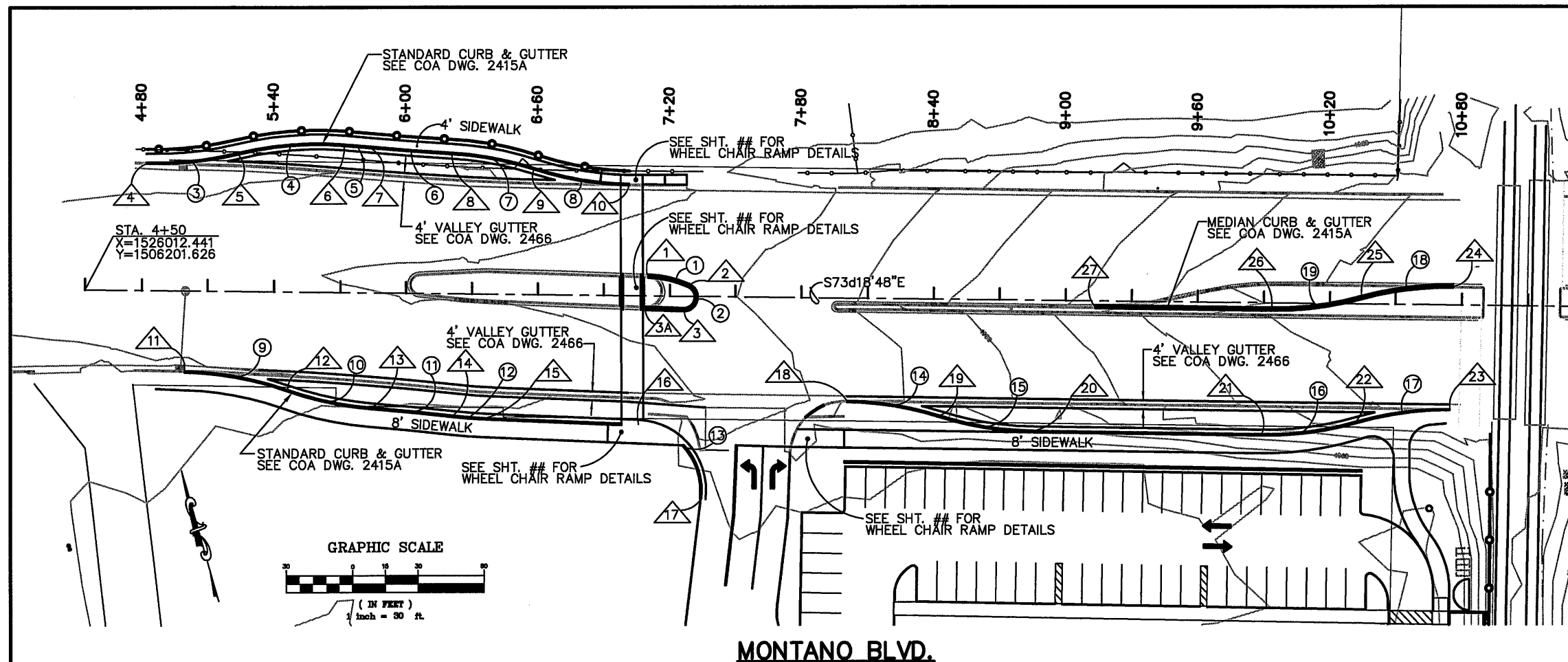


REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEER'S STAMP & SIGNATURE		APPROVED	ENGINEER	DATE	APPROVED FOR CONSTRUCTION		
		DRC Chairman					
		Transportation					
		ABCWUA					
		Hydrology					
		C I P					
		AMAFCIA					
		Constr. Coord.			CITY ENGINEER	DATE	
PROJECT NUMBER			ZONE ATLAS NO.		DRAWING NO. <u>1</u> OF <u>59</u>		
<u>550282</u>			<u>F-15</u>				



<div> <div></div> <div>POINT DATA</div> </div>					
POINT NO.	STATION	OFFSET	ELEV.	X	Y
1	7+10.10	8.71' L	77.99	1526260.279	1506136.425
2	7+28.47	4.74' L	77.91	1526276.729	1506127.347
3	7+26.73	5.81' R	77.86	1526272.038	1506117.744
3A	7+08.94	5.28' R	77.88	1526255.149	1506123.357
4	4+81.45	57.35' L	76.25	1526055.227	1506248.676
5	5+23.30	62.01' L	75.69	1526096.651	1506241.123
6	5+71.00	66.38' L	75.82	1526143.593	1506231.613
7	5+83.26	65.47' L	75.86	1526155.073	1506227.217
8	6+42.70	62.35' L	76.04	1526211.110	1506207.154
9	6+81.32	56.22' L	76.30	1526246.344	1506190.197
10	7+25.90	50.05' L	76.52	1526287.284	1506171.489
11	4+99.98	36.16' R	76.54	1526236.925	1506144.051
12	5+47.29	42.26' R	76.48	1526088.521	1506132.717
13	5+84.50	51.80' R	76.51	1526122.594	1506114.527
14	6+22.13	55.04' R	76.54	1526157.455	1506100.004
15	6+36.89	56.00' R	76.61	1526217.361	1506094.825
16	7+06.48	58.02' R	76.92	1526237.442	1506072.912
17	7+35.44	91.27' R	77.25	1526255.839	1506033.384
18	8+01.17	46.32' R	79.05	1526331.712	1506144.051
19	8+43.42	52.69' R	79.77	1526370.354	1506039.334
20	8+86.27	59.07' R	80.49	1526409.570	1506020.922
21	9+89.94	59.35' R	82.54	1526508.789	1505990.878
22	10+32.02	53.45' R	83.33	1526550.787	1505984.448
23	10+74.12	47.57' R	83.42	1526592.809	1505977.990
24	10+76.10	8.28' L	83.86	1526610.742	1506030.918
25	10+34.68	2.62' L	83.45	1526569.455	1506038.393
26	9+93.56	3.04' R	83.10	1526528.423	1506043.781
27	9+13.35	2.87' R	81.50	1526551.641	1506066.972

○ CURVE DATA			
CURVE NO.	RADIUS	TANGENT LENGTH	ARC LENGTH
1	50.00'	9.57'	18.90'
2	5.50'	22.59'	14.65'
3	150.00'	21.26'	42.25'
4	150.00'	24.26'	48.10'
5	1120.31'	6.14'	12.28'
6	1145.84'	29.77'	59.53'
7	150.00'	19.72'	39.21'
8	150.00'	22.76'	45.18'
9	150.00'	23.97'	47.54'
10	150.00'	19.47'	38.73'
11	1199.93'	18.89'	37.77'
12	150.00'	7.40'	14.79'
13	30.00'	32.50'	49.52'
14	150.00'	21.58'	42.87'
15	150.00'	21.89'	43.47'
16	150.00'	21.46'	42.63'
17	149.50'	21.48'	42.66'
18	150.00'	21.11'	41.94'
19	150.00'	20.96'	41.64'

