

May 9, 2017

RESS

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Union Gas Limited ("Union")  
Panhandle Reinforcement Project  
Board File # EB-2016-0186**

Please find attached Change Request 1, for the above-noted project.

Union believes that these changes are not significant and would appreciate your timely review and approval of this request.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-4601.

Sincerely,

(original signed by)

Mark A. Murray J.D.  
Manager, Regulatory Projects & Land Acquisition

cc: Karen Hockin  
Zora Crnojacki, OEB

## **REQUEST TO VARY**

**Project Name:** Panhandle Reinforcement Project

**OEB File Number:** EB-2016-0186

**Change Request:** 1

### **Description and Rationale for Change**

Union is proposing changes to the dimensions and locations of permanent easements and temporary land use areas (“Land Rights”), and requests for additional Land Rights, at various locations along the pipeline route to facilitate pipeline construction.

### **Construction and Restoration Practices**

There are no changes proposed for the construction of the proposed facilities.

### **Environmental**

No new environmental mitigation measures will be required.

### **Consultation**

Union has met with the directly affected landowners and no issues have been identified.

### **Lands**

Union has acquired the necessary permanent easements and temporary land rights, from the landowners.

### **Costs**

These changes will not result in any additional costs to the project.

### **Schedule**

These changes will not result in any change to the project in-services date.

### **Maps**

A chart setting out the changes in land rights, which are identified in red is attached at Schedule 1.

Maps showing the location of the permanent easements, which are identified as red cross-hatched areas, and temporary land rights which are identified in solid red, are attached at Schedule 2. The top half of each individual map identifies the land rights previously included in Union’s application, as Tab 11 Schedule 1, and the bottom half of each map identifies the additional Land Rights requested.

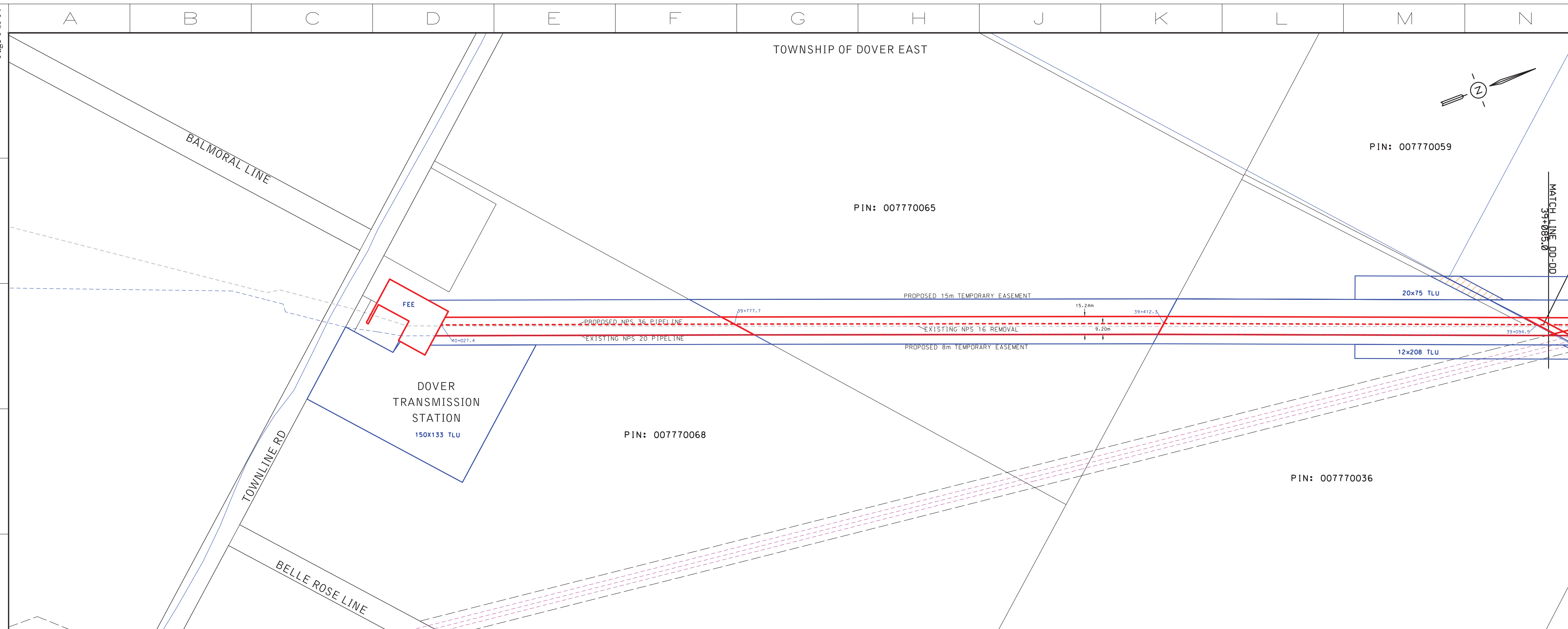
## Schedule 1 - Land Right Changes

File No.	Property Description	Permanent Easement			Temporary Easement		
		Dimensions (Metres) Area			Dimensions (Metres) Area		
		Length	Width	(Hectares)	Length	Width	(Hectares)
TOWNLINE							
P0.5	PIN: 007770074 LT						
P1	<del>PIN: 007770068 LT</del> PT LT 1 CON 6 DOVER AS IN R668352 S/T 604871 S/T DO28895 PARTIALLY RELEASED BY 242584 S/T <del>PIN: 007770138</del> DO28879 PARTIALLY RELEASED BY 242583; S/T				222 x 15 0.33 290 x 8 0.23 <del>150 x 12 0.14</del> 142 133 1.324  1.5 x 200 0.03 6 x 70 0.05 10 x 132 0.132		
P3	PIN: 007770036 LT PT LT 2 CON 6 DOVER AS IN R668353 (SECONDLY) S/T DO28937 PARTIALLY RELEASED BY 182415 & 309952; S/T 237942; CHATHAM-KENT				<del>208 x 12 0.24</del> 198 x 12 0.22 75 x 20 0.03 300 x 15 0.43 360 x 8 0.29		
P5	PIN: 007770059 LT PT LT 2-3 CON 6 DOVER AS IN 572879 S/T DO28804 AMENDED BY 242576; S/T 236684; CHATHAM-KENT				1049 x 8 0.85 1142 x 15 1.69 <del>75 x 12 0.10</del> 100 x 12 0.12 470 x 20 0.85		
P6	PIN: 007770047 LT PT LT 4 CON 6 DOVER AS IN 655906 T/W 638008 S/T DO28795 PARTIALLY RELEASED BY 242578; S/T 236303; CHATHAM-KENT	50 x 15 0.04			<del>190 x 20 0.22</del> 200 x 20 0.356  150 x 20 0.24 324 x 15 0.46 377 x 8 0.30		
P6b	PIN: 007770135 LT PT LT 4 CON 6 DOVER DEISGNATED AS PARTS 1, 2 & 3, 24R10093 SUBJECT TO AN EASEMENT AS IN 638008 MUNICIPALITY CHATHAM-KENT				147 10 0.15  50 20 0.1		
P6c	PIN: 007770056 LT PT LT 5 CON 6 DOVER AS IN 257313 EXCEPT 24R5050; S/T 243389 & 638008; CHATHAM-KENT				620 x 10 0.63  50 x 20 0.1		
HERON LIN							
P7	PIN: 007720009 LT PT LT 3-4 CON 7 DOVER AS IN 558619; S/T DO28779 PARTIALLY SURRENDERED BY 242577; S/T 234151, 262964; CHATHAM-KENT	41 x 15 0.04			100 x 50 0.37 90 x 60 0.54  irr x irr 0.01 67 x 15 0.08 120 x 10 0.12		
P31	PIN: 007690229 LT PART OF LOT 1, PLAN 588 AS IN 558169 EXCEPT PARTS 1 & 2, 24R9977; SUBJECT TO AN EASEMENT AS IN DO28800 PARTIALLY SURRENDERED BY 160760 SUBJECT TO AN EASEMENT AS IN D1352 MUNICIPALITY CHATHAM-KENT	5 x 351 0.18			25 x 20 0.05 <del>75 x 20 0.15</del> 100 x 20 0.21 <del>85 x 10 0.09</del> 100 x 10 0.10 345 x 8 0.28 366 x 15 0.53 60 x 20 0.12		
WINTERLIN							
P33	PIN: 007700190 LT LT 6 PL 588 SAVE & EXCEPT PTS 1 & 2 PL 24R9961; S/T DO28807 PARTIALLY RELEASED BY 242597; S/T 236879 MUNICIPALITY CHATHAM-KENT	5 x 517 0.26			518 x 15 0.78 518 x 8 0.41 91 x 10 0.09 86 x 20 0.16		
P34	PIN: 007700039 LT PT LT 13 CON 9 DOVER AS IN 604393 S/T DEBTS IN 604393 S/T DO28796 PARTIALLY RELEASED BY 243431; S/T 236301, 353516; CHATHAM-KENT	5 x 181 0.09			180 x 8 0.14 180 x 15 0.27		
P35	PIN: 007700046 LT PT LT 14 CON 9 DOVER AS IN 391293; S/T 238207, 353523; SUBJECT TO AN EASEMENT IN GROSS UNTIL JULY 26, 2051 AS IN CK64380 MUNICIPALITY CHATHAM-KENT	5 x 235 0.12			75 x 12 0.08 75 x 12 0.08 290 x 8 0.22 232 x 15 0.32		
P36	PIN: 007700044 LT PT LT 14 CON 9 DOVER AS IN 663556 S/T DO28842 PARTIALLY RELEASED BY 147444; S/T 236878; CHATHAM-KENT	5 x 121 0.06			34 x 12 0.02 73 x 8 0.05 146 x 15 0.20 79 x 12 0.08		

