

A	B	C
<h1>LEGEND</h1>		
<div> <div>SIZE & TYPE</div> <div> <div>SIZE & TYPE</div> </div> </div>	<div>EXISTING SEWER OR CULVERT</div> <div>EXISTING MH</div> <div>EXISTING CB, SWI</div> <div>EXISTING CB W/ CURB INLET</div> <div>EXISTING SIDE SEWER AND FRESH AIR INLET</div> <div>EXISTING MUNI OVERHEAD WIRES</div> <div>EXISTING AWSS</div>	
<div> <div>SIZE & TYPE</div> <div> </div> </div>	<div>NEW MH PER SFDPW STD PLAN 87,181</div> <div>NEW MH PER SFDPW STD PLAN 87,182</div> <div>NEW ANGLE MH PER SFDPW STD PLAN 87,182</div> <div>REPLACE (E) MH PER SFDPW STD PLAN 87,186</div> <div>REPLACE (E) MH PER SFDPW STD PLAN 87,181</div> <div>MORTAR EXISTING MH</div> <div>ABANDON EXISTING MH</div> <div>REPLACE (E) MH PER SFDPW STD PLAN 87,182</div> <div>REPLACE (E) MH W/ ANGLE MH PER SFDPW STD PLAN 87,182</div> <div>EXISTING MH</div> <div>NEW MH</div> <div>MORTAR EXISTING MH</div> <div>REPLACE EXISTING MH</div> <div>ABANDON EXISTING MH</div> <div>REMOVE EXISTING MH</div> <div>NEW SWI PER SFDPW STD PLAN 87,189</div> <div>NEW CB WITH CURB INLET PER SFDPW STD PLAN 87,187</div> <div>NEW CB PER SFDPW STD PLAN 87,188</div> <div>REPLACE (E) CB PER SFDPW STD PLAN 87,188</div> <div>ABANDON EXISTING CB</div> <div>REPLACE (E) SWI PER SFDPW STD PLAN 87,189</div> <div>NEW SS PER SFDPW STD PLAN 87,196</div> <div>NEW 6" OR 8"Ø SS CONNECTION TO MAIN SEWER</div> <div>PLUG EXISTING FACILITIES</div> <div>PLUG AND FILL EXISTING FACILITIES</div> <div>APPROXIMATE PAVEMENT SURFACE</div> <div>DIRECTION OF FLOW</div> <div>SLURRY GROUT SHOWN IN SECTION OR PROFILE</div> <div>ADJUSTABLE REPAIR COUPLING</div>	

ABBREVIATIONS	
±	PLUS OR MINUS
ACWS	ASPHALT CONCRETE WEARING SURFACE
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AWSS	AUXILIARY WATER SUPPLY SYSTEM
BLVD	BOULEVARD
BRK	BRICK
CAC	CALCIUM ALUMINATE CEMENTITIOUS
CB	CATCH BASIN
CH	CHANGE
CIPL	CURED IN-PLACE LINER
CONC	CONCRETE
C-C	CENTER TO CENTER
CY	CUBIC YARD
DET	DETAIL
DIA OR Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
E	EAST
(E)	EXISTING
EL	ELEVATION
ENGR	ENGINEER
EQ	EQUAL
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HETCH HETCHY WATER POWER
FGP	FIBERGLASS PIPE
HORIZ	HORIZONTAL
HWY	HIGHWAY
ID	INSIDE DIAMETER
INV	INVERT
ISP	IRON STONE PIPE
LF	LINEAR FEET
MAX	MAXIMUM
MDB	MUNI DUCT BANK
MH	MANHOLE
MH "X"	MANHOLE DESIGNATION
MIN	MINIMUM
N	NORTH
(N)	NEW
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
ℙ	PROPERTY LINE
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
S	SOUTH
SF	SQUARE FEET
S.F.	SAN FRANCISCO
SFDPW	SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS
SL	SLOPE
SPECS	SPECIFICATIONS
