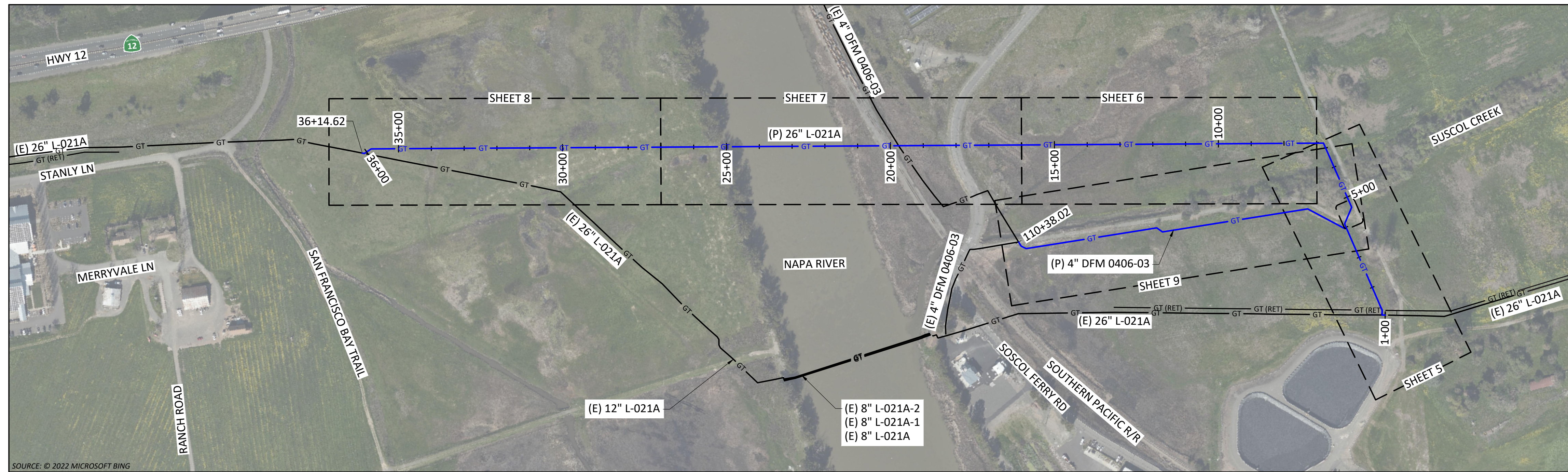


# L-021A, MP 14.46 - 15.14 DFM 0406-03, MP 0.00 - 0.08 ILI UPGRADE, SEGMENT 1 NAPA, NAPA COUNTY



**KEY MAP**  
SCALE: 1" = 200'

**SCHEDULE OF SHEETS**

SHEET 1	--	TITLE & INDEX
SHEET 2	--	PROJECT MAP
SHEET 3	--	CONSTRUCTION NOTES
SHEET 4	--	LEGEND & STAMPS
SHEETS 5-8	--	PLAN & PROFILE (L-021A)
SHEET 9	--	PLAN & PROFILE (DFM 0406-03)
SHEETS 10-15	--	DETAILS
SHEET 16	--	BILL OF MATERIAL / PIPE INSPECTION TABLE
SHEETS 17-18	--	WORKSPACE & EXCAVATION MAP
SHEETS 19-20	--	HDD PROFILE

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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG		AG	PD JQ
B	7/21/22	ISSUED FOR PERMIT	74024169	DNG		AG	PD JQ
A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG		AG	PD JQ

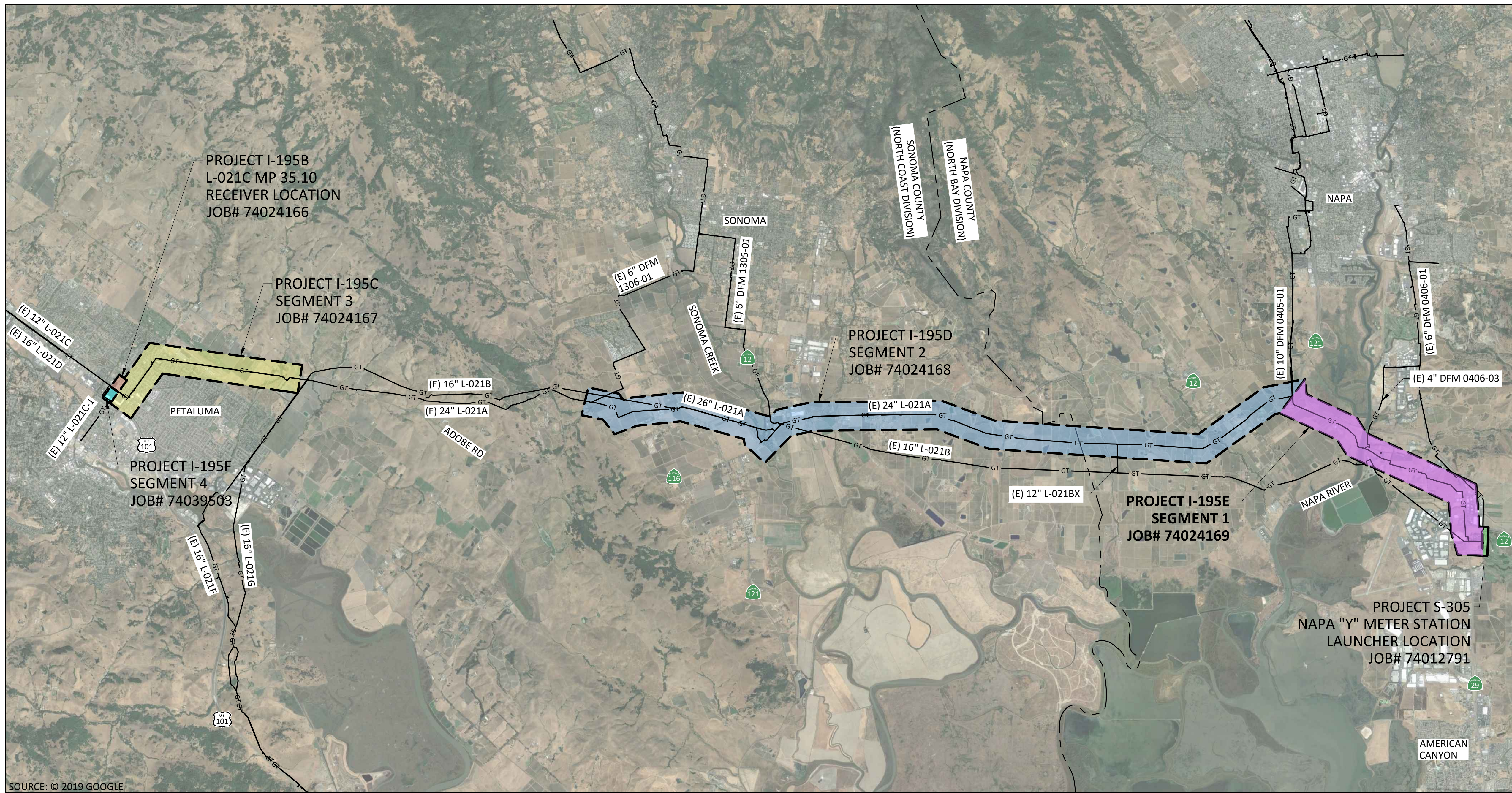
PIPELINE - TITLE & INDEX  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

IMPACTED RECORD DRAWINGS:  
 YES  NO  
CAP # N/A



BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	1 OF 20 SHEETS
74024169	C

E  
D  
C  
B  
A



I-195 ILI UPGRADE PROJECT TABLE			
PROJECT	SEGMENT	MILE POINTS	JOB NUMBER
S-305	LAUNCHER	NAPA "Y" METER STATION L-021A MP 12.04	74012791
I-195E	SEGMENT 1	L-021A MP 14.46 - 15.14	74024169
I-195D	SEGMENT 2	L-021A MP 16.16 - 27.40	74024168
I-195C	SEGMENT 3	L-021C MP 31.95 - 35.10	74024167
I-195F	SEGMENT 4	L-021C MP 35.08 - 35.12 L-021D MP 21.83 - 21.86	74039503
I-195B	RECEIVER	L-021C MP 35.10	74024166

## ILI UPGRADE PROJECT MAP

### L-021A MP 12.05 - L-021C MP 35.10

(SCALE: 1" = 4,500')



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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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PIPELINE - PROJECT MAP  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY

GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	2 OF 20 SHEETS
74024169	C

SUMMARY OF PROPOSED WORK:

UPGRADE 26" L-021A FROM MP 14.46 - MP 15.14 (SEGMENT 1) FOR INLINE INSPECTION PIGGABILITY PER DRAWINGS AND STRENGTH TEST PRESSURE REPORT (#74024169).

CAPITAL ORDER # 74024169

- 1. INSTALL 2,807' OF 26.000" OD PIPE VIA HDD.
2. INSTALL 633' OF 26.000" OD PIPE VIA OPEN CUT.
3. INSTALL 91' OF 26.000" OD PIPE VIA PIPE RAMMING.
4. INSTALL 1,041' OF 4.500" OD PIPE VIA OPEN CUT.
5. INSTALL 10' OF 2.375" OD PIPE.
6. INSTALL ONE (1) 4" BALL VALVE (V-94.2).
7. REMOVE 47' OF 26.000" OD PIPE.
8. REMOVE 19' OF 4.500" OD PIPE.

SEQUENCE OF OPERATIONS:

- 1. PRIOR TO TAKING PIPELINE CLEARANCE, THE FOLLOWING MUST BE PERFORMED:
A. PG&E GPOM TO CHECK ANY DRIPS IN SHUT-IN SEGMENT FOR PRESENCE OF PIPELINE LIQUIDS.
B. REMOVE PIPE WRAP FROM CUT OUT SECTIONS EXTENDING 1' BEYOND EACH END OF THE CUT-OUT AND SANDBLAST TO NEAR WHITE.
C. COMPLETE A-FORMS ON ALL EXPOSED PIPE AND INCLUDE IN AS-BUILT PACKAGE.
D. INSTALL SAVE-A-VALVES FOR OIL TESTING AND SNIFF HOLES WHERE DESIGNATED.
E. STRENGTH TEST, DEWATER, AND DRY TIE-IN PIECES PER UTILITY PROCEDURE TD-4137S.
2. INSTALL OPEN TRENCH SECTIONS OF PROPOSED PIPING.
3. INSTALL PIPE RAMMING SECTION OF PROPOSED PIPING.
4. INSTALL HDD SECTION OF PROPOSED PIPING.
5. FABRICATE TIE-IN AND TEST ALL PIPING.
6. COMPLETE CLEARANCE PER APPROVED CLEARANCE PROCEDURE.
7. TIE-IN NEW 4" & 26" PIPING.
8. AFTER CLEARANCE, CONTRACTOR TO TRANSPORT COUPONS AND CUT OUTS AS REQUIRED ON THE PIPELINE INSPECTION TABLE (SEE SHEET 20) GENERATED COUPONS, ALONG WITH THEIR CoC PAPERWORK, ARE TO BE SENT DIRECT TO ANAMET TESTING FACILITY AT 26102 EDEN LANDING ROAD, SUITE 3, HAYWARD, CA.
9. UPON ARRIVAL AT ANAMET TESTING FACILITY, ATS TO PERFORM FURTHER TESTING AND ANALYSIS OF CUT-OUT SECTIONS.
10. RESTORE SITE AND CONSTRUCTION CORRIDORS.

BASIS OF COORDINATES & BEARINGS:

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON GLOBAL POSITION SYSTEM OBSERVATIONS (GPS) BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 2, BEING ON THE NORTH AMERICAN DATUM OF 1983 (NAD83) AND WERE DERIVED FROM OBSERVATIONS OF THE CALIFORNIA SURVEYING & DRAFTING SUPPLY (CSDS) REAL-TIME NETWORK (RTN).

