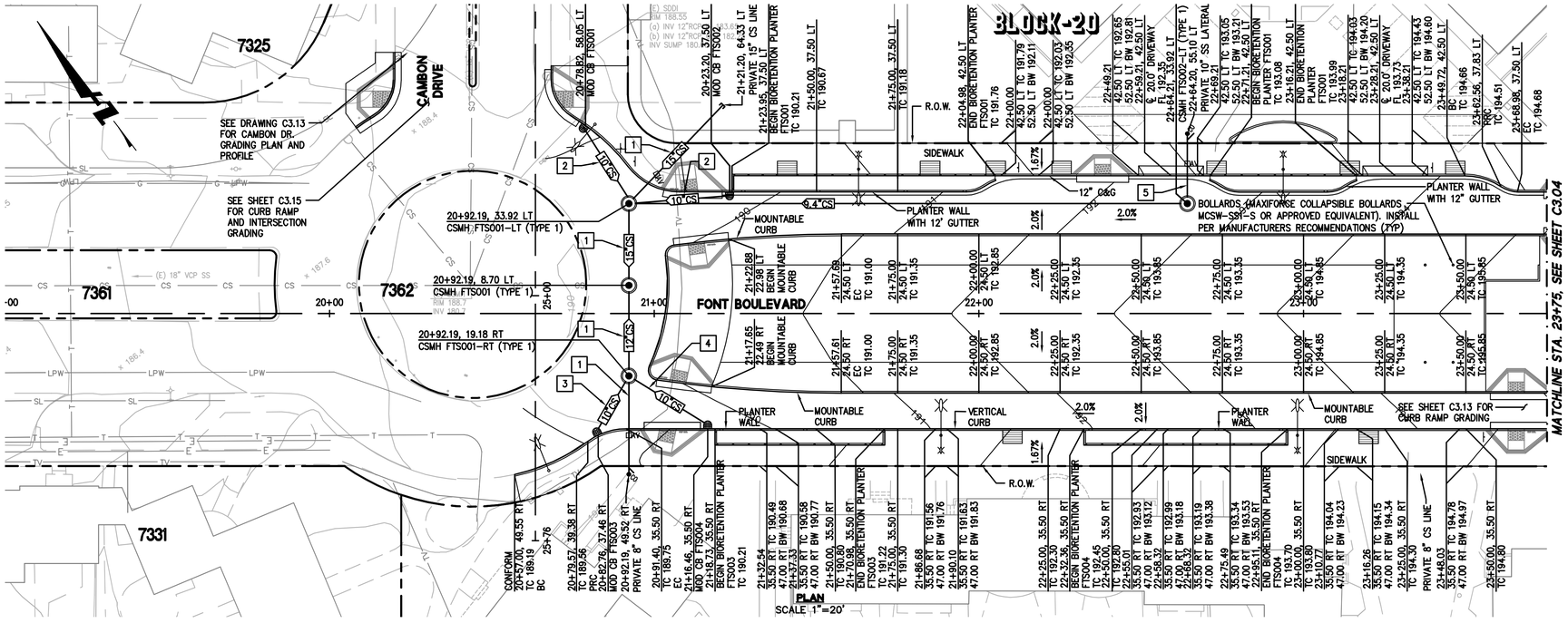

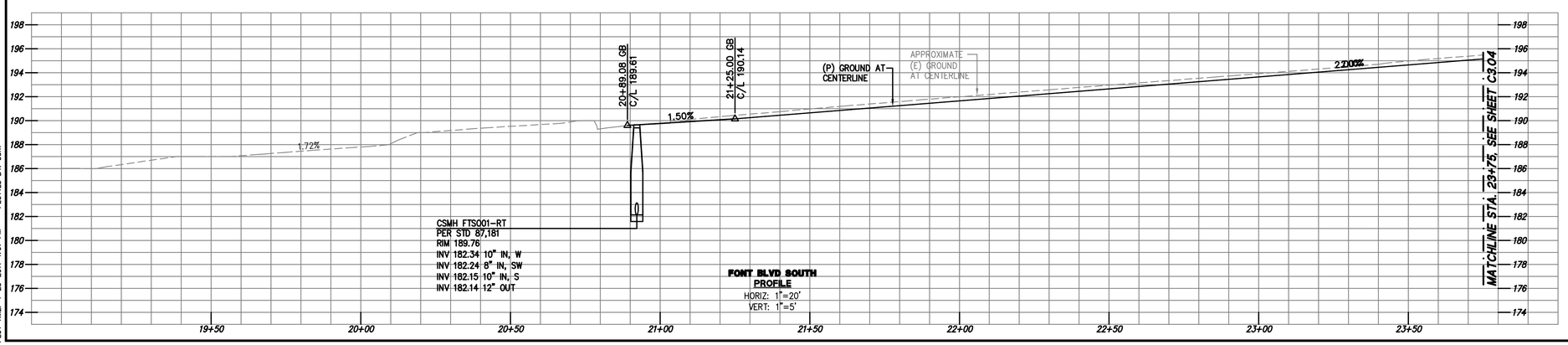

GRAPHIC SCALE
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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – FONT BOULEVARD
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER BRIAN STOKLE No. C 61644 CIVIL 12/31/18 STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C3.03

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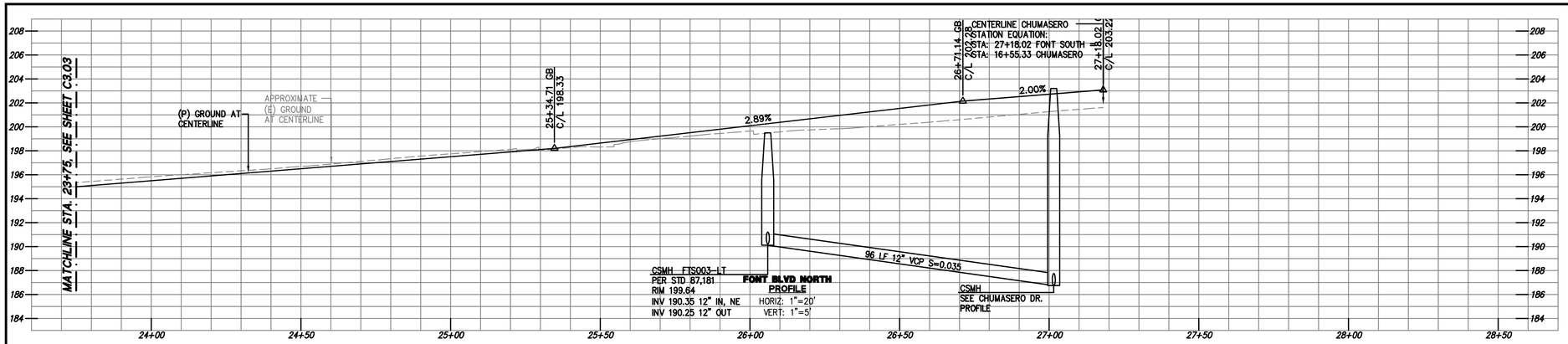

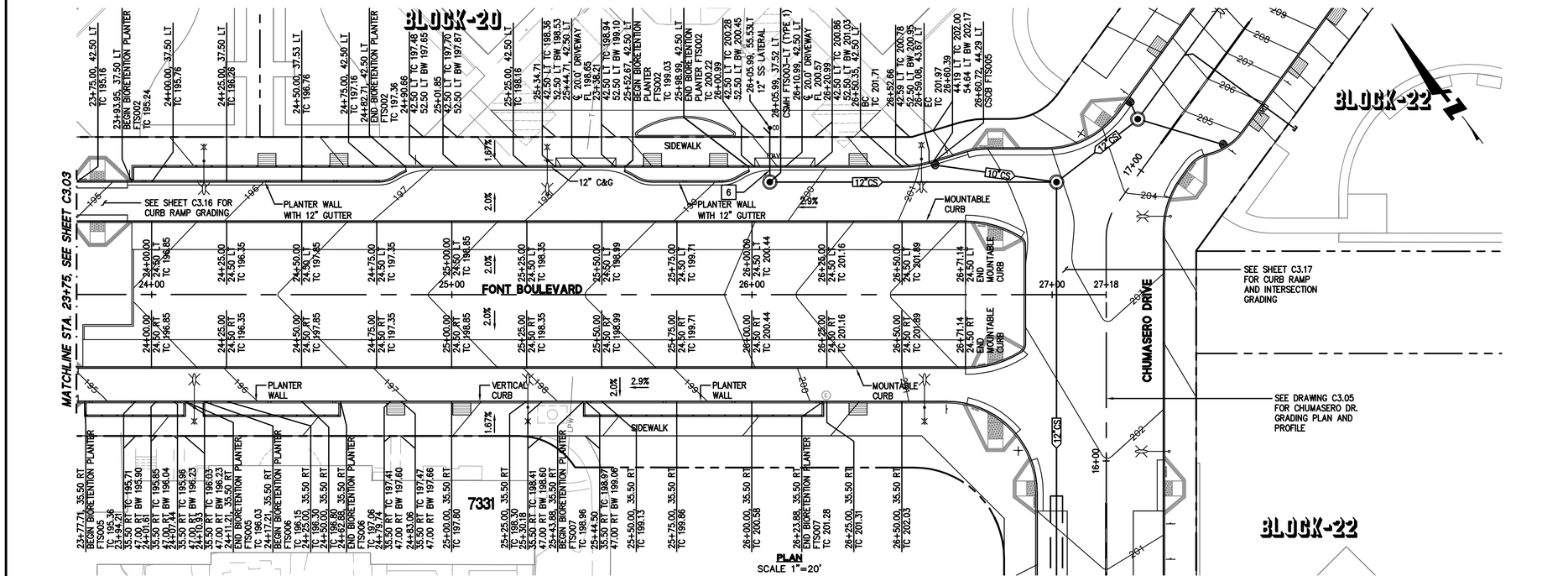

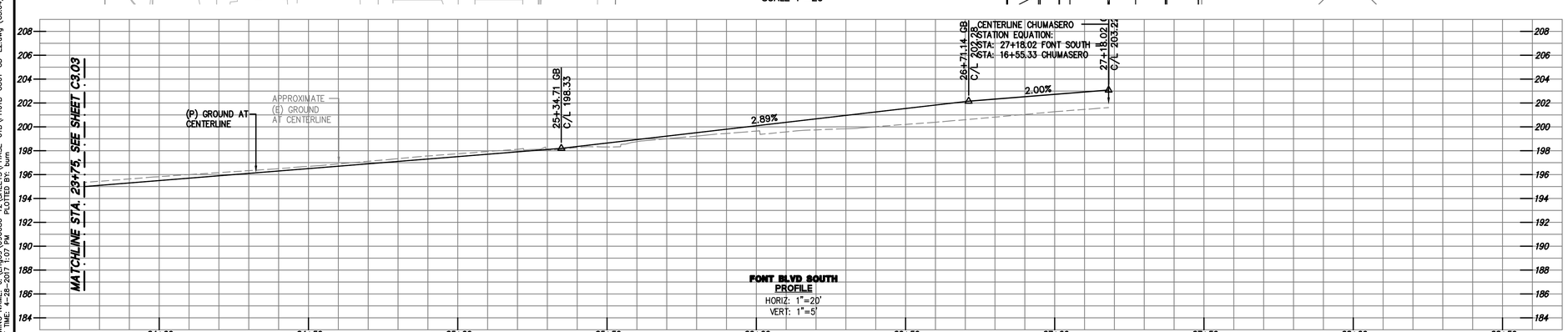

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KEY MAP

GRAPHIC SCALE
20 0 20 40

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – FONT BOULEVARD
SAN FRANCISCO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. KNOX
No. 72128
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.04

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PLOT TIME: 4/28/2017 10:04 PM PLOTTED BY: Jamie

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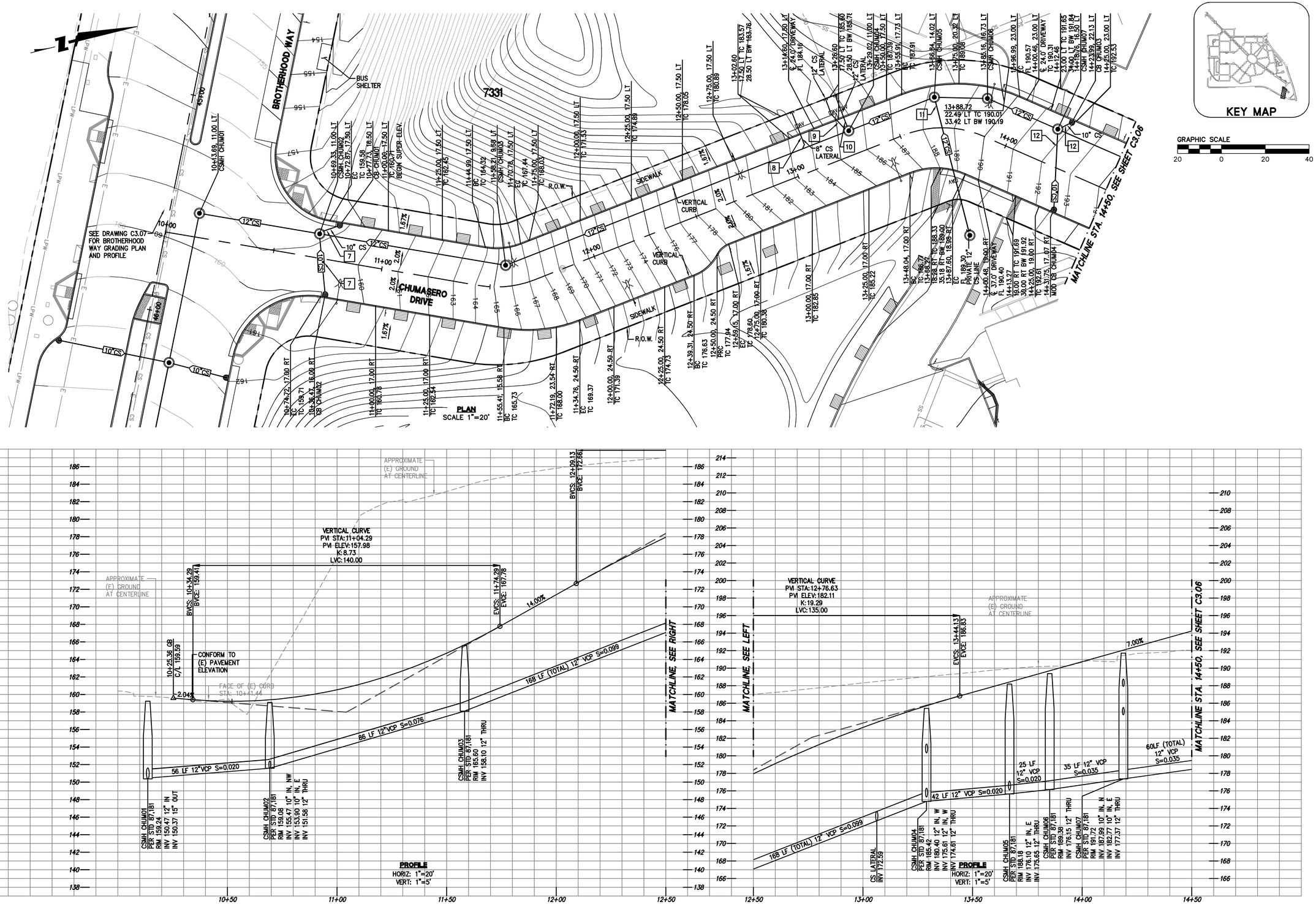



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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – CHUMASERO DRIVE
SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.05

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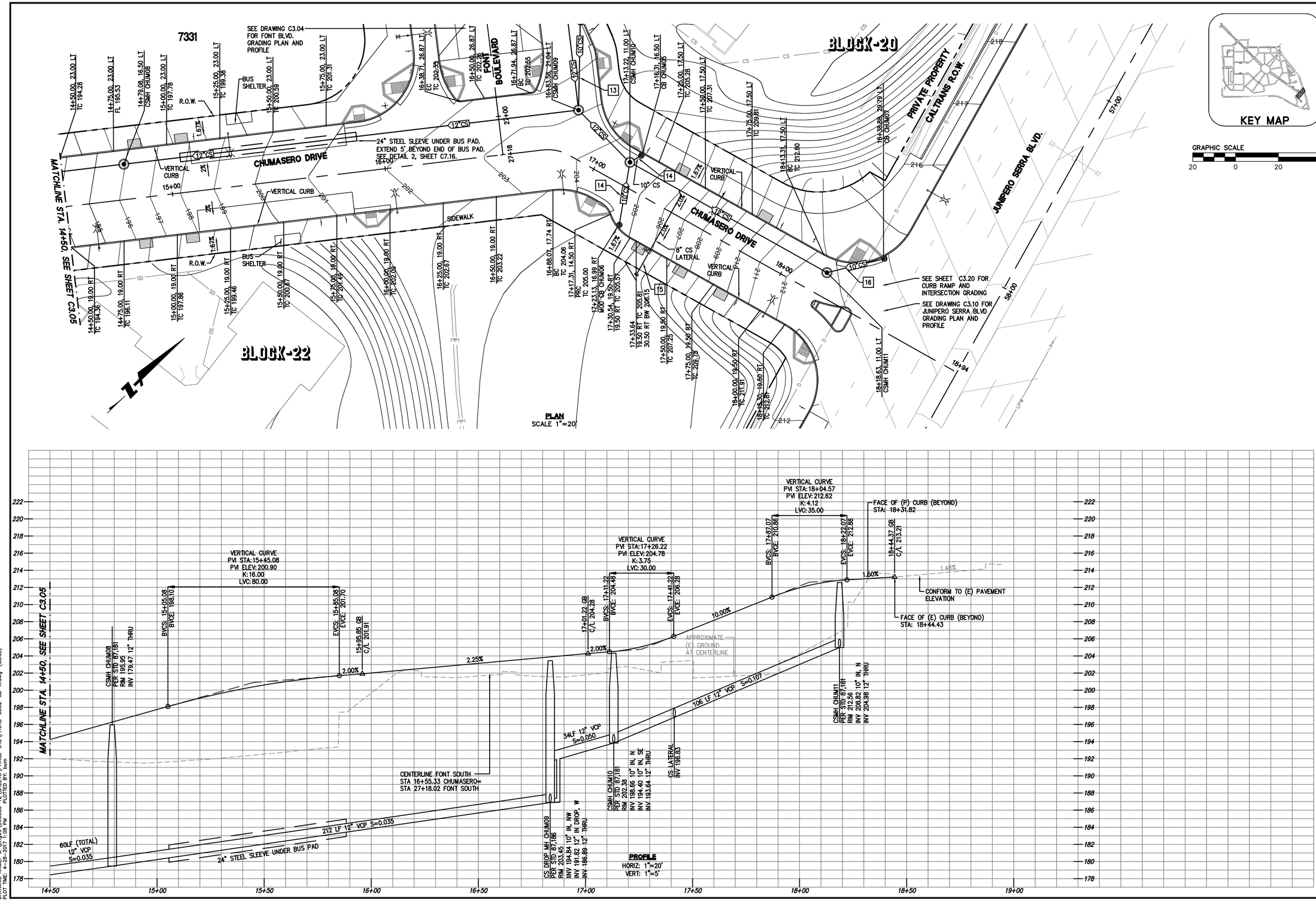

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PHASE 1B STREET IMPROVEMENT PLANS
PLAN & PROFILE – CHUMASERO DRIVE

SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.06

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PLAN
SCALE 1"=20'

GRAPHIC SCALE
20 0 20 40

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – BROTHERHOOD WAY
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

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No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.07

DRAWING NAME: \\Bkf-sv\data\Eng02\20090086-12\SHEETS\PHASE-01B\PH01B-C303-GD-BRW.dwg (C3.07)
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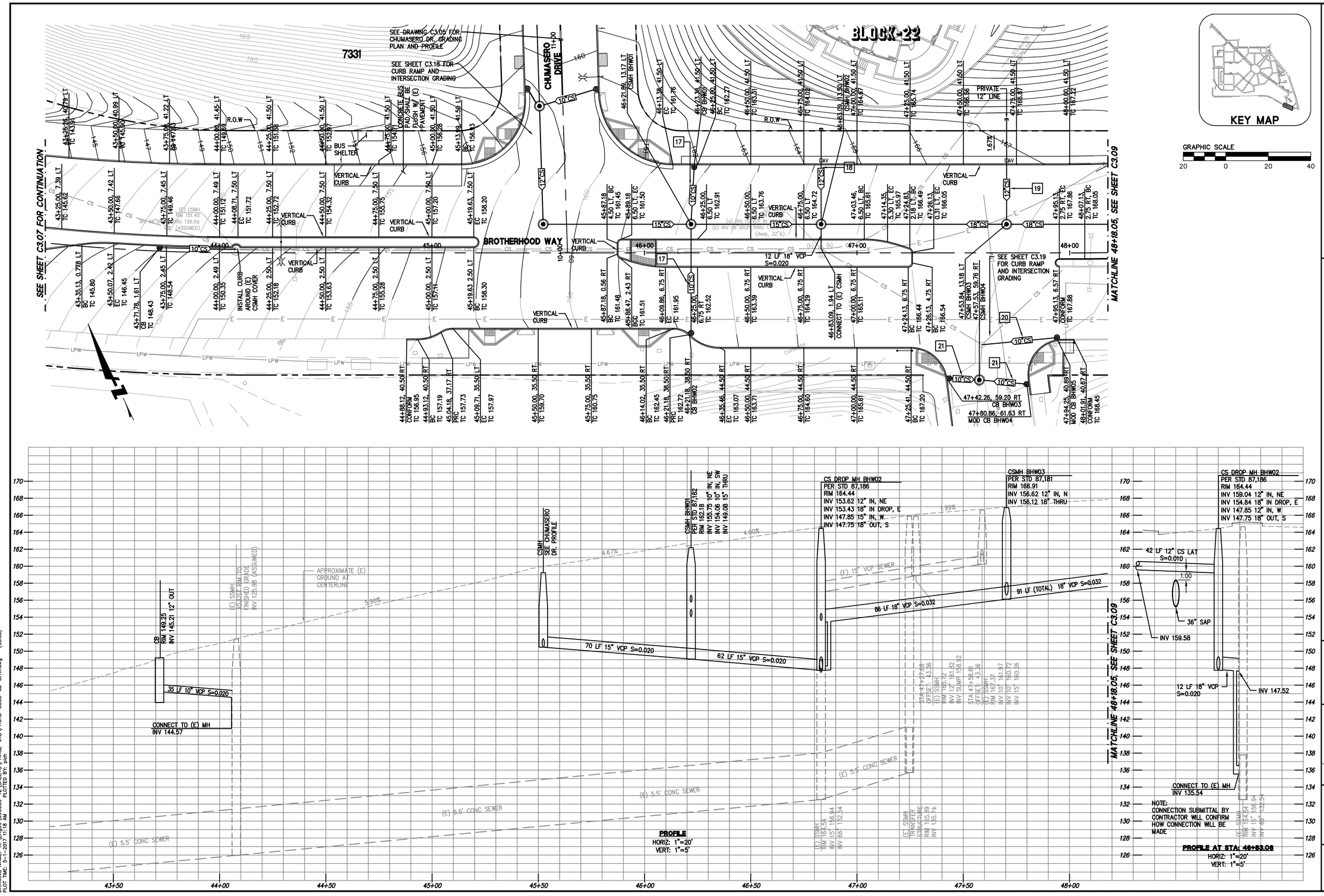

GRAPHIC SCALE
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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – BROTHERHOOD WAY
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.08

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PLOT TIME: 5-1-2017 11:18 AM PLOTTED BY: pich

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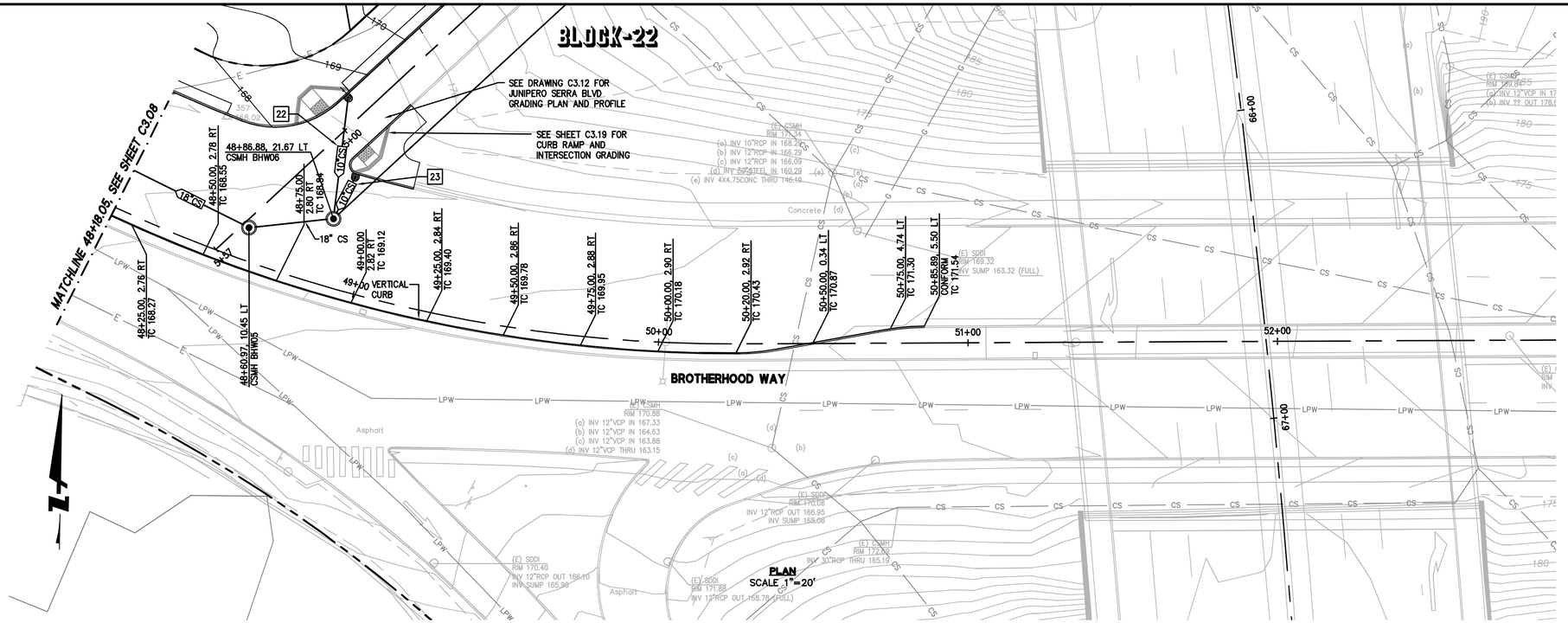

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – BROTHERHOOD WAY
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.09

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PLOT TIME: 4-28-2017 1:08 PM PLOTTED BY: burn

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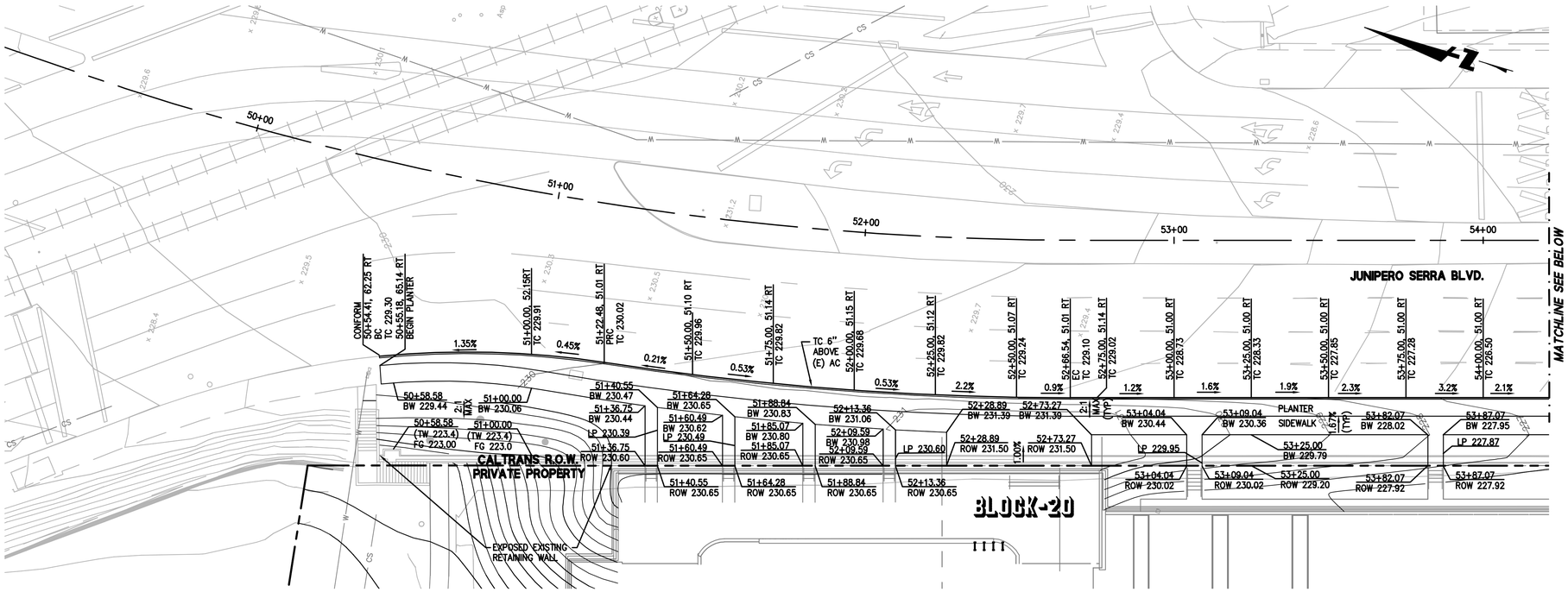

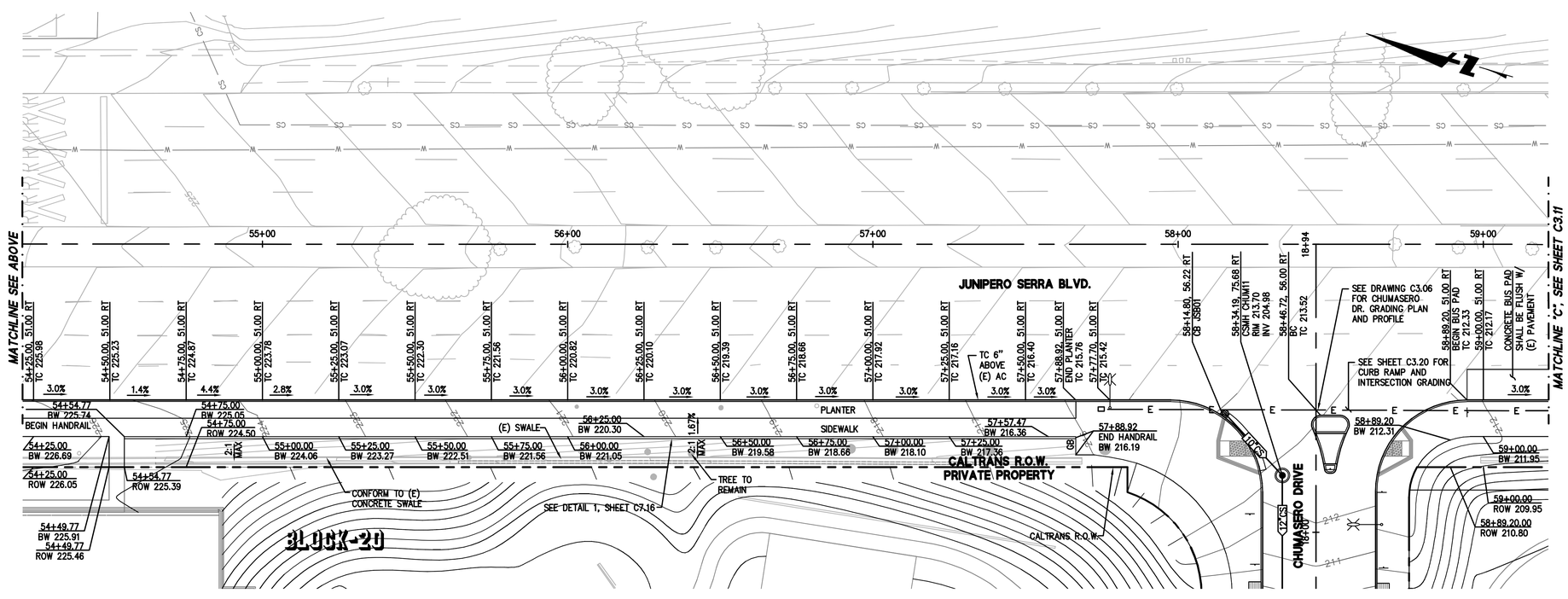



GRAPHIC SCALE
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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN – JUNIPERO SERRA BOULEVARD
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER BRIAN P. STRONG No. 72611 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
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Approved: BS
Job No: 20090086

Drawing Number:
C3.10

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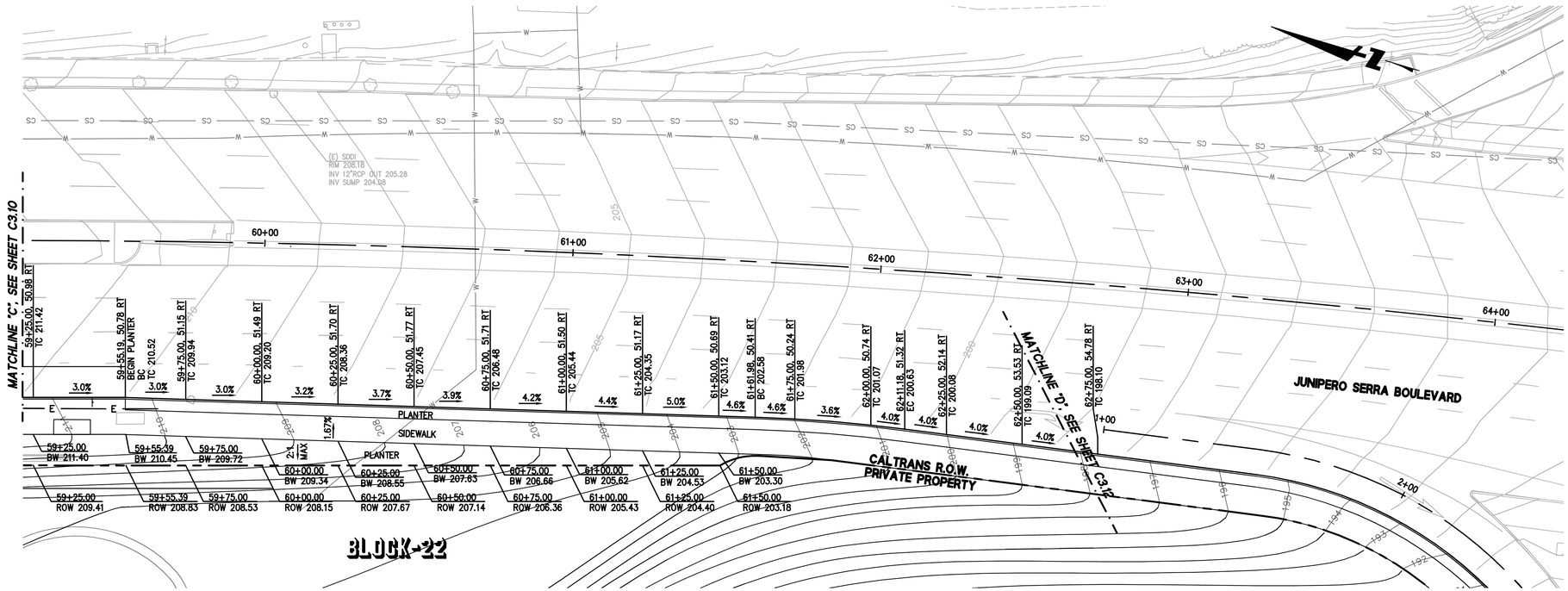



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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN – JUNIPERO SERRA BOULEVARD
SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.11

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PLOT TIME: 4-28-2017 1:09 PM PLOTTED BY: bum

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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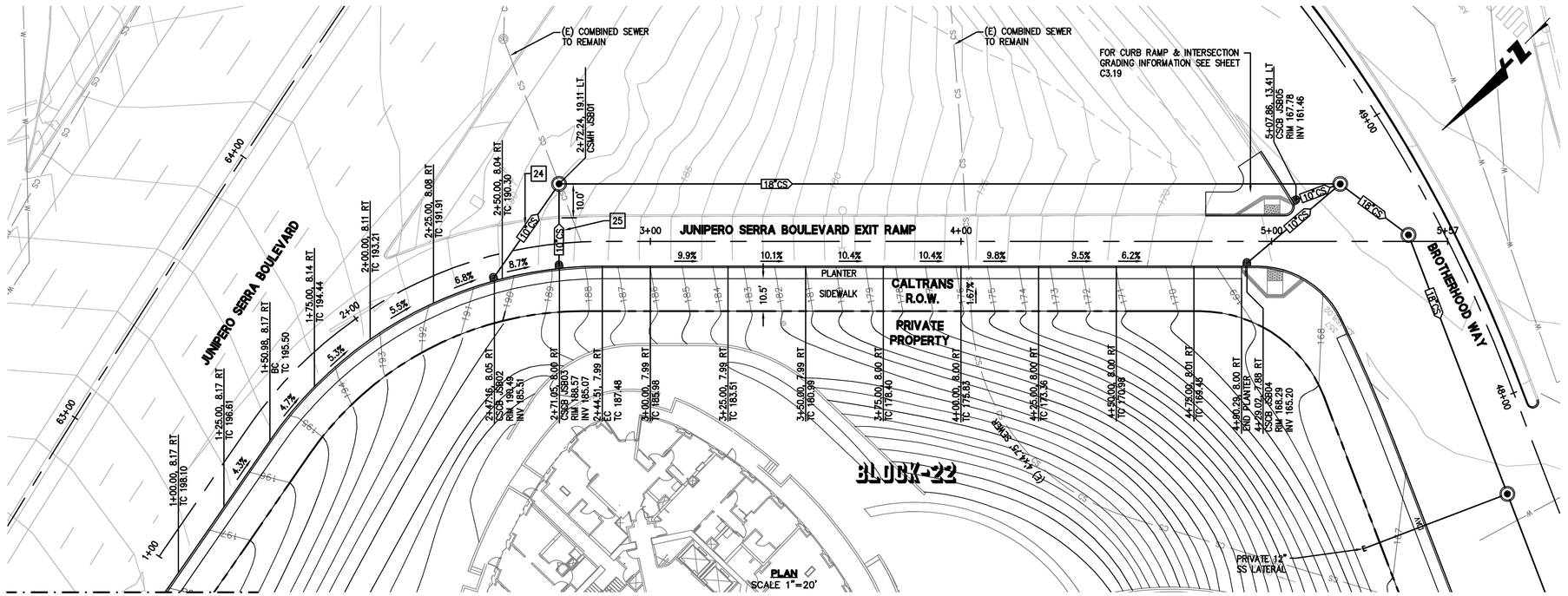

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN – JUNIPERO SERRA BOULEVARD
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.12

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C304-GD-JSB.dwg (C3.12)
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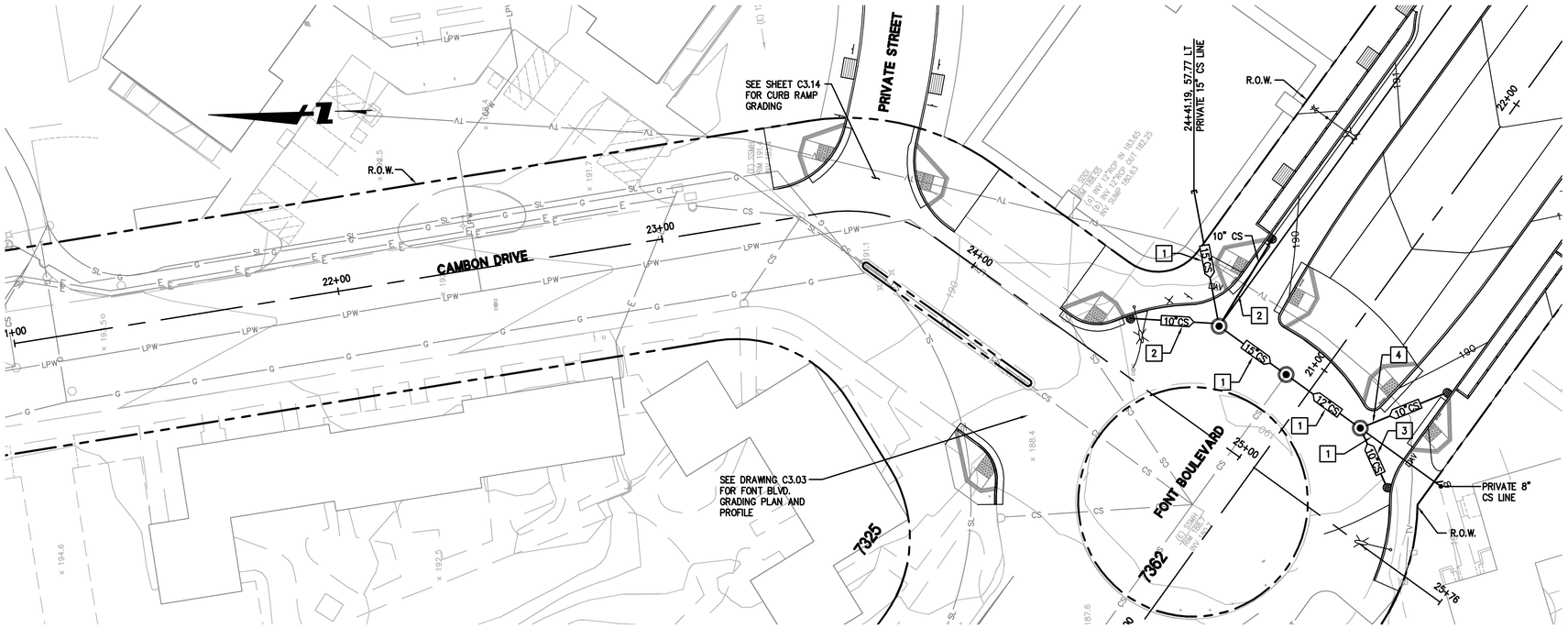



GRAPHIC SCALE

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PHASE 1B STREET IMPROVEMENT PLANS
GRADING PLAN & PROFILE – CAMBON DRIVE

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN R. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C3.13

DRAWING NAME: K:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C301-G0-L2.dwg (C3.13)
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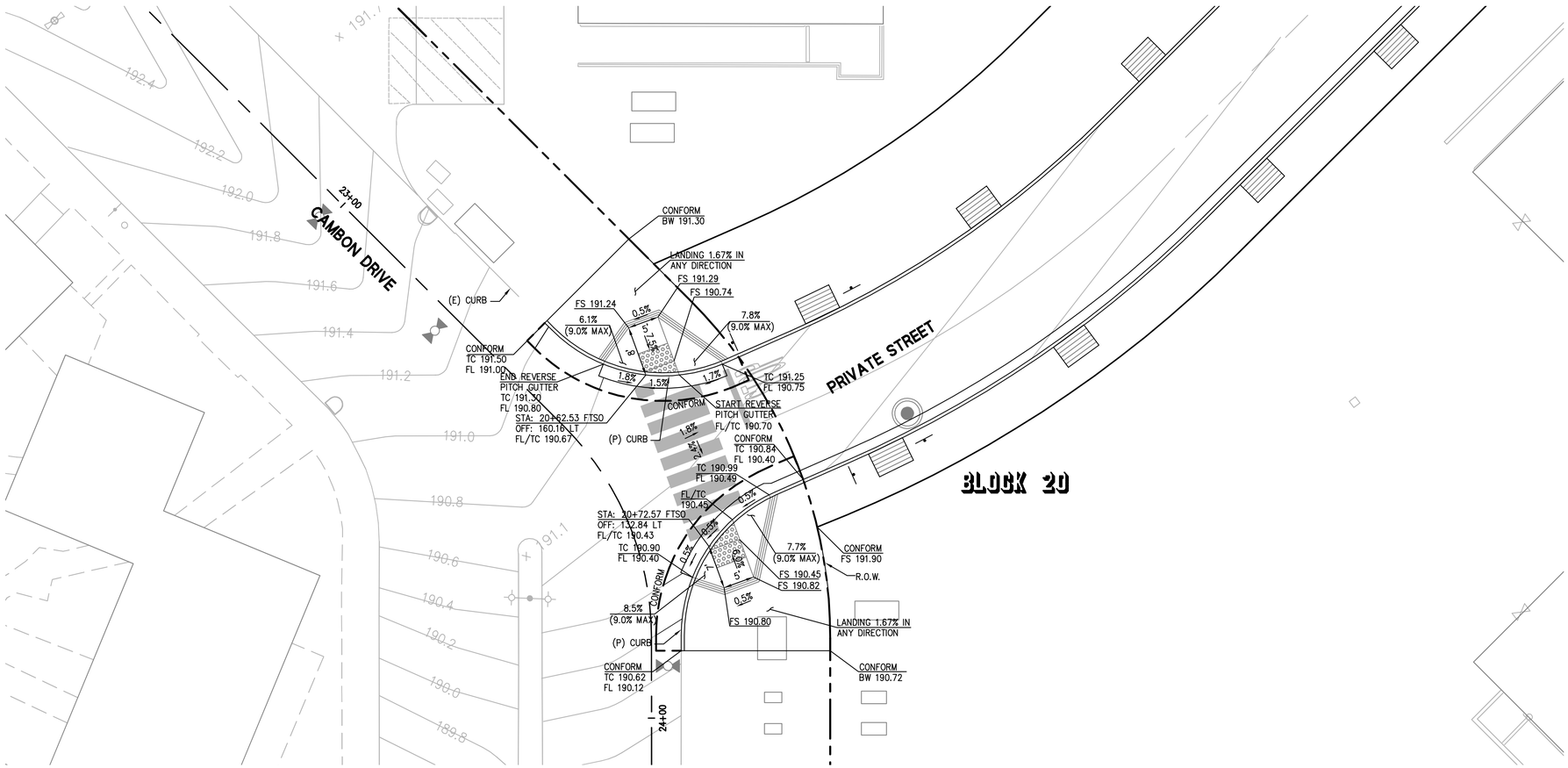

KEY MAP

GRAPHIC SCALE
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SHEET NOTES
1. REFER TO SHEET C3.00 FOR GENERAL GRADING NOTES.
2. STREET NAMES SHALL BE STAMPED INTO WET CONCRETE IN WING SECTION OF CURB RAMPS. OBTAIN CONCURRENCE FROM OWNER'S AGENT ON LOCATION OF CONCRETE PLACEMENT.
3. REFER TO CCSF STD PLANS FOR REQUIRED DETECTABLE SURFACE AND GROOVING DETAILS.
4. REFER TO DETAIL 2, SHEET C7.14 FOR VERTICAL CURB TO MOUNTABLE CURB TRANSITION.

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PHASE 1B STREET IMPROVEMENT PLANS
INTERSECTION DETAIL
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER BRIAN D. STOKER No. 73405 CIVIL STATE OF CALIFORNIA
Exp. 12/31/18

No.	Revisions

Date: 05/01/17
Scale: 1"=5'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.14

DRAWING NAME: J:\Entitl\20090086-121\SHEETS\PHASE-01B\PH01B-C305-DET.dwg (C3.14)
PLOT TIME: 4-28-2017 1:10 PM PLOTTED BY: Juan

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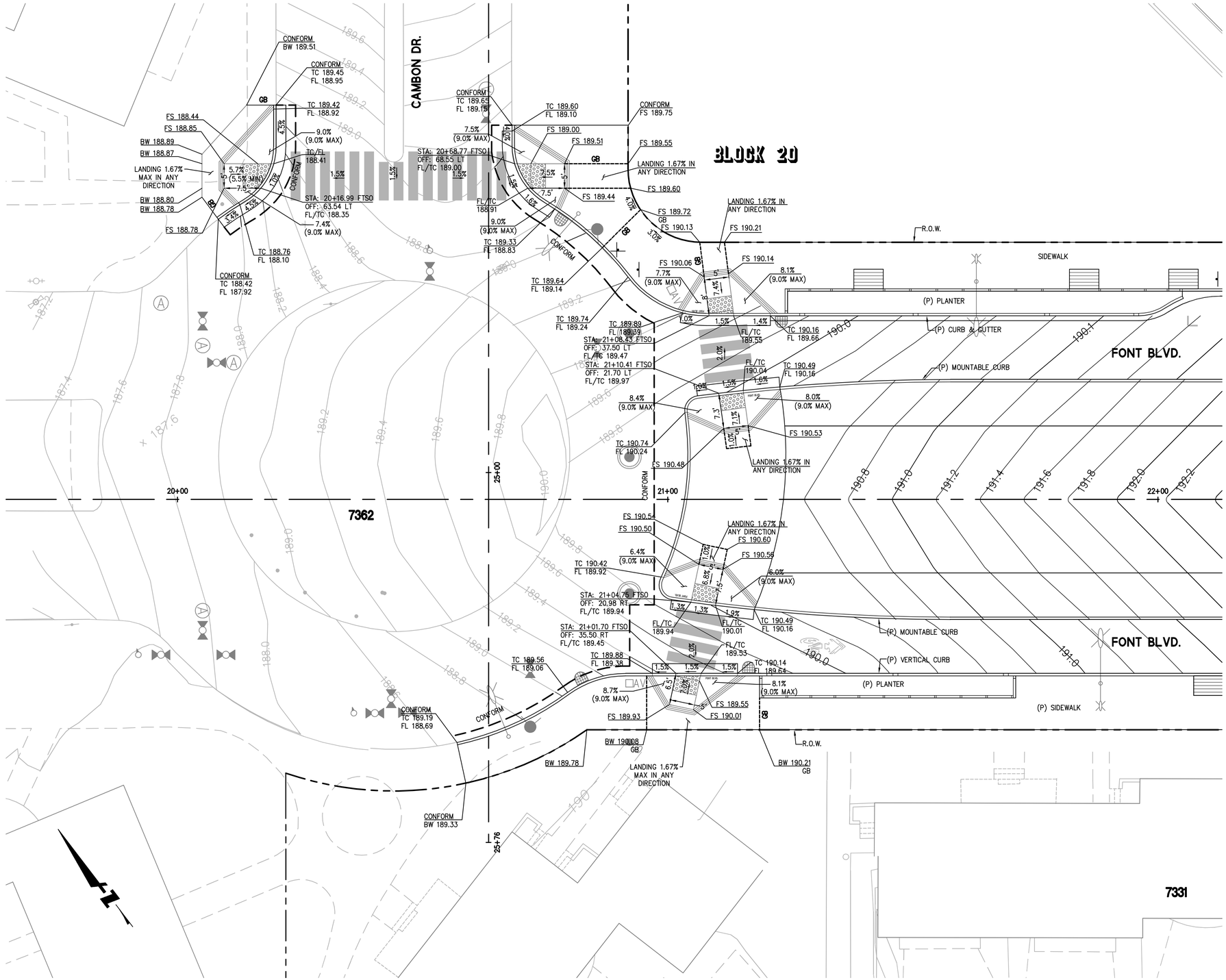



GRAPHIC SCALE
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SHEET NOTES

1. REFER TO SHEET C3.00 FOR GENERAL GRADING NOTES.
2. STREET NAMES SHALL BE STAMPED INTO WET CONCRETE IN WING SECTION OF CURB RAMPS. OBTAIN CONCURRENCE FROM OWNER'S AGENT ON LOCATION OF CONCRETE PLACEMENT.
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No.	Revisions

Date: 05/01/17
Scale: 1"=5'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
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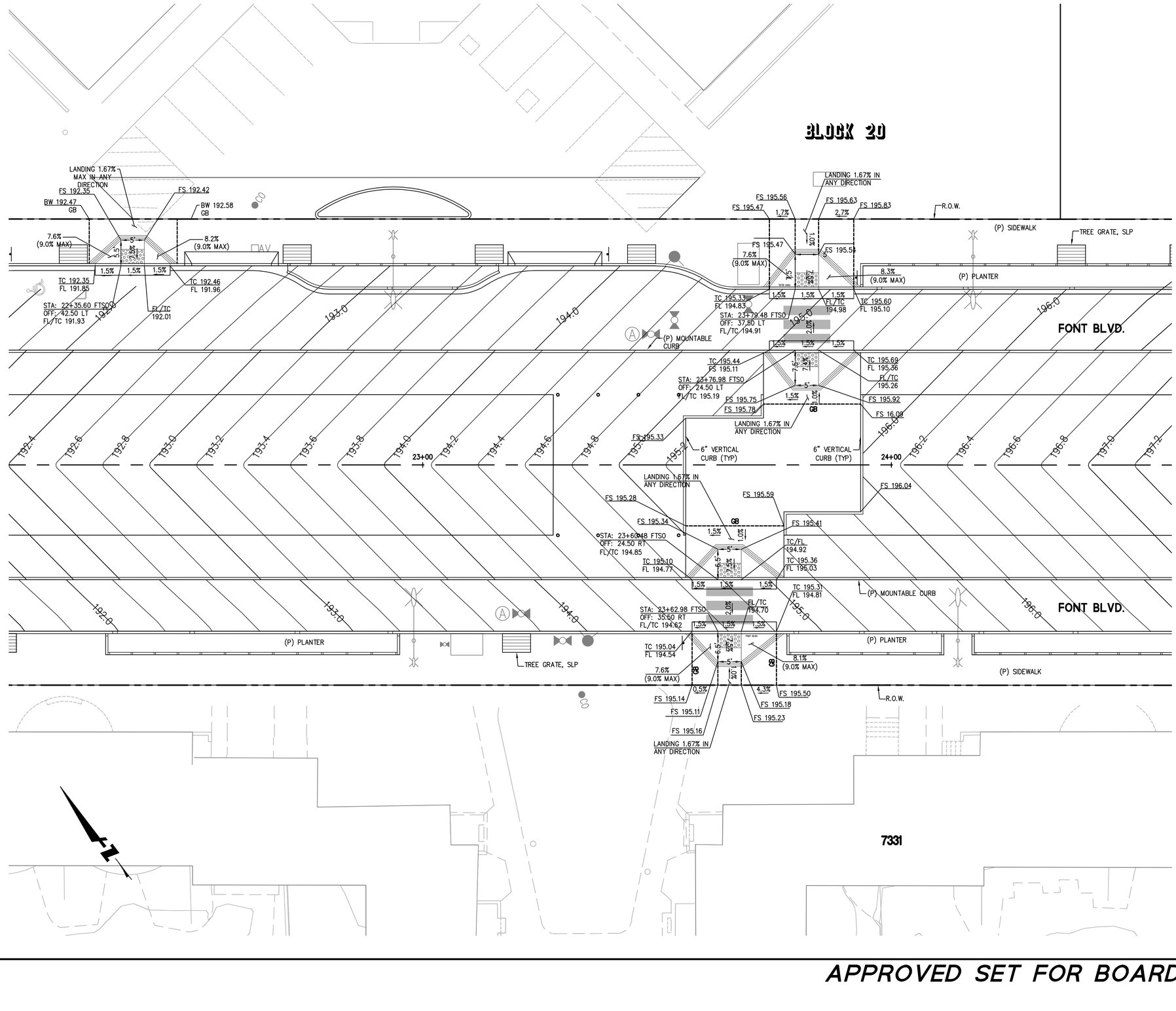

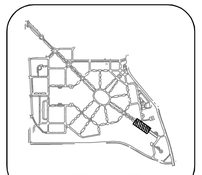

GRAPHIC SCALE
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SHEET NOTES
1. REFER TO SHEET C3.00 FOR GENERAL GRADING NOTES.
2. STREET NAMES SHALL BE STAMPED INTO WET CONCRETE IN WING SECTION OF CURB RAMPS. OBTAIN CONCURRENCE FROM OWNER'S AGENT ON LOCATION OF CONCRETE PLACEMENT.
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Date: 05/01/17
Scale: 1"=5'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.16

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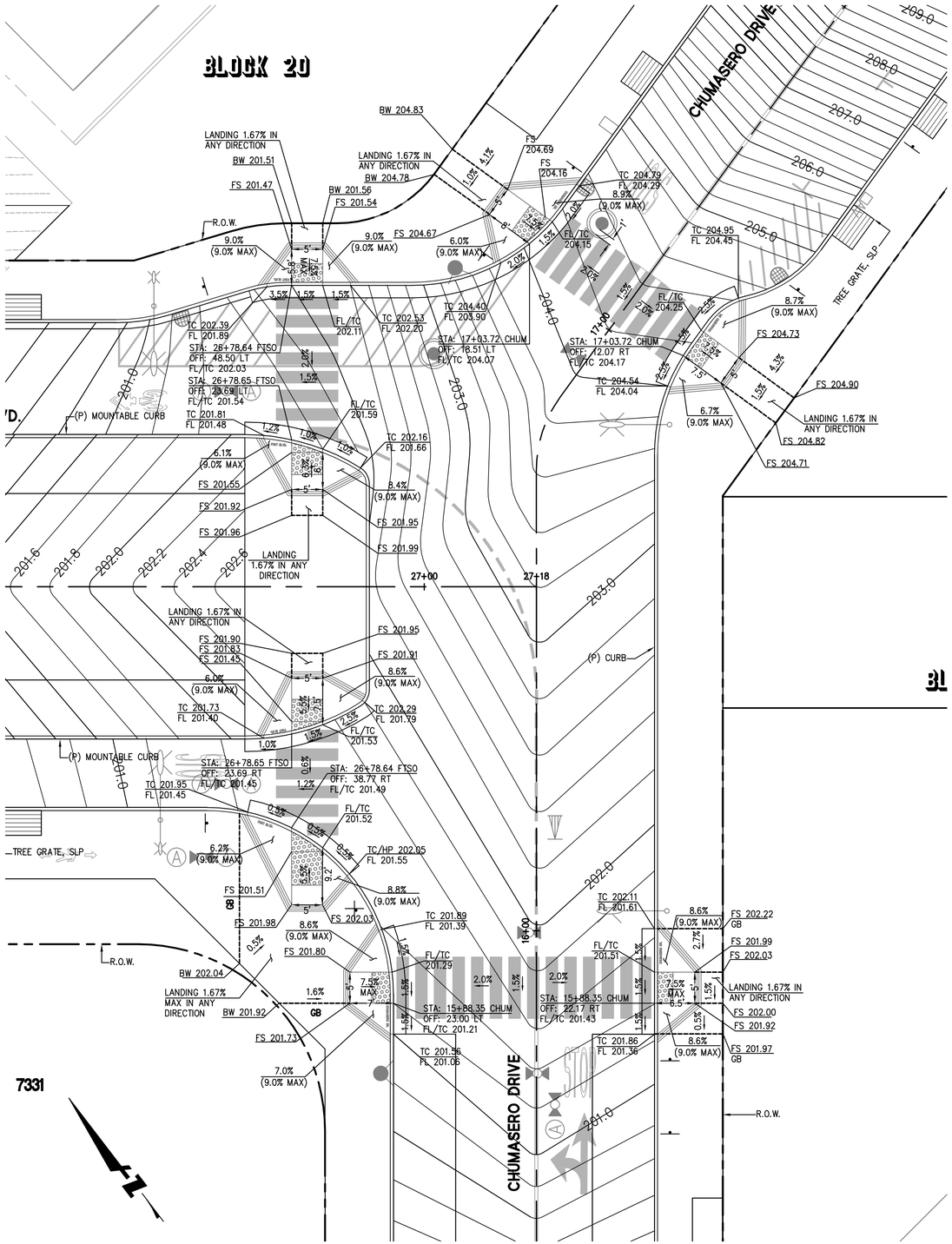

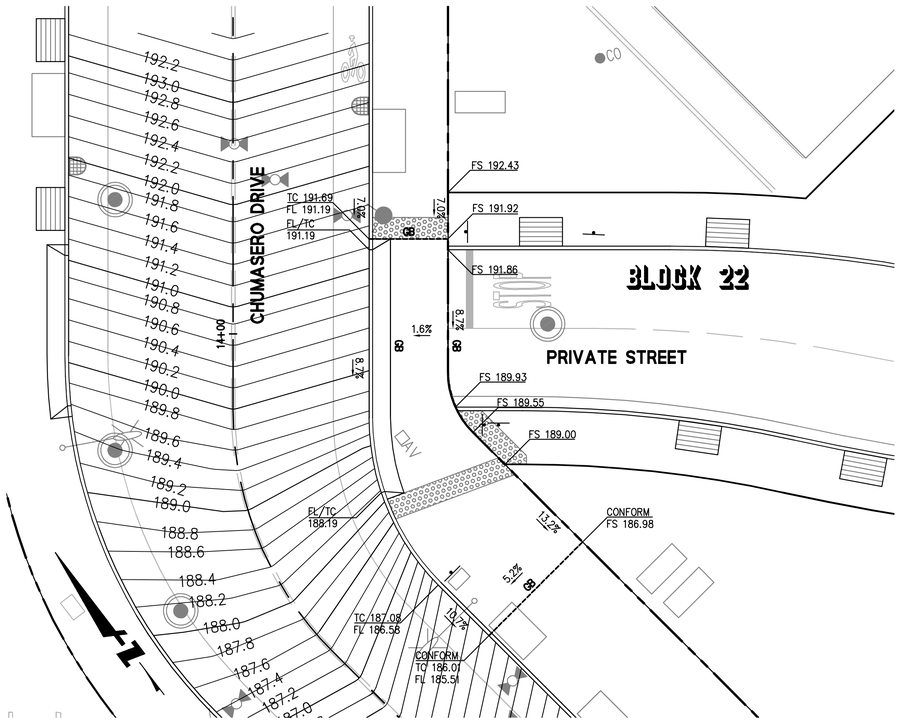



GRAPHIC SCALE
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SHEET NOTES

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REGISTERED PROFESSIONAL ENGINEER
BRIAN D. CONROY
No. 72191
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=5'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.17

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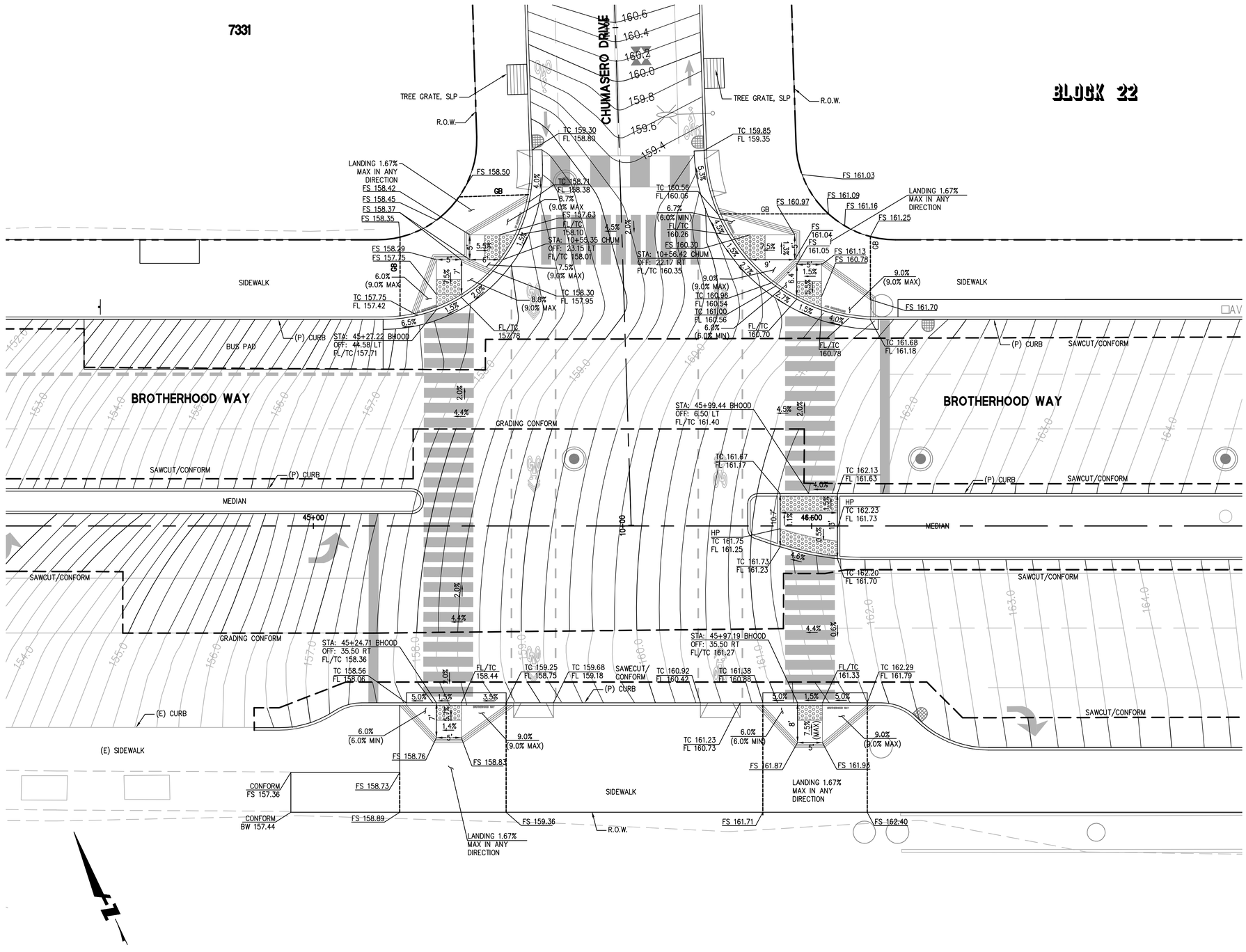



GRAPHIC SCALE

10 0 10 20

SHEET NOTES

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No.	Revisions

Date: 05/01/17
Scale: 1"=5'
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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C3.18

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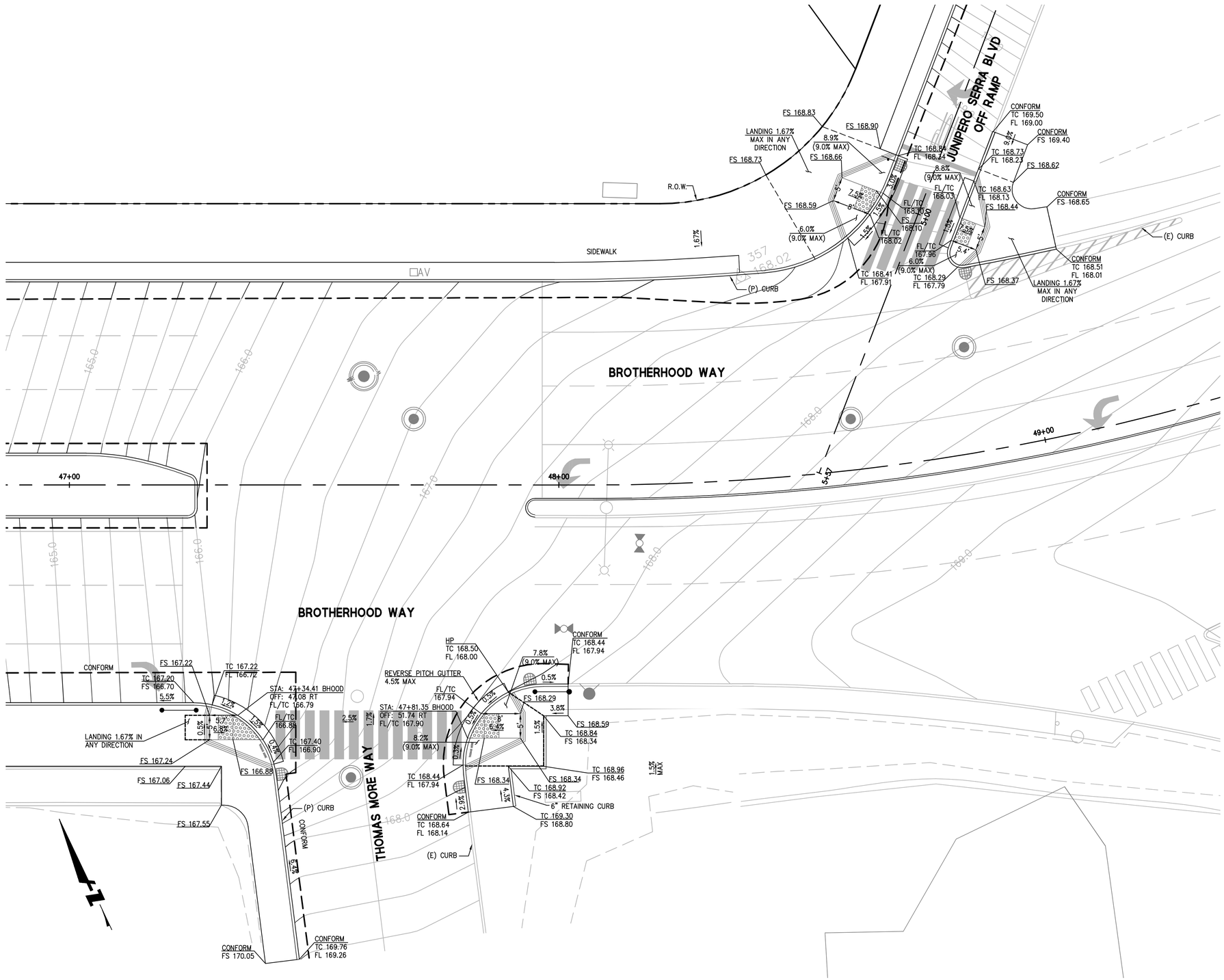



GRAPHIC SCALE
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SHEET NOTES

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INTERSECTION DETAIL
SAN FRANCISCO COUNTY CALIFORNIA

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No.	Revisions

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Approved: BS
Job No: 20090086

Drawing Number:
C3.19

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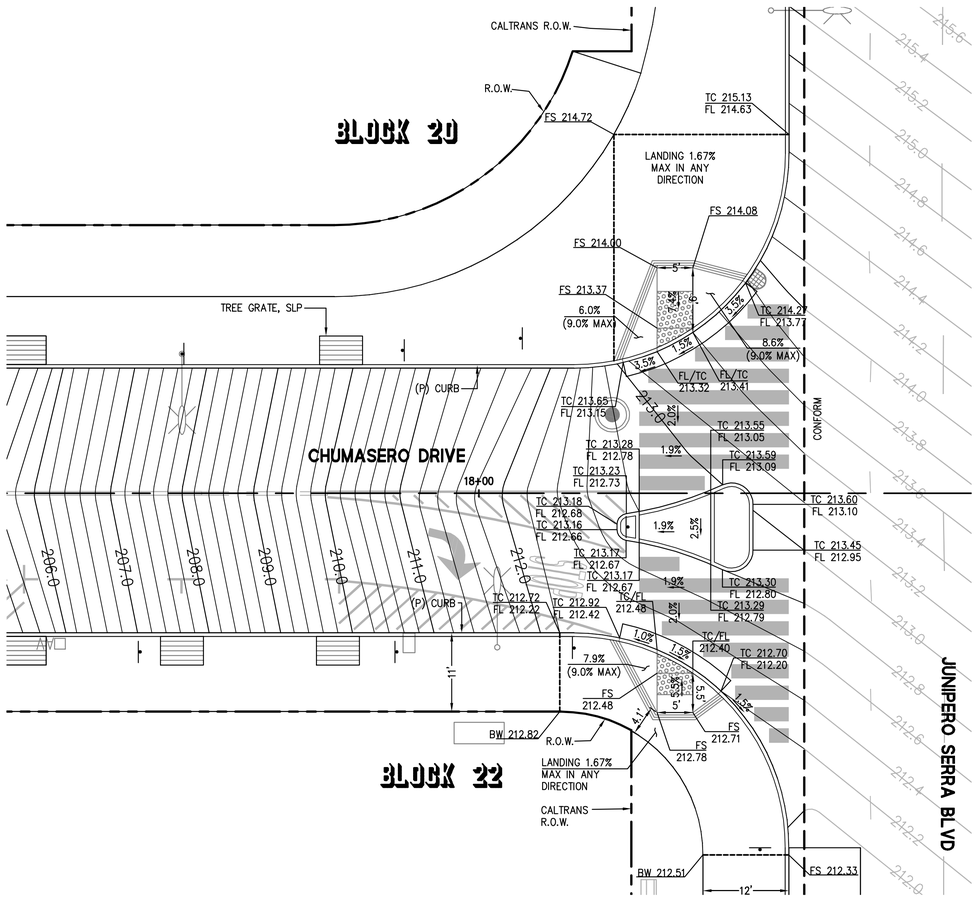

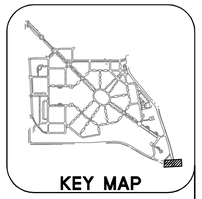

GRAPHIC SCALE

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SHEET NOTES

1. REFER TO SHEET C3.00 FOR GENERAL GRADING NOTES.
2. STREET NAMES SHALL BE STAMPED INTO WET CONCRETE IN WING SECTION OF CURB RAMPS. OBTAIN CONCURRENCE FROM OWNER'S AGENT ON LOCATION OF CONCRETE PLACEMENT.
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INTERSECTION DETAIL

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PROFESSIONAL ENGINEER
BRIAN STOKEN
No. C 61158
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=5'
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Approved: BS
Job No: 20090086

Drawing Number:

C3.20

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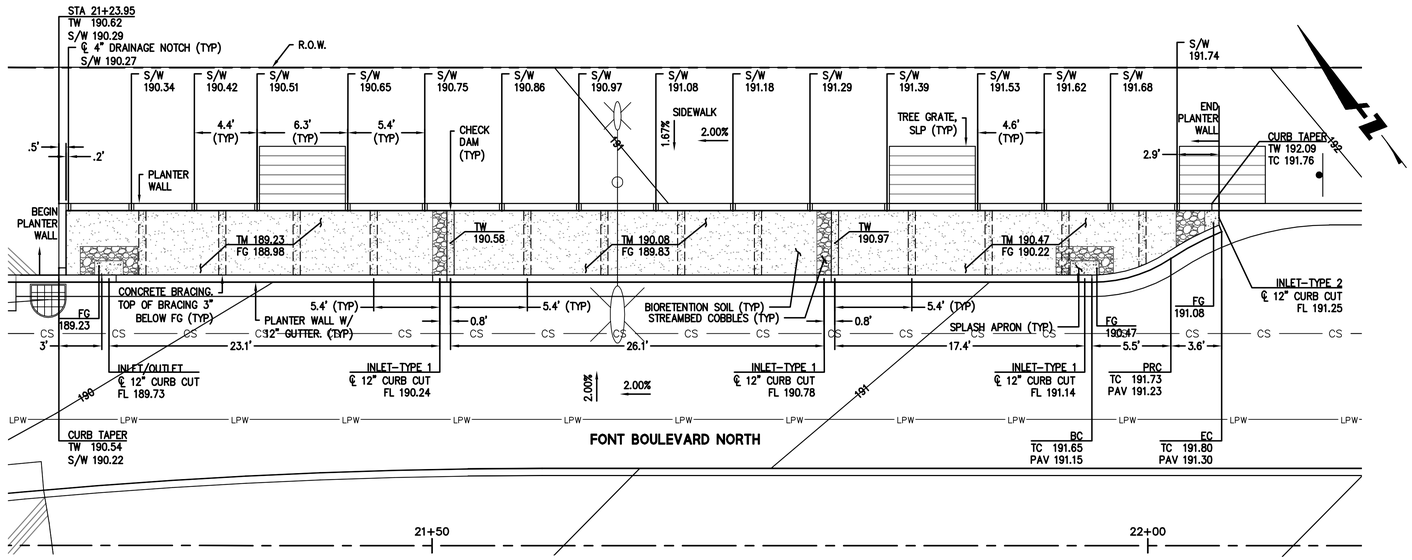

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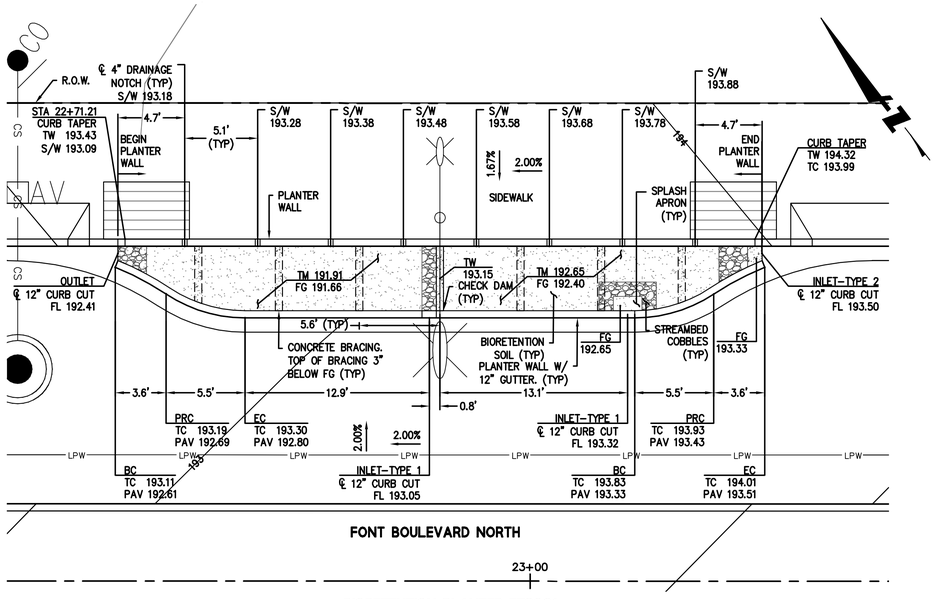

BIORETENTION PLANTER FTS001
SCALE: 1"=5'

GRAPHIC SCALE
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BMP GRADING DETAIL – FONT BOULEVARD
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. KERN
No. C 69090
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.21

DRAWING NAME: J:\5-proj\20090086-121\SHEETS\PHASE-01B\PH01B-C306-BMP.dwg (C3.21)
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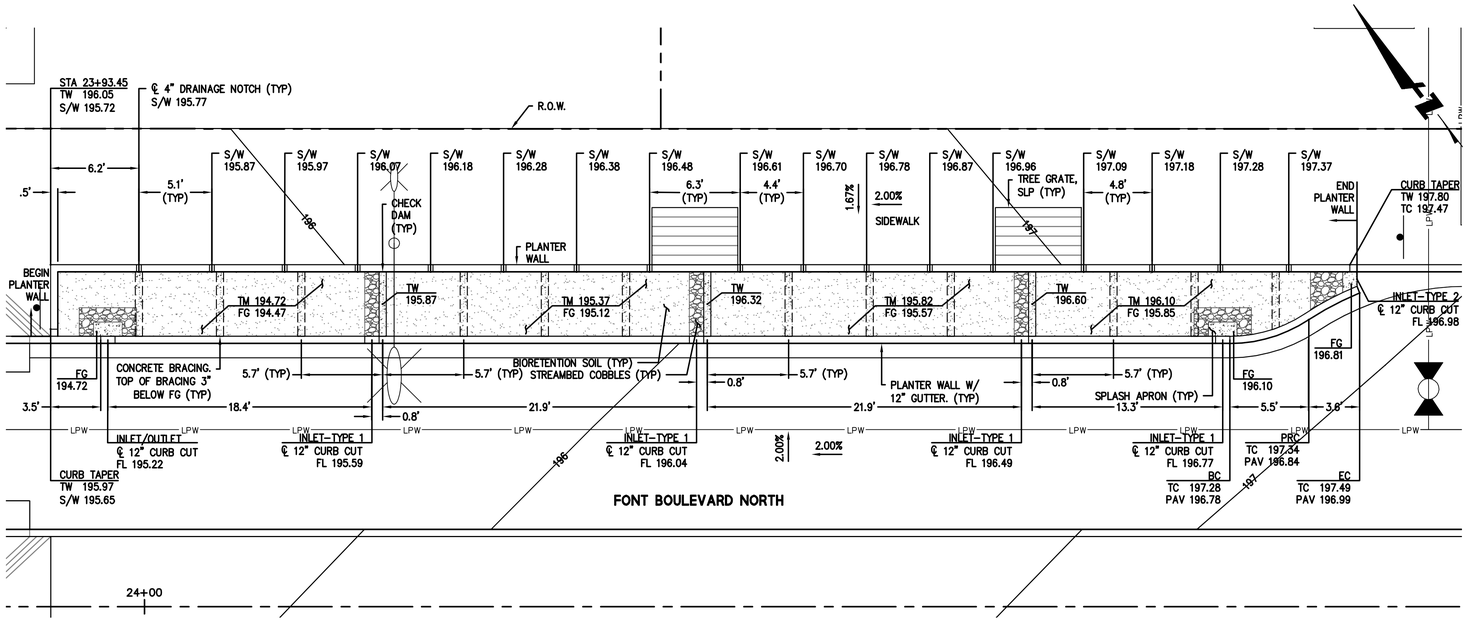

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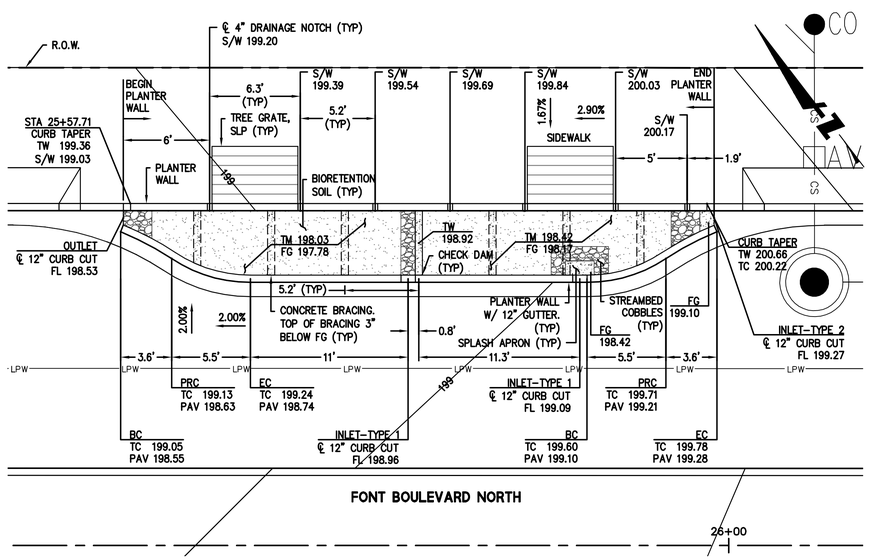

BIORETENTION PLANTER FTS002
SCALE: 1"=5'

GRAPHIC SCALE
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SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
GARY THEW
No. C61191
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C3.22

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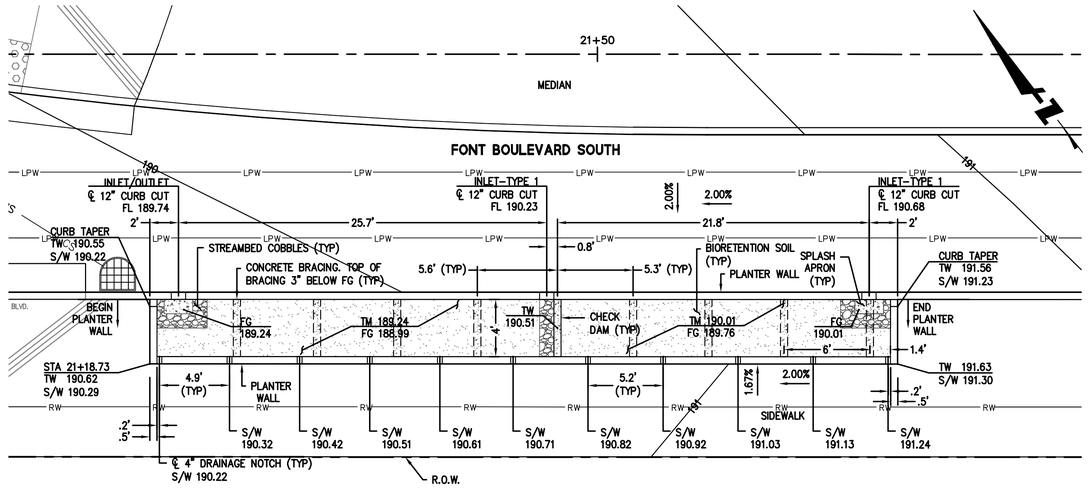

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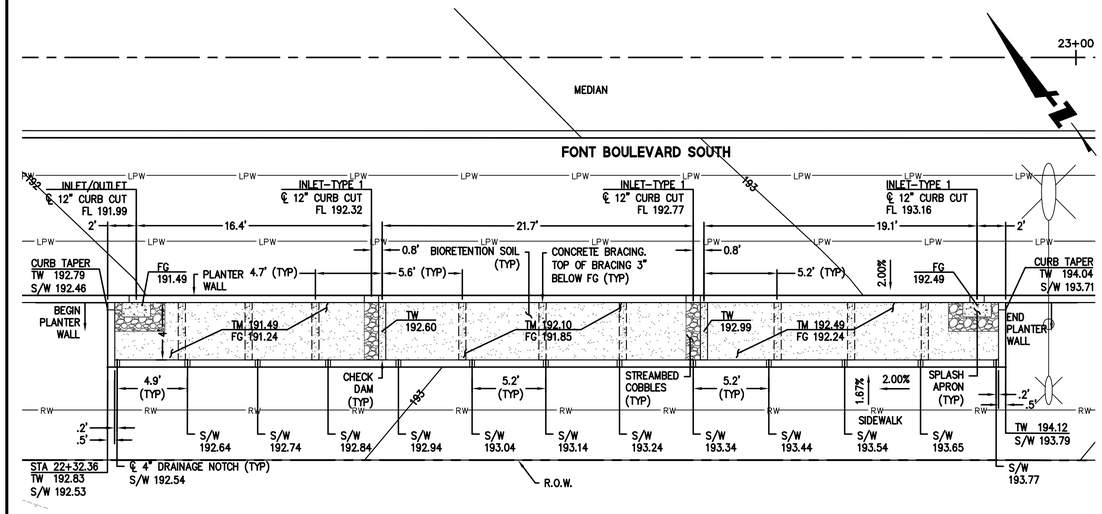

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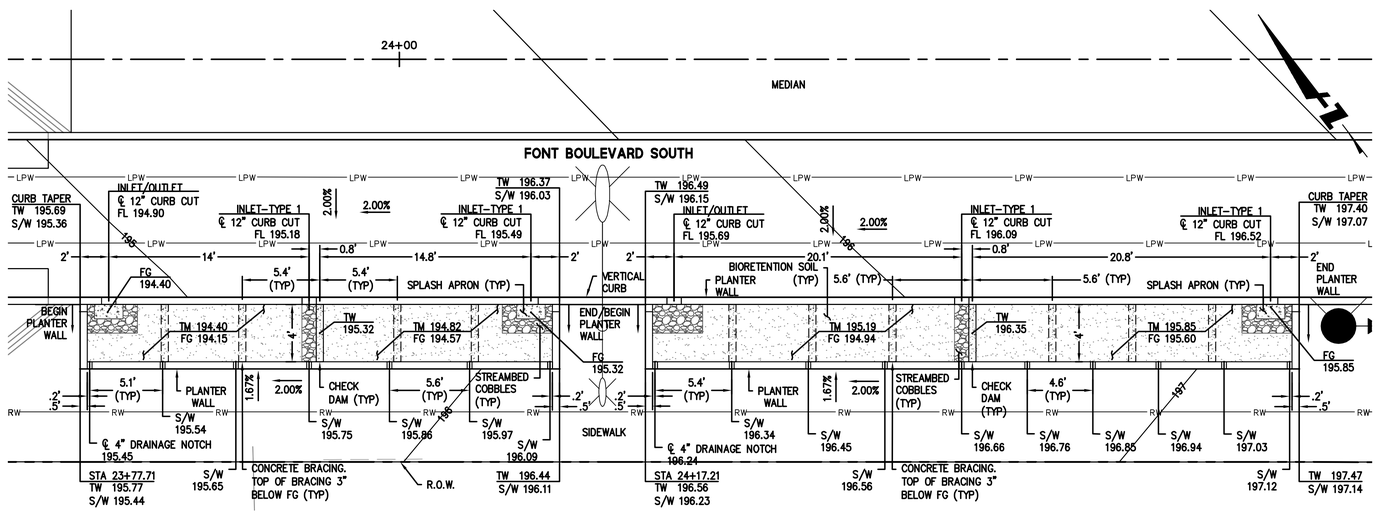

BIORETENTION PLANTER FTS005
SCALE: 1"=5'

GRAPHIC SCALE
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REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. HAHN
No. C61744
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C3.23

DRAWING NAME: J:\Survey\20090086-121\SHEETS\PHASE-01B\PH01B-C306-BMP.dwg (C3.23)
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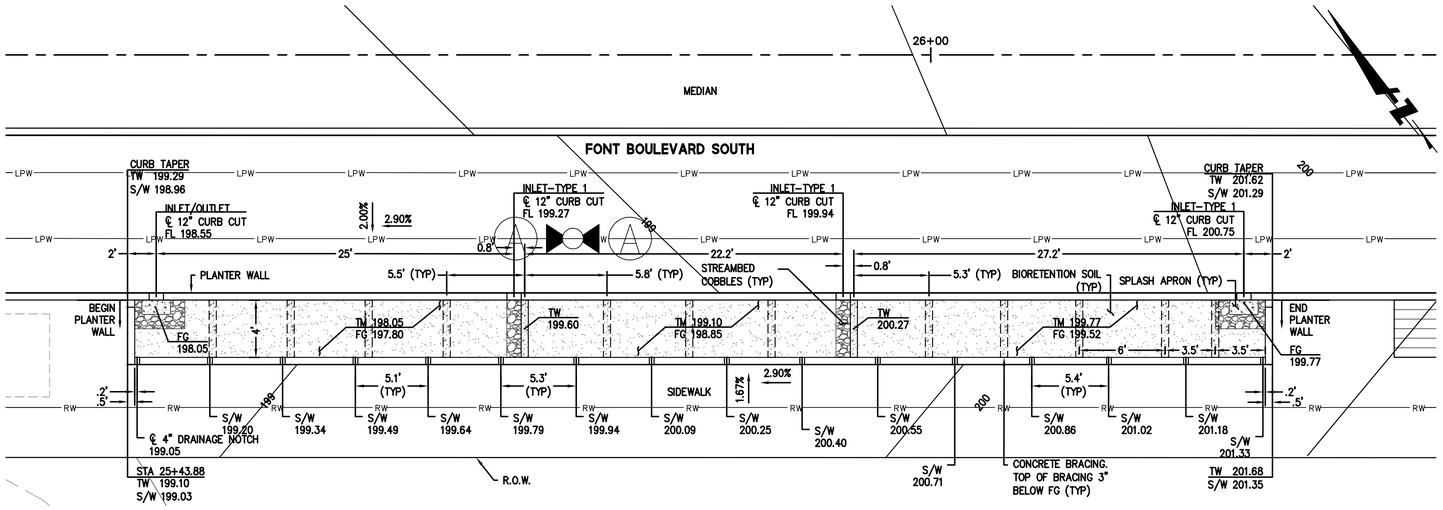

BIORETENTION PLANTER FTS006
SCALE: 1"=5'

GRAPHIC SCALE
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PHASE 1B STREET IMPROVEMENT PLANS
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SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. JOHNSON
No. C 61009
12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.24

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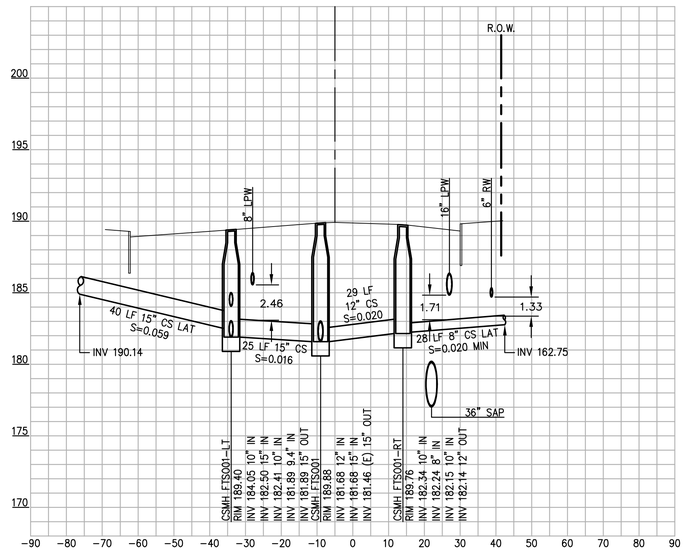

1 **SEWER MANHOLE - FTS001**

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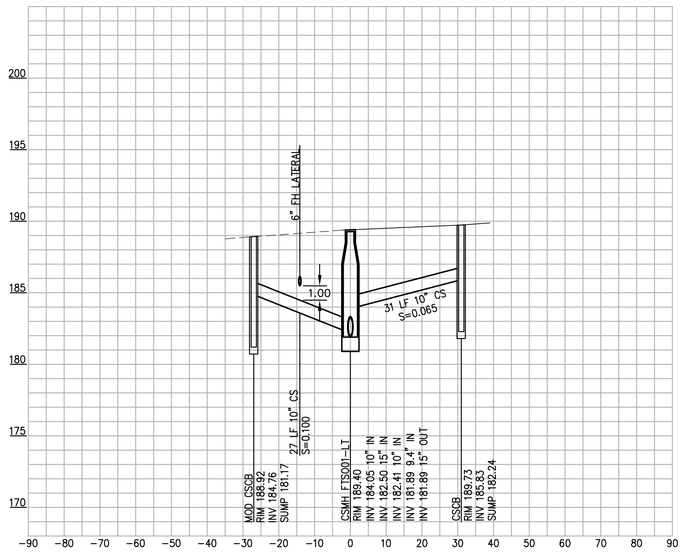

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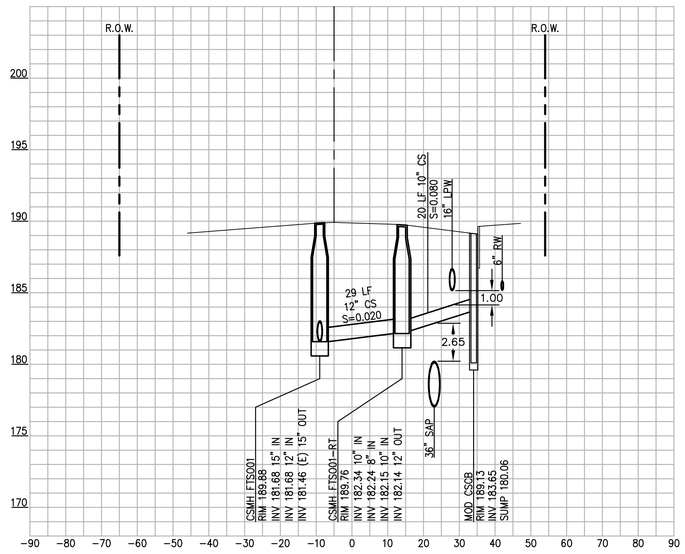

3 **SEWER MANHOLE - FTS001 RT**

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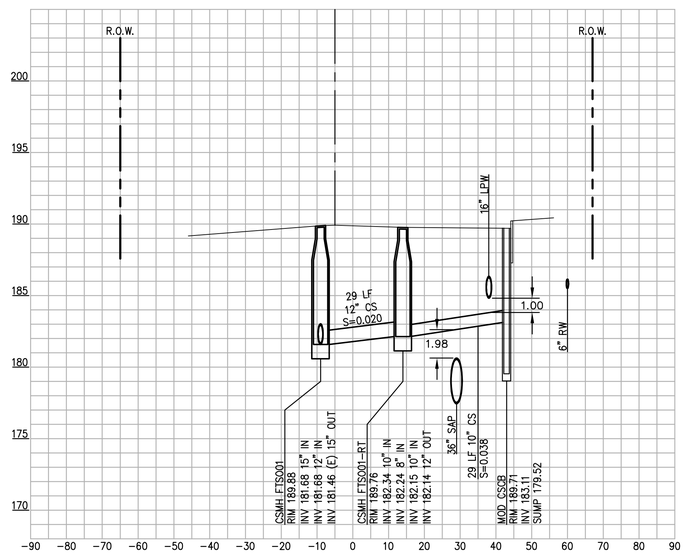

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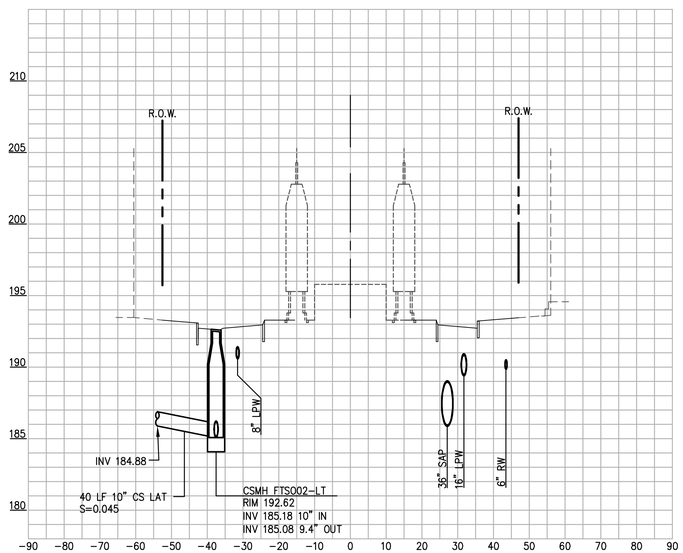

5 **SEWER MANHOLE - FTS002 LT**

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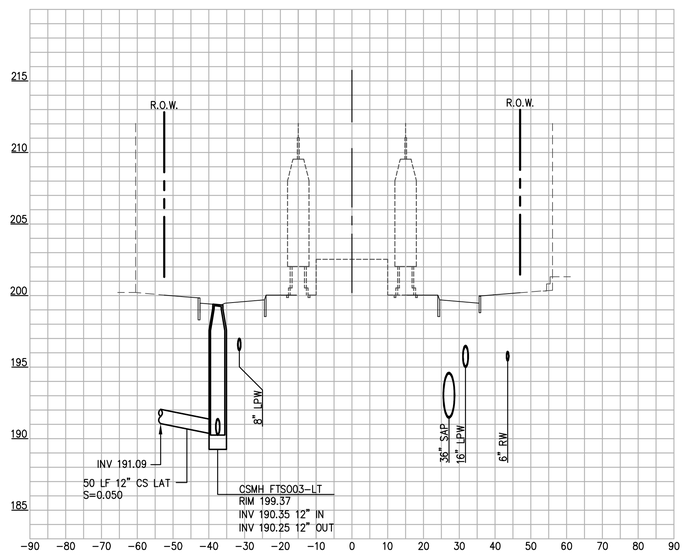

6 **SEWER MANHOLE - FTS003 LT**

FONT BLVD (STA: 26+05.99)
SCALE HORIZ: 1"=20'
VERT: 1"=5'

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SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. GIBSON
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No.	Revisions

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Scale: AS SHOWN
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
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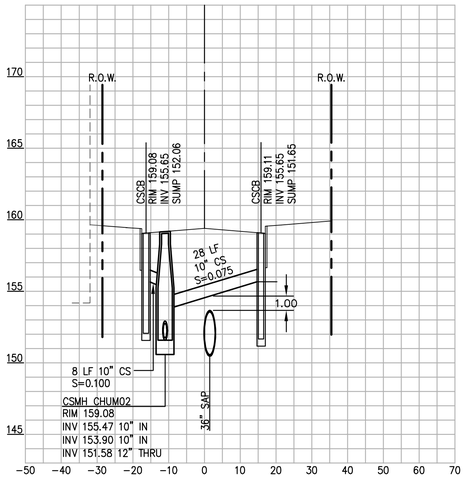

7 **SEWER MANHOLE - CHUM02**

CHUMASERO DR (STA: 10+69.33)
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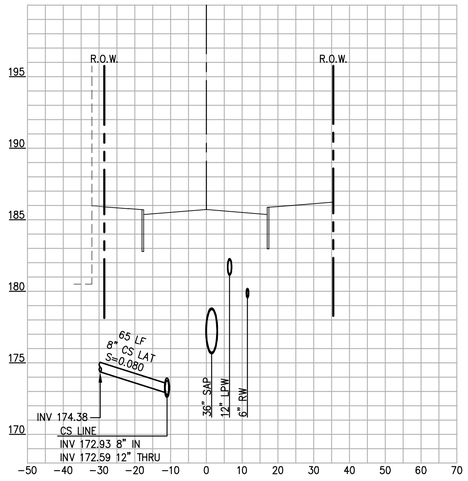

8 **SEWER LATERAL**

CHUMASERO DR (STA: 13+29.02)
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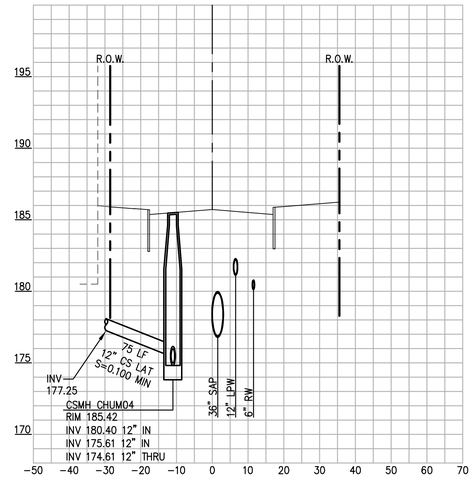

9 **SEWER MANHOLE - CHUM04**

CHUMASERO DR (STA: 13+29.02)
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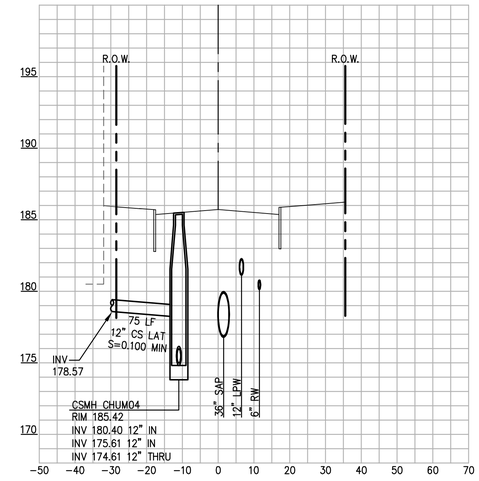

10 **SEWER MANHOLE - CHUM04**

CHUMASERO DR (STA: 13+29.02)
SCALE HORIZ: 1"=20'
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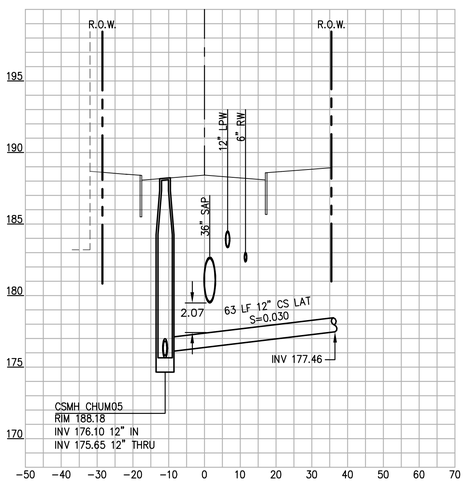

11 **SEWER MANHOLE - CHUM05**

CHUMASERO DR (STA: 13+66.84)
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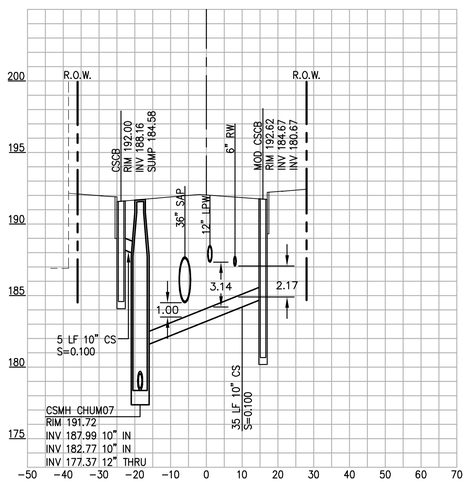

12 **SEWER MANHOLE - CHUM07**

CHUMASERO DR (STA: 14+18.76)
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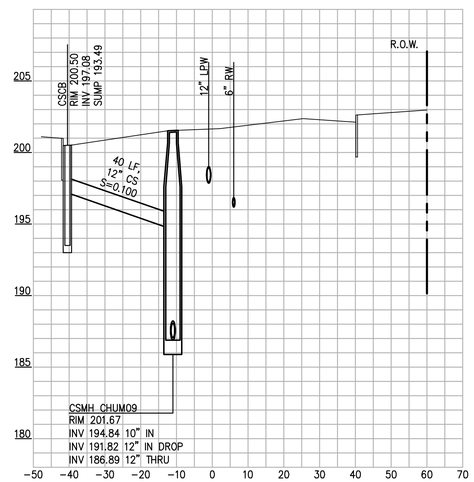

13 **SEWER MANHOLE - CHUM09**

CHUMASERO DR (STA: 16+83.58)
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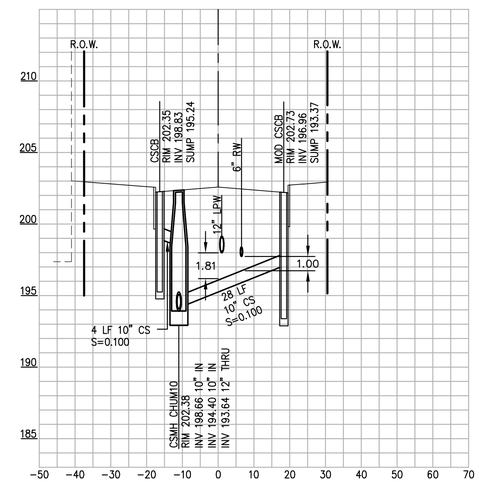

14 **SEWER MANHOLE - CHUM10**

CHUMASERO DR (STA: 17+13.22)
SCALE HORIZ: 1"=20'
VERT: 1"=5'

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SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.26

DRAWING NAME: K:\Engr09\20090086-121\SHEETS\PHASE-01B\PH01B-C307-LAT.dwg (C3.26)
PLOT TIME: 4/4/2017 11:11 AM - PLOTTED BY: pjos

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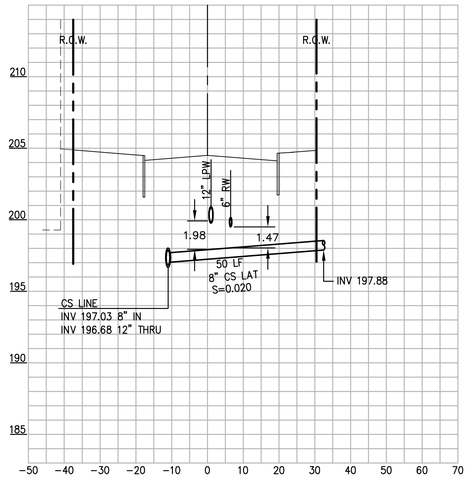

15 **SEWER LATERAL**

CHUMASERO DR (STA: 17+41.47)
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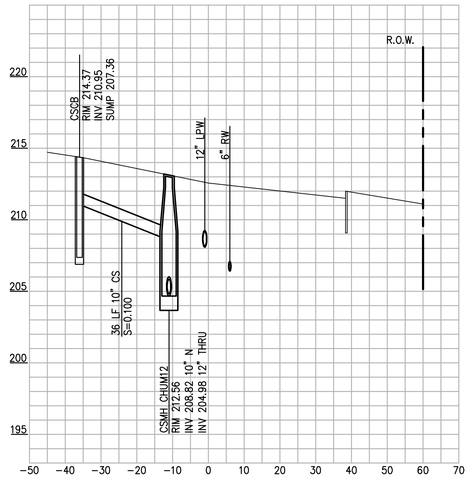

16 **SEWER MANHOLE - CHUM11**

CHUMASERO DR (STA: 18+18.63)
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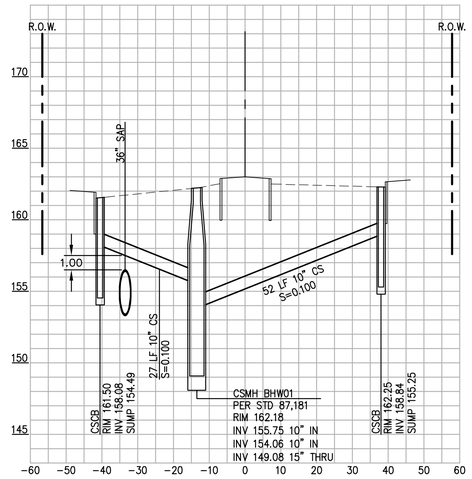

17 **SEWER MANHOLE - BHW01**

BROTHERHOOD WAY (STA 46+21.89)
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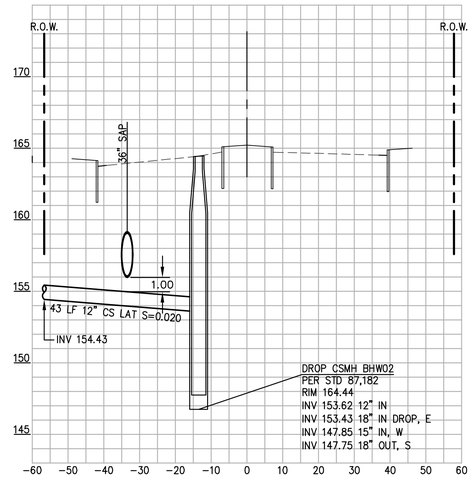

18 **SEWER MANHOLE - BHW03**

BROTHERHOOD WAY (STA: 46+83.09)
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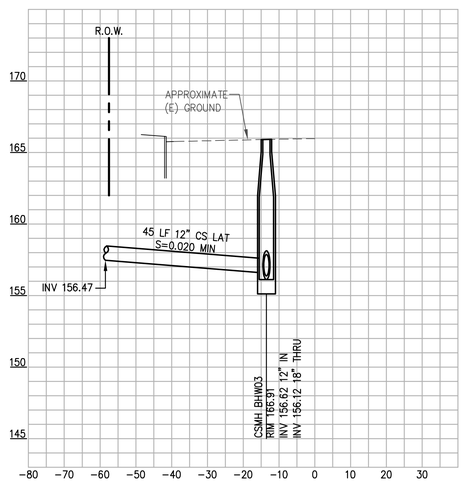

19 **SEWER MANHOLE - BHW03**

BROTHERHOOD WAY (STA: 47+70.36)
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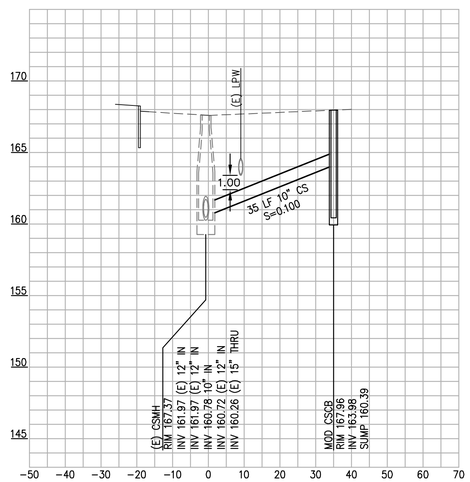

20 **(E) SEWER MANHOLE - BHOOD**

BROTHERHOOD WAY (STA: 47+58.82)
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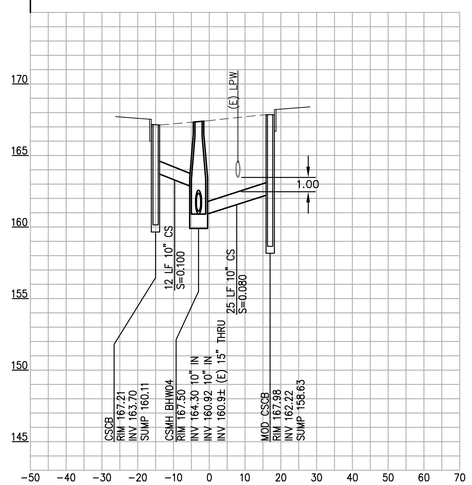
VERT: 1"=5'



21 **SEWER MANHOLE - BHW04**

BROTHERHOOD WAY (STA: 47+57.53)
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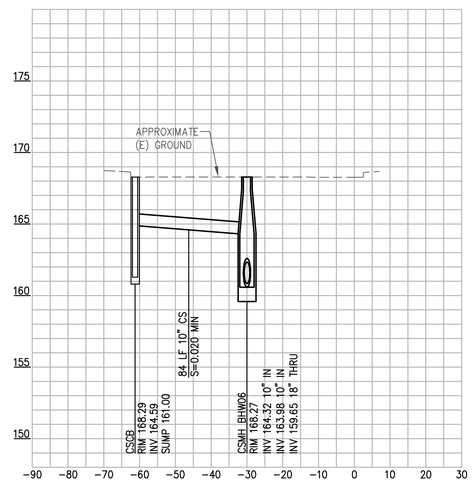

22 **SEWER MANHOLE - BHW06**

BROTHERHOOD WAY (STA 48+82.04)
SCALE HORIZ: 1"=20'
VERT: 1"=5'

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STORM DRAIN & SANITARY SEWER CROSSINGS
SAN FRANCISCO
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN STEVENS
No. C61137
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C3.27

DRAWING NAME: K:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C307-LAT.dwg (C3.27)
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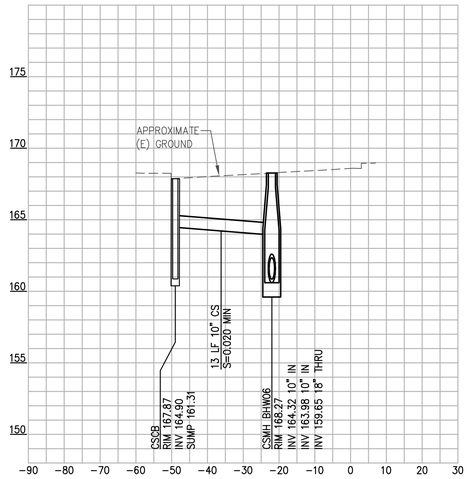

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JUNIPERO SERRA BLVD (5+16.55)
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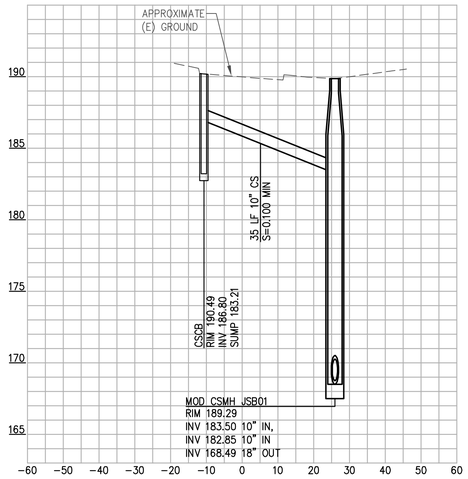

24 **SEWER MANHOLE - JSB01**

JUNIPERO SEERA BLVD (STA 2+73.05)
SCALE HORIZ: 1"=20'
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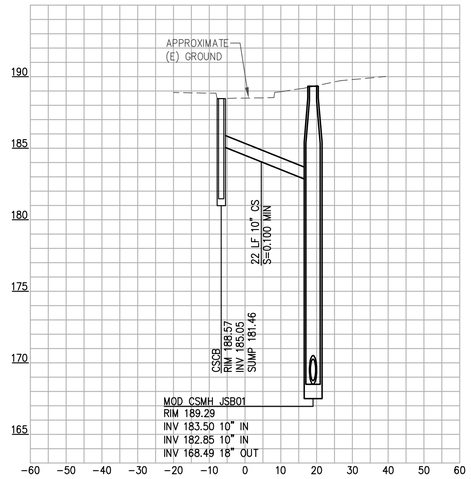

25 **SEWER MANHOLE - JSB01**

JUNIPERO SEERA BLVD (STA 2+73.05)
SCALE HORIZ: 1"=20'
VERT: 1"=5'

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REGISTERED PROFESSIONAL ENGINEER
THOMAS HOWE
No. C61935
12/31/18
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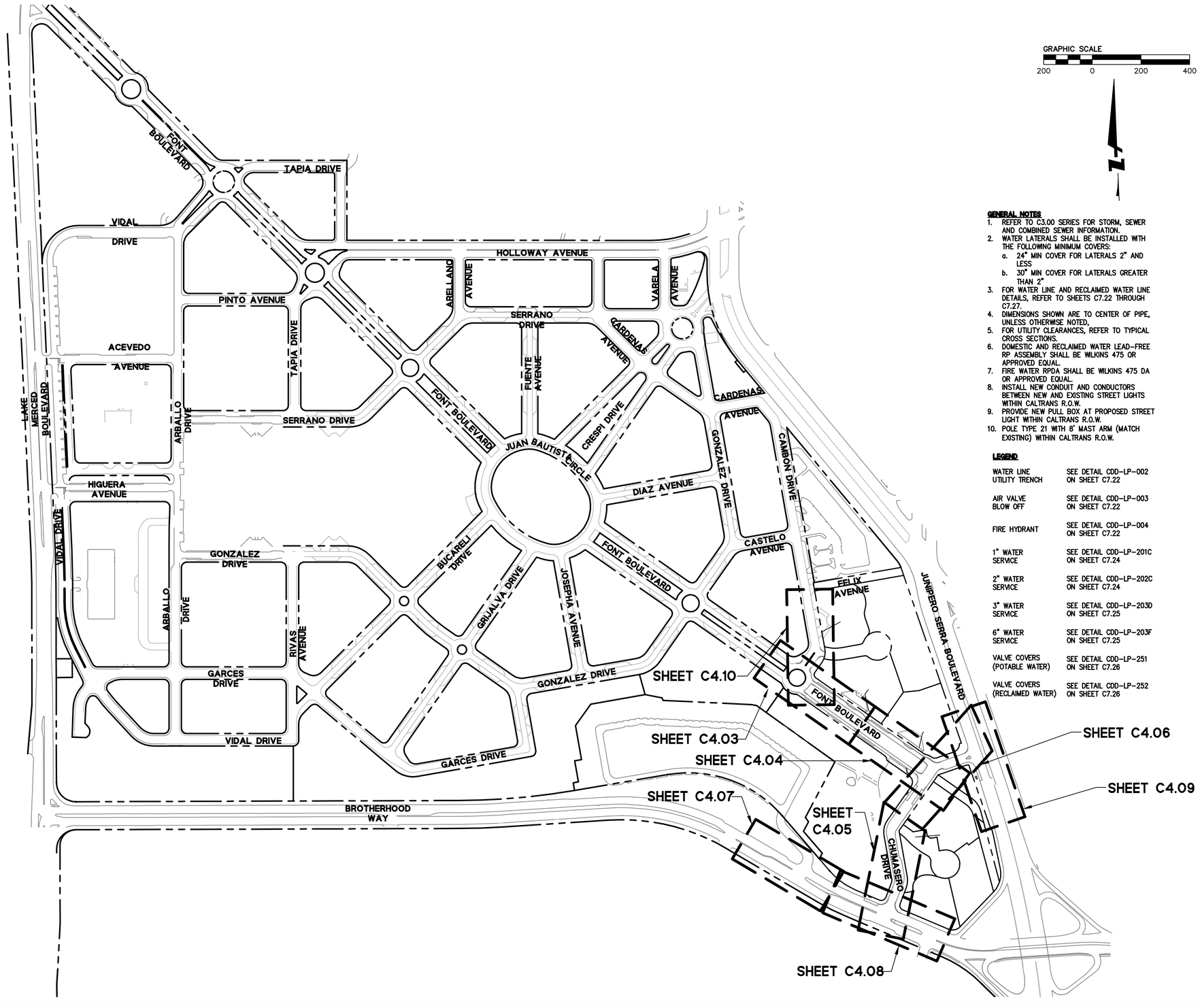

GRAPHIC SCALE
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GENERAL NOTES

1. REFER TO C3.00 SERIES FOR STORM, SEWER AND COMBINED SEWER INFORMATION.
2. WATER LATERALS SHALL BE INSTALLED WITH THE FOLLOWING MINIMUM COVERS:
   a. 24" MIN COVER FOR LATERALS 2" AND LESS
   b. 30" MIN COVER FOR LATERALS GREATER THAN 2"
3. FOR WATER LINE AND RECLAIMED WATER LINE DETAILS, REFER TO SHEETS C7.22 THROUGH C7.27.
4. DIMENSIONS SHOWN ARE TO CENTER OF PIPE, UNLESS OTHERWISE NOTED,
5. FOR UTILITY CLEARANCES, REFER TO TYPICAL CROSS SECTIONS.
6. DOMESTIC AND RECLAIMED WATER LEAD-FREE RP ASSEMBLY SHALL BE WILKINS 475 OR APPROVED EQUAL.
7. FIRE WATER RPDA SHALL BE WILKINS 475 DA OR APPROVED EQUAL.
8. INSTALL NEW CONDUIT AND CONDUCTORS BETWEEN NEW AND EXISTING STREET LIGHTS WITHIN CALTRANS R.O.W.
9. PROVIDE NEW PULL BOX AT PROPOSED STREET LIGHT WITHIN CALTRANS R.O.W.
10. POLE TYPE 21 WITH 8' MAST ARM (MATCH EXISTING) WITHIN CALTRANS R.O.W.

LEGEND

WATER LINE UTILITY TRENCH	SEE DETAIL CDD-LP-002 ON SHEET C7.22
AIR VALVE BLOW OFF	SEE DETAIL CDD-LP-003 ON SHEET C7.22
FIRE HYDRANT	SEE DETAIL CDD-LP-004 ON SHEET C7.22
1" WATER SERVICE	SEE DETAIL CDD-LP-201C ON SHEET C7.24
2" WATER SERVICE	SEE DETAIL CDD-LP-202C ON SHEET C7.24
3" WATER SERVICE	SEE DETAIL CDD-LP-203D ON SHEET C7.25
6" WATER SERVICE	SEE DETAIL CDD-LP-203F ON SHEET C7.25
VALVE COVERS (POTABLE WATER)	SEE DETAIL CDD-LP-251 ON SHEET C7.26
VALVE COVERS (RECLAIMED WATER)	SEE DETAIL CDD-LP-252 ON SHEET C7.26

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN - KEY MAP
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SUN
No. 72884
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.00

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PLOTTING: Apr 25, 2017 1:12 PM PLOTTED BY: Sun

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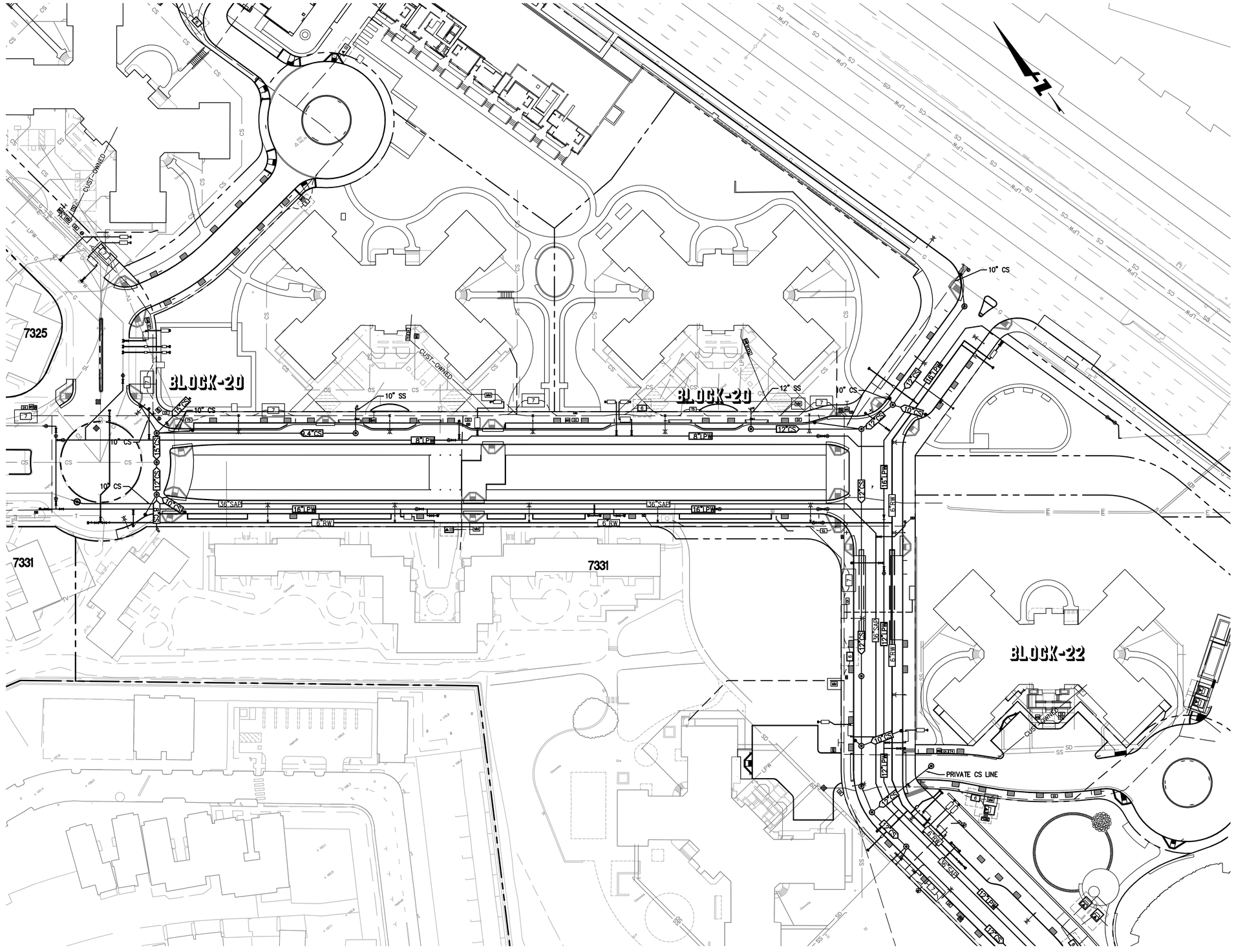

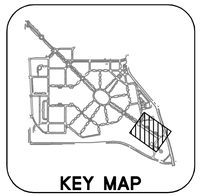

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN – NORTH

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN E. SCOTT
No. 61089
Exp. 12/31/18
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STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.01

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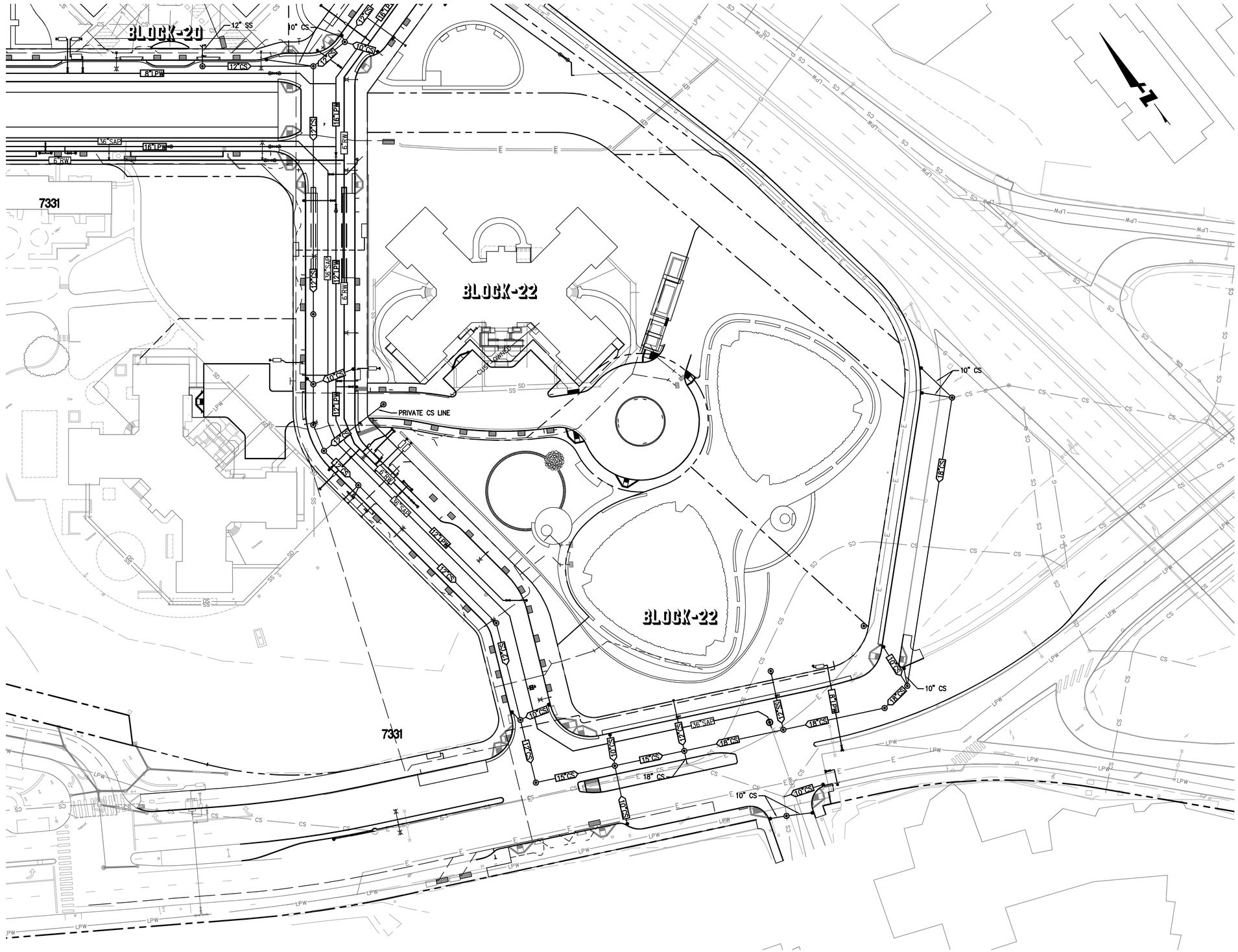



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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN – SOUTH

SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.02

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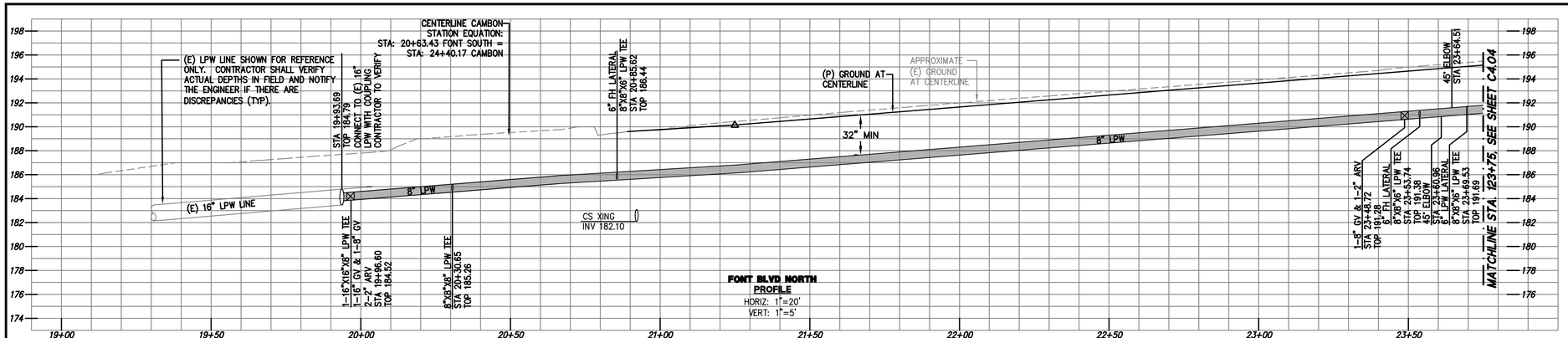

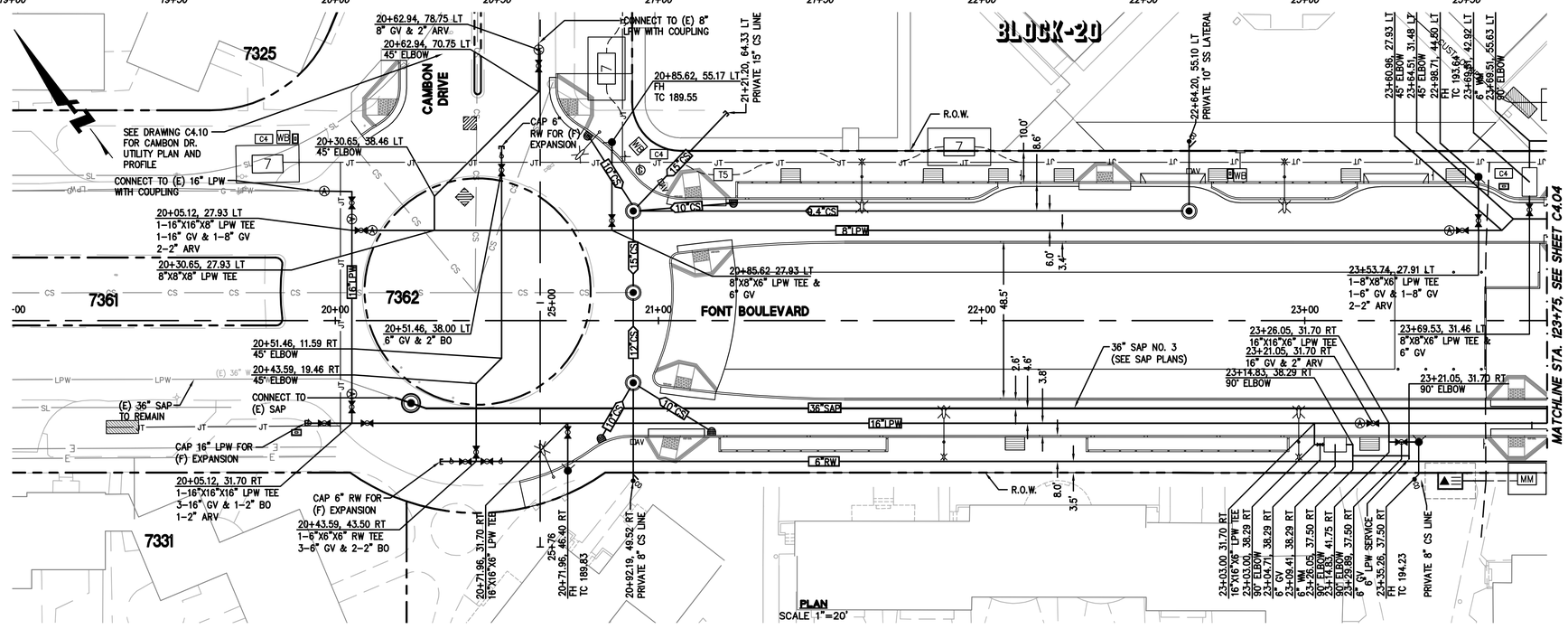

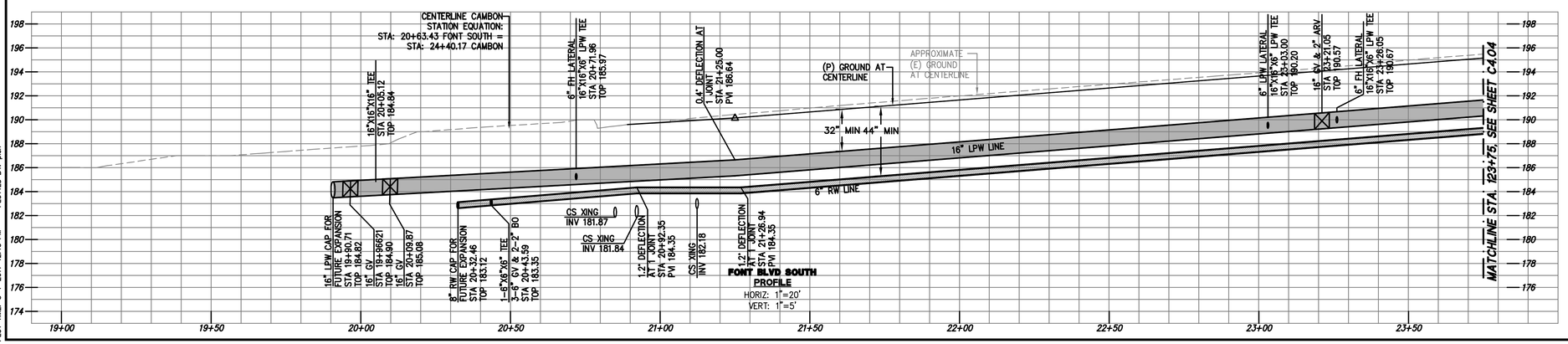



GRAPHIC SCALE
20 0 20 40

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN & PROFILE - FONT BOULEVARD
SAN FRANCISCO, SAN FRANCISCO COUNTY, CALIFORNIA



No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.03

DRAWING NAME: K:\Projs\20090086-12\SHEETS\PHASE-01B\PH01B-C401-UT-L2.dwg (C4.03)
PLOT TIME: 5/1/2017 2:43 PM PLOTTED BY: phil

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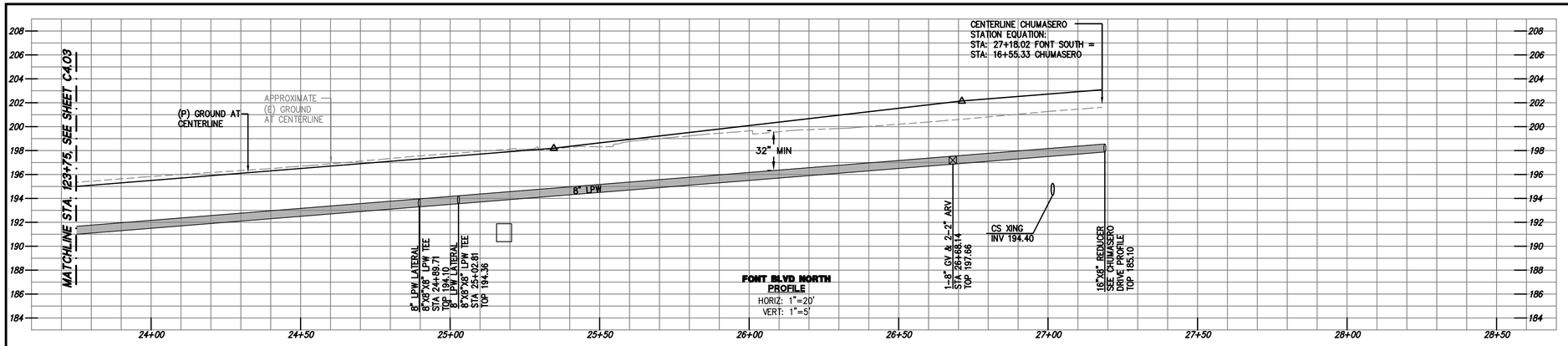

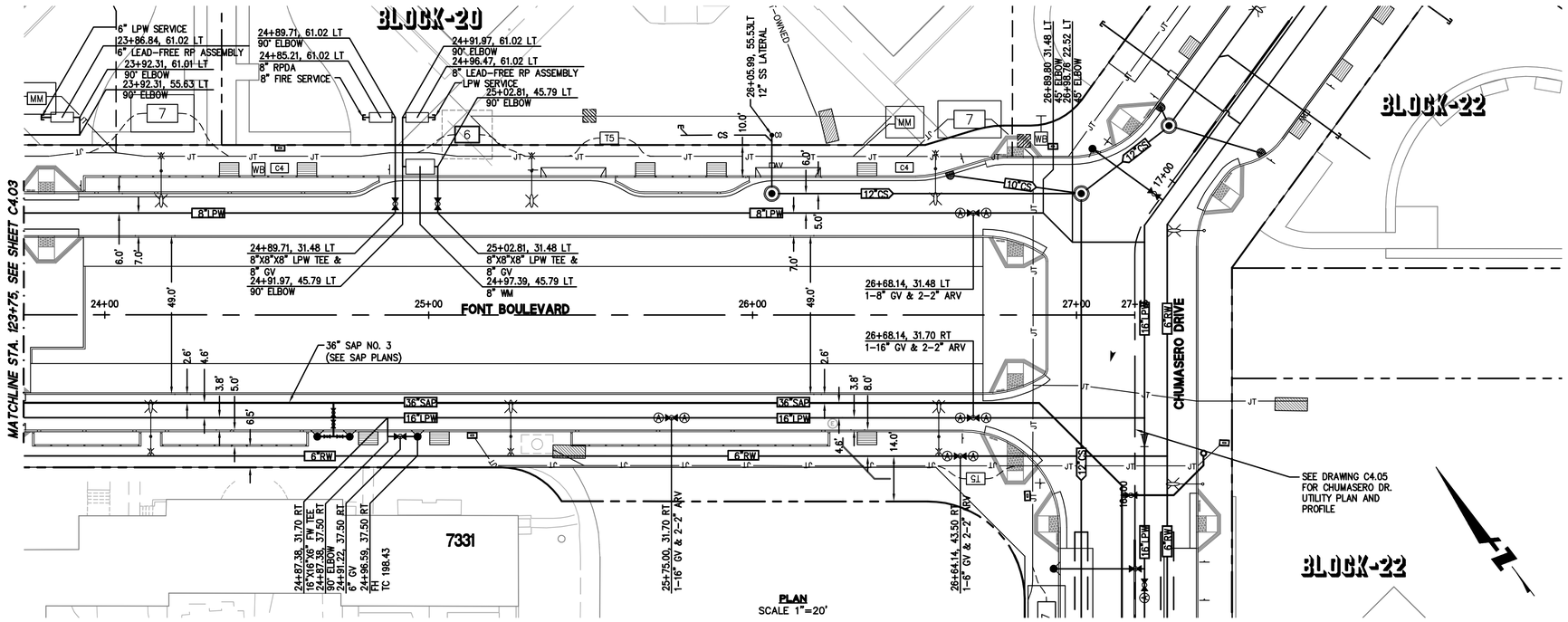

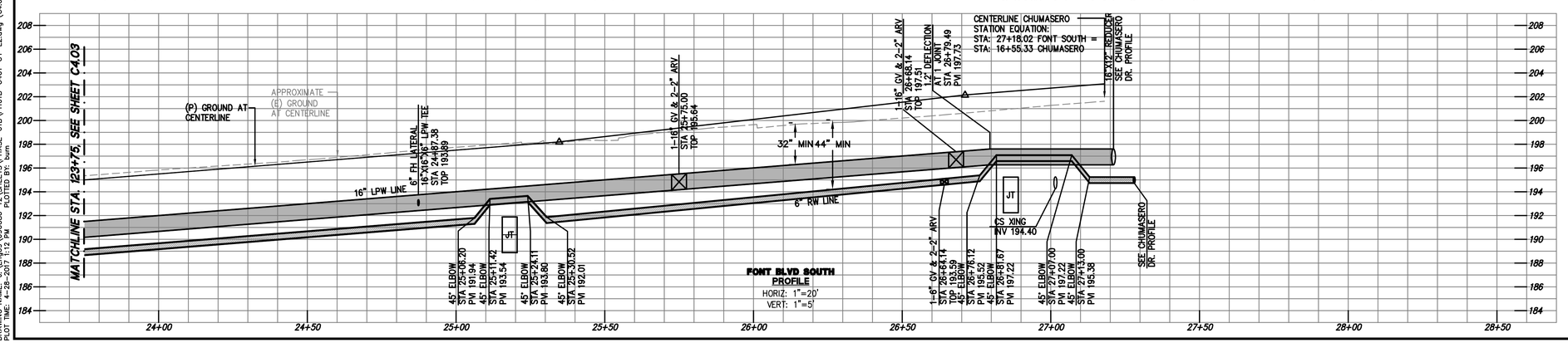



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SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER — CHRISTOPHER S. VIL — No. 73655 — Exp. 12/31/18 — STATE OF CALIFORNIA
CIVIL

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.04

DRAWING NAME: J:\Projects\20090086-12\SHEETS\PHASE-01B\VP01B-C401-UT-L2.dwg (C4.04)
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PLOTTED BY: Nicholas Lam

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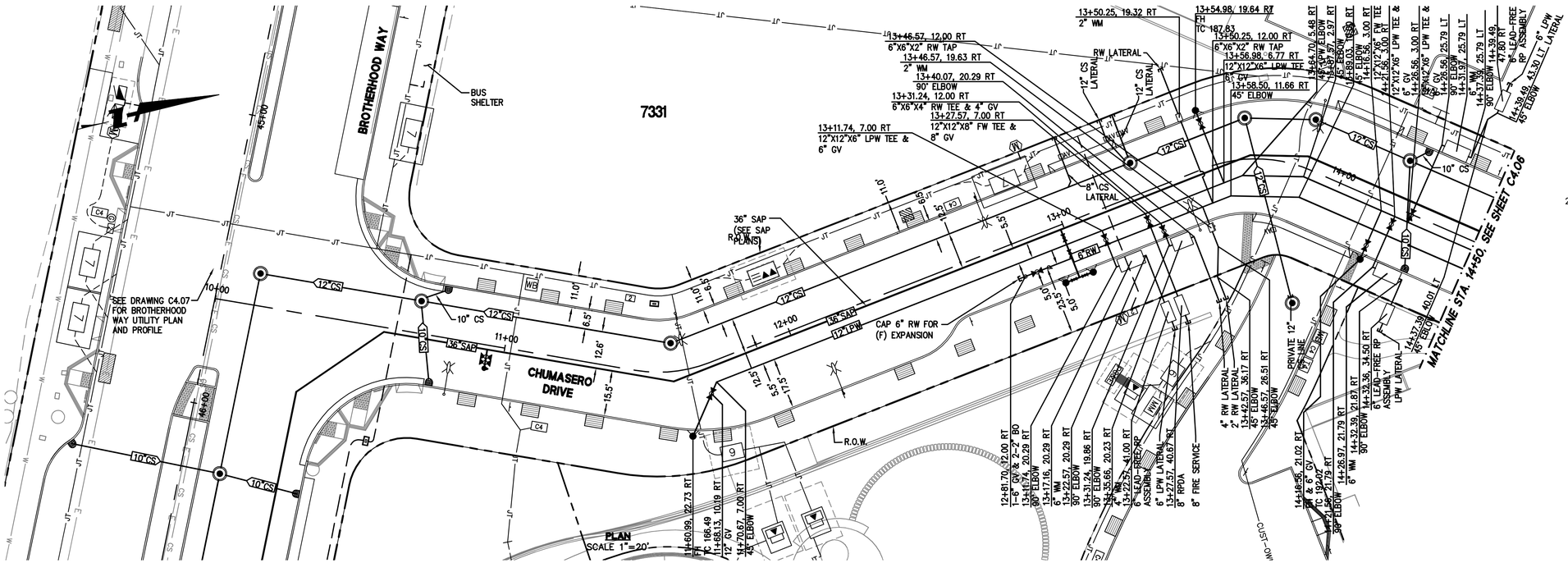

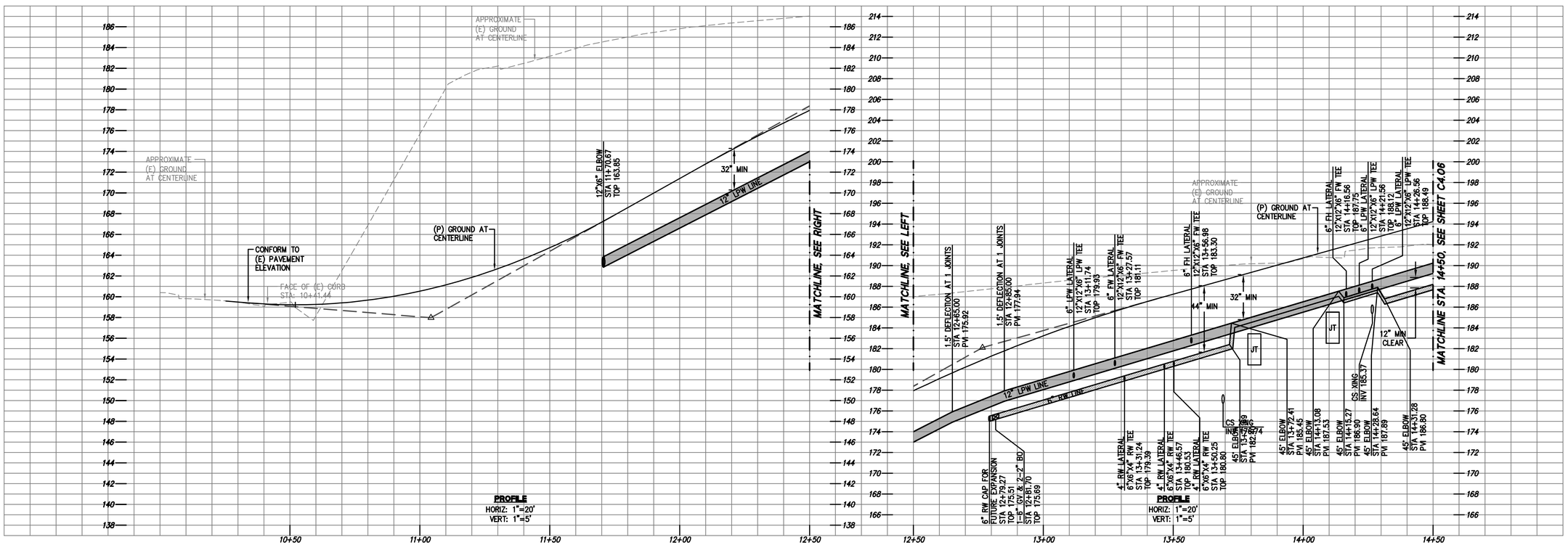

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN & PROFILE – CHUMASERO DRIVE
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.05

DRAWING NAME: J:\Projects\20090086-101\SHEETS\PHASE-01B\PH01B-C402-UT-X.dwg (C4.05)
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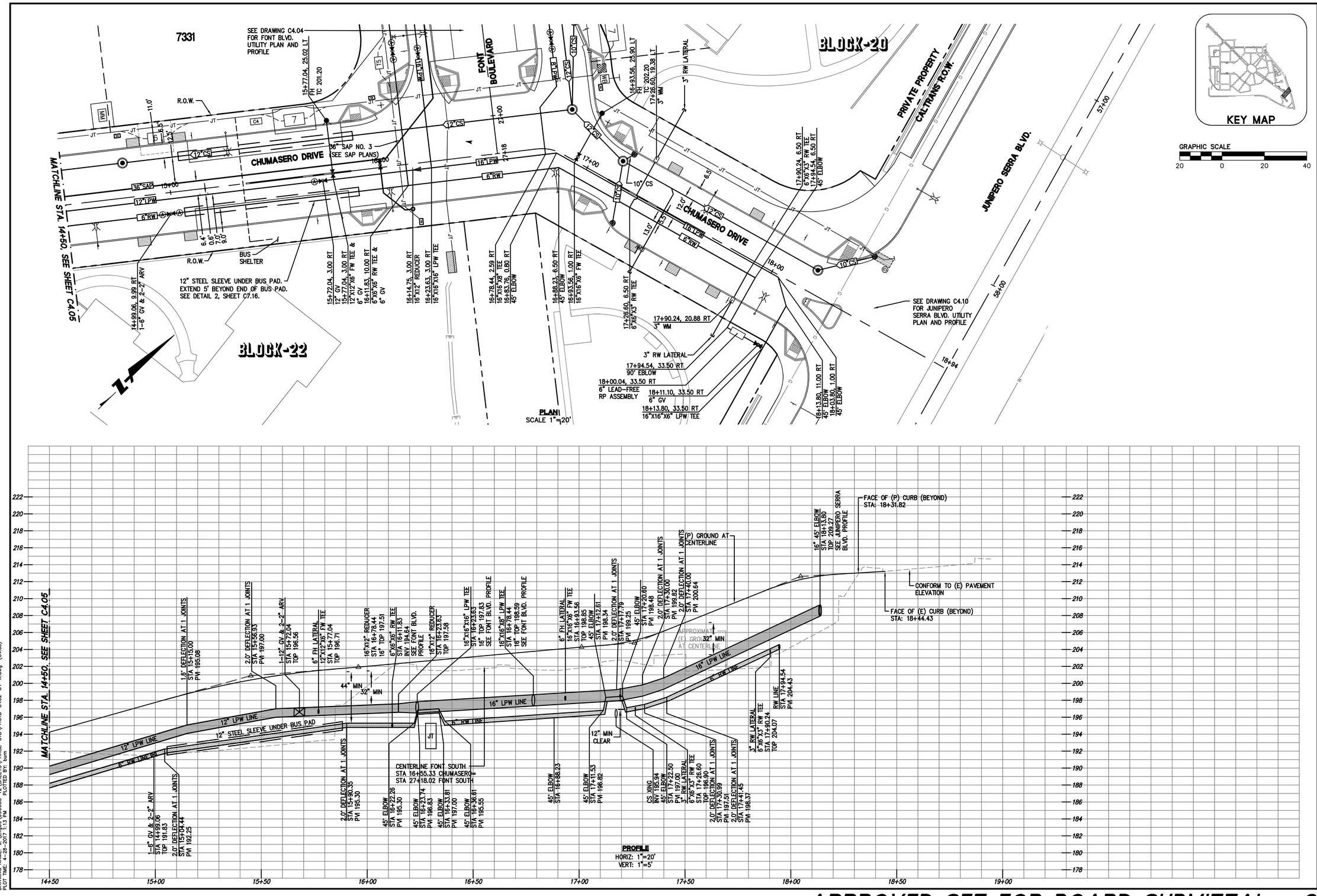

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UTILITY PLAN & PROFILE – CHUMASERO DRIVE
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.06

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C402-UT-X.dwg (C4.06)
PLOT TIME: 4-28-2017 1:13 PM PLOTTED BY: burn

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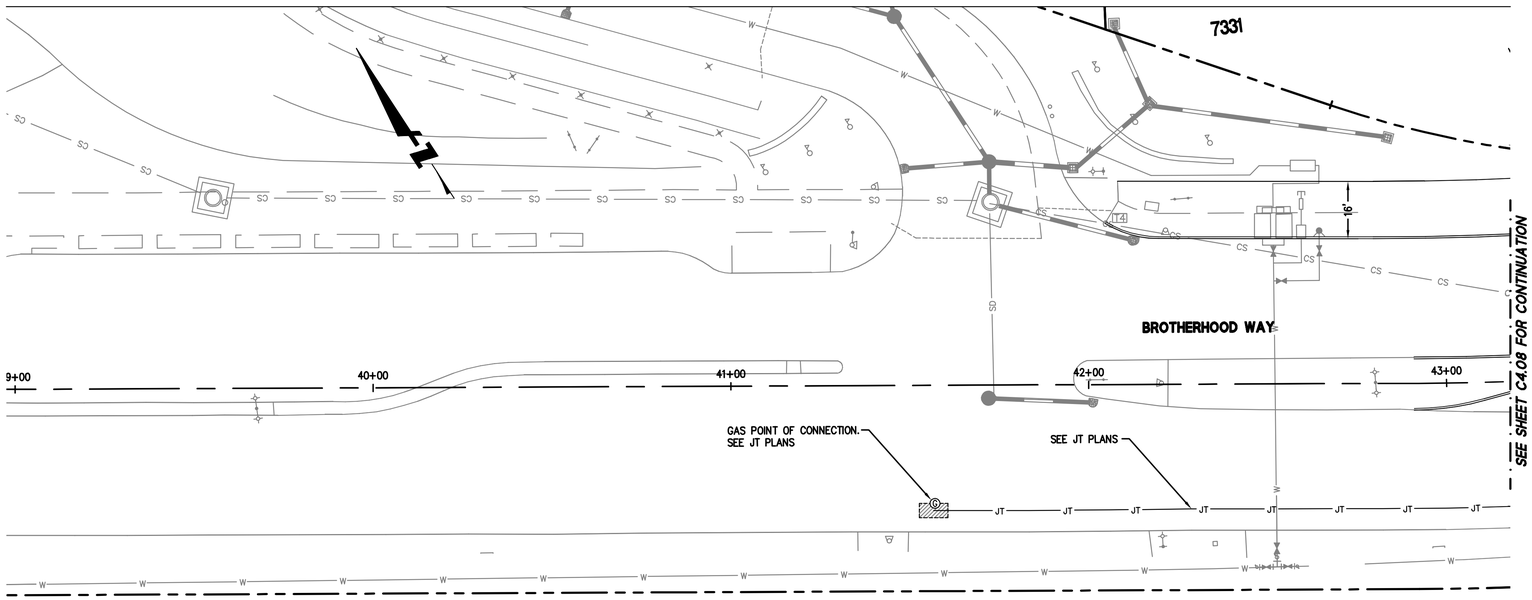

PLAN
SCALE 1"=20'



GRAPHIC SCALE
20 0 20 40

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN & PROFILE – BROTHERHOOD WAY
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN S. SCOTT
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.07

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C403-UT-BHW.dwg (C4.07)
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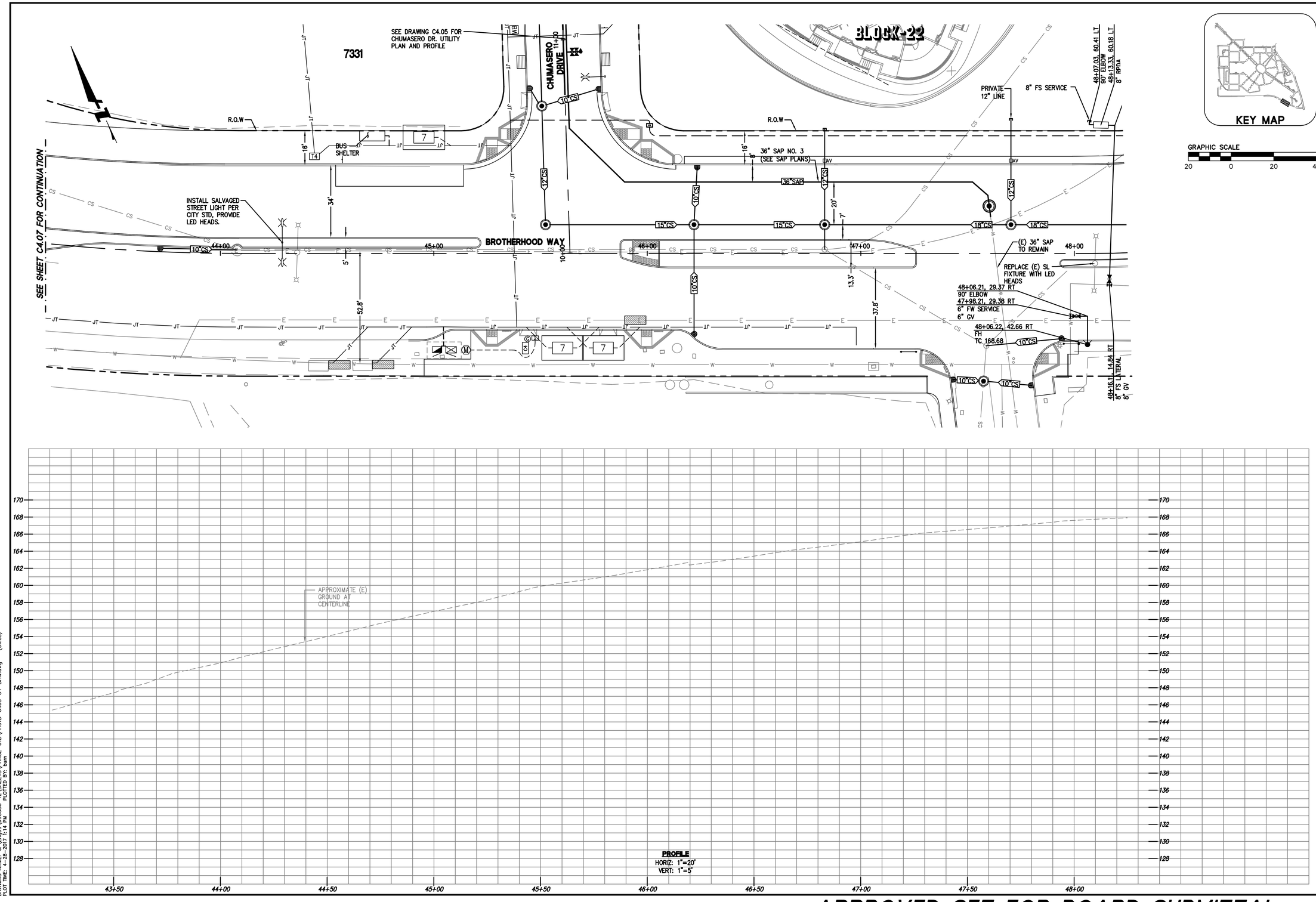

KEY MAP

GRAPHIC SCALE

20 0 20 40

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN & PROFILE – BROTHERHOOD WAY
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMES A. SCOTT
No. 61089
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.08

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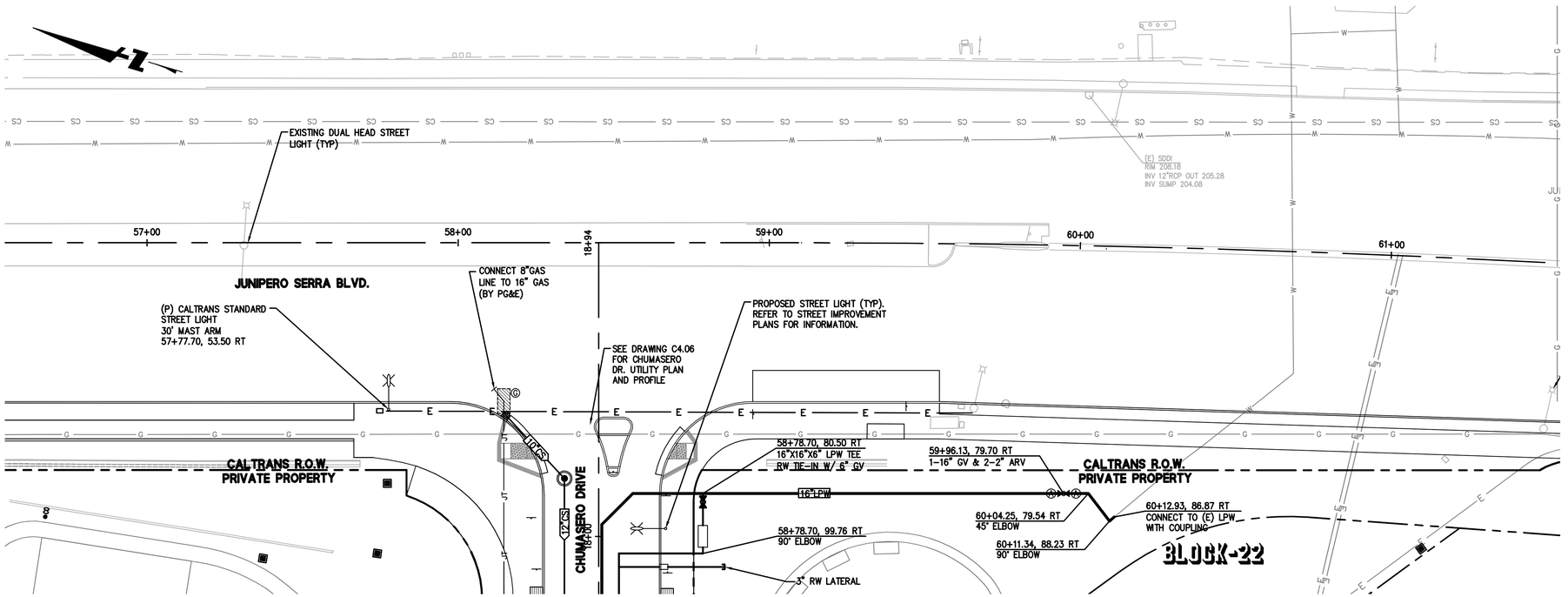

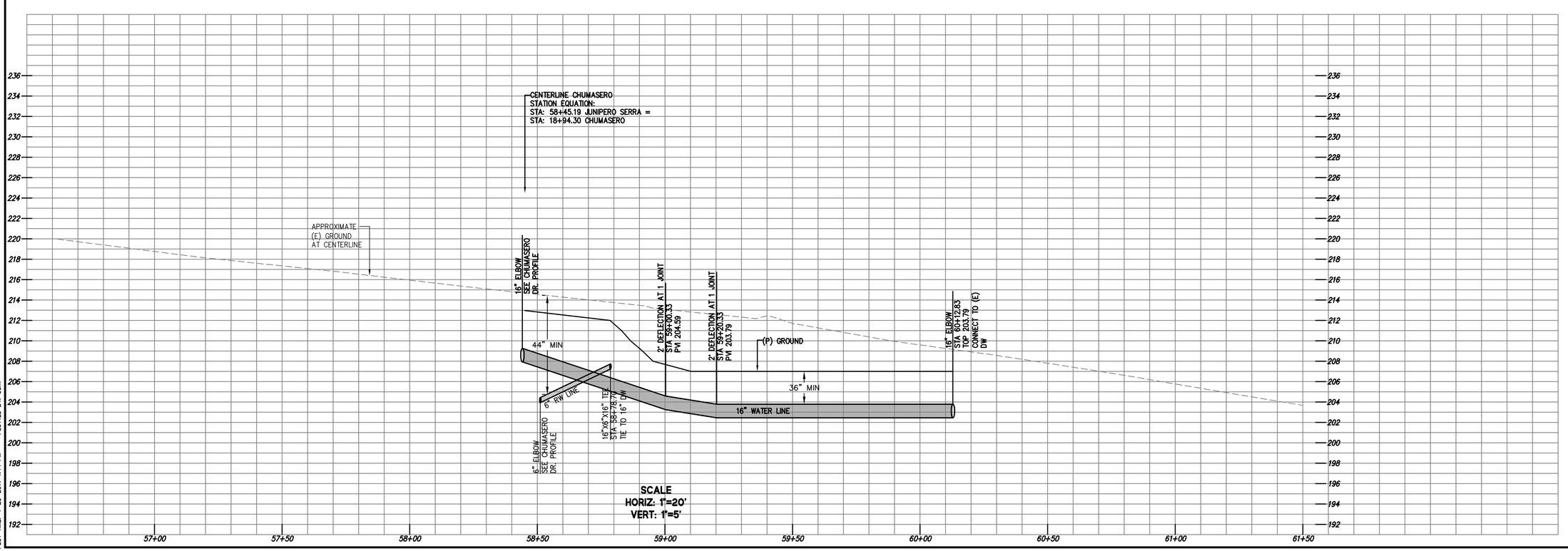



GRAPHIC SCALE
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SHEET NOTES
1. REFER TO 4.00 FOR GENERAL NOTES.

