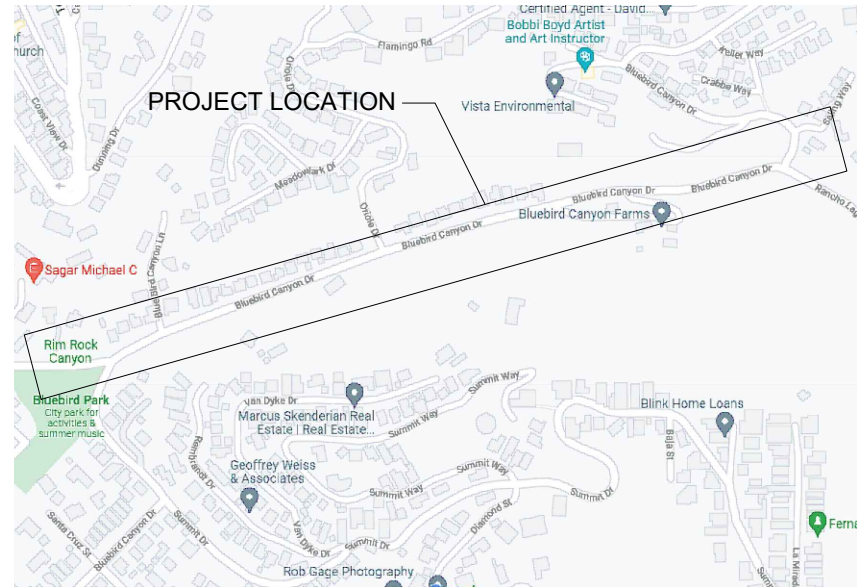


**FRONTIER COMMUNICATIONS
CONSTRUCTION SPECIFICATIONS**

- Contact Frontier Engineer ARIEL FATALLA 714-813-5270 sixty (60) days prior to need of service in order to confirm compliance, order materials, and schedule work forces.
- Frontier Communications, Incorporated reserves the right to refuse any conduits, pull boxes, manholes or utility boxes that deviate from plans and specifications.
- CHANGES OR DEVIATIONS FROM THIS PLAN MUST BE APPROVED BY FRONTIER.
- CONTACT THE FRONTIER INSPECTOR 48 HOURS BEFORE TRENCHING AND UPON COMPLETION OF YOUR SUBSTRUCTURES TO SCHEDULE THE FINAL INSPECTION.
- Frontier Inspector shall be present on site when contractor needs to access any existing Frontier facility.
- All conduit riser bends to have a minimum thirty-six (36) inch radius.
- All horizontal ninety degree bends shall have a radius of not less than 12 feet and all vertical ninety degree bends shall have a radius of not less than three feet. No more than two (2) ninety degree horizontal bends shall be placed in any single run unless otherwise specified. Contact Frontier engineer concerning any required deviations.
- All conduit must be proven using a mandrel no less than a 1/2" smaller than the conduit to be accepted. Mule tape shall be placed in all conduits proven. Wall to wall measurements must be taken with a mule tape.
- Accurate AS-BUILTS shall be provided to the Frontier inspector assigned to this project. AS-BUILTS shall include conduit section measurements, wall to wall footages, stations and offsets of AS-BUILT Frontier structures, and the cover to the top of the Frontier underground structure placed. Copy of the AS-BUILT conduit work order must be provided to the Frontier inspector assigned to your project.
- Contact FRANK FUENTES @ 714-375-9554 for coordination of inspection dates.
- Place weatherproof cap on end of all conduits terminated outside of a building.
- Place temporary weatherproof cap on end of all conduits exposed during construction.
- Rigid steel, approved plastic conduit (PVC Schedule #40, TYPE-C (4") or DB-120 (2") or Frontier provided or approved Roll Sheet sub duct, is specified for underground construction. Condulets, Flex, Transite, Plumbers fittings, Water and Gas Pipes must NOT be used. Rigid steel must be used when conduit can be exposed to vehicular traffic.
- Conduit terminated on a pole must be PVC Schedule 80. If conduit will be exposed to traffic, rigid steel pipe and sweep is required to 48" above finished grade otherwise turned up 12" above finished grade. Location of riser on pole will be as shown on conduit plan and location can be modified by approval of Frontier engineer/inspector only.
- Minimum separation from other utilities shall be a minimum of 12". Conduit placed in same trench with primary power conduit must be separated by no less than twelve inches (12") of well-packed sand or three inches (3") of concrete. Minimum cover shall be no less than thirty (30") inches measured from the final grade of the street flow line to the top of Frontier structure unless noted otherwise. Ducts placed in the driven portion of the roadway must have no less than 48 inches (48") of cover to top of pipe measured at flow line of roadway.
- FRONTIER RECOMMENDATIONS: Provide a minimum 1-4" conduit home run from each suite location to the main terminal backboard in lieu of running cables over drop ceiling access. Frontier will not install cables not contained in conduit.
- Provide source of ground at the telephone backboard location: (1) #6 insulated copper wire (solid preferred) to power system ground. - (1) #6 insulated copper wire (solid preferred) to permanent metallic structure such as UFER ground or building steel. - (1) #6 insulated copper wire (solid preferred) to metallic water pipe bonded to previously described permanent metallic structure. Leave adequate wire to extend six feet beyond base of backboard. NOTE: THE FOLLOWING MUST NOT BE USED FOR GROUND SOURCES: ROOF TRUSSES, FLOOR JOINTS, BRACES, SPRINKLER SYSTEM PIPES, METAL ELECTRICAL DISTRIBUTION CONDUIT, AND HORIZONTAL STEEL MEMBERS LESS THAN 3/8" THICK.
- Provide cable racking as described in attachment. Provide pulling irons as described in attachment.
- Three to six weeks will be needed from the date of final inspection for Frontier to start placing facilities. All paperwork and easements must also be completed, if applicable.
- Work crew to adjust manholes to final grade as shown on the approved grading plan.
- Actual footages of conduit are needed to order materials.

