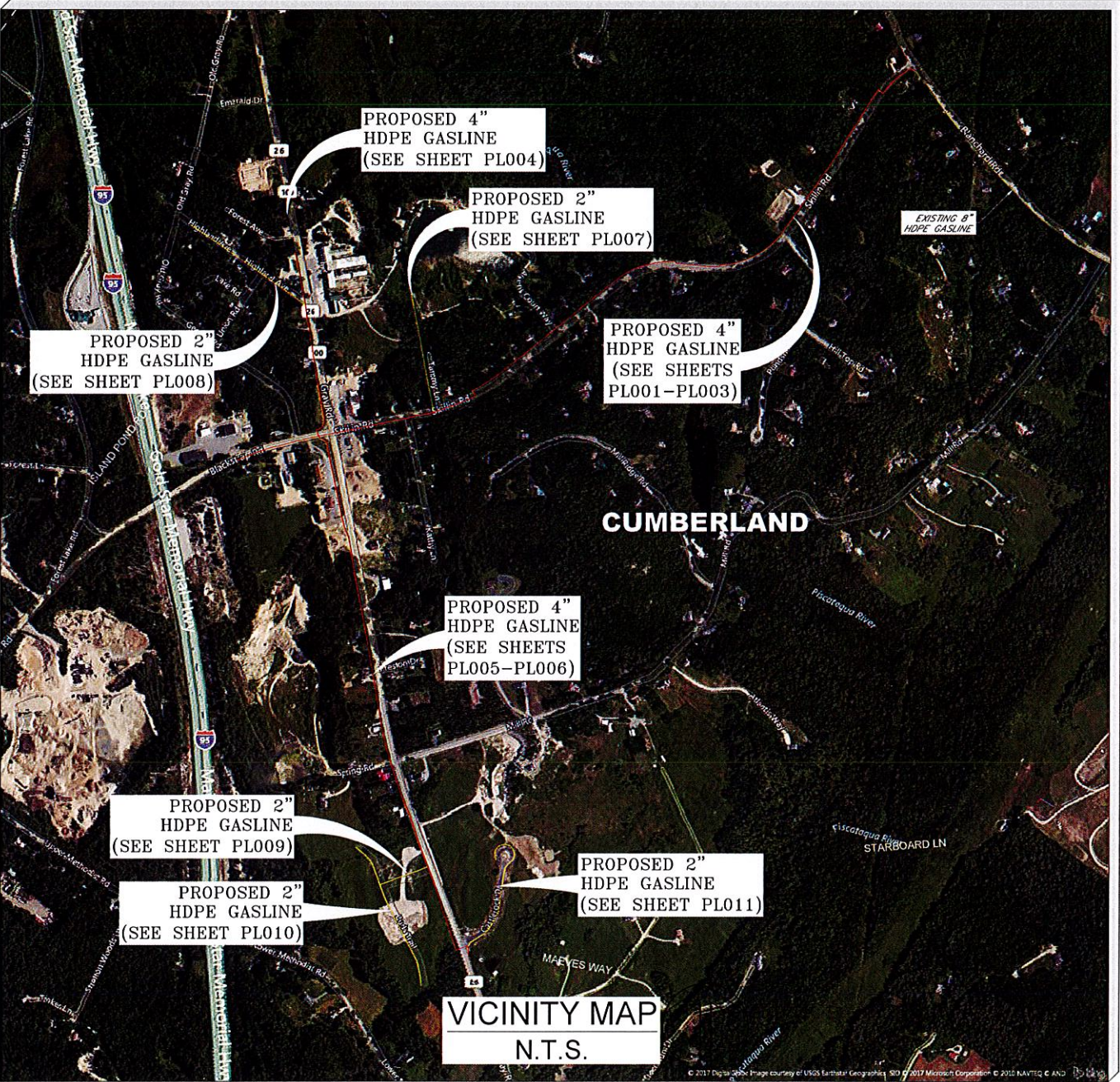


TOWN OF CUMBERLAND - CUMBERLAND WEST

CUMBERLAND COUNTY - 2017

STATE OF MAINE PROPOSED NATURAL GAS MAINLINE AND DISTRIBUTION SYSTEM



SHEET INDEX	
SHEET TITLE & DESCRIPTION	
CS01 - COVER SHEET	
GN01 - GENERAL NOTES & LEGEND	
QUANTITY TAKEOFF	
GAS SYSTEM OVERALL 4" PLAN SHEETS	
PL001 - STATION 1+00 TO STATION 22+50 BLACKSTRAP RD/SKILLIN RD	
PL002 - STATION 22+50 TO STATION 44+50 SKILLIN RD & POND SHORE DR	
PL003 - STATION 44+50 TO STATION 56+47 SKILLIN RD & BLANCHARD DR	
PL004 - STATION 1+00 TO STATION 13+50 GRAY RD - NORTH	
PL005 - STATION 1+00 TO STATION 22+50 GRAY RD - NORTH	
PL006 - STATION 22+50 TO STATION 37+54 GRAY RD - NORTH	
GAS SYSTEM OVERALL 2" PLAN SHEETS	
PL007 - STATION 1+00 TO STATION 9+48 TAMMY LN	
PL008 - STATION 1+00 TO STATION 10+29 HIGHLAND AVE	
PL009 - STATION 1+00 TO STATION 4+38 ROOSTER RIDGE	
PL010 - STATION 1+00 TO STATION 11+25 BUD'S TRAIL	
PL011 - STATION 1+00 TO STATION 10+66 CASTLEROCK DR	
DETAILS SHEETS	
DT001 - TYPICAL DETAILS	
DT002 - TRAFFIC CONTROL DETAILS	
DT003 - UTILITY DETAILS	
DT004 - MISCELLANEOUS DETAILS	

STATE OF MAINE
HELEN H. AYOTTE
No. 12482
LICENSED PROFESSIONAL ENGINEER

6/19/17

I HEREBY CERTIFY THAT THESE CONSTRUCTION DOCUMENTS WERE PREPARED UNDER MY SUPERVISION, AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE.

A

CUMBERLAND WEST
STATE OF MAINE
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND COUNTY
CUMBERLAND COUNTY
PROPOSED NATURAL GAS SYSTEM
COVER SHEET

PROJECT:	---
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	June 16, 2017
FILE:	COVER.DWG
REVISIONS:	
50% IFR V.1	05/04/2017
75% IFR V.2	06/06/2017
85% IFR V.1	06/16/2017

SHEET
CS01



CONSTRUCTION NOTES

- 1) SUMMIT NATURAL GAS OF MAINE, INC. (SNG-ME) STANDARDS AND SPECIFICATIONS SHALL GOVERN FOR MISCELLANEOUS ITEMS OF CONSTRUCTION NOT SHOWN ON THE DRAWINGS. ALL EXCAVATION WORK WITHIN ROAD RIGHT-OF-WAYS SHALL MEET THE STANDARDS AND SPECIFICATIONS, FOR THE APPROPRIATE JURISDICTIONAL AUTHORITY.
- 2) LOCATIONS AND DEPTHS OF UTILITIES IDENTIFIED WITHIN THESE CONSTRUCTION DOCUMENTS HAVE BEEN COMPILED BY VARIOUS UTILITY COMPANIES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MAINE DIG SAFE (811) AND CUMBERLAND PUBLIC WORKS TO VERIFY ALL UTILITY CONFLICTS. WHERE CONFLICTS MAY ARISE, CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES.
- 3) EXCEPT AS OTHERWISE SPECIFIED, ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT EXISTING PRIOR TO CONSTRUCTION.
- 4) TRENCHING, BACKFILL, AND PAVEMENT RESTORATION
- a. SUITABLE MATERIAL EXCAVATED FROM THE TRENCH SHALL BE USED FOR BACKFILL, SUBJECT TO APPROVAL OF THE CONSTRUCTION INSPECTOR (SEE STANDARD TRENCH DETAIL). AT NO TIME WILL CONTAMINATED, WET, SOGGY, FROZEN, OR OTHER UNSUITABLE MATERIAL BE ALLOWED AS BACKFILL. IF PROPER BACKFILL AND MATERIAL IS NOT AT THE EXCAVATION SITE, SUITABLE MATERIAL SHALL BE BROUGHT IN AND UNSUITABLE MATERIAL REMOVED FROM THE SITE. NEW MATERIAL MUST BE APPROVED BY SNG-ME INSPECTOR PRIOR TO INSTALLATION.
- b. ALL CUTS MADE IN ASPHALT OR CONCRETE SURFACING SHALL BE MADE BY MECHANICALLY CUTTING TO A NEAT, TRUE HORIZONTAL AND VERTICAL LINE, AND SHALL BE CUT ONE FOOT WIDER ON EACH SIDE OF THE TOP OF THE TRENCH EXCAVATION. THE FINAL PAVEMENT CUT SHALL NOT BE MADE UNTIL IMMEDIATELY PRIOR TO PATCHING. REPAIR OF CONCRETE SURFACING, IF NECESSARY, SHALL CONSIST OF DOWELING INTO THE EXISTING CONCRETE SURFACE ADJACENT TO THE LIMITS OF THE EXCAVATION AND PROVIDING PROPER CLASS OF CONCRETE AND REINFORCEMENT WITHIN THE CONCRETE PATCH AREA.
- c. TEMPORARY HOT ASPHALT OR COLD MIX SHALL BE PLACED IMMEDIATELY IN ALL PATH AREAS, ON ALL ARTERIAL AND COLLECTOR STREETS, DRIVEWAYS, AND WITHIN SEVEN CALENDAR DAYS ON ALL OTHERS. ANY SETTLEMENT IN TEMPORARY HOT ASPHALT OR COLD MIX, GREATER THAN ONE INCH SHALL BE RAISED TO ORIGINAL GRADE PRIOR TO FINAL PAVING. IN THE EVENT WEATHER CONDITIONS PRECLUDE, RESTORATION BY PERMANENT HOT BITUMINOUS PAVEMENT WITHIN A MAXIMUM OF 10 WORKING DAYS OR AS WEATHER AND AVAILABILITY OF MATERIALS PERMITS.
- d. IN THE EVENT THAT BITUMINOUS BASE, SOIL CEMENT, OR OTHER BASE COURSE MATERIALS ARE ENCOUNTERED DURING EXCAVATION, RESTORATION SHALL BE MADE IN KIND OR AS SPECIFIED BY THE APPLICABLE JURISDICTIONAL AUTHORITY.
- 7) BRIDGE, CULVERT AND STRUCTURE CROSSINGS
- a. STREAM CROSSINGS: UTILITIES SHALL BE PLACED AT LEAST FOUR FEET BELOW THE CHANNEL FLOW LINE AS CONDITIONS PERMIT. THE UTILITY SHALL CONTINUE FOUR FEET BELOW THE FLOW LINE ELEVATION FOR A MINIMUM DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CHANNEL BACK. ADDITIONAL COVER MAY BE REQUIRED IF DIRECTED BY THE PERMITTING AUTHORITY.
- b. ALL GAS MAINS SHALL HAVE A MINIMUM OF TWELVE (12) INCHES OF VERTICAL SEPARATION WHEN CROSSING CULVERTS AND ALL OTHER PIPES AND EXISTING UTILITIES.
- 8) PIPELINE ALIGNMENT AND AS-BUILT DRAWINGS
- a. PROPOSED PIPELINE ALIGNMENTS DEPICTED IN THE ALIGNMENT DRAWINGS ARE BASED ON DESIGN DATA, PROPERTY INFORMATION, AND CUSTOMER DATA OBTAINED BY SNG-ME. PIPELINE ALIGNMENTS AND DIRECTIONAL BORE LOCATIONS ARE SUBJECT TO RE-ROUTES AND/OR CHANGES IN PIPELINE SIZE AND/OR DELETION BASED ON FIELD AND MARKET CONDITIONS. CONTRACTOR SHALL NOT MAKE CHANGES TO THE ALIGNMENT WITHOUT APPROVAL BY SNG-ME OR ITS DESIGNATED REPRESENTATIVE. DURING CONSTRUCTION, SNG-ME SHALL REGULARLY COMMUNICATE SUCH PIPELINE ALIGNMENT CHANGES TO THE APPLICABLE JURISDICTIONAL AGENCY.
- b. UPON COMPLETION OF THE PIPELINE INSTALLATION SNG-ME SHALL PROVIDE AS-BUILT DRAWINGS (DRAWINGS OF RECORD) TO THE APPLICABLE JURISDICTION AGENCIES.
- c. THE CONTRACTORS WILL BE REQUIRED TO PROVIDE NEAT AND LEGIBLE RED-LINED AS-BUILT DRAWINGS DAILY BASED ON WHAT WAS INSTALLED, INSPECTED AND APPROVED EACH DAY. RED-LINE AS-BUILT DRAWINGS MUST INCLUDE THE LOCATIONS OF ANY ABOVE GROUND APPURTENANCES (PIPELINE MARKERS, WARNING SIGNS, TEST STATIONS, ETC).
- d. AS A GENERAL RULE THE PIPELINE WILL MAINTAIN A MINIMUM THREE (3) FEET OF HORIZONTAL SEPARATION FROM ANY LONGITUDINAL UTILITIES AND STRUCTURES.
- 9) ANY EXISTING PAVEMENT STRIPING OR MARKINGS WILL BE REPLACED IN ACCORDANCE WITH THE PERMITTING AGENCY'S STANDARDS AND SPECIFICATIONS.
- 10) ANY EXISTING TRAFFIC CONTROLS AND SIGNAGE DISTURBED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
- 11) THE CONTRACTOR SHALL PROVIDE SNG-ME 48-HOUR NOTICE OF ANY WORK THAT WILL DISTURB BOUNDARY MONUMENTS.
- 12) CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, BY A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF MAINE, ANY BOUNDARY MONUMENT DISTURBED DURING CONSTRUCTION.
- 13) ALL DISTURBED PAVEMENT WILL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL STANDARDS.
- 14) THE CONTRACTOR SHALL MAINTAIN A CLEAN WORKSITE, REMOVING DEBRIS AS NEEDED, SWEEPING PAVEMENT AND APPLYING WATER AS DIRECTED BY SNG-ME'S REPRESENTATIVE.
- 15) THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND MISCELLANEOUS FACILITIES, INCLUDING POTHOLING TO CONFIRM DEPTH IF NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY UTILITIES, INCLUDING CULVERTS, DAMAGED OR DISTURBED DURING CONSTRUCTION. IN THE EVENT THAT AN EXISTING UTILITY IS DAMAGED, THE CONTRACTOR MUST NOTIFY CORRESPONDING UTILITY COMPANY IMMEDIATELY, AND REPAIR OR REPLACE UTILITY AS DIRECTED BY SUCH COMPANY OR REPRESENTATIVE.
- 16) THE FOLLOWING LOCAL, STATE AND FEDERAL STANDARDS AND REGULATIONS ARE APPLICABLE TO THIS PROJECT:
- a. MAINE DOT UTILITY ACCOMMODATION POLICY, 17-229 CMR CHAPTER 10, JULY 28, 2009
- b. MRSA TITLE 35-A (MAINE REVISED STATUTES) PUBLIC UTILITIES
- c. CODE OF FEDERAL REGULATIONS (CFR) TITLE 49, PART 192 TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS
- d. STATE OF MAINE DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, REVISION OF NOVEMBER 2014
- e. CHAPTER 420, CODE OF MAINE RULES (CMR) OF THE PUBLIC UTILITIES COMMISSION, SAFETY STANDARDS FOR NATURAL GAS AND LIQUEFIED NATURAL GAS FACILITY ACCESS ROAD
- f. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION
- g. AREMA 2012 MANUAL FOR RAILWAY ENGINEERING, CHAPTER 1, PART 5
- 17) THE CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING AND PAYMENT OF POLICE DETAILS, IF REQUIRED BY THE TRAFFIC CONTROL PLAN OR AS DIRECTED BY SNG-ME'S REPRESENTATIVE.
- 18) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY ITEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION PROCESS TO PRE-EXISTING CONDITION OR BETTER.
- 19) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY TRAFFIC CONTROL AND TRAFFIC WILL BE RETURNED TO ORIGINAL TRAFFIC FLOW AT THE CONCLUSION OF EACH WORK DAY.
- 20) UNLESS OTHERWISE NOTED ALL ROAD AND INTERSECTION CROSSINGS WILL BE INSTALLED VIA OPEN CUT METHODS. TRAFFIC MANAGEMENT WILL BE ACCOMPLISHED WITH STRICT COMPLIANCE TO MUTCD STANDARDS AND ANY PLANNED ROAD CLOSURES WILL BE PROPERLY NOTICED TO MAINE DOT AND THE MUNICIPALITIES WITHIN STATUTORY TIMEFRAMES.
- 21) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREE TRIMMING, CLEARING AS WELL AS DISPOSAL OF ALL RESULTING MATERIAL.
- 22) WHEN PERFORMING CONSTRUCTION ACTIVITIES WITHIN ROAD RIGHT-OF-WAYS MAINTAINED BY THE CITIES OF CUMBERLAND, FALMOUTH, & YARMOUTH, CONTRACTOR MUST COMPLY WITH "THE CITY OF CUMBERLAND, FALMOUTH, & YARMOUTH STREET OPENING AND EXCAVATION POLICY."
- 23) THE CONTRACTOR SHALL NOTIFY THE ABUTTING LANDOWNER WHEN THERE ARE OBSTRUCTIONS SUCH AS TREES, PLANTINGS, FENCES, WALLS, ETC. IN THE ROAD RIGHTS-OF-WAY THAT ARE IN CONFLICT WITH THE PROPOSED LINE AND NEED TO BE REMOVED OR DISTURBED. WHEN PRACTICAL, THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES IN THESE AREAS TO AVOID DISTURBANCE OR REMOVAL OF SUCH OBSTRUCTIONS. ANY CHANGE IN PIPE ALIGNMENT TO AVOID SUCH AREAS MUST FIRST BE APPROVED BY SNG-ME REPRESENTATIVE AND ROAD WAY GOVERNING BODY.
- 24) A TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR ALL MAJOR INTERSECTIONS PRIOR TO COMMENCING WORK, ANY WORK THAT WILL REQUIRE A LANE CLOSURE AND OTHER AREAS WHERE THE CONSTRUCTION WILL SIGNIFICANTLY AFFECT TRAFFIC PATTERNS.
- 25) ALL OPEN TRENCHES ARE REQUIRED TO BE CUT WIDE ENOUGH TO ACCOMMODATE COMPACTION EQUIPMENT THAT WILL ACHIEVE 95% STANDARD PROCTOR DENSITY. THIRD PARTY TESTING WILL BE PROVIDED BY THE MUNICIPALITY. ALL FAILED TESTS WILL REQUIRE A SECOND TEST AT THE CONTRACTOR'S EXPENSE.
- 26) ALL TRENCH EXCAVATIONS WILL REQUIRE THAT EXISTING MATERIAL BE REUSED UNLESS FOUND UNSUITABLE TO DO SO. APPROVED REPLACEMENT MATERIAL WILL BE AT THE DIRECTION OF THE MUNICIPAL ENGINEER OR PUBLIC WORKS DIRECTOR.
- 27) ALL PAVEMENT CUTS REQUIRE SMOOTH STRAIGHT SAW CUT EDGES AND WILL BE SWEPT AND COATED WITH TACK PRIOR TO PAVING. IF THE CONDITION OF THE STREET IS SUCH THAT SMOOTH STRAIGHT EDGES CANNOT BE OBTAINED, THE MUNICIPAL ENGINEER OR PUBLIC WORKS DIRECTOR WILL AGREE ON A SUITABLE TREATMENT.
- 28) IF, IN THE EVENT THAT A NEWLY RECONSTRUCTED, REHABILITATED, AND/OR REPAVED ROAD (WITHIN THE LAST 5 YEARS) MUST BE EXCAVATED OR DISTRIBUTED AS A RESULT OF THE WORK UNDER THIS PERMIT, THE PERMITTEE SHALL RESTORE SAID ROAD BY THE STANDARDS SET FORTH IN M.R.S.A. TITLE 23, PART 3, CHAPTER 307, SECTION 3351-A.