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UTILITY PLAN – JUNIPERO SERRA BOULEVARD
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER BRIAN STOKES No. 72181 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C4.09

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PLOTTED BY: Dan

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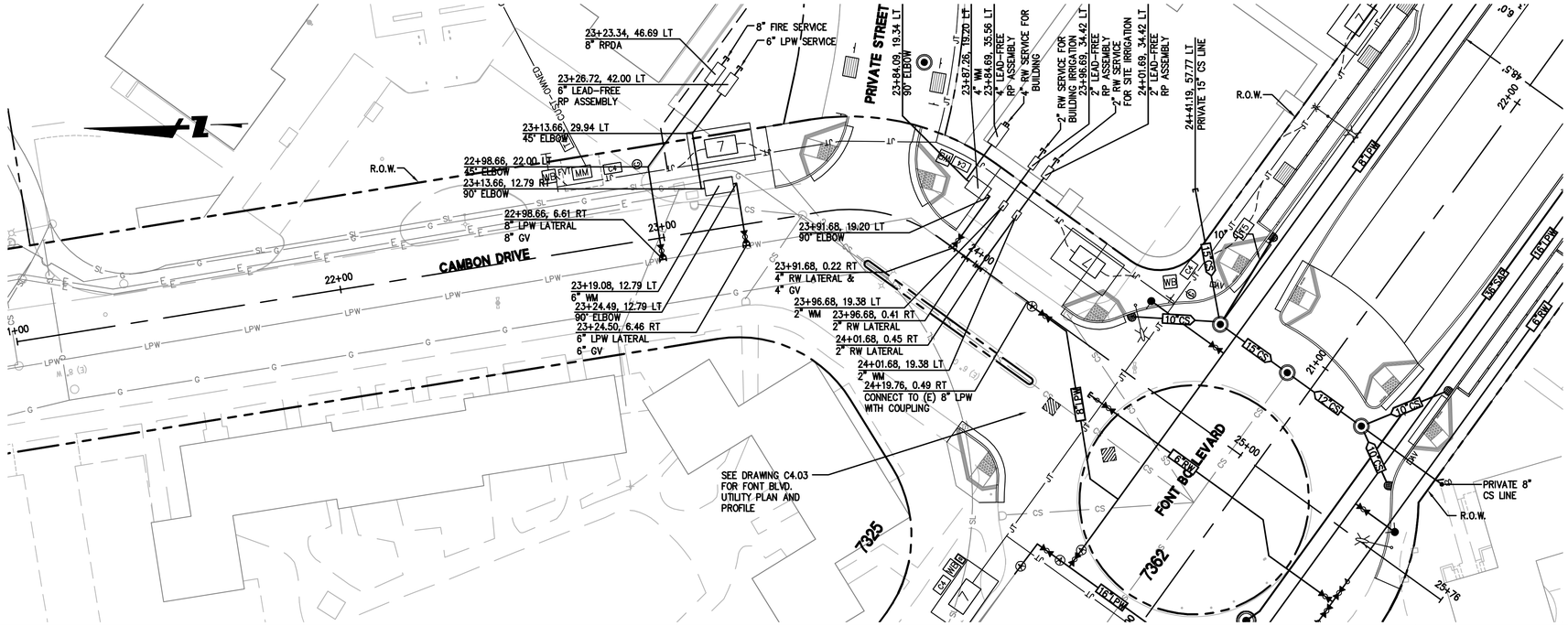



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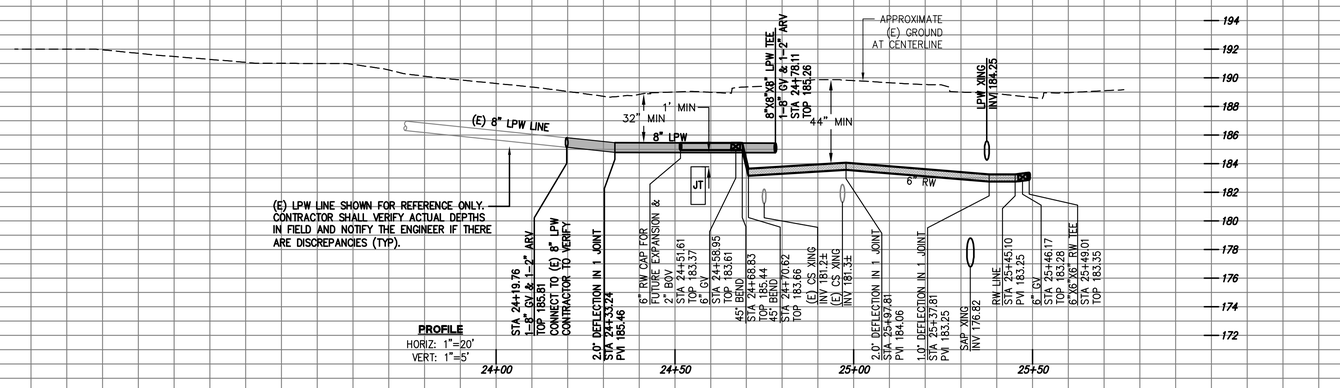

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PHASE 1B STREET IMPROVEMENT PLANS
UTILITY PLAN & PROFILE – CAMBON DRIVE

SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER
JAMES K. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

C4.10

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PLOT TIME: 5-1-2017 12:15 PM PLOTTED BY: pich

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GENERAL NOTES

1. LOCATIONS OF EXISTING SIGNS, STRIPING, AND PAVEMENT MARKERS ARE APPROXIMATE ONLY. NEW ROADSIDE SIGNS SHALL CONFORM TO THE LATEST PROVISIONS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) AND THE PROJECT SPECIFICATIONS.
2. ALL PERMANENT TRAFFIC SIGNS, CURB PAINTING & PAVEMENT MARKINGS SHOWN ON THESE PLANS SHALL BE FURNISHED AND INSTALLED BY THE SFMTA. FINAL CONFIGURATION & QUANTITIES OF SIGNAGE & STRIPING SHALL BE DETERMINED BY SFMTA FOLLOWING FINAL COMPLETION OF SIDEWALK & ROADWAY PAVEMENT. THE INSTALLATION COST OF FINAL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE PAID FOR BY THE DEVELOPER.
3. SIGN INSTALLATION WITHIN CALTRANS R.O.W. SHALL BE PER CALTRANS STANDARD PLANS.
4. SIGN POSTS SHALL BE PAINTED SQUARE METAL POSTS, COORDINATE COLOR WITH SITE SIGNAGE PLANS.
5. SUBGRADE R-VALUES = 50 PER GEOTECHNICAL REPORT.
6. CONCRETE SIDEWALK FINISH AND SCORING PATTERN SHALL BE PER CITY OF SAN FRANCISCO STANDARDS.
7. SEE SHEET C7.44 FOR CITY STANDARD CROSSWALK DETAIL.
8. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM SFMTA. SEE TRAFFIC CONTROL PLAN NOTES ON SHEET C1.02. SFMTA PERMITS THE USE OF TEMPORARY STRIPING TAPE.
9. ALL CONFLICTING STRIPING, PAVEMENT MARKERS, AND PAVEMENT MARKINGS SHALL BE REMOVED AS REQUIRED BY SFMTA IN ACCORDANCE WITH SFMTA APPROVED PROCEDURES.

PAVEMENT MARKING LEGEND

- TWO-WAY BLUE RETROFLECTIVE MARKER. BLUE MARKERS SHALL BE PLACED ON THE LEFT HAND SIDE OF ALL TRAVEL LANES TO THE FIRE HYDRANT UP TO THE CENTER OF THE STREET.
- YIELD LINE PER CALTRANS STANDARD PLAN A24E
- TYPE I ARROW PER CALTRANS STD PLAN A24A
- TYPE VII (L) ARROW PER CALTRANS STD PLAN A24A
- TYPE IV (L & R) ARROW PER CALTRANS STD PLAN A24A
- TYPE IV (L) ARROW PER CALTRANS STD PLAN A24A
- TYPE VII (R) ARROW PER CALTRANS STD PLAN A24A
- SHARED ROADWAY BICYCLE MARKING

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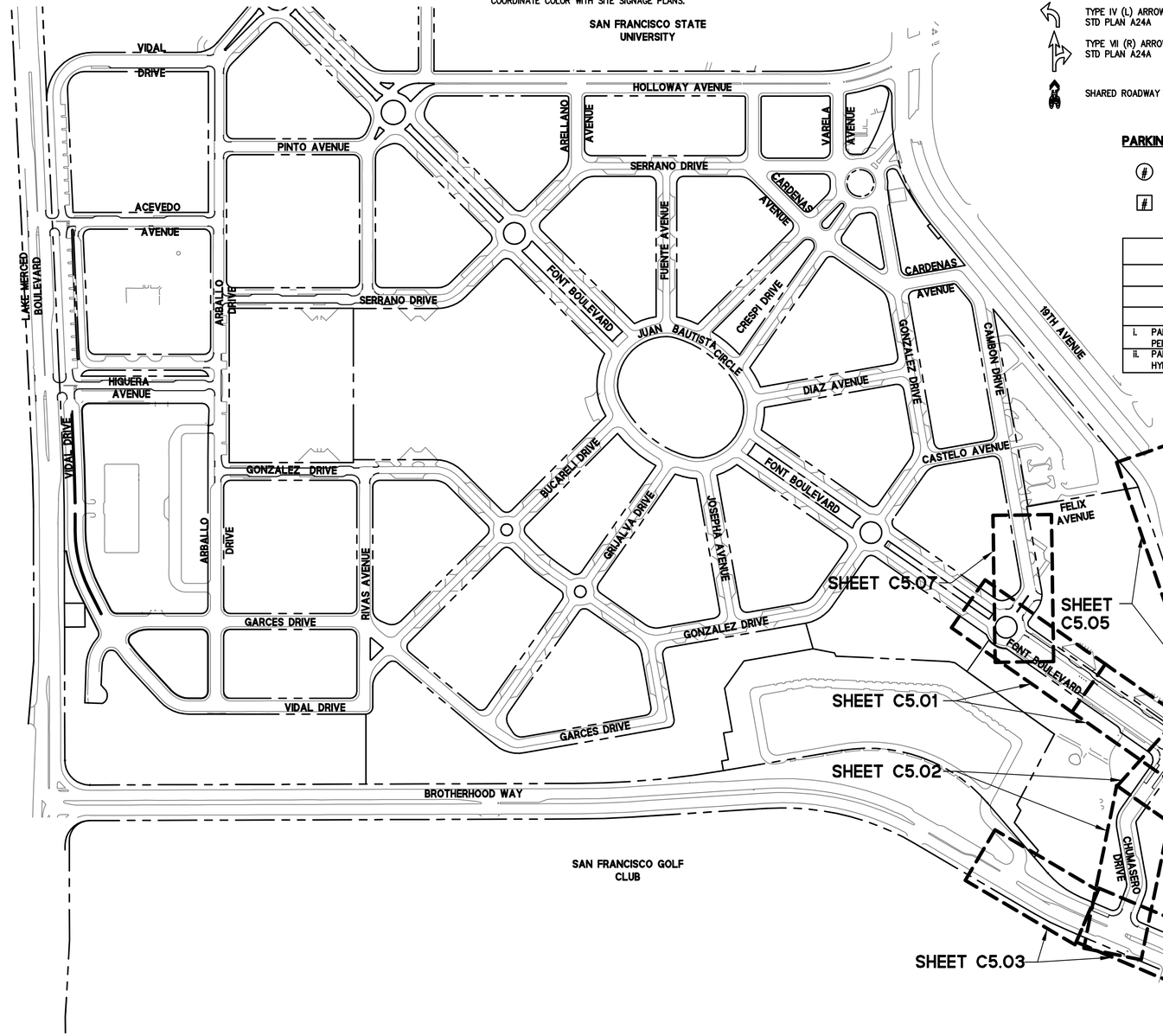

PARKING LEGEND AND COUNT SUMMARY

- (#) PROPOSED OFF-SITE PARKING FOR PHASE 1B
- [#] PROPOSED OFF-SITE ADA PARKING FOR PHASE 1B

PARKING COUNT SUMMARY			
	PARKING TYPE		
AREA	REGULAR	ADA	TOTAL
PHASE 1B	11	1	12
i. PARKING COUNTS BASED ON PARALLEL PARKING STALL DIMENSIONS OF 7' X 22' AND PERPENDICULAR PARKING STALL DIMENSIONS OF 9' X 18'.			
ii. PARKING COUNTS DO NOT INCLUDE A POSSIBLE REDUCTION IN NUMBER DUE TO FIRE HYDRANTS, BUS STOPS, AND PASSENGER/COMMERCIAL LOADING ZONES.			

SIGN AND TRAFFIC LINE LEGEND

- (1) CALTRANS TRAFFIC LINE PER DETAIL 1 ON STD PLAN A20A
- (8) CALTRANS TRAFFIC LINE PER DETAIL 8 ON STD PLAN A20A
- (24) CALTRANS TRAFFIC LINE PER DETAIL 8 ON STD PLAN A20B
- (38A) CALTRANS TRAFFIC LINE PER DETAIL 38A ON STD PLAN A20D
- (39) CALTRANS TRAFFIC LINE PER DETAIL 39 ON STD PLAN A20D
- (39A) CALTRANS TRAFFIC LINE PER DETAIL 39A ON STD PLAN A20D
- (A24E) CALTRANS YIELD OR LIMIT LINE PER STD PLAN A24E
- (ADA-1) ADA SIGN DETAIL "ACCESSIBLE STALL SIGNAGE" PER DETAIL, 1 SHEET C7.45
- (R1-1) "STOP" R1-1 SIGN
- (R2-1) "SPEED LIMIT XX MPH" SIGN
- (R4-7) KEEP RIGHT SIGN
- (W3-1) "STOP AHEAD" WARNING SIGN
- (W3-5) RIGHT TURN ONLY SIGN
- (W7-1G) "XXX' STEEP GRADE WARNING SIGN
- (W11-2) PED XING SIGN
- (W13-1b) "XX MPH" ADVISORY SPEED PLAQUE
- (W16-7P) DIAGONAL ARROW SIGN

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN - KEY MAP
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

No.	Revisions

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No. 20090086

Drawing Number:
C5.00

DRAWING NAME: \\Bkf-sv1\data\Engd01\20090086-10\SHEETS\PHASE-01B\PH01B-C500-SS.dwg (C5.00)
PLOT TIME: 5-1-2017, 11:57 AM Plotted By: hwh

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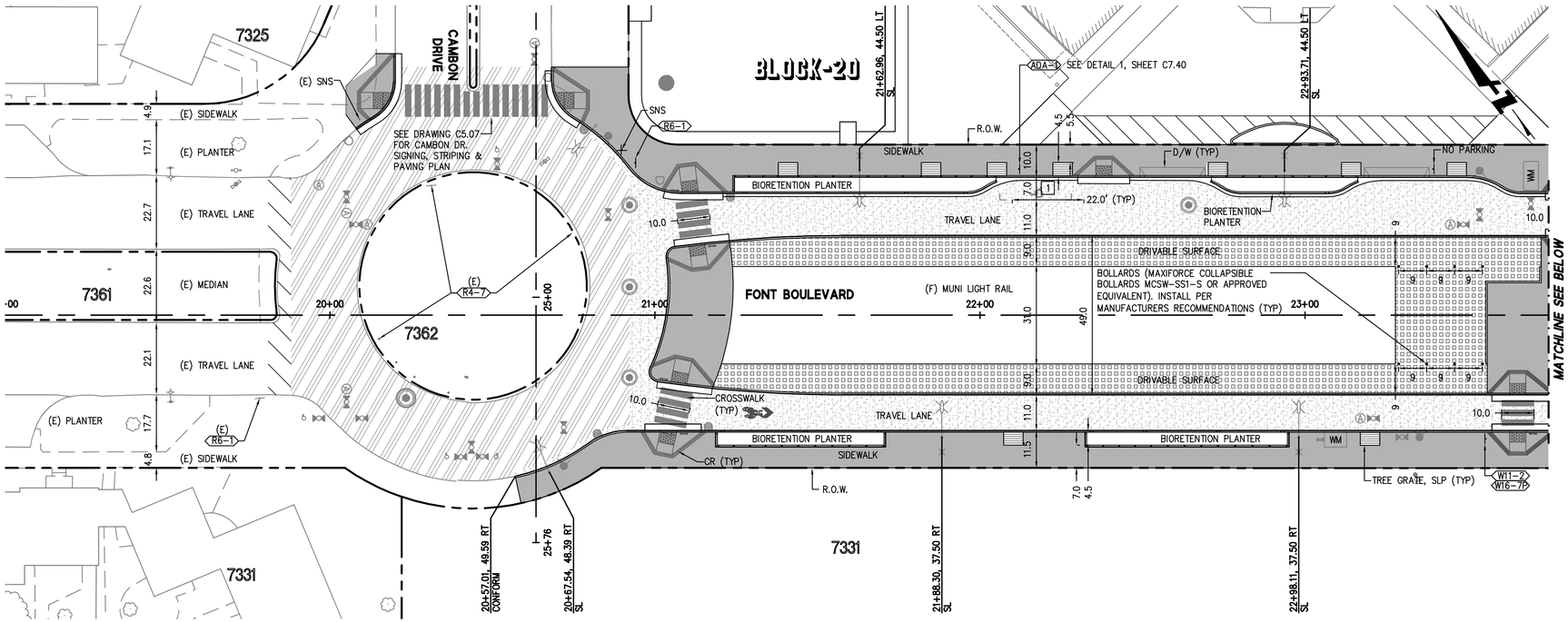

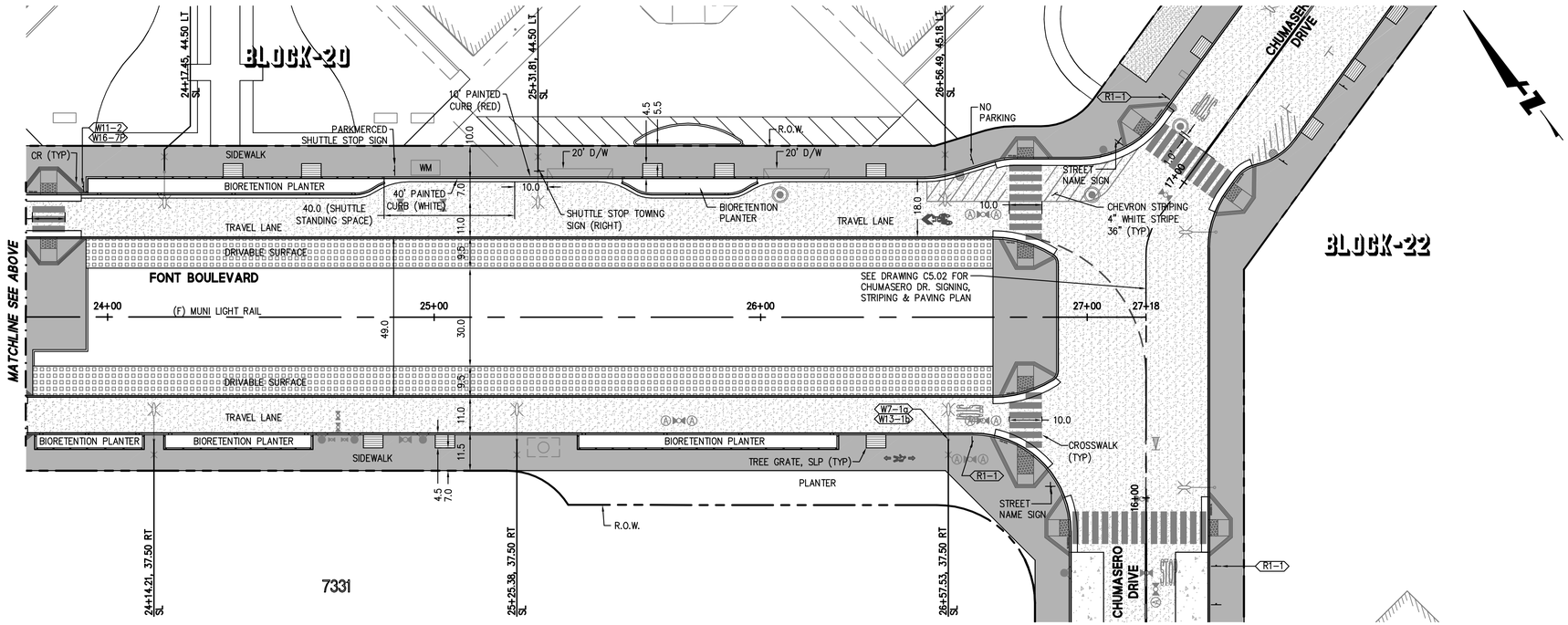



GRAPHIC SCALE
20 0 20 40

SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

- CITY STANDARD SIDEWALKS & DRIVEWAYS: 3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.
- AC PATH: 3.5" AC/8" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS
- CITY STANDARD STREET (COMMERCIAL): 2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION
- REINFORCED CONCRETE BUS PAD: 10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607
- DRIVEABLE SURFACE: CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.
- PLANING WEDGE: SEE SHEET C7.28.
- AC OVERLAY: 2" GRIND AND 2" MIN. AC OVERLAY

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN – FONT BOULEVARD
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KERN — No. C 61455 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C5.01

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: K:\Proj\20\20090086-121\SHEETS\PHASE-01B\PH01B-C501-SS-L2.dwg (5.01)
PLOT TIME: 4-5-2017 10:30 AM PLOTTED BY: pjoh

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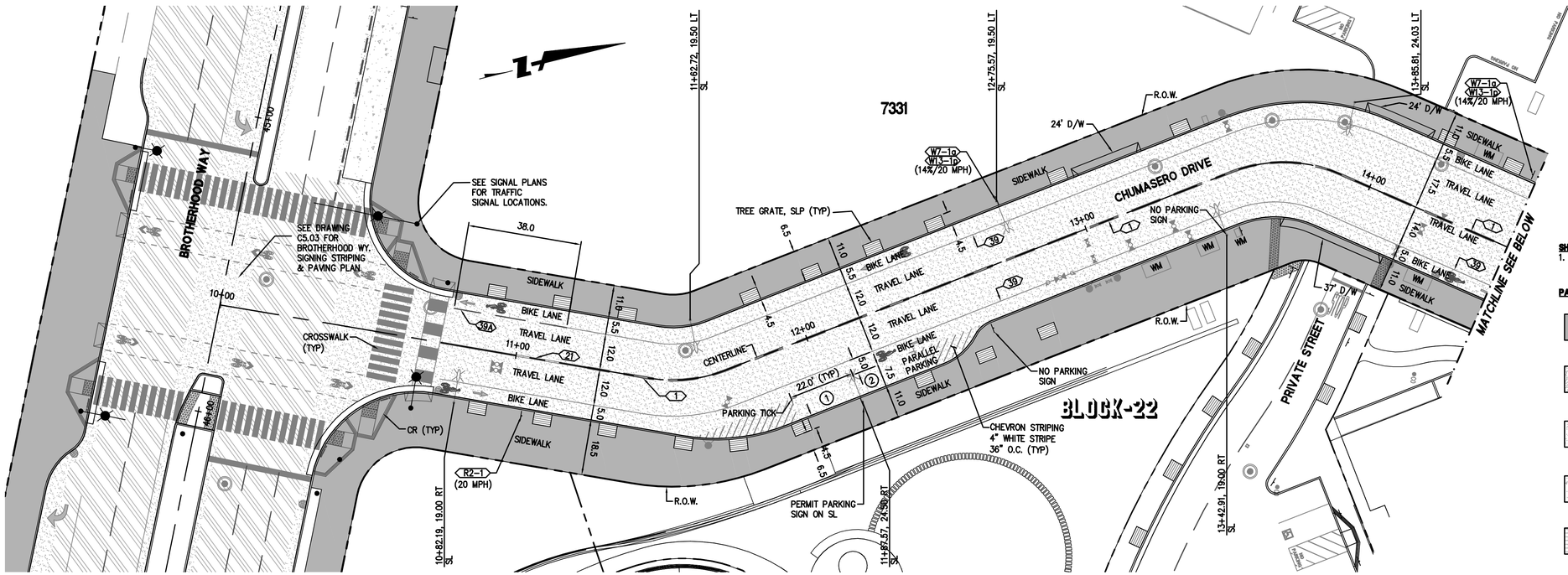

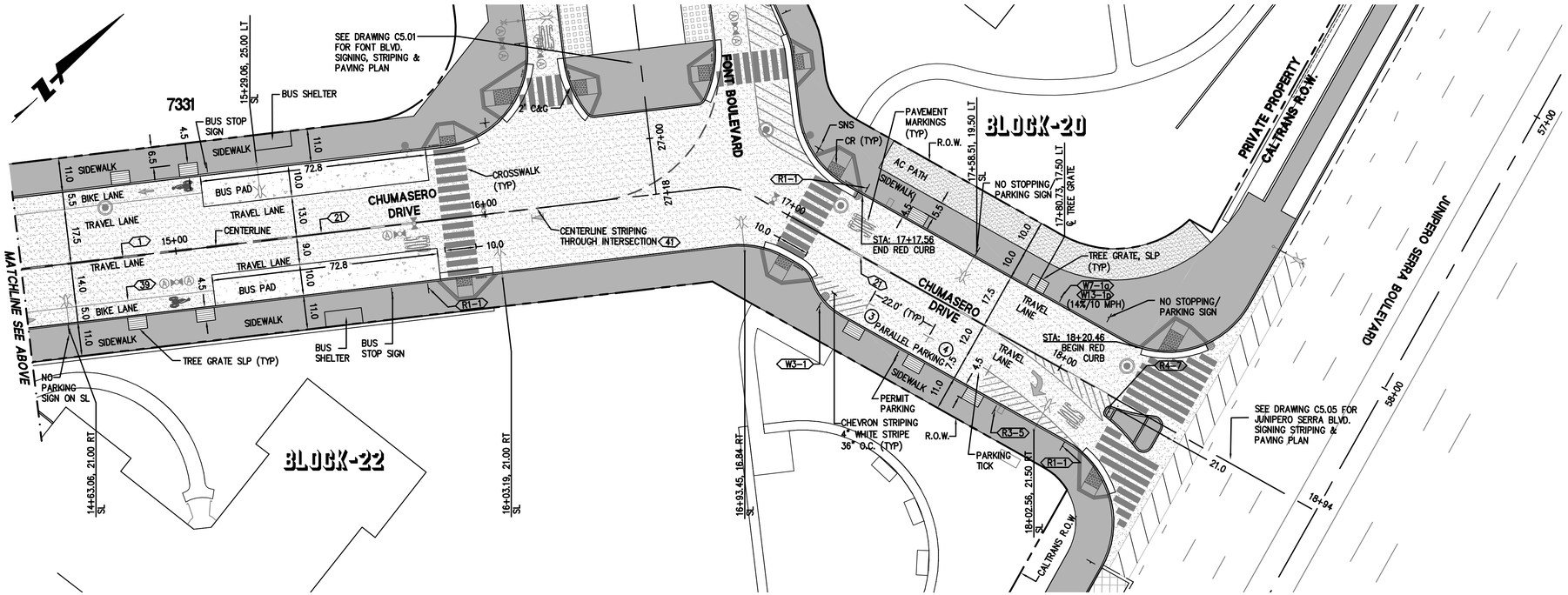



GRAPHIC SCALE
20 0 20 40

SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

- CITY STANDARD SIDEWALKS & DRIVEWAYS — 3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.
- AC PATH — 3.5" AC/8" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS
- CITY STANDARD STREET (COMMERCIAL) — 2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION
- REINFORCED CONCRETE BUS PAD — 10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607
- DRIVEABLE SURFACE — CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.
- PLANING WEDGE — SEE SHEET C7.28.
- AC OVERLAY — 2" GRIND AND 2" MIN. AC OVERLAY

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN – CHUMASERO DRIVE
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. GIBBS — No. 73344 — CIVIL — STATE OF CALIFORNIA — 10/20/18

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.02

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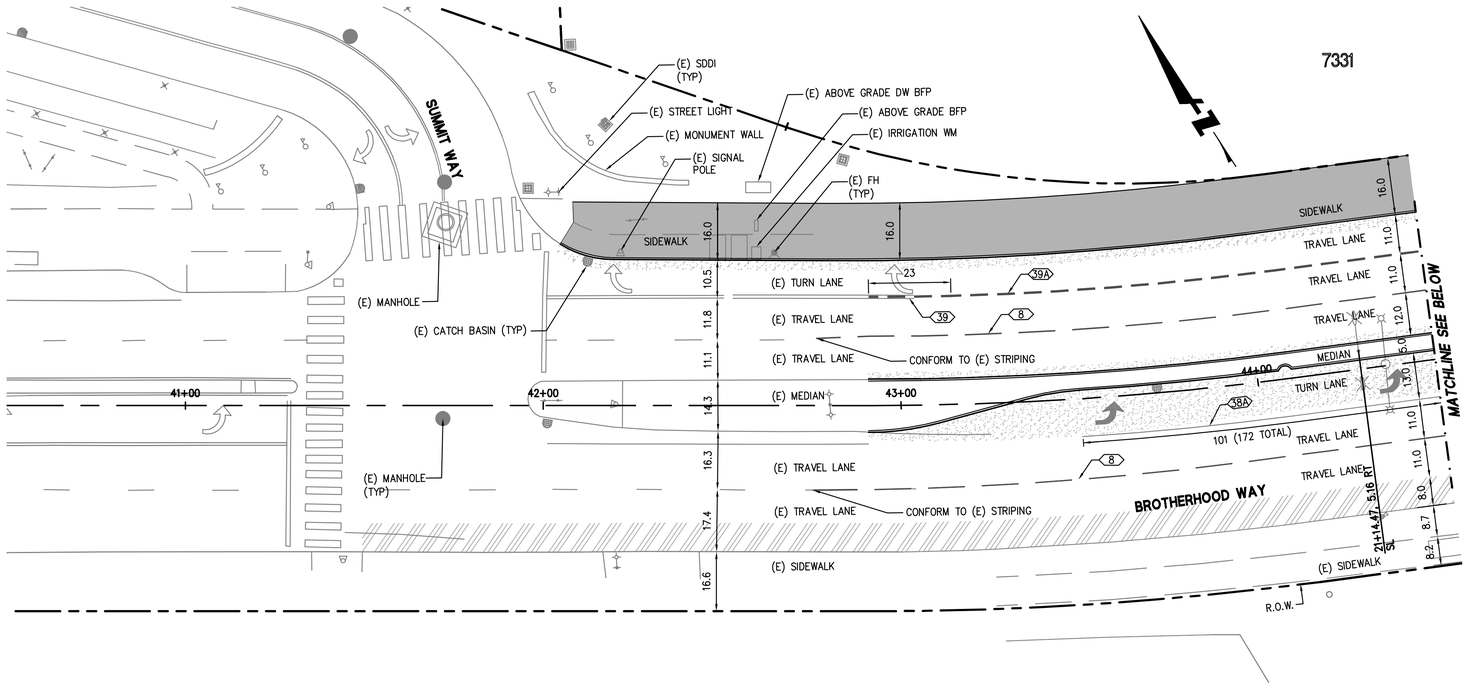

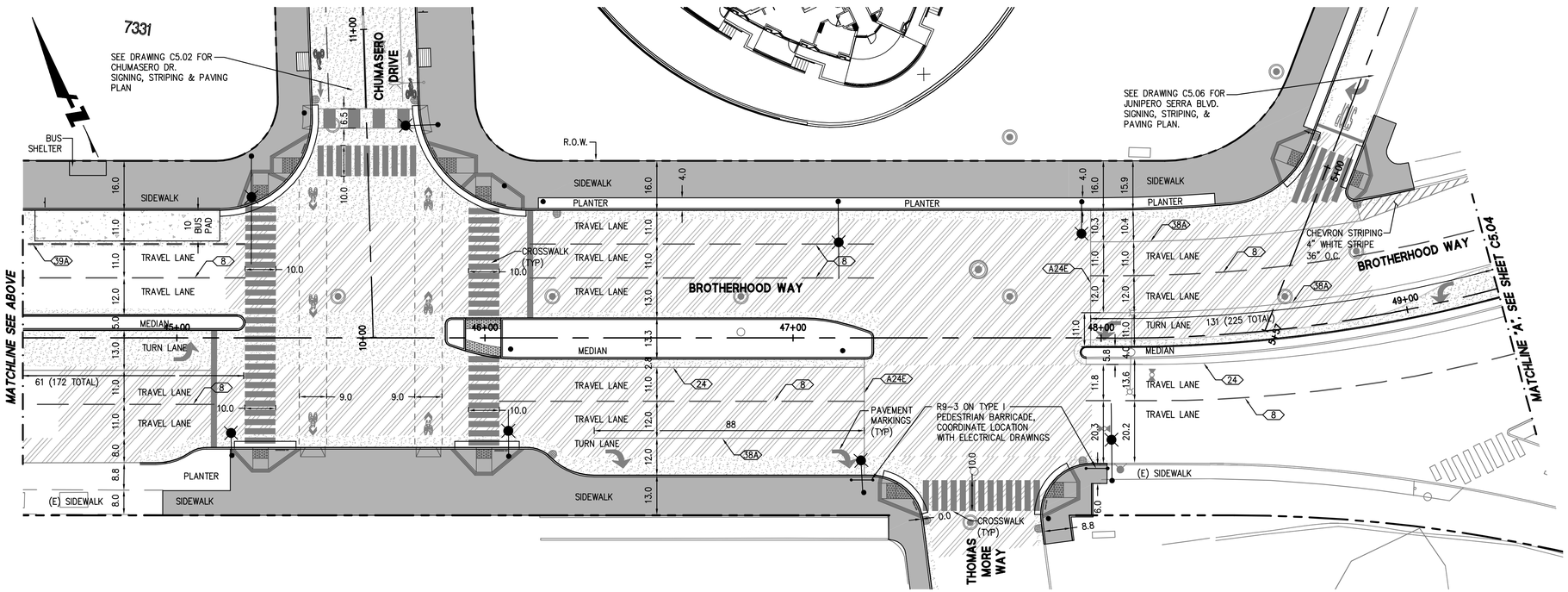

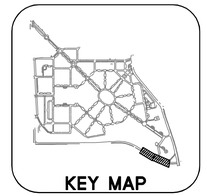

GRAPHIC SCALE
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SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

- CITY STANDARD SIDEWALKS & DRIVEWAYS — 3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.
- AC PATH — 3.5" AC/6" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS
- CITY STANDARD STREET (COMMERCIAL) — 2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION
- REINFORCED CONCRETE BUS PAD — 10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607
- DRIVEABLE SURFACE — CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.
- PLANING WEDGE — SEE SHEET C7.28.
- AC OVERLAY — 2" GRIND AND 2" MIN. AC OVERLAY

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN – BROTHERHOOD WAY
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. GIBBS — No. 76844 — CIVIL — STATE OF CALIFORNIA — 10/31/18

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.03

DRAWING NAME: K:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C503-SS-BHW.dwg (C5.03)
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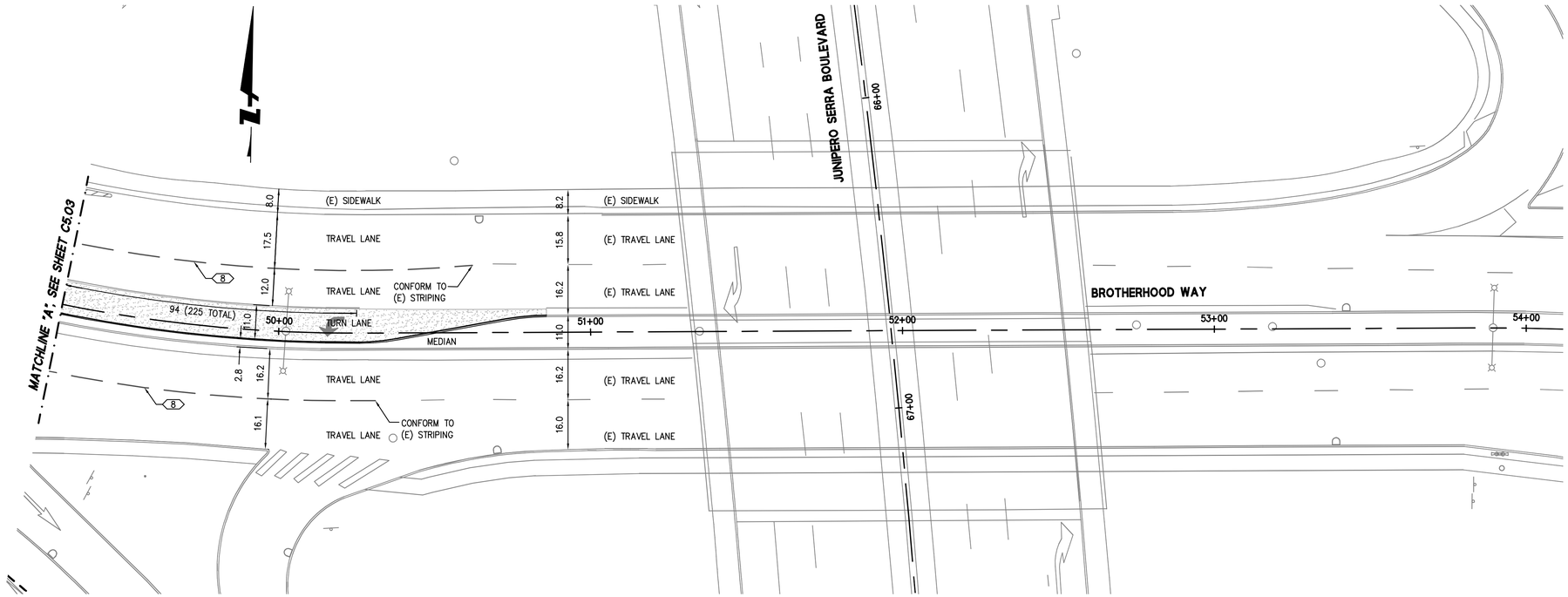



GRAPHIC SCALE
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SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

CITY STANDARD SIDEWALKS & DRIVEWAYS
3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.

AC PATH
3.5" AC/6" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS

CITY STANDARD STREET (COMMERCIAL)
2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION

REINFORCED CONCRETE BUS PAD
10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607

DRIVEABLE SURFACE
CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.

PLANING WEDGE
SEE SHEET C7.28.

AC OVERLAY
2" GRIND AND 2" MIN. AC OVERLAY

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN - BROTHERHOOD WAY
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER
THOMAS HUNG
No. C61191
10/31/18
CIVIL
STATE OF CALIFORNIA
CERTIFICATION

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.04

DRAWING NAME: J:\5-proj\090086-121\SHEETS\PHASE-01B\PH01B-C503-SS-BHW.dwg (C5.04)
PLOT TIME: 4-28-2017 1:17 PM PLOTTED BY: John

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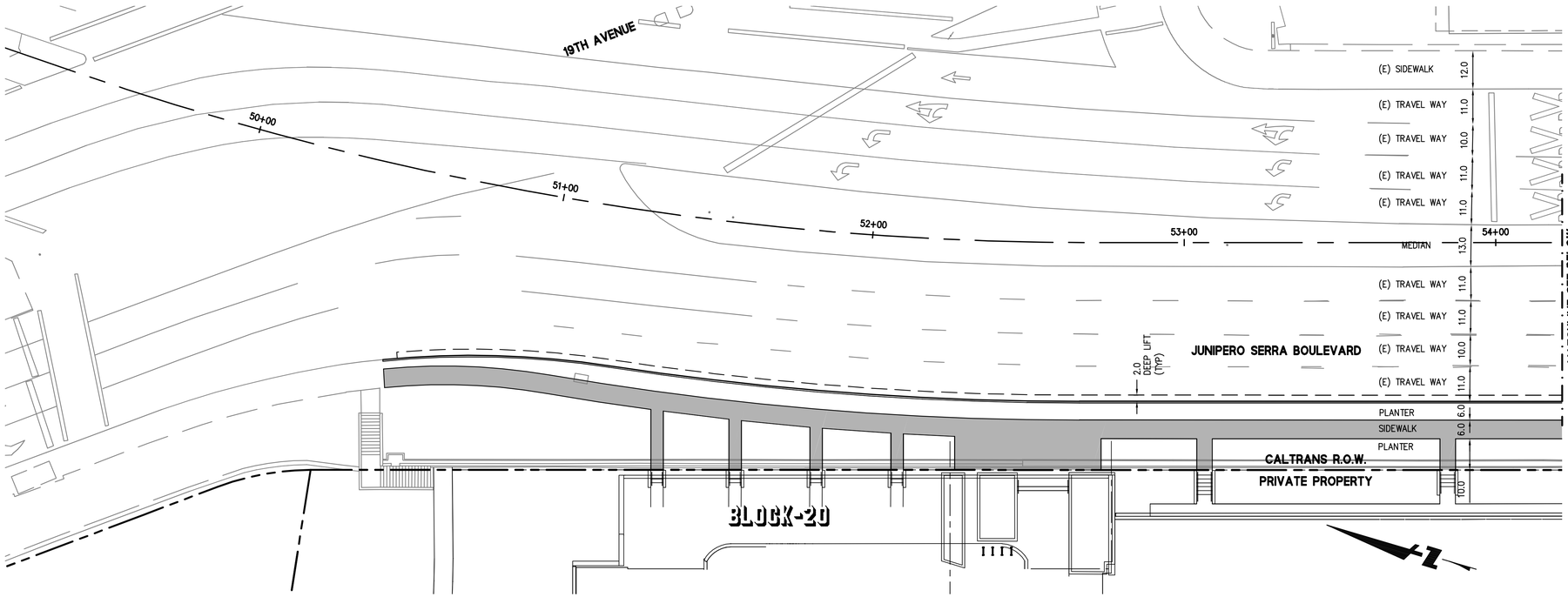

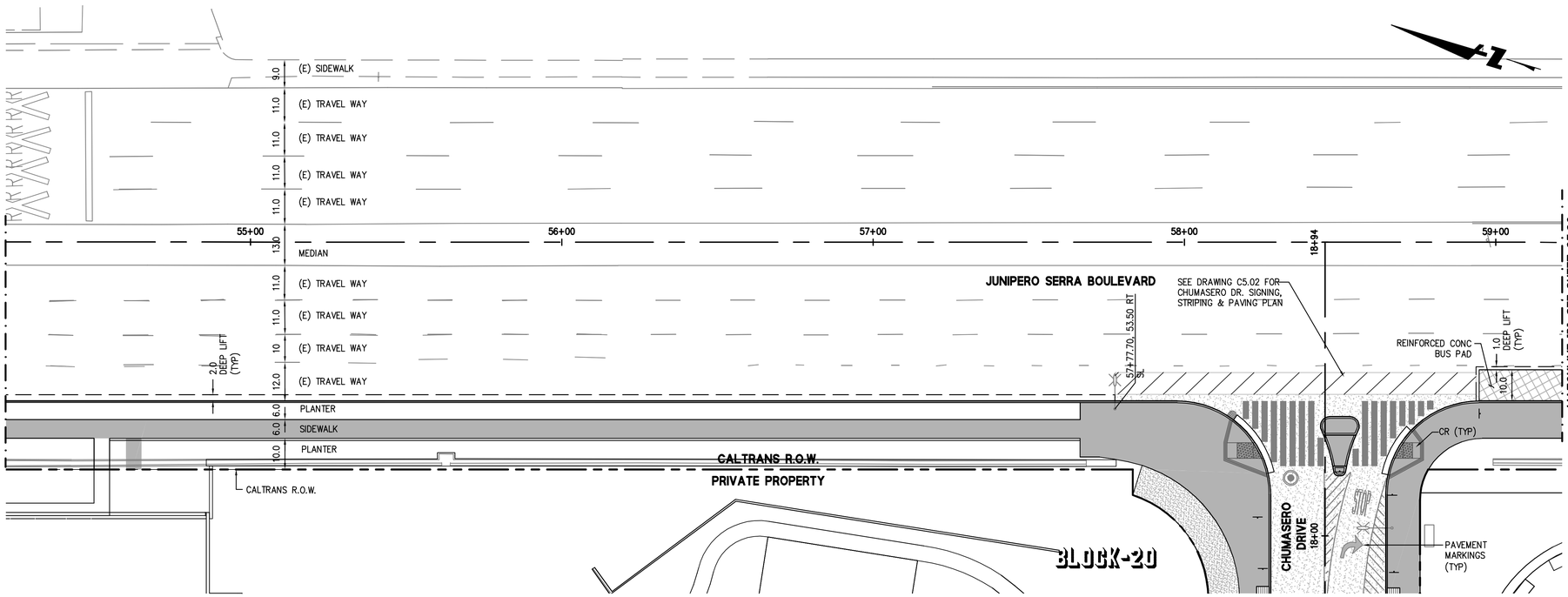



GRAPHIC SCALE
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SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

CITY STANDARD SIDEWALKS & DRIVEWAYS
3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.

AC PATH
3.5" AC/8" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS

CITY STANDARD STREET (COMMERCIAL)
2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION

REINFORCED CONCRETE BUS PAD
10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607

DRIVEABLE SURFACE
CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.

PLANING WEDGE
SEE SHEET C7.28.

AC OVERLAY
2" GRIND AND 2" MIN. AC OVERLAY

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN – JUNIPERO SERRA BLVD
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER S. HOM
No. C61191
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.05

DRAWING NAME: J:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C504-SS-JSB.dwg (C5.05)
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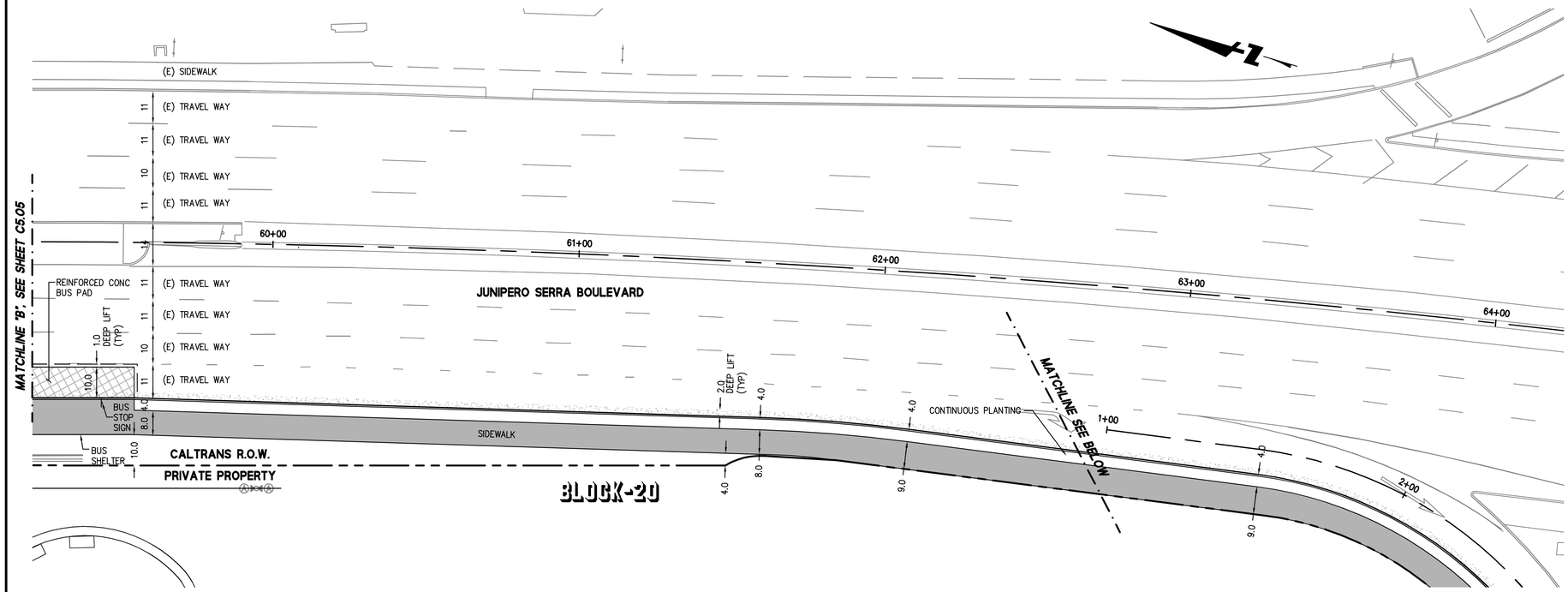

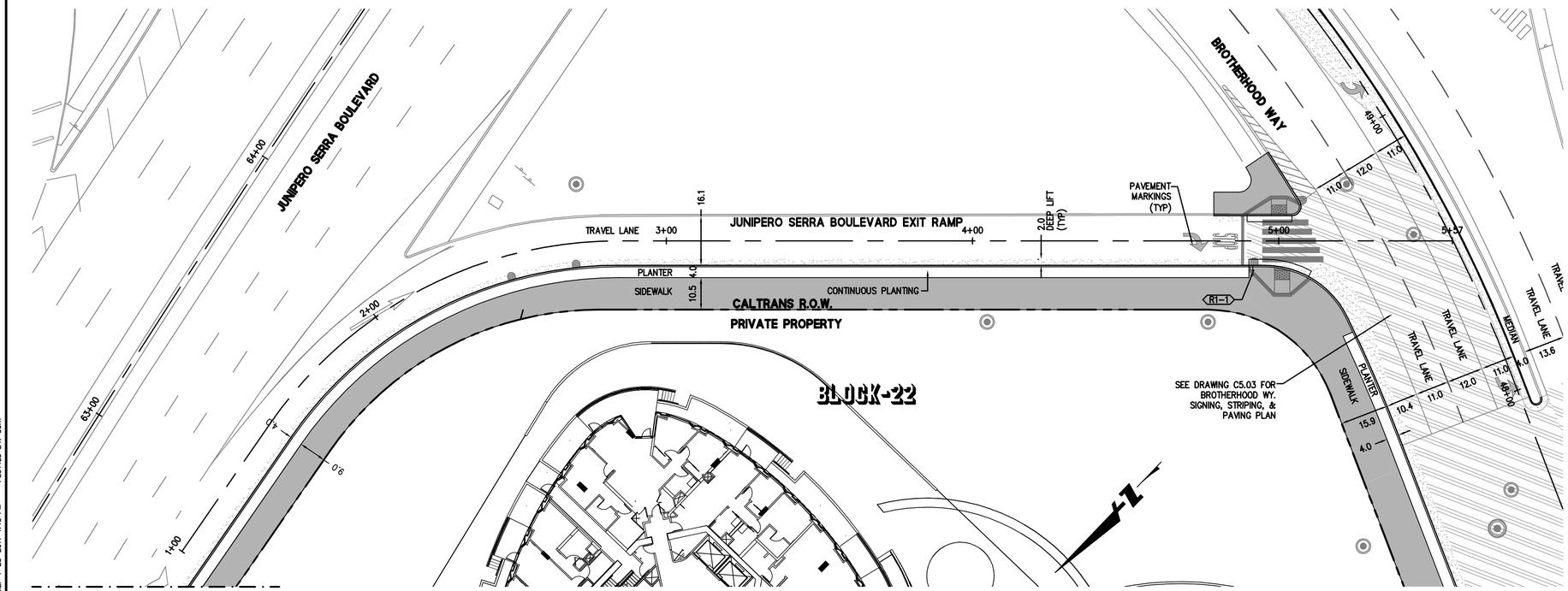



GRAPHIC SCALE
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SHEET NOTES
1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

CITY STANDARD SIDEWALKS & DRIVEWAYS
3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.

AC PATH
3.5" AC/6" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS

CITY STANDARD STREET (COMMERCIAL)
2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION

REINFORCED CONCRETE BUS PAD
10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607

DRIVEABLE SURFACE
CONCRETE GRID PAVING UNIT (HASTINGS CHECKER BLOCK OR APPROVED EQUAL), INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE DETAIL 3 SHEET C7.19 AND LANDSCAPE PLANS.

PLANING WEDGE
SEE SHEET C7.28.

AC OVERLAY
2" GRIND AND 2" MIN. AC OVERLAY

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SIGNING, STRIPING & PAVING PLAN - JUNIPERO SERRA BLVD
SAN FRANCISCO COUNTY, CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — GLENN T. STANLEY — No. C 61009 — CIVIL — STATE OF CALIFORNIA — 10/31/18

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.06

DRAWING NAME: J:\Survey\20090086-121\SHEETS\PHASE-01B\PH01B-C5504-SS-JSB.dwg (C5.06)
PLOT TIME: 4-28-2017 1:18 PM PLOTTED BY: Jason

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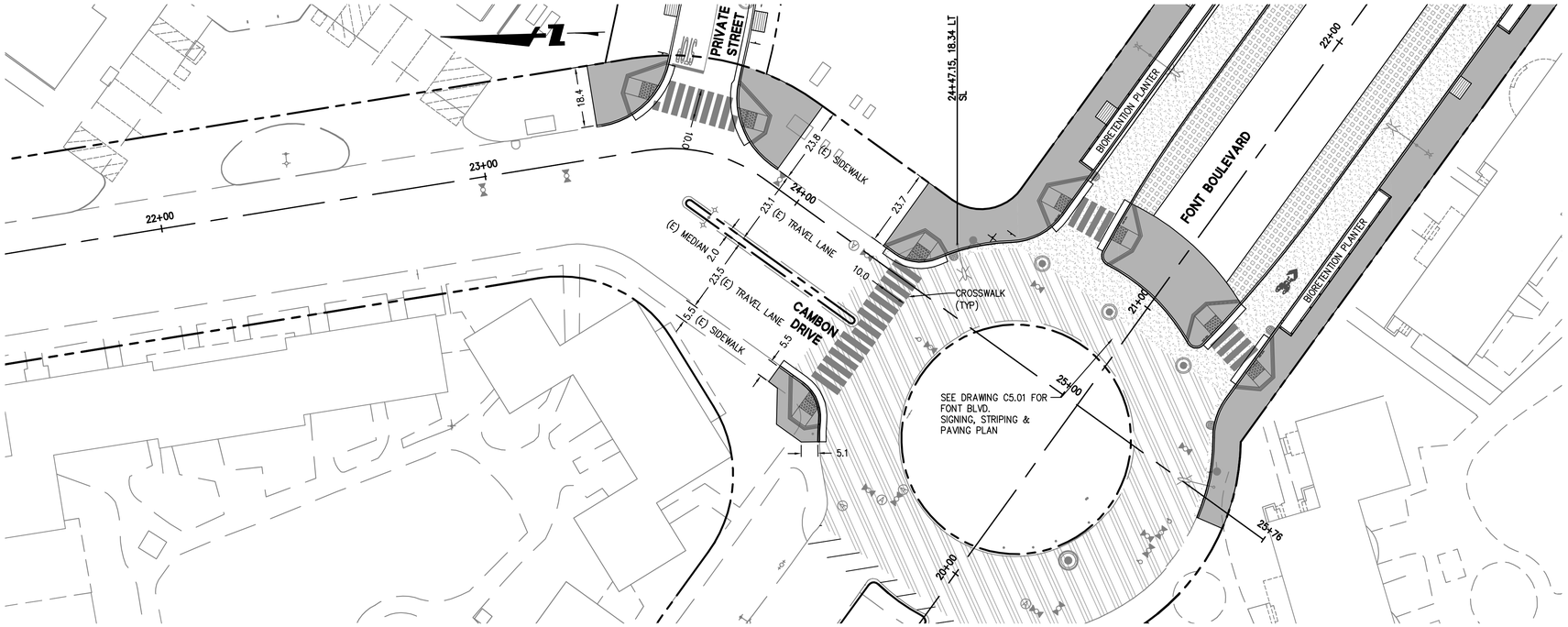



GRAPHIC SCALE

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SHEET NOTES

1. REFER TO 5.00 FOR GENERAL NOTES.

PAVING LEGEND

CITY STANDARD SIDEWALKS & DRIVEWAYS
3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 204.

AC PATH
3.5" AC/6" AGGREGATE BASE/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS

CITY STANDARD STREET (COMMERCIAL)
2" MIN. AC/8" MIN. CONC/PREPARED SUBGRADE, SEE SAN FRANCISCO STANDARD SPECIFICATIONS SECTIONS 200 THRU 221 FOR ADDITIONAL INFORMATION

REINFORCED CONCRETE BUS PAD
10"CONC, SEE SAN FRANCISCO STANDARD PLAN 96,607

DRIVEABLE SURFACE
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PLANING WEDGE
SEE SHEET C7.28.

AC OVERLAY
2" GRIND AND 2" MIN. AC OVERLAY

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PHASE 1B STREET IMPROVEMENT PLANS
SIGNING, STRIPING & PAVING PLAN – CAMBON DRIVE

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.07

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C503-SS-BHW.dwg (C5.07)
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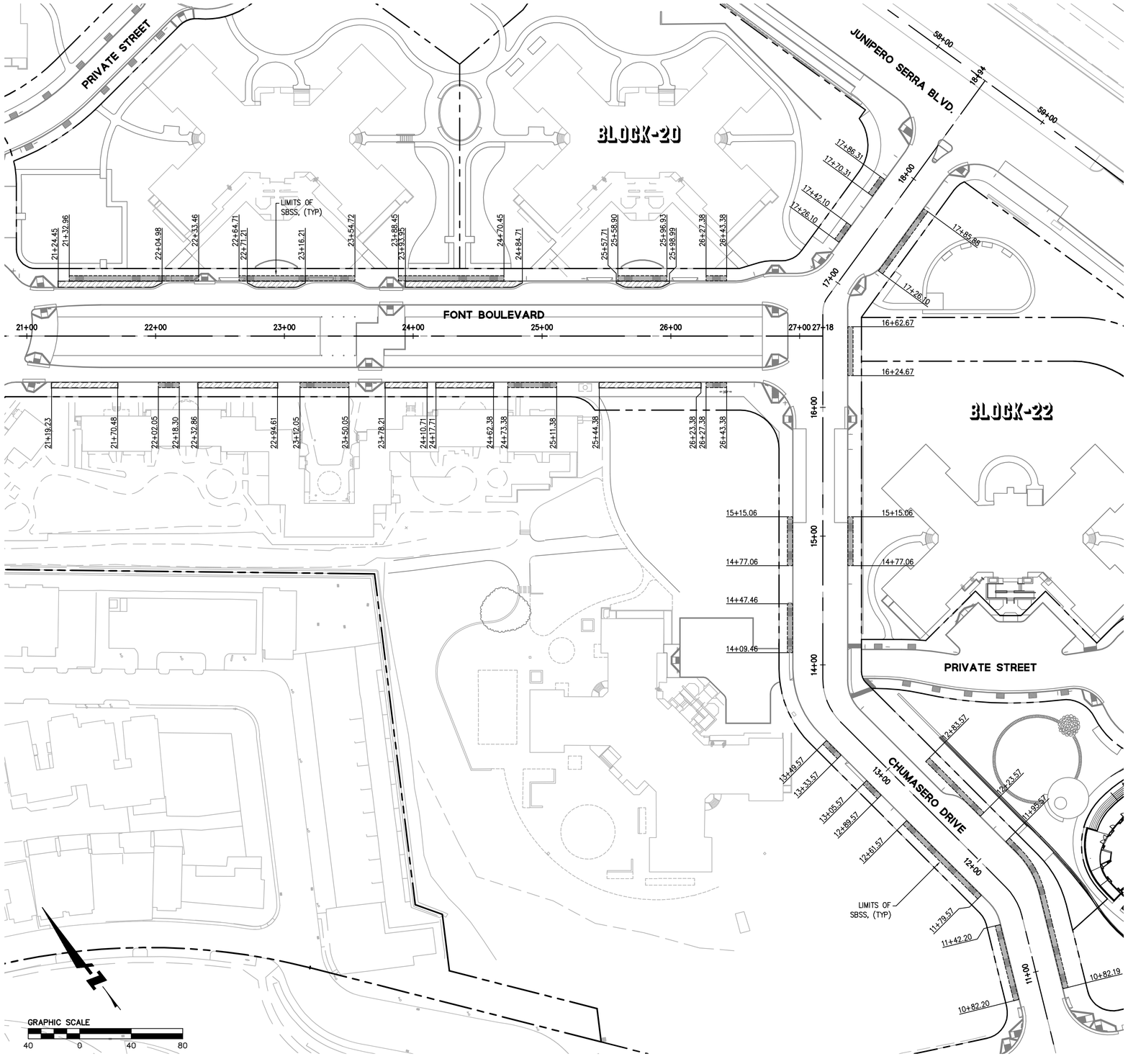


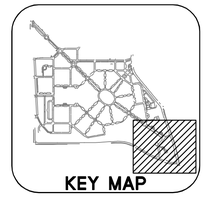
SHEET NOTES

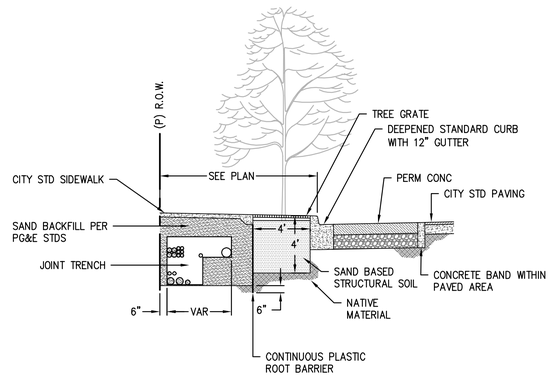
1. REFER TO C1.07 FOR EDGE TREATMENT DETAIL REFERENCES.
2. REFER TO SHEETS C3.14 THRU C3.24 FOR BIORETENTION PLANTER DETAILS INCLUDING GRADING, CURB CUTS, DRAINAGE NOTHCES, CHECK DAMS, LATERAL BRACING, ETC.
3. REFER TO C5.00 FOR GENERAL NOTES.

LEGEND

SAND BASED STRUCTURAL SOIL, SEE PROJECT SPECIFICATIONS AND TYPICAL SECTIONS THIS SHEET.

BIORETENTION SOIL, SEE PROJECT SPECIFICATIONS





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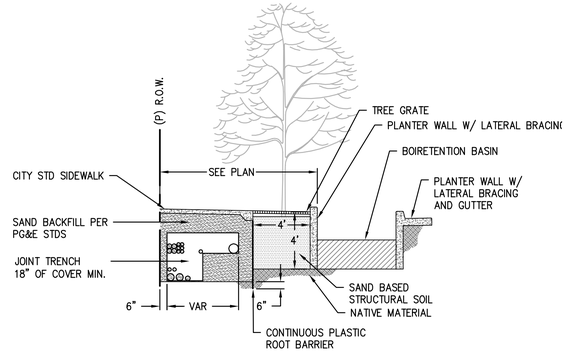

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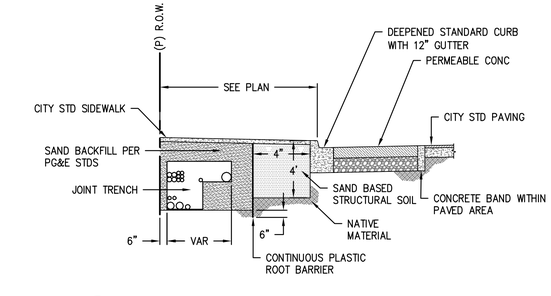

3 TYPICAL SIDEWALK SECTION – BETWEEN TREEWELLS
SCALE: 1"=5'

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PHASE 1B STREET IMPROVEMENT PLANS
SAND BASED STRUCTURAL SOIL PLAN

SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=80'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C5.08

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C505-SBSS.dwg (C5.08)
PLOT TIME: 4-28-2017 1:18 PM PLOTTED BY: burn

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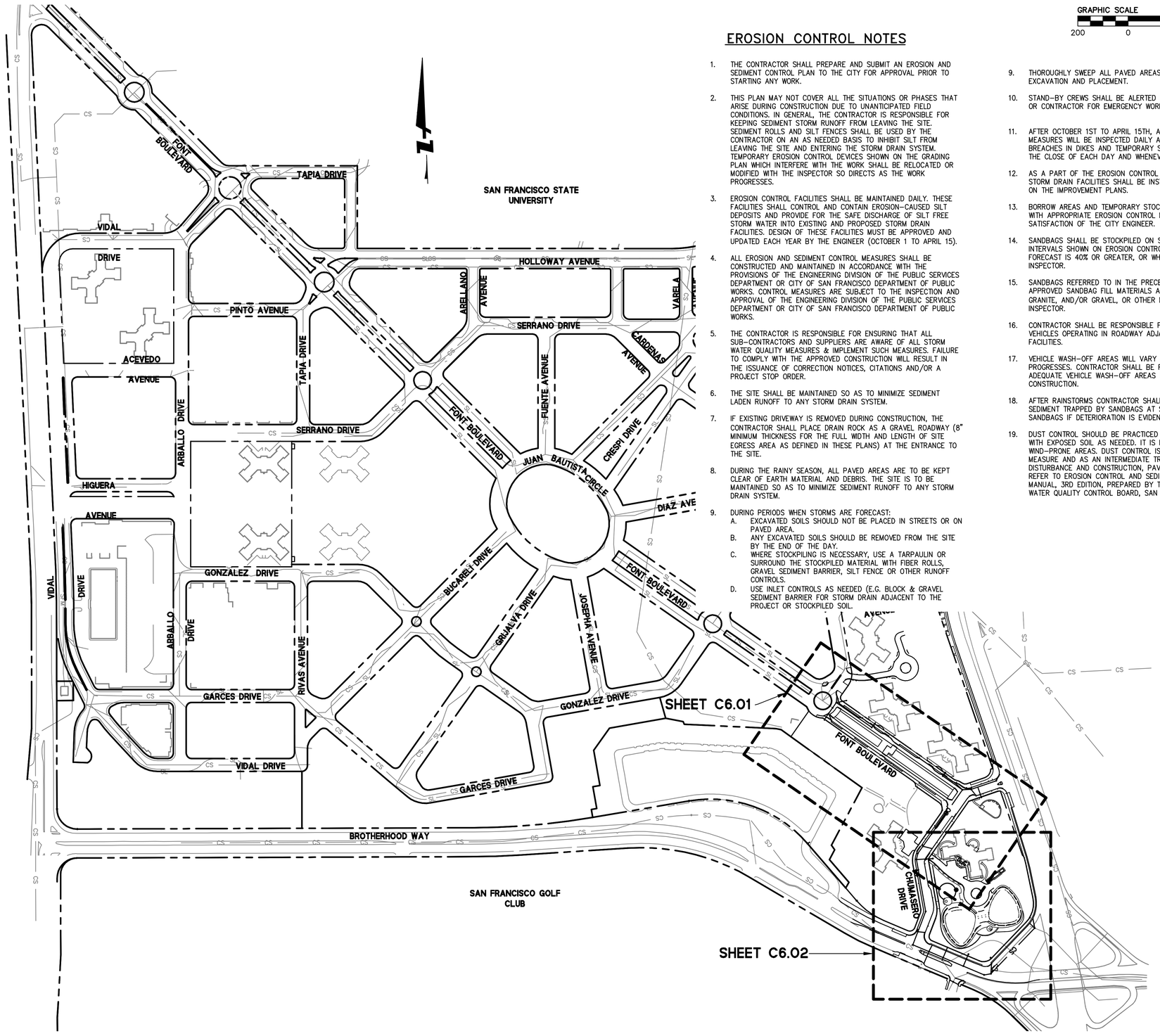

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL PREPARE AND SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN TO THE CITY FOR APPROVAL PRIOR TO STARTING ANY WORK.
2. THIS PLAN MAY NOT COVER ALL THE SITUATIONS OR PHASES THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT STORM RUNOFF FROM LEAVING THE SITE. SEDIMENT ROLLS AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WITH THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
3. EROSION CONTROL FACILITIES SHALL BE MAINTAINED DAILY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE ENGINEER (OCTOBER 1 TO APRIL 15).
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OR CITY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS. CONTROL MEASURES ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OR CITY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS AND/OR A PROJECT STOP ORDER.
6. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
7. IF EXISTING DRIVEWAY IS REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PLACE DRAIN ROCK AS A GRAVEL ROADWAY (8" MINIMUM THICKNESS FOR THE FULL WIDTH AND LENGTH OF SITE EGRESS AREA AS DEFINED IN THESE PLANS) AT THE ENTRANCE TO THE SITE.
8. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM.
9. DURING PERIODS WHEN STORMS ARE FORECAST:
   - A. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREA.
   - B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
   - C. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE OR OTHER RUNOFF CONTROLS.
   - D. USE INLET CONTROLS AS NEEDED (E.G. BLOCK & GRAVEL SEDIMENT BARRIER FOR STORM DRAIN ADJACENT TO THE PROJECT OR STOCKPILED SOIL.
9. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
10. STAND-BY CREWS SHALL BE ALERTED BY THE PERMIT APPLICANT OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
11. AFTER OCTOBER 1ST TO APRIL 15TH, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. BREACHES IN DIKES AND TEMPORARY SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHENEVER RAIN IS FORECAST.
12. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
13. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
14. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
15. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE, AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES.
17. VEHICLE WASH-OFF AREAS WILL VARY AS CONSTRUCTION PROGRESSES. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ADEQUATE VEHICLE WASH-OFF AREAS THROUGH ALL STAGES OF CONSTRUCTION.
18. AFTER RAINSTORMS CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SANDBAGS AT STAGING AREA. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
19. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITES WITH EXPOSED SOIL AS NEEDED. IT IS IMPORTANT IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING, OR REVEGETATION. REFER TO EROSION CONTROL AND SEDIMENT CONTROL FIELD MANUAL, 3RD EDITION, PREPARED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION.

GRAPHIC SCALE
200 0 200 400

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650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
EROSION & SEDIMENT CONTROL PLAN - KEY MAP
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

Revisions

No.	

Date: 05/01/17
Scale: 1"=200'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.00

DRAFT

DRAWING NAME: J:\Sg01\090086-101 SHEETS\PHASE-01B\PH01B-C600-EC.dwg (36.00)
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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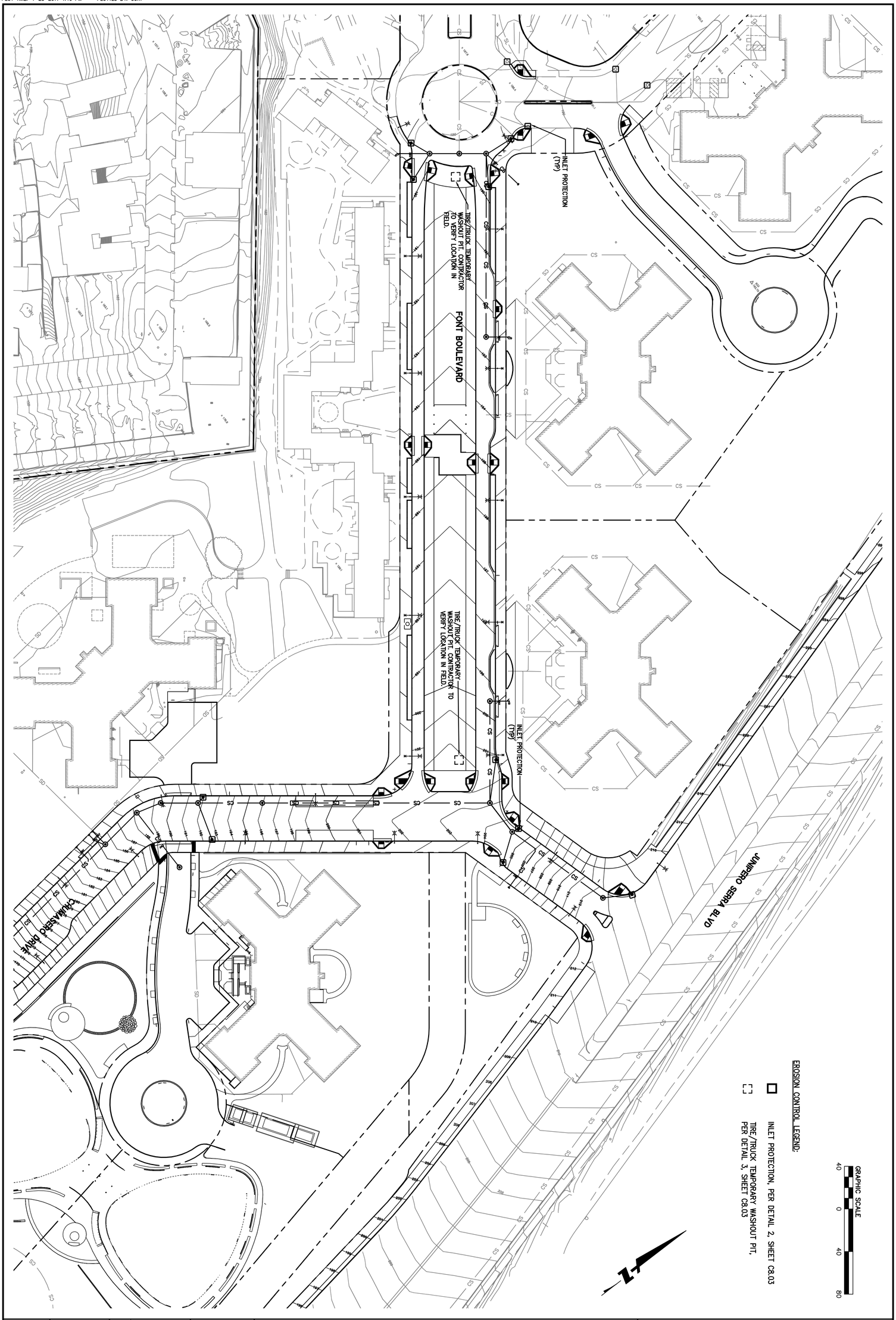

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

Drawing Number:	Date: 05/01/17	No.	Revisions
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	Design: TH		
	Drawn: NL		
	Approved: BS		
	Job No: 20090086		

PARKMERCED

PHASE 1B STREET IMPROVEMENT PLANS

EROSION & SEDIMENT CONTROL PLAN – NORTH

SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

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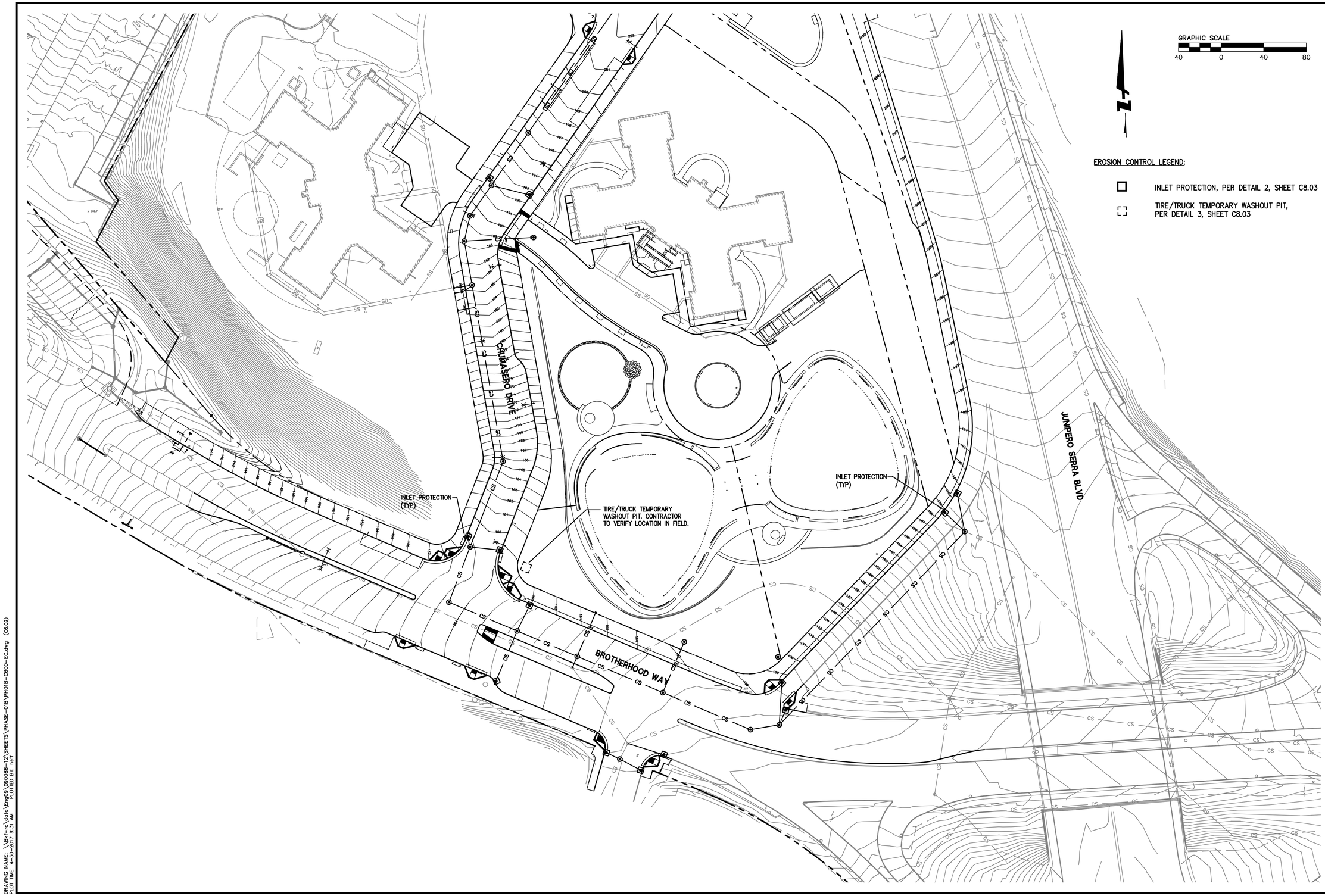

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PHASE 1B STREET IMPROVEMENT PLANS
EROSION & SEDIMENT CONTROL PLAN – SOUTH
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
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STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.02

DRAWING NAME: \\Bkf-rc\data\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C600-EC.dwg (C6.02)
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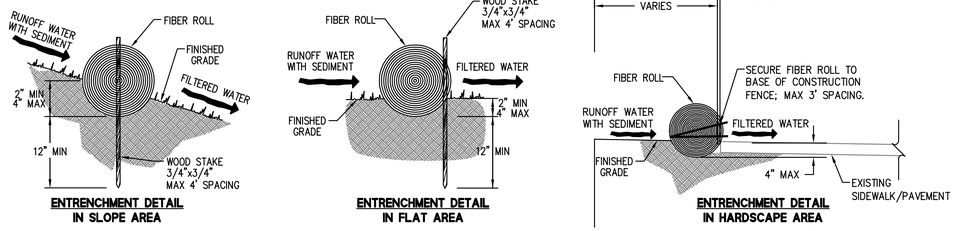
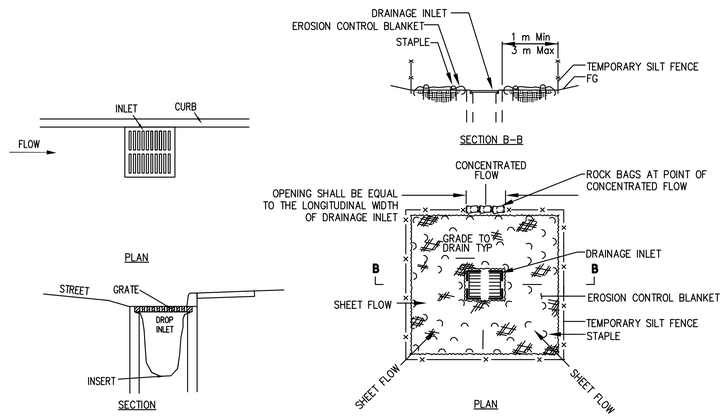
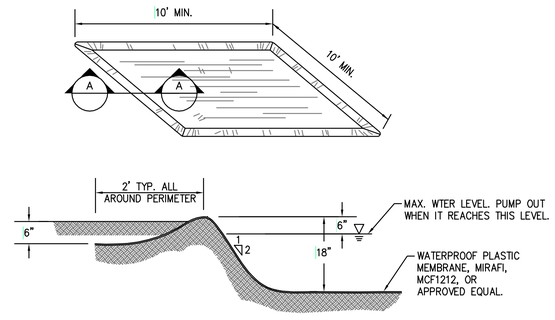


NOTES:
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, DUG ON CONTOUR.
2. ADJACENT ROLLS SHALL TIGHTLY ABUT.
3. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

1 — **FIBER ROLL DETAIL**
N.T.S.



2 — **DROP INLET PROTECTION**
NTS



SECTION A-A

3 — **TIRE/TRUCK TEMPORARY WASH OUT PIT**
N.T.S.

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EROSION & SEDIMENT CONTROL PLAN - DETAILS
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No.	Revisions

Date: 05/01/17
Scale: N.T.S
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.03

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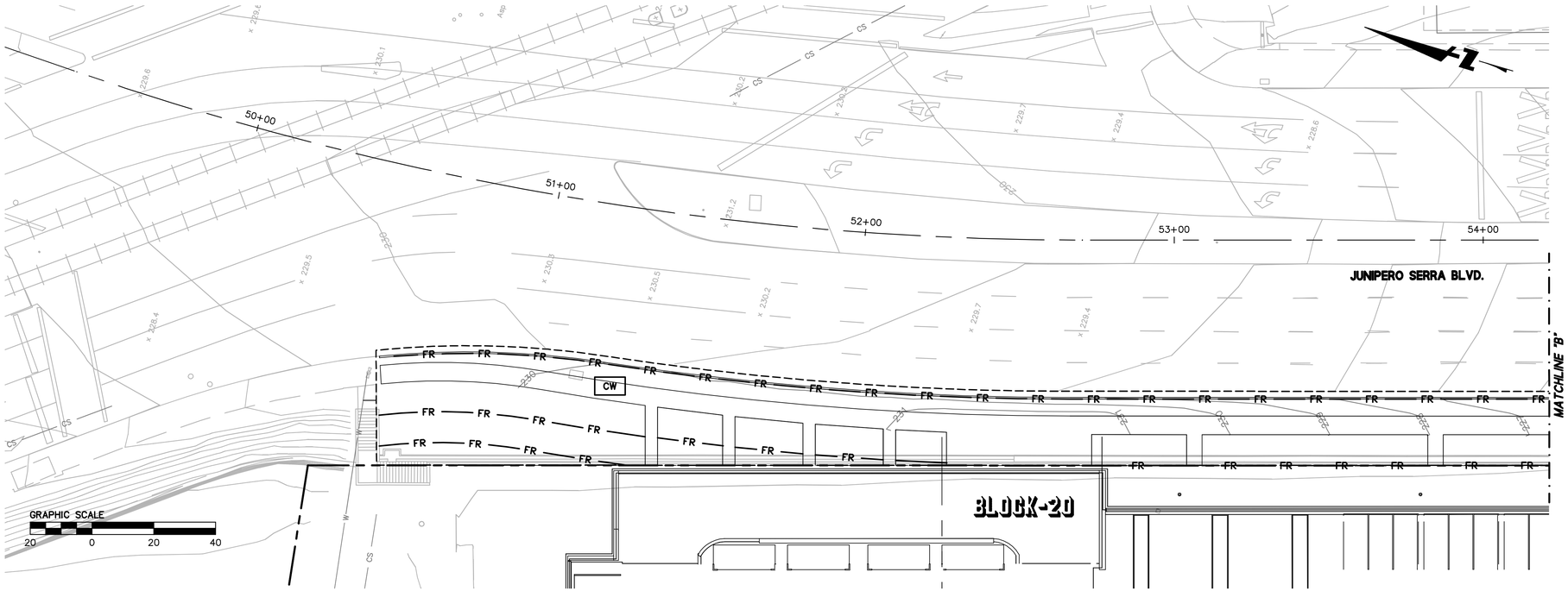
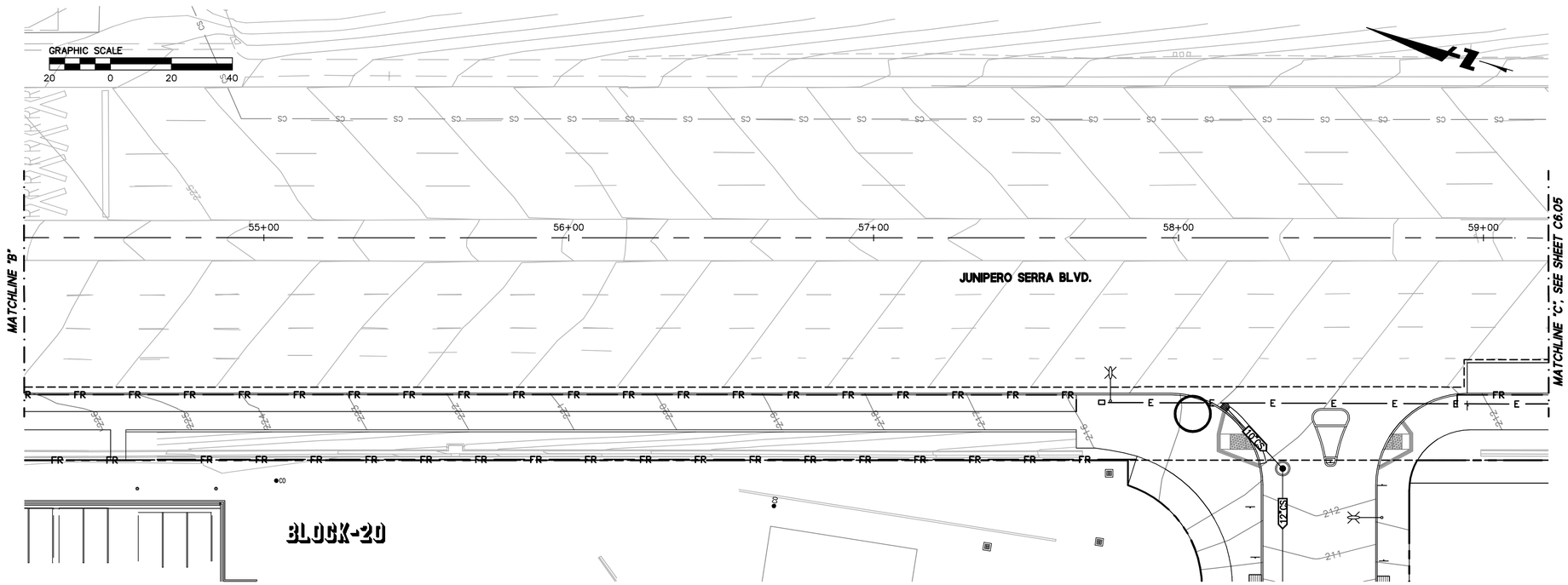




LEGEND

- TEMPORARY INLET PROTECTION
- FR — TEMPORARY FIBER ROLL
- CW — TEMPORARY CONCRETE WASHOUT FACILITY (PORTABLE)



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PHASE 1B STREET IMPROVEMENT PLANS
WATER POLLUTION CONTROL PLAN – JUNIPERO SERRA BLVD
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
BRIAN E. SCOTT
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
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Approved: BS
Job No: 20090086

Drawing Number:
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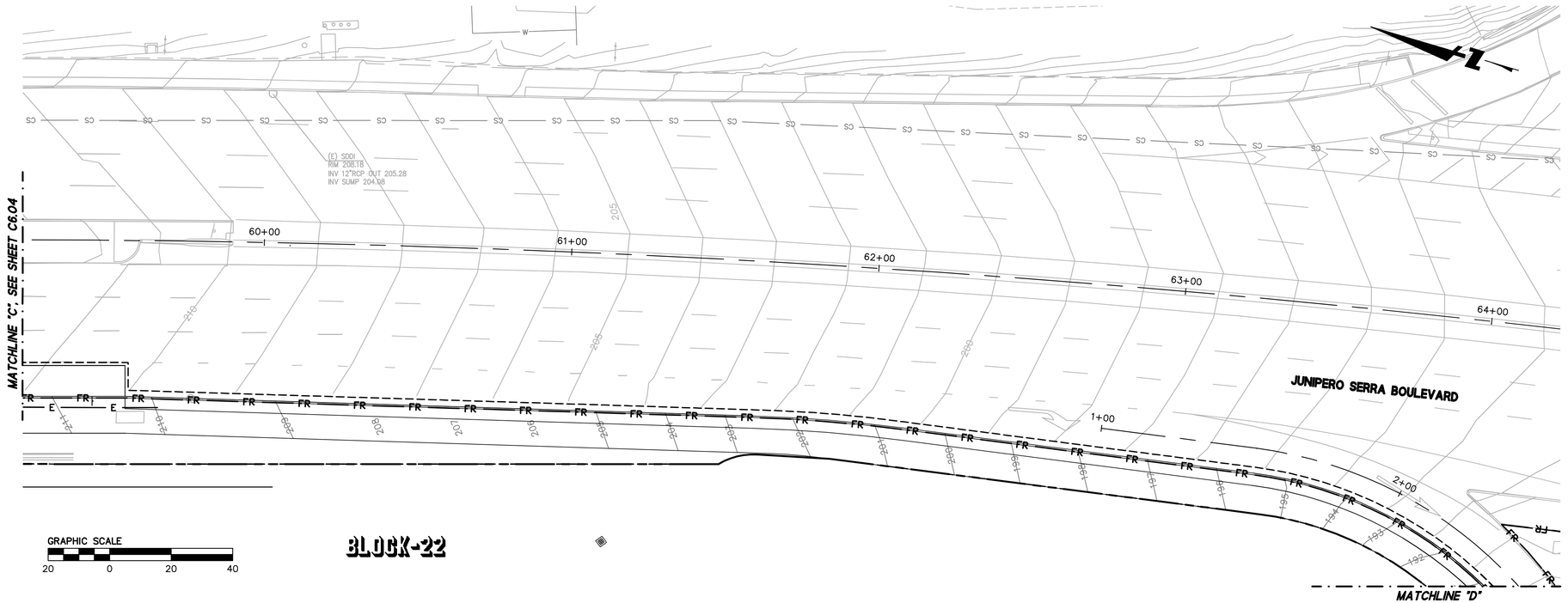
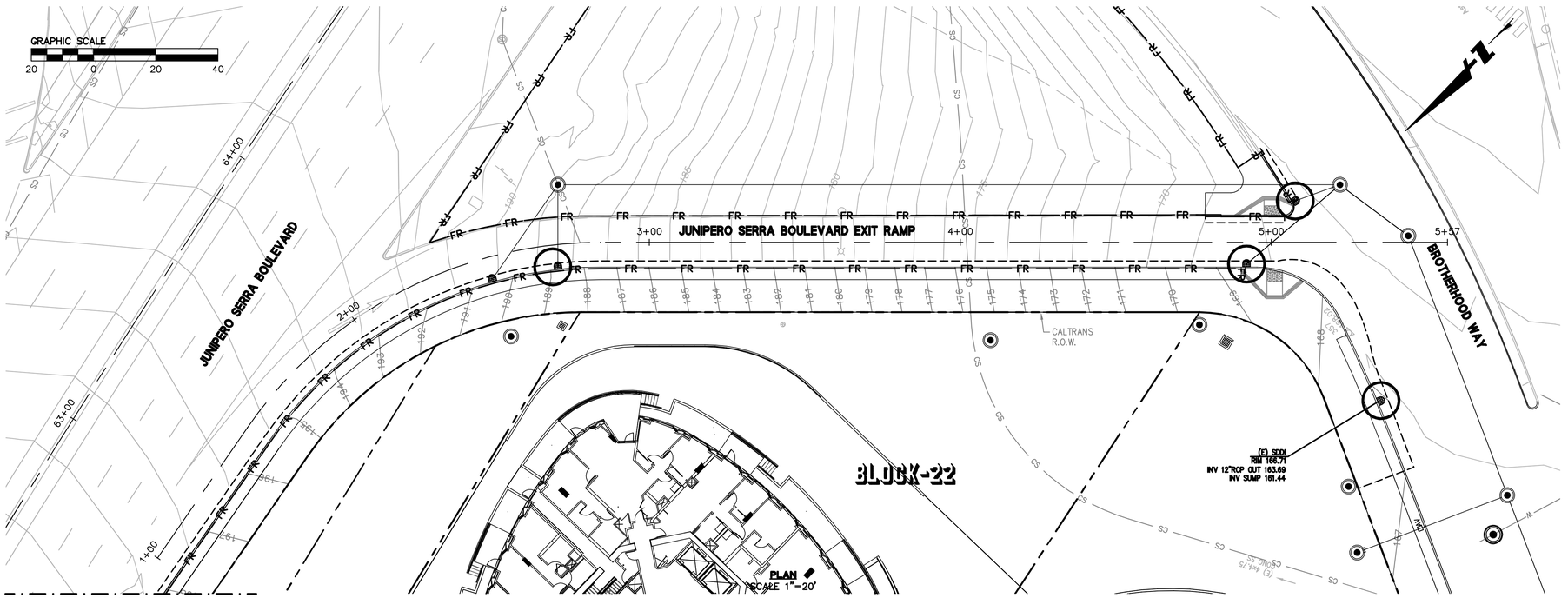




LEGEND

- TEMPORARY INLET PROTECTION
- FR — TEMPORARY FIBER ROLL
- CW — TEMPORARY CONCRETE WASHOUT FACILITY (PORTABLE)



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PHASE 1B STREET IMPROVEMENT PLANS
WATER POLLUTION CONTROL PLAN – JUNIPERO SERRA BLVD
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
GLENN THEIEN
No. C 61127
CIVIL
STATE OF CALIFORNIA
10/31/18

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.05

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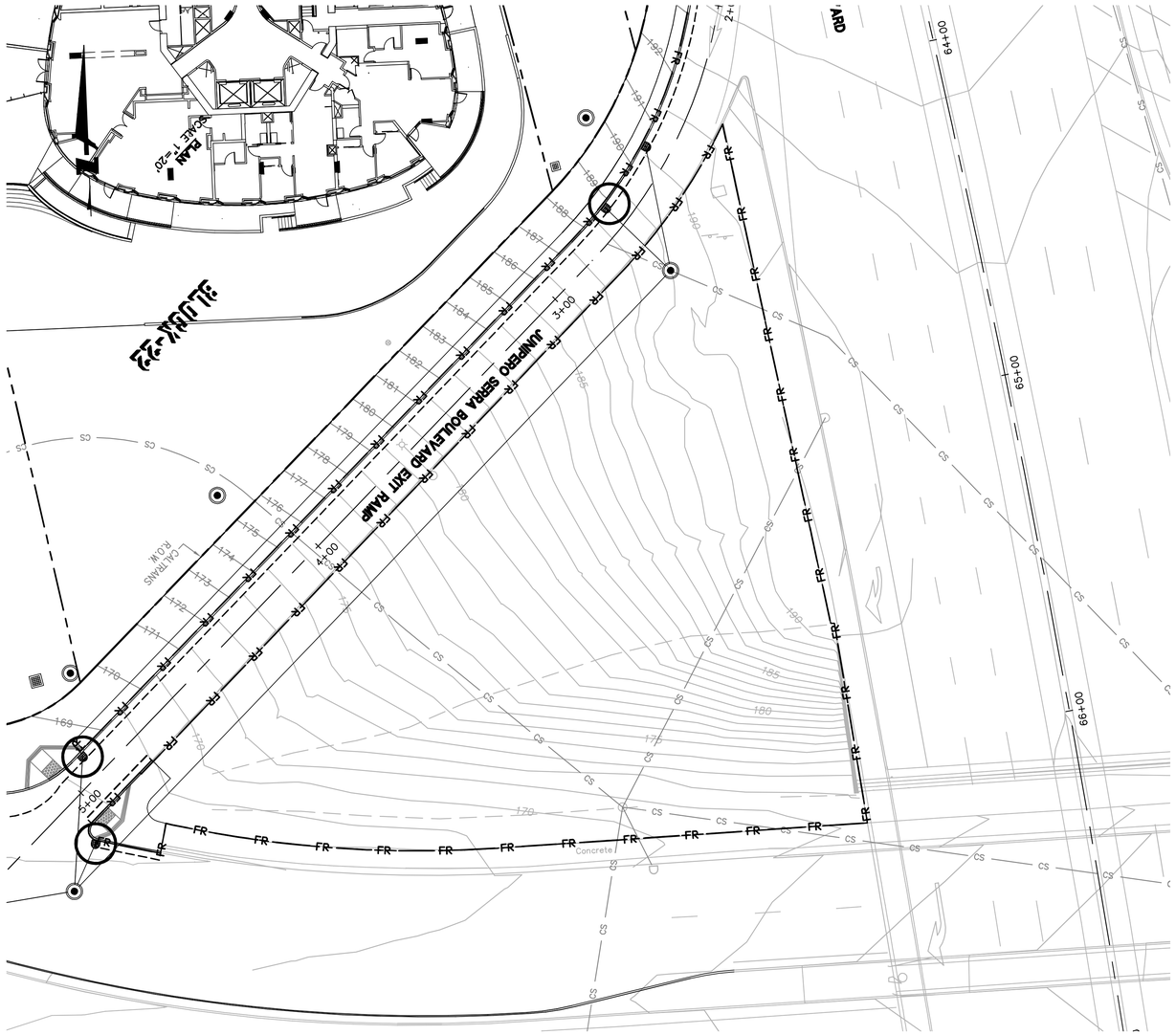



LEGEND

(symbol)	TEMPORARY INLET PROTECTION
— FR —	TEMPORARY FIBER ROLL
CW	TEMPORARY CONCRETE WASHOUT FACILITY (PORTABLE)

SHEET NOTES
1. REFER TO C1.30 FOR GENERAL NOTES.

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PHASE 1B STREET IMPROVEMENT PLANS
WATER POLLUTION CONTROL QUANTITIES - JUNIPERO SERRA BLVD
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61089
Exp. 12/31/18
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Date: 05/01/17
Scale: AS SHOWN
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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.06

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PLOT TIME: 4-28-2017 1:20 PM PLOTTED BY: burn

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TEMPORARY WATER POLLUTION CONTROL QUANTITIES

SHEET	TEMPORARY CONCRETE WASHOUT (PORTABLE)	TEMPORARY FIBER ROLL	TEMPORARY DRAINAGE INLET PROTECTION
	LS	LF	EA
C7.00	1	1503	1
C7.01	–	736	3
C7.02	–	726	1
TOTAL	1	2965	5

SHEET NOTES

1. C7.01 QUANTITIES INCLUDE ONLY THE LIMIT OF WORK SHOWN ON SHEET C7.01 THAT IS NORTH OF THE JUNIPERO SERRA BOULEVARD EXIT RAMP.
2. C7.02 QUANTITIES INCLUDE ONLY THE LIMIT OF WORK SHOWN ON SHEET C7.02 THAT IS SOUTH OF THE JUNIPERO SERRA BOULEVARD EXIT RAMP.

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WATER POLLUTION CONTROL QUANTITIES
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NEHAN SEGOV
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C6.07

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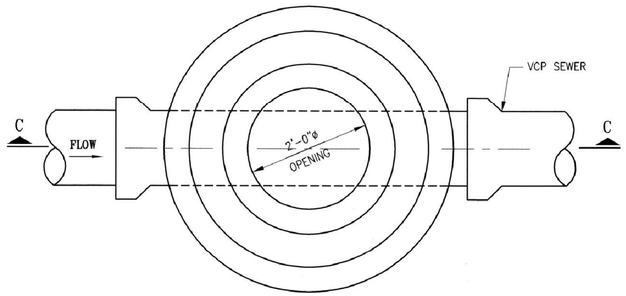

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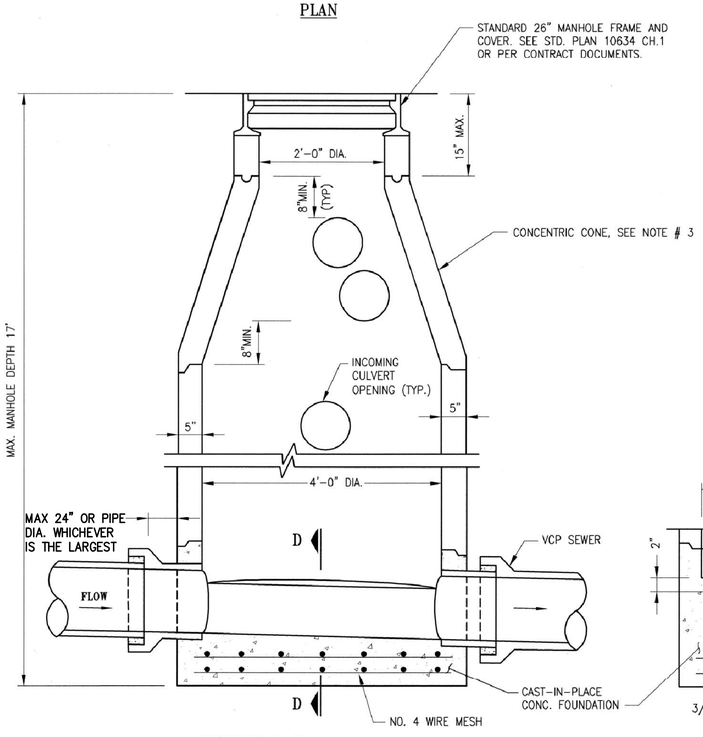
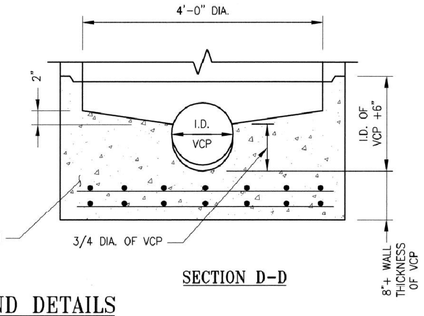


SECTION C-C



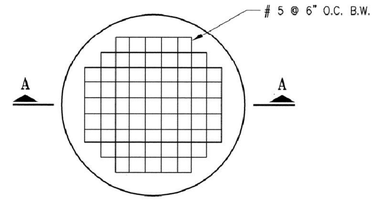
SECTION D-D

MANHOLE PLAN AND DETAILS

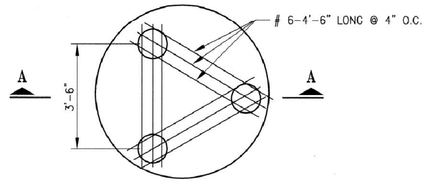
This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.

NOTES

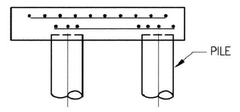
1. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN CLASS "C" MORTAR.
2. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. VERTICAL WALL OF CONCENTRIC CONE SHALL BE ON UPSTREAM SIDE OF MANHOLE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. CAST-IN-PLACE CONCRETE FOUNDATION SHALL BE CLASS 6-3000-3/4.
5. CULVERT OPENINGS SHALL BE A MINIMUM OF 8" FROM PRECAST SECTION JOINTS.
6. CONTRACTOR SHALL MINIMIZE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
7. **STEEL REINFORCEMENT IN FOUNDATION IS REQUIRED.**
8. SIDE SEWER CONNECTIONS TO THE MANHOLE SHALL NOT BE HIGHER THAN 12" ABOVE THE INVERT OF THE MANHOLE.
9. CULVERT CONNECTIONS SHALL BE FLUSH WITH INSIDE FACE OF THE MANHOLE WALL.
10. MANHOLE DEPTH SHALL NOT EXCEED 17'.



TOP REINFORCING STEEL



BOTTOM REINFORCING STEEL



SECTION A-A

REINFORCED CONCRETE FOUNDATION FOR MANHOLE ON PILES

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:	
ID	12/2006	
DRAWN:	DATE:	
AM/JL	07/2003	
CHECKED:	DATE:	
KS	12/2006	

PLANS APPROVAL DATE: APRIL 30, 2007

4/30/07
SECTION MANAGER

4/30/07
DEPUTY BUREAU MANAGER

BUREAU MANAGER

STANDARD PLAN

HYDRAULICS

PRECAST CONCRETE MANHOLE FOR 12" AND 24" DIAMETER SEWERS

OLD FILE NO. 45,560 CH 1

FILE NO. 87,181

REV. NO.

BKF ENGINEERS
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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO CALIFORNIA

Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.00

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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Dimension Scale: 40
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Measurement Units are English
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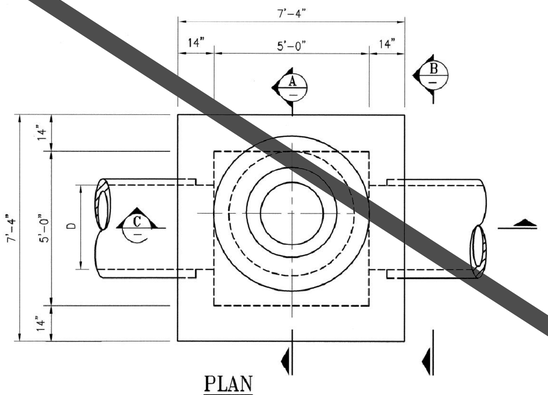

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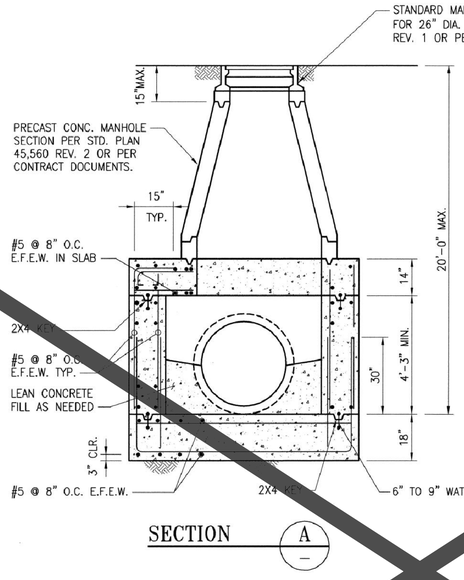

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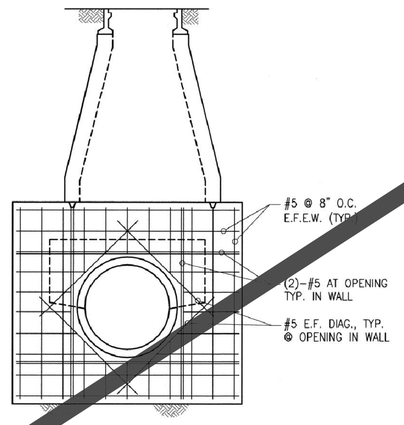

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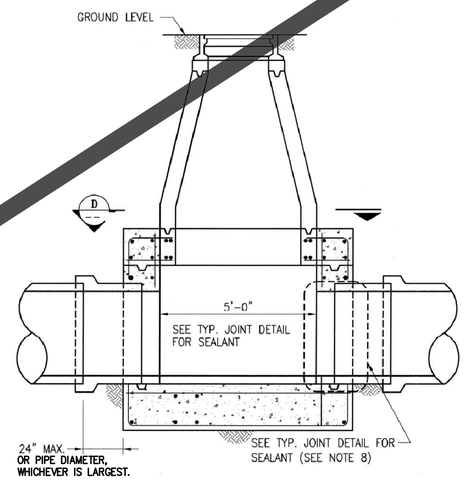

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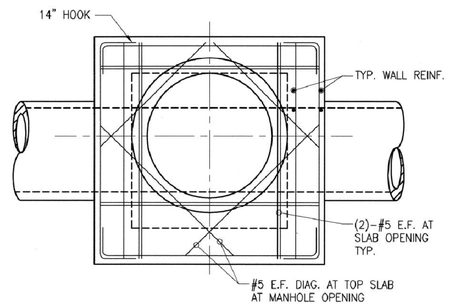

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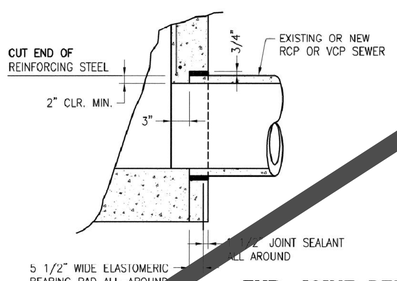

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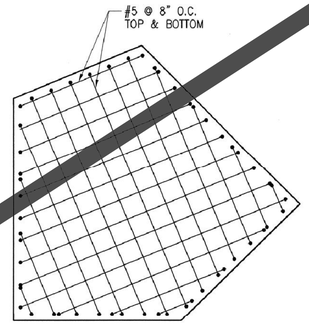

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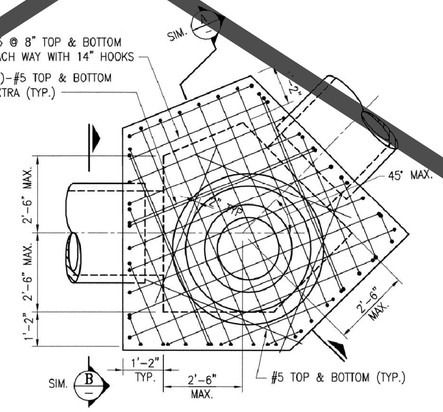

TOP SLAB

ANGLE MANHOLE

GENERAL NOTES

1. ALL REINFORCING STEEL SHALL BE PLACED AT LEAST 2" FROM FACE OF CONCRETE, EXCEPT WHERE OTHERWISE SHOWN.
2. PROVIDE CONTINUOUS BENDS AT ALL CORNERS AND LAP BARS AS SHOWN.
3. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN A FLEXIBLE GASKET-JOINT SEALANT (RUB'R-NEK).
4. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
5. CAST-IN-PLACE CONCRETE FOUNDATION SHALL BE CLASS 6-4000-3/4.
6. CULVERT OPENING SHALL BE A MINIMUM OF 8" FROM PRECAST SECTION JOINTS.
7. CONTRACTOR SHALL MINIMIZE THE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
8. USE STEEL WALL ANCHOR RING CONNECTION PER CONTRACT DOCUMENTS FOR PIPE 42" AND GREATER.
9. HEIGHT OF CAST-IN-PLACE PORTION OF MANHOLE SHALL BE INCREASED, AS NECESSARY, TO ACCOMODATED EGG-SHAPED AND OTHER MONOLITHIC SEWERS.

This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.

NO.	DATE	DESCRIPTION	BY	APP.

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REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
AM	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER 4/30/07
DEPUTY BUREAU MANAGER 4/30/07
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
STANDARD CONCRETE MANHOLE
FOR PIPE SEWERS
27" TO 48" DIAMETER

OLD FILE NO. 48,057 CH 3
FILE NO. 87,182
REV. NO.

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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN SCOTT KELLY No. C 61582 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.01

Dimension Scale: 40
Model Units: Feet
Measurement Units are English
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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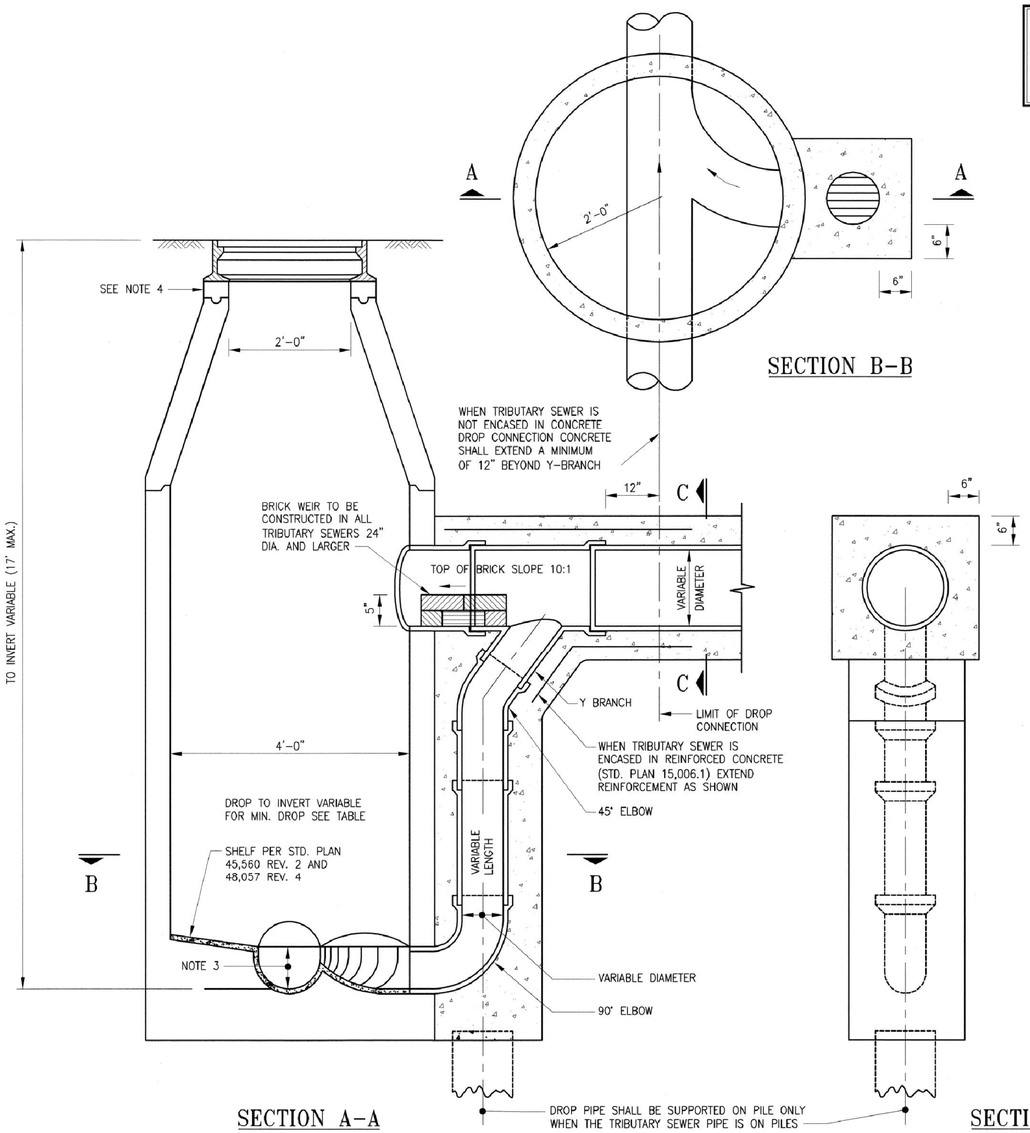

TABLE

SIZE OF TRIBUTARY SEWER	SIZE OF DROP PIPE	MINIMUM DROP
8"	6"	3'-3"
12"	6"	3'-3"
15"	8"	3'-9"
18"	8"	3'-9"
21"	10"	4'-6"
24"	10"	4'-6"
27"	12"	5'-0"
30"	12"	5'-0"
33"	12"	5'-0"
36"	12"	5'-0"

GENERAL NOTES

1. FOR DETAILS OF M.H. FRAME & COVER, SEE STANDARD PLAN A-10,634 CH. 1
2. DEPTH OF CHANNEL SHALL BE 3/4 THE DIAMETER OF THE LARGEST PIPE TRIBUTARY TO MANHOLE OR AS SHOWN IN PLANS FOR A PARTICULAR PROJECT. THE MANHOLE FLOOR AND CHANNEL SHELL BE PLASTERED WITH CLASS "C" MORTAR 1/2" THICK
3. WHERE TWO OR MORE DROP INLETS ARE REQUIRED, EACH INLET SHALL BE BUILT AS SHOWN FOR SINGLE DROP INLET IN THE ABOVE SECTIONS
4. FOR DETAILS OF MANHOLE SEE STD. PLANS 45,560 REV. 2 & 48,057 REV. 4 SFPUC/DPW STANDARD SPECIFICATIONS
5. FOR ENCASEMENT AND STEEL DETAILS SEE STANDARD PLAN A-15,006.1
6. ALL CONCRETE SHALL BE CLASS 6-3000-3/4

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	ID	DATE: 12/2006
DRAWN:	AM	DATE: 07/2003
CHECKED:	KS	DATE: 12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07 SECTION MANAGER
4/30/07 DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
DROP MANHOLE FOR V.C.P. SEWERS

OLD FILE NO. LL-266 CH 4
FILE NO. 87,186
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — KEVIN KEIKEN — No. 73691 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number: C7.02

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\5-PROJ\20086-121SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.02)
PLOT TIME: 4-28-2017, 1:03 PM PLOTTED BY: Dan
Xrefs: V:\20966\ Standard Plans & Specs Update\2_Plans\FINAL\PH01SP-87166.dwg, Logo; ceranlogo
Attachment Units are English
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Model Units feet
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Plot Time: Fri, 27 Apr 2007 - 7:29pm
Xrefs: V:\20966\ Standard Plans & Specs Update\2_Plans\Title_Block\BOE STD Title Block.dwg

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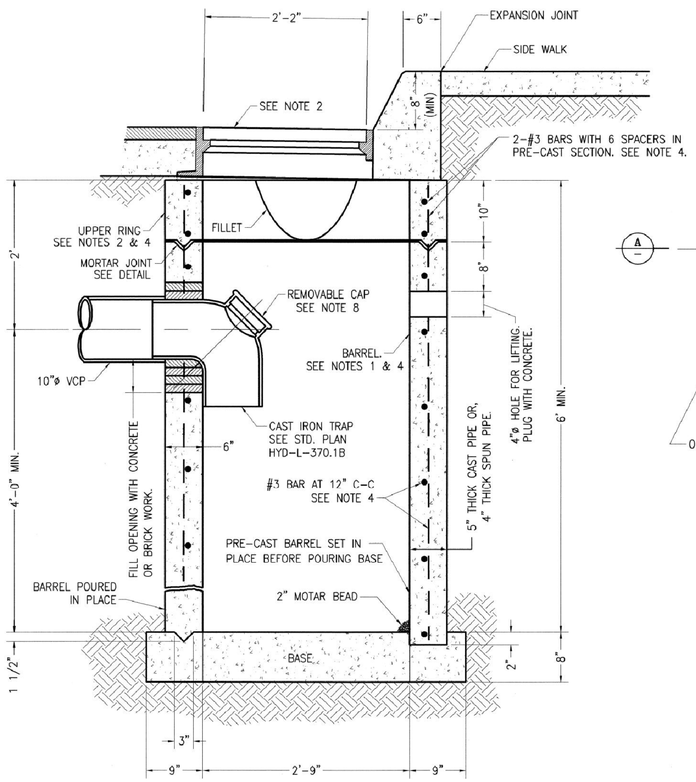
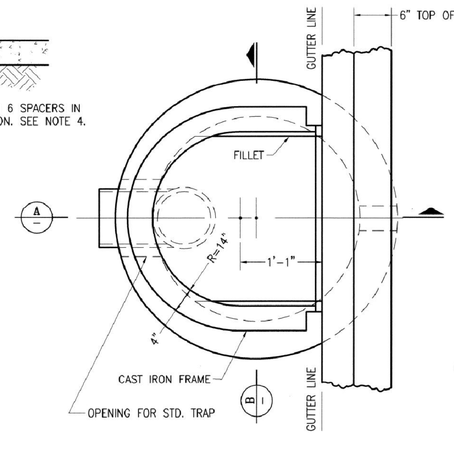
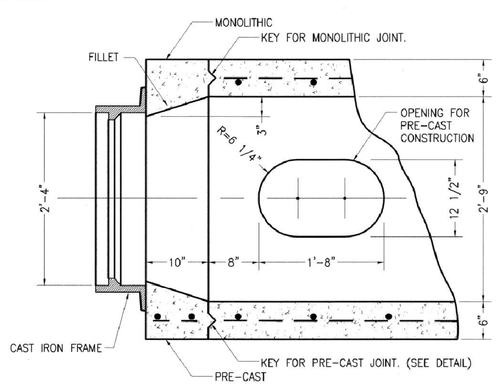


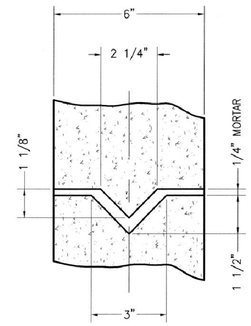
SEACTION A-A
SCALE: 1"=10"



PLAN
SCALE: 1"=10"



SECTION B-B
SCALE: 1"=10"



DETAIL OF KEY
NOT TO SCALE

NOTES:

1) BARREL OF C.B. MAY BE PRE-CAST CONCRETE WITH REINFORCING STEEL AS SHOWN, OR POURED IN PLACE CONCRETE WITHOUT STEEL.
2) UPPER RING OF C.B. MAY BE PRE-CAST CONCRETE WITH MATCHING KEY AS SHOWN OR POURED IN PLACE CONCRETE WITHOUT STEEL, OR CONSTRUCTED OF BRICK.
3) FOR DETAILS OF CATCH BASIN FRAME AND GRATING SEE STD. PLAN HYD-LL-360 REV. 5
4) 4"X4" MESH No.4 X No.4 WIRE MAY BE SUBSTITUTED FOR REINFORCING BARS.
5) BASE SHALL BE CONCRETE POURED IN PLACE.
6) ALL CONCRETE SHALL BE CLASS 6-3000-3/4.
7) FRAME AND GRATES OF CATCH BASINS TO BE INSTALLED IN TRAVELED LANES SHALL CONFORM TO GUTTER ELEVATION.
8) CLEANOUT CAP SHALL BE "T" CONE EXPANDABLE CLEANOUT PLUG S-802 OF ETCO SPECIAL PRODUCTS, INC. OR EQUAL.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
JL	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07 SECTION MANAGER
4/30/07 DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
STANDARD CONCRETE CATCH BASIN WITHOUT CURB INLET AND WITH CAST IROM TRAP

OLD FILE NO. LL-18,039.1 CH 7
FILE NO. 87,188
REV. NO.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.03

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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Xrefs: V:\0966J Standard Plans & Specs Update\2_Plans\TMM\TYPICAL-ST-BTBR.dwg, xdgn: carenitos
Miscellaneous Units are English
Dimension Scale: 10
Model Units: Feet
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Plot Time: Fri, 21 Apr 2017 - 1:25pm

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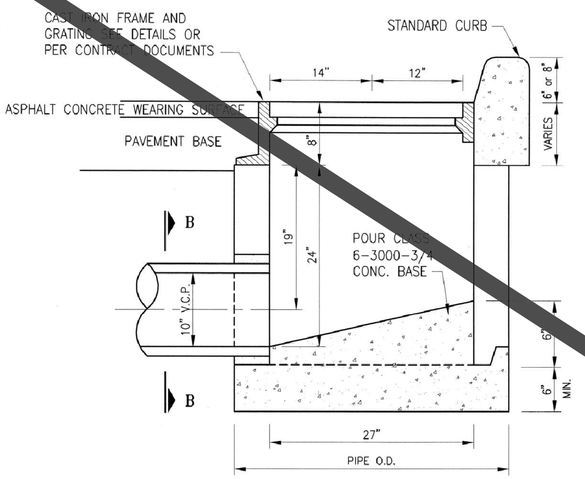
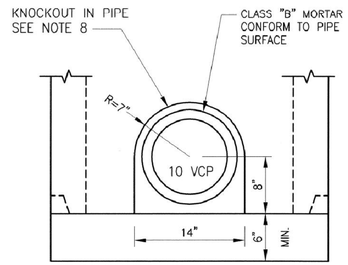
GENERAL NOTES

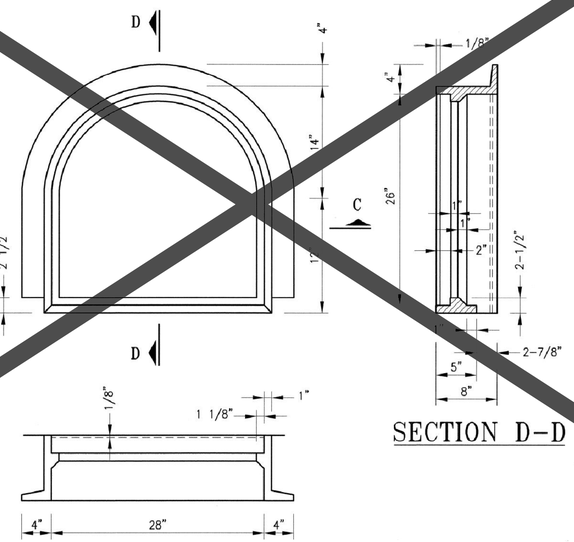
1. CAST IRON SHALL BE IN ACCORDANCE WITH THE CURRENT A.S.T.M. STANDARD SPECIFICATIONS FOR GRAY-IRON CASTINGS (CL 30). DESIGNATION A-48.
2. PRECAST REINFORCED CONCRETE PIPE SHALL BE IN ACCORDANCE WITH THE CURRENT A.S.T.M. STANDARD SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT STORM DRAIN AND SEWER PIPE, DESIGNATION C-76.
3. COMPUTED WEIGHT OF FRAME – 260 POUNDS.
4. COMPUTED WEIGHT OF GRATING – 250 POUNDS.
5. THE NAME OF THE FOUNDRY, THE YEAR OF MANUFACTURE AND THE PATTERN NUMBER SHALL BE CAST ON THE UNDERSIDE OF EACH CASTING IN 3/4" LETTERS RAISED 1/8".
6. THE WORD "SAN FRANCISCO" SHALL BE CAST AS INDICATED ON THE TOP OF THE GRATING IN 3/4" LETTERS RAISED 1/8".
7. FINISH: GRIND HIGH SPOTS FROM CONTACT SURFACES TO OBTAIN BEARING OF GRATING ON FRAME.
8. CULVERT BARREL MAY BE PROVIDED WITH A KNOCKOUT AS SHOWN OR THE CULVERT CONNECTION MAY BE MADE BY CHIPPING OUT IN ACCORDANCE WITH SF PUC. STANDARD SPECIFICATIONS.
9. OUTLET PIPE MAY BE POINTED IN ANY DIRECTION.



SECTION A-A

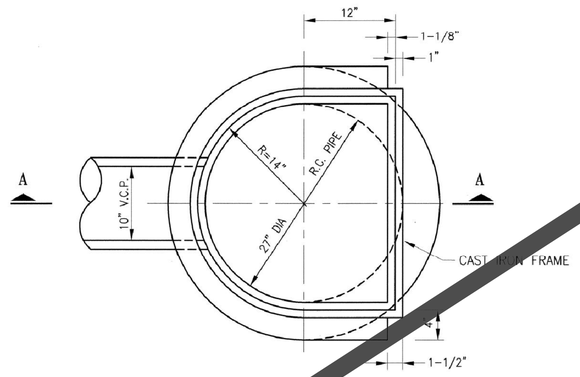


SECTION B-B



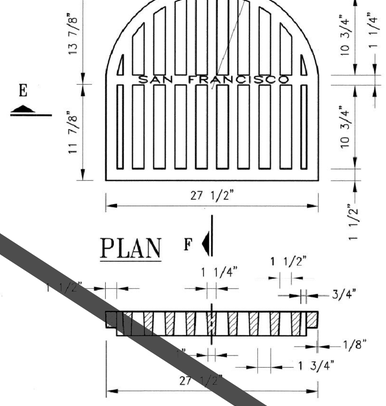
SECTION C-C

SECTION D-D



PLAN

STORM WATER INLET



PLAN

SECTION E-E

SECTION F-F

CAST IRON GRATING

NO.	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
AM	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER 4/30/07
DEPUTY BUREAU MANAGER 4/30/07
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
STORM WATER INLET

OLD FILE NO. A-33,585 CH 2
FILE NO. 87,189
REV. NO.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

Revisions | No.