CONDUIT DESIGN UNDERGROUND RELOCATION

**BLUEBIRD CANYON RD BETWEEN CRESS ST & SAILING WAY
LAGUNA BEACH, CA**



**VICINITY MAP
NTS**

PICK UP POINT:
EX. MH 60L
STA. 496+72

PATH LENGTH:
JOINT TRENCH = 4,223'

MATERIALS:
3,386' OF 2" PVC
4,776' OF 4" PVC
(2) 11"x18" HANDHOLES
(3) 17"x30" HANDHOLES
(5) 2'X3' PULL BOXES

SHEET INDEX
1 - COVER
2 - CONDUIT DESIGN
3 - DETAILS

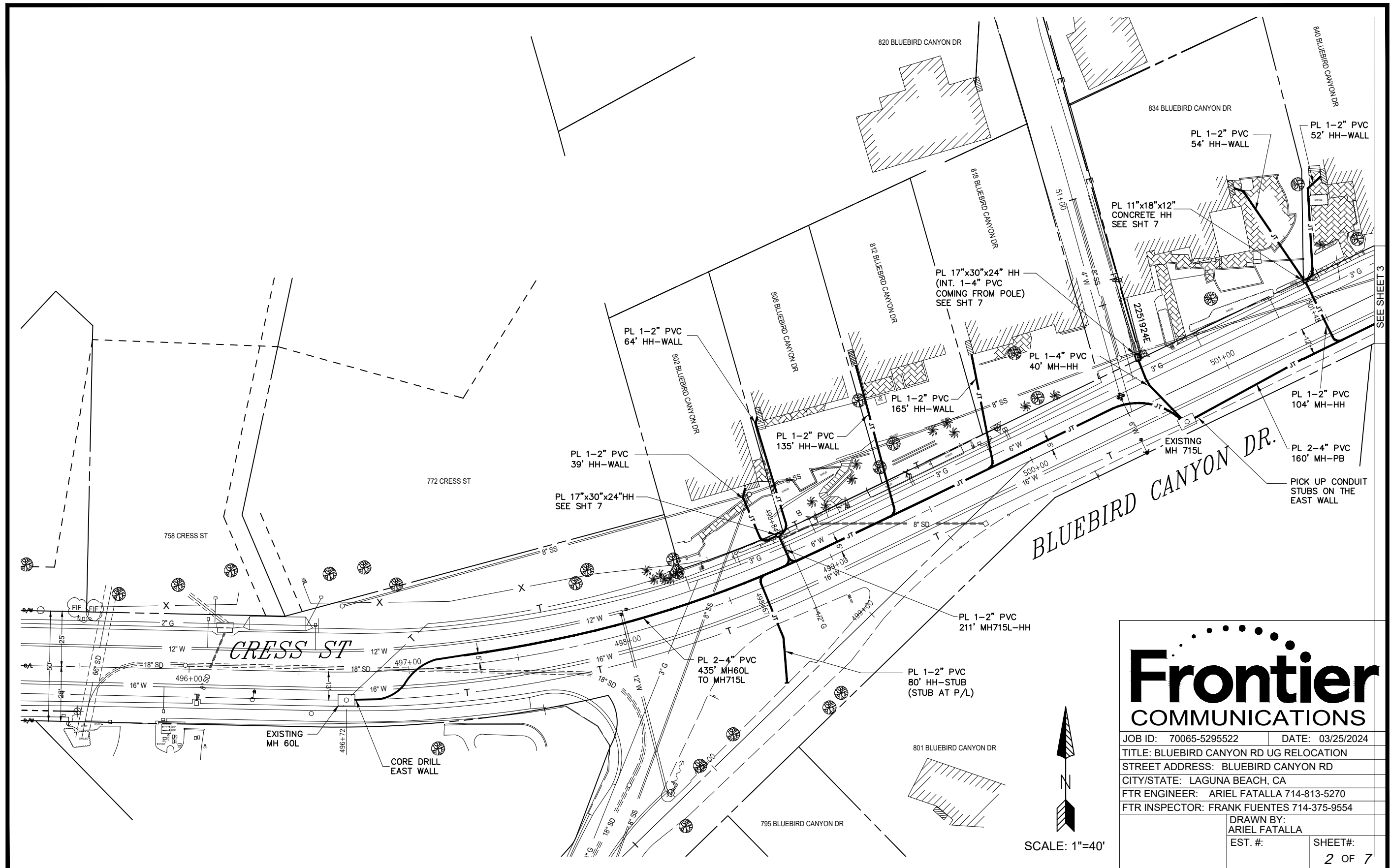
ABBREVIATIONS	PROPOSED	EXISTING
BUILDING	BLDG	bdg
CENTERLINE	C/L	c/l
CONCRETE	CONC	conc
SIDEWALK	CSW	csw
DRIVEWAY	DWY	dwy
EDGE OF PAVEMENT	EOP	eop
FACE OF CURB	FOC	foc
HANDHOLE	HH	hh
MANHOLE	MH	mh
PEDESTAL	PED	ped
POLYVINYL CHLORIDE	PVC	pvc
SUB DUCT	SD	sd
PROPERTY LINE	P/L	p/l
RAILROAD	RR	rr
RAILROAD R/W	RR R/W	rr r/w
RIGHT OF WAY	R/W	r/w
SOUTHERN CAL EDISON	SCE	sce
WALL TO BUILDING	W-B	w/b
WALL TO POLE	W-P	w/p
NOT TO SCALE	NTS	