PROJECT DESIGN NOTES

ALL FITTINGS AND PIPELINE MATERIAL UTILIZED FOR THE NATURAL GAS DISTRIBUTION SYSTEM BEING CONSTRUCTED IN THE TOWNS OF CUMBERLAND, FALMOUTH AND YARMOUTH SHALL MEET THE REQUIRED MATERIAL SPECIFICATIONS BELOW. NO SUBSTITUTE MATERIAL MAY BE USED UNLESS WRITTEN & SIGNED DOCUMENTATION IS RECEIVED FROM THE OWNER'S REPRESENTATIVE. ALL MATERIAL SPECIFICATIONS MUST BE VERIFIED BY THE CONTRACTOR AND THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.

MATERIALS:

1) 2.375" O.D., SDR-11, PE100/PE4710, BLACK ASTM 2513

2) 4.500" O.D., SDR-11, PE100/PE4710, BLACK ASTM 2513

3) 6.625" O.D., SDR-11, PE100/PE4710, BLACK ASTM 2513

4) 8.625" O.D., SDR-11, PE100/PE4710, BLACK ASTM 2513

5) 12.75" O.D., SDR-11, PE100/PE4710, BLACK ASTM 2513

PIPELINE DESIGN PRESSURE: 150 PSIG (TEST PRESSURE)

OPERATING PRESSURE: 99 PSIG

MAXIMUM ALLOWABLE OPERATING PRESSURE: 100 PSIG

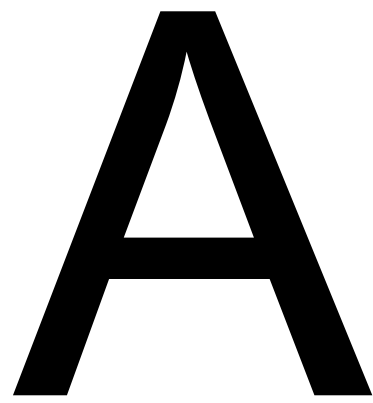
COMPOSITION OF PRODUCT: NATURAL GAS (0.6 SPECIFIC GRAVITY)

ABBREVIATIONS

±	PLUS OR MINUS (APPROXIMATE)	LN	LANE
Ø	DIAMETER	LOC	LIMITS OF CONSTRUCTION
AVE	AVENUE	MAX.	MAXIMUM
BIT	BITUMINOUS PAVEMENT	MDPE	MEDIUM DENSITY POLYETHYLENE PIPE
BLD	BUILDING	MIN.	MINIMUM
BLVD	BOULEVARD	MP	METAL POSTS
BNDY	BOUNDARY	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
B.O.C.	BACK OF CURB	N	NORTHING
BS	BITUMINOUS SIDEWALK	N/F	NOW OR FORMALLY
±	CENTER LINE	NO.	NUMBER
CCP	CONCRETE CYLINDER PIPE	PP	PLAN AND PROFILE
CHP	CORRUGATED HDPE PIPE	PR.	PROPOSED
CLF	CHAIN LINK FENCE	PT.	POINT
CMFR	CENTRAL MAINE POWER	PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE	R	RADIUS
CPP	CORRUGATED POLYETHYLENE PIPE	RCP	REINFORCED CONCRETE PIPE
CS	CARBON STEEL PIPE	RD	ROAD
DIA.	DIAMETER	ROW	RIGHT OF WAY
DIP	DUCTILE IRON PIPE	RR	RAILROAD TRACKS
DOT	DEPARTMENT OF TRANSPORTATION	RTE	ROUTE
DWG	DRAWING	SDR	STANDARD DIMENSION RATIO
E	EASTING	STA.	STATION
E.O.P.	EDGE OF PAVEMENT	ST	STREET
ELEV.	ELEVATION	SUI	SUMMIT UTILITIES, INC.
EX.	EXISTING	TER	TERRACE
GANC	GUY ANCHOR	TYP.	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE PIPE	WP	WOOD POSTS
INV	INVERT		
L.F.	LINEAR FEET		

LEGEND

EXISTING SURFACE	
PROPOSED SURFACE	
EXISTING 2" HDPE GASLINE	
EXISTING 4" HDPE GASLINE	
EXISTING 6" HDPE GASLINE	
EXISTING 8" HDPE GASLINE	
EXISTING 12" HDPE GASLINE	
PROPOSED 2" HDPE GASLINE	
PROPOSED 4" HDPE GASLINE	
PROPOSED 6" HDPE GASLINE	
PROPOSED 8" HDPE GASLINE	
PROPOSED 12" HDPE GASLINE	
EXISTING STORM GRATE INLET	
EXISTING MANHOLE COVER	
EXISTING UTILITY POLE	
EXISTING LIGHT POLE	
EXISTING ELECTRIC POLE	
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	
EXISTING FLAG POLE	
EXISTING CULVERT PIPE	
EXISTING WATERLINE	
EXISTING SANITARY SEWER LINE	
EXISTING STORM SEWER LINE	
EXISTING OVERHEAD ELECTRIC	
EXISTING UNDERGROUND ELECTRIC	
EXISTING GUARDRAIL	
EXISTING MAILBOX	
EXISTING SIGN	
EXISTING POST	
EXISTING BUILDING	
EXISTING FENCE	
EXISTING RIPRAP	
EXISTING GRAVEL SHOULDER/ROAD	
EXISTING TREE	
EXISTING BUSH/VEGETATION	
EXISTING TREE LINE	
EXISTING RETAINING WALL	
EXISTING WATER FLOWLINE	
EXISTING RAILROAD	



CUMBERLAND WEST

STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE

442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND

CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
GENERAL NOTES & LEGEND

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	COVER.DWG
REVISIONS:	
	50% IFR V.1 05/04/2017
	75% IFR V.2 06/06/2017
	85% IFC V.1 06/16/2017

SHEET
GN01

BILL OF MATERIAL				
PIPES, FITTINGS, AND APPURTENANCES				
ITEM NO.	QUANTITY	UNIT	NOMINAL SIZE	DESCRIPTION
10004	4	EA	2"	BALL VALVE, SDR-11, PE4710
10006	1	EA	4"	BALL VALVE, SDR-11, PE4710
10016	9	EA	2"	CAP, BF, SDR-11, PE4710
10026	8	EA	4"	CAP, BF, SDR-11, PE4710
10039	9	EA	2"	COUPLING, EF, SDR-11, PE4710
10043	21	EA	4"	COUPLING, EF, SDR-11, PE4710
10075	4	EA	4"	ELBOW, 45-DEG, BF, SDR-11, PE4710
10076	9	EA	4"	ELBOW, 90-DEG, BF, SDR-11, PE4710
10106	1	EA	6" x 4"	REDUCER, BF, PE4710
10107	1	EA	8" x 6"	REDUCER, BF, PE4710
10131	4	EA	4" x 2"	TAP TEE, EF, HVTT, PE4710
10176	1	EA	2"x2"	TEE, BF, SDR-11, PE4710
10179	2	EA	4" x 4"	TEE, BF, SDR-11, PE4710
50008	4,274	LF	2"	PIPE, SDR-11, PE4710
50012	10,338	LF	4"	PIPE, SDR-11, PE4710
60033	14,612	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

4" PLAN - QUANTITY TAKE-OFF									
SHEET NO.	STATION		TRENCH (75% TOTAL LENGTH)			BEDDING (CY)	BORE (25% TOTAL LENGTH)		STREET NAME
	START	END	LENGTH (LF)	TYPE A (CY)	TYPE B (CY)		PIPE SIZE (INCHES)	LENGTH (LF)	
PL001	1+00	22+50	1,612.50	49	149	0.0	4	537.50	BLACKSTRAP RD/SKILLIN RD
PL002	22+50	44+50	1,650.00	50	153	0.0	4	550.00	SKILLIN RD & PONDSHORE DR
PL003	44+50	56+47	897.75	27	83	0.0	4	299.25	SKILLIN RD & BLANCHARD RD
PL004	1+00	13+50	937.50	28	87	0.0	4	312.50	GRAY RD - NORTH
PL005	1+00	22+50	1,612.50	49	149	0.0	4	537.50	SKILLIN RD & GRAY RD - SOUTH
PL006	22+50	36+41	1,043.38	32	97	0.0	4	347.79	GRAY RD - SOUTH & CASTLEROCK DR

