COUNTY OF SAN MATEO

MIDDLEFIELD ROAD IMPROVEMENT PROJECT

TOTAL PROJECT LENGTH APPROXIMATELY 0.50 MILES

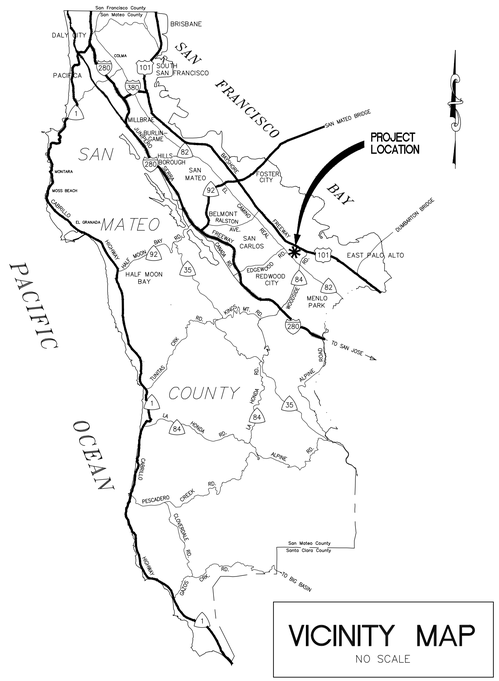
TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2006 AND 2018 AND ADOPTED BY SAN MATEO COUNTY, NOVEMBER 14, 2006, BY RESOLUTION NO. 068389 AND FEBRUARY 11, 2020 BY RESOLUTION NO. 77227

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

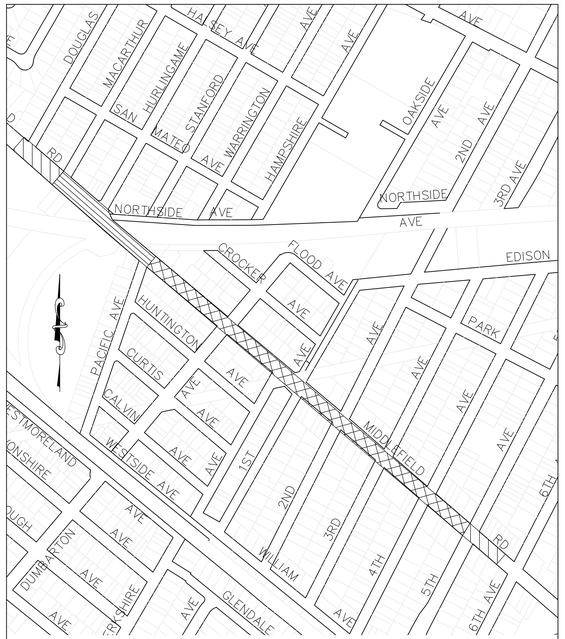
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



VICINITY MAP
NO SCALE



ROAD RECONSTRUCTION, SANITARY SEWER REPLACEMENT, AND JOINT TRENCH IMPROVEMENTS

SANITARY SEWER REPLACEMENT AND JOINT TRENCH IMPROVEMENTS ONLY

SANITARY SEWER REPLACEMENT

LOCATION MAP
NO SCALE

SHEET INDEX:

G-1	(SHEET 1)	TITLE SHEET
G-2 TO G-3	(SHEETS 2-3)	GENERAL NOTES AND ABBREVIATIONS
S-1	(SHEET 4)	TOPOGRAPHIC SURVEY/KEY MAP
S-2 TO S-8	(SHEETS 5-11)	TOPOGRAPHIC SURVEY
D-1 TO D-6	(SHEET 12-17)	DEMOLITION PLAN
D-7	(SHEET 18)	REDWOOD JUNCTION DEMOLITION
PP-1 TO PP-6	(SHEETS 19-24)	PLAN AND PROFILE
PP-7 TO PP-9		NOT USED
PP-10	(SHEET 25)	TYPICAL ROAD SECTIONS
PP-11	(SHEETS 26)	REDWOOD JUNCTION SECTIONS
PP-12	(SHEET 27)	POTHOLE & CORING DATA
MD-1 TO MD-3	(SHEET 28-30)	MISCELLANEOUS DETAILS
PG-1	(SHEET 31)	REDWOOD JUNCTION RESTORATION
SSG-1	(SHEET 32)	SANITARY SEWER COVER SHEET
SSG-2	(SHEET 33)	SANITARY SEWER ABBREVIATIONS, GENERAL NOTES AND LEGEND
SSG-3	(SHEET 34)	SANITARY SEWER NOTES
SSG-4	(SHEET 35)	SANITARY SEWER LATERAL INFORMATION
SS-1 TO SS-7	(SHEETS 36-42)	SANITARY SEWER LAYOUT (PLAN AND PROFILE)
SS-8 TO SS-9	(SHEETS 43-44)	SANITARY SEWER UTILITY DETAILS
SS-10	(SHEET 45)	SANITARY SEWER UPRR CROSSING PLAN
SS-11	(SHEET 46)	SANITARY SEWER UPRR SECTIONS AND DETAILS
ST-1 TO ST-6	(SHEETS 47-52)	SIGNING AND STRIPING PLANS
ST-7 TO ST-9	(SHEETS 53-55)	SIGNING AND STRIPING DETAILS
TH-1 TO TH-5	(SHEETS 56-60)	CONSTRUCTION PHASING AND TRAFFIC HANDLING PLAN
TS-1	(SHEET 61)	TRAFFIC SIGNAL
TS-2	(SHEET 62)	CONDUIT-CONDUCTOR SCHEDULE
TS-3 TO TS-5	(SHEETS 63-65)	POLE DETAILS
TS-6 TO TS-14	(SHEETS 66-74)	TRAFFIC SIGNAL, HOLIDAY LIGHT AND WIFI CONDUIT
GI-1 TO GI-13	(SHEETS 75-87)	GREEN INFRASTRUCTURE
L-1	(SHEET 88)	LANDSCAPE GENERAL NOTES AND ABBREVIATIONS
L-2	(SHEET 89)	LANDSCAPE LEGEND & CONSTRUCTION PLAN
L-3 TO L-7	(SHEETS 90-94)	LANDSCAPE CONSTRUCTION PLANS
L-8	(SHEETS 95)	LANDSCAPE CONSTRUCTION DETAILS
L-9 TO L-14	(SHEETS 96-101)	IRRIGATION PLANS
L-15	(SHEET 102)	IRRIGATION NOTES & LEGEND
L-16 TO L-19	(SHEETS 103-106)	IRRIGATION DETAILS
L-20	(SHEET 107)	PLANTING SCHEDULE & PLAN
L-21 TO L-25	(SHEETS 108-112)	PLANTING PLANS
L-26 TO L-29	(SHEETS 113-116)	PLANTING DETAILS
JT-1	(SHEET 117)	JOINT TRENCH COMPOSITE-TITLE SHEET
JT-2	(SHEET 118)	NOTES AND DETAILS
JT-3 TO JT-11	(SHEET 119-127)	JOINT TRENCH COMPOSITE
RR-1	(SHEET 128)	RAIL ROAD CROSSINGS
RR-2	(SHEETS 129)	RAIL ROAD CROSSING
RR-3	(SHEET 130)	JACK AND BORE LOCATIONS
RR-4	(SHEET 131)	UNION PACIFIC RAILROAD CO. EXHIBIT "A"
RR-5	(SHEET 132)	RAIL ROAD CROSSING (SOUTH BOUND)
RR-6	(SHEET 133)	RAIL ROAD CROSSING (NORTH BOUND)
RR-7	(SHEET 134)	RAIL ROAD CROSSING (SOUTH BOUND)
SL-1	(SHEET 135)	ELECTROLIER TITLE
SL-2 TO SL-6	(SHEETS 136-140)	ELECTROLIER PLAN

NOTES:

1. HORIZONTAL DATUM/BASIS OF BEARINGS IS THE NORTH AMERICAN DATUM OF 1983 (2011), CALIFORNIA COORDINATE SYSTEM ZONE 3, EPOCH 2010.00, AS DETERMINED BY STATIC GPS OBSERVATION AT CONTROL POINTS 1 AND 2 ON JULY 14, 2015 AND AGAIN ON JULY 21, 2015. ALL DISTANCES ARE BASED ON SURVEY FEET AND ARE GRID DISTANCES. TO CONVERT GRID DISTANCES TO GROUND LEVEL DISTANCES, MULTIPLY GRID DISTANCES BY 1.0000555.
2. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK IS CONTROL POINT 1, HAVING AN ELEVATION OF 23.04 FEET.
3. SURVEY DATES: JULY 14 – SEPTEMBER 24, 2015.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JAMES M. SWEET
No. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TITLE SHEET	SCALE: AS SHOWN
		CHECKED BY: TS		DATE: 10-16-2020
		DRAWN BY: AB		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

G-1
SHEET 1 OF 140

FILENAME: C:\USERS\JULIA.TEXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TITLE AND NOTES\TITLE SHEET.DWG (G-01)

GENERAL NOTES:

1. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES WITHIN THE PROJECT LIMITS CONSISTING OF ROAD RIGHT-OF-WAY, AREAS ON PRIVATE PROPERTY WITHIN THE APPROVED LIMITS OF THE "PERMITS TO ENTER & CONSTRUCT", AND/OR PROJECT CONFORMS AS SHOWN ON THE PLANS AND AS APPROVED BY THE ENGINEER.

2. THE PLANS ARE TO BE SUPPLEMENTED BY THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION'S (CALTRANS) STANDARD PLANS AND SPECIFICATIONS DATED MAY 2006 AND 2018 AND ADOPTED BY SAN MATEO COUNTY ON NOVEMBER 14, 2006 BY RESOLUTION NO. 068389 AND FEBRUARY 11, 2020 BY RESOLUTION NO. 77227. THE PLANS ARE ALSO TO BE SUPPLEMENTED BY THE COUNTY OF SAM MATEO'S STANDARD PLANS FOR PUBLIC IMPROVEMENT DATED JULY 1997.

3. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES TO DETERMINE EXACT LOCATIONS AND DEPTHS. THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 1-800-642-2444 TWO (2) WORKING DAYS BEFORE EXCAVATION BEGINS. WHEN CALLING BE PREPARED TO SUPPLY LOCATION, NATURE OF WORK, START DATE, COMPANY NAME, ADDRESS, AND TELEPHONE NUMBER.

4. THE PLANS MAY NOT SHOW ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND PRESERVATION OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR IS ADVISED THAT EXCAVATION MAY CONFLICT WITH EXISTING GAS, WATER, STORM, SEWER, ELECTRICAL, OR OTHER UTILITY LINES. ANY DAMAGE TO EXISTING OR FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

5. THE CITY AND COUNTY OF SAN FRANCISCO ACTING BY AND THROUGH ITS PUBLIC UTILITIES COMMISSION, WATER SUPPLY AND TREATMENT DIVISION ("SFPUC") OWNS AND OPERATES THREE WATER AQUEDUCTS THAT CROSS THE PROJECT ALIGNMENT. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (USA) 48 HOURS BEFORE ANY CONSTRUCTION IN THE VICINITY OF THE SFPUC AQUEDUCTS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE SFPUC CONSTRUCTION INSPECTOR, MR. ALBERT HAO, AT (650) 871-3015, AT LEAST TEN (10) CALENDAR DAYS PRIOR TO THE START OF ON-SITE CONSTRUCTION IN THE VICINITY OF THE SFPUC ROW. IN THE EVENT OF EMERGENCY INVOLVING SFPUC FACILITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY SFPUC BY CALLING SFPUC MILLBRAE DISPATCH AT 650-872-5900.

6. NO MECHANICAL EXCAVATION IS ALLOWED WITHIN 24 INCHES OF SFPUC PIPELINES. DIGGING WITHIN 24 INCHES OF PIPELINE MUST BE DONE WITH HAND TOOL. NO VIBRATORY COMPACTION EQUIPMENT SHALL BE USED WITHOUT PRIOR WRITTEN APPROVAL OF THE SFPUC.

7. CONTRACTOR SHALL OBTAIN CONSENT FROM THE SFPUC TO POTHOLE SFPUC PIPELINE TO DETERMINE THE PIPE DEPTH PRIOR TO ANY EXCAVATION. THE POTHOLING SHALL BE CARRIED OUT BY SOIL VACUUM EXTRACTION METHOD.

8. MAXIMUM EXTERNAL LOADING OVER SFPUC PIPELINE IS AASHTO H-10 LOADING WITH A MINIMUM OF 3 FEET SOIL COVER (OR H-20 LOADING WITH A MINIMUM OF 4 FEET SOIL COVER). IF LOADING CONDITION EXCEEDS ABOVE, ENGINEERING CALCULATIONS AS SHOWN IN AWWA, M9 MUST BE SUBMITTED TO THE SFPUC TO SHOW THAT PROPOSED CONDITION WOULD IMPOSE A LOAD OF LESS THAN 500 PSF ONTO THE PIPELINE.

9. PROJECT SURVEY AND STAKING SERVICES WILL BE PROVIDED BY THE CONTRACTOR. REFER TO SECTION 5-1.07 OF THE STANDARD SPECIFICATIONS.

10. THE CONTRACTOR IS ADVISED THAT A PORTION OF THE PROJECT AREA LIES WITHIN A COMMERCIAL ZONE. EXCAVATION AND DEMOLITION OF THE EXISTING ASPHALT CONCRETE AND PORTLAND CEMENT CONCRETE SHALL CONFORM TO AN ESTABLISHED PLAN SUBMITTED TO AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH ANY EXCAVATION OR DEMOLITION THAT IS NOT PART OF AN ENGINEER APPROVED DEMOLITION PLAN.

11. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING PROPERTY OWNERS AND BUSINESSES. CONVENIENT ACCESS TO CROSS STREETS, DRIVEWAYS, HOUSES AND BUILDINGS ALONG THE LINE OF WORK SHALL BE MAINTAINED.

12. LANE CLOSURE SCHEDULE SHALL FOLLOW THE TRAFFIC HANDLING AND STAGING PLAN, AND THE CONTRACTOR'S TRAFFIC CONTROL PLANS. FOR SPECIFIC UNAVOIDABLE INSTANCES WHEN SIDE STREETS REQUIRE CLOSURE TO FACILITATE WORK, AS APPROVED BY THE COUNTY, SIDE STREETS MAY BE CLOSED FOR CONSTRUCTION BETWEEN THE HOURS OF 7:00 AM AND 6:00 PM. CONSTRUCTION IS ONLY ALLOWED BETWEEN 8:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY. IF ADDITIONAL CONSTRUCTION OUTSIDE OF THOSE HOURS IS REQUIRED, IT WILL REQUIRE WRITTEN REQUEST FOR APPROVAL AND WOULD COMPLY WITH THE COUNTY'S RESTRICTIONS ON CONSTRUCTION HOURS (I.E., 7:00 AM TO 6:00 PM MONDAY THROUGH FRIDAY; 9:00 AM TO 5:00 PM SATURDAY; NO CONSTRUCTION ON SUNDAYS, THANKSGIVING, OR CHRISTMAS). SATURDAY WORK SHALL BE REQUESTED AND APPROVED IN WRITING BY THE COUNTY.

13. THE CONTRACTOR WILL BE REQUIRED TO HAVE AT LEAST ONE TRAVEL LANE OPEN IN EACH DIRECTION ALONG MIDDLEFIELD ROAD DURING WORK HOURS.

14. THE CONTRACTOR WILL ONLY BE ALLOWED TO REMOVE AND CONSTRUCT CURB, GUTTER, SIDEWALK AND UNDERGROUND UTILITY IMPROVEMENTS AT TWO OR MORE NON-ADJACENT OR ALTERNATING BLOCKS AT THE SAME TIME AND WORK SHALL BE LIMITED TO ONLY ONE (1) SIDE OF THE STREET. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A WORK SEQUENCING PLAN TO THE ENGINEER FOR REVIEW AND WORK SHALL NOT COMMENCE PRIOR TO RECEIVING WRITTEN APPROVAL OF THE CONTRACTOR'S PLAN FOR SEQUENCING WORK BY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO COMPLETE THE CURB, GUTTER, AND SIDEWALK IMPROVEMENTS WITHIN TEN (10) WORKING DAYS FROM THE START OF SIDEWALK IMPROVEMENT CONSTRUCTION PER BLOCK. THE CONTRACTOR MAY SUBMIT AN ALTERNATE CONSTRUCTION PLAN FOR REVIEW, SUBJECT TO THE ENGINEER'S APPROVAL AND WRITTEN AUTHORIZATION.

15. CONTRACTOR SHALL IMMEDIATELY PROVIDE ACCESS TO ALL ENTRANCES AFTER THE REMOVAL OF ADJACENT CONCRETE IMPROVEMENTS AND DURING THE FORMING, PLACING, AND CURING OF CONCRETE. THE CONTRACTOR SHALL MAINTAIN ACCESS FACILITIES TO ALL AFFECTED ENTRANCES AT HIS/HER EXPENSE UNTIL THE ENGINEER HAS APPROVED THEIR REMOVAL. THE METHOD OR TYPE OF ACCESS FACILITY FOR EACH ENTRANCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE METHOD OR TYPE OF ACCESS FACILITY SHALL BE APPROVED BY THE ENGINEER.

16. THE CONTRACTOR SHALL NOT PROCEED WITH CONCRETE FORMING, PLACEMENT, OR CURING OPERATIONS UNTIL THE METHOD OR TYPE OF ACCESS FACILITY HAS BEEN APPROVED BY THE ENGINEER. CONTRACTOR SHALL LIMIT THE EXTENT OF CONCRETE REMOVAL TO THAT WHICH ALLOWS PLACEMENT OF APPROVED TEMPORARY ACCESS FACILITY FOR ALL AREAS WHICH CONCRETE HAS BEEN REMOVED IN THE SAME WORK DAY.

17. CONTRACTOR SHALL COMPLY WITH SPECIFICATIONS TO ADDRESS UNANTICIPATED HAZARDOUS SOILS.

18. CONTRACTOR SHALL ENSURE THAT THE EXISTING STREET LIGHTS REMAIN OPERATIONAL UNTIL THE NEW STREET LIGHTS ARE INSTALLED AND TESTED AND POWER IS ROUTED TO THE NEW LIGHTS.

GENERAL CONSTRUCTION NOTES:

1. DRIVEWAY OPENINGS AND CONFORM LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

2. VEGETATION AND IMPROVEMENTS (INCLUDING FENCES) THAT ARE DESIGNATED TO BE REMOVED SHALL BE REMOVED ONLY WHEN DIRECTED IN WRITING BY THE ENGINEER AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

3. ANY DAMAGE TO FACILITIES (SUCH AS DRIVEWAYS, PAVED SHOULDERS, ETC.) ADJACENT TO THE LIMITS OF CONFORM RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

4. ALL CONCRETE SHALL BE CLASS B, EXCEPT AS NOTED, CONTAINING NOT LESS THAN 470 POUNDS OF PORTLAND CEMENT PER CUBIC YARD.

5. AGGREGATE BASE SHALL BE COMPACTED TO NOT LESS THAN 95% RELATIVE COMPACTION FIRST TESTS SHALL BE PERFORMED AT A COUNTY APPROVED LAB AT THE COUNTY'S EXPENSE.ANY RETESTS DUE TO INSUFFICIENT COMPACTION SHALL BE AT THE CONTRACTOR'S EXPENSE.

6. WHERE SIDEWALK WIDTH IS 12' TO FACE OF CURB, SIDEWALKS SHALL BE SCORED AT TWO FEET THREE INCHES (2'-3") INTERVALS, WITH LAST PANEL WIDTH OF TWO FEET SIX INCHES (2'-6"), STARTING FROM BACK OF WALK. MONOLITHIC CURB, GUTTER, AND SIDEWALK SHALL HAVE A CONTINUOUS SCORE MARK SIX INCHES (6") FROM THE CURB FACE.

7. ALL NEW PORTLAND CEMENT CONCRETE (PCC) IMPROVEMENTS SHALL BE DOWELED TO EXISTING ADJACENT PCC IMPROVEMENTS USING TWELVE INCH (12") LONG NO. 3 REBAR AT THREE FEET (3') ON CENTER. DRILL FOR TIGHT FIT OR EPOXY IN PLACE.

8. LOCATIONS FOR BENCHES, BIKE RACKS, AND TRASH RECEPTACLES ARE SHOWN ON SHEETS L-2 THROUGH L-7 OF THE LANDSCAPE PLANS. LOCATIONS FOR STREET TREES ARE SHOWN ON SHEETS L-20 THROUGH L-25 OF LANDSCAPE PLANS. EXACT LOCATIONS MAY BE MODIFIED DUE TO FIELD CONDITIONS. FINAL LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.

9. PRE-CONSTRUCTION: CONTACT UNDERGROUND SERVICE ALERT (USA); NOTIFY: SFPUC ROW MANAGER ONE WEEK PRIOR (EMILY READ, ROW MANAGER, AT EREAD@SFWATER.ORG OR (650) 652-3204), SFPUC-WSTD LAND ENGINEERING CONSTRUCTION INSPECTOR (ALBERT HAO, CONSTRUCTION INSPECTOR, AT AHAO@SFWATER.ORG OR (650) 871-3015) AND SFPUC MILLBRAE DISPATCH AT (650) 872-5900 WHEN COMMENCING CONSTRUCTION ON SFPUC PROPERTY AND/OR PIPELINES.

10. POST-CONSTRUCTION: REMOVE ALL CONSTRUCTION DEBRIS FROM SFPUC ROW/PARCELS AND ARRANGE FOR POST-CONSTRUCTION/RESTORATION SITE INSPECTION [COUNTY TO CONTACT EMILY READ, ROW MANAGER, AT EREAD@SFWATER.ORG OR (650) 652-3204].

LEGEND:

- (1) REMOVE & RESET SIGN
- [1] INSTALL NEW SIGN
- (1) STRIPING/MARKING DETAIL
- 1 DRIVEWAY NUMBER
- DWY 18 DRIVEWAY LOCATION AND WIDTH
- 3258 HOUSE/PROPERTY ADDRESS
- G EX. GAS MAIN
- SS EX. SANITARY SEWER LINE
- W EX. WATER MAIN
- SD EX. STORM DRAIN LINE
- E E E E EX. ELECTRICAL
- FO EX. FIBER OPTIC
- OH OH OH EX. OVERHEAD UTILITY
- GPR GPR EX. UNKNOWN UTILITY
- EX. RAILROAD TRACKS
- PROPERTY LINES
- ROW LIMIT LINES
- SD PR. STORM DRAIN LINE
- PR. JOINT TRENCH
- PR. UNDERDRAIN

- (100.00) EXISTING ELEVATION
- 100.00 PROPOSED ELEVATION
- WATER METER
- WV WATER VALVE
- GV GAS VALVE
- SS SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- SD STORM DRAIN MANHOLE
- SIGN
- FIRE HYDRANT
- TREE & EXISTING TREE OUTLINE
- PROPOSED STREET TREE & TREE WELL
- X X FENCE
- EX. MONUMENT
- EX. RR SPIKE
- BM BENCHMARK
- JOINT UTILITY POLE
- GY GUY
- BOLLARD

- ELECTRIC METER BOX
- MAILBOX
- EXISTING LIGHT POLE OR TRAFFIC SIGNAL POLE
- DRAINAGE INLET
- SIDEWALK TELEPHONE
- T TELECOMMUNICATION MANHOLE
- RAILROAD SIGNAL
- PEDESTRIAN SIGNAL
- PBT PULL BOX TELEPHONE
- PB PULL BOX
- CATV CABLE TV PULL BOX
- PBE ELECTRICAL PULL BOX
- E FENCE
- TRAFFIC LIGHT
- W MONITORING WELL
- PEDESTRIAN LIGHT
- STREET LIGHT WITH 30" WIDE BASE
- ℄ CENTER LINE
- P PROPERTY LINE

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

ABBREVIATIONS:

AB	AGGREGATE BASE
ADA	AMERICANS WITH DISABILITIES ACT
AC	ASPHALT CONCRETE
BC	BOTTOM OF CURB
BDPLS	BAY DIVISION PIPELINES
BM	BENCHMARK
BMPs	BEST MANAGEMENT PRACTICES
BW	BACK OF WALK
BEG	BEGIN
CATV	CABLE TV
CB	CATCH BASIN
CL	CENTERLINE
COMM	COMMUNICATION
CONC	CONCRETE
CY	CUBIC YARD
DWY	DRIVEWAY
E	EAST, ELECTRICAL
EG	EXISTING GRADE/GROUND
ETS	EMISSIONS TRADING SYSTEM
EX, (E)	EXISTING
FC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FL	FLOWLINE
FO	FIBER OPTIC
G	GAS
GB	GRADE BREAK
GPR	GROUND PENETRATING RADAR
GV	GAS VALVE
GY	GUY
HP	HIGH POINT
ID	INSIDE DIAMETER
INV	INVERT
JT	JOINT TRENCH
LP	LOW POINT
LT	LEFT
(M)	MATCH EXISTING
MAX	MAXIMUM
MFS	METROPOLITAN FIBER SYSTEMS (EX FIBER OPTIC CABLE)
MH	MANHOLE
(N)	NEW
N	NORTH
NE	NORTH EAST
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OFF	OFFSET
OH	OVERHEAD UTILITY
PAV	PAVEMENT
PB	PULL BOX
PBE	PULL BOX ELECTRICAL
PBT	PULL BOX TELEPHONE
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE POINT OF COMPOUND CURVATURE
PG&E	PACIFIC GAS AND ELECTRIC
PKNG	PARKING
PP	POWER POLE
PR, (P)	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RIM	UPPER RIM OF PIPE OR STRUCTURE
ROW	RIGHT OF WAY
RR	RAILROAD
RRFB	RECTANGULAR RAPID-FLASHING BEACONS
RT	RIGHT
S	SOUTH
SCD	SYSTEM CONTROL DIAGRAM
SD	STORM DRAIN
SDDI	STORM DRAIN DRAINAGE INLET
SDMH	STORM DRAIN MANHOLE
SE	SOUTHEAST
SF	SQUARE FEET
SFPUC	SAN FRANCISCO PUBLIC UTILITIES COMMISSION
SL	STREET LIGHT
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STRP	STRIPE
SW	SOUTHWEST
S/W	SIDEWALK
T	THICKNESS
TBD	TO BE DETERMINED
TC	TOP OF CURB
TG	TOP OF GRATE
TYP	TYPICAL
UP, UPRR	UNION PACIFIC RAILROAD
VCP	VITRIFIED CLAY PIPE
W	WEST, WATER
WM	WATER METER
WV	WATER VALVE

FILENAME: \\NA.AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TITLE AND NOTES\NOTES AND ABBREVIATIONS.DWG (G-2)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
TS M. SHU
No. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	GENERAL NOTES AND ABBREVIATIONS
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

G-2
SHEET 2 OF 140

DEMOLITION AND CONSTRUCTION NOTES:

1. CONTRACTOR TO SUPPLY ALL LABOR, EQUIPMENT, MATERIALS, INCLUDING ANY AND ALL APPURTENANCES, NECESSARY TO COMPLETE PROPOSED IMPROVEMENTS.
2. CONTRACTOR SHALL OBTAIN WRITTEN CLEARANCE/EXCAVATION PERMIT(S) FROM THE COUNTY OF SAN MATEO 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION.
3. ALL CONSTRUCTION SHALL CONFORM TO THE COUNTY OF SAN MATEO STANDARD PLANS (WHERE APPLICABLE).
4. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS. WORK HOURS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK. THE CONTRACTOR WILL BE REQUIRED TO HAVE AT LEAST ONE TRAVEL LANE OPEN IN EACH DIRECTION DURING WORKING HOURS.
5. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE IMPROVEMENT PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UTILITIES. HOWEVER, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE DELINEATION OF SUCH UNDERGROUND UTILITIES NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
6. THE CONTRACTOR SHALL EXPOSE/POTHOLE AND VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO THE CONSTRUCTION OF THE NEW IMPROVEMENTS CONNECTING TO OR IN THE VICINITY OF SAME, INCLUDING BUT NOT LIMITED TO EXISTING WATER MAIN AND SERVICE LATERALS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND RELOCATION (WHERE NECESSARY) OF ALL EXISTING MONUMENTS, OTHER SURVEY MARKERS, STREET SIGNS, AND ANY OTHER IMPORTANT OBJECTS ON THE JOB SITE.
8. CONTRACTOR TO LAYOUT ALL UTILITIES AND ASSOCIATED STRUCTURES PRIOR TO COMMENCING EXCAVATION AND NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR TO POTHOLE LOCATION OF PROPOSED LIGHT POSTS, RRFBS, AND OTHER LIGHTING AND TRAFFIC SIGNAL DEVICES PRIOR TO INSTALLATION.
9. CONTRACTOR TO LOCATE ALL PROPOSED STRUCTURES (MANHOLES AND CATCH BASINS) TO ACCOMMODATE THE EXISTING CONDITIONS AND CONFORM TO EXISTING PAVEMENT AND CURB ELEVATIONS AND LOCATIONS. TOP ELEVATION OF NEW CATCH BASINS TO BE SET SUFFICIENTLY BELOW ADJACENT EXISTING GRADE TO DRAIN AND MANHOLES TO BE SET 0.05' BELOW ADJACENT EXISTING GRADE. ALL CONNECTOR PIPE SCREEN INLETS WITH AUTO-RETRACTABLE SCREENS SHALL BE PROTECTED. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE, AND SHALL REPLACE IN KIND.
10. CONTRACTOR SHALL POTHOLE/VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED JOINT TRENCH AND OTHER IMPROVEMENTS TO COUNTY ENGINEER IN WRITING. CONTRACTOR TO MAKE ADJUSTMENTS TO JOINT TRENCH TO PASS ABOVE, BELOW, OR THROUGH ADJACENT UTILITIES.
11. THE CITY AND COUNTY OF SAN FRANCISCO ACTING BY AND THROUGH ITS PUBLIC UTILITIES COMMISSION, WATER SUPPLY AND TREATMENT DIVISION ("SFPUC") OWNS AND OPERATES THREE WATER AQUEDUCTS THAT CROSS THE PROJECT ALIGNMENT. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (USA) 48 HOURS BEFORE ANY CONSTRUCTION IN THE VICINITY OF THE SFPUC AQUEDUCTS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE SFPUC CONSTRUCTION INSPECTOR, MR. ALBERT HAO, AT (650) 871-3015, AT LEAST TEN (10) CALENDAR DAYS PRIOR TO THE START OF ON-SITE CONSTRUCTION IN THE VICINITY OF THE SFWD ROW. IN THE EVENT OF EMERGENCY INVOLVING SFPUC FACILITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY SFPUC BY CALLING SFPUC MILLBRAE DISPATCH AT 650-872-5900.
12. NO MECHANICAL EXCAVATION IS ALLOWED WITHIN 24 INCHES OF SFPUC PIPELINES. DIGGING WITH 24 INCHES OF PIPELINE MUST BE DONE WITH HAND TOOL. NO VIBRATORY COMPACTION EQUIPMENT SHALL BE USED WITHOUT PRIOR WRITTEN APPROVAL OF THE SFPUC.
13. CONTRACTOR SHALL OBTAIN CONSENT FROM THE SFPUC TO POTHOLE SFPUC PIPELINE TO DETERMINE THE PIPE DEPTH PRIOR TO ANY EXCAVATION. THE POTHOLING SHALL BE CARRIED OUT BY SOIL VACUUM EXTRACTION METHOD.
14. MAXIMUM EXTERNAL LOADING OVER SFPUC PIPELINE IS AASHTO H-10 LOADING WITH A MINIMUM OF 3 FEET SOIL COVER (OR H-20 LOADING WITH A MINIMUM OF 4 FEET SOIL COVER). IF LOADING CONDITION EXCEEDS ABOVE, ENGINEERING CALCULATIONS AS SHOWN IN AWWA, M9 MUST BE SUBMITTED TO THE SFPUC TO SHOW THAT PROPOSED CONDITION WOULD IMPOSE A LOAD OF LESS THAN 500 PSF ONTO THE PIPELINE.
15. CONTRACTOR RESPONSIBLE FOR SEQUENCING OF WORK TO AVOID CONFLICTS.
16. CONTRACTOR RESPONSIBLE TO ENSURE EROSION CONTROL/STORMWATER BMPs AND TRAFFIC CONTROL BARRICADES AND SIGNAGE ARE ERECTED AND IN-PLACE AT THE END OF EACH WORK DAY.
17. CONTRACTOR RESPONSIBLE FOR OPENING AND ENSURING ACCESS TO ROADS AFTER WORK HOURS.
18. CONTRACTOR TO BE SOLELY RESPONSIBLE TO PROTECT EXISTING BUILDINGS, VEGETATION TO REMAIN, UTILITIES, AND SURFACE FEATURES FROM DAMAGE. ANY DAMAGE INCURRED WILL BE REPAIRED BY THE CONTRACTOR. CONTRACTOR TO SUBMIT REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) 21 DAYS PRIOR TO INTENDED CONSTRUCTION START DATE.
19. CONTRACTOR TO CALL UNION PACIFIC TELECOMMUNICATION "CALL BEFORE YOU DIG" LINE AT 800-336-9193 LINE, TO LOCATE ANY FIBER OPTIC LINES THAT MAY BE PRESENT WITHIN UP ROW 21 DAYS PRIOR TO INTENDED CONSTRUCTION START DATE. CONTRACTOR SHALL ALSO CONTACT RAILROAD COMPANY'S MANAGER OF TRACK MAINTENANCE, MANAGER OF SIGNAL MAINTENANCE, AND TELECOMMUNICATION NUMBER AT LEAST 10 DAYS IN ADVANCE OF THE DATE HE/SHE INTENDS TO ENTER THE RIGHT OF WAY FOR OF UNION PACIFIC RAIL ROAD COMPANY FOR FURTHER INSTRUCTIONS AND APPROVAL TO COMMENCE CONSTRUCTION. CURRENTLY MAIKEL YOUNAN IS THE MANAGER OF SIGNAL MAINTENANCE AND CAN BE REACHED AT: 402-216-2342.
20. CONTRACTOR TO COORDINATE WITH PG&E 5 DAYS PRIOR TO ANY EXCAVATION IN THE AREA.
21. CONTRACTOR TO PROVIDE ANY AND ALL TRAFFIC CONTROL DEVICES/PERSONNEL PER THE ENGINEER'S DIRECTION (INCLUDING LIGHTING IN EVENT OF NIGHT WORK).
22. SAWCUT LINES SHALL BE SMOOTH AND FREE OF FRAGMENTED OR BROKEN ASPHALT AND CONCRETE.
23. SAWCUT AND DEMOLISH SIDEWALKS AND/OR CURBS AT CONTROL JOINTS.
24. CONTRACTOR TO COMPLY WITH APPLICABLE BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD) CONTROL MEASURES TO CONTROL GENERATION AND MITIGATION OF FUGITIVE DUST EMISSIONS.
25. CONTRACTOR TO COMPLY WITH US ENVIRONMENTAL PROTECTION AGENCY (USEPA) AND CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CALEPA) RECOMMENDATIONS TO REDUCE EQUIPMENT EXHAUST EMISSIONS.
26. CONTRACTOR TO ACCOMMODATE ALL PROJECT-RELATED STAGING ON-SITE.
27. THE CONTRACTOR SHALL NOT DAMAGE ANY PRIVATE PROPERTY. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
28. DIMENSIONS GIVEN ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENT TO ACCOMMODATE ACTUAL FIELD CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR PERFORMING WORK NECESSARY TO COMPLETE SHOWN IMPROVEMENTS.
29. EXCEPT FOR ITEMS INDICATED TO REMAIN, CONTRACTOR SHALL REMOVE FROM PROJECT SITE AND DISPOSE (IN AUTHORIZED DISPOSAL SITES) ALL DEMOLITION MATERIALS WITHIN THE LIMIT OF DEMOLITION AS SHOWN. EXCEPT FOR WHERE RECYCLING OF THE THE DEMOLISHED MATERIAL IS REQUIRED, REMOVAL ITEMS WILL INCLUDE (BUT NOT BE LIMITED TO) PAVING, CURBS, SOIL, PIPING, ETC. THE REMOVED ITEMS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND ORDINANCES OF THE COUNTY OF SAN MATEO AND AS STATED IN THE STANDARD AND PROJECT SPECIFICATIONS.
30. THE COUNTY REQUIRES ALL CONTRACTORS TO COMPLY WITH CHAPTER 4.105, "RECYCLING AND DIVERSION OF DEBRIS FROM CONSTRUCTION AND DEMOLITION" OF THE SAN MATEO COUNTY CODE OF ORDINANCES. THE COUNTY REQUIRES CONTRACTORS TO PREPARE A WASTE MANAGEMENT PLAN THAT REDUCES PROJECT WASTE ENTERING LANDFILL FACILITIES. THE CONSTRUCTION CONTRACTOR MUST IDENTIFY THE SOURCES OF RECYCLABLE MATERIALS AND A RECYCLING METHOD (I.E., SELF-SEPARATION OR MIXED RECOVERY) AND DISPOSE OF CONSTRUCTION DEBRIS AT COUNTY-APPROVED FACILITIES, INCLUDING THE OX MOUNTAIN LANDFILL, SAN CARLOS TRANSFER STATION, BLUE LINE TRANSFER STATION, BRISBANE RECYCLING COMPANY, OR OTHER COUNTY-APPROVED RECYCLING CENTERS LISTED IN THE COUNTY'S GUIDE FOR CONSTRUCTION AND DEMOLITION PROJECTS. COMPLIANCE WITH CHAPTER 4.105 OF THE COUNTY'S CODE OF ORDINANCES AND PREPARATION OF A WASTE MANAGEMENT PLAN WOULD ENSURE CONSTRUCTION DEBRIS IS DISPOSED OF AT A LANDFILL WITH SUFFICIENT CAPACITY TO ACCOMMODATE SOLID-WASTE DISPOSAL NEEDS OF THE PROJECT, SO THE CONSTRUCTION-RELATED IMPACTS WOULD BE LESS THAN SIGNIFICANT.
31. UNDERGROUND UTILITIES SHOWN ARE FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING & PROTECTING ALL SURFACE AND SUBSURFACE UTILITIES (INCLUDING ANY OTHER POSSIBLE UNFORESEEN UTILITIES THAT MAY NOT BE SHOWN ON THE DRAWINGS) WITHIN THE PROJECT AREA DURING CONSTRUCTION. NO ADDITIONAL PAYMENT SHALL BE MADE IF ANY VARIATIONS (I.E. LOCATION, SIZE, DEPTH, MATERIAL) ARE FOUND.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FUNCTION OF EXISTING UTILITIES AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION.
33. EXISTING SANITARY SEWER SERVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. EXISTING SANITARY SEWER SERVICE LATERAL LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS/HER SOLE EXPENSE.
34. ALL UTILITY STRUCTURES SUBJECT TO POSSIBLE VEHICLE LOADING SHALL BE RATED TO WITHSTAND AASHTO H20 LOADING.
35. SEE DETAIL 3 ON SHEET MD-1 FOR ADDITIONAL INFORMATION OF BULBOUT CONSTRUCTION.
36. FOR EACH PHASE OF CONSTRUCTION, CONTRACTOR TO PROVIDE PEDESTRIAN CUSTOMERS, CUSTOMER VEHICLES, AND DELIVERY VEHICLES ACCESS TO BUSINESSES WHEN THE AREA IS CLOSED TO THROUGH TRAFFIC. SHOULD WORK NECESSARILY OBSTRUCT ENTRY TO BUSINESSES, SAID BUSINESSES SHALL BE PROVIDED 48 HOUR ADVANCE NOTIFICATION, AS APPROVED BY THE ENGINEER, AND ACCESS SHALL BE RESTORED SAME DAY UNDER SPECIAL CIRCUMSTANCES IF BUSINESS/PROPERTY OWNER AND ENGINEER AGREES.
37. WHILE EXCAVATING/DEMOLISHING FOR INSTALLATION OF TREES, ANY STORMDRAIN PIPE JOINT EXPOSED SHALL BE WRAPPED WITH A 40MIL HDPE SHEETING, PLACED ON THE STORMDRAIN JOINT 2 FEET LONGITUDINALLY ON EITHER SIDE OF THE JOINT DOWN TO THE SPRING LINE OF THE PIPE.
38. WHILE DEMOLISHING THE EXISTING SIDEWALK, CONTRACTOR SHALL PROTECT ANY TREE ROOTS, INCLUDING THOSE THAT MAY BE LOCATED IN PRIVATE PROPERTY, LARGER THAN 3 INCH IN DIAMETER.
39. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL ADA REQUIREMENTS DURING CONSTRUCTION, BY PROVIDING MEASURES INCLUDING, BUT NOT LIMITED TO ACCESSIBLE PATH OF TRAVEL AND ACCESSIBLE PARKING.
40. CONTRACTOR SHALL PROVIDE ACCESS TO EMERGENCY VEHICLES AT ALL TIMES AND DELIVERY VEHICLES DURING ALL PHASES OF CONSTRUCTION.
41. OUTSIDE OF WORK HOURS, CONTRACTOR TO PLATE AND OPEN ROADWAY IMPACTED BY CONSTRUCTION.
42. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL THE DEWATERING NEEDED DURING CONSTRUCTION AND ADJACENT TO ALL BUSINESS.

BIORETENTION DESCRIPTION:

1. GREEN INFRASTRUCTURE STORMWATER TREATMENT DEVICES IN THESE PLANS ARE REFERRED TO IN GENERAL AS "BEST MANAGEMENT PRACTICES," OR "BMPs."
2. A BIORETENTION UNIT IS A LANDSCAPED STORMWATER COLLECTION DEVICE THAT, IN THIS CASE, CONTAINS AN UNDERDRAIN AND USES AN ENGINEERED SOIL MIX FOR THE PLANTING BED.

BIORETENTION CONSTRUCTION:

AVOIDING SOIL COMPACTION AND SEDIMENTATION

1. FOR BIORETENTION UNITS TO FUNCTION PROPERLY, THE PLANTING BED MUST NOT BE COMPACTED DURING CONSTRUCTION, AND SEDIMENT MUST BE PREVENTED FROM ENTERING THE BMPs DURING AND AFTER CONSTRUCTION.
2. CONSTRUCTION ACTIVITIES SHALL NOT COMPACT SOILS WITHIN THE FOOTPRINT OF THE BIORETENTION CELL. HEAVY EQUIPMENT SHALL BE KEPT OUT OF THE BMPs FOR ALL EXCAVATION AND GRADING ACTIVITIES.
3. SEDIMENT AND EROSION CONTROLS MUST BE IN-PLACE UPHILL AND UPSTREAM OF THE BMPs AT ALL TIMES DURING CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING THE BMPs DURING CONSTRUCTION OR AFTER PLANTING. CONSTRUCTION OF FEATURES UPHILL OF THE BMPs SHALL BE COMPLETED BEFORE CONSTRUCTING THE BMPs PLANTING BEDS.
4. WATTLES, SILT FENCE, SILT DIKE, OR EQUIVALENT, SHALL BE INSTALLED UPHILL OF BMPs WHERE SOIL IS TO BE DISTURBED AND MAY CAUSE RUNOFF TO AND SEDIMENTATION OF BMPs.
5. INLETS TO THE BMPs SHALL BE BLOCKED OFF WITH SAND BAGS DURING CONSTRUCTION TO KEEP STORMWATER AND SEDIMENT FROM ENTERING THE BIORETENTION CELL. SAND BAGS SHALL BE LEFT IN PLACE AFTER CONSTRUCTION AT THE DIRECTION OF THE COUNTY REPRESENTATIVE TO PROTECT THE BIORETENTION UNIT DURING THE INITIAL PLANT ESTABLISHMENT PERIOD.

BIORETENTION EXCAVATION

1. BIORETENTION UNITS SHALL BE EXCAVATED AND CONSTRUCTED WITH AN EXCAVATOR OPERATING OUTSIDE THE UNIT FOOTPRINT. NO EQUIPMENT MAY ENTER THE BMP TO EXCAVATE THEM WITHOUT PRIOR APPROVAL FROM COUNTY REPRESENTATIVE. IN THE RARE EVENT THAT EQUIPMENT IS ALLOWED TO ENTER BIORETENTION UNITS BY COUNTY REPRESENTATIVE, EQUIPMENT SHALL CONSIST OF LOW-IMPACT, LIGHTWEIGHT EQUIPMENT, AND THE BED OF THE BIORETENTION UNIT SHALL BE RESTORED BY RIPPING TO A MINIMUM DEPTH OF 12 INCHES.

CURBS, INLETS, AND SIDEWALK REPAIR

1. ALL CONCRETE AND PAVEMENT WORK INCLUDING, BUT NOT LIMITED TO, CURB CUTS, INLET CONSTRUCTION, CURB REPLACEMENT, PAVEMENT OR SIDEWALK REPAIR SHALL BE DONE BEFORE BIORETENTION UNIT GRADING AND PLANTING BED PREPARATION.
2. ALL ROCK, GRAVEL, CONCRETE WASTE, LUMBER, OR OTHER CONSTRUCTION DEBRIS MUST BE REMOVED FROM THE BMP PRIOR TO BIORETENTION BED GRADING AND PREPARATION.
3. IF BIORETENTION SOILS ARE DISTURBED OR COMPACTED BY CONCRETE WORK, THE BED OF THE BIORETENTION UNIT SHALL BE RESTORED BY RIPPING TO A MINIMUM DEPTH OF 12 INCHES.

GRADING AND SOIL PREPARATION

PREPARE THE BIORETENTION UNIT IN THE FOLLOWING MANNER:

1. TYPICAL BIORETENTION UNIT STORMWATER COLLECTION DEPTH WILL BE 0.85-FT. THE ENGINEERED SOIL USED FOR THE PLANTING BED WILL BE APPROXIMATELY 18 INCHES DEEP AND THE BIORETENTION GRAVEL STORAGE LAYER WILL BE 12 INCHES OF ASTM #3 AGGREGATE WITH A 3" CHOKING LAYER OF ASTM #57 AGGREGATE.
2. CONSTRUCT BIORETENTION BASIN AND INSTALL NYLOPLAST INLET AND CLEANOUT STRUCTURES.
3. TEMPORARY BACKFILL CONCRETE STRUCTURE OVER EXCAVATION AFTER STRIPPING FORMS TO PROTECT INFILTRATION SURFACE AT PLANTER SUBGRADE.
4. EXCAVATE THE BIORETENTION UNIT TO BOTTOM OF THE BIORETENTION BASIN DEPTH.
5. ROTOTILL 6 INCHES OF NATIVE SUBGRADE BEFORE THE PLACEMENT OF AGGREGATE.
6. INSTALL 3 INCHES CHOKING COURSE LAYER OF ASTM #57 OVER 12 INCHES OF ASTM #3 AGGREGATE.
7. PLACE 18 INCHES OF MOISTENED ENGINEERED BIORETENTION SOIL MIX OVER CLEAN COMPACTED GRAVEL IN LIGHTLY COMPACTED 6 INCH LAYERS.
8. CREATE SIDE SLOPES WITH ENGINEERED BIORETENTION SOIL MIX. LIGHTLY TAMP SOIL IN PLACE WITH FOOT TRAFFIC AND RAKE TO GRADE.
9. AFTER GRADING AND LIGHT COMPACTION, ADD SOIL AS REQUIRED TO REACH DESIGN LINES AND GRADES.

BIORETENTION UNIT COMPACTION AND SEDIMENT

1. PLANTING SOILS MUST NOT BE COMPACTED DURING CONSTRUCTION OF BIORETENTION UNIT. IF SOILS ARE COMPACTED AT ANY TIME AFTER BIORETENTION UNIT GRADING, THEY MUST BE RESTORED BY RIPPING TO A MINIMUM DEPTH OF 12 INCHES.
2. PREVENT SEDIMENT FROM ENTERING THE BIORETENTION BASIN.

PLANT AND MULCH INSTALLATION

1. REFER TO LANDSCAPE PLANS FOR PLANTING AND MULCH INSTALLATION.

SANITARY SEWER DEMOLITION:

1. THE CONTRACTOR SHALL CONTACT THE SEWER DISTRICT AT 650-363-4100 TWO (2) WORKING DAYS IN ADVANCE OF BEGINNING ANY SANITARY SEWER WORK. THE CONTRACTOR SHALL THEREAFTER KEEP THE INSPECTOR FOR THE DISTRICT INFORMED OF THE SCHEDULE FOR SANITARY SEWER WORK.
2. ALL SANITARY SEWER WORK CONSTRUCTED WITHOUT INSPECTION BY THE DISTRICT SHALL BE REMOVED AND RECONSTRUCTED WITH INSPECTIONS.
3. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FORTY-EIGHT (48) HOURS IN ADVANCE OF BEGINNING ANY WORK.
4. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING ANY EXCAVATING.
5. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE COUNTY OR SFPUC BEFORE BEGINNING ANY SANITARY SEWER WORK.
6. SANITARY SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL USE WHATEVER MEANS ARE NECESSARY (E.G. PUMPS, ETC.) TO MAINTAIN THIS SERVICE DURING CONSTRUCTION.
7. THE CONTRACTOR MAY NOT USE ANY MACHINE OR DEVICE THAT BREAKS PAVEMENT BY BLOWS STRUCK BY A FALLING OR DRIVEN HAMMER OR WEIGHT. CONTRACTOR SHALL USE, BUT NOT LIMITED TO, PAVEMENT CONCRETE SAW CUTTING OR VIBRATORY PAVEMENT BREAKER.
8. SUCH PROHIBITION, HOWEVER, SHALL NOT BE CONSTRUED AS BARRING THE USE OF HAND TOOLS OR MANUALLY OPERATED AIR TOOLS SUCH AS JACKHAMMERS.

JACK AND BORE AND DIRECTIONAL DRILLING SPECIFICATIONS

1. THE CONTRACTOR SHALL LOCATE THE JACKING PITS A MINIMUM OF THIRTY (30) FEET FROM THE CENTERLINE OF NEAREST RAIL OF RAILROAD TRACKS.
2. THE CONTRACTOR SHALL SHORE IN ACCORDANCE TO CAL-OSHA REQUIREMENTS.
3. REFLECTORS SHALL BE AFFIXED TO THE SHORING ON ALL SIDES FACING TRAFFIC.
4. THE CONTRACTOR SHALL ENSURE PITS DO NOT AFFECT ANY FACILITIES, OR CREATE A HAZARD TO THE TRAVELING PUBLIC. DAMAGED FACILITIES SHALL BE REPLACED IN-KIND OR REPAIRED TO THEIR ORIGINAL STATE BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL HAVE CRUSHED-ROCK AND SUMP AREAS TO CLEAR GROUNDWATER AND WATER USED TO CLEAN THE CASINGS IN ALL PITS. PITS SHALL BE LINED WITH FILTER FABRIC WHEN GROUNDWATER IS FOUND AND PUMPING IS REQUIRED.
6. TEMPORARY TYPE-K RAILING SHALL BE PLACED AT A 20:1 TAPER OR AS OTHERWISE DIRECTED BY THE COUNTY'S REPRESENTATIVE TO MAINTAIN THE INTEGRITY OF THE ADJACENT TRAVEL LANE.
7. WHILE EXCAVATING THE BORING PIT, CONTRACTOR SHALL PROTECT ANY TREE ROOTS LARGER THAN 3 INCH IN DIAMETER.
9. CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE PRIOR TO WORK ADJACENT TO THE RAILROAD. COUNTY SHALL PROVIDE MONITORING OF TRACKS AND CONSTRUCTION OBSERVATION OF ALL WORK PERTAINING TO THE RAILROAD. RAILPROS FIELD SERVICES, RP.UTILITY@RAILPROS.COM (682)223-5271.
10. CONTRACTOR SHALL NOT DAMAGE ANY RAILROAD PROPERTY OR FACILITIES. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

JOINT TRENCH DEMOLITION:

1. JOINT TRENCH WORK IN PRIVATE RIGHT OF WAY WILL BE PERFORMED BY PG&E.
2. FOR JOINT TRENCH NOTES REFER TO JT-2.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER JAMES M. SHEA No. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

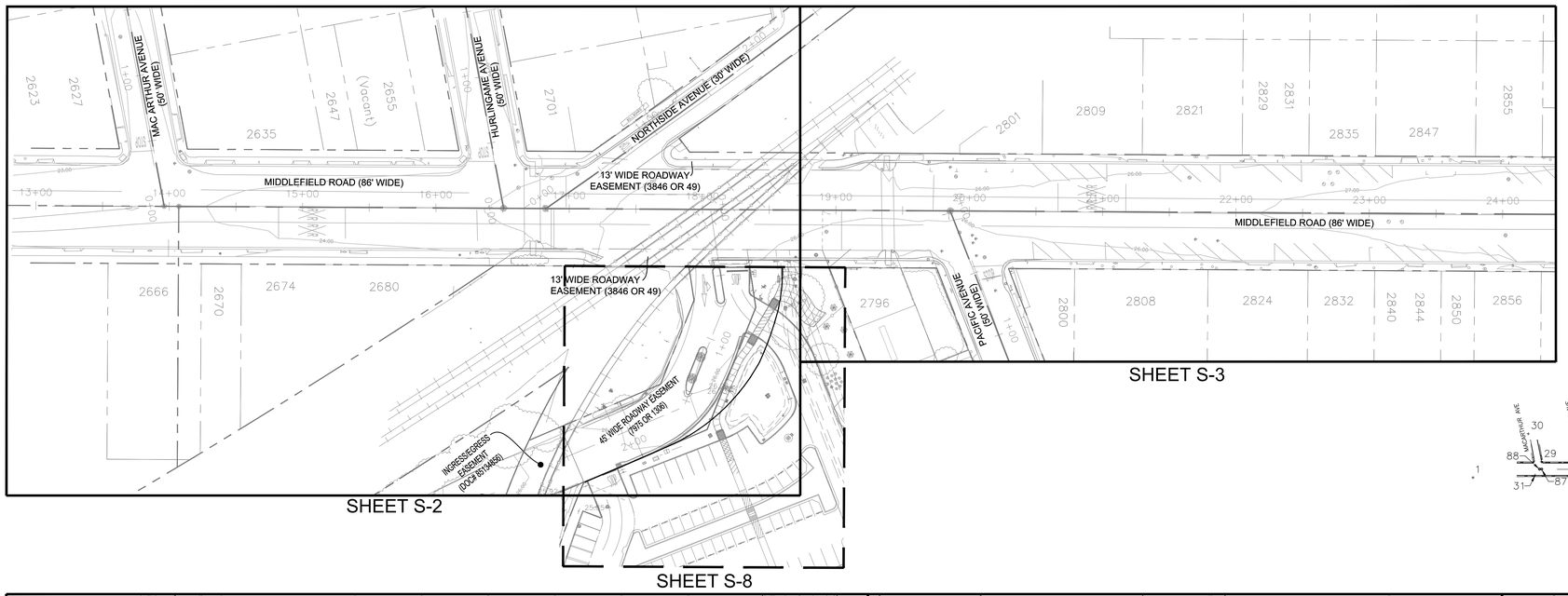
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GENERAL NOTES AND ABBREVIATIONS
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

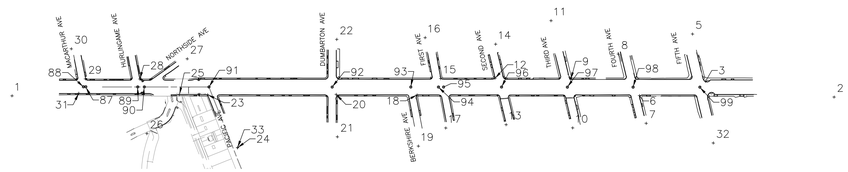
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

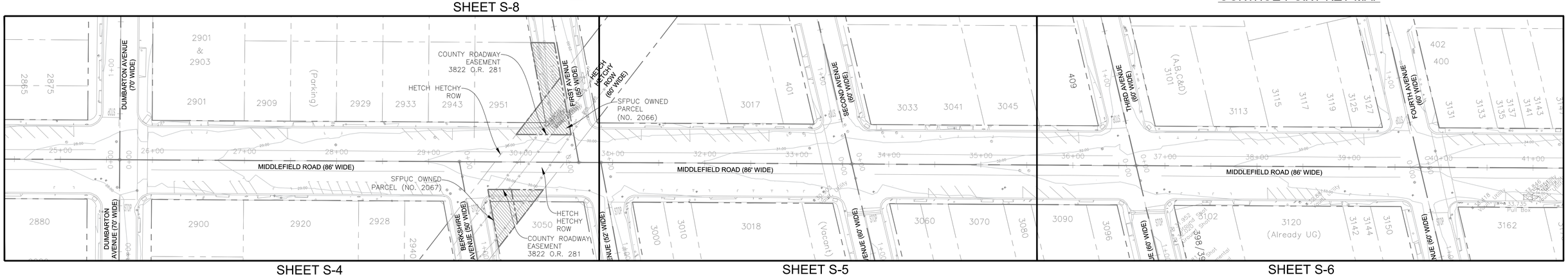
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

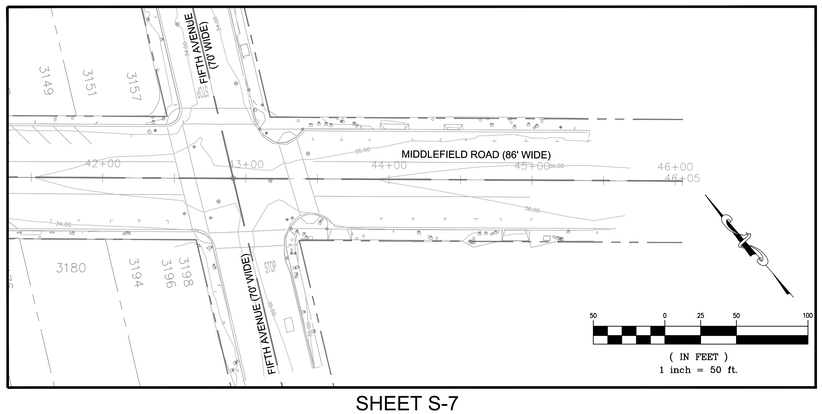
G-3
SHEET 3 OF 140

FILENAME: \\NA.AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\VDO_CAD\SHEETS\TITLE AND NOTES\G-3 NOTES AND ABBREVIATIONS.DWG (G-3)









CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2000958.733	6064572.669	23.036	CUT X
2	1998431.261	6067490.606	36.795	MAG NAIL
3	1998881.958	6067083.004	34.805	CUT X
5	1999089.738	6067180.873	33.037	CUT X
6	1999033.710	6066803.044	32.757	MAG NAIL AND SHINER
7	1998914.632	6066742.170	33.357	CUT X
8	1999245.653	6066855.584	31.901	MAG NAIL
9	1999302.131	6066609.069	31.045	MAG NAIL
10	1999124.161	6066466.910	32.116	CUT X
11	1999571.377	6066718.908	30.289	MAG NAIL
12	1999538.757	6066343.135	29.834	MAG NAIL
13	1999340.171	6066240.302	31.359	CUT X
14	1999657.810	6066449.682	29.390	CUT X
15	1999704.400	6066149.125	29.377	MAG NAIL
16	1999897.468	6066219.216	28.261	MAG NAIL
17	1999513.249	6066015.396	30.866	MAG NAIL
18	1999719.039	6066014.693	29.478	MAG NAIL

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
19	1999533.301	6065862.587	29.994	MAG NAIL
20	1999968.504	6065728.888	27.976	MAG NAIL
21	1999814.516	6065603.242	28.193	MAG NAIL
22	2000162.292	6065899.763	27.437	CUT X
23	2000362.705	6065271.205	25.068	MAG NAIL
24	2000082.539	6065215.084	26.145	MAG NAIL
25	2000449.340	6065171.315	26.103	MAG NAIL
26	2000410.641	6064936.293	25.839	MAG NAIL
27	2000552.713	6065308.743	25.169	MAG NAIL
28	2000625.807	6065078.191	24.379	CUT X
29	2000793.683	6064885.229	23.005	MAG NAIL
30	2000943.865	6064927.390	23.195	CUT X
31	2000763.138	6064817.106	23.418	MAG NAIL
32	1998638.944	6066920.225	36.426	MAG NAIL
33	2000082.541	6065215.075	26.060	MAG NAIL
87	2000764.421	6064861.816	23.013	1.5IN DISK IN CL WELL
88	2000771.568	6064853.556	23.346	NOTE AVAILABLE

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
89	2000605.091	6065046.098	24.360	
90	2000584.539	6065069.857	24.701	1.5IN DISK IN CL WELL
91	2000386.013	6065299.470	25.504	1.5IN DISK IN CL WELL
92	2000007.569	6065737.239	27.808	1.5IN DISK IN CL WELL
93	1999766.198	6066016.451	29.438	1.5IN DISK IN CL WELL
94	1999681.381	6066114.626	29.935	1.5IN DISK IN CL WELL
95	1999665.629	6066132.776	29.973	1.5IN DISK IN CL WELL
96	1999487.269	6066339.065	30.983	1.5IN DISK IN CL WELL
97	1999285.300	6066572.695	31.885	1.5IN DISK IN CL WELL
98	1999083.450	6066806.226	33.455	1.5IN DISK IN CL WELL
99	1998878.224	6067043.555	34.739	1.5IN DISK IN CL WELL

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

LICENSED LAND SURVEYOR BRYAN M. COLEMAN LS 8367 STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TOPOGRAPHIC SURVEY/KEY MAP
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-1
SHEET 4 OF 140

FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\VDOC_CAD\SHEETS\SURVEY SHEETS\S-01.DWG (S-01)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

MACARTHUR AVENUE (50' WIDE)

HURLINGAME AVENUE (50' WIDE)

NORTHSIDE AVENUE (30' WIDE)

MIDDLEFIELD ROAD (86' WIDE)

13' WIDE ROADWAY EASEMENT (3846 OR 49)

SEE SHEET S-3

SEE SHEET S-8

13' WIDE ROADWAY EASEMENT (3846 OR 49)

SOUTHERN PACIFIC R/W

ADDITIONAL PERMANENT ACCESS EASEMENT

45' WIDE ROADWAY EASEMENT (7975 OR 1306)

INGRESS/EGRESS EASEMENT (DOC# 85134856)

(IN FEET)
1 inch = 20 ft.

FILENAME: \\NA.AECOMNET.COM\LFSYAMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\SURVEY SHEETS\MIDDLEFIELD RD. SURVEY BASE MAP AB 3.DWG (S-02)

LICENSED LAND SURVEYOR
BRIAN M. COLLETTE
LS 8367
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TOPOGRAPHIC SURVEY
		CHECKED BY: AE	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-2
SHEET 5 OF 140

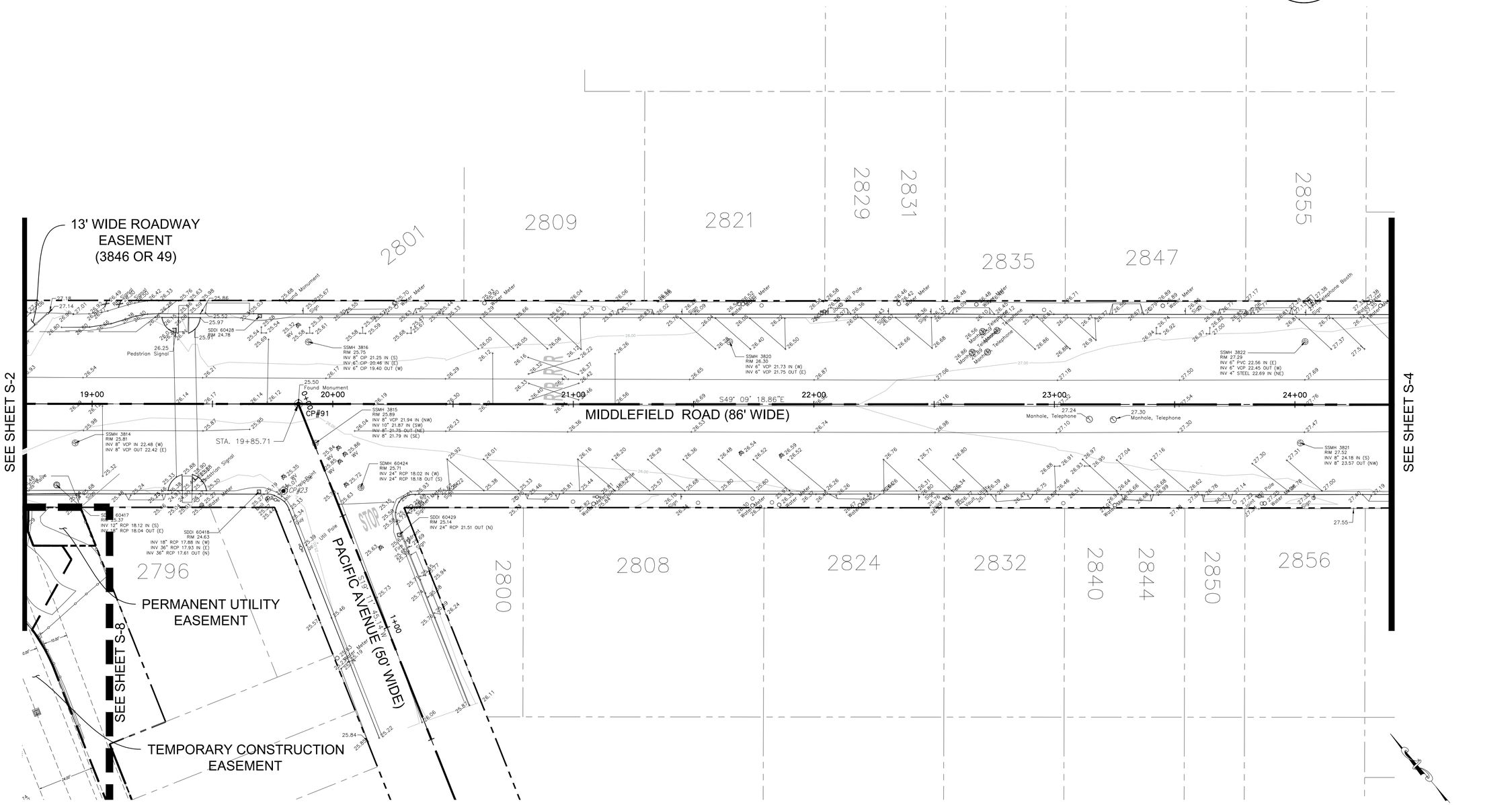
AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\SURVEY SHEETS\MIDDLEFIELD RD. SURVEY BASE MAP AB 3.DWG (S-03)

LICENSED LAND SURVEYOR
BRIAN M. COLLINS
LS 8367
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TOPOGRAPHIC SURVEY
		CHECKED BY: AE	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-3
SHEET 6 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

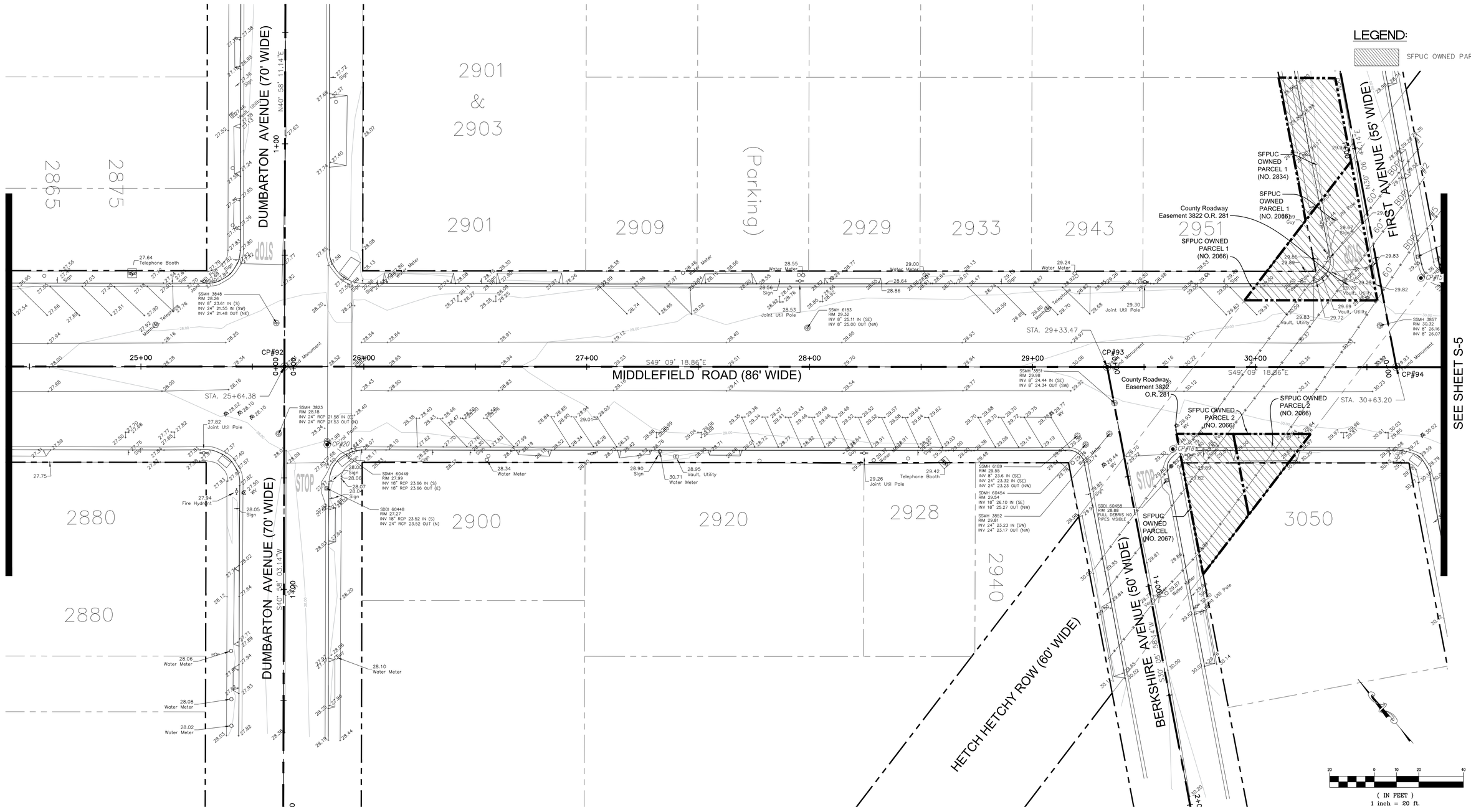
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

LEGEND:

SFPUC OWNED PARCEL



FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\604295976 MIDDLEFIELD RD STREETSCAPE\VDO_CAD\SHEETS\SURVEY SHEETS\MIDDLEFIELD RD. SURVEY BASE MAP AB 3.DWG (S-04)

LICENSED LAND SURVEYOR
BRYAN M. COLEMAN
LS 8367
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TOPOGRAPHIC SURVEY
		CHECKED BY: AE	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-4
SHEET 7 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

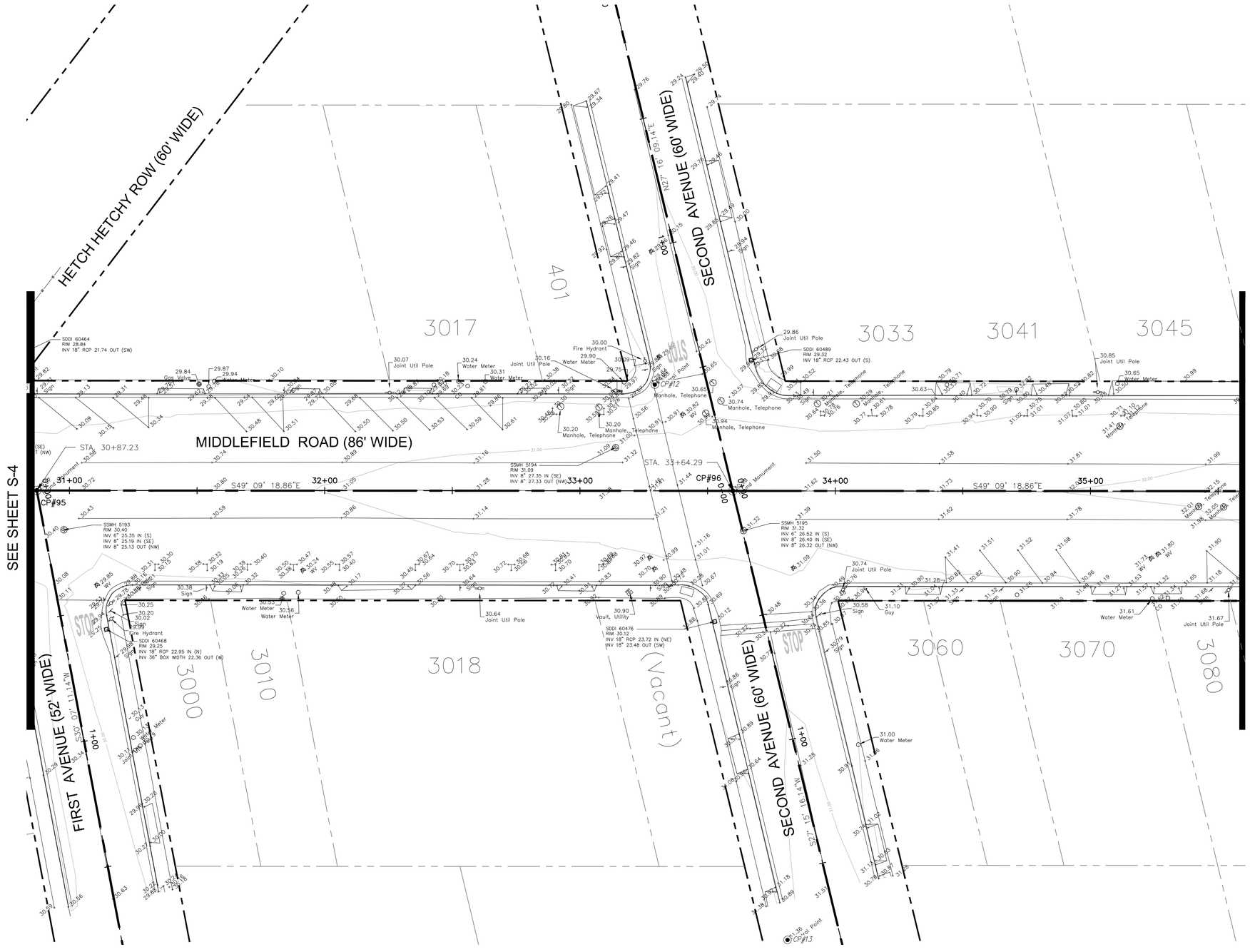
APPROVED:

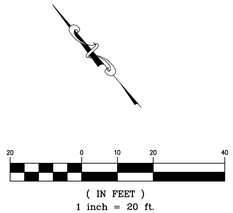
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

LEGEND:

SFPUC OWNED PARCEL





FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\604295976 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\SURVEY SHEETS\MIDDLEFIELD RD. SURVEY BASE MAP AB 3.DWG (S-05)

LICENSED LAND SURVEYOR
BRYAN M. COLEMAN
LS 8367
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TOPOGRAPHIC SURVEY
		CHECKED BY: AE	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

S-5
SHEET 8 OF 140

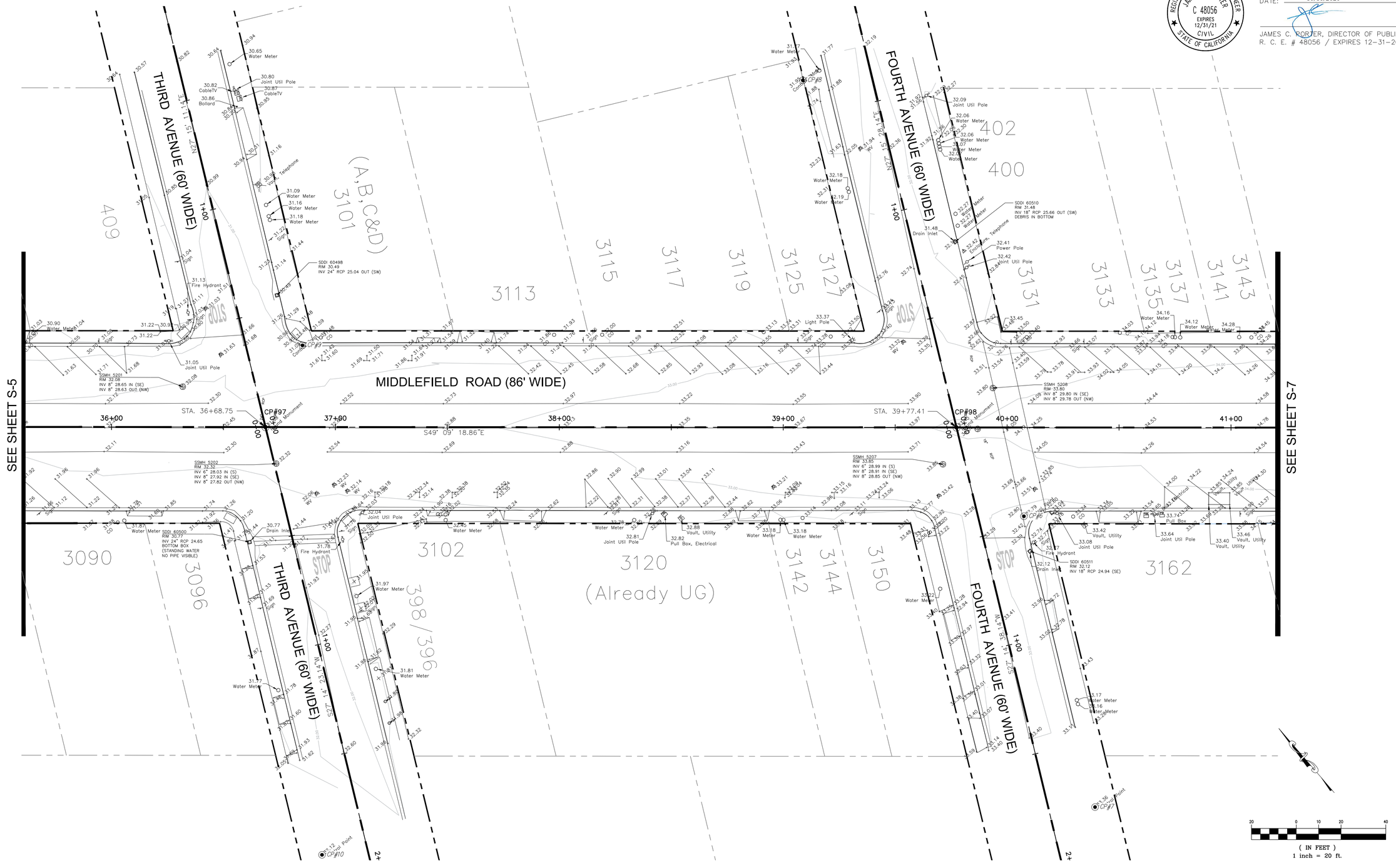
AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

LICENSED LAND SURVEYOR
BRIAN M. CALLEGARI
LS 8367
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: AE	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	TOPOGRAPHIC SURVEY
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

S-6
SHEET 9 OF 140

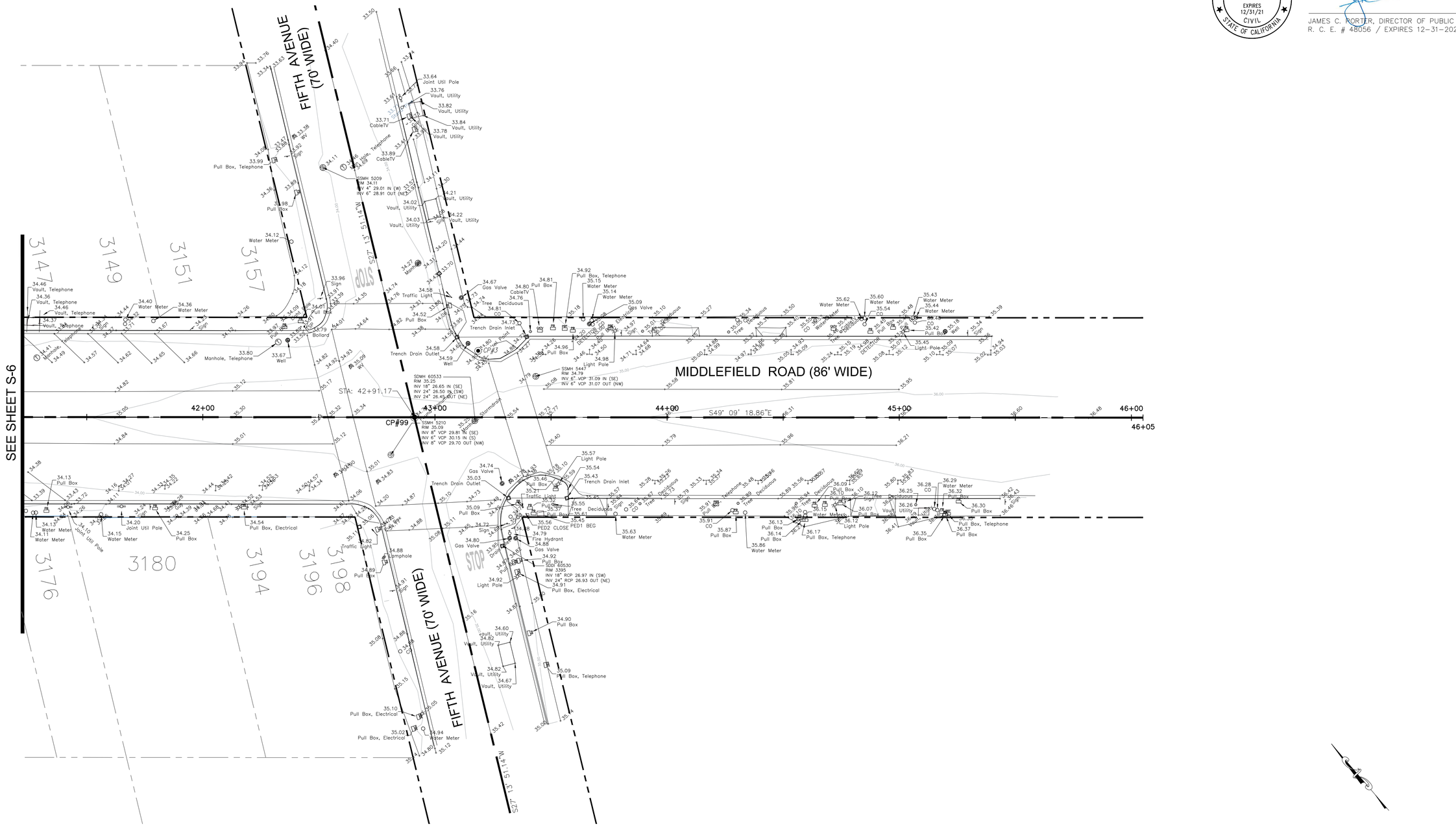
AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

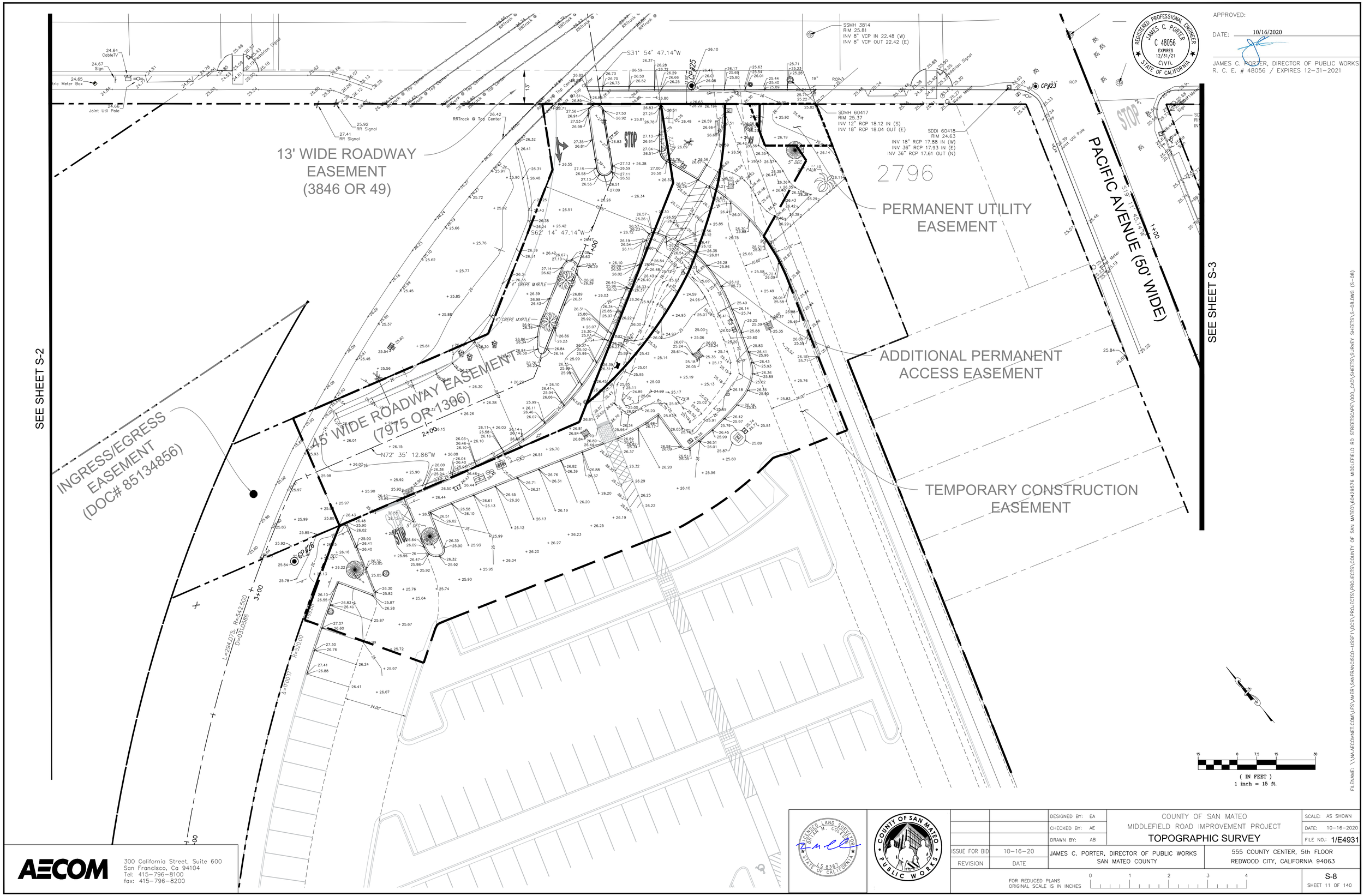
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA


SEE SHEET S-6
FIFTH AVENUE (70' WIDE)
MIDDLEFIELD ROAD (86' WIDE)
FIFTH AVENUE (70' WIDE)
STA: 42+91.17
CP#99
S49° 09' 18.86"E
N51° 14' 42"W
S51° 14' 42"E
42+00
43+00
44+00
45+00
46+00
46+05
3147
3149
3151
3157
3176
3180
3194
3196
3198
STOP
SSMH 5209 RIM 34.11 INV 4" 29.01 IN (W) INV 6" 28.91 OUT (NE)
SDMH 60533 RIM 35.25 INV 18" 26.65 IN (SE) INV 24" 26.50 IN (SW) INV 24" 26.45 OUT (NE)
SSMH 5210 RIM 35.09 INV 8" VCP 29.81 IN (SE) INV 6" VCP 30.15 IN (S) INV 8" VCP 29.70 OUT (NW)
SSMH 5447 RIM 34.79 INV 6" VCP 31.09 IN (SE) INV 6" VCP 31.07 OUT (NW)
Storm Drain
Joint Util Pole
Pull Box, Telephone
Vault, Utility
Vault, Telephone
CableTV
Water Meter
Gas Valve
Traffic Light
Trench Drain Inlet
Trench Drain Outlet
Light Pole
Pull Box
Pull Box, Electrical
Pull Box, Telephone
Manhole, Telephone
Manhole
Well
Sign
Bollard
Fire Hydrant
Water Valve
Deciduous Tree
Telephone
Water Meter
Pull Box
Vault
Utility
Light Pole
Pull Box, Electrical
Water Meter
Pull Box, Telephone
Pull Box
Vault, Utility
Pull Box, Telephone
Pull Box, Electrical
Water Meter
Pull Box
Pull Box, Telephone
Pull Box
Pull Box, Telephone
Pull Box
Pull Box, Telephone



APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

FILENAME: \\NA.AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\SURVEY SHEETS\S-08.DWG (S-08)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED LAND SURVEYOR BRIAN M. COLESON LS 8367 STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: AE	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	TOPOGRAPHIC SURVEY
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

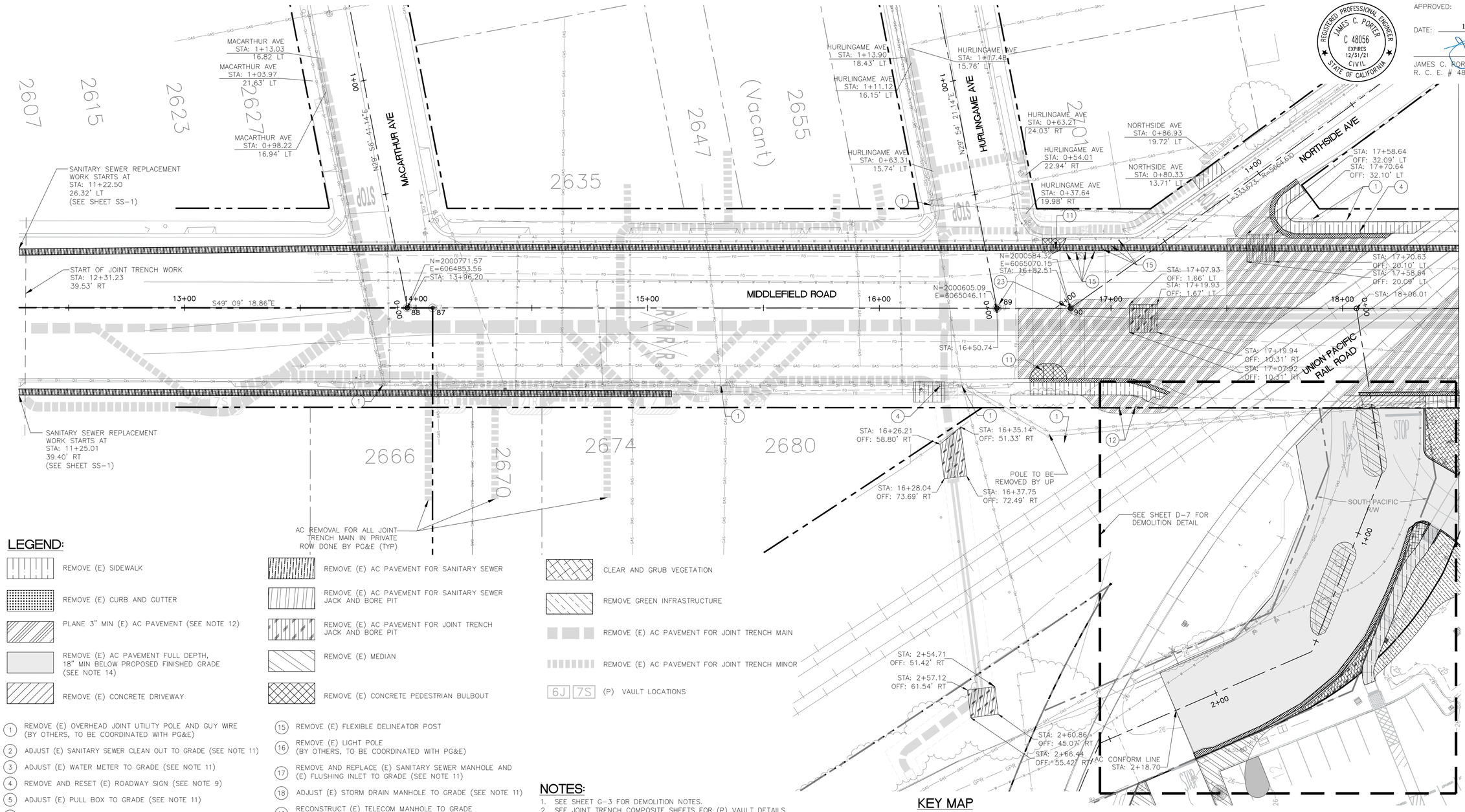
S-8
SHEET 11 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



STA: 18+50.00 - SEE SHEET D-2

LEGEND:

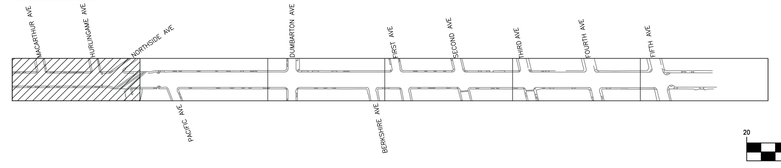
- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- PLANE 3" MIN (E) AC PAVEMENT (SEE NOTE 12)
- REMOVE (E) AC PAVEMENT FULL DEPTH, 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER JACK AND BORE PIT
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH JACK AND BORE PIT
- REMOVE (E) MEDIAN
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- CLEAR AND GRUB VEGETATION
- REMOVE GREEN INFRASTRUCTURE
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- 6J 7S (P) VAULT LOCATIONS

1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) ROADWAY SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. PROTECT (E) FIRE HYDRANT IN PLACE
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (N) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND EXISTING FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)
27. (E) RECONSTRUCT (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)

NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTHBOUND AND STATION 17+50 NORTHBOUND TO STATION 19+00, REMOVE 3" MIN (E) AC PAVEMENT BY PLANING AND PLACE NEW AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).

KEY MAP



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. SHAW
No. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT DEMOLITION PLAN
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-1
SHEET 12 OF 140

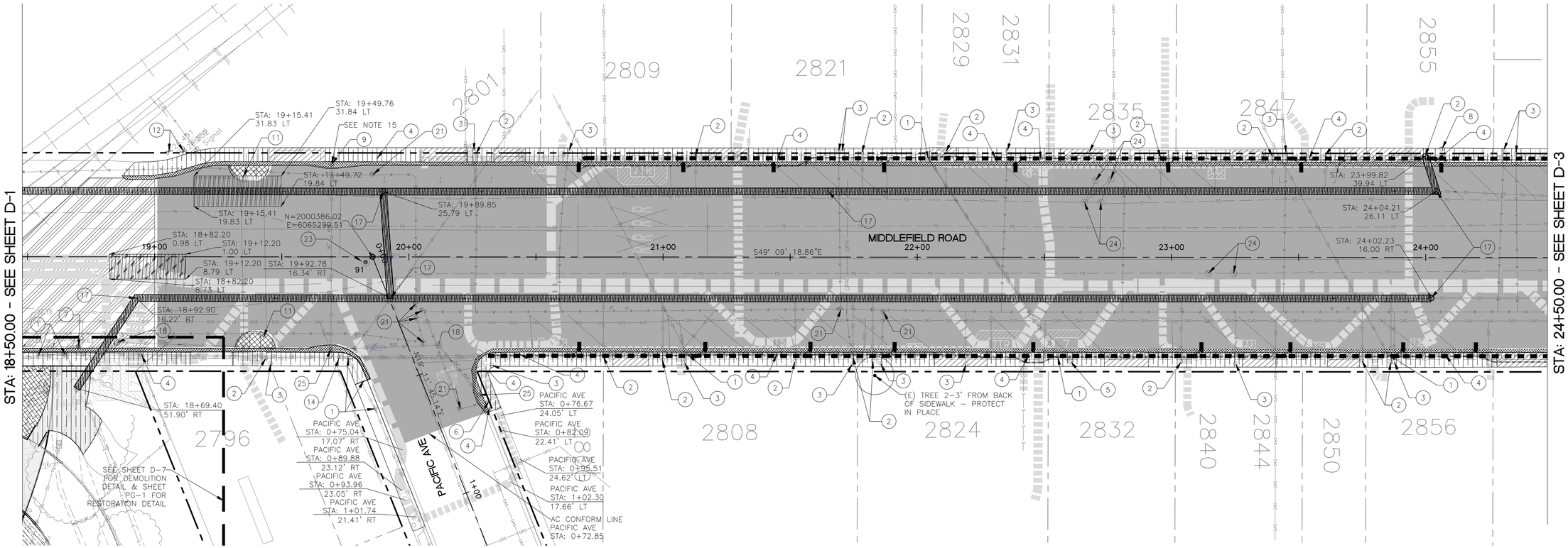
FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN_D-01.DWG (D-01)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

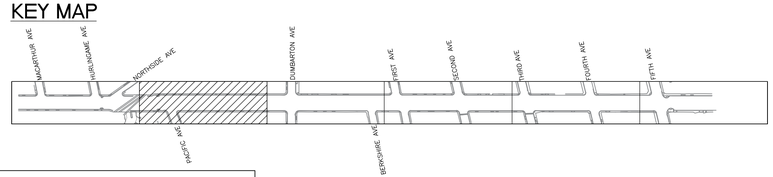
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



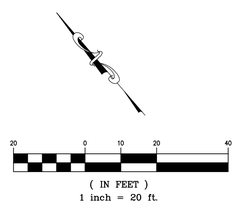
LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- PLANE 3" MIN (E) AC PAVEMENT (SEE NOTE 12)
- PLANE (E) AC PAVEMENT TO 3" BELOW PROPOSED GRADE (SEE NOTE 13)
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER JACK AND BORE PIT
- CLEAR AND GRUB VEGETATION
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH JACK AND BORE PIT
- 6J 7S (P) VAULT LOCATIONS
- REMOVE (E) AC PAVEMENT FOR TRAFFIC SIGNAL AND TREE HOLIDAY LIGHT CONDUIT

KEY MAP



1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. ADJUST (E) FIRE HYDRANT TO GRADE WHERE FINISH GRADE IS ABOVE ABOVE-GRADE FLANGED CONNECTIONS (SEE NOTE 11)
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (N) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)



NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTH BOUND AND STATION 17+50 NORTH BOUND TO STATION 19+00, PLANE 3" MIN (E) AC PAVEMENT AND PLACE 3" MIN (N) AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN (N) AC TO PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).
15. REFER TO SHEET PP-2 FOR LOCATION OF RELOCATED STORM DRAINAGE INLET.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. SHAW
No. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AB
		CHECKED BY: TS
		DRAWN BY: AB
ISSUE FOR BID	10-16-20	
REVISION	DATE	

COUNTY OF SAN MATEO
MIDDLEFIELD ROAD IMPROVEMENT PROJECT
DEMOLITION PLAN

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

D-2
SHEET 13 OF 140

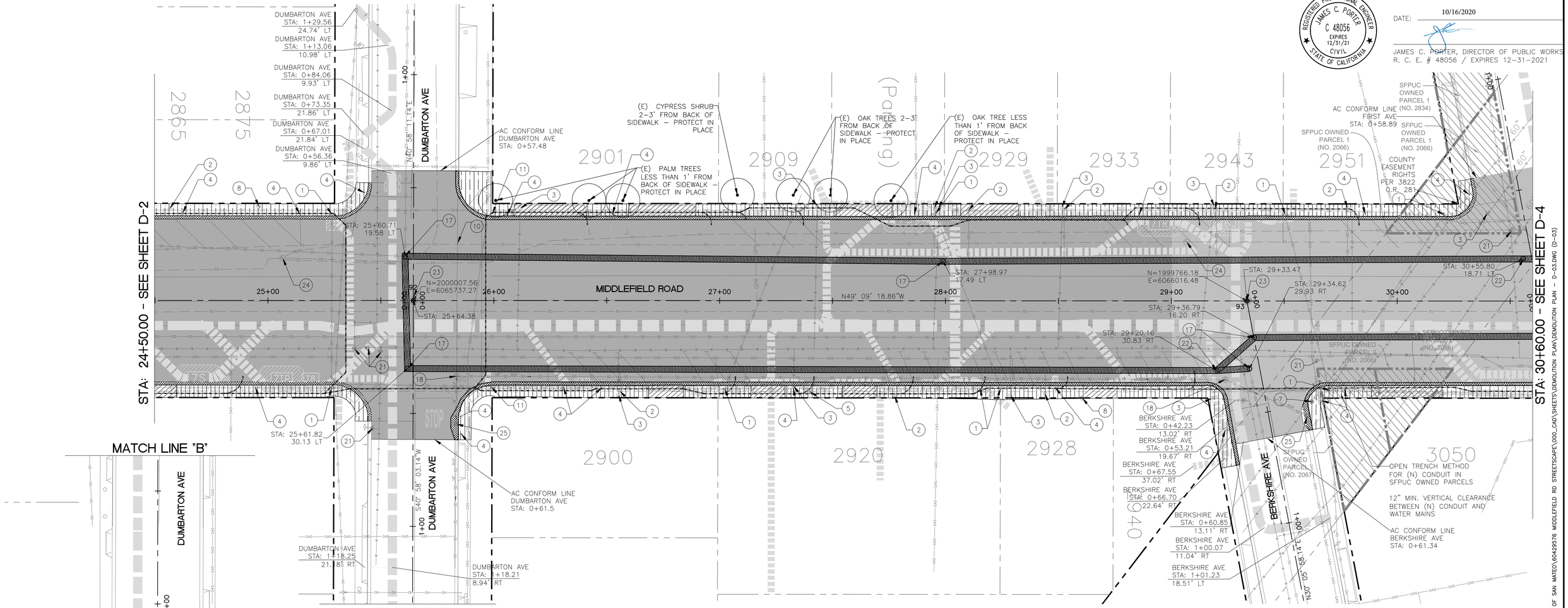
FILENAME: \\NA.AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\VDOC_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN - D-02.DWG (D-02)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

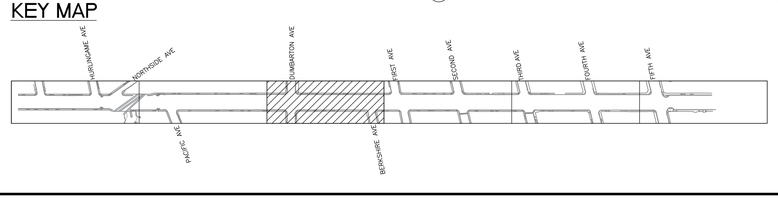


LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- PLANE (E) AC PAVEMENT TO 3" BELOW PROPOSED GRADE (SEE NOTE 13)
- REMOVE (E) AC PAVEMENT FULL DEPTH, 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- 6J 7S (P) VAULT LOCATIONS
- REMOVE (E) AC PAVEMENT FOR TRAFFIC SIGNAL AND TREE HOLIDAY LIGHT CONDUIT

1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. ADJUST (E) FIRE HYDRANT TO GRADE WHERE FINISH GRADE IS ABOVE ABOVE-GRADE FLANGED CONNECTIONS (SEE NOTE 11)
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (N) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND EXISTING FLUSHING INLET (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)

KEY MAP



NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN LOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTHBOUND AND STATION 17+50 NORTHBOUND TO STATION 19+00, REMOVE 3" MIN (E) AC PAVEMENT BY PLANING AND PLACE NEW AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STA 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE) AND PLACE (N) AC 3" (MIN) TO PROPOSED FINISHED GRADE.
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
NICHOLAS M. SIMEONOV
No. C 59265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT DEMOLITION PLAN
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-3
SHEET 14 OF 140

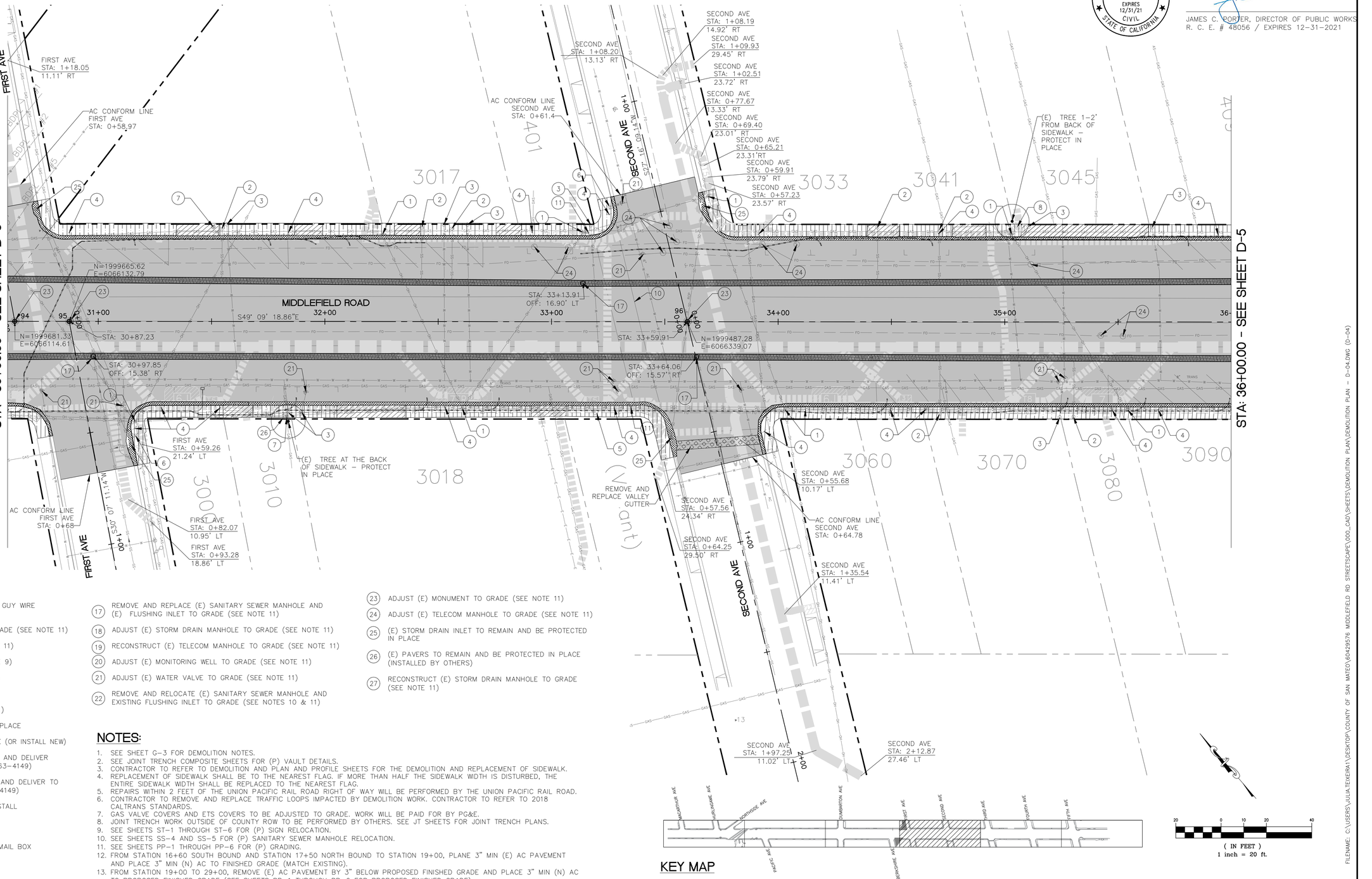
FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN - D-03.DWG (D-03)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- REMOVE (E) AC PAVEMENT FULL DEPTH, 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- 6J 7S (P) VAULT LOCATIONS
- REMOVE (E) AC PAVEMENT FOR TRAFFIC SIGNAL AND TREE HOLIDAY LIGHT CONDUIT
- REMOVE AND REPLACE (E) VALLEY GUTTER

1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. PROTECT (E) FIRE HYDRANT IN PLACE
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (N) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND EXISTING FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)
27. RECONSTRUCT (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)

NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTH BOUND AND STATION 17+50 NORTH BOUND TO STATION 19+00, PLANE 3" MIN (E) AC PAVEMENT AND PLACE 3" MIN (N) AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN (N) AC TO PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).

KEY MAP

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
ANDREW M. SWAN
No. C 58265
Exp. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: AB	**DEMOLITION PLAN**
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-4
SHEET 15 OF 140

FILENAME: C:\USERS\JULIATEXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN - D-04.DWG (D-04)

LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- REMOVE (E) AC PAVEMENT FULL DEPTH, 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- 6J 7S (P) VAULT LOCATIONS
- REMOVE (E) AC PAVEMENT FOR TRAFFIC SIGNAL AND TREE HOLIDAY LIGHT CONDUIT
- REMOVE AND REPLACE (E) VALLEY GUTTER

NOTES:

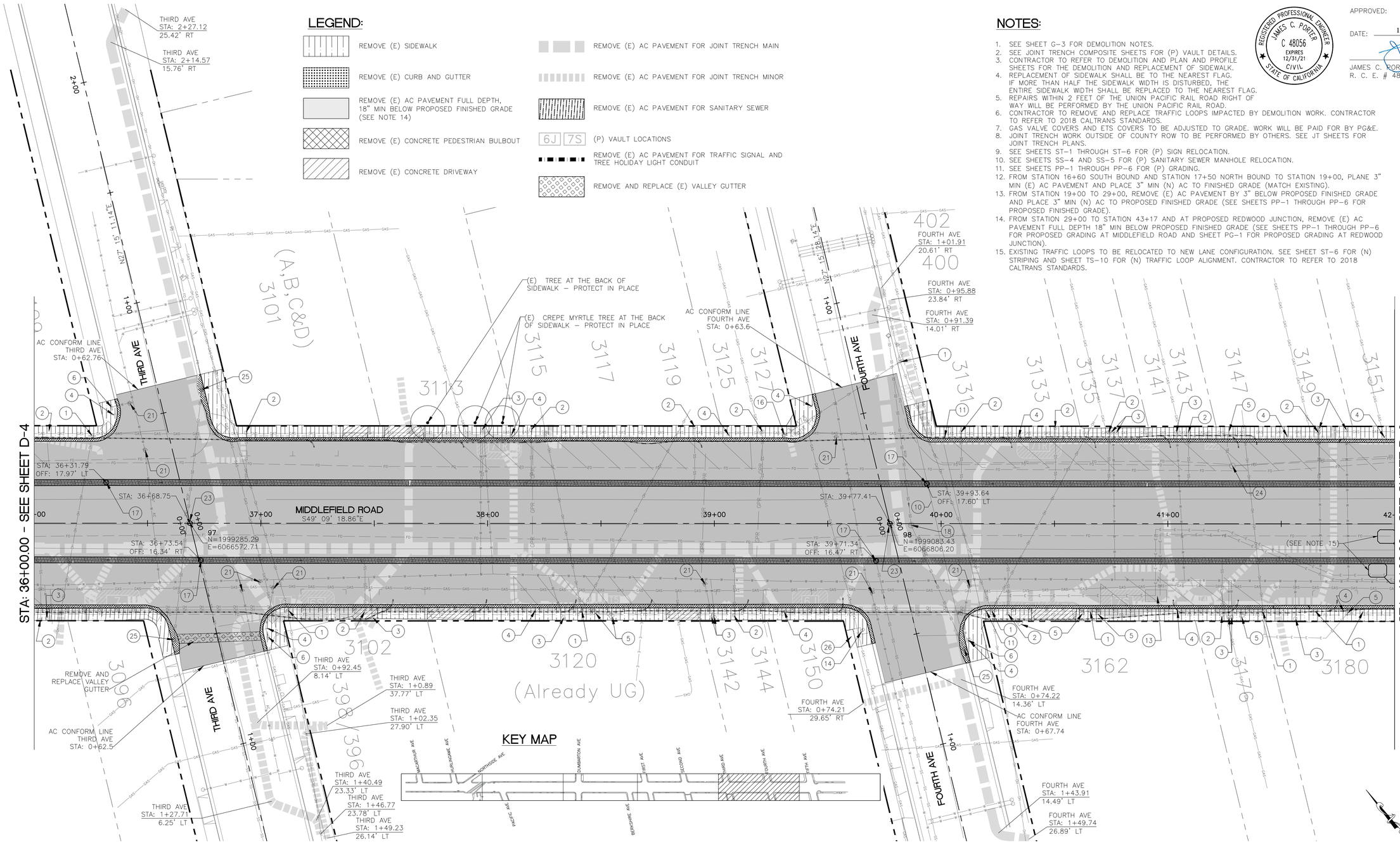
1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTH BOUND AND STATION 17+50 NORTH BOUND TO STATION 19+00, PLANE 3" MIN (E) AC PAVEMENT AND PLACE 3" MIN (N) AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN (N) AC TO PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).
15. EXISTING TRAFFIC LOOPS TO BE RELOCATED TO NEW LANE CONFIGURATION. SEE SHEET ST-6 FOR (N) STRIPING AND SHEET TS-10 FOR (N) TRAFFIC LOOP ALIGNMENT. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



KEY MAP

1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. PROTECT (E) FIRE HYDRANT IN PLACE
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (N) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS.
27. RECONSTRUCT (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER JAMES M. SWAN NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

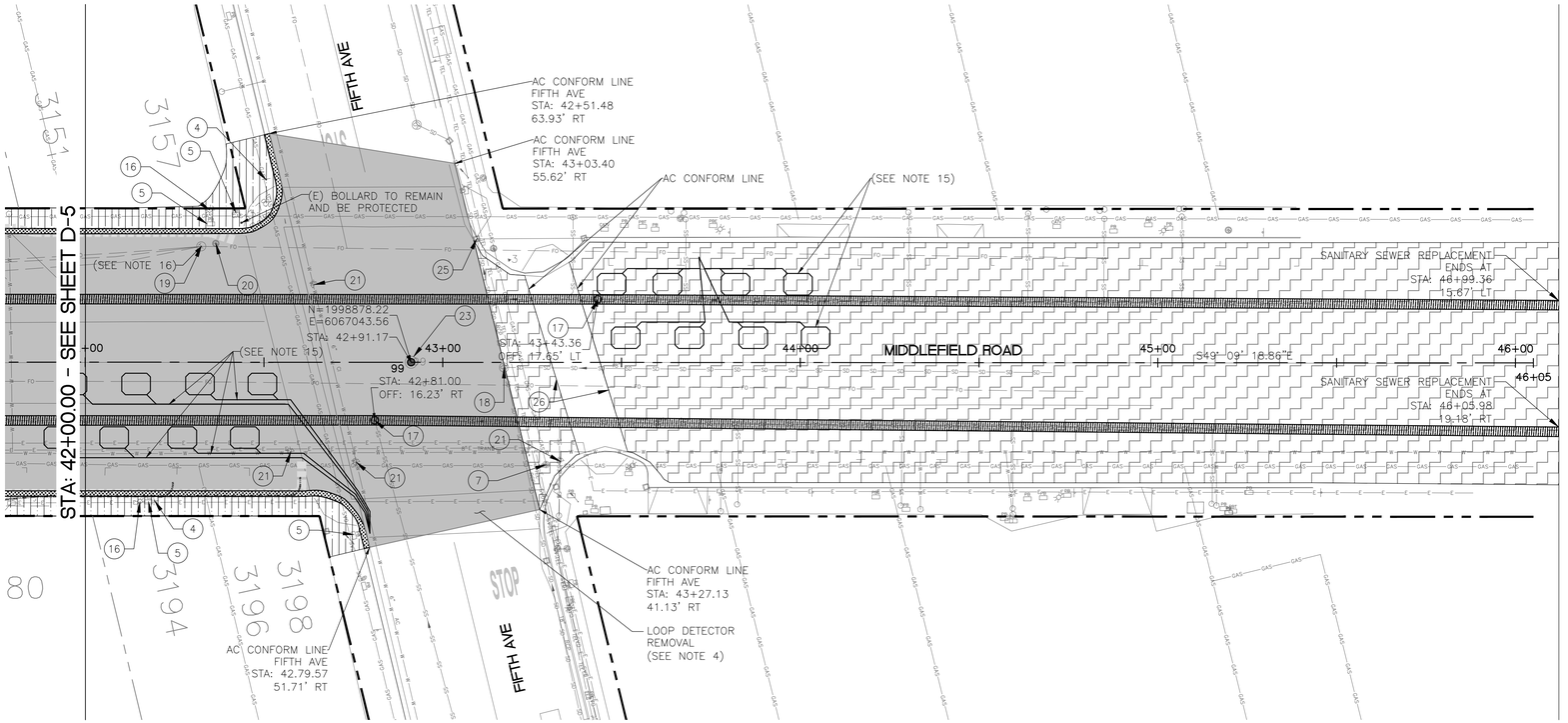
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: AB	DEMOLITION PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-5
SHEET 16 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN - D-05.DWG (D-05)



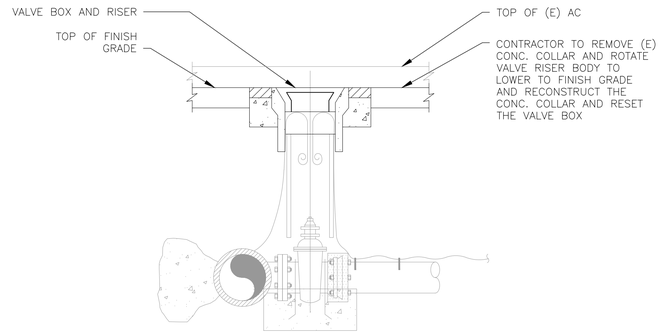
LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- REMOVE (E) AC PAVEMENT 2" (SEE NOTE 17)
- REMOVE (E) AC PAVEMENT FULL DEPTH, 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- REMOVE (E) CONCRETE PEDESTRIAN BULBOUT
- REMOVE (E) CONCRETE DRIVEWAY
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR TRAFFIC SIGNAL AND TREE HOLIDAY LIGHT CONDUIT

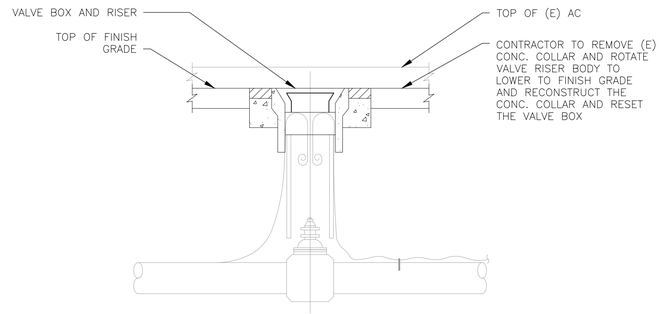
1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. PROTECT (E) FIRE HYDRANT IN PLACE
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11 & DETAIL 2/D-6)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (E) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. REMOVE AND REPLACE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11 & DETAIL 1/D-6)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)
27. RECONSTRUCT (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)

NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
3. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
4. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
7. EXISTING PAVER CROSSWALK ON MIDDLEFIELD ROAD TO BE PROTECTED AND REMAIN IN PLACE.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEETS ST-1 THROUGH ST-6 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PP-1 THROUGH PP-6 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTH BOUND AND STATION 17+50 NORTH BOUND TO STATION 19+00, PLANE 3" MIN (E) AC PAVEMENT AND PLACE 3" MIN (N) AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN (N) AC TO PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).
15. EXISTING TRAFFIC LOOPS TO BE RELOCATED TO NEW LANE CONFIGURATION. SEE SHEET ST-6 FOR (N) STRIPING AND SHEET TS-10 FOR (N) TRAFFIC LOOP ALIGNMENT. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
16. RELOCATE AND RECONSTRUCT (E) TELECOM MANHOLE OUTSIDE OF (N) PLANTER WALL AND ADJUST TO PROPOSED GRADE. SEE SHEET GI-5 FOR (N) PLANTER AND SHEET PP-6 FOR PROPOSED GRADING.
17. REMOVE 2" MINIMUM (E) AC PAVEMENT BY PLANING AND PLACE NEW AC TO FINISHED GRADE (MATCH EXISTING).

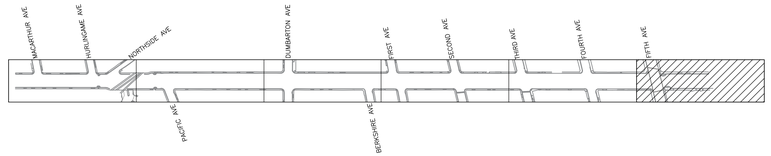


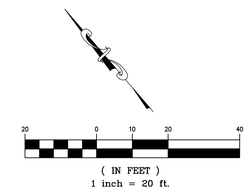
1 / D-6 WATER VALVE ADJUSTMENT
NOT TO SCALE



2 / D-6 GAS VALVE ADJUSTMENT
NOT TO SCALE

KEY MAP





APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER ANDREW M. SHEA NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT DEMOLITION PLAN
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

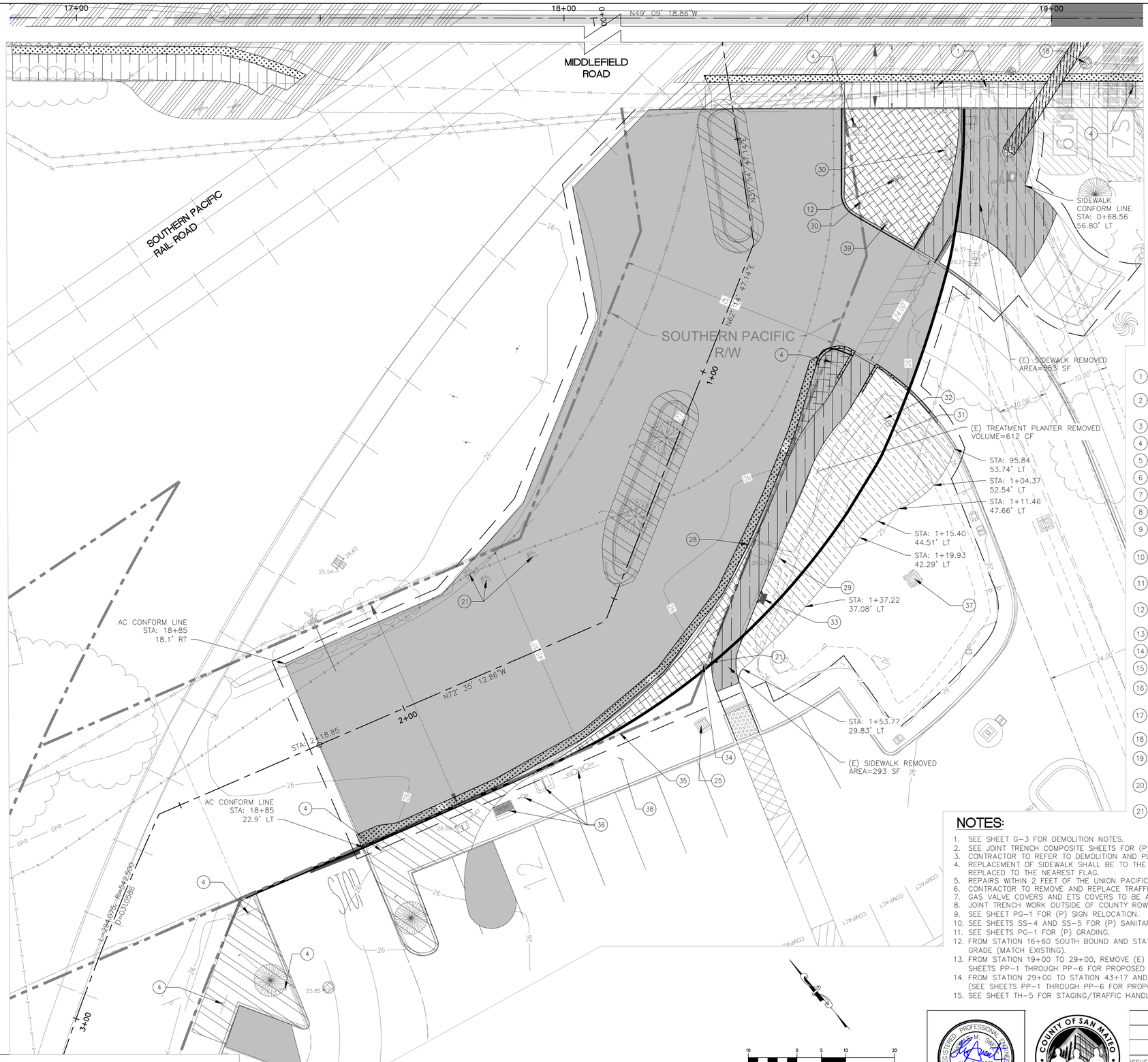
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-6
SHEET 17 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

FILENAME: C:\USERS\JULIA.TEXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN - D-06.DWG (D-06)



LEGEND:

- REMOVE (E) SIDEWALK
- REMOVE (E) CURB AND GUTTER
- PLANE 3" MIN (E) AC PAVEMENT (SEE NOTE 12)
- REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE NOTE 14)
- PLANE (E) PAVEMENT TO 3" BELOW PROPOSED FINISHED GRADE (SEE NOTE 13)
- REMOVE (E) MEDIAN
- REMOVE (E) TREATMENT PLANTER
- REMOVE (E) CONCRETE DRIVEWAY
- LIMITS OF WORK
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- REMOVE (E) AC PAVEMENT FOR SANITARY SEWER
- CLEAR AND GRUB VEGETATION
- 6J 7S (P) VAULT LOCATIONS

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

1. REMOVE (E) OVERHEAD JOINT UTILITY POLE AND GUY WIRE (BY OTHERS, TO BE COORDINATED WITH PG&E)
2. ADJUST (E) SANITARY SEWER CLEAN OUT TO GRADE (SEE NOTE 11)
3. ADJUST (E) WATER METER TO GRADE (SEE NOTE 11)
4. REMOVE AND RESET (E) STREET SIGN (SEE NOTE 9)
5. ADJUST (E) PULL BOX TO GRADE (SEE NOTE 11)
6. PROTECT (E) FIRE HYDRANT IN PLACE (SEE NOTE 11)
7. ADJUST (E) GAS VALVE TO GRADE (SEE NOTE 11)
8. (E) OPERABLE PAYPHONE TO BE PROTECTED IN PLACE
9. REMOVE AND RELOCATE (E) DRAIN INLET TO GRADE (OR INSTALL NEW)
10. REMOVE (E) LIGHTED CROSSWALK, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
11. REMOVE (E) PEDESTRIAN SIGNAL, LABEL PARTS, AND DELIVER TO GRANT YARD (CONTACT: JEFF PACINI 650-363-4149)
12. UPRR TO REMOVE (E) RAILROAD SIGNAL AND INSTALL (E) SIGNAL
13. ADJUST (E) VAULT TO GRADE (SEE NOTE 11)
14. RELOCATE (E) UNITED STATES POSTAL SERVICE MAIL BOX
15. REMOVE (E) FLEXIBLE DELINEATOR POST
16. REMOVE (E) LIGHT POLE (BY OTHERS, TO BE COORDINATED WITH PG&E)
17. RECONSTRUCT (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTE 11)
18. ADJUST (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
19. RECONSTRUCT (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
20. ADJUST (E) MONITORING WELL TO GRADE (SEE NOTE 11)
21. ADJUST (E) WATER VALVE TO GRADE (SEE NOTE 11)
22. REMOVE AND RELOCATE (E) SANITARY SEWER MANHOLE AND (E) FLUSHING INLET TO GRADE (SEE NOTES 10 & 11)
23. ADJUST (E) MONUMENT TO GRADE (SEE NOTE 11)
24. ADJUST (E) TELECOM MANHOLE TO GRADE (SEE NOTE 11)
25. (E) STORM DRAIN INLET TO REMAIN AND BE PROTECTED IN PLACE
26. (E) PAVERS TO REMAIN AND BE PROTECTED IN PLACE (INSTALLED BY OTHERS)
27. RECONSTRUCT (E) STORM DRAIN MANHOLE TO GRADE (SEE NOTE 11)
28. RELOCATE (E) THROUGH CURB AND SIDEWALK OPENING
29. REMOVE (E) ROCK SLOPE PROTECTION
30. RELOCATE (E) FAIR OAKS HEALTH CENTER SIGN AND CONDUIT BOX TO NEW LANDSCAPE AREA
31. REMOVE (E) SURFACE IRRIGATION WITHIN FILLZONE (6± HOSES)
32. RELOCATE (E) CLEANOUT AS SHOWN ON (E) UD
33. RELOCATE (E) FIRE DEPARTMENT CONNECTION 15'± SOUTH (12" MIN. BEHIND SIDEWALK)
34. RELOCATE (E) BOLLARD
35. RELOCATE (E) FIRE HYDRANT 3'+ (18" MIN. BEHIND FC)
36. PROTECT-IN-PLACE (E) IRRIGATION METER, DOMESTIC BACKFLOW DEVICE, DOMESTIC WATER METERS, AND FIRE BACKFLOW DEVICE
37. PROTECT-IN-PLACE (E) STORM DRAIN OUTLET
38. CONTRACTOR TO MAINTAIN (E) LANDSCAPE AND PROTECT-IN-PLACE, AND RECONSTRUCT IRRIGATION HEADS
39. RELOCATE (E) PULL BOX

NOTES:

1. SEE SHEET G-3 FOR DEMOLITION NOTES.
2. SEE JOINT TRENCH COMPOSITE SHEETS FOR (P) VAULT DETAILS.
3. CONTRACTOR TO REFER TO DEMOLITION AND PLAN AND PROFILE SHEETS FOR THE DEMOLITION AND REPLACEMENT OF SIDEWALK.
4. REPLACEMENT OF SIDEWALK SHALL BE TO THE NEAREST FLAG. IF MORE THAN HALF THE SIDEWALK WIDTH IS DISTURBED, THE ENTIRE SIDEWALK WIDTH SHALL BE REPLACED TO THE NEAREST FLAG.
5. REPAIRS WITHIN 2 FEET OF THE UNION PACIFIC RAIL ROAD RIGHT OF WAY WILL BE PERFORMED BY THE UNION PACIFIC RAIL ROAD.
6. CONTRACTOR TO REMOVE AND REPLACE TRAFFIC LOOPS IMPACTED BY DEMOLITION WORK. CONTRACTOR TO REFER TO 2018 CALTRANS STANDARDS.
7. GAS VALVE COVERS AND ETS COVERS TO BE ADJUSTED TO GRADE. WORK WILL BE PAID FOR BY PG&E.
8. JOINT TRENCH WORK OUTSIDE OF COUNTY ROW TO BE PERFORMED BY OTHERS. SEE JT SHEETS FOR JOINT TRENCH PLANS.
9. SEE SHEET PG-1 FOR (P) SIGN RELOCATION.
10. SEE SHEETS SS-4 AND SS-5 FOR (P) SANITARY SEWER MANHOLE RELOCATION.
11. SEE SHEETS PG-1 FOR (P) GRADING.
12. FROM STATION 16+60 SOUTH BOUND AND STATION 17+50 NORTH BOUND TO STATION 19+00, PLANE 3" MIN (E) AC PAVEMENT AND PLACE 3" MIN (N) AC TO FINISHED GRADE (MATCH EXISTING).
13. FROM STATION 19+00 TO 29+00, REMOVE (E) AC PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN (N) AC TO PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED FINISHED GRADE).
14. FROM STATION 29+00 TO STATION 43+17 AND AT PROPOSED REDWOOD JUNCTION, REMOVE (E) AC PAVEMENT FULL DEPTH 18" MIN BELOW PROPOSED FINISHED GRADE (SEE SHEETS PP-1 THROUGH PP-6 FOR PROPOSED GRADING AT MIDDLEFIELD ROAD AND SHEET PG-1 FOR PROPOSED GRADING AT REDWOOD JUNCTION).
15. SEE SHEET TH-5 FOR STAGING/TRAFFIC HANDLING.