P37	PIN: 007700045 LT PT LT 14 CON 9 DOVER AS IN 659978 S/T DO28841 PARTIALLY RELEASED BY 148047; S/T 236877; CHATHAM-KENT	5 x 347 0.17	70 x 12 0.08 75 x 12 0.09 76 x 12 0.09 350 x 8 0.28 350 x 15 0.52
P38	PIN: 007700074 LT PT LT 15 CON 9 DOVER AS IN 543895 & 599849 S/T DO28839 PARTIALLY RELEASED BY 174267 S/T DO28847 PARTIALLY RELEASED BY 186396; S/T 239585, 239586; CHATHAM-KENT	5 x 691 0.35	680 x 8 0.14 680 x 15 1.02 75 x 12 0.09 75 x 12 0.09
P39	PIN: 007700054 LT PT LT 16 CON 9 DOVER AS IN 212690 S/T DO28802 PARTIALLY RELEASED BY 214494; S/T 233882; SUBJECT TO AN EASEMENT IN GROSS UNTIL JULY 26, 2051 AS IN CK64385 MUNICIPALITY CHATHAM-KENT	5 x 277 0.14	102 x 20 0.17 75 x 12 0.09 330 x 8 0.26 274 x 15 0.38
MALLARD F			
P39a	PIN: 007700017 LT PT LT 16 CON 10 DOVER AS IN 558170 EXCEPT PT 6, D1186 S/T DO28969 PARTIALLY RELEASED BY 225072; S/T 232002; CHATHAM-KENT	5 x 39 0.02	65 x 15 0.07 112 x 20 0.17
P40	PIN: 007700084 LT PT LT 16 CON 10 DOVER AS IN 662342 S/T DO28840 PARTIALLY RELEASED BY 242596; S/T 236300; CHATHAM-KENT	5 x 345 0.17	695 x 8 0.56 10 x 20 0.01 75 x 12 0.01 317 x 8 0.26 344 x 15 0.51
P41	PIN: 007700085 LT PT LT 17 CON 10 DOVER AS IN 662343 S/T DO28801 PARTIALLY RELEASED BY 242595; S/T 236299; CHATHAM-KENT	5 x 347 0.17	75 x 15 0.11 690 x 8 0.55 348 x 8 0.28 348 x 15 0.51
P42	PIN: 007700184 LT PART OF LOT 17, CONCESSION 10, GEOGRAPHIC TOWNSHIP OF DOVER, AS IN 409918 EXCEPT PART 2, 24R9009 ; SUBJECT TO INTEREST IN 463657 SUBJECT	5 x 348 0.17	350 x 8 0.28 350 x 15 0.53
P43	PIN: 007700026 LT PT LT 18 CON 10 DOVER AS IN 640078 S/T INTEREST IN 558019 S/T DO28942 PARTIALLY RELEASED BY 242581; S/T 234153; CHATHAM-KENT	5 x 344 0.17	350 x 8 0.28 335 x 15 0.48
P44a	PIN: 007700024 LT PT LT 18 CON 10 DOVER AS IN 162256; S/T EXECUTION 09-0000124, IF ENFORCEABLE;	5 x 3 0.007	49 x 15 0.05
P45	PIN: 007700025 LT PT LT 18 CON 10 DOVER AS IN 558018 S/T INTEREST IN 558018 S/T DO28931 PARTIALLY RELEASED BY 242580; S/T 234152; S/T EXECUTION 09-0000124, IF ENFORCEABLE; CHATHAM-KENT	5 x 340 0.17	75 x 12 0.09 75 x 12 0.08 75 x 12 0.07 75 x 12 0.07 318 x 8 0.25 342 x 15 0.51
P46	PIN: 007700028 LT PT LT 19 CON 10 DOVER PT 1, 24R2743 S/T DO28777; S/T 194264; CHATHAM-KENT	5 x 347 0.17	347 x 8 0.28 347 x 15 0.52
P47	PIN: 007700029 LT PT LT 19 CON 10 DOVER AS IN 663982 S/T DO28777; S/T 194264; CHATHAM-KENT	5 x 342 0.17	75 x 12 0.09 75 x 20 0.16 338 x 8 0.27 338 x 15 0.51
BEARLINE F			
P55	PIN: 007680054 LT PT LT 24 CON 12 DOVER DESIGNATED AS PTS 7, 8 & 9, 24R7748, S/T DO28843 PARTIALLY RELEASED BY 205558; S/T 194767 MUNICIPALITY CHATHAM-KENT	<del>60</del> <del>15</del> <del>0.09</del> 100 x 15 0.152	258 8 0.21 250 15 0.38 245 20 0.48  502 x 10 0.504
P56	PIN: 007680055 LT PT LT 24 CON 12 DOVER DESIGNATED AS PARTS 1 TO 6, 24R7748, S/T DO28843 PARTIALLY RELEASED BY 205558, S/T 194767, DO27460 SUBJECT TO AN EASEMENT IN GROSS OVER PARTS 1, 2, 3 & 4, 24R9955 AS IN CK103592 MUNICIPALITY CHATHAM-KENT	<del>70</del> <del>15</del> <del>0.04</del> <del>60</del> <del>15</del> <del>0.09</del>  90 x 15 0.139	422 8 0.34 381 15 0.61 75 20 0.09  40 x 70 0.28 10 70 0.07 10 x 523 0.53 381 20 0.73
P58	PIN: 007530023 LT PT LT 1-2 CON 12 CHATHAM AS IN 473263 S/T CH42329 PARTIALLY RELEASED BY 205557; S/T 196426 SUBJECT TO AN EASEMENT IN GROSS OVER PART OF LOT 1, CON 12, CHATHAM, DESIGNATED AS PARTS 1 & 2, 24R9951 AS IN CK103582 MUNICIPALITY CHATHAM-KENT	<del>190</del> <del>15</del> <del>0.29</del> 35 x 15 0.05	96 20 0.18 60 12 0.11 794 8 0.64 766 15 1.12

PRINCE ALB			
P73	PIN: 007570007 LT NW 1/4 LT 7 CON 13 CHATHAM S/T CH42220 PARTIALLY SURRENDERED BY 205550; S/T 194252; CHATHAM-KENT		63 29 0.08 115 12 0.13 51 12 0.05 180 12 0.22 23 20 0.05 184 8 0.14 128 15 0.17 175 x 32 0.525
OLD FIELD STARKWEA			
P92	PIN: 005940103 LT PT LT 26 CON 2 CHATHAM GORE PT 1, 2, 3 & 4, 24R8941; S/T CH42114 PARTIALLY SURRENDERED BY 205540; S/T 194648; CHATHAM-KENT		18 6 0.01 111 15 0.13 173 20 0.28 13 x 43 0.028
P94	PIN: 005940106 LT PT LT 26 CON 2 CHATHAM GORE AS IN 457897 N OF RIVER RD; S/T CH42215 PARTIALLY SURRENDERED BY 205539; S/T 194239; S/T 597618; CHATHAM-KENT	157 15 0.23	485 8 0.39 366 15 0.60 364 20 0.67 100 12 0.12 10 x 70 0.07 40 x 70 0.28
McCREARY			
P96	PIN: 005950008 LT PT LT 26 CON 3 CHATHAM GORE AS IN 612697; S/T CH42115 PARTIALLY RELEASED BY 205538; S/T 194238; CHATHAM-KENT	15 x 85 0.13	75 12 0.09  154 8 0.11 156 20 0.31 268 15 0.30
P128	PIN: 433850057 LT E 1/2 LT 25 CON 1 DAWN EXCEPT PT 6 25R506; S/T L749192, PP1046, PP1047; DAWN-EUPHEMIA		50 x 302 1.5 77 x 93 0.72 130 x 230 3
FEE LISTING			
	<del>PIN: 007770068 LT</del> PT LT 1 CON 6 DOVER AS IN R668352 S/T 604871 S/T PIN: 007770138 DO28895 PARTIALLY RELEASED BY 242584 S/T DO28879 PARTIALLY RELEASED BY 242583; S/T 235269, 236410; CHATHAM-KENT	55 x 25 0.19  70 x 7 0.049 85 x 7 0.0595 57 x 13 0.0741 24 x 5 0.012 12 x 25 0.03	
	PIN: 007770026 PT LT 1 CON 6 DOVER	85 x 63 0.5355	
	PIN: 007680006 LT PT LT 20 CON 11 DOVER AS IN 473959, S/T DO28924 PARTIALLY SURRENDERED BY 205561; S/T 195266; CHATHAM-KENT	30 x 25 0.08	





**LEGEND**

PROPOSED NPS 36 PANHANDLE	- - - - -	SEDMIMENT FENCELINE	- - - - -
EXISTING PANHANDLE NPS 20	- - - - -	TELEPHONE	- - - - -
EXISTING PANHANDLE NPS 16 REMOVAL	- - - - -	EXISTING HYDRO LINES	- - - - -
PROPOSED PANHANDLE BORE LOCATIONS	- - - - -	WATERMAIN	- - - - -
EXISTING DISTRIBUTION LINE	- - - - -	ROAD SIDE DRAINAGE	- - - - -
EXISTING EASEMENT	- - - - -	SANITARY	- - - - -
PROPOSED ORIGINAL PERMANENT EASEMENT	- - - - -	ELSC BURIED CABLE	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	HYDRO TOWER	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (IMAGERY)	- - - - -	STREAM CROSSING	- - - - -
NORTH KENT CONSTRUCTION AREA	- - - - -	BOREHOLE	- - - - -
MINIMUM DISTURBANCE ZONE	- - - - -	BOREHOLE WITH WELL	- - - - -
TEST BOX	- - - - -		- - - - -

**CONSTRUCTION NOTES:**

- 1) CONTRACTOR RESPONSIBLE FOR ALL UTILITY LOCATES.
- 2) DEPTH OF MAIN TO BE 1.5m BELOW C.O. OF ROAD OR DITCH, WHICHEVER IS LOWER.
- 3) MINIMUM DEPTH OF COVER: 1.2m 1.5m FOR ALL ROAD AND CREEK CROSSINGS AND 3.25m FOR RAILWAY CROSSINGS.
- 4) MAINTAIN MIN. 500mm CLEARANCE BETWEEN PROPOSED MAIN AND OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE CROSSED.
- 5) ALL CULVERTS, END WALL TREATMENT AND TILE DRAINS REMOVED DURING CONSTRUCTION ARE TO BE RESTORED TO MATCH EXISTING CONDITIONS.
- 6) RESTORATION INCLUDES TOPSOIL AND SEEDING.
- 7) RESTORE DRIVEWAYS TO MATCH EXISTING.
- 8) ALL ASPHALT AREAS TO BE RESTORED TO MATCH EXISTING.
- 9) RESTORE ALL OPEN DRAINS TO MATCH ORIGINAL GRADE AND CONTOUR CONDITIONS.
- 10) ALL WORK MUST BE IN ACCORDANCE WITH THE UNION GAS CONSTRUCTION AND MAINTENANCE MANUAL SPECIFICATIONS.
- 11) ALL WELDS TO BE NON-DESTRUCTIVELY EXAMINED, AS PER C&M 3.6.8.