PLAN SHEET - QUANTITY TAKE-OFF									
SHEET NO.	STATION		TRENCH (25% TOTAL LENGTH)			BEDDING (CY)	BORE (75% TOTAL LENGTH)		STREET NAME
	START	END	LENGTH (LF)	TYPE A (CY)	TYPE B (CY)		PIPE SIZE (INCHES)	LENGTH (LF)	
PL007	1+00	9+03	200.85	6	22	4.5	2	602.54	TAMMY LN
PL008	1+00	10+29	232.25	7	19	5.2	2	696.75	HIGHLAND AVE
PL009	1+00	4+86	96.50	3	8	2.1	2	289.50	ROOSTER RIDGE
PL010	1+00	11+25	256.25	8	21	5.7	2	768.75	BUD'S TRAIL
PL011	1+00	11+38	259.39	8	21	5.8	2	778.16	CASTLEROCK DR

BACKFILL AND PAVEMENT					
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	NOMINAL SIZE	DESCRIPTION
N/A	LIFT "A"	409	CY	3/4" MINUS	NATIVE OR IMPORTED SOIL BACKFILL W/NO MATERIAL GREATER THAN 3/4" IN SIZE
N/A	LIFT "B"	1,301	CY	N/A	APPROVED NATIVE BACKFILL MATERIAL (NO ROCKS GREATER THAN 3" PERMITTED)

A

CUMBERLAND WEST

STATE OF MAINE

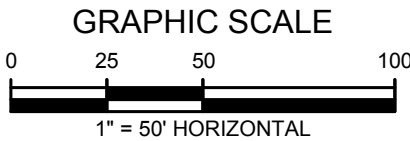
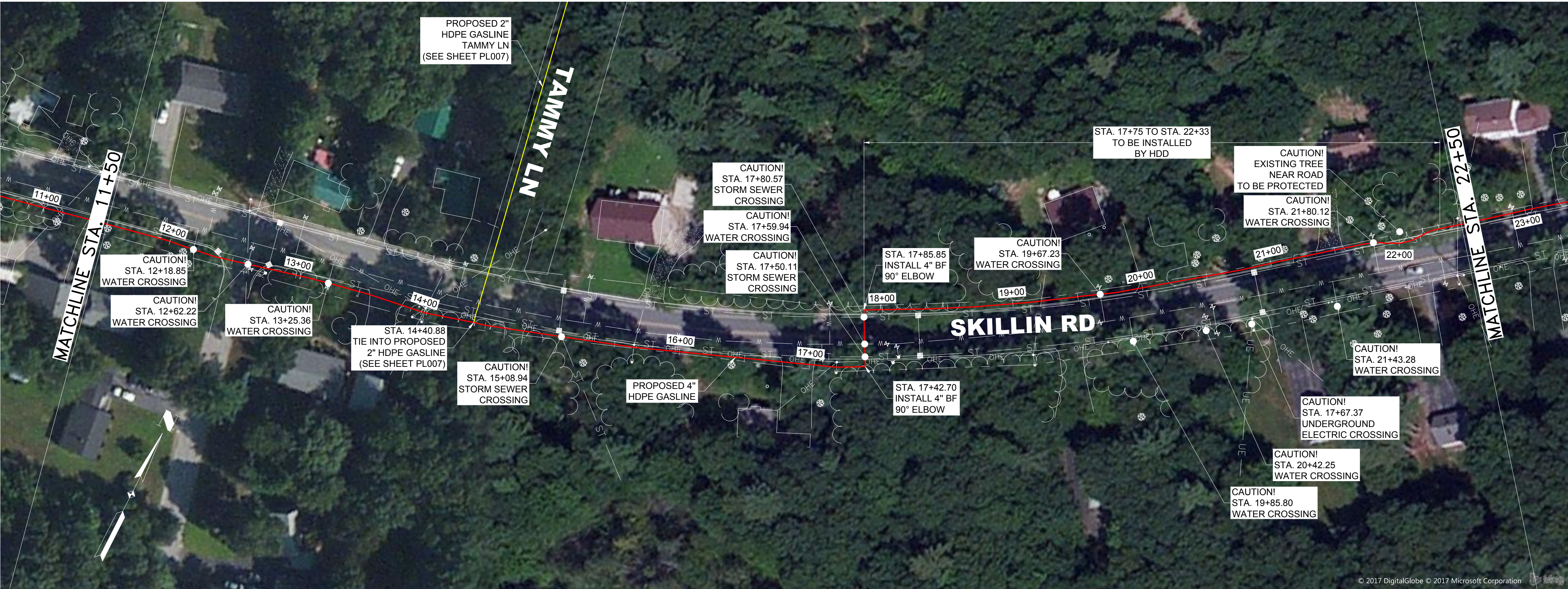
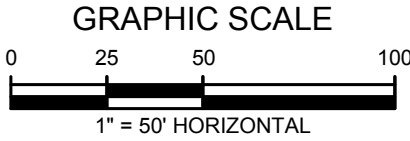
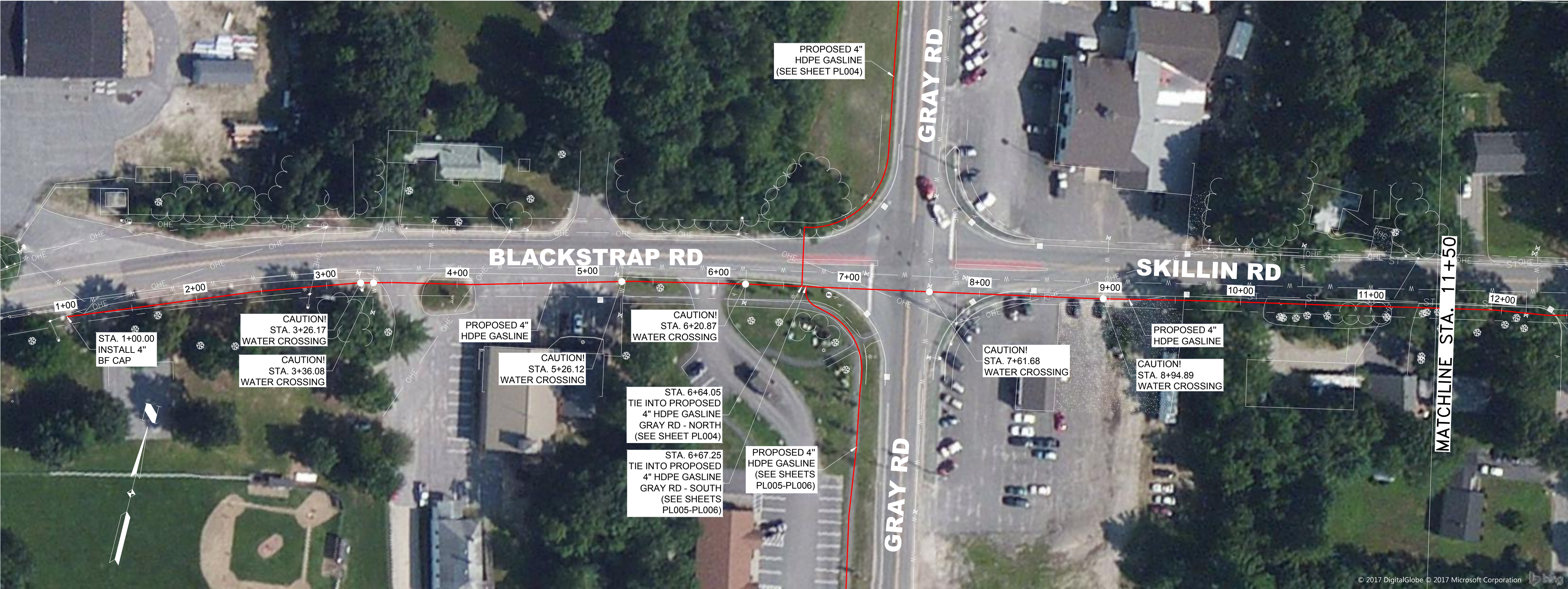
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
QUANTITY TAKE-OFF

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	QT001.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL001 - PL003 SKILLIN RD)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10026	3	EA	4"	CAP, BF, SDR-11, PE4710
10043	11	EA	4"	COUPLING, EF, SDR-11, PE4710
10075	4	EA	4"	ELBOW, 45-DEG, BF, SDR-11, PE4710
10076	4	EA	4"	ELBOW, 90-DEG, BF, SDR-11, PE4710
10106	1	EA	6" x 4"	ELBOW, 90-DEG, BF, PE4710
10107	1	EA	8" x 6"	REDUCER, BF, PE4710
50012	5,547	LF	4"	PIPE, SDR-11, PE4710
60033	5,547	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

CUMBERLAND WEST

STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE

442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM

BLACKSTRAP RD/SKILLIN RD

STATION 1+00 TO STATION 22+50

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL001-PL003.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

SHEET
PL001

SHEET 4 OF 18



ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

A

CUMBERLAND WEST
STATE OF MAINE
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY
PROPOSED NATURAL GAS SYSTEM
SKILLIN RD & PONDSHORE DR
STATION 22+50 TO STATION 44+50

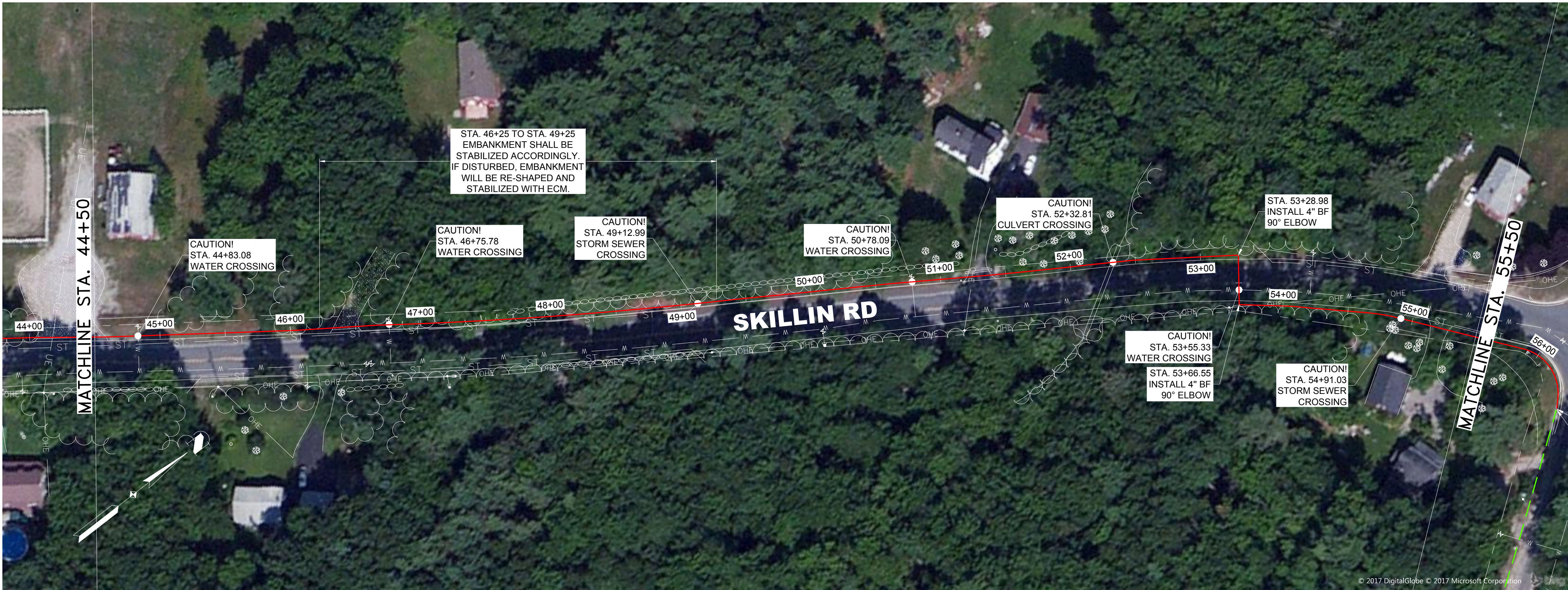
PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL001-PL003.DWG
REVISIONS:	
①	50% IFR V.1 05/04/2017
②	75% IFR V.2 06/06/2017
③	85% IFC V.1 06/16/2017



SHEET
PL002
SHEET 5 OF 18

ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

A

CUMBERLAND WEST
STATE OF MAINE
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY
PROPOSED NATURAL GAS SYSTEM
SKILLIN RD & BLANCHARD RD
STATION 44+50 TO END STATION 56+47

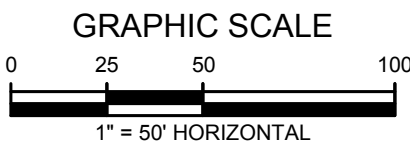
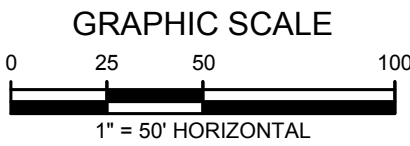
PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL001-PL003.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017



SHEET
PL003
SHEET 6 OF 18

ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL004 - GRAY RD - NORTH)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10026	2	EA	4"	CAP, BF, SDR-11, PE4710
10043	3	EA	4"	COUPLING, EF, SDR-11, PE4710
10076	1	EA	4"	ELBOW, 90-DEG, BF, SDR-11, PE4710
10179	1	EA	4" x 4"	TEE, BF, SDR-11, PE4710
50012	1,250	LF	4"	PIPE, SDR-11, PE4710
60033	1,250	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

A

CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
GRAY RD - NORTH
STATION 1+00 TO END STATION 13+50

PROJECT:	17-2030
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL004.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