BENCHMARK

THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND WERE DERIVED FROM OBSERVATIONS OF THE CALIFORNIA SURVEYING & DRAFTING SUPPLY (CSDS) REAL-TIME NETWORK (RTN).

Table with 5 columns: POINT, NORTHING, EASTING, ELEVATION, DESCRIPTION. Contains 18 rows of survey control data.

CONSTRUCTION NOTES:

GENERAL REQUIREMENTS:

- 1. UNDERGROUND SERVICE ALERT: CALL 811 (1-800-227-2600) A MINIMUM OF 2 BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE FOR THE MARKING OF UNDERGROUND UTILITIES, INCLUDING ALL NON-UTILITIES BEFORE YOU DIG, GRADE, OR EXCAVATE.
2. UTILITY NOTES:
A. DIMENSIONS SHOWN ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION FROM SEVERAL SOURCES, AND SHALL BE VERIFIED IN THE FIELD BY CONSTRUCTION PERSONNEL PRIOR TO FABRICATION.
B. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES, PROPERTY LINES, AND OTHER SUBSTRUCTURES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE, UNLESS OTHERWISE NOTED.
C. PROSPECTING IS REQUIRED AHEAD OF WORK. ALL OFFSETS OR ROPING WILL NEED TO BE APPROVED BY THE PG&E PROJECT ENGINEER (PED), AND REDLINED DETAILS SHOWN ON PROFILE AND CONSTRUCTION DETAIL SHEETS OF EACH ADDITIONAL SUBSTRUCTURE.
D. ALL EXCAVATIONS WITHIN EXISTING STATIONS SHALL BE HAND DUG OR EXCAVATED USING SOFT DIG METHODS (e.g. VACUUM EXCAVATIONS OR SIMILAR).
3. ELBOWS AND FIELD BENDS:
A. ALL BENDS ARE ELBOWS, EXCEPT WHERE SMOOTH FIELD BENDS ARE SHOWN.
4. SEPARATION FROM OTHER STRUCTURES:
A. CROSSING UNDERGROUND FACILITIES: PG&E PIPELINE MUST BE INSTALLED WITH AT LEAST 24 INCHES OF CLEARANCE FROM ANY OTHER SUBSTRUCTURE/UTILITY NOT ASSOCIATED WITH THE PIPELINE UNLESS NOTED ON THE DRAWINGS.
5. RESTORATION AND CLEAN UP:
A. RESTORATION OF PUBLIC STREETS, SIDEWALKS, CURBS, ETC. ABOVE PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE LATEST CITY, COUNTY, OR AGENCY STANDARDS.
6. DESIGN NOTES:
A. THIS DRAWING HAS BEEN CREATED BY REVIEW OF THE AS-BUILT DRAWINGS AND RECORDS.
7. WELDING REQUIREMENTS:
A. ALL ARC WELDING IS TO BE PERFORMED IN ACCORDANCE WITH THE GAS WELDING CONTROL MANUAL TD-4160M.
8. STRENGTH TEST REQUIREMENTS:
A. STRENGTH TESTING SHALL MEET PRESSURE AND DURATION REQUIREMENTS OF GAS STANDARD A-34 AND SHALL BE CONDUCTED IN ACCORDANCE WITH UTILITY PROCEDURE TD-4137S.
9. COATING REQUIREMENTS:
A. ALL EXPOSED PIPE AND FITTINGS ARE TO BE COATED IN ACCORDANCE WITH GAS STANDARD E-30.
10. INSPECTION OF EXISTING PIPELINE:
A. WHENEVER EXISTING BURIED GAS FACILITIES ARE EXCAVATED DURING ENGINEERING OR DURING CONSTRUCTION, FOLLOW TD-5100P-01 TO DOCUMENT PIPE INSPECTION.

- 11. TIE-IN AND CLEARANCE PROCEDURE TO BE PREPARED AND PERFORMED IN ACCORDANCE WITH THE FOLLOWING WORK PROCEDURES:
A. TD-4100P-01, HOT AND COLD WORK METHODS FOR NATURAL GAS TRANSMISSION PIPELINE SHUTDOWN AND TIE-IN.
B. TD-4441S, GAS CLEARANCE PROCEDURES FOR FACILITIES OPERATING OVER 60 PSIG.
12. COATING REMOVAL:
A. PERFORM THE FOLLOWING STEPS, IN ACCORDANCE WITH TD-4711P-01, BEFORE REMOVING ASPHALTIC PIPE WRAP ON PIPELINES INSTALLED PRIOR TO 1972 (BASED ON PG&E ANALYSIS, PIPE INSTALLED IN 1972 OR LATER DOES NOT HAVE PIPE WRAP THAT CONTAINS ASBESTOS):
1. WHEN A PIPE WRAP SAMPLE IS REQUIRED TO BE ANALYZED FOR ASBESTOS:
a. COLLECT SAMPLE PER TD-4711P-01 AND COMPLETE CHAIN OF CUSTODY FORM TD-4711P-01-F01.
b. FILE PINK COPY OF THE CHAIN OF CUSTODY FORM AND FINAL LABORATORY RESULTS WITH THE AS-BUILTS.
2. WHEN REMOVING PIPE WRAP THAT CONTAINS ASBESTOS, OR FOR EMERGENCY WORK, FOLLOW TD-4711P-01 "PIPE WRAP REMOVAL, HANDLING AND DISPOSAL".

CATHODIC PROTECTION NOTES:

- 1. FOLLOW TD-5100P-01 TO DOCUMENT INTERNAL CORROSION AND EXTERNAL CORROSION INSPECTION OF THE PIPELINE.
2. INSTALL ELECTROLYSIS TEST STATIONS IN ACCORDANCE WITH GAS DESIGN STANDARDS 0-10, 0-10.1 AND 0-10.2.
3. UPON COMPLETION OF BORINGS, CONTACT THE CORROSION SUPERVISOR FOR THE LOCAL AREA/DIVISION TO PERFORM CURRENT DRAIN TESTS ON THE PIPELINE SEGMENT THAT WAS INSTALLED IN THE BORE.
4. FOR THE INSTALLATION OF THE WATCHDOG RECTIFIER REMOTE MONITOR, CONTACT THE CORROSION SUPERVISOR FOR THE LOCAL AREA/DIVISION.
5. BONDING CABLES TO BE INSTALLED ACROSS PIPELINE CUT-OUTS AT ALL LOCATIONS THE PIPELINE IS SEVERED PRIOR TO REMOVAL.

ABANDONMENT PROCEDURE FOR EXISTING PIPE:

- 1. GT&D UTILITY WORK PROCEDURE TD-9500P-16, "ABANDONMENT OF UNDERGROUND GAS FACILITIES," SHALL BE FOLLOWED.
2. THE EXISTING PIPE SECTIONS SHALL HAVE FREE LIQUIDS REMOVED AND BE 100% PURGED PER GAS DESIGN STANDARD A-38, "PROCEDURES FOR PURGING GAS FACILITIES."
3. THE PIPE SHALL BE SECTIONALIZED AT INTERVALS AS SPECIFIED IN THE ABANDONMENT PLAN.
4. AT EACH SUCH LOCATION NOTED ABOVE, A PIECE OF PIPE AT LEAST 24" LONG SHALL BE REMOVED.

DESIGN CHANGE PROCEDURE:

MAINTENANCE AND CONSTRUCTION PERSONNEL MUST OBTAIN APPROVAL FROM THE PROJECT ENGINEER (PED) BEFORE MAKING ANY DESIGN CHANGE TO GAS FACILITIES PER TD-4014P-06.

CONTACT INFORMATION:

Table listing roles and names: PROJECT MANAGER (GARRETT PON), PROJECT ENGINEER (PED) (JOHN MADUENO), PIPELINE ENGINEER (PLE) (VAL CHERNEV), CONTRACT PROJECT ENGINEER (ALI GANJI), FIELD ENGINEER / CM (ROBERT CHRZANOWSKI), LAND PLANNER (VICK GERMANY), CULTURAL MONITOR, ENVIRONMENTAL FIELD SPECIALIST (BILL FROHLICH), BIOLOGIST (BOBBY VOGT), CORROSION ENGINEER (DAVID HELALE), DISTRIBUTION PLANNER (ANGELA FOX), TRANSMISSION PLANNER (NANCY NG), GPOM SUPERVISOR (JASON TANIHARA).

REFERENCE DRAWINGS:

Table listing drawing types and numbers: OPERATING MAPS (384185 REV 100), AS-BUILTS (GM 3992 (1930), GM 434071 (1967), GM 174876 (1971), GM 181489 (1974), GM 490635 (1976), PM 7053647 (2007)), WALL MAPS (2774), PLAT SHEETS (F01, F02, G02).

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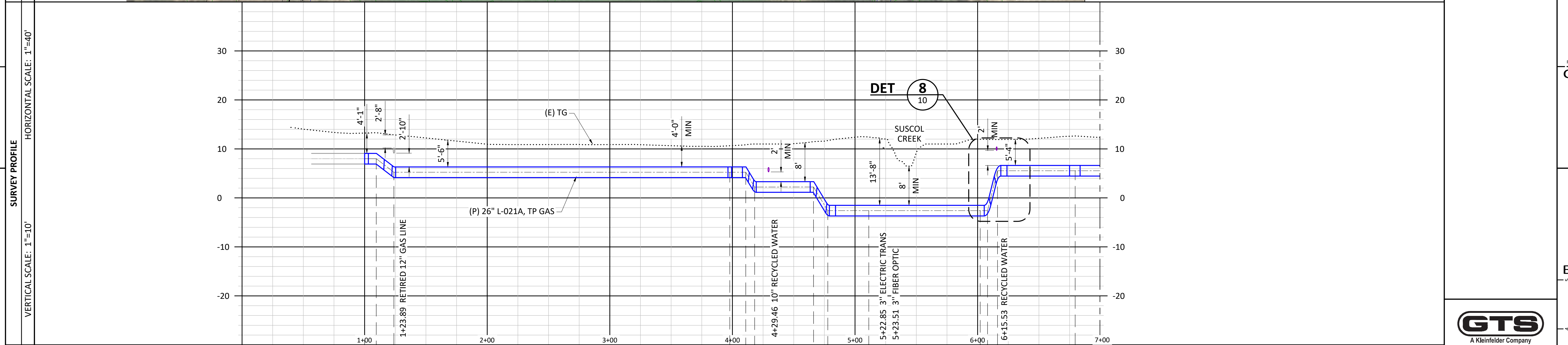
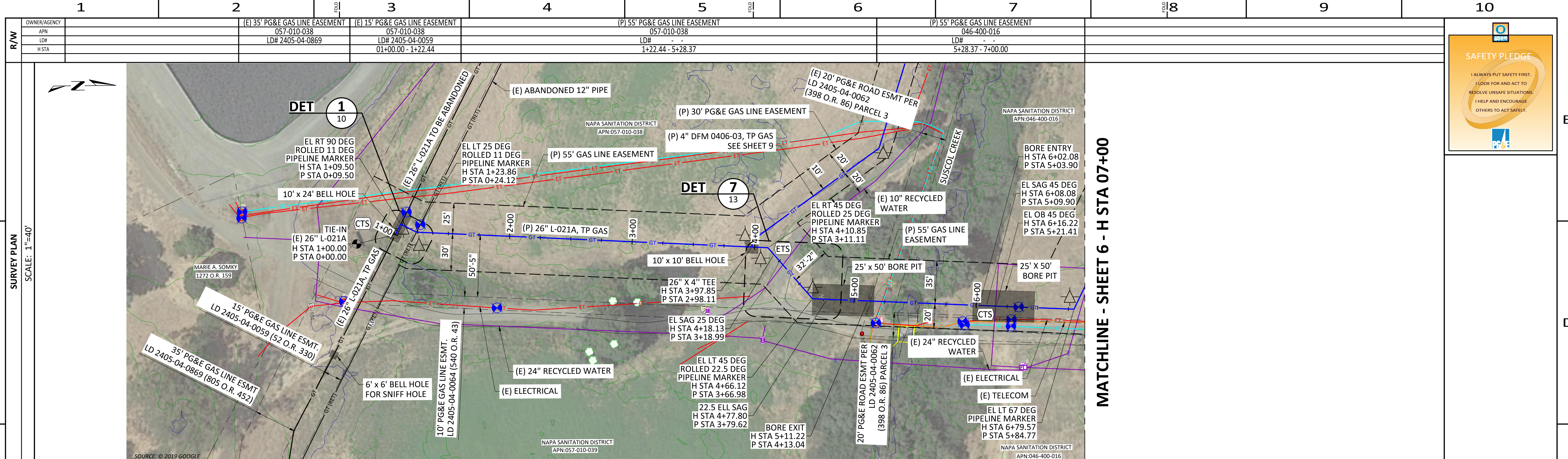
Table with columns: REV., DATE, DESCRIPTION, ORDER, DWN, ADE, ENG, ENG APVD. Contains revision history for the document.