10 0 5 10 20
(IN FEET)
1 inch = 10 ft.

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. SHORT
NO. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

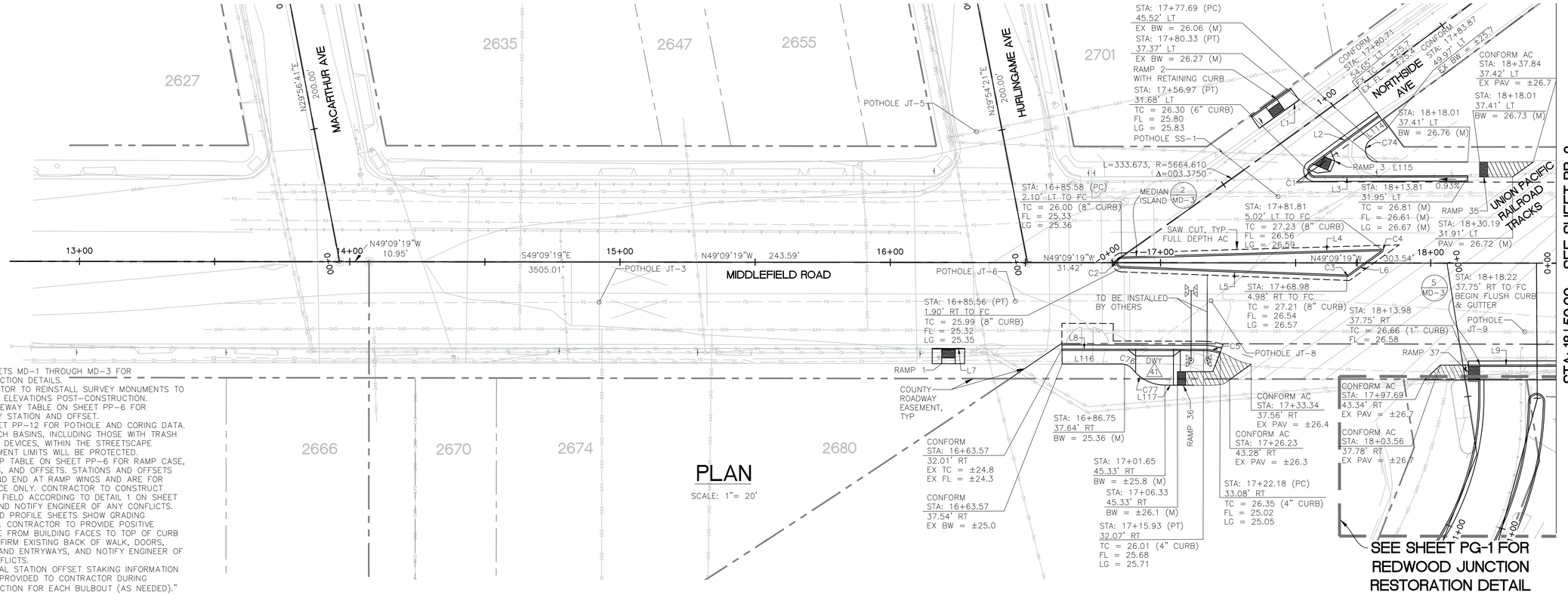
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT REDWOOD JUNCTION DEMOLITION
		CHECKED BY: TS	
ISSUE FOR BID	10-16-20	DRAWN BY: AB	
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

D-7
SHEET 18 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\DEMOLITION PLAN\DEMOLITION PLAN - D-07.DWG (D-7)



PLAN

SCALE: 1"= 20'

NOTES:

1. SEE SHEETS MD-1 THROUGH MD-3 FOR CONSTRUCTION DETAILS.
2. CONTRACTOR TO REINSTALL SURVEY MONUMENTS TO THE NEW ELEVATIONS POST-CONSTRUCTION.
3. SEE DRIVEWAY TABLE ON SHEET PP-6 FOR DRIVEWAY STATION AND OFFSET.
4. SEE SHEET PP-12 FOR POTHOLE AND CORING DATA.
5. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN THE STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
6. SEE RAMP TABLE ON SHEET PP-6 FOR RAMP CASE, STATIONS, AND OFFSETS. STATIONS AND OFFSETS BEGIN AND END AT RAMP WINGS AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING TO DETAIL 1 ON SHEET MD-2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
7. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. ADDITIONAL STATION OFFSET STAKING INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION FOR EACH BULBOUT (AS NEEDED)."

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

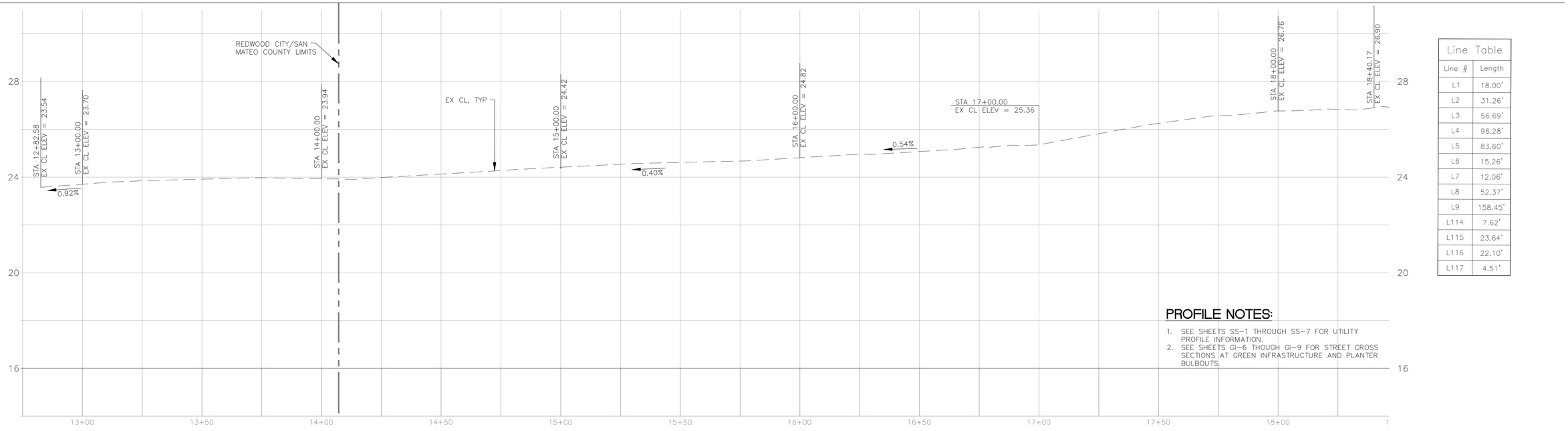
STA: 18+50.00 – SEE SHEET PP-2

Curve Table			
Curve #	Length	Radius	Delta
C1	6.28'	2.50'	143°59'18"
C2	6.15'	2.00'	176°08'54"
C3	0.66'	1.00'	037°49'58"
C4	1.27'	0.50'	146°01'07"
C5	6.36'	20.00'	018°12'43"
C74	11.34'	4.50'	144°21'20"
C75	10.80'	20.00'	030°56'30"
C76	4.65'	5.12'	051°58'15"
C77	13.68'	15.12'	051°50'01"

LEGEND:

AC PAVEMENT (SEE DETAIL 4/MD-2)

(IN FEET)
1 inch = 20 ft.



ROAD CENTERLINE PROFILE

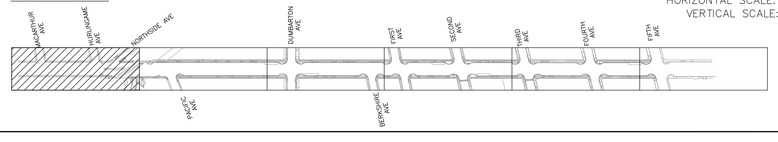
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

Line Table	
Line #	Length
L1	18.00'
L2	31.26'
L3	56.69'
L4	96.28'
L5	83.60'
L6	15.26'
L7	12.06'
L8	52.37'
L9	158.45'
L114	7.62'
L115	23.64'
L116	22.10'
L117	4.51'

PROFILE NOTES:

1. SEE SHEETS SS-1 THROUGH SS-7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI-6 THOUGH GI-9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. SHEA
NO. C 59265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	PLAN AND PROFILE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-1
SHEET 19 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-1_PLAN_&_PROFILE.DWG (PP-1)

NOTES:

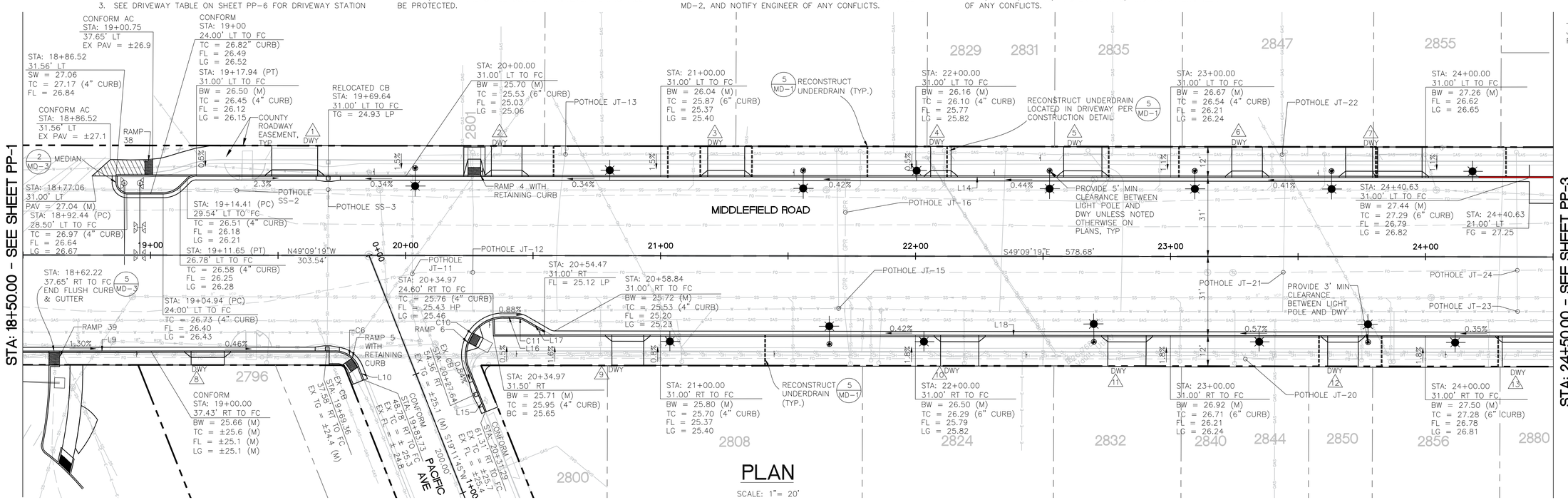
1. SEE SHEETS MD-1 THROUGH MD-3 FOR CONSTRUCTION DETAILS.
2. CONTRACTOR TO REINSTALL MONUMENTS WITH NEW ELEVATIONS POST-CONSTRUCTION.
3. SEE DRIVEWAY TABLE ON SHEET PP-6 FOR DRIVEWAY STATION AND OFFSET.
4. SEE PP-12 FOR POTHOLE AND CORING DATA.
5. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN THE STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
6. SEE RAMP TABLE ON SHEET PP-6 FOR RAMP CASE, STATIONS, AND OFFSETS. STATIONS AND OFFSETS BEGIN AND END AT RAMP WINGS AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING DETAIL 1 ON SHEET MD-2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
7. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. ADDITIONAL STATION OFFSET INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION FOR EACH BULBOUT (AS NEEDED).

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



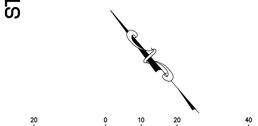
PLAN

SCALE: 1"= 20'

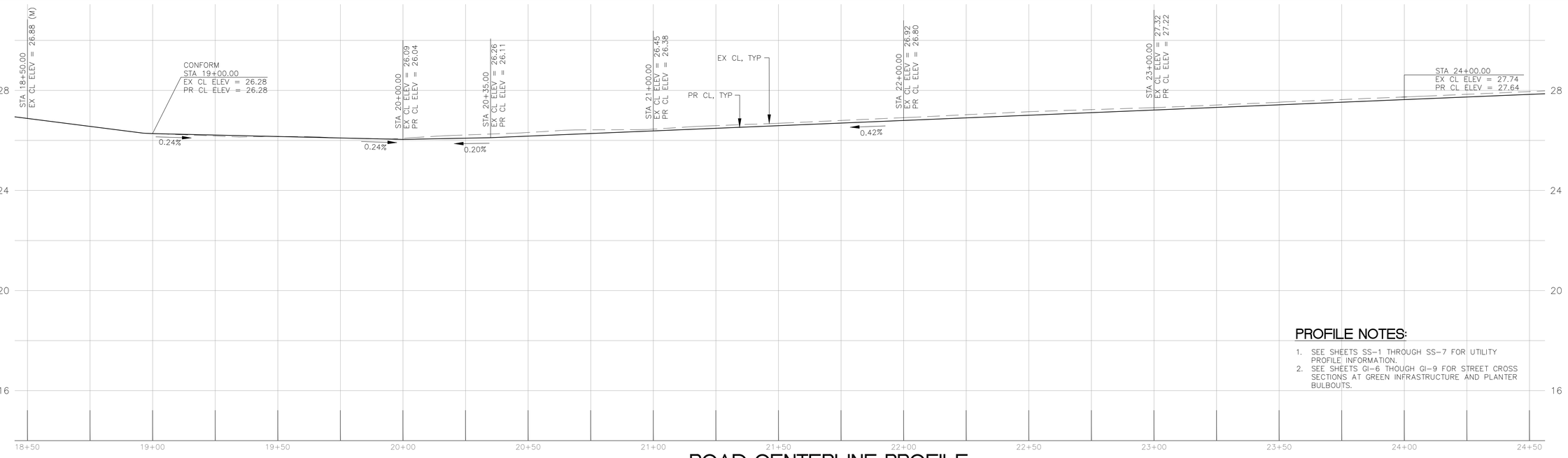
Curve Table			
Curve #	Length	Radius	Delta
C6	11.98'	10.00'	068°37'43"
C10	29.26'	15.00'	111°44'48"
C11	4.97'	9.50'	030°00'00"

LEGEND:

AC PAVEMENT (SEE DETAIL 4/MD-2)



(IN FEET)
1 inch = 20 ft.



ROAD CENTERLINE PROFILE

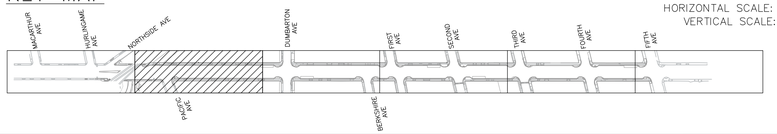
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

Line Table	
Line #	Length
L9	158.45'
L10	5.39'
L14	582.68'
L15	18.04'
L16	4.00'
L17	8.35'
L18	444.83'

PROFILE NOTES:

1. SEE SHEETS SS-1 THROUGH SS-7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI-6 THOUGH GI-9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. SWEET
NO. C 59265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	PLAN AND PROFILE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-2
SHEET 20 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-2_PLAN_&_PROFILE.DWG (PP-2)

NOTES:

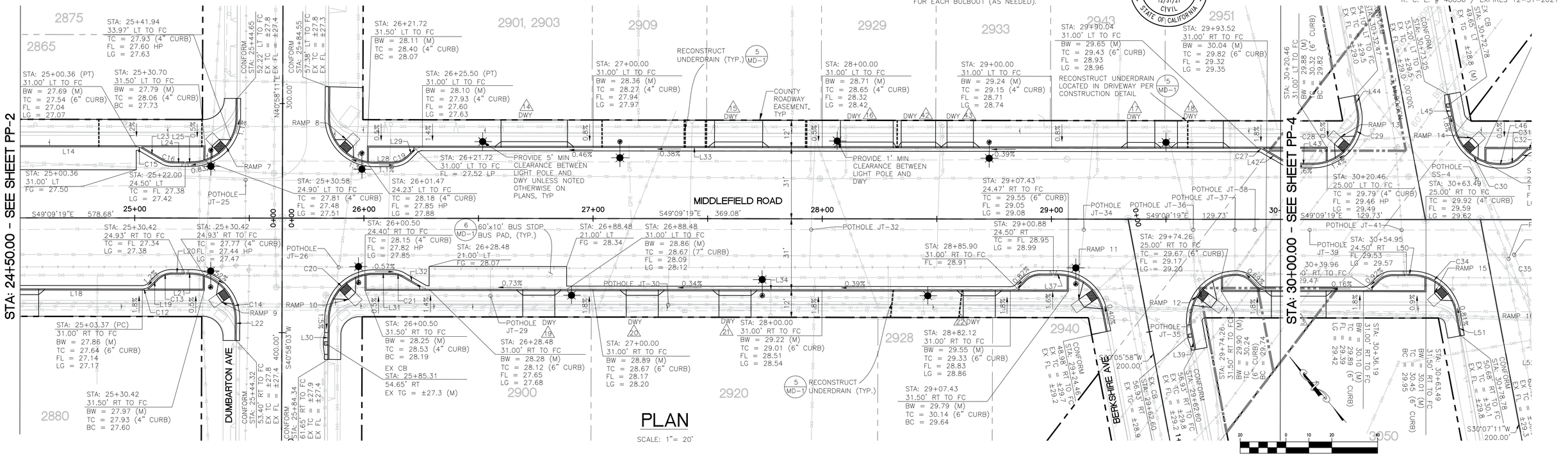
1. SEE SHEETS MD–1 THROUGH MD–3 FOR CONSTRUCTION DETAILS.
2. TRAFFIC SIGN, TRAFFIC SIGNAL LIGHT, FIRE HYDRANT, STREET SIGN AND ANY OTHER FEATURES AND THEIR FOUNDATIONS SHOULD NOT BE PLACED WITHIN THE FOOTPRINT OF THE SFPUC PIPELINES.
3. CONTRACTOR TO REINSTALL MONUMENTS WITH NEW ELEVATIONS POST–CONSTRUCTION.
4. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
5. SEE DRIVEWAY TABLE ON SHEET PP–6 FOR DRIVEWAY STATION AND OFFSET.
6. SEE SHEET PP–12 FOR POTHOLE AND CORING DATA.
7. SEE RAMP TABLE ON SHEET PP–6 FOR CURB RAMP CASE, STATIONS AND OFFSETS. STATIONS AND OFFSETS BEGIN AND END AT RAMP WINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING TO DETAIL 1 ON SHEET MD–2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
9. ADDITIONAL STATION OFFSET INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION FOR EACH BULBOUT (AS NEEDED).

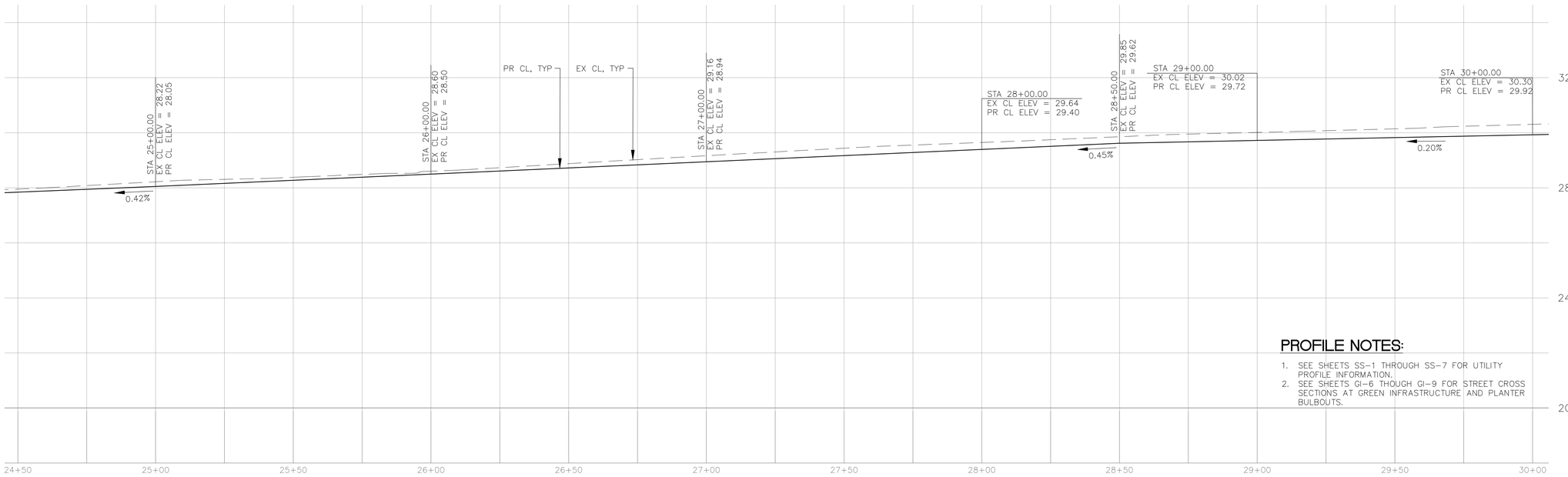
REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021





ROAD CENTERLINE PROFILE

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

PROFILE NOTES:

1. SEE SHEETS SS–1 THROUGH SS–7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI–6 THOUGH GI–9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

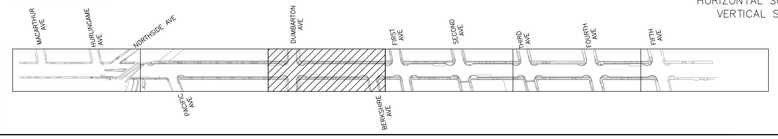
Curve Table

Curve #	Length	Radius	Delta
C12	3.93'	5.00'	045°00'00"
C13	7.46'	9.50'	045°00'00"
C14	31.54'	20.00'	090°21'29"
C15	2.62'	5.00'	030°00'00"
C16	4.97'	9.50'	030°00'00"
C19	7.46'	9.50'	045°00'00"
C20	31.27'	20.00'	089°35'21"
C21	4.97'	9.50'	030°00'00"
C27	2.62'	5.00'	030°00'00"

Line Table

Line #	Length
L14	582.68'
L18	444.83'
L19	3.89'
L20	5.25'
L21	1.75'
L22	9.28'
L23	10.11'
L24	4.87'
L25	2.13'
L28	8.00'
L29	3.89'
L30	17.79'
L31	8.00'
L32	8.59'
L33	364.54'
L34	253.64'
L37	1.75'
L39	9.40'
L42	10.11'

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER MARY M. SHAFFER NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	PLAN AND PROFILE
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP–3
SHEET 21 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP–3_PLAN_&_PROFILE.DWG (PP–3)

NOTES:

1. SEE SHEETS MD-1 THROUGH MD-3 FOR CONSTRUCTION DETAILS.
2. TRAFFIC SIGN, TRAFFIC SIGNAL LIGHT, FIRE HYDRANT, STREET SIGN AND ANY OTHER FEATURES AND THEIR FOUNDATIONS SHOULD NOT BE PLACED WITHIN THE FOOTPRINT OF THE SFPUC PIPELINES.
3. CONTRACTOR TO REINSTALL MONUMENTS WITH NEW ELEVATIONS POST-CONSTRUCTION.
4. SEE DRIVEWAY TABLE ON SHEET PP-6 FOR DRIVEWAY STATION AND OFFSET.
5. SEE SHEET PP-12 FOR POTHOLE AND CORING DATA.
6. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN THE STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
7. SEE RAMP TABLE ON SHEET PP-6 FOR CURB RAMP CASE, STATIONS, AND OFFSETS. STATIONS AND OFFSETS BEGIN AND END AT RAMP WINGS AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING TO DETAIL 1 ON SHEET MD-2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
9. ADDITIONAL STATION OFFSET INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION FOR EACH BULBOUT (AS NEEDED).

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

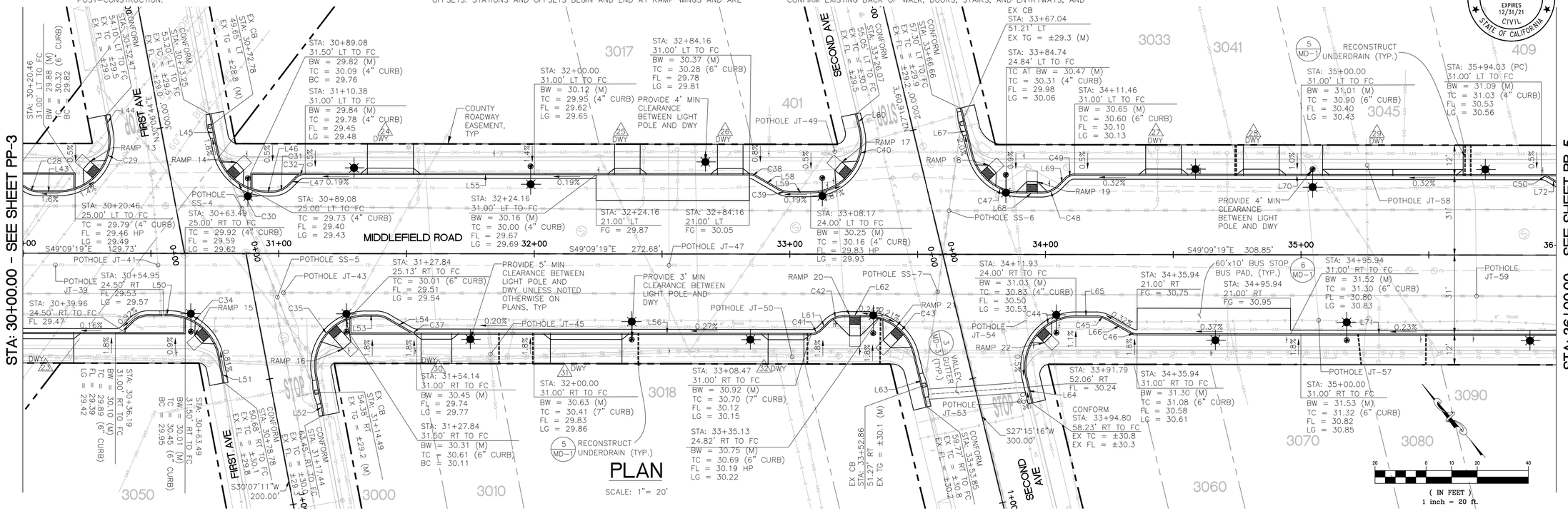
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

PLAN

SCALE: 1" = 20'

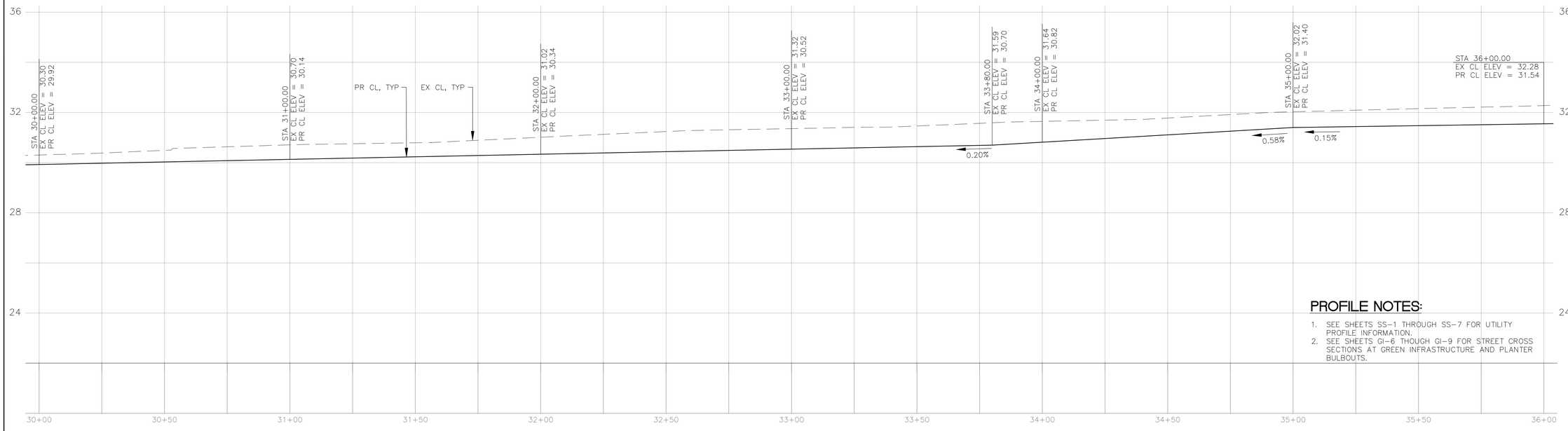


Curve Table			
Curve #	Length	Radius	Delta
C28	4.97'	9.50'	030°00'00"
C29	35.21'	20.00'	100°51'58"
C30	27.64'	20.00'	079°10'07"
C31	7.46'	9.50'	045°00'00"
C32	3.93'	5.00'	045°00'00"
C34	27.74'	20.00'	079°28'45"
C35	35.13'	20.00'	100°39'11"
C37	2.62'	5.00'	030°00'00"
C38	2.62'	5.00'	030°00'00"
C39	4.97'	9.50'	030°00'00"
C40	36.18'	20.00'	103°38'19"
C41	3.93'	5.00'	045°00'00"
C42	7.46'	9.50'	045°00'00"
C43	26.69'	20.00'	076°28'09"
C44	36.11'	20.00'	103°26'14"
C45	4.97'	9.50'	030°00'00"
C46	2.62'	5.00'	030°00'00"
C47	26.67'	20.00'	076°23'56"
C48	7.46'	9.50'	045°00'00"
C49	3.93'	5.00'	045°00'00"
C50	2.62'	5.00'	030°00'00"

Line Table		Line Table	
Line #	Length	Line #	Length
L43	8.00'	L61	3.89'
L44	6.45'	L62	8.00'
L45	14.62'	L63	21.04'
L46	2.00'	L64	9.85'
L47	3.89'	L65	8.00'
L50	1.75'	L66	10.11'
L51	10.51'	L67	18.52'
L52	16.03'	L68	8.00'
L53	4.00'	L69	3.89'
L54	10.11'	L70	182.57'
L55	173.79'	L71	189.33'
L56	154.33'	L72	10.11'
L58	10.11'		
L59	8.00'		
L60	6.52'		

ROAD CENTERLINE PROFILE

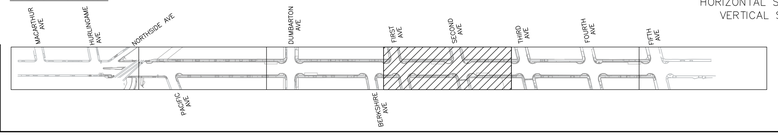
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'



PROFILE NOTES:

1. SEE SHEETS SS-1 THROUGH SS-7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI-6 THOUGH GI-9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER TIMOTHY M. SWEET NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	PLAN AND PROFILE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-4
SHEET 22 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-4_PLAN_&_PROFILE.DWG (PP-4)

NOTES:

1. SEE SHEETS MD-1 THROUGH MD-3 FOR CONSTRUCTION DETAILS.
2. CONTRACTOR TO REINSTALL MONUMENTS WITH NEW ELEVATIONS POST-CONSTRUCTION.
3. SEE DRIVEWAY TABLE ON SHEET PP-6 FOR DRIVEWAY STATION AND OFFSET.
4. CONTRACTOR TO REPLACE SPECIAL PAVING IN KIND.
5. SEE SHEET PP-12 FOR POTHOLE AND CORING DATA.
6. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN THE STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
7. SEE RAMP TABLE ON SHEET PP-6 FOR CURB RAMP CASE, STATIONS, AND OFFSETS. STATIONS AND OFFSETS BEGIN AND END AT THE RAMP WINGS AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING TO DETAIL 1 ON SHEET MD-2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
9. ADDITIONAL STATION OFFSET INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION (AS NEEDED).

APPROVED:

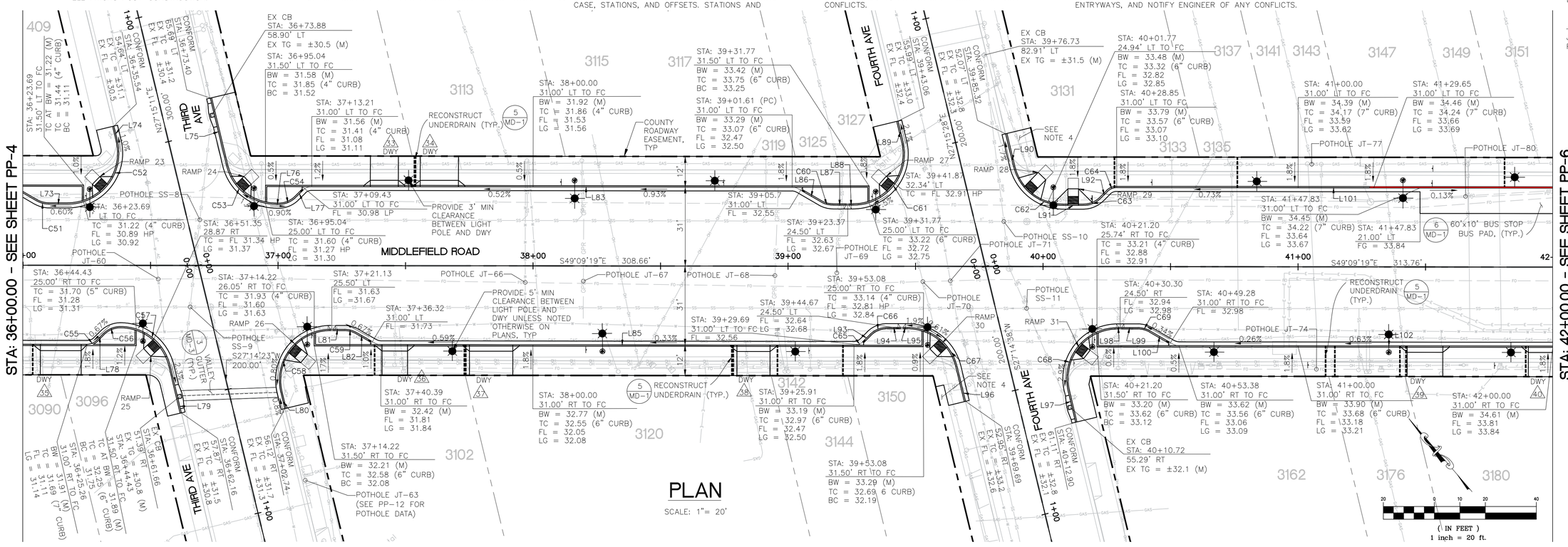
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

STA: 36+00.00 – SEE SHEET PP-4

STA: 42+00.00 – SEE SHEET PP-6



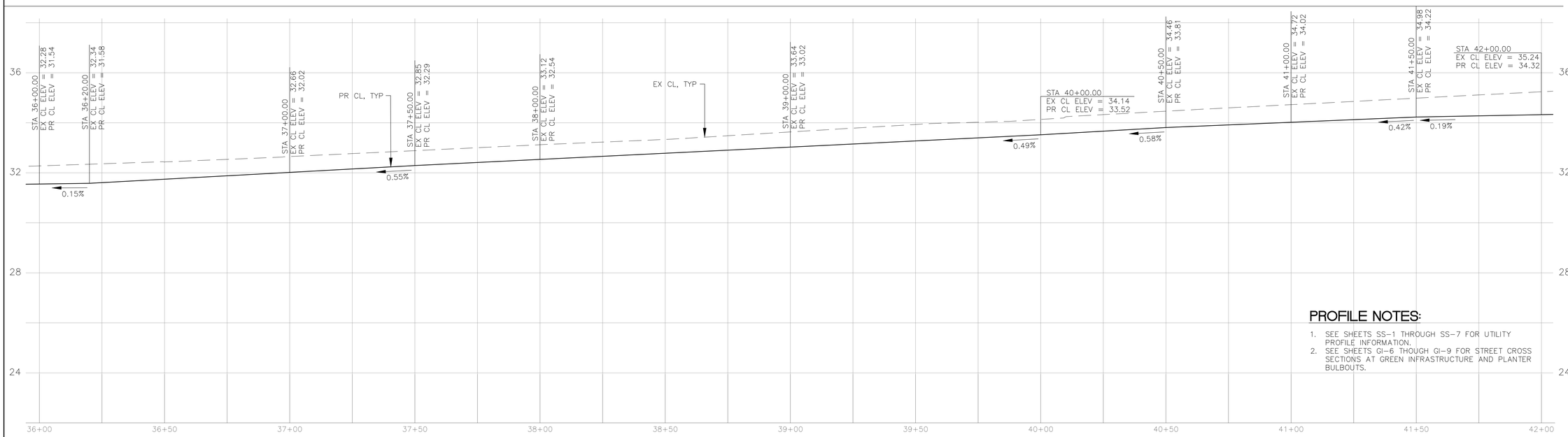
Curve Table			
Curve #	Length	Radius	Delta
C51	4.97'	9.50'	030°00'00"
C52	36.18'	20.00'	103°39'01"
C53	26.69'	20.00'	076°27'04"
C54	7.46'	9.50'	045°00'00"
C55	3.93'	5.00'	045°00'00"
C56	7.46'	9.50'	045°00'00"
C57	26.71'	20.00'	076°30'35"
C58	36.17'	20.00'	103°37'47"
C59	4.97'	9.50'	030°00'00"
C60	4.97'	9.50'	030°00'00"
C61	36.14'	20.00'	103°31'18"
C62	26.68'	20.00'	076°26'08"
C63	7.46'	9.50'	045°00'00"
C64	3.93'	5.00'	045°00'00"
C65	3.93'	5.00'	045°00'00"
C66	7.46'	9.50'	045°00'00"
C67	26.63'	20.00'	076°17'30"
C68	36.15'	20.00'	103°34'27"
C69	4.97'	9.50'	030°00'00"

Line Table	
Line #	Length
L73	7.50'
L74	6.09'
L75	27.13'
L76	1.00'
L77	4.05'
L78	3.89'
L79	19.06'
L80	6.59'
L81	4.48'
L82	6.59'
L83	188.40'
L85	189.30'
L86	8.59'
L87	5.25'
L88	1.75'

Line Table	
Line #	Length
L89	8.55'
L90	13.13'
L91	8.00'
L92	3.89'
L93	3.89'
L94	5.25'
L95	1.75'
L96	14.09'
L97	12.77'
L98	0.46'
L99	6.54'
L100	8.38'
L101	178.98'
L102	181.15'

PLAN

SCALE: 1" = 20'



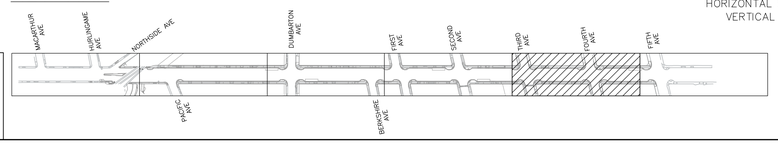
PROFILE NOTES:

1. SEE SHEETS SS-1 THROUGH SS-7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI-6 THOUGH GI-9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

ROAD CENTERLINE PROFILE

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

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER STACY M. SWIFT NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

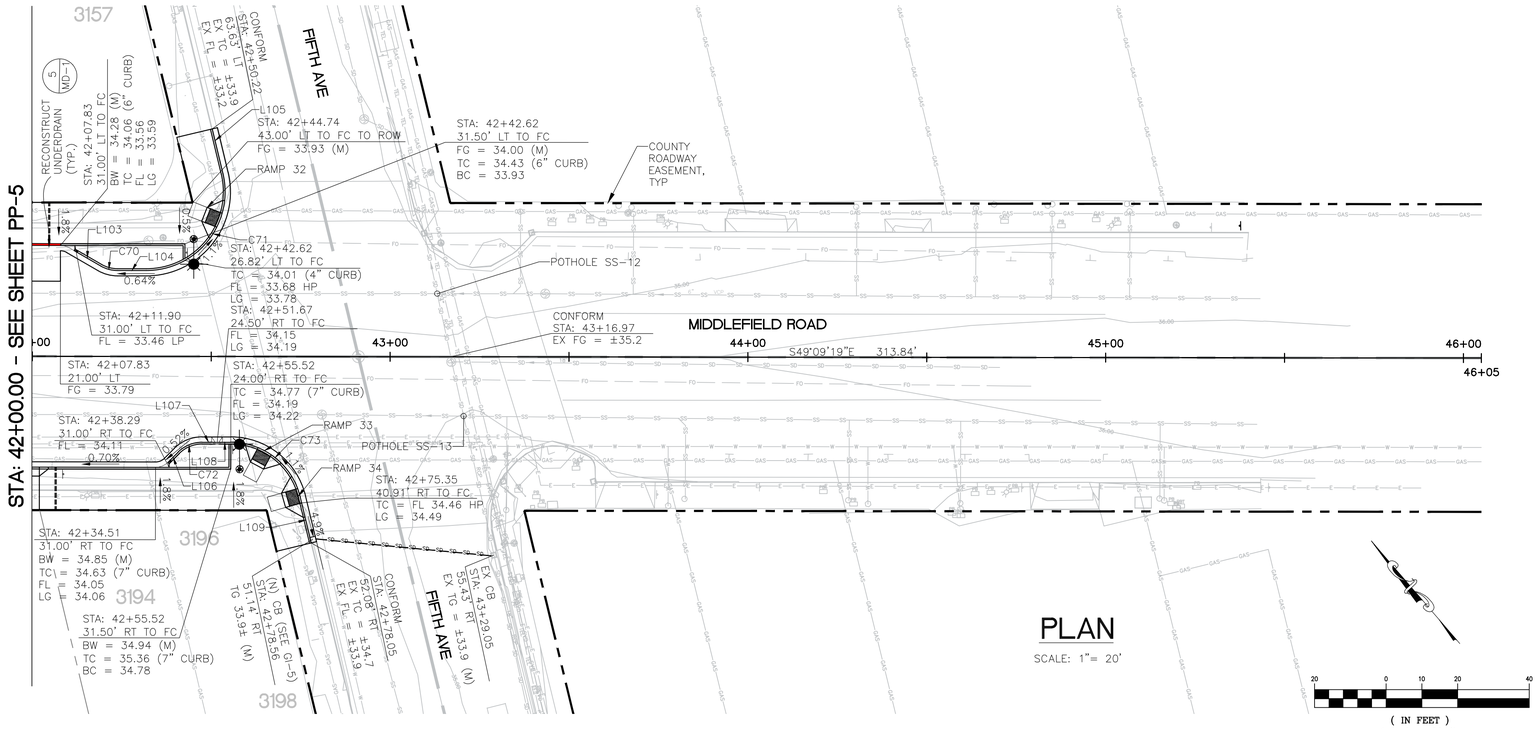
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLAN AND PROFILE
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-5
SHEET 23 OF 140

FILENAME: C:\USERS\JULIATEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-5_PLAN_&_PROFILE.DWG (PP-5)



PLAN

SCALE: 1" = 20'

(IN FEET)
1 inch = 20 ft.

Line Table	
Line #	Length
L103	8.59'
L104	8.00'
L105	12.83'
L106	3.89'
L107	3.66'
L108	3.35'
L109	13.15'

Curve Table			
Curve #	Length	Radius	Delta
C70	4.97'	9.50'	030°00'00"
C71	39.76'	22.00'	103°32'55"
C72	7.46'	9.50'	045°00'00"
C73	26.67'	20.00'	076°24'18"

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

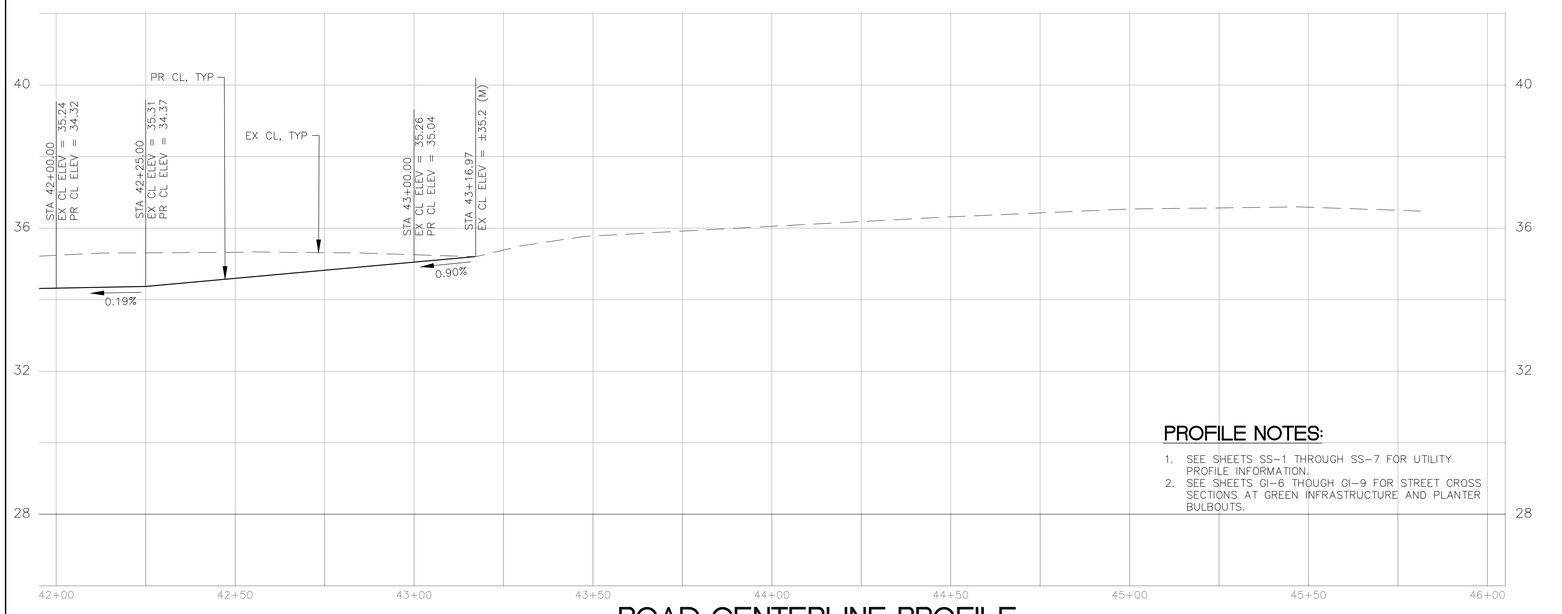
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTES:

1. SEE SHEETS MD-1 THROUGH MD-3 FOR CONSTRUCTION DETAILS.
2. CONTRACTOR TO REINSTALL MONUMENTS WITH NEW ELEVATIONS POST-CONSTRUCTION.
3. EXISTING PAVER CROSSWALK ON MIDDLEFIELD ROAD TO BE PROTECTED AND REMAIN IN PLACE.
4. SEE SHEET PP-12 FOR POTHOLE AND CORING DATA.
5. SEE DRIVEWAY TABLE FOR DRIVEWAY STATION AND OFFSET.
6. ALL CATCH BASINS, INCLUDING THOSE WITH TRASH CAPTURE DEVICES, WITHIN THE STREETSCAPE IMPROVEMENT LIMITS WILL BE PROTECTED.
7. SEE RAMP TABLE FOR CURB RAMP CASE, STATIONS, AND OFFSETS. STATION AND OFFSETS BEGIN AND END AT RAMP WINGS AND ARE FOR REFERENCE ONLY. CONTRACTOR TO CONSTRUCT RAMP IN FIELD ACCORDING TO DETAIL 1 ON SHEET MD-2, AND NOTIFY ENGINEER OF ANY CONFLICTS.
8. PLAN AND PROFILE SHEETS SHOW GRADING CONCEPT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE FROM BUILDING FACES TO TOP OF CURB AND CONFIRM EXISTING BACK OF WALK, DOORS, STAIRS, AND ENTRYWAYS, AND NOTIFY ENGINEER OF ANY CONFLICTS.
9. ADDITIONAL STATION OFFSET INFORMATION WILL BE PROVIDED TO CONTRACTOR DURING CONSTRUCTION FOR EACH BULBOUT (AS NEEDED).

Driveway Table											
DWY #	Begin Station	End Station	Offset	DWY #	Begin Station	End Station	Offset	DWY #	Begin Station	End Station	Offset
1	19+45.00	19+68.00		16	28+05.41	28+32.16	31.00' LT	31	32+03.88	32+36.88	31.00' RT
2	20+31.12	20+48.12	31.00' LT	17	29+30.57	29+47.57	31.00' LT	32	32+89.06	33+08.06	31.00' RT
3	21+15.95	21+35.45	31.00' LT	18	29+52.47	29+77.47	31.00' LT	33	37+33.66	37+49.66	31.00' LT
4	22+03.38	22+16.38	31.00' LT	19	26+66.85	26+85.85	31.00' RT	34	37+53.23	37+73.23	31.00' LT
5	22+55.54	22+75.54	31.00' LT	20	27+12.00	2+31.00	31.00' RT	35	36+04.34	36+24.84	31.00' RT
6	23+21.47	23+38.47	31.00' LT	21	27+52.48	27+71.48	31.00' RT	36	37+38.35	37+53.35	31.00' RT
7	23+66.10	24+01.11	31.00' LT	22	28+59.07	28+78.07	31.00' RT	37	37+72.61	237+94.61	31.00' RT
8	19+13.46	19+31.46	37.55' RT	23	29+93.52	30+22.39	31.00' RT	38	38+77.50	38+95.50	31.00' RT
9	20+78.44	20+95.94	31.00' RT	24	31+32.21	31+55.21	31.00' LT	39	41+40.36	41+59.36	31.00' RT
10	22+07.34	22+27.34	31.00' RT	25	32+28.91	32+43.91	31.00' LT	40	41+87.87	42+04.52	31.00' RT
11	22+72.98	22+92.98	31.00' RT	26	32+69.16	32+84.16	31.00' LT	41	16+88.33	17+07.33	32.05' LT
12	23+59.16	23+76.16	31.00' RT	27	34+36.70	34+55.70	31.00' LT	42	28+33.16	28+51.91	31.00' LT
13	24+27.59	24+60.59	31.00' RT	28	34+74.92	34+93.92	31.00' LT	43	28+51.91	28+68.41	31.00' LT
14	26+57.27	26+91.27	31.00' LT	29	35+08.44	35+63.44	31.00' LT				
15	27+50.43	27+76.43	31.00' LT	30	31+53.29	31+70.29	31.00' RT				



PROFILE NOTES:

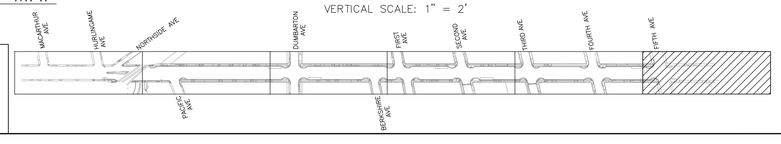
1. SEE SHEETS SS-1 THROUGH SS-7 FOR UTILITY PROFILE INFORMATION.
2. SEE SHEETS GI-6 THOUGH GI-9 FOR STREET CROSS SECTIONS AT GREEN INFRASTRUCTURE AND PLANTER BULBOUTS.

Ramp Table											
Ramp #	Case	Begin Station	Begin Offset	End Station	End Offset	Ramp #	Case	Begin Station	Begin Offset	End Station	End Offset
1	C	16+15.55	31.83' RT	16+27.60	31.84' RT	21	A	33+36.62	25.32' RT	33+47.89	36.19' RT
2	C	17+41.84	53.56' LT	17+45.91	56.46' LT	22	A	33+94.44	34.36' RT	34+02.31	26.49' RT
3	A	17+54.51	34.63' LT	17+62.77	41.51' LT	23	A	36+27.47	26.64' LT	36+35.21	34.63' LT
4	B	20+22.80	31.00' LT	20+31.12	31.00' LT	24	A	36+81.43	34.82' LT	36+89.09	26.74' LT
5	C	19+70.10	37.43' RT	19+83.73	48.78' RT	25	A	36+47.76	26.40' RT	36+56.44	35.66' RT
6	A	20+23.61	37.46' RT	20+28.77	27.61' RT	26	A	37+01.85	36.48' RT	37+08.36	28.02' RT
7	A	25+33.90	26.27' LT	25+41.94	33.97' LT	27	A	39+36.28	27.08' LT	39+43.67	36.40' LT
8	A	25+87.16	34.01' LT	25+95.18	26.30' LT	28	A	39+90.20	34.57' LT	39+98.95	26.08' LT
9	A	25+36.79	28.32' RT	25+43.25	37.38' RT	29	A	40+04.14	24.37' LT	40+19.43	24.70' LT
10	A	25+86.58	35.06' RT	25+96.29	25.75' RT	30	A	39+55.99	26.18' RT	39+64.89	35.22' RT
11	A	29+14.20	27.34' RT	29+22.49	38.98' RT	31	A	40+10.81	36.49' RT	40+17.69	27.75' RT
12	A	29+61.64	37.40' RT	29+70.20	26.87' RT	32	A	42+49.68	33.12' LT	42+53.71	43.57' LT
13	A	30+24.07	26.69' LT	30+32.47	36.20' LT	33	A	42+59.74	24.45' RT	42+69.54	29.74' RT
14	A	30+77.20	35.64' LT	30+85.89	26.39' LT	34	A	42+72.58	33.56' RT	42+76.29	44.83' RT
15	A	30+67.67	26.96' RT	30+75.16	35.20' RT	35	C	18+18.02	31.85' LT	18+21.02	31.87' LT
16	A	31+16.59	34.39' RT	31+26.20	25.+64' RT	36	C	17+06.32	40.33' RT	17+09.32	40.33' RT
17	A	33+18.22	26.71' LT	33+26.60	36.24' LT	37	C	18+13.98	37.76' RT	18+18.22	37.74' RT
18	A	33+72.69	34.82' LT	33+80.35	26.74' LT	38	C	18+97.76	31.50' LT	19+00.76	31.50' LT
19	A	33+88.71	24.08' LT	34+00.71	24.27' LT	39	C	18+60.22	37.66' RT	18+64.41	37.65' RT
20	A	33+16.87	25.19' RT	33+34.62	24.67' RT						

ROAD CENTERLINE PROFILE

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

KEY MAP



REGISTERED PROFESSIONAL ENGINEER
JAMES M. SWEET
NO. C 59265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	PLAN AND PROFILE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

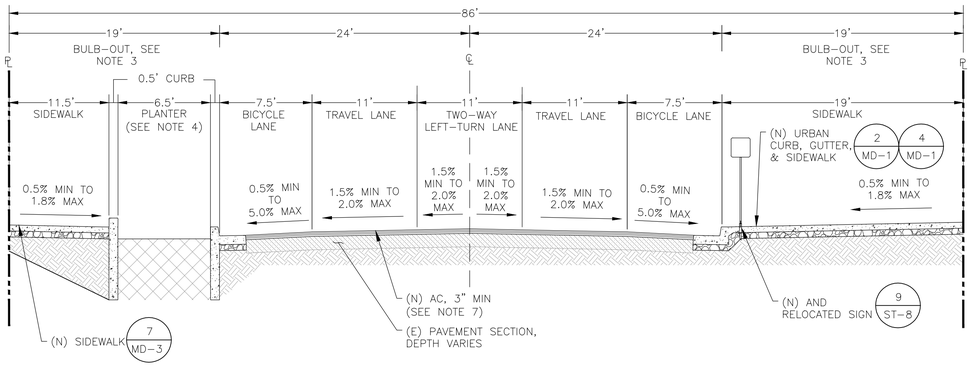
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-6
SHEET 24 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

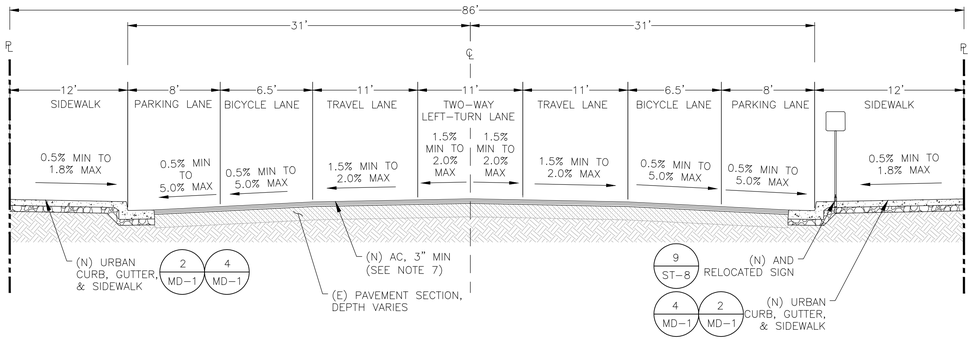
FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-6_PLAN_&_PROFILE.DWG (PP-6)



1 PP-10

TYPICAL MIDDLEFIELD ROAD SECTION – BULB-OUTS STATION 19+00 TO STATION 29+00

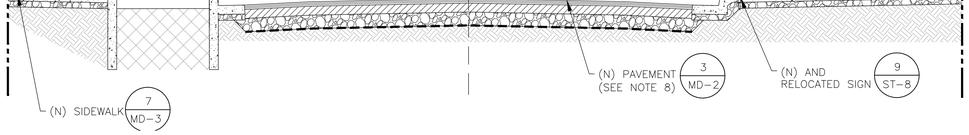
NOT TO SCALE



2 PP-10

TYPICAL MIDDLEFIELD ROAD SECTION – NO BULB-OUTS STATION 19+00 TO STATION 29+00

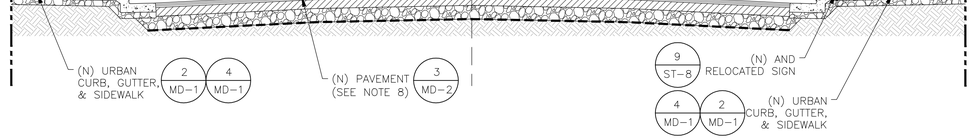
NOT TO SCALE



3 PP-10

TYPICAL MIDDLEFIELD ROAD SECTION – BULB-OUTS STATION 29+00 TO STATION 43+17

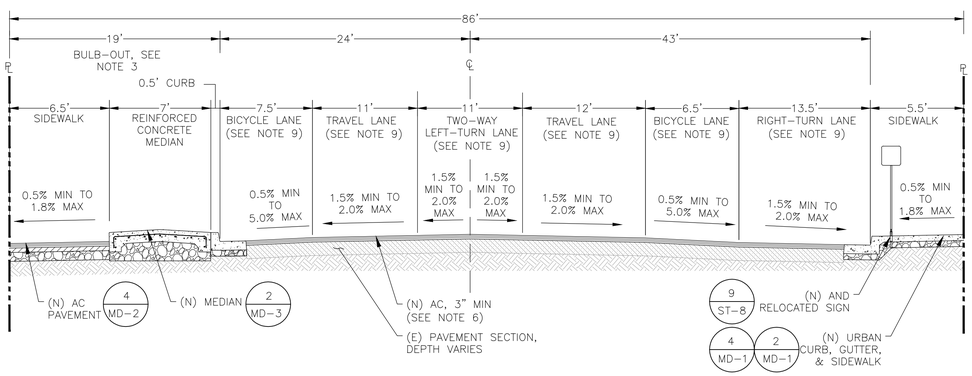
NOT TO SCALE



4 PP-10

TYPICAL MIDDLEFIELD ROAD SECTION – NO BULB-OUTS STATION 29+00 TO STATION 43+17

NOT TO SCALE



5 PP-10

TYPICAL MIDDLEFIELD ROAD SECTION UNION PACIFIC RAILROAD TRACKS TO STATION 19+00

NOT TO SCALE

NOTES:

1. FOR DRIVEWAY, GENERAL BULB LAYOUTS, CURB, GUTTER, AND SIDEWALK DETAILS, SEE SHEETS MD-1 THROUGH MD-3.
2. FOR STREET GRADING AND CURB HEIGHTS, SEE SHEETS PP-1 TO PP-6.
3. BULB-OUT LAYOUTS WITH GREEN INFRASTRUCTURE PLACEMENT VARIES BY INTERSECTION. SEE PP-1 TO PP-6 AND GI-1 TO GI-5 FOR BULB-OUT LAYOUTS BY INTERSECTION.
4. FOR PLANTER DETAILS AND SECTIONS, SEE SHEETS GI-1 TO GI-13.
5. CONTRACTOR TO PROVIDE UNIFORM CROSS SLOPE IN BICYCLE AND PARKING LANES (0.5% MIN TO 5.0% MAX) TO MAINTAIN 2% CROSS SLOPE IN TWO-WAY LEFT-TURN LANE AND TRAVEL LANES AND PROPOSED FINISHED GRADE IN (N) GUTTER. WHERE 2% CROSS SLOPE IN THE TWO-WAY LEFT TURN LANE AND TRAVEL LANES IS NOT FEASIBLE (AFTER REDUCING BICYCLE AND PARKING LANES TO 0.5% MIN), CONTRACTOR TO REDUCE CROSS SLOPE IN TWO-WAY LEFT-TURN LANE AND AND TRAVEL LANES UNIFORMLY AS NEEDED (1.5% MIN) TO RECOVER GRADE.
6. FROM STATION 16+60 SOUTHBOUND AND STATION 17+50 NORTHBOUND TO STATION 19+00, CONTRACTOR TO PLANE (E) PAVEMENT BY 3"MIN AND PLACE NEW AC TO FINISHED GRADE (MATCH EXISTING). SEE SHEETS PP-1 THROUGH PP-2 FOR EXISTING GRADING.
7. FROM STATION 19+00 TO STATION 29+00, CONTRACTOR TO REMOVE (E) PAVEMENT BY 3" BELOW PROPOSED FINISHED GRADE AND PLACE 3" MIN OF (N) AC TO PROPOSED FINISHED GRADE. SEE SHEETS PP-2 THROUGH PP-6 FOR PROPOSED GRADING.
8. FROM STATION 29+00 TO STATION 43+17, CONTRACTOR TO REMOVE (E) PAVEMENT FULL DEPTH AND PLACE (N) PAVEMENT AT PROPOSED FINISHED GRADE. SEE DETAIL 3/MD-2 FOR (N) PAVEMENT AND SHEETS PP-2 THROUGH PP-6 FOR PROPOSED GRADING.
9. STRIPING TRANSITIONS BETWEEN RAILROAD TRACKS AND STATION 19+00, REFER TO SHEET ST-1 AND ST-2 FOR PROPOSED STRIPING.

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JESSICA M. SWAN
NO. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

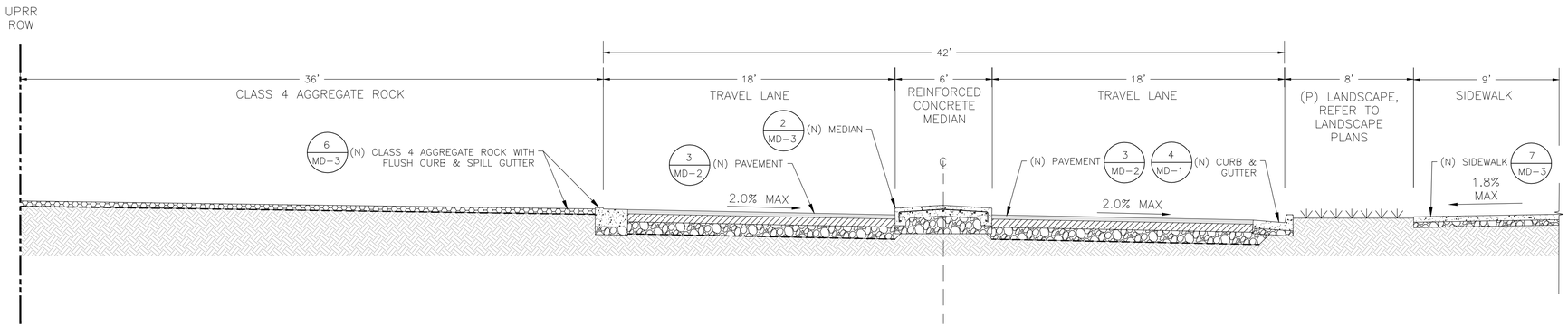
		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TYPICAL ROAD SECTIONS
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-10
SHEET 25 OF 140

FILENAME: C:\USERS\JULIATEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-10_TYPICAL SECTIONS.DWG (PP-10)



A / PP-11 REDWOOD JUNCTION SECTION AT STA: 0+68.51

NOT TO SCALE

B / PP-11 REDWOOD JUNCTION SECTION AT STA: 1+43.84

NOT TO SCALE

C / PP-11 REDWOOD JUNCTION SECTION AT STA: 1+68.49

NOT TO SCALE

NOTES:

1. FOR HARDSCAPE DETAILS, SEE SHEETS MD-1 THROUGH MD-3.
2. FOR STREET GRADING AN CURB HEIGHTS, SEE SHEET PG-1.
3. REFER TO LANDSCAPE PLANS FOR PLANTING AND IRRIGATION DESIGN AND DETAILS.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP-11_REDWOOD JUNCTION SECTIONS.DWG (PP-11)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER TIMOTHY M. SHEA No. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	REDWOOD JUNCTION SECTIONS
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP-11
SHEET 26 OF 140

Pothole Data Table

Pothole ID	Utility	Existing Depth of Cover (Inches)	AC Depth (Inches)	Concrete Depth (Inches)	Sheet
JT–1	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–2	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–3	WATER	32	5	N/A	PP–1
	FIBER OPTIC	NOT FOUND			
JT–4	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–5	GAS	33	5	N/A	PP–1
JT–6	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6', PROBED 10'	5	N/A	PP–1
JT–7	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–8	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6', PROBED 10'	5	N/A	PP–1
JT–9	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6', PROBED 10'	5	N/A	PP–1
JT–10	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–11	WATER	33	14	N/A	PP–2
	FIBER OPTIC	NOT FOUND – CLEARED 6'			
JT–12	WATER	30	6	N/A	PP–2
	FIBER OPTIC	NOT FOUND – CLEARED 6'			
JT–13	GAS	35	N/A	5	PP–2
JT–14	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–15	WATER	52	5	N/A	PP–2
JT–16	UNKNOWN; POTENTIALLY FIBER OPTIC	39	6	N/A	PP–2
JT–17	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–18	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–19	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–20	FIBER OPTIC	61	4	N/A	PP–2
JT–21	WATER	NOT FOUND – DRY HOLE, CLEARED 6', PROBED 10'	16	N/A	PP–2
	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6', PROBED 10'			
JT–22	GAS	39	4	N/A	PP–2
JT–23	WATER	48	6	N/A	PP–2
	FIBER OPTIC	NOT FOUND			
JT–24	WATER	44	6	N/A	PP–2
	FIBER OPTIC	NOT FOUND			
JT–25	WATER	27	4	N/A	PP–3
JT–26	GAS	NOT FOUND – DRY HOLE, CLEARED 6'	4	N/A	PP–3
JT–27	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–28	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–29	WATER	30	4	9	PP–3
	STORM DRAIN	34			
JT–30	WATER LATERAL	25	4	4	PP–3
	STORM DRAIN	37			
JT–31	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–32	WATER	24	4	14	PP–3
	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6'			
JT–33	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–34	WATER	24	4	12	PP–3
	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 6'			
JT–35	FIBER OPTIC	39	4	N/A	PP–3
JT–36	GAS	NOT FOUND – DRY HOLE, CLEARED 6'	4	N/A	PP–3
JT–37	WATER	33	4	N/A	PP–3
	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 7'			
JT–38	FIBER OPTIC	31	8	N/A	PP–3
JT–39	FIBER OPTIC	NOT FOUND – DRY HOLE, CLEARED 7'	4.5	7	PP–4
JT–40	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED

Pothole Data Table – Continued

Pothole ID	Utility	Existing Depth of Cover (Inches)	AC Depth (Inches)	Concrete Depth (Inches)	Sheet
JT–41	WATER	NOT FOUND – DRY HOLE, CLEARED 5'	8	N/A	PP–4
JT–42	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–43	GAS	42	10	N/A	PP–4
JT–44	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–45	GAS	NOT FOUND – DRY HOLE, CLEARED 5'	7	N/A	PP–4
JT–46	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–47	WATER	30	4	N/A	PP–4
	FIBER OPTIC	NOT FOUND – CLEARED 6'			PP–4
JT–48	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–49	WATER	NO VISUAL DUE TO SAND CAVING IN – POSSIBLE DEPTH AT 58"	4	7	PP–4
JT–50	GAS	31	6	N/A	PP–4
	WATER	NOT FOUND – DRY HOLE, CLEARED 5'			
JT–51	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–52	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–53	WATER	33	7	N/A	PP–4
JT–54	GAS	43	9	N/A	PP–4
JT–55	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–56	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–57	WATER	38	6	N/A	PP–4
JT–58	WATER	35	6	N/A	PP–4
JT–59	WATER	38	9	N/A	PP–4
JT–60	WATER	NOT FOUND – DRY HOLE, CLEARED 5'	6	N/A	PP–5
JT–61	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–62	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–63	GAS	36	N/A	N/A	PP–5
JT–64	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–65	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–66	WATER	35	15	N/A	PP–5
	GAS	NOT FOUND			
JT–67	GPR	NOT FOUND – DRY HOLE, CLEARED 8'	15	N/A	PP–5
JT–68	GPR	NOT FOUND – DRY HOLE, CLEARED 8'	15	N/A	PP–5
JT–69	GPR	NOT FOUND – DRY HOLE, CLEARED 6'	17	N/A	PP–5
JT–70	GAS	52	14	N/A	PP–5
	FIBER OPTIC	NOT FOUND			
JT–71	WATER	44	14	N/A	PP–5
JT–72	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–73	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–74	FIBER OPTIC	64	N/A	5	NOT USED
JT–75	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–76	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–77	GAS	31	N/A	5	PP–5
JT–78	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–79	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
JT–80	FIBER OPTIC	32	10	N/A	PP–5

Pothole Data Table – Continued

Pothole ID	Utility	Existing Depth of Cover (Inches)	AC Depth (Inches)	Concrete Depth (Inches)	Sheet
SS–1	SANITARY SEWER	NO VISUAL, POSSIBLE DEPTH AT 69"	6	N/A	PP–1
SS–2	SANITARY SEWER	64	6	N/A	PP–2
	FIBER OPTIC	NOT FOUND – DRY HOLE, PROBED 6'			
SS–3	SANITARY SEWER	60	6	N/A	PP–2
	STORM DRAIN	NOT FOUND – DRY HOLE, CLEARED 6'			
SS–4	STORM DRAIN	NOT FOUND – DRY HOLE, CLEARED 6'	4	N/A	PP–4
SS–5	STORM DRAIN	44	10	N/A	PP–4
SS–6	SANITARY SEWER	42	NOT NOTED	NOT NOTED	PP–4
	STORM DRAIN	55			
SS–7	STORM DRAIN	35	8	N/A	PP–4
SS–8	SANITARY SEWER	35	8	N/A	PP–5
	STORM DRAIN	64			
SS–9	SANITARY SEWER	45	9	N/A	PP–5
	STORM DRAIN	66			
SS–10	SANITARY SEWER	42	8	N/A	PP–5
	STORM DRAIN	84			
SS–11	SANITARY SEWER	54	9	N/A	PP–5
	STORM DRAIN	84			
SS–12	SANITARY SEWER	38	10	N/A	PP–6
	STORM DRAIN	84			
SS–13	SANITARY SEWER	55	10	N/A	PP–6
	UNKNOWN 2"	35			
	STORM DRAIN	NO VISUAL			

POTHOLE DATA NOTES:

1. POTHOLE SURVEY PERFORMED BY EXARO TECHNOLOGIES CORPORATION.
2. POTHOLE SURVEY DATES: JULY 31 – OCTOBER 1, 2019.
3. REFER TO SHEETS PP–1 THROUGH PP–6 FOR POTHOLE LOCATIONS.

1 / PP–12 POTHOLE DATA

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

Coring Data Table

Core #	Approximate Location	AC Thickness	AC # of Layers	(E) Petromat Found at Depth
1	2635 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	11"	4	FOUND AT 2"
2	MIDDLEFIELD ROAD & HURLINGAME AVENUE (SOUTHBOUND, INBOARD LANE)	16"	6	FOUND AT 2"
3	2809 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	15"	4	FOUND AT 2"
4	2875 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	15"	4	FOUND AT 2"
5	2909 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	15"	4	FOUND AT 2"
6	2945 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	16"	5	FOUND AT 2"
7	3009 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	14.5"	4	FOUND AT 2"
8	3041 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	14.5"	4	FOUND AT 2"
9	3RD AVENUE (SOUTHBOUND, INBOARD LANE)	13.75"	4	FOUND AT 2"
10	3119 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	14.5"	4	FOUND AT 2"
11	3135 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	16"	5	FOUND AT 2"
12	3201 MIDDLEFIELD ROAD (SOUTHBOUND, INBOARD LANE)	5"	1	NOT FOUND

CORING DATA NOTES:

1. CORING SURVEY PERFORMED BY BAGG ENGINEERS..
2. CORING SURVEY DATES: SEPTEMBER 16 – SEPTEMBER 17, 2019.

2 / PP–12 CORING DATA

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER TIMOTHY M. SMITH No. C 59265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

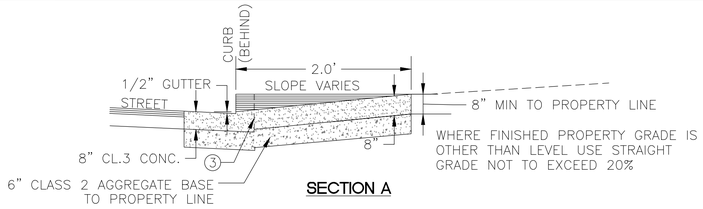
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT POTHOLE & CORING DATA
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

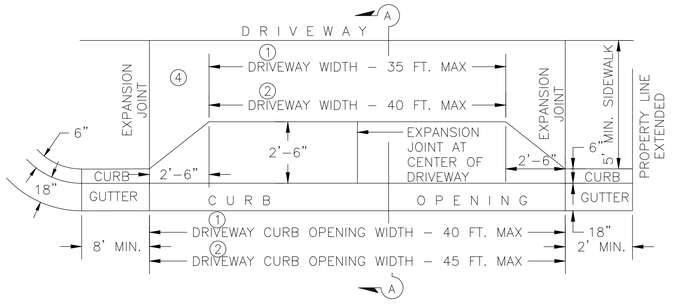
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

PP–12
SHEET 27 OF 140

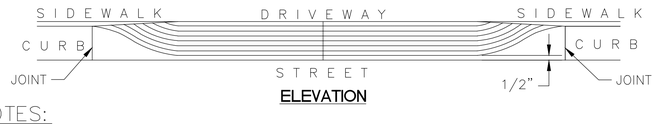
FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\PLAN AND PROFILES\PP–12_POTHOLE DATA.DWG (PP–12_POTHOLE DATA – PP–12)



SECTION A



PLAN



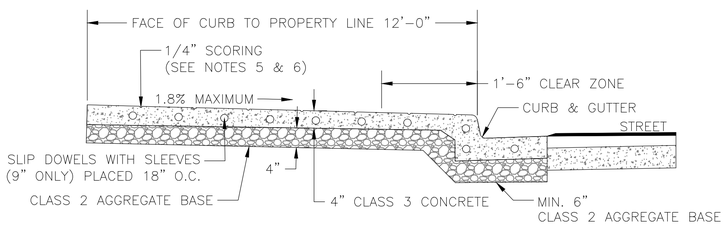
ELEVATION

NOTES:

1. SPEED LIMIT OF 35 MPH OR LESS ALONG FRONTAGE STREET
2. SPEED LIMIT OF 40 MPH OR LESS ALONG FRONTAGE STREET
3. CONSTRUCT MONOLITHIC CURB, GUTTER, DRIVEWAY AND APRON
4. USE NO. 4 REINFORCING BAR DOWELS AS SHOWN ON STANDARD CURB, GUTTER AND SIDEWALK DETAIL
5. FOR MORE THAN ONE DRIVEWAY
   A. 23 FT. OR MULTIPLES OF 23 FT. BETWEEN CURB OPENINGS
   B. TOTAL DRIVEWAY WIDTH FRONTAGE
      70% OF FRONTAGE 100 FT. OR LESS
      60% OF FRONTAGE MORE THAN 100 FT.
6. EXCEPTION ONE BUSINESS WITH DRIVEWAY WIDTH OF 55 FEET

1 / MD-1 COMMERCIAL DRIVEWAYS

NOT TO SCALE



NOTES:

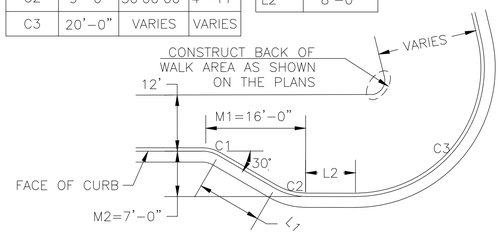
1. OBSTRUCTIONS SUCH AS POLES, HYDRANTS, STREET SIGNS, UTILITY BOXES, STREET LIGHTS, ETC. SHALL BE LOCATED BEHIND THE SIDEWALK, UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS. A CLEAR ZONE ALONG THE CURB AND SIDEWALK 18" IN WIDTH (MEASURED FROM THE FACE OF CURB) SHALL BE KEPT CLEAR AND OPEN FROM ALL OBSTRUCTIONS. IN ADDITION, AN AREA 3' IN WIDTH ALONG THE SIDEWALK, EXCLUSIVE OF THE CURB WIDTH, SHALL BE KEPT CLEAR AND OPEN FROM ALL OBSTRUCTIONS IN COMPLIANCE WITH THE STATE BUILDING CODE (PART 2, TITLE 24, C.A.C).
2. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
3. CONSTRUCT MONOLITHIC CURB, GUTTER, AND SIDEWALK UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
4. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.
5. FOR 12"-0" WIDE SIDEWALK, SCORE SIDEWALK AREA ON BASIS OF 2'-10.75" SQUARES, DIMENSIONING FROM PROPERTY LINE. FOR 5'-6" WIDE SIDEWALK, SCORE SIDEWALK AREA ON BASIS OF 2'-5" SQUARES, DIMENSIONING FROM PROPERTY LINE.
6. FOR SIDEWALK ADJACENT TO EXISTING OVERHEAD POLES THAT ARE TO BE REMOVED, CONTRACTOR TO PLACE AC AROUND POLE TO NEAREST SCORE LINE. AFTER POLES ARE REMOVED, CONTRACTOR TO PLACE NEW CONCRETE TO NEAREST SCORE LINE.

2 / MD-1 URBAN CURB, GUTTER, AND SIDEWALK

NOT TO SCALE

CURVE TABLE			
CURVE	RADIUS	Δ	LENGTH
C1	5'-0"	30°00'00"	2'-7"
C2	9'-6"	30°00'00"	4'-11"
C3	20'-0"	VARIES	VARIES

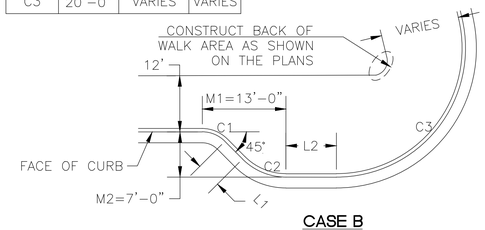
LINE TABLE	
LINE	LENGTH
L1	10'-11"
L2	8'-0"



CASE A

CURVE TABLE			
CURVE	RADIUS	Δ	LENGTH
C1	5'-0"	45°00'00"	3'-11"
C2	9'-6"	45°00'00"	7'-5"
C3	20'-0"	VARIES	VARIES

LINE TABLE	
LINE	LENGTH
L1	3'-11"
L2	8'-0"



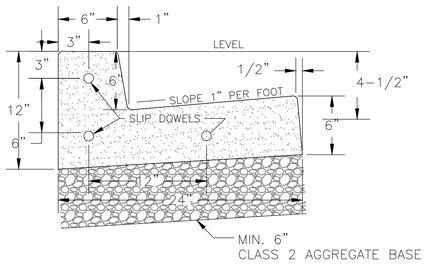
CASE B

NOTES:

1. SEE PLANS FOR INCLUDED ANGLE AND LENGTH OF C3 CURVE.
2. CURVE DIMENSIONS REFERENCE THE FACE OF CURB.

3 / MD-1 GENERAL BULB OUT LAYOUTS

NOT TO SCALE



CURB AND GUTTER

NOTES:

1. ALL CONCRETE TO BE CLASS B (CLASS 3) CONCRETE.
2. MINIMUM SIDEWALK THICKNESS = 4" PCC.
3. PLACE 1/2" DIAMETER X 18" LONG DOWELS AT EXPANSION JOINTS AS SHOWN.
4. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
5. CONSTRUCT MONOLITHIC CURB, GUTTER AND SIDEWALK UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
6. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.

4 / MD-1 CURB AND GUTTER

NOT TO SCALE

CASE A BULB OUTS	
INTERSECTION	BULB OUT
DUMBARTON AVE	NE, SW
1ST AVE	NE
2ND AVE	NE, SW
4TH AVE	NE, SW

CASE A EXCEPTIONS		
INTERSECTION	BULB OUT	EXCEPTION
PACIFIC AVE	SW	C3, RADIUS=15'-0"
1ST AVE	SW	L2, LENGTH=4.00'
3RD AVE	NE	L2, LENGTH=7.50'
3RD AVE	SW	L1, LENGTH=8'-1" L2, LENGTH=5'-6" M1, M1=14'-3" M2, M2=6'-0"
5TH	NE	C3, RADIUS=22'-0"

CASE B BULB OUTS	
INTERSECTION	BULB OUT
DUMBARTON AVE	NW, SE
BERKSHIRE AVE	NW
1ST AVE	NW
2ND AVE	NW, SE
3RD AVE	SE
4TH AVE	NW, SE
5TH AVE	NW

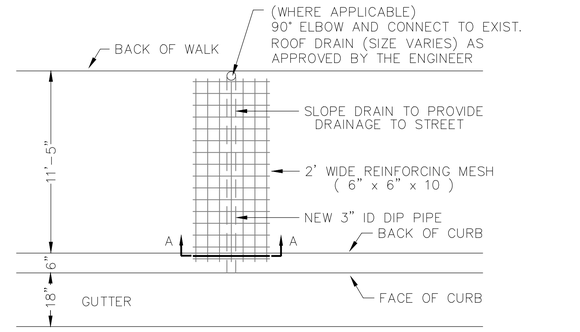
CASE B EXCEPTIONS		
INTERSECTION	BULB OUT	EXCEPTION
BERKSHIRE AVE	SW	L2, LENGTH=0'-0"
1ST AVE	SE	L2, LENGTH=2'-0"
3RD AVE	NW	L2, LENGTH=0'-0"

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

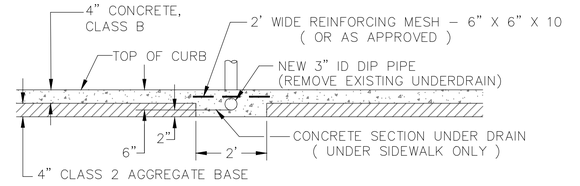
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



PLAN



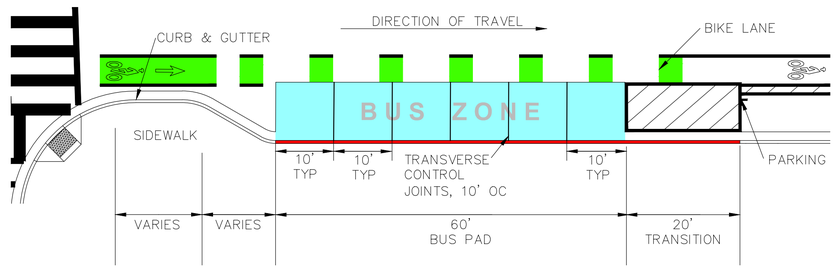
SECTION A-A

NOTES:

1. UNDERDRAIN SHALL BE CONNECTED TO EXISTING ROOFDRAIN OR UNDERDRAIN.
2. UNDERDRAIN OUTLET TO BE LOCATED OUTSIDE OF DRIVEWAYS UNLESS STATED OTHERWISE ON PLANS.

5 / MD-1 SIDEWALK UNDERDRAIN

NOT TO SCALE



NOTE:

SEE DETAIL 2 ON SHEET MD-2 FOR STANDARD BUS STOP PAD SECTION.

6 / MD-1 STANDARD BUS STOP

NOT TO SCALE

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER SAEID TAHSEIN EHSANI C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

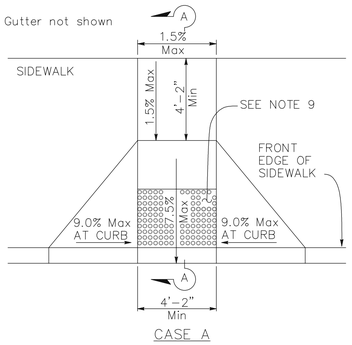
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT MISCELLANEOUS DETAIL
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

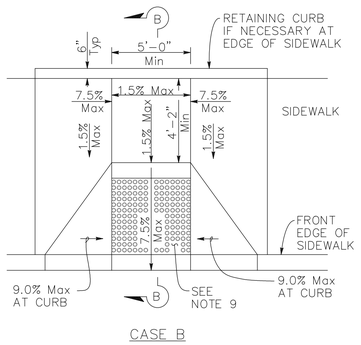
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

MD-1
SHEET 28 OF 140

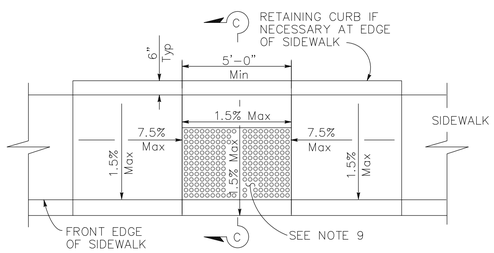
FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\MISCELLANEOUS DETAIL\MD-1_MISCELLANEOUS_DETAIL.DWG (MD-1)



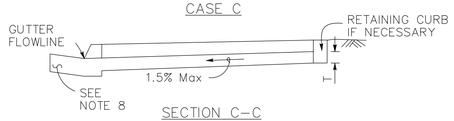
CASE A



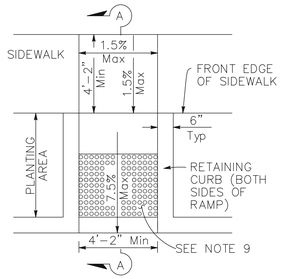
CASE B



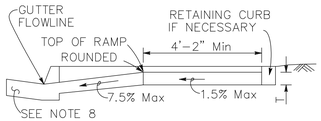
CASE C



SECTION C–C

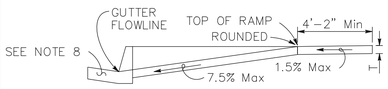


CASE F

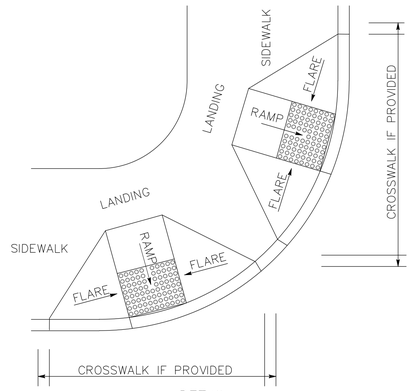


SECTION B–B

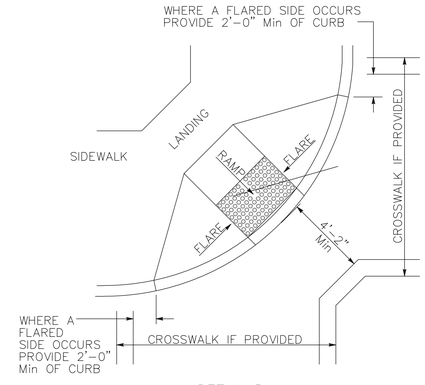
Depress entire sidewalk as required



SECTION A–A



DETAIL A



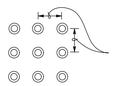
DETAIL B

TYPICAL TWO–RAMP CORNER INSTALLATION

See Note 1

TYPICAL ONE–RAMP CORNER INSTALLATION

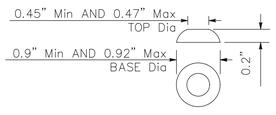
See Notes 1 and 3



RAISED TRUNCATED DOME PATTERN (IN–LINE)

DETECTABLE WARNING SURFACE

See Note 9



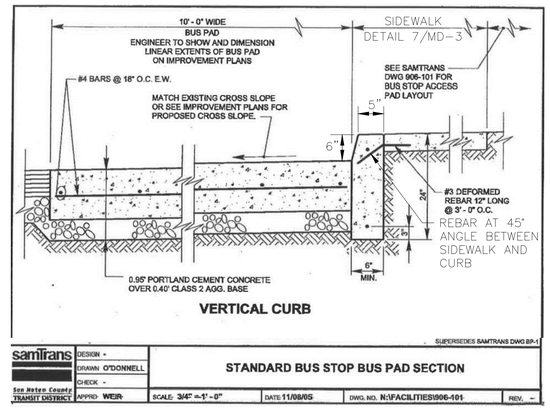
RAISED TRUNCATED DOME

NOTES:

1. AS SITE CONDITIONS DICTATE, CASE A THROUGH CASE F CURB RAMPS MAY BE USED FOR CORNER INSTALLATIONS SIMILAR TO THOSE SHOWN IN DETAIL A AND DETAIL B. THE CASE OF CURB RAMPS USED IN DETAIL A DO NOT HAVE TO BE THE SAME. CASE A THROUGH CASE F CURB RAMPS ALSO MAY BE USED AT MID BLOCK LOCATIONS, AS SITE CONDITIONS DICTATE.
2. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4'–2" PLATFORM (LANDING) AS SHOWN IN CASE A, THE SIDEWALK MAY BE DEPRESSED LONGITUDINALLY AS IN CASE B.
3. WHEN RAMP IS LOCATED IN CENTER OF CURB RETURN, CROSSWALK CONFIGURATION MUST BE SIMILAR TO THAT SHOWN FOR DETAIL B.
4. IF LOCATED ON A CURVE, THE SIDES OF THE RAMP NEED NOT BE PARALLEL, BUT THE MINIMUM WIDTH OF THE RAMP SHALL BE 4'–2".
5. SIDE SLOPE OF RAMP FLARES VARY UNIFORMLY FROM A MAXIMUM OF 9.0% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP, EXCEPT IN CASE C AND CASE F.
6. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS, AND STREETS SHALL BE AT THE SAME LEVEL.
7. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 24 INCHES OF THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20 (5.0%). GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'–0" OF WIDTH.
8. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'–0" DEPTH OF THE RAMP. A 4'–0" WIDE DETECTABLE WARNING SURFACE MAY BE USED ON A 4'–2" WIDE CURB RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS.
9. SIDEWALK AND RAMP THICKNESS, "T", SHALL BE 3" MINIMUM.
10. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP WILL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.
11. DETECTABLE WARNING SURFACE MAY HAVE TO BE CUT TO ALLOW REMOVAL OF UTILITY COVERS WHILE MAINTAINING FULL DETECTABLE WARNING WIDTH AND DEPTH.
12. TRUNCATED DOMES SHALL BE "GREY" IN COLOR.

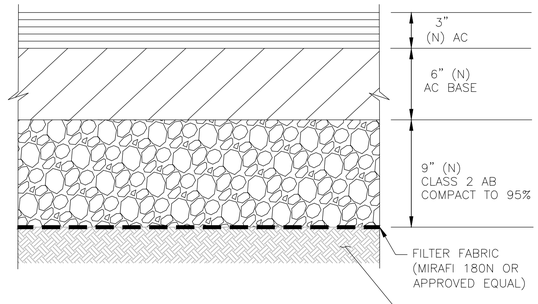
1 / MD–2 — CURB RAMP DETAILS

NOT TO SCALE



2 / MD–2 — STANDARD BUS STOP PAD SECTION

NOT TO SCALE

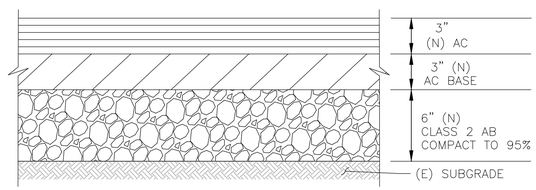


NOTES:

1. REFER TO DETAIL 2/MD–2 FOR TYPICAL BUS PAD SECTION.
2. THIS SECTION APPLIES TO MIDDLEFIELD ROAD BETWEEN STA 29+00 TO STA 43+17 AND AT REDWOOD JUNCTION.
3. FROM STA 16+60 SOUTHBOUND AND STA 17+50 NORTHBOUND TO STA 19+00, WHERE CENTERLINE GRADE IS UNCHANGED, REMOVE 3" (MIN) BY PLANING AND PLACE NEW AC TO FINISH GRADE.
4. FROM STA 19+00 TO STA 29+00, WHERE CENTERLINE GRADE IS LOWERED, REMOVE PAVEMENT BY 3" BELOW FINISH GRADE AND PLACE NEW AC 3" (MIN) TO FINISH GRADE.

3 / MD–2 — NEW ROADWAY PAVEMENT SECTION

NOT TO SCALE



NOTE:

REFER TO SHEETS PP–1 AND PP–2 FOR LOCATION OF (P) AC PAVEMENT

4 / MD–2 — AC PAVEMENT

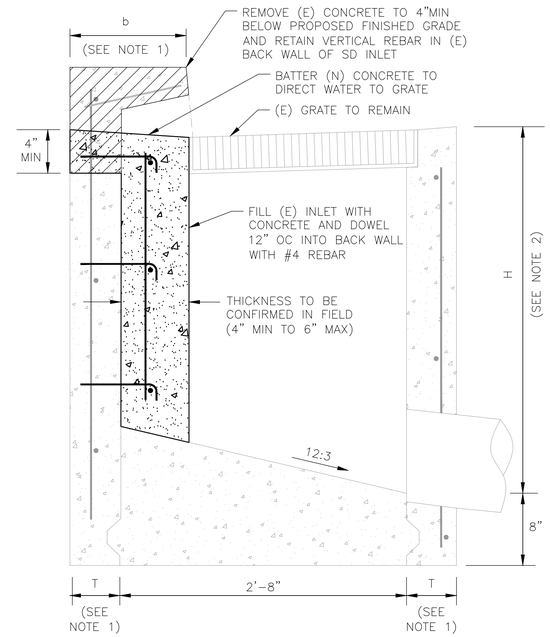
NOT TO SCALE

TABLE A

H	T
3'–0" MIN TO 8'–0" MAX	6"
8'–1" TO 20'–0" MAX	8"

TABLE B

CURB TYPE	TYPICAL CURB HEIGHT	b
A1–6	6"	12.5"
A1–8	8"	12"



NOTES:

1. REFER TO TABLE A FOR THICKNESS (T). REFER TO TABLE B FOR WIDTH b.
2. DEPTH (H) IS THE DIFFERENCE IN ELEVATION BETWEEN THE OUTLET PIPE FLOW LINE AND THE NORMAL GUTTER GRADE LINE UNDEPRESSED AT THE FACE OF CURB. DEPTH (H) AND CURB HEIGHT TO BE CONFIRMED IN FIELD.

5 / MD–2 — SD INLET MODIFICATION AT REDWOOD JUNCTION

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER — MATTHOSSEIN TESSIER — C 89909 — 6/30/21 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

ISSUE FOR BID	10–16–20

DESIGNED BY: EA
CHECKED BY: TS
DRAWN BY: EA

COUNTY OF SAN MATEO
MIDDLEFIELD ROAD IMPROVEMENT PROJECT
MISCELLANEOUS DETAIL

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

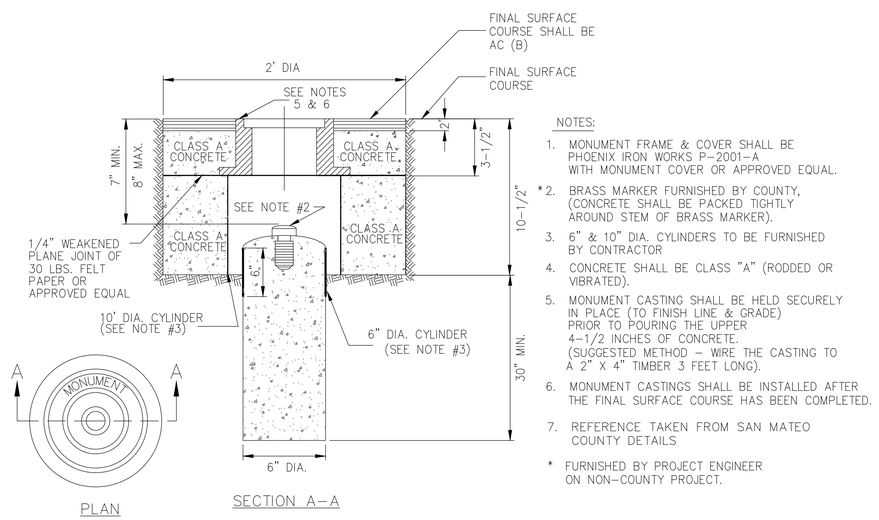
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

MD-2
SHEET 29 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\MISCELLANEOUS DETAIL\MD-2_MISCELLANEOUS_DETAIL.DWG (MD-2)



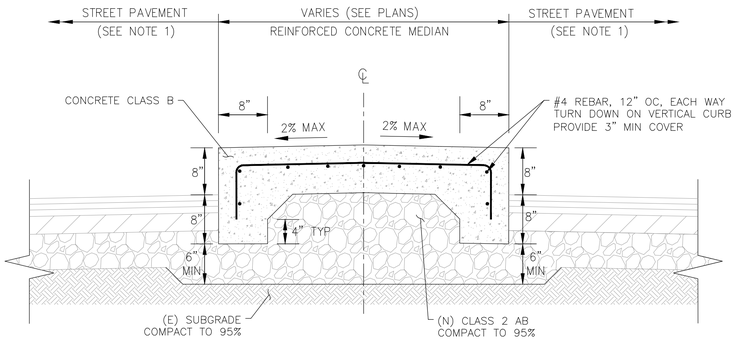
NOTES:

1. MONUMENT FRAME & COVER SHALL BE PHOENIX IRON WORKS P-2001-A WITH MONUMENT COVER OR APPROVED EQUAL.
2. * BRASS MARKER FURNISHED BY COUNTY, (CONCRETE SHALL BE PACKED TIGHTLY AROUND STEM OF BRASS MARKER).
3. 6" & 10" DIA. CYLINDERS TO BE FURNISHED BY CONTRACTOR
4. CONCRETE SHALL BE CLASS "A" (RODDED OR VIBRATED).
5. MONUMENT CASTING SHALL BE HELD SECURELY IN PLACE (TO FINISH LINE & GRADE) PRIOR TO POURING THE UPPER 4-1/2 INCHES OF CONCRETE. (SUGGESTED METHOD - WIRE THE CASTING TO A 2" X 4" TIMBER 3 FEET LONG).
6. MONUMENT CASTINGS SHALL BE INSTALLED AFTER THE FINAL SURFACE COURSE HAS BEEN COMPLETED.
7. REFERENCE TAKEN FROM SAN MATEO COUNTY DETAILS

* FURNISHED BY PROJECT ENGINEER ON NON-COUNTY PROJECT.

1 MD-3 STANDARD STRUCTURES MONUMENT, FRAME AND COVER

NOT TO SCALE

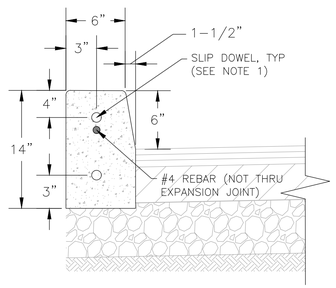


NOTES:

1. TIE IN MEDIAN INTO EXISTING PAVEMENT ON MIDDLEFIELD ROAD (REFER TO SHEET PP-1 FOR LOCATION OF MEDIAN) AND NEW PAVEMENT ON REDWOOD JUNCTION (REFER TO SHEET PG-1 FOR LOCATION OF MEDIAN AND DETAIL 3/MD-2 FOR NEW PAVEMENT SECTION).
2. PLACE JOINTS EVERY 10' OC.
3. MEDIAN TO BE CONSTRUCTED MONOLITHICALLY.

2 MD-3 TYPICAL MEDIAN ISLAND

NOT TO SCALE

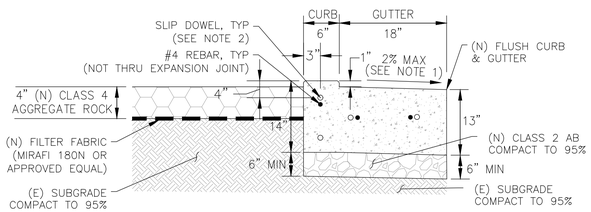


NOTES:

1. ALL CONCRETE TO BE CLASS B (CLASS 3) CONCRETE.
2. PLACE 1/2" DIAMETER X 18" LONG DOWELS AT EXPANSION JOINTS AS SHOWN.
3. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
4. CONSTRUCT MONOLITHIC CURB UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
5. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.

4 MD-3 A1-6 CURB

NOT TO SCALE

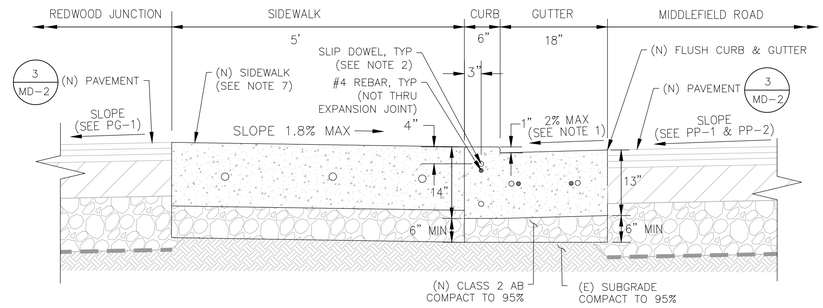


NOTES:

1. SPILL GUTTER CROSS SLOPE TO MATCH CROSS SLOPE IN STREET AT REDWOOD JUNCTION, NOT TO EXCEED 2%.
2. ALL CONCRETE TO BE CLASS B (CLASS 3) CONCRETE.
3. PLACE 1/2" DIAMETER X 18" LONG DOWELS AT EXPANSION JOINTS AS SHOWN.
4. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
5. CONSTRUCT MONOLITHIC CURB UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
6. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.

6 MD-3 CLASS 4 AGGREGATE ROCK WITH FLUSH CURB & SPILL GUTTER

NOT TO SCALE

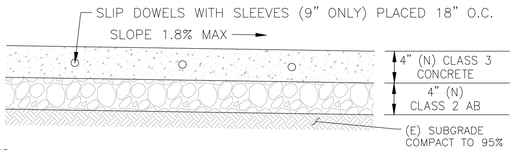


NOTES:

1. CATCH GUTTER CROSS SLOPE TO MATCH CROSS SLOPE IN STREET AT MIDDLEFIELD ROAD, NOT TO EXCEED 2%.
2. ALL CONCRETE TO BE CLASS B (CLASS 3) CONCRETE.
3. PLACE 1/2" DIAMETER X 18" LONG DOWELS AT EXPANSION JOINTS AS SHOWN.
4. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
5. CONSTRUCT MONOLITHIC CURB UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
6. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.
7. WHERE REDWOOD JUNCTION MEETS MIDDLEFIELD ROAD, (N) SIDEWALK SECTION SHALL MATCH DRIVEWAY SECTION AND REINFORCEMENT SHOWN IN DETAIL 1/MD-1.

5 MD-3 REDWOOD JUNCTION ENTRANCE

NOT TO SCALE



NOTES:

1. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
2. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.
3. FOR 12"-0" WIDE SIDEWALK, SCORE SIDEWALK AREA ON BASIS OF 2'-10.75" SQUARES, DIMENSIONING FROM PROPERTY LINE. FOR 5'-6" WIDE SIDEWALK, SCORE SIDEWALK AREA ON BASIS OF 2'-5" SQUARES, DIMENSIONING FROM PROPERTY LINE.
4. FOR SIDEWALK ADJACENT TO EXISTING OVERHEAD POLES THAT ARE TO BE REMOVED, CONTRACTOR TO PLACE AC AROUND POLE TO NEAREST SCORE LINE. AFTER POLES ARE REMOVED, CONTRACTOR TO PLACE NEW CONCRETE TO NEAREST SCORE LINE.

7 MD-3 SIDEWALK

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

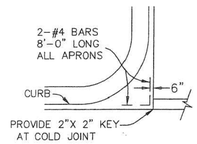
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

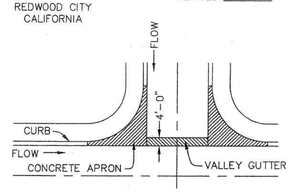
SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY CALIFORNIA

DRAWN BY: D.P.
CHECK BY: J.A.L.
APPROVED BY: N.R.C.

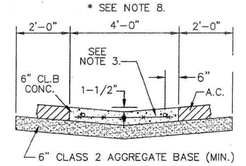
SCALE: NONE
DATE: 7/97
REVISED:



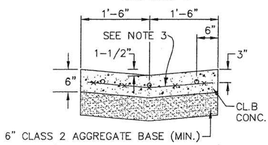
CONCRETE APRON



VALLEY GUTTER INTERSECTION PLAN



CONCRETE VALLEY GUTTER
AT STREET INTERSECTION



CONCRETE VALLEY GUTTER
AT NON-STREET INTERSECTION LOCATIONS

NOTES:

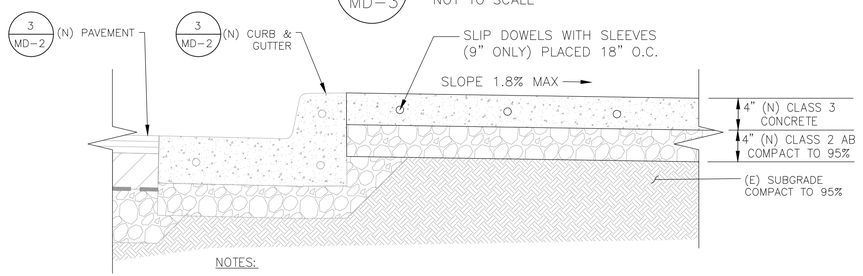
1. OMIT GUTTER AROUND RETURN. SLOPE ALL PARTS OF APRON FROM CURB TO NEAREST FLOW LINE WITHIN LIMITS OF VALLEY GUTTER.
2. APRON TO BE 6" MIN. THICK CL.B P.C.C. OVER MIN. 6" COMPACTED CL.2 AGG. BASE.
3. REINFORCEMENT SHALL CONSIST OF 6"X 6"-#10/#10 WELDED WIRE FABRIC.
4. APRONS SHALL BE POURED MONOLITHIC WITH ADJACENT CURB AND GUTTER.
5. CONCRETE VALLEY GUTTER AND APRONS SHALL BE INSTALLED PRIOR TO PAVING.
6. PLACE 1/2" DIAMETER X 18" LONG DOWELS, AT EXPANSION JOINTS, AS SHOWN.
7. PLACE 1/4" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER. DEEP SCORE AT 10' INTERVALS BETWEEN EXPANSION JOINTS.
8. WIDTH OF VALLEY GUTTER SHALL BE AS DETERMINED BY DPW.

VALLEY GUTTER DETAILS

D-5

3 MD-3 VALLEY GUTTER

NOT TO SCALE



NOTES:

1. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
2. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.
3. SCORE SIDEWALK AREA ON BASIS OF 4'" SQUARES.

8 MD-3 REDWOOD JUNCTION SIDEWALK

NOT TO SCALE

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\MISCELLANEOUS DETAIL\MD-3_MISCELLANEOUS_DETAIL.DWG (MD-3)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: JY	**MISCELLANEOUS DETAIL**
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

MD-3
SHEET 30 OF 140

MIDDLEFIELD ROAD

SOUTHERN PACIFIC RAILROAD

UNION PACIFIC RAILROAD

5 MD-3 FLUSH CURB AND GUTTER

LOOSE DECOMPOSED GRANITE

CONTRACTOR TO COORDINATE WITH PG&E FOR REMOVAL/ RELOCATION OF GUY WIRE

CONFORM
STA: 0+43.29
20.81' LT TO FC
TC = ±26.9 (6" CURB)
EX FL = ±26.4

TO BE INSTALLED BY OTHERS

CONFORM
STA: 0+43.11
21.19' RT TO FC
TC = EX FL = ±26.9

STA: 0+54.94 (PC)
20.76' RT TO FC
TC = 27.36 (6" CURB)
FL = 26.86 (M)
LG = 26.83

STA: 0+48.20
0.22' RT TO FC
TC = 27.32 (8" CURB)
FL = 25.65

STA: 0+83.55
17.21' RT TO FC
TC = 27.26 (6" CURB)
FL = 26.73 (M)
LG = 26.70

STA: 1+16.89
20.32' RT TO FC
TC = 27.07 (6" CURB)
FL = 26.57 (M)
LG = 26.54

STA: 1+14.47
0.71' LT TO FC
TC = 27.03 (8" CURB)
FL = 26.36

6 MD-3 FLUSH C&G (SPILL GUTTER)

(P) CLASS 4 AGGREGATE AREA=2,300 SF

STA: 1+89.76 (PT)
22.63' LT TO FC
TC = 26.70 (6" CURB)
FL = 26.30 (M)
LG = 26.27

(E) PIPE FEEDING THE FH AND FDC

(P) APPROXIMATE PAVEMENT AREA=6,000 SF

CONFORM
STA: 2+28.80
17.61' RT TO FC
TC = ±26.6 (6" CURB)
EX FL = ±26.1

BLUE HYDRANT MARKER

PERMANENT (79'S OR 306) ACCESS EASEMENT

45.00'

N72° 35' 12.86"W

2+00 (N) PIPE EXTENSION TO RELOCATED FH

STA: 1+90.06 (PT)
22.63' LT TO FC
TC = 26.32 (6" CURB)
FL = 25.82
LG = 25.85

5 MD-2 (E) SD INLET TO REMAIN IN PLACE AND CONTRACTOR TO FILL (E) SD INLET THROAT TO GUTTER ELEVATION

EX CB
STA: 2+26.60
20.27' LT
EX TG ±25.7 (M)

L=294.08', R=542.50'
D=31.0586 DEGREES

STA: 2+75.03 (PC)
23.35' LT TO FC
TC = 26.30 (6" CURB)
FL = 25.80 (M)

STA: 2+53.09 (PT)
25.30' LT TO FC
TC = 26.40 (6" CURB)
FL = 25.90 (M)

STA: 2+88.07
36.95' LT TO FC
TC = 26.35 (6" CURB)
FL = 25.85 (M)

STA: 3+04.84
22.48' LT TO FC
TC = 26.98 (6" CURB)
FL = 26.48 (M)

CONFORM
STA: 3+04.88
20.48' LT TO FC
EX TC = ±26.8
EX FL = ±26.4

STA: 3+04.88 (PT)
46.17' LT TO FC
TC = 26.37 (6" CURB)
FL = 25.87 (M)

STA: 3+03.17 (PC)
47.42' LT TO FC
TC = 26.40 (6" CURB)
FL = 25.90 (M)

RELOCATE (E) STOP SIGN

RELOCATE (E) FIRE LANE SIGN

STA: 2+14.43 (PC)
42.88' LT
TC = 26.48 (6" CURB)
FL = 25.98 (M)

STA: 2+04.52 (PT)
43.97' LT TO FC
TC = 26.53 (6" CURB)
FL = 26.03 (M)

STA: 2+04.18
32.19' LT TO FC
TC = 26.63 (6" CURB)
FL = 26.13 (M)

STA: 1+82.32 (PC)
21.80' LT TO FC
TC = 26.71 (6" CURB)
FL = 26.21
LG = 26.24

STA: 1+28.12
22.44' LT TO FC
TC = 26.56 (6" CURB)
FL = 26.06
LG = 26.09

STA: 1+28.18
27.48' LT TO S/W
S/W = 26.50
FG = 25.83 (PLANTER)

STA: 1+52.43
22.26' LT TO FC
S/W = 26.44
TC = 26.44 (6" CURB)
FL = 25.94
LG = 25.97

STA: 1+64.72
36.90' LT TO FC
TC = 26.94 (6" CURB)
FL = 26.44 (M)

(P) MEDIAN ADDITION AREA=395 SF

STA: 0+71.75 (PT)
26.06' LT TO FC
TC = 26.58 (6" CURB)
FL = 26.08 (M)

STA: 0+74.39
32.02' LT TO FC
TC = 26.48 (6" CURB)
FL = 25.98 (M)

STA: 0+99.64 (PT)
27.93' LT TO FC
TC = 26.36 (6" CURB)
FL = 25.86 (M)

CURB RAMP CASE F

1 ST-7 INSTALL CROSSWALK LADDER STRIPING

STA: 1+01.33
30.32' LT TO FC
TC = 26.32 (6" CURB)
FL = 25.82 (M)

CURB RAMP CASE F

STA: 1+05.15
24.76' LT TO FC
TC = 26.23 (6" CURB)
FL = 25.73 (M)

CONFORM
STA: 1+10.98
30.86' LT TO FC
EX TC = ±26.7
EX FL = ±25.7

STA: 1+11.56
33.34' LT TO FC
TC = 26.24

STA: 1+08.10
28.13' LT TO FC
TC = 26.35

(P) TREATMENT PLANTER VOLUME=835 CF PER SIDEWALK ADDITION

(P) SIDEWALK ADDITION AREA=340 SF 8 MD-3

CONTRACTOR TO RELOCATE (E) PLATE AND INSTALL ROUND TOP BOLT EMBEDS INTO CONCRETE UTILIZING EPOXY PER (E) LAYOUT AND MATCH BOLT HOLES IN (E) PLATE (SEE NOTE 8)

(N) PIPE EXTENSION TO RELOCATED FDC

SEE NOTE 9

(E) WATER VALVE TO BE PROTECTED AND ADJUSTED TO (P) GUTTER ELEVATION

SEE NOTE 9

PROTECT-IN-PLACE (E) IRRIGATION METER, DOMESTIC BACKFLOW DEVICE, DOMESTIC WATER METERS, AND FIRE BACKFLOW DEVICE

SEE NOTES 2&7

(P) SIDEWALK ADDITION AREA=258 SF 7 MD-3

SEE NOTE 5

STA: 0+68.28 (PC)
23.48' LT TO FC
TC = 26.79 (6" CURB)
FL = 26.29

STA: 0+68.02
31.73' LT TO FC
TC = FL 26.47

STA: 0+70.58
36.89' LT TO FC
TC = FL 26.40

STA: 0+77.09
37.07' LT TO FC
TC = 26.41 (6" CURB)
FL = 25.91 (M)

CONFORM
STA: 0+81.24
43.56' LT TO FC
EX TC = ±26.3
EX FL = ±25.8

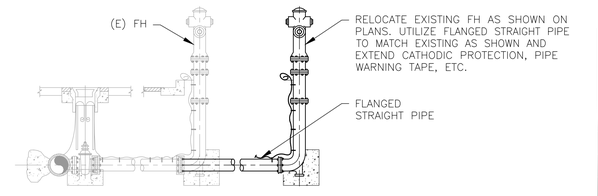
LEGEND:

- (P) SIDEWALK
- (P) CURB AND GUTTER
- (P) TREATMENT PLANTER EXTENT
- (P) PAVEMENT EXTENT
- (P) MEDIAN
- (P) LANDSCAPE
- (P) LOOSE DECOMPOSED GRANITE
- (P) CLASS 4 AGGREGATE OVER FILTER FABRIC (MIRAFI 180N OR EQUAL)
- XX+XX STATION FOR STRIPING (SEE NOTE 4)

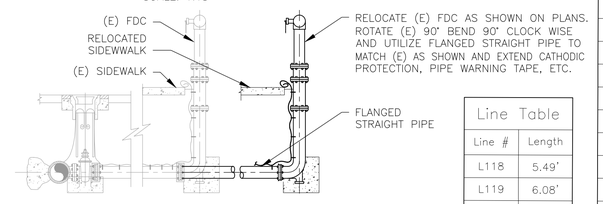
QTY		
2 EA	1	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
37 LF	2	INSTALL 12" WHITE THERMOPLASTIC STRIPING
2 EA	3	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10'))
1 EA	4	INSTALL LEFT AND RIGHT TURN ARROW (STATE TYPE III (B))
2 EA	5	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
3 EA		(E) SIGNS TO BE RELOCATED
0 EA		(N) SIGNS TO BE INSTALLED
1 EA		(N) BLUE HYDRANT MARKERS)

NOTES

1. A TEMPORARY CONSTRUCTION EASEMENT WILL BE REQUIRED TO WORK ON THE PRIVATE PROPERTY WITHIN REDWOOD JUNCTION.
2. CONTRACTOR TO ENSURE SIGNS TO REDWOOD JUNCTION ARE ON AT ALL TIMES.
3. CONTRACTOR TO ENSURE EMERGENCY VEHICLE ACCESS TO REDWOOD JUNCTION AT ALL TIMES.
4. STATIONING FOR STRIPING SHOWN AT START POINT. REFER TO SHEETS ST-7 THROUGH ST-9 FOR SIGNING AND STRIPING DETAILS.
5. CONTRACTOR TO MATCH EXISTING SIDEWALK SCORING AND JOINTING PATTERN.
6. REFER TO SHEETS MD-1 THROUGH MD-3 FOR HARDSCAPE DETAILS. REFER TO LANDSCAPE PLANS FOR PLANTING DETAILS.
7. CONTRACTOR TO RELOCATE SIGN AND EXISTING FOUNDATION AND ASSEMBLE AS NEEDED OVER MINIMUM LAYER OF 8" CLASS 2 AB (COMPACTED TO 95%), EXTENDING 6" BEYOND FOOTPRINT OF FOOTING, TO PROTECT SIGN. TOP OF FOUNDATION TO BE2"ABOVE ADJACENT FINISHED GRADE (MATCH EXISTING FINISHED GRADE).
8. PROVIDE 2" OF FALL AT CURB OPENING IN PLANTER. PROVIDE 12" MIN THICK SIDEWALK SECTION EXTENDING 12" BEYOND CURB OPENING ON EITHER SIDE. USE #4 REBAR AT 12" OC.
9. CONTRACTOR TO RELOCATE FIRE HYDRANT, BOLLARD, AND WATER VALVE 1' BEHIND FACE OF CURB AND FIRE DEPARTMENT CONNECTION 1' OFF OF BACK OF SIDEWALK.



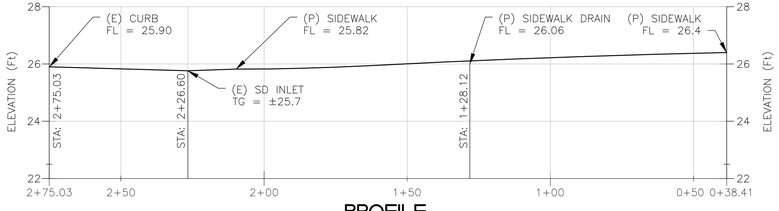
FH RELOCATION
SCALE: NTS



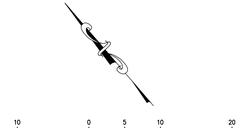
FDC RELOCATION
SCALE: NTS

Curve Table			
Curve #	Length	Radius	Delta
C78	115.71'	100.00'	066°17'40"
C79	28.94'	145.00'	011°26'08"
C80	4.53'	4.00'	064°52'48"
C81	5.73'	77.69'	004°13'30"
C82	14.25'	101.23'	008°03'50"
C83	16.44'	47.80'	019°42'45"
C84	7.93'	4.00'	113°34'09"
C85	105.05'	145.50'	041°21'58"
C86	20.14'	1624.25'	000°42'38"
C87	34.32'	25.00'	078°38'53"
C88	16.52'	5.00'	189°16'40"
C89	9.19'	7.50'	070°11'47"
C90	37.72'	145.50'	014°51'14"
C91	10.05'	17.17'	033°31'40"
C92	10.53'	18.34'	032°54'25"
C93	10.52'	19.44'	031°00'08"
C94	10.10'	23.14'	025°01'15"
C95	36.15'	150.50'	013°45'46"
C96	3.05'	2.77'	063°07'35"
C97	5.64'	2.25'	143°40'43"
C98	2.18'	1.00'	124°41'14"
C99	9.42'	3.00'	180°00'00"
C100	59.40'	118.00'	028°50'40"
C101	9.42'	3.00'	180°00'00"
C102	62.52'	124.00'	028°53'22"

Line Table	
Line #	Length
L118	5.49'
L119	6.08'
L120	41.09'
L121	7.44'
L122	20.14'
L123	11.79'
L124	54.05'
L125	11.40'
L126	28.57'
L127	8.01'
L128	15.63'
L129	34.34'



PROFILE
SCALE: NTS



REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
Susan Chiang
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB
		CHECKED BY: TS
		DRAWN BY: AB
ISSUE FOR BID	10-16-20	
REVISION	DATE	

COUNTY OF SAN MATEO
MIDDLEFIELD ROAD IMPROVEMENT PROJECT
REDWOOD JUNCTION RESTORATION

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

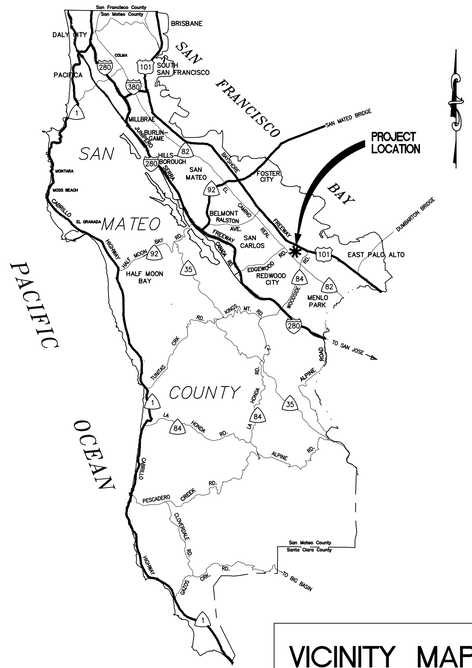
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

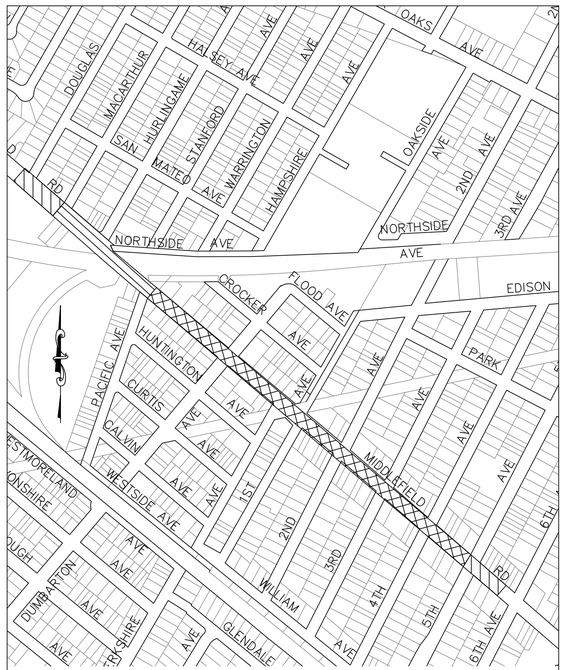
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

PG-1
SHEET 31 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\604295176 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\REDWOOD JUNCTION\REDWOOD JUNCTION.DWG (PG-1)



VICINITY MAP
NO SCALE



ROAD RECONSTRUCTION, SANITARY SEWER REPLACEMENT, AND JOINT TRENCH IMPROVEMENTS

SANITARY SEWER REPLACEMENT AND JOINT TRENCH IMPROVEMENTS ONLY

SANITARY SEWER REPLACEMENT

LOCATION MAP
NO SCALE

COUNTY OF SAN MATEO

MIDDLEFIELD ROAD IMPROVEMENT PROJECT

SANITARY SEWER UTILITY LAYOUT

PER SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS REVISED STANDARD SPECIAL PROVISIONS, MAY 28, 2014
AND TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS
DATED MAY 2006 AND 2018 AND ADOPTED BY SAN MATEO COUNTY, NOVEMBER 14, 2006, BY
RESOLUTION NO. 068389 AND FEBRUARY 11, 2020 BY RESOLUTION NO. 77227
FILE NO. E4931, PROJECT NO. OD420

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

SHEET INDEX:

SSG-1	(SHEET 32)	SANITARY SEWER COVER SHEET
SSG-2	(SHEET 33)	SANITARY SEWER ABBREVIATIONS, GENERAL NOTES AND LEGEND
SSG-3	(SHEET 34)	SANITARY SEWER NOTES
SSG-4	(SHEET 35)	SANITARY SEWER LATERAL INFORMATION
SS-1 TO SS-7	(SHEETS 36-42)	SANITARY SEWER LAYOUT (PLAN AND PROFILE)
SS-8 TO SS-9	(SHEETS 43-44)	SANITARY SEWER UTILITY DETAILS
SS-10	(SHEET 45)	SANITARY SEWER UPRR CROSSING PLAN
SS-11	(SHEET 46)	SANITARY SEWER UPRR SECTIONS AND DETAILS

NOTES

1. TOTAL SANITARY SEWER PROJECT LENGTH APPROXIMATELY 6,580 LF TO BE REPLACED.

USA NORTH 811 Call 811 Before You Dig

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 85365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SANITARY SEWER COVER SHEET	SCALE: AS SHOWN
		CHECKED BY: TS		DATE: 10-16-2020
		DRAWN BY: EM		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SSG-1
SHEET 32 OF 140

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\G-01 GENERAL-NOTES.DWG (LAYOUT)

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THESE DRAWINGS AND SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS AND SPECIFICATIONS.
2. THE UNDERGROUND UTILITIES SHOWN IN PLAN DRAWINGS ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR SHALL POTHOLE EXISTING PIPELINES TO VERIFY THE VERTICAL AND HORIZONTAL ALIGNMENT PRIOR TO PERFORMING EARTHWORK ADJACENT TO PIPELINES. CONTACT UNDERGROUND SERVICE ALERT (USA) AT 811 PRIOR TO CONSTRUCTION AND FOLLOW-UP WITH EACH UTILITY PRESENT IN THE AREA TO CONFIRM THAT THE LOCATION OF THEIR INFRASTRUCTURE WAS MARKED.
3. THE COUNTY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF UTILITY INFORMATION, THE CONTRACTOR SHALL EXERCISE CAUTION WHILE EXCAVATING AND SHALL PROTECT ALL EXISTING SERVICES FROM DAMAGE DUE TO HIS OPERATIONS. SUPPORT EXISTING UTILITIES THAT ARE EXPOSED DUE TO CONSTRUCTION ACTIVITIES.
4. UTILITY LATERALS SUCH AS WATER, GAS, ELECTRICAL, TELECOMMUNICATION AND SEWER LATERALS ARE GENERALLY NOT SHOWN. IF THEY ARE DISPLAYED, LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL LOCATE UTILITY LATERALS IN THE FIELD AND PROTECT THEM.
5. THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THESE PLANS IS BASED UPON BEST AVAILABLE PUBLIC RECORDS. THIS INFORMATION MAY BE INCOMPLETE. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THE POSITION OF AND PROVIDE PROTECTION FOR ALL EXISTING UTILITIES AND STRUCTURES.
6. CONTRACTOR SHALL POSSESS A CLASS "A" GENERAL ENGINEERING CONTRACTOR LICENSE.