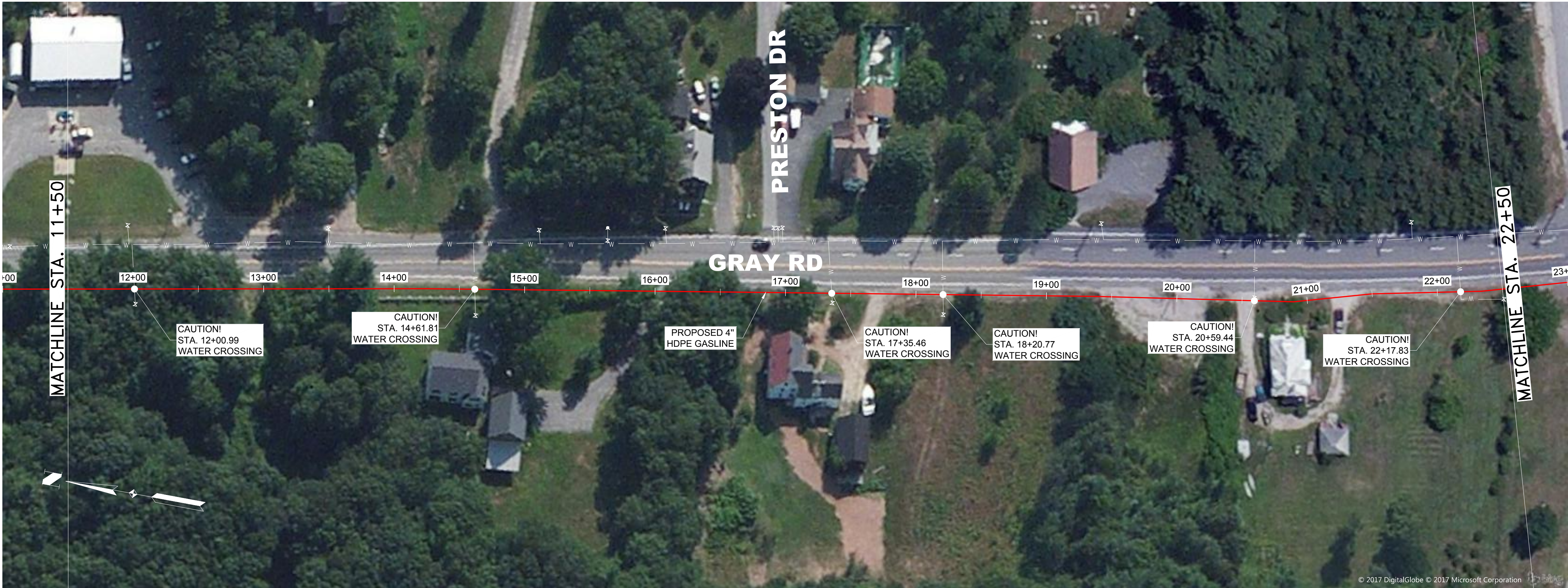
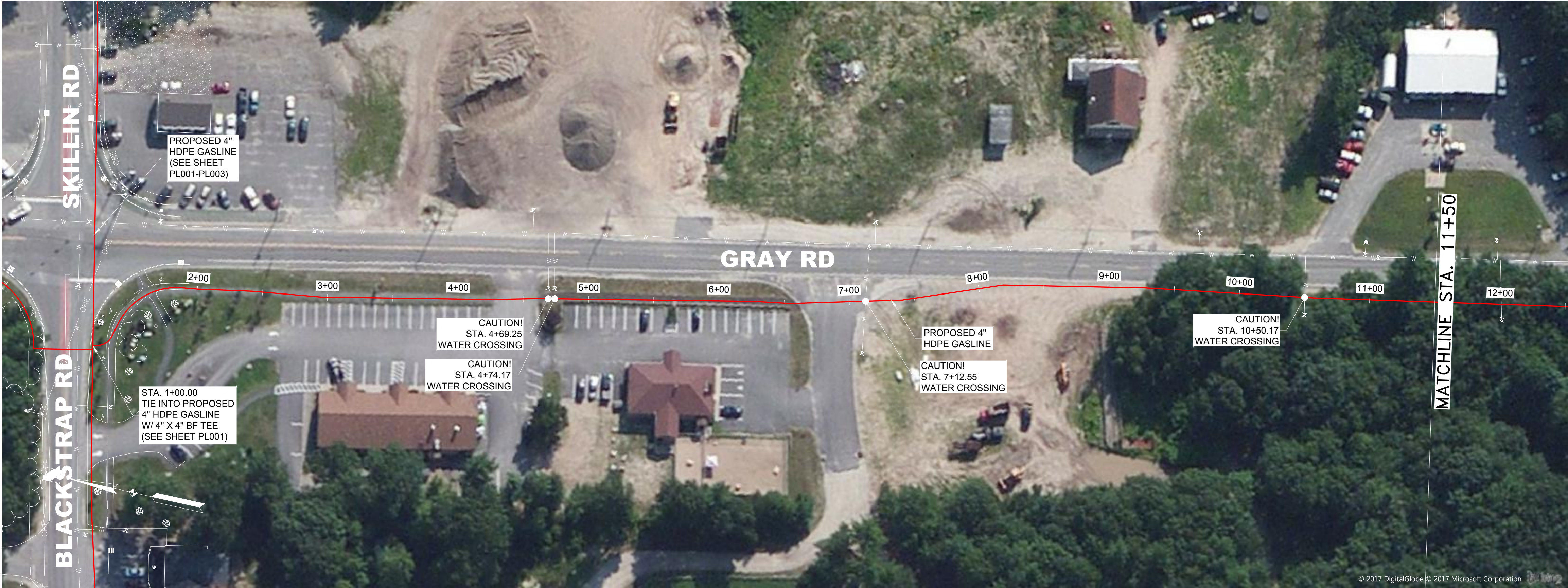
SHEET
PL004

SHEET 7 OF 18



ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL005 - PL006 - GRAY RD - SOUTH)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10006	1	EA	4"	BALL VALVE, SDR-11, PE4710
10026	3	EA	4"	CAP, BF, SDR-11, PE4710
10043	7	EA	4"	COUPLING, EF, SDR-11, PE4710
10076	4	EA	4"	ELBOW, 90-DEG, BF, SDR-11, PE4710
10179	1	EA	4" x 4"	TEE, BF, SDR-11, PE4710
50012	3,541	LF	4"	PIPE, SDR-11, PE4710
60033	3,541	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

A

CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

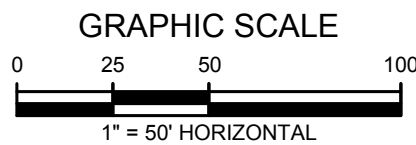
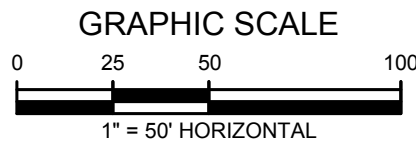
CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
SKILLIN RD & GRAY RD - SOUTH
STATION 1+00 TO STATION 22+50

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL005-PL006.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017



TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

A

CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
GRAY RD - SOUTH & CASTLEROCK DR
STATION 22+50 TO END STATION 36+41

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL005-PL006.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017



SHEET
PL006

SHEET 9 OF 18

ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL007 - TAMMY LN)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10004	1	EA	2"	BALL VALVE, SDR-11, PE4710
10016	1	EA	2"	CAP, BF, SDR-11, PE4710
10039	2	EA	2"	COUPLING, EF, SDR-11, PE4710
10131	1	EA	4" x 2"	TAP TEE, EF, HVTT, PE4710
50008	848	LF	2"	PIPE, SDR-11, PE4710
60033	848	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

A

CUMBERLAND WEST
STATE OF MAINE
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY
PROPOSED NATURAL GAS SYSTEM
TAMMY LN
STATION 1+00 TO END STATION 9+48

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL007.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017



SHEET
PL007
SHEET 10 OF 18

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL008 - HIGHLAND AVE)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10004	1	EA	2"	BALL VALVE, SDR-11, PE4710
10016	2	EA	2"	CAP, BF, SDR-11, PE4710
10039	2	EA	2"	COUPLING, EF, SDR-11, PE4710
10131	1	EA	4" x 2"	TAP TEE, EF, HVTT, PE4710
50008	1,029	LF	2"	PIPE, SDR-11, PE4710
60033	1,029	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

A

CUMBERLAND WEST
STATE OF MAINE
SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY
PROPOSED NATURAL GAS SYSTEM
HIGHLAND AVE
STATION 1+00 TO END STATION 10+29

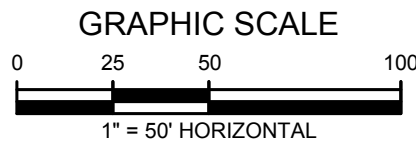
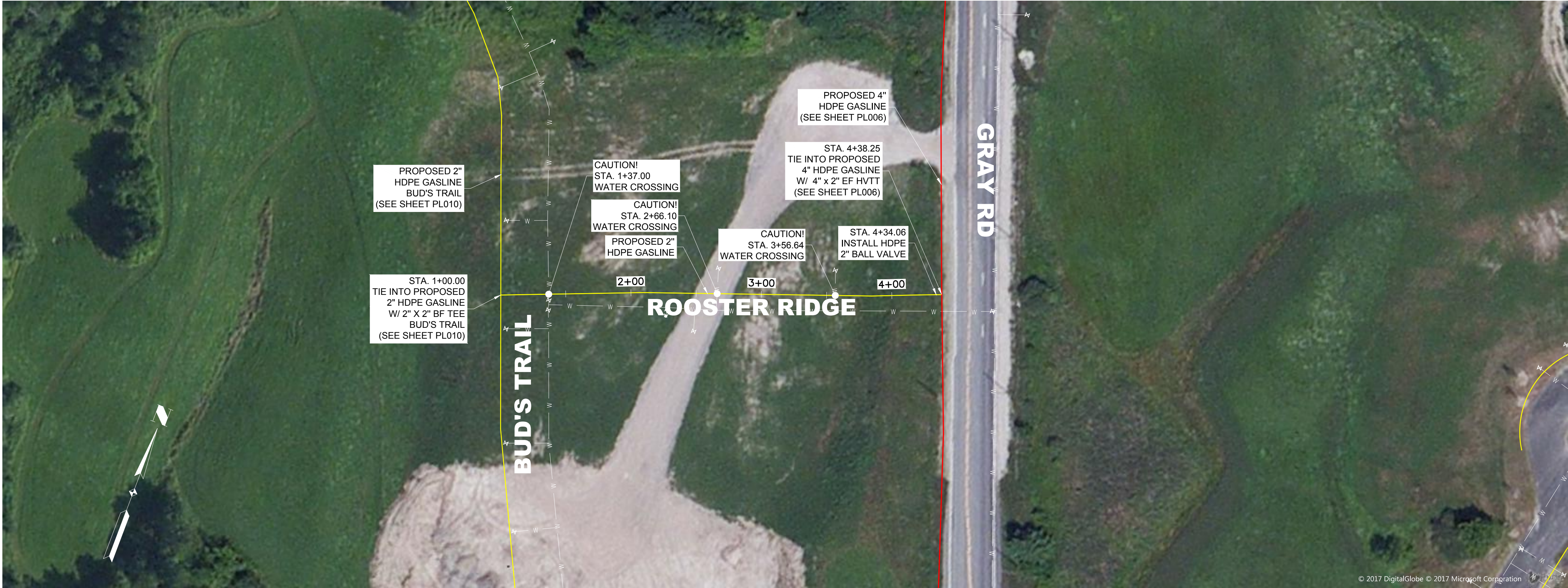
PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL008.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017



SHEET
PL008
SHEET 11 OF 18

ISSUED FOR CONSTRUCTION

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL009 - ROOSTER RIDGE)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10004	1	EA	2"	BALL VALVE, SDR-11, PE4710
10016	2	EA	2"	CAP, BF, SDR-11, PE4710
10039	1	EA	2"	COUPLING, EF, SDR-11, PE4710
10131	1	EA	4" x 2"	TAP TEE, EF, HVTT, PE4710
10176	1	EA	2"x2"	TEE, BF, SDR-11, PE4710
50008	486	LF	2"	PIPE, SDR-11, PE4710
60033	486	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE

CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
ROOSTER RIDGE
STATION 1+00 TO END STATION 4+38

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL009.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

