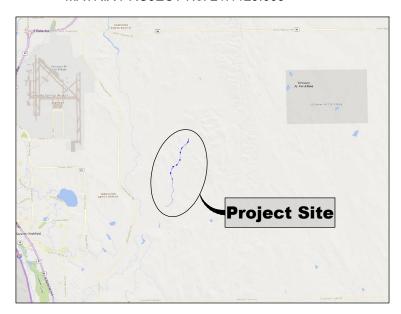
# ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION CONTROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION

THE LANDHUIS COMPANY

# 60% DESIGN PLANS **MARCH 2023**

# MATRIX PROJECT No. 21.1129.009



# VICINITY MAP

VERTICAL DATUM: THE ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

HORIZONTAL DATUM: THE COORDINATES FOR THIS PROJECT ARE NAD83/2011 COLORADO STATE PLANE CENTRAL ZONE GRID COORDINATES.

AERIAL PHOTO: PROVIDED BY AERIAL MAPPING SERVICES

BENCHMARK STATEMENT: THE BENCHMARK USED FOR THIS SURVEY IS FIMS MONUMENT NUMBER 202. A U.S. GEOLOGICAL SURVEY BRASS CAP STAMPED '11 HA 1947' IN A CONCRETE PAD. LOCATED ALONG DRENNAN ROAD, APPROXIMATELY 0.5 MILES EAST OF MARKSHEFFEL ROAD, APPROXIMATELY 200 FEET EAST OF A BRIDGE. THE MARK IS 32 FEET NORTH OF THE PAVEMENT. 23 FEET EAST OF A NORTH TO SOUTH FENCE LINE, AND 2 FEET NORTHEAST OF A POWER POLE."

PROPERTY INFORMATION: PARCEL LINES AND PROPERTY OWNERSHIP INFORMATION SHOWN WERE PROVIDED BY AN ALTA SURVEY.



**LOCATION MAP** SCALE: 1" = 4,000'

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	Applicable Specifications (City of Co	lorado Sp	rings - Drainage Criteria Manual (DCM))
100	General Provisions	622	Channel Embankment and Backfill
620	Drainage Channels	624	Riprap and Grouted Riprap Channel Construction
621	Channel Excavation	900	Seeding, Fertilizer, Mulching, and Sodding
i i	Applicable Specifications (Mile High Flo	ood Distric	ct - Urban Storm Drainage Criteria Manual )
017113	Mobilization	31 23 33	Trenching and Backfill
01 55 26	Traffic Control	31 25 00	Erosion and Sediment Control
01 56 39 Temporary Tree and Plant Protection		31 37 00	Riprap, Boulders, and Bedding
31 11 00	Clearing and Grubbing	32 91 13	Topsoil
31 14 13 Topsoil Stripping and Stockpiling 32 92 19 Seeding		Seeding	
31 23 00	Excavation and Fill	32 93 00	Landscape Planting
31 23 19	Dewatering	32 93 43	Soil Bioengineering or Shoreline Stabilization

REFERENCE DRAWINGS					60%
Rolling Hills MDDP topo X-1129-MDG22x34					NOTION THIS
	No.	DATE	DESCRIPTION REVISIONS	BY	THE I
	FILE N CTB FI PLOT I	AME: S:\21.11: ILE: Matrix(bl DATE: March 16	E MANAGEMENT  29.009 Rolling Hills Floodplain and Permitting\Dwg\Design Plans\1129.009-TS01.dwg ack).ctb  3.023 9:27:59 AM  S.OF RLOT DATE AND MAY BE SUBJECT TO CHANGE.		- AARO - IT IS I CONS PERM

# % DESIGN PLANS

S DOCUMENT IS RELEASED FOR PURPOSE OF INTERIM REVIEW DER THE AUTHORITY OF RON SUTHERLIN, PE NOT TO BE USED FOR NSTRUCTION, BIDDING OR





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IS SUBJECT TO CHANGE			

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

THE LANDHUIS COMPANY

TITLE SHEET

DESIGNED BY:	TKM	SCALE	DATE ISSUED:	MARCH 2023	DRAWING No.
DRAWN BY: CHECKED BY:		HORIZ. 1" = 4,000'	SHEET	01 OF 47	TS01

## **GENERAL NOTES:**

- 1. THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR TO CALL FOR UTILITY LOCATOR AT LEAST 3 CALENDAR DAYS BEFORE EARTHWORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES. IN THE EVENT THAT THE CONTRACTOR UTILITY VERIFICATION RESULTS IN EXISTING STRUCTURES OR UTILITIES BEING IN CONFLICT WITH THE PROPOSED WORK OF THIS CONTRACT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY UTILITIES AND COORDINATE ANY NEEDED MODIFICATIONS TO THE PROPOSED WORK AS DIRECTED BY AFFECTED AGENCY OR UTILITY.
- 2. THE CONTRACTOR SHALL COORDINATE WITH ALL AFFECTED UTILITY OWNERS TO ESTABLISH THE REQUIREMENTS AND METHODS TO ACCOMMODATE THE PROTECTION, TEMPORARY SUPPORT, ADJUSTMENT OR RELOCATION OF UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- 3. OVERHEAD UTILITIES ARE NOT INDICATED ON PROFILE OR SECTION DRAWINGS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING IN CONTINUOUS OPERATION, ALL EXISTING STRUCTURES. NOT ALL POTENTIALLY IMPACTED STRUCTURES MAY BE SHOWN ON THE DRAWINGS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND PROTECT ALL STRUCTURES INCLUDING BUT NOT LIMITED TO STREETS, CURB AND GUTTER, BRIDGE PIERS AND ABUTMENTS, CREEK BANK PROTECTION OF VARIOUS TYPES, CREEK DROP STRUCTURES, SIGNS, PEDESTRIAN WALKS, RETAINING WALLS AND FENCING. IN THE EVENT THAT A STRUCTURE OR UTILITY IS DAMAGED DURING CONSTRUCTION THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THE FACILITY IN WRITING AND COORDINATE AND COOPERATE WITH NEEDED REPAIRS PER THE APPROPRIATE SPECIFICATIONS ACCORDING TO THE OWNER'S DIRECTION
- 5. THE CONTRACTOR SHALL CONFIRM THE RECEIPT OF ALL NECESSARY PERMITS AND APPROVALS BEFORE THE START OF CONSTRUCTION.
- 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF COLORADO SPRINGS, EL PASO COUNTY, AND THE MILE HIGH FLOOD DISTRICT, AS NOTED, UNLESS SPECIFICALLY DETAILED OTHERWISE ON THESE PLANS AND ASSOCIATED SPECIFICATIONS.
- 7. THE CONTRACTOR SHALL MAINTAIN AT THE SITE AT ALL TIMES ONE SIGNED COPY OF THE PROJECT DRAWINGS AND SPECIFICATIONS, ONE COPY OF THE STORMWATER MANAGEMENT PLAN AND ONE COPY OF ALL REQUIRED PERMITS.
- 8. THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A WAY THAT THE AREA OF DISTURBANCE IS MINIMIZED. ALL EXISTING TREES, SHRUBS AND VEGETATION SHALL BE PROTECTED UNLESS OTHERWISE NOTED ON THE DRAWINGS. NO TREES SHALL BE REMOVED WITHOUT APPROVAL. DESIGNATED ACCESS SHALL BE MINIMAL AND AGREED UPON WITH THE ENGINEER PRIOR TO CONSTRUCTION ACTIVITIES
- 9. FOR ALL SITE GRADING, SMOOTH, PARABOLIC TRANSITIONS SHALL BE MADE BETWEEN CHANGES IN SLOPE.
- 10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING STABLE EXCAVATIONS AND TEMPORARY SLOPES AND FOR SATISFYING ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THIS INCLUDES BUT IS NOT LIMITED TO BENCHING, SHORING, AND SLOPING AS NEEDED FOR CONSTRUCTION.
- 11. CONSTRUCTION OF THE PROPOSED WORK WILL TAKE PLACE WITHIN THE CHANNEL AND WATER CONTROL MEASURES WILL BE REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCEPTANCE AND CONTROL OF DRAINAGE WATER FROM AREAS ADJACENT TO EAST FORK JIMMY CAMP CREEK AND ITS TRIBUTARIES INCLUDING STORMWATER OUTFALLS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTABLISHING MEANS AND METHODS OF GROUND AND SURFACE WATER CONTROL APPROPRIATE FOR CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT DRAWINGS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND PERMITS.
- 12. THE CONTRACTOR SHALL PREPARE AND MAINTAIN THE STORMWATER MANAGEMENT PLAN AND OBTAIN THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THROUGH THE COLORADO DEPARTMENT OF PUBLIC HEALTH (CDPHE) AND ALL OTHER APPROPRIATE FEDERAL, STATE AND LOCAL PERMITS.ADDITIONAL INFORMATION IS PROVIDED ON THE GRADING AND EROSION CONTROL PI ANS
- 13. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT DRAWINGS TO BE MAINTAINED AND SUBMITTED TO THE CITY OF COLORADO SPRINGS AND EL PASO COUNTY.
- 14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ON-SITE SURVEY CONTROL AND CONSTRUCTION STAKING.
- 15. CONTRACTOR SHALL FENCE OFF CRITICAL AREAS TO BE PROTECTED AT THE DISCRETION OF THE CITY OF COLORADO SPRINGS AND EL PASO COUNTY.
- 16. THE CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN FOR PLANNED ACCESS TO THE SITE AND FOR EXITING AND ENTERING PUBLIC ROADS.
- 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND MAINTAINING PHYSICAL AND LEGAL ACCESS TO THE PROJECT SITE AND SHALL LIMIT TRANSPORTATION TO AND FROM THE SITE TO THOSE APPROVED BY THE CITY OF COLORADO SPRINGS AND EL PASO COUNTY.
- 18. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT AND MANAGE SPILLS OF TOXIC MATERIALS, SUCH AS EQUIPMENT FUELS
- 19. ALL MATERIALS USED SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND.
- 20. WORK INCLUDES FURNISHING OF LABOR, MATERIALS, TOOLS, AND EQUIPMENT TO COMPLETE THE CONSTRUCTION OF ALL ELEMENTS OF THE DESIGN PLANS.

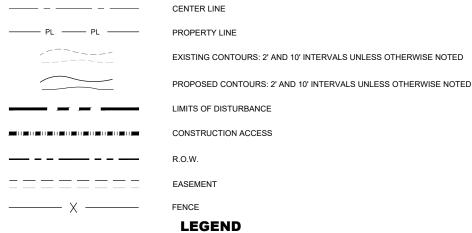
## **ABBREVIATIONS**

CENTER LINE APPROX. **APPROXIMATE** HORIZONTAL CONTROL LINE MINIMIIM DIA DIAMETER MAX. MAXIMUM EX./EXIST EXISTING HORIZ **HORIZONTAL** PR./PROP **PROPOSED** VERT. VERTICAL ELEVATION DIST DISTANCE FFFT NTS NOT TO SCALE INVERT INV. TYP LINEAR FEET O.C. ON CENTER LIMITS OF CONSTRUCTION L.O.C. NORTH SOUTH FAST WEST N.S.E.W RR RAII ROAD PROPERTY LINE BANKFULL CONTROL LINE BCL ROW RIGHT-OF-WAY THALWEG CONTROL LINE BLR BANNING LEWIS RANCH SQUARE FEET

# Know what's below. Call before you dig.

SHEET No. 02

# STANDARD SYMBOLS



PROPOSED SOIL RIPRAE





**Excellence by Design** 

PROPOSED SOIL RIPRAP - BURIED WITH TOPSOIL & REVEGETATION



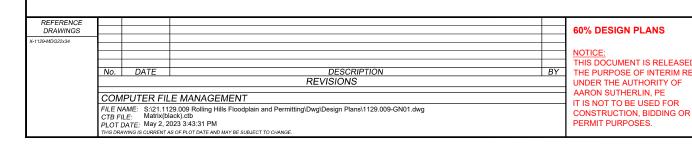
STA.

STATION

PROPOSED SCULPTED CONCRETE DROP STRUCTURE

PROPOSED COUNTY ACCESS ROAD

PR. 100-YR FLOODPLAIN BOUNDARY (3,600 OR 4,400 CFS)







PRELIMINARY
THIS DRAWING HAS NO
BEEN APPROVED BY
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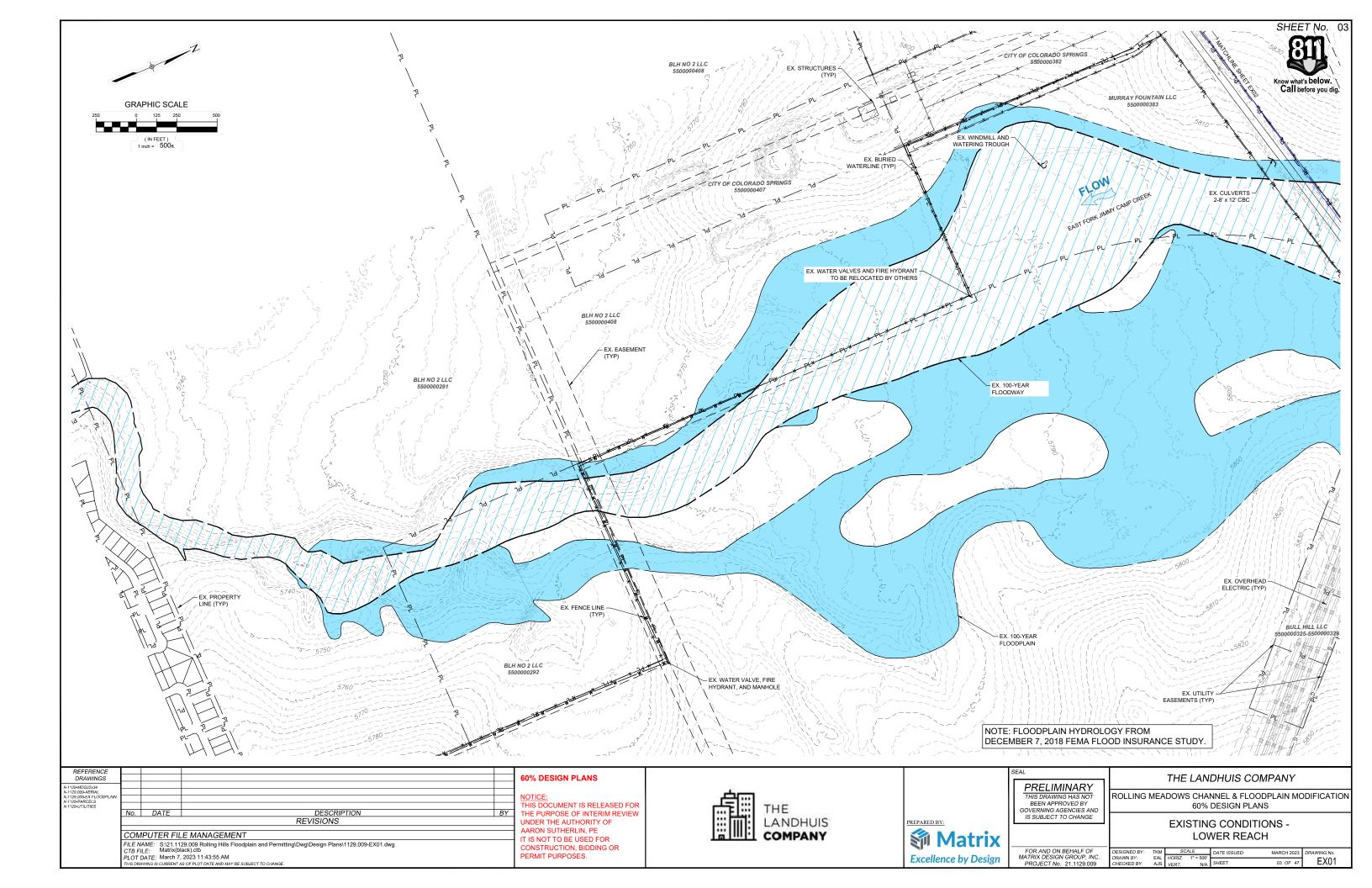
MATRIX DESIGN GROUP, INC.

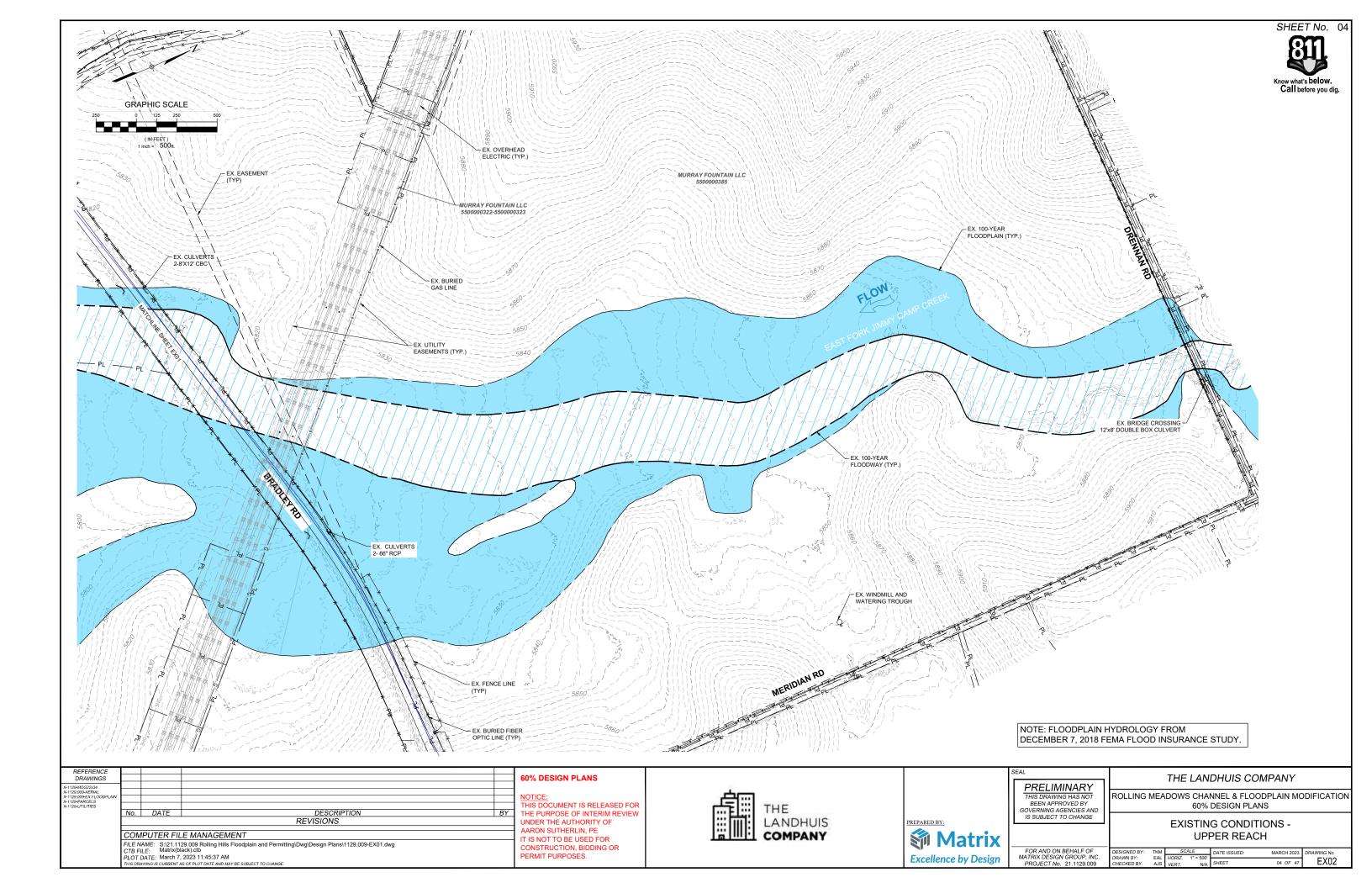
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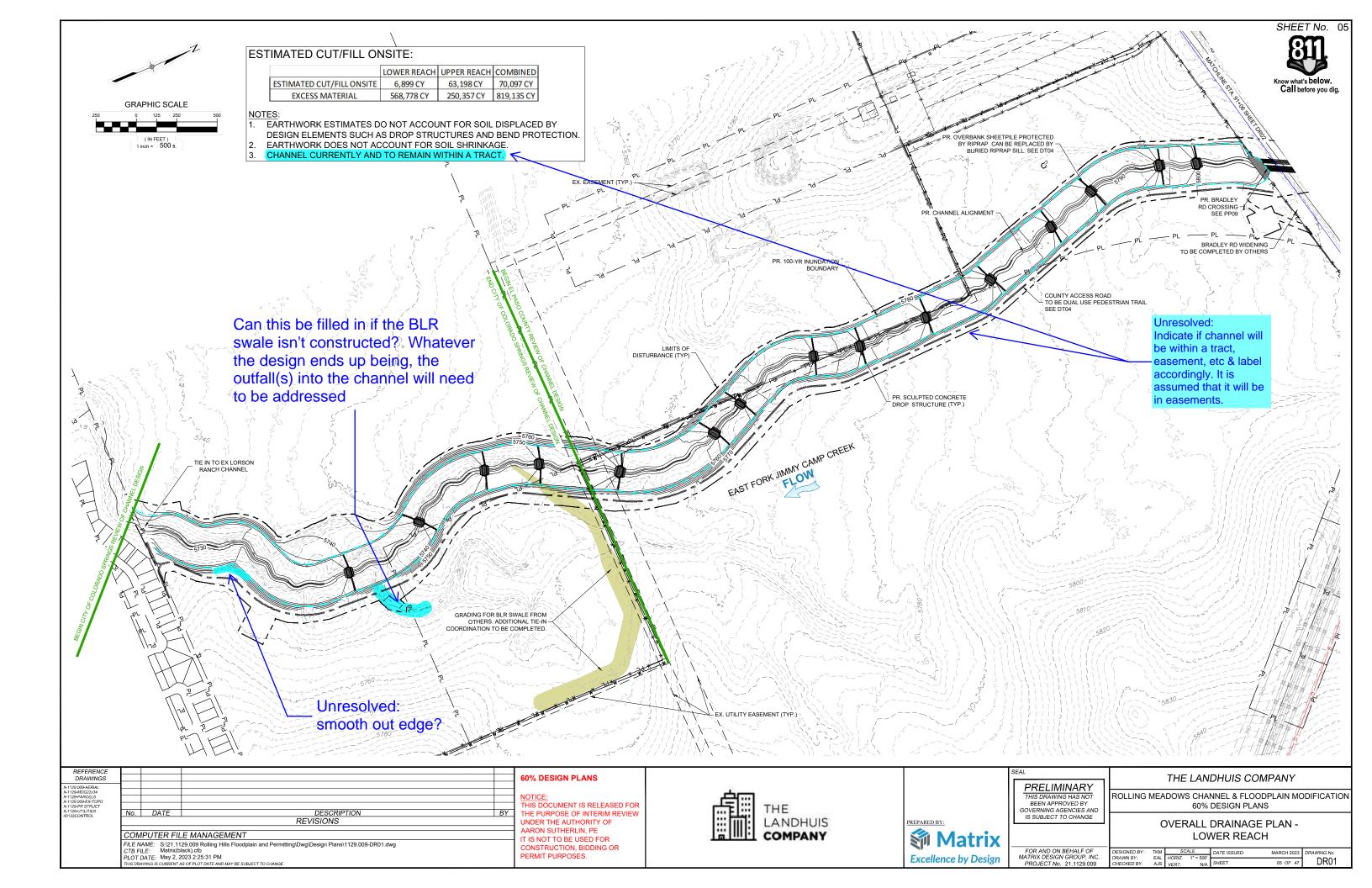
THE LANDHUIS COMPANY
ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