CONSTRUCTION NOTES

1. CONSTRUCTION HOURS (INCLUDES ANY AND ALL DELIVERIES): MONDAY - FRIDAY: 8:00 AM TO 5:00 PM.
2. SHUTDOWN OF UTILITIES WILL NOT BE ALLOWED. IF EMERGENCY SHUTDOWN OF UTILITIES IS NECESSARY, THEN SHUTDOWN SHALL BE APPROVED IN WRITING BY SAN MATEO COUNTY OR THE RESPECTIVE UTILITY COMPANY.
3. AT THE END OF EACH WORKING DAY, A TEMPORARY TIE-IN SHALL BE MADE BETWEEN THE REPLACED SECTION OF PIPE AND THE EXISTING SYSTEM. THE BYPASS WILL EITHER BE REMOVED OR THE PUMPS WILL BE MANNED ON A 24-HOUR BASIS.
4. CONTRACTOR TO PROVIDE SS BYPASS DURING CONSTRUCTION, WHICH CAN INCLUDE TEMPORARY STORAGE TANKS. CONTRACTOR WILL SUBMIT BYPASS PLAN AND APPROVAL PRIOR TO CONSTRUCTION.
5. ALL TRAFFIC CONTROL SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACTOR'S SPECIFIC TRAFFIC CONTROL PLAN AS APPROVED BY THE COUNTY.
6. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE SAFETY RULES AND REGULATIONS ESTABLISHED BY CAL-OSHA AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK.
7. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING FOR THE PROPOSED IMPROVEMENTS.
8. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY.
9. MANHOLE RIM ELEVATIONS ARE APPROXIMATE ONLY. MANHOLE RIMS SHALL BE ADJUSTED TO MATCH PROPOSED GRADE UNLESS OTHERWISE NOTED ON PLANS.
10. CONTRACTOR SHALL REPAIR, TO THE SATISFACTION OF THE COUNTY AND WITH SAME MATERIAL AS EXISTING, ALL BROKEN SEWER MAINS, WATER LINES, LATERALS, AND OTHER EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
11. CONTRACTOR SHALL LOCATE NEW CURB INLETS AT CURB RETURNS SO AS NOT TO OBSTRUCT PROPOSED HANDICAP RAMPS, AND TO MINIMIZE IMPACTS TO EXISTING GAS AND WATER VALVES, AS DIRECTED BY THE ENGINEER. GAS LINES WILL BE RELOCATED BY OTHERS AS NECESSARY TO AVOID CURB INLETS AS DIRECTED BY THE ENGINEER.
12. CONTRACTOR WILL BE RESPONSIBLE TO RECONNECT ALL LATERALS TO THE NEW SEWER PIPE. IF THE LATERALS ARE FOUND TO BE STRUCTURALLY AND FUNCTIONALLY DEFICIENT, THE CONTRACTOR SHALL REPLACE THE CONNECTIONS.
13. CONSTRUCTION WITHIN SFPUC HETCH HETCHY R.O.W. SHALL BE BY OPEN TRENCH CONSTRUCTION METHOD ONLY.
14. CONTRACTOR SHALL AT ALL TIMES PROVIDE ACCESS TO BUSINESSES.
15. BASE BID WILL BE OPEN CUT, WITH PIPE BURSTING (EXCEPT AT SFPUC) AS AN ADD ALTERNATIVE.

SFPUC NOTES

1. THE CITY AND COUNTY OF SAN FRANCISCO ACTING BY AND THROUGH ITS PUBLIC UTILITIES COMMISSION, WATER SUPPLY AND TREATMENT DIVISION ("SFPUC") OWNS AND OPERATES WATER AQUEDUCTS THAT CROSS THE PROJECT ALIGNMENT. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (USA) 48 HOURS BEFORE ANY CONSTRUCTION IN THE VICINITY OF THE SFPUC AQUEDUCTS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE SFPUC CONSTRUCTION INSPECTOR. MR. ALBERT HAO. AT (650) 871-3015, AT LEAST (10) CALENDAR DAYS PRIOR TO THE START OF ON-SITE CONSTRUCTION IN THE VICINITY OF THE SFPUC ROW. IN THE EVENT OF EMERGENCY INVOLVING SFPUC FACILITIES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY SFPUC BY CALLING SFPUC MILLBRAE DISPATCH AT (650) 872-5900.
2. THE CONTRACTOR SHALL NOTIFY THE ROW MANAGER AT LEAST ONE WEEK PRIOR TO COMMENCING CONSTRUCTION WORK ON SFPUC PROPERTY AND/OR PIPELINES (CONTACT EMILY READ, ROW MANAGER, AT EREAD@SFWATER.ORG OR (650) 652-3204).
3. THE CONTRACTOR SHALL NOTIFY SFPUC MILLBRAE DISPATCH, AT (650) 872-5900, WHEN COMMENCING CONSTRUCTION ON SFPUC PROPERTY AND/OR PIPELINES.
4. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION DEBRIS IS REMOVED FROM SFPUC PROPERTY AND DISPOSED OF PROPERLY AND LEGALLY. IN ADDITION, THE PROJECT SPONSOR WILL ARRANGE FOR A POST-CONSTRUCTION/RESTORATION SITE INSPECTION BY SFPUC STAFF (CONTACT EMILY READ, ROW MANAGER, AT EREAD@SFWATER.ORG OR (650) 652-3204).

UPRR NOTES

1. CONTRACTOR SHALL CONTACT UNION PACIFIC RAIL ROAD COMPANY'S MANAGER OF TRACK MAINTENANCE, MANAGER OF SIGNAL MAINTENANCE, AND TELECOMMUNICATION "CALL BEFORE YOU DIG" LINE AT 800-336-9136 LINE AT AT LEASE 10 DAYS IN ADVANCE OF THE DATE HE/SHE INTENDS TO ENTER THE RIGHT OF WAY OF UNION PACIFIC RAIL COMPANY, AND FOR FURTHER INSTRUCTIONS AND APPROVAL TO COMMENCE CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE 72 HOURS NOTICE PRIOR TO WORK ADJACENT TO THE RAILROAD. COUNTY SHALL PROVIDE MONITORING OF TRACKS AND CONSTRUCTION OBSERVATION OF ALL WORK PERTAINING TO THE RAILROAD RAILPROS FIELD SERVICES, RP.UTILITY@RAILPROS.COM (682)223-5721.
3. CONTRACTOR SHALL NOT DAMAGE ANY RAILROAD PROPERTY OR FACILITIES. ANY DAMAGES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ABBREVIATIONS

APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS INTERNATIONAL
AVE	AVENUE
BDPL	BAY DIVISION PIPELINE
BTW	BETWEEN
C/O	CLEANOUT
DIA	DIAMETER
DI	DUCTILE IRON
DIM	DIMENSIONS
DIP	DUCTILE IRON PIPE
DR	DIMENSION RATIO
(E)	EXISTING
EG	EXISTING GROUND
FG	FUTURE GROUND
FT	FOOT
FO	FIBER OPTICS
GPR	GROUND PENETRATING RADAR
HH, H.H.	HETCH HETCHY
LB	POUND
ID	INSIDE DIAMETER
INV	INVERT
JT	JOINT TRENCH
MACP	MANHOLE ASSESSMENT AND CERTIFICATION PROGRAM
MH	MANHOLE
(N)	NEW
NE	NORTHEAST
NW	NORTHWEST
OD	OUTSIDE DIAMETER
OH	OVERHEAD WIRE
PACP	PIPELINE ASSESSMENT AND CERTIFICATION PROGRAM
P/L	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
PG&E	PACIFIC GAS AND ELECTIC
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
ROW, R.O.W.	RIGHT OF WAY
SD	STORM DRAIN
SE	SOUTHEAST
SDDI	STORM DRAIN DRAINAGE INLET
SDR	STANDARD DIMENSION RATIO
SFPUC	SAN FRANCISCO PUBLIC UTILITIES COMMISSION
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SW	SOUTHWEST
T	PIPE WALL THICKNESS
TBD	TO BE DETERMINED (FIELD VERIFY BY CONTRACTOR REQUIRED)
UGE	UNDERGROUND ELECTRIC
UP,UPRR	UNION PACIFIC RAILROAD
VCP	VITRIFIED CLAY PIPE
W	WATER
WL	WATER LINE

LEGEND

SS SS SS SS	(N) SANITARY SEWER AND MANHOLE
SS SS SS SS SS	SANITARY SEWER
SD	STORM DRAIN MANHOLE
SS	SANITARY SEWER MANHOLE
	CATCH BASIN
GAS GAS GAS GAS	GAS LINE
W W W W W	WATER LINE
E E	ELECTRICAL LINE
OH OH OH OH	ELECTRICAL OVERHEAD LINE
CC	COMCAST UNDERGROUND
T	TELEPHONE LINE
FO	FIBER OPTIC
GPR GPR GPR	(E) GROUND PENETRATING RADAR LOCATED FACILITIES (TYPE AND MATERIAL UNKNOWN)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

USA NORTH 811
Call 811 Before You Dig

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\G-02 LEGEND-ABBREV.DWG (LAYOUT)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: EM	SS ABBREVIATIONS GENERAL NOTES, AND LEGEND
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

SSG-2
SHEET 33 OF 140

SAN MATEO COUNTY SEWER AND SANITATION DISTRICTS
STANDARD SPECIFICATIONS

GENERAL NOTES

1. ALL REFERENCES TO "DISTRICT" IN THESE GENERAL NOTES SHALL MEAN THE FAIR OAKS SEWER MAINTENANCE DISTRICT.
2. THE APPROVAL OF THESE PLANS BY THE DISTRICT SHALL BE INTERPRETED TO MEAN THAT THE SANITARY SEWER DESIGN SHOWN ON THESE PLANS MEETS THE DISTRICT'S STANDARDS. THE DISTRICT'S APPROVAL IN NO WAY GUARANTEES ANY OTHER ASPECT OF THIS PLAN OR ITS ACCURACY RELATIVE TO ACTUAL FIELD CONDITIONS.
3. THE CONTRACTOR SHALL CONTACT THE DISTRICT AT 650-363-4100 TWO (2) WORKING DAYS IN ADVANCE OF BEGINNING ANY SANITARY SEWER WORK. THE CONTRACTOR SHALL THEREAFTER KEEP THE DISTRICT INSPECTOR INFORMED OF HIS SCHEDULE FOR SANITARY SEWER WORK.
4. ALL SANITARY SEWER WORK CONSTRUCTED WITHOUT INSPECTION BY THE DISTRICT SHALL BE REMOVED AND RECONSTRUCTED WITH INSPECTION.
5. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FORTY-EIGHT (48) HOURS IN ADVANCE OF BEGINNING ANY WORK.
6. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING ANY EXCAVATING.
7. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE COUNTY OR CITY BEFORE BEGINNING ANY SANITARY SEWER WORK.
8. UPON THE COMPLETION OF CONSTRUCTION A COMPLETE SET OF REPRODUCIBLE "AS-BUILT" PLANS SHALL BE PROVIDED TO THE DISTRICT.
9. SANITARY SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL USE WHATEVER MEANS ARE NECESSARY (E.G. PUMPS, ETC.) TO MAINTAIN THIS SERVICE DURING CONSTRUCTION.
10. PRIOR TO COMMENCING ANY SANITARY SEWER WORK IN OFF-SITE EASEMENTS THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH ADEQUATE EVIDENCE THAT ALL AFFECTED PROPERTY OWNERS (AND TENANTS WHERE APPLICABLE) WERE NOTIFIED WELL IN ADVANCE OF THE DATE WORK IN THESE EASEMENTS WAS TO BEGIN AND THAT THEY HAVE UPDATED THAT NOTICE IN A TIMELY MANNER WHEN THOSE DATES HAVE CHANGED.
11. FOR CONVENIENCE IN DESIGNATION ON THE PLANS OR IN THE SPECIFICATIONS. CERTAIN MATERIALS, TO BE INCORPORATED IN THE WORK MAY BE DESIGNATED UNDER A TRADE NAME OR THE NAME OF A MANUFACTURER AND CATALOG INFORMATION AND FOLLOWED BY THE WORDS "OR APPROVED EQUAL" THE USE OF A MATERIAL WHICH IS OF EQUAL QUALITY AND OF THE REQUIRED CHARACTERISTICS FOR THE PURPOSE INTENDED WILL BE PERMITTED, SUBJECT TO THE FOLLOWING REQUIREMENTS.

PIPE AND FITTINGS

POLYVINYL CHLORIDE PIPE (PVC)

1. ALL PIPE AND FITTINGS SHALL CONFORM TO ASTM SPECIFICATIONS D3034, SDR 26.
2. ALL JOINTS SHALL BE A BELL AND SPIGOT ASSEMBLY WITH ELASTOMERIC SEALING GASKETS. SEALING GASKETS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATION D1869. SOLVENT CEMENT JOINTS ARE NOT PERMITTED.
3. ALL PIPE ENTERING OR LEAVING A CONCRETE STRUCTURE SHALL HAVE A RUBBER WATERSTOP GASKET ATTACHED TO IT. THE WATERSTOP GASKET SHALL CONFORM TO THE PIPE MANUFACTURER'S SPECIFICATIONS. THE WATERSTOP GASKET SHALL BE SEATED FIRMLY AROUND THE PIPE EXTERIOR AND BE CAST INTO THE CONCRETE STRUCTURE.
4. ALL PIPE JOINTS SHALL BE MADE USING MANUFACTURED PVC COUPLINGS. BAND TYPE COMPRESSION COUPLINGS ARE NOT PERMITTED.

TESTING REQUIREMENTS

1. ALL REFERENCES TO "DISTRICT" IN THESE TESTING REQUIREMENTS SHALL MEAN THE APPROPRIATE COUNTY SEWER OR SANITATION DISTRICT.
2. ALL REQUIRED CLEANING AND TESTING OF SANITARY SEWER MAINS AND LATERALS SHALL BE PERFORMED IN THE PRESENCE OF A REPRESENTATIVE OF THE DISTRICT.
3. ALL SANITARY SEWER MAINS BEING CONSTRUCTED SHALL BE CLEANED BY MEANS OF A HIGH SPEED JET RODDER PRIOR TO TESTING. VCP AND DIP SHALL BE TESTED FOR OBSTRUCTION BY BALL ROLLING.
4. REFER TO SPECIFICATION SECTION 103-3.5 SANITARY SEWER TESTING FOR AIR TESTING.
5. CLOSED CIRCUIT TELEVISION (CCTV) INSPECTIONS OF SANITARY SEWER MAINS

   CCTV INSPECTION OF THE SANITARY SEWER MAINS SHALL BE PERFORMED BY THE APPLICANT / CONTRACTOR IN CONFORMANCE WITH THE FOLLOWING PROVISIONS AND THE DIRECTIONS OF THE DISTRICT.

   A) CCTV INSPECTION SHALL BE FROM MANHOLE-TO-MANHOLE, AND SANITARY SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES DURING CLEANING AND CCTV INSPECTION OF THE SEWER LINES.

   B) PRIOR TO CCTV INSPECTION, THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND FOREIGN OBJECTS INSIDE THE SANITARY SEWER LINES AND MANHOLES WHERE WORK WAS PERFORMED, AND THEN FLUSH AND CLEAN ALL PARTS OF THE SYSTEM, AND REMOVE ALL ACCUMULATED CONSTRUCTION DEBRIS, GRAVEL, SILT AND OTHER FOREIGN MATERIAL FROM THE SANITARY SEWER SYSTEM AT OR NEAR THE CLOSEST DOWNSTREAM MANHOLE USING MECHANICAL RODDING, FLUSHING, OR BUCKETING EQUIPMENT, IF NECESSARY.

   C) THE CONTRACTOR SHALL FURNISH ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR REQUIRED TO PERFORM CCTV INSPECTION; AND CCTV INSPECTION EQUIPMENT SHALL BE APPROVED BY THE DISTRICT.

   D) VIDEO EQUIPMENT SHALL INCLUDE A TELEVISION CAMERA IN COLOR FORMAT SPECIFICALLY DESIGNED AND CONSTRUCTED FOR OPERATION IN CONNECTION WITH SEWER INSPECTION AND FOR OPERATION IN SEWERS UNDER 100% HUMIDITY CONDITIONS. THE CAMERA SHALL HAVE A MINIMUM CAPABILITY OF 350 LINES OF RESOLUTION AND SHOULD BE OF THE ARTICULATING HEAD TYPE TO ALLOW LATERALS AND DEFECTS TO BE VIEWED DIRECTLY. LIGHTING AND CAMERA QUALITY SHALL PRODUCE A CLEAR, IN-FOCUS PICTURE OF THE ENTIRE PERIPHERY OF THE PIPE FOR A MINIMUM DISTANCE OF SIX FEET (6'). THE CAMERA SHALL BE MOVED THROUGH THE LINE, PREFERABLY IN THE DIRECTION OF THE SEWAGE FLOW, AT A MODERATE RATE, STOPPING AT JOINTS, LATERAL CONNECTIONS AND WHEN NECESSARY TO PERMIT PROPER DOCUMENTATION OF THE SEWER'S CONDITION. IN NO CASE SHALL THE TELEVISION CAMERA BE OPERATED AT A SPEED GREATER THAN 30 FEET PER MINUTE. MANUAL WINCHES, POWER WINCHES, TV CABLE, AND POWERED REWINDS OR OTHER DEVICES THAT DO NOT OBSTRUCT THE CAMERA VIEW OR INTERFERE WITH PROPER DOCUMENTATION OF THE SEWER CONDITIONS SHALL BE USED TO MOVE THE CAMERA THROUGH THE SEWER LINE.

   E) THE CCTV INSPECTION SHALL BE CONTINUOUS COLOR DIGITAL RECORDING IN MPEG 4 FORMAT FOR EACH PIPE SEGMENT INSPECTED. THE INSPECTION VIDEO SHALL BE EITHER CONFIGURED FOR VIEWING USING THE LATEST VERSION OF WINDOWS MEDIA PLAYER, OR THE APPROPRIATE VIEWING SOFTWARE MUST BE SUBMITTED ON EACH DVD. DVDS SHALL BE SUBMITTED TO THE DISTRICT WITH A TYPED LOG OF THE INSPECTION FOR REVIEW AND ACCEPTANCE. ALL DVDS SHALL BECOME THE PROPERTY OF THE COUNTY. IF, IN THE OPINION OF THE DISTRICT, THE SUBMITTED DVDS ARE OF POOR QUALITY SUCH THE DISTRICT IS UNABLE TO EVALUATE THE CONDITION OF THE SEWER LINES, THE DISTRICT MAY REJECT THE DVDS AND REQUIRE THE CCTV INSPECTION TO BE REPEATED AND NEW DVDS SUBMITTED TO THE DISTRICT FOR REVIEW AND ACCEPTANCE.

   F) SUBMITTED DVDS, WHEN REPLAYED ON A MONITOR, SHALL BE CLEAR AND IN-FOCUS, AND SHALL INCLUDE A CONTINUOUS ON-SCREEN DISPLAY CONTAINING, AT A MINIMUM, THE DATE OF VIDEO INSPECTION AND IDENTIFICATION OF THE SANITARY SEWER LINE AND SEGMENT (STREET LOCATION, UPSTREAM AND DOWNSTREAM MANHOLE NUMBERS) OF THE LINE BEING VIEWED, AND FOOTAGE. THE NUMBER DESIGNATIONS FOR EXISTING SANITARY SEWER MANHOLES SHALL BE AS SHOWN ON THE DISTRICT MAPS.

   G) IF, UPON THE DISTRICT'S REVIEW OF THE CCTV INSPECTION, ANY DEBRIS OR FOREIGN MATTER IS STILL PRESENT IN THE SANITARY SEWER SYSTEM, THE CONTRACTOR SHALL RE-FLUSH AND CLEAN, AND RE-CCTV INSPECT THOSE SECTIONS AND PORTIONS OF THE SANITARY SEWER LINES AND MANHOLES, AS REQUIRED AND AS DIRECTED BY THE DISTRICT. THIS PROCESS SHALL BE REPEATED UNTIL CCTV INSPECTION INDICATES THAT THE SANITARY SEWER LINES HAVE BEEN SATISFACTORILY CLEANED.

   H) ANY DAMAGE TO THE EXISTING SANITARY SEWER MAIN CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR, TO THE SATISFACTION OF THE DISTRICT.

   I) ANY DAMAGE TO EITHER PUBLIC OR PRIVATE FACILITIES (DUE TO, FOR EXAMPLE, A SANITARY SEWER MAINLINE BACKUP) AS A RESULT OF THE CONTRACTOR'S CCTV INSPECTION OPERATIONS, AS DESCRIBED ABOVE, SHALL BE REPAIRED OR CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT.

   CLOSED CIRCUIT TELEVISION (CCTV) INSPECTIONS OF PRIVATE SANITARY SEWER LATERALS

   A VIDEO INSPECTION SHALL BE PERFORMED BY THE APPLICANT/CONTRACTOR OF PRIVATE SEWER LATERALS AS SPECIFIED BY THE DISTRICT. A DVD SHALL BE MADE OF THE INSPECTION AND DELIVERED ALONG WITH A TYPED LOG OF THE INSPECTION TO THE DISTRICT FOR REVIEW AND ACCEPTANCE. THE INSPECTION VIDEO SHALL BE EITHER CONFIGURED FOR VIEWING USING THE LATEST VERSION OF WINDOWS MEDIA PLAYER, OR THE APPROPRIATE VIEWING SOFTWARE MUST BE SUBMITTED ON EACH DVD. PRIOR TO PERFORMING THE VIDEO INSPECTION, ALL DEBRIS OR FOREIGN OBJECTS INSIDE THE SEWER LATERAL SHALL BE CLEANED AND REMOVED. IF THE VIDEO INSPECTION SHOWS ANY DEBRIS STILL EXISTS INSIDE THE SEWER LATERAL, IT SHALL BE REMOVED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. AFTER THE REMOVAL OF ALL DEBRIS, THE CONTRACTOR MUST PROVIDE A VIDEO OF THE RE-INSPECTED SEWER LATERAL.

   IMMEDIATELY PRIOR TO TELEVISING THE SEWER LATERALS, AN AMOUNT OF WATER ACCEPTABLE TO THE DISTRICT'S REPRESENTATIVE SHALL BE INTRODUCED INTO THE SEWER LATERAL BEING INSPECTED. SUBMITTED DVDS SHALL INCLUDE A CONTINUOUS ON-SCREEN DISPLAY, WHICH CONTAINS, AT A MINIMUM, THE DATE OF THE VIDEO INSPECTION AND LOCATION OF THE SEWER LATERAL INSPECTION BY INDICATING ADDRESS, AND FOOTAGE. VIDEO EQUIPMENT SHALL INCLUDE A TELEVISION CAMERA IN COLOR FORMAT SPECIFICALLY DESIGNED AND CONSTRUCTED FOR OPERATION IN CONNECTION WITH SEWER INSPECTION AND FOR OPERATION IN SEWERS UNDER 100% HUMIDITY CONDITIONS. LIGHTING AND CAMERA QUALITY SHALL PRODUCE A CLEAR, IN-FOCUS PICTURE OF THE ENTIRE PERIPHERY OF THE PIPE FOR A MINIMUM DISTANCE OF SIX (6) FEET. THE CAMERA SHALL BE MOVED THROUGH THE LINE, IN A SMOOTH FASHION, PREFERABLY IN THE DIRECTION OF THE SEWAGE FLOW, AT A MODERATE RATE, STOPPING WHEN NECESSARY TO PERMIT PROPER DOCUMENTATION OF THE SEWER LATERALS CONDITION. IN NO CASE SHALL THE TELEVISION CAMERA BE OPERATED AT A SPEED GREATER THAN 30 FEET PER MINUTE.

   IF, IN THE OPINION OF THE DISTRICT, THE SUBMITTED DVDS ARE OF POOR QUALITY SUCH THAT THE DISTRICT IS UNABLE TO EVALUATE THE CONDITION OF THE SEWER LATERAL, THE DISTRICT MAY REJECT THE DVDS AND REQUIRE THE VIDEO INSPECTION TO BE REPEATED AND NEW DVDS SUBMITTED TO THE DISTRICT FOR REVIEW AND ACCEPTANCE. ALL DVDS SHALL BECOME THE PROPERTY OF THE COUNTY.

   THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR ALL WORK LISTED IN THE PRECEDING PARAGRAPHS.

6. DEFLECTION TESTING OF POLYVINYL CHLORIDE (PVC) SEWER MAINS SHALL BE PERFORMED AFTER THE PLACEMENT OF ALL TRENCH BACKFILL. PIPE DEFLECTION SHALL BE TESTED BY PULLING BY HAND A GO/NO-GO MANDREL THROUGH THE INSTALLED SECTIONS OF SEWER MAIN.

   THE MANDREL USED SHALL HAVE A MINIMUM LENGTH EQUAL TO ITS DIAMETER. THE MANDREL SHALL BE CONSTRUCTED WITH A MINIMUM OF NINE (9) RIBS FABRICATED PARALLEL TO ITS LONGITUDINAL AXIS. BOTH THE DESIGN OF THE MANDREL AND THE FABRICATED MANDREL ITSELF SHALL BE INSPECTED AND APPROVED BY THE DISTRICT WELL IN ADVANCE OF THE DEFLECTION TEST.

   THE MANDREL DIAMETER SHALL BE 95% OF THE PIPE'S AVERAGE INSIDE DIAMETER AS DEFINED BY ASTM SPECIFICATION D3034, AND AS DETAILED IN THE FOLLOWING TABLE:

NOMINAL PIPE SIZE (inches)	AVERAGE INSIDE DIAMETER (inches)	MINIMUM MANDREL DIAMETER (inches)
6	5.893	5.598
8	7.891	7.497
10	9.864	9.371

NOTE: AVERAGE INSIDE DIAMETER = AVERAGE OUTSIDE DIAMETER – 2(1.06)T; WHERE T = MINIMUM WALL THICKNESS AS DEFINED BY ASTM SPECIFICATION D3034.

7. SEWER MAIN AND MANHOLE TESTING MATRIX

TEST METHOD	PURPOSE	PIPE TESTING (PVC, VCP, DIP, HDPE)	MANHOLE TESTING
AIR TEST	LEAKAGE IN PIPE	ALL MATERIALS EXCEPT HDPE	NOT APPLICABLE
BALL TEST	OBSTRUCTION AND JOINT OFFSET IN PIPE	ONLY ON VCP AND DIP	NOT APPLICABLE
MANDREL TEST	DEFLECTION IN PIPE	ONLY ON PVC	NOT APPLICABLE
CCTV	DEFECTS IN PIPE	ALL MATERIALS	NOT APPLICABLE
VACCUM OR WATER TEST	LEAKAGE IN MANHOLE	NOT APPLICABLE	YES

OPEN TRENCH NOTES

1. BEFORE SEWER PIPE IS PLACED IN POSITION IN THE TRENCH, THE BOTTOM AND SIDES OF THE TRENCH SHALL BE CAREFULLY PREPARED, THE REQUIRED BEDDING PLACED, AND BRACING AND SHEETING INSTALLED WHERE REQUIRED. THE TRENCH SHALL BE EXCAVATED TO THE DIMENSIONS SHOWN ON THE DRAWINGS. EACH PIPE SHALL BE ACCURATELY PLACED TO THE LINE AND GRADE CALLED FOR ON THE PLANS.
2. PIPE LAYING SHALL PROCEED UPGRADE, STARTING AT THE LOWER END OF THE GRADE AND WITH THE BELLS UPHILL.
3. TRENCH BOTTOMS FOUND TO BE UNSUITABLE FOR FOUNDATIONS AFTER PIPE LAYING OPERATIONS HAVE STARTED SHALL BE CORRECTED AND BROUGHT TO GRADE WITH APPROVED COMPACTED MATERIALS.
4. PIPE TRENCHES SHALL BE KEPT FREE FROM WATER DURING PIPE LAYING, JOINING OR BEFORE SUFFICIENT BACKFILL HAS BEEN PLACED TO PREVENT FLOTATION OF THE PIPE. THE CONTRACTOR MAY USE SUMP PUMPS, OR ANY OTHER APPROVED DEVICES TO REMOVE WATER FROM THE TRENCH BOTTOM. THE CONTRACTOR SHALL PROVIDE AMPLE MEANS AND DEVICES TO PROMPTLY REMOVE AND DISPOSE OF ALL WATER FROM ANY SOURCE ENTERING THE TRENCH.
5. THE CONTRACTOR SHALL COMPLY WITH ALL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REGULATIONS.
6. NO CONNECTION SHALL BE MADE WHERE JOINT SURFACES AND JOINT MATERIALS HAVE BEEN SOILED BY EARTH OR EMBEDMENT IN HANDLING UNTIL SUCH SURFACES ARE THOROUGHLY CLEANED.
7. AS THE WORK PROGRESSES, THE INTERIOR OF ALL PIPES SHALL BE KEPT CLEAN. AFTER EACH LINE OF PIPE HAS BEEN LAID, IT SHALL BE CAREFULLY INSPECTED AND ALL EARTH, TRASH, RAGS, AND OTHER FOREIGN MATTER REMOVED FROM THE INTERIOR.
8. BACKFILLING OF TRENCHES SHALL BE STARTED IMMEDIATELY AFTER THE PIPE IS PLACED IN THE TRENCH.
9. BACKFILL MATERIAL PLACED UNDER THE HAUNCHES SHALL BE SHOVEL SLICED AND/OR COMPACTED.
10. AT END OF EACH DAY THE CONTRACTOR SHALL PLATE THE END OF THE INSTALLED PIPE.

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

USA NORTH 811 Call 811 Before You Dig

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER — LAWRENCE TAM — Rev. 09/30/2020 — Exp. 6/30/2022 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SANITARY SEWER NOTES
		CHECKED BY: TS	
		DRAWN BY: EM	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SSG-3
SHEET 34 OF 140

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\G-03 SEWER-NOTES.DWG (LAYOUT)



APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

MH# From	MH# To	Lateral Sta	SIZE ''	Type
5447	5458	43+55.23	4	TFC
		43+69.37	4	TB
		43+87.66	4	TFC
		44+07.54	4	TB
		44+20.19	4	TFC
		44+30.18	4	TB
		44+48.57	4	TFC
		44+66.37	4	TBA
		44+81.21	4	TFC
		45+07.71	4	TF
		45+40.14	4	TFC
		46+37.34	4	TFC
		46+50.79	4	TB
		46+69.88	4	TB
5447	5208	43+40.39	4	TBA
		43+24.37	4	TFC
		41+60.23	4	TFA
		41+31.85	4	TFC
		40+99.31	4	TF
		40+71.03	4	TF
		40+50.46	6	TFA
		40+38.60	4	TFC
		40+06.06	4	TF
5208	5201	39+25.61	4	TB
		39+10.18	4	TFC
		38+91.20	4	TBI
		38+81.60	4	TFC
		38+56.68	4	TB
		38+53.32	4	TFC
		38+20.69	4	TFC
		38+15.05	4	TB
		37+97.75	6	TF
		37+90.83	4	TFC
		37+80.35	4	TBI
		37+62.35	4	TFC
		37+29.91	4	TFC
		36+96.00	4	TF
5201	5194	36+08.35	4	TFC
		36+04.89	4	TF
		35+76.02	4	TFC
		35+47.74	4	TFC
		35+06.90	4	TF
		34+88.70	4	TFC
		34+84.85	4	TB
		34+56.27	4	TFC
		34+43.71	4	TF
		34+11.77	4	TB

MH# From	MH# To	Lateral Sta	SIZE ''	Type
5194	3857	32+95.42	4	TFC
		32+93.94	4	TB
		32+87.71	4	TF
		32+61.11	4	TB
		32+40.34	4	TB
		32+30.55	4	TFC
		31+98.12	4	TFC
		31+65.88	4	TFC
		31+57.97	4	TB
		31+39.28	4	TFC
		30+88.55	4	TFC
3857	6183	29+96.22	4	TF
		29+69.72	4	TFC
		29+43.52	4	TFC
		29+32.64	4	TBI
		29+17.02	4	TFC
		28+96.65	4	TFC
		28+69.95	4	TF
		28+43.84	4	TFC
		28+27.33	4	TB
		28+21.40	4	TFC
6183	3848	27+77.64	4	TF
		27+51.24	4	TFC
		27+28.79	4	TFC
		27+27.01	4	TB
		27+15.15	4	TF
		27+02.49	4	TFC
		26+51.96	4	TFC
5457	5210	45+15.85	4	TF
		44+89.25	4	TFC
		44+57.01	4	TFC
		44+53.15	4	TB
		44+24.77	4	TFC
		44+18.25	4	TBI
		43+98.27	4	TFC
		43+74.54	4	TF
		43+69.00	4	TB
		43+65.94	4	TFC
		43+27.47	4	TFC
5210	5207	42+33.93	4	TFC
		42+01.40	4	TFC
		41+68.86	4	TFC
		41+50.67	4	TB
		41+42.46	4	TFC
		41+21.20	4	TB
		41+10.03	4	TFC
		40+83.82	4	TFC
		40+51.39	4	TFC
		40+28.25	4	TB
		40+18.86	4	TFC

MH# From	MH# To	Lateral Sta	SIZE ''	Type
5207	5202	39+26.55	4	TFC
		39+08.84	4	TF
		38+91.14	4	TF
		38+88.08	4	TFC
		38+56.73	4	TB
		38+31.22	4	TF
		37+88.01	4	TB
		37+72.58	4	TFC
		37+40.25	4	TF
		37+37.58	4	TB
		37+07.81	4	TFC
5202	5195	35+98.29	4	TF
		35+23.83	4	TF
		34+64.79	4	TF
		34+32.36	4	TF
5195	5193	32+43.52	4	TFA
		31+51.36	4	TF
5193	3851	30+28.04	4	TF
6189	3823	28+39.91	4	TF
		27+74.54	4	TF
		27+21.34	4	TFA
		26+50.64	4	TF
3822	3820	24+01.24	4	TBI
		23+82.85	4	TFC
		23+60.50	4	TB
		23+56.35	4	TFC
		23+40.43	4	TB
		23+32.02	4	TFC
		23+07.70	4	TFC
		22+86.34	4	TBD
		22+64.78	4	TF
		22+42.53	4	TFC
		22+11.39	4	TB
		21+83.70	4	TFC
		21+77.57	4	TF
3820	3816	21+58.06	4	TFC
		21+33.63	4	TFC
		21+13.76	4	TB
		21+09.60	4	TFC
		20+83.20	4	TFC
		20+58.88	4	TFC
		20+23.77	4	TB
		20+20.21	4	TFC

MH# From	MH# To	Lateral Sta	SIZE ''	Type
3802	3797	16+99.62	4	TFC
		16+70.75	4	TB
		16+69.07	4	TFC
		15+95.50	4	TFC
		15+86.50	4	TBI
		15+67.12	4	TFC
		15+48.23	4	TF
		15+42.39	4	TFC
		15+38.04	4	TF
		15+15.99	4	TFC
		14+87.51	4	TFC
		14+63.09	4	TF
		14+38.86	4	TFC
3797	3796	13+43.70	4	TFC
		13+17.30	4	TFC
		12+92.98	4	TFA
		12+66.57	4	TF
		12+52.43	4	TF
		12+08.63	4	TB
		11+97.75	4	TFC
3821	3815	23+83.44	4	TFA
		23+74.94	4	TB
		23+32.71	4	TFC
		23+18.67	4	TB
		23+04.14	4	TF
		22+82.18	4	TFC
		22+57.17	4	TB
		22+33.14	4	TFC
		22+19.00	4	TF
		21+84.39	4	TB
		21+82.51	4	TFC
		21+74.30	4	TB
		21+51.95	4	TF
		21+36.13	4	TFC
3798	3795	14+76.38	4	TF
		14+47.21	4	TF
		13+63.55	4	TF
		13+12.13	4	TFC
		12+93.05	4	TF
		12+64.87	4	TFC
		12+13.05	4	TFC

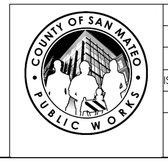
NOTE:

1. INFORMATION PROVIDED ON THIS PLAN SHEET IS FOR REFERENCE ONLY AND BASED ON A COUNTY OF SAN MATEO CCTV INSPECTION CONDUCTED ON FEBRUARY 2017.
2. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF THE SEWER LATERAL.
3. THE CONTRACTOR SHALL RECONNECT EXISTING ACTIVE LATERALS ALONG THE NEW SEWER ALIGNMENTS.

ABBREVIATIONS:
TB – TAP BREAK–IN
TBA – TAP BREAK–IN ACTIVE
TBD – TAP BREAK–IN DEFECTIVE
TBI – TAP BREAK–IN INTRUDING
TF – TAP FACTORY MADE
TFA – TAP FACTORY MADE ACTIVE
TFC – TAP FACTORY MADE CAPPED

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200





		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SANITARY SEWER LATERAL INFORMATION
		CHECKED BY: TS	
		DRAWN BY: EM	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

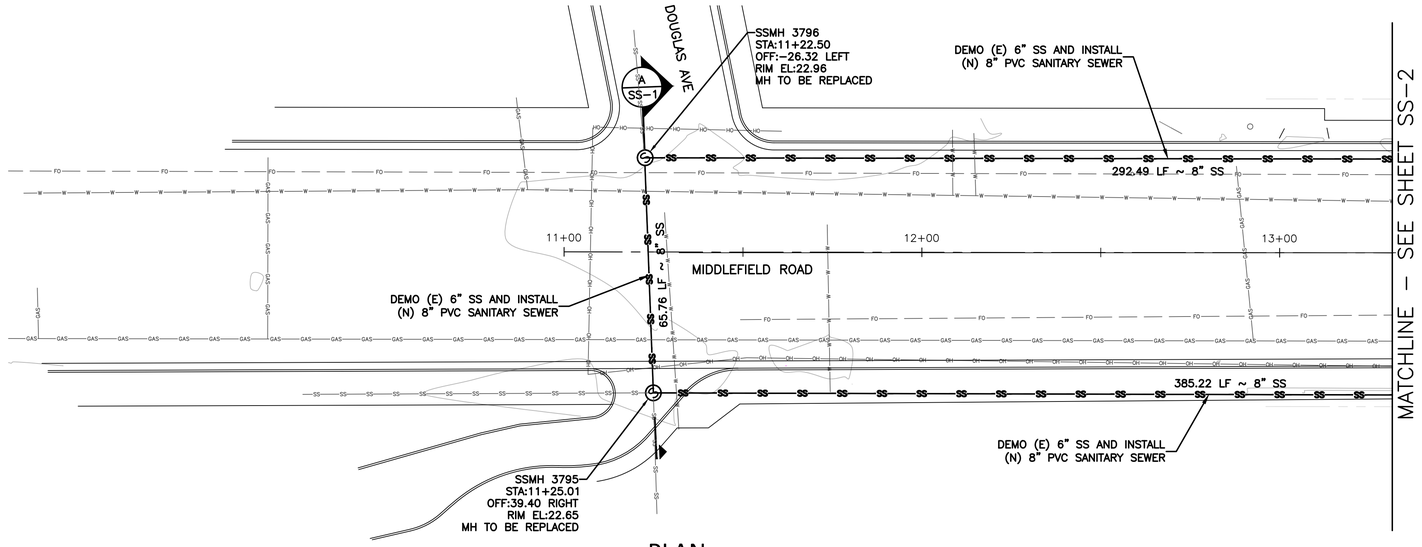
SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

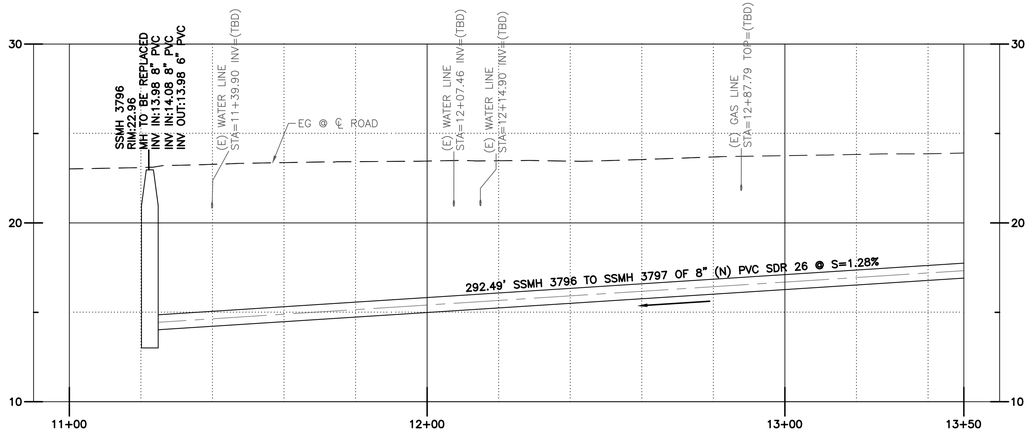
SSG-4
SHEET 35 OF 140



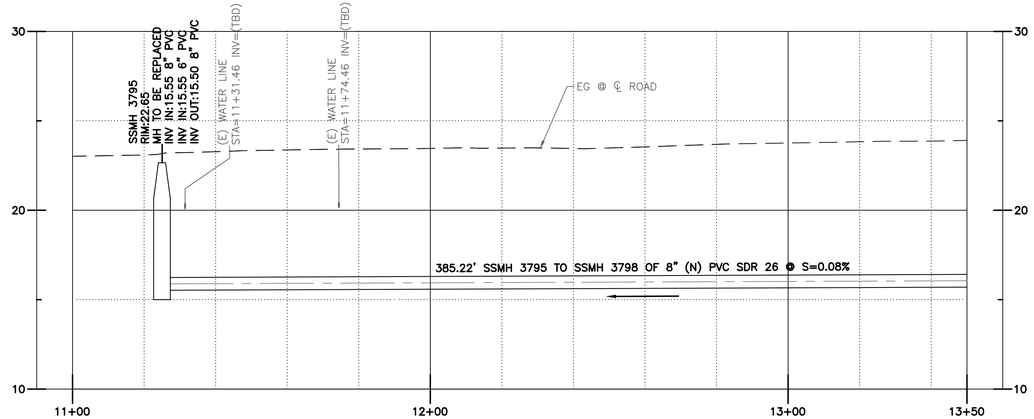
FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\G-04 LATERAL TABLE.DWG (LAYOUT)



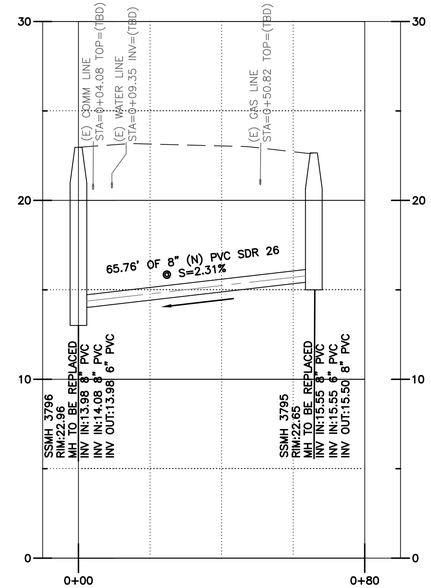
PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.



SECTION A (SS-1)
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH EXISTING GROUND. RESTORE THE TRENCH PAVEMENT TO EXISTING GROUND.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 85365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

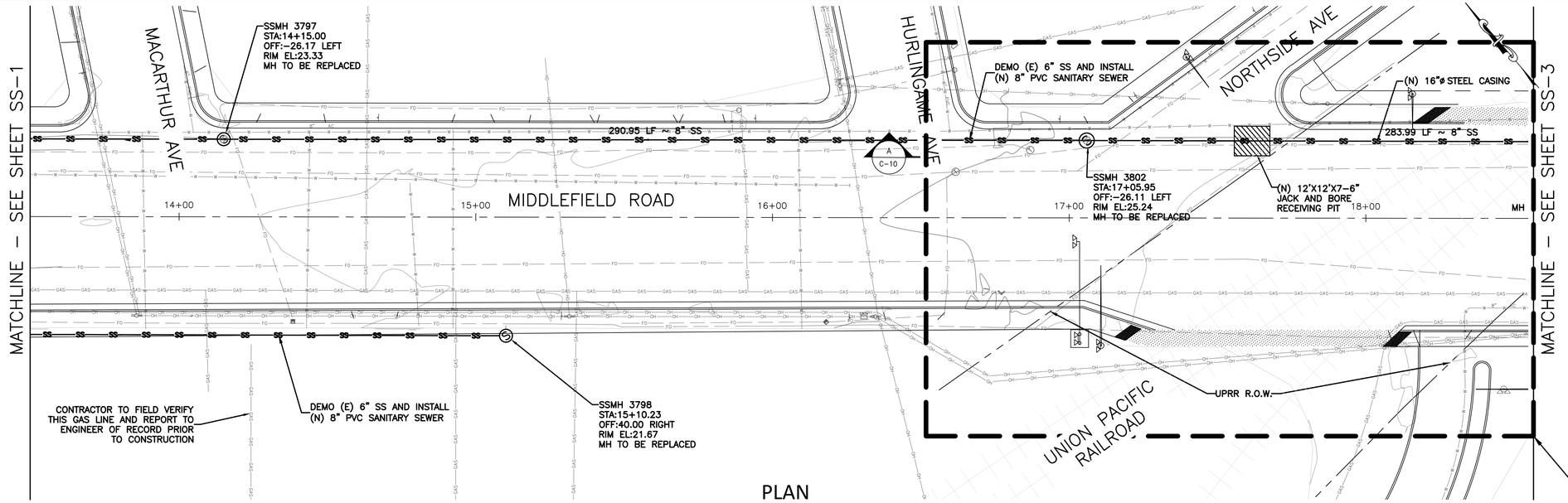
COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UTILITY LAYOUT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

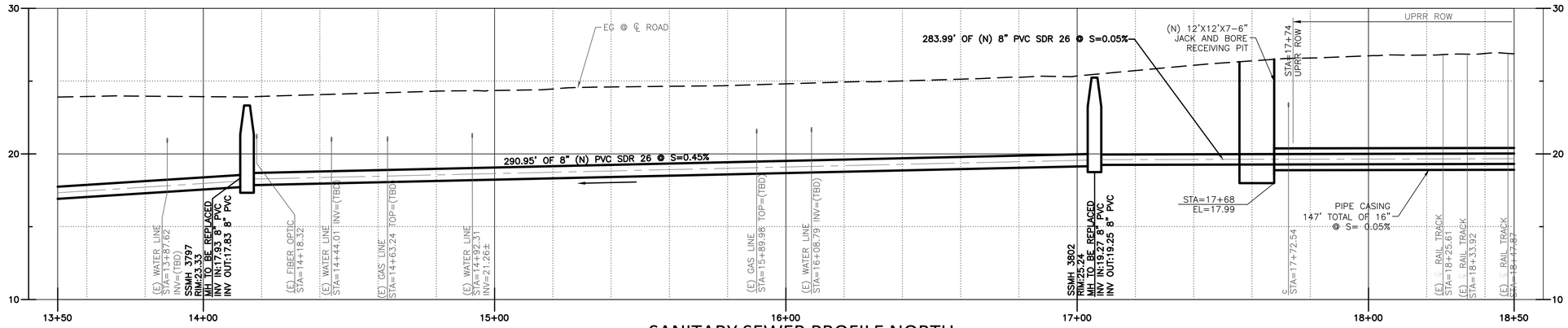
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931
SS-1
SHEET 36 OF 140

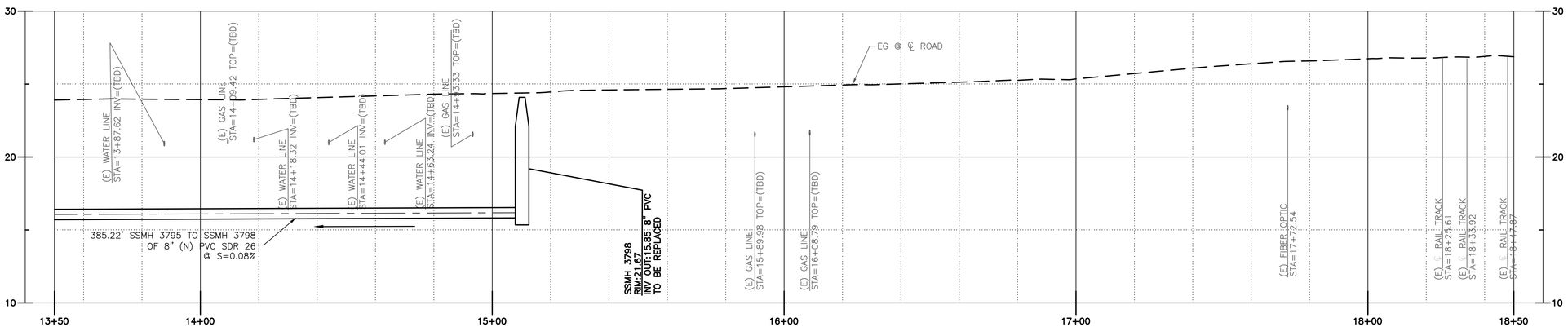
FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-01.DWG (D-SIZE)



PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH EXISTING GROUND. RESTORE THE TRENCH PAVEMENT TO EXISTING GROUND.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

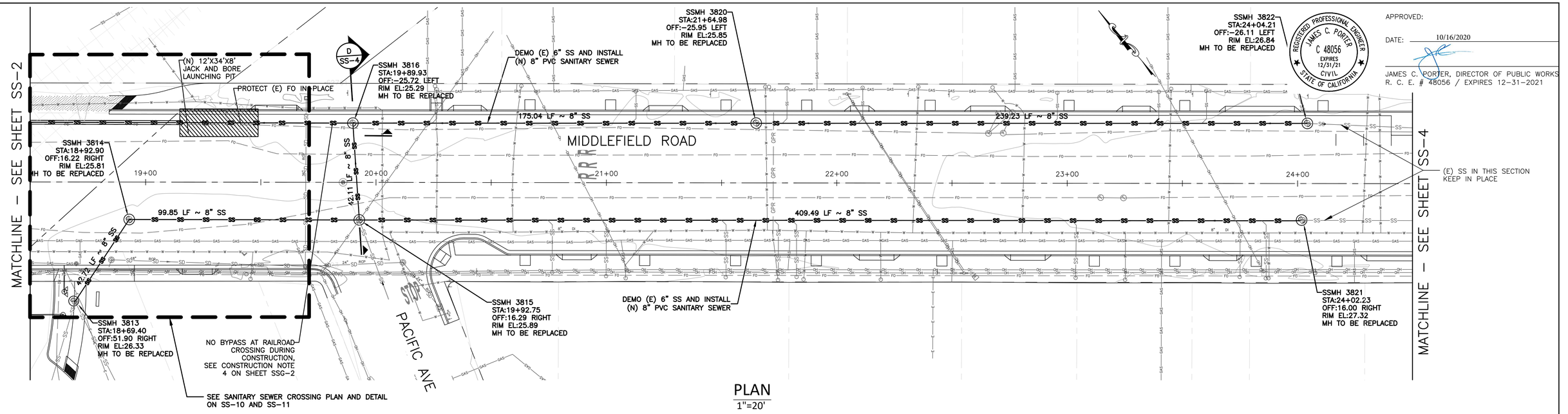
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SANITARY SEWER UTILITY LAYOUT
		CHECKED BY: TS	
		DRAWN BY: EM	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

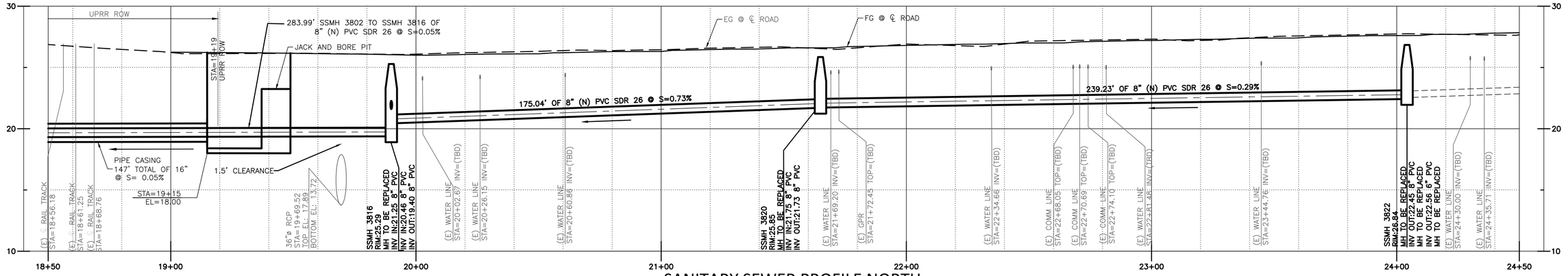
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

SS-2
SHEET 37 OF 140

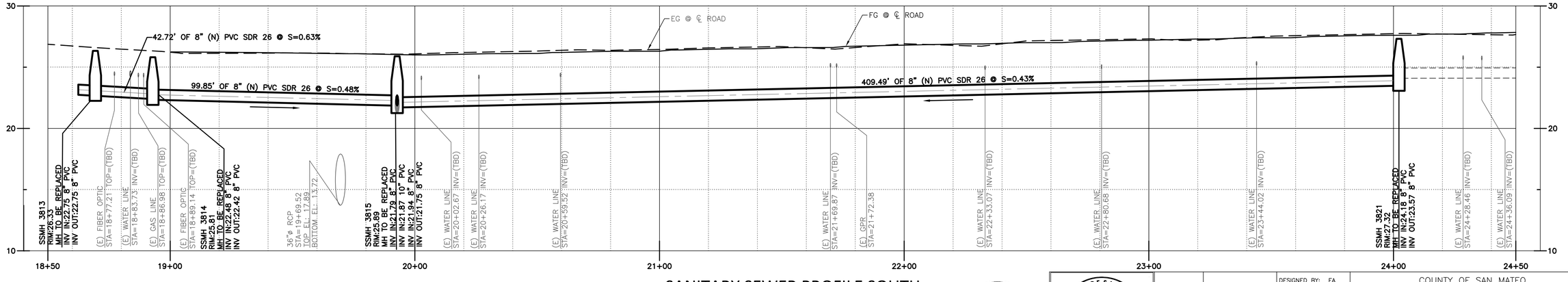
FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS–02.DWG (D–SIZE)



PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH FG. RESTORE THE TRENCH PAVEMENT TO FG.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

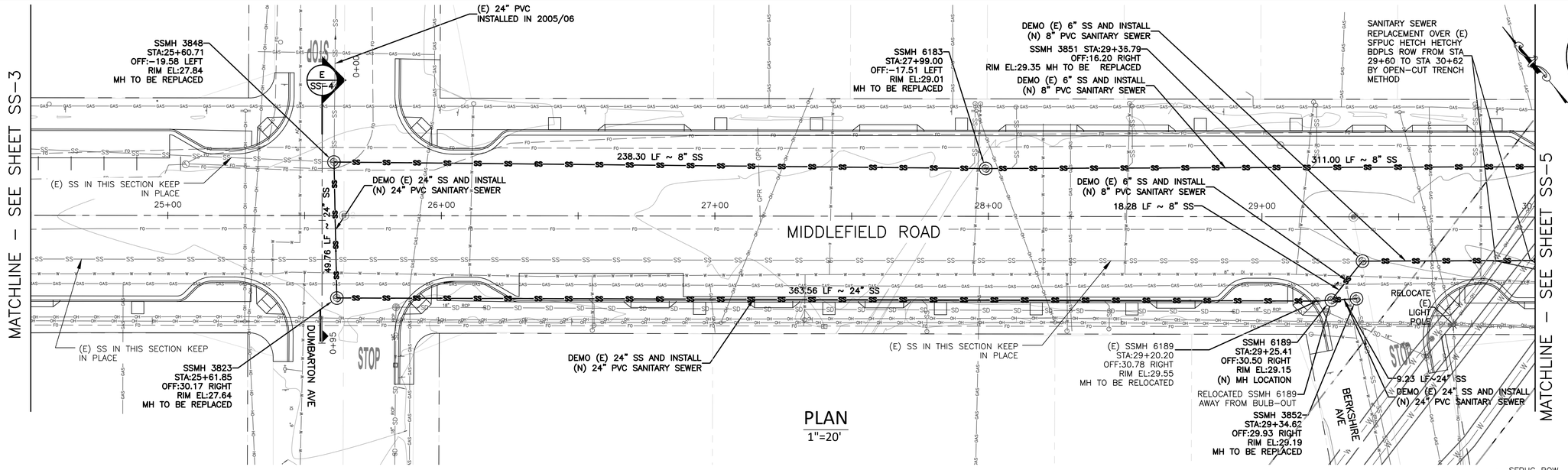
		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UTILITY LAYOUT
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

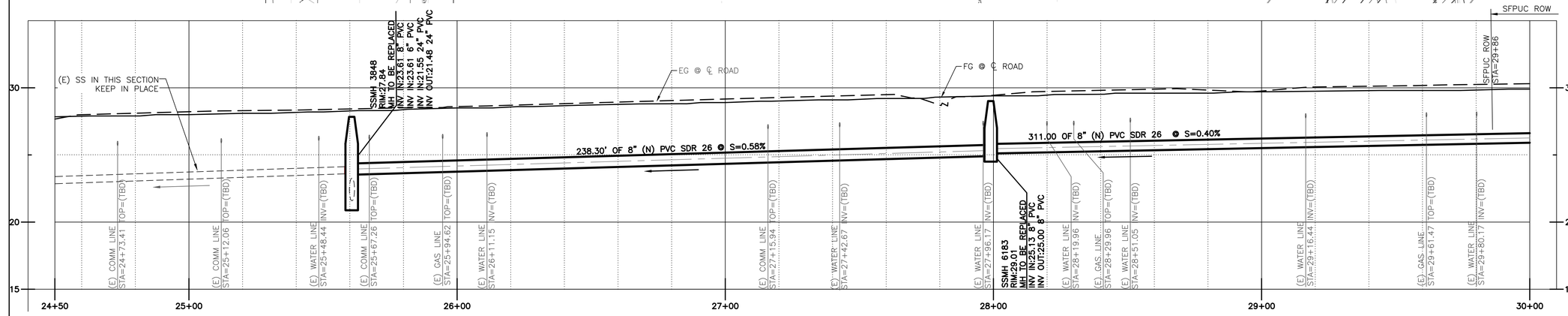
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SS-3
SHEET 38 OF 140

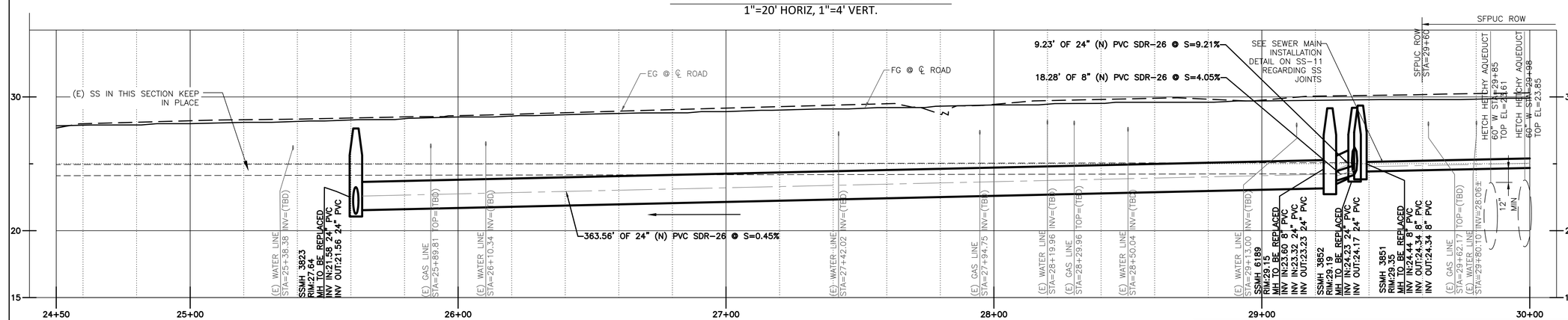
FILENAME: Z:\JOCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-03.DWG (D-SIZE)



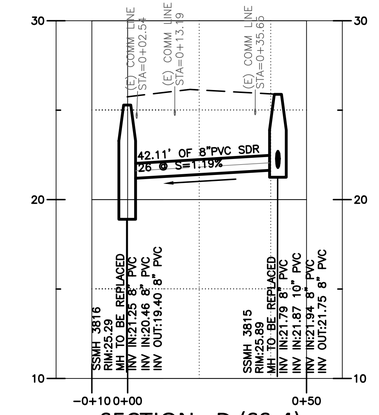
PLAN
1"=20'



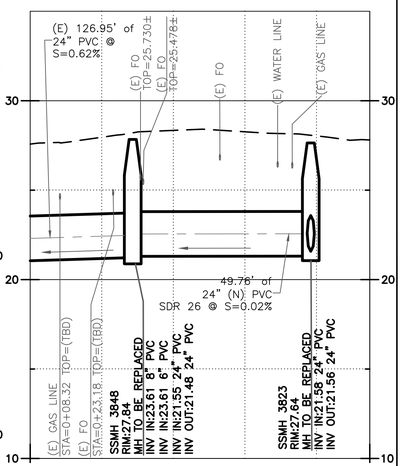
SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.



SECTION - D (SS-4)
1"=20' HORIZ, 1"=4' VERT.



SECTION - E (SS-4)
1"=20' HORIZ, 1"=4' VERT.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

NOTES:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH FG. RESTORE THE TRENCH PAVEMENT TO FG.

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 88365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UTILITY LAYOUT
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

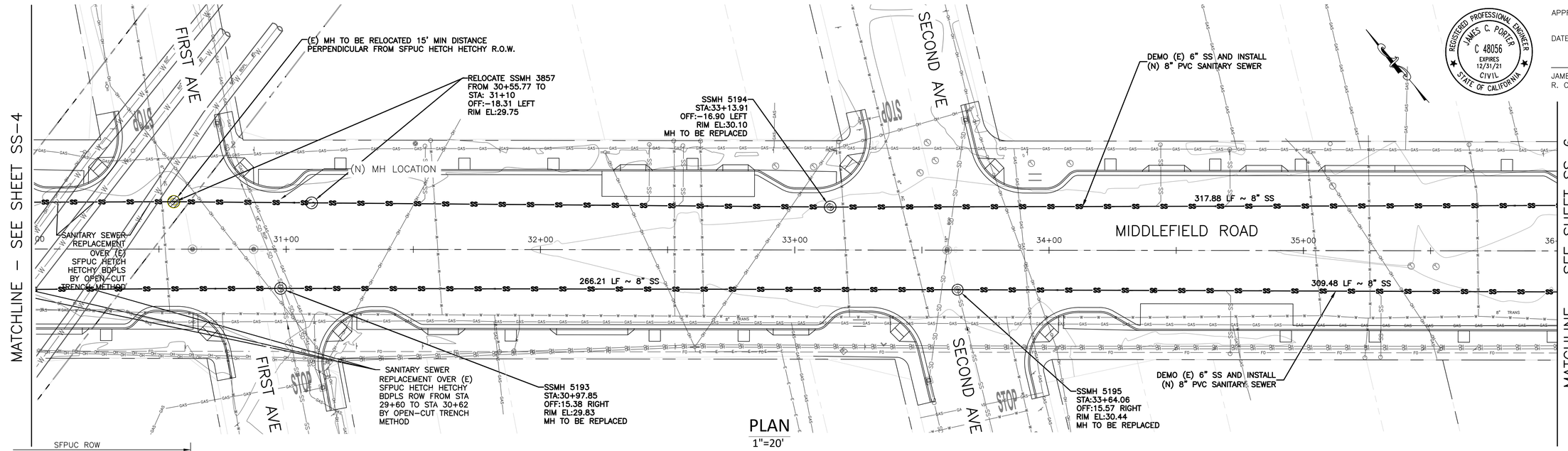
SS-4
SHEET 39 OF 140

APPROVED:

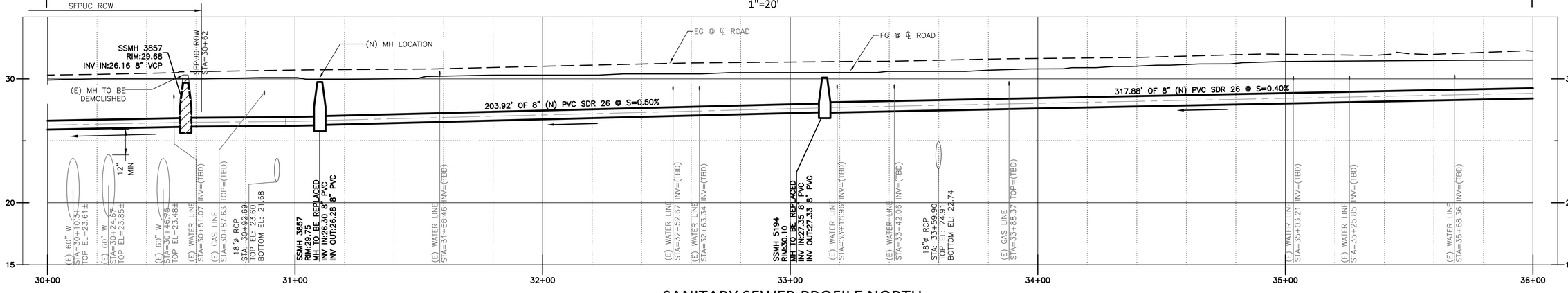
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

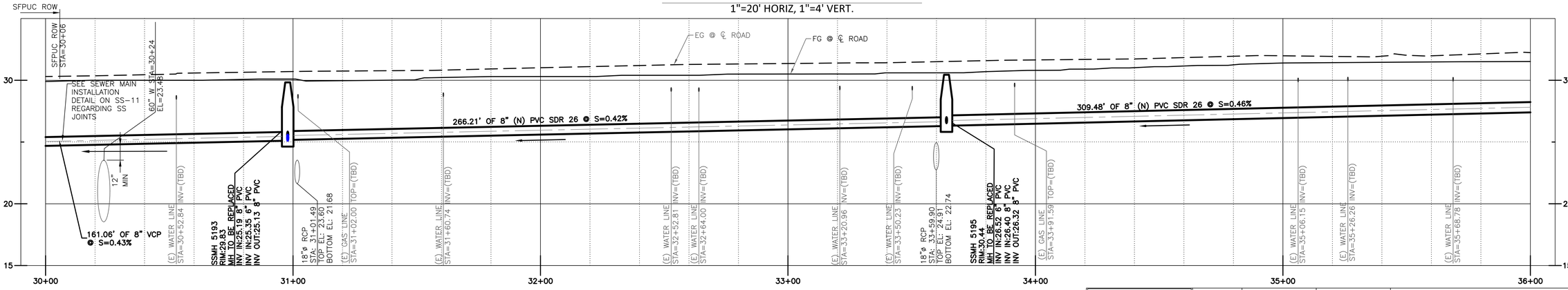
REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH FG. RESTORE THE TRENCH PAVEMENT TO FG.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
Nov 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

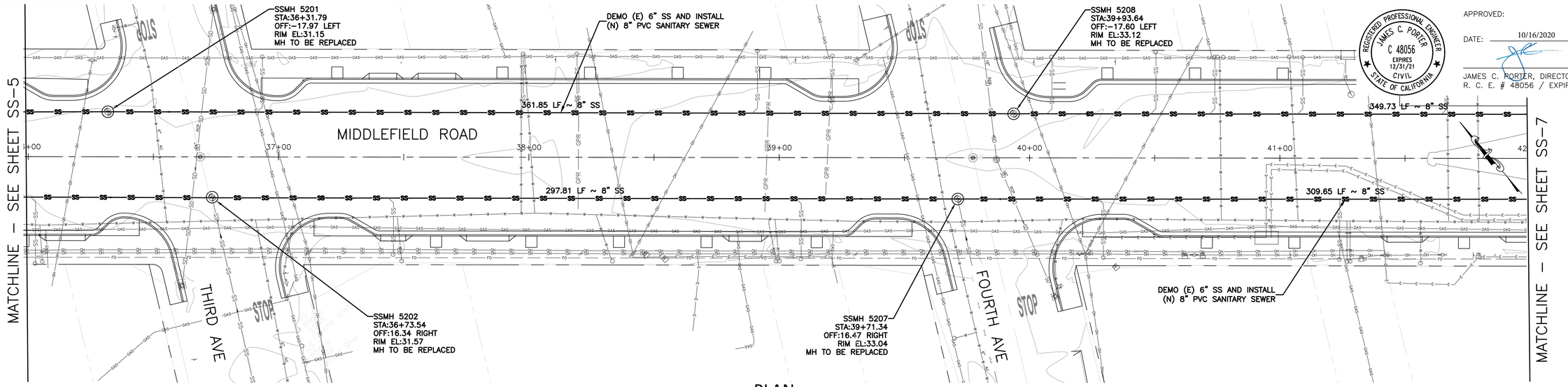
COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UTILITY LAYOUT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

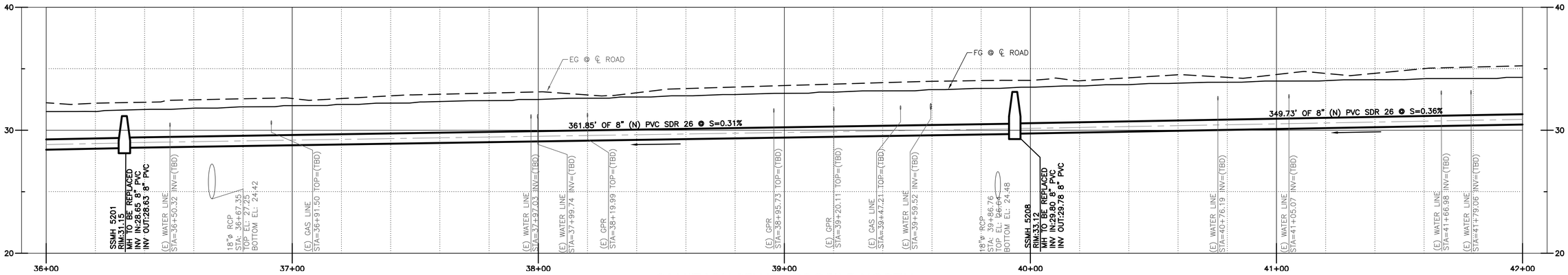
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931
SS-5
SHEET 40 OF 140

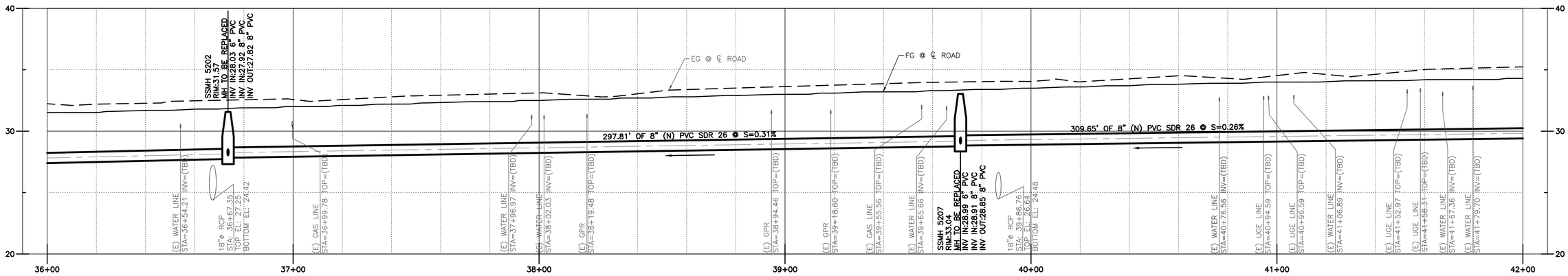
FILENAME: Z:\DPCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-05.DWG (D-SIZE)



PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH FG. RESTORE THE TRENCH PAVEMENT TO FG.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE T.M. [illegible]
No. 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

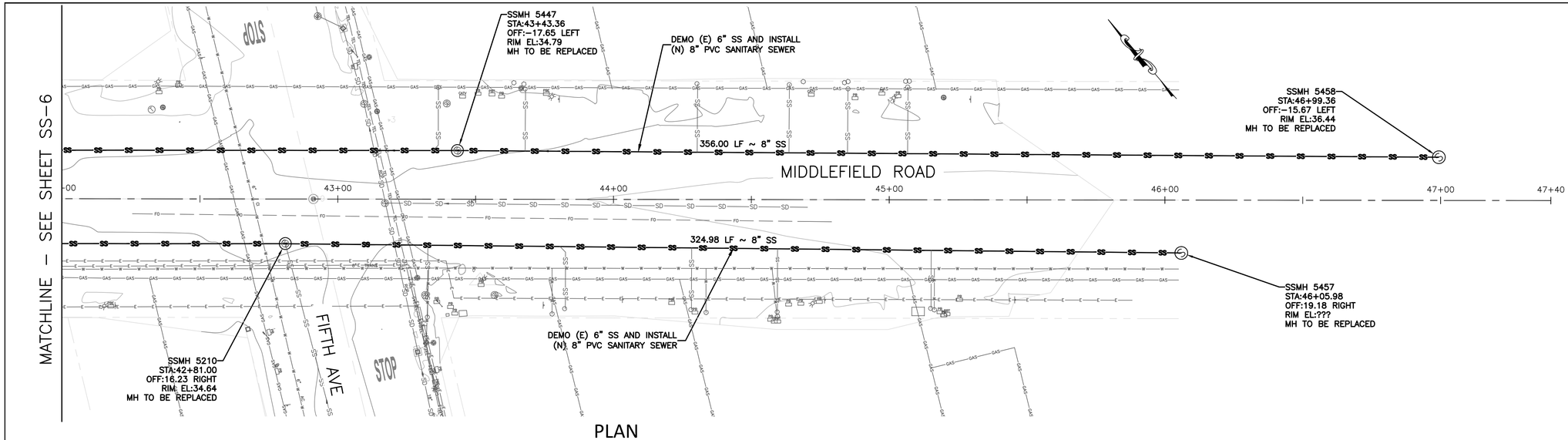
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SANITARY SEWER UTILITY LAYOUT
		CHECKED BY: TS	
		DRAWN BY: EM	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

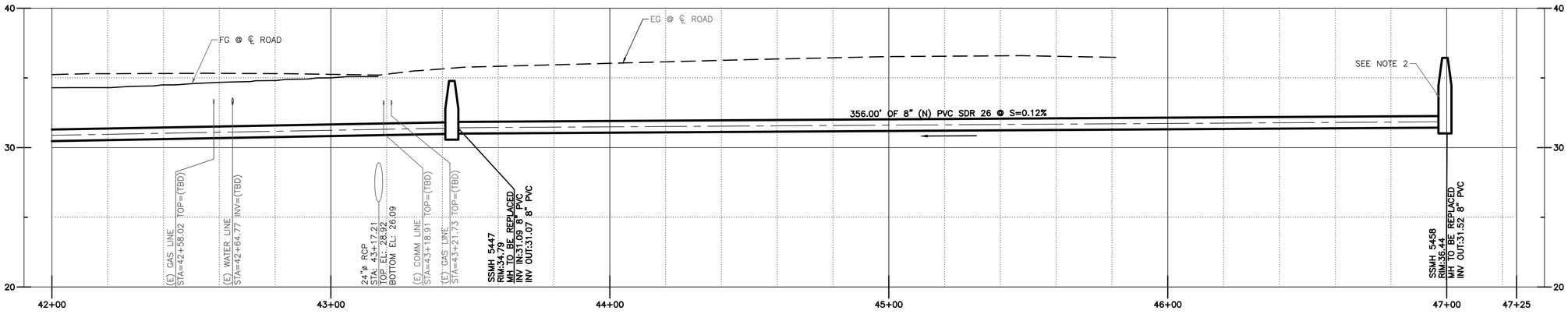
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SS-6
SHEET 41 OF 140

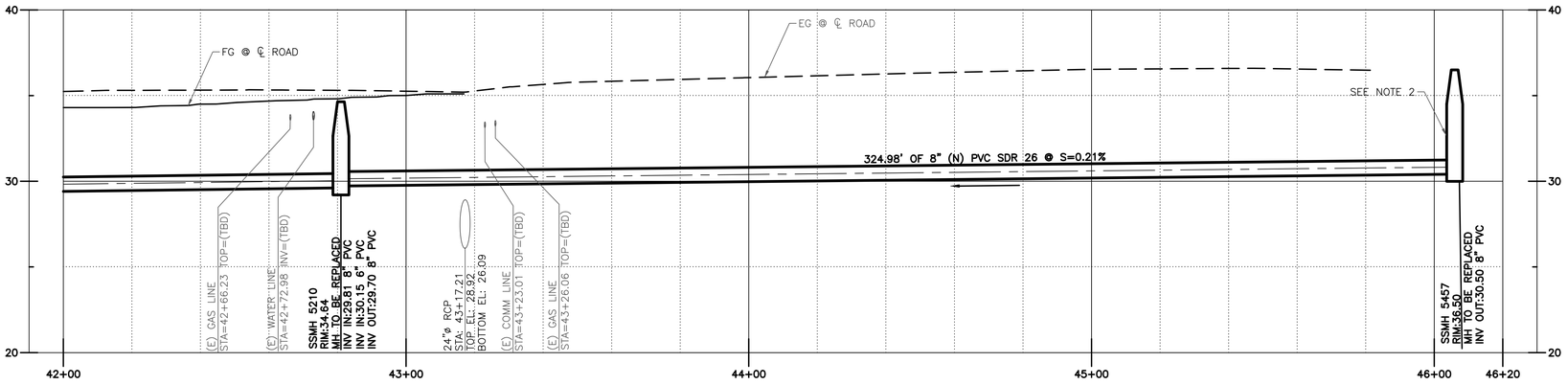
FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-06.DWG (SS-06)



PLAN
1"=20'



SANITARY SEWER PROFILE NORTH
1"=20' HORIZ, 1"=4' VERT.



SANITARY SEWER PROFILE SOUTH
1"=20' HORIZ, 1"=4' VERT.

NOTE:

1. CONTRACTOR TO ADJUST (N) MANHOLE RIM GRADE TO MATCH EG OR FG (SECTIONS SHOWN ON THE PROFILE). RESTORE THE TRENCH PAVEMENT TO EG OR FG (SECTIONS SHOWN ON THE PROFILE).
2. MANHOLE RIM AND INVERT INFORMATION ON THIS SHEET NOT AVAILABLE. CONTRACTOR TO FIELD VERIFY AND CONFIRM WITH ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER LAWRENCE TAM No. 89365 Exp. 6/30/2022 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UTILITY LAYOUT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

SS-7
SHEET 42 OF 140

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-07.DWG (SS-07)



APPROVED:

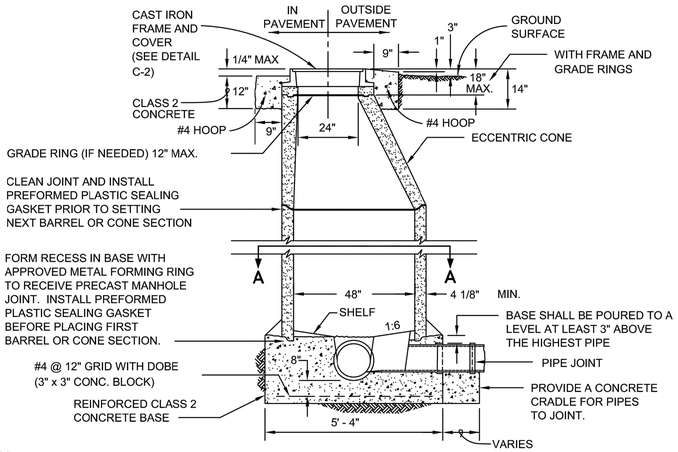
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

DRAWN BY: T.D.
CHECK BY: M.C.
APPROVED BY: J.C.P.

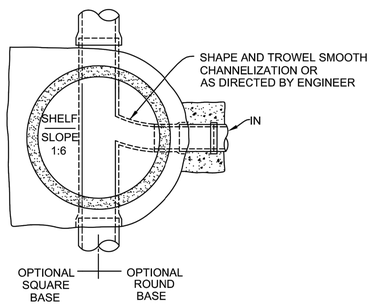
COUNTY OF SAN MATEO
DEPARTMENT OF
PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

SCALE: NONE
DATE: 6/2015
REVISED: 9/2020



NOTES:

1. ALL STEEL TO BE 3" CLEAR.
2. LAY PIPE THRU MANHOLE WHEN POSSIBLE.
3. MANHOLE SHELF SHALL BE MORTARED TO A SLOPE OF 1:6.
4. THERE SHALL BE NO STEPS IN THE MANHOLE.
5. PREFORMED PLASTIC SEALING GASKET SHALL BE "RAM-NEK" OR APPROVED EQUAL.
6. STANDARD WATER STOPS SHALL BE INCORPORATED INTO THE MANHOLE BASE WHEN PVC PIPES ARE USED.
7. MANHOLE THROAT LOCATION TO BE OPPOSITE THE LARGEST SHELF AREA OR AS DIRECTED BY THE ENGINEER.
8. NO LATERAL CONNECTIONS TO HDPE MANHOLE.
9. ANY VARIATION FROM DETAIL SHALL BE APPROVED BY THE ENGINEER.



SECTION A-A

SANITARY SEWER MANHOLE DETAIL

SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 1

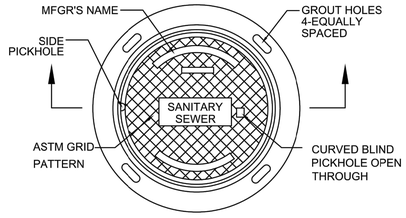
DRAWN BY: M.L.
CHECK BY: R.O.
APPROVED BY: N.R.C.

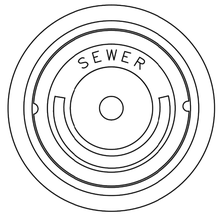
COUNTY OF SAN MATEO
DEPARTMENT OF
PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

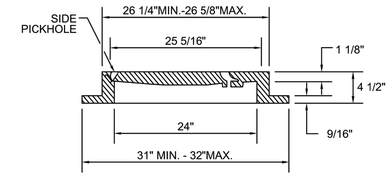
SCALE: NONE
DATE: 6/2015
REVISED: 10/2018

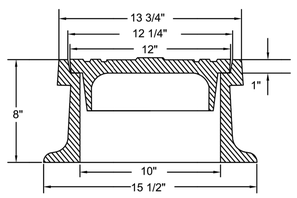
GENERAL NOTE:

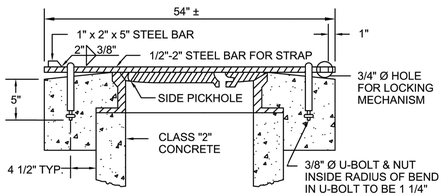
FRAME AND COVER SHALL MEET OR EXCEED THE REQUIREMENTS OF AASHTO H-20 LOADING.











SBF 1246-S

FRAME	85 LBS
LID	40 LBS
TOTAL	125 LBS

GENERAL INFORMATION

1. ALL MATERIALS USED SHALL CONFORM TO ASTM SPEC. A-159-70T-G3000 OR U.S. GOV'T SPEC. QQ1-653.
2. MANHOLE STRAP TO BE USED IN OFF ROAD SPECIFIED BY THE ENGINEER AREA WHERE SPECIFIED BY THE ENGINEER.
3. U-BOLTS, NUT & STRAP SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

GENERAL INFORMATION

1. ALL MATERIALS USED IN MANUFACTURING SHALL CONFORM TO ASTM 48, CLASS 35B.
2. CASTINGS SHALL BE DIPPED IN BLACK, BITUMINOUS PAINT.

SANITARY SEWER MANHOLE COVER, FRAME AND STRAP DETAIL

SANITARY SEWER FLUSHING INLET COVER

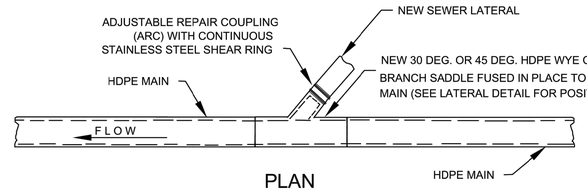
SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 2

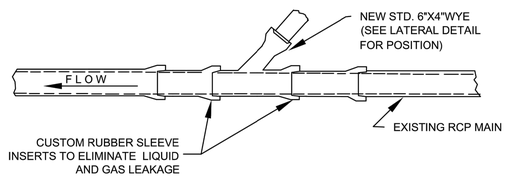
DRAWN BY: BKF
CHECK BY: R.O.
APPROVED BY: N.R.C.

COUNTY OF SAN MATEO
DEPARTMENT OF
PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

SCALE: NONE
DATE: 6/2015
REVISED: 10/2018



PLAN
HIGH DENSITY POLYETHYLENE PIPE (HDPE)



PLAN
REINFORCED CONCRETE PIPE (RCP)

SANITARY SEWER MANHOLE COVER, FRAME AND STRAP DETAIL

NOT TO SCALE

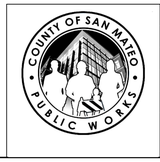
LATERAL CONNECTION INSTALLATION DETAIL ON EXISTING PIPE

SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 8A

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-8 DETAIL SHEET 1.DWG (D-SIZE)





		DESIGNED BY: EA	COUNTY OF SAN MATEO	SCALE: AS SHOWN
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT	DATE: 10-16-2020
		DRAWN BY: EM	SANITARY SEWER UTILITY DETAILS 1	FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4				SS-8 SHEET 43 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

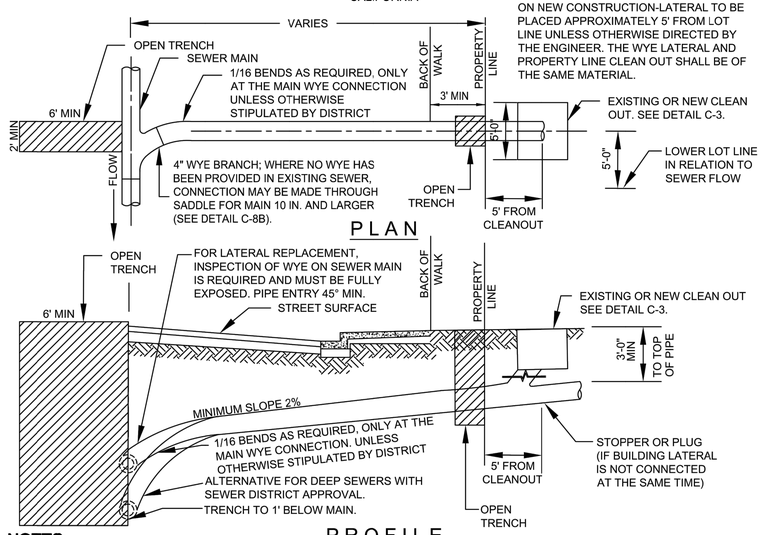
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

DRAWN BY: BKF
CHECK BY: R.O.
APPROVED BY: N.R.C.

COUNTY OF SAN MATEO
DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

SCALE: NONE
DATE: 6/2015
REVISED: 10/2018



NOTES:

1. BEDDING AND BACKFILL MATERIAL SEE DETAIL C-7.
2. THE LATERAL SHALL BE LOWER WHERE NECESSARY TO SERVE EXISTING PLUMBING OR LOW LOTS OR WHEN DIRECTED BY THE ENGINEER.
3. A 4" LATERAL CAN BE USED FOR A SINGLE FAMILY RESIDENCE (SFR) OR A SFR WITH A SECOND UNIT. A MINIMUM 6" LATERAL SHALL BE USED FOR ALL OTHER DEVELOPMENTS.
4. A 3' PIPE COVER IS REQUIRED AT PROPERTY LINE.
5. EXISTING MAIN ≤ 8": FOR MEANS BY WHICH CONNECTION IS TO BE MADE TO MAIN LINE SEE DETAIL C-8.
6. EXISTING MAIN 10"-24": CONNECTION BY MEANS OF AN APPROVED SADDLE "TEE"
7. EXISTING MAIN >24": CONNECTION SHALL BE AT A MANHOLE UNLESS OTHERWISE APPROVED BY THE SEWER DISTRICT.
8. WHEN ENTIRE LATERAL IS REPLACED, LATERAL FROM PROPERTY LINE CLEANOUT TO MAIN LINE SHALL HAVE A SINGLE CONDUCTOR TRACER WIRE TAPED TO THE ENTIRE LENGTH OF THE PIPE.
9. SEE SHEETS C-15, C-16, C-16A FOR GENERAL NOTES.
10. OPEN TRENCH EXCAVATIONS IN FRONT OF THE EXISTING SANITARY SEWER MAIN AND BETWEEN THE EXISTING BACK OF WALK AND PROPERTY LINE SHALL BE AS SHOWN TO ALLOW FOR DIRECTIONAL BORING OR PIPE BURSTING OF THE SANITARY SEWER LATERAL.
11. CONTRACTOR TO PROVIDE PRE AND POST CONSTRUCTION SURVEY OF EXISTING POINTS OF CONNECTION TO ENSURE CORRECT INSTALLATION.
12. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONTACT USA PRIOR TO DIRECTIONAL BORING.
13. ANY DAMAGE TO OTHER UTILITIES WILL BE THE RESPONSIBILITY OF THE APPLICANT.
14. SEWER LATERAL SHALL BE CONSTRUCTED WITH A STRAIGHT GRADE AND ALIGNMENT FROM THE MAIN TO THE PROPERTY LINE UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.
15. SEWER LATERAL SHALL BE 4" OR 6" HDPE SDR 17.
16. CONTRACTOR TO PROVIDE CCTV VIDEO INSPECTION ON SEWER LATERAL FOR REVIEW BY THE DISTRICT ENGINEER.

SEWER LATERAL BY TRENCHLESS METHOD DETAIL

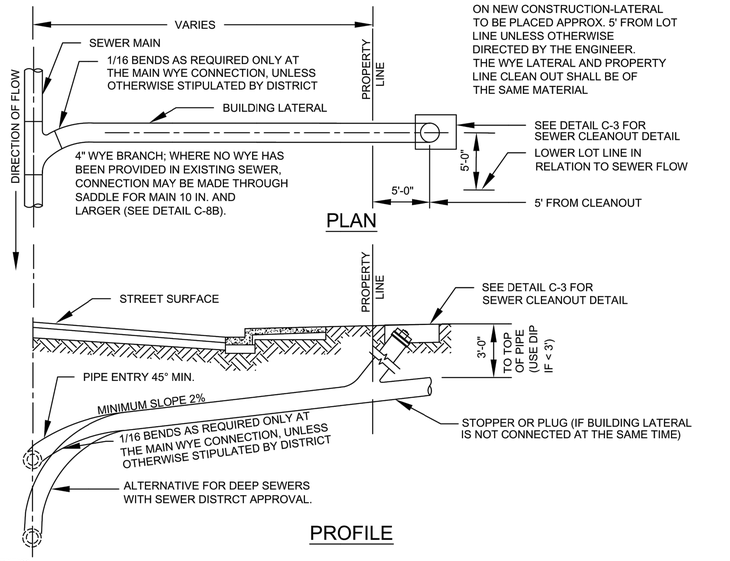
SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 6

DRAWN BY: N.M.A
CHECK BY: R.O.
APPROVED BY: N.R.C.

COUNTY OF SAN MATEO
DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

SCALE: NONE
DATE: 6/2015
REVISED: 10/2018



NOTES:

1. BEDDING AND BACKFILL MATERIAL SEE DETAILS C-7.
2. THE LATERAL SHALL BE LOWER WHERE NECESSARY TO SERVE EXISTING PLUMBING OR WHEN DIRECTED BY THE ENGINEER.
3. A 4" LATERAL CAN BE USED FOR A SINGLE FAMILY RESIDENCE (SFR) OR A SFR WITH A SECOND UNIT. A MINIMUM 6" LATERAL SHALL BE USED FOR ALL OTHER DEVELOPMENTS.
4. EXISTING MAIN ≤ 8": FOR MEANS BY WHICH CONNECTION IS TO BE MADE TO MAIN LINE SEE DETAIL C-8.
6. EXISTING MAIN 10"-24": CONNECTION BY MEANS OF AN APPROVED SADDLE "TEE".
7. EXISTING MAIN >24": CONNECTION SHALL BE AT A MANHOLE UNLESS OTHERWISE APPROVED BY THE SEWER DISTRICT.
8. SEE SHEETS C-15, C-16, C-16A FOR GENERAL NOTES.
9. SDR-26 WYE, RISER, CLEANOUT BODY AND CAP CAN BE USED ONLY WHEN LATERAL FROM PROPERTY LINE TO MAIN LINE IS REPLACED WITH SDR-26.
10. FOR 12" VCP OR LARGER, A 45° WYE IS ALLOWED TO BE FUSED ONTO HDPE (ALL SIZES).
11. WHEN ENTIRE LATERAL IS REPLACED, LATERAL FROM PROPERTY LINE CLEANOUT TO MAIN LINE SHALL HAVE A SINGLE CONDUCTOR TRACER WIRE TAPED TO THE ENTIRE LENGTH OF THE PIPE.
12. ADD TRACER WIRE FOR OPEN TRENCH EXCEPT ON DIP.
13. FOR DIP LATERAL, MECHANICAL JOINTS/COUPLERS SHALL BE USED.

SEWER LATERAL DETAIL

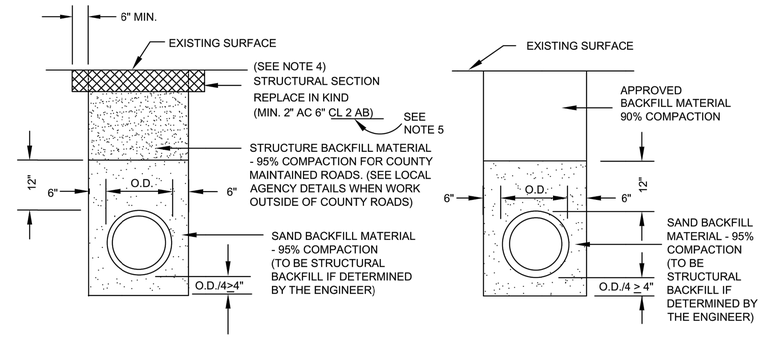
SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 5

DRAWN BY: N.M.A
CHECK BY: R.O.
APPROVED BY: N.R.C.

COUNTY OF SAN MATEO
DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY
CALIFORNIA

SCALE: NONE
DATE: 6/2015
REVISED: 10/2018



NOTES:

1. SAND - MATERIAL FREE FROM ORGANIC MATTER AND CLAY WITH A SIEVE GRADATION BY WEIGHT AS FOLLOWS:

SIEVE SIZE	% PASSING SIEVE
No. 4	100
No. 200	0-5

2. STRUCTURE BACKFILL MATERIAL - MATERIAL WITH SAND EQUIVALENT NOT LESS THAN 20 AND SIEVE GRADATION BY WEIGHT AS FOLLOWS:

SIEVE SIZE	% PASSING SIEVE
3"	100
No. 4	35-100
No. 30	20-100

3. BACKFILL MATERIAL - MATERIAL FROM EXCAVATION, FREE FROM STONES OR LUMPS EXCEEDING 3 INCHES GREATEST DIMENSION, ORGANIC MATTER, OR OTHER UNSATISFACTORY MATERIAL. CONTROLLED LOW STRENGTH MATERIALS (CLSM) MAY BE USED AS APPROVED BY THE ENGINEER.
4. ON TRENCHES THAT PARALLEL THE ROAD AND ARE WITHIN EXISTING BICYCLE LANES, THE WIDTH OF THE STRUCTURAL SECTION SHALL BE GREATER THAN OR EQUAL TO THE WIDTH OF THE EXISTING BICYCLE LANE, WHICHEVER IS WIDER. PAVING JOINTS WITHIN THE BICYCLE LANE ARE NOT ALLOWED.
5. RECYCLE AB MAY BE USED PER CALTRANS STD. SPECS SECTION 25 AND SECTION 26, AS BACKFILL MATERIAL.

STANDARD TRENCH BACKFILL AND BEDDING DETAIL FOR SEWER PIPE

SEE HTTP://PUBLICWORKS.SMCGOV.ORG/SEWER-SERVICES FOR STANDARD DETAILS.

C - 7

NOTES:

1. ALL STEEL REBAR TO BE 3" CLEAR.
2. LAY PIPE THRU MANHOLE WHEN POSSIBLE.
3. MANHOLE SHELF SHALL BE MORTARED TO A SLOPE OF 2"/FT.
4. THERE SHALL BE NO STEPS IN THE MANHOLE.
5. PERFORMED PLASTIC SEALING GASKET SHALL BE "RAM-NEK" OR APPROVED EQUAL.
6. STANDARD WATER STOPS SHALL BE INCORPORATED INTO THE MANHOLE BASE.
7. MANHOLE THROAT LOCATION TO BE OPPOSITE THE LARGEST SHELF AREA OR DIRECTED BY THE ENGINEER.
8. SANITARY SEWER UTILITY DETAILS WERE PREPARED BY THE COUNTY OF SAN MATEO.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER — LAWRENCE TAM — No. 89365 — Exp. 6/30/2022 — CIVIL — STATE OF CALIFORNIA

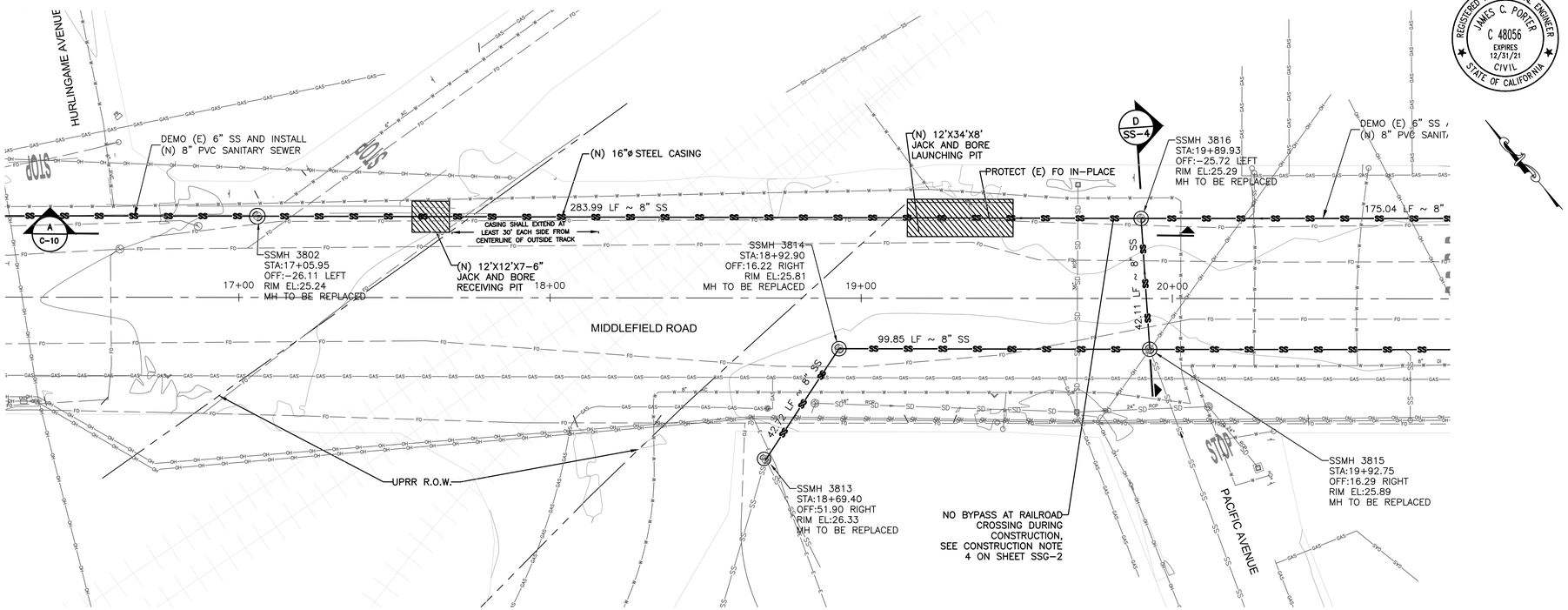
COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY:	COUNTY OF SAN MATEO	SCALE: AS SHOWN
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT	DATE: 10-16-2020
		DRAWN BY: EM	SANITARY SEWER UTILITY DETAILS 2	FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR	
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063	

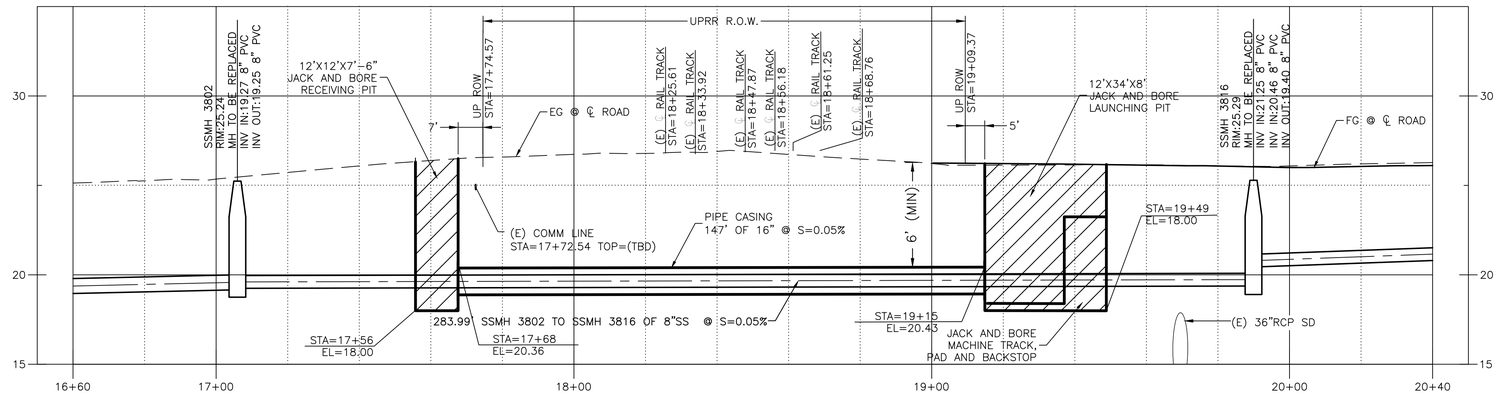
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SS-9
SHEET 44 OF 140

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-9 DETAIL SHEET 2.DWG (D-SIZE)



PLAN
1"=20'



SECTION A
1"=20' HORIZ, 1"=4' VERT.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-10.DWG (PLAN)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE TAM
No. 89365
Exp. 6/30/2022
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: 2	COUNTY OF SAN MATEO
		CHECKED BY: XX	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: XX	SANITARY SEWER UPRR CROSSING PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

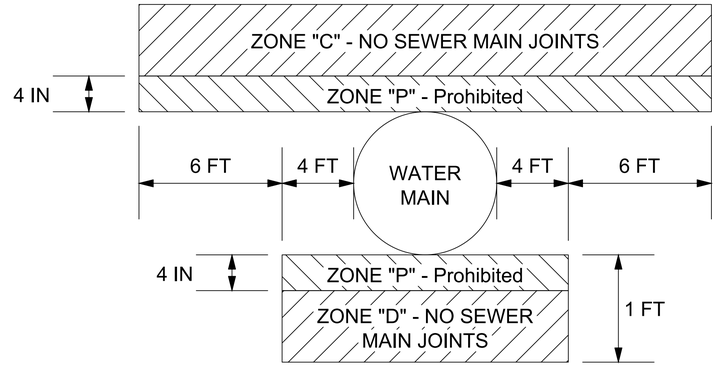
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931
SS-10
SHEET 45 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

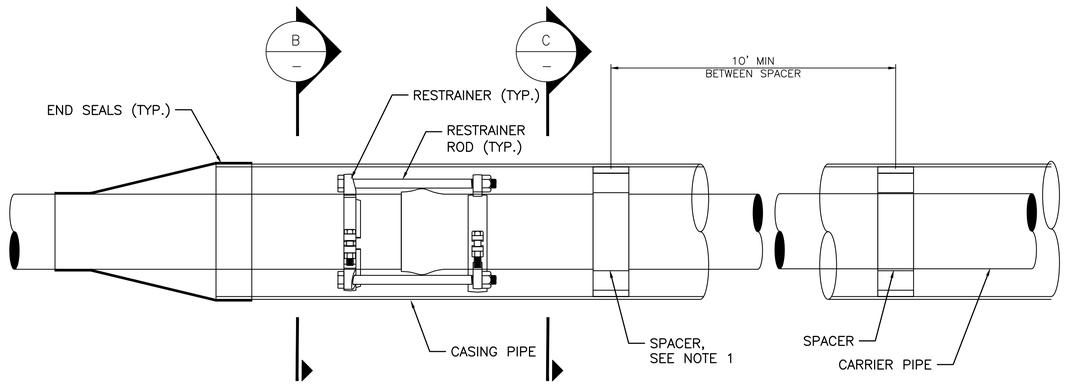
REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



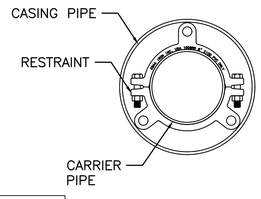
SEWER MAIN INSTALLATION DETAIL APPLICABLE IN SFPUC ROW ONLY

NOTES:

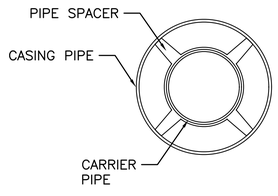
1. USE NON ROTTING PIPE SPACER WITH 316 SS HARDWARE.



CASING DETAIL
NTS



SECTION-B
NTS



SECTION-C
NTS

SS UPRR ROW DETAILS

SECTION	MATERIAL	STANDARD	RATING	NOMINAL DIAMETER	O.D.	I.D.	T	MAX O.D.
UPRR CASING PIPE	WELDED STEEL	AWWA C200	NONE	16"	16.625"	16"	0.3125"	16.625"
UPRR CARRIER PIPE	PVC	ASTM D3034	SDR 26	8"	8.40"	7.754"	0.323"	9.692"

FILENAME: Z:\DCS\PROJECTS\MIDDLEFIELD SANITARY SEWER\000_CAD\SHEETS\SS SHEETS\SS-11.DWG (SECTIONS)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER LAWRENCE TAM No. 85365 Exp. 6/30/2022 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LK	COUNTY OF SAN MATEO
		CHECKED BY: XX	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EM	SANITARY SEWER UPRR SECTIONS AND DETAILS
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SS-11
SHEET 46 OF 140

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

P-1 PARKING STALL NO.

DWY 1 DRIVEWAY NUMBER

XX+XX STRIPING BEGIN STATION

QTY		
0 LF	1	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
0 EA		TYPE D MARKERS
1 EA	2	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
101 LF	3	INSTALL 12" WHITE THERMOPLASTIC STRIPING
0 EA	4	INSTALL LEFT TURN ARROW (STATE TYPE IV)
2 EA	5	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
3 EA	6	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
2 EA	7	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
5 EA	8	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
5 EA	9	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
3 EA	10	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
1 EA	11	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
270 LF	12	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
0 EA	13	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
330 LF	14	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
14 EA		TYPE G MARKERS
274 LF	15	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
635 LF	16	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
415 LF	17	INSTALL 6" WHITE THERMOPLASTIC STRIPING
0 LF	18	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
1 EA	19	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
1 EA	20	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
1 EA	21	INSTALL SHARED LEFT AND THROUGH ARROW (STATE DETAIL SHEET A24A)
26 LF	22	INSTALL 24" WHITE THERMOPLASTIC STRIPING
2 LF	23	INSTALL DETAIL 41 (STATE DETAIL SHEET A20D)
203 LF	24	INSTALL DETAIL 24 4" YELLOW THERMOPLASTIC STRIPING (CA MUTCD FIGURE 3A-105 (CA))
500 LF	25	INSTALL 4" WHITE THERMOPLASTIC CHANNELIZING STRIPING
2 EA		(E) SIGNS TO BE RELOCATED
19 EA		(N) SIGNS TO BE INSTALLED
0 EA		(N) BLUE HYDRANT MARKERS

NOTES:

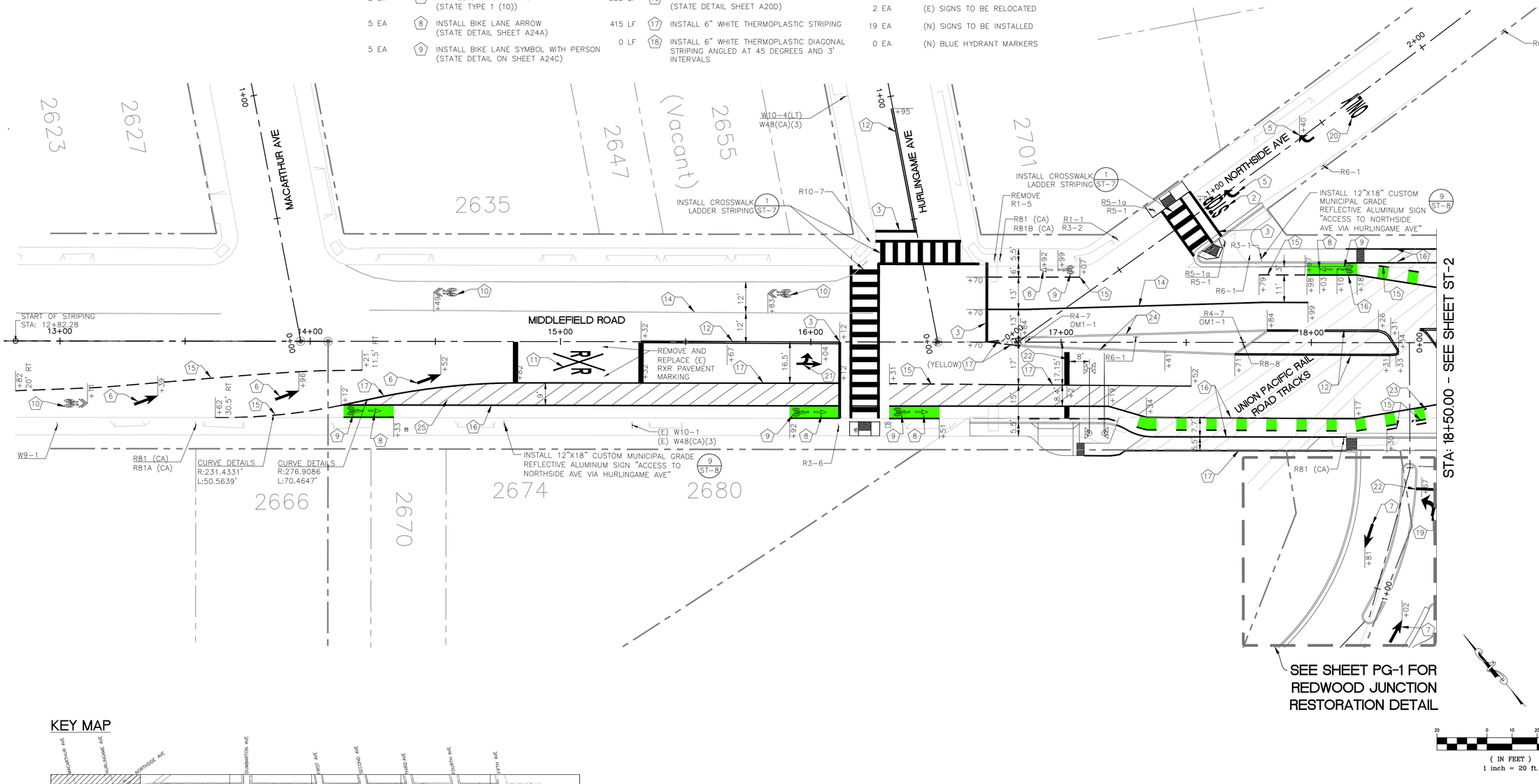
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST-7 THOUGH ST-9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP-10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA-14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

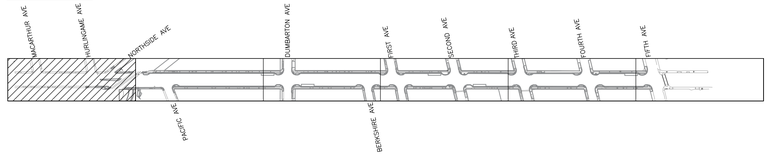
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



(IN FEET)
1 inch = 20 ft.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
ERIN C. TOUSSEIN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	SIGNING AND STRIPING PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-1
SHEET 47 OF 140

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_FOLDER-1\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-1_SIGNING_&_STRIPING.DWG (ST-1)

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

P–1 PARKING STALL NO.

⚠1 STREET LIGHT POLE NUMBER, SEE STREET LIGHT POLE TABLE ON SHEET ST–6

DWY ⚠1 DRIVEWAY NUMBER

XX+XX STRIPING BEGIN STATION

QTY		
270 LF	1	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
20 EA		TYPE D MARKERS
0 EA	2	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
77 LF	3	INSTALL 12" WHITE THERMOPLASTIC STRIPING
7 EA	4	INSTALL LEFT TURN ARROW (STATE TYPE IV)
2 EA	5	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
0 EA	6	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
1 EA	7	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
7 EA	8	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
7 EA	9	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
0 EA	10	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
1 EA	11	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
386 LF	12	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
1 EA	13	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
169 LF	14	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
7 EA		TYPE G MARKERS
53 LF	15	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
3,128 LF	16	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
0 LF	17	INSTALL 6" WHITE THERMOPLASTIC STRIPING
527 LF	18	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
1 EA	19	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
0 EA	20	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
0 EA	21	INSTALL SHARED LEFT AND THROUGH ARROW (STATE DETAIL SHEET A24A)
37 LF	22	INSTALL 24" WHITE THERMOPLASTIC STRIPING
9 LF	23	INSTALL DETAIL 41 (STATE DETAIL SHEET A20D)
13 EA		(E) SIGNS TO BE RELOCATED OR REMOVED
1 EA		(N) SIGNS TO BE INSTALLED
1 EA		(N) BLUE HYDRANT MARKERS

NOTES:

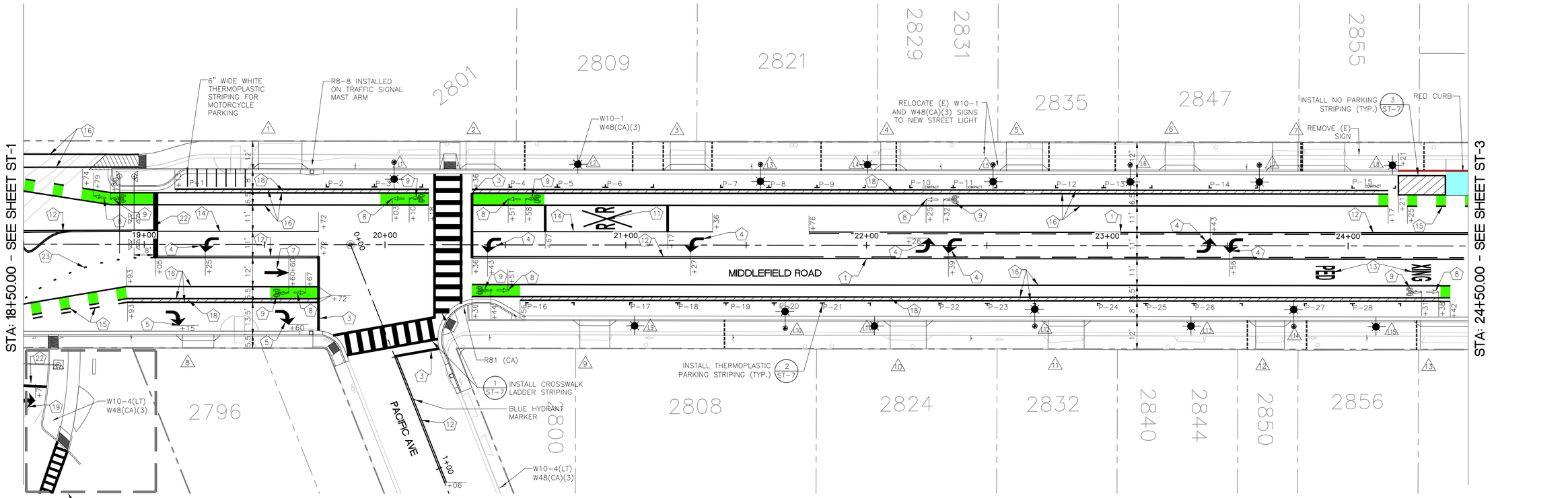
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST–7 THROUGH ST–9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP–10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA–14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

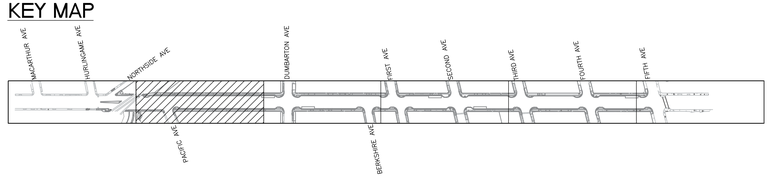
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021



SEE SHEET PG–1 FOR REDWOOD JUNCTION RESTORATION DETAIL

KEY MAP



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_FOLDER_\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST–2_SIGNING_&_STRIPING.DWG (ST–2)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

LINDSEY PROFESSIONAL ENGINEER ANTHOSSEIN FARAHI C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SIGNING AND STRIPING PLAN
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST–2
SHEET 48 OF 140

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

P–1 PARKING STALL NO.

(1) STREET LIGHT POLE NUMBER, SEE STREET LIGHT POLE TABLE ON SHEET ST–6

DWY (1) DRIVEWAY NUMBER

XX+XX STRIPING BEGIN STATION

QTY		
468 LF	(1)	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
34 EA		TYPE D MARKERS
3 EA	(2)	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
57 LF	(3)	INSTALL 12" WHITE THERMOPLASTIC STRIPING
7 EA	(4)	INSTALL LEFT TURN ARROW (STATE TYPE IV)
0 EA	(5)	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
0 EA	(6)	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
0 EA	(7)	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
6 EA	(8)	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
5 EA	(9)	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
0 EA	(10)	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
0 EA	(11)	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
290 LF	(12)	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
1 EA	(13)	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
156 LF	(14)	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
7 EA		TYPE G MARKERS
319 LF	(15)	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
1,301 LF	(16)	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
0 LF	(17)	INSTALL 6" WHITE THERMOPLASTIC STRIPING
216 LF	(18)	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
0 EA	(19)	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
0 EA	(20)	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
10 EA	(21)	INSTALL "YIELD LINE" (STATE DETAIL A24E)
51 LF	(22)	INSTALL DETAIL 23 (STATE DETAIL SHEET A20A)
15 EA		(E) SIGNS TO BE RELOCATED
4 EA		(N) SIGNS TO BE INSTALLED
1 EA		(N) BLUE HYDRANT MARKERS

NOTES:

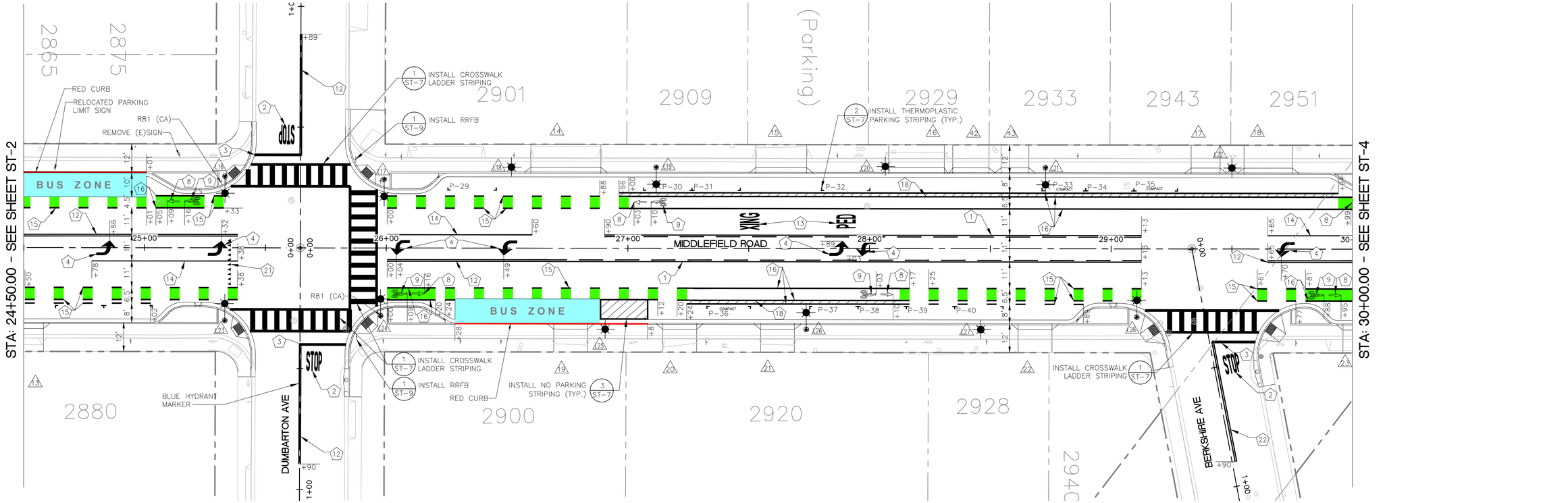
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST–7 THROUGH ST–9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP–10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA–14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

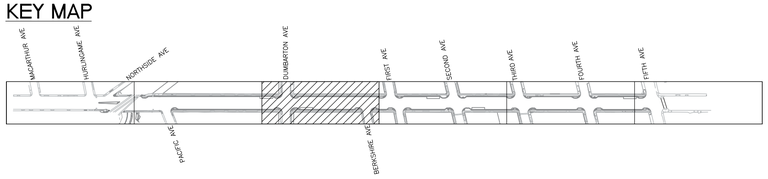
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



KEY MAP



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_FOLDER-1\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-3_SIGNING_&_STRIPING.DWG (ST-3)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER THOMAS S. STEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SIGNING AND STRIPING PLAN
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-3
SHEET 49 OF 140

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

P-1 PARKING STALL NO.

(1) STREET LIGHT POLE NUMBER, SEE STREET LIGHT POLE TABLE ON SHEET ST-6

DWY (1) DRIVEWAY NUMBER

XX+XX STRIPING BEGIN STATION

QTY		
223 LF	1	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
16 EA		TYPE D MARKERS
4 EA	2	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
81 LF	3	INSTALL 12" WHITE THERMOPLASTIC STRIPING
10 EA	4	INSTALL LEFT TURN ARROW (STATE TYPE IV)
0 EA	5	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
0 EA	6	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
0 EA	7	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
7 EA	8	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
7 EA	9	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
0 EA	10	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
0 EA	11	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
527 LF	12	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
2 EA	13	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
252 LF	14	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
11 EA		TYPE G MARKERS
459 LF	15	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
731 LF	16	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
0 LF	17	INSTALL 6" WHITE THERMOPLASTIC STRIPING
117 LF	18	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
0 EA	19	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
0 EA	20	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
20 EA	21	INSTALL "YIELD LINE" (STATE DETAIL A24E)
17 EA		(E) SIGNS TO BE RELOCATED
7 EA		(N) SIGNS TO BE INSTALLED
2 EA		(N) BLUE HYDRANT MARKERS

NOTES:

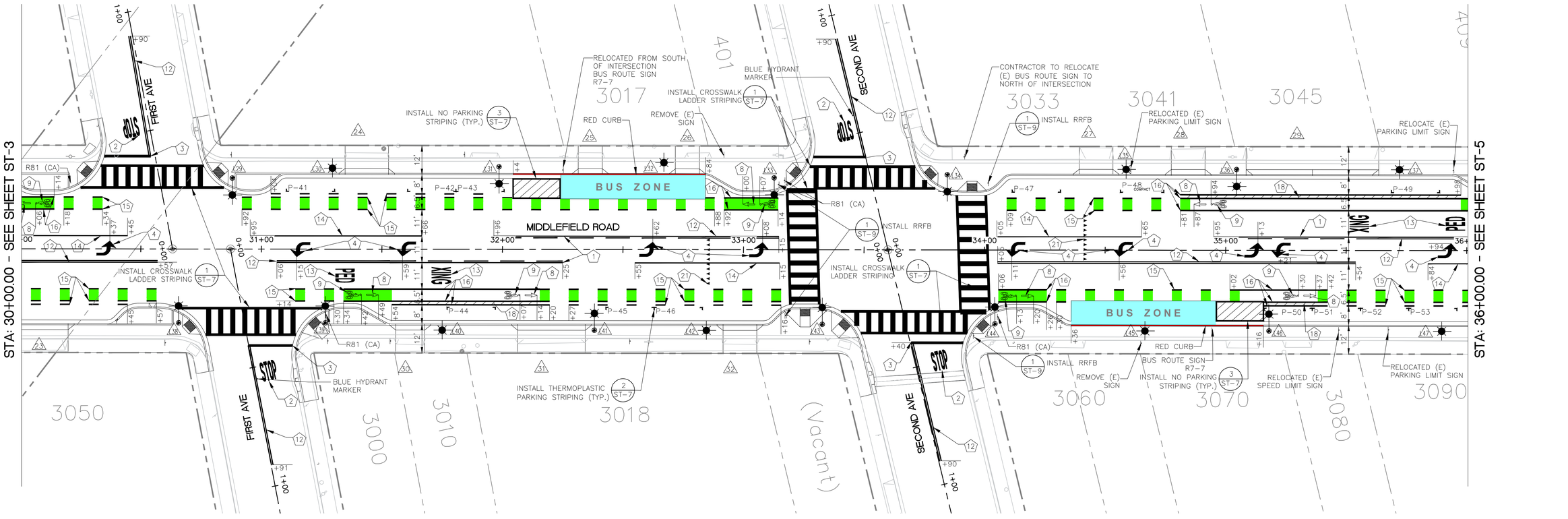
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST-7 THROUGH ST-9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP-10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA-14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

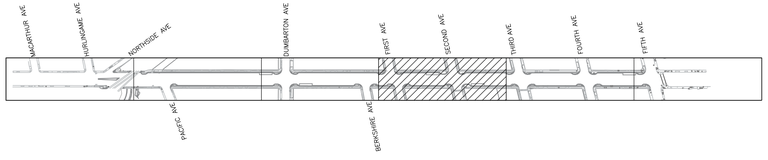
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



KEY MAP



(IN FEET)
1 inch = 20 ft.

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP\~FOLDER~\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-4_SIGNING_&_STRIPING.DWG (ST-4)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER STEVEN C. TROSSEN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	SIGNING AND STRIPING PLAN
ISSUE FOR BID	10-16-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-4
SHEET 50 OF 140

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

P-1 PARKING STALL NO.

