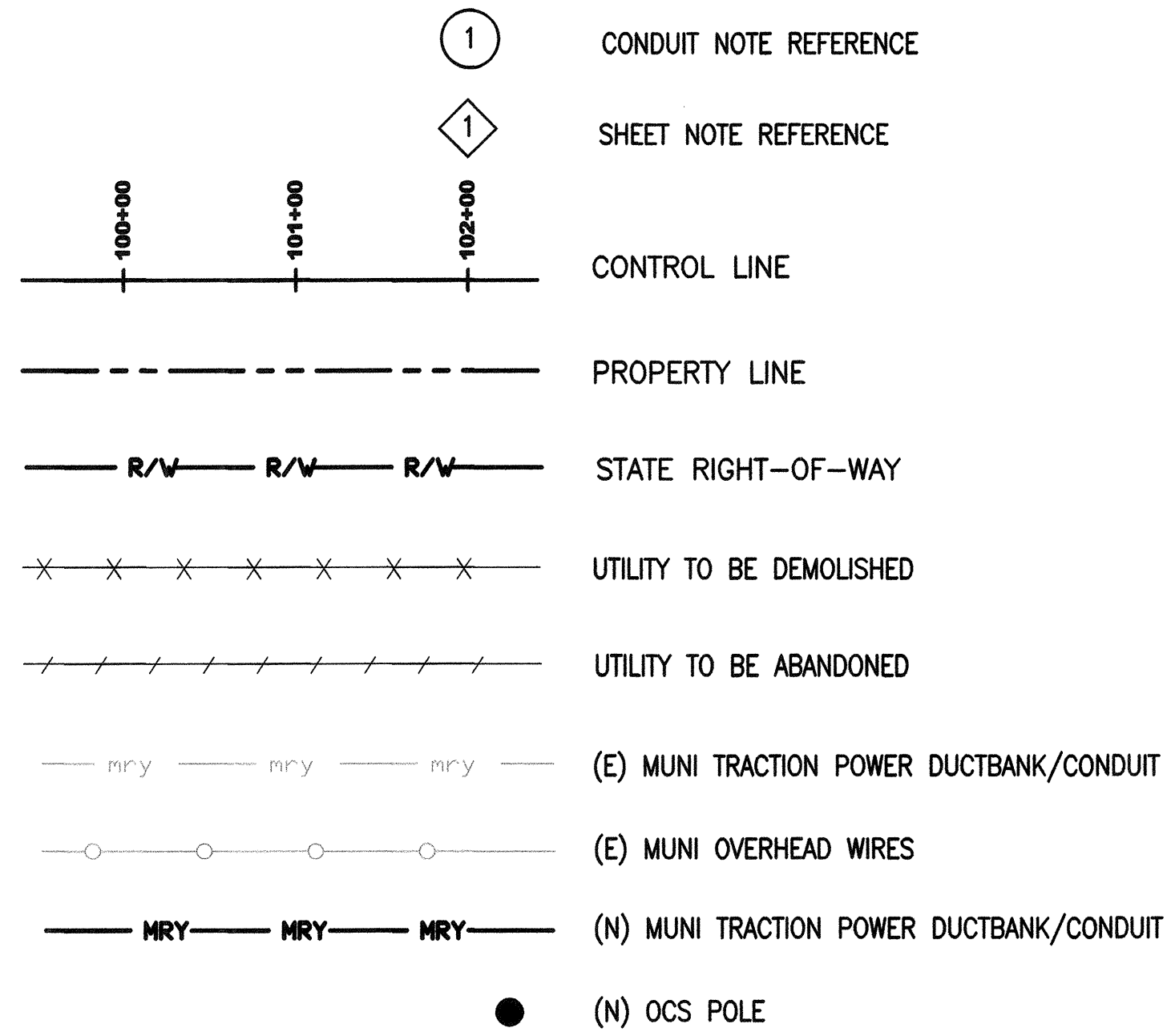


LEGEND



ABBREVIATIONS

CB	CATCH BASIN	NTS	NOT TO SCALE
CF	CUBIC FOOT	OC	ON CENTER
CJ	CONTROL JOINT	OD	OUTSIDE DIAMETER
CL	CENTER LINE	P/L	PROPERTY LINE
Clr	CLEAR	R	RADIUS
Conc	CONCRETE	REF	REFERENCE
CTL	PROJECT CONTROL LINE	R/C	REMOVE FROM SITE AS CONTRACTOR PROPERTY
CY	CUBIC YARD	R/R	REMOVE (E) AND REPLACE W/ (N)
Dia	DIAMETER	R/RE	REMOVE AND RELOCATE
DIP	DPT DEPARTMENT OF PARKING AND TRAFFIC	R/RI	REMOVE AND REINSTALL
DPW	DEPARTMENT OF PUBLIC WORKS	R/S	REMOVE AND SALVAGE AS CITY PROPERTY
DWG	DRAWING	REV	REVISION
(E)	EXISTING	ROW	RIGHT OF WAY
EA	EACH	SCH	SCHEDULE
Exp Jt	EXPANSION JOINT	Sht	SHEET
Elev	ELEVATION	Sim	SIMILAR
EQ	EQUAL	Spec	SPECIFICATIONS
EW	FG FINISHED GRADE	SQFT	SQUARE FOOT
F/I	FURNISH AND INSTALL	St	STREET
Fig	FIGURE	Sta	STATION
FIN	FINISH	Std	STANDARD
ft	FEET	STL	STEEL
GRS	GALVANIZED RIGID STEEL CONDUIT	TBD	TO BE DETERMINED
HORIZ	HORIZONTAL	TC	TOP OF CURB
ID	INSIDE DIAMETER	TOG	TOP OF GUTTER
IN	INCH	TP	TRACTION POWER
Jt	JOINT	Typ	TYPICAL
KJ	KEY JOINT	UON	UNLESS OTHERWISE NOTED
LBS	POUNDS	VIF	VERIFY IN FIELD
LF	LINEAR FOOT	W/	WITH
Longit	LONGITUDINAL	W/O	WITHOUT
Max	MAXIMUM	WP	WORK POINT
MFR	MANUFACTURER		
MH	MANHOLE		
Min	MINIMUM		
MRY	MUNICIPAL RAILWAY		
MTA/TP	SFMTA MOTIVE POWER		
(N)	NEW		
N/A	NOT APPLICABLE		
NIC	NOT IN CONTRACT		
No.	NUMBER (MUST HAVE PERIOD)		
Nos.	NUMBERS (MUST HAVE PERIOD)		

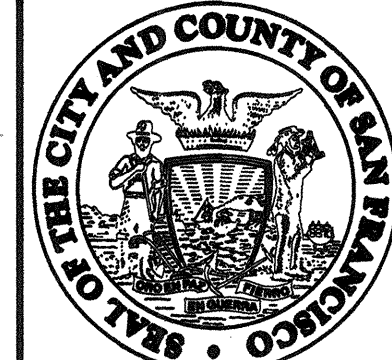
GENERAL NOTES

- COORDINATE TRACTION POWER DUCTBANK WORK WITH ALL OTHER DISCIPLINES, INCLUDING PLANS TO BE PROVIDED BY CONTRACTOR.
- MAINTAIN EXISTING SERVICE TO THE OVERHEAD CONTACT SYSTEM UNTIL NEW SERVICE IS CUT-OVER FROM EXISTING SYSTEM TO NEW SYSTEM.
- SEE TP SERIES PLANS FOR TRACTION POWER CABLE INSTALLATION AND PROPOSED DUCTBANK CONFIGURATION.
- EXISTING FACILITIES ARE SHOWN SCREENED ARE FOR REFERENCE ONLY.
- THE LAYOUT OF THE DUCTBANK IS DIAGRAMMATIC. CONTRACTOR SHALL MAKE ALL NECESSARY FIELD CHANGES TO ACCOMMODATE EXISTING FIELD CONDITIONS. PROVIDE ALL NECESSARY WORK FOR OFFSETS, CHANGES OF DIRECTION, AND ELEVATION TO AVOID CONFLICTS WITH EXISTING AND NEW FACILITIES AND WORK TO BE PROVIDED BY OTHER DISCIPLINES.
- CONTRACTOR SHALL PROVIDE TO ENGINEER SHOP DRAWINGS AND TRENCH CONFIGURATIONS THAT INCLUDE PROFILES, ELEVATION, AND DETAILS FOR ALL INSTALLATIONS.
- PROVIDE ALL REQUIRED TRENCHING INCLUDING WIDER AND DEEPER TRENCHES TO ALLOW CONDUIT OFFSETS, CHANGES OF ELEVATION, CONDUIT CROSSING EXISTING FACILITIES SUCH AS STORM DRAIN SEWERS, GAS LINES AND WATER LINES, AND CONNECTIONS TO MANHOLES AND PULL BOXES FOR A COMPLETE INSTALLATION.
- CONCRETE ENCASED TRACTION POWER DUCTBANK SHALL HAVE A MINIMUM CLEARANCE FROM TOP OF SIDEWALK & TOP OF ROADWAY OF 24 INCHES & 30 INCHES FROM TOP OF PAVEMENT TO TOP OF RACEWAY, RESPECTIVELY. THE STACKING CONFIGURATION MAY BE MODIFIED TO AVOID OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEER.
- ALL CONNECTIONS AND PENETRATIONS TO MANHOLES AND PULL BOXES SHALL BE CORE DRILLED. COORDINATE ALL WORK WITH MUNI.
- TRENCH DETAILS SHOWN ARE TYPICAL INSTALLATION DETAILS FOR REFERENCE ONLY.
- CONTRACTOR IS RESPONSIBLE FOR HAVING ALL INSTALLATIONS INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO BACKFILLING (48 HOURS MINIMUM NOTICE).
- WHEN WORKING ENERGIZED EQUIPMENT, MUNI SHALL BE NOTIFIED TO SUPPLY THE APPROPRIATE MANPOWER AND SAFETY PRECAUTIONS AS NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY AND TRAFFIC CONTROL MEASURES.
- THE CONTRACTOR SHALL MAINTAIN POINTS OF ACCESS THAT ARE AGREEABLE TO ADJACENT LAND OWNERS, USERS, AND TENANTS AT ALL TIMES.
- SEE UT DRAWINGS FOR EXISTING UTILITY INFORMATION. EXISTING UTILITY INFORMATION IS BASED ON RECORDS RECEIVED FROM UTILITY AGENCIES. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. ACTUAL CONDITIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE PRECISE LOCATION OF ALL UNDERGROUND FACILITIES AT LEAST 7 DAYS PRIOR TO EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING IN PLACE ALL EXISTING FACILITIES. EXCAVATION MAY BE REQUIRED OVER, UNDER, OR ADJACENT TO EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, EXPOSING AND PROTECTING ALL EXISTING FACILITIES.
- THE CONTRACTOR IS REQUIRED TO PLACE TEMPORARY AND/OR PERMANENT PAVING IN ACCORDANCE WITH SFDPW REQUIREMENTS.
- PROVIDE MINIMUM 3 INCHES COVER AROUND DUCTS ENCASED IN CONCRETE.
- ALL CABLES, CONDUCTORS, AND EQUIPMENT WILL BE SALVAGED BY MUNI AFTER CUTOVER TO NEW FACILITIES HAS BEEN COMPLETED. CONTRACTOR SHALL COORDINATE SALVAGE WITH MUNI. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR MUNI TO PERFORM SALVAGE.
- OFFSETS AND STATIONING FOR STRUCTURES LOCATED TO CENTER OF STRUCTURE. POSITIVE OFFSET VALUES INDICATE DISTANCE TO THE RIGHT OF THE CONTROL LINE AND NEGATIVE OFFSET VALUES INDICATE DISTANCE TO THE LEFT OF THE CONTROL LINE WHILE LOOKING NORTHWARD.
- VAULT DIMENSIONS ARE OUTSIDE DIMENSIONS W x L x H. LENGTH IS MEASURED PARALLEL TO CONTROL LINE, UNLESS OTHERWISE INDICATED.
- CONDUIT NOTES ARE STANDARDIZED ON ALL DUCTBANK (DB) SHEETS.
- PROVIDE 12-INCH CLEARANCE AROUND ALL EXISTING AND PROPOSED AWSS MAIN LINES.
- CONTRACTOR SHALL PROVIDE AWSS MONITORING AT EACH LOCATION WHERE NEW CONDUIT CROSSES UNDER AN AWSS PIPELINE. COORDINATE WITH SFPD AND SFDPW. SEE AWSS DRAWINGS.
- CONTRACTOR SHALL PRESERVE EXISTING GRANITE CURBS, CURB RAMPS, AND CROSSWALK BANDS BY WORKING UNDER OR AROUND, UON.
- PROTECT EXISTING WATERPROOFING WHEN EXCAVATING ADJACENT TO EXTERIOR BASEMENT WALLS. REPAIR IN-KIND ANY DAMAGE TO WATERPROOFING.
- PAVEMENT RESTORATION SHALL BE AS SHOWN ON DPW STANDARD PLANS FOR ROADWAY AND SIDEWALK CONSTRUCTION, UON.
- ALL CONDUITS AND TRENCHING SHALL BE KEPT A MINIMUM OF FIVE FEET CLEAR OF TREE TRUNKS WHERE FEASIBLE.

I:\CPTB401_Van Ness BRT V2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files\ductbank\CP16401DB601.dwg pulison Tue Jun 23 2015 3:52 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

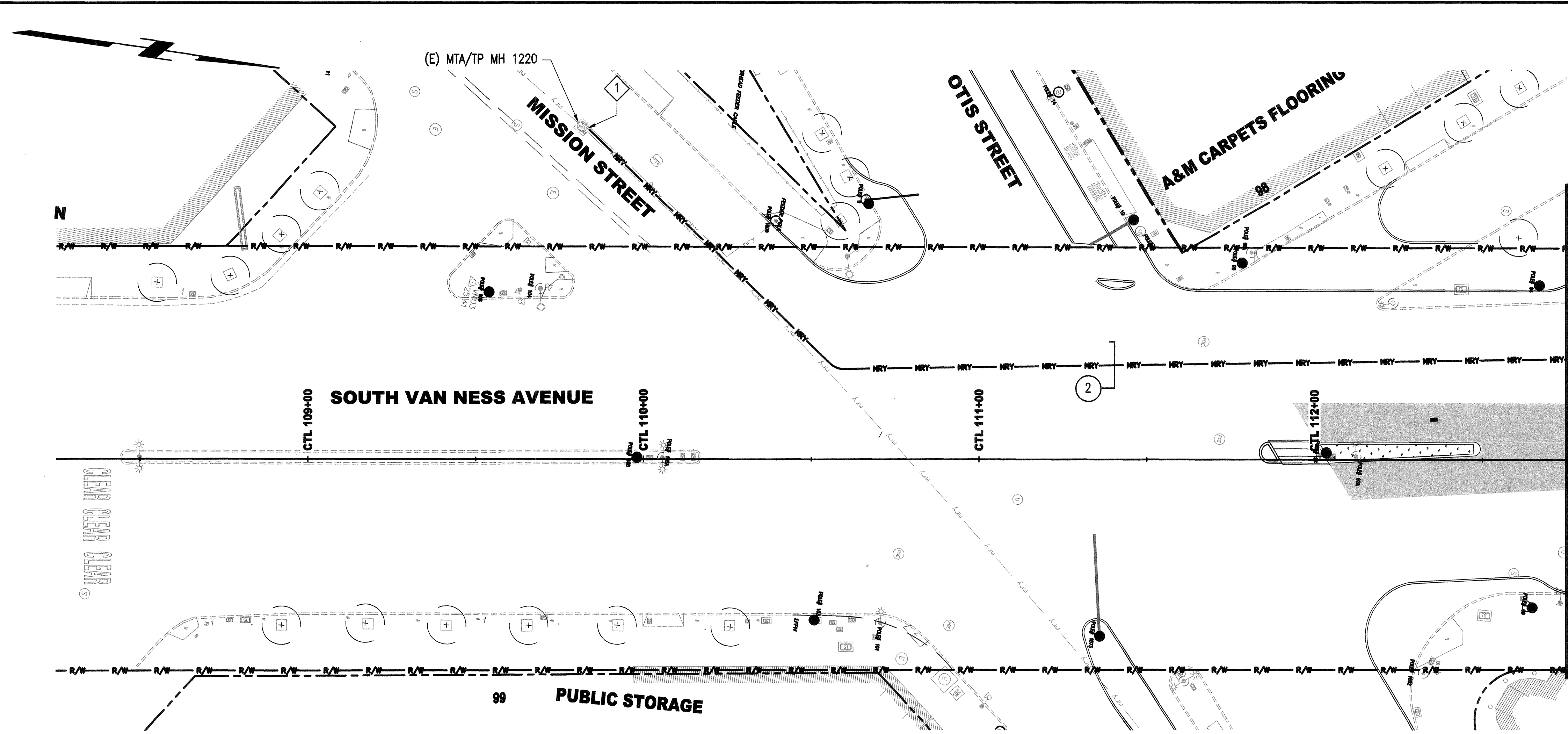
DESIGNED	<i>Robert Wilson</i>
DRAWN	<i>Robert Wilson</i>
CHECKED	<i>Edna Campbell</i>
REVIEWED	<i>Mark A. Redrich</i>
RECOMMENDED	<i>Robert Wilson</i>
APPROVED	<i>F. Mohr</i>
DATE	MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
Lucy Harris
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-28994
TRACTION POWER DUCTBANK LEGEND, ABBREVIATIONS AND GENERAL NOTES		DB-G1 DB-152
		REVISION 0

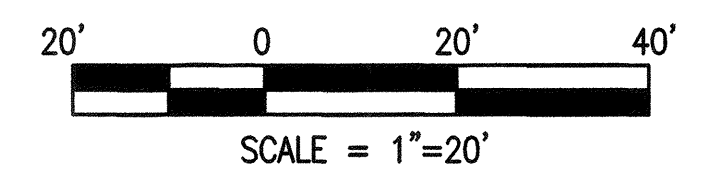


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

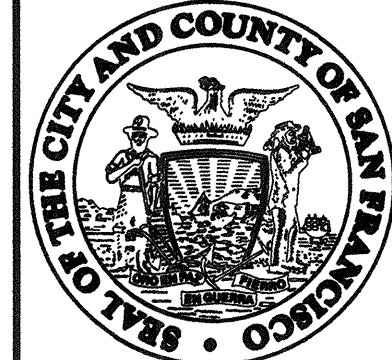
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



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NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Justin Wilson*
 DRAWN: *Justin Wilson*
 CHECKED: *Edwin Cardenas*
 REVIEWED: *Maya A. Rudnicki*
 RECOMMENDED: *Justin Wilson*
 APPROVED: *F. Mohamed*
 DATE: MAY 13 2016



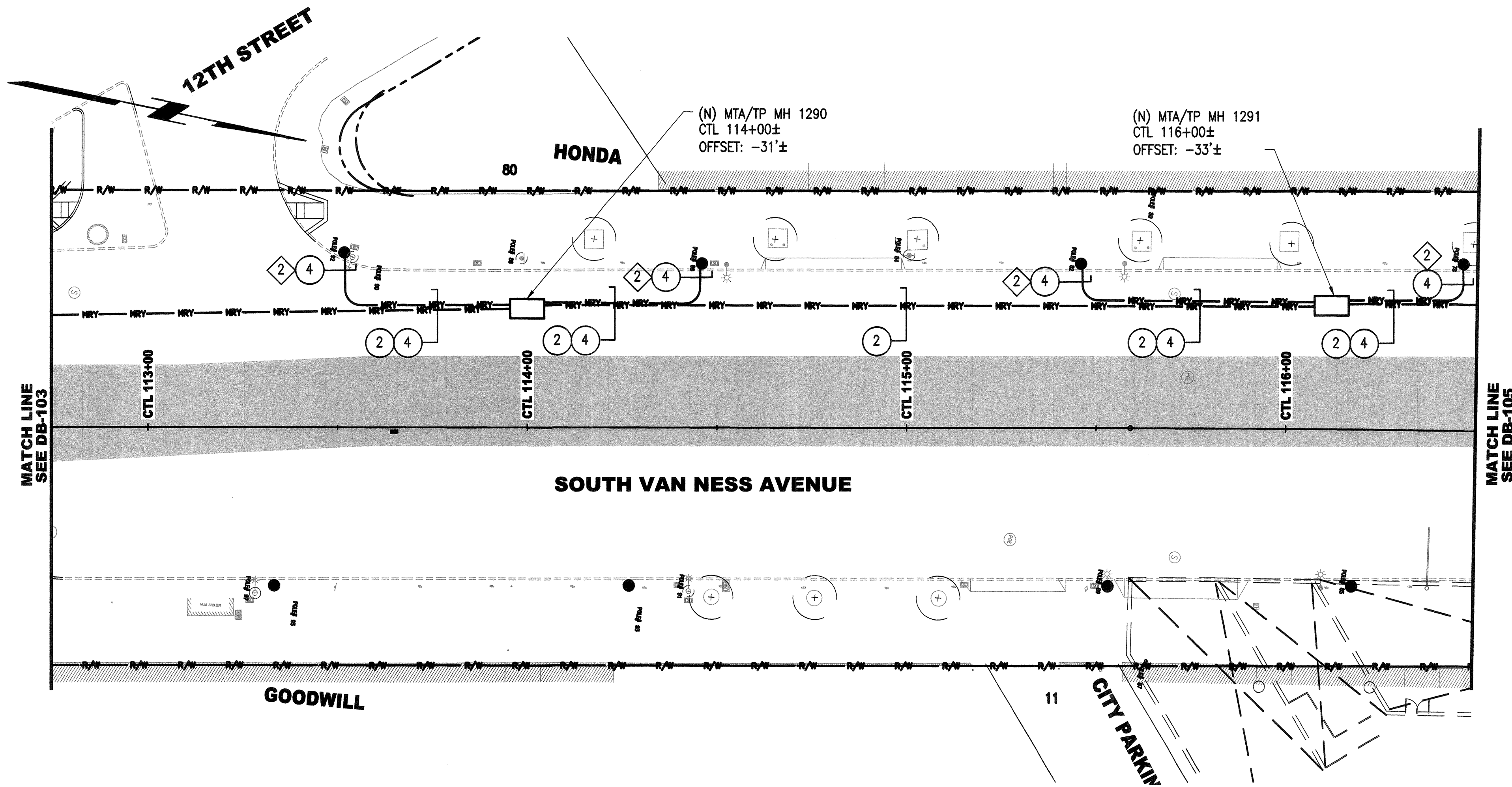
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Lucinda Hanne*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 108+25 TO 112+75
 PLAN

