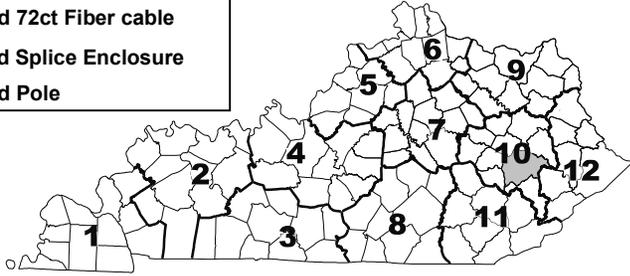


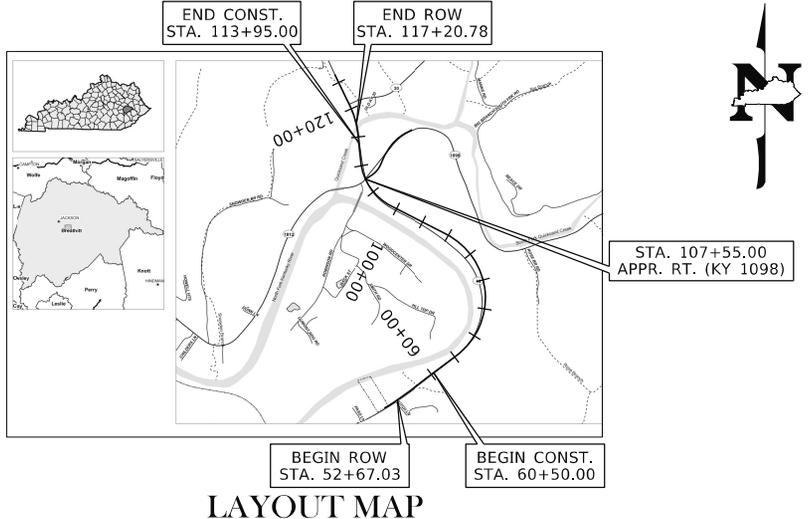


LEGENDS

- Existing CBN Cable
- Existing Fiber Cable
- Proposed 48ct Fiber cable
- Proposed 72ct Fiber cable
- Proposed Splice Enclosure
- Proposed Pole



**Crystal Broadband Networks, Inc
Proposed Relocation Plans for
KY 10-5014.00 Project**



LAYOUT MAP

DESIGN CRITERIA	
CLASS OF HIGHWAY	RURAL PRINCIPAL ARTERIAL
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	55 MPH
REQUIRED NPSD	495'
REQUIRED PSD	900'
LEVEL OF SERVICE	N/A
ADT PRESENT (2020)	9,400
ADT FUTURE (2040)	10,000
DHV	27
D %	57.0
T %	4.6
GEOGRAPHIC COORDINATES	
LATITUDE	37 DEGREES 31 MINUTES 56 SECONDS NORTH
LONGITUDE	83 DEGREES 20 MINUTES 31 SECONDS WEST
DESIGNED	
% RESTRICTED SD	
LEVEL OF SERVICE	
MAX. DISTANCE W/O PASSING	

INDEX OF SHEETS			
SHEET NO.	DESCRIPTION		
R1	LAYOUT SHEET		
R2 - R2k	TYPICAL SECTIONS - SUMMARY OF QUANTITIES		
R3 - R16	PLAN AND PROFILE SHEETS		
R17	RIGHT OF WAY SUMMARY SHEET		
R18	RIGHT OF WAY STRIP MAP SHEET		
R19	RIGHT OF WAY MONUMENTATION SHEET		
R20	COORDINATE CONTROL SHEET		
R21 - R21j	DETAIL SHEETS		
R22 - R23	SIGNING SHEETS		
R24 - R32	TRAFFIC CONTROL SHEETS		
R33 - R37	EROSION CONTROL SHEETS		
R38 - R48	GEOTECH SHEETS		
R49 - R55	PIPE DRAINAGE SHEETS		
STANDARD DRAWINGS			
TPM-115	TTC-180-02	RBR-020	RDX-220-05
TPM-170-01	TTC-185	RBR-055-01	RDX-225-01
TPM-175	TTS-105-02		RDX-230
TPM-206		RDD-040-05	
TPR-100		RDI-001-10	RGS-001-07
TPR-110	RBE-100	RDI-002-05	RGX-005-06
TPR-115	RBI-001-12	RDI-040	RGX-010-04
TPR-125	RBI-002-07	RDI-041	
	RBI-004-06	RDP-001-06	RPM-110-07
	RBM-116	RDP-005-05	
TTC-100-05		RDP-006-04	
TTC-110-04		RDP-006-04	
TTC-135-03	RBR-005-11	RDP-010-09	
TTC-185-02	RBR-015-06	RDX-210-33	

THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT

THIS PROJECT IS ON THE NH SYSTEM

LENGTH	UN. FT.	MILES									
ADDED	FOR EQUALITIES										
NOT INCLUDED			NOT INCLUDED			NOT INCLUDED			NOT INCLUDED		
RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.			RAILROAD CROSSINGS NO.		
BRIDGES			BRIDGES			BRIDGES			BRIDGES		

PROJECT NUMBER: FEDERAL: 0151094
STATE: FD52 013 001 5 013-015

PROJECT DESCRIPTION: ROCKFALL MITIGATION ON KY 15 FROM 0.593 MILES NORTH OF BEAVERLY ROAD (MP 13.750) TO KY-1098/KY-1813 (MP 14.644).

RECOMMENDED BY: DARREN BACK, P.E.	DATE:	LETTING DATE:
PLAN APPROVED BY:	DATE:	ITEM NO. 10-5014.00 COUNTY OF BREATHITT
		SHEET NO. R1

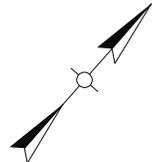
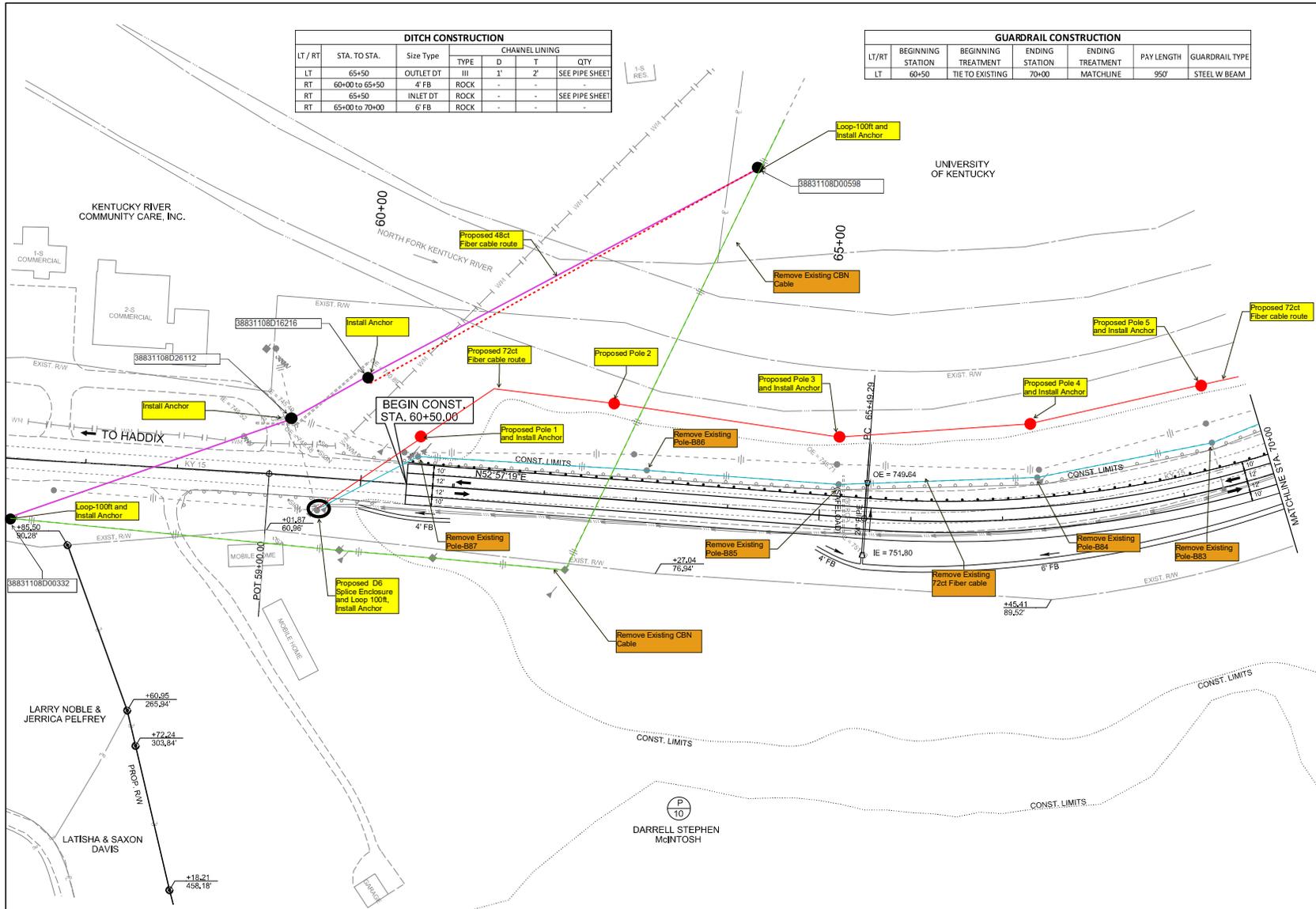