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.04

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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Dimension Scale: 1
Model Units: Feet

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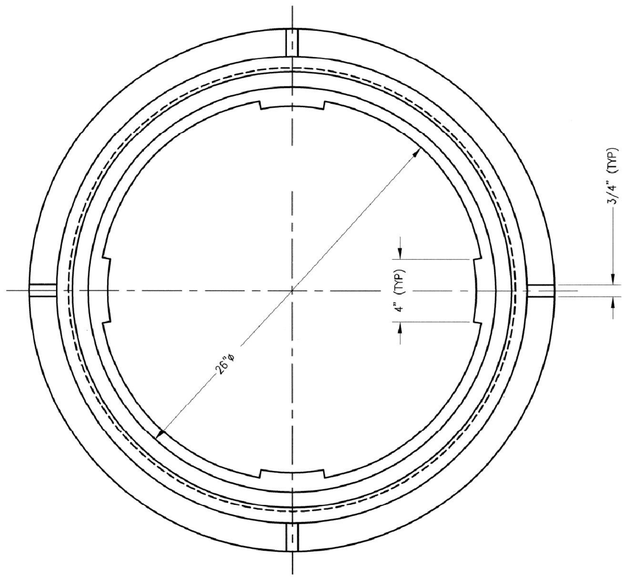
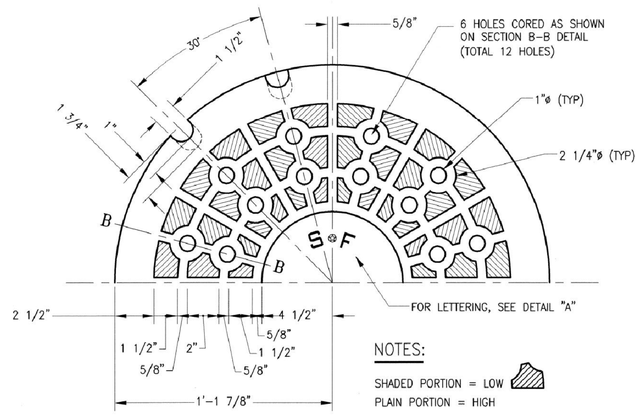
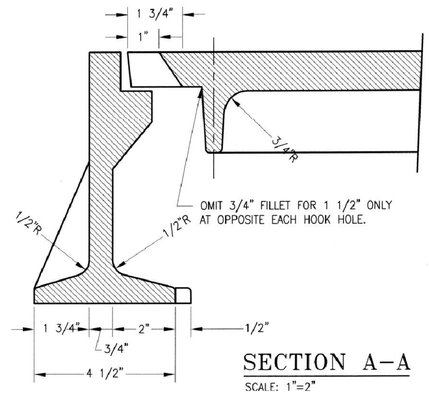


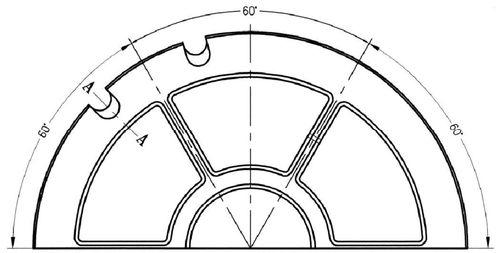
PLAN VIEW OF MANHOLE FRAME
SCALE: 1"=4"

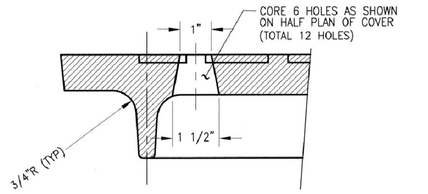


HALF PLAN OF COVER
SCALE: 1"=4"

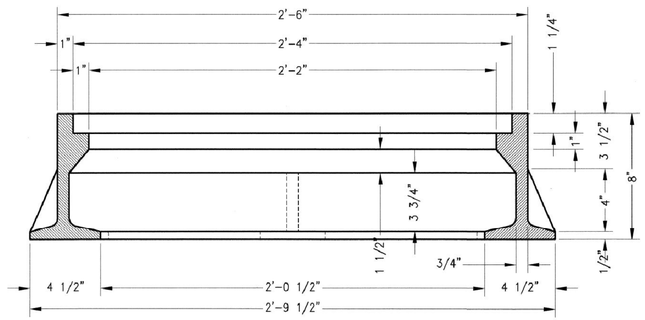


SECTION A-A
SCALE: 1"=2"





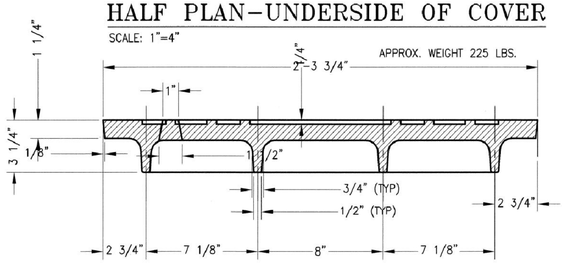
SECTION B-B
SCALE: 1"=2"



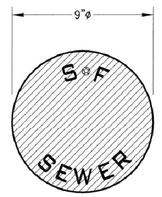
SECTION OF MANHOLE FRAME
SCALE: 1"=4"
APPROX. WEIGHT 258 LBS.

NOTE : MATERIAL FOR MANHOLE FRAME AND COVER TO BE "GRAY IRON" IN ACCORDANCE WITH CURRENT A.S.T.M. - SPEC. A-48

HALF PLAN-UNDERSIDE OF COVER
SCALE: 1"=4"



SECTION OF COVER
SCALE: 1"=4"



LETTER SIZE SHALL BE 1 1/4" . PATTERN TO BE MADE SO THAT OTHER LETTERING CAN BE INSERTED IN THIS SPACE IF ORDERED.

DETAIL "A"
SCALE: 1"=2"

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NO.	DATE	DESCRIPTION	BY	APP.

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BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	ID	DATE: 12/2006
DRAWN:	JL	DATE: 07/2003
CHECKED:	KS	DATE: 12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07
SECTION MANAGER
4/30/07
DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
STANDARD 26" MANHOLE FRAME & COVER

OLD FILE NO. A-10,634
FILE NO. 87,190
REV. NO.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.05

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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Model Units: Feet
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Measurement Units are English
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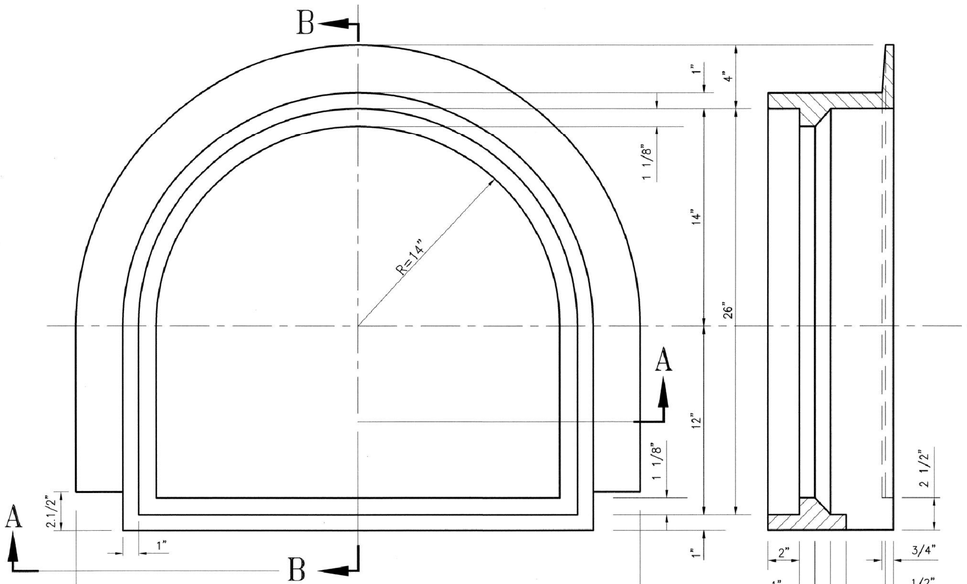
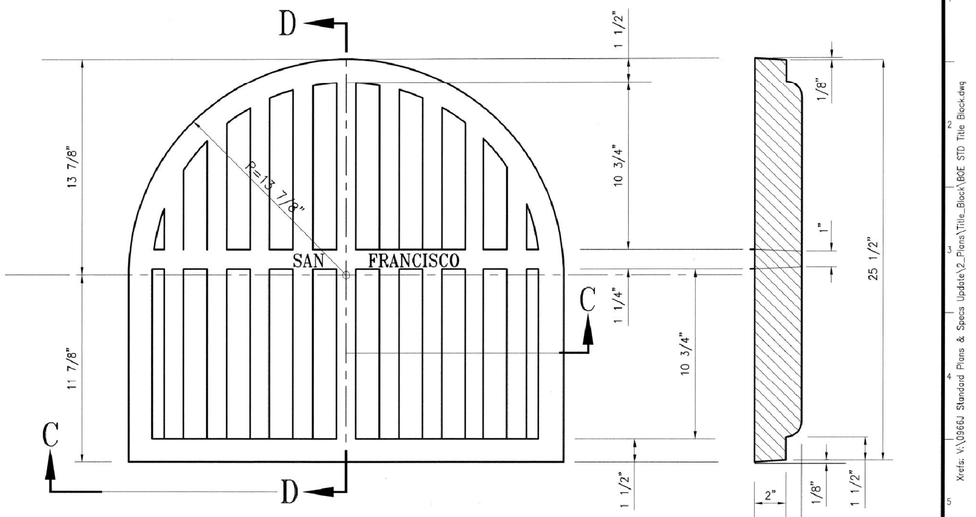


PLAN–CAST IRON FRAME

SECTION "B–B"

SECTION "A–A"

FINISH: GRIND HIGH SPOTS FROM CANTACT SURFACES TO OBTAIN UNIFORM BEARING OF GRATING ON FRAME.



PLAN–CAST IRON GRATING.

SECTION "D–D"

SECTION "C–C"

NOTES:

1. COMPUTED WEIGHT OF FRAME–262 POUNDS. COMPUTED WEIGHT OF GRATING–242 POUNDS.
2. THE NAME OF THE FOUNDRY, THE YEAR OF MANUFACTURE & THE PATTERN NUMBER, SHALL BE CAST ON THE UNDERSIDE OF EACH CASTING IN 3/4" LETTERS, RAISED 1/8".
3. CAST IRON SHALL BE IN ACCORDANCE WITH THE CURRENT A.S.T.M. STANDARD SPEC. FOR GRAY CASTING (CL. 30), DESIGNATION A–48.
4. THE WORD "SAN FRANCISCO" SHALL BE CAST, AS INDICATED, ON THE TOP OF THE GRATING IN 3/4" LETTERS RAISED 1/8".

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CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	ID	DATE: 12/2006
DRAWN:	PS	DATE: 07/2003
CHECKED:	KS	DATE: 12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER — 4/30/07
DEPUTY BUREAU MANAGER — 4/30/07
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
CAST IRON FRAME AND GRATING FOR CATCH BASIN TYPE A

OLD FILE NO. LL-360 CH 4
FILE NO. 87,193
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — KEVIN SIMS — No. 72181 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.06

Xrefs: V:\20966\ Standard Plans & Specs Update\2_Plans\Title_Block\BOE STD Title Block.dwg
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Dimension Scale: 4
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Assessment Units are English
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PLOTTING: 4-28-2017 1:03 PM PLOTTED BY: twan
(C7.06)

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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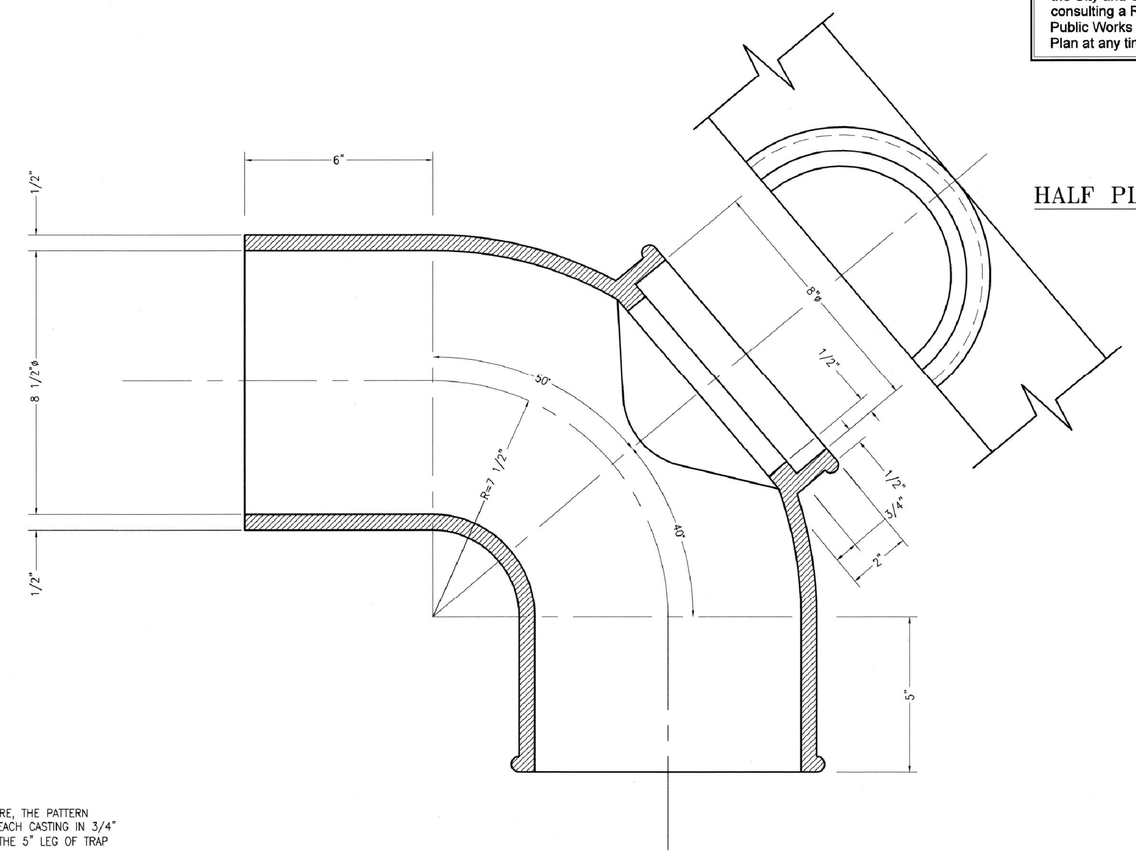

HALF PLAN OF CLEAN OUT

NOTES:

1. RADIUS OF BEADS 1/4".
2. COMPUTED WEIGHT OF TRAP 89 LBS.
3. THE NAME OF THE FOUNDRY, THE YEAR OF MANUFACTURE, THE PATTERN NUMBER AND "CATCH BASIN END" SHALL BE CAST ON EACH CASTING IN 3/4" LETTERS, RAISED 1/8". THIS DATA SHALL BE CAST ON THE 5" LEG OF TRAP DIRECTLY UNDER 8" DIAMETER CLEAN-OUT.
4. CAST IRON SHALL BE IN ACCORDANCE WITH THE CURRENT A.S.T.M. STANDARD SPEC. FOR GRAY-IRON CASTING (CL. 20), DESIGNATION A-48.
5. CAST IRON WATER TRAP SHALL INCLUDE CLEANOUT CAP.

SECTION OF CAST IRON TRAP

SCALE: 1"=2"

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
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BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
JL	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER 4/30/07
DEPUTY BUREAU MANAGER 4/30/07
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
CAST IRON WATER TRAP FOR CATCH BASIN

OLD FILE NO. L-370.1B
FILE NO. 87,194
REV. NO.

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
12/31/18

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.07

Drawing Path: V:\0966J Standard Plans & Specs Update\2_Plans\FINAL\HYD\SP-87194.dwg, Login: carantos
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Measurement Units are English
Dimension Scale: 1
Model Units: Feet
Xrefs: V:\0966J Standard Plans & Specs Update\2_Plans\Title_Block\BOE STD Title Block.dwg

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PLOT TIME: 4-28-2017 1:00 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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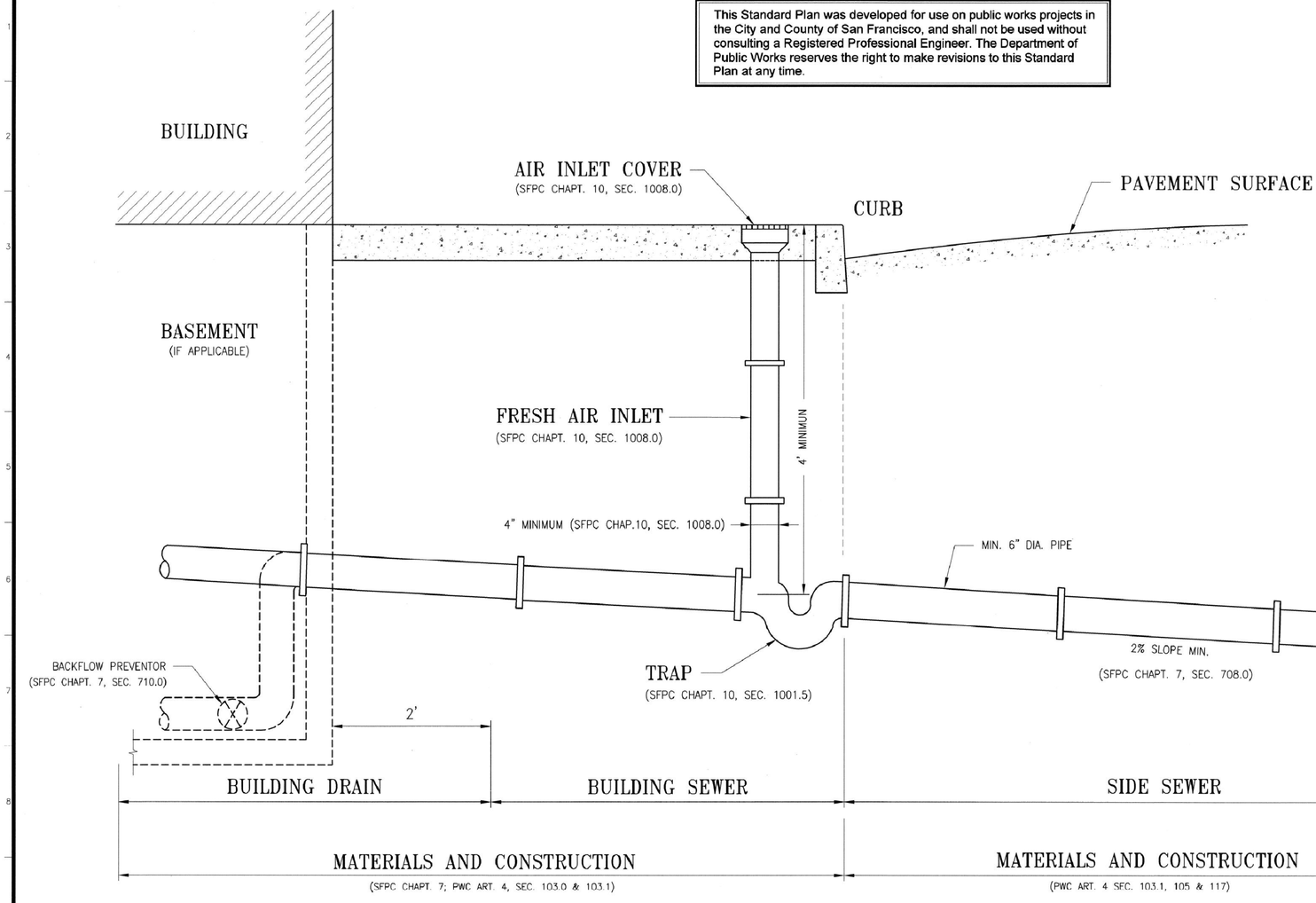

NOTES:

1. SIDE SEWER SHALL BE CONNECTED TO THE MAIN SEWER BY USING A "T" BRANCH OR "Y" BRANCH, OR BY DRILLING A HOLE IN THE SEWER MAIN AND SECURING THE STUB INLET.
2. SIDE SEWER CONNECTION SHALL NOT PROTRUDE IN THE MAIN SEWER.
3. TAP-TITE FITTING MANUFACTURED BY TAP-TITE CO. OR SC TEE SEWER CONNECTOR BY FLEX CONNECTIONS, INC. OR OTHER APPROVED EQUAL PRODUCT CAN BE USED FOR MAKING SIDE SEWER CONNECTION TO MAIN SEWER 42"ø AND SMALLER.

PWC – PUBLIC WORKS CODE (2002 ED.)
SFPC – SAN FRANCISCO PLUMBING CODE (2001 ED.)

4. **TAP-TITE FITTINGS ARE ALLOWED WHEN THE SEWER IS A MINIMUM OF TWICE THE LATERAL SIZE. TAP-TITE MUST BE 24" MINIMUM FROM PIPE JOINT. TAP-TITE MUST BE 24" MINIMUM FROM CLOSEST TAP-TITE.**

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
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DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED: ID	DATE: 12/2006
DRAWN: AM	DATE: 07/2003
CHECKED: KS	DATE: 12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07 SECTION MANAGER
4/30/07 DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
TYPICAL INSTALLATION OF BUILDING SEWER AND SIDE SEWER

OLD FILE NO. 44,337
FILE NO. 87,196
REV. NO.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — BRIAN P. STRONG — No. 19015 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

CONFORMED COPY

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No. 20090086

Drawing Number:
C7.08

Xrefs: V:\20965\ Standard Plans & Specs Update\2_Plans\Title_Block\BOF STD Title Block.dwg
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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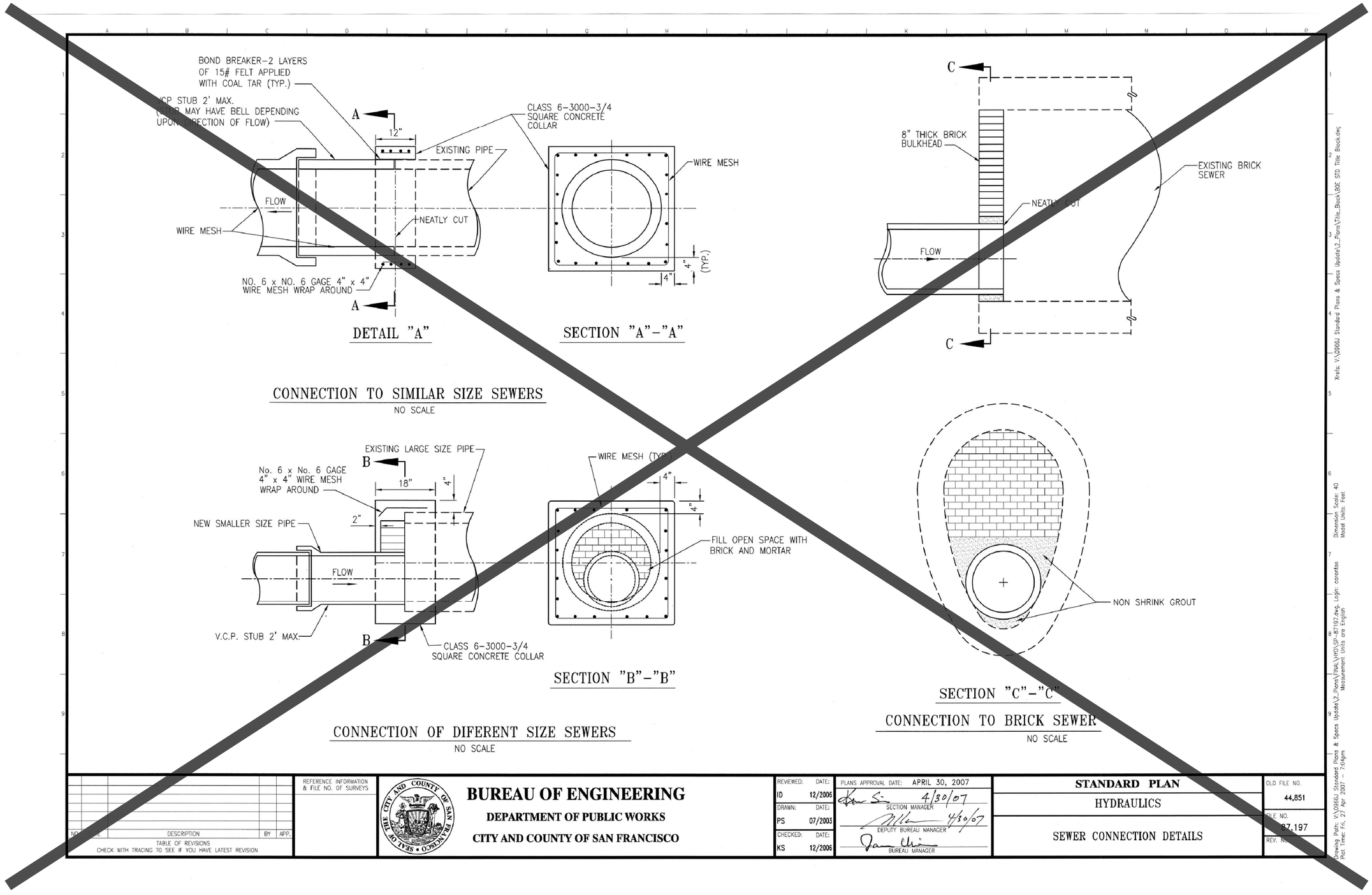

NO.	DATE	DESCRIPTION	BY	APP.

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BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
PS	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER 4/30/07
DEPUTY BUREAU MANAGER 4/30/07
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
SEWER CONNECTION DETAILS

OLD FILE NO. 44,851
FILE NO. 87,197
REV. NO.

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255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
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650-482-6399 (FAX)

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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMES G. DOBBS
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.09

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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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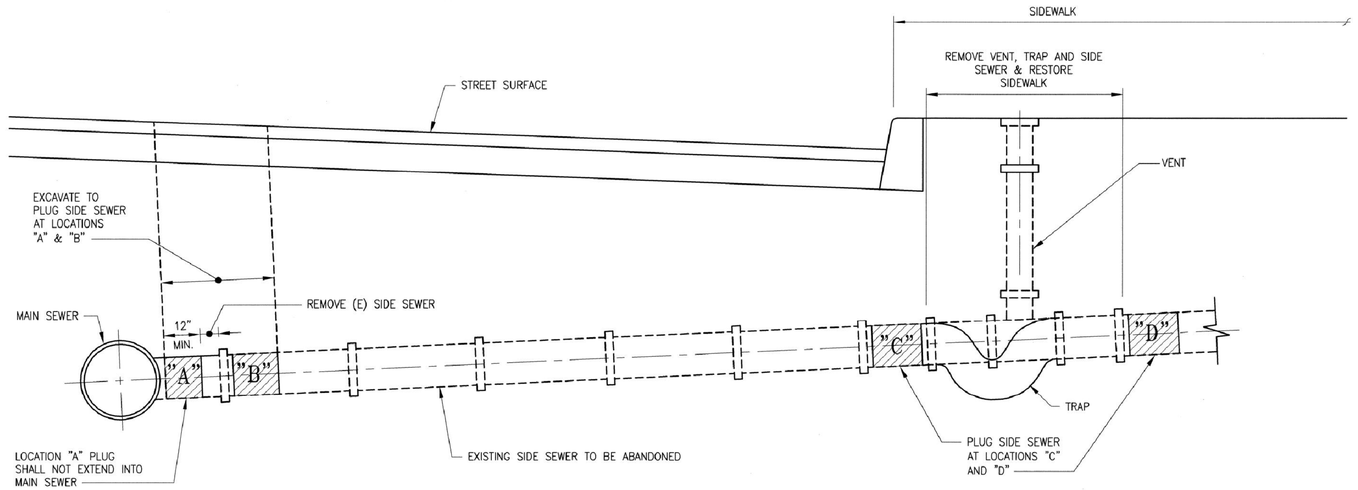

NOTES

1. ALL PLUGS SHALL BE CONCRETE OR BRICK AND MORTAR.
2. SIDE SEWERS LARGER THAN 6" IN DIAMETER SHALL BE PLUGGED AND FILLED WITH EITHER SLURRY AS SPECIFIED IN SECTION 302 OF THE STANDARD SPECIFICATIONS OR PER CONTRACT DOCUMENTS.

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DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED: ID	DATE: 12/2006
DRAWN: AM	DATE: 07/2003
CHECKED: KS	DATE: 12/200

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07 SECTION MANAGER
4/30/07 DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN

HYDRAULICS

ABANDONMENT OF EXISTING SIDE SEWER

OLD FILE NO. L-38,782 CH 1
FILE NO. 87,198
REV. NO.

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255 SHORELINE DR
SUITE 200
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650-482-6300
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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — KEVIN KNOX — No. 73191 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C7.10

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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PLOT TIME: 4-28-2017, 7:00 PM PLOTTED BY: Dan
(C7.10)

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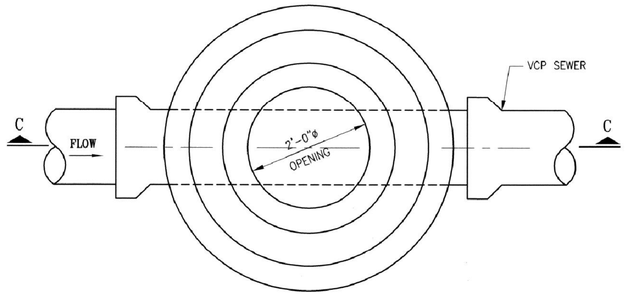

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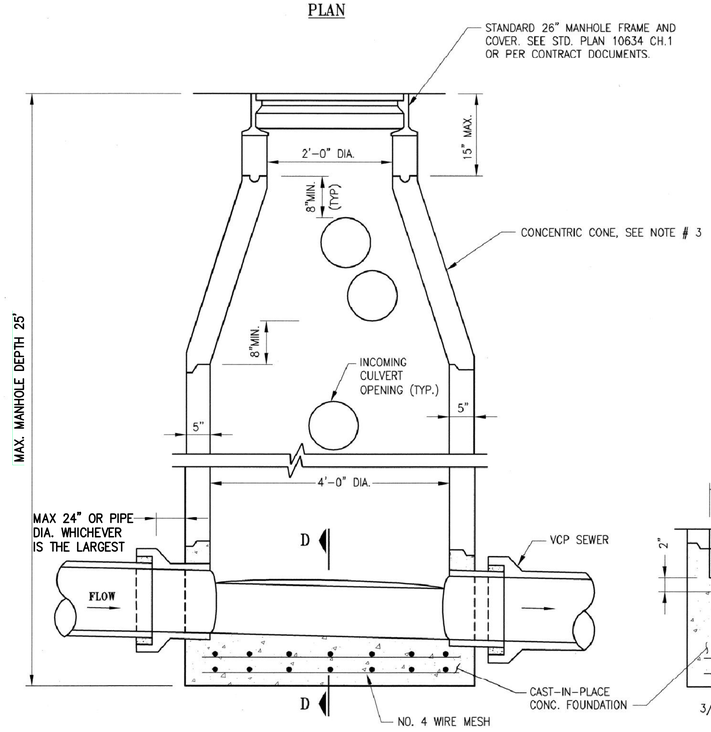
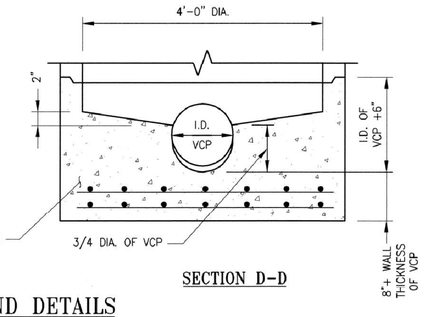


SECTION C-C



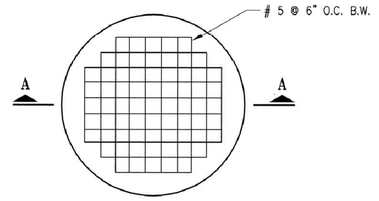
SECTION D-D

MANHOLE PLAN AND DETAILS

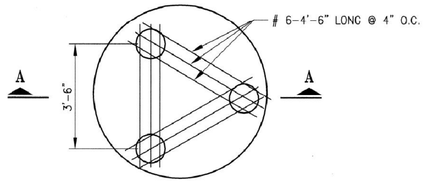
This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.

NOTES

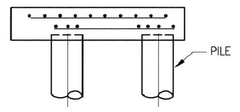
1. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN CLASS "C" MORTAR.
2. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. VERTICAL WALL OF CONCENTRIC CONE SHALL BE ON UPSTREAM SIDE OF MANHOLE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. CAST-IN-PLACE CONCRETE FOUNDATION SHALL BE CLASS 6-3000-3/4.
5. CULVERT OPENINGS SHALL BE A MINIMUM OF 8" FROM PRECAST SECTION JOINTS.
6. CONTRACTOR SHALL MINIMIZE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
7. **STEEL REINFORCEMENT IN CONCRETE FOUNDATION IS REQUIRED.**
8. SIDE SEWER CONNECTIONS TO THE MANHOLE SHALL NOT BE HIGHER THAN 12" ABOVE THE INVERT OF THE MANHOLE.
9. CULVERT CONNECTIONS SHALL BE FLUSH WITH INSIDE FACE OF THE MANHOLE WALL.
10. MANHOLE DEPTH SHALL NOT EXCEED 17'.



TOP REINFORCING STEEL



BOTTOM REINFORCING STEEL



SECTION A-A

REINFORCED CONCRETE FOUNDATION FOR MANHOLE ON PILES

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
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DEPARTMENT OF PUBLIC WORKS
CITY AND CITY AND COUNTY OF SAN FRANCISCO

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AM/JL	07/2003	
CHECKED:	DATE:	
KS	12/2006	

PLANS APPROVAL DATE: APRIL 30, 2007

4/30/07
SECTION MANAGER

4/30/07
DEPUTY BUREAU MANAGER

BUREAU MANAGER

STANDARD PLAN

HYDRAULICS

MODIFIED PRECAST CONCRETE MANHOLE
FOR 12" AND 24" DIAMETER SEWERS

OLD FILE NO. 45,560 CH 1

FILE NO. 87,181

REV. NO.

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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SAN FRANCISCO CALIFORNIA

SAN FRANCISCO

Revisions

Date: 05/01/17
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Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.11

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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Dimension Scale: 40
Model Units: Feet

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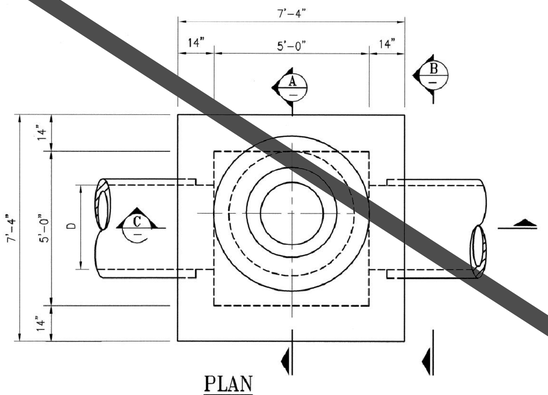

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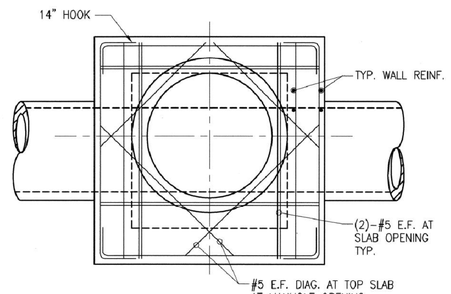

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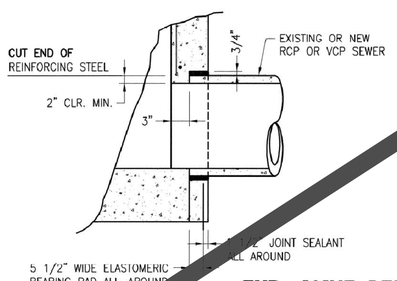

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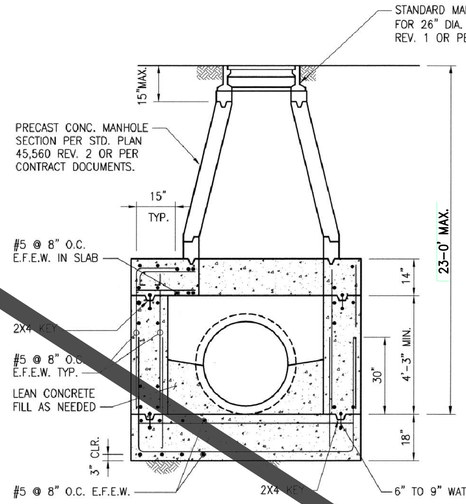

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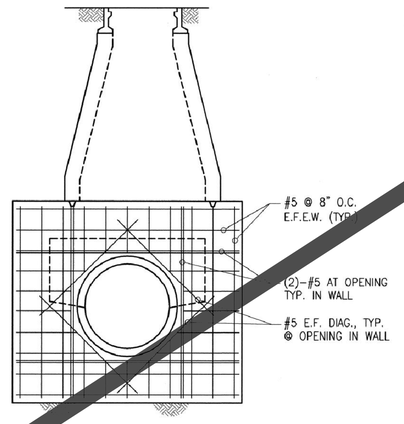

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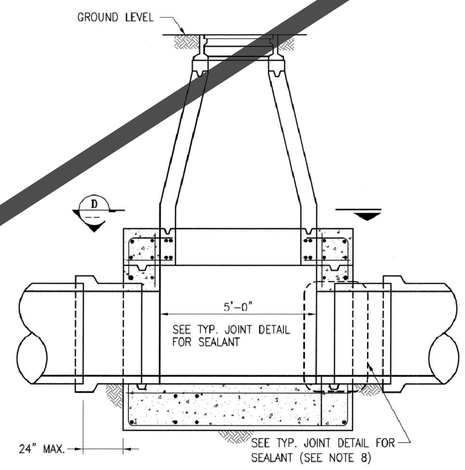

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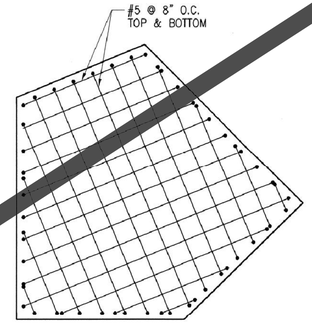
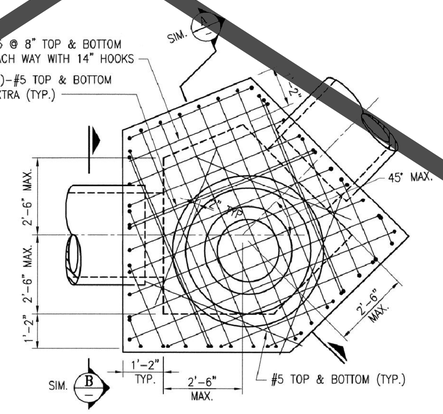


BOTTOM SLAB



TOP SLAB

ANGLE MANHOLE

GENERAL NOTES

1. ALL REINFORCING STEEL SHALL BE PLACED AT LEAST 2" FROM FACE OF CONCRETE, EXCEPT WHERE OTHERWISE SHOWN.
2. PROVIDE CONTINUOUS BENDS AT ALL CORNERS AND LAP BARS AS SHOWN.
3. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN A FLEXIBLE GASKET-JOINT SEALANT (RUB'R-NEK).
4. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
5. CAST-IN-PLACE CONCRETE FOUNDATION SHALL BE CLASS 6-4000-3/4.
6. CULVERT OPENING SHALL BE A MINIMUM OF 8" FROM PRECAST SECTION JOINTS.
7. CONTRACTOR SHALL MINIMIZE THE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
8. USE STEEL WALL ANCHOR RING CONNECTION PER CONTRACT DOCUMENTS FOR PIPE 42" AND GREATER.
9. HEIGHT OF CAST-IN-PLACE PORTION OF MANHOLE SHALL BE INCREASED, AS NECESSARY, TO ACCOMODATED EGG-SHAPED AND OTHER MONOLITHIC SEWERS.

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NO.	DATE	DESCRIPTION	BY	APP.

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CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
ID	12/2006
DRAWN:	DATE:
AM	07/2003
CHECKED:	DATE:
KS	12/2006

PLANS APPROVAL DATE: APRIL 30, 2007
4/30/07 SECTION MANAGER
4/30/07 DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
HYDRAULICS
MODIFIED CONCRETE MANHOLE
FOR PIPE SEWERS
27" TO 48" DIAMETER

OLD FILE NO. 48,057 CH 3
FILE NO. 87,182
REV. NO.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER KEVIN SCHMID No. 73241 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.12

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Model Units: Feet
Log in: cavantos
Measurement Units are English
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Time: Fri, 21 Apr 2017 - 7:19pm

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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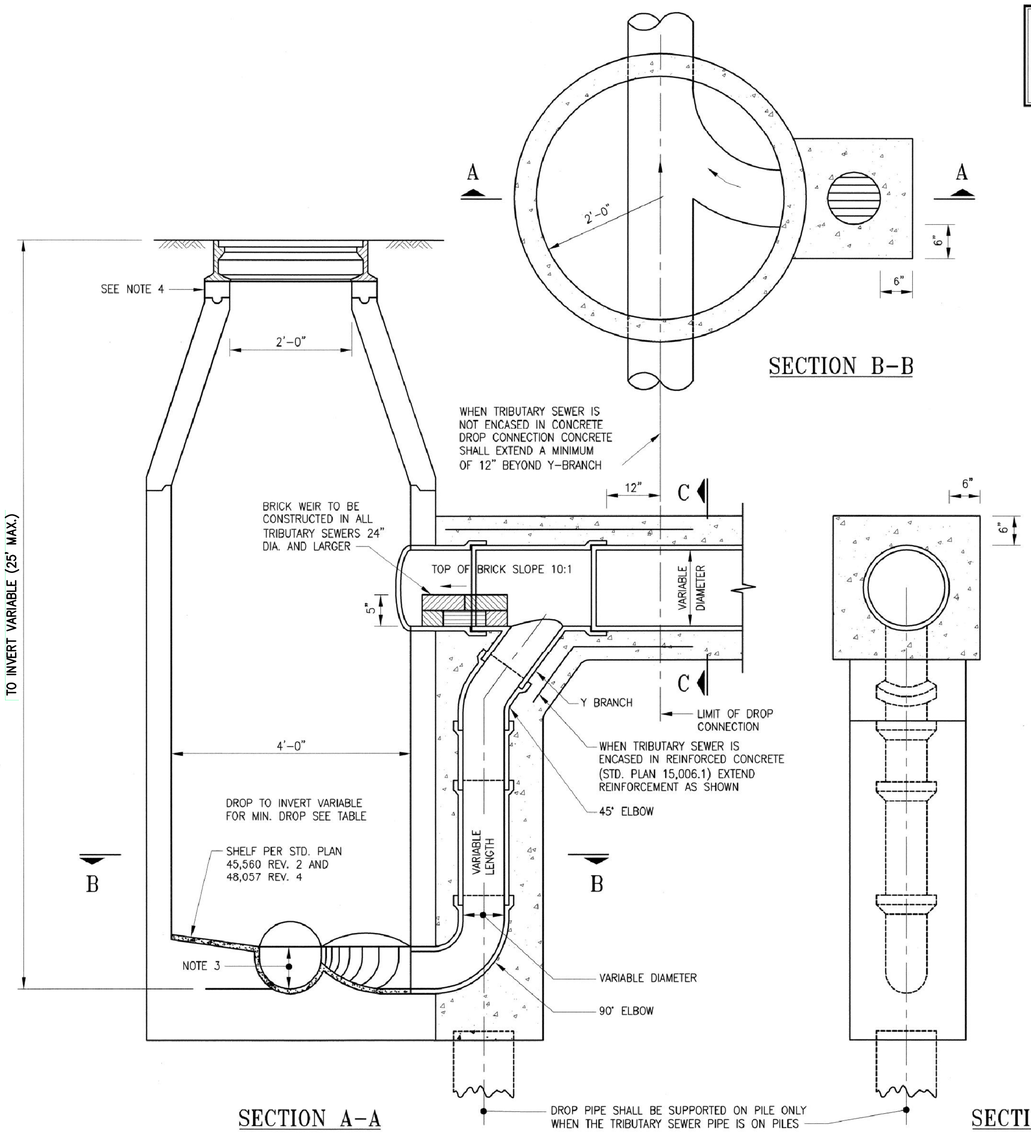

TABLE

SIZE OF TRIBUTARY SEWER	SIZE OF DROP PIPE	MINIMUM DROP
8"	6"	3'-3"
12"	6"	3'-3"
15"	8"	3'-9"
18"	8"	3'-9"
21"	10"	4'-6"
24"	10"	4'-6"
27"	12"	5'-0"
30"	12"	5'-0"
33"	12"	5'-0"
36"	12"	5'-0"

GENERAL NOTES

1. FOR DETAILS OF M.H. FRAME & COVER, SEE STANDARD PLAN A-10,634 CH. 1
2. DEPTH OF CHANNEL SHALL BE 3/4 THE DIAMETER OF THE LARGEST PIPE TRIBUTARY TO MANHOLE OR AS SHOWN IN PLANS FOR A PARTICULAR PROJECT. THE MANHOLE FLOOR AND CHANNEL SHELL BE PLASTERED WITH CLASS "C" MORTAR 1/2" THICK
3. WHERE TWO OR MORE DROP INLETS ARE REQUIRED, EACH INLET SHALL BE BUILT AS SHOWN FOR SINGLE DROP INLET IN THE ABOVE SECTIONS
4. FOR DETAILS OF MANHOLE SEE STD. PLANS 45,560 REV. 2 & 48,057 REV. 4 SFPUC/DPW STANDARD SPECIFICATIONS
5. FOR ENCASEMENT AND STEEL DETAILS SEE STANDARD PLAN A-15,006.1
6. ALL CONCRETE SHALL BE CLASS 6-3000-3/4

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:	PLANS APPROVAL DATE:	APRIL 30, 2007
ID	12/2006	SECTION MANAGER	4/30/07
DRAWN:	DATE:	DEPUTY BUREAU MANAGER	4/30/07
AM	07/2003	BUREAU MANAGER	
CHECKED:	DATE:		
KS	12/2006		

STANDARD PLAN
HYDRAULICS
MODIFIED DROP MANHOLE
FOR V.C.P. SEWERS

OLD FILE NO. LL-266 CH 4
FILE NO. 87,186
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KELLEY — No. C 57866 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number: C7.13

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\5-PROJ\20086-121SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.13)
PLOT TIME: 4-28-2017, 1:03 PM PLOTTED BY: Dan
Xrefs: V:\0966J Standard Plans & Specs Update\2_Plans\TitleBlock\BOE STD Title Block.dwg
Drawing Path: V:\0966J Standard Plans & Specs Update\2_Plans\FINAL\HYDSF-87166.dwg, Login: cerantzos
Plot Time: Fri, 27 Apr 2007 - 7:29pm Measurement Units are English
Dimension Scale: 40 Model Units Feet

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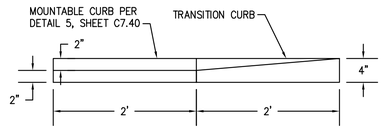
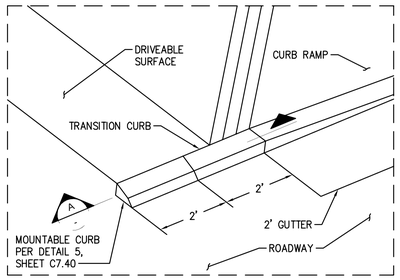
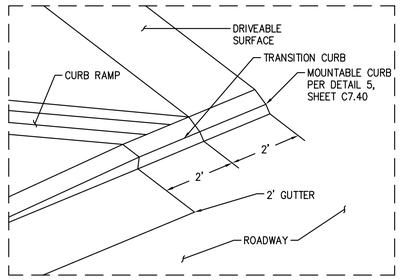


SECTION A



DETAIL A



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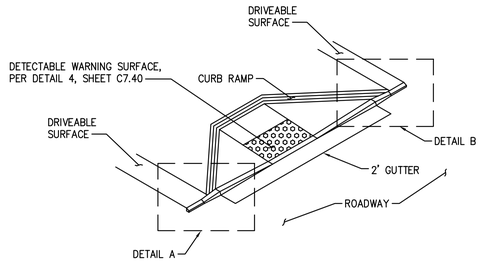

ISOMETRIC

1 — **TRANSITION CURB**
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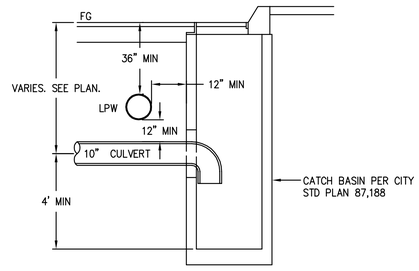

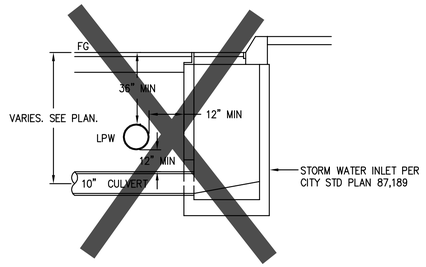

2 — **MODIFIED CATCH BASIN AND STORM WATER INLET AT WATER LINE CROSSING**
N.T.S

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER
BRIAN S. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.14

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.14)
PLOT TIME: 4-28-2017 1:00 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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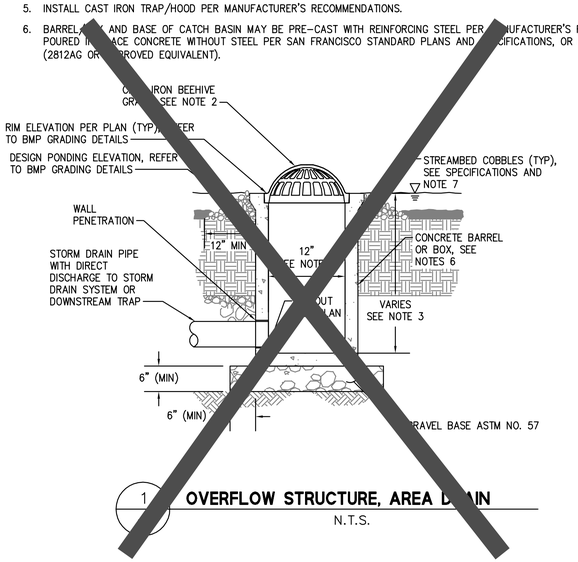
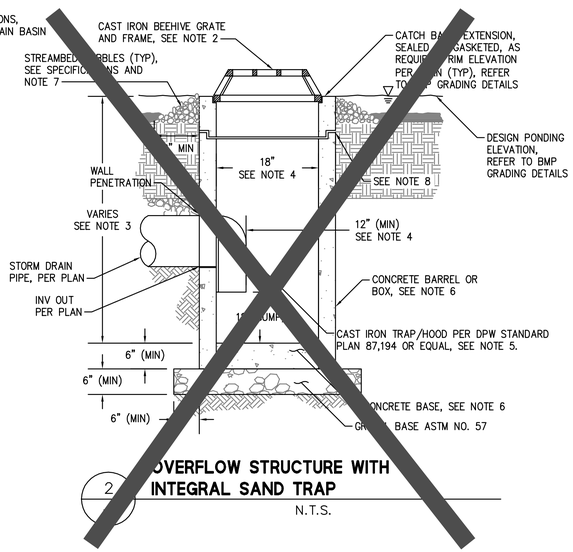
CONSTRUCTION NOTES:

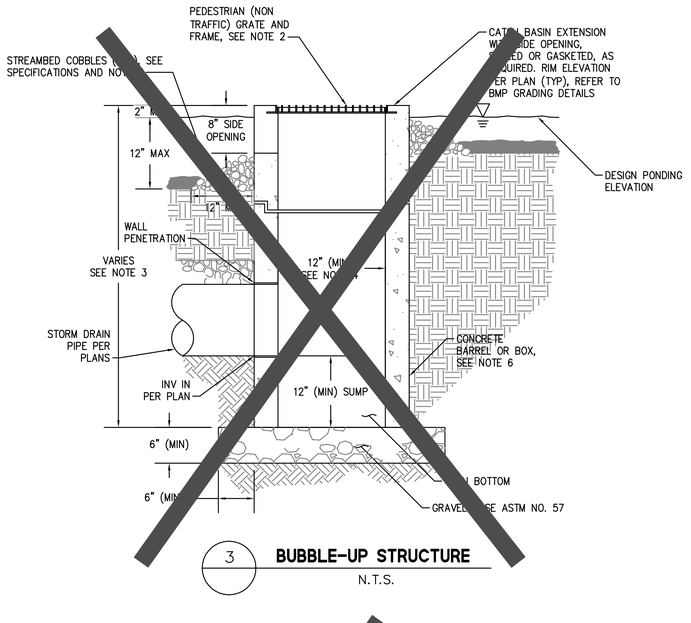
1. ALL MATERIAL AND WORKMANSHIP FOR OVERFLOW STRUCTURES SHALL CONFORM TO SAN FRANCISCO STANDARD SPECIFICATIONS AND APPLICABLE CODES PER SAN FRANCISCO PUBLIC WORKS.
2. SIZE OF GRATE SHALL MATCH SIZE OF RISER SPECIFIED IN PLANS, SHALL BE REMOVABLE TO PROVIDE MAINTENANCE ACCESS, AND SHALL BE BOLTED IN PLACE OR OUTFITTED WITH APPROVED TAMPER-RESISTANT LOCKING MECHANISM. MAXIMUM GRATE OPENING SHALL BE 4 INCHES.
3. IF INTERIOR DEPTH OF OVERFLOW STRUCTURE EXCEEDS 5 FEET, A PERMANENT BOLTED LADDER AND MINIMUM CLEAR SPACE OF 30 IN BY 30 IN SHALL BE PROVIDED FOR MAINTENANCE ACCESS.
4. 12 INCH (MIN) CLEARANCE WITHIN OVERFLOW STRUCTURE SHALL BE PROVIDED FOR MAINTENANCE ACCESS.
5. INSTALL CAST IRON TRAP/HOOD PER MANUFACTURER'S RECOMMENDATIONS.
6. BARREL AND BASE OF CATCH BASIN MAY BE PRE-CAST WITH REINFORCING STEEL PER MANUFACTURER'S RECOMMENDATIONS, POURED IN PLACE CONCRETE WITHOUT STEEL PER SAN FRANCISCO STANDARD PLANS AND SPECIFICATIONS, OR NYLOPLAST DRAIN BASIN (2812AG OR APPROVED EQUIVALENT).
7. MINIMUM STREAMBED COBBLE DIAMETER SHALL BE LARGER THAN MAXIMUM GRATE OPENING.
8. GROUT ALL PENETRATIONS, CRACKS, SEAMS, AND JOINTS WITH CLASS "C" MORTAR.
9. OVERFLOW PIPES MUST BE LOCATED AT AN ELEVATION HIGHER THAN THE SEWER HYDRAULIC GRADE LINE TO PREVENT BACKFLOW INTO THE BIORETENTION FACILITY.
10. REFER TO SHEET C7.16 FOR TYPICAL BUBBLE-UP SECTIONS.
11. REFER TO SHEET C7.16 FOR LOCATION OF SIDE OPENING.



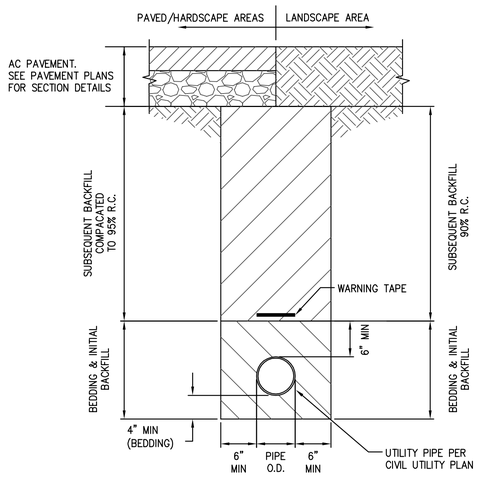
1 **OVERFLOW STRUCTURE, AREA DRAIN**
N.T.S.



2 **OVERFLOW STRUCTURE WITH INTEGRAL SAND TRAP**
N.T.S.



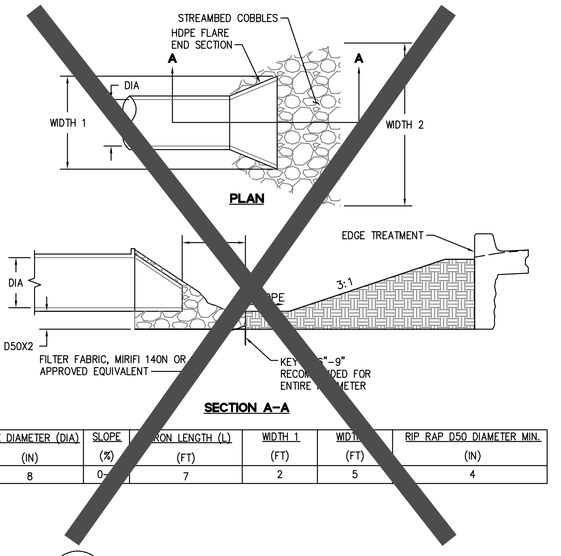
3 **BUBBLE-UP STRUCTURE**
N.T.S.



UTILITY TRENCH NOTES:

1. BEDDING AND INITIAL BACKFILL:
   a. SAND PER THE CITY OF SAN FRANCISCO STANDARD SPECIFICATIONS, COMPACTED TO 95% R.C.
   b. UNDER SATURATED CONDITIONS AND APPROVED BY THE ENGINEER AND GEOTECHNICAL CONSLUTATNT – MANUFACTURED AGGREGATE PER ASTM 2321 CLASS IA (3/8" MAX). COMPACTION SHALL BE BY VIBRATORY EQUIPMENT OR AS APPROVED BY THE GEOTECHNICAL CONSULTANT.
2. SUBSEQUENT BACKFILL:
   a. IMPORTED OR EXCAVATED ONSITE SOIL CONFORMING TO STRUCTURAL FILL PER CITY STANDARD SPECIFICATION. REFER TO DETAIL FOR COMPACTION REQUIREMENTS.
   b. COORDINATE SBSS INSTALLATION WHERE REQUIRED.
3. BACKFILL TO BE COMPACTED IN LIFTS NOT EXCEEDING 8-INCHES.
4. ALL UTILITY TRENCHES THAT RUN BELOW PERMEABLE PAVEMENT, BIORETENTION, CURBS, GUTTER AND SIDEWALKS SHALL BE PLUGGED AT LEAST 2-FEET THICK AND 2-FEET BEYOND TRENCH EDGE WITH COMPACTED CLAYEY-SOIL, COMPACTED BENTONITE, A BENTONITE-CEMENT OR SAND-CEMENT SLURRY MIXTURE.

4 **CS, SS AND SD UTILITY TRENCH**
N.T.S.



PIPE DIAMETER (DIA)	SLOPE	APRON LENGTH (L)	WIDTH 1	WIDTH 2	RIP RAP D50 DIAMETER MIN.
(IN)	(%)	(FT)	(FT)	(FT)	(IN)
8	0-	7	2	5	4

5 **STABILIZED OUTFALL**
N.T.S.

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SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER TIMOTHY HOSEA No. 18668 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.15

DRAWING NAME: J:\Sf-proj\090086-123\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.15)
PLOT TIME: 4-28-2017 1:09 PM PLOTTED BY: bwm

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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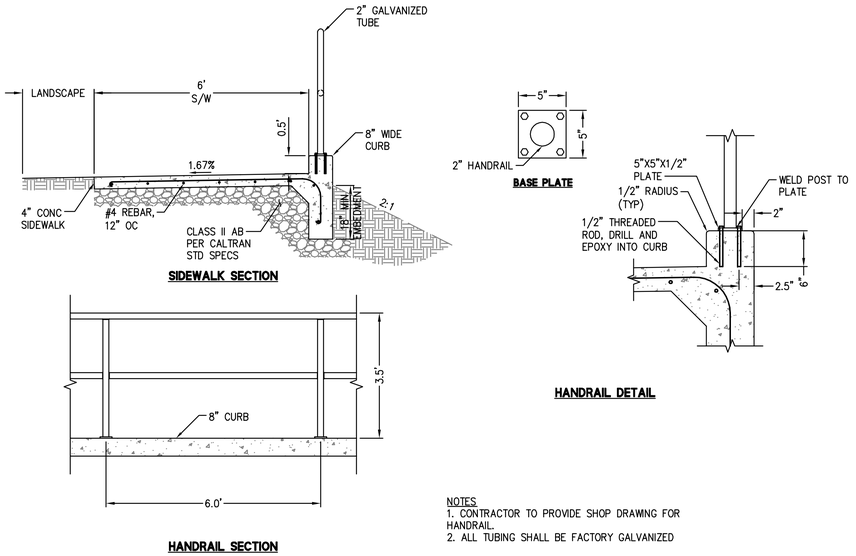

1 **SIDEWALK AND HANDRAIL DETAIL**
N.T.S.

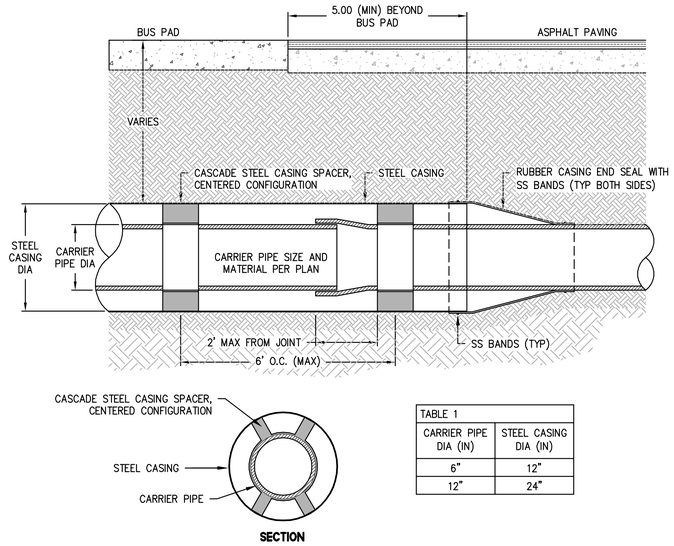

TABLE 1	
CARRIER PIPE DIA (IN)	STEEL CASING DIA (IN)
6"	12"
12"	24"

2 **STEEL PIPE CASING DETAIL**
N.T.S.

255 SHORELINE DR
SUITE 200
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SAN FRANCISCO CALIFORNIA

SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER BRIAN STRICKLAND No. 72885 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

ORIGINAL SIGNED

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.16

DRAWING NAME: J:\Eng20\20090086-10\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.16)
PLOT TIME: Apr 25, 2017 1:00 PM PLOTTED BY: bam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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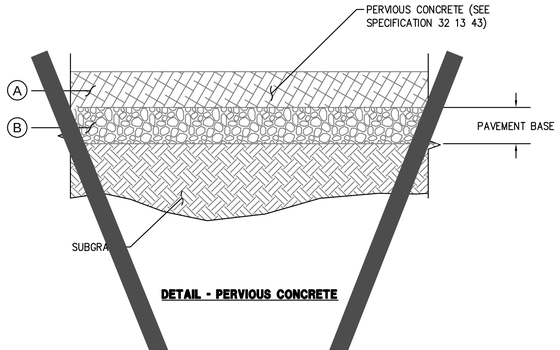


DETAIL - PERVIOUS CONCRETE

GENERAL UTILITY NOTES:

1. UTILITY TRENCHES THAT CROSS PERMEABLE PAVEMENT SHALL BE PLUGGED AT LEAST 2' THICK & 2' BEYOND TRENCH EDGE WITH COMPACTED CLAYEY-SOIL, COMPACTED BENTONITE, A-BENTONITE CEMENT OR SAND-CEMENT SLURRY.
2. ABANDONED UTILITIES WITHIN FOOTPRINT OF FACILITY AND OBSERVED DURING CONSTRUCTION MUST BE REMOVED. COORDINATE WITH MUNICIPAL OR PRIVATE OWNER AND ENGINEER.

PERVIOUS CONCRETE NOTES:

1. COMPACT SUBGRADE TO 90% OF MAXIMUM DENSITY PER STANDARD PROCTOR TEST (ASTM D698) FOR PEDESTRIAN APPLICATIONS, 95% OF MAXIMUM DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557) FOR VEHICULAR APPLICATIONS, OR PER GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2. PROOF-ROLL PREPARED SUBGRADE TO REVEAL SOFT SPOTS, AND REPLACE WITH PERMEABLE STRUCTURAL FILL AS DIRECTED BY ENGINEER TO ACHIEVE UNIFORM SUBGRADE.
3. AFTER COMPACTION, SCARIFY SUBGRADE TO 1/2 INCH DEEP BY HAND RAKE.
4. PROVIDE FLOW DIVERSION AND EROSION CONTROL MEASURES TO PROTECT THE PERMEABLE PAVEMENT AREA FROM SEDIMENTATION UNTIL UPSTREAM CATCHMENT AREA IS THOROUGHLY STABILIZED.

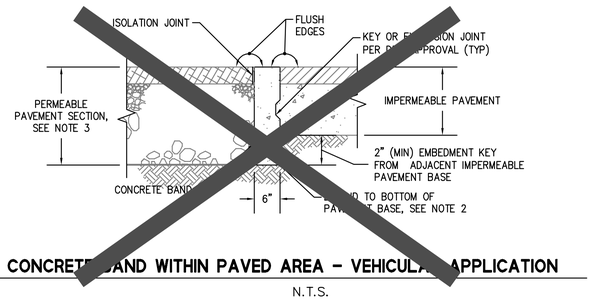
MINIMUM MATERIAL THICKNESS (IN).

LAYER	MATERIAL TYPE*	MODERATE VEHICULAR
		GOOD SOILS**
A	PERVIOUS CONCRETE	9
B	GRAVEL BASE COURSE ASTM NO. 3 OR 57	

* MATERIAL LARGER THAN NO. 100 SIEVE SHALL NOT EXCEED 2 PERCENT FOR ANY GRAVEL LAYER.

** "GOOD" AND "POOR" SOIL CLASSIFICATIONS BASED ON AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES. DETERMINATION OF SOIL CLASSIFICATION SHALL BE CONFIRMED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.

1 — PERMEABLE PAVEMENT - PERVIOUS CONCRETE
N.T.S.



2 — CONCRETE BAND WITHIN PAVED AREA - VEHICULAR APPLICATION
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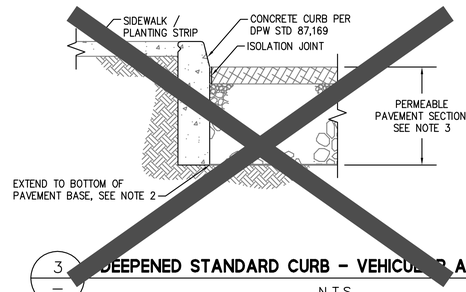

3 — DEEPENED STANDARD CURB - VEHICULAR APPLICATION
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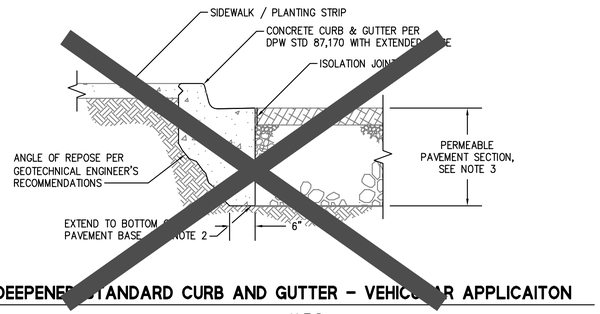

4 — DEEPENED STANDARD CURB AND GUTTER - VEHICULAR APPLICAITON
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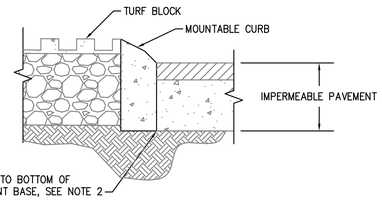
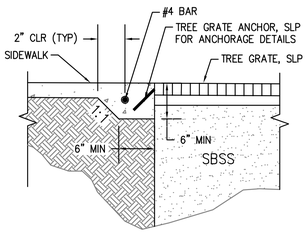


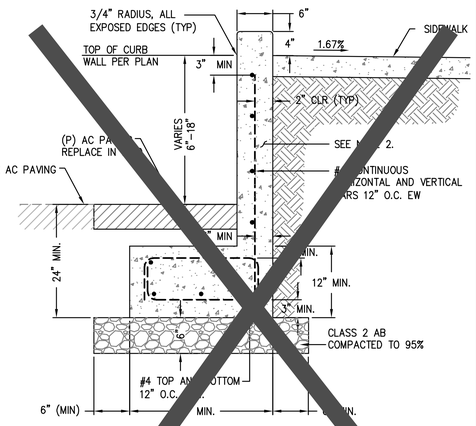
5 — DEEPENED MOUNTABLE CURB - VEHICULAR APPLICATION
N.T.S.

EDGE TREATMENT NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR EDGE TREATMENTS SHALL CONFORM TO SAN FRANCISCO STANDARD SPECIFICATIONS.
2. FOR DEEP PAVEMENT SECTIONS, EDGE TREATMENT NOT REQUIRED TO EXTEND MORE THAN 12 INCHES BELOW WEARING COURSE PROVIDED REQUIREMENTS AT INTERFACE WITH IMPERMEABLE PAVEMENTS ARE SATISFIED.
3. REFER TO SHEET C7.17, DETAIL 1 AND THE PAVING PLANS FOR PERMEABLE PAVEMENT SECTIONS.



6 — THICKENED CONCRETE EDGE AT TREE GRATE
N.T.S.



NOTES:
1. PROVIDE EXPANSION JOINTS EVERY 20' O.C.
2. POC CONCRETE WALL CONCRETE AND REBAR SHALL CONFORM TO THE CITY OF SAN FRANCISCO STANDARD SPECIFICATIONS.

7 — CURB WALL
NTS

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255 SHORELINE DR
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650-482-6300
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — Matthew Sidell — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.17

DRAWING NAME: J:\Projects\20090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.17)
PLOT TIME: 25-2017 1:01 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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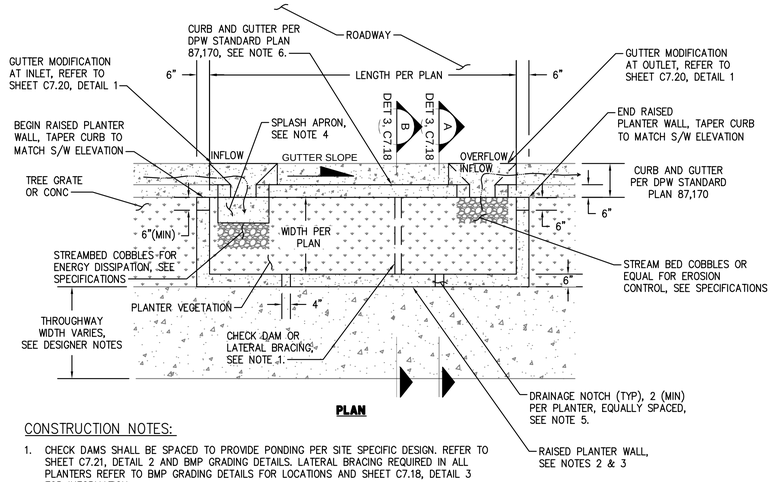


PLAN

CONSTRUCTION NOTES:

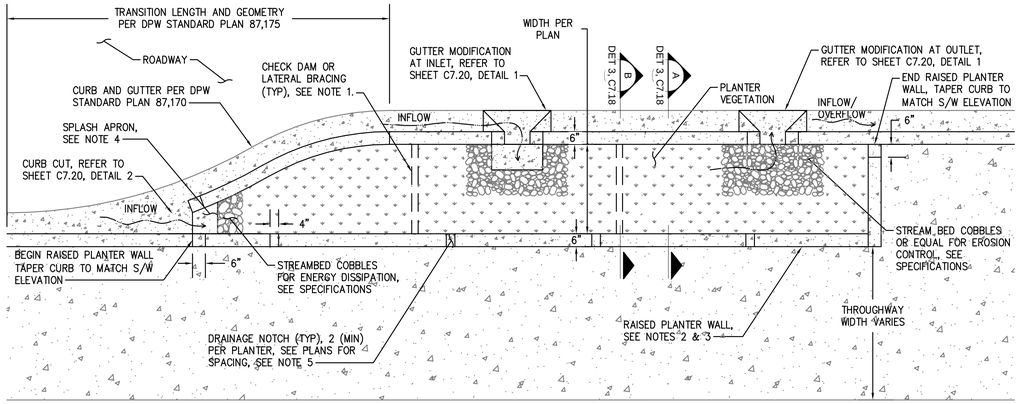
1. CHECK DAMS SHALL BE SPACED TO PROVIDE PONDING PER SITE SPECIFIC DESIGN. REFER TO SHEET C7.21, DETAIL 2 AND BMP GRADING DETAILS. LATERAL BRACING REQUIRED IN ALL PLANTERS REFER TO BMP GRADING DETAILS FOR LOCATIONS AND SHEET C7.18, DETAIL 3 FOR INFORMATION.
2. SLOPE TOP OF PLANTER WALL TO MATCH LONGITUDINAL SLOPE OF ADJACENT SURFACE.
3. FOR EDGE TREATMENT OPTIONS, REFER TO SHEET C7.17.
4. SPLASH APRON SHALL NOT BE INTEGRAL TO PLANTER WALL OR OTHER ADJACENT CONCRETE SURFACES.
5. LAYOUT DRAINAGE NOTCHES TO PREVENT PONDING BEHIND PLANTER WALL. REFER TO SHEET C7.18, DETAIL 3.
6. CURB AND GUTTER W/ WALL EXTENSION, REFER TO SHEET C7.18, DETAIL 3.

GENERAL UTILITY NOTES:

1. INCLUDE MEASURES TO PREVENT PREFERENTIAL FLOW INTO UTILITY TRENCHES. UTILITY TRENCHES THAT CROSS PERMEABLE PAVEMENT OR BIORETENTION FACILITIES SHALL BE PLUGGED AT LEAST 2' THICK & 2' BEYOND TRENCH EDGE WITH COMPACTED CLAYEY-SOIL, COMPACTED BENTONITE, A-BENTONITE CEMENT OR SAND-CEMENT SLURRY.
2. ABANDONED UTILITIES WITHIN FOOTPRINT OF FACILITY AND OBSERVED DURING CONSTRUCTION MUST BE REMOVED. COORDINATE WITH MUNICIPAL OR PRIVATE OWNER AND ENGINEER.

1 — BIORETENTION PLANTER PLAN (ROADSIDE PLANTER WITHOUT PARKING)

N.T.S.



PLAN

CONSTRUCTION NOTES:

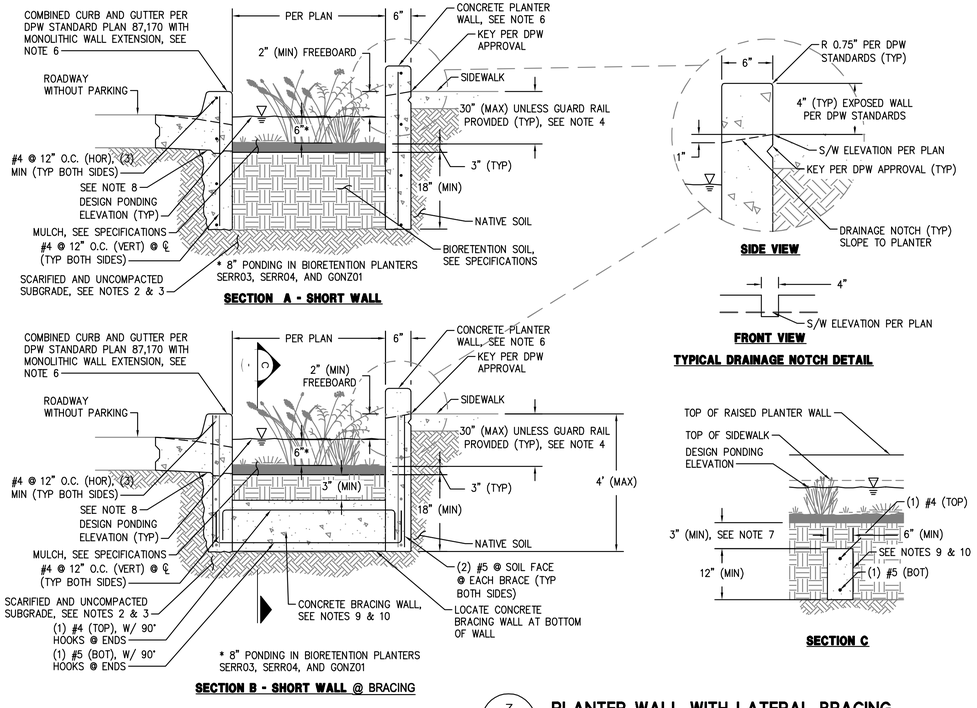
1. CHECK DAMS SHALL BE SPACED TO PROVIDE PONDING PER SITE SPECIFIC DESIGN. REFER TO C7.21, DETAIL 2 AND BMP GRADING DETAILS. LATERAL BRACING REQUIRED IN ALL PLANTERS, REFER TO BMP GRADING DETAILS FOR LOCATIONS AND SHEET C7.18, DETAIL 3 FOR INFORMATION.
2. SLOPE TOP OF PLANTER WALL TO MATCH LONGITUDINAL SLOPE OF ADJACENT SURFACE.
3. FOR EDGE TREATMENT OPTIONS, REFER TO SHEET C7.17.
4. SPLASH APRON SHALL NOT BE INTEGRAL TO PLANTER WALL OR OTHER ADJACENT CONCRETE SURFACES. REFER TO INLET CURB CUT OR OUTLET CURB CUT FOR ENERGY DISSIPATOR DETAILS.
5. LAY OUT DRAINAGE NOTCHES TO PREVENT PONDING BEHIND PLANTER WALL. REFER TO SHEET C7.18, DETAIL 3.
6. CURB AND GUTTER W/ WALL EXTENSION, REFER TO SHEET C7.18, DETAIL 3.

GENERAL UTILITY NOTES:

1. INCLUDE MEASURES TO PREVENT PREFERENTIAL FLOW INTO UTILITY TRENCHES. UTILITY TRENCHES THAT CROSS PERMEABLE PAVEMENT OR BIORETENTION FACILITIES SHALL BE PLUGGED AT LEAST 2' THICK & 2' BEYOND THE TRENCH EDGE WITH COMPACTED CLAYEY-SOIL, COMPACTED BENTONITE, A-BENTONITE CEMENT OR SAND-CEMENT SLURRY..
2. ABANDONED UTILITIES WITHIN FOOTPRINT OF FACILITY AND OBSERVED DURING CONSTRUCTION MUST BE REMOVED. COORDINATE WITH MUNICIPAL OR PRIVATE OWNER AND ENGINEER.

2 — BIORETENTION PLANTER (ROADSIDE BULBOUT PLANTER)

N.T.S.



3 — PLANTER WALL WITH LATERAL BRACING

N.T.S.

CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR LATERAL BRACING SHALL CONFORM TO PROJECT SPECIFICATIONS.
2. AVOID COMPACTION OF EXISTING SUBGRADE BELOW PLANTER DURING CONSTRUCTION.
3. SCARIFY SUBGRADE TO A DEPTH OF 6 INCHES (MIN) IMMEDIATELY PRIOR TO PLACEMENT OF BIORETENTION SOIL.
4. MAXIMUM DROP FROM TOP OF CURB TO TOP OF BIORETENTION SOIL SHALL INCLUDE CONSIDERATIONS FOR BIORETENTION SOIL SETTLEMENT.
5. FOR EDGE TREATMENT OPTIONS, REFER TO SHEET C7.17.
6. ALL PLANTER WALLS SHALL EXTEND TO BOTTOM OF BIORETENTION SOIL, OR DEEPER.
7. CONTRACTOR TO PROVIDE 3 INCH MINIMUM COVER OVER ALL LATERAL BRACING FOR PLANT ESTABLISHMENT.
8. ALL CONSTRUCTION COLD JOINTS SHALL INCORPORATE EPOXY, DOWEL, KEYWAY, AND WATER STOP.
9. CONCRETE LATERAL BRACING SHALL BE CONTINUOUS (NO JOINTS).
10. LATERAL BRACING SHALL BE PROVIDED EVERY 6 FEET (MAX) FOR WALLS UP TO 4 FEET IN HEIGHT AND EVERY 4 FEET (MAX) FOR WALLS BETWEEN 4 AND 6 FEET IN HEIGHT.
11. LATERAL BRACING SHALL MEET HYDROLOGIC AND HYDRAULIC DESIGN REQUIREMENTS FOR CHECK DAMS WHEN USED AS CHECK DAMS. REFER TO SHEET C7.21, DETAIL 2.

255 SHORELINE DR
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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KEHOE — No. 73055 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.18

DRAWING NAME: J:\Projob\20090086-10\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.18)
PLOT TIME: 4-25-2017, 1:07 PM PLOTTED BY: bsam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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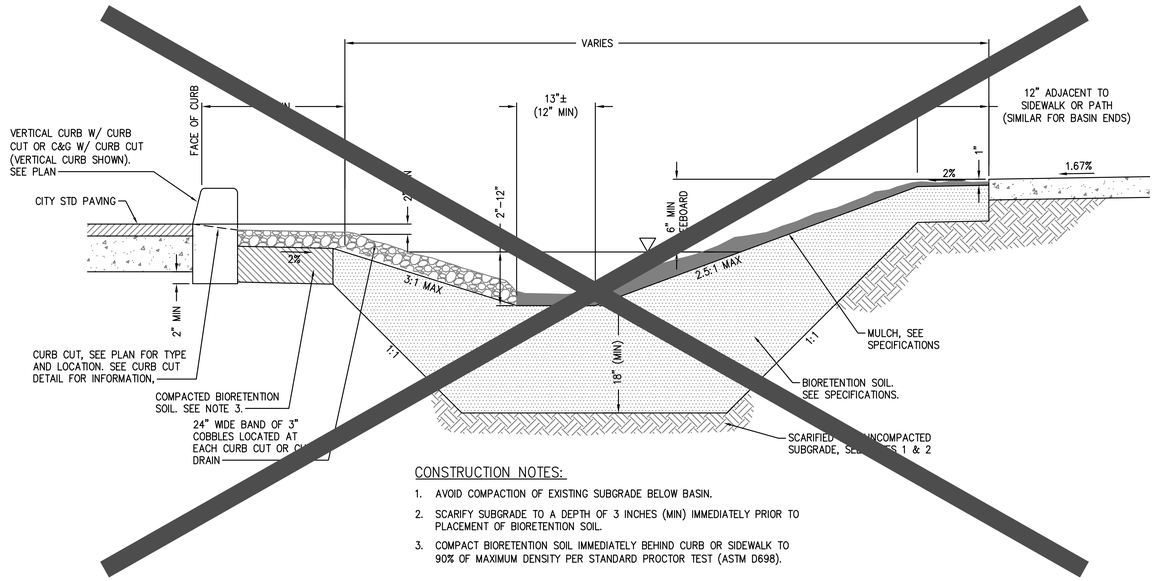
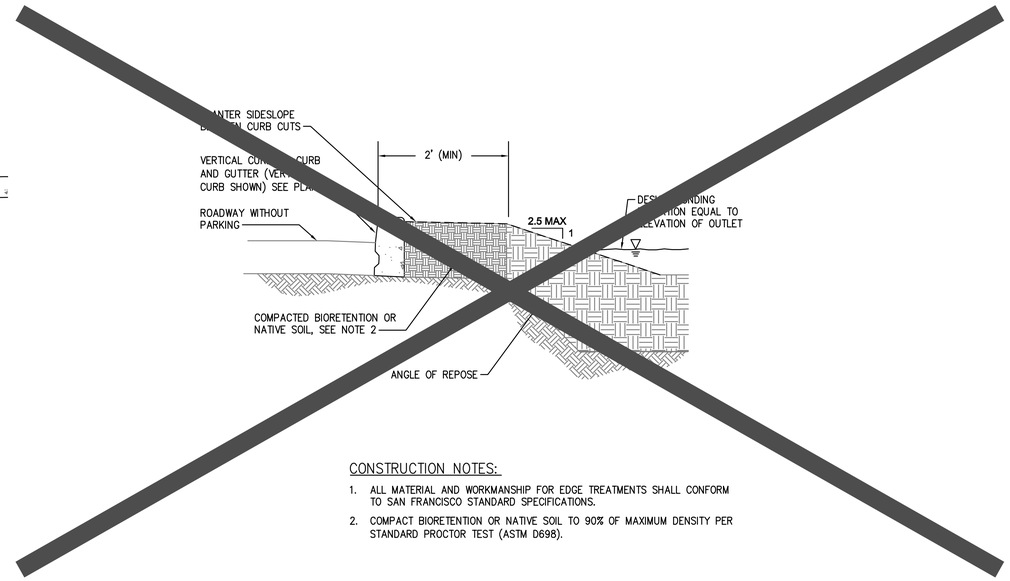


CONSTRUCTION NOTES:

1. AVOID COMPACTION OF EXISTING SUBGRADE BELOW BASIN.
2. SCARIFY SUBGRADE TO A DEPTH OF 3 INCHES (MIN) IMMEDIATELY PRIOR TO PLACEMENT OF BIORETENTION SOIL.
3. COMPACT BIORETENTION SOIL IMMEDIATELY BEHIND CURB OR SIDEWALK TO 90% OF MAXIMUM DENSITY PER STANDARD PROCTOR TEST (ASTM D698).

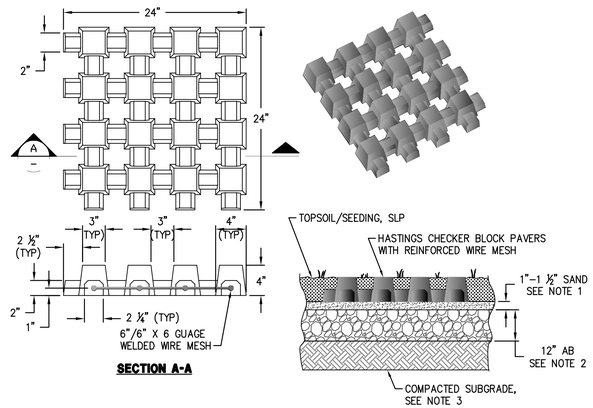
1 — **BIORETENTION BASIN DETAIL**
N.T.S.



CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR EDGE TREATMENTS SHALL CONFORM TO SAN FRANCISCO STANDARD SPECIFICATIONS.
2. COMPACT BIORETENTION OR NATIVE SOIL TO 90% OF MAXIMUM DENSITY PER STANDARD PROCTOR TEST (ASTM D698).

2 — **STANDARD CURB EDGE AT BIORETENTION BASIN**
N.T.S.



NOTES:

1. BEDDING SAND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
2. AGGREGATE BASE SHALL BE CLASS II PERMEABLE MATERIAL PER CALTRANS SPECIFICATIONS COMPACTED TO 95%.
3. PERMEABLE REINFORCED GRID PAVER SHALL BE #1741 CHECKER BLOCK PER HASTINGS ARCHITECTURAL & ORNAMENTAL CONCRETE PRODUCTS, OR APPROVED EQUIVALENT (200 HENRY STREET, LINDENHURST, NY 11575. (631) 669-0600, WWW.HASTINGSARCHITECTURAL.COM). INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

3 — **CONCRETE GRID PAVING UNIT**
N.T.S.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER T. HILLEN — No. 73320 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.19

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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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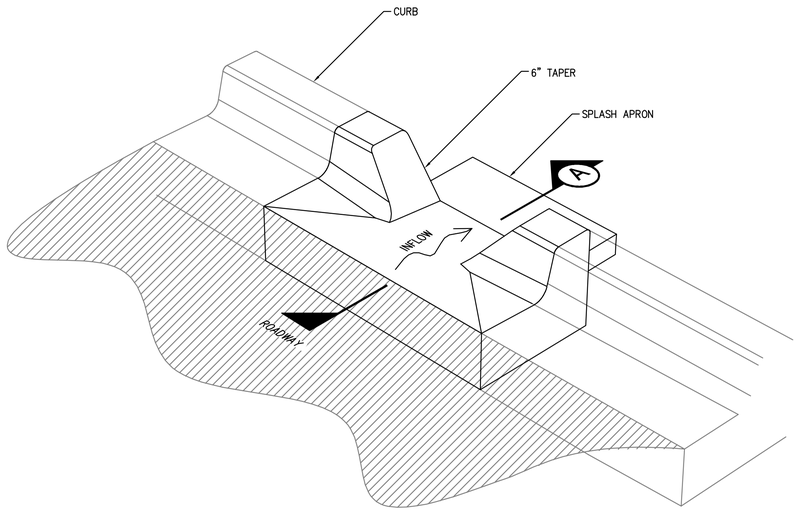
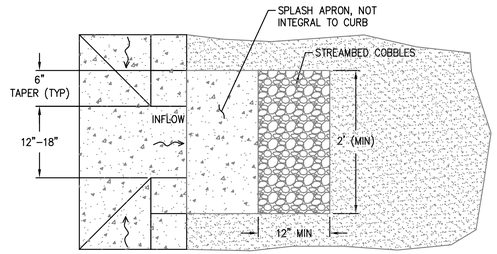


ISOMETRIC

CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO PROJECT SPECIFICATIONS AND APPLICABLE CODES PER SAN FRANCISCO PUBLIC WORKS.
2. BOND NEW CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH EPOXY AND 12" LONG #4 REBAR DOWEL CONNECTION.
3. DOWEL SPLASH APRONS TO CURB. PROVIDE A MINIMUM OF 2 12" LONG #4 REBAR DOWELS PER SPLASH APRON.
4. INLET, CURB CUT TYPE I CAN ALSO BE USED AS OVERFLOW.



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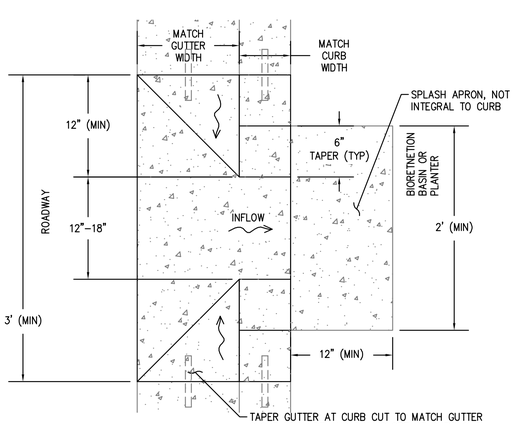
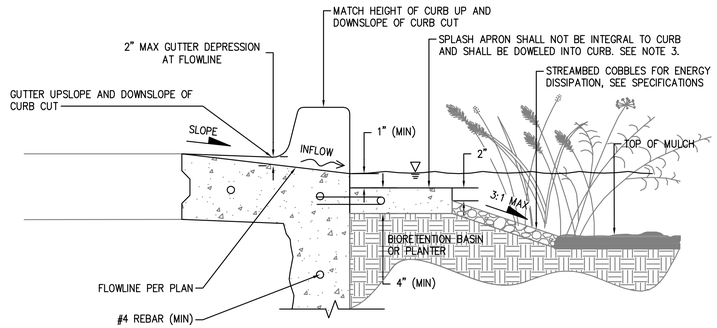
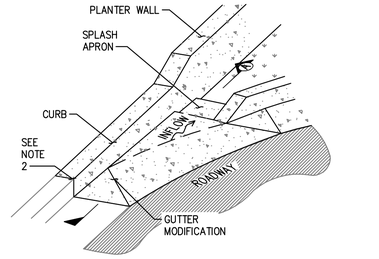


PLAN



SECTION A

1 — **INLET - CURB CUT TYPE I**
N.T.S.



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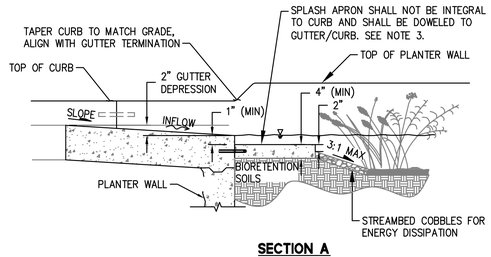
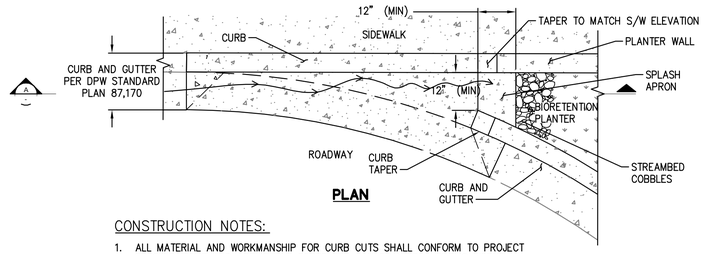


SECTION A



PLAN

CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO PROJECT SPECIFICATIONS AND APPLICABLE CODES PER SAN FRANCISCO PUBLIC WORKS.
2. BOND NEW CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH EPOXY AND 12" LONG #4 REBAR DOWEL CONNECTION.
3. DOWEL SPLASH APRONS TO CURB/GUTTER. PROVIDE A MINIMUM OF 3 12" LONG #4 REBAR DOWELS (ONE PER FACE OF SPLASH APRON/CURB OR SPLASH APRON/GUTTER JOINT).

2 — **INLET - CURB CUT TYPE II**
N.T.S.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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CONSTRUCTION DETAILS

SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA



No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.20

DRAWING NAME: H:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.20)
PLOTTING DATE: 5/1/2017 11:32 AM PLOTTED BY: John

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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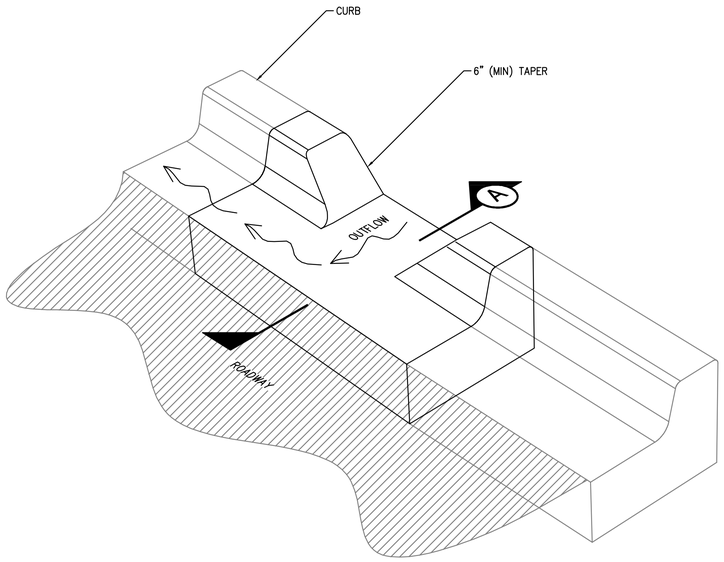
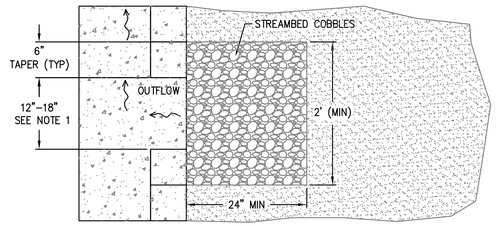


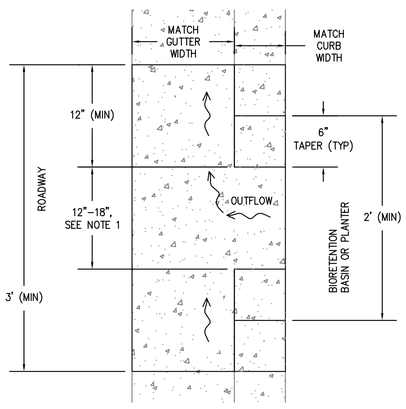
ISOMETRIC

CONSTRUCTION NOTES:

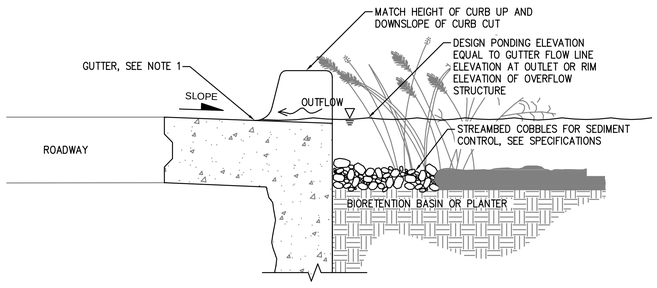
1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO SAN FRANCISCO STANDARD SPECIFICATIONS.
2. BOND NEW CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH EPOXY AND DOWEL CONNECTION.
3. MATCH GUTTER SLOPE UP AND DOWNSLOPE OF CURB CUT. SLOPE SIMILAR TO INLET DETAIL UNLESS MODIFYING GUTTER.



STREAMBED COBBLES



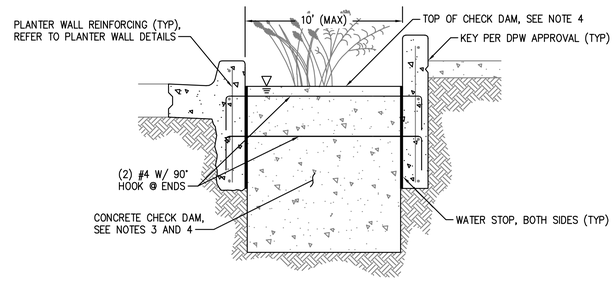
PLAN



SECTION A

1 — **OUTLET CURB CUT WITHOUT GUTTER MODIFICATION**

N.T.S.



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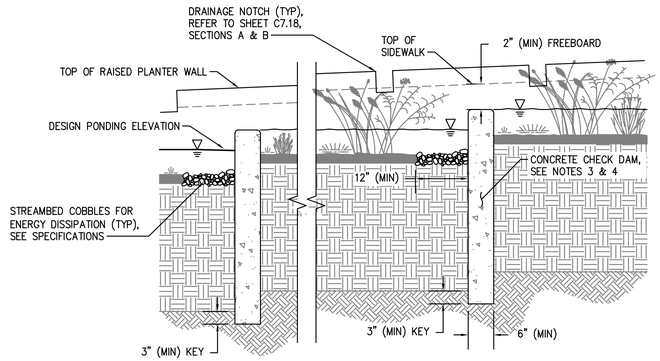

PROFILE

CONSTRUCTION NOTES:

1. ALL MATERIAL AND WORKMANSHIP FOR CHECK DAM ASSEMBLY SHALL CONFORM TO SAN FRANCISCO STANDARD SPECIFICATIONS AND APPLICABLE CODES PER SAN FRANCISCO PUBLIC WORKS.
2. CONCRETE CHECK DAM SHALL BE CONTINUOUS (NO JOINTS) AND REINFORCED WITH #4 BAR, PLACED AT 18 INCHES ON CENTER, EACH WAY.
3. CONCRETE CHECK DAM SHALL MEET STRUCTURAL REQUIREMENTS FOR LATERAL BRACING WHEN USED AS LATERAL BRACING. REFER TO SHEET C7.18, DETAIL 3.
4. TOP OF CHECK DAM TO BE LEVEL WITH CREST ELEVATION MATCHING PONDING ELEVATION. SEE BMP GRADING DETAILS FOR LOCATION AND ELEVATIONS.

2 — **CHECK DAMS**

N.T.S.

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61089
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.21

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.21)
PLOT TIME: 4-28-2017 1:01 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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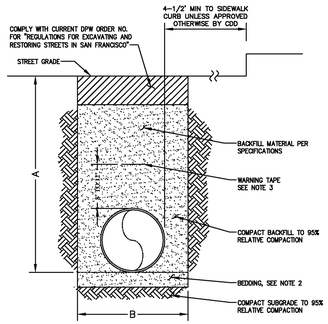


NOMINAL PIPE DIAMETER	MINIMUM TRENCH DEPTH A	MINIMUM TRENCH WIDTH B
1", 2"	24"	12"
4", 6", 8"	36"	18"
12"	44"	24"
16"	54"	30"
20"	54"	38"
24"	55"	44"

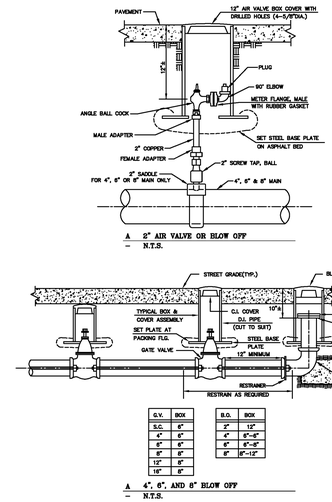
NOTES:
1) MINIMUM TRENCH DEPTHS AND TRENCH WIDTHS MUST BE ADHERED TO UNLESS APPROVED OTHERWISE BY THE CITY DISTRIBUTION DIVISION.
2) OVEREXCAVATING FOR BEDDING IS NOT REQUIRED UNLESS:
   A) BOTTOM OF TRENCH EXCAVATION IS IN BEDROCK, WHERE BEDDING SHALL BE 6" THICK.
   B) FOR 20" AND 24" DIA. PIPE, WHERE BEDDING SHALL BE 4" THICK.
   C) REQUIRED BY THE CITY REPRESENTATIVE.
   BEDDING SHALL BE THE SAME AS BACKFILL MATERIAL PER SPECIFICATIONS AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
3) WARNING TAPE SHALL BE 6" WIDE, BLUE COLORED FOR LPW AND PURPLE FOR RW, NON-DETECTABLE TYPE, INSCRIPTION MESSAGE, USING 1.5" MINIMUM HEIGHT BLACK TEXT, SPACED AT 3-FT MAXIMUM INTERVALS, SHALL READ "CAUTION: WATER LINE BELOW" FOR LPW AND "CAUTION: RECYCLED WATER LINE BELOW" FOR RW. WARNING TAPE SHALL OVERLAP 12" MINIMUM AT SPLICES.
4) TRENCH CONSTRUCTION SHALL CONFORM TO OSHA AND CAL OSHA.

SUPERSEDES E-4969R

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

STANDARD PLAN FOR DUCTILE IRON PIPE MAIN INSTALLATION
POTABLE & RECYLCED WATER PIPE TRENCH

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-002	3



G.V.	BOX
S.C.	6"
4"	6"
6"	6"
8"	6"
12"	6"
16"	6"

S.O.	BOX
2"	12"
4"	6"-6"
6"	6"-6"
8"	6"-12"

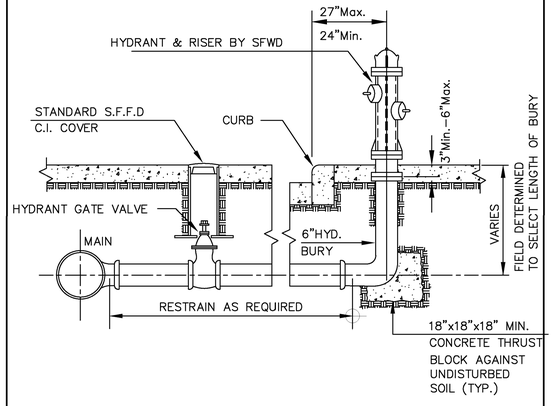
NOTES:
1) ALL MATERIALS SHOWN ON THE PLANS SHALL BE ASSEMBLED & INSTALLED BY THE CONTRACTOR EXCEPT WHERE NOTED OTHERWISE.
2) ALL FITTINGS 2" OR LESS SHALL BE BRASS UNLESS OTHERWISE SHOWN ON THE PLANS.
3) PLUGS FOR AIR VALVES & BLOW OFF ASSEMBLIES SHALL BE LUBRICATED WITH "NO OXIDE" GREASE & INSTALLED HAND TIGHT.

SUPERSEDES E-4969R

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

STANDARD PLAN FOR DUCTILE IRON PIPE MAIN INSTALLATION
AIR VALVES AND BLOW OFFS

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-003	4



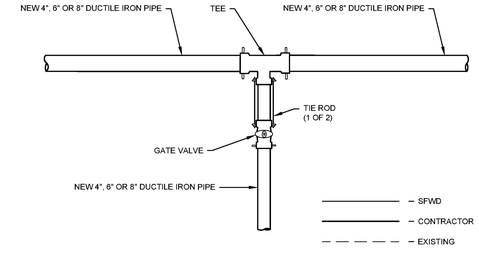
NOTES:
1) ALL MATERIALS SHOWN ON THE PLANS SHALL BE ASSEMBLED & INSTALLED BY THE CONTRACTOR EXCEPT WHERE NOTED OTHERWISE.

SUPERSEDES E-4969R

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

STANDARD PLAN FOR DUCTILE IRON PIPE MAIN INSTALLATION
FIRE HYDRANT

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-004	5

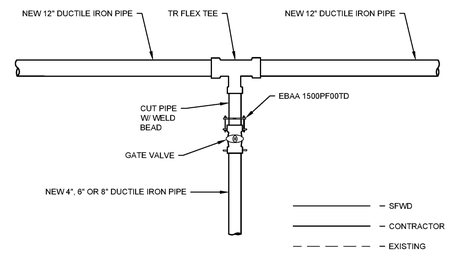


	MATERIALS	LAT-4x4	LAT-6x4	LAT-6x6	LAT-8x4	LAT-8x6	LAT-8x8
CC	TEE	4"x4" (1)	6"x4" (1)	6"x6" (1)	8"x4" (1)	8"x6" (1)	8"x8" (1)
	GATE VALVE	4" (1)	4" (1)	6" (1)	4" (1)	4" (1)	8" (1)
	BOX COVER	6" (1)	6" (1)	6" (1)	6" (1)	6" (1)	8" (1)
	BOX BASE PLATE	6" (1)	6" (1)	6" (1)	6" (1)	6" (1)	8" (1)
	FIELD LOK GASKET	4" (5)	4"(3), 6"(2)	6" (5)	4"(3), 8"(2)	6"(3), 8"(2)	8" (5)
	TIE ROD	5/8" (2)	5/8" (2)	5/8" (2)	5/8" (2)	5/8" (2)	3/4" (2)

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL
FOR 4", 6" AND 8" BRANCH TO 4", 6" AND 8" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-126	34

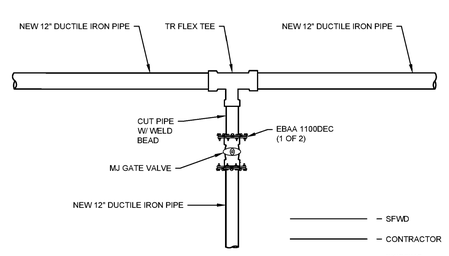


	MATERIALS	LAT-12x4	LAT-12x6	LAT-12x8
CONTRACTOR	TR FLEX TEE	12"x4" (1)	12"x6" (1)	12"x8" (1)
	GATE VALVE	4" (1)	6" (1)	8" (1)
	BOX COVER	6" (1)	6" (1)	8" (1)
	BOX BASE PLATE	6" (1)	6" (1)	8" (1)
	TYTON GASKET	12"(2), 4"(1)	12"(2), 6"(1)	12"(2), 8"(1)
	FIELD LOK GASKET	4" (2)	6"(2)	8" (2)
	EBAA 15PF00TD	4" (2)	6" (2)	8" (2)

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL
FOR 4", 6" AND 8" BRANCH TO 12" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-127	35



	MATERIALS	LAT-12x12
CONTRACTOR	TR FLEX TEE	12"x12" (1)
	MJ GATE VALVE	12" (1)
	BOX COVER	8" (1)
	BOX BASE PLATE	8" (1)
	TYTON GASKET	12" (3)
	EBAA 1100DEC	12" (2)

NOTES
1. GATE VALVE SHALL BE MECHANICAL JOINT WITH EBBA 1100DEC OR PUSH ON JOINT WITH FIELD LOK GASKET AS APPROVED BY CDD.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL
FOR 12" BRANCH TO 12" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-128	36

BKF ENGINEERS
255 SHORELINE DR
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REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — BRIAN K. STRONG — No. C 51055 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.22

DRAWING NAME: J:\Projob\20090086-10\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.22)
PLOT TIME: 4-25-2017 1:01 PM PLOTTED BY: bsm

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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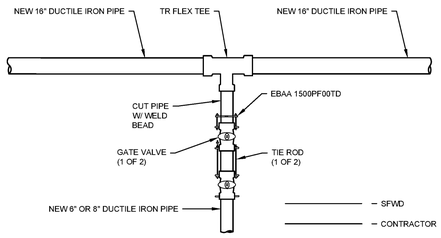


	MATERIALS	LAT-16x6	LAT-16x8
CONTRACTOR	TR FLEX TEE	16"x6" (1)	16"x8" (1)
	GATE VALVE	6" (2)	8" (2)
	BOX COVER	6" (2)	8" (2)
	BOX BASE PLATE	6" (2)	8" (2)
	TYTON GASKET	16"(2), 6"(1)	16"(2), 8"(1)
	FIELD LOK GASKET	6"(4)	8" (4)
	TIE ROD	5/8" (2)	3/4" (2)
	EBAA 15PF00TD	6" (1)	8" (1)

NOTES

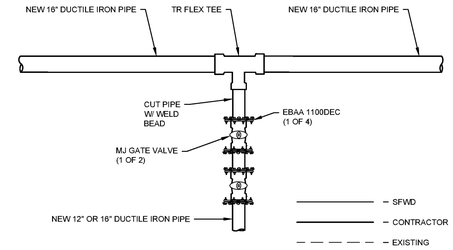
1. TWO GATE VALVES REQUIRED ONLY IF SHOWN ON CONTRACT DRAWINGS OR IF APPROVED BY CDD.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL
FOR 6" AND 8" BRANCH TO 16" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–129	37



	MATERIALS	LAT-16x12	LAT-16x16
CONTRACTOR	TR FLEX TEE	16"x12" (1)	16"x16" (1)
	MJ GATE VALVE	12" (2)	16" (2)
	BOX COVER	8" (2)	8" (2)
	BOX BASE PLATE	8" (2)	8" (2)
	TYTON GASKET	16"(2), 12"(1)	16" (3)
	EBAA 1100DEC	12"(4)	16"(4)

NOTES

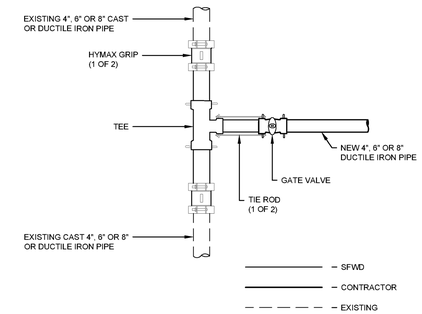
1. TWO GATE VALVES REQUIRED ONLY IF SHOWN ON CONTRACT DRAWINGS OR IF APPROVED BY CDD.
2. GATE VALVE SHALL BE MECHANICAL JOINT WITH EBBA 1100DEC OR PUSH ON JOINT WITH FIELD LOK GASKET AS APPROVED BY CDD.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL
FOR 12" AND 16" BRANCH TO 16" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–130	38



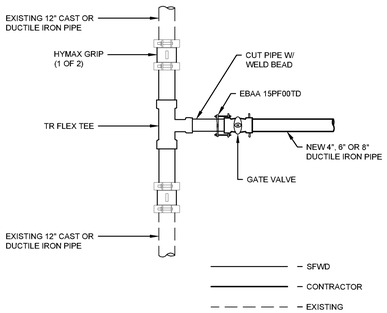
	MATERIALS	MC-4x4	MC-4x6	MC-6x6	MC-4x8	MC-6x8	MC-8x8
CONTRACTOR	GATE VALVE	4" (1)	4" (1)	6" (1)	4" (1)	6" (1)	8" (1)
	FIELD LOK GASKET	4" (1)	4" (1)	6" (1)	4" (1)	6" (1)	8" (1)
	BOX COVER	6" (1)	6" (1)	6" (1)	6" (1)	6" (1)	8" (1)
	BOX BASE PLATE	6" (1)	6" (1)	6" (1)	6" (1)	6" (1)	8" (1)
SFWD	TEE	4"x4" (1)	6"x4" (1)	6"x6" (1)	8"x4" (1)	8"x6" (1)	8"x8" (1)
	HYMAX GRIP	4" (2)	6" (2)	6" (2)	8" (2)	8" (2)	8" (2)
	FIELD LOK GASKET	4" (4)	6"(2), 4"(2)	6" (4)	8"(2), 4"(2)	8"(2), 6"(2)	8" (4)
	TIE ROD	5/8" (2)	5/8" (2)	5/8" (2)	5/8" (2)	5/8" (2)	3/4" (2)

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TO EXISTING MAIN
FOR 4", 6" AND 8" BRANCH TO 4", 6" AND 8" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–131	39



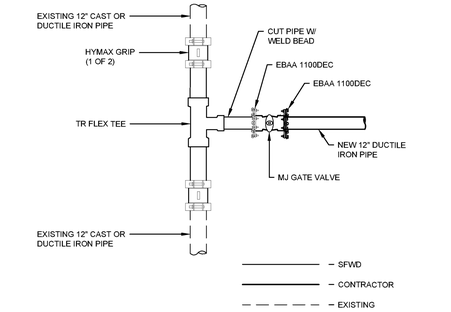
	MATERIALS	MC-4x12	MC-6x12	MC-8x12
CONTRACTOR	GATE VALVE	4" (1)	6" (1)	8" (1)
	FIELD LOK GASKET	4" (2)	6" (2)	8" (2)
	BOX COVER	6" (1)	6" (1)	8" (1)
	BOX BASE PLATE	6" (1)	6" (1)	8" (1)
SFWD	TR FLEX TEE	12"x4" (1)	12"x6" (1)	12"x8" (1)
	HYMAX GRIP	12" (2)	12" (2)	12" (2)
	TYTON GASKET	12"(2), 4"(1)	12"(2), 6"(1)	12"(2), 8"(1)
	EBAA 15PF00TD	4" (1)	6" (1)	8" (1)

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TO EXISTING MAIN
FOR 4", 6" AND 8" BRANCH TO 12" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–132	40



	MATERIALS	MC-12x12
CONTRACTOR	MJ GATE VALVE	8" (1)
	BOX COVER	8" (1)
	BOX BASE PLATE	8" (1)
	EBAA 1100DEC	12" (1)
SFWD	TR FLEX TEE	12"x12" (1)
	HYMAX GRIP	12" (2)
	TYTON GASKET	12" (3)
	EBAA 1100DEC	12" (1)

NOTES

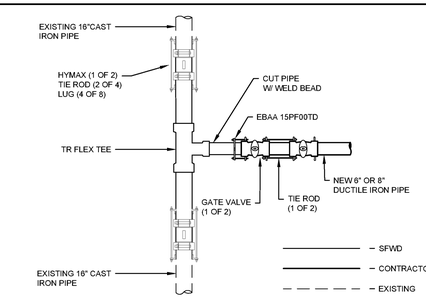
1. GATE VALVE SHALL BE MECHANICAL JOINT WITH EBBA 1100DEC OR PUSH ON JOINT WITH FIELD LOK GASKET AS APPROVED BY CDD.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TO EXISTING MAIN
FOR 12" BRANCH TO 12" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–133	41



	MATERIALS	MC-6x16C	MC-8x16C
CONTRACTOR	GATE VALVE	6" (2)	8" (2)
	FIELD LOK GASKET	6" (3)	8" (3)
	TIE ROD	5/8" (2)	3/4" (2)
	BOX COVER	6" (1)	8" (1)
	BOX BASE PLATE	6" (1)	8" (1)
SFWD	TR FLEX TEE	16"x6" (1)	16"x8" (1)
	HYMAX	16" (2)	16" (2)
	TYTON GASKET	16"(2), 6"(1)	16"(2), 8"(1)
	FIELD LOK GASKET	6" (1)	8" (1)
	TIE ROD	1-1/4" (4)	1-1/4" (4)
	LUG	16" (8)	16" (8)
	EBAA 15PF00TD	6" (1)	8" (1)

NOTES

1. TWO GATE VALVES REQUIRED ONLY IF SHOWN ON CONTRACT DRAWINGS OR IF APPROVED BY CDD.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TO EXISTING MAIN
FOR 6" AND 8" BRANCH TO 16" CAST IRON MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–134	42

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KEHOE — No. 73234 — CIVIL — STATE OF CALIFORNIA — 10/31/18

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.23

DRAWING NAME: J:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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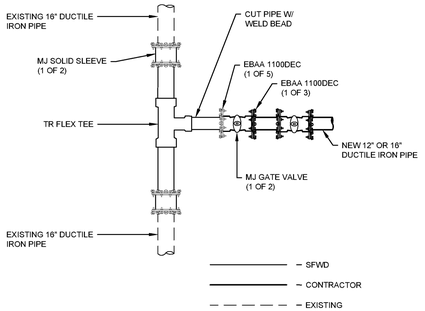


	MATERIALS	MC-12x16D	MC-16x16D
CONTRACTOR	MJ GATE VALVE	12" (2)	16" (2)
	EBAA 1100DEC	12" (3)	16" (3)
	BOX COVER	6" (2)	6" (2)
	BOX BASE PLATE	6" (2)	6" (2)
SFWD	TR FLEX TEE	16"x12" (1)	16"x16" (1)
	MJ SOLID SLEEVE	16" (2)	16" (2)
	TYTON GASKET	16"(2), 12"(1)	16" (3)
	EBAA 1100DEC	16"(4), 12"(1)	16" (5)

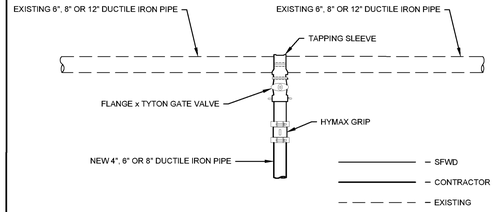
NOTES

1. TWO GATE VALVES REQUIRED ONLY IF SHOWN ON CONTRACT DRAWINGS OR IF APPROVED BY CDD.
2. GATE VALVE SHALL BE MECHANICAL JOINT WITH EBBA 1100DEC OR PUSH ON JOINT WITH FIELD LOK GASKET AS APPROVED BY CDD.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TO EXISTING MAIN FOR 12" AND 16" BRANCH TO 16" DUCTILE IRON MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–135	43

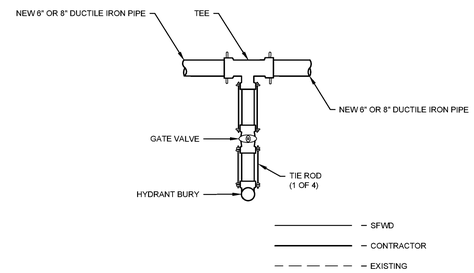


	MATERIALS	MCT-4x6	MCT-4x8	MCT-6x8
SFWD	TAPPING SLEEVE	6"x4" (1)	8"x4" (1)	8"x6" (1)
	FLANGExTYTON GATE	4" (1)	4" (1)	6" (1)
	BOX COVER	6" (1)	6" (1)	6" (1)
	BOX BASE PLATE	6" (1)	6" (1)	6" (1)
	FIELD LOK GASKET	4" (1)	4" (1)	6" (1)
	HYMAX GRIP	4" (1)	4" (1)	6" (1)

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW LATERAL BRANCH TAP TO EXISTING MAIN FOR 4", 6" AND 8" BRANCH TAP TO 6", 8" AND 12" MAIN

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–136	44

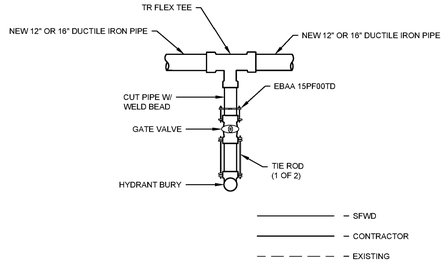


	MATERIALS	NH-6	NH-8
CONTRACTOR	TEE	6"x6" (1)	8"x6" (1)
	GATE VALVE	6" (1)	6" (1)
	HYRANT BURY	6" (1)	6" (1)
	BOX COVER	6" (1)	6" (1)
	BOX BASE PLATE	6" (1)	6" (1)
	FIELD LOK GASKET	6" (6)	6"(4), 8"(2)
	TIE ROD	5/8" (4)	5/8" (4)

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW HYDRANT FOR 6" AND 8" PIPE

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–146	54

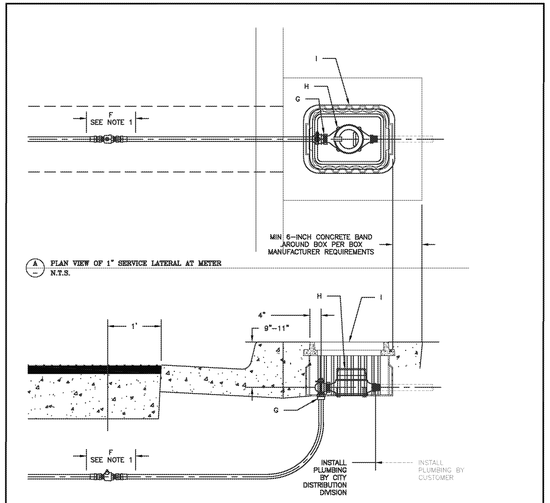


	MATERIALS	NH-12	NH-16
CONTRACTOR	TR FLEX TEE	12"x6" (1)	16"x6" (1)
	GATE VALVE	6" (1)	6" (1)
	HYRANT BURY	6" (1)	6" (1)
	BOX COVER	6" (1)	6" (1)
	BOX BASE PLATE	6" (1)	6" (1)
	TYTON GASKET	12"(2), 6"(1)	16"(2), 6"(1)
	FIELD LOK GASKET	6" (3)	6"(3)
	EBAA 15PF00TD	6" (1)	6" (1)
	TIE ROD	5/8" (2)	5/8" (2)

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

NEW HYDRANT FOR 12" AND 16" PIPE

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–147	55



NOTES:

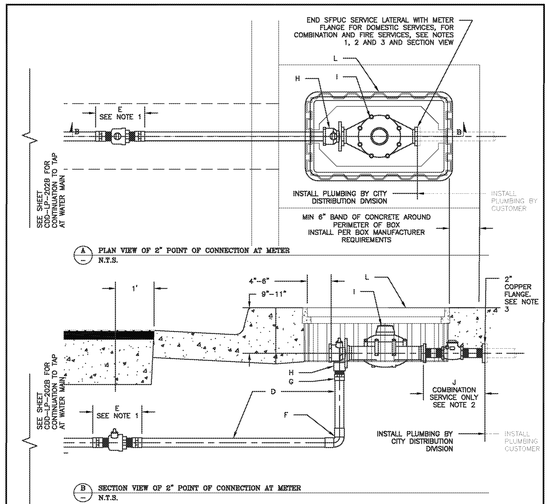
1. FOR LONG SERVICE LATERALS ONLY (MAIN ON FAR SIDE OF STREET WITH RESPECT TO CUSTOMER), INSTALL BURIED LINE VALVE JUST OUTSIDE OF LIP OF GUTTER.
2. CUSTOMERS REQUIRING METER SET INSTALLATIONS SHALL LEAVE ENOUGH EXCAVATED SPACE IN SIDEWALK AREA TO ALLOW FOR MEASUREMENT OF METER SET ASSEMBLY AND TO PLACE THE METER ASSEMBLY IN THE GROUND WITH APPROPRIATELY–SIZED METER BOX.

SUPERSEDES A–1240–2B

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
1–INCH SERVICE LATERAL CONNECTION AT METER

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–201C	61



NOTES:

1. FOR LONG SERVICE LATERALS ONLY (MAIN ON FAR SIDE OF STREET WITH RESPECT TO CUSTOMER), INSTALL BURIED LINE VALVE JUST OUTSIDE OF LIP OF GUTTER.
2. FOR 2–INCH COMBINATION DOMESTIC/FIRE SERVICES, A CHECK VALVE IS INSTALLED DOWNSTREAM OF THE WATER METER.
3. CUSTOMER FLANGE SHALL NOT BE INSTALLED UNTIL AFTER CITY LATERAL IS INSTALLED TO CITY FLANGE.
4. CUSTOMERS REQUIRING METER SET INSTALLATIONS SHALL LEAVE ENOUGH EXCAVATED SPACE IN SIDEWALK AREA TO ALLOW FOR MEASUREMENT OF METER SET ASSEMBLY AND TO PLACE THE METER ASSEMBLY IN THE GROUND WITH APPROPRIATELY–SIZED METER BOX.

SUPERSEDES A–1240–2B

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
2–INCH SERVICE LATERAL CONNECTION AT METER (DOMESTIC AND COMBINATION SERVICE)

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–202C	64

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CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. STARKEY No. 61654 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.24

DRAWING NAME: J:\Projects\20090086-1\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.24)
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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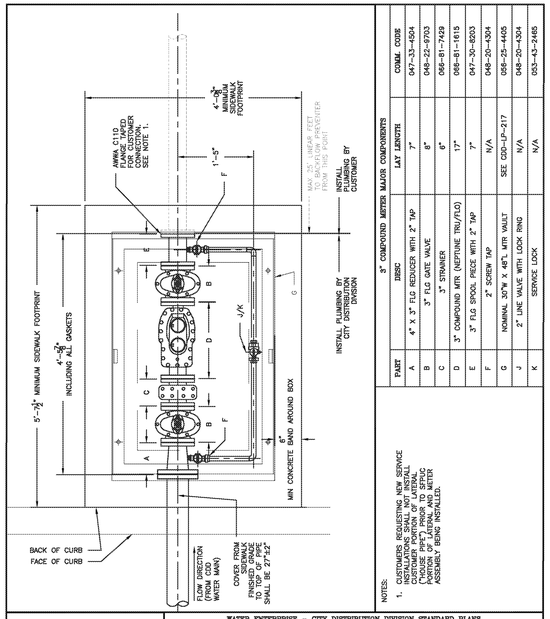


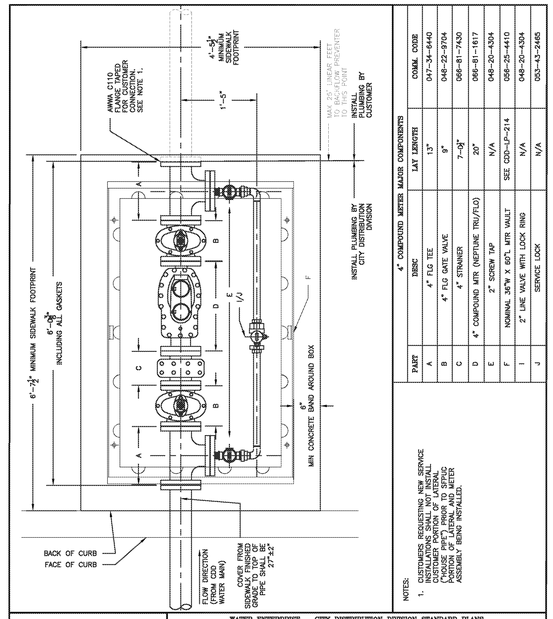
3" COMPOUND METER MAJOR COMPONENTS			
PART	DESC	LAY LENGTH	COMM. CODE
A	4" X 3" FLG REDUCER WITH 2" TAP	7"	047-33-4504
B	3" FLG GATE VALVE	8"	048-22-9703
C	3" STRAINER	6"	066-81-7429
D	3" COMPOUND MTR (NEPTUNE TRU/FLO)	17"	066-81-1615
E	3" FLG SPOOL PIECE WITH 2" TAP	7"	047-30-8203
F	2" SCREW TAP	N/A	048-20-4304
G	NOMINAL 30"W X 48"L MTR VAULT	SEE CDD-LP-217	056-25-4405
J	2" LINE VALVE WITH LOCK RING	N/A	048-20-4304
K	SERVICE LOCK	N/A	053-43-2485

NOTES:
1. CUSTOMERS REQUESTING NEW SERVICE INSTALLATIONS SHALL NOT INSTALL DISTINCTIVE PURPLE PIPE TO SEPTIC CUSTOMER PORTION OF LATERAL. (THOSE PIPE) PRIOR TO SEPTIC PORTION OF LATERAL AND METER ASSEMBLY BEING INSTALLED.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
3-INCH COMPOUND METER ASSEMBLY
(STANDARD INSTALLATION)

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-203D	69



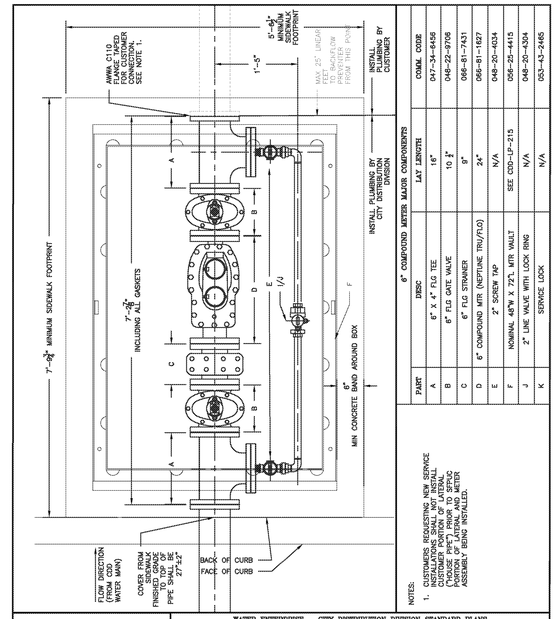
4" COMPOUND METER MAJOR COMPONENTS			
PART	DESC	LAY LENGTH	COMM. CODE
A	4" FLG TEE	13"	047-34-6440
B	4" FLG GATE VALVE	9"	048-22-9704
C	4" STRAINER	7-½"	066-81-7430
D	4" COMPOUND MTR (NEPTUNE TRU/FLO)	20"	066-81-1617
E	2" SCREW TAP	N/A	048-20-4304
F	NOMINAL 36"W X 60"L MTR VAULT	SEE CDD-LP-214	056-25-4410
I	2" LINE VALVE WITH LOCK RING	N/A	048-20-4304
J	SERVICE LOCK	N/A	053-43-2485

NOTES:
1. CUSTOMERS REQUESTING NEW SERVICE INSTALLATIONS SHALL NOT INSTALL DISTINCTIVE PURPLE PIPE TO SEPTIC (THOSE PIPE) PRIOR TO SEPTIC PORTION OF LATERAL AND METER ASSEMBLY BEING INSTALLED.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
4-INCH COMPOUND METER ASSEMBLY
(STANDARD INSTALLATION)

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-203E	71



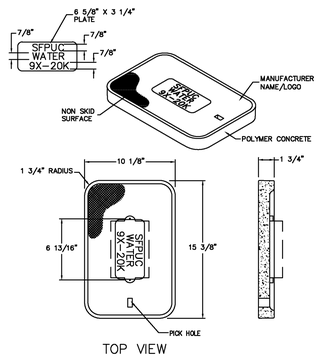
6" COMPOUND METER MAJOR COMPONENTS			
PART	DESC	LAY LENGTH	COMM. CODE
A	6" x 4" FLG TEE	16"	047-34-4496
B	6" FLG GATE VALVE	10-½"	048-22-9706
C	6" FLG STRAINER	9"	066-81-7431
D	6" COMPOUND MTR (NEPTUNE TRU/FLO)	24"	066-81-1627
E	2" SCREW TAP	N/A	048-20-4034
F	NOMINAL 48"W X 72"L MTR VAULT	SEE CDD-LP-215	056-25-4415
J	2" LINE VALVE WITH LOCK RING	N/A	048-20-4304
K	SERVICE LOCK	N/A	053-43-2485

NOTES:
1. CUSTOMERS REQUESTING NEW SERVICE INSTALLATIONS SHALL NOT INSTALL DISTINCTIVE PURPLE PIPE TO SEPTIC (THOSE PIPE) PRIOR TO SEPTIC PORTION OF LATERAL AND METER ASSEMBLY BEING INSTALLED.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
6-INCH COMPOUND METER ASSEMBLY
(STANDARD INSTALLATION)

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-203F	73

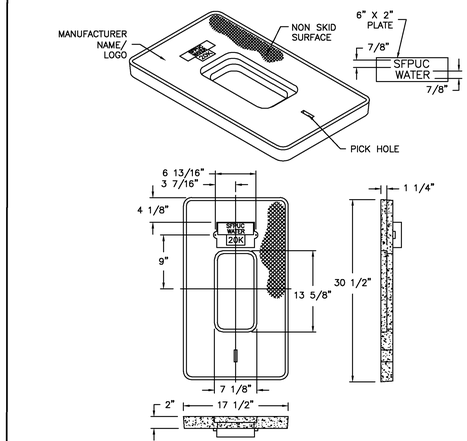


ARMORCAST A6-1922T-9X-SFPUC OR APPROVED EQUIVALENT
FOR REPLACEMENT ONLY – NOT FOR NEW INSTALLATION

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
10"X15" POLYMER CONCRETE METER BOX COVER 9X

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-209	83

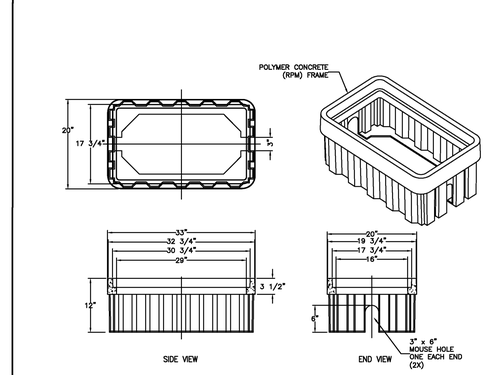


ARMORCAST A6-1947TD-EB-SFPUC OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
17"X30" POLYMER CONCRETE METER BOX COVER
WITH 7"X13" READ LID OPENING

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-210	84



ARMORCAST A6-1534X12-SFWD OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
17"X30"X12" METER BOX

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD-LP-212	86

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
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650-482-6300
650-482-6399 (FAX)
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN G. CARLSON No. 72301 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.25

DRAWING NAME: J:\Sheets\20090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.25)
PLOT TIME: 4-28-2017 10:19a PLOTTED BY: twan

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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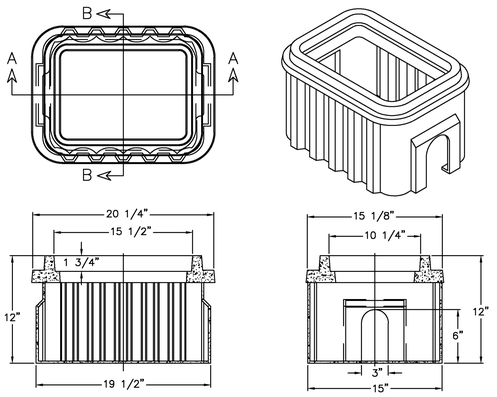
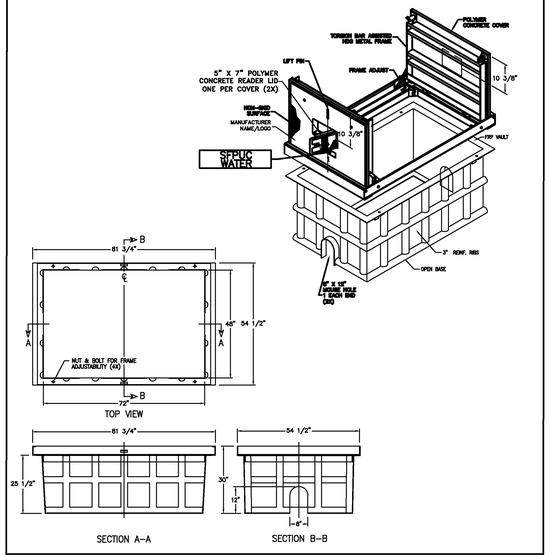


ARMORCAST P6–1921X12–SFWD OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
10"X15"X12" METER BOX

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–213	87

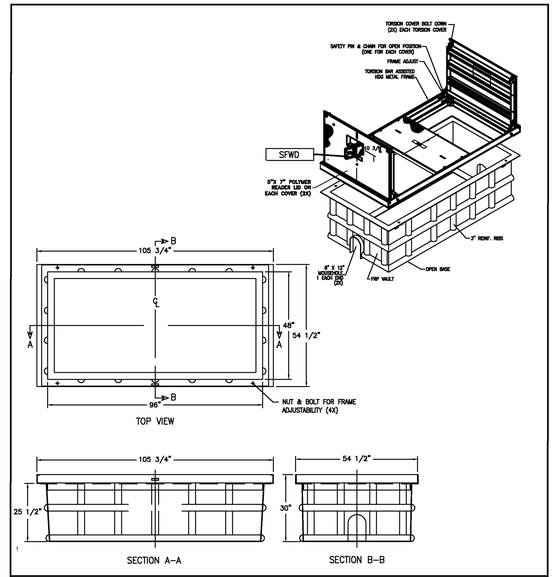


ARMORCAST A6–1506TAX30MT–SFWD OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
48"X72"X30" METER VAULT W/TORSION ASSISTED COVER

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–215	89

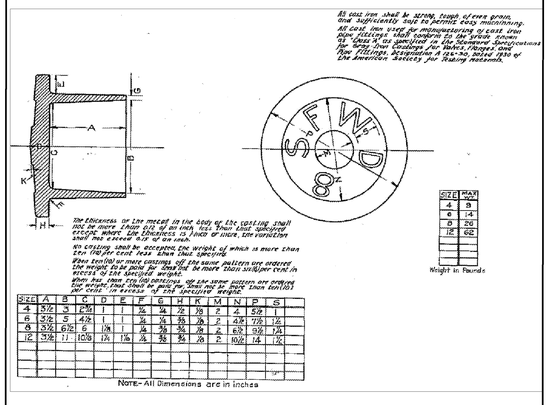


ARMORCAST A6–1499TAXMT–SFWD OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

WATER SERVICES
48"X96"X30" METER VAULT W/TORSION ASSISTED COVER

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–216	90

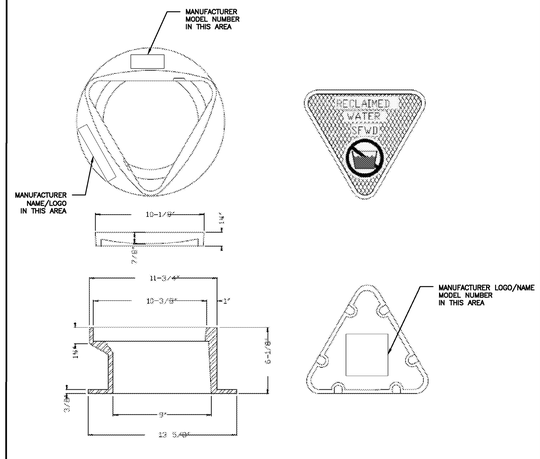


DaL FOUNDRY O–700X OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

VALVE BOXES & COVERS
STANDARD SFWD POTABLE WATER GATE COVER

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–251	92

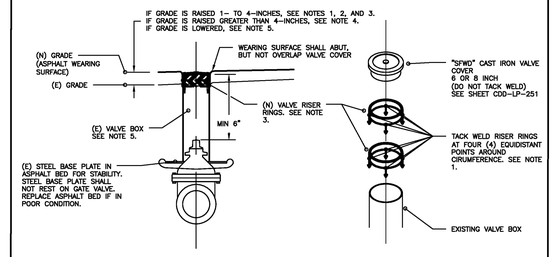


DaL FOUNDRY M–9009 OR APPROVED EQUIVALENT

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

VALVE BOXES & COVERS
STANDARD SFWD RECYCLED WATER GATE COVER

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–252	93



VALVE COVER ADJUSTMENT NOTES FOR ASPHALT WEARING SURFACES:

1. TO RAISE VALVE COVERS BETWEEN 1–INCH AND 4–INCHES TO (N) STREET GRADE, TACK WELD SFWD–SUPPLIED VALVE BOX RISER RINGS TO (E) VALVE BOX AS SHOWN.
2. VALVE BOX RISER RINGS ARE AVAILABLE IN THE FOLLOWING SIZES FROM THE CITY DISTRIBUTION WAREHOUSE AT 1990 NEWCOMB AVENUE.

		COMMODITY CODE:
2.1.	1–INCH HIGH X 6–INCH DIAMETER	047–33–9061
2.2.	2–INCH HIGH X 6–INCH DIAMETER	047–33–9062
2.3.	1–INCH HIGH X 8–INCH DIAMETER	047–33–9081
2.4.	2–INCH HIGH X 8–INCH DIAMETER	047–33–9082

3. A MAXIMUM OF TWO (2) VALVE RISER RINGS MAY BE TACK–WELDED TO AN (E) IRON VALVE BOX.
4. IF VALVE COVERS ARE BEING RAISED MORE THAN 4–INCHES TO (N) GRADE, THE (E) VALVE BOX MUST BE REMOVED AND A (N) IRON VALVE BOX MUST BE CUT TO THE APPROPRIATE SIZE AND SET IN PLACE.
5. IF VALVE COVERS ARE BEING LOWERED, THE (E) VALVE BOX MUST BE REMOVED, CUT OR GROUND TO THE APPROPRIATE SIZE, AND RESET IN PLACE. THE MINIMUM DISTANCE BETWEEN GATE VALVE OPERATING NUT AND VALVE COVER IS SIX (6) INCHES.
6. IF VALVE BOX IS 12–INCHES OR GREATER IN DIAMETER, VALVE ADJUSTMENT MUST BE MADE BY INSTALLING A (N) VALVE BOX CUT TO THE APPROPRIATE SIZE. VALVE BOX RISER RINGS ARE NOT AVAILABLE FOR VALVE BOXES GREATER THAN OR EQUAL TO 12–INCHES IN DIAMETER.
7. (N) ASPHALT WEARING SURFACE SHALL ENCASE THE CIRCUMFERENCE, BUT NOT BE PLACED OVER THE TOP SURFACE OF, THE SFWD VALVE COVER.

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

VALVE BOXES & COVERS
ADJUSTMENT OF STANDARD POTABLE GATE COVER TO NEW GRADE

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–253	94

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA



No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.26

DRAWING NAME: J:\Projects\20090086-1(3 SHEETS)\PHASE-01B\PH01B-C700-Details.dwg (C7.26)
PLOT TIME: 4-25-2017 1:01 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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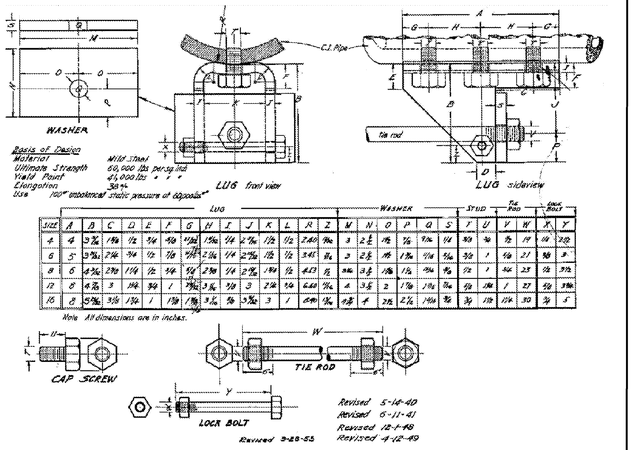


Basis of Design
Material — Mild Steel
Ultimate Strength — 60,000 lbs per sq.inch
Yield Point — 40,000 lbs
Elongation — 30%
Use — 100% accidental static pressure of 150 psi

SIZE	LUG A	B	C	D	E	F	G	H	I	J	K	L	R	Z	WASHER M	N	O	P	Q	S	STUD T	U	TIE ROD V	W	EYE BOLT X	Y
4	4	3 3/4	1 5/8	1/2	3/4	4 5/8	1 1/16	1 5/16	1/4	2 1/16	1/2	1/2	2.60	11/16	3	2 1/2	1/16	1/16	1/4	3/8	1/2	1	3/8	1/2	1	2 1/2
6	5	5 3/4	2 1/4	3/4	1/2	7/8	1 7/16	2 1/4	1/4	2 7/16	1/2	1/2	3.45	1 1/4	3	2 1/2	1/16	1 3/16	1/4	5/16	5/8	1	1/2	2 1/2	1	3
8	6	6 3/4	2 3/4	1 1/4	1/2	1	1 7/16	2 3/8	1/4	2 7/16	1 1/4	1/2	4.13	1 1/2	3 1/2	3 1/2	1/16	1 1/2	1/4	5/16	5/8	1	1/2	2 1/2	1 1/2	3 1/2
12	8	9 3/4	3	1 1/2	3/4	1	1 7/16	3 1/4	3/8	3	1 1/2	3/4	6.60	1 1/4	4	3 1/2	2	1 1/16	1 1/16	1/4	5/8	1 1/2	1	2 1/2	1 1/2	3 1/2
16	8	9 3/4	3 1/2	1 3/4	1	1 3/8	1 7/16	3 1/4	5/8	3 1/2	3	1	8.60	1 1/4	4 1/2	4	2 1/2	2 1/4	1 1/16	3/8	1	1 1/2	1 1/4	3	2	5

Note All dimensions are in inches.

NOTE:
LUGS, TIE RODS, BOLTS AND WASHERS SHALL BE STAINLESS STEEL TYPE 304 OR 316

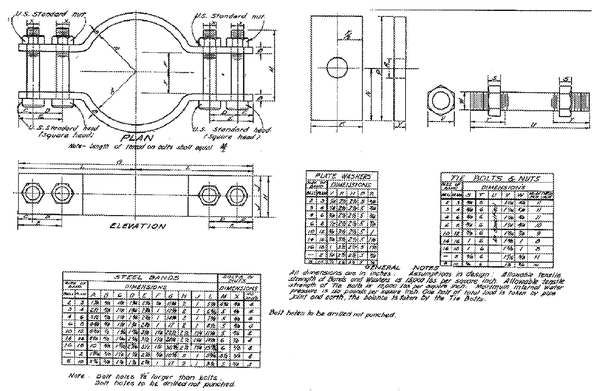
Revised 5-14-40
Revised 6-11-41
Revised 12-1-49
Revised 9-28-55
Revised 4-12-49

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

MISCELLANEOUS
LUGS AND TIE RODS

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–301	98



STEEL BANDS									PLATE WASHERS					TIE BOLTS & NUTS				
SIZE OF PIPE	DIMENSIONS								SIZE OF PIPE	DIMENSIONS				SIZE OF PIPE	DIMENSIONS			
	A	B	C	D	E	F	G	H		A	B	C	D		T	W	L	H
3	3	7/8	5/8	1/8	1 3/4	1/8	3	1	3	3	2 1/2	5/8	5/8	3	1/2	1 1/16	4	1
4	4	1 1/16	7/8	1/8	2 1/4	1/8	3	1	4	4	3 1/2	5/8	5/8	4	1/2	1 1/16	4	1
6	6	1 1/16	7/8	1/8	2 1/4	1/8	3	1	6	6	5 1/2	5/8	5/8	6	1/2	1 1/16	4	1
8	8	1 1/16	7/8	1/8	2 1/4	1/8	3	1	8	8	7 1/2	5/8	5/8	8	1/2	1 1/16	4	1
10	10	1 1/16	7/8	1/8	2 1/4	1/8	3	1	10	10	9 1/2	5/8	5/8	10	1/2	1 1/16	4	1
12	12	1 1/16	7/8	1/8	2 1/4	1/8	3	1	12	12	11 1/2	5/8	5/8	12	1/2	1 1/16	4	1
14	14	1 1/16	7/8	1/8	2 1/4	1/8	3	1	14	14	13 1/2	5/8	5/8	14	1/2	1 1/16	4	1
16	16	1 1/16	7/8	1/8	2 1/4	1/8	3	1	16	16	15 1/2	5/8	5/8	16	1/2	1 1/16	4	1
18	18	1 1/16	7/8	1/8	2 1/4	1/8	3	1	18	18	17 1/2	5/8	5/8	18	1/2	1 1/16	4	1
20	20	1 1/16	7/8	1/8	2 1/4	1/8	3	1	20	20	19 1/2	5/8	5/8	20	1/2	1 1/16	4	1
24	24	1 1/16	7/8	1/8	2 1/4	1/8	3	1	24	24	23 1/2	5/8	5/8	24	1/2	1 1/16	4	1

Note: Bolt holes to be drilled not punched.

GENERAL NOTES
All dimensions are in inches. Deductions in design for bolt holes. Allowable tensile strength of Bands and Washers is 18000 lbs per square inch. Allowable tensile strength of Tie Bolts is 15000 lbs per square inch. Minimum internal water pressure is 150 pounds per square inch. Use one set of bolts to take dead load in joint and same, the balance is taken by the Tie Bolts.

Bolt holes to be drilled not punched.

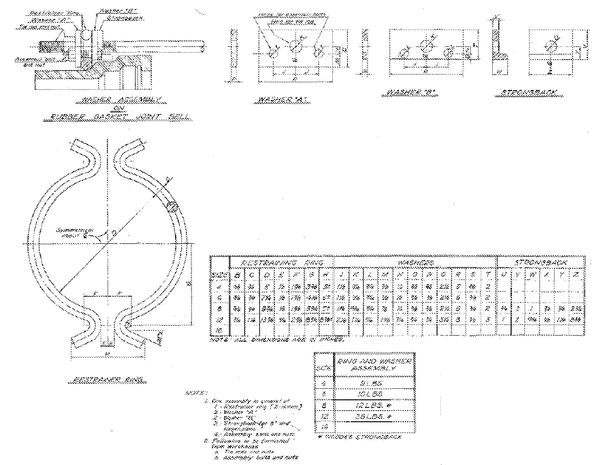
NOTE:
BOLTS, NUTS, BANDS, AND WASHERS SHALL BE STAINLESS STEEL TYPE 304 OR 316

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

MISCELLANEOUS
PLAIN & BELL BANDS / PLATE WASHERS & TIE BOLTS

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–302	99



ELECTRAGAP RING										WASHERS										STRONGBACK					
SIZE OF PIPE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
4	4	3 3/4	2	1/2	1/8	3/4	1	1 1/16	1/4	2 1/16	1/2	1/2	2 1/2	1 1/16	3	2 1/2	1/16	1 1/16	1/4	3/8	1/2	1	3/8	1/2	1	2 1/2
6	6	5 3/4	2 3/4	1/2	1/8	3/4	1	1 1/16	1/4	2 1/16	1/2	1/2	3 1/2	1 1/16	3	2 1/2	1/16	1 1/16	1/4	3/8	1/2	1	3/8	1/2	1	3
8	8	7 3/4	3 1/2	1/2	1/8	3/4	1	1 1/16	1/4	2 1/16	1/2	1/2	4 1/2	1 1/16	3	2 1/2	1/16	1 1/16	1/4	3/8	1/2	1	3/8	1/2	1	3
12	12	11 3/4	4 1/2	1/2	1/8	3/4	1	1 1/16	1/4	2 1/16	1/2	1/2	6 1/2	1 1/16	3	2 1/2	1/16	1 1/16	1/4	3/8	1/2	1	3/8	1/2	1	3
16																									

NOTE: ALL DIMENSIONS ARE IN INCHES.