SRCP	SPUN REINFORCED CONCRETE PIPE
SS	SIDE SEWER (LATERAL)
ST	STREET
STD	STANDARD
SWI	STORM WATER INLET
THRU	THROUGH
(TYP)	TYPICAL
VERT	VERTICAL
VCP	VITRIFIED CLAY PIPE
W	WEST
W/	WITH
W/O	WITHOUT

H	I	J	K	L
<h1 style="text-align: center;">GENERAL NOTES</h1> <ol style="list-style-type: none"> NUMBER AND LOCATIONS OF SIDE SEWER (LATERAL) CONNECTIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY SIDE SEWER (LATERAL) CONNECTIONS IN THE FIELD. ALL GROUND SURFACE ELEVATIONS AND INVERT ELEVATIONS TO BE CONFORMED ARE APPROXIMATE. ELEVATIONS ARE IN REFERENCE TO CCSF 2013 NAVD88 VERTICAL DATUM (SF-VD13). IN ACCORDANCE WITH THE PROVISIONS OF THE CALIFORNIA PUBLIC CONTRACT CODE SECTION 3300, A BID SUBMITTED TO A PUBLIC AGENCY BY A CONTRACTOR WHO IS NOT LICENSED IN ACCORDANCE WITH CHAPTER 9 OF THE BUSINESS AND PROFESSIONS CODE SHALL BE CONSIDERED NON-RESPONSIVE AND SHALL BE REJECTED BY THE PUBLIC AGENCY. AT THE TIME THIS CONTRACT IS BID, THE CONTRACTOR SHALL POSSESS A STATE OF CALIFORNIA CLASS "A" GENERAL ENGINEERING CONTRACTOR'S LICENSE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN EXCAVATION PERMIT FROM SFPDW-PERMIT CENTER LOCATED AT 49 SOUTH VAN NESS AVENUE, SUITE 200, SAN FRANCISCO, CA 94103. MAXIMUM TRENCH WIDTH SHALL BE THE LARGER OUTSIDE DIMENSION OF THE NEW OR EXISTING SEWER/STRUCTURE PLUS 1.5 FEET ON EACH SIDE. ALL NEW VCP AND RCP MAIN SEWERS SHALL BE CONSTRUCTED ON CRUSHED ROCK BEDDING PER DETAILS SHOWN BELOW UNLESS OTHERWISE NOTED. PIPE LENGTH SHOWN IN PROFILE INDICATES DISTANCE EXCLUDING INSIDE DIMENSION OF MANHOLE/STRUCTURE. AFTER SEWER WORK, PAVING AND CURB REPAIRS COMPLETED, THE CONTRACTOR SHALL CLEAN, PATCH, SHOWN ON SW-DRAWINGS AND REPLACE CATCH BASINS AS DIRECTED BY THE CITY REPRESENTATIVE. CONTRACTOR SHALL PROTECT ALL SURVEY BENCHMARKS LOCATED WITHIN THE CONTRACT AREA. MONUMENTS LOCATED WITHIN 20 FEET OF EXISTING MONUMENTS MUST BE REVERIFIED PRIOR TO ANY DEMOLITION. RECORD MUST BE FILED WITH THE COUNTY CLERK BY CONTACTING BUREAU OF STREET-USE AT (415) 771-2711-2000. THE MONUMENTS MUST BE REVERIFIED AFTER CONSTRUCTION HAS BEEN COMPLETED TO DETERMINE IF MOVEMENT HAS OCCURRED. IF MONUMENTS ARE REFERENCED PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PAY A MINIMUM FEE OF \$10,000 A PIECE TO THE COUNTY FOR REESTABLISHING THE MONUMENT. PRIOR TO ABANDONING EXISTING SEWER FACILITIES, CONTRACTOR SHALL NOTIFY THE CITY REPRESENTATIVE IMMEDIATELY OF ANY DISCOVERIES. RIM ELEVATIONS OF PROPOSED SEWER MANHOLES SHALL CONFORM TO FINISHED ROADWAY ELEVATIONS. CONTRACTOR SHALL VERIFY EXACT DIAMETER OF EXISTING SEWER TO BE LINED PRIOR TO INSTALLATION OF LINER. 				
