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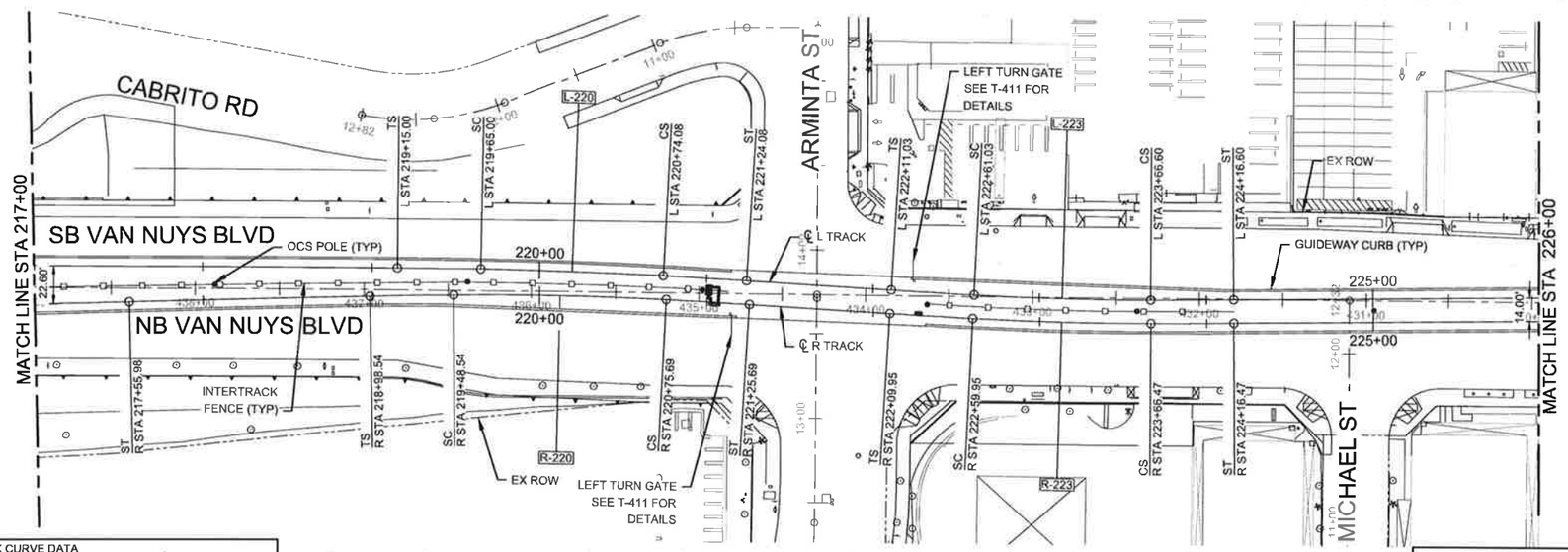
Exhibit B4: Arminta Street



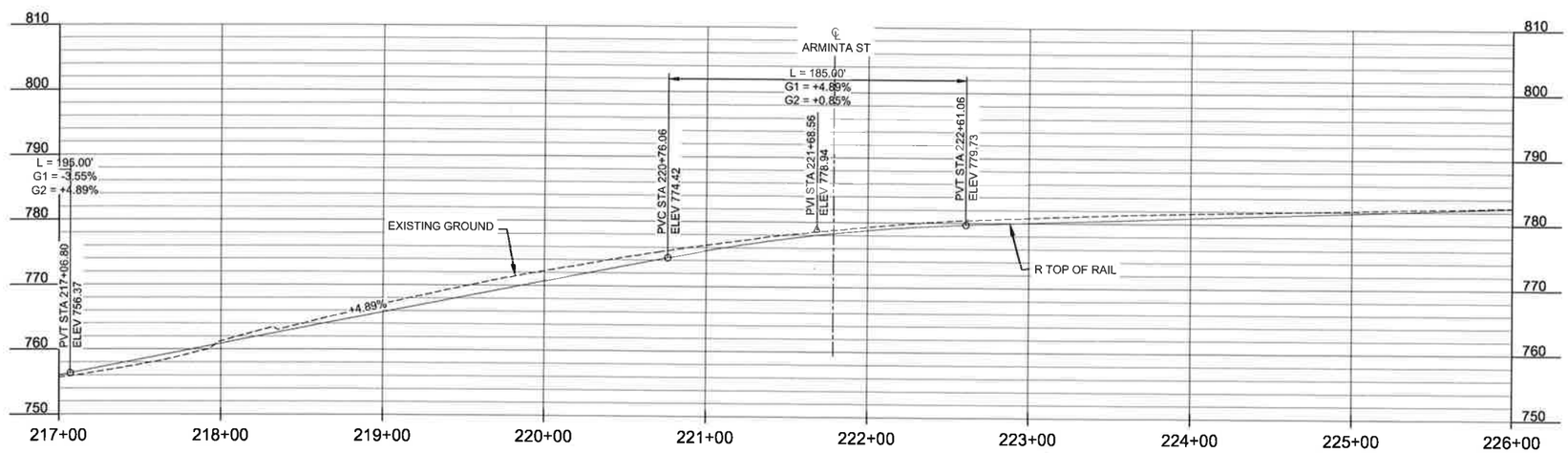
PLAN
SCALE: 1" = 40'

NOTES:

SEE SHEET T-B-001 FOR GENERAL PLAN AND PROFILE NOTES.

L TRACK CURVE DATA								
CURVE NO.	Ls IN (FT)	Ls OUT (FT)	R (FT)	Lc (FT)	E (IN)	Ea (IN)	Eu (IN)	DESIGN SPEED V (MPH)
L-220	50	50	3,100	109.08	1.52	1.00	0.52	35
L-223	50	50	2,300	105.57	2.04	1.00	1.04	35

R TRACK CURVE DATA								
CURVE NO.	Ls IN (FT)	Ls OUT (FT)	R (FT)	Lc (FT)	E (IN)	Ea (IN)	Eu (IN)	DESIGN SPEED V (MPH)
R-220	50	50	2,200	127.14	2.14	1.00	1.14	35
R-223	50	50	2,314	106.51	2.03	1.00	1.03	35



PROFILE
HORZ: 1" = 40'
VERT: 1" = 10"

40' 20' 0 40' 80'
HORIZ: 1"=40'

10' 0 10' 20'
VERT: 1"=10'

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION (FTA), UNDER THE FEDERAL TRANSIT ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

REV	DATE	BY	APP	REG. NO.	EXPIRES	SEAL HOLDER	DESCRIPTION
1	4/30/21						30%/60% DESIGN SUBMITTAL
0	8/7/20						15%/30% SUBMITTAL