RING AND WASHER ASSEMBLY	
SIZE	WEIGHT
4	21.5 lbs
6	10 LBS
8	12 LBS #
12	36 LBS #
16	

WOODEN STRONGBACK

NOTE:
1. Ring assembly is consist of:
   1- Electragap ring (2 halves)
   2- Washer "A"
   3- Washer "B"
   3- Strongback- 8" and
   4- Assembly bolts and nuts
2. Packaging to be furnished from workshop.
   a- Tie wire nut nuts
   b- Assembly bolts and nuts

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

MISCELLANEOUS
RUBBER GASKET JOINT BELL

DATE	10/1/2016	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	CDD–LP–303	100

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650–482–6300
650–482–6399 (FAX)
ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — JOSEPH C. SULLIVAN — No. 72781 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.27

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\Engr\20090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.27)
PLOT TIME: 4-28-2017 1:01 PM PLOTTED BY: tom

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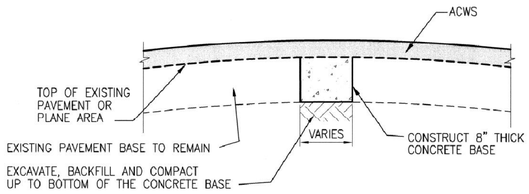

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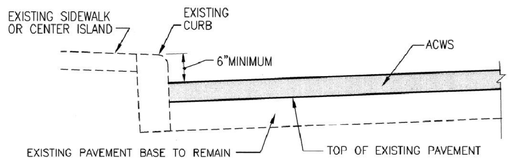
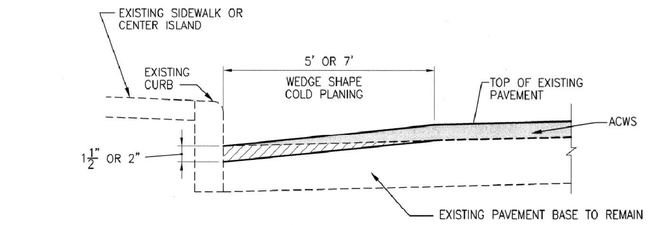
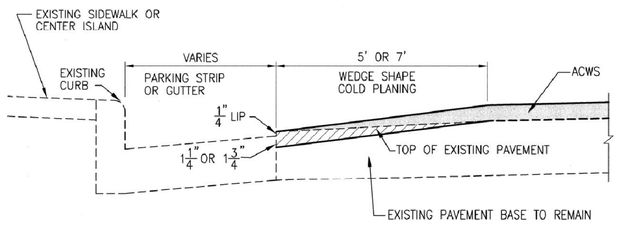


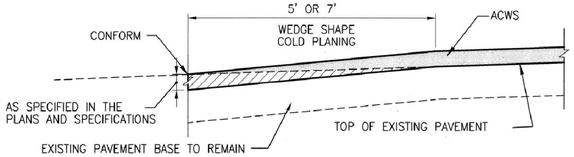
RESURFACING ADJACENT TO CURB



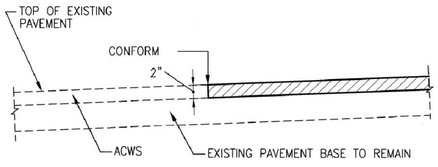
PLANING AND RESURFACING ADJACENT TO CURB



PLANING AND RESURFACING ADJACENT TO CONCRETE PARKING STRIP OR GUTTER



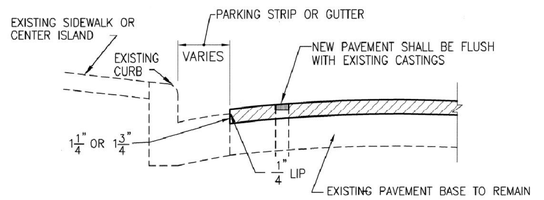
WEDGE SHAPE COLD PLANING CONFORM



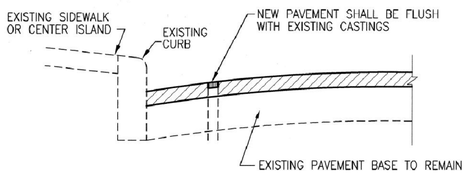
FULL DEPTH PLANING CONFORM

LEGEND

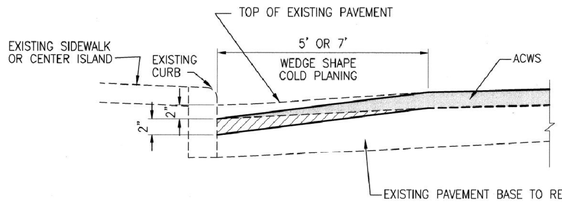
- NEW ASPHALT CONCRETE WEARING SURFACE (ACWS)
- AREA TO BE COLD PLANED AND RESURFACED
- EXISTING PAVEMENT OR FACILITY



FULL DEPTH PLANING & RESURFACING ADJACENT TO GUTTER OR PARKING STRIP



FULL DEPTH PLANING & RESURFACING ADJACENT TO CURB



PLANING AND RESURFACING TO INCREASE CURB HEIGHT

This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
PR	10/01/06
DRAWN:	DATE:
GY	10/01/06
CHECKED:	DATE:
EK	11/01/06

PLANS APPROVAL DATE: APRIL 30, 2007
Rick A. Rice 4/27/07 — SECTION MANAGER
4/30/07 — DEPUTY BUREAU MANAGER
BUREAU MANAGER

STANDARD PLAN
STREETS AND HIGHWAYS
STANDARD COLD PLANING AND RESURFACING CROSS SECTIONS

OLD FILE NO. 49,096
FILE NO. 87,168
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

Registered Professional Engineer — Evan Kirshen — No. Civil — Exp. 12/31/18 — State of California

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.28

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\Projects\20090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.28)
PLOT DATE: 25-Apr-2017 1:01 PM PLOTTED BY: Gwyn
Xrefs: V:\09866\ Standard Plans & Specs Update\2_Plans\Title_Block\BSE STD Title Block.dwg
Dimension Scale: 1 Model Units: Inches
Logfile: carertos Measurement Units: ansi English
Drawing Path: V:\09866\ Standard Plans & Specs Update\2_Plans\FINAL\SPA1.dwg
Plot Time: Fri, 27 Apr 2007 - 11:58am

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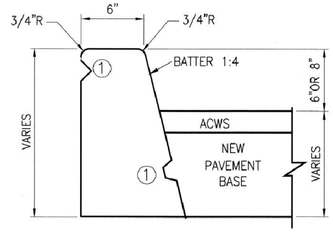
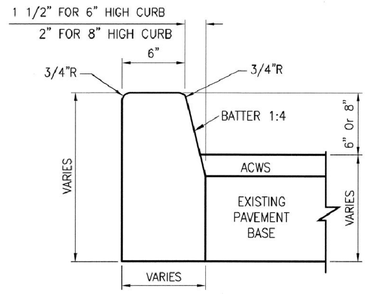
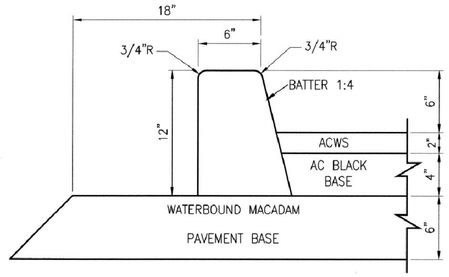


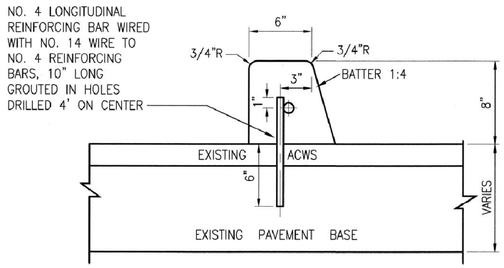
6-INCH OR 8-INCH HIGH CONCRETE CURB
(STANDARD SECTION)



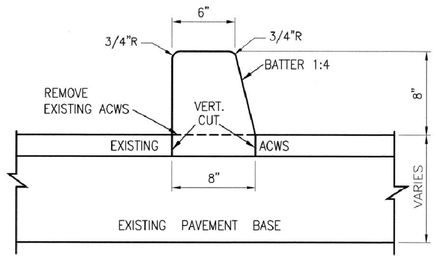
6-INCH OR 8-INCH HIGH CONCRETE CURB
(OPTIONAL SECTION)



6-INCH WIDE CONCRETE CURB
ADJACENT TO BLACK BASE ON
MACADAM SUBGRADE



SPECIAL DOWELED
8-INCH HIGH CONCRETE CURB
ON EXISTING PAVEMENT SURFACE



SPECIAL 8-INCH HIGH CONCRETE CURB
ON EXISTING PAVEMENT BASE

NOTES AND LEGEND

(1) LONGITUDINAL JOINTS FOR CONCRETE CURB SHALL BE AS SHOWN ON STANDARD PLAN NO. 87,173

ACWS = ASPHALT CONCRETE WEARING SURFACE

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NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:	
PR	10/01/06	
DRAWN:	DATE:	
GY	10/01/06	
CHECKED:	DATE:	
EK	11/01/06	

PLANS APPROVAL DATE: APRIL 30, 2007

Patrick Rivera 4/27/07
SECTION MANAGER

4/30/07
DEPUTY BUREAU MANAGER

BUREAU MANAGER

STANDARD PLAN
STREETS AND HIGHWAYS
STANDARD CURBS

OLD FILE NO. LL-24,455 CH 1
FILE NO. 87,169
REV. NO.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — GLENN YASUDA — No. C061218 — CIVIL — STATE OF CALIFORNIA — 10/31/18

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C7.29

Xrefs: v:\09864\ Standard Plans & Specs Update\2_Plans\Title_Block\BDE STD Title Block.dwg
Dimension Scale: 500
Model Units: Meters
Logic: carothe
Measurement Units: dark Metric
Drawing Path: V:\09864\ Standard Plans & Specs Update\2_Plans\FINAL\SHAR2.dwg
Plot Time: Fri, 27 Apr 2007 - 10:27am

DRAWING NAME: J:\5-pdf\090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.29)
PLOT TIME: 4-28-2017, 10:24a PLOTTED BY: cwm

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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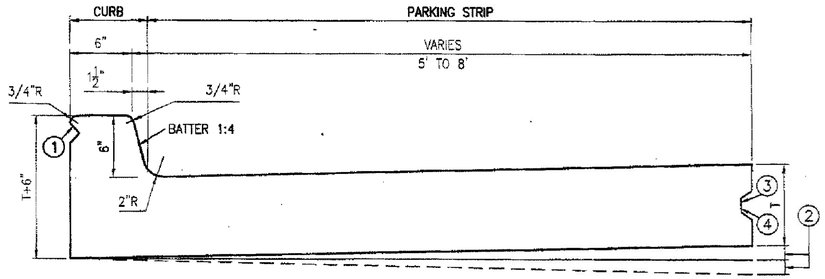
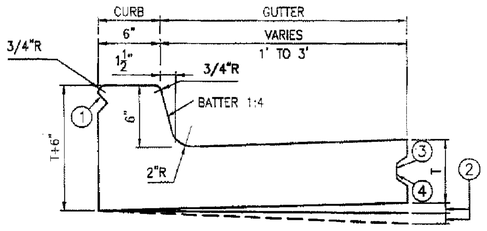
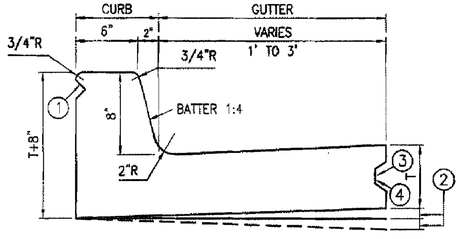


COMBINED 6-INCH CONCRETE CURB AND PARKING STRIP



COMBINED 6-INCH CONCRETE CURB AND GUTTER



COMBINED 8-INCH CONCRETE CURB AND GUTTER

NOTES:

1. LONGITUDINAL JOINTS FOR CONCRETE CURB SHALL BE AS SHOWN ON PLAN C-2.08
2. SET TO FIT CROWN OR SUPERELEVATION OF ADJACENT ROADWAY
3. **LONGITUDINAL JOINT NOT** REQUIRED FOR AGGREGATE BASE OR ASPHALT CONCRETE BASE
4. LONGITUDINAL JOINTS FOR CONCRETE PARKING STRIP OR GUTTER SHALL BE AS SHOWN ON PLAN L-26,075 Ch.1

T = **8" MINIMUM THICKNESS**

R = RADIUS

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NO.	DATE	DESCRIPTION	BY	APP'D

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
PR	10/01/06
DRAWN:	DATE:
GY	10/01/06
CHECKED:	DATE:
EK	11/01/06

PLANS APPROVAL DATE: APRIL 30, 2007

SECTION MANAGER 4/27/07

DEPUTY BUREAU MANAGER 4/30/07

BUREAU MANAGER

STANDARD PLAN

STREETS AND HIGHWAYS

STANDARD COMBINED CURB AND PARKING STRIP OR GUTTER

OLD FILE NO. L-24,456 CH. 3

FILE NO. 87,170

REV. NO.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — William Kloos — No. C 50711 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.30

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\Dwg\20090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.30)
PLOTTING: 4-28-2017 10:17am PLOTTED BY: Chris

Xrefs: W:\Utility Standard Plans & Specs Update\2_Plans\TitleBlock\BKF STD Title Block.dwg
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Plot Time: Fri, 27 Apr 2007 - 10:17am
Bitmap Scale: 500 Model Units= Meters
Measurement Units are Metric Logic: correction

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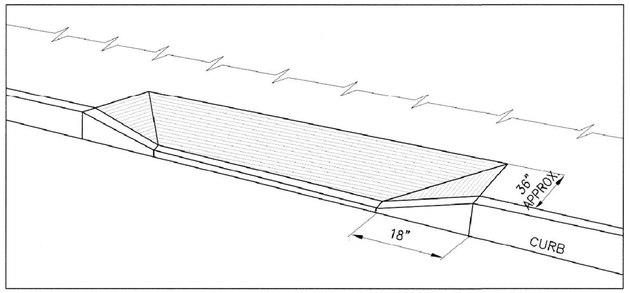
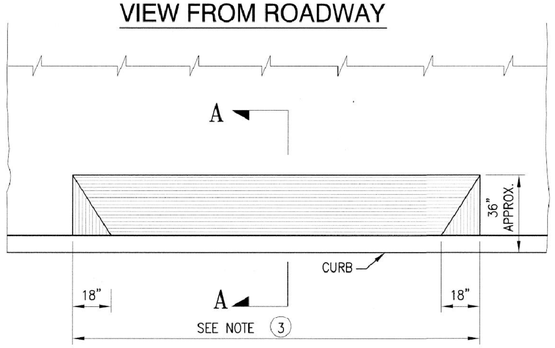
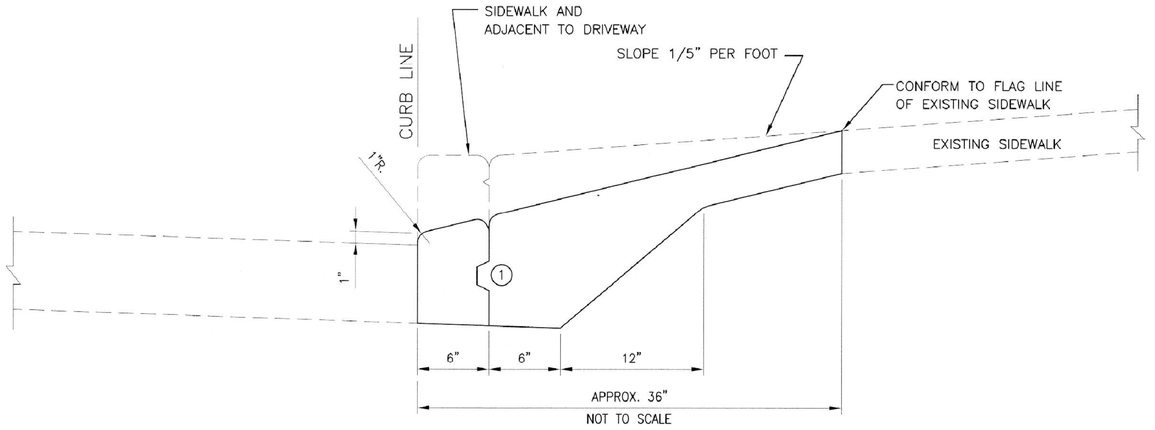


VIEW FROM ROADWAY



PLAN VIEW OF DRIVEWAY



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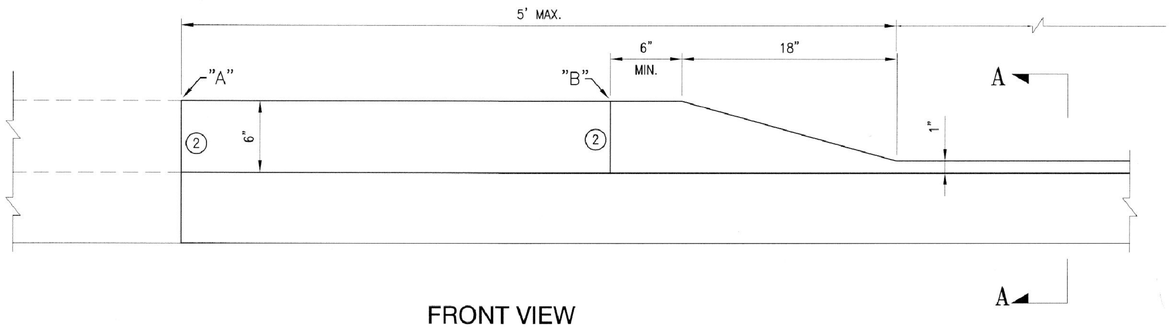

FRONT VIEW

NOTES:

1. 2-1/2"x1" LONGITUDINAL JOINT PER STANDARD PLAN 87,173 ONLY IF CURB IS POURED SEPARATELY.
2. CONCRETE CURB SHALL BE REPLACED TO JOINT "A" IF WITHIN 5 FEET, OR SAWCUT AT POINT "B" IF JOINT IS OVER 5 FEET AWAY. STONE CURB SHALL BE REPLACED TO NEAREST SECTION AND THE ENDS CLEANED AND SQUARED.
3. WIDTH OF DRIVEWAY IS 10 FEET STANDARD, INCLUDING WINGS/FLARED SIDES.
4. IF PROPOSED WIDTH EXCEEDS 10 FEET, BUT NO MORE THAN 30 FEET, THEN SAID DRIVEWAY MUST BE DIMENSIONED ON BUILDING PLANS AND APPROVED BY THE PLANNING DEPARTMENT.
5. A DRIVEWAY EXCEEDING 30 FEET MAY BE REQUESTED BY APPLYING FOR AN OVERWIDE DRIVEWAY PERMIT AT DPW.

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NO.	DATE	DESCRIPTION	BY	APP.
1	12/10/12	REVISIONS TO NOTES	EK	CY

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

INFRASTRUCTURE DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED: PR	DATE: 10/01/06
DRAWN: GY	DATE: 11/01/06
CHECKED: EK	DATE: 11/01/06

PLANS APPROVAL DATE: APRIL 30, 2007

SECTION MANAGER — 12/10/12

DEPUTY DIVISION MANAGER — 12/10/12

DIVISION MANAGER — 12/10/12

STANDARD PLAN
STREETS AND HIGHWAYS
DRIVEWAY CONSTRUCTION

OLD FILE NO. L-6964.1 L-19,689.1 CH 3
FILE NO. 87,171
REV. NO. 1

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — ERIK KNUDSEN — No. C61191 — EXP. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions
1	

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number: C7.31

Drawing Path: S:\SH\STANDARD PLAN\STANDARD PLAN.dwg, Login: kay
Plot Time: Mon, 10 Dec 2012 - 7:30am

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PLOT TIME: 4-28-2017, 1:01 PM CLOTILDE BY: cwu

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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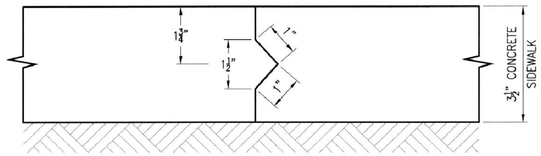
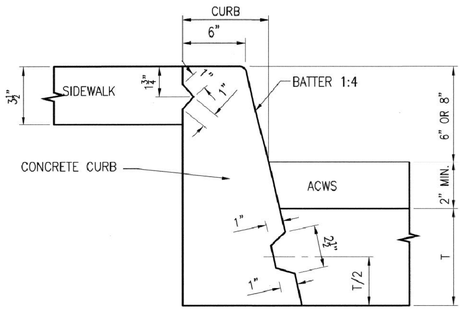


TRANSVERSE CONSTRUCTION JOINT
FOR CONCRETE SIDEWALK



LEGEND:

ACWS = ASPHALT CONCRETE WEARING SURFACE

T = THICKNESS OF CONCRETE BASE

LONGITUDINAL CONSTRUCTION JOINTS
FOR CONCRETE CURB

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NO.	DATE	DESCRIPTION	BY	APP.

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BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

		DATE:
REVIEWED:	PR	10/01/06
DRAWN:	GY	10/01/06
CHECKED:	EK	11/01/06

PLANS APPROVAL DATE: APRIL 30, 2007

Robert A. Dair 4/27/07
SECTION MANAGER

4/30/07
DEPUTY BUREAU MANAGER

BUREAU MANAGER

STANDARD PLAN
STREETS AND HIGHWAYS
STANDARD CONSTRUCTION JOINTS FOR CONCRETE SIDEWALK AND CURB

OLD FILE NO. L-31,374 CH 1
FILE NO. 87,173
REV. NO.

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER BRIAN K. CLARKSON No. 63084 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

BRIAN K. CLARKSON

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.32

Xrefs: V:\20866\ Standard Plans & Specs Update\2_Plans\Title_Block\DGE STD Title Block.dwg
Dimension Scale: 1
Model Units: Meters
on
Drawing Path: V:\20866\ Standard Plans & Specs Update\2_Plans\TIMA\SHT\R6.dwg Login: carcentos
Plot Time: Fri, 27 Apr 2007 - 10:31am
Measurement Units are Metric

DRAWING NAME: J:\Engr09\090086-10\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.32)
PLOTTING: 4-25-2017 1:01 PM PLOTTED BY: Burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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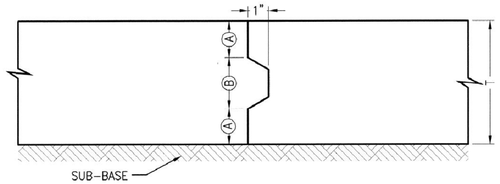
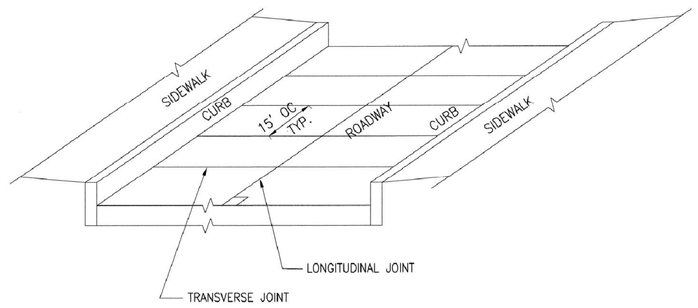
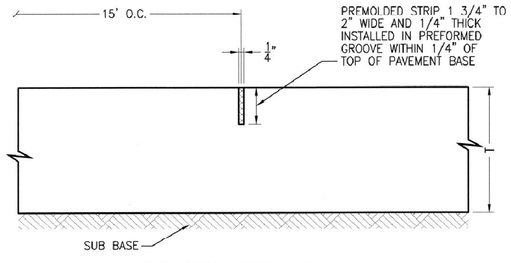


LONGITUDINAL JOINT





TRANSVERSE JOINT

NOTE:
T = CONCRETE PAVEMENT THICKNESS
O.C. = ON CENTER

T	Ⓐ	Ⓑ
8"	2 3/4"	2 1/2"
10"	3 3/4"	2 1/2"
12"	4 3/4"	2 1/2"

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NO.	DATE	DESCRIPTION	BY	APP.

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BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
PR	10/01/06
DRAWN:	DATE:
GY	10/01/06
CHECKED:	DATE:
EK	11/01/06

PLANS APPROVAL DATE: APRIL 30, 2007
SECTION MANAGER 4/27/07
DEPUTY BUREAU MANAGER 4/30/07
BUREAU MANAGER

STANDARD PLAN
STREETS AND HIGHWAYS
STANDARD JOINTS FOR CONCRETE PAVEMENT BASE

OLD FILE NO. L-26,075 CH 1
FILE NO. 87,174
REV. NO.

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Plot Time: Fri, 27 Apr 2007 - 10:36am Measurement Units are Metric
Dimension Scale: 500
Model Units: Meters

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
CIVIL

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.33

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.33)
PLOT TIME: 4-26-2017 1:01 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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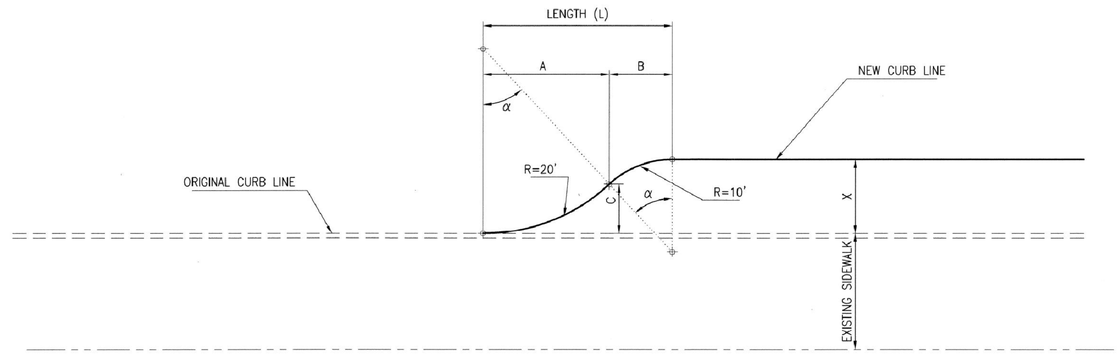

CURB BULBS & OTHER SIDEWALK WIDENING

LAYOUT OF TRANSITION

SIDEWALK WIDENING	LENGTH	A	B	C
4'	15'-0"	10'-0"	5'-0"	2'-8"
5'	16'-7"	11'-1"	5'-6"	3'-4"
6'	18'-0"	12'-0"	6'-0"	4'-0"
7'	19'-3"	12'-10"	6'-5"	4'-8"
8'	20'-5"	13'-7"	6'-10"	5'-4"

FORMULA FOR WIDENING DIMENSIONS:

X = ACTUAL SIDEWALK WIDENING IN FEET

$\alpha = \text{ARCCOS}\left(\frac{30 - X}{30}\right)$

$L = 30*\text{SIN}\,\alpha$

$A = 20*\text{SIN}\,\alpha$

$B = 10*\text{SIN}\,\alpha$

$C = 20-\left(\frac{A}{\text{TAN}\,\alpha}\right)$

This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:	
PR	10/01/06	
DRAWN:	DATE:	
GY	10/01/06	
CHECKED:	DATE:	
EK	11/01/06	

PLANS APPROVAL DATE: APRIL 30, 2007

SECTION MANAGER 4/27/07

DEPUTY BUREAU MANAGER 4/30/07

BUREAU MANAGER

STANDARD PLAN

STREETS AND HIGHWAYS

CURB BULB & SIDEWALK WIDENING LAYOUT

OLD FILE NO. NONE

FILE NO. 87,175

REV. NO.

BKF
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — ERIC KNOX — No. C 67911 — EXP. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C7.34

Xrefs: v:\09864\ Standard Plans & Specs Update\2_Plans\Title_Block\BDE STD Title Block.dwg

Drawing Path: V:\09864\ Standard Plans & Specs Update\2_Plans\FINAL\SHT\27.dwg Login: carenlos
Plot Time: Fri, 27 Apr 2007 - 10:33am Measurement Units are English Dimension Scale: 2 Model Units: Feet

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PLOT TIME: 4-28-2017, 10:24 PLOTTED BY: cwp

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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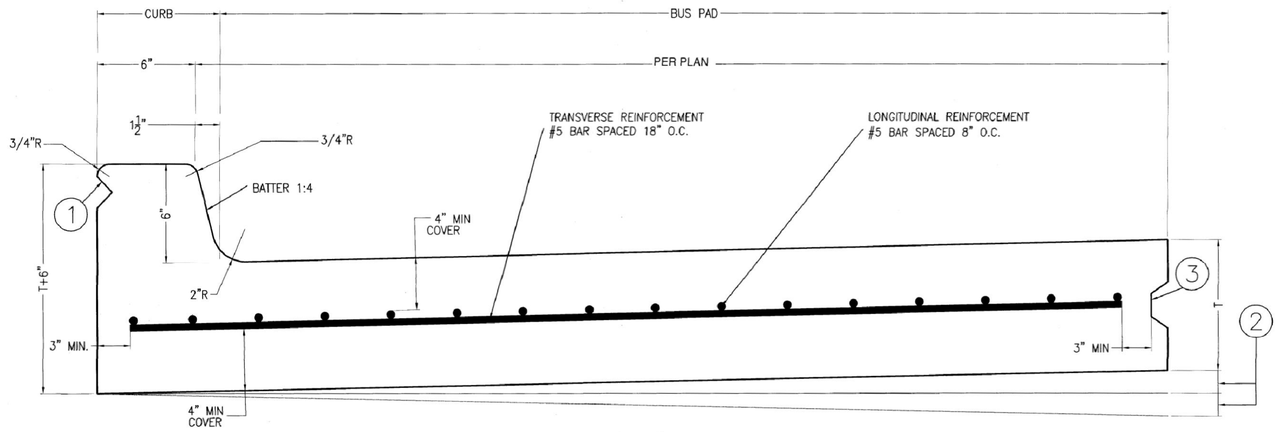
NOTES:

1. LONGITUDINAL JOINTS FOR CONCRETE CURB SHALL BE AS SHOWN ON STANDARD PLAN 87,173
2. SET TO FIT CROWN OR SUPERELEVATION OF ADJACENT ROADWAY
3. LONGITUDINAL JOINT NOT REQUIRED FOR AGGREGATE BASE OR ASPHALT CONCRETE BASE. LONGITUDINAL JOINTS FOR CONCRETE BUS PAD SHALL BE AS SHOWN ON STANDARD PLAN 87,174
4. SEE STANDARD PLAN 87,174 FOR TRANSVERSE JOINT DETAIL

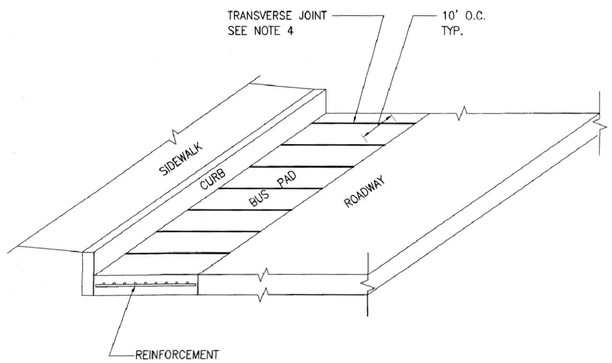
T = 10" MINIMUM THICKNESS

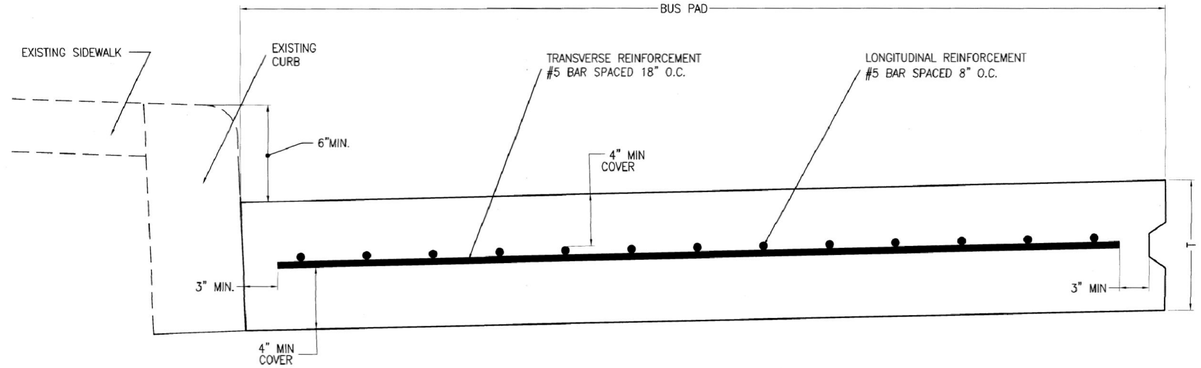
R = RADIUS



COMBINED 6-INCH CONCRETE CURB AND REINFORCED BUS PAD

(NOT TO SCALE)





REINFORCED CONCRETE BUS PAD

(NOT TO SCALE)

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REFERENCE INFORMATION & FILE NO. OF SURVEYS

INFRASTRUCTURE DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED: JH	DATE: 05/2013	
DRAWN: JH	DATE: 05/2013	
CHECKED: EK	DATE: 05/2013	

APPROVED

SECTION MANAGER	DATE: 5/14/13
DEPUTY DIVISION MANAGER	DATE: 5/15/13
DIVISION MANAGER	DATE: 5/16/13

STANDARD PLAN
STREETS AND HIGHWAYS
REINFORCED CONCRETE BUS PAD

DRAWING NO. NONE
FILE NO. 96,607
REV. NO.

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER JASON HU No. C67135 CIVIL STATE OF CALIFORNIA Exp. 12/31/18

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved BS
Job No: 20090086

Drawing Number:
C7.35

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

Xrefs: C:\Users\jhu\Desktop\BKF STD Title Block.dwg
Dimension Scale: 0.5
Model Units: Meters
Drawing Path: S:\SF\Jason Hu\DRAFT STD Plans\Bus Pad Reinforcement.dwg, Login: jhu
Plot Time: Tue, 14 May 2013 - 9:39am Measurement Units are Metric
DRAWING NAME: L:\15-69\20086-121SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.35)
PLOT TIME: 4-28-2017 10:04 PM PLOTTED BY: Dan

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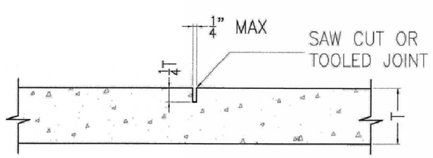
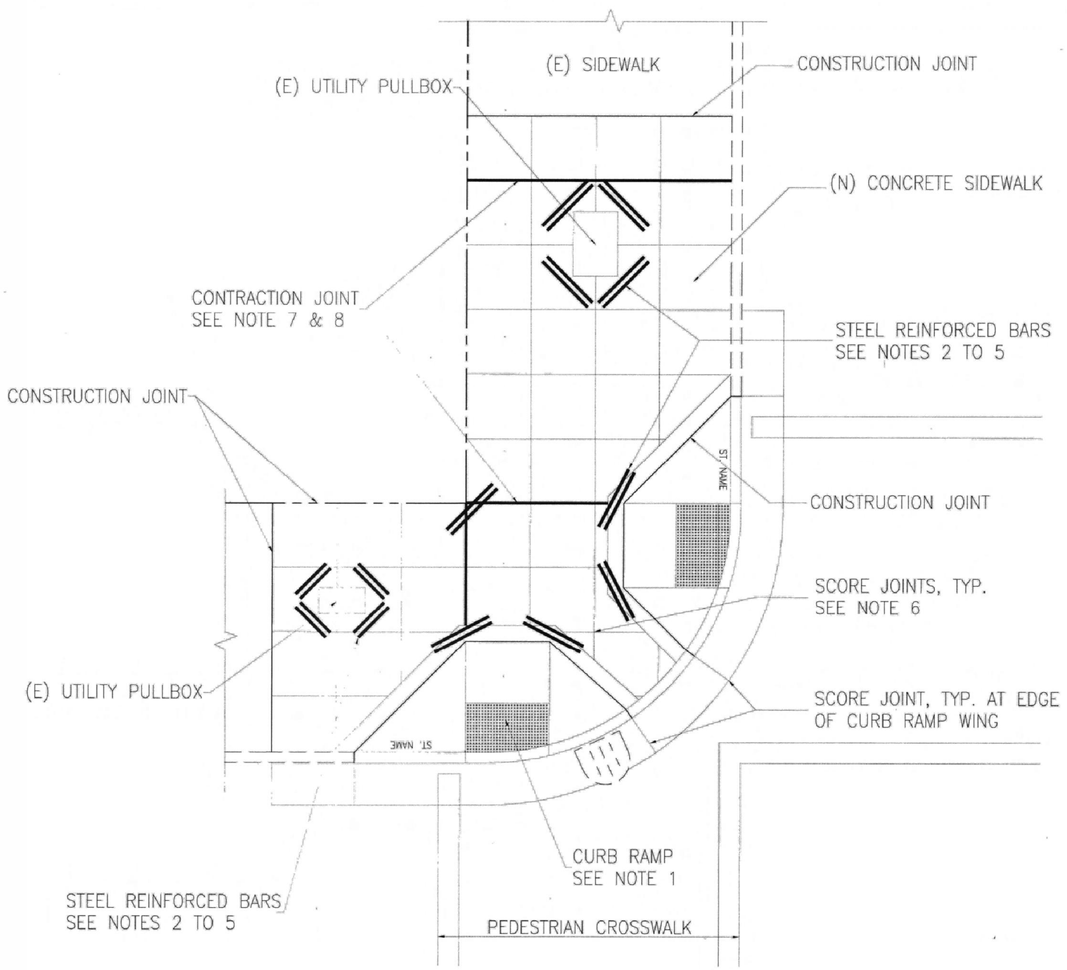
NOTES:

1. ALL CURB RAMPS SHALL BE POURED SEPARATELY FROM SIDEWALK AND SHALL CONTRAST VISUALLY WITH ADJACENT SIDEWALK SURFACES, IN ACCORDANCE WITH CITY STANDARD SIDEWALKS AS DEFINED IN SECTION 204 OF DPW STANDARD SPECIFICATIONS AND CURB RAMP STANDARD PLANS FILE NO 55,017 TO 55,018.
2. CURB RAMP AND SIDEWALK SLAB-ON-GRADE ACCORDING TO SFDPW STANDARD SPECIFICATION SECTION 204 WITH #3 STEEL REINFORCED BARS AT MID-DEPTH OF THE CONCRETE SIDEWALK SLAB.
3. MINIMUM 3-FOOT REINFORCED BAR LENGTH WITH 3-INCH O.C. SPACING. AT LOCATIONS WHERE 3-FOOT REINFORCEMENT BAR LENGTH IS RESTRICTED, 2-FOOT REINFORCEMENT BAR LENGTH IS ACCEPTABLE WITH THE APPROVAL OF THE ENGINEER.
4. A 2-INCH MINIMUM DISTANCE IS REQUIRED FROM THE EDGES OF THE REINFORCEMENT TO A CONSTRUCTION JOINT.
5. INSTALL REINFORCEMENT ON A DIAGONAL TO ALL RE-ENTRANT CORNERS (PROPERTY CORNERS, CURB RAMPS, PULL BOXES, ETC).
6. SCORE JOINTS SHALL HAVE A ¼-INCH DEPTH AND BE IN ACCORDANCE WITH CITY STANDARD SIDEWALKS AS DEFINED IN SECTION 204 OF DPW STANDARD SPECIFICATIONS.
7. CONTRACTION JOINTS SHALL BE SPACED A MAXIMUM OF 15 FEET APART AND SHALL ENCLOSE AN AREA NO MORE THAN 250 SQUARE FEET.
8. FOR SAW CUT CONTRACTION JOINTS, CUT SLAB IMMEDIATELY AFTER INITIAL CONCRETE SET AND BEFORE FINAL CURING.



CONTRACTION JOINT



REINFORCED SIDEWALK PLAN
TYPICAL LAYOUT
(NOT TO SCALE)

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TABLE OF REVISIONS
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REFERENCE INFORMATION & FILE NO. OF SURVEYS

INFRASTRUCTURE DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

REVIEWED:	DATE:
JH JH	09/2013
DRAWN:	DATE:
JH	09/2013
CHECKED: EK	DATE:
EK	09/2013

APPROVED
SECTION MANAGER 9/24/13 DATE:
DEPUTY DIVISION MANAGER 9/24/13 DATE:
DIVISION MANAGER 9/25/13 DATE:

STANDARD PLAN
STREETS AND HIGHWAYS
STEEL REINFORCED BARS FOR SIDEWALK CONSTRUCTION

DRAWING NO. NONE
FILE NO. 96,608
REV. NO.

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
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650-482-6300
650-482-6399 (FAX)

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES A. SCOTT LAWS 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.36

Drawing Path: S:\SH\Jason Hui\DRAFT STD Plans\Bar Sidewalk\Reinforcement.dwg, Login: jhui
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Measurement Units are English
Dimension Scale: 10
Model Units: Feet
Xrefs: C:\Users\jhui\Desktop\BOE STD Title Block.dwg

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.36)
PLOT TIME: 4-28-2017 1:02 PM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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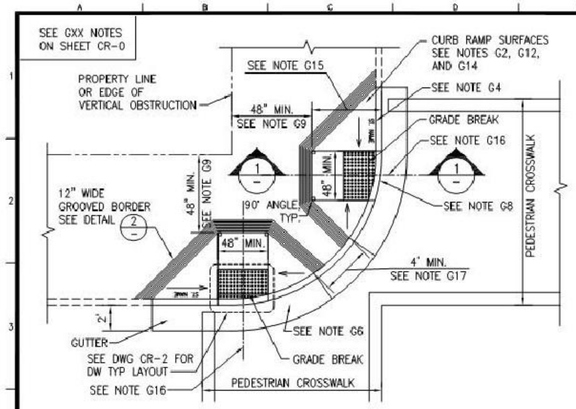
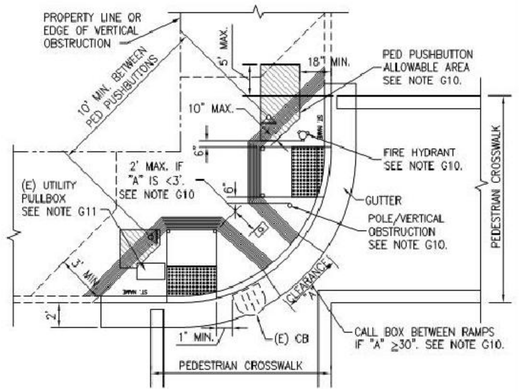
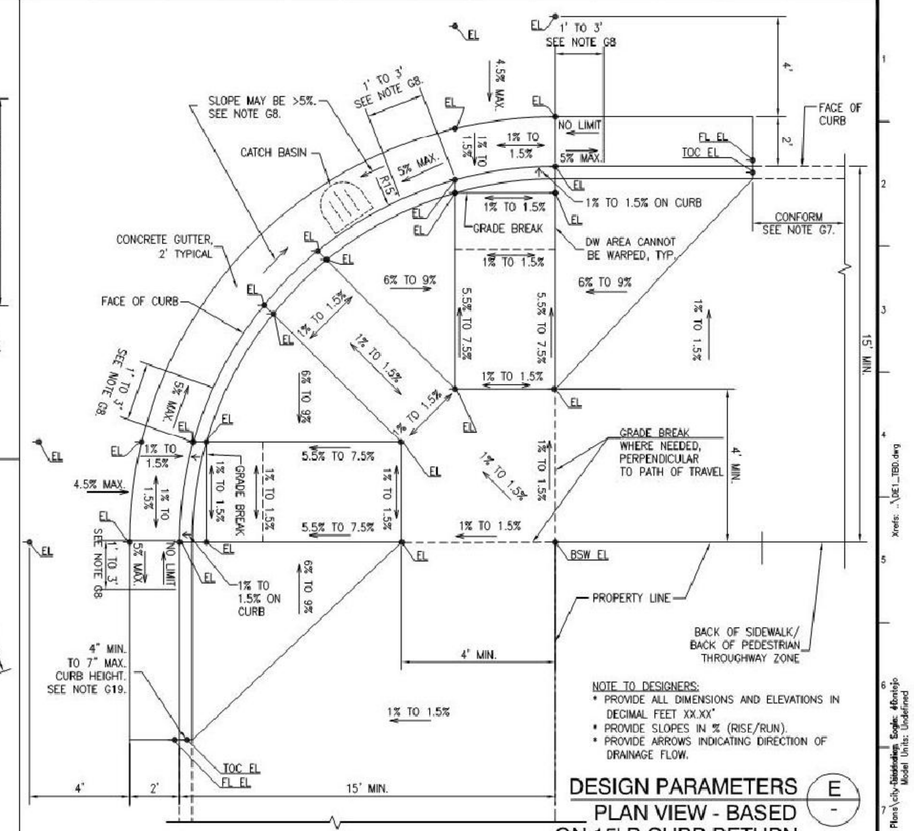


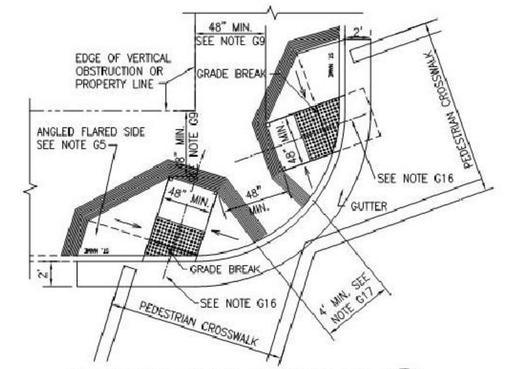
STANDARD CURB RAMP PLAN A
TYPICAL NORMAL LAYOUT



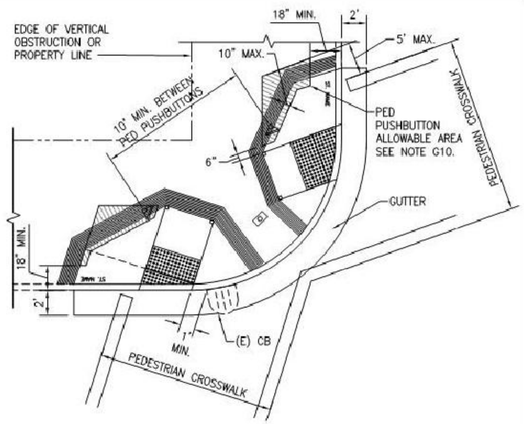
STANDARD CURB RAMP PLAN B
UTILITY PLACEMENT



DESIGN PARAMETERS E
PLAN VIEW - BASED ON 15' R CURB RETURN

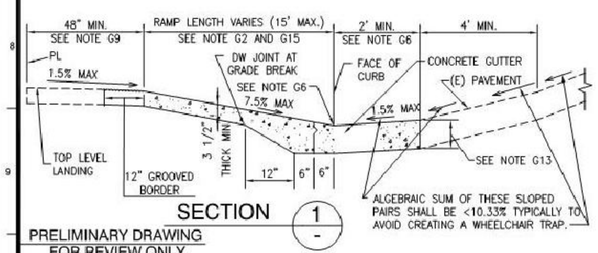


DIAGONAL CURB RAMP PLAN C
TYPICAL DIAGONAL LAYOUT



DIAGONAL CURB RAMP PLAN D
UTILITY PLACEMENT

FRONT ELEVATION 3



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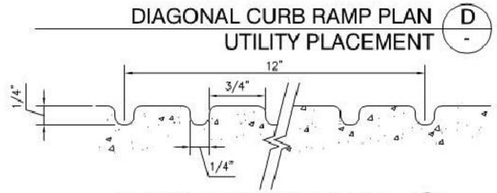

GROOVED BORDER DETAIL 2

PRELIMINARY DRAWING
FOR REVIEW ONLY

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/07/15 10:09, BY: elontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED: PUBLIC WORKS	DATE:	10/15
DRAWN: PUBLIC WORKS	DATE:	10/15
CHECKED: PUBLIC WORKS	DATE:	10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 2 OF 13

ACCESSIBLE STREET CROSSING STANDARDS

STANDARD CURB RAMP PLANS

CONTRACT NO. NONE
DRAWING NO. CR-1
FILE NO. 102,855
REV. NO.

APPROVED:
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE:

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
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REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.37

Drawing Path: \\bkf-sf-01\Projects\20090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.37)
Plot Time: Wed, 07 Oct 2015 - 10:11am
Xrefs: ..\XEL_TBD.dwg
Model Units: Undefined
Measurement Units: US English
Plotted By: elontejo
Plot Time: 4-28-2017 1:02 PM

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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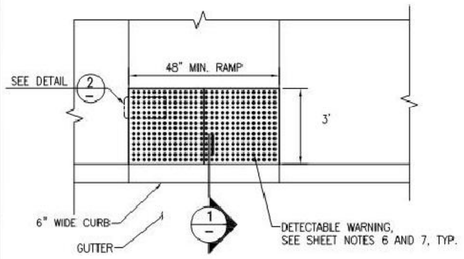
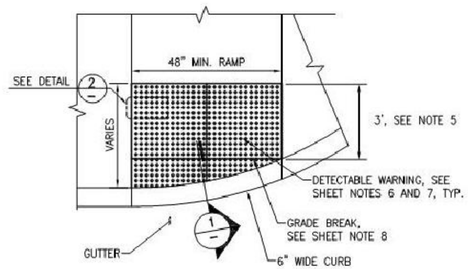
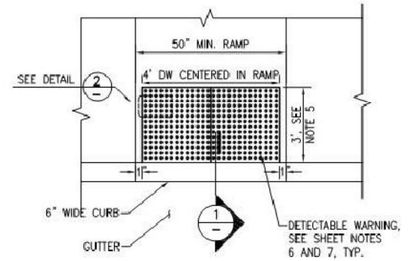


DETECTABLE WARNING LAYOUT A
RAMP ON STRAIGHT EDGE



DETECTABLE WARNING LAYOUT B
RAMP ON CURVED EDGE



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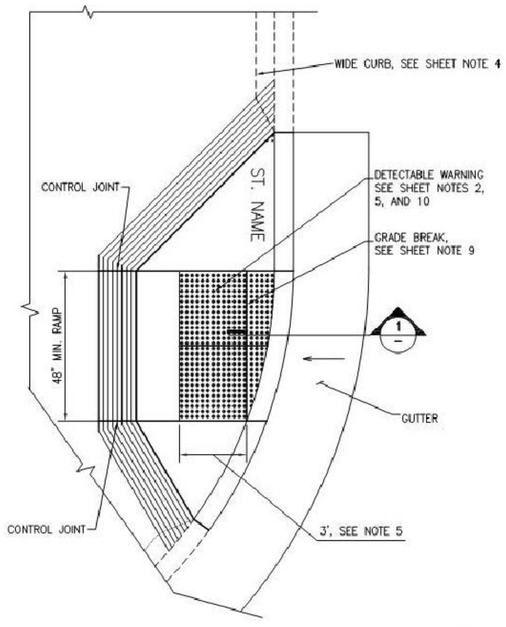

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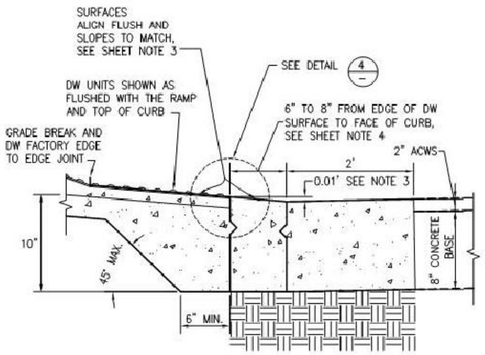

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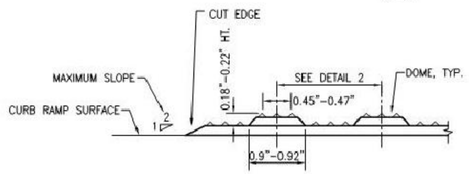
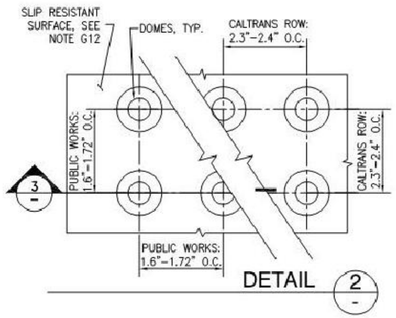
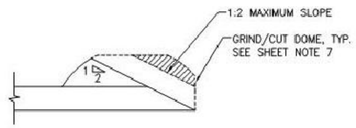


SECTION AT CUT EDGE 3
AT SURFACE - APPLIED DETECTABLE WARNING UNITS



DETAIL 2



DETAIL 4
AT CUT DOME

GENERAL NOTES

1. SEE DRAWING CR-0 AND CR-1 FOR ALL GENERAL NOTES AND DETAILS THAT APPLY TO THIS DRAWING.

2. THE DETECTABLE WARNING (DW) DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF THE RAMP. WHEN MULTIPLE TILES REGARDLESS OF SIZE ARE USED, THEN THE DW DOMES SHALL BE ALIGNED BETWEEN THE TILES AND THROUGHOUT THE ENTIRE DW INSTALLATION. DW TILES SHALL HAVE FACTORY EDGES TOGETHER AT JOINTS.

3. THE SLOPE OF THE CURB PORTION OF THE RAMP SHALL BE .01'.

4. WHEN THE CURB IS WIDER THAN 8 INCHES, THE CURB WITHIN THE CURB RAMP SHALL BE 8 INCHES MAXIMUM. THE WIDE CURB OUTSIDE SHALL TRANSITION THROUGH THE GROOVED BORDER AS SHOWN ON THE DRAWING.

5. DW SHALL BE A MINIMUM OF 3' DEEP, MEASURED FROM THE GRADE BREAK.

6. RIGID CEMENTITIOUS DW PANELS MUST LIE IN A SINGLE NON-WARPED PLANE.

7. THE EDGE OF THE SURFACE-APPLIED DW TILE SHALL HAVE A BEVELED EDGE SLOPED AT 1:2 MAXIMUM. WHEN THE SURFACE-APPLIED DW TILE EDGE OR A DOME IS CUT AND THE RESULTING EDGE/DOME IS NOT FLUSH WITH THE SURFACE OF THE CURB RAMP, THE EDGE/DOME SHALL BE BEVELED AT 1:2 MAXIMUM SLOPE, IN ACCORDANCE WITH THE APPROVED DW MANUFACTURER'S REQUIREMENTS. SEE DETAILS 3 AND 4.

8. GRADE BREAK ACROSS THE DW SHALL BE REQUIRED WHEN NECESSARY TO MEET GUTTER ELEVATIONS AND TO LIMIT CROSS-SLOPE ON RAMP TO BE 1.5% MAXIMUM. ADJACENT PANEL EDGES SHALL BE FLUSH (NO VERTICAL OFFSET.)

9. REFERENCE PUBLIC WORKS STANDARD SPECIFICATIONS FOR THE INSTALLATION OF CEMENTITIOUS OR PLASTIC DW TILES AND FOR THE CONSTRUCTION OF CONCRETE SIDEWALK, CURB, GUTTER, AND ASPHALT CONCRETE.

10. INSTALL WHOLE DW TILE UNITS ABOVE GRADE BREAK WITH 3' LONG UNITS. INSTALL FACTORY EDGE OF DW UNITS ALONG GRADE BREAK BETWEEN GRADE BREAK AND BACK OF CURB.

11. SURFACE-APPLIED DW UNITS MAY BE USED ONLY WHERE PROVIDING CAST IN PLACE UNITS IS DOCUMENTED TO BE TECHNICALLY INFEASIBLE AND MUST BE APPROVED BY PUBLIC WORKS ON A CASE BY CASE BASIS.

12. THE COLOR OF THE DW SHALL CONFORM TO FEDERAL STANDARD 595B TABLE IV, COLOR #33538 "FEDERAL YELLOW". NEW AND RETROFITTED RAMP CONSTRUCTION SHALL BE PROVIDED WITH PUBLIC WORKS APPROVED UNITS THAT ARE CAST-IN-PLACE PER MANUFACTURER'S INSTRUCTIONS.

APPROVED: _____
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE: _____

PRELIMINARY DRAWING
FOR REVIEW ONLY

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/07/15 14:51, BY: efontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	PUBLIC WORKS	DATE: 10/15
DRAWN:	PUBLIC WORKS	DATE: 10/15
CHECKED:	PUBLIC WORKS	DATE: 10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 3 OF 13

ACCESSIBLE STREET CROSSING STANDARDS
STANDARD CURB RAMPS
DETECTABLE WARNING LAYOUT
DETAILS AND NOTES

CONTRACT NO. NONE
DRAWING NO. CR-2
FILE NO. 102,856
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

Revisions | No.

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.38

PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA — Exp. 10/31/18 — SIGNATURE

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PLOTTING: 4-28-2017 02 PM - ALOTTES (BY: Plan)
(C7.38)

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Plot Time: Wed, 07 Oct 2015 - 2:50pm
Model Units: Feet
Measurement Units are English

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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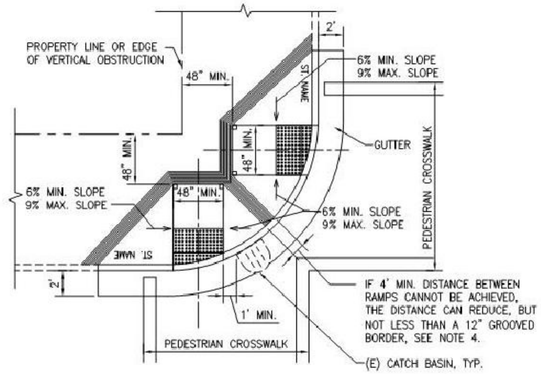
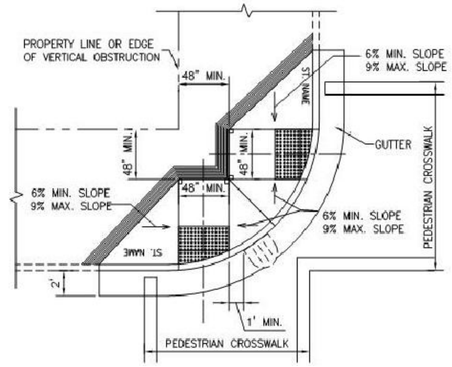


CURB RAMP ALTERNATE A
MERGED GROOVED BORDER



CURB RAMP ALTERNATE B
MERGED FLARED SIDES

SHEET NOTES

1. THE ALTERNATE CURB RAMPS SHOWN ON THIS DRAWING SHALL BE USED ONLY WITH PRIOR APPROVAL FROM THE CITY ENGINEER, PUBLIC WORKS DISABILITY ACCESS COORDINATOR, OR THEIR DESIGNEE AND UPON PROPER DOCUMENTATION OF HARDSHIP INDICATING LEGAL AND/OR PHYSICAL CONSTRAINTS.

2. ALL GENERAL NOTES ON DRAWING CR-0 SHALL APPLY TO THIS SHEET. FOR DETECTABLE WARNING DETAILS AND NOTES, SEE DRAWING CR-2.

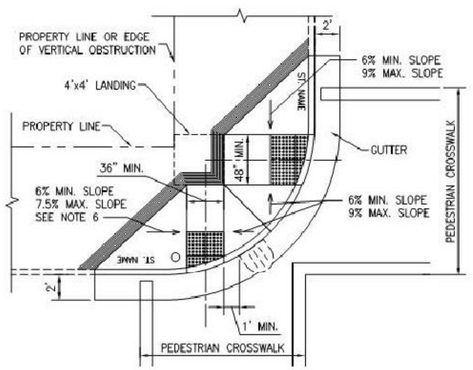
3. THE CURB RAMP ALTERNATES SHALL BE USED IN DESCENDING ORDER OF PRIORITY, FROM ALTERNATE "A" TO "B" TO "C" TO "D" THEN TO "E".

4. ALTERNATE "A" SHALL BE USED WHEN THE 4-FOOT MINIMUM DISTANCE BETWEEN THE TWO CURB RAMPS CANNOT BE ACHIEVED DUE TO HARDSHIP. THE DISTANCE BETWEEN THE TWO RAMPS CAN BE REDUCED TO A 12" GROOVED BORDER. IT IS PREFERRED THAT LARGER THAN 12" DISTANCE BE PROVIDED, AS MUCH AS TECHNICALLY FEASIBLE.

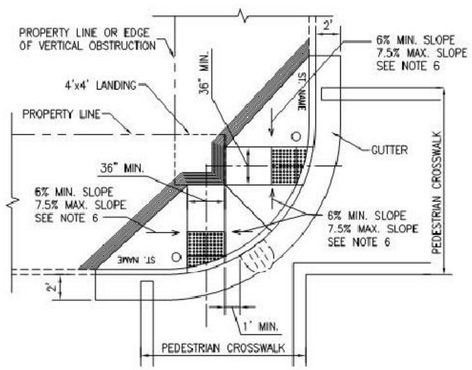
5. ALTERNATE "B" SHALL BE USED WHEN THE SPACE WITHIN THE CURB RETURN IS LIMITED AND OMITTING THE MERGED GROOVED BORDER WILL ALLOW THE INSTALLATION OF TWO ADJACENT CURB RAMPS.

6. WHEN THE RAMP WIDTH IS LESS THAN 48 INCHES OR THE TOP LANDING WIDTH IS LESS THAN 48 INCHES, THEN THE SLOPE OF THE FLARED SIDES SHALL BE 7.5% MAXIMUM, 6% MINIMUM.

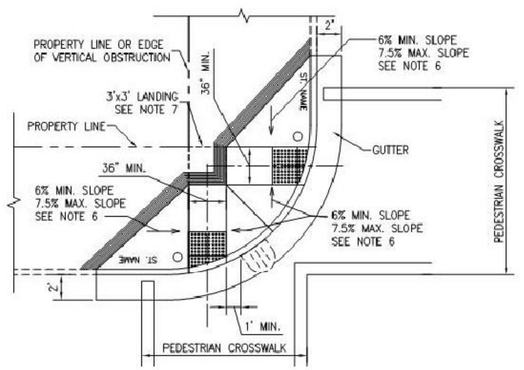
7. WHERE THE CURB RAMP TOP LANDING CLEARANCE MUST BE <48" AT LOCATIONS WHERE IT IS DOCUMENTED TO BE TECHNICALLY INFEASIBLE TO PROVIDE 48" MINIMUM LENGTH AND WIDTH, THE LANDING MAY BE REDUCED, BUT SHALL NOT BE <36". EXTREME TECHNICALLY INFEASIBLE LOCATIONS THAT CANNOT BE PROVIDED WITH 36" LANDING MUST BE APPROVED AND DOCUMENTED ON A CASE BY CASE BASIS BY PUBLIC WORKS.



CURB RAMP ALTERNATE C
48" TOP LANDING - 36" AND 48" RAMPS



CURB RAMP ALTERNATE D
48" TOP LANDING - 36" RAMPS



CURB RAMP ALTERNATE E
36" TOP LANDING - 36" RAMPS

APPROVED: _____
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE: _____

PRELIMINARY DRAWING
FOR REVIEW ONLY

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/07/15 14:56, BY: efontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	PUBLIC WORKS	DATE: 10/15
DRAWN:	PUBLIC WORKS	DATE: 10/15
CHECKED:	PUBLIC WORKS	DATE: 10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 4 OF 13

ACCESSIBLE STREET CROSSING STANDARDS
ALTERNATE CURB RAMPS
MERGED GROOVED BORDER CURB RAMP PLANS

CONTRACT NO. NONE
DRAWING NO. CR-3
FILE NO. 102,857
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — Adam Sidle — No. C 78781 — CIVIL — STATE OF CALIFORNIA — 12/31/16

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.39

Drawing Path: \\bkf-sf-01\projects\20090086-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.39)
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Standard Plans\city-standard-plans\Model Units: Feet
Measurement Units are English
S:\SF\Curb_Ramp_Group\CR presentation\Rev
Model Units: Feet

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PLOT TIME: 4-25-2017 1:02 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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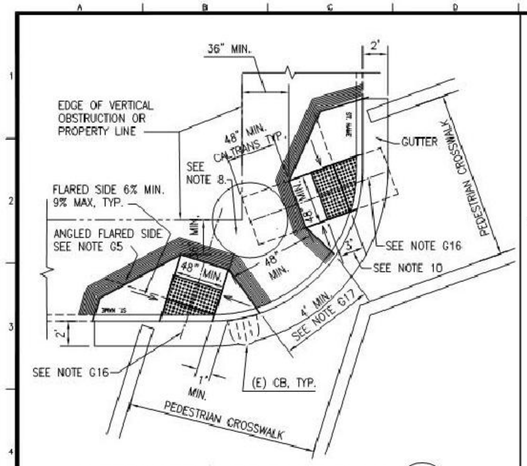
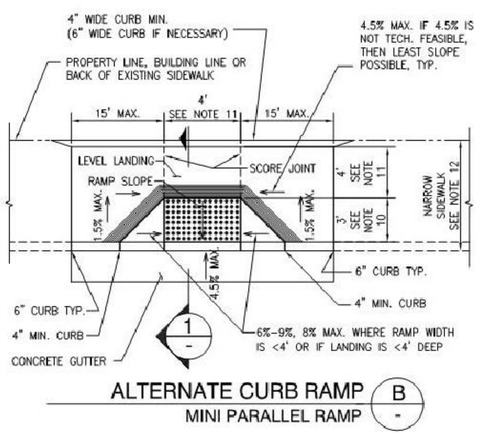
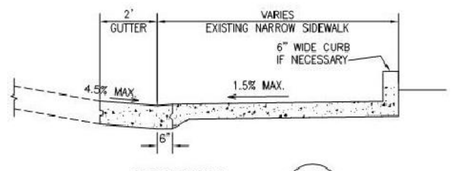


ALTERNATE CURB RAMP PLAN A1
TYPICAL DIAGONAL LAYOUT -



ALTERNATE CURB RAMP B
MINI PARALLEL RAMP -



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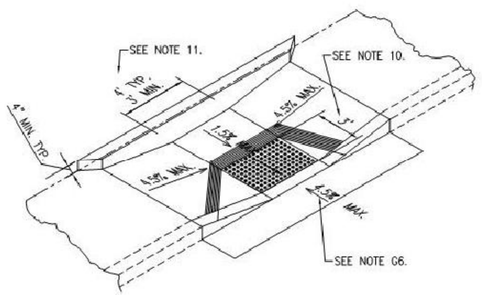

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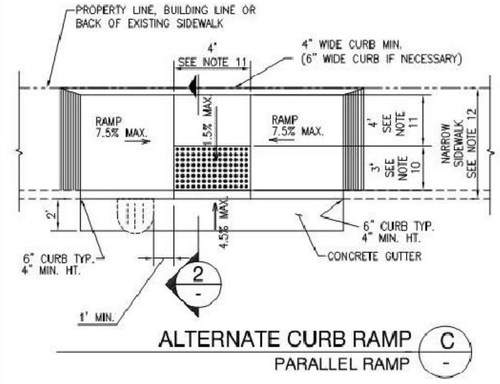
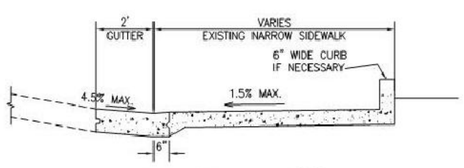


ALTERNATE CURB RAMP C
PARALLEL RAMP -



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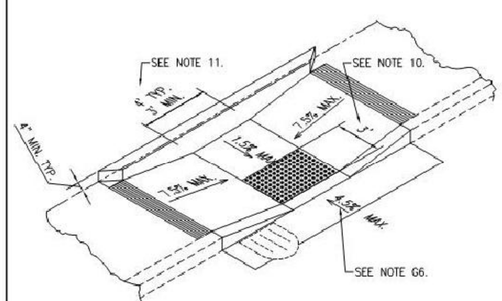

ISOMETRIC

SHEET NOTES

1. THE ALTERNATE CURB RAMPS SHOWN ON THIS DRAWING SHALL BE USED ONLY WITH PRIOR APPROVAL FROM THE CITY ENGINEER, PUBLIC WORKS DISABILITY ACCESS COORDINATOR, OR THEIR DESIGNEE AND UPON PROPER DOCUMENTATION OF HARDSHIP INDICATING LEGAL AND OR PHYSICAL CONSTRAINTS. WHERE ALTERNATE CURB RAMP "B" IS TECHNICALLY FEASIBLE OR STRUCTURALLY POSSIBLE, IT SHALL TYPICALLY BE USED IN LIEU OF ALTERNATE "C" AND SHALL BE DIRECTIONAL WITH THE CROSSWALK.

2. ALL GENERAL NOTES ON DRAWING CR-0 SHALL APPLY TO THIS SHEET. FOR DETECTABLE WARNING DETAILS AND NOTES, SEE DRAWING CR-2.

3. THE CURB RAMP EXCEPTIONS SHALL BE USED IN DESCENDING ORDER OF PRIORITY, FROM EXCEPTION "A1" TO "A2" TO "B" TO "C".

4. ALTERNATE "B" CURB RAMP SHALL BE USED AS A VARIATION OF A STANDARD CURB RAMP AT NARROW SIDEWALK LOCATIONS WHERE THERE IS ENOUGH ROOM FOR TOP LEVEL LANDING.

5. ALTERNATE "C" CURB RAMP SHALL BE USED ON SIDEWALKS AT MID-BLOCK LOCATIONS AND OTHER LOCATIONS WHERE THE STANDARD CURB RAMP LAYOUT AND CURB RAMP ALTERNATES A1, A2, AND B ON SHEET CR-4 ARE NOT TECHNICALLY FEASIBLE. A 6-INCH WIDE CURB SHALL BE INSTALLED ALONG THE EDGE OF THE BACK OF SIDEWALK, ONLY WHEN NECESSARY.

6. IT IS PREFERRED TO USE CURB RAMP DESIGNS THAT PLACE DW ON A SLOPE IN ORDER FOR RAIN TO WASH DEBRIS AWAY AND OFF OF RAMPS.

7. CONSTRUCT CURB TO RETAIN LANDSCAPING AS NEEDED WHERE SIDEWALK SURFACE IS LOWERED TO FIT CURB RAMPS.

8. LOWER SIDEWALK TO FIT DIRECTIONAL CURB RAMPS.

9. WHEN RAMP WIDTH, TOP LANDING WIDTH, AND/OR LENGTH OF TOP LANDING IN DIRECTION OF RAMP IS LESS THAN 4 FEET, FLARED SIDE IS TO BE DESIGNED AT A MAXIMUM 7.5% SLOPE PERPENDICULAR TO THE RAMP. CONSTRUCTED MAXIMUM SLOPE FOR FLARED SIDE IS 8.33% UNDER THESE SAME CONSTRAINTS.

10. DEPTH OF DW MAY BE REDUCED TO AS LITTLE AS 2 FEET IN ORDER TO PROVIDE THE MOST COMPLIANT UPPER LANDING DEPTH.

11. 4' RAMP WIDTH AND 4' UPPER LANDING DEPTH ARE REQUIRED MINIMUM DIMENSIONS. THESE DIMENSIONS MAY BE REDUCED TO AS LITTLE AS 3' WHERE IT IS TECHNICALLY INFEASIBLE TO DO OTHERWISE.

12. SIDEWALK WITH A WIDTH OF LESS THAN OR EQUAL TO 7'6" IS CONSIDERED A "NARROW SIDEWALK." WHEN SIDEWALK IS LESS THAN OR EQUAL TO 7'6" AND GREATER THAN 5'6", ALTERNATE CURB RAMP "B" IS PREFERRED. ALTERNATE CURB RAMP "C" IS USED WHERE SIDEWALK IS LESS THAN OR EQUAL TO 5'6".

APPROVED: _____
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE: _____

PRELIMINARY DRAWING
FOR REVIEW ONLY

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/07/15 15:10, BY: efontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	PUBLIC WORKS	DATE: 10/15
DRAWN:	PUBLIC WORKS	DATE: 10/15
CHECKED:	PUBLIC WORKS	DATE: 10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 5 OF 13

ACCESSIBLE STREET CROSSING STANDARDS
ALTERNATE CURB RAMPS AT NARROW SIDEWALKS

CONTRACT NO. NONE
DRAWING NO. CR-4
FILE NO. 102,858
REV. NO.

BKF ENGINEERS
255 SHORELINE DR
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REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.40

PROFESSIONAL ENGINEER BRIAN STOKLE No. 61668 Exp. 10/31/18 CIVIL STATE OF CALIFORNIA

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Plot Time: Wed, 07 Oct 2015 - 3:11pm
Plot Date: 4-28-2017, 7:02 PM - PLOTTED BY: bsmith
DRAWING NAME: \\Sfmg01\090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.40)

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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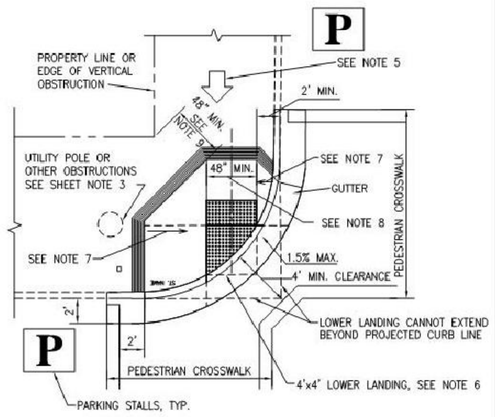
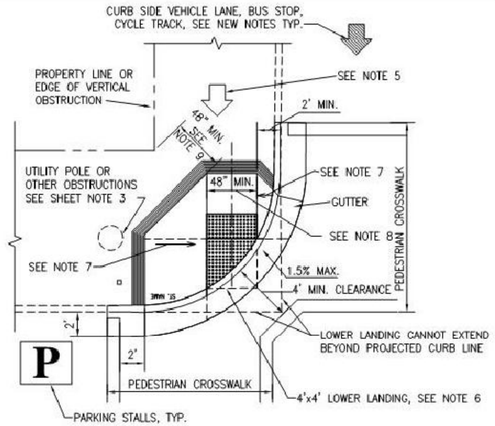
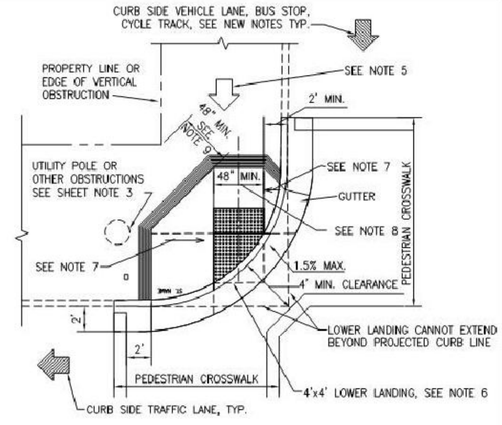
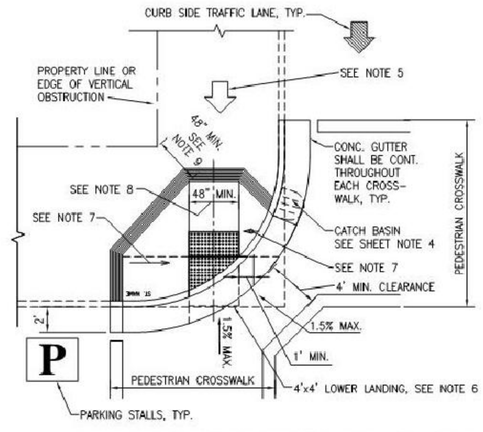
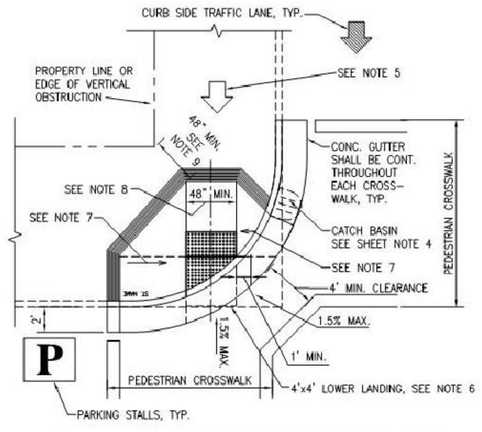
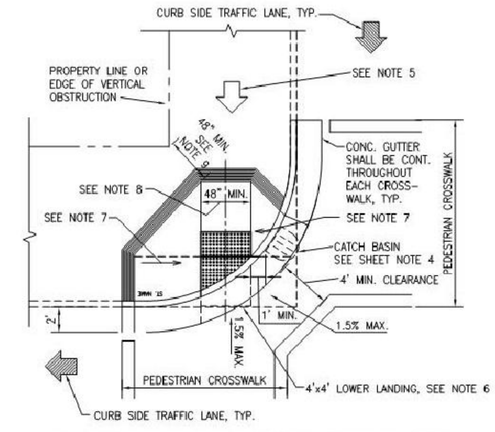
	COLUMN A LOCATIONS WITH FULL TIME CURB SIDE PARKING ON EACH CURB FACE ADJACENT TO CURB RETURN AREA	COLUMN B LOCATIONS WITH FULL TIME CURB SIDE PARKING ON ONE CURB FACE AND CURB SIDE TRAFFIC LANE INCLUDING RUSH HOUR LANE OR BUS STOP ON THE OTHER CURB FACE	COLUMN C LOCATIONS WITH CURB SIDE TRAFFIC LANE (INCLUDING RUSH HOUR LANE OR BUS STOP ON OTHER CURB FACE ADJACENT TO CURB RETURN AREA
ROW 1 NO STORM DRAIN CATCH BASIN INLET IN CURB RETURN	 SINGLE CURB RAMP EXCEPTION A1 PARKING ON BOTH SIDES - NO CATCH BASIN	 SINGLE CURB RAMP EXCEPTION B1 PARKING ON ONE SIDE - NO CATCH BASIN	 SINGLE CURB RAMP EXCEPTION C1 NO PARKING - NO CATCH BASIN
ROW 2 WITH STORM DRAIN CATCH BASIN INLET IN CURB RETURN	 SINGLE CURB RAMP EXCEPTION A2 PARKING ON BOTH SIDES - WITH CATCH BASIN	 SINGLE CURB RAMP EXCEPTION B2 PARKING ON ONE SIDE - WITH CATCH BASIN	 SINGLE CURB RAMP EXCEPTION C2 NO PARKING - WITH CATCH BASIN

PRELIMINARY DRAWING
FOR REVIEW ONLY

SHEET NOTES

1. THE EXCEPTION CURB RAMPS SHOWN ON THIS DRAWING SHALL BE USED ONLY WITH PRIOR APPROVAL FROM THE CITY ENGINEER, PUBLIC WORKS DISABILITY ACCESS COORDINATOR, OR THEIR DESIGNEE AND UPON PROPER DOCUMENTATION INDICATING LEGAL AND/OR PHYSICAL CONSTRAINTS. ONE CURB RAMP MAY SERVE TWO CROSSWALKS THAT MEET AT A SINGLE CURB RETURN ONLY WHERE IT HAS BEEN DOCUMENTED THAT PROVIDING TWO CURB RAMPS AT SUCH A LOCATION IS TECHNICALLY INFEASIBLE.

2. ALL GENERAL NOTES ON DRAWING CR-0 SHALL APPLY TO THIS SHEET. FOR DETECTABLE SURFACE DETAILS AND NOTES, SEE DRAWING CR-2.

3. SINGLE CURB RAMP EXCEPTION PLANS A1, B1, AND C1 OCCUR WHEN (E) VERTICAL OBSTRUCTIONS, SUCH AS UTILITY POLES, ELECTRICAL CABINETS, FIRE HYDRANTS, OR (E) TOPOGRAPHIC CONSTRAINTS PROHIBIT THE INSTALLATION OF TWO CURB RAMPS.

4. SINGLE CURB RAMP EXCEPTION PLANS A2, B2, AND C2 OCCUR WHEN AN (E) CATCH BASIN AT THE CURB RETURN OR (E) TOPOGRAPHIC CONSTRAINTS PROHIBIT THE INSTALLATION OF TWO CURB RAMPS.

5. THE DIRECTION OF THE RAMP SHALL FOLLOW THE PREDOMINANT PEDESTRIAN PATH OF TRAVEL WHERE FEASIBLE.

6. PROVIDE A 4'x4' LOWER LANDING. THE LOWER LANDING MAY SLOPE 1.5% MAXIMUM IN EACH DIRECTION. LOWER LANDING SHALL NOT EXTEND BEYOND PROJECTED FACE OF THE CURB LINE (PROWAG R304.5.5) UNLESS TECHNICALLY INFEASIBLE.

7. THE SLOPE ON THE FLARED SIDES SHALL BE 7.5% MAXIMUM, 6% MINIMUM MEASURED PERPENDICULAR TO THE RAMP.

8. WHERE CURB RAMP WIDTH MUST BE <48" DUE TO A DOCUMENTED TECHNICALLY INFEASIBLE (E) CONDITION, THE WIDTH OF THE RAMP MAY BE REDUCED, BUT SHALL NOT BE <36". SUCH LOCATIONS SHALL BE DOCUMENTED AS POSING A TECHNICALLY INFEASIBLE (E) CONDITION AND MUST BE APPROVED ON A CASE BY CASE BASIS BY PUBLIC WORKS.

9. WHERE PINCH POINT WIDTH MUST BE <48" DUE TO A DOCUMENTED TECHNICALLY INFEASIBLE (E) CONDITION, THE WIDTH OF THE PINCH POINT MAY BE REDUCED, BUT SHALL NOT BE <36". SUCH LOCATIONS SHALL BE DOCUMENTED AS POSING A TECHNICALLY INFEASIBLE (E) CONDITION AND MUST BE APPROVED ON A CASE BY CASE BASIS BY PUBLIC WORKS.

APPROVED: _____
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE: _____

NO.	DATE	DESCRIPTION	BY	APP.
		TABLE OF REVISIONS		

THIS DRAWING WAS LAST MODIFIED: 10/07/15 15:24, BY: efontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	DATE:	PUBLIC WORKS 10/15
DRAWN:	DATE:	PUBLIC WORKS 10/15
CHECKED:	DATE:	PUBLIC WORKS 10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 7 OF 13

ACCESSIBLE STREET CROSSING STANDARDS

EXCEPTION CURB RAMPS
SINGLE CURB RAMP PLANS

CONTRACT NO. NONE
DRAWING NO. CR-6
FILE NO. 102,860
REV. NO.

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
ENGINEERS / SURVEYORS / PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.41

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Model Units: Feet
Color Dependent Plot Style: Monojo

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PLOT TIME: 4-28-2017 7:02 PM PLOTTED BY: Dan
(C7.41)

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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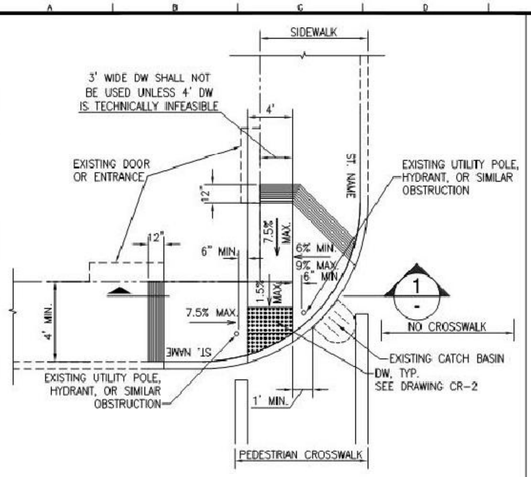
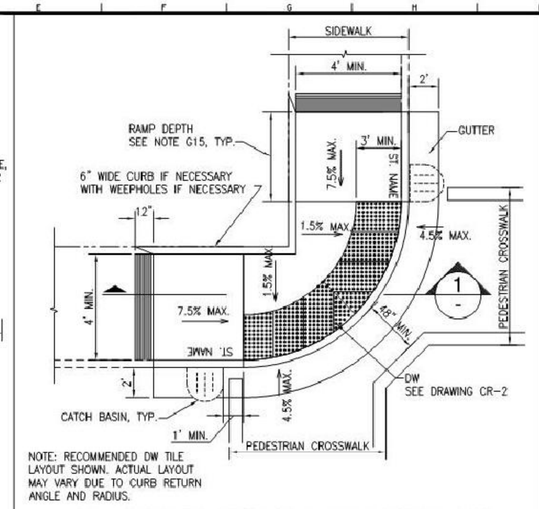
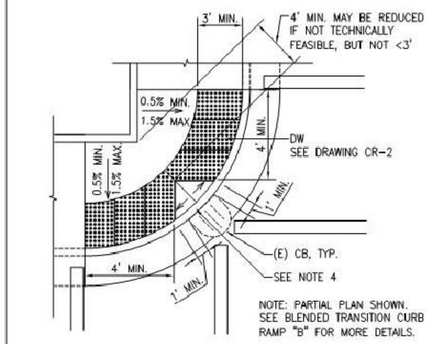


T-INTERSECTION RAMP
4-FOOT WIDE RAMP — A1 -



NOTE: RECOMMENDED DW TILE LAYOUT SHOWN. ACTUAL LAYOUT MAY VARY DUE TO CURB RETURN ANGLE AND RADIUS.

BLENDED TRANSITION CURB RAMP
CATCH BASIN OUTSIDE OF CURB RETURN — B -



NOTE: PARTIAL PLAN SHOWN. SEE BLENDED TRANSITION CURB RAMP "B" FOR MORE DETAILS.

BLENDED TRANSITION CURB RAMP
CATCH BASIN AT CURB RETURN — C -

SHEET NOTES

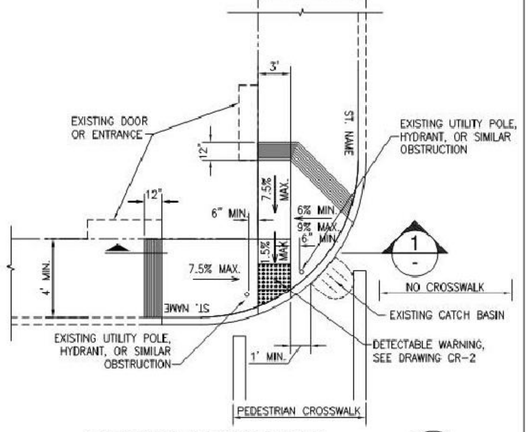
1. THE EXCEPTION CURB RAMPS SHOWN ON THIS DRAWING SHALL BE USED ONLY WITH PRIOR APPROVAL FROM THE CITY ENGINEER, PUBLIC WORKS DISABILITY ACCESS COORDINATOR, OR THEIR DESIGNEE AND UPON PROPER DOCUMENTATION OF HARDSHIP INDICATING LEGAL AND OR PHYSICAL CONSTRAINTS.

2. ALL GENERAL NOTES ON DRAWING CR-0 SHALL APPLY TO THIS SHEET. FOR DETECTABLE WARNING DETAILS AND NOTES, SEE DRAWING CR-2.

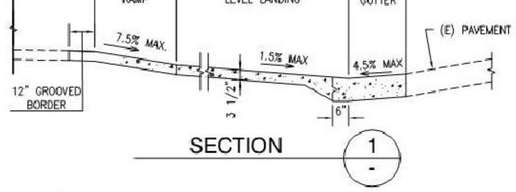
3. BLENDED TRANSITION CURB RAMP "B" SHALL BE USED WHEN THE SIDEWALK IS NOT WIDE ENOUGH, MAKING IT TECHNICALLY INFEASIBLE TO PROVIDE A STANDARD CURB RAMP LAYOUT OR ALTERNATE CURB RAMP.

4. A CATCH BASIN AT THE CENTER OF A BLENDED TRANSITION CURB RAMP SHALL BE AVOIDED AS MUCH AS TECHNICALLY FEASIBLE. OTHER OPTIONS SHALL BE CONSIDERED FIRST, SUCH AS RELOCATING THE CATCH BASIN OUTSIDE OF THE CURB RETURN OR USE OF ALTERNATE CURB RAMPS. WHEN ALL OTHER OPTIONS ARE NOT TECHNICALLY FEASIBLE, THE CATCH BASIN WITHIN THE BLENDED TRANSITION MAY REMAIN. THE CURB AT THE CATCH BASIN SHALL REACH A HEIGHT OF 4 INCHES MINIMUM, 7 INCHES MAXIMUM.

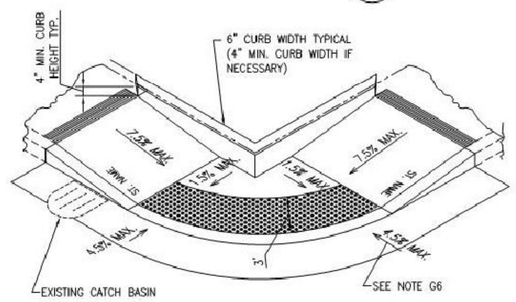
5. A 6" CURB (4" MINIMUM) CAN BE CONSTRUCTED AT THE BACK OF SIDEWALK ONLY WHEN NECESSARY.



T-INTERSECTION RAMP
3-FOOT WIDE RAMP — A2 -



SECTION — 1 -



NOTE: DW TILE LAYOUT NOT SHOWN. ISOMETRIC

PRELIMINARY DRAWING
FOR REVIEW ONLY

APPROVED:
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE:
EFFECTIVE DATE:

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/08/15 10:24, BY: efantejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 - 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	PUBLIC WORKS	DATE: 10/15
DRAWN:	PUBLIC WORKS	DATE: 10/15
CHECKED:	PUBLIC WORKS	DATE: 10/15

SCALE: NOT TO SCALE
SHEET OF SHEETS: 8 OF 13

ACCESSIBLE STREET CROSSING STANDARDS
EXCEPTION CURB RAMPS
BLENDED TRANSITION CURB RAMPS

CONTRACT NO. NONE
DRAWING NO. CR-7
FILE NO. 102.861
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.42

COPYRIGHT

Xrefs: S:\SHV\Curb_Ramp_Group\CR presentation\DET_TBD.dwg
Drawing Path: V:\proj\20090086\CAD\FILES\ Model\SHV\Curb_Ramp_Group\CR presentation\Rev Standard Plans\city standard Scale: Model Units Measurement Units are English
Plot Time: Thu, 08 Oct 2015 - 10:05am

DRAWING NAME: c:\570d92\D0086-121SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.42)
PLOT TIME: 4-28-2017 1:02 PM PLOTTED BY: bwh

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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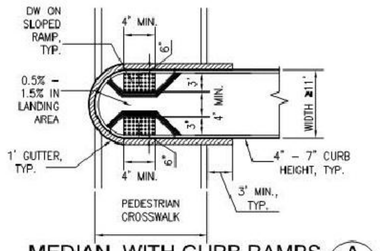
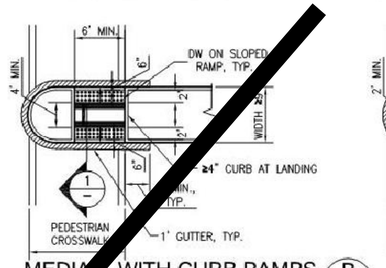
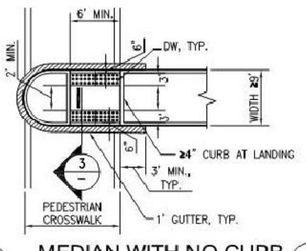


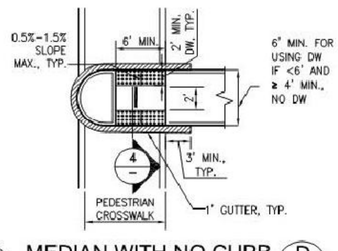
MEDIAN WITH CURB RAMPS AND LANDING; WIDTH ≥ 11' (A)



MEDIAN WITH CURB RAMPS AND LANDING; WIDTH ≥ 9', < 11' (B)



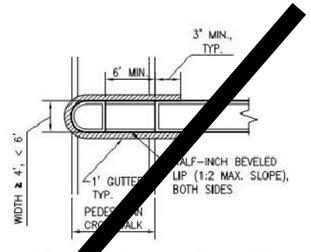
MEDIAN WITH NO CURB RAMPS; WIDTH ≥ 9', <11' (C)



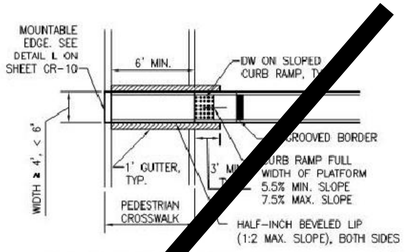
MEDIAN WITH NO CURB RAMPS; WIDTH ≥ 6', <9' (D)

SHEET NOTES

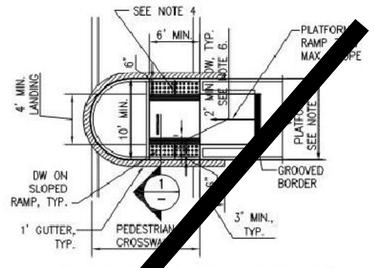
1. ALL GENERAL NOTES ON DRAWING CR–0 SHALL APPLY TO THIS SHEET. FOR DETECTABLE WARNING (DW) DETAILS AND NOTES, SEE DRAWING CR–2.
2. WHEN PATHWAY IS MADE OF ASPHALT CONCRETE, THE DW SHALL BE SET ON CONCRETE 4" THICK MINIMUM AND 6" WIDE AROUND ALL EDGES OF THE TILES. FOR AREAS WHERE MAINTENANCE OR EMERGENCY VEHICLE TRAFFIC WILL TRAVEL ON DW, CONCRETE SHALL BE 6" THICK.
3. WHEN THE PEDESTRIAN PASS THRU IS BOUNDED BY CURB ON BOTH SIDES, THE CURBS SHALL BE PARALLEL TO THE CROSSWALK ON EITHER END OF THE PASS THRU.
4. SLOPE PASS–THRU FOR DRAINAGE TO LIMIT DEBRIS BUILD–UP.
5. WIDTH OF BOARDING PLATFORM SHOULD BE AT LEAST 8' FOR ACCESSIBILITY.
6. ANY EXCESS WIDTH AFTER 4' LANDING, 6" CURB, AND MIN. 2' OF DW REQUIREMENT HAS BEEN MET SHALL BE DISTRIBUTED EQUALLY AS ADDITIONAL WIDTH TO THE DW.
7. PASS–THROUGHS AND REFUGE AREAS ARE REQUIRED TO HAVE A 6' MINIMUM WIDTH. WIDTH MAY BE REDUCED TO 5' MINIMUM (5'2" MINIMUM FOR CALTRANS) WHERE IT IS TECHNICALLY INFEASIBLE TO ACHIEVE A WIDER WIDTH.



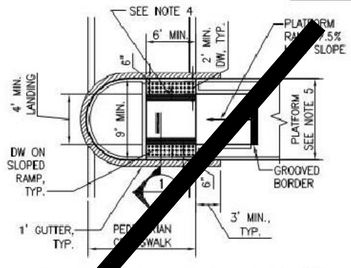
MEDIAN PASS–THRU WIDTH ≥ 4', < 6' (E)



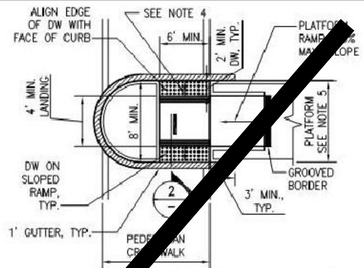
PASS–THRU WITH MOUNTABLE CURB; WIDTH ≥ 4', < 6' (F)



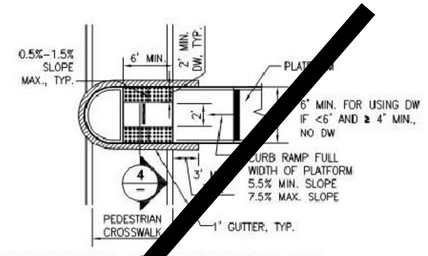
BUS PLATFORM MEDIAN WIDTH ≥10' (G)



BUS PLATFORM MEDIAN WIDTH ≥ 9' (H)

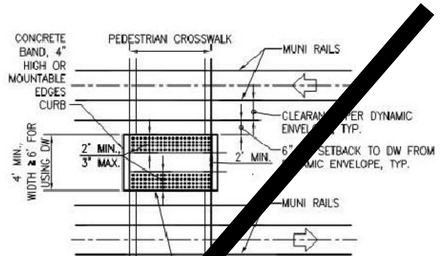


BUS PLATFORM MEDIAN WIDTH ≥ 8, <9' (I)

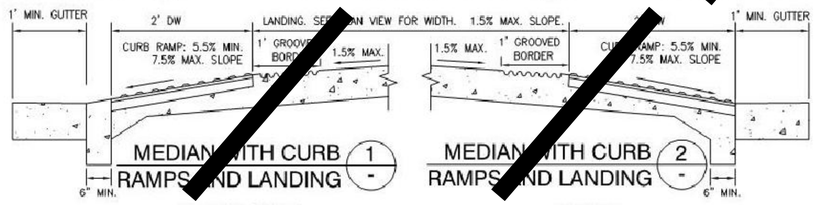


FOR PLATFORM WIDTH < 8' (AT LEAST PREFERABLE, USE WHEN B AND I ARE NOT TECHNICALLY FEASIBLE.

BUS PLATFORM MEDIAN NARROW MEDIAN (J)

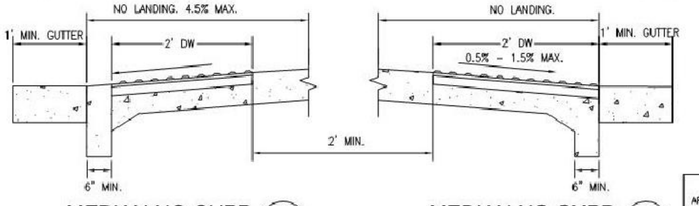


MUNI REFUGE AREA BETWEEN TRACKS (K)



MEDIAN WITH CURB RAMPS AND LANDING (1)

MEDIAN WITH CURB RAMPS AND LANDING (2)



MEDIAN NO CURB RAMPS, NO LANDING (3)

MEDIAN NO CURB RAMPS, NO LANDING (4)

APPROVED: _____
PUBLIC WORKS DISABILITY ACCESS COORDINATOR DATE: _____
EFFECTIVE DATE: _____

PRELIMINARY DRAWING
FOR REVIEW ONLY

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
THIS DRAWING WAS LAST MODIFIED: 10/08/15 09:19, BY: efontejo

REFERENCE INFORMATION & FILE NO. OF SURVEYS

DESIGN & ENGINEERING
PUBLIC WORKS
CITY & COUNTY OF SAN FRANCISCO
30 VAN NESS AVENUE, 5TH FLOOR
SAN FRANCISCO, CA 94102 – 6028

Section Mgr: Date:
Deputy Division Mgr:
Division Mgr: PATRICK RIVERA

DESIGNED:	DATE:	
PUBLIC WORKS	10/15	
DRAWN:	DATE:	
PUBLIC WORKS	10/15	
CHECKED:	DATE:	
PUBLIC WORKS	10/15	

SCALE: NOT TO SCALE
SHEET OF SHEETS: 10 OF 13

ACCESSIBLE STREET CROSSING STANDARDS

STANDARD CURB RAMPS
ACCESSIBLE MEDIAN DETAILS

CONTRACT NO. NONE
DRAWING NO. CR–9
FILE NO. 102,863
REV. NO.

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650–482–6300
650–482–6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number: C7.43

Drawing Path: \\bkf.local.corp.net\Work\SCOFILES1\Data\SW\Curb_Ramp_Group\CR presentation\Rev Standard Plans\city Standard Plans Model Units: Feet
Plot Time: Thu, 08 Oct 2015 - 9:19am
Measurement Units are English
Xrefs: S:\SW\Curb_Ramp_Group\CR presentation\DET_TBD.dwg

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PLOT TIME: 4-25-2017 1:02 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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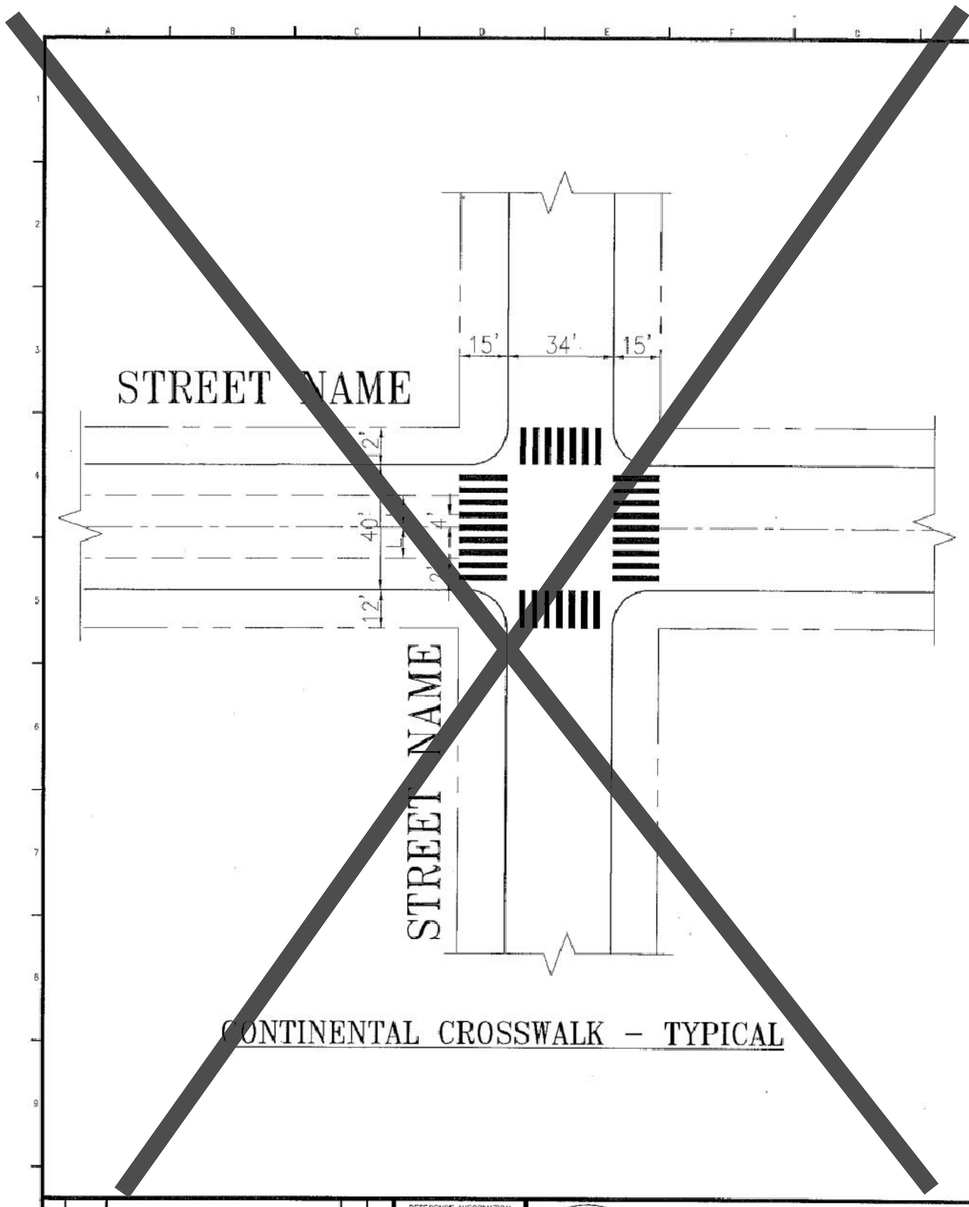
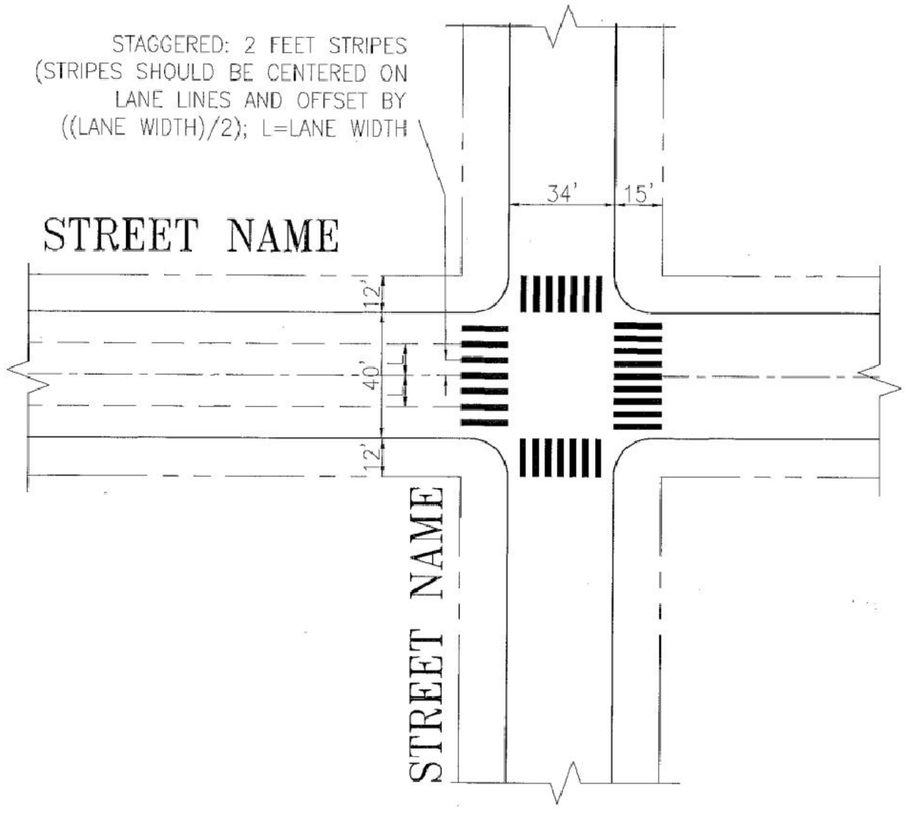


CONTINENTAL CROSSWALK – TYPICAL



CONTINENTAL CROSSWALK – STAGGERED

NO.	DATE	DESCRIPTION	BY	APP.
1	XXXX	XXXX	XX	XX

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
DIVISION OF PARKING AND TRAFFIC - TRAFFIC ENGINEERING
CITY AND COUNTY OF SAN FRANCISCO

DESIGNED: -	DATE: XX
DRAWN: T.A	DATE: XX
CHECKED: M.V	DATE: XX

APPROVED
Thomas Rothrock 3/6/10
SECTION ENGINEER DATE:
CITY TRAFFIC ENGINEER DATE: 3/11/10

SCALE: 1"=20'

SHEET OF SHEETS 10

TRAFFIC STRIPING

DETAIL
CONTINENTAL CROSSWALK

CONTRACT NO.
DRAWING NO. STR-7821
FILE NO.
REV. NO. 0

FILE NAME: T:\1_e_files\Off_rec\Dwgs\str-7821
DATE:
EXTERNAL REFERENCES: FONTS USED:
SCALE FACTOR: PLOT SCALE:
WORKSPACE: OPERATIONS

BKF ENGINEERS | SURVEYORS | PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

PROFESSIONAL ENGINEER — William Sieh — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA
CERTIFICATION

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.44

DRAWING NAME: J:\Engr(0)\20090B6-12\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.44)
PLOT TIME: 4-25-2017 1:02 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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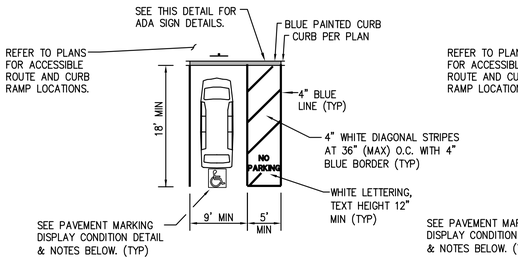
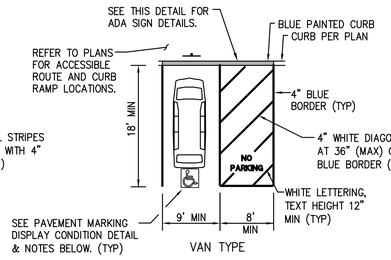
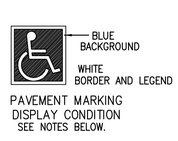
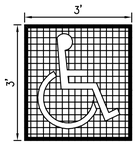


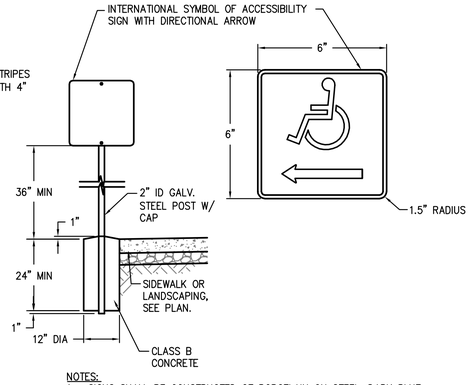






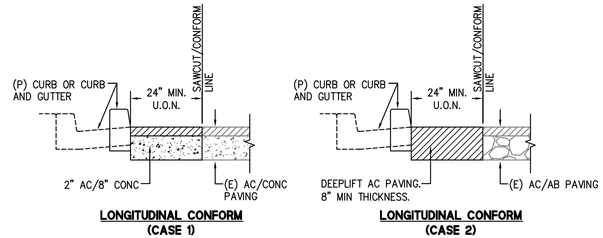
NOTES:
1. SLOPES WITHIN PARKING STALLS AND ACCESS AISLES SHALL BE THE MINIMUM FEASIBLE.
2. DIMENSIONS GIVEN ARE TO CENTER OF STRIPE.
3. WHEELSTOPS SHALL BE PROVIDED WHERE SHOWN IN PLAN.
4. THE CENTERLINE OF THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE A MAXIMUM OF 6" FROM THE CENTERLINE OF THE PARKING SPACE, ITS SIDES PARALLEL TO THE LENGTH OF THE PARKING SPACE AND ITS LOWER CORNER AT, OR LOWER SIDE ALIGNED WITH, THE END OF THE PARKING SPACE LENGTH.
5. ACCESS AISLES SHALL BE CONNECTED THE SIDEWALK VIA ACCESSIBLE MEANS (CURB RAMP, FLUSH TRANSITION, ETC.).

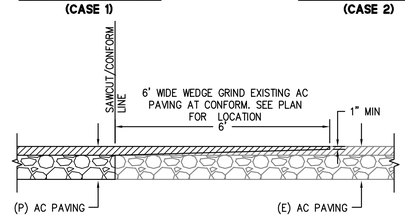
1 **ACCESSIBLE PARKING (BY SFMTA)**
N.T.S.



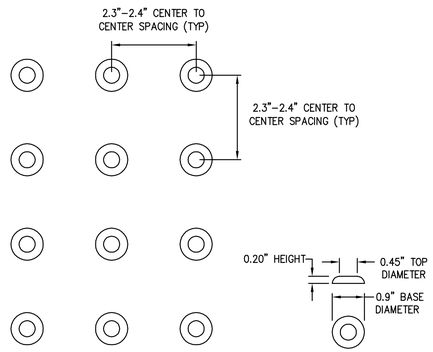
NOTES:
1. SIGNS SHALL BE CONSTRUCTED OF PORCELAIN ON STEEL. DARK BLUE BACKGROUND (FEDERAL STANDARD 595B) WITH BEADED, WHITE SYMBOL AND A NON-GLARE FINISH.
2. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN SHALL FACE IN THE SAME DIRECTION AS THE DIRECTIONAL ARROW SIGN.
3. ADA PATH DIRECTIONAL SIGNS MOUNTED ON POSTS SHALL BE ORIENTED 45° TO PATH.

2 **ADA PATH DIRECTIONAL SIGN DETAIL**
N.T.S.



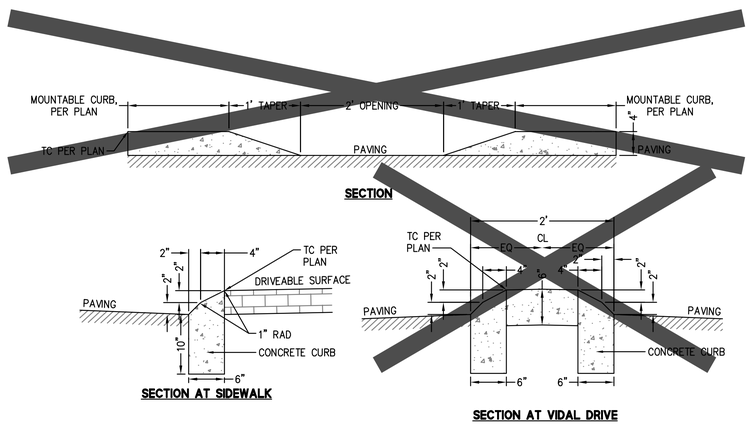


3 **AC CONFORM DETAIL**
N.T.S.



NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE FEDERAL YELLOW (COLOR NUMBER FS 33538).
2. DETECTABLE WARNING SURFACE SHALL DIFFER FROM ADJOINING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
3. DETECTABLE WARNING SURFACE SHALL BE TEKWAY (OR APPROVED EQUIVALENT). INSTLL PER MANUFACTURER'S RECOMMENDATIONS.

4 **DETECTABLE WARNING SURFACE**
N.T.S.



5 **MOUNTABLE CURB**
N.T.S.

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
BKF ENGINEERS | SURVEYORS | PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION DETAILS
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. KOSTER — No. 73790 — 10/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
C7.45

DRAWING NAME: J:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-C700-Details.dwg (C7.45)
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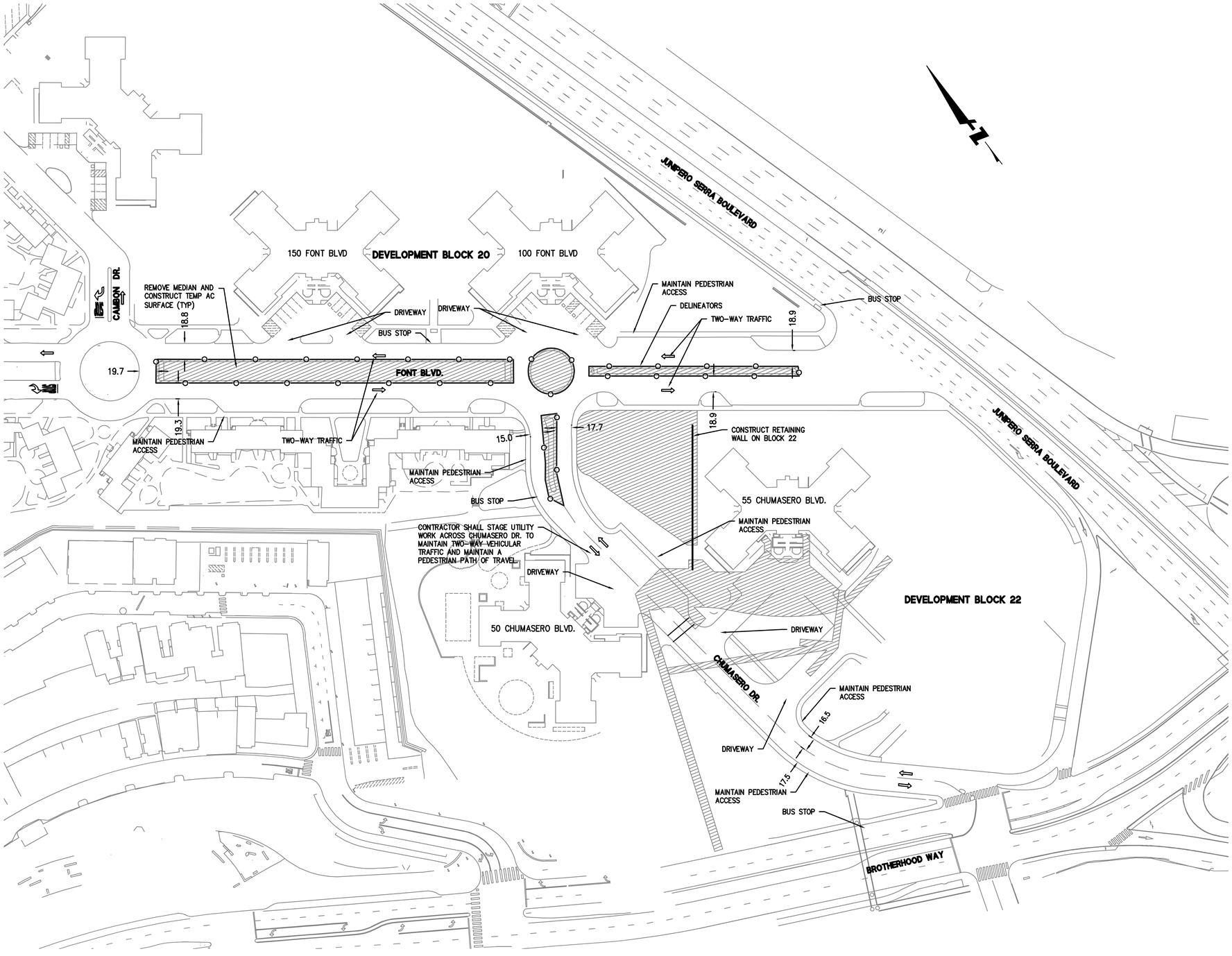

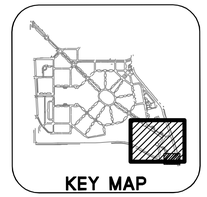

GRAPHIC SCALE

60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. REMOVE (E) MEDIANS AND CONSTRUCT TEMPORARY AC ROAD OVER (E) MEDIAN (4" AC OVER NATIVE COMPACTED TO 95%).
2. CONSTRUCT THE RETAINING WALL ON BLOCK 22 AND ASSOCIATED ROADWAY GRADING.
3. CONSTRUCT TEMPORARY UTILITIES FOR 50 AND 55 CHUMASERO.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 1
SAN FRANCISCO CALIFORNIA

SAN FRANCISCO COUNTY



No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.01

DRAWING NAME: K:\Projects\20090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.01)
PLOTTING: 5/1/2017 10:25 AM PLOTTED BY: pam

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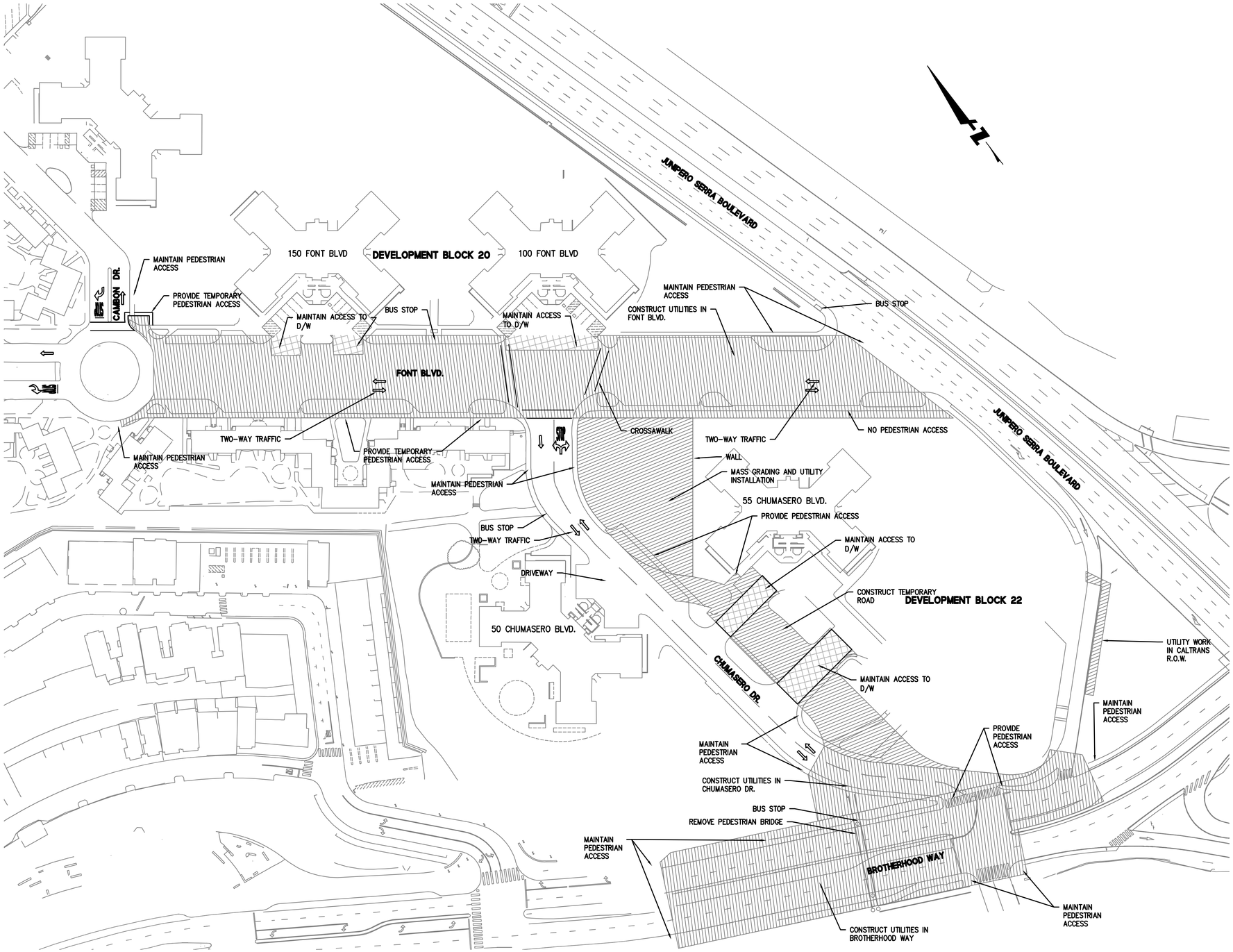

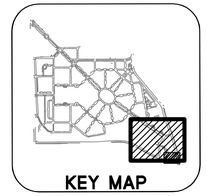

GRAPHIC SCALE
60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. CONSTRUCT ALL UTILITY WORK ON BROTHERHOOD WAY AND FONT BLVD.
2. CONSTRUCT TEMPORARY ROAD ON BLOCK 22 AND COMMISSION.
3. INSTALL UTILITIES AND MASS GRADING FOR CHUMASERO DR. BETWEEN 55 CHUMASERO DR. AND FONT BLVD.
4. MAINTAIN EXISTING INTERSECTION AND SIGNAL CONFIGURATION AT CHUMASERO DR. / THOMAS MOORE WAY / BROTHERHOOD WAY.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 2
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER
BRIAN H. STOKLE
No. 19885
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
CS.02

DRAWING NAME: K:\Proj\20090086-121 SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.02)
PLOT TIME: 5/1/2017 9:55 AM PLOTTED BY: pam

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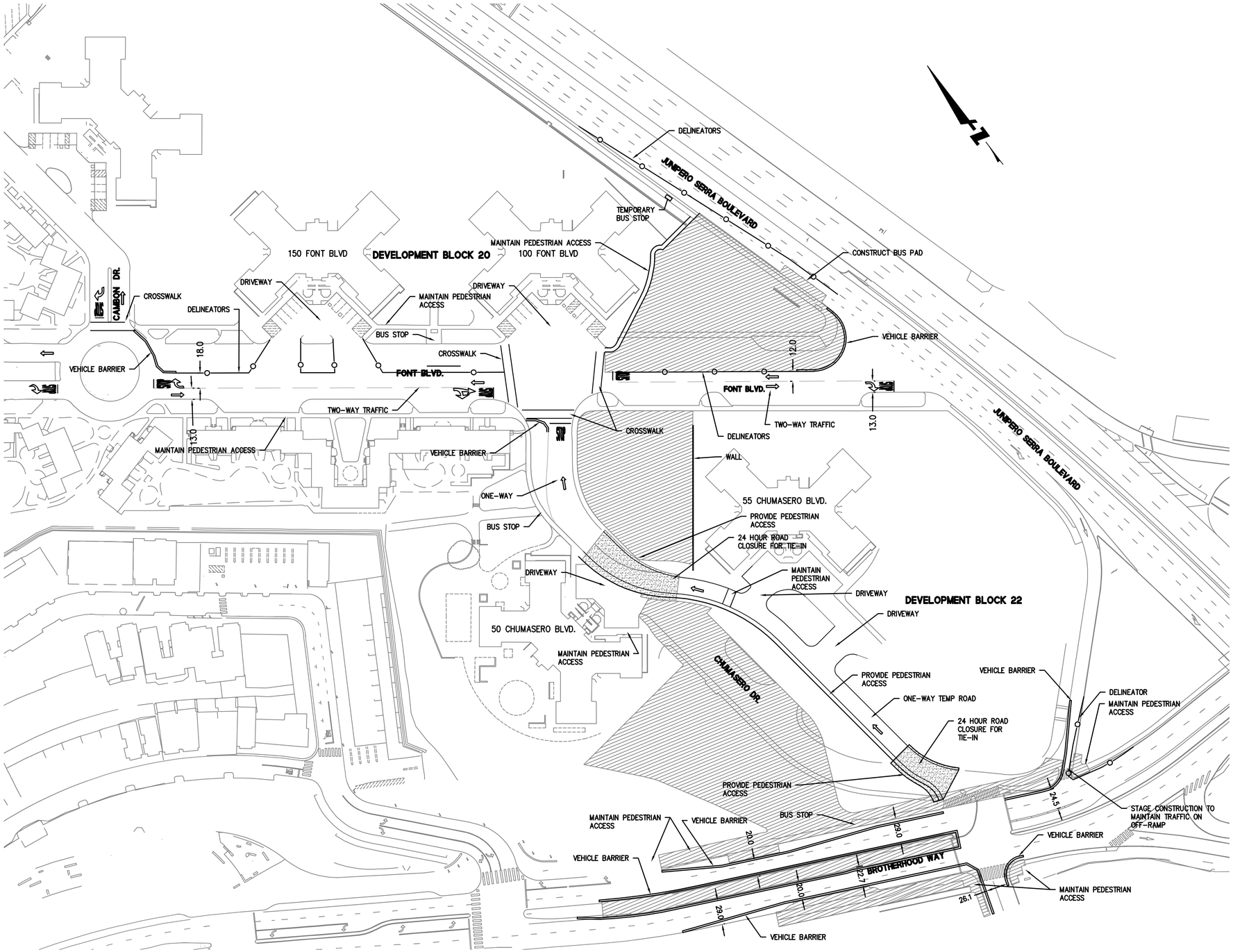

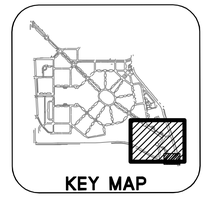

GRAPHIC SCALE

60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. COMPLETE SA3 INSTALLATION ON CHUMASERO DR. AND COMMISSION LINE.
2. CONSTRUCT GRADING, REMAINING UTILITIES, AND HARDSCAPE ON NEW CHUMASERO DR.
3. COMPLETE SIGNAL WORK AND ASSOCIATED HARDSCAPE AT BROTHERHOOD WAY/CHUMASERO INTERSECTION AND THOMAS MOORE WAY / BROTHERHOOD WAY INTERSECTION.
   - 3.1. CONSTRUCT NORTH SIDE OF BROTHERHOOD WAY
   - 3.2. CONSTRUCT MEDIAN AND LEFT TURN BAY IN BROTHERHOOD WAY
   - 3.3. CONSTRUCT SOUTHERN SIDE OF BROTHERHOOD WAY
4. COMMISSION NEW CHUMASERO DR.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN – STAGE 3

SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.03

DRAWING NAME: K:\Eng09\090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.03)
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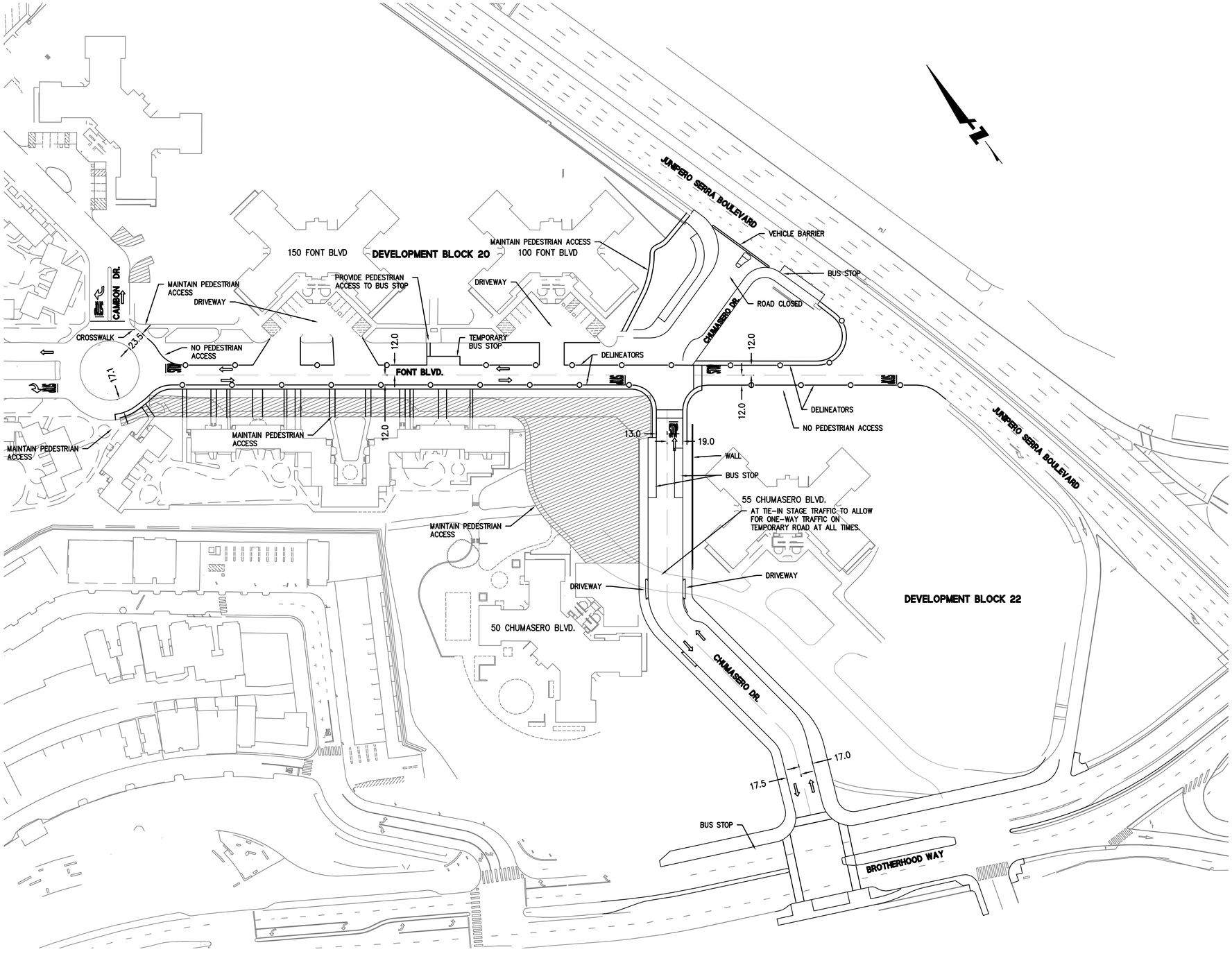

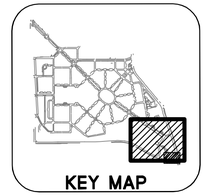

GRAPHIC SCALE
60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. CONSTRUCT CURB, GUTTER, SIDEWALK AND BIORETENTION PLANTERS ON SOUTH SIDE OF FONT BLVD.
2. CONSTRUCT THE MOUNTABLE CURB AT THE SOUTH SIDE OF FONT BLVD. MEDIAN.
3. CONSTRUCT SOUTH SIDE OF FONT BLVD. HARDSCAPE.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 4a

SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER — BRIAN K. STOKE — No. C-71181 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

CERTIFICATION

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
CS.04A

DRAWING NAME: K:\Engr\20090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQ0.dwg (CS.04A)
PLOT TIME: 5/1/2017 10:58 AM PLOTTED BY: pam

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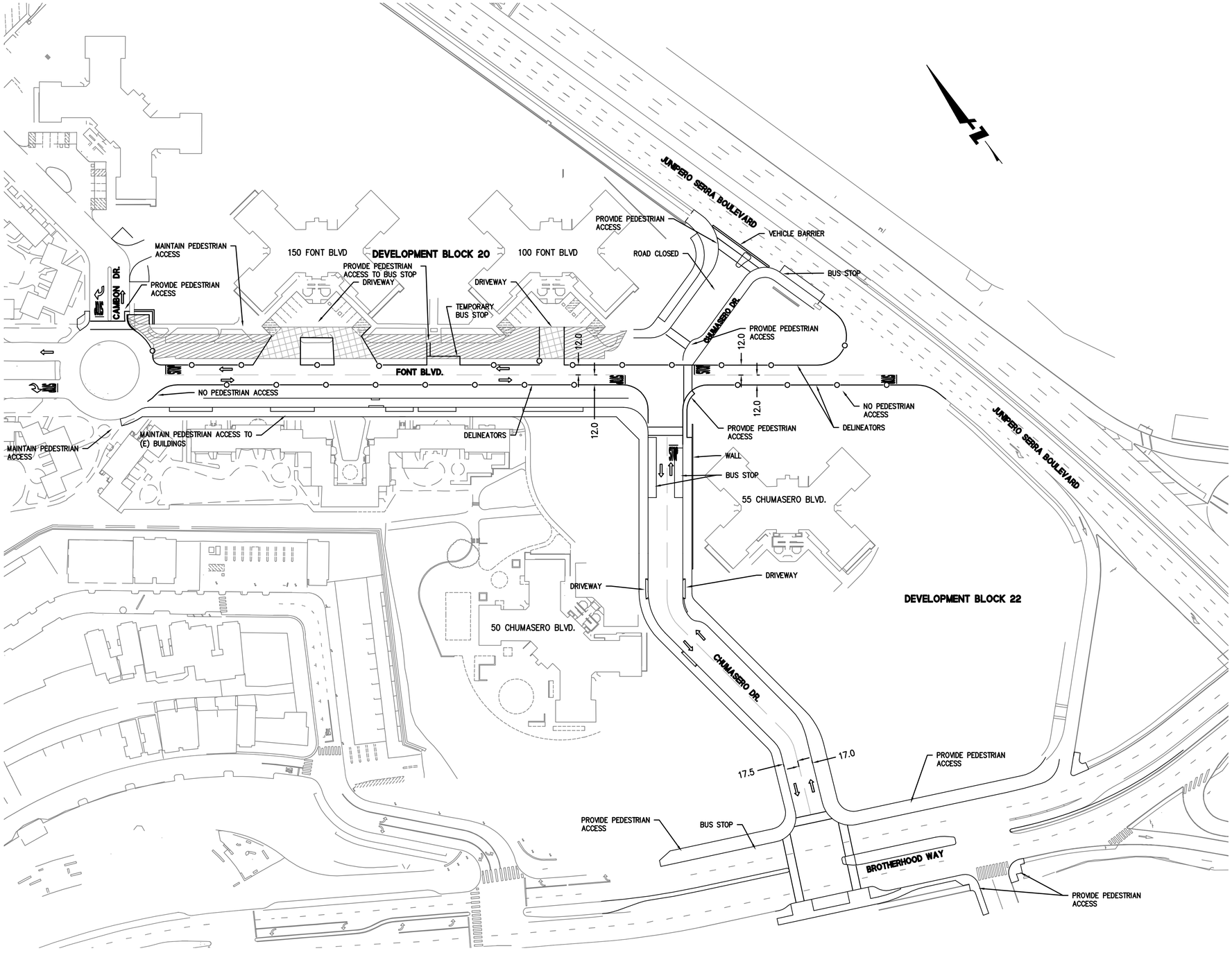

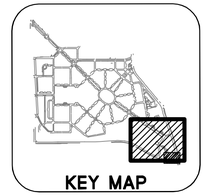

GRAPHIC SCALE
60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. CONSTRUCT CURB, GUTTER, SIDEWALK AND BIORETENTION PLANTERS ON NORTH SIDE OF FONT BLVD.
2. CONSTRUCT THE MOUNTABLE CURB AT THE NORTH SIDE OF FONT BLVD. MEDIAN.
3. CONSTRUCT NORTH SIDE OF FONT BLVD. HARDSCAPE.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 4b
SAN FRANCISCO CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.04B

DRAWING NAME: K:\Engrd\20090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQ04.dwg (CS.04B)
PLOT TIME: 5/1/2017 10:58 AM PLOTTED BY: pam

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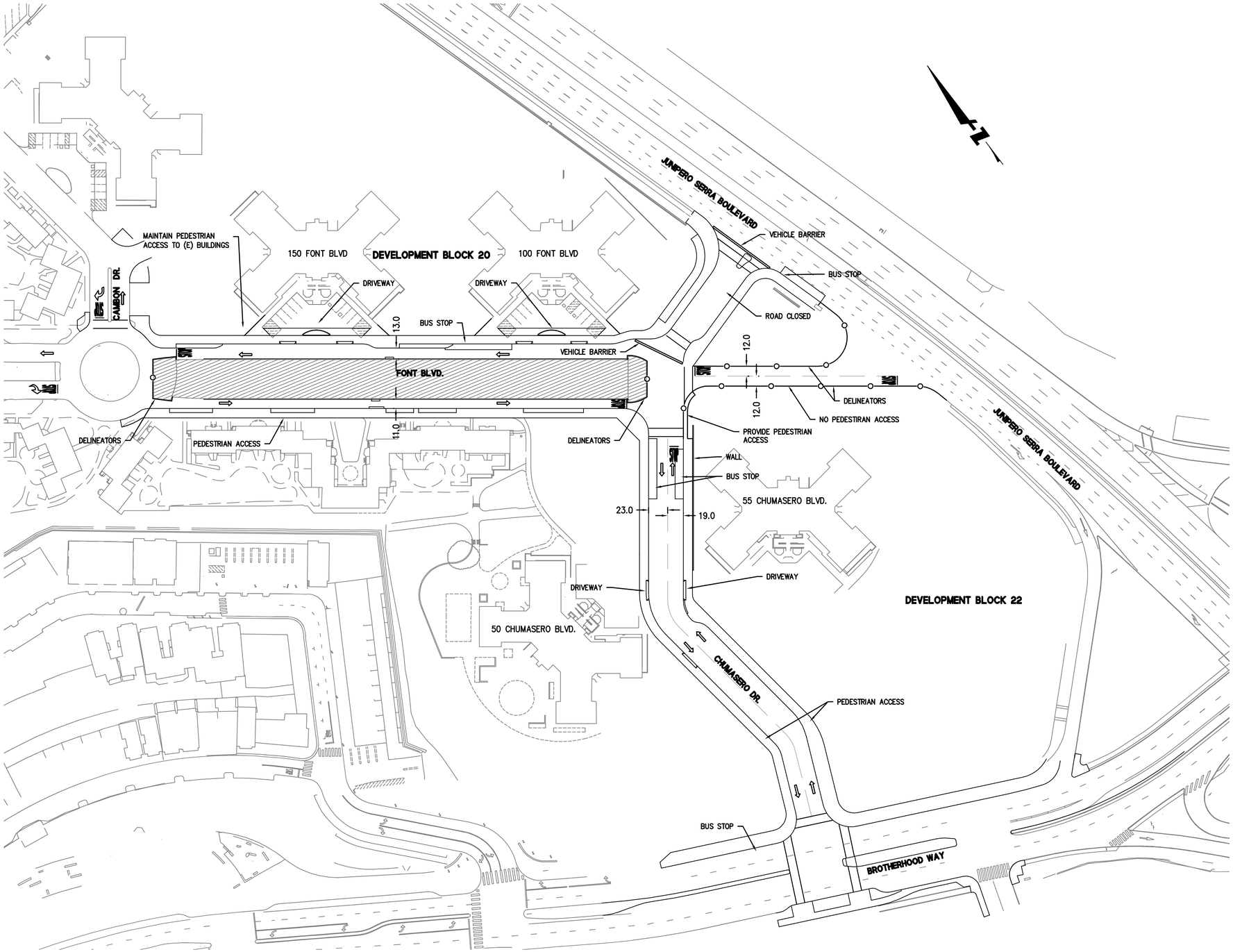

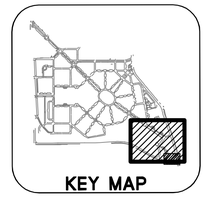

GRAPHIC SCALE

60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. COMPLETE CONSTRUCT OF FONT BLVD. MEDIAN.
2. COMPLETE CONSTRUCT OF CHUMASERO DR. CURB, GUTTER AND SIDEWALK AT THE INTERSECTION OF CHUMASERO DR./ FONT BLVD
3. COMPLETE CONSTRUCTION OF ROADWAY HARDSCAPE AT THE INTERSECTION OF CHUMASERO DR. / FONT BLVD.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 4c
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
Nicholas Stiles
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.04C

DRAWING NAME: K:\Projects\20090086-123\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.04C)
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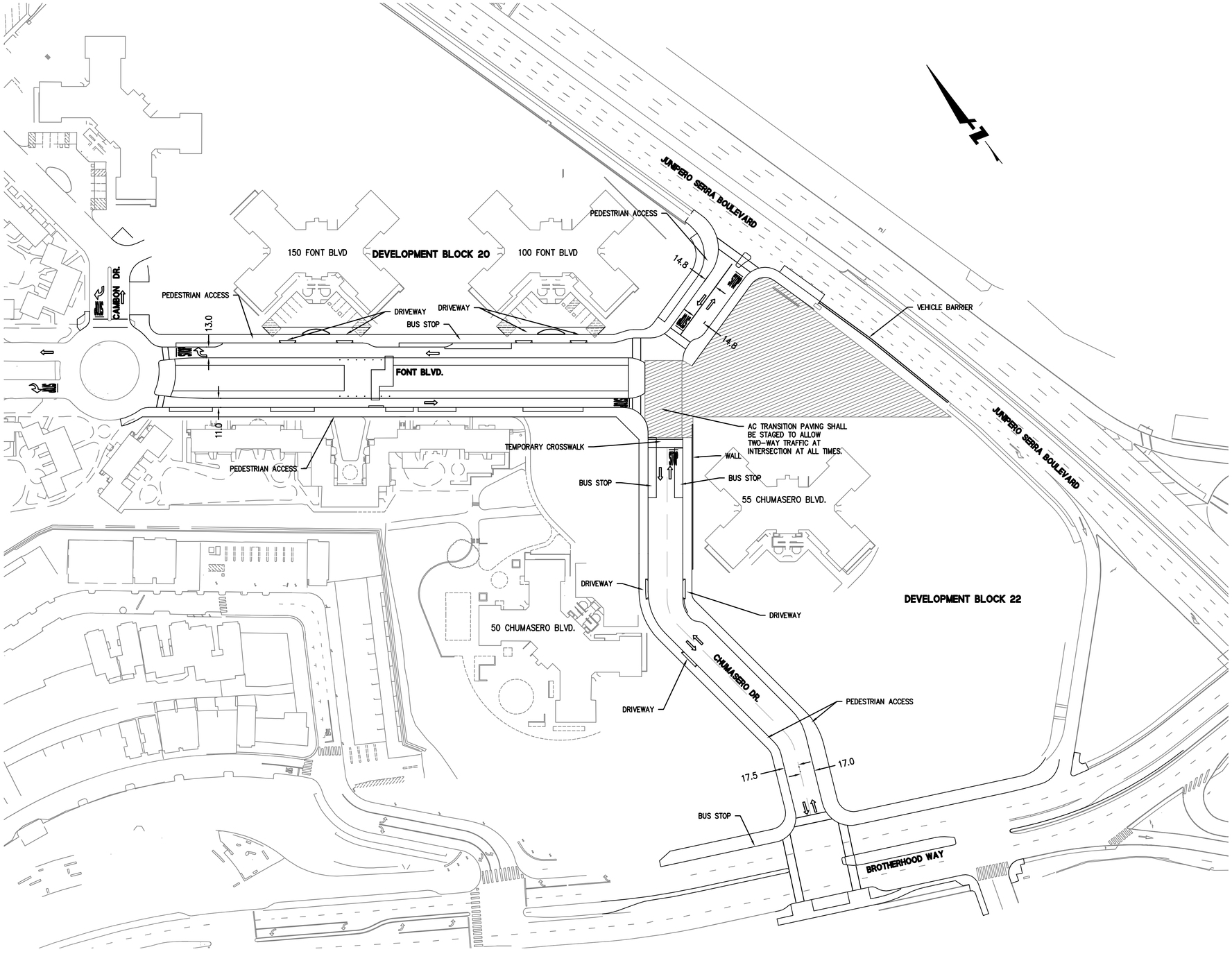

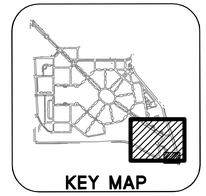

GRAPHIC SCALE
60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. *OPEN CHUMASERO DR. AT FONT BLVD.*
2. *CLOSE FONT AT JUNIPERO SERRA BLVD.*
3. *COMPLETE CONSTRUCT OF FONT BLVD. BETWEEN CHUMASERO DR. AND JUNIPERO SERRA BLVD.*

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 4d
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER — CHRISTOPHER M. KERN — No. 73697 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
CS.04D

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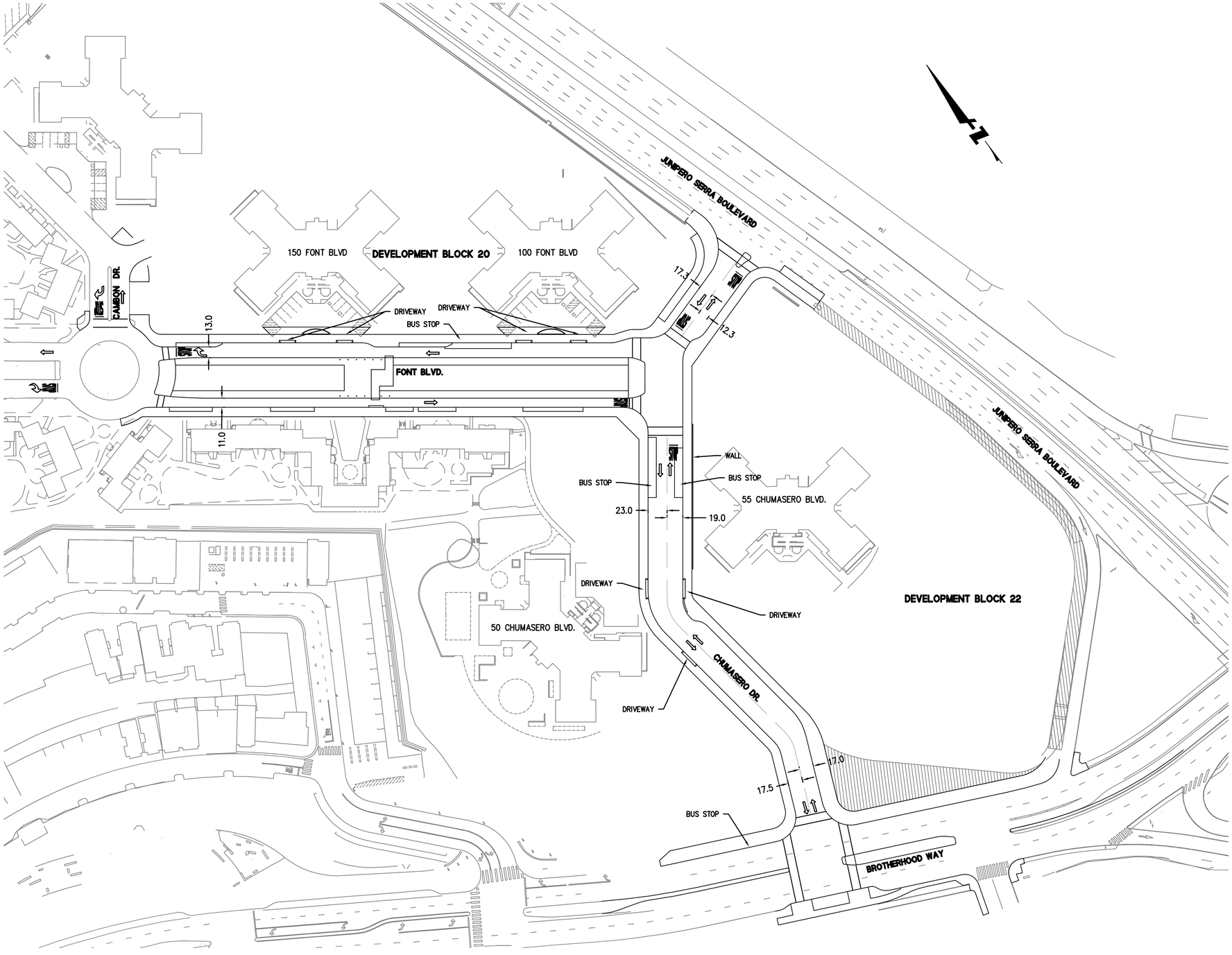

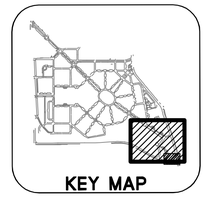

GRAPHIC SCALE

60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. COMPLETE ALL REMAINING JUNIPERO SERRA BLVD. GRADING, UTILITY, CURB, SIDEWALK, AND LANDSCAPING.
2. COMPLETE ALL REMAINING SOUTH BOUND JUNIPERO SERRA BLVD. OFF RAMP TO WEST BOUND BROTHERHOOD WAY GRADING, UTILITY, CURB, SIDEWALK, AND LANDSCAPING.
3. COMPLETE REMAINING HARDSCAPE DEMOLITION.