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>DETAIL NOTES:</p> <ol style="list-style-type: none"> WRAP AASHTO M288, CLASS 2, NON-WOVEN GEOTEXTILE FABRIC AROUND CRUSHED ROCK BEDDING, 1-FOOT MIN OVERLAP. WELL GRADED CRUSHED ROCK BEDDING WITH 100% PASSING THE 1" SIEVE, MIN 90% PASSING THE 3/4" SIEVE & WITH MAX 5% PASSING THE #4 SIEVE. THE FINES PASSING THE NO. 200 SHALL BE NON-PLASTIC. </div> <div style="width: 35%; text-align: right;"> <p>(E) PAVEMENT</p> <p>MIN BEDDING WIDTH OD + 2'</p> <p>PIPE</p> <p>OD</p> <p>OD / 2</p> <p>OD / 6 , 5" MIN WHICHEVER IS GREATER (TYP)</p> </div> </div> <h2 style="text-align: center;">BEDDING DETAIL FOR RIGID PIPE</h2>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>DETAIL NOTES:</p> <ol style="list-style-type: none"> PRIOR TO INSTALLING PIPES, PROVIDE "BELL HOLE" TO AVOID RESTING OF BELL ON BEDDING OR FOUNDATION. AFTER CONNECTING PIPES, FILL BELL HOLE WITH BEDDING BUT IT DOES NOT NEED TO BE COMPACTED. BEDDING IN THIS AREA SHALL BE PLACED IN TWO LAYERS. AFTER 1ST LAYER IS PLACED, COMPACT BEDDING IN HAUNCH AREA BY SHOVEL SLICE METHOD EXCEPT AT THE "BELL HOLE" AREA. </div> <div style="width: 35%; text-align: right;"> <p>OD / 6 , 5" MIN WHICHEVER IS GREATER (TYP)</p> <p>UNDISTURBED SOIL</p> <p>SEE NOTE 1</p> <p>GEOTEXTILE FABRIC</p> <p>SEE NOTE 2</p> <p>UNDISTURBED SOIL</p> <p>GEOTEXTILE FABRIC (SEE BEDDING DETAIL)</p> </div> </div> <h2 style="text-align: center;">PIPE INSTALLATION</h2>				
REFERENCE INFORMATION & FILE NO. OF SURVEYS 			<div style="float: right; text-align: right;">CITY OF SAN FRANCISCO</div> <div style="clear: both;"></div> <div style="position: relative; height: 150px;"> <div style="position: absolute; top: 0; left: 0; bottom: 0; right: 0; pointer-events: none;"> <p>REGISTERED PROFESSIONAL ENGINEER</p> <p>MATTHEW W. LIM</p> <p>Matthew Lim</p> <p>No. C84735</p> <p>CIVIL</p> <p>STATE OF CALIFORNIA</p> </div> </div> <div style="font-size: small; margin-top: 5px;"> SECTION MANAGER L.WONG DEPUTY BUREAU MANAGER F.CISNEROS ACTING BUREAU MANAGER I.DHAPA \$_____ NO. _____ DATE _____ </div>	
10/6/2021				

S	HORIZONTAL EACH SEWER	M	N	O	P
AMP HAS BEEN IN ALL CATCH BASINS EAST IRON WATER TRAP E.					
MONUMENTS AND CT LIMIT. CITY CONSTRUCTION MUST N, AND A CORNER Y SURVEYOR'S OFFICE AND MAPPING AT (628) VISITED AFTER VERIFY THAT NO ARE NOT E CITY WILL CHARGE A E CONTRACTOR FOR					
ILITIES, CONTRACTOR CONNECTIONS TO IFY CITY REPARANCIES.					