Corporate Limits		ADA Ramp		Headstone		Sign group (4)	
County Line		Anchor Pole		Interstate Shield		Station Stamp	
Easement		Benchmark		Iron Pin		Storm Manhole	
Fence COA		Bike Lane Symbol		Light Pole		Stub Power	
Mineral Parcel		Bollard		Low Wire		Stub Telephone	
Property Line		Centerline		Mailbox		Survey Cross Notch	
Right of Way Line		Centerline Stationing		Manhole		Survey Curb Notch	
All Overhead Utility Lines		Control Monument		Mineral Parcel		Survey Nail	
Electric Line Underground		Control Point		Misc Location Point		Survey Spike	
Electric Line Underground Duct		Core Hole		Monitoring Well		Survey Stone Marker	
Gas Main		Crash Cushion TY 6 D		Parking Meter		Swamp	
Sanitary Force Main		Crash Cushion TY 6 A		Pedestrian Signal		Telephone Booth	
Telephone Underground Cable		Crash Cushion TY 9A		Pins/Pipes		Telephone Junction Box	
Telephone Underground Duct		Crash Cushion TY 9		PK Nail		Telephone Line Overhead	
Fiber Optic Cable		Cross Notch		Point (Misc)		Telephone Manhole	
Television Line Underground		Curb Box Inlet		Pole		Telephone Pedestal	
Water Main		Curb Notch		Pole (Light)		Telephone Pole	
Storm Sewer		Combination Pole		Post		Temporary Benchmark	
Cable Guardrail		Delineator Post		Power Pole		Traffic Light	
Ditch		Drop Box		Quarry		Traffic Signal Control Box	
Edge of Water		Existing Spring		Random (Ground Shot)		Traffic Signal Junction Box	
Fence Hedge		Electric Manhole		Railroad Mile Marker		Traffic Signal Pole	
Fence		Electric Meter		Railroad Spike		Traverse Point	
Flow Line/Thalweg/Int. Stream or Ditch		Electric Pedestal		Right of Way Marker		Tree	
Guardrail		Electric Pole		Right of Way Monument		TV Junction Box	
Railroad		Electric Junction Box		RR Traffic Signal Pole		Utility Pole	
Shrub Line		Fire Hydrant		RW Parcel		Underground Storage Tank	
Sink Hole		Flag Pole		Sanitary Cleanout		Utility Test Hole	
Tree Line		Force Main Sewer Valve		Sanitary Manhole		Water Line Marker	
Wall (WSM or DSM)		Fuel Tank Inlet		Satellite Dish		Water Meter	
Blue Line Stream		Fuel Tank Vent		Septic Tank Cleanout		Water Spigot	
Lakes and Ponds		Gasline Marker		Service Pole		Water Valve	
Regulated Floodway		Gas Meter		Sewer Air Release Valve		Water Well	
RDZ Line		Gas Monitoring Well		Shrub		Yard Light	
		Gas Valve		Sign		Yard Sprinkler	
		Gas Vent		Sign Post (Single)		Yard Sprinkler Water Valve	
		Gas Well		Sign with 2 posts			
		Guidewires & Anchors					

Utility Owners	
Jackson Municipal Water (606) 666-2056 333 Broadway St. Jackson, KY	Water Sewer
Kentucky Power - AEP Christian, Doug 1400 East Main St. Hazard, KY 41701	Electric
Thacker-Grigsby Telephone Co. Williams, Freddy PO Box 789 Hindman, KY 41822 (606) 785-9500	Fiber
Windstream Lady, Gary 719 North Main St. London, KY 40741	Telephone

DITCH CONSTRUCTION						
LT / RT	STA. TO STA.	Size Type	CHANNEL LINING			QTY
			TYPE	D	T	
LT	65+50	OUTLET DT	III	1'	2'	SEE PIPE SHEET
RT	60+00 to 65+50	4' FB	ROCK	-	-	-
RT	65+50	INLET DT	ROCK	-	-	SEE PIPE SHEET
RT	65+00 to 70+00	6' FB	ROCK	-	-	-