(1) STREET LIGHT POLE NUMBER, SEE STREET LIGHT POLE TABLE ON SHEET ST-6

DWY (1) DRIVEWAY NUMBER

XX+XX STRIPING BEGIN STATION

QTY		
144 LF	(1)	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
11 EA		TYPE D MARKERS
4 EA	(2)	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
83 LF	(3)	INSTALL 12" WHITE THERMOPLASTIC STRIPING
8 EA	(4)	INSTALL LEFT TURN ARROW (STATE TYPE IV)
0 EA	(5)	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
0 EA	(6)	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
0 EA	(7)	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
7 EA	(8)	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
7 EA	(9)	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
0 EA	(10)	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
0 EA	(11)	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
650 LF	(12)	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
2.5 EA	(13)	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
237 LF	(14)	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
10 EA		TYPE G MARKERS
437 LF	(15)	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
1,169 LF	(16)	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
0 LF	(17)	INSTALL 6" WHITE THERMOPLASTIC STRIPING
197 LF	(18)	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
0 EA	(19)	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
0 EA	(20)	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
21 EA	(21)	INSTALL "YIELD LINE" (STATE DETAIL A24E)
0 LF	(22)	INSTALL DETAIL 23 (STATE DETAIL SHEET A20A)
10 EA		(E) SIGNS TO BE RELOCATED
5 EA		(N) SIGNS TO BE INSTALLED
3 EA		(N) BLUE HYDRANT MARKERS

NOTES:

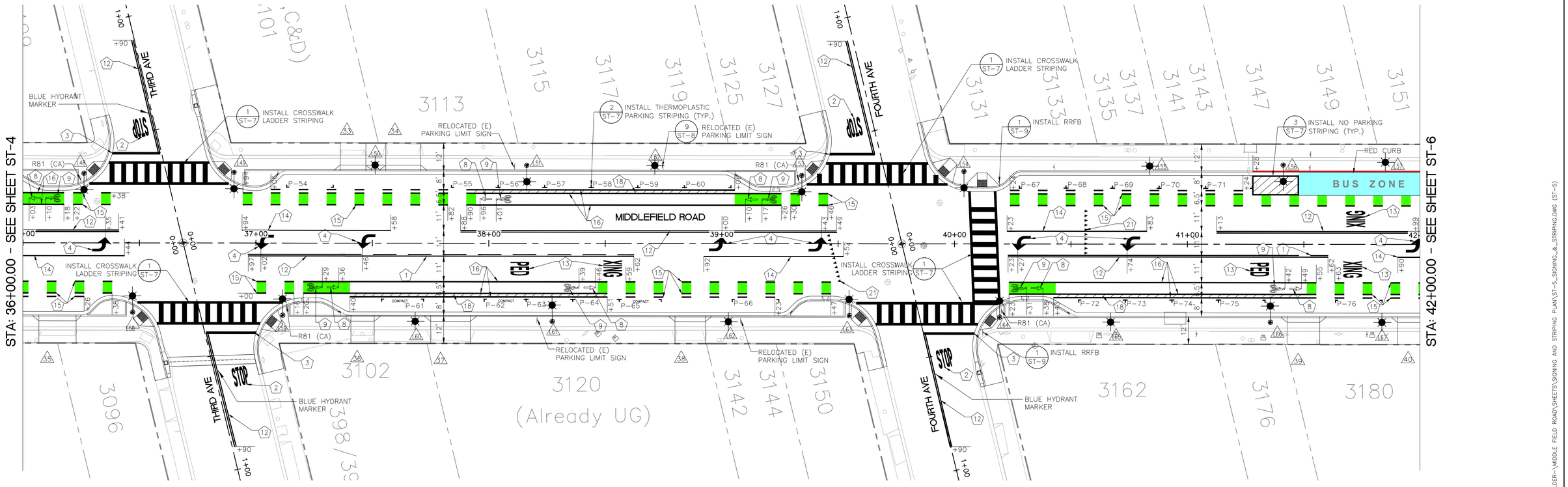
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST-7 THROUGH ST-9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP-10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA-14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

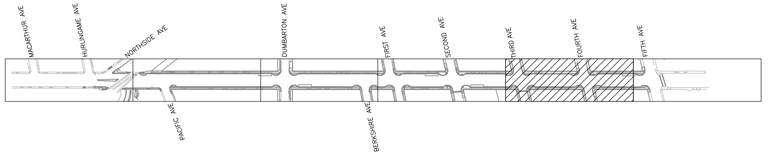
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



KEY MAP



20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP\~FOLDER~1\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-5_SIGNING_&_STRIPING.DWG (ST-5)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER TIMOTHY SCOTT HEISSEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	SIGNING AND STRIPING PLAN
ISSUE FOR BID	10-16-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-5
SHEET 51 OF 140

LEGEND:

(1) REMOVE AND REPLACE EXISTING STREET SIGN AND STOP SIGN (TYPE R1)

NOTE: THE BLOCK BETWEEN 5TH AND 6TH WILL HAVE A 2" FULL WIDTH GRIND FROM EDGE OF GUTTER TO EDGE OF GUTTER. CONTRACTOR SHALL REPLACE ALL STRIPING IN THIS BLOCK.

P-1 PARKING STALL NO.

1 STREET LIGHT POLE NUMBER, SEE STREET LIGHT POLE TABLE

DWY 1 DRIVEWAY NUMBER

XX+X STRIPING BEGIN STATION

QTY		
0 LF	1	INSTALL DETAIL 32 (STATE DETAIL SHEET A20B)
0 EA		TYPE D MARKERS
0 EA	2	INSTALL "STOP" LEGEND (STATE DETAIL SHEET A24D)
23 LF	3	INSTALL 12" WHITE THERMOPLASTIC STRIPING
3 EA	4	INSTALL LEFT TURN ARROW (STATE TYPE IV)
0 EA	5	INSTALL RIGHT TURN ARROW (STATE TYPE IV)
3 EA	6	INSTALL RIGHT LANE DROP ARROW (STATE TYPE VI)
0 EA	7	INSTALL STRAIGHT ARROW (STATE TYPE 1 (10))
2 EA	8	INSTALL BIKE LANE ARROW (STATE DETAIL SHEET A24A)
2 EA	9	INSTALL BIKE LANE SYMBOL WITH PERSON (STATE DETAIL ON SHEET A24C)

QTY		
2 EA	10	INSTALL SHARED ROADWAY BICYCLE MARKING (STATE DETAIL ON SHEET A24C)
0 EA	11	INSTALL RAILROAD CROSSING SYMBOL (STATE DETAIL ON SHEET A24B)
280 LF	12	INSTALL DETAIL 21 (STATE DETAIL SHEET A20A)
2.5 EA	13	INSTALL "PED XING" LEGEND (STATE DETAIL SHEET A24D)
150 LF	14	INSTALL DETAIL 38 (STATE DETAIL SHEET A20D)
6 EA		TYPE G MARKERS
427 LF	15	INSTALL DETAIL 39A (STATE DETAIL SHEET A20D)
40 LF	16	INSTALL DETAIL 39 (STATE DETAIL SHEET A20D)
0 LF	17	INSTALL 6" WHITE THERMOPLASTIC STRIPING
0 LF	18	INSTALL 6" WHITE THERMOPLASTIC DIAGONAL STRIPING ANGLED AT 45 DEGREES AND 3' INTERVALS

QTY		
0 EA	19	INSTALL TYPE III (B) ARROW (STATE DETAIL ON SHEET A24B)
0 EA	20	INSTALL "ONLY" LEGEND (STATE DETAIL A24E)
2 EA	20	INSTALL "AHEAD" LEGEND (STATE DETAIL A24D)
1 EA		(E) SIGNS TO BE RELOCATED OR REMOVED
3 EA		(N) SIGNS TO BE INSTALLED
1 EA		(N) BLUE HYDRANT MARKERS

NOTES:

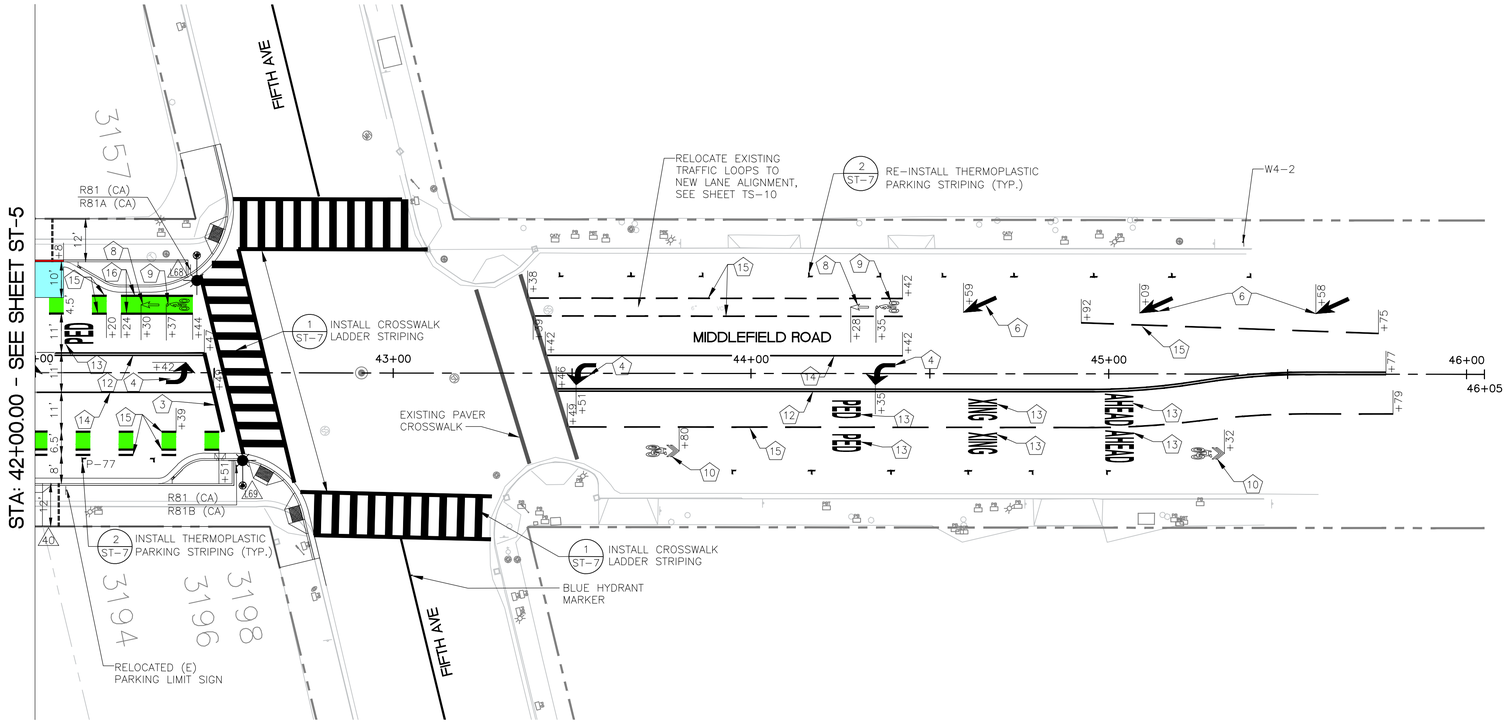
1. FINAL LOCATION OF SIGNS, STRIPING, MARKINGS, AND PAVEMENT MARKERS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. SEE SHEETS ST-7 THROUGH ST-9 FOR SIGNING AND STRIPING DETAILS.
3. ALL EXISTING SIGNS TO BE REMOVED AND RELOCATED PER DETAILS ON PP-10.
4. GREEN COLOR TO FOLLOW RECOMMENDATIONS PROVIDED BY THE "INTERIM APPROVAL FOR OPTIONAL USE OF GREEN COLORED PAVEMENT FOR BIKE LANES (IA-14)" OF FHWA MUTCD.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

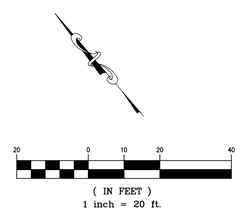
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

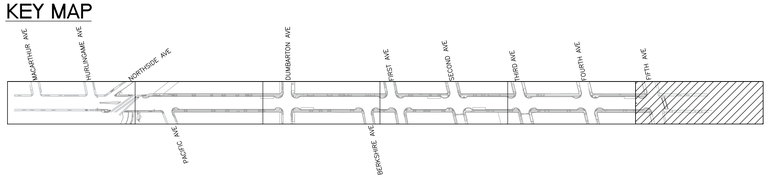


STREET LIGHT POLE TABLE (SEE SL SHEETS FOR STREET LIGHT DETAILS)

Pole #	Station Offset	Pole #	Station Offset	Pole #	Station Offset	Pole #	Station Offset
1	20+03.74, 34.24' LT	19	27+11.68, 33.52' LT	37	35+72.09, 33.50' LT	55	40+83.78, 33.50' LT
2	20+80.04, 33.50' LT	20	28+06.50, 33.97' LT	38	30+65.75, 30.60' RT	56	41+41.12, 34.00' LT
3	21+55.90, 33.50' LT	21	28+72.82, 33.50' LT	39	31+26.55, 30.59' RT	57	41+84.94, 35.25' LT
4	22+00.38, 33.50' LT	22	29+49.96, 33.50' LT	40	31+75.06, 33.50' RT	58	36+47.09, 29.74' RT
5	22+52.52, 33.50' LT	23	25+33.18, 30.09' RT	41	32+38.20, 33.50' RT	59	37+11.54, 30.97' RT
6	23+09.49, 33.50' LT	24	25+97.74, 28.11' RT	42	32+84.63, 33.50' RT	60	37+68.42, 33.50' RT
7	23+61.11, 33.50' LT	25	26+90.62, 33.50' RT	43	33+32.71, 30.94' RT	61	38+27.30, 33.50' RT
8	24+18.37, 33.50' LT	26	27+73.91, 33.54' RT	44	34+04.37, 30.64' RT	62	39+02.90, 33.50' RT
9	21+03.71, 33.54' RT	27	28+46.09, 33.50' RT	45	34+66.54, 33.50' RT	63	39+54.83, 30.87' RT
10	21+66.30, 34.52' RT	28	29+10.68, 28.28' RT	46	35+18.02, 33.44' RT	64	40+19.45, 31.49' RT
11	22+03.33, 33.50' RT	29	30+87.94, 29.44' LT	47	35+89.64, 33.50' RT	65	40+67.07, 33.50' RT
12	22+69.97' 33.50' RT	30	31+29.46, 33.58' LT	48	36+26.16, 29.86' LT	66	41+35.69, 33.50' RT
13	23+34.80, 33.40' RT	31	31+98.58, 34.26' LT	49	36+90.56, 30.32' LT	67	41+83.55, 33.50' RT
14	23+77.53, 33.50' RT	32	32+66.95, 36.09' LT	50	37+51.15, 33.50' LT	68	42+45.09, 32.80' LT
15	24+11.64, 33.59' RT	33	33+12.70, 29.80' LT	51	38+16.30, 33.50' LT	69	42+58.02, 31.51' RT
16	25+33.21, 29.58' LT	34	33+84.50, 31.19' LT	52	38+71.25, 33.50' LT		
17	25+99.08, 28.38' LT	35	34+58.68, 33.50' LT	53	39+34.38, 29.28' LT		
18	26+51.77, 33.50' LT	36	35+04.52, 33.50' LT	54	40+04.03, 31.08' LT		



KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER STEPHEN TSEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

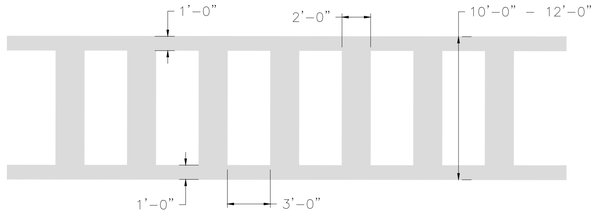
		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SIGNING AND STRIPING PLAN
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

ST-6
SHEET 52 OF 140

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_-FOLDER-\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-6_SIGNING_&_STRIPING.DWG (ST-6)



1 ST-7 CROSSWALK LADDER DETAIL

NOT TO SCALE

NOTES:

1. SPACES BETWEEN MARKINGS MUST BE PLACED IN WHEEL TRACKS OF EACH LANE
2. SPACINGS NOT TO EXCEED 2.5 TIMES WIDTH OF LONGITUDINAL LINE
3. ALL CROSSWALK MARKINGS MUST BE WHITE EXCEPT THOSE NEAR SCHOOLS MUST BE YELLOW

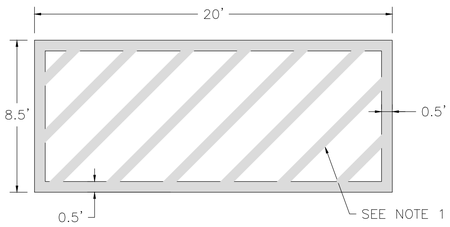


2 ST-7 THERMOPLASTIC PARKING STRIPING (TYP.)

NOT TO SCALE

NOTES:

1. STRIPING SHALL BE 4" WIDE WHITE THERMOPLASTIC

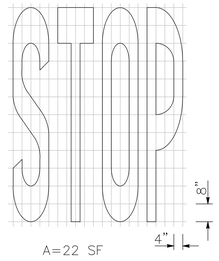


3 ST-7 NO PARKING STRIPING (TYP.)

NOT TO SCALE

NOTES:

1. NO PARKING STRIPING UTILIZED AFTER BUS STOP ZONES
2. EXTERIOR STRIPING SHALL BE 6" WIDE WHITE THERMOPLASTIC
3. INTERIOR STRIPING SHALL BE 45° 4" WIDE WHITE THERMOPLASTIC AT 3' MAXIMUM CENTERS

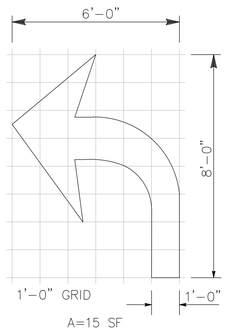


4 ST-7 STOP LEGEND

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24D

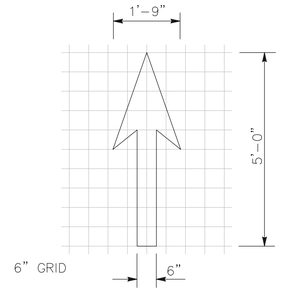


5 ST-7 TYPE IV (L) ARROW

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A
2. FOR TYPE IV (R) ARROW, USE MIRROR IMAGE
3. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER

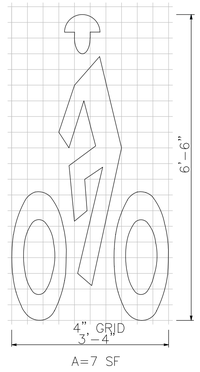


6 ST-7 BIKE LANE ARROW

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A

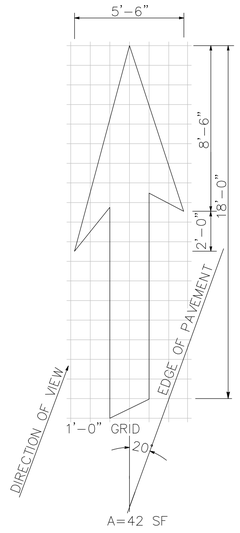


7 ST-7 BIKE LANE SYMBOL WITH PERSON

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24C

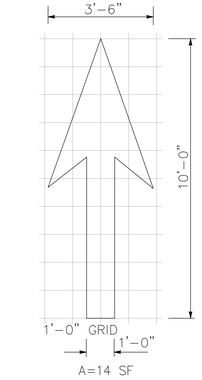


8 ST-7 TYPE VI RIGHT LANE DROP ARROW

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A
2. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER

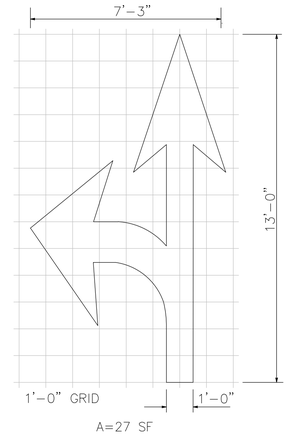


9 ST-7 TYPE I 10'-0" STRAIGHT ARROW

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A
2. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER

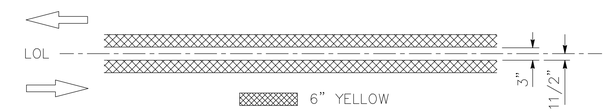


10 ST-7 TYPE VII THROUGH (L) TURN ARROW

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A
2. FOR TYPE II (R) ARROW, USE MIRROR IMAGE
3. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER



11 ST-7 NO PASSING ZONES-TWO DIRECTION

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A20A
2. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER JASON RIESS-SEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

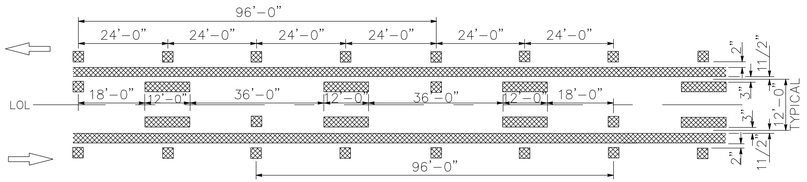
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SIGNING AND STRIPING DETAILS
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-7
SHEET 53 OF 140

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_FOLDER-_\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-7_SIGNING_&_STRIPING.DWG (ST-7)



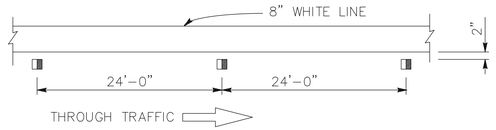
1 ST-8

TWO-WAY LEFT TURN LANES DETAIL 32

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A20B
2. STRIPING SHALL BE THERMOPLASTIC



2 ST-8

CHANNELIZING LINE DETAIL 38

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A20D
2. MARKERS TYPE G ONE-WAY CLEAR RETROREFLECTIVE
3. STRIPING SHALL BE THERMOPLASTIC

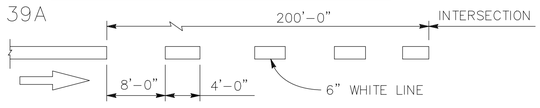
DETAIL 39

BIKE LANE LINE



DETAIL 39A

BIKE LANE INTERSECTION LINE



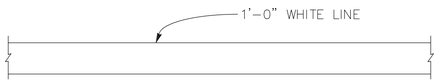
3 ST-8

BIKE LANE LINE DETAILS

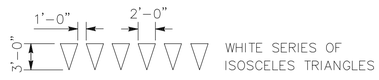
NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A20D



LIMIT LINE (STOP LINE)



YIELD LINE

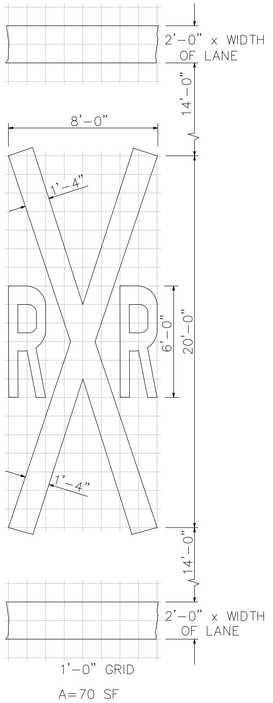
4 ST-8

LIMIT LINE & YIELD LINE

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24E



A=70 SF

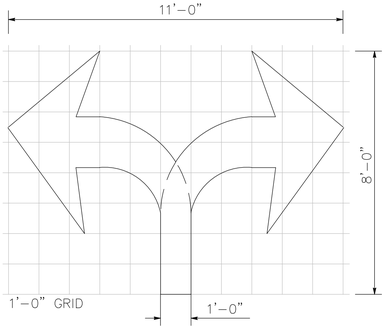
5 ST-8

RAILROAD CROSSING SYMBOL

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24B
2. 70 SF DOES NOT INCLUDE THE 2'-0" X VARIABLE WIDTH TRANSVERSE LINES



A=27 SF

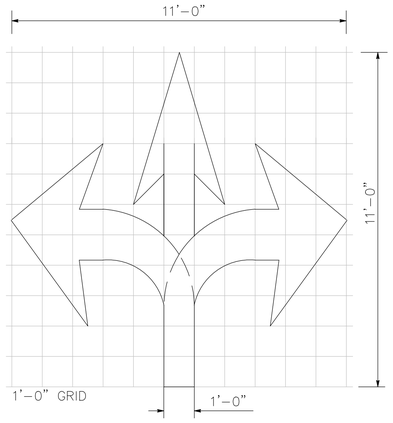
6 ST-8

TYPE III (B) MODIFIED ARROW

NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24B
2. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER.



A=35 SF

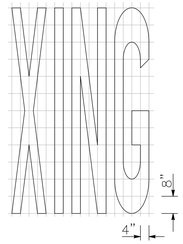
7 ST-8

TYPE VIII (B) MODIFIED ARROW

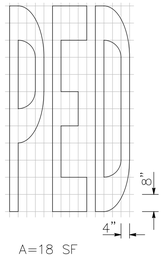
NOT TO SCALE

NOTES:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24A
2. MINOR VARIATIONS IN DIMENSIONS MAY BE ACCEPTED BY THE ENGINEER.



A=21 SF



A=18 SF

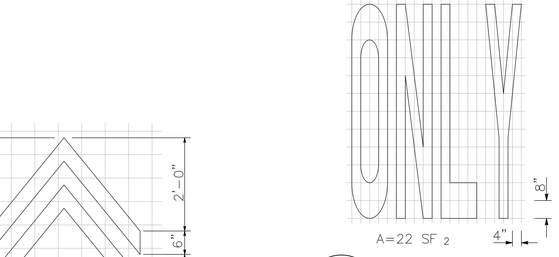
8 ST-8

PED XING LEGEND

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24D



A=22 SF 2

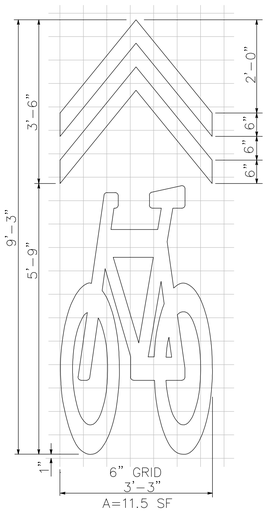
11 ST-8

ONLY

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24E



A=11.5 SF

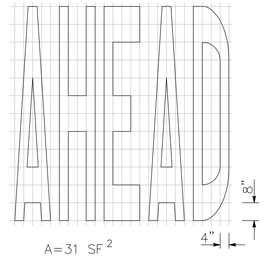
10 ST-8

SHARED ROADWAY BICYCLE MARKING

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24C



A=31 SF 2

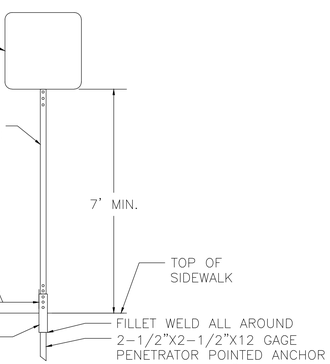
12 ST-8

AHEAD

NOT TO SCALE

NOTE:

1. REFERENCE TAKEN FROM 2018 STANDARD PLAN A24D



9 ST-8

SIGN POLE

NOT TO SCALE

NOTES:

1. CUT POST TO MEET SPECIFIED HEIGHT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
LINDSEY HOSSEIN FRASER
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

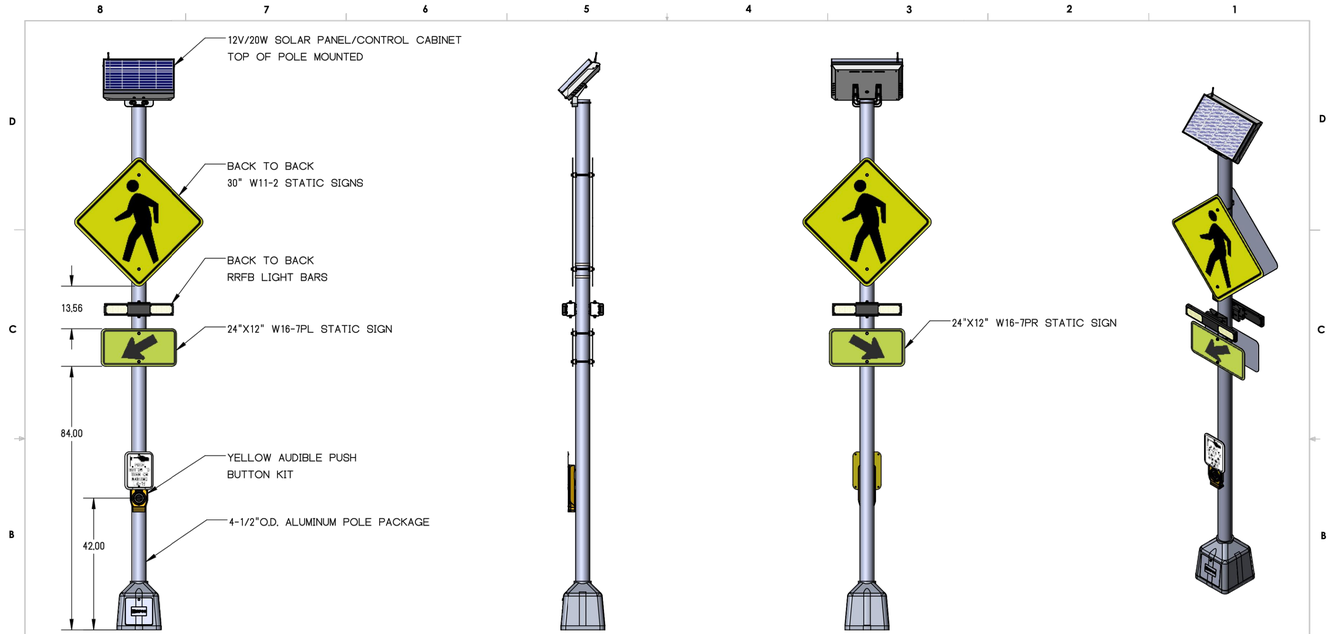
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT SIGNING AND STRIPING DETAILS
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-XX-2019
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-8
SHEET 54 OF 140

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP\--FOLDER--\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-8_SIGNING_&_STRIPING.DWG (ST-8)



NOTES:

1. ORIENT SOLAR PANEL TOWARDS SOUTHERN SKY FOR MAXIMUM SOLAR EXPOSURE
2. CONTROL CABINET HEIGHT MAY VARY.
3. SNAP LOCKS ARE PROVIDED, STANDARD 3/4" S/S BANDING IS RECOMMENDED
4. J-BOLTS NOT SHOWN
5. ALL DIMENSIONS ARE FOR REFERENCE ONLY.

MATERIAL		INTERPRET GEOMETRIC TOLERANCING PER ASME Y14.5-2009	
FINISH		REFERENCE:	

TOLERANCE UNLESS OTHERWISE SPECIFIED
HOLE Ø ±.003
DEC. INCH
X ±0.030
XX ±0.015
XXX ±0.005
ANGULAR ±0.5°

TITLE: RRFB, SOLAR 20/44, RADIO, TOP, DS, AMBER, XAV, H/T POLE X2

DESIGNED BY:	TAPCO		SIZE	DWG. NO.	REV	WEIGHT:
DRAWN BY:	C. GRAVES	5/7/2018	B	600144	A	
CHECKED BY:						SCALE: 1:26

PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TAPCO. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TAPCO IS PROHIBITED. SHEET 2 OF 2

1 / ST-9 RECTANGULAR RAPID FLASHING BEACON

NOT TO SCALE

NOTES:

1. TAPCO DETAIL IS USED AS EXAMPLE. CONTRACTOR MAY USE AN APPROVED EQUAL PRODUCT.
2. CHIRP SOUNDS ARE OKAY FOR AUDIBLE PUSH BUTTON.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

FILENAME: C:\USERS\DENNIS.BARNHART\DESKTOP_FOLDER_\MIDDLE FIELD ROAD\SHEETS\SIGNING AND STRIPING PLAN\ST-9_SIGNING_&_STRIPING.DWG (ST-9)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LINDSEY PROFESSIONAL ENGINEER ANDROSSEN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	SIGNING AND STRIPING DETAILS
ISSUE FOR BID	10-16-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

ST-9
SHEET 55 OF 140

NOTES:

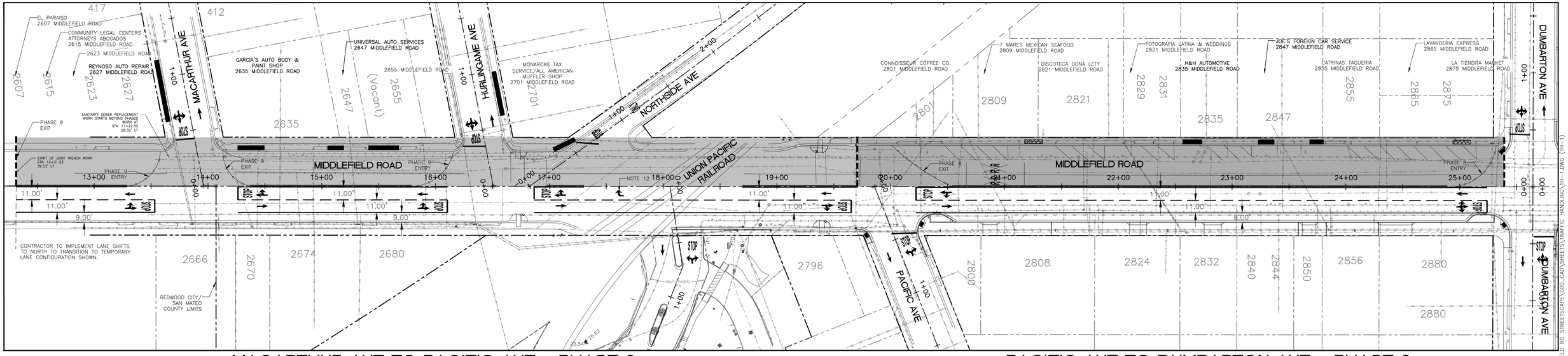
1. CONSTRUCTION PHASING & TRAFFIC HANDLING PLANS DO NOT SHOW ALL WORK REQUIRED TO BE COMPLETED. WORK HOURS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK.
2. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS.
3. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND STRIPING AT EACH PHASE. COVER EXISTING CONFLICTING ROADSIDE SIGNS.
4. CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN PHASES AND PROVIDE PEDESTRIAN, CUSTOMER VEHICLE SERVICE AND DELIVERY VEHICLES ACCESS AT ALL TIMES TO AFFECTED BUSINESSES FOR EACH PHASE OF CONSTRUCTION. ANY WORK THAT OBSTRUCTS ENTRY TO BUSINESS SHALL BE RESTORED WITHIN 24 CONSECUTIVE HOURS.
5. DURING CONSTRUCTION OF PHASES 4 AND 10, CONTRACTOR TO PLACE K-RAILS WITH PRIVACY SCREENS 3' EAST OF THE MIDDLEFIELD ROAD ROW CENTERLINE TO SEPARATE CONSTRUCTION ZONE FROM VEHICULAR TRAFFIC.
6. DURING CONSTRUCTION OF PHASE 8, CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON WEST SIDE DURING PHASE 4. DURING CONSTRUCTION OF PHASE 10, CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON EAST SIDE DURING PHASE 9.
7. SIGNAGE WILL BE POSTED AT THE APPROACHING END OF ALL CONSTRUCTION ZONES DIRECTING DELIVERY TRUCKS AND CUSTOMERS OF VEHICLE SERVICE BUSINESSES TO ACCESS/ENTRY POINTS WITH FLAGGERS.
8. THE FLAGGERS WILL CONTROL ACCESS TO DELIVERY TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS.
9. MOVEMENT OF TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS OUT OF THE CONSTRUCTION ZONE WILL BE DIRECTED BY CONTRACTOR FLAGGERS TO MERGE BACK ONTO TRAFFIC AT 4 WAY STOP CONDITION AT NEXT INTERSECTION.
10. TRAFFIC SIGNALS SHALL BE TURNED OFF. INTERSECTIONS TO FUNCTION AS 4 WAY STOP.
11. SEE SHEET TH-4 FOR TYPICAL CONSTRUCTION PHASE LAYOUT AND ADDITIONAL NOTES.
12. DURING PHASE 10, CONTRACTOR TO FIRST CONSTRUCT SOUTHERN PORTION OF REDWOOD JUNCTION DRIVEWAY UTILIZING THE EXISTING DRIVEWAY TO MANAGE TRAFFIC. CONTRACTOR TO CONFIRM PHASING WITH COUNTY OF SAN MATEO PRIOR TO CONSTRUCTION.
13. ONCE CONSTRUCTION OF SOUTHERN PORTION OF REDWOOD JUNCTION DRIVEWAY IS COMPLETED, CONTRACTOR TO CONSTRUCT MIDDLE PORTION OF DRIVEWAY AND MANAGE TRAFFIC BY UTILIZING THE EXISTING NORTHERN LANE OF THE DRIVEWAY FOR INBOUND TRAFFIC AND SHIFTING OUTBOUND TRAFFIC TO NEWLY CONSTRUCTED DRIVEWAY.
14. ONCE CONSTRUCTION OF MIDDLE PORTION OF REDWOOD JUNCTION DRIVEWAY IS COMPLETED, CONTRACTOR TO CONSTRUCT NORTHERN PORTION OF DRIVEWAY AND MANAGE TRAFFIC BY UTILIZING THE NEWLY CONSTRUCTED DRIVEWAY FOR BOTH INBOUND AND OUTBOUND TRAFFIC.
15. SEE SHEET TH-5 FOR DETAIL AND ADDITIONAL NOTES FOR CONSTRUCTION PHASING AND TRAFFIC HANDLING OF REDWOOD JUNCTION DRIVEWAY.
16. BEFORE CONSTRUCTION, CONTRACTOR TO CONTACT SAMTRANS BUS TRANSPORTATION SUPERVISOR, MANUEL PEREZ-GONZALEZ, AT PEREZ-GONAZLEZM@SAMTRANS.COM OR (650)-508-6492 TO COORDINATE BUS ROUTE DETOURS.
17. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS, PARKING PLANS, AND PEDESTRIAN ACCESS PLANS TO COUNTY OF SAN MATEO FOR APPROVAL PRIOR TO CONSTRUCTION.
18. BUSINESSES MAY CHANGE, CONTRACTOR SHALL VERIFY THE CUSTOMER SERVICE OR DELIVERY VEHICLE SERVICE PRIOR TO CONSTRUCTING IMPROVEMENTS.
19. BANNERS AND SIGNAGE SHALL BE PROVIDED AND MAINTAINED FOR EACH BUSINESS AND PROPERTY. CONTRACTOR SHALL PROCURE AND MAINTAIN SIGNAGE FOR ALL STORE FRONTS. CONTRACTOR TO SUBMIT SIGNAGE TO COUNTY FOR APPROVAL.
20. CONTRACTOR SHALL OBTAIN ENCROACHMENT PERMIT FROM REDWOOD CITY PRIOR TO PLACING SIGNS IN THEIR RIGHT OF WAY.

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



LEGEND:

- CONSTRUCTION PHASE EXTENT
- K-RAIL
- AUTO REPAIR BUSINESS
- BUSINESS REQUIRING DELIVERY TRUCK ACCESS
- TUBULAR MARKERS (42" ARROW TOP DELINEATOR TUBE WITH 3" REFLECTIVE COLLARS AND 12-LBS OCTAGONAL RUBBER BASE)
- PHASE WORK AREA
- ADJACENT PHASE WORK AREA

(IN FEET)
1 inch = 40 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER — JESSE M. SWAN — NO. C 58265 — EXP. 06/30/22 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: AB	CONSTRUCTION PHASING & TRAFFIC HANDLING PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES (0 1 2 3 4)

TH-1
SHEET 56 OF 140

FILENAME: L:\NA\ECOMNET.COM\LFS\AMER\SANFRANCISCO-LFSF\LVDCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\VDOC_CAD\SHEETS\TRAFFIC HANDLING\TH-1.DWG (TH-1)

NOTES:

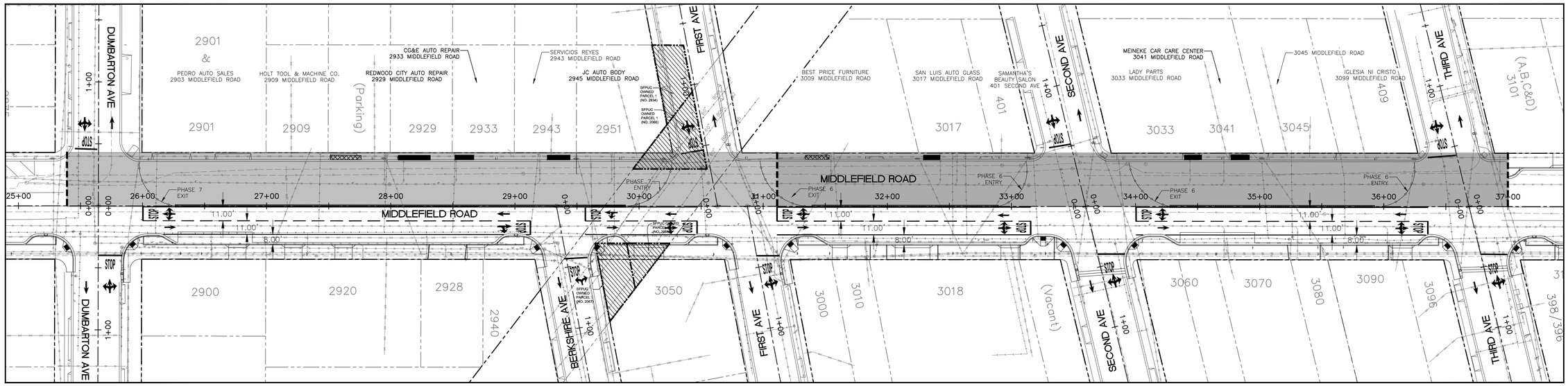
1. CONSTRUCTION PHASING & TRAFFIC HANDLING PLANS DO NOT SHOW ALL WORK REQUIRED TO BE COMPLETED. WORK HOURS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK.
2. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS.
3. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND STRIPING AT EACH PHASE. COVER EXISTING CONFLICTING ROADSIDE SIGNS.
4. CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN PHASES AND PROVIDE PEDESTRIAN, CUSTOMER VEHICLE SERVICE AND DELIVER VEHICLES ACCESS AT ALL TIMES TO AFFECTED BUSINESSES FOR EACH PHASE OF CONSTRUCTION. ANY WORK THAT OBSTRUCTS ENTRY TO BUSINESS SHALL BE RESTORED WITHIN 24 CONSECUTIVE HOURS.
5. DURING CONSTRUCTION OF PHASES 2 AND 3, CONTRACTOR TO PLACE K-RAILS WITH PRIVACY SCREENS 3' EAST OF THE MIDDLEFIELD ROAD ROW CENTERLINE TO SEPARATE CONSTRUCTION ZONE FROM VEHICULAR TRAFFIC.
6. DURING CONSTRUCTION OF PHASES 6 AND 7, CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON WEST SIDE DURING PHASES 2 AND 3.
7. SIGNAGE WILL BE POSTED AT THE APPROACHING END OF ALL CONSTRUCTION ZONES DIRECTING DELIVERY TRUCKS AND CUSTOMERS OF VEHICLE SERVICE BUSINESSES TO ACCESS/ENTRY POINTS WITH FLAGGERS.
8. THE FLAGGERS WILL CONTROL ACCESS TO DELIVERY TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS.
9. MOVEMENT OF TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS OUT OF THE CONSTRUCTION ZONE WILL BE DIRECTED BY CONTRACTOR FLAGGERS TO MERGE BACK ONTO TRAFFIC AT 4 WAY STOP CONDITION AT NEXT INTERSECTION.
10. TRAFFIC SIGNALS SHALL BE TURNED OFF. INTERSECTIONS TO FUNCTION AS 4 WAY STOP.
11. SEE SHEET TH-4 FOR TYPICAL CONSTRUCTION PHASE LAYOUT AND ADDITIONAL NOTES.
12. BEFORE CONSTRUCTION, CONTRACTOR TO CONTACT SAMTRANS BUS TRANSPORTATION SUPERVISOR, MANUEL PEREZ-GONZALEZ, AT PEREZ-GONAZLEZM@SAMTRANS.COM OR (650)-508-6492 TO COORDINATE BUS ROUTE DETOURS.
13. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS, PARKING PLANS, AND PEDESTRIAN ACCESS PLANS TO COUNTY OF SAN MATEO FOR APPROVAL PRIOR TO CONSTRUCTION.
14. BUSINESSES MAY CHANGE, CONTRACTOR SHALL VERIFY THE CUSTOMER SERVICE OR DELIVERY VEHICLE SERVICE PRIOR TO CONSTRUCTING IMPROVEMENTS.
15. BANNERS AND SIGNAGE SHALL BE PROVIDED AND MAINTAINED FOR EACH BUSINESS AND PROPERTY. CONTRACTOR SHALL PROCURE AND MAINTAIN SIGNAGE FOR ALL STORE FRONTS. CONTRACTOR TO SUBMIT PROPOSED SIGNAGE TO COUNTY FOR APPROVAL.

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

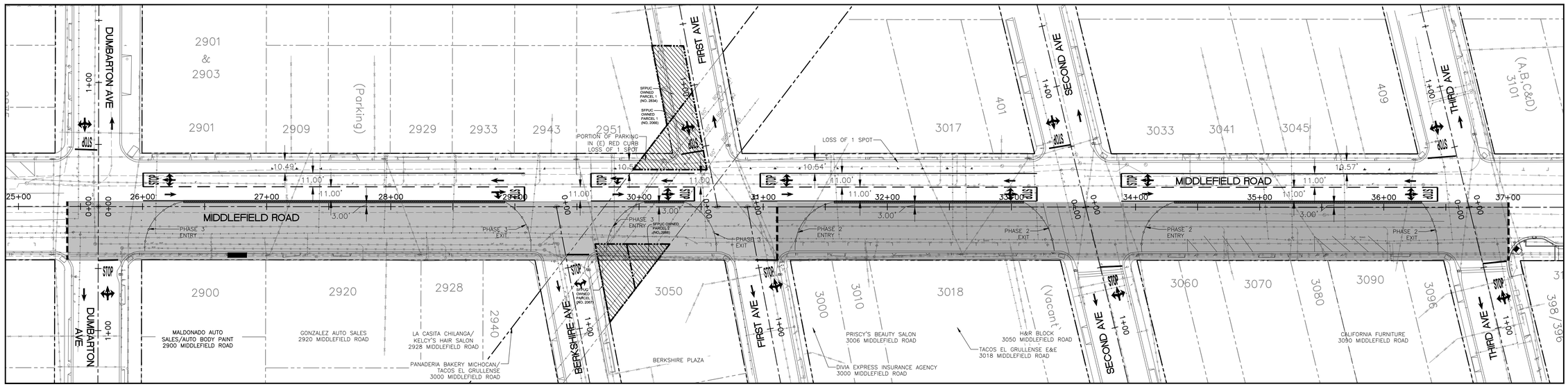
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



DUMBARTON AVE TO FIRST AVE - PHASE 7

FIRST AVE TO THIRD AVE - PHASE 6



DUMBARTON AVE TO FIRST AVE - PHASE 3

FIRST AVE TO THIRD AVE - PHASE 2

LEGEND:

- CONSTRUCTION PHASE EXTENT
- K-RAIL
- AUTO REPAIR BUSINESS
- BUSINESS REQUIRING DELIVERY TRUCK ACCESS
- TUBULAR MARKERS (42" ARROW TOP DELINEATOR TUBE WITH 3" REFLECTIVE COLLARS AND 12-LBS OCTAGONAL RUBBER BASE)
- PHASE WORK AREA
- ADJACENT PHASE WORK AREA

40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER — JAMES M. SIMON — NO. C 58265 — EXP. 06/30/22 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	CONSTRUCTION PHASING & TRAFFIC HANDLING PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TH-2
SHEET 57 OF 140

FILENAME: \\NA-AECOMNET.COM\LFS\AMER\SANFRANCISCO--USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TRAFFIC HANDLING\TH-2.DWG (TH-2)

NOTES:

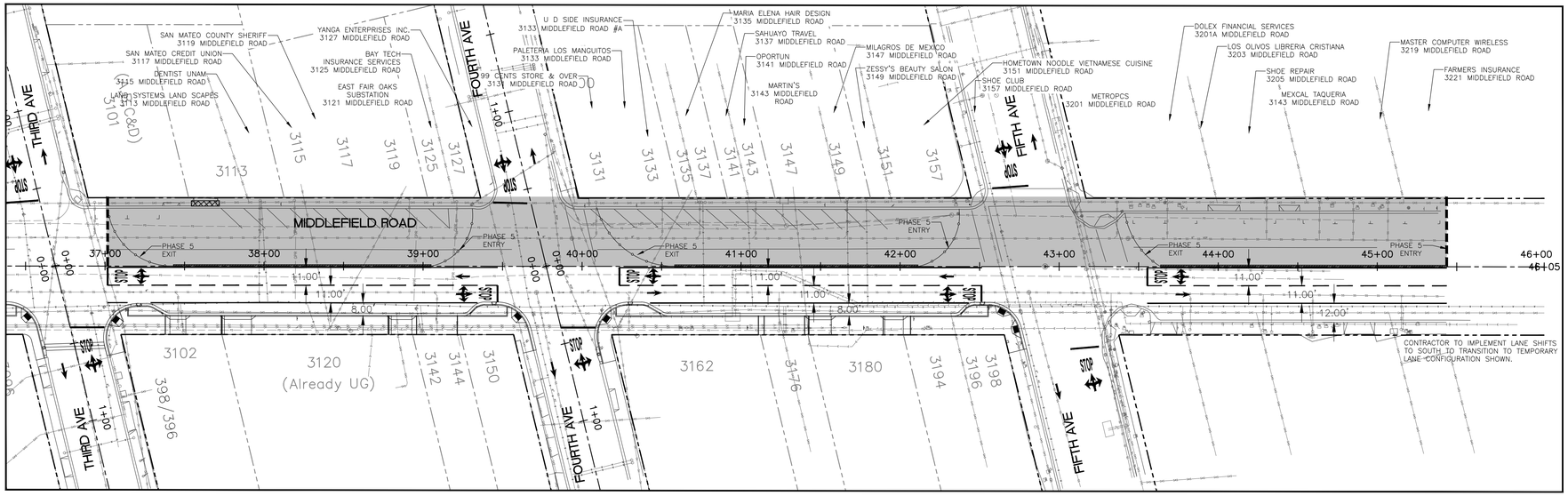
1. CONSTRUCTION PHASING & TRAFFIC HANDLING PLANS DO NOT SHOW ALL WORK REQUIRED TO BE COMPLETED. WORK HOURS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK.
2. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS.
3. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND STRIPING AT EACH PHASE. COVER EXISTING CONFLICTING ROADSIDE SIGNS.
4. CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN PHASES AND PROVIDE PEDESTRIAN, CUSTOMER VEHICLE SERVICE AND DELIVERY VEHICLES ACCESS AT ALL TIMES TO AFFECTED BUSINESSES FOR EACH PHASE OF CONSTRUCTION. ANY WORK THAT OBSTRUCTS ENTRY TO BUSINESS SHALL BE RESTORED WITHIN 24 CONSECUTIVE HOURS.
5. DURING CONSTRUCTION OF PHASE 1, CONTRACTOR TO PLACE K-RAILS WITH PRIVACY SCREENS 3' EAST OF THE MIDDLEFIELD ROAD ROW CENTERLINE TO SEPARATE CONSTRUCTION ZONE FROM VEHICULAR TRAFFIC.
6. DURING CONSTRUCTION OF PHASE 5, CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON WEST SIDE DURING PHASE 1.
7. SIGNAGE WILL BE POSTED AT THE APPROACHING END OF ALL CONSTRUCTION ZONES DIRECTING DELIVERY TRUCKS AND CUSTOMERS OF VEHICLE SERVICE BUSINESSES TO ACCESS/ENTRY POINTS WITH FLAGGERS.
8. THE FLAGGERS WILL CONTROL ACCESS TO DELIVERY TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS.
9. MOVEMENT OF TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS OUT OF THE CONSTRUCTION ZONE WILL BE DIRECTED BY CONTRACTOR FLAGGERS TO MERGE BACK ONTO TRAFFIC AT 4 WAY STOP CONDITION AT NEXT INTERSECTION.
10. TRAFFIC SIGNALS SHALL BE TURNED OFF. INTERSECTIONS TO FUNCTION AS 4 WAY STOP.
11. SEE SHEET TH-4 FOR TYPICAL CONSTRUCTION PHASE LAYOUT AND ADDITIONAL NOTES.
12. BEFORE CONSTRUCTION, CONTRACTOR TO CONTACT SAMTRANS BUS TRANSPORTATION SUPERVISOR, MANUEL PEREZ-GONZALEZ, AT PEREZ-GONAZLEZM@SAMTRANS.COM OR (650)-508-6492 TO COORDINATE BUS ROUTE DETOURS.
13. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS, PARKING PLANS, AND PEDESTRIAN ACCESS PLANS TO COUNTY OF SAN MATEO FOR APPROVAL PRIOR TO CONSTRUCTION.
14. BUSINESSES MAY CHANGE, CONTRACTOR SHALL VERIFY THE CUSTOMER SERVICE OR DELIVERY VEHICLE SERVICE PRIOR TO CONSTRUCTING IMPROVEMENTS.
15. BANNERS AND SIGNAGE SHALL BE PROVIDED AND MAINTAINED FOR EACH BUSINESS AND PROPERTY. CONTRACTOR SHALL PROCURE AND MAINTAIN SIGNAGE FOR ALL STORE FRONTS. CONTRACTOR TO SUBMIT PROPOSED SIGNAGE TO COUNTY FOR REVIEW AND APPROVAL.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

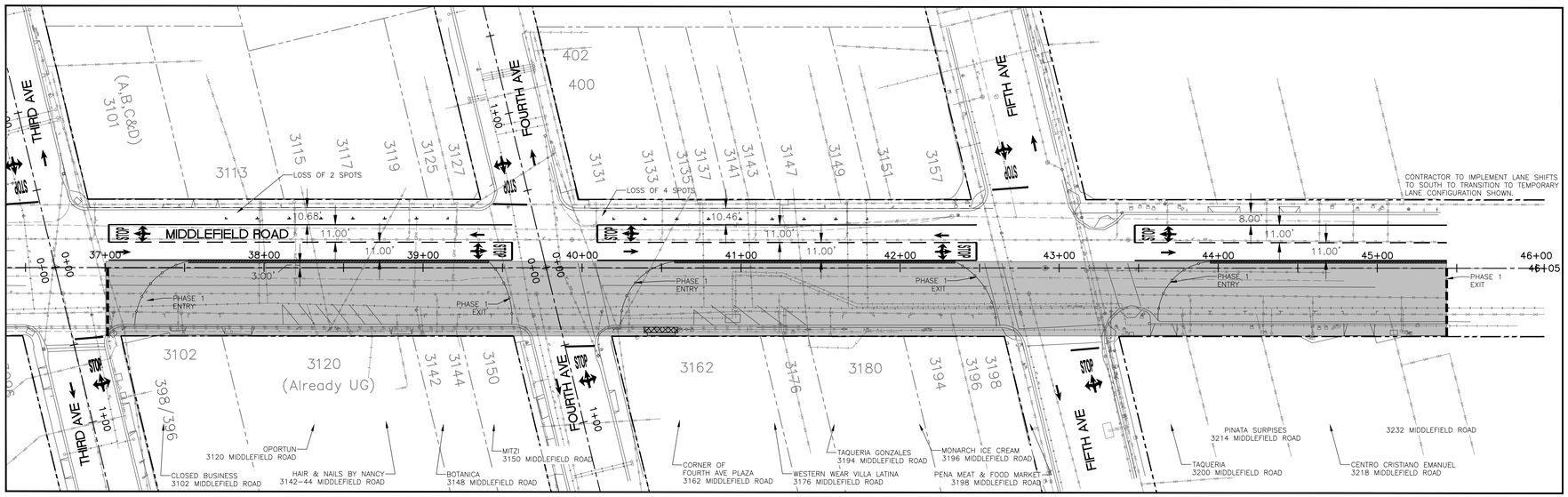
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



THIRD AVE TO FIFTH AVE- PHASE 5



THIRD AVE TO FIFTH AVE - PHASE 1

(IN FEET)
1 inch = 40 ft.

LEGEND:

- CONSTRUCTION PHASE EXTENT
- K-RAIL
- AUTO REPAIR BUSINESS
- BUSINESS REQUIRING DELIVERY TRUCK ACCESS
- TUBULAR MARKERS (42" ARROW TOP DELINEATOR TUBE WITH 3" REFLECTIVE COLLARS AND 12-LBS OCTAGONAL RUBBER BASE)
- PHASE WORK AREA

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
SHELLEY M. SPRAGUE
No. C 58265
EXP. 06/30/22
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: AB	CONSTRUCTION PHASING & TRAFFIC HANDLING PLAN
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

TH-3
SHEET 58 OF 140

FILENAME: C:\USERS\JULIA.TEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TRAFFIC HANDLING\TH-3.DWG (TH-3)

LEGEND:

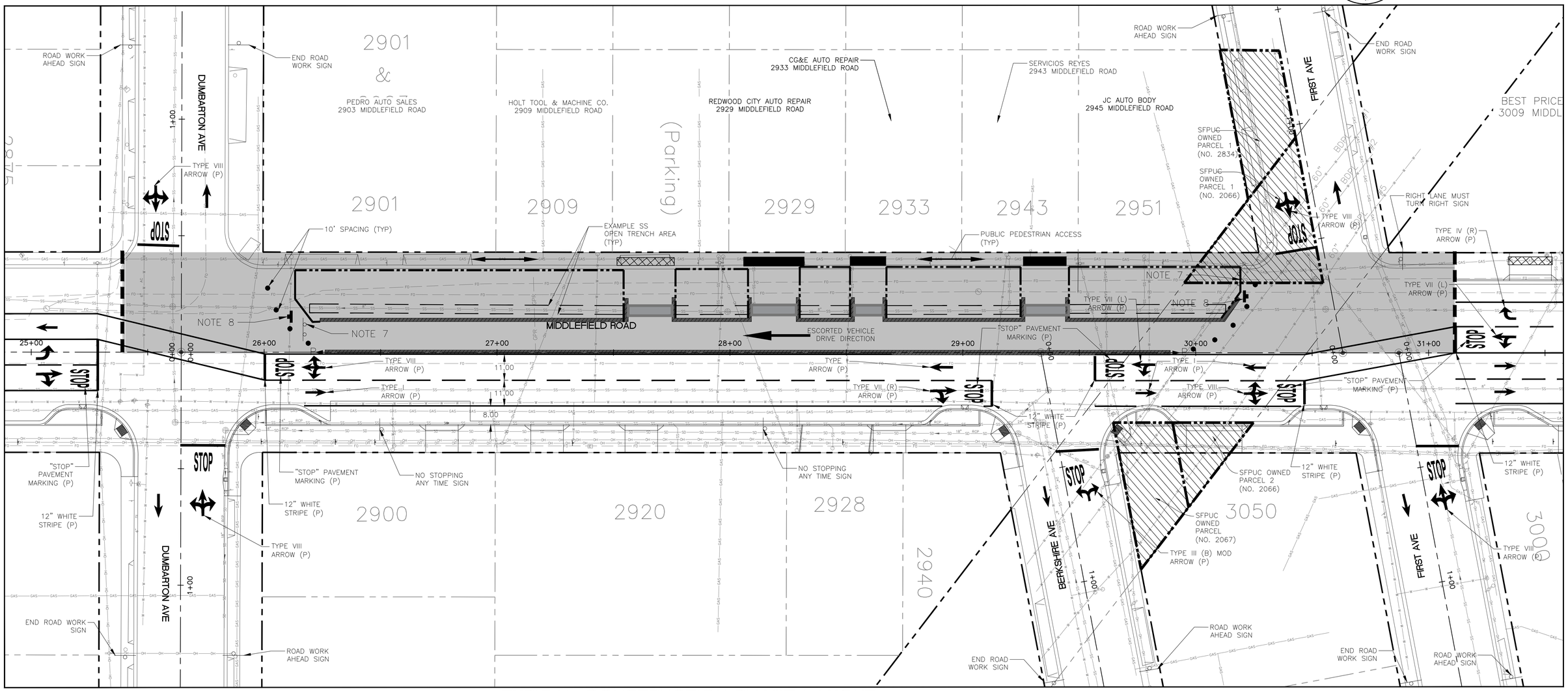
- CONSTRUCTION PHASE EXTENT
- K-RAIL
- SIGN LISTING BUSINESSES
- TYPE P(CA) OBJECT MARKER
- AUTO REPAIR BUSINESS
- BUSINESS REQUIRING DELIVERY TRUCK ACCESS
- PORTABLE CHANNELIZERS WITH DOUBLE REFLECTOR BANDS
- FLAGGER SYMBOL
- (P) TEMPORARY STRIPING (PAINT)
- CONSTRUCTION SIGNAGE
- PHASE WORK AREA
- TEMPORARY CONSTRUCTION FENCING
- TRENCH BRIDGE

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



TYPICAL CONSTRUCTION PHASE LAYOUT
(PHASE 7)

NOTES:

1. CONSTRUCTION PHASING & TRAFFIC HANDLING PLANS DO NOT SHOW ALL WORK REQUIRED TO BE COMPLETED. WORK HOURS TO BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK.
2. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS. OUTSIDE THESE HOURS, CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE FLAGGERS TO BUSINESSES DURING NORMAL BUSINESS HOUR THAT ARE OUTSIDE OF CONTRACTOR WORK HOURS.
3. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND STRIPING AT EACH PHASE. COVER EXISTING CONFLICTING ROADSIDE SIGNS.
4. CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN PHASES AND PROVIDE PEDESTRIAN, CUSTOMER VEHICLE SERVICE AND DELIVERY VEHICLES ACCESS AT ALL TIMES TO AFFECTED BUSINESSES FOR EACH PHASE OF CONSTRUCTION. ANY WORK THAT OBSTRUCTS ENTRY TO BUSINESS SHALL BE RESTORED WITHIN 24 CONSECUTIVE HOURS.
5. DURING CONSTRUCTION OF WEST SIDE OF MIDDLEFIELD ROAD (PHASES 1–4 AND 10), CONTRACTOR TO PLACE K-RAILS WITH PRIVACY SCREENS 3' EAST OF THE MIDDLEFIELD ROAD ROW CENTERLINE TO SEPARATE CONSTRUCTION ZONE FROM VEHICULAR TRAFFIC.
6. DURING CONSTRUCTION OF EAST SIDE OF MIDDLEFIELD ROAD (PHASES 5–9), CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON WEST SIDE DURING PHASES 1–4.
7. DURING CONSTRUCTION OF PHASE 10, CONTRACTOR TO PLACE K-RAIL ON THE MIDDLEFIELD ROAD ROW CENTERLINE TO ALLOW CONTRACTOR ACCESS TO JOINT TRENCH CROSSINGS INSTALLED ON EAST SIDE DURING PHASE 9.
8. SIGNAGE WILL BE POSTED AT THE APPROACHING END OF ALL CONSTRUCTION ZONES DIRECTING DELIVERY TRUCKS AND CUSTOMERS OF VEHICLE SERVICE BUSINESSES TO ACCESS/ENTRY POINTS WITH FLAGGERS.
9. THE FLAGGERS WILL CONTROL ACCESS BY DELIVERY TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS.
10. MOVEMENT OF DELIVERY TRUCKS AND VEHICLE SERVICE BUSINESS CUSTOMERS OUT OF THE CONSTRUCTION ZONE WILL BE DIRECTED BY CONTRACTOR FLAGGERS TO MERGE BACK ONTO TRAFFIC AT 4 WAY STOP CONDITION AT NEXT INTERSECTION.
11. TRAFFIC SIGNALS SHALL BE TURNED OFF. INTERSECTIONS TO FUNCTION AS 4 WAY STOP.
12. BEFORE CONSTRUCTION, CONTRACTOR TO CONTACT SAMTRANS BUS TRANSPORTATION SUPERVISOR, MANUEL PEREZ–GONZALEZ, AT PEREZ–GONAZLEZM@SAMTRANS.COM OR (650)–508–6492 TO COORDINATE BUS ROUTE DETOURS.
13. DURING UNDERGROUNDING OR SANITARY SEWER LATERALS, AND SUBSEQUENT ROADWAY AND SIDEWALK REPLACEMENT, CONTRACTOR TO ENSURE PEDESTRIANS HAVE CLEAR ACCESS TO BUSINESSES AND CROSS STREETS VIA TEMPORARY PEDESTRIAN WALKWAYS ON THE COMPLETED PORTIONS OF THE ROADWAY AND SIDEWALK AND/OR ACCESS RAMPS FROM THE STREET.
14. IN AREAS WHERE CONSTRUCTION IS DIRECTLY IN FRONT OF BUSINESSES, CONTRACTOR TO COORDINATE WITH AFFECTED BUSINESSES TO MINIMIZE DISRUPTION THROUGH THE USE OF ALTERNATE WORK TIMES, USE OF STEEL PLATES TO TEMPORARILY COVER TRENCH AREAS AND OTHER MEASURES TO MINIMIZE DISRUPTION.
15. CONTRACTOR SHALL PROVIDE PEDESTRIAN ADA–COMPLIANT WALKWAY INCLUDING BUT NOT LIMITED TO PLYWOOD RAMPS, BRIDGES, AND STEEL PLATES, AT ALL TIMES DURING CONSTRUCTION.
16. CONTRACTOR SHALL MAINTAIN AND KEEP ALL ELECTRICAL SYSTEMS (INCLUDING TRAFFIC SIGNALS) OPERATIONAL AT ALL TIMES.
17. SEE SIGNING AND STRIPING SHEETS FOR FINAL PAVEMENT STRIPING AND PAVEMENT MARKING DETAILS.
18. FINAL STRIPING WORK SHALL BE DONE DURING OFF PEAK HOURS.
19. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS, PARKING PLANS, AND PEDESTRIAN ACCESS PLANS TO COUNTY OF SAN MATEO FOR APPROVAL PRIOR TO CONSTRUCTION.
20. BUSINESSES MAY CHANGE, CONTRACTOR SHALL VERIFY THE CUSTOMER SERVICE OR DELIVERY VEHICLE SERVICE PRIOR TO CONSTRUCTING IMPROVEMENTS.
21. BANNERS AND SIGNAGE SHALL BE PROVIDED AND MAINTAINED FOR EACH BUSINESS AND PROPERTY. CONTRACTOR SHALL PROCURE AND MAINTAIN SIGNAGE FOR ALL STORE FRONTS. CONTRACTOR TO SUBMIT SIGNAGE TO COUNTY FOR REVIEW AND APPROVAL.
22. CONTRACTOR SHALL PROVIDE PORTABLE CHANGEABLE TRAFFIC MESSAGE SIGNS.
23. CONSTRUCTION IN AREAS ACCESSIBLE BY THE PUBLIC (AS DIRECTED BY CONTRACTOR FLAGGER), TEMPORARY FENCES SHALL BE UTILIZED TO SEPARATE ACCESSIBLE AREAS FROM CONSTRUCTION AREAS AS FOLLOWS:
    1. EXISTING SIDEWALK AREAS – PEDESTRIAN ACCESS ON EXISTING SIDEWALK TO BUSINESS/BUILDING ENTRANCES SHALL BE SEPARATED FROM ADJACENT CONSTRUCTION ZONES IN THE EXISTING STREET WITH TEMPORARY FENCING. FOR AREAS WHERE EXISTING SIDEWALK HAS BEEN REMOVED OR INTERRUPTED BY A TRENCH, A WRITTEN METHOD TO PROVIDE WALKWAY SURFACE AND BRIDGES OVER TRENCHES TO BE PROVIDED TO THE ENTRANCE OF THE BUSINESS/BUILDING WILL BE SUBMITTED BY CONTRACTOR TO AND APPROVED BY THE ENGINEER.
    2. EXISTING ROADWAY AREAS – CUSTOMER VEHICLE AND DELIVERY VEHICLE ACCESS TO VEHICLE REPAIR BUSINESS DRIVEWAYS WILL BE SEPARATED FROM CONSTRUCTION ZONES WITH TEMPORARY FENCING AND/OR VEHICLE BARRIERS ERECTED AND MAINTAINED BY CONTRACTOR TO SEPARATE WORK ZONES FROM PUBLICLY ACCESSIBLE DRIVE ROUTES TO BUSINESSES.

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER SHAWN M. SMITH NO. C 58265 EXP. 06/30/22 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT TRAFFIC HANDLING PLAN
		CHECKED BY: TS	
		DRAWN BY: AB	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TH-4
SHEET 59 OF 140

FILENAME: C:\USERS\JULIATEIXEIRA1\DESKTOP\COUNTY OF SAN MATEO\604295976 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TRAFFIC HANDLING\TH-4.DWG (TH-4)

LEGEND:

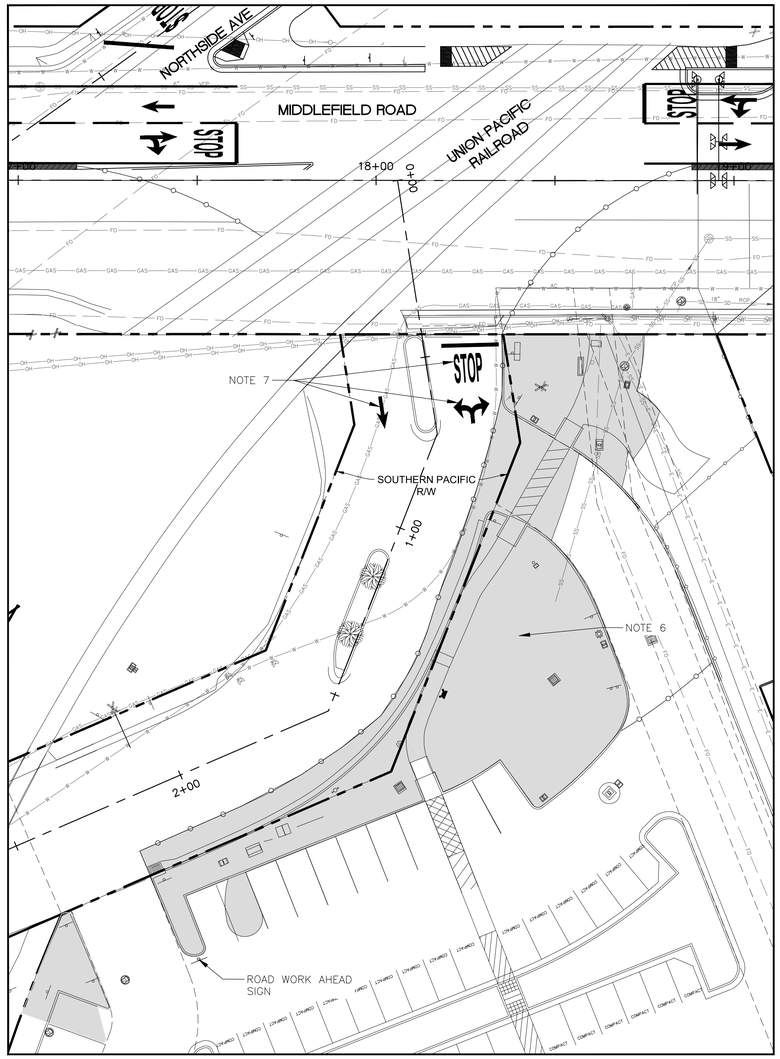
- CONSTRUCTION PHASE EXTENT
- K–RAIL
- TUBULAR MARKERS (42" ARROW TOP DELINEATOR TUBE WITH 3" REFLECTIVE COLLARS AND 12–LBS OCTAGONAL RUBBER BASE)
- CONSTRUCTION PHASE 10A
- CONSTRUCTION PHASE 10B
- CONSTRUCTION PHASE 10C

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

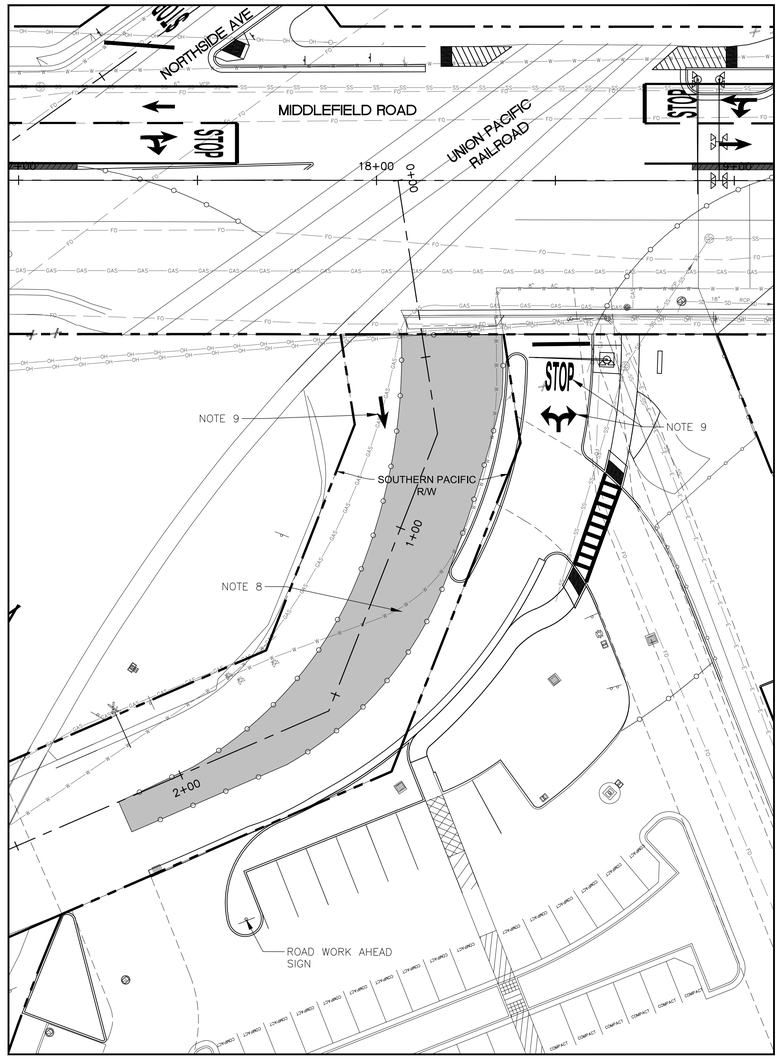
APPROVED:

DATE: 10/16/2020

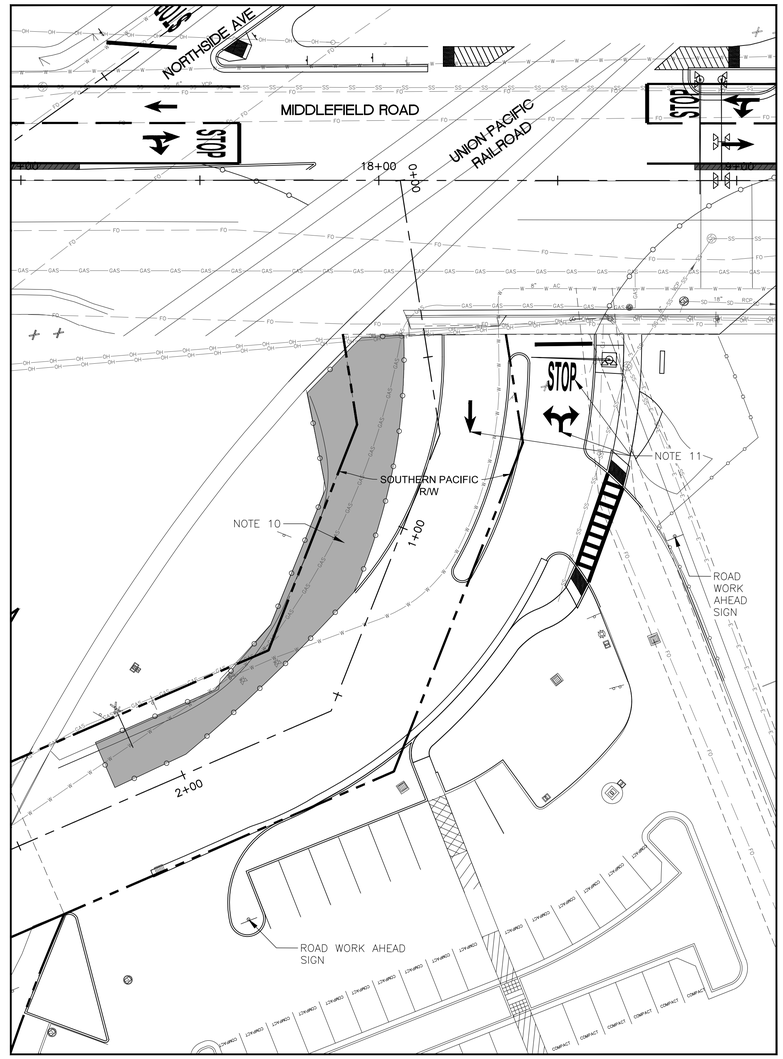
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021



REDWOOD JUNCTION DRIVEWAY – PHASE 10A



REDWOOD JUNCTION DRIVEWAY – PHASE 10B



REDWOOD JUNCTION DRIVEWAY – PHASE 10C

NOTES:

1. CONSTRUCTION PHASING & TRAFFIC HANDLING PLANS DO NOT SHOW ALL WORK REQUIRED TO BE COMPLETED. THE CONTRACTOR SHALL SUBMIT A TRAFFIC HANDLING AND CONSTRUCTION STAGING PLAN AS PART OF THEIR CONSTRUCTION SUBMITTALS. WORK HOURS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK.
2. THE CONTRACTOR'S WORK HOURS SHALL BE BETWEEN 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY. SATURDAY WORK SHALL BE REQUESTED AND APPROVED BY THE COUNTY. CONSTRUCTION IS NOT ALLOWED ON SUNDAYS, THANKSGIVING, OR CHRISTMAS.
3. REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND STRIPING AT EACH PHASE. COVER EXISTING CONFLICTING ROADSIDE SIGNS.
4. CONTRACTOR SHALL CONSTRUCT IMPROVEMENTS IN PHASES AND PROVIDE PEDESTRIAN, EMERGENCY VEHICLE ACCESS, EMPLOYEE VEHICLE ACCESS, CUSTOMER VEHICLE SERVICE AND DELIVERY VEHICLES ACCESS AT ALL TIMES TO FAIR OAKS HEALTH CENTER FOR EACH PHASE OF CONSTRUCTION.
5. CONTRACTOR TO CONSTRUCT REDWOOD JUNCTION DRIVEWAY DURING PHASE 10 AND SEPARATE WORK INTO THREE PHASES: PHASE 10A, PHASE 10B, AND PHASE 10C.
6. DURING PHASE 10A, CONTRACTOR TO CONSTRUCT SOUTHERN PORTION OF REDWOOD JUNCTION DRIVEWAY (INCLUDING CURB AND GUTTER, SIDEWALK, MEDIAN, AND BIORETENTION AREA).
7. DURING THE CONSTRUCTION OF PHASE 10A, CONTRACTOR SHALL MANAGE TRAFFIC AT REDWOOD JUNCTION DRIVEWAY BY UTILIZING EXISTING DRIVEWAY.
8. DURING PHASE 10B, CONTRACTOR TO CONSTRUCT THE MIDDLE PORTION OF REDWOOD JUNCTION DRIVEWAY (INCLUDING CURB AND BALLAST ROCK).
9. DURING THE CONSTRUCTION OF PHASE 10B, CONTRACTOR SHALL MANAGE TRAFFIC AT REDWOOD JUNCTION DRIVEWAY BY UTILIZING THE EXISTING NORTHERN LANE OF THE DRIVEWAY FOR INBOUND TRAFFIC AND SHIFTING OUTBOUND TRAFFIC TO THE NEWLY CONSTRUCTED DRIVEWAY.
10. DURING PHASE 10C, CONTRACTOR TO CONSTRUCT THE NORTHERN PORTION OF REDWOOD JUNCTION DRIVEWAY (INCLUDING CURB AND BALLAST ROCK).
11. DURING THE CONSTRUCTION OF PHASE 10C, CONTRACTOR SHALL MANAGE TRAFFIC AT REDWOOD JUNCTION DRIVEWAY BY UTILIZING THE NEWLY CONSTRUCTED DRIVEWAY FOR BOTH INBOUND AND OUTBOUND TRAFFIC.
12. SIGNAGE WILL BE POSTED AT THE APPROACHING END OF ALL CONSTRUCTION ZONES DIRECTING DELIVERY TRUCKS, EMPLOYEES, AND CUSTOMERS OF FAIR OAKS HEALTH CENTER TO ACCESS/ENTRY POINTS WITH FLAGGERS. FLAGGERS WILL CONTROL ACCESS TO DELIVERY TRUCKS AND CUSTOMERS TO FAIR OAKS HEALTH CENTER.
13. TRAFFIC SIGNALS SHALL BE TURNED OFF. INTERSECTIONS TO FUNCTION AS 4 WAY STOP.
14. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS, PARKING PLANS, AND PEDESTRIAN ACCESS PLANS TO COUNTY OF SAN MATEO FOR APPROVAL PRIOR TO CONSTRUCTION.
16. CONTRACTOR SHALL VERIFY THE CUSTOMER SERVICE OR DELIVERY VEHICLE SERVICE PRIOR TO CONSTRUCTING IMPROVEMENTS.
17. BANNERS AND SIGNAGE SHALL BE PROVIDED AND MAINTAINED FOR FAIR OAKS HEALTH CENTER. CONTRACTOR SHALL PROCURE AND MAINTAIN SIGNAGE. CONTRACTOR TO SUBMIT PROPOSED SIGNAGE TO COUNTY FOR REVIEW AND APPROVAL.
18. CONTRACTOR SHALL COORDINATE AND NOTIFY SHUT DOWN WITH THE HEALTH CLINIC AND BUSINESSES WITHIN THE REDWOOD JUNCTION AREA FOR WORK RELATED TO WATER, HYDRANT, AND BACKFLOW DEVICE RELOCATION.

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER — JAMES M. SHEA — No. C 58265 — EXP. 06/30/22 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO — PUBLIC WORKS

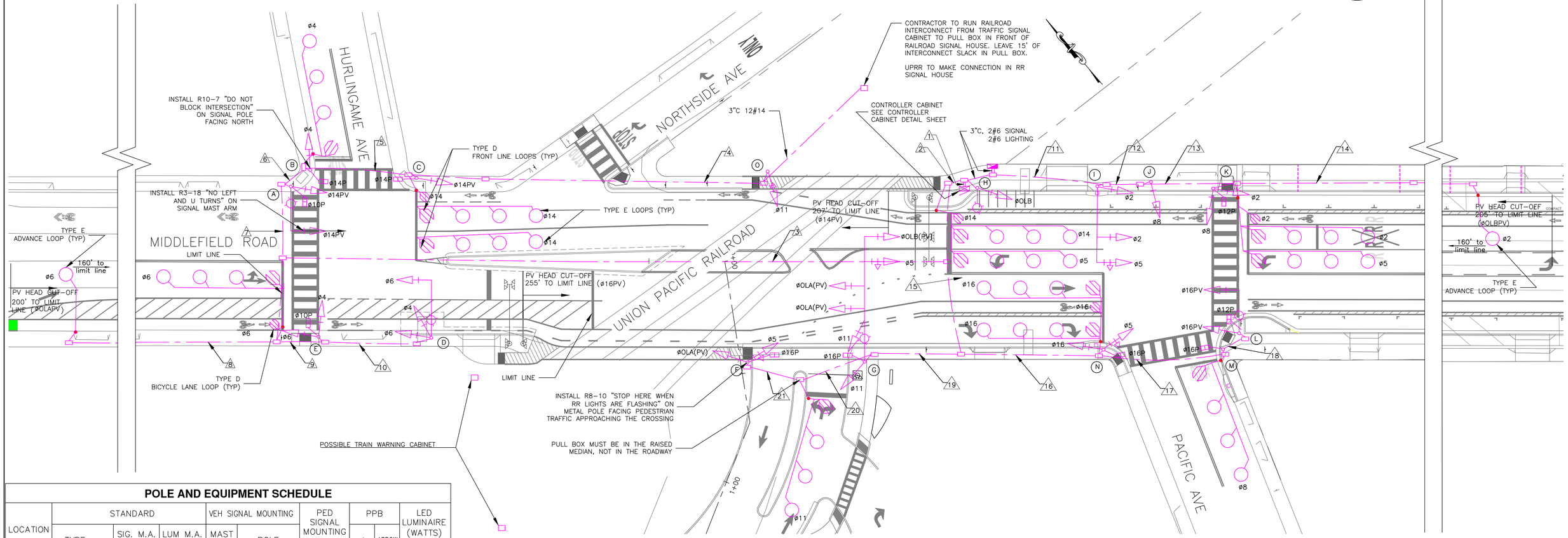
		DESIGNED BY: AB	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	CONSTRUCTION PHASING & TRAFFIC HANDLING PLAN
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

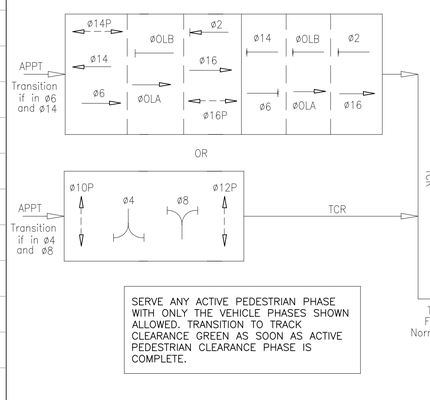
TH-5
SHEET 60 OF 140

FILENAME: \\AA.AECOMNET.COM\AJFS\AMER\SANFRANCISCO-USSF1\DCS\PROJECTS\PROJECTS\COUNTY OF SAN MATEO\60429576 MIDDLEFIELD RD STREETSCAPE\000_CAD\SHEETS\TRAFFIC HANDLING\TH-5.DWG (TH-5)

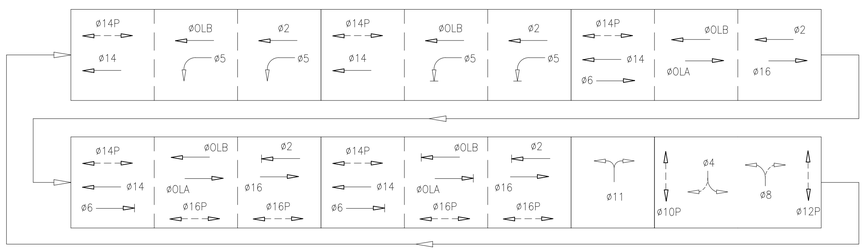


POLE AND EQUIPMENT SCHEDULE

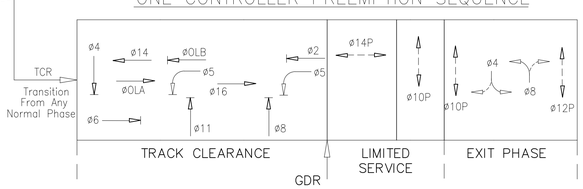
LOCATION	STANDARD TYPE	STANDARD SIG. M.A. (FEET)	STANDARD LUM M.A. (FEET)	VEH SIGNAL MOUNTING MAST ARM	VEH SIGNAL MOUNTING POLE	PED SIGNAL MOUNTING	PPB ø	PPB ARROW	LED LUMINAIRE (WATTS)
A	17-2-100	20'	15'	MAS	SV-1-T	SP-1-T	4	←	88W
B	TYPE 1-B	–	–	–	TV-1-T	SP-1-T	14	→	
C	TYPE 1-B	–	–	–	TV-1-T	SP-1-T	14	→	
D	19A-1-100	30'	15'	MAS	SV-2-T				88W
E	TYPE 1-B	–	–	–	TV-2-T	SP-1-T	4	←	
F	TYPE 1-B	–	–	–	TV-2-T	SP-1-T	16	←	
G	29A-5-100	55'	15'	MAS	SV-1-T	SP-1-T	16	→	88W
H	15TS	–	15'	–	SV-1-T				88W
I	19A-3-100	35'	15'	MAS	SV-1-T				
J	TYPE 1-B	–	–	–	TV-1-T				
K	TYPE 1-B	–	–	–	TV-2-T	SP-1-T	8	←	
L	17A-2-100	20'	15'	MAS	SV-1-T	SP-1-T	8	←	88W
M	TYPE 1-B	–	–	–	–	TP-1-T	16	→	
N	TYPE 1-B	–	–	–	TV-2-T	SP-1-T	16	→	
O	TYPE 1-B	–	–	–	TV-1-T				



ONE CONTROLLER PHASE SEQUENCE



ONE CONTROLLER PREEMPTION SEQUENCE



Advance to Limited Service operation when full Track Clearance Green has been provided and at least 5-seconds after GDR circuit closes.

NOTES:

1. INTERCONNECTED WARNING LABEL WILL BE INCLUDED IN THE TRAFFIC SIGNAL CABINET TO WARN TECHNICIANS THAT THE TRAFFIC SIGNAL IS INTERCONNECTED WITH THE RAILROAD AND PROVIDE BOTH HIGHWAY AND RAILROAD AGENCY CONTACT INFORMATION.
2. TCR= TRACK CLEARANCE RELAY, PROVIDES ADVANCE PRE-EMPTION NOTIFICATION.
3. GDR= GATE DOWN RELAY, PROVIDES NOTIFICATION THAT THE RR ENTRANCE GATE DESCENT IS ALMOST COMPLETE.
4. XR= CROSSING RELAY, PROVIDES NOTIFICATION THAT THE RR GRADE CROSSING WARNING SYSTEM DEVICE HAS BEEN ACTIVATED.
5. CONTRACTOR TO FIELD VERIFY POLE FOUNDATION LOCATIONS AND CONTACT THE ENGINEER IF ANY CONFLICTS ARE OBSERVED.
6. LED STREET LIGHTS MOUNTED ON TRAFFIC SIGNALS SHALL MATCH THE LIGHTING TEMPERATURE OF THOSE PROVIDED ON THE ST SHEETS, FOR STREET AND PEDESTRIAN LIGHTS.

CONSTRUCTION NOTES:

1. FURNISH AND INSTALL WITH FOUNDATION AND BATTERY BACKUP SYSTEM, MCCAIN MODEL 2070LX CONTROLLER ASSEMBLY IN A FULLY FURNISHED 332I CABINET SUFFICIENT TO OPERATE THE TWO INTERSECTIONS AND RAILROAD PREEMPT AS SHOWN ON THE PLANS. RAIL ROAD INTERFACE PANEL (MCCAIN) WILL BE PROVIDED AND PROGRAMMED TO WORK WITH MCCAIN OMNI SOFTWARE
2. FURNISH AND INSTALL WITH FOUNDATION, TYPE III – BF SERVICE CABINET PER CALTRANS STD PLAN ES-2E
   a. SERVICE METER ID: SERVICE METER ID WILL BE PROVIDED BY PG&E PRIOR TO THE PROJECT GOING TO BID.
   b. ADDRESS: METER ADDRESS AT MIDDLEFIELD ROAD AND PACIFIC AVENUE WILL BE PROVIDED BY PG&E PRIOR TO THE PROJECT GOING TO BID.
   c. CIRCUIT 1: 50A, 1P, 120V, CB
   d. CIRCUIT 2: 30A, 240V, 2P, CB

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER ANTHONY THOMSEN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	TRAFFIC SIGNAL
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-1
SHEET 61 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\ELECTRIC\ALT2.DWG (TS-1)



APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

CONDUCTOR AND CONDUIT SCHEDULE-(Phases 4 and 8 Operate Together)

CONDUCTOR SCHEDULE			No. OF CONDUCTORS																						
CABLE SIZE	STD	PHASE	RUN NUMBER																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
VEH-PED 12CSC / PBA 3CSC	A	14,4P 4	1 1	1 1	1 1	1 1	1 1	1 1															
	B	4,14P 14	1 1	1 1	1 1	1 1	1 1																
	C	14,14P 14	1 1	1 1	1 1	1 1																	
	D	4,6	1	1	1	1	1	1	1		1	1											
	E	4,6,4P 4	1 1	1 1	1 1	1 1	1 1	1 1	1 1														
	F	OLA,5,16P 16	1 1	1 1	1												1 1				1 1	1 1	1 1
	G	OLA,11,16P 16	1 1	1 1	1												1 1				1 1		
	H	OLB	1																				
	I	2,5	1										1										
	J	8	1										1	1									
	K	2,8,8P 8	1 1										1 1	1 1	1								
	L	16,8P 8	1 1	1 1	1												1 1	1 1	1 1	1			
	M	16P 16	1 1	1 1	1												1 1	1 1	1 1	1			
	N	5,16,16P 16	1 1	1 1	1												1 1	1 1	1				
	O	11	1	1	1																		
TOTAL CABLES 12/3 CONDUCTORS			15 10	11 9	6 4	5 4	4 3	3 2	2 1		1	1	3 1	2 1	1 1		5 5	3 3	2 2	1 1	2 2	1 1	1 1
#6		SIGNAL																					
#6		LIGHTING	2	2	2	2	2	2	2		2	2	2				2	2	2	2	2		
TYPE B DLC		Ø2	1	1									1	1	1								
		Ø2 BICYCLE	1										1	1	1								
		Ø2 ADVANCE	1										1	1	1	1							
		Ø4	1	1	1	1	1																
		Ø5	2	1									1	1	1								
		Ø6	1	1	1	1	1	1	1														
		Ø6 ADVANCE	1	1	1	1	1	1	1	1													
		Ø8	1	1													1	1	1				
		Ø11	1	1													1				1	1	
		Ø14	2	2	2	2																	
		Ø14 BICYCLE	2	2	1	1																	
		Ø14 ADVANCE	1	1																			
		Ø16	2	2													2	2					
		Ø16 BICYCLE	1	1													1	1					
TOTAL DLCs PER RUN			19	17	8	8	5	4	4	1	2	2	6	4	4	1	7	6	3	2	3	1	
CONDUIT SIZE			2-4"	2-4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\ELECTRIC\TS-2.DWG (TS-2)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200





		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT CONDUIT-CONDUCTOR SCHEDULE
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

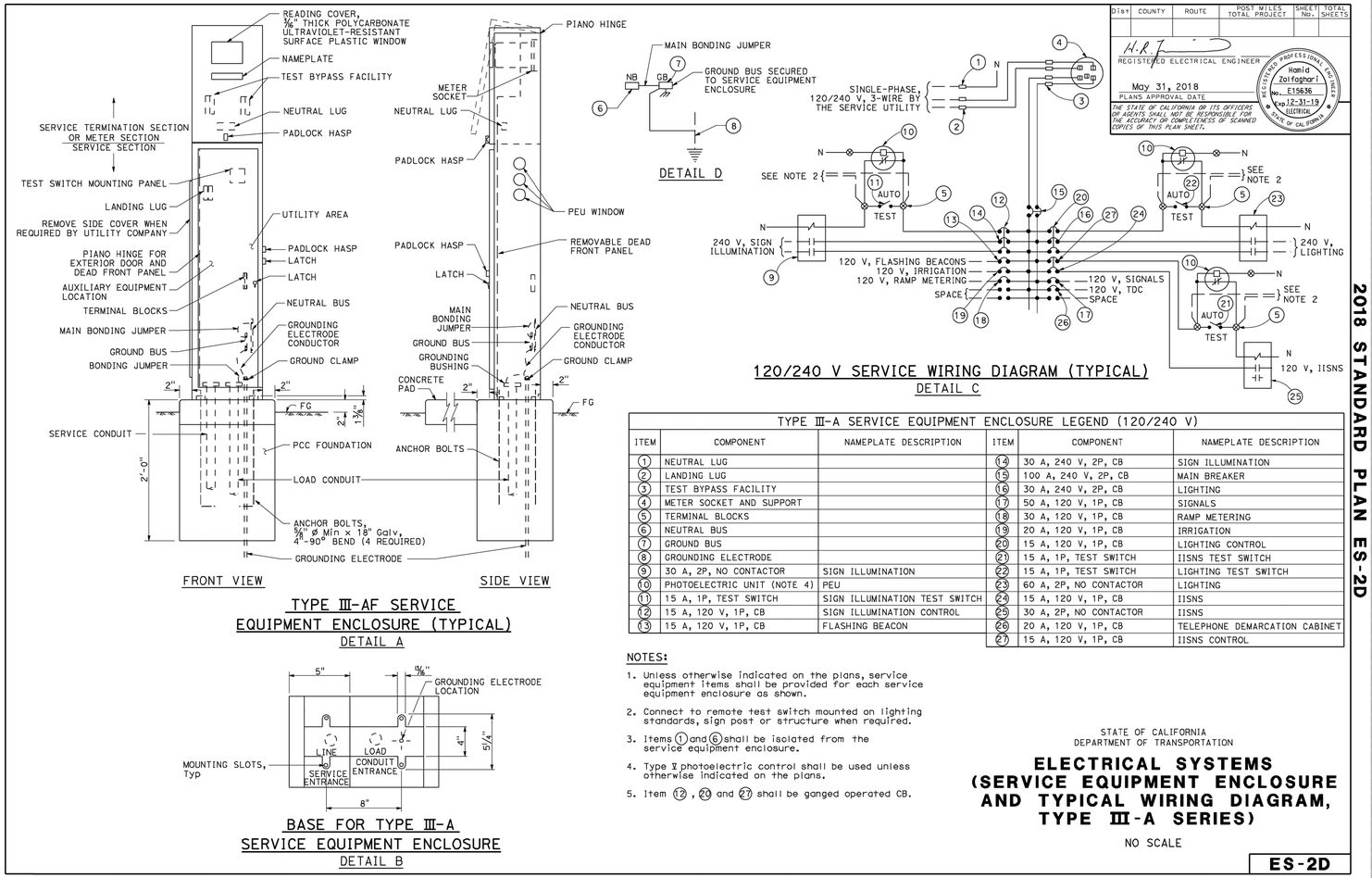
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-2
SHEET 62 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)

DETAIL A

BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE

DETAIL B

DETAIL D

120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

DETAIL C

TYPE III-A SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
(1)	NEUTRAL LUG		(14)	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
(2)	LANDING LUG		(15)	100 A, 240 V, 2P, CB	MAIN BREAKER
(3)	TEST BYPASS FACILITY		(16)	30 A, 240 V, 2P, CB	LIGHTING
(4)	METER SOCKET AND SUPPORT		(17)	50 A, 120 V, 1P, CB	SIGNALS
(5)	TERMINAL BLOCKS		(18)	30 A, 120 V, 1P, CB	RAMP METERING
(6)	NEUTRAL BUS		(19)	20 A, 120 V, 1P, CB	IRRIGATION
(7)	GROUND BUS		(20)	15 A, 120 V, 1P, CB	LIGHTING CONTROL
(8)	GROUNDING ELECTRODE		(21)	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
(9)	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	(22)	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
(10)	PHOTOELECTRIC UNIT (NOTE 4)	PEU	(23)	60 A, 2P, NO CONTACTOR	LIGHTING
(11)	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH	(24)	15 A, 120 V, 1P, CB	IISNS
(12)	15 A, 120 V, 1P, CB	SIGN ILLUMINATION CONTROL	(25)	30 A, 2P, NO CONTACTOR	IISNS
(13)	15 A, 120 V, 1P, CB	FLASHING BEACON	(26)	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
			(27)	15 A, 120 V, 1P, CB	IISNS CONTROL

NOTES:

1. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
2. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
3. Items (1) and (6) shall be isolated from the service equipment enclosure.
4. Type II photoelectric control shall be used unless otherwise indicated on the plans.
5. Item (12), (20) and (27) shall be ganged operated CB.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER

Hamid Zolfaghari, No. E15636, Exp 12-31-19, ELECTRICAL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

May 31, 2018
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT ENCLOSURE AND TYPICAL WIRING DIAGRAM, TYPE III-A SERIES)

NO SCALE

ES-2D

1-29-18

481

2018 STANDARD PLAN ES-2D

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\ELECTRICAL\TS-3.DWG (TS-3)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER, SEYED HOSSEIN TAVASSOLI, C 89909, 6/30/21, CIVIL, STATE OF CALIFORNIA

COUNTY OF SAN MATEO, PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT POLE DETAILS
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

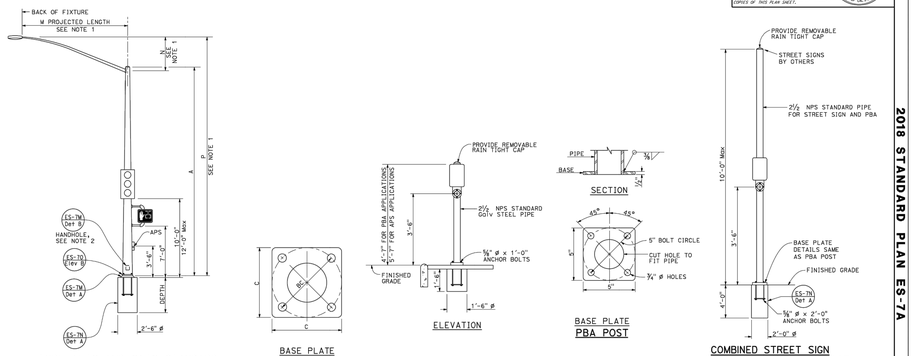
TS-3
SHEET 63 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



TYPE 15TS AND 21TS STANDARD
ELEVATION A
(See Note 1)

BASE PLATE
TYPE 15TS AND 21TS
DETAIL A

PUSH BUTTON ASSEMBLY POST
DETAIL B

COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH
	HEIGHT	Min OD BASE	Min OD TOP	WALL THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	DEPTH
15TS	30'-0"	8"	3⅝"	0.1793"	1'-1½"	1'-0"	2"	1½" ø x 42"	7'-6"
21TS	35'-0"	9⅜"	3⅝"		1'-3"	1'-2"			8'-6"

NOTES:
1. For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
2. Handhole shall be located on the downstream side of traffic.

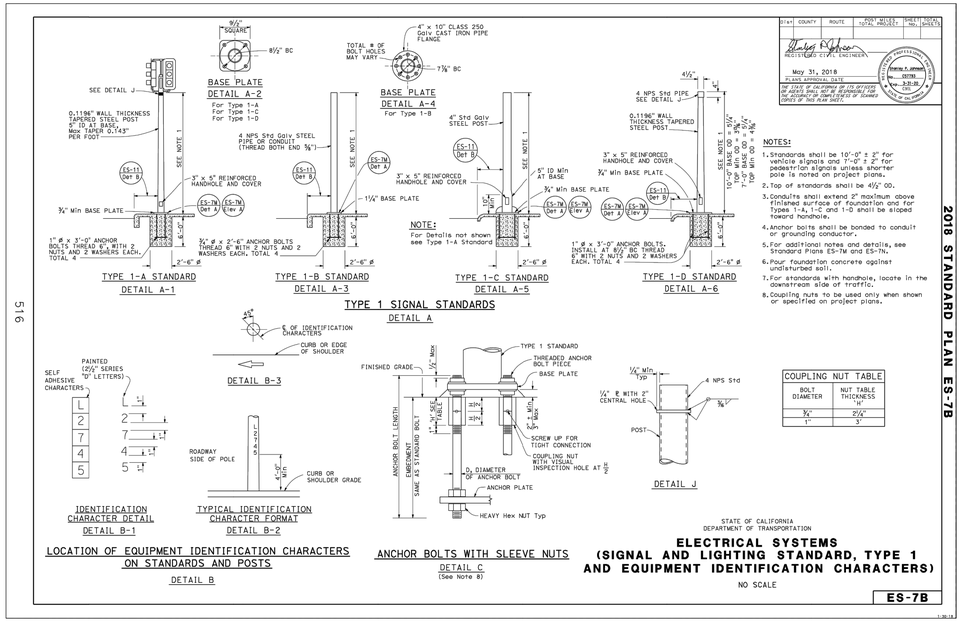
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PUSH BUTTON ASSEMBLY POST)

NO SCALE

ES-7A

2018 STANDARD PLAN ES-7A



TYPE 1 SIGNAL STANDARDS
DETAIL A

NOTES:
1. Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless shorter pole is noted on project plans.
2. Top of standards shall be 4½" OD.
3. Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
4. Anchor bolts shall be bonded to conduit or grounding conductor.
5. For additional notes and details, see Standard Plans ES-7M and ES-7N.
6. Pour foundation concrete against undisturbed soil.
7. For standards with handhole, locate in the downstream side of traffic.
8. Coupling nuts to be used only when shown or specified on project plans.

COUPLING NUT TABLE	
BOLT DIAMETER	NUT TABLE THICKNESS "H"
¾"	2⅛"
1"	3"

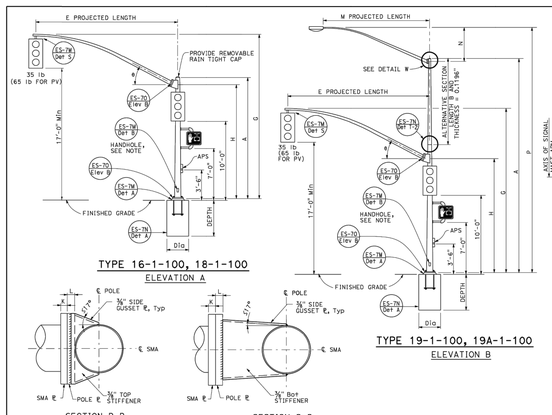
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE 1 AND EQUIPMENT IDENTIFICATION CHARACTERS)

NO SCALE

ES-7B

2018 STANDARD PLAN ES-7B



SIGNAL MAST ARM DATA												
E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM ℄ THICKNESS	L POLE ℄ THICKNESS	θ
15'-0"	21'-8"±	17'-6"	7⅝"	0.1793"	12"	1¼"-7NC-3"	1'-1"	1¼"	1½"	23°
20'-0"	22'-8"±		8"							
25'-0"	22'-8"±	16'-0"	9"							
30'-0"	23'-0"±		10"							

LUMINAIRE MAST ARM DATA					
M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT 30'-0" POLE	P MOUNTING HEIGHT 35'-0" POLE
6'-0"	2'-0"±	3¼"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3½"		32'-0"±	37'-0"±
10'-0"	3'-0"±	3¾"		32'-9"±	37'-9"±
12'-0"	4'-3"±	4⅛"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4¼"		34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA A HEIGHT	POLE DATA Min OD BASE	POLE DATA Min OD TOP	POLE DATA THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	BASE PLATE DATA C	BASE PLATE DATA BC = BOLT CIRCLE	BASE PLATE DATA THICKNESS	BASE PLATE DATA ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION Dia	CIDH PILE FOUNDATION DEPTH
16-1-100	1	100	18'-6"	12"	9⅜"	0.2391" OR 0.25"	None			1'-6"	1'-4"	2"	1¾"ø x 42"	NONE	15'-0", 20'-0"	3'-0"	9'-0"
18-1-100			17'-0"				None							NONE			
19-1-100			30'-0"	14"	9⅞"		10'-0"	11¼"	9⅞"	1'-10"	1'-8"	2½"	2"ø x 42"	6'-15" [52'-0"]	25'-0", [30'-0"]	3'-6"	10'-0"
19A-1-100			35'-0"		9"		15'-0"		9"					6'-15" [52'-0"]			

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

NOTES:
1. Handhole shall be located on the downstream side of traffic.
2. Δ = Luminaire mast arm skew -90° or +90° default 0°

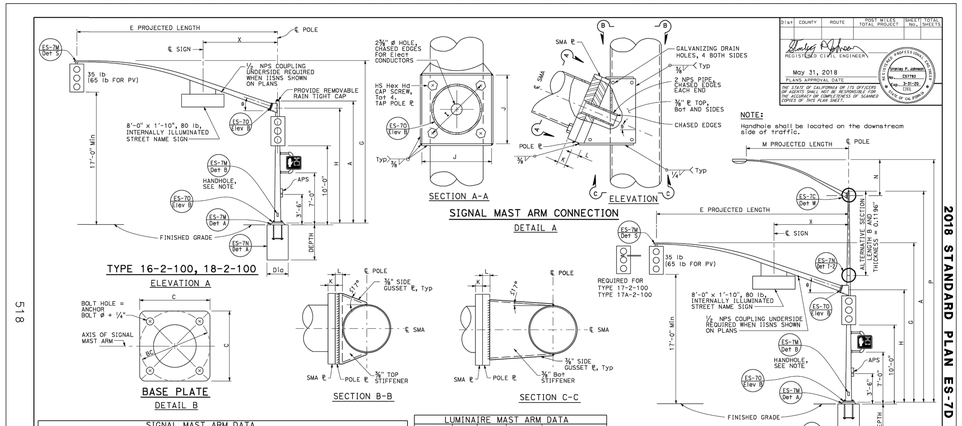
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 1 SIGNAL MAST ARM LOADING, WIND VELOCITY = 100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')

NO SCALE

ES-7C

2018 STANDARD PLAN ES-7C



SIGNAL MAST ARM DATA												
E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM ℄ THICKNESS	L POLE ℄ THICKNESS	θ	X Max
15'-0"	21'-8"±	17'-6"	7⅝"	0.1793"	12"	1¼"-7NC-3"	1'-1"	1¼"	1½"	23°	10'-6"
20'-0"	22'-8"±		8"								
25'-0"	22'-8"±	16'-0"	9"				1'-3"				
30'-0"	23'-0"±		10"	0.2391"							

LUMINAIRE MAST ARM DATA					
M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT 30'-0" POLE	P MOUNTING HEIGHT 35'-0" POLE
6'-0"	2'-0"±	3¼"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3½"		32'-0"±	37'-0"±
10'-0"	3'-0"±	3¾"		32'-9"±	37'-9"±
12'-0"	4'-3"±	4⅛"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4¼"		34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA A HEIGHT	POLE DATA Min OD BASE	POLE DATA Min OD TOP	POLE DATA THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	BASE PLATE DATA C	BASE PLATE DATA BC = BOLT CIRCLE	BASE PLATE DATA THICKNESS	BASE PLATE DATA ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION Dia	CIDH PILE FOUNDATION DEPTH
16-2-100	2	100	18'-6"	14"	11⅜"	0.2391" OR 0.25"	10'-0"	11¼"	9⅞"	1'-10"	1'-8"	2½"	2"ø x 42"	NONE	15'-0", [20'-0"]	3'-6"	10'-0"
17-2-100			30'-0"		9⅞"		15'-0"		9"					6'-15" [52'-0"]			
17A-2-100			35'-0"		9"									6'-15" [15'-0"]			
18-2-100			17'-0"		11⅜"		10'-0"	11¼"	9⅞"					None	25'-0", [30'-0"]		
19-2-100			30'-0"		9⅞"									6'-15" [52'-0"]			
19A-2-100			35'-0"	16"	11"		15'-0"	13¾"	11"	1'-11"	1'-9"	3"	2¼"ø x 42"	6'-15" [15'-0"]			12'-0"

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 2 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')

NO SCALE

ES-7D

2018 STANDARD PLAN ES-7D

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED - OUT DRAWINGS\TS\ELECTRIC\TS-4.DWG (TS-4)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER ANDROSSEIN ERFANI C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT POLE DETAILS
		CHECKED BY: TS	
		DRAWN BY: EA	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-4
SHEET 64 OF 140

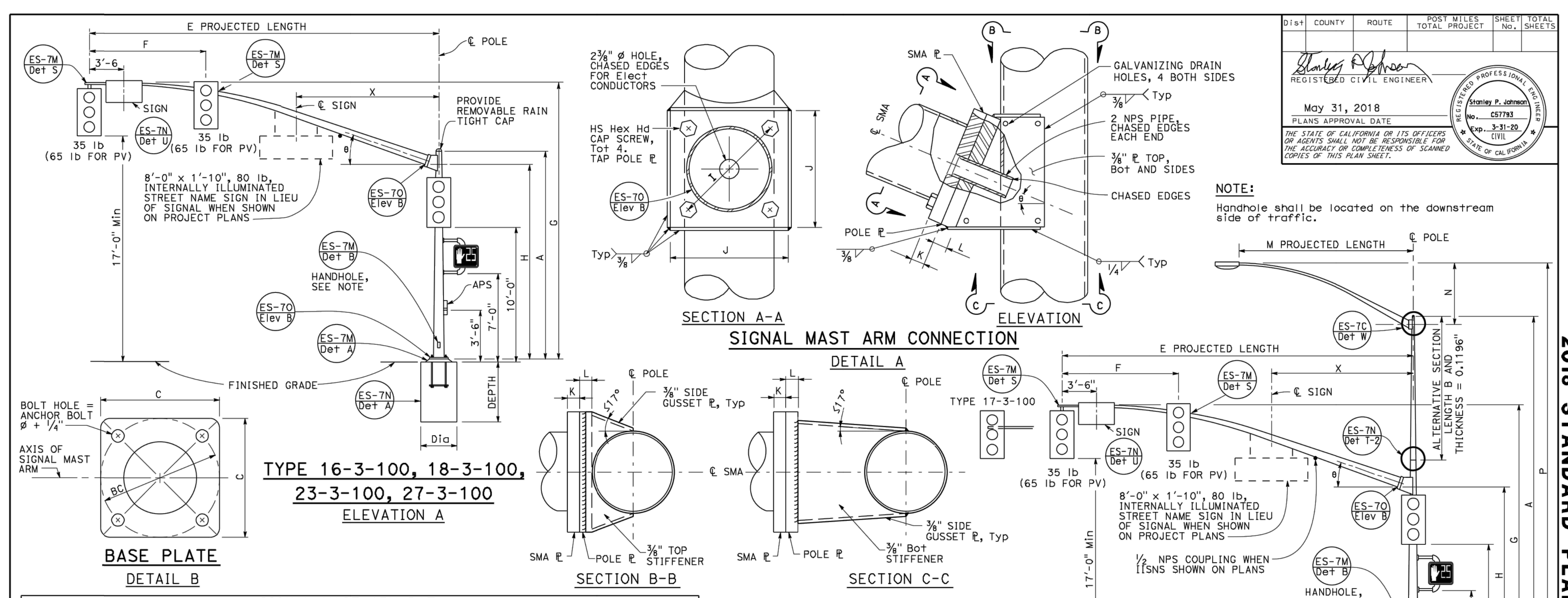
APPROVED:

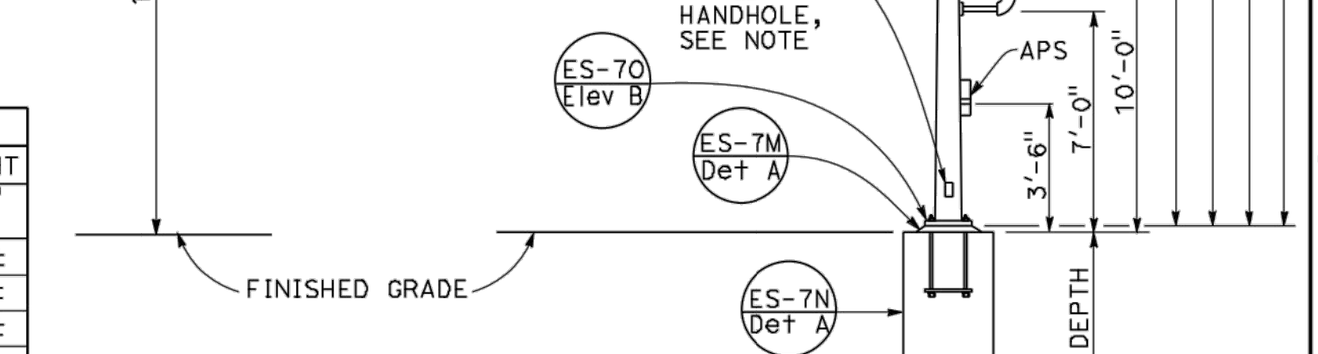
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

519





TYPE 17-3-100, 24A-3-100, 19-3-100, 26-3-100, 19A-3-100, 26A-3-100, 24-3-100
ELEVATION B

SIGNAL MAST ARM DATA

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM ℘ THICKNESS	L POLE ℘ THICKNESS	θ	X Max
15'-0"	8'-0"	21'-8"±	17'-6"	7⅜"	0.1793"	12"	1¼"-7NC-3"	1'-3"	1¼"	1½"	23°	-
20'-0"		21'-8"±		7⅝"								
25'-0"	12'-0"	22'-8"±	16'-0"	7⅞"	0.2391"							10'-6"
30'-0"				8"								
35'-0"	14'-0"	23'-0"±		8¾"		13"			1½"	1¾"	21°	
40'-0"	15'-0"			9⅜"							15°	13'-0"
45'-0"		23'-8"±		10-1/16"				1'-5"				

LUMINAIRE MAST ARM DATA

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT 30'-0" POLE	P MOUNTING HEIGHT 35'-0" POLE
6'-0"	2'-0"±	3¼"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3½"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3⅞"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4¼"		34'-3"±	39'-3"±

POLE DATA / BASE PLATE DATA / CIDH PILE FOUNDATION

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH Dia	CIDH DEPTH
16-3-100	3	100	18'-6"	16"	13⅜"	0.2391" OR 0.25"				1'-11"	1'-9"	3"	2¼" ø x 42"	NONE	15'-0", [20'-0"]	3'-6"	12'-0"
17-3-100			30'-0"		11¾"		10'-0"	13⅛"	11¾"					6'-15' [12'-0"]			
18-3-100			17'-0"		13⅝"									NONE	25'-0", [30'-0"]		
19-3-100			30'-0"		11¾"		10'-0"	13⅛"	11¾"					6'-15' [12'-0"]			
19A-3-100			35'-0"		11"	0.3125"	15'-0"		11"					6'-15' [15'-0"]			
23-3-100			17'-0"		13⅝"	0.2391" OR 0.25"								NONE	35'-0"		
24-3-100			30'-0"		11¾"		10'-0"	13⅛"	11¾"					6'-15' [12'-0"]			
24A-3-100			35'-0"		11"		15'-0"		11"					6'-15' [15'-0"]			
26-3-100			30'-0"	18"	13¾"	0.3125"	10'-0"	15⅛"	13¾"	2'-1"	1'-11"			6'-15' [12'-0"]	40'-0", [45'-0"]		13'-0"
26A-3-100			35'-0"		13"		15'-0"		13"					6'-15' [15'-0"]			
27-3-100			17'-0"		15⅝"									NONE			

[ ] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER Stanley P. Johnson No. C57793 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 3 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 45')

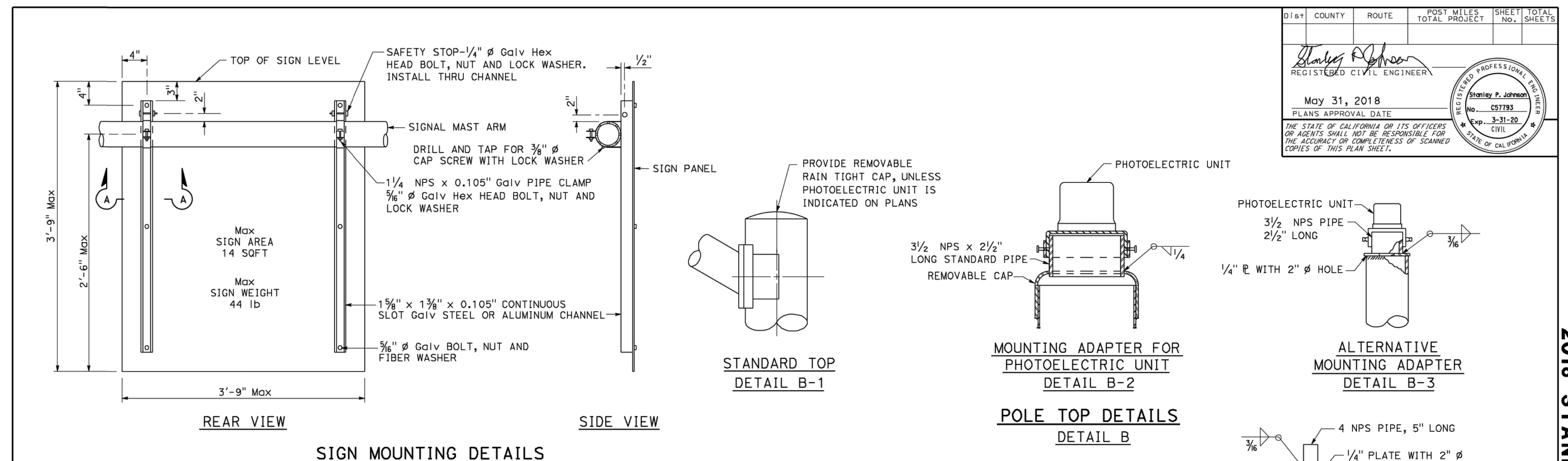
NO SCALE

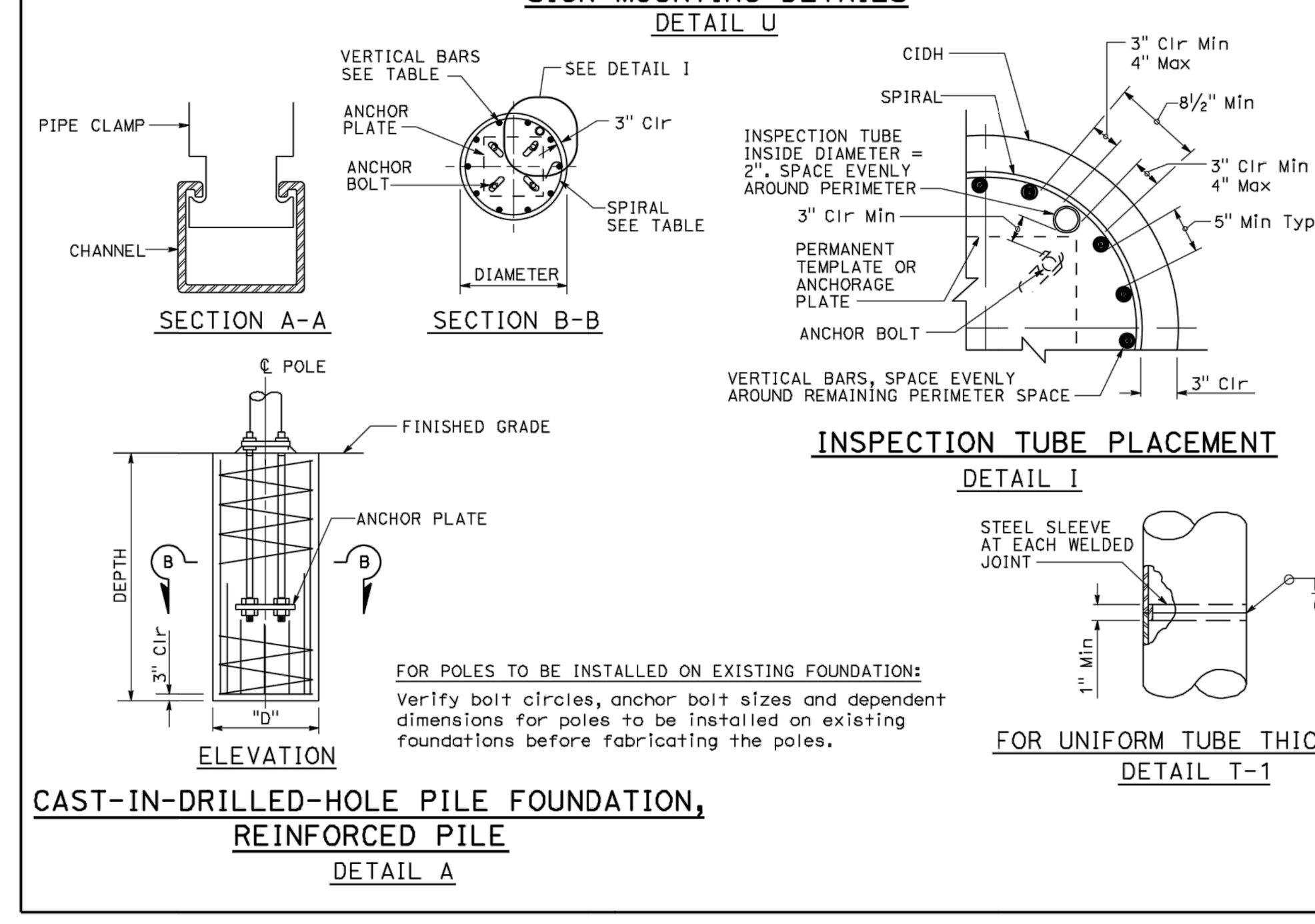
2018 STANDARD PLAN ES-7E

ES-7E

1-30-18

527

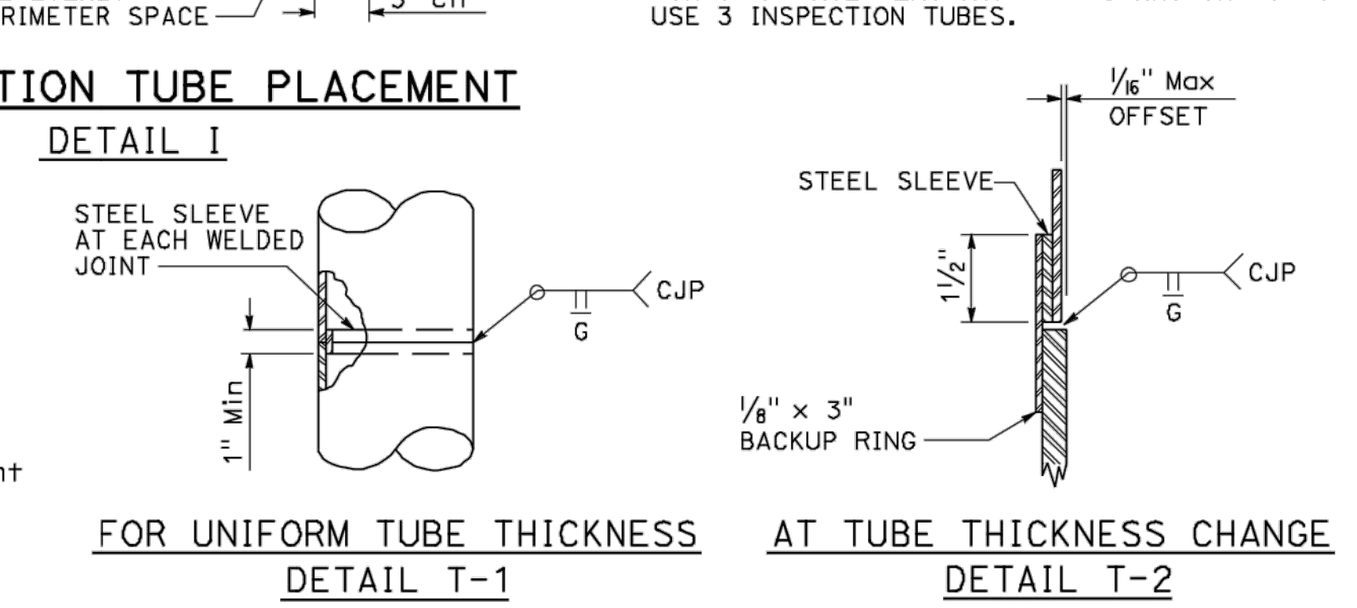


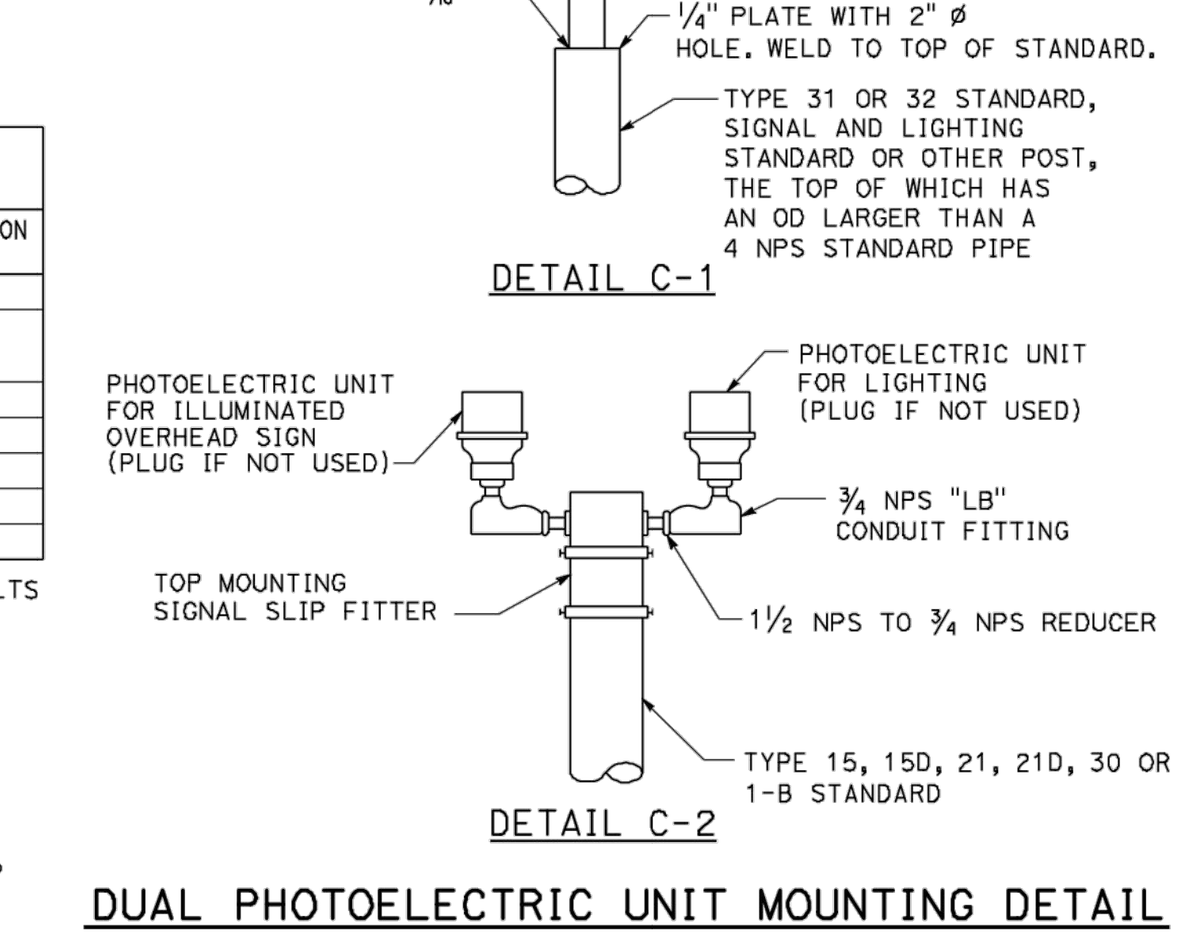


CIDH REINFORCING AND INSPECTION TUBE SCHEDULE

CIDH DIAMETER	VERTICAL BARS	SPIRAL	INSPECTION TUBE
2 ft	8-#5	#4 AT 6	2
2.5 ft	10-#6		4*
3 ft	12-#7	#5 AT 6	
3.5 ft	14-#8		4
4 ft	18-#9	2-#4 AT 7	5
4.5 ft	18-#9	2-#5 AT 7	5
5 ft	22-#10	2-#5 AT 7	6
6 ft	26-#11	2-#6 AT 7	7

* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER Stanley P. Johnson No. C57793 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, DETAIL No. 2)

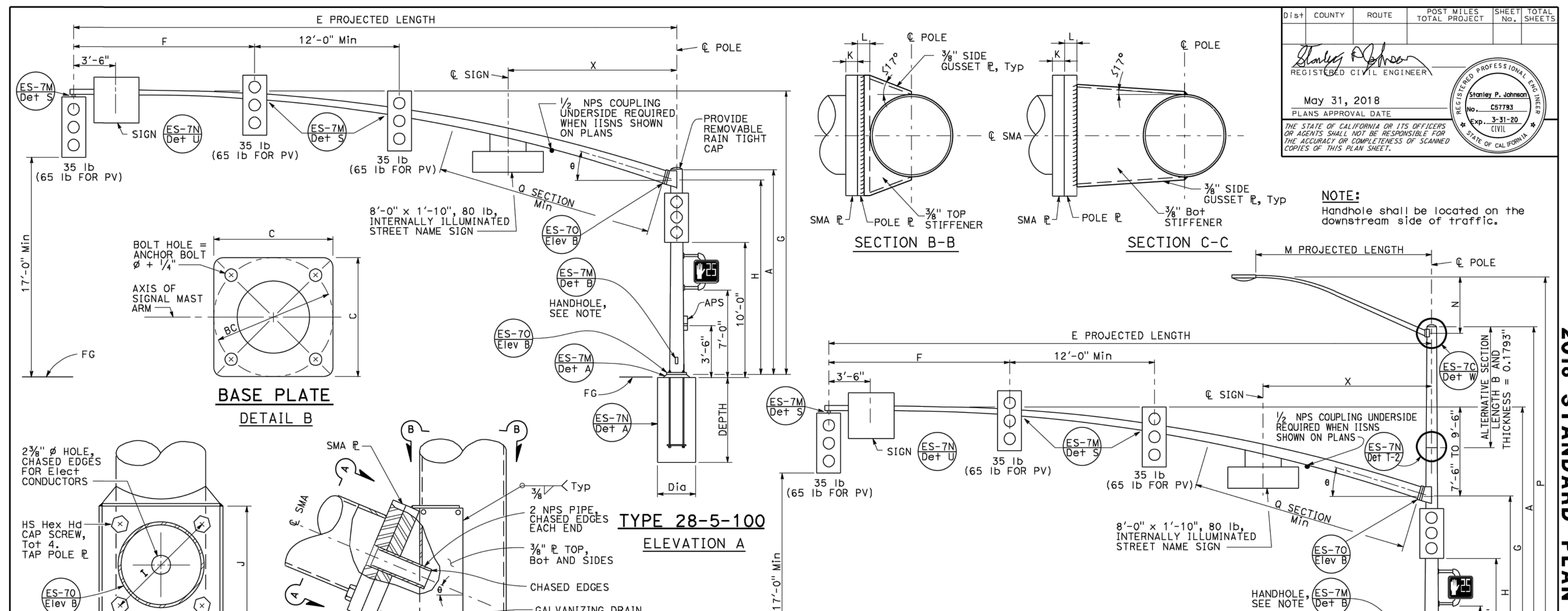
NO SCALE

2018 STANDARD PLAN ES-7N

ES-7N

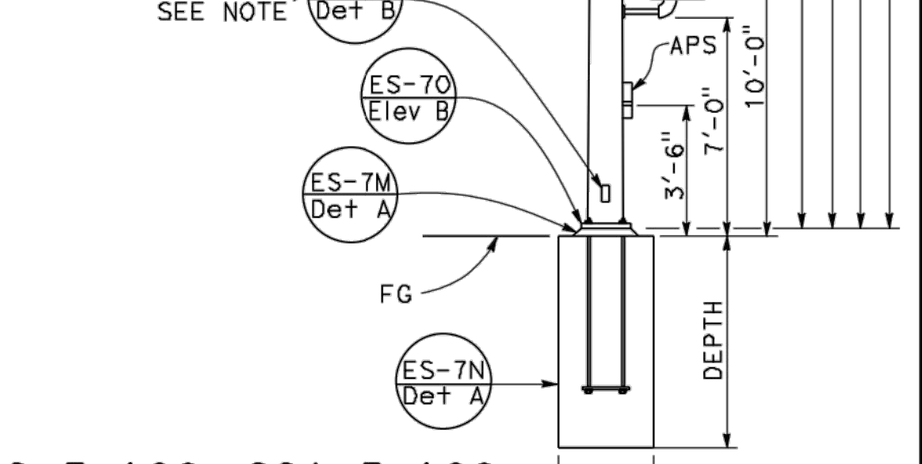
1-30-18

521



LUMINAIRE MAST ARM DATA

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT 30'-0" POLE	P MOUNTING HEIGHT 35'-0" POLE
6'-0"	2'-0"±	3¼"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3½"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3⅞"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4¼"		34'-3"±	39'-3"±



TYPE 29-5-100, 29A-5-100
ELEVATION B

SIGNAL MAST ARM DATA

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM ℘ THICKNESS	L POLE ℘ THICKNESS	θ	Q SECTION LENGTH	Q SECTION THICKNESS	X Max
50'-0"	15'-0"	23'-7"± TO 25'-7"±	16'-0"	11-7/16"	0.1793"	16"	1½"-6NC-3¼"	1'-9"	1¾"	1¾"	15°	18'-0"	0.2391"	14'-0"
55'-0"				1'-¼"								23'-0"		

POLE DATA / BASE PLATE DATA / CIDH PILE FOUNDATION

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH Dia	CIDH DEPTH
28-5-100	5	100	17'-0"	22"	19⅝"	0.375"				2'-6"	2'-4"	3"	2¼"ø x 42"	NONE	50'-0", [55'-0"]	4'-0"	14'-0"
29-5-100			30'-0"		17¾"		10'-0"	19⅛"	17¾"					6'-15' [15'-0"]			
29A-5-100			35'-0"		17"		15'-0"		17"								

[ ] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER Stanley P. Johnson No. C57793 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 5 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 50' TO 55')

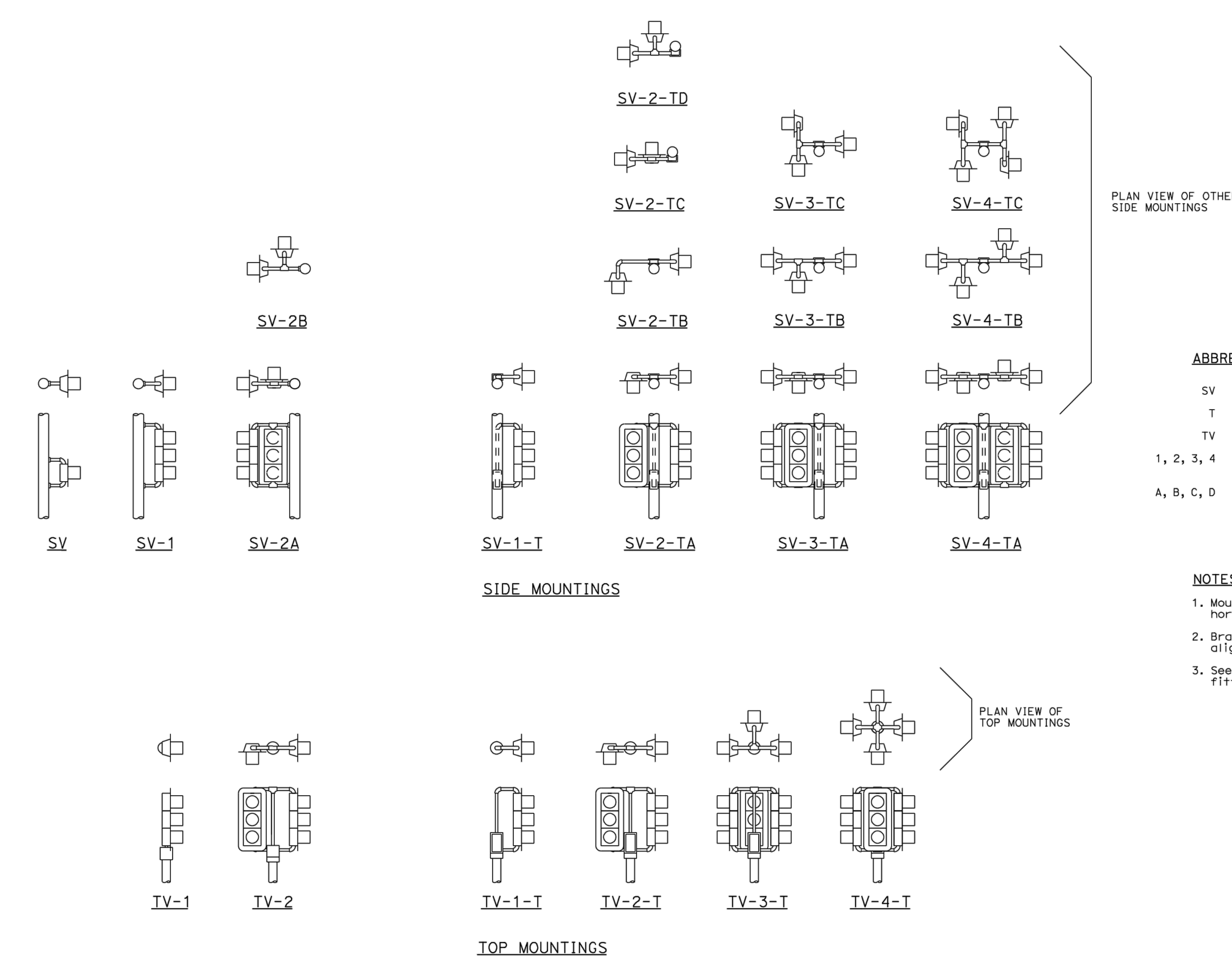
NO SCALE

2018 STANDARD PLAN ES-7G

ES-7G

1-30-18

499



ABBREVIATIONS:

- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES (3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

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 backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED ELECTRICAL ENGINEER
May 31, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
REGISTERED PROFESSIONAL ENGINEER Hamid Zolfaghari No. E15636 Exp. 12-31-19 ELECTRICAL STATE OF CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

2018 STANDARD PLAN ES-4A

ES-4A

1-30-18

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\ELECTRIC\TS-5.DWG (TS-5)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER AMIRHOSSEIN EHSAEI C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO	SCALE: AS SHOWN
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT	DATE: 10-16-2020
		DRAWN BY: EA	POLE DETAILS	FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

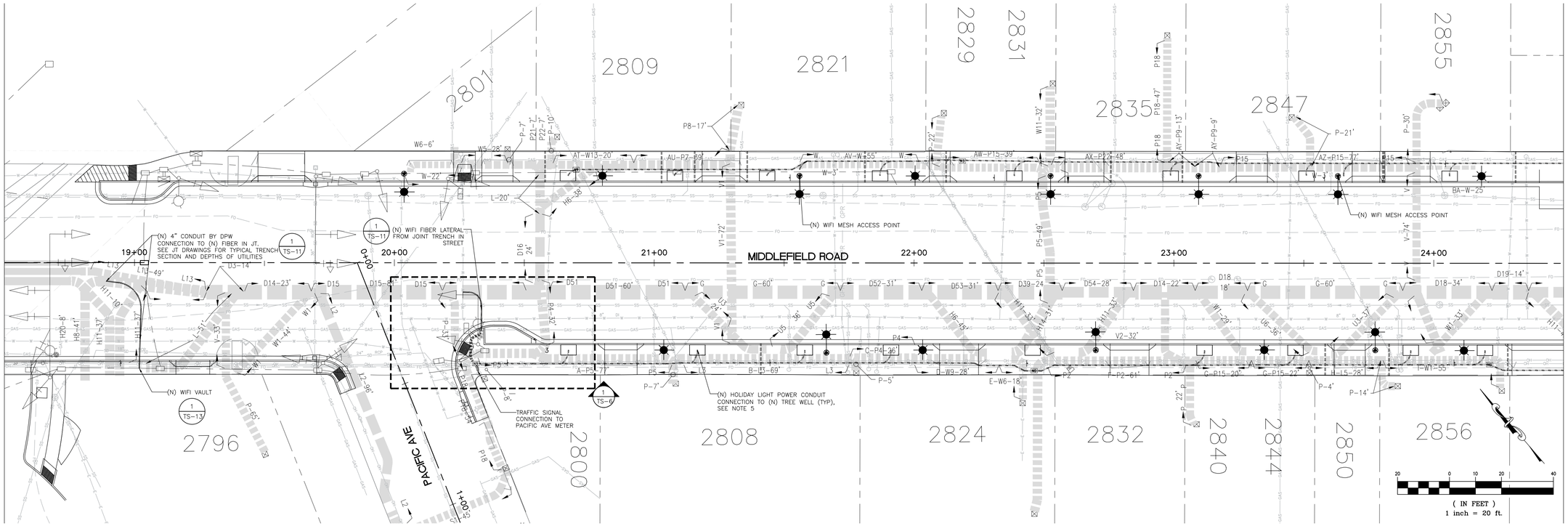
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

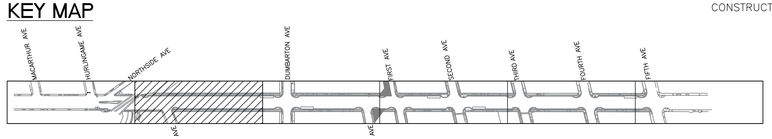


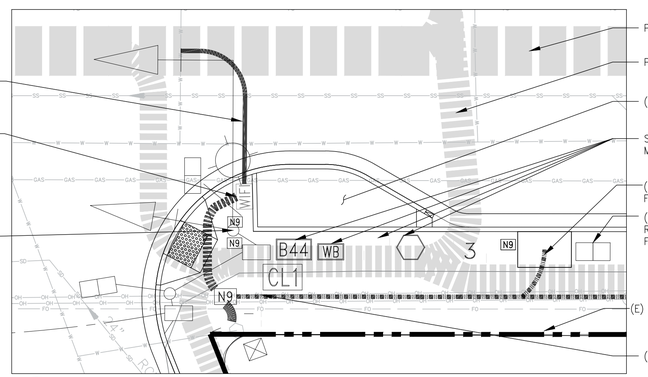
STA: 24+50.00 – SEE SHEET TS-7

LEGEND:

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- PROPOSED TRAFFIC SIGNAL CONDUIT
- PROPOSED WIFI FIBER LATERAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER AND TRAFFIC SIGNAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER CONDUIT
- N9 — PROPOSED PULL BOX, SEE DETAIL 1/TS-13 FOR DETAILS
- A-P5-77' — (SECTION NAME)-(REFERENCE TO JOINT TRENCH)-(LENGTH OF TRENCH)

KEY MAP





1 / TS-6 — PACIFIC AVENUE AND MIDDLEFIELD ROAD SOUTHWEST RETURN

(IN FEET)
1 inch = 8 ft.

