LEGEND

- PROPOSED NORTHEAST UPGRADE LOOP LINES
- PROPOSED MAINLINE VALVE
- PROPOSED ACCESS ROADS
- PIPELINE MILE POST
- PROPOSED CONTRACTOR/PIPE YARDS
- EXISTING TGP FACILITIES (METER/COMPRESSOR STATIONS)

PRELIMINARY NOT FOR CONSTRUCTION

DRAWING NUMBER			DRAWING TITLE		
REFERENCE DRAWINGS					
B	03/11/11	MWC	ISSUED FOR FERC	51814	MC
NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

tennessee Gas Pipeline
an El Paso company

NORTHEAST UPGRADE PROJECT
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

Division: Northern	Op. Area: Agawam		
State: New Jersey	Co./Par.: Passaic		
Section:	Township:	Range:	
Drafter PAD Date: 11/04/10	Project ID: 51814	Type:	
Chk'd: RSC Date: 11/11/10	Scale: 1" = 2000'		
Appr: DDM Date: 12/10/10	TQ-016-300-2-10.dwg	Sheet:	Rev:
TQ-Q16-300-2-10		16 of 13	B

Mar 23, 2011 - 3:56PM

LEGEND

- PROPOSED NORTHEAST UPGRADE LOOP LINES
- PROPOSED MAINLINE VALVE
- PROPOSED ACCESS ROADS
- PIPELINE MILE POST
- PROPOSED CONTRACTOR/PIPE YARDS
- EXISTING TGP FACILITIES (METER/COMPRESSOR STATIONS)

PRELIMINARY NOT FOR CONSTRUCTION

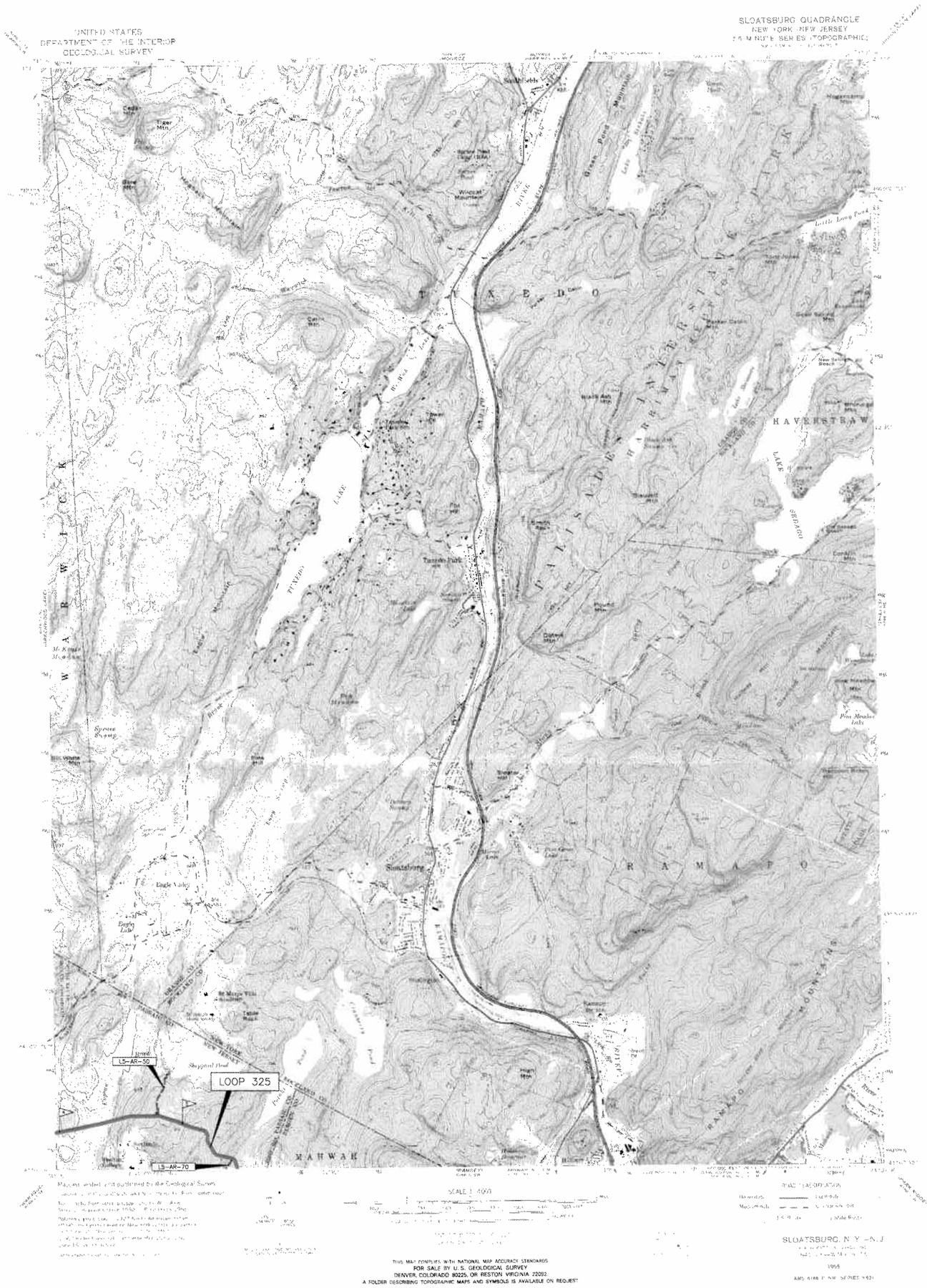
DRAWING NUMBER			DRAWING TITLE		
B	12/21/11	MWC	REFERENCE DRAWINGS	51814	WG
NO.	DATE	BY	ISSUED FOR FERC	PROJ. ID	APPR.
			DESCRIPTION		
			REVISIONS		