GUARDRAIL CONSTRUCTION						
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH	GUARDRAIL TYPE
LT	60+50	TIE TO EXISTING	70+00	MATCHLINE	950'	STEEL W BEAM



INITIAL KY 15
 PI STA: 85+12.75
 (X) = 5620963.4631
 (Y) = 3725620.1943
 D = 115°52'13" LT
 C = 04°39'29"
 T = 1963.46'
 L = 2487.45'
 R = 1230.00'
 E = 1086.91'
 e = 7.6%
 Runoff (Back) = 182'
 Runoff (Ahead) = 318.5'
 Runout (Back) = 47.9'
 Runout (Ahead) = 83.83'

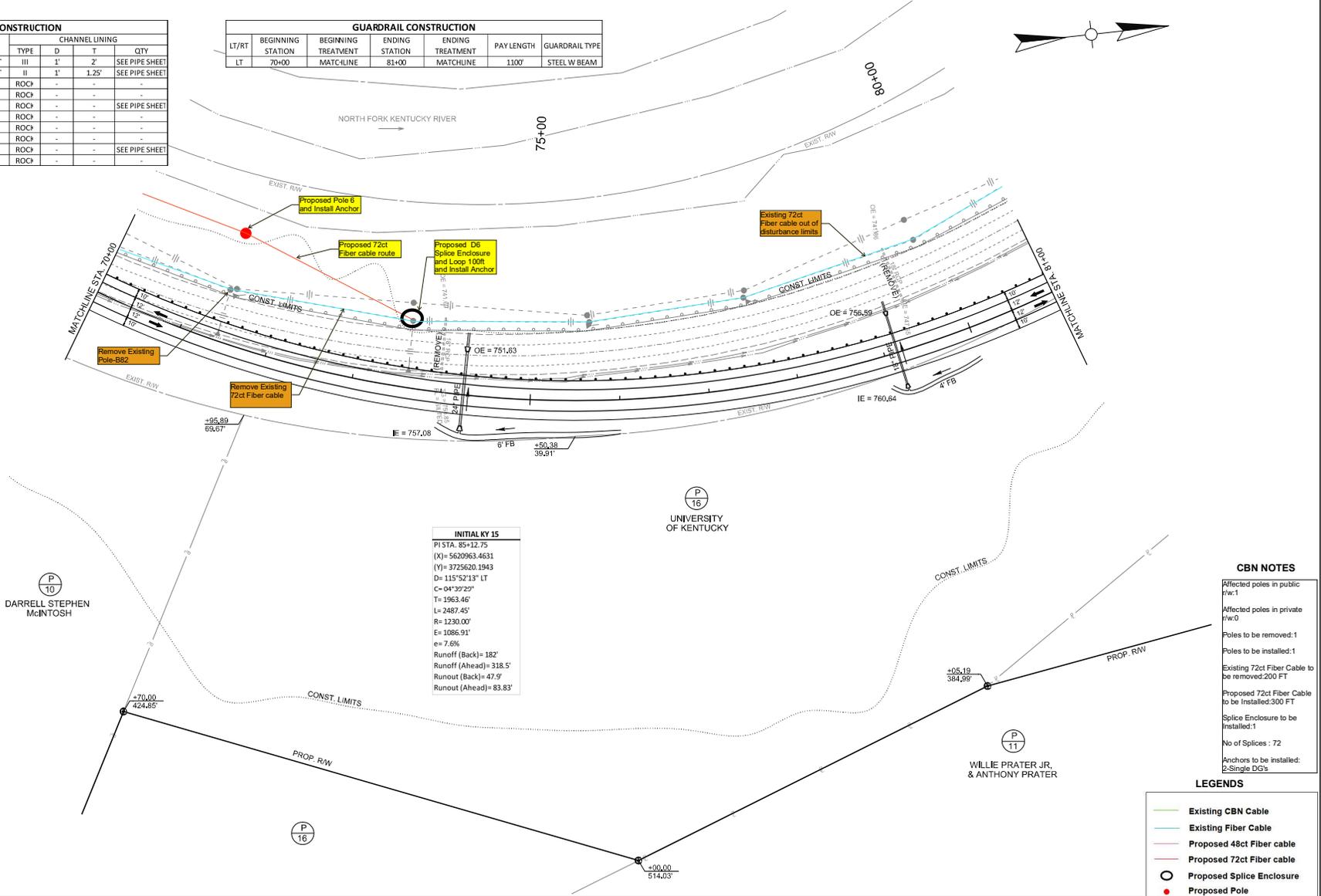
CBN NOTES
 Affected poles in public f/w: 5
 Affected poles in private f/w: 4
 Poles to be removed: 5
 Poles to be installed: 5
 Existing CBN Cable to be removed: 1200 FT
 Existing 72ct Fiber Cable to be removed: 1200 FT
 Proposed 48ct Fiber Cable to be Installed: 1200 FT.
 Proposed 72ct Fiber Cable to be Installed: 1300 FT
 Splice Enclosure to be Installed: 1
 No of Splices : 72
 Anchors to be installed: 6-Single DG's