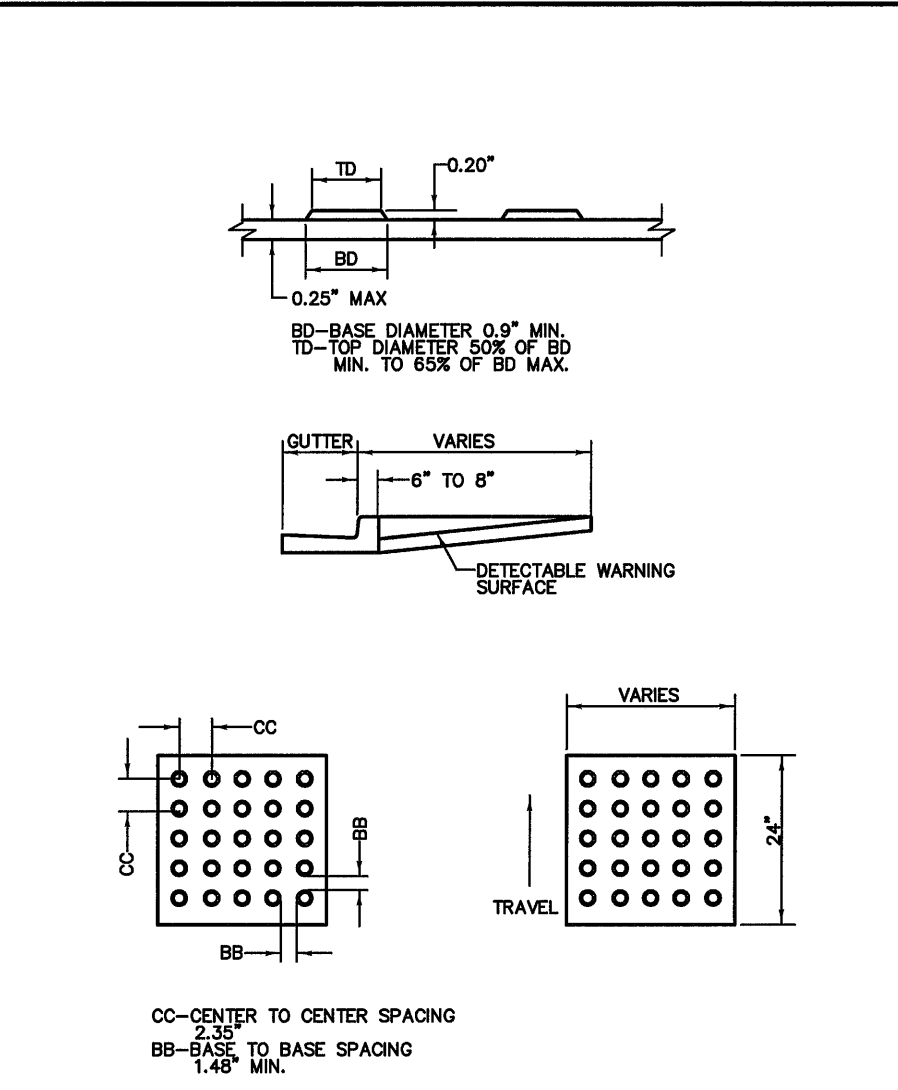
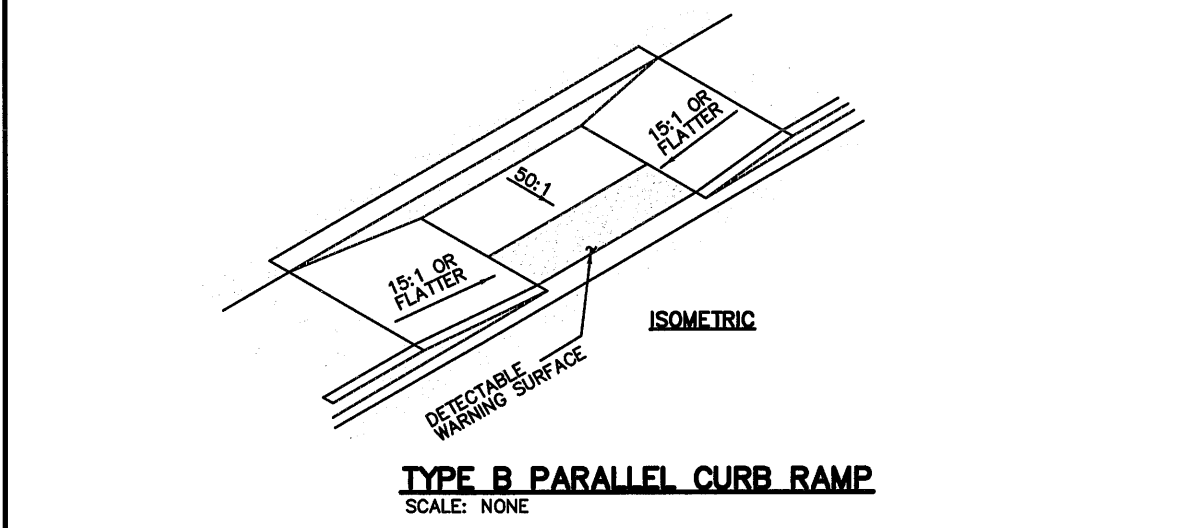
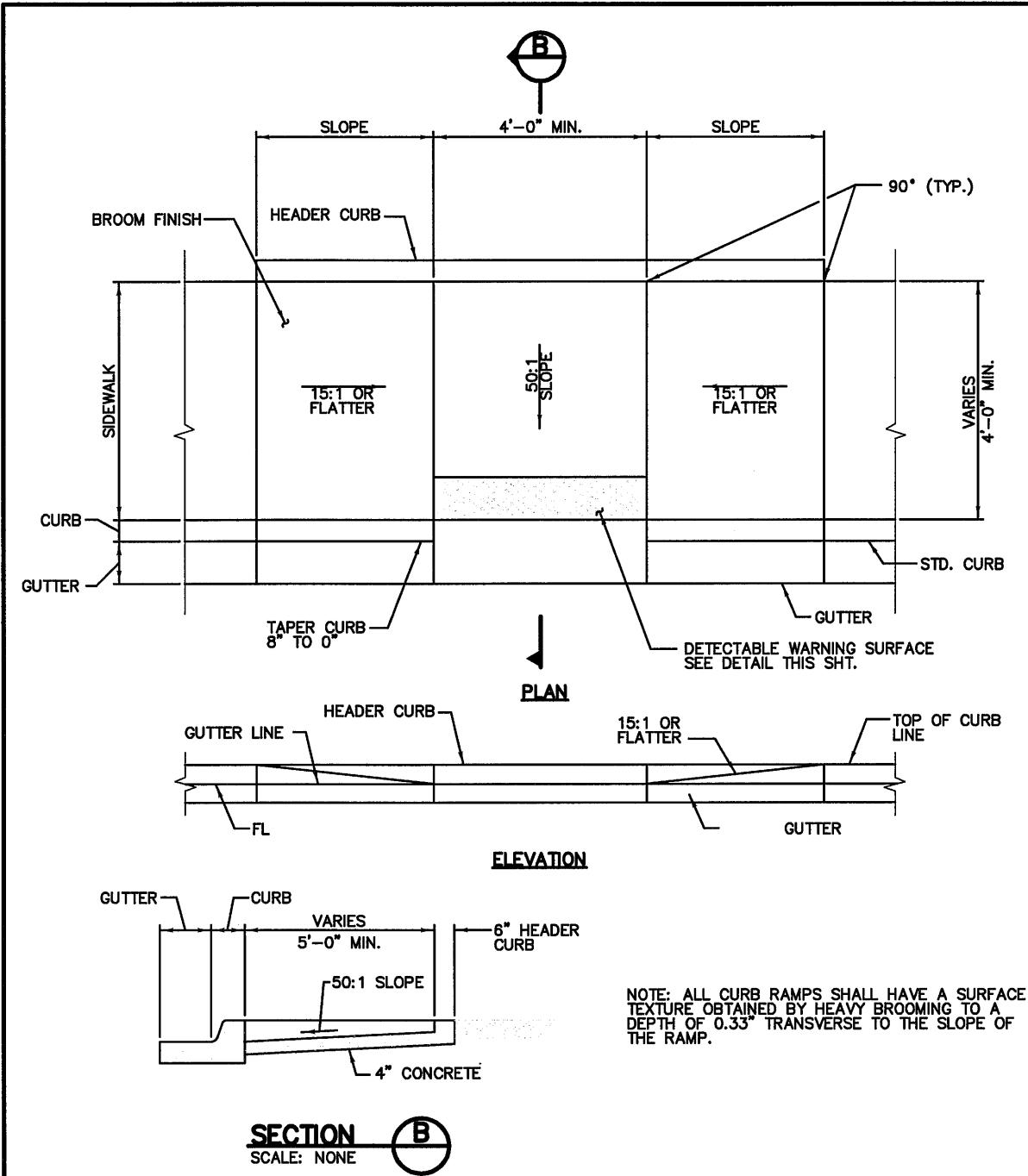


Vector
Engineering, LLC

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION	
TITLE:	NEW MEXICO RAIL RUNNER EXPRESS MONTANO STATION MONTANO BLVD. PLAN AND PROFILE

Design Review Committee	City Engineer Approval	Last Design Update	Mo. / Day / Yr.	Mo. / Day / Yr.
City Project No.		Zone Map No.	Sheet	Of
559282		F-15	2	12

4990																								4990
4985																								4985
4980																								4980
4975																								4975
4970																								4970
4965																								4965
4960																								4960
4955																								4955
	4976.58	4976.72	4976.71	4976.90	4977.06	4977.31	4977.04	4977.70	4977.74	4977.99	4978.45	4979.11	4979.95	4980.40	4980.95	4981.49	4982.67	4983.04	4982.90	4983.76	4984.02	4983.48	4983.94	
	4+80		5+40		6+00		6+60		7+20		7+80		8+40		9+00		9+60		10+20		10+80		11+40	



DEFINITIONS:

DETECTABLE WARNING SURFACE: A SURFACE FEATURE BUILT IN OR APPLIED TO WALKING SURFACES OR OTHER ELEMENTS TO WARN OF HAZARDS ON A CIRCULATION PATH TO AID PERSONS WITH VISUAL IMPAIRMENTS.