Tennessee Gas Pipeline
an El Paso company

NORTHEAST UPGRADE PROJECT
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

Division: Northern		Op. Area: Ringwood	
State: New Jersey		Co./Par.: Passaic	
Section:	Township:	Range:	
Drafter: PAD Date: 11/04/10	Project ID: 51814	Type	
Chk'd: RSC Date: 11/11/10	Scale: 1" = 2000'		
Appr: DEM Date: 12/10/10	TG-016-300-2-11.dwg		
TG-Q16-300-2-11		Sheet:	Rev: B

Mar 22, 2011 - 3:57PM



LEGEND

- PROPOSED NORTHEAST UPGRADE LOOP LINES
- PROPOSED MAINLINE VALVE
- PROPOSED ACCESS ROADS
- PIPELINE MILE POST
- PROPOSED CONTRACTOR/PIPE YARDS
- EXISTING TGP FACILITIES (METER/COMPRESSOR STATIONS)

PRELIMINARY NOT FOR CONSTRUCTION

DRAWING NUMBER			DRAWING TITLE		
REFERENCE DRAWINGS					
B	03/11/11	MWC	ISSUED FOR FERC	51814	WEI
NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

Tennessee Gas Pipeline
an El Paso company

NORTHEAST UPGRADE PROJECT
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

Division: Northern		Op. Area: Agawam	
State: New Jersey		Co./Par.: Passaic	
Section:	Township:	Range:	
Drafter: PAD	Date: 11/04/10	Project ID: 51814	Type:
Chk'd: RSC	Date: 11/11/10	Scale: 1" = 2000'	
Appr: DEM	Date: 12/10/10	Filename: TO-Q16-300-2-12.dwg	
TO-Q16-300-2-12		Sheet: 12 of 13	Rev. B

Mar 23, 2011 - 3:59PM

LEGEND

- PROPOSED NORTHEAST UPGRADE LOOP LINES
- PROPOSED MAINLINE VALVE
- PROPOSED ACCESS ROADS
- PIPELINE MILE POST
- PROPOSED CONTRACTOR/PIPE YARDS
- EXISTING TGP FACILITIES (METER/COMPRESSOR STATIONS)

PRELIMINARY NOT FOR CONSTRUCTION

DRAWING NUMBER			DRAWING TITLE		
REFERENCE DRAWINGS					
B	03/31/11	MWC	ISSUED FOR FERC	51814	WS
NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR
REVISIONS					

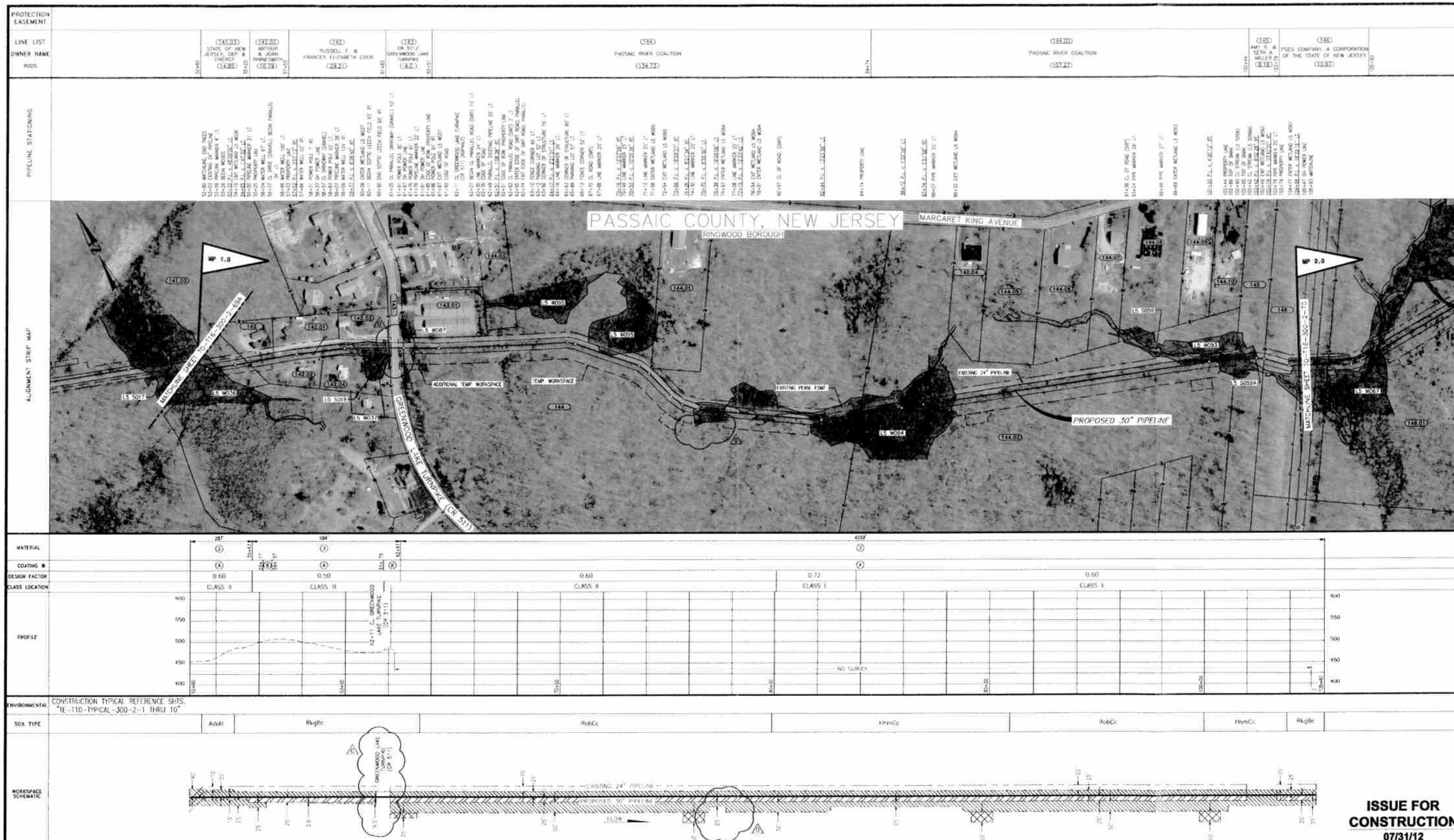
Tennessee Gas Pipeline
(an El Paso company)