LEGENDS

	Existing CBN Cable
	Existing Fiber Cable
	Proposed 48ct Fiber cable
	Proposed 72ct Fiber cable
	Proposed Splice Enclosure
	Proposed Pole

DITCH CONSTRUCTION						
LT / RT	STA. TO STA.	Size Type	CHANNEL LINING			
			TYPE	D	T	QTY
LT	74+25	OUTLET DT	III	1'	2'	SEE PIPE SHEET
LT	79+15	OUTLET DT	II	1'	1.25'	SEE PIPE SHEET
RT	65+00 to 70+00	6' FB	ROCP	-	-	-
RT	74+00 to 74+25	6' FB	ROCP	-	-	-
RT	74+25	INLET DT	-	-	-	SEE PIPE SHEET
RT	74+25 to 76+00	6' FB	ROCP	-	-	-
RT	76+00 to 79+00	4' FB	ROCP	-	-	-
RT	79+00 to 79+15	4' FB	ROCP	-	-	-
RT	79+15	INLET DT	ROCP	-	-	SEE PIPE SHEET
RT	79+15 to 81+00	4'	ROCP	-	-	-

GUARDRAIL CONSTRUCTION						
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH	GUARDRAIL TYPE
LT	70+00	MATCHLINE	81+00	MATCHLINE	1100'	STEEL W BEAM



INITIAL KY 15	
PI STA:	85+12.75
(X)=	5620963.4631
(Y)=	3725630.1943
D=	115°52'13" LT
C=	04°32'25"
T=	1963.46'
L=	2487.45'
R=	1230.00'
E=	1086.91'
e=	7.6%
Runoff (Back)=	182'
Runoff (Ahead)=	318.5'
Runout (Back)=	47.9'
Runout (Ahead)=	83.83'

- CBN NOTES**
- Affected poles in public r/w: 1
 - Affected poles in private r/w: 0
 - Poles to be removed: 1
 - Poles to be installed: 1
 - Existing 72ct Fiber Cable to be removed: 200 FT
 - Proposed 72ct Fiber Cable to be installed: 300 FT
 - Splice Enclosure to be installed: 1
 - No of Splices : 72
 - Anchors to be installed: 2-Single DG's

- LEGENDS**
- Existing CBN Cable
 - Existing Fiber Cable
 - Proposed 48ct Fiber cable
 - Proposed 72ct Fiber cable
 - Proposed Splice Enclosure
 - Proposed Pole



GUARDRAIL CONSTRUCTION						
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH	GUARDRAIL TYPE
LT	81+00	MATCHLINE	95+00	MATCHLINE	1400'	STEEL W BEAM

ULTIMATE KY 15
 PI STA. 279+46.03
 (X)=5620215.8815
 (Y)=3726023.8418
 D= 42°47'31" LT
 C= 04°46'29"
 T= 470.18'
 L= 896.23'
 R= 1200.00'
 E= 88.82'
 e= 7.8%
 Runoff = 327.25'
 Runout = 83.83'

INITIAL KY 15
 PI STA. 85+12.75
 (X)= 5620963.4631
 (Y)= 3725620.1943
 D= 115°52'13" LT
 C= 04°39'29"
 T= 1963.46'
 L= 2487.45'
 R= 1230.00'
 E= 1086.91'
 e= 7.6%
 Runoff (Back)= 382'
 Runoff (Ahead)= 318.5'
 Runout (Back)= 47.9'
 Runout (Ahead)= 83.83'