LEGEND

CONDUIT		
	Mainline/Backbone Conduit or ABS	
	Service Lateral Conduit	
	Joint Trench	
	Sole Trench	
	Proposed Construction Call Out	
UTILITIES		
	Existing	Proposed
Gas	g	G
Water	w	W
Telephone	t	T
San Sewer	ss	SS
Electric	e	E
Storm Drain	sd	SD
POLES		
	Existing	Proposed
Frontier Owned	○	○
Foreign Owned	×	×
Joint Owned	⊗	⊗
FACILITIES		
Manhole		
Handhole		
PullBox		
Bore Pit		
5/8"-8' Copper Ground Rod		
	Material provided by Frontier & Placed by Developer.	
	Non-Reimbursable Material Provided & Placed by Developer.	

Frontier
COMMUNICATIONS

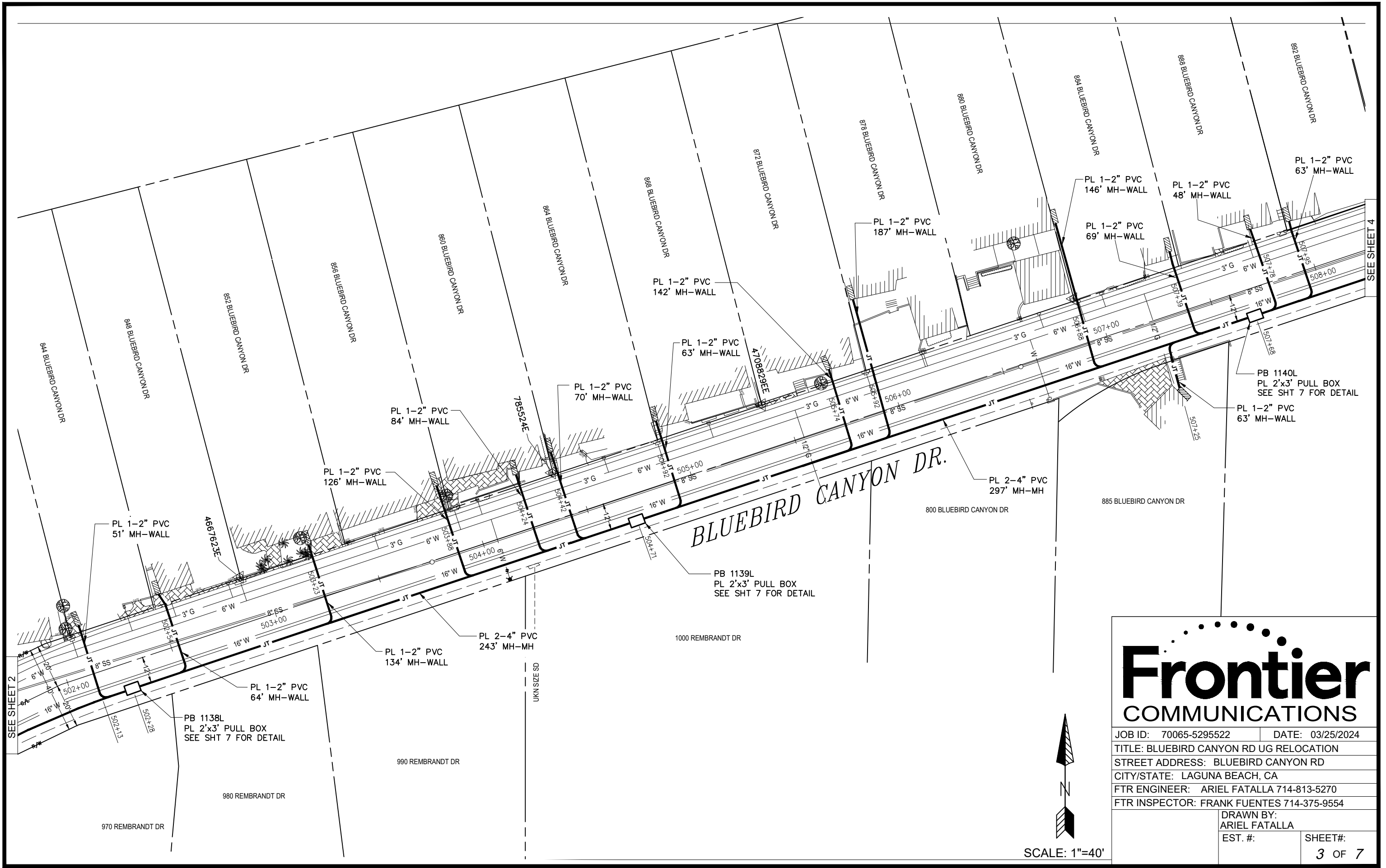
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STREET ADDRESS: BLUEBIRD CANYON RD	
CITY/STATE: LAGUNA BEACH, CA	
FTR ENGINEER: ARIEL FATALLA 714-813-5270	
FTR INSPECTOR: FRANK FUENTES 714-375-9554	
DRAWN BY: ARIEL FATALLA	
EST. #:	SHEET#:
	1 OF 7



Frontier
COMMUNICATIONS

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FTR INSPECTOR: FRANK FUENTES 714-375-9554	
DRAWN BY: ARIEL FATALLA	
EST. #:	SHEET#:
	2 OF 7