DESIGNED BY D. SALAZAR
DRAWN BY D. SALAZAR
CHECKED BY D. LEE
IN CHARGE M. FREEMAN
DATE 04/30/2021

FOR REVIEW ONLY NOT FOR CONSTRUCTION

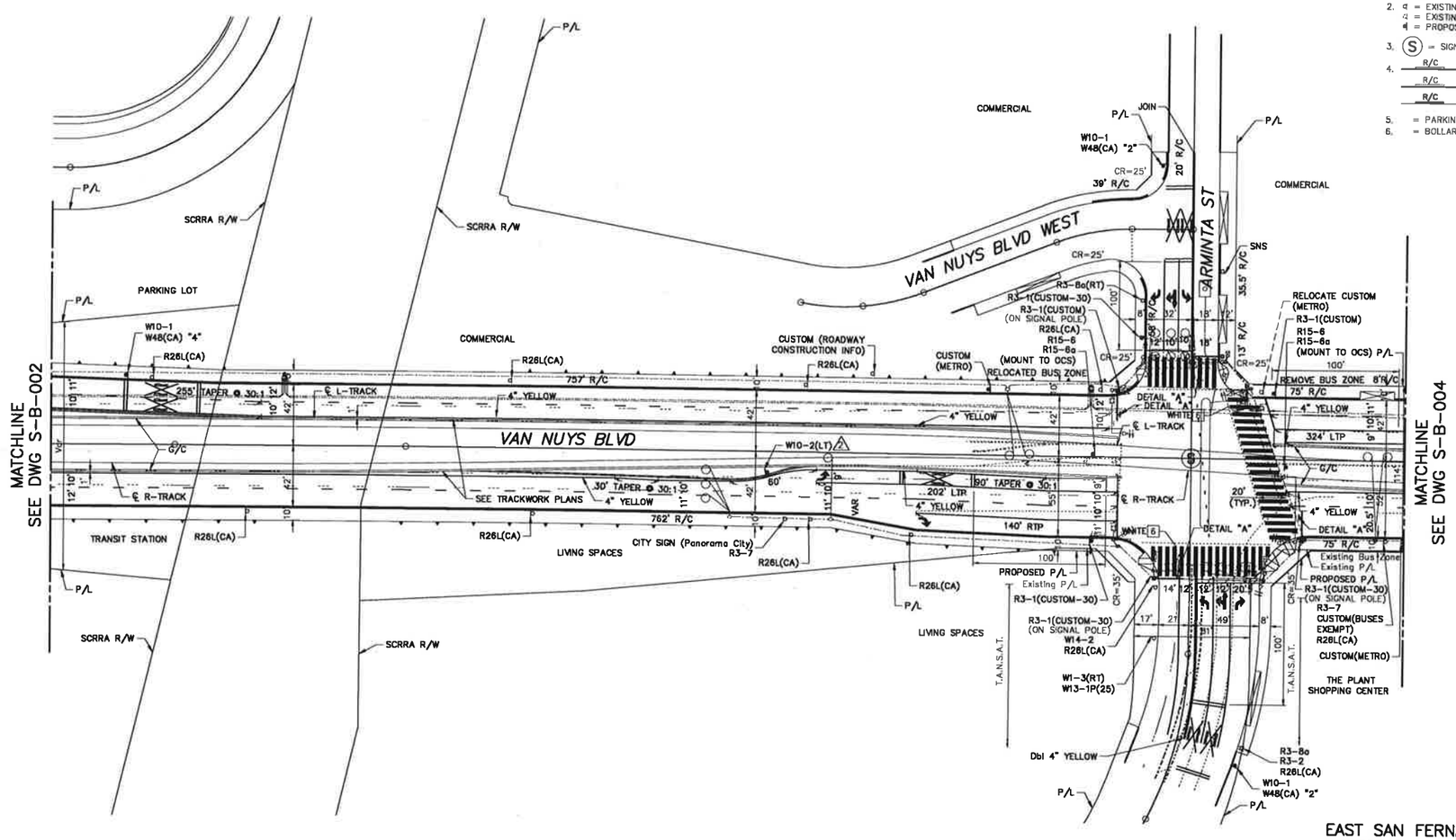
Metro
LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY

Gannett Fleming

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR
TRACK ALIGNMENT
PLAN AND PROFILE
STA 217+00 TO STA 226+00

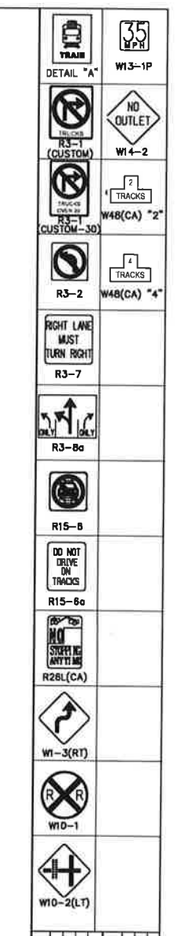
CONTRACT NO E0129
DRAWING NO T-B-004
REV 1
SCALE AS SHOWN
SHEET NO

C:\pwworking\gfnyc01\mwlaser\wd0802\E0129-T-B-004.dwg - LAST PLOTTED ON Mon 02/28/22 - 08:21AM BY rwalderama
E0129-T-B-004.dwg 2/28/2022 USER=VALDERAMA, RENEE 08:21:19 AM Pentable----- Plot Driver=NONE



LEGEND

1. = EXISTING STRIPING & MARKINGS TO REMAIN.
   = EXISTING STRIPING & MARKINGS TO BE REMOVED.
   = PROPOSED STRIPING & MARKINGS.
2. = EXISTING SIGN AND POST.
   = EXISTING SIGN AND POST TO BE REMOVED OR RELOCATED.
   = PROPOSED SIGN AND POST.
3. (S) = SIGNALIZED INTERSECTION.
4. R/C = EXISTING RED CURB MARKINGS TO REMAIN.
   R/C = EXISTING RED CURB MARKINGS TO BE REMOVED.
   R/C = PROPOSED RED CURB MARKINGS.
5. = PARKING METER TO BE REMOVED
6. = BOLLARD TO BE REMOVED



Scale: 1" = 40'

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR RESTORATION STRIPING PLAN

REVIEWED ____ 20 ____	RECOMMENDED ____ 20 ____	ACCEPTED ____ 20 ____
Transportation Engineer	Senior Transportation Engineer	Principal Transportation Engineer

INSTALLATION DATES

MARKOUT BEGAN: ____
MARKOUT COMPLETED: ____
STRIPING COMPLETED: ____
District: EAST VALLEY
Thomas Guide: 532-A3
References:
FIELD INVESTIGATION

CITY OF LOS ANGELES
DEPARTMENT OF TRANSPORTATION
SELETA J. REYNOLDS, GENERAL MANAGER

VAN NUYS BLVD
BET KESWICK ST AND ARMINTA ST

IF THIS PLAN HAS NOT BEEN IMPLEMENTED WITHIN TWO (2) YEARS OF THE ACCEPTANCE DATE, IT MUST BE RESUBMITTED TO LADOT METRO PROGRAMS DIVISION FOR REVIEW.