NORTHEAST UPGRADE PROJECT
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC and BERGAN COUNTY
NEW JERSEY

Division:	Northern	Op. Area:	Appleton
State:	New Jersey	Co./Par.:	Passaic & Bergen
Section:	Township:	Range:	
Drafter: PAD	Date: 11/04/10	Project ID: 51814	Type
Chk'd: RSC	Date: 11/11/10	Scale: 1" = 2000'	
Appr: DEM	Date: 12/10/10	Filename: TG-016-300-2-13.dwg	

TG-016-300-2-13 | Sheets: 13 of 13 | Rev: B

Apr 22, 2011 - 4:09PM



ISSUE FOR CONSTRUCTION
07/31/12

✱ BUOYANCY CONTROL

1. BUOYANCY CONTROL WILL BE REQUIRED ACROSS WATER BODIES, WETLANDS AND STREAMS. CONTRACTOR MAY USE EITHER CONCRETE COATING OR WEIGHTING AS NOTED BELOW, EXCEPT WHERE CONCRETE COATING IS INDICATED ON SITE SPECIFIC CROSSING PLANS.
2. CONCRETE COATING, WHERE USED, WILL BE IN ACCORDANCE WITH THE TABLE BELOW.

PIPE	CONCRETE SELECTION
0.349" W.T. IN MARSH, WETLAND, SMALL STREAM	5.25" THICK 140 PCF
0.418" W.T. IN MARSH, WETLAND, SMALL STREAM	5.00" THICK 140 PCF
0.502" W.T. IN MARSH, WETLAND, SMALL STREAM	4.50" THICK 140 PCF
0.502" W.T. IN LARGE OR CROSSABLE STREAM	5.00" THICK 140 PCF

3. CONCRETE OR SACK WEIGHTS, WHERE USED, SHALL BE A MINIMUM OF 9,000 LBS. TO BE INSTALLED ON 14.5' SPACING.

PIPE SUMMARY

ITEM	DESCRIPTION	QTY
2	PIPE,30 IN OD X 0.418 IN WT,DSAW,API 5L GR X70	4506
3	PIPE,30 IN OD X 0.502 IN WT,DSAW,API 5L GR X70	634

NOTE: BC = BUOYANCY CONTROL RP = ROCK PROTECTION/PADDING

COATING SUMMARY

A EXTERNAL FBE UC-200 14-16 MILS
B EXTERNAL FBE UC-200 8-10 MILS W/ 40-50 MILS ARO
C EXTERNAL FBE UC-200 14-16 MILS W/1" CONCRETE COATED

FIELD NOTES

TEST: ______
RADIOGRAPH: ______

REFERENCE DRAWINGS

TYPICALS

R1A	NEUP TYPICAL 30" PIPELINE R/W CO-LOCATED WITH TGP PIPELINE
R1B	NEUP TYPICAL 30" PIPELINE R/W CO-LOCATED WITH TGP PIPELINE
R2A	NEUP TYPICAL 30" PL R/W CO-LOCATED WITH TGP PL IN WETLANDS
R2B	NEUP TYPICAL 30" PL R/W CO-LOCATED WITH TGP PL IN WETLANDS

LEGEND

EXISTING PERMANENT EASEMENT
PROPOSED PERMANENT EASEMENT
TEMPORARY WORKSPACE
ADDITIONAL TEMPORARY WORKSPACE (AT45)
LIMITS OF DISTURBANCE
CENTERLINE PROPOSED 30" PIPELINE
CENTERLINE EXISTING 24" PIPELINE

NOTE: MAOP IS 1170 PSIG

SCALE 200 100 0 200 400

IMAGERY DATE: APRIL, 2010

REVISIONS

NO	PROJ. ID	DESCRIPTION	DATE	BY	CK	APPR
0	51814	ISSUE FOR CONSTRUCTION	07/31/12	WEI	WEI	

AREA: AGAWAM	DIV.: NORTHERN		
DRAFTER: BSP	DATE: 08/21/2010		
DRAFT COORD: MWC	DATE: 08/21/2010		

Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

NORTHEAST UPGRADE
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

DESIGN COORD.	DATE	SCALE: 1" = 200'	PROJ. ID: 51814
PROJECT COORD.	DATE	TO-T16-300-2-69B	0
OPER APPR.	DATE		

PROTECTION EASEMENT

LINE LIST / OWNER NAME / RODS

(148) PSEG COMPANY, A CORPORATION OF THE STATE OF NEW JERSEY (7.33)