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - STAGE 5
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER J. CLARKSON — No. 61055 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.05

DRAWING NAME: K:\Engdg\20090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.05)
PLOT TIME: 5/1/2017 10:37 AM PLOTTED BY: pam

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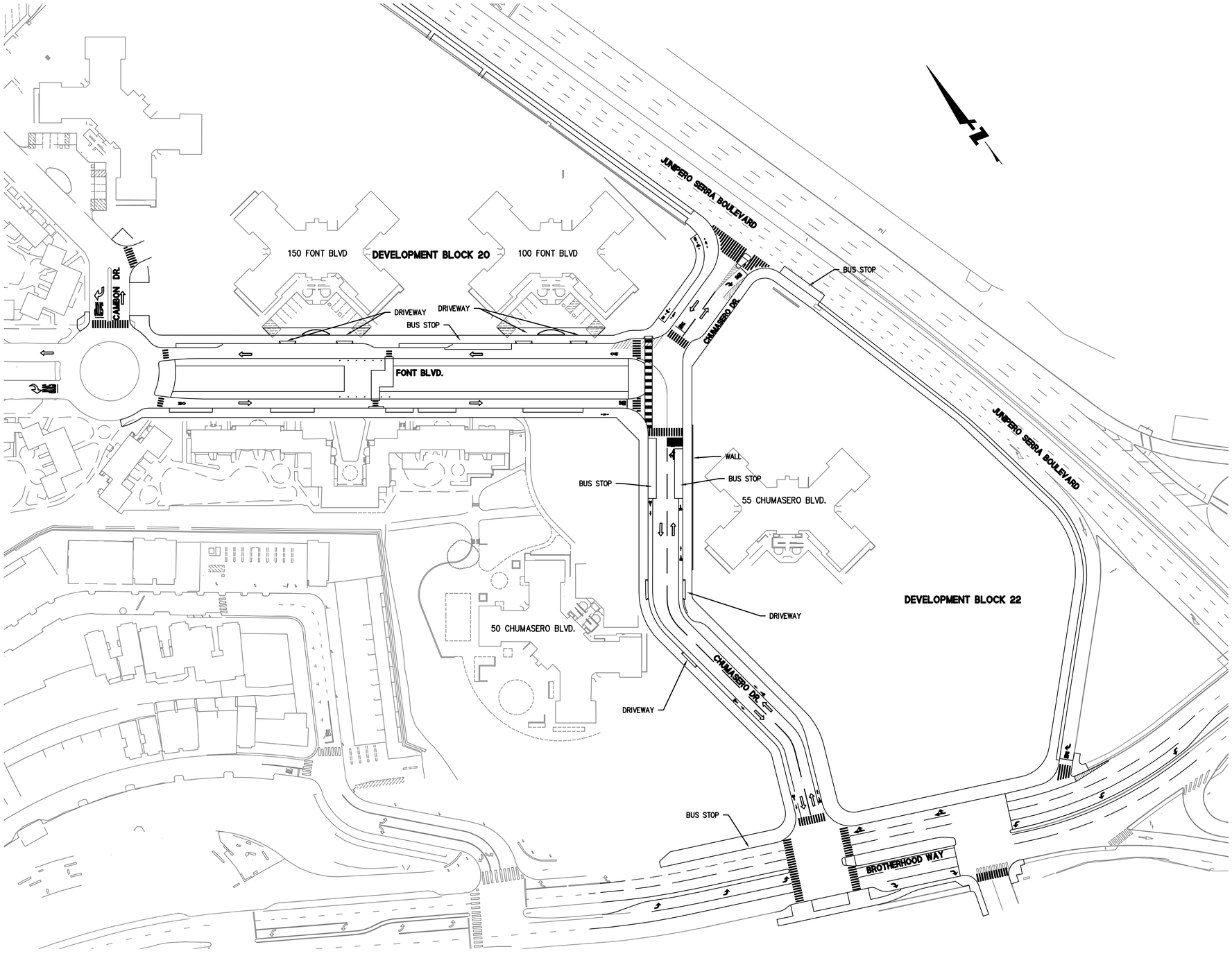

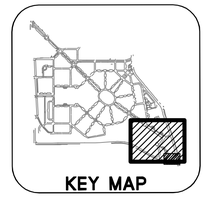

GRAPHIC SCALE
60 0 60 120

LEGEND:

- AREA OF WORK
- DIRECTIONAL ARROW
- TEMPORARY STRIPING
- DELINEATORS

SHEET NOTES:

1. *PLANTING TO TAKE PLACE ONCE HARDSCAPE IS COMPLETE IN EACH STAGE. PERFORM ONCE ADEQUATE SPACE IS AVAILABLE SO AS TO ALLOW FOR A CONTINUOUS OPERATION WITHOUT REMOBILIZATION AND AS TO NOT CONFLICT WITH OTHER SCOPES OF WORK.*

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PHASE 1B STREET IMPROVEMENT PLANS
CONSTRUCTION STAGING PLAN - COMPLETED PHASE 1B
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. JACKSON
No. 72055
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=60'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:

CS.06

DRAWING NAME: K:\Projects\20090086-12\SHEETS\CONSTRUCTION SEQUENCING\PH01B-SEQU.dwg (CS.06)
PLOT TIME: 5/1/2017 10:29 AM PLOTTED BY: pah

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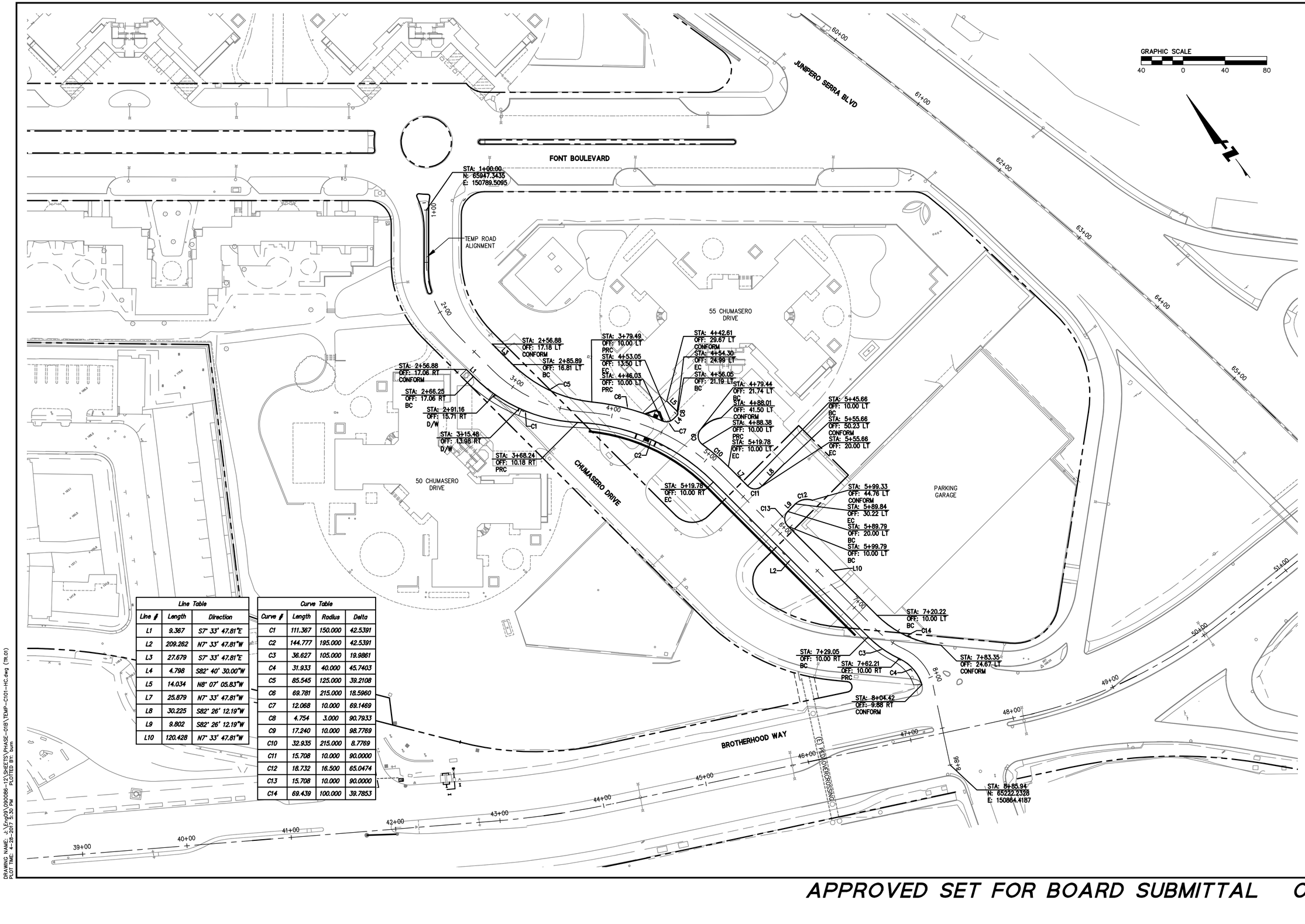

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L4	4.798	S82° 40' 30.00"W
L5	14.034	N8° 07' 05.83"W
L7	25.879	N7° 33' 47.81"W
L8	30.225	S82° 26' 12.19"W
L9	9.802	S82° 26' 12.19"W
L10	120.428	N7° 33' 47.81"W

Curve Table			
Curve #	Length	Radius	Delta
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C4	31.933	40.000	45.7403
C5	85.545	125.000	39.2108
C6	69.781	215.000	18.5960
C7	12.068	10.000	69.1469
C8	4.754	3.000	90.7933
C9	17.240	10.000	98.7769
C10	32.935	215.000	8.7769
C11	15.708	10.000	90.0000
C12	18.732	16.500	65.0474
C13	15.708	10.000	90.0000
C14	69.439	100.000	39.7853

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – HORIZONTAL CONTROL PLAN
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
TR.01

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\TEMP-C101-HC.dwg (TR.01)
PLOT TIME: 4-28-2017 5:30 PM PLOTTED BY: burn

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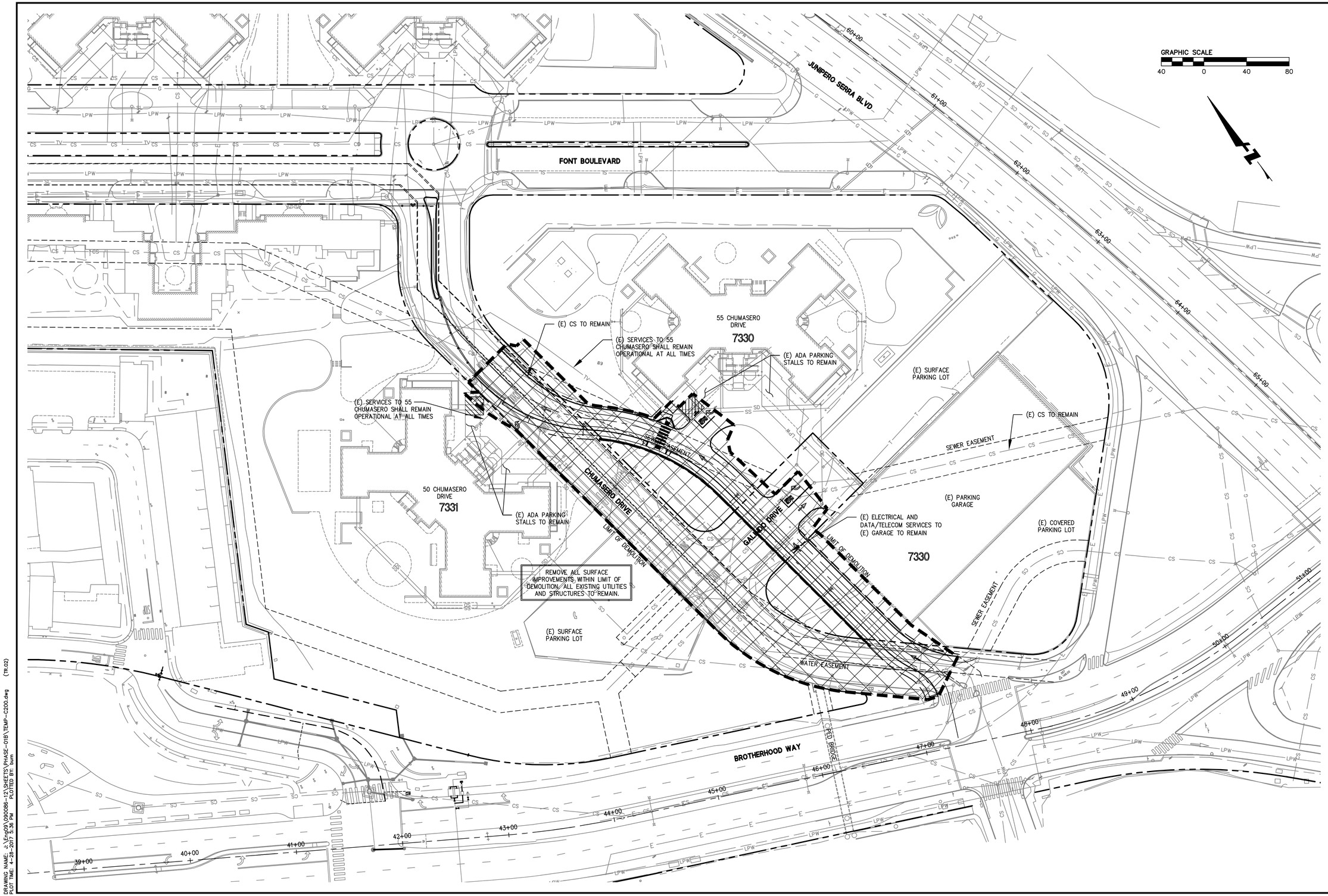

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD - EXISTING CONDITIONS AND DEMOLITION PLAN
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NIRAJAN K. SCOTT
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
TR.02

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\TEMP-C200.dwg (TR.02)
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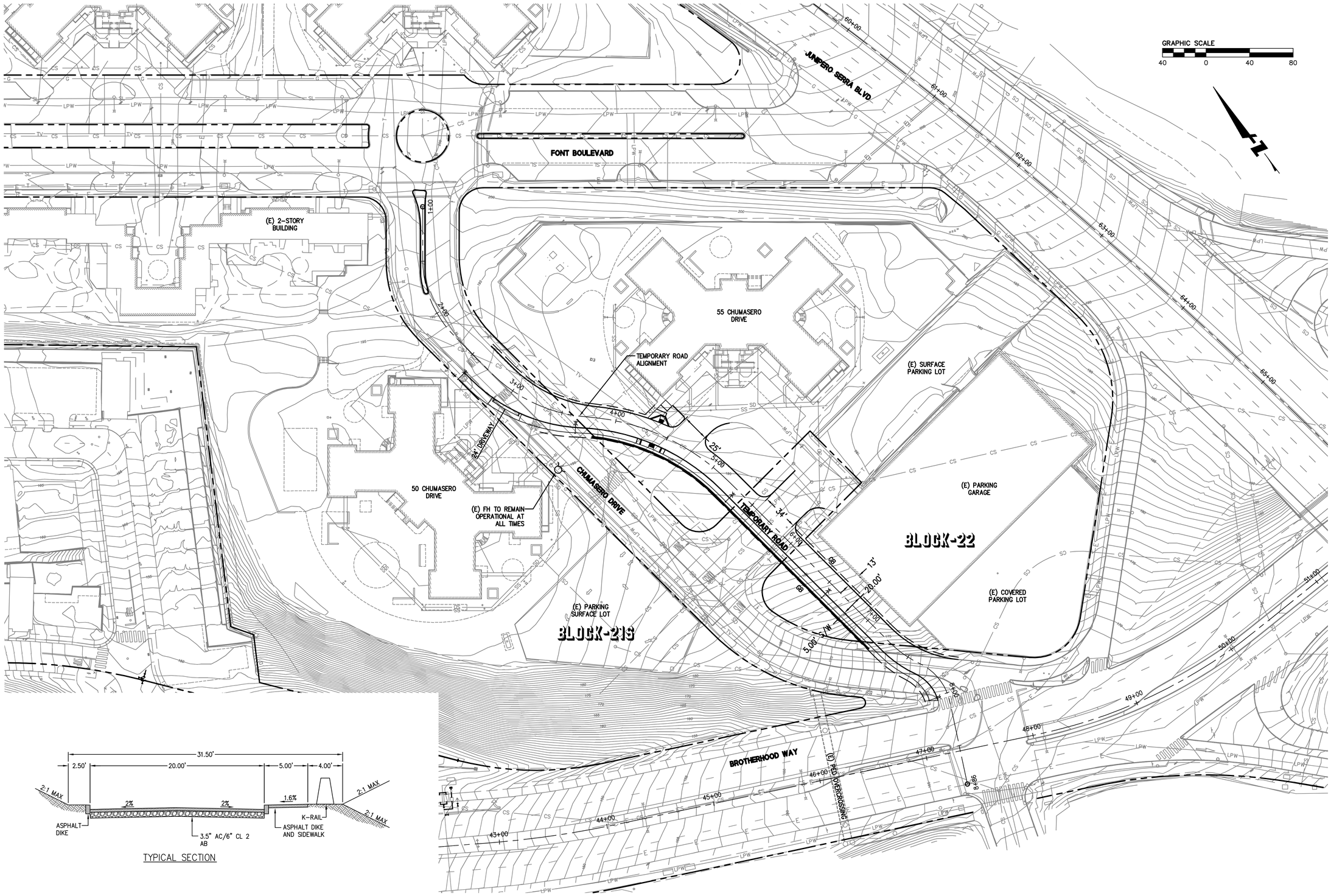

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – SITE PLAN

SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BRIAN K. SCOTT
No. 61099
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
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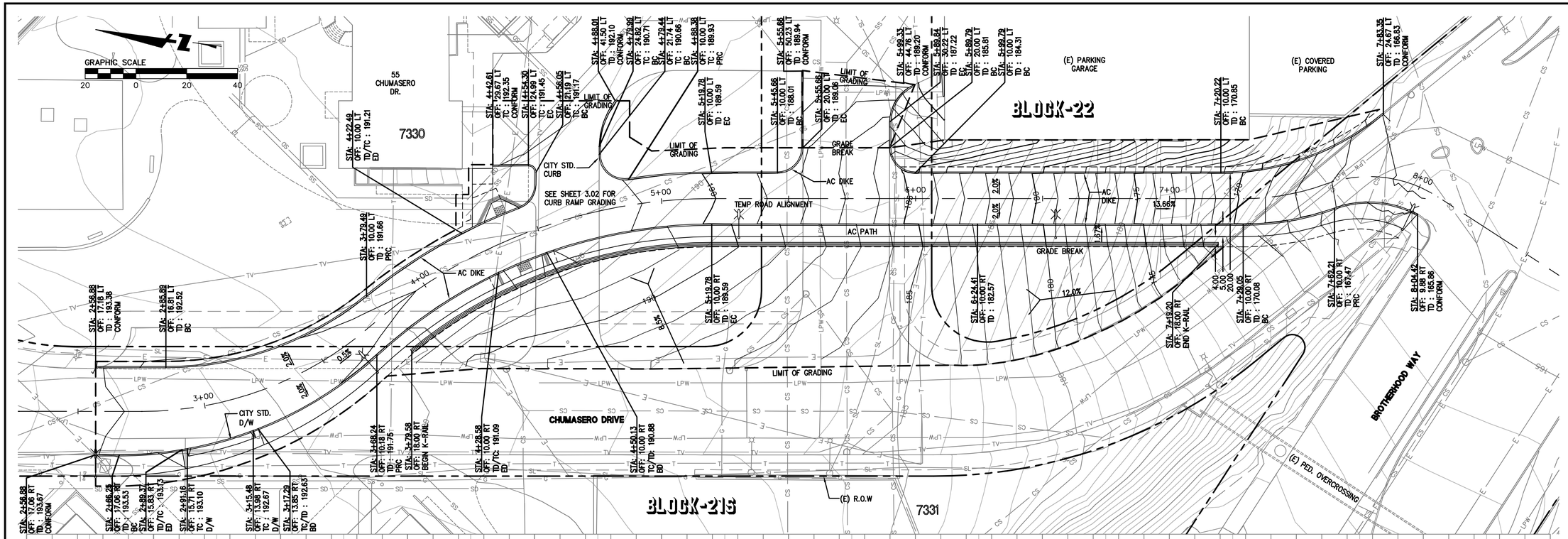

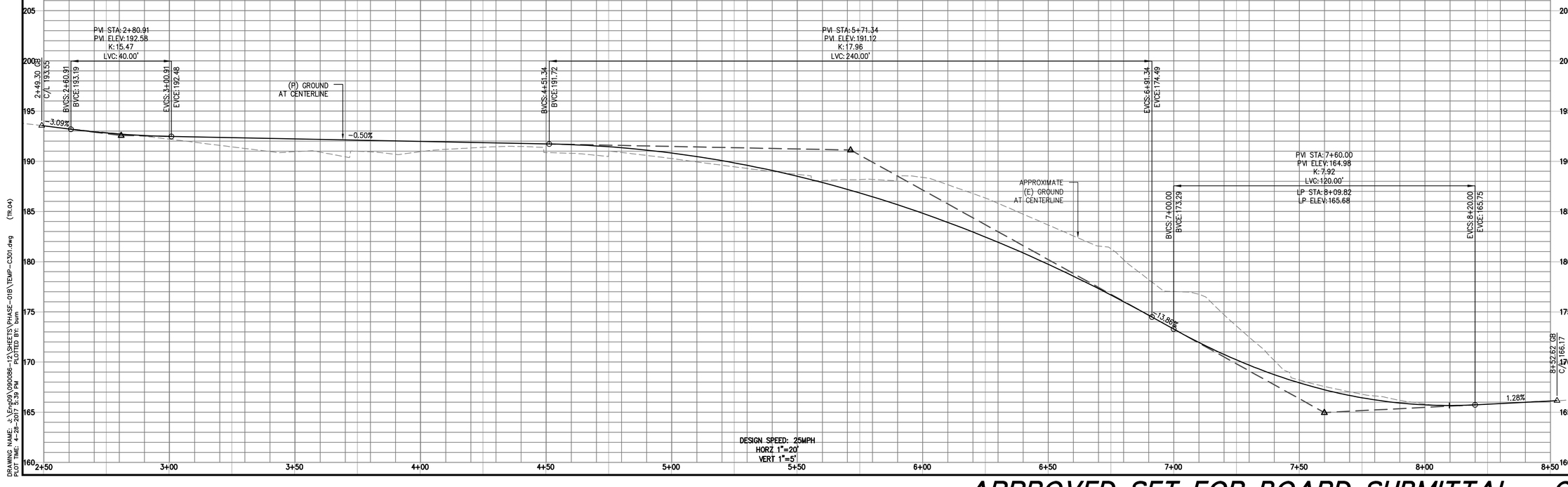

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD - PLAN AND PROFILE - STAGE 1
SAN FRANCISCO, CALIFORNIA

Revisions

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Date: 05/01/17
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GRAPHIC SCALE
5 0 5 10

CONFORM
TC 192.50
FL 192.00

BW 192.42
CONFORM

BW 192.48
CONFORM

BW 192.32
CONFORM

FS 192.17

FS 192.13

FS 192.08

FS 192.02

FS 192.05

LANDING 1.67% IN
ANY DIRECTION

2.0%

4.5%

3.5%

GB

4.17

TC 192.28
FL 191.78

TC 192.19
FL 191.69

1.2%

TC 192.13
FL 191.63

STA: 4+46.03
OFF: 10.00 LT
TC: 192.05
FL: 191.55
PRC

TC/FL
191.58

9.0%

0.5%

4.00
MIN

5.50

7.00

TC/FL
191.60

TC 192.13
FL 191.63

TEMPORARY ROAD ALIGNMENT

5+00

4+00

198

STA: 4+36.72
OFF: 10.00 RT
TC/FL: 191.62

TC/FL
191.57

TC 192.04
FL 191.54

LANDING 1.67% IN
ANY DIRECTION

4.28

1.67%

6.25

7.5%

BW
192.12

TC 192.14
FL 191.64

6.00

7.75

LANDING 1.67% IN
ANY DIRECTION

BW
192.22

BW
191.68

BW
191.65

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPROARY ROAD – CURB RAMP GRADING PLAN
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER
BRIAN K. STOKES
No. 72181
Exp. 12/31/18
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STATE OF CALIFORNIA

EXPIRATION

No.	Revisions

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TR.05

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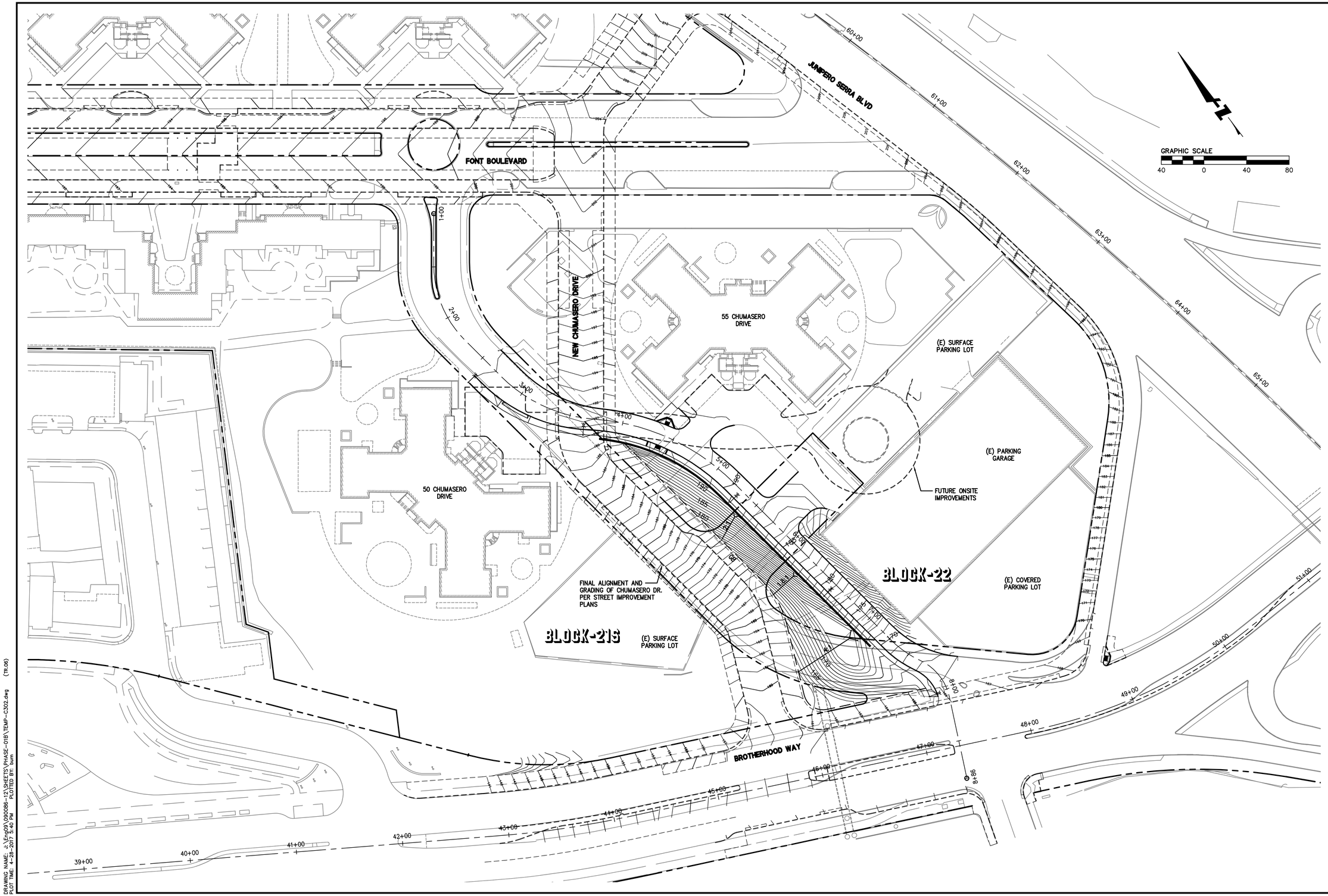

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – GRADING PLAN – STAGE 2

SAN FRANCISCO COUNTY CALIFORNIA

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Job No: 20090086

Drawing Number:
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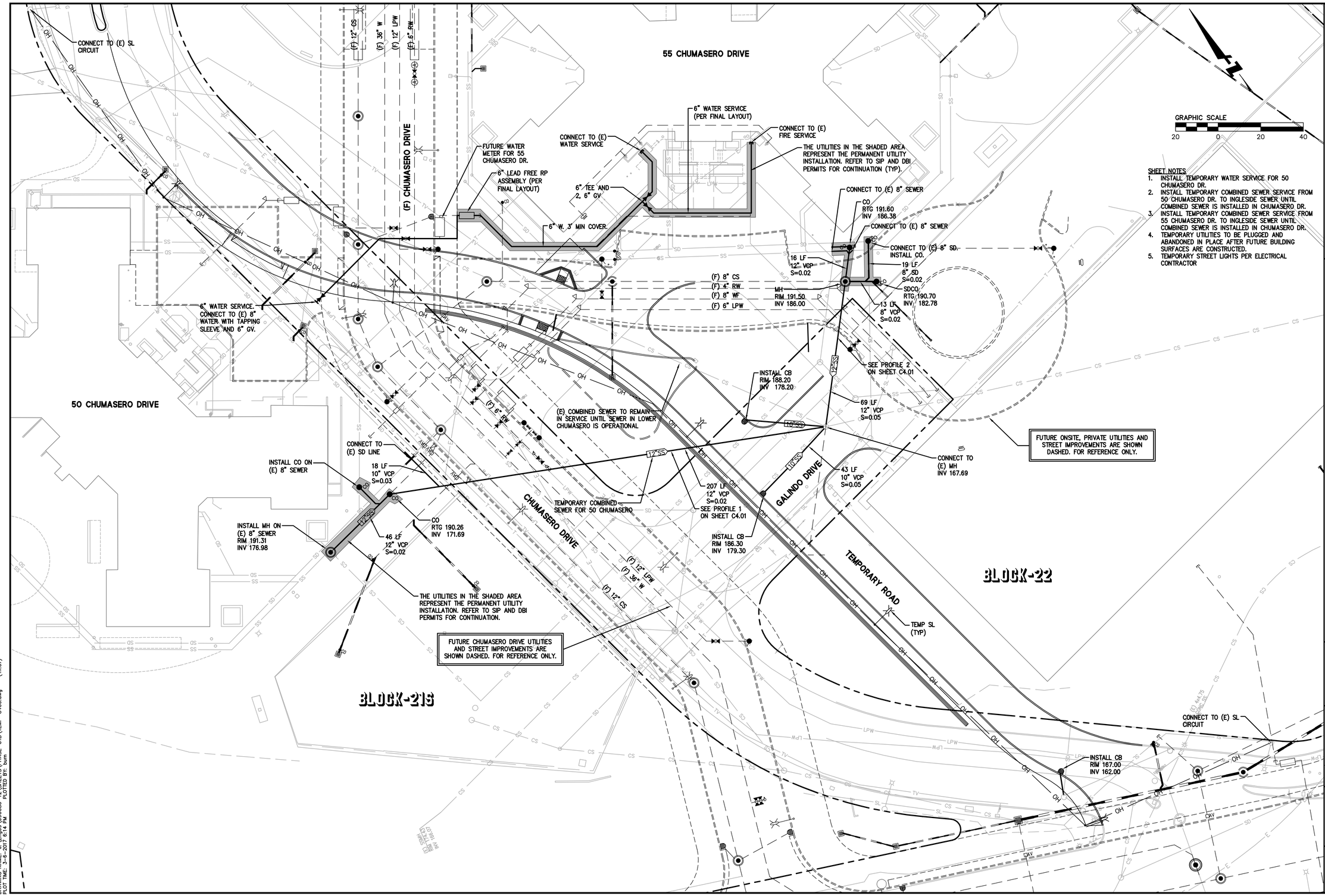

SHEET NOTES
1. INSTALL TEMPORARY WATER SERVICE FOR 50 CHUMASERO DR.
2. INSTALL TEMPORARY COMBINED SEWER SERVICE FROM 50 CHUMASERO DR. TO INGLESIDE SEWER UNTIL COMBINED SEWER IS INSTALLED IN CHUMASERO DR.
3. INSTALL TEMPORARY COMBINED SEWER SERVICE FROM 55 CHUMASERO DR. TO INGLESIDE SEWER UNTIL COMBINED SEWER IS INSTALLED IN CHUMASERO DR.
4. TEMPORARY UTILITIES TO BE PLUGGED AND ABANDONED IN PLACE AFTER FUTURE BUILDING SURFACES ARE CONSTRUCTED.
5. TEMPORARY STREET LIGHTS PER ELECTRICAL CONTRACTOR

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – TEMPORARY UTILITY PLAN
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. SCOTT EXP. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 03/06/17
Scale: AS SHOWN
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
TR.07

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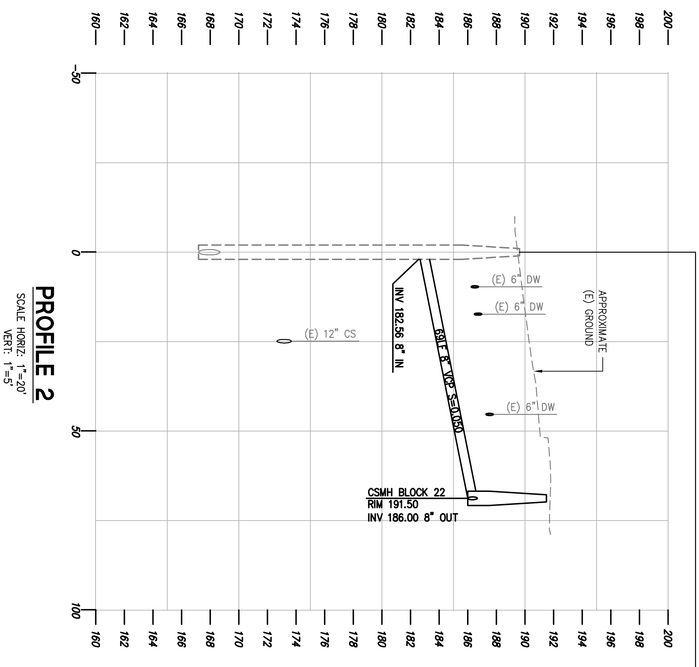
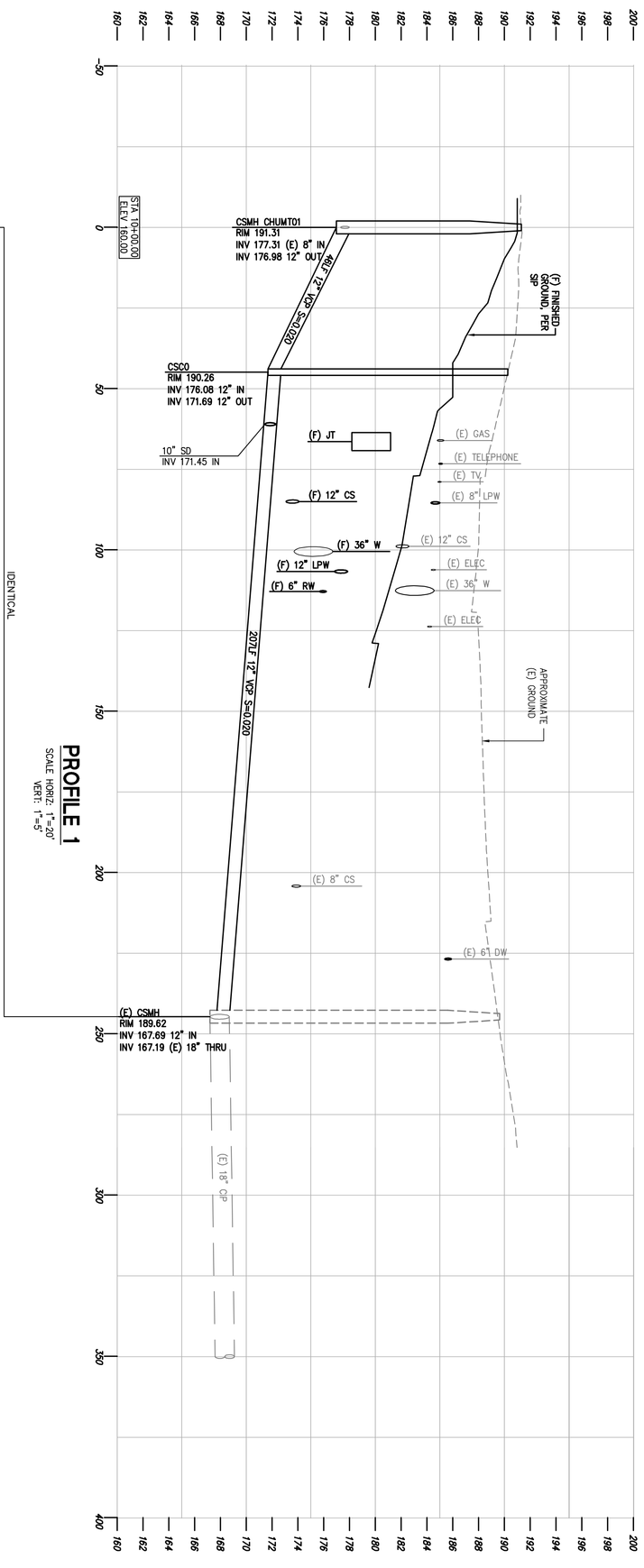


IDENTICAL



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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – UTILITY PROFILES
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

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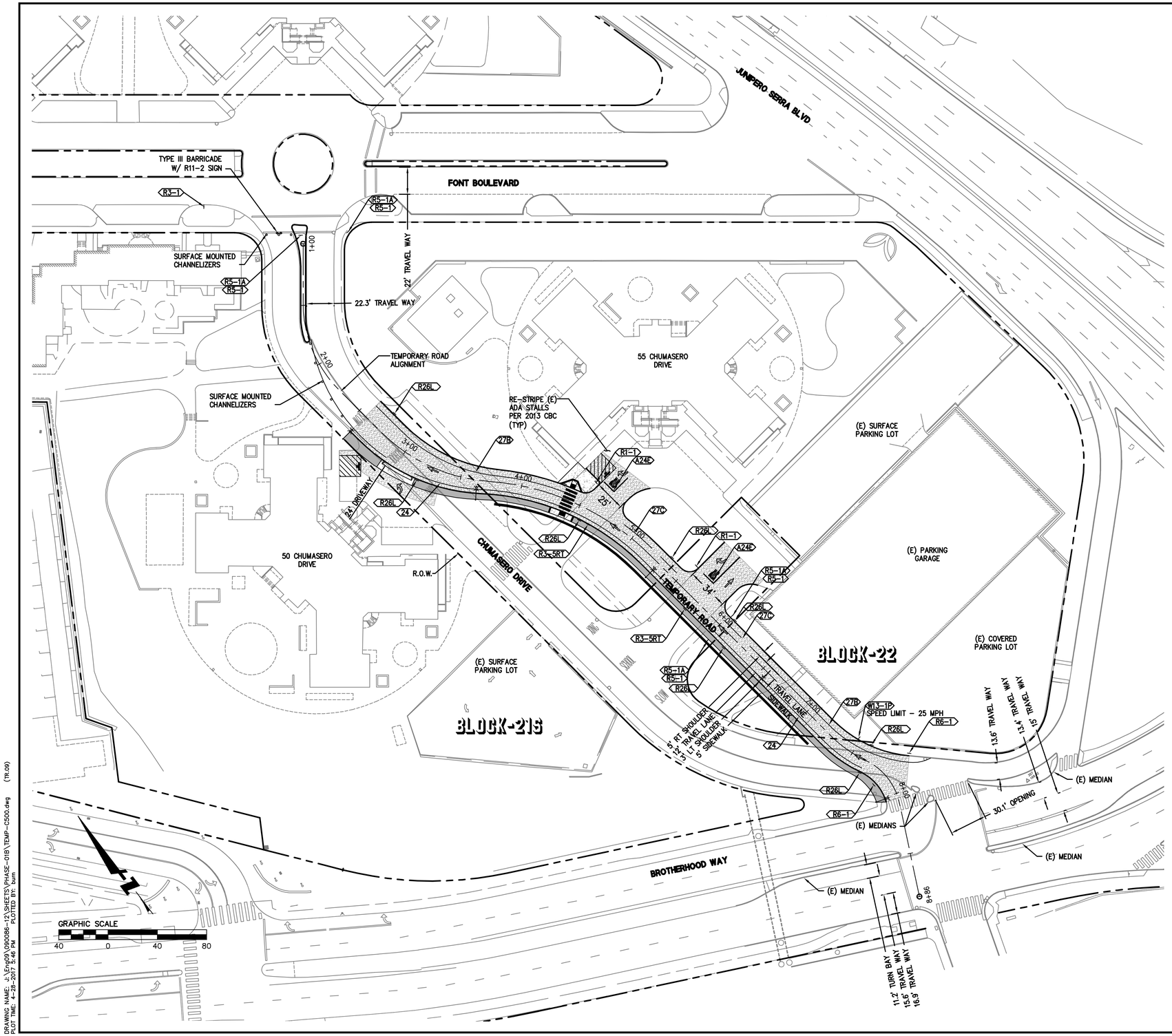

PAVING LEGEND

AC SIDEWALKS
2" AC/6" CL II AB COMPACTED TO 95%/PREPARED SUBGRADE PER.

CONCRETE SIDEWALK
3.5" CONC/PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS

AC PAVING
3.5" AC/6" CL II AB COMPACTED TO 95% /PREPARED SUBGRADE PER SAN FRANCISCO STANDARD SPECIFICATIONS AND GEOTECH RECOMMENDATIONS. (TI=6, R=50)

PAVEMENT MARKING LEGEND

TWO-WAY BLUE RETROFLECTIVE MARKER. BLUE MARKERS SHALL BE PLACED ON THE LEFT HAND SIDE OF ALL TRAVEL LANES TO THE FIRE HYDRANT UP TO THE CENTER OF THE STREET.

YIELD LINE PER CALTRANS STANDARD PLAN A24E

TYPE 1 ARROW PER CALTRANS STD PLAN A24A

TYPE IV (L & R) ARROW PER CALTRANS STD PLAN A24A

TYPE IV (L) ARROW PER CALTRANS STD PLAN A24A

TYPE IV (R) ARROW PER CALTRANS STD PLAN A24A

SIGN AND TRAFFIC LINE LEGEND

1 CALTRANS TRAFFIC LINE PER DETAIL 1 ON STD PLAN A20A
8 CALTRANS TRAFFIC LINE PER DETAIL 8 ON STD PLAN A20A
21 CALTRANS TRAFFIC LINE PER DETAIL 21 ON STD PLAN A20A
24 CALTRANS TRAFFIC LINE PER DETAIL 24 ON STD PLAN A20B
27B CALTRANS TRAFFIC LINE PER DETAIL 27B ON STD PLAN A20B
27C CALTRANS TRAFFIC LINE PER DETAIL 27C ON STD PLAN A20B
A24E CALTRANS YIELD LINE OR CROSSWALK AND LIMIT LINE PER STD PLAN A24E
R1-1 "STOP" R1-1 SIGN
R1-5a "YIELD HERE TO PEDESTRIANS" R1-5a SIGN
R2-1 "SPEED LIMIT" R2-1 SIGN
R3-1 "NO RIGHT TURN" R3-1 SIGN
R3-5 "(RIGHT/LEFT ARROW) ONLY" R3-5 SIGN
R5-1 "DO NOT ENTER" R5-1 SIGN
R6-1 "(ARROW) ONE WAY" R6-1 SIGN
R11-2 "ROAD CLOSED" R11-2 SIGN
R26L "NO STOPPING ANY TIME" R26L SIGN
W11-2 PEDESTRIAN CROSSING SIGN W11-2
W13-1P TEMPORARY TRAFFIC CONTROL SIGN

GENERAL NOTES

1. FOR SIGN DESIGNATIONS (R1-1) REFER TO MUTCD AND MUTCD CALIFORNIA SUPPLEMENT.
2. SIGN POSTS SHALL PER CALTRANS STANDARD.
3. REFER TO STREET IMPROVEMENT PLANS FOR CONTINUATION OF WORK BEYOND TEMPORARY ROAD.

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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD - SIGNING, STRIPING, AND PAVING PLAN
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. SCOTT LAWS, CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
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TR.09

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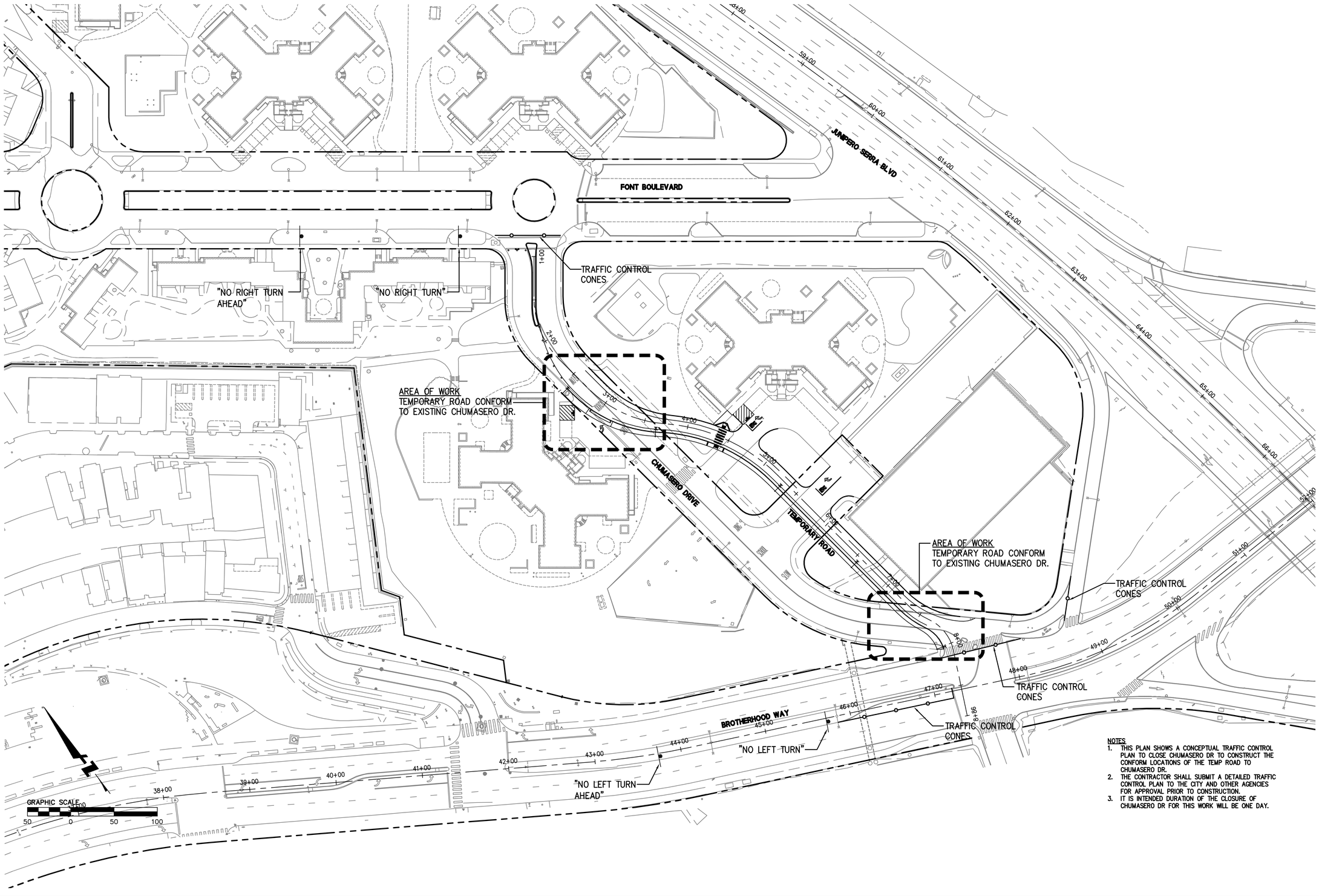

NOTES
1. THIS PLAN SHOWS A CONCEPTUAL TRAFFIC CONTROL PLAN TO CLOSE CHUMASERO DR TO CONSTRUCT THE CONFORM LOCATIONS OF THE TEMP ROAD TO CHUMASERO DR.
2. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN TO THE CITY AND OTHER AGENCIES FOR APPROVAL PRIOR TO CONSTRUCTION.
3. IT IS INTENDED DURATION OF THE CLOSURE OF CHUMASERO DR FOR THIS WORK WILL BE ONE DAY.

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TEMPORARY ROAD - TEMPORARY TRAFFIC CONTROL PLAN
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMAN K. SCOTT
Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

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TR.10

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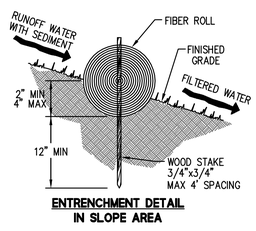
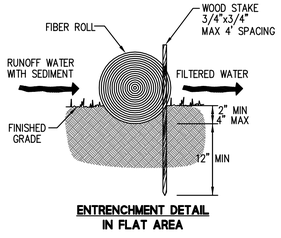
EROSION CONTROL NOTES

1. THIS PLAN MAY NOT COVER ALL THE SITUATIONS OR PHASES THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT STORM RUNOFF FROM LEAVING THE SITE. SEDIMENT ROLLS AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WITH THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
2. EROSION CONTROL FACILITIES SHALL BE MAINTAINED DAILY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION–CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE ENGINEER (OCTOBER 1 TO APRIL 15).
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OR CITY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS. CONTROL MEASURES ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT OR CITY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB–CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS AND/OR A PROJECT STOP ORDER.
5. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
6. IF EXISTING DRIVEWAY IS REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PLACE DRAIN ROCK AS A GRAVEL ROADWAY (8" MINIMUM THICKNESS FOR THE FULL WIDTH AND LENGTH OF SITE EGRESS AREA AS DEFINED IN THESE PLANS) AT THE ENTRANCE TO THE SITE.
7. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM.
8. DURING PERIODS WHEN STORMS ARE FORECAST:
   A. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREA.
   B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
   C. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE OR OTHER RUNOFF CONTROLS.
   D. USE INLET CONTROLS AS NEEDED (E.G. BLOCK & GRAVEL SEDIMENT BARRIER FOR STORM DRAIN ADJACENT TO THE PROJECT OR STOCKPILED SOIL.
9. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
10. STAND–BY CREWS SHALL BE ALERTED BY THE PERMIT APPLICANT OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
11. AFTER OCTOBER 1ST TO APRIL 15TH, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. BREACHES IN DIKES AND TEMPORARY SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHENEVER RAIN IS FORECAST.
12. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
13. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
14. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
15. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE, AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES.
17. AFTER RAINSTORMS CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SANDBAGS AT STAGING AREA. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
18. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITES WITH EXPOSED SOIL AS NEEDED. IT IS IMPORTANT IN WINDY OR WIND–PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING, OR REVEGETATION. REFER TO EROSION CONTROL AND SEDIMENT CONTROL FIELD MANUAL, 3RD EDITION, PREPARED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION.



ENTRENCHMENT DETAIL IN SLOPE AREA



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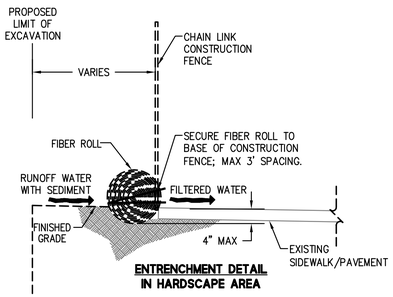
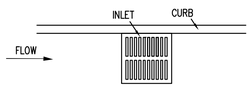
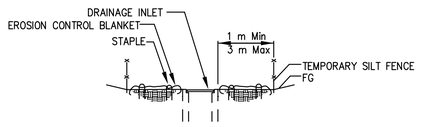


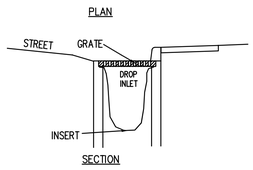
ENTRENCHMENT DETAIL IN HARDSCAPE AREA

NOTES:
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, DUG ON CONTOUR.
2. ADJACENT ROLLS SHALL TIGHTLY ABUT.
3. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

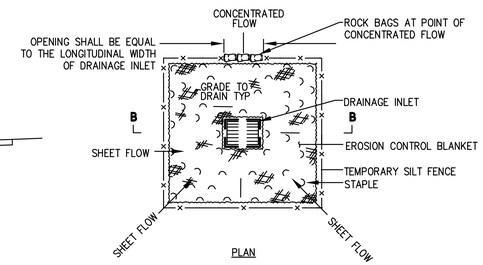
1 **FIBER ROLL DETAIL**
N.T.S.





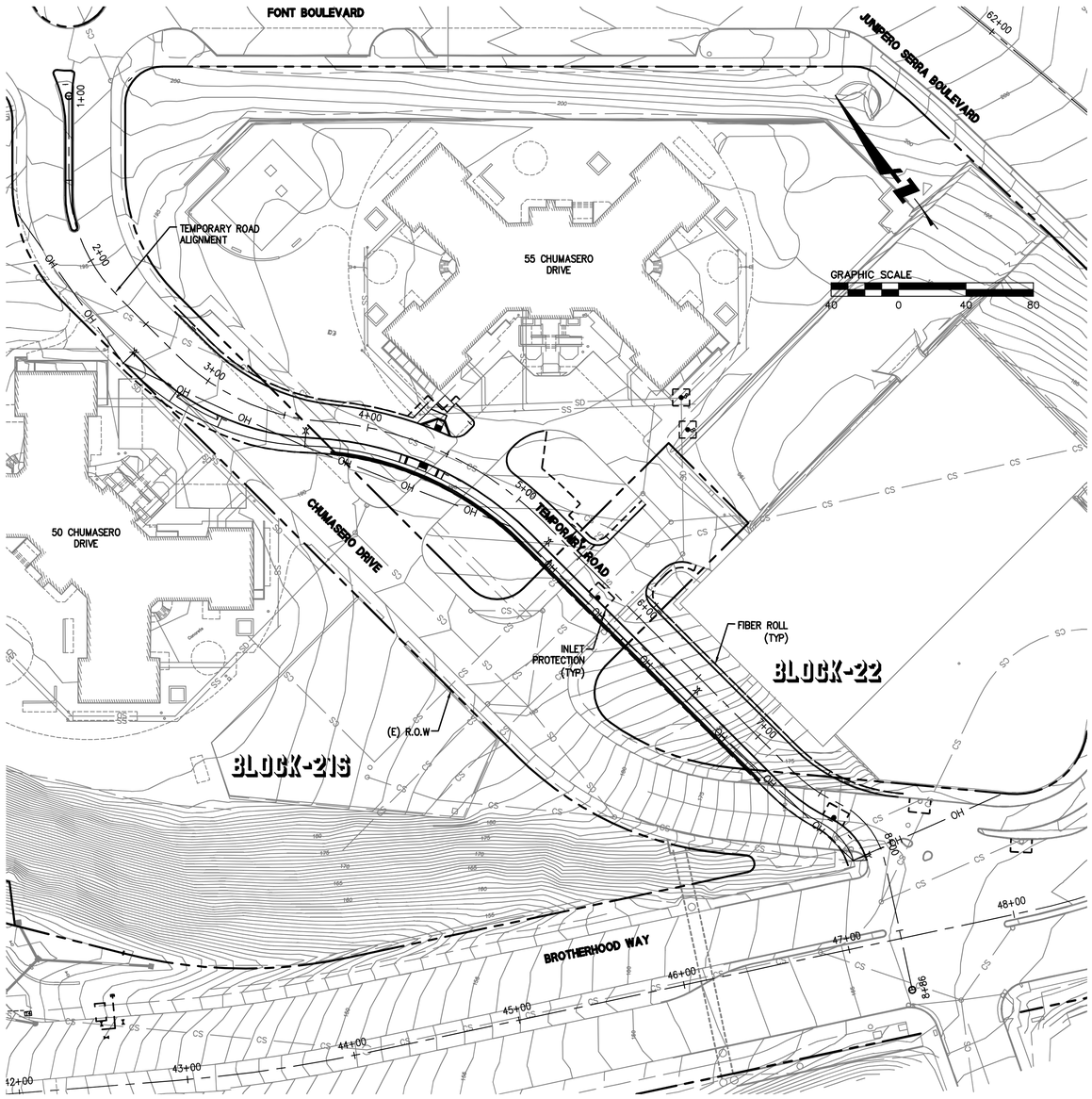


FOR PAVED AREAS



FOR LANDSCAPED AREAS

2 **DROP INLET PROTECTION**
NTS



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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – EROSION CONTTROL PLAN
SAN FRANCISCO — SAN FRANCISCO COUNTY — CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER BRIAN K. STRONG No. 72651 Exp. 12/31/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=40'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
TR.11

DRAWING NAME: J:\Engr90\20090086-10\SHEETS\PHASE-01B\TEMP-C600.dwg (TR.11)
PLOTTING: 4-25-2017 3:48 PM PLOTTED BY: Sam

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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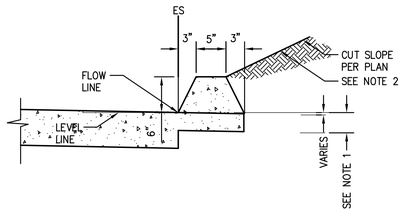
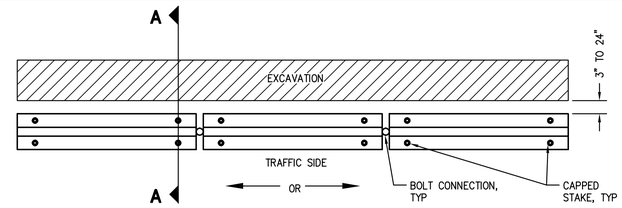


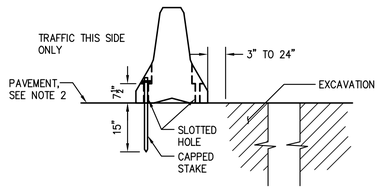
NOTES:

1. FOR HMA SHOULDERS ONLY, EXTEND TOP LAYER OF HMA PLACED ON THE SHOULDER UNDER DIKE WITH NO JOINT AT THE ES. FOR PROJECTS WITH OGFC SHOULDERS, DO NOT EXTEND OGFC UNDER DIKE.
2. FILL AND COMPACT WITH EXCAVATED MATERIAL TO TOP OF DIKE.
3. SEE TO CALTRANS STANDARD PLAN A87B.

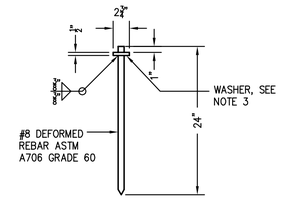
1 — **CALTRANS STD. ASPHALT DIKE, TYPE A**
N.T.S.



RAIL STAKING CONIGURATON ADJACENT TO AN EXCAVATION
SEE NOTE 1



SECTION A–A

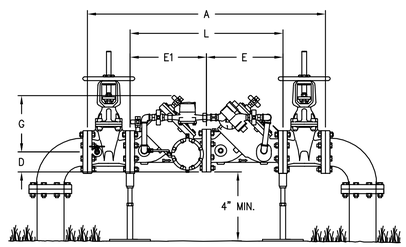


CAPPED STAKE DETAIL

NOTES:

1. WHERE TYPE K TEMPORARY RAILING IS PLACED 3" TO 24" FROM THE EDGE OF AN EXCAVATION, USE TWO CAPPED STAKES PER PANEL ALONG THE TRAFFIC SIDE.
2. STAKED TYP K TEMPORARY RAILING MUST BE SUPPORTED BY AT LEAST 4" THICK CONCRETE, HOT MIX ASPHALT OR EXISTING ASPHALT CONCRETE PAVEMENT.
3. THE MINIMUM YIELD STRENGTH FOR THE WASHER MUST BE 60,000 PSI.
4. SEE CALTRANS STANDARD PLAN T3A.

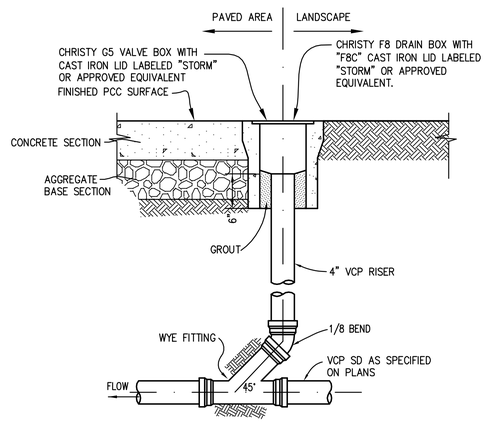
2 — **CALTRANS STD. K RAIL, TYPE K**
N.T.S.



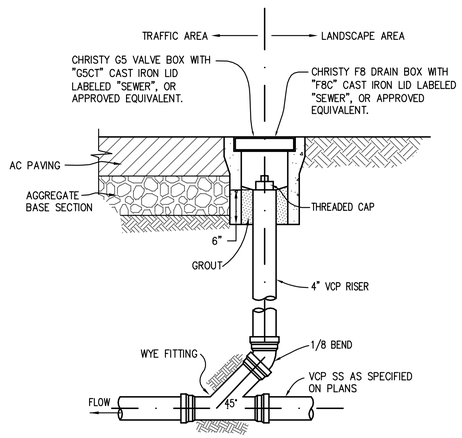
SIZE	DIMENSIONS						WEIGHT
	A	C	D	E, E1	G	L	OS&Y
IN.	IN.	IN.	IN.	IN.	IN.	IN.	LBS.
8	78 1/2	37 3/4	9 3/4	26	18 1/2	55 1/4	1,456

NOTE:
1. SEE PLAN FOR BACKFLOW ASSEMBLY LOCATIONS.
2. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

3 — **WATER SERVICE BACKFLOW ASSEMBLY**
N.T.S.



4 — **STORM DRAIN CLEANOUT**
N.T.S.



5 — **SANITARY SEWER CLEANOUT**
N.T.S.

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650-482-6399 (FAX)
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PHASE 1B STREET IMPROVEMENT PLANS
TEMPORARY ROAD – CONSTRUCTION DETAILS
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER BRIAN STANLEY SCHAEFER No. C 69090 CIVIL STATE OF CALIFORNIA 10/31/18

No.	Revisions

Date: 05/01/17
Scale: NTS
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
TR.12

DRAWING NAME: J:\Projects\20090086-121\SHEETS\PHASE-01B\TEMP-C700.dwg (TR.12)
PLOT TIME: 4-28-2017, 3:49 PM PLOTTED BY: Nick Lum

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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SAN ANDREAS PIPELINE No. 3
AT PARK MERCED

GENERAL NOTES

1. HEAVY LINES AND SYMBOLS INDICATE WORK TO BE DONE BY THE CONTRACTOR. CONTRACTOR SHALL FURNISH, INSTALL AND COMPLETE ALL WORK UNLESS OTHERWISE NOTED.
2. THE LOCATION AND GENERAL ARRANGEMENT OF UNDERGROUND UTILITIES, UNDERGROUND STRUCTURES, PIPE LINES WITH FITTINGS, VALVES AND APPURTENANCES, WHERE SHOWN, ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND VERIFY EXISTING UTILITIES PRIOR TO WORK.
3. INFORMATION AS TO UNDERGROUND AND/OR OTHER CONDITIONS AS INDICATED BY ADJUSTMENT IN PIPE LINE ALIGNMENT, OR OBSTRUCTION SHOWN ON THE PLANS AND/OR SPECIFICATIONS HAS BEEN OBTAINED WITH REASONABLE CARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORDS OF THE OWNER OF THE UTILITIES AND HAS BEEN RECORDED IN GOOD FAITH.
4. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT THE SAN FRANCISCO WATER DEPARTMENT, THE OWNER OF THE UTILITIES, AND THE OWNER MAKE ANY REPRESENTATION AS TO THE COMPLETENESS OR ACCURACY OF SAID INFORMATION OF UTILITIES PLACED OR INDICATED HEREIN.
5. THE PROPOSED PIPE ALIGNMENT AND PROFILE WITHIN THE STREET AND SFPUC RIGHT OF WAY UNDER THE CONTRACT AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL DIG TEST HOLES AS NECESSARY OR SPECIFIED BY THE ENGINEER FOR SUBMITTALS NEEDED FOR STEEL PIPE FABRICATION. THE CONTRACTOR WILL DETERMINE THE EXACT LOCATION IN THE PIPE ALIGNMENT AFTER SUCH EXPLORATION IN THE FIELD. ANY ALIGNMENT AND PROFILE CHANGES BY THE ENGINEER MAY RESULT IN DIFFERENT CONSTRUCTION METHODS OR DIFFERENT CONDITIONS SUCH AS REQUIRING HAND DIGGING FOR ANY PORTION OF WORK SHALL BE SUBJECTED TO CLAIM FOR EXTRA TIME AND COST.
6. UTILITIES LESS THAN THREE INCHES IN DIAMETER ARE GENERALLY NOT SHOWN.
7. CONTRACTOR WORK AROUND EXISTING UTILITIES SHALL BE IN CONFORMANCE WITH CALIFORNIA GOVERNMENT AT AREAS WHERE CONNECTIONS ARE MADE TO EXISTING PIPES, CONTRACTOR SHALL POTHOLE AND FIELD VERIFY THE EXACT LOCATION, SIZE, AND DEPTH OF THE EXISTING PIPES PRIOR TO FABRICATING THE CONNECTION PIECES.
8. ALL DISTANCES WITHIN THIS DRAWING ARE BASED UPON THE US SURVEY FOOT AND DECIMALS THEREOF AND ARE GROUND DISTANCES. THE CONTRACTOR WILL BE PAID AT THE PRICED BID PER LINEAR FOOT. MEASURED HORIZONTALLY ALONG THE CENTERLINE OF THE STEEL PIPE INCLUDING PIPE INSIDE THE VAULT AND LENGTH OF BUTTERFLY VALVE, STATION 345+71.95 AT THE SAN PEDRO VALVE LOT AND END CONNECTION MIDPOINT AT THE 54" MAIN AT 22ND AND SWAT BLVD.
9. UNLESS INDICATED OTHERWISE, ALL ELEVATIONS SHOWN AT GRADE BREAKS AND MATCH LINE REFER TO TOP OF PIPE. ALL EXISTING UTILITIES SHALL MAINTAINED IN PLACE AND IN OPERATION AT ALL TIMES.
10. DRIVEWAY CUT AND CURBS ARE NOT SHOWN.
11. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR FOR CONSTRUCTION REQUIRED HEREIN IN ACCORDANCE WITH LOCAL, STATE, CAL/OSHA AND FEDERAL CODES.
12. CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING FENCE. AFTER CONSTRUCTION, CONTRACTOR SHALL INSTALL THE SALVAGE FENCE AT THE SAME LOCATION, ANY DAMAGE TO THE FENCE SHALL BE REP LACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER. REMOVING, SALVAGING AND RE-INSTALLING FENCE ARE INCIDENTALS TO INSTALL THE PIPE.
13. OVER EXCAVATION BELOW THE REQUIRED DEPTH SHALL BE FILLED WITH COMPACTED SAND PER DETAIL AND SPECIFICATIONS AT NO COST TO THE OWNER OR AS REQUIRED ON OTHER DRAWINGS OR SPECIFICATIONS WHICHEVER IS GREATER.
14. CONTRACTOR SHALL RETAIN PERIMETER OF GENERAL EXCAVATION BY A SOIL RETENTION SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF SYSTEM. HE SHALL PROVIDE ADEQUATE MEANS AND TAKE PRECAUTIONS TO MINIMIZE SETTLEMENT OF EXISTING AND NEW CONSTRUCTION ON AND ADJACENT TO CONTRACT WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY CONSTRUCTION.
15. THE CONTRACTOR SHALL GRADE AND COMPACT AREAS WHICH ARE DISTURBED DURING CONSTRUCTION TO 90 PERCENT DENSITY OR AS REQUIRED ON THE DRAWINGS OR THE SPECIFICATIONS WHICHEVER IS GREATER.
16. THE CONTRACTOR SHALL REFER TO THE DETAILED TREE IMPACT ANALYSIS FOR ALL TREE WORK WITHIN THE PROJECT LIMITS.

BASIS OF BEARING

THE BEARING OF NORTH 46° 36' 00" WEST BETWEEN THE FOUND MONUMENT AT THE INTERSECTION OF GARCES DRIVE AND BUCARELI DRIVE AND THE FOUND MONUMENT AT THE NORTHERLY INTERSECTION OF CRESPI DRIVE AND JUAN BAUTISTA CIRCLE AS SHOWN ON CITY AND COUNTY OF SAN FRANCISCO MONUMENT MAP T-13-6.

BENCHMARK

BM10510 – 2 1/2" DOMED BRASS DISK AT THE NORTHEAST CORNER OF LAKE MERCED BLVD & BROTHERHOOD WAY, STAMPED "T-0158." IN CONCRETE ISLAND FORMED BY NORTH BOUND LAKE MERCED BLVD & TURN LANES OF WEST BOUND BROTHERHOOD WAY. 10.3' NORTH OF NORTH FACE OF CURB OF HANDICAP RAMP IN ISLAND. 10.3' EAST OF PEDESTRIAN TRAFFIC SIGNAL. 6.7' EAST OF EAST FACE OF CURB OF LAKE MERCED BLVD.
ELEVATION=52.034' (NAVD 88 DATUM)

VERTICAL DATUM STATEMENT: THE ELEVATIONS SHOWN ON THIS SURVEY WERE BASED ON THE CITY & COUNTY OF SAN FRANCISCO 2013 NAVD88 VERTICAL DATUM.

HORIZONTAL DATUM STATEMENT: ALL COORDINATES HEREIN ARE BASED ON THE CITY & COUNTY OF SAN FRANCISCO'S 2013 HIGH PRECISION NETWORK SURVEY AND REFLECT THE LOCAL CUSTOM COORDINATE SYSTEM CREATED BY SAID SURVEY AND REFERRED TO AS THE CITY & COUNTY OF SAN FRANCISCO COORDINATE SYSTEM (CCSF-CS)

LEGEND

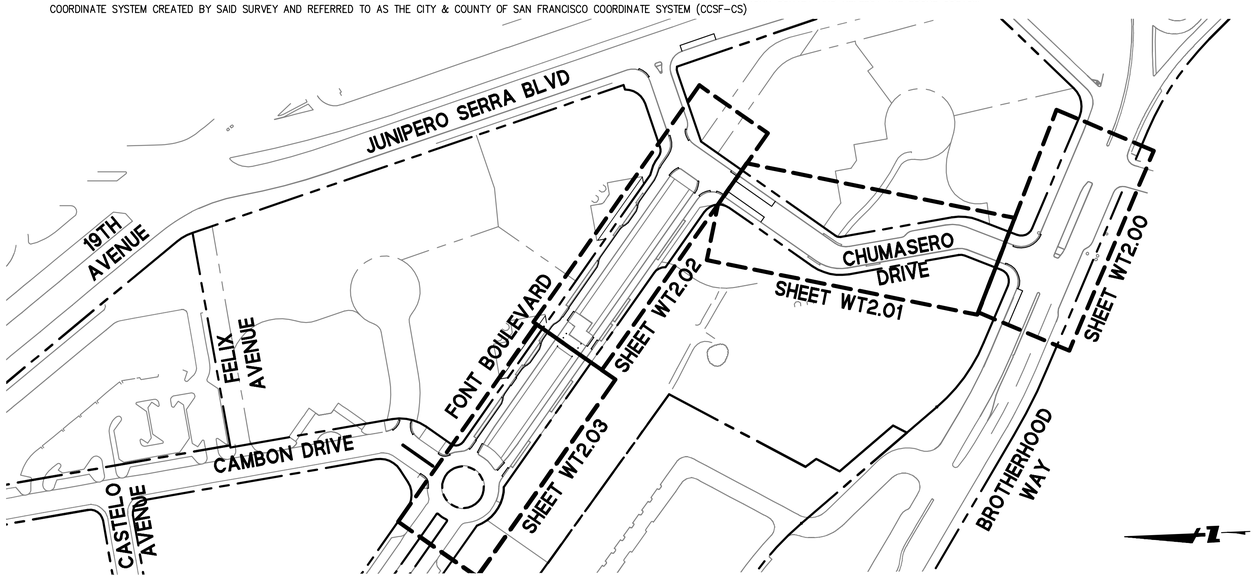
	PROPOSED
NEW SAPL3 LINE	
EXISTING SAPL3 LINE	
BLOW OFF VALVE	
AIR RELEASE & VACCUM BREAK VALVE	

ABBREVIATIONS

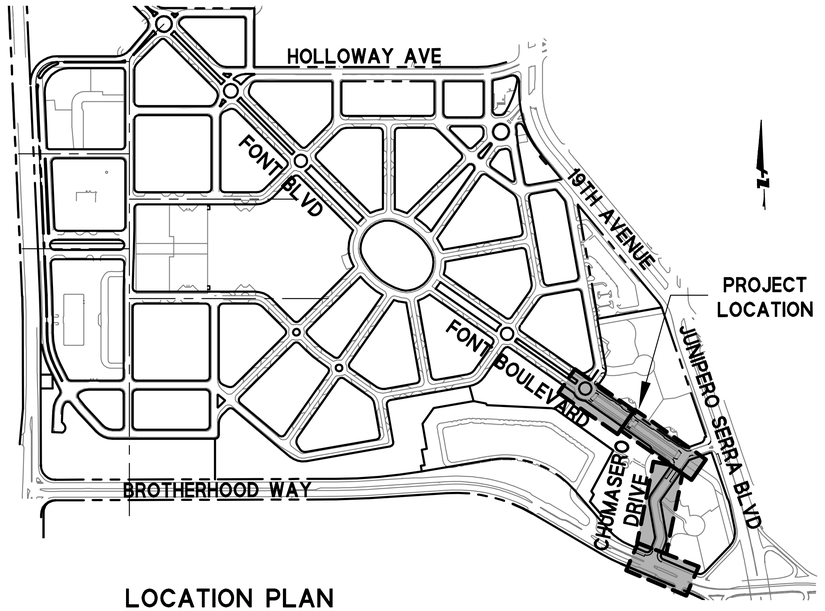
SYMBOL	DESCRIPTION
ASSY	ASSEMBLY
AVV	AIR RELEASE & VACUUM BREAK VALVE
CCSF	CITY AND COUNTY OF SAN FRANCISCO
ø	DIAMETER
(F)	FUTURE
I	INFLECTION ANGLE
L	LEFT
(N)	NEW
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
R	RIGHT
SAPL3	SAN ANDREAS PIPELINE No. 3
SFDPW	SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS
SFFD	SAN FRANCISCO FIRE DEPARTMENT
SFPUC	SAN FRANCISCO PUBLIC UTILITIES COMMISION
SFWD	SAN FRANCISCO WATER DEPARTMENT
TOP	TOP OF PIPE
X-ING	CROSSING
VPI	VERTICAL POINT OF INFLECTION
W, WD	WATER

LIST OF DRAWINGS

SHEET NUMBER	TITLE
WT1.00	TITLE SHEET
WT2.00	SAPL3 PLAN & PROFILE – STA 1+00 TO STA 3+50
WT2.01	SAPL3 PLAN & PROFILE – STA 3+50 TO STA 8+50
WT2.02	SAPL3 PLAN & PROFILE – STA 8+50 TO STA 12+50
WT2.03	SAPL3 PLAN & PROFILE – STA 12+50 TO END
WT3.00	DETAIL – CONNECTION TO EXISTING 36" SAPL3
WT3.01	NOZZLE LAYOUT AND DETAILS
WT3.02	STEEL PIPE TYP. BEND, JOINT COATING & LINING DETAILS
WT3.03	STEEL PIPE DETAILS
WT3.04	BLOWOFF & AIR VALVE DETAILS
WT3.05	TRENCH DETAIL & APPURTENANCE SCHEDULE
WT3.06	CORROSION CONTROL DETAILS
WT3.07	PLAN, SECTION AND DETAILS FOR STEEL PIPE MANHOLE
WT3.08	27-INCH FRAME, GRATE & COVER FOR MANHOLE
WT3.09	LADDER RISER IN MANHOLE DETAIL
WT3.10	ALTERNATE HYDRANT CONFIGURATION DETAIL 1
WT3.11	ALTERNATE HYDRANT CONFIGURATION DETAIL 2



KEY PLAN



LOCATION PLAN

255 SHORELINE DR
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PHASE 1B STREET IMPROVEMENT PLANS
TITLE SHEET – SAN ANDREAS PIPELINE NO.3
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

PROFESSIONAL ENGINEER – CHRISTOPHER A. KERN – No. C 62618 – CIVIL – STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT1.00

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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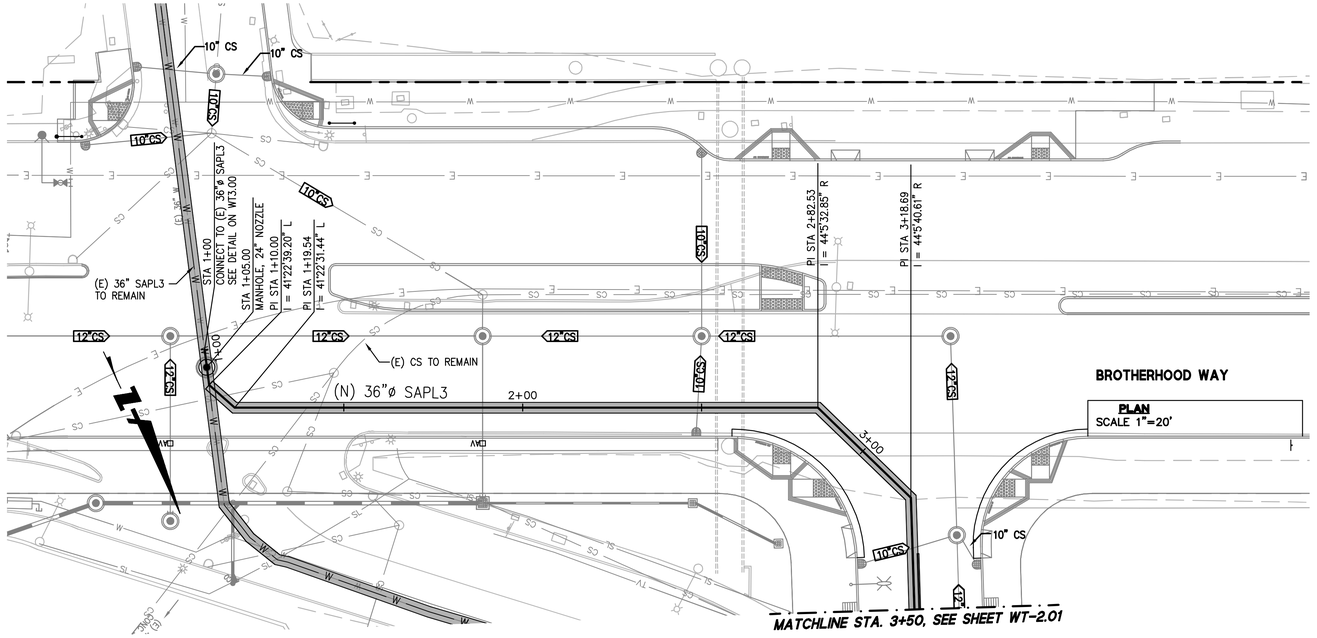

PLAN
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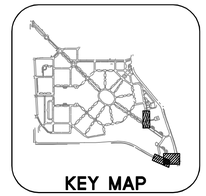

KEY MAP

GRAPHIC SCALE
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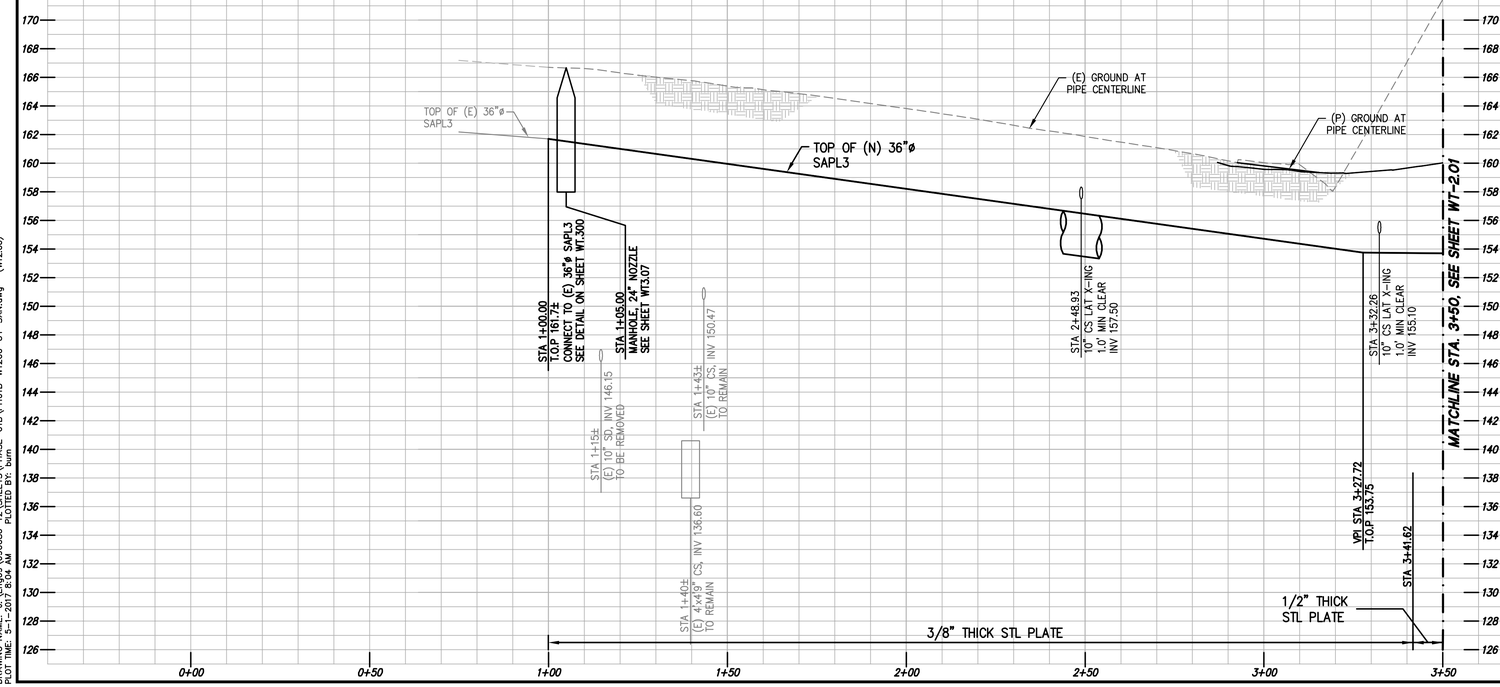
CIVIL NOTES

1. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES THAT HAS BEEN PLACED OR INDICATED IN THE DRAWING. UTILITY DATA SHOWN IN THE DRAWING RELATIVE TO THE LOCATIONS AND DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE EXACT LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES AFFECTING EXCAVATION PRIOR TO START OF WORK.
2. IN THE AREA WHERE CONNECTIONS ARE MADE TO EXISTING PIPES, CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE EXACT LOCATIONS, SIZE AND DEPTH OF EXISTING PIPES PRIOR TO FABRICATING THE CONNECTION PIECES.
3. THERE SHALL BE MINIMUM OF 12-INCH CLEARANCE BETWEEN THE OUTSIDE DIAMETER OF EXISTING UTILITY PIPE AND THE OUTSIDE DIAMETER OF THE NEW WATER MAIN.



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PHASE 1B STREET IMPROVEMENT PLANS
SAPL No. 3 PLAN & PROFILE - STA 1+00 TO STA 3+50
SAN FRANCISCO — SAN FRANCISCO COUNTY — CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW FOUSHEE
No. C 58218
CIVIL
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT2.00

DRAWING NAME: J:\Projects\20090086-121\SHEETS\PHASE-01B\PH01B-WT200-UT-SAN.dwg (WT2.00)
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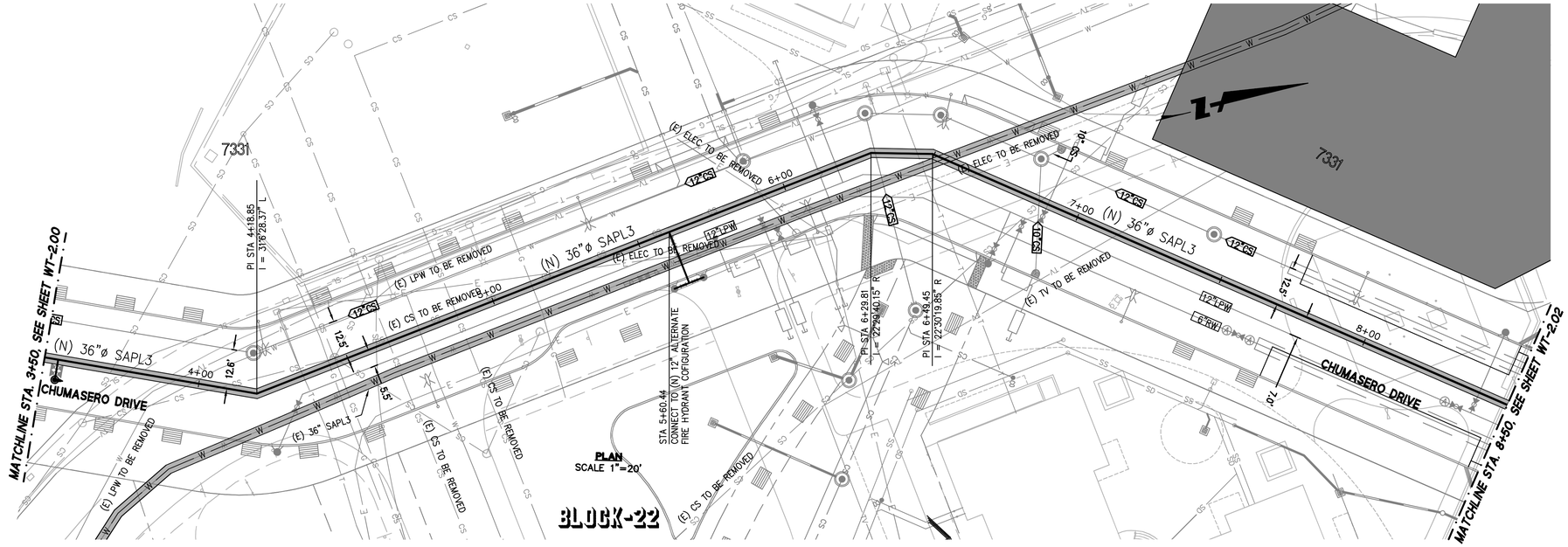

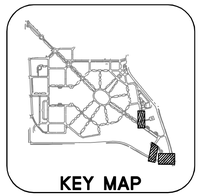

GRAPHIC SCALE

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SHEET NOTES
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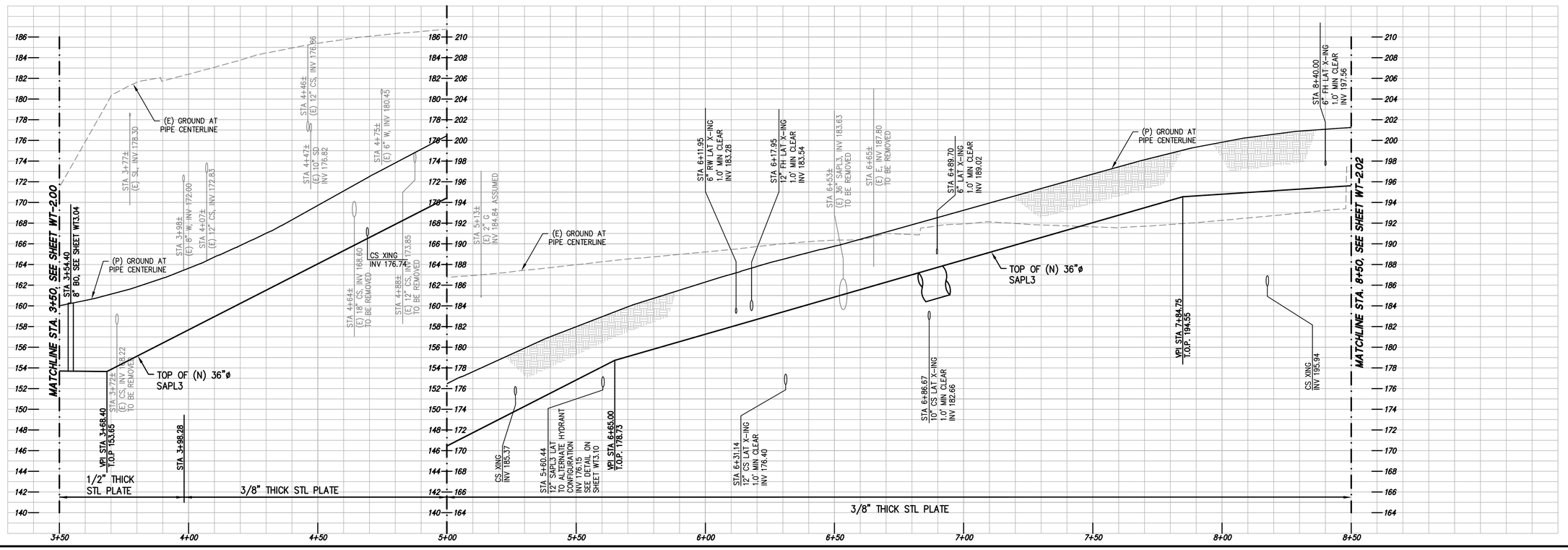

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SAPL No. 3 PLAN & PROFILE – STA 3+50 TO STA 8+50
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOUSRA CHAMPAIGN
No. C-67742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT2.01

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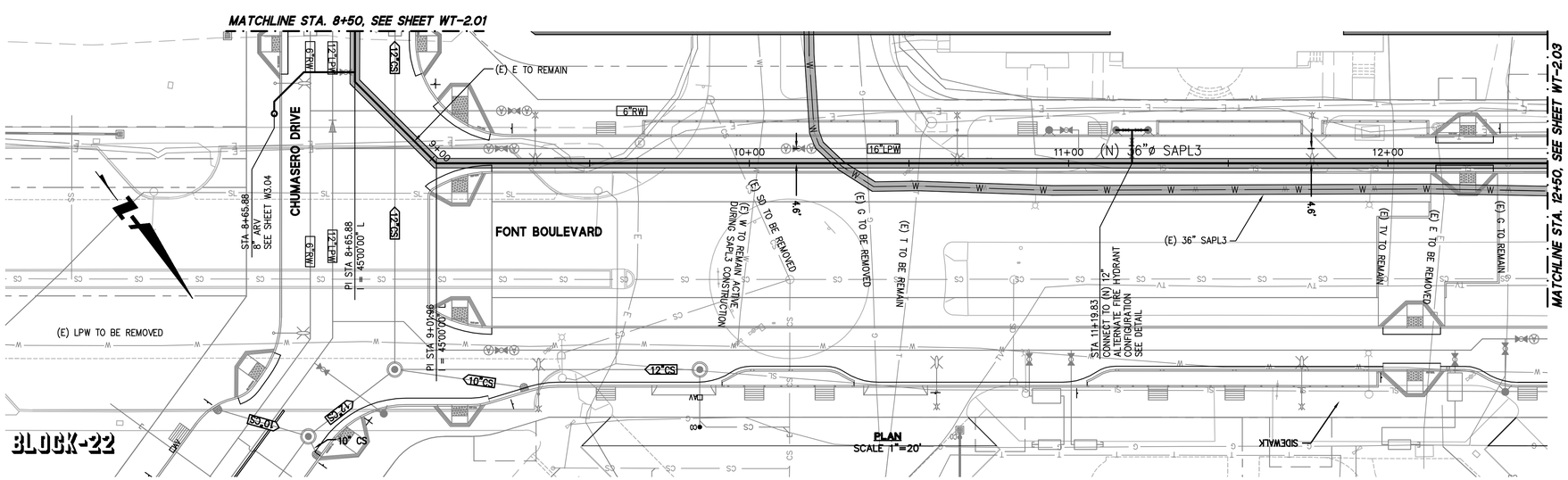

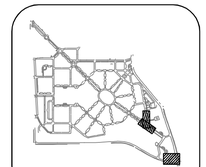

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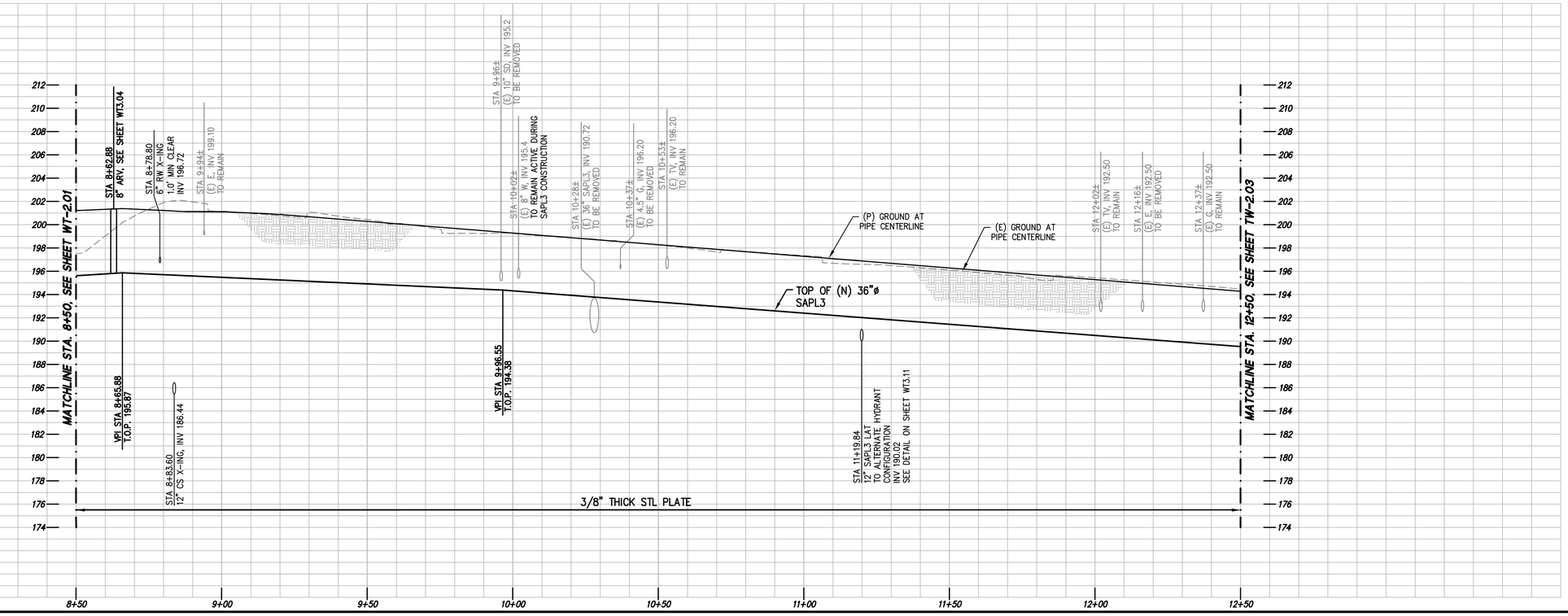

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PHASE 1B STREET IMPROVEMENT PLANS
SAPL No. 3 PLAN & PROFILE – STA 8+50 TO STA 12+50
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — GREGORY M. LEWIS — No. C 68748 — Exp. 6/30/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT2.02

DRAWING NAME: J:\Projob\20090086-10\SHEETS\PHASE-01B\PH01B-WT200-UT-SAN.dwg (WT2.02)
PLOT TIME: 5/1/2017 8:59 AM PLOTTED BY: ram

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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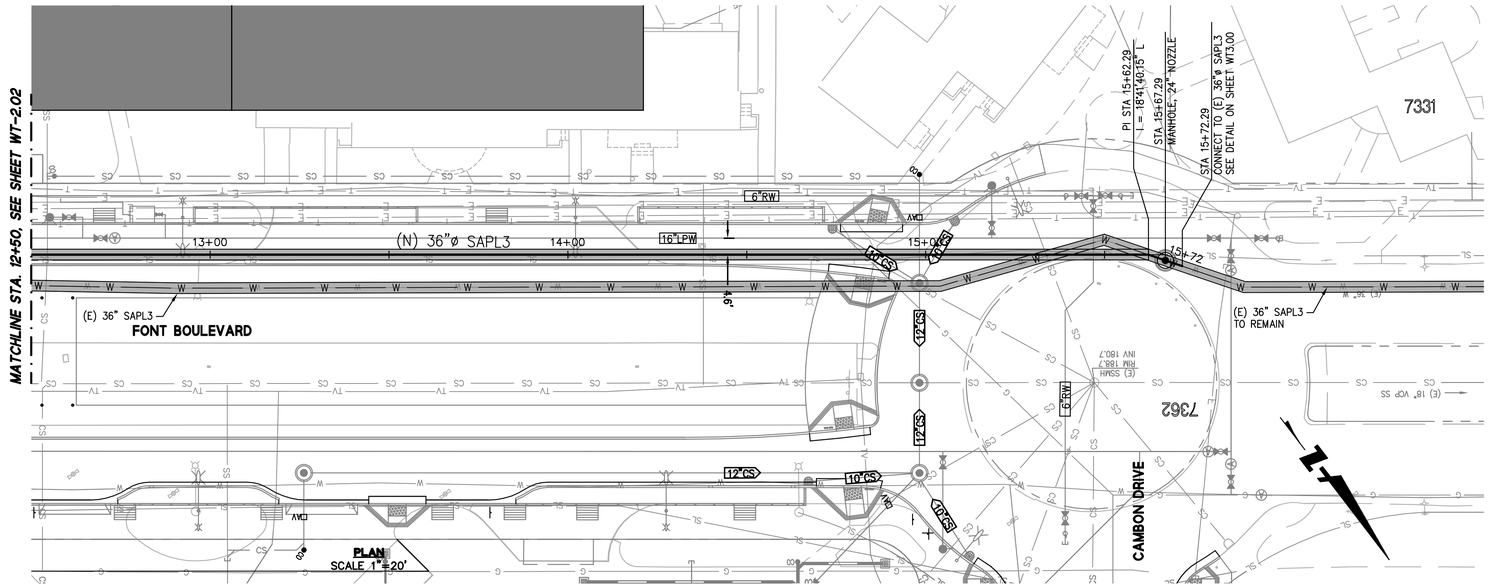

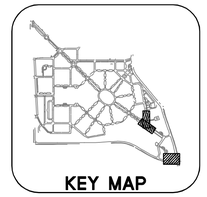

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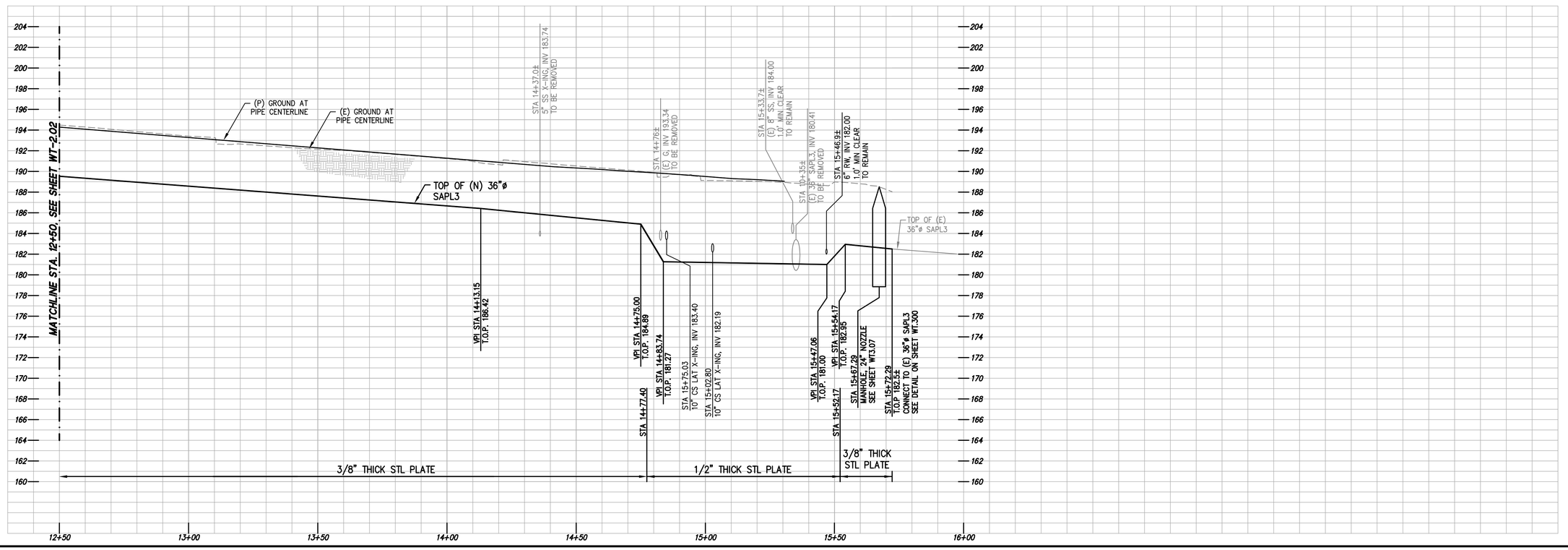

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
SAPL No. 3 PLAN & PROFILE - STA 12+50 TO END
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
Kyle C. Wilson
Exp. 6/30/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: AS SHOWN
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT2.03

DRAWING NAME: J:\Engr90\090086-10\SHEETS\PHASE-01B\PH01B-WT200-U1-SAN.dwg (WT2.03)
PLOTTING: 5-1-2017 8:59 AM PLOTTED BY: ram

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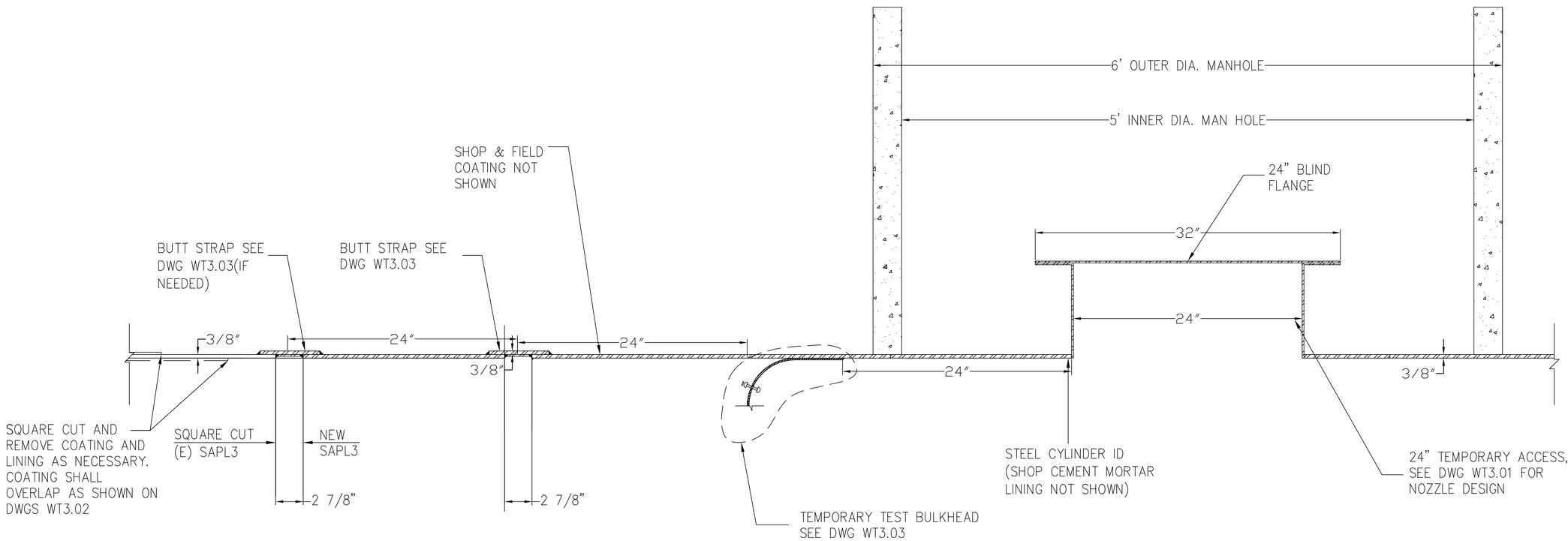

NOTES:
1. FIELD COATING PER DWG WT3.02
2. CONTRACTOR SHALL MAKE AND BE RESPONSIBLE FOR ALL MEASUREMENTS NECESSARY FOR CLOSURE PIECES REQUIRED.
3. APPLY FIELD LINING AFTER CUTTING OFF BULKHEAD AND INSTALLING BUTT STRAP.
4. SQUARE CUT TO THE EXISTING PIPE SHOULD BE A MINIMUM OF 12" AWAY FROM THE BELL END.

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PHASE 1B STREET IMPROVEMENT PLANS

DETAIL - CONNECTION TO EXISTING 36" SAPL3

SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

PROFESSIONAL ENGINEER — TIMOTHY FOUSSE — No. C 62718 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
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Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:

WT3.00

DRAWING NAME: J:\Eng09\090086-121\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.00)
PLOTTING: 5-1-2017 8:36 AM PLOTTED BY: tom

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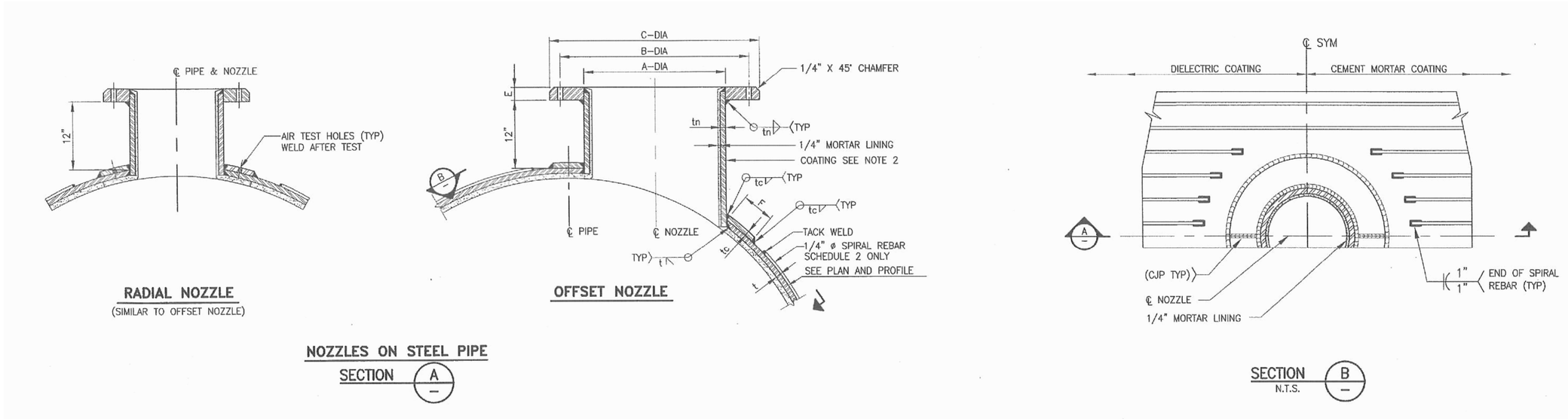

RADIAL NOZZLE
(SIMILAR TO OFFSET NOZZLE)

OFFSET NOZZLE

NOZZLES ON STEEL PIPE
SECTION A

SECTION B
N.T.S.

NOZZLE DIMENSIONS (INCHES)										
NOZZLE	A	B	F	C	tc	tn	BOLT HOLE DIA	BOLT DIA	No. BOLT	E (PER AWWA CLASS "E")
4	4.57	7.5	3	9	3/8	0.365	3/4	5/8	8	1.125
6	6.72	9.5	5	11	7/16	0.365	7/8	3/4	8	1.313
8	8.72	11.75	6	13.5	1/2	0.365	7/8	3/4	8	1.500
10	10.88	14.25	6	16	1/2	0.365	1	7/8	12	1.563
12	12.88	17	7	19	1/2	0.375	1	7/8	12	1.750
16	16.19	21.25	9	23.5	5/8	0.375	1 1/8	1	16	2.000
18	18.19	22.75	10	25	5/8	0.375	1 1/4	1 1/8	16	2.125
24	24.19	29.50	10	32	3/4	0.375	1 3/8	1 1/4	20	2.625

NOTES:

1. ALL FLANGE SHALL BE FACED AFTER WELDING OF SKIRT.
2. ALL EXPOSED METAL SURFACES, EXCEPT FLANGE SHALL BE COATED WITH EPOXY IN ACCORDANCE WITH AWWA C210 NSF STANDARD 61 APPROVED. AMERLOCK 400, HIGH-SOLIDS EPOXY COATING OR APPROVED EQUAL. THE EPOXY COATING SHALL BE TWO COATS MINIMUM, 6 MILS DFT PER COAT OR APPROVED CORROSION RESISTANT COATING. FLANGE FACE SHALL BE COATED WITH SHOP PRIMER.
3. FLANGES INSTALLED SHALL CONFORM TO AWWA STANDARD C-207 CLASS "E".
4. 250# ANSI VALVE SPEC NOT COMPATIBLE WITH AWWA C-207 CLASS "E".
5. RADIAL NOZZLES SHALL BE USED FOR INSTALLATION OF WELD LEADS.

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PHASE 1B STREET IMPROVEMENT PLANS
NOZZLE LAYOUT AND DETAILS
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOUSRA CHRISTIAN
No. C-60742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA
CHRISTIAN

No.	Revisions

Date: 05/01/17
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Drawn: RAM
Approved: YT
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Drawing Number:
WT3.01

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.01)
PLOT TIME: 5-1-2017 8:06 AM PLOTTED BY: burn

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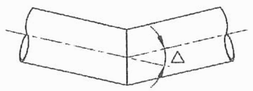
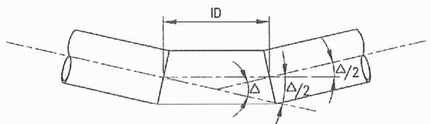


TYPE 1 BEND
SCALE: 3/8"=1'-0"
Δ OVER 5° TO 22.5°



TYPE 2 BEND
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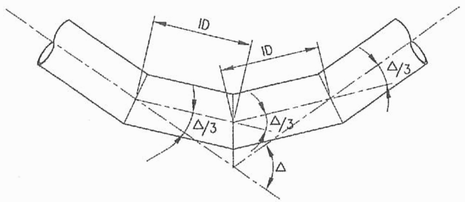
Δ OVER 22.5° TO 45°



TYPE 3 BEND
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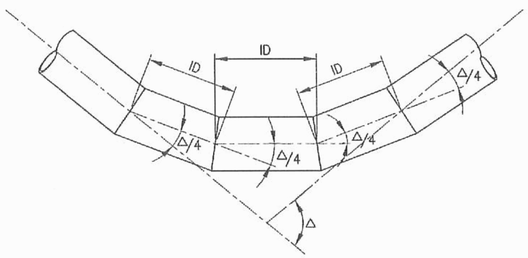
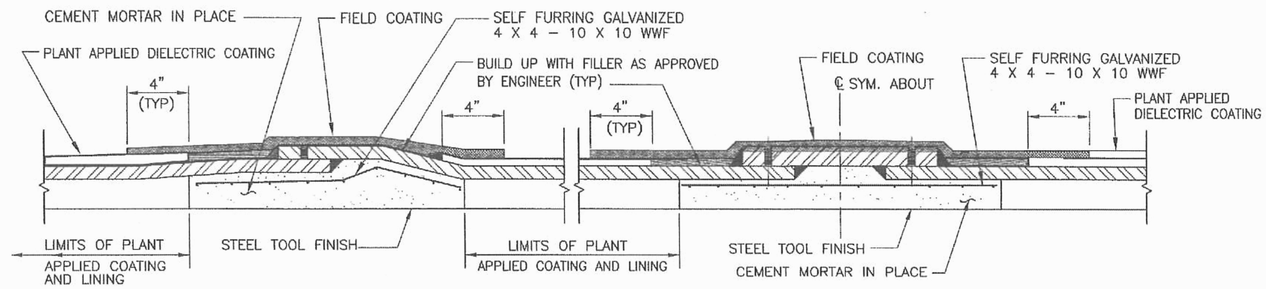
Δ OVER 45° TO 67.5°



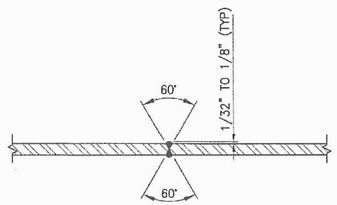
TYPE 4 BEND
SCALE: 3/8"=1'-0"
Δ OVER 67.5° TO 90°



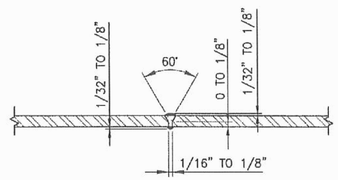
BELL AND SPIGOT JOINT

BUTT STRAP

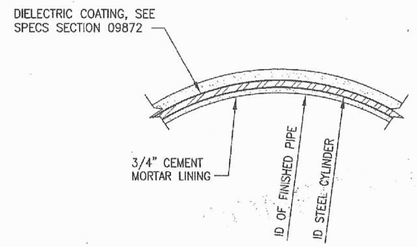
MORTAR LINING AND DIELECTRIC COATING AT JOINTS



TYPICAL DOUBLE "V" BUTT JOINT



TYPICAL SINGLE "V" BUTT JOINT



TYPICAL STEEL PIPE SECTION

NOTES:

1. SEE PLAN SHEET WT3.03 FOR ADDITIONAL DETAILS ON REQUIRED WELDS AND FINISHING OR AIR TEST HOLES.

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PHASE 1B STREET IMPROVEMENT PLANS
STEEL PIPE TYP. BEND, JOINT COATING & LINING DETAILS
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOLANDA YOUNG
No. C-60742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.02

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.02)
PLOT TIME: 5-1-2017 8:06 AM PLOTTED BY: bum

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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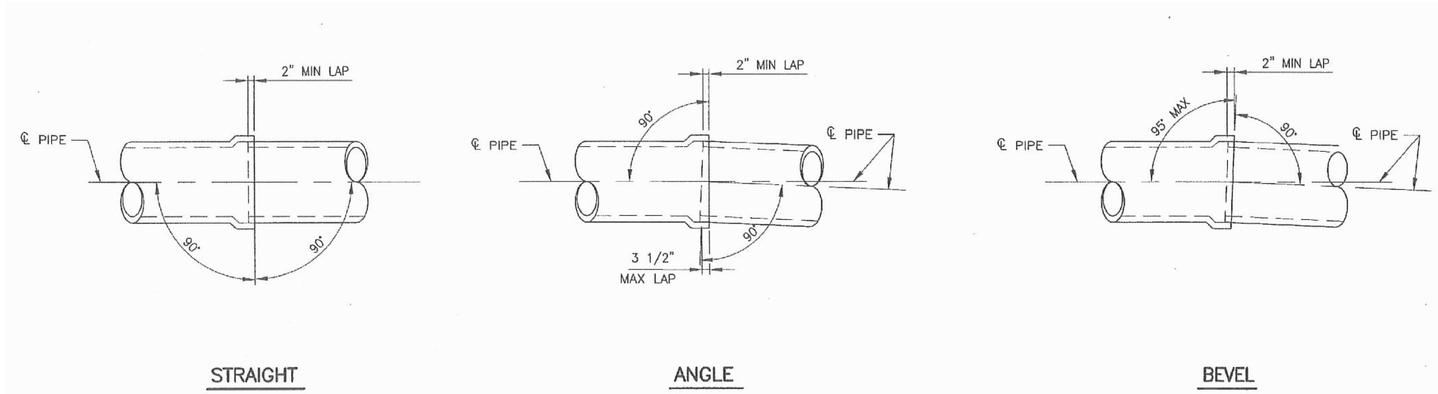
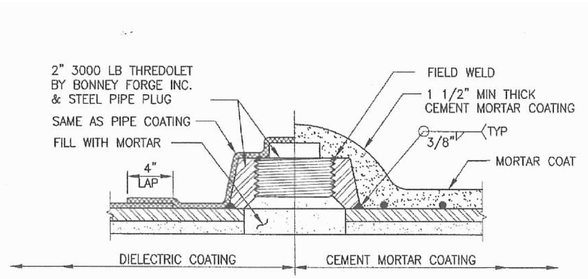


STRAIGHT

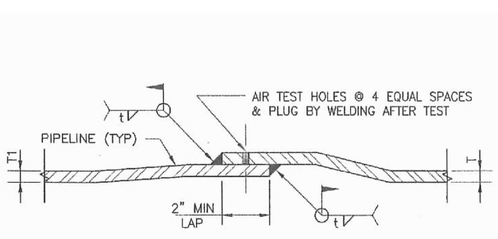
ANGLE

BEVEL

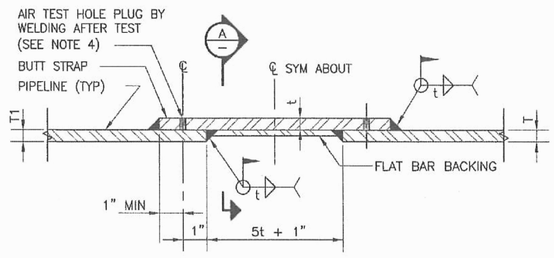
WELDED BELL AND SPIGOT GIRTH JOINT
N.T.S.



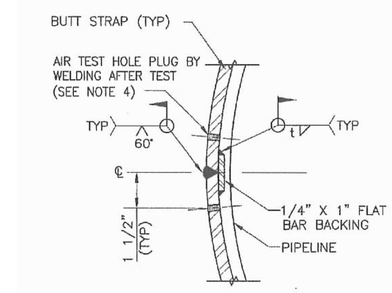
2" OUTLET DETAIL
N.T.S.



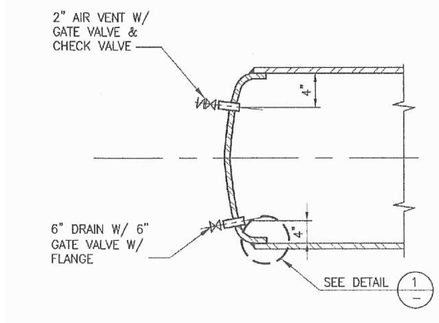
TYPICAL WELDED BELL AND SPIGOT JOINT DETAIL
N.T.S.



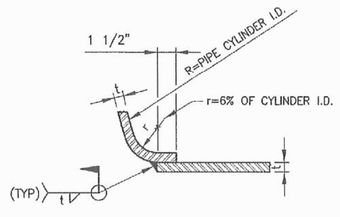
TYPICAL BUTT STRAP DETAIL
N.T.S.



SECTION A
N.T.S.



TEST BULKHEAD DETAIL
N.T.S.



DETAIL 1
N.T.S.

NOTES:

1. SEE DRAWINGS AND/OR SPECIFICATIONS FOR PLATE THICKNESS OF PIPES.
2. TYPICAL BUTT STRAPS SHALL COME IN TWO-SEMICIRCULAR PIECES FITTED TO PIPE.
3. PROVIDE 1/4"x1" BACKING PLATE AT BUTT STRAP ENDS.
4. AIR TEST TO 100psi MINIMUM.
5. "t" THICK BUTT STRAPS SHALL BE FABRICATED IN HALVES COMPLETE WITH 8 DRILLED AND TAPPED HOLES FOR STANDARD 1/4-INCH THREADED PIPE. "t" SHALL EQUAL T OR T1 WHICHEVER IS THICKER.

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PHASE 1B STREET IMPROVEMENT PLANS
STEEL PIPE DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOLANDA TEJERA
No. C-67742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
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Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.03

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.03)
PLOT TIME: 5-1-2017 8:06 AM PLOTTED BY: burn

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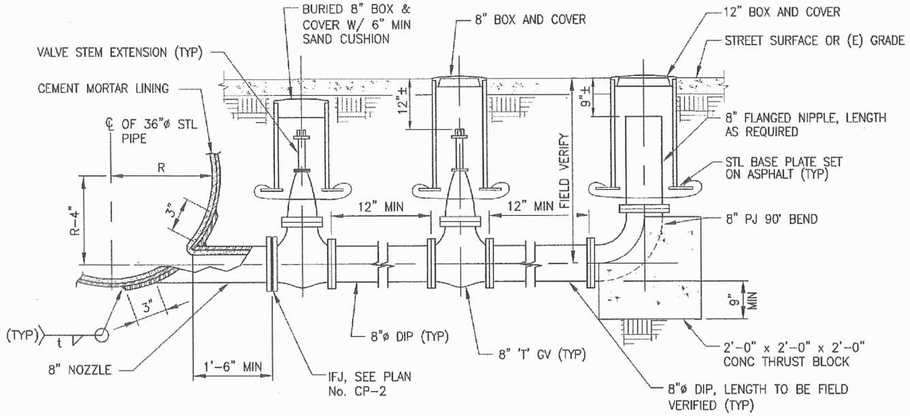
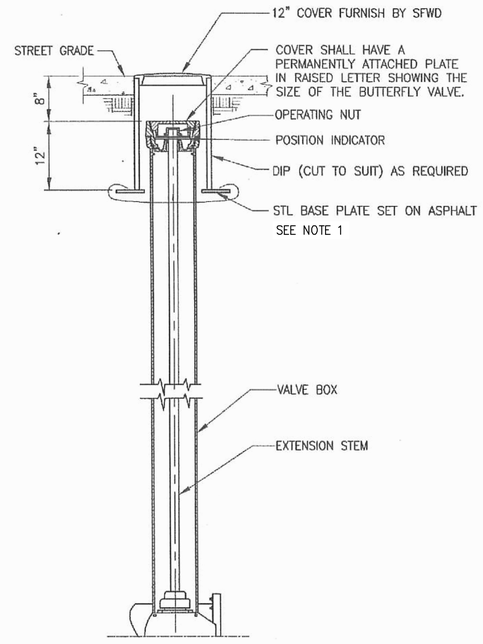
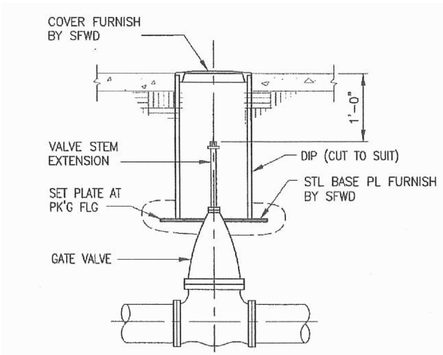


8" BOTTOM BLOW-OFF
N.T.S.



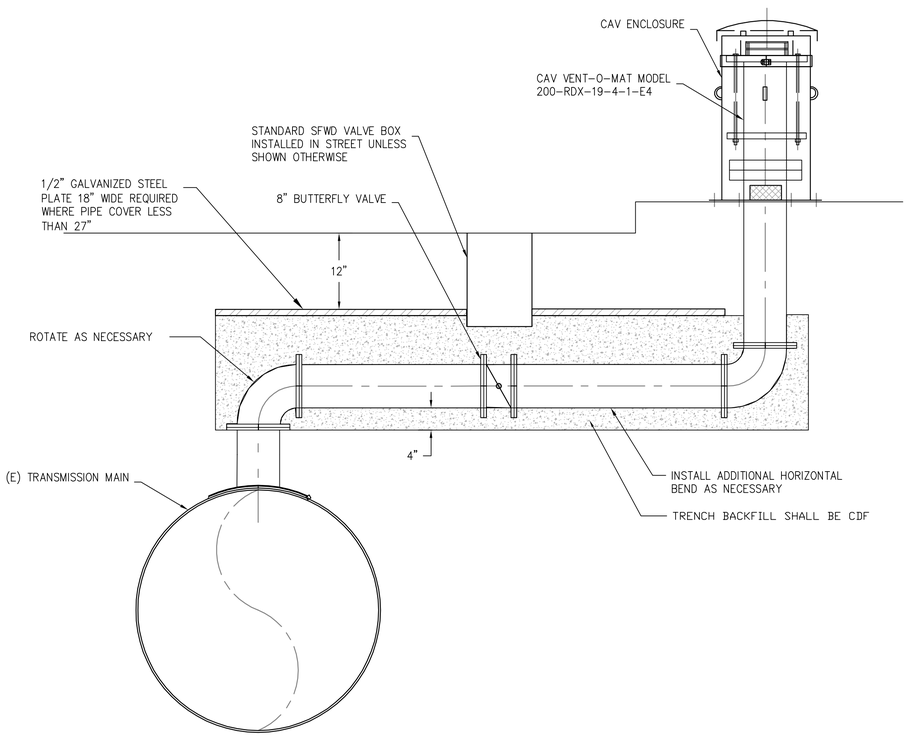
BOX & COVER DETAIL FOR CONTROL VALVE
N.T.S.



TYPICAL BOX & COVER ASSEMBLY
N.T.S.

NOTES:

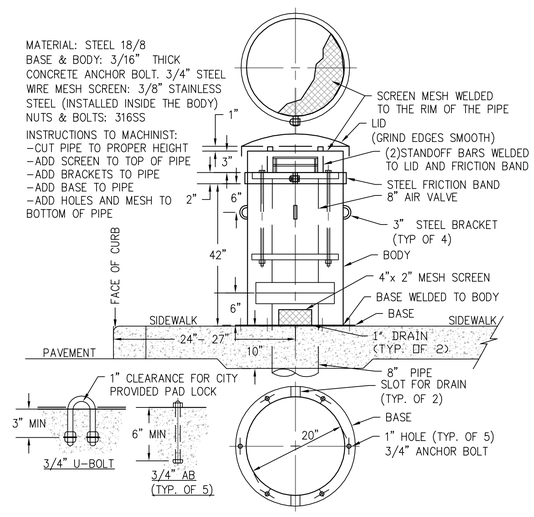
1. STEEL BASE PLATE SHALL NOT TOUCH THE GATE VALVE BODY



COMBINATION AIR VALVE
SCALE: NTS

NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL INSULATION JOINTS SHOWN ON THIS DRAWING AS INCIDENTAL WORK TO AIR RELEASE & VACUUM BREAL VALVE & BLOW-OFF ASSEMBLY INSTALLATION. FOR INSULATION JOINT DETAIL SEE PLAN No. CP-2
2. CONTRACTOR SHALL ORDER THE AVV ENCLOSURE FROM CITY DISTRIBUTION DIVISION, SFWD, AT 1990 NEWCOMB AVE. SAN FRANCISCO, CA 94124, IN ADVANCE. CONTACT CDD CONSTRUCTION: CDDCONSTRUCTION@SFWATER.ORG
3. CONTRACTOR SHALL CONSTRUCT A 3.0' x 3.0' CONCRETE PAD FOR THE AVV ENCLOSURE. .
4. CONTRACTOR SHALL REFER TO SFWD-CITY DISTRIBUTION DIVISION STANDARD DRAWING A-1241 FOR MOST UPDATED AIR VALVE ENCLOSURE DETAILS.



COMBINATION AIR VALVE ENCLOSURE DETAIL
SCALE: NTS

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PHASE 1B STREET IMPROVEMENT PLANS
BLOWOFF & AIR VALVE DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY
CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
Exp. 6/30/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

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WT3.04

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PLOT TIME: 5/1/2017 8:08 AM PLOTTED BY: Ram

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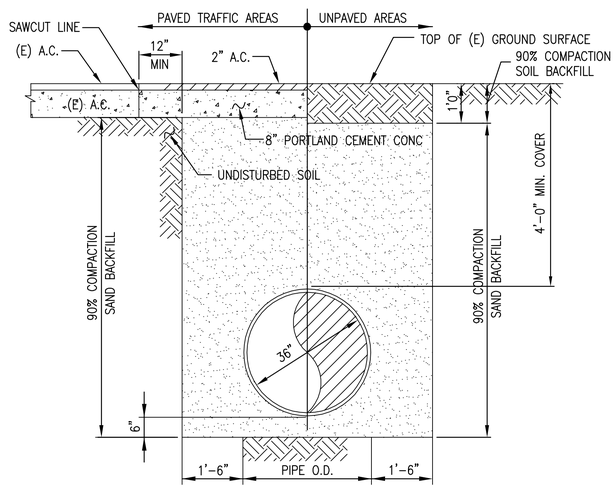

TYPICAL TRENCH DETAIL
SCALE: NTS

NOTES:

1. SEE STANDARD SPECIFICATIONS AND/OR PROJECT SPECIFICATIONS AND DRAWINGS FOR REQUIREMENTS RELATING TO PAVING RESTORATION AND SUITABLE LOCAL EXCAVATION MATERIALS FOR USE AS BACKFILL.
2. ALL BACKFILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS BEFORE COMPACTION.
3. UNLESS OTHERWISE SPECIFIED, RELATIVE COMPACTION SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D1557.
4. JETTING OR PONDING OF BACKFILL MATERIALS TO ACHIEVE COMPACTION WILL NOT BE ALLOWED.
5. ALL TRENCH EXCAVATIONS SHALL CONFORM TO OSHA REQUIREMENTS.
6. SEE STD DWG FOR STREET PATCHING DETAILS AND "SLURRY" TRENCH FOR ELECTRICAL COMMUNICATION AND TRAFFIC SIGNAL CONDUIT.
7. REMOVE LOOSE SOIL IF IT IS DISTURBED DURING EXCAVATION.
8. 4'-0" MINIMUM COVER OR AS SHOWN ON THE PLAN AND PROFILE PLANS, WHICHEVER IS GREATER.

APPURTENANCE AND MANHOLE SCHEDULE		
STATION	TYPE OF APPURTENANCE	REMARK
	SECTION I	REFERENCE DRAWING
1+05	24" MH	WT3.07
3+54.40	8" BO	WT3.04
8+62.86	8" ARV	WT3.04
10+34.58	8" BO	WT3.04
10+71.78	8" ARV	WT3.04
15+67.29	24" MH	WT3.07

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PHASE 1B STREET IMPROVEMENT PLANS
TRENCH DETAIL & APPURTENANCE SCHEDULE
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
Jon Carnes
No. C69718
CIVIL
STATE OF CALIFORNIA
FOR CONSTRUCTION

No.	Revisions

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PLOTTING: 5/1/2017 8:56 AM PLOTTED BY: Yan

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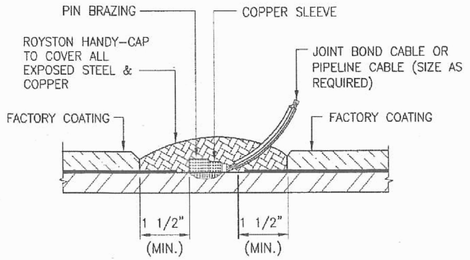
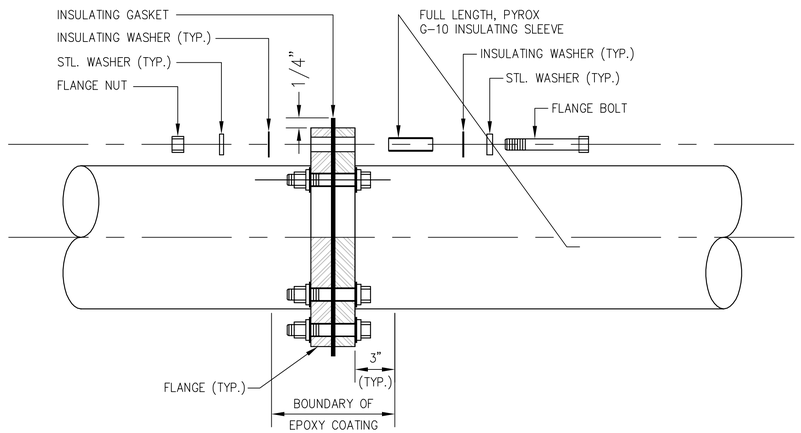
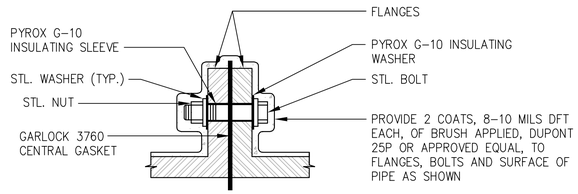


NOTES:
1. PIPE LINING IS NOT SHOWN FOR CLARITY.
2. FURNISH AND INSTALL ROYSTON CAP PER MANUFACTURER'S INSTRUCTIONS.

CABLE TO PIPE CONNECTIONS

DETAIL 1 — NOT TO SCALE

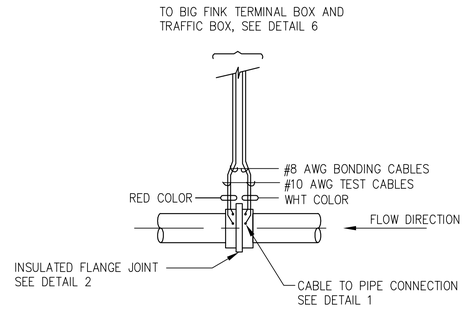




NOTES:
1. INSTALL BONDING CABLES AND TEST CABLES PER DETAIL 4.
2. INSULATING WASHERS SHALL BE LARGER THAN STEEL WASHERS.

INSULATED FLANGE JOINT DETAIL

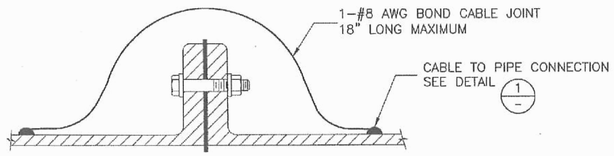
2 — NOT TO SCALE



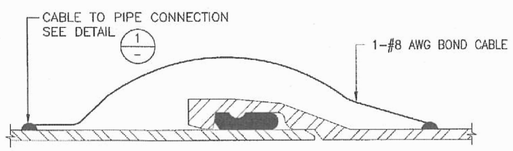
NOTES:
1. UPSTREAM FLOW WILL BE WHT, DOWNSTREAM FLOW WILL BE RED COLOR.

TEST CABLES FOR IFJ DETAIL

4 — NOT TO SCALE



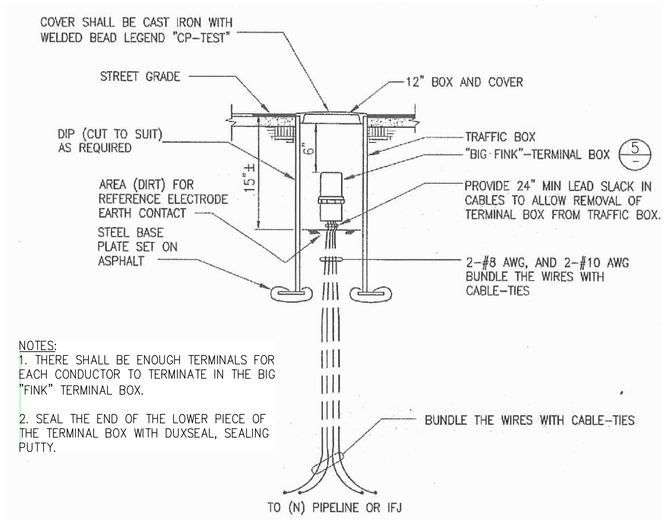
FLANGED JOINT



NOTES:
1. ALL MECHANICAL JOINTS, EXCEPT IFJ, SHALL BE BONDED TO PROVIDE CONTINUITY.
2. PROVIDE ENOUGH SLACK IN THE BOND CABLES FOR JOINT MOVEMENT.

JOINT BONDING

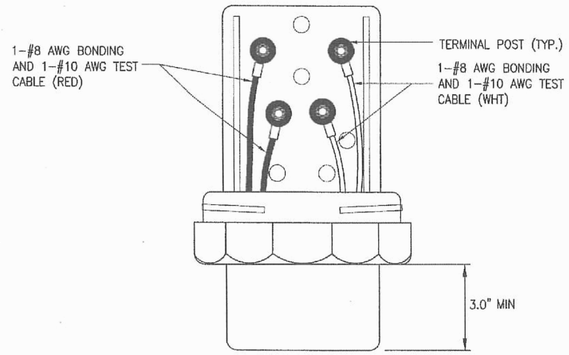
DETAIL 3 — NOT TO SCALE



NOTES:
1. THERE SHALL BE ENOUGH TERMINALS FOR EACH CONDUCTOR TO TERMINATE IN THE BIG "FINK" TERMINAL BOX.
2. SEAL THE END OF THE LOWER PIECE OF THE TERMINAL BOX WITH DUXSEAL, SEALING PUTTY.

CORROSION TEST STATION

6 — NOT TO SCALE



NOTES:
1. ATTACH THE PERMANENT CABLES TO THE APPROPRIATE WIRES.
2. COVER OF THE TERMINAL BOX IS NOT SHOWN FOR CLARITY.
3. SEAL THE END OF THE LOWER PIECE OF THE TERMINAL BOX WITH DUXSEAL, SEALING PUTTY.

TERMINAL BOX

DETAIL 5 — NOT TO SCALE

255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PHASE 1B STREET IMPROVEMENT PLANS
CORROSION CONTROL DETAILS

SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — No. C067442 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.06

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

DRAWING NAME: J:\Projob\20090086-12\SHEETS\PHASE-01B\YH01B-WT300-Details.dwg (WT3.06)
PLOT DATE: 5/1/2017 8:08 AM PLOTTED BY: Yuri

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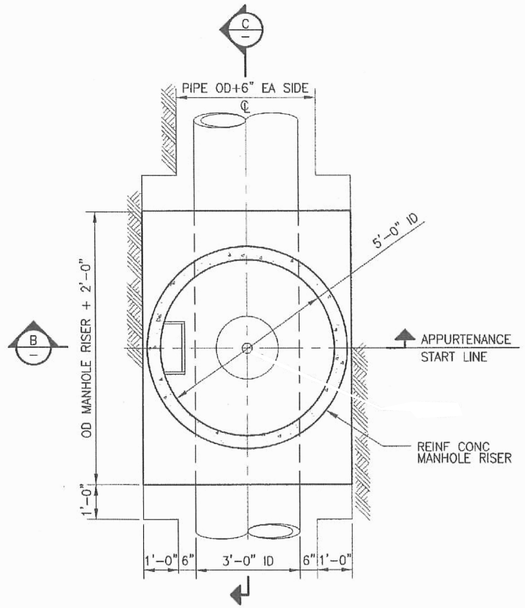
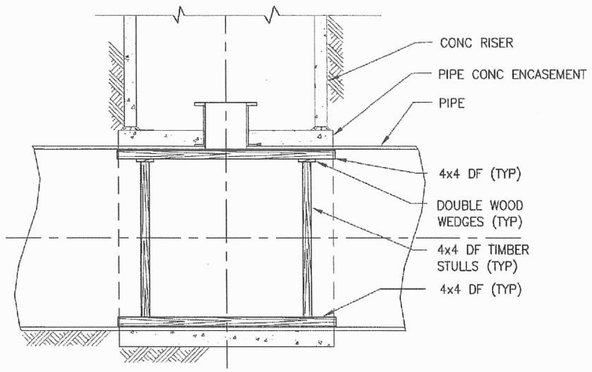
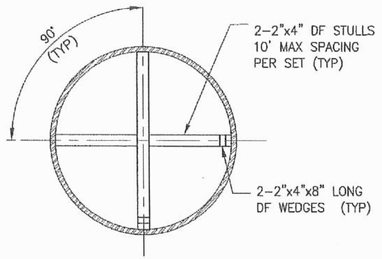
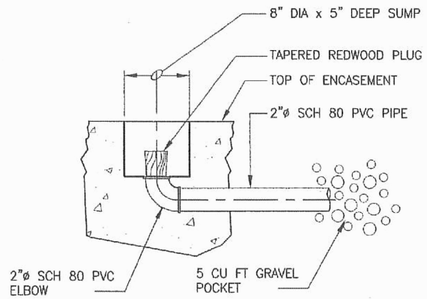


PLAN

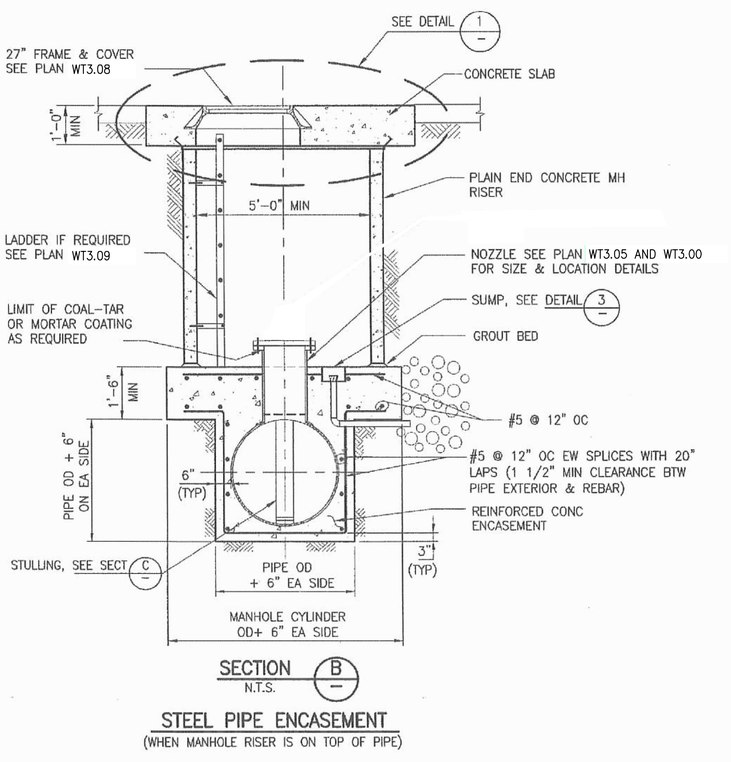


STULLING DETAIL
SECTION C N.T.S.



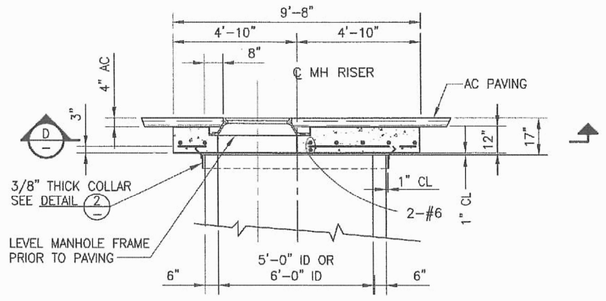


SUMP DETAIL
DETAIL 3 N.T.S.

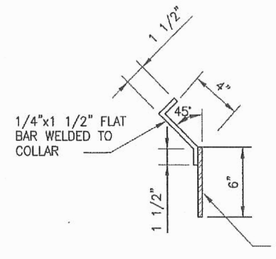


SECTION B N.T.S.

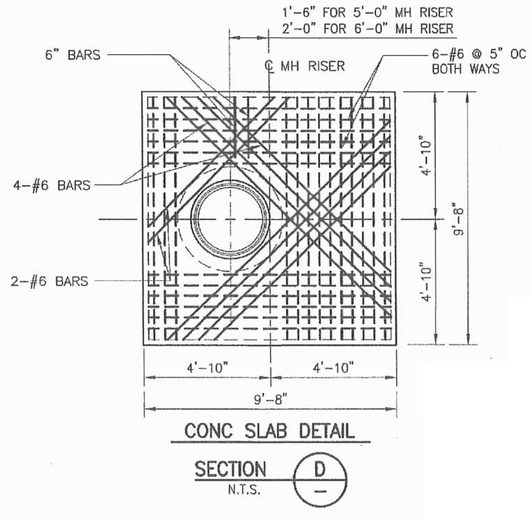
STEEL PIPE ENCASEMENT
(WHEN MANHOLE RISER IS ON TOP OF PIPE)



DETAIL 1 N.T.S.



ANCHOR STRAP
DETAIL 2 N.T.S.



CONC SLAB DETAIL
SECTION D N.T.S.

NOTES:

1. COAT OUTSIDE SURFACE OF ALL NOZZLES AND FLANGES WITH COAL EPOXY AS REQUIRED.
2. INSTALL STULLS PRIOR TO POURING CONCRETE ENCASEMENT ON STEEL PIPES.
3. PUT MANHOLE FRAME ON TOP OF ACCESS MANHOLE WHEN RISER HEIGHT IS LESS THAN 4 FEET.