PROJECT NO. PCM14007
DRAWING NO. S-B-003

NO.	REVISION DESCRIPTION	BY	DATE	REVIEWED	DATE
				T.E.A.	T.E.
				T.E.	S.T.E.
				S.T.E.	
				DISTRICT BIKEWAYS	

REV	DATE	BY	APP	REG. NO.	EXPIRES	SEAL HOLDER	DESCRIPTION
2	02/09/21						CPUC APPLICATION 3
1	04/30/21						30%/60% DESIGN SUBMITTAL
0	08/07/20						15%/30% DESIGN SUBMITTAL

DESIGNED BY P. YANG
DRAWN BY A. VILLEGAS
CHECKED BY H. NGUYEN
IN CHARGE H. NGUYEN
DATE 04/30/21

FOR REVIEW ONLY NOT FOR CONSTRUCTION

Metro
LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY

WKE
Gannett Fleming

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR

SIGNING AND STRIPING PLAN
SHEET 3 OF 16

CONTRACT NO E0129
DRAWING NO S-B-003
REV 2
SCALE 1" = 40'
SHEET NO

SIGNAL STANDARD SCHEDULE

	No.	TYPE	FOUND. TYPE	PED. PUSH BUT'N TYPE	PED. PUSH BUT'N PHASE	REMARKS/RELATED NOTES
	(1)	352 CAB	F-332*	–	–	ATSAC 2070 CONTROLLER IN 352 CABINET
**	(2)	17-3-100	CIDH	APS(2)	2	15' MAST ARM
****	(3)	40' DAVIT	BSL	APS(3)	3	
	(4)	40' DAVIT	CIDH	APS(3)	3	35' MAST ARM, 24-4-100**
***	(5)	40' DAVIT	BSL	APS(6)	6	
**	(6)	17-3-100	CIDH	APS(6)	6	20' MAST ARM
****	(7)	40' DAVIT	BSL	–	–	
	(8)	40' DAVIT	CIDH	–	–	30' MAST ARM, 19-4-100**
****	(9)	CD953C	BSL	APS(2)	2	
**	(10)	332 CAB	F-332*	–	–	BATTERY BACKUP FOR TRAFFIC SIGNAL
	(11)	GATE ARM CONTROLLER	–	–	–	LEFT TURN GATE ARM AND CONTROLLER
	(12)	GATE ARM CONTROLLER	–	–	–	LEFT TURN GATE ARM AND CONTROLLER

* Per LADOT STD. DWG. No. S-52.1.3
** Per LADOT STD. DWG. No. S-52.1.6
*** Per LADOT STD. DWG. No. S-51.1.9A
**** FOR REFERENCE ONLY, SEE STREET LIGHTING SHEET.

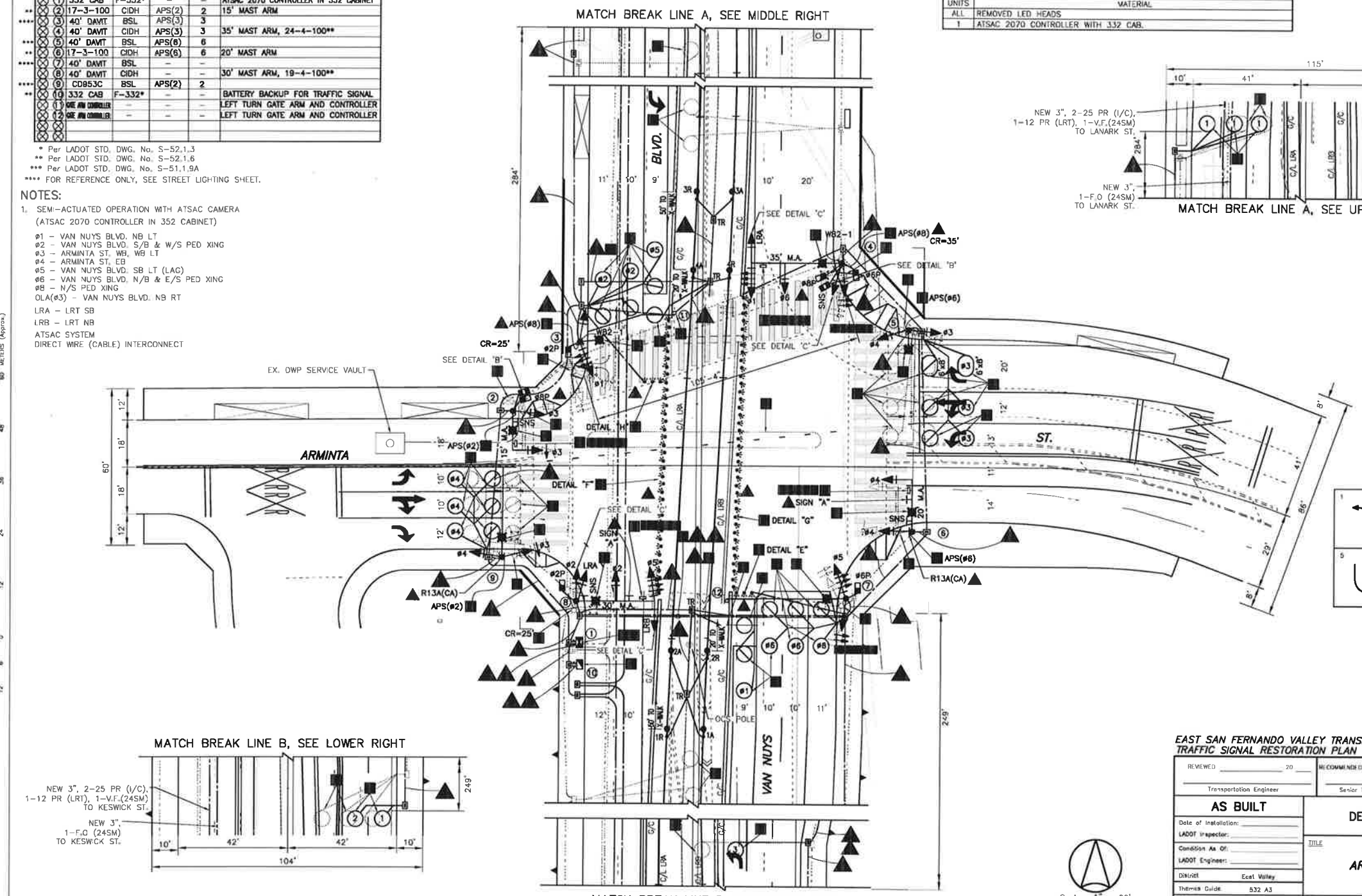
NOTES:

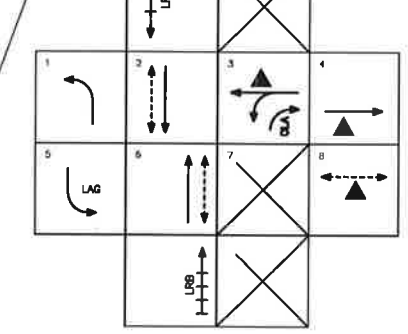
1. SEMI-ACTUATED OPERATION WITH ATSAC CAMERA (ATSAC 2070 CONTROLLER IN 352 CABINET)

   ø1 – VAN NUYS BLVD. NB LT
   ø2 – VAN NUYS BLVD. S/B & W/S PED XING
   ø3 – ARMINTA ST. WB, WB LT
   ø4 – ARMINTA ST. EB
   ø5 – VAN NUYS BLVD. SB LT (LAG)
   ø6 – VAN NUYS BLVD. N/B & E/S PED XING
   ø8 – N/S PED XING
   OLA(ø3) – VAN NUYS BLVD. NB RT
   LRA – LRT SB
   LRB – LRT NB
   ATSAC SYSTEM
   DIRECT WIRE (CABLE) INTERCONNECT

ESTIMATED SALVAGE MATERIAL TO BE RETURNED TO LADOT

UNITS	MATERIAL
ALL	REMOVED LED HEADS
1	ATSAC 2070 CONTROLLER WITH 332 CAB.





PROPOSED PHASE DIAGRAM

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR PROJECT
TRAFFIC SIGNAL RESTORATION PLAN

REVIEWED ____ 20__	RECOMMENDED ____ 20__	ACCEPTED ____ 20__
Transportation Engineer	Senior Transportation Engineer	Principal Transportation Engineer

AS BUILT
Date of Installation:
LADOT Inspector:
Condition As Of:
LADOT Engineer:
District: East Valley
Thomas Guide: 532 A3
References: As-Built: 02-24-04 PROJ.: 74212 PLAN: XXXX Field Investigation

CITY OF LOS ANGELES
DEPARTMENT OF TRANSPORTATION
SELETA J. REYNOLDS, General Manager

TITLE
ARMINTA ST. & VAN NUYS BLVD.
SHEET 1 OF 2

File Name	Intersection No.	Project No.
31240-2020.DWG	31240	PCM14007

NOTICE: IF PLAN HAS NOT BEEN IMPLEMENTED WITHIN TWO (2) YEARS OF THE ACCEPTANCE DATE, IT MUST BE RESUBMITTED TO LADOT METRO PROGRAMS DIVISION FOR REVIEW.

THE PREPARATION OF THIS DRAWING HAS BEEN FINANCED IN PART THROUGH A GRANT FROM THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION (FTA) UNDER THE FEDERAL TRANSIT ACT OF 1964, AS AMENDED, AND IN PART BY THE TAXES OF THE CITIZENS OF LOS ANGELES COUNTY AND OF THE STATE OF CALIFORNIA.

REV	DATE	BY	APP	REQ NO	EXPIRES	SEAL HOLDER	DESCRIPTION
2	05/20/22						CPUC APPLICATION #3
1	01/29/21						30%/60% DESIGN SUBMITTAL
0	08/07/20						15%/30% DESIGN SUBMITTAL

DESIGNED BY M. GUTIERREZ
DRAWN BY M. GUTIERREZ
CHECKED BY N. KIM
IN CHARGE B. LI
DATE 04/30/21

FOR REVIEW ONLY NOT FOR CONSTRUCTION

Metro LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

PLANS PREPARED BY: iteris® 1700 Carnegie Avenue, Suite 100, Santa Ana, CA 92705-551, Phone: (949)270-9460, Fax: (949) 270-9481

PROJECT PRIME: Gannett Fleming

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR
TRAFFIC SIGNAL RESTORATION PLAN
ARMINTA ST. & VAN NUYS BLVD.
SHEET 1 OF 2

CONTRACT NO. E-0129
DRAWING NO. TR-B-007 REV 1
SCALE 1" = 20'
SHEET NO.

NO.	REVISION DESCRIPTION	DATE	BY	DIV./DIST. ENGR.	DATE	BY	DATE	BY	DATE

TIMING
DISTRICT
GEOMETRIC
ATSAC
METRO RAIL
TRANSIT PRIORITY

CHECKED
DESIGNER
SR. DRAFTING
DRAFTING
FIELD
BASE

ORIGINAL MAPS SCALE 1" = 20' 1" = 40'

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NOTES (CONT'D):