SEE SHEET 3



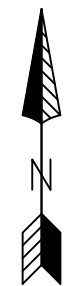
SEE SHEET 2

SEE SHEET 4

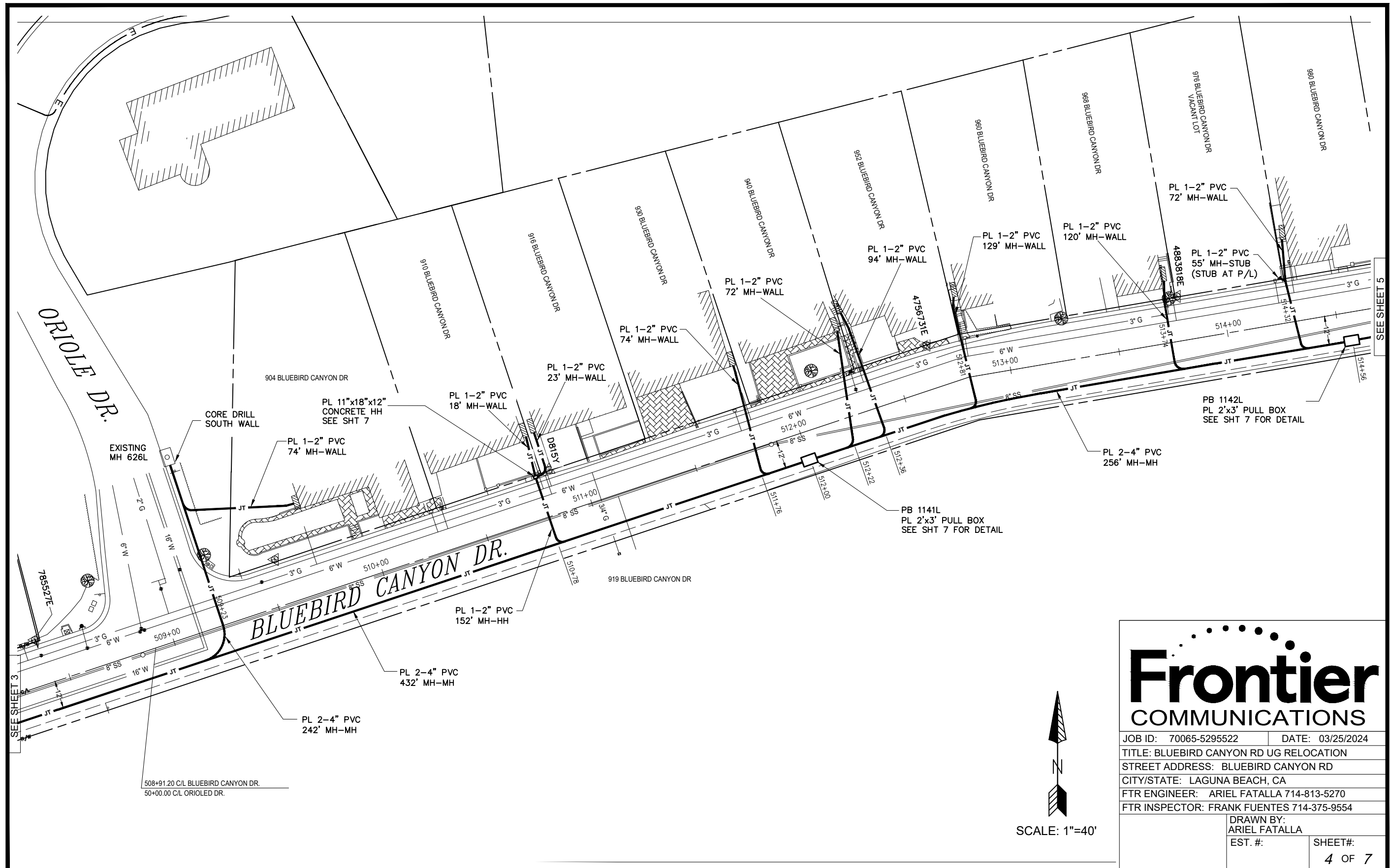
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 CITY/STATE: LAGUNA BEACH, CA
 FTR ENGINEER: ARIEL FATALLA 714-813-5270
 FTR INSPECTOR: FRANK FUENTES 714-375-9554

DRAWN BY:
 ARIEL FATALLA