BKF ENGINEERS
255 SHORELINE DR
SUITE 200
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ENGINEERS / SURVEYORS / PLANNERS

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
PLAN, SECTION AND DETAIL FOR STEEL PIPE MANHOLE
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. VIVIANI
No. C057424
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.07

DRAWING NAME: J:\Projob\20090086-10\SHEETS\PHASE-01B\PH01B-WT3300-Details.dwg (WT3.07)
PLOTTING: 5/1/2017 8:08 AM PLOTTED BY: Ram

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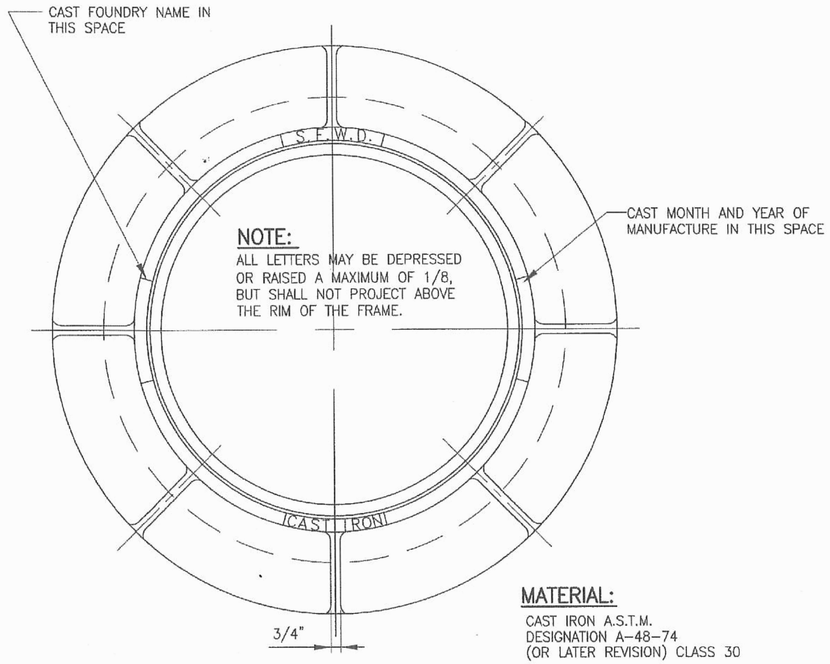
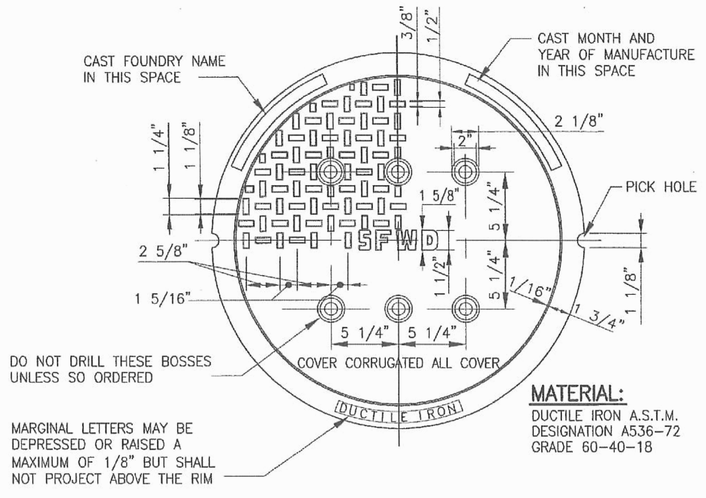
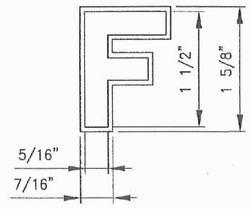


NOTE:
ALL LETTERS MAY BE DEPRESSED OR RAISED A MAXIMUM OF 1/8, BUT SHALL NOT PROJECT ABOVE THE RIM OF THE FRAME.

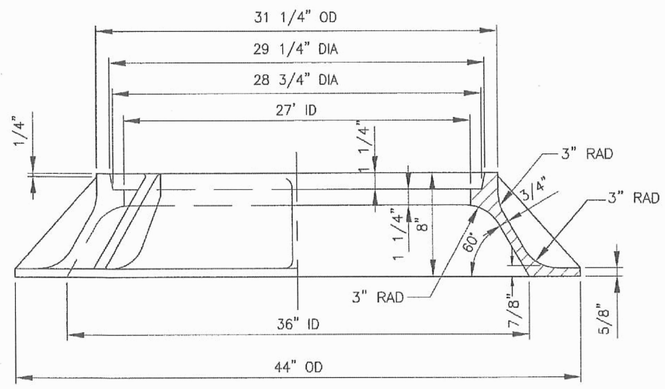
MATERIAL:
CAST IRON A.S.T.M.
DESIGNATION A-48-74
(OR LATER REVISION) CLASS 30



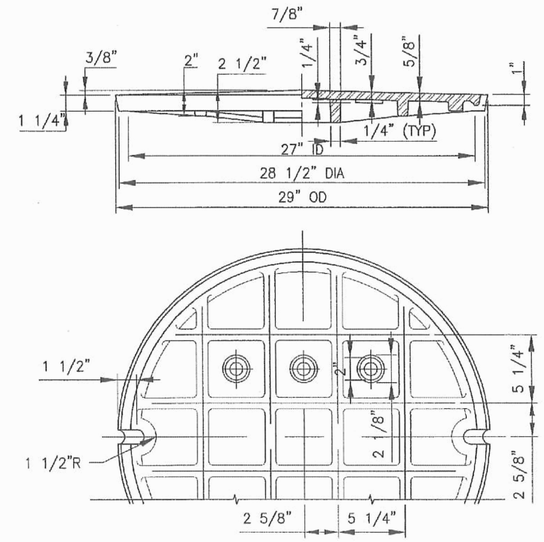
MATERIAL:
DUCTILE IRON A.S.T.M.
DESIGNATION A536-72
GRADE 60-40-18



DETAIL OF LETTERS
N.T.S.



27" CAST IRON FRAME
(APPROX. WEIGHT=350 LBS.)
N.T.S.



27" DUCTILE IRON COVER
FOR USE ON BOXES CONTAINING NO VACUUM VALVES
(APPROX. WEIGHT=235 LBS.)
N.T.S.

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
27-INCH FRAME, GRATE & COVER FOR MANHOLE
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
No. C48742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA
Not For Construction

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.08

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.08)
PLOT TIME: 5-11-2017 8:06 AM PLOTTED BY: bum

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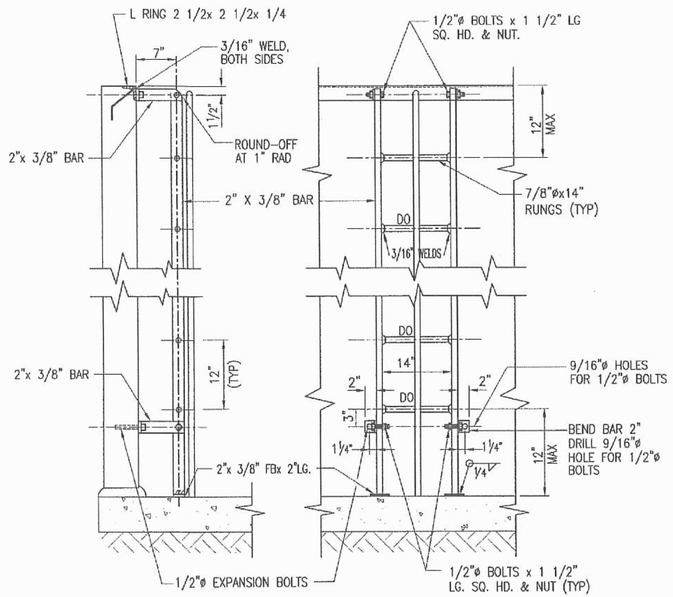
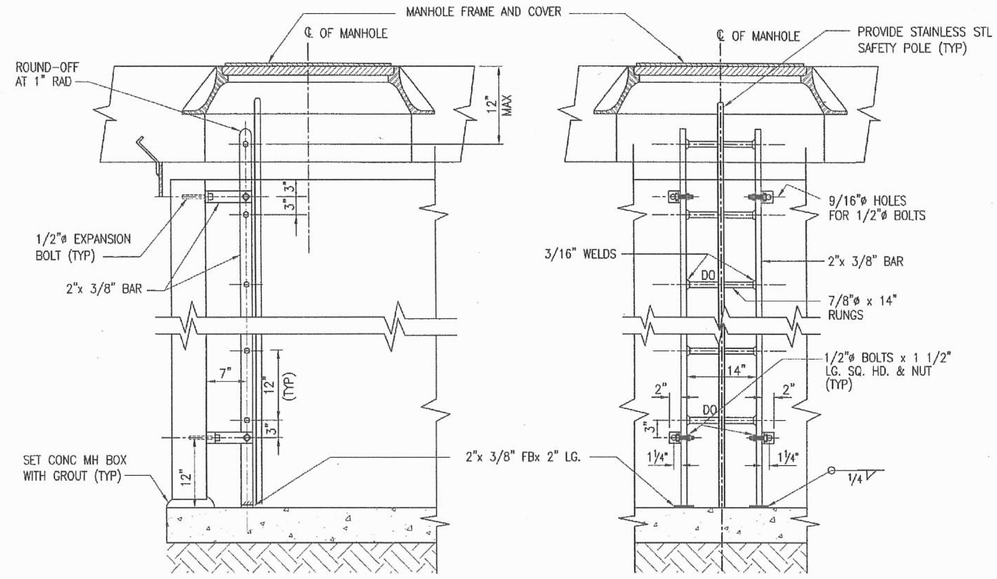


SIDE VIEW FRONT VIEW

LADDER FOR RISERS IN PRIVATE RIGHT OF WAY

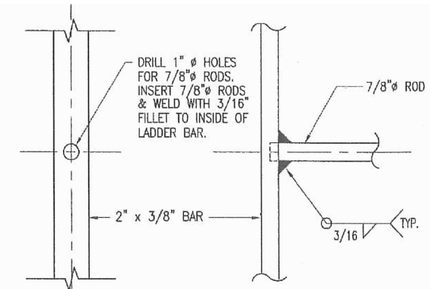
3/4"= 1'- 0"



SIDE VIEW FRONT VIEW

LADDER FOR RISERS IN PAVED STREETS

3/4"= 1'- 0"



SIDE VIEW FRONT VIEW

LADDER DETAIL

3" = 1'- 0"

NOTES:

1. NO LADDER REQUIRED IF DISTANCE FROM TOP OF CONCRETE ENCASEMENT TO TOP OF CONCRETE MH RISER IS 4' OR LESS.
2. LADDERS AND SUPPORTS SHALL BE GALVANIZED. ALL WELDS SHALL BE GROUND SMOOTH.
3. LADDER RUNG SPACING IS 12". LOCATION OF LADDER IN MH RISERS SHALL BE SET BY THE ENGINEER IN ALL CASES. ALL FERROUS METAL PARTS SHALL BE GALVANIZED AFTER FABRICATION.
4.
5. PROVIDE LADDER UP SAFETY POST BY "BILCO COMPANY" MODEL LV-2.

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PHASE 1B STREET IMPROVEMENT PLANS

LADDER RISER IN MANHOLE DETAIL

SAN FRANCISCO CALIFORNIA

SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER KEITH VINCENT LUTTRELL No. C 69214 Exp. 9/30/18 CIVIL STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:

WT3.09

DRAWING NAME: J:\Eng00\090086-10\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.09)
PLOTTING: 5/1/2017 8:59 AM PLOTTED BY: Ram

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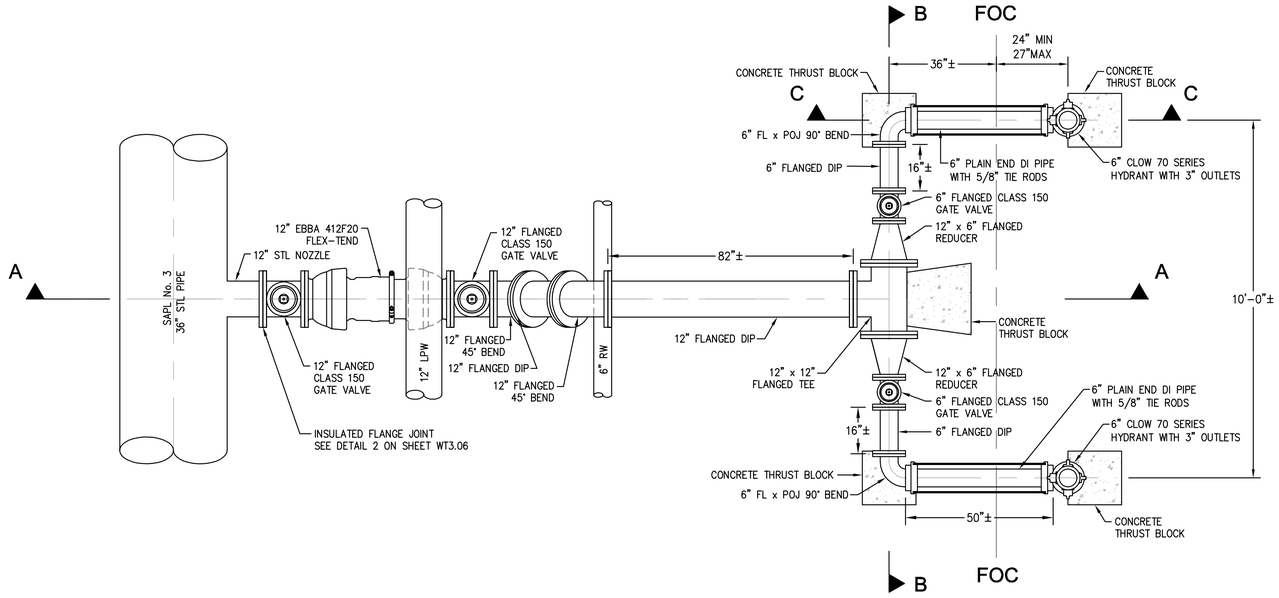
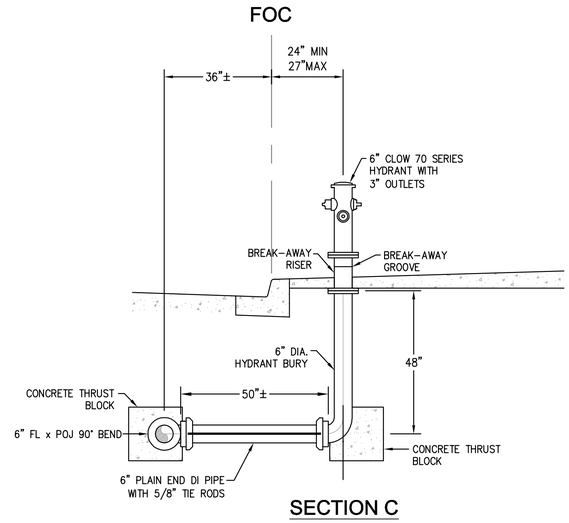
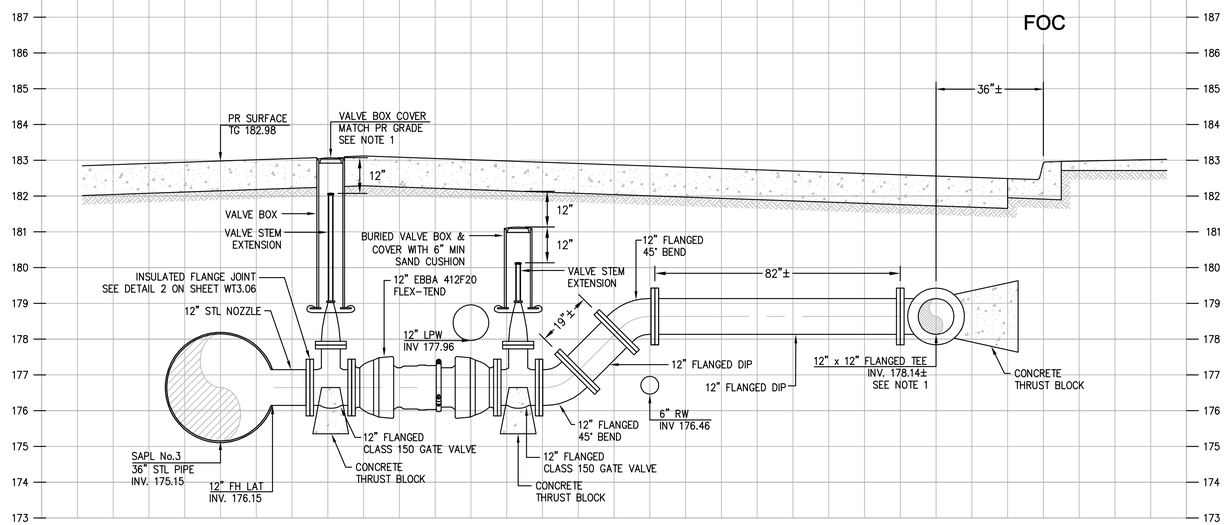


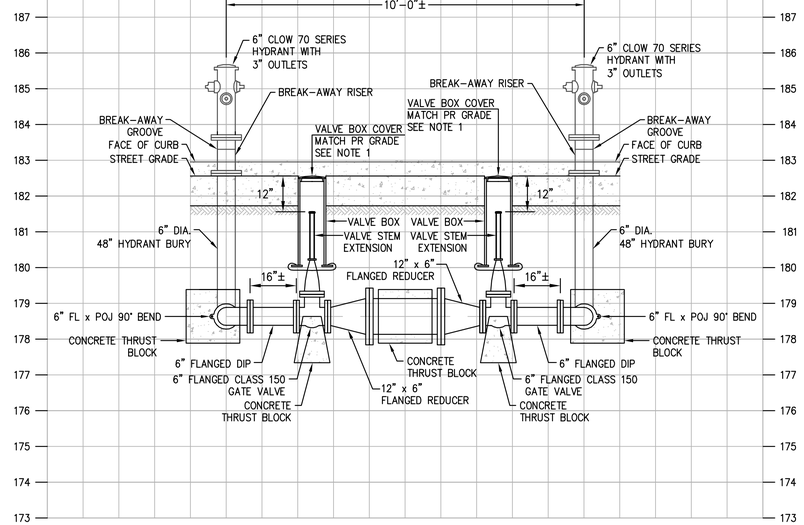
PLAN



SECTION C



SECTION A



SECTION B

NOTES:
1. FIELD-ADJUST ELEVATIONS AS NEEDED TO ACCOMODATE 48" HYDRANT BURY, SURFACE GRADES, AND CONNECTION TO 36" SAPL No. 3.

ALTERNATE FIRE HYDRANT DETAIL AT CHUMASERO DRIVE

NTS

BKF ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
ALTERNATE HYDRANT CONFIGURATION DETAIL 1
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOUSRA TOUSSAN
No. C48742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No: 20090086

Drawing Number:
WT3.10

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.10)
PLOT TIME: 5-1-2017 8:06 AM PLOTTED BY: burn

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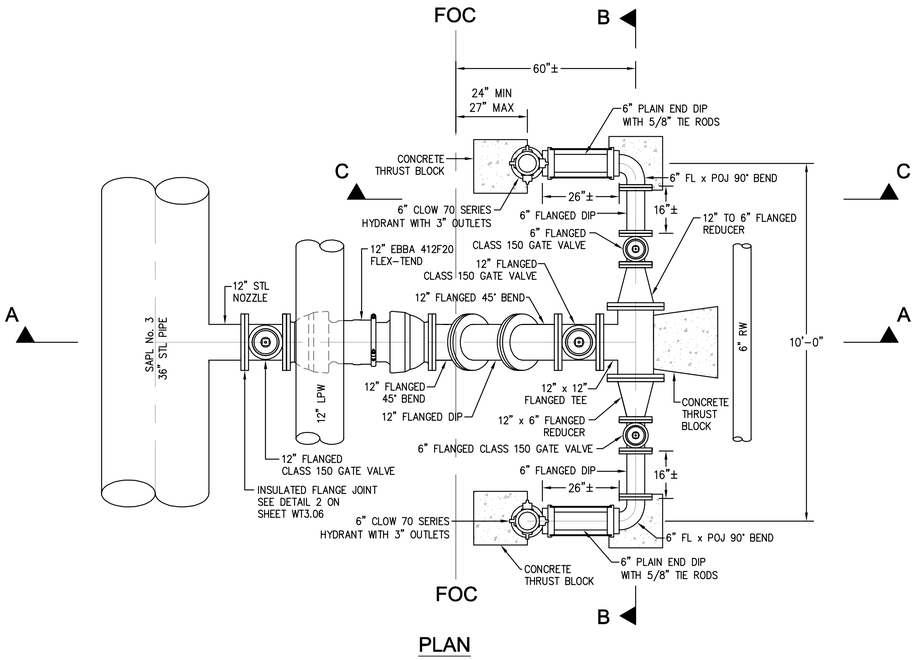
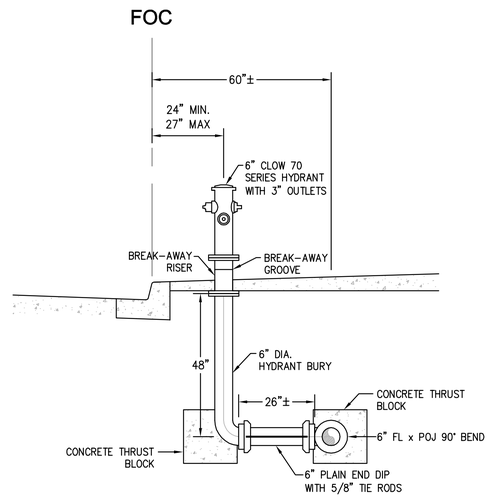


PLAN



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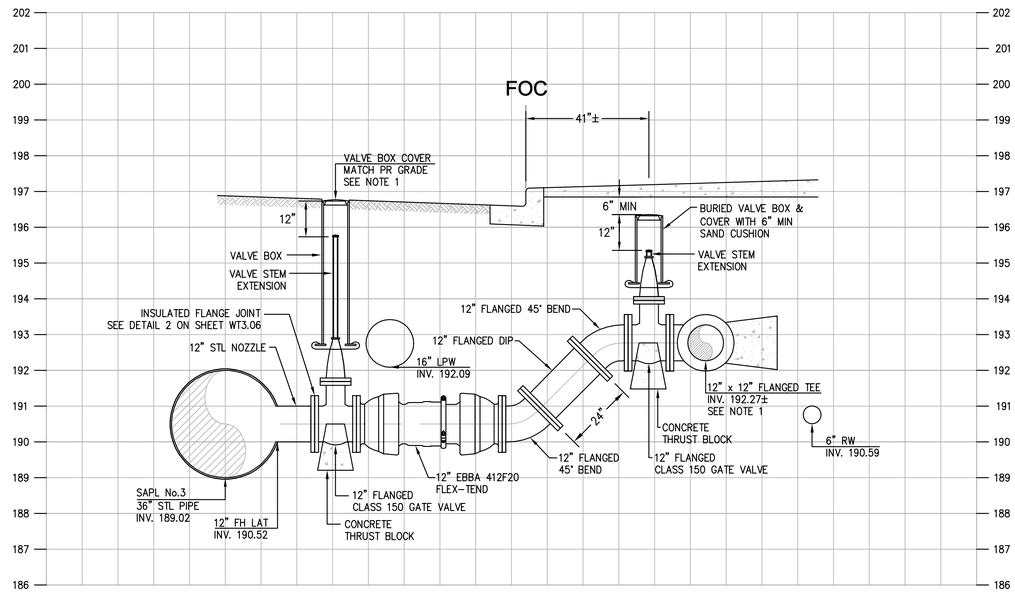
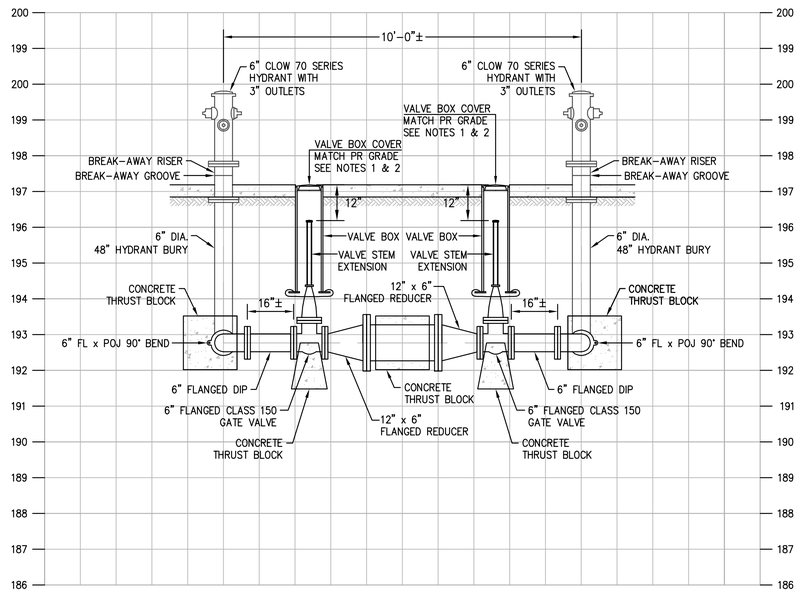


SECTION A



SECTION B

NOTES:
1. FIELD-ADJUST ELEVATIONS AS NEEDED TO ACCOMODATE 48" HYDRANT BURY, SURFACE GRADES, AND CONNECTION TO 36" SAPL No. 3.
2. USE ADA-COMPLIANT VALVE BOX COVER FOR VALVE BOXES IN SIDEWALK.

ALTERNATE FIRE HYDRANT DETAIL AT FONT BLVD

NTS

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255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
ALTERNATE HYDRANT CONFIGURATION DETAIL 2
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER M. GIVEN — No. C067218 — Exp. 9/30/18 — CIVIL — STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: YT
Drawn: RAM
Approved: YT
Job No. 20090086

Drawing Number:
WT3.11

DRAWING NAME: J:\Projects\20090086-123\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.11)
PLOT TIME: 5/1/2017 8:08 AM PLOTTED BY: Ryan

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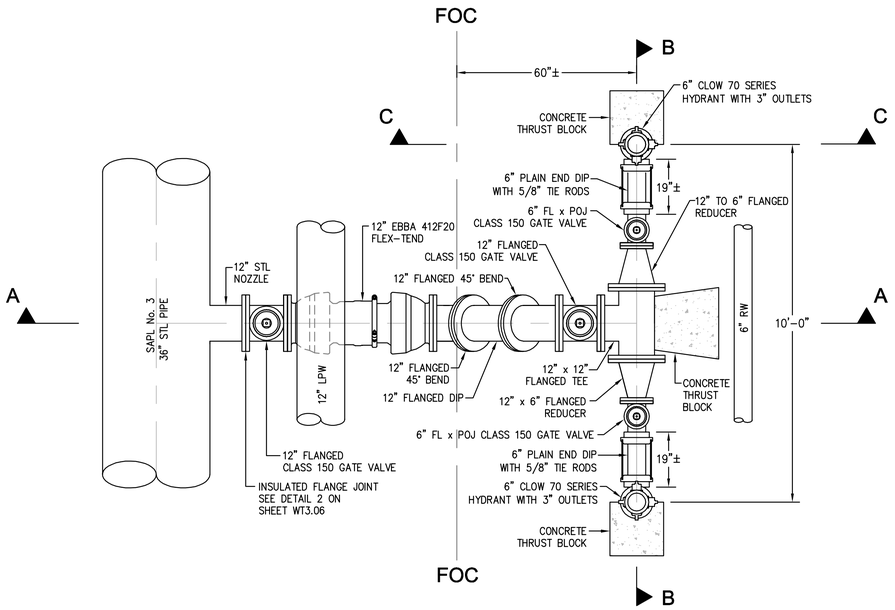

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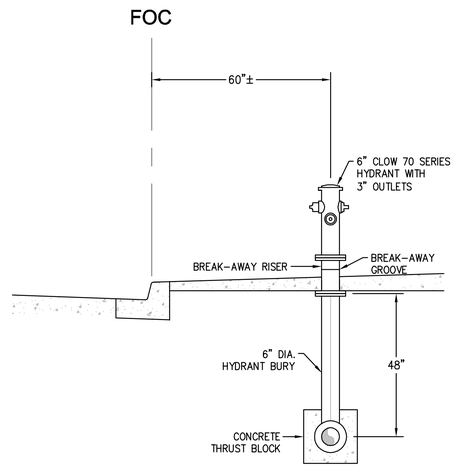
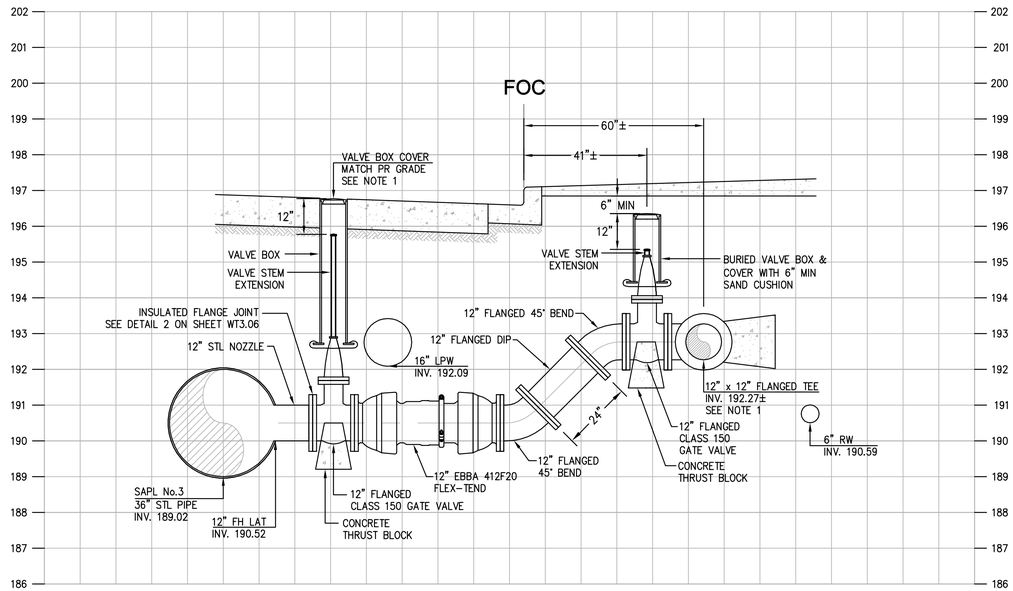
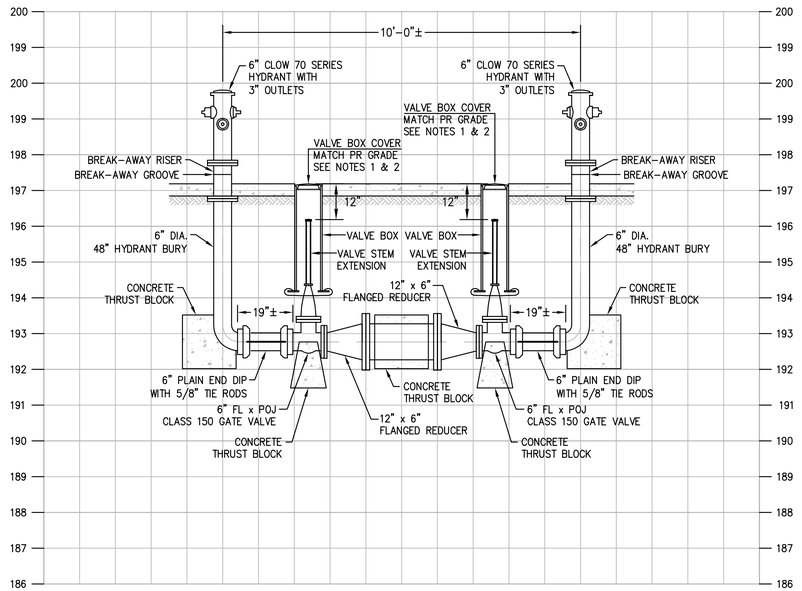


SECTION C



SECTION A



SECTION B

NOTES:
1. FIELD-ADJUST ELEVATIONS AS NEEDED TO ACCOMODATE 48" HYDRANT BURY, SURFACE GRADES, AND CONNECTION TO 36" SAPL No. 3.
2. USE ADA-COMPLIANT VALVE BOX COVER FOR VALVE BOXES IN SIDEWALK.

ALTERNATE FIRE HYDRANT DETAIL AT FONT BLVD

NTS

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255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
ALTERNATE HYDRANT CONFIGURATION DETAIL 2
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
YOUSRA YOUSRA
No. C48742
Exp. 9/30/18
CIVIL
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

No.	Revisions

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Approved: YT
Job No: 20090086

Drawing Number:
WT3.11A

DRAWING NAME: J:\Eng09\090086-12\SHEETS\PHASE-01B\PH01B-WT300-Details.dwg (WT3.11A)
PLOT TIME: 5-1-2017 8:06 AM PLOTTED BY: burn

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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LEGEND

SYMBOLS

FURNISH & INSTALL	EXISTING	REMOVE / SALVAGE UON	
			CONDUIT
			VEHICLE SIGNAL FACE – 12"
			VEHICLE SIGNAL FACE – 12" BACK PLATE INSTALLED ON SIGNAL FACE
			VEHICLE SIGNAL FACE – 12" WITH ARROWS
			VEHICLE SIGNAL FACE – 12" WITH ARROWS BACK PLATE INSTALLED ON SIGNAL FACE
			MAST ARM MOUNTED SIGNAL FACE. VEHICLE SIGNAL FACE – 12" BACK PLATE INSTALL ON SIGNAL FACE
			PEDESTRIAN SIGNAL
			PEDESTRIAN PUSH BUTTON
			"M" OR "M–SF" FOUNDATION
			STREET LIGHT WITH 6' LUMINAIRE ARM
			TRAFFIC SIGNAL OR STREET LIGHT POLE WITH FOUNDATION.
			PEDESTRIAN BARRICADE
			SIGN
			SENSYS TYPE F–MODEL SENSOR
			GROUND ROD – 5/8" ØX10'–0" (15.88 mm X 3048 mm)
			PULL BOX TYPE III

SYMBOLS

1	DETAIL NOTE
1	POLE NUMBER
1	CONDUIT RUN NUMBER
1 / E1.03	DETAIL REFERENCE, SEE DETAIL "1" ON DRAWING NO. E1.03

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
ELECTRICAL LEGEND – SYMBOLS
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JOEL WANG
No. 37606
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

No.	Revisions

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PLOT TIME: 4–28–2017 4:32 PM PLOTTED BY: leea

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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LEGEND

ABBREVIATIONS

A	AMPERE
APS	ACCESSIBLE PEDESTRIAN SIGNALS
ATS	AUTOMATIC TRANSFER SWITCH
AVE	AVENUE
A.T.&T.	AMERICAN TELEPHONE COMPANY
AWG	AMERICAN WIRE GAUGE
BP	SIGNAL BACKPLATE
BSCW	BARE STRANDED COPPER WIRE
C	CONDUIT
CAB	CABINET
CCTV	CLOSED CIRCUIT TELEVISIONCAMERA
CKT	CIRCUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CTSP CTSS	STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS.
DLC	DETECTOR LEAD-IN CABLE
DLW	DETECTOR LOOP WIRES
DTIS	DEPT. OF TELECOMMUNICATIONS AND INFORMATION SERVICES
DWG	DRAWING
(E), EX	EXISTING
EXT	EXTERNAL
FA	FIRE ALARM
FC	FULL CIRCLE VISOR
F/I	FURNISH AND INSTALL UNDER THIS CONTRACT
FRH	FLASHING RED HAND
FUT, (F)	FUTURE
HDPE	HIGH DENSITY POLYETHELYNE
HW	HIGH VOLTAGE VAULT
HPS	HIGH PRESSURE SODIUM
HZ	HERTZ
G	GREEN
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
IC	INTERSECTION CONTROLLER
I/P	IN PLACE OF
JB	JUNCTION BOX
KVA	KILOVOLTAMPERE
KW	KILOWATT
LGT	LIGHT
LUM	LUMINAIRE
M	METER

ABBREVIATIONS (CONT.)

MAS	MAST ARM MOUNTED VEHICLE SIGNALS SIDE MOUNTED
METS	MAYOR'S EMERGENCY TELEPHONE SYSTEM
mm	MILLIMETER
(N)	NEW
NIC	NOT IN CONTACT
NTS	NOT TO SCALE
OH	OVERHEAD
PAC	PACIFIC BELL CO.
PG&E, PGE	PACIFIC GAS AND ELECTRIC COMPANY
PED	PEDESTRIAN
PED(S) XING	PEDESTRIAN CROSSING
PPB	PEDESTRIAN PUSH BUTTON
PPBP	PEDESTRIAN PUSH BUTTON POST (POLE)
PV	PROGRAMMED VISIBILITY
PVC	POLYVINYL CHLORIDE
R	RED
R/C	REMOVE FROM SITE OF WORK AS CONTRACTOR'S PROPERTY
RH	RED HAND
RLC	RED LIGHT CAMERA
(R)	RELOCATED
R/R	REMOVE AND RELOCATE, OR REMOVE AND REINSTALL AS APPLICABLE
R/S	REMOVE AND SALVAGE AS CITY'S PROPERTY
R/W	RIGHT OF WAY
SCGW	STRANDED COPPER GROUND WIRE
SL	STREET LIGHT
SP	SPARE
ST	STREET
SW	SWITCH
SPDPWSF	STANDARD PLAN, DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO.
SSDPWSF	STANDARD SPECIFICATION, DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO.

ABBREVIATIONS (CONT.)

T	TUNNEL VISOR
TS	TRAFFIC SIGNAL
TP	TROLLEY SIGNAL
TPB	TRANSIT PUSH BUTTON
V	VOLT
VA	VOLTAMPERE
VDS	VIDEO DETECTION SYSTEM CAMERA
U.O.N., UON	UNLESS OTHERWISE NOTED
VEH	VEHICLE
VMS	VARIABLE MESSAGE SIGN
W	WATT
WM	WALK MAN
WP	WOOD POLE
WPR	WEATHERPROOF
Y	YELLOW
TV-X SV-X TP-X SP-X	VEHICLE AND PEDESTRIAN SIGNAL POLE MOUNTING DESIGNATIONS. SEE CTSP ES 3-A, ES-3B, ES-3C EXCEPT USE U-BOLTS IN LIEU OF POLE AS APPLICABLE.
EB WB NB SB	TRAFFIC DIRECTION SUCH AS EAST BOUND, WEST BOUND, NORTH BOUND AND SOUTH BOUND.
1-A (X)	CALTRANS TYPE OF SIGNAL STANDARD. SEE CTSP.
12/C	12-CONDUCTOR CABLE
XX-XX-100	CALTRANS TYPE OF SIGNAL STANDARD WITH SIGNAL MAST ARM. SEE CTSP.
1S-COUNT	1 SECTION COUNTDOWN TIMER LED PEDESTRIAN SIGNAL
3S12"	3 SECTION 12", RED, YELLOW, GREEN
3S12"LA	3 SECTION 12", RED, YELLOW, GREEN (ALL LEFT ARROWS)

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PHASE 1B STREET IMPROVEMENT PLANS
ELECTRICAL LEGEND - ABBREVIATIONS
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
JOEL WANG
No. E 37866
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

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PLOT TIME: 4-28-2017 4:34 PM PLOTTED BY: lwang

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LEGEND

GENERAL NOTES

1. THESE ELECTRICAL PLANS ARE DIAGRAMMATIC AND ARE CORRECT FOR GENERAL DESIGN ONLY. THE EXACT LOCATIONS OF EQUIPMENT & APPURTENANCES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES APPLY TO ALL "E" DRAWINGS.

3. THIS IS A GENERAL LEGEND. NOT ALL SYMBOLS ARE USED.

4. SPECIAL INSTRUCTION TO THE CONTRACTOR: IT IS EXPECTED THAT AN ELECTRICAL CONTRACTOR WILL BE ABLE TO INTERPRET THE DESIGNED TRAFFIC PHASING AND THE WIRING SHOWN ON THE PLANS AND ENSURE THAT THE NET RESULT WILL OPERATE CORRECTLY. ANY IRREGULARITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

5. ALL CALTRANS TYPE STANDARDS SHALL BE IN ACCORDANCE WITH SECTION 86-2.04 OF CTSS. EXCEPT MASTARM POLE HANDHOLES ARE 180° AWAY FROM CURB AND SL POLE HANDHOLES ARE 90° AWAY FROM CURB AND ALSO AWAY FROM TRAFFIC.

6. IC DOOR SHALL BE ORIENTED AWAY FROM INTERSECTION SUCH THAT WHILE WORKING IN THE IC, THE TECHNICIAN IS FACING THE INTERSECTION. NO PULL BOX SHALL BE LOCATED WITHIN A 3' BY 3' CLEARANCE IN FRONT OF IC DOOR.

7. SERVICE CONNECTIONS SHALL BE MADE PER SPDPWSF#87,203. IF THE PLAN REQUIRES FUSING IN A PULL BOX FOR IC SERVICE, THIS IS THE POINT THE NEUTRAL IS BONDED TO GROUND. THE GROUND ROD IN THE PULL BOX SHALL BE CONNECTED TO THE GROUND ROD IN THE IC WITH #6 BSCW TO FORM A GROUNDING SYSTEM.

8. FOR SIGNAL SERVICE FROM PG&E THAT DOES NOT GO DIRECTLY TO INTERSECTION CONTROLLER, CONTRACTOR SHALL PROVIDE IN LINE FUSE AND FUSE HOLDER SIMILAR TO STREET LIGHTS APPLICATIONS. SEE SPDPWSF #87,203. F/I IN-LINE FUSE HOLDERS W/40A FUSES FOR IC SERVICE AND SL SERVICE.

9. PROVIDE GROUND WIRES IN ALL TRAFFIC SIGNAL, STREET LIGHT AND SERVICE CONDUIT.

10. CONTRACTOR SHALL VERIFY THE VOLTAGE OF EACH EXISTING STREET LIGHT LUMINAIRE SO THE NEW STREETLIGHT LUMINAIRE REPLACING THE OLD LUMINAIRE SHALL HAVE THE SAME VOLTAGE, U.O.N.

11. PROVIDE 12" CONCRETE COLLAR ALL AROUND PULL BOX IN UNPAVED OR LAWN AREA PER SPDPWSF #87,201.

12. CONTRACTOR SHALL CONSTRUCT A CONCRETE PAD AROUND A POLE OR CONTROLLER CABINET FOUNDATION IN AN UNPAVED OR LAWN AREA. FINAL DIMENSIONS OF CONCRETE PAD SHALL BE DIRECTED BY RESIDENT ENGINEER.

13. CONTRACTOR SHALL COORDINATE WITH RESIDENT ENGINEER TO LAYOUT CONTRACT CURB LOCATIONS PRIOR TO POLE, PULL BOX, AND FOUNDATION CONSTRUCTION.

14. CONTRACTOR SHALL PROTECT EXISTING CURB RAMPS NOT SHOWN ON THE PLANS BY RUNNING CONDUITS AROUND THEM. EXISTING CURB RAMPS DAMAGED DURING CONSTRUCTION SHALL BE RECONSTRUCTED BY THE CONTRACTOR AT THEIR EXPENSE.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR WORKING AROUND AND PROTECTING ALL EXISTING FACILITIES ADJACENT TO HIS WORK AREA. THESE FACILITIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: TREES, LANDSCAPING, HYDRANTS AND UTILITY POLES.

16. PROVIDE 1/4" PULL ROPE IN ALL EMPTY PVC OR GRSC CONDUITS AND ALL CONDUITS CROSSING THE STREET CONTAINING TS OR 12/C. PROVIDE 3/8" PULL TAPE IN ALL POLYETHYLENE CONDUITS.

17. CONDUITS RUNNING IN THE SAME DIRECTION CAN BE JOINT TRENCHED.

18. CONTRACTOR SHALL COORDINATE WITH RESIDENT ENGINEER TO REFERENCE EX SURVEY MONUMENTS BEFORE CONSTRUCTION: 48 HOURS ADVANCE NOTICE IS REQUIRED.

19. IN ACCORDANCE WITH SAN FRANCISCO ADMINISTRATIVE CODE SECTION 6.22(E), THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL PAY THEIR WORKERS THE GENERAL RATES OF PREVAILING WAGE BASED ON THE TYPE OF WORK PERFORMED. THE CONTRACTOR AND ITS SUBCONTRACTORS ARE ADVISED THAT THE CITY CONSIDERS THE PROPER CLASSIFICATION FOR EMPLOYEES WHO PERFORM ALL ELECTRICAL WORK ASSOCIATED WITH THE INSTALLATION OF UNDERGROUND FED TRAFFIC SIGNALS TO BE THAT OF ELECTRICIAN: INSIDE WIREMAN. THE CLASSIFICATION OF ELECTRICAL UTILITY LINEMAN IS NOT APPLICABLE FOR THIS TYPE OF WORK. THE SAN FRANCISCO BOARD OF SUPERVISORS ANNUALLY DETERMINES THE CLASSIFIED PREVAILING RATES OF WAGE. PRINTED VERSIONS ARE AVAILABLE FROM DEPUTY BUREAU CHIEF MAURICE WILLIAMS AT (415)554-8362. THE RATES ARE ALSO AVAILABLE ON-LINE AT http://www.dir.ca.gov/DLRS/PWD.

GENERAL NOTES (CONT.)

20. CONTRACTOR TO FIELD VERIFY AND MAINTAIN TRAFFIC SIGNAL, STREETLIGHT, AND INTERCONNECT WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THE CONTRACT. THEY SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR AS DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES, IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.

21. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.

22. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OR MATERIAL EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.

23. COORDINATE WITH OTHER TRADES TO DETERMINE THE SEQUENCE OF CONSTRUCTION TRHOUGH-OUT THE PROJECT, INCLUDING EXISTING, TEMPORARY REMODELED AND NEW AREAS, WHERE APPLICABLE.

24. RECONNECT ALL EXISTING TRAFFIC SIGNAL AND STREETLIGHTING SERVICES WHICH MAY HAVE BEEN INTERRUPTED DUE TO RENOVATION. RESTORE ALL ELECTRICAL SERVICES AND WIRING TO EXISTING CONDITION.

25. NO EXPOSED CONDUITS. U.O.N.

26. PROVIDE GROUND ROD IN PULL BOX THAT HAS SERVICE CONNECTION.

27. CONTRACTOR SHALL F/I A LABEL ON THE PG&E SERVICE CABLES IN THE IC CABINET THAT IDENTIFIES CORNER OF INTERSECTION WHERE IN-LINE FUSE HOLDER FOR IC SERVICE WAS INSTALLED. (I.E. A SAMPLE LABEL IS AS FOLLOWS: "IC IN-LINE FUSE HOLDER INSTALLED IN NE CORNER")

28. CONTRACTOR TO COORDINATE THE SEQUENCE OF CONSTRUCTION AND SWITCHOVER WITH ENGINEER PRIOR TO INSTALLATION.

29. SPLICING FOR STREETLIGHT AND CONTROLLER ONLY ALLOWED AT UTILITY SERVICE BOXES .

30. PRIOR TO FINAL COMPLETION, CONTRACTOR SHALL CLEAR ALL DEBRIS INSIDE THE PULL BOXES AND CABINETS.

31. ALL NEW POLES AND CONTROLLER CABINETS MUST BE LOCATED AT LEAST 5 FEET FROM FIRE HYDRANTS U.O.N.

32. ALL EXISTING STREETLIGHTS SHALL REMAIN IN OPERATION THROUGHOUT THE DURATION OF THE PROJECT. PROVIDE TEMPORARY LIGHTING AS NEEDED.

33. CONTRACTOR SHALL RESTORE SIDEWALK TO MATCH EXISTING SIDEWALK IN DESIGN, COLOR, AND MATERIAL AND TO EXISTING WHOLE FLAG LINES THAT ARE AFFECTED BY THIS PROJECT.

34. WHEN PROVIDING TEMPORARY SIGNAL, CONTRACTOR SHALL MAINTAIN 5' PATH OF TRAVEL.

35. CONTRACTOR SHALL RELABEL NEW AND REUSED SIGNAL WIRES PER SPECIFICATIONS SECTION 26 05 00. USE SIGNAL HEAD NUMBERS ON PLANS.

36. CONDUIT ALIGNMENT SHOWN ON PLANS ARE SCHEMATIC. CONDUIT RUNS SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE. WHERE OBSTRUCTIONS ARE ENCOUNTERED AND WITH PRIOR APPROVAL OF THE ENGINEER, LOCATION OF CONDUIT MAY BE CHANGED OR ALIGNMENT BE CURVED ACCORDINGLY TO THE CONDUIT BENDING RESTRICTIONS SPECIFIED IN THE SPECIAL PROVISIONS.

37. THE UTILITIES INFORMATION IS FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATIONS OF THE UTILITIES. ALL DAMAGE TO EXISTING UTILITY LINES OR ADJACENT FACILITIES SHALL BE REPAIRED PROMPTLY AT THE CONTRACTOR'S EXPENSE.

38. ANY PULL BOXES INSTALLED ON ROADWAY OR DRIVEWAY SHALL BE H-20 LOADING WITH NO-SKID METAL COVER AND SEE SHEET NOTE 4SPDPWSF #87,201.

GENERAL NOTES (CONT.)

39. FOR ALL TRAFFIC SIGNAL AND STREET LIGHT PULL BOXES THAT ARE ROTATED, RELOCATED, OR ADJUSTED, THE CONTRACTOR SHALL CONTACT SFMTA TRAFFIC SIGNAL SHOP AND SFPUC AT LEAST 3 DAYS PRIOR TO SETTING THE BOX AT THE NEW LOCATION AND/OR GRADE. THE WORK PERFORMED SHALL MEET THE FOLLOWING CONDITIONS:

- THE ENDS OF ALL EXISTING CONDUITS SHALL BE WITHIN THE WALLS OF THE EXISTING PULL BOX AT ITS NEW LOCATION;
- THE CONDUIT ENDS (I.E., BUSHINGS) SHALL BE A MINIMUM OF 5" FROM THE BOTTOM OF THE PULL BOX LID;
- CONTRACTOR SHALL CONTACT THE SFMTA TRAFFIC SIGNAL SHOP AND SFPUC THROUGH THE ENGINEER AFTER THE WORK IS COMPLETED, FOR FINAL INSPECTION AND APPROVAL OF THE PULL BOX MODIFICATION(S);
- ALL CONDUIT AND WIRING MODIFICATIONS SHALL BE PART OF INCIDENTAL COST.

40. WHERE EXISTING CONDUITS NEED TO BE EXTENDED TO THE PULL BOX, THE CONTRACTOR SHALL MODIFY THE EXISTING TRAFFIC SIGNAL WIRING AS FOLLOWS:

- REMOVE EXISTING TRAFFIC SIGNAL WIRING, COMPLETE ALL NECESSARY PULL BOX AND CONDUIT MODIFICATIONS, PROVIDE NEW TRAFFIC SINGAL WIRES TO REPLACE ALL THE EXISTING WIRING IMPACTED BY THIS MODIFICATION;

OR

- WITH THE APPROVAL OF THE SFMTA TRAFFIC SIGNAL SHOP, THE CONTRACTOR SHALL PULL BACK EXISTING WIRES TO ADJACENT PULL BOX (TOWARD THE I/C), COMPLETE ALL NECESSARY PULL BOX AND CONDUIT MODIFICATIONS, RECONNECT, AND REUSE THE EXISTING TRAFFIC SIGNAL WIRES, IF FEASIBLE.

41. CONTRACTOR TO PROVIDE TEMPORARY POLE BASE MOUNTED LIGHTING FOR PEDESTRIAN AND VEHICULAR SAFETY IF THERE IS CONFLICT WITH EXISTING AND/OR NEW LIGHTING IN THE LIMIT OF WORK. TEMPORARY LIGHTING SOURCE SHALL BE TAP FROM THE NEAREST EXISTING SOURCE. THIS WORK SHALL BE PART OF INCIDENTAL COST.

42. CONTRACTOR SHALL CONTACT WITH SFPUC – UTILITY SERVICE AT (415)227-8529 HIEU DOAN FOR INSPECTION; TEN(10) DAYS ADVANCE NOTICE IS REQUIRED.

43. THE CONTRACTOR SHALL COORDINATE WITH SFMTA TRAFFIC SIGNAL SHOP AT (415)550-2736 TO COORDINATE PICK UP AND DELIVERY OF CONTROLLER CABINET. TEN (10) WORKING DAYS ADVANCE NOTICE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR INSTALLING CABINET PER PG&E REQUIREMENTS BEFORE PG&E CONNECTION.

44. THE CONTRACTOR SHALL COORDINATE WITH PG&E VIA BHASKAR GOSWAMI OF SFPUC AT (415)554-3135 FOR SERVICE CONNECTIONS; TEN(10) WORKING DAYS ADVANCE NOTICE IS REQUIRED.

45. THE LUMINAIRE SHALL BE PROVIDED WITH NEMA PHOTO CONTROL RECEPTACLE AND TWIST LOCK PHOTOCELL, FUSE AND BACKLIGHT CUT-OFF.

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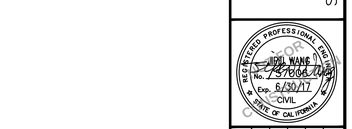
ELECTRICAL LEGEND - GENERAL NOTES
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA



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Design: TH
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Approved: BS
Job No: 20090086

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E1.02

DRAWING NAME: \\bkfs-fs1\nd\2009\20090086-15\ENG\Sheets\Phase 1B\E1.02 - General Notes.dwg (Layout1)
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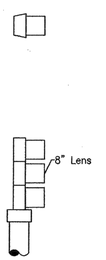

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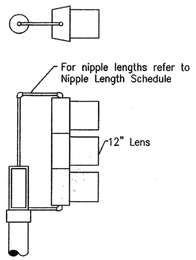

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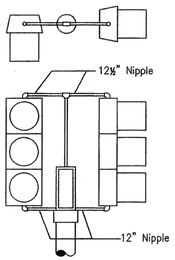

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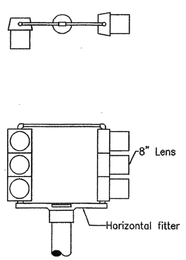

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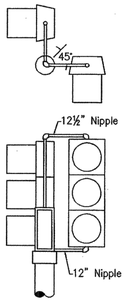

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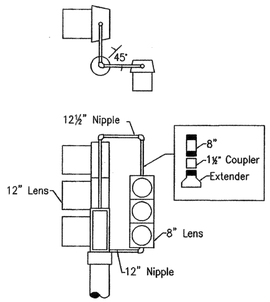

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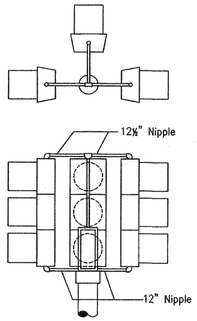

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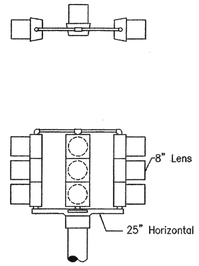

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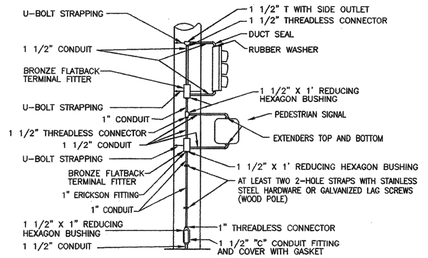
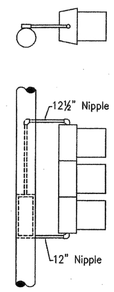


SIGNAL HEAD MOUNTINGS
EXTERNAL CONDUIT DETAILS



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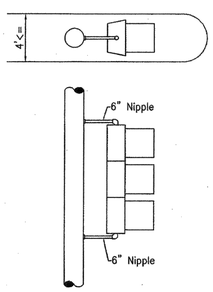

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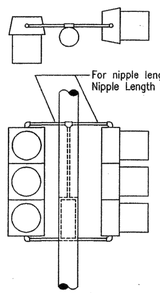

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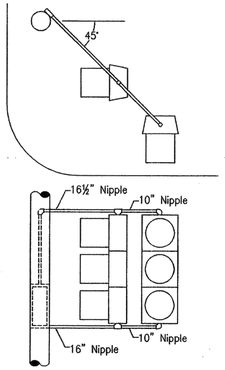

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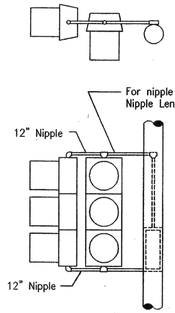

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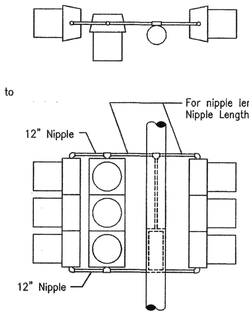


SV-3-TA

NIPPLE LENGTH SCHEDULE

MOUNTING DETAIL	POLE DIAMETER	LENS TYPE	TOP NIPPLE LENGTH	BOTTOM NIPPLE LENGTH
SV-2-TA SV-3-TA SV-2-TC	If ≤ 8" and	8" Sections	12½"	12"
		Otherwise	16½"	16"
SP-1-T SP-2-T	4" TO 6"	Pedestrian	12½"	12"
SP-1-T SP-2-T	7" TO 8"	Pedestrian	14½"	14"
SP-1-T SP-2-T	>8"	Pedestrian	18½"	18"
TV-1-T		12" Sections or Combinations	12½"	12"

Notes: Combinations denote at lease one 12" lens on the signal head.
All dimension are expressed in inches.

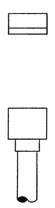
NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplates.
3. See State of California Department of Transportation standard plans ES-3D and ES-3E for attachment fitting details (except pole plates).
4. All framing shall be 1-1/2 hot dip galvanized pipe.
5. Mounting details are for internally wired poles.
6. Mounting height is measured from the sidewalk to bottom of lower bracket nipple.
7. For side mounted signals, U-bolt clamp required for steel or concrete poles. Pole plate with lag screws for wood poles.
8. Framework plugs shall be galvanized steel.
9. For TV-2-T-SFA and TV-2-T-SFB mountings, the terminal compartment shall be oriented to face the nearest curb to provide for street access.
10. See State of California Department of Transportation Standard plans ES-3A and ES-3B for other types of signal head mounting details.

ABBREVIATIONS:

TP	Top mounted pedestrian signal
TV	Top mounted vehicular signal
SP	Side mounted pedestrian signal
SV	Side mounted vehicular signal
1,2,3,4	Number of signal heads (3 section unless otherwise indicated)
T	Terminal compartment
TA	Terminal compartment in configuration "A" (See Caltrans ES-3A)
SF	San Francisco Standard
SFA	San Francisco Standard in configuration "A"

VEHICULAR SIGNAL MOUNTINGS



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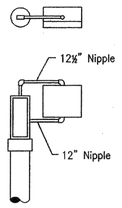
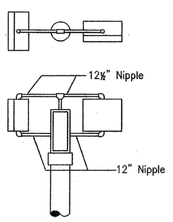


TP-1-T



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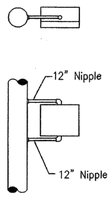

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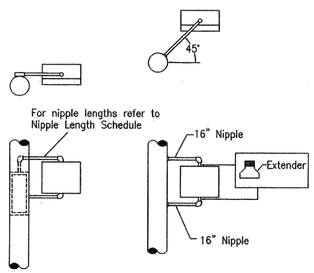
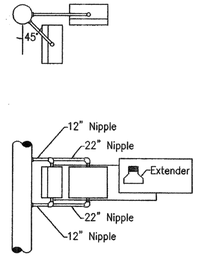
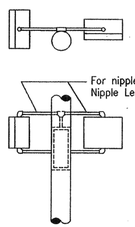


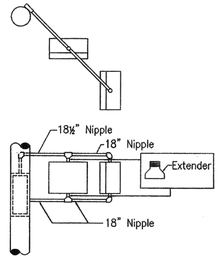
SP-1-T SP-1-SF



SP-1-SF with SP-1



SP-2-T



SP-2-T-SF

PEDESTRIAN SIGNAL MOUNTINGS

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255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
ELECTRICAL DETAILS - SIGNAL HEAD MOUNTING
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
JIDU WANG
No. E 78166
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: TH
Drawn: NL
Approved: ES
Job No: 20090086

Drawing Number:
E1.03

DRAWING NAME: \\BKF-fs\ Vol4\2009\20090086-15\ENG\Sheets\Phase 1B\E1.03 - Signal Mounting.dwg (Layout)
PLOT TIME: 4-28-2017 4:35 PM PLOTTED BY: nwu

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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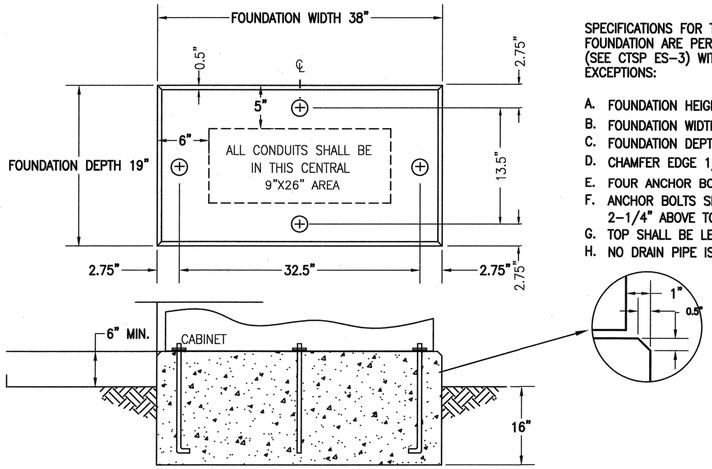
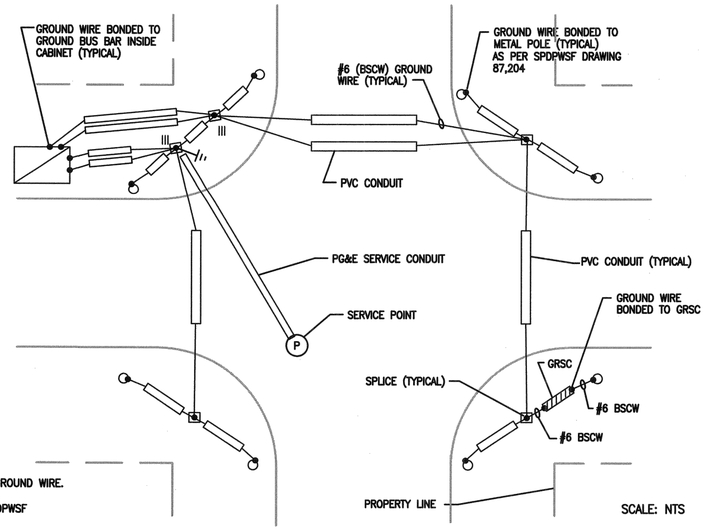


SPECIFICATIONS FOR THE 'M-SF' CABINET FOUNDATION ARE PER CALTRANS 'M' FOUNDATION (SEE CTSP ES-3) WITH THE FOLLOWING EXCEPTIONS:

A. FOUNDATION HEIGHT OF 22"
B. FOUNDATION WIDTH OF 38".
C. FOUNDATION DEPTH OF 19".
D. CHAMFER EDGE 1/2" X 1/2".
E. FOUR ANCHOR BOLTS AS SHOWN.
F. ANCHOR BOLTS SHALL EXTEND 2" TO 2-1/4" ABOVE TOP OF FOUNDATION.
G. TOP SHALL BE LEVEL WITH A SMOOTH FINISH
H. NO DRAIN PIPE IS REQUIRED.

"M-SF" CABINET FOUNDATION DETAIL 1/–

NTS



1. ALL PVC CONDUITS SHALL HAVE 1#6 (BSCW) GROUND WIRE.
2. SPLICING OF GROUND WIRE SHALL BE PER SPDPWSF DRAWING 87,204
3. THE CONTRACTOR SHALL COORDINATE WITH PG&E VIA BHASKAR GOSWAMI OF SFPUC AT (415) 554-3135 FOR SERVICE CONNECTIONS; TEN WORKING DAYS ADVANCE NOTICE IS REQUIRED.
4. SERVICE CONNECTIONS SHALL BE MADE PER SPDPWSF #87,203. IF THE PLAN REQUIRES FUSING IN A PULL BOX FOR IC SERVICE, THIS IS THE POINT THE NEUTRAL IS BONDED TO GROUND.

GROUNDING LAYOUT DETAIL 2/–

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PHASE 1B STREET IMPROVEMENT PLANS
ELECTRICAL DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JIDIL WANG
No. 73806
Exp. 6/30/17
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No.	Revisions

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Scale: NONE
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
E1.04

DRAWING NAME: \\BKF-SJ\vol4\2009\20090086-15\ENG\Sheets\Phase 1B\E1.04 - Electrical Details.dwg (Layout1)
PLOT TIME: 4-28-2017 4:35 PM PLOTTED BY: leea

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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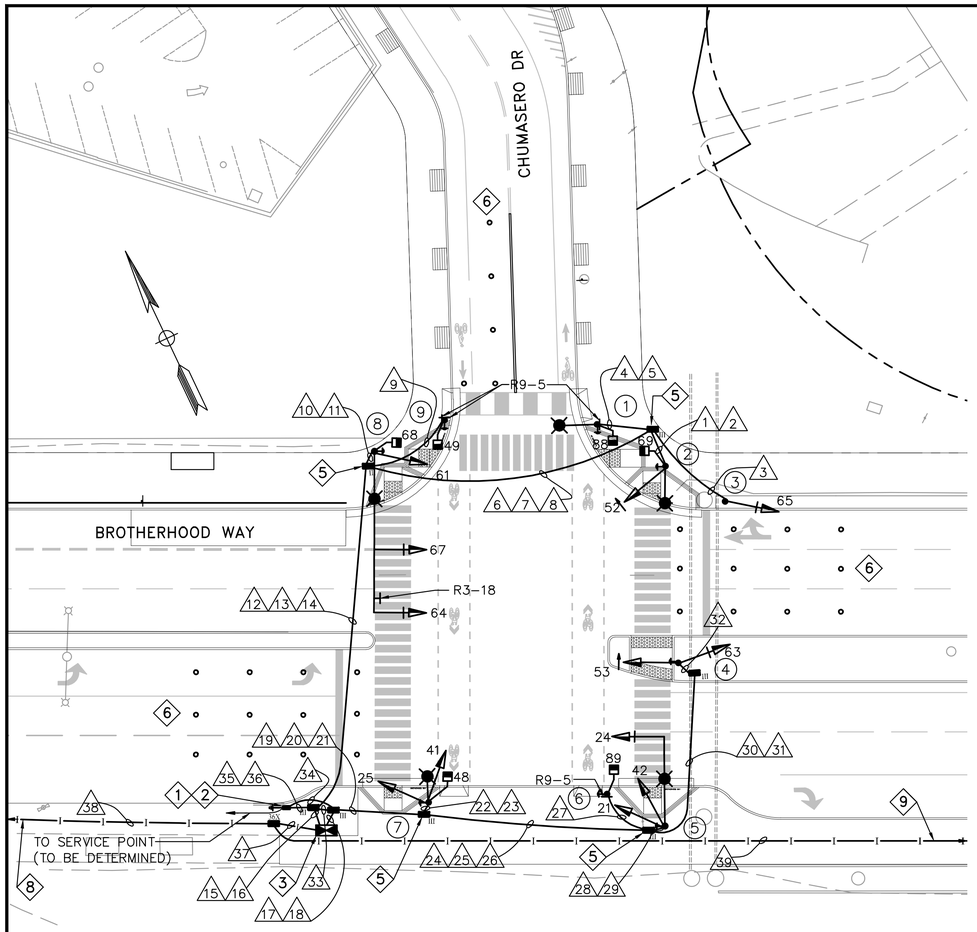


POLE AND EQUIPMENT SCHEDULE

POLE No.	TYPE OF POLE	LUMINAIRE VOLTAGE/ WATTAGE*	VEHICLE SIGNAL					PEDESTRIAN SIGNAL			REMARKS ◊0
			No.	TYPE	MOUNTING	VISORS	LOUVERS	No.	TYPE ◊7	MOUNTING	
①	CITY STANDARD STREET LIGHT	120/240V 130W						88	1S-COUNT	SP-1	APS-2W
②	CITY STANDARD STREET LIGHT	120/240V 130W	52	3S12"	SV-1-T	T		69	1S-COUNT	SP-1	APS-2W
③	1-A(10')		65	3S12"	TV-1-T	T					
④	1-A(10')		53 63	3S12" 3S12"	TV-2-T	T T					APS-2W
⑤	19-3-100 WITH 25' MASTARM & 6' LUMINAIRE ARM	120/240V 130W	21 42 24	3S12" 3S12" 3S12"	SV-2-TC MAS	T T T					APS-2W BACKPLATE FOR SIGNAL 24
⑥	1-A(7')							89	1S-COUNT	TP-1	APS-2W
⑦	CITY STANDARD STREET LIGHT	120/240V 130W	25 41	3S12" 3S12"	SV-2-TC	T		48	1S-COUNT	SP-1	APS-2W
⑧	26-4-100 WITH 45' MASTARM & 6' LUMINAIRE ARM	120/240V 130W	61 64 67	3S12" 3S12" 3S12"	SV-1-T MAS MAS	T T T		68	1S-COUNT	SP-1	APS-2W BACKPLATE FOR SIGNAL 64 BACKPLATE FOR SIGNAL 67
⑨	1-A(7')							49	1S-COUNT	TP-1	APS-2W

*** INSTALL LED LUMINAIRE(S). LED TYPE SHALL BE EVOLVE LED ROADWAY LIGHT BY GE, MODEL No. ERS2-0-E3-D1-7-40-4-GRAY-L.**

DETAIL NOTES:

◊1 CONTROLLER SERVICE POINT IS A PG&E SERVICE BOX (TO BE DETERMINED). CONTRACTOR SHALL COORDINATE WITH PG&E THROUGH SFPUC (BHASKAR GOSWAMI (415) 554-3135) FOR FINAL POWER SERVICE CONNECTION. TEN DAYS NOTICE IS REQUIRED.

◊2 CONTRACTOR SHALL PROVIDE 40A INLINE FUSE AND FUSE HOLDER FOR TRAFFIC SIGNAL SERVICE DISCONNECT AND 30A INLINE FUSE & FUSE HOLDER FOR STREETLIGHT DISCONNECT IN FIRST PULL BOX NEXT TO THE NEW PG&E SERVICE.

◊3 CONTRACTOR TO INSTALL CITY FURNISHED INTERSECTION TRAFFIC SIGNAL CONTROLLER CABINET AND BATTERY BACK-UP SYSTEM.

◊4 CONTRACTOR TO INSTALL APS WIRING AS INDICATED IN CONDUIT AND WIRING SCHEDULE. CITY FORCES TO FURNISH AND INSTALL AND ACTIVATE APS BUTTONS ON POLES AS SHOWN ON INTERSECTION DRAWING AND AS INDICATED IN POLE & EQUIPMENT SCHEDULE.

◊5 F/I 10A INLINE FUSE AND FUSE HOLDER FOR STREETLIGHT.

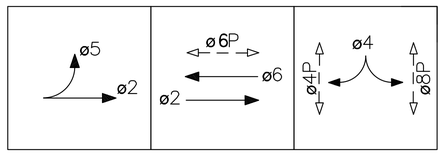
◊6 CITY FORCES TO INSTALL SENSYS WIRELESS SENSORS.

◊7 CONTRACTOR TO INSTALL CITY FURNISHED ONE SECTION LED PEDESTRIAN COUNTDOWN SIGNAL MODULE IN CONTRACTOR FURNISHED ONE SECTION PEDESTRIAN SIGNAL HOUSING.

◊8 INSTALL 4-2" SIGNAL INTERCONNECT CONDUITS AND SIGNAL INTERCONNECT CABLE TO THE INTERSECTION OF BROTHERHOOD WAY AND SUMMIT WAY (±300'). INSTALL 36X PULL BOXES IN 200' INTERVAL MAXIMUM.

◊9 INSTALL 4-2" SIGNAL INTERCONNECT CONDUITS AND SIGNAL INTERCONNECT CABLE TO THE INTERSECTION OF BROTHERHOOD WAY AND THOMAS MORE WAY (±200'). INSTALL 36X PULL BOXES IN 200' INTERVAL MAXIMUM.

PHASE DIAGRAM



PHASE SEQUENCE

G					Y	R		BROTHERHOOD WAY (EB) – ø2
G	Y		R					BROTHERHOOD WAY LEFT TURN (EB) – ø5
R		G			Y	R		BROTHERHOOD WAY (WB) – ø6
RH		WM		FRH	RH			PED XING CHUMASERO DR (NS) – ø6P
R					G		Y	CHUMASERO DR (SB) – ø4
RH					WM	FRH	RH	PED XING BROTHERHOOD WAY (WS & ES) – ø4P & ø8P

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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255 SHORELINE DR
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650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TRAFFIC SIGNAL INSTALLATION PLAN - BROTHERHOOD WAY & CHUMASERO DR
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
TOM WANG
No. 79066
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

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DRAWING NAME: \\BKF-S2\vol4\2009\20090086-15\ENG\Sheets\Phase 1B\E1.05 - BrotherhoodChumaseroSIG.dwg
LOGGED FILE: May 26, 2017 4:56 PM PLOTTED: 01, 1860

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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CONDUCTOR AND CONDUIT SCHEDULE

CONDUIT RUN NUMBER		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
CONDUIT SIZE (INCH)		2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2-2	4-2	4-2
			GRS			GRS		GRS	SP			GRS		GRS	SP		SP		SP		GRS	SP		GRS		GRS	SP		GRS		SP		SP	GRS		GRS	HDPE	HDPE	HDPE
NOTES																																								
	PED SIGNAL 88				2		2						2			2																									
	APS PPB FOR XING CHUMASERO DR ON POLE 1				2		2						2			2																								
	VEHICLE SIGNAL 52	3					3						3			3																								
	PED SIGNAL 69	2					2						2			2																								
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 2	2					2						2			2																								
	VEHICLE SIGNAL 65			3			3						3			3																								
	PED SIGNAL 49									2			2			2																								
	APS PPB FOR XING CHUMASERO DR ON POLE 9									2			2			2																								
	VEHICLE SIGNAL 61										3		3			3																								
	VEHICLE SIGNAL 64										3		3			3																								
	VEHICLE SIGNAL 67										3		3			3																								
	PED SIGNAL 68										2		2			2																								
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 8										2		2			2																								
	VEHICLE SIGNAL 25																	3		3			3																
	VEHICLE SIGNAL 41																	3		3			3																
	PED SIGNAL 48																	2		2			2																
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 7																	2		2			2																
	PED SIGNAL 89																	2		2			2		2			2												
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 6																	2		2			2		2			2												
	VEHICLE SIGNAL 21																	3		3			3		3			3	3										
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	VEHICLE SIGNAL 42																	3		3			3		3			3	3										
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 5																	2		2			2		2			2	2										
	VEHICLE SIGNAL 53																	3		3			3		3			3			3		3						
	VEHICLE SIGNAL 63																	3		3			3		3			3			3		3						
	APS PPB FOR XING BROTHERHOOD WAY ON POLE 4																	2		2			2		2			2			2		2						
	#14 NEUTRAL	2		1	1					1	4												3					1	3			2							
	#14 SPARE						3						3			3		3		3						3					3									
	TOTAL 14 WIRES	9		4	5		17			5	17		34			37		36		36			36		26			24	14		11		10						
	#10 WIRES NEUTRAL						1						2			2		3		3					2						1								
	#10 WIRES STREET LIGHT		2			2						2												2					2										
	#8 WIRES STREET LIGHT							2						2							2					2									2		2			
	#8 WIRES (120 V SERVICE)															2																			2					
	INTERCONNECT 12C CABLE																																				4	2	2

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PHASE 1B STREET IMPROVEMENT PLANS
CONDUIT & WIRING SCHEDULE – BROTHERHOOD WAY & CHUMASERO DR
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO



No.	Revisions

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Drawn: NL
Approved: BS
Job No: 20090086

Drawing Number:
E1.06

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PLOT TIME/DATE: 4/28/2017 4:29 PM PLOTTED BY: Neil

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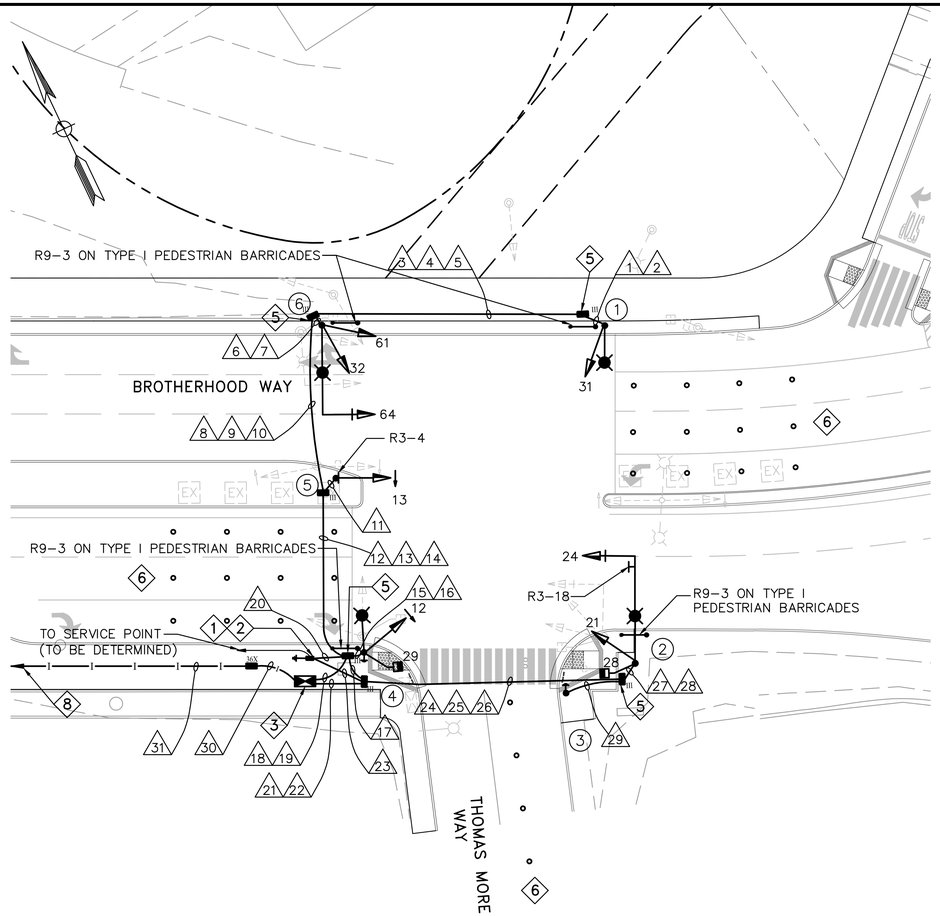


POLE AND EQUIPMENT SCHEDULE

POLE No.	TYPE OF POLE	LUMINAIRE VOLTAGE/ WATTAGE	VEHICLE SIGNAL					PEDESTRIAN SIGNAL			REMARKS ◇4
			No.	TYPE	MOUNTING	VISORS	LOUVERS	No.	TYPE ◇7	MOUNTING	
①	CITY STANDARD WITH 6' LUMINAIRE ARM	120/240V 130W	31	3S12"	SV-1-T	T					
②	19-4-100 WITH 30' MASTARM & 6' LUMINAIRE ARM	120/240V 130W	21 24	3S12" 3S12"	SV-1-T MAS	T T		28	1S-COUNT	SP-1	BACKPLATE FOR SIGNAL 24
③	PPBP										APS-2W
④	CITY STANDARD WITH 6' LUMINAIRE ARM	120/240V 130W	12	3S12"LA	SV-1-T	T		29	1S-COUNT	SP-1	APS-2W
⑤	1-A(10')		13	3S12"LA	TV-1-T	T					
⑥	19-4-100 WITH 25' MASTARM & 6' LUMINAIRE ARM	120/240V 130W	61 32 64	3S12" 3S12" 3S12"	SV-2-TC MAS	T T T					BACKPLATE FOR SIGNAL 64

*** INSTALL LED LUMINAIRE(S). LED TYPE SHALL BE EVOLVE LED ROADWAY LIGHT BY GE, MODEL No. ERS2-0-E3-D1-7-40-4-GRAY-L.**

DETAIL NOTES:

◇1 CONTROLLER SERVICE POINT IS A PG&E SERVICE BOX (TO BE DETERMINED). CONTRACTOR SHALL COORDINATE WITH PG&E THROUGH SFPUC (BHASKAR GOSWAMI (415) 554-3135) FOR FINAL POWER SERVICE CONNECTION. TEN DAYS NOTICE IS REQUIRED.

◇2 CONTRACTOR SHALL PROVIDE 40A INLINE FUSE AND FUSE HOLDER FOR TRAFFIC SIGNAL SERVICE DISCONNECT AND 30A INLINE FUSE & FUSE HOLDER FOR STREETLIGHT DISCONNECT IN FIRST PULL BOX NEXT TO THE NEW PG&E SERVICE.

◇3 CONTRACTOR TO INSTALL CITY FURNISHED INTERSECTION TRAFFIC SIGNAL CONTROLLER CABINET AND BATTERY BACK-UP SYSTEM.

◇4 CONTRACTOR TO INSTALL APS WIRING AS INDICATED IN CONDUIT AND WIRING SCHEDULE. CITY FORCES TO FURNISH, INSTALL AND ACTIVATE APS BUTTONS ON POLES AS SHOWN ON INTERSECTION DRAWING AND AS INDICATED IN POLE & EQUIPMENT SCHEDULE.

◇5 F/I 10A INLINE FUSE AND FUSE HOLDER FOR STREETLIGHT.

◇6 CITY FORCES TO INSTALL SENSYS WIRELESS SENSORS.

◇7 CONTRACTOR TO INSTALL CITY-FURNISHED ONE-SECTION LED PEDESTRIAN COUNTDOWN SIGNAL MODULE IN CONTRACTOR FURNISHED ONE-SECTION PEDESTRIAN SIGNAL HOUSING.

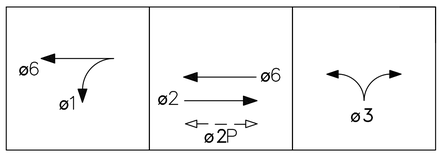
◇8 INSTALL 4-2" SIGNAL INTERCONNECT CONDUITS AND SIGNAL INTERCONNECT CABLE TO THE INTERSECTION OF BROTHERHOOD WAY AND CHUMASERO DRIVE (±200'). INSTALL 36X PULL BOXES IN 200' INTERVAL MAXIMUM.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PHASE DIAGRAM



PHASE SEQUENCE

G				Y	R	BROTHERHOOD WAY (WB) – ø2
G	Y		R			BROTHERHOOD WAY LEFT TURN (WB) – ø5
R		G		Y	R	BROTHERHOOD WAY (EB) – ø6
RH	WM	FRH		RH		PED XING BROTHERHOOD WAY (SS) – ø6P
R				G	Y	THOMAS MORE WAY (NB) – ø3

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PHASE 1B STREET IMPROVEMENT PLANS
TRAFFIC SIGNAL INSTALLATION PLAN – BROTHERHOOD WAY & THOMAS MORE WAY
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED PROFESSIONAL ENGINEER
JUN WANG
No. C57006
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

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LAYOUT: E1.07 – BROTHERHOOD THOMAS SIG
LAST PLOT: 4-28-2017 4:39 PM BS

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

© BKF ENGINEERS

CONDUCTOR AND CONDUIT SCHEDULE

CONDUIT RUN NUMBER		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
CONDUIT SIZE (INCH)		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	2	2	2	2	2	2	2-2	4-2
			GRS		SP	GRS		GRS		SP	GRS			SP	GRS		GRS	SP		SP	GRS		SP	GRS		SP	GRS		GRS			
NOTES																																
	VEHICLE SIGNAL 31	3		3					3				3						3													
	VEHICLE SIGNAL 32						3		3				3						3													
	VEHICLE SIGNAL 61						3		3				3						3													
	VEHICLE SIGNAL 64						3		3				3						3													
	VEHICLE SIGNAL 13											3	3						3													
	VEHICLE SIGNAL 12															3			3													
	PED SIGNAL 29															2			2													
	APS PPB FOR XING THOMAS MORE WAY ON POLE 4															2			2													
	VEHICLE SIGNAL 21																					3			3			3				
	VEHICLE SIGNAL 24																					3			3			3				
	PED SIGNAL 28																					2			2			2				
	APS PPB FOR XING THOMAS MORE WAY ON POLE 3																					2			2					2		
	#14 NEUTRAL	2					2					2				2												2		2		
	#14 SPARE			3					3				3						3			3			3							
	TOTAL 14 WIRES	5		6			11		15			5	18			9			25			13			13			10		4		
	#10 WIRES NEUTRAL			1					1				1						1			1			1							
	#10 WIRES STREET LIGHT		2					2									2												2			
	#8 WIRES STREET LIGHT					2					2				2						2			2			2					
	#8 WIRES (120 V SERVICE)																		2		2											
	INTERCONNECT 12C CABLE																														2	2

BKF
ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
CONDUIT & WIRING SCHEDULE - BROTHERWOOD WAY & THOMAS MORE WAY
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JIRO WANG
No. 37806
Exp. 6/30/17
CIVIL
STATE OF CALIFORNIA

No.	Revisions

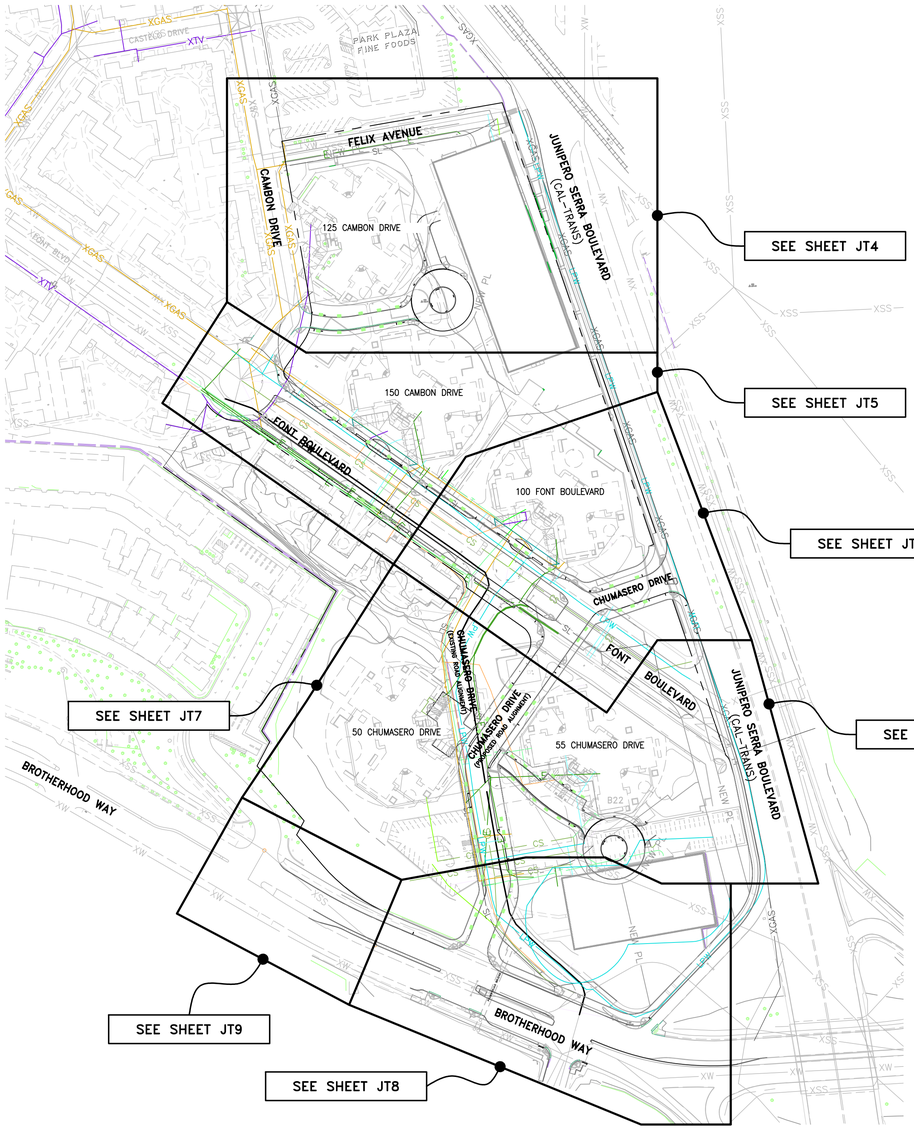
Date: 05/01/17
Scale: 1"=20'
Design: TH
Drawn: NL
Approved: BS
Job No: 20090086

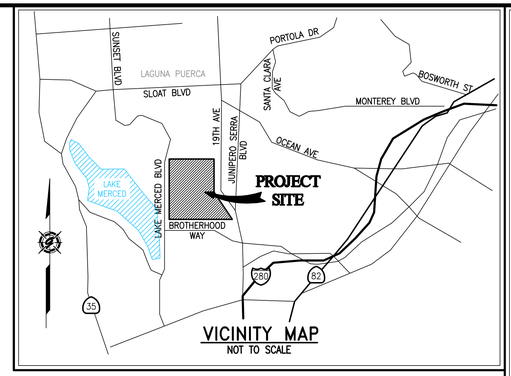
Drawing Number:
E1.08

DRAWING NAME: \\BKF-SJ\vol4\2009\20090086-15\ENG\Sheets\Phase 1B\E1.08 - BrotherhoodThomasSIG-Sched.dwg
(Layout1)
LOT TIME: 4-26-2017 4:40 PM PLOTTED BY: [illegible]

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

BKF
PARKMERCED
PHASE 1B - B20 & B22
SAN FRANCISCO, CALIFORNIA







PG&E PM NO.

ELECTRIC:		
NEW BUSINESS:	BLOCK 20-NORTH	31186038
	BLOCK 20-SOUTH	31186062
	BLOCK 22-EAST	31186064
	BLOCK 22-WEST	31186066
TEMP SERVICE:	BLOCK 20 (1208 JUNIPERO SERRA)	31186037
	BLOCK 22	31186063
GAS:		
NEW BUSINESS:	BLOCK 20	31185053
	BLOCK 22	31179643
CAPACITY:		31176624

PROJECT TEAM CONTACTS

COMPANY:	CONTACT:	PHONE:
MAXIMUS REAL ESTATE PARTNERS	FERNANDO G. BRAVO	415-549-8962
BKF	BRIAN SCOTT	650-482-6335
BKF	TIM HEFFERNAN	650-482-6300
PG&E - SAN FRANCISCO	MIKE BALMY	415-695-3515
AT&T - SAN FRANCISCO	TIM LAPORTE	415-216-2280
CABLECOM, LLC - BURLINGGAME	MARK WHEELER	650-670-6008
DTIS - PUBLIC SAFETY	MIKE DENNING	415-550-2718
GIACALONE DESIGN SERVICES, INC.	DAVE CROWFOOT	925-467-1740

LATEST FILES RECEIVED

DESCRIPTION:	BY:	DATE:	STATUS:
GAS DESIGN	PG&E	03-02-16	90% EXHIBIT
ELECTRIC DESIGN	PG&E	04-08-16	PRELIMINARY
TELEPHONE LAYOUT	AT&T	03-23-16	INTENT REPLY
COMCAST CATV LAYOUT	CABLECOM	03-14-16	INTENT REPLY
WAVEBAND & GOOGLE LAYOUT	GDSI	12-10-15	INTENT REPLY
STREET LIGHT PLANS - PUBLIC	GDSI	08-10-16	
PUBLIC SAFETY LAYOUT	GDSI	08-10-16	
IMPROVEMENT PLANS (ELECTRONIC FILE)	BKF	04-26-17	

A=Approved • ANS=Approved Not Signed • NA=Not Approved • F=First Submittal • SS=Second Submittal

B20: PROJECT DESCRIPTION & SCOPE

- NEW SERVICE TO (2) BUILDINGS CONSISTING OF 299 TOTAL UNITS
  (NORTH TOWER) BUILDING (1) BLOCK 20 - LOT 03A (188 UNITS)
  -3000A,120/208V, 3ø 4W
  600-1000 SF; (AVE. UNIT=780 SF)
  -COMMON AREA: 30,000 SF & (NO RETAIL)
  (1218 JUNIPERO SERRA) BUILDING (2) BLOCK 20 - LOT 03B (111 UNITS)
  -2000A,120/208V, 3ø 4W,
  600-1000 SF; (AVE. UNIT=780 SF)
  -COMMON AREA: 17,000 SF & (NO RETAIL)
  COMBINED HOUSE PANEL: 2000A, 277/480V, 3ø 4W
- JOINT TRENCH RELOCATION ALONG CHUMASERO DRIVE & FONT BLVD.

B22: PROJECT DESCRIPTION & SCOPE

- NEW SERVICE TO (1) BUILDING CONSISTING OF 164 TOTAL UNITS
  (95 CHUMASERO DRIVE) (BLOCK 22-02) - EAST TOWER
  -(1) 2500A,120/208V, 3ø 4W
  600-1000 SF; (AVE. UNIT=780 SF)
  -COMMON AREA: 3,000 SF & (NO RETAIL)
  (1) COMBINED HOUSE PANEL: 1000A, 277/480V, 3ø 4W
- NEW SERVICE TO (1) BUILDING CONSISTING OF 153 TOTAL UNITS
  (99 CHUMASERO DRIVE) (BLOCK 22-03) - WEST TOWER
  -(1) 2500A,120/208V, 3ø 4W
  600-1000 SF; (AVE. UNIT=780 SF)
  -COMMON AREA: 3,000 SF & (NO RETAIL)
  (1) COMBINED HOUSE PANEL: 1600A, 277/480V, 3ø 4W

  -FIRE PUMP DISTRIBUTION - 'FP-A'
  -1600A,277/480V, 3ø 4W
  (1) FIRE PUMP METER (179HP)

SHEET INDEX

SHEET	DESCRIPTION
JT1	JOINT TRENCH COMPOSITE TITLE SHEET
JT2	JOINT TRENCH GENERAL NOTES & DETAILS
JT3	JOINT TRENCH DETAILS & LEGEND
JT3A-JT3B	JOINT TRENCH DETAILS & TRENCH SECTIONS
JT4-JT9	JOINT TRENCH COMPOSITE PLAN
SL1-SL2	PUBLIC STREET LIGHTING TITLE SHEET
SL3-SL5	PUBLIC STREET LIGHTING SITE PLAN
PS1-PS2	PUBLIC SAFETY SITE PLAN

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

JOINT TRENCH COMPOSITE TITLE SHEET

BKF
PARKMERCED
PHASE 1B - B20 & B22
SAN FRANCISCO CALIFORNIA

DAVID CROWFOOT
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: NOT TO SCALE
JOB NUMBER: 14-193 B20 & B22
DATE LAST MODIFIED: 05-01-17

SHEET **JT1** OF 11 SHEETS

LABOR & CONSTRUCTION RESPONSIBILITY

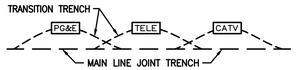
	DEPT. OF TECHNOLOGY	POST ELECTRIC	PG&E GAS	TELEPHONE	CATV, WAVEBAND & GOOGLE	CONTRACTOR
1. TRENCHING: EXCAVATE, BACKFILL AND COMPACT	○	○	○	○	○	●
2. GAS MATERIAL: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
3. ELECTRIC CABLE: SUPPLY	○	●	○	○	○	○
INSTALL	○	●	○	○	○	○
4. ELECTRIC CONDUIT: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
5. ELECTRIC SPLICE BOXES: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
6. ELECTRIC TFMR. ENCLS: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
7. ELECTRIC EQUIP. ENCLS.: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
8. ELECTRIC TRANS. PADS: GRADE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
9. ELECTRIC SWITCH PADS: GRADE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
10. TELEPHONE CONDUIT: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
11. TELEPHONE CABLE: SUPPLY	○	○	○	●	○	○
INSTALL	○	○	○	●	○	○
12. TELEPHONE SPLICE BOXES: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
13. TELEPHONE INTER PADS: GRADE	○	○	○	○	○	○
SUPPLY	○	○	○	○	○	○
INSTALL	○	○	○	○	○	○
14. CATV CONDUITS: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
15. CATV SPLICE BOXES: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
16. WAVEBAND CONDUITS: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
17. WAVEBAND SPLICE BOXES: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
18: PUBLIC SAFETY CONDUITS: SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
19: PUBLIC SAFETY BOXES: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●
20: STREET LIGHTING: EXCAVATE	○	○	○	○	○	●
SUPPLY	○	○	○	○	○	●
INSTALL	○	○	○	○	○	●

THE ● ABOVE DESIGNATES THE WORK TO BE PERFORMED BY THE CONTRACTOR AND EACH UTILITY COMPANY.

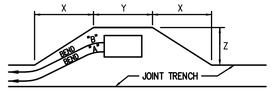
STREET LIGHTING NOTES

1. FOR STREET LIGHT LOCATIONS & CIRCUITRY SEE STREET LIGHT PLANS SHEETS SL1–SL9.
2. STREET LIGHT CONDUIT INSTALLED IN SEPARATE TRENCH. REFER TO J.T. COMPOSITE PLANS FOR LOCATION OF STREET LIGHT TRENCH.

JOINT TRENCH TRANSITION



1. CONTRACTOR TO EXCAVATE TRANSITIONS FROM MAIN–LINE TRENCH TO VAULTS AS REQUIRED BY EACH UTILITY.
2. TRANSITIONS NOT SHOWN ON COMPOSITE DRAWING FOR CLARITY.
3. CONTRACTOR TO INCLUDE COST OF TRANSITIONS IN VAULT EXCAVATION COST.



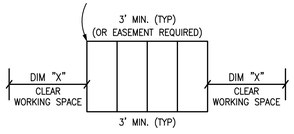
PRIMARY BOX SIZE	DISTANCE "X"	WHEN CONDUIT ENTERS BOX @ "A" "Y"	"Z"
3'x5'	24'	7'	5'
4'6"x8'6"	24'	11'	7'

PRIMARY BOX SIZE	DISTANCE "X"	WHEN CONDUIT ENTERS BOX @ "B" "Y"	"Z"
3'x5'	32'	7'	5'
4'6"x8'6"	32'	11'	7'

TYPICAL PRIMARY BOX EXCAVATION
USING A CONDUIT SYSTEM
NOT TO SCALE

PG&E PRIMARY ENCLOSURE CLEARANCES

3'0"x5'0" PRIMARY ENCLOSURE
OR
4'0"x6'6" PRIMARY ENCLOSURE/TRANSFORMERS
OR
4'6"x8'6"x6'0" PRIMARY ENCLOSURE/TRANSFORMERS



DIM "X"
3' MIN. 3'0"x5'0" & 4'0"x6'6" ENCLOSURES
5' MIN. 4'6"x8'6"x6'0" ENCLOSURES

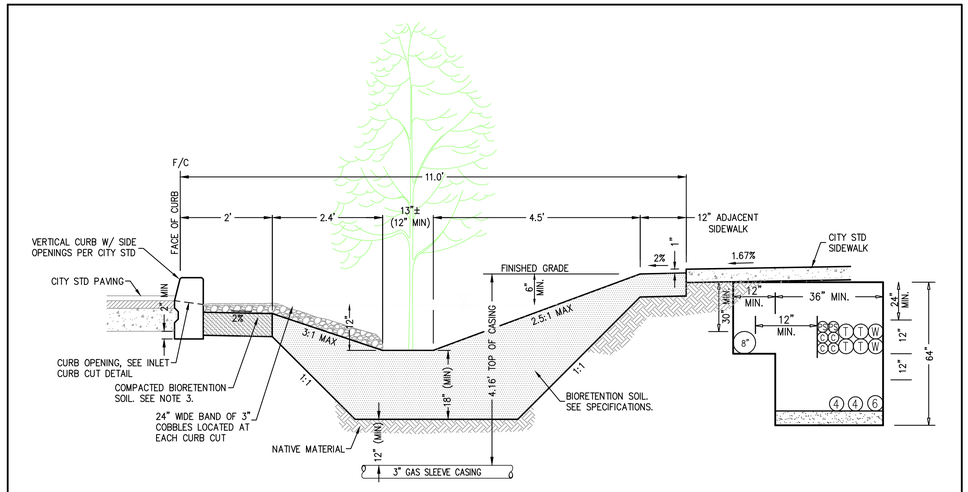
NOT TO SCALE

JOINT TRENCH CONTRACTORS NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO HAVE ALL INSTALLATIONS INSPECTED AND APPROVED BY THE RESPECTIVE UTILITY COMPANY, MUNICIPALITY, OR SOILS ENGINEER PRIOR TO ANY BACK FILLING. (48 HOUR NOTICE)
2. CONTRACTOR WILL COMPLY WITH ALL LAWS, ORDINANCES AND REGULATIONS. CONTRACTOR SHALL BE FAMILIAR WITH O.S.H.A. INDUSTRIAL ORDERS AND SHALL CONDUCT HIS WORK ACCORDINGLY. WHEN WORKING AROUND ENERGIZED EQUIPMENT, THE UTILITY OWNER SHALL BE NOTIFIED TO SUPPLY THE APPROPRIATE MAN POWER AND SAFETY PRECAUTIONS AS NEEDED THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC SAFETY AND TRAFFIC CONTROL MEASURES.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POINTS OF ACCESS THAT ARE AGREEABLE TO ADJACENT LAND USES AND TENANTS AT ALL TIMES.
4. **THE CONTRACTOR TO BE AWARE THAT THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE BASED UPON RECORD DATA MADE AVAILABLE BY PG&E, TELEPHONE, CATV, IMPROVEMENT PLANS AND CITY RECORDS. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR THE INFORMATION SHOWN. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE PRECISE LOCATION OF ALL UNDERGROUND FACILITIES. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) (811) AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO START OF WORK.**
5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF CONSTRUCTION WITH THE RESPECTIVE UTILITY AGENCIES, ALLOWING 48 HOURS PRIOR TO THE NEED FOR INSTALLATIONS.
6. THE CONTRACTOR SHALL NOTIFY DEVELOPER 48 HOURS PRIOR TO THE NEED FOR SURVEY STAKING. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL CONSTRUCTION STAKING SET BY THE DEVELOPERS SURVEYORS AND WILL BE BACK CHARGED FOR ANY RE–STAKING THAT IS REQUIRED.
7. THE CONTRACTOR IS RESPONSIBLE TO PROTECT IN PLACE ALL EXISTING FACILITIES. EXCAVATION MAY BE REQUIRED OVER, UNDER OR ADJACENT TO EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO LOCATE, EXPOSE AND PROTECT ALL EXISTING FACILITIES. THE CONTRACTOR IS RESPONSIBLE TO BID THE WORK BASED ON THE REVIEW OF THE IMPROVEMENT PLANS IN CONJUNCTION WITH THESE PLANS.
8. **IT'S THE CONTRACTOR/DEVELOPER RESPONSIBILITY TO MAKE SURE THAT THE MOST CURRENT SET OF PLANS ARE BEING USED. CALL GIACALONE DESIGN SERVICES, INC. (925) 467–1740 TO VERIFY.**
9. THE CONTRACTOR SHALL COORDINATE ALL TIE–INS WITH UTILITY COMPANIES AS REQUIRED.
10. THE CONTRACTOR SHALL PROVIDE TIE–IN HOLE TO 12" BELOW EXISTING GAS MAIN FOR PG&E GAS TIE–IN(S) UNLESS OTHERWISE NOTED ON PLANS.
11. JOINT TRENCH FACILITIES SHALL MAINTAIN A MINIMUM OF 3' HORIZONTAL CLEARANCE FROM EDGE OF JOINT TRENCH TO EDGE OF "WET" UTILITIES WITH A MINIMUM 6" VERTICAL CLEARANCE WHEN CROSSING (U.O.N), THE CONTRACTOR SHALL REFER TO PG&E UO STANDARD S5453 FOR ADDITIONAL INFORMATION.
12. TRANSITION TRENCH FOR VAULTS/PEDESTALS NOT SHOWN FOR CLARITY. THE CONTRACTOR SHALL PROVIDE INCIDENTAL TRENCHING AS REQUIRED FOR CONDUIT/CABLE ROUTING INTO VAULTS/PEDESTALS. CONTRACTOR SHALL INCLUDE COST OF TRANSITION TRENCH IN VAULT/PEDESTAL EXCAVATION COST.
13. THE CONTRACTOR SHALL OFFSET VAULTS/PEDESTALS AS REQUIRED FOR CONDUIT/CABLE ROUTING.
14. THE CONTRACTOR SHALL FIELD ADJUST VAULTS/PEDESTALS AS REQUIRED TO AVOID CONFLICTS WITH DRIVEWAYS, SIDEWALKS, HANDICAP RAMPS, FIRE HYDRANTS, WATER & SEWER LATERALS, ETC.
15. SERVICE LOCATIONS SHOWN ARE APPROXIMATE, THE CONTRACTOR SHALL FIELD VERIFY THEIR EXACT LOCATIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL FIELD ADJUST SERVICE STUB AND CROSSING LOCATIONS AS REQUIRED TO AVOID CONFLICTS WITH OTHER FACILITIES.
16. SERVICE COMPLETION TRENCHES SHALL BE INSTALLED AFTER CURB AND GUTTER, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE ADDITIONAL MOVE–INS AS NECESSARY TO COMPLETE THE SERVICES TO EACH INDIVIDUAL UNIT WITH THE DEVELOPER, UTILITY COMPANIES & ALL INVOLVED AGENCIES. THE COST OF THESE MOVE–INS SHALL BE INCLUDED IN THE CONTRACTORS UNIT BID PRICE FOR TRENCHING.
17. EDGE OF SPLICE BOXES & PEDESTALS SHALL BE 5' FROM EDGE OF F.H. AND 3' FROM STREET LIGHT (TYP.) CONTRACTOR TO AVOID DISTURBING F.H. THRUST BLOCK.
18. THE CONTRACTOR SHALL PERFORM ALL TRENCHING, EXCAVATING, BACKFILLING, INSTALLATION AND ALL OTHER WORK AS SHOWN OR NOTED ON THESE PLANS & SPECIFICATIONS.
19. ALL TRENCHES, BOXES AND CONDUIT LAYOUTS IN THIS PLAN SET ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL INSTALL ALL UTILITY VAULTS, PADS, CONDUITS, ETC. IN PROPER RELATION TO FINAL GRADE. VERIFY ALL SUBSTRUCTURE EXCAVATION DIMENSIONS WITH SUPPLIERS PRIOR TO EXCAVATING.
20. ALL JOINT TRENCH CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD PRACTICES AND SPECIFICATIONS OF EACH PARTICIPATING UTILITY COMPANY AND CONFORM TO THE CURRENTLY ADOPTED EDITIONS OF THE STANDARD PLANS AND SPECIFICATIONS OF THE CITY OR COUNTY INVOLVED.
21. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING WORK.
22. THE BOTTOM OF ALL TRENCHES SHALL BE CLEARED OF ROCKS AND ALL OTHER HARD SURFACE MATERIAL. A SAND BEDDING OF AT LEAST 2" (TWO INCHES) SHALL BE PROVIDED ON WHICH THE UTILITIES WILL BE PLACED. (MAY NOT BE REQUIRED IN NATIVE SAND AREAS, CONSULT WITH LOCAL AGENCIES).
23. THE CONTRACTOR SHALL NOTIFY GIACALONE DESIGN SERVICES, INC. OF ANY DIFFERENCES IN THE ACTUAL LOCATION OF EXISTING FACILITIES FROM THAT SHOWN IN THESE PLANS, OR ANY OTHER CONFLICTS WITH THE DESIGN, PRIOR TO CONTINUING WORK IN THAT AREA. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT FIRST NOTIFYING GIACALONE DESIGN SERVICES, INC.
24. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR ANY DIFFERENCES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PRIOR TO SUBMITTING BID.
25. THE CONTRACTOR SHALL COORDINATE ALL CONNECTIONS BETWEEN EXISTING AND PROPOSED FACILITIES WITH THE RESPECTIVE UTILITY INSPECTOR. ALL EXISTING CONDUIT TO BE USED SHALL BE MANDREL TESTED AND PROVED PRIOR TO MAKING CONNECTION AS DIRECTED BY THE GOVERNING INSPECTOR. UTILITY COMPANIES SHALL MAKE ALL "HOT" TIE–INS AND CONNECTIONS. **THE CONTRACTOR SHALL NOT ENTER OR WORK ON ANY ENERGIZED FACILITIES, UNLESS DIRECTED BY THE UTILITY INSPECTOR.** THIS COST SHALL BE INCLUDED IN CONTRACTOR BID.
26. THE CONTRACTOR IS REQUIRED TO EXCAVATE "BELL HOLES" AT THE TIE–IN LOCATIONS AS REQUIRED BY THE UTILITY COMPANIES.
27. TRENCHING AND/OR SUBSTRUCTURE EXCAVATIONS MAY TAKE PLACE OVER, UNDER, OR ADJACENT TO OTHER UNDERGROUND FACILITIES (STORM, SEWER, WATER, ETC.). THE CONTRACTOR IS RESPONSIBLE TO LOCATE, EXPOSE AND PROTECT IN PLACE ALL EXISTING FACILITIES. THIS WORK SHALL NOT BE CONSIDERED AS EXTRA WORK. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW ALL IMPROVEMENT AND GRADING PLANS, IN CONJUNCTION WITH THESE PLANS, AND BID HIS WORK ACCORDINGLY.
28. THE RESPECTIVE UTILITY INSPECTOR WILL DETERMINE IN THE FIELD IF RETAINING WALLS WILL BE NEEDED TO MEET THE MINIMUM CLEARANCE REQUIREMENTS. REFER TO THE PG&E "GREEN BOOK" STANDARD DRAWING 051122 FOR APPROVED RETAINING WALL REQUIREMENTS. RETAINING WALLS ARE THE DEVELOPERS RESPONSIBILITY AND ARE NOT INCLUDED IN THIS CONTRACT.
29. THE CONTRACTOR SHALL "RED–LINE" (1) ONE SET OF THE JOINT TRENCH COMPOSITE PLANS AND (2) TWO SETS OF THE GAS AND ELECTRIC PLANS WITH "AS–BUILT" INFORMATION AND GIVE TO THE DEVELOPER PRIOR TO SPLICING OF THE PRIMARY ELECTRIC SYSTEM.
30. CONTRACTOR TO VERIFY RIGHT OF WAY, PUBLIC UTILITY EASEMENT AND/OR PUBLIC SERVICE EASEMENT ACQUISITION WITH THE APPLICANT PRIOR TO CONSTRUCTION WITHIN AREAS OF QUESTION.
31. SUBSTRUCTURES MUST HAVE 12" MINIMUM CLEARANCE FROM JOINT TRENCH.

GENERAL NOTES

1. PG&E'S UO STANDARD S5453 TO BE UTILIZED FOR ALL TRENCHING, BACK–FILLING, AND INSTALLATION WORK.
2. SHOULD A DISPUTE OR DISAGREEMENT OVER ANY INSTALLATION, DESIGN, PLAN, OR DRAWING OCCUR THE SPECIFICATIONS AND REQUIREMENTS OF THE INDIVIDUAL UTILITY COMPANY AND THEIR INSPECTOR SHALL TAKE PRECEDENCE.
3. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR THE QUALITY, QUANTITY OR TIMING OF WORK BY CONTRACTOR, UTILITY COMPANY CONSTRUCTION CREWS OR OTHER SUBCONTRACTORS TO THE DEVELOPER.
4. THE DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED TO BE COMPLEMENTARY TO ONE ANOTHER. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS SHALL BE CONSIDERED OF LIKE EFFECT AS IF APPEARING IN BOTH, CONTACT GIACALONE DESIGN SERVICES, INC. PRIOR TO START OF WORK OR SUBMITTAL OF BID IF A DISCREPANCY IS FOUND.
5. CONSULT PARTICIPATING UTILITIES, SOILS ENGINEER, AND THE CITY FOR APPROVED BACK FILL MATERIAL. COMPACTION TO MEET LOCAL AGENCIES REQUIREMENTS.
6. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR THE PROJECT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW THE PROJECT AND SITE PRIOR TO SUBMITTING HIS BID.
7. ALL LENGTHS SHOWN ON THESE PLANS ARE ESTIMATES. FINAL QUANTITIES SHALL BE BASED ON WHAT WILL BE NEEDED TO COMPLETE THIS PROJECT. DUE TO CHANGES, ADDITIONS, DELETIONS OR OMISSIONS FINAL QUANTITIES MAY VARY.
8. SHOULD A CONFLICT ARISE BETWEEN FACILITIES SHOWN ON THESE PLANS AND IMPROVEMENT PLANS FOR THIS PROJECT, THE IMPROVEMENT PLANS SHALL TAKE PRECEDENCE. CONTACT GIACALONE DESIGN SERVICES, INC. (925) 467–1740 IF A PROBLEM SHOULD OCCUR.
9. ALL TRANSFORMERS AND TRANSFORMER PADS ARE TO BE INSTALLED PER PG&E SPECIFICATIONS. PROTECTIVE BOLLARDS ARE TO BE PLACED WHERE NEEDED AS DIRECTED BY UTILITY INSPECTOR.
10. THE MINIMUM TRENCH WIDTHS AND DEPTHS SHOWN ARE BASED ON THE MINIMUM UTILITY COMPANY REQUIREMENTS FOR WIDTH, DEPTH AND SEPARATIONS. THE CONTRACTOR SHALL EXCAVATE FOR ADDITIONAL WIDTH OR DEPTH WHERE THE PROPOSED JOINT TRENCH FACILITIES APPROACH AND CROSS OTHER EXISTING UTILITY LINES (STORM DRAIN, SEWER, WATER, ETC.) TO ADEQUATELY CLEAR THESE FACILITIES. THE JOINT TRENCH FACILITIES MAY BE PLACED EITHER BELOW OR ABOVE THE EXISTING UTILITY LINES WITH AT LEAST 6" FREE CLEARANCE BETWEEN THE EXISTING UTILITY LINES BEING CROSSED, OR SUCH GREATER MINIMUM DISTANCE AS MAY BE REQUIRED BY THE LOCAL GOVERNMENTAL AGENCY OR OTHER PUBLIC REGULATORY AGENCY. (SEE MINIMUM COVER AND CLEARANCE TABLE)
11. TRENCH SECTIONS SHOWN ARE SCHEMATIC AND INDICATE AREAS OF OCCUPANCY ONLY, THEY DO NOT REFLECT THE SIZE OR QUANTITY OF THE FACILITIES BEING INSTALLED AND ARE DESIGNED TO ACCOMMODATE ALL REQUIRED FACILITIES AS SHOWN ON EACH TRENCH PARTICIPANTS' CONSTRUCTION DRAWINGS. REFER TO THE COMPOSITE, CONDUIT, STREETLIGHT PLAN AND/OR EACH RESPECTIVE UTILITY COMPANIES CONSTRUCTION DRAWINGS FOR THE NECESSARY CONDUIT, CABLE AND/OR PIPE BEING INSTALLED.
12. RESPECTIVE UTILITY TO OBTAIN CITY OR COUNTY APPROVAL OF ALL ABOVE GROUND EQUIPMENT.
13. ALL BOXES TO BE INSTALLED WITHIN THE R/W AND/OR PUE AREA.
14. ANY QUESTIONS OR UNCERTAINTIES REGARDING REMOVAL AND/OR REPLACEMENT OF EXISTING HARDSCAPE OR LANDSCAPE SHALL BE COORDINATED WITH THE DEVELOPER AND/OR OTHER PARTIES/AGENCIES INVOLVED.
15. A 3 FOOT CLEAR & LEVEL WORKING AREA MUST BE MAINTAINED AROUND ALL ELECTRIC ENCLOSURES, EXCEPT 4'–6"x8'–6" VAULTS WHICH SHALL MAINTAIN A 5 FOOT MINIMUM CLEAR & LEVEL WORKING AREA ON THE SHORT SIDES AND 3 FOOT ON THE LONG WALL SIDES; PAD MOUNT EQUIPMENT SHALL MAINTAIN AN 8 FOOT CLEAR & LEVEL WORKING AREA IN FRONT OF EQUIPMENT DOORS AND 3 FOOT CLEAR ON SIDES & BACK, UNLESS DIRECTED OTHERWISE BY INSPECTOR. REFER TO THE PG&E "GREEN BOOK" STANDARD DRAWING 051122 FOR ADDITIONAL CLEARANCE PROTECTION REQUIREMENTS.



TYPICAL BIO–SWALE STREET SECTION
NOT TO SCALE

DESIGN CHANGE COMPONENT
ANY CHANGES TO THIS DESIGN MUST BE APPROVED BY
RALPH BEIERLY 415–695–3554
PG&E Gas ADE

DEVELOPER
PLEASE NOTE AND SIGN
ALL PG&E ENCLOSURES AND BOXES HAVE BEEN SET TO GRADE ACCORDING TO GRADE STAKES PROVIDED BY DEVELOPERS ENGINEER. ALL COSTS TO RELOCATE OR RE–ADJUST BOXES AT A LATER DATE WILL BE BILLED TO THE DEVELOPER. PLEASE HAVE YOUR SUPERINTENDENT VERIFY THE CORRECT GRADE OF ALL ENCLOSURES AND BOXES AND SIGN AND DATE DRAWING.
THANK YOU
SIGNED: _____
DATE: _____

TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE
811
CALL BEFORE YOU DIG

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

JOINT TRENCH GENERAL NOTES & DETAILS

BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: AS SHOWN
JOB NUMBER: 14–193 B20 & B22
DATE LAST MODIFIED: 05–01–17
SHEET JT2
OF 11 SHEETS

REGISTERED PROFESSIONAL ENGINEER
DAVID CROWFOOT
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

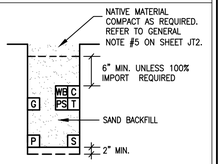
MINIMUM COVER & CLEARANCE CHART

UTILITY	G	T	C	S	P	PUB SL	PGE SL	F	MINIMUM COVER
G (GAS) SEE NOTE 3 & 4		12"	12"	6"	12"	12"	6"	12"	24"; 30" IN STREET
T (TELEPHONE)	12"		1"	12"	12"	12"	12"	1"	24"; 30" IN STREET
C & WB (CABLE T.V.)	12"	1"		12"	12"	1"	12"	1"	24"; 30" IN STREET
S (ELECT. SECONDARY)	6"	12"	12"	1.5"	3"	12"	1.5"	12"	24"; 30" IN STREET
P (ELECT. PRIMARY)	12"	12"	12"	3"	3"	12"	3"	12"	36"; 36" IN STREET
*SL (PUBLIC-STREET LIGHT)	12"	12"	1"	12"	12"		12"	1"	24"; 30" IN STREET
SL (PG&E-STREET LIGHT)	6"	12"	12"	1.5"	3"	12"		12"	24"; 30" IN STREET
PS (PUBLIC SAFETY)	12"	1"	1"	12"	12"	1"	12"		24"; 30" IN STREET

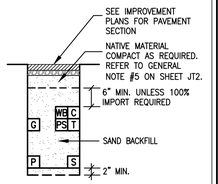
NOTE:

1. TRENCH COVER & CLEARANCES SHOWN ARE MINIMUMS ONLY AND MAY REQUIRE ALTERATIONS TO SUIT FIELD CONDITIONS.
2. IT IS RECOMMENDED THAT ALL FACILITIES ARE TO BE A MINIMUM OF 12" BELOW SUBBASE DISTURBANCE.
3. WITH MUTUAL AGREEMENT FROM PARTICIPATING UTILITIES, WHEN 4" O.D. OR SMALLER GAS PIPE IS INSTALLED, SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" BETWEEN GAS AND COMMUNICATION DUCTS (TELEPHONE, CATV & FIBER OPTIC).
4. WHERE 6" GAS MAIN IS IN JOINT TRENCH 12" MINIMUM SEPARATION FROM GAS MAIN TO ALL UTILITIES WILL BE REQUIRED.
5. 3" MINIMUM BETWEEN 600A (6") MAINLINE PRIMARY ELECTRIC DUCTS.

*6. WITH MUTUAL AGREEMENT FROM PARTICIPATING UTILITIES, ST. LT. SEPARATION MAY BE REDUCED TO 0" BETWEEN ST. LT. AND COMMUNICATION DUCTS (TELEPHONE, CATV. & FIBER OPTIC).



TRENCH IN DIRT AREA



TRENCH IN STREET AREA OR SIDEWALK

TRENCH SECTION LEGEND

- MEETS UTILITY TRENCH ALLOTMENT
- EXCEEDS UTILITY TRENCH ALLOTMENT
- P PG&E PRIMARY
- S PG&E SECONDARY
- G PG&E GAS
- T TELEPHONE
- C COMCAST CABLE T.V.
- WB WAVEBAND CABLE T.V.
- PS PUBLIC SAFETY
- SL PUBLIC STREET LIGHTING

XX LF-TOTAL = TOTAL TRENCH LENGTH

XX LF-R&R = REMOVE & REPLACE PAVEMENT ONLY, TRENCH INCLUDED IN TOTAL TRENCH LENGTH

JOINT TRENCH OCCUPANCY GUIDE

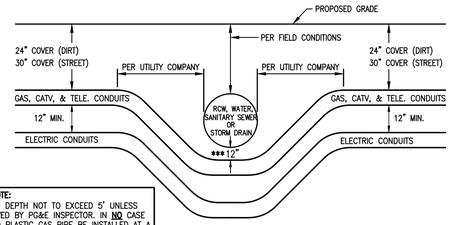
SECTION	G	T	C	S	P	OTHER
*A	X	X	X	X	X	
*B	X	X		X	X	
*C	X		X	X	X	
*D		X	X	X	X	
*E	X			X	X	
*F		X		X	X	
*G			X	X	X	
*H				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				
V			X			
W				X		

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

GENERAL TRENCH SECTION NOTES

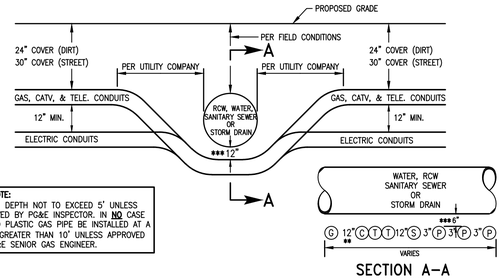
1. TRENCH CONFIGURATIONS SHOWN ARE FOR INSTALLATIONS WHERE EACH OCCUPANT IS UTILIZING HIS ENTIRE SPACE ALLOCATION. OTHER CONFIGURATIONS, OR REDUCED DIMENSIONS, MAY BE USED PROVIDED THAT MINIMUM COVER AND CLEARANCES ARE MAINTAINED.
2. CONTRACTOR TO ADJUST TRENCH DEPTHS AT ALL JOINT TRENCH LATERAL CROSSINGS TO MAINTAIN REQUIRED CLEARANCES BETWEEN ALL PARTICIPATING UTILITIES.
3. TRENCH SECTIONS SHOWN ARE SCHEMATIC AND INDICATE AREAS OF OCCUPANCY ONLY, THEY DO NOT REFLECT THE SIZE OR QUANTITY OF THE FACILITIES BEING INSTALLED AND ARE DESIGNED TO ACCOMMODATE ALL REQUIRED FACILITIES AS SHOWN ON EACH TRENCH PARTICIPANTS' CONSTRUCTION DRAWINGS. REFER TO THE COMPOSITE, CONDUIT, STREETLIGHT PLAN AND/OR EACH RESPECTIVE UTILITY COMPANIES CONSTRUCTION DRAWINGS FOR THE NECESSARY CONDUIT, CABLE AND/OR PIPE BEING INSTALLED.

DRY UTILITY CROSSING DETAILS



GAS NOTE:
TRENCH DEPTH NOT TO EXCEED 5' UNLESS APPROVED BY PG&E INSPECTOR. IN NO CASE SHOULD PLASTIC GAS PIPE BE INSTALLED AT A DEPTH GREATER THAN 10' UNLESS APPROVED BY PG&E SENIOR GAS ENGINEER.

JOINT TRENCH UNDER WATER, RECYCLED WATER, SANITARY SEWER OR STORM DRAIN



SECTION A-A
NOT TO SCALE

GAS NOTE:
TRENCH DEPTH NOT TO EXCEED 5' UNLESS APPROVED BY PG&E INSPECTOR. IN NO CASE SHOULD PLASTIC GAS PIPE BE INSTALLED AT A DEPTH GREATER THAN 10' UNLESS APPROVED BY PG&E SENIOR GAS ENGINEER.

JOINT TRENCH UNDER WATER, RECYCLED WATER, SANITARY SEWER OR STORM DRAIN

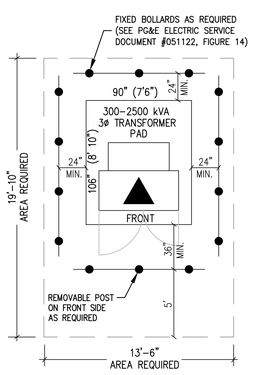
NOTE:

*1. SEE MINIMUM COVER & CLEARANCE CHART.

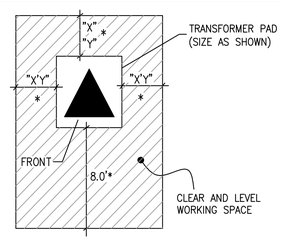
**2. WITH MUTUAL AGREEMENT, WHEN 4" O.D. OR SMALLER GAS PIPE IS INSTALLED SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" BETWEEN GAS AND COMMUNICATION DUCTS (TELEPHONE & CATV).

3. 6" MINIMUM REQUIRED BY PG&E-ADDITIONAL CLEARANCE MAYBE REQUIRED BY CITY OR COUNTY. BED THE BOTTOM OF THE TRENCH WITH IMPORTED SAND, INSTALL THE CONDUIT AND/OR GAS PIPE, COVER THE FACILITY WITH THE SAME IMPORTED SAND AND MECHANICALLY COMPACT USING A VIBRATORY TYPE COMPACTOR.

4. CROSSING METHODS ARE NOT LIMITED TO THE ABOVE DETAILS. OTHER APPROVED CONFIGURATIONS MAY BE USED. CONTRACTOR TO VERIFY METHOD OF CROSSING WITH GOVERNING AGENCY AND/OR UTILITY COMPANIES AS REQUIRED PRIOR TO CONSTRUCTION.
5. JOINT TRENCH CONTRACTOR SHALL NOT ASSUME THAT ANY OF THE METHODS ABOVE WILL BE ACCEPTABLE TO PG&E & THE UTILITIES. J.T. CONTRACTOR IS REQUIRED TO COORDINATE THE LOCAL INSPECTORS PRIOR TO INSTALLING DRY UTILITIES ACROSS WATER, RECYCLED WATER, SANITARY SEWER, STORM DRAIN OR ANY OTHER FACILITY WITH ANY ISSUE RELATING TO COVERS LESS THAN THE MINIMUM OR COVERS REQUIRING SHOWING. CONCRETE CAPPING IS ONLY ACCEPTABLE WHERE NO OTHER SOLUTION IS POSSIBLE AND ONLY WHEN CERTAIN CRITERIA ARE MET AND ONLY WITH PG&E APPROVAL.



PG&E STYLE IIE 3ø TRANSFORMER DETAIL
90" x 106"
(PHYSICAL PROTECTION REQUIREMENTS IN PARKING LOT, TRAVELED WAY, ETC. ...)
NOT TO SCALE
1 JT3



"Y"= 2' MIN. CLEAR WORKING SPACE
"Y"= 2' MIN. TO NON-COMBUSTIBLE BLDG. WALL
"X"= 3' MIN. TO COMBUSTIBLE BLDG. WALL

2' MIN. CLEARANCE APPLIES TO ONLY ONE NON OPERABLE SIDE
3' MUST BE MAINTAINED ON THE REMAINING TWO SIDES

4' MIN. DOORWAY CLEARANCE (DO NOT IMPEDE ACCESS)
(CONTACT INSPECTOR FOR CLEARANCE TO OPENING WINDOWS)

* MIN. 9' (COMMERCIAL/HIGH DENSITY) FROM FACE OF CURB WITHOUT PHYSICAL PROTECTION

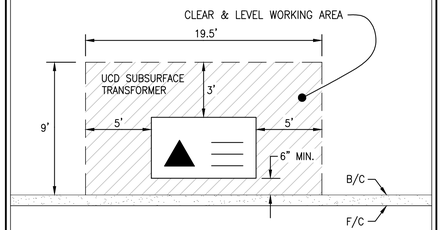
* MIN. 3' (RESIDENTIAL/LOW DENSITY) FROM FACE OF CURB WITHOUT PHYSICAL PROTECTION

ALL PG&E TRANSFORMERS
N.T.S.
2 JT3

LEGEND

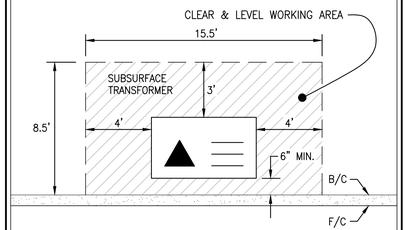
- EXISTING TRENCH OR UTILITIES
- PROPOSED TRENCH (DISTRIBUTION)
- PROPOSED TRENCH (SERVICE)
- PROPOSED STREET LIGHT TRENCH
- EXISTING UTILITY SPLICE BOX
- G GAS E.T.S. BOX (N.T.S.)
- 2 17"x30"x18" PG&E SPLICE BOX
- 6 4'x6'6"x5' PG&E BOX
- 7 4'6"x8'6"x6' PG&E SPLICE BOX
- 4'x6'6"x5' PG&E TRANSFORMER
- 4'6"x8'6"x7'6" PG&E UCD TRANSFORMER
- 4'6"x8'6"x6' PG&E DUPLEX TRANSFORMER
- 90"x106" PG&E PAD MOUNT TRANSFORMER
- 90"x106" PG&E PAD MOUNT TRANSFORMER W/BUS DUCT
- PG&E PG&E TERMINATION CAN (SIZE AS NOTED)
- MM 3'x5'x3'6" PG&E 'MEET ME' BOX
- FVT MM 3'x5'x3'6" PG&E 'MEET ME' BOX WITH FULL VEHICULAR TRAFFIC LID
- T7 20"x42"x36" TELEPHONE SPLICE BOX
- T4 30"x48"x34" TELEPHONE SPLICE BOX
- T5 36"x60"x48" TELEPHONE SPLICE BOX
- C4 30"x48"x14" CATV BOX (B52)
- WB WB FVT 4'x4'x4' WAVE BAND BOX (F.V.T.)
- 13"x24"x12" N3 PS BOX (BY DEPT. OF TECHNOLOGY)
- M METERED SERVICE PEDESTAL
- PROPOSED L.E.D. STREET LIGHT
- PROPOSED L.E.D. PEDESTRIAN STREET LIGHT
- PROPOSED L.E.D. DOUBLE STREET LIGHT
- STREET LIGHT BOX (STATE TYPE 3 1/2)
- FUTURE T/S CONTROLLER CABINET (BY OTHERS)
- # PG&E SKETCH LOCATION NUMBER
- (F.V.T.) FULL VEHICULAR TRAFFIC LID
- (N.T.S.) NOT TO SCALE
- (U.O.N.) UNLESS OTHERWISE NOTED

4'6"x8'6"x7'6" (I.D.) UCD SUBSURFACE TRANSFORMER CLEARANCES



CLEARANCE REQUIREMENTS BASED ON OUTSIDE DIMENSIONS OF BOX.
NOT TO SCALE
3 JT3

4'x6'6"x5' (I.D.) SUBSURFACE TRANSFORMER CLEARANCES



CLEARANCE REQUIREMENTS BASED ON OUTSIDE DIMENSIONS OF BOX.
NOT TO SCALE
4 JT3

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

JOINT TRENCH DETAILS & LEGEND

BKF
PARKMERCED
PHASE 1B - B20 & B22
SAN FRANCISCO CALIFORNIA

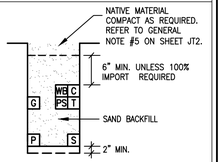
PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: AS SHOWN
JOB NUMBER: 14-193 B20 & B22
DATE LAST MODIFIED: 05-01-17
SHEET JT3 OF 11 SHEETS

DAVID PAUL CROWFOOT
REGISTERED PROFESSIONAL ENGINEER
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

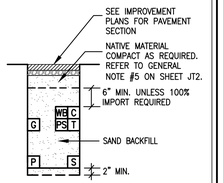
TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE
811
CALL BEFORE YOU DIG

MINIMUM COVER & CLEARANCE CHART

UTILITY	G	T	C	S	P	PUB SL	PGE SL	F	MINIMUM COVER
G (GAS) SEE NOTE 3 & 4		12"	12"	6"	12"	12"	6"	12"	24"; 30" IN STREET
T (TELEPHONE)	12"		1"	12"	12"	12"	12"	1"	24"; 30" IN STREET
C & WB (CABLE T.V.)	12"	1"		12"	12"	1"	12"	1"	24"; 30" IN STREET
S (ELECT. SECONDARY)	6"	12"	12"	1.5"	3"	12"	1.5"	12"	24"; 30" IN STREET
P (ELECT. PRIMARY)	12"	12"	12"	3"	3"	12"	3"	12"	36"; 36" IN STREET
*SL (PUBLIC-STREET LIGHT)	12"	12"	1"	12"	12"		12"	1"	24"; 30" IN STREET
SL (PG&E-STREET LIGHT)	6"	12"	12"	1.5"	3"	12"		12"	24"; 30" IN STREET
PS (PUBLIC SAFETY)	12"	1"	1"	12"	12"	1"	12"		24"; 30" IN STREET



TRENCH IN DIRT AREA



TRENCH IN STREET AREA OR SIDEWALK

NOTE:

1. TRENCH COVER & CLEARANCES SHOWN ARE MINIMUMS ONLY AND MAY REQUIRE ALTERATIONS TO SUIT FIELD CONDITIONS.
2. IT IS RECOMMENDED THAT ALL FACILITIES ARE TO BE A MINIMUM OF 12" BELOW SUBBASE DISTURBANCE.
3. WITH MUTUAL AGREEMENT FROM PARTICIPATING UTILITIES, WHEN 4" O.D. OR SMALLER GAS PIPE IS INSTALLED, SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" BETWEEN GAS AND COMMUNICATION DUCTS (TELEPHONE, CATV & FIBER OPTIC).
4. WHERE 6" GAS MAIN IS IN JOINT TRENCH 12" MINIMUM SEPARATION FROM GAS MAIN TO ALL UTILITIES WILL BE REQUIRED.
5. 3" MINIMUM BETWEEN 600A (6") MAINLINE PRIMARY ELECTRIC DUCTS.
*6. WITH MUTUAL AGREEMENT FROM PARTICIPATING UTILITIES, ST. LT. SEPARATION MAY BE REDUCED TO 0" BETWEEN ST. LT. AND COMMUNICATION DUCTS (TELEPHONE, CATV. & FIBER OPTIC).

TRENCH SECTION LEGEND

- MEETS UTILITY TRENCH ALLOTMENT
- EXCEEDS UTILITY TRENCH ALLOTMENT
- [P] PG&E PRIMARY
- [S] PG&E SECONDARY
- [G] PG&E GAS
- [T] TELEPHONE
- [C] COMCAST CABLE T.V.
- [WB] WAVEBAND CABLE T.V.
- [PS] PUBLIC SAFETY
- [SL] PUBLIC STREET LIGHTING

XX LF-TOTAL = TOTAL TRENCH LENGTH
XX LF-R&R = REMOVE & REPLACE PAVEMENT ONLY, TRENCH INCLUDED IN TOTAL TRENCH LENGTH

SECTION LEGEND

- NEW BUSINESS (PM# AS SHOWN)
- TEMP SERVICE (PM# AS SHOWN)
- CAPACITY (PM# 31172378)
- WRO RELOCATION (PM# 31222515)

DASHED OUTLINE INDICATES NOT ALWAYS IN TRENCH SECTION

JOINT TRENCH OCCUPANCY GUIDE

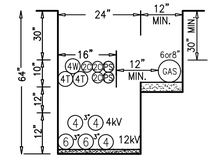
SECTION	G	T	C	S	P	OTHER
*A	X	X	X	X	X	
*B	X	X		X	X	
*C	X		X	X	X	
*D		X	X	X	X	
*E	X			X	X	
*F		X		X	X	
*G			X	X	X	
*H				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				
V			X			
W				X		

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

GENERAL TRENCH SECTION NOTES

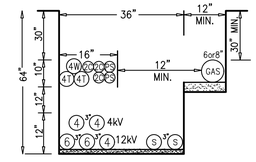
1. TRENCH CONFIGURATIONS SHOWN ARE FOR INSTALLATIONS WHERE EACH OCCUPANT IS UTILIZING HIS ENTIRE SPACE ALLOCATION. OTHER CONFIGURATIONS, OR REDUCED DIMENSIONS, MAY BE USED PROVIDED THAT MINIMUM COVER AND CLEARANCES ARE MAINTAINED.
2. CONTRACTOR TO ADJUST TRENCH DEPTHS AT ALL JOINT TRENCH LATERAL CROSSINGS TO MAINTAIN REQUIRED CLEARANCES BETWEEN ALL PARTICIPATING UTILITIES.
3. TRENCH SECTIONS SHOWN ARE SCHEMATIC AND INDICATE AREAS OF OCCUPANCY ONLY, THEY DO NOT REFLECT THE SIZE OR QUANTITY OF THE FACILITIES BEING INSTALLED AND ARE DESIGNED TO ACCOMMODATE ALL REQUIRED FACILITIES AS SHOWN ON EACH TRENCH PARTICIPANTS' CONSTRUCTION DRAWINGS. REFER TO THE COMPOSITE, CONDUIT, STREETLIGHT PLAN AND/OR EACH RESPECTIVE UTILITY COMPANIES CONSTRUCTION DRAWINGS FOR THE NECESSARY CONDUIT, CABLE AND/OR PIPE BEING INSTALLED.

TYPICAL STEP TRENCH W/GAS



NOT TO SCALE

TYPICAL STEP TRENCH W/GAS AND SECONDARY



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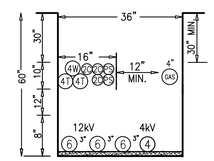
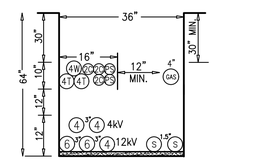
TYPICAL TRENCH



NOT TO SCALE

TYPICAL TRENCH W/SECONDARY



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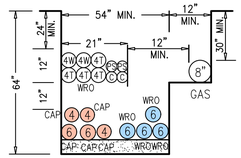
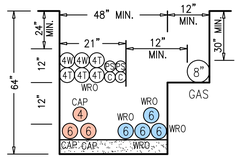
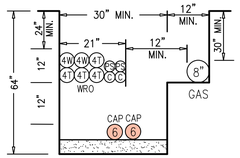


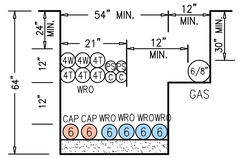
SECTION A1
109 LF-TOTAL
0 LF-R&R



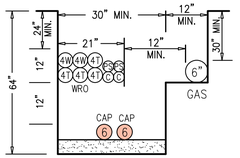
SECTION A2
165 LF-TOTAL
0 LF-R&R



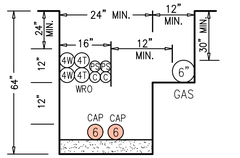
SECTION A3
39 LF-TOTAL
0 LF-R&R



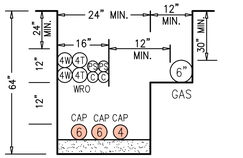
SECTION A4
340 LF-TOTAL
0 LF-R&R



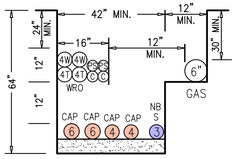
SECTION A5
25 LF-TOTAL
0 LF-R&R



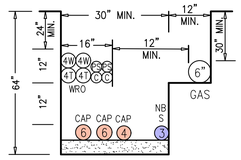
SECTION A7
47 LF-TOTAL
0 LF-R&R



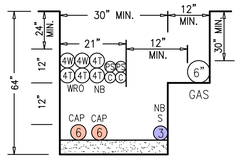
SECTION A8
66 LF-TOTAL
0 LF-R&R



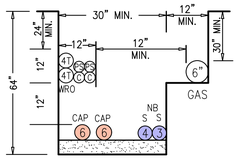
SECTION A9
21 LF-TOTAL
0 LF-R&R



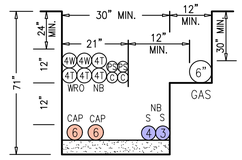
SECTION A10
93 LF-TOTAL
0 LF-R&R



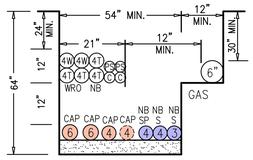
SECTION A11
89 LF-TOTAL
0 LF-R&R



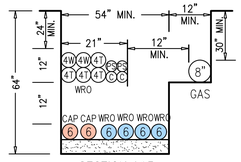
SECTION A12
47 LF-TOTAL
0 LF-R&R



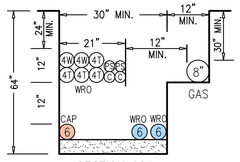
SECTION A13
73 LF-TOTAL
0 LF-R&R



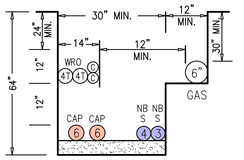
SECTION A14
121 LF-TOTAL
0 LF-R&R



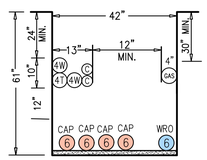
SECTION A15
17 LF-TOTAL
0 LF-R&R



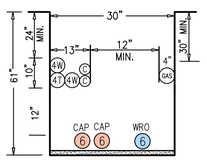
SECTION A21
100 LF-TOTAL
0 LF-R&R



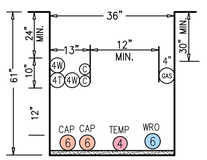
SECTION A22
12 LF-TOTAL
0 LF-R&R



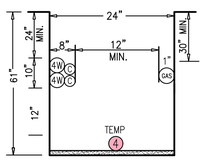
SECTION A23
28 LF-TOTAL
0 LF-R&R



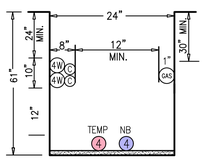
SECTION A24
110 LF-TOTAL
0 LF-R&R



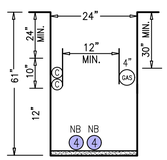
SECTION A25
65 LF-TOTAL
0 LF-R&R



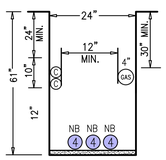
SECTION C6
196 LF-TOTAL
0 LF-R&R
(TEMP)



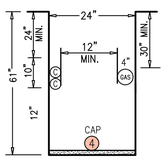
SECTION C7
87 LF-TOTAL
0 LF-R&R



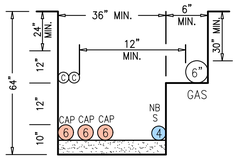
SECTION C10
185 LF-TOTAL
0 LF-R&R



SECTION C11
11 LF-TOTAL
0 LF-R&R



SECTION C12
114 LF-TOTAL
0 LF-R&R



SECTION C14
85 LF-TOTAL
85 LF-R&R





REVISIONS

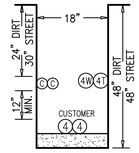
SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

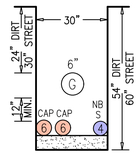
JOINT TRENCH DETAILS & SECTIONS

BKF
PARKMERCED
PHASE 1B - B20 & B22
SAN FRANCISCO CALIFORNIA

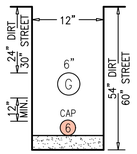
PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: AS SHOWN
JOB NUMBER: 14-193 B20 & B22
DATE LAST MODIFIED: 05-01-17
SHEET JT3A
OF 11 SHEETS



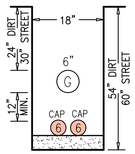
SECTION D4
389 LF–TOTAL
0 LF–R&R
(CUST. OWNED)



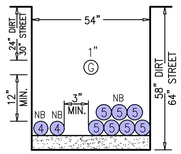
SECTION E
39 LF–TOTAL
39 LF–R&R



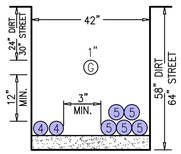
SECTION E1
21 LF–TOTAL
21 LF–R&R



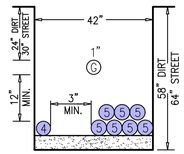
SECTION E2
15 LF–TOTAL
15 LF–R&R



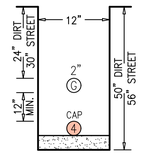
SECTION E3
37 LF–TOTAL
0 LF–R&R



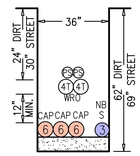
SECTION E4
10 LF–TOTAL
0 LF–R&R



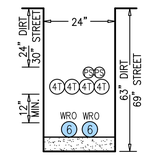
SECTION E5
14 LF–TOTAL
0 LF–R&R



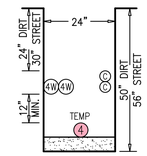
SECTION E6
99 LF–TOTAL
0 LF–R&R



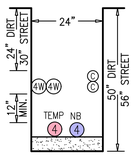
SECTION F
41 LF–TOTAL
41 LF–R&R
(CAPACITY)



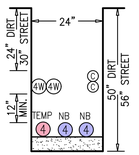
SECTION F2
82 LF–TOTAL
0 LF–R&R
(WRO)



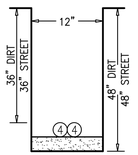
SECTION G1
6 LF–TOTAL
0 LF–R&R
(NEW BUSINESS)



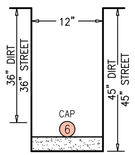
SECTION G2
46 LF–TOTAL
0 LF–R&R
(NEW BUSINESS)



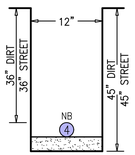
SECTION G3
19 LF–TOTAL
0 LF–R&R
(NEW BUSINESS)



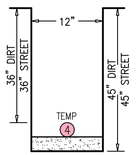
SECTION H1
203 LF–TOTAL
0 LF–R&R
(CUST. OWNED)



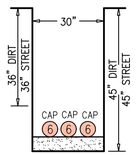
SECTION H2
52 LF–TOTAL
52 LF–R&R



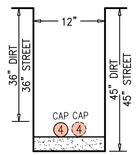
SECTION H3
10 LF–TOTAL
0 LF–R&R
(NEW BUSINESS–B22–N)



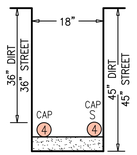
SECTION H4
8 LF–TOTAL
0 LF–R&R
(TEMP SVC–B22)



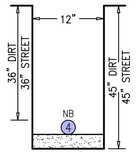
SECTION H5
168 LF–TOTAL
168 LF–R&R
(CAPACITY)



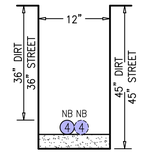
SECTION H7
105 LF–TOTAL
0 LF–R&R
(CAPACITY)



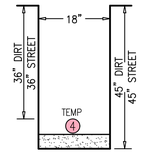
SECTION H8
8 LF–TOTAL
0 LF–R&R



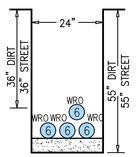
SECTION H9
144 LF–TOTAL
0 LF–R&R
(NEW BUSINESS–B20)



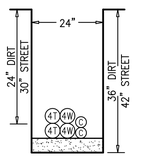
SECTION H10
67 LF–TOTAL
0 LF–R&R
(NEW BUSINESS–B22–S)



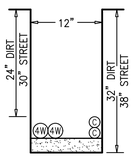
SECTION H13
7 LF–TOTAL
0 LF–R&R
(TEMP – B20)



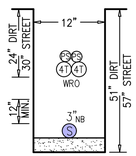
SECTION H14
125 LF–TOTAL
0 LF–R&R



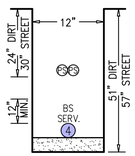
SECTION L
241 LF–TOTAL
0 LF–R&R



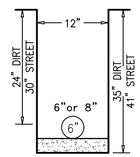
SECTION L1
82 LF–TOTAL
0 LF–R&R



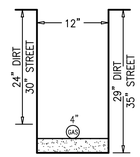
SECTION R
337 LF–TOTAL
0 LF–R&R



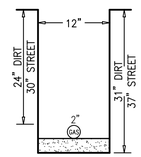
SECTION R2
77 LF–TOTAL
0 LF–R&R
(SERVICE–BS)



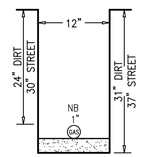
SECTION T
489 LF–TOTAL
320 LF–R&R



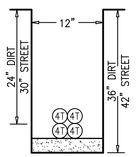
SECTION T2
347 LF–TOTAL
0 LF–R&R
(PM 31179643)



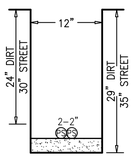
SECTION T3
129 LF–TOTAL
0 LF–R&R
(WRO)



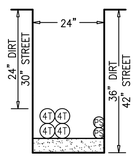
SECTION T9
82 LF–TOTAL
0 LF–R&R



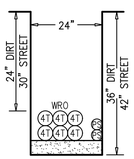
SECTION U1
59 LF–TOTAL
0 LF–R&R



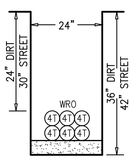
SECTION U2
365 LF–TOTAL
0 LF–R&R
(PUBLIC SAFETY)



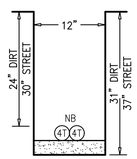
SECTION U3
14 LF–TOTAL
0 LF–R&R



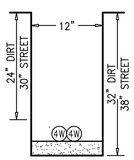
SECTION U4
140 LF–TOTAL
0 LF–R&R



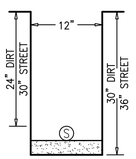
SECTION U5
11 LF–TOTAL
0 LF–R&R



SECTION U6
71 LF–TOTAL
0 LF–R&R



SECTION V
26 LF–TOTAL
0 LF–R&R



SECTION W
9 LF–TOTAL
9 LF–R&R
(SERVICE)

SECTION W1
2405 LF–TOTAL
0 LF–R&R
(PUBLIC ST. LIGHT)

SECTION W2
127 LF–TOTAL
0 LF–R&R
(SERVICE)

SECTION W3
60 LF–TOTAL
60 LF–R&R
(SERVICE)

SECTION W6
63 LF–TOTAL
0 LF–R&R
(SERVICE – N.B.)