CURB LINE: A LINE AT THE FACE OF THE CURB THAT MARKS THE TRANSITION BETWEEN THE SIDEWALK AND THE GUTTER OF THE ROADWAY.

LOCATION:

- 1.) DETECTABLE WARNING SURFACES SHALL BE PROVIDED WHERE A CURB RAMP OR LANDING CONNECTS TO A CROSSWALK AND/OR PEDESTRIAN ROUTE CROSSING A ROADWAY.
- 2.) DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MIN. AND 8" MAX. FROM THE CURB LINE.
- 3.) MEDIAN AND REFUGE ISLANDS SHALL HAVE A DETECTABLE WARNING. DETECTABLE WARNING AT CUT THROUGH ISLANDS SHALL BE SEPARATED BY A 24' MIN. LENGTH OF WALKWAY WITHOUT WARNINGS.

EXCEPTION: DETECTABLE WARNINGS SHALL NOT BE REQUIRED ON CUT THROUGH ISLANDS WHERE THE CROSSINGS ARE CONTROLLED BY SIGNALS AND ARE TIMED FOR FULL CROSSING ON MEDIANS LESS THAN 7 FT.

NOTES:

- 1.) DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION OR RECONSTRUCTION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.
- 2.) SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 3.) THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
- 4.) ALL PRODUCTS USED FOR DETECTABLE WARNING SURFACES SHALL BE ON THE CITY OF ALBUQUERQUE'S APPROVED PRODUCTS LIST.

DOVE ALIGNMENT: DETECTABLE WARNING SURFACES SHALL EXTEND 24" MIN. IN THE DIRECTION OF TRAVEL AND FULL WIDTH OF THE CURB RAMP, LANDING, OR TRANSITION. DOWNS SHALL BE ALIGNED ON A SQUARE GRID IN THE PERDOMINANT DIRECTIONS OF THE CROSSWALK TO PERMIT WHEELS TO ROLL BETWEEN DOWNS.

TYP. ORIFICE PLATE DETAIL

SCALE: NONE

AS BUILT INFORMATION

CONTRACTOR	DATE
NGS STAINLESS ROD SET BENEATH A 5 1/2"	
ACCESS COVER STAMPED "D-438, 1984"	
SE QUADRANT OF MONTANO RD. & THE	
BNSF RAILROAD TRACKS, 42.5 FT. EAST OF	
CENTERLINE OF THE TRACKS, 44 FT. SOUTH	
OF CENTERLINE OF MONTANO RD. NE. 1.1 FT.	
WEST OF CHAIN LINK FENCE.	
DATUM NAVD 1988	
ELEV. 4978.070	

ENGINEERS SEAL

NO. BY DATE

REVISIONS

NO.	DATE	REMARKS
1	6/2010	DESIGN
2	6/2010	
3	6/2010	

DESIGNED BY SL

DRAWN BY BN

CHECKED BY CS

DATE 6/2010

DATE 6/2010

DATE 6/2010

Vector Engineering, LLC

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

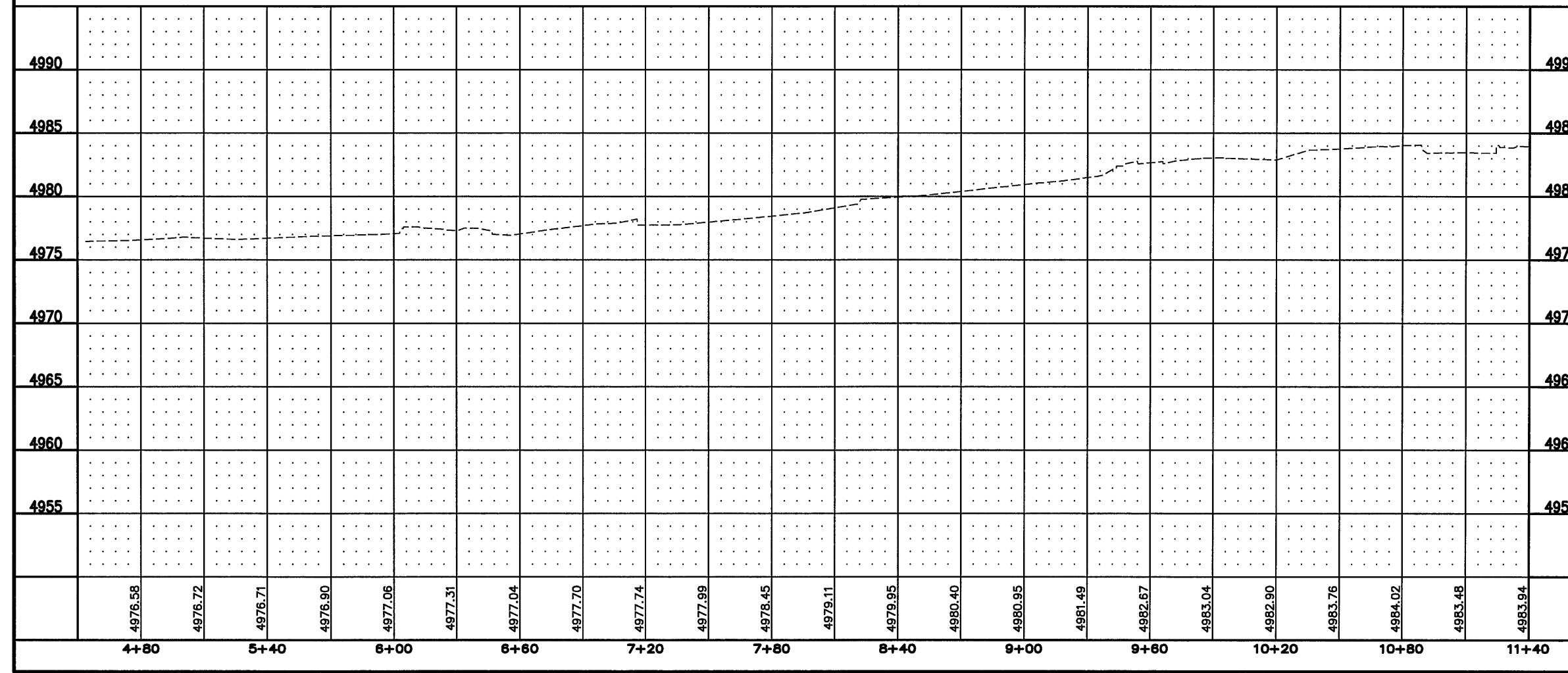
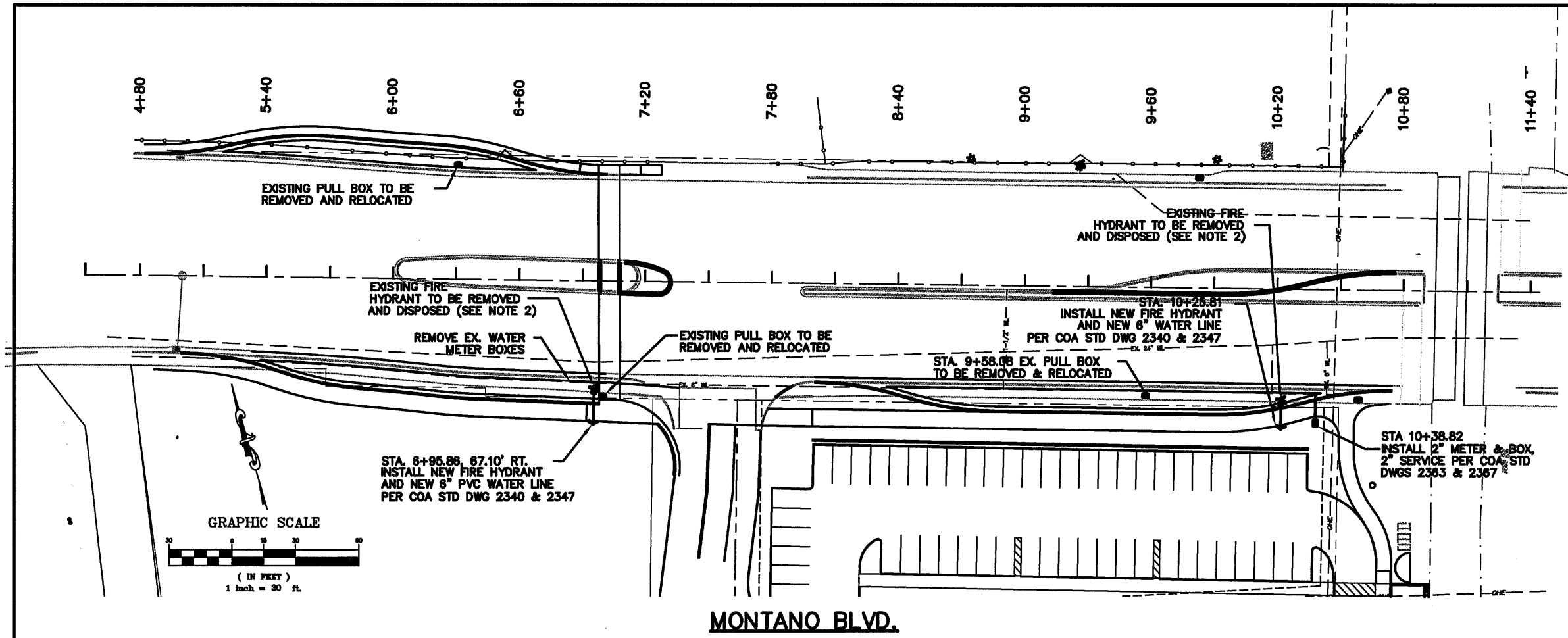
**TITLE: NEW MEXICO RAIL RUNNER EXPRESS
MONTANO STATION
DETAIL SHEET**

Design Review Committee	City Engineer Approval	No. / Day / Yr.	No. / Day / Yr.