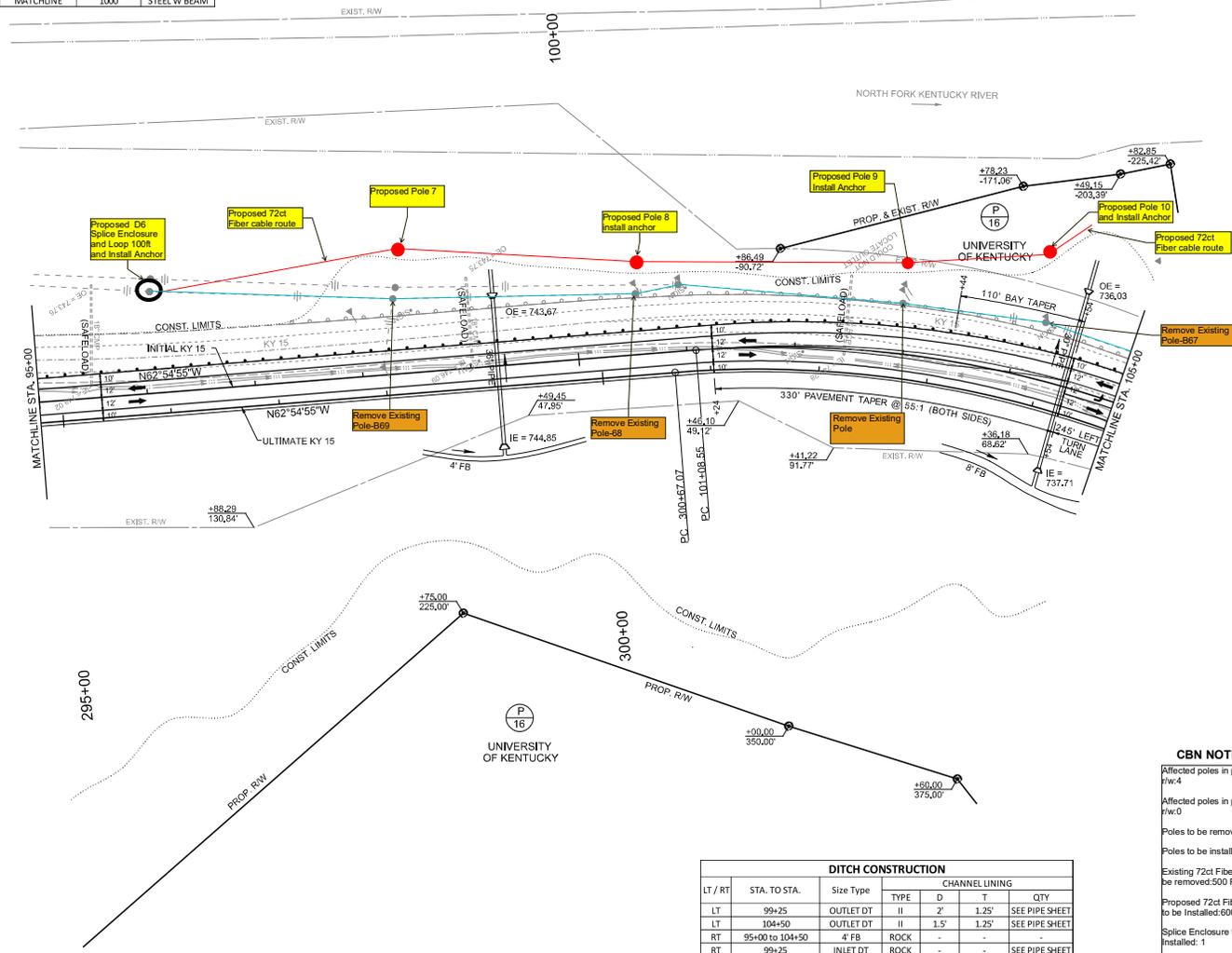
DITCH CONSTRUCTION						
LT / RT	STA. TO STA.	Size Type	CHANNEL LINING			
			TYPE	D	T	QTY
LT	93+25	OUTLET DT	II	2'	1.25'	SEE PIPE SHEET
RT	8100 to 85+00	4 FB	ROCK	-	-	-
RT	85+00 to 89+00	4 FB	ROCK	-	-	-
RT	89+00 to 93+25	6 FB	ROCK	-	-	-
RT	93+25	INLET DT	ROCK	-	-	SEE PIPE SHEET
RT	93+25 to 95+00	4 FB	ROCK	-	-	-

LEGENDS

- Existing CBN Cable
- Existing Fiber Cable
- Proposed 48ct Fiber cable
- Proposed 72ct Fiber cable
- Proposed Splice Enclosure
- Proposed Pole