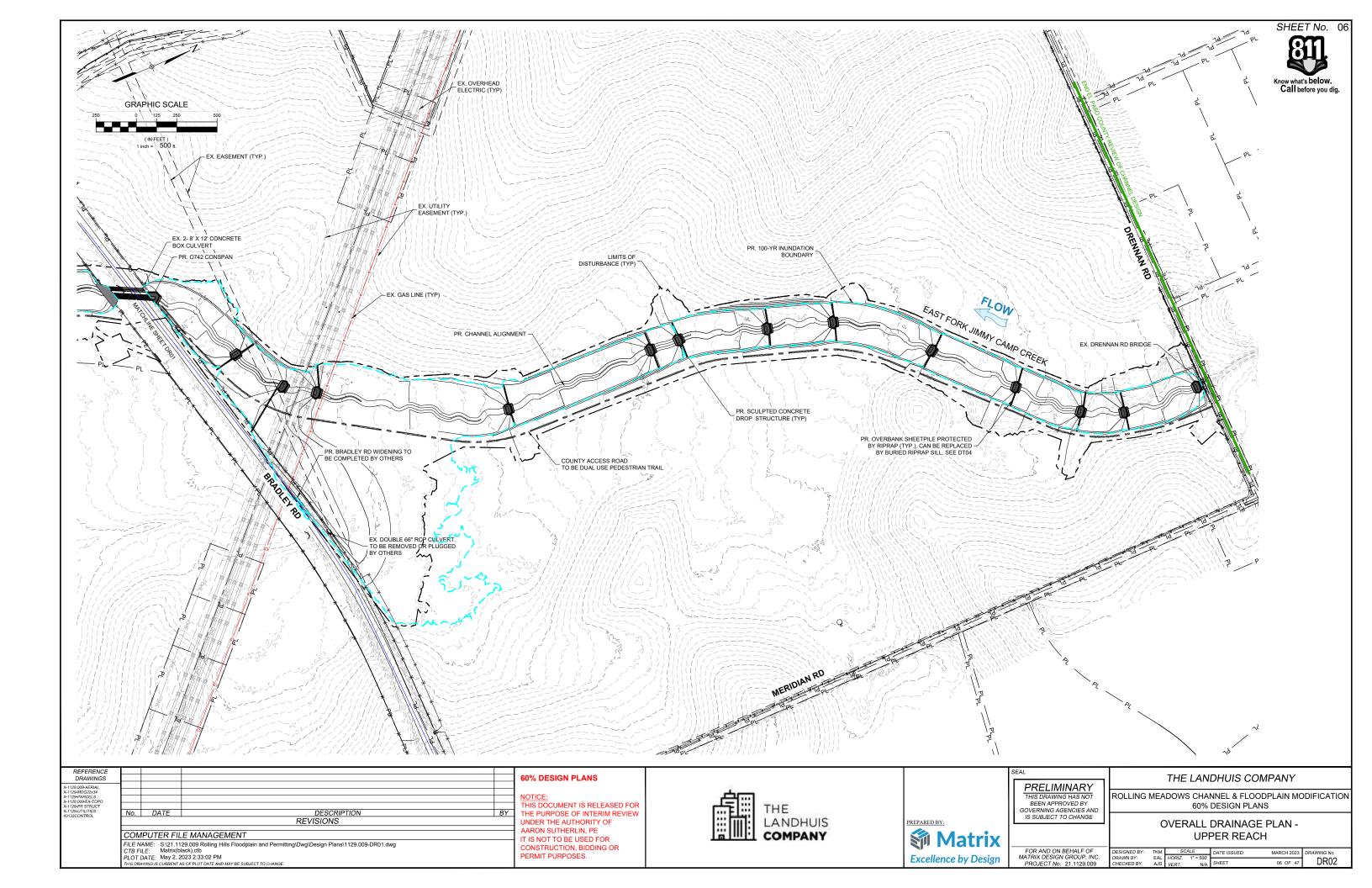
GENERA	LNOTES

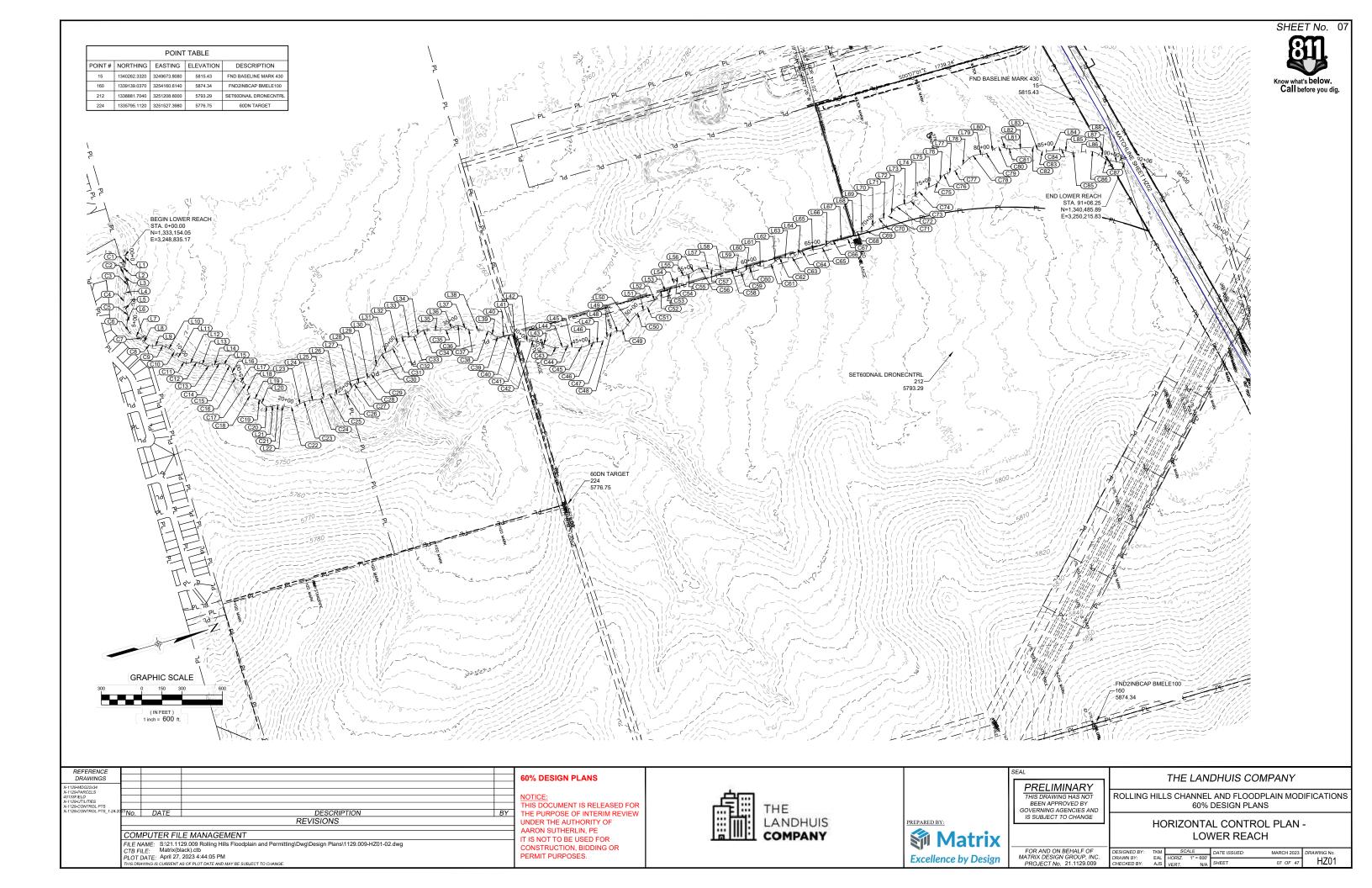
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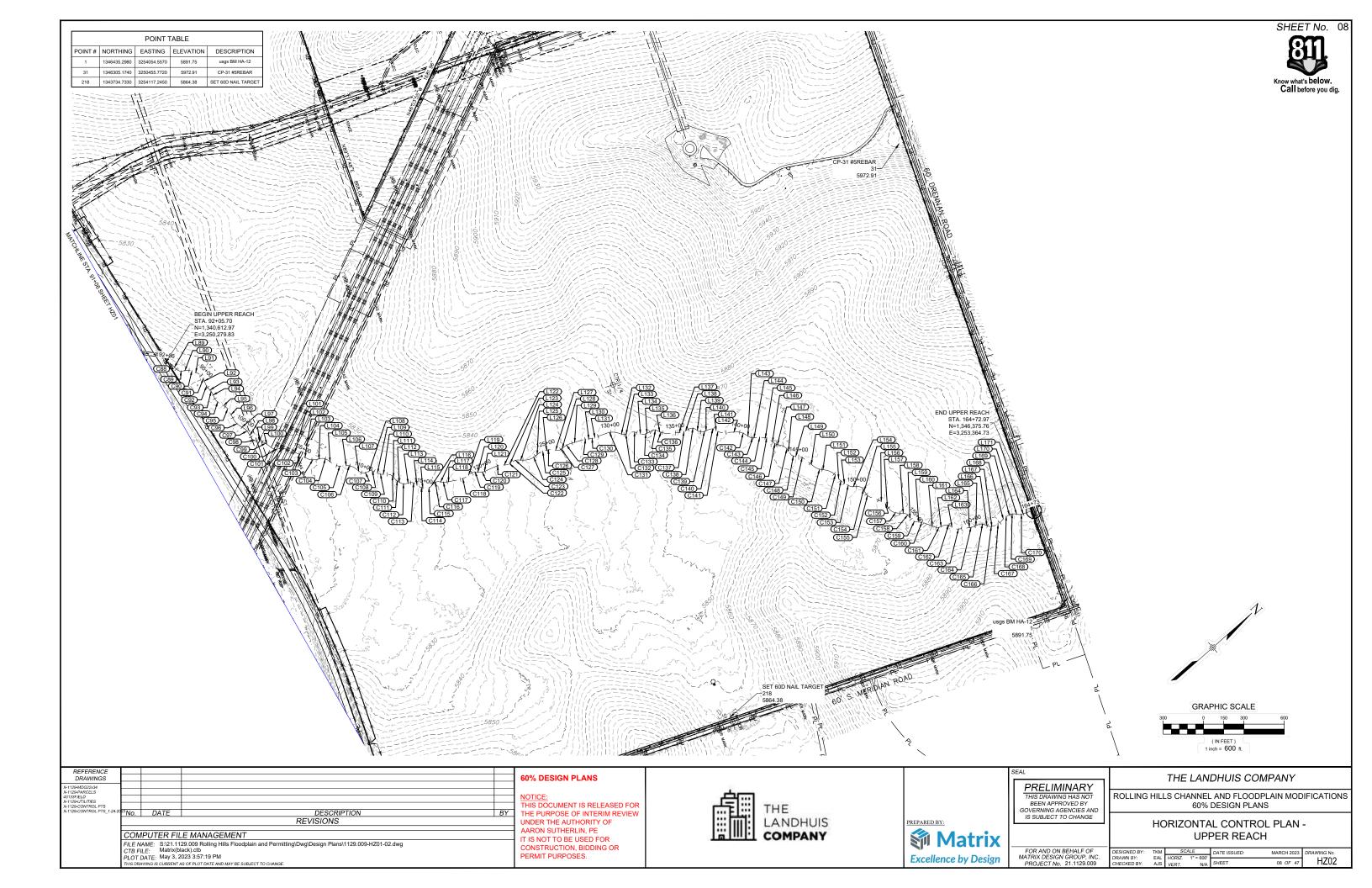












## LOWER SECTION

LINE TABLE		
NE#	BEARING	DISTANCE
L1	S79°44'29"E	31.55'
L2	S55°31'15"E	31.60'
L3	N77°48'05"E	31.07'
L4	S52°39'06"E	40.92'
L5	N81°32'03"E	31.70'
L6	S64°46'09"E	29.70'
L7	N35°38'22"E	35.00'
L8	N64°18'00"E	31.73'
L9	N10°39'14"E	44.26'
10	N46°26'51"E	40.93'
_11	N69°33'48"E	41.20'
.12	N08°40'38"E	29.65'
.13	N37°55'47"E	33.69'
.14	N00°00'44"W	30.79'
.15	N22°33'23"E	31.00'
.16	N88°44'03"E	44.57'
_17	N40°36'19"E	39.68'
L18	S87°38'19"E	43.00'
L19	N33°00'25"E	36.10'
_20	N65°52'21"E	32.65'
L21	N01°46'42"E	38.70'
L22	N30°44'49"E	34.16'
L23	N13°30'35"W	36.80'
L24	N07°46'28"E	100.00'
L25	N17°59'14"W	30.83'

LINE TABLE					
LINE#	BEARING	DISTANCE			
L76	N40°37'52"W	31.40'			
L77	N01°17'52"E	35.64'			
L78	N26°59'11"W	108.02'			
L79	N12°00'38"E	30.86'			
L80	N18°11'10"W	45.00'			
L81	N32°28'08"E	32.36'			
L82	N10°34'22"E	130.66'			
L83	N41°12'55"E	29.70'			
L84	N08°49'33"E	106.12'			
L85	N35°27'33"E	44.47"			
L86	N05°32'49"E	45.17"			
L87	N52°12'17"E	42.64'			
L88	N26°45'46"E	120.57'			

CURVE TABLE						
CURVE#	ARC LENGTH	RADIUS	DELTA ANGLI			
C1	53.62	126.83'	24°13'14"			
C2	39.04	47.92'	46°40'40"			
C3	82.15	95.00'	49°32'49"			
C4	88.86	111.12'	45°48'51"			
C5	64.10	109.00'	33°41'48"			
C6	115.26	82.97'	79°35'28"			
C7	38.23	76.43'	28°39'37"			
C8	58.33	62.30'	53°38'46"			
C9	61.49	98.42'	35°47'38"			
C10	54.87	136.00'	23°06'56"			
C11	71.73	67.50'	60°53'09"			
C12	59.02	115.60'	29°15'09"			
C13	60.92	92.00'	37°56'31"			
C14	39.71	100.82'	22°34'07"			
C15	57.72	49.97'	66°10'41"			
C16	58.80	70.00'	48°07'45"			
C17	43.48	48.13'	51°45'22"			
C18	52.24	50.43'	59°21'16"			
C19	27.64	48.19'	32°51'57"			
C20	55.93	50.00'	64°05'40"			
C21	38.69	76.52'	28°58'07"			
C22	100.42	130.00'	44°15'24"			
C23	31.37	84.43'	21°17'03"			
C24	22.04	49.03'	25°45'42"			
C25	63.64	91.00'	40°04'18"			

	1		
CURVE #	ARC LENGTH	RADIUS	DELTA ANGLE
C26	92.54	84.00'	63°07"12"
C27	36.67	50.00'	42°01'09"
C28	44.76	90.00'	28°29'42"
C29	44.99	129.84'	19°51'05"
C30	38.31	54.34'	40°23'39"
C31	82.02	125.00'	37°35'48"
C32	76.39	65.00'	67°20'10"
C33	42.51	50.44'	48°17"28"
C34	74.63	94.57'	45°13'03"
C35	58.27	107.26'	31°07"27"
C36	75.67	80.00'	54°11'47"
C37	34.23	79.96'	24°31'38"
C38	46.94	74.07"	36°18'22"
C39	60.18	60.78'	56°43'37"
C40	59.43	61.10'	55°43"34"
C41	68.11	82.00'	47°35'28"
C42	59.89	112.00'	30°38'17"
C43	71.84	125.46'	32°48'39"
C44	41.98	105.00'	22°54'36"
C45	92.94	139.86'	38°04'28"
C46	24.53	64.49'	21°47"36"
C47	53.26	63.14'	48°19'44"
C48	61.06	69.30'	50°29'08"
C49	43.22	51.60'	47°59'30"
C50	66.49	133.66'	28°30'09"

CURVE#	ARC LENGTH	RADIUS	DELTA ANGLE	CURVE#
C51	39.38	80.00'	28°12'23"	C76
C52	32.69	57.72	32°26'56"	C77
C53	59.41	73.77'	46°08'39"	C78
C54	62.88	65.90'	54°40'05"	C79
C55	46.98	115.26'	23°21'20"	C80
C56	83.09	100.00'	47°36'27"	C81
C57	20.33	75.50'	15°25'43"	C82
C58	36.22	86.00'	24°07'55"	C83
C59	51.75	50.00'	59°17'58"	C84
C60	34.18	65.00'	30°07'51"	C85
C61	43.44	67.00'	37°09'06"	C86
C62	54.32	64.80'	48°01'49"	C87
C63	75.15	105.00'	41°00'32"	
C64	39.77	81.43'	27°59'00"	
C65	39.06	67.06'	33°22'05"	
C66	92.49	120.00'	44°09'43"	
C67	71.37	84.50'	48°23'38"	
C68	40.37	49.00'	47°12'22"	

41.58 49.20' 48°25'18"

67.00'

120.59'

75.31 105.21' 41°00'36"

C74 57.67 106.96' 30°53'43" 38.92 67.53' 33°01'24"

37°12'33"

41°48'55"

52.93' 45°11'16"

43.51

41.74

88.01

	CURVE	TABLE	
CURVE#	ARC LENGTH	RADIUS	DELTA ANGLE
C76	57.08	78.00'	41°55'44"
C77	48.14	97.51'	28°17'03"
C78	85.08	125.00'	38°59'49"
C79	55.76	105.80'	30°11'48"
C80	62.33	70.50'	50°39'17"
C81	33.56	87.83'	21°53'46"
C82	51.90	97.05'	30°38'33"
C83	48.05	85.00'	32°23'22"
C84	23.24	50.00'	26°38'00"
C85	75.70	145.00'	29°54'44"
C86	118.08	145.00'	46°39'28"
C87	35.52	80.00'	25°26'31"

# SHEET No. 09 Know what's below. Call before you dig.

# **UPPER SECTION**

LINE TABLE					LINE TAB	LE
LINE#	BEARING	DISTANCE		LINE#	BEARING	DISTANCE
L89	N64°39'37"E	32.52'		L114	N53°53'58"E	36.52'
L90	N08°25'46"E	23.37'	1	L115	N25°39'44"E	30.58'
L91	N43°05'57"E	29.18'		L116	N28°51'45"W	28.21'
L92	N86°32'45"E	36.24'		L117	N26°48'44"E	28.32'
L93	N67°17'29"E	35.60'	1	L118	N07°54'53"E	101.67'
L94	N84°13'38"E	33.18'		L119	N17°49'53"W	40.63'
L95	N47°05'00"E	39.29'		L120	N23°18'42"E	28.57'
L96	N79°53'42"E	73.88'		L121	N05°23'32"W	100.21'
L97	N50°20'27"E	40.62'		L122	N18°14'56"E	27.60'
L98	N81°15'39"E	24.94'		L123	N14°33'13"W	27.99'
L99	N26°18'49"E	35.84'		L124	N20°02'16"E	39.22'
L100	N54°33'32"E	58.43'		L125	N19°44'43"W	33.82'
L101	N08°02'22"E	27.41'		L126	N04°33'21"E	27.95'
L102	N39°46'31"E	100.86'		L127	N26°07'46"E	29.98'
L103	N49°05'13"E	41.69'		L128	N20°00'01"W	29.99'
L104	N05°21'56"E	31.03'		L129	N01°40'38"E	100.94'
L105	N55°13'42"E	41.11'		L130	N13°01'45"E	29.45'
L106	N13°14'32"E	36.02'		L131	N01°41'46"W	100.78'
L107	N57°49'30"E	35.10'		L132	N36°15'08"E	32.27'
L108	N02°41'26"W	29.69'		L133	N02°13'58"W	33.72'
L109	N45°09'35"E	33.10'		L134	N35°41'19"E	37.07'
L110	N17°45'29"E	41.36'		L135	N07°44'54"W	45.95'
L111	N68°22'04"E	27.93'		L136	N42°26'46"E	27.44'
L112	N44°02'07"E	29.27'		L137	N13°46'44"E	93.47'
L113	N03°44'51"E	31.65'		L138	N09°01'31"W	38.43'

LINE#	BEARING	DISTANCE
L139	N49°54'31"E	27.62'
L140	N05°02'14"W	38.00'
L141	N47°29'52"E	27.43'
L142	N15°42'46"E	99.84'
L143	N50°17'21"E	38.39'
L144	N11°13'32"E	28.84'
L145	N23°42'50"E	28.00'
L146	N59°26'33"E	35.48'
L147	N32°02'26"E	38.27'
L148	N73°09'50"E	41.60'
L149	N20°09'48"E	30.81'
L150	N56°12'58"E	107.50'
L151	N24°46'48"E	27.23'
L152	N66°16'00"E	41.77'
L153	N46°23'38"E	34.20'
L154	N19°01'52"E	41.22'
L155	N80°55'27"E	28.99'
L156	N39°20'29"E	100.63'
L157	N74°12'13"E	28.77'
L158	N19°27'09"E	42.72'
L159	N73°11'42"E	28.77'
L160	N21°36'09"E	35.70'
L161	N38°46'27"E	99.65'
L162	N06°35'31"W	26.90'
L163	N48°32'10"E	32.65'

LINE TABLE

LINE TABLE				
INE#	BEARING	DISTANCE		
L164	N11°12'51"E	79.92'		
L165	N03°15'01"W	41.20'		
L166	N40°28'15"E	31.80'		
L167	N03°30'18"E	28.56'		
L168	N31°31'54"W	36.14'		
L169	N03°16'17"W	27.88'		
L170	N27°19'06"E	30.31'		
L171	N00°37'31"E	86.32'		

	CURVE	TABLE	
CURVE#	ARC LENGTH	RADIUS	DELTA ANGLE
C88	60.97	90.00'	38°48'45"
C89	49.07	50.00'	56°13'51"
C90	66.56	110.00'	34°40'11"
C91	68.25	90.00'	43°26'48"
C92	26.88	80.00'	19°15'15"
C93	23.65	80.00'	16°56'09"
C94	58.35	90.00'	37°08'39"
C95	51.54	90.00'	32°48'43"
C96	61.90	120.00'	29°33'16"
C97	54.57	100.60'	31°04'42"
C98	57.54	60.00'	54°56'49"
C99	34.51	70.00'	28°14'42"
C100	41.41	51.00'	46°31'09"
C101	38.77	70.00'	31°44'09"
C102	21.13	130.00'	9°18'42"
C103	76.31	100.00'	43°43'17"
C104	65.27	75.00'	49°51'47"
C105	68.88	94.00'	41°59'11"
C106	77.81	100.00'	44°34'58"
C107	46.58	44.10'	60°30'55"
C108	40.09	48.00'	47°51'00"
C109	28.69	60.00'	27°24'06"
C110	45.05	51.00'	50°36'34"
C111	25.48	60.00'	24°19'57"
C112	31.01	44.10'	40°17'16"

CURVE TABLE					
URVE#	ARC LENGTH	RADIUS	DELTA ANGLE		
C113	38.51	44.00'	50°09'07"		
C114	24.64	50.00'	28°14'14"		
C115	41.87	44.00'	54°31'29"		
C116	42.76	44.00'	55°40'29"		
C117	25.07	76.00'	18°53'51"		
C118	59.31	132.00'	25°44'46"		
C119	35.90	50.00'	41°08'35"		
C120	35.07	70.00'	28°42'14"		
C121	41.26	100.00'	23°38'28"		
C122	33.08	57.79'	32°48'09"		
C123	46.49	77.00'	34°35'28"		
C124	83.32	120.00'	39°46'59"		
C125	50.90	120.00'	24°18'04"		
C126	37.65	100.00'	21°34'25"		
C127	37.04	46.00'	46°07'47"		
C128	43.89	116.00'	21°40'39"		
C129	19.81	100.00'	11°21'07"		
C130	33.41	130.00'	14°43'31"		
C131	86.10	130.00'	37°56'54"		
C132	29.62	44.10'	38°29'06"		
C133	44.92	67.88'	37°55'17"		
C134	42.47	56.03'	43°26'13"		
C135	41.17	47.00'	50°11'39"		
C136	56.04	112.00'	28°40'02"		
C137	31.84	80.00'	22°48'15"		

CURVE#	ARC LENGTH	RADIUS	DELTA ANGLE
C138	45.36	44.10'	58°56'02"
C139	48.32	50.39'	54°56'45"
C140	41.26	45.00'	52°32'06"
C141	40.50	73.00'	31°47'06"
C142	67.59	112.00'	34°34'35"
C143	34.09	50.00'	39°03'49"
C144	29.75	136.50'	12°29'18"
C145	37.41	60.00'	35°43'43"
C146	23.91	50.00'	27°24'07"
C147	53.47	74.50	41°07'23"
C148	41.63	45.00'	53°00'01"
C149	28.32	45.00'	36°03'10"
C150	54.87	100.00'	31°26'10"
C151	94.85	131.00'	41°29'12"
C152	41.62	120.00'	19°52"22"
C153	38.21	80.00'	27°21'47"
C154	47.64	44.10'	61°53'35"
C155	39.92	55.00'	41°34'58"
C156	41.98	69.00'	34°51'43"
C157	76.45	80.00'	54°45'04"
C158	46.90	50.00'	53°44'33"
C159	41.42	46.00'	51°35'33"
C160	20.98	70.00	17°10'18"
C161	34.84	44.00'	45°21'58"
C162	50.03	52.00'	55°07'41"

C69

C70

C72

C73

CURVE TABLE					
CURVE#	ARC LENGTH	RADIUS	DELTA ANGLE		
C163	39.08	60.00'	37°19'19"		
C164	34.33	136.00'	14°27'52"		
C165	38.15	50.00'	43°43'16"		
C166	28.39	44.00'	36°57'57"		
C167	45.86	75.00'	35°02'12"		
C168	34.53	70.00'	28°15'37"		
C169	26.69	50.00'	30°35'23"		
C170	23.29	50.00'	26°41'35"		