NOTES:

1. SEE SL SHEETS FOR STREET LIGHT CONDUIT AND POLE DETAILS.
2. SEE JT SHEETS FOR JOINT TRENCH DETAILS.
3. SEE SHEET SL-1 FOR COUNTY CONDUIT TRENCH DETAILS.
4. SEE SHEETS TS-10 TO TS-13 FOR TRENCH SECTION DETAILS.
5. HOLIDAY LIGHT POWER RECEPTACLES SHALL BE GFCI PROTECTED AND INSTALLED DIRECTLY ON TREES AT 18" MIN. ABOVE FINISH GRADE. AT CONNECTIONS TO TREE WELLS, HOLIDAY LIGHT CABLES SHALL BE PROTECTED BY RIGID METAL CONDUITS ABOVE 18" BELOW GRADE.
6. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JENNIFER L. HOSSEN ERIER
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-6
SHEET 66 OF 140

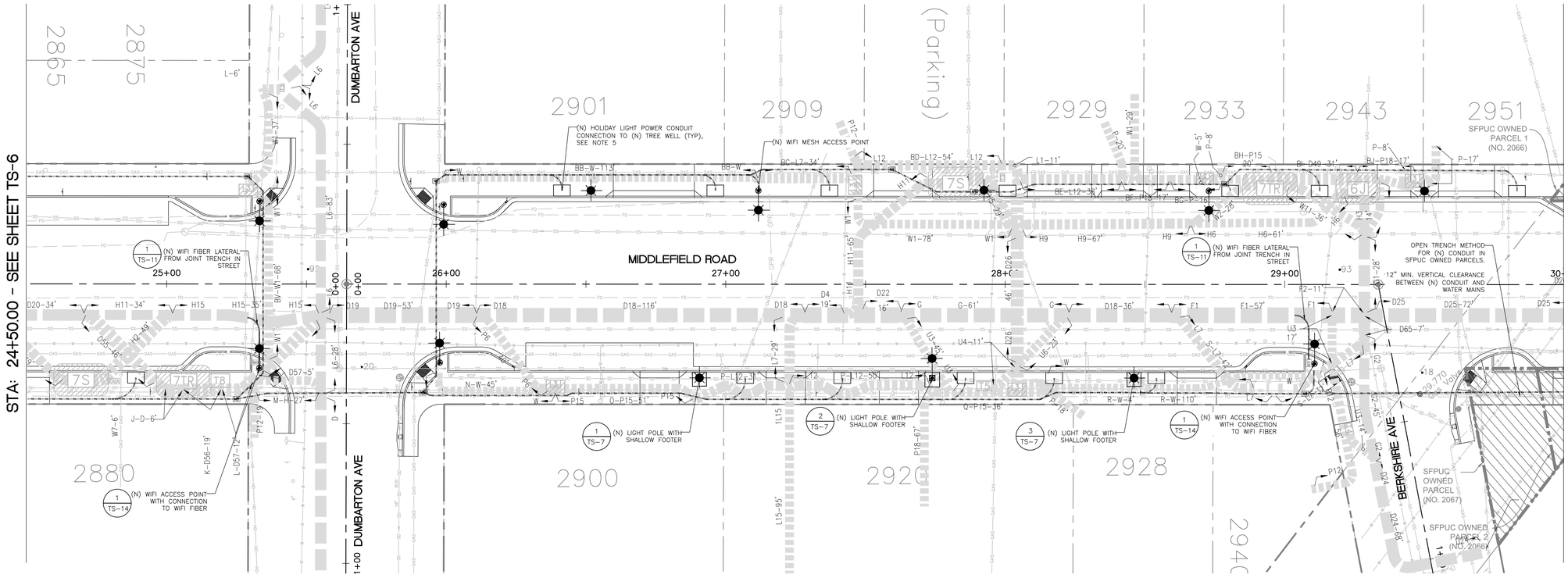
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-6.DWG (TS-6)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

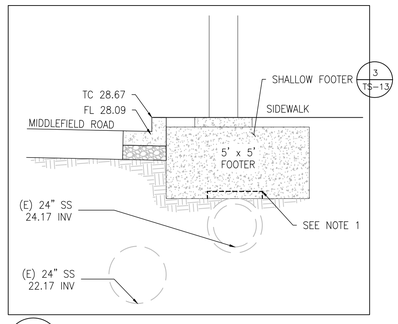


LEGEND:

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- PROPOSED TRAFFIC SIGNAL CONDUIT
- PROPOSED WIFI FIBER LATERAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER AND TRAFFIC SIGNAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER CONDUIT
- N9 — PROPOSED PULL BOX, SEE DETAIL 1/TS-13 FOR DETAILS
- A-P5-77' — (SECTION NAME)-(REFERENCE TO JOINT TRENCH)-(LENGTH OF TRENCH)

NOTES:

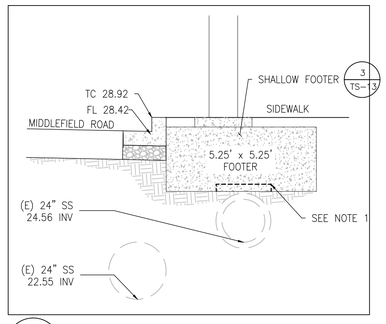
1. SEE SL SHEETS FOR STREET LIGHT CONDUIT AND POLE DETAILS.
2. SEE JT SHEETS FOR JOINT TRENCH DETAILS.
3. SEE SHEET SL-1 FOR COUNTY CONDUIT TRENCH DETAILS.
4. SEE SHEETS TS-10 TO TS-13 FOR TRENCH SECTION DETAILS.
5. HOLIDAY LIGHT POWER RECEPTACLES SHALL BE GFCI PROTECTED AND INSTALLED DIRECTLY ON TREES AT 18" MIN. ABOVE FINISH GRADE. AT CONNECTIONS TO TREE WELLS, HOLIDAY LIGHT CABLES SHALL BE PROTECTED BY RIGID METAL CONDUITS ABOVE 18" BELOW GRADE.



1 TS-7 LIGHT POLE WITH SHALLOW FOOTER

NOTES:

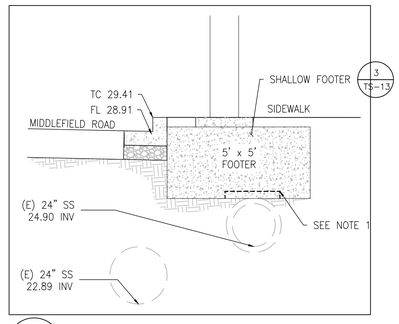
1. IF REQUIRED FOR CLEARANCE, STEP FOOTER (3" MAX.) OVER TOP OF EXISTING RCP TO PROVIDE 3" MINIMUM SAND BUFFER AND INCREASE FOOTPRINT OF FOOTER TO 5.25' X 5.25'.



2 TS-7 LIGHT POLE WITH SHALLOW FOOTER

NOTES:

1. IF REQUIRED FOR CLEARANCE, STEP FOOTER (3" MAX.) OVER TOP OF EXISTING RCP TO PROVIDE 3" MINIMUM SAND BUFFER AND INCREASE FOOTPRINT OF FOOTER TO 5.5' X 5.5'.

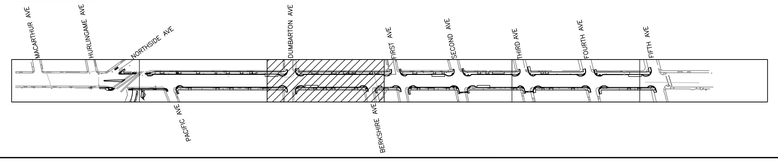


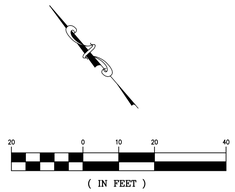
3 TS-7 LIGHT POLE WITH SHALLOW FOOTER

NOTES:

1. IF REQUIRED FOR CLEARANCE, STEP FOOTER (3" MAX.) OVER TOP OF EXISTING RCP TO PROVIDE 3" MINIMUM SAND BUFFER AND INCREASE FOOTPRINT OF FOOTER TO 5.25' X 5.25'.

KEY MAP





FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-7.DWG (TS-7)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER ANDREW T. SEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

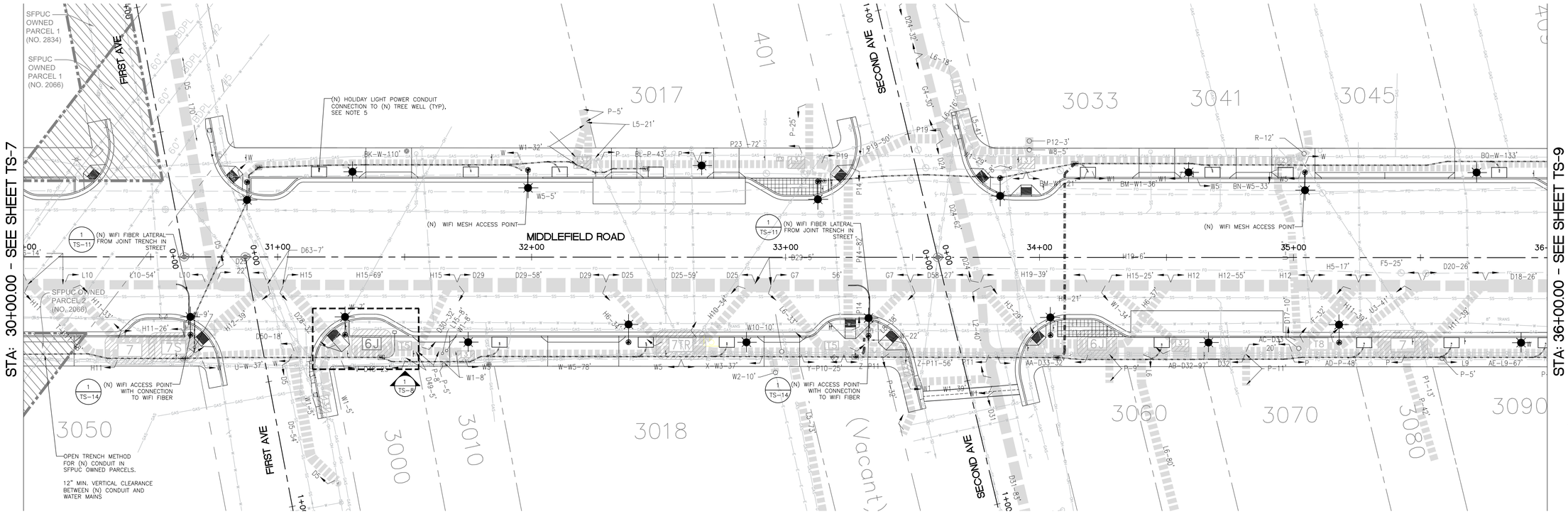
TS-7
SHEET 67 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



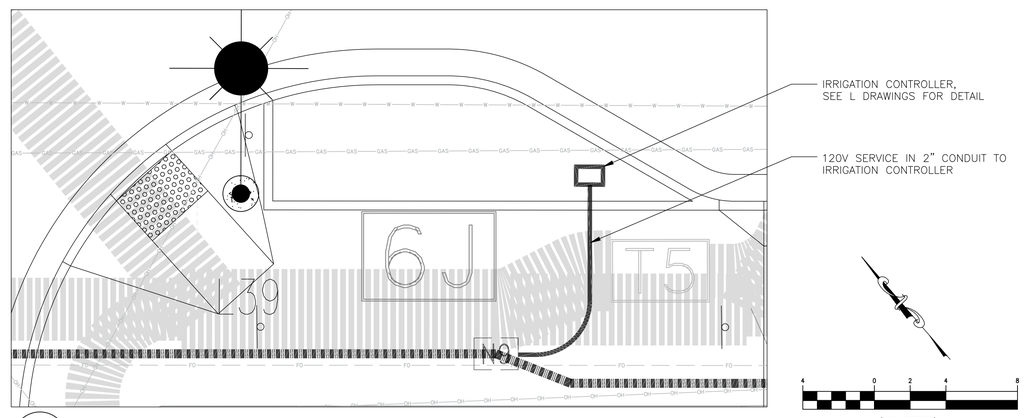
(IN FEET)
1 inch = 20 ft.

LEGEND:

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- PROPOSED TRAFFIC SIGNAL CONDUIT
- PROPOSED WIFI FIBER LATERAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER AND TRAFFIC SIGNAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER CONDUIT
- N9 PROPOSED PULL BOX, SEE DETAIL 1/TS-13 FOR DETAILS
- A-P5-77' (SECTION NAME)-(REFERENCE TO JOINT TRENCH)-(LENGTH OF TRENCH)

NOTES:

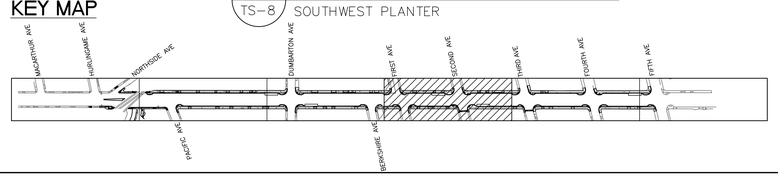
1. SEE SL SHEETS FOR STREET LIGHT CONDUIT AND POLE DETAILS.
2. SEE JT SHEETS FOR JOINT TRENCH DETAILS.
3. SEE SHEET SL-1 FOR COUNTY CONDUIT TRENCH DETAILS.
4. SEE SHEETS TS-10 TO TS-13 FOR TRENCH SECTION DETAILS.
5. HOLIDAY LIGHT POWER RECEPTACLES SHALL BE GFCI PROTECTED AND INSTALLED DIRECTLY ON TREES AT 18" MIN. ABOVE FINISH GRADE. AT CONNECTIONS TO TREE WELLS, HOLIDAY LIGHT CABLES SHALL BE PROTECTED BY RIGID METAL CONDUITS ABOVE 18" BELOW GRADE.



1 / TS-8 FIRST AVENUE AND MIDDLEFIELD ROAD SOUTHWEST PLANTER

(IN FEET)
1 inch = 4 ft.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER ANDRIS HOSSEIN EHSAN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-8
SHEET 68 OF 140

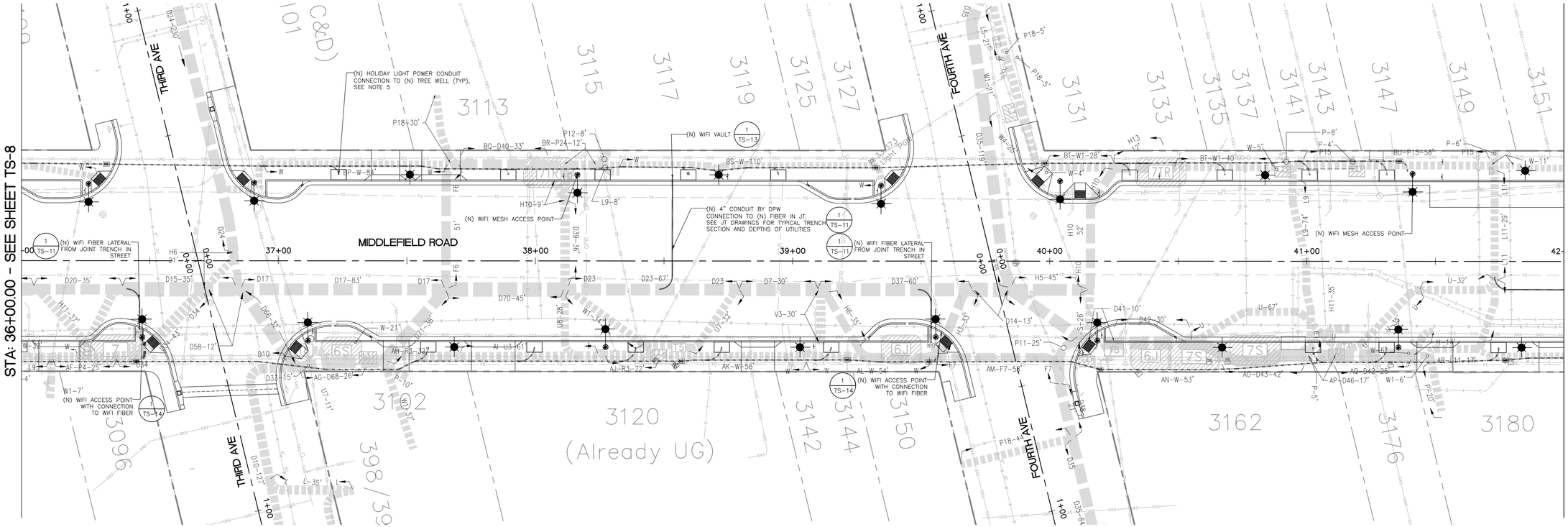
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-8.DWG (TS-8)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



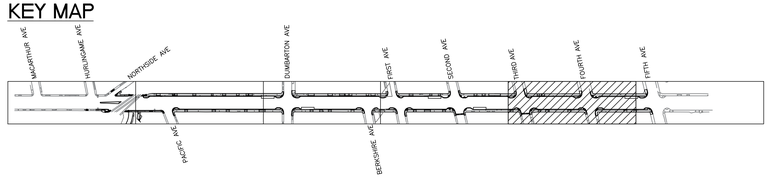
LEGEND:

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- PROPOSED TRAFFIC SIGNAL CONDUIT
- PROPOSED WIFI FIBER LATERAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER AND TRAFFIC SIGNAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER CONDUIT
- N9 PROPOSED PULL BOX, SEE DETAIL 1/TS-13 FOR DETAILS
- A-P5-77' (SECTION NAME)-(REFERENCE TO JOINT TRENCH)-(LENGTH OF TRENCH)

NOTES:

1. SEE SL SHEETS FOR STREET LIGHT CONDUIT AND POLE DETAILS.
2. SEE JT SHEETS FOR JOINT TRENCH DETAILS.
3. SEE SHEET SL-1 FOR COUNTY CONDUIT TRENCH DETAILS.
4. SEE SHEETS TS-10 TO TS-13 FOR TRENCH SECTION DETAILS.
5. HOLIDAY LIGHT POWER RECEPTACLES SHALL BE GFCI PROTECTED AND INSTALLED DIRECTLY ON TREES AT 18" MIN. ABOVE FINISH GRADE. AT CONNECTIONS TO TREE WELLS, HOLIDAY LIGHT CABLES SHALL BE PROTECTED BY RIGID METAL CONDUITS ABOVE 18" BELOW GRADE.

KEY MAP



(IN FEET)
1 inch = 20 ft.

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-9.DWG (TS-9)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER AMIR HOSSEIN EHSAN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

DESIGNED BY: AE	COUNTY OF SAN MATEO	SCALE: AS SHOWN
CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT	DATE: 10-16-2020
DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT	FILE NO.: 1/E4931
ISSUE FOR BID 10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION / DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

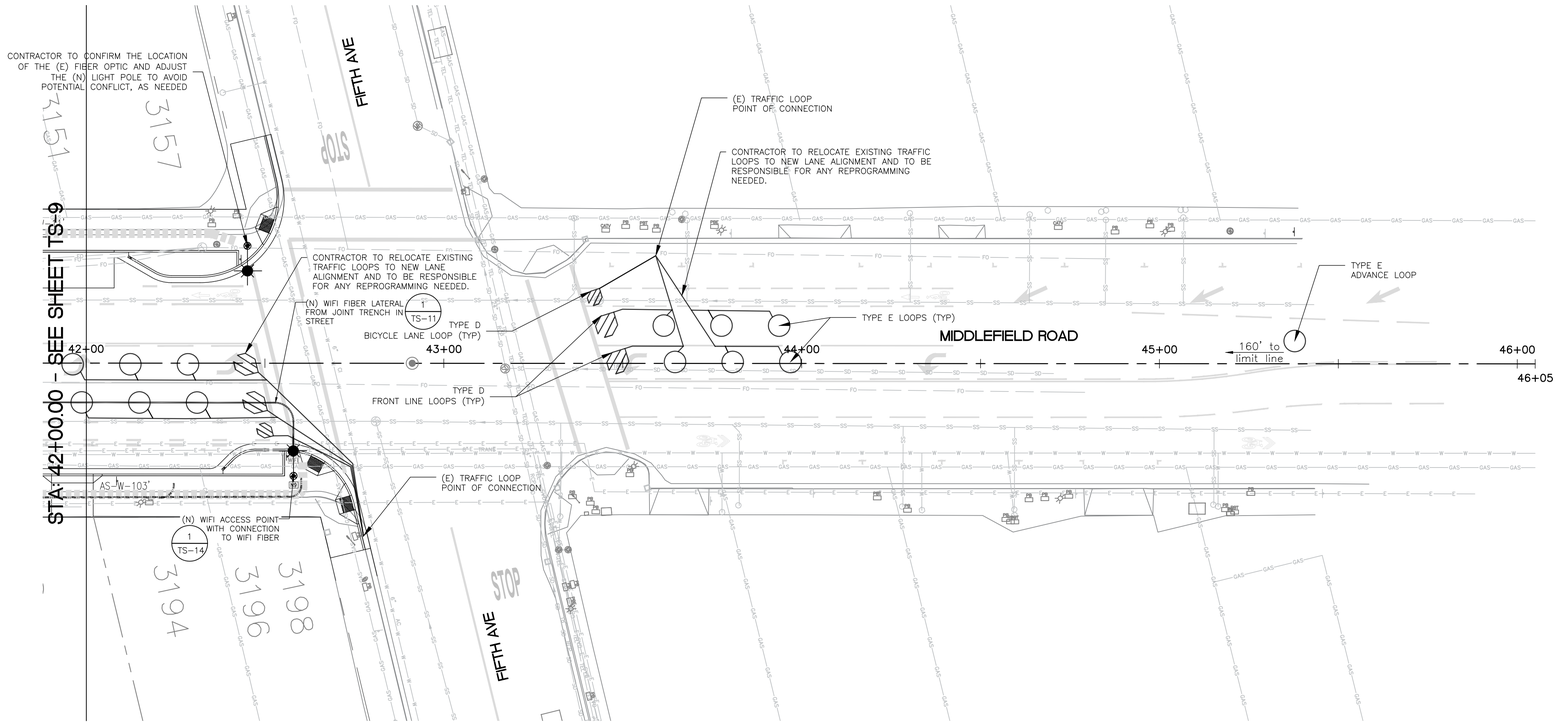
TS-9
SHEET 69 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



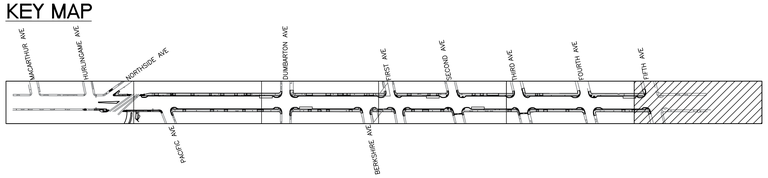
LEGEND:

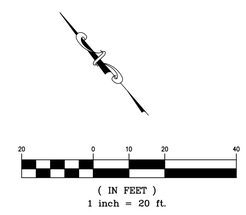
- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- PROPOSED TRAFFIC SIGNAL CONDUIT
- PROPOSED WIFI FIBER LATERAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER AND TRAFFIC SIGNAL CONDUIT
- PROPOSED HOLIDAY LIGHT/WIFI POWER CONDUIT
- N9 — PROPOSED PULL BOX, SEE DETAIL 1/TS-13 FOR DETAILS
- A-P5-77' — (SECTION NAME)-(REFERENCE TO JOINT TRENCH)-(LENGTH OF TRENCH)

NOTES:

1. SEE SL SHEETS FOR STREET LIGHT CONDUIT AND POLE DETAILS.
2. SEE JT SHEETS FOR JOINT TRENCH DETAILS.
3. SEE SHEET SL-1 FOR COUNTY CONDUIT TRENCH DETAILS.
4. SEE SHEETS TS-10 TO TS-13 FOR TRENCH SECTION DETAILS.
5. HOLIDAY LIGHT POWER RECEPTACLES SHALL BE GFCI PROTECTED AND INSTALLED DIRECTLY ON TREES AT 18" MIN. ABOVE FINISH GRADE. AT CONNECTIONS TO TREE WELLS, HOLIDAY LIGHT CABLES SHALL BE PROTECTED BY RIGID METAL CONDUITS ABOVE 18" BELOW GRADE.

KEY MAP





FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-10.DWG (TS-10)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER
AMIR HOSSEIN FAHIM
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

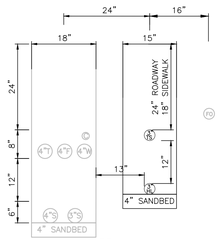
COUNTY OF SAN MATEO
PUBLIC WORKS

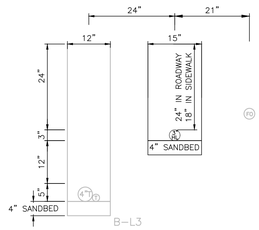
		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

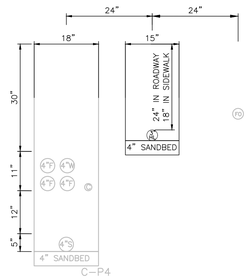
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

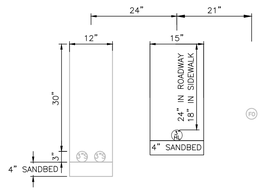
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

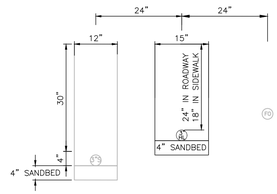
TS-10
SHEET 70 OF 140

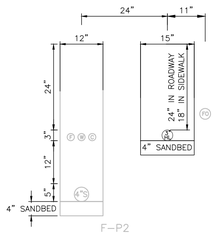


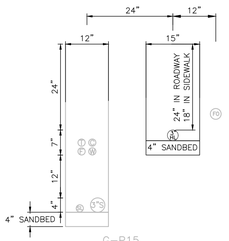


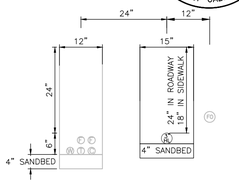


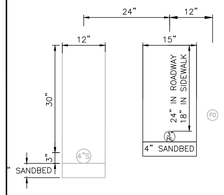


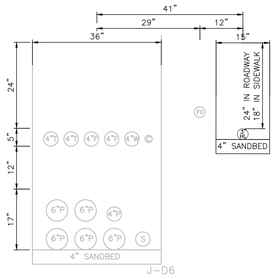


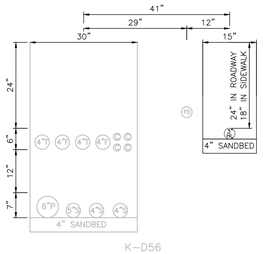


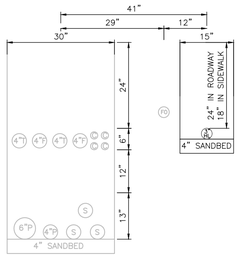


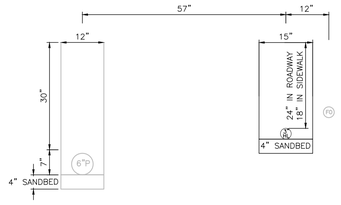


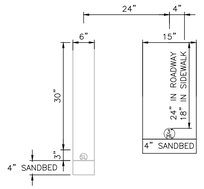


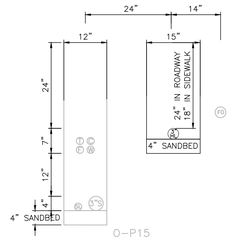


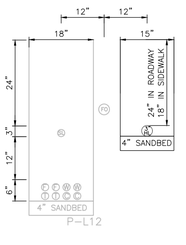


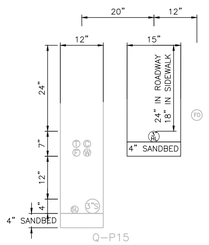


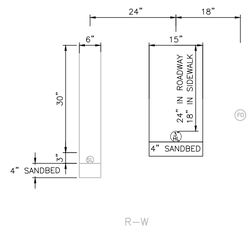


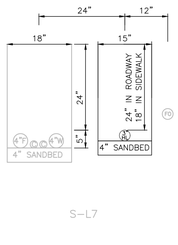


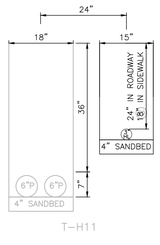


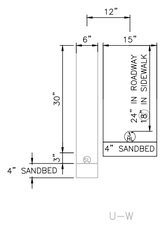


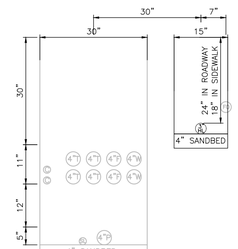


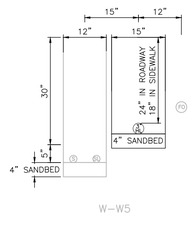


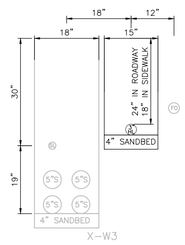


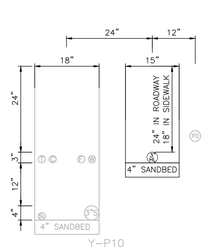


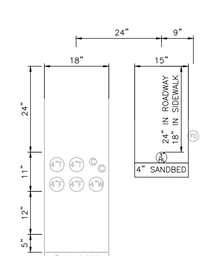


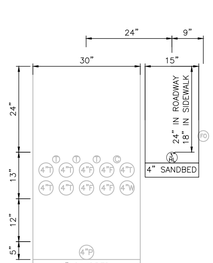


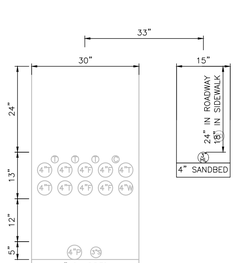


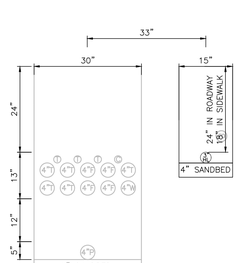


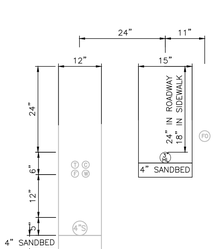


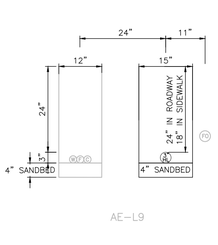














1 / TS–13 WIFI FIBER LATERAL FROM JOINT TRENCH IN STREET

NOTES:

1. DEPTH OF EXISTING UTILITIES SHOWN IS APPROXIMATE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING UTILITIES.
2. CONTRACTOR TO ADJUST TRENCH AND UTILITIES DEPTHS TO MAINTAIN A 12" CLEARANCE BETWEEN FIBER AND POWERED CONDUITS.
3. JT INFORMATION SHOWN ON THIS SHEET IS FOR REFERENCE ONLY, REFER TO JT DRAWINGS FOR DETAILS.
4. REFER TO JT DRAWINGS FOR JOINT TRENCH BACKFILL DETAILS. REFER TO TS–13 FOR TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT BACKFILL DETAIL.

LEGEND:

HL HOLIDAY LIGHT AND WIFI POWER CONDUIT
TS TRAFFIC SIGNAL CONDUIT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

REGISTERED PROFESSIONAL ENGINEER
MATTHIAS SEIN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-11
SHEET 71 OF 140

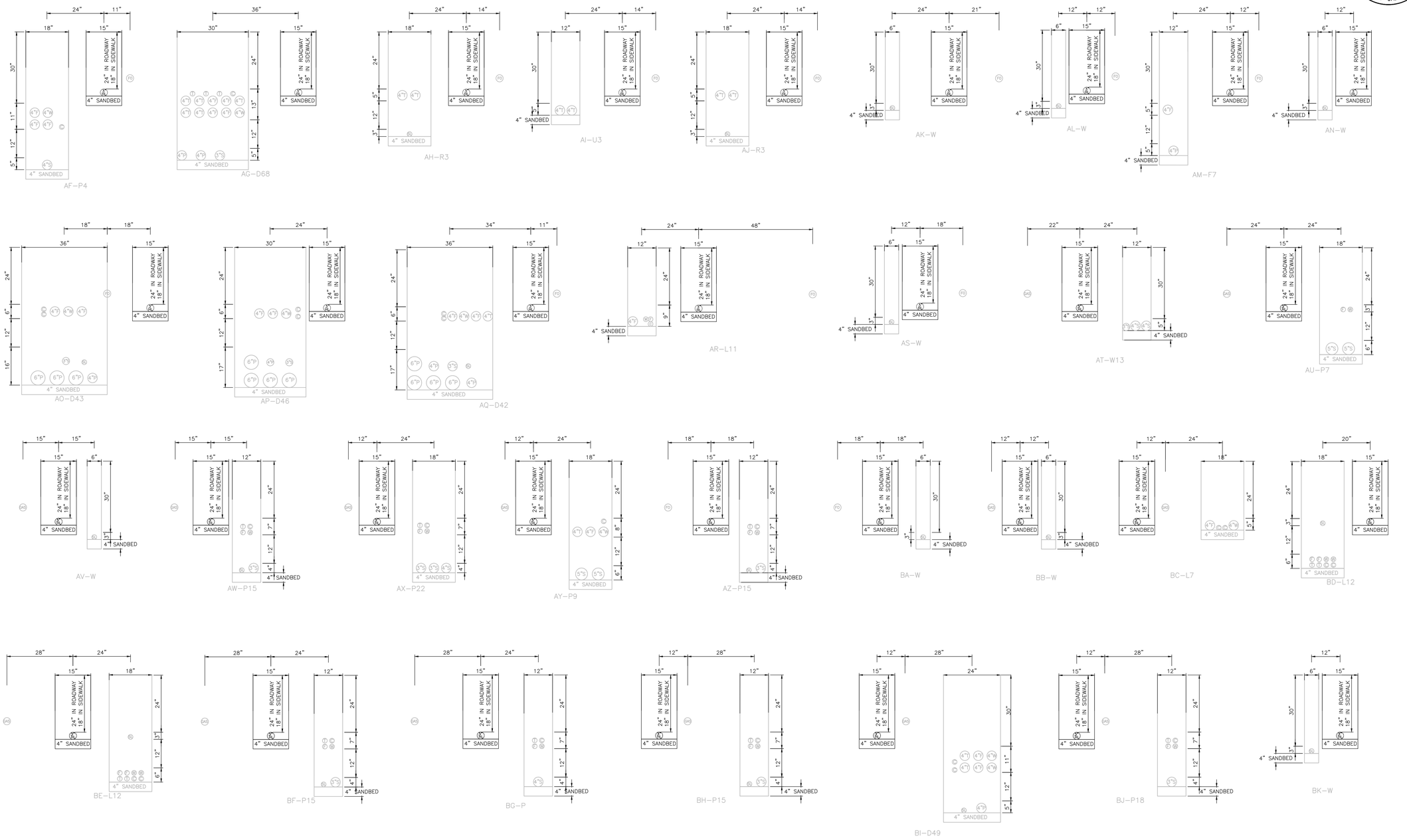
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-11.DWG (TS-11)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



NOTES:

1. DEPTH OF EXISTING UTILITIES SHOWN IS APPROXIMATE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING UTILITIES.
2. CONTRACTOR TO ADJUST TRENCH AND UTILITIES DEPTHS TO MAINTAIN A 12" CLEARANCE BETWEEN FIBER AND POWERED CONDUITS.
3. JT INFORMATION SHOWN ON THIS SHEET IS FOR REFERENCE ONLY, REFER TO JT DRAWINGS FOR DETAILS.
4. REFER TO JT DRAWINGS FOR JOINT TRENCH BACKFILL DETAILS. REFER TO TS-13 FOR TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT BACKFILL DETAIL.

LEGEND:

HL HOLIDAY LIGHT AND WIFI POWER CONDUIT
TS TRAFFIC SIGNAL CONDUIT

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER
ARTHUR SEIN ENSAN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

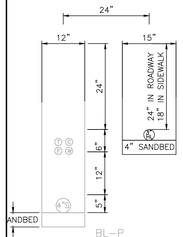
		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

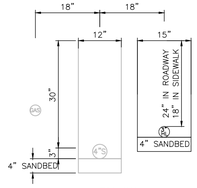
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

TS-12
SHEET 72 OF 140

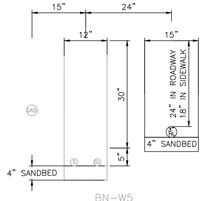
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-12.DWG (TS-12)



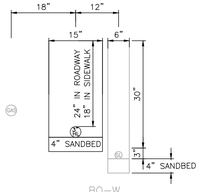
BL–P



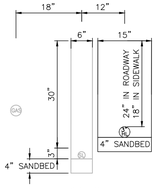
BM–W1



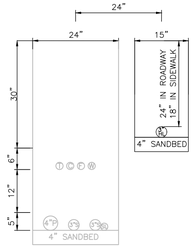
BN–W5



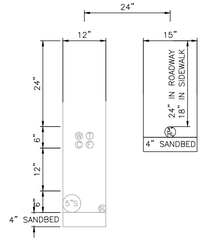
BO–W



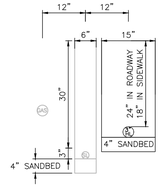
BP–W



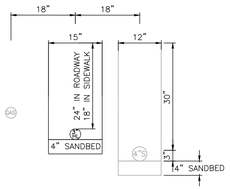
BQ–D40



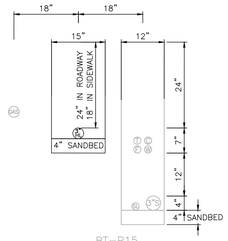
BR–P24



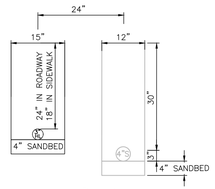
BS–W



BT–W1



BT–P15



BV–W1

NOTES:

1. DEPTH OF EXISTING UTILITIES SHOWN IS APPROXIMATE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING UTILITIES.
2. CONTRACTOR TO ADJUST TRENCH AND UTILITIES DEPTHS TO MAINTAIN A 12" CLEARANCE BETWEEN FIBER AND POWERED CONDUITS.
3. JT INFORMATION SHOWN ON THIS SHEET IS FOR REFERENCE ONLY, REFER TO JT DRAWINGS FOR DETAILS.
4. REFER TO JT DRAWINGS FOR JOINT TRENCH BACKFILL DETAILS. REFER TO TS–13 FOR TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT BACKFILL DETAIL.

LEGEND:

HL HOLIDAY LIGHT AND WIFI POWER CONDUIT
TS TRAFFIC SIGNAL CONDUIT

BULKU243624

BULK VAULT HDPE STRUCTURAL FOAM SHIELD X COMPOSITE COVER

BULK ™ ™

FEATURES:

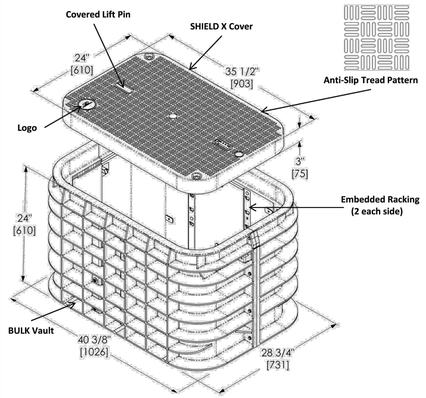
- 24" X 36" X 24" (open floor) (actual dimensions on drawing)
- BULK VAULT – SHIELD X COVER- Tier 22 Load Rated (ANSI/SCTE 77: 2013)
- (2) Cover locking Auger bolts, Hex (9/16") or Penta (7/8") head with washer
- (2) Non-Seizing Fastening System, Field Replaceable
- (4) Embedded Composite Rack Support
- (2) Lifting slot equipped with stainless steel pin (slot is approximately 2 ¾"x¼")
- (2) Winterized Cable Drop slide (1 ¼" X 1 ¼")
- (1) Logo Disk

WEIGHT & SHIPPING:

- Cover Weight: 47 lbs
- Box Weight: 55 lbs
- Assembly Weight : 102 lbs

PERFORMANCE TESTING:

- ANSI/SCTE 77: 2013 - TIER 22 Rated (33,750 lbs)
- AS3996 – Class C
- EN124 Class B125
- ASTM C1028-07 & AS-4586 (Slip Resistance)
- 10,000 Hour Xenon-Arc Exposure (No fiber-bloom)
- ASTM D635-06 (Flammability)



Inside Dimensions		
Length	Width	Depth
34 ¾" [873]	22 ¼" [578]	21" [533]

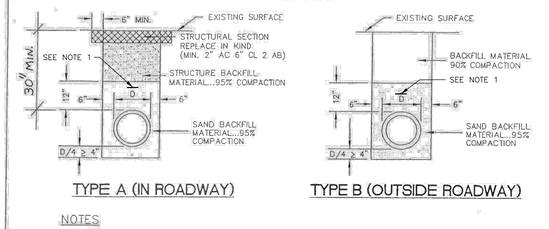
CHANNELL

1 TS–13 WIFI VAULT

SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY CALIFORNIA

DRAWN BY: M.L.
CHECK BY: D.M.W.
APPROVED BY: N.R.C.

SCALE: NONE
DATE: 6/95
REVISED: 7/97



TYPE A (IN ROADWAY) TYPE B (OUTSIDE ROADWAY)

NOTES

1. SAND.... MATERIAL FREE FROM ORGANIC MATTER AND CLAY WITH A SIEVE GRADATION BY WEIGHT AS FOLLOWS:

SIEVE SIZE	% PASSING SIEVE
No. 4	100
No. 200	0–5

2. STRUCTURE BACKFILL MATERIAL.... MATERIAL WITH SAND EQUIVALENT NOT LESS THAN 20 AND SIEVE GRADATION BY WEIGHT AS FOLLOWS:

SIEVE SIZE	% PASSING SIEVE
3"	100
No. 4	35–100
No. 30	20–100

3. BACKFILL MATERIAL.... MATERIAL FROM EXCAVATION, FREE FROM STONES OR LUMPS EXCEEDING 3 INCHES GREATEST DIMENSION, ORGANIC MATTER, OR OTHER UNSATISFACTORY MATERIAL.

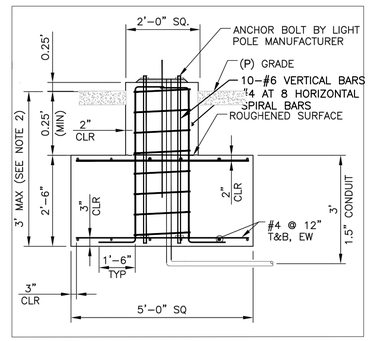
STANDARD TRENCH BACKFILL AND BEDDING DETAIL

W–10

2 TS–13 STANDARD TRENCH BACKFILL AND BEDDING DETAIL

NOTES:

1. COLORED–CODED DETECTABLE UTILITY MARKING TAPE SHALL BE PLACED OVER NEW CONDUIT IN THE TRENCH. REFER TO TAPE MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM TAPE BURIAL DEPTH.



3 TS–13 LIGHT POLE FOUNDATION SHALLOW FOOTER

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

LICENSED PROFESSIONAL ENGINEER NORTHROSS-EIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

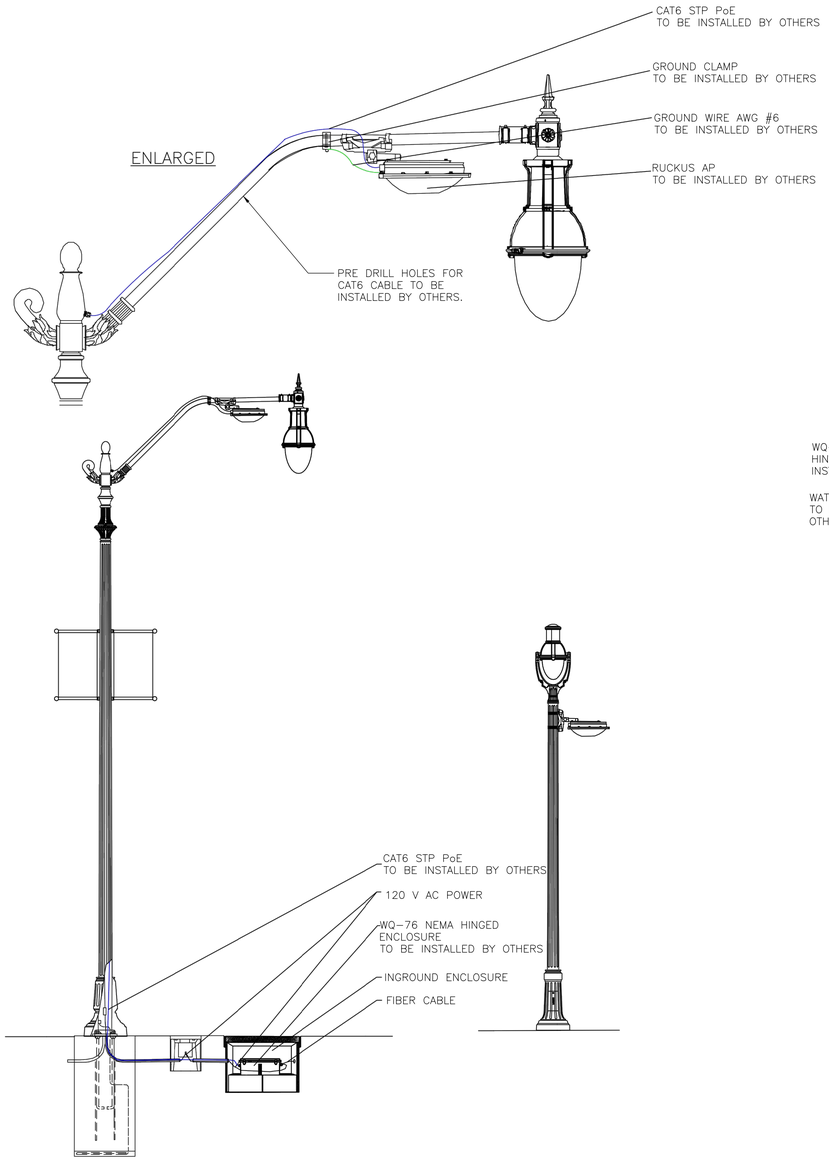
		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

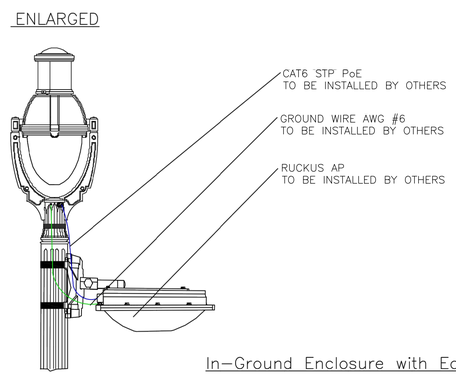
SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-13
SHEET 73 OF 140

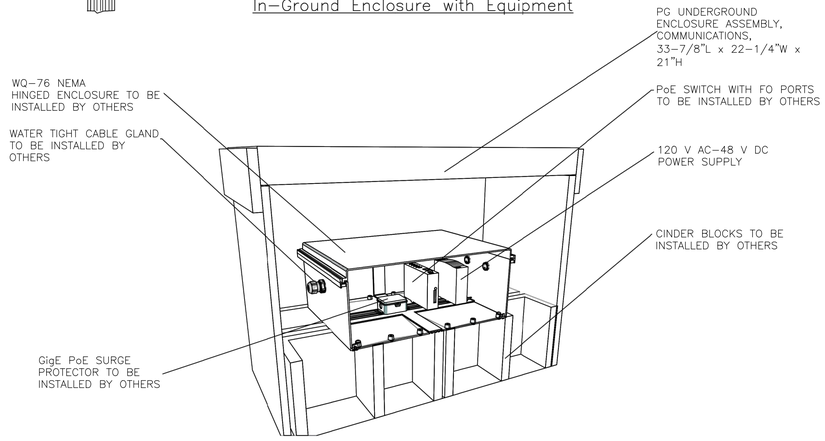
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-13.DWG (TS-13)



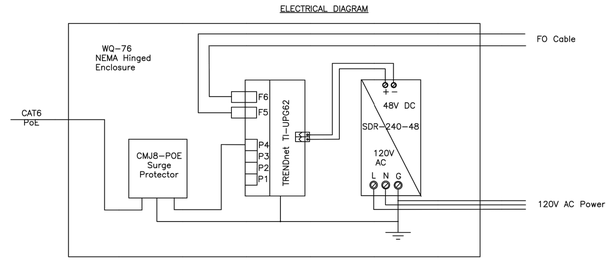


NOTE: WIFI VAULT AND INGROUND ENCLOSURE TO BE PROVIDED BY CONTRACTOR.
ALL EQUIPMENT AND CABLES TO BE FURNISHED AND INSTALLED BY OTHERS.

In-Ground Enclosure with Equipment



ELECTRICAL DIAGRAM



General Notes

PUBLIC ELECTRICAL SPECIFICATIONS

These electrical procedures are to be used in conjunction with the latest National Electrical Code (N.E.C.) and local requirements.

MATERIALS

The Electrical Inspector shall approve all materials used for wiring, including conduit or boxes, as well as acceptable lighting fixtures.
All materials shall bear the seal of "U.L." listing or equivalent agency.
Construction materials shall be accepted and inspected by the County's Inspectors. Concrete used for foundations and encompassing pads shall be "Minor concrete".
Unless otherwise specified by a State of California Certified Structural engineer or Registered Civil Engineer. Drain rock shall be used to set all in-ground pull boxes and junction boxes and shall be 1 inch minimum to 2 inch maximum diameter drain rock.

CONDUIT

Underground circuits shall be P.V.C. schedule 40, unless otherwise noted. Electrical street light conduit shall be place under road pavement as directed by the County.
Electric street light conduit within County limits shall be place under road pavement and as directed by the County. Circuits can be places in existing conduit where applicable or as directed by City or County.
Electricol conduit trenches shall be backfilled only after the Electrical Inspector has accepted the conduit run for materials used and depth of conduit. The Inspector shall inspect the backfill and compaction to ensure it meets the engineering plans and specifications.

SERVICE BOXES

All in-ground junction boxes shall be easily accessible for maintenance purposes. Box type and size shall be accepted by the Electrical Inspector. All boxes shall be set on a 12 inch thick cushion of drain rock. Drain rock shall be 1 inch minimum to 2 inches maximum in dimension. At the bottom of the box there shall be one inch minimum thick grout on roofing paper, with a drain hole one inch minimum to 2 inches maximum in size in the center of the box. If a box is beside a streetlight or other pole light, it shall be set to finished grade and included within the concrete pad for that pole. They will not be allowed in the walkway or vehicular traffic areas. If there is no sidewalk, the box shall be set to grade behind the curb. If a box is within a landscaped area, it shall be set to finished grade such that water and landscaping material will not flow into it or cover it from view. Boxes shall not be left above grade to become a trip hazard. Provide brass hold down bolts.
WIRING AND SPLICING
All lighting circuits shall be copper THW or THHN 600 volt rated. Splices shall be water proof per Cal-Trans Section 86. A code size ground shall be installed in all circuits. All metal parts shall be bonded. Multiple circuits in the same conduit shall be clearly labeled with Brady or equivalent labels.

No.	Revision/Issue	Date

1 TS-14 WIFI CONNECTION TO LIGHT POLES

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER MOHOSSEIN FARSHIDI C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

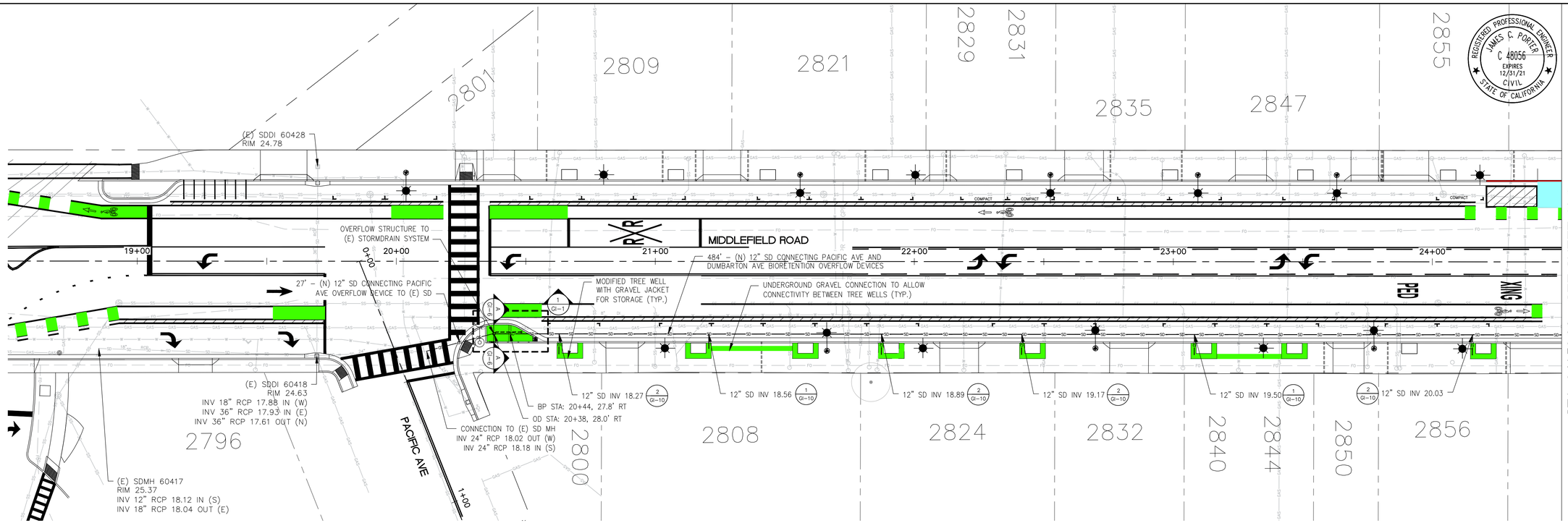
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: JY	TRAFFIC SIGNAL, HOLIDAY LIGHT, AND WIFI CONDUIT
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

TS-14
SHEET 74 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\TS\CONDUIT PATH SHEETS\TS-14.DWG (TS-14)

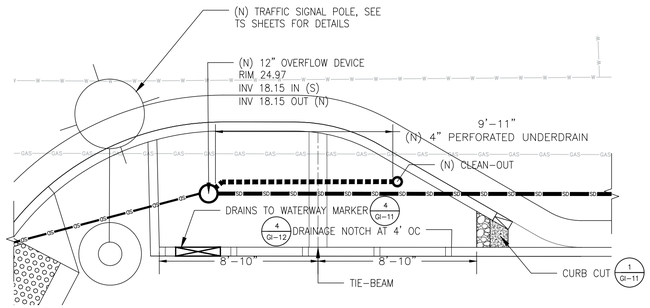


APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



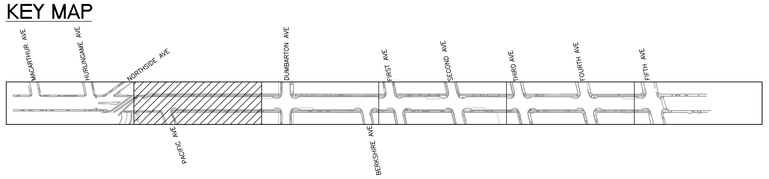
1 / GI-1 PACIFIC AVENUE AND MIDDLEFIELD ROAD
SOUTHWEST PLANTER

(IN FEET)
1 inch = 4 ft.

NOTES:

1. SEE G-2 TO G-3 FOR GENERAL NOTES, CONSTRUCTION NOTES, AND BIORETENTION CONSTRUCTION NOTES.
2. SEE GI-6 TO GI-13 FOR GI SECTIONS AND DETAILS
3. SEE PP-2 TO PP-6 FOR GRADING INFORMATION
4. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.
5. SEE DETAIL 1/GI-12 FOR TYPICAL BIORETENTION PLANTER DETAIL.

KEY MAP



FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-01.DWG (GI-1)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER
ARTHUR HOSSEIN EHSAN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	GREEN INFRASTRUCTURE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

GI-1
SHEET 75 OF 140

STA: 24+50.00 – SEE SHEET GI-1

STA: 30+00.00 – SEE SHEET GI-3

DUMBARTON AVE

MIDDLEFIELD ROAD

BERKSHIRE AVE

BUS ZONE

BUS ZONE

STOP

STOP

OD STA: 25+24, 26.9' LT
BP STA: 25+17, 27.7' LT

80' – (N) 8" SD LINE CONNECTING OVERFLOW DEVICES IN BIORETENTION PLANTERS

OD STA: 26+04.5, 26.8' LT
BP STA: 26+11, 27.8' LT

54' – (N) 8" SD LINE CONNECTING OVERFLOW DEVICES IN BIORETENTION PLANTERS

BP STA: 25+18, 27.7' RT
OD STA: 25+24, 28.2' RT

BP STA: 26+12, 27.7' RT
OD STA: 26+04, 27.5' RT

(E) 24" SS
INV 22.19

INSTALL (N) CB
FL 28.12
INV 24.50

CONNECT TO (E) 18" SD USING GI WYE CONNECTION DETAIL (W/O CO)
INV 24.16

BP STA: 28+97, 27.8' RT
OD STA: 29+04, 28.8' RT

(E) SDMH 60454
RIM 29.54
INV 18" 26.10 IN (SE)
INV 18" 25.27 OUT (NW)

(E) SDDI 60458
RIM 28.88

NON-GI PLANTER WITH 12" GRASS

NORTH DUMBARTON BIORETENTION RECEIVING RUNOFF FROM UPSTREAM BLOCK VIA SUBSURFACE PIPE

SFPUC OWNED PARCEL 1 (NO. 2066)

SFPUC OWNED PARCEL 2 (NO. 2067)

SFPUC OWNED PARCEL 2 (NO. 2066)

2880 2900 2928 2940 2865 2875 2901 2909 2929 2933 2943 2951

25+00 26+00 27+00 28+00 29+00 30+00 0+00 1+00

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

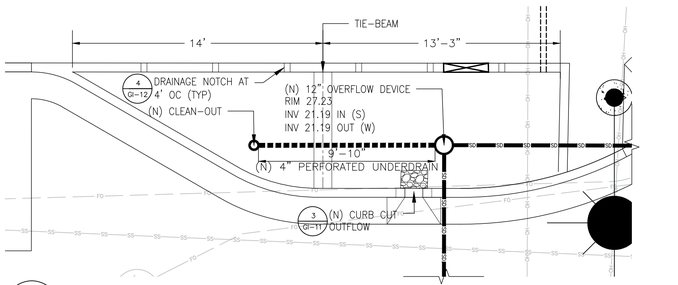
APPROVED:

DATE: 10/16/2020

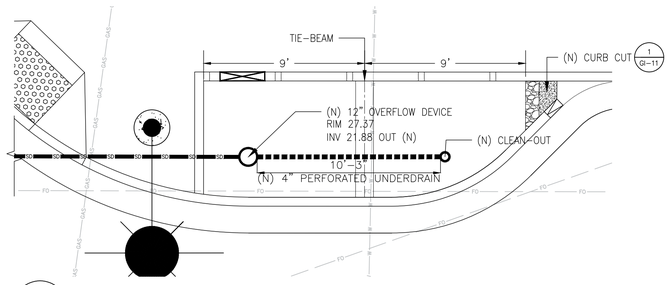
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTES:

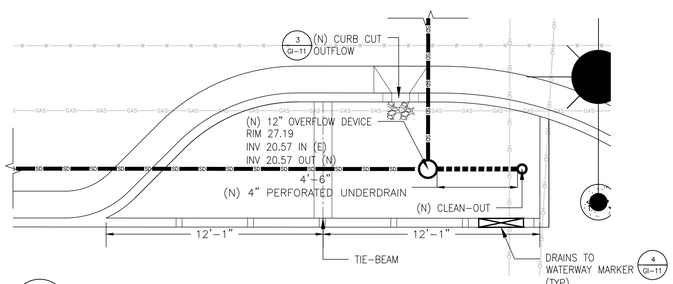
1. SEE G-2 TO G-3 FOR GENERAL NOTES, CONSTRUCTION NOTES, AND BIORETENTION CONSTRUCTION NOTES.
2. SEE GI-6 TO GI-13 FOR GI SECTIONS AND DETAILS.
3. SEE PP-2 TO PP-6 FOR GRADING INFORMATION.
4. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.
5. SEE DETAIL 1/GI-12 FOR TYPICAL BIORETENTION PLANTER DETAIL.



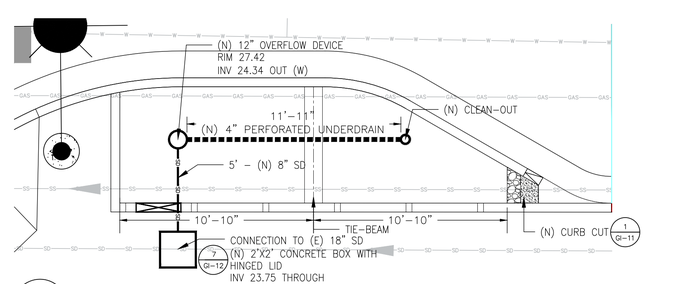
1 GI-2 DUMBARTON AVENUE AND MIDDLEFIELD ROAD
NORTHEAST PLANTER



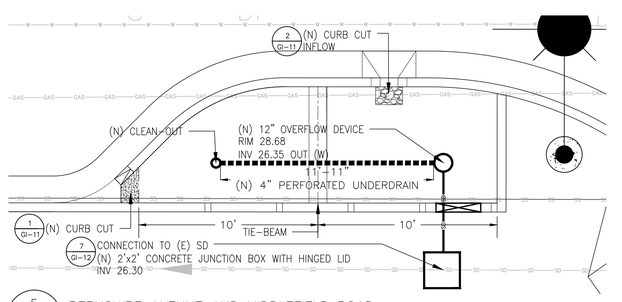
3 GI-2 DUMBARTON AVENUE AND MIDDLEFIELD ROAD
SOUTHEAST PLANTER



2 GI-2 DUMBARTON AVENUE AND MIDDLEFIELD ROAD
NORTHWEST PLANTER



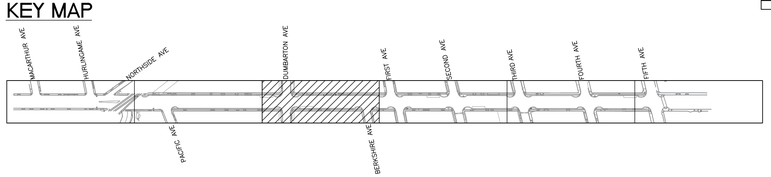
4 GI-2 DUMBARTON AVENUE AND MIDDLEFIELD ROAD
SOUTHWEST PLANTER



5 GI-2 BERKSHIRE AVENUE AND MIDDLEFIELD ROAD
NORTHWEST PLANTER

4 0 2 4 8
(IN FEET)
1 inch = 4 ft.

KEY MAP



REGISTERED PROFESSIONAL ENGINEER
LISA HOSSEIN TSENG
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

GI-2
SHEET 76 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-02.DWG (GI-2)

STA: 30+00.00 – SEE SHEET GI-2

STA: 36+00.00 – SEE SHEET GI-4

SFPUC OWNED PARCEL 1 (NO. 2834)

SFPUC OWNED PARCEL 1 (NO. 2066)

FIRST AVE

SECOND AVE

MIDDLEFIELD ROAD

(E) SDDI 60464
RIM 28.84
INV 18" RCP 21.74 OUT (SW)

SPECIAL PAVING WITH SITE FURNISHING FOR PUBLIC SPACE SEE SHEET L-8 FOR DETAILS

(E) SDDI 60489
RIM 29.32
INV 18" RCP 22.43 OUT (S)

BUS ZONE

NON-GI PLANTER WITH 12" GRASS (2/GI-12)

WYE STA: 30+61, 22.5' RT

OD STA: 30+60, 27.0' RT
BP STA: 30+52, 27.7' RT

CONNECTION TO (N) 8" SD INV 22.80 THROUGH

PARCEL 2 (NO. 2066)

45' – (N) 8" SD LINE FROM OVERFLOW DEVICE TO (E) SD LINE

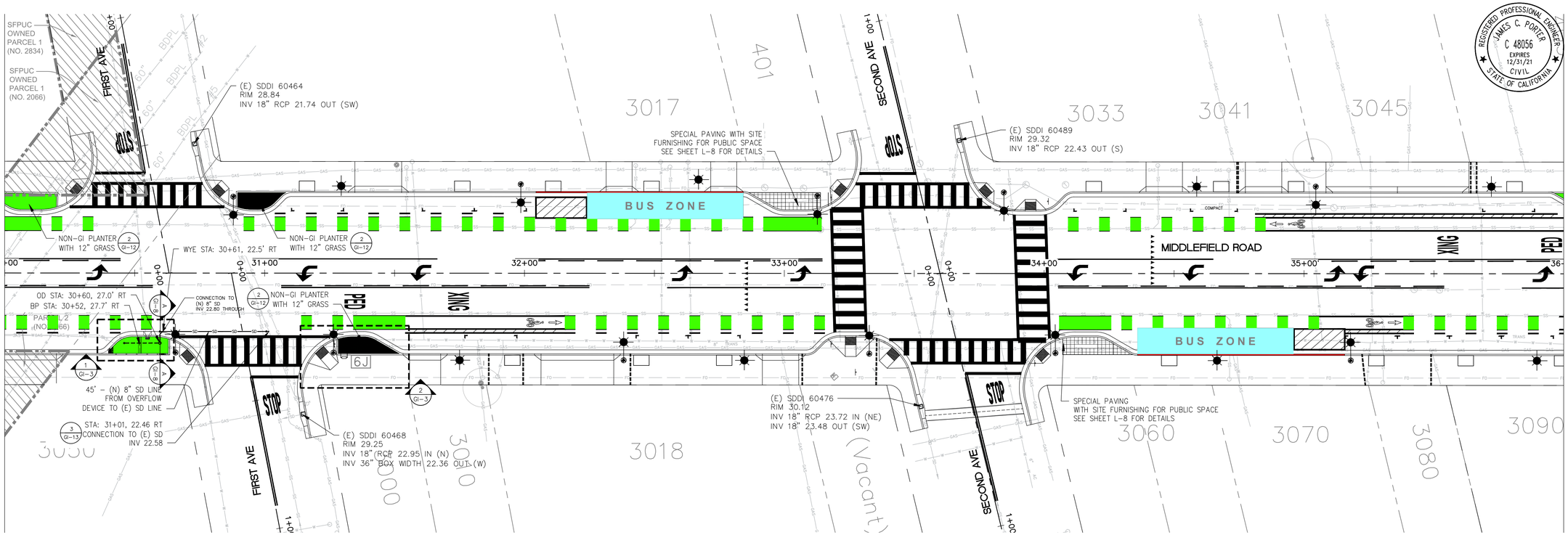
STA: 31+01, 22.46 RT CONNECTION TO (E) SD INV 22.58 (1/GI-13)

(E) SDDI 60468
RIM 29.25
INV 18" RCP 22.95 IN (N)
INV 36" BOX WIDTH 22.36 OUT (W)

(E) SDDI 60476
RIM 30.12
INV 18" RCP 23.72 IN (NE)
INV 18" 23.48 OUT (SW)

SPECIAL PAVING WITH SITE FURNISHING FOR PUBLIC SPACE SEE SHEET L-8 FOR DETAILS

3017 3018 3030 3033 3041 3045 3060 3070 3080 3090 401 (Vacant)



20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

APPROVED:

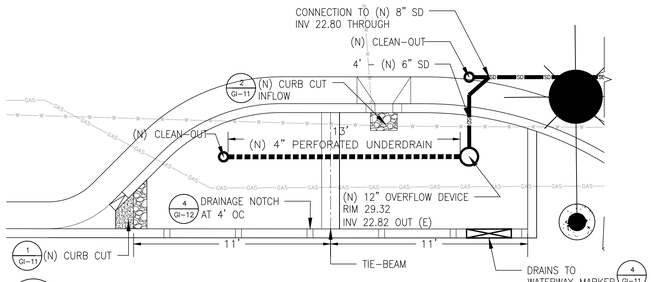
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

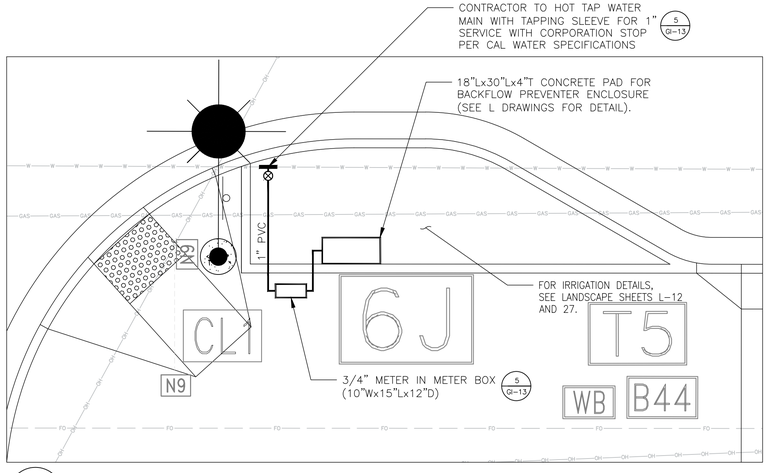
NOTES:

1. SEE G-2 TO G-3 FOR GENERAL NOTES, CONSTRUCTION NOTES, AND BIORETENTION CONSTRUCTION NOTES.
2. SEE GI-6 TO GI-13 FOR GI SECTIONS AND DETAILS.
3. SEE PP-2 TO PP-6 FOR GRADING INFORMATION.
4. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.
5. SEE DETAIL 1/GI-12 FOR TYPICAL BIORETENTION PLANTER DETAIL.



1/GI-3 FIRST AVENUE AND MIDDLEFIELD ROAD NORTHWEST PLANTER

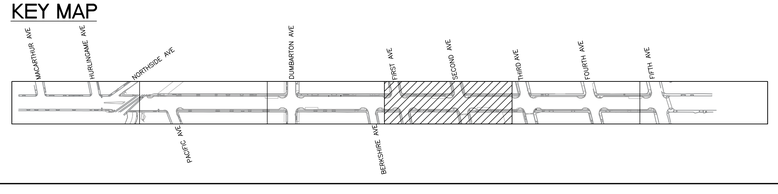
4 0 2 4 8
(IN FEET)
1 inch = 4 ft.



2/GI-3 FIRST AVENUE AND MIDDLEFIELD ROAD SOUTHWEST PLANTER

4 0 2 4 8
(IN FEET)
1 inch = 4 ft.

KEY MAP



AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	GREEN INFRASTRUCTURE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

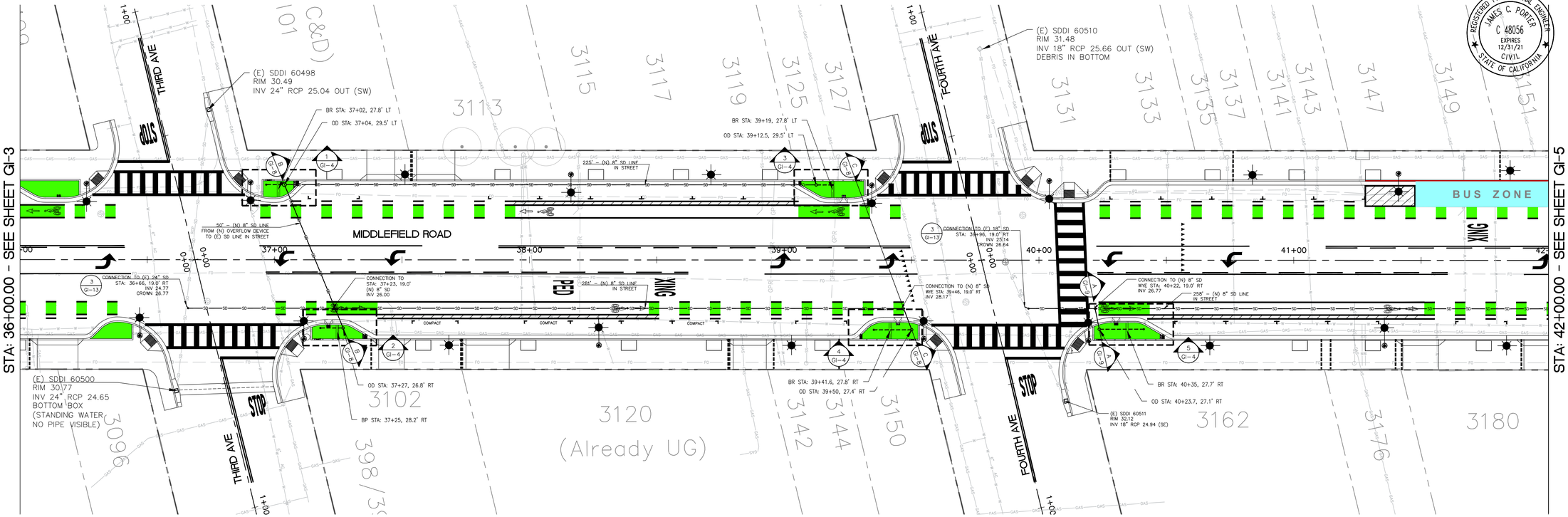
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-3
SHEET 77 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-03.DWG (GI-3)

STA: 36+00.00 – SEE SHEET GI-3

STA: 42+00.00 – SEE SHEET GI-5



APPROVED:

DATE: 10/16/2020

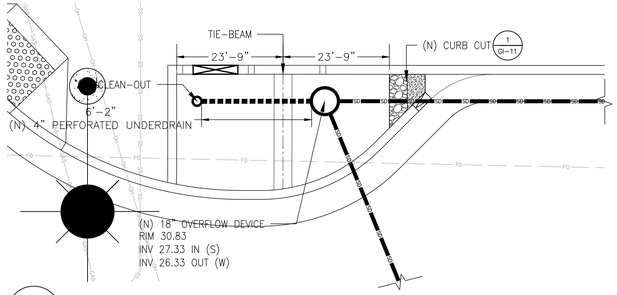
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

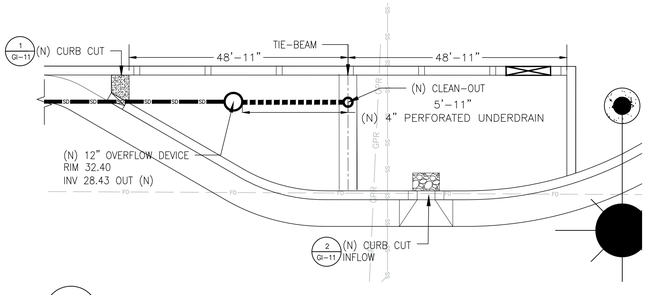
NOTES:

1. SEE G-2 TO G-3 FOR GENERAL NOTES, CONSTRUCTION NOTES, AND BIORETENTION CONSTRUCTION NOTES.
2. SEE GI-6 TO GI-13 FOR GI SECTIONS AND DETAILS.
3. SEE PP-2 TO PP-6 FOR GRADING INFORMATION.
4. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.
5. SEE DETAIL 1/GI-12 FOR TYPICAL BIORETENTION PLANTER DETAIL.

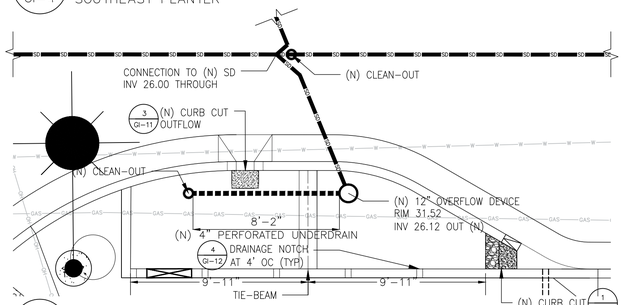
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.



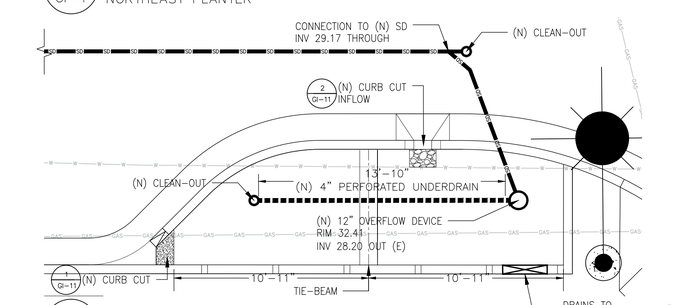
1 GI-4 THIRD AVENUE AND MIDDLEFIELD ROAD SOUTHEAST PLANTER



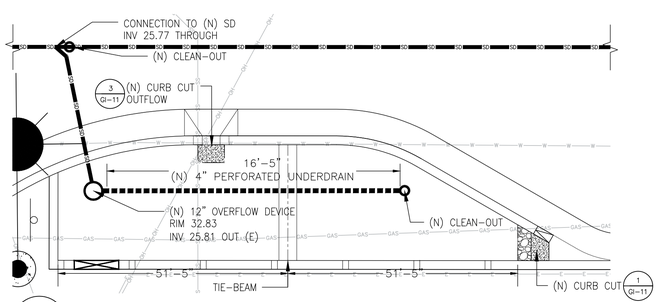
3 GI-4 FOURTH AVENUE AND MIDDLEFIELD ROAD NORTHEAST PLANTER



2 GI-4 THIRD AVENUE AND MIDDLEFIELD ROAD SOUTHWEST PLANTER

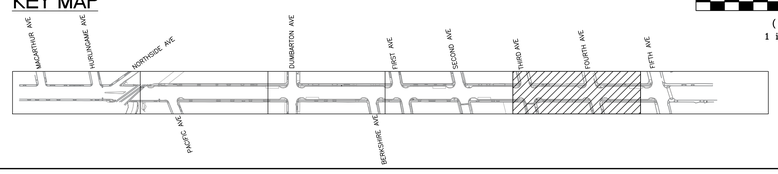


4 GI-4 FOURTH AVENUE AND MIDDLEFIELD ROAD NORTHWEST PLANTER



5 GI-4 FOURTH AVENUE AND MIDDLEFIELD ROAD SOUTHWEST PLANTER

KEY MAP



4 0 2 4 8
(IN FEET)
1 inch = 4 ft.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
TERESA SHEIN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

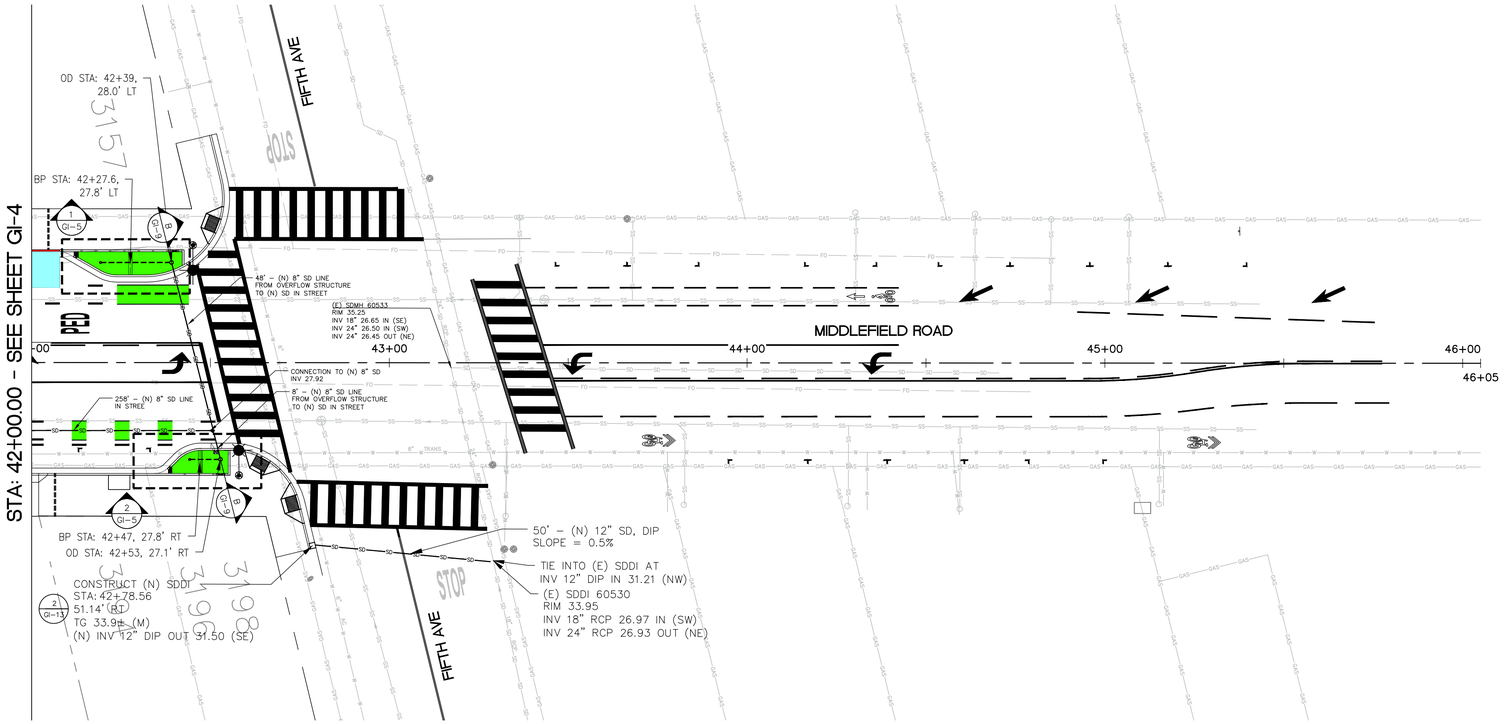
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

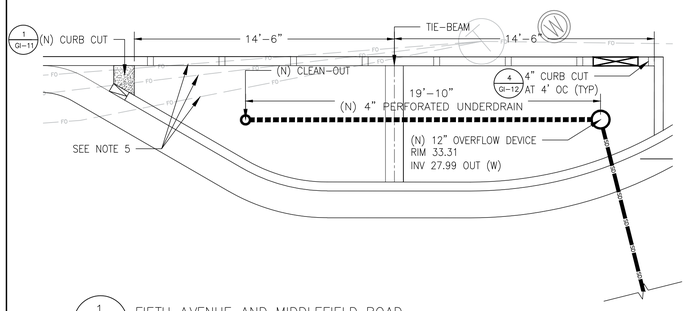
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

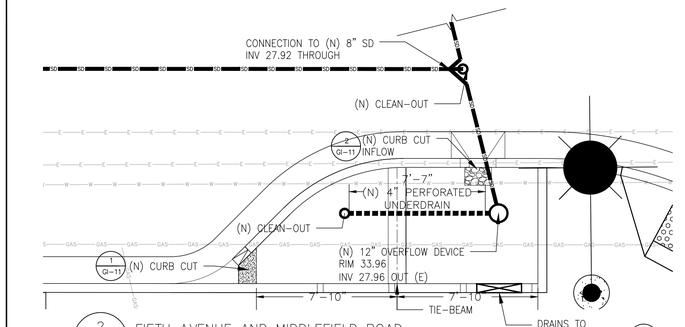
GI-4
SHEET 78 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-04.DWG (GI-4)





1 GI–5 FIFTH AVENUE AND MIDDLEFIELD ROAD NORTHEAST PLANTER



2 GI–5 FIFTH AVENUE AND MIDDLEFIELD ROAD NORTHWEST PLANTER

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

4 0 2 4 8
(IN FEET)
1 inch = 4 ft.

20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

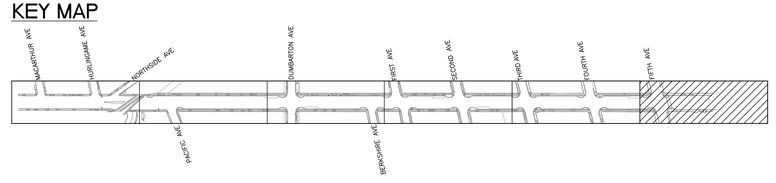
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

NOTES:

1. SEE G–2 TO G–3 FOR GENERAL NOTES, CONSTRUCTION NOTES, AND BIORETENTION CONSTRUCTION NOTES.
2. SEE GI–6 TO GI–13 FOR GI SECTIONS AND DETAILS.
3. SEE PP–2 TO PP–6 FOR GRADING INFORMATION.
4. THE ORDER OF CONSTRUCTION SHALL BE AS FOLLOWS: (1) TRAFFIC SIGNAL POLE, (2) PLANTER/GI PIPING, (3) SANITARY SEWER, (4) JOINT TRENCH, (5) SIDEWALK, CURB, AND GUTTER.
5. CONTRACTOR TO POTHOLE (E) FO CONDUITS IN VICINITY OF BIORETENTION PLANTER TO CONFIRM LOCATION. OVER EXCAVATION OF (E) CONDUITS MAY BE REQUIRED TO ALLOW SHIFTING OUT OF BIORETENTION PLANTER FOOTPRINT.
6. SEE DETAIL 1/GI–12 FOR TYPICAL BIORETENTION PLANTER DETAIL.

KEY MAP



REGISTERED PROFESSIONAL ENGINEER JOSEPH A. YSEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

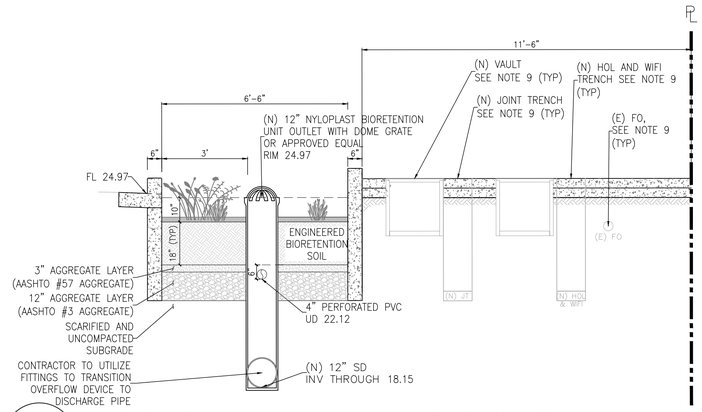
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

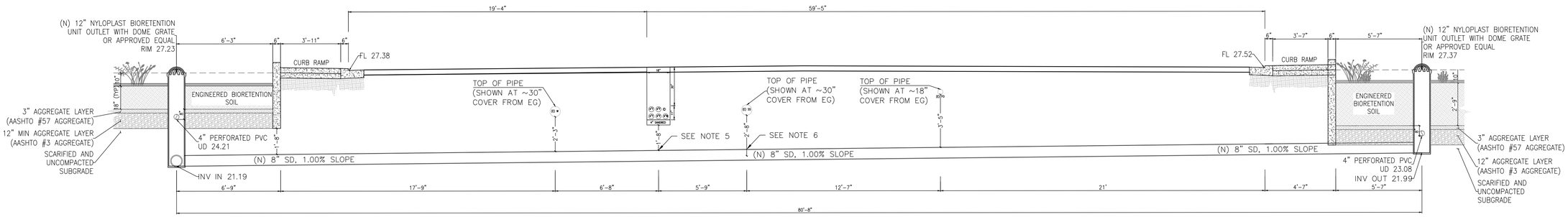
GI-5
SHEET 79 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-05.DWG (GI-5)



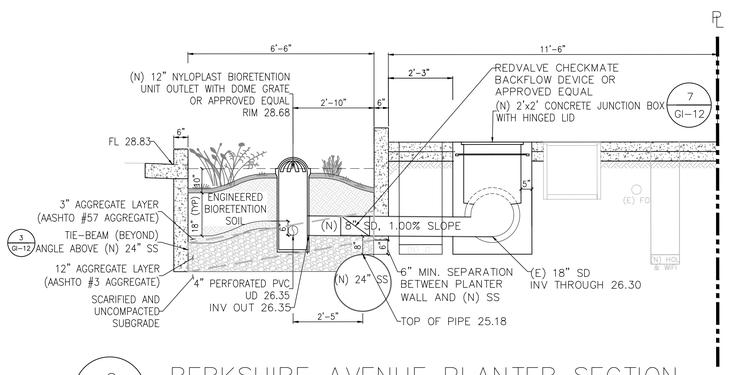
A / GI–6 PACIFIC AVENUE PLANTER SECTION

NOT TO SCALE



B / GI–6 DUMBARTON AVENUE SECTION

NOT TO SCALE



C / GI–6 BERKSHIRE AVENUE PLANTER SECTION

NOT TO SCALE

NOTES:

1. FOR DRIVEWAY, GENERAL BULB LAYOUTS, CURB, GUTTER, AND SIDEWALK DETAILS, SEE SHEET MD SHEETS.
2. FOR STREET GRADING AND CURB HEIGHTS, SEE PP SHEETS.
3. FOR TYPICAL PLANTER DETAILS AND PLANTER STRUCTURAL DETAILS, SEE GI–10.
4. FOR JOINT TRENCH PLANS AND DETAILS, SEE JT SHEETS.
5. CONTRACTOR TO RAISE OR LOWER LOWEST JT CONDUITS AS NEEDED TO AVOID STORM DRAIN CROSSING PIPE.
6. (N) SD LINES SHALL BE PVC, UNLESS AT SD AND SS CROSSINGS. (N) SD LINES SHALL TRANSITION FROM PVC TO DUCTILE IRON PIPE WITHIN 10' OF BOTH SIDES OF SS AND SD CROSSINGS.
7. CONTRACTOR TO VERIFY DEPTH TO EXISTING UTILITIES. CONTRACTOR SHALL CONTACT THE ENGINEER IF UTILITY LINE(S) ARE FOUND.
8. FOR DETAILS ON UTILITIES GOING THROUGH THE GREEN INFRASTRUCTURE FEATURES, SEE GI DETAILS.
9. NEW AND EXISTING UTILITIES, VAULTS, AND TRENCHES ARE SHOWN FOR REFERENCE ONLY.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

REGISTERED PROFESSIONAL ENGINEER TERESSEIN TSEGAYE C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10–16–20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10–16–2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-6
SHEET 80 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415–796–8100
fax: 415–796–8200

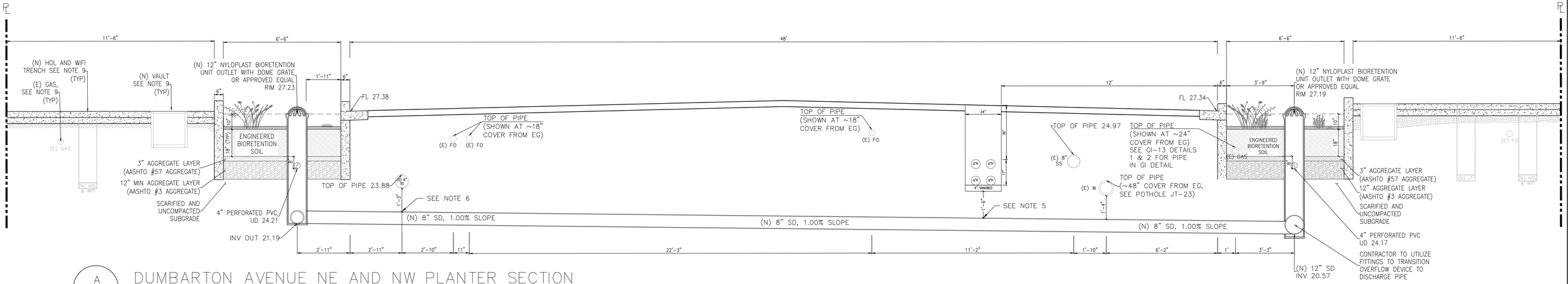
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-06.DWG (GI-6)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

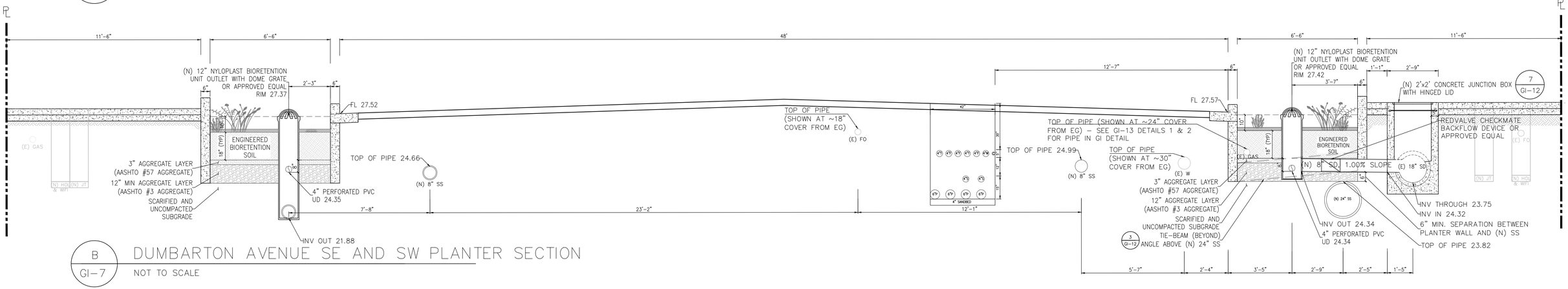
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



A / GI-7 DUMBARTON AVENUE NE AND NW PLANTER SECTION

NOT TO SCALE



B / GI-7 DUMBARTON AVENUE SE AND SW PLANTER SECTION

NOT TO SCALE

NOTES:

1. FOR DRIVEWAY, GENERAL BULB LAYOUTS, CURB, GUTTER, AND SIDEWALK DETAILS, SEE SHEET MD SHEETS.
2. FOR STREET GRADING AND CURB HEIGHTS, SEE PP SHEETS.
3. FOR TYPICAL PLANTER DETAILS AND PLANTER STRUCTURAL DETAILS, SEE GI-10.
4. FOR JOINT TRENCH PLANS AND DETAILS, SEE JT SHEETS.
5. CONTRACTOR TO RAISE OR LOWER LOWEST JT CONDUITS AS NEEDED TO AVOID STORM DRAIN CROSSING PIPE.
6. (N) SD LINES SHALL BE PVC, UNLESS AT SD AND SS CROSSINGS. (N) SD LINES SHALL TRANSITION FROM PVC TO DUCTILE IRON PIPE WITHIN 10' OF BOTH SIDES OF SS AND SD CROSSINGS.
7. CONTRACTOR TO VERIFY DEPTH TO EXISTING UTILITIES. CONTRACTOR SHALL CONTACT THE ENGINEER IF UTILITY LINE(S) ARE FOUND.
8. FOR DETAILS ON UTILITIES GOING THROUGH THE GREEN INFRASTRUCTURE FEATURES, SEE GI DETAILS.
9. NEW AND EXISTING UTILITIES, VAULTS, AND TRENCHES ARE SHOWN FOR REFERENCE ONLY.

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
SHAHROKH SEIN TEHRANI
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

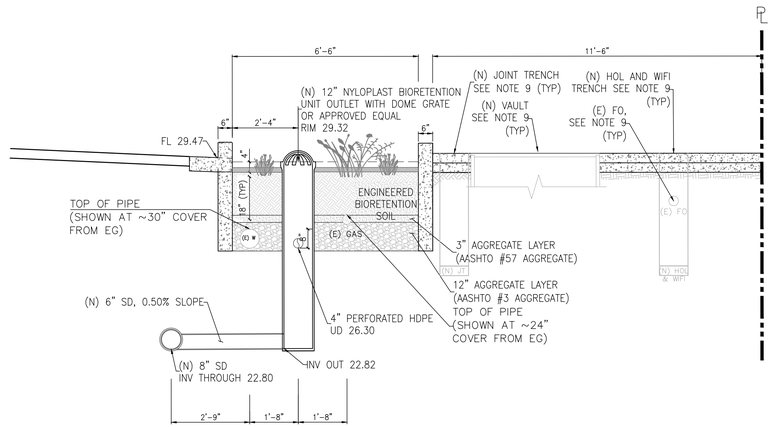
		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	GREEN INFRASTRUCTURE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-7
SHEET 81 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-07.DWG (GI-7)



A
GI-8

FIRST AVENUE NW PLANTER SECTION

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

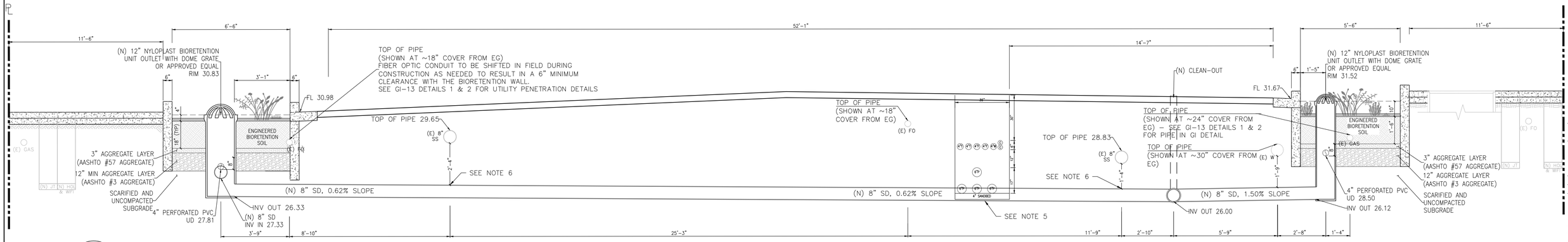
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTES:

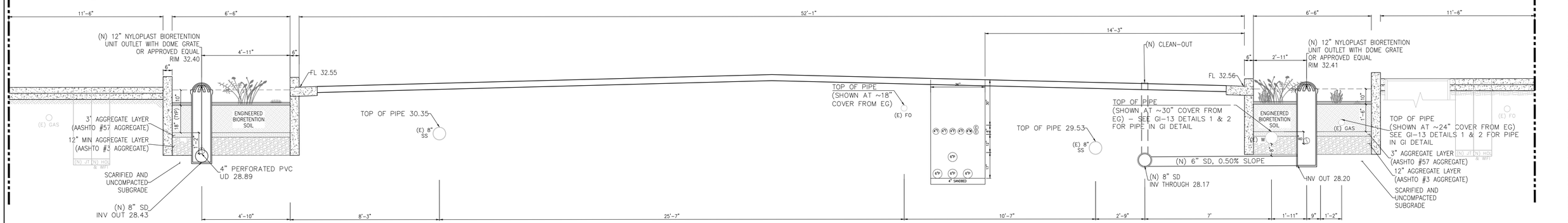
1. FOR DRIVEWAY, GENERAL BULB LAYOUTS, CURB, GUTTER, AND SIDEWALK DETAILS, SEE SHEET MD SHEETS.
2. FOR STREET GRADING AND CURB HEIGHTS, SEE PP SHEETS.
3. FOR TYPICAL PLANTER DETAILS AND PLANTER STRUCTURAL DETAILS, SEE GI-10.
4. FOR JOINT TRENCH PLANS AND DETAILS, SEE JT SHEETS.
5. CONTRACTOR TO RAISE OR LOWER LOWEST JT CONDUITS AS NEEDED TO AVOID STORM DRAIN CROSSING PIPE.
6. (N) SD LINES SHALL BE PVC, UNLESS AT SD AND SS CROSSINGS. (N) SD LINES SHALL TRANSITION FROM PVC TO DUCTILE IRON PIPE WITHIN 10' OF BOTH SIDES OF SS AND SD CROSSINGS.
7. CONTRACTOR TO VERIFY DEPTH TO EXISTING UTILITIES. CONTRACTOR SHALL CONTACT THE ENGINEER IF UTILITY LINE(S) ARE FOUND.
8. FOR DETAILS ON UTILITIES GOING THROUGH THE GREEN INFRASTRUCTURE FEATURES, SEE GI DETAILS.
9. NEW AND EXISTING UTILITIES, VAULTS, AND TRENCHES ARE SHOWN FOR REFERENCE ONLY.



B
GI-8

THIRD AVENUE SE AND SW PLANTER SECTION

NOT TO SCALE



C
GI-8

FOURTH AVENUE NE AND NW PLANTER SECTION

NOT TO SCALE

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-8.DWG (GI-08)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER
ANDREW ROSSEIN PARK
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

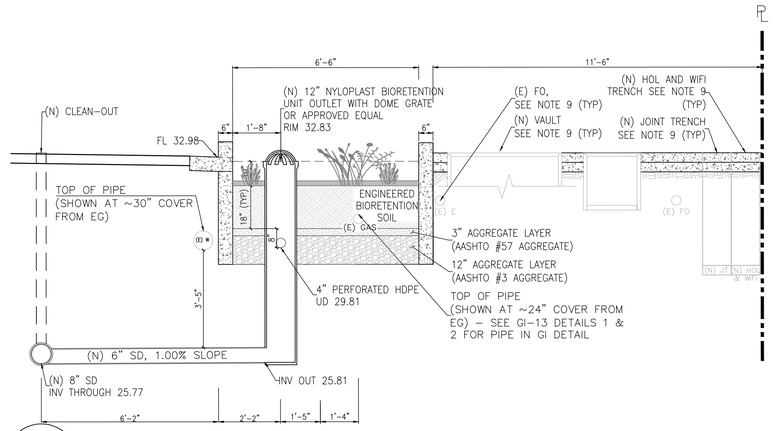
COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

GI-8
SHEET 82 OF 140



A
GI-9

FOURTH AVENUE SW PLANTER SECTION

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

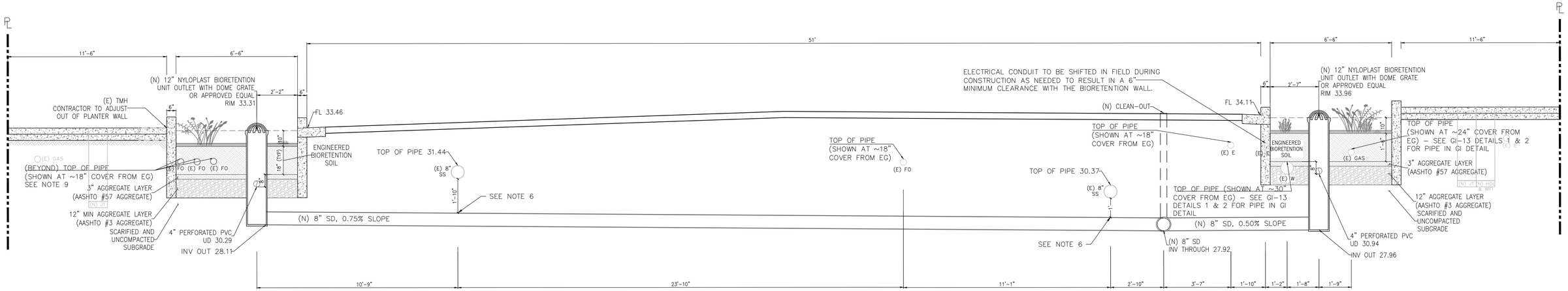
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTES:

1. FOR DRIVEWAY, GENERAL BULB LAYOUTS, CURB, GUTTER, AND SIDEWALK DETAILS, SEE SHEET MD SHEETS.
2. FOR STREET GRADING AND CURB HEIGHTS, SEE PP SHEETS.
3. FOR TYPICAL PLANTER DETAILS AND PLANTER STRUCTURAL DETAILS, SEE GI-10.
4. FOR JOINT TRENCH PLANS AND DETAILS, SEE JT SHEETS.
5. CONTRACTOR TO RAISE OR LOWER LOWEST JT CONDUITS AS NEEDED TO AVOID STORM DRAIN CROSSING PIPE.
6. (N) SD LINES SHALL BE PVC, UNLESS AT SD AND SS CROSSINGS. (N) SD LINES SHALL TRANSITION FROM PVC TO DUCTILE IRON PIPE WITHIN 10' OF BOTH SIDES OF SS AND SD CROSSINGS.
7. CONTRACTOR TO VERIFY DEPTH TO EXISTING UTILITIES. CONTRACTOR SHALL CONTACT THE ENGINEER IF UTILITY LINE(S) ARE FOUND.
8. FOR DETAILS ON UTILITIES GOING THROUGH THE GREEN INFRASTRUCTURE FEATURES, SEE GI DETAILS.
9. NEW AND EXISTING UTILITIES, VAULTS, AND TRENCHES ARE SHOWN FOR REFERENCE ONLY.
10. CONTRACTOR TO POTHOLE (E) FO CONDUITS IN VICINITY OF BIORETENTION PLANTER TO CONFIRM LOCATION. OVER EXCAVATION OF (E) CONDUITS MAY BE REQUIRED TO ALLOW SHIFTING OUT OF BIORETENTION PLANTER FOOTPRINT.



B
GI-9

FIFTH AVENUE NE AND NW PLANTER SECTION

NOT TO SCALE

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
STEPHEN T. YEE
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

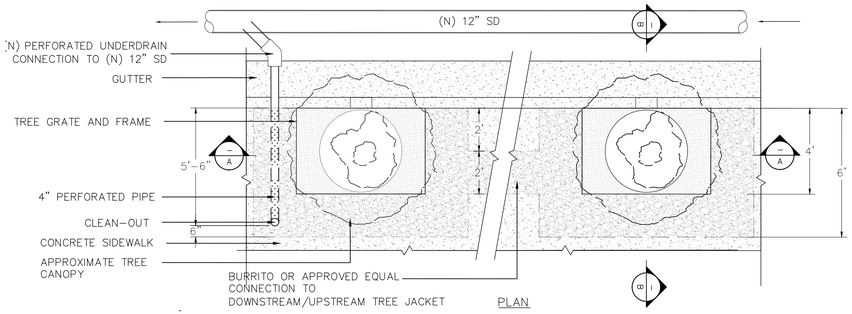
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

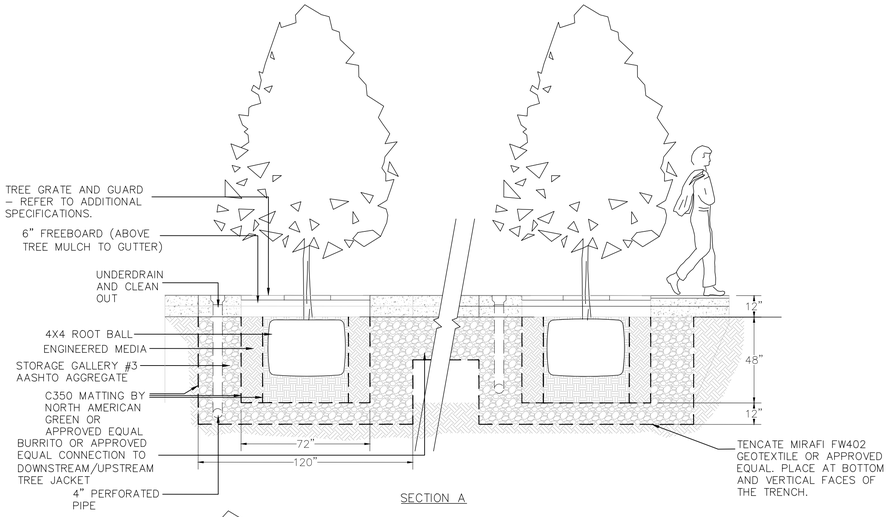
SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

GI-9
SHEET 83 OF 140

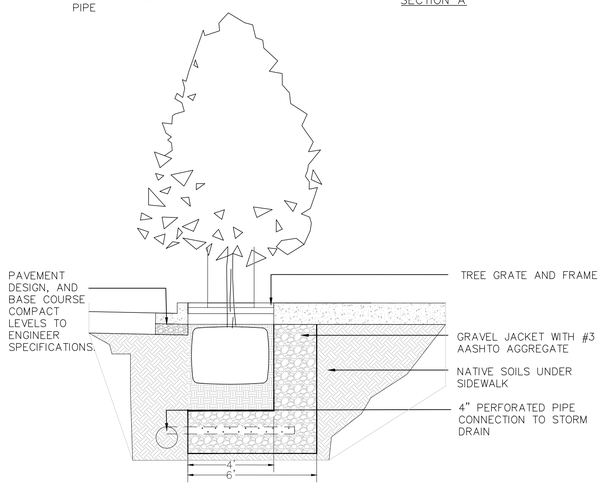
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-09.DWG (GI-09)



PLAN



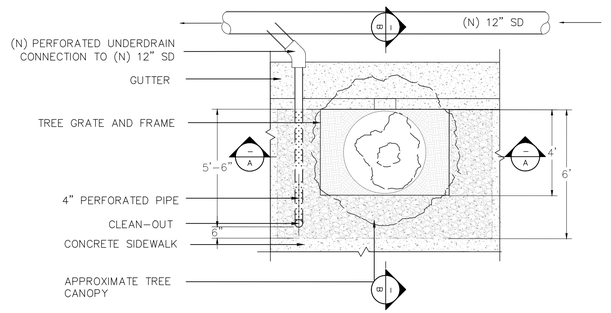
SECTION A



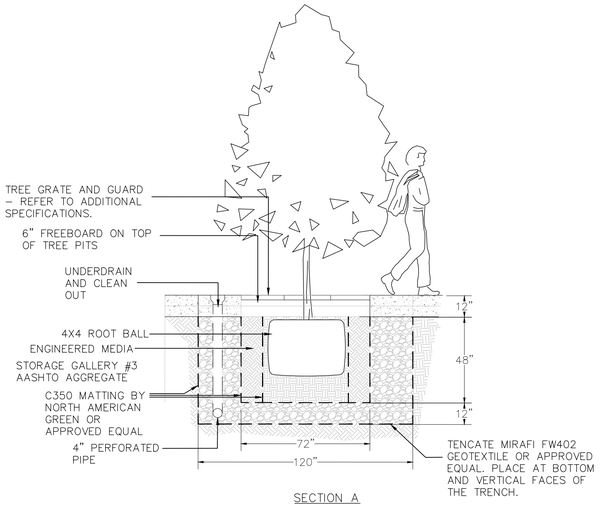
SECTION B

1 / GI-10 GI TREE PLANTING AND CONSTRUCTION (BURRITO CONNECTION)

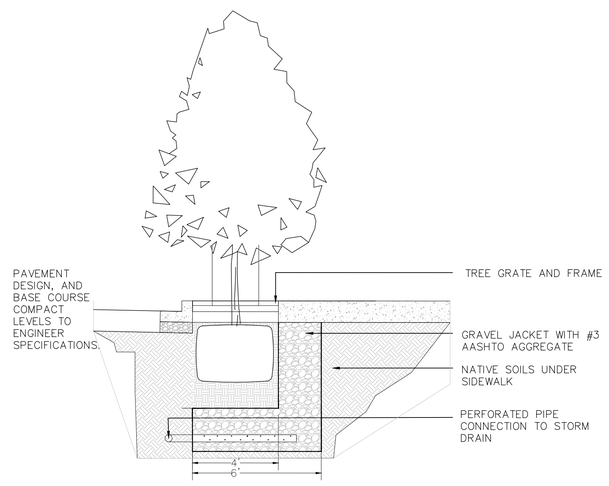
NOT TO SCALE



PLAN



SECTION A



SECTION B

2 / GI-10 GI TREE PLANTING AND CONSTRUCTION

NOT TO SCALE

NOTES:

1. PLACE MIRAFI FW402 GEOTEXTILE FABRIC, OR APPROVED EQUAL, ON BOTTOM AND VERTICAL FACES OF THE TRENCH, AS SHOWN IN THE DETAIL
2. PLACE THE AGGREGATE IN THE BOTTOM ONE FOOT OF THE TRENCH
3. REMOVE THE 4'X4' TREE FROM WOODEN BOX AND WRAP THE ROOT BALL WITH C350 MATTING FROM NORTH AMERICAN GREEN, OR APPROVED EQUAL, AND LOWER INTO THE PIT.
4. PLACE AND HOLD THE C350 TURF REINFORCEMENT MAT, OR APPROVED EQUAL, IN A VERTICAL POSITION BETWEEN THE ENGINEERED MEDIA AND STORAGE AGGREGATE.
5. PLACE ENGINEERED MEDIA AND STORAGE AGGREGATE IN ONE FOOT LIFTS, SUCH THAT THE C350 MATTING WOULD NOT COLLAPSE UNDER THE WEIGHT OF EITHER OF THE MATERIALS.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER JASON SEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

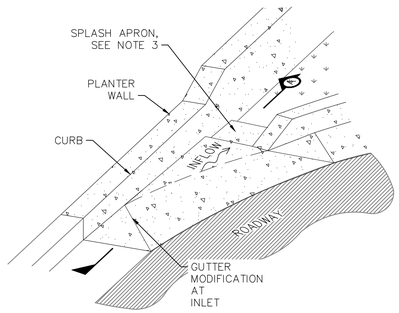
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

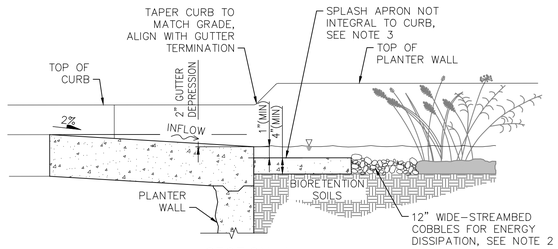
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-10
SHEET 84 OF 140

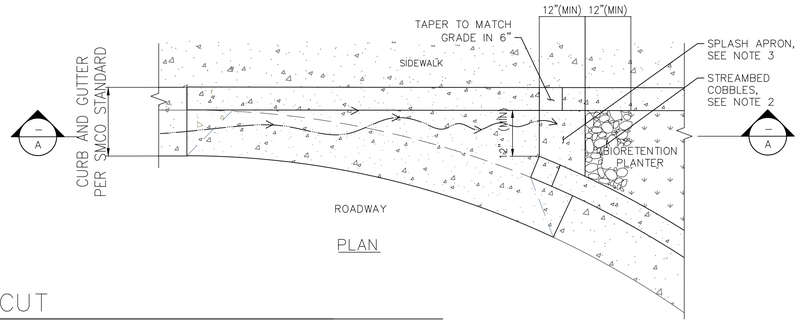
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-10.DWG (GI-10)



ISOMETRIC



SECTION A

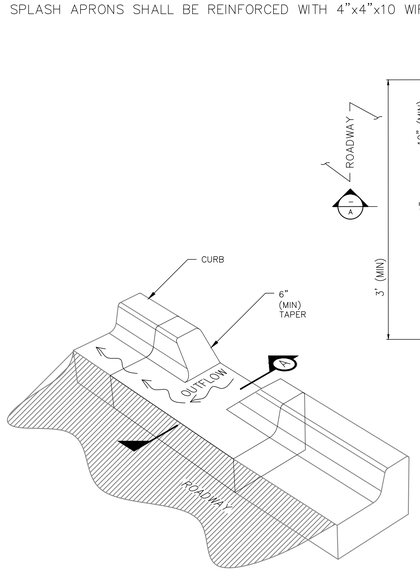


PLAN

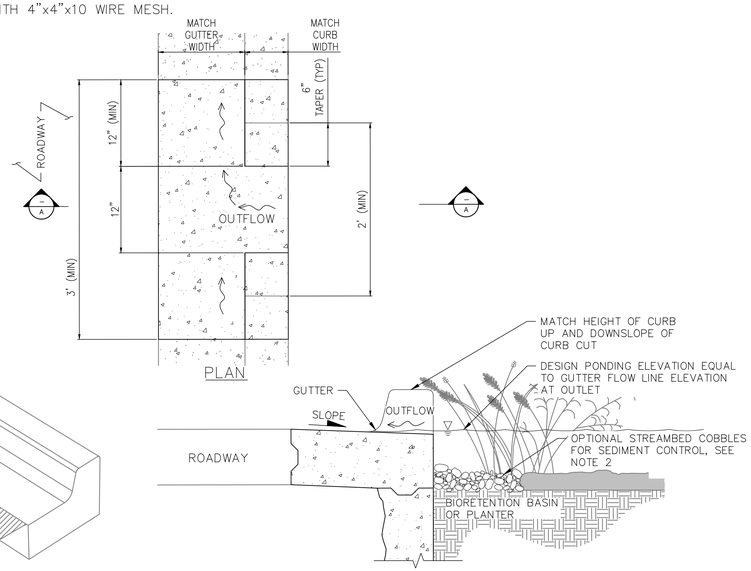
1 GI-11 CURB CUT

NOT TO SCALE

NOTES:
1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO SAN MATEO COUNTY STANDARD SPECIFICATIONS AND APPLICABLE CODES.
2. STREAMBED COBBLES ARE TO CONSIST OF 4"X8"COBBLES (75%) AND 2"-4"STONE MULCH (25%, AS FILL-IN) BY VOLUME
3. SPLASH APRONS SHALL BE REINFORCED WITH 4"x4"x10 WIRE MESH.