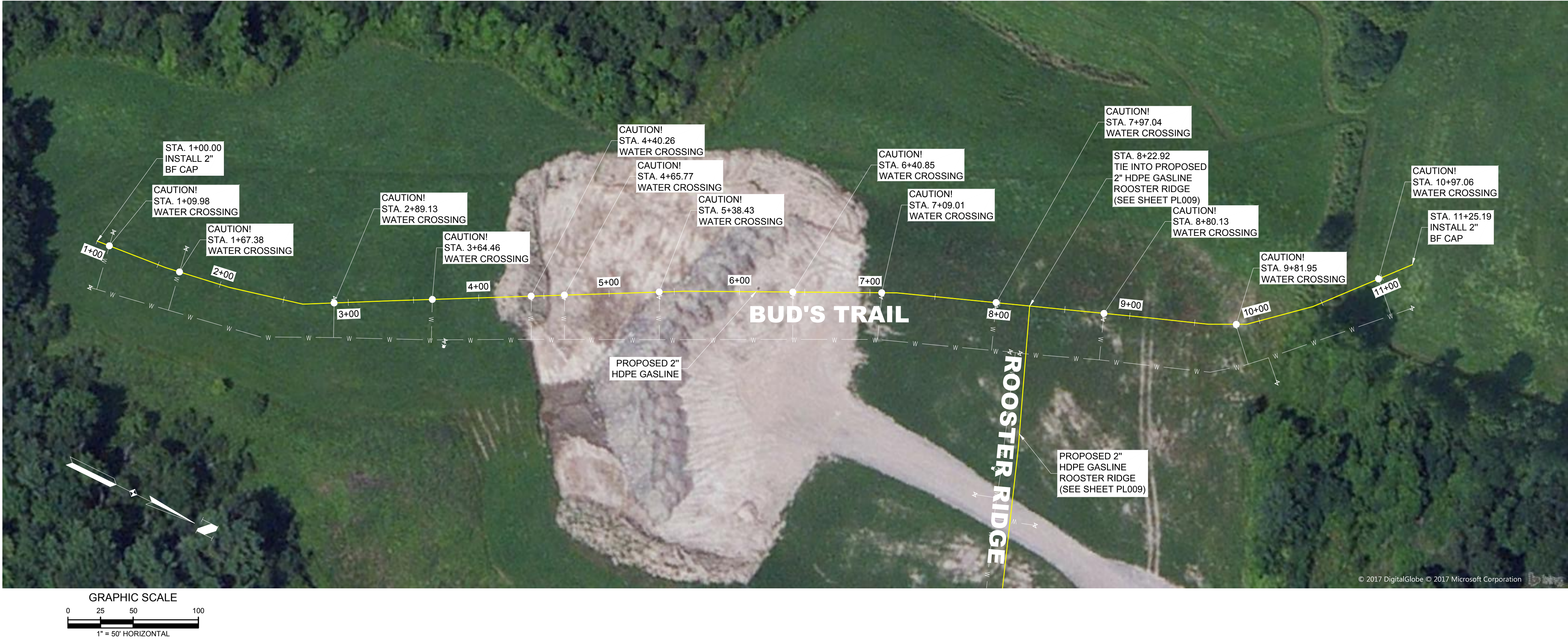


SHEET

PL009

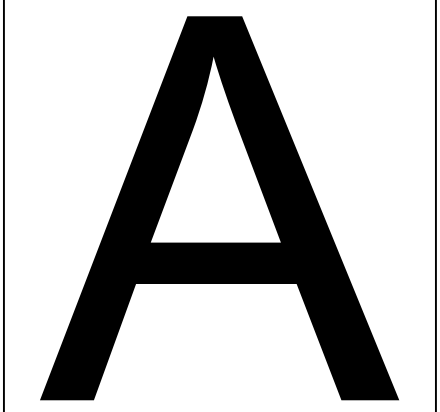
SHEET 12 OF 18

TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL010 - BUD'S TRAIL)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10016	2	EA	2"	CAP, BF, SDR-11, PE4710
10039	2	EA	2"	COUPLING, EF, SDR-11, PE4710
50008	1,025	LF	2"	PIPE, SDR-11, PE4710
60033	1,025	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE



CUMBERLAND WEST

STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE

442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND

CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM

BUD'S TRAIL

STATION 1+00 TO END STATION 11+25

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL010.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

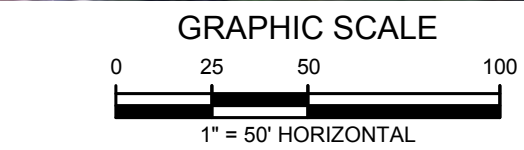
SHEET

PL010

SHEET 13 OF 18



TOWN OF CUMBERLAND



- NOTES:
1. PROPOSED GAS-LINE IS SHOWN 6" FROM THE EDGE OF PAVEMENT, BACK OF CURB, OR ALTERNATE HORIZONTAL DIMENSIONAL SEPARATION AS SPECIFIED ON THESE PLANS AND VERIFIED IN THE FIELD.
 2. ALL GAS-LINE ALIGNMENTS WILL BE DIMENSIONED USING EDGE OF PAVEMENT, BACK OF CURB OR OTHER HARD SURFACE THAT CAN BE VISUALLY VERIFIED IN THE FIELD.
 3. EXISTING UTILITIES ARE DIMENSIONED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. GAS-LINE LOCATION SHALL NOT BE DETERMINED BASED ON APPROXIMATE LOCATION OF KNOWN BURIED UTILITIES.
 4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, CULVERTS, AND CULVERT INLETS/OUTLETS.

QTO (PL011 - CASTLEROCK DR)				
ITEM	QUANTITY	UNIT	SIZE	DESCRIPTION
10004	1	EA	2"	BALL VALVE, SDR-11, PE4710
10016	2	EA	2"	CAP, BF, SDR-11, PE4710
10039	2	EA	2"	COUPLING, EF, SDR-11, PE4710
10131	1	EA	4" x 2"	TAP TEE, EF, HVTT, PE4710
50008	1,038	LF	2"	PIPE, SDR-11, PE4710
60033	1,038	LF	12AWG	TRACER WIRE, 12AWG, 2500' ROLL
60036	TBD	LF	1000' x 6"	MAINE CAUTION TAPE



ISSUED FOR CONSTRUCTION

A

CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

PROPOSED NATURAL GAS SYSTEM
CASTLEROCK DR
STATION 1+00 TO END STATION 11+38

PROJECT:	----
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	PL011.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

SHEET
PL011

SHEET 14 OF 18



SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

STANDARD DETAILS
TYPICAL DETAILS

PROJECT:	17-2030												
DRAWN:	JUSTIN GUTIERREZ												
CHECKED:	GRAHAM CHRISTY												
PLOT DATE:	July 6, 2017												
FILE:	DT001-DT004.DWG												
<p align="center">REVISIONS:</p> <table border="1"> <tr> <td>①</td> <td>50% IFR V.1 05/04/2017</td> </tr> <tr> <td>②</td> <td>75% IFR V.2 06/06/2017</td> </tr> <tr> <td>③</td> <td>85% IFC V.1 06/16/2017</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		①	50% IFR V.1 05/04/2017	②	75% IFR V.2 06/06/2017	③	85% IFC V.1 06/16/2017						
①	50% IFR V.1 05/04/2017												
②	75% IFR V.2 06/06/2017												
③	85% IFC V.1 06/16/2017												

SHEET

DT001

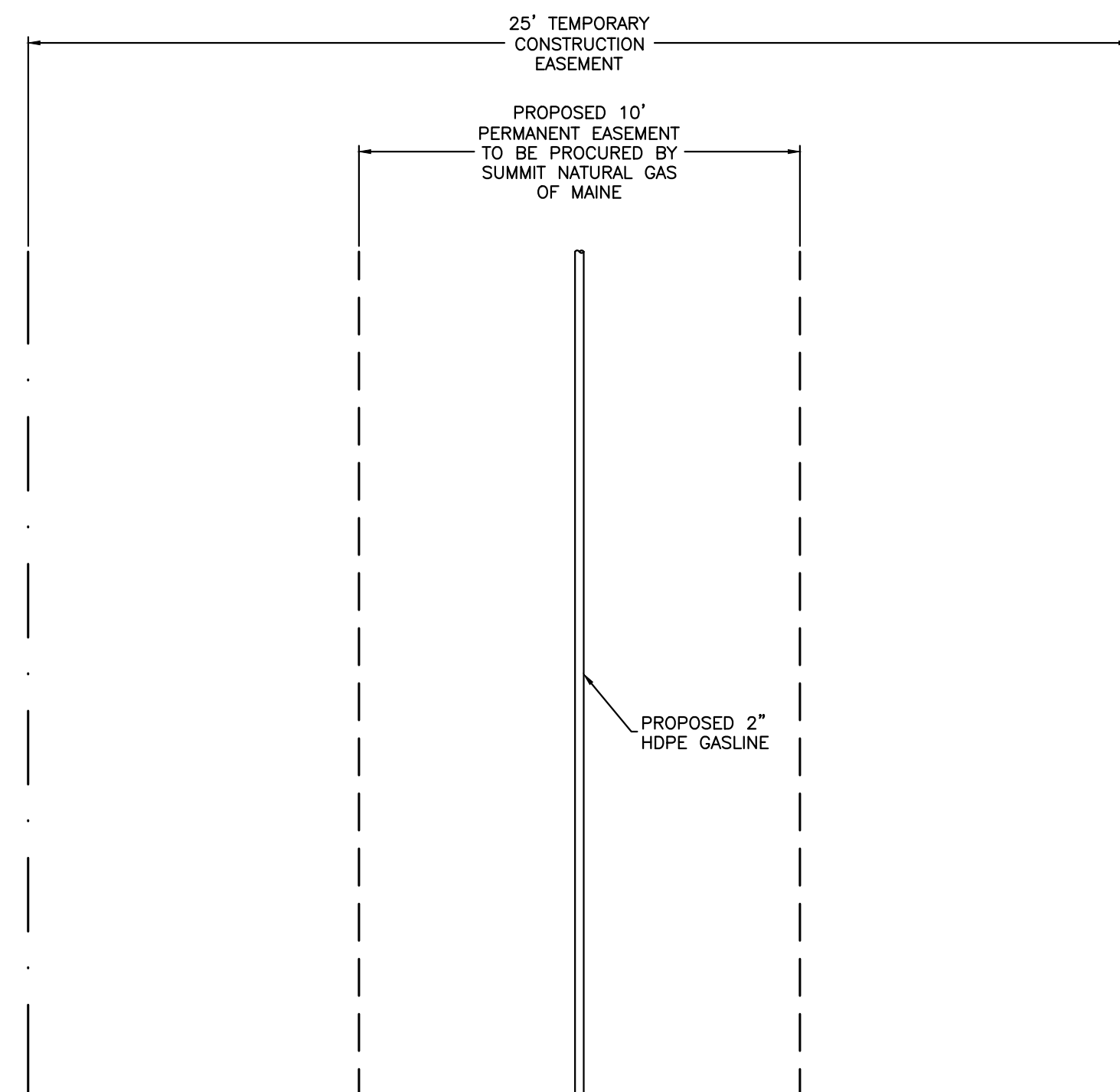
SHEET 15 OF 18

Diagram illustrating the cross-section of a trench for a gas line installation, showing various layers and dimensions:

- Top Layer:** 36" T/PIPE (ONLY)
- Bucket Width (Recommended):**
 - 16"-24"
 - 12"-24"
 - 12"-24"
 - 12"-24"
- Existing Pavement:** SAWCUT EXISTING PAVEMENT
- Existing Ground:** EXISTING GROUND
- Existing Pavement Section:** (SEE NOTE 8)
- Gravel Layer:** 3" (MIN.) TYPE "A" GRAVEL (MEDOT 703.06)
- Warning Tape:** PLASTIC WARNING TAPE (SEE NOTE 6)
- LIFT B:** 18"
- LIFT A:** 6" TYP.
- Tracer Wire:** TRACER WIRE (SEE NOTE 4)
- Gas Line:** PROPOSED GAS LINE SEE PLANS (SEE NOTE 9)
- Bedding:** BEDDING
- Pipe Dimensions:**
 - PIPE O.D. + (2"x6")
 - PIPE O.D.
 - 36" T/PIPE
- Trench Width:** TRENCH WIDTH SEE TABLE Z

1. SUITABLE BACKFILL MATERIAL FOR LIFT 'A' SHALL NOT HAVE MATERIAL OVER 3/4" IN SIZE. (NATIVE MATERIAL)
2. BACKFILL MATERIAL FOR LIFT 'B' SHALL BE NATIVE MATERIAL UNLESS FOUND UNSUITABLE BY THE MUNICIPAL ENGINEER OR SNG REPRESENTATIVE.
3. IF MATERIAL IS UNSUITABLE IN LIFT A OR B REFER TO MEDOT 703.06 SPECIFICATION FOR TYPE "A" OR "D" BACKFILL. MUST BE APPROVED BY SNG REPRESENTATIVE.
4. TRACER WIRE NOT NECESSARY FOR STEEL PIPE INSTALLATIONS. TRACER WIRE MUST BE INSTALLED DIRECTLY ABOVE GAS PIPELINE, WITH A MINIMUM OF 6" OF VERTICAL SEPARATION.
5. MINIMUM OUTSIDE HORIZONTAL SEPARATION BETWEEN GAS AND ALL OTHER UTILITIES TO BE 12" UNLESS OTHERWISE APPROVED. (MAINE UTILITY ACCOMMODATION)
6. MINIMUM OUTSIDE VERTICAL SEPARATION BETWEEN GAS AND ALL OTHER UTILITIES TO BE 12". (MAINE UTILITY ACCOMMODATION POLICY)
7. PLASTIC WARNING TAPE TO BE INSTALLED FOR ALL DIRECT BURY GAS MAINS AT A DEPTH APPROX. 12" FROM FINISHED GRADE.
8. PAVEMENT THICKNESS SHALL MATCH EXISTING CONDITIONS. SHALL BE DONE IN 2 LIFTS: 2-1/2" BINDER (19MM) AND 2-1/2" SURFACE (12.5MM) AS REQ'D. ADDITIONAL LIFTS TO BE 2-1/2" MAXIMUM (IF NECESSARY)
9. IN AREAS WHERE ROCK IS PRESENT, TRENCH MUST BE BEDDED WITH 6" OF COMPACTED MATERIAL THAT IS EQUIVALENT TO THE MATERIAL USED FOR LIFT 'A'.