**DESIGN PARAMETERS (NEW PIPING ONLY)**

**DESIGN**

- DESIGNED TO CSA Z662-15
- DESIGN FACTOR - 0.8
- LOCATION FACTOR - 0.625, 0.9
- CLASS - 21
- DESIGN TEMPERATURE - WSC
- DESIGN PRESSURE - 6895 kPa
- MOP - 6040 kPa

**TEST PRESSURE**

- MINIMUM - 8460 kPa

- TEST DATE: \_\_\_\_\_

ENGINEER: DEREK LANDSCHOOT

**PRELIMINARY**

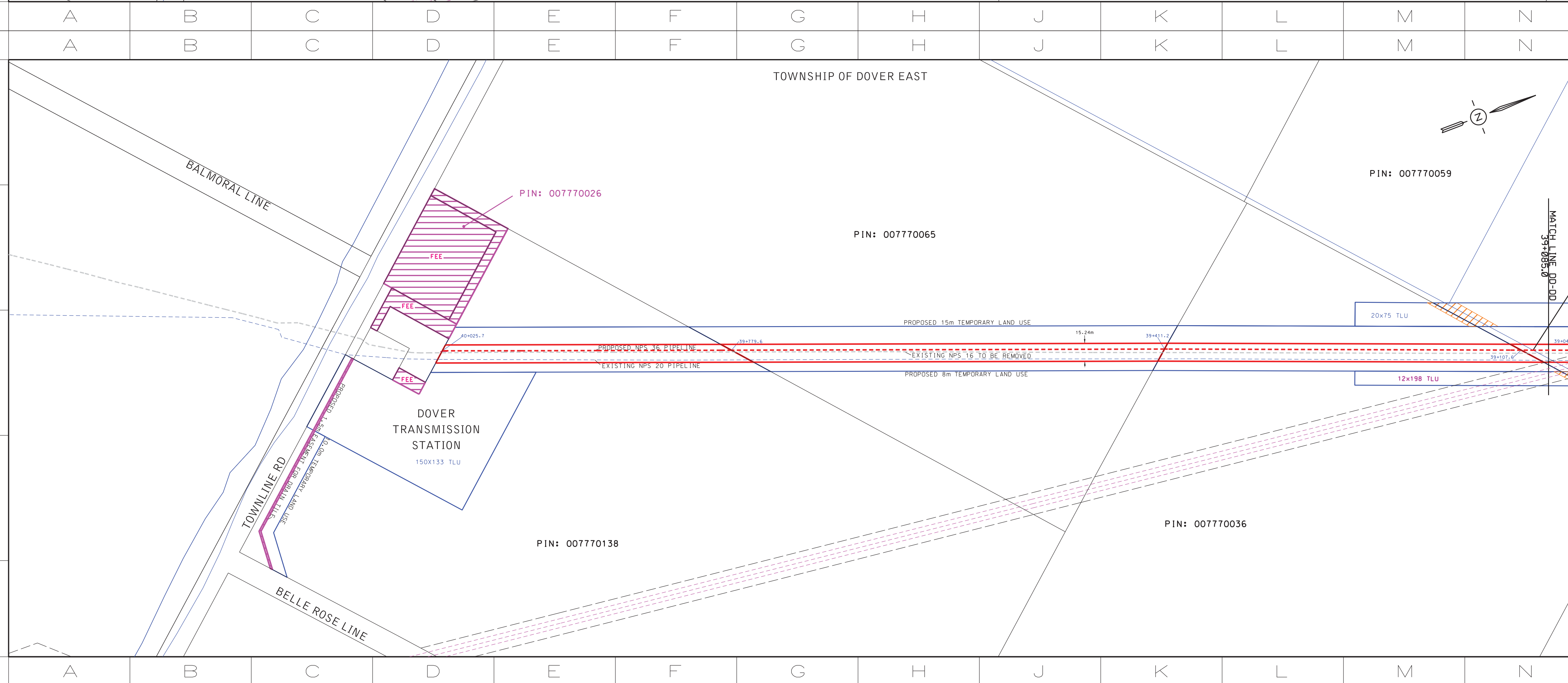
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NO.	DATE	BY	APPD.		REMARKS

REVISIONS

**uniongas**  
An Enbridge Company

NPS 36 PANHANDLE REINFORCEMENT - DAWN TO DOVER  
2017 CONSTRUCTION - TOWNSHIP OF DOVER EAST  
FROM 39+085.0 TO DOVER TRANSMISSION STATION

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APPROVED BY	DATE	FILE REVISION DATE
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**LEGEND**

PROPOSED NPS 36 PANHANDLE	- - - - -	SEDMIMENT FENCELINE	- - - - -
EXISTING PANHANDLE NPS 20	- - - - -	TELEPHONE	- - - - -
EXISTING PANHANDLE NPS 16 REMOVAL	- - - - -	EXISTING HYDRO LINES	- - - - -
PROPOSED PANHANDLE BORE LOCATIONS	- - - - -	WATERMAIN	- - - - -
EXISTING DISTRIBUTION LINE	- - - - -	ROAD SIDE DRAINAGE	- - - - -
EXISTING EASEMENT	- - - - -	SANITARY	- - - - -
PROPOSED ORIGINAL PERMANENT EASEMENT	- - - - -	ELSC BURIED CABLE	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	HYDRO TOWER	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (IMAGERY)	- - - - -	STREAM CROSSING	- - - - -
PROPOSED NEW PERMANENT EASEMENT	- - - - -	BOREHOLE	- - - - -
PROPOSED NEW TEMPORARY LAND USE	- - - - -	BOREHOLE WITH WELL	- - - - -
NORTH KENT CONSTRUCTION AREA	- - - - -		- - - - -
MINIMUM DISTURBANCE ZONE	- - - - -	TEST BOX	- - - - -

**CONSTRUCTION NOTES:**

- 1) CONTRACTOR RESPONSIBLE FOR ALL UTILITY LOCATES.
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- 5) ALL CULVERTS, END WALL TREATMENT AND TILE DRAINS REMOVED DURING CONSTRUCTION ARE TO BE RESTORED TO MATCH EXISTING CONDITIONS.
- 6) RESTORATION INCLUDES TOPSOIL AND SEEDING.
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- 11) ALL WELDS TO BE NON-DESTRUCTIVELY EXAMINED, AS PER C&M 3.6.8.

**DESIGN PARAMETERS (NEW PIPING ONLY)**

**DESIGN**

- DESIGNED TO CSA Z662-15
- DESIGN FACTOR - 0.8
- LOCATION FACTOR - 0.625, 0.9
- CLASS - 21
- DESIGN TEMPERATURE - WSC
- DESIGN PRESSURE - 6895 kPa
- MOP - 6040 kPa

**TEST PRESSURE**

- MINIMUM - 9653 kPa

- TEST DATE: \_\_\_\_\_

ENGINEER: DEREK LANDSCHOOT

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00	2016-06-06	MJW	DTL		O.E.B. FILING
NO.	DATE	BY	APPD.		REMARKS

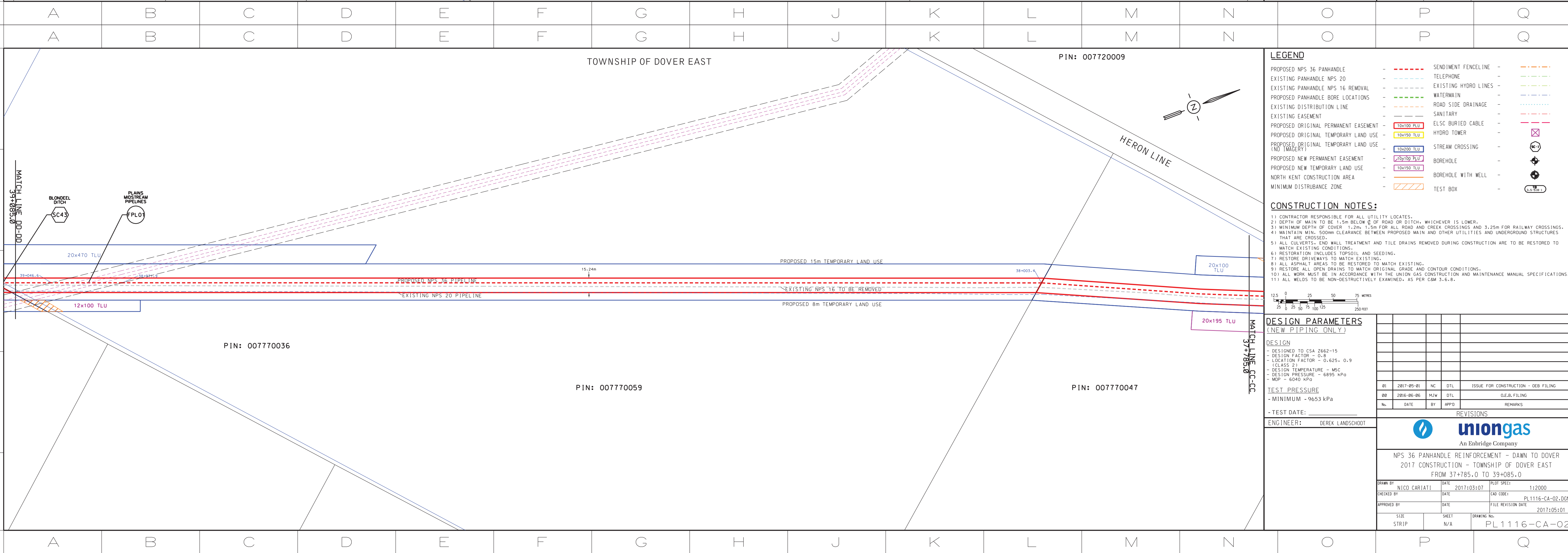
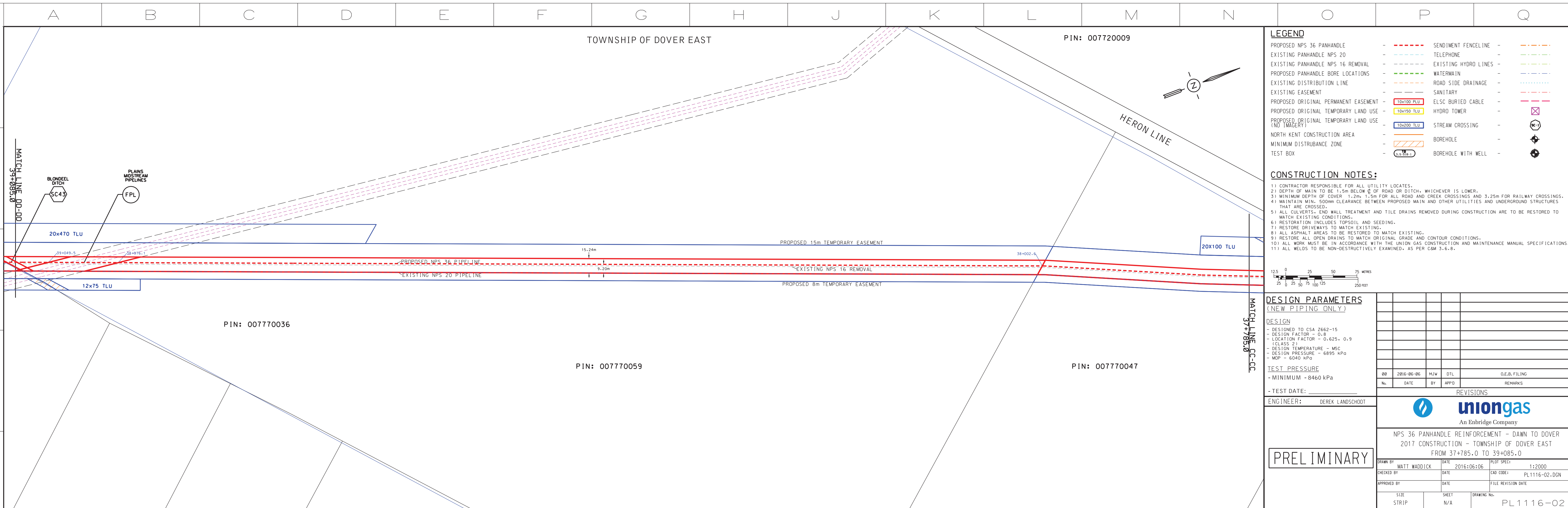
REVISIONS