1289
 CL-28995
 DB-103
 DB-152
 REVISION
 0

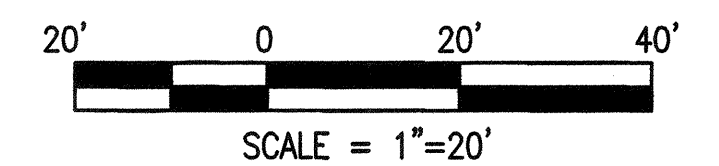
○ **CONDUIT NOTES:**

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



◇ **SHEET NOTES:**

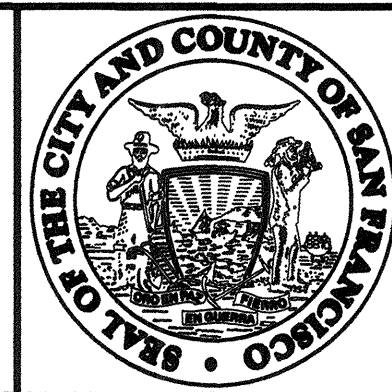
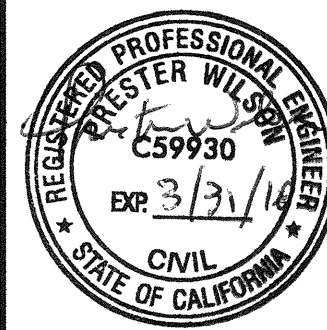
1. NOT USED.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



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NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Justin Wilson*
 DRAWN: *Justin Wilson*
 CHECKED: *Chris Campbell*
 REVIEWED: *Mark A. Rudrich*
 RECOMMENDED: *Justin Wilson*
 APPROVED: *F. Robinson*
 DATE: **MAY 13 2016**

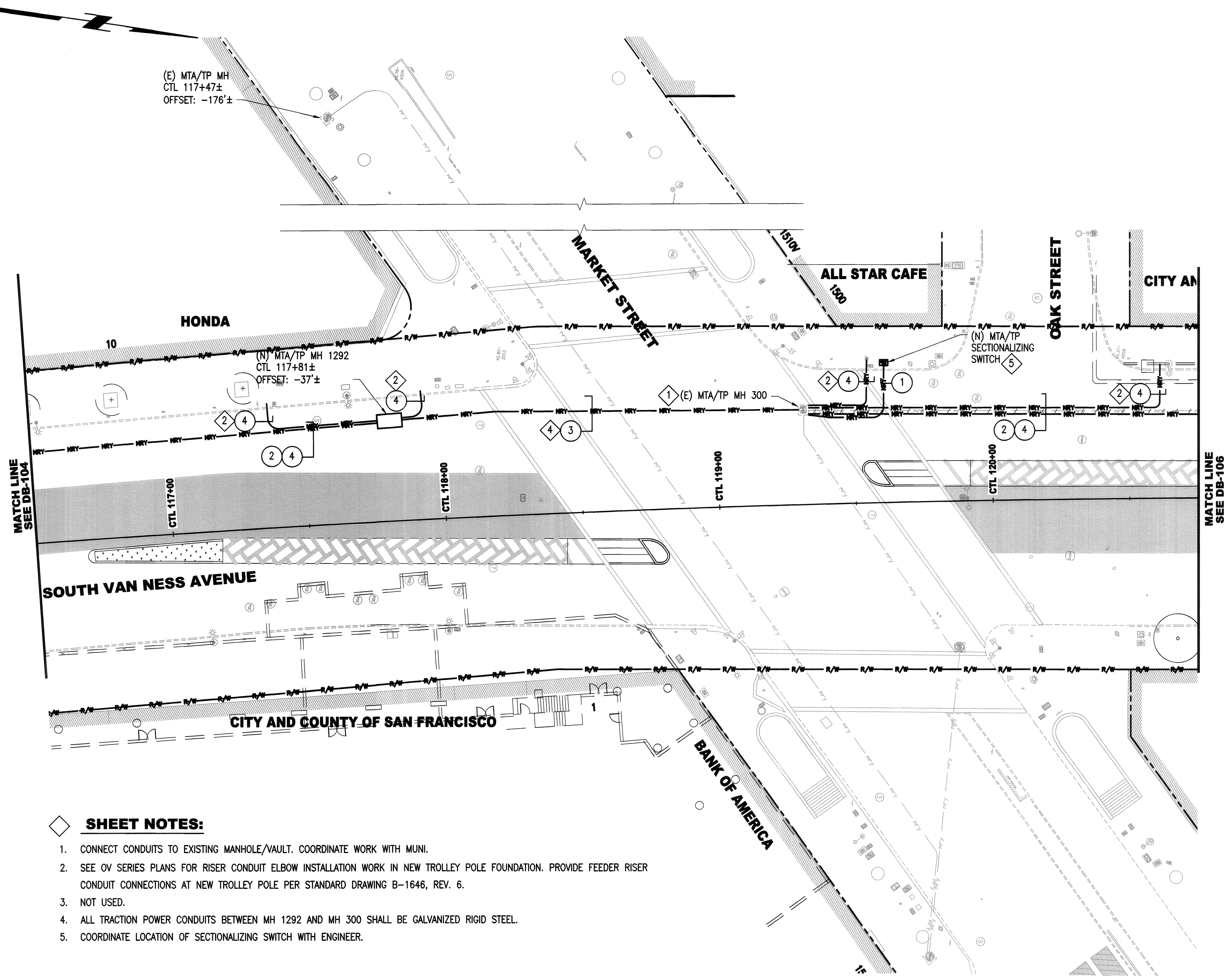


CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Lucretia Harris*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-28996
TRACTION POWER DUCTBANK CTL 112+75 TO 116+50 PLAN	DB-104	REVISION
	DB-152	0

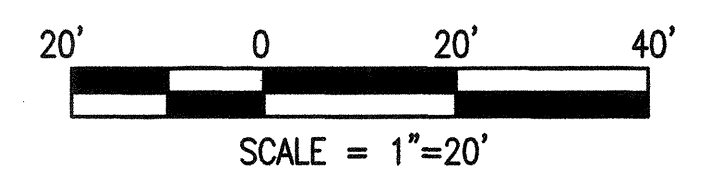
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
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2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

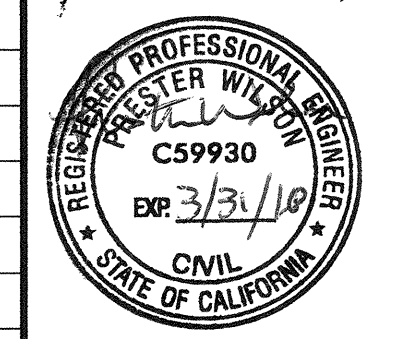
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
3. NOT USED.
4. ALL TRACTION POWER CONDUITS BETWEEN MH 1292 AND MH 300 SHALL BE GALVANIZED RIGID STEEL.
5. COORDINATE LOCATION OF SECTIONALIZING SWITCH WITH ENGINEER.



I:\CP1640.1 Van Ness BRT V_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files\Drawbank\CP16401DB105.dwg pwlison Tue Jun 23 2015 - 4:18 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Proton*
 DRAWN: *Proton*
 CHECKED: *Edna Carlock*
 REVIEWED: *Mark A. Ruchman*
 RECOMMENDED: *Proton*
 APPROVED: *F. Mohr*
 DATE: MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

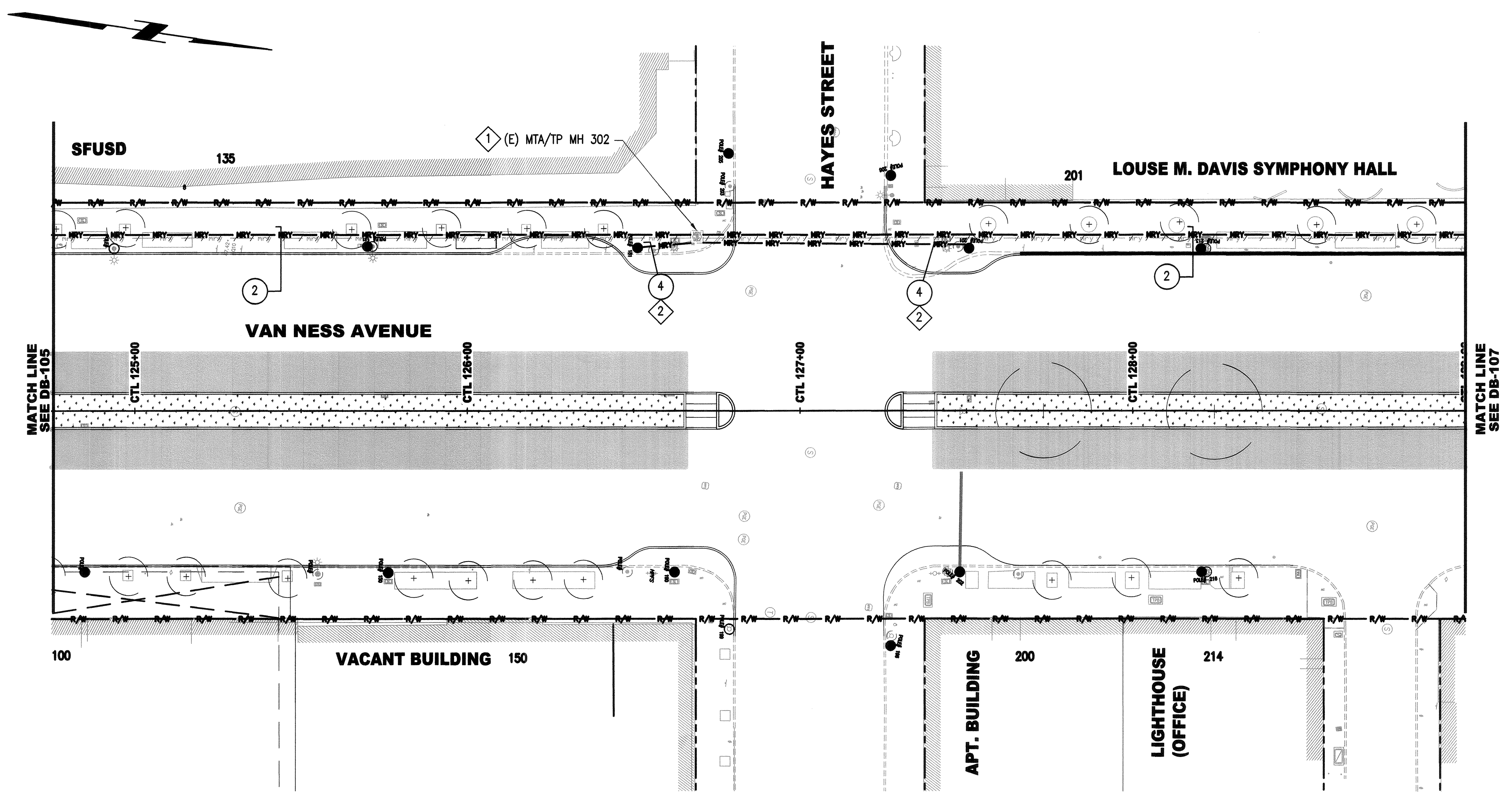
APPROVED
Lucinda Ham
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 116+50 TO 120+75
 PLAN

1289
 CL-28997
 DB-105
 DB-152
 REVISION
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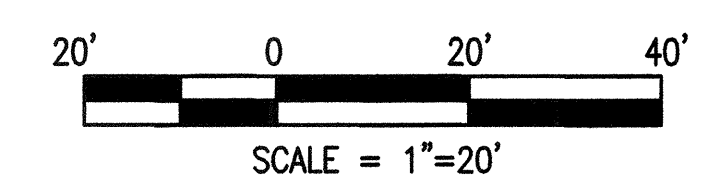
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

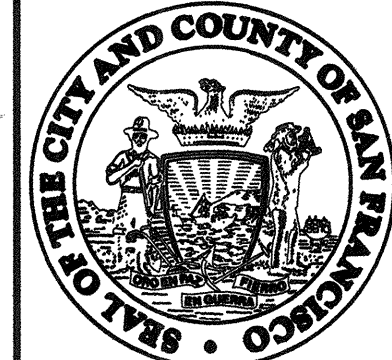
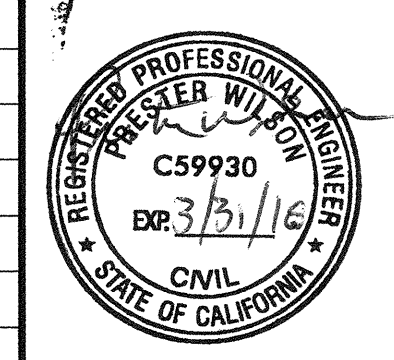
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPTB40.1_Van Ness BRT_V_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files Ductbank\CPTB401DB107.dwg pwillson Tue Jun 23, 2015 - 4:42 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016



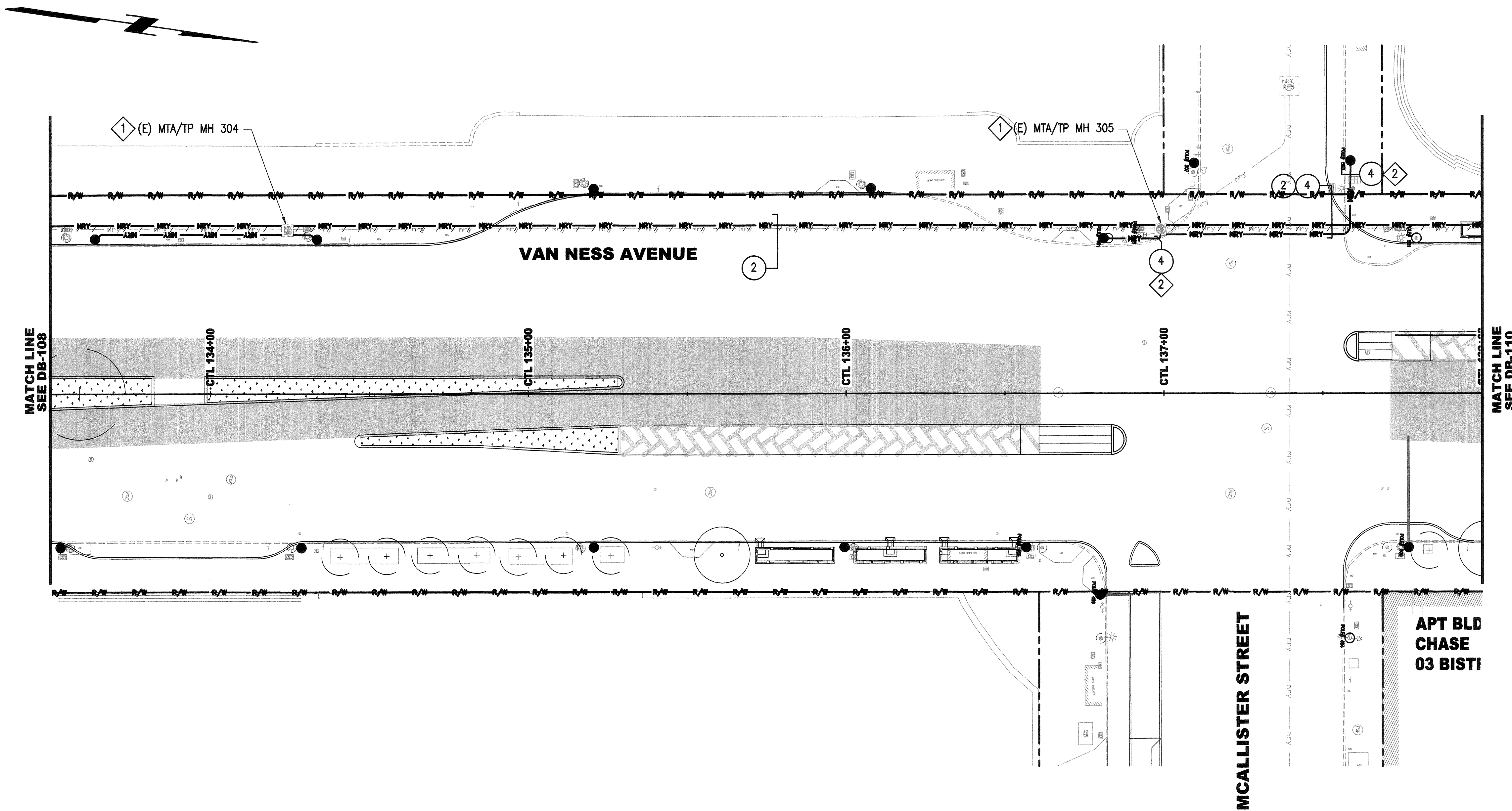
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 124+75 TO 129+00
 PLAN

1289	REVISION
CL-28999	0
DB-107	
DB-152	

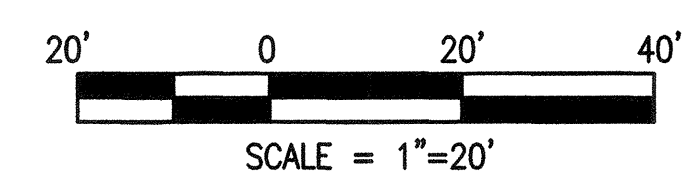
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



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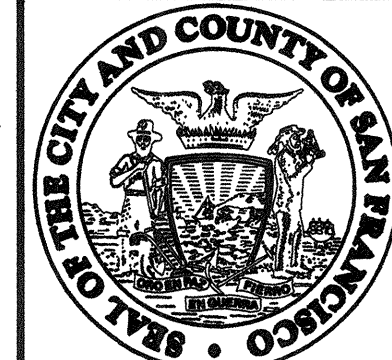
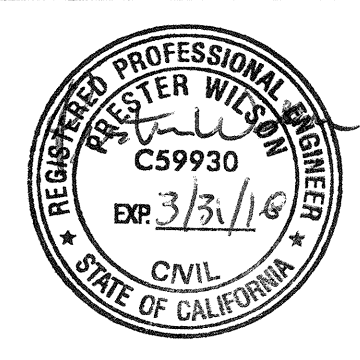
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



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NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED *[Signature]*
 DRAWN *[Signature]*
 CHECKED *[Signature]*
 REVIEWED *[Signature]*
 RECOMMENDED *[Signature]*
 APPROVED *[Signature]*
 DATE **MAY 13 2016**



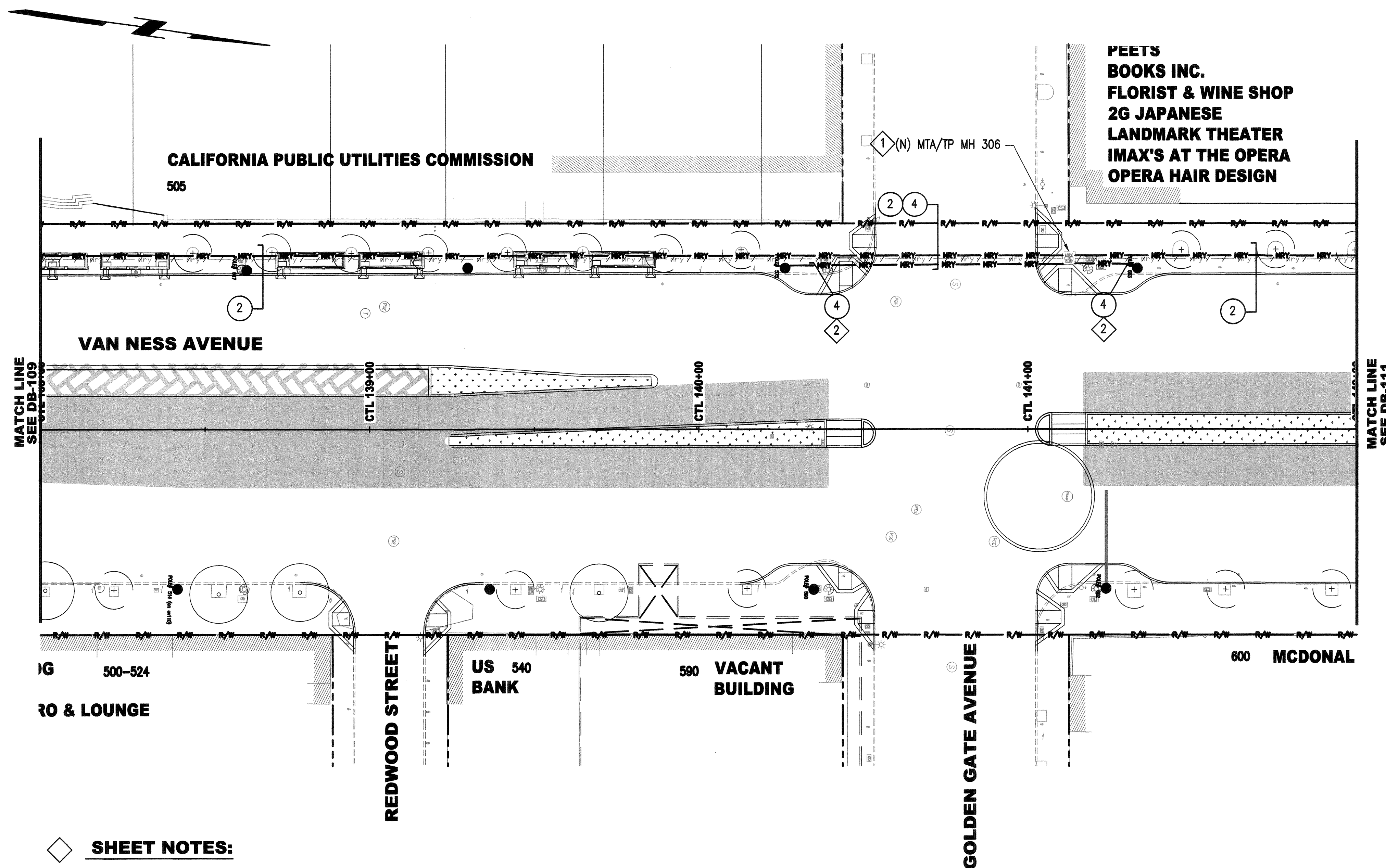
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 133+50 TO 138+00
 PLAN