SCALE: 1"=1'



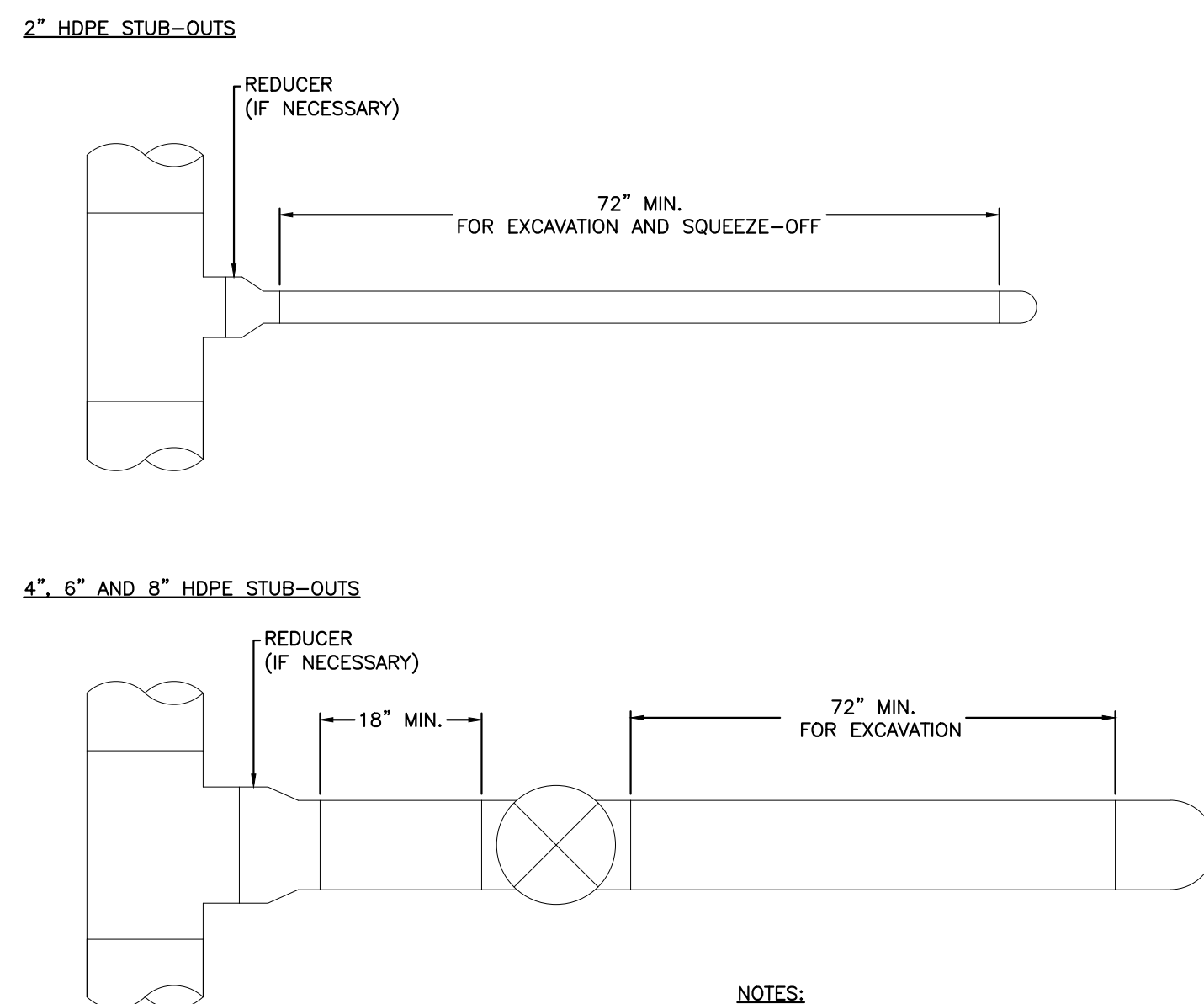
SCALE: N.T.S.

The diagram illustrates the required clearances for a gas service line installation. Key features and dimensions include:

- R.O.W.** (Right of Way) and **PRIVATE PROPERTY** are indicated at the top.
- PROPERTY LINE** is shown as a vertical dashed line.
- ROAD SURFACE OR SHOULDER** and **ROADSIDE DITCH** are labeled on the left side.
- 36" MIN.** clearance is shown from the road surface to the top of the gas main.
- 36" MIN.** clearance is shown from the roadside ditch to the top of the gas main.
- 24" MIN.** clearance is shown from the property line to the top of the gas service line.
- 18" MIN.** clearance is shown from the gas main to the tapping point.
- EXCESS FLOW** and **TRACER WIRE** are labeled on the gas main.
- GAS MAIN w/ TAPPING** and **GAS SERVICE LINE** are labeled on the gas lines.
- TO PRIVATE SERVICE** is indicated at the bottom right.

STANDARD INSTALLATION DEPTHS		
ITEM	LOCATION	DEPTH TO TOP OF PIPE
1. ALL GAS MAINS	PUBLIC / PRIVATE R.O.W.	36" (MIN.)
2. SERVICE LINES	PUBLIC / PRIVATE R.O.W.	30" (MIN.)
3. SERVICE LINES	PRIVATE PROPERTY	24" (MIN.)

SCALE: 1"=1'



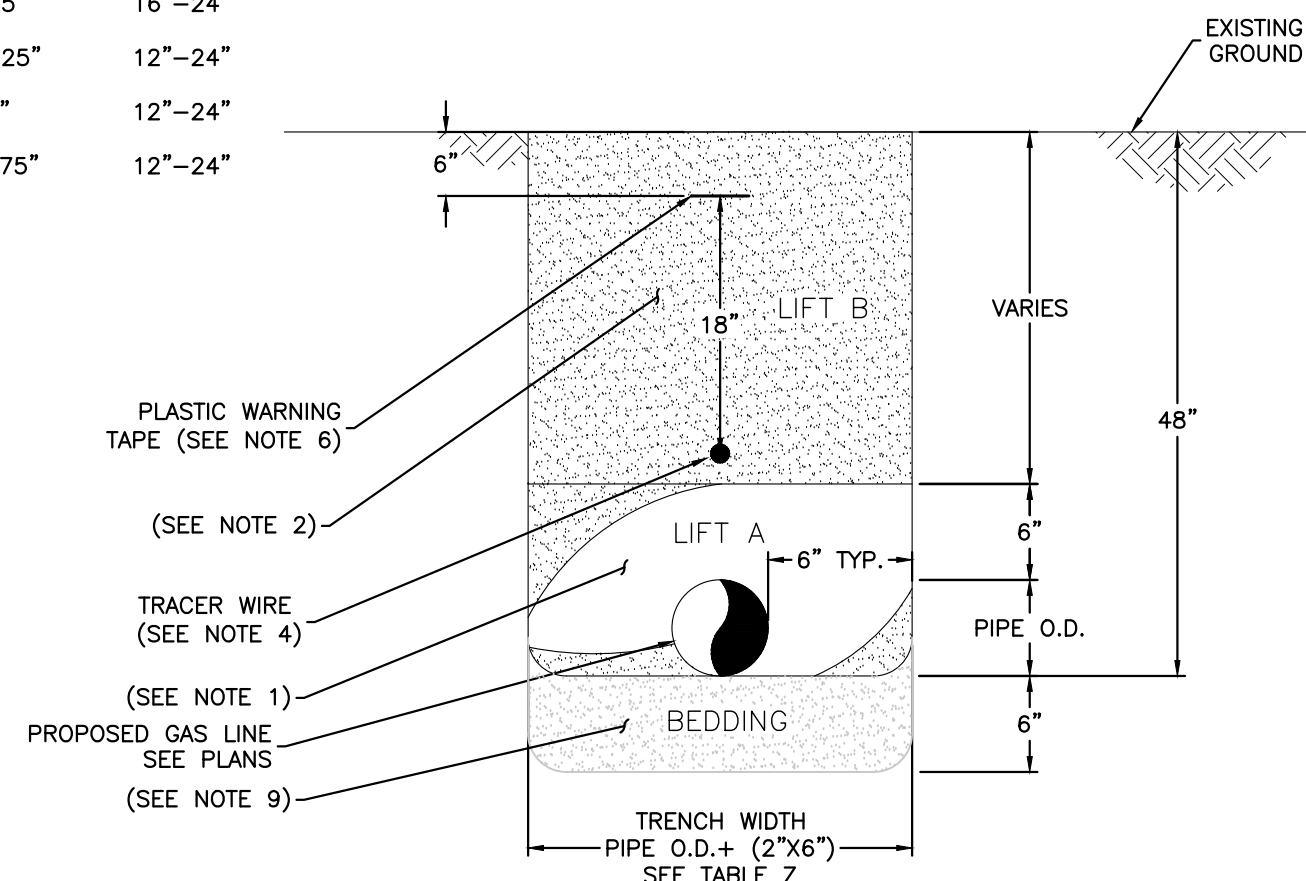
SCALE: N.T.S.

The diagram illustrates the installation of a gas meter. Key components and labels include:

- R.O.W. 30" MIN. COVER**: Right of Way, 30 inches minimum cover.
- PRIVATE PROPERTY**: The area where the meter is installed.
- METER VALVE (MUELLER OR APPR. EQUAL)**: The valve at the top of the riser.
- 6"**: Dimension indicating the distance from the ground surface to the meter valve.
- GROUND SURFACE**: The ground level.
- TRACER WIRE**: A wire used for locating the gas line.
- 24"**: Dimension indicating the distance from the ground surface to the tracer wire.
- 6"**: Dimension indicating the distance from the ground surface to the gas service line.
- PROPERTY LINE**: The boundary of the property.
- TO GAS MAIN**: Direction towards the gas main.
- COUPLING**: The connection point between the gas service line and the anodeless meter riser.
- GAS SERVICE LINE**: The line connecting the meter to the gas main.
- ANODELESS METER RISER**: The riser pipe for the meter.
- METER SET SUPPORT BRACKET**: The bracket supporting the meter.
- BUILDING WALL**: The wall of the building.

SCALE: 1"=1

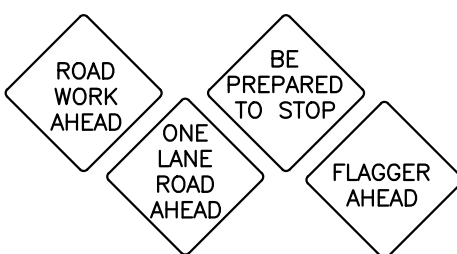
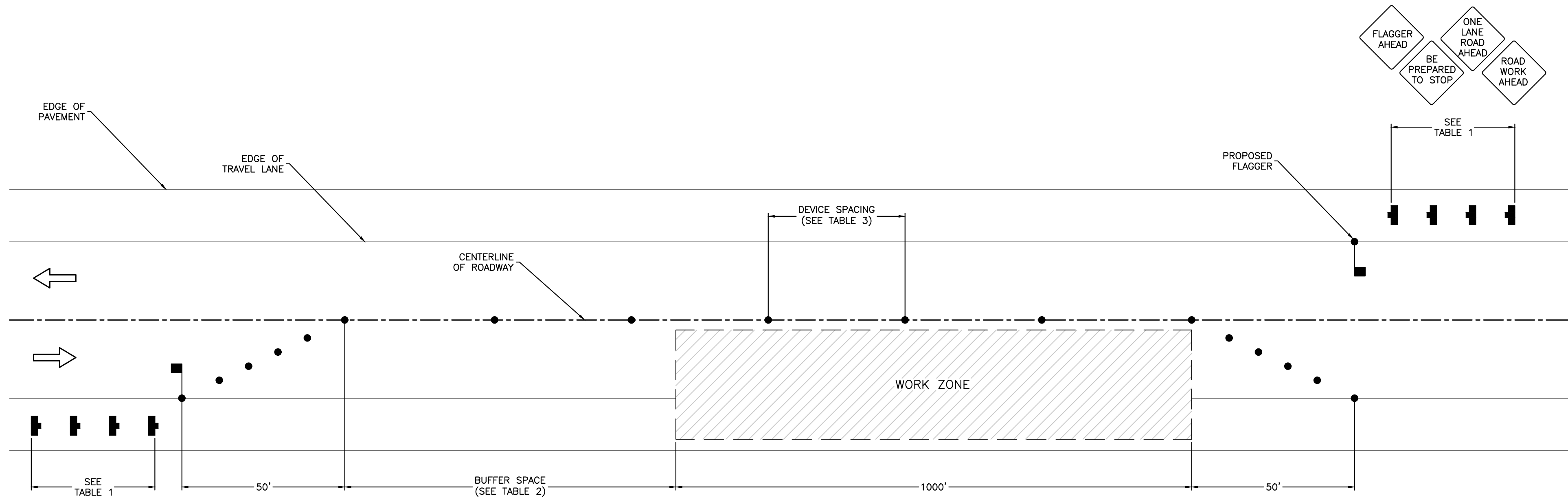
SIZE	O.D.	TRENCH WIDTH	BUCKET WIDTH (RECOMMENDED)
12"	12.75"	24.75"	16"—24"
8"	8.625"	20.625"	12"—24"
4"	4.5"	16.5"	12"—24"
2"	2.375"	14.375"	12"—24"



1. SUITABLE BACKFILL MATERIAL FOR LIFT 'A' SHALL NOT HAVE MATERIAL OVER 3/4" IN SIZE. (NATIVE MATERIAL)
2. BACKFILL MATERIAL FOR LIFT 'B' SHALL BE NATIVE MATERIAL UNLESS FOUND UNSUITABLE BY THE MUNICIPAL ENGINEER OR SNG REPRESENTATIVE.
IF MATERIAL IS UNSUITABLE IN LIFT A OR B REFER TO MEDOT 703.06 SPECIFICATION FOR TYPE "A" OR "D" BACKFILL. MUST BE APPROVED BY SNG REPRESENTATIVE.
3. TRACER WIRE NOT NECESSARY FOR STEEL PIPE INSTALLATIONS. TRACER WIRE MUST BE INSTALLED DIRECTLY ABOVE GAS PIPELINE, WITH A MINIMUM OF 6" OF VERTICAL SEPARATION.
5. MINIMUM OUTSIDE HORIZONTAL SEPARATION BETWEEN GAS AND ALL OTHER UTILITIES TO BE 12" UNLESS OTHERWISE APPROVED. (MAINE UTILITY ACCOMMODATION)
6. MINIMUM OUTSIDE VERTICAL SEPARATION BETWEEN GAS AND ALL OTHER UTILITIES TO BE 12". (MAINE UTILITY ACCOMMODATION POLICY)
7. PLASTIC WARNING TAPE TO BE INSTALLED FOR ALL DIRECT BURY GAS MAINS AT A DEPTH APPROX. 12" FROM FINISHED GRADE.
8. PAVEMENT THICKNESS SHALL MATCH EXISTING CONDITIONS. SHALL BE DONE IN 2 LIFTS: 2-1/2" BINDER (19MM) AND 2-1/2" SURF (9.5MM) OR 12" MAX AS REQ'D. ADDITIONAL LIFTS TO BE 2-1/2" MAXIMUM (IF NECESSARY).
9. IN AREAS WHERE ROCK IS PRESENT, TRENCH MUST BE BEDDED WITH 6" OF COMPACTED MATERIAL THAT IS EQUIVALENT TO THE MATERIAL USED FOR LIFT 'A'.