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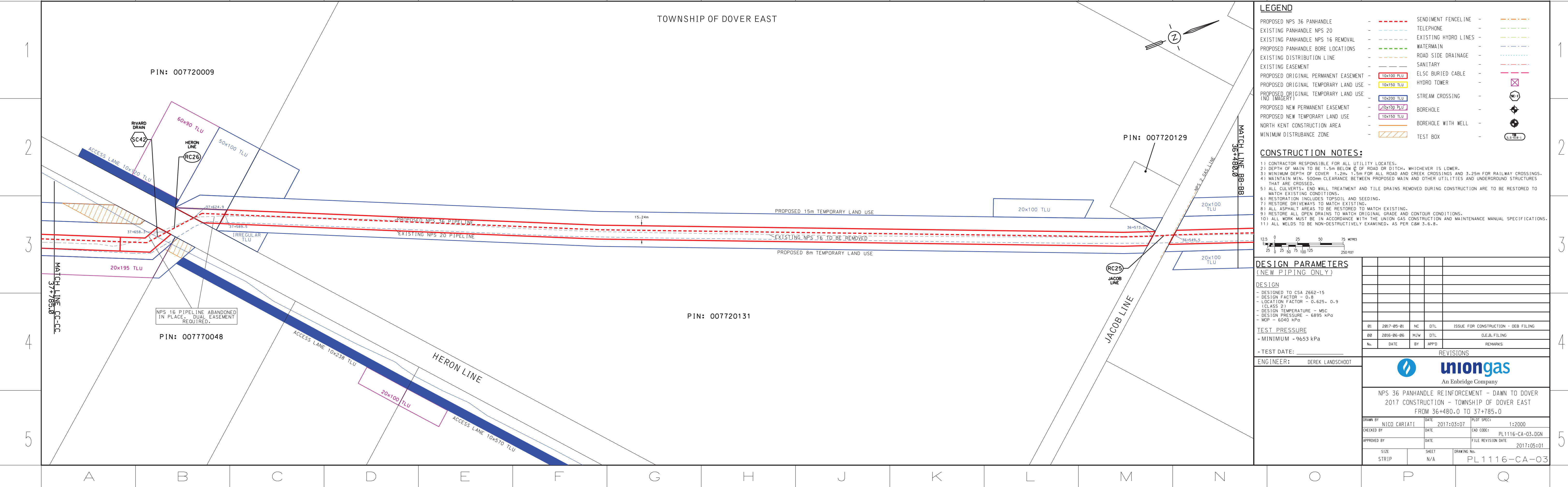
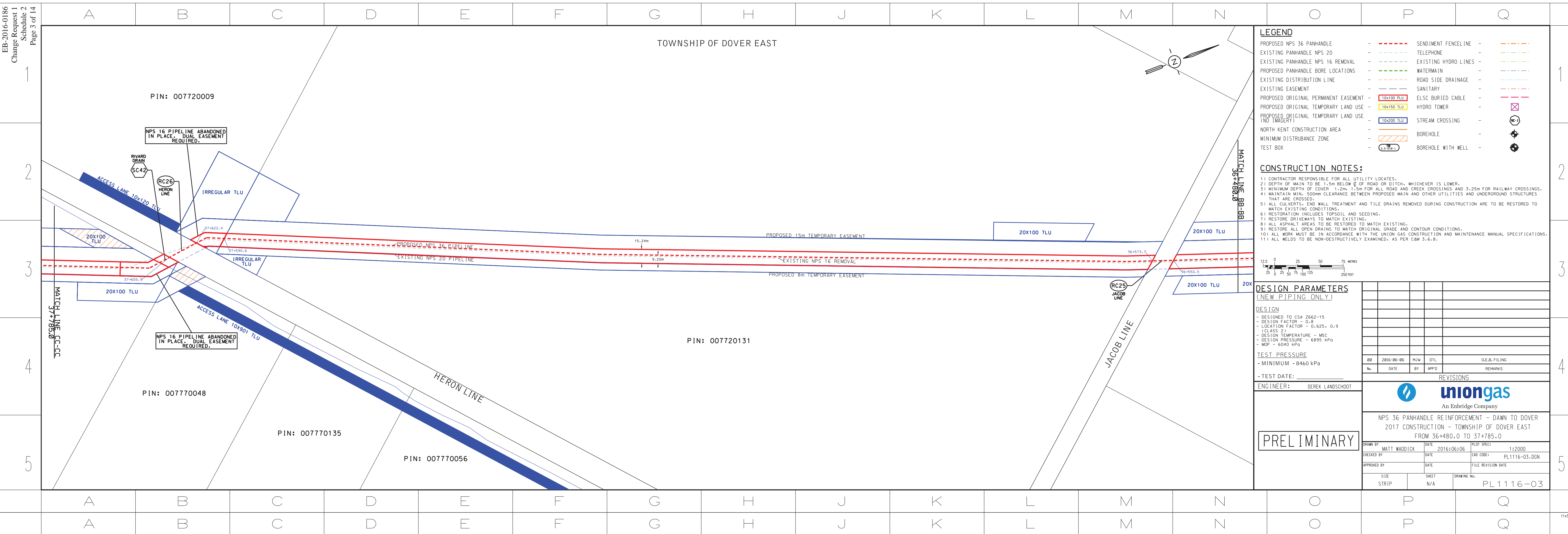
NPS 36 PANHANDLE REINFORCEMENT - DAWN TO DOVER  
2017 CONSTRUCTION - TOWNSHIP OF DOVER EAST  
FROM 39+085.0 TO DOVER TRANSMISSION STATION

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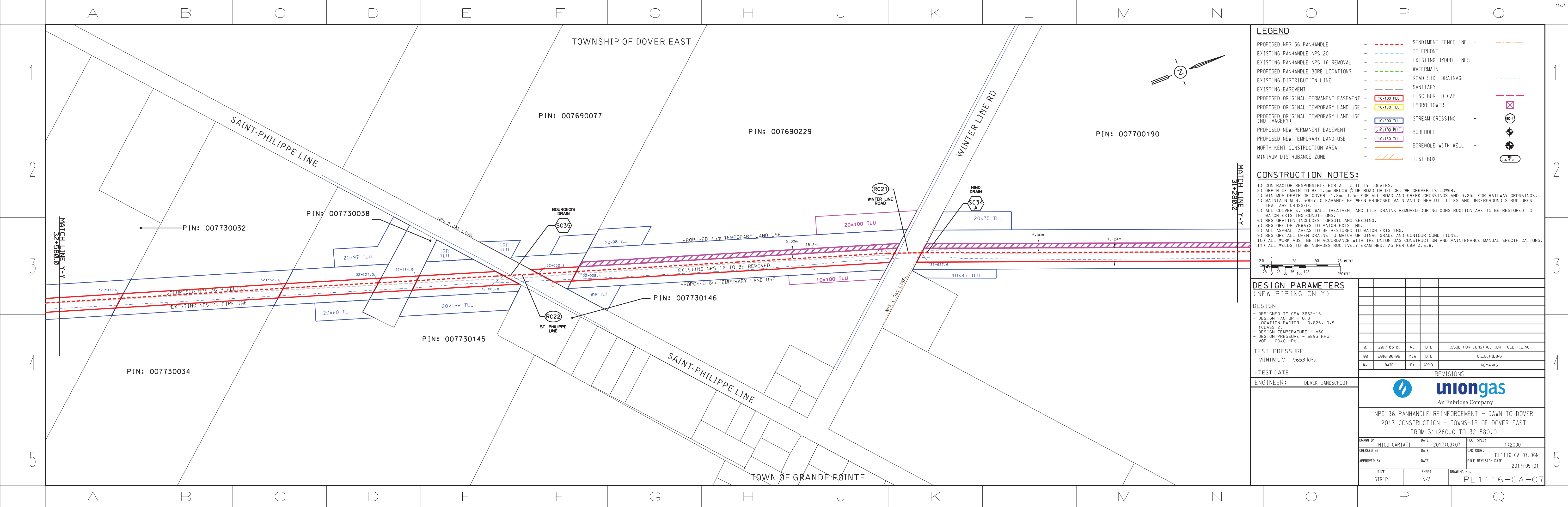
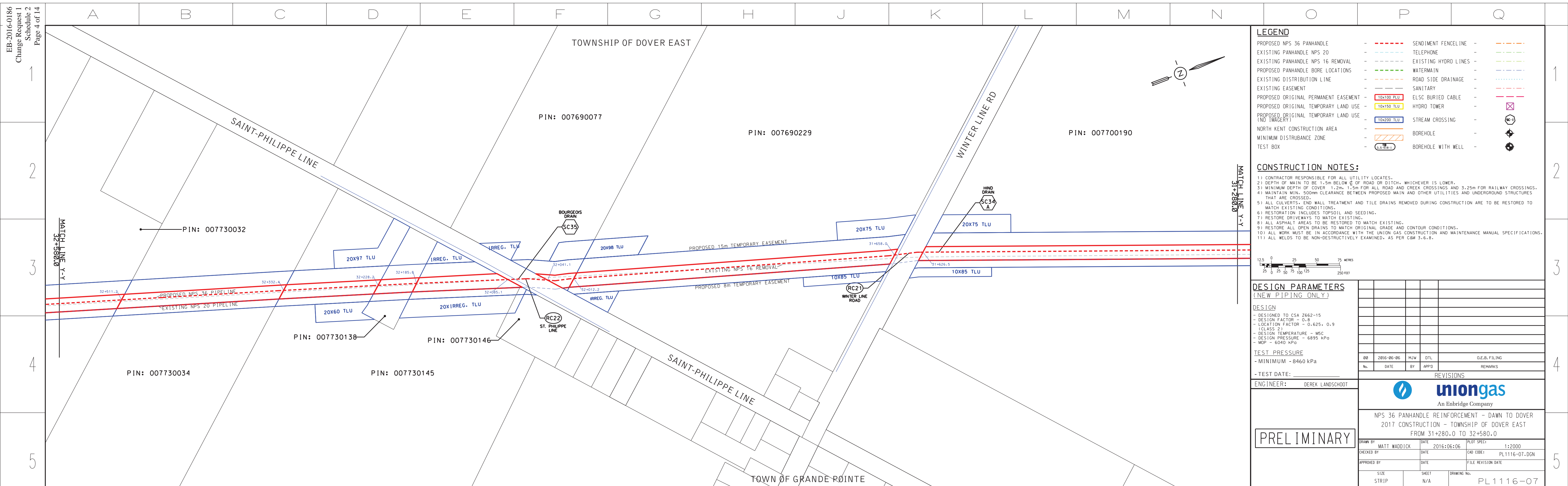