City Project No. **559282** Zone Map No. **F-15** Sheet **3** Of **12**



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTANO STATION DETAIL SHEET			
Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.
			No. / Day / Yr.
			No. / Day / Yr.
			No. / Day / Yr.
			No. / Day / Yr.
City Project No.		Zone Map No.	Sheet Of
559282		F-15	4 12



WATER SHUT-OFF PLAN

SHUT OFF VALVES #635, 636, 632

NOTES:

- ONLY WATER UTILITY PERSONNEL ARE AUTHORIZED TO OPERATE VALVES.
- NOTIFY ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY (PHONE 857-8200) SEVEN (7) WORKING DAYS IN ADVANCE OF NEEDING EXECUTION OF THE WATER SHUT-OFF PLAN.
- APPROXIMATE SHUT OFF WILL BE 24 HOURS.
- SHUT OFF THE VALVES INDICATED IN THE ABOVE PLAN.

GENERAL NOTES:

- SEE SHEET --- FOR RESTRAINING TABLES.
- CONTACT PINO YARDS FOR DISPOSAL OF FIRE HYDRANT.

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

TITLE: NEW MEXICO RAIL RUNNER EXPRESS
MONTANO STATION
MONTANO BLVD. UTILITY PLAN AND PROFILE

Design Review Committee	City Engineer Approval	No. / Day / Yr.	No. / Day / Yr.

City Project No. **559282** Zone Map No. **F-15** Sheet **5** Of **12**

AS BUILT INFORMATION

CONTRACTOR: NGS STAINLESS ROD SET BENEATH A 5 1/2" ACCESS COVER STAMPED "D-438, 1984", SE QUADRANT OF MONTANO RD. & THE BNSF RAILROAD TRACKS, 42.5 FT. EAST OF CENTERLINE OF THE TRACKS, 44 FT. SOUTH OF CENTERLINE OF MONTANO RD. NE, 1.1 FT. WEST OF CHAIN LINK FENCE.

DATUM: NAVD 1988
ELEV: 4978.070

BENCH MARKS

NO. DATE BY

SURVEY INFORMATION

FIELD NOTES

NO.	DATE	BY

ENGINEERS SEAL

REVISIONS	BY

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
SL	10/2010
BN	10/2010
CB	10/2010

1. THIS PROJECT INCLUDES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE MONTANO RAILRUNNER STATION/MONTANO BOULEVARD INTERSECTION AND CONNECTION TO EXISTING FIBER OPTIC INTERCONNECT EQUIPMENT PARALLEL TO MONTANO BOULEVARD.
2. ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS, AND THE CITY OF ALBUQUERQUE'S TRAFFIC ENGINEERING OPERATIONS SPECIFICATIONS (CURRENT EDITION).
3. LOCATIONS OF CONDUITS, FOUNDATIONS, CONTROL CABINETS, POLES, PULL BOXES, MANHOLES, AND SPLICE VAULTS SHOWN ON THE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE AMERICAN WITH DISABILITIES ACT. THE CONTRACTOR SHALL MEET WITH THE CITY'S TRAFFIC ENGINEERING OPERATIONS PERSONNEL IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING THE WORK. ALL SUCH EQUIPMENT SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY.
4. THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
5. THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR SIDE STREET CROSSINGS. BEFORE CONDUIT CAN BE BORED, DRILLED, OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE GAS LINES WHICH CROSS ANY PROPOSED BORES. THESE EXCAVATIONS SHALL REMAIN OPEN UNTIL AFTER THE BORE IS COMPLETE. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH, AND REPLACE EXISTING PAVEMENT ONLY WHEN APPROVED BY THE PROJECT MANAGER.
6. SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES, AND WILL ONLY BE PERMITTED AT SPLICE VAULTS OR CONTROLLER CABINETS WITH SPLICE BARS. SPLICING OF TRAFFIC SIGNAL MCC WILL BE PERMITTED IN LARGE PULL BOXES, INCLUDING LARGE MEDIAN PULL BOXES. SPLICING OF VIDEO DETECTION CABLE WILL NOT BE PERMITTED FROM THE MASTARM BASE TO THE CONTROLLER CABINET. SPLICING OF OPTICAL DETECTOR CABLE WILL NOT BE PERMITTED FROM THE DETECTOR TO THE CONTROLLER CABINET.
7. ALL VIDEO DETECTION CABLE SHALL BE TAGGED AT THE CONTROLLER CABINET TO IDENTIFY EACH CABLE BY CAMERA NUMBER AND LOCATION. ALL OPTICAL DETECTOR CABLE SHALL BE TAGGED AT THE CONTROLLER CABINET TO IDENTIFY EACH BY DIRECTION AND LOCATION.
8. THE CONTRACTOR SHALL NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS (857-8000) THREE WORKING DAYS IN ADVANCE OF ANY ANTICIPATED WORK ON SIGNALS, LIGHTING, AND POWER SERVICES AT THE INTERSECTION. TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL ASSIST THE CONTRACTOR IN THE FIELD LOCATION OF EQUIPMENT, COLOR CODING OF WIRING, AND MUST BE PRESENT WHEN SIGNALS AND LIGHTING ARE SHUT OFF OR TURNED ON. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS EACH TIME A SIGNAL CONTROLLER DOOR IS TO BE OPENED AT THE INTERSECTION.
9. THE CONTRACTOR SHALL NOTIFY PNM 30 DAYS IN ADVANCE OF ANY ANTICIPATED POWER SERVICE CONNECTIONS OR MODIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH PNM TO MAINTAIN ELECTRICAL SERVICE IN THE CITY'S NAME AT THE INTERSECTION.
10. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND DELIVER TO THE CITY TRAFFIC ENGINEERING YARD WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.
11. LIVE UNUSED CONDUCTORS WILL NOT BE ALLOWED AT MASTARM POLES AND PEDESTAL POLES. ALL SUCH UNUSED CONDUCTORS SHALL BE DISCONNECTED AT THE LARGE PULL BOX ADJACENT TO THE POLE.
12. IF TRENCH WIDTHS LESS THAN 12" ARE PROPOSED BY THE CONTRACTOR, APPROVED COMPACTION METHODS SHALL BE USED DURING BACKFILL TO PREVENT LATENT TRENCH FAILURES. THE CONTRACTOR SHALL USE GROUT OR LEAN FILL AS APPROVED BY THE PROJECT MANAGER IN LIEU OF EARTH BACKFILL.
13. THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLERS AT THE INTERSECTION.
14. FOR CONDUITS CONTAINING ONLY LOW VOLTAGE COMMUNICATIONS CABLES, THE REQUIREMENTS FOR A SINGLE CONDUCTOR BARE COPPER #8 AWG MAY BE WAIVED WHERE PERMITTED BY THE N.E.C.
15. EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED. EXISTING CONDUITS SHALL BE REPAIRED, ADJUSTED, OR REPLACED AS DIRECTED BY THE PROJECT MANAGER WHERE ELECTRICAL PULL BOXES OR TRAFFIC MANHOLES ARE INSTALLED OR REPLACED.
16. THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC IF SIGNALS ARE TURNED OFF.
17. ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND FROM FIELD OBSERVATIONS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXPLORATORY TRENCHING, IF NECESSARY, TO MORE SPECIFICALLY LOCATE UTILITY LINES. COST OF LOCATING LINES INCLUDING EXPLORATORY TRENCHING WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