(148.01) DARET, INC. (45.65)

(148.02) BLIZZARD INDUSTRIES, LLC (46.97)

(148.03) THE RINGWOOD INDUSTRIAL PARTNERSHIP, A PARTNERSHIP OF THE STATE OF NEW JERSEY (2.30)

(148.04) DOUGLAS REALTY HOLDING, LLC (13.76)

(148.05) MARYANN HONCZARENKO (TRUST UNDER ARTICLE THIRD U/W/O ARNAUD HONCZARENKO) (23.94)

(148.07) VAN NATTA DRIVE (4.14)

(148.08) RINGWOOD CONTRACTOR STORAGE, LLC (18.87)

(148.09) THE RINGWOOD INDUSTRIAL PARTNERSHIP, A PARTNERSHIP OF THE STATE OF NEW JERSEY (37.25)

(147) NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (106.81)

(148) NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (5.58)

(148) NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (8.36)

PIPELINE STATIONING

ALIGNMENT STRIP MAP

MATERIAL: 1420' (2) | 896' (3) | 2948' (2)

COATING #: (A) | (B) | (A)

DESIGN FACTOR: 0.60 | 0.72 | 0.60 | 0.50 | 0.60 | 0.72

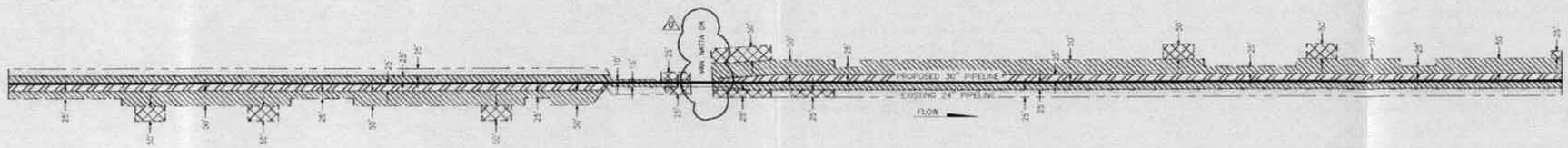
CLASS LOCATION: CLASS II | CLASS I | CLASS III | CLASS III | CLASS II | CLASS I

PROFILE

ENVIRONMENTAL: CONSTRUCTION TYPICAL REFERENCE SHTS. "TE-T10-TYPICAL-300-2-1 THRU 10"

SOIL TYPE: RlgBc | RobCc | RlgBc | HhmCc | RobCc | RobDc | HhmCc | RobCc | HhmCc | OtlC

WORKSPACE SCHEMATIC



ISSUE FOR CONSTRUCTION
07/31/12

* BUOYANCY CONTROL

1. BUOYANCY CONTROL WILL BE REQUIRED ACROSS WATER BODIES, WETLANDS AND STREAMS. CONTRACTOR MAY USE EITHER CONCRETE COATING OR WEIGHTING AS NOTED BELOW, EXCEPT WHERE CONCRETE COATING IS INDICATED ON SITE SPECIFIC CROSSING PLANS.
2. CONCRETE COATING, WHERE USED, WILL BE IN ACCORDANCE WITH THE TABLE BELOW:

PIPE	CONCRETE SELECTION
0.549" W.T. IN MARSH, WETLAND, SMALL STREAM	5.25" THICK 140 PCF
0.438" W.T. IN MARSH, WETLAND, SMALL STREAM	5.00" THICK 140 PCF
0.502" W.T. IN MARSH, WETLAND, SMALL STREAM	4.50" THICK 140 PCF
0.502" W.T. IN LARGE OR ERODIBLE STREAM	5.00" THICK 140 PCF

3. CONCRETE OR SACK WEIGHTS, WHERE USED, SHALL BE A MINIMUM OF 9,000 LBS. TO BE INSTALLED ON 14.5' SPACING.

PIPE SUMMARY

ITEM	DESCRIPTION	QTY
1	PIPE-X, IN 30 X 0.549 IN W/CORRUGATED SL GR X70	[illegible]
2	PIPE-X, IN 30 X 0.438 IN W/CORRUGATED SL GR X70	[illegible]
3	PIPE-X, IN 30 X 0.502 IN W/CORRUGATED SL GR X70	[illegible]

NOTE: BC = BUOYANCY CONTROL RP = ROCK PROTECTION/PADDING

COATING SUMMARY

A EXTERNAL FBE UC-200 14-16 MILS
B EXTERNAL FBE UC-200 8-10 MILS W/ 40-50 MILS ARO
C EXTERNAL FBE UC-200 14-16 MILS W/1" CONCRETE COATED

FIELD NOTES

TEST:

RADIOGRAPH:

REFERENCE DRAWINGS

R1A	NEWP TYPICAL 30" PIPELINE R/W CD-LOCATED WITH TOP PIPELINE
R1B	NEWP TYPICAL 30" PIPELINE R/W CD-LOCATED WITH TOP PIPELINE
R2A	NEWP TYPICAL 30" PL R/W CD-LOCATED WITH TOP PL IN WETLANDS
R2B	NEWP TYPICAL 30" PL R/W CD-LOCATED WITH TOP PL IN WETLANDS

LEGEND

- EXISTING PERMANENT EASEMENT
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE (ATWS)