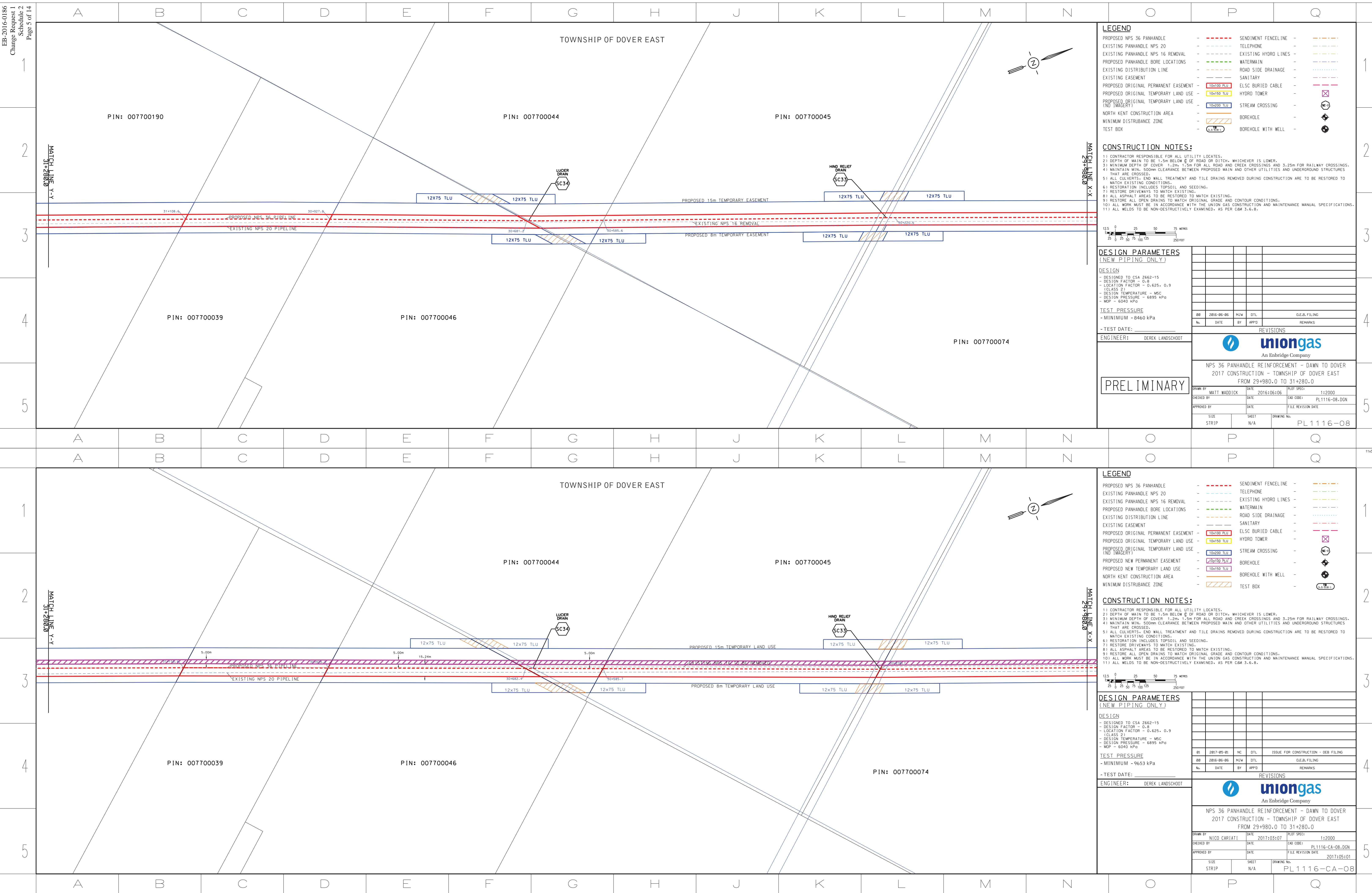
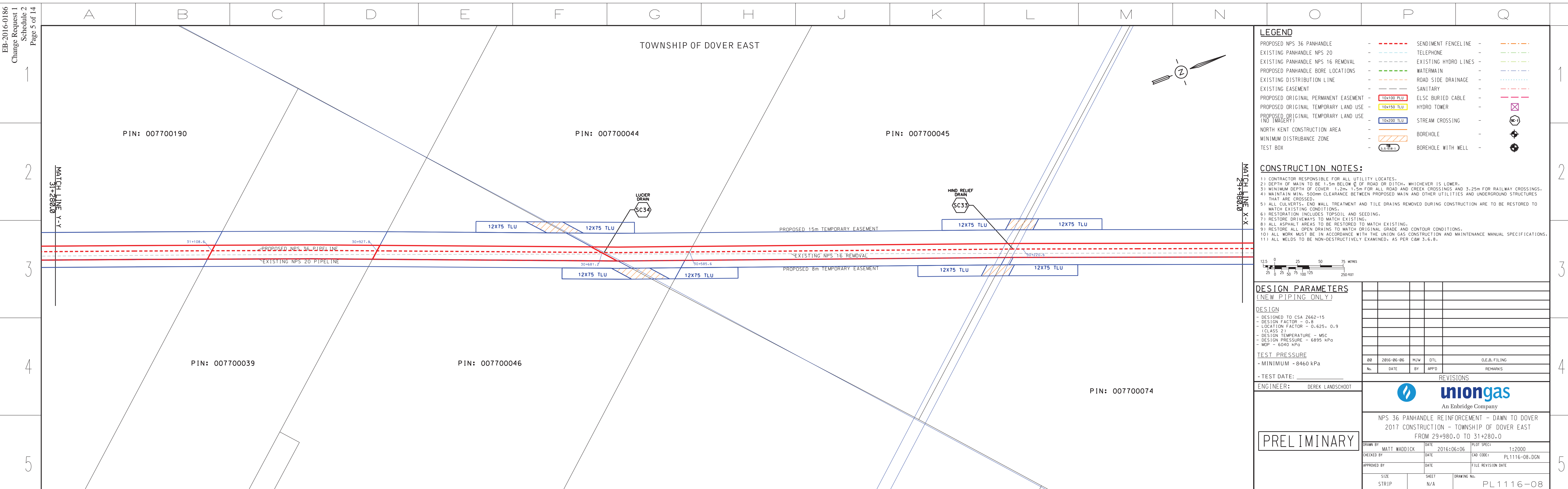