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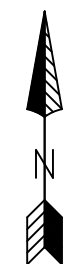


SCALE: 1"=40'



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COMMUNICATIONS

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DRAWN BY: ARIEL FATALLA	
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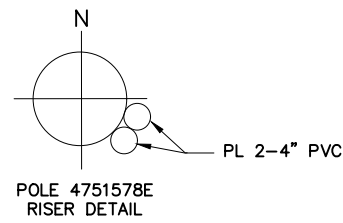
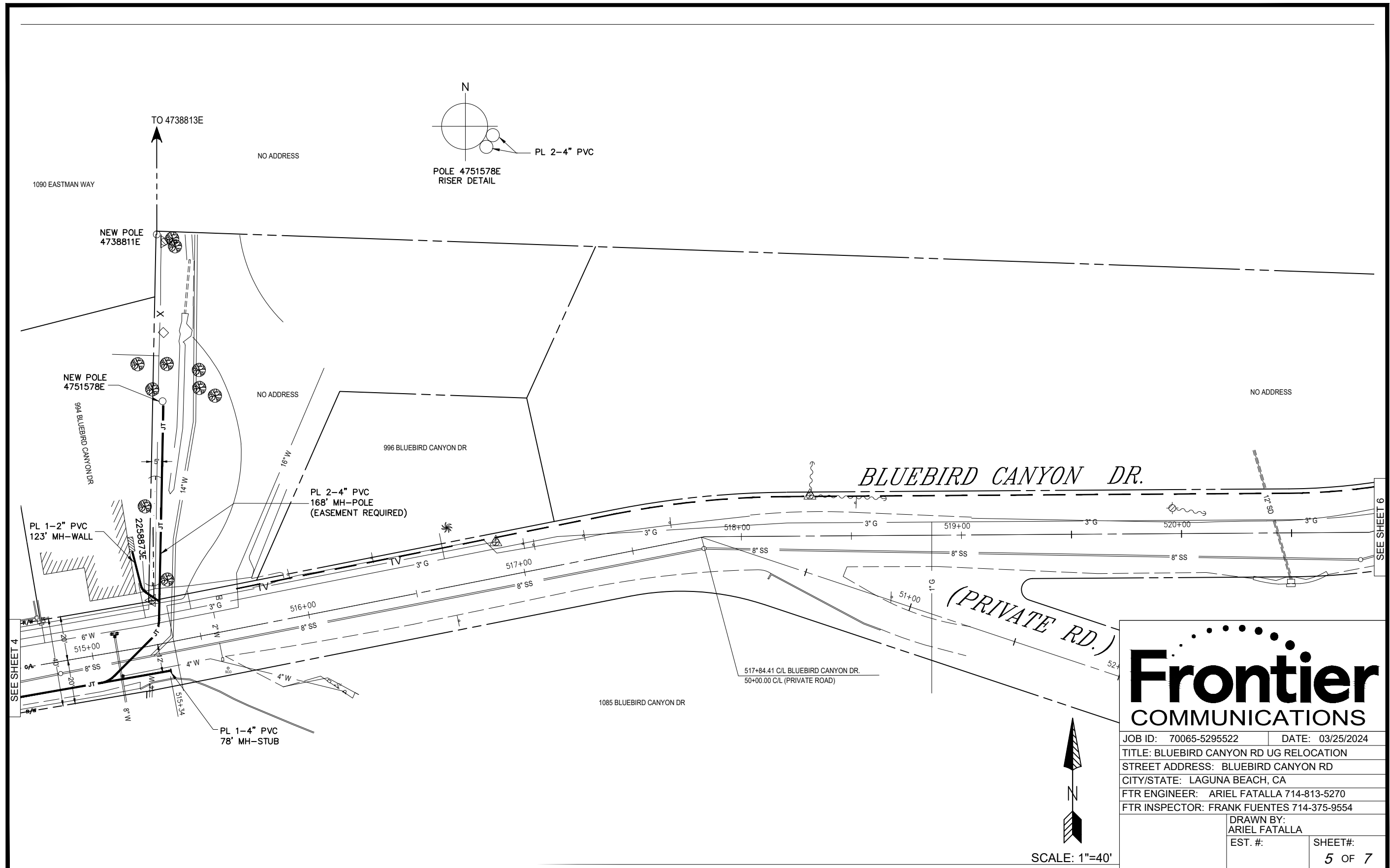