REFERENCE DRAWINGS					60
X-1129-MDG22x34					4
X-1129-PARCELS 43133FIELD					NO
X-1129-UTILITIES					┨╬
X-1129-CONTROL PTS X-1129-CONTROL PTS_1.24.2	023 N/O	DATE	DESCRIPTION	BY	_
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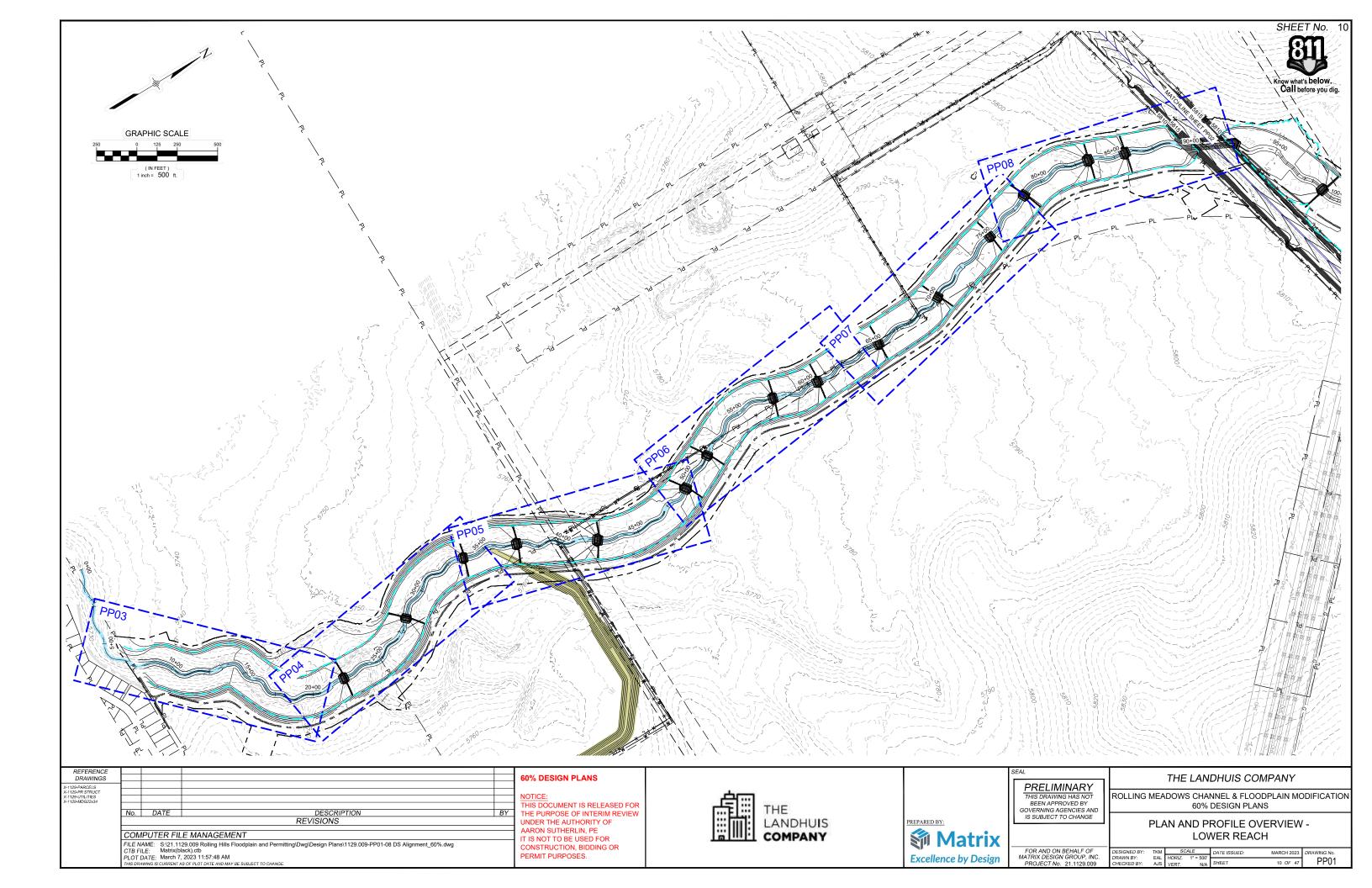


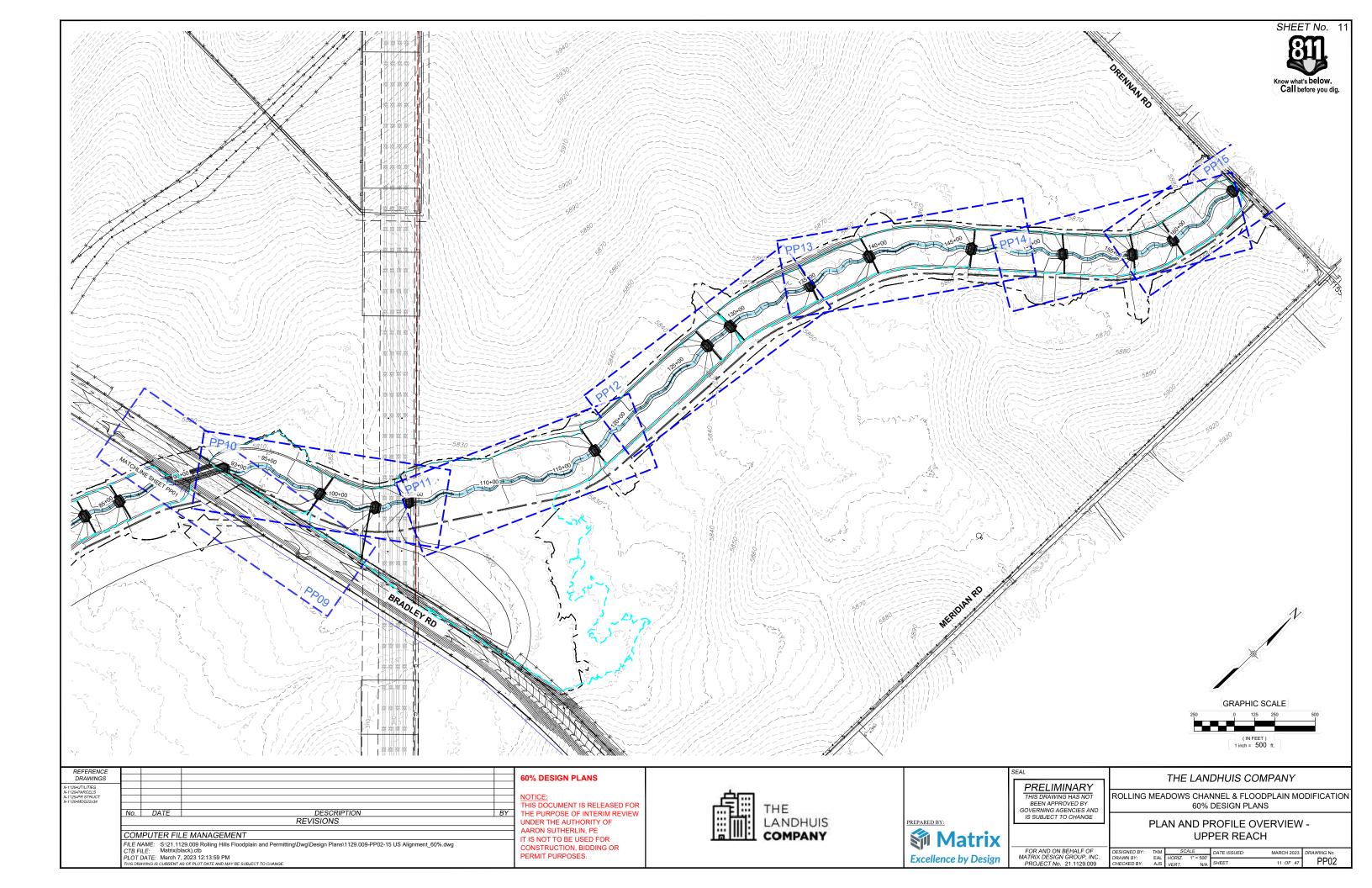
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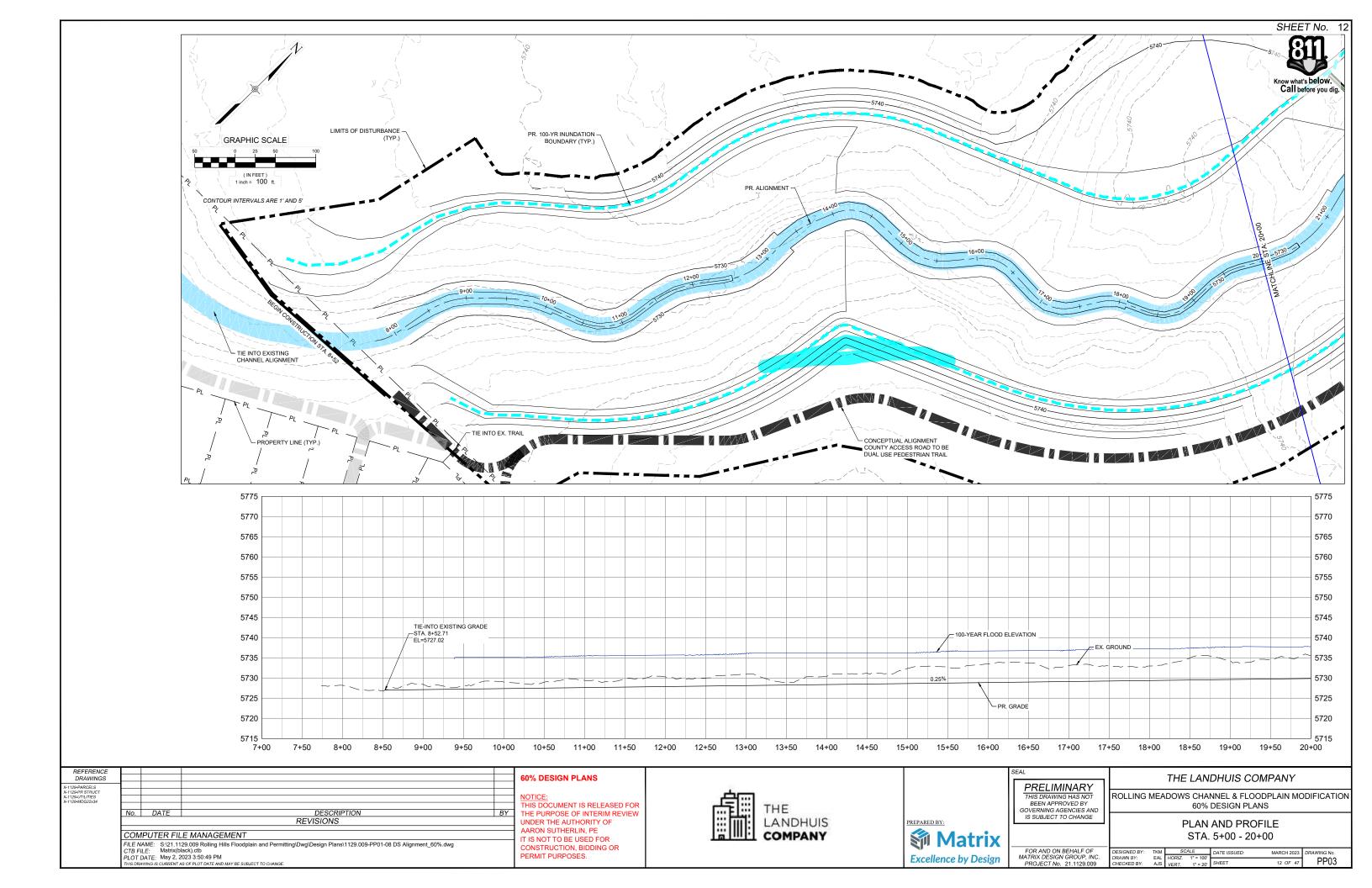
THE LANDHUIS COMPANY
ROLLING HILLS CHANNEL AND FLOODPLAIN MODIFICATIONS 60% DESIGN PLANS

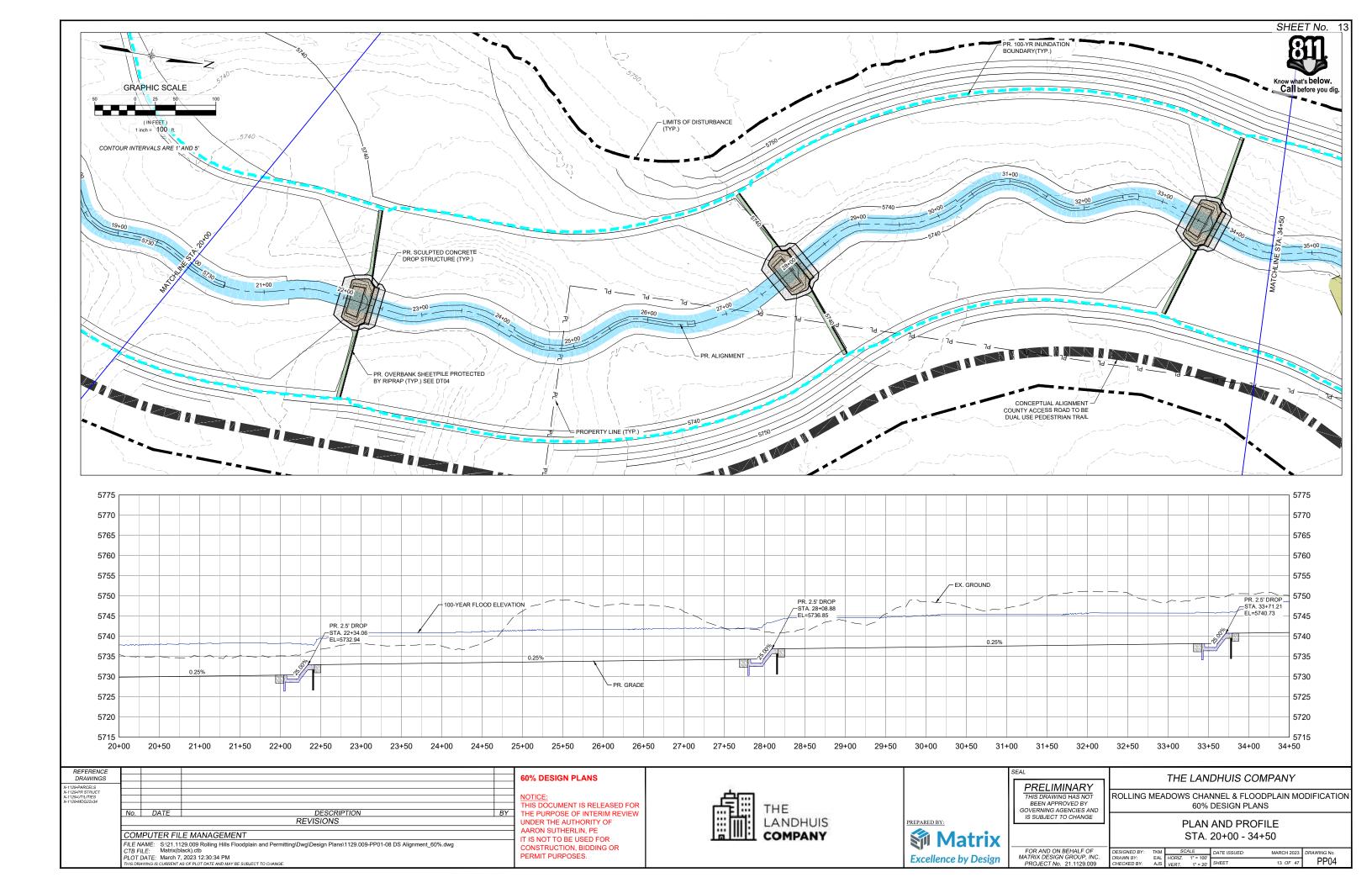
HORIZONTAL CONTROL PLAN -	
LOWER REACH	

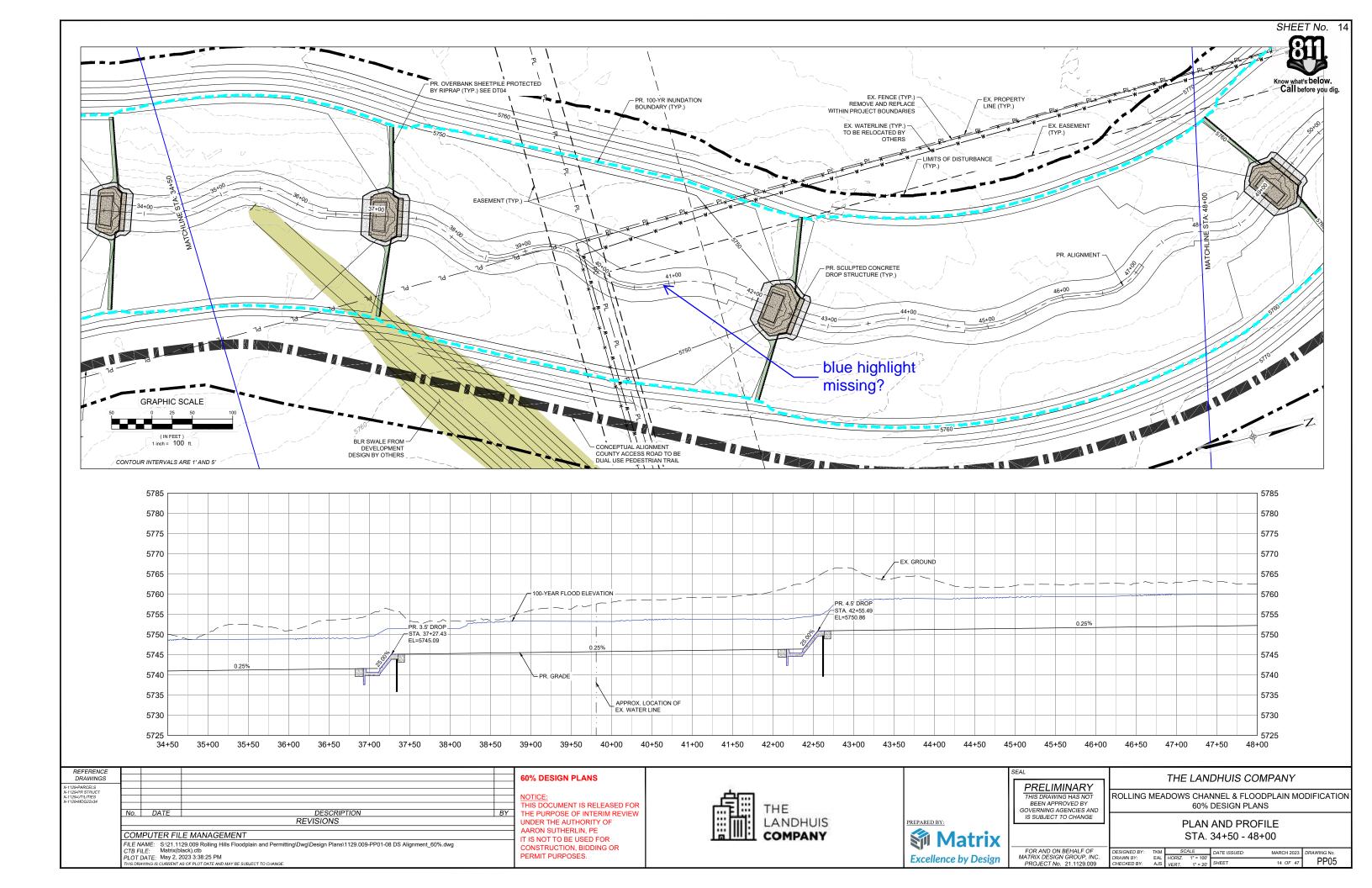
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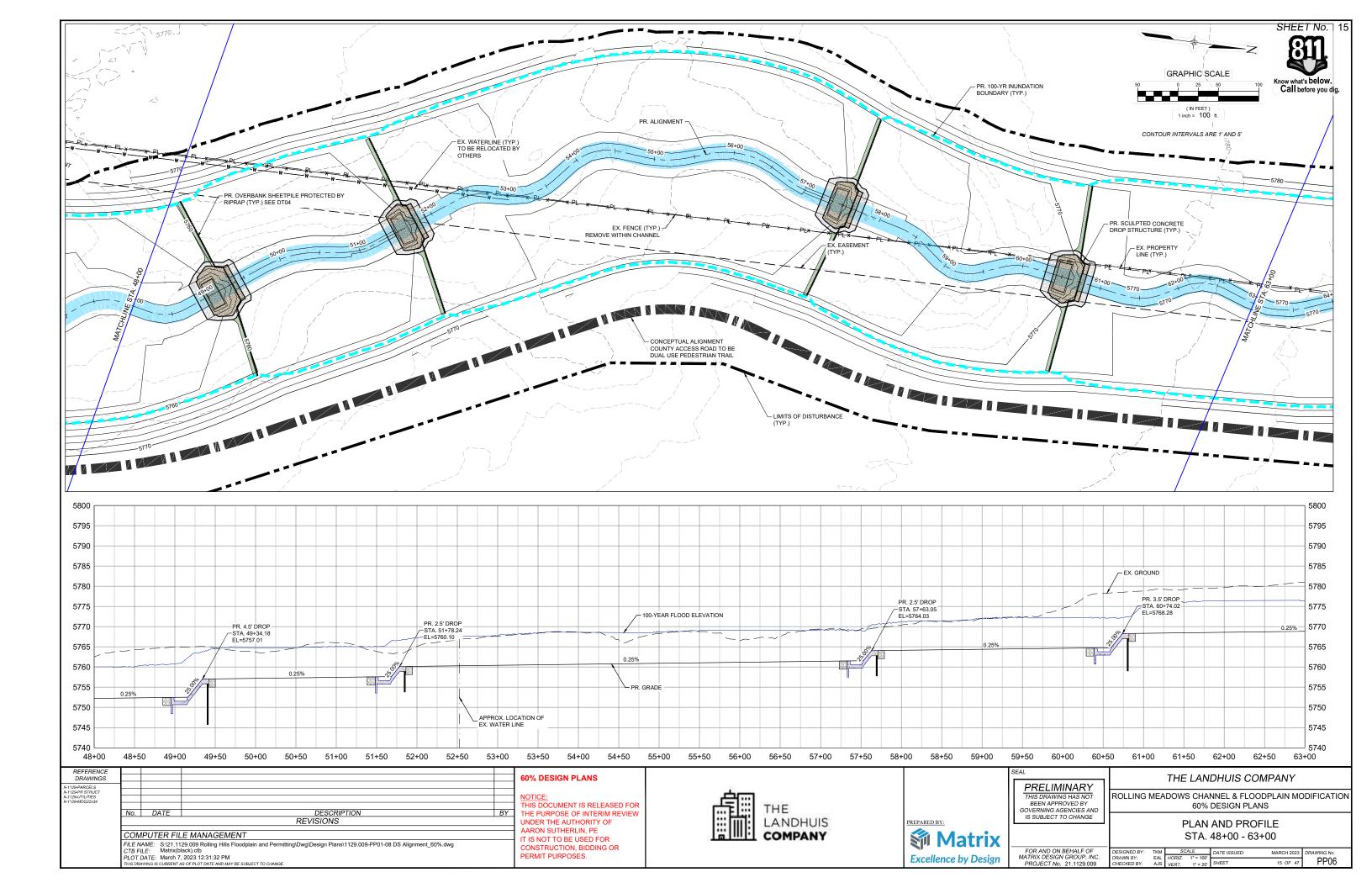