1289
 CL-29001
 DB-109
 DB-152
 REVISION
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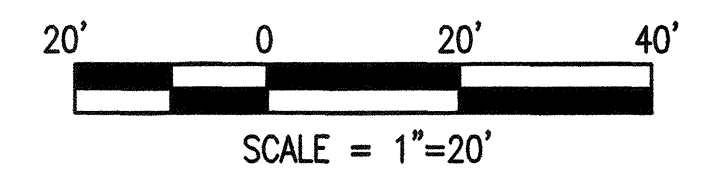
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

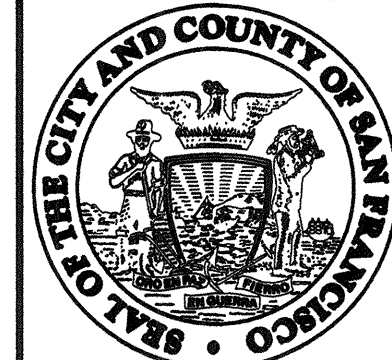
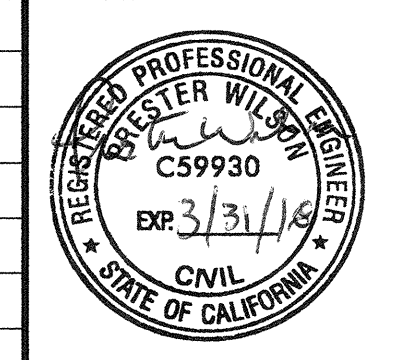
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT6401_Van Ness BRT\2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet_Sheet_CPT6401DB110.dwg pwlison Wed Jun 24 2015 - 9:25 am

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

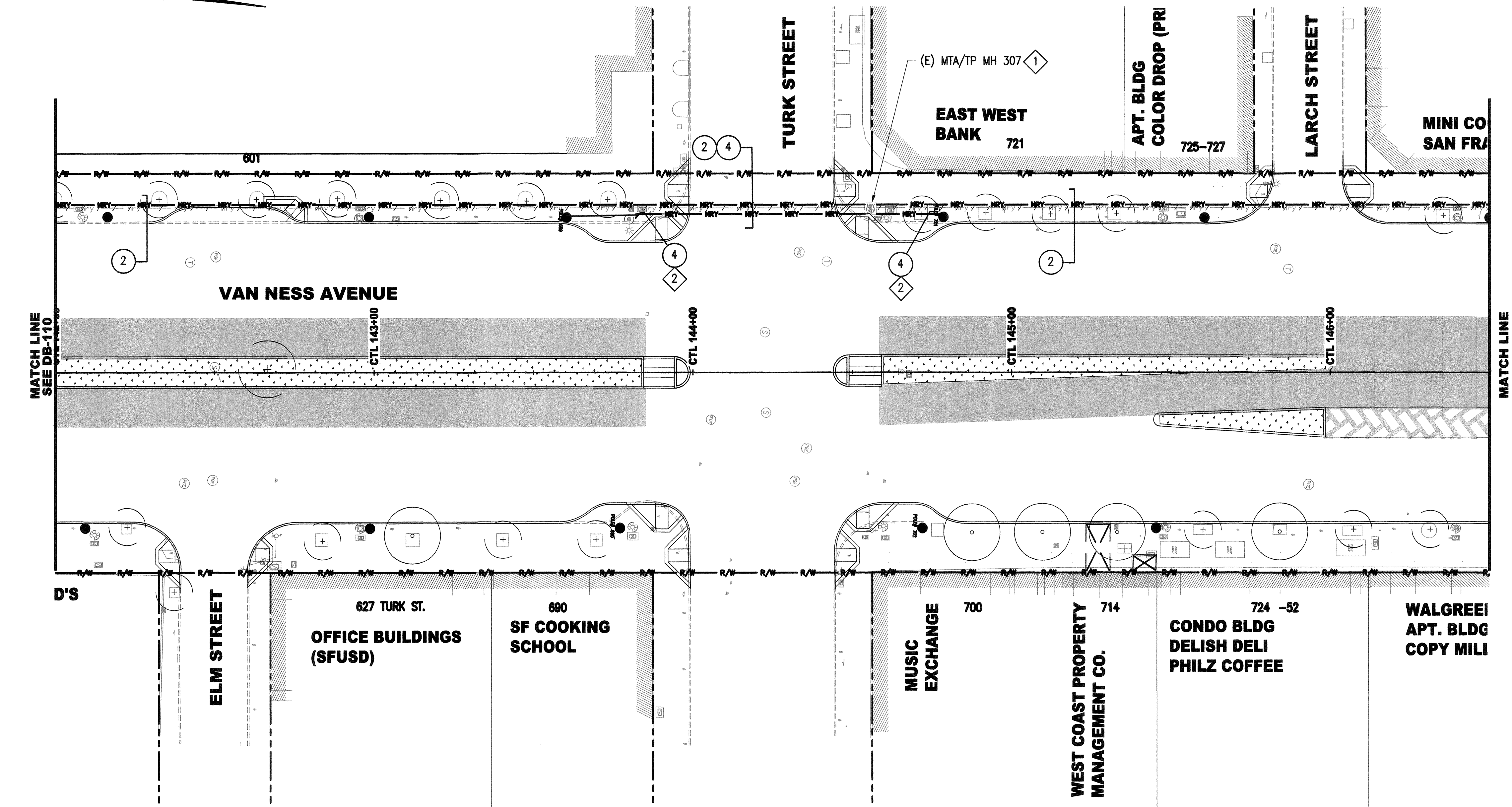
DESIGNED *[Signature]*
 DRAWN *[Signature]*
 CHECKED *[Signature]*
 REVIEWED *[Signature]*
 RECOMMENDED *[Signature]*
 APPROVED *[Signature]*
 DATE **MAY 13 2016**



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 138+00 TO 142+00
 PLAN

1289
CL-29002
 DB-110
 DB-152
 REVISION
0

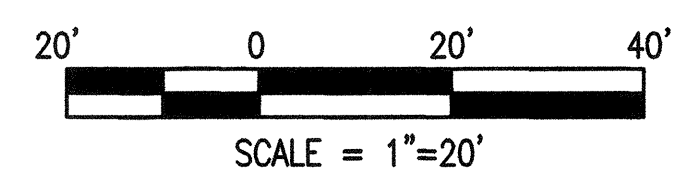


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



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NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED *Justin Wilson*
 DRAWN *Justin Wilson*
 CHECKED *Glenn Campbell*
 REVIEWED *Mark A. Bedrichi*
 RECOMMENDED *Justin Wilson*
 APPROVED *F. Mohammedi*
 DATE **MAY 13 2016**

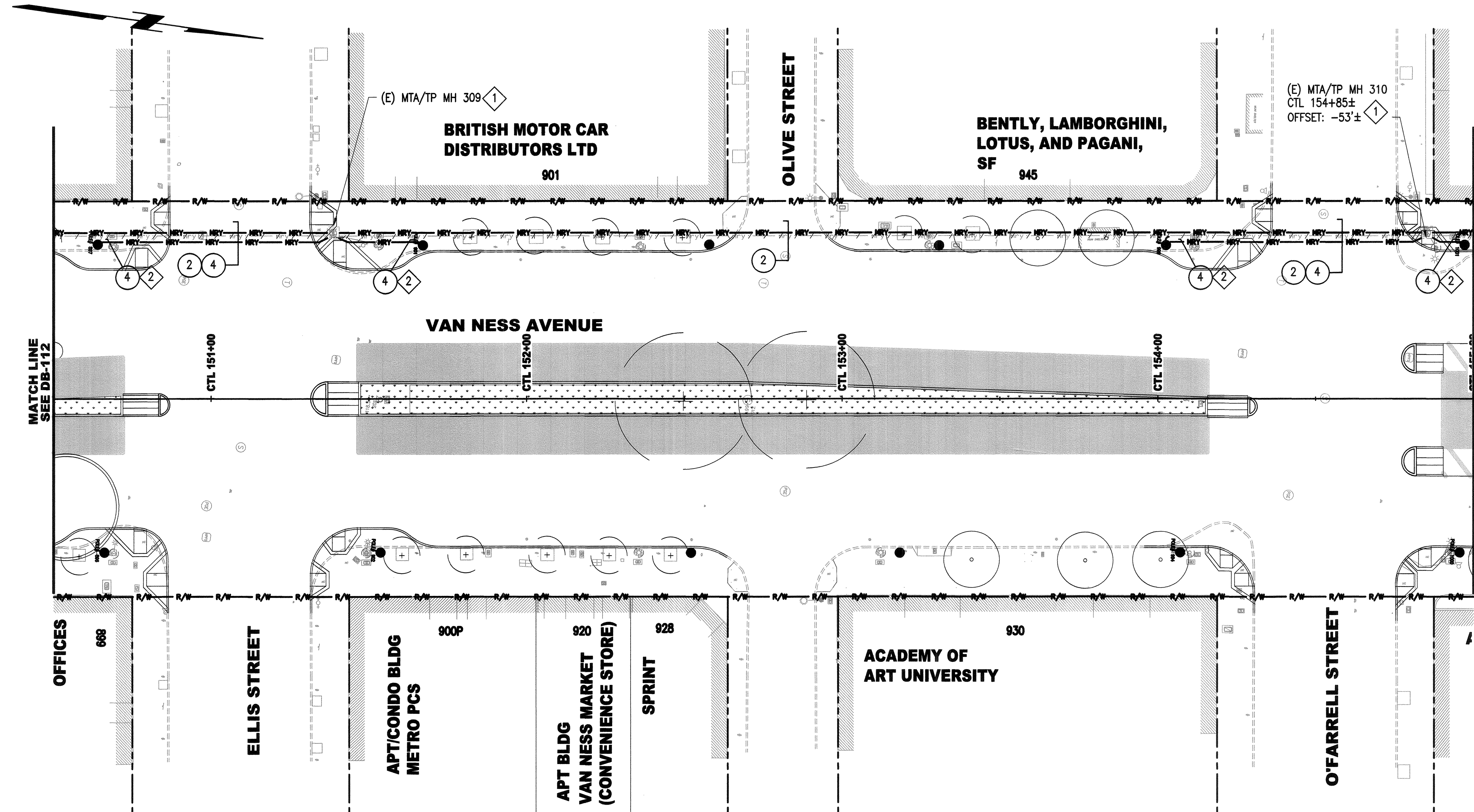


CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
Amir H. Hani
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 142+00 TO 146+50
 PLAN

1289
 CL-29003
 REVISION
 DB-111
 DB-152 0

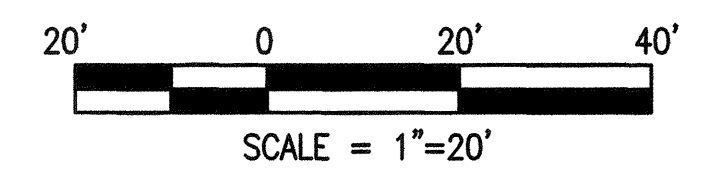


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

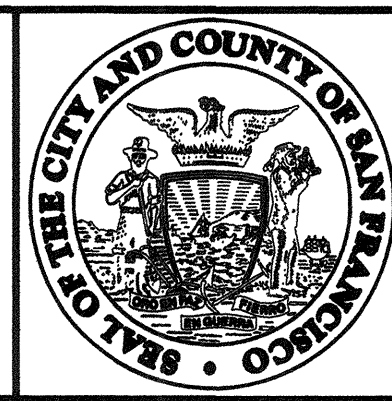
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT6401_Van Ness BRT V2_CERA_S00_Design Components\S01_Drawings\21_Traction Power\Sheet Files Ductbank\CPT6401DB113.dwg pwlison Wed Jun 24 2015 10:09 am

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016



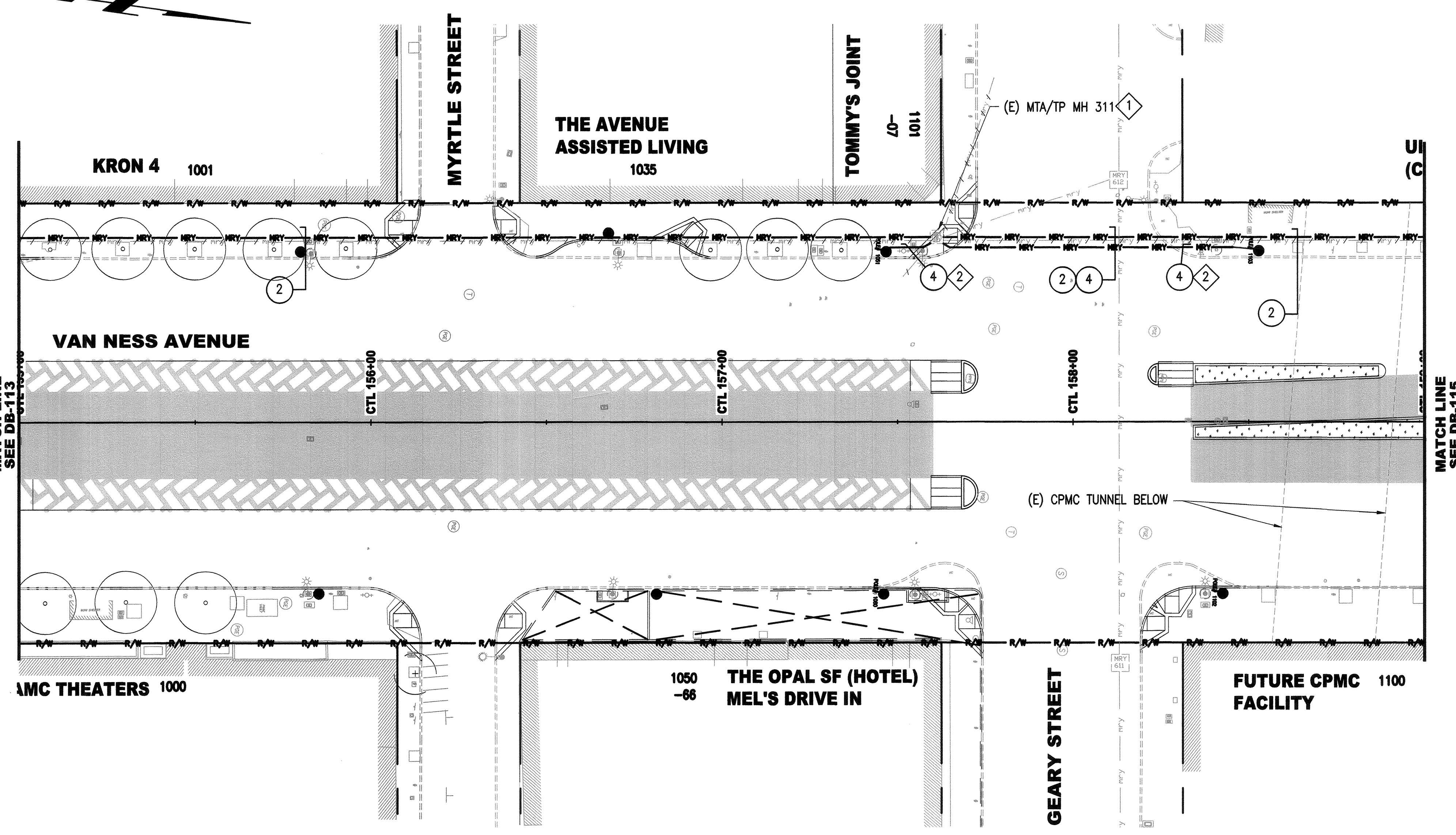
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 150+50 TO 155+00
 PLAN

1289	REVISION
CL-29005	0
DB-113	
DB-152	

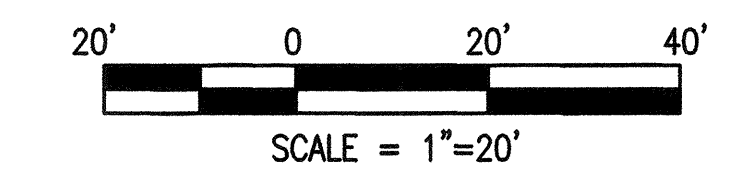
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



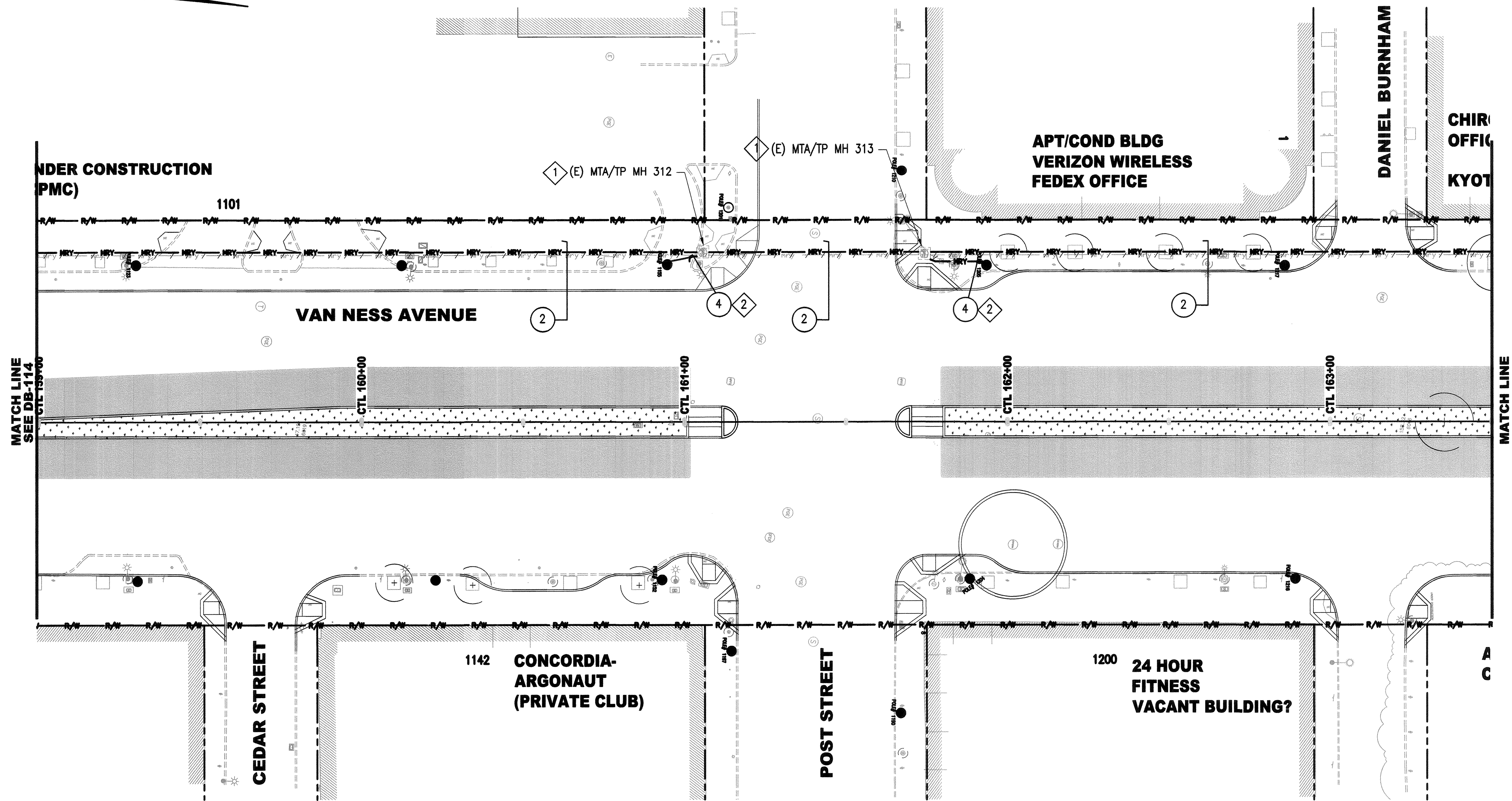
I:\CPTB401_Van Ness BRV2_CER500_Design Components\501_Drawings\21_Traction Power\Sheet Files\Ductbank\CPTB401DB114.dwg jwilson Wed Jun 24 2015 10:19 am

DESIGNED: <i>[Signature]</i> DRAWN: <i>[Signature]</i> CHECKED: <i>[Signature]</i> REVIEWED: <i>[Signature]</i> RECOMMENDED: <i>[Signature]</i> APPROVED: <i>[Signature]</i> DATE: MAY 13 2016						CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED: <i>[Signature]</i> for the DIRECTOR OF TRANSPORTATION	MUNI BUS RAPID TRANSIT SYSTEM VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT TRACTION POWER DUCTBANK CTL 155+00 TO 159+00 PLAN	1289 CL-29006 DB-114 DB-152	REVISION 0
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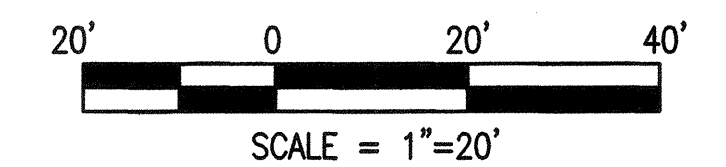
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