GUARDRAIL CONSTRUCTION						
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH	GUARDRAIL TYPE
LT	95+00	MATCHLINE	105+00	MATCHLINE	1000'	STEEL W BEAM



INITIAL KY 15	
PI STA.	106+30.40
(X)	= 5617796.4395
(Y)	= 3727239.7844
D	= 57°03'21" RT
C	= 05°58'06"
T	= 521.84'
L	= 955.98'
R	= 960.00'
E	= 132.67'
e	= 8.0%
Runoff	= 336'
Runout	= 84'

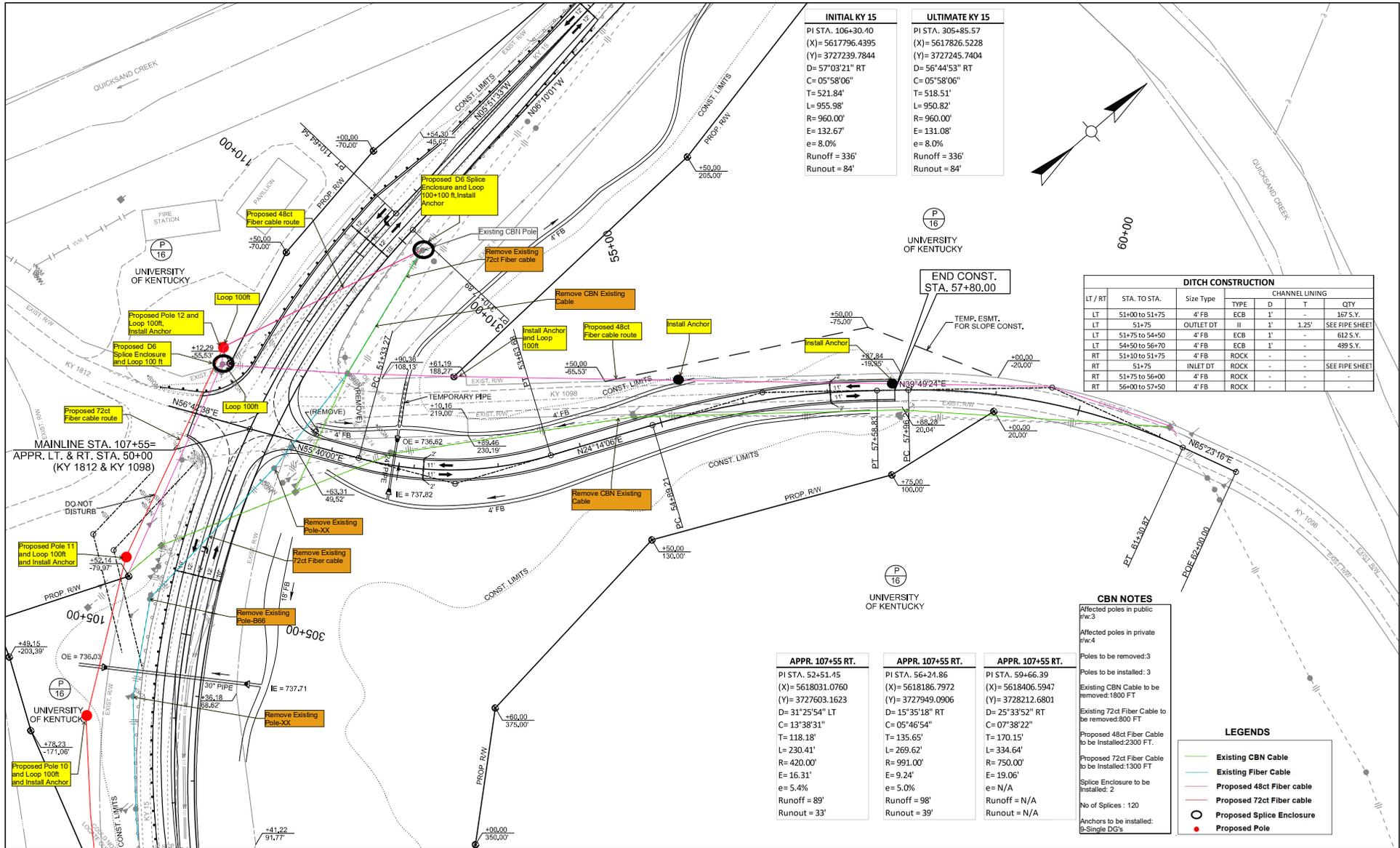
ULTIMATE KY 15	
PI STA.	305+85.57
(X)	= 5617826.5228
(Y)	= 3727245.7404
D	= 56°44'53" RT
C	= 05°58'06"
T	= 518.51'
L	= 950.82'
R	= 960.00'
E	= 131.08'
e	= 8.0%
Runoff	= 336'
Runout	= 84'