LIMITS OF DISTURBANCE

- CENTERLINE PROPOSED 30" PIPELINE
- CENTERLINE EXISTING 24" PIPELINE

NOTE: MAOP IS 1170 PSIG

SCALE: 200 100 0 200 400

IMAGERY DATE: APRIL, 2010

REVISIONS

NO	REV NO	DESCRIPTION	DATE	BY	CK	APPR
6	51814	ISSUE FOR CONSTRUCTION	07/31/12	WB	WB	

AREA: AGAWAM DIV.: NORTHERN
DRAFTER: BSP DATE: 08/21/2010
DSGN CODE: MMC DATE: 08/21/2010

Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

NORTHEAST UPGRADE
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

DESIGN CODE: DATE:
PROJECT CODE: DATE:
OPER. AREA: DATE:

SCALE: 1 = 200' PROJ. ID: 51814

TO-T16-300-2-70 | 0

PROTECTION EASEMENT

LINE LIST

OWNER NAME

RODS

NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (12.21)

NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (12.42)

NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (36.12)

NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (2.87)

MARGARET KING AVENUE (4.13)

BOROUGH OF RINGWOOD (26.24)

BOROUGH OF RINGWOOD (14.0)

STATE OF NEW JERSEY, DEP (35.88)

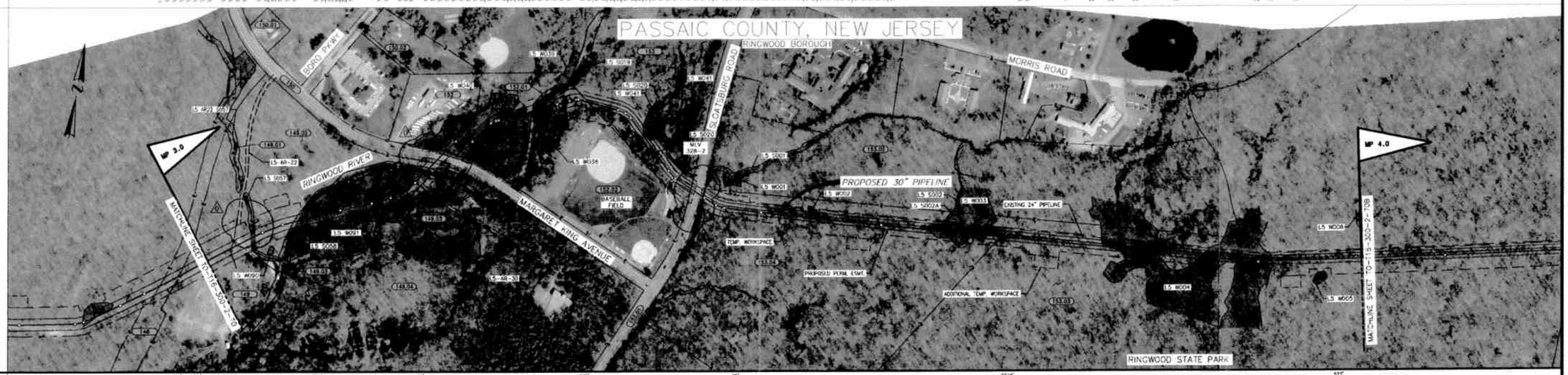
SLOATSBURG ROAD (1.94)

STATE OF NEW JERSEY, DEP & ENERGY (77.94)

STATE OF NEW JERSEY, DEP (12.39)

PIPELINE STATIONING

ALIGNMENT STRIP MAP



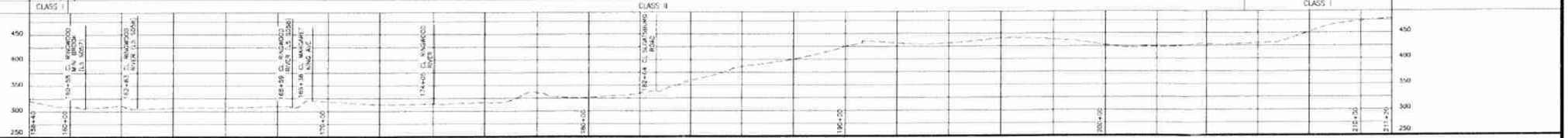
MATERIAL

COATING *

DESIGN FACTOR

CLASS LOCATION

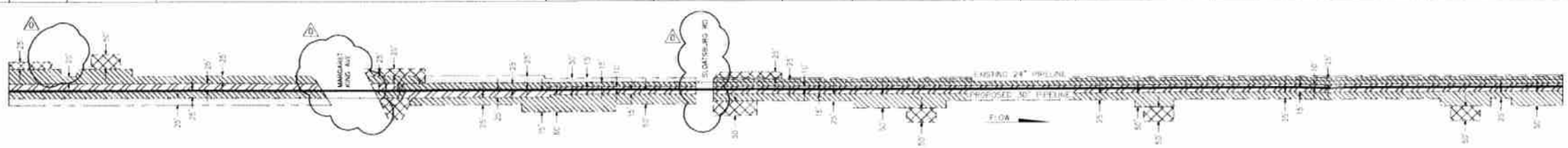
PROFILE



ENVIRONMENTAL: CONSTRUCTION TYPICAL REFERENCE SHTS. "TE-T10-TYPICAL-300-2-1 THRU 10"

SOIL TYPE

WORKSPACE SCHEMATIC



ISSUE FOR CONSTRUCTION
07/31/12

* BUOYANCY CONTROL

1. BUOYANCY CONTROL WILL BE REQUIRED ACROSS WATER BODIES, WETLANDS AND STREAMS. CONTRACTOR MAY USE EITHER CONCRETE COATING OR WEIGHTING AS NOTED BELOW, EXCEPT WHERE CONCRETE COATING IS INDICATED ON SITE SPECIFIC CROSSING PLANS.
2. CONCRETE COATING, WHERE USED, WILL BE IN ACCORDANCE WITH THE TABLE BELOW.