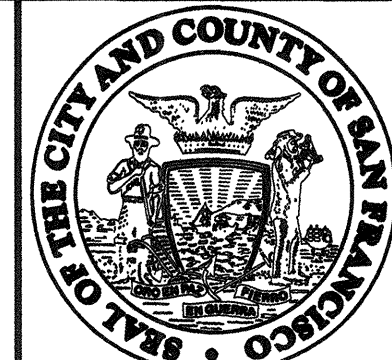
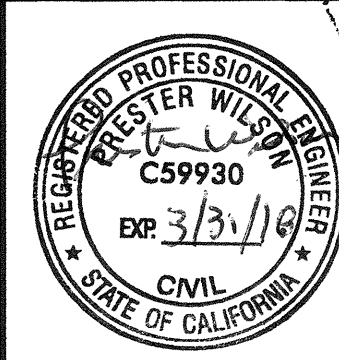
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT640.1 Van Ness BRT\2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files Ductbank\ CPT6401DB115.dwg pwlison Wed Jun 24, 2015 10:58 am

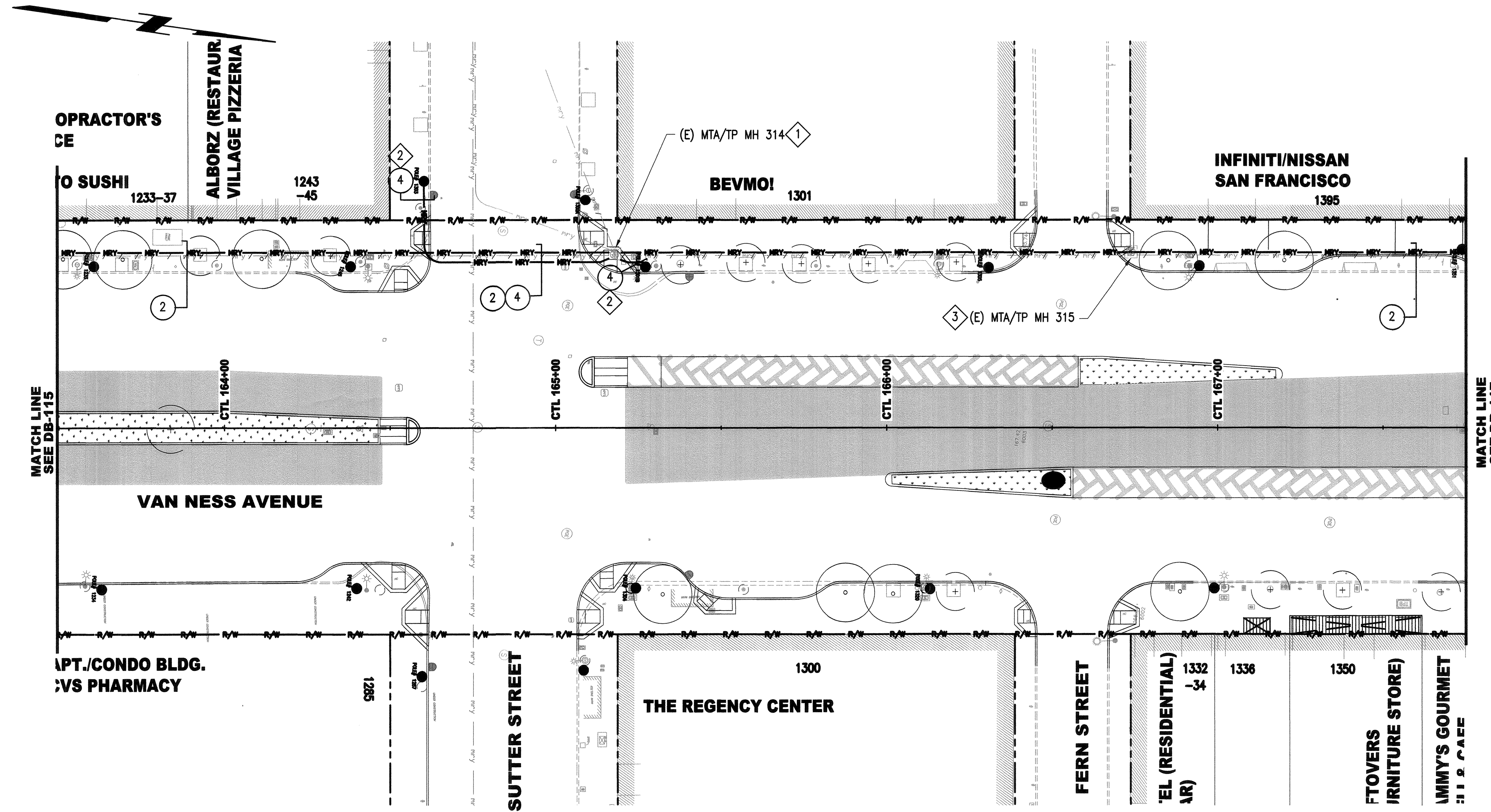
NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Proteus*
 DRAWN: *Proteus*
 CHECKED: *Eloa Caylak*
 REVIEWED: *Mark A. Rudnicki*
 RECOMMENDED: *Proteus*
 APPROVED: *F. Mohammedi*
 DATE: MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Vincent Han*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-29007
TRACTION POWER DUCTBANK CTL 159+00 TO 163+50 PLAN	DB-115 DB-152	REVISION 0

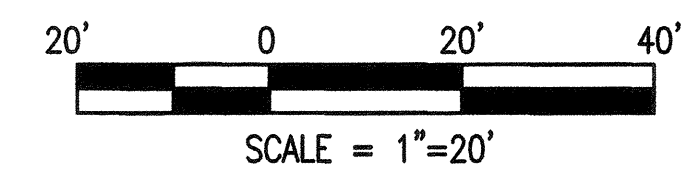


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

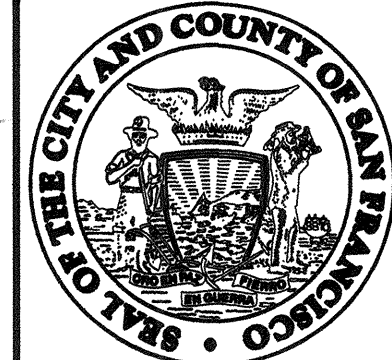
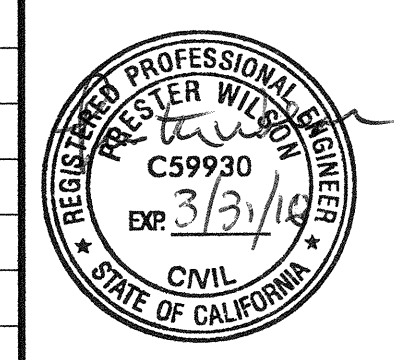
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
- BYPASS NEW DUCTBANK AROUND EXISTING MANHOLE.



I:\CPT16401_Van Ness BRT V2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet\Van Ness DB116.dwg (pwlison Fri Dec 04 2015 - 2:45 pm)

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Proton*
 DRAWN: *Proton*
 CHECKED: *Edwin*
 REVIEWED: *Mark A. Redrechi*
 RECOMMENDED: *Proton*
 APPROVED: *Proton*
 DATE: MAY 13 2016



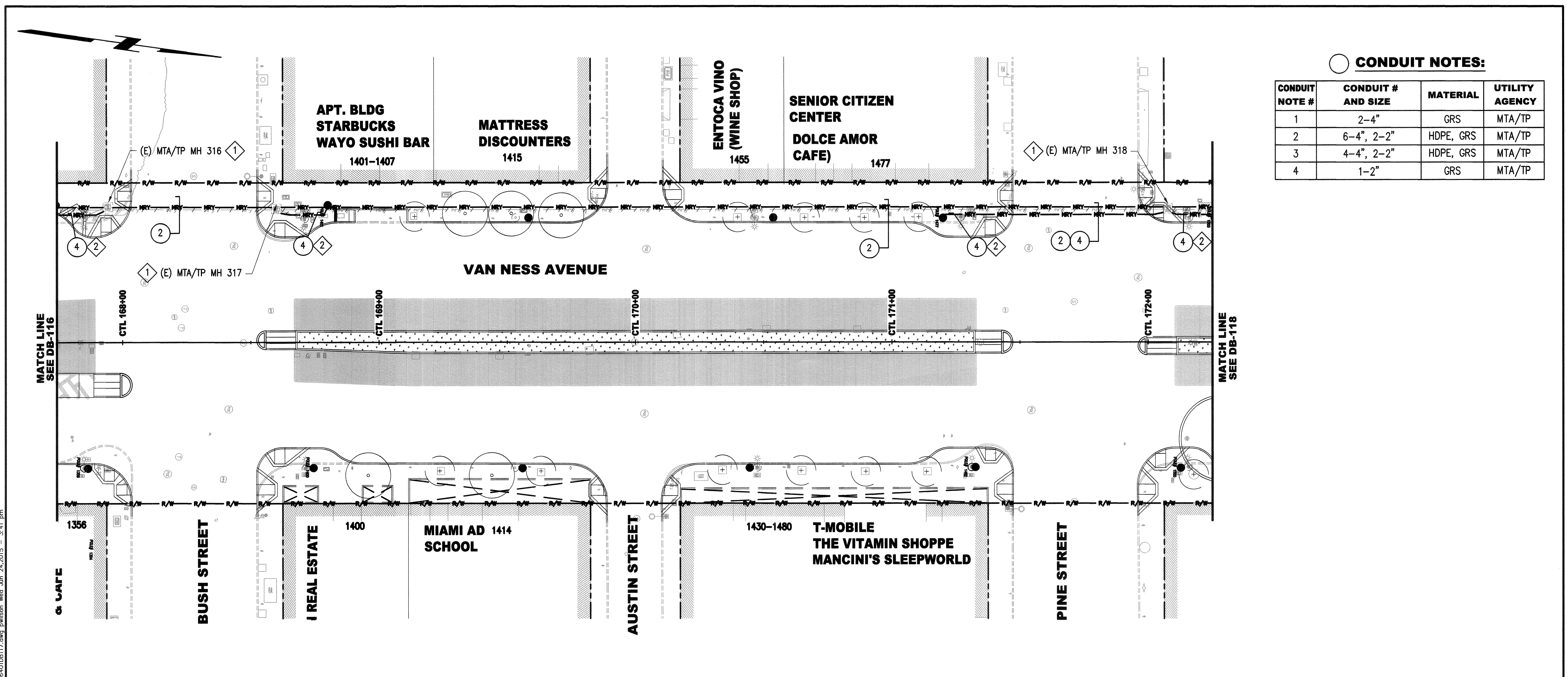
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Vincent*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 163+50 TO 167+75
 PLAN

1289	REVISION
CL-29008	0
DB-116	
DB-152	

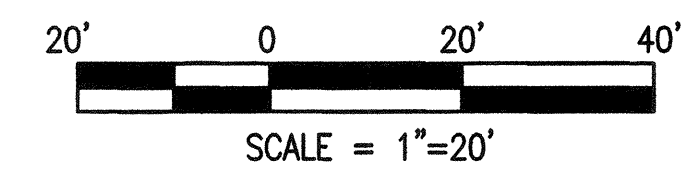
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

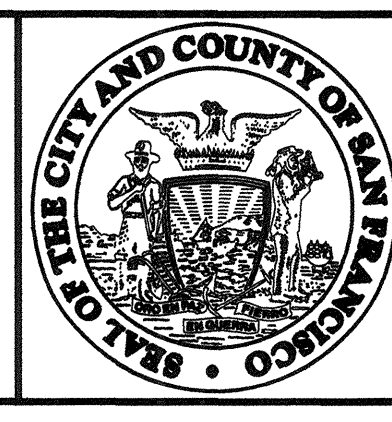
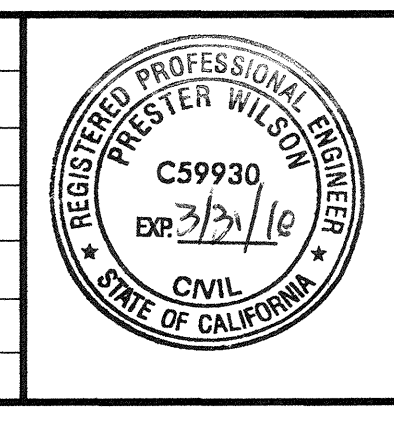
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT1640.1_Van Ness BRT\2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet\Files Ductbank\CPT16401DB117.dwg tpwilson Wed Jun 24, 2015 - 3:41 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016

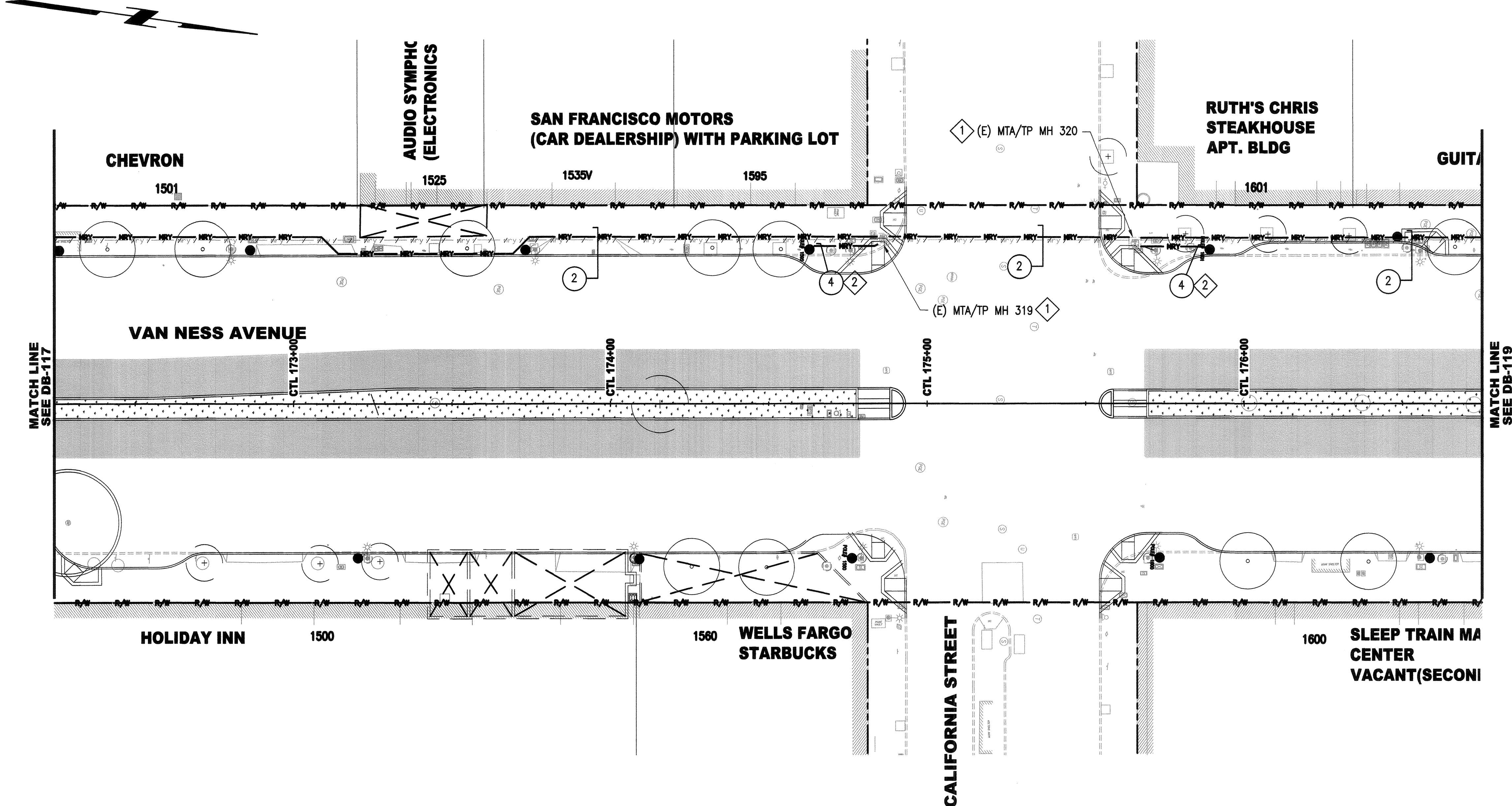


CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
[Signature]
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 167+75 TO 172+25
 PLAN

1289	REVISION
CL-29009	0
DB-117	
DB-152	

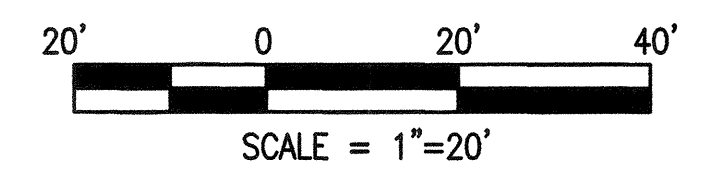


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

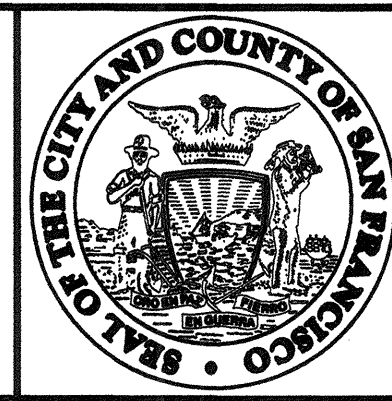
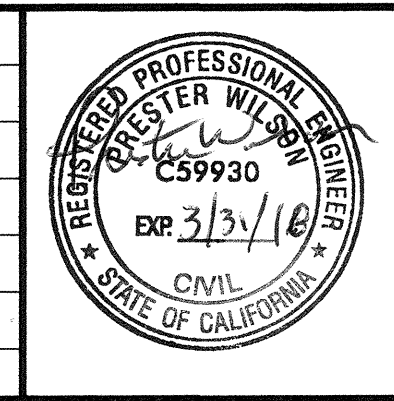
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CP16401_Van Ness BRT V2_CERA_V00_Design Components\301_Drawings\21_Traction Power\Sheet\CP16401DB118.dwg p.wilson Wed Jun 24, 2015 - 3:50 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016

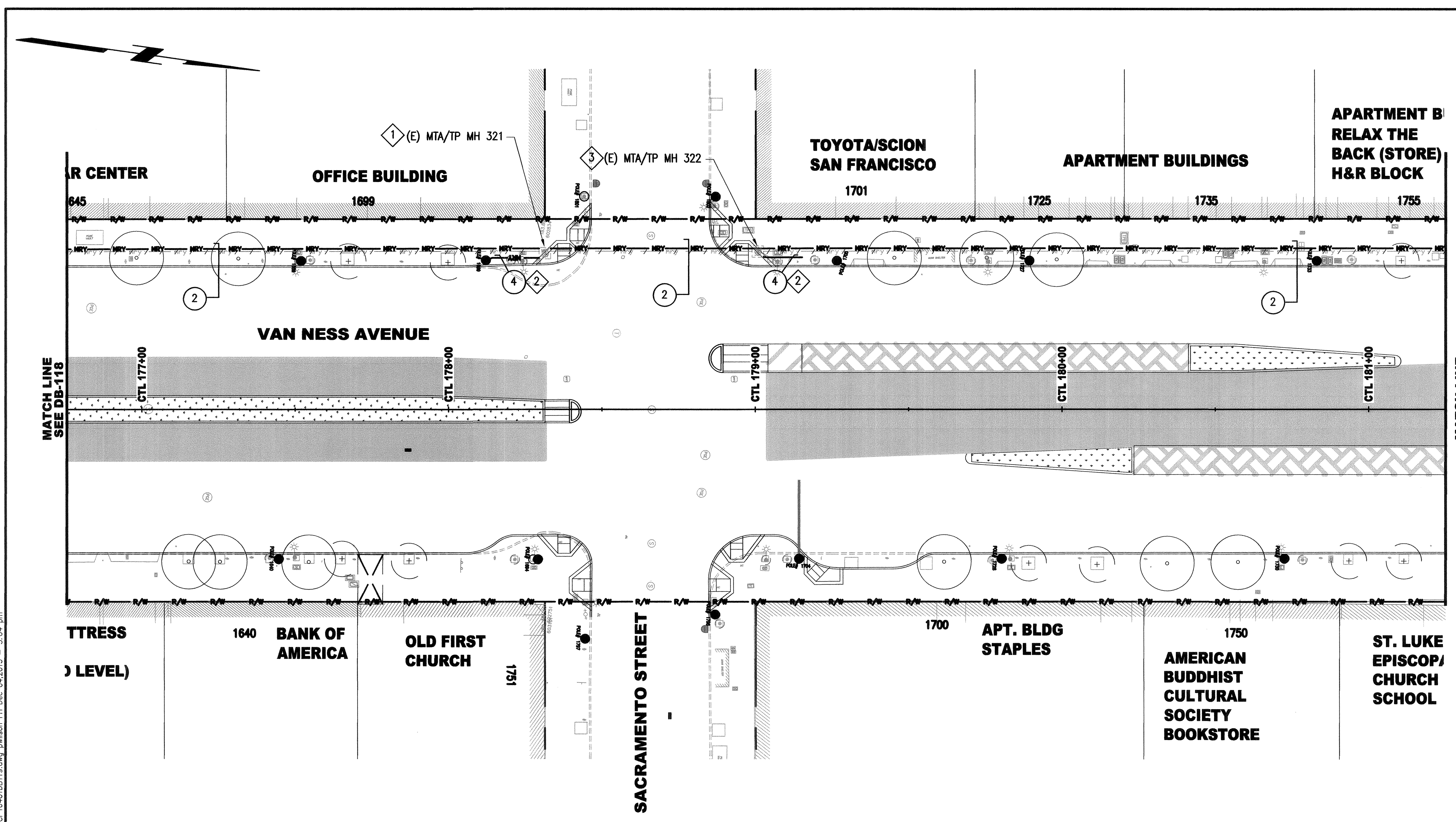


CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 172+25 TO 176+75
 PLAN

1289
 CL-29010
 DB-118
 DB-152
 REVISION
 0

I:\PT6401_Van Ness_BRT_V_CER_500_Design_Components\301_Drawings\21_Traction Power\Sheet\Drawings\21_Traction Power\Sheet.dwg pwlison Fri Dec 04 2015 - 3:04 pm

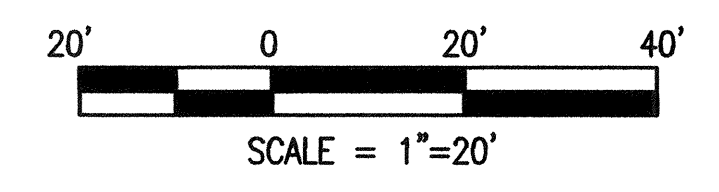


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

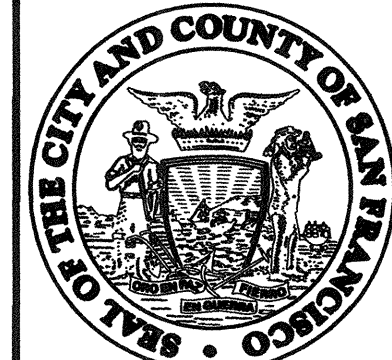
SHEET NOTES:

- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
- BYPASS NEW DUCTBANK AROUND EXISTING MANHOLE.



NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016



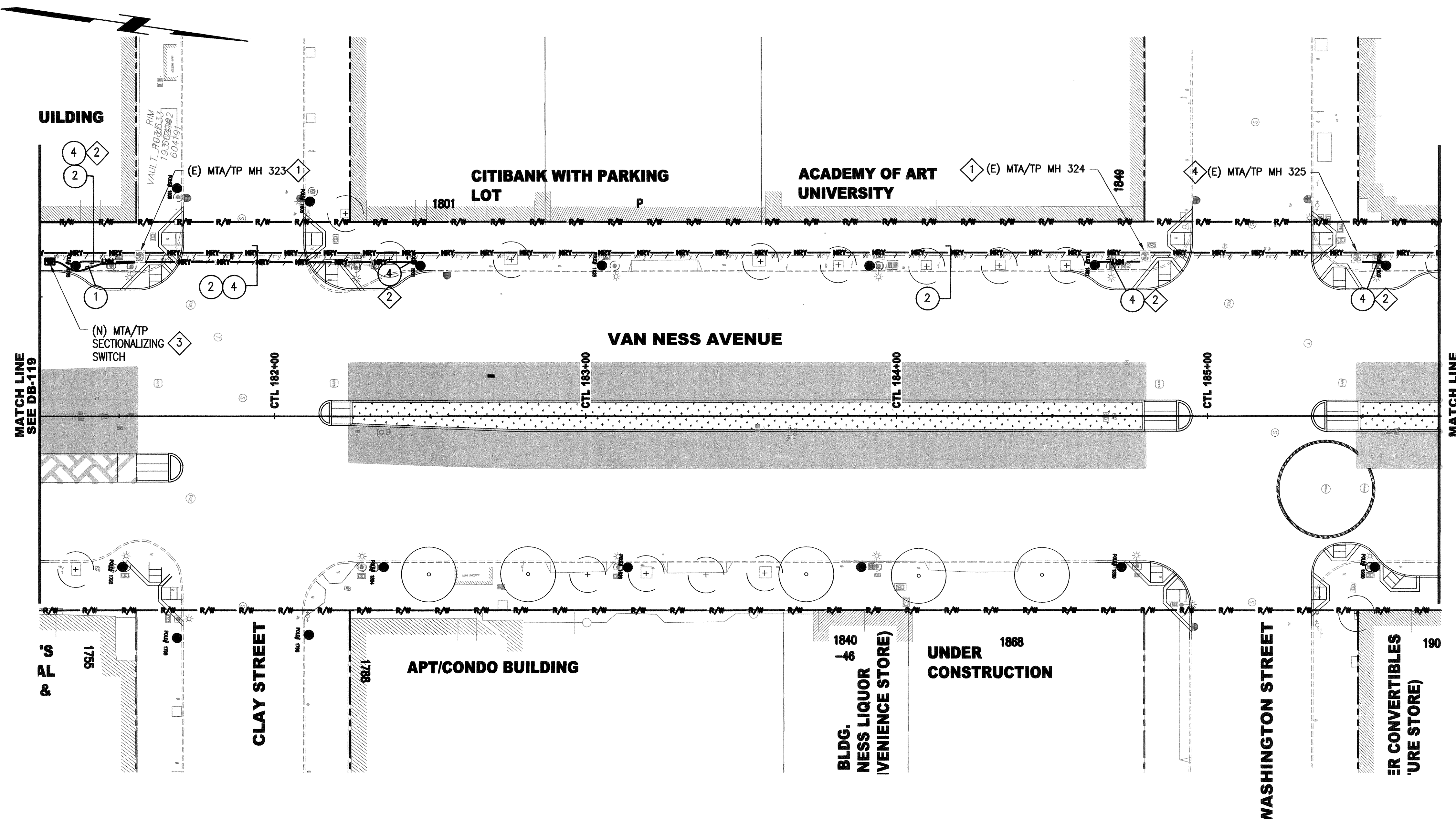
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 176+75 TO 181+25
 PLAN

1289
 CL-29011
 DB-119
 DB-152
 REVISION
 0

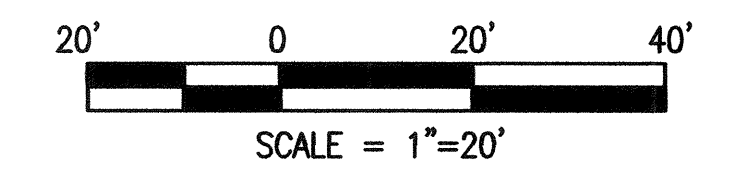
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

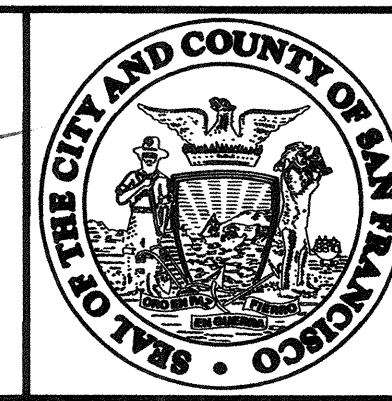
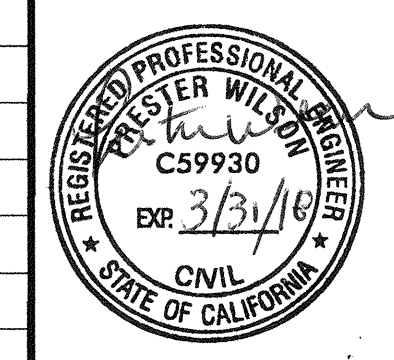
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
3. COORDINATE LOCATION OF SECTIONALIZING SWITCH WITH ENGINEER.
4. BYPASS NEW DUCTBANK AROUND EXISTING MANHOLE.



I:\CPT640.1_Van Ness BRT V2_GER_500_Design Components\501_Drawings\21_Traction Power\Sheet_Files Ductbank\CPT6401DB120.dwg, p.wilson, Fri, Dec, 04, 2015, 3:09 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Proton*
 DRAWN: *Proton*
 CHECKED: *Gloria Taylor*
 REVIEWED: *Mark A. Rasmussen*
 RECOMMENDED: *Proton*
 APPROVED: *F. Mahabadi*
 DATE: MAY 13 2016

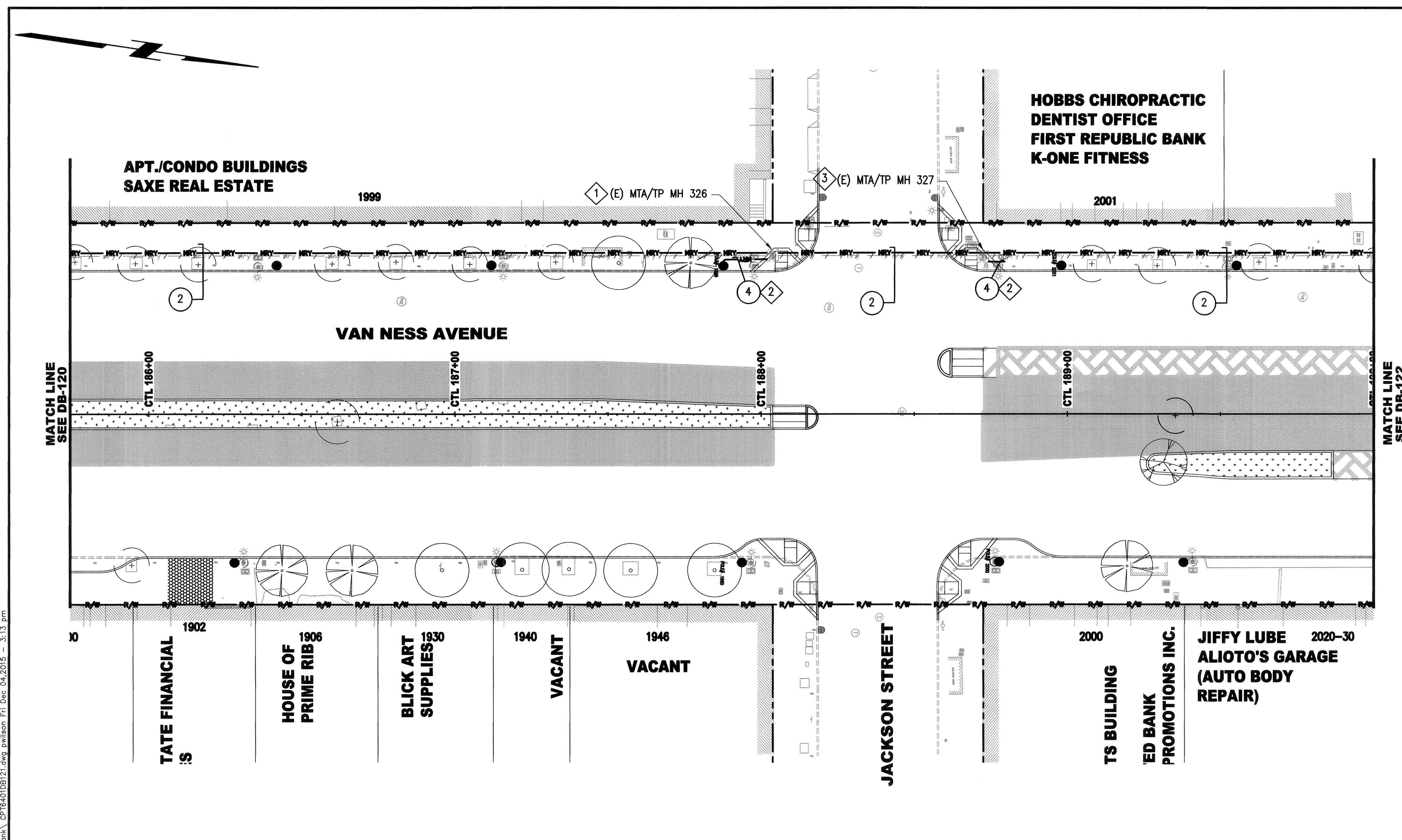


CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Vincent Han*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 181+25 TO 185+75
 PLAN

1289	
CL-29012	
DB-120	REVISION
DB-152	0

I:\CPT640.1_Van Ness BRT V2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files Ductbank\CPT6401DB121.dwg pwilson, Fri Dec 04 2015 3:13 pm

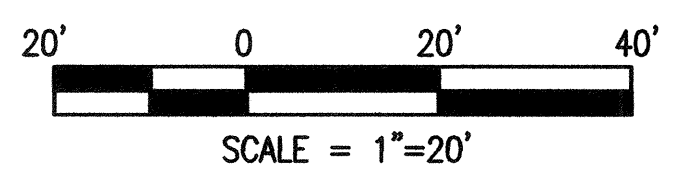


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

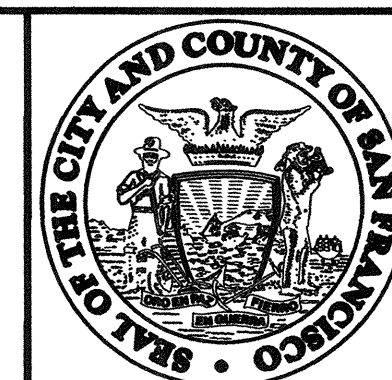
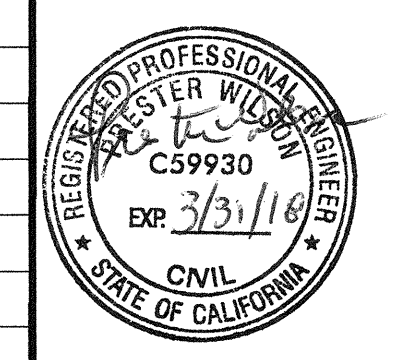
SHEET NOTES:

1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
3. BYPASS NEW DUCTBANK AROUND EXISTING MANHOLE.



NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Proton Wilson*
 DRAWN: *Proton Wilson*
 CHECKED: *Gina Campbell*
 REVIEWED: *Mark A. Rudolph*
 RECOMMENDED: *Proton Wilson*
 APPROVED: *Proton Wilson*
 DATE: MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Lincoln Hsu*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 185+75 TO 190+00
 PLAN

1289
CL-29013
 DB-121
 DB-152
 REVISION
 0

CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

**SUMMIT REAL ESTATE
PACIFIC FRENCH DRY CLEANERS
STERLING BANK & TRUST
CVS PHARMACY**

**OXBRIDGE HOUSE (GOLD BUYERS)
DIAMOND CLUB (TATTOOS)
INTERNATIONAL BLD (OFFICES)
DELLI GATTI HAIR DESIGN
MAI LE NAIL SALON
LAUNDRY LOCKER
HAPPY DONUT**

**ST. BRIGID CHURCH
(ACADEMY OF ART
UNIVERSITY)**

VAN NESS AVENUE

MATCH LINE
SEE DB-121

MATCH LINE
SEE DB-123

MILLION THAI RESTAURANT 2080

PACIFIC STREET

HARRIS' RESTAURANT 2100

APT BLDG 2128

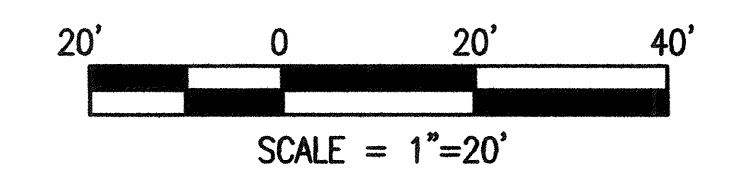
**ELIXIR DESIGN
MAGNOLIA CENTER** 2134

APT BLDG 2146

**SIGNOGRAPHS
SIGN SHOP** 2160

SHEET NOTES:

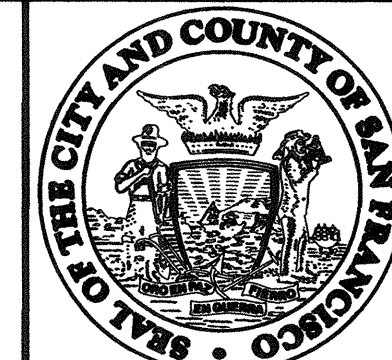
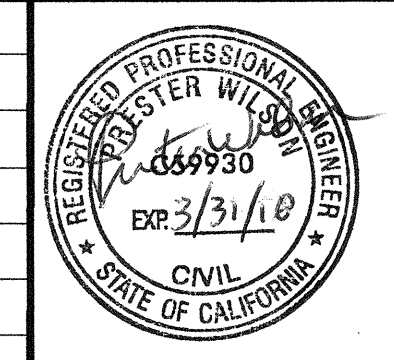
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.
- BYPASS NEW DUCTBANK AROUND EXISTING MANHOLE.



I:\CPT6401_Van Ness BRT_V2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files Ductbank\CPT6401DB122.dwg pwilson Fri Dec 04 2015 3:16 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Protein*
 DRAWN: *Protein*
 CHECKED: *John Ample*
 REVIEWED: *Mark A. Resnick*
 RECOMMENDED: *Protein*
 APPROVED: *F. Robinson*
 DATE: **MAY 13 2016**



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

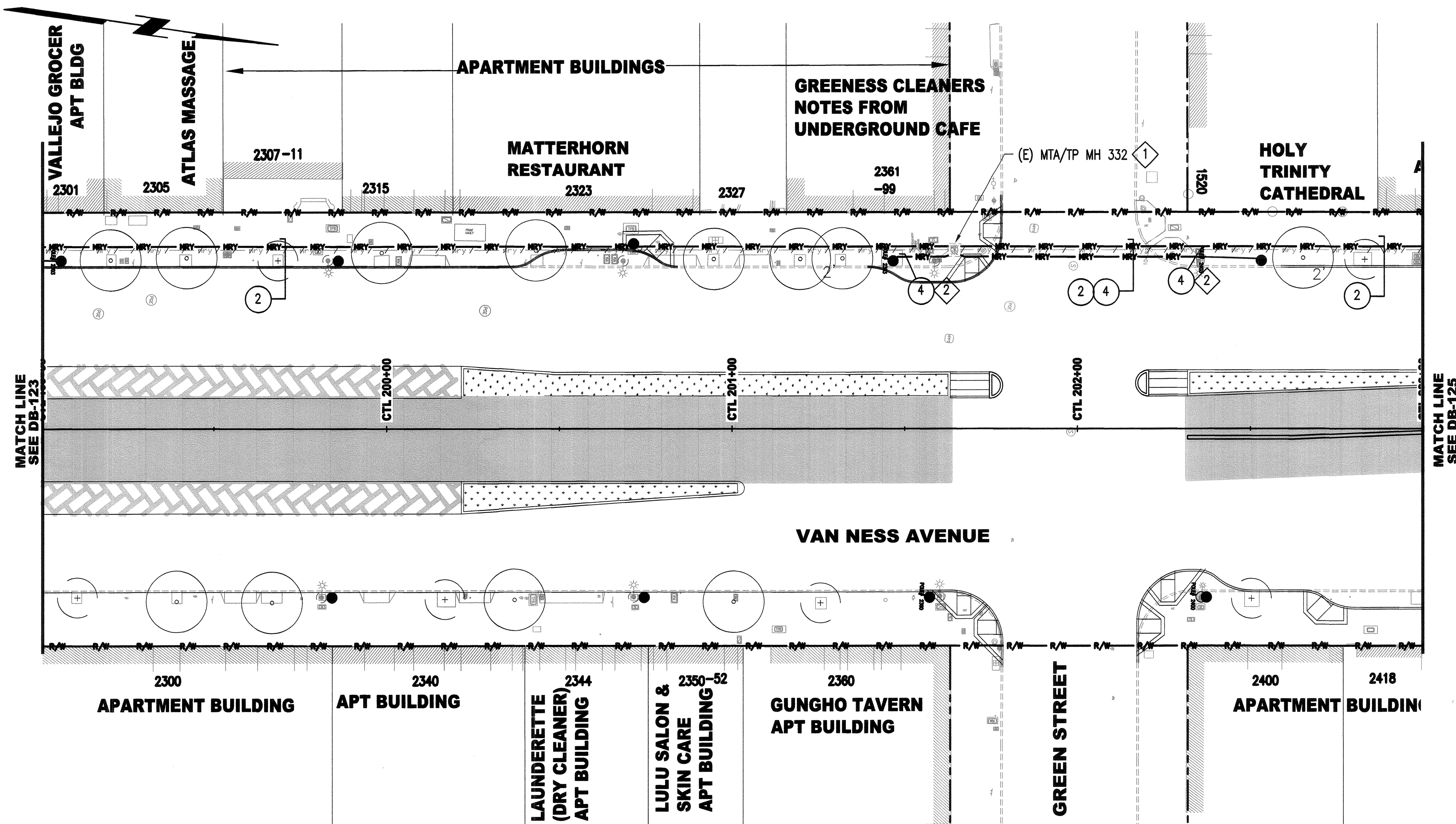
APPROVED: *Vincent Horn*
for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
TRACTION POWER DUCTBANK
CTL 190+00 TO 194+50
PLAN

1289
CL-29014
REVISION
DB-122
DB-152 0

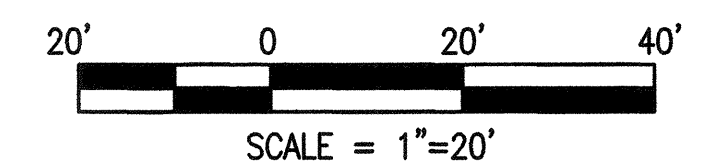
CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP



SHEET NOTES:

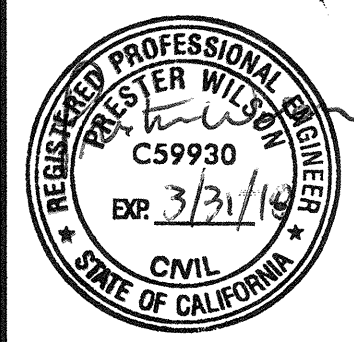
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT1640.1_Van Ness_BRT_V_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet_Files\Ductbank\CPT16401DB124.dwg pwlison Wed Jun 24 2015 - 4:36 pm