1. ALL TRAFFIC SIGNAL EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE AND SHALL BE APPROVED BY CITY STAFF BEFORE BEING INSTALLED. THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING EQUIPMENT FOR THIS INTERSECTION:
 - A. ECONOLITE ASC 2S-2100 TRAFFIC SIGNAL CONTROLLER WITH TS-2 CABINET.
 - B. ECONOLITE EIGHT-PHASE DUAL RING "P" SIZE CONTROLLER CABINET WIRED FOR FULL EIGHT-PHASE OPERATION, TELEMETRY BOARDS, "IT" TRANSIENT VOLTAGE SURGE SUPPRESSOR AND ALL CONNECTING HARNESSSES
 - C. THE CONTROLLER CABINET SHALL BE EQUIPPED WITH A MMU-16LE SMARTMONITOR WITH LCD DISPLAY.
 - D. VIDEO DETECTION CAMERAS SUPPLIED FOR THE PROJECT SHALL BE AUTOSCOPE SOLO TERRA.
2. EMERGENCY VEHICLE OPTICAL DETECTOR (EVOD) SYSTEM EQUIPMENT SHALL BE 3M "OPTICOM" MODEL 762 (OR MOST CURRENT ACCEPTABLE MODEL) PHASE SELECTORS MOUNTED ON 3M OPTICOM MODEL 760 RACKS, OR APPROVED EQUAL. ALL RACKS SHALL BE CAPABLE OF PROVIDING FOUR CHANNELS OF DETECTION. PHASE SELECTOR MODULES SHALL BE CAPABLE OF TWO CHANNELS OF DETECTION EACH. OPTICAL DETECTORS SHALL BE 3M "OPTICOM" MODEL 711, ONE CHANNEL, ONE DIRECTION OR APPROVED EQUAL. OPTICAL DETECTOR CABLE SHALL BE 3M "OPTICOM" MODEL 138 OR EQUAL. A MANUFACTURER'S REPRESENTATIVE SHALL ASSIST THE CONTRACTOR IN THE FIELD AS WORK PROGRESSES TO COMPLETE THE INSTALLATION OF ALL EVOD EQUIPMENT AND ASSIST IN SETTING UP, TURNING ON, PROGRAMMING, AND FIELD TESTING PREEMPTION EQUIPMENT, INCLUDING EMITTERS, TO INSURE THAT THE EQUIPMENT IS OPERATIONAL.
3. ALL INDICATIONS OF ALL VEHICLE SIGNAL ASSEMBLIES AND ALL PEDESTRIAN SIGNAL INDICATORS SHALL BE L.E.D, SIGNALS OF A TYPE AND MANUFACTURER APPROVED BY THE CITY OF ALBUQUERQUE. PEDESTRIAN SIGNALS SHALL INCLUDE COUNTDOWN INDICATIONS.
4. ALL SIGNAL ASSEMBLIES, PEDESTRIAN SIGNALS, PEDESTRIAN PUSH BUTTONS, CABINETS, AND FITTINGS AT THE INTERSECTION SHALL COMPLY WITH THE CITY OF ALBUQUERQUE TYPE AND COLOR FINISH REQUIREMENTS.
5. ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY DUTY TYPE WITH REINFORCED POLYMER MORTAR HEAVY DUTY COVERS. CONCRETE COVERS, STEEL COVERS, AND CONCRETE PULL BOXES WILL NOT BE ACCEPTABLE.
6. ALL BACKPLATES SHALL BE LOUVERED.
7. TYPE III STANDARDS AT THE INTERSECTION SHALL HAVE 40' CAMERA MOUNTING HEIGHTS AND 10' ARMS.

1. REMOVAL OF EXISTING PULL BOXES, CONDUITS, OR OTHER SIGNAL AND LIGHTING EQUIPMENT NOT SPECIFICALLY ENUMERATED AS BID ITEMS FOR INSTALLATION OF NEW SIGNAL AND LIGHTING EQUIPMENT.
2. CABLE TESTING AND DIAGRAMS.
3. BORING, DRILLING, PUSHING, AND TRENCHING, INCLUDING REMOVAL AND REPLACEMENT OF PAVEMENT, SIDEWALKS, DRIVE PADS, VALLEY GUTTERS, WHEELCHAIR RAMPS, CURB & GUTTER, AND LANDSCAPING (INCLUDING SPRINKLERS) FOR INSTALLATION OF PULL BOXES, CONDUITS, AND SIGNAL FOUNDATIONS, EXCEPT AS NOTED ON THE PLANS.
4. LOCATION OF UTILITY LINES INCLUDING EXPLORATORY TRENCHING AND EXPOSING OF GAS LINES WHEN BORING.
5. DESIGN, MATERIALS, INSTALLATION AND REMOVAL OF SAFETY BARRIER FOR SHIELDING EQUIPMENT OR MATERIAL.
6. APPRISING PUBLIC THROUGH THE LOCAL NEWS MEDIA.
7. REMOVAL, SALVAGE, AND TRANSPORTATION OF EXISTING EQUIPMENT TO THE CITY TRAFFIC ENGINEERING OPERATIONS YARD, OR HAULING OF WASTE MATERIALS TO THE CITY LANDFILL, AS APPROPRIATE.
8. LEAN FILL FOR CONDUIT TRENCHES.
9. PULL BOX ADJUSTMENTS TO GRADE.
10. OFF-DUTY POLICE OFFICER FOR TRAFFIC CONTROL
11. REMOVAL AND REPLACEMENT IN KIND OR BETTER OF LANDSCAPING INCLUDING SPRINKLERS, FOR INSTALLATION OF PULL BOXES, CONDUITS, AND SIGNAL AND LIGHTING FOUNDATIONS.
12. CONDUIT TRACE WIRE



Vector
Engineering, LLC

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTAÑO STATION MONTAÑO BLVD. SIGNAL PLAN NOTES			
Design Review Committee	City Engineer Approval	Last Design Update	No. / Day / Yr.
City Project No. 559282	Zone Map No. F-15	Sheet	Of
		6	12