PIPE	CONCRETE SELECTION
0.349" W.T. IN MARSH, WETLAND, SMALL STREAM	5.25" THICK 140 PCF
0.438" W.T. IN MARSH, WETLAND, SMALL STREAM	5.00" THICK 140 PCF
0.500" W.T. IN MARSH, WETLAND, SMALL STREAM	4.50" THICK 140 PCF
0.500" W.T. IN LARGE OR ERODIBLE STREAM	5.00" THICK 140 PCF

3. CONCRETE OR SACK WEIGHTS, WHERE USED, SHALL BE A MINIMUM OF 9,000 LBS. TO BE INSTALLED ON 14.5' SPACING.

PIPE SUMMARY

ITEM	DESCRIPTION	
1	PIPE, 30 IN OD X 0.349 IN WT X GRADE X-52 SP API	1,591
2	PIPE, 30 IN OD X 0.438 IN WT X GRADE X-52 SP API	1,323
3	PIPE, 30 IN OD X 0.500 IN WT X GRADE X-52 SP API	4477
		7,390

NOTE: BC = BUOYANCY CONTROL BR = ROCK PROTECTION/PADDING

COATING SUMMARY

A EXTERNAL FBE UC-200 14-16 MILS
B EXTERNAL FBE UC-200 8-10 MILS W/ 40-50 MILS ARO
C EXTERNAL FBE UC-200 14-16 MILS W/1" CONCRETE COATED

FIELD NOTES

TEST:

RADIOGRAPH:

REFERENCE DRAWINGS

TYPICALS

R1A	NEW TYPICAL 30" PIPELINE R/W CO-LOCATED WITH 16" PIPELINE
R1B	NEW TYPICAL 30" PIPELINE R/W CO-LOCATED WITH 16" PIPELINE
R2A	NEW TYPICAL 30" PL R/W CO-LOCATED WITH 16" PL IN WETLANDS
R2B	NEW TYPICAL 30" PL R/W CO-LOCATED WITH 16" PL IN WETLANDS

LEGEND

- EXISTING PERMANENT EASEMENT
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE (ATWS)

LIMITS OF DISTURBANCE

- CENTERLINE PROPOSED 30" PIPELINE
- CENTERLINE EXISTING 24" PIPELINE

NOTE: MAOP /S 1170 PSIG

SCALE: 200 100 0 200 400

IMAGERY DATE: APRIL, 2010

REVISIONS

NO/REV	DESCRIPTION	DATE	HT	CK	APPR
0	51814 ISSUE FOR CONSTRUCTION	07/31/12	WEI	WEI	

AREA:	ALABAMA	DIV.:	NORTHERN
DRAFTER:	BSP	DATE:	08/21/2010
DRAFT. COORD.:	MRC	DATE:	08/21/2010

Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

NORTHEAST UPGRADE
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

DESIGN COORD.	DATE:	SCALE: 1 = 200'	PROJ. ID: 51814
PROJECT COORD.	DATE:	TO-T16-300-2-70A	0
OPER. APPR.	DATE:		

PROTECTION EASEMENT

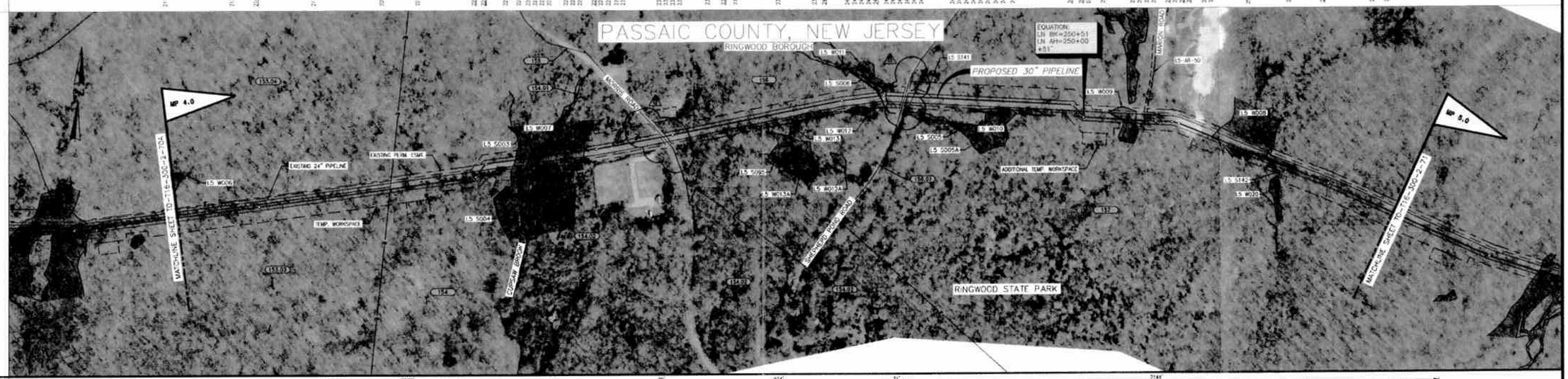
LINE LIST

OWNER NAME

RODS

PIPELINE STATIONING

ALIGNMENT STRIP MAP



MATERIAL

COATING #

DESIGN FACTOR

CLASS LOCATION

PROFILE

ENVIRONMENTAL: CONSTRUCTION TYPICAL REFERENCE SHTS. "TL-110-TYPICAL-300-2-1 THRU 10"

SOIL TYPE

WORKSPACE SCHEMATIC

ISSUE FOR CONSTRUCTION
07/31/12

* BUOYANCY CONTROL

1. BUOYANCY CONTROL WILL BE REQUIRED ACROSS WATER BODIES, WETLANDS AND STREAMS. CONTRACTOR MAY USE EITHER CONCRETE COATING OR WEIGHTING AS NOTED BELOW, EXCEPT WHERE CONCRETE COATING IS INDICATED ON SITE SPECIFIC CROSSING PLANS.
2. CONCRETE COATING WHERE USED, WILL BE IN ACCORDANCE WITH THE TABLE BELOW.