PIPELINE - CONSTRUCTION NOTES
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08
ILI UPGRADE 26" PIPE
NAPA, NAPA COUNTY
GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA



Table with project details: BILL OF MATL SHEET 16, JOB ID I-195E, SHEET NO. 3 OF 20 SHEETS, 74024169 C

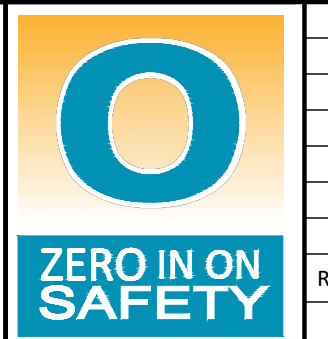




PIPELINE STATIONING	1+00	1+23.89	2+00	3+00	4+00	4+29.46	5+00	5+22.85	5+23.51	6+00	6+15.53	7+00
TIE-IN	H STA 1+00.00 P STA 0+00.00											
EL RT 90 DEG ROLLED 11 DEG PIPELINE MARKER	H STA 1+09.50 P STA 0+09.50											
EL LT 25 DEG ROLLED 11 DEG PIPELINE MARKER	H STA 1+23.86 P STA 0+24.12											
26' x 4' TEE	H STA 3+97.85 P STA 2+98.11											
EL RT 45 DEG ROLLED 25 DEG PIPELINE MARKER	H STA 4+10.85 P STA 3+11.11											
EL SAG 25 DEG	H STA 4+18.13 P STA 3+18.99											
EL LT 45 DEG ROLLED 22.5 DEG PIPELINE MARKER	H STA 4+66.12 P STA 3+66.98											
22.5 ELL SAG	H STA 4+77.80 P STA 3+79.62											
BORE EXIT	H STA 5+11.22 P STA 4+13.04											
BORE ENTRY	H STA 6+02.08 P STA 5+03.90											
EL SAG 45 DEG	H STA 6+08.08 P STA 5+09.90											
EL OB 45 DEG	H STA 6+16.22 P STA 5+21.41											
EL LT 67 DEG PIPELINE MARKER	H STA 6+79.57 P STA 5+84.77											

BOM#	MOI	102	122	102	123	102	130	102	122	102	123	102	122	102	123	101	101	121	101	102	122	102
		OPEN CUT (413')										PIPE RAMMING (91')					OPEN CUT (101')					

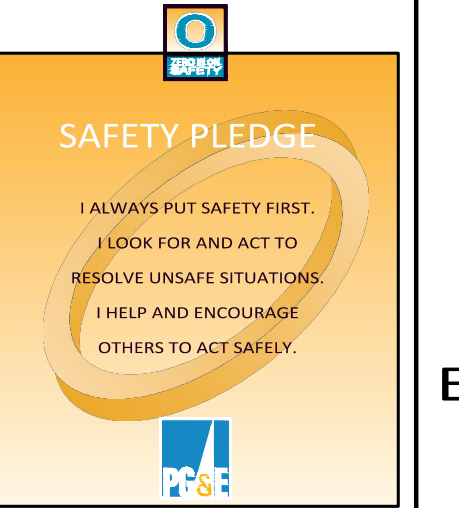
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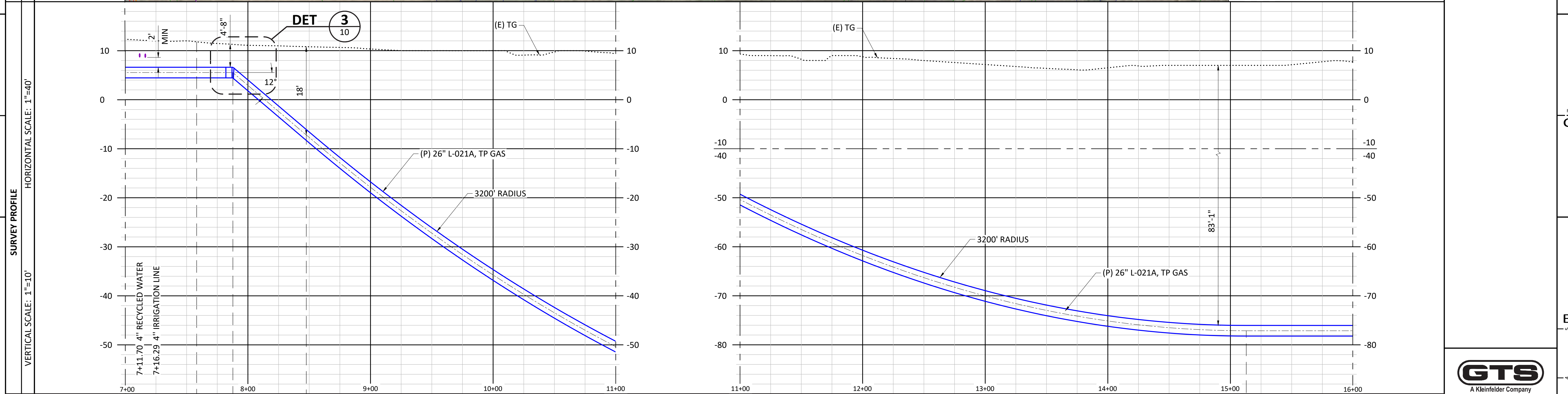
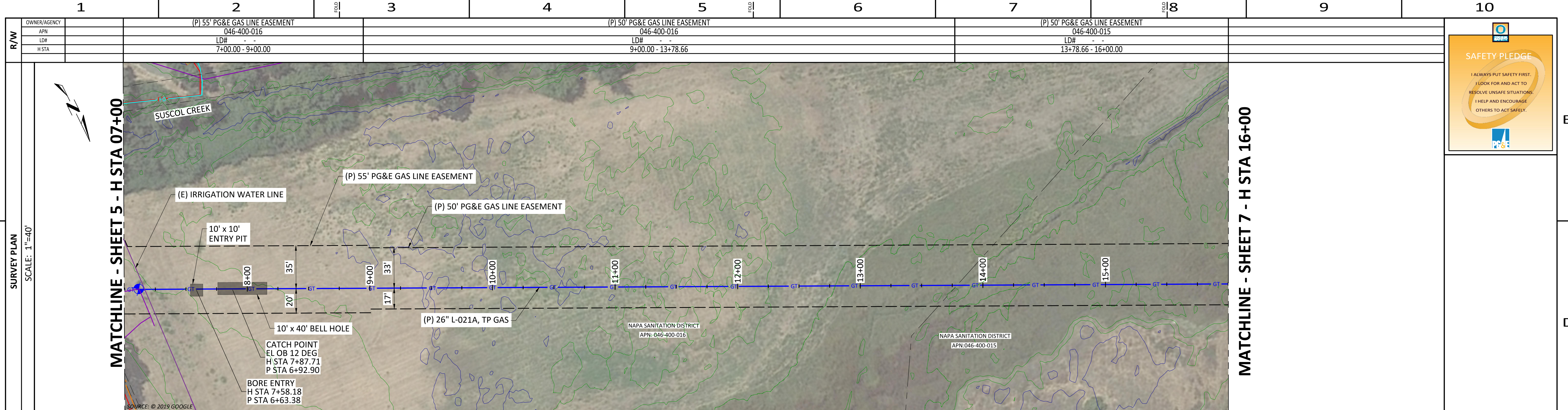
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SAN FRANCISCO, CALIFORNIA

BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	5 OF 20 SHEETS
74024169	C



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PIPELINE STATIONING	BORE ENTRY H STA 7+58.18 P STA 6+63.38	CATCH POINT EL OB 12 DEG H STA 7+87.71 P STA 6+92.90	BEGIN RADIUS H STA 8+47.63 P STA 7+54.16	END RADIUS H STA 15+12.95 P STA 14+24.37
7+00				
8+00				
9+00				
10+00				
11+00				
12+00				
13+00				
14+00				
15+00				
16+00				

BOM#	102	101	101	101
MOI	OPEN CUT (88')			HDD (819')

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SAN FRANCISCO, CALIFORNIA

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**SAFETY PLEDGE**

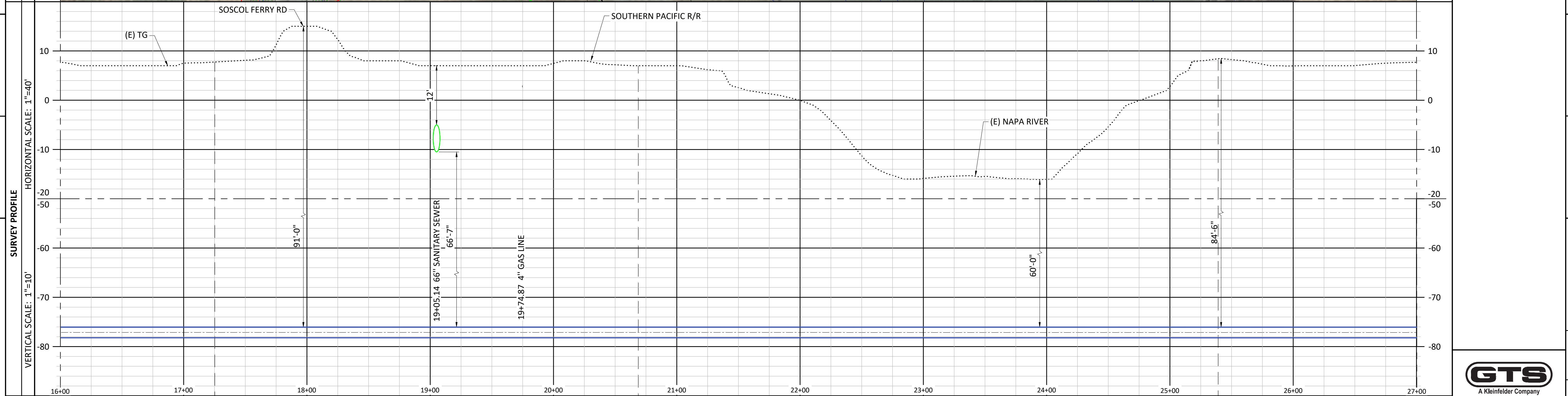
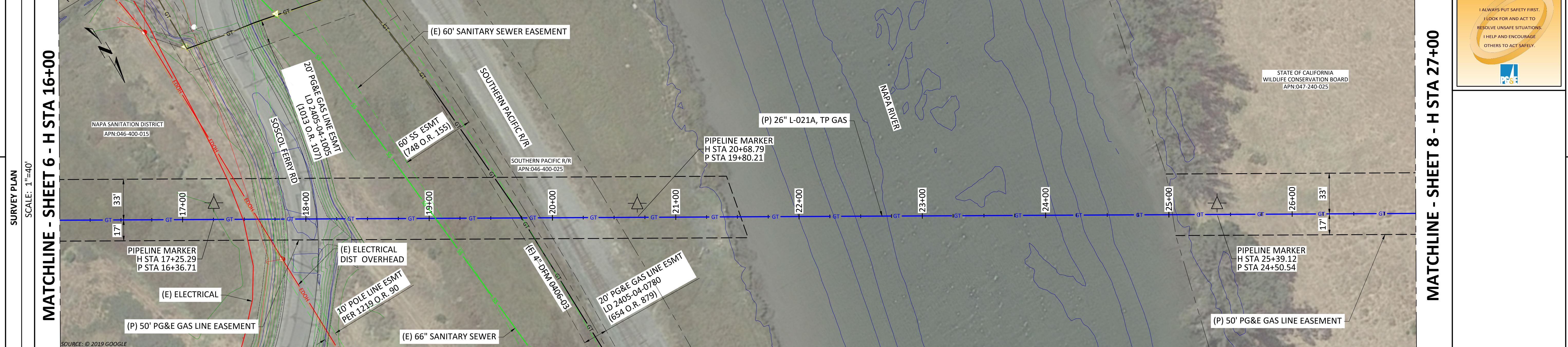
I ALWAYS PUT SAFETY FIRST.  
I LOOK FOR AND ACT TO  
RESOLVE UNSAFE SITUATIONS.  
I HELP AND ENCOURAGE  
OTHERS TO ACT SAFELY.