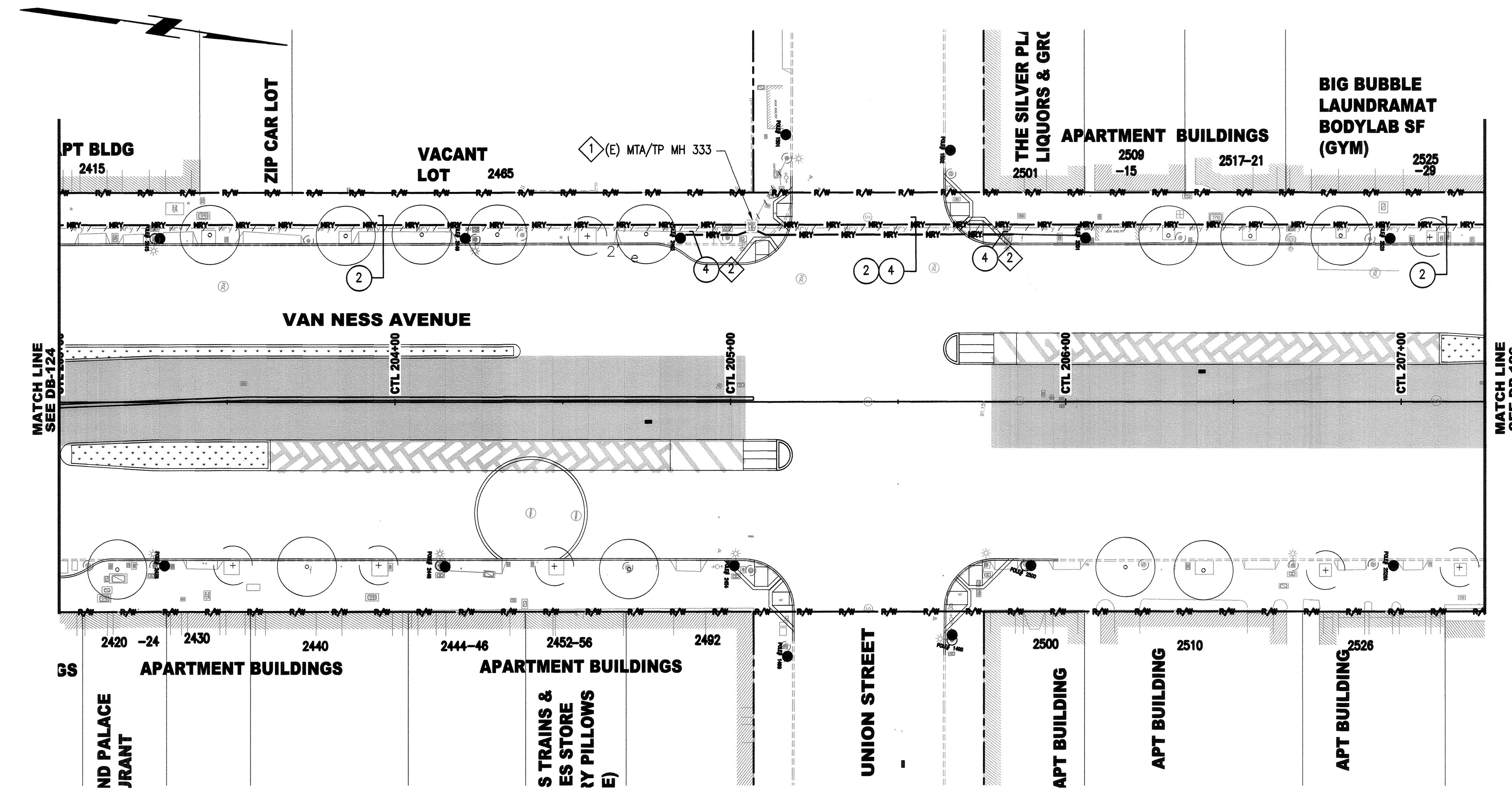
NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED *Proteus*
 DRAWN *Proteus*
 CHECKED *Edison Cards*
 REVIEWED *Mark A. Rednicki*
 RECOMMENDED *Proteus*
 APPROVED *Proteus*
 DATE **MAY 13 2016**



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED *Vincent...*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-29016
TRACTION POWER DUCTBANK CTL 199+00 TO 203+00 PLAN		DB-124 DB-152
		REVISION 0

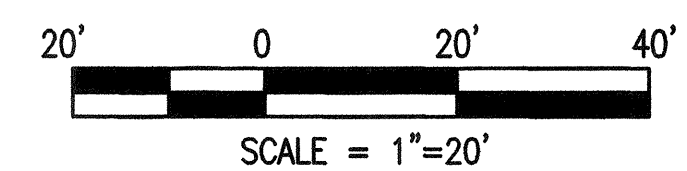


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

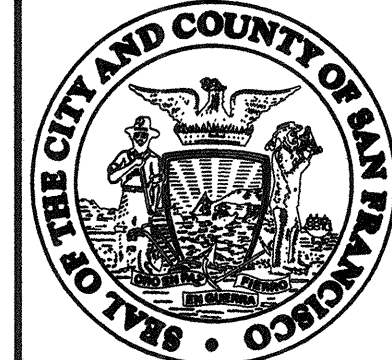
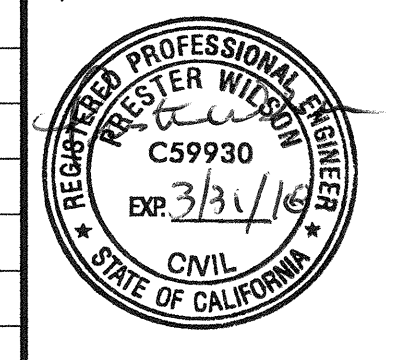
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CPT640.1_Van Ness BRT V2_GERA\500_Design Components\501_Drawings\21_Traction Power\Sheet\Drawings_V21_Traction Power\Sheet\Drawings_V21_Traction Power.dwg pwlison Wed Jun 24 2015 4:42 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

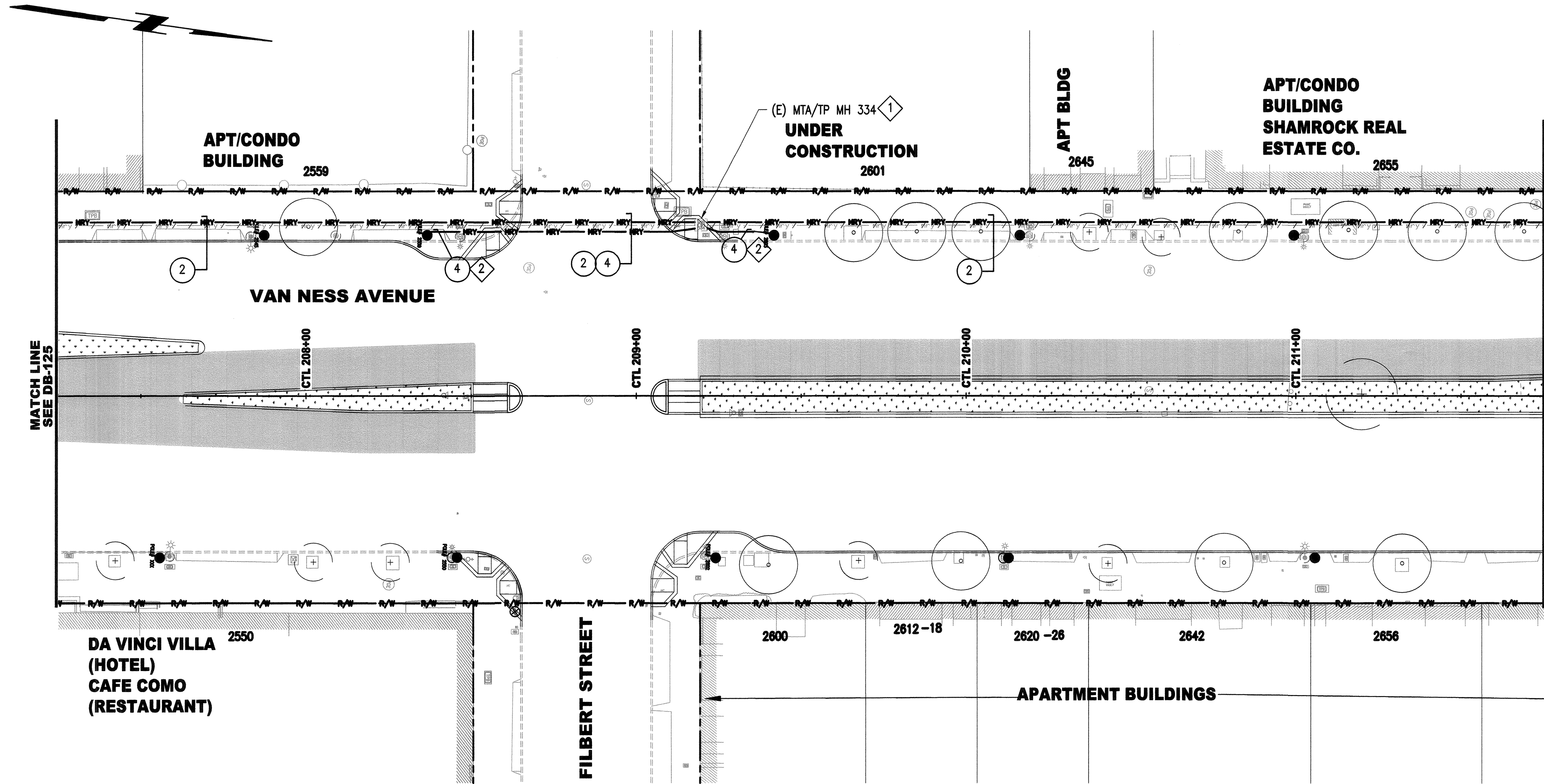
DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 203+00 TO 207+25
 PLAN

1289
 CL-29017
 DB-125
 DB-152
 REVISION
 0

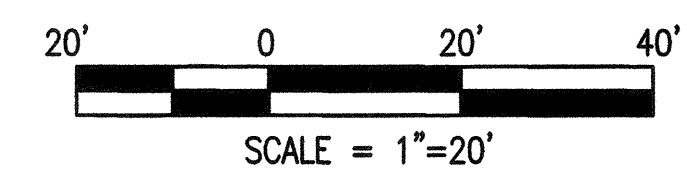


○ **CONDUIT NOTES:**

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

◇ **SHEET NOTES:**

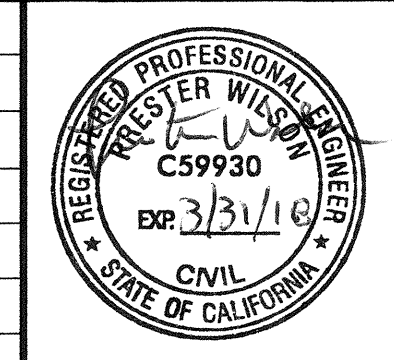
- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



I:\CP16401_Van Ness BRT\2_CER\500_Design Components\501_Drawing\21_Traction Power\Sheet\Drawings\21_Drawing\CP16401DB126.dwg Pwison Wed Jun 24 2015 - 4:49 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

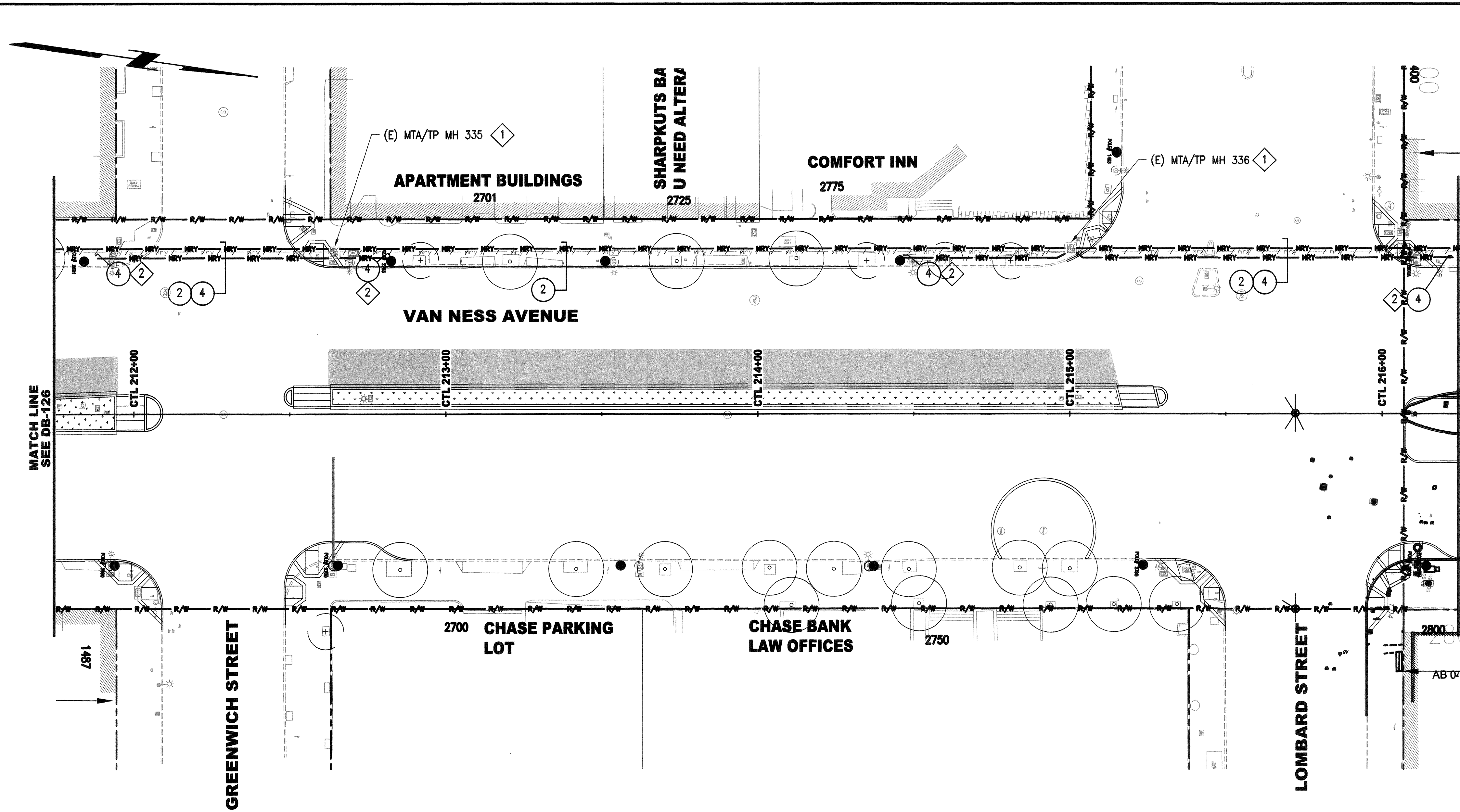
DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: **MAY 13 2016**



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-29018
TRACTION POWER DUCTBANK CTL 207+25 TO 211+75 PLAN		DB-126 DB-152
		REVISION 0

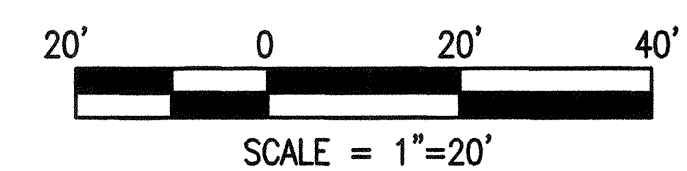
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CONDUIT NOTES:

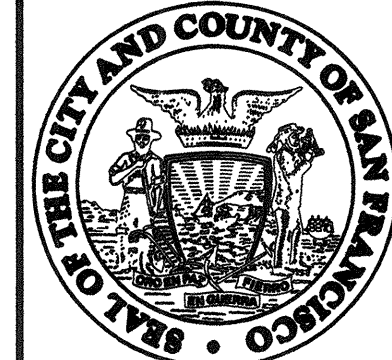
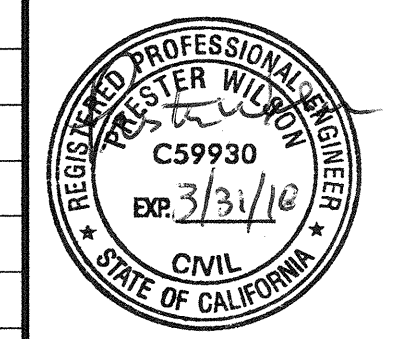
CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

- SHEET NOTES:**
1. CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
 2. SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

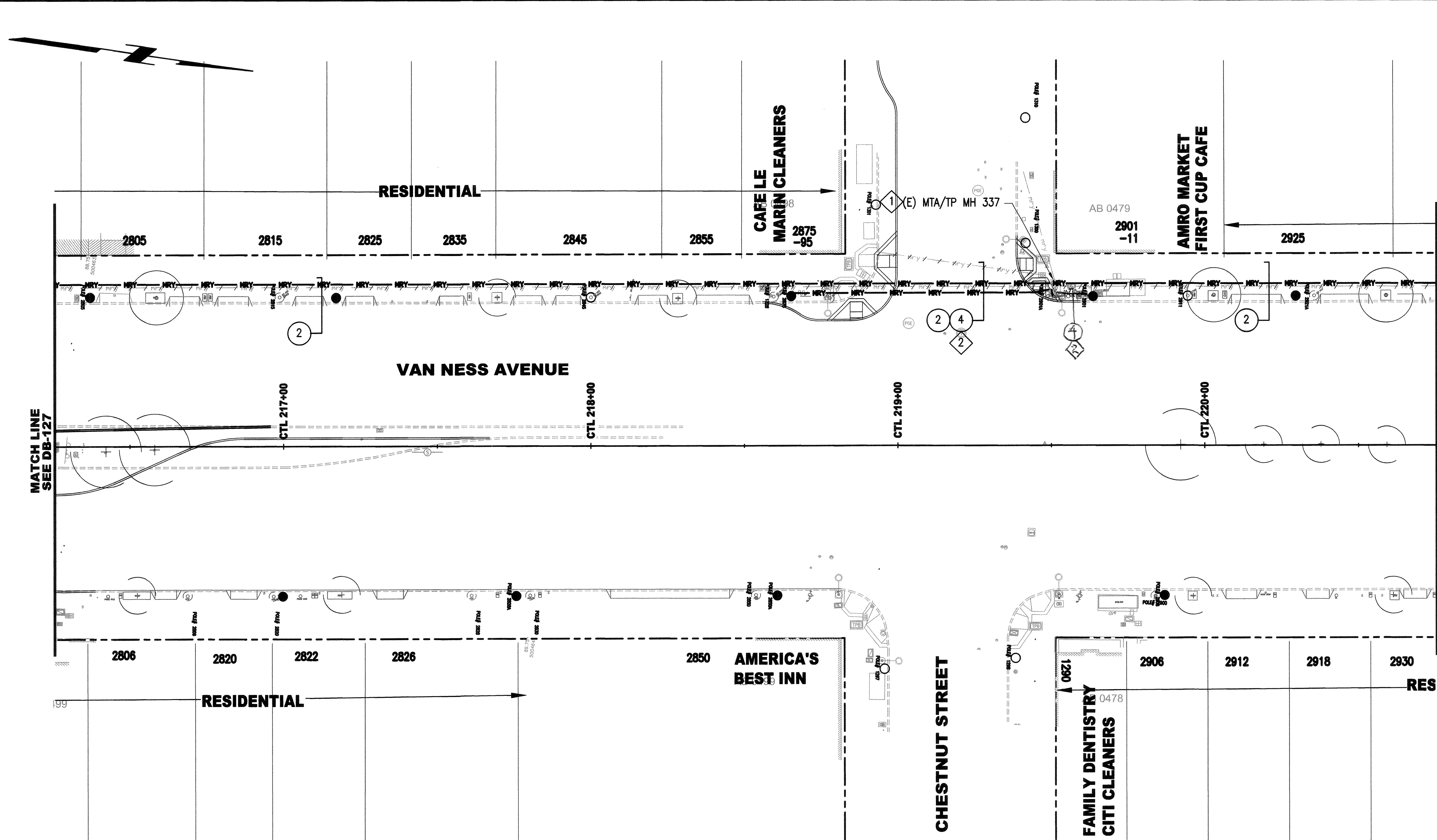
DESIGNED: *[Signature]*
 DRAWN: *[Signature]*
 CHECKED: *[Signature]*
 REVIEWED: *[Signature]*
 RECOMMENDED: *[Signature]*
 APPROVED: *[Signature]*
 DATE: MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *[Signature]*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 211+75 TO 216+25
 PLAN

1289	REVISION
CL-29019	0
DB-127	
DB-152	

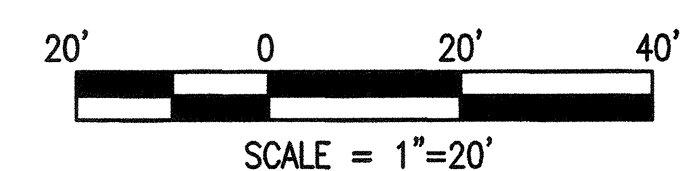


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



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NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED <i>Protavision</i>
DRAWN <i>Protavision</i>
CHECKED <i>Edwan Cayloph</i>
REVIEWED <i>Mark A. Rudnicki</i>
RECOMMENDED <i>Protavision</i>
APPROVED <i>F. Mohamoud</i>
DATE MAY 13 2016

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 CIVIL
 C39930
 EXP. 3/31/16