PIPE	CONCRETE SELECTION
0.349" W.T. IN MARSH, WETLAND, SMALL STREAM	5.25" THICK 140 PCF
0.438" W.T. IN MARSH, WETLAND, SMALL STREAM	5.00" THICK 140 PCF
0.500" W.T. IN MARSH, WETLAND, SMALL STREAM	4.50" THICK 140 PCF
0.500" W.T. IN LARGE OR ERODIBLE STREAM	5.00" THICK 140 PCF

3. CONCRETE OR SACK WEIGHTS, WHERE USED, SHALL BE A MINIMUM OF 9,000 LBS. TO BE INSTALLED ON 14.5' SPACING.

PIPE SUMMARY

ITEM	DESCRIPTION	QTY
1	PIPE 30" W.T. 0.344 IN WT X-MARK 70 GR X70	2FT
2	PIPE 30" W.T. 0.500 IN WT X-MARK 70 GR X70	1147'

NOTE: BC = BUOYANCY CONTROL RP = ROCK PROTECTION/PADDING

COATING SUMMARY

A EXTERNAL FBE UC-200 14-16 MILS
B EXTERNAL FBE UC-200 8-10 MILS W/ 40-50 MILS APO
C EXTERNAL FBE UC-200 14-16 MILS W/1" CONCRETE COATED

FIELD NOTES

TEST:

RADIOGRAPH:

REFERENCE DRAWINGS

TYPICALS

R1A	NEUP TYPICAL 30" PIPELINE R/W CD-LOCATED WITH TOP PIPELINE
R1B	NEUP TYPICAL 30" PIPELINE R/W CD-LOCATED WITH TOP PIPELINE
R2A	NEUP TYPICAL 30" PL R/W CD-LOCATED WITH TOP PL IN WETLANDS
R2B	NEUP TYPICAL 30" PL R/W CD-LOCATED WITH TOP PL IN WETLANDS

LEGEND

- EXISTING PERMANENT EASEMENT
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE (ATWS)

LIMITS OF DISTURBANCE

- CENTERLINE PROPOSED 30" PIPELINE
- CENTERLINE EXISTING 24" PIPELINE

NOTE: MAOP IS 1170 PSIG

SCALE: 200 100 0 200 400

IMAGERY DATE: APRIL, 2010

REVISIONS

NO	PROJ NO	DESCRIPTION	DATE	BY	CK	APPR
0	51814	ISSUE FOR CONSTRUCTION	07/31/12	WD	WD	

ASS.A: ACA/WAM DIV.: NORTHERN

DRAFTER: BSP DATE: 08/21/2010

DRAFT COORD: MMC DATE: 08/21/2010

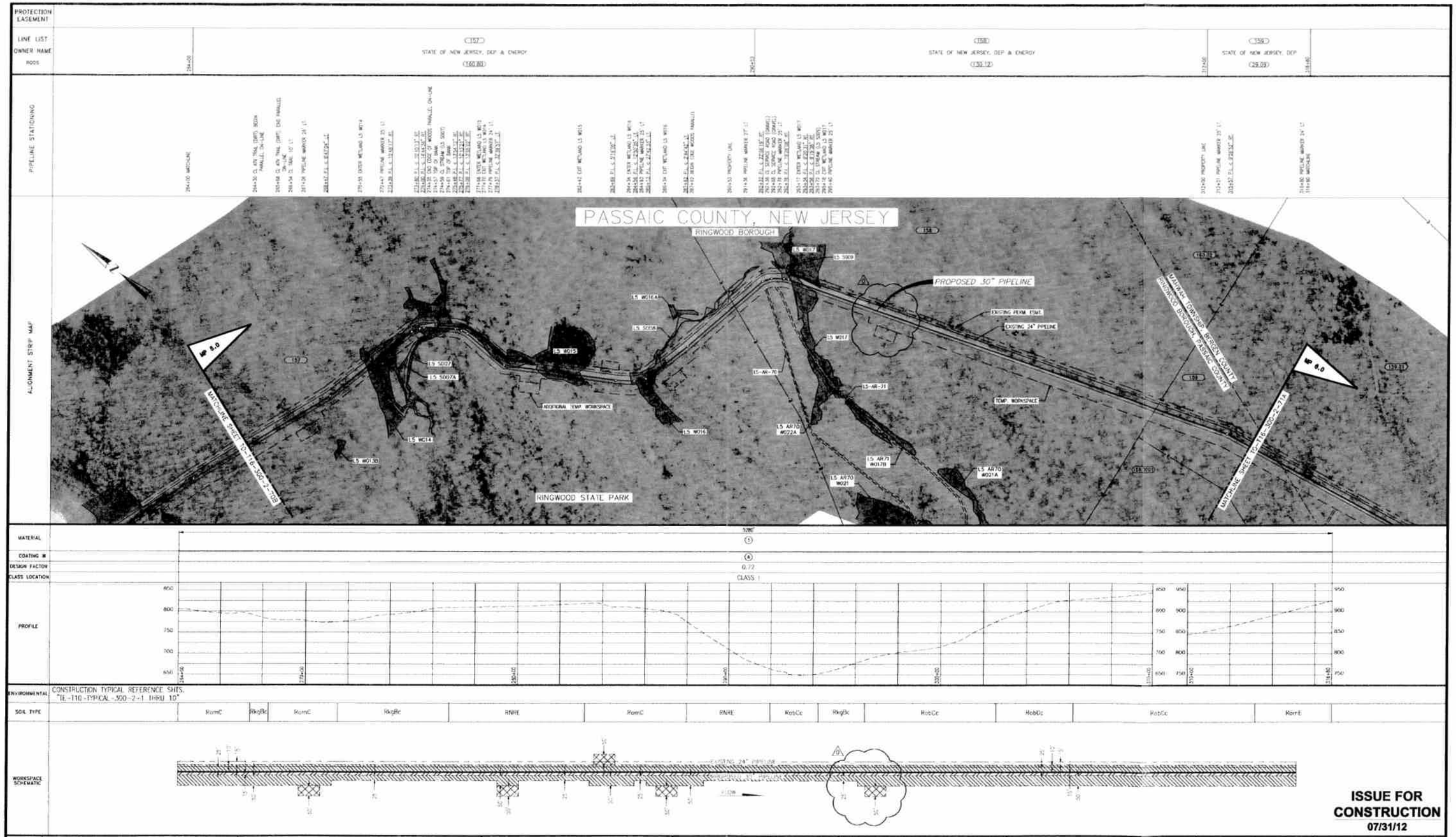
Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