**GTS**

A Kleinfelder Company  
575 Lennon Lane, Suite 200  
Walnut Creek, CA 94598  
Project No. 00191020.000A

BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	6 OF 20 SHEETS
<b>74024169</b>	<b>C</b>

1	2	3	4	5	6	7	8	9	10	
OWNER/AGENCY APN LD# H STA	(P) 50' PG&E GAS LINE EASEMENT 046-400-015 LD# - 16+00.00 - 17+72.24	(E) 10' POLE LINE ESMT 046-400-015 LD# PER 1219 O.R. 90 17+72.24 - 17+82.32	(P) 50' PG&E GAS LINE EASEMENT 046-400-015 LD# - 17+82.32 - 19+10.64	(E) 60' SANITARY SEWER EASEMENT 046-400-015 LD# 748 O.R. 155 19+10.64 - 19+66.69	(E) 20' PG&E EASEMENT 046-400-015 LD# 2405-04-0780 19+66.69 - 19+90.09	(E) SOUTHERN PACIFIC R/R 046-400-025 LD# - 19+90.09 - 20+50.91	NAPA RIVER LD# - 20+50.91 - 25+02.74	(P) 50' PG&E GAS LINE EASEMENT 047-240-025 LD# - 25+02.74 - 27+00.00		



PIPELINE STATIONING	PIPELINE MARKER H STA 17+25.29 P STA 16+36.71	PIPELINE MARKER H STA 20+68.79 P STA 19+80.21	PIPELINE MARKER H STA 25+39.12 P STA 24+50.54

**SAFETY PLEDGE**

I ALWAYS PUT SAFETY FIRST.  
I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.  
I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.

**GTS**  
A Kleinfelder Company  
575 Lennon Lane, Suite 250  
Walnut Creek, CA 94598  
Project No. 00191020.000A

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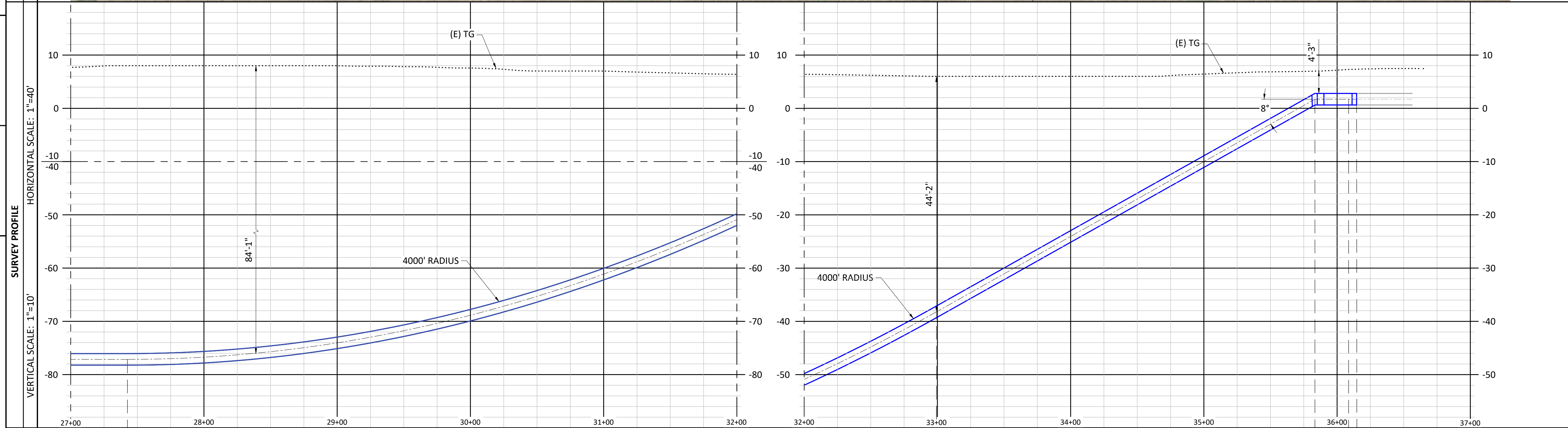
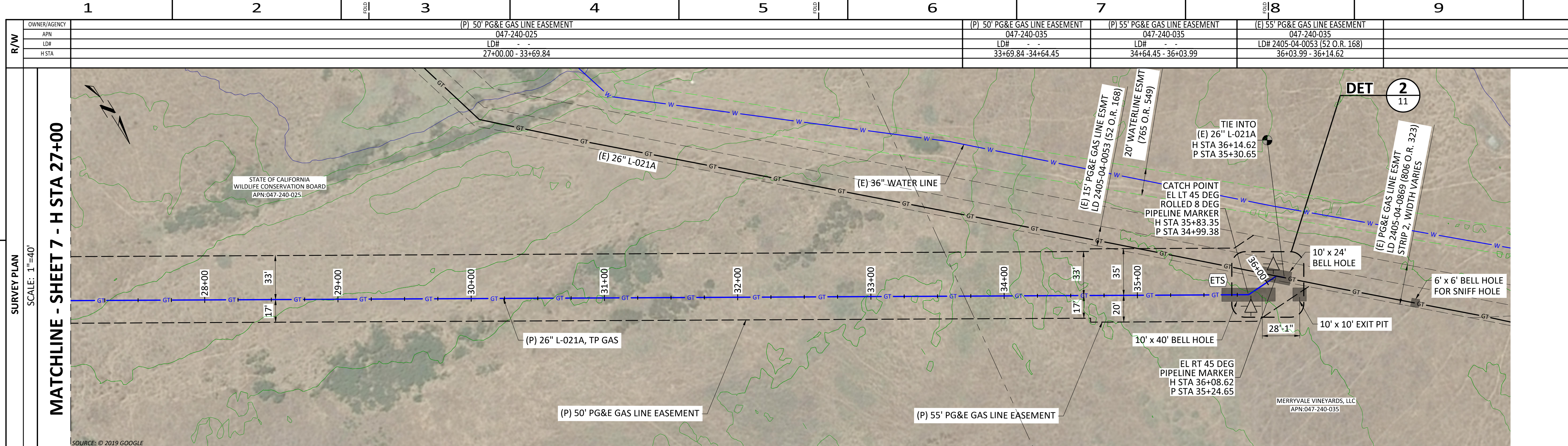
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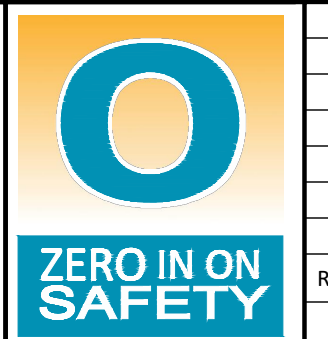
BILL OF MATL SHEET 16  
JOB ID I-195E  
SHEET NO. 7 OF 20 SHEETS  
74024169 C



PIPELINE STATIONING	27+00	28+00	29+00	30+00	31+00	32+00	33+00	34+00	35+00	36+00	37+00
BEGIN RADIUS											
H STA 27+42.58											
P STA 26+54.00											
END RADIUS											
H STA 32+99.27											
P STA 32+12.51											
CATCH POINT											
EL LT 45 DEG											
ROLLED 8 DEG											
PIPELINE MARKER											
H STA 35+83.35											
P STA 34+99.38											
EL RT 45 DEG											
PIPELINE MARKER											
H STA 36+08.62											
P STA 35+24.65											
TIE INTO											
(E) 26" L-021A											
H STA 36+14.62											
P STA 35+30.65											

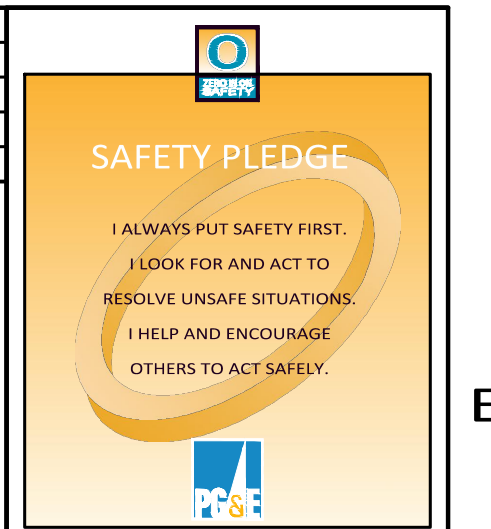
BOM#											
MOI											

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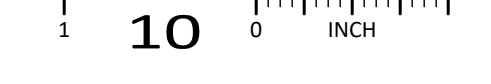
REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
B	7/21/22	ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG	AG	PD	JQ

PIPELINE - PLAN & PROFILE (L-021A)  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