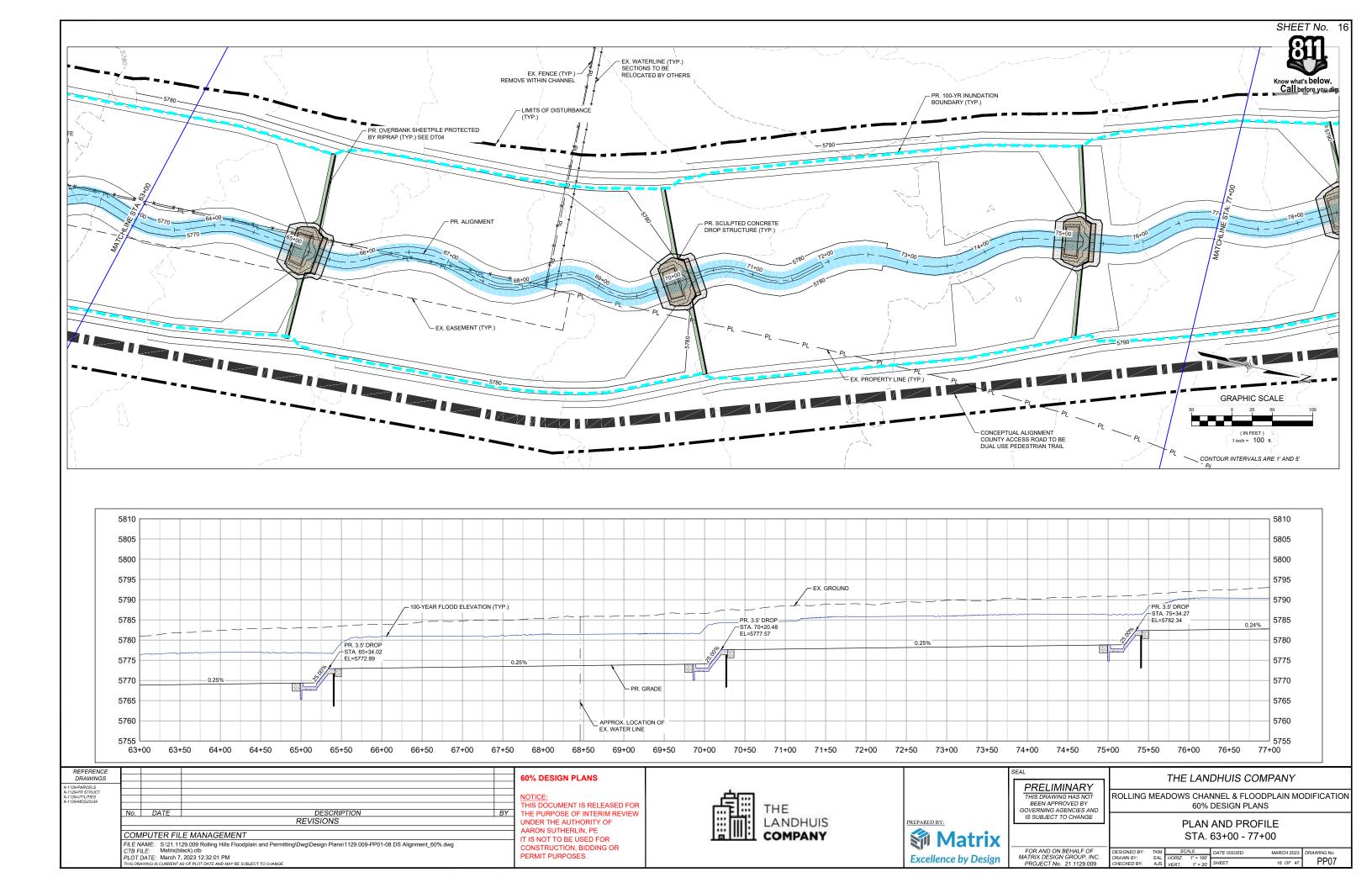


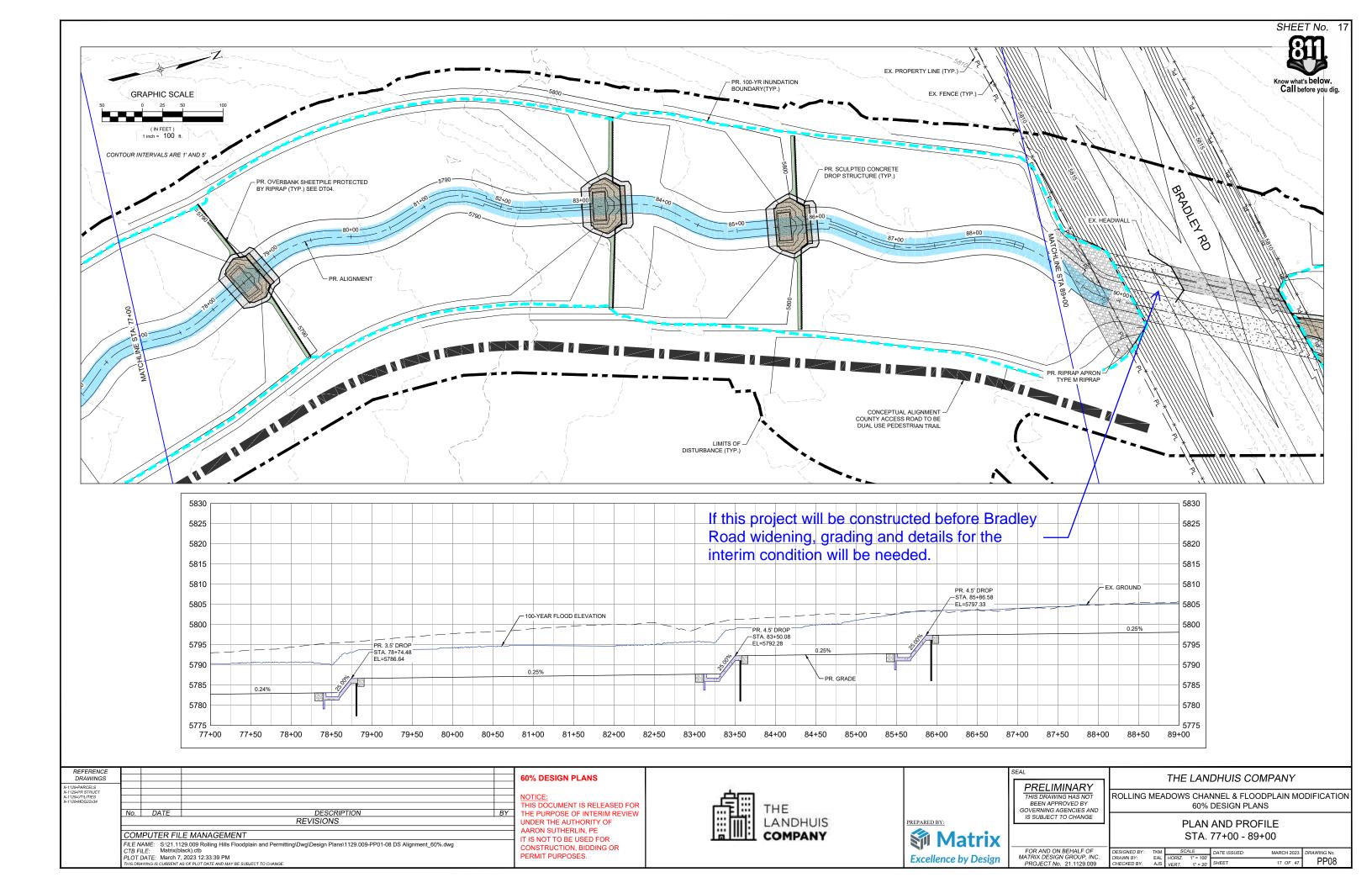


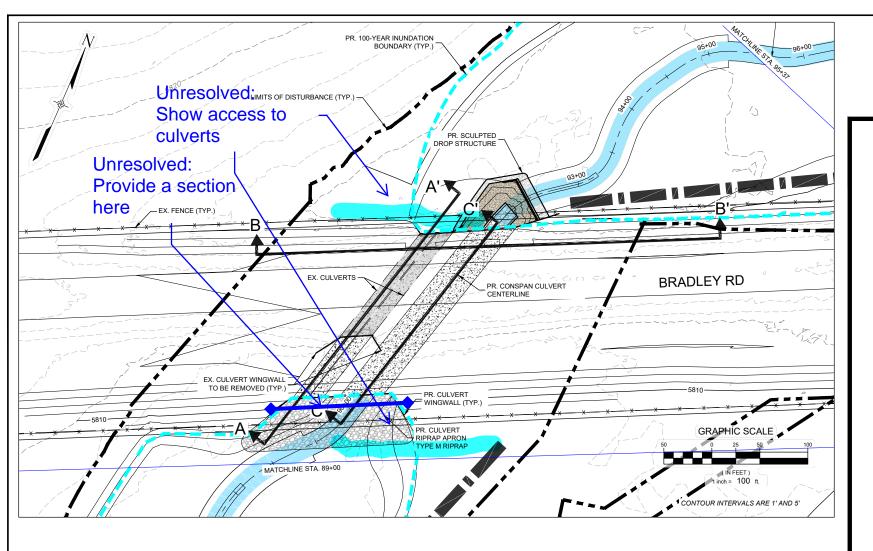


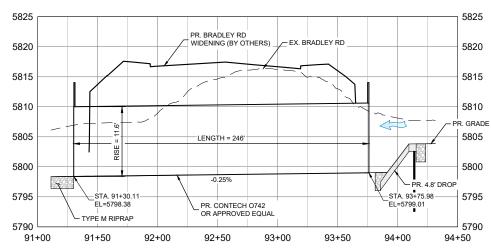












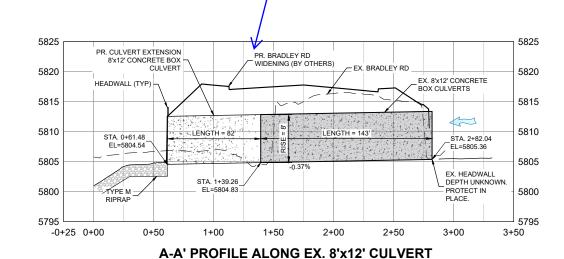
## C-C' PROFILE ALONG PROPOSED CONSPAN CULVERT

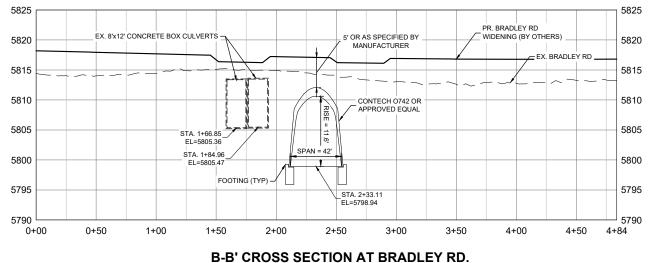
FOLLOWS THE PR. CHANNEL ALIGNMENT

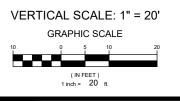
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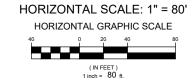
Unresolved: Is widening going to be done before channel improvements?











REFERENCE DRAWINGS					60% DESIGN PLANS
X-1129-UTILITIES X-1129-PARCELS X-1129-PR STRUCT X-1129-MDG22x34	No.	DATE	DESCRIPTION REVISIONS	BY	NOTICE: THIS DOCUMENT IS RELE THE PURPOSE OF INTERI UNDER THE AUTHORITY (
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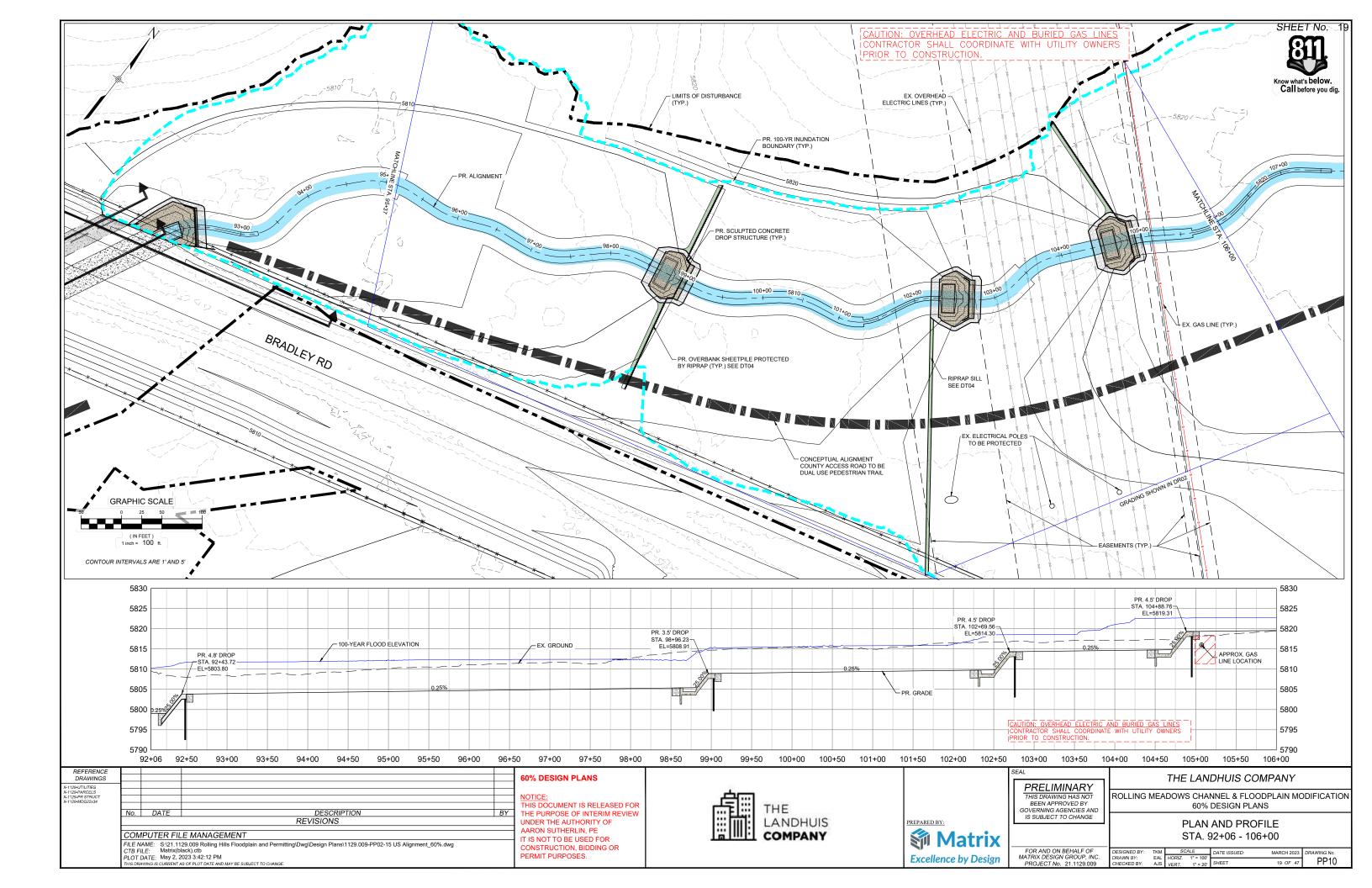
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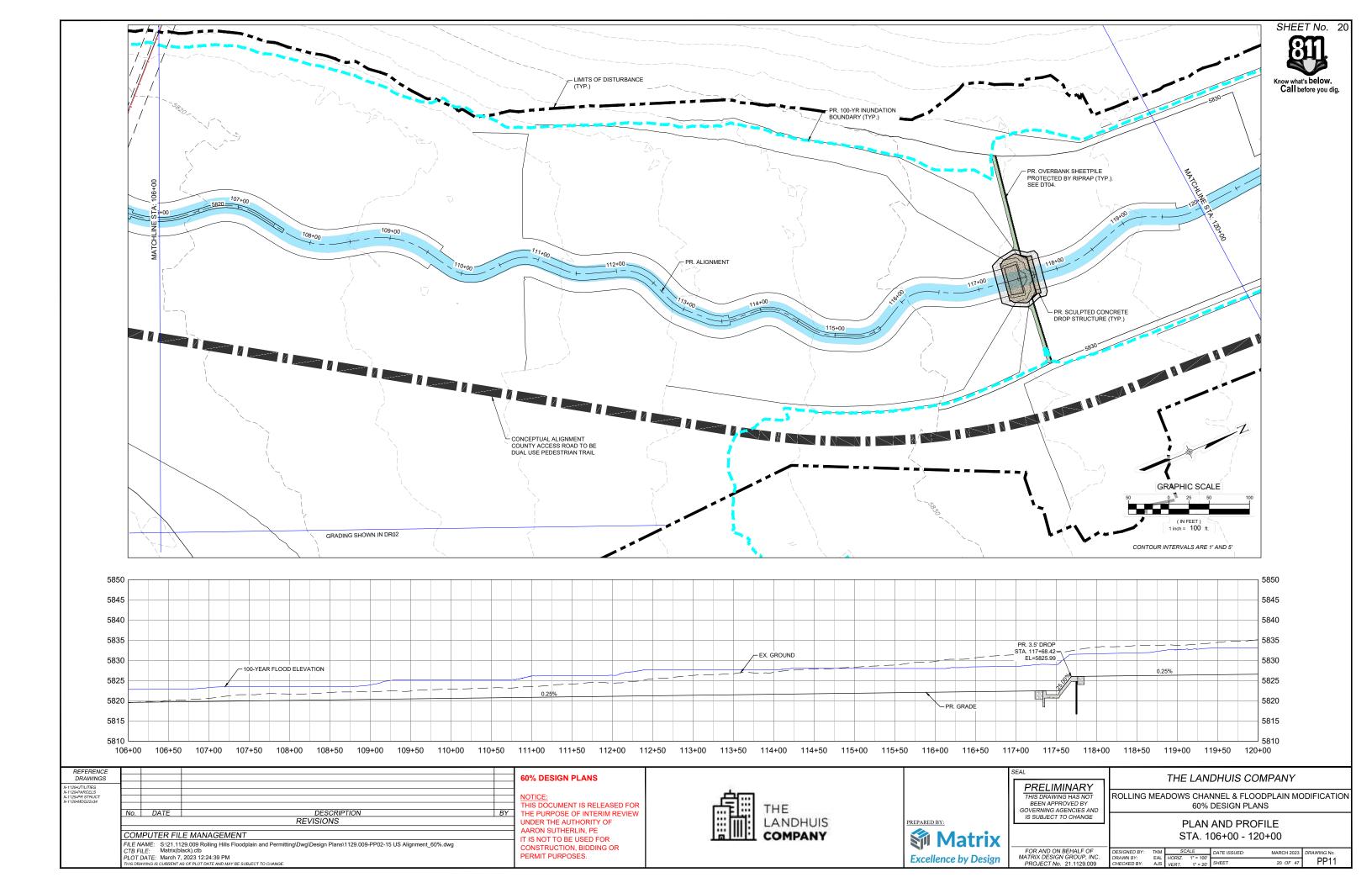
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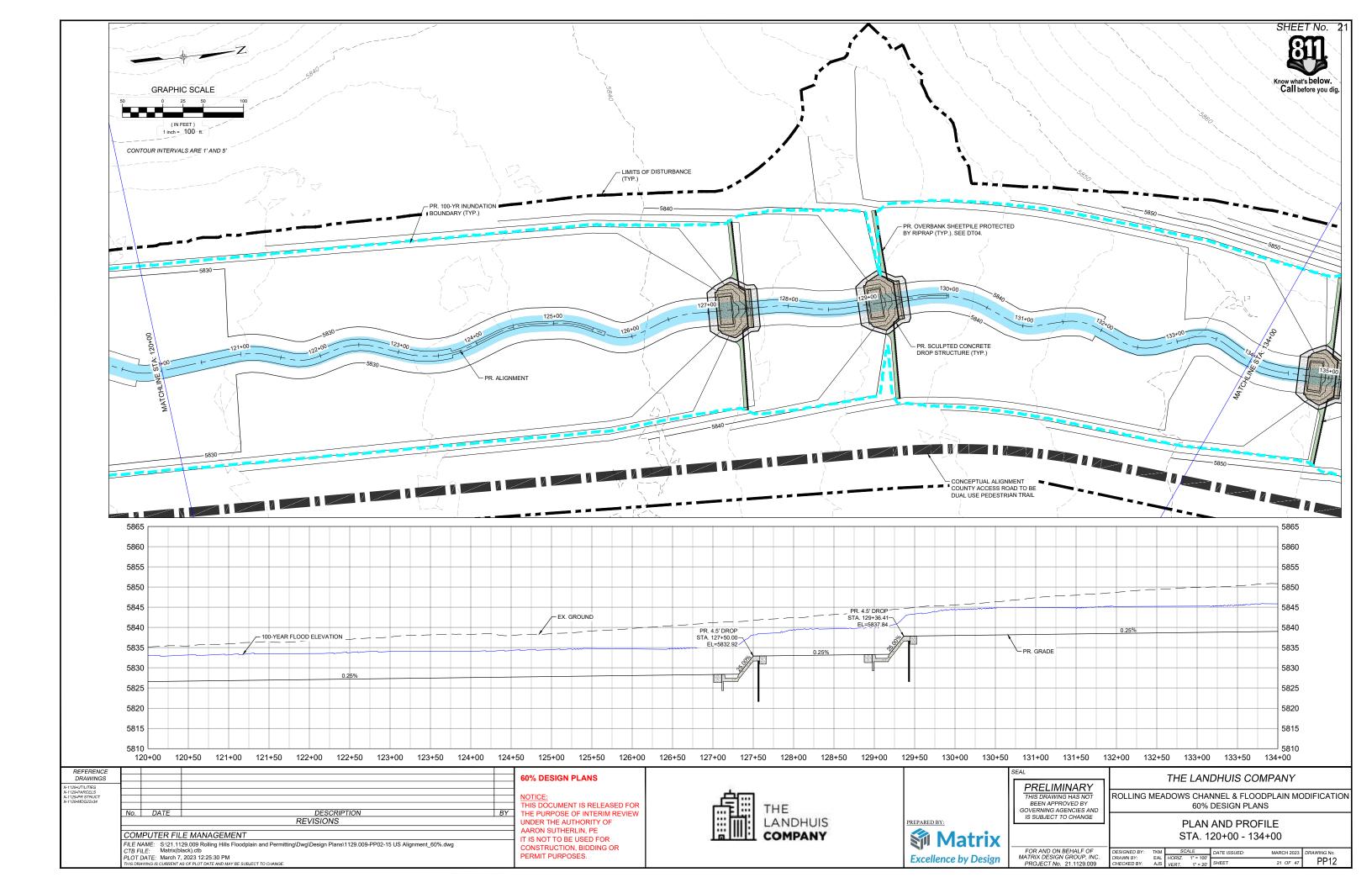
ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS
PLAN AND PROFILE

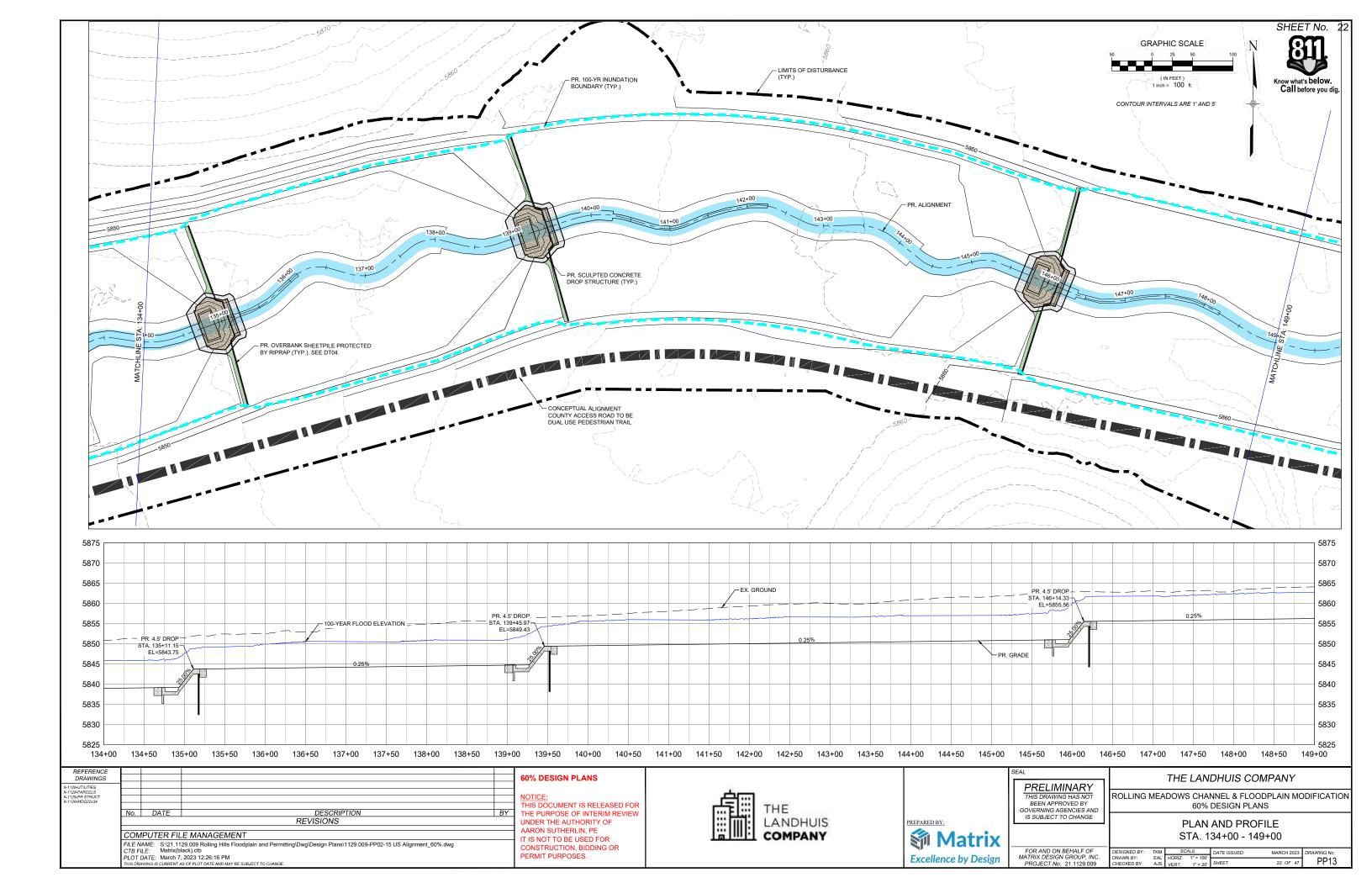
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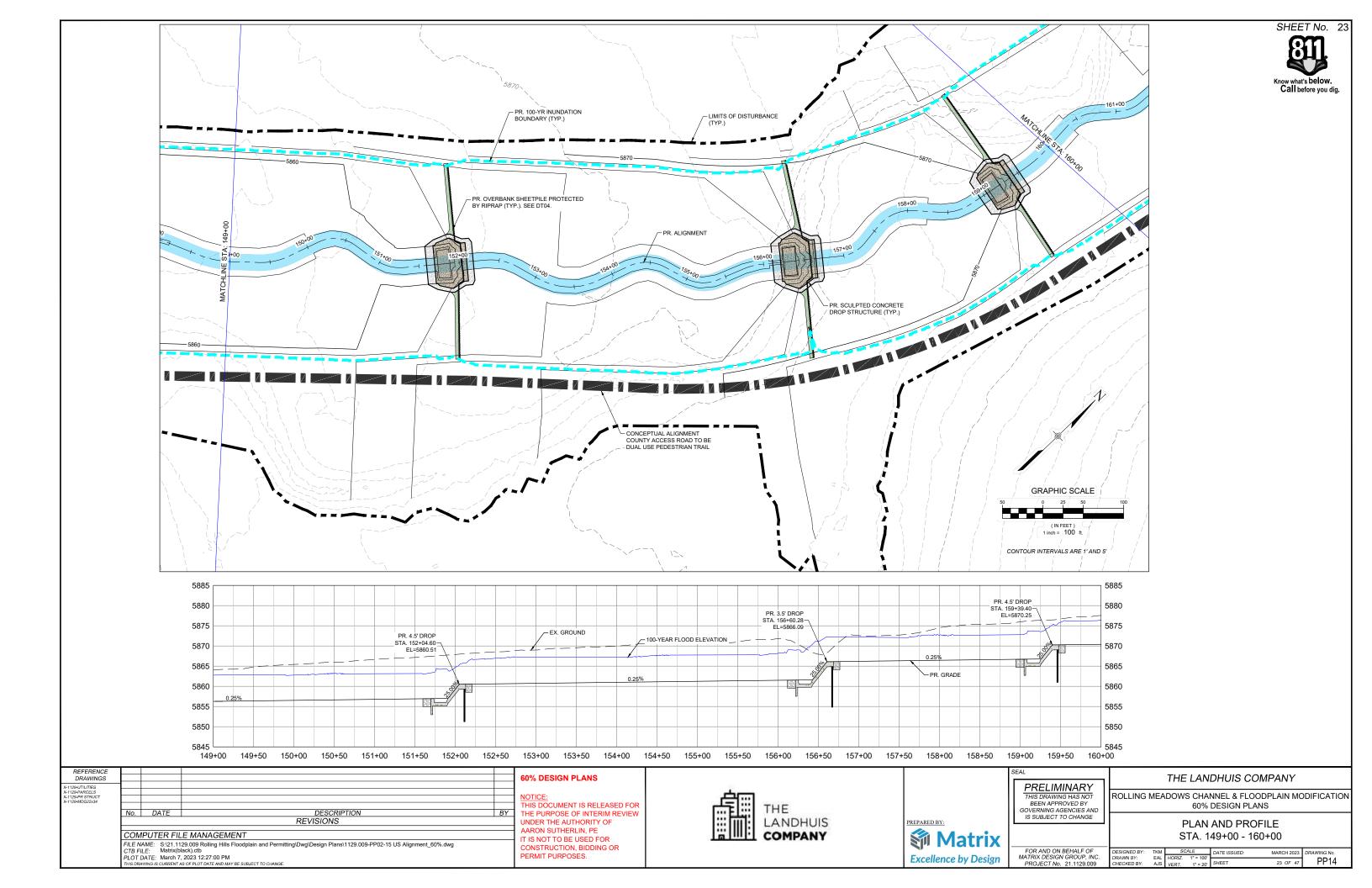
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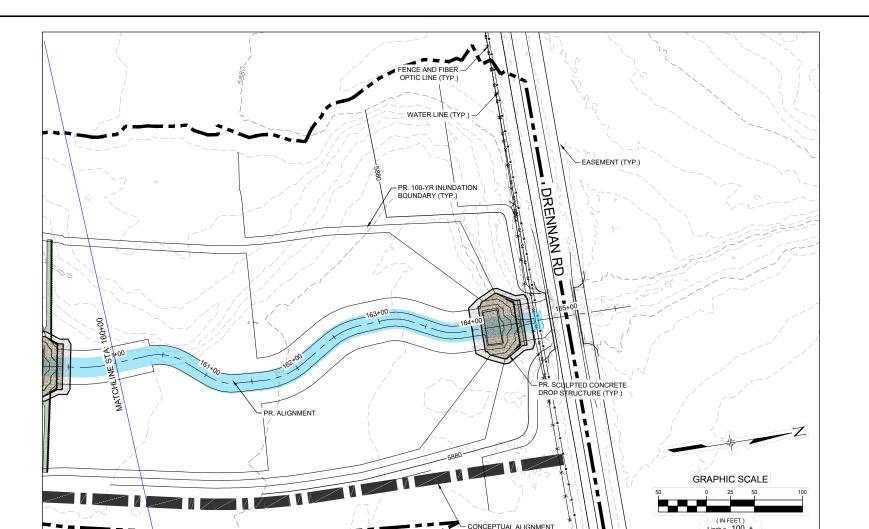