- REMOVE CONTROLLER, CABINET, AND FOUNDATION.
- INSTALL ATSAC 2070 CONTROLLER IN NEW 352 CABINET. THE CONTRACTOR SHALL PROVIDE A COMPLETE FUNCTIONING CONTROLLER ASSEMBLY AND CABINET CONFORMING TO THE LATEST LADOT SPECIFICATIONS FOR 2070 CONTROLLER AND 352 CABINET, AND SHALL INCLUDE ALL NECESSARY AUXILIARY EQUIPMENT TO PROVIDE A COMPLETE AND FUNCTIONING CONTROLLER SYSTEM. CONTRACTOR TO DELIVER ASSEMBLED CONTROLLER FOR TESTING TO THE DEPARTMENT OF TRANSPORTATION GENERAL SHOP, PIPER TECHNICAL CENTER, 555 RAMIREZ STREET THIRTY (30) DAYS PRIOR TO INSTALLATION. CONTRACTOR TO PICK UP AND INSTALL CONTROLLER ASSEMBLY ON NEW F-332 FOUNDATION.
- CONTRACTOR SHALL FURNISH AND INSTALL BATTERY BACKUP SYSTEM (BBS) IN NEW 332 CABINET PER LADOT SPECIFICATIONS 92-066-03 (LATEST EDITION). BBS SHALL BE COMPATIBLE WITH AND MEET ALL SPECIFICATIONS REQUIRED BY THE TRAFFIC SIGNAL SYSTEM; PROVIDE A MINIMUM OF 8 HOURS CONTINUOUS POWER TO OPERATE THE TRAFFIC SIGNAL; PROVIDE NORMALLY OPEN CONTACT OUTPUTS FOR "LOW BATTERY", "BATTERY FAIL" AND "ON-BATTERY".
- REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT, STANDARD, FOUNDATION AND ABANDON EXISTING CONDUITS.
- FURNISH AND INSTALL ELECTRIC TRAIN WARNING SIGN PER LADOT STD. DWG. NO. S-58.23.
- INSTALL ACCESSIBLE PEDESTRIAN SIGNAL (APS) PER LADOT STD. DWG. NO. S-73.2.
- ABANDON LOOPS.
- SEE STREET LIGHTING SHEET FOR WORK ON STREET LIGHTING FACILITIES.
- INSTALL DETECTOR LOOP(S) FOR LADOT STD. DWG. NO. S-70.1.A & S-70.1.D CASE II. CONTRACTOR SHALL OBTAIN APPROVAL FROM LADOT INSPECTOR PRIOR TO INSTALLATION OF ANY LOOPS.
- INSTALL DETECTOR LOOP(S) PER LADOT STD. DWG. NO. S-70.1A. CONTRACTOR SHALL OBTAIN APPROVAL FROM LADOT INSPECTOR PRIOR TO INSTALLATION OF ANY LOOPS.
- INSTALL PREFORMED LRT TRACK AREA DETECTOR LOOP PER LADOT STD. DWG. NO. S-70.4A.
- CONTRACTOR TO PROVIDE TEN (10) MODEL GT-200-LRT LIGHT RAIL LOOP SENSORS. CONTACT RAUL DE ANDA AT (213) 473-8467 FOR CURRENT SPECIFICATIONS.
- CONDUIT SHALL BE INSTALLED AT A MINIMUM OF 36" DEPTH FROM TOP OF RAIL.
- INSTALL GATE ARM MAST AND FOUNDATION. SEE DETAILS D & E. FOLLOW MANUFACTURER'S GUIDELINES FOR INSTALLATION OF GATE DETAILS (ARM MECHANISM, SUPPORT AND JUNCTION BOX.). ALL GATE EQUIPMENT (GATE ARM MAST AND GATE CONTROLLER) SHALL BE MAINTAINED BY METRO. ANY WORK SHALL BE COORDINATED WITH LADOT.
- INSTALL LEFT TURN GATE LOOP. GATE LOOP SHALL BE CONNECTED TO GATE CONTROLLER.
- FURNISH AND INSTALL INTERNALLY ILLUMINATED RAISED PAVEMENT MARKERS (IIRPM) AS SHOWN. SEE DETAILS E, F, G, AND H. SEE "IIRPM OPERATIONS" FOR SEQUENCE DETAILS. PROVIDE AN OUTPUT CONNECTED TO EACH IIRPM FUNCTION OF THE LT PHASES AND/OR PROVIDE ONE OUTPUT CONNECTED TO THE LRT PHASES.

18. NOTIFY LADOT MAJOR CONSTRUCTION COORDINATION DIVISION AT (213) 972-5968 PRIOR TO START OF CONSTRUCTION.
19. ALL NEW VEHICLE AND PEDESTRIAN TRAFFIC SIGNALS SHALL BE LED MODULE, PER LADOT SPECIFICATION 92-088-06 (LATEST EDITION).
20. ALL PEDESTRIAN INDICATIONS SHALL BE LED COUNT-DOWN HEADS.
21. TRAFFIC CONSULTANT SHALL BE RESPONSIBLE FOR IDENTIFYING AND RESOLVING SUBSTRUCTURE CONFLICT WITH PROPOSED FOUNDATION DURING THE DESIGN PHASE AND INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR AND MATERIAL INVOLVED IN THE REMOVAL, MARKOUT AND INSTALLATION OF ALL SIGNS, STRIPING AND PAVEMENT MARKINGS PER LADOT GEOMETRIC PLAN NO. S-B-003.
23. TRAFFIC CONSULTANT SHALL BE RESPONSIBLE FOR IDENTIFYING ALL THE EXISTING CONDITIONS, AND PREPARE ALL THE NECESSARY PLANS DURING THE DESIGN PHASE, TO INSTALL NEW ATSAC INTERCONNECT (I/C), VIDEO FIBER (V.F.), AND FIBER OPTIC (F.O.) TRUNKLINE COMMUNICATION CABLES, AND INCLUDE ALL THE NECESSARY SIGNAL EQUIPMENT TO ACCOMPLISH A NEW COMPLETE ATSAC COMMUNICATION SYSTEM.
24. TRAFFIC CONSULTANT SHALL BE RESPONSIBLE FOR PREPARING THE REQUIRED LRT DETECTOR LOOPS AND LRT PREDICTION PLAN(S), TO INCLUDE ALL THE NECESSARY ATSAC INTERCONNECT AND COMMUNICATION CABLES, AND THE INSTALLATION OF PREDICTOR CONTROLLER(S) FOR A COMPLETE LRT SYSTEM.
25. SEE SHEET NO. FO-B-004 FOR ADDITIONAL WORK RELATED TO ATSAC INTERCONNECT AND COMMUNICATION SYSTEM.

IIRPM OPERATIONS:

1. IIRPM LIGHTS FACING ARMINTA STREET WESTBOUND AND EASTBOUND
   1.1. LIGHTS SHALL BE SOLID RED WHEN LRT PHASE IS ACTIVE.
   1.2. LIGHTS SHALL TURN OFF WHEN LRT PHASE IS INACTIVE.
2. IIRPM LIGHTS FACING VAN NUYS NORTHBOUND LEFT-TURN LANE
   2.1. LIGHTS SHALL BE SOLID RED:
   WHEN LEFT TURN PHASE (ø1) IS RED OR
   WHEN LRT PHASE IS ACTIVE.
   2.2. LIGHTS SHALL TURN OFF WHEN LEFT TURN PHASE (ø1) IS GREEN OR YELLOW AND LRT PHASE IS INACTIVE.
3. IIRPM LIGHTS FACING VAN NUYS SOUTHBOUND LEFT-TURN LANE
   3.1. LIGHTS SHALL BE SOLID RED:
   WHEN LEFT TURN PHASE (ø5) IS RED OR
   WHEN LRT PHASE IS ACTIVE.
   3.2. LIGHTS SHALL TURN OFF WHEN LEFT TURN PHASE (ø5) IS GREEN OR YELLOW AND LRT PHASE IS INACTIVE.