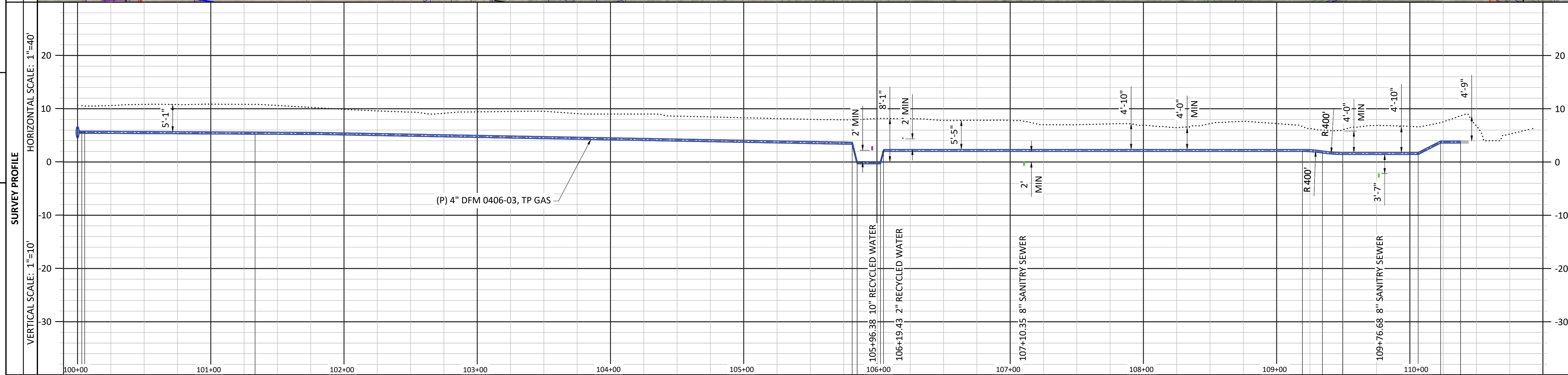
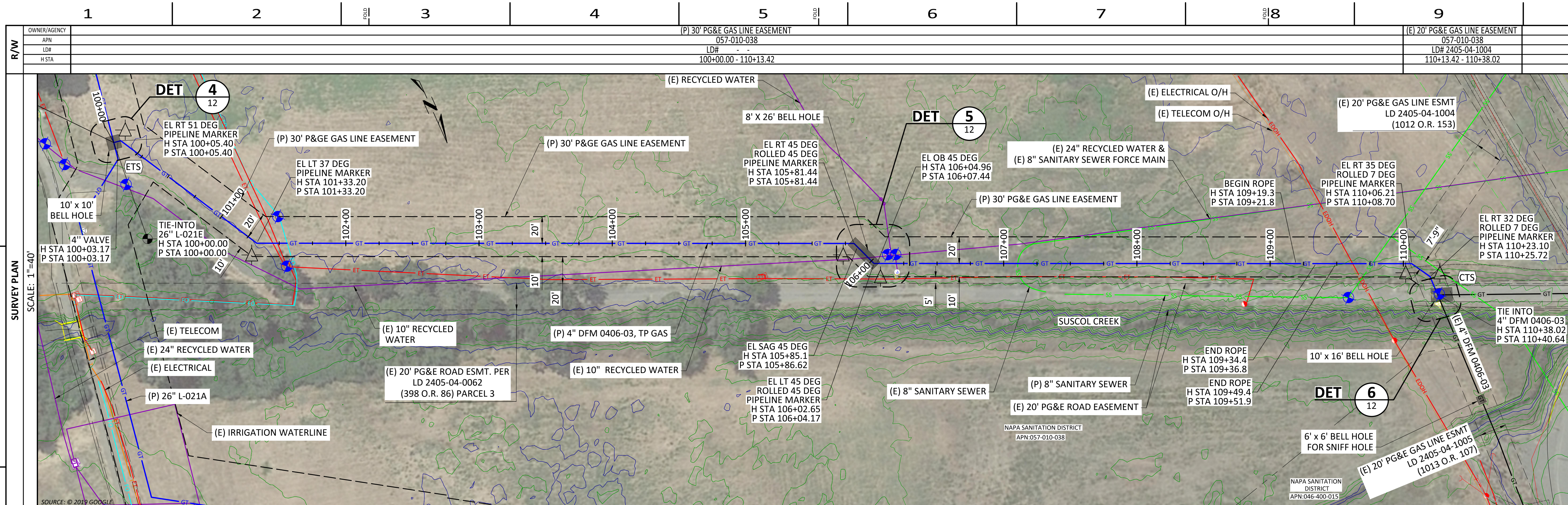


**ISSUED FOR PERMIT**  
**NOT APPROVED FOR CONSTRUCTION**

BILL OF MATL SHEET 16  
JOB ID I-195E  
SHEET NO. 8 OF 20 SHEETS  
74024169 C







PIPELINE STATIONING	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00
TIE-INTO 26\" L-021E 26\" X 4\" TEE H STA 100+00.00 P STA 100+00.00											
4\" VALVE H STA 100+03.17 P STA 100+03.17											
EL RT 51 DEG PIPELINE MARKER H STA 100+05.40 P STA 100+05.40											
EL LT 37 DEG PIPELINE MARKER H STA 101+33.20 P STA 101+33.20											
EL LT 45 DEG ROLLED 45 DEG PIPELINE MARKER H STA 105+81.44 P STA 105+81.44											
EL SAG 45 DEG ROLLED 45 DEG PIPELINE MARKER H STA 106+02.65 P STA 106+02.65											
EL OB 45 DEG ROLLED 45 DEG PIPELINE MARKER H STA 106+07.44 P STA 106+07.44											
BEGIN ROPE H STA 109+19.3 P STA 109+21.8											
END ROPE H STA 109+34.4 P STA 109+36.8											
END ROPE H STA 109+49.4 P STA 109+51.9											
EL RT 35 DEG ROLLED 7 DEG PIPELINE MARKER H STA 110+06.21 P STA 110+08.70											
EL RT 32 DEG ROLLED 7 DEG PIPELINE MARKER H STA 110+23.10 P STA 110+25.72											
TIE INTO 4\" DFM 0406-03 H STA 110+38.02 P STA 110+40.64											

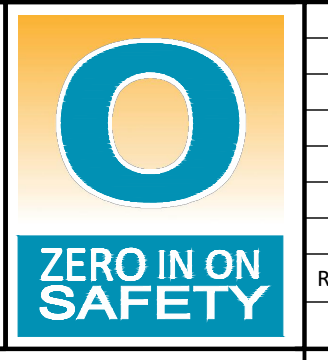
**SAFETY PLEDGE**

I ALWAYS PUT SAFETY FIRST.  
I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.  
I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.

**GTS**  
A Kleinfelder Company  
575 Lennon Lane, Suite 250  
Walnut Creek, CA 94598  
Project No. 00191020.000A

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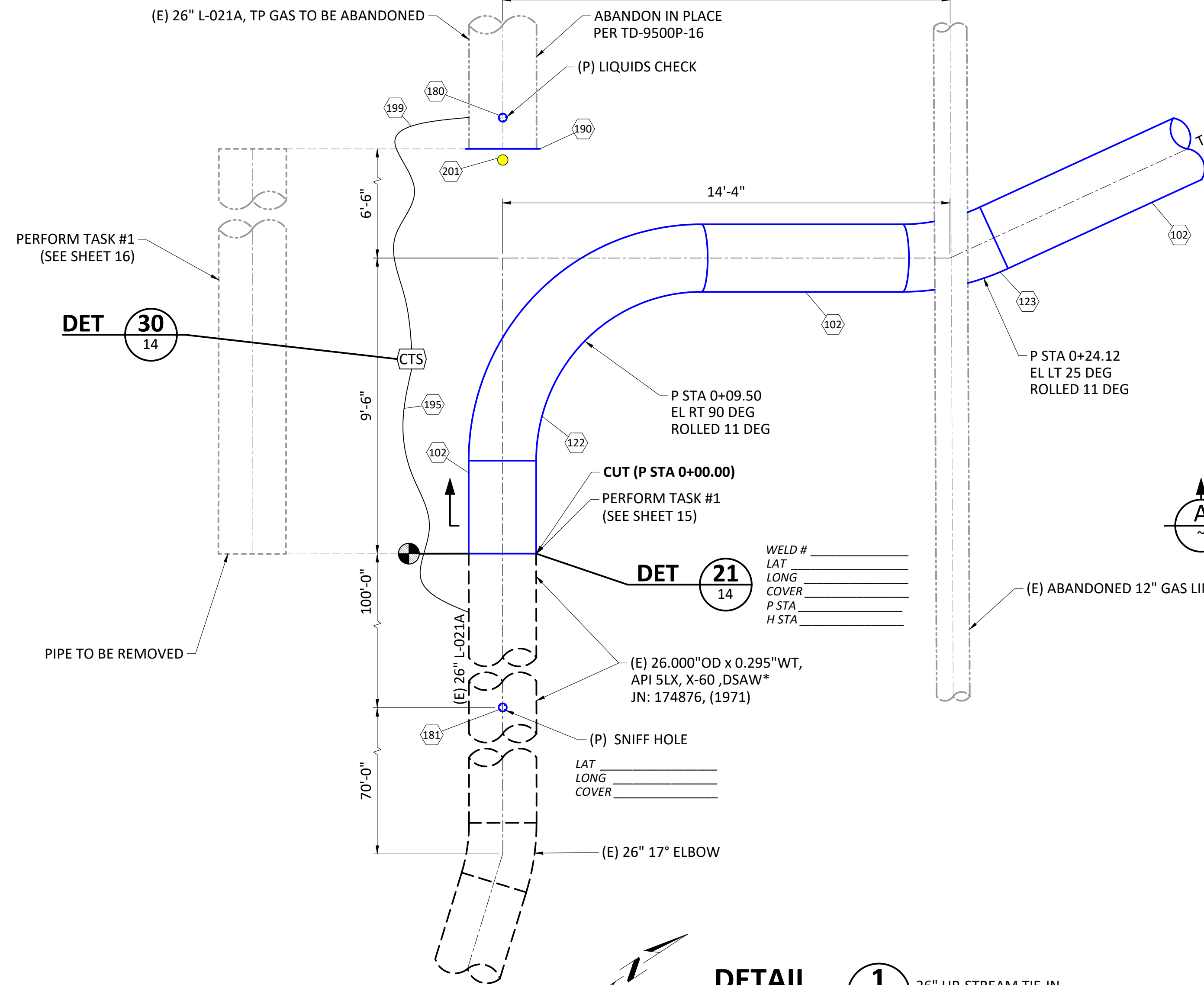
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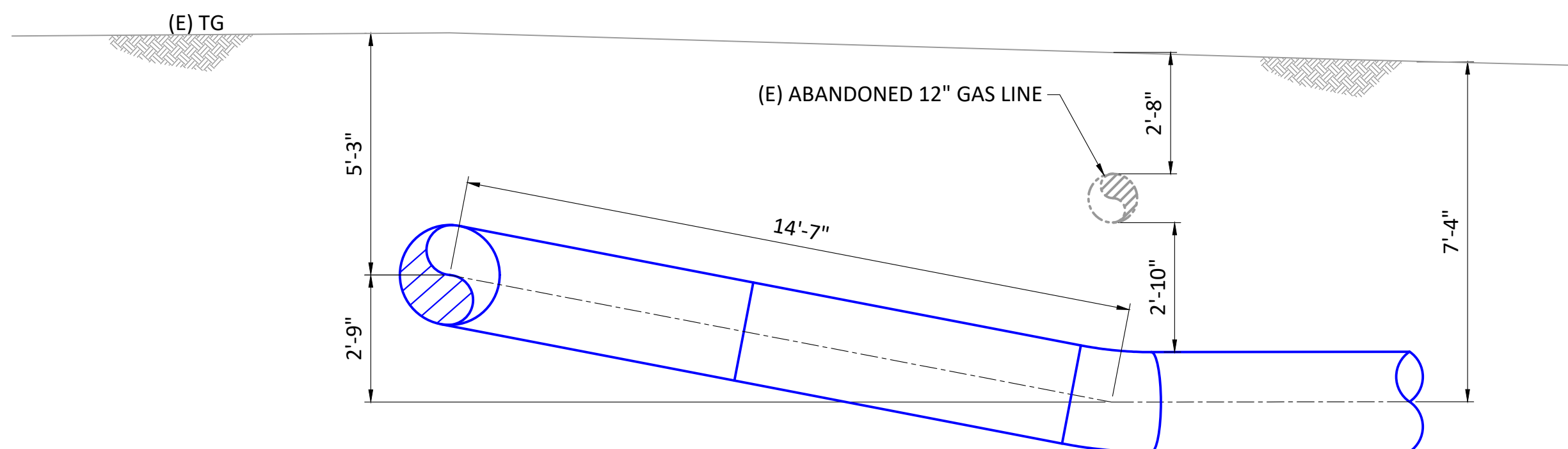
REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
B	7/21/22	ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG	AG	PD	JQ

PIPELINE - PLAN & PROFILE (DFM 0406-03)  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