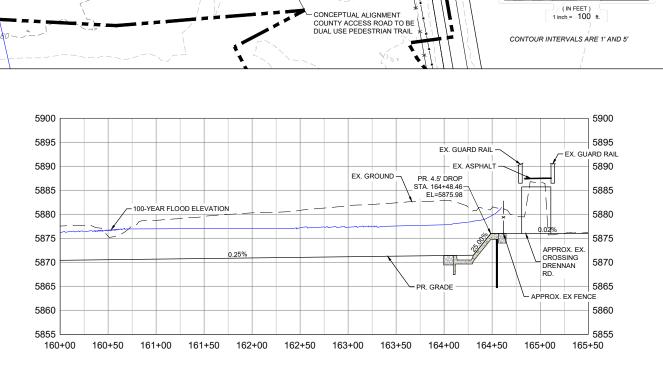


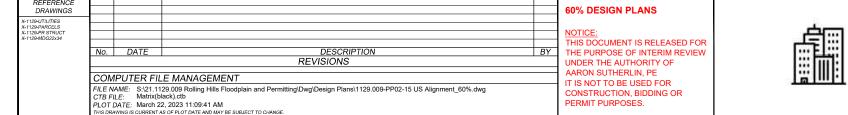
















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	ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS
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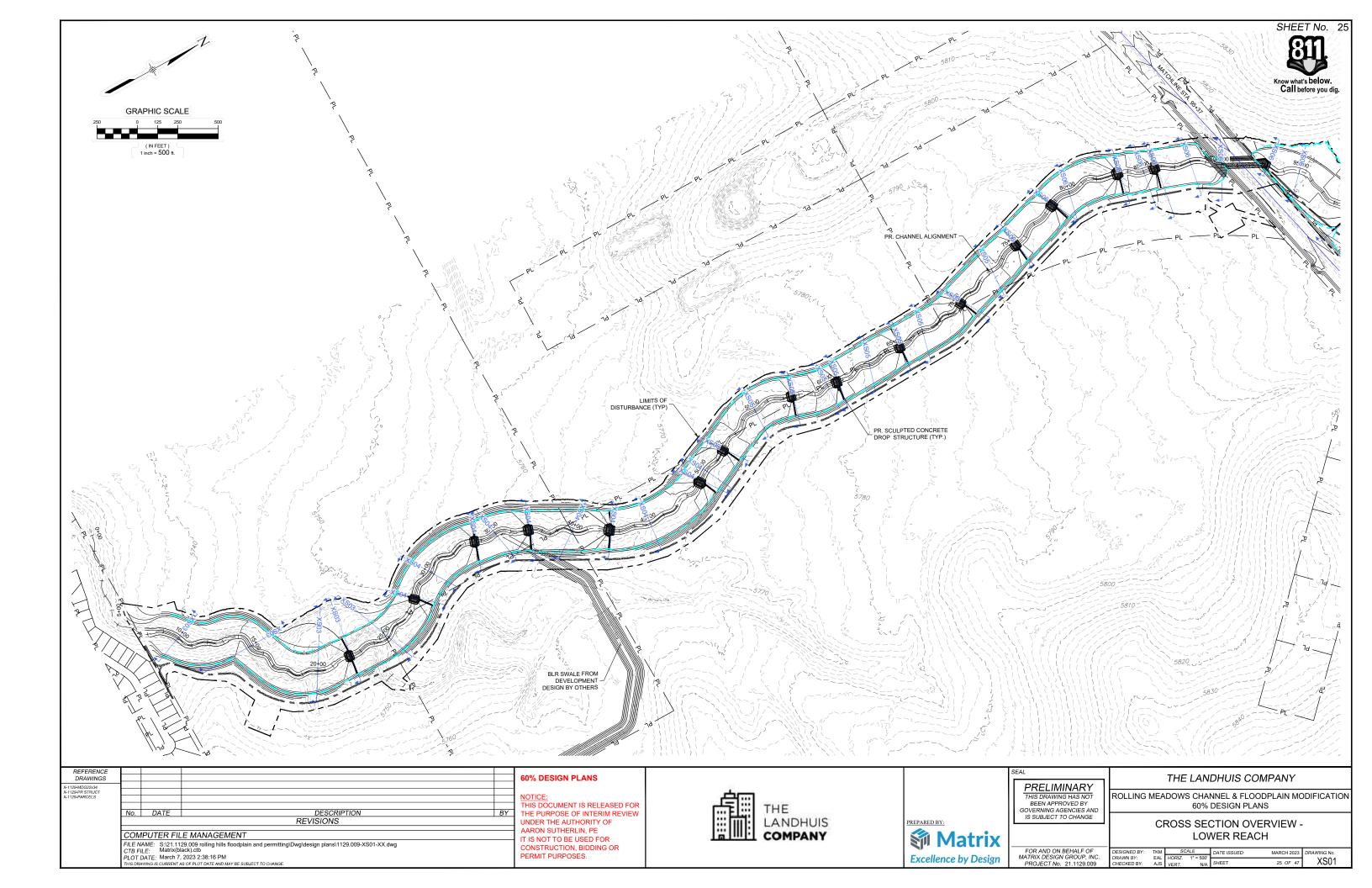
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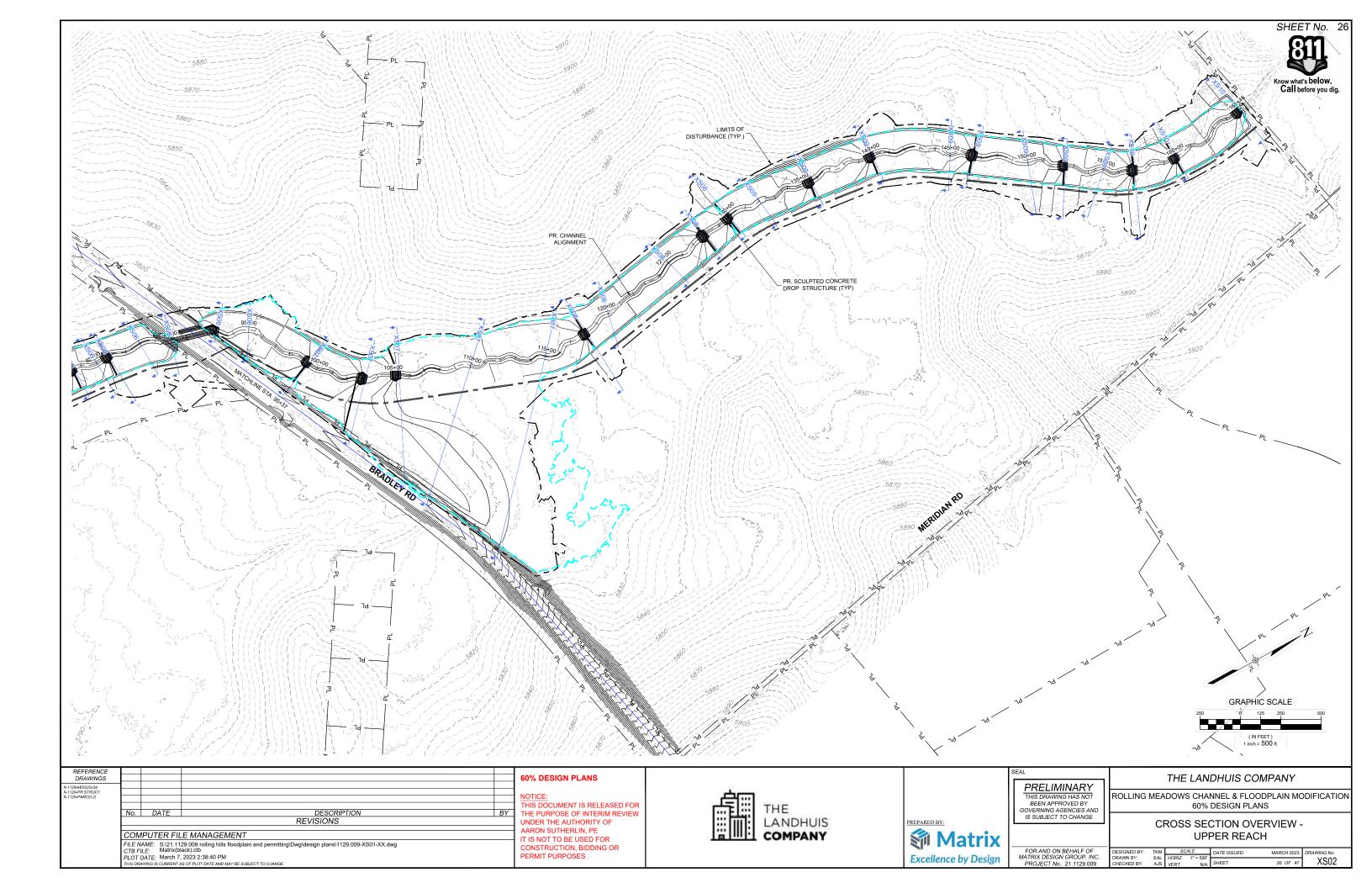
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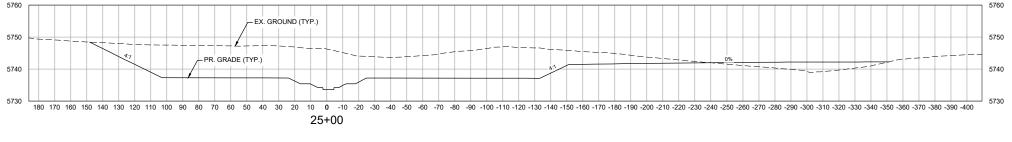
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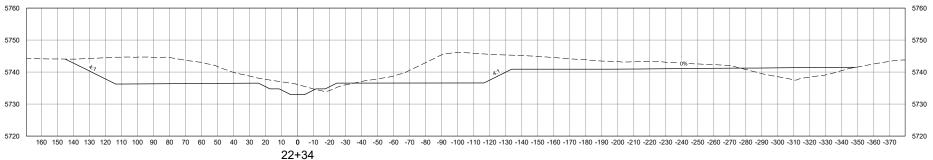
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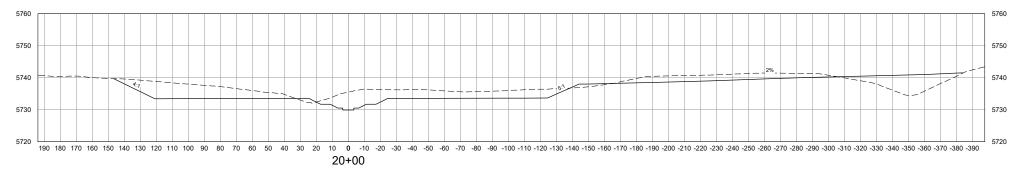
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Call before you dig.

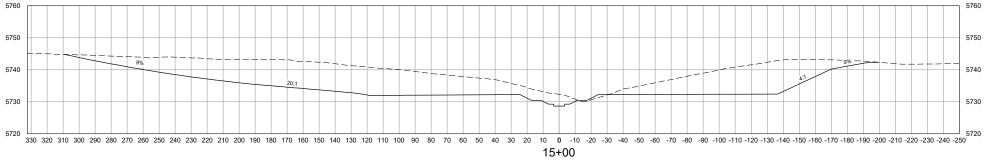


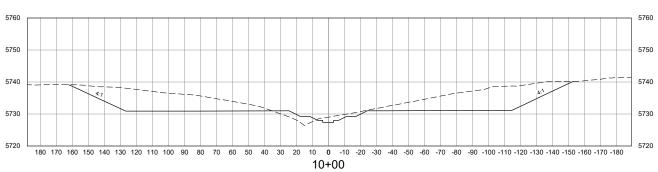




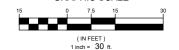




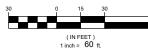




VERTICAL SCALE: 1" = 30' GRAPHIC SCALE



HORIZONTAL SCALE: 1" = 60' HORIZONTAL GRAPHIC SCALE



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NOTE:

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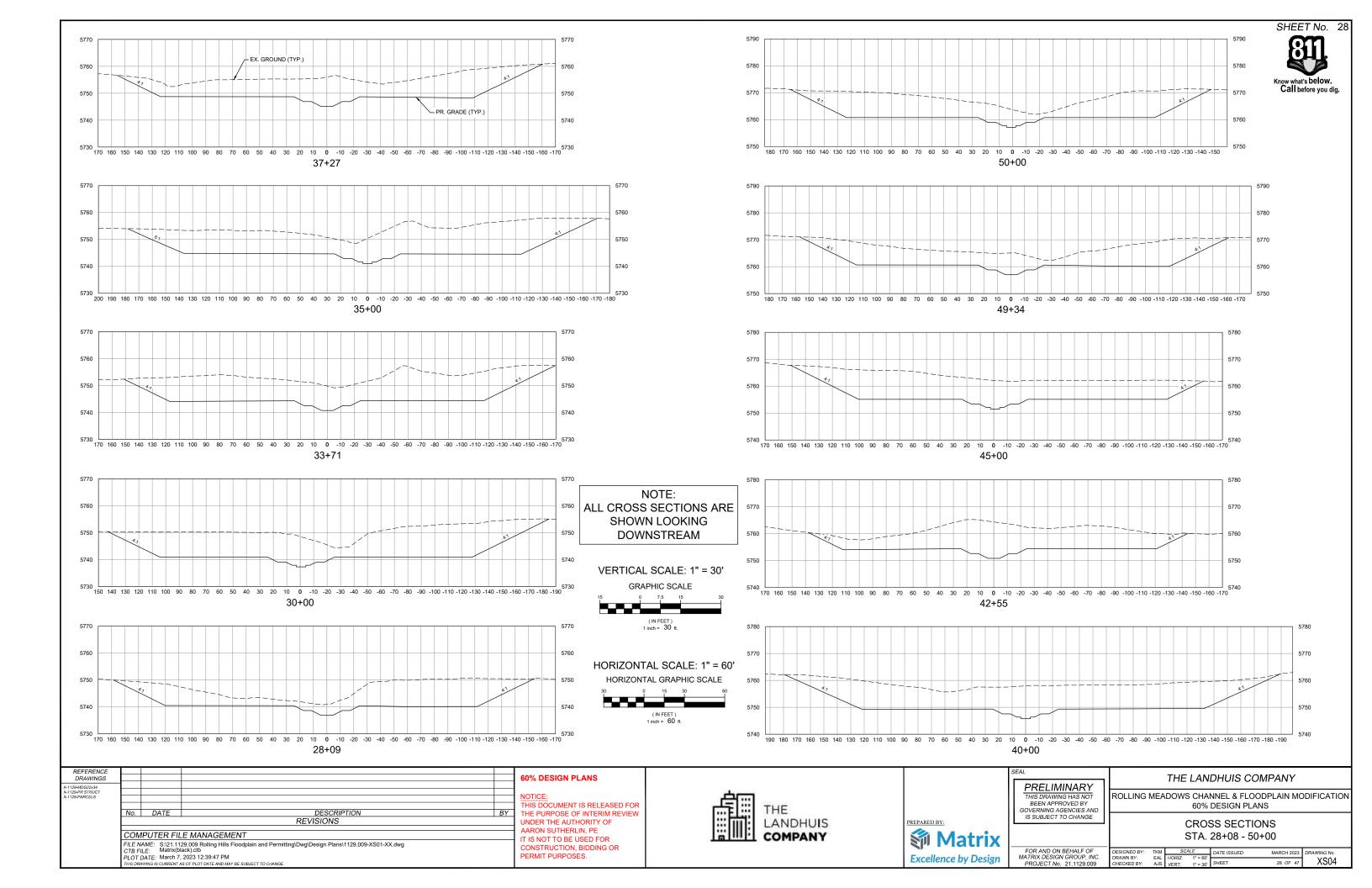
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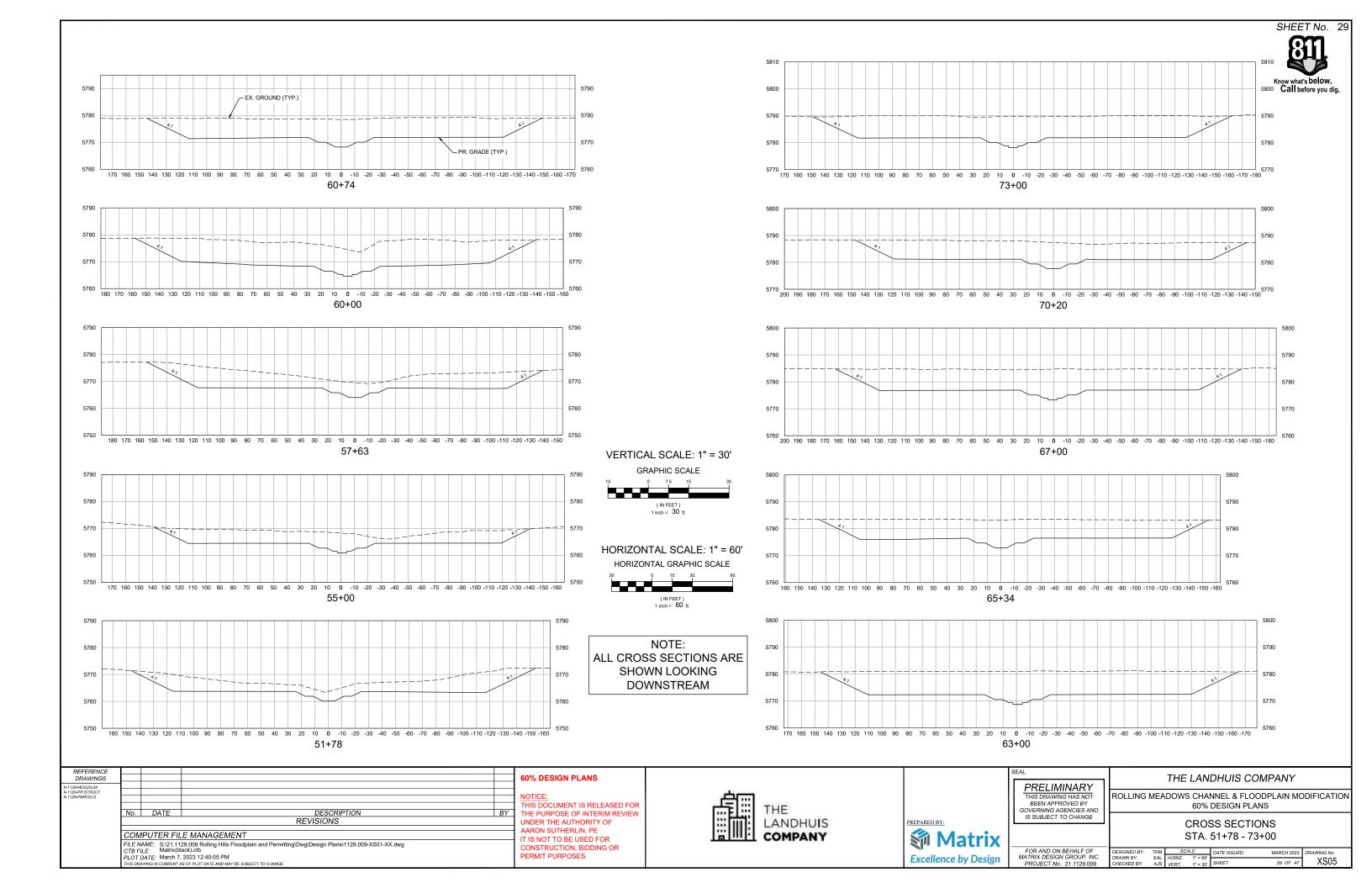
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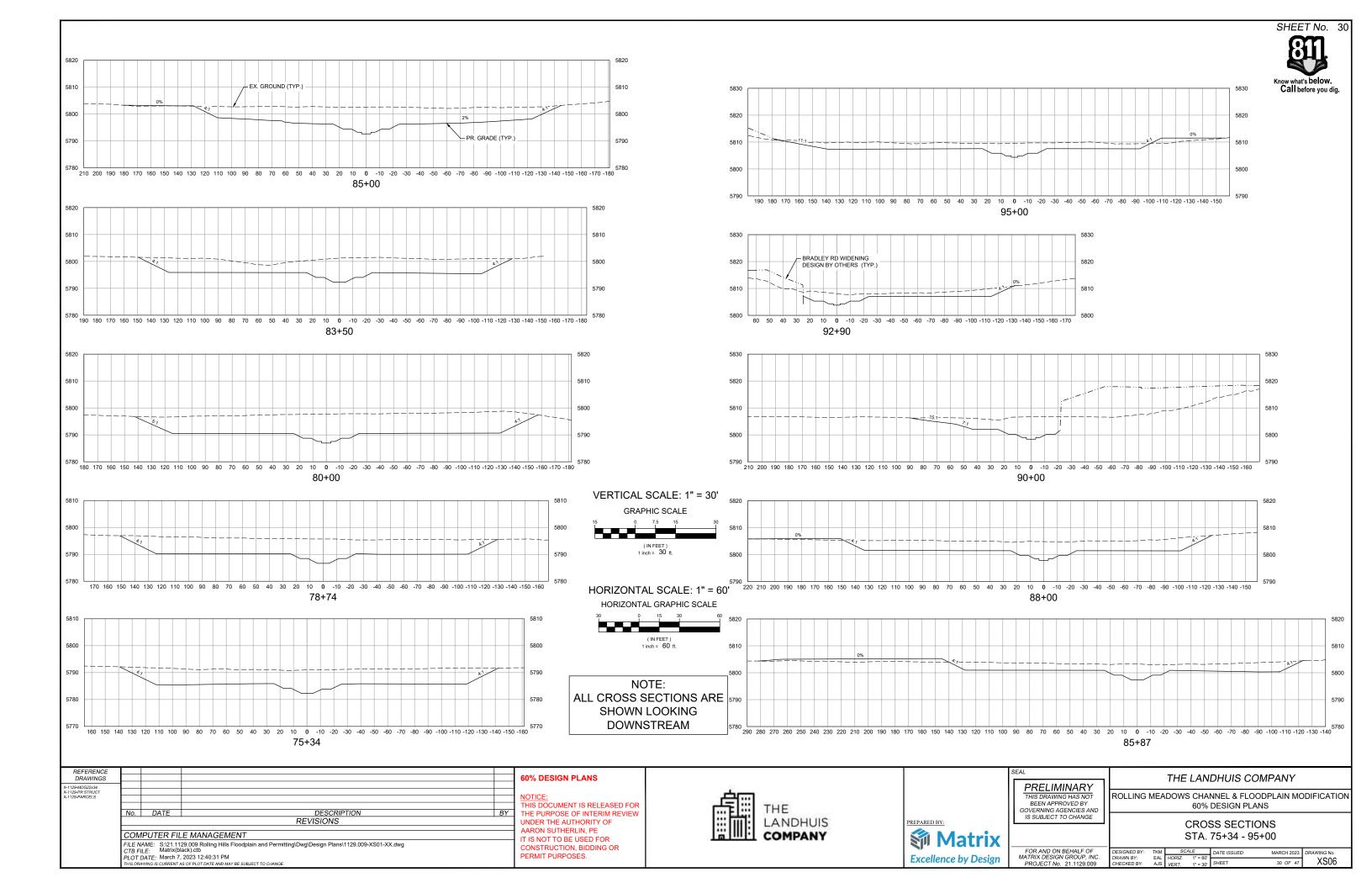
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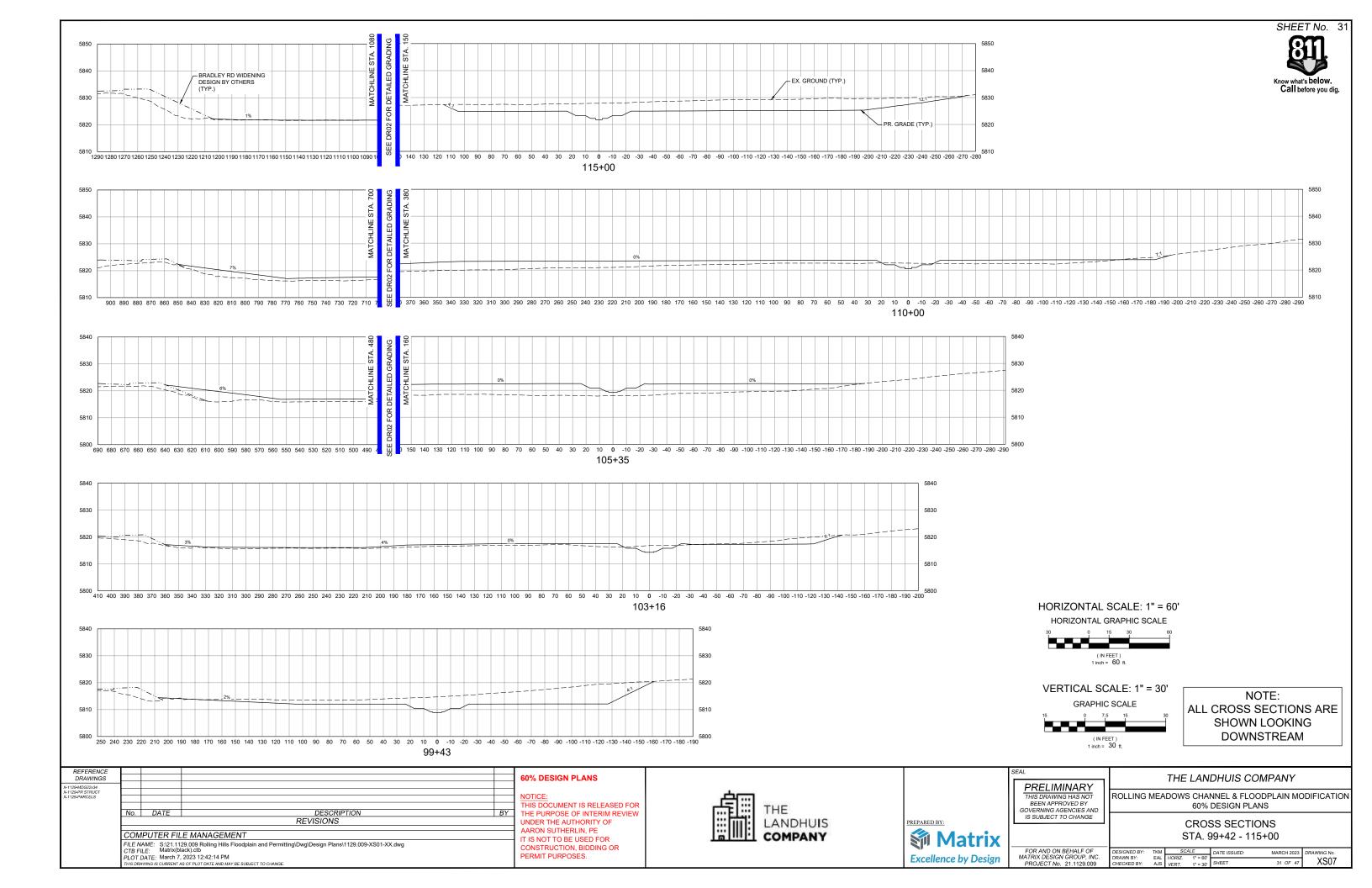
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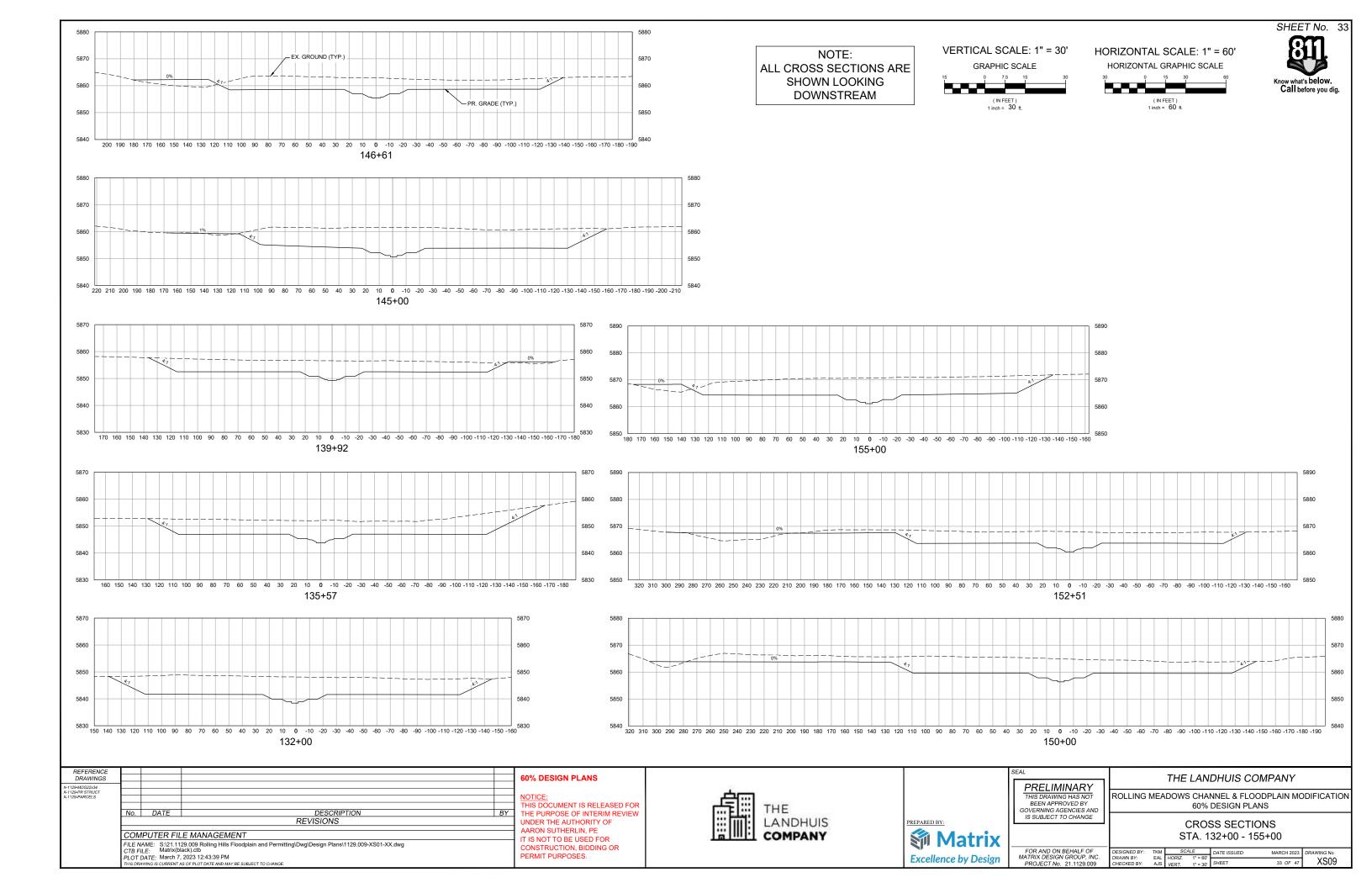
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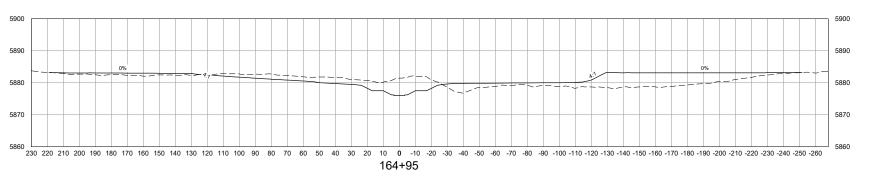