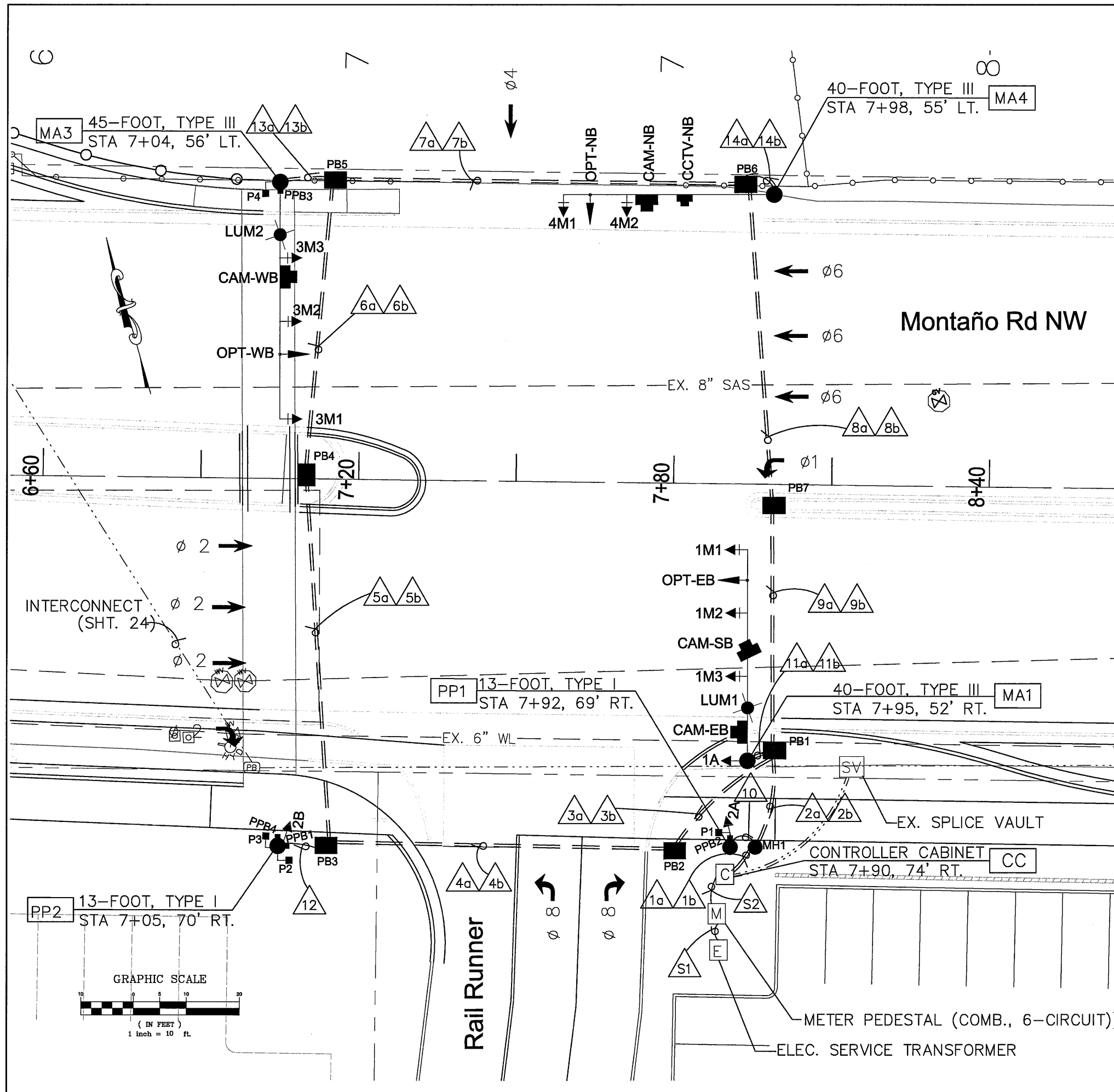
SIGNAL AND INTERCONNECT QUANTITIES					
ITEM NO.	DESCRIPTION	UNIT	MONTAÑO- RAILRUNNER	FIBER OPTIC INTERCONNECT	TOTAL
421.005	SERVICE RISER (SIGNAL), CIP	EACH	1		1
421.01	METER PEDESTAL (SIGNAL), CIP	EACH	1		1
421.015	SERVICE CONNECTION (SIGNAL), CIP	EACH	1		1
422.003	TRAFFIC SIGNAL PEDESTAL POLE, 13', CIP	EACH	2		2
422.021	TRAFFIC SIGNAL MASTARM, 40' ARM, TYPE III, TROMBONE, CIP	EACH	2		2
422.02X	TRAFFIC SIGNAL MASTARM, 45' ARM, TYPE III, TROMBONE, CIP	EACH	1		1
423.001	TRAFFIC SIGNAL FOUNDATION FOR PEDESTAL POLE, CIP	EACH	2		2
423.002	TRAFFIC SIGNAL MASTARM FOUNDATION, CIP	EACH	3		3
423.003	TRAFFIC SIGNAL CONTROLLER FOUNDATION (TYPE M & P CABINET), CIP	EACH	1		1
424.006	ELECTRICAL CONDUIT, 2", INCL. TRENCHING, BACKFILL, PACKING, PUSHING, BORING & JACKING, CIP	L.F.	530		530
424.011	ELECTRICAL CONDUIT, 3", INCL. TRENCHING, BACKFILL, PACKING, PUSHING, BORING & JACKING, CIP	L.F.	565		565
424.0XX	ELECTRICAL CONDUIT, 4", INCL. TRENCHING, BACKFILL, PACKING, PUSHING, BORING & JACKING, CIP	L.F.	40		40
425.003	ELECTRICAL PULL BOX (LARGE), CIP	EACH	7		7
425.02	TRAFFIC SIGNAL MANHOLE, CIP	EACH	1		1
425.102	ELECTRICAL PULL BOX, ANY TYPE, REMOVE AND RELOCATE, CIP	EACH		3	3
426.003	SINGLE CONDUCTOR, #6, CIP	L.F.	840		840
426.01	MULTI-CONDUCTOR CABLE, #5, CIP	L.F.	1,520		1,520
426.011	MULTI-CONDUCTOR CABLE, #7, CIP	L.F.	65		65
426.014	MULTI-CONDUCTOR CABLE, #20, CIP	L.F.	980		980
427.002	3 SECTION TRAFFIC SIGNAL ASSEMBLY, CIP	EACH	10		10
427.004	5 SECTION TRAFFIC SIGNAL ASSEMBLY, CIP	EACH	1		1
427.0XX	PEDESTRIAN SIGNAL, L.E.D. COUNTDOWN, CIP	EACH	4		4
427.031	3 SECTION BACKPLATE, CIP	EACH	7		7
427.033	5 SECTION BACKPLATE, CIP	EACH	1		1
428.01	PUSH BUTTON STATION, CIP	EACH	4		4
428.071	PHASE SELECTOR MODULE 2 CHANNEL, CIP	EACH	1		1
428.075	OPTICAL DETECTOR 1D/1C, CIP	EACH	3		3
428.078	OPTICAL DETECTOR CABLE, CIP	L.F.	720		720
428.092	VIDEO COAXIAL CABLE, CIP	L.F.	820		820
428.093	VIDEO POWER CABLE, CIP	L.F.	820		820
428.094	VIDEO CAMERA, CIP	EACH	4		4
	CCTV CABLE	L.F.		255	255
428.210	CCTV CAMERA	EACH		1	1
429.001	TRAFFIC ACTUATED CONTROLLER, CIP	EACH	1		1
429.021	8 PHASE DUAL RING CONTROLLER CABINET, CIP	EACH	1		1
432.001	ROADWAY LUMINAIRE, TYPE 250S, CIP	EACH	2		2
435.006	SINGLE MODE FIBER OPTIC CABLE (6)	L.F.		100	100
435.300	UNINTERRUPTED POWER SUPPLY (UPS)	EACH		1	1
435.600	SPLICE CLOSURE (FULL CABLE SPLICE)	EACH		1	1
435.700	FIELD ETHERNET TO SERIAL DATA TERMINAL SERVER (TS)	EACH		1	1
435.702	MANAGED FIELD ETHERNET SWITCH	EACH		1	1

TRAFFIC SIGNAL LEGEND

NEW	EXISTING	ITEM
		PULL BOX
		SERVICE POLE
		METER PEDESTAL
		CONTROLLER CABINET
		CONDUIT RUN (SIGNALS)
		CONDUIT RUN (INTERCONNECT)
		TRAFFIC SIGNAL PEDESTAL POLE
		CONDUIT RUN NUMBER (SIGNAL)
		CONDUIT RUN NUMBER (POWER SERVICE)
		CONDUIT RUN NUMBER (INTERCONNECT)
		CONDUIT RUN NUMBER (WARNING BEACON)
		TYPE II STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACKPLATE, AND OPTICAL DETECTOR
		TYPE III STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACKPLATE, OPTICAL DETECTOR, LUNIMAIRE, AND CAMERA
		PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		PEDESTRIAN SIGNAL (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		SPLICE CABINET
		TRAFFIC MANHOLE
		VIDEO CAMERA



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTAÑO BLVD. SIGNAL PLAN SUMMARY OF QUANTITIES			
Design Review Committee	City Engineer Approval	<div> <div>Mo / Day / Yr.</div> <div>Mo / Day / Yr.</div> </div>	
<div> <div>City Project No.</div> <div>559282</div> </div>	<div> <div>Zone Map No.</div> <div>F-15</div> </div>	<div> <div>Sheet</div> <div>7</div> <div>Of</div> <div>12</div> </div>	
		<div> <div>City Project No.</div> <div>559282</div> </div>	
		<div> <div>Zone Map No.</div> <div>F-15</div> </div>	



ABBREVIATIONS	
MAI	MASTARM NUMBER
PP1	PEDESTAL POLE NUMBER
PPB1	PEDESTRIAN PUSH BUTTON NUMBER
CC1	CONTROL CABINET NUMBER
SC1	SPLICE CABINET NUMBER
PB1	PULL BOX NUMBER (SIGNALS)
PBS1	PULL BOX NUMBER (POWER)
PBC1	PULL BOX NUMBER (INTERCONNECT)
3A	SIGNAL HEAD NUMBER
P1	PEDESTRIAN SIGNAL NUMBER
MH1	TRAFFIC MANHOLE NUMBER
OPT	OPTICAL DETECTOR

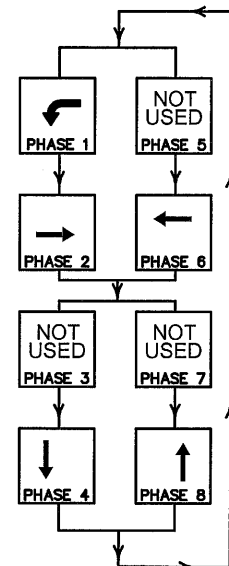
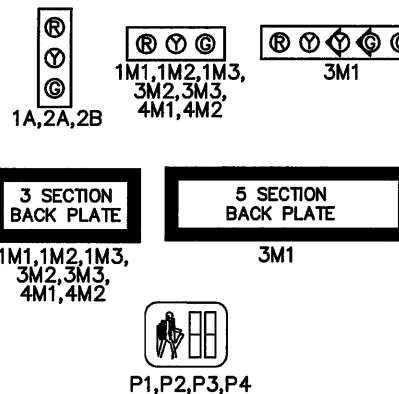
SYMBOL KEY	
	SIGNAL & CABINET ID
	CONDUIT RUN ID (SIGNALS)
	CONDUIT RUN ID (POWER SERVICE)
	CONDUIT RUN ID (INTERCONNECT)