ISOMETRIC



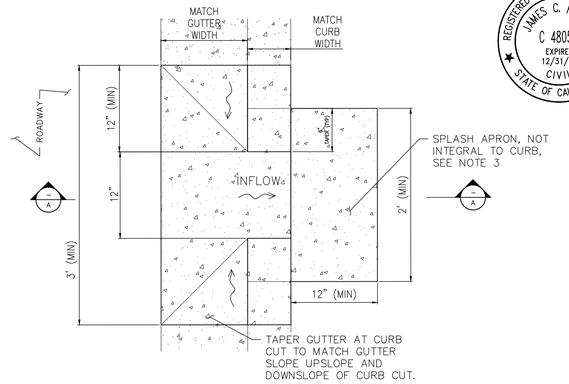
PLAN SECTION A

3 GI-11 CURB CUT - OUTFLOW

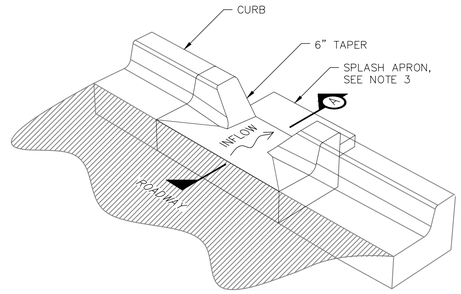
NOT TO SCALE

NOTES:
1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO SAN MATEO COUNTY STANDARD SPECIFICATIONS AND APPLICABLE CODES.
2. STREAMBED COBBLES ARE TO CONSIST OF 4"X8"COBBLES (75%) AND 2"-4"STONE MULCH (25%, AS FILL-IN) BY VOLUME
3. SPLASH APRONS SHALL BE REINFORCED WITH 4"x4"x10 WIRE MESH.

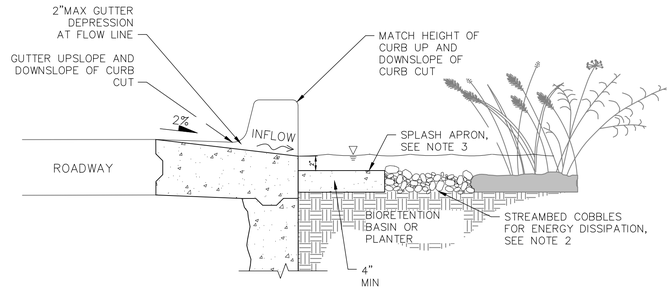
AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200



PLAN



ISOMETRIC

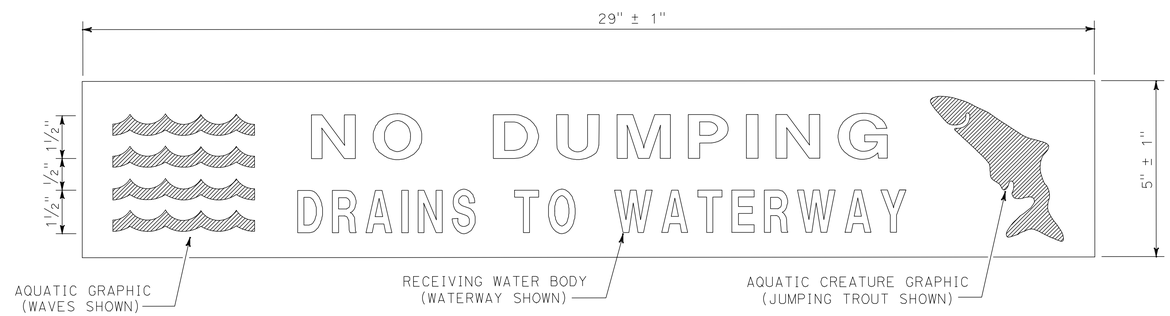


SECTION A

2 GI-11 CURB CUT - INFLOW

NOT TO SCALE

NOTES:
1. ALL MATERIAL AND WORKMANSHIP FOR CURB CUTS SHALL CONFORM TO SAN MATEO COUNTY STANDARD SPECIFICATIONS AND APPLICABLE CODES.
2. STREAMBED COBBLES ARE TO CONSIST OF 4"X8"COBBLES (75%) AND 2"-4"STONE MULCH (25%, AS FILL-IN) BY VOLUME
3. SPLASH APRONS SHALL BE REINFORCED WITH 4"x4"x10 WIRE MESH.



4 GI-11 DRAINS TO WATERWAY MARKER

NOT TO SCALE

NOTES:
1. REFERENCE TAKEN FROM 2018 STANDARD PLAN D71.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER TAHMINEH TOUSSEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

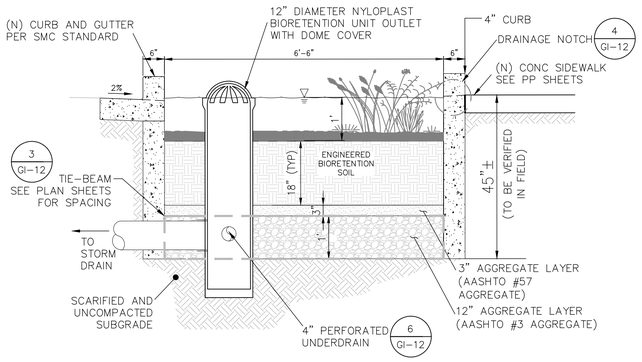
		DESIGNED BY: AE	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT GREEN INFRASTRUCTURE
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-11
SHEET 85 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-11.DWG (GI-11)



1 GI-12 TYPICAL BIORETENTION PLANTER

NOT TO SCALE

2 GI-12 NON-GI PLANTER

NOT TO SCALE

PLAN VIEW

SECTION A-A

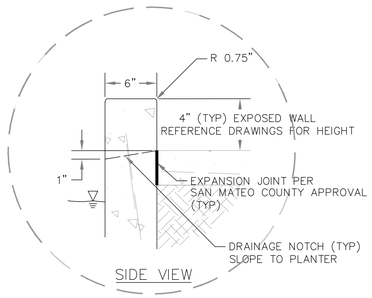
SECTION C-C

SECTION B-B

NOTE:
1. BIORETENTION BASIN CURBS TO BE CONSTRUCTED PER DIMENSIONS OUTLINED IN DETAIL 4 ON SHEET MD-1.
2. BIORETENTION BASIN WALLS TO BE POURED AGAINST EARTH CUT IF CLAY TYPE SOILS ARE PRESENT. IF SANDY TYPE SOILS PRESENT, CONTRACTOR TO OVEREXCAVATE AND USE FORMS TO COMPLETE BASIN CONSTRUCTION.

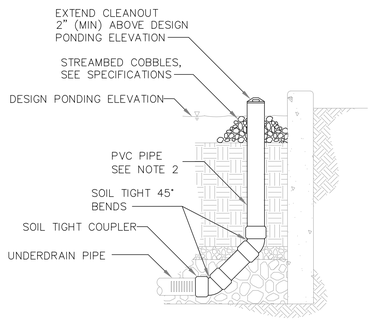
3 GI-12 PLANTER STRUCTURAL DETAILS

NOT TO SCALE

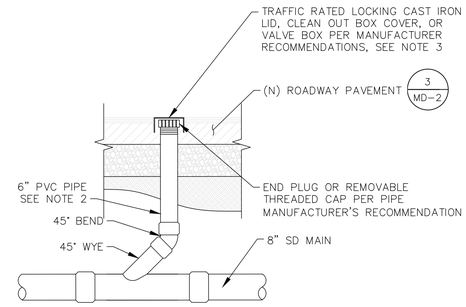


4 GI-12 DRAINAGE NOTCH

NOT TO SCALE



CLEAN-OUT - BIORETENTION PLANTERS

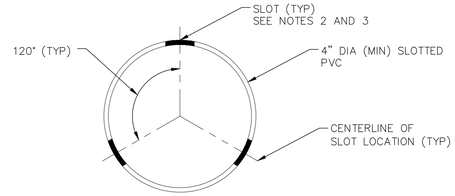


CLEAN-OUT - ROADWAY

CONSTRUCTION NOTES:
1. ALL MATERIAL AND WORKMANSHIP FOR CLEANOUTS SHALL CONFORM TO SAN MATEO COUNTY STANDARD SPECIFICATIONS AND APPLICABLE CODES.
2. CLEANOUT PIPE AND FITTINGS SHALL BE SAME SIZE AND MATERIAL AS SLOTTED UNDERDRAIN PIPE.
3. COVER SHALL BE TRAFFIC RATED WITH TAMPER RESISTANT LOCKING MECHANISM. COVER SHALL INCLUDE CASTING OF "CO" OR EQUAL.
4. CLEANOUT SHALL BE INSTALLED TO ALLOW FOR MAINTENANCE ACCESS TO ALL PIPES.
5. ALL FITTINGS SHALL BE SOIL TIGHT.

5 GI-12 CLEAN-OUTS

NOT TO SCALE

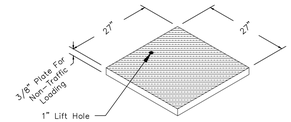


CONSTRUCTION NOTES:
1. UNDERDRAIN PIPE SHALL BE SLOTTED PVC.
2. ALL PERFORATIONS SHALL BE SLOTTED TYPE, MEASURING 0.032 INCH WIDE (MAX), SPACED AT 0.25 INCH (MIN), AND PROVIDING A MINIMUM INLET AREA OF 5.0 SQUARE INCH PER LINEAR FOOT OF PIPE.
3. PERFORATIONS SHALL BE ORIENTED PERPENDICULAR TO LONG AXIS OF PIPE, AND EVENLY SPACED AROUND CIRCUMFERENCE AND LENGTH OF PIPE.

6 GI-12 SLOTTED UNDERDRAIN PIPE

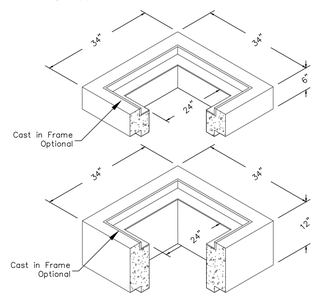
NOT TO SCALE

Black Metal or Galvanized Lid
Weight : Varies



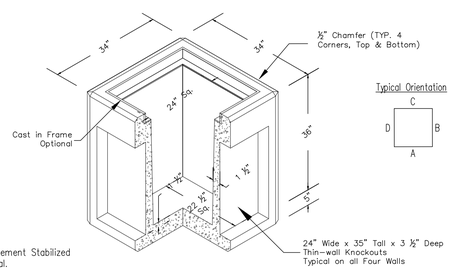
6" Riser W/ Frame
Weight : 302 Lbs.

12" Riser
Weight : 604 Lbs.



Bottom :
Weight : See Chart

Bottom	
Wall(s)	Weight (Lbs.)
4-Way	1,294



Notes :
1. Bedding Shall be 6" Cement Stabilized Sand or Select Material.

7 GI-12 CONCRETE JUNCTION BOX

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER TIMOTHY J. SCHMOSSEIN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

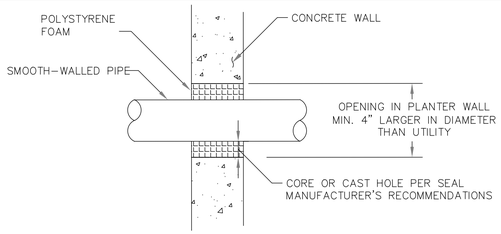
		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	GREEN INFRASTRUCTURE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-12
SHEET 86 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-12.DWG (GI-12)



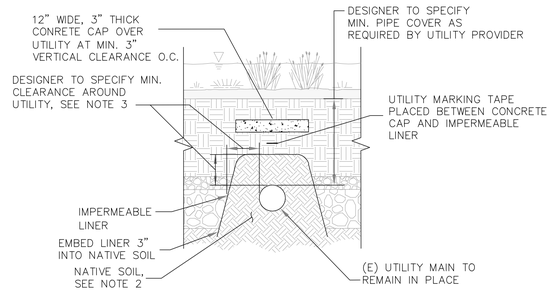
TYPICAL WALL PENETRATION (1)

CONSTRUCTION NOTES:

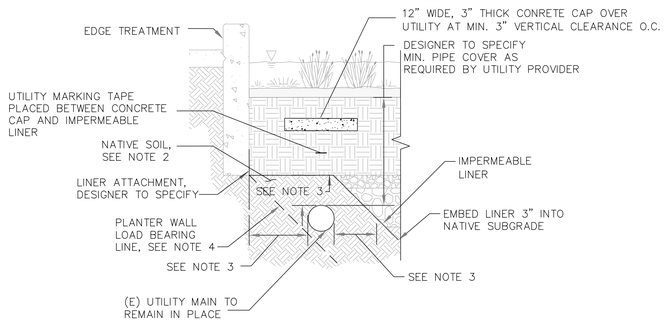
1. AT LOCATIONS WHERE EXISTING UTILITIES ARE TO REMAIN AND WILL PENETRATE PROPOSED BIORETENTION WALLS, CONTRACTOR TO FORM AN OPENING IN THE CONCRETE WALL AROUND THE EXISTING TO-BE-RETAINED UTILITY THAT IS A MINIMUM OF 4-INCHES LARGER THAN THE UTILITY. THE ANULAR SPACE BETWEEN THE EXISTING UTILITY AND CONCRETE WALL TO BE FILLED WITH HIGH DENSITY FOAM OR POLYSTYRENE TO CUSHION THE EXISTING UTILITY PIPE FROM CONTACT WITH THE WALL CONCRETE.
2. COLOR-CODED DETECTABLE UTILITY MARKING TAPE AND WIRE SHALL BE PLACED OVER ALL UTILITIES WITHIN THE FOOTPRINT OF BIORETENTION FACILITIES. REFER TO THE TAPE MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM TAPE BURIAL DEPTH.

1 GI-13 UTILITY WALL PENETRATIONS

NOT TO SCALE



SHALLOW UTILITY MAIN WITHIN BIORETENTION FACILITY (B)



UTILITY MAIN ADJACENT TO PLANTER WALL (A)

CONSTRUCTION NOTES:

1. ANY DISCREPANCIES BETWEEN THE EXISTING UTILITIES SHOWN IN THE DESIGN DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY.
2. EXISTING UTILITIES AND NATIVE SOIL AROUND EXISTING UTILITIES SHOULD REMAIN IN PLACE WHERE POSSIBLE. IF A PORTION OR ALL OF THE UTILITY IS UNCOVERED DURING EXCAVATION OR EXISTING SOIL WITHIN 1 FOOT OF THE KNOWN EXISTING UTILITY IS SCARIFIED, NATIVE SOIL OR APPROVED ENGINEERED BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED AROUND THE UTILITY PER THE UTILITY PROVIDER'S REQUIREMENTS.
3. PROVIDE THE MINIMUM CLEARANCE AROUND THE UTILITY MAIN AND SETBACKS FROM STRUCTURAL ELEMENTS PER THE UTILITY PROVIDER'S REQUIREMENTS.

4 GI-13 UTILITY CROSSINGS IN PLANTERS

NOT TO SCALE

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

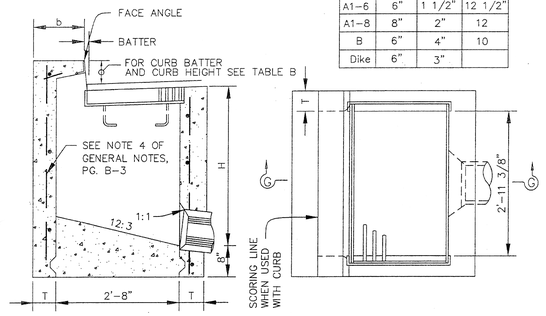
SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS
REDWOOD CITY CALIFORNIA

DRAWN BY: A.G.M.
CHECK BY: R.L.F.
APPROVED BY: N.R.C.

SCALE: NONE
DATE: 6/95
REVISED: 4/97

TABLE B

Curb Type	Normal Curb Height	Curb Batter	b
A1-6	6"	1 1/2"	12 1/2"
A1-8	8"	2"	12
B	6"	4"	10
Dike	6"	3"	



SECTION G-G

INLET TYPE GO

PLAN

CATCH BASIN QUANTITY TABLE

	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	'H=3'-0"	ADDITIONAL P.C.C. PER FT. (C.Y.)	H=8'-1"	ADDITIONAL P.C.C. PER FT. (C.Y.)
GO	1.24	0.245	3.39	0.346

TABLE BASED ON 8" FLOOR SLAB, NO DEDUCTION FOR PIPE OPENINGS, AND CURB TYPE GIVING HIGHEST QUANTITY OF CONCRETE. NO DEDUCTIONS OR ADJUSTMENTS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPE.

B-1

2 GI-13 STORM DRAIN INLET

NOT TO SCALE

NOTES FROM COUNTY STANDARD DETAIL B-3:

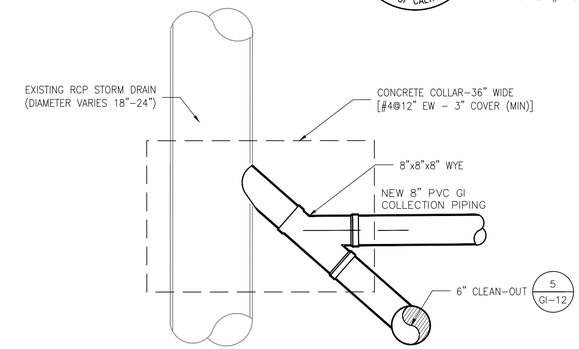
1. "H" IS THE DIFFERENCE IN ELEVATION BETWEEN THE OUTLET PIPE FLOW LINE AND THE NORMAL GUTTER GRADE LINE UNDEPRESSED AT THE CURB FACE.
2. FOR "T" WALL THICKNESS SEE TABLE.
3. HEIGHT OF CURB OPENING WILL VARY WITH THE TYPE OF CURB AND THE DEPTH OF THE LOCAL DEPRESSION.
4. WALL REINFORCING NOT REQUIRED WHEN H = 8' OR LESS AND THE UNSUPPORTED WIDTH OR LENGTH = 7' OR LESS. WALLS EXCEEDING THESE LIMITS SHALL BE REINFORCED WITH #4 BARS @ 18" +/- CENTER PLACED 1-1/2" CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
5. STEPS - NONE REQUIRED WHERE "H" IS LESS THAN 30 INCHES. WHERE "H" IS 30 INCHES OR MORE, INSTALL STEPS WITH LOWEST RUNG 12 INCHES ABOVE THE FLOOR, AND HIGHEST RUN NOT MORE THAN 6 INCHES BELOW TOP OF INLET. THE DISTANCE BETWEEN STEPS SHALL NOT EXCEED 12 INCHES AND SHALL BE UNIFORM THROUGHOUT THE LENGTH OF WALL. PLACE STEPS IN THE WALL WITHOUT AN OPENING. STEP INSERTS MAY BE SUBSTITUTED FOR THE BAR STEPS. STEP INSERTS SHALL COMPLY WITH STATE INDUSTRIAL SAFETY REQUIREMENTS.
8. EXCEPT FOR INLETS USED AS JUNCTION BOXES, BASIN FLOOR SHALL HAVE A MINIMUM SLOPE OF 12:3 FROM ALL DIRECTIONS TOWARD OUTLET PIPE AND SHALL HAVE A WOOD TROWEL FINISH.
13. CAST-IN-PLACE OR PRECAST ALTERNATIVE IS OPTIONAL WITH CONTRACTOR. SEE STANDARD SPECIFICATIONS.

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

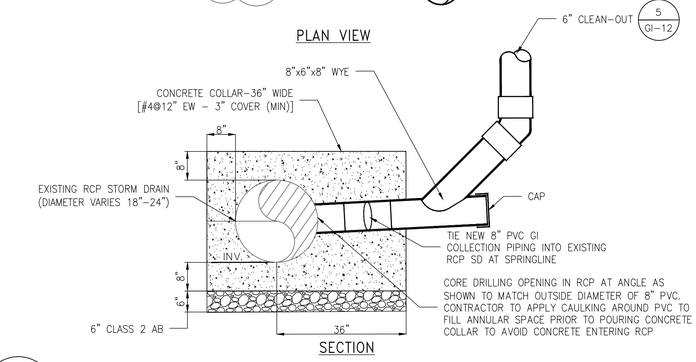
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



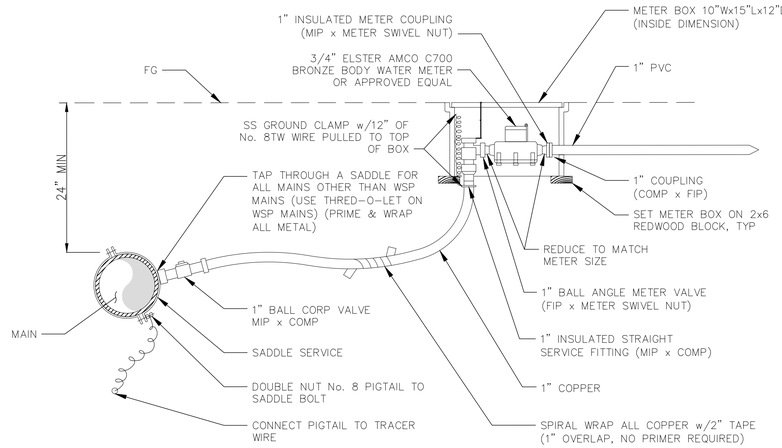
PLAN VIEW



SECTION

3 GI-13 GI PIPING CONNECTION TO EXISTING STORM DRAIN

NOT TO SCALE



5 GI-13 CONNECTION TO WATER MAIN

NOT TO SCALE

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\GI\GI-13.DWG (GI-13)

REGISTERED PROFESSIONAL ENGINEER Jason Yee C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AE	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: JY	GREEN INFRASTRUCTURE
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

GI-13
SHEET 87 OF 140

GENERAL LANDSCAPE NOTES

1. THESE DRAWINGS AND SPECIFICATIONS DESCRIBE THE QUALITY AND CHARACTER OF THE MATERIALS, SHAPE, CONFIGURATION AND DESIGN INTENT OF THE COMPLETED, INSTALLED WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE AND OPERATIONAL SYSTEMS AND INSTALLATIONS OF THE DESCRIBED DESIGN INTENT, INCLUDING ALL MISCELLANEOUS ITEMS OF WORK, MATERIALS, EQUIPMENT, ETC., NECESSARY TO COMPLETE THE INSTALLATION WHETHER OR NOT MENTIONED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS. ALL MATERIALS SHALL BE FURNISHED AND PROPERLY INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

2. ALL GENERAL NOTES, DIMENSIONS, AND DETAILS SHALL BE CONSIDERED TYPICAL AND APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED. SPECIFIC NOTES, DETAILS AND SPECIFICATIONS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK BETWEEN TRADES, SUBCONTRACTORS, MANUFACTURERS, FABRICATORS, AND ALL OTHER CONTRACTED FOR THE COMPLETION OF THE WORK, INCLUDING THOSE UNDER SEPARATE CONTRACTS FOR CONCURRENT PROJECTS.

4. ALL UNDERGROUND UTILITIES SHOWN ON THESE PLANS REFLECT THE AVAILABLE RECORDS. CONTRACTOR SHALL USE CAUTION IN ALL EXCAVATION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE TO INVESTIGATE AND VERIFY ALL EXISTING AND PROPOSED CONDITIONS AS SHOWN OR REFERENCED IN THE DOCUMENTS, INCLUDING LOCATION AND DEPTH OF ALL UTILITIES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS AND/OR DISCREPANCIES BETWEEN EXISTING AND PROPOSED CONDITIONS WHICH WILL AFFECT THE WORK, BEFORE PROCEEDING WITH THE WORK.

5. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA 800-642-2444) TWO WORKING DAYS MINIMUM PRIOR TO ANY EXCAVATION.

6. PROVIDE ADEQUATE PROTECTION FOR ALL PROPOSED AND EXISTING UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.

7. ALL EXISTING UTILITY STRUCTURES (SHOWN OR NOT SHOWN ON THE DRAWINGS) WITHIN THE AREA OF WORK SHALL BE ADJUSTED OR RECONSTRUCTED TO THE FINISH GRADES SHOWN AND SPECIFIED.

8. REFER TO CIVIL DRAWINGS FOR INFORMATION AND LOCATION OF ALL EXISTING AND PROPOSED UTILITIES.

9. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, TREES, LANDSCAPE AND OTHER ITEMS TO REMAIN FROM DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

10. THE CONTRACTOR SHALL PROVIDE ACCESSIBLE EGRESS AND INGRESS TO ON-SITE FACILITIES THAT ARE TO REMAIN OPERATIONAL DURING CONSTRUCTION.

11. CONTRACTOR SHALL MAINTAIN "GOOD HOUSEKEEPING" PRACTICES AT THE JOB SITE. EXCESS BUILDING MATERIALS AND DEBRIS SHALL BE REMOVED PROMPTLY FROM THE JOB SITE AND DISPOSED OF AT AN APPROVED DUMPSITE. THE JOB SITE SHALL BE LEFT "BROOM CLEAN" AT THE END OF EACH WORKDAY. BEFORE ACCEPTANCE BY THE COUNTY REPRESENTATIVE, THE COMPLETED CONSTRUCTION SHALL BE CLEARED, ANY APPLICABLE LABELS REMOVED, AND ALL OTHER TOUCHUP WORK COMPLETED. ALL FINISH MATERIALS SHALL BE PROTECTED AT ALL TIMES AGAINST SUBSEQUENT DAMAGE UNTIL FINAL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

12. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL IMPROVEMENTS TO THE ADJACENT EXISTING CONDITIONS WITH SMOOTH TRANSITIONS TO AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES, CROSS SLOPE, HAZARDOUS CONDITIONS, ETC.

13. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY REPRESENTATIVE OF ANY REVISIONS OR ADDITIONAL WORK REQUIRED AS A RESULT OF FIELD CONDITIONS OR LOCAL GOVERNING AUTHORITIES. ALL REVISIONS SHALL BE IN WRITTEN CHANGE ORDER FORM AND APPROVED AND AUTHORIZED BY THE COUNTY REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK. WORK PERFORMED WITHOUT WRITTEN AUTHORIZATION SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE COUNTY.

LANDSCAPE ABBREVIATIONS

AL	ALIGN
AC	ASPHALITIC CONCRETE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
AGG	AGGREGATE
ALUM	ALUMINUM
APPX	APPROXIMATE
ARCH	ARCHITECTURE
BLDG	BUILDING
BOS	BOTTOM OF SLOPE
BS	BOTTOM OF STAIRS
BX	BOX
CAL	CALIPER
CALDAG	CALIFORNIA DISABLED ACCESSIBILITY GUIDEBOOK
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CJ	CONTROL JOINT
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CLR	CLEAR
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTR	CENTER
CY	CUBIC YARD
DG	DECOMPOSED GRANITE
DI	DRAIN INLET
DIA	DIAMETER
DWGS	DRAWINGS
EJ	EXPANSION JOINT
ELE TRANS	ELECTRICAL TRANSFORMER
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
ETWU	ESTIMATED TOTAL WATER USE
(E)	EXISTING
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FL	FLOWLINE
FOB	FACE OF BUILDING
FOC	FACE OF CURB
FT	FOOT/FEET
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GC	GALLON CAN
GFRC	GLASS FIBER REINFORCED CONCRETE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
HB	HOSE BIB
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HORIZ	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER
INV	INVERT ELEVATION
IRR	IRRIGATION
LF	LINEAR FEET
MAWA	MAXIMUM APPLIED WATER ALLOWANCE
MAX	MAXIMUM
MFG	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
(N)	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PA	PLANTING AREA
PERF	PERFORATED
PERP	PERPENDICULAR
PIP	POURED-IN-PLACE
PL	PROPERTY LINE
POC	POINT OF CONNECTION
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL-CHLORIDE
QTY	QUANTITY
R	RADIUS
RB	ROOTBALL
REBAR	REINFORCING BAR
REC	RECOMMENDATION
REQ'D	REQUIRED
RGH	ROUGH
RIM	RIM ELEVATION
RWD	REDWOOD
SAD	SEE ARCHITECTURAL DRAWINGS
SGID	SEE GREEN INFRASTRUCTURE DRAWINGS
SED	SEE ELECTRICAL DRAWINGS
SPD	SEE PLUMBING DRAWINGS
SSD	SEE STRUCTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SD	STORM DRAIN
SDR	STORM / SLOT DRAIN RIM
SHT	SHEET
SJ	SCORE JOINT
SL	IRRIGATION SLEEVE
SMD	SEE MECHANICAL DRAWINGS
SPCS	SPACES
SPEC'D	SPECIFIED
SPECS	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FEET
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STPA	STORMWATER TREATMENT PLANTING AREA
SW	SIDEWALK
TBD	TO BE DETERMINED
TC	TOP OF CURB
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TS	TOP OF STAIRS
TW	TOP OF WALL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W	WATER LINE
WUCOLS	WATER USE CLASSIFICATION OF LANDSCAPE SPECIES
W/	WITH
@	AT

LIST OF DRAWINGS

L-1	LANDSCAPE GENERAL NOTES & ABBREVIATIONS
L-2	LANDSCAPE LEGEND & CONSTRUCTION PLAN
L-3 - L-7	LANDSCAPE CONSTRUCTION PLANS
L-8	LANDSCAPE CONSTRUCTION DETAILS
L-9 - L-14	IRRIGATION PLANS
L-15	IRRIGATION NOTES & LEGEND
L-16 - L-19	IRRIGATION DETAILS
L-20	PLANTING SCHEDULE & PLAN
L-21 - L-25	PLANTING PLANS
L-26 - L-29	PLANTING DETAILS

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\GD\RHAA\PLOT\L-00 GENERAL NOTES & LEGENDS.DWG (L-1 GENERAL NOTES & LEGENDS)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE GENERAL NOTES AND ABBREVIATIONS	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

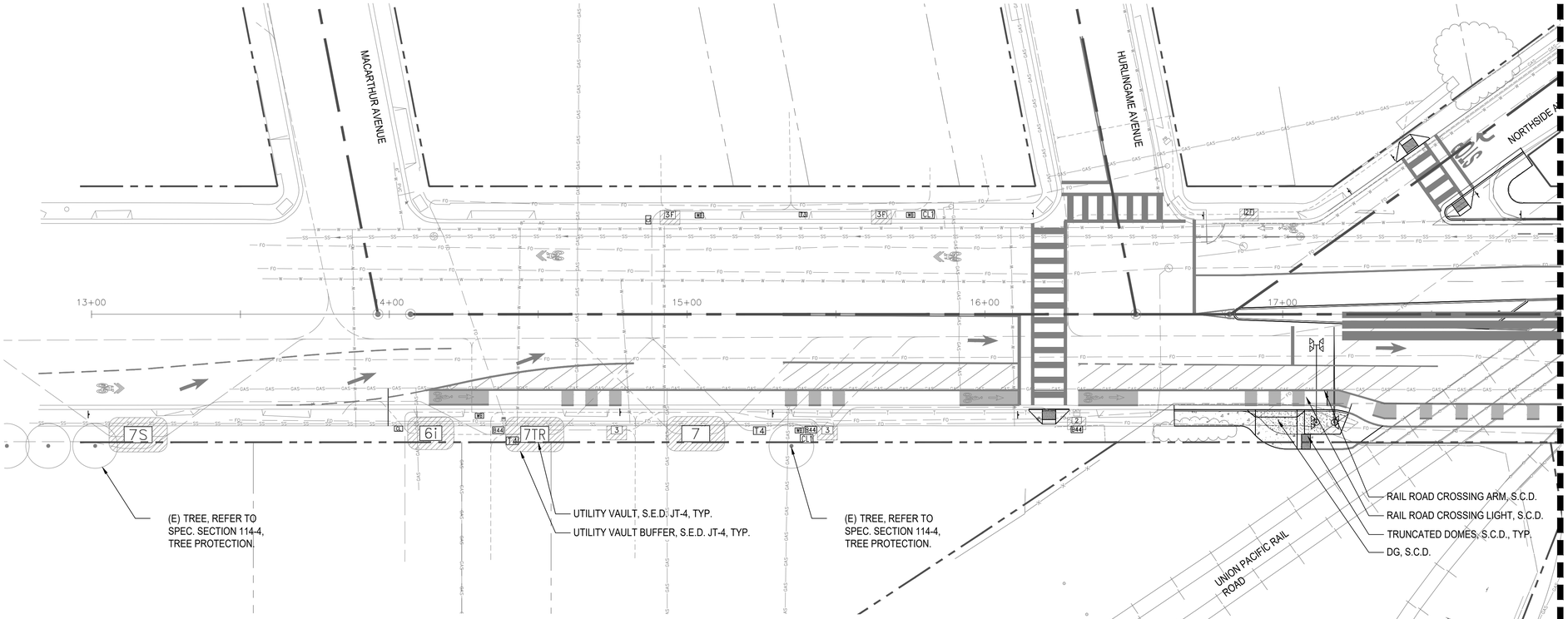
L-1
SHEET 88 OF 140

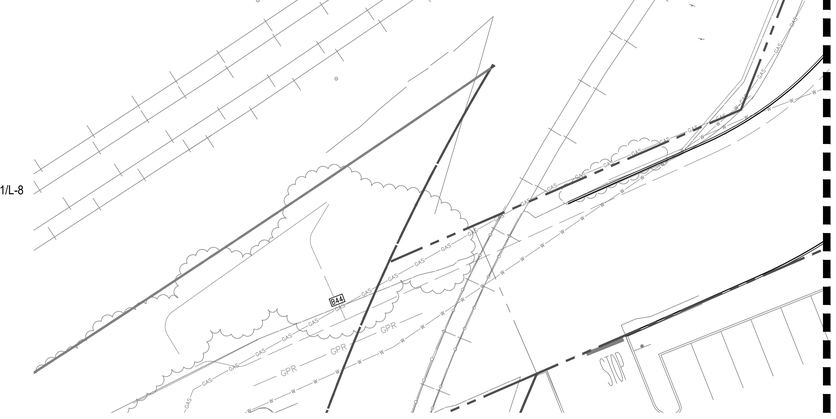
APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA





LANDSCAPE CONSTRUCTION NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO LAYOUT ALL IMPROVEMENTS AS SHOWN AND SPECIFIED.
2. THE CONTRACTOR SHALL FIELD VERIFY THAT ALL STAKING SET FOR IMPROVEMENTS ARE CONSISTENT WITH THE DESIGN INTENT OF THESE PLANS AND IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY.
3. ALL CURVES TO BE CONTINUOUS WITH SMOOTH TRANSITIONS AS SHOWN IN THE DRAWINGS, UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL REFER TO THE CIVIL PLANS FOR THE LAYOUT, DIMENSIONS, ANGLES AND ELEVATIONS OF ALL BUILDINGS, STRUCTURES, UTILITIES, CURBS AND GUTTERS, PAVING, ETC.
5. THE CONTRACTOR SHALL REFER TO SPECIFICATION SECTION 114-4, TREE PROTECTION FOR PRESERVING AND PROTECTING EXISTING PLANT MATERIALS TO REMAIN, INCLUDING PROTECTING PLANTS ON ADJOINING PROPERTIES DURING SITE PREPARATION WORK AND CONSTRUCTION.

LANDSCAPE CONSTRUCTION LEGEND

℄	CENTER LINE
	ALIGN
	SCORE JOINT, SEE SPECS
EJ	EXPANSION JOINT, SEE SPECS
X	DETAIL NUMBER
L-X	SHEET NUMBER
EQ	EQUAL
(E)	EXISTING
MIN	MINIMUM
OC	ON CENTER
PA	PLANTING AREA
SCD	SEE CIVIL DRAWINGS
SED	SEE ELECTRICAL DRAWINGS
TW	TREE WELL WITH GRAVEL JACKET
TYP	TYPICAL

	CONCRETE PAVING, S.C.D.
	SPECIAL BULBOUT PAVING, SEE DTL 2/L-8
B1	BENCH - STANDARD, SEE DTL 3/L-8 & SPECS
B2	BENCH - SPECIAL BULB-OUT SEATWALL, SEE DTL 1/L-8
T	TRASH & RECYCLING RECEPTACLES, SEE SPECS
BR	BIKE RACK, SEE DTL 4/L-8 & SPECS
	PEDESTRIAN LIGHT, S.C.D.
	ROADWAY LIGHT, S.C.D.
DI	DRAIN INLET, S.C.D.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-2 LANDSCAPE LEGEND & CONSTRUCTION PLAN - 1.DWG (L-2 LANDSCAPE LEGEND & CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Master Licensee No. 5033 Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE LEGEND AND CONSTRUCTION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

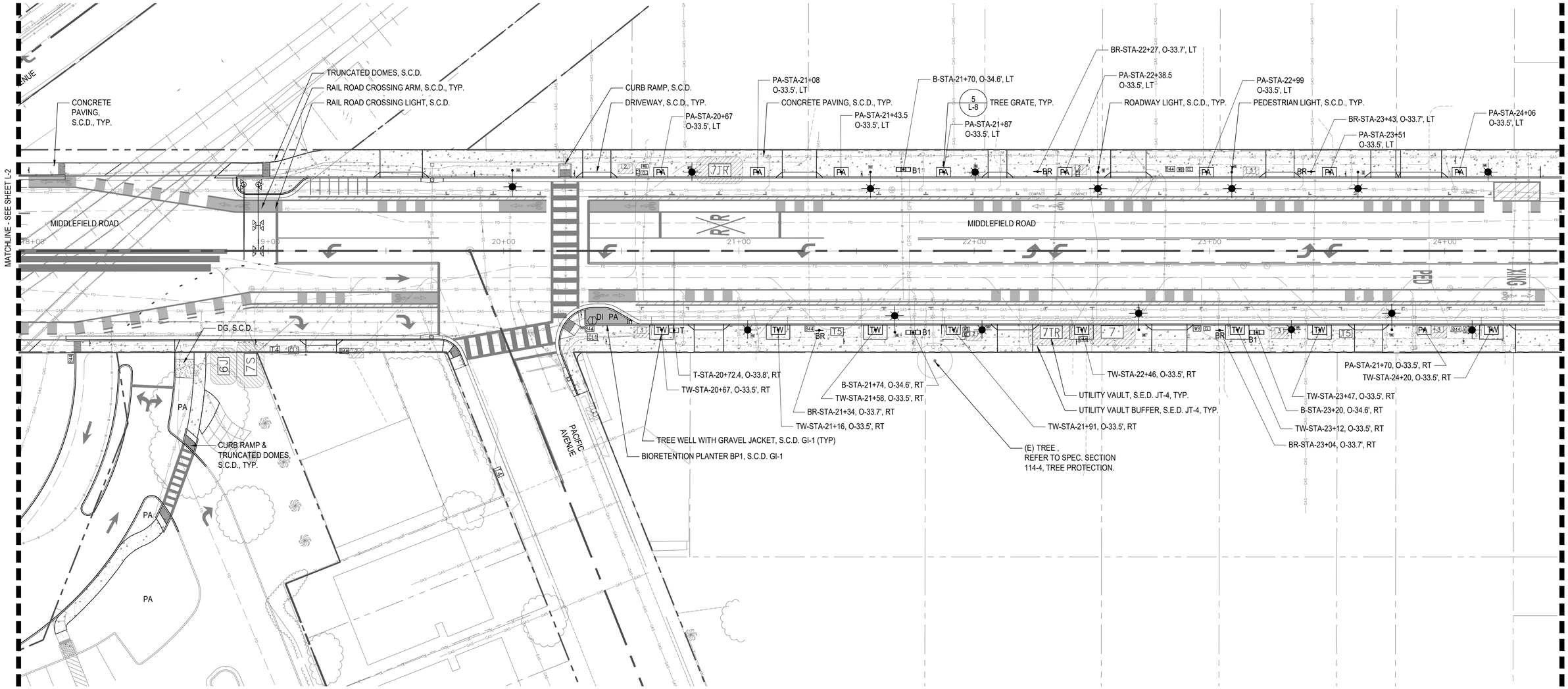
L-2
SHEET 89 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE LANDSCAPE CONSTRUCTION LEGEND ON SHEET LANDSCAPE CONSTRUCTION PLAN L-2.

0 10' 20' 40' N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-3 LANDSCAPE CONSTRUCTION PLAN - 2.DWG (L-3 LANDSCAPE CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

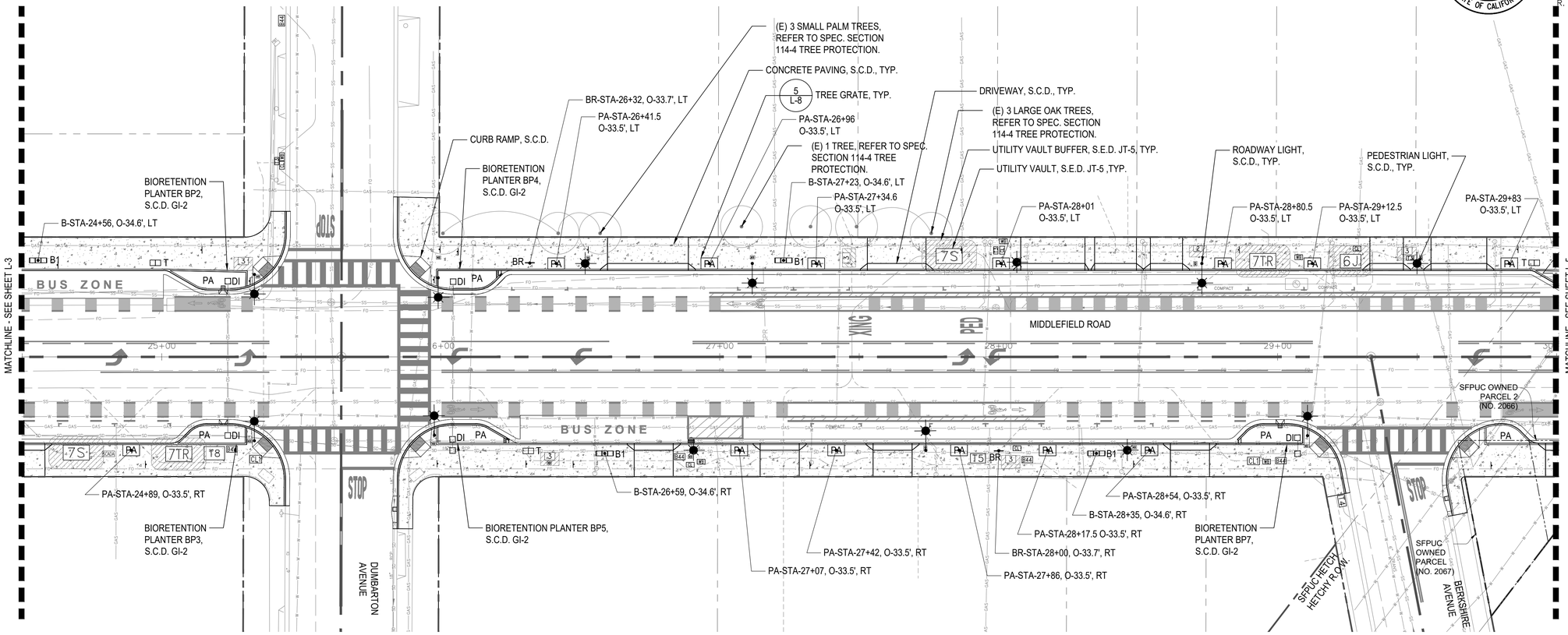
L-3
SHEET 90 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



SHEET NOTES

1. SEE LANDSCAPE CONSTRUCTION LEGEND ON SHEET LANDSCAPE CONSTRUCTION PLAN L-2.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-4 LANDSCAPE CONSTRUCTION PLAN - 3.DWG (L-4 LANDSCAPE CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Matthew Lincoln Lawrence Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

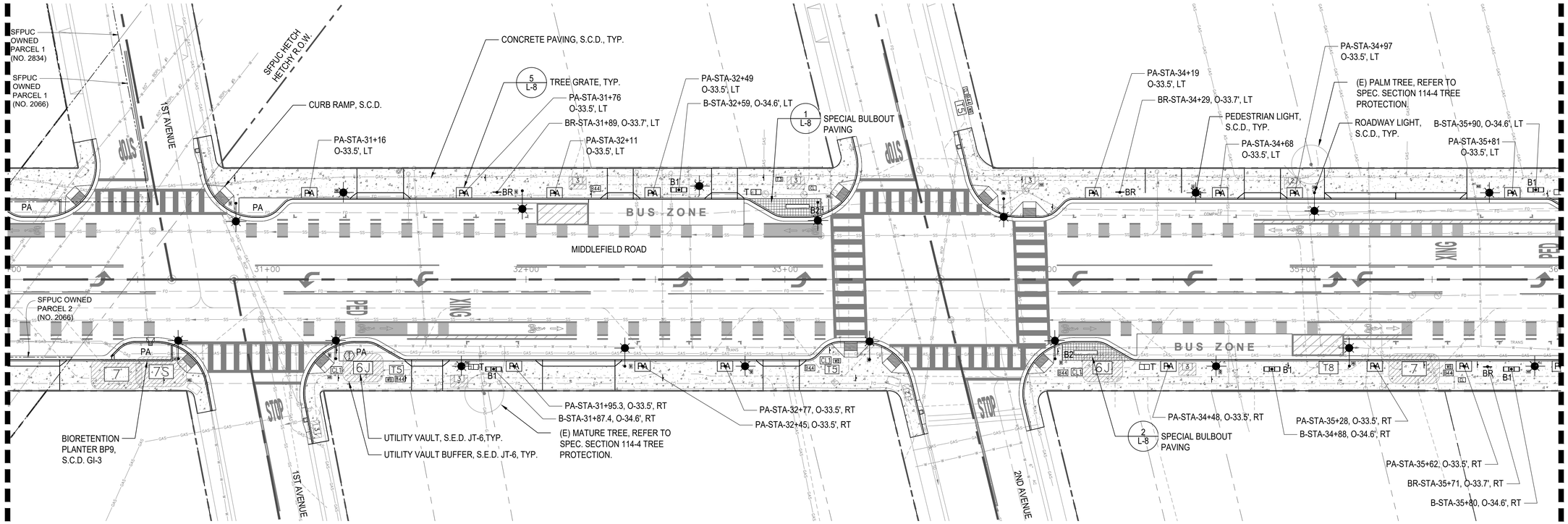
L-4
SHEET 91 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE LANDSCAPE CONSTRUCTION LEGEND ON SHEET LANDSCAPE CONSTRUCTION PLAN L-2.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-5 LANDSCAPE CONSTRUCTION PLAN - 4.DWG (L-5 LANDSCAPE CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Certificate Number
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

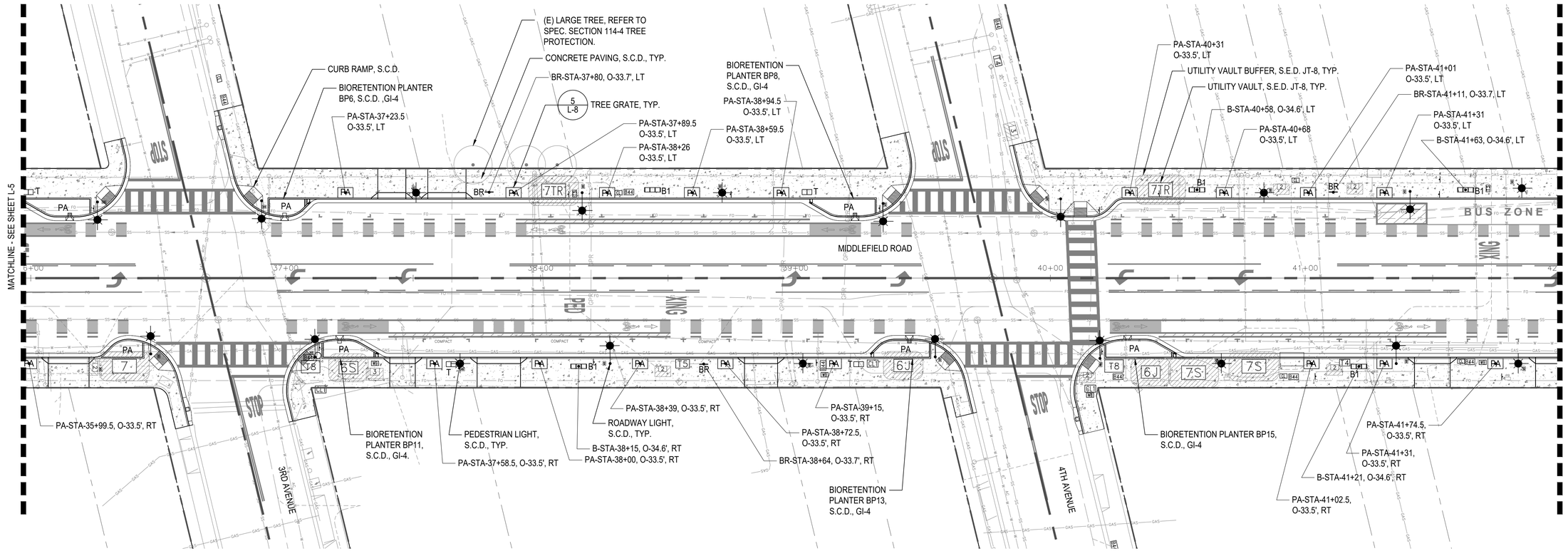
L-5
SHEET 92 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE LANDSCAPE CONSTRUCTION LEGEND ON SHEET LANDSCAPE CONSTRUCTION PLAN L-2.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-6 LANDSCAPE CONSTRUCTION PLAN - 5.DWG (L-6 LANDSCAPE CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Lee Lincenberg
Signature 04/30/22
Renewal Date 10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

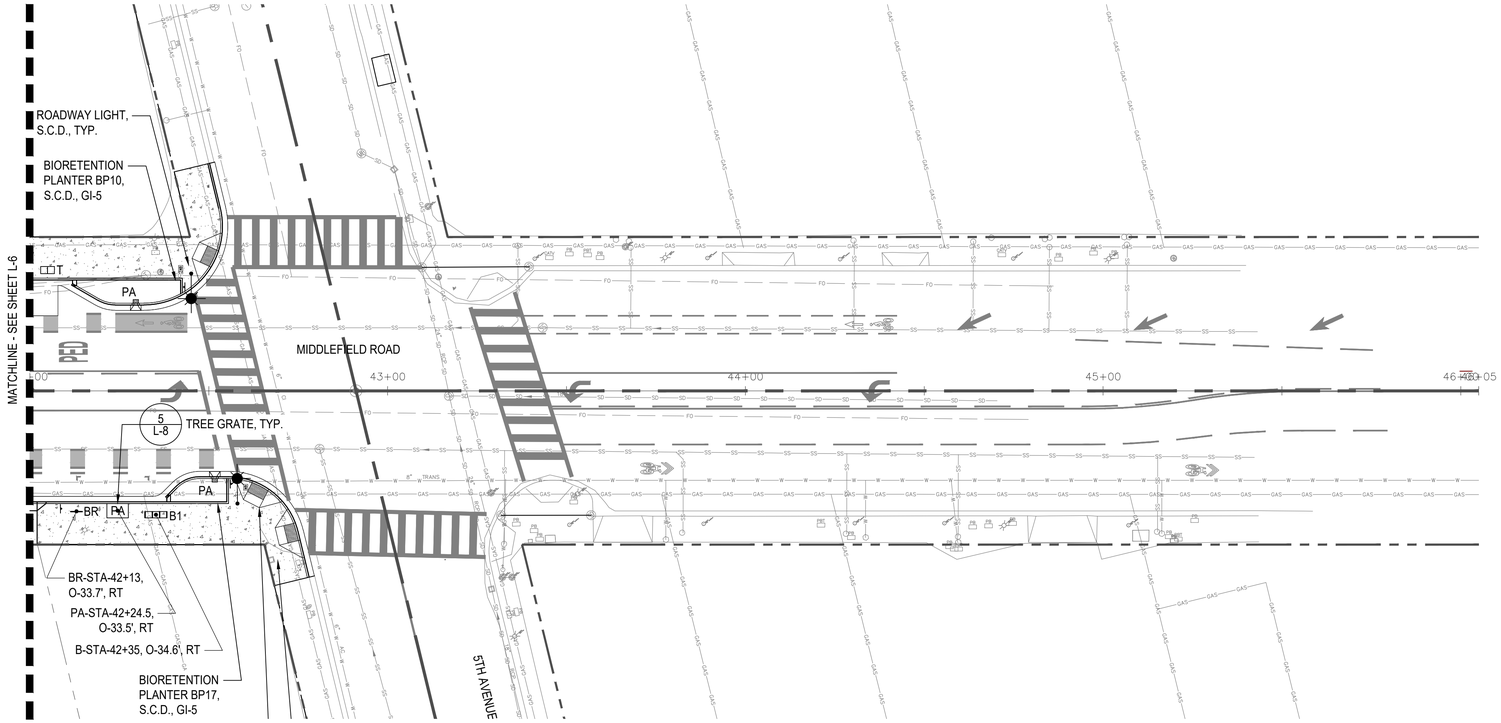
L-6
SHEET 93 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE LANDSCAPE CONSTRUCTION LEGEND ON SHEET LANDSCAPE CONSTRUCTION PLAN L-2.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-7 LANDSCAPE CONSTRUCTION PLAN - 6.DWG (L-7 LANDSCAPE CONSTRUCTION PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Matthew Snyder Lincoln
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

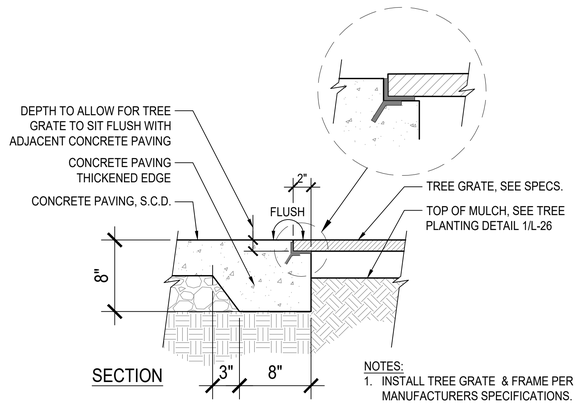
L-7
SHEET 94 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

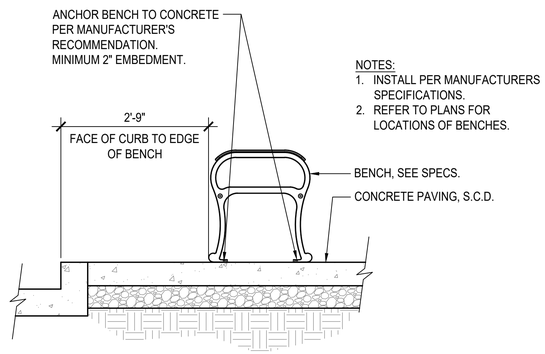
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



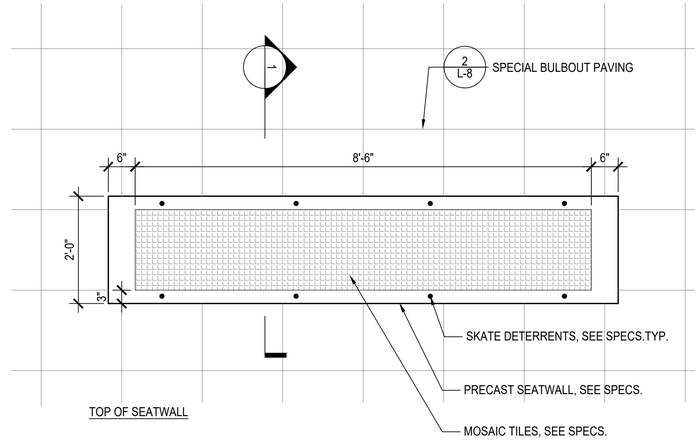
5 TREE GRATE

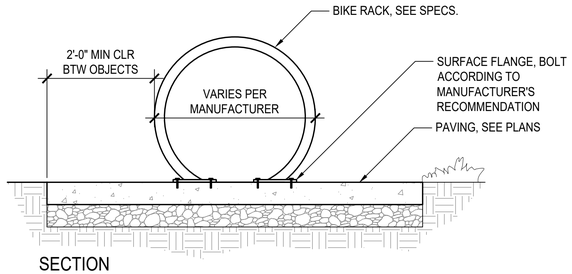
1-1/2"=1'-0"

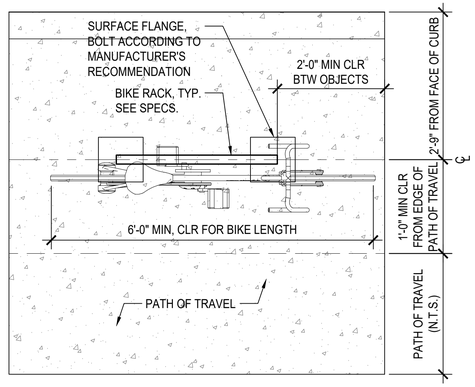


3 B1 - BENCH - SURFACE MOUNT

SCALE: 3/4" = 1'-0"

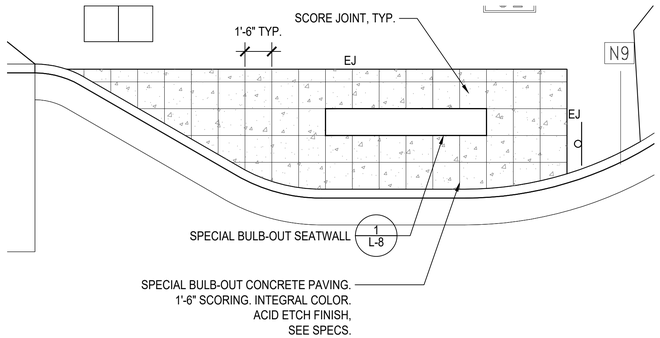


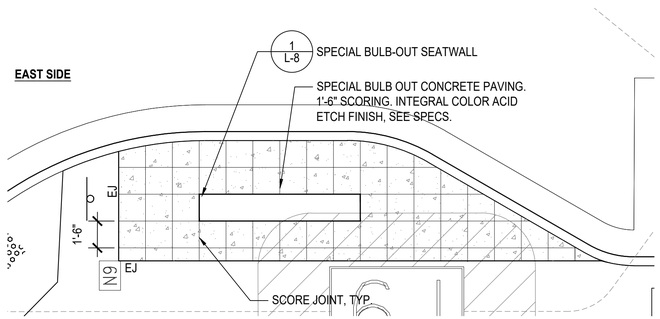




4 BIKE RACK - CIRCULAR

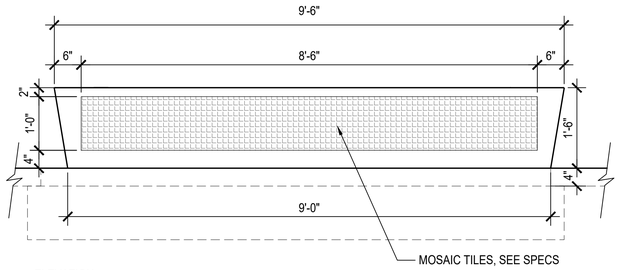
SCALE: 3/4" = 1'-0"

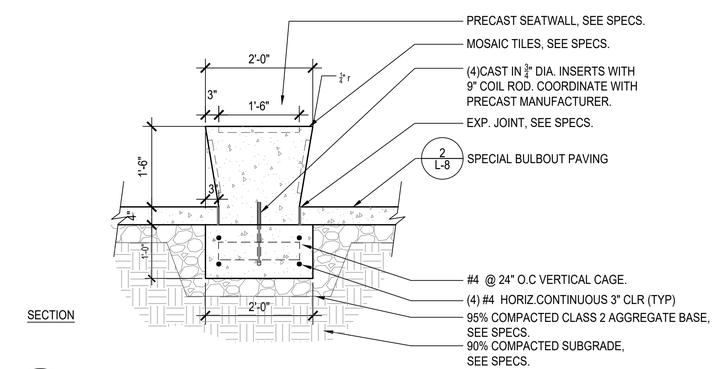




2 SPECIAL BULB-OUT PAVING

1/4" = 1'0"





1 B2 - SPECIAL BULB-OUT SEATWALL

SCALE: 3/4" = 1'-0"

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-8 LANDSCAPE CONSTRUCTION DETAILS.DWG (L-8 LANDSCAPE CONSTRUCTION DETAILS)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Peter Linperis
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT LANDSCAPE CONSTRUCTION DETAILS	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

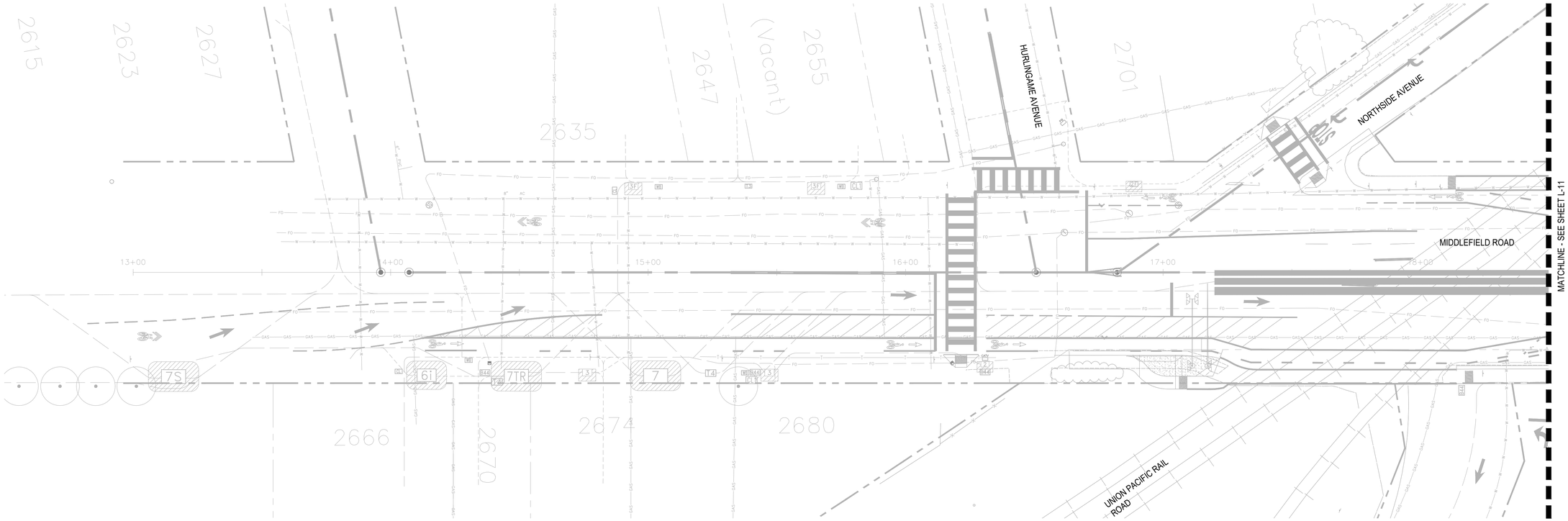
L-8
SHEET 95 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:

.75"	0–6 GPM
1"	7–12 GPM
1.25"	13–20 GPM

5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:

.75"	0–500 FT
1"	501–1100 FT
1.25"	1101–2000 FT
1.5"	2001–3000 FT

6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Nathaniel Lincoln Ph.D. Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

L-9
SHEET 96 OF 140

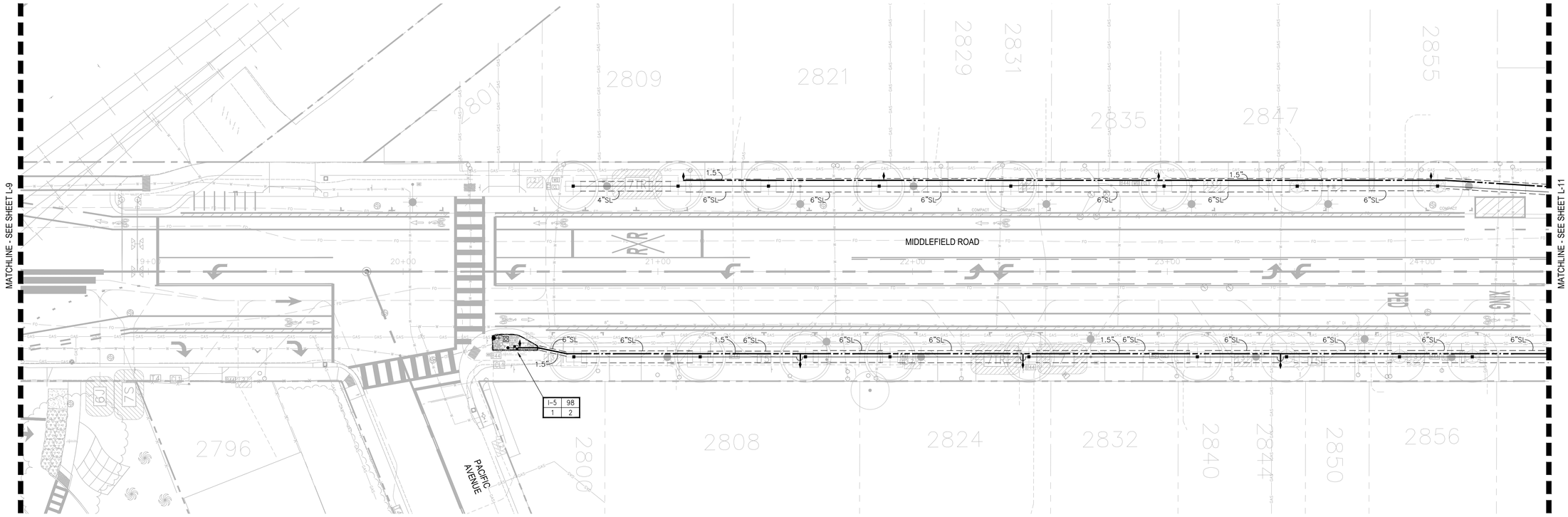
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-9 IRRIGATION PLAN.DWG (L-9 IRRIGATION PLAN)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:
   .75" 0-6 GPM
   1" 7-12 GPM
   1.25" 13-20 GPM
5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:
   .75" 0-500 FT
   1" 501-1100 FT
   1.25" 1101-2000 FT
   1.5" 2001-3000 FT
6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Heather Lingenfelter
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-10
SHEET 97 OF 140

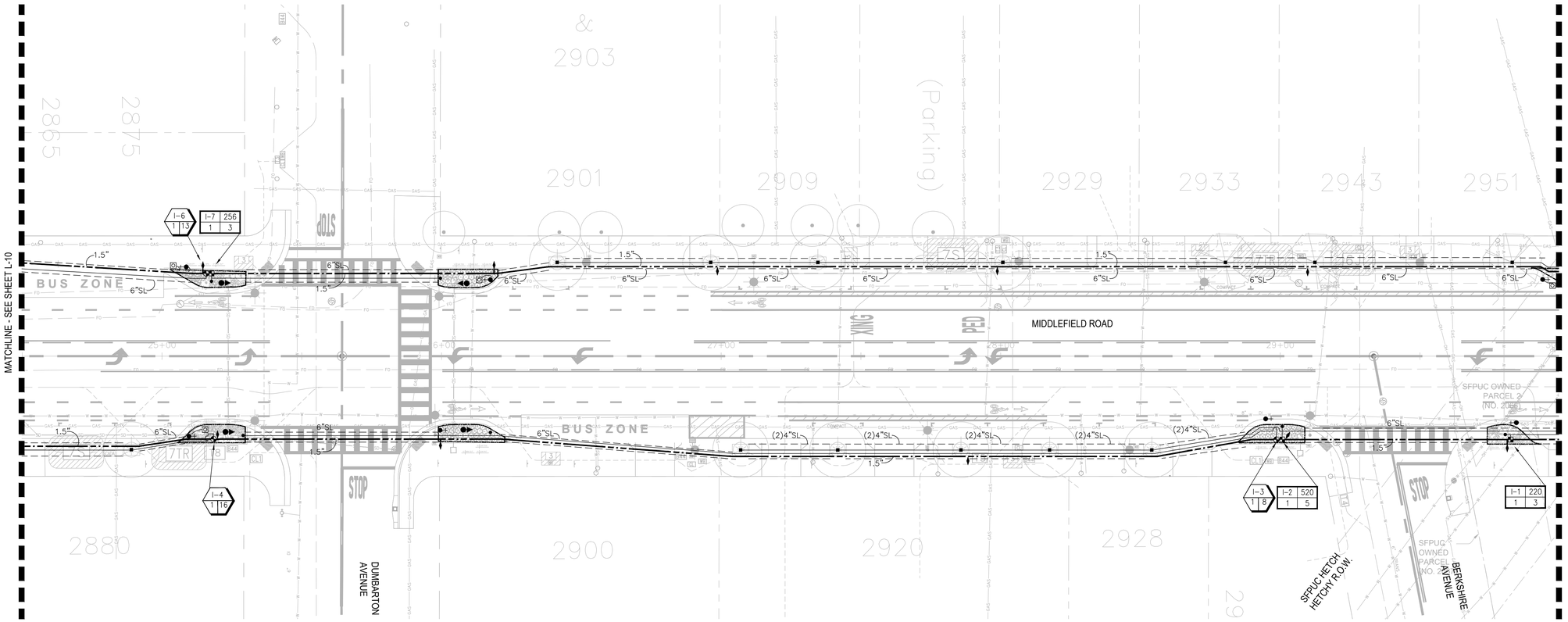
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 150334\CAD\CD\RHAA PLOT\L-10 IRRIGATION PLAN.DWG (L-10 IRRIGATION PLAN)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:
   .75" 0-6 GPM
   1" 7-12 GPM
   1.25" 13-20 GPM
5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:
   .75" 0-500 FT
   1" 501-1100 FT
   1.25" 1101-2000 FT
   1.5" 2001-3000 FT
6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Master Licensee No. 5023 Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

L-11
SHEET 98 OF 140

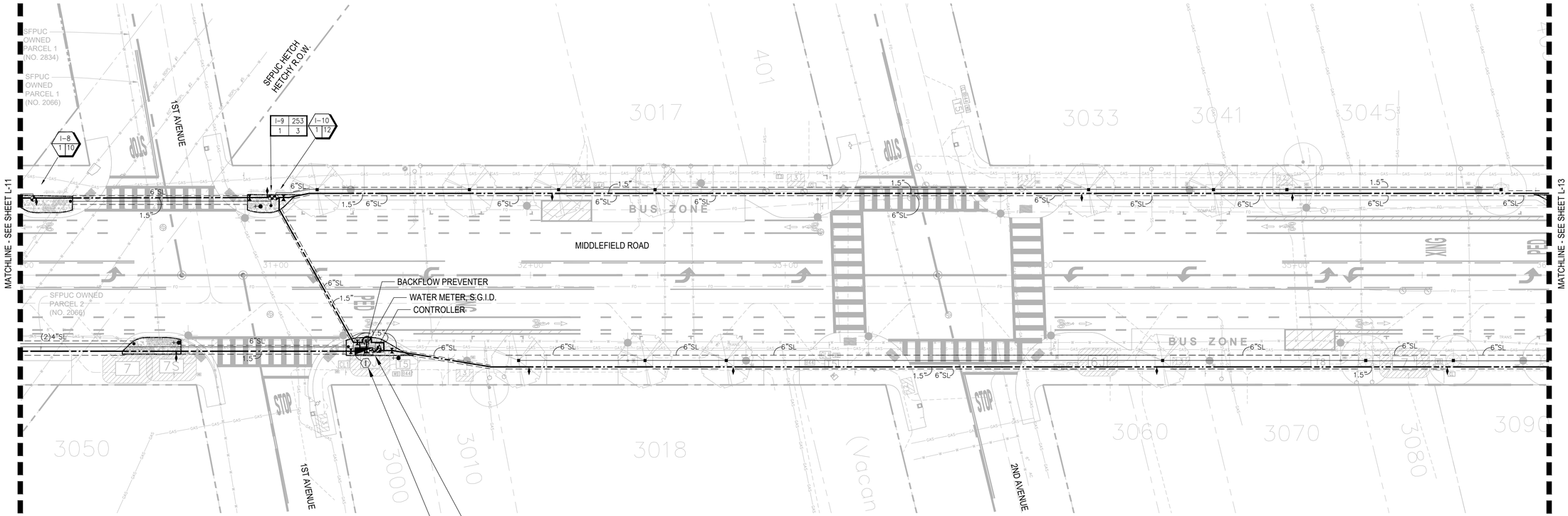
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-11 IRRIGATION PLAN.DWG (L-11 IRRIGATION PLAN)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



3/4" WATER METER WITH 1" SERVICE LINE FOR IRRIGATION, SEE SHEET GI-3 FOR WATER METER POINT OF CONNECTION. MAXIMUM IRRIGATION DEMAND: 13 GPM AT 65 PSI STATIC PRESSURE AT WATER METER LOCATION.

IRRIGATION CONTROLLER "I". MOUNT ON PEDESTAL AT THIS LOCATION, SEE SHEET TS-7 FOR ELECTRICAL SERVICE. CONNECT TO 120 VOLT A.C. ELECTRICAL SERVICE INSTALLED AT THIS LOCATION. IRRIGATION CONTRACTOR SHALL COORDINATE LOCATION OF ELECTRICAL SERVICE PRIOR TO CONSTRUCTION.

NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:

.75"	0-6 GPM
1"	7-12 GPM
1.25"	13-20 GPM

5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:

.75"	0-500 FT
1"	501-1100 FT
1.25"	1101-2000 FT
1.5"	2001-3000 FT

6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Nathan Lynch Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-12
SHEET 99 OF 140

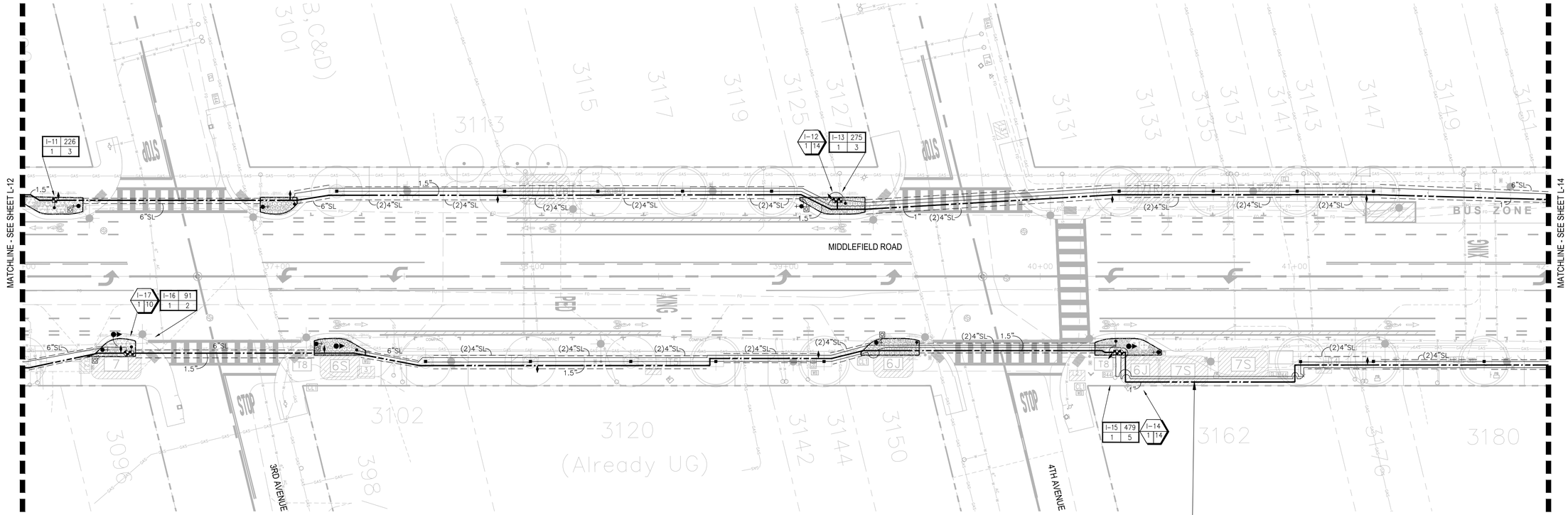
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-12 IRRIGATION PLAN.DWG (L-12 IRRIGATION PLAN)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



MAINLINE, LATERAL LINE AND ELECTRICAL CONDUIT FOR LOW VOLTAGE WIRES TO BE DIRECT BURIED IN THIS LOCATION DUE TO UTILITY CONFLICTS.

NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:
   .75" 0-6 GPM
   1" 7-12 GPM
   1.25" 13-20 GPM
5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:
   .75" 0-500 FT
   1" 501-1100 FT
   1.25" 1101-2000 FT
   1.5" 2001-3000 FT
6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Chapter Lincoln
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-13
SHEET 100 OF 140

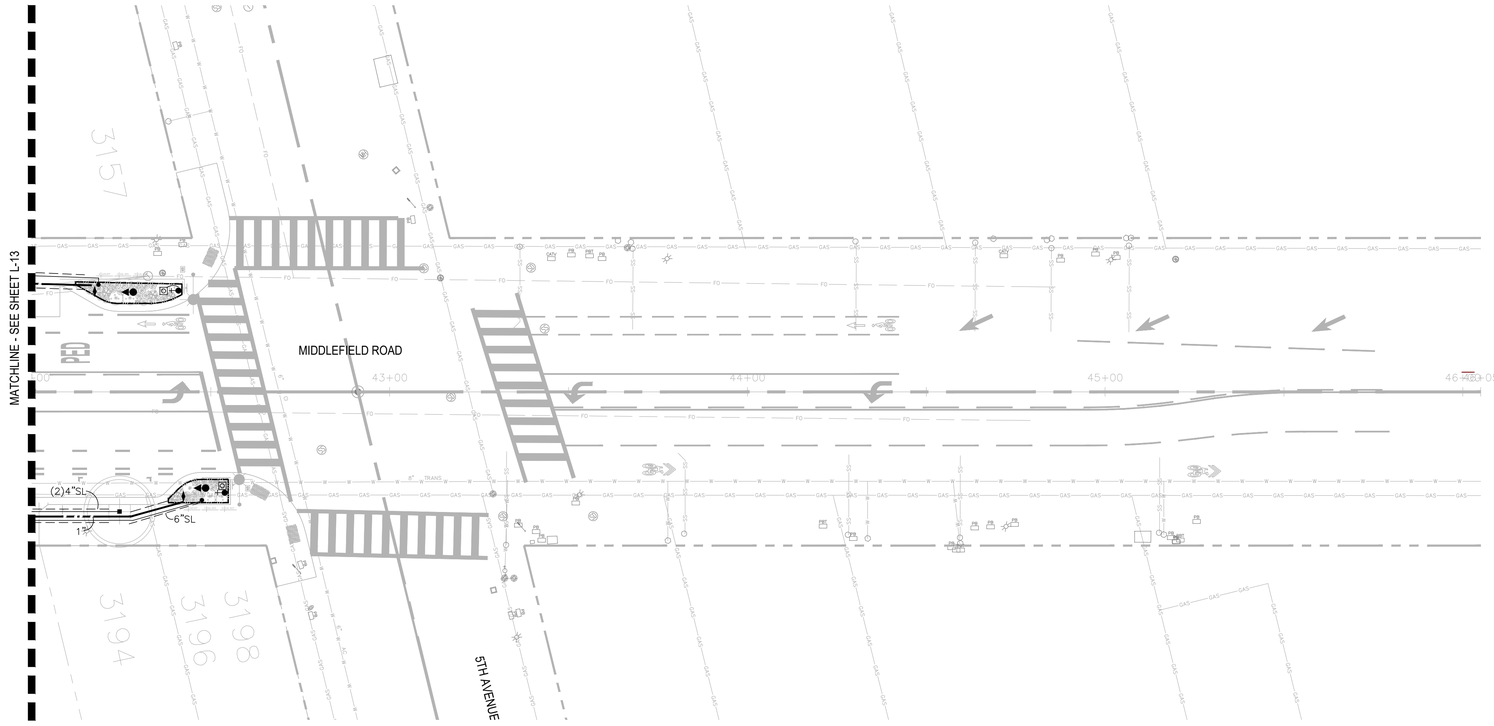
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA PLOT\L-13 IRRIGATION PLAN.DWG (L-13 IRRIGATION PLAN)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



NOTES:

1. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL QUANTITY AND TYPE OF BUBBLERS PER LEGEND AND DETAILS AT EACH TREE.
2. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT WHERE POSSIBLE. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
3. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
4. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:
   .75" 0-6 GPM
   1" 7-12 GPM
   1.25" 13-20 GPM
5. SIZING OF LATERAL PIPE FOR DRIPLINE (12" O.C. GRID WITH 0.6 GPH OR LESS EMITTERS) SHALL BE AS FOLLOWS:
   .75" 0-500 FT
   1" 501-1100 FT
   1.25" 1101-2000 FT
   1.5" 2001-3000 FT
6. SEE IRRIGATION NOTES AND LEGEND SHEET L-15.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Lincoln Lee Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-14
SHEET 101 OF 140

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-14 IRRIGATION PLAN.DWG (L-14 IRRIGATION PLAN)

IRRIGATION NOTES

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.

2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRIC CODE; THE UNIFORM PLUMBING CODE, PUBLISHED BY THE WESTERN PLUMBING OFFICIALS ASSOCIATION; AND OTHER STATE OR LOCAL LAWS OR REGULATIONS. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR REGULATIONS. THE CONTRACTOR SHALL FURNISH WITHOUT ANY EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED BY THE COMPLIANCE WITH THESE CODES AND REGULATIONS.

3. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LAYOUT AND INSTALLATION OF THE PLANT MATERIALS TO INSURE THAT THERE WILL BE COMPLETE AND UNIFORM IRRIGATION COVERAGE OF PLANTING IN ACCORDANCE WITH THESE DRAWINGS, AND CONTRACT DOCUMENTS. THE IRRIGATION LAYOUT SHALL BE CHECKED BY THE CONTRACTOR AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO CONSTRUCTION TO DETERMINE IF ANY CHANGES, DELETIONS, OR ADDITIONS ARE REQUIRED. IRRIGATION SYSTEM SHALL BE INSTALLED AND TESTED PRIOR TO INSTALLATION OF PLANT MATERIAL.

4. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

5. IT IS THE RESPONSIBILITY OF THE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER(S) TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS, SLOPES, SUN, SHADE AND WIND EXPOSURE.

6. IT IS THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT A.C. (2.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE TO THE CONTROLLER LOCATION(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE STUB-OUT TO THE CONTROLLER(S). PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.

7. PROVIDE EACH CONTROLLER WITH ITS OWN GROUND ROD. SEPARATE THE GROUND RODS BY A MINIMUM OF EIGHT FEET. THE GROUND ROD SHALL BE AN EIGHT FOOT LONG BY 5/8" DIAMETER U.L. APPROVED COPPER CLAD ROD. INSTALL NO MORE THAN 6" OF THE GROUND ROD ABOVE FINISH GRADE. CONNECT #6 GAUGE WIRE WITH A U.L. APPROVED GROUND ROD CLAMP TO ROD AND BACK TO GROUND SCREW AT BASE OF CONTROLLER WITH APPROPRIATE CONNECTOR. MAKE THIS WIRE AS SHORT AS POSSIBLE, AVOIDING KINKS OR BENDING.

8. PROVIDE EACH IRRIGATION CONTROLLER WITH ITS OWN INDEPENDENT LOW VOLTAGE COMMON GROUND WIRE.

9. SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.

10. IRRIGATION CONTROL WIRES: SOLID COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. CONTROL WIRE SERVICING REMOTE CONTROL VALVES: SIZE #14-1 WIRE WITH A UNIQUE COLOR INSULATING JACKET FOR EACH CONTROLLER. COMMON GROUND WIRE: SIZE #12-1 WIRE WITH A WHITE I INSULATING JACKET AND A STRIPE OF COLOR WHICH MATCH'S THE CONTROL WIRE COLOR CHOICE FOR SPECIFIC CONTROLLER. SPARE WIRE: #14-1 WIRE WITH BLACK INSULATION JACKET. SPLICES SHALL BE MADE WITH 3M-SCOTCHLOC SEAL PACKS OR APPROVED EQUAL.

11. INSTALL TWO CONTROL WIRES ALONG THE ENTIRE WIRE ROUTING FOR EACH CONTROLLER. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.

12. SPLICING OF LOW VOLTAGE WIRES IS PERMITTED IN VALVE BOXES ONLY. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. DO NOT TAPE WIRES TOGETHER WHERE CONTAINED WITHIN SLEEVING OR CONDUIT.

13. INSTALL GREEN PLASTIC (WITHIN PLANTING AREAS) OR CONCRETE (WITHIN PAVING) VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE NDS, CARSON OR APPROVED EQUAL.

14. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX AN EQUAL DISTANCE FROM THE WALK, CURB, BUILDING OR LANDSCAPE FEATURE AND PROVIDE 12" BETWEEN BOX TOPS. ALIGN THE SHORT SIDE OF RECTANGULAR VALVE BOXES PARALLEL TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE.

15. THE CONTRACTOR SHALL LABEL CONTROL LINE WIRE AT EACH REMOTE CONTROL VALVE WITH A 2 1/4" X 2 3/4" POLYURETHANE I.D. TAG, INDICATING IDENTIFICATION NUMBER OF VALVE (CONTROLLER AND STATION NUMBER). ATTACH LABEL TO CONTROL WIRE. THE CONTRACTOR SHALL PERMANENTLY STAMP ALL VALVE BOX LIDS WITH APPROPRIATE IDENTIFICATION AS NOTED IN CONSTRUCTION DETAILS.

16. THE REMOTE CONTROL VALVES SPECIFIED ON THE DRAWINGS IS A PRESSURE REDUCING TYPE. SET THE DISCHARGE PRESSURE AS FOLLOWS:

A. DRIP EMITTERS=35 PSI
B. BUBBLERS= 30 PSI

17. INSTALL A GATE VALVE TO ISOLATE EACH REMOTE CONTROL VALVE (RCV) OR GROUP OF RCV'S LOCATED TOGETHER. GATE VALVE SIZE SHALL BE SAME AS THE LARGEST REMOTE CONTROL VALVE IN MANIFOLD.

18. FLUSH AND ADJUST IRRIGATION OUTLETS AND NOZZLES FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF THE ARC AND RADIUS TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH CONTROL ZONE.

19. LOCATE EMITTER OUTLETS ON UPHILL SIDE OF PLANT OR TREE.

20. LOCATE BUBBLERS ON UPHILL SIDE OF PLANT OR TREE.

21. NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

22. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

23. IRRIGATION DEMAND: REFER TO PLANS.

24. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL #5 OR APPROVED EQUAL.

25. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES IN THE IRRIGATION LAYOUT DUE TO OBSTRUCTIONS NOT SHOWN ON THE IRRIGATION DRAWINGS SUCH AS LIGHTS, FIRE HYDRANTS, SIGNS, ELECTRICAL ENCLOSURES, ETC.

26. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CHANGES IN THE IRRIGATION LAYOUT AND VALVE ZONING DUE TO VARIATIONS IN THE EXISTING SITE CONDITIONS SUCH AS EXPOSURE FROM BUILDINGS, TRELLISES, TREES, ETC., AS WELL AS SLOPE AND SOIL CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT OF THE PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.

27. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE IRRIGATION SYSTEM DESIGN IF THE PLANTING DESIGN CHANGES FROM THE ORIGINAL PLAN AND NEEDS TO ADAPT TO THE NEW PLANTING DESIGN. THE LANDSCAPE CONTRACTOR NEEDS TO NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT OF PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.

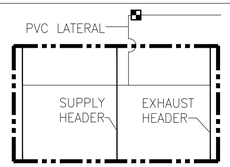
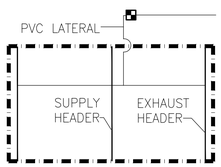
28. WHEN WORK OF THIS SECTION HAS BEEN COMPLETED AND SUCH OTHER TIMES AS MAY BE DIRECTED, REMOVE ALL TRASH, DEBRIS, SURPLUS MATERIALS AND EQUIPMENT FROM SITE.

29. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLEMENTAL HAND WATERING OF ALL PLANT MATERIAL WITHIN DRIPLINE AREAS UNTIL THE PLANTS ARE SUFFICIENTLY ESTABLISHED.

30. VERIFY LOCATIONS OF ALL IRRIGATION COMPONENTS INSTALLED WITHIN A VALVE BOX WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL UNTIL LANDSCAPE ARCHITECT PROVIDES ACCEPTABLE LOCATIONS.

31. WHERE MANUFACTURER,'BRAND' OR PRODUCT MODEL IS SPECIFIED, IT ALSO MEANS 'OR APPROVED EQUAL'.

IRRIGATION LEGEND

SYMBOL	DESCRIPTION
	DRIPLINE REMOTE CONTROL VALVE DRIP ZONE: TORO DL2000 SERIES DRIPLINE WITH TRI-LOC FITTINGS, PART #RGP-212. TUBING TO BE INSTALLED 4" BELOW GRADE IN A 12" O.C. GRID ACCORDING TO DETAILS. SIZE EXHAUST HEADERS AS FOLLOWS: 1": 0-10 GPM, 1.25": 11-20 GPM. ALL EXHAUST HEADERS SHALL BE 1" SCH 40 PVC OR 1" SCH 40 FLEXIBLE PVC. USE SCH. 40 PVC SOLVENT WELD FITTINGS. EXTEND PVC HEADERS TO THE ENDS OF ALL DRIP ZONES TO BALANCE FLOW IF REQUIRED. SEE DETAILS FOR FURTHER INFORMATION.
	DRIPLINE REMOTE CONTROL VALVE DRIP ZONE (BIORETENTION AREAS): TORO DL2000 SERIES DRIPLINE WITH TRI-LOC FITTINGS, PART #RGP-412. TUBING TO BE INSTALLED 4" BELOW GRADE IN A 12" O.C. GRID ACCORDING TO DETAILS. SIZE EXHAUST HEADERS AS FOLLOWS: 1": 0-10 GPM, 1.25": 11-20 GPM. ALL EXHAUST HEADERS SHALL BE 1" SCH 40 PVC OR 1" SCH 40 FLEXIBLE PVC. USE SCH. 40 PVC SOLVENT WELD FITTINGS. EXTEND PVC HEADERS TO THE ENDS OF ALL DRIP ZONES TO BALANCE FLOW IF REQUIRED. SEE DETAILS FOR FURTHER INFORMATION.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION	NOZZLE GPM	OPERATING PSI	OPERATING RADIUS (FEET)
■	1401 SERIES/ RWS-M-B-1402	RAIN BIRD BUBBLERS AT ROOT BALL, 1 ON GRADE AND 2-18" DEEP ROOT WATERING TUBES	0.25/0.5	30	TRICKLE
	T-YD-500-34	TORO AIR RELIEF VALVE			
	T-FJJ16	TORO FLUSH VALVE			
	570Z-6P-SI-PRX/ O-T-5-QP	TORO POP-UP SPRINKLER WITH SIDE INLET AND A CLOSED 5' NOZZLE TO BE USED AS DRIPLINE INDICATOR			
•	-	APPROXIMATE CONNECTION POINT BETWEEN DRIPLINE TUBING AND PVC SUPPLY. REFER TO DRIPLINE TUBING CONNECTION DETAIL FOR MORE INFORMATION.			
	DWS-100-PRV	GRISWOLD REMOTE CONTROL VALVE WITH A PRESSURE REGULATOR			
	DWS-100-PRV/ T-ALFD10150-L	GRISWOLD REMOTE CONTROL VALVE WITH A PRESSURE REGULATOR (SET TO 40 PSI) AND A TORO 1" DISC FILTER			
	33 DNP	RAIN BIRD QUICK COUPLING VALVE			
	LGT-XX-SS	LEEMCO STAINLESS STEEL GATE VALVE (LINE SIZE)-2.5" AND SMALLER			
	2000-1"	GRISWOLD MASTER VALVE (NORMALLY CLOSED)			
	FS-B100	RAIN MASTER FLOW SENSOR			
	975XLSEU-1.5"/VIT SBBC-30AL/PBB-30	WILKINS REDUCED PRESSURE BACKFLOW ASSEMBLY WITH VIT STRONGBOX ENCLOSURE AND FREEZE BLANKET.			
C	EGP-24i-SPED	RAIN MASTER EAGLE PLUS CONTROLLER IN A STAINLESS STEEL PEDESTAL ENCLOSURE; INCLUDES I-CARD AND TWO YEARS RAIN MASTER I-CENTRAL SERVICE.			
—	RM-ISVC-2Y	ADDITIONAL 2 YEARS OF PREMIUM (FREEDOM) WIRELESS DATA SERVICE AND ZIPET FOR RAIN MASTER ICENTRAL CONTROL SYSTEM			
R	RS-500	IRRITROL WIRELESS RAIN SENSOR, MOUNT ON THE SIDE OF THE CONTROLLER ENCLOUSURE			
		CONTROLLER AND STATION NUMBER			
		FLOW (GPM)			
		REMOTE CONTROL VALVE SIZE (IN INCHES)			
		ASSOCIATED REMOTE CONTROL VALVE			
		CONTROLLER AND STATION NUMBER			
		AREA (SQ. FT.)			
		FLOW (GPM)			
		REMOTE CONTROL VALVE SIZE (IN INCHES)			
		ASSOCIATED REMOTE CONTROL VALVE			
		MAIN LINE WITHIN PLANTING AND WALKWAYS: 2" AND SMALLER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. MINIMUM 18" COVER WITHIN PLANTING.			
		MAIN LINE UNDER ROADWAYS: 2" AND SMALLER: 1120-SCHEDULE 80 PVC PLASTIC PIPE WITH SCHEDULE 80 PVC SOLVENT WELD FITTINGS. MINIMUM 18" COVER WITHIN ROADWAY.			
		LATERAL LINE WITHIN PLANTING AND WALKWAYS: 3/4" AND LARGER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. MINIMUM 12" COVER.			
		LATERAL LINE WITHIN ROADWAYS: 3/4" AND LARGER: 1120-SCHEDULE 80 PVC PLASTIC PIPE WITH SCHEDULE 80 PVC SOLVENT WELD FITTINGS. MINIMUM 18" COVER WITHIN ROADWAY.			
		SLEEVING (SL): SCHEDULE 40 PVC PLASTIC PIPE. COVER TO BE AS INDICATED IN SPECIFICATIONS OR AS INDICATED ABOVE FOR PIPE DEPTH OF COVER.			

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Matthew Fowler Lincense
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

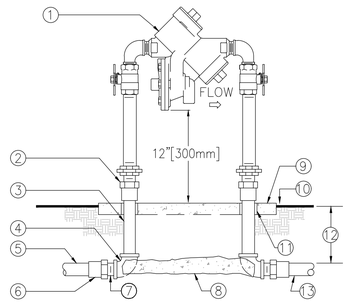
		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION NOTES & LEGEND
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-15
SHEET 102 OF 140

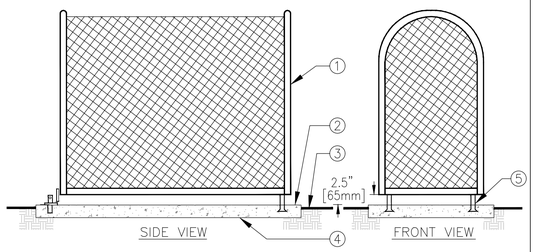
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOTS\L-15 IRRIGATION NOTES & LEGEND.DWG



① REDUCED PRESSURE BACKFLOW ASSEMBLY.
② WROUGHT COPPER MALE ADAPTER–2 TOTAL (SOLDER x THREAD CONNECTION).
③ COPPER TYPE "K" PIPE (LENGTH AS REQUIRED).
④ WROUGHT COPPER 90° ELBOW–2 TOTAL (SOLDER x THREAD CONNECTION).
⑤ PVC MAIN LINE TO POINT OF CONNECTION.
⑥ BUSH AS NECESSARY FOR SIZE TRANSITION.
⑦ SCHEDULE 40 PVC MALE ADAPTER–2 TOTAL.
⑧ CONCRETE SUPPORT BLOCK.
⑨ CONCRETE PAD–SEE ENCLOSURE DETAIL.
⑩ FINISH GRADE.
⑪ PVC SLEEVE BOTH SIDES.
⑫ REFER TO IRRIGATION LEGEND.
⑬ PVC MAIN LINE TO IRRIGATION SYSTEM.

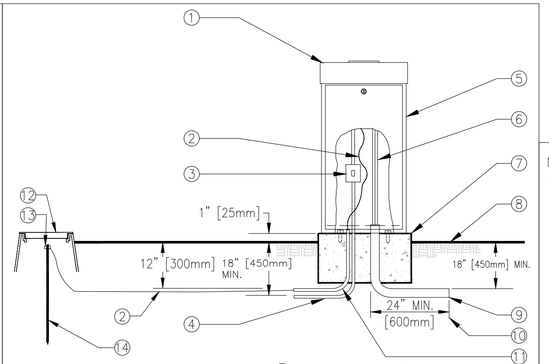
NOTES:
1. INSTALL A FREEZE PREVENTATIVE BLANKET AROUND BACKFLOW ASSEMBLY. BLANKET SHALL BE GREEN.
2. DO NOT SOLDER CONNECT FITTINGS WHILE THREADED INTO BACKFLOW ASSEMBLY. THIS MAY CAUSE DAMAGE TO DEVICE.
3. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS BACKFLOW ASSEMBLY.
4. PROVIDE A STAINLESS STEEL ENCLOSURE TO COMPLETELY ENCLOSE DEVICE. INSTALL ENCLOSURE TO CONCRETE BASE AS DIRECTED BY MANUFACTURER.

1 REDUCED PRESSURE BACKFLOW ASSEMBLY
SCALE: NONE



① STAINLESS STEEL ENCLOSURE TO COMPLETELY ENCLOSE DEVICE
② SET PAD 1/2" [13MM] ABOVE FINISH GRADE
③ FINISH GRADE
④ 6" [150mm] THICK CONCRETE PAD FOR ENCLOSURE SUPPORT TO EXTEND 6" [150mm] BEYOND ENCLOSURE ON ALL SIDES. CONCRETE TO HAVE MEDIUM BROOM FINISH.
⑤ MOUNTING BRACKETS (STANDARD WITH ENCLOSURE) TO BE SET INTO CONCRETE PAD. PROVIDE LOCKING TAB TO ACCEPT PADLOCK PER MANUFACTURER'S INSTRUCTION.

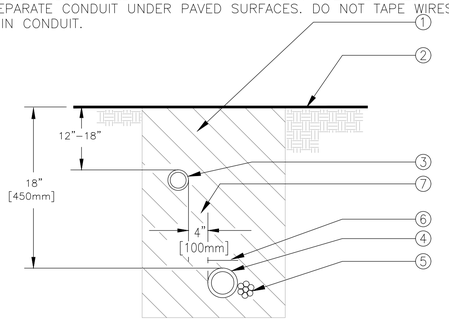
2 BACKFLOW ASSEMBLY ENCLOSURE
SCALE: NONE



① TOP ENTRY IRRIGATION CONTROLLER.
② #6 BARE COPPER GROUND WIRE.
③ 120 VOLT LOCKABLE WEATHERPROOF ON/OFF SWITCH PROVIDED UNDER IRRIGATION CONTRACT.
④ 120 VOLT A.C. ELECTRICAL SERVICE FROM SOURCE TO CONTROLLER LOCATION PROVIDED BY CONTRACTOR. IRRIGATION CONTRACTOR TO PROVIDE RIGID STEEL CONDUIT FROM SERVICE STUB–OUT TO CONTROLLER GCFI SWITCH AND COMPLETE ELECTRICAL SERVICE TO CONTROLLER.
⑤ PEDESTAL ENCLOSURE.
⑥ LOW VOLTAGE CONTROL WIRING.
⑦ CONCRETE PAD–6" [150mm] THICK (MIN.) EXTEND 6" [150mm] BEYOND EACH SIDE AND BACK, 24" [600mm] IN FRONT AND 1" [25mm] ABOVE FINISH GRADE.
⑧ FINISH GRADE.
⑨ SCHEDULE 40 GREY PVC ELECTRICAL CONDUIT WITH SWEEP ELL FOR LOW VOLTAGE WIRE.
⑩ 24" MIN. [600mm] AND OR 12" [300mm] BEYOND HARDSCAPE.
⑪ 1 1/2" [40mm] PVC SWEEP ELL FOR GROUND WIRE.
⑫ 6" ROUND BLACK PLASTIC BOX WITH T–LID FOR GROUND ROD.
⑬ CADWELD CONNECTIONS
⑭ 8' LONG COPPER GROUND ROD. LOCATE A MINIMUM OF 10' AWAY FROM CONTROLLER.

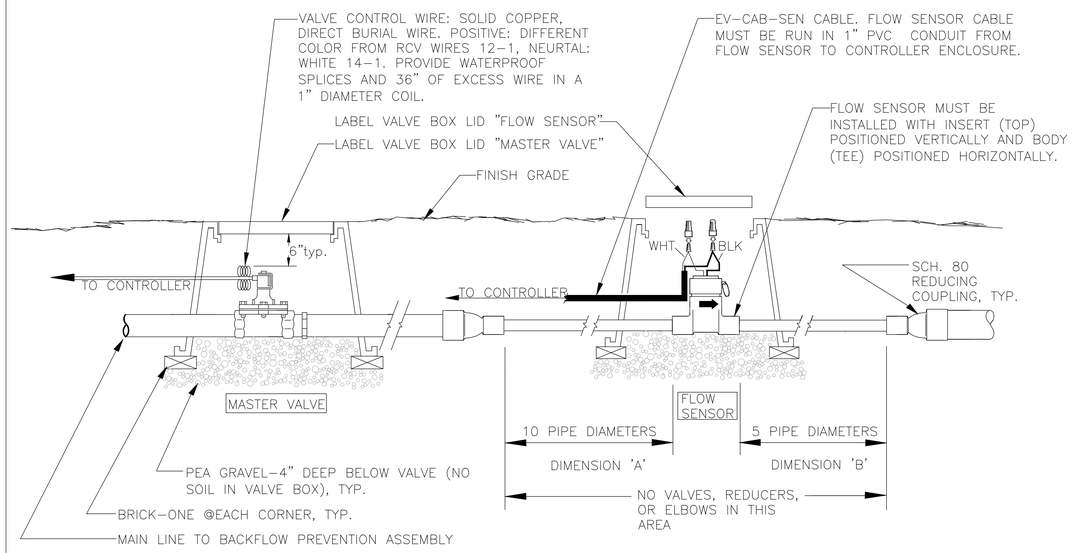
3 CONTROLLER – PEDESTAL MOUNT
SCALE: NONE

NOTES:
1. ALL MAIN SUPPLY LINES AND LATERAL LINES SHALL BE PLACED IN SLEEVES UNDER PAVED SURFACES. INSTALL LOW VOLTAGE WIRES WITHIN A SEPARATE CONDUIT UNDER PAVED SURFACES. DO NOT TAPE WIRES WITHIN CONDUIT.



① CLEAN BACKFILL MATERIAL.
② FINISH GRADE.
③ LATERAL LINE, 12" BELOW FINISH GRADE WITHIN PLANTING, 18" BELOW FINISH GRADE WITHIN ROADWAYS.
④ MAIN LINE.
⑤ LOW VOLTAGE CONTROL WIRE. TAPE AND BUNDLE TUBING OR WIRING AT 10 FT. INTERVALS. WIRING SHALL BE LAID OUT LOOSELY IN THE TRENCH.
⑥ 2" DETECTABLE WARNING TAPE OVER MAIN LINE – 3" [75mm] ABOVE PIPE. USE CHRISTY MODEL #TA–DT–2–BIRR FOR POTABLE IRRIGATION SYSTEMS OR #TA–DT–2–PIRR FOR RECYCLED IRRIGATION WATER SYSTEMS
⑦ TYPICAL DISTANCE BETWEEN PIPES.

4 TRENCHING
SCALE: NONE



5 RAIN MASTER EAGLE FLOW SENSOR & MASTER VALVE INSTALLATION
SCALE: NONE

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT – Ter Lincense – Signature 04/30/22 Renewal Date 10/16/20 Date – STATE OF CALIFORNIA

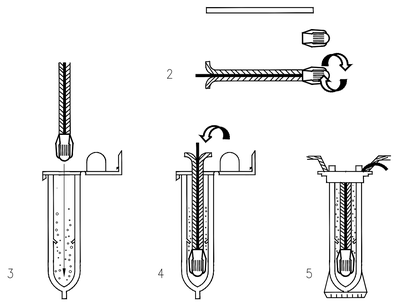
		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION DETAILS
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-16
SHEET 103 OF 140

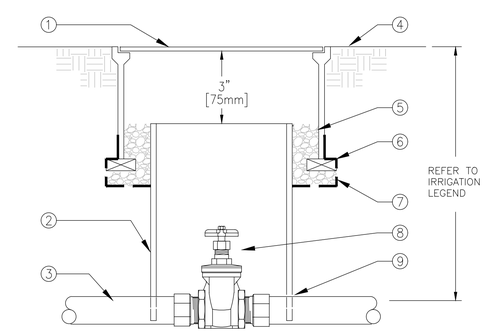
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-16 IRRIGATION DETAILS.DWG (L-16 IRRIGATION DETAILS)



INSTRUCTIONS:

1. STRIP WIRES APPROXIMATELY 1/2" (13 mm) TO EXPOSE WIRE.
2. TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
3. INSERT WIRE ASSEMBLY INTO PLASTIC TUBE UNTIL WIRE CONNECTOR SNAPS PAST LIP IN BOTTOM OF TUBE.
4. PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
5. INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

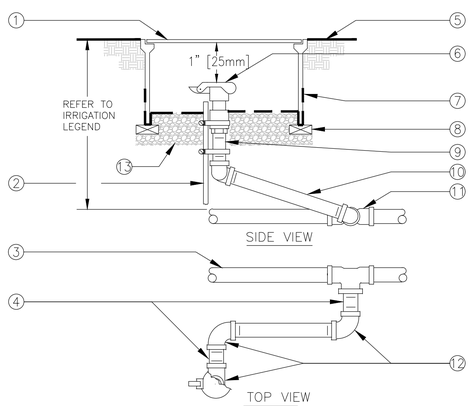
1 WEATHERPROOF WIRE SPLICE ASSEMBLY
SCALE: NONE



① 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID.

② 8" [200mm] CLASS 160 OR SCHEDULE 40 PVC PIPE (NOTCH TO FIT OVER MAIN LINE PIPE).
③ PVC MAIN LINE.
④ FINISH GRADE.
⑤ PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK – 4" [100mm] DEEP (NO SOIL IN VALVE BOX).
⑥ BRICK–2 TOTAL.
⑦ 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH.
⑧ GATE VALVE WITH X–TOP HANDLE.
⑨ MALE ADAPTER. REFER TO LEGEND FOR FITTING TYPE.

2 GATE VALVE – 3" [75mm] AND SMALLER
SCALE: NONE

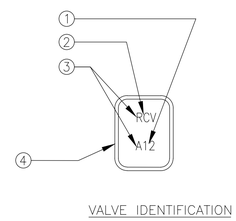


① 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID.
② 1 1/4" x 1 1/4" x 3/16" [30mm x 30mm x 5mm] ANGLE IRON 30" [760mm] LONG W/2 STAINLESS STEEL STRAPS (ONE AROUND QCV).
③ PVC MAIN LINE.
④ 3" [75mm] LONG SCHEDULE 80 PVC THREADED NIPPLE.
⑤ FINISH GRADE.
⑥ QUICK COUPLING VALVE.

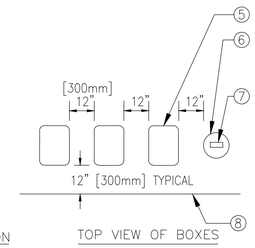
NOTE:
NIPPLES AND FITTINGS TO BE SAME SIZE AS VALVE IPT INLET THREAD SIZE.

⑦ 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH.
⑧ BRICK – 2 TOTAL.
⑨ SCHEDULE 80 PVC THREADED NIPPLE.
⑩ 10" [250mm] LONG SCHEDULE 80 PVC THREADED NIPPLE.
⑪ UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW.
⑫ SCHEDULE 80 PVC THREADED 90° ELL.
⑬ PEA GRAVEL OR 3/4" DRAIN ROCK– 4" [100mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).

3 QUICK COUPLING VALVE
SCALE: NONE



VALVE IDENTIFICATION



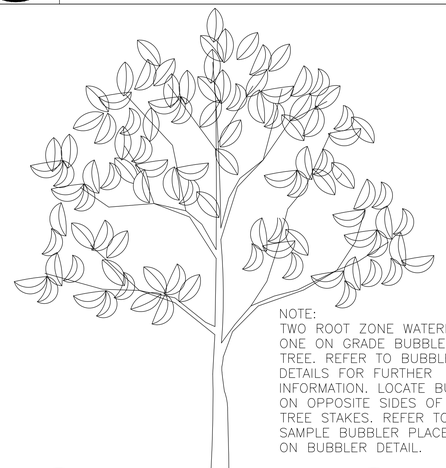
TOP VIEW OF BOXES

① CONTROLLER AND STATION
② VALVE TYPE
③ HEAT BRAND LETTERS AND NUMBERS INTO LID.
④ VALVE BOX COVER
⑤ RECTANGULAR VALVE BOX
⑥ ROUND VALVE BOX FOR QCV AND GATE VALVE.
⑦ HEAT BRAND LETTERS AND NUMBERS INTO LID (TYPICAL).
⑧ EDGE OF LAWN, WALK, FENCE, CURB, ETC.

INSTRUCTIONS:

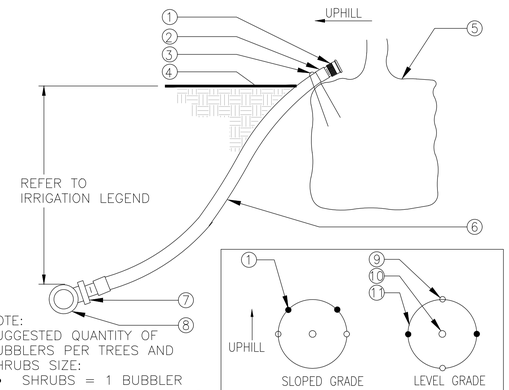
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" [25mm] ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

4 VALVE BOX INSTALLATION
SCALE: NONE



NOTE:
TWO ROOT ZONE WATERING AND ONE ON GRADE BUBBLER PER TREE. REFER TO BUBBLER DETAILS FOR FURTHER INFORMATION. LOCATE BUBBLER ON OPPOSITE SIDES OF THE TREE STAKES. REFER TO THE SAMPLE BUBBLER PLACEMENT ON BUBBLER DETAIL.

5 TREE BUBBLER PLACEMENT
SCALE: NONE



NOTE:
SUGGESTED QUANTITY OF BUBBLERS PER TREES AND SHRUBS SIZE:

- SHRUBS = 1 BUBBLER
- 15 GAL OR 24" BOX = 2 BUBBLERS
- 36" OR 48" BOX = 4 BUBBLERS
- 60" OR 72" BOX = 6 BUBBLERS

TREE BUBBLER PLACEMENT EXAMPLES

① BUBBLER (TO BE INSTALLED ON TOP OF ROOTBALL).
② 1/2" [13mm] SCH. 40 MALE ADAPTER.
③ 6" [150mm] STEEL STAPLE.
④ FINISH GRADE.
⑤ TREE OR SHRUB ROOTBALL.
⑥ 1/2" [13mm] IPS FLEXIBLE PVC.
⑦ PVC TEE (SST), ELBOW (ST) OR FEMALE ADAPTER.
⑧ PVC LATERAL LINE.
⑨ TREE STAKES.
⑩ TREE OR SHRUB.
⑪ EDGE OF ROOTBALL (TYPICAL).

6 TREE AND SHRUB BUBBLER
SCALE: NONE

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT — Master Lyster License — Signature 04/30/22 Renewal Date 10/16/20 Date — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

COUNTY OF SAN MATEO · PUBLIC WORKS

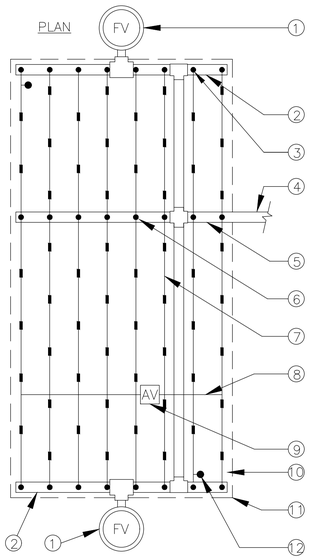
		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION DETAILS
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-17
SHEET 104 OF 140

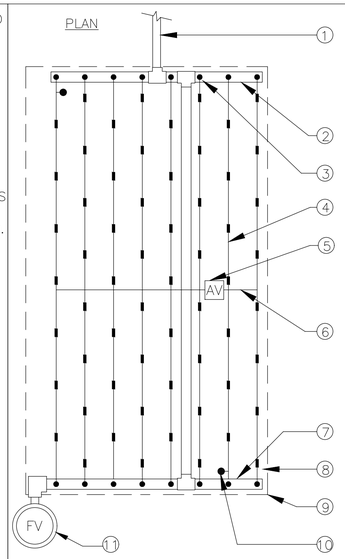
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-17 IRRIGATION DETAILS.DWG (L-17 IRRIGATION DETAILS)



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. MANIFOLD–TO–ELBOW CONNECTION (TYP).
4. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
5. PVC SUPPLY MANIFOLD. EXTEND TO END OF ZONE/EXHAUST HEADER.
6. MANIFOLD–TO–TEE CONNECTION.
7. DRIPLINE LATERAL.
8. AIR/VACUUM RELIEF LATERAL, BLANK POLY TUBING CENTERED ON MOUND OR BERM.
9. AIR/VACUUM RELIEF PLUMBED TO BLANK 5/8" POLY TUBING AT EACH HIGH POINT.
10. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
11. AREA PERIMETER.
12. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

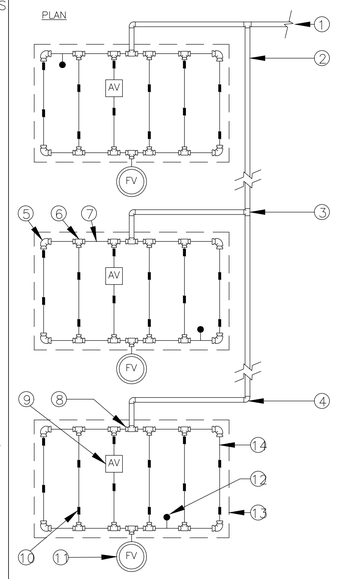
1 TORO DL 2000 CENTER FEED LAYOUT
SCALE: NONE



1. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. MANIFOLD–TO–ELBOW CONNECTION (TYP).
4. DRIPLINE LATERAL.
5. AIR/VACUUM RELIEF VALVE PLUMBED TO BLANK 5/8" TUBING AT EACH HIGH POINT.
6. AIR/VACUUM RELIEF LATERAL, BLANK 5/8" POLY TUBING CENTERED ON MOUND OR BERM.
7. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
8. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
9. AREA PERIMETER.
10. DRIP OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONES.
11. AUTOMATIC FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

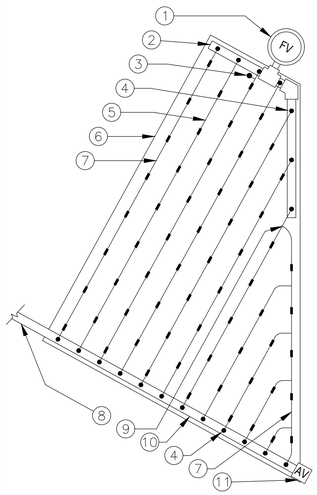
2 TORO DL 2000 END FEED LAYOUT
SCALE: NONE



1. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. PVC TEE (SxSxS).
4. PVC ELL (SxS).
5. TORO TRI–LOC ELL (TL–E).
6. TORO TRI–LOC TEE (TL–T).
7. BLANK 5/8" [16mm] POLY TUBING AT SUPPLY AND FLUSH END OF EACH ISLAND.
8. REFER TO DRIPLINE TO PVC CONNECTION DETAIL.
9. AIR/VACUUM RELIEF VALVE PLUMBED TO TUBING AT HIGH POINT.
10. DRIPLINE LATERAL.
11. MANUAL FLUSH VALVE PLUMBED TO TUBING AT LOW POINT.
12. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
13. ISLAND PERIMETER.
14. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.

NOTE:
1. THE TOTAL LENGTH OF A SINGLE DRIP LINE RUN SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

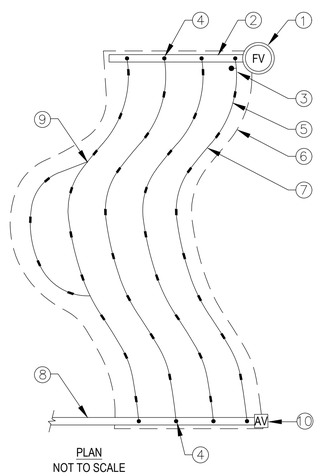
3 TORO DL 2000 ISLAND LAYOUT
SCALE: NONE



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD–TO–ELBOW CONNECTION.
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
8. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. TORO TRI–LOC TEE (TL–T)
10. PVC SUPPLY MANIFOLD.
11. TORO DL2000 AIR/VACUUM RELIEF VALVE (YD–500–34) PLUMBED TO SUPPLY MANIFOLD AT HIGH POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

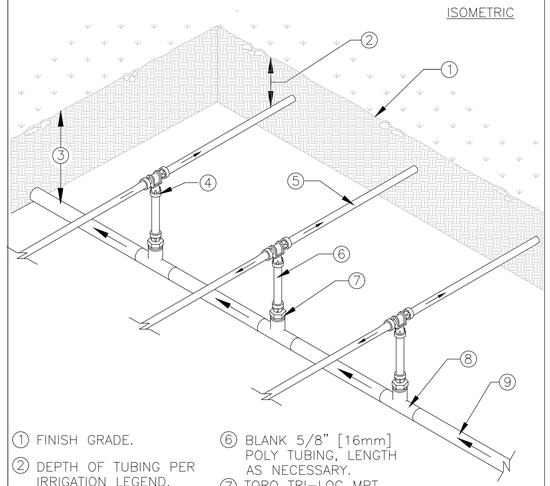
4 TORO DL2000 TRIANGULAR LAYOUT
SCALE: NONE



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD–TO–ELBOW CONNECTION (TYP).
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
8. PVC SUPPLY LINE/HEADER FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. TORO TRI–LOC TEE (TL–T)
10. TORO DL2000 AIR/VACUUM RELIEF VALVE (YD–500–34) PLUMBED TO SUPPLY MANIFOLD AT HIGH POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

5 TORO DL2000 ODD CURVE LAYOUT
SCALE: NONE



1. FINISH GRADE.
2. DEPTH OF TUBING PER IRRIGATION LEGEND.
3. DEPTH OF PVC LATERAL LINE PER IRRIGATION LEGEND
4. TORO TRI–LOC TEE (TL–T)
5. DRIPLINE TUBING.
6. BLANK 5/8" [16mm] POLY TUBING, LENGTH AS NECESSARY.
7. TORO TRI–LOC MPT ADAPTER (TL–M50)
8. PVC TEE (SxSxT) WITH 1/2" [13mm] FPT OUTLET.
9. PVC LATERAL LINE FROM REMOTE CONTROL VALVE.

NOTE:
THE TOTAL LENGTH OF A SINGLE DRIP LINE RUN SHALL NOT EXCEED 300 FT.

6 TORO DL 2000 CENTER FEED MANIFOLD
SCALE: NONE

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2021

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

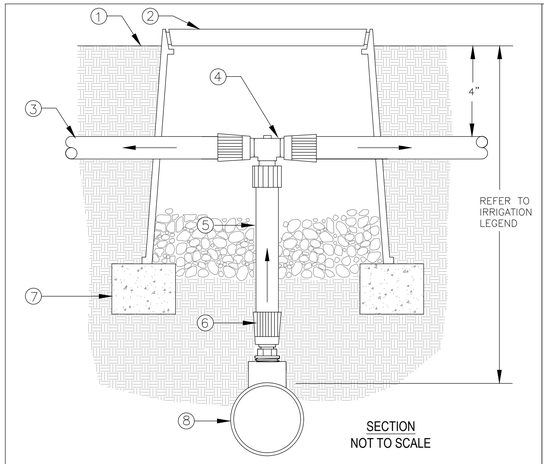
		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION DETAILS
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-18
SHEET 105 OF 140

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-18 IRRIGATION DETAILS.DWG (L-18 IRRIGATION DETAILS)

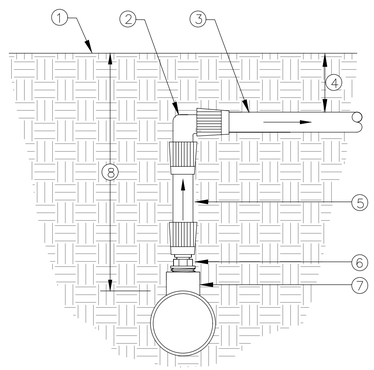


SECTION
NOT TO SCALE

1. FINISH GRADE
2. CARSON 708 OR EQUAL. COLOR: BLACK. USE PURPLE FOR RECYCLED WATER SYSTEMS.
3. DRIPLINE TUBING
4. TORO TRI-LOC TEE
5. BLANK 5/8" [16mm] POLY TUBING, LENGTH AS NECESSARY.
6. TORO TRI-LOC MPT ADAPTER (TL-M50)
7. BRICK (1 OF 2)
8. SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
8. PVC LATERAL LINE SUPPLY. MINIMUM SIZE TO BE 1" UNLESS SIZED DIFFERENTLY ON DRAWINGS. USE SCH 40 PVC 1"x1"x1/2" TEE OR 90° ELBOW.

1 DRIPLINE TO PVC CONNECTION-SMALL PLANTERS

SCALE: NONE

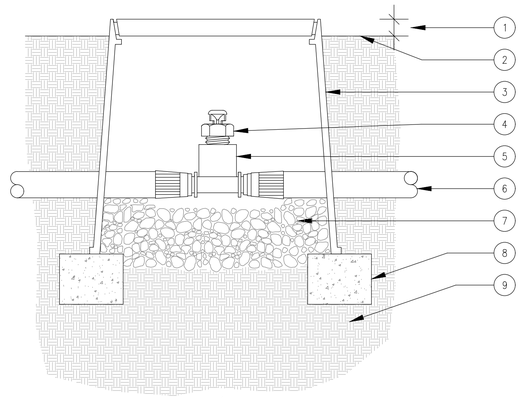


SECTION/ELEVATION
NOT TO SCALE

1. FINISH GRADE
2. TORO TRI-LOC ELBOW (TL-E)
3. DRIPLINE TUBING
4. DEPTH OF TUBING PER IRRIGATION LEGEND.
5. BLANK 5/8" [16mm] POLY TUBING, LENGTH AS NECESSARY.
6. TORO TRI-LOC MPT ADAPTER (TL-M50)
7. SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
8. DEPTH OF PVC LATERAL LINE PER IRRIGATION LEGEND

2 DRIPLINE MANIFOLD TO ELBOW CONNECTION

SCALE: NONE



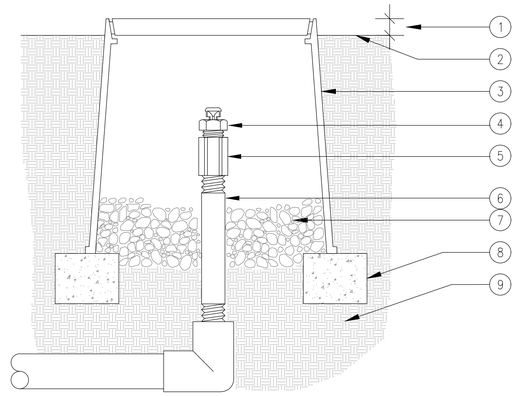
SECTION/ELEVATION

NOTE:
USE ONE AIR/RELIEF VALVE FOR EVERY 7 GPM PER ZONE.
LOCATE AT HIGH POINTS.