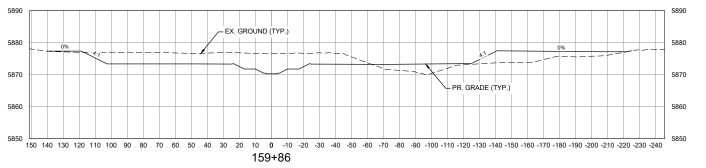


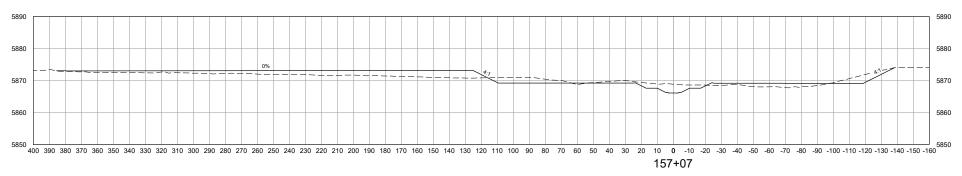










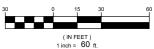


VERTICAL SCALE: 1" = 30' GRAPHIC SCALE



NOTE: ALL CROSS SECTIONS ARE SHOWN LOOKING **DOWNSTREAM** 

HORIZONTAL SCALE: 1" = 60' HORIZONTAL GRAPHIC SCALE



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# 0% DESIGN PLANS

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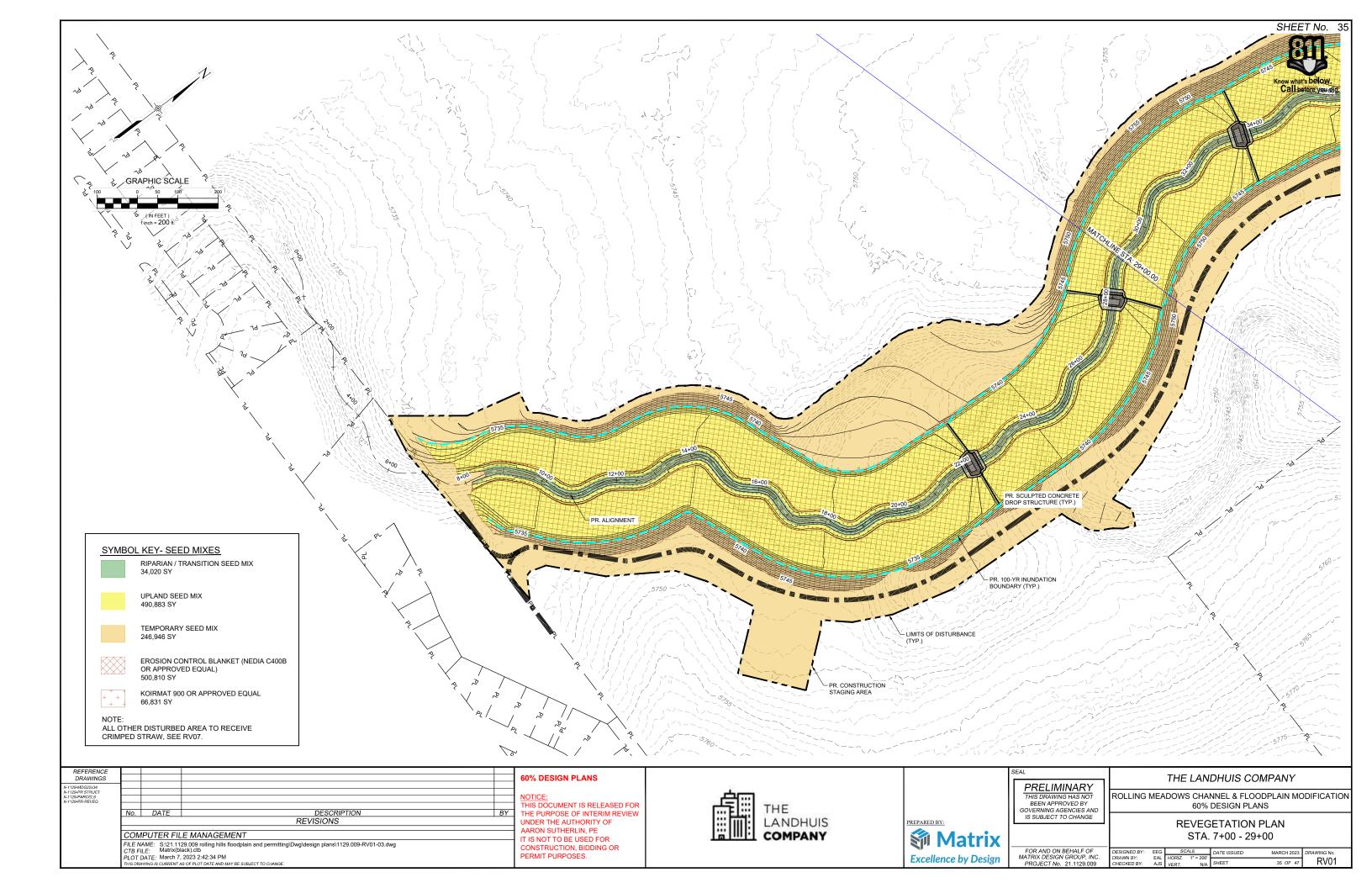
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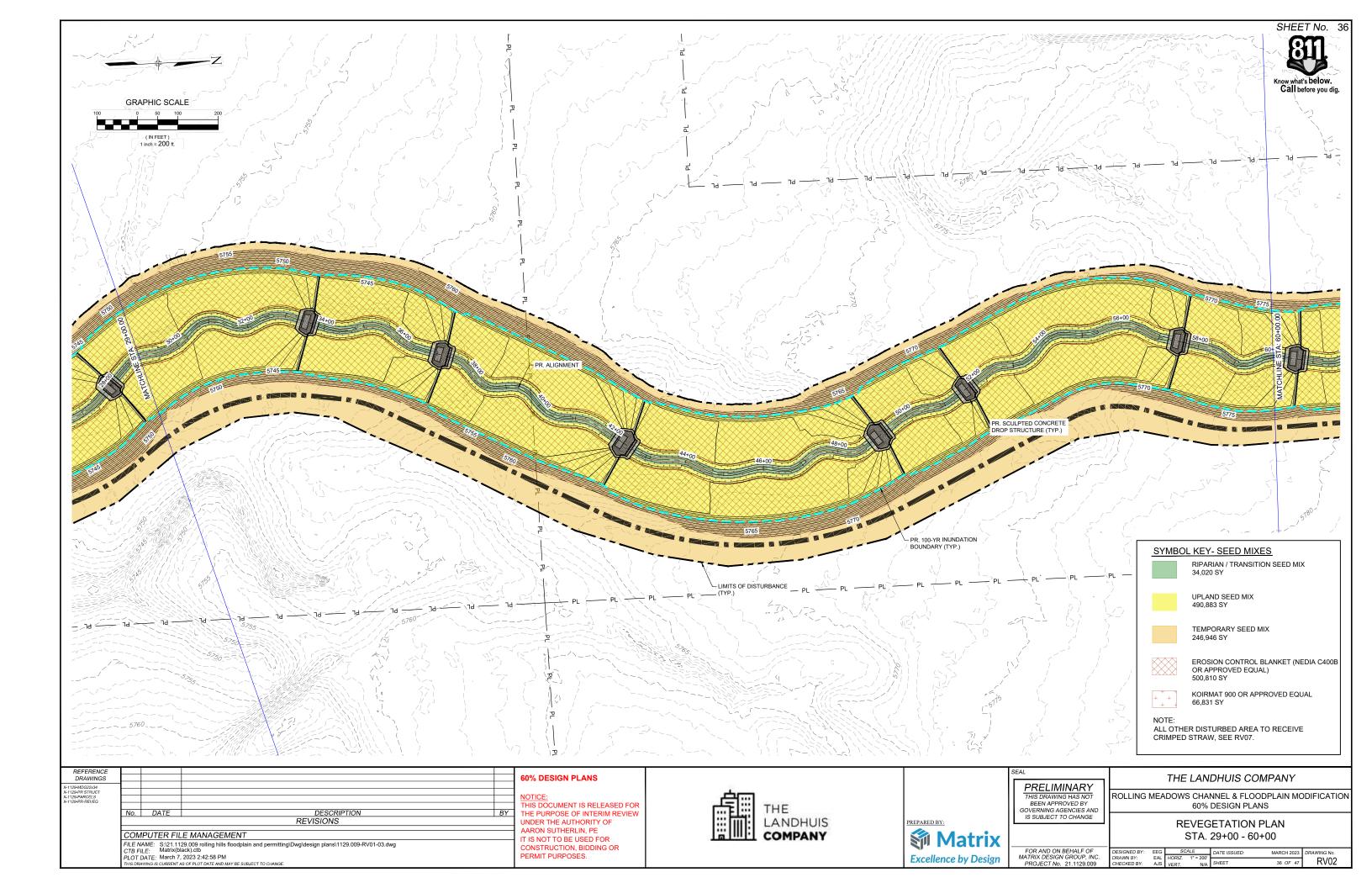
THE	LANDHUIS	COMPANY

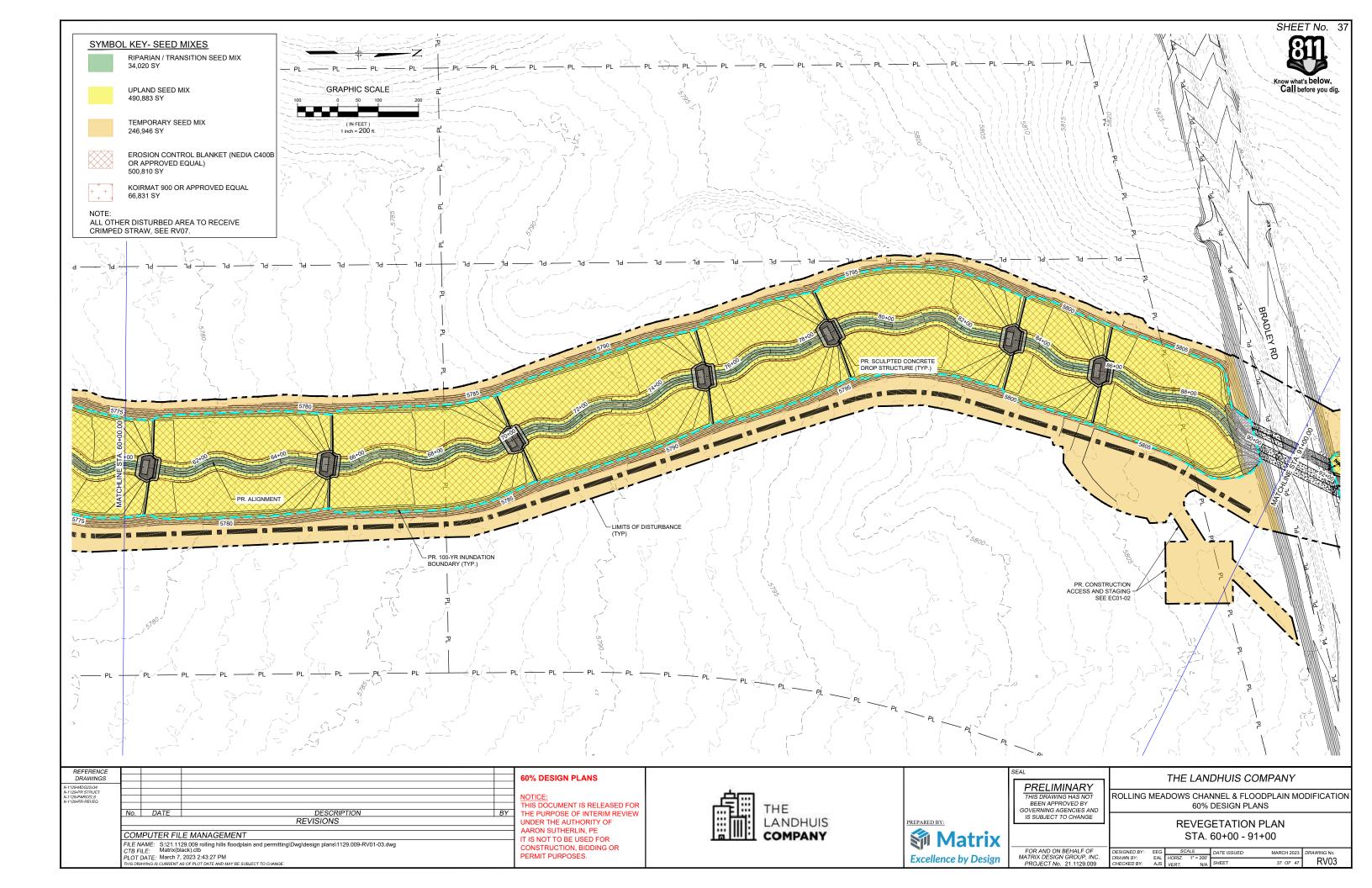
ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