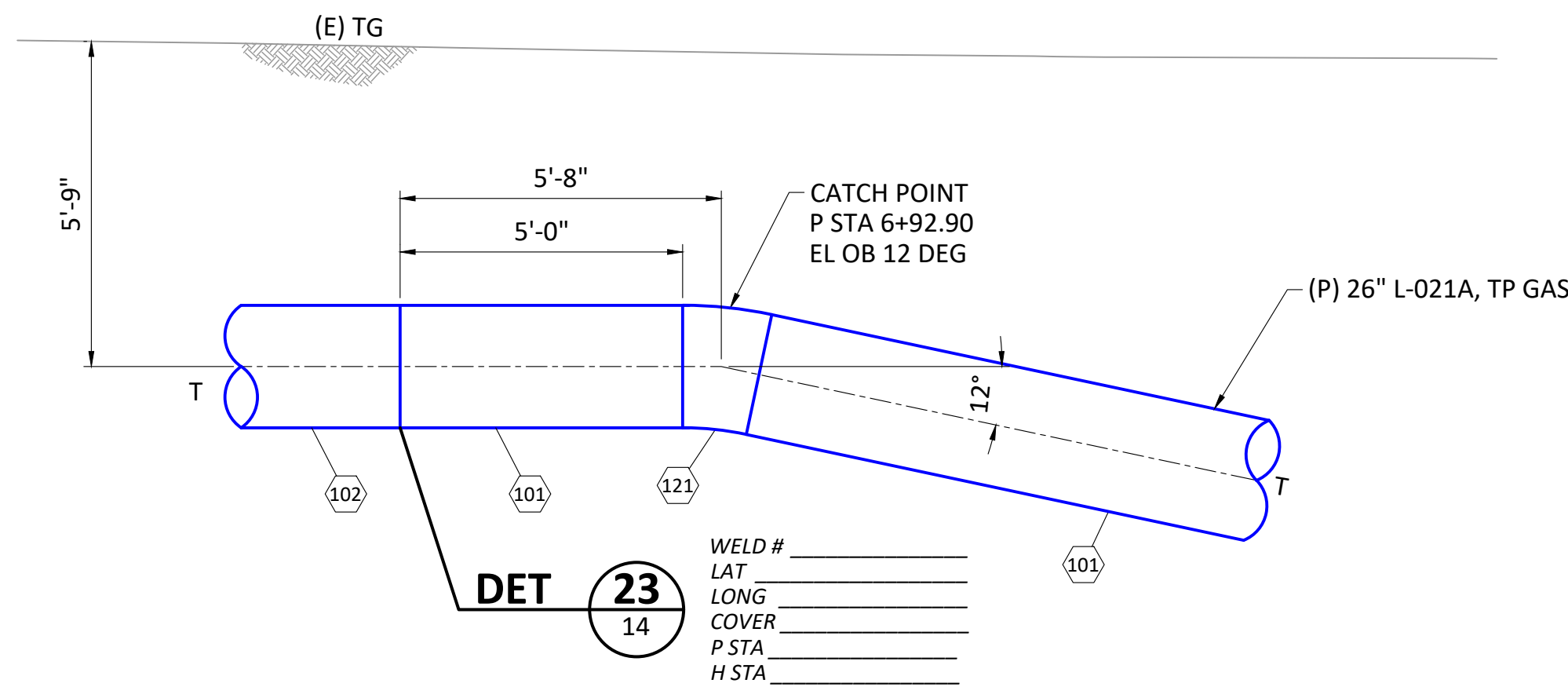
BILL OF MATL SHEET 16
JOB ID I-195E
SHEET NO. 9 OF 20 SHEETS
74024169 C



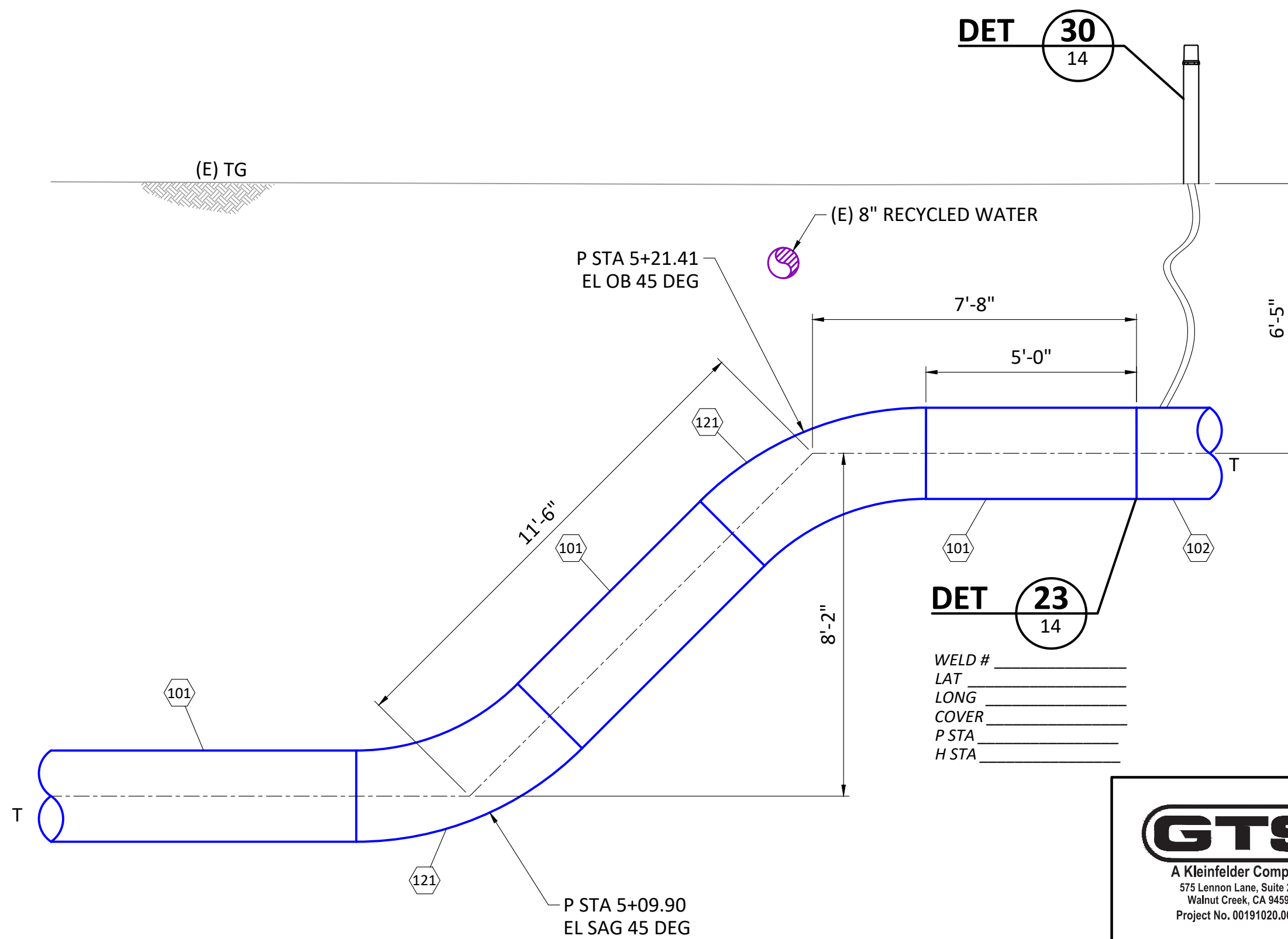
**DETAIL 1**  
SCALE: 3/8" = 1'-0"  
26" UP-STREAM TIE-IN  
H STA 1+00.00



**ELEVATION A**  
SCALE: 3/8" = 1'-0"



**DETAIL 3**  
SCALE: 3/8" = 1'-0"  
26" UP-STREAM HDD CATCH POINT  
H STA 7+87.71



**DETAIL 8**  
SCALE: 3/8" = 1'-0"  
26" OFFSET DETAIL  
H STA 6+08.08

\*ASSUMED VALUES PER PG&E TD-4125P-09, PROCEDURE FOR RESOLVING UNKNOWN PIPELINE FEATURES

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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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B	7/21/22	ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
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PIPELINE - DETAILS  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA



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BILL OF MATL SHEET 16  
JOB ID I-195E  
SHEET NO. 10 OF 20 SHEETS  
74024169 C

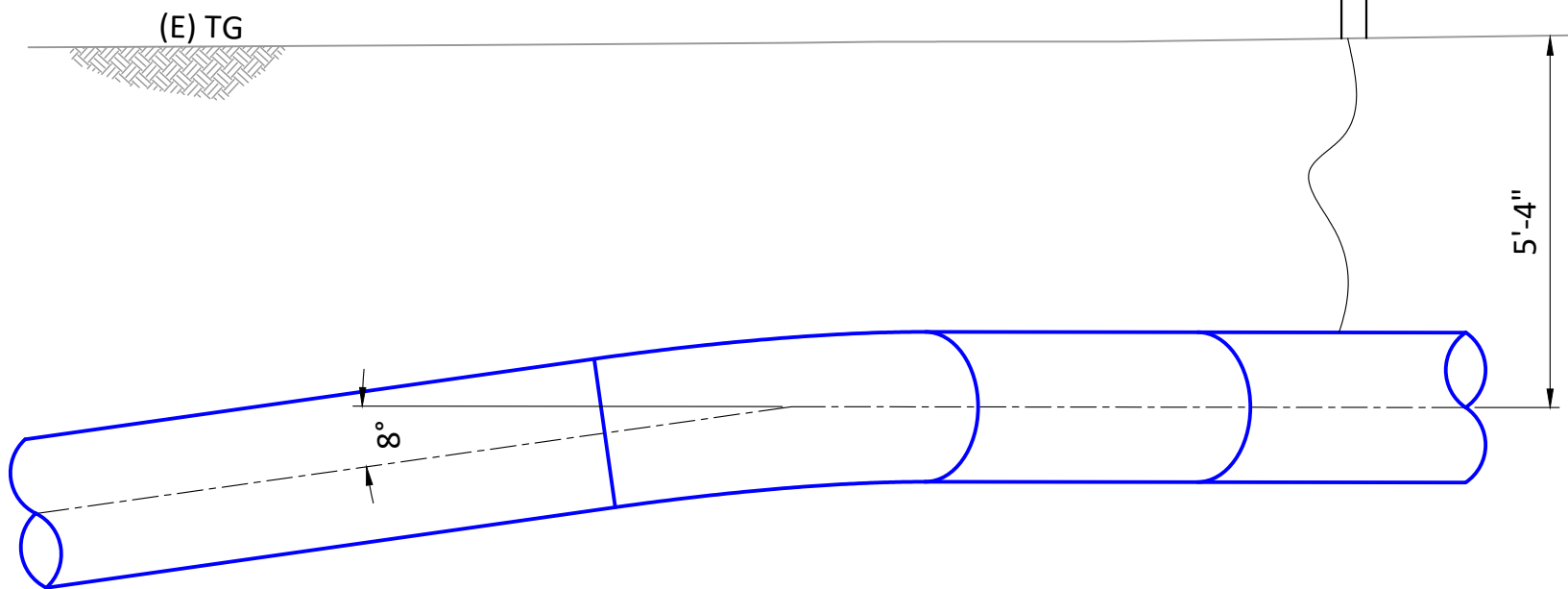
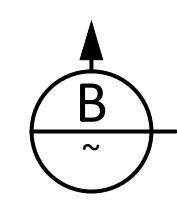
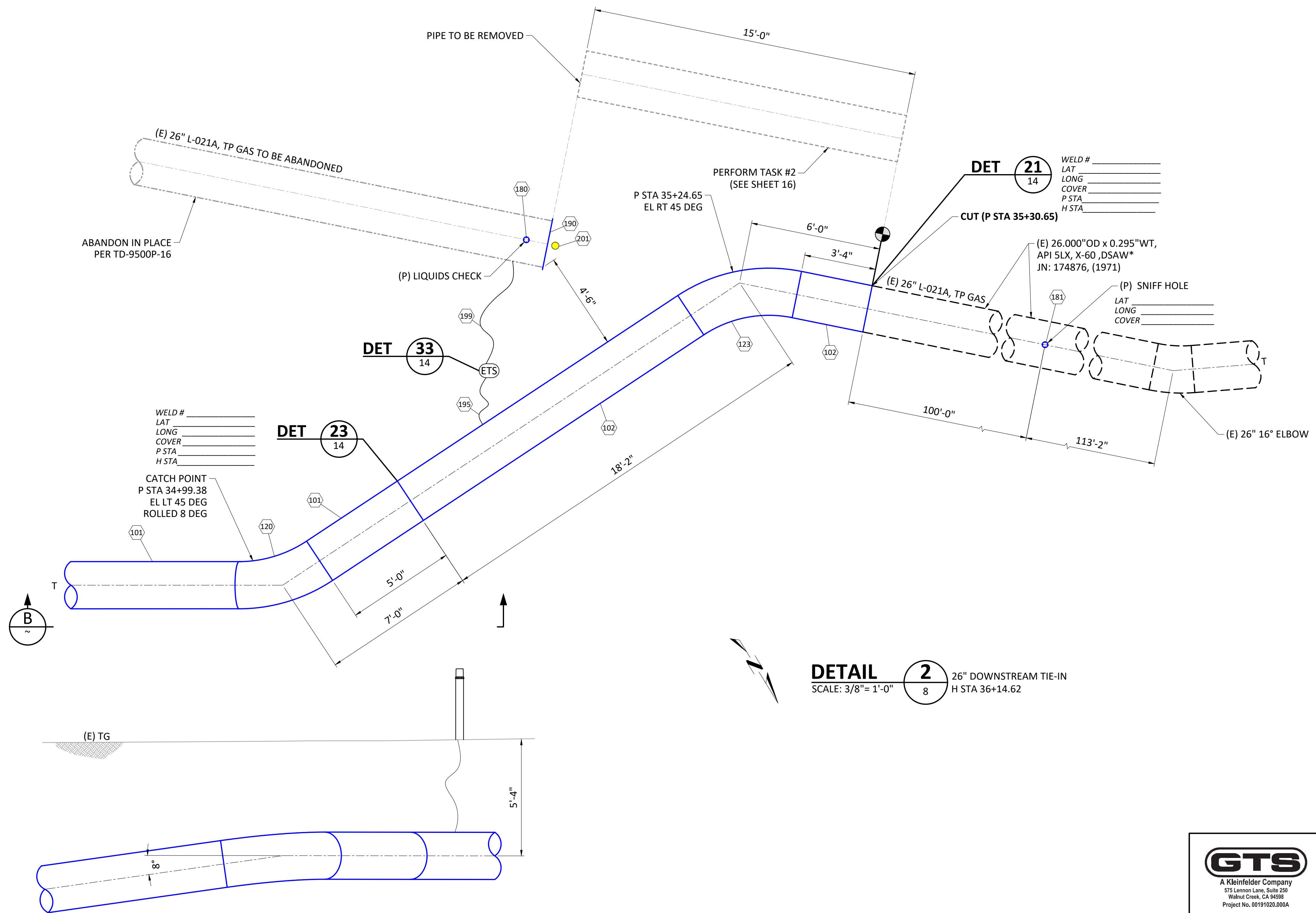
1 2 3 4 5 6 7 8 9 10