FLASH CONDITION	
YELLOW BALL	1M1, 1M2, 1M3, 1A, 3M1, 3M2, 3M3
RED BALL	2A, 2B, 4M1, 4M2

INITIALIZATION	
ALL RED, THEN PHASE 2 AND 6 GREEN	

- NOTES**
- ALL PULL BOXES ARE LARGE SIZE.
 - LUM1 AND LUM2 ARE 250W MOUNTED AT A 40' HEIGHT ON A 10' ARM.
 - CCTV-NB IS LOCATED AT A 40' HEIGHT

TYPICAL SIGNAL FACE LENS ARRANGEMENTS



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTAÑO STATION MONTAÑO BLVD. SIGNAL PLAN			
Design Review Committee	City Engineer Approval	Ms. / Day / Yr.	Ms. / Day / Yr.
City Project No. 559282	Zone Map No. F-15	Last Design Update	
		Sheet 8	Of 12

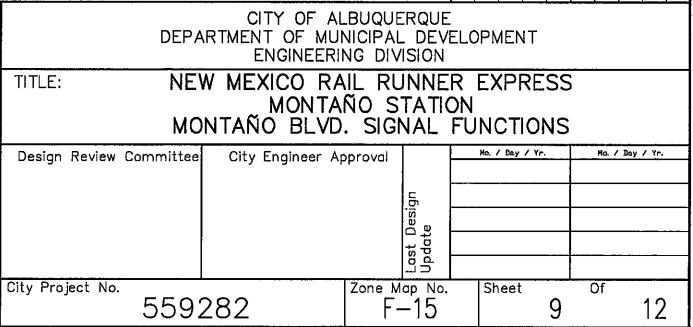
AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEERS SEAL	
CONTRACTOR	WORK STATION	ROD SET BENEATH A 5 1/2" ACCESS	COVER STAMPED "D-438, 1984" SE	DATE	BY	NO.	REMARKS
INSPECTOR'S	DATE	QUADRANT OF MONTANO RD. & BNSF	RAILROAD TRACKS, 42.5 FT± EAST OF				DESIGN
VERIFICATION BY	DATE	CENTERLINE OF TRACKS, 44 FT± SOUTH OF	CENTERLINE OF MONTANO RD., 1.1 FT.				DESIGNED BY KA DATE 6/2010
DATE		WEST OF CHAIN LINK FENCE					DRAWN BY KA DATE 6/2010
							CHECKED BY SL DATE 6/2010

	<u>Ø1</u>	<u>Ø2</u>	<u>Ø3</u>	<u>Ø4</u>	<u>Ø5</u>	<u>Ø6</u>	<u>Ø7</u>	<u>Ø8</u>
MINIMUM INITIAL	10	15		10		15		10
VEHICLE EXTENSION	3	3		3		3		3
MAXIMUM 1	30	30		30		30		30
MAXIMUM 2	40	40		40		40		40
YELLOW CHANGE	4	4		4		4		4
RED CLEAR	2	2		2		2		2
WALK	0	4		4		0		0
PEDESTRIAN CLEAR	0	15		30		0		0
OPERATION	OFF	MIN		OFF		MIN		OFF
		RECALL				RECALL		

CONDUCTOR			RING 1 – MULTI CONDUCTOR CABLE 20		RING 2 – MULTI CONDUCTOR CABLE 20 2/	
CONDUCTOR NUMBER	BASE COLOR	TRACER	FUNCTION	FIELD CONNECTION 1/	FUNCTION	FIELD CONNECTION
1	BLACK	—	SPARE	SPARE	SPARE	SPARE
2	WHITE	—	SPARE	SPARE	SPARE	SPARE
3	RED	—	PHASE 1 RED	RED BALL 3M1	SPARE	SPARE
4	GREEN	—	PHASE 1 GREEN	GREEN ARROW 3M1	SPARE	SPARE
5	ORANGE	—	PHASE 1 YELLOW	YELLOW ARROW 3M1	SPARE	SPARE
6	BLUE	—	SPARE	SPARE	SPARE	SPARE
7	WHITE	BLACK	SPARE	SPARE	SPARE	SPARE
8	RED	BLACK	PHASE 2 RED	RED BALL 1M1, 1M2, 1M3, 1A	PHASE 6 RED	RED BALL 3M1, 3M2, 3M3
9	GREEN	BLACK	PHASE 2 GREEN	GREEN BALL 1M1, 1M2, 1M3, 1A	PHASE 6 GREEN	GREEN BALL 3M1, 3M2, 3M3
10	ORANGE	BLACK	PHASE 2 YELLOW	YELLOW BALL 1M1, 1M2, 1M3, 1A	PHASE 6 YELLOW	YELLOW BALL 3M1, 3M2, 3M3
11	BLUE	BLACK	PHASE 2 WALK	PEDESTRIAN WALK P1, P2	SPARE	SPARE
12	BLACK	WHITE	PHASE 2 DON'T WALK	PEDESTRIAN DON'T WALK P1, P2	SPARE	SPARE
13	RED	WHITE	SPARE	SPARE	SPARE	SPARE
14	GREEN	WHITE	SPARE	SPARE	SPARE	SPARE
15	BLUE	WHITE	SPARE	SPARE	SPARE	SPARE
16	BLACK	RED	PHASE 4 RED	RED BALL 2A, 2B	PHASE 8 RED	RED BALL 4M1, 4M2
17	WHITE	RED	PHASE 4 GREEN	GREEN BALL 2A, 2B	PHASE 8 GREEN	GREEN BALL 4M1, 4M2
18	ORANGE	RED	PHASE 4 YELLOW	YELLOW BALL 2A, 2B	PHASE 8 YELLOW	YELLOW BALL 4M1, 4M2
19	BLUE	RED	PHASE 4 WALK	PEDESTRIAN WALK P3, P4	SPARE	SPARE
20	RED	GREEN	PHASE 4 DON'T WALK	PEDESTRIAN DON'T WALK P3, P4	SPARE	SPARE

FUNCTION CHART – 24 VOLT CIRCUIT ^{3/}					
CONDUCTOR		RING 1–MULTI CONDUCTOR CABLE 5		RING 2–MULTI CONDUCTOR CABLE 5	
NUMBER	BASE COLOR	FUNCTION	FIELD CONNECTION	FUNCTION	FIELD CONNECTION
1	BLACK	PHASE 2 PPB	PPB1 & PPB2	SPARE	SPARE
2	WHITE	COMMON	PPB1, PPB2, PPB3, PPB4	NOT USED	NOT USED
3	RED	PHASE 4 PPB	PPB3 & PPB4	SPARE	SPARE
4	GREEN	SPARE	SPARE	NOT USED	NOT USED
5	ORANGE	SPARE	SPARE	NOT USED	NOT USED

- 1/ IDENTIFY CONDUCTORS LISTED AS "115 VOLTS".
- 2/ WRAP RING 2 CABLE AT EACH SPLICE POINT WITH COLORED ELECTRICAL TAPE. THE IDENTIFICATION MARKING SHALL BE PROVIDED ON EACH RING 2 CABLE AT EACH SPLICE AND LOCATED 6" BACK FROM THE END.
- 3/ IDENTIFY CONDUCTORS LISTED AS "PPB - LOW VOLTAGE" AT EACH SPLICE POINT. FIVE (5) CONDUCTOR CABLE SHALL BE 24 VOLTS AND USED FOR PUSH BUTTONS ONLY.