NORTHEAST UPGRADE
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

DESIGN COORD: DATE:
PROJECT COORD: DATE:
OPER APPR: DATE:

SCALE: 1 = 200' PROJ. ID: 51814

TO-T16-300-2-70B | 0



ISSUE FOR CONSTRUCTION
07/31/12

* BUOYANCY CONTROL

1. BUOYANCY CONTROL WILL BE REQUIRED ACROSS WATER BODIES, WETLANDS AND STREAMS. CONTRACTOR MAY USE EITHER CONCRETE COATING OR WEIGHTING AS NOTED BELOW, EXCEPT WHERE CONCRETE COATING IS INDICATED ON SITE SPECIFIC CROSSING PLANS.
2. CONCRETE COATING, WHERE USED, WILL BE IN ACCORDANCE WITH THE TABLE BELOW.

PIPE	CONCRETE SELECTION
0.349" W.T. IN MARSH, WETLAND, SMALL STREAM	5.25" THICK 140 PCF
0.418" W.T. IN MARSH, WETLAND, SMALL STREAM	5.00" THICK 140 PCF
0.502" W.T. IN MARSH, WETLAND, SMALL STREAM	4.50" THICK 140 PCF
0.502" W.T. IN LARGE OR ERODIBLE STREAM	5.00" THICK 140 PCF

3. CONCRETE OR SACK WEIGHTS, WHERE USED, SHALL BE A MINIMUM OF 9,000 LBS. TO BE INSTALLED ON 14.5' SPACING.

PIPE SUMMARY

REV	DESCRIPTION	QTY
1	PIPE 30 IN OD X 0.349 IN WT.(SAMPLE S. OR 470)	2280

NOTE: BC = BUOYANCY CONTROL RP = ROCK PROTECTION/PADDING

COATING SUMMARY

A EXTERNAL FBE UC-200 14-16 MILS
B EXTERNAL FBE UC-200 8-10 MILS W/ 40-50 MILS ARO
C EXTERNAL FBE UC-200 14-16 MILS W/1" CONCRETE COATED

FIELD NOTES

TEST:
RADIOGRAPH:

REFERENCE DRAWINGS

TYPICALS

R1A	NEUP TYPICAL 30" PIPELINE R/W CO-LOCATED WITH TGP PIPELINE
R1B	NEUP TYPICAL 30" PIPELINE R/W CO-LOCATED WITH TGP PIPELINE
R2A	NEUP TYPICAL 30" PL R/W CO-LOCATED WITH TGP PL IN WETLANDS
R2B	NEUP TYPICAL 30" PL R/W CO-LOCATED WITH TGP PL IN WETLANDS

LEGEND

EXISTING PERMANENT EASEMENT
PROPOSED PERMANENT EASEMENT
TEMPORARY WORKSPACE
ADDITIONAL TEMPORARY WORKSPACE (ATWS)
LIMITS OF DISTURBANCE
CENTERLINE PROPOSED 30" PIPELINE
CENTERLINE EXISTING 24" PIPELINE

NOTE: MAGP IS 1170 PSIG

SCALE
200 100 0 200 400

IMAGERY DATE: APRIL, 2010

REVISIONS

NO	PROJ ID	DESCRIPTION	DATE	BY	CK	APPR
0	51814	ISSUE FOR CONSTRUCTION	07/31/12	WEI	WEI	

AREA:	AGAWAM	DIV.:	NORTHERN
DRAFTER:	BSP	DATE:	08/21/2010
DRAFT COORD:	MWC	DATE:	08/21/2010

Tennessee Gas Pipeline Company, L.L.C.
a Kinder Morgan company

NORTHEAST UPGRADE
LOOP 325
PROPOSED 30" HEBRON LINE
PASSAIC COUNTY
NEW JERSEY

DESIGN COORD:	DATE:	SCALE: 1 = 200'	PROJ. ID: 51814
PROJECT COORD:	DATE:	T0-T16-300-2-71	0
OPER. APPR:	DATE:		