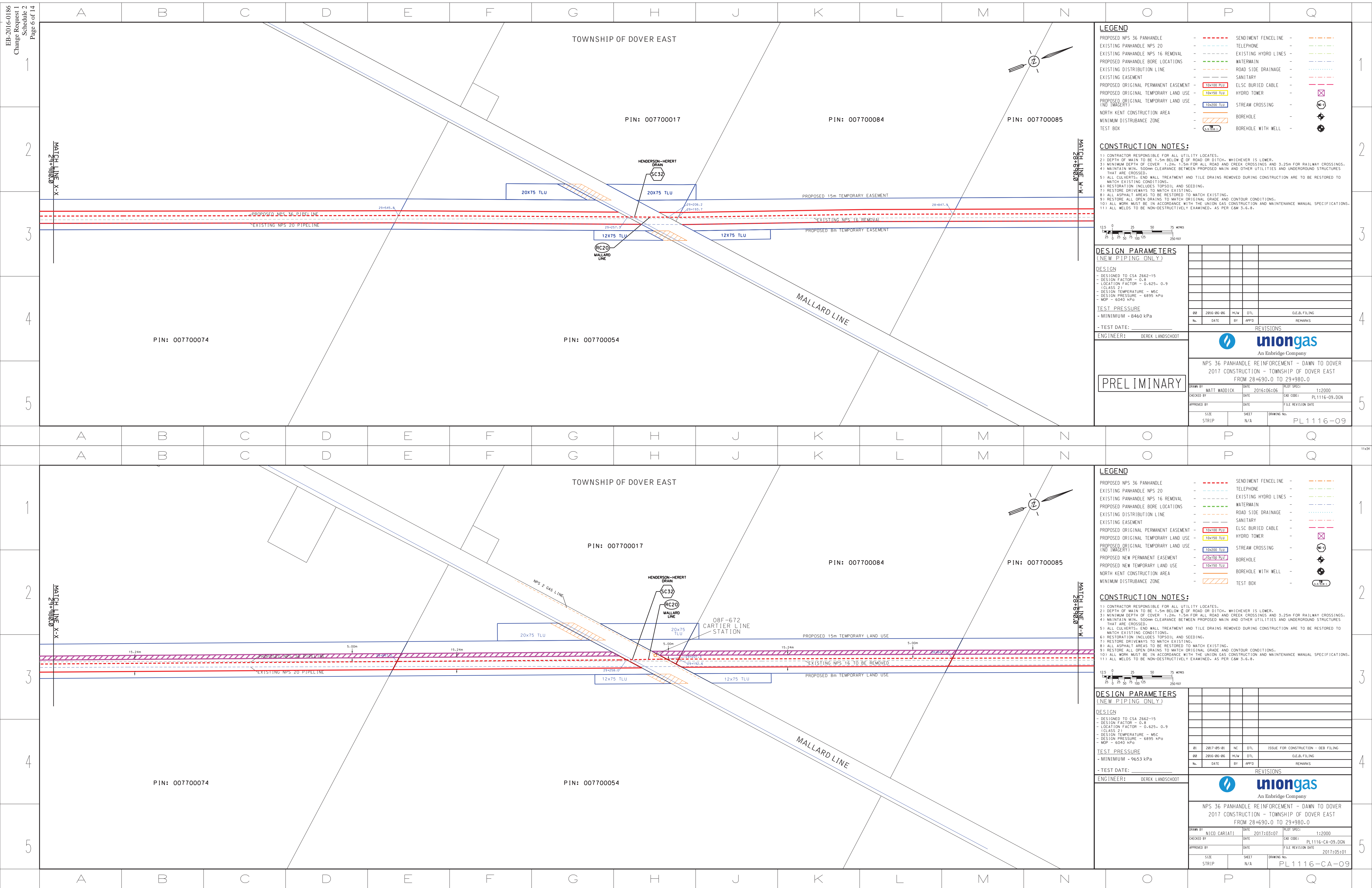








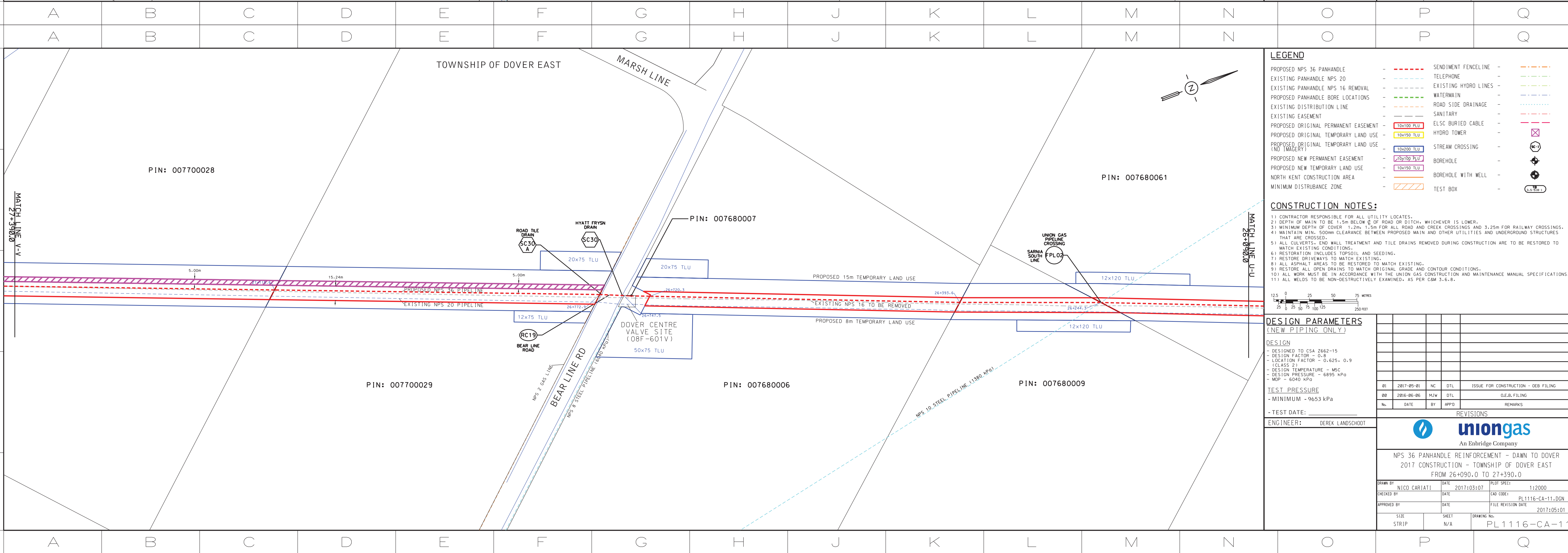
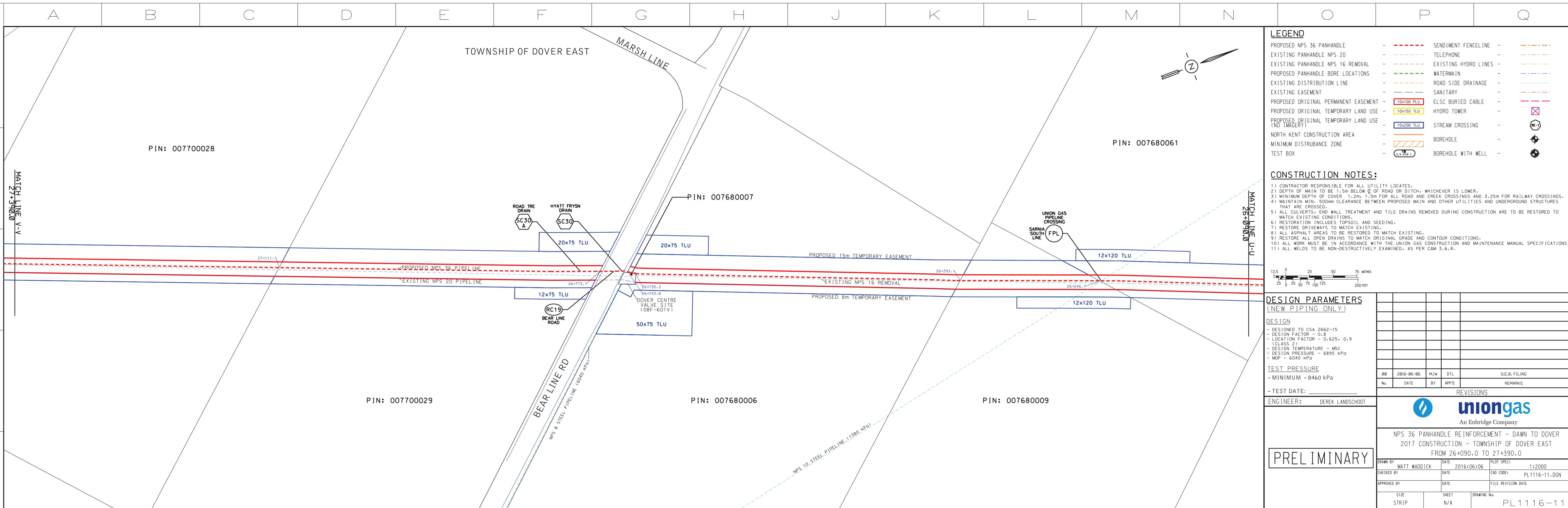




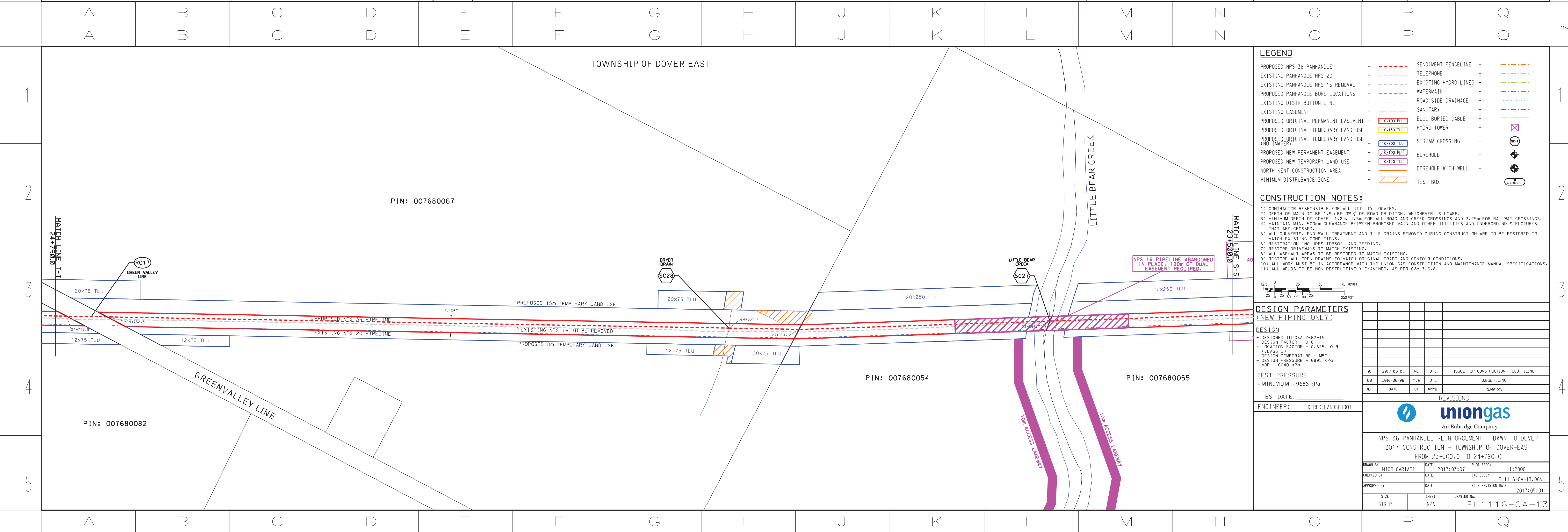
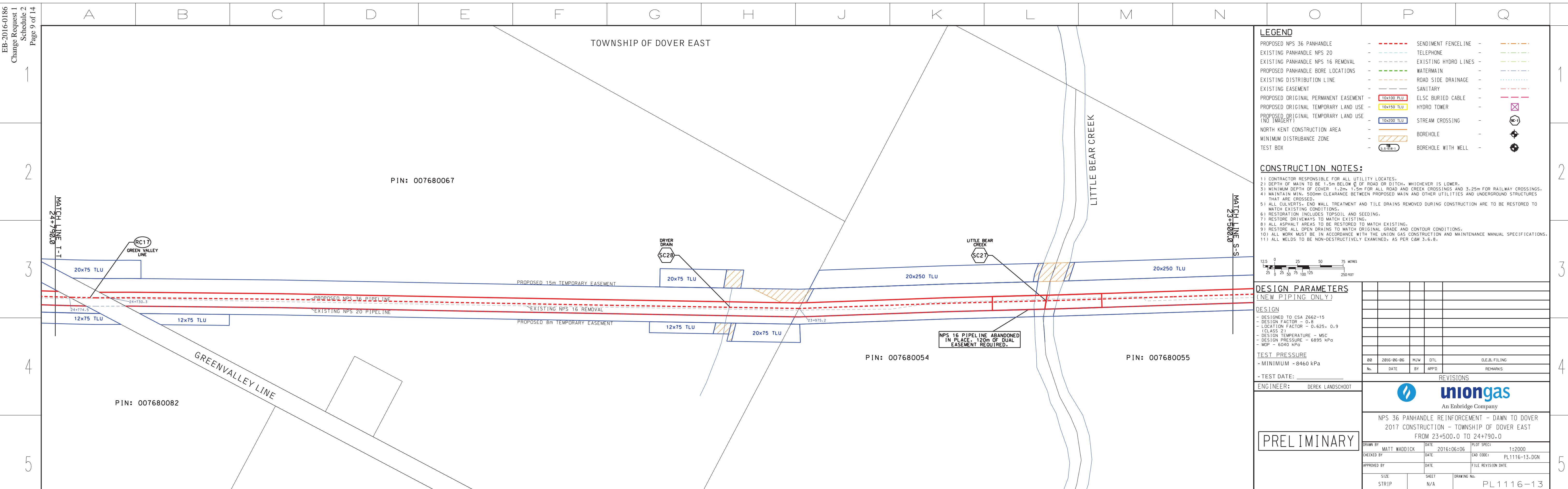