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SEE SHEET 5

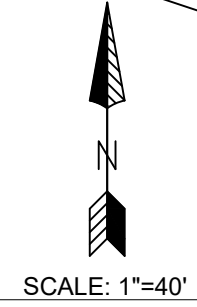
SEE SHEET 3

508+91.20 C/L BLUEBIRD CANYON DR.
50+00.00 C/L ORIOLE DR.



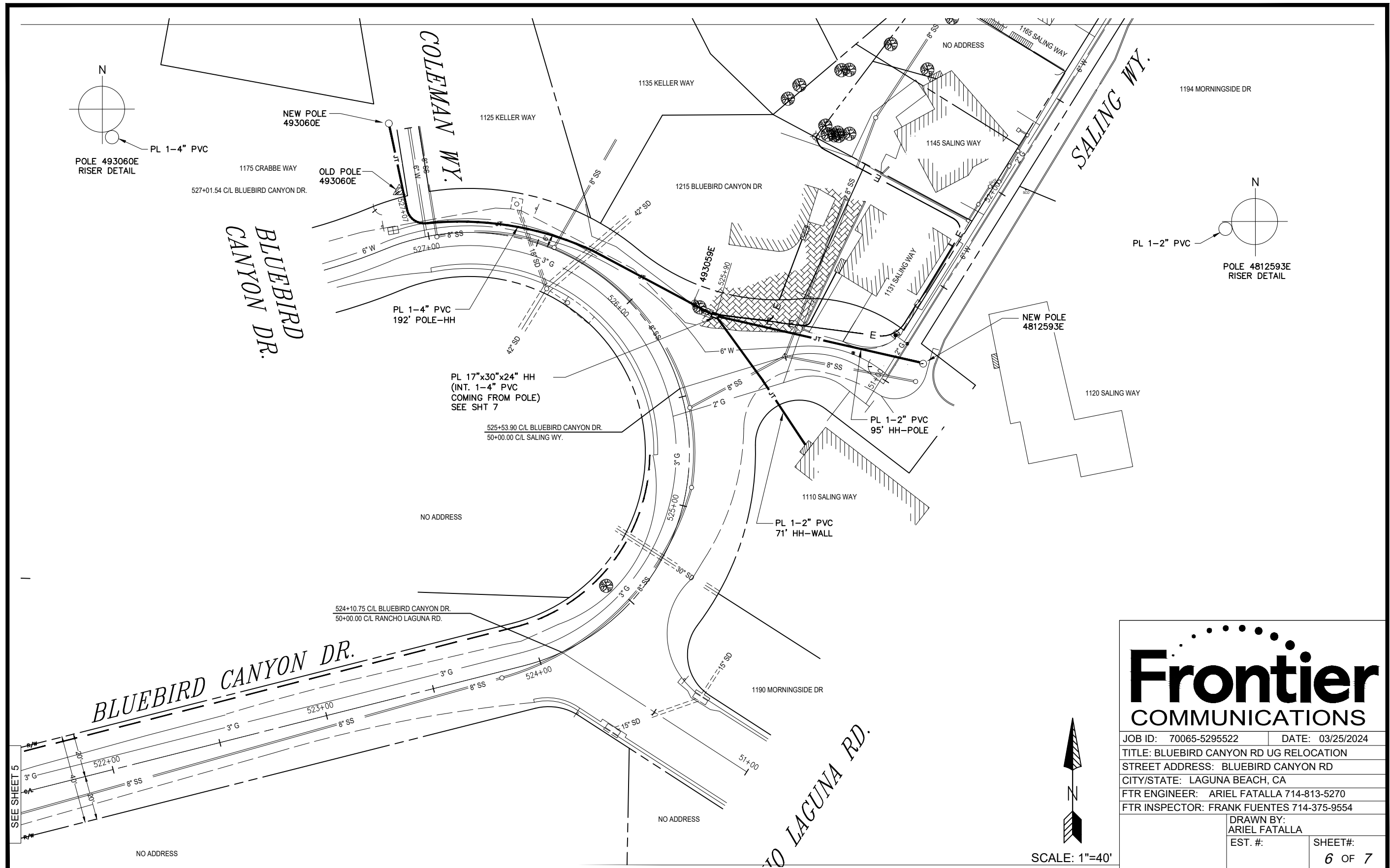
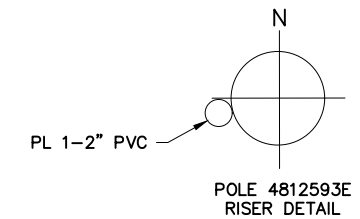
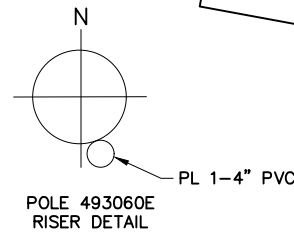
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FTR INSPECTOR: FRANK FUENTES 714-375-9554	
DRAWN BY: ARIEL FATALLA	
EST. #:	SHEET#: 5 OF 7



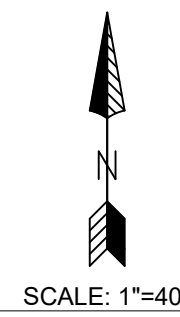
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SEE SHEET 6