SECTION LEGEND

- NEW BUSINESS (PM# AS SHOWN)
- TEMP SERVICE (PM# AS SHOWN)
- CAPACITY (PM# 31172378)
- WRO RELOCATION (PM# 31222515)

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REVISIONS		
SYMBOL	DATE	DESCRIPTION
		APPROVED

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JOINT TRENCH SECTIONS

BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER:	DAVE CROWFOOT
DRAWN BY:	CVN/MTR
CHECKED BY:	DC
SCALE:	AS SHOWN
JOB NUMBER:	14–193 B20 & B22
DATE LAST MODIFIED:	05–01–17
SHEET	JT3B
OF	11 SHEETS

CAUTION!!!! ENERGIZED FACILITIES!!

CONTRACTOR TO EXERCISE EXTREME CAUTION TO AVOID DAMAGING EXISTING UNDERGROUND UTILITIES. OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES. NEITHER THE OWNER NOR THE DESIGNER ASSUME ANY RESPONSIBILITY THAT THE OBSTRUCTIONS INDICATED WILL ACTUALLY BE THE OBSTRUCTIONS ENCOUNTERED. POTHOLING IS REQUIRED. HAND EXCAVATE ONLY IN PRESENCE OF UTILITY INSPECTOR.

PARK PLAZA FINE FOODS

FELIX AVENUE

CAMBON DRIVE

JUNIPERO SERRA BOULEVARD (CAL-TRANS)

125 CAMBON DRIVE
SAN FRANCISCO, CA 94132

TELEPHONE TIE-IN LOCATION:
TIE INTO EXISTING AT&T NODE & SYSTEM AS REQUIRED. (APPROXIMATE LOCATION)
J.T. CONTRACTOR TO COORDINATE TIE-IN AS REQUIRED.

EX. PG&E 7'x8'x7' MH796 TO REMAIN

EX. TELEPHONE NODE TO REMAIN

TEMPORARY POWER TRANSFORMER
90"x106" PG&E PAD MOUNT TRANSFORMER
1000A, 277/480V 3ø 4W
(PM 31186036) FOR 1208 JUNIPERO SERRA (G)

TEMPORARY POWER METER PEDESTAL
TERMINATION CAN COORDINATE WITH BUILDING CONTRACTOR FOR SIZE. (FIELD LOCATE)

EX. ELECTRIC U.G. TO BE RELOCATED

EX. ELECTRIC U.G. (APPROX. LOC.)

EX. PG&E 7'x8'x7' MH795 TO REMAIN

ELECTRIC TIE-IN LOCATION:
EXPOSE, INTERCEPT & TIE INTO EXISTING 6" PRIMARY DUCT(S) AS REQUIRED.
(SEE PG&E ELECTRIC PLANS PM 31186036)
J.T. CONTRACTOR TO COORDINATE TIE-IN WITH PG&E AS REQUIRED.

PICKUP ELECTRIC, TELEPHONE, CATV, WAVE & GOOGLE STUBS 5' FROM EDGE OF BUILDING (STUBS BY OTHERS)
J.T. CONTRACTOR TO COORDINATE WITH BUILDING CONTRACTOR FOR LOCATION OF UTILITY STUBS.

CALTRANS R/W

MPOE
TELE. & CATV DATA ROOM (LEVEL 1)

T.C.W.G

RESIDENTIAL DISTRIBUTION BOARD – "RDP-A"
(BLOCK 20-03A) (LEVEL 01) NORTH TOWER
3000A, 120/208V 3ø 4W
–800A 39 RES. UNIT METERS (MC-04) LEVEL 04
–800A 45 RES. UNIT METERS (MC-07) LEVEL 07
–800A 36 RES. UNIT METERS (MC-10) LEVEL 10
–800A 36 RES. UNIT METERS (MC-13) LEVEL 13
–800A 32 RES. UNIT METERS (MC-16) LEVEL 16
TOTAL: 188 RESIDENTIAL UNIT METERS

TEMPORARY POWER TRANSFORMER
90"x106" PG&E PAD MOUNT TRANSFORMER – 12kV
2500A, 277/480V 3ø 4W
(PM 31186037) FOR 1208 JUNIPERO SERRA (F)

TEMPORARY POWER METER PEDESTAL
TERMINATION CAN COORDINATE WITH BUILDING CONTRACTOR FOR SIZE. (FIELD LOCATE)

MPOE ROOM LEVEL 1
90"x106" PG&E PAD MOUNT TRANSFORMER (PM 31186038) FOR NORTH TOWER (E)

90"x106" PG&E PAD MOUNT TRANSFORMER (PM 31186038) FOR NORTH TOWER (E)

MAIN DISTRIBUTION BOARD – "MDP-A" HOUSE & GARAGE
(BLOCK 20-03A) (LEVEL 01) NORTH TOWER
2000A, 277/480V 3ø 4W
(1) 1200A HOUSE METER
–(3) ELEVATORS @ (40HP) EACH
–(2) ELEVATOR PRESS. FANS @ (25HP) EACH
–(2) STAIRWELL PRESS. FANS @ 10HP) EACH
–(9) EV CHARGING STATION @ 9kVA = EACH
–MISCELLANEOUS LOADS
FIRE PUMP DISTRIBUTION – "FP-A"
1600A, 277/480V 3ø 4W
(1) FIRE PUMP METER (200HP)

SEE DETAIL 1/JT3 2/JT3 (TYP)

4'x4'x4' WAVEBAND BOX

PROPOSED 4'x6'6"x5' PG&E BOX

PAD MOUNT TRANSFORMER ROOM:
(REFER TO M.E.P & ARCHITECT PLANS FOR ADDITIONAL INFORMATION)

13'–0"x13'–0" OF BUILDING WALL REQUIRED WITHOUT ANY OPENINGS TO BUILDING. (TYP)

GAS METER ASSEMBLY LOCATION: (BLOCK 20-03A & B)
(269 RESIDENCE UNITS)
TOTAL: (1) ROTARY GAS METER @ 2.0 PSI
–(1) DOMESTIC WATER HEATER = 5,672 MBH
–(1) COGEN = 850 CFH
–(188) COOKTOPS @ 65 MBH = 12,220 MBH
TOTAL GAS LOAD = 6,522 MBH

STA. 22+69 4'x4'x4' WAVEBAND BOX (TYP)

30"x48"x34" TELE. BOX

CUST-OWNED

EX. PG&E (P7438) (3) 50kVA TFMRS (APPROX. LOC.)

EX. 6" GAS TO REMAIN

STUB FOR FUTURE

EX. 2" GAS TO REMAIN

STA. 22+79 3'x5'x3'6" PG&E 'MEET ME' BOX (F.V.T.) (PRIMARY)

STA. 22+88

EX. PG&E 7'x8'x7' MH797 TO REMAIN

STA. 23+22 (75) (12kV) 4'6"x8'6"x6' PG&E BOX

EX. GAS METER

EX. GAS SVC. TO BE REPLACE BY PG&E (PM 31179643)

EX. ELECTRIC U.G. TO BE RELOCATED

EX. 6" GAS TO REMAIN

EX. 6" GAS TO BE ABANDONED (BY PG&E)

STA. 23+74 4'x4'x4' WAVEBAND BOX (TYP)

STA. 23+79

PROPOSED PROPERTY LINE

3'x5'x3'6" PG&E (PRIMARY)

4'x4'x4' WAVEBAND BOX

PROPOSED PROPERTY LINE

SEE DETAIL 1/JT3 (TYP)

PICKUP ELECTRIC STUBS 5' FROM EDGE OF BUILDING (STUBS BY OTHERS)
J.T. CONTRACTOR TO COORDINATE WITH BUILDING CONTRACTOR FOR LOCATION OF UTILITY STUBS.

4'6"x8'6"x7'6" PG&E UG TRANSFORMER (PM 31186062) FOR 1218 JUNIPERO SERRA (D)

RESIDENTIAL DISTRIBUTION BOARD – "RDP-B"
(BLOCK 20-03B) (LEVEL 02) SOUTH TOWER
2000A, 120/208V 3ø 4W
–1000A 50 RES. UNIT METERS (MC-01) LEVEL 01
–1200A 61 RES. UNIT METERS (MC-02) LEVEL 02
TOTAL: 111 RESIDENTIAL UNIT METERS

SUB-PANEL DIST. BOARD – "MDP-B" HOUSE & GARAGE
(BLOCK 20-03B) (LEVEL 02) SOUTH TOWER
1200A, 277/480V 3ø 4W
–(2) ELEVATORS @ (40HP) EACH

MATCHLINE – SEE SHEET JT5

SEE SHEET JT3 FOR LEGEND

SEE SHEET JT2 FOR J.T. & UTILITY BOX LOCATION STREET SECTIONS

NOTE:
LOCATION OF EXISTING JOINT TRENCH FACILITIES SHOWN IS BASED ON INFORMATION PROVIDED BY OTHERS. JOINT TRENCH CONTRACTOR TO FIELD VERIFY ACTUAL LOCATIONS & ADJUST TRENCH AS NECESSARY AND MAINTAIN PROPER CLEARANCES.

R/W, P.U.E. & P.S.E. ACQUISITION NOTE:
CONTRACTOR TO VERIFY RIGHT OF WAY, PUBLIC UTILITY EASEMENT AND/OR PUBLIC SERVICE EASEMENT ACQUISITION WITH THE APPLICANT PRIOR TO CONSTRUCTION WITHIN AREAS OF QUESTION.

(IN FEET)
1 INCH = 20 FT.

KEY MAP
NOT TO SCALE

JOINT TRENCH OCCUPANCY GUIDE

SECTION	G	T	C	S	P	OTHER
*A	X	X	X	X	X	
*B	X	X		X	X	
*C	X		X	X	X	
*D		X	X	X	X	
*E	X			X	X	
*F		X		X	X	
*G			X	X	X	
*H				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				
V			X			
W				X		

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

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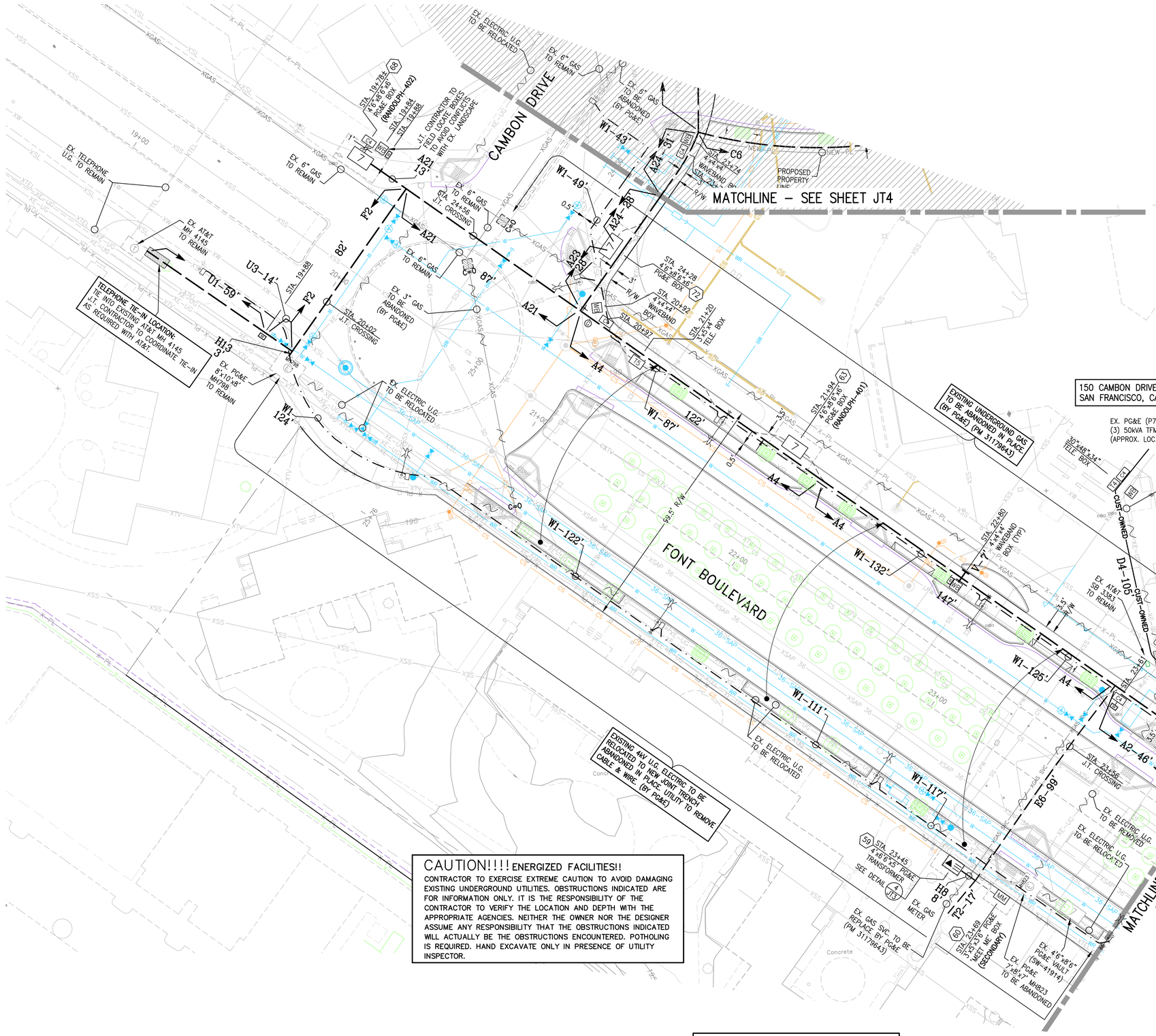
JOINT TRENCH COMPOSITE PLAN

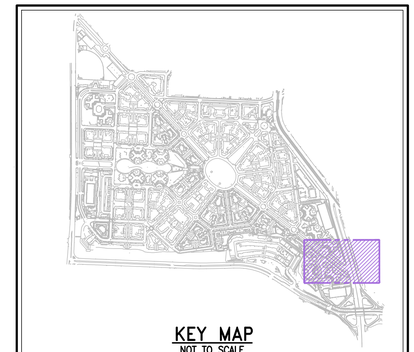
BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: 1"=20'
JOB NUMBER: 14-193 B20 & B22
DATE LAST MODIFIED: 05-01-17

DAVID CROWFOOT
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

SHEET JT4 OF 11 SHEETS





JOINT TRENCH OCCUPANCY GUIDE

SECTION	G	T	C	S	P	OTHER
*A	X	X	X	X	X	
*B	X	X		X	X	
*C	X		X	X	X	
*D		X	X	X	X	
*E	X			X	X	
*F		X		X	X	
*G			X	X	X	
*H				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				
V			X			
W				X		

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED

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JOINT TRENCH COMPOSITE PLAN

BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER:	DAVE CROWFOOT
DRAWN BY:	CVN/MTR
CHECKED BY:	DC
SCALE:	1"=20'
JOB NUMBER:	14-193 B20 & B22
DATE LAST MODIFIED:	05-01-17
SHEET	JT5
OF	11 SHEETS

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DAVID CROWFOOT E11965 EXP. 9/30/17 ELECTRICAL STATE OF CALIFORNIA

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100 FONT BOULEVARD
SAN FRANCISCO, CA 94132

MATCHLINE – STA. 24+15
SEE SHEET JT5

FONT BOULEVARD

JUNIPERO SERRA BOULEVARD
(CAL–TRANS)

CHUMASERO DRIVE
(EXISTING ROAD ALIGNMENT)

CHUMASERO DRIVE
(PROPOSED ROAD ALIGNMENT)

CHUMASERO DRIVE

CALTRANS R/W

STA. 24+18 (12kV)
4'6"x8'6"x6'6"
PG&E BOX

EXISTING UNDERGROUND GAS TO BE ABANDONED IN PLACE (BY PG&E) (PM 31179643)

STA. 24+18
4'4"x4" WAVEBAND BOX
STA. 24+59

EX. TELEPHONE U.G. TO REMAIN

STA. 25+12
3'x6'6"x3'
PG&E BOX

EX. AT&T SB 339A TO REMAIN

EX. PG&E (P7440)
(3) 50kVA TFMRS
(APPROX. LOC.)

STA. 25+56
PROPOSED
3'x5'x4'
TELE. INTERCEPT BOX
(FIELD LOC.)

30"x48"x34"
TELE. BOX

CUST–OWNED P4–92'

EX. GAS SVC TO BE REPLACE BY PG&E (PM 31179643)

EX. ELECTRIC TO BE REPLACE

CUSTOMER TIE–IN

EX. GAS METER

STA. 26+47
3'x5'x3'6"
PG&E
MEET ME BOX
(PRIMARY)

STA. 26+47
4'6"x8'6"x6'6"
PG&E BOX

STA. 26+89
4'x4'x4'
WAVEBAND
MEET ME BOX
STA. 26+92

T2–57'

T–5'
STUB FOR FUTURE

4'x 8' BELL HOLE FOR GAS TIE–IN. WHEN EXCAVATING OR TRENCHING KEEP CLEAR OF EXISTING FACILITIES. (TYPICAL)
CAUTION!! ENERGIZED FACILITIES!!
HAND EXCAVATE ONLY IN PRESENCE OF INSPECTOR.

CAUTION!!
EXERCISE EXTREME CAUTION WHEN WORKING AROUND GAS DISTRIBUTION LINES. HAND EXCAVATE ONLY IN PRESENCE OF INSPECTOR.

TELEPHONE TIE–IN LOCATION:
TIE INTO EXISTING AT&T MH. 4116
4'L CONTRACTOR TO COORDINATE TIE–IN AS REQUIRED WITH AT&T.

EX. ELECTRIC U.G. TO BE RELOCATED

EX. TELEPHONE U.G. TO REMAIN

STA. 25+13
13"x24"x12"
NG PS. BOX
(TYP)

EX. AT&T MH 4116 TO REMAIN

EXISTING 4kV U.G. ELECTRIC TO BE RELOCATED TO NEW JOINT TRENCH ABANDONED IN PLACE. UTILITY TO REMOVE CABLE & WIRE. (BY PG&E)

EX. PG&E
10'x8'x7' MH822
TO BE ABANDONED & REMOVED
(BY PG&E)

EX. ELECTRIC U.G. TO BE REMOVED

EX. 4'6"x8'6" VAULT TO BE REMOVED BY (PG&E)

STA. 26+87
J.T. CROSSING

STA. 26+70
3'x5'x4' TELE. BOX

STA. 15+38
4'6"x8'6"x6'
PG&E BOX

STA. 15+20
30"x60"x14"
CATV BOX (TYP)

STA. 15+35
J.T. CROSSING

STA. 15+09
J.T. CROSSING

EX. ELECTRIC U.G. TO BE REMOVED

ELECTRIC TIE–IN LOCATION:
EXPOSE, INTERCEPT & TIE INTO EXISTING PG&E 4kV

EX. ELECTRIC U.G. TO REMAIN

EX. PG&E
7'x8'x7' MH816
TO REMAIN

FUTURE SIGNALIZED INTERSECTION WITH STREET LIGHTS ON TRAFFIC SIGNAL POLE

EX. TELEPHONE U.G. TO BE RELOCATED

MATCHLINE – STA. 28+45
SEE SHEET JT7

MATCHLINE – "A"
SEE SHEET JT7

W1–114'
W1–125'
W1–133'
W1–140'
W1–112'
W1–114'
W1–91'
W1–73'

A1 100'
A2 119'
A3 39'
A4 71'
A5 25'
A6 20'
A7 27'
A8 25'
A15 17'

U1 11'
U2 38'
U3 3'
U4 3'
U5 11'
U2 60'

T1 20'
T2 57'
T 167'
T 68'

H7 17'
H14 20'
H14 20'
H14 20'
H14 85'
H14 12'

R/W
110' R/W
68' R/W

NOTE:
LOCATION OF EXISTING JOINT TRENCH FACILITIES SHOWN IS BASED ON INFORMATION PROVIDED BY OTHERS. JOINT TRENCH CONTRACTOR TO FIELD VERIFY ACTUAL LOCATIONS & ADJUST TRENCH AS NECESSARY AND MAINTAIN PROPER CLEARANCES.

NOTE:
EXISTING SERVICES TO LOW RISE BUILDINGS TO REMAIN.

SEE SHEET JT3 FOR LEGEND

SEE SHEET JT2 FOR J.T. & UTILITY BOX LOCATION STREET SECTIONS

R/W, P.U.E. & P.S.E. ACQUISITION NOTE:
CONTRACTOR TO VERIFY RIGHT OF WAY, PUBLIC UTILITY EASEMENT AND/OR PUBLIC SERVICE EASEMENT ACQUISITION WITH THE APPLICANT PRIOR TO CONSTRUCTION WITHIN AREAS OF QUESTION.

KEY MAP
NOT TO SCALE

20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

CALL BEFORE YOU DIG
TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE 811

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

JOINT TRENCH COMPOSITE PLAN

BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: 1"=20'
JOB NUMBER: 14–193 B20 & B22
DATE LAST MODIFIED: 05–01–17
SHEET JT6
OF 11 SHEETS

DAVID CROWFOOT E11965 EXP. 9/30/17 ELECTRICAL STATE OF CALIFORNIA

GAS TO BE REPLACED BY PG&E PM 31179643

EX. GAS METER

EX. AT&T SB 3385 TO BE REMOVED (BY AT&T)

EX. GAS TO BE ABANDONED

EX. TELEPHONE U.G. TO BE REMOVED

EX. PG&E (P7442) (3) 50kVA TFMRS (APPROX. LOC.)

50 CHUMASERO DRIVE
SAN FRANCISCO, CA 94132

EXISTING UNDERGROUND GAS TO BE ABANDONED IN PLACE (BY PG&E) (PM 31179643)

EX. AT&T SB 3387 TO REMAIN

EX. GAS TO BE ABANDONED

STA. 12+94
METERED SERVICE PEDESTAL
-200A, 120/240V, 3ø 4W
SERVICE FEED FOR 20HP TRASH COMPACTORS
-J.T. CONTRACTOR TO INSTALL PG&E SERVICE CABLE.

EX. GAS SERVICE TO BE CUT-OFF (BY PG&E ON PM 31179643)

BELL HOLE FOR EXISTING GAS SVC. CUT-OFF. WHEN EXCAVATING OR TRENCHING KEEP CLEAR OF EXISTING FACILITIES. (TYP.)
CAUTION!! ENERGIZED FACILITIES!!
HAND EXCAVATE ONLY IN PRESENCE OF INSPECTOR.

TRASH COMPACTORS

CHUMASERO DRIVE

MATCHLINE – 'B' – SEE SHEET JT8

MATCHLINE – 'A' – SEE SHEET JT6

CHUMASERO DRIVE (PROPOSED ROAD ALIGNMENT)

FONT BOULEVARD

MATCHLINE – STA. 28+45 SEE SHEET JT6

JUNIPERO SERRA BOULEVARD (CAL-TRANS)

CALTRANS R/W

BUS SHELTER

STA. 15+38 4'6"x8'6"x6" PG&E BOX

STA. 15+20 30"x60"x14" CATV BOX (TYP)

STA. 14+96 PROPOSED 4'x6'6"x5" PG&E BOX

STA. 14+78

STA. 14+72 3'x5'x3'6" MEET ME PG&E (PRIMARY)

STA. 14+15 4'x4'x4' WAVEBAND BOX (TYP)

STA. 13+79 30"x48"x14" CATV BOX (B52)

STA. 13+68 J.T. CROSSING

STA. 14+11 J.T. CROSSING

STA. 15+14 J.T. CROSSING

STA. 13+16 J.T. CROSSING

STA. 13+03

STA. 13+07

STA. 11+67 30"x48"x14" CATV BOX (B52) (TYP)

EX. PG&E 7'x8'x7' MHB21

EX. PG&E 7'x8'x7' MH1816 TO REMAIN

EX. PG&E 7'x8'x7' MH1817 TO REMAIN

EX. ELECTRIC U.G. TO BE REMOVED

EX. ELECTRIC U.G. TO REMAIN

ELECTRIC TIE-IN LOCATION: EXPOSE, INTERCEPT & TIE INTO EXISTING PG&E 4kV

EX. ELECTRIC TO BE REPLACE (BY PG&E)

4'x6'5"x5" PG&E BOX

3'x5'x3'6" PG&E MEET ME BOX (PRIMARY)

30"x48"x34" TELE. BOX

CAUTION!!!! ENERGIZED FACILITIES!!

CONTRACTOR TO EXERCISE EXTREME CAUTION TO AVOID DAMAGING EXISTING UNDERGROUND UTILITIES. OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES. NEITHER THE OWNER NOR THE DESIGNER ASSUME ANY RESPONSIBILITY THAT THE OBSTRUCTIONS INDICATED WILL ACTUALLY BE THE OBSTRUCTIONS ENCOUNTERED. POTHOLING IS REQUIRED. HAND EXCAVATE ONLY IN PRESENCE OF UTILITY INSPECTOR.

METERED SERVICE PEDESTAL
-100A, 120/240V, 1ø 3W
SERVICE FEED FOR PARK SERVICE
-J.T. CONTRACTOR TO INSTALL PG&E SERVICE CABLE.

55 CHUMASERO DRIVE
SAN FRANCISCO, CA 94132

APPLICANT TO UPGRADE CUSTOMER-OWNED PRIMARY TO ACCOMMODATE NEW 12kV SERVICE

EX. PG&E (P7441) (3) 50kVA TFMRS (APPROX. LOC.)

EXISTING UNDERGROUND GAS TO BE REPLACED BY PM 31186987 TO NEW JOINT TRENCH. ABANDONED IN PLACE. (BY PG&E)

TEMPORARY POWER TRANSFORMER
90"x106" PG&E PAD MOUNT TRANSFORMER W/BUS DUCT
3500A, 277/480V 3ø 4W
(PM 31186063) FOR 95 CHUMASERO DRIVE

TERMINATION CAN COORDINATE WITH BUILDING CONTRACTOR FOR SIZE.

EX. GAS TO BE TRANSFERED UNDER PM 31179643 WHEN JOINT TRENCH IS INSTALLED

PICKUP ELECTRIC STUBS 5' FROM EDGE OF BUILDING (STUBS BY OTHERS) J.T. CONTRACTOR TO COORDINATE WITH BUILDING CONTRACTOR FOR LOCATION OF UTILITY STUBS. (TYPICAL)

90"x106" PG&E PAD MOUNT TRANSFORMER (PERM-PM 31186064)

90"x106" PG&E PAD MOUNT TRANSFORMER (PERM-PM 31186064)

PAD MOUNT TRANSFORMER ROOM: (REFER TO M.E.P & ARCHITECT PLANS FOR ADDITIONAL INFORMATION)

13'-0"x13'-0" OF BUILDING WALL REQUIRED WITHOUT ANY OPENINGS TO BUILDING. (TYP)

GAS METER ASSEMBLY LOCATION: (BLOCK 22-02)
TOTAL: (1) ROTARY GAS METER @ 2.0 PSI
-329 RANGES/OVENS @ 65 EACH = 21,385 CFH
-(4) DOM. WATER HEATERS @ 2,000 EACH = 8,000 CFH
-(1) COGENMICROTUBINE 850 CFH
TOTAL GAS LOAD DEMAND = 30,235 CFH

RESIDENTIAL DISTRIBUTION BOARD – "RDP-A" (BLOCK 22-02) (BASEMENT LEVEL B1) EAST TOWER
95 CHUMASERO DRIVE (PM 31186064)
2500A, 120/208V 3ø 4W
-800A 44 RES. UNIT METERS (MC-03) LEVEL 03
-800A 36 RES. UNIT METERS (MC-06) LEVEL 06
-800A 36 RES. UNIT METERS (MC-06) LEVEL 09
-600A 24 RES. UNIT METERS (MC-11) LEVEL 11
-600A 24 RES. UNIT METERS (MC-13) LEVEL 13
TOTAL: 164 RESIDENTIAL UNIT METERS
(7)-5" SECONDARY CONDUITS

SWITCH GEAR ROOM BASEMENT LEVEL B1

ELEC

GARAGE PARKING RAMP DOWN

MAIN DISTRIBUTION BOARD – "MDP-A" HOUSE & GARAGE
(BLOCK 22-02) (BASEMENT LEVEL B1) EAST TOWER
95 CHUMASERO DRIVE (PM 31186064)
1000A, 277/480V 3ø 4W
(1) 1200A HOUSE METER
-(2) ELEVATORS @ (40HP) EACH
-(2) ELEVATOR PRESS. FANS @ (25HP) EACH
-(2) STAIRWELL PRESS. FANS @ 10HP) EACH
-(6) EV CHARGING STATION @ 9kVA = EACH
(5)-5" SECONDARY CONDUITS

SEE SHEET JT3 FOR LEGEND

SEE SHEET JT2 FOR J.T. & UTILITY BOX LOCATION STREET SECTIONS

NOTE:
EXISTING SERVICES TO LOW RISE BUILDINGS TO REMAIN.

NOTE:
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20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

KEY MAP
NOT TO SCALE

REVISIONS			
SYMBOL	DATE	DESCRIPTION	APPROVED

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JOINT TRENCH COMPOSITE PLAN

BKF
PARKMERCED
PHASE 1B – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: 1"=20'
JOB NUMBER: 14-193 B20 & B22
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SHEET JT7
OF 11 SHEETS

TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE 811
CALL BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER
DAVID CROWFOOT
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

CAUTION!!!! ENERGIZED FACILITIES!!

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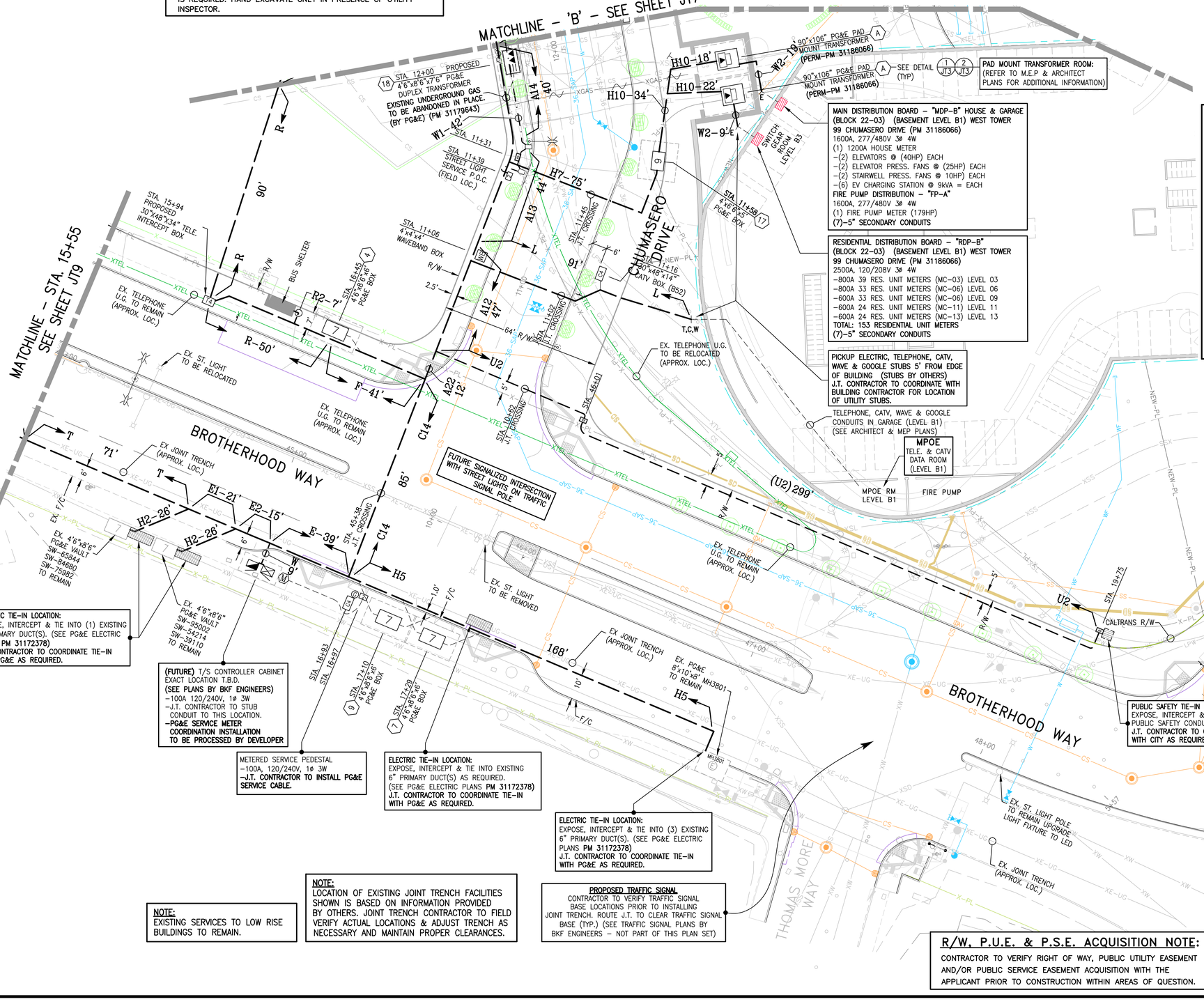
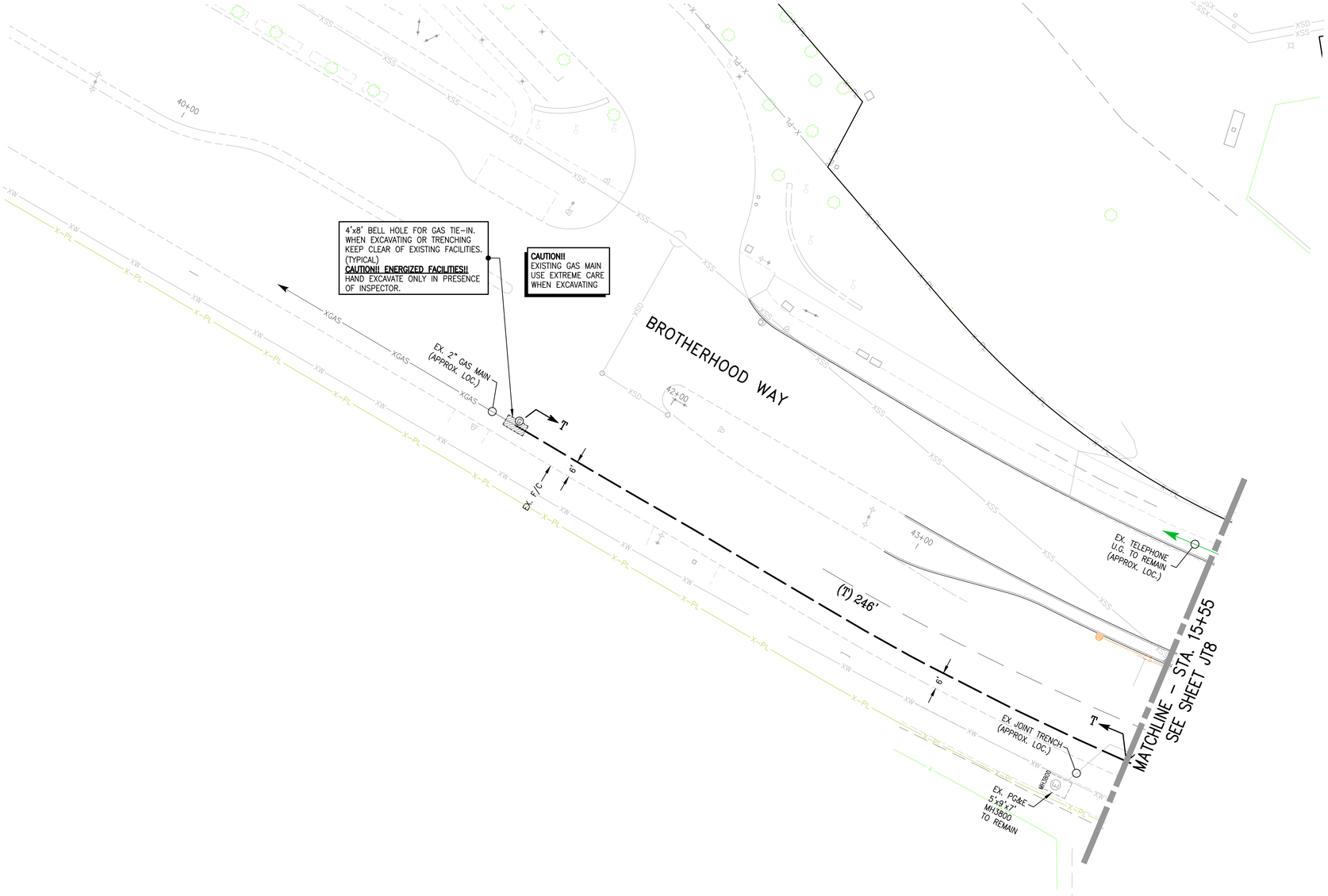
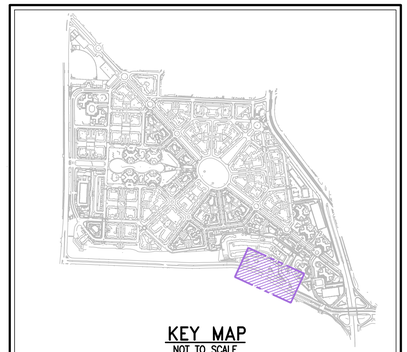

MATCHLINE – 'B' – SEE SHEET JT7
MATCHLINE – STA. 15+55
SEE SHEET JT9
CHUMASERO DRIVE
BROTHERHOOD WAY
THOMAS MORE WAY
STA. 12+00 PROPOSED 4'6"x8'6"x7'6" PG&E DUPLEX TRANSFORMER
EXISTING UNDERGROUND GAS TO BE ABANDONED IN PLACE. (BY PG&E) (PM 31179643)
STA. 11+31
STA. 11+39 STREET LIGHT SERVICE P.O.C. (FIELD LOC.)
STA. 15+94 PROPOSED 30"X48"X34" TELE. INTERCEPT. BOX
STA. 11+06 4'x4'x4' WAVEBAND BOX
STA. 16+45 4'6"x8'6"x6' PG&E BOX
BUS SHELTER
EX. TELEPHONE U.G. TO REMAIN (APPROX. LOC.)
EX. ST. LIGHT TO BE RELOCATED
EX. JOINT TRENCH (APPROX. LOC.)
EX. 4'6"x8'6" PG&E VAULT SW-65984 SW-84680 SW-75982 TO REMAIN
EX. 4'6"x8'6" PG&E VAULT SW-93002 SW-54214 SW-39110 TO REMAIN
STA. 16+93
STA. 16+97
STA. 17+10 4'6"x8'6"x6' PG&E BOX
STA. 17+29 4'6"x8'6"x6' PG&E BOX
STA. 11+45 J.T. CROSSING
STA. 11+02 J.T. CROSSING
STA. 46+01 J.T. CROSSING
STA. 45+38 J.T. CROSSING
STA. 11+16 4'x4'x48"x14" CATV BOX (G52)
STA. 11+58 4'x6'6"x4'3" PG&E BOX
EX. TELEPHONE U.G. TO BE RELOCATED (APPROX. LOC.)
FUTURE SIGNALIZED INTERSECTION WITH STREET LIGHTS ON TRAFFIC SIGNAL POLE
EX. ST. LIGHT TO BE REMOVED
EX. TELEPHONE U.G. TO REMAIN (APPROX. LOC.)
EX. PG&E 6'x10'x8' MH3801 TO REMAIN
MH3801
STA. 19+75
CALTRANS R/W
EX. ST. LIGHT POLE TO REMAIN UPGRADE LIGHT FIXTURE TO LED
H10-18'
H10-22'
H10-34'
W2-19'
W2-9'E
W1-42'
H7-75'
A14 40'
A13 44'
A12 47'
A22 12'
R-50'
F-41'
E1-21'
E2-15'
E-39'
H2-26'
H2-26'
H5
H5
C14
C14
U2
U2
(U2) 299'
90'
91'
85'
71'
168'
64' R/W
90'x106" PG&E PAD MOUNT TRANSFORMER (PERM-PM 31186066)
SEE DETAIL 1 JT3 2 JT3 (TYP)
SWITCH GEAR ROOM LEVEL B3
MPOE RM LEVEL B1
FIRE PUMP
NEW-PL
NEW-PL
NEW-PL



20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.



KEY MAP
NOT TO SCALE

JOINT TRENCH OCCUPANCY GUIDE

SECTION	G	T	C	S	P	OTHER
*A	X	X	X	X	X	
*B	X	X		X	X	
*C	X		X	X	X	
*D		X	X	X	X	
*E	X			X	X	
*F		X		X	X	
*G			X	X	X	
*H				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				
V			X			
W				X		

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

NOTE:
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SEE SHEET JT3 FOR LEGEND

SEE SHEET JT2 FOR J.T. & UTILITY BOX LOCATION STREET SECTIONS

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DAVID CROWFOOT
E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

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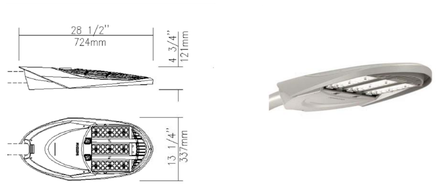
JOINT TRENCH COMPOSITE PLAN

BKF
PARKMERCED
PHASE 1B - B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CVN/MTR
CHECKED BY: DC
SCALE: 1"=20'
JOB NUMBER: 14-193 B20 & B22
DATE LAST MODIFIED: 05-01-17
SHEET JT9
OF 11 SHEETS

PARK MERCED PHASE 1B - B20 -B22 - PUBLIC STREET LIGHTING

Park Merced -Chunasero Dr. & Font Blvd. - San Francisco (Type R2M & R3W distribution, 71 watts)



EPA: 0.65 sq ft / weight: 17 lb (7.7 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type AA	
Qty	5	Luminaire	**GPLS-32L700WW-G2-R2M-UNV-DMG-RCD7-API-GY3**
		Type AA (part of group AC)	
Qty	5	Luminaire	**GPLS-32L700WW-G2-R2M-UNV-DMG-RCD7-API-GY3**
		Type BB	
Qty	13	Luminaire	**GPLS-32L700WW-G2-R3W-UNV-DMG-RCD7-API-GY3**

Description of Components:

Housing: The upper grid and lower part of the housing are made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 7 3/4" (197mm) minimum long tenon. Comes with two zinc plated clamps fixed by 4 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Complete with a bird guard protecting against birds and similar intruders. ANSI label to identify wattage and source included in box.

Light Engine: Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**
Electrical components are RoHS compliant, IP66 sealed light engine. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

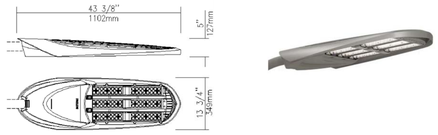
Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

LED Module: Composed of 16 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Warm White, 3000 Kelvin nominal (2985K +/- 275K or 2710K to 3260K), CRI 70 Min. 75 Typical.

Optical System: (R2M), IES type II medium (asymmetrical). Composed of high-performance UV stabilized optical grade

PHILIPS LUMEC

Park Merced -Chunasero Dr. & Font Blvd. - San Francisco (Traffic, R3M distribution, 105 watts)



EPA: 0.94 sq ft / weight: 27 lb (12.3 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Traffic	
Qty	8	Luminaire	**GPLM-64L530WW-G2-R3M-UNV-DMG-RCD7-API-GY3**

Description of Components:

Housing: The upper grid and lower part of the housing are made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 7 3/4" (197mm) minimum long tenon. Comes with two zinc plated clamps fixed by 4 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Complete with a bird guard protecting against birds and similar intruders. ANSI label to identify wattage and source included in box.

Light Engine: Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**
Electrical components are RoHS compliant, IP66 sealed light engine. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

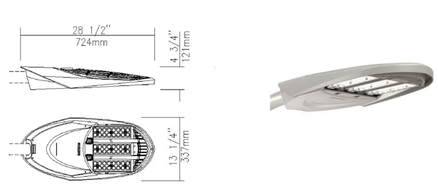
Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

LED Module: Composed of 64 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Warm White, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

Optical System: (R3M), IES type III medium (asymmetrical). Composed of high-performance UV stabilized optical grade

PHILIPS LUMEC

Park Merced -Chunasero Dr. & Font Blvd. - San Francisco (Type R2M distribution, 38 watts)



EPA: 0.65 sq ft / weight: 17 lb (7.7 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

		Type CC (ped, head for group AC)	
Qty	5	Luminaire	**GPLS-16L700WW-G2-R2M-UNV-DMG-RCD7-API-GY3**

Description of Components:

Housing: The upper grid and lower part of the housing are made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 7 3/4" (197mm) minimum long tenon. Comes with two zinc plated clamps fixed by 4 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Complete with a bird guard protecting against birds and similar intruders. ANSI label to identify wattage and source included in box.

Light Engine: Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**
Electrical components are RoHS compliant, IP66 sealed light engine. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire Luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

LED Module: Composed of 16 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Warm White, 3000 Kelvin nominal (2985K +/- 275K or 2710K to 3260K), CRI 70 Min. 75 Typical.

Optical System: (R2M), IES type II medium (asymmetrical). Composed of high-performance UV stabilized optical grade

PHILIPS LUMEC

Park Merced -Chunasero Dr. & Font Blvd. - San Francisco (Type R2M distribution, 38 watts)

LED light engine technical information for GPLS
CRI = 70, CCT = 4000K (3985K +/- 275K or 5710K to 4260K)
System (LED + driver) rated life = 100,000 hrs [1]

LED Module	Typical delivered lumens	Typical system wattage [2] (W)	Typical current @ 120 V (A)	Typical current @ 208 V (A)	Typical current @ 240 V (A)	Typical current @ 277 V (A)	Typical current @ 347 V (A)	Typical current @ 480 V (A)	LED current (mA)	Luminaire Efficacy Rating (Lm/W)	BUG rating
16L530NW-G2-R2M	3033	27	0.23	0.14	0.12	0.11	0.10	0.08	530	111	B1-U0-G1
16L530NW-G2-R2S	3339	27	0.23	0.14	0.12	0.11	0.10	0.08	530	123	B1-U0-G0
16L530NW-G2-R3M	3124	27	0.23	0.14	0.12	0.11	0.10	0.08	530	115	B1-U0-G1
16L530NW-G2-R3S	3089	27	0.23	0.14	0.12	0.11	0.10	0.08	530	113	B1-U0-G1
16L530NW-G2-R3W	3059	27	0.23	0.14	0.12	0.11	0.10	0.08	530	112	B1-U0-G1
16L530NW-G2-4	3165	27	0.23	0.14	0.12	0.11	0.10	0.08	530	116	B1-U0-G1
16L530NW-G2-5	3054	27	0.23	0.14	0.12	0.11	0.10	0.08	530	112	B2-U0-G1
16L700NW-G2-R2M	3816	38	0.32	0.19	0.17	0.15	0.12	0.10	700	100	B1-U0-G1
16L700NW-G2-R2S	4201	38	0.32	0.19	0.17	0.15	0.12	0.10	700	111	B1-U0-G1
16L700NW-G2-R3M	3930	38	0.32	0.19	0.17	0.15	0.12	0.10	700	103	B1-U0-G1
16L700NW-G2-R3S	3886	38	0.32	0.19	0.17	0.15	0.12	0.10	700	102	B1-U0-G1
16L700NW-G2-R3W	3849	38	0.32	0.19	0.17	0.15	0.12	0.10	700	101	B1-U0-G1
16L700NW-G2-4	3982	38	0.32	0.19	0.17	0.15	0.12	0.10	700	105	B1-U0-G1
16L700NW-G2-5	3843	38	0.32	0.19	0.17	0.15	0.12	0.10	700	101	B2-U0-G1
16L1050NW-G2-R2M	5227	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	95	B1-U0-G1
16L1050NW-G2-R2S	5754	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	104	B1-U0-G1
16L1050NW-G2-R3M	5383	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	98	B1-U0-G1
16L1050NW-G2-R3S	5323	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	97	B1-U0-G2
16L1050NW-G2-R3W	5272	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	96	B1-U0-G2
16L1050NW-G2-4	5454	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	99	B1-U0-G2
16L1050NW-G2-5	5264	55	0.46	0.27	0.23	0.20	0.17	0.13	1050	96	B3-U0-G1
32L530NW-G2-R2M	6046	53	0.45	0.27	0.24	0.22	0.17	0.14	530	114	B2-U0-G1
32L530NW-G2-R2S	6656	53	0.45	0.27	0.24	0.22	0.17	0.14	530	126	B2-U0-G1
32L530NW-G2-R3M	6227	53	0.45	0.27	0.24	0.22	0.17	0.14	530	118	B2-U0-G1
32L530NW-G2-R3S	6158	53	0.45	0.27	0.24	0.22	0.17	0.14	530	117	B1-U0-G2
32L530NW-G2-R3W	6099	53	0.45	0.27	0.24	0.22	0.17	0.14	530	115	B1-U0-G2
32L530NW-G2-4	6309	53	0.45	0.27	0.24	0.22	0.17	0.14	530	119	B1-U0-G2
32L530NW-G2-5	6089	53	0.45	0.27	0.24	0.22	0.17	0.14	530	115	B3-U0-G1
32L700NW-G2-R2M	7594	71	0.60	0.34	0.295	0.27	0.23	0.18	700	107	B2-U0-G2

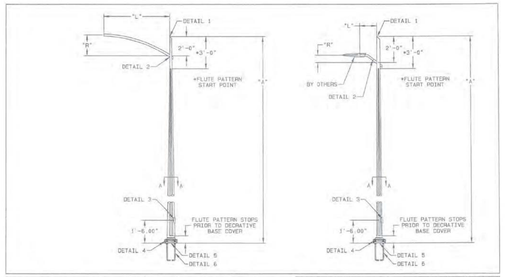
1 L70 = 100,000 hrs (at ambient temperature = 25°C).
2 System wattage or total luminaire wattage includes the LED module and the LED driver.
Note that IES files with HS house side shield option are also available – contact the factory.
Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

PHILIPS LUMEC

STREET LIGHTING GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, FEDERAL AND ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL UTILITY COMPANY REGULATIONS; N.E.C., AND THE LATEST APPROVED STANDARDS OF I.E.E.E., A.S.A, N.E.M.A., U.L. AND OSHA WHERE APPLICABLE. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE. ALSO, ALL SECTIONS OF STATE OF CALIFORNIA PUC G.O. 95 SHALL APPLY.
2. MATERIALS FURNISHED UNDER THIS SECTION OF THESE SPECIFICATIONS FOR WHICH UL STANDARDS HAVE BEEN ESTABLISHED SHALL BE LISTED AND BEAR THE LABEL OF UNDERWRITER'S LABORATORIES, INC.
3. WHERE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS CONFLICT WITH THE DRAWINGS OR THESE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
4. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT FIRST NOTIFYING & OBTAINING APPROVAL FROM CITY/COUNTY AGENCY & GIACALONE DESIGN SERVICES, INC.
5. GIACALONE DESIGN SERVICES, INC. ASSUMES NO RESPONSIBILITY FOR ANY VARIANCE BETWEEN THESE PLANS AND THE ACTUAL FIELD CONDITIONS. CONTRACTOR SHOULD REVIEW PROJECT SITE PRIOR TO SUBMITTING ITS BID.
6. LEGEND SYMBOLS ARE SHOWN IN STREET AREA FOR CLARITY. INSTALL BEHIND CURB AND/OR SIDEWALK PER COUNTY SPECIFICATIONS KEEP CLEAR OF DRIVEWAYS AND PATHWAYS (TYPICAL).
7. ANY CHANGES OR MODIFICATIONS TO PROPOSED STREET LIGHT LOCATIONS SHALL BE APPROVED, IN WRITING, BY THE CITY/COUNTY AGENCY PRIOR TO INSTALLATION.

SAN FRANCISCO STREET LIGHT PLAN
FIXTURE CATALOGUE TECHNICAL DETAILS
TYPE LS100



PAGE 4

CONTRACTORS NOTES

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, FEDERAL AND ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL UTILITY COMPANY REGULATIONS; N.E.C., AND THE LATEST APPROVED STANDARDS OF I.E.E.E., A.S.A, N.E.M.A., U.L. AND OSHA WHERE APPLICABLE. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE ABOVE. ALSO, ALL SECTIONS OF STATE OF CALIFORNIA PUC G.O. 95 SHALL APPLY.
2. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE UNDERGROUND SERVICE FROM THE LUMINAIRE TO PG&E SERVICE POINT AND TERMINATE CONDUIT AND WIRES AT BOX AS DIRECTED BY PG&E
3. KEEP STREET LIGHTS A MINIMUM OF 3 FEET AWAY FROM THE EDGE OF DRIVEWAYS AND 3 FEET AWAY FROM LOW PRESSURE FIRE HYDRANTS, AND 6 FEET FROM HIGH PRESSURE HYDRANTS.
4. TWO OR MORE STREET LIGHTS ON THE SAME CIRCUIT SHALL BE WIRED TO BALANCE THE LOAD. (SEE WIRING DIAGRAM)
5. CONDUIT AND FITTINGS: ALL CONDUIT AND FITTINGS SHALL BE U.L. APPROVED. UNLESS OTHERWISE NOTED OR REQUIRED, USE MINIMUM 1-1/2" HOT DIPPED GALVANIZED CONDUIT AND FITTINGS, NOT SCHEDULE 40 PVC. MINIMUM RADIUS BENDS SHALL BE 18". PROVIDE PULL WIRE IN ALL EMPTY CONDUITS. ALL CROSSINGS TO BE PERPENDICULAR TO STREET.
6. CONDUIT DEPTH: CONDUIT SHALL NOT BE INSTALLED AT A DEPTH GREATER THAN 36" BELOW PAVEMENT SURFACE, NOR 30" BELOW GROUND SURFACE IN UNPAVED AREAS: AND MINIMUM DEPTH OF CONDUIT SHALL BE 24" IN ROADWAY AREAS AND 18" IN SIDEWALK AND UNPAVED AREAS.
7. CABLE: ALL WIRING SHALL BE THW INSULATION TYPE. THWN IS NOT ACCEPTABLE FOR STREET LIGHTING. NO. 10 AWG WITH THW SOLID TYPE INSULATION IN POLE MAY BE USED. ALL FIELD WIRING IS A MINIMUM OF #8 STRANDED COPPER PER N.E.C. AND INSULATED FOR 600 VOLT.
8. SPLICE BOXES: FURNISH AND INSTALL AS PER SFDPW STANDARD PLANS AND SPECIFICATIONS NOT PER CALTRANS STANDARDS.
9. FUSES: EACH POLE SHALL BE FUSED WITH WATERPROOF IN-LINE FUSE HOLDERS (BUSHMAN HEB SERIES) AT EACH ADJACENT SPLICE BOX WITH 10 AMP FUSE.
10. SPLICING: SPLICES SHALL BE MADE WITH 'C' SHAPED COMPRESSION CONNECTORS OR SPLIT BOLT CONNECTORS. INSTALLED CONNECTORS SHALL BE WRAPPED WITH A MINIMUM OF 4 HALF-LAPPED LAYERS OF RUBBER OR RUBBER MASTIC TAPE. OVERLAP WITH AT LEAST 2 HALF LAPPED LAYERS OF SCOTCH 33+ VINYL OR APPROVED PREMIUM TAPE. AFTER TAPING SPLICES, APPLY SCOTCHKOTE ELECTRICAL COATING EVENLY OVER SPLICES OR AS RECOMMENDED BY THE MANUFACTURER.
11. POLE NUMBERS: COORDINATE WITH SFPUC – POWER ENTERPRISE (BLHP) STREET LIGHTING DEPARTMENT.
12. TRENCH: CONDUIT CAN BE PLACED IN JOINT TRENCH. CONDUIT LAYOUT IS SHOWN SCHEMATICALLY. SEE COMPOSITE DRAWING FOR TRENCH LOCATION. ANY INCIDENTAL TRENCHING NOT PROVIDED BY TRENCHING AGENT IS CONTRACTOR'S RESPONSIBILITY.
13. CONTRACTOR TO INSTALL CIRCUIT GROUNDING AND GROUND WIRE IN CONDUIT AS PER PLANS.
14. CENTERLINE OF STREET LIGHTS SHALL BE LOCATED ON THE LOT LINE UNLESS OTHERWISE NOTED ON THESE PLANS.
15. A LIST OF ALL MATERIALS & SUPPLIERS SHOULD BE PROVIDED TO AUTHORITY HAVING JURISDICTION FOR APPROVAL.
16. BURN TEST: DAY BURN FOR 24 HOURS FOR 5 CONSECUTIVE DAYS FOR COUNTY INSPECTOR APPROVAL.
17. GROUNDING AND BONDING SHALL PROPERLY INTERCONNECT ALL METAL PARTS OF THE SYSTEM.
18. ALL CONNECTIONS SHALL BE SECURED WITH LOCK NUTS AND INSULATED BUSHINGS.
19. CONTRACTOR SHALL CONSULT LOCAL AGENCIES FOR THEIR CIRCUIT GROUNDING REQUIREMENTS. IF GROUND WIRE IS REQUIRED IN CONDUIT, INSTALL ACCORDINGLY.
20. WATERPROOF INLINE FUSES SHALL BE PROVIDED IN THE SPLICE BOX NEXT TO EACH NEW OR RELOCATED STREET LIGHT. IF THE DESIGN IS SUCH THAT NO BOXES WILL BE INSTALLED, THE SPLICE SHALL BE LOCATED IN THE HANDHOLE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE OPERATING SYSTEM.
22. EACH STREET LIGHT SHALL BE CONTROLLED BY A PHOTO ELECTRIC CELL MOUNTED ON TOP OF EACH LUMINAIRE OR THE TOP OF EACH POLE DEPENDING UPON THE MANUFACTURER'S RECOMMENDATIONS OR CONTROLLED BY OTHER MEANS AS SHOWN ON THE DRAWINGS.
23. FOUNDATION MOUNTED ELECTROLIERS SHALL BE PLUMBED BY ADJUSTING THE NUTS ON THE ANCHOR BOLTS BEFORE THE FOUNDATION CAP IS PLACED. SHIMS OR OTHER SIMILAR DEVICES FOR PLUMBING OR RAKING WILL NOT BE PERMITTED. AFTER PLUMBING THE STANDARD, ANCHOR BOLTS SHALL BE CUT OFF 1/4" TO ½" ABOVE THE NUTS AND THE EXPOSED SURFACES SHALL BE REPAIRED AS INDICATED BY THE INSPECTING AGENCY.
24. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE STREET LIGHT ADMINISTRATION DEPT. OF THE COUNTY PRIOR TO ACCEPTANCE OF THE STREET LIGHTING SYSTEM.
25. CLEARANCE BETWEEN STREETLIGHT AND TREE* SHALL BE IN ACCORDANCE WITH SFDPW ORDINANCE NO. 165-95:
    1. SMALL TREE – NO CLOSER THAN 9 FEET.
    2. MEDIUM TREE – NO CLOSER THAN 15 FEET.
    3. LARGE TREE – NO CLOSER THAN 21 FEET.
    * MATURE SIZE OF TREE DETERMINED BY SFDPW STREET TREE PLANTING GUIDE.
26. EACH STREET LIGHT POLE MUST HAVE AN INDIVIDUAL PULL BOX INSTALLED IN THE SIDEWALK WITHIN 3 TO 5 FEET OF THE BASE FOUNDATION.
27. FOR ADDITIONAL INFORMATION, REFER TO BLHP STREETLIGHTING POLICY.

PUBLIC/PRIVATE LIGHTING:	PUBLIC
PG&E RATE SCHEDULE:	LS-2A
INSTALL IN JOINT TRENCH:	
INSTALL IN SEPARATE TRENCH:	✓
CITY PERMIT REQUIRED:	✓

LUMINAIRE SCHEDULE

TYPE	LUMINAIRE	DIST.	MTG. HT.	ARM	POLE HT.	COLOR	MATERIAL	QUANTITY
						GY3		
"AC" = "AA" GPLS	71W, LED, 120V	TYPE 2	20'-9"	1.83'	23'-0"	MEDIUM	STEEL	10
+ "CC" GPLS	38W, LED, 120V	TYPE 2	12'-0"	1.83'	23'-0"	GREY	STEEL	
"BB" GPLS	71W, LED, 120V	TYPE 3	20'-9"	1.83'	23'-0"	TEXTURED	STEEL	13
"TRAFFIC" GPLM	105W, LED, 120V	TYPE 3	33'-9"	12'-0"	30'-0"		STEEL	9

*NOTE: CONTRACTOR TO VERIFY ALL QUANTITIES AND SPECIFICATIONS PRIOR TO ORDERING.

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'-0".

DAVID C. CROWFOOT — E11965 EXP. 9/30/17 — ELECTRICAL — STATE OF CALIFORNIA — PROFESSIONAL ENGINEER

TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE
811
CALL BEFORE YOU DIG

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

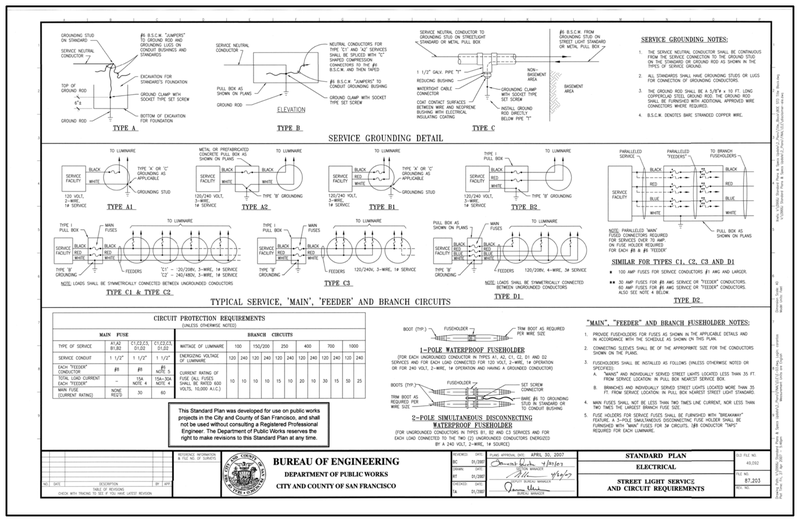
GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

PUBLIC STREET LIGHTING TITLE SHEET

BKF
PARKMERCED
PHASE 1B - B20-B22
SAN FRANCISCO CALIFORNIA

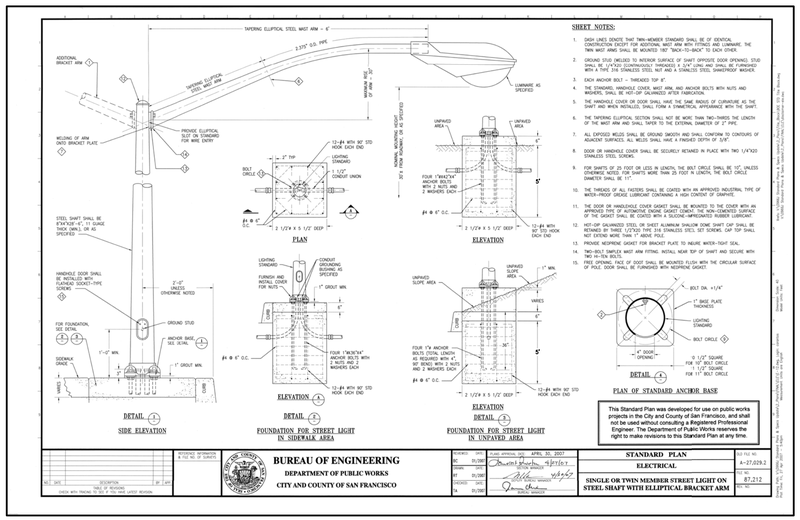
PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CCP
CHECKED BY: DC
SCALE: AS SHOWN
JOB NUMBER: 14-193 B20-B22
DATE LAST MODIFIED: 05-01-17

SHEET
SL1
OF 5 SHEETS



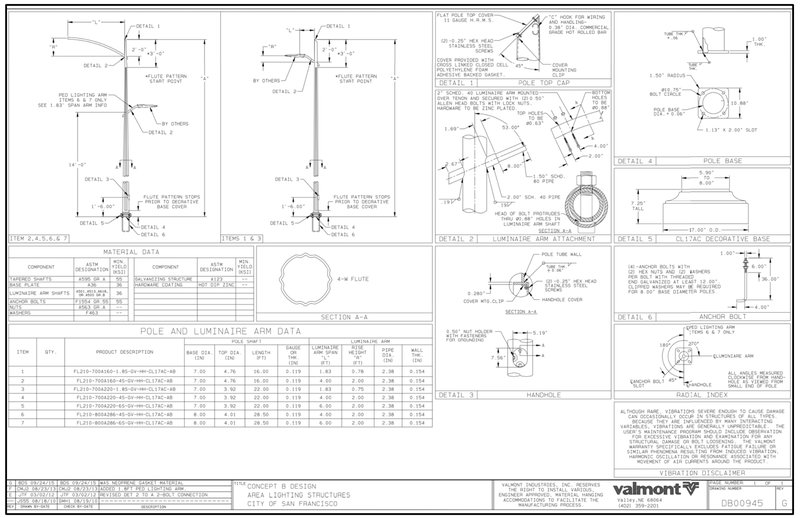
ST. LIGHT CIRCUIT REQUIREMENTS DETAIL

SEE SL1 FOR ST LIGHT ORDERING INFO.



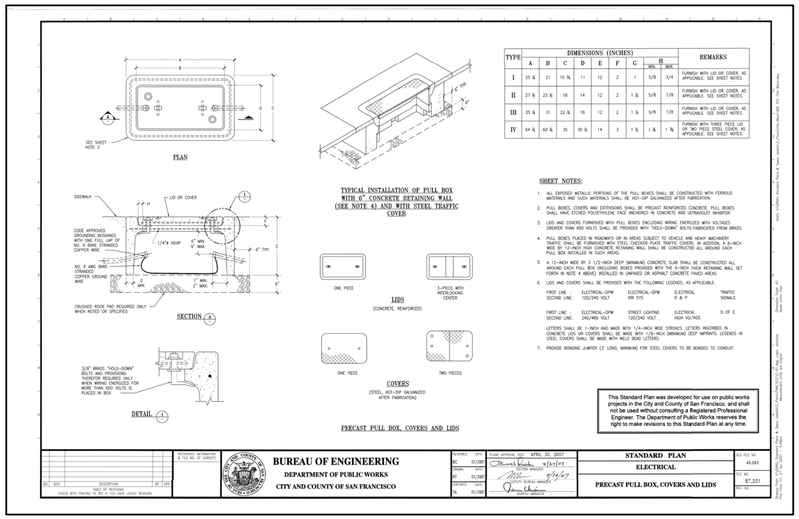
ST. LIGHT LOCATION & FOUNDATION DETAIL

SEE SL1 FOR ST LIGHT ORDERING INFO.



ST. LIGHT POLE DETAIL

SEE SL1 FOR ST LIGHT ORDERING INFO.



ST. LIGHT PULL BOX DETAIL

SEE SL1 FOR ST LIGHT ORDERING INFO.

CAUTION:

CONTACT **U.S.A. (811)** (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'-0".

REGISTERED PROFESSIONAL ENGINEER — DAVE CROWFOOT — E11965 — EXP. 9/30/17 — ELECTRICAL — STATE OF CALIFORNIA

TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE
811
CALL BEFORE YOU DIG

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

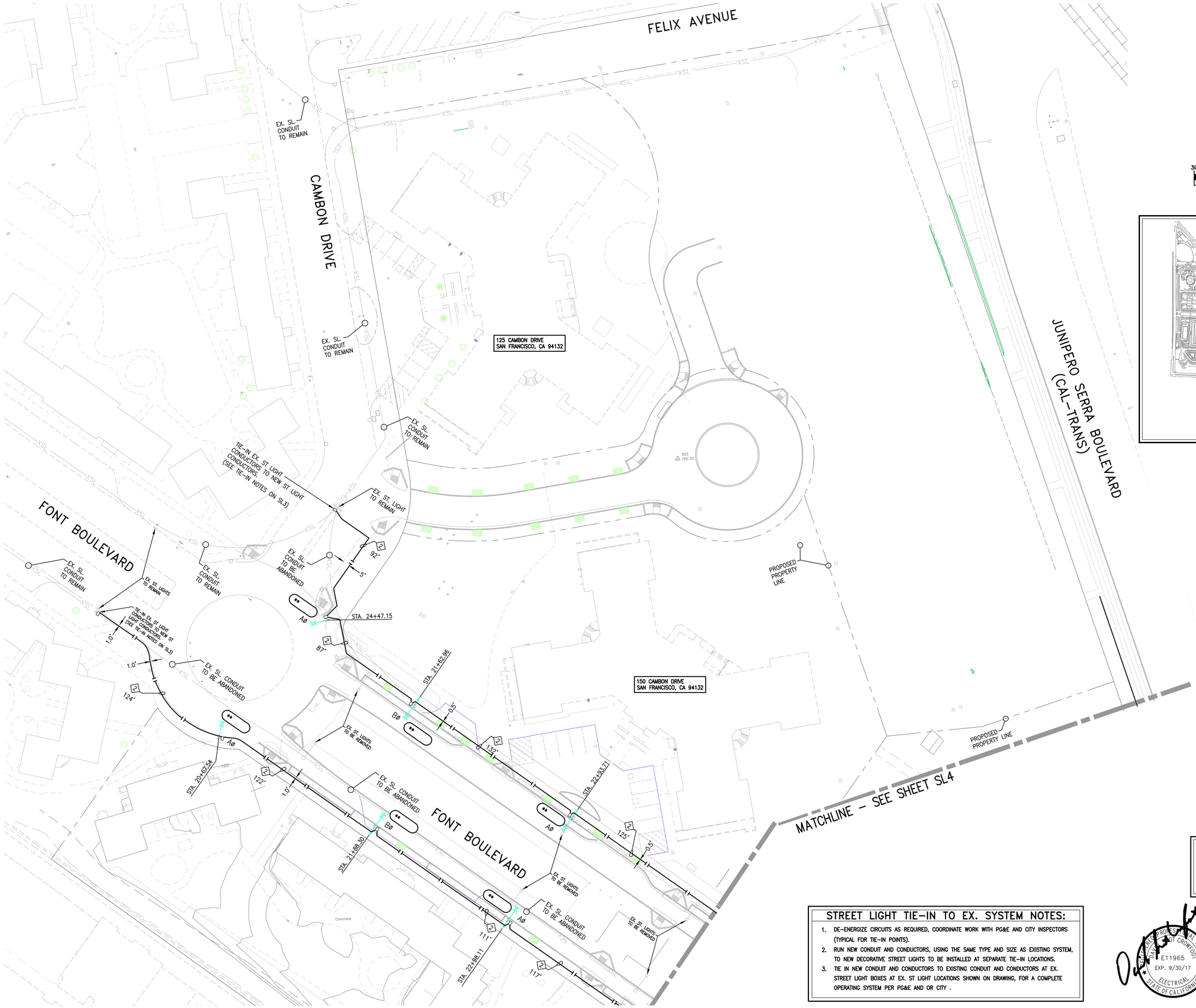
GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

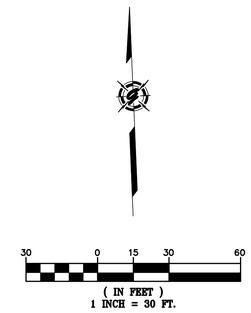
PUBLIC STREET LIGHTING DETAIL SHEET

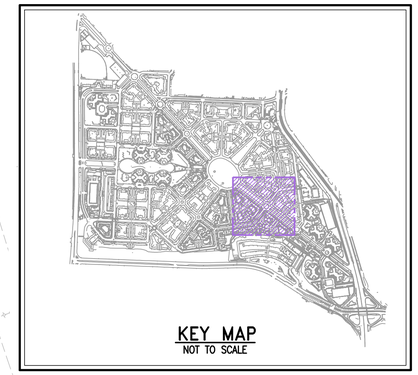
BKF
PARKMERCED
PHASE 1B - B20-B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CCP
CHECKED BY: DC
SCALE: AS SHOWN
JOB NUMBER: 14-193 B20-B22
DATE LAST MODIFIED: 05-01-17

SHEET SL2 OF 5 SHEETS







NOTE:
SEE SHEET SL5 FOR CONDUIT AND CONDUCTOR SCHEDULE AND SYMBOL LEGEND.

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'-0".

STREET LIGHT TIE-IN TO EX. SYSTEM NOTES:

1. DE-ENERGIZE CIRCUITS AS REQUIRED, COORDINATE WORK WITH PG&E AND CITY INSPECTORS (TYPICAL FOR TIE-IN POINTS).
2. RUN NEW CONDUIT AND CONDUCTORS, USING THE SAME TYPE AND SIZE AS EXISTING SYSTEM, TO NEW DECORATIVE STREET LIGHTS TO BE INSTALLED AT SEPARATE TIE-IN LOCATIONS.
3. TIE IN NEW CONDUIT AND CONDUCTORS TO EXISTING CONDUIT AND CONDUCTORS AT EX. STREET LIGHT BOXES AT EX. ST LIGHT LOCATIONS SHOWN ON DRAWING, FOR A COMPLETE OPERATING SYSTEM PER PG&E AND OR CITY .

REGISTERED PROFESSIONAL ENGINEER DAVE CROWFOOT E11965 EXP. 9/30/17 ELECTRICAL STATE OF CALIFORNIA

TWO DAYS BEFORE YOU DIG CALL USA TOLL FREE 811
CALL BEFORE YOU DIG

REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

PUBLIC STREET LIGHTING SITE PLAN

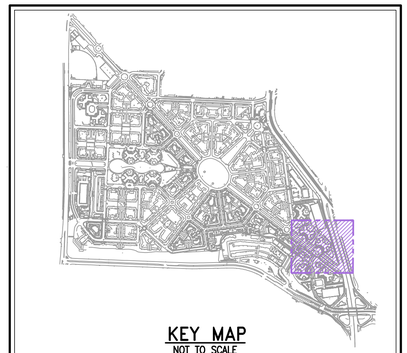
BKF PARKMERCED PHASE 1B - B20-B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: CCP
CHECKED BY: DC
SCALE: 1"=30'
JOB NUMBER: 14-193 B20-B22
DATE LAST MODIFIED: 05-01-17
SHEET SL3 OF 5 SHEETS



30 0 15 30 60

(IN FEET)
1 INCH = 30 FT.



KEY MAP
NOT TO SCALE

NOTE:
SEE SHEET SL5 FOR CONDUIT AND CONDUCTOR SCHEDULE.

LEGEND

- EXISTING TRENCH OR UTILITIES
- PROPOSED 1 1/2" SCH. 40 PVC CONDUIT
- EXISTING STREET LIGHT SPLICE BOX
- [2] ELECTRIC SERVICE POINT (SECONDARY BOX)
- PROPOSED SINGLE ARM STREET LIGHT
- PROPOSED STREET LIGHT AND PEDESTRIAN LIGHT
- PROPOSED INTERSECTION SIGNAL STREET LIGHTS (BY OTHERS)
- STREET LIGHT BOX (STATE TYPE 3 1/2)
- STREET LIGHT BOX (STATE TYPE 5)
- EXISTING STREET LIGHT TO BE REMOVED
- EXISTING DUAL STREET LIGHT TO BE REMOVED
- EXISTING STREET LIGHT TO REMAIN
- (123456) STREET LIGHT POLE NUMBER
- (M) METERED SERVICE PEDESTAL
- FIRE HYDRANT (BY OTHERS)

CAUTION:
CONTACT U.S.A. (811) (2) FULL WORKING DAYS PRIOR TO STARTING WORK IF EXISTING UTILITIES CONFLICT WITH POLE LOCATION, FIELD ADJUST TO CLEAR EXISTING UTILITIES A MINIMUM OF 3'–0".

DAVID CROWFOOT
No. E11965
EXP. 9/30/17
ELECTRICAL
STATE OF CALIFORNIA

TWO DAYS BEFORE YOU DIG
CALL USA TOLL FREE
811
CALL BEFORE YOU DIG

REVISIONS

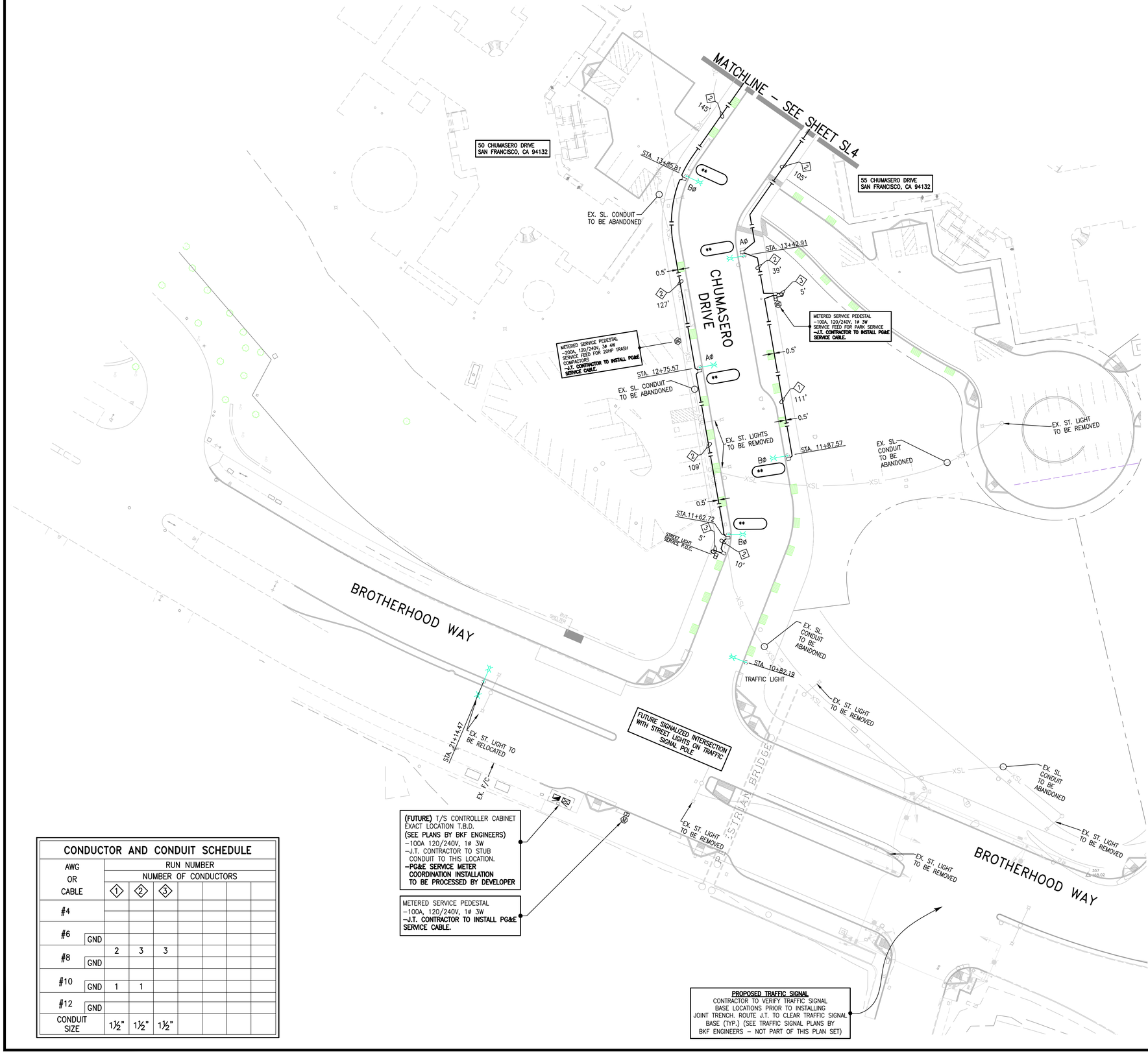
SYMBOL	DATE	DESCRIPTION	APPROVED

GIACALONE DESIGN SERVICES, INC.
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

PUBLIC STREET LIGHTING SITE PLAN

BKF
PARKMERCED
PHASE 1B – B20–B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER:	DAVE CROWFOOT
DRAWN BY:	CCP
CHECKED BY:	DC
SCALE:	1"=30'
JOB NUMBER:	14–193 B20–B22
DATE LAST MODIFIED:	05–01–17
SHEET	SL4
OF	5 SHEETS


MATCHLINE – SEE SHEET SL4
50 CHUMASERO DRIVE
SAN FRANCISCO, CA 94132
55 CHUMASERO DRIVE
SAN FRANCISCO, CA 94132
CHUMASERO DRIVE
BROTHERHOOD WAY
BROTHERHOOD WAY
PEDESTRIAN BRIDGE
STA. 13+85.81
STA. 13+42.91
STA. 12+75.57
STA. 11+87.57
STA. 11+62.72
STA. 10+82.19
STA. 21+14.47
145'
105'
39'
5'
127'
111'
109'
10'
0.5'
EX. SL. CONDUIT TO BE ABANDONED
METERED SERVICE PEDESTAL –100A, 120/240V, 1ø 3W SERVICE FEED FOR PARK SERVICE –J.T. CONTRACTOR TO INSTALL PG&E SERVICE CABLE.
METERED SERVICE PEDESTAL –200A, 120/240V, 3ø 4W SERVICE FEED FOR 20HP TRASH COMPACTORS –J.T. CONTRACTOR TO INSTALL PG&E SERVICE CABLE.
EX. ST. LIGHTS TO BE REMOVED
EX. ST. LIGHT TO BE REMOVED
EX. SL. CONDUIT TO BE ABANDONED
STREET LIGHT SERVICE POLE
TRAFFIC LIGHT
EX. ST. LIGHT TO BE RELOCATED
EX. T/C
FUTURE SIGNALIZED INTERSECTION WITH STREET LIGHTS ON TRAFFIC SIGNAL POLE
(FUTURE) T/S CONTROLLER CABINET EXACT LOCATION T.B.D. (SEE PLANS BY BKF ENGINEERS) –100A 120/240V, 1ø 3W –J.T. CONTRACTOR TO STUB CONDUIT TO THIS LOCATION. –PG&E SERVICE METER COORDINATION INSTALLATION TO BE PROCESSED BY DEVELOPER
METERED SERVICE PEDESTAL –100A, 120/240V, 1ø 3W –J.T. CONTRACTOR TO INSTALL PG&E SERVICE CABLE.
PROPOSED TRAFFIC SIGNAL
CONTRACTOR TO VERIFY TRAFFIC SIGNAL BASE LOCATIONS PRIOR TO INSTALLING JOINT TRENCH. ROUTE J.T. TO CLEAR TRAFFIC SIGNAL BASE (TYP.) (SEE TRAFFIC SIGNAL PLANS BY BKF ENGINEERS – NOT PART OF THIS PLAN SET)
BUS SHELTER
EX. ST. LIGHT TO BE REMOVED
EX. SL. CONDUIT TO BE ABANDONED
EX. ST. LIGHT TO BE REMOVED
EX. ST. LIGHT TO BE REMOVED
EX. ST. LIGHT TO BE REMOVED
EX. SL. CONDUIT TO BE ABANDONED
EX. ST. LIGHT TO BE REMOVED
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EX. ST. LIGHT TO BE REMOVED
EX. ST. LIGHT TO BE REMOVED
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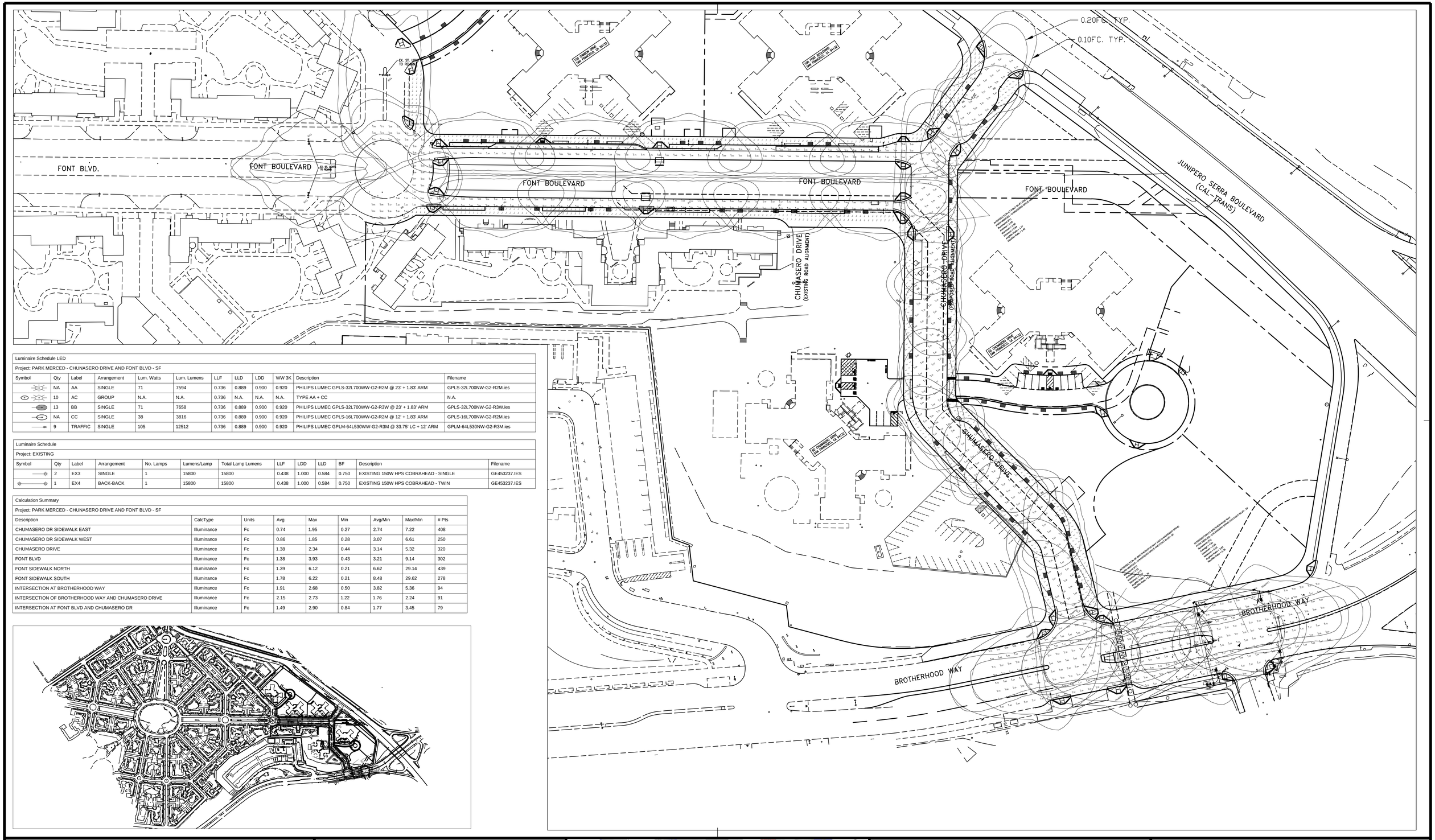


Luminaire Schedule LED										
Project: PARK MERCED - CHUNASERO DRIVE AND FONT BLVD - SF										
Symbol	Qty	Label	Arrangement	Lum. Watts	Lum. Lumens	LLF	LLD	LDD	WW 3K	Description	Filename
	NA	AA	SINGLE	71	7594	0.736	0.889	0.900	0.920	PHILIPS LUMEC GPLS-32L700WW-G2-R2M @ 23' + 1.83' ARM	GPLS-32L700NW-G2-R2M.ies
	10	AC	GROUP	N.A.	N.A.	0.736	N.A.	N.A.	N.A.	TYPE AA + CC	N.A.
	13	BB	SINGLE	71	7658	0.736	0.889	0.900	0.920	PHILIPS LUMEC GPLS-32L700WW-G2-R3W @ 23' + 1.83' ARM	GPLS-32L700NW-G2-R3W.ies
	NA	CC	SINGLE	38	3816	0.736	0.889	0.900	0.920	PHILIPS LUMEC GPLS-16L700WW-G2-R2M @ 12' + 1.83' ARM	GPLS-16L700NW-G2-R2M.ies
	9	TRAFFIC	SINGLE	105	12512	0.736	0.889	0.900	0.920	PHILIPS LUMEC GPLM-64L530WW-G2-R3M @ 33.75' LC + 12' ARM	GPLM-64L530NW-G2-R3M.ies

Luminaire Schedule												
Project: EXISTING												
Symbol	Qty	Label	Arrangement	No. Lamps	Lumens/Lamp	Total Lamp Lumens	LLF	LDD	LLD	BF	Description	Filename
	2	EX3	SINGLE	1	15800	15800	0.438	1.000	0.584	0.750	EXISTING 150W HPS COBRAHEAD - SINGLE	GE453237.IES
	1	EX4	BACK-BACK	1	15800	15800	0.438	1.000	0.584	0.750	EXISTING 150W HPS COBRAHEAD - TWIN	GE453237.IES

Calculation Summary								
Project: PARK MERCED - CHUNASERO DRIVE AND FONT BLVD - SF								
Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts
CHUMASERO DR SIDEWALK EAST	Illuminance	Fc	0.74	1.95	0.27	2.74	7.22	408
CHUMASERO DR SIDEWALK WEST	Illuminance	Fc	0.86	1.85	0.28	3.07	6.61	250
CHUMASERO DRIVE	Illuminance	Fc	1.38	2.34	0.44	3.14	5.32	320
FONT BLVD	Illuminance	Fc	1.38	3.93	0.43	3.21	9.14	302
FONT SIDEWALK NORTH	Illuminance	Fc	1.39	6.12	0.21	6.62	29.14	439
FONT SIDEWALK SOUTH	Illuminance	Fc	1.78	6.22	0.21	8.48	29.62	278
INTERSECTION AT BROTHERHOOD WAY	Illuminance	Fc	1.91	2.68	0.50	3.82	5.36	94
INTERSECTION OF BROTHERHOOD WAY AND CHUMASERO DRIVE	Illuminance	Fc	2.15	2.73	1.22	1.76	2.24	91
INTERSECTION AT FONT BLVD AND CHUMASERO DR	Illuminance	Fc	1.49	2.90	0.84	1.77	3.45	79

ALL VALUES SHOWN ARE MAINTAINED HORIZONTAL FOOTCANDLES AT GRADE

* *

PHOTOMETRIC DATA USED AS INPUT FOR THESE CALCULATIONS IS BASED ON ESTABLISHED IES PROCEDURES AND PUBLISHED LAMP, RATINGS, FIELD PERFORMANCE WILL DEPEND ON ACTUAL LAMP, BALLAST, ELECTRICAL, AND SITE CHARACTERISTICS.

* *

Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.

Associated Lighting Representatives, Inc.

ASSOCIATED LIGHTING REPRESENTATIVES, INC
7777 PARDEE LANE
P.O. BOX 2265
OAKLAND, CA 94621
PHONE: (510) 638-0158 - FAX (510) 638-2908

REPORT FOR: GIACALONE DESIGN SERVICES
BY: APPLICATIONS ENGINEERING; RAMON ZAPATA
SALES REPRESENTATIVE: ALR; JOHN BENSON

AGI32 VERSION 17.3
AGI (C) 1999-2016 LIGHTING ANALYSTS, INC.
10268 W. CENTENNIAL ROAD, SUITE 202
LITTLETON, CO 80127

PROJECT DESCRIPTION

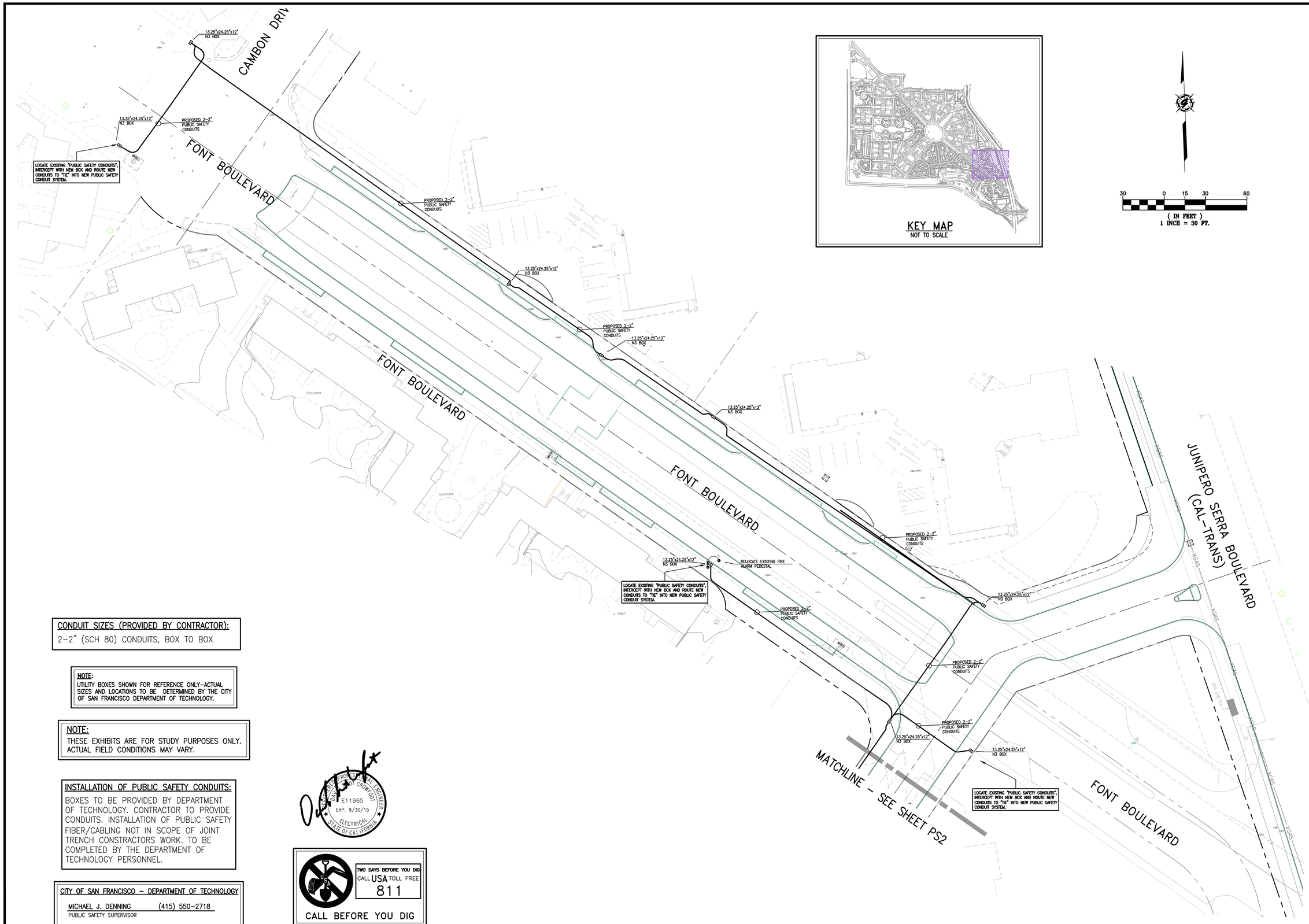
PARK MERCED - CHUNASERO DR. AND FONT BLVD.

SAN FRANCISCO

DRAWING NO. / INPUT FILE

12798BEN-R8.DWG / 12798BEN-R8.A32

SCALE	SHEET	DATE	REV
1" = 40'	1 OF 1	11.01.2016	8



KEY MAP
NOT TO SCALE

30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

CONDUIT SIZES (PROVIDED BY CONTRACTOR):
2-2" (SCH 80) CONDUITS, BOX TO BOX

NOTE:
UTILITY BOXES SHOWN FOR REFERENCE ONLY-ACTUAL SIZES AND LOCATIONS TO BE DETERMINED BY THE CITY OF SAN FRANCISCO DEPARTMENT OF TECHNOLOGY.

NOTE:
THESE EXHIBITS ARE FOR STUDY PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY.

INSTALLATION OF PUBLIC SAFETY CONDUITS:
BOXES TO BE PROVIDED BY DEPARTMENT OF TECHNOLOGY. CONTRACTOR TO PROVIDE CONDUITS. INSTALLATION OF PUBLIC SAFETY FIBER/CABLING NOT IN SCOPE OF JOINT TRENCH CONSTRACTORS WORK. TO BE COMPLETED BY THE DEPARTMENT OF TECHNOLOGY PERSONNEL.

CITY OF SAN FRANCISCO - DEPARTMENT OF TECHNOLOGY
MICHAEL J. DENNING (415) 550-2718
PUBLIC SAFETY SUPERVISOR

DAVE CROWFOOT
REGISTERED PROFESSIONAL ENGINEER
E11965
EXP. 9/30/15
ELECTRICAL
STATE OF CALIFORNIA

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REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED

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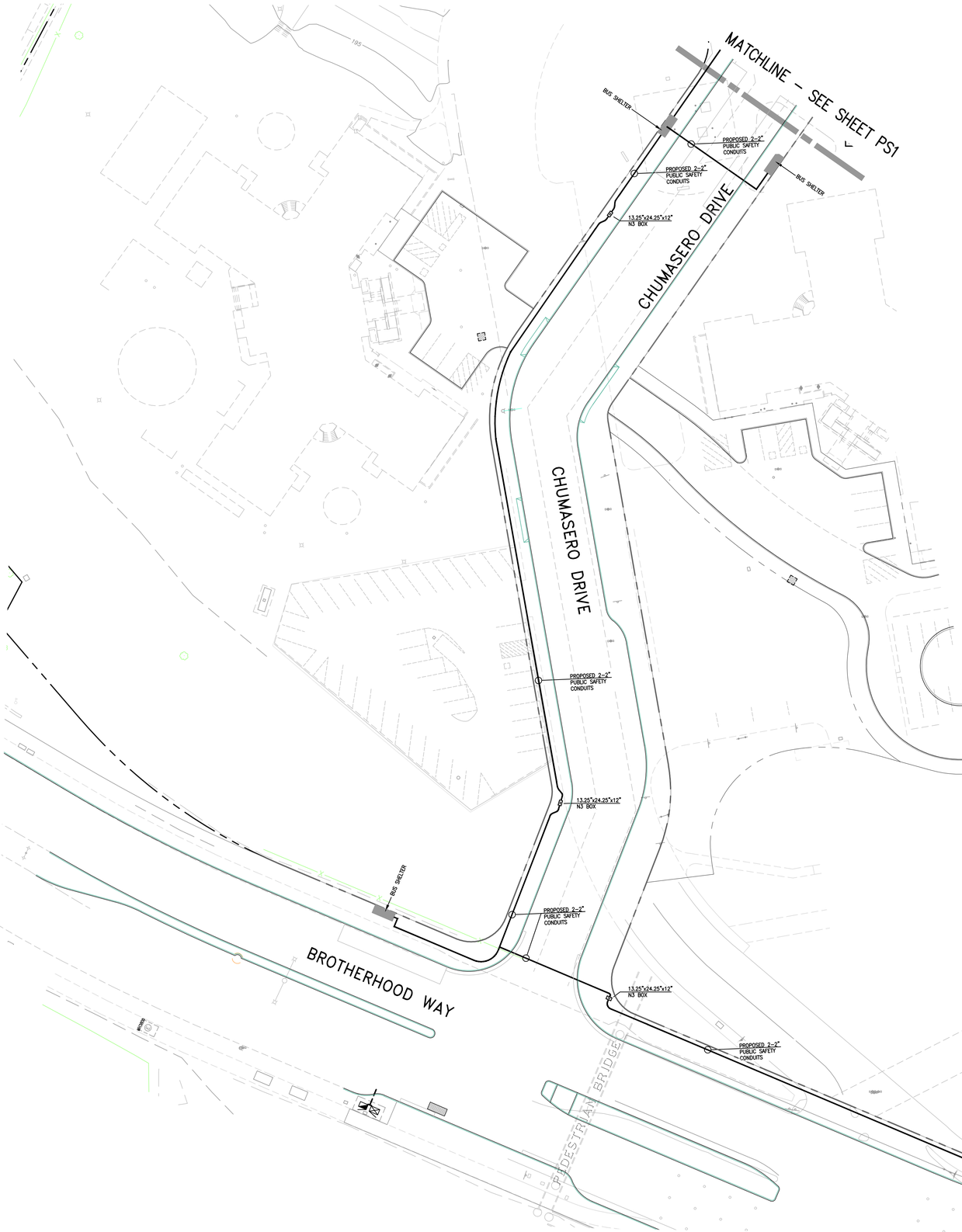
5820 STONERIDGE MALL RD., #345 | PLEASANTON, CA 94588
925.467.1740 | WWW.GIACALONEDESIGN.COM

PUBLIC SAFETY CONDUIT EXHIBIT

BKF
PARKMERCED
PHASE 1 - B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: DC
CHECKED BY: DC
SCALE: 1"=30'
JOB NUMBER: 14-193 B20-B22
DATE LAST MODIFIED: 05-01-17
SHEET PS1
OF 2 SHEETS



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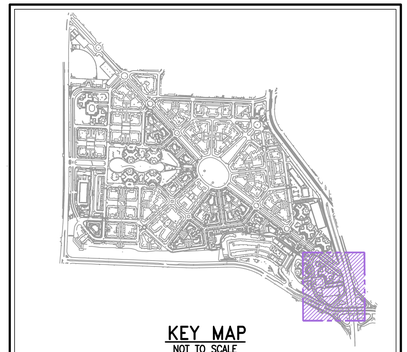

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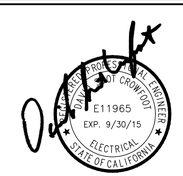

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925.467.1740 | WWW.GIACALONEDESIGN.COM

PUBLIC SAFETY CONDUIT EXHIBIT

BKF
PARKMERCED
PHASE 1 – B20 & B22
SAN FRANCISCO CALIFORNIA

PROJECT MANAGER: DAVE CROWFOOT
DRAWN BY: DC
CHECKED BY: DC
SCALE: 1"=30'
JOB NUMBER: 14–193 B20–B22
DATE LAST MODIFIED: 05–01–17
SHEET PS2
OF 2 SHEETS

© BKF ENGINEERS

LANDSCAPE INDEX, NOTES AND LEGEND

ABBREVIATIONS

@	AT
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
ATC	AT TRELLIS COLUMN
B	BENCH
B&B	BALL AND BURLAP
BC	BOTTOM OF CURB
BFP	BOTTOM OF FENCE POST
BFS	BELOW FINISHED SURFACE
BLDG	BUILDING
BOC	BACK OF CURB
BP	BAMBOO PLANTER
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL
C	CURB RAMP
CAL	CALIPER
CB	CATCH BASIN
CH	CONCRETE HEADER
CIP	CAST IRON PIPE
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE
CO	CLEAN OUT
COJ	CONSTRUCTION JOINT
CONC	CONCRETE
CONT	CONTINUOUS
CR	CURB RAMP
DCA	DOUBLE CHECK ASSEMBLY
DIA	DIAMETER
DN	DOWN
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
FCJ	FORMED CONTROL JOINT
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FOC	FACE OF CURB
FOW	FACE OF WALL
FS	FINISH SURFACE
G	GATE
GB	GRADE BREAK
GJ	GROUT JOINT
HH	HANDHOLE
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HIGH STRENGTH STEEL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERTED
L	LIGHT
LIC	LANDSCAPE IRRIGATION CONTRACTOR
LONGIT	LONGITUDINAL
LOW	LIMIT OF WORK
LP	LOW POINT
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OP	OVERFLOW PIPE
OPP	OPPOSITE HAND
PA	PLANTING AREA
PD	PLANTER DRAIN
PED	PEDESTRIAN
PERF	PERFORATED
PL	PLANTER
POC	POINT OF CONNECTION
PT	POINT OF TANGENCY
PVC	POLYVINYLCHLORIDE
R	RADIUS
RB	ROOT BARRIER
RIM	RIM ELEVATION
ROW	RIGHT OF WAY
S	SLOPE
SAD	SEE ARCHITECTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SD	STORM DRAIN
SED	SEE ELECTRICAL DRAWINGS
SGB	SUBGRADE GRADE BREAK
SGS	SUBGRADE SURFACE
SH	STEEL HEADER
SIM	SIMILIAR
SJ	SCORE JOINT
SS	STAINLESS STEEL
SPD	SEE PLUMBING DRAWINGS
SSD	SEE STRUCTURAL DRAWINGS
STD	STANDARD
STS	STRAIGHT SLOPE
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TCJ	TOOLED CONTROL JOINT
TD	TRENCH DRAIN
TFG	TOP OF FOOTING
TFP	TOP OF FENCE PICKET
TG	TREE GRATE
TH	TOP OF HEADER
TP	TOP OF PLINTH
TPA	TERRACE PLANTER AREA
TPC	TOP OF POOL COPING
TPW	TOP OF POOL WALL
TRANS	TRANSVERSE
TRB	TOP OF ROOT BALL
TSP	TOP OF STEEL PLATE
TYP	TYPICAL
VEH	VEHICULAR
VERT	VERTICAL
W	WALL
WL	WATER LEVEL
WPM	WATER PROOF MEMBRANE
WWF	WELDED WIRE FABRIC
W/	WITH

NOTES

GENERAL:

1. REFER TO LANDSCAPE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. THE BASIS OF DESIGN HAS BEEN ESTABLISHED BY THE INFORMATION PROVIDED IN THE FOLLOWING DOCUMENTS:
   A. SURVEY INFORMATION OF EXISTING CONDITIONS PROVIDED BY BKF ENGINEERS, SURVEYORS, PLANNERS

pmextopo.dwg	10/13/2015
pmsvtopo.dwg	03/26/2016
pmexutil.dwg	04/21/2016
20161115_pmexutil_remain.dwg	11/15/2016

   B. ARBORIST REPORT REGARDING EXISTING TREES PROVIDED BY HORTSCIENCE, INC., DATED SEPTEMBER 2015.

PHASE 1A + 1B	11/13/2015

   C. ARCHITECTURAL DRAWINGS PROVIDED BY

BLOCK 1:

LEDDY MAYTUM STACY

lms-ground floor plan-032816.dwg	03/03/2017

FOUGERON ARCHITECTS

16_0519_A2-01-Floor Plan - Level 01A - Basement B.dwg	03/28/2017

BLOCK 6:

WOODS BAGOT ARCHITECTURE

a2-01-01.dwg	04/18/2017
a2-03-01.dwg	04/18/2017
a2-00-b1.dwg	04/18/2017

BLOCK 20:

KWAN HENMI ARCHITECTURE & PLANNING

a2.01.dwg	04/11/2017
a2.02.dwg	04/11/2017
a2.03.dwg	04/11/2017
a2.04.dwg	04/11/2017

BLOCK 22

SKIDMORE, OWINGS & MERRILL

a2-1.dwg	03/06/2017
a2-4.dwg	03/06/2017

   D. CIVIL DRAWINGS PROVIDED BY BKF ENGINEERS, SURVEYORS, PLANNERS.

pm-ph01b-gdtx-10.dwg	04/26/2017
pm-ph01-gdtx-10.dwg	04/26/2017
pmprgrad-PH01A.dwg	04/26/2017
pmprgrad-PH01B.dwg	04/26/2017
20170428_pmprutil_jt-PH01A.dwg	04/28/2017
20170428_pmprutil_jt-PH01B.dwg	04/28/2016
pmpralign-PH01A.dwg	11/10/2016
pmpralign-PH01B.dwg	11/10/2016
pmprplan-PH01A.dwg	04/26/2017
pmprplan-PH01B.dwg	04/26/2017
pmprutil-PH01A.dwg	04/27/2017
pmprutil-PH01B.dwg	04/26/2017
pmprbndy-ph01a.dwg	04/26/2017
pmprbndy-ph01b.dwg	04/26/2017
pm-ph01a-prwklm.dwg	04/26/2017
pm-ph01a-prwklm-demo.dwg	04/26/2017

3. IRRIGATION CONTRACTOR SHALL COORDINATE WITH PROJECT CIVIL ENGINEER REGARDING TAP AND METER LOCATION.
4. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS, AND APPLICABLE REQUIREMENTS OF OTHER REGULATORY AGENCIES.
5. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE WORK INDICATED ON THE LANDSCAPE DRAWINGS IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS.
6. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE TO THE LANDSCAPE ARCHITECT AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN. THE EXACT LOCATION AND ELEVATION OF UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT/CIVIL ENGINEER IMMEDIATELY IF EXACT LOCATION AND/OR ELEVATION IS DIFFERENT THAN WHAT IS SHOWN.
7. PROTECT EXISTING WATER, SEWER, DRAINAGE, TELEPHONE AND COMMUNICATION MAINLINES, DUCT BANKS AND SERVICES THAT ARE TO REMAIN IN PLACE FROM DAMAGE.
8. IF LIVE UTILITIES ARE ENCOUNTERED, NOT PREVIOUSLY INDICATE, PROTECT THE SAME FROM DAMAGE AND IMMEDIATELY NOTIFY THE OWNER AND THE AFFECTED UTILITY PROVIDER. DO NOT PROCEED UNTIL FURTHER INSTRUCTIONS ARE RECEIVED.
9. BACKFILL UTILITY LINES EXPOSED BY WORK OPERATIONS, REPAIR BEDDING AND BACKFILL MATERIALS OF UTILITIES THAT ARE DISPLACED AND DAMAGED DURING WORK. REPLACE CONTAMINATED MATERIALS WITH NEW MATERIALS MATCHING THE EXISTING MATERIALS.
10. REPORT DISCREPANCIES IN DRAWINGS OR SPECIFICATIONS IN WRITING TO THE LANDSCAPE ARCHITECT FOR CLARIFICATIONS AND ADJUSTMENTS BEFORE WORK. ANY DEVIATIONS OR CHANGES IN THESE DRAWINGS WITHOUT WRITTEN ACCEPTANCE OF THE LANDSCAPE ARCHITECT SHALL ABSOLVE THE LANDSCAPE ARCHITECT OF ANY AND ALL RESPONSIBILITY OF SAID DEVIATION AND CHANGE.
11. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
12. FOR DEMOLITION AND UTILITIES, SEE CIVIL DRAWINGS
13. OBTAIN ACCEPTANCE BY LANDSCAPE ARCHITECT OF HORIZONTAL ALIGNMENT OF ELEMENTS IN THE FIELD FROM LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
14. DIMENSIONS INDICATED ON PLANS FOR HORIZONTAL CONTROL ARE ACCURATE IF MEASURED ON A LEVEL LINE. MEASURE HORIZONTAL CONTROL DIMENSIONS ON A LEVEL LINE, NOT PARALLEL WITH GROUND SLOPE.
15. PLANT LOCATIONS TAKE PRECEDENCE OVER IRRIGATION VALVE BOX LOCATIONS. MOVE INSTALLED IRRIGATION VALVE BOXES CONFLICTING WITH ACCEPTED PLANT LOCATIONS.
16. OBTAIN ACCEPTANCE OF PLANT MATERIAL LOCATIONS BY LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION OF TREE BUBBLER PIPE AND HEADS.
17. PLANTS AND WOOD CHIP MULCH ARE NOT SHOWN ON SOME DETAILS FOR PURPOSES OF CLARITY. SEE PLANTING PLAN FOR PLANT MATERIAL AREAS AND SEE TYPICAL PLANTING AREA DETAILS AND SPECIFICATIONS FOR LIMIT OF WOOD CHIP MULCH.
18. SEE CIVIL DRAWINGS FOR STREET SIDEWALKS, GRADING, CURB RAMP, UTILITIES, VEHICULAR PAVING AND GUTTER DETAILS.
19. CONTRACTOR TO PROVIDE SURVEY AT GROUND LEVEL AND CONFIRM EXISTING CONDITIONS.
20. DURING DEMOLITION AND CONSTRUCTION, TREE PROTECTION ZONES SHALL BE INSTALLED AND MAINTAINED WITH AN IRRIGATION SYSTEM.
21. PROVIDE TEMPORARY IRRIGATION FOR ALL EXISTING TO REMAIN TREES UNTIL PERMANENT IRRIGATION SYSTEM IS INSTALLED.

SHEET INDEX

LANDSCAPE DRAWINGS:

GENERAL

L00.01	LANDSCAPE SHEET INDEX, NOTES, AND LEGEND
L00.02	LANDSCAPE SHEET INDEX, NOTES, AND LEGEND
L00.10	PROJECT AREA IDENTIFICATION PLAN
L00.11	PHASE 1B SHEET TILING PLAN

MATERIALS

L01.01	MATERIALS PLAN
L01.02	MATERIALS PLAN
L01.03	MATERIALS PLAN
L01.04	MATERIALS PLAN
L01.05	MATERIALS PLAN

PLANTING

L02.01	PLANTING PLAN
L02.02	PLANTING PLAN
L02.03	PLANTING PLAN
L02.04	PLANTING PLAN
L02.05	PLANTING PLAN

IRRIGATION

L03.00	IRRIGATION NOTES AND LEGEND
L03.01	IRRIGATION PLAN
L03.02	IRRIGATION PLAN
L03.03	IRRIGATION PLAN
L03.04	IRRIGATION PLAN
L03.05	IRRIGATION PLAN
L03.11	IRRIGATION DETAILS
L03.12	IRRIGATION DETAILS

SOILS

L04.01	SOILS PLAN
L04.02	SOILS PLAN
L04.03	SOILS PLAN
L04.04	SOILS PLAN
L04.05	SOILS PLAN

LANDSCAPE DETAILS

L05.01	TURF BLOCK DETAILS
L05.02	TURF BLOCK DETAILS
L06.01	HEADER DETAILS
L07.01	PLANTING DETAILS
L07.02	PLANTING DETAILS
L07.03	PLANTING DETAILS
L07.04	PLANTING DETAILS
L08.01	FURNISHING DETAILS
L09.01	SOILS DETAILS

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PHASE 1B STREET IMPROVEMENT PLANS

INDEX, NOTES AND LEGEND

SAN FRANCISCO — SAN FRANCISCO COUNTY — CALIFORNIA

NOT FOR CONSTRUCTION

REGISTERED LANDSCAPE ARCHITECT — SIGNATURE — DATE BELOW — STATE OF CALIFORNIA — EXP. 06/30/2018

No.	Revisions

Date: 05/01/17
Scale: NONE
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number: L00.01

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PLOT TIME: 4-28-2017 4:55 PM PLOTTED BY: jugions

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

LANDSCAPE INDEX, NOTES AND LEGEND

GENERAL-ALL SHEETS

- LIMIT OF WORK
- MATCHLINE
- NOT IN SCOPE
- SECTION/ELEVATION DETAIL
- BREAKLINE
- CENTERLINE
- ALIGN
- POINT OF BEGINNING (P.O.B.) — POB
- FLUSH — Z
- REVISION DELTA — 6R
- REVISION CLOUD
- DETECTABLE WARNING - SCD
- STREET LIGHT -SCD
- STREET LIGHT -SCD



MATERIAL DETAIL KEY NUMBER



SHEET NUMBERING

MATERIALS

- TURF BLOCK -SEE 1/L05.01
- AGGREGATE MULCH -SEE 2/L07.01
- WOOD CHIP MULCH -SEE 1/L07.01
- METAL HEADER -SEE 1 / L06.01
- TREE GRATE WITH TREE STAKE - MULCH, NOT SHOWN FOR CLARITY - SEE 1&2 / L08.01
- TRASH RECEPTACLE - DPW STANDARD
- BUS SHELTER - SFMTA STANDARD - BY OTHERS, FOR REFERENCE ONLY

NOTES:

1. THESE HATCHES APPLY TO MATERIALS PLAN ONLY.

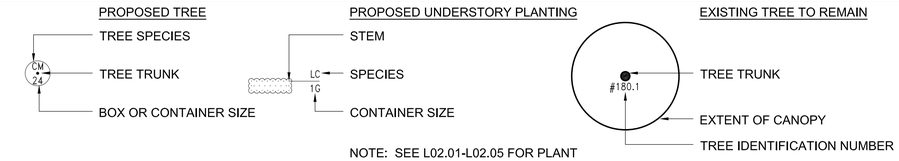
SOILS

- SOIL - SEE CIVIL DRAWINGS FOR MATERIAL AND EXTENTS
- 18" PLANTING SOIL - SEE 2\L09.01
- 36" PLANTING SOIL - SEE 1\L09.01
- AMEND IN PLACE - SEE 4\L09.01

NOTES:

1. THESE HATCHES APPLY TO SOILS PLAN ONLY.
2. SEE CIVIL SHEETS FOR BIORETENTION AND STRUCTURAL SOIL EXTENTS.

PLANTING



NOTE: SEE L02.01-L02.05 FOR PLANT SPECIES, SIZES, LOCATIONS AND QUANTITIES. PLAN CENTERS TAKE PRECEDENCE OVER SPACING DIAGRAM.

TREES

	BOTANICAL NAME	COMMON NAME	NOTES
CM	CUPRESSUS MACROCARPA	MONTEREY CYPRESS	
PA	PLATANUS X ACERFOLIA 'COLUMBIA'	LONDON PLANE TREE	STANDARD
PC	PINUS CANARIENSIS	CANARY ISLAND PINE	STANDARD
UP	ULMUS PARVIFOLIA 'DRAKE'	CHINESE ELM	STANDARD

UNDERSTORY

	BOTANICAL NAME	COMMON NAME	NOTES
AA	ALOE ARBORESCENS	TORCH ALOE	
CG	CEANOTHUS GRISEUS 'YANKEE POINT'	YANKEE POINT CEANOTHUS	

	BIORETENTION PLANTERS		SPACING	QUANTITY	
LC	LEYMUS CONDENSATUS 'CANYON PRINCE'	CANYON PRINCE WILD RYE	18" O.C. AS SHOWN	797	

TURF

	BOTANICAL NAME	COMMON NAME	NOTES
		NO MOW FESCUE	SEEDED
	CAREX GLAUCA CAREX PANSA	BLUE GREEN SEDGE CALIFORNIA MEADOW SEDGE	50 / 50 ALTERNATING MIX 1 GAL, 18" O.C., Δ SPACING

NOTES:

1. REFER TO SHEETS L00.01 FOR GENERAL NOTES
2. REFER TO SHEET L07.01-L07.04 FOR PLANTING DETAILS
3. CONTRACTOR RESPONSIBLE FOR ALL QUANTITIES OF MATERIALS AS INDICATED ON PLANS.

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INDEX, NOTES AND LEGEND
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

NOT FOR CONSTRUCTION

No.	Revisions

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Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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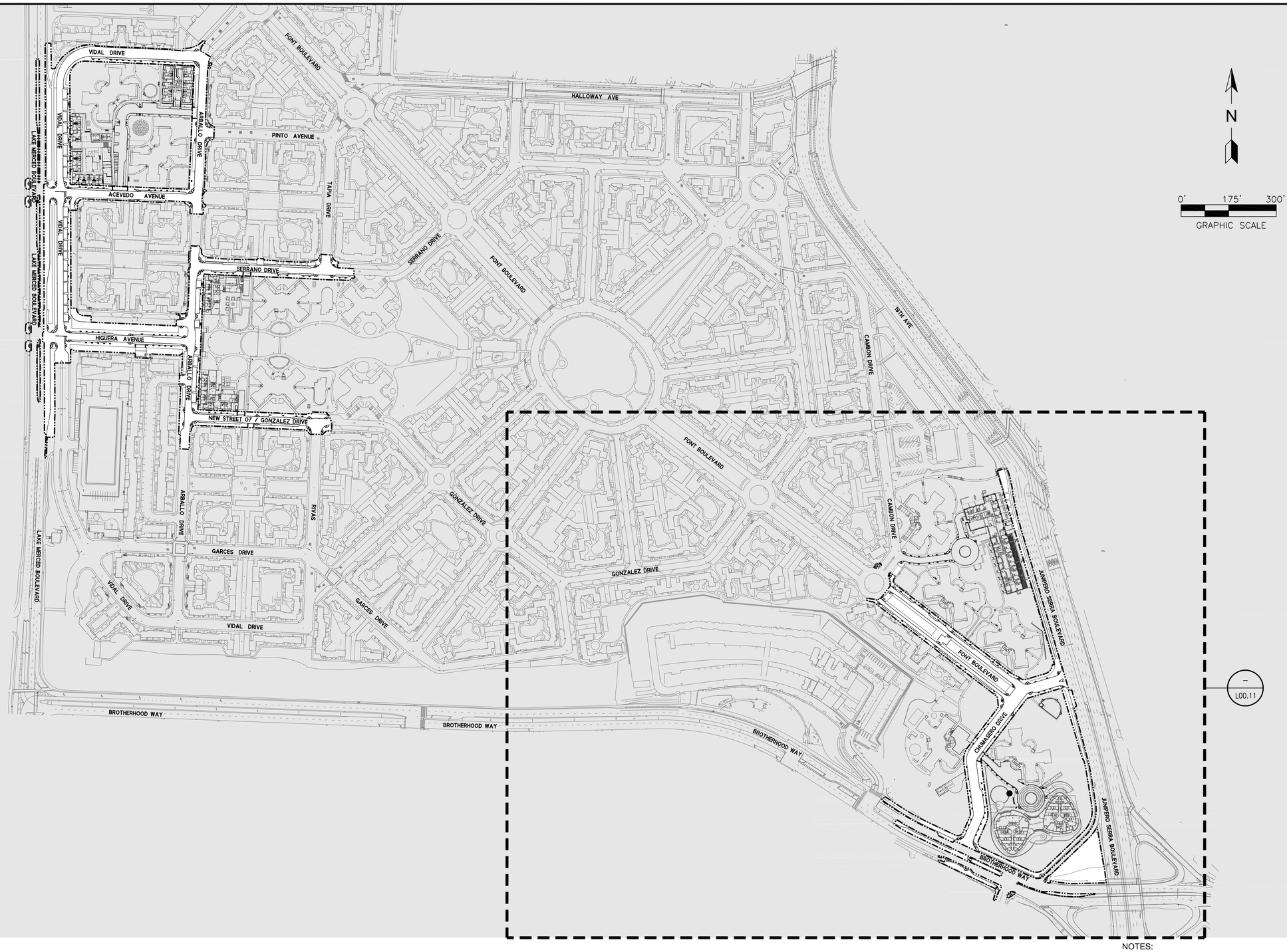

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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PHASE 1B AREA IDENTIFICATION PLAN
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Approved: LEAD
Job No: MAX 1401

Drawing Number:
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APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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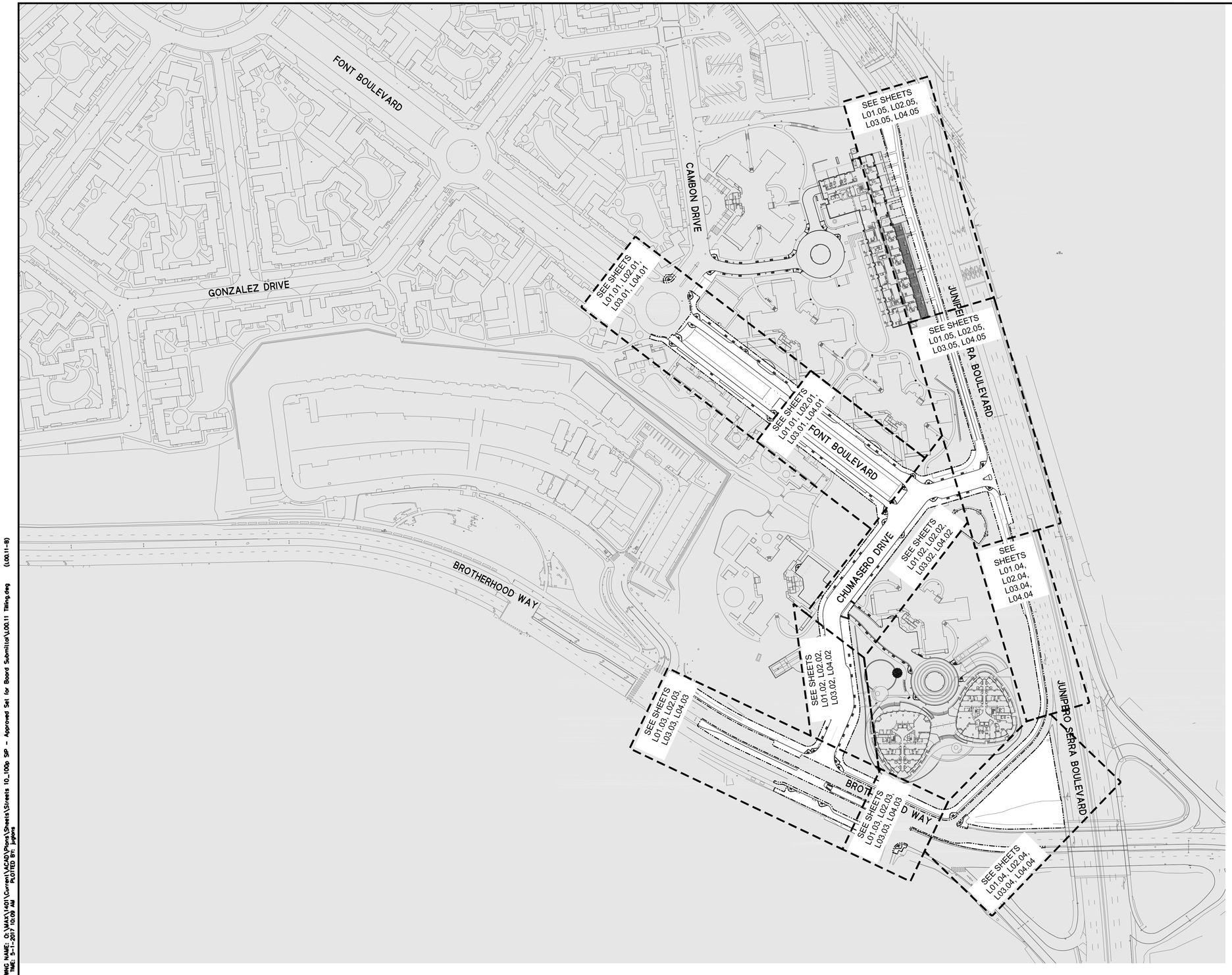

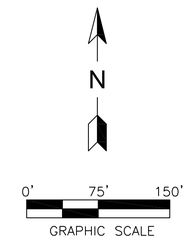

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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SHEET TILING PLAN

SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

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No.	Revisions

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Approved: LEAD
Job No: MAX 1401

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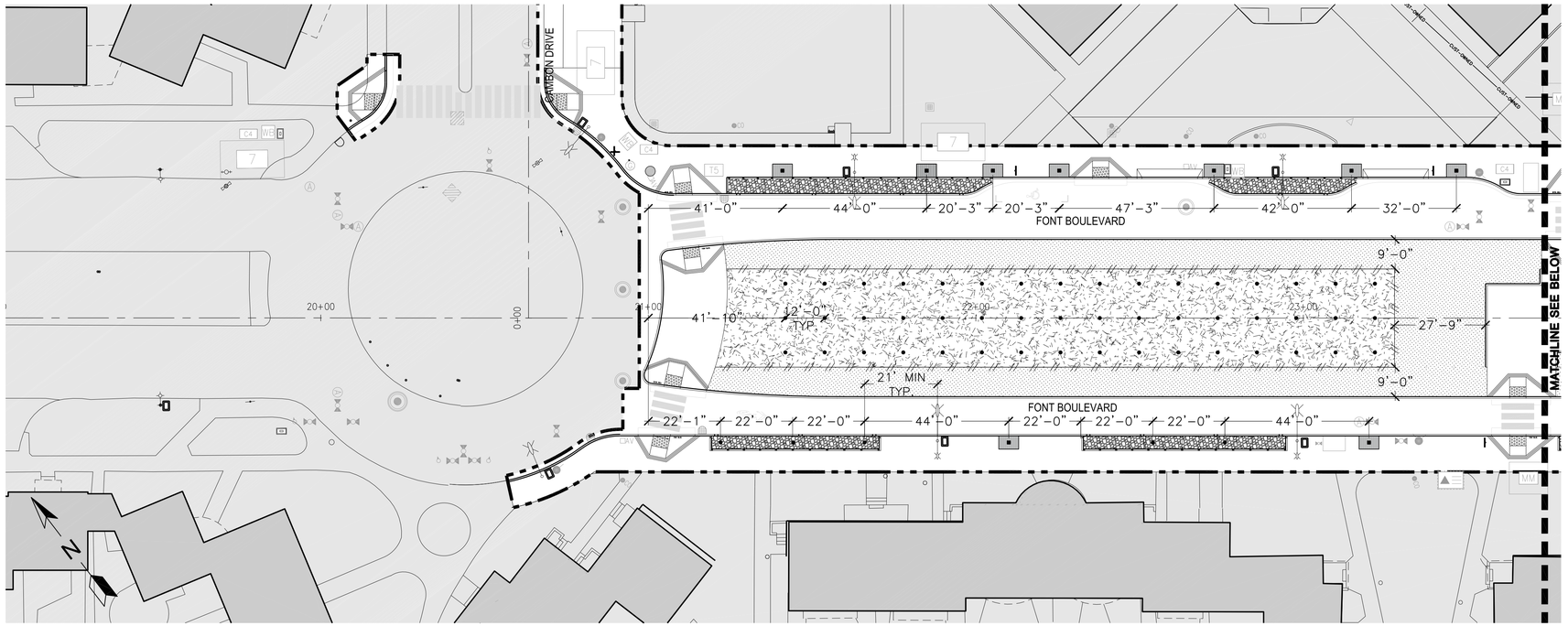

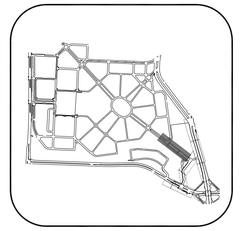

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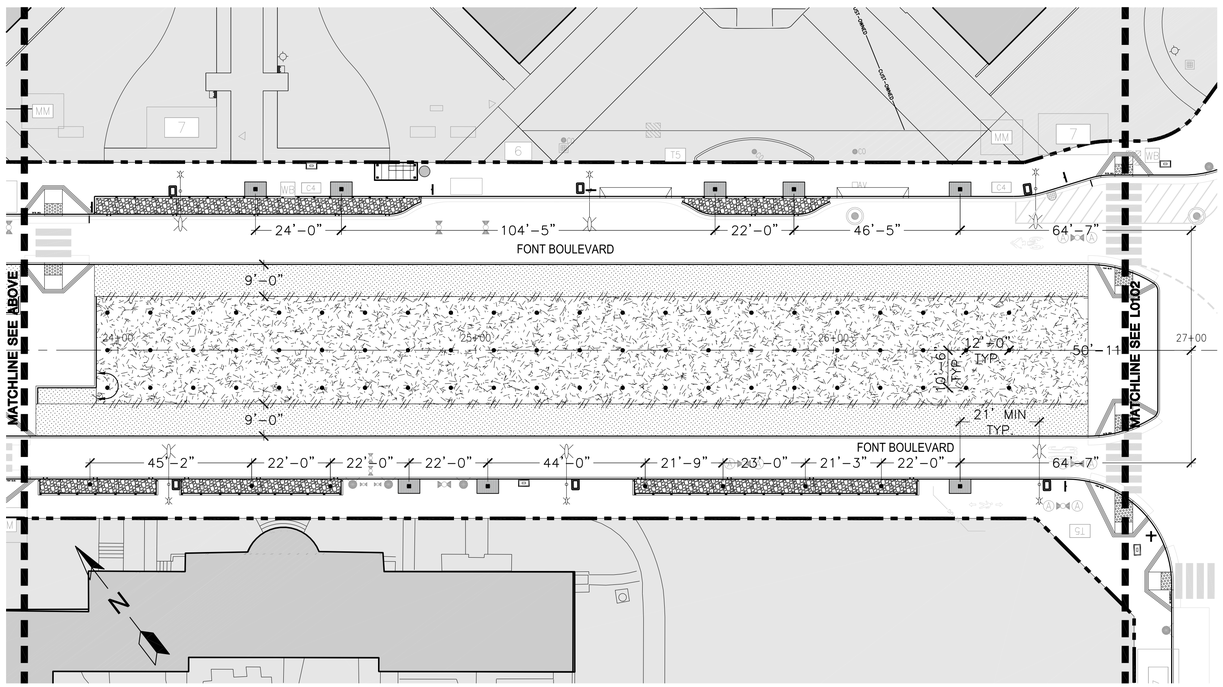

NOTES:

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MATERIALS PLAN

SAN FRANCISCO CALIFORNIA

SAN FRANCISCO COUNTY

REGISTERED LANDSCAPE ARCHITECT
NOT FOR CONSTRUCTION
STATE OF CALIFORNIA
EXP. 08/31/2018

No.	Revisions

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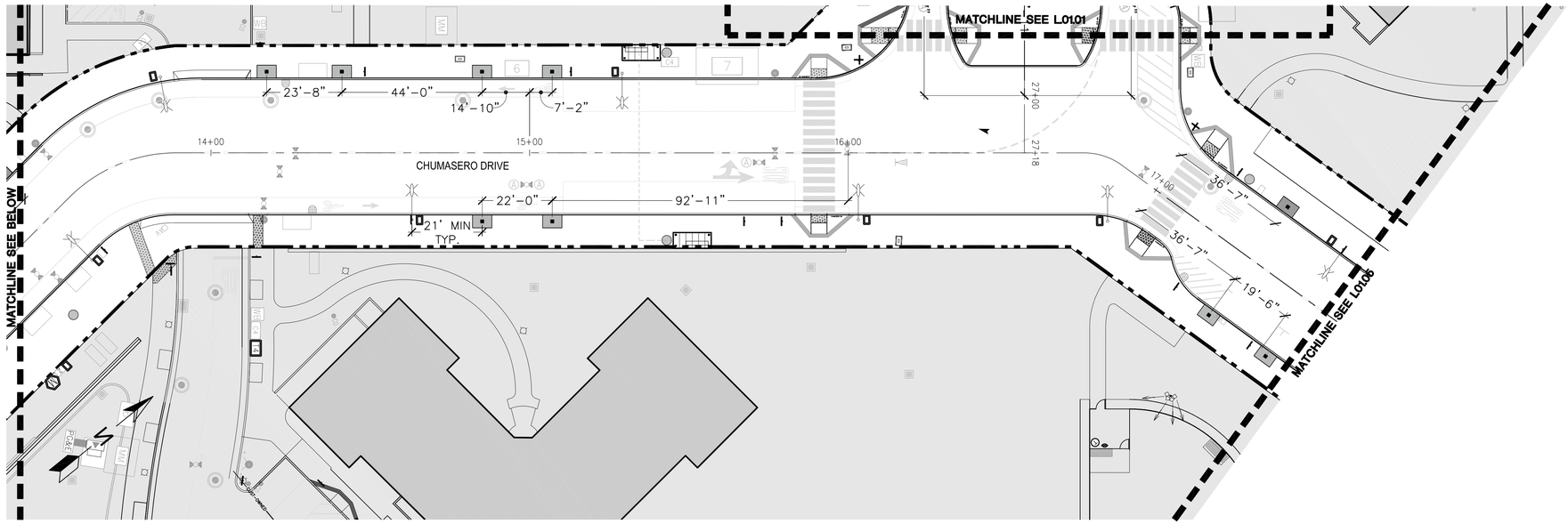

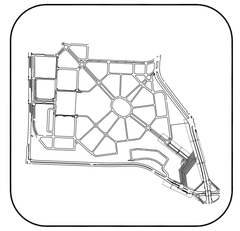

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NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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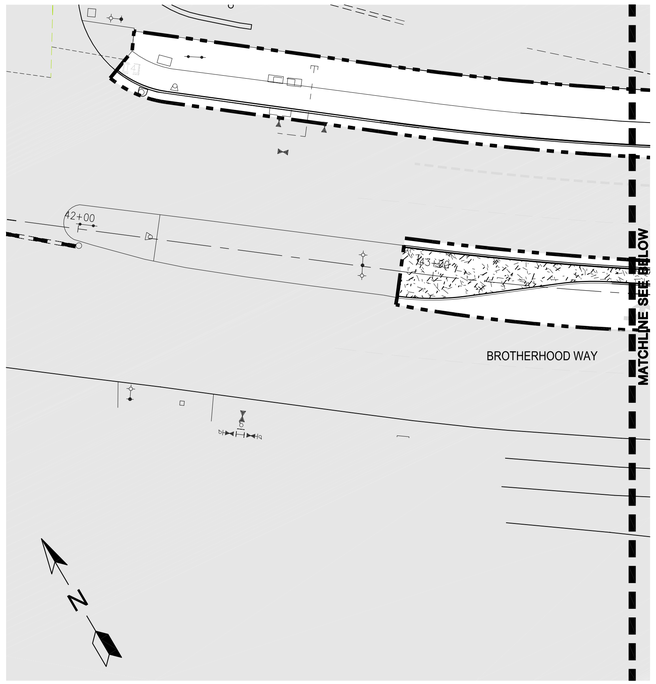

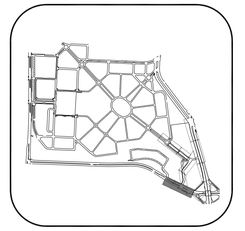

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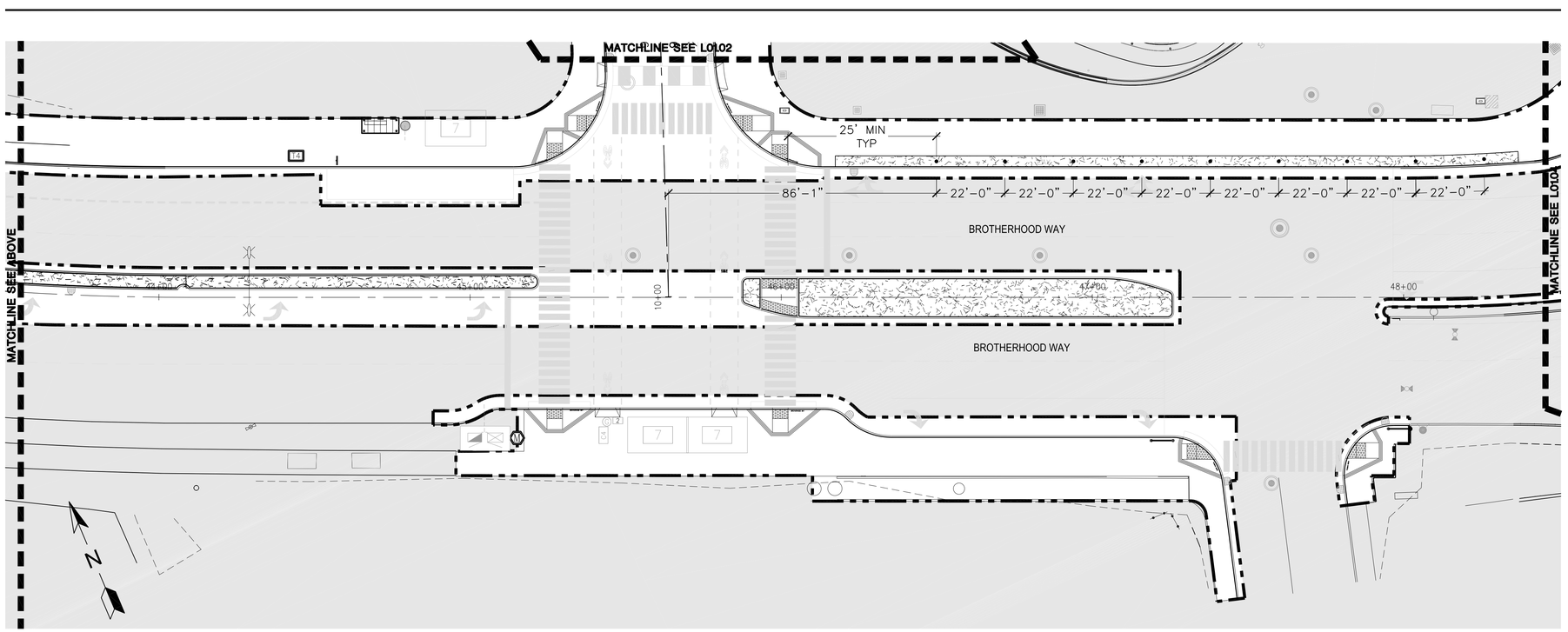

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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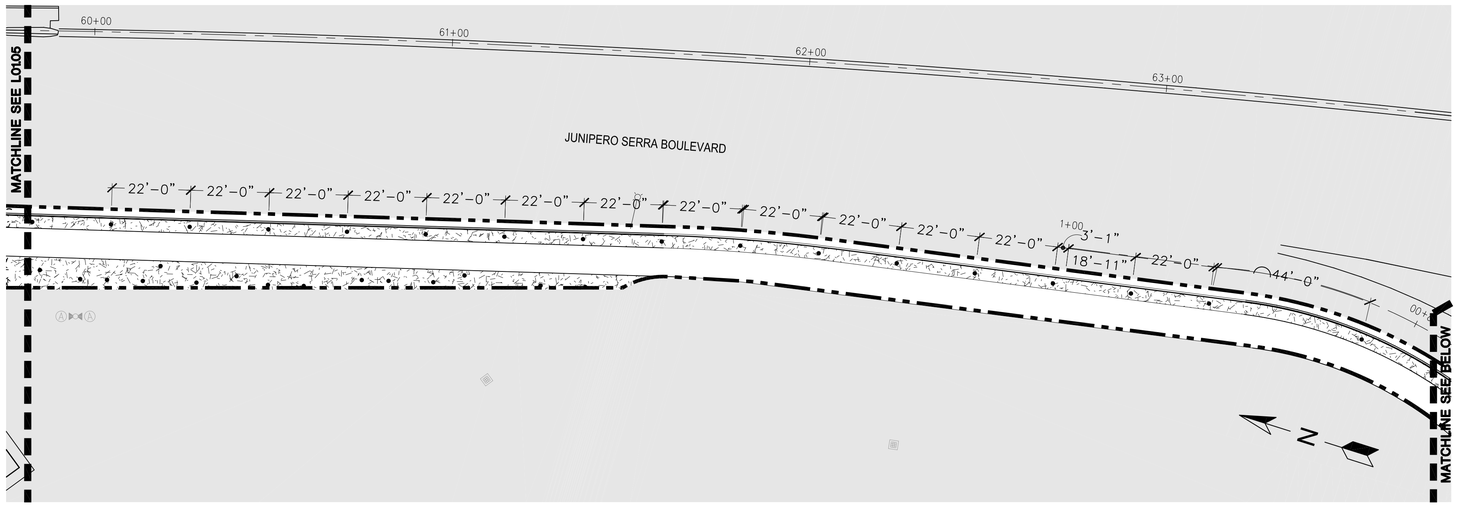



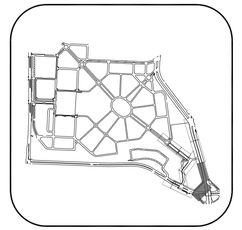

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NOTES:

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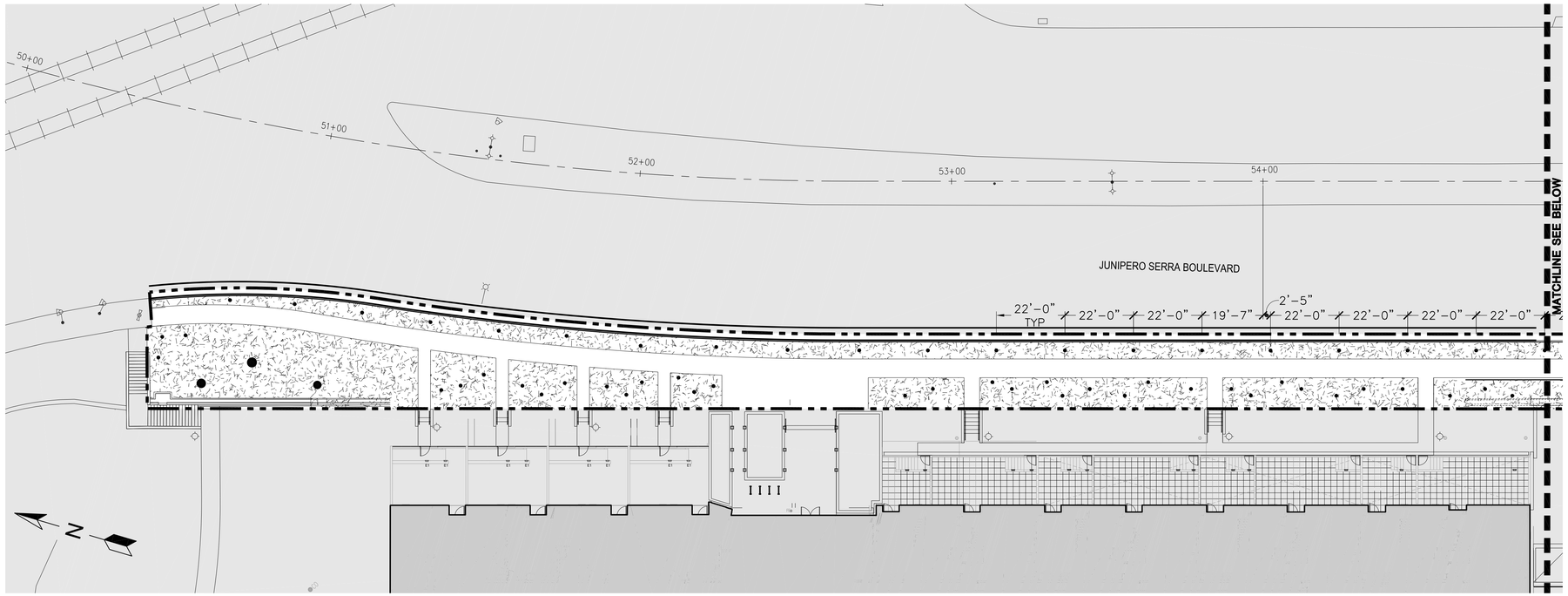

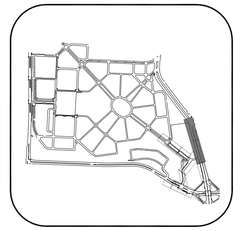

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NOTES:

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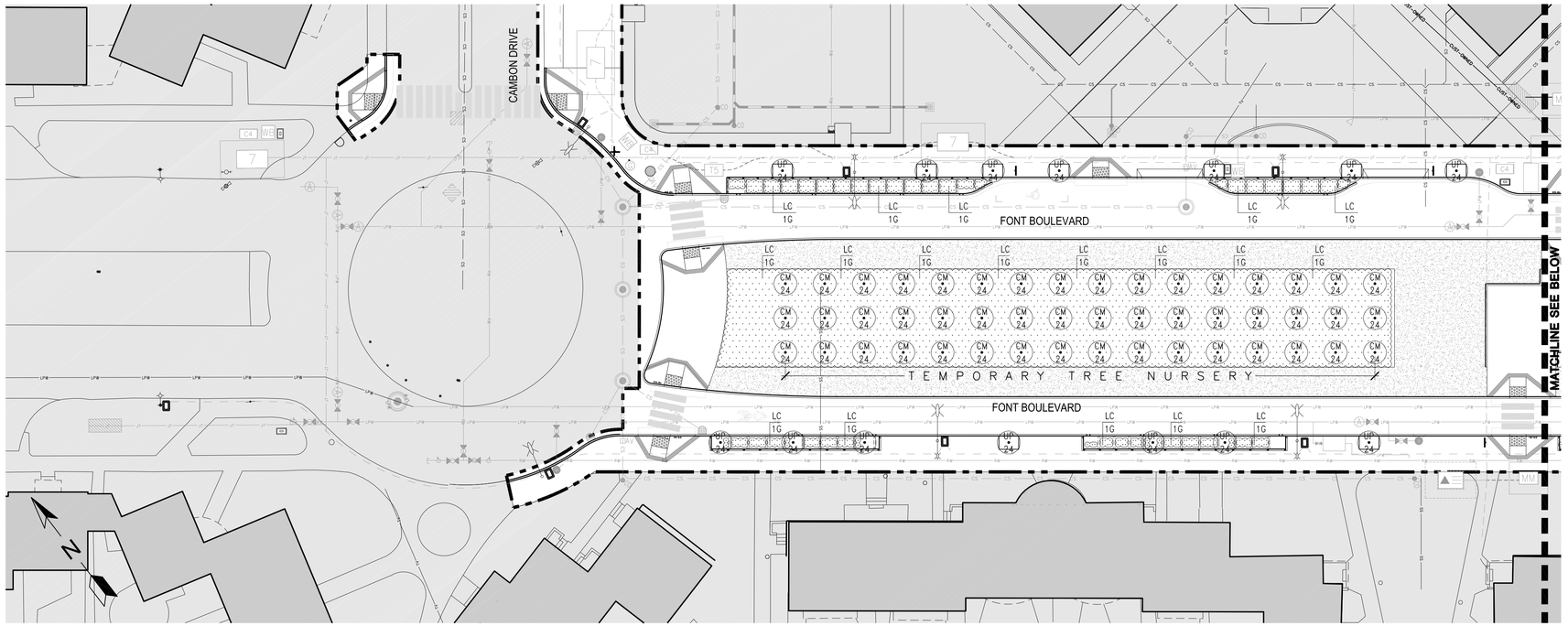

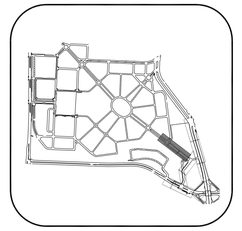

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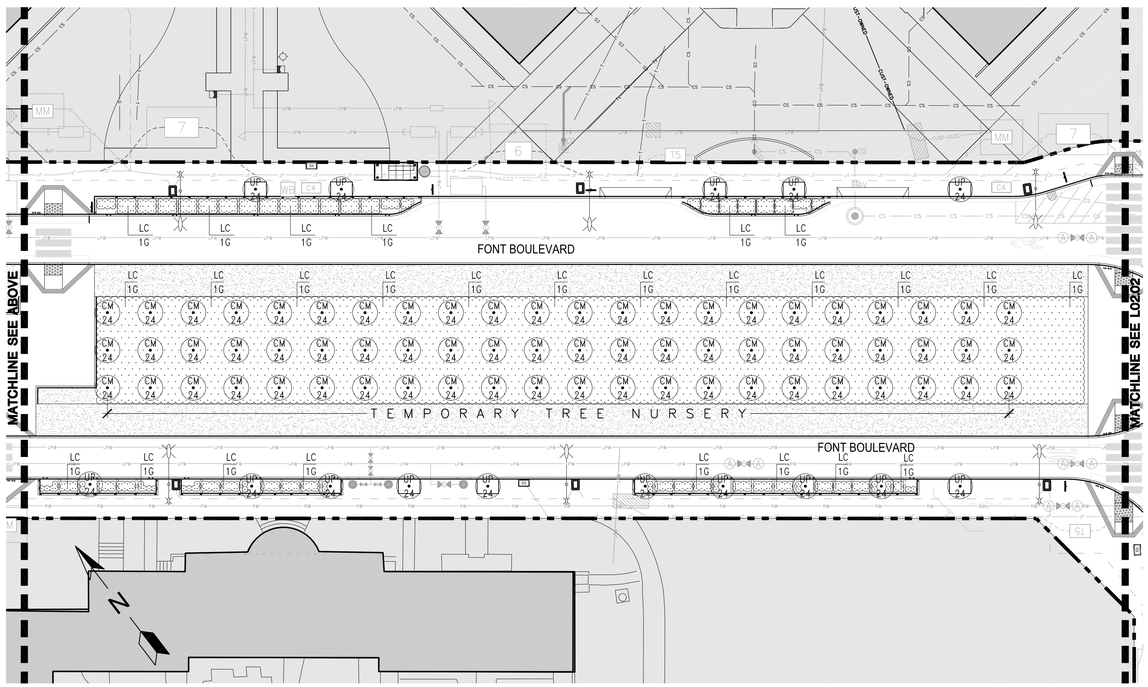

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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PLANTING PLAN
SAN FRANCISCO COUNTY CALIFORNIA

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No.	Revisions

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Design: LEAD
Drawn: TEAM
Approved: LEAD
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Drawing Number:
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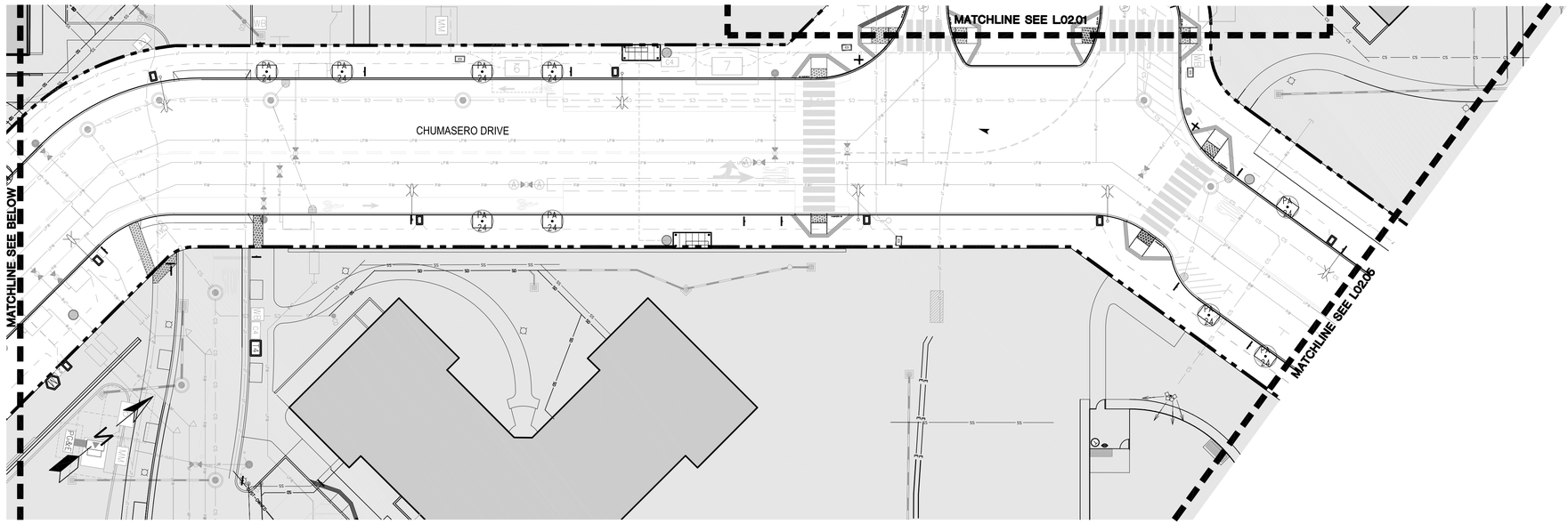

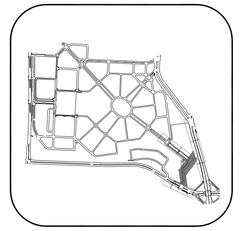

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GRAPHIC SCALE

NOTES:

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PLANTING PLAN
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Drawn: TEAM
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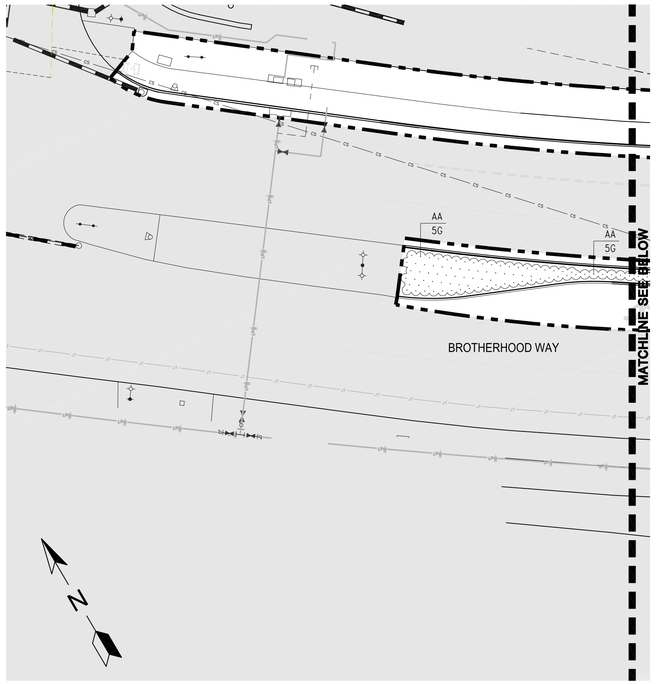

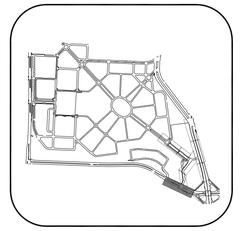

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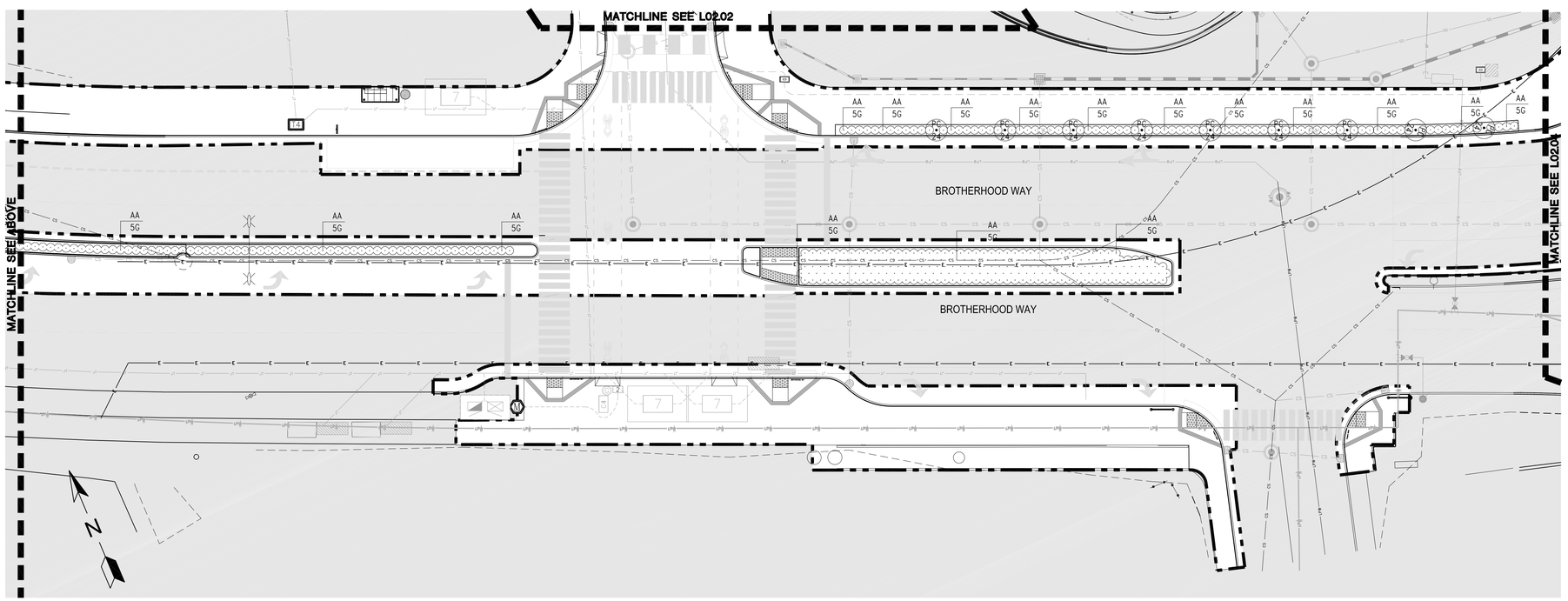

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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739 Allston Way
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510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
PLANTING PLAN
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

NOT FOR CONSTRUCTION

No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L02.03

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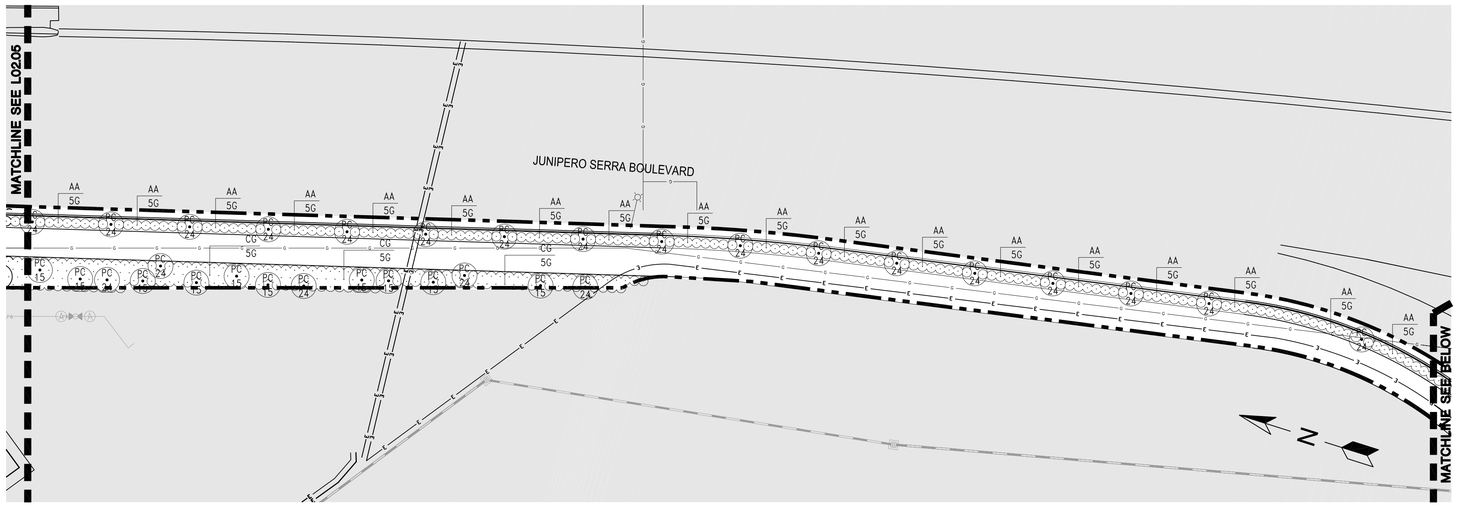
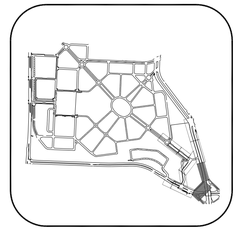
APPROVED SET FOR BOARD SUBMITTAL 05.01.17







0' 20' 40'
GRAPHIC SCALE

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PLANTING PLAN
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No.	Revisions

Date: 05/01/17
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Approved: LEAD
Job No: MAX 1401

Drawing Number:
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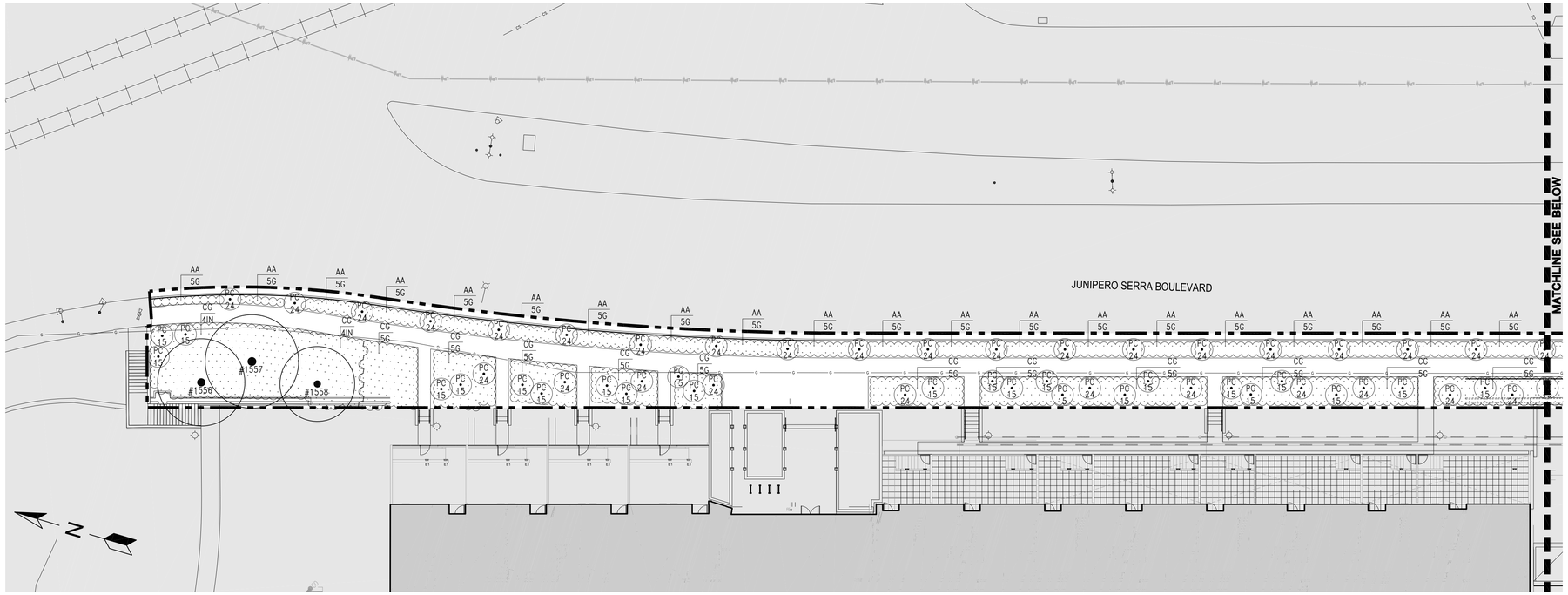

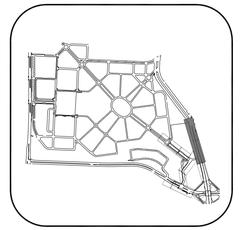

0' 20' 40'
GRAPHIC SCALE

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IRRIGATION SYSTEM LEGEND

M	IRRIGATION WATER METER–1.5"	–BY CIVIL SECTION OF CONTRACT
	IRRIGATION BACKFLOW PREVENTION DEVICE	–BY CIVIL SECTION OF CONTRACT
	GATE VALVE	–NIBCO–T113–IRR–LINE SIZE
	MASTER CONTROL VALVE	–SUPERIOR–3100–2"
	FLOW SENSOR	–BASELINE–BL–PFS–100
	FERTIGATION UNIT	–EZ–FLO–XXX
	ELECTRIC CONTROLLERS	–BASELINE–BL–1000/P/WL/BL–BMW2–1/BL–BMW2–MAA–1
S	MOISTURE SENSOR	–BASELINE–BL–5315B
	REMOTE CONTROL VALVE	–RAINBIRD–EFB–CP SERIES
	QUICK COUPLING VALVE	–RAINBIRD–44–NP
	DRIP ZONE KIT	–RAINBIRD–XCZ–100–PRB–COM
	DRIP FLUSH VALVE	–SEE DETAIL
	BUBBLER	–RAINBIRD–RWS–B–C–1402–RWS–SOCK
	IRRIGATION SUPPLYLINE	–SCHEDULE 40 GALVANIZED STEEL PIPE & FITTINGS –18" COVER
	IRRIGATION LATERAL LINE	–1120/SCHEDULE 40 PVC PIPE –12" COVER
	SLEEVING	–1120/SCHEDULE 40 PVC PIPE –24" COVER
	ELECTRICAL CONDUIT	–1120/SCHEDULE 40 ELECTRICAL CONDUIT –24" COVER
	SUBSURFACE DRIPLINE	–NETAFIM–TLCV–6–12 –4" COVER

ALL LATERAL LINE PIPING SHALL BE PURPLE COLORED PVC. PROVIDE R/W LABELING FOR SUPPLYLINE.

sta — CONTROLLER STATION NUMBER
gpm — GALLONS PER MINUTE THROUGH VALVE
size — CONTROL VALVE SIZE

SLEEVING SIZING SCHEDULE

PIPE SIZE	SLEEVE SIZE
3/4"	2"
1"	2 1/2"
1 1/4"	2 1/2"
1 1/2"	3"
2"	4"
2 1/2"	4"
3"	6"
4"	8"

IRRIGATION SYSTEM NOTES

1. IRRIGATION SYSTEM IS DESIGNED FOR A MAXIMUM OF 40 G.P.M. AT 60 P.S.I. STATIC PRESSURE. VERIFY PRESSURE OF 60 P.S.I. AT THE POINT OF CONNECTION PRIOR TO INSTALLATION OF THE IRRIGATION SYSTEM. NOTIFY OWNERS REPRESENTATIVE OF ANY DISCREPANCIES IN PRESSURE.

2. NOTIFY OWNERS REPRESENTATIVE SIX (6) DAYS PRIOR TO INSTALLATION FOR A PRE–INSTALLATION CONFERENCE AND FIELD REVIEW COORDINATION FOR TRENCH DEPTHS, ASSEMBLY REVIEW, PRESSURE TESTS, COVERAGE TESTS, PRE– MAINTENANCE AND FINAL REVIEWS. A CONTINUITY TEST WILL BE REQUIRED FOR CONTROL WIRE STUBOUTS. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNERS REPRESENTATIVE.

3. CONNECT TO DISCHARGE SIDE OF IRRIGATION BACKFLOW REVENTION DEVICE PROVIDED FOR BY CIVIL SECTION OF CONTRACT.

4. INSTALL CONTROLLER WHERE INDICATED. EXACT LOCATION OF CONTROLLER TO BE DETERMINED AT JOBSITE BY OWNERS REPRESENTATIVE. 120 VOLT ELECTRICAL SUPPLY IS PROVIDED FOR IN IMMEDIATE VICINITY BY ELECTRICAL SECTION OF CONTRACT. MAKE FINAL 120 VOLT ELECTRICAL CONNECTION TO CONTROLLER. USE THIN WALL METAL CONDUIT ABOVE GRADE. PROGRAM CONTROLLERS TO NOT EXCEED MAXIMUM FLOW RATE STATED IN NOTE NO. 1. INSTALL PER MANUFACTURERS SPECIFICATIONS. CONTROLLER SHALL BE PROPERLY GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRIC CODE, LOCAL REGULATIONS, AND MANUFACTURERS GROUNDING REQUIREMENTS. INSTALL AS DETAILED. SEAL ALL CONDUIT HOLES WITH SILICONE OR EQUAL. PROGRAM CONTROLLER TO IRRIGATE USING MULTIPLE REPEAT CYCLES OF SHORT DURATIONS. CARE SHALL BE TAKEN TO PREVENT RUNOFF OF WATER AND SLOPE/SOIL EROSION DUE TO PROLONGED APPLICATIONS OF WATER.

5. INSTALL MASTER CONTROL VALVE, FLOW SENSOR, FERTIGATION SYSTEM, REMOTE CONTROL VALVES, QUICK COUPLING VALVES, BALL VALVES, DRIP ZONE KITS, AND FLUSH VALVES AS DETAILED. INSTALL R.C.V. ID TAGS MANUFACTURED BY T. CHRISTY ENT. STANDARD SIZE, 1 1/8" HOT STAMPED BLACK LETTERS ON YELLOW BACKGROUND ON SOLENOID WIRES. LETTERS TO CONFORM TO CONTROLLER/STATION NUMBER.

6. ALL HEADS SHALL HAVE RISER ASSEMBLIES AS DETAILED. INSTALL CHECK VALVES AS SHOWN ON BUBBLER RISER ASSEMBLY DETAILS WHERE LOW HEAD DRAINAGE OCCURS. NOTE ESPECIALLY TO AVOID DRAINAGE AT SIDEWALKS AND OTHER POINTS WHERE PUDDLING WILL CAUSE DAMAGE OR HAZARD. ADJUST ALL BUBBLERS AT TREES AS REQUIRED FOR DEEP ROOT WATERING.

7. ALL PIPE AND WIRING UNDER PAVEMENT SHALL BE INSTALLED AT A TWENTY FOUR INCH (24") DEPTH BELOW GRADE. ALL PIPE AND WIRING UNDER PAVEMENT SHALL BE INSTALLED IN PVC SCHEDULE 40 SLEEVING AND ELECTRICAL CONDUIT. SLEEVING AND ELECTRICAL CONDUIT SHALL EXTEND SIX INCHES (6") BEYOND EDGE OF PAVEMENT OR CURB. INSTALL SAND FOR BACKFILL IN VEHICULAR PAVEMENT AREAS TO 6" COVER ABOVE PIPE. SURROUND PIPE WITH SAND IN AREAS WHERE ROCKY TERRAIN IS ENCOUNTERED.

8. PRIOR TO INSTALLATION OF SUBSURFACE DRIP SYSTEMS ENSURE THAT THE SOIL IS ROTOTILLED TO A UNIFORM DEPTH. REVIEW DRIP COMPONENTS, EQUIPMENT AND INSTALLATION TECHNIQUES WITH MANUFACTURER'S REPRESENTATIVE. SPECIAL ATTENTION SHALL BE PAID WHEN COORDINATING INSTALLATION OF PLANT MATERIALS AND DRIP SYSTEM. AVOID CONFLICTS BETWEEN INSTALLATION OF SUBSURFACE DRIP AND PLANT LOCATIONS. IF CONFLICTS IN INSTALLATION LOCATIONS OCCUR, THEN PLANT INSTALLATION LOCATIONS SHALL HAVE PRIORITY.

9. SUBSURFACE DRIPLINE SHOWN IS DIAGRAMMATIC ONLY. FOLLOW SPACING REQUIREMENTS INDICATED ON INSTALLATION DETAIL AND MANUFACTURERS SPECIFICATIONS.

10. PROVIDE LITERATURE OF ALL DRIP SYSTEM COMPONENTS INCLUDING ANY PREVENTATIVE MAINTENANCE AND TROUBLE SHOOTING GUIDES TO OWNER AND REVIEW MAINTENANCE PROCEDURES INCLUDING:
    CLEANING FILTER IN WYE STRAINERS
    REPAIRING BREAKS IN PIPES AND RISERS
    ADDING EMITTERS OR TUBING FOR EXPANSION/INSTALLING PLUGS

11. MAINTENANCE CONSIDERATIONS:
    FILTER CLEANING AND FLUSHING SHOULD START OUT AS A MONTHLY PROCEDURE(MORE FREQUENT FOR DIRTY WATER SITUATIONS) AND ADJUST TIMING AS APPROPRIATE. VISUALLY CHECK FOR INDICATIONS OF PIPE BREAKS OR CLOGGED EMITTERS ON A REGULAR BASIS. DURING WINTER MONTHS, WHEN THE SYSTEM IS NOT IN USE, THE EMITTERLINE SYSTEM(S) SHOULD BE RUN ABOUT EVERY 2 WEEKS FOR 2–4 MINUTE MINIMUM RUNTIME.

12. IRRIGATION PIPING IS DIAGRAMMATIC ONLY. PROVIDE LATERAL/MAINLINES AT BACK OF TREE WELL, WHERE FEASIBLE, IN LIEU OF ROADWAYS OR UNDER CURB AND GUTTER.

13. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING THIS PROJECT.

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NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
IRRIGATION NOTES AND LEGEND
SAN FRANCISCO — SAN FRANCISCO COUNTY — CALIFORNIA

NOT FOR CONSTRUCTION — ARTHUR LANDSCAPE IRRIGATION CONSULTING PAT ARTHUR

No.	Revisions

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Scale: NO SCALE
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L03.00

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PLOT TIME: 4-28-2017 5:34 PM PLOTTED BY: Omar

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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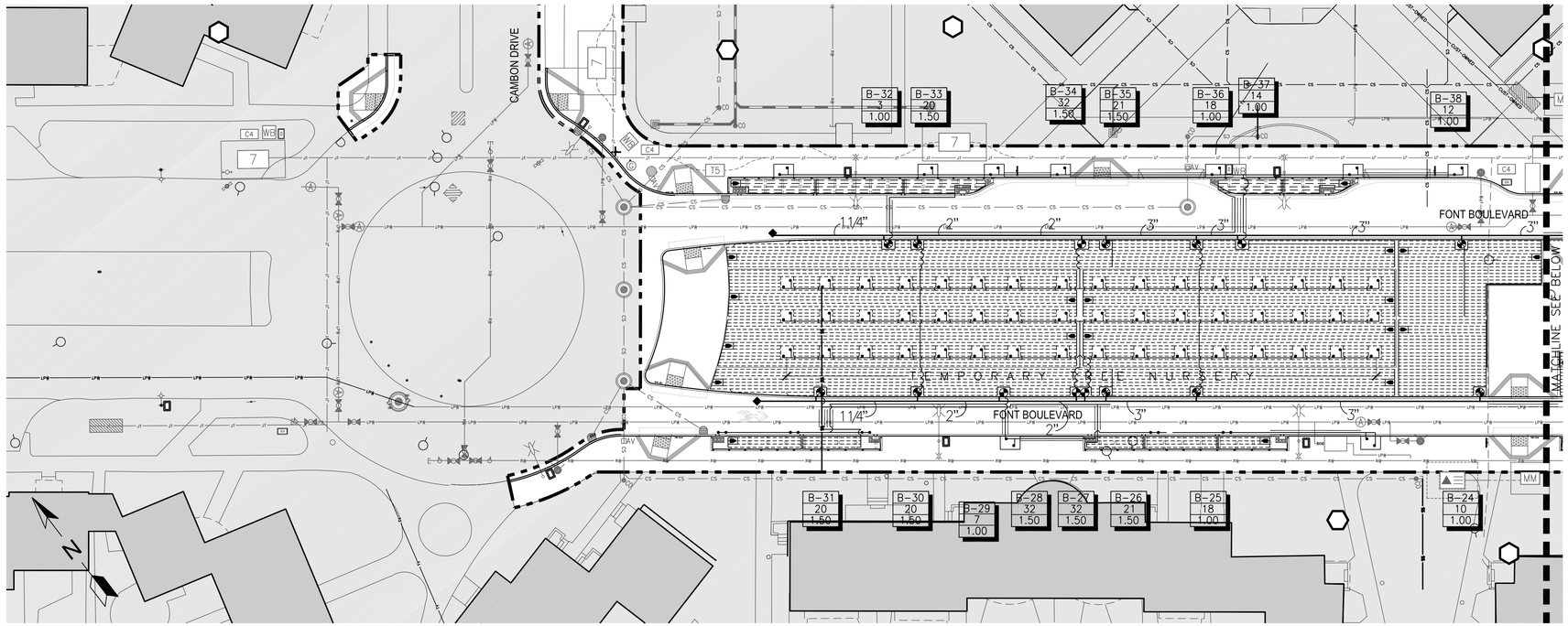
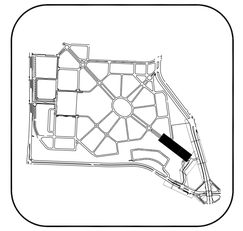


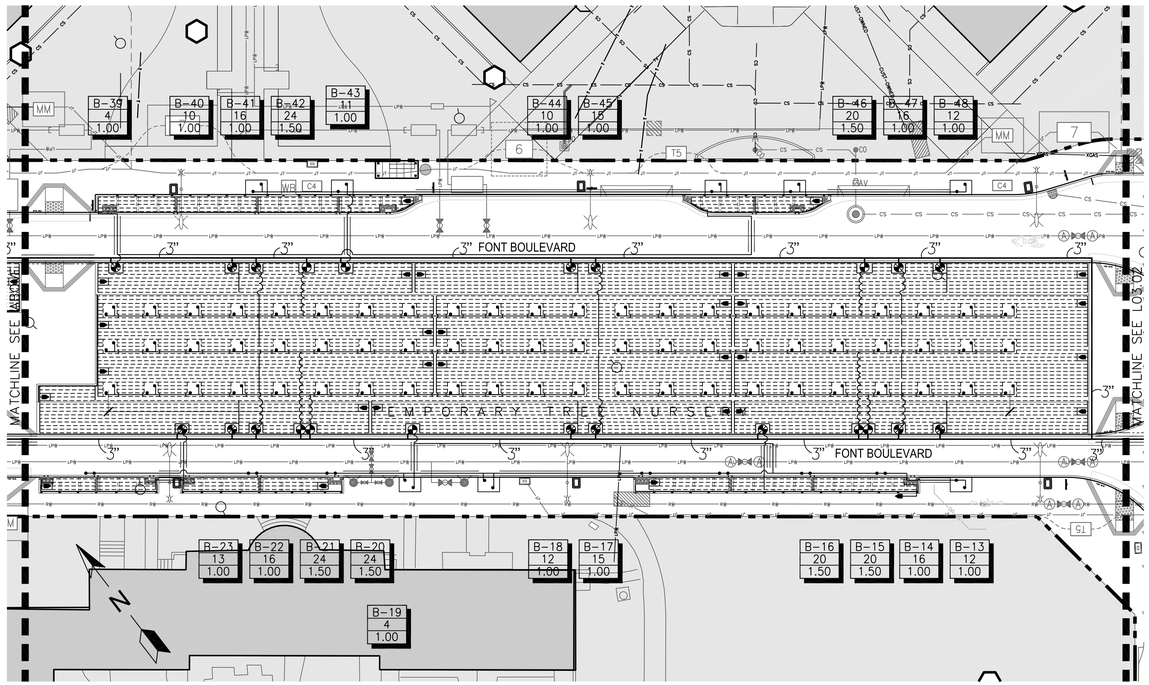


0' 20' 40'

GRAPHIC SCALE

IRRIGATION SYSTEM LEGEND

M	IRRIGATION WATER METER-1.5"
	IRRIGATION BACKFLOW PREVENTION DEVICE
	GATE VALVE
	MASTER CONTROL VALVE
	FLOW SENSOR
F	FERTIGATION UNIT
B C	ELECTRIC CONTROLLERS
S	MOISTURE SENSOR
	REMOTE CONTROL VALVE
	QUICK COUPLING VALVE
	DRIP ZONE KIT
	DRIP FLUSH VALVE
•	BUBBLER
	IRRIGATION SUPPLYLINE
	IRRIGATION LATERAL LINE
	SLEEVING
	ELECTRICAL CONDUIT
	SUBSURFACE DRIPLINE
sta / gpm / size	CONTROLLER STATION NUMBER GALLONS PER MINUTE THROUGH VALVE CONTROL VALVE SIZE
	REFER TO SHEET L03.00 FOR FULL EQUIPMENT LEGEND



NOTES:

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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
IRRIGATION PLAN
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

NOT FOR CONSTRUCTION
PROFESSIONAL IRRIGATION DESIGNER
RAY ARTHUR

No.	Revisions

Date: 05/01/17
Scale: 1" = 20'
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L03.01

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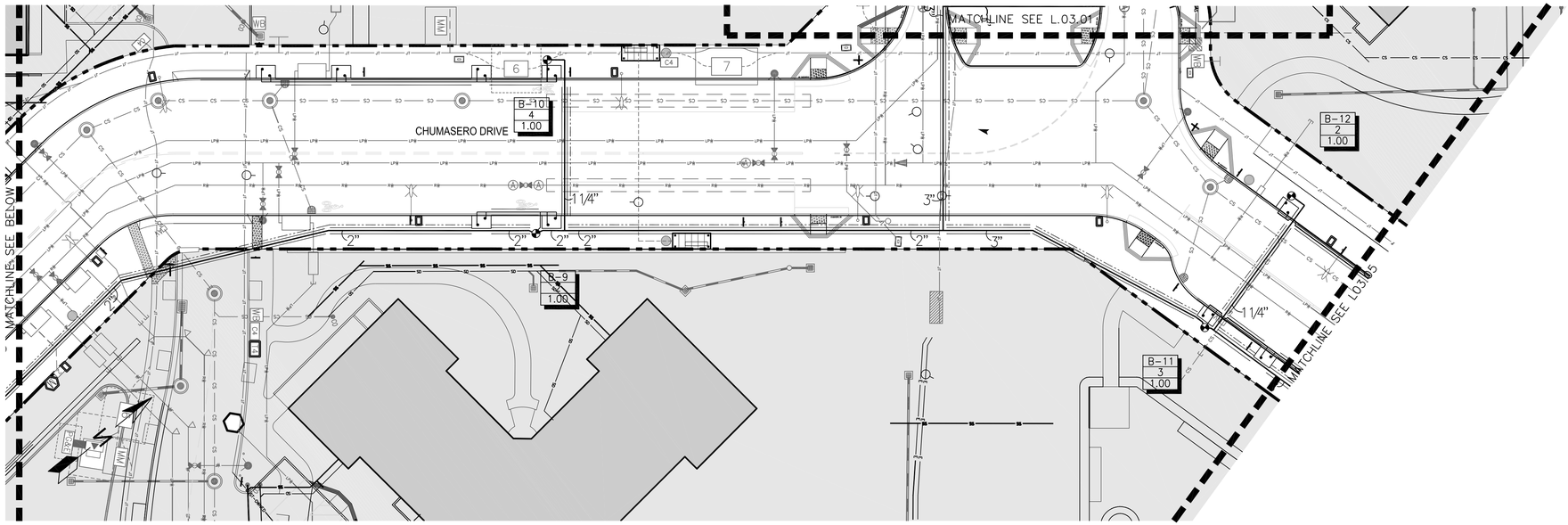

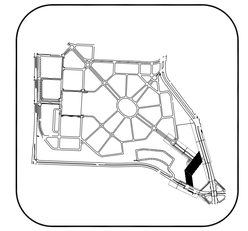

0' 20' 40'
GRAPHIC SCALE

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IRRIGATION PLAN
SAN FRANCISCO COUNTY CALIFORNIA

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No.	Revisions

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Scale: 1"=20'
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
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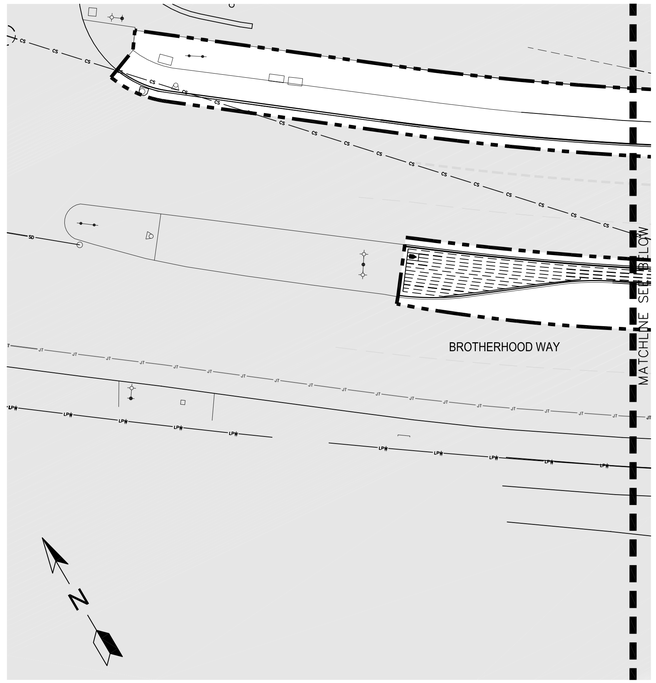

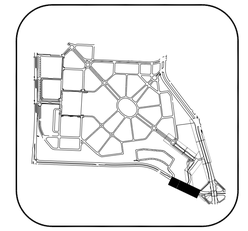

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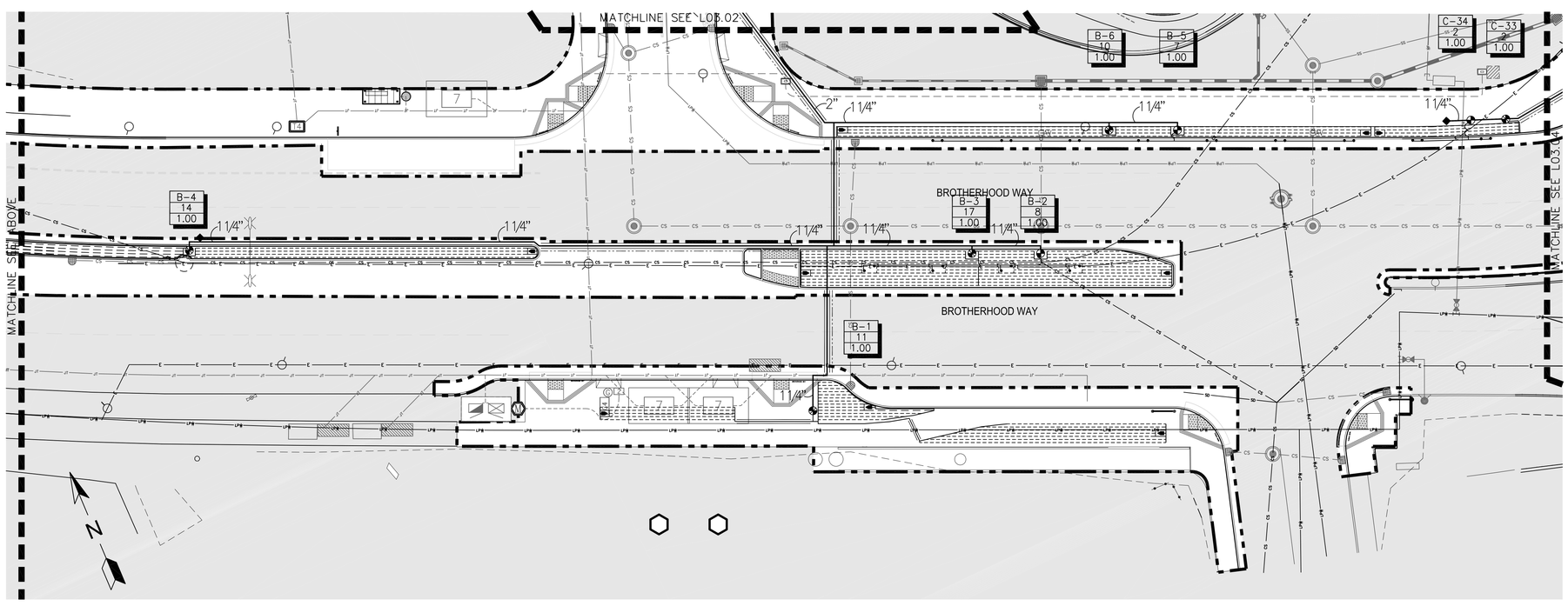

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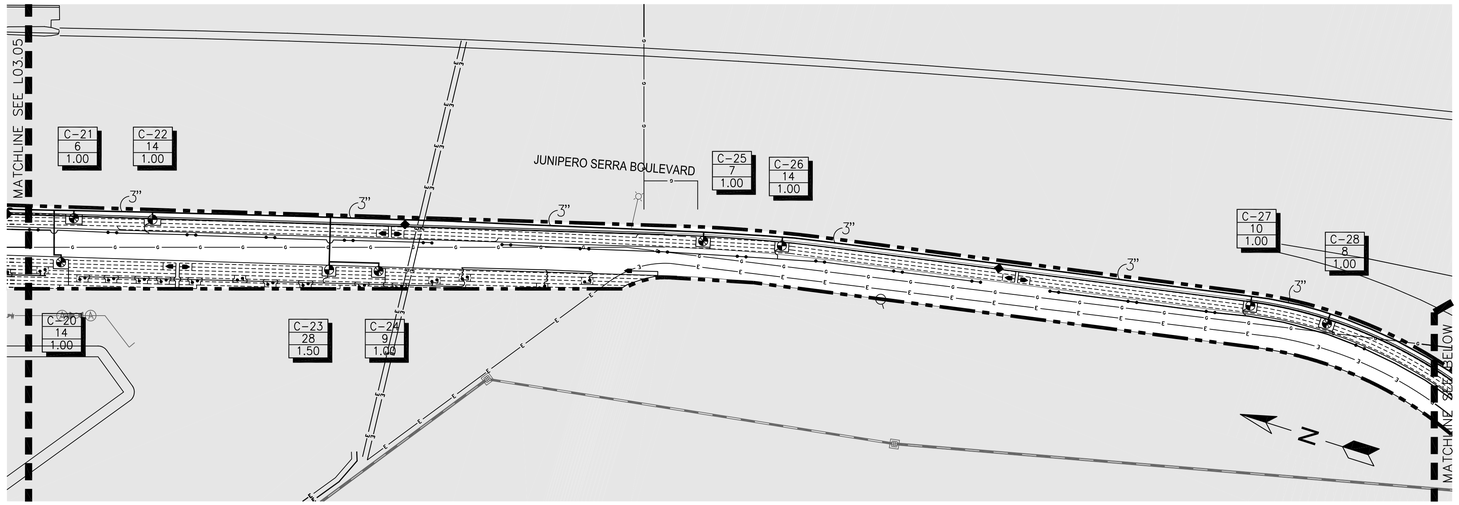



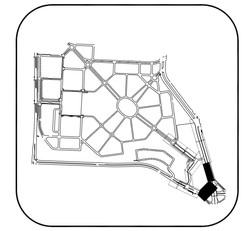

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PHASE 1B STREET IMPROVEMENT PLANS

IRRIGATION PLAN

SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

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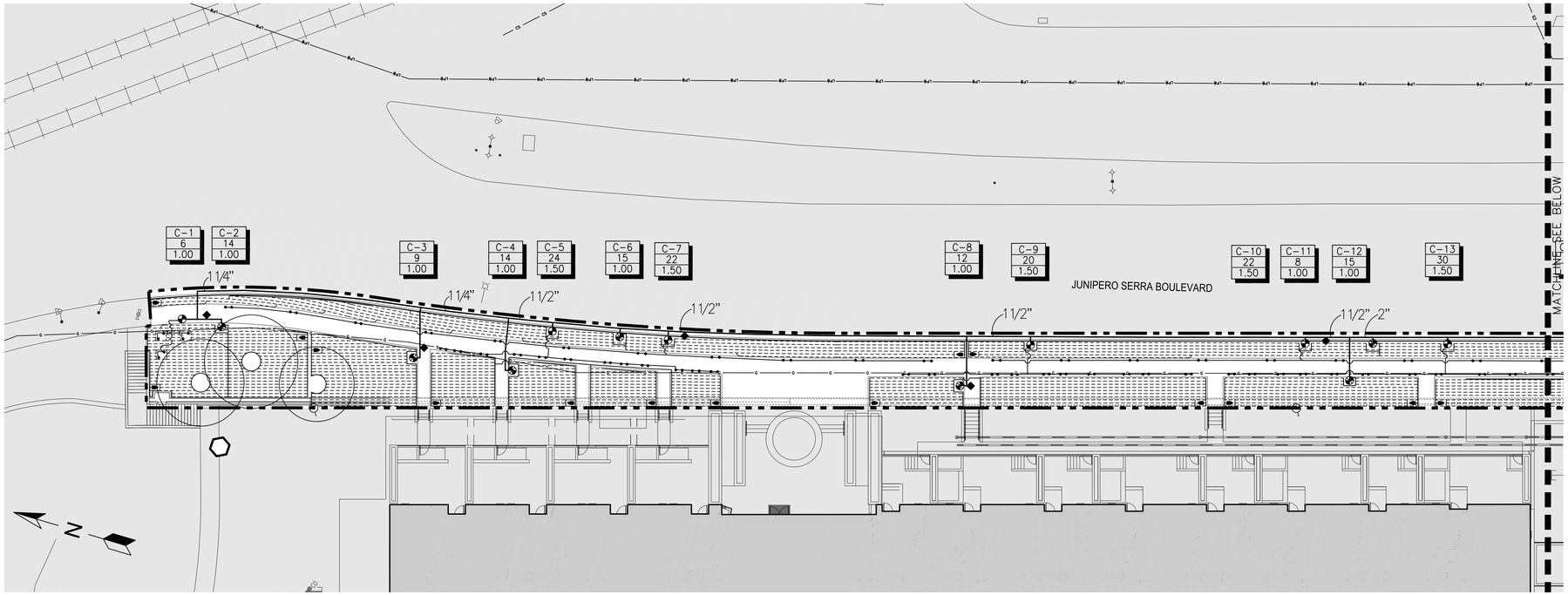

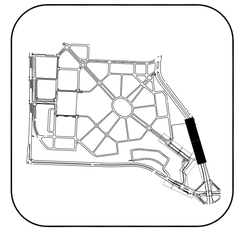

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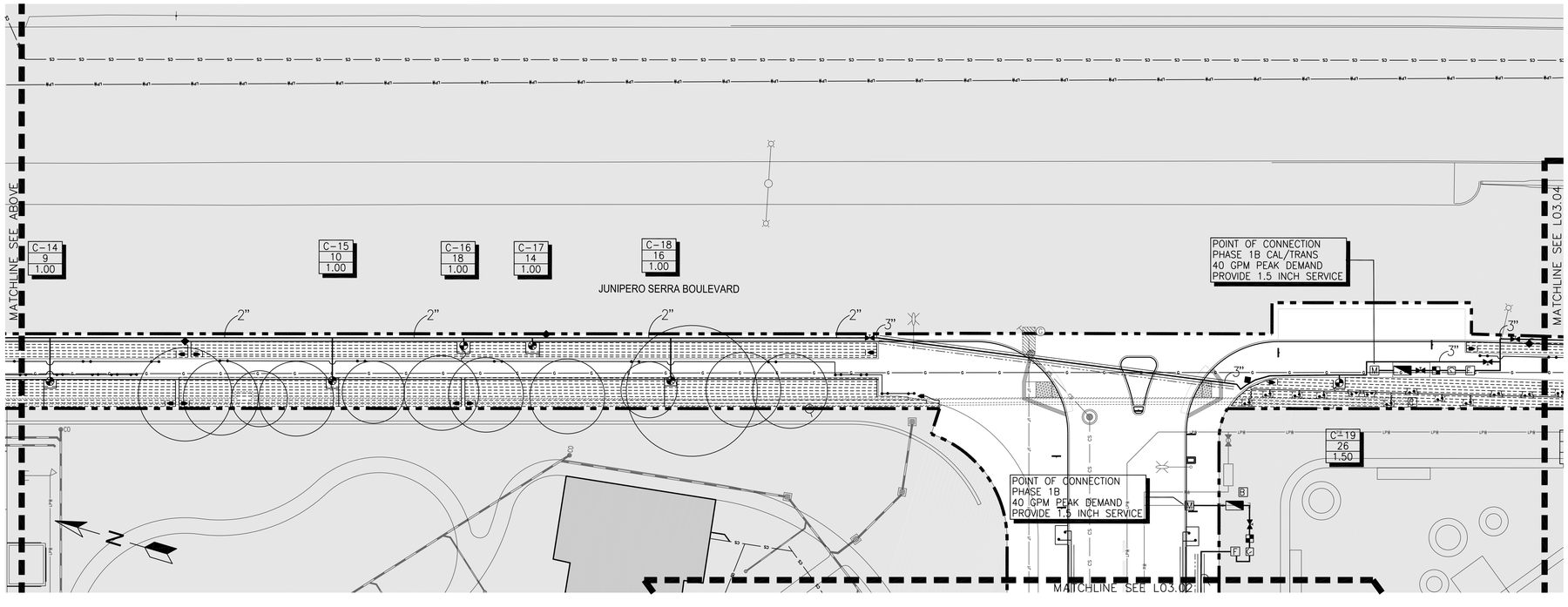

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IRRIGATION PLAN

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L03.05

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PLOT TIME: 4-28-2017 6:07 PM PLOTTED BY: Owner

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

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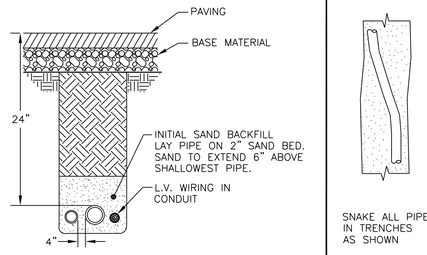
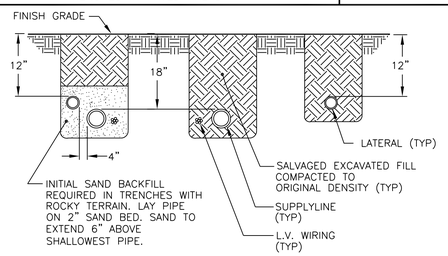


TRENCHES IN PAVED AREAS

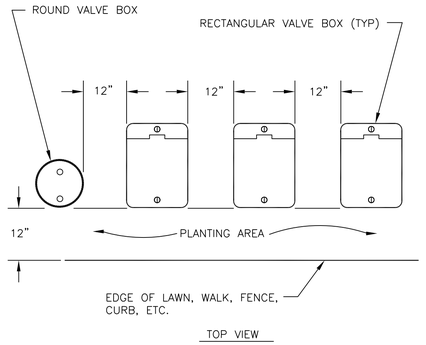
SNAKE ALL PIPE IN TRENCHES AS SHOWN



TRENCHES IN PLANTING AREAS

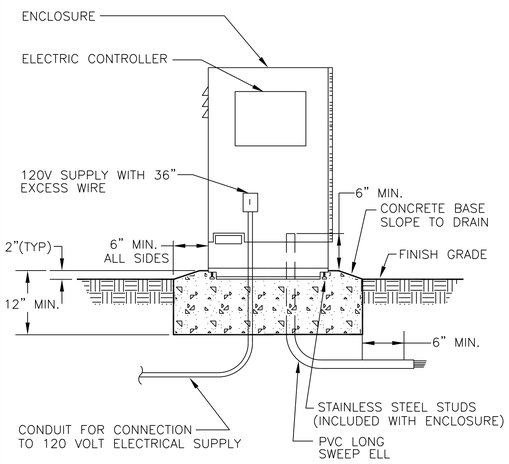
A TRENCHING DETAILS
NTS

NOTES: 1. CENTER BOXES OVER VALVES.
2. SET BOXES IN GROUND COVER/SHRUB AREA WHERE POSSIBLE.
3. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.



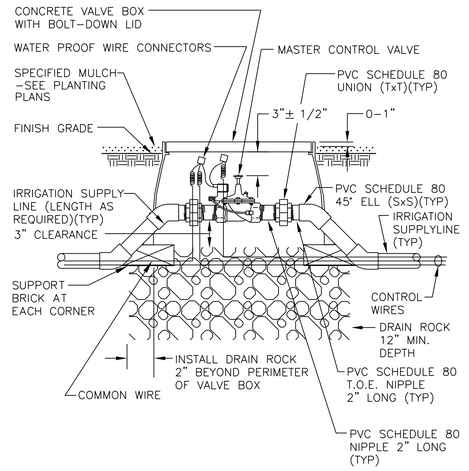
B VALVE BOX INSTALLATION DETAIL
NTS

NOTE: CONTROLLER SHALL BE PROPERLY GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRIC CODE AND CONFORM TO LOCAL REGULATIONS.



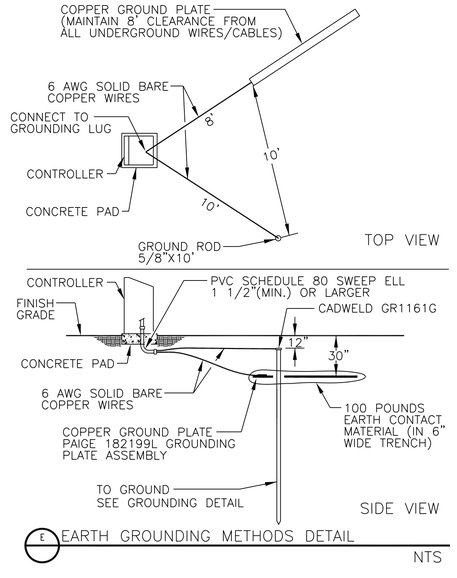
NOTE: CONSULT MANUFACTURERS MOUNTING PAD TEMPLATE FOR PROPER QUANTITY, PLACEMENT AND SIZE OF CONDUITS.

PEDESTAL
C MOUNT CONTROLLER INSTALLATION DETAIL
NTS



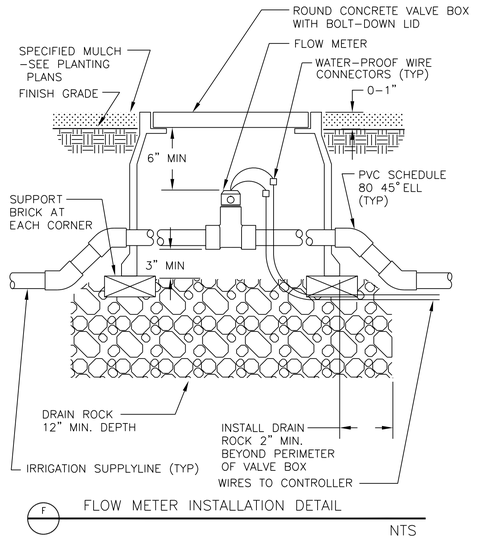
D MASTER CONTROL VALVE INSTALLATION DETAIL
NTS

NOTE: 1. GROUND PER NATIONAL ELECTRIC CODE ARTICLE 250.
2. SALTS, FERTILIZERS, AND OTHER CHEMICALS TO IMPROVE SOIL CONDUCTING WILL CORRODE COPPER ELECTRODES.
3. EARTH TO GROUND RESISTANCE TO BE 10 OHMS, INSTALL ADDITIONAL GROUNDING PLATES AS REQUIRED TO LOWER OHMS.



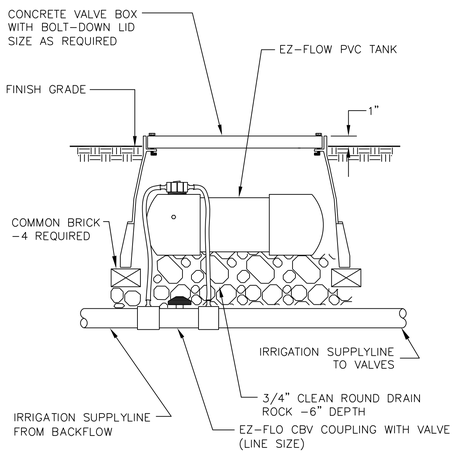
E EARTH GROUNDING METHODS DETAIL
NTS

NOTE: ALLOW 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM FROM SENSOR OF STRAIGHT UNOBSTRUCTED PIPE TO ENSURE PROPER FLOW READING.



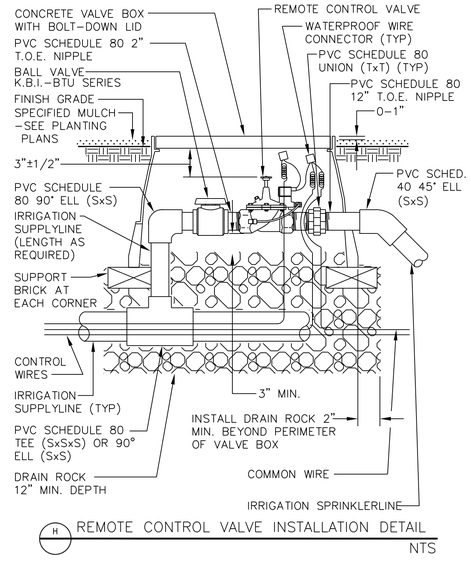
F FLOW METER INSTALLATION DETAIL
NTS

NOTES: 1. USE ONLY EZ-FLO PREMIUM FERTILIZERS AND SUPPLEMENTS.
2. REFER TO MANUFACTURERS OPERATING SPECIFICATIONS PRIOR TO THE START UP OF THE SYSTEM.
3. REFER TO MANUFACTURERS INSTALLATION GUIDELINES.



G FERTILIZATION SYSTEM INSTALLATION DETAIL
NTS

NOTES: 1. VALVE BOXES IN PAVED/PAVER/TURFBLOCK AREAS SHALL BE OLDCASTLE PRECAST MODEL N36 WITH STEEL LID.
2. SET TOP OF BOX FLUSH WITH FINISH GRADE IN TURF AREAS.



H REMOTE CONTROL VALVE INSTALLATION DETAIL
NTS

ALI Consulting
ARTHUR LANDSCAPE IRRIGATION CONSULTING
Post Office Box 3490 Professional Member - ASIC
Livermore, Calif. 94551
T 925.518.3956
E ray@aliconsulting.net

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

PWP LANDSCAPE ARCHITECTURE
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Berkeley, CA 94710
510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
IRRIGATION DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
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No.	Revisions

Date: 05/01/17
Scale: NO SCALE
Design: LEAD
Drawn: TEAM
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Job No: MAX 1401

Drawing Number:
L03.11

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PLOT TIME: 4-28-2017 5:35 PM PLOTTED BY: Owner

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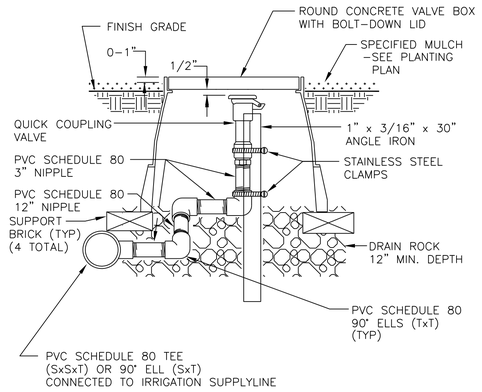
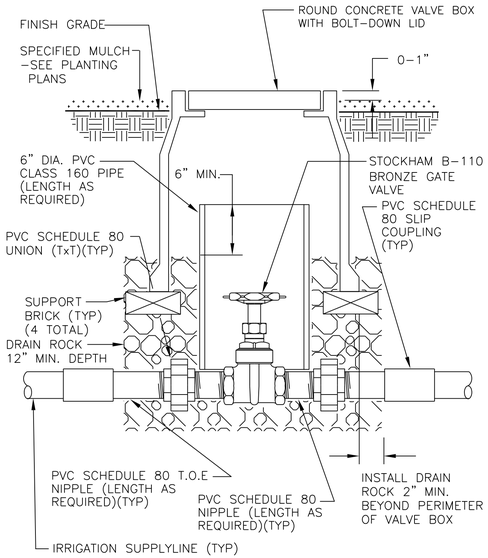
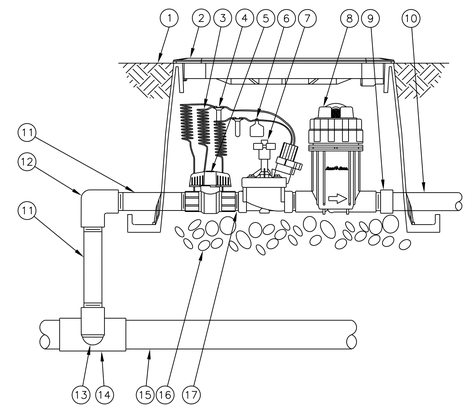
NOTES: 1. VALVE BOXES IN PAVED/PAVER/TURFBLOCK AREAS SHALL BE OLDCASTLE PRECAST MODEL N36 WITH STEEL LID.
2. SET TOP OF BOX FLUSH WITH FINISH GRADE IN TURF AREAS.



A QUICK COUPLING VALVE RISER ASSEMBLY DETAIL
NTS

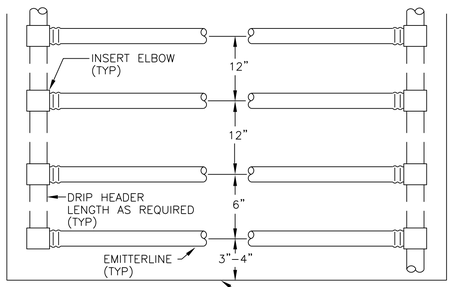


B GATE VALVE INSTALLATION DETAIL
NTS



1. FINISH GRADE/TOP OF MULCH
2. CONCRETE VALVE BOX WITH BOLT–DOWN LID
3. 30–INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION:
5. 1–INCH BALL VALVE (INCLUDED IN XCZ–PRB–100–COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ–PRB–100–COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB–QKCHK–100 (INCLUDED IN XCZ–PRB–100–COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2–INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ–PRB–100–COM KIT)

C DRIP ZONE KIT INSTALLATION DETAIL
NTS



D EMITTERLINE INSTALLATION DETAIL
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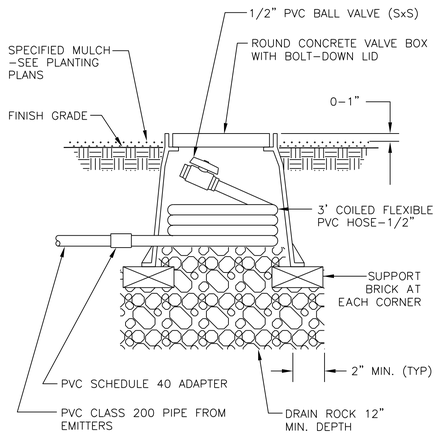

E FLUSH VALVE INSTALLATION DETAIL
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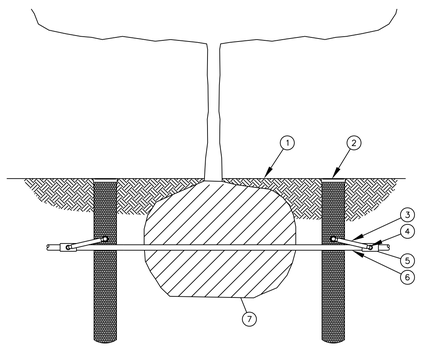

NOTES:
1. POSITION 2 UNITS EVENLY SPACED AROUND PLANT. FOR NEW TREES PLACE NEAR ROOT BALL.
2. INSTALL PRODUCT WITH TOP EVEN WITH FINISH GRADE.
3. ADD ¾" GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
4. ONCE RWS HAS BEEN INSTALLED FILL THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.

1. FINISH GRADE/TOP OF D.G.
2. ROOT WATERING SERIES: RAIN BIRD RWS SERIES
3. SWING ASSEMBLY (INCLUDED)
4. 1/2–INCH MALE NPT INLET (INCLUDED)
5. PVC SCH 40 TEE OR EL
6. PVC LATERAL PIPE
7. PLANT ROOT BALL

F TREE BUBBLER INSTALLATION DETAIL

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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Date: 05/01/17
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Design: LEAD
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Approved: LEAD
Job No: MAX 1401

Drawing Number:
L03.12

ARTHUR LANDSCAPE
ALI Consulting IRRIGATION CONSULTING
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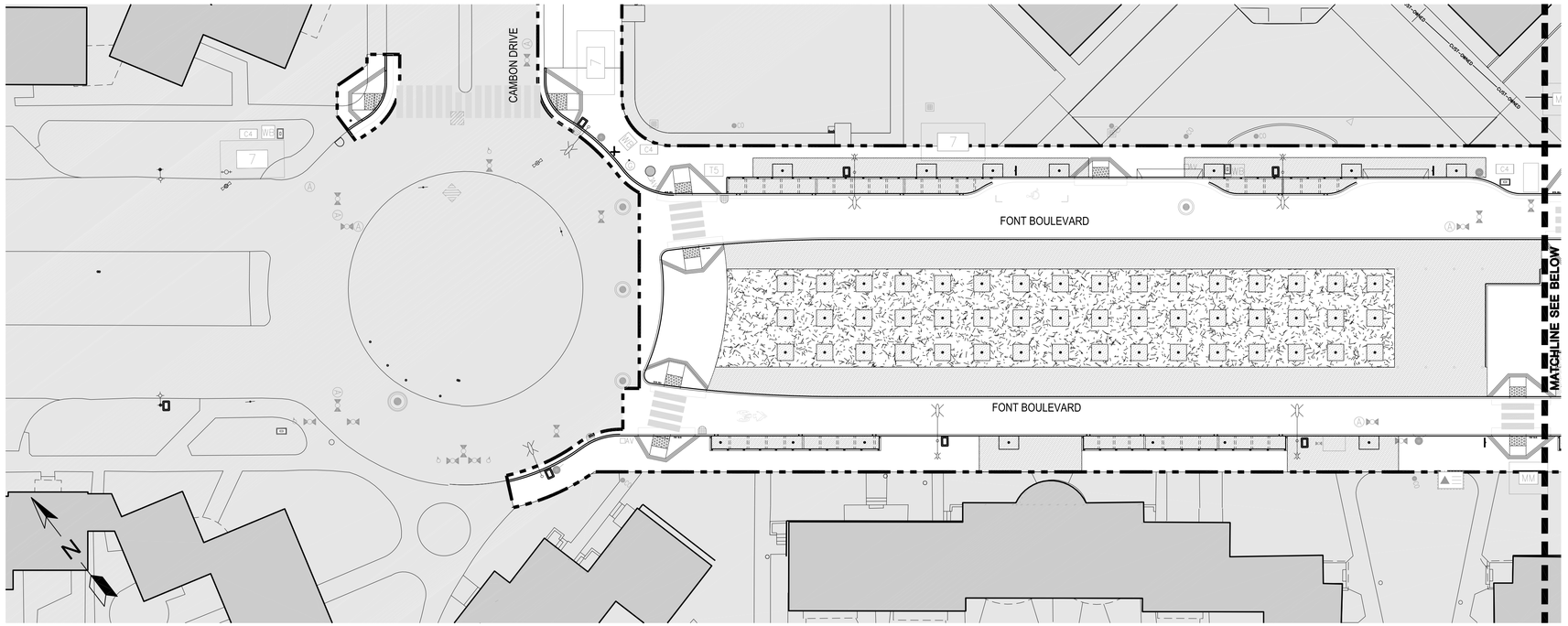

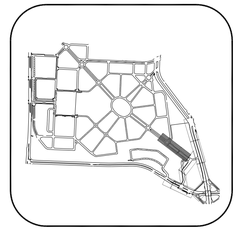

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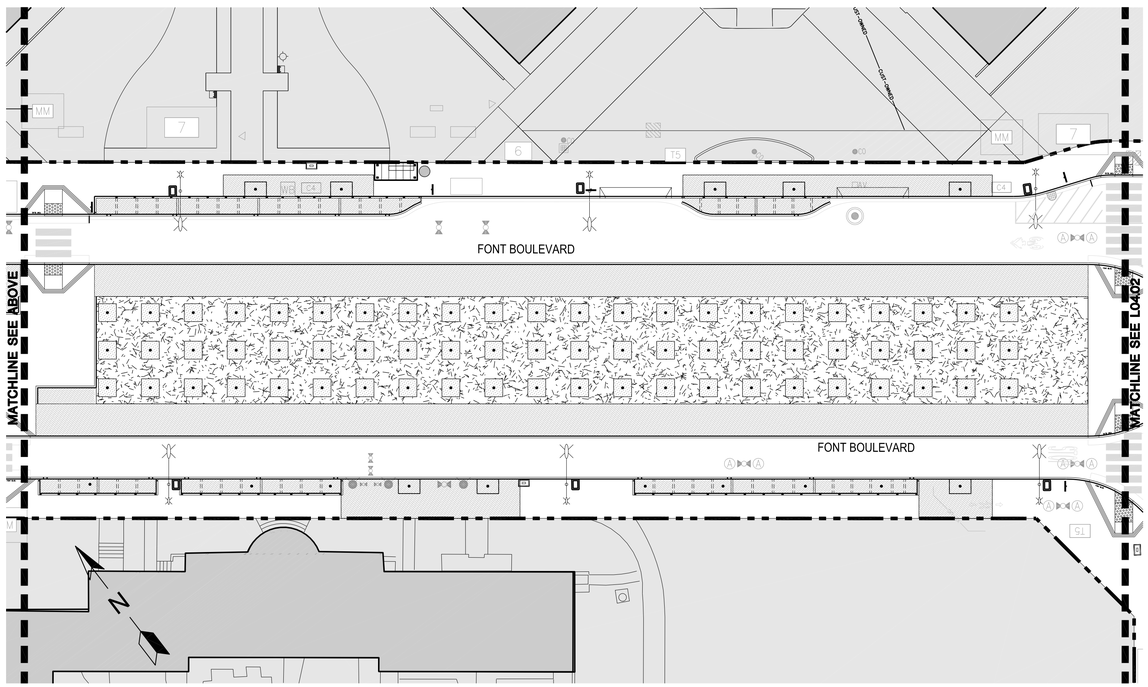

NOTES:

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Date: 05/01/17
Scale: 1"=20'
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
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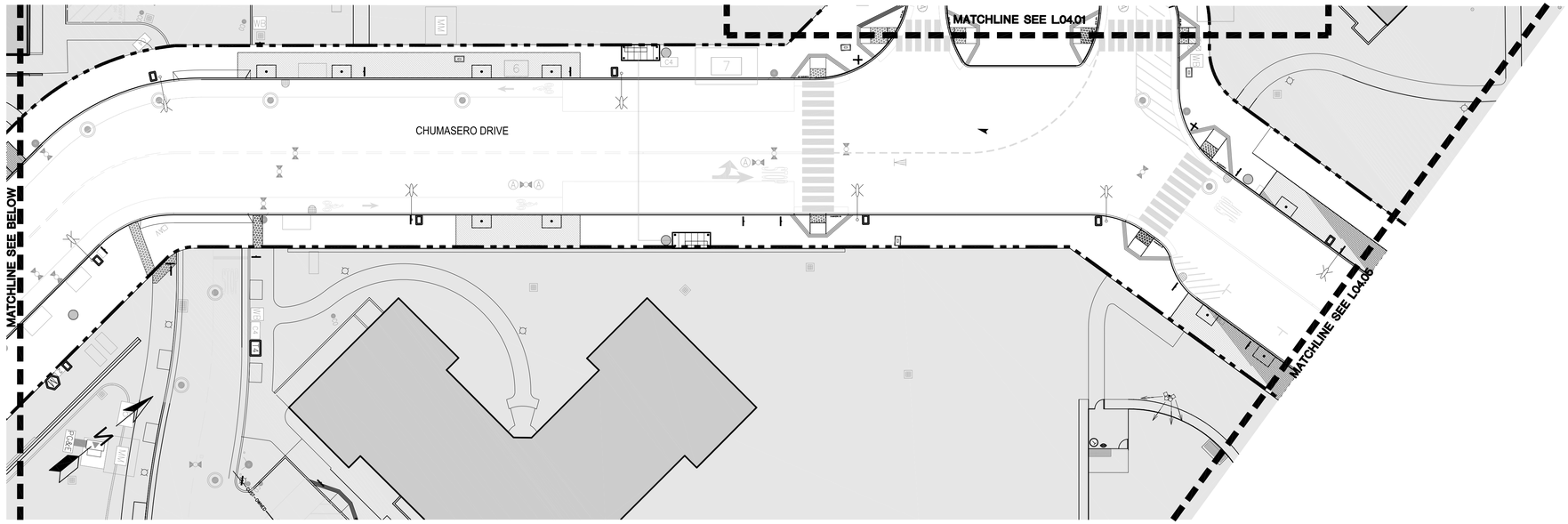
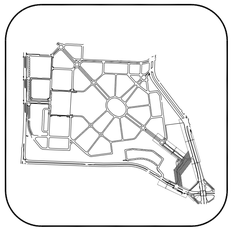
APPROVED SET FOR BOARD SUBMITTAL 05.01.17





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NOTES:

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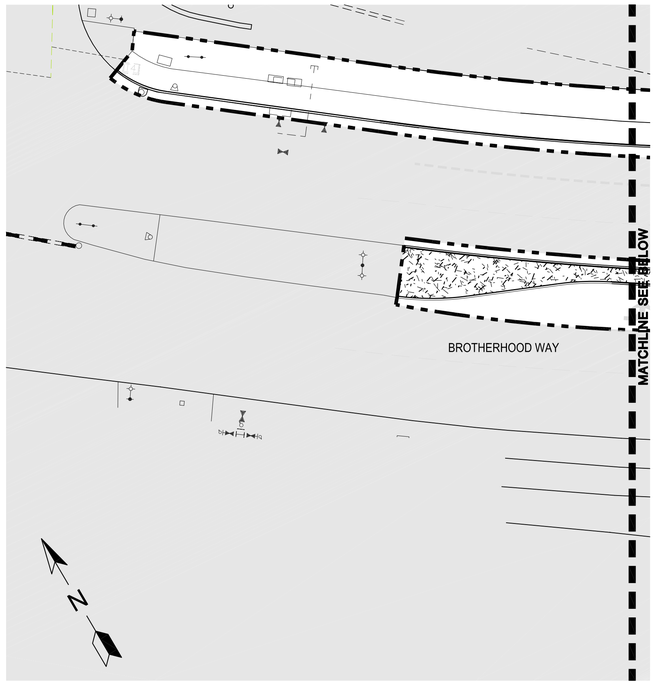

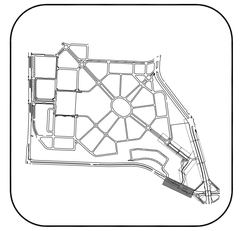

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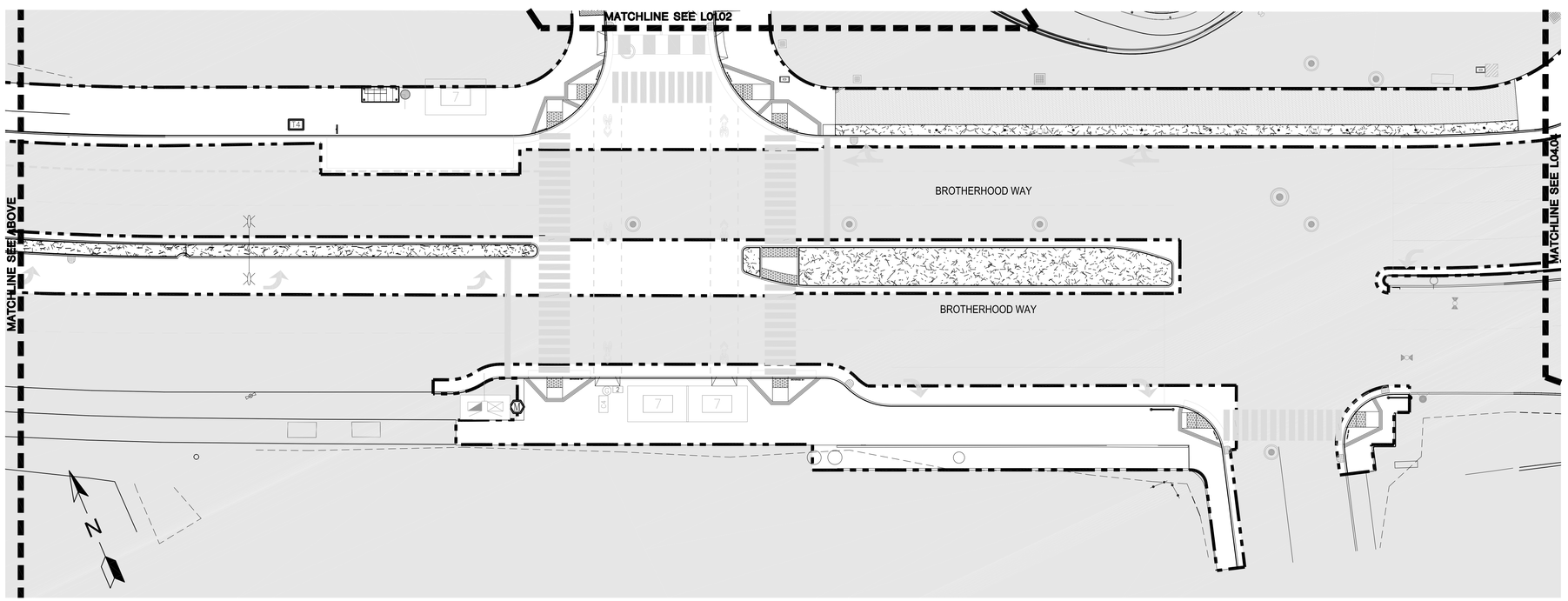

NOTES:

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Drawn: TEAM
Approved: LEAD
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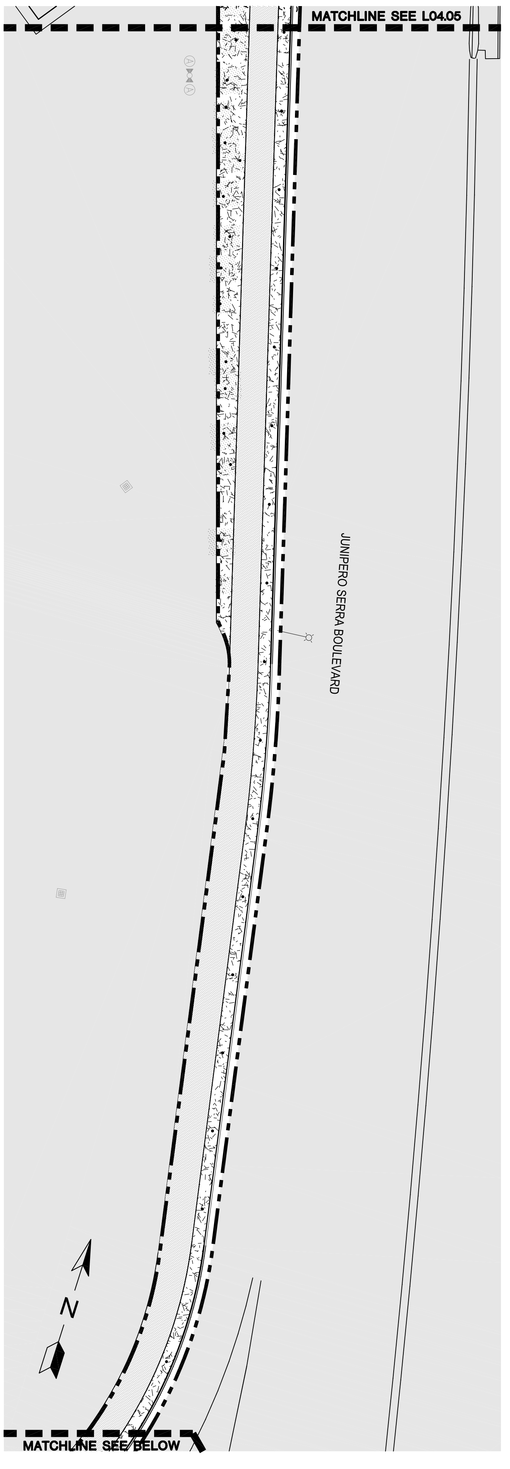

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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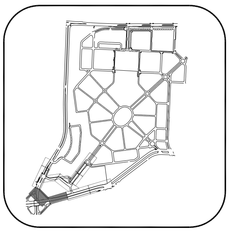

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Drawing Number: L04.04

Date: 05/01/17	
Scale: 1"=20'	
Design: LEAD	
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Approved: LEAD	
Job No: MAX 1401	

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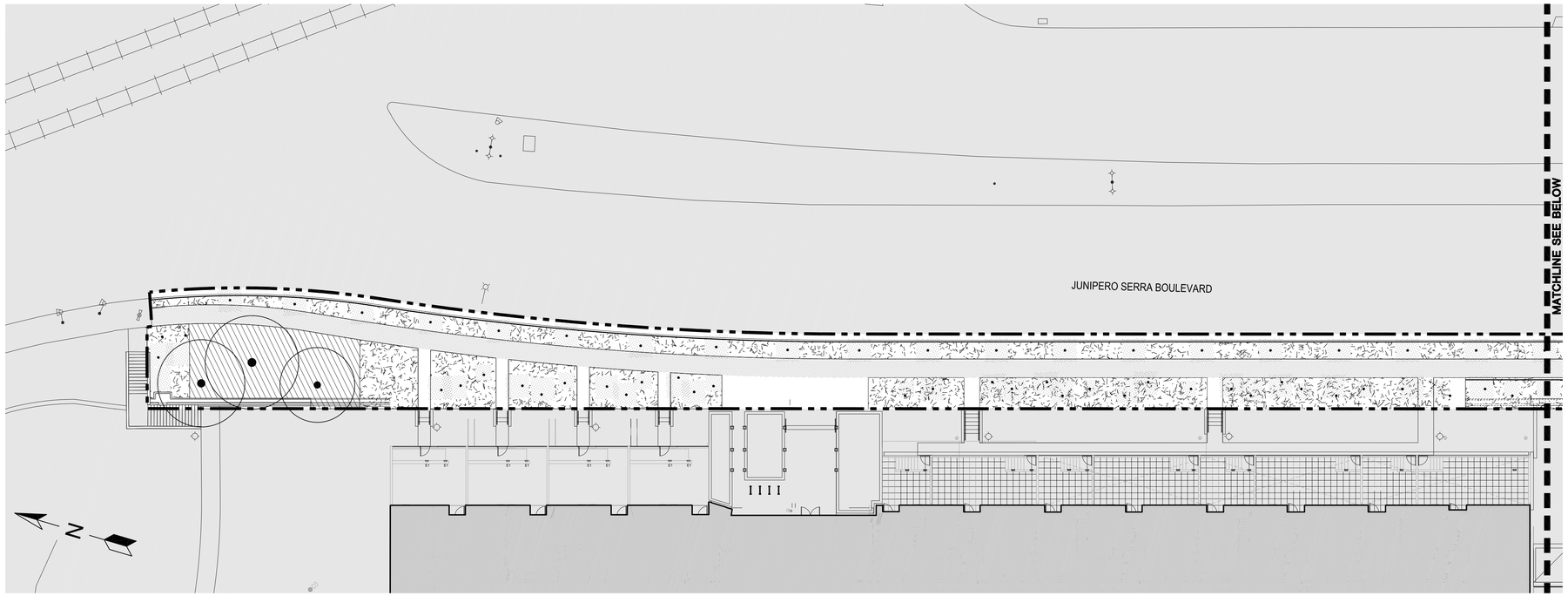

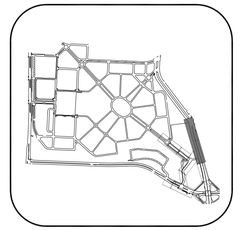

0' 20' 40'
GRAPHIC SCALE

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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SOILS PLAN

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No.	Revisions

Date: 05/01/17
Scale: 1"=20'
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
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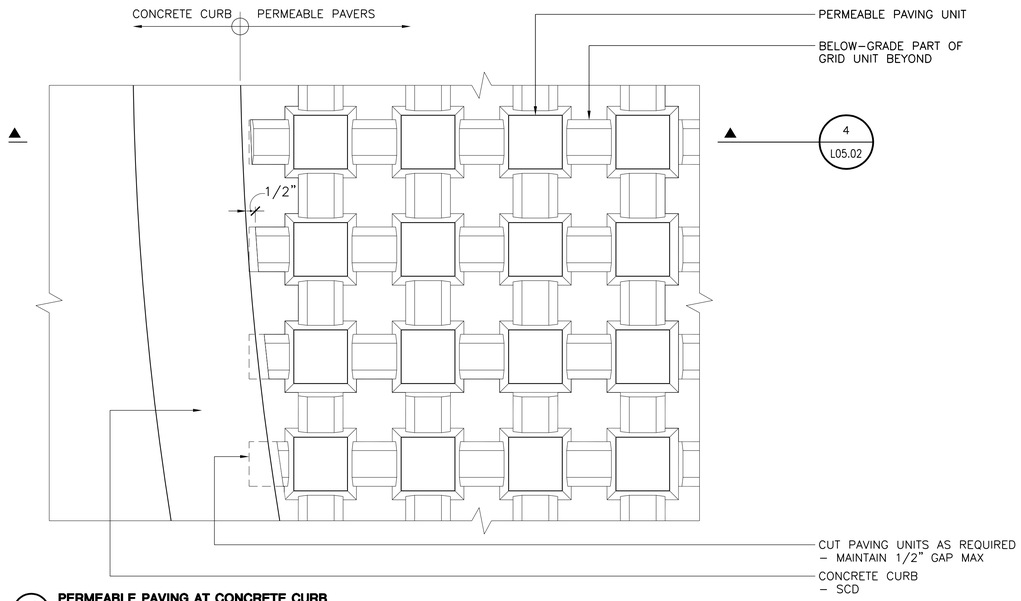

4 **PERMEABLE PAVING AT CONCRETE CURB**
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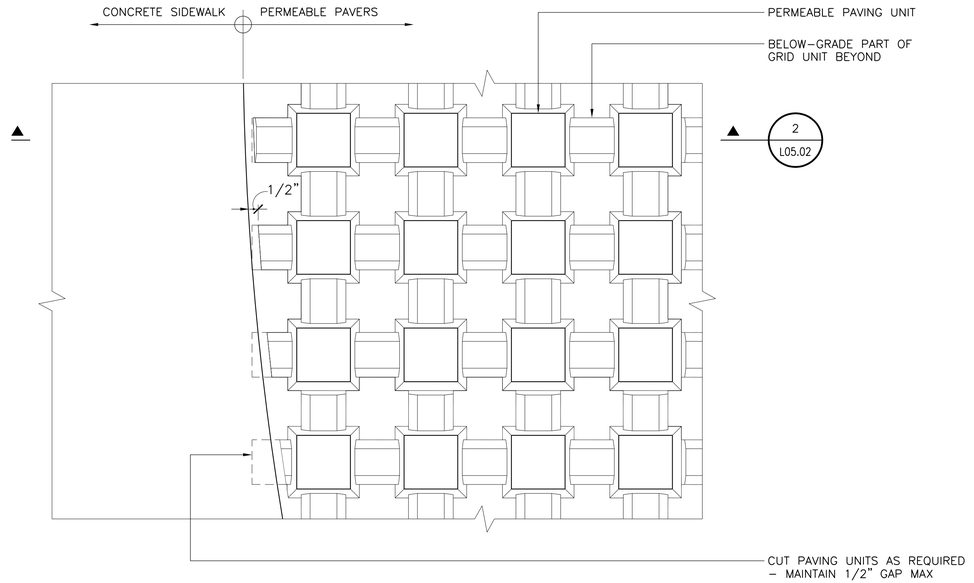

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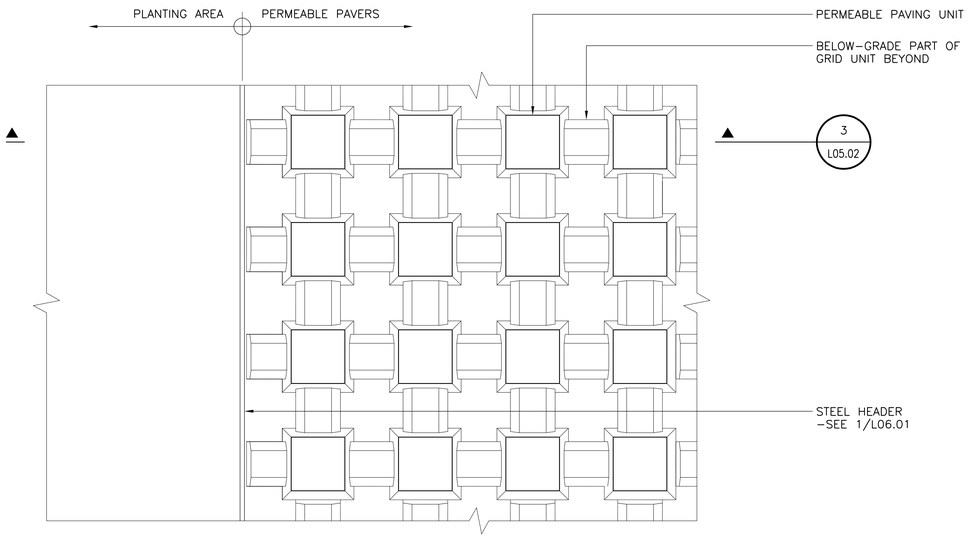

3 **PERMEABLE PAVING AT PLANTING**
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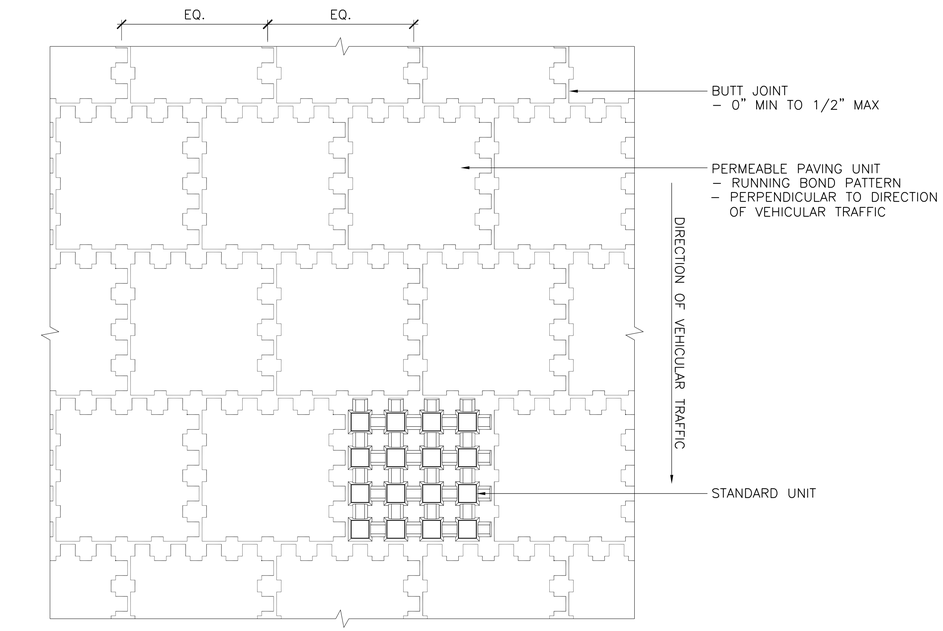


1 **PERMEABLE PAVING**
SCALE: 0 1' 2' 3' TYPICAL PLAN

PWP LANDSCAPE ARCHITECTURE
739 Allston Way
Berkeley, CA 94710
510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
TURF BLOCK DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

NOT FOR CONSTRUCTION

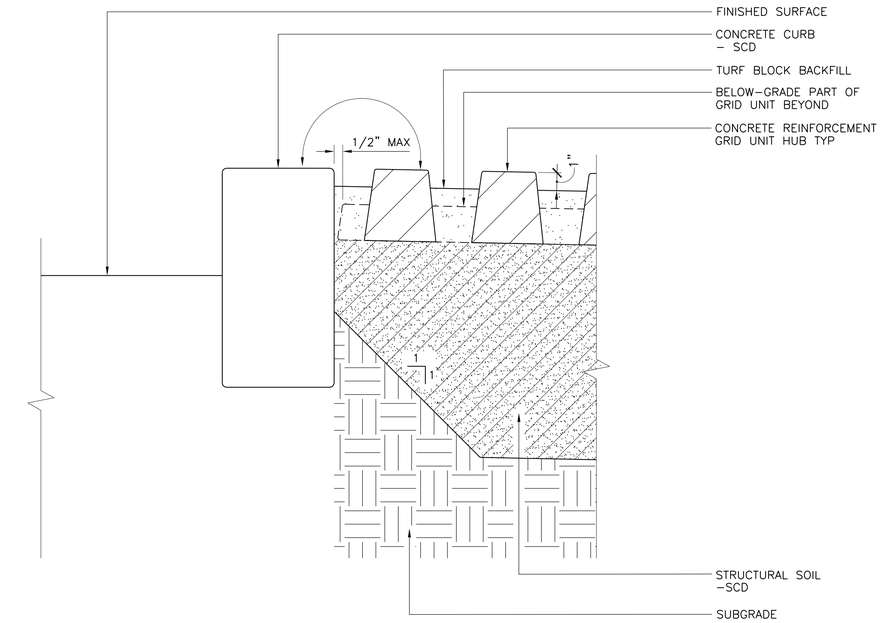
No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

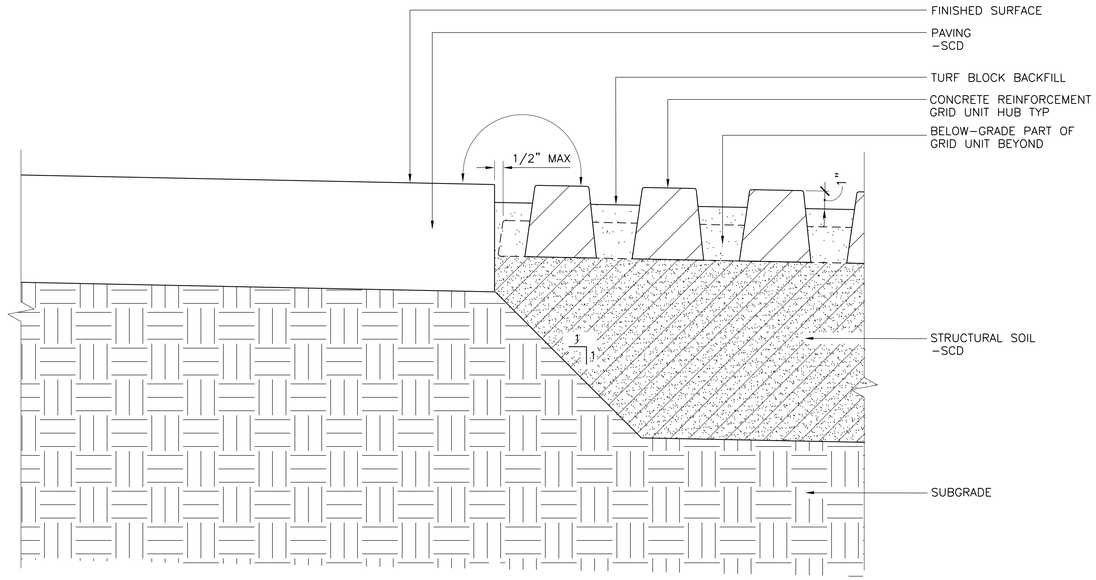
Drawing Number:
L05.01

DRAWING NAME: O:\MAX\1401\Current\ACAD\Details\12_100p SIP PH01 BOARD SUBMITTAL\L05.XX PAVING\L05.XX TURFBLOCK.dwg (L05.01 PH01B)
PLOT TIME: 4-28-2017 10:00 AM PLOTTED BY: jugions

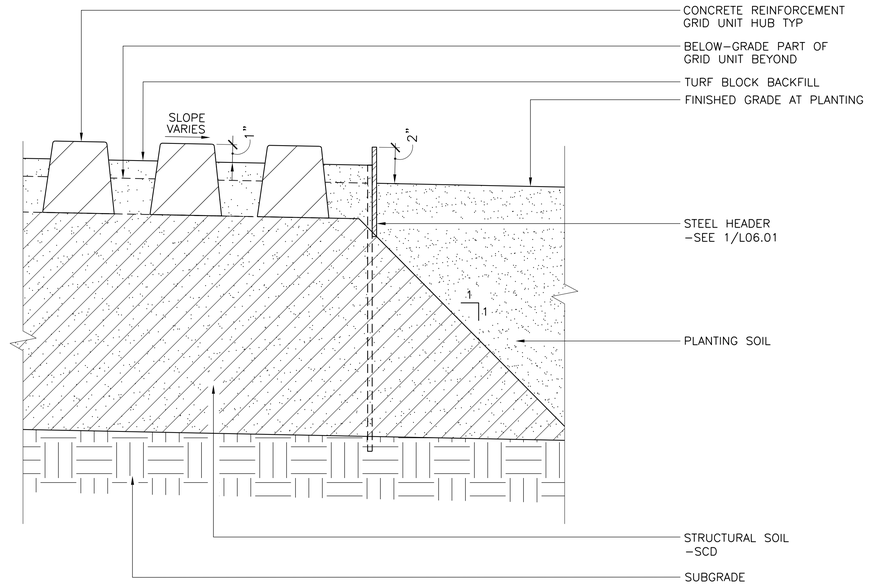
APPROVED SET FOR BOARD SUBMITTAL 05.01.17



4 **PERMEABLE PAVERS AT CONCRETE CURB**
SCALE: 3" = 1'–0" 0 6" 1' TYPICAL SECTION

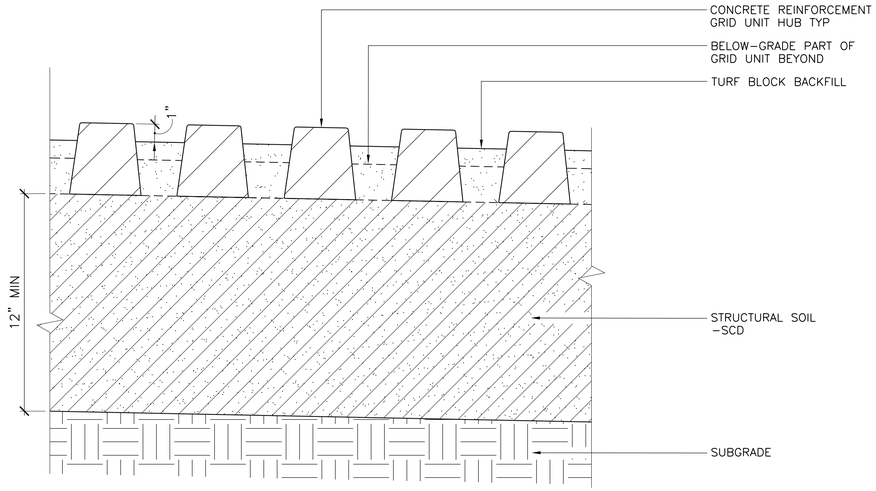


2 **PERMEABLE PAVERS AT PAVING**
SCALE: 3" = 1'–0" 0 6" 1' TYPICAL SECTION



NOTE: MULCH NOT SHOWN FOR CLARITY

3 **PERMEABLE PAVERS AT PLANTING**
SCALE: 3" = 1'–0" 0 6" 1' TYPICAL SECTION



1 **PERMEABLE PAVERS**
SCALE: 3" = 1'–0" 0 6" 1' TYPICAL SECTION

PWP LANDSCAPE ARCHITECTURE
739 Allston Way
Berkeley, CA 94710
510.849.9494

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PHASE 1B STREET IMPROVEMENT PLANS
TURF BLOCK DETAILS
SAN FRANCISCO COUNTY CALIFORNIA
SAN FRANCISCO

NOT FOR CONSTRUCTION

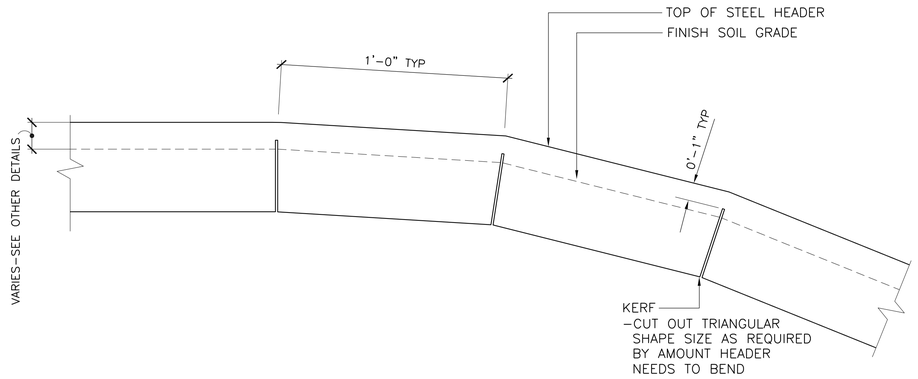
No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

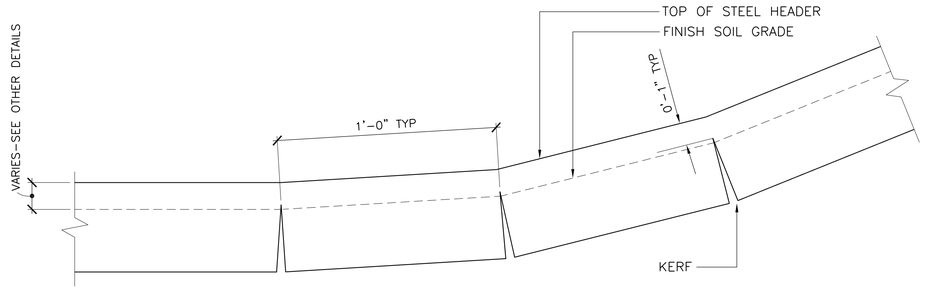
Drawing Number:
L05.02

DRAWING NAME: O:\MAX\1401\Current\ACAD\Details\12_100p SP PH01 BOARD SUBMITTAL\L05.XX PAVING\L05.XX TURFBLOCK.dwg (L05.02 PH01B)
PLOT TIME: 4-28-2017 9:59 AM PLOTTED BY: jugions

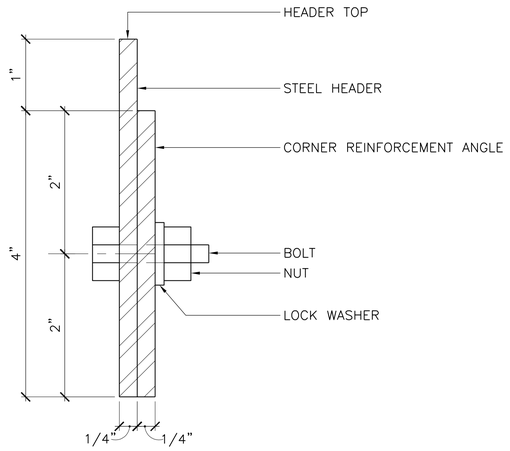
APPROVED SET FOR BOARD SUBMITTAL 05.01.17



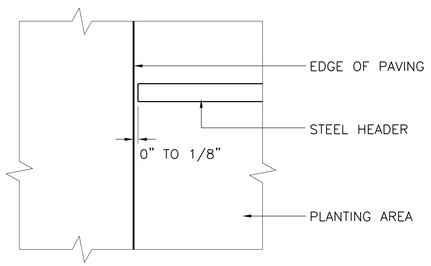
5 KERFED STEEL HEADER AT CONVEX VERTICAL CURVE
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION



2 KERFED STEEL HEADER AT CONCAVE VERTICAL CURVE
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL PROFILE

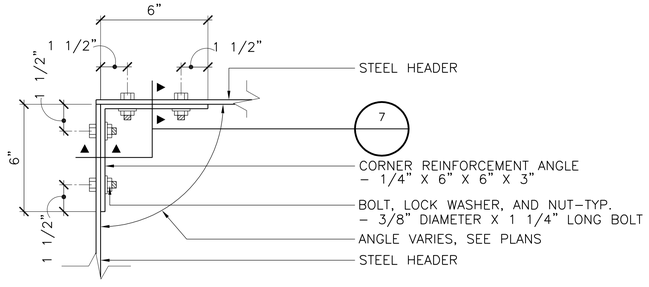


7 STEEL HEADER CORNER REINFORCEMENT ANGLE
SCALE: 1'-0"=1'-0" 0 1" 2" TYPICAL SECTION



6 STEEL HEADER TERMINATION
SCALE: 1'-0"=1'-0" 0 1" 2" TYPICAL SECTION

4 STEEL HEADER TEE INTERSECTION
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL PLAN



3 STEEL HEADER CORNER
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL PLAN

1 STEEL HEADER
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION

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510.849.9494

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PHASE 1B STREET IMPROVEMENT PLANS
HEADER DETAILS
SAN FRANCISCO COUNTY
SAN FRANCISCO CALIFORNIA

REGISTERED LANDSCAPE ARCHITECT
PETER WALKER
No. 2522
STATE OF CALIFORNIA
EXP. 08/31/2018
NOT FOR CONSTRUCTION

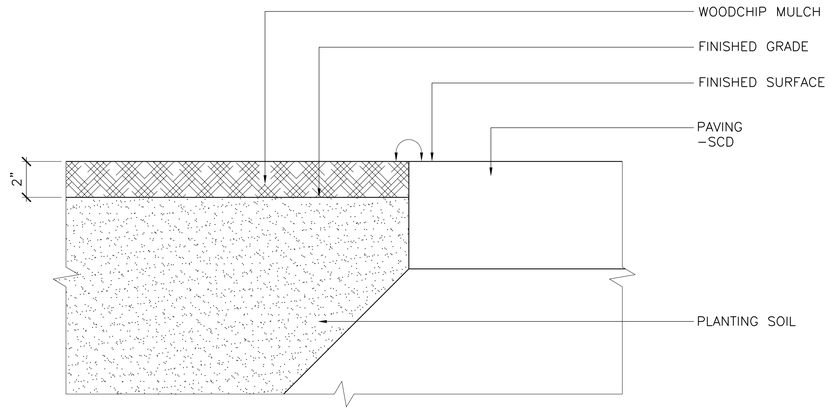
No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

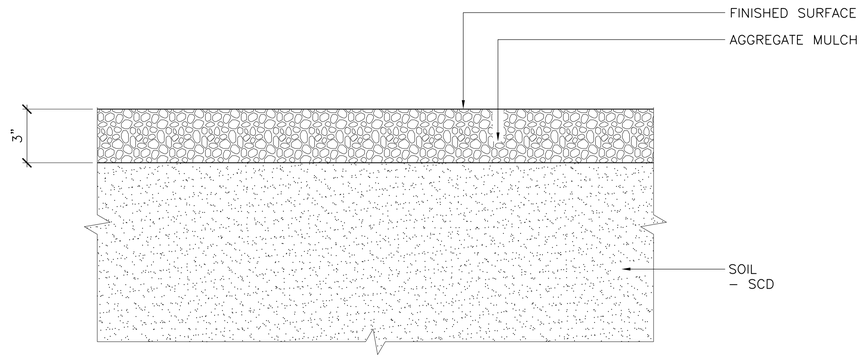
Drawing Number:
L06.01

DRAWING NAME: Q:\MAX\1401\Current\LAD\Drawings\12_L06a SP PH01 BOARD SUBMITTAL\L06.xx METAL HEADER\L06.xx METAL HEADER.dwg (L06.01 PH01B)
PLOT DATE: 4-25-2017 10:01 AM PLOTTED BY: jupark

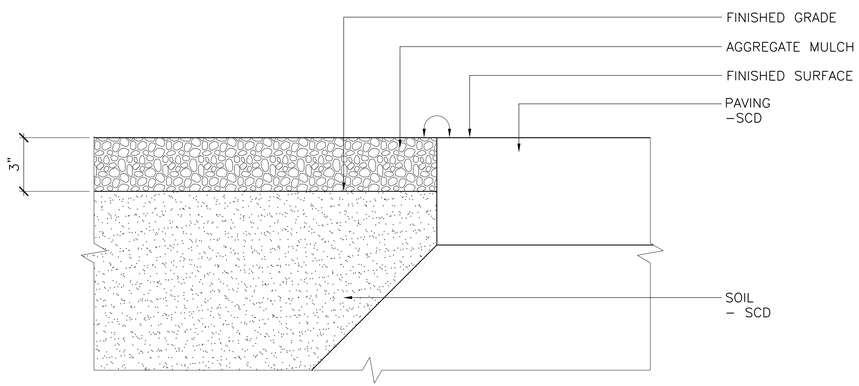
APPROVED SET FOR BOARD SUBMITTAL 05.01.17



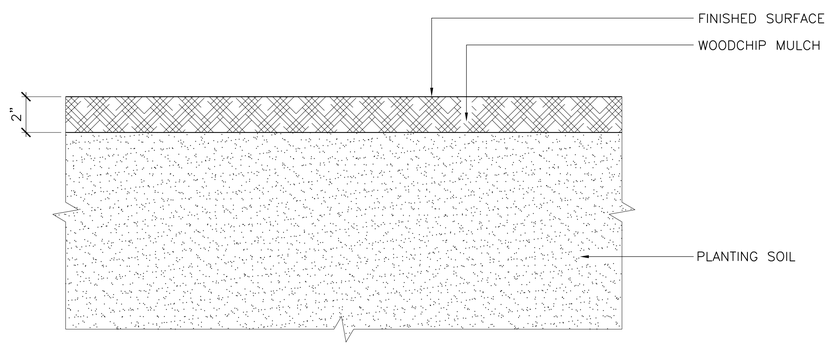
4 **WOODCHIP MULCH AT PAVING**
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION



2 **AGGREGATE MULCH**
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION



3 **AGGREGATE MULCH AT PAVING**
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION



1 **WOODCHIP MULCH**
SCALE: 3" = 1'-0" 0 6" 1' TYPICAL SECTION

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

PWP LANDSCAPE ARCHITECTURE
739 Allston Way
Berkeley, CA 94710
510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
PLANTING DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

NOT FOR CONSTRUCTION

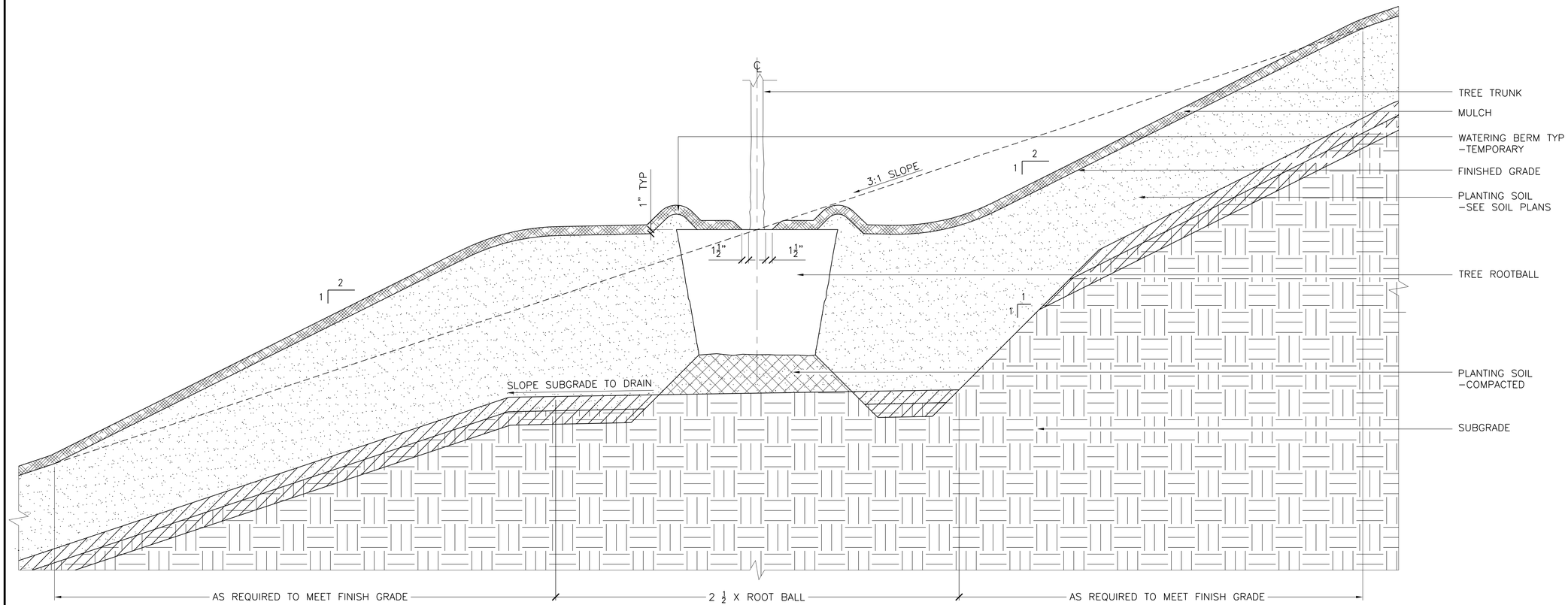
No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

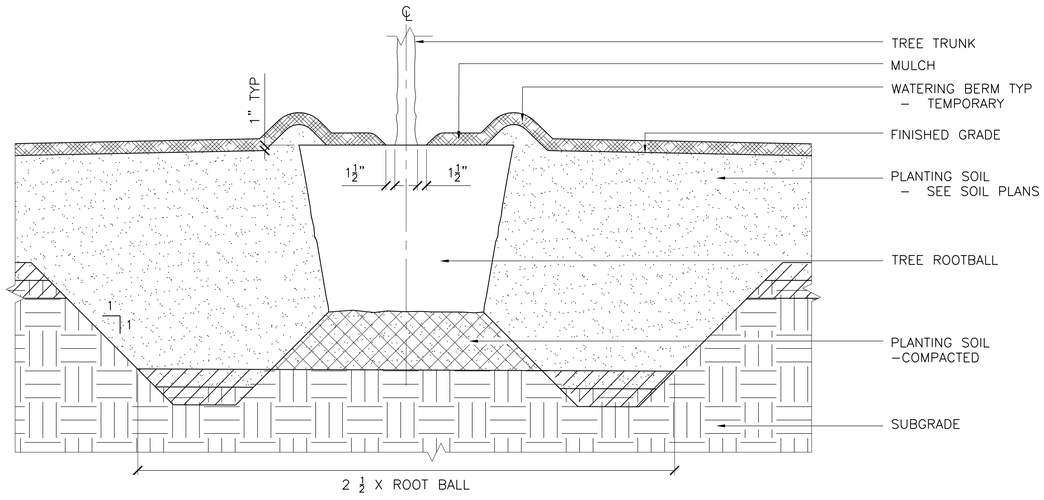
Drawing Number:
L07.01

DRAWING NAME: O:\MAX\1401\Current\ACAD\Details\12_100p SP PH01 BOARD SUBMITTAL\L07.XX PLANTING\L07.XX PLANTING.dwg (L07.01 PH01B)
PLOT TIME: 4-28-2017 10:02 AM PLOTTED BY: jugiens

APPROVED SET FOR BOARD SUBMITTAL 05.01.17



1 **TREE PLANTING ON SLOPE**
SCALE: 1"=1'-0" TYPICAL SECTION



4 **TREE PLANTING**
SCALE: 1"=1'-0" TYPICAL SECTION

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

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PHASE 1B STREET IMPROVEMENT PLANS
PLANTING DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

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NOT FOR CONSTRUCTION

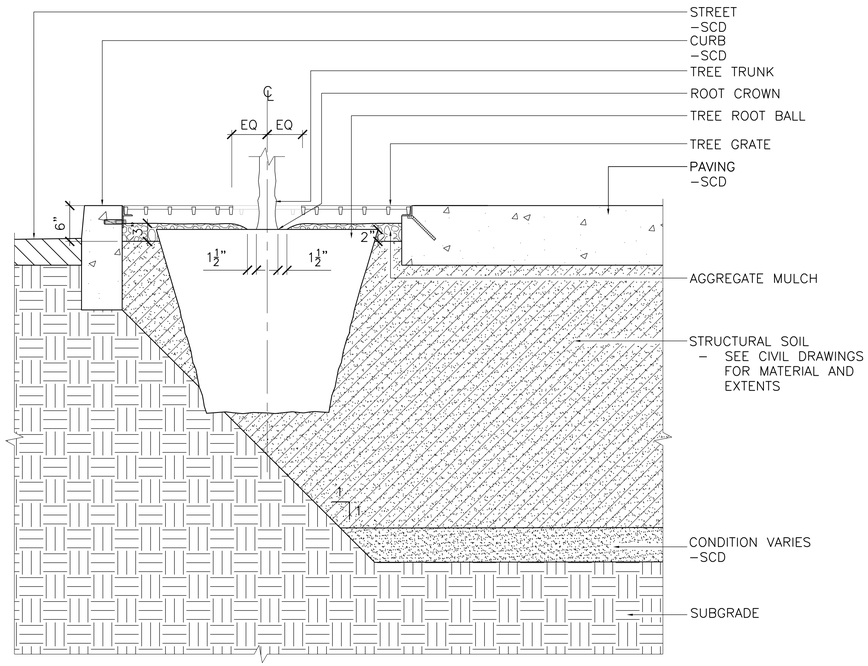
No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L07.02

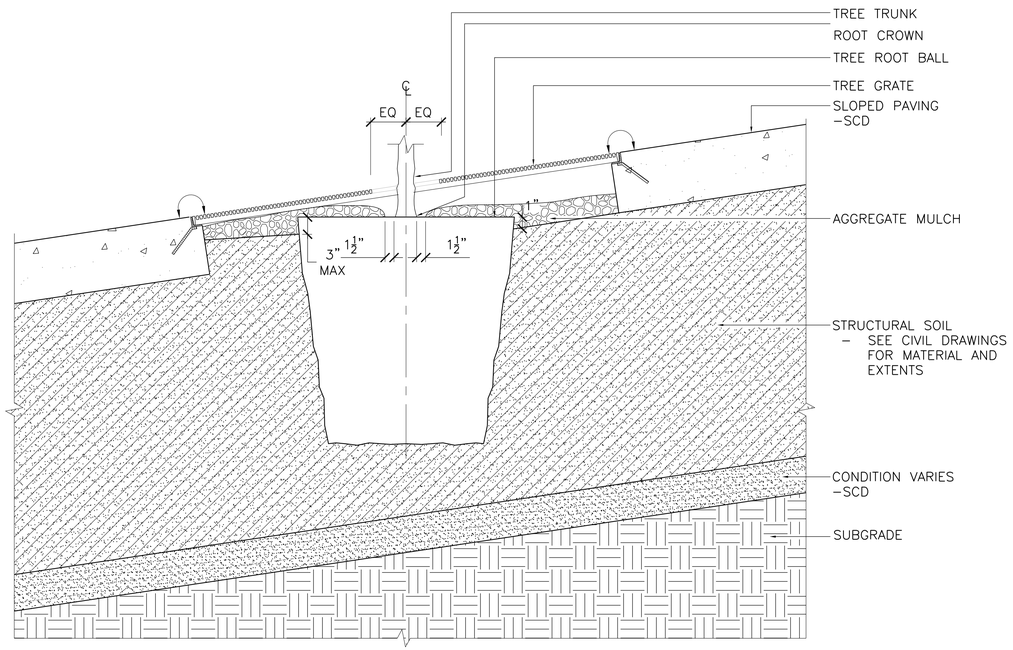
DRAWING NAME: O:\MAX\1401\Current\ACAD\Details\12_100p SIP PH01 BOARD SUBMITTAL\L07.XX PLANTING\L07.XX PLANTING.dwg (L07.02 PH01B)
PLOT TIME: 4-28-2017 10:03 AM PLOTTED BY: jvgions

APPROVED SET FOR BOARD SUBMITTAL 05.01.17



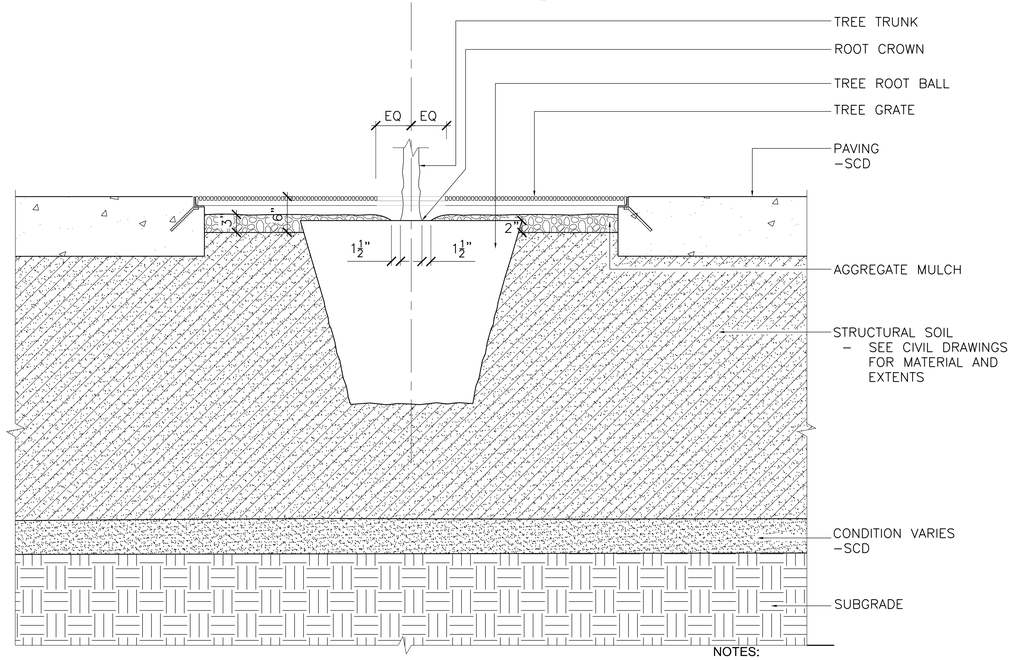
2 **TREE IN STRUCTURAL SOIL AT CURB**

SCALE: 1"=1'-0" 0 1' 2' TYPICAL SECTION



3 **STREET TREE PLANTING ON SLOPE**

SCALE: 1"=1'-0" 0 1' 2' TYPICAL SECTION



1 **TREE IN STRUCTURAL SOIL AT CONCRETE PAVING**

SCALE: 1"=1'-0" 0 1' 2' TYPICAL SECTION

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

PWP LANDSCAPE ARCHITECTURE
739 Allston Way
Berkeley, CA 94710
510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
PLANTING DETAILS
SAN FRANCISCO COUNTY CALIFORNIA

SAN FRANCISCO

NOT FOR CONSTRUCTION

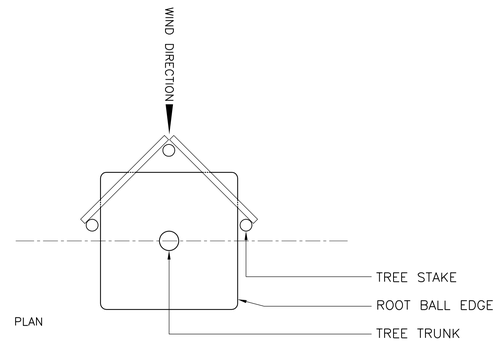
No.	Revisions

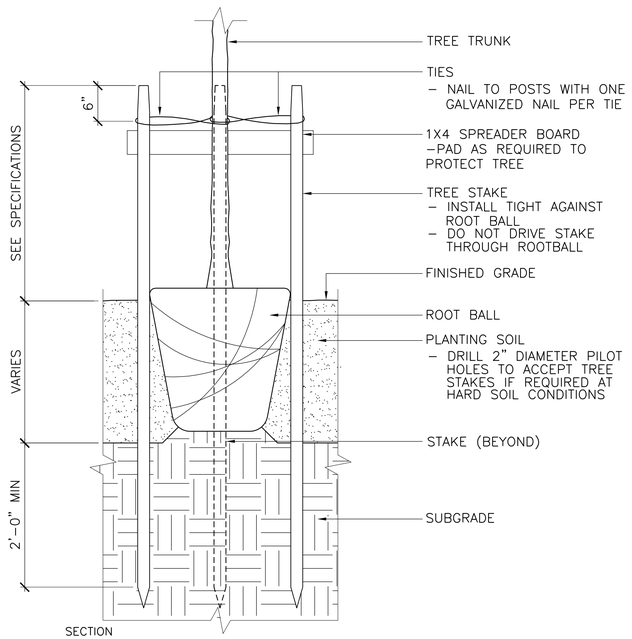
Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L07.03

DRAWING NAME: O:\MAX\1401\Current\ACAD\Details\12_100p SIP PH01 BOARD SUBMITTAL\L07.XX PLANTING\L07.XX PLANTING.dwg (L07.03 PH01B)
PLOT TIME: 4-28-2017 10:03 AM PLOTTED BY: jugions

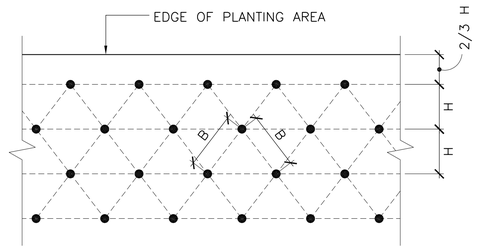
APPROVED SET FOR BOARD SUBMITTAL 05.01.17





3 TREE STAKING

SCALE: 1" = 1'-0" SECTION / PLAN

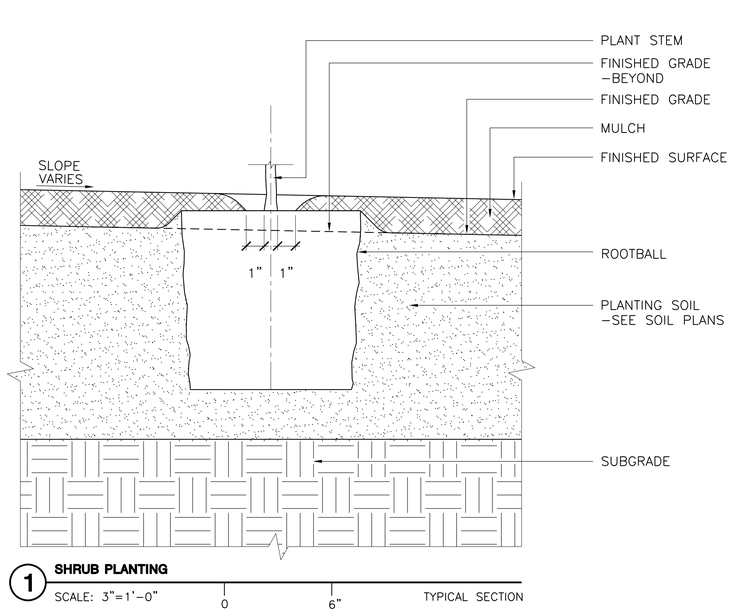


TRIANGULAR SPACING = B	DISTANCE BETWEEN ROWS = H	TOTAL AREA (SF) PER PLANT
6"	5"	0.21
8"	7"	0.39
9"	8"	0.50
10"	8 1/2"	0.59
12" (1'-0")	10 1/2"	0.88
15"	13"	1.35
18"	15 1/2"	1.94
21"	18"	2.63
24" (2'-0")	21"	3.50
30"	26"	5.42
36"	31"	7.80
48" (4'-0")	42"	13.84

NOTE:
SEE PLANTING PLAN, CENTERS OF PLANTS AS DRAWN TAKE PRECEDENCE OVER THIS DIAGRAM.

2 TRIANGULAR PLANT SPACING DIAGRAM

NTS TYPICAL PLAN



1 SHRUB PLANTING

SCALE: 3"=1'-0" 0 6" TYPICAL SECTION

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

PWP LANDSCAPE ARCHITECTURE
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PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
PLANTING DETAILS
SAN FRANCISCO CALIFORNIA
SAN FRANCISCO COUNTY

REGISTERED LANDSCAPE ARCHITECT — NOT FOR CONSTRUCTION — STATE OF CALIFORNIA — EXP. 08/30/2018

No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L07.04

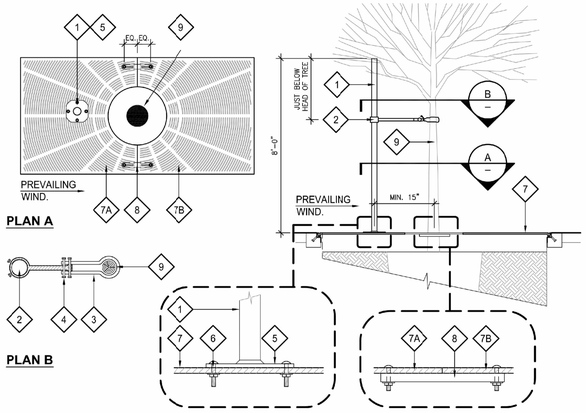
DRAWING NAME: Q:\MAX\1401\Current\ACAD\Details\L2_100b SP PH01 BOARD SUBMITTAL\L07.xx PLANTING\L07.xx PLANTING.dwg (L07.04 PH01B)
PLOT TIME: 4-26-2017 10:03 AM PLOTTED BY: jupton

APPROVED SET FOR BOARD SUBMITTAL 05.01.17

LEGEND

1. "MEGA GRATE STAKE". 1 1/4" DIAMETER SCHEDULE 40 STEEL PIPE. POWDER-COATED BLACK.
2. STRAP BAR. 3/8" X 14-1/2" FLAT BAR. SECURED WITH (2) SET BOLTS.
3. ADJUSTABLE VINYL STRAP. MINIMUM 3/8" X 1-1/4" X 24" 90 DURO FLEX PVC STRAP WITH UV INHIBITORS.
4. (2) 1/4" X 1-3/4" BOLTS, WASHERS AND NUTS.
5. STAKE PLATE.
6. SECURE TO GRATE WITH (4) 5/16" CARRIAGE BOLTS, WASHERS AND NUTS.
7. TREE GRATE. A. HALF 1 B. HALF 2
8. STEEL STRAP. 6" x 1-1/5" x 3/8". SECURE TO BOTTOM SIDE OF TREE GRATE WITH (2) 5/16" CARRIAGE BOLTS, WASHERS AND NUTS.
9. TREE.

DETAIL IS FOR REFERENCE ONLY. SEE MANUFACTURER'S DETAILS AND SPECIFICATIONS. J.R. PARTNERS, 1616 FREEDOM COURT, TURLOCK,CA. 95382. (888) 333-3090



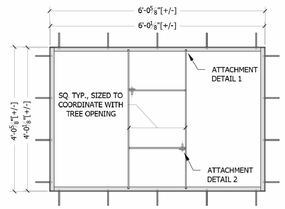
"MEGA GRATE STAKE" BY J.R. PARTNERS

SCALE: NTS

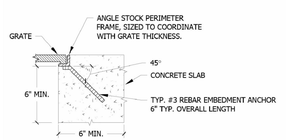
"MEGA GRATE STAKE" BY J.R. PARTNERS .dwg

2 GRATE STAKE

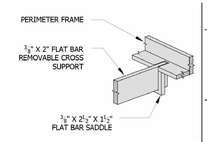
NOT TO SCALE



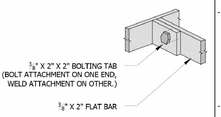
Plan



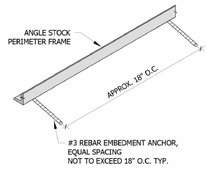
Elevation



Detail 1



Detail 2



Isometric

SPECIFICATIONS

- Frames are constructed of mild steel ASTM A36 (unless specified otherwise; see below).
  Material:
  ☒ Mild Steel ASTM A36 (standard)
  ☐ Stainless Steel grade 304L
  ☐ Architectural Bronze, ASTM B455
  ☐ Structural Aluminum, ASTM B221
- Finish will be natural patina of raw steel (unless specified otherwise; see below).
  Finish:
  ☒ Raw (standard)
  ☐ Polyester Powder Coat*
  ☐ Liquid Coat (wet paint)*
  Color:
  *Please specify standard UA color or mfr. name and color code.
  ☐ Galvanized
  ☐ Other:
- Frame is load rated for pedestrian traffic only (unless specified otherwise; see below).
  Load Classifications:
  ☒ Pedestrian (standard)
  ☐ Light Vehicular
  ☐ H20/HS20
  (Additional steel support may be added for optional load classes. Please contact UA for revised cut sheet, as necessary.)
- Typical 1/8" horizontal gap between grate and frame. All visible welds to be ground smooth on outside edges. Frames will be true to square or diameter. Top of grate flush with grade of surrounding topping material (paver, concrete slab, etc.).
- **Dimensions are nominal.**

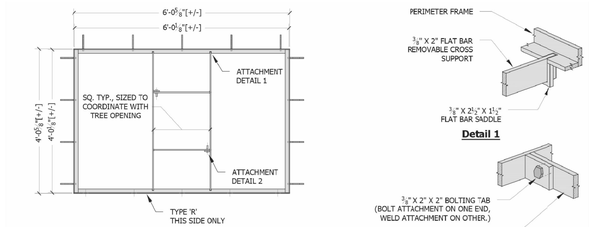
Comments:

Tree Grate Frame

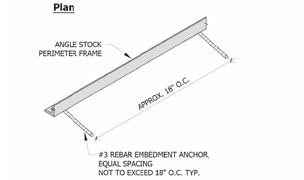
4' x 6' Type "S"
Pedestrian Duty

Page: 1 of 1 Date: 5/22/12

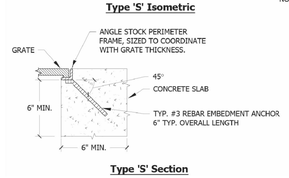
URBAN ACCESSORIES Founded 1972
465 E. FIFTEENTH ST. sales@urbanaccessories.com
TACOMA, WA 98421 www.urbanaccessories.com
(877) 487-0488



Plan



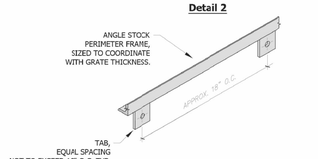
Type 'S' Isometric



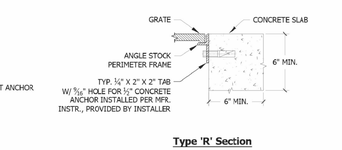
Type 'S' Section

Detail 1

Detail 2



Type 'R' Isometric



Type 'R' Section

SPECIFICATIONS

- Frames are constructed of mild steel ASTM A36 (unless specified otherwise; see below).
  Material:
  ☒ Mild Steel ASTM A36 (standard)
  ☐ Stainless Steel grade 304L
  ☐ Architectural Bronze, ASTM B455
  ☐ Structural Aluminum, ASTM B221
- Finish will be natural patina of raw steel (unless specified otherwise; see below).
  Finish:
  ☒ Raw (standard)
  ☐ Polyester Powder Coat*
  ☐ Liquid Coat (wet paint)*
  Color:
  *Please specify standard UA color or mfr. name and color code.
  ☐ Galvanized
  ☐ Other:
- Frame is load rated for pedestrian traffic only (unless specified otherwise; see below).
  Load Classifications:
  ☒ Pedestrian (standard)
  ☐ Light Vehicular
  ☐ H20/HS20
  (Additional steel support may be added for optional load classes. Please contact UA for revised cut sheet, as necessary.)
- Typical 1/8" horizontal gap between grate and frame. All visible welds to be ground smooth on outside edges. Frames will be true to square or diameter. Top of grate flush with grade of surrounding topping material (paver, concrete slab, etc.).
- **Dimensions are nominal.**

Comments:

Tree Grate Frame

4'x6' (3) Sides Type "S"
(1) Side Type 'R' Ped. Duty

Page: 1 of 1 Date: 10/22/15

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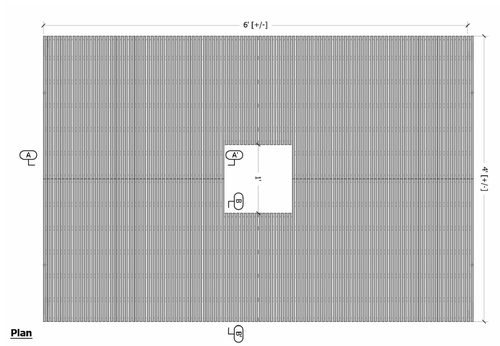
TACOMA, WA 98421 www.urbanaccessories.com
(877) 487-0488



Plan

Section A-A'

Section B-B'

SPECIFICATIONS

- Material will be high quality 100% recycled grey iron; ASTM A48 class 35b or better; hardness 170-223 brinnell (unless specified otherwise; see below).
  Material:
  ☒ Grey iron ASTM A48 (standard)
  ☐ Aluminum, ASTM B26
  ☐ Ductile iron, (required for all load ratings higher than pedestrian) ASTM A536 class 65-45-12.
  ☐ Nickel bronze (ASTM B30)
  ☐ Bronze (ASTM B26)
- Finish will be natural patina of raw iron (unless specified otherwise; see below).
  Finish:
  ☒ Raw (standard)
  ☐ Rust conditioner
  ☐ Polyester Powder Coat*
  ☐ Liquid Coat (wet paint)*
  Color:
  *Please specify standard UA color or mfr. name and color code.
  ☐ Brush (bronze/nickel/aluminum only)
  ☐ Polish (bronze/nickel/aluminum only)
  ☐ Galvanized (grey iron and ductile iron only)
  ☐ Other:
- **Dimensions are nominal.**

Notes
1) Cast in four pieces.
2) Grate is 1- ½" thick at edge.
3) Center opening expansions at 1'-2" and 1'-10" square.
4) No openings greater than 5/8", in conformance with ADA Accessibility Guidelines.
5) Grate weighs 570 lbs.

Comments:

Tree Grate

4' x 6' Jamison

Page 1 of 1 Date: 2/25/13

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1 TREE GRATE

NOT TO SCALE

PWP LANDSCAPE ARCHITECTURE
739 Alston Way
Berkeley, CA 94710
510.849.9944

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
FURNISHING DETAILS
SAN FRANCISCO
SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED LANDSCAPE ARCHITECT — NOT FOR CONSTRUCTION — STATE OF CALIFORNIA — TYP. 06/30/09-8

No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAX 1401

Drawing Number:
L08.01

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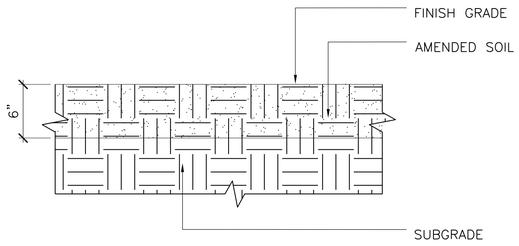
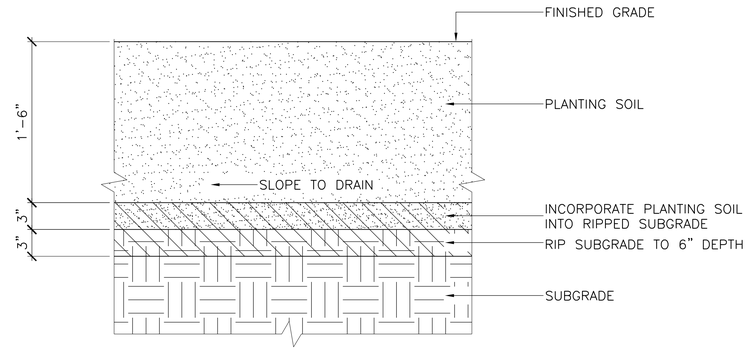
PLOTTED BY: jpoor

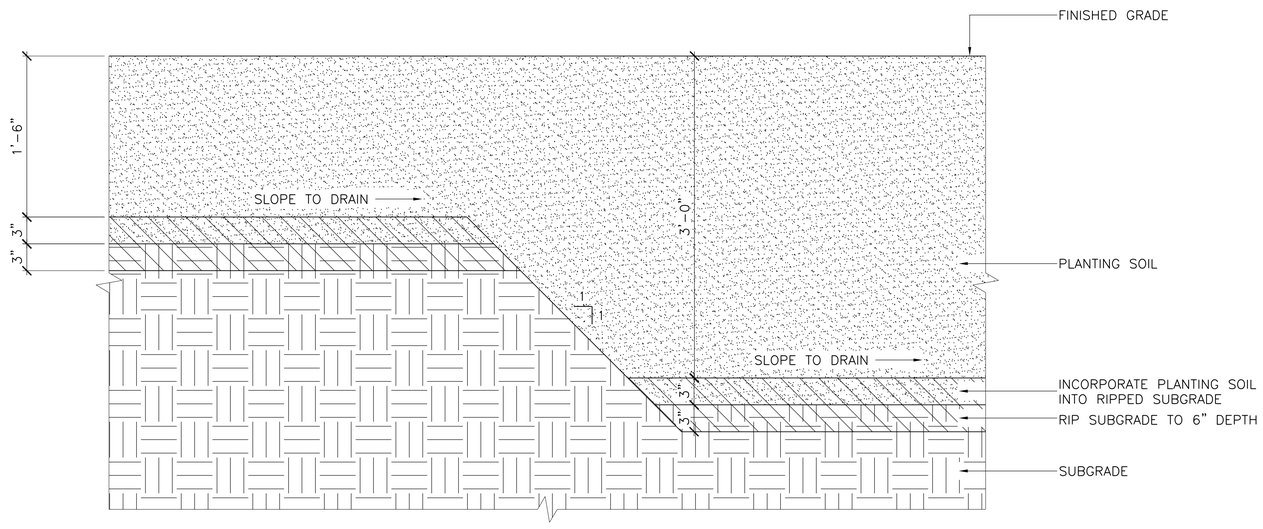
APPROVED SET FOR BOARD SUBMITTAL 05.01.17



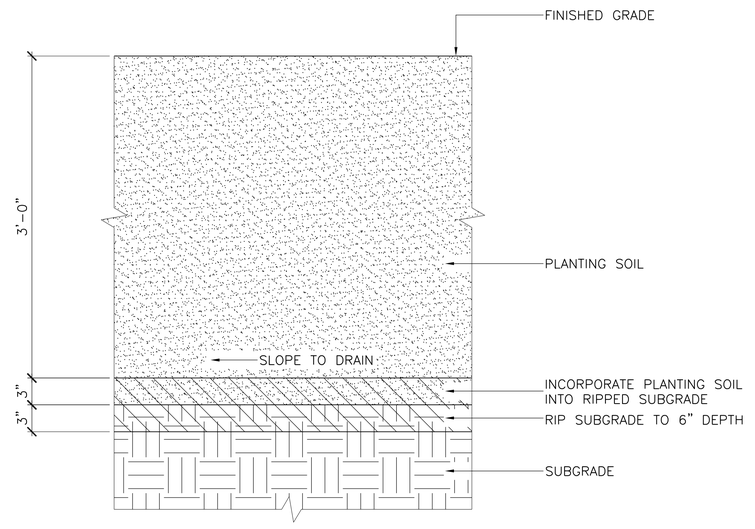
4 AMEND IN PLACE SOIL
SCALE: 1 1/2"=1'-0" 0 6" 1' TYPICAL SECTION



2 18" PLANTING SOIL PROFILE
SCALE: 1 1/2"=1'-0" 0 6" 1' TYPICAL SECTION



3 TRANSITION BETWEEN 18" AND 36" PLANTING SOIL
SCALE: 1 1/2"=1'-0" 0 6" 1' TYPICAL SECTION



1 36" PLANTING SOIL PROFILE
SCALE: 1 1/2"=1'-0" 0 6" 1' TYPICAL SECTION

NOTES:

1. REFER TO SHEETS L00.01-L00.02 FOR GENERAL NOTES AND LEGENDS

PWP LANDSCAPE ARCHITECTURE
1739 Allston Way
Berkeley, CA 94710
510.849.9494

PARKMERCED
PHASE 1B STREET IMPROVEMENT PLANS
SOILS DETAILS
SAN FRANCISCO SAN FRANCISCO COUNTY CALIFORNIA

REGISTERED LANDSCAPE ARCHITECT STATE OF CALIFORNIA
NOT FOR CONSTRUCTION
EXP: 08/31/2018

No.	Revisions

Date: 05/01/17
Scale: AS NOTED
Design: LEAD
Drawn: TEAM
Approved: LEAD
Job No: MAx 1401

Drawing Number:
L09.01

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PLOTTED BY: pgens

APPROVED SET FOR BOARD SUBMITTAL 05.01.17