1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. 6" ROUND PLASTIC VALVE BOX. HEAT BRAND "AR" ON LID IN 1" HIGH CHARACTERS.
4. TORO DL2000 AIR/VACUUM RELIEF VALVE (YD-500-34).
5. TORO TRI-LOC TEE X 1/2" FPT ADAPTER (TL-T-F50)
6. TORO DL2000 TUBING/ AIR-RELIEF LATERAL.
7. PEA GRAVEL (4" DEEP).
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.

3 AIR VACUUM RELIEF VALVE IN DRIPLINE

SCALE: NONE



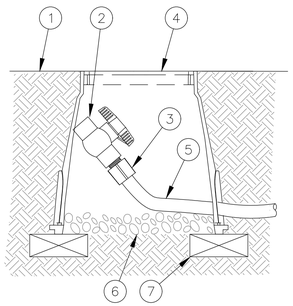
SECTION/ELEVATION

NOTE:
USE ONE AIR/RELIEF VALVE FOR EVERY 7 GPM PER ZONE.
LOCATE AT HIGH POINTS.

1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. 6" ROUND PLASTIC VALVE BOX. HEAT BRAND "AR" ON LID IN 1" HIGH CHARACTERS.
4. TORO DL2000 AIR/VACUUM RELIEF VALVE (YD-500-34).
5. 1/2" SCH 40 PVC COUPLING (TxT)
6. 1/2" SCH 80 PVC NIPPLE (LENGTH AS REQUIRED).
7. PEA GRAVEL (4" DEEP).
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.

4 AIR VACUUM RELIEF VALVE ON PVC ELL

SCALE: NONE

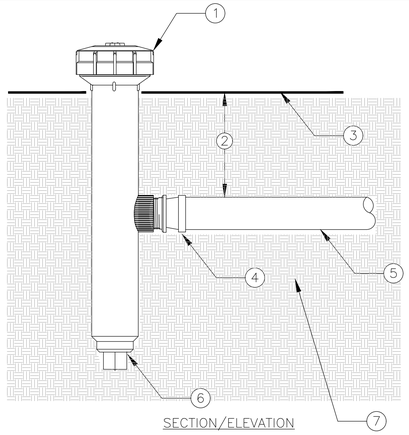


NOTE:
ALLOW A MINIMUM OF PVC HOSE IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

1. FINISH GRADE
2. 1/2" SCH 40 THREADED BALL VALVE.
3. 1/2" SCH 40 MALE ADAPTER.
4. 6" ROUND PLASTIC VALVE BOX.
5. 1" IPS PVC HOSE FROM EXHAUST HEADER OR BLANK DRIP TUBING.
6. PEA GRAVEL SUMP (6" DEEP).
7. BRICK (1 OF 2)

5 DRIPLINE-FLUSH POINT

SCALE: NONE



SECTION/ELEVATION

1. TORO 6" POP UP SPRINKLER WITH SIDE INLET (MODEL 570Z-6P-SI-PRX WITH 5' PRECISION NOZZLE (MODEL 0-T-5-QP) TURNED COMPLETELY OFF WITH ADJUSTMENT SCREW. SPRINKLER SHALL OPERATE AS THE DRIPLINE INDICATOR. USE A MINIMUM OF ONE PER ZONE AND LOCATED AT END OF ZONE.
2. DEPTH OF DRIPLINE. REFER TO IRRIGATION LEGEND.
3. FINISH GRADE.
4. TORO TRI-LOC X 1/2" MPT ADAPTER (TL-M50)
5. DRIPLINE.
6. KEEP PLUG IN SPRINKLER. ONLY USE SIDE INLET.
7. SOIL BACKFILL.

6 DRIPLINE OPERATION INDICATOR

SCALE: NONE

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Lic. Number Linda Lyster
Signature 04/30/22
Renewal Date 10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT IRRIGATION DETAILS
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-19
SHEET 106 OF 140

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-19 IRRIGATION DETAILS.DWG (L-19 IRRIGATION DETAILS)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

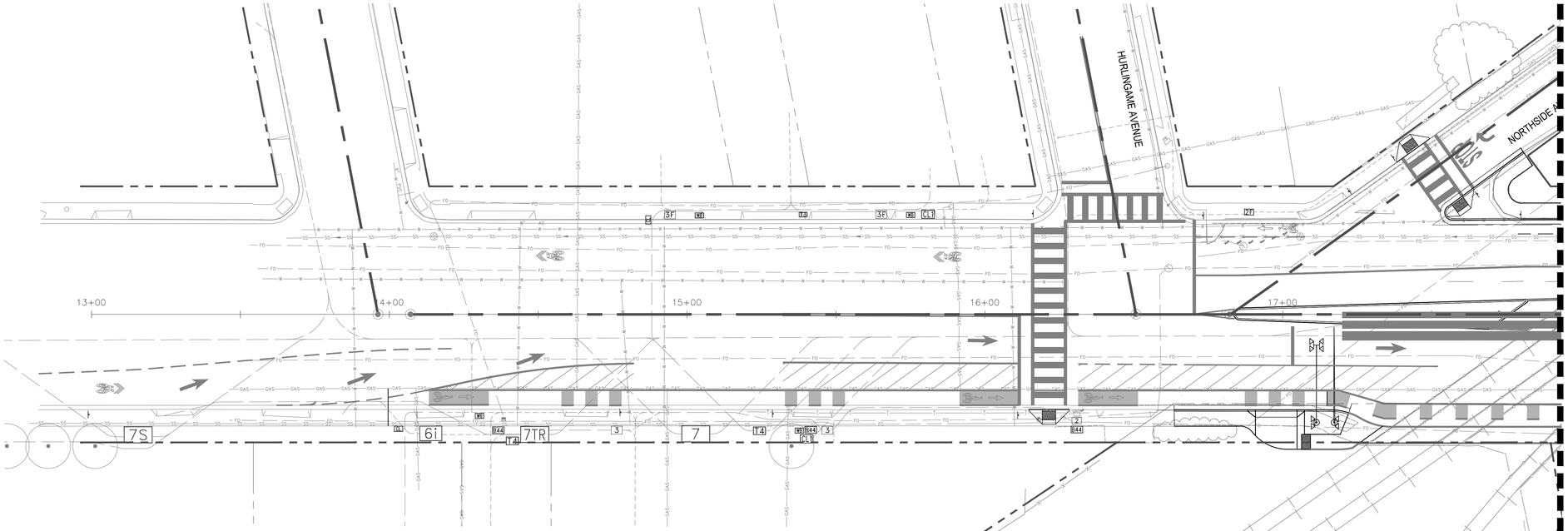
APPROVED:

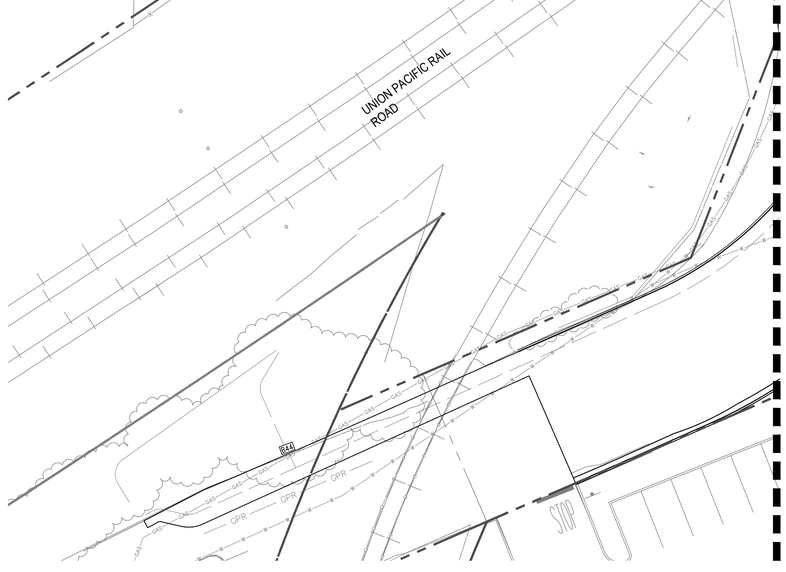
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

PLANTING NOTES

1. REFER TO SPECIFICATIONS FOR SOIL PREPARATION, PLANTING, AND MAINTENANCE PERIOD REQUIREMENTS.
2. CONTRACTOR TO REFER TO PLANT LIST FOR PLANT SIZE AND SPACING. USE TRIANGULAR SPACING UNLESS OTHERWISE NOTED.
3. PLANT QUANTITIES ARE PROVIDE FOR CONTRACTOR'S CONVENIENCE ONLY. CONTRACTOR TO VERIFY ALL PLANT QUANTITIES SHOWN IN PLANTING PLANS.
4. CONTRACTOR TO SUBMIT PLANT SAMPLES FOR APPROVAL BY OWNER"S REPRESENTATIVE, SEE SPECS.
5. LANDSCAPE ARCHITECT TO INSPECT PLANTING LAYOUT PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE 10' X 10' MOCKUP OF ALL PLANT MIXES FOR APPROVAL BY LANDSCAPE ARCHITECT.
6. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES, STRUCTURES, AND IRRIGATION LINES BEFORE DIGGING.
7. GROUNDCOVERS ARE TO EXTEND UNDER TREE AND SHRUB PLANTINGS FOR FULL COVERAGE. SPACE GROUNDCOVER 18" AWAY FROM TREES AND 12" AWAY FROM SHRUBS.
8. SEE GRADING PLAN FOR FINISH GRADES. ALL FINISH GRADES REFER TO FINISH GRADE OF MULCHED LANDSCAPE.
9. ALL PLANTING AREAS & PLANTERS, TO RECEIVE 3" OF MULCH, SEE SPECS.





PLANTING SCHEDULE

TREES

SYMBOL	QTY.	ABBR.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WATER USE
	24	GIN BIL	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	48" BOX	PER PLAN	MODERATE
	21	ACE RUB	ACER RUBRUM 'FRANK JR.'	REDPOINTE RED MAPLE	48" BOX	PER PLAN	MODERATE
	5	ACE RUB	ACER RUBRUM 'FRANK JR.'	REDPOINTE RED MAPLE	36" BOX	PER PLAN	MODERATE
	16	LOP CON	LOPHOSTEMON CONFERTUS	BRISBANE BOX	48" BOX	PER PLAN	MODERATE

BIORETENTION PLANTING - MIDDLEFIELD ROAD

SYMBOL	QTY.	ABBR.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WATER USE
	143	CAL NUT	CALAMAGROSTIS NUTKAENSIS	PACIFIC REEDGRASS	1 GAL	3'-0" OC	MODERATE
	85	CAR TES	CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE	1 GAL	2'-0" OC	MODERATE
	37	JUN EFF	JUNCUS EFFUSUS	PACIFIC RUSH	1 GAL	2'-6" OC	MODERATE
	89	JUN PAT	JUNCUS PATENS	CALIFORNIA GREY RUSH	1 GAL	2'-0" OC	MODERATE
	97	MIM GUT	MIMULUS GUTTATUS	CREEK MONKEYFLOWER	1 GAL	1'-6" OC	MODERATE
	22	SAL SPA	SALVIA SPATHACEA	HUMMINGBIRD SAGE	5 GAL	4'-0" OC	MODERATE

PLANT QUANTITIES → XX | ACE RUB → PLANT TYPE ABBREVIATION
48" BOX → SIZE OF PLANT CONTAINER

PLANT CALL-OUT KEY

BULB-OUT PLANTING - MIDDLEFIELD ROAD

SYMBOL	QTY.	ABBR.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WATER USE
	125	BOU GRA	BOUTELOUA GRACILIS	BLUE GRAMA GRASS	1 GAL	1'-0" OC	LOW
	45	CEA CEN	CEANOTHUS 'CENTENNIAL'	CENTENNIAL CEANOTHUS	5 GAL	4'-0" OC	LOW
	26	FES CAL	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	1 GAL	2'-0" OC	LOW

BIORETENTION PLANTING - REDWOOD JUNCTION

SYMBOL	QTY.	ABBR.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WATER USE
	108	CAL NUT	CALAMAGROSTIS NUTKAENSIS	PACIFIC REEDGRASS	1 GAL	3'-0" OC	MODERATE
	110	JUN EFF	JUNCUS EFFUSUS	PACIFIC RUSH	1 GAL	2'-6" OC	MODERATE
	56	SAL SPA	SALVIA SPATHACEA	HUMMINGBIRD SAGE	5 GAL	4'-0" OC	MODERATE

WALKWAY PLANTING - REDWOOD JUNCTION

SYMBOL	QTY.	ABBR.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WATER USE
	21	CEA CEN	CEANOTHUS 'CENTENNIAL'	CENTENNIAL CEANOTHUS	5 GAL	4'-0" OC	LOW

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Matthew Taylor Lindsey
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING SCHEDULE & PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-20
SHEET 107 OF 140

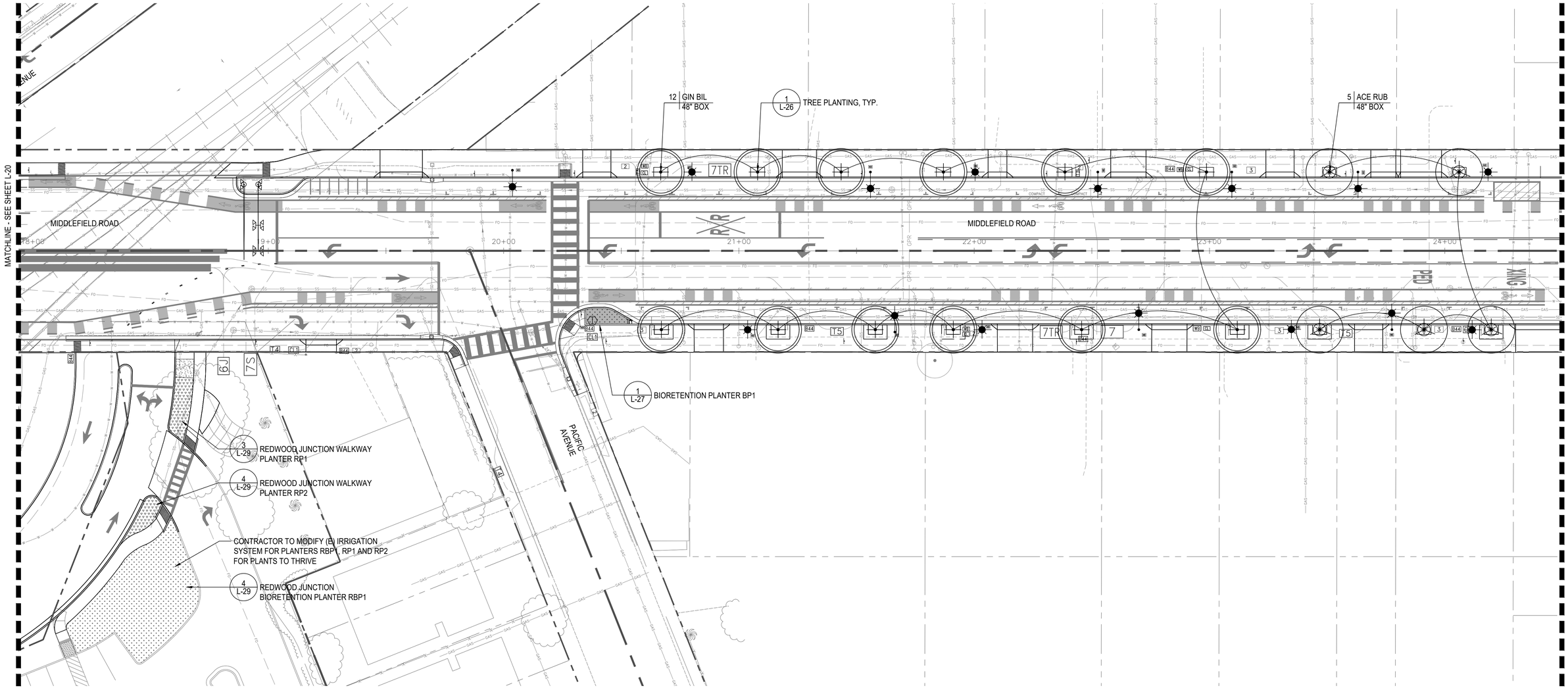
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-20 PLANTING SCHEDULE & PLAN - 1.DWG (L-20 PLANTING SCHEDULE & PLAN)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



SHEET NOTES

1. SEE PLANTING SCHEDULE ON SHEET L-20 PLANTING SCHEDULE & PLAN.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-21 PLANTING PLAN - 2.DWG (L-21 PLANTING PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Nicholas Lincoln Lazzaro Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

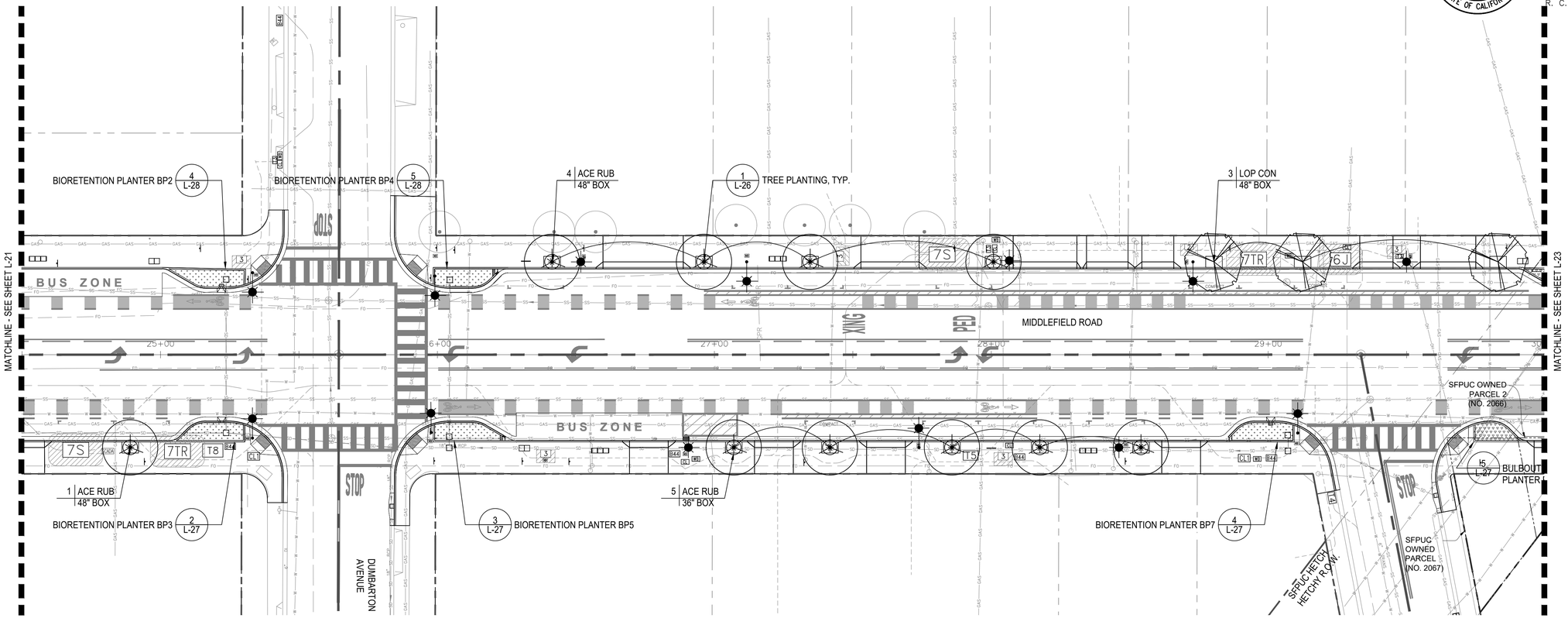
L-21
SHEET 108 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE PLANTING SCHEDULE ON SHEET L-20 PLANTING SCHEDULE & PLAN.

0 10' 20' 40'

N

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Heather Lincoln
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-22
SHEET 109 OF 140

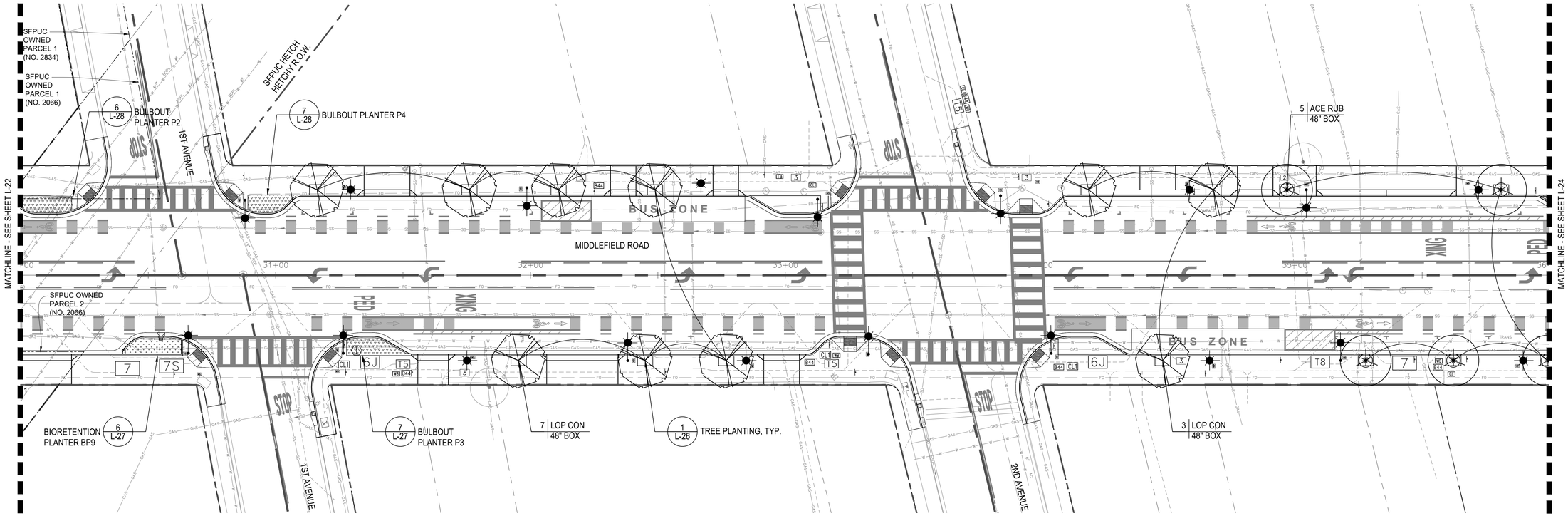
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-22 PLANTING PLAN - 3.DWG (L-22 PLANTING PLAN)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



SHEET NOTES

1. SEE PLANTING SCHEDULE ON SHEET L-20 PLANTING SCHEDULE & PLAN.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-23 PLANTING PLAN - 4.DWG (L-23 PLANTING PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING PLAN
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

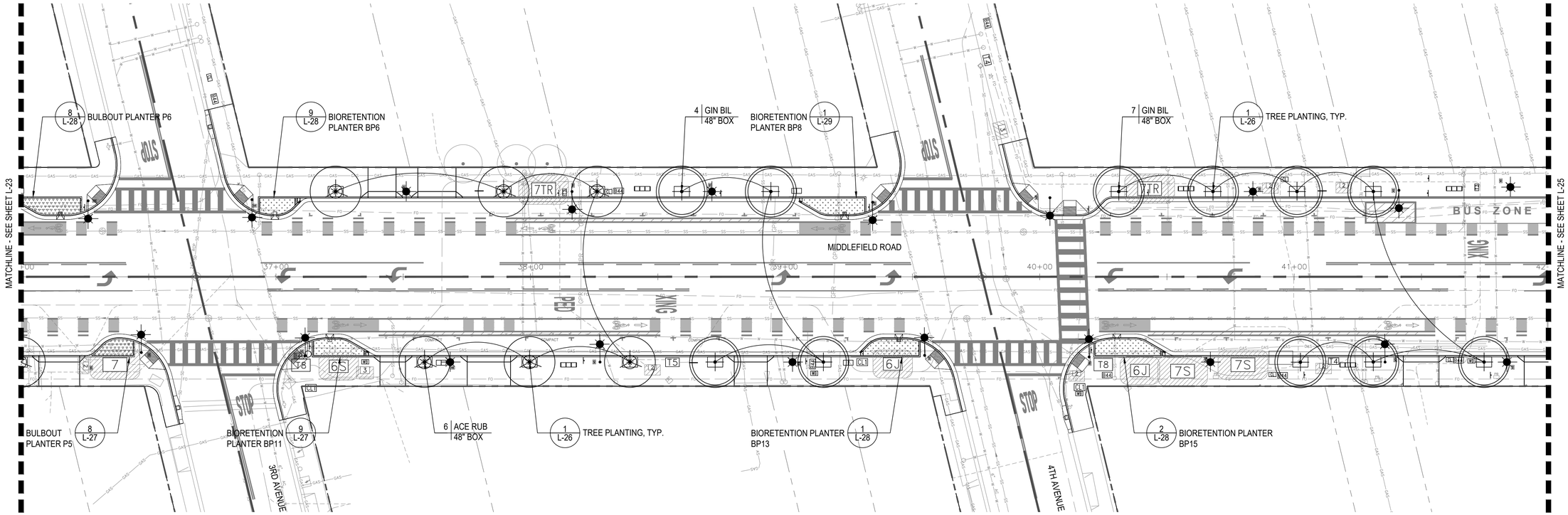
L-23
SHEET 110 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE PLANTING SCHEDULE ON SHEET L-20 PLANTING SCHEDULE & PLAN.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-24 PLANTING PLAN - 5.DWG (L-24 PLANTING PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Certificate Number
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO • PUBLIC WORKS •

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

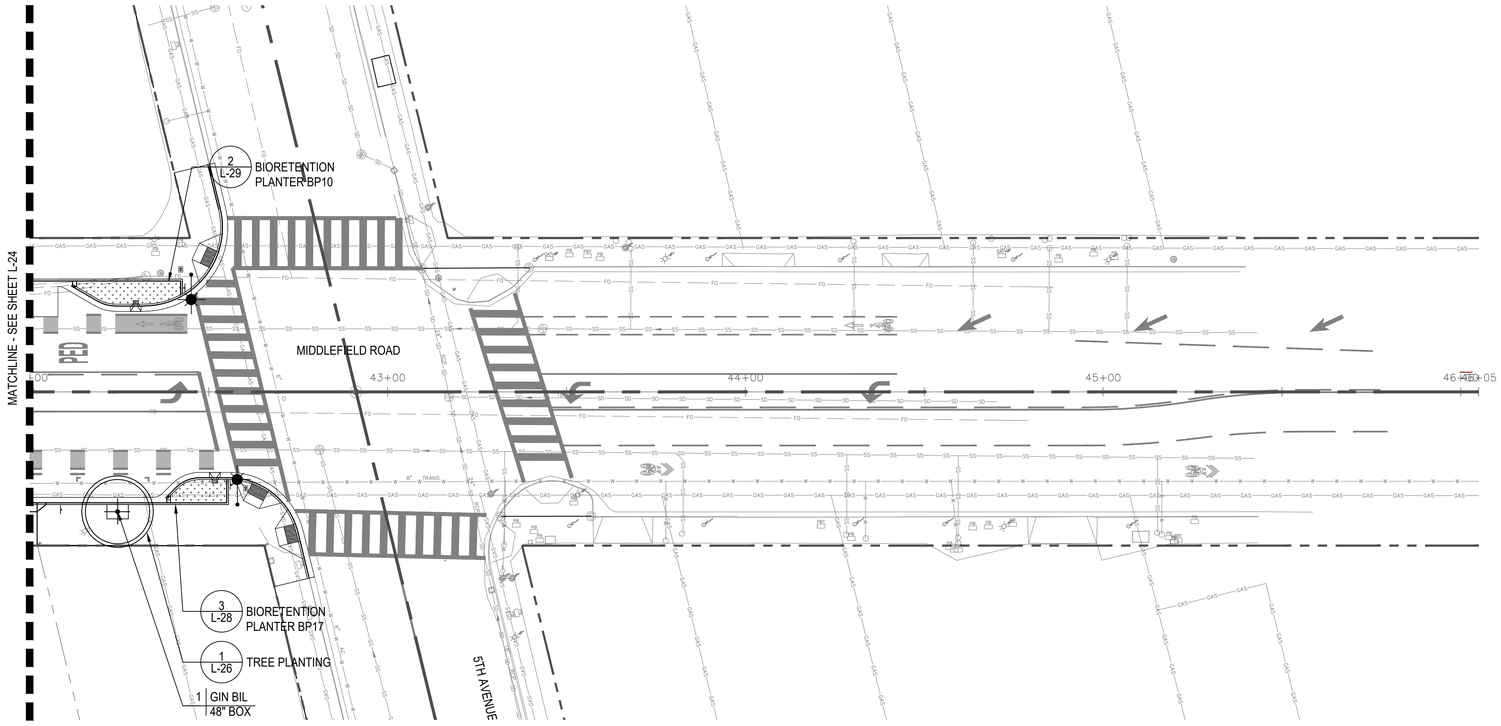
L-24
SHEET 111 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



SHEET NOTES

1. SEE PLANTING SCHEDULE ON SHEET L-20 PLANTING SCHEDULE & PLAN.

0 10' 20' 40'

N

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-25 PLANTING PLAN - 6.DWG (L-25 PLANTING PLAN)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Heather Lineberg
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING PLAN	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-25
SHEET 112 OF 140

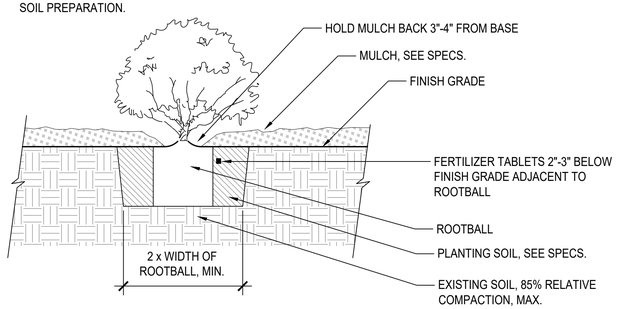
REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTE:
1. SEE SPECS FOR MORE INFORMATION REGARDING PLANT INSTALLATION AND SOIL PREPARATION.



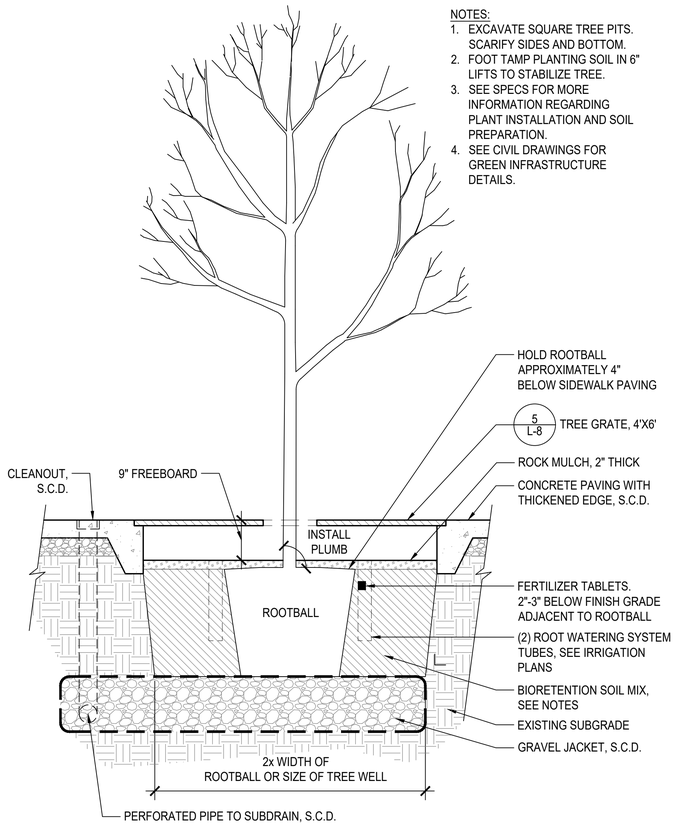
3 SHRUB PLANTING
SCALE: 1" = 1'-0"

NOTES:
1. SEE PLANTING PLAN FOR SPACING BY PLANT SPECIES.
2. INSTALL TRIANGULATED PLANT LAYOUT, UNLESS OTHERWISE SHOWN ON PLANS.

PLANT SPACING	A	B	C
12"	6"	10"	12"
1'-6"	9"	1'-4"	1'-6"
2'-0"	12"	1'-9"	2'-0"
2'-6"	1'-3"	2'-2"	2'-6"
3'-0"	1'-6"	2'-7"	3'-0"
3'-6"	1'-9"	3'-0"	3'-6"
4'-0"	2'-0"	3'-6"	4'-0"
4'-6"	2'-3"	3'-11"	4'-6"
5'-0"	2'-6"	4'-4"	5'-0"

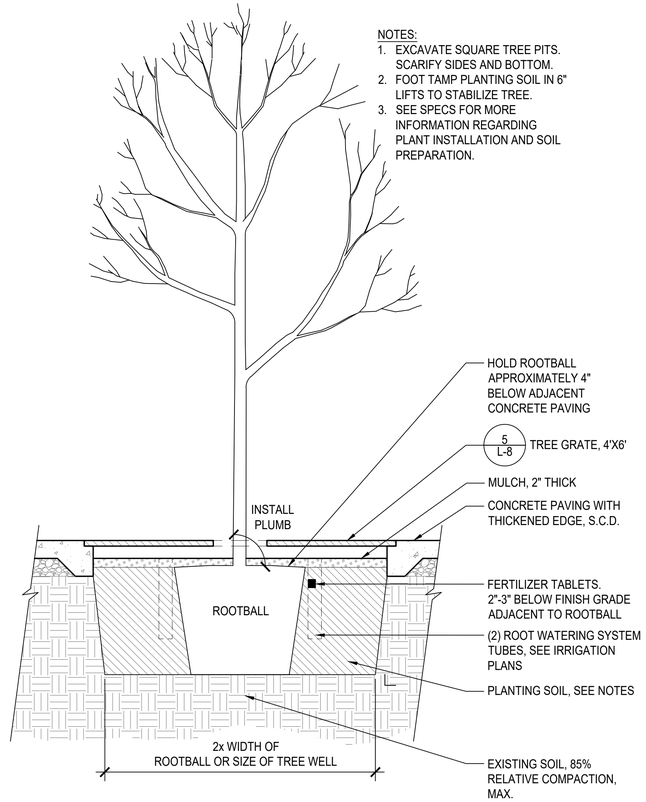
4 PLANTING LAYOUT
NTS

NOTES:
1. EXCAVATE SQUARE TREE PITS. SCARIFY SIDES AND BOTTOM.
2. FOOT TAMP PLANTING SOIL IN 6" LIFTS TO STABILIZE TREE.
3. SEE SPECS FOR MORE INFORMATION REGARDING PLANT INSTALLATION AND SOIL PREPARATION.
4. SEE CIVIL DRAWINGS FOR GREEN INFRASTRUCTURE DETAILS.



2 TREE WELL WITH GRAVEL JACKET
NTS

NOTES:
1. EXCAVATE SQUARE TREE PITS. SCARIFY SIDES AND BOTTOM.
2. FOOT TAMP PLANTING SOIL IN 6" LIFTS TO STABILIZE TREE.
3. SEE SPECS FOR MORE INFORMATION REGARDING PLANT INSTALLATION AND SOIL PREPARATION.



1 TREE PLANTING
NTS

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Master Lincense
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING DETAILS	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

L-26
SHEET 113 OF 140

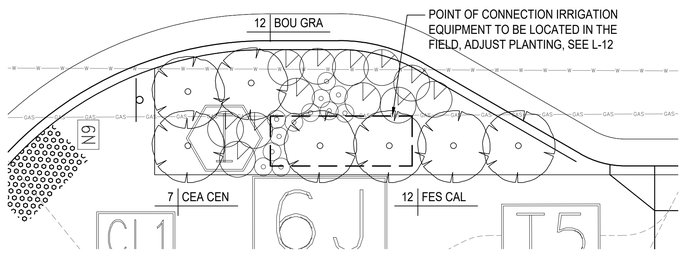
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-26 PLANTING DETAILS.DWG (L-26 PLANTING DETAILS)

APPROVED:

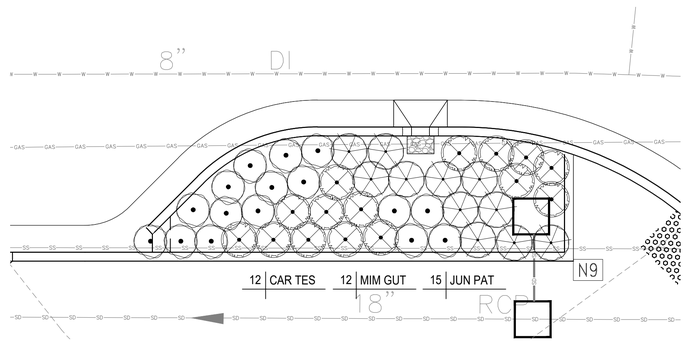
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

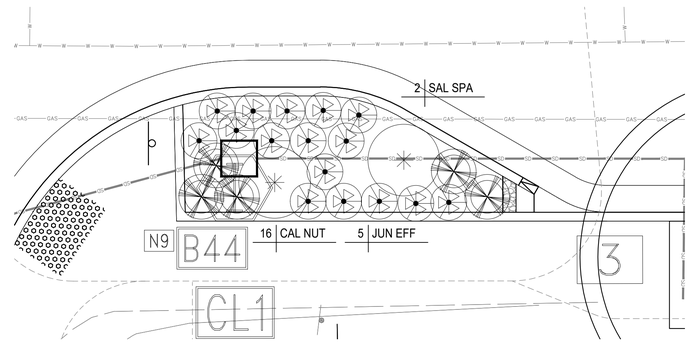
REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



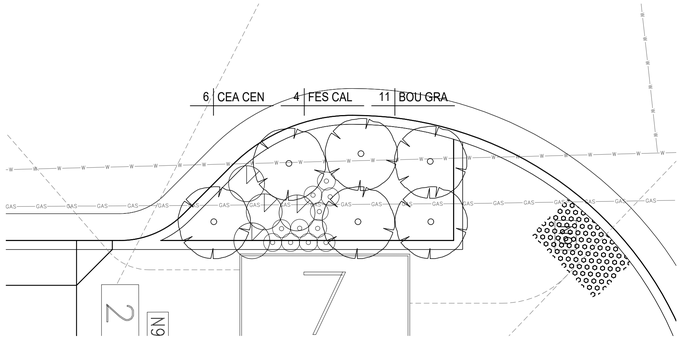
7 BULB-OUT PLANTER P3
1/4" = 1'0"



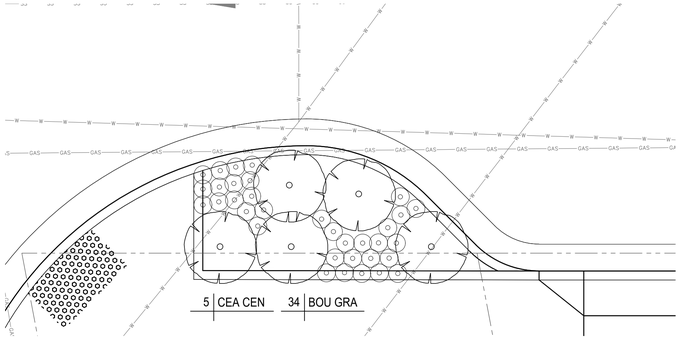
4 BIORETENTION PLANTER BP7
1/4" = 1'0"



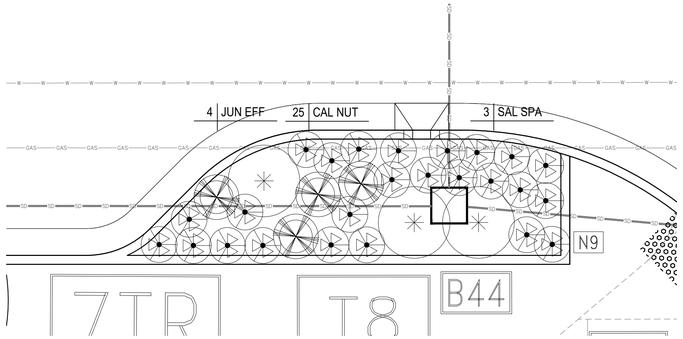
1 BIORETENTION PLANTER BP1
1/4" = 1'0"



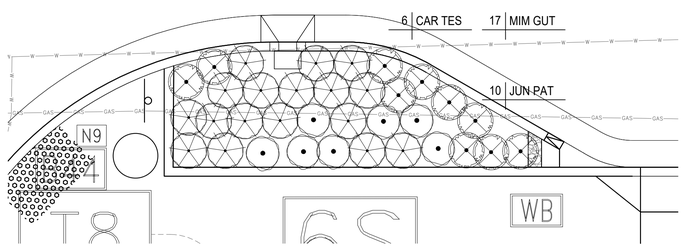
8 BULB-OUT PLANTER P5
1/4" = 1'0"



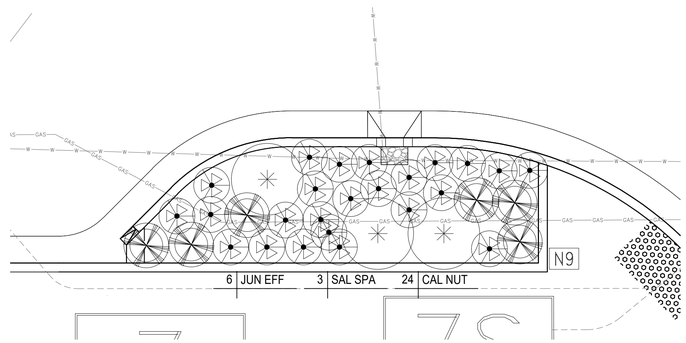
5 BULB-OUT PLANTER P1
1/4" = 1'0"



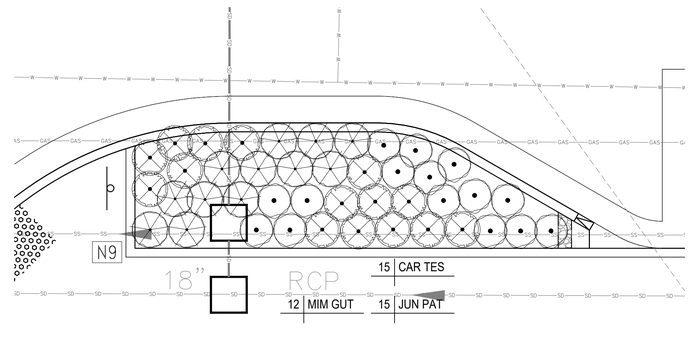
2 BIORETENTION PLANTER BP3
1/4" = 1'0"



9 BIORETENTION PLANTER BP11
1/4" = 1'0"



6 BIORETENTION PLANTER BP9
1/4" = 1'0"



3 BIORETENTION PLANTER BP5
1/4" = 1'0"

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA\PLOT\L-27 PLANTING DETAILS.DWG (L-27 PLANTING DETAILS)

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT Master Licensee No. 4043 Signature 04/30/22 Renewal Date 10/16/20 Date STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING DETAILS
		CHECKED BY: JI	
		DRAWN BY: LY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

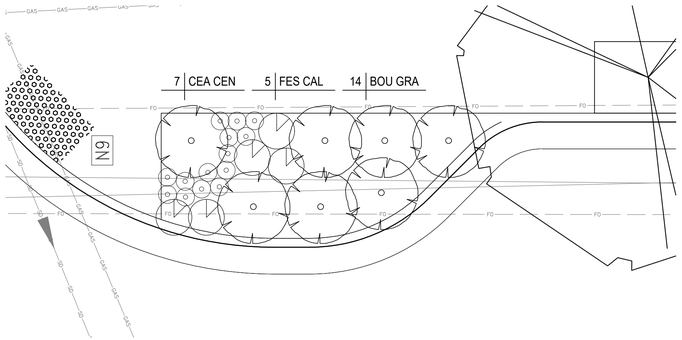
L-27
SHEET 114 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

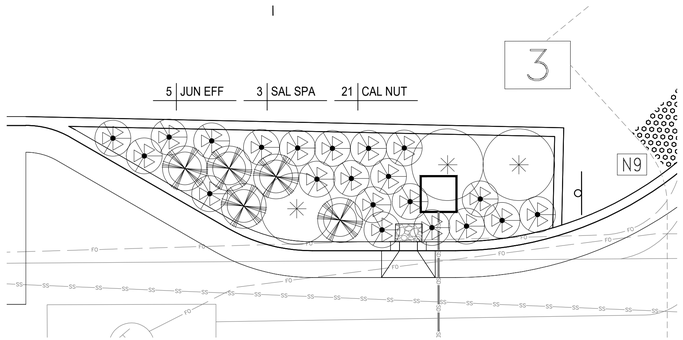
APPROVED:

DATE: 10/16/2020

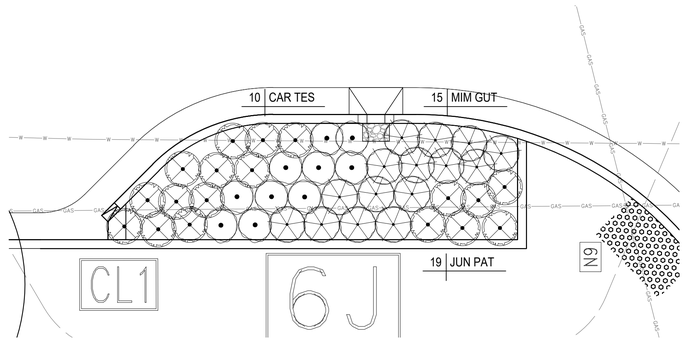
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



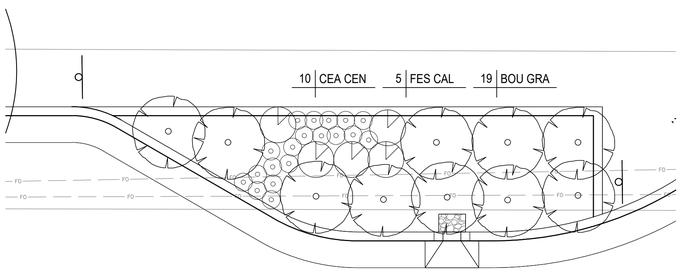
7 BULB-OUT PLANTER P4
1/4" = 1'0"



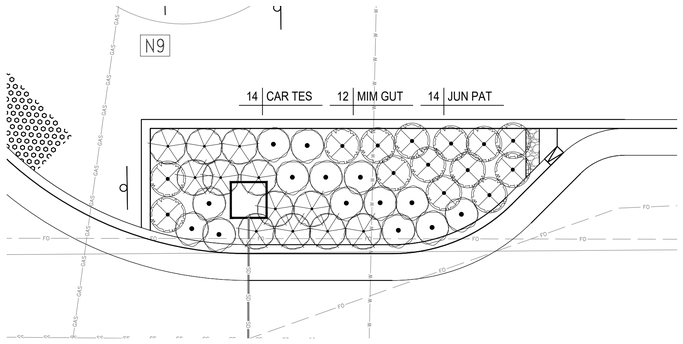
4 BIORETENTION PLANTER BP2
1/4" = 1'0"



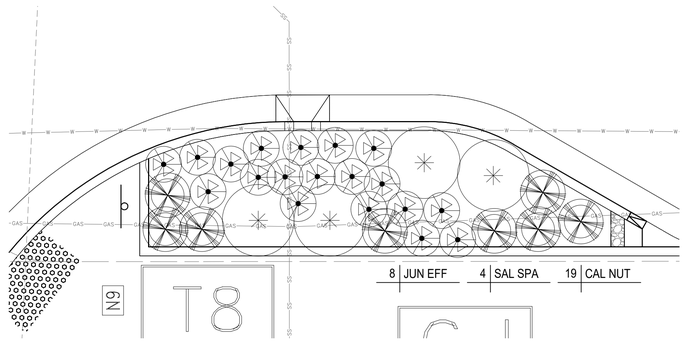
1 BIORETENTION PLANTER BP13
1/4" = 1'0"



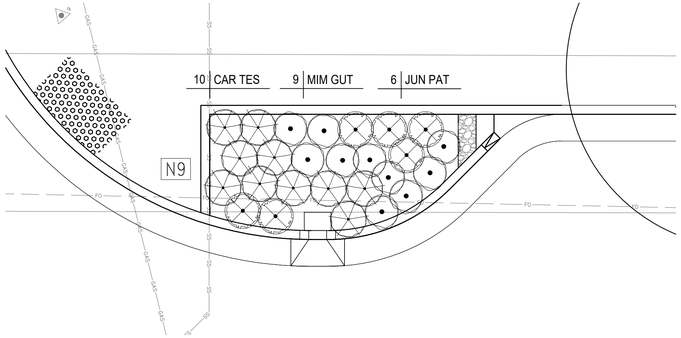
8 BULB-OUT PLANTER P6
1/4" = 1'0"



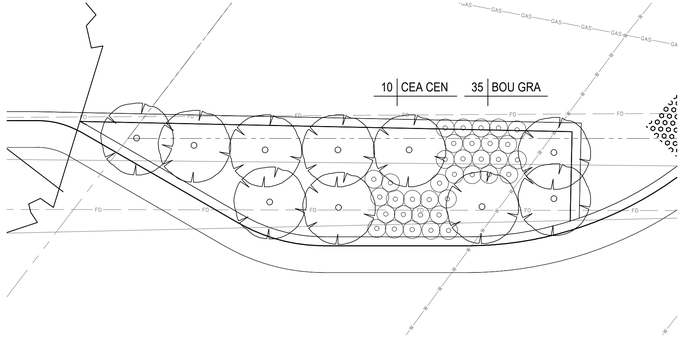
5 BIORETENTION PLANTER BP4
1/4" = 1'0"



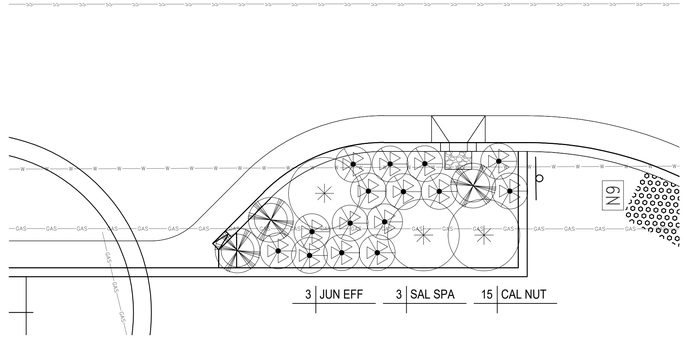
2 BIORETENTION PLANTER BP15
1/4" = 1'0"



9 BIORETENTION PLANTER BP6
1/4" = 1'0"



6 BULB-OUT PLANTER P2
1/4" = 1'0"



3 BIORETENTION PLANTER BP17
1/4" = 1'0"

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Master Lincense
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING DETAILS
		CHECKED BY: JI	SCALE: AS SHOWN
		DRAWN BY: LY	DATE: 10-16-2020
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	FILE NO.: 1/E4931 555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-28
SHEET 115 OF 140

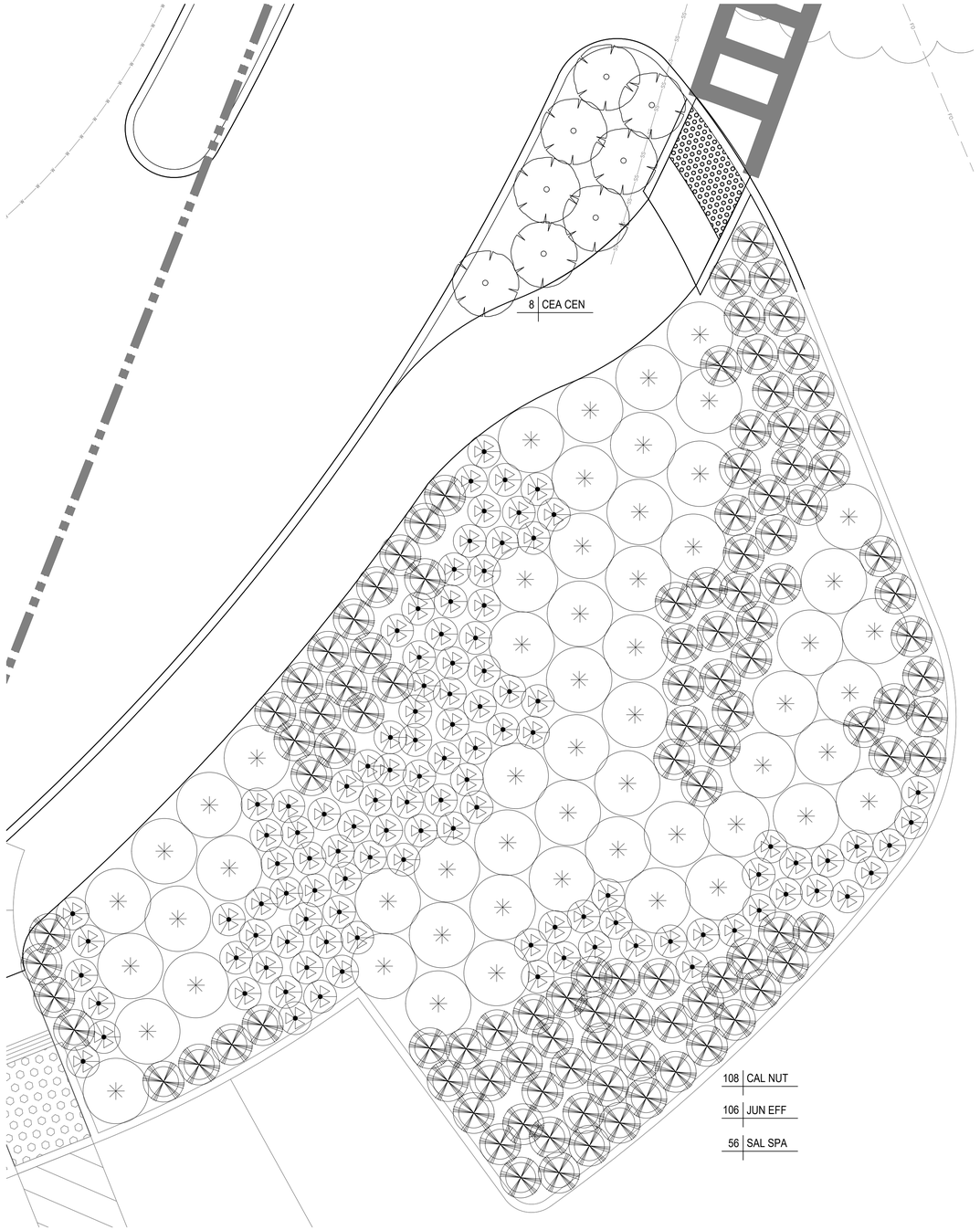
FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA PLOT\L-28 PLANTING DETAILS.DWG

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

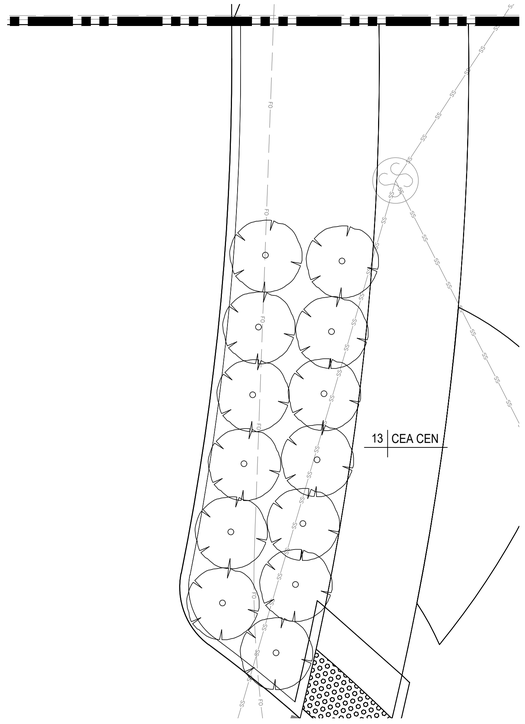
APPROVED:

DATE: 10/16/2020

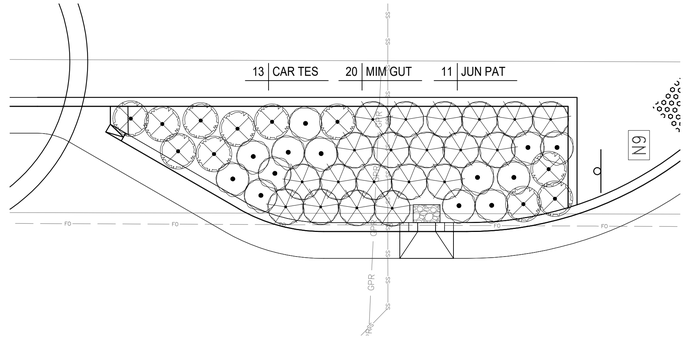
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



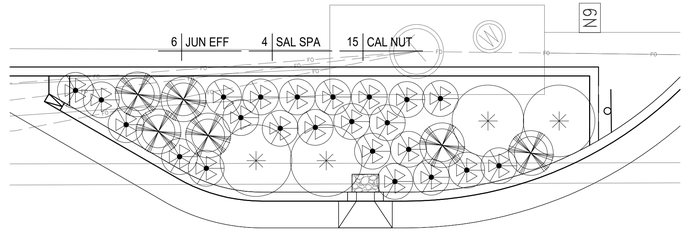
4 REDWOOD JUNCTION BIORETENTION PLANTER RBP1 & PLANTER RP2
1/4" = 1'0"



3 REDWOOD JUNCTION PLANTER RP1
1/4" = 1'0"



1 BIORETENTION PLANTER BP8
1/4" = 1'0"



2 BIORETENTION PLANTER BP10
1/4" = 1'0"

811 Know what's below. Call 811 before you dig.

rhaa
LANDSCAPE ARCHITECTURE + PLANNING
323 Geary St., Suite #602, San Francisco, CA 94102
T 415 861 7900 F 415 861 7908 www.rhaa.com

LICENSED LANDSCAPE ARCHITECT
Christopher Lincoln Taylor
Signature
04/30/22
Renewal Date
10/16/20
Date
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

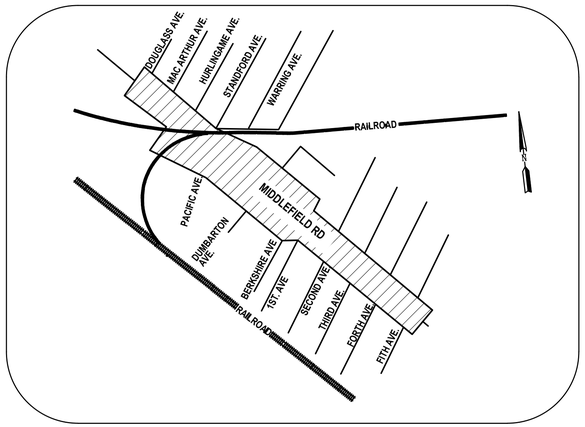
		DESIGNED BY: LY	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT PLANTING DETAILS	SCALE: AS SHOWN
		CHECKED BY: JI		DATE: 10-16-2020
		DRAWN BY: LY		FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

L-29
SHEET 116 OF 140

FILENAME: S:\ACTIVE JOBS\MIDDLEFIELD ROAD STREETSCAPE IMPROVEMENTS 15033A\CAD\CD\RHAA PLOT\L-29 PLANTING DETAILS.DWG (L-29 PLANTING DETAILS)

JOINT TRENCH COMPOSITE
FOR
MIDDLEFIELD ROAD
REDWOOD CITY, CALIFORNIA



VICINITY MAP
REDWOOD CITY, CA.

APPROVED:

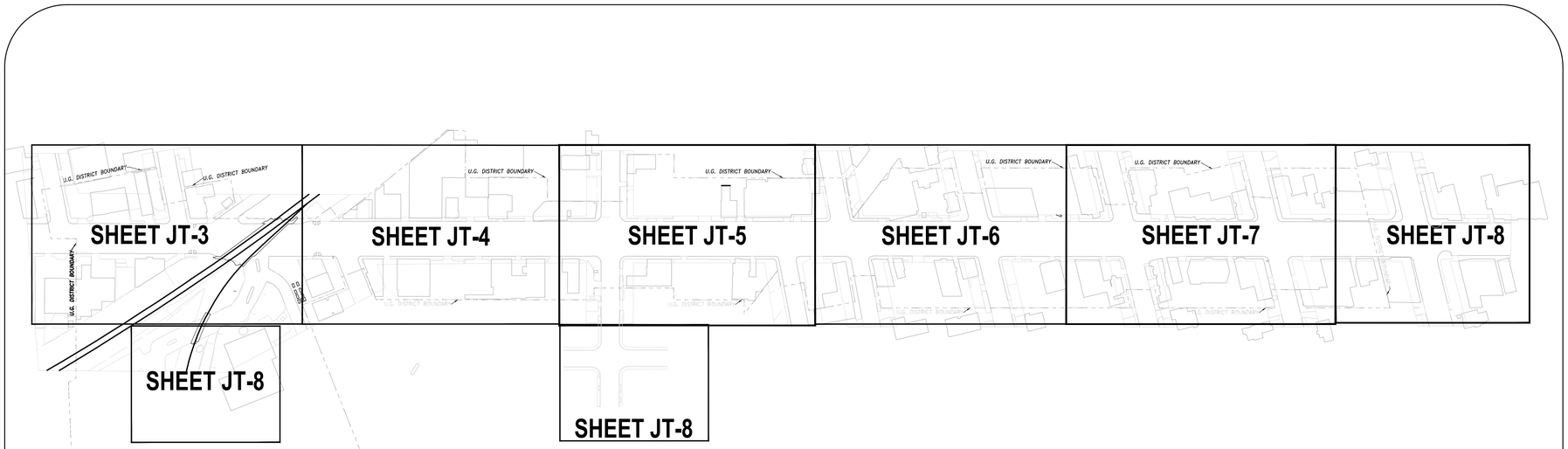
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

BC – BACK OF CURB
BW – BACK OF WALK
C – EXISTING CATV
GAS – EXISTING PG&E GAS
E – EXIST. PG&E ELECTRIC
EUG – EXIST. UNDERGROUND
FC – FACE OF CURB
JT – JOINT TRENCH
PL – PROPERTY LINE
LG – LIP OF GUTTER
SL – EXISTING STREET LIGHT
TEL – EXISTING TELEPHONE
UG – UNDERGROUND

ABBREVIATIONS



SHEET MAP
NOT TO SCALE

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

UTILITY APPROVALS

UTILITY	APPROVED BY	DATE
PG&E ELECTRIC		
AT&T (PHONE)		
COMCAST (CATV)		
CITY ENGINEER		

THESE PLANS WERE PREPARED IN CONJUNCTION WITH THE FOLLOWING PLANS:

	RECEIVED	APPROVED
CIVIL IMPROVEMENT PLANS/GRADING PLANS	09-17-2020	
PANEL SIZES & SERVICE LOCATIONS	10-24-2106	BY OTHERS
PG&E DESIGN (ELECTRIC)	12-28-2017	FINAL
TELEPHONE	02-19-2018	FINAL
COMCAST	11-09-2107	FINAL
WAVE BROADBAND	12-04-2107	FINAL
CENTURY LINK – AS BUILTS	10-26-2017	N/A
MCI/VERIZON – AS BUILTS	06-12-2017	N/A
C.L.E.C. – FIBER	12-12-2017	FINAL
LANDSCAPE	03-30-2018	
LIGHT LOCATIONS		

VIZION UTILITY PARTNERS is not responsible for any subsequent changes or revisions.

Other utilities shown are approximate and based on field survey and available utility information. It is the contractors' responsibility to verify the actual location and extent of utilities prior to the commencement of work. Physical verification of utility locations shall be performed by careful probing or hand digging in accordance with Article 6 of the CAL/OSHA construction safety orders.

OWNER:
COUNTY OF SAN MATEO
555 COUNTY CENTER 5TH FLOOR
REDWOOD CITY, CA. 94063
650-363-4100

PG&E PM#S:
ELECTRIC: 74004302

DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHIES
No. 28429
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)
		DRAWN BY: M.W.	JOINT TRENCH COMPOSITE - TITLE SHEET
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-19-2020
FILE NO.: 15-646

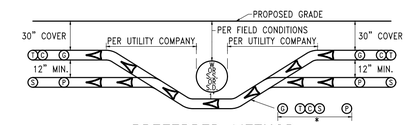
VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4
VIZION DATE LAST WORKED ON: 10-19-2020
JT-1
SHEET 117 OF 140

FILENAME: J:\UNOPSNX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RDA WORK\PS 15-646 JT VIZION.DWG (JT-1)

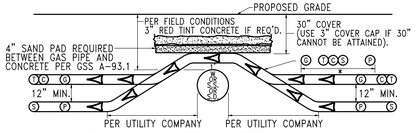
WORK RESPONSIBILITY
JOINT TRENCH

	PG&E ELECTRIC	PG&E GAS	TELEPHONE	COMCAST	WAVE BROADBAND	C.L.E.C.	VERIZON	COUNTY'S CONTRACTOR
TRENCHING								
EXCAVATE & BACKFILL	○	○	○	○	○	○	○	●
*ELECTRIC CABLE								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
ELECTRIC CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
ELECTRIC BOXES								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
ELECTRIC TRANSFORMER PADS								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
ELECTRIC SWITCHGEAR & TRANSFORMER								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
TELEPHONE CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
TELEPHONE CABLE								
SUPPLY & INSTALL	○	○	●	○	○	○	○	○
TELEPHONE SPLICE BOXES								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
WAVE BROADBAND								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
WAVE B.B. BOXES								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
WAVE CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
VERIZON CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
C.A.T.V. CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
C.A.T.V. SPLICE BOXES								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
C.L.E.C CONDUIT								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
C.L.E.C. SPLICE BOXES								
SUPPLY & INSTALL	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●
DIRECTIONAL DRILL / JACK AND BORE								
SUPPLY & INSTALL CONDUIT	○	○	○	○	○	○	○	●
EXCAVATION	○	○	○	○	○	○	○	●

● SYMBOL DESIGNATES THE WORK TO BE PERFORMED BY THE RESPECTIVE CONTRACTOR & UTILITY COMPANIES.
○ NOT APPLICABLE UNLESS OTHERWISE SPECIFIED
* PG&E TO PULL CABLE INTO ENERGIZED ENCLOSURES



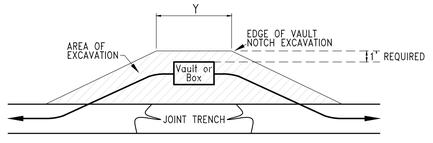
PREFERRED METHOD
JOINT TRENCH UNDER WATER & S.S. & S.D.
WIDTH PER SIZE & NUMBER OF EACH UTILITY. PG&E AND CITY INSPECTOR TO DETERMINE METHOD OF CROSSING.



JOINT TRENCH OVER WATER & S.S. & S.D.
***WIDTH PER SIZE & NUMBER OF EACH UTILITY. PG&E AND CITY INSPECTOR TO DETERMINE METHOD OF CROSSING.**

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.

TRENCHING CONTRACTOR SHALL NOT ASSUME THAT EITHER OF THE ABOVE DETAILS WILL BE ACCEPTABLE TO PG&E YOU ARE REQUIRED TO CONTACT THE LOCAL PG&E ENGINEERING OFFICE WITH ANY ISSUE RELATING TO COVERS LESS THAN MINIMUM OR COVERS REQUIRING SHORING. CONCRETE CAPPING IS ONLY ACCEPTABLE WHERE NO OTHER SOLUTION IS POSSIBLE AND ONLY WHEN CERTAIN CRITERIA ARE MET AND ONLY WITH PG&E APPROVAL.

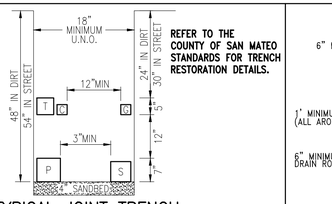


	BOX EXCAVATION	
PRIMARY BOX SIZE	"Y"	NOTE:
3' x 5'	7'	DISTANCE VARIES PER FIELD CONDITIONS
4'-6" x 8'-6"	11'	

TYPICAL PG&E PRIMARY BOX
EXCAVATION DETAIL

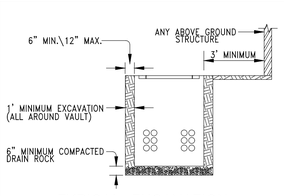
CONSTRUCTION NOTES:

1. ALL TRENCHING, BACKFILLING AND INSTALLATION BY CONTRACTOR MUST COMPLY WITH PG&E UO STANDARD S5453 (EFFECTIVE DATE 7-5-2006).
2. ALL WORK MUST COMPLY WITH P.G. & E., TELEPHONE, C.A.T.V., STANDARDS AND PRACTICES. ALL WORK MUST BE INSPECTED AND APPROVED BY RESPECTIVE INSPECTORS. RANDOM SOIL SAMPLES SHALL BE TAKEN FROM A MINIMUM OF THREE LOCATIONS PER 1,000' OF TRENCH. 100% OF THE SAMPLE MUST PASS THROUGH A ½" SIEVE AND 75% MUST PASS THROUGH A #4 SCREEN. ADDITIONAL SAMPLES MUST BE TAKEN IF EXISTING SOIL CONDITIONS CHANGE AND IS TO BE AT THE DISCRETION OF THE PG&E REPRESENTATIVE ON SITE. THE SOILS MUST NOT CONTAIN ANY ROCKS THAT HAVE SHARP EDGES OR THAT MAY OTHERWISE BE ABRASIVE. THE SOILS MUST NOT CONTAIN CLODS LARGER THAN ½" IF TO BE USED AS SHADING, BEDDING OR LEVELING MATERIALS. COMPACTION REQUIREMENTS MUST MEET ANY APPLICABLE P.G.& E. FEDERAL, STATE, COUNTY OR LOCAL REQUIREMENTS. ANY NATIVE SOILS OR IMPORT MATERIALS USED MUST NOT HINDER THOSE EFFORTS.
3. BACKFILL SHALL BE APPROVED BY THE UTILITY COMPANIES AND THE COUNTY OF SAN MATEO. COMPACTION WILL BE TESTED AND PASSED BY THE SOILS ENGINEER.
4. IF SOIL IS NOT ROCK FREE, ADD 4" DEPTH OF TRENCH FOR SAND BEDDING.
5. VERIFY SPLICE BOX EXCAVATION SIZES WITH SUPPLIER(S).
6. THE TRENCHING CONTRACTOR SHALL COORDINATE THE UTILITY COMPANIES' INSTALLATION.
7. CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THE PROJECT IMPROVEMENT PLANS AND CONDUCT HIS WORK ACCORDINGLY.
8. IT IS THE TRENCHING CONTRACTOR'S RESPONSIBILITY TO PROTECT IN PLACE ALL EXISTING FACILITIES. NO EXTRA PAYMENT WILL BE CONSIDERED FOR CROSSING OTHER SYSTEMS.
9. VIZION UTILITY PARTNERS DESIGN ASSUMES NO RESPONSIBILITY FOR THE PROJECT CONDITIONS. THESE DRAWINGS WERE PREPARED USING DATA SUPPLIED BY PG&E, TELEPHONE, C.A.T.V., IMPROVEMENT PLANS AND THE COUNTY'S VARIOUS "AS BUILT" INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PHYSICALLY REVIEW THE PROJECT PRIOR TO SUBMITTING HIS BID.
10. CONTRACTOR WILL COMPLY WITH ALL LAWS, ORDINANCES AND REGULATIONS. CONTRACTOR SHALL BE FAMILIAR WITH O.S.H.A., INDUSTRIAL SAFETY ORDERS AND SHALL CONDUCT HIS WORK ACCORDINGLY. WHEN WORKING NEAR ENERGIZED OR "HOT" EQUIPMENT, THE UTILITY OWNER SHALL BE NOTIFIED TO SUPPLY THE APPROPRIATE MAN POWER. PUBLIC SAFETY AND TRAFFIC CONTROL MEASURES ARE THE CONTRACTOR'S RESPONSIBILITY.
11. THE CONTRACTOR SHALL PROTECT CONSTRUCTION STAKING. HE SHALL COORDINATE STAKING WITH THE PROJECT'S CIVIL ENGINEER.
12. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) TWO WORKING DAYS PRIOR TO START OF WORK.
13. CONTRACTOR SHALL NOTIFY INSPECTORS OF ANY POTENTIAL CONFLICTS PRIOR TO START OF WORK.
14. THIS PLAN IS TO BE USED FOR SOLE PURPOSE OF DIGGING THE JOINT TRENCH. SEE PG&E, AT&T, AND COMCAST PLANS FOR EXACT SIZE AND NUMBER OF CONDUITS INSTALLED IN THE JOINT TRENCH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE CORRECT NUMBER, SIZE AND TYPES OF CONDUITS ARE INSTALLED PER THE ENGINEERED PLANS BY EACH UTILITY COMPANY.
15. NOTE PLANS ISSUED AT THE PRE-CONSTRUCTION MEETING MAY BE SUBJECT TO REVISIONS, IF FINAL PLANS FROM EACH UTILITY COMPANY WERE NOT AVAILABLE AT THE START OF CONSTRUCTION.
16. WATER, SEWER, DRAINS, SANITARY WASTE, FUELS (INCLUDING DIESEL AND GASOLINE), OIL, PROPANE AND OTHER VOLATILE HEAVIER THAN AIR GASES, SPRINKLER, IRRIGATION, STEAM AND OTHER "WET" FACILITIES SHALL MAINTAIN A MINIMUM OF THREE FEET FROM THE NEAREST OUTER SURFACE OF PG&E FACILITIES WITH NO LESS THAN ONE FOOT OF EARTH (SOIL BARRIER) BETWEEN THE ADJACENT SIDES OF THE INDIVIDUAL TRENCHES.
17. IN THE EXTRAORDINARY CASE THAT THE MINIMUM THREE FOOT HORIZONTAL SEPARATION CANNOT BE ATTAINED BETWEEN "WET" UTILITIES AND COMPANY DRY FACILITIES, A VARIANCE MAY APPROVED BY THE LOCAL INSPECTION SUPERVISOR AND SUBMITTED TO SERVICE PLANNING SUPPORT PROGRAM MANAGER FOR APPROVAL.
18. ALL METER PANELS: INDIVIDUAL, RESIDENTIAL, OR NONRESIDENTIAL APPLICANTS WITH A METER PANEL RATING OF ANY SIZE, INSTALLED INSIDE A METER ROOM OR OTHER STRUCTURE, MUST FOLLOW ALL OF THE REQUIREMENTS DESCRIBED BELOW.
   A. INSTALL, OWN, AND MAINTAIN A SEPARATE, NOMINAL, 2-INCH DIAMETER CONDUIT WITH PULL TAPE INSIDE. THE CONDUIT AND PULL TAPE MUST EXTEND FROM THE OUTSIDE SURFACE OF THE BUILDING AND TERMINATE OUTSIDE THE METER PANEL OR SWITCHBOARD AT THE TOP OF THE METER SECTION.
   B. ENSURE THE 2-INCH DIAMETER CONDUIT AND PULL TAPE EXIT THE OUTSIDE OF THE BUILDING A MINIMUM OF 8 FEET AND A MAXIMUM OF 10 FEET ABOVE GROUND. THE OPEN END OF THE CONDUIT THAT IS EXPOSED TO THE OUTSIDE MUST HAVE A REMOVABLE, TEMPORARY CAP OR PLUG.
   C. DO NOT USE THE CONDUIT. THE CONDUIT IS FOR PG&E'S METERING EQUIPMENT ONLY.



REFER TO THE COUNTY OF SAN MATEO STANDARDS FOR TRENCH RESTORATION DETAILS.

TYPICAL JOINT TRENCH
PER PG&E STANDARD S5453, EXHIBIT B



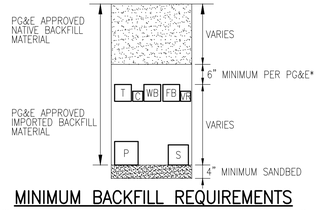
TYPICAL EXCAVATION
FOR PG&E PRIMARY VAULTS, TRANSFORMERS, U.N.O.

SUBSTRUCTURE VERIFICATION STAMP

COUNTY OF SAN MATEO
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 COUNTY OF SAN MATEO PLEASE HAVE YOUR SUPT. VERIFY THE CORRECT GRADE OF ALL ENCLOSURES OR BOXES, AND SIGN AND DATE DRAWING.
THANK YOU

SIGNED _____
DATE _____



SYMBOL LEGEND

P	PG&E PRIMARY
S	PG&E SECONDARY
C	COMCAST CATV
WB	WAVE BROADBAND
F	C.L.E.C. FIBER
VR	VERIZION

MINIMUM BACKFILL REQUIREMENTS
*CHECK WITH LOCAL GOVERNING AGENCIES FOR POSSIBLE VARIATIONS
SEE TRENCH SECTION SHEETS FOR SIZE & NUMBER OF CONDUITS

GENERAL NOTES:

1. THE PREFERRED TRENCH LOCATION IS IN A PUBLIC UTILITY EASEMENT (P.U.E.).
2. ALL DEPTHS AND RESULTING COVER REQUIREMENTS ARE MEASURED FROM FINAL GRADE.
3. COVER, CLEARANCES, AND SEPARATION SHALL BE AS GREAT AS PRACTICABLE UNDER THE CIRCUMSTANCES, BUT UNDER NO CIRCUMSTANCES SHALL BE LESS THAN THE MINIMUM COVER, CLEARANCE, AND SEPARATION REQUIREMENTS SET FORTH IN GENERAL ORDER 128 AND 49CFR 192.321 , 49CFR 192.325, AND 49CFR 192.327. ALL FACILITIES SHALL BE ANCHORED IN PLACE PRIOR TO COMPACTION, OR OTHER MEANS SHALL BE TAKEN TO ENSURE NO MOTION OF THE FACILITIES. DIMENSIONAL REQUIREMENTS FOR SHADING, LEVELING, AND BACKFILLING SHALL BE DETERMINED SUBSEQUENT TO COMPACTION.
4. TRENCH DIMENSIONS SHOWN ARE TYPICAL. TRENCH SIZES AND CONFIGURATIONS MAY VARY DEPENDING UPON OCCUPANCY AND/OR FIELD CONDITIONS. TRENCH SIZE AND CONFIGURATION MUST AT ALL TIMES BE CONSTRUCTED IN A MANNER THAT ENSURES PROPER CLEARANCES AND COVER REQUIREMENTS ARE MET. ANY "CHANGE" TO THE TRENCH WIDTH AND CONFIGURATIONS AS SHOWN IN THIS EXHIBIT MUST BE DESIGNED TO ENSURE THIS REQUIREMENT.
5. IT IS PREFERRED TO HAVE NON-PG&E OWNED STREETLIGHTS AT A LEVEL OTHER THAN THE GAS OR ELECTRIC LEVEL. NON-PG&E OWNED STREETLIGHTS MAY BE AT THE ELECTRIC LEVEL OF THE TRENCH AS LONG AS MINIMUM CLEARANCES ARE PROVIDED AND COMPLY WITH ALL SPECIAL NOTES FOR A JOINT TRENCH WITH A SECOND ELECTRIC UTILITY.
6. NON-UTILITY FACILITIES ARE NOT ALLOWED IN ANY JOINT UTILITY TRENCH, E.G., IRRIGATION CONTROL LINES, BUILDING FIRE ALARM SYSTEMS, PRIVATE TELEPHONE SYSTEMS, OUTDOOR ELECTRICAL CABLE, ETC.
7. WHEN COMMUNICATION DUCTS ARE INSTALLED, A MINIMUM OF 12" RADIAL SEPARATION SHALL BE MAINTAINED FROM GAS FACILITIES. EXCEPTION: WITH MUTUAL AGREEMENT, WHEN 4-INCH DIAMETER OR SMALLER GAS PIPE IS INSTALLED, THE SEPARATION MAY BE REDUCED TO NOT LESS THAN 6 INCHES.
8. PROVIDE SEPARATION FROM TRENCH WALL AND OTHER FACILITIES SUFFICIENT TO ENSURE PROPER COMPACTION.
9. MAINTAIN PROPER SEPARATION BETWEEN PG&E FACILITIES AND "WET" UTILITY LINES AS DESCRIBED IN UNDERGROUND OPERATIONS STANDARD S5453. THE MINIMUM ALLOWABLE HORIZONTAL SEPARATION BETWEEN COMPANY FACILITIES AND "WET" FACILITIES IS 3' WITH A MINIMUM 1' OF UNDISTURBED EARTH OR THE INSTALLATION OF A SUITABLE BARRIER BETWEEN THE FACILITIES. IF A 3' HORIZONTAL SEPARATION CANNOT BE ATTAINED BETWEEN "WET" UTILITIES AND COMPANY DRY FACILITIES, A VARIANCE MAY BE APPROVED BY THE LOCAL INSPECTION SUPERVISOR AND SUBMITTED TO THE SERVICE PLANNING SUPPORT PROGRAM MANAGER FOR APPROVAL. SEPARATIONS OF 1' OR LESS ARE NOT PERMISSIBLE AND WILL NOT BE ALLOWED. THE COMPANY MAY AGREE TO WAIVE THE MINIMUM 3' SEPARATION REQUIREMENT AT THE REQUEST OF AN APPLICANT IF WARRANTED AND THE NEED IS JUSTIFIED. THE REQUEST FOR A WAIVER MUST:
   - BE MADE IN WRITING AND SUBMITTED TO THE COMPANY AREA DISTRICT ENGINEER DURING THE PLANNING AND DESIGN PHASE OF THE PROJECT,
   - CLEARLY DESCRIBE THE CONDITIONS NECESSITATING THE WAIVER,
   - INCLUDE A PROPOSED DESIGN, AND INCLUDE A DESIGN FOR A BARRIER BETWEEN THE "WET" UTILITIES AND COMPANY DRY FACILITIES IN THE EVENT 1' OF UNDISTURBED EARTH CANNOT BE MAINTAINED. NOTE: DRAIN LINES CONNECTED TO DOWNSPOUTS ON BUILDINGS ARE CONSIDERED A "WET" UTILITY FOR THE PURPOSES OF THIS STANDARD.
10. SEPARATIONS SHALL BE MAINTAINED AT ABOVEGROUND TERMINATION POINTS.
11. PROCEDURES FOR APPROVING NATIVE BACKFILL FOR SHADING OF PG&E GAS FACILITIES:
   - RANDOM SOIL SAMPLES SHALL BE TAKEN FROM A MINIMUM OF 3 LOCATIONS PER 1,000' OF TRENCH. 100% OF THE SAMPLE MUST PASS THROUGH A 1/2" SIEVE AND 75% MUST PASS THROUGH A #4 SCREEN. ADDITIONAL SAMPLES MUST BE TAKEN IF EXISTING SOIL CONDITIONS CHANGE AND ARE TO BE TAKEN AT THE DISCRETION OF THE PG&E REPRESENTATIVE ON SITE.
   - THE SOILS MUST NOT CONTAIN ANY ROCKS THAT HAVE SHARP EDGES OR THAT MAY OTHERWISE BE ABRASIVE.
   - THE SOILS MUST NOT CONTAIN CLODS LARGER THAN 1/2" IF TO BE USED AS SHADING, BEDDING, OR LEVELING MATERIALS.
   - COMPACTION REQUIREMENTS MUST MEET ANY APPLICABLE PG&E, FEDERAL, STATE, COUNTY, OR LOCAL REQUIREMENTS.
   - AT NO TIME SHALL THE OVER SATURATION OF NATIVE SOILS BE USED TO ACHIEVE THESE REQUIREMENTS.
   - THE SIEVES AND SCREENS SHALL BE:
     1/2" SIEVE: 8" DIAMETER BY 2" DEEP, STAINLESS STEEL MESH SCREEN.
     #4 SCREEN: 8" DIAMETER BY 2" DEEP, STAINLESS STEEL MESH SCREEN.
12. PROCEDURES FOR APPROVING NATIVE BACKFILL FOR SHADING AT PG&E ELECTRIC FACILITIES:
   - RANDOM SOIL SAMPLES SHALL BE TAKEN FROM A MINIMUM OF 3 LOCATIONS PER 1,000' OF TRENCH. ADDITIONAL SAMPLES MUST BE TAKEN IF EXISTING SOIL CONDITIONS CHANGE AND ARE TO BE TAKEN AT THE DISCRETION OF THE PG&E REPRESENTATIVE ON SITE.
   - SHADING MATERIAL CONTAINING LARGE ROCK, PAVING MATERIAL, CINDERS, SHARPLY ANGULAR SUBSTANCES, OR CORROSIVE MATERIAL SHALL NOT BE PLACED IN THE TRENCH WHERE SUCH MATERIAL MAY DAMAGE THE CONDUITS AND/OR PREVENT PROPER COMPACTION OVER OR AROUND THE CONDUITS.
   - NATIVE SOILS CONTAINING CLODS NOT TO EXCEED 6" IN DIAMETER MAY BE INCLUDED IN THE SHADING MATERIAL PROVIDED THE CLODS ARE READILY BREAKABLE BY HAND. NOTE: SOILS CONSISTING PRIMARILY OF ADOBE, HARD COMPACT (DENSE) CLAY, AND BAY MUDS SHALL NOT BE USED AS SHADING MATERIAL.
   - AT NO TIME SHALL THE OVER SATURATION OF NATIVE SOILS BE USED TO ACHIEVE THESE REQUIREMENTS.
   - REFER TO ENGINEERING DOCUMENT 062288, ITEM 13 ON PAGE 2.
13. COMPETENT NATIVE SOILS ARE PREFERRED TO BE USED FOR SHADING, BEDDING, AND BACKFILLING THROUGHOUT THE TRENCH.
   - WHERE NATIVE SOILS EXCEED 1/2" MINUS AND/OR WHERE GAS IS TO BE PLACED AT THE BOTTOM OF A TRENCH IN AREAS THAT EXCEED 1/2" MINUS SOIL CONDITIONS, OR WHERE THE BOTTOM OF A TRENCH IS CONSIDERED TO CONSIST OF HARD PAN, PG&E APPROVED 1/2" MINUS IMPORT MATERIAL SHALL BE USED FOR SHADING AND/OR BEDDING OF GAS FACILITIES.
   - PG&E APPROVED IMPORT MATERIAL IS PER CGT ENGINEERING GUIDELINE 4123.
   - IF A LEVELING COURSE IS REQUIRED FOR GAS FACILITIES, THE USE OF NATIVE SOILS IS PREFERRED, BUT IF 1/2" MINUS CONDITIONS ARE NOT ATTAINABLE WITH THE NATIVE SOILS, THEN THE USE OF PG&E APPROVED IMPORT MATERIALS IS REQUIRED. BEDDING UNDER GAS FACILITIES WILL BE A MINIMUM OF 2" OF COMPACTED 1/2" MINUS NATIVE SOILS OR PG&E APPROVED IMPORT MATERIAL.
   - FOR ELECTRIC FACILITIES, REFER TO NOTE 12. THIS APPLIES TO LEVELING COURSES AS WELL AS SHADING.
   - THE MINIMUM PG&E APPROVED BEDDING MATERIAL MAY BE INCREASED AT THE DISCRETION OF PG&E WHEN WARRANTED BY EXISTING FIELD CONDITIONS (E.G., ROCKY SOILS, HARD PAN, ETC.).
   - THE USE OF ANY IMPORTED MATERIAL FOR BACKFILLING PURPOSES SHALL BE LIMITED TO THOSE SITUATIONS WHEN NATIVE SOILS DO NOT ALLOW FOR REQUIRED COMPACTION.
14. THE APPLICANT IS RESPONSIBLE FOR THE REMOVAL OF EXCESS SPOIL AND ASSOCIATED COSTS.
15. SEPARATION BETWEEN GAS FACILITIES AND ELECTRIC FACILITIES MAY BE REDUCED TO 6" WHEN CROSSING.
16. SERVICE SADDLES ARE THE PREFERRED SERVICE FITTINGS FOR USE THROUGHOUT THE JOINT TRENCH PROJECT. ALL PROJECTS WILL BE DESIGNED AND ESTIMATED USING SERVICE SADDLES. HOWEVER, SERVICE TEES MAY BE USED IF ALL CLEARANCES, SEPARATION, AND COVERAGE REQUIREMENTS ARE MAINTAINED.

DESIGN CHANGE COMPONENT
ANY CHANGES TO THIS DESIGN MUST BE APPROVED BY

PG&E GAS ADE

PG&E PM#S:
ELECTRIC: 74004302

TRANSFORMER CLEARANCE REQUIREMENTS:

1. ABOVE ANY SINGLE PHASE TRANSFORMER LOCATION, MAINTAIN 20' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT/PAD.
2. ABOVE ANY THREE PHASE TRANSFORMER LOCATION, MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT/PAD.

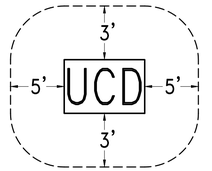
ELECTRIC CONDUIT MINIMUM BEND RADIUS

CONDUIT DIAMETER	VERTICAL RADIUS	HORIZONTAL RADIUS
2"	24"	36"
3"	24"	36"
4"	36"	36"
5"	36"	60"

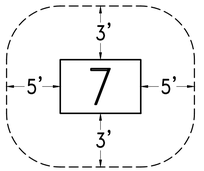
NOTE:
315° MAX BENDS IN ANY SECONDARY CONDUIT RUN 200' OR LESS.
300° MAX BENDS IN ANY PRIMARY CONDUIT RUN.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

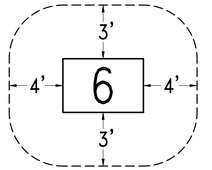
APPROVED:
DATE: 10/16/2020
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



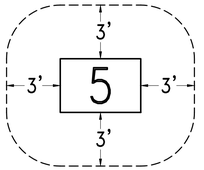
WORK SPACE & EASEMENT REQUIREMENTS
FOR UCD TRANSFORMER VAULTS
MAINTAIN A CLEAR AND LEVEL WORK SPACE AS SHOWN (N.T.S.), PER PG&E DOCUMENT 051122.
TRANSFORMER



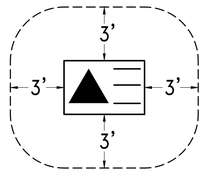
WORK SPACE & EASEMENT REQUIREMENTS
FOR #7 VAULTS
MAINTAIN A CLEAR AND LEVEL WORK SPACE AS SHOWN (N.T.S.), PER PG&E DOCUMENT 051122.
VAULT OR SWITCH



WORK SPACE & EASEMENT REQUIREMENTS
FOR #6 VAULTS
MAINTAIN A CLEAR AND LEVEL WORK SPACE AS SHOWN (N.T.S.), PER PG&E DOCUMENT 051122.
VAULT OR SWITCH



WORK SPACE & EASEMENT REQUIREMENTS
FOR #5 VAULTS
MAINTAIN A CLEAR AND LEVEL WORK SPACE AS SHOWN (N.T.S.), PER PG&E DOCUMENT 051122.
VAULT OR SWITCH



WORK SPACE & EASEMENT REQUIREMENTS
FOR SUBSURFACE TRANSFORMERS
MAINTAIN A CLEAR AND LEVEL WORK SPACE AS SHOWN (N.T.S.), PER PG&E DOCUMENT 051122.
TRANSFORMER

NOTE:
1.) TRANSFORMER VAULTS AND SWITCH VAULTS CAN NOT BE INSTALLED IN STREET OR DRIVEWAYS

2.) WORKING CLEARANCES SHOWN ABOVE ARE FROM ALL ABOVE GROUND STRUCTURES WALLS, STREET LIGHTS, FIRE HYDRANTS, OR ANY OTHER STRUCTURES.

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE:
PRIOR TO ENERGIZING THIS PROJECT
A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

SOIL NOTES:
1. VIZION UTILITY PARTNERS IS NOT RESPONSIBLE FOR ANY SOILS ENGINEERING TO DETERMINE THE ABILITY TO CONSTRUCT OR THE PROJECT CONDITIONS.
2. VIZION UTILITY PARTNERS ASSUMES NO RESPONSIBILITY FOR ADDITIONAL WORK DUE TO ADVERSE JOB SITE CONDITIONS,
3. PG&E WILL REQUIRE SOILS ANALYSIS FOR SUBSURACE TRANSFORMERS (If Applicable).

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RDA WORK\PS 15-646 JT VIZION.DWG (JT-2)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

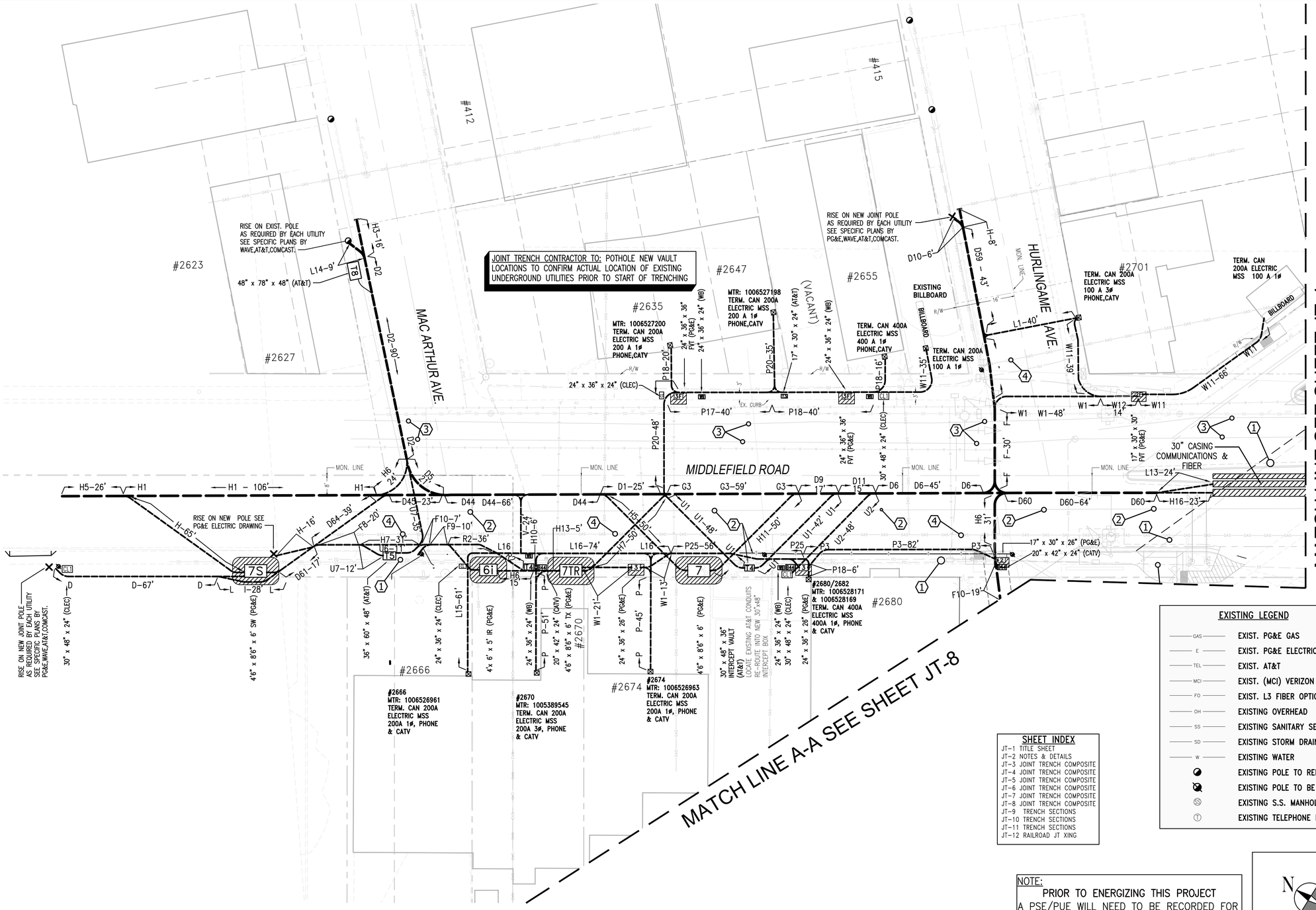
REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHIES
No. 19429
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO
PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II) NOTES & DETAILS
		CHECKED BY: D.V.	
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: N.T.S.
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER T. NGUYEN
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4
VIZION DATE LAST WORKED ON: 10-19-2020
JT-2
SHEET 118 OF 140



APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/2021 — CIVIL — STATE OF CALIFORNIA

PROPOSED LEGEND

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 3J — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 3FJ — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- 1J — 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 1FJ — 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- 1A — 17" x 30" x 24" SPLICE BOX (AT&T)
- 24A — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- W8 — 24" x 36" x 24" SPLICE BOX – (WAVE)
- CL1 — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- 1C — 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- (1) PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (2) PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (3) PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (4) PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- (5) PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

EXISTING LEGEND

- GAS — EXIST. PG&E GAS
- E — EXIST. PG&E ELECTRIC
- TEL — EXIST. AT&T
- MCI — EXIST. (MCI) VERIZON
- FO — EXIST. L3 FIBER OPTIC
- OH — EXISTING OVERHEAD
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- SS — EXISTING S.S. MANHOLE
- T — EXISTING TELEPHONE MANHOLE

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

NOTE:
PRIOR TO ENERGIZING THIS PROJECT A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

N

0 10 20 40

DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

CONTRACTOR NOTES:

"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER — DAVID B. VOORHIES — No. 20429 — Exp. 03-31-22 — CIVIL — STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)
		DRAWN BY: M.W.	JOINT TRENCH COMPOSITE
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4
VIZION DATE LAST WORKED ON: 10-19-2020
JT-3
SHEET 119 OF 141

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RAW WORK\PS 15-646 JT VIZION.DWG (JT-3)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/2021 — CIVIL — STATE OF CALIFORNIA

MATCH LINE SEE SHEET JT-3

MATCH LINE SEE SHEET JT-5

MATCH LINE SEE SHEET JT-8

EXISTING LEGEND

- EXIST. PG&E GAS
- EXIST. PG&E ELECTRIC
- EXIST. AT&T
- EXIST. (MCI) VERIZON
- EXIST. L3 FIBER OPTIC
- EXISTING OVERHEAD
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- EXISTING S.S. MANHOLE
- EXISTING TELEPHONE MANHOLE

NORTHSIDE AVE. (30' WIDE)

(3) CASINGS END 37' FROM THE C/L OF THE S.P.R.R. TRACKS BEYOND EXIST. MCI CONDUITS

(3) CASINGS END 30' FROM THE C/L OF THE S.P.R.R. TRACKS

SPARE 30" CASING

36" CASING PG&E PRIMARY

MIDDLEFIELD ROAD

MIDDLEFIELD ROAD

PACIFIC AVE.

PACIFIC AVE.

#2801 (BB)
MTR: 1009469970
TERM. CAN 200A
ELECTRIC MSS
200 A 1ϕ

#2801
MTR: 106624413
TERM. CAN 400A
ELECTRIC MSS
400 A 3ϕ
PHONE,CATV

#2809
MTR: 1006527190
TERM. CAN 200A
ELECTRIC MSS 200 A 1ϕ

#2819/2821
MTR: 1006527190
TERM. CAN 800A
ELECTRIC MSS
800 A 3ϕ
PHONE,CATV

#2829 (BB)
MTR: 1009469968
TERM. CAN 200A
ELECTRIC MSS
100 A 1ϕ

#2829/2831
MTR: 1006346133
& 1006759202
TERM. CAN 200A
ELECTRIC MSS
100 A 1ϕ
PHONE,CATV

#2835
MTR: 1005835636
TERM. CAN 200A
ELECTRIC MSS
100 A 3ϕ
PHONE,CATV

#2796
MTR: 1004551322
TERM. CAN 200A
ELECTRIC MSS
200A 3ϕ, PHONE
& CATV

#2800 (BB)
MTR: 1004472551
TERM. CAN 200A
ELECTRIC MSS
200A 1ϕ

#2800/2802
MTR: 1006527191
& 1006527192
TERM. CAN 200A
ELECTRIC MSS
200A 1ϕ, PHONE
& CATV

#2808
MTR:1009661703
TERM. CAN 200A
ELECTRIC MSS
200A 1ϕ

2816
MTR: 1006526965
TERM. CAN 200A
ELECTRIC MSS
200A 1ϕ

#2824 (SIGN)
MTR: 1006527189
TERM. CAN 200A
ELECTRIC
MSS 200A 1ϕ

#2840
MTR: 1005389618
TERM. CAN 200A
ELECTRIC MSS
200A 3ϕ
PHONE,CATV

#2796
#2800
#2802
#2808
#2816
#2824
#2832
#359
#355
#349

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

RISE ON NEW JOINT POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E-WAVE-AT&T-COMCAST.

100 AMP METER PED. FOR IRRIGATION.

IRRIGATION CONTROLLER

PROPOSED TRAFFIC SIGNAL CONTROLLER #1

200 AMP METER PED. TRAFFIC SIGNAL

DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

N
0 10 20 40

PROPOSED LEGEND

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 3J — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 3FF — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- 2J — 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 2FF — 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- T1 — 17" x 30" x 24" SPLICE BOX (AT&T)
- 344 — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- WB — 24" x 36" x 24" SPLICE BOX – (WAVE)
- CL1 — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- CL — 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- (1) PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (2) PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (3) PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (4) PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- (5) PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RDA WORK\PS 15-646 JT VIZONLDWG (JT-4)

CONTRACTOR NOTES:

"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

NOTE:
PRIOR TO ENERGIZING THIS PROJECT
A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER — DAVID B. VOORHIES — No. 20429 — Exp. 03-31-22 — CIVIL — STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO — PUBLIC WORKS

ISSUE FOR BID	10-19-2020
REVISION	DATE

VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN

DESIGNED BY: M.W.
CHECKED BY: D.V.
DRAWN BY: M.W.

MIDDLEFIELD ROAD
UNDERGROUND UTLITY DISTRICT (PHASE II)
JOINT TRENCH COMPOSITE

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 10-19-2020
FILE NO.: 15-646

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 10-19-2020

JT-4
SHEET 120 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/2021 — CIVIL — STATE OF CALIFORNIA

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

EXISTING LEGEND

- GAS — EXIST. PG&E GAS
- E — EXIST. PG&E ELECTRIC
- TEL — EXIST. AT&T
- MCI — EXIST. (MCI) VERIZON
- FO — EXIST. L3 FIBER OPTIC
- OH — EXISTING OVERHEAD
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- EXISTING S.S. MANHOLE
- EXISTING TELEPHONE MANHOLE

PROPOSED LEGEND

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- J3 — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- J3F — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- J2 — 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- J2F — 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- T1 — 17" x 30" x 24" SPLICE BOX (AT&T)
- 244 — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- WB — 24" x 36" x 24" SPLICE BOX – (WAVE)
- CL1 — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- CL — 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- (1) PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (2) PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (3) PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (4) PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- (5) PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

MATCH LINE SEE SHEET JT-4

MATCH LINE SEE SHEET JT-6

#425 REMAIN O.H.

#2855 #2965

#2847
#2847
MTR: 1004551335
TERM. CAN 200A
ELECTRIC MSS
100 A 3#
PHONE,CATV

#2875
#405/2895/2865/2897/2875
MTR: 1006346135,10058326,1006259686
1009660759, & 1009660760
TERM. CAN 400A
ELECTRIC MSS 400A 1# PHONE,CATV

#2909
TERM. CAN
400A ELECTRIC
MSS 400A 3#
PHONE,CATV

#2929
#2929
MTR: 1005829351
TERM. CAN 200A
ELECTRIC MSS
200A 1#

#2929 (BB)
MTR: 1006936035
TERM. CAN 200A
ELECTRIC MSS
200A 1#

#2844
MTR: 1006526967
TERM. CAN 200A
ELECTRIC MSS
200A 3#
PHONE,CATV

#2856
MTR: 1006490677
TERM. CAN 200A
ELECTRIC MSS
200A 3#
PHONE,CATV

#2856 (BB)
MTR: 1004472228
TERM. CAN 200A
ELECTRIC MSS
200A 3#
PHONE,CATV

#2928
MTR: 1005388300
TERM. CAN 200A
ELECTRIC MSS
200A 3#
PHONE,CATV

#2840 #2844 #2850 #2856 #2880 #2900 #2920 #2928

#2885 TERM. CAN 800A ELECTRIC MSS 800 A 3# PHONE,CATV

#2885 TERM. CAN 200A ELECTRIC MSS 200 A 3# PHONE,CATV

RISE ON EXIST. POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY WAVE,AT&T,COMCAST,VERIZION

20" x 42" x 24" B-44 (I.D.) – (CATV)

DUMBARTON AVE.

MIDDLEFIELD ROAD

BUS ZONE

(PARKING)

BILLBOARD

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

TERM. CAN 200A ELECTRIC MSS 200A 3# PHONE,CATV

TERM. CAN 400A ELECTRIC MSS 400A 3# PHONE,CATV

EXISTING METER #1004472228

TELEPHONE 2914 HUNTINGTON AVE.

MON. LINE

MATCH LINE SEE SHEET JT-8

NOTE:
PRIOR TO ENERGIZING THIS PROJECT
A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

N
0 10 20 40

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

FILENAME: J:\UROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\DGN WORK\PS 15-646 JT VIZION.DWG (JT-5)

DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

CONTRACTOR NOTES:

"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER — DAVID B. VOORHIES — No. 19123 — Exp. 03-31-22 — CIVIL — STATE OF CALIFORNIA

DATE: 09-20-2020

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II)
		CHECKED BY: D.V.	JOINT TRENCH COMPOSITE
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: 1"=20'
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 10-19-2020

JT-5
SHEET 121 OF 140

APPROVED:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

MATCH LINE SEE SHEET JT-5

MATCH LINE SEE SHEET JT-7

HETCH HETCHY R.O.W.
PERMIT REQUIRED TO CROSS HETCH HETCHY R/W REQUIRED – BY OTHERS

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

RISE ON NEW POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E WAVE,AT&T,COMCAST.

#2933
#2943/2945 SERVICES
MTR: 1004551393
TERM. CAN 200A
ELECTRIC MSS 200A 3Ø
PHONE,CATV
#2943
#2945
#2951
#2933
MTR: 1009780986
TERM. CAN 200A
ELECTRIC MSS
200A 1Ø
PHONE,CATV
#2951
MTR: 1005829350
TERM. CAN 200A
ELECTRIC MSS
200A 1Ø
PHONE,CATV

FIRST AVE.

MIDDLEFIELD ROAD

BUS ZONE

#3009
MTR:1005388303
TERM. CAN 200A
ELECTRIC MSS
200A 3Ø
PHONE,CATV
#3017
No Service
#401
#401
MTR: 1006346108
TERM. CAN 200A
ELECTRIC MSS
200A 1Ø
PHONE,CATV
#3033
TERM. CAN 400A
ELECTRIC MSS
400A 3Ø
PHONE,CATV

SECOND AVE.

BERKSHIRE AVE

#2940
MTR: 1005388301
& 1009660757
TERM. CAN 400A
ELECTRIC MSS
400A 3Ø
PHONE,CATV
#2940

RISE ON NEW POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E, WAVE,AT&T,COMCAST,VERIZON
#2950
EXISTING OVERHEAD SERVICE TO REMAIN

#3000
MTR:1005388296
TERM. CAN 200A
ELECTRIC MSS
200A 3Ø
PHONE,CATV
#3006
MTR: 1006526959
TERM. CAN 200A
ELECTRIC MSS
200A 1Ø
PHONE,CATV

RISE ON EXIST. POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY WAVE,AT&T,COMCAST.

#3018 (EUG)
MTR: 1007073402
600A 3Ø
PHONE,CATV
LOCATE EXISTING 2-4" (S) CONDUITS. TIE INTO AS REQUIRED BY PG&E

#3050
MTR: 1008813974
ELECTRIC MSS
200A 1Ø DC
PHONE,CATV

EXISTING PG&E #5 TO BE REMOVED

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

EXISTING LEGEND

- EXIST. PG&E GAS
- EXIST. PG&E ELECTRIC
- EXIST. AT&T
- EXIST. (MCI) VERIZON
- EXIST. L3 FIBER OPTIC
- EXISTING OVERHEAD
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- EXISTING S.S. MANHOLE
- EXISTING TELEPHONE MANHOLE

PROPOSED LEGEND

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30" UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 3J — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 3FJ — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- 1J — 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 1JFD — 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- 1TS — 17" x 30" x 24" SPLICE BOX (AT&T)
- 24J — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- W8 — 24" x 36" x 24" SPLICE BOX – (WAVE)
- C1L — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- 1C — 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- (1) PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (2) PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (3) PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- (4) PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- (5) PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

N
0 10 20 40

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

NOTE:
PRIOR TO ENERGIZING THIS PROJECT
A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

CONTRACTOR NOTES:

"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHIES
No. 24429
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II)
		CHECKED BY: D.V.	JOINT TRENCH COMPOSITE
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: 1"=20'
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 10-19-2020

JT-6
SHEET 122 OF 140

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RAW WORK\PS 15-646 JT VIZION.DWG (JT-6)

MATCH LINE A-A

MATCH LINE SEE SHEET JT-6

MATCH LINE SEE SHEET JT-8

20" x 42" x 24"
B-44 (I.D.) – (CATV)

RISE ON NEW JOINT POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E,WAVE,AT&T,COMCAST.

#408
EXISTING OVERHEAD SERVICE TO REMAIN

#3101
EXISTING OVERHEAD SERVICE TO REMAIN

#409
EXISTING OVERHEAD SERVICE TO REMAIN

(EUG) #3045

#3041

#3045
TERM. CAN 200A
MTR: 1005446782
ELECTRIC MSS 200A 3ø
PHONE,CATV

17" x 30" x 18" (PG&E)
BILLBOARD

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

#3113
#3115
#3117
#3119
#3121
#3123
#3125/3127
EXISTING OVERHEAD SERVICE TO REMAIN

TERM. CAN
MTR: 1006882116,1008826442,
1006882116,1008826442, 1006759223
400A ELECTRIC MSS 400A 3ø
PHONE,CATV

MIDDLEFIELD ROAD

THIRD AVE.

FOURTH AVE.

BUS ZONE

#3070
MTR: 1009994536
TERM. CAN 200A
ELECTRIC MSS
200A 3ø
PHONE,CATV

#3060

#3080
MTR: 108817188
TERM. CAN 200A
ELECTRIC MSS
200A 1ø
PHONE,CATV

#3090

MTR: 10072773405
TERM. CAN 400A
ELECTRIC MSS 400A 1ø
PHONE,CATV

#3096 (BB)
EXISTING OVERHEAD SERVICE TO REMAIN
TERM. CAN 200A
ELECTRIC MSS
200A 1ø

EXISTING BILLBOARD ON BULDING

#3102
ELEC.
TEL.
CATV
#3102
MTR: 100888934
TERM. CAN 200A
ELECTRIC MSS
200A 1ø

#3102 (BB)
MTR: 1007175227
TERM. CAN 200A
ELECTRIC MSS
200A 1ø

#3120
EXISTING UNDERGROUND SERVICE

REPLACE DIST. SPLICE BOX WITH NEW 17"x30"x20" (PG&E)
45" x 78" x 48" (AT&T)

(EUG) #3120
MTR: 1005388041
ELECTRIC MSS
200A 3ø
PHONE,CATV

(EUG) #3142/3144
MTR: 1005828356
ELECTRIC MSS 400A
1ø PHONE,CATV

#3140

EXISTING BILLBOARD

D5-18'

RISE ON NEW POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E WAVE,AT&T,COMCAST.

RISE ON NEW JOINT POLE AS REQUIRED BY EACH UTILITY SEE SPECIFIC PLANS BY PG&E,WAVE,AT&T,COMCAST.

JOINT TRENCH CONTRACTOR TO: POTHOLE NEW VAULT LOCATIONS TO CONFIRM ACTUAL LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF TRENCHING

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

CONTRACTOR NOTES:
"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

NOTE:
PRIOR TO ENERGIZING THIS PROJECT A PSE/PUE WILL NEED TO BE RECORDED FOR ALL UTILITIES WITHIN THIS PROJECT. INCLUDING THE "WORKING SPACE" REQUIRED AROUND ALL EQUIPMENT.

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

EXISTING LEGEND
- GAS — EXIST. PG&E GAS
- E — EXIST. PG&E ELECTRIC
- TEL — EXIST. AT&T
- MCI — EXIST. (MCI) VERIZON
- FO — EXIST. L3 FIBER OPTIC
- OH — EXISTING OVERHEAD
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- (S) EXISTING S.S. MANHOLE
- (T) EXISTING TELEPHONE MANHOLE

PROPOSED LEGEND
- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 3J — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 3FJ — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- 17" x 30" x 24" SPLICE BOX (AT&T)
- 24J — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- WB — 24" x 36" x 24" SPLICE BOX – (WAVE)
- CL1 — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- WP — 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- 1 — PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 2 — PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 3 — PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 4 — PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- 5 — PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

N
0 10 20 40

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

APPROVED:
DATE: 10/16/2020
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHEES
No. 19429
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II) JOINT TRENCH COMPOSITE
		CHECKED BY: D.V.	
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: 1"=20'
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 10-19-2020

JT-7
SHEET 123 OF 140

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\WGA WORK\PS 15-646 JT VIZION.DWG (JT-7)

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

CONTRACTOR NOTES:

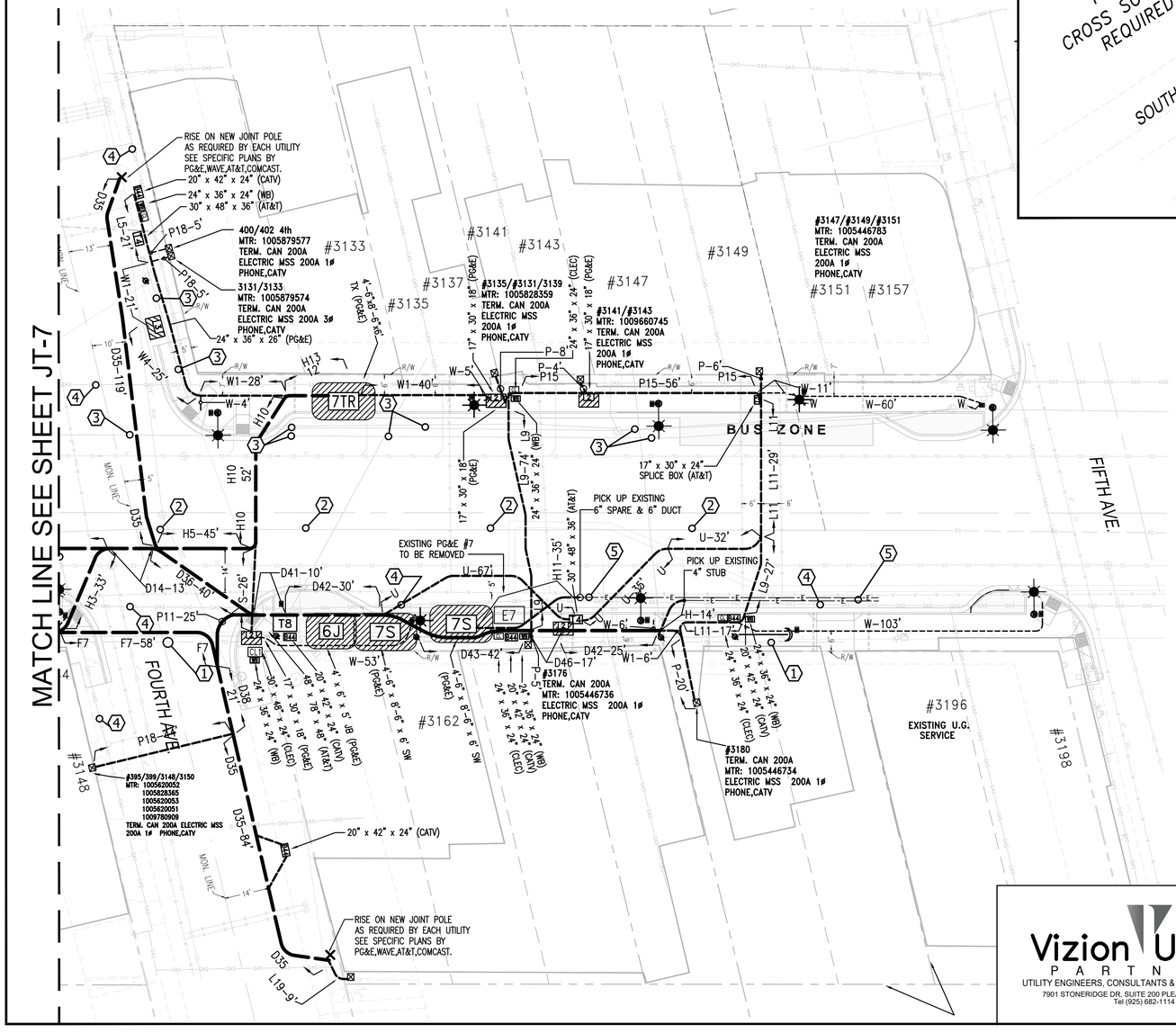
"POT HOLE" EXISTING PAVEMENT TO VERIFY EXISTING PAVEMENT SECTION CONSTRUCTION, PRIOR TO INSTALLING THE "JOINT TRENCH".

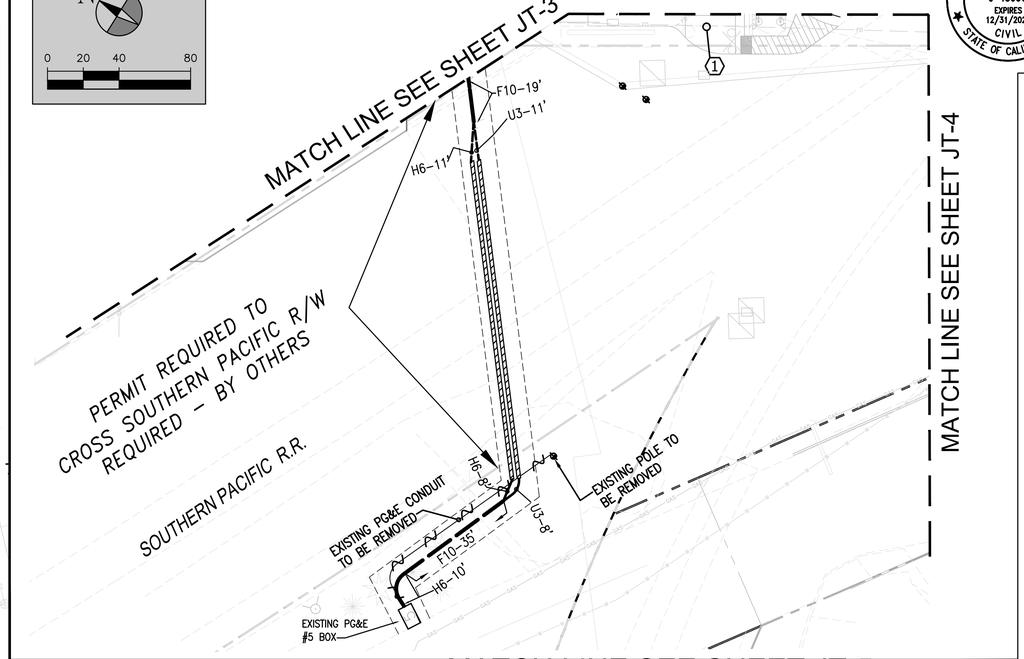
OPEN-CUT TRENCHING MAY NOT BE PREFERRED METHOD OF CONSTRUCTION. CONTRACTOR MAY USE THE OPTION OF DIRECTIONAL DRILLING TO INSTALL CONDUITS.

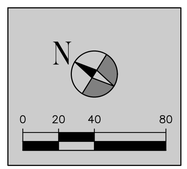
NO ADDITIONAL PAYMENTS WILL BE MADE BASED ON EXISTING CONDITIONS.

EXISTING LEGEND

- EXIST. PG&E GAS
- EXIST. PG&E ELECTRIC
- EXIST. AT&T
- EXIST. (MCI) VERIZON
- EXIST. L3 FIBER OPTIC
- EXISTING OVERHEAD
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- EXISTING S.S. MANHOLE
- EXISTING TELEPHONE MANHOLE







SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER — JAMES C. PORTER — C 48056 — EXPIRES 12/31/2021 — CIVIL — STATE OF CALIFORNIA

PROPOSED LEGEND

- PROPOSED JOINT TRENCH MAIN
- PROPOSED JOINT TRENCH MINOR
- 7S — 4'-6" x 8'-6" x 6' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7 — 4'-6" x 8'-6" x 6' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 7TR — 4'-6" x 8'-6" x 6' DUPLEX TXFMR. (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER TRANSFORMER VAULT
- 6S — 4' x 6'-6" x 5' SWITCH BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6J — 4' x 6'-6" x 5' SPLICE BOX (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 6I — 4' x 6'-6" x 5' INTERRUPTER (PG&E) WORKING SPACE SHOWN MAINTAIN 30' UNOBSTRUCTED OVERHEAD CLEARANCE OVER BOX
- 3J — 24" x 36" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 3FJ — 24" x 36" x 36" SPLICE BOX (PG&E) FULL TRAFFIC RATED WORKING SPACE SHOWN
- 1J — 17" x 30" x 26" SPLICE BOX (PG&E) WORKING SPACE SHOWN
- 1FJ — 17" x 30" x 30" SPLICE BOX (PG&E) TRAFFIC RATED WORKING SPACE SHOWN
- T8 — 48" x 78" x 48" SPLICE BOX (AT&T)
- T5 — 36" x 60" x 48" SPLICE BOX (AT&T)
- T4 — 30" x 48" x 36" SPLICE BOX (AT&T)
- T2 — 30" x 60" x 36" SPLICE BOX (AT&T)
- T1 — 17" x 30" x 24" SPLICE BOX (AT&T)
- 244 — 20" x 42" x 24" SPLICE BOX – (COMCAST)
- W8 — 24" x 36" x 24" SPLICE BOX – (WAVE)
- CL1 — 30" x 48" x 24" SPLICE BOX (C.L.E.C)
- 1C — 24" x 36" x 24" SPLICE BOX (C.L.E.C)
- STREET LIGHT WITH 30" BASE
- PEDESTRIAN LIGHT
- 11"x17"x12" "N-9" SPLICE BOX (S.L.)
- EXISTING JOINT POLE TO BE REMOVED
- EXISTING JOINT POLE TO REMAIN
- PROPOSED NEW JOINT POLE LOCATION
- IRRIGATION CONTROLLER
- 100 AMP METER PEDESTAL (I.C. & TRAF. SIG.)
- 1 — PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 2 — PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 3 — PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
- 4 — PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
- 5 — PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

FILENAME: A:\JOROBSON\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RGA WORK\PS 15-646 JT VIZION.DWG (JT-8)

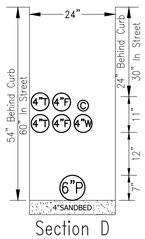
Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER — DAVID B. VOORHEES — No. 69429 — 03-31-22 — CIVIL — STATE OF CALIFORNIA
DATE: 09-20-2020

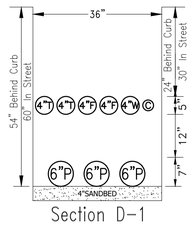
COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)
		DRAWN BY: M.W.	JOINT TRENCH COMPOSITE
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

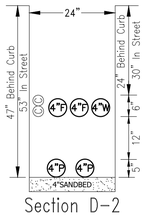
SCALE: 1"=20'			
DATE: 10-19-2020			
FILE NO.: 15-646			
VIZION UTILITY PARTNERS PROJECT MANAGER T. NGUYEN	FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4	VIZION DATE LAST WORKED ON: 10-19-2020	JT-8 SHEET 124 OF 140



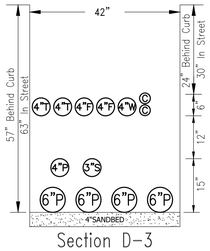
Section D



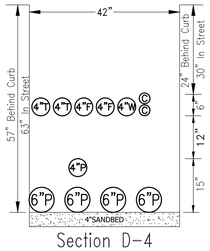
Section D-1



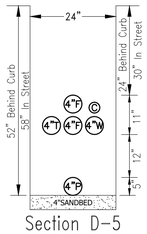
Section D-2



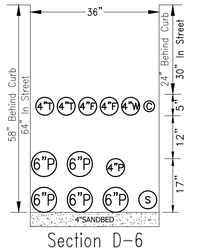
Section D-3



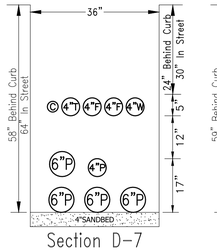
Section D-4



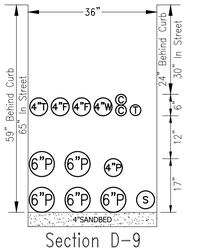
Section D-5



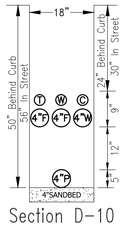
Section D-6



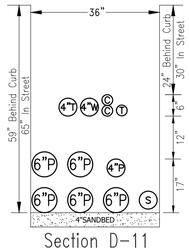
Section D-7



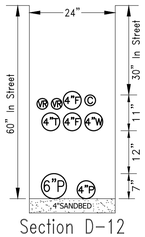
Section D-9



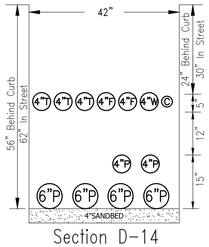
Section D-10



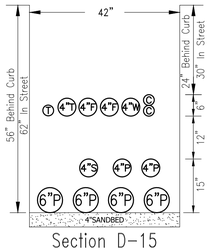
Section D-11



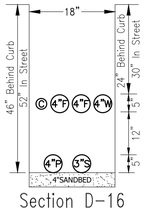
Section D-12



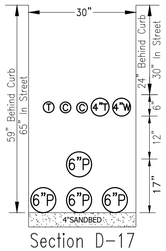
Section D-14



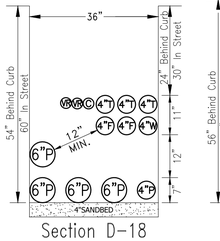
Section D-15



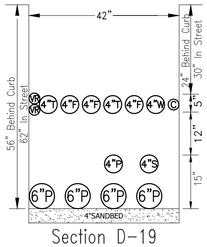
Section D-16



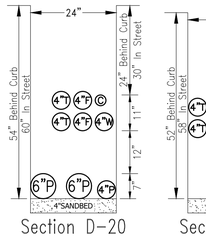
Section D-17



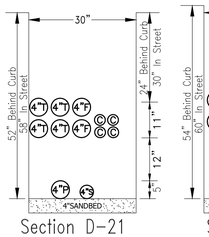
Section D-18



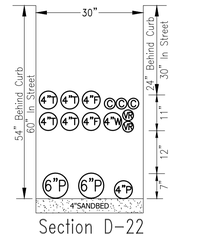
Section D-19



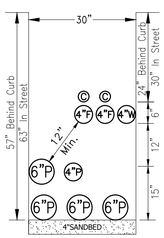
Section D-20



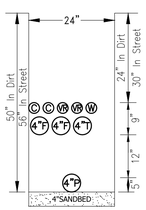
Section D-21



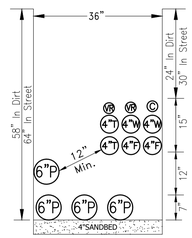
Section D-22



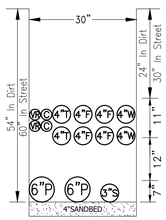
Section D-23



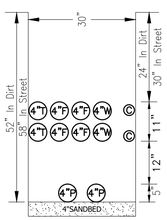
Section D-24



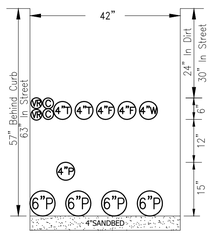
Section D-25



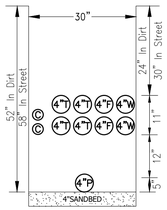
Section D-26



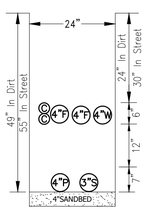
Section D-28



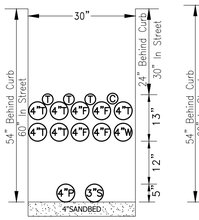
Section D-29



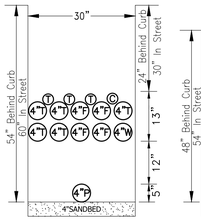
Section D-30



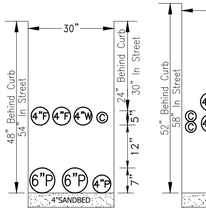
Section D-31



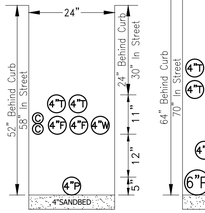
Section D-32



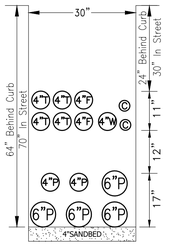
Section D-33



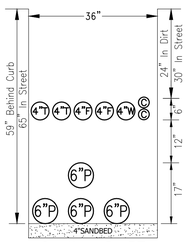
Section D-34



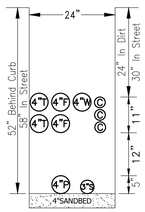
Section D-35



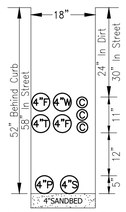
Section D-36



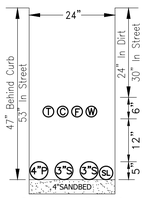
Section D-37



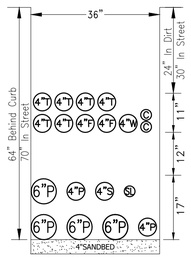
Section D-38



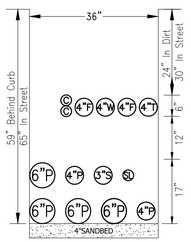
Section D-39



Section D-40



Section D-41



Section D-42

Section D-43

Section D-44

Section D-45

Section D-46

Section D-48

Section D-49

Section D-50

TRENCH OCCUPANCY GUIDE						
SECTION	G	T	C	S	P	C.L.E.C.
A*	X	X	X	X	X	
B*	X	X		X	X	
C*	X		X	X	X	
D*		X	X	X	X	X+
E*	X			X	X	
F*		X		X	X	X+
G*			X	X	X	X+
H*				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			X+
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		X+
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				X+
V			X			
W				X		
X						

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

+THESE SECTIONS MAY OR MAY NOT CONTAIN C.L.E.C. CONDUIT

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

NOTE:
THIS PLAN IS TO BE USED AS A GUIDE FOR TRENCHING WIDTH AND DEPTH AND NOT CONDUIT INSTALLATION.