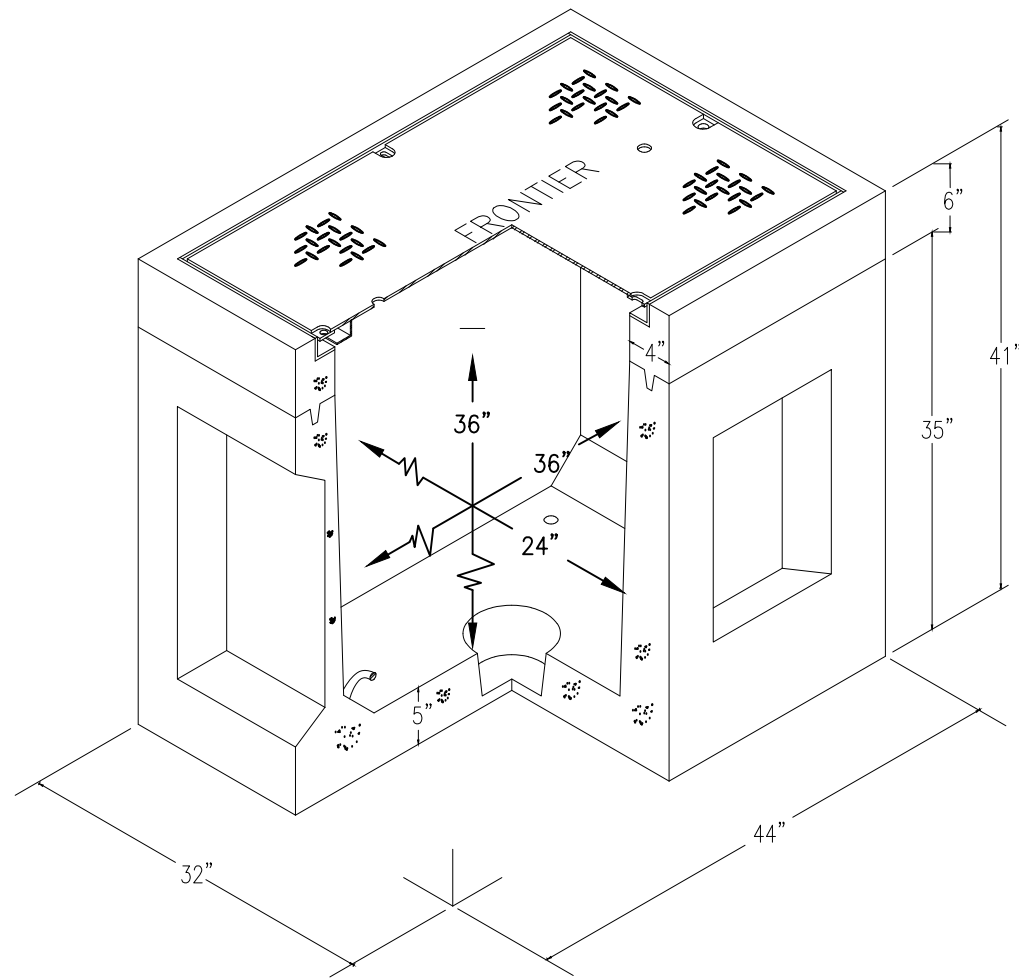
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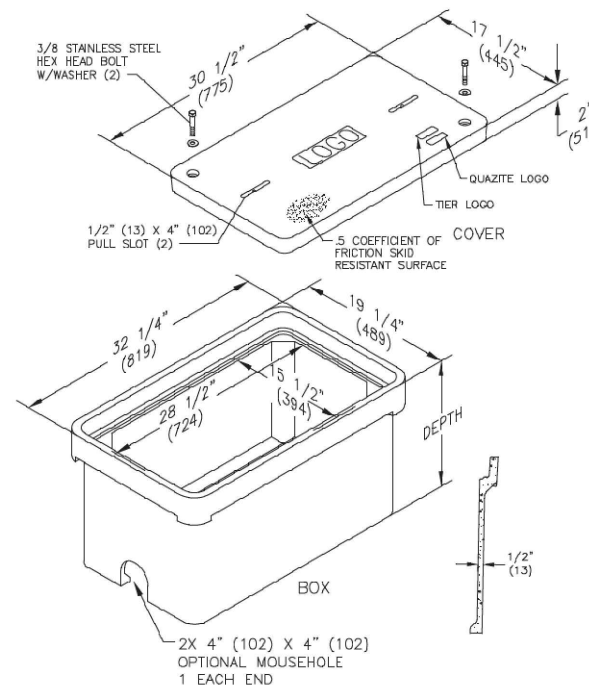


SEE SHEET 5

2'X3'X3' PULL BOX
TRAFFIC RATED STEEL COVER



17"x30"x24" CONCRETE HANDHOLE
OPEN BOTTOM



CONCRETE PRODUCTS

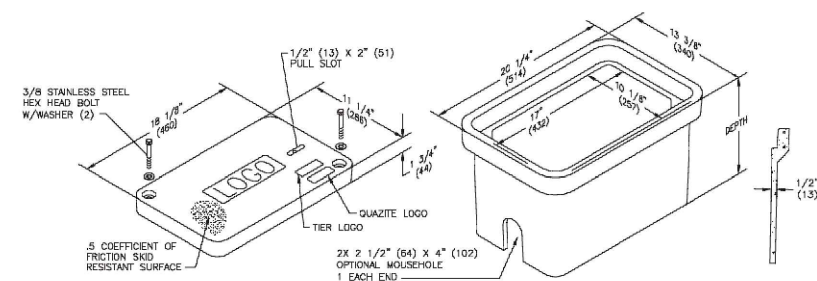
PRECAST CONCRETE ITEM COMPLETE WITH NECK,
COVER AND INSERTS MAY BE OBTAINED
FROM ANY OF THE FOLLOWING LISTED AND
APPROVED MANUFACTURERS:

JENSEN PRECAST
14221 SAN BERNARDINO AVE, FONTANA, CA 92335
PHONE: 909-350-4111
800-257-6100

OLDCASTLE INFRASTRUCTURE
10650 HEMLOCK AVE, FONTANA, CA 92337
PHONE: 909-428-3700
800-626-3860

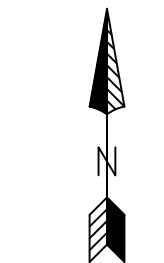
HUBBELL/QUAZITE
JEFF OLSON
PHONE: 626-243-8607
EMAIL: JOLSON@HUBBELL.COM

11"x18"x12" CONCRETE HANDHOLE
OPEN BOTTOM



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DRAWN BY:
ARIEL FATALLA
EST. #: | SHEET#:



SCALE: 1"=40'

7 OF 7