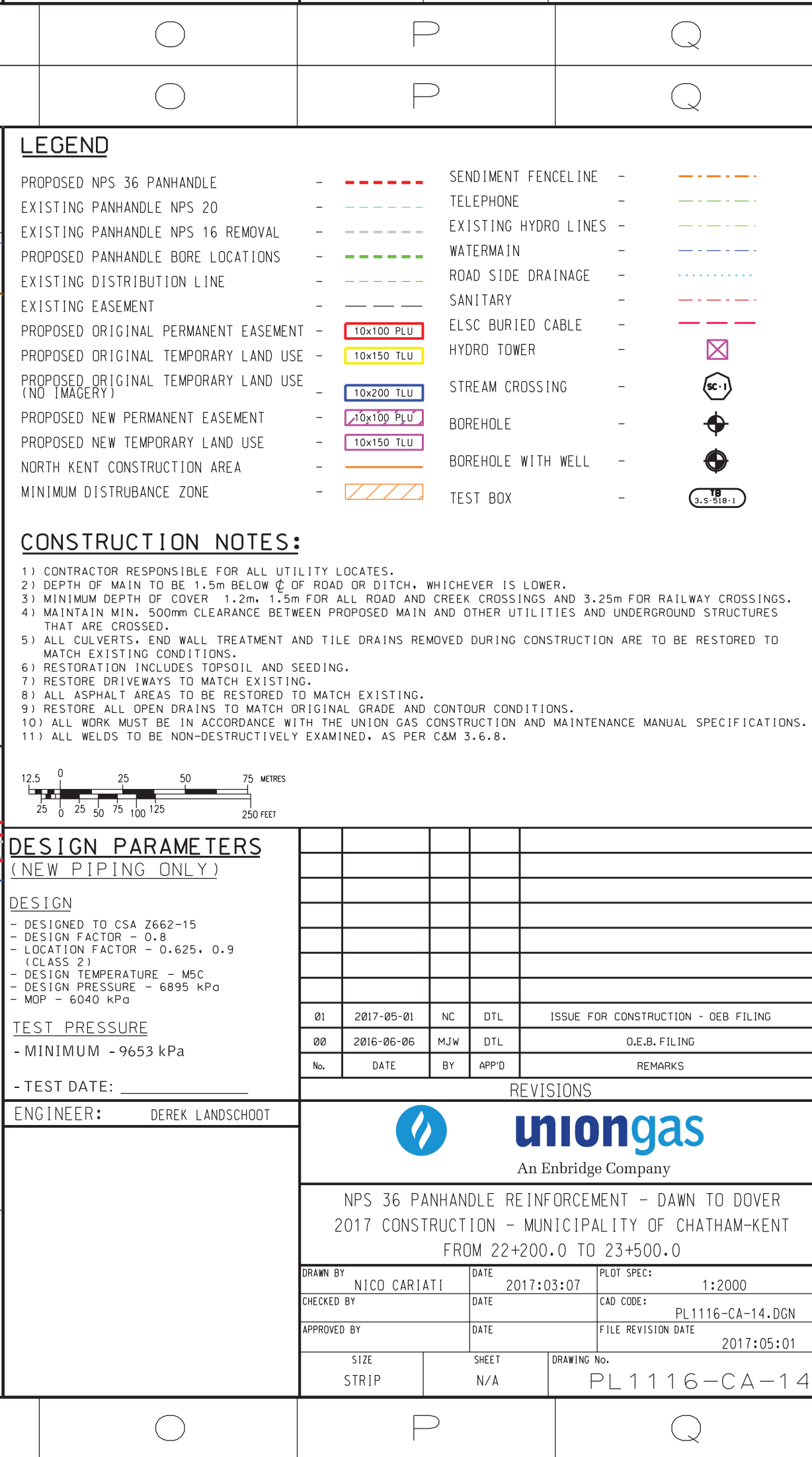
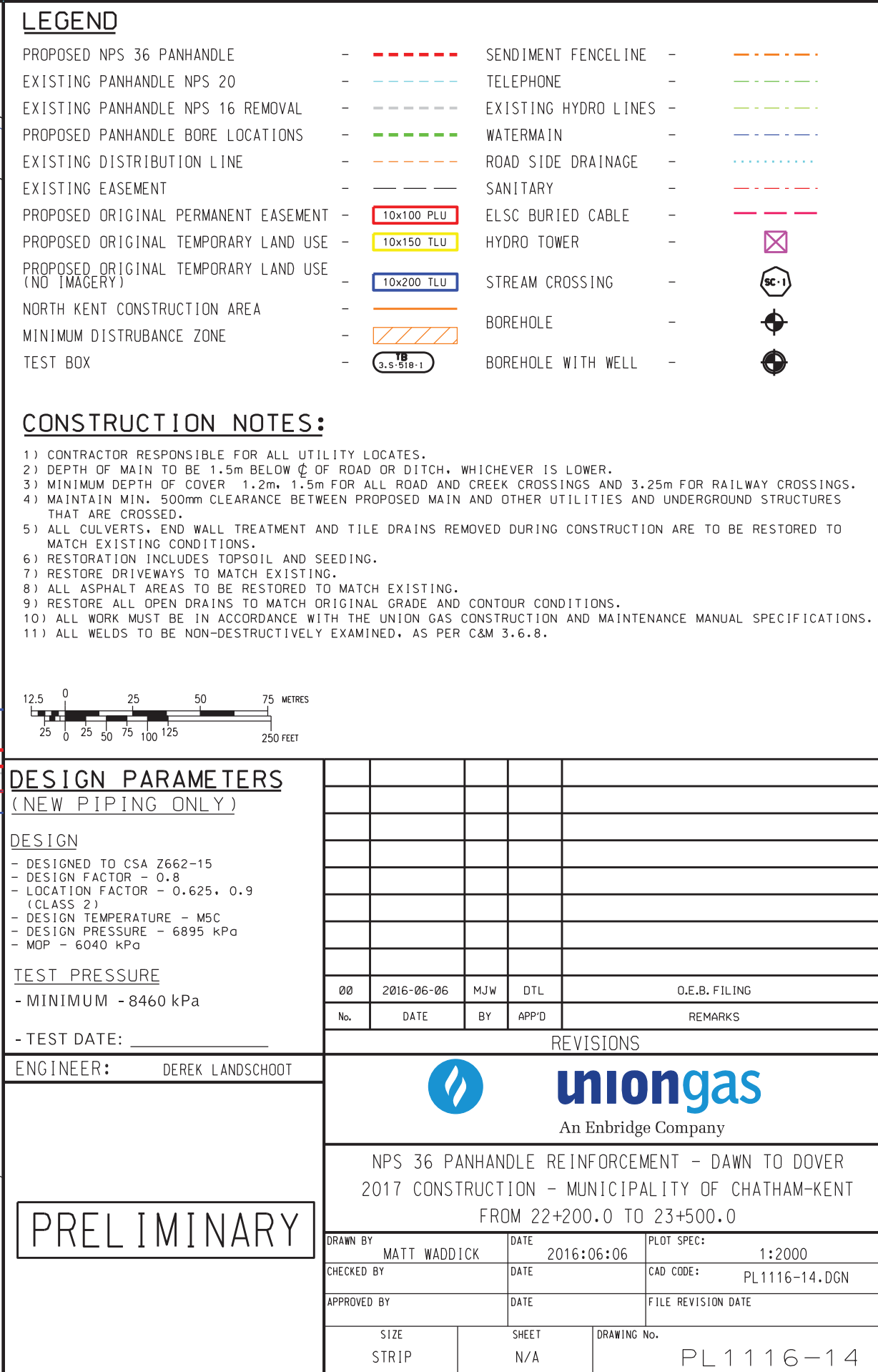




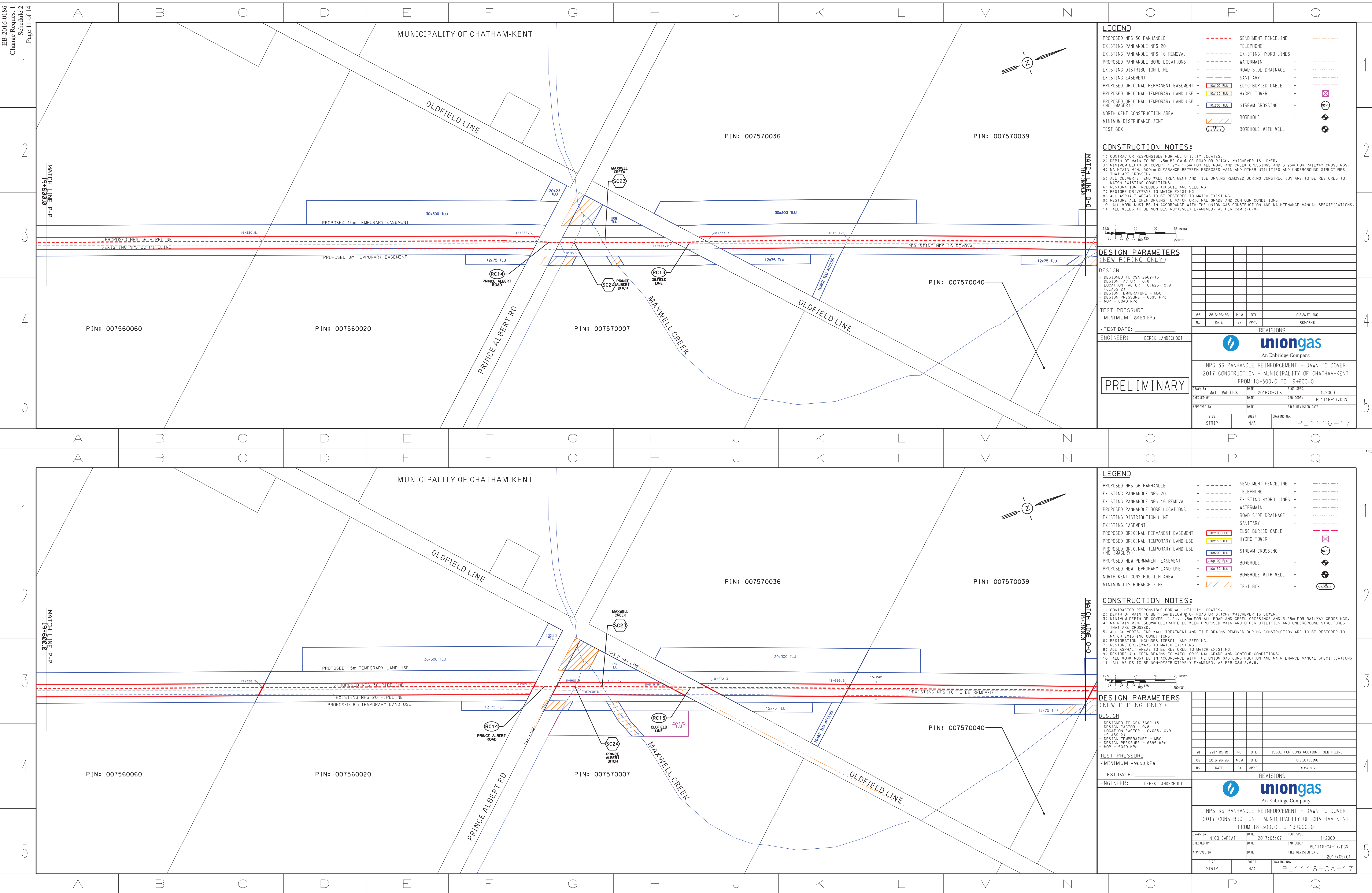
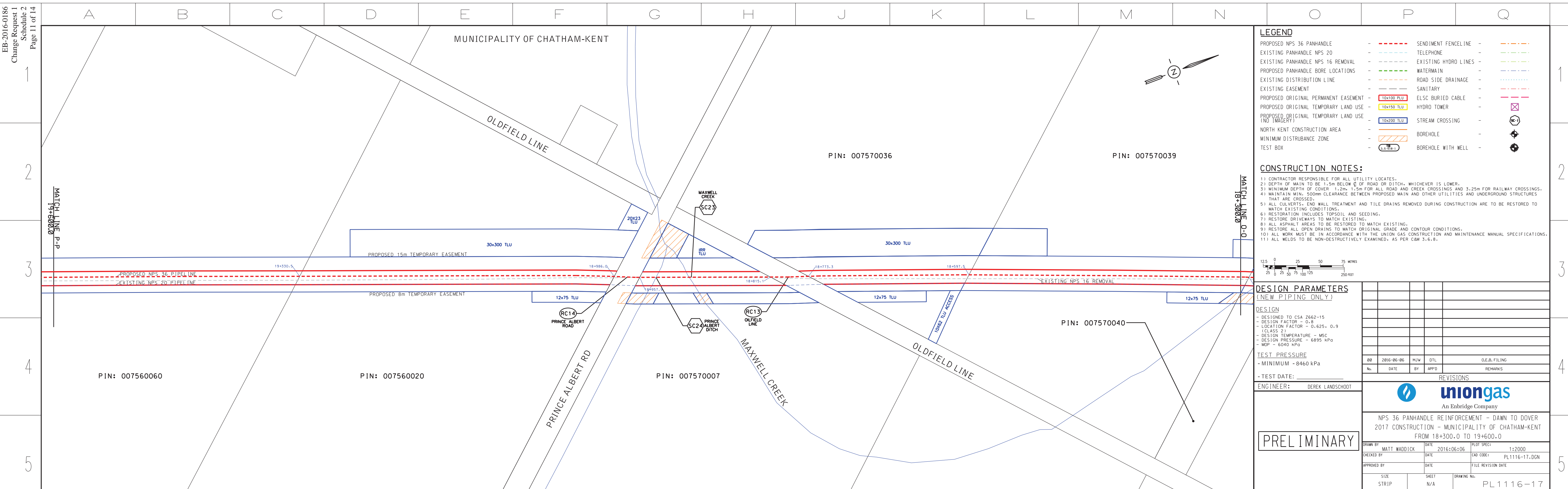