CBN NOTES

- Affected poles in public f/w: 4
- Affected poles in private f/w: 0
- Poles to be removed: 4
- Poles to be installed: 4
- Existing 72ct Fiber Cable to be removed: 500 FT
- Proposed 72ct Fiber Cable to be installed: 600 FT
- Splice Enclosure to be installed: 1
- No of Splices : 72 Anchors
- to be installed: 3-Single DG's

LEGENDS	
	Existing CBN Cable
	Existing Fiber Cable
	Proposed 48ct Fiber cable
	Proposed 72ct Fiber cable
	Proposed Splice Enclosure
	Proposed Pole

DITCH CONSTRUCTION						
LT / RT	STA. TO STA.	Size Type	CHANNEL LINING			
			TYPE	D	T	QTY
LT	99+25	OUTLET DT	II	2'	1.25'	SEE PIPE SHEET
LT	104+50	OUTLET DT	II	1.5'	1.25'	SEE PIPE SHEET
RT	99+25	INLET DT	ROCK	-	-	SEE PIPE SHEET
RT	104+50	INLET DT	ROCK	-	-	SEE PIPE SHEET
RT	104+50 to 105+00	4' FB	ROCK	-	-	-



INITIAL KY 15	ULTIMATE KY 15
PI STA. 106+30.40	PI STA. 305+85.57
(X)= 5617796.4395	(X)= 5617826.5228
(Y)= 3727239.7844	(Y)= 3727245.7404
D= 57°03'21" RT	D= 56°44'53" RT
C= 05°58'06"	C= 05°58'06"
T= 521.84'	T= 518.51'
L= 955.98'	L= 950.82'
R= 960.00'	R= 960.00'
E= 132.67'	E= 131.08'
e= 8.0%	e= 8.0%
Runoff = 336'	Runoff = 336'
Runout = 84'	Runout = 84'

DITCH CONSTRUCTION						
LT / RT	STA. TO STA.	Size Type	TYPE	D	T	QTY
LT	51+00 to 51+75	4' FB	ECB	1'	-	187 S.Y.
LT	51+75	OUTLET DT	II	1'	1.25'	SEE PIPE SHEET
LT	51+75 to 54+50	4' FB	ECB	1'	-	612 S.Y.
LT	54+50 to 56+70	4' FB	ECB	1'	-	489 S.Y.
RT	51+10 to 51+75	4' FB	ROCK	-	-	-
RT	51+75	INLET DT	ROCK	-	-	SEE PIPE SHEET
RT	51+75 to 56+00	4' FB	ROCK	-	-	-
RT	56+00 to 57+50	4' FB	ROCK	-	-	-

CBN NOTES

Affected poles in public
#w:3

Affected poles in private
#w:4

Poles to be removed:3

Poles to be installed: 3

Existing CBN Cable to be removed:1800 FT

Existing 72ct Fiber Cable to be removed:800 FT

Proposed 48ct Fiber Cable to be installed:2300 FT

Proposed 72ct Fiber Cable to be installed:1300 FT

Splice Enclosure to be installed: 2

No of Splices : 120

Anchors to be installed:
8-Single DG's

APPR. 107+55 RT.	APPR. 107+55 RT.	APPR. 107+55 RT.
PI STA. 52+51.45	PI STA. 56+24.86	PI STA. 59+66.39
(X)= 5618031.0760	(X)= 5618186.7972	(X)= 5618406.5947
(Y)= 3727603.1623	(Y)= 3727949.0906	(Y)= 3728212.6801
D= 31°25'54" LT	D= 15°35'18" RT	D= 25°33'52" RT
C= 13°38'31"	C= 05°46'54"	C= 07°38'22"
T= 118.18'	T= 135.65'	T= 170.15'
L= 230.41'	L= 269.62'	L= 334.64'
R= 420.00'	R= 991.00'	R= 750.00'
E= 16.31'	E= 9.24'	E= 19.06'
e= 5.4%	e= 5.0%	e= N/A
Runoff = 89'	Runoff = 98'	Runoff = N/A
Runout = 33'	Runout = 39'	Runout = N/A

LEGENDS

- Existing CBN Cable
- Existing Fiber Cable
- Proposed 48ct Fiber cable
- Proposed 72ct Fiber cable
- Proposed Splice Enclosure
- Proposed Pole