CITY AND COUNTY OF SAN FRANCISCO
 MUNICIPAL TRANSPORTATION AGENCY

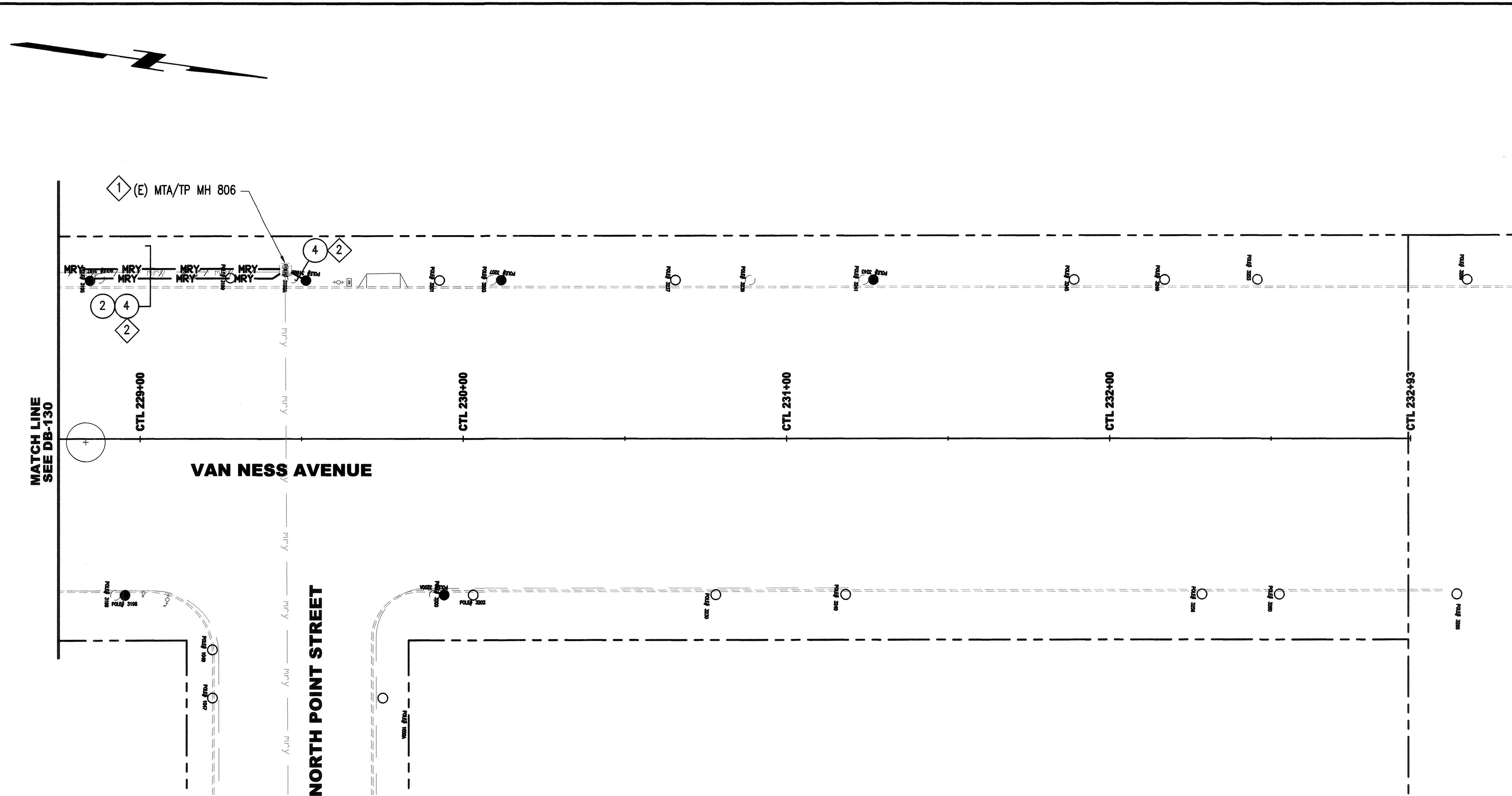
APPROVED
Sumet, Harri
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
 VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT

TRACTION POWER DUCTBANK
 CTL 216+25 TO 220+75
 PLAN

1289	REVISION
CL-29020	0
DB-128	
DB-152	

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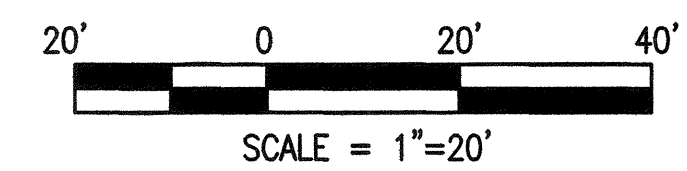


CONDUIT NOTES:

CONDUIT NOTE #	CONDUIT # AND SIZE	MATERIAL	UTILITY AGENCY
1	2-4"	GRS	MTA/TP
2	6-4", 2-2"	HDPE, GRS	MTA/TP
3	4-4", 2-2"	HDPE, GRS	MTA/TP
4	1-2"	GRS	MTA/TP

SHEET NOTES:

- CONNECT CONDUITS TO EXISTING MANHOLE/VAULT. COORDINATE WORK WITH MUNI.
- SEE OV SERIES PLANS FOR RISER CONDUIT ELBOW INSTALLATION WORK IN NEW TROLLEY POLE FOUNDATION. PROVIDE FEEDER RISER CONDUIT CONNECTIONS AT NEW TROLLEY POLE PER STANDARD DRAWING B-1646, REV. 6.



NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

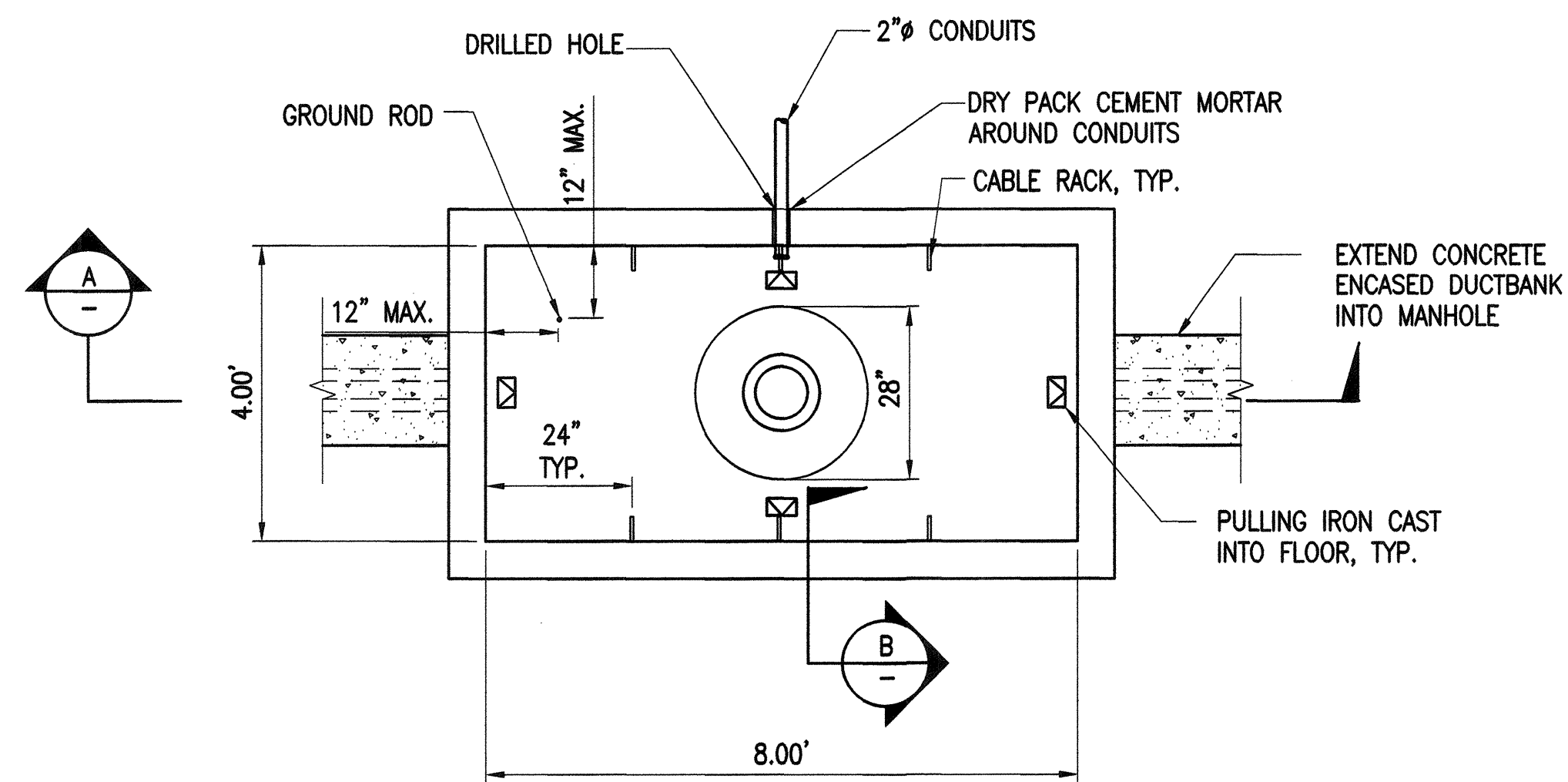
DESIGNED: *Proton*
 DRAWN: *Proton*
 CHECKED: *Edwin Caylo*
 REVIEWED: *Mark A. Ruchnicki*
 RECOMMENDED: *Proton*
 APPROVED: *Proton*
 DATE: **MAY 13 2016**



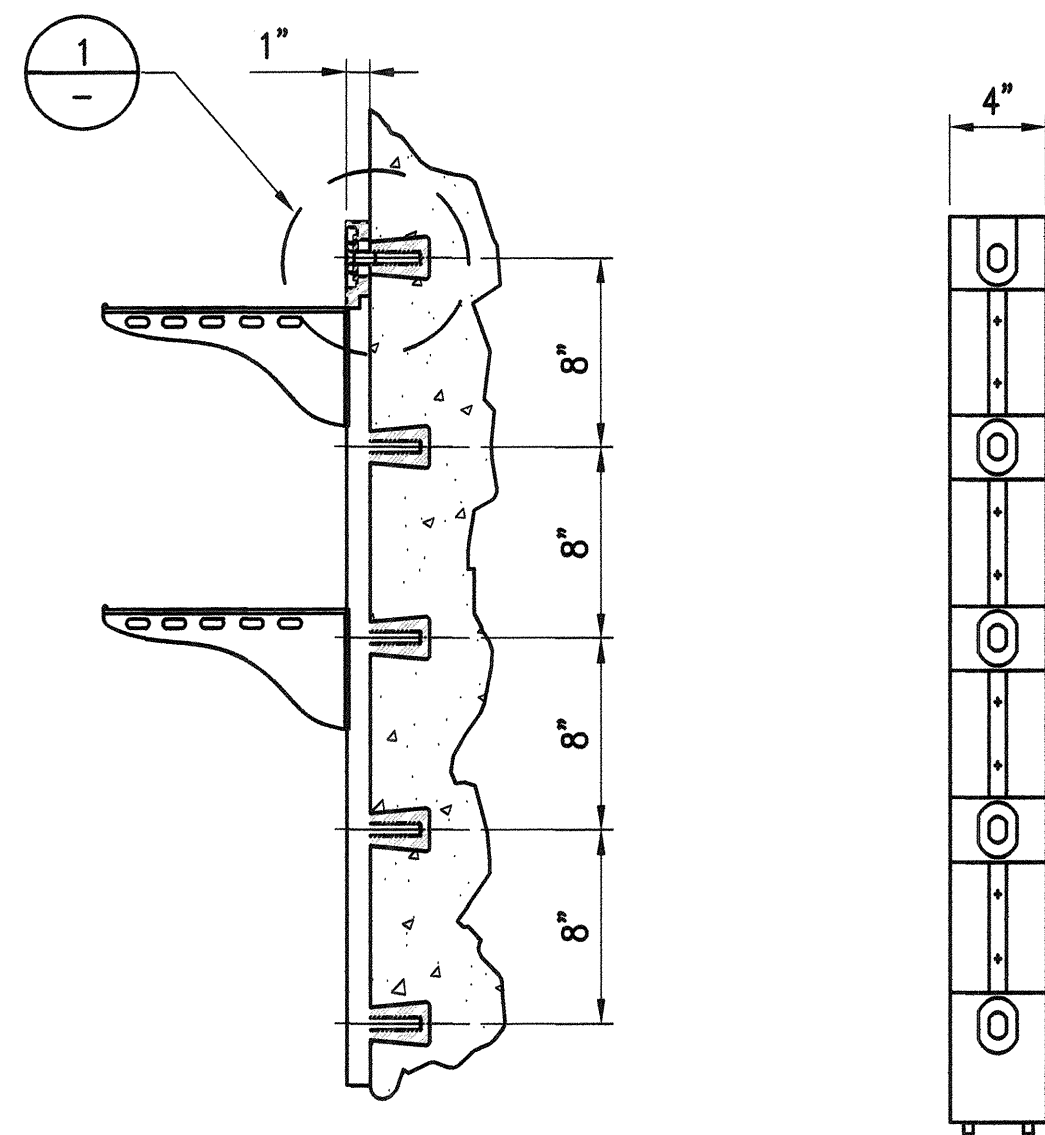
CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED
Vincent J. Am...
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT
 TRACTION POWER DUCTBANK
 CTL 228+75 TO 233+25
 PLAN

1289
CL-29023
 DB-131
 DB-152
 REVISION
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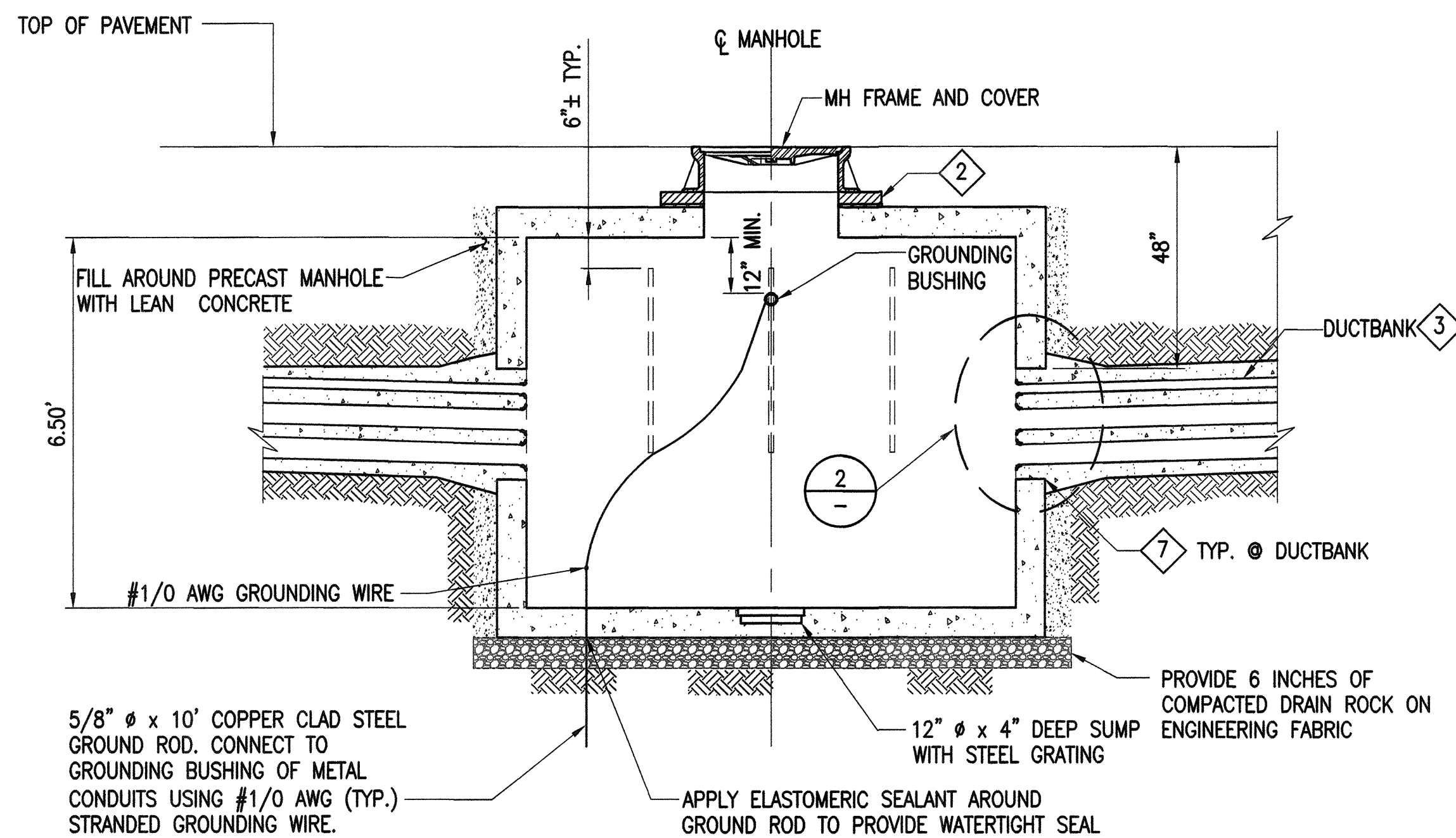


PLAN

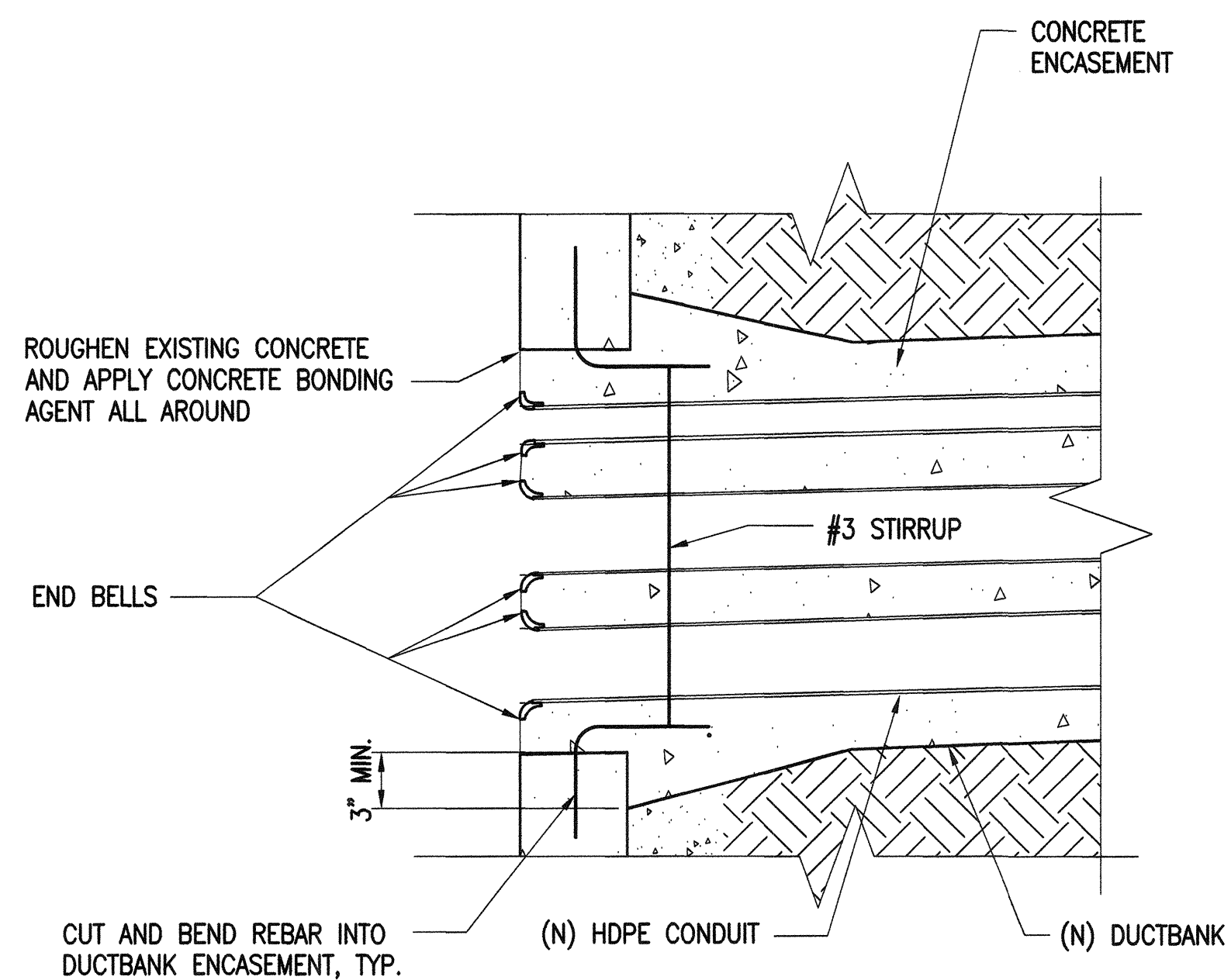
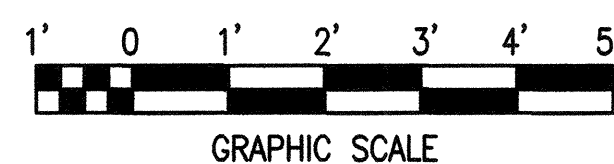


CABLE RACK CONNECTION IN MANHOLE

SECTION

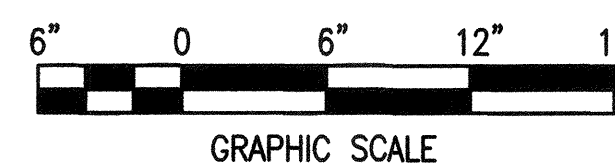


SECTION



DUCTBANK CONNECTION TO MANHOLE

DETAIL

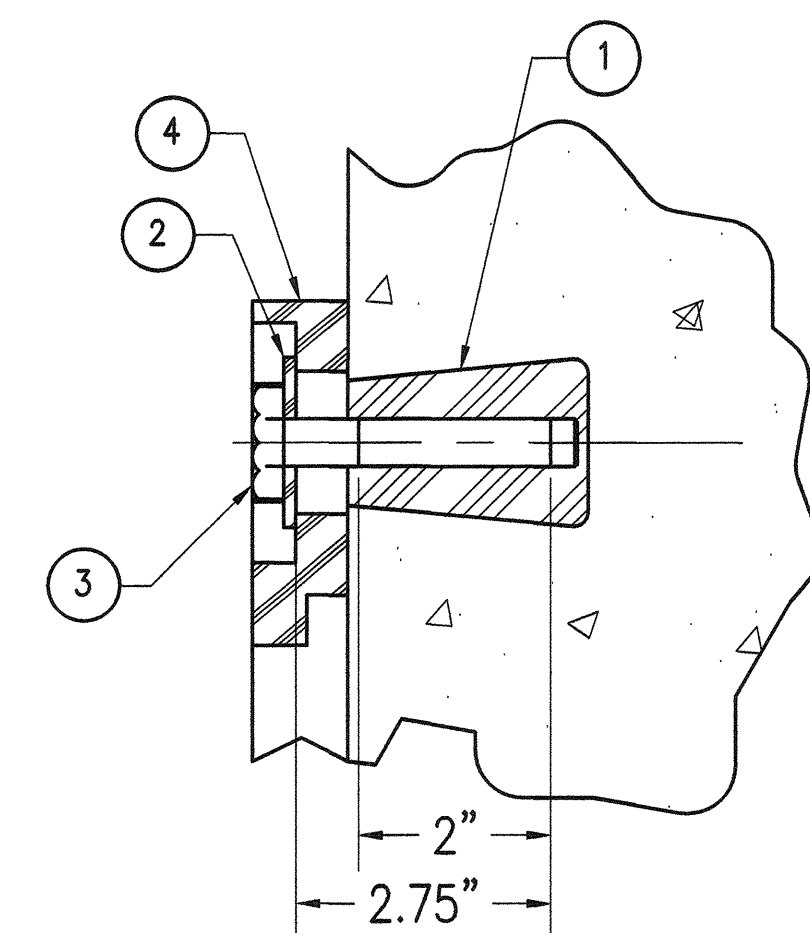


NOTES:

1. TOP 8" OF (E) SUBGRADE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. APPLY CONCRETE BONDING AGENT TO JOINTS AND VOIDS IN MANHOLES AND DRY PACK WITH MORTAR APPLIED IN A MANNER TO INSURE FILLING ALL VOIDS AND JOINTS. JOINT BETWEEN MANHOLE COVER FRAME AND VAULT SHALL NOT EXCEED 3".
3. SWEEP DUCTBANK DOWN TO ALIGN WITH KNOCKOUTS.
4. SLOPE DUCTBANK 0.5 % MIN. TOWARD VAULT FOR DRAINAGE.
5. PROVIDE END BELLS FOR CONDUITS.
6. APPLY WATERPROOF COATING ALL AROUND.
7. PROVIDE DUCTBANK KNOCKOUTS CENTERED ON WALL.
8. MANHOLE FRAME AND COVER SHALL BE FURNISHED BY CITY. SEE STD DWG CL-7709 FOR DETAILS.
9. CONTRACTOR SHALL PROVIDE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR NEW MANHOLES. SEE SECTION 03320 FOR DETAILS.
10. ACTUAL CONDUIT LAYOUT AS SHOWN MAY DIFFER.