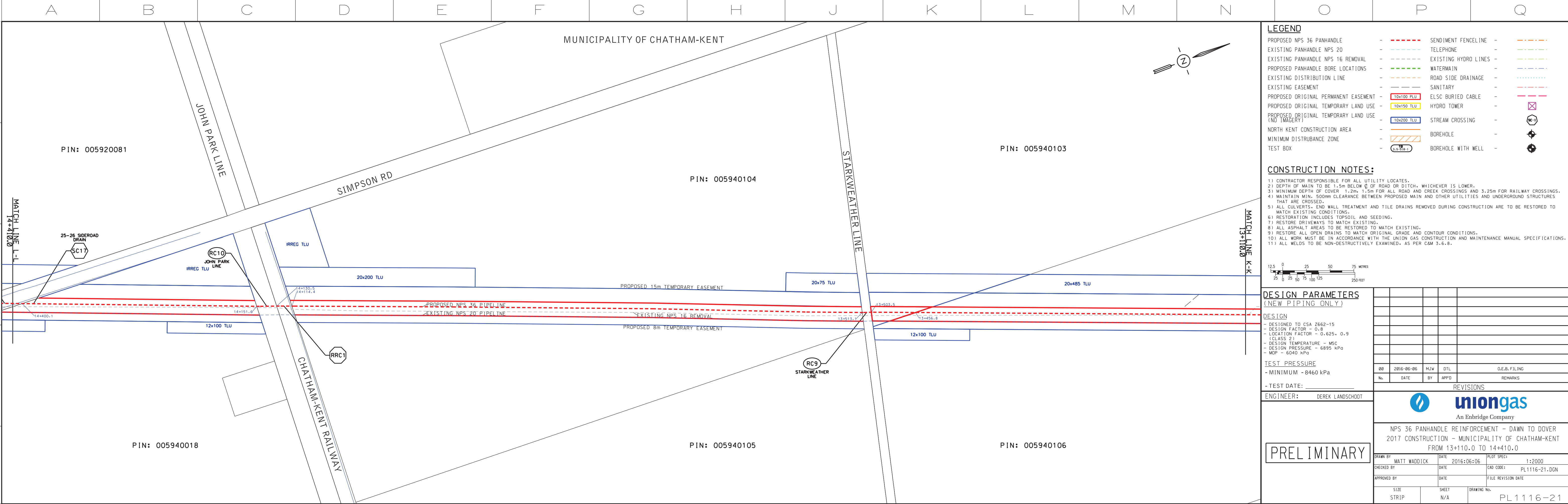












LEGEND			
PROPOSED NPS 36 PANHANDLE	- - - - -	SEDIMENT FENCE LINE	- - - - -
EXISTING PANHANDLE NPS 20	- - - - -	TELEPHONE	- - - - -
EXISTING PANHANDLE NPS 16 REMOVAL	- - - - -	EXISTING HYDRO LINES	- - - - -
PROPOSED PANHANDLE BORE LOCATIONS	- - - - -	WATERMAIN	- - - - -
EXISTING DISTRIBUTION LINE	- - - - -	ROAD SIDE DRAINAGE	- - - - -
EXISTING EASEMENT	- - - - -	SANITARY	- - - - -
PROPOSED ORIGINAL PERMANENT EASEMENT	- - - - -	ELSC BURIED CABLE	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	HYDRO TOWER	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	STREAM CROSSING	- - - - -
NORTH KENT CONSTRUCTION AREA	- - - - -	BOREHOLE	- - - - -
MINIMUM DISTURBANCE ZONE	- - - - -	BOREHOLE WITH WELL	- - - - -
TEST BOX	- - - - -		- - - - -

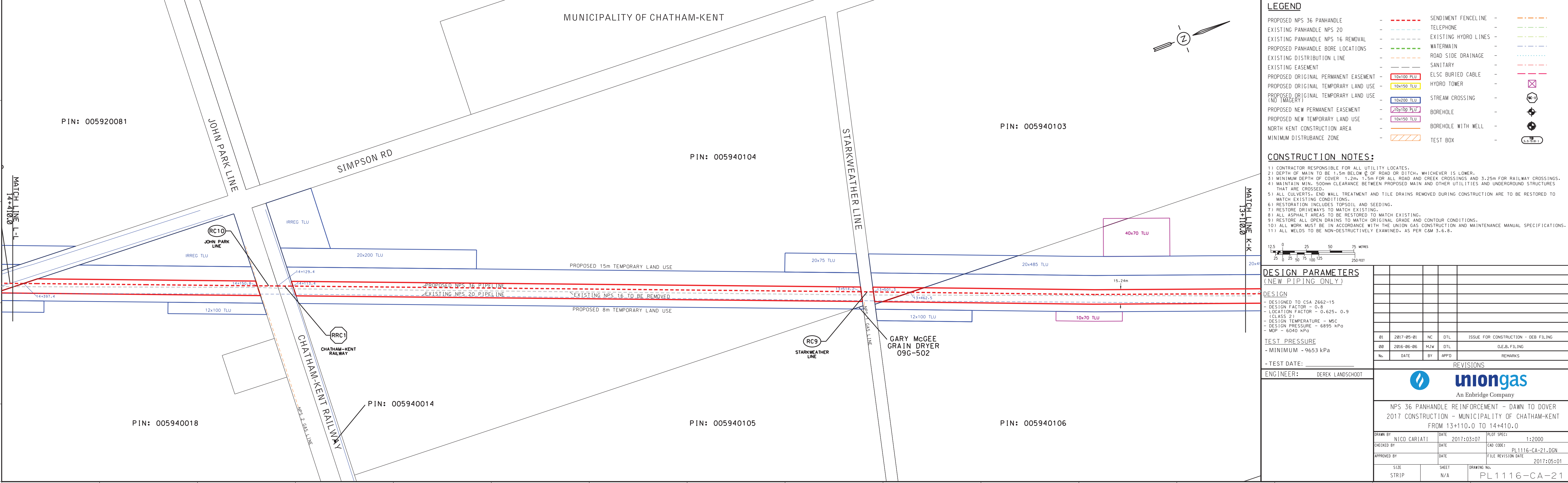
**CONSTRUCTION NOTES:**

1) CONTRACTOR RESPONSIBLE FOR ALL UTILITY LOCATES.  
2) DEPTH OF MAIN TO BE 1.5m BELOW G.O. OF ROAD OR DITCH, WHICHEVER IS LOWER.  
3) MINIMUM DEPTH OF COVER: 1.2m, 1.5m FOR ALL ROAD AND CREEK CROSSINGS AND 3.25m FOR RAILWAY CROSSINGS.  
4) MAINTAIN MIN. 500mm CLEARANCE BETWEEN PROPOSED MAIN AND OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE CROSSED.  
5) ALL CULVERTS, END WALL TREATMENT AND TILE DRAINS REMOVED DURING CONSTRUCTION ARE TO BE RESTORED TO MATCH EXISTING CONDITIONS.  
6) RESTORATION INCLUDES TOPSOIL AND SEEDING.  
7) RESTORE DRIVEWAYS TO MATCH EXISTING.  
8) ALL ASPHALT AREAS TO BE RESTORED TO MATCH EXISTING.  
9) RESTORE ALL OPEN DRAINS TO MATCH ORIGINAL GRADE AND CONTOUR CONDITIONS.  
10) ALL WORK MUST BE IN ACCORDANCE WITH THE UNION GAS CONSTRUCTION AND MAINTENANCE MANUAL SPECIFICATIONS.  
11) ALL WELDS TO BE NON-DESTRUCTIVELY EXAMINED, AS PER C&M 3.6.8.

DESIGN PARAMETERS (NEW PIPING ONLY)			
DESIGN			
- DESIGNED TO CSA 2662-15			
- DESIGN FACTOR - 0.8			
- LOCATION FACTOR - 0.625, 0.9			
- CLASS - 21			
- DESIGN TEMPERATURE - WGC			
- DESIGN PRESSURE - 6895 kPa			
- MOP - 6040 kPa			
TEST PRESSURE			
- MINIMUM - 8460 kPa			
- TEST DATE:			
ENGINEER: DEREK LANDSHOOT			
REVISIONS			
uniongas An Enbridge Company			
NPS 36 PANHANDLE REINFORCEMENT - DAWN TO DOVER 2017 CONSTRUCTION - MUNICIPALITY OF CHATHAM-KENT FROM 13+110.0 TO 14+410.0			
DRAWN BY: MATT WADDICK DATE: 2016-06-06 PLOT SPEC: 1:2000			
CHECKED BY: DATE: CAD CODE: PL1116-21.DGN			
APPROVED BY: DATE: FILE REVISION DATE:			
SIZE: STRIP SHEET: N/A DRAWING NO: PL 1116-21			

PRELIMINARY

A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q



LEGEND			
PROPOSED NPS 36 PANHANDLE	- - - - -	SEDIMENT FENCE LINE	- - - - -
EXISTING PANHANDLE NPS 20	- - - - -	TELEPHONE	- - - - -
EXISTING PANHANDLE NPS 16 REMOVAL	- - - - -	EXISTING HYDRO LINES	- - - - -
PROPOSED PANHANDLE BORE LOCATIONS	- - - - -	WATERMAIN	- - - - -
EXISTING DISTRIBUTION LINE	- - - - -	ROAD SIDE DRAINAGE	- - - - -
EXISTING EASEMENT	- - - - -	SANITARY	- - - - -
PROPOSED ORIGINAL PERMANENT EASEMENT	- - - - -	ELSC BURIED CABLE	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	HYDRO TOWER	- - - - -
PROPOSED ORIGINAL TEMPORARY LAND USE (NO IMAGERY)	- - - - -	STREAM CROSSING	- - - - -
PROPOSED NEW PERMANENT EASEMENT	- - - - -	BOREHOLE	- - - - -
PROPOSED NEW TEMPORARY LAND USE	- - - - -	BOREHOLE WITH WELL	- - - - -
NORTH KENT CONSTRUCTION AREA	- - - - -		- - - - -
MINIMUM DISTURBANCE ZONE	- - - - -	TEST BOX	- - - - -

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TEST PRESSURE			
- MINIMUM - 9653 kPa			
- TEST DATE:			
ENGINEER: DEREK LANDSHOOT			
REVISIONS			
uniongas An Enbridge Company			
NPS 36 PANHANDLE REINFORCEMENT - DAWN TO DOVER 2017 CONSTRUCTION - MUNICIPALITY OF CHATHAM-KENT FROM 13+110.0 TO 14+410.0			
DRAWN BY: NICO CARIATI DATE: 2017-03-07 PLOT SPEC: 1:2000			
CHECKED BY: DATE: CAD CODE: PL1116-CA-21.DGN			
APPROVED BY: DATE: FILE REVISION DATE: 2017-05-01			
SIZE: STRIP SHEET: N/A DRAWING NO: PL 1116-CA-21			

A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
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