PER LADOT STANDARD PLAN No. S-58.23

DETAIL "A"
Not To Scale

PEDESTRIAN LED SIGN BLACK BACKGROUND/ YELLOW LEGEND

DETAIL "B"
Not To Scale

All Lunar White
12" 12" 12"

LRT T.S. HEAD

(HIGH MOUNTED @ 20' IF INSTALLED ON POLE)

DETAIL "C"
Not To Scale

SIGN LEGEND

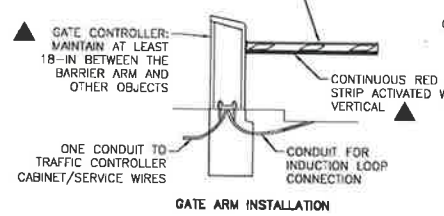
W82-1(CA)

SIGN "A"

R13A(CA)

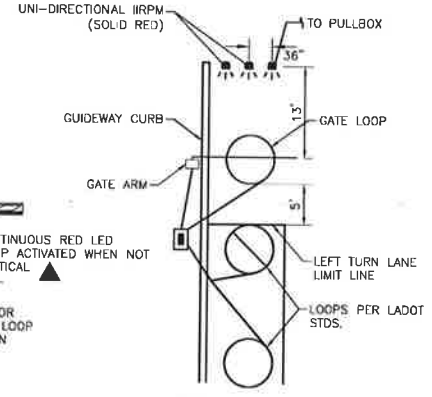
LEGEND:

- PROPOSED GATE ARM WITH LED STRIP (SEE DETAIL 'B')
- UNI-DIRECTIONAL IIRPM LIGHT
- BI-DIRECTIONAL IIRPM LIGHT



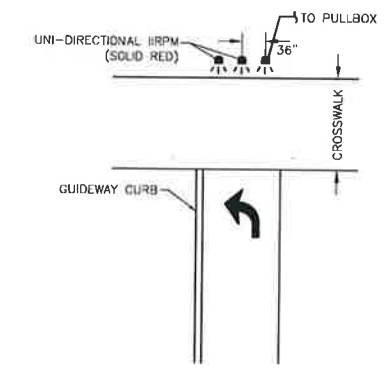
GATE ARM INSTALLATION

DETAIL "D"
Not To Scale



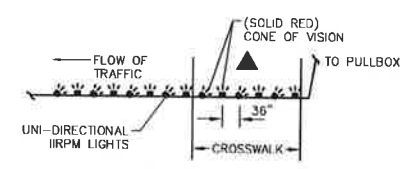
GATE LOOP LAYOUT

DETAIL "E"
Not To Scale

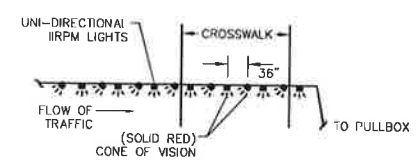


LEFT-TURN LANE IIRPM LAYOUT

DETAIL "H"
Not To Scale



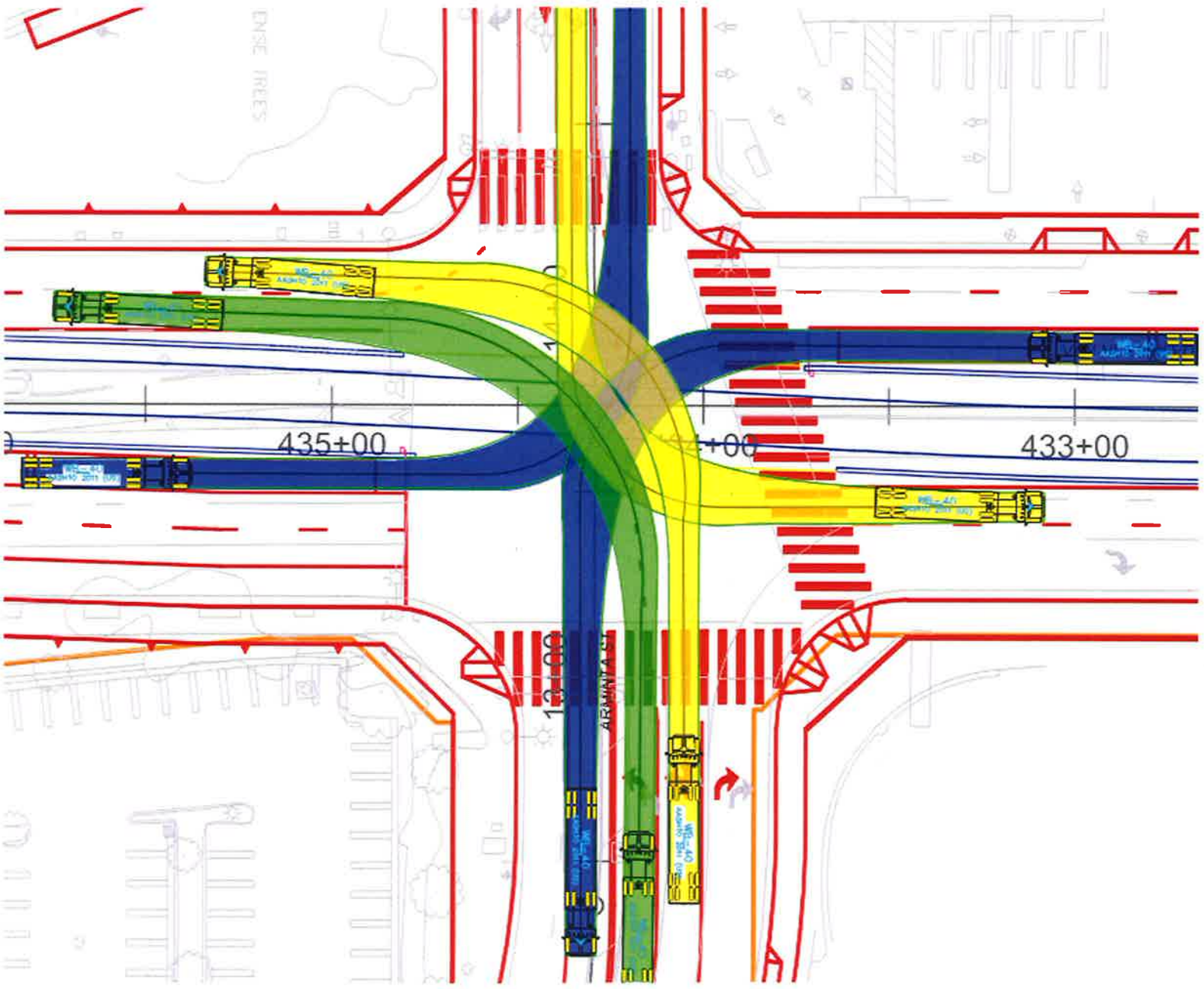
DETAIL "F"
Not To Scale

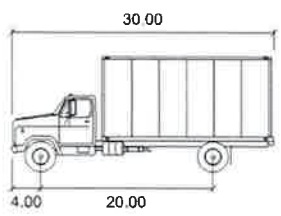


DETAIL "G"
Not To Scale

CONDUCTOR SCHEDULE

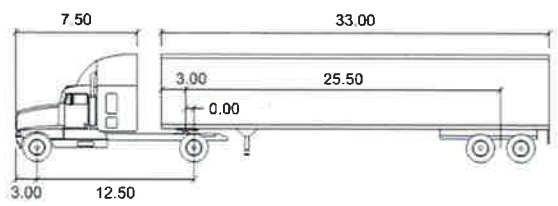
| SIZE No. | CABLE / WIRE | RUN | | |





SU-30

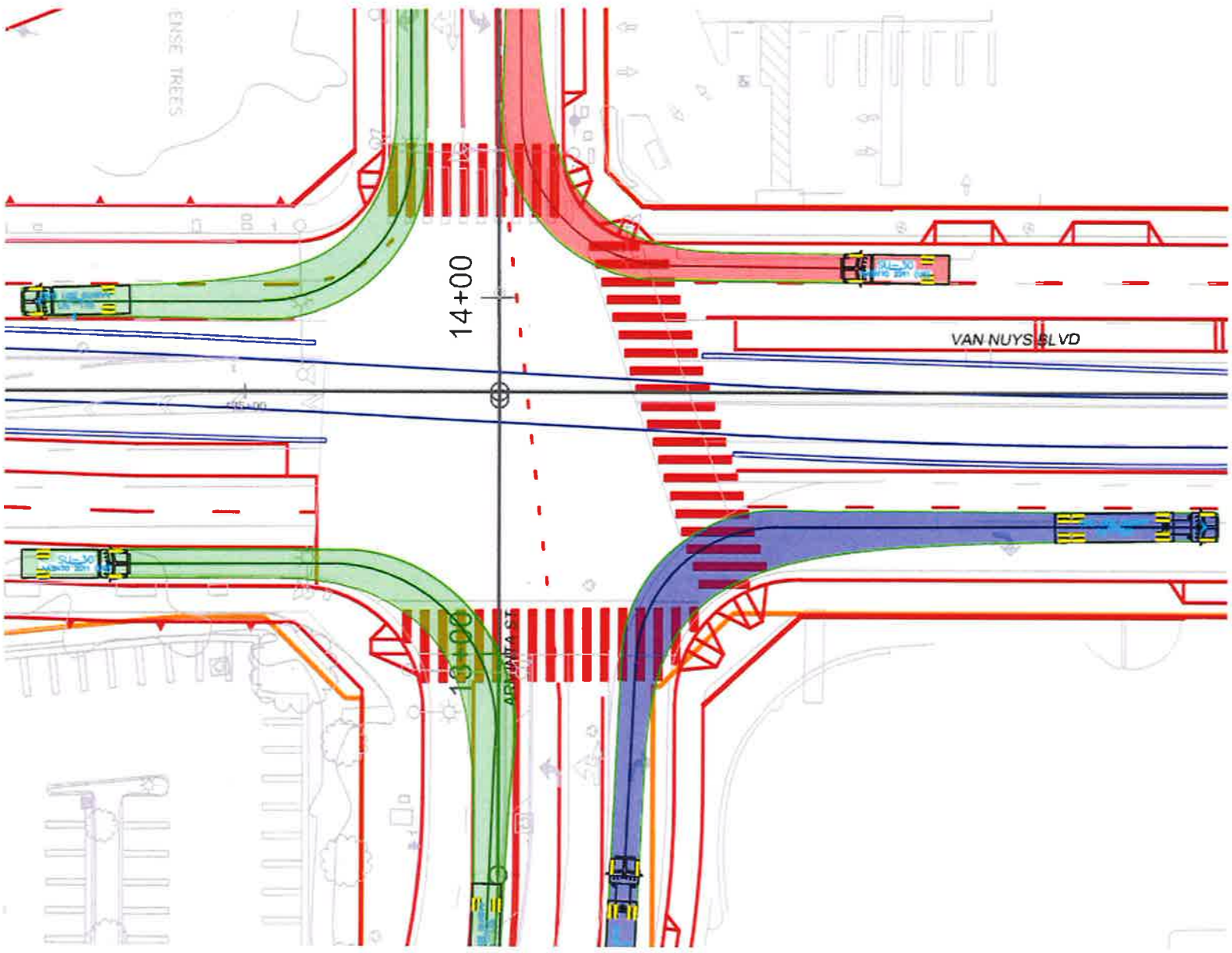
	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

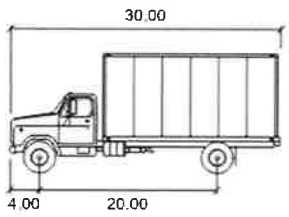


WB-40

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		

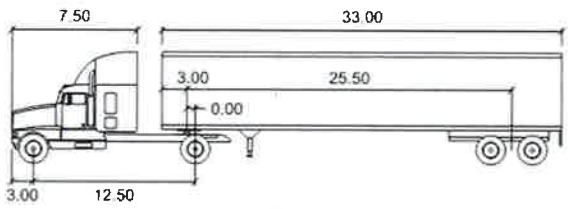
EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR
Truck Turn Template Exhibit – Arminta St.