SCALE: 1"=1

ISSUED FOR CONSTRUCTION

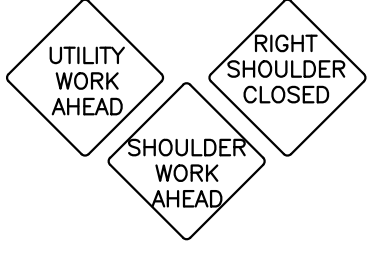
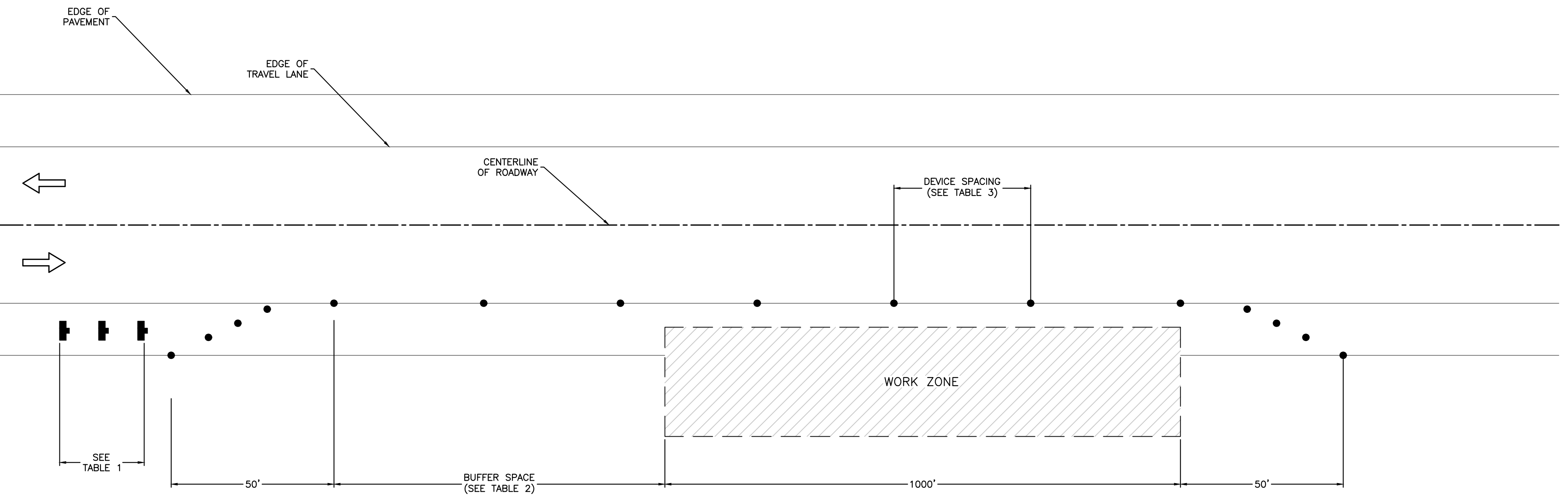


G TYPICAL SINGLE LANE CLOSURE
SCALE: N.T.S.

ADVANCE WARNING SIGN SPACING (TABLE 1)	
ROAD TYPE & SPEED (MPH)	SPACING (FT)
URBAN STREET 25 MPH OR LESS	100-200
URBAN STREET 30-40 MPH	250-350
*ALL OTHER ROADS 45 MPH OR LESS	350-500
ALL OTHER ROADS 45 MPH OR MORE	500-800
LIMITED ACCESS HIGHWAYS	1300-1500
*INCLUDES URBAN STREETS WITH GREATER THAN 40 MPH	

BUFFER ZONE SPACING (TABLE 2)	
POSTED SPEED (MPH)	SPACING (FT)
≤20	115-125
25	155-165
30	200-210
35	250-260
40	305-320
45	360-380
50	425-445
55	500-520
60	570-590
65	645-675
70	730-760
75	820-850

CHANNELING DEVICE SPACING (TABLE 3)		
WORK ZONE LOCATION	POSTED SPEED (MPH)	SPACING (FT)
IN TAPERS & CURVES	35 MPH OR LESS	20
PARALLEL TO TRAVEL WAY	35 MPH OR LESS	40
SPOT CONSTRUCTION ACCESS	35 MPH OR LESS	80
IN TAPERS & CURVES	MORE THAN 35 MPH	40
PARALLEL TO TRAVEL WAY	MORE THAN 35 MPH	80
SPOT CONSTRUCTION ACCESS	MORE THAN 35 MPH	120

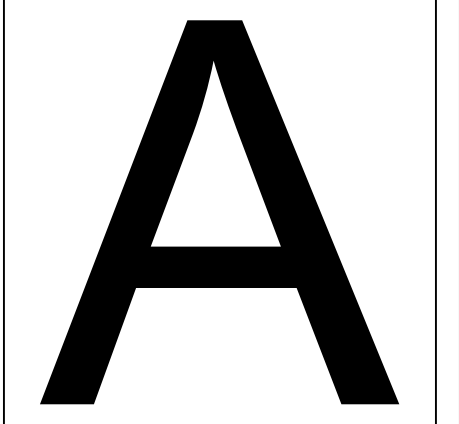


H TYPICAL SHOULDER CLOSURE
SCALE: N.T.S.

ADVANCE WARNING SIGN SPACING (TABLE 1)	
ROAD TYPE & SPEED (MPH)	SPACING (FT)
URBAN STREET 25 MPH OR LESS	100-200
URBAN STREET 30-40 MPH	250-350
*ALL OTHER ROADS 45 MPH OR LESS	350-500
ALL OTHER ROADS 45 MPH OR MORE	500-800
LIMITED ACCESS HIGHWAYS	1300-1500
*INCLUDES URBAN STREETS WITH GREATER THAN 40 MPH	

BUFFER ZONE SPACING (TABLE 2)	
POSTED SPEED (MPH)	SPACING (FT)
≤20	115-125
25	155-165
30	200-210
35	250-260
40	305-320
45	360-380
50	425-445
55	500-520
60	570-590
65	645-675
70	730-760
75	820-850

CHANNELING DEVICE SPACING (TABLE 3)		
WORK ZONE LOCATION	POSTED SPEED (MPH)	SPACING (FT)
IN TAPERS & CURVES	35 MPH OR LESS	20
PARALLEL TO TRAVEL WAY	35 MPH OR LESS	40
SPOT CONSTRUCTION ACCESS	35 MPH OR LESS	80
IN TAPERS & CURVES	MORE THAN 35 MPH	40
PARALLEL TO TRAVEL WAY	MORE THAN 35 MPH	80
SPOT CONSTRUCTION ACCESS	MORE THAN 35 MPH	120



CUMBERLAND WEST
STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE
442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

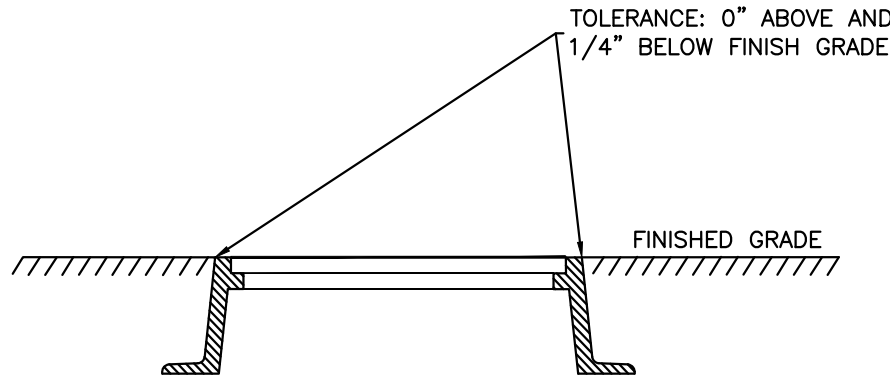
STANDARD DETAILS
TRAFFIC CONTROL DETAILS

PROJECT:	17-2030
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	DT001-DT004.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

SHEET
DT002

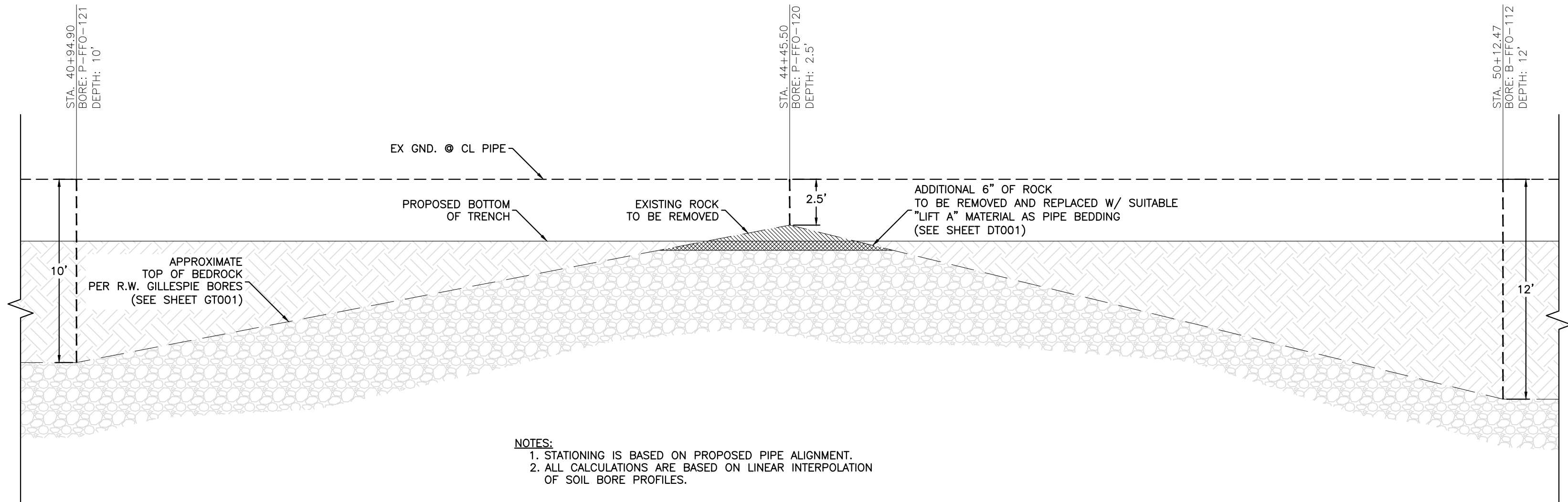
SHEET 16 OF 18

NOTES:
1) MANHOLE FRAMES, VALVE BOXES, AND
COVERS SHALL MEET ASTM A48



UTILITY STRUCTURE
(MANHOLE, VALVE BOX, VAULT COVER)

I TYPICAL UTILITY STRUCTURE
SCALE: N.T.S.



NOTES:
1. STATIONING IS BASED ON PROPOSED PIPE ALIGNMENT.
2. ALL CALCULATIONS ARE BASED ON LINEAR INTERPOLATION
OF SOIL BORE PROFILES.

J EXAMPLE ROCK PROFILE CALCULATION DETAIL
SCALE: N.T.S.

A

CUMBERLAND WEST

STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE

442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

STANDARD DETAILS
UTILITY DETAILS

PROJECT:	17-2030
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	DT001-DT004.DWG

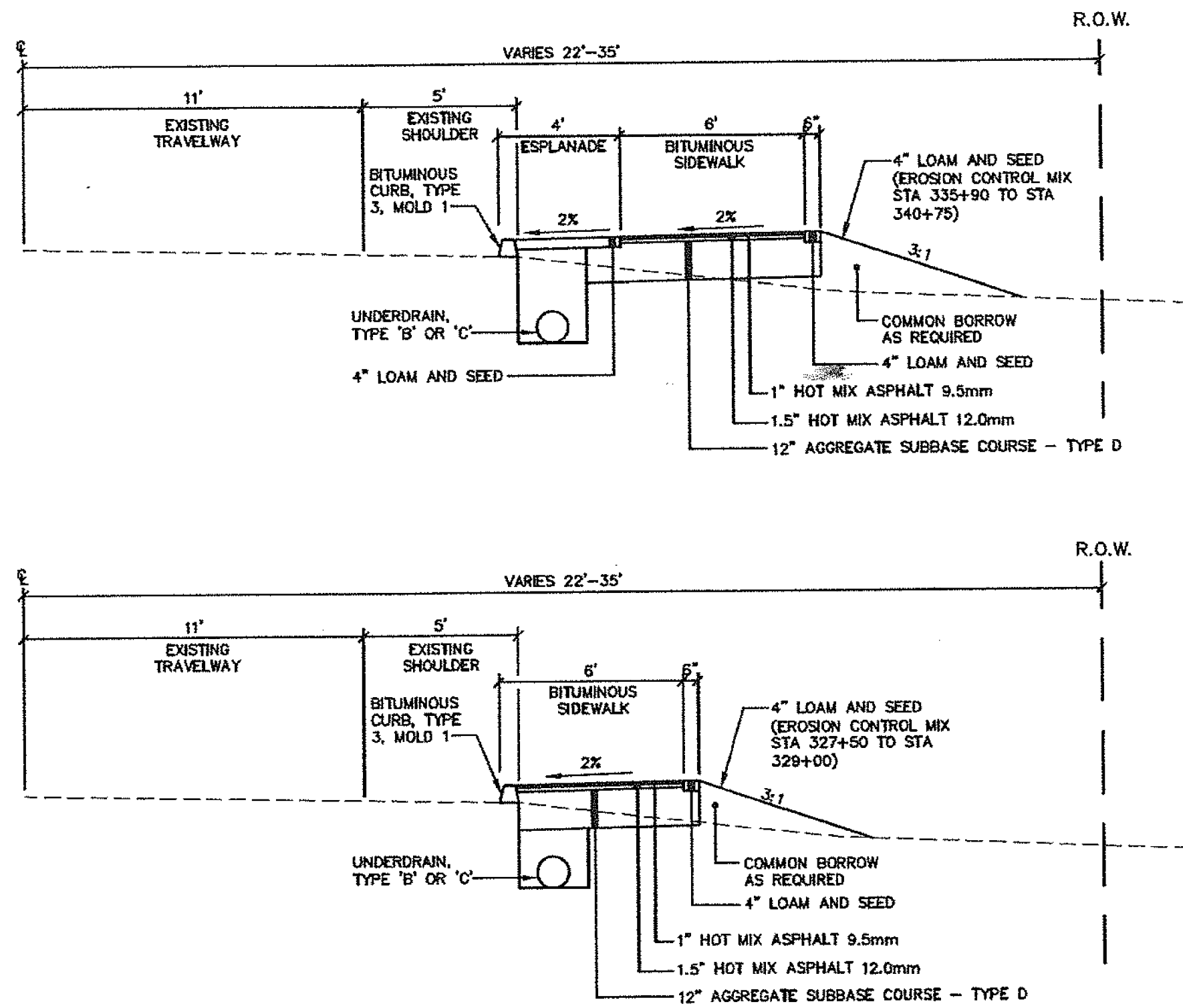
REVISIONS:

1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

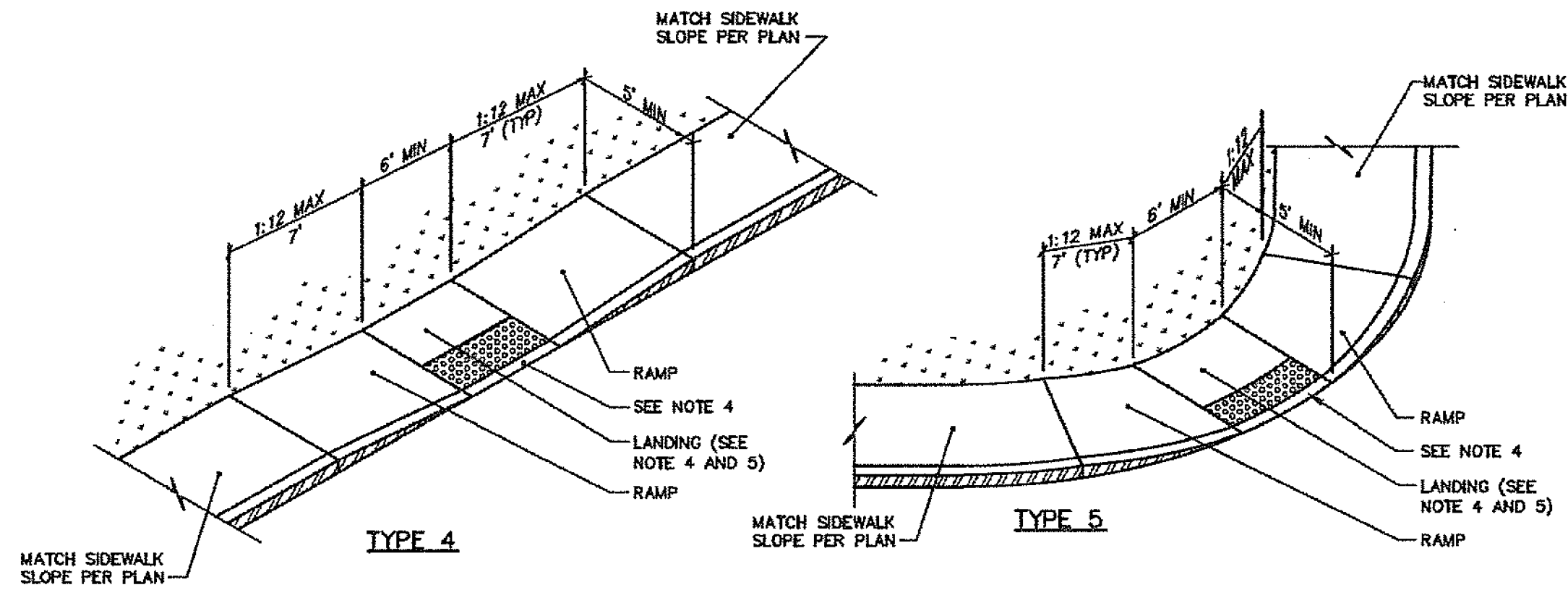
SHEET
DT003

SHEET 17 OF 18

ISSUED FOR CONSTRUCTION



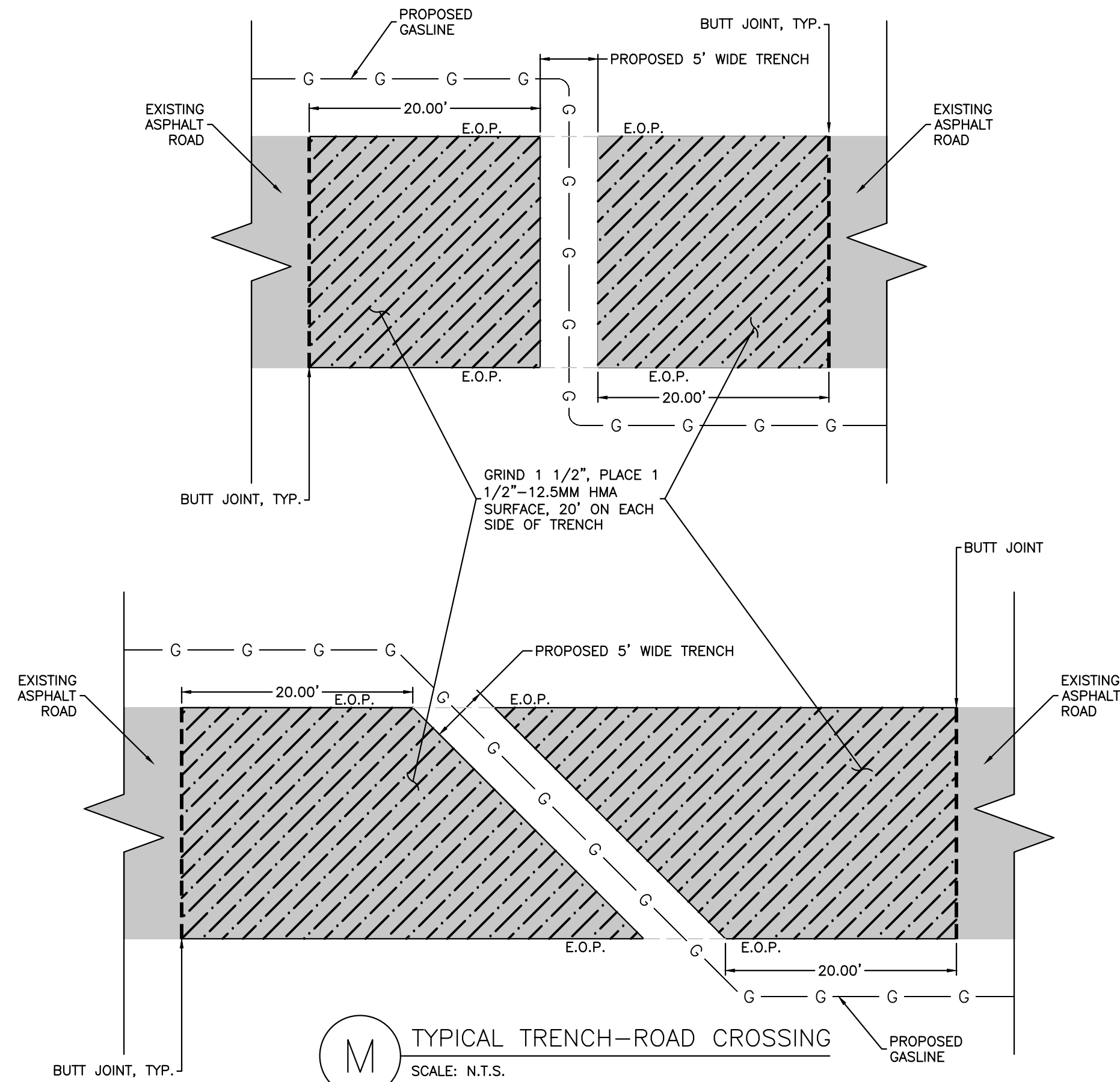
K TYPICAL SIDEWALK REPLACEMENT
SCALE: N.T.S.



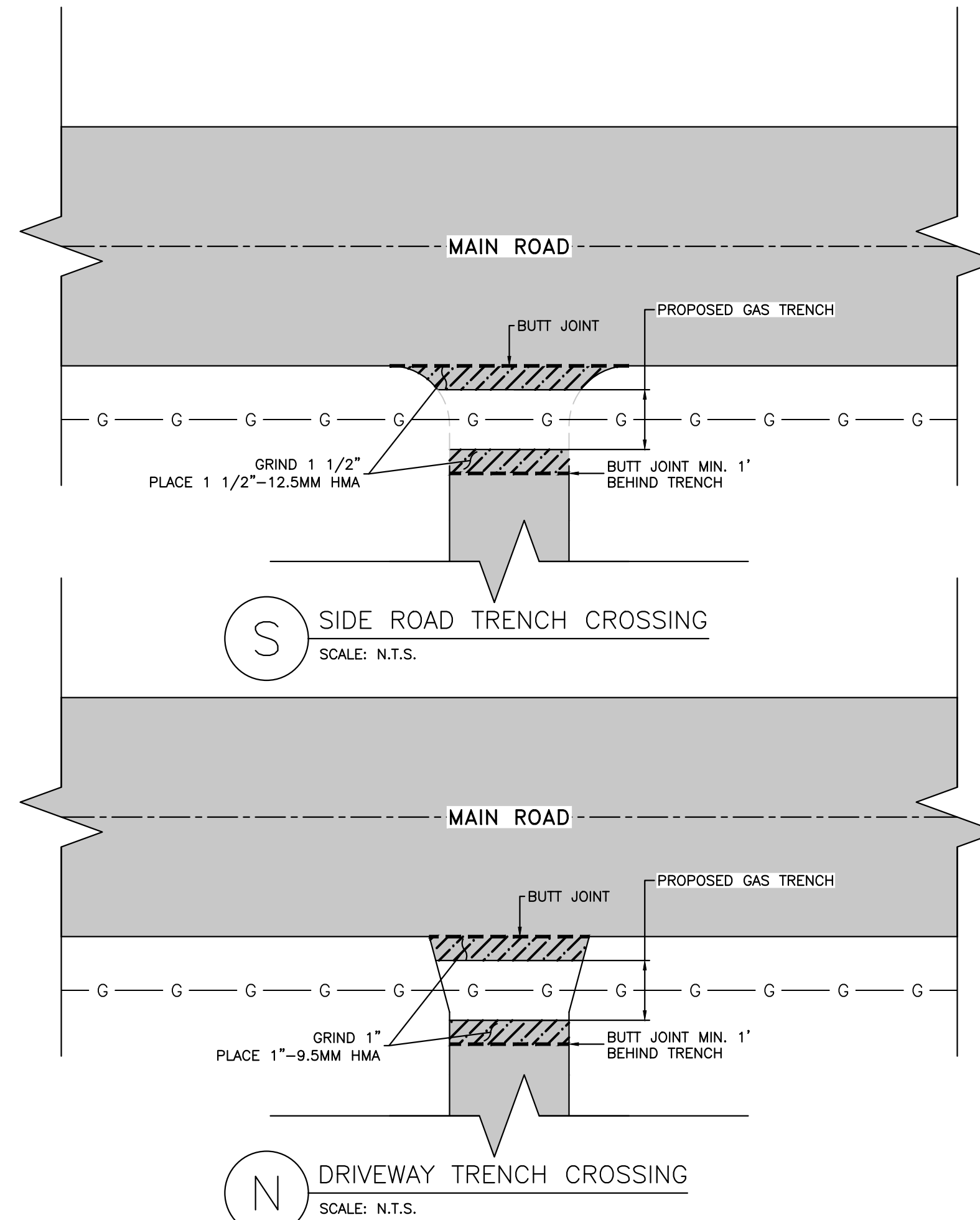
L TYPICAL ADA RAMP
SCALE: N.T.S.

NOTE:

1. CURB RAMP LENGTHS ARE BASED ON SEVEN (7) INCH CURB REVEAL HEIGHT AND NO RUNNING SLOPE. RAMP LENGTHS SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE VARYING CURB REVEAL HEIGHTS AND TO MATCH RUNNING SLOPES OF ADJACENT ROADWAY AND SIDEWALK SLOPES TO MAINTAIN A RAMP THAT DOES NOT EXCEED THE MAXIMUM RAMP SLOPE OF 1:12.
2. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES AND SHALL HAVE A BASE DIAMETER OF 0.9 INCHES (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM; A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM AND A HEIGHT OF 0.2 INCHES (5.1 mm), A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41mm) MINIMUM AND 2.4 INCHES (61mm) MAXIMUM; AND A BASE-TO-BASE SPACING OF 0.65 INCHES (17mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
3. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
4. ALL ACCESSIBLE ROUTE SIDEWALKS INTERSECTING ROADWAYS, DRIVEWAYS, OR OTHER VEHICULAR CROSSINGS REQUIRE DETECTABLE WARNINGS. DETECTABLE WARNING ZONES SHALL BE INSTALLED SIX (6) INCHES (OR THE HORIZONTAL THICKNESS OF THE ADJACENT CURB) FROM THE FLOW LINE OF THE CURB, EXTEND INTO THE SIDEWALK FOR A 24\"/>



M TYPICAL TRENCH-ROAD CROSSING
SCALE: N.T.S.



S SIDE ROAD TRENCH CROSSING
SCALE: N.T.S.

N DRIVEWAY TRENCH CROSSING
SCALE: N.T.S.

ISSUED FOR CONSTRUCTION

A

CUMBERLAND WEST

STATE OF MAINE

SUMMIT NATURAL GAS OF MAINE

442 Civic Center Drive | Suite 100
Augusta, ME 04330 | Phone (207) 621-8000

CUMBERLAND
CUMBERLAND COUNTY

STANDARD DETAILS
MISCELLANEOUS DETAILS

PROJECT:	17-2030
DRAWN:	JUSTIN GUTIERREZ
CHECKED:	GRAHAM CHRISTY
PLOT DATE:	July 6, 2017
FILE:	DT001-DT004.DWG
REVISIONS:	
1	50% IFR V.1 05/04/2017
2	75% IFR V.2 06/06/2017
3	85% IFC V.1 06/16/2017

SHEET
DT004