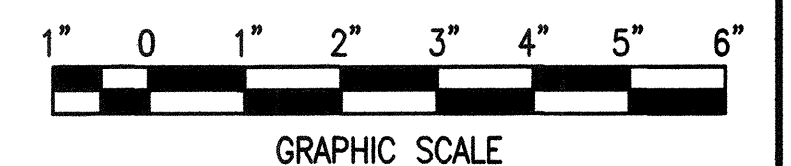
BILL OF MATERIAL PER RACK			
ITEM NUMBER	CATALOG * NUMBER	DESCRIPTION	QUANTITY REQUIRED
1	FNMA-16	1/2"-13 THREAD CAST-IN-PLACE INSERT MATERIAL: POLYAMIDE (NONMETALLIC)	5
2	FFW316-18-40	FLAT WASHER ID=0.562, OD=1.250, THK=0.078 MATERIAL: G316 STAINLESS STEEL (ASTM F593)	5
3	FHG316-16-88	1/2"-13 THREAD X 2-3/4" LG. WITH 2" MINIMUM FULL THREAD HEX HEAD CAP SCREW MATERIAL: G316 STAINLESS STEEL (ASTM F593) (NOTE: THIS SCREW HAS A SPECIAL THREAD LENGTH)	5
4	CR36	CR36 STANCHION MATERIAL: 50% CLASS REINFORCED NYLON	1
5	RA08	ROB ARM (8" ARM) MATERIAL: 50% CLASS REINFORCED NYLON	2

* MANUFACTURED BY UNDERGROUND DEVICES.



INSERT AND HEX CAP SCREW

DETAIL



I:\CP1640.1_Van Ness BRTV2_CERA 500_Design Components\501_Drawings\21_Traction Power\Sheet\CP16401DB151.dwg pwlison Mon Jun 15 2015 10:56 am

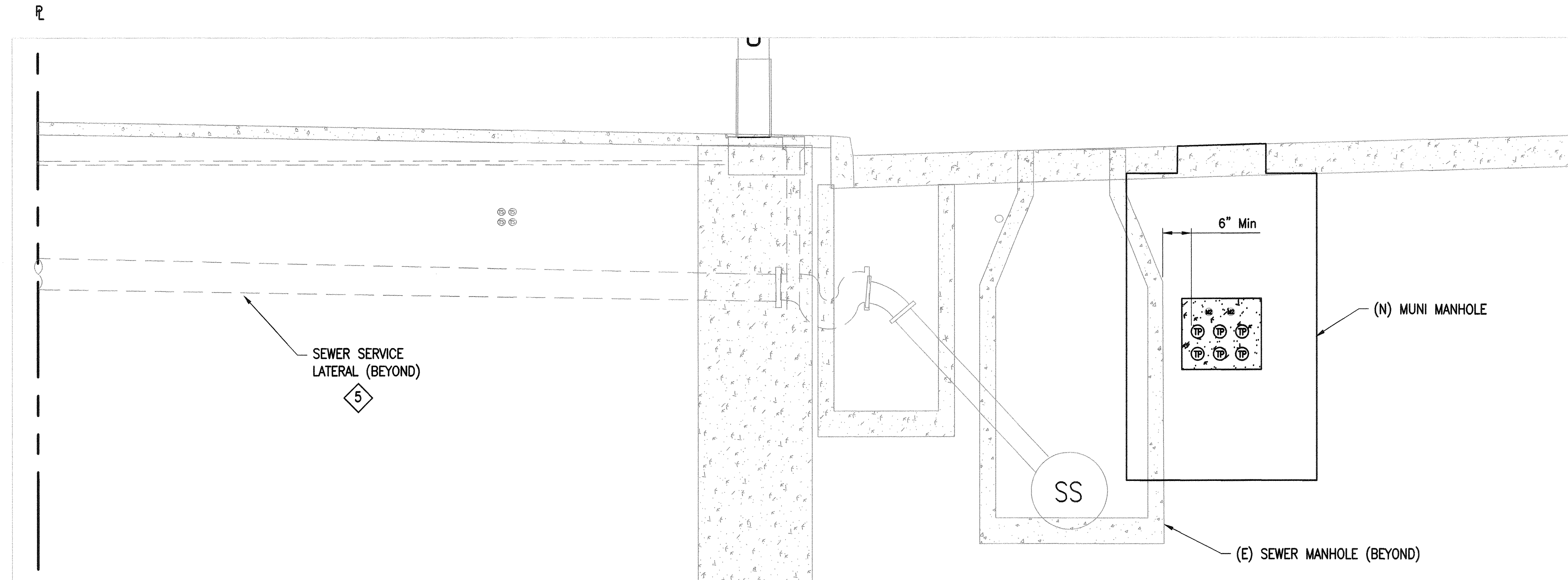
NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED	<i>[Signature]</i>
DRAWN	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
REVIEWED	<i>[Signature]</i>
RECOMMENDED	<i>[Signature]</i>
APPROVED	<i>[Signature]</i>
DATE	MAY 13 2016



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED
[Signature]
 for the DIRECTOR OF TRANSPORTATION

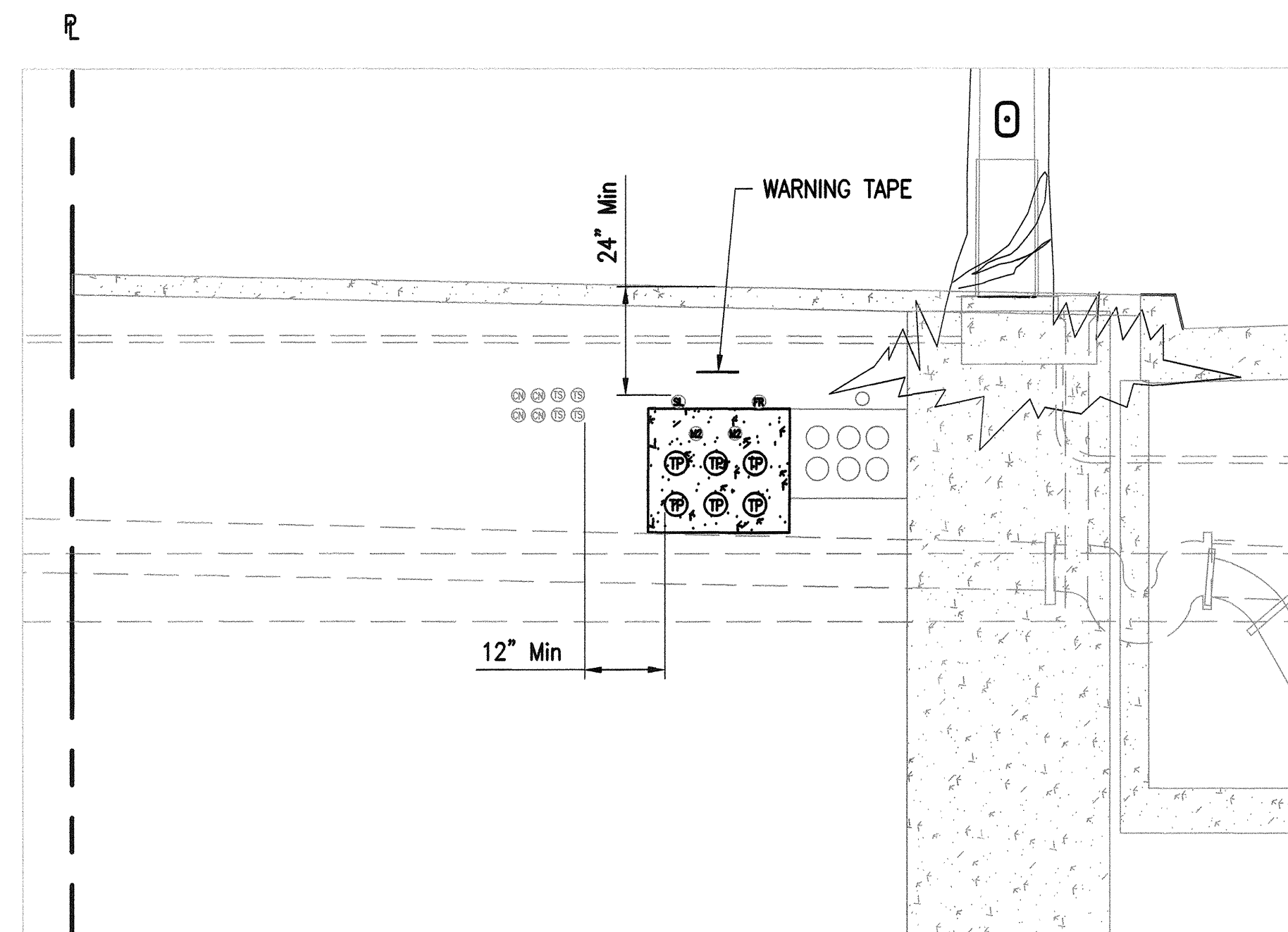
MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-29024
TRACTION POWER DUCTBANK MUNI MANHOLE DETAILS		DB-151
		DB-152
		REVISION
		0



MUNI DUCTBANK ON S. VAN NESS

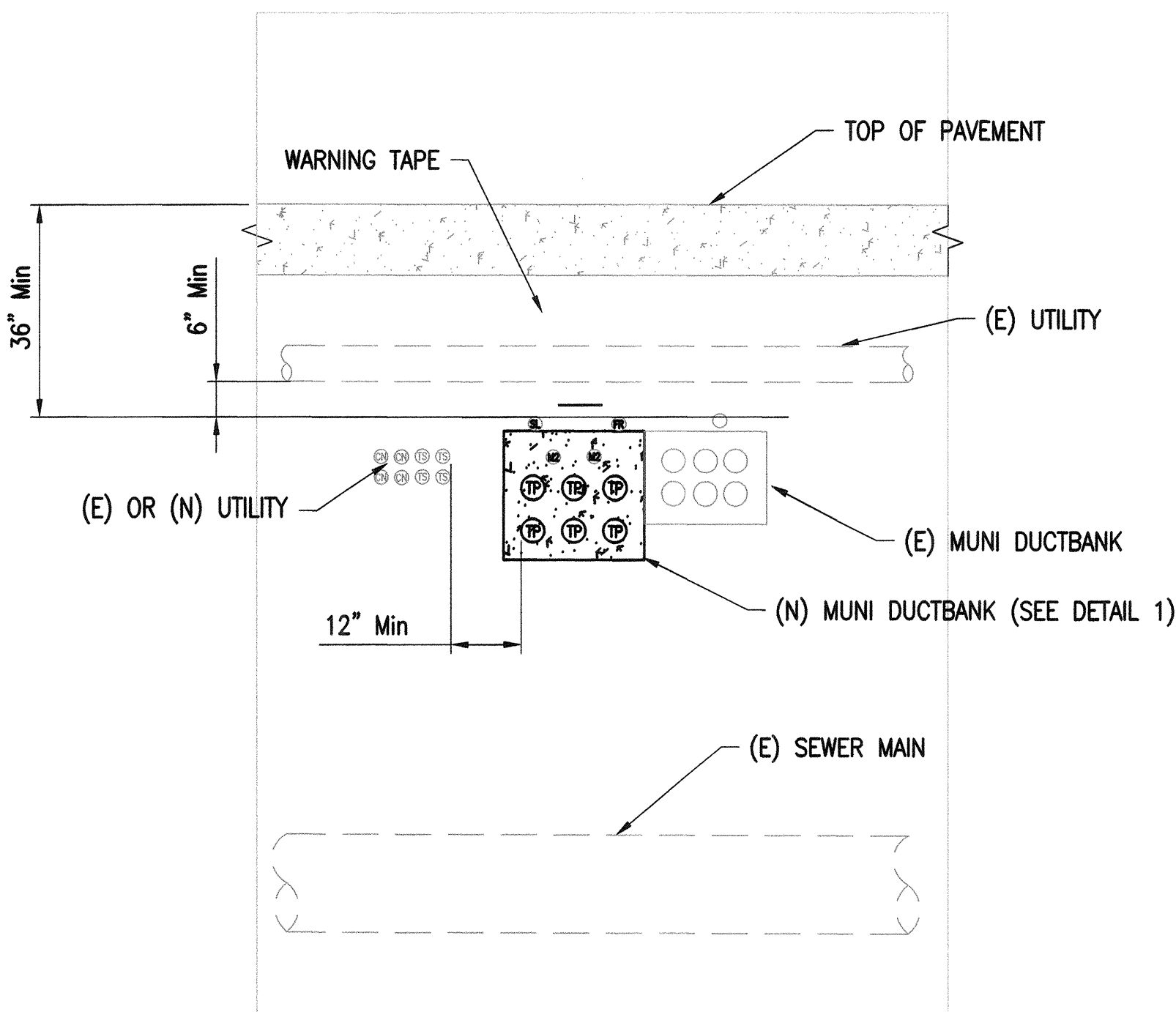
A SECTION
NTS

- NOTES:**
1. CONDUIT LAYOUT SHOWN ARE APPROXIMATE AND MAY VARY BY LOCATION.
 2. THE LAYOUTS SHOWN ON THIS SHEET ARE TYPICAL. CONTRACTOR SHALL SUBMIT CONDUIT LAYOUT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION TO AVOID EXISTING AND PROPOSED FACILITIES.
 3. ALL CONDUIT LAYOUT SHALL COMPLY WITH STATE OF CALIFORNIA PUC GENERAL ORDER 128 FOR SPACE SEPARATION REQUIREMENTS WITH ALL UTILITIES.
 4. SEE WD DRAWINGS FOR LOCATION OF WATER SERVICE LATERALS.
 5. SEE SW DRAWINGS FOR LOCATION OF SEWER SERVICE LATERALS.



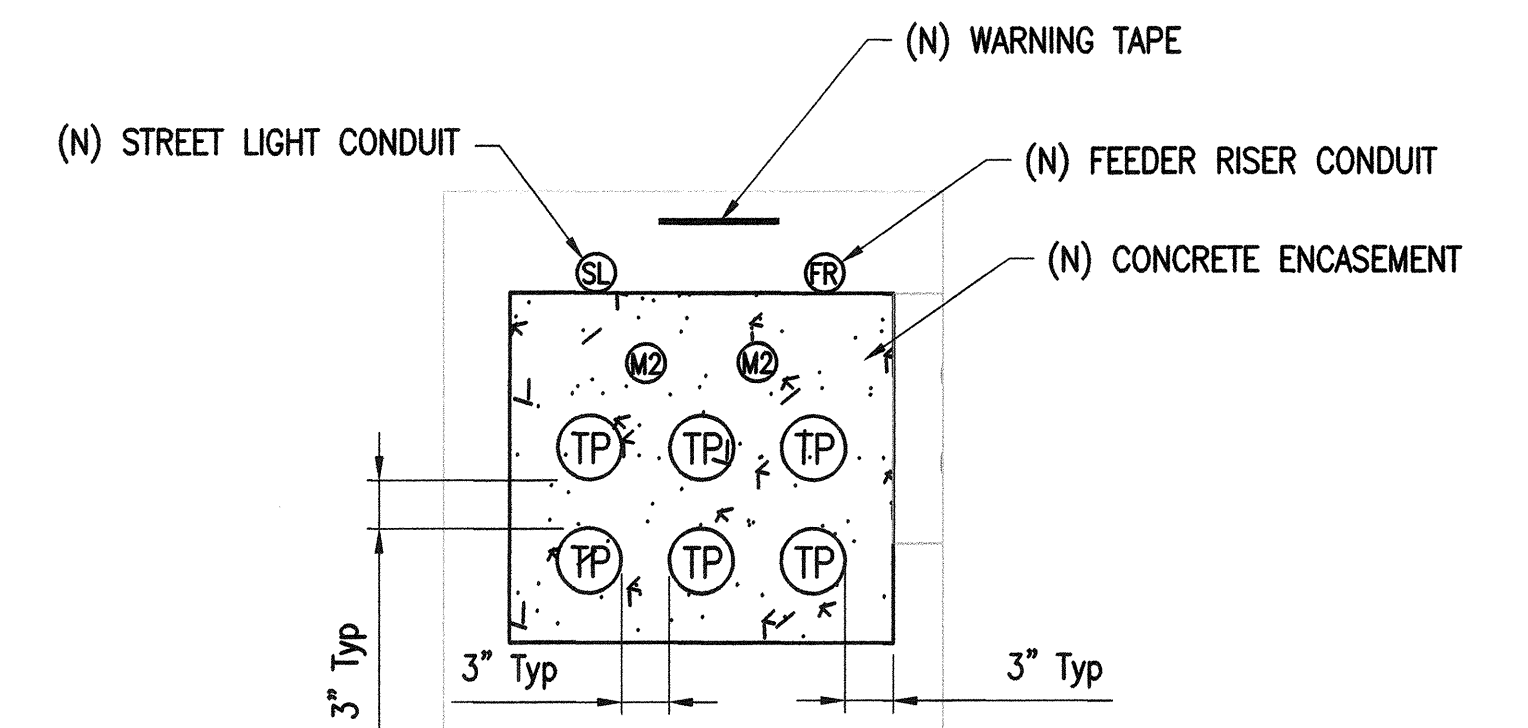
MUNI DUCTBANK UNDER SIDEWALK

B SECTION
NTS



MUNI DUCTBANK UNDER CROSS STREET

C SECTION
NTS

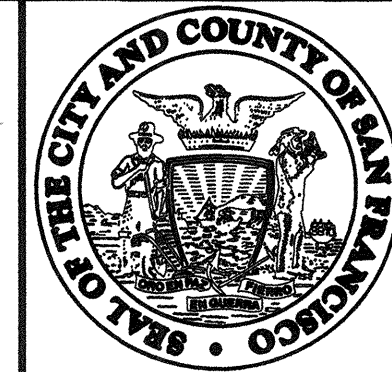
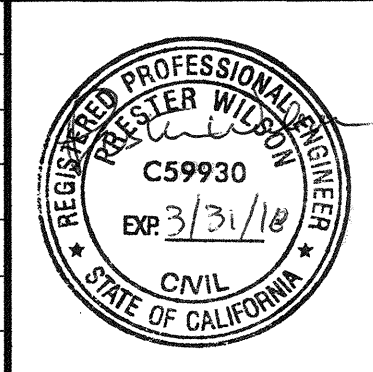


1 DETAIL
NTS

I:\CP16401_Van Ness BRTV_2_CER\500_Design Components\501_Drawings\21_Traction Power\Sheet Files Ductbank\CP16401DB152.dwg pulison Fri Jun 26 2015 - 2:23 pm

NO.	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED
REVISIONS					

DESIGNED: *Patricia Wilson*
 DRAWN: *Patricia Wilson*
 CHECKED: *Glenn Campbell*
 REVIEWED: *Mark A. Rudnicki*
 RECOMMENDED: *Patricia Wilson*
 APPROVED: *Patricia Wilson*
 DATE: **MAY 13 2016**



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
 APPROVED: *Vincent Harris*
 for the DIRECTOR OF TRANSPORTATION

MUNI BUS RAPID TRANSIT SYSTEM		1289
VAN NESS CORRIDOR TRANSIT IMPROVEMENT PROJECT		CL-29025
TRACTION POWER DUCTBANK TYPICAL CROSS SECTIONS		DB-152
		REVISION
		DB-152
		0