E  
D  
C  
B  
A

E  
D  
C  
B  
A

1 2 3 4 5 6 7 8 9 10

INCH



**ELEVATION B**  
SCALE: 3/8" = 1'-0"

**DETAIL 2**  
SCALE: 3/8" = 1'-0"  
26" DOWNSTREAM TIE-IN  
H STA 36+14.62

\*ASSUMED VALUES PER PG&E TD-4125P-09, PROCEDURE FOR RESOLVING UNKNOWN PIPELINE FEATURES

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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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PIPELINE - DETAILS  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

**GTS**  
A Kleinfelder Company  
575 Lemon Lane, Suite 200  
Walnut Creek, CA 94598  
Project No. 00191020.000A

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**NOT APPROVED FOR CONSTRUCTION**

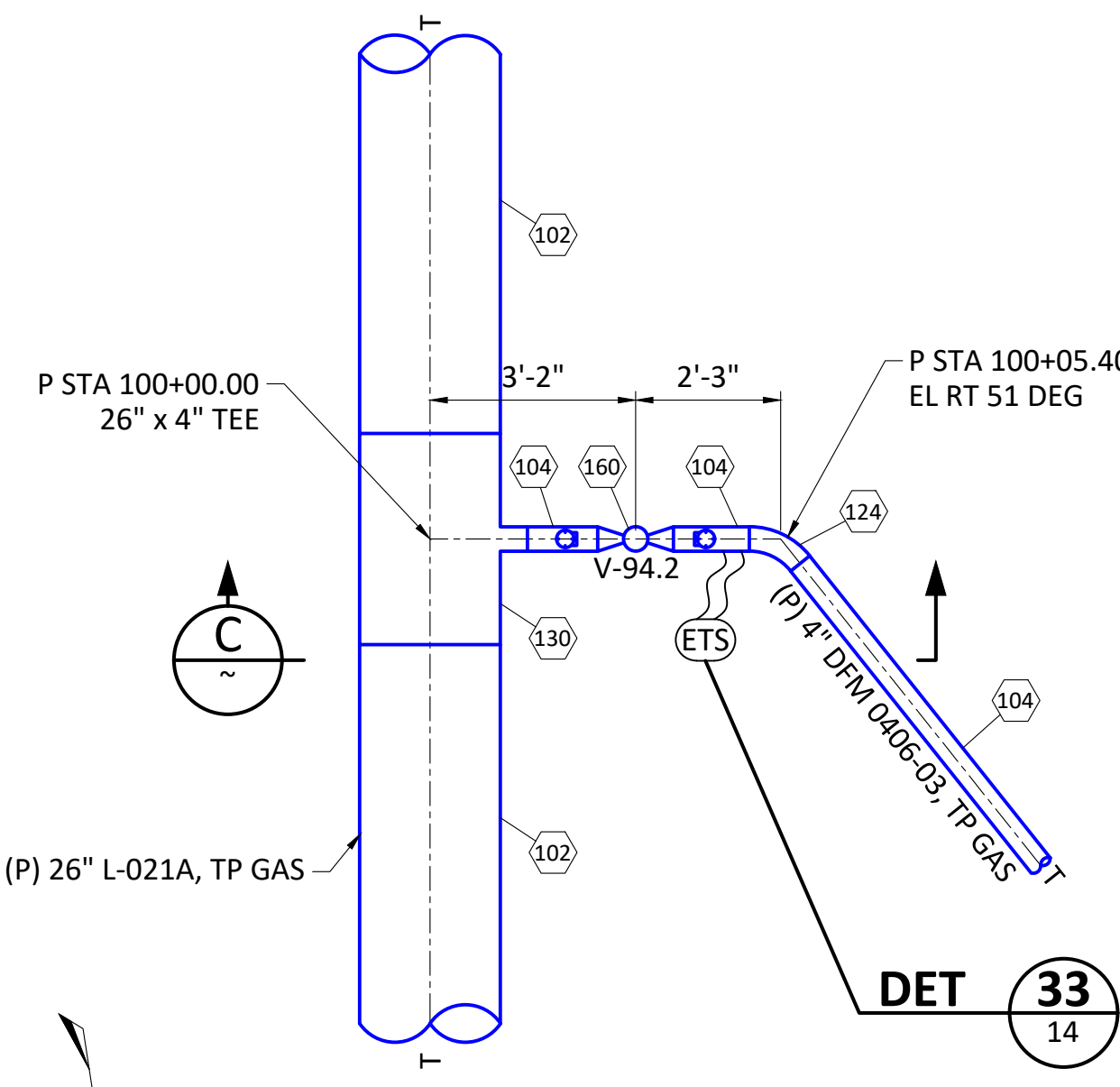
BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	11 OF 20 SHEETS
<b>74024169</b>	<b>C</b>

**VALVE DATA STAMP**

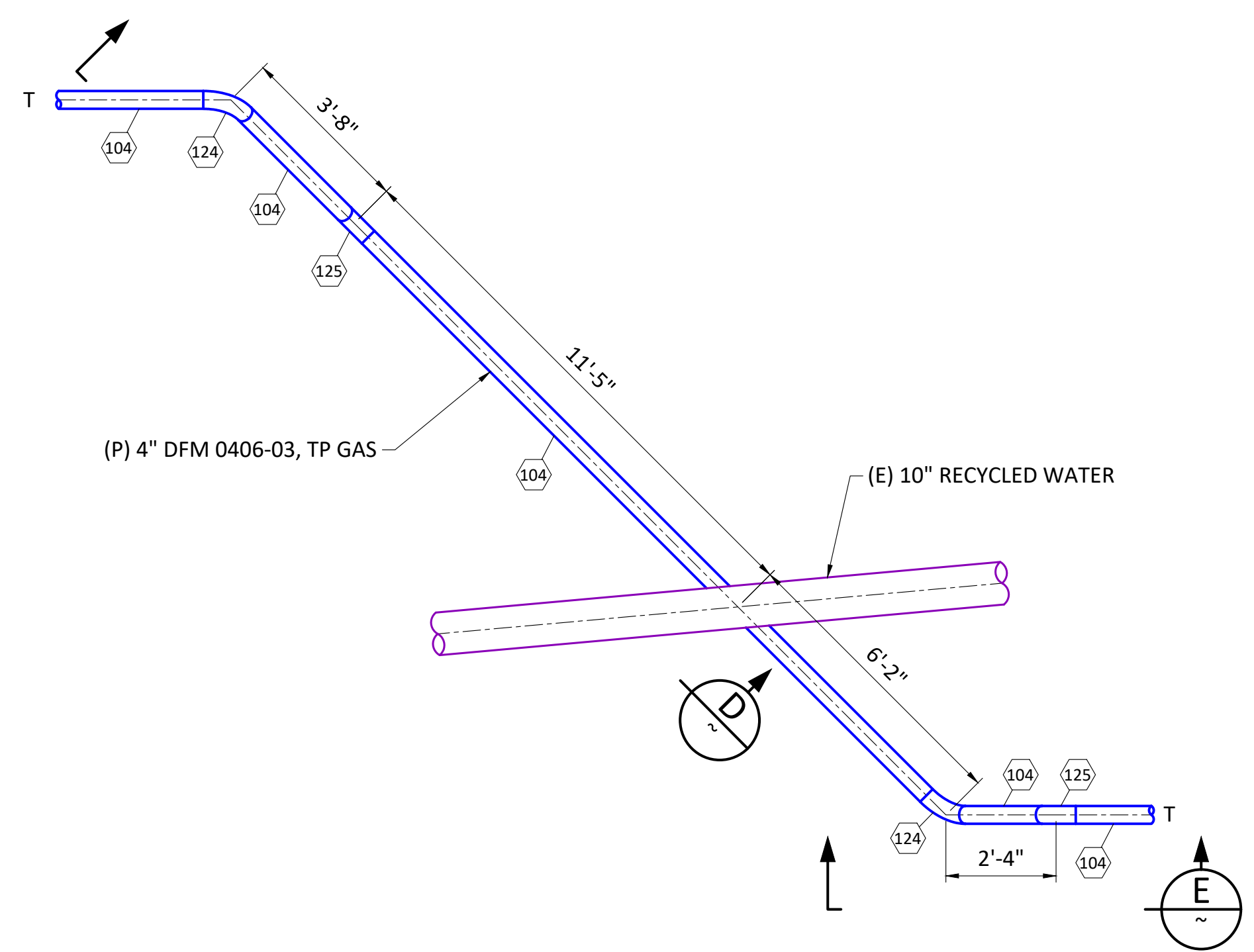
BOM# 160 VALVE SIZE 4"  
 TECH ID (VALVE #) V-94.2  
 VALVE TYPE BALL VALVE ANSI 600  
 MANUFACTURER \_\_\_\_\_  
 MODEL/FIGURE # \_\_\_\_\_  
 SERIAL# \_\_\_\_\_  
 CRITICAL VALVE  YES  NO  
 CRITICAL VALVES ARE TO BE COMMISSIONED PER TD-4520P-1

**COMMISSIONING**  
 VALVE TO BE COMMISSIONED BY GAS PIPELINE OPERATION & MAINTENANCE (GPO&M) AND DIVISION OR DISTRICT PERSONNEL PRIOR TO PLACING VALVE IN SERVICE.