NHOLES SHALL NS.					
R AND LENGTH OF MANUFACTURING THE					
<div> <div> <div> <div> <div>PAVEMENT RESTORATION (SEE DETAIL NOTE 1)</div> <div>(N) 2" THICK ACWS</div> <div>SEE R-DWGS FOR FINAL CONCRETE BASE THICKNESS</div> <div>1' (TYP)</div> <div>DETECTABLE WARNING TAPE. SEE DETAIL NOTE 3</div> <div>FOR MAX TRENCH WIDTH SEE GENERAL NOTE NO. 7</div> </div> <div> <div>(E) PAVEMENT</div> <div>FINAL SAW-CUT LINE FOR CONCRETE BASE RESTORATION (TYP)</div> <div>INITIAL SAW-CUT LINE FOR TRENCH EXCAVATION & SHORING (TYP)</div> <div>BACKFILL AS PER SECTION 703 OF CURRENT SAN FRANCISCO PUBLIC WORKS STANDARD SPECIFICATIONS</div> </div> </div> </div> </div> <div> <div>DETAIL NOTES:</div> <div> <div>1. LIMITS OF FINAL ACWS SHALL BE AS DELINEATED PER R-DRAWINGS.</div> <div>2. RESTORATION OF CONCRETE BASE MAY BE WIDER THAN SHOWN IN TRENCH RESTORATION DETAIL PER DPW ORDER 187,005, SECTION 11.</div> <div>3. DETECTABLE WARNING TAPE SHALL BE 6" WIDE, 5 MIL THICKNESS GREEN METALLIC WARNING TAPE WITH WORDS "CAUTION: BURIED SEWER," AND CENTERED OVER AND PLACED 12" ABOVE THE TOP OF PIPE.</div> </div> </div>					
TRENCH RESTORATION DETAIL FOR ASPHALT STREET					
<div> <div>SOURCING EVENT ID. 0000005626</div> <div> <div>CITY AND COUNTY OF SAN FRANCISCO</div> <div>PUBLIC UTILITIES COMMISSION</div> <div>INFRASTRUCTURE DIVISION</div> <div>ENGINEERING MANAGEMENT BUREAU</div> </div> <div>MISSION ST AND GENEVA AVE IMPROVEMENT PROJECT</div> <div> <div>LEGEND, ABBREVIATIONS, GENERAL NOTES AND DETAILS FOR SEWER AND DRAINAGE WORK</div> <div> <div>CHECKED / APPROVED</div> <div>DRAWN</div> <div>SCALE</div> <div>NONE</div> </div> <div> <div>SECTION MANAGER</div> <div>DESIGNED</div> <div>DATE</div> </div> <div> <div>APPROVED</div> <div>APPROVED</div> </div> <div> <div>MANAGER, ENGINEERING MANAGEMENT BUREAU</div> <div>ASSISTANT GENERAL MANAGER WASTE WATER ENTERPRISE</div> </div> <div> <div>SHEET</div> <div>PLAN NO.</div> <div>DRAWING / FILE NO.</div> <div>REVISION NO.</div> </div> <div> <div>116 OF 210</div> <div>SW-G2</div> <div>120,682</div> <div>0</div> </div> </div> </div>					
ITY AND COUNTY OF SAN FRANCISCO FRANCISCO PUBLIC WORKS BUREAU OF ENGINEERING					
<div> <div>10/13/2021</div> <div>A.MOMBENI/V.GOH</div> <div>09/2021</div> </div> <div> <div>12/09/2021</div> <div>V.GOH</div> <div>09/2021</div> </div> <div> <div>12/10/2021</div> <div>M.LIM</div> <div>09/2021</div> </div>					
<div>DESCRIPTION</div> <div>BY</div> <div>APPR'D</div>					
<div>REVISIONS</div>					