SU-30

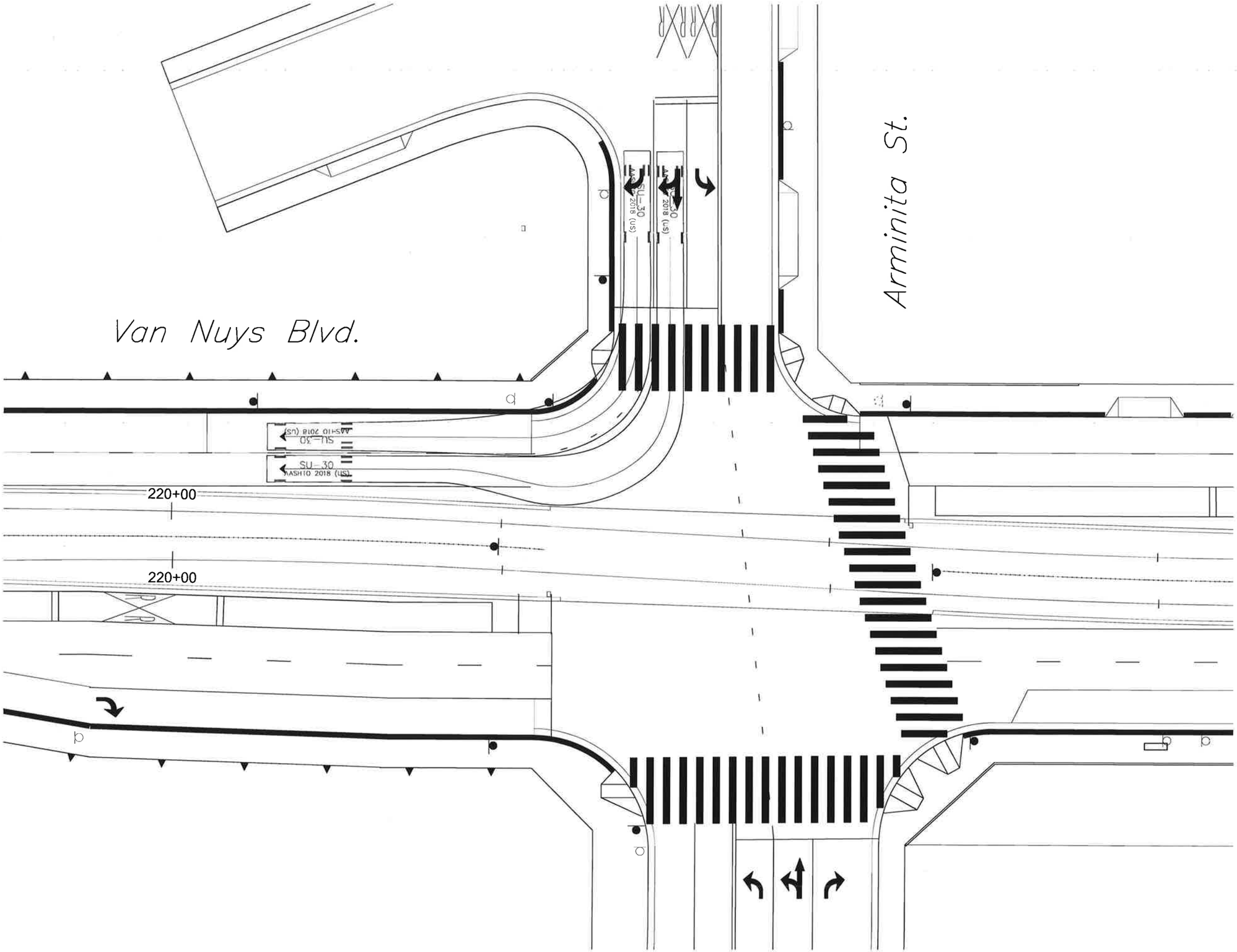
	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



WB-40

	feet				
Tractor Width	: 8.00	Lock to Lock Time	: 6.0	Steering Angle	: 20.3
Trailer Width	: 8.00	Articulating Angle	: 70.0		
Tractor Track	: 8.00				
Trailer Track	: 8.00				

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR
Truck Turn Template Exhibit – Arminta St.


Van Nuys Blvd.
Arminita St.
SU-30
AASHTO 2018 (US)
SU-30
AASHTO 2018 (US)
SU-30
AASHTO 2018 (US)
SU-30
AASHTO 2018 (US)
220+00
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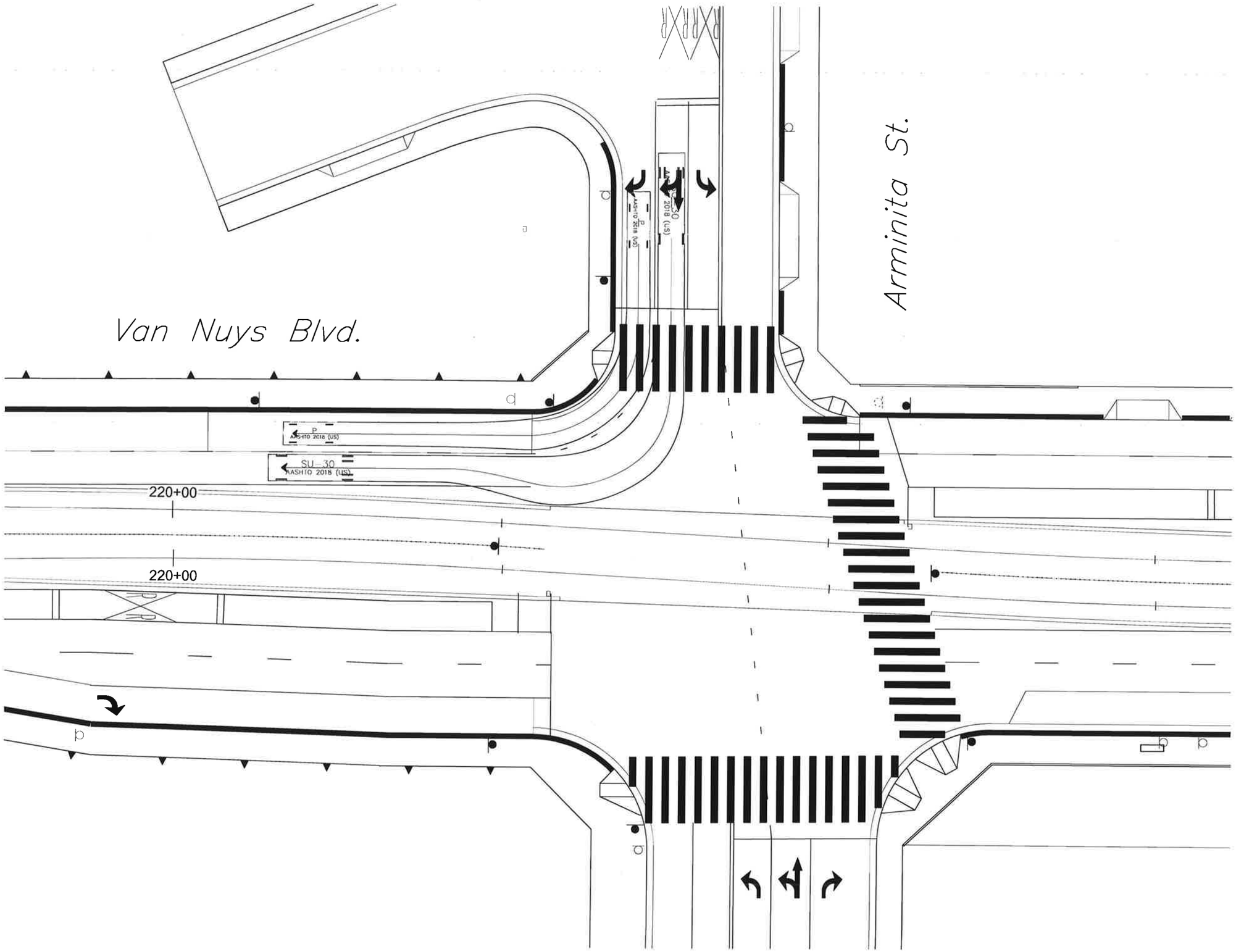
Van Nuys Blvd.
Arminita St.
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