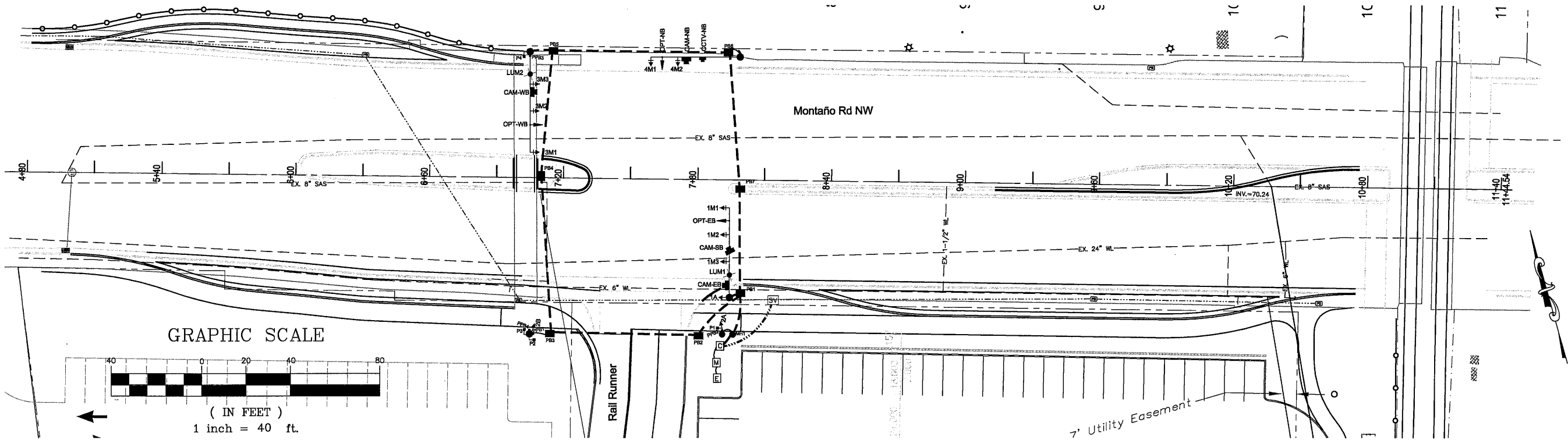


KEYED NOTES

- 1 INSTALL IN CONTROLLER CABINET:
(1) 435.300 UNINTERRUPTED POWER SUPPLY
(1) 435.700 FIELD ETHERNET TO SERIAL DATA TERMINAL SERVER
(1) 435.702 MANAGED FIELD ETHERNET SWITCH
- 2 EXISTING FIBER OPTIC CONDUIT (INSTALLED UNDER CITY PROJECT NO. 7851.82) AND EXISTING FIBER OPTIC CABLE (INSTALLED UNDER CITY PROJECT NO. 7908.04)
- 3 EXISTING SPLICE VAULT (INSTALLED UNDER CITY PROJECT NO. 7908.04)
- 4 EXISTING FIBER OPTIC PULLBOX (INSTALLED UNDER CITY PROJECT NO. 7851.82) TO BE RELOCATED BEHIND NEW CURB
- 5 INSTALL NEW SPLICE CLOSURE IN EXISTING SPLICE VAULT (SEE DETAIL, SHT. 25)
- 6 NEW 3" R.E.C. WITH NEW 6 SFMO CABLE TO BE INSTALLED BETWEEN CC AND SPLICE VAULT

NOTE

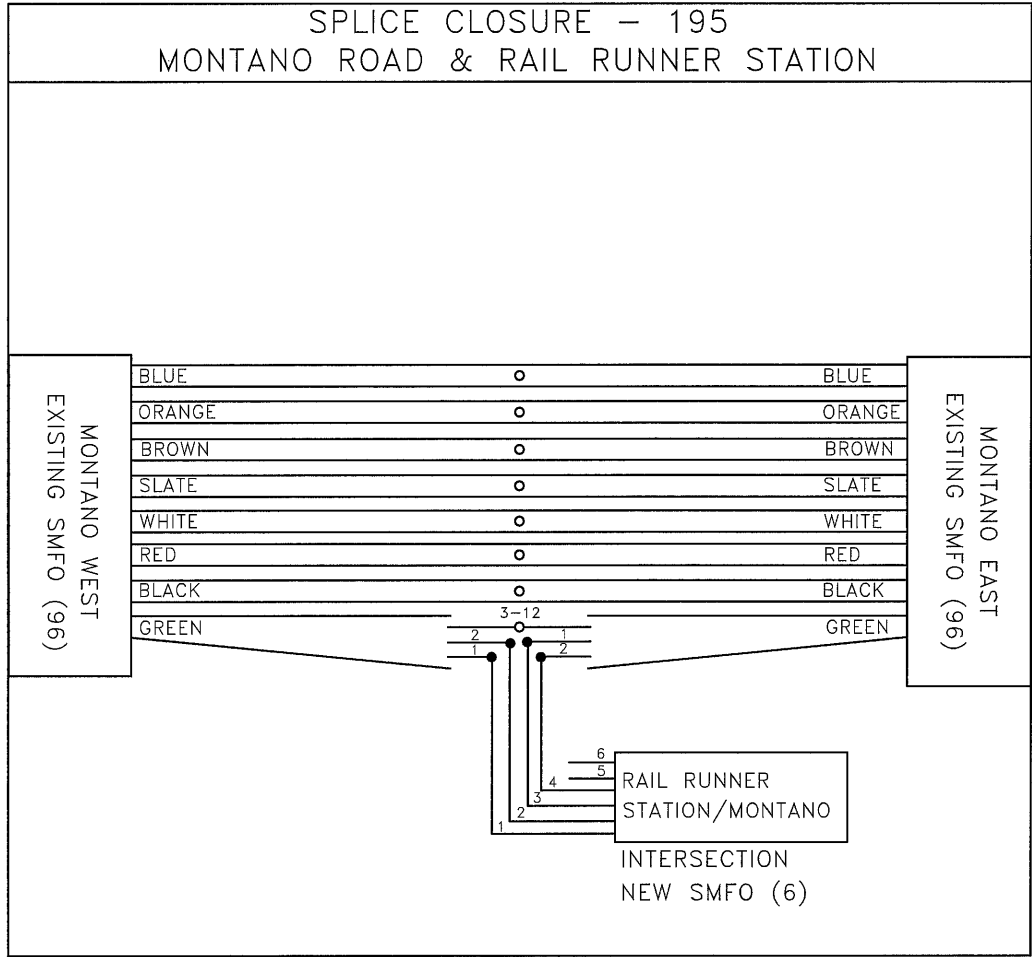
The Contractor shall provide and maintain an experienced team throughout the life of the project for all services applying to the construction of fiber optic signal communication equipment. The Engineer must approve the substitution of a team member. An experienced team shall be composed of trained personnel (be it managers, supervisors, foremen, laborer or subcontractor) present during all installation of fiber optic communications cable and equipment. Specifically, personnel shall have taken and passed the Fiber Optics 1-2-3 or BISC1 Fiber 300 course or an approved 3+ day classroom and hands-on training course. The Engineer may direct that activity on this project will cease as a result of the absence of an experienced team member from the project. Activity will not be allowed to resume until the team members are all present. No extension of Contract Time will be allowed for such cessation of activity.



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTAÑO STATION MONTAÑO BLVD. INTERCONNECT PLAN			
Design Review Committee	City Engineer Approval	No. / Day / Yr.	No. / Day / Yr.
City Project No.	Zone Map No.	Sheet	Of
559282	F-15	11	12

SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	BY	DATE	NO.	CONTRACTOR	DATE
			1	ROD SET BENEATH A 5 1/2" ACCESS	DATE
			2	COVER STAMPED "D-438, 1984" SE	DATE
			3	QUADRANT OF MONTAÑO RD. & BNSF	DATE
			4	RAILROAD TRACKS, 42.5 FT± EAST OF	DATE
			5	CENTERLINE OF TRACKS, 44 FT± SOUTH OF	DATE
			6	CENTERLINE OF MONTAÑO RD., 1.1 FT. WEST OF CHAIN LINK FENCE	DATE

REVISIONS		MICRO-FILM INFORMATION	
NO.	DATE	REMARKS	DATE
1	6/2010	DESIGN	DATE
2	6/2010		DATE
3	6/2010		DATE



LEGEND:

- NEW FUSION SPLICE
- EXISTING FUSION SPLICE

BUFFER TUBE ASSIGNMENTS
BLUE – BACKBONE (NON LOCAL)
ORANGE – LOCAL
GREEN – LOCAL
BROWN –
SLATE –
WHITE –
RED –
BLACK –



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION			
TITLE: NEW MEXICO RAIL RUNNER EXPRESS MONTAÑO STATION FIBER OPTIC SPLICE DETAIL			
Design Review Committee	City Engineer Approval	No. / Day / Yr.	
Last Design Update			
City Project No.	Zone Map No.	Sheet	Of
559282	F-15	12	12

SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
FIELD NOTES		(NAYD88) 4978.07 NGS STAINLESS STEEL	ROD SET BENEATH A 5 1/2" ACCESS	CONTRACTOR	DATE
NO.	BY	COVER STAMPED "D-438, 1984" SE	QUADRANT OF MONTANO RD. & BNSF	WORK STARTED BY	DATE
				FIELD INSPECTION BY	DATE
				REVISIONS	DATE
				DESIGNED BY	DATE
				DRAWN BY	DATE
				CHECKED BY	DATE
				RECORDED BY	DATE
				NO.	DATE