MINIMUM SEPARATION AND CLEARANCE REQUIREMENTS

	DUCT	G	T	F	WB	VR	C	S	P	Min. Cover
G	Gas	0"	12"	12"	12"	12"	12"	6"	12"	24", 30" in street
T	Telephone (Duct)	12"	0"	1"	1"	1"	1"	12"	12"	24", 30" in street
C	C.A.T.V.	12"	1"	1"	1"	1"	1"	12"	12"	24", 30" in street
F	Fiber (CLEC)	12"	1"	1"	1"	1"	1"	12"	12"	24", 30" in street
WB	CATV (WAVE)	12"	1"	1"	0"	1"	1"	12"	12"	24", 30" in street
VR	CATV (VERIZON)	12"	1"	1"	1"	0"	1"	12"	12"	24", 30" in street
S	Electric Secondary	6"	12"	12"	12"	12"	12"	3"	3"	24", 30" in street
P	Electric Primary	12"	12"	12"	12"	12"	12"	3"	3"	36", 36" in street

SOIL NOTES:
1. VIZION UTILITY PARTNERS IS NOT RESPONSIBLE FOR ANY SOILS ENGINEERING TO DETERMINE THE ABILITY TO CONSTRUCT OR THE PROJECT CONDITIONS.
2. VIZION UTILITY PARTNERS ASSUMES NO RESPONSIBILITY FOR ADDITIONAL WORK DUE TO ADVERSE JOB SITE CONDITIONS.
3. PG&E WILL REQUIRE SOILS ANALYSIS FOR SUBSURACE TRANSFORMERS (If Applicable).

CONTRACTOR NOTES:
1. The symbols (P) (S) (T) (C) (G) (F) (VR) (WB) indicate occupancy only. See Electric, Gas, Comcast, & AT&T plans for exact size and number of conduits.
2. Contractor to include incidental trenching in splice box, vault, or transformer excavation in areas where no entrance or exit of trench is shown.

PG&E LEGEND
- (6"P) 6" PG&E PRIMARY CONDUIT
- (4"P) 4" PG&E PRIMARY CONDUIT
- (5"S) 5" PG&E SECONDARY CONDUIT
- (4"S) 4" PG&E SECONDARY CONDUIT
- (3"S) 3" PG&E SECONDARY CONDUIT

AT&T LEGEND
- (4"T) 4" AT&T CONDUIT
- (T) 2" AT&T CONDUIT

COMCAST LEGEND
- (C) 4" COMCAST CONDUIT

WAVE BROADBAND LEGEND
- (4"W) 4" WAVE CONDUIT
- (W) 2" WAVE CONDUIT

C.L.E.C LEGEND
- (4"F) 4" C.L.E.C. CONDUIT

VERIZION LEGEND
- (VR) 2" VERIZION CONDUIT

SL LEGEND
- (SL) 2" STREET LIGHT CONDUIT

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

FILENAME: J:\DROPBOX\PROJECTS\2019\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RDA WORK\PS 15-646 JT MZONING (JT-9)

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR. SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHIES
No. 20129
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II)
		CHECKED BY: D.V.	JOINT TRENCH COMPOSITE
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

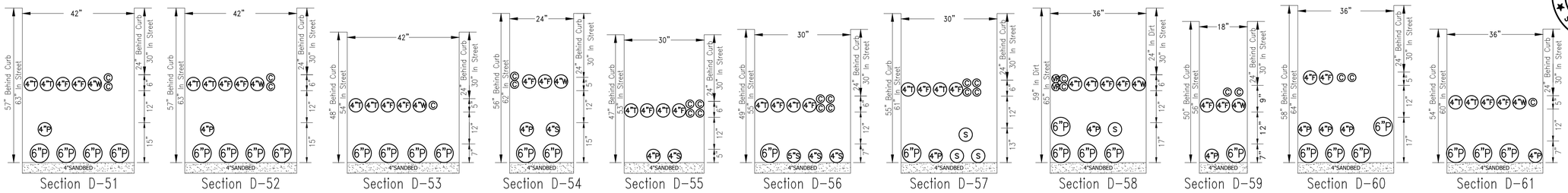
SCALE: N.T.S.
DATE: 10-19-2020
FILE NO.: 15-646

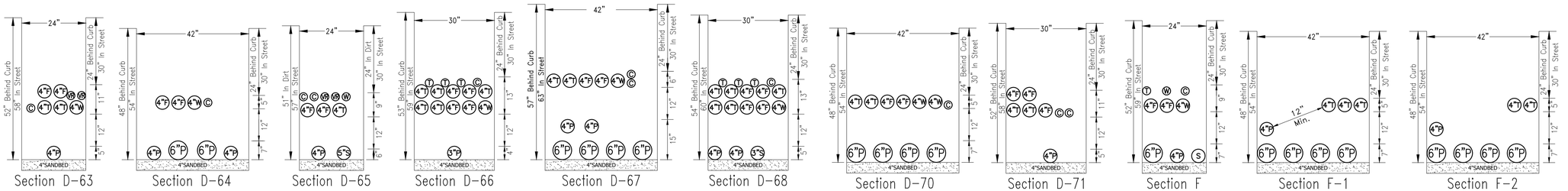
VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN

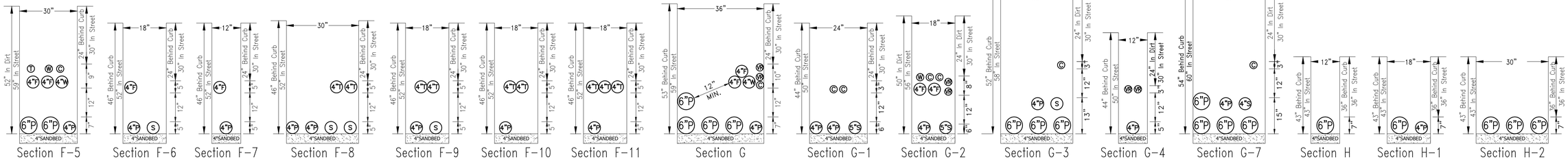
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES (0 1 2 3 4)

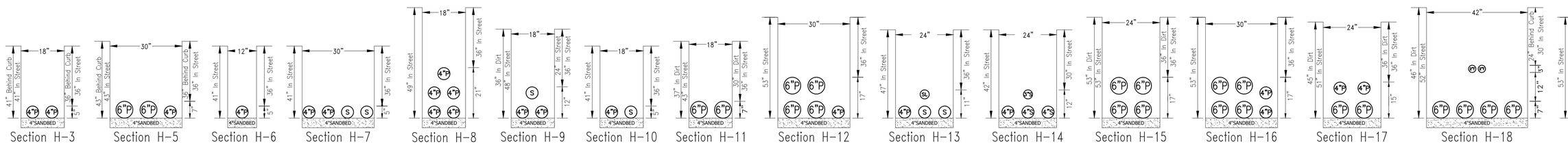
VIZION DATE LAST WORKED ON: 10-19-2020

JT-9
SHEET 125 OF 140









REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

NOTE:
THIS PLAN IS TO BE USED AS A GUIDE FOR TRENCHING WIDTH AND DEPTH AND NOT CONDUIT INSTALLATION.

TRENCH OCCUPANCY GUIDE

SECTION	G	T	C	S	P	C.L.E.C.
A*	X	X	X	X	X	
B*	X	X		X	X	
C*	X		X	X	X	
D*		X	X	X	X	X+
E*	X			X	X	
F*		X		X	X	X+
G*			X	X	X	X+
H*				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			X+
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		X+
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				X+
V			X			
W				X		
X						

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY
+THESE SECTIONS MAY OR MAY NOT CONTAIN C.L.E.C. CONDUIT

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

SOIL NOTES:
1. VIZION UTILITY PARTNERS IS NOT RESPONSIBLE FOR ANY SOILS ENGINEERING TO DETERMINE THE ABILITY TO CONSTRUCT OR THE PROJECT CONDITIONS.
2. VIZION UTILITY PARTNERS ASSUMES NO RESPONSIBILITY FOR ADDITIONAL WORK DUE TO ADVERSE JOB SITE CONDITIONS.
3. PG&E WILL REQUIRE SOILS ANALYSIS FOR SUBSURACE TRANSFORMERS (If Applicable).

MINIMUM SEPARATION AND CLEARANCE REQUIREMENTS

		DUCT G	T	F	WB	CL	C	S	P	Min. Cover
G	Gas	0"	12"	12"	12"	12"	12"	6"	12"	24", 30" in street
T	Telephone (Duct)	12"	0"	1"	1"	1"	1"	12"	12"	24", 30" in street
C	C.A.T.V.	12"	1"	1"	1"	1"	1"	12"	12"	24", 30" in street
F	Fiber (CLEC)	12"	1"	1"	1"	1"	1"	12"	12"	24", 30" in street
WB	CATV (WAVE)	12"	1"	1"	0"	1"	1"	12"	12"	24", 30" in street
CL	CATV (CENTURY LINK)	12"	1"	1"	1"	0"	1"	12"	12"	24", 30" in street
S	Electric Secondary	6"	12"	12"	12"	12"	12"	3"	3"	24", 30" in street
P	Electric Primary	12"	12"	12"	12"	12"	12"	3"	3"	36", 36" in street

CONTRACTOR NOTES:

1. The symbols (P)(S)(T)(C)(G)(F)(W)(WB) indicate occupancy only. See Electric, Gas, Comcast, & AT&T plans for exact size and number of conduits.

2. This plan is to be used as a guide for trenching width and depth and not conduit installation.

3. Contractor to include incidental trenching in splice box, vault, or transformer excavation in areas where no entrance or exit of trench is shown.

PG&E LEGEND

- (6"P) 6" PG&E PRIMARY CONDUIT
- (4"P) 4" PG&E PRIMARY CONDUIT
- (5"S) 5" PG&E SECONDARY CONDUIT
- (4"S) 4" PG&E SECONDARY CONDUIT
- (3"S) 3" PG&E SECONDARY CONDUIT

AT&T LEGEND

- (4"T) 4" AT&T CONDUIT
- (T) 2" AT&T CONDUIT

COMCAST LEGEND

- (C) 2" COMCAST CONDUIT

WAVE BROADBAND LEGEND

- (4"W) 4" WAVE CONDUIT
- (W) 2" WAVE CONDUIT

C.L.E.C LEGEND

- (4"F) 4" C.L.E.C. CONDUIT

VERIZION LEGEND

- (VR) 2" VERIZION CONDUIT

SL LEGEND

- (SL) 2" STREET LIGHT CONDUIT

SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

FILENAME: J:\JROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\DGN WORK\PS 15-646 JT VIZION.DWG (JT-10)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER
DAVID B. VOORHIES
No. 19129
Exp. 03-31-22
CIVIL
STATE OF CALIFORNIA

DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II)
		CHECKED BY: D.V.	JOINT TRENCH COMPOSITE
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: N.T.S.
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES (0 1 2 3 4)

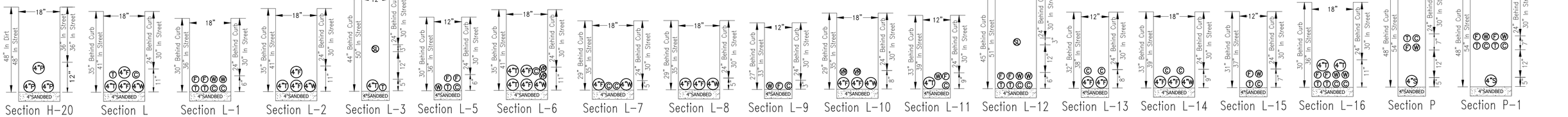
VIZION DATE LAST WORKED ON: 10-19-2020

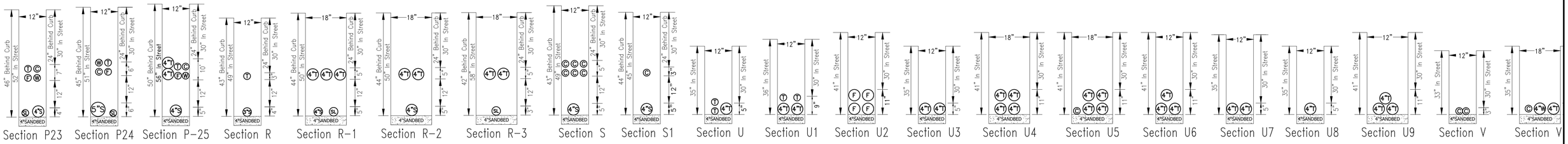
JT-10
SHEET 126 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021







SHEET INDEX

JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RGA WORK\PS 15-646 JT VIZONLDWG (JT-11)

TRENCH OCCUPANCY GUIDE

SECTION	G	T	C	S	P	C.L.E.C.
A*	X	X	X	X	X	
B*	X	X		X	X	
C*	X		X	X	X	
D*		X	X	X	X	X+
E*	X			X	X	
F*		X		X	X	X+
G*			X	X	X	X+
H*				X	X	
I	X	X	X			
J	X	X				
K	X		X			
L		X	X			X+
M	X	X	X	X		
N	X	X		X		
O	X		X	X		
P		X	X	X		X+
Q	X			X		
R		X		X		
S			X	X		
T	X					
U		X				X+
V			X			
W				X		
X						

*THESE SECTIONS MAY OR MAY NOT CONTAIN SECONDARY

+THESE SECTIONS MAY OR MAY NOT CONTAIN C.L.E.C. CONDUIT

DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE TO CONTRACTOR:
FOR CONTRACTOR'S WORK RESPONSIBILITY, REFER TO JOINT TRENCH SHEET (JT-2)

SOIL NOTES:
1. VIZION UTILITY PARTNERS IS NOT RESPONSIBLE FOR ANY SOILS ENGINEERING TO DETERMINE THE ABILITY TO CONSTRUCT OR THE PROJECT CONDITIONS.
2. VIZION UTILITY PARTNERS ASSUMES NO RESPONSIBILITY FOR ADDITIONAL WORK DUE TO ADVERSE JOB SITE CONDITIONS.
3. PG&E WILL REQUIRE SOILS ANALYSIS FOR SUBSURACE TRANSFORMERS (If Applicable).

MINIMUM SEPARATION AND CLEARANCE REQUIREMENTS

		DUCT G	T	F	WB	CL	C	S	P	Min. Cover
G	Gas	0"	12"	12"	12"	12"	12"	6"	12"	24"; 30" in street
T	Telephone (Duct)	12"	0"	1"	1"	1"	1"	12"	12"	24"; 30" in street
C	C.A.T.V.	12"	1"	1"	1"	1"	1"	12"	12"	24"; 30" in street
F	Fiber (CLEC)	12"	1"	1"	1"	1"	1"	12"	12"	24"; 30" in street
WB	CATV (WAVE)	12"	1"	1"	0"	1"	1"	12"	12"	24"; 30" in street
CL	CATV (CENTURY LINK)	12"	1"	1"	1"	0"	1"	12"	12"	24"; 30" in street
S	Electric Secondary	6"	12"	12"	12"	12"	12"	3"	3"	24"; 30" in street
P	Electric Primary	12"	12"	12"	12"	12"	12"	3"	3"	30"; 36" in street

CONTRACTOR NOTES:

1. The symbols (P)(S)(T)(C)(F)(W)(WB) indicate occupancy only. See Electric, Gas, Comcast, & AT&T plans for exact size and number of conduits.

2. This plan is to be used as a guide for trenching width and depth and not conduit installation.

3. Contractor to include incidental trenching in splice box, vault, or transformer excavation in areas where no entrance or exit of trench is shown.

PG&E LEGEND

- (6"P) 6" PG&E PRIMARY CONDUIT
- (4"P) 4" PG&E PRIMARY CONDUIT
- (5"S) 5" PG&E SECONDARY CONDUIT
- (4"S) 4" PG&E SECONDARY CONDUIT
- (3"S) 3" PG&E SECONDARY CONDUIT

AT&T LEGEND

- (4"T) 4" AT&T CONDUIT
- (T) 2" AT&T CONDUIT

COMCAST LEGEND

- (C) 2" COMCAST CONDUIT

WAVE BROADBAND LEGEND

- (4"W) 4" WAVE CONDUIT
- (W) 2" WAVE CONDUIT

C.L.E.C LEGEND

- (4"F) 4" CLEC CONDUIT

VERIZION LEGEND

- (VR) 2" VERIZION CONDUIT

SL LEGEND

- (SL) 2" STREET LIGHT CONDUIT

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER — DAVID B. VOORHEES — No. 19429 — Exp. 03-31-22 — CIVIL — STATE OF CALIFORNIA

DATE: 09-20-2020

COUNTY OF SAN MATEO — PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II) JOINT TRENCH COMPOSITE
		CHECKED BY: D.V.	
		DRAWN BY: M.W.	
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: N.T.S.
DATE: 10-19-2020
FILE NO.: 15-646

VIZION UTILITY PARTNERS PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES: 0 1 2 3 4

VIZION DATE LAST WORKED ON: 10-19-2020

JT-11
SHEET 127 OF 140

PG&E PRIMARY

Utility Line Crossing Lines and Cables Carrying More Than 750 Volts

a. A minimum depth of 4.5 feet below the base of rail (BBR) to the top of the facility will be maintained.
b. A minimum of 4.0 feet below natural grade (BNG) to the top of the facility will be maintained.
c. The wireline must be encased completely across the railroad right of way with a rigid metallic conduit or non-metallic conduit (PVC) encased in a minimum of 3 inches of concrete.
d. A 6-inch wide warning tape will be installed 1-foot BNG directly over the underground power line where located on railroad right of way outside the track ballast sections. No warning tape is required above directional boring routes.
e. Crossings shall not be installed under or within 50 feet from the end of any railroad bridge, centerline of any culvert or switch area.
f. A Railroad signal representative must be present during installation if railroad signals are in the vicinity of wireline crossing unless signal representative authorizes otherwise.

PG&E SECONDARY & COMMICATIONS

Utility Line Crossing Lines Carrying 750 Volts Or Less;
Power, Television, Telephone, and Fiber Optic Lines and Cables

There are two types of clearances, overhead and underground. The purpose of the clearances is to allow a safe operating system without interfering with other systems.

Above-ground facilities should be located as far as possible from automobile or pedestrian crossings or constructed in such manner to allow automobile or pedestrian traffic adequate sight lines to see approaching trains.

If space permits, the above-ground facilities should be located in such a way as to allow for additional future tracks.

Although railroads do strive to keep derailments to a minimum, they do happen. Locations where derailments are most likely to happen are at turnouts, the outside of tight curves, ends of bridges, at road crossings and the pullout end of classification yards. Locating facilities at or near these locations should be avoided if possible.

All crossings should cross as near perpendicular to the track as possible but not less than at a 60 degree angle.

All wireline facility installations shall comply with the current published issue of the American National Standards Institute's (ANSI's) National Electrical Safety Code (NESC) and local governing authority.

1. Underground
a. A minimum depth of 4.5 feet below the base of rail (BBR) will be maintained except that a minimum of 5 feet BBR will be maintained for fiber optic cable wirelines.
b. A minimum of 3.0 feet below natural grade (BNG) will be maintained except fiber optic cable wirelines.
c. Casing must extend a minimum of 30 feet out from the centerline of the nearest track, when measured at right angles. The casing material shall be steel or rigid metal conduit (no PVC) for typical burial depths. PVC will be considered acceptable if the burial depth is at least 15 feet.
d. Horizontal directional drilling is not an approved method of installation unless the burial depth is at least 15 feet, the conduit/casing size is six inches or less, and the Interim Guidelines for Horizontal Directional Drilling Under Union Pacific Railroad Right of Way are followed. The interim guidelines were distributed by the Office of AVP Engineering Design on May 27, 2005.
e. Crossings shall not be installed under or within 50 feet from the end of any railroad bridge, centerline of any culvert or switch area.
f. A Railroad signal representative must be present during installation if railroad signals are in the vicinity of wireline

INTERIM GUIDELINES FOR
HORIZONTAL DIRECTIONAL DRILLING (HDD) UNDER
UNION PACIFIC RAILROAD RIGHT-OF-WAY

Preface: The American Railway Engineering and Maintenance-of-Way Association (AREMA) has assigned a working committee to develop a recommended railroad industry practice for horizontal directional drilling (HDD) under railroad rights-of-way. These interim guidelines are issued by the Union Pacific Railroad (UPRR) pending completion of the AREMA recommended practice, at which time UPRR will review and determine whether to adopt it.

Scope: All pipelines proposed for installation under UPRR right-of-way and trackage using HDD. Fiber optics installation under the jurisdiction of the UPRR Information Technologies (IT) Department with 10 inch or smaller diameter casing pipe shall follow the guidelines outlined in the current version of the "Fiber Optic Engineering, Construction and Maintenance" Standard Manual.

1. For all liquid or gas pipelines, only steel pipe may be installed under tracks or UPRR right-of-way utilizing HDD. The pipe may be used as a carrier pipe or a casing pipe. Plastic carrier pipe, if used, must be installed in a steel casing.

2. For fiber optics (not under the jurisdiction of UPRR IT Department) or electrical installations, plastic (PVC or HDPE) pipe may be used as a conduit.

3. For all liquid or gas installations or for nominal pipe sizes exceeding 6 in., minimum cover (measured from base of rail to top of pipe) shall be 25 ft, regardless of product. For fiber optics or electrical installations, with casing/conduit nominal size of 6 in. or less, minimum cover shall be 15 ft. Applicant submittal shall include actual planned depth of pipe under each railroad track.

4. Applicant must provide pipe specifications. Pipe must satisfy AREMA recommendations and all applicable government and industry regulations.

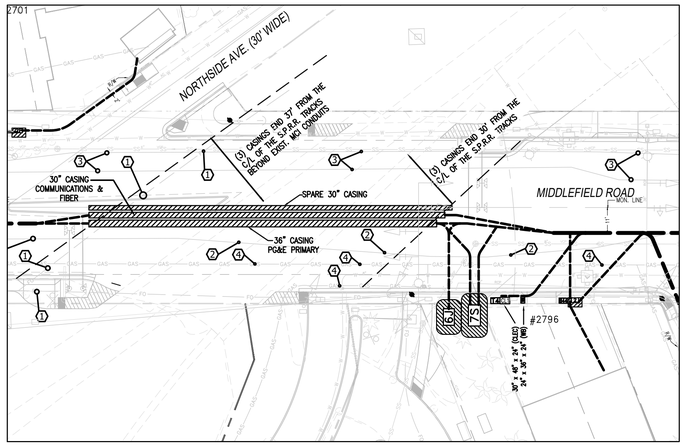
5. Applicant must provide qualifications of drilling contractor including specific instances of previous successful experience in drilling under sensitive surface facilities.

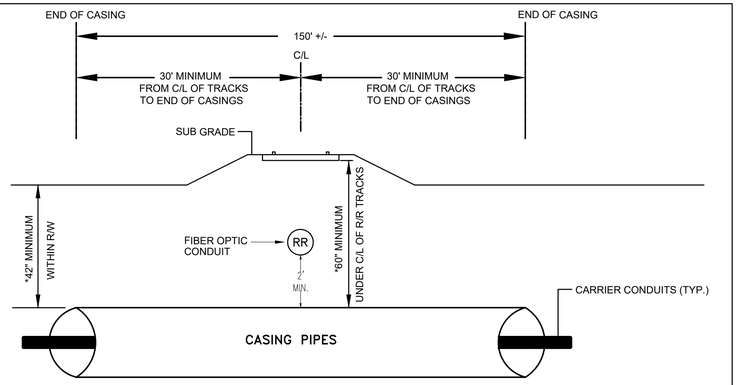
6. Prior to commencement of drilling:
A. The contractor must submit an Installation Plan that describes the anticipated rig capacity, the proposed equipment and the method for advancing the borehole through expected soil conditions, angles, depth and exact location of the exit ditch, the pilot hole diameter, the proposed reaming plan, including the number and diameter of pre-reams/back-reams and diameter of the final reamed borehole, and the contingency equipment and plans for dealing with soil conditions that a soil engineer could reasonably expect to be encountered at the proposed HDD installation site. The Installation Plan will also address the anticipated hours of operation during the HDD borehole drilling and installation process, the minimum number of personnel, and their responsibilities on-duty and on-site during all HDD drilling operations.
B. The contractor must provide a detailed Fracture Mitigation (frac-out) Plan including method of monitoring and capturing the return of drilling fluids with particular attention to prevention of inadvertent escape of drilling fluids where they could undermine the Railroad tracks.
C. Establish a Survey Grid Line and provide a program of monitoring and documenting the actual location of the borehole during drilling operations.

7. A railroad observer and an applicant inspector are required to monitor the ground, ballast, and track for movement during the drilling, reaming, and pullback processes. All work within the Railroad right-of-way must be coordinated with the Railroad flagger. The installation process and all train movement must be immediately stopped if movement is detected. The damaged area must be immediately reported to the Railroad and immediately repaired subject to Railroad review and approval. The installation process must be reviewed and modified as required before the installation may proceed. Applicant must pay Railroad's expenses for review, observation of installation, and flagging.

8. Upon completion of the HDD installation work, the contractor shall provide an accurate as-built drawing of the installed HDD segment. As-built drawings will include both horizontal and profile plans.

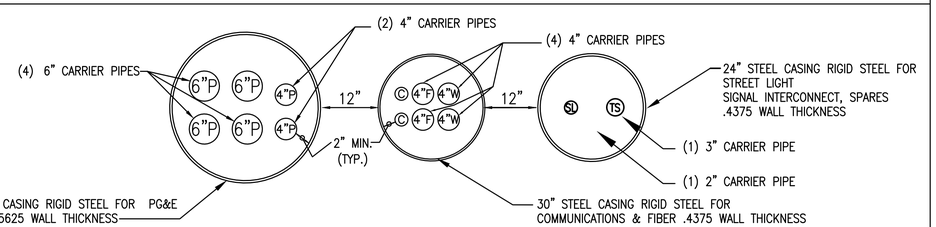
1. PROTECT IN PLACE – EXISTING MCI/VERIZON CONDUITS DURING JOINT TRENCH CONSTRUCTION
2. PROTECT IN PLACE – EXISTING CENTURY LINK CONDUITS DURING JOINT TRENCH CONSTRUCTION
3. PROTECT IN PLACE – EXISTING FIBER CONDUITS DURING JOINT TRENCH CONSTRUCTION
4. PROTECT IN PLACE – EXISTING PG&E GAS DURING JOINT TRENCH CONSTRUCTION
5. PROTECT IN PLACE – EXISTING PG&E ELECTRIC DURING JOINT TRENCH CONSTRUCTION





6"P 6" PRIMARY (PG&E)
4"P 4" PRIMARY (PG&E)
4" WB 4" WAVE BROAD BAND
F 4" C.L.E.C. (FIBER)
C 2" COMCAST (CATV)
SL 2" STREET LIGHT
TS 3" TRAFFIC SIGNAL

*** CASING PIPE MUST BE PLACED A MINIMUM OF 2' BELOW EXISTING FIBER OPTIC CABLE. ANY EXCAVATION REQUIRED WITHIN 5' OF EXISTING FIBER OPTIC CABLE MUST BE HAND DUG. FIBER OPTIC LOCATION WILL BE MARKED BY S.P. COMMUNICATIONS AND AREAS WILL BE "POT-HOLED" PRIOR TO THE START OF WORK WITHIN THE RIGHT OF WAY. NOTIFY SOUTHERN PACIFIC COMMUNICATIONS PRIOR TO INSTALLING CASING BORE 1-510-755-5515**



EXISTING LEGEND

- EXIST. PG&E GAS
- EXIST. PG&E ELECTRIC
- EXIST. AT&T
- EXIST. (MCI) VERIZON
- EXIST. L3 FIBER OPTIC
- EXISTING OVERHEAD
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING WATER
- EXISTING POLE TO REMAIN
- EXISTING POLE TO BE REMOVED
- EXISTING S.S. MANHOLE
- EXISTING TELEPHONE MANHOLE

SUBSTRUCTURE LOCATIONS MUST BE STAKED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION. SEE CONSTRUCTION NOTES NOTE 9 THIS SHEET REGARDING EXISTING CONDITIONS.

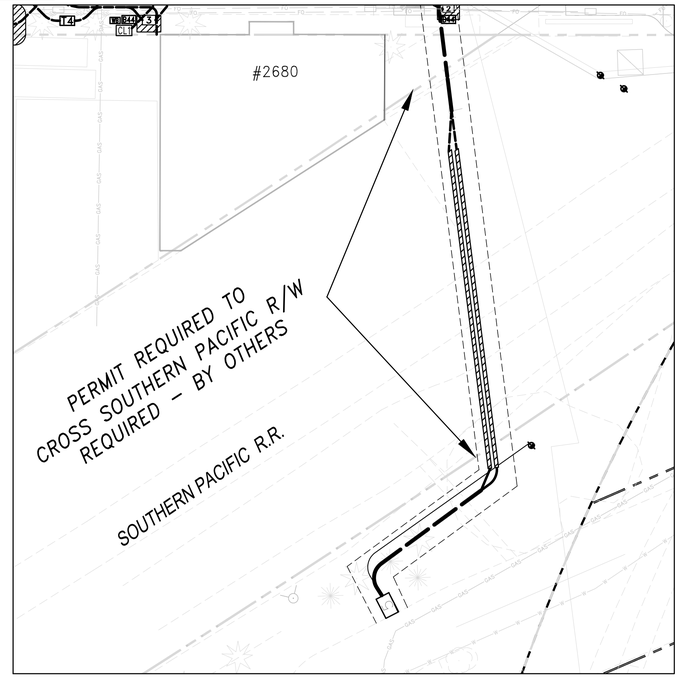
RECORD DRAWING
THIS DRAWING INDICATES IMPROVEMENTS AS DESIGNED AND REVISED BY RGA DESIGN TOGETHER WITH FIELD CHANGES REPORTED TO HAVE OCCURRED DURING CONSTRUCTION IN ACCORDANCE WITH RECORDS AND REPRESENTATIONS OF INSPECTORS AND CONTRACTORS.
BY: _____ DATE: _____

*** CASING PIPE MUST BE PLACED A MINIMUM OF 2' BELOW EXISTING FIBER OPTIC CABLE. ANY EXCAVATION REQUIRED WITHIN 5' OF EXISTING FIBER OPTIC CABLE MUST BE HAND DUG. FIBER OPTIC LOCATION WILL BE MARKED BY S.P. COMMUNICATIONS AND AREAS WILL BE "POT-HOLED" PRIOR TO THE START OF WORK WITHIN THE RIGHT OF WAY. NOTIFY SOUTHERN PACIFIC COMMUNICATIONS PRIOR TO INSTALLING CASING BORE 1-510-755-5515**

SHEET INDEX

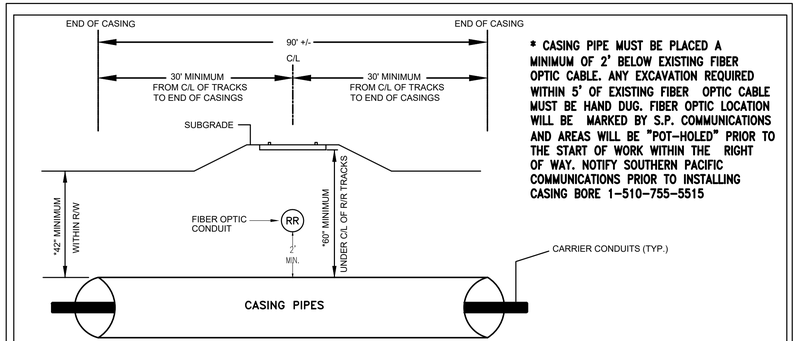
JT-1 TITLE SHEET
JT-2 NOTES & DETAILS
JT-3 JOINT TRENCH COMPOSITE
JT-4 JOINT TRENCH COMPOSITE
JT-5 JOINT TRENCH COMPOSITE
JT-6 JOINT TRENCH COMPOSITE
JT-7 JOINT TRENCH COMPOSITE
JT-8 JOINT TRENCH COMPOSITE
JT-9 TRENCH SECTIONS
JT-10 TRENCH SECTIONS
JT-11 TRENCH SECTIONS
JT-12 RAILROAD JT XING

N
0 20 40 80



REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/2021 CIVIL STATE OF CALIFORNIA

APPROVED:
DATE: 10/16/2020
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



*** CASING PIPE MUST BE PLACED A MINIMUM OF 2' BELOW EXISTING FIBER OPTIC CABLE. ANY EXCAVATION REQUIRED WITHIN 5' OF EXISTING FIBER OPTIC CABLE MUST BE HAND DUG. FIBER OPTIC LOCATION WILL BE MARKED BY S.P. COMMUNICATIONS AND AREAS WILL BE "POT-HOLED" PRIOR TO THE START OF WORK WITHIN THE RIGHT OF WAY. NOTIFY SOUTHERN PACIFIC COMMUNICATIONS PRIOR TO INSTALLING CASING BORE 1-510-755-5515**

FILENAME: J:\JOBPROJ\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RGA WORK\PS 15-646 JT VIZONLINK (JT-12)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

REGISTERED PROFESSIONAL ENGINEER DAVID B. VOORHEES No. 24129 Exp. 03-31-22 CIVIL STATE OF CALIFORNIA
DATE: 09-20-2020

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: M.W.	MIDDLEFIELD ROAD
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)
		DRAWN BY: M.W.	RAIL ROAD JOINT TRENCH CROSSINGS
ISSUE FOR BID	10-19-2020	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

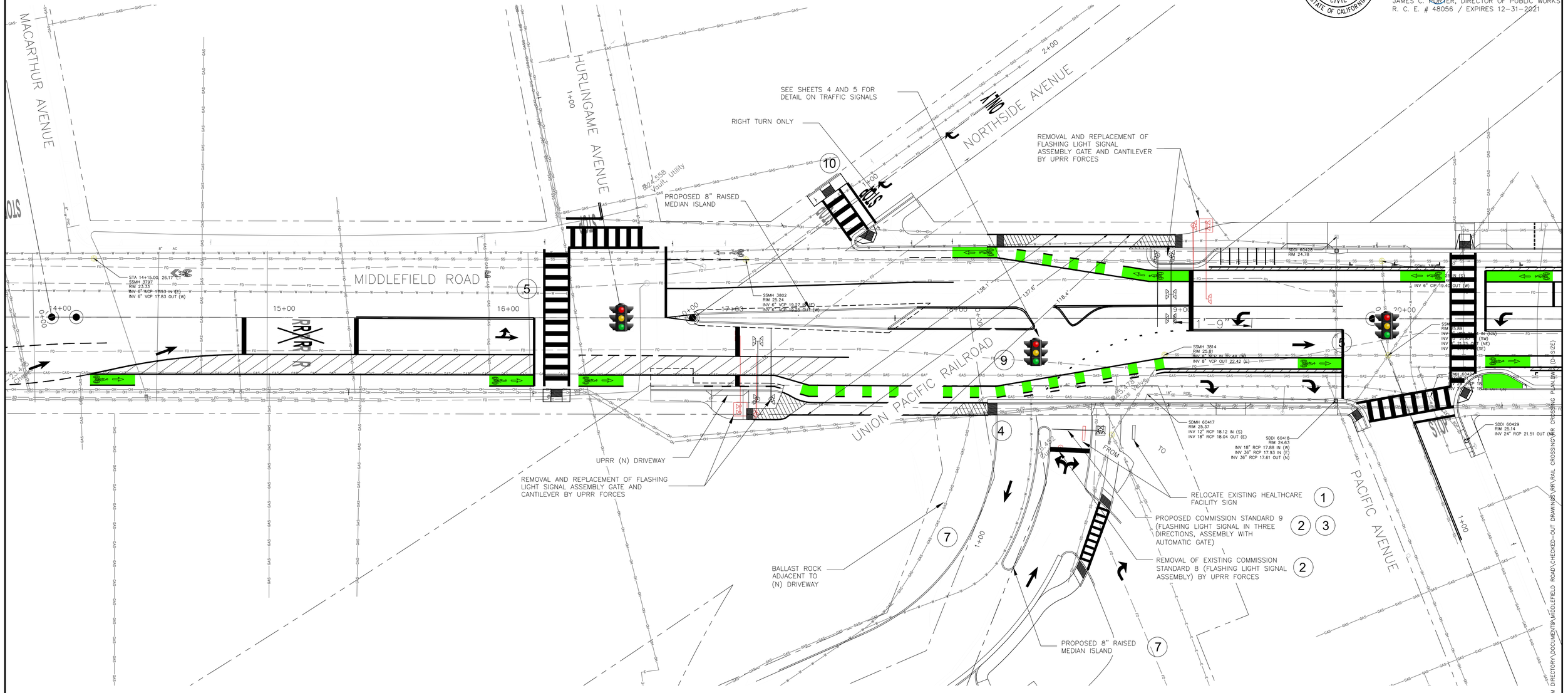
SCALE: N.T.S.			
DATE: 10-19-2020			
FILE NO.: 15-646			
VIZION UTILITY PARTNERS PROJECT MANAGER T. NGUYEN	FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4	VIZION DATE LAST WORKED ON: 10-19-2020	RR-1 SHEET 128 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



KEY NOTES, BASED ON CPUC LETTER ON 12/6/2013:

1. CONFIRM SIGHT LINES, MOVE SIGN.
2. REMOVE CS 8 (FLASHING LIGHT SIGNAL ASSEMBLY) AND REPLACE WITH CS 9 (FLASHING LINE SIGNAL ASSEMBLY WITH GATE).
3. RECONFIGURE MEDIAN ISLAND (TO PLACE AWD 4'-3" FROM CURBS TO CENTERLINE OF AWD)
4. REVIEW LOCATION AND NEED FOR CROSSWALK.
5. REVIEW LOCATION OF CROSSWALK AND CONSIDER SHIFTING TO EAST OF PACIFIC AVE.
6. SEE COMMENT 2.
7. RECONFIGURE DRIVEWAY MEDIAN (SEE COMMENT 3)
8. REVIEW TRUCK TURNING RADII FOR INGRESS AND EGRESS
9. REVIEW SIGNALIZATION OF REDWOOD JUNCTION ACCESS AND RAILROAD PREEMPTION
10. REVIEW OPTIONS FOR LEFT TURNING TRAFFIC FROM NORTHSIDE RD. TO EAST BOUND MIDDLEFIELD RD. (SIGN AS "NO LEFT TURN" OR PROVIDE CS9).

UPRR REQUIREMENTS FOR WORKING NEAR RAIL ROAD ASSETS:

1. COMPLETE A UNION PACIFIC RAILROAD WORK PLAN PAPERWORK AND SUBMIT TO UP.WORKPLAN@RAILPROS.COM. REFERENCE , PROJECT FOLDER NUMBERS (3108-10, 3108-36 & 3144-51).
2. LOCATE UPRR SIGNAL CABLES BY FOLLOWING THE FOLLOWING STEPS:
   EMAIL THE UP MANAGER SIGNAL MAINTENANCE MAIKEL YOUNAN AT MIYOUNAN@UP.COM
   GIVE THE DEPTH OF THE CASING, THE MP AND SUBDIVISIONS (GIVEN IN EXHIBIT A OF THE UPRR AGREEMENT)
   ASK HIM TO REPLY VIA EMAIL WITH ANY ADDITIONAL INSTRUCTIONS.
   CC UTILITIES.OFFICE.STAFF@RAILPROS.COM ON ANY COMMUNICATIONS WITH MR. YOUNAN
3. UPRR TELECOMMUNICATIONS ("CALL BEFORE U DIG")
   CALL 1-800-336-9193 TO GENERATE AN ACTIVE TICKET OR TO RENEW AN EXISTING TICKET
   48 BUSINESS HOURS TO BECOME ACTIVE AND ACTIVE FOR 14 DAYS
   FORWARD THE CBUD TICKET TO UTILITIES.OFFICE.STAFF@RAILPROS.COM
   NOTE: EACH CONTRACTOR WHO WILL BE DIGGING AND/OR DRILLING ON UPRR PROPERTY/ROW MUST BE NAMED ON A TICKET.

GRAPHIC SCALE
0 10 20 40
1" = 20'

MATERIAL PREPARED FOR UPRR PERMITS

FOR REFERENCE ONLY

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

REGISTERED PROFESSIONAL ENGINEER
ALI POSSEIN CHRISTIAN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT RAIL ROAD CROSSING
		CHECKED BY: TS	
		DRAWN BY: JY	
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

RR-2
SHEET 129 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\RAIL CROSSING PLAN SHEET (D SIZE).

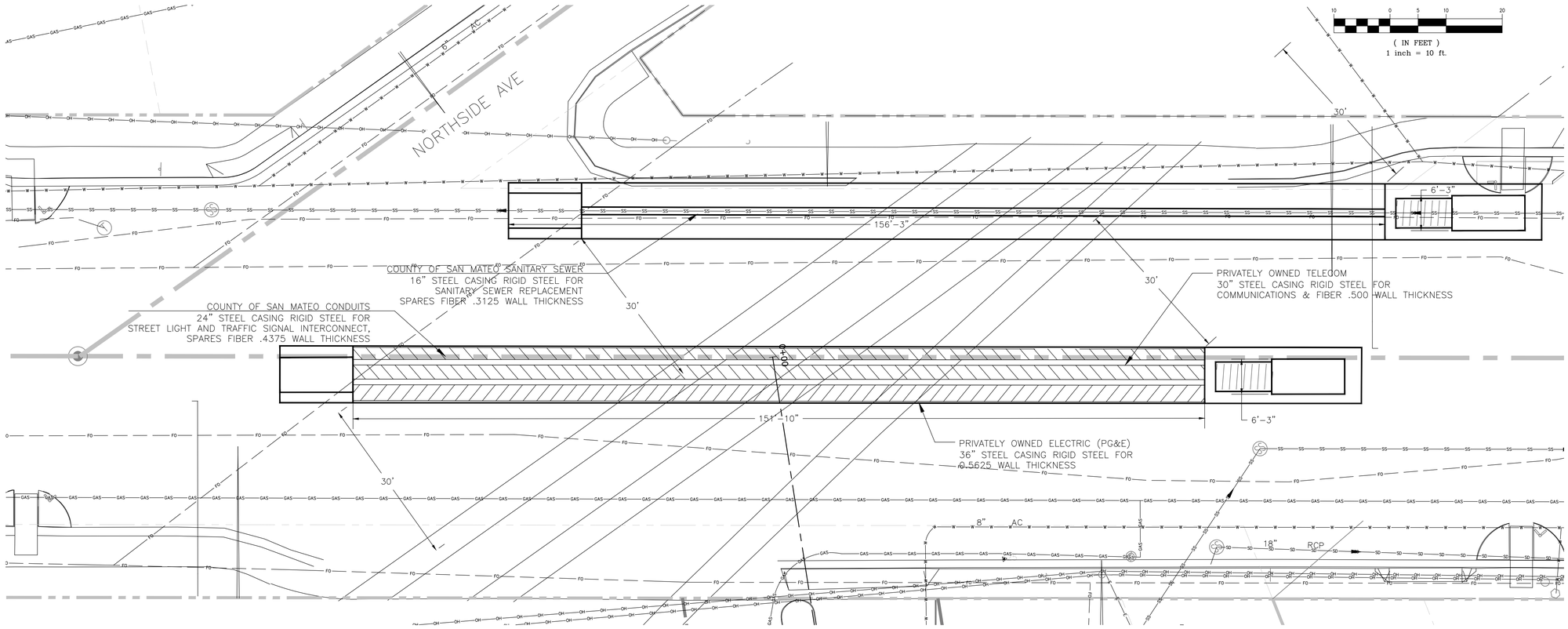
LEGEND:

JOINT TRENCH JACK AND BORE

SANITARY SEWER JACK AND BORE EXTENT OF WORK

JOINT TRENCH JACK AND BORE BOUNDARY

JOINT TRENCH JACK AND BORE EXTENT OF WORK



A) IS PIPELINE CROSSING WITHIN DEDICATED STREET? X YES; _ NO;

B) IF YES, NAME OF STREET: MIDDLEFIELD ROAD

C) DISTRIBUTION LINE X OR TRANSMISSION LINE _
COMMODITY TO BE CONVEYED ELECTRICITY AND DATA X
OPERATING PRESSURE N/A PSI
WALL THICKNESS: VARIES, INDICATED ON THE PLANS, AND BELOW;
DIAMETER: VARIES, INDICATED ON THE PLANS, AND BELOW ;
MATERIAL PLASTIC CONDUIT, RIGID STEEL CASING;

E) CASING PIPE:
PRIMARY ELECTRIC
WALL THICKNESS 0.5625; DIAMETER 36"; MATERIAL RIGID STEEL;
TELECOM
WALL THICKNESS 0.5000; DIAMETER 30"; MATERIAL RIGID STEEL;
STREET LIGHT INTERCONNECT
WALL THICKNESS 0.4375; DIAMETER 24"; MATERIAL RIGID STEEL;
SANITARY SEWER
WALL THICKNESS 0.3125; DIAMETER 16"; MATERIAL RIGID STEEL;

F) METHOD OF INSTALLING CASING PIPE UNDER TRACK(S):
_ DRY BORE AND JACK (WET BORE NOTE PERMITTED);

G) WILL CONSTRUCTION BE BY AN OUTSIDE CONTRACTOR? X YES; _ NO;

H) DISTANCE FROM CENTER LINE OF TRACK TO NEAR FACE OF BORING AND JACKING PITS WHEN MEASURED AT RIGHT ANGLES TO TRACK 30 FEET

I) APPLICANT HAS CONTACTED 1-800-336-9163, U.P. COMMUNICATION DEPARTMENT, AND HAS DETERMINED FIBER OPTIC CABLE _ DOES; X DOES NOT; EXIST IN VICINITY OF WORK TO BE PERFORMED. TICKED NO. _

J) UPRR REQUIRES THAT THE JACK & BORE METHOD NOT INCLUDE ANY 'OVERBORE' AUGURING METHODS DURING CASING PIPE INSTALLATION. AUGERS LEADING IN FRONT OF CASING PIPE DURING JACK AND BORE SHALL NOT BE USED – INTERNAL AUGERS ARE ACCEPTABLE (THIS ELIMINATES OVER-BORING AND POTENTIAL GROUND SETTLEMENT BENEATH TRACKS DURING INSTALLATION).

K) IF ANY PROCESS LEAVES VOID SPACE BETWEEN CASING PIPE AND SURROUNDING SOILS, THE VOID SPACE SHALL BE GROUTED.

L) ALL OF THE PROPOSED PIPES CROSSING IN THIS LOCATION REQUIRE TRACK AND GROUND MONITORING (T&GM) TO BE PERFORMED WHILE THE CASINGS ARE BEING INSTALLED. PRIOR TO START OF WORK, CONTRACTOR SHALL PROVIDE A T&GM WORK PLAN THAT CONFORMS TO THE OUTLINED REQUIREMENTS. THIS IS REQUIRED BEFORE UPRR CAN GRANT APPROVAL OF THE PROPOSED INSTALLATIONS.

M) ALL OF PROPOSED INSTALLATIONS WILL REQUIRE CONSTRUCTION OBSERVATIONS TO BE PERFORMED BY RAILPROS DURING INSTALLATION.

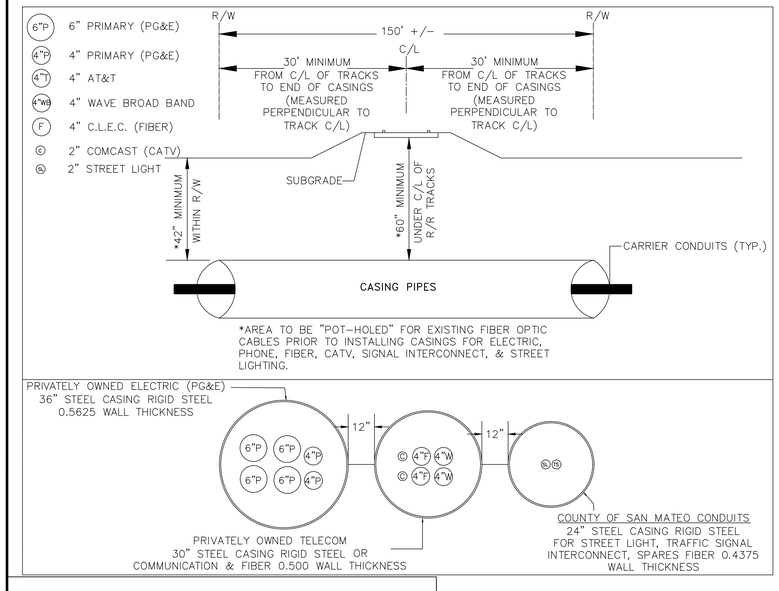
N) NO UNDERGROUND PIPES SHALL BE ABANDONED IN THE PROJECT VICINITY.

APPROVED:

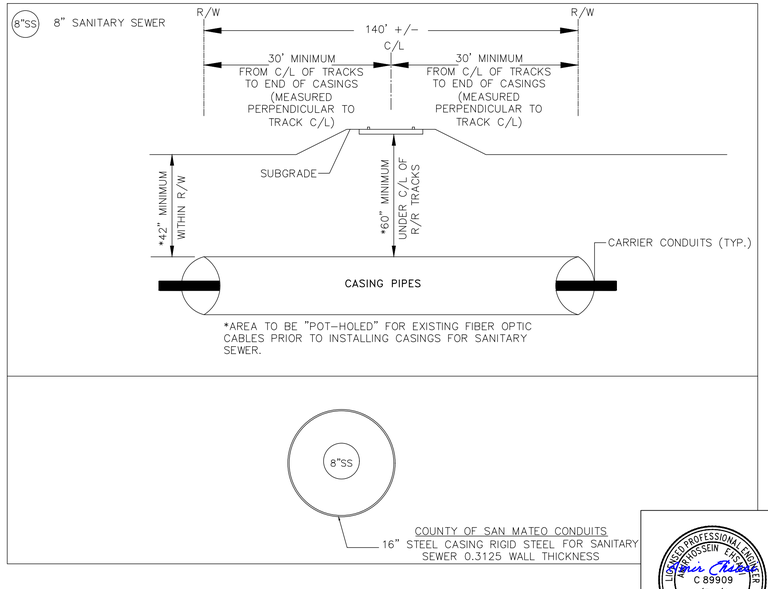
DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA



*AREA TO BE "POT-HOLED" FOR EXISTING FIBER OPTIC CABLES PRIOR TO INSTALLING CASINGS FOR ELECTRIC, PHONE, FIBER, CATV, SIGNAL INTERCONNECT, & STREET LIGHTING.



*AREA TO BE "POT-HOLED" FOR EXISTING FIBER OPTIC CABLES PRIOR TO INSTALLING CASINGS FOR SANITARY SEWER.

MATERIAL PREPARED FOR UPRR PERMITS

RAILROAD CROSSING PROFILE VIEWS

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

LICENSED PROFESSIONAL ENGINEER
ARMOOSSEIN CHRIS
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

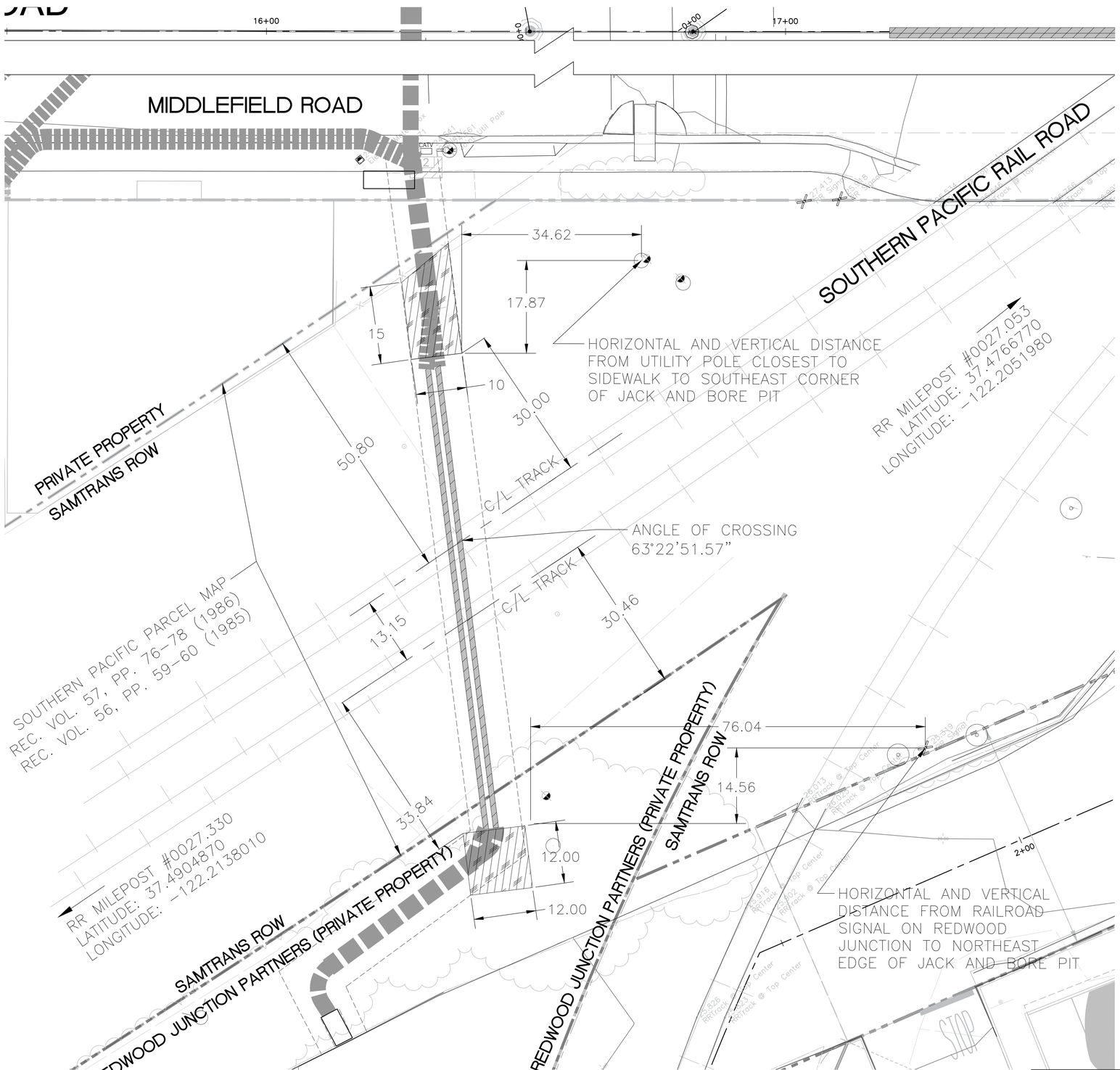
		DESIGNED BY: AB	COUNTY OF SAN MATEO MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		CHECKED BY: TS	
		DRAWN BY: AB	JACK AND BORE LOCATIONS
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

RR-3
SHEET 130 OF 140

FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\RAIL CROSSING\RR PRIMARY CROSSING.DWG (D-SIZE)



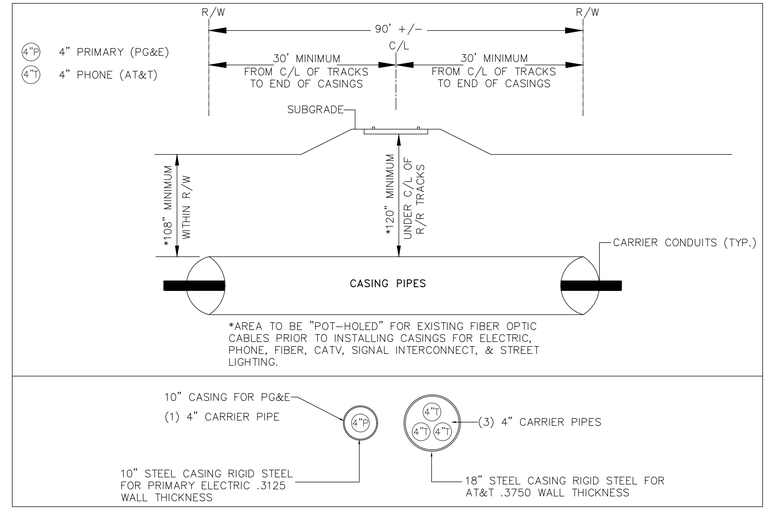
RAILROAD CROSSING PLAN VIEW

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



RAILROAD CROSSING PROFILE VIEW

A) IS PIPELINE CROSSING WITHIN DEDICATED STREET? _ YES; X NO;

B) IF YES, NAME OF STREET _

C) DISTRIBUTION LINE X OR TRANSMISSION LINE _
COMMODITY TO BE CONVEYED ELECTRICITY AND DATA_
OPERATING PRESSURE _ PSI
WALL THICKNESS 0.337"; DIAMETER 4"; MATERIAL PLASTIC;

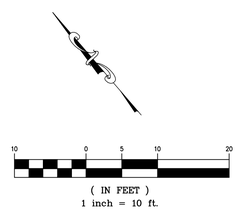
E) CASING PIPE:
PRIMARY ELECTRIC
WALL THICKNESS 0.3125; DIAMETER 10"; MATERIAL RIGID STEEL;
AT&T
WALL THICKNESS 0.3750; DIAMETER 18"; MATERIAL RIGID STEEL;

F) METHOD OF INSTALLING CASING PIPE UNDER TRACK(S):
_ DRY BORE AND JACK (WET BORE NOTE PERMITTED);

G) WILL CONSTRUCTION BE BY AN OUTSIDE CONTRACTOR? X YES; _ NO;

H) DISTANCE FROM CENTER LINE OF TRACK TO NEAR FACE OF BORING AND JACKING PITS WHEN MEASURED AT RIGHT ANGLES TO TRACK 30 FEET AND 34.08 FEET

I) APPLICANT HAS CONTACTED 1-800-336-9163, U.P. COMMUNICATION DEPARTMENT, AND HAS DETERMINED FIBER OPTIC CABLE _ DOES; X DOES NOT; EXIST IN VICINITY OF WORK TO BE PERFORMED. TICKED NO. _



LEGEND:

- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MAIN
- REMOVE (E) AC PAVEMENT FOR JOINT TRENCH MINOR
- JACK AND BORE
- REMOVE (E) GROUND SURFACE FOR JOINT TRENCH JACK AND BORE PIT

MATERIAL PREPARED FOR UPRR PERMITS

LICENSED PROFESSIONAL ENGINEER
ARMOSSEIN ENDER
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: AB	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: AB	UNION PACIFIC RAILROAD CO. EXHIBIT "A"
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR
REVISION	DATE	SAN MATEO COUNTY	REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

RR-4
SHEET 131 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

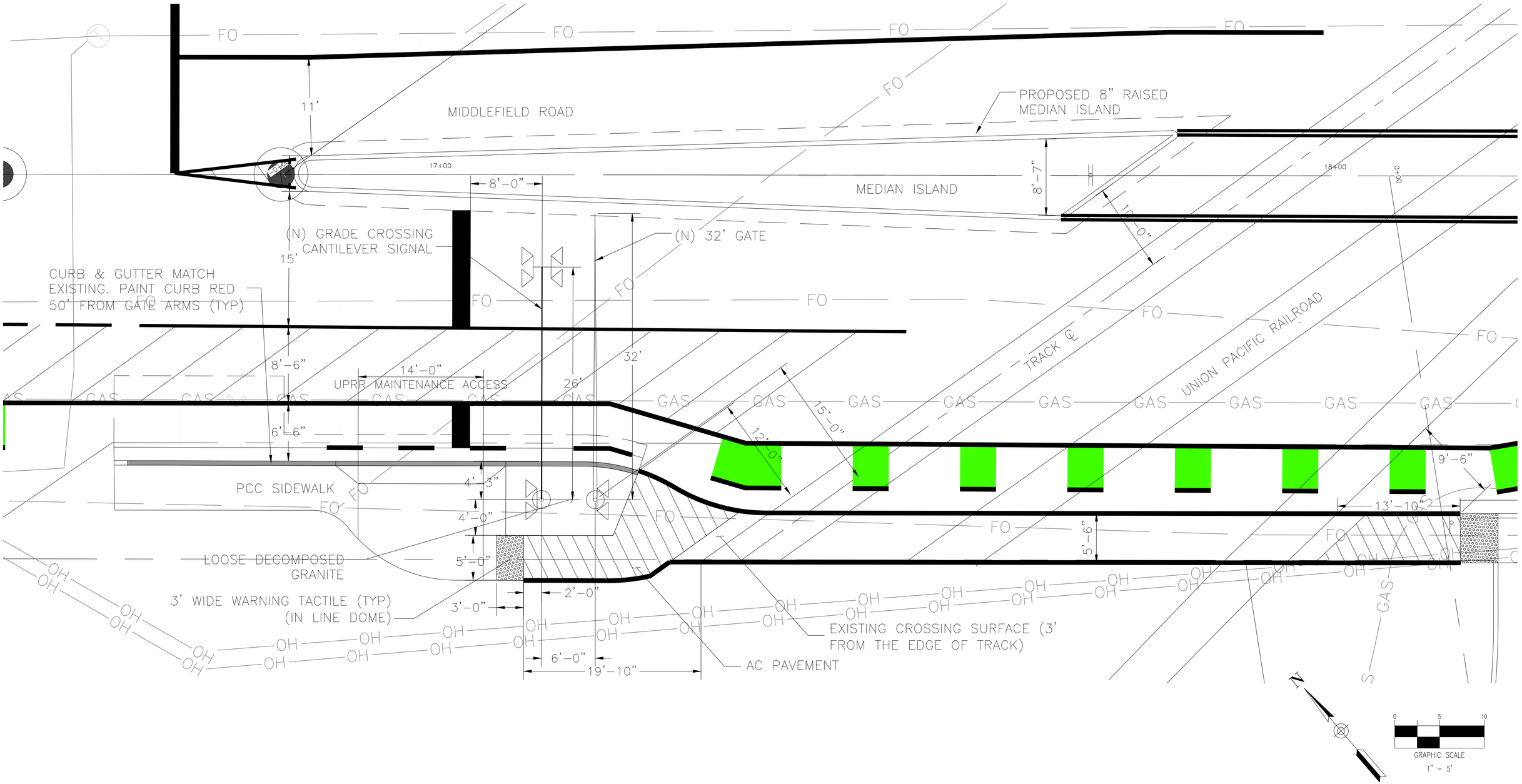
FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\PAL CROSSING\RR SECONDARY CROSSING.DWG (RR-1)

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\RAIL CROSSING\RR CROSSING PLAN DETAIL 1.DWG (D-SIZE)

MATERIAL PREPARED FOR UPRR PERMITS

LICENSED PROFESSIONAL ENGINEER AMIR HOSSEIN ERSHAD C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	RAIL ROAD CROSSING (SOUTH BOUND)
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

RR-5
SHEET 132 OF 140

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

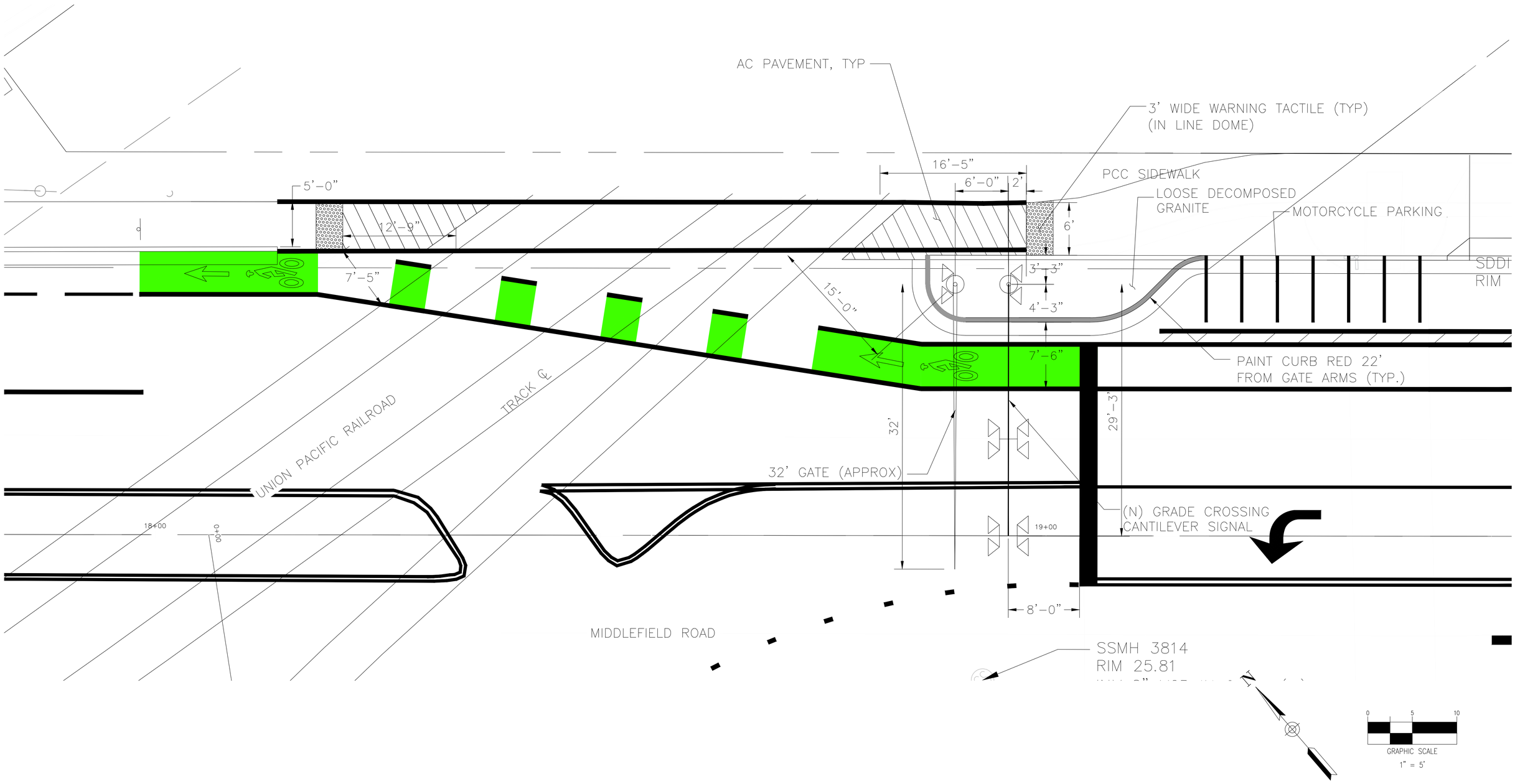
FOR REFERENCE ONLY

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\RAIL CROSSING\RR CROSSING PLAN DETAIL 2.DWG (D-SIZE)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

FOR REFERENCE ONLY

MATERIAL PREPARED FOR UPRR PERMITS

LICENSED PROFESSIONAL ENGINEER
THOMAS SEIN
C 89909
6/30/21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

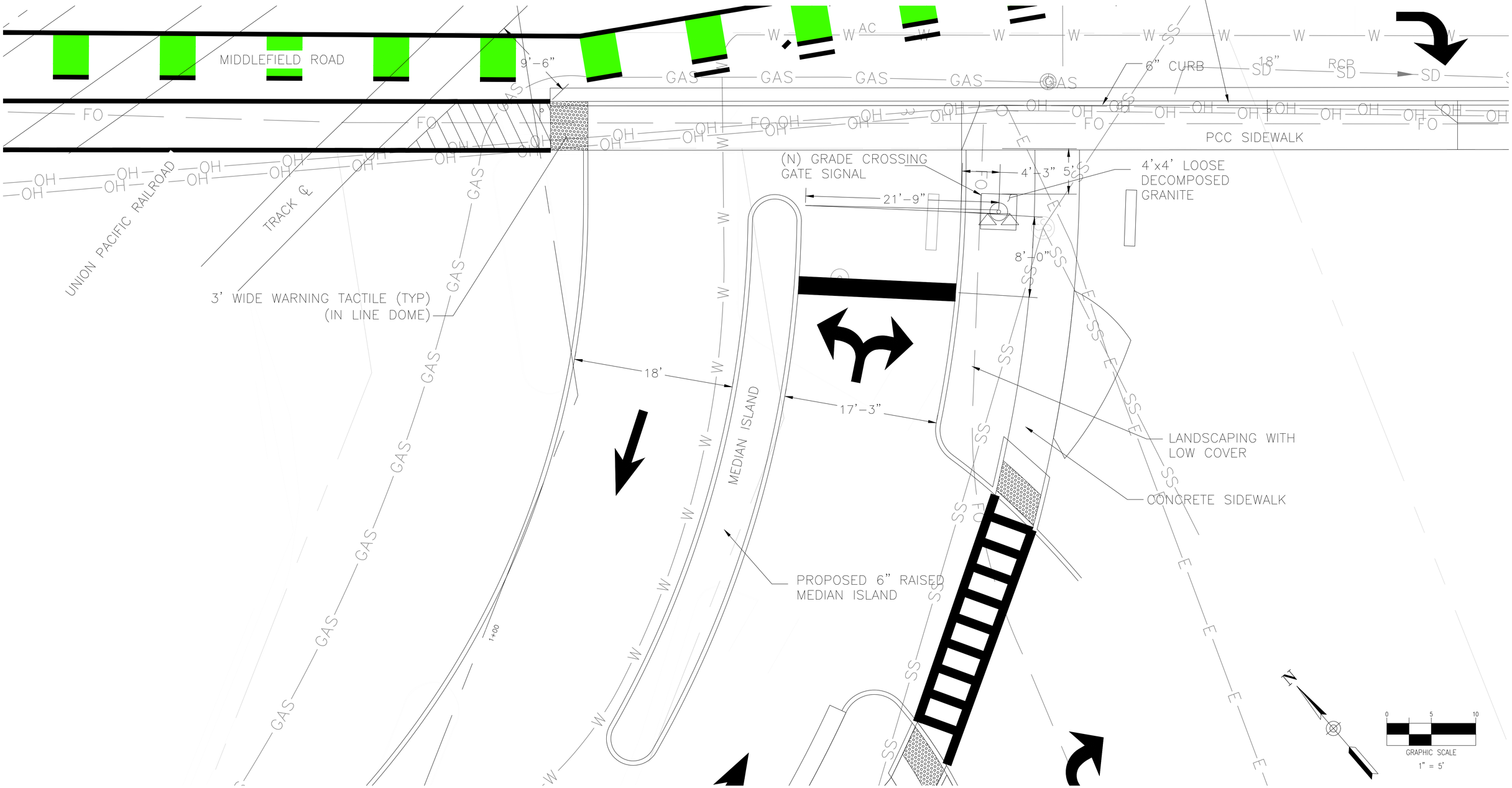
		DESIGNED BY: EA	COUNTY OF SAN MATEO	SCALE: AS SHOWN
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT	DATE: 10-16-2020
		DRAWN BY: EA	RAIL ROAD CROSSING (NORTH BOUND)	FILE NO.: 1/E4931
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
REVISION	DATE			
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4				RR-6 SHEET 133 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA



FILENAME: C:\USERS\JASON.YEE\ONEDRIVE - AECOM DIRECTORY\DOCUMENTS\MIDDLEFIELD ROAD\CHECKED-OUT DRAWINGS\RR\RAIL CROSSING\RR CROSSING PLAN DETAIL 3.DWG (D-SIZE)

AECOM
300 California Street, Suite 600
San Francisco, Ca 94104
Tel: 415-796-8100
fax: 415-796-8200

FOR REFERENCE ONLY

MATERIAL PREPARED FOR UPRR PERMITS

LICENSED PROFESSIONAL ENGINEER AMIR HOSSEIN EHSAN C 89909 6/30/21 CIVIL STATE OF CALIFORNIA

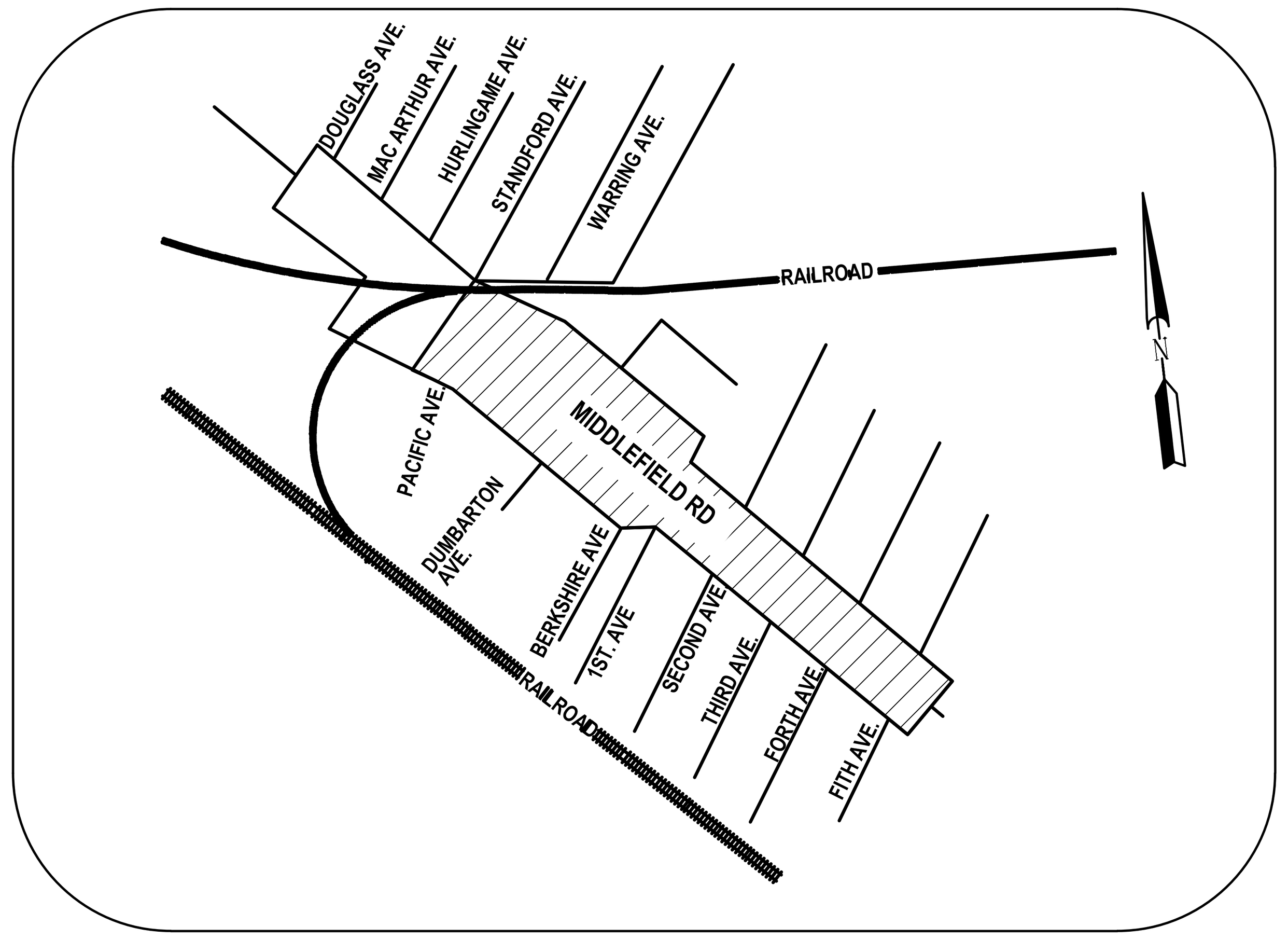
COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: EA	COUNTY OF SAN MATEO
		CHECKED BY: TS	MIDDLEFIELD ROAD IMPROVEMENT PROJECT
		DRAWN BY: EA	RAIL ROAD CROSSING (SOUTH BOUND)
ISSUE FOR BID	10-16-20	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 10-16-2020
FILE NO.: 1/E4931

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

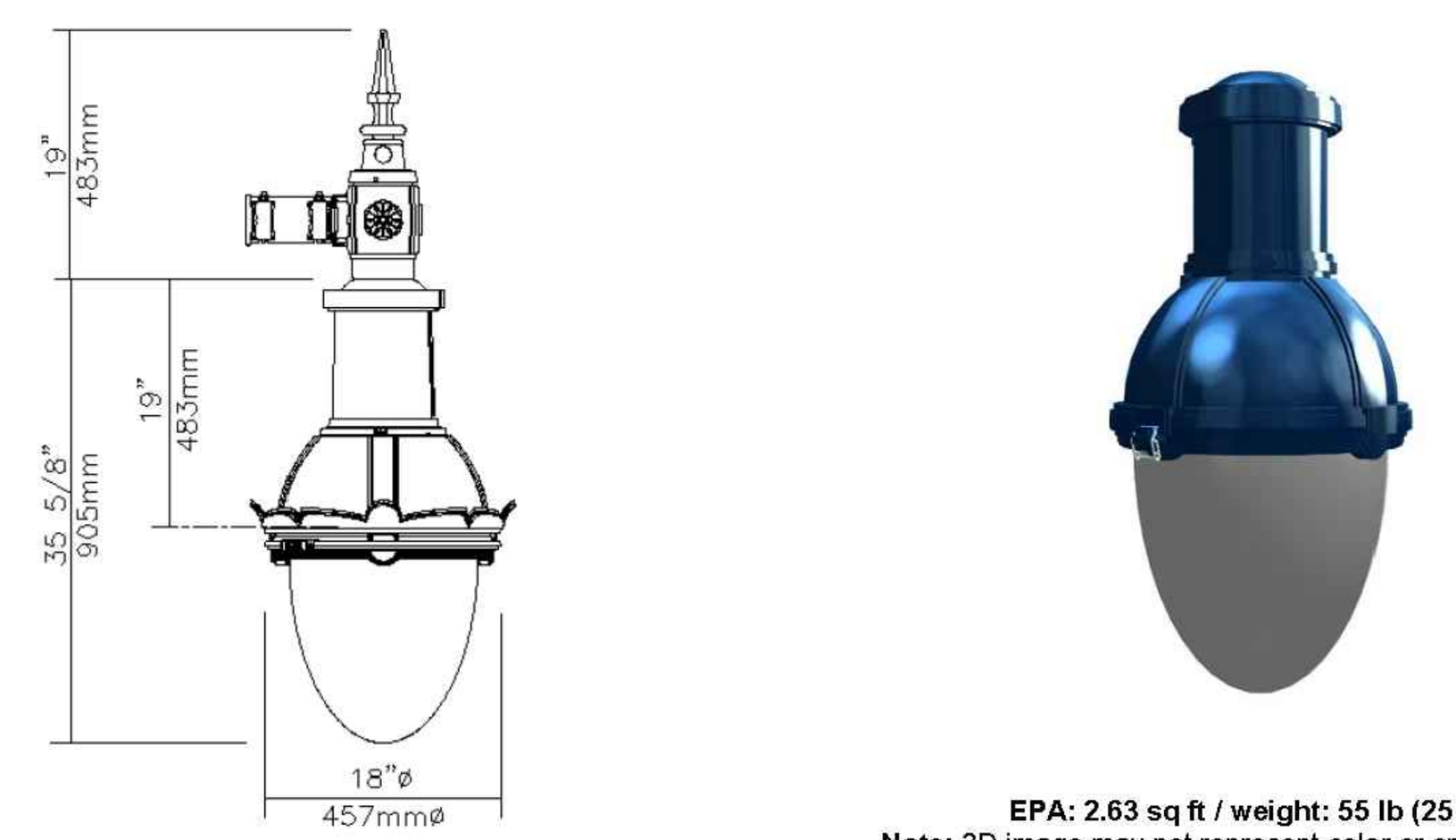
RR-7
SHEET 134 OF 140



Sheet Index

SL-1 ELECTROLIER TITLE SHEET
SL-2 THUR SL-6 ELECTROLIER PLANS

Middlefield Road – Redwood City Lumec LED RN20 90W – CRM8 arm – RS856V-22' pole (24.5' MH)



EPA: 2.63 sq ft / weight: 55 lb (25 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

Qty	Type	**Roadway Fixture**
	Luminaire	**RN20-90W80LED4K-T-ACDR-LE3R-UNV-DMG-[SMA-013]-CR1-[RCD7-019]- RAL 3011**

Description of Components:

Hood: Injection die cast A360.1 aluminium dome, mechanically assembled on the luminaire housing.

Housing: In a round shape, this housing is made of injection die cast A360.1 aluminium, complete with a decorative crown and a weatherproof door giving a tool-free access to the ballast, without disconnection of wiring, mechanically assembled. This suspension system permits a full rotation of the luminaire in 90 degree increments.

Access-Mechanism: Injection die cast A360.1 aluminium frame with latch and hinge, complete with cast-in security block for frame's open position. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LEDgine composed of 5 main components: **Globe / LED Module / Optical System / Heat Sink / Driver** Electrical components are RoHS compliant.

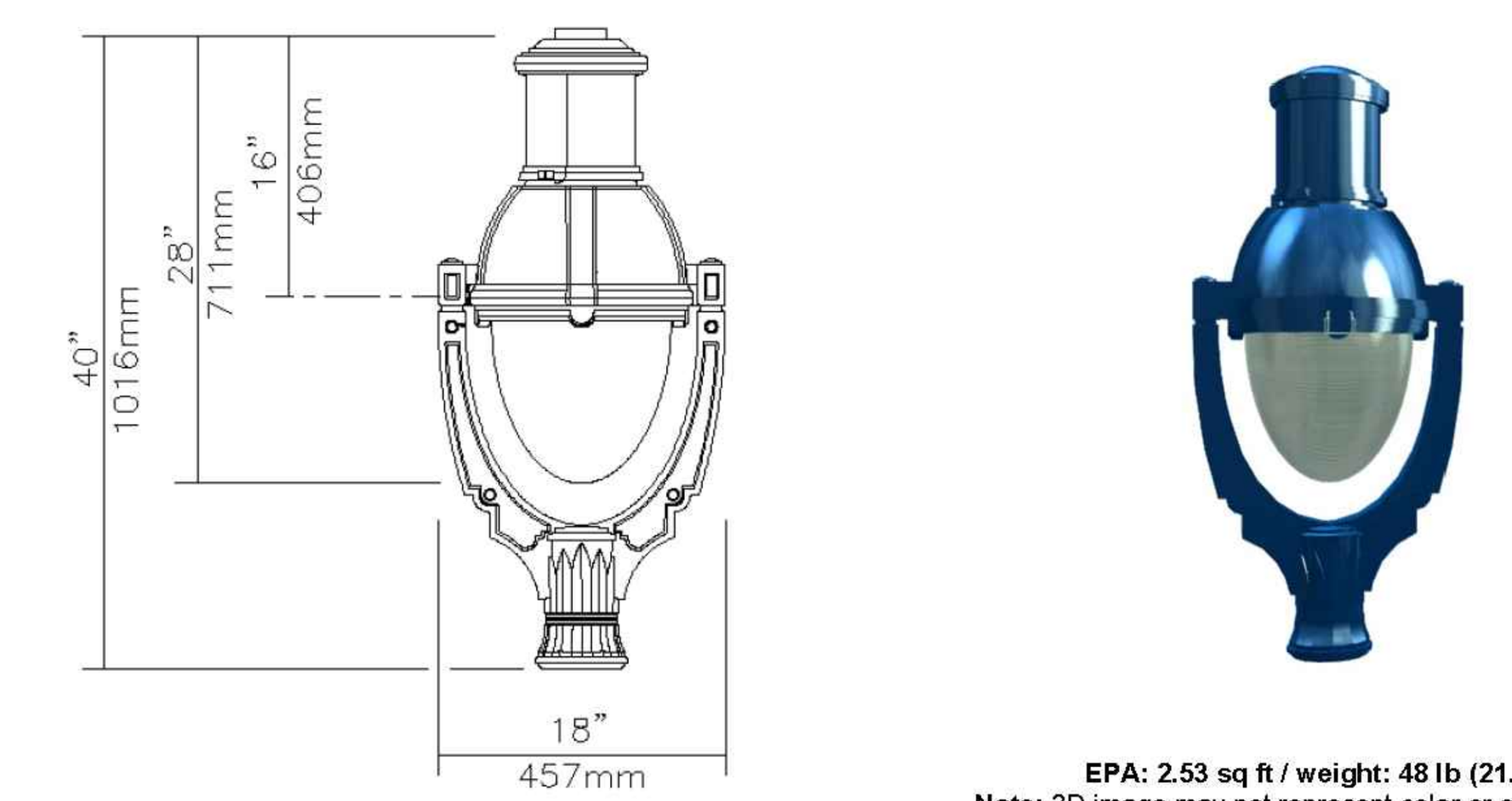
Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Globe: (ACDR), Made of one-piece seamless injection-molded impact-resistant (DR) acrylic having an inner prismatic surface. Complete with a semi-prismatic house side shield and external glare softening prisms. The globe is mechanically assembled and sealed onto the lower part of the heat sink.

LED Module: LED type Philips Lumileds LUXEON T. Composed of 80 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

LCP70498-83947-1(SA)MA.do
c 09-18-2020 Page 1

Middlefield Road – Redwood City Lumec RNS20-YM – R80U-14.5-TBC1 (RCD7 control ready)



EPA: 2.53 sq ft / weight: 48 lb (21.8 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

Qty	Type	**Pedestrian assembly**
	Luminaire	**[RNS20-013]-55W32LED4K-T-ACDR-LE3-UNV-DMG-YM-[RCD7-019]- RAL 3011**

Description of Components:

Hood: Cast 356 aluminum dome, mechanically assembled on the housing.

Housing: In a round shape, this housing is made of die cast A380 aluminum, welded to the yoke.

Access-Mechanism: A gravity die cast 356 aluminum frame with latch and hinge. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LEDgine composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver** Electrical components are RoHS compliant.

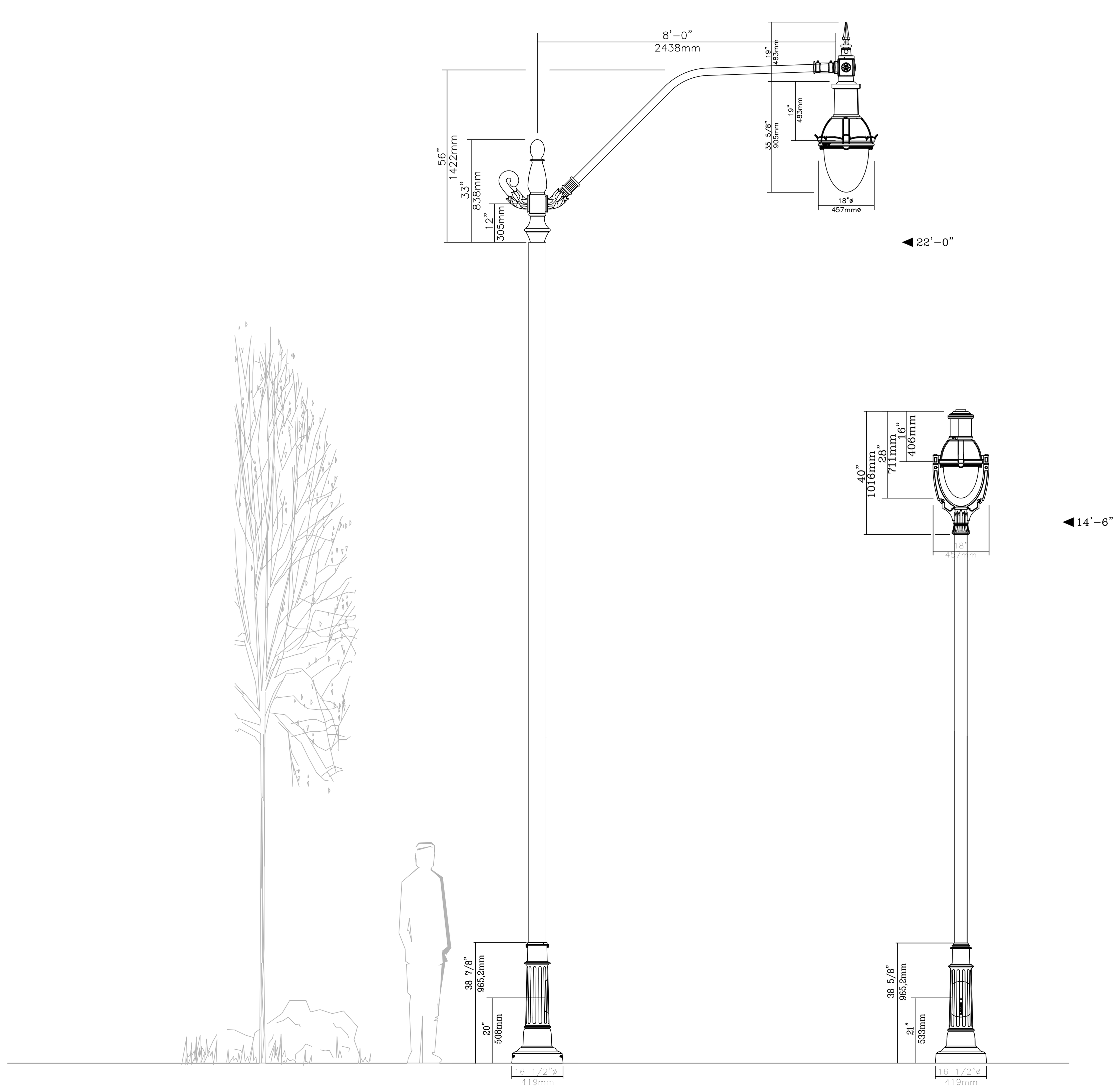
Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Globe: (ACDR), Made of one-piece seamless injection-molded impact-resistant (DR) acrylic having an inner prismatic surface. Complete with a semi-prismatic house side shield and external glare softening prisms. The globe is mechanically assembled and sealed onto the lower part of the heat sink.

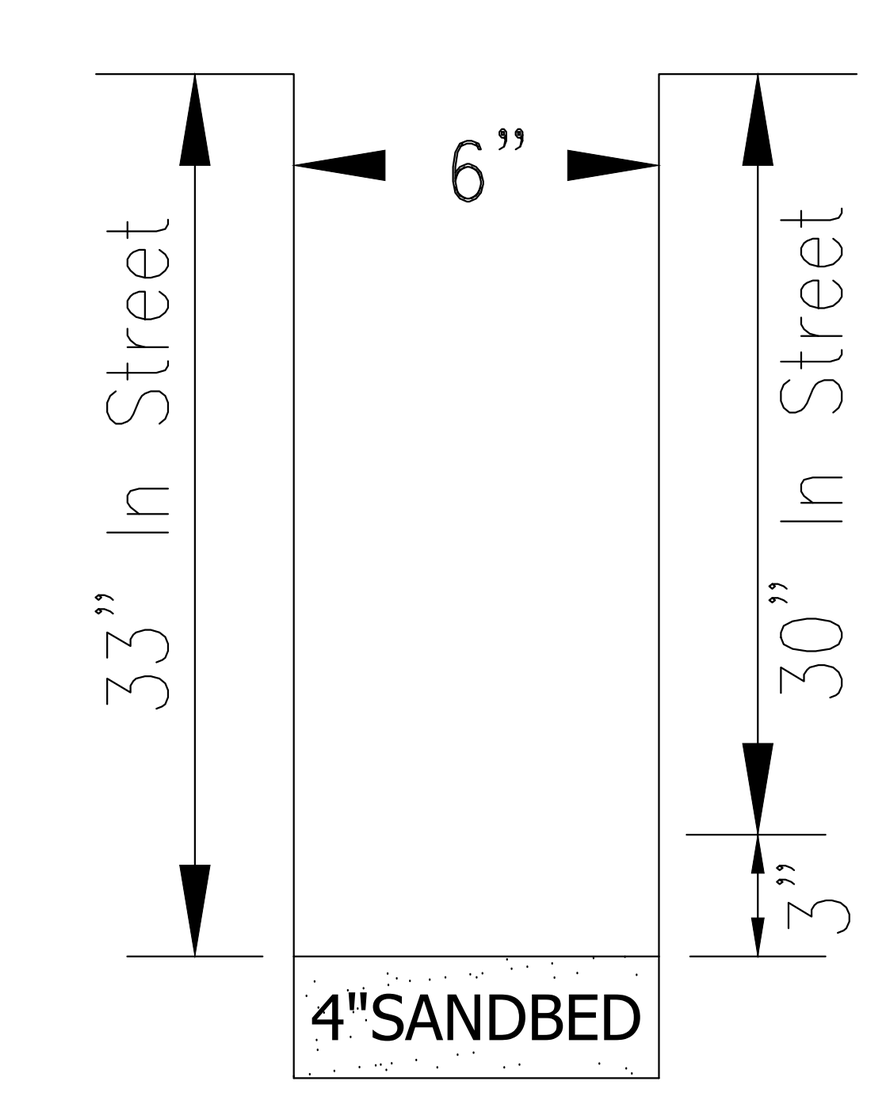
LED Module: LED type Philips Lumileds LUXEON T. Composed of 32 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

Optical System: (LE3), IES type III (asymmetrical). Composed of high-performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity.

LCP70499-83947-2(SA)MA.do
c 09-18-2020 Page 1

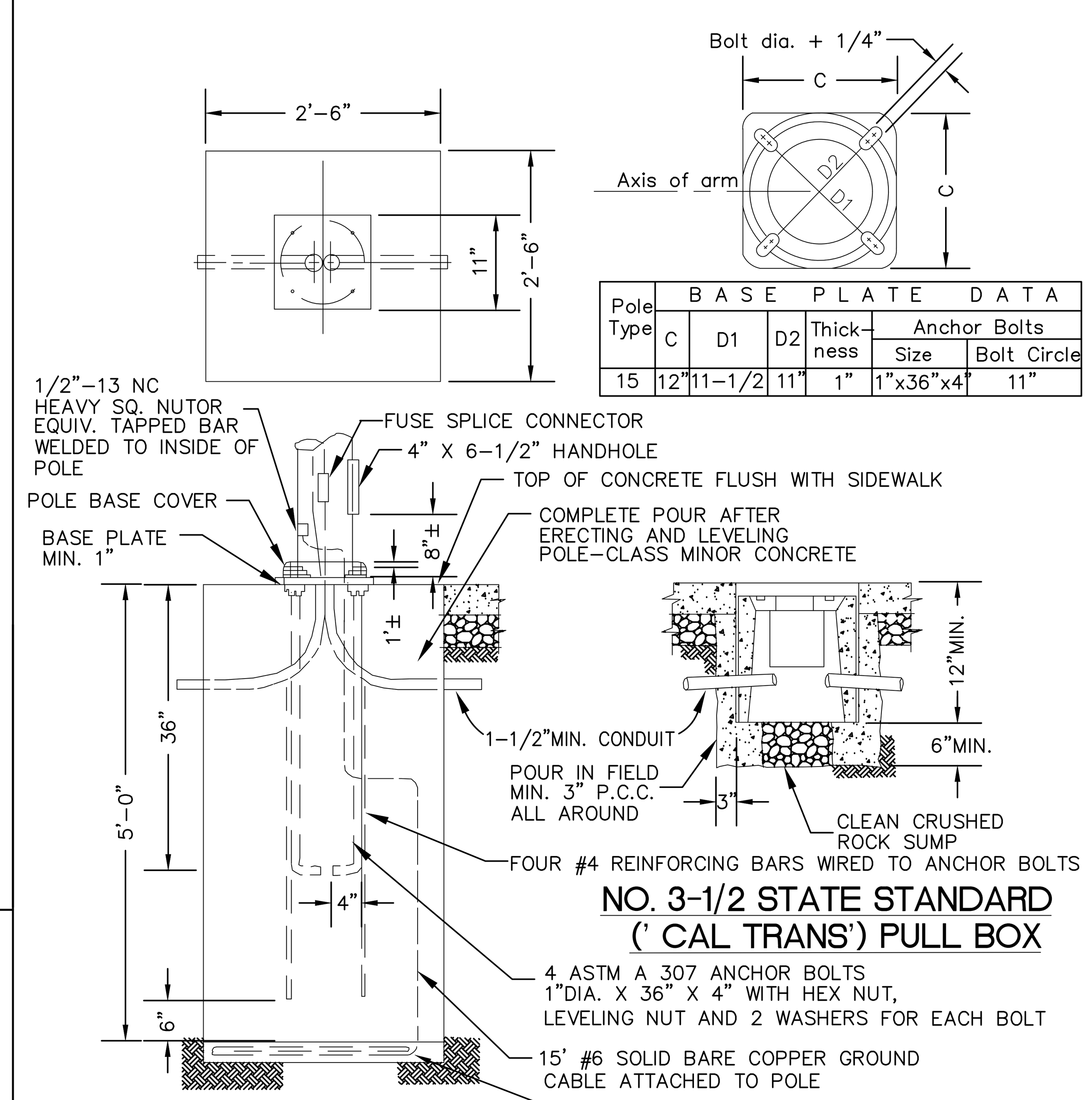


TEAR-DROP ELECTROLIER: CRM8-1A-RS856V-22-RAL 3011
DECORATIVE ELECTROLIER: R80U-14.5-TBC1-RAL 3011



Streetlight Trench Section

NOTE: SEE JT COMPOSITE PLANS FOR STREETLIGHT LAYOUT WHEN INSTALLING IN THE SAME TRENCH WITH OTHER PROPOSED UTILITIES (ELECTRIC AND TELECOMMUNICATIONS, ETC.)



Pole Type	BASE PLATE DATA					
	C	D1	D2	Thick-ness	Anchor Bolts Size	Anchor Bolts Bolt Circle
15	12"	11-1/2	11"	1"	1"x36"x4"	11"

NO. 3-1/2 STATE STANDARD (' CAL TRANS') PULL BOX

STREET LIGHT FOUNDATION

COUNTY LIGHTING STANDARD

NOTE: SEE SHEET TS-13 FOR SHALLOW LIGHT POLE FOOTING DETAIL

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/2021 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

PUBLIC ELECTRICAL SPECIFICATIONS

These electrical procedures are to be used in conjunction with the latest National Electrical Code (N.E.C.) and Menlo Park Highway Lighting District requirements.

MATERIALS

The Electrical Inspector shall approve all materials used for wiring, including conduit or boxes, as well as acceptable lighting fixtures.

All materials shall bear the seal of "U.L." listing or equivalent agency.

Construction materials shall be accepted and inspected by the County's Inspectors. Concrete used for foundations and encompassing pads shall be "Minor concrete". Unless otherwise specified by a State of California Certified Structural engineer or Registered Civil Engineer. Drain rock shall be used to set all in-ground pull boxes and junction boxes and shall be 1 inch minimum to 2 inch maximum diameter drain rock.

Lighting fixtures shall be the brand and design as shown. No substitution shall be allowed without prior approval.

PRE-JOBS AND INSPECTIONS

Prior to construction, a pre-job meeting shall be called by the County's representative and held on site. This pre-job meeting should include the superintendent or County's representative, the contractor or contractors who will be responsible for installation of all aspects of the lighting (excluding the interior building lighting), the County's Electrical Inspector and the Landscape Architect.

CONDUIT

Underground circuits shall be P.V.C. schedule 40, unless otherwise noted. Electrical street light conduit shall be placed under road pavement as directed by the County. Electric street light conduit within County limits shall be place under road pavement and as directed by the County. Circuits can be placed in existing conduit where applicable or as directed by City or County.
Electrical conduit trenches shall be backfilled only after the Electrical Inspector has accepted the conduit run for materials used and depth of conduit. The Inspector shall inspect the backfill and compaction to ensure it meets the engineering plans and specifications.

LOCATION

The contractor shall include time in his bid for nighttime aiming as directed.

FOUNDATIONS

All direct burial lighting fixtures shall be installed as per the N.E.C. listing requirements and the manufacturer's design. Installation detail for foundations of all lighting structures shall be provided.

SERVICE BOXES

All in-ground junction boxes shall be easily accessible for maintenance purposes. Box type and size shall be accepted by the Electrical Inspector. All boxes shall be set on a 12 inch thick cushion of drain rock. Drain rock shall be 1 inch minimum to 2 inches maximum in dimension. At the bottom of the box there shall be one inch minimum thick grout on roofing paper, with a drain hole one inch minimum to 2 inches maximum in size in the center of the box. If a box is beside a streetlight or other pole light, it shall be set to finished grade and included within the concrete pad for that pole. They will not be allowed in the walkway or vehicular traffic areas. If there is no sidewalk, the box shall be set to grade behind the curb. If a box is within a landscaped area, it shall be set to finished grade such that water and landscaping material will not flow into it or cover it from view. Boxes shall not be left above grade to become a trip hazard. Provide brass hold down bolts.

WIRING AND SPLICING

All lighting circuits shall be copper THW or THHN 600 volt rated. Splices shall be water proof per Cal-Trans Section 86. A code size ground shall be installed in all circuits. All metal parts shall be bonded. Multiple circuits in the same conduit shall be clearly labeled with Brady or equivalent labels.

PERMIT

The contractor shall be responsible for obtaining the electrical permit and County encroachment permit.

P.G.& E. FEES

The County will pay the P.G.& E. connection fees. Contractor shall coordinate service connection.

BURN TEST

Contractor to perform a (5) day burn test prior to acceptance.

All materials and workmanship shall be guaranteed for one year.

PER-CONSTRUCTION

Contractor to contact USA and/or pothole any possible conflicts prior to construction.

NOTE: Contractor shall mark all light locations in the field, check condition of conduits to be used for this project, and report to the engineer any deficiencies prior to starting any construction work.

FILENAME: J:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\RGA WORK\MS 15-646_SLDWG (SL-1)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

REGISTERED PROFESSIONAL ENGINEER TAGHI ESFAHANI No. E16082 EXP.12-31-20 ELECTRICAL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

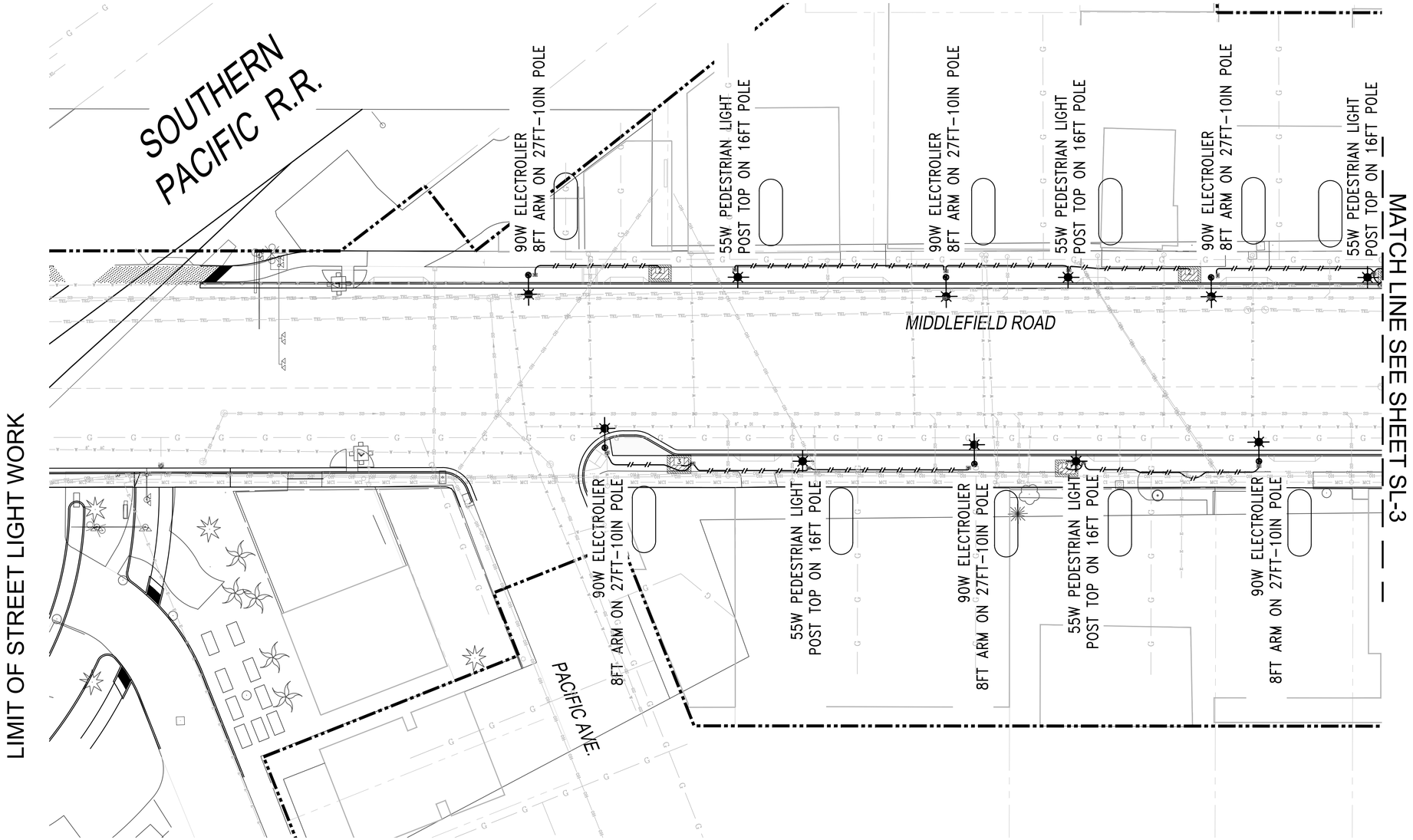
REVISION	DATE	DESIGNED BY: S.W.	MIDDLEFIELD ROAD		SCALE: N.T.S.
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)		DATE: 10-16-2020
		DRAWN BY: S.W.	ELECTROLIER TITLE SHEET		FILE NO: 1/E4931
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY		555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
VIZION PROJECT MANAGER T. NGUYEN		FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4		VIZION DATE LAST WORKED ON: 04-10-2020	SL-1 SHEET 135 OF 140

APPROVED:

DATE: 10/16/2020

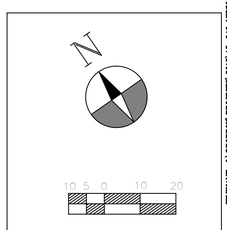
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA



LEGEND

- 2" SCH. 40 PVC W/2-#8CU & GRND.
- PG&E SERVICE POINTS
- ELECTROLIER
  RN20-90W80LED4K-R-LE3R
  8FT ARM ON 22FT POLE
- PEDESTRIAN LIGHT
  RNS-55W32LED4K-T-LE3-YM
  POST TOP ON 14FT-6IN POLE
- SPLICE BOX 3-1/2
  10" x 17" x 12" "N9"
- POLE NUMBER



FILENAME: A:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\DGN WORK\MS 15-646_SL.DWG (SL-2)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
REGISTERED PROFESSIONAL ENGINEER
No. E16082
EXP.12-31-20
ELECTRICAL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: S.W.
CHECKED BY: D.V.
DRAWN BY: S.W.

MIDDLEFIELD ROAD
UNDERGROUND UTLITY DISTRICT (PHASE II)
ELECTROLIER PLAN

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 09-24-2020
FILE NO: 1/E4931

VIZION PROJECT MANAGER
T. NGUYEN

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

VIZION DATE LAST WORKED ON:
04-10-2020

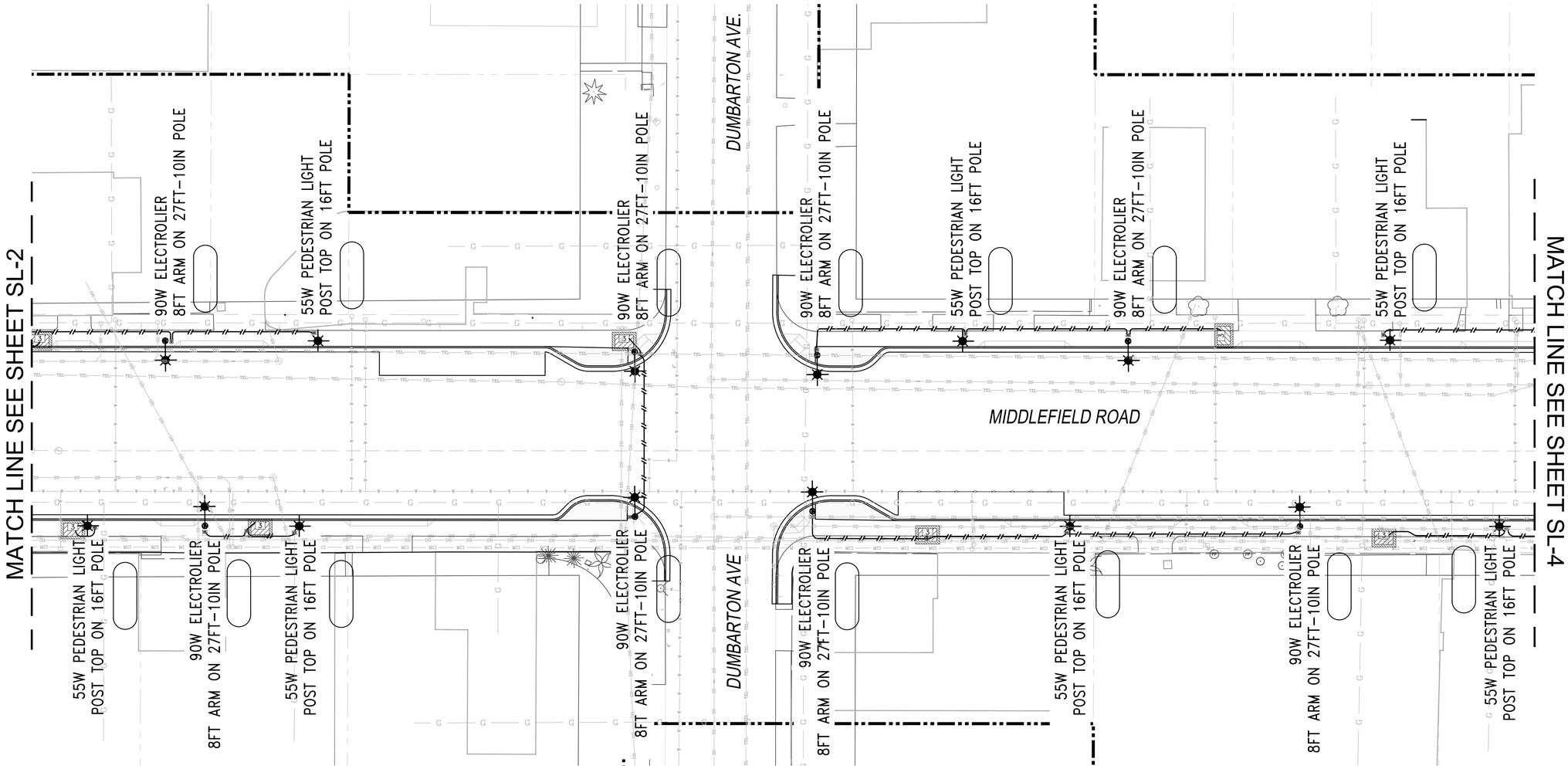
SL-2
SHEET 136 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA



LEGEND

2" SCH. 40 PVC W/2-#8CU & GRND.

PG&E SERVICE POINTS

ELECTROLIER
RN20-90W80LED4K-R-LE3R
8FT ARM ON 22FT POLE

PEDESTRIAN LIGHT
RNS-55W32LED4K-T-LE3-YM
POST TOP ON 14FT-6IN POLE

SPLICE BOX 3-1/2
10" x 17" x 12" "N9"

POLE NUMBER

N

10 5 0 10 20

FILENAME: P:\DROPBOX\PROJECTS\2015\15-648 MIDDLEFIELD ROAD, REDWOOD CITY\RDA WORK\MS 15-648_SL.DWG (SL-3)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
REGISTERED ELECTRICAL ENGINEER
No. E16082
EXP. 12-31-20
STATE OF CALIFORNIA ELECTRICAL

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: S.W.
CHECKED BY: D.V.
DRAWN BY: S.W.

MIDDLEFIELD ROAD
UNDERGROUND UTLITY DISTRICT (PHASE II)
ELECTROLIER PLAN

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 09-24-2020
FILE NO: 1/E4931

VIZION PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 04-10-2020

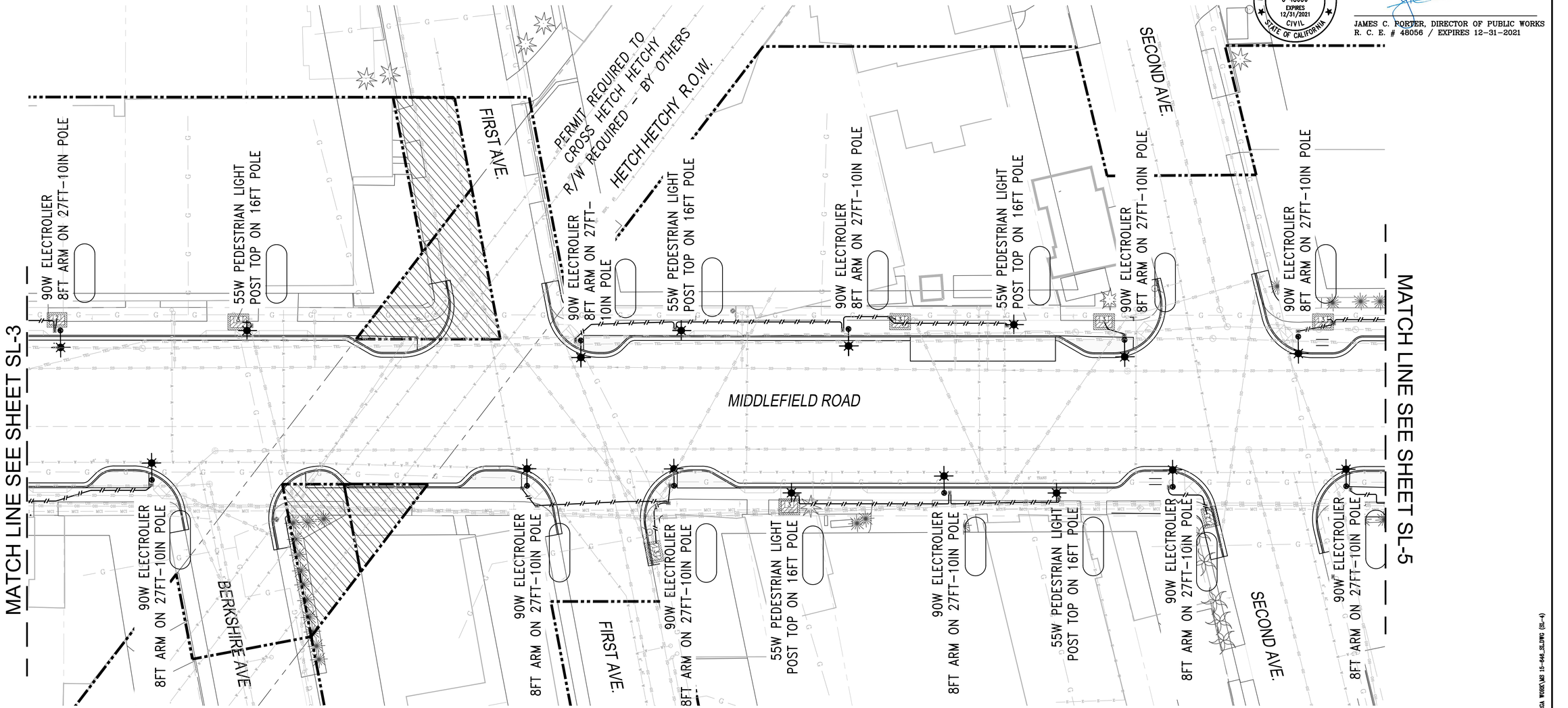
SL-3
SHEET 137 OF 140

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021



LEGEND

——//——//——	2" SCH. 40 PVC W/2–#8CU & GRND.
	PG&E SERVICE POINTS
	ELECTROLIER RN20–90W80LED4K–R–LE3R 8FT ARM ON 22FT POLE
	PEDESTRIAN LIGHT RNS–55W32LED4K–T–LE3–YM POST TOP ON 14FT–6IN POLE
	SPLICE BOX 3–1/2 10" x 17" x 12" "N9"
	POLE NUMBER

N

10 5 0 10 20

FILENAME: A:\DROPBOX\PROJECTS\2015\15-646 MIDDLEFIELD ROAD, REDWOOD CITY\DGN WORK\MS 15-646_SL.DWG (SL-4)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
LIC. E16082 EXP.12-31-20
ELECTRICAL CONTRACTOR

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: S.W.	MIDDLEFIELD ROAD UNDERGROUND UTLITY DISTRICT (PHASE II) ELECTROLIER PLAN
		CHECKED BY: D.V.	
		DRAWN BY: S.W.	
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 09-24-2020
FILE NO: 1/E4931

VIZION PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 04-10-2020

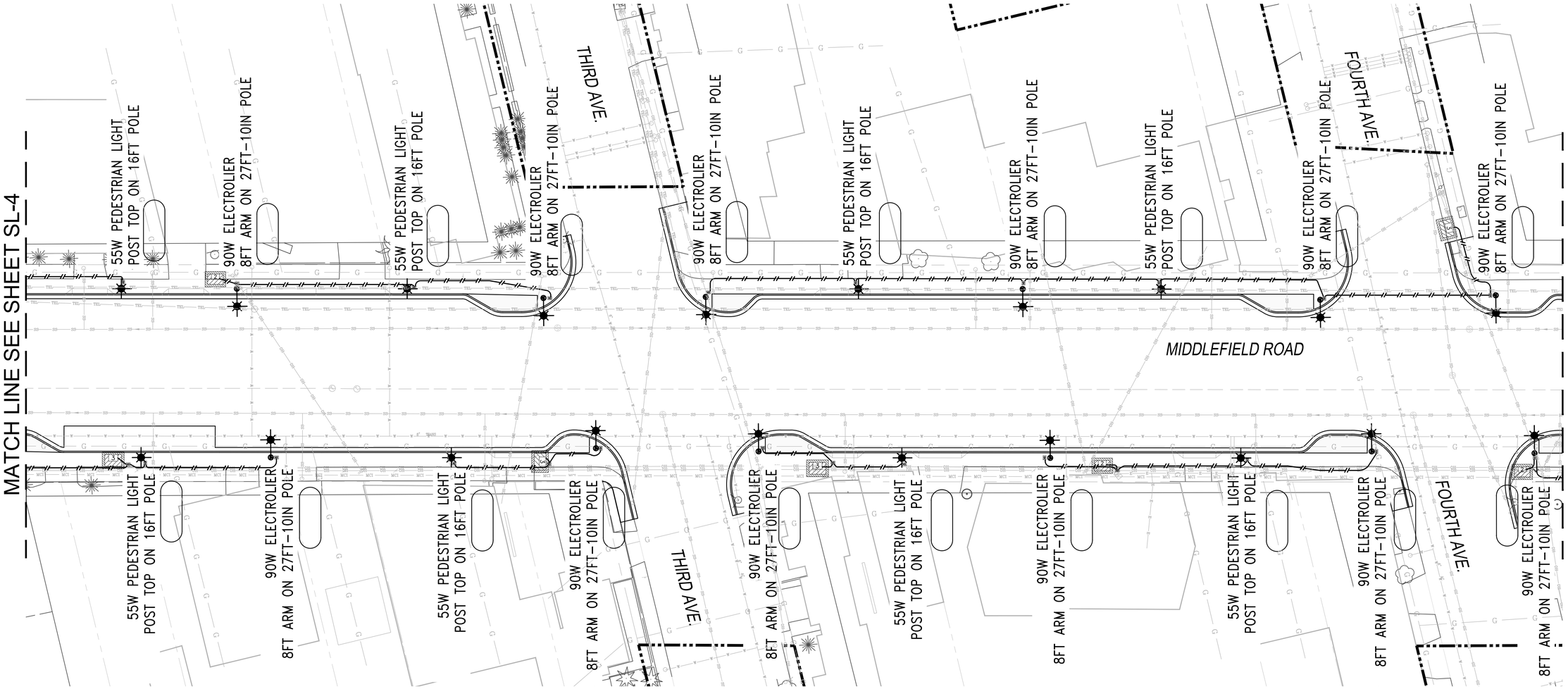
SL-4
SHEET 138 OF 140

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

REGISTERED PROFESSIONAL ENGINEER · JAMES C. PORTER · C 48056 · EXPIRES 12/31/2021 · CIVIL · STATE OF CALIFORNIA



LEGEND

- 2" SCH. 40 PVC W/2-#8CU & GRND.
- PG&E SERVICE POINTS
- ELECTROLIER RN20-90W80LED4K-R-LE3R 8FT ARM ON 22FT POLE
- PEDESTRIAN LIGHT RNS-55W32LED4K-T-LE3-YM POST TOP ON 14FT-6IN POLE
- SPLICE BOX 3-1/2 10" x 17" x 12" "N9"
- POLE NUMBER

N

10 0 0 10 20

FILENAME: A:\DROPBOX\PROJECTS\2015\15-046 MIDDLEFIELD ROAD, REDWOOD CITY\VGA WORK\MS 15-046_SL.DWG (SL-5)

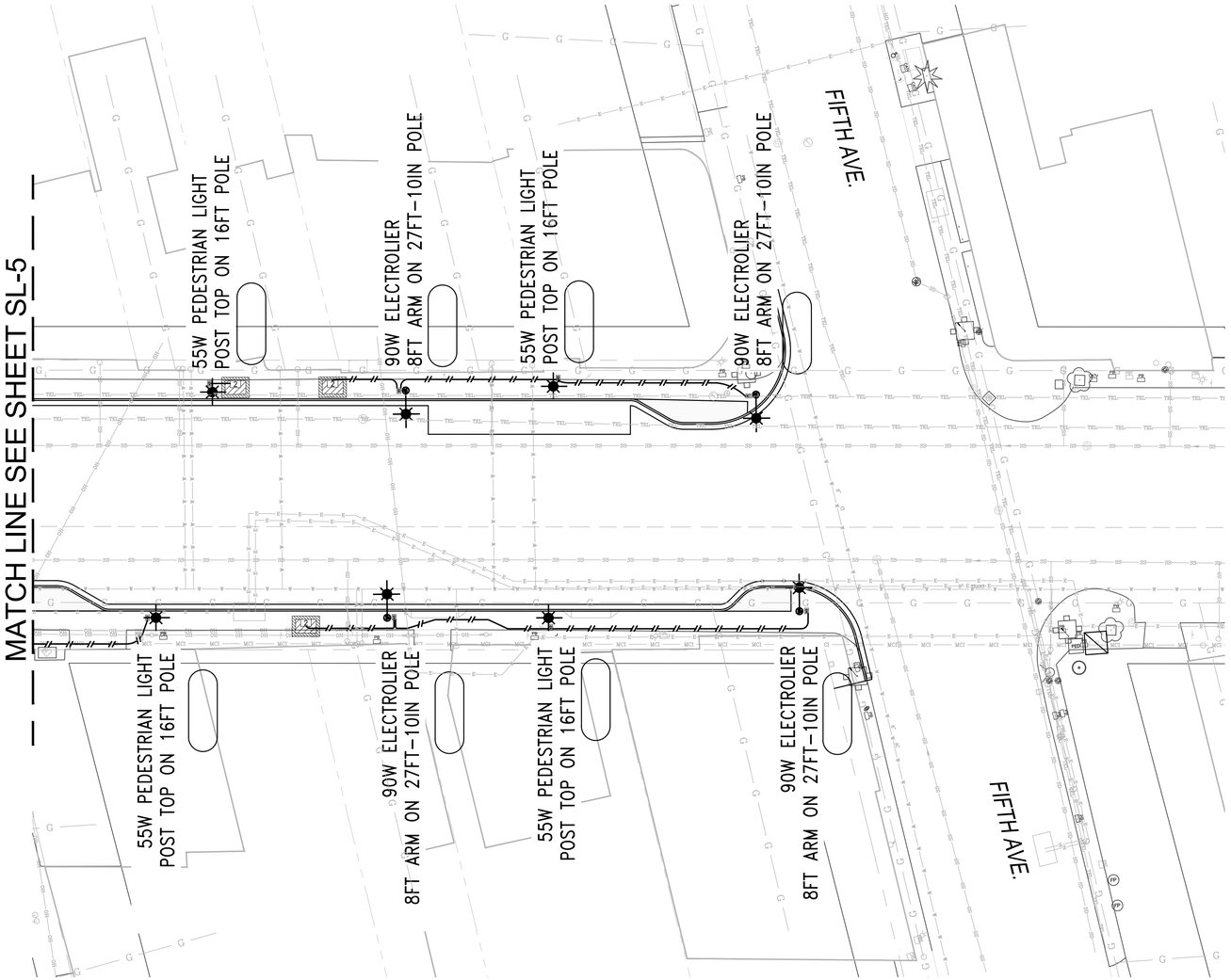
Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
NO. E16082 EXP.12-31-20 ELECTRICAL STATE OF CALIFORNIA

COUNTY OF SAN MATEO · PUBLIC WORKS

		DESIGNED BY: S.W.	MIDDLEFIELD ROAD
		CHECKED BY: D.V.	UNDERGROUND UTLITY DISTRICT (PHASE II)
		DRAWN BY: S.W.	ELECTROLIER PLAN
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'	DATE: 09-24-2020	FILE NO: 1/E4931	
VIZION PROJECT MANAGER: T. NGUYEN	FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4	VIZION DATE LAST WORKED ON: 04-10-2020	SHEET 139 OF 140



LEGEND

- 2" SCH. 40 PVC W/2-#8CU & GRND.
- PG&E SERVICE POINTS
- ELECTROLIER
  RN20-90W80LED4K-R-LE3R
  8FT ARM ON 22FT POLE
- PEDESTRIAN LIGHT
  RNS-55W32LED4K-T-LE3-YM
  POST TOP ON 14FT-6IN POLE
- SPLICE BOX 3-1/2
  10" x 17" x 12" "N9"
- POLE NUMBER

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/2021
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: 10/16/2020

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2021

N

10 5 0 10 20

FILENAME: J:\DROPBOX\PROJECTS\2015\15-648 MIDDLEFIELD ROAD, REDWOOD CITY\RUL WORK\MS 15-648_SL.DWG (SL-6)

Vizion Utility PARTNERS
UTILITY ENGINEERS, CONSULTANTS & STREETLIGHT DESIGN
7901 STONERIDGE DR, SUITE 200 PLEASANTON, CA 94588
Tel (925) 682-1114

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

ELECTRICAL ENGINEER
No. E16082
EXP: 12-31-20
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: S.W.
CHECKED BY: D.V.
DRAWN BY: S.W.

MIDDLEFIELD ROAD
UNDERGROUND UTLITY DISTRICT (PHASE II)
ELECTROLIER PLAN

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: 1"=20'
DATE: 09-24-2020
FILE NO: 1/E4931

VIZION PROJECT MANAGER: T. NGUYEN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

VIZION DATE LAST WORKED ON: 04-10-2020

SL-6
SHEET 140 OF 140