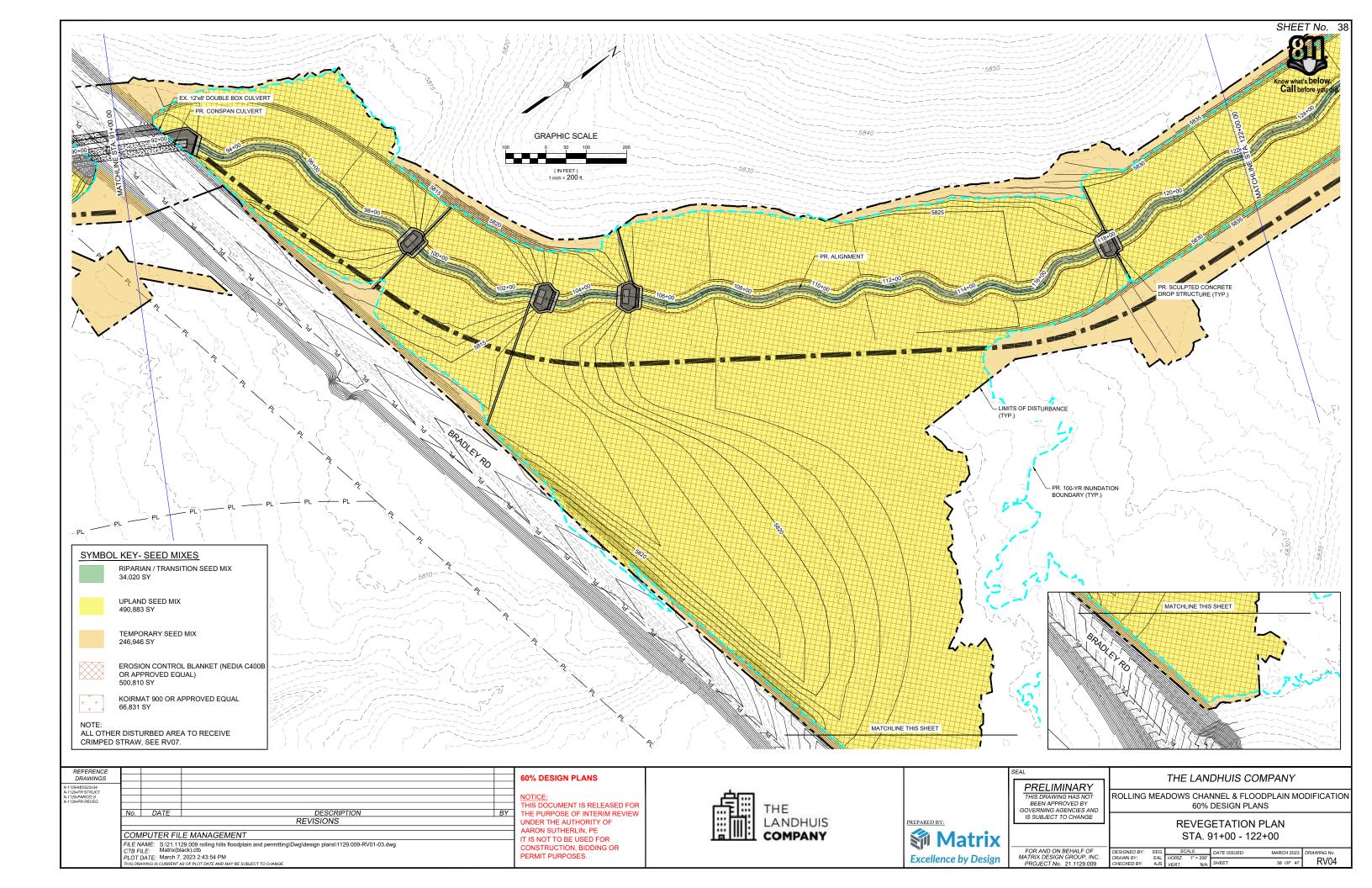
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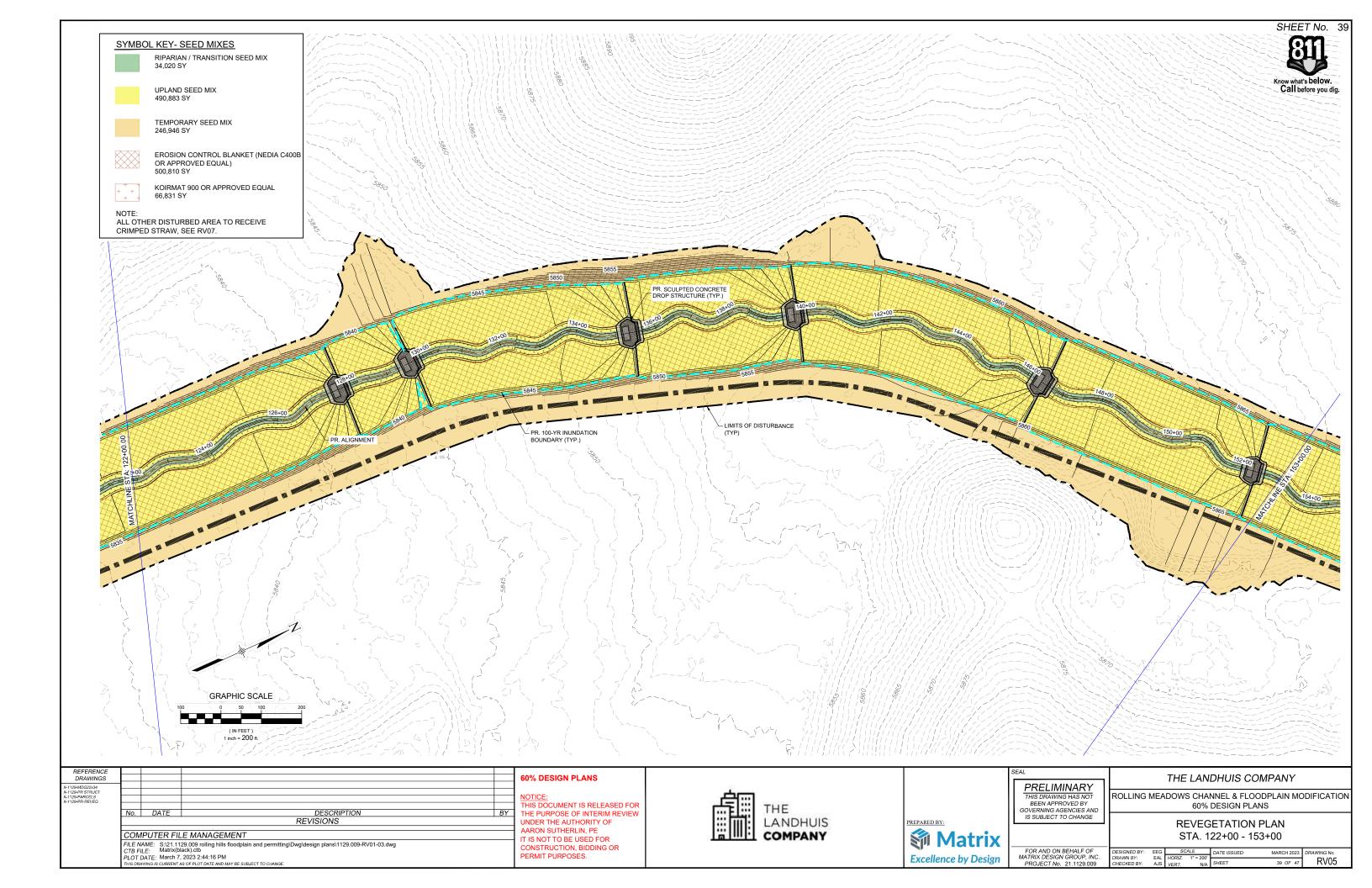
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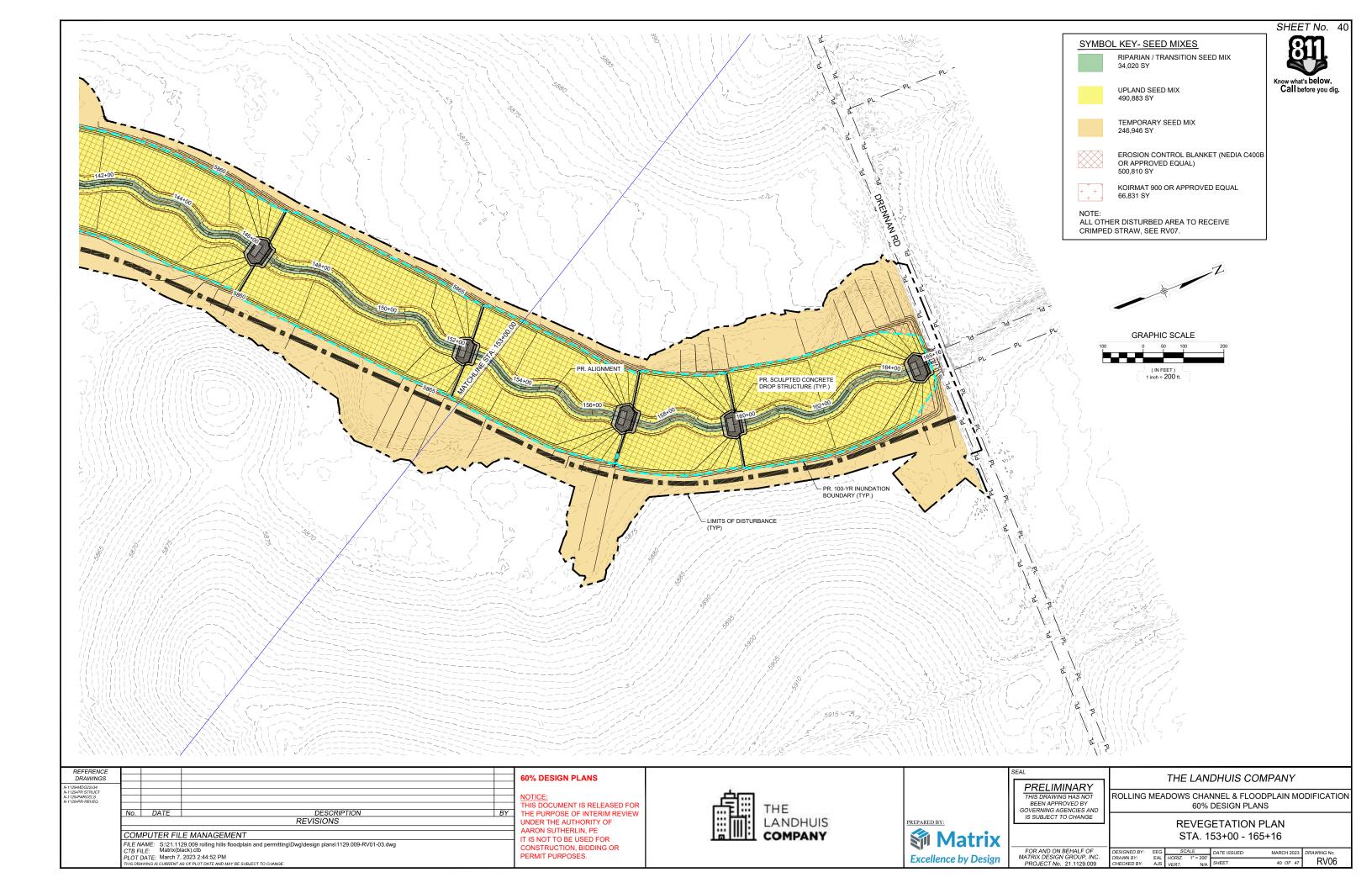












		Riparian Transition	Seed Mix			
Scientific Name	Variety	Common Name	PLS lbs/ac	% of Seed Mix by Wgt	PLS/sq ft	% of PLS/sq ft
Graminoids						
Andropogon gerardi	vns.	big bluestem	2.00	5	7	4
Bouteloua gracilis	CO Native	blue grama	1.00	3	17	10
Disticlis spicata	vns.	inland saltgrass	0.60	2	7	4
Juncus balticus	vns.	Baltic rush	0.12	0	8	5
Koeleria macrantha	vns.	prairie junegrass	0.10	0	5	3
Nassella viridula	vns.	green needlegrass	4.00	10	15	10
Schizachyrium scoparium	Cimarron	little bluestem	1.20	3	5	3
Sporobolus airoides	vns.	alkali sacaton	0.15	0	6	4
Sporobolus cryptandrus	vns.	sand dropseed	0.12	0	15	10
Panicum obtusum	vns.	vine mesquite	5.00	13	17	10
Pascopyron smithii	Arriba	western wheatgrass	5.00	13	15	10
Panicum virgatum	Blackwell	switchgrass	2.00	5	12	7
		Graminoid Total	21.29	55	130	81
Forbs						
Asclepias speciosa	vns.	showy milkweed	4	10	7	4
Helianthus annuus	vns.	common sunflower	2.00	5	2	1
Echinacea moench	vns.	purple coneflower	1.50	4	5	3
Liatris punctata	vns.	dotted blazing star	4.00	10	6	4
Monarda fistulosa	vns.	wild bergamot	0.20	1	6	4
Vicia americana	vns.	American vetch	5.50	14	4	3
		Forb Total	17.20	45	30	19
		Total	38.49	100	160	100

	Upland Seed Mix						
Scientific Name	Variety	Common Name	PLS lbs/ac	% of Seed Mix by Wgt	PLS/sq ft	% of PLS/sq f	
Graminoids							
Acantherum hymenoides	Paloma	Indian ricegrass	1.50	4	6	4	
Bouteloua curtipendula	vns.	sideoats grama	2.00	6	7	5	
Bouteloua gracilis	CO Native	blue grama	1.50	4	25	17	
Pascopyron smithii	Arriba	western wheatgrass	5.00	15	15	10	
Schizachyrium scoparium	Cimarron	little bluestem	1.80	5	8	5	
Hesperostipa comata	vns.	needle and thread	2.75	8	9	6	
Andropogon gerardi	vns.	big bluestem	2.00	6	7	4	
Nassella viridula	vns.	green needlegrass	3.50	10	13	9	
Andropogon hallii	vns.	sand bluestem	6.00	18	13	9	
Pleuraphis james ii	Viva	James' galleta	2.00	6	7	5	
Bouteloua dactyloides	vns.	buffalograss	1.00	3	8	5	
		Graminoid Total	29.05	86	118	80	
Forbs and Sub-Shrubs							
Artemisia ludoviciana	vns.	white sage brush	0.05	0	5	3	
Dalea purpurea var. purpurea	Kaneb	purple prairie clover	0.50	1	4	2	
Gaillardia aristata	vns.	blanketflower	1.50	4	5	3	
Heterotheca villosa	vns.	hairy false goldenaster	0.50	1	6	4	
Rudbeckia laciniata	vns.	cutleaf coneflower	1.00	3	6	4	
Helianthus maximiliani	vns.	Maximilian sunflower	1.20	4	5	4	
		Forb and Sub-Shrub Total	4.75	14	30	20	
_		Total	33.80	100	148	100	

	Shrub Overseed Mix						
Scientific Name	Variety	Common Name	PLS lbs/ac	% by Wgt	PLS/sq ft	% of PLS/sq ft	
Shrubs							
Amorpha canescens	vns.	leadplant	0.50	1	2	15	
Atriplex canescens	vns.	fourwing saltbush	3.00	8	3	20	
Ericameria nauseosa	vns.	rubber rabbitbrush	0.20	1	2	12	
Krascheninnikovia lanata	vns.	winterfat	2.5	7	6	42	
Prunus pumila	vns.	western sandcherry	30	83	2	11	
		Total	36.20	100	15	100	
*var. = variety; vns. = variety r	not specified						

Temporary Seed Mix						
Scientific Name	Variety	Common Name	PLS lbs/ac	% by Weight	PLS/sq ft	% of PLS/sq ft
Graminoids						
Acantherum hymenoides	Paloma	Indian ricegrass	2.00	6	7	6
Elymus trachycaulus	Pryor	slender wheatgrass	8.00	24	29	25
Bouteloua gracilis	CO Native	blue grama	1.50	4	25	21
Pascopyron smithii	Arriba	western wheatgrass	8.00	24	24	21
Elymus canadensis	vns.	Canada wildrye	8.00	24	21	18
Bouteloua dactyloides	vns.	buffalograss	1.50	4	12	10
		Tot	al 29.00	86	119	100
*var. = variety; vns. = variety r	not specified					

### REVEGETATION NOTES:

- 1. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE FREE OF NOXIOUS SPECIES. UNDESIRABLE SPECIES AS DEFINED IN THE SEEDING SPECIFICATION, AND AGGRESSIVE NON-NATIVE SPECIES INCLUDING BUT NOT LIMITED TO CHEATGRASS, KOCHIA, SMOOTH BROME, AND RUSSIAN THISTLE.
- 2. ALL MATERIALS SHALL BE FURNISHED IN ORIGINAL MANUFACTURER'S SHIPPING BAGS OR CONTAINERS AND REMAIN IN THESE BAGS OR CONTAINERS UNTIL THEY ARE USED. ALL MATERIALS SHALL BE STORED IN A MANNER THAT WILL PREVENT THEM FROM COMING INTO CONTACT WITH PRECIPITATION SURFACE WATER OR ANY OTHER CONTAMINATING SUBSTANCE. ANY MATERIALS THAT HAVE BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE SHALL NOT BE USED.
- 3. AFTER ROUGH GRADING HAS BEEN COMPLETED, A MINIMUM OF 2 COMPOSITE SOIL SAMPLES, 1 FROM THE SEED MIX AREA SUBSOILS AND 1 FROM THE TOPSOIL STOCKPILE, SHALL BE COLLECTED FROM THE PROJECT AREA AND SUBMITTED FOR SOIL FERTILITY AND TEXTURE TESTING PRIOR TO APPLICATION OF SOIL CONDITIONER, SEEDING, OR PLANTING. A COMPOSITE SAMPLE IS COMPRISED OF AT LEAST 4 INDIVIDUAL GRAB SAMPLES CAPTURING THE TOP 6 INCHES OF SOIL. EXACT LOCATIONS OF SAMPLES TO BE DETERMINED BY THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT. A RECOMMENDED SOIL CONDITIONING AMENDMENT AND APPLICATION RATE SHALL BE DETERMINED BASED ON THE SOIL TEST RESULTS. NO SOIL CONDITIONING, SEEDING, OR PLANTING SHALL OCCUR PRIOR TO SOIL TEST AND UNTIL A SOIL CONDITIONING AMENDMENT IS ACCEPTED.

### TOPSOIL

- 4. IF THE SOIL FERTILITY TESTING INDICATES NATIVE TOPSOIL MEETS THE MINIMUM SPECIFICATIONS, NATIVE MATERIAL MAY BE REUSED UNAMENDED AS DETERMINED BY THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT. IF SOIL FERTILITY TESTING INDICATES NATIVE TOPSOIL DOES NOT MEET MINIMUM SPECIFICATIONS, THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT SHALL CONFIRM THE REQUIRED APPLICATION RATE OF COMPOST AMENDMENT OR SOIL CONDITIONER PER THE CONSTRUCTION DOCUMENTS AS NECESSARY TO MEET THE MINIMUM SPECIFICATIONS.
- 5 WITHIN THE PROJECT AREA ANY AREAS WITH ADEQUATE TOPSOIL SHALL BE SALVAGED AND STOCKPILED FOR RELISE
- 6. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 6 INCHES ON ALL DISTURBED ARFAS. WHERE SOIL AMENDMENT IS REQUIRED, IT SHALL BE EVENLY DISTRIBUTED AND TILLED TO A DEPTH OF 12 INCHES MINIMUM OR AS SPECIFIED BY THE PRODUCT MANUFACTURER INSTRUCTIONS. IF DEPTH IS NOT POSSIBLE, NOTIFY PROJECT ENGINEER IMMEDIATELY. RECOMMENDATIONS OR MODIFICATIONS TO DEPTH OF TOPSOIL SHALL BE DETERMINED BY THE PROJECT FCOLOGIST / LANDSCAPE ARCHITECT BASED ON THE SOIL TEST RESULTS. NO SOIL CONDITIONING, SEEDING, OR PLANTING SHALL OCCUR PRIOR TO SOIL TEST AND UNTIL TOPSOIL TESTING IS ACCEPTED.
- HUMATE SOIL CONDITIONER WILL BE APPLIED AT A RATE OF 250 POUNDS PER ACRE AND SHALL BE TOPICALLY APPLIED OR AS SPECIFIED BY THE PRODUCT MANUFACTURER INSTRUCTIONS

- 8. FOR BIDDING PURPOSES, IT IS ASSUMED ALL SEEDING AREAS OUTSIDE OF 10 FEET FROM THE ACTIVE WATERWAY SHALL BE AMENDED WITH 3 CUBIC YARDS OF ORGANIC, WEED FREE, CLASS A COMPOST PER 1,000 S,F AND ALL SEEDING AREAS, INCLUDING ALONG THE ACTIVE WATERWAY, SHALL BE AMENDED WITH HUMATE SOIL CONDITIONER THAT SHALL BE APPLIED AT A RATE OF 250 POUNDS PER ACRE. FINAL COMPOST AMENDMENT AND SOIL CONDITIONS APPLICATION RATES SHALL BE CONFIRMED BY THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT FROM THE RESULTS OF THE SOIL FERTILITY TESTS
- 9. SOIL AMENDMENTS

COMPOST: COMPOST SHALL BE CLASS A AS DEFINED BY CFR TITLE 40, PART 503 OR CLASS 1 AS DESCRIBED IN THE TABLE BELOW. THE AMOUNT OF COMPOST ADDED TO THE SOIL MAY VARY DEPENDING ON SOIL TEST RESULTS.

Compost Parameters	Reported As	Requirements	Test Method	
pН	pH units	6.0 - 8.4	TMECC 04.11-A	
Soluble Salts (Electrical Conductivity)	dS m <sup>-1</sup> or mmhos cm <sup>-1</sup>	0-3 mmhos/cm	TMECC 04.11-A	
Moisture Content	%, wet weight basis	35 - 60%	TMECC 03.09-A	
Organic Matter Content	%, dry weight basis	30 - 70%	TMECC 05.07-A	
Particle Size (Sieve Sizes)	%, dry weight basis for each sieve fraction	Passing 1 inch - 100% 1/2 inch - 95%	TMECC 02.02-B	
Man-made Inert Contamination	%, dry weight basis	< 1%	TMECC 03.08-A	
Stability (Respirometry)	mg CO₂ - C per g TS per day mg CO₂ - C per g OM per day	8 or below	TMECC 05.08-B	
Select Pathogens	(PASS/FAIL) Limits: Salmonella < 3 MPN/4grams of TS, or Coliform Bacteria <1000 MPN/gram	Pass	TMECC 07.01-B Fecal Coliforms, or 07.02 Samonella	
Trace Metals	(PASS/FAIL) Limits (mg kg¹ dw basis): As 41, Cd 39, Cu 1500, Pb 300, Hg 17, Ni 420, Se 100, Zn 2800	Pass	TMECC 04.06	
Maturity (Bioassay) Percent Emergency Relative	%, (average)	> 80%	TMECC 05.05-A	
Seedling Vigor	%, (average)	> 80%	255 00.0071	
Notes: The Contractor sha	Il provide a CTR in accordar	nce with subsectio	n 106.13 of CDOT	

standard specifications confirming that the material has been tested in accordance with

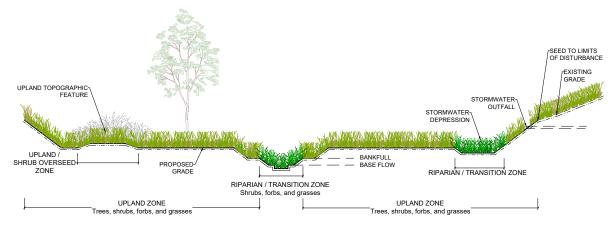
- 10. HUMATE SOIL CONDITIONER, NATURAL MINERAL, CARBON, AND HUMIC ACID-BASED SOIL CONDITIONER SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
- HUMIC ACIDS >50%
- ORGANIC MATTER >85%
- 1%N, <0.1% AS P2O5, <0.10%K AS K2O
- APPLICATION RATE IS ASSUMED TO BE 250 LBS/ACRE FOR BIDDING PURPOSES BUT IS DEPENDENT ON SOIL TEST RESULTS. HUMATE WORKS BEST WHEN MINIMUM DAILY SOIL TEMPERATURES REACH 55°F AND IS THOROUGHLY MIXED INTO SOIL. CAN BE TOPICALLY APPLIED IF SITE CONDITIONS DO NOT ALLOW PROPER MIXING.
- 11. CONTRACTOR SHALL SUBMIT A LAB TEST OF THE COMPOST SAMPLE TO BE USED FOR APPROVAL. LAB TEST OF COMPOST SHALL BE TAKEN FROM THE SAME SOURCE THAT IS TO BE USED ON THIS PROJECT. LAB TEST SHALL BE TAKEN A MAXIMUM OF SIX (6) MONTHS PRIOR TO APPLICATION. THE COMPOST SHALL BE TESTED IN ACCORDANCE WITH THE U.S. COMPOSTING COUNCIL'S TEST METHODS FOR EXAMINING OF COMPOSTING AND COMPOST (TMECC) MANUAL.

### SITE PREPARATION:

- 12. ALL DISTURBED AREAS SHALL BE RIPPED TO A MINIMUM DEPTH OF TWELVE (12) INCHES, WITH NO MORE THAN A TEN (10) INCH INTERVAL BETWEEN FURROWS. SLOPES FLATTER THAN 2:1 SHALL HAVE A WELL SETTLED SEEDBED EIGHT (8) INCHES DEEP. SLOPES 2:1 OR STEEPER SHALL BE LEFT IN A ROUGHENED CONDITION
- 13. SLOPES SHALL BE FREE OF SOIL CLODS, STICKS, STONES, AND DEBRIS IN EXCESS OF FOUR (4) INCHES IN ANY DIMENSION, AND BE BROUGHT TO THE DESIRED GRADE AND LINE. SOIL PREPARATION FOR SEEDING SHALL NOT OCCUR WHEN SOIL IS FROZEN OR IN AN EXTREME WET OR DRY CONDITION.
- 14. DRAGGING EXCAVATOR TEETH IS NOT AN ACCEPTABLE METHOD FOR RIPPING.

- 15. CONTRACTOR SHALL BE REQUIRED TO SUBMIT SIGNED STATEMENTS OF GUARANTEE, SEED CERTIFICATIONS, AND SEED LOT ANALYSIS FROM VENDORS WHO SUPPLY SEED AND SOIL CONDITIONER. SEED CERTIFICATION SHOULD PROVIDE INFORMATION THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY FOR SEED TESTING WITHIN TWELVE (12) MONTHS PRIOR TO THE DATE OF SEEDING AND SHALL BE FREE OF NOXIOUS OR UNDESIREABLE SPECIES AS APPROVED BY THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT PRIOR TO PURCHASE. ANY SEED PURCHASED PRIOR TO APPROVAL IS DONE AT THE CONTRACTORS EXPENSE AND MAY NOT BE BILLED TO THE
- 16. ANY SUBSTITUTIONS OF SEED SPECIES MUST BE APPROVED BY THE PROJECT ECOLOGIST / LANDSCAPE ARCHITECT PRIOR TO DELIVERY OF SEED TO CONSTRUCTION SITE.
- 17. ALL SEED SHALL BE FURNISHED IN BAGS OR CONTAINERS CLEARLY AND PROPERLY LABELED TO SHOW THE NAME AND ADDRESS OF THE SUPPLIER, THE SEED NAME, THE LOT NUMBER, NET WEIGHT, ORIGIN, THE PERCENT OF WEED SEED CONTENT, THE GUARANTEED PERCENTAGE OF PURITY AND GERMINATION, POUNDS OF PURE LIVE SEED (PLS) OF EACH SEED SPECIES. AND THE TOTAL POUNDS OF PLS IN THE CONTAINER, ALL SEED SHALL BE GUARANTEED FOR PURITY AND GERMINATION, FREE OF NOXIOUS WEED SEED AND SUPPLIED ON A PURE LIVE SEED (PLS) BASIS.
- 18. CONTRACTOR IS RESPONSIBLE TO MEET THE SUCCESS RATE OF SEEDING ESTABLISHMENT AS DEFINED IN THE SPECIFICATIONS.
- 19. SEED MIXES SHALL BE INSTALLED WITH A 2' OVERLAP BETWEEN SEED AREAS.
- 20. NATIVE SEEDING SHALL BE RESTRICTED TO BETWEEN SPRING THAW AND MAY 15 AND BETWEEN OCTOBER 15 UNTIL CONSISTENT GROUND FREEZE AND SHALL NOT BE APPLIED DURING INCLEMENT WEATHER INCLUDING RAIN AND HIGH WINDS, OR WHEN SOIL MOISTURE IS TOO HIGH TO EVENLY DISTRIBUTE SEED.
- 21. SEEDING SHALL BE ACCOMPLISHED WITHIN 24 HOURS OF PREPARING THE SEEDING SURFACE.
- 22. SEEDING OR PLANTING SHALL NOT OCCUR WHEN THE GROUND IS FROZEN. WHEN FRFFZING TEMPFRATURES ARE FORECASTED WITHIN 24 HOURS, OR WHEN CONDITIONS ARE OTHERWISE UNSUITABLE
- 23. DRILL SEEDING OR BROADCAST SEEDING SHALL BE USED FOR REVEGETATION. THE SIZE AND SLOPE OF THE DISTURBED AREA SHALL DETERMINE WHICH SEEDING METHOD(S) IS APPROPRIATE AND ACCEPTABLE. WHERE FEASIBLE, DRILL SEEDING IS THE REQUIRED METHOD. IF BROADCAST SEEDING IS EMPLOYED, EITHER BY HAND, SPREADER, OR OTHER APPROVED MEANS, THE SEEDING RATE (PLS LBS/ACRE) SHALL BE DOUBLED AS SHOWN ON THE DESIGN PLAN. HYDROMULCHING, HYDRAULIC SEEDING, AND STRAW MULCHING WILL NOT BE ACCEPTED UNLESS APPROVED BY THE PROJECT ENGINEER / LANDSCAPE ARCHITECT.
- 24. FOR SLOPES EQUAL TO OR LESS THAN 3:1, SEED SHALL BE PLANTED USING A RANGELAND DRILL WITH A SMAL SEED/LEGUME BOX AND AN AGITATOR BOX FOR FLUFFY OR BUILKY SEED. SEED ROWS SHALL BE SPACED SEVEN (7) TO TEN (10) INCHES APART, AND PLANTED % INCH TO % INCH DEEP. THE ORILL SHALL HAVE DOUBLE-DISK FURROW OPENERS WITH DEPTH BANDS AND PACKER WHEELS. SEEDING SHALL BE ACCOMPLISHED USING BI-DIRECTIONAL DRILLING AND WITH THE SECOND DIRECTION FOLLOWING THE SLOPE CONTOUR, THE DRILL EQUIPMENT SHALL BE CALIBRATED EACH DAY OR WHENEVER THERE IS A CHANGE IN THE SEED MIX TO ENSURE PROPER SEED DISTRIBUTION
- 25. FOR SLOPES GREATER THAN 3:1, SEED SHALL BE BROADCAST BY HAND OR MECHANICAL SPREADER. ALL SEED SOWN BY BROADCAST-TYPE SEEDERS SHALL BE RAKED IN OR COVERED WITH SOIL TO A DEPTH OF AT LEAST 1/2 INCH. BROADCAST SEEDING SHALL PROCEED ON FRESHLY DISTURBED (RAKED OR HARROWED) SOIL SURFACE AND BROADCAST SEED SHALL BE IMMEDIATELY RAKED OR HARROWED INTO THE SURFACE. RAKING SHALL BE ACCOMPLISHED USING METAL-TINED GARDEN OR LANDSCAPE RAKES: NO PLASTIC LEAF RAKES SHALL BE ALLOWED. IF HARROWING IS USED, AN ENGLISH HARROW OR ITS EQUIVALENT SHALL BE REQUIRED. BROADCAST SEEDING SHALL BE AVOIDED WHEN WIND SPEED
- 26. FOLLOWING SEEDING, HEAVY MACHINERY SHALL NOT BE DRIVEN ACROSS SEEDED AREAS TO AVOID RE-COMPACTION
- 27. ACCESS ROUTES SHALL BE REVEGETATED AFTER CONSTRUCTION. SEED AND BLANKET ALONG ACCESS SHOULD MATCH HYDROLOGIC ZONES AS SHOWN IN REVEGETATION PLANS AND AS DIRECTED BY THE PROJECT ECOLOGIST / LANDSCAPE

- 28. ALL EROSION CONTROL FABRIC, BLANKET, OR MATTING SHALL BE INSTALLED PERPENDICULAR TO THE CHANNEL UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.
- CONTRACTOR SHALL SUBMIT SAMPLES OF THE EROSION CONTROL FABRIC, BLANKET, AND/OR MATTING, GROUND ANCHORING DEVICES, AND METHOD OF ANCHORING PRIOR TO INSTALLATION FOR APPROVAL.



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### **60% DESIGN PLANS**

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ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

**REVEGETATION PLAN** 

THE LANDHUIS COMPANY

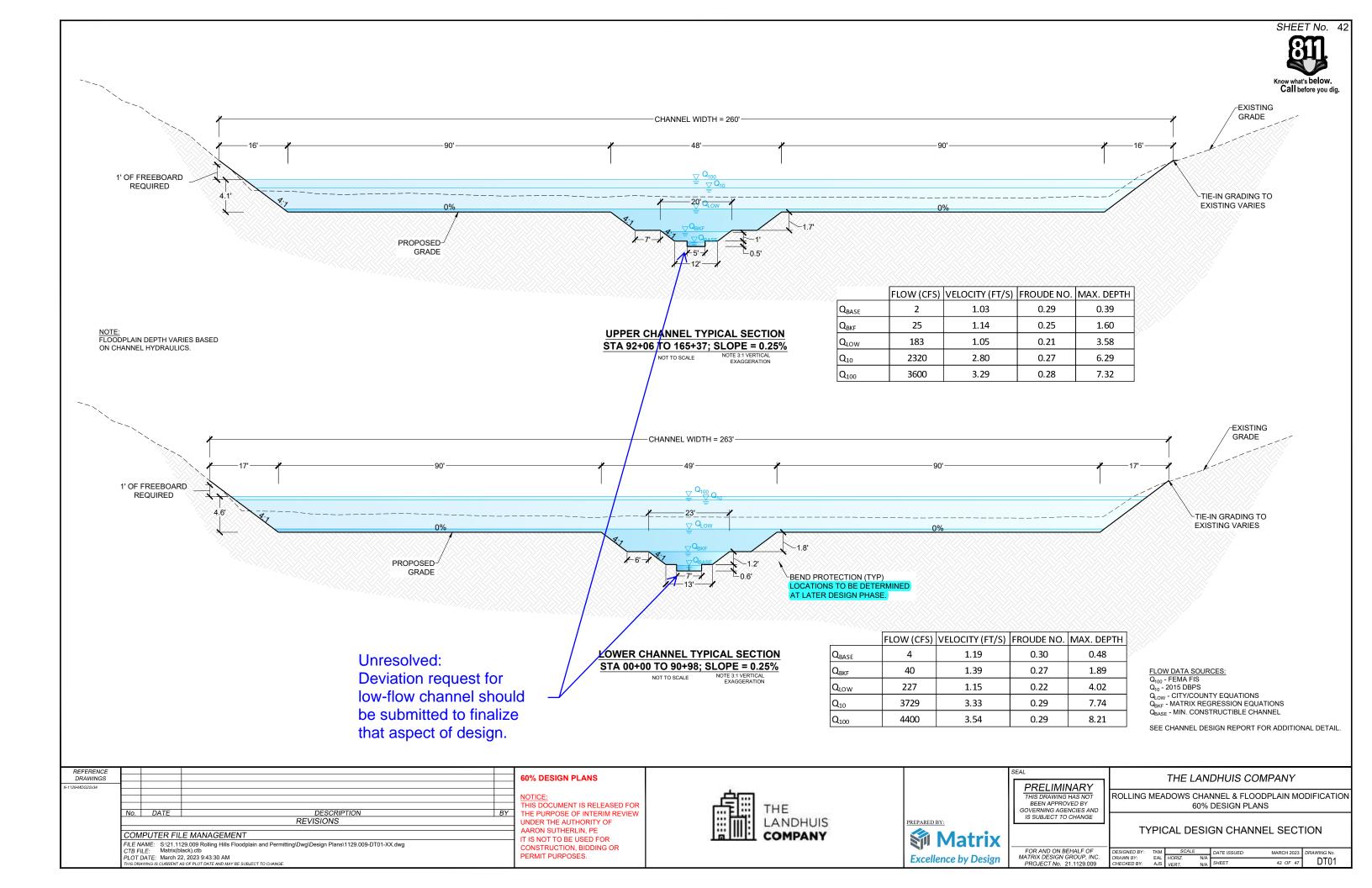
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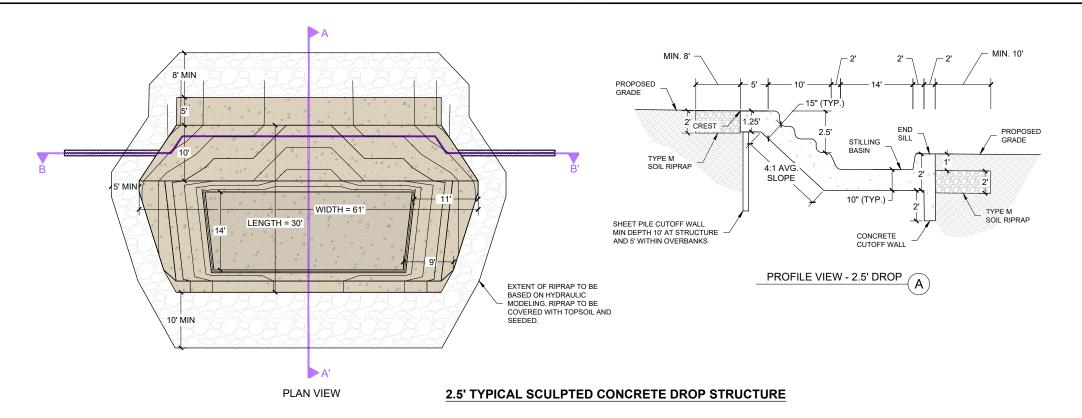
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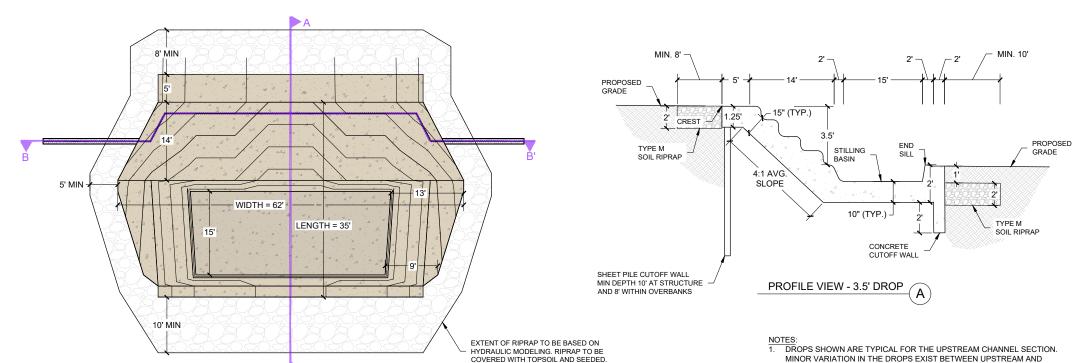
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**NOTES & SCHEDULE** 

DESIGNED BY:	EEG			DATE ISSUED:	MARCH 2023	DRAWING No.
DRAWN BY:	EAL	HORIZ.	N/A			D\/07
CHECKED BY:	AJS	VERT.	N/A	SHEET	41 OF 47	KVU/







# PLAN AND PROFILE VIEW OF TYPICAL SCULPTED CONCRETE DROP STRUCTURES

NOT TO SCALE

- MINOR VARIATION IN THE DROPS EXIST BETWEEN UPSTREAM AND
- 3.5' TYPICAL SCULPTED CONCRETE DROP STRUCTURE

  2. FOR ALL DROPS, DOWNSTREAM CUTOFF WALL DEPTH IS SET TO PROTECT AGAINST RISK OF DOWNSTREAM DEGREDATION, WITH MINIMUM DEPTH

  - BEING 2':

    STILLING BASIN OF ALL DROPS IS 1'.

    PROFILES FOR ALL DROPS CAN BE SEEN IN PP03-PP15. PROFILES FOR EACH CONCRETE DROP STRUCTURE WILL BE PROVIDED AT 90% DESIGN.

REFERENCE DRAWINGS					60% DESIGN PLANS
X-1129-MDG22x34					NOTICE: THIS DOCUMENT IS RELE
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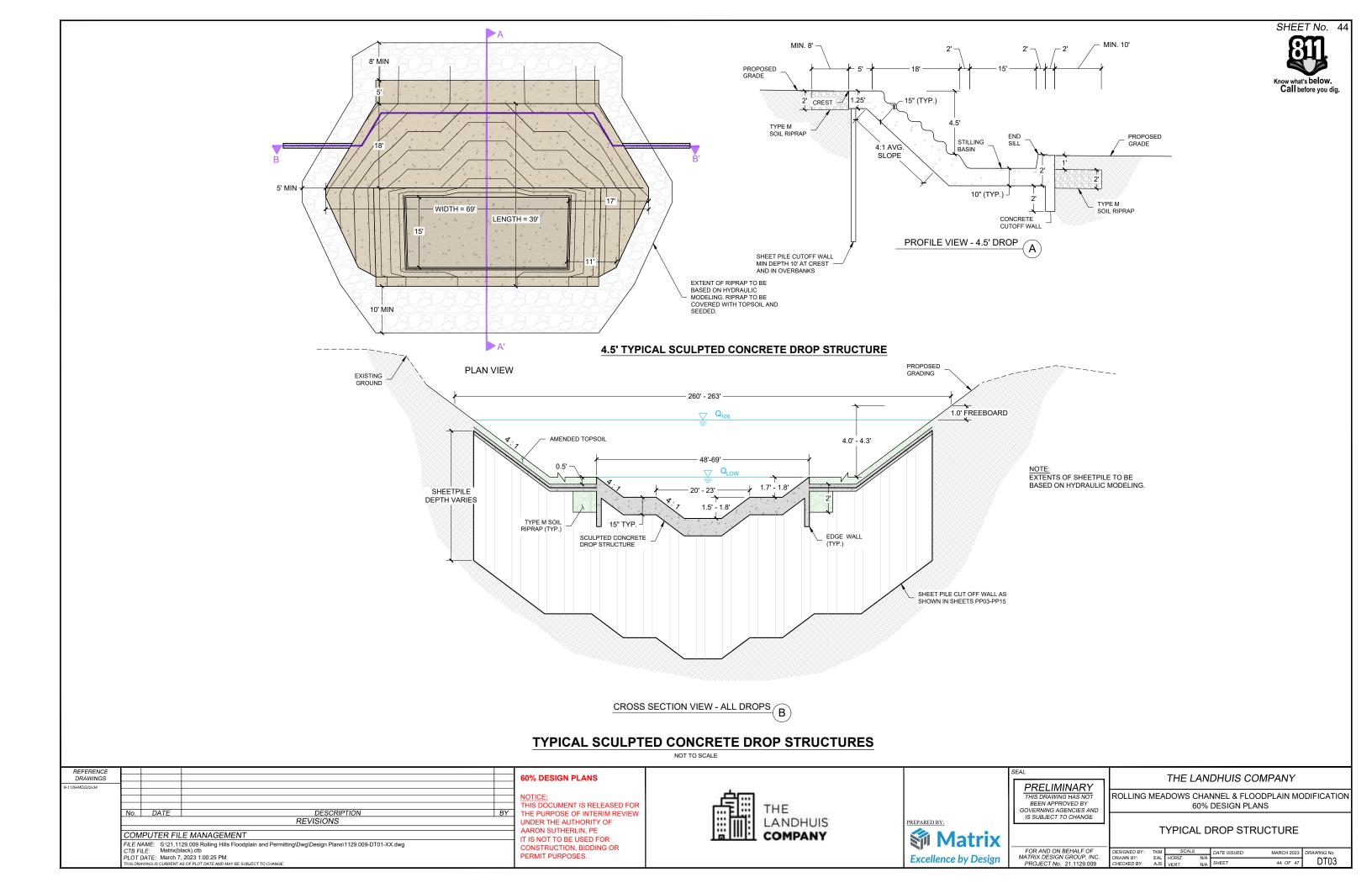
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.1129.009

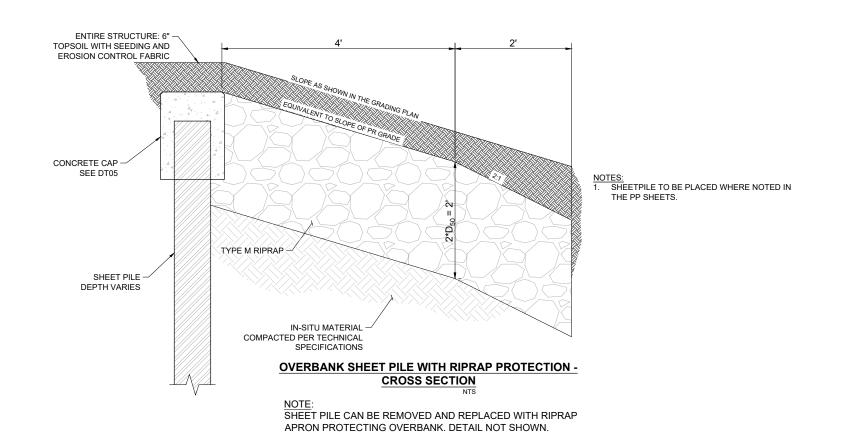
ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

TYPICAL DROP STRUCTURE	
PLAN AND PROFILE VIEWS	

THE LANDHUIS COMPANY

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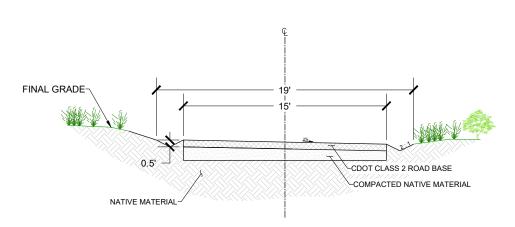




NEAR DROP AT 102+69

NOT TO SCALE

PR. DROP STRUCTURE EXTENTS

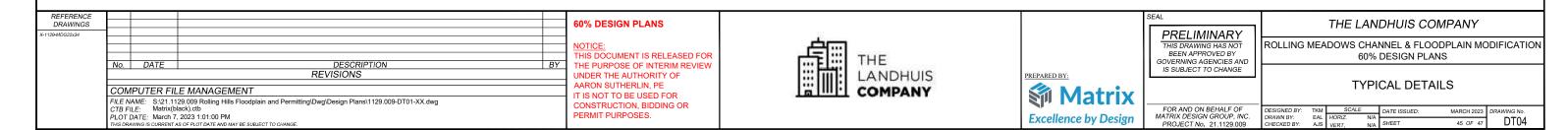


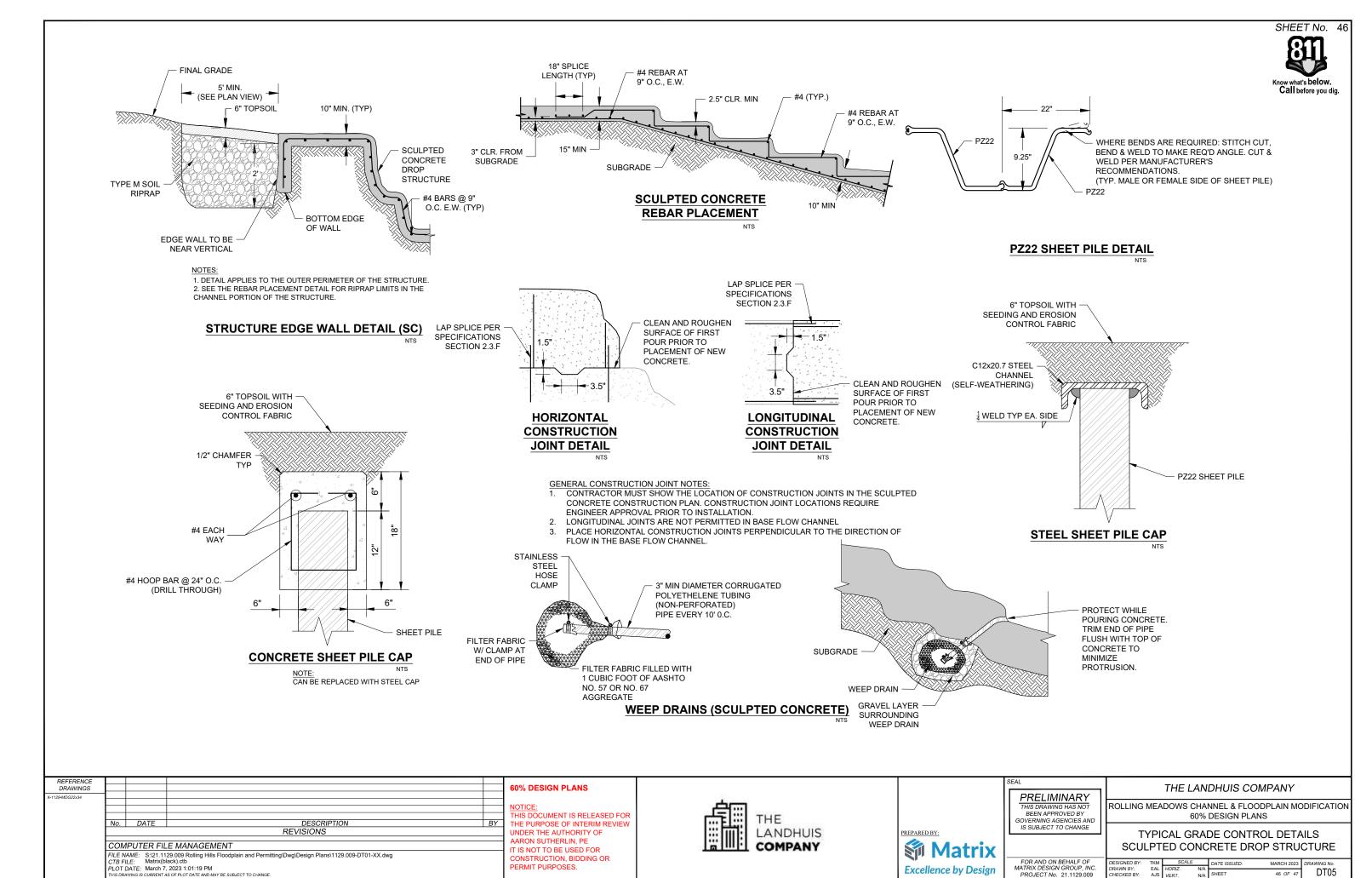
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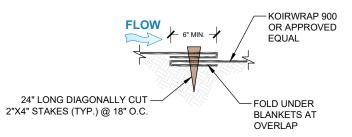
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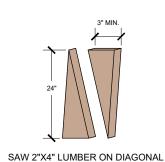




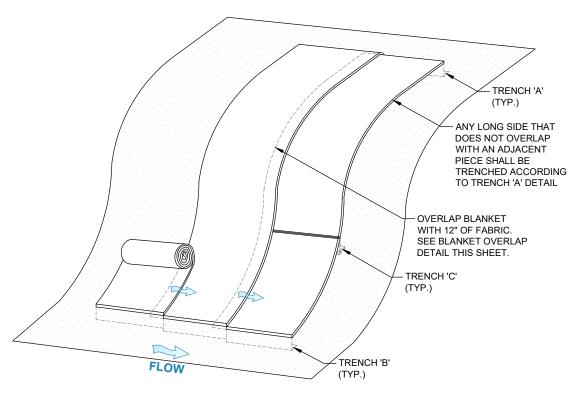




# **BLANKET OVERLAP DETAIL**

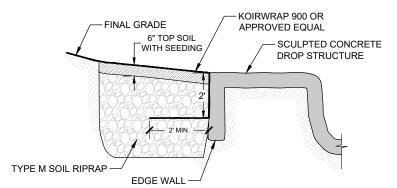


WOOD STAKE DETAIL

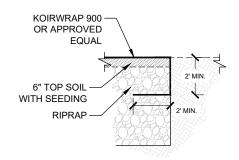


NOTE: STAKE @24" O.C. AND ALL SEAMS @18" O.C.

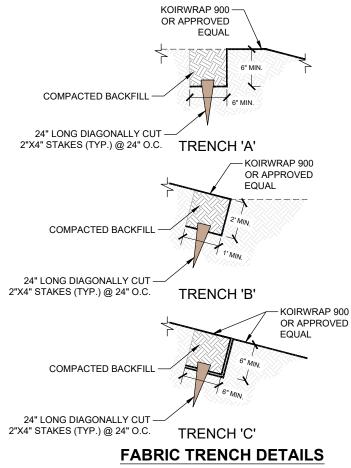
# **EROSION CONTROL BLANKET SLOPE INSTALLATION DETAIL**

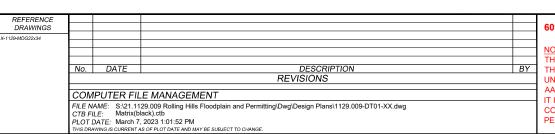


**FABRIC TUCK AT EDGE WALL DETAIL** 



**FABRIC TRENCH IN RIPRAP DETAIL** 





**60% DESIGN PLANS** 

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THE LANDHUIS COMPANY ROLLING MEADOWS CHANNEL & FLOODPLAIN MODIFICATION 60% DESIGN PLANS

TYPICAL FABRIC DETAILS

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