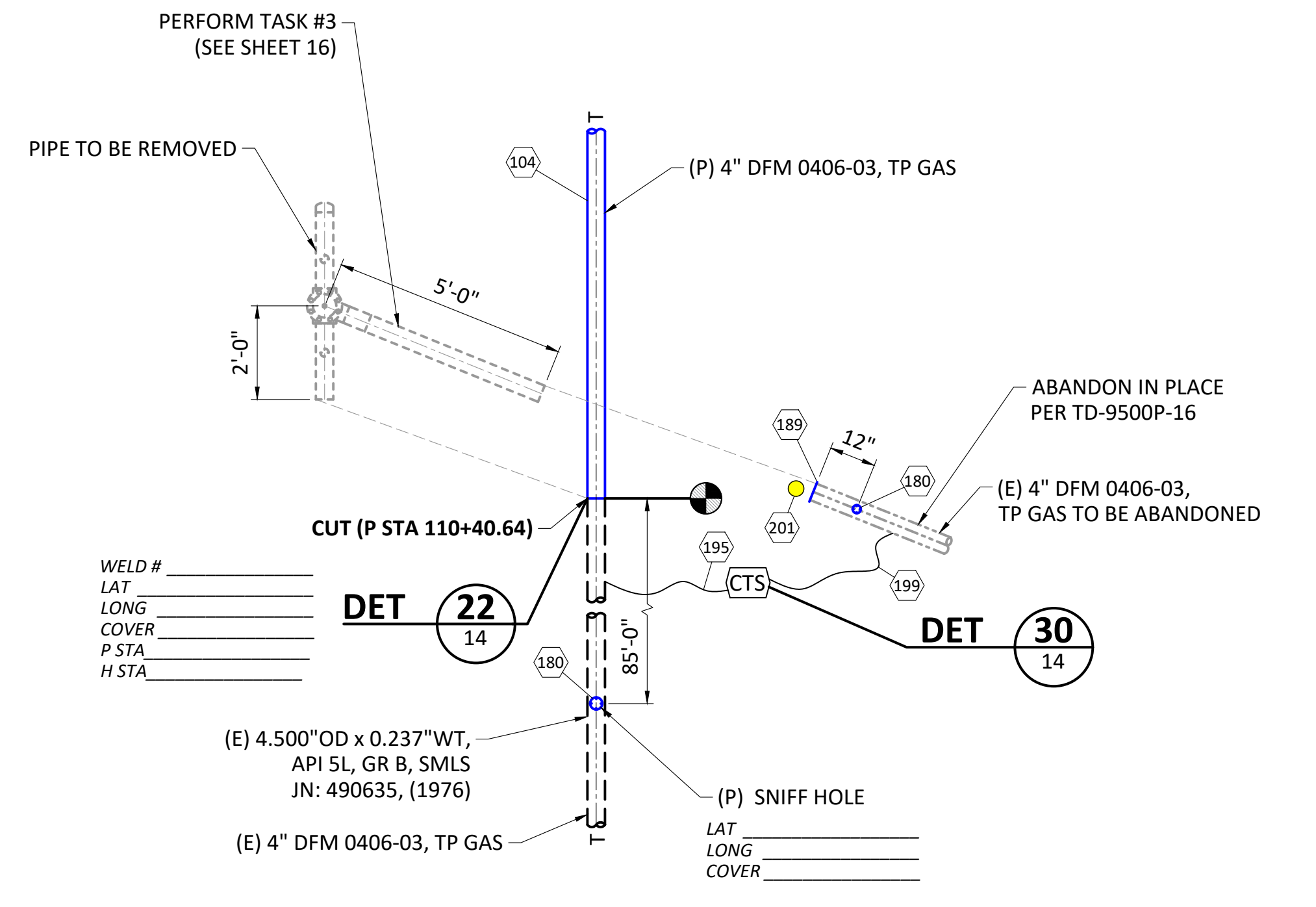
**COMMISSIONED BY:**  
 LAN ID \_\_\_\_\_  
 DATE \_\_\_\_\_  
 NUMBER OF TURNS OF HANDWHEEL (IF APPROPRIATE) \_\_\_\_\_



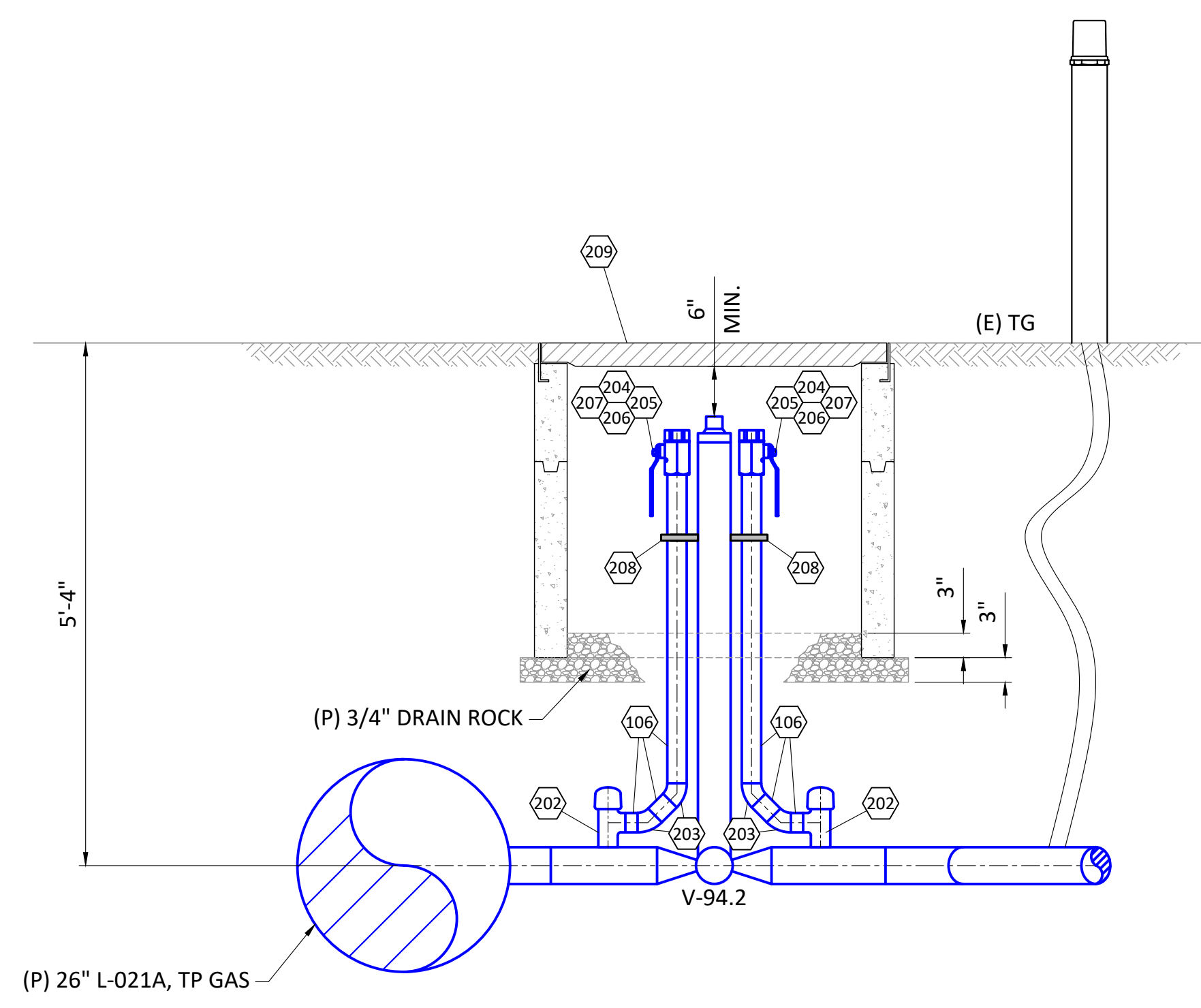
**DETAIL 4**  
 SCALE: 3/8"=1'-0"  
 DFM 0406-03 TO L-021A TIE-IN  
 H STA 100+00.00



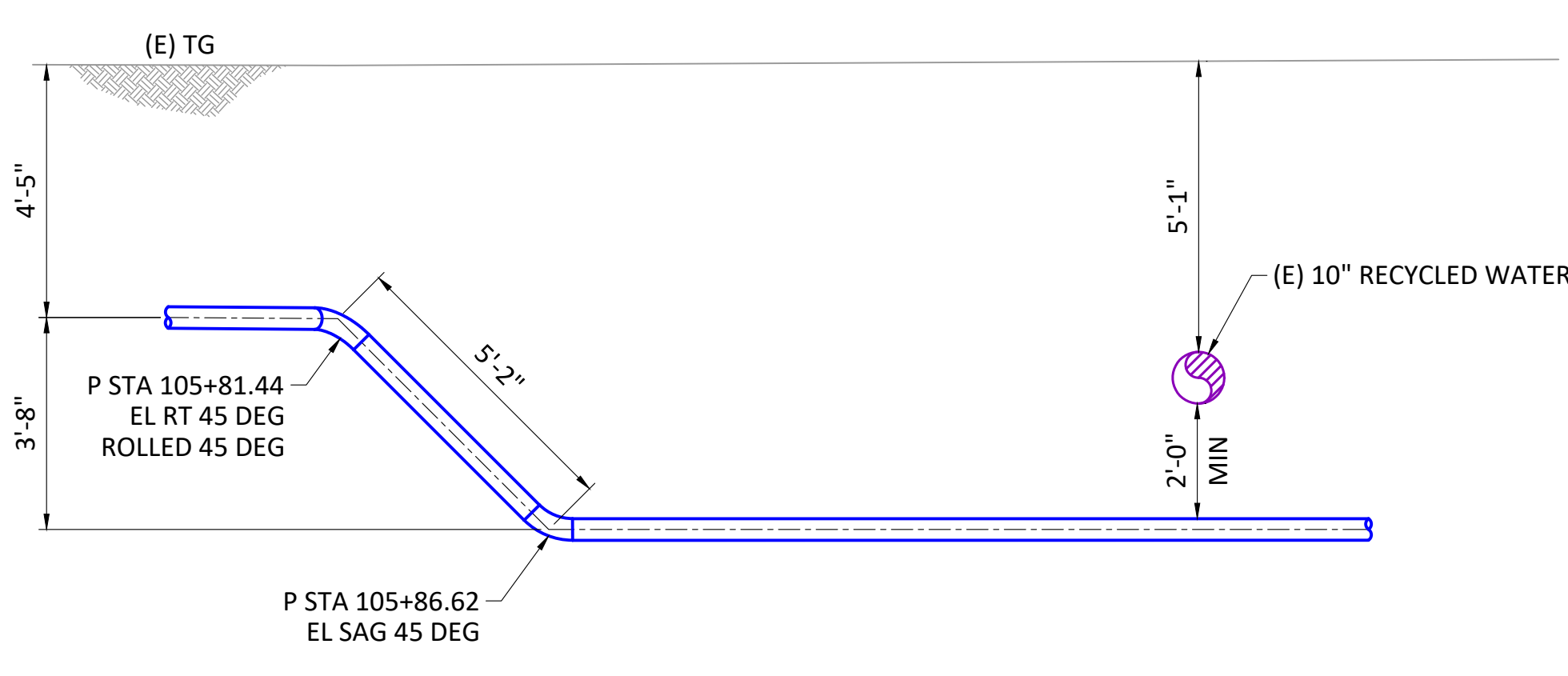
**DETAIL 5**  
 SCALE: 3/8"=1'-0"  
 4" OFFSET DETAIL  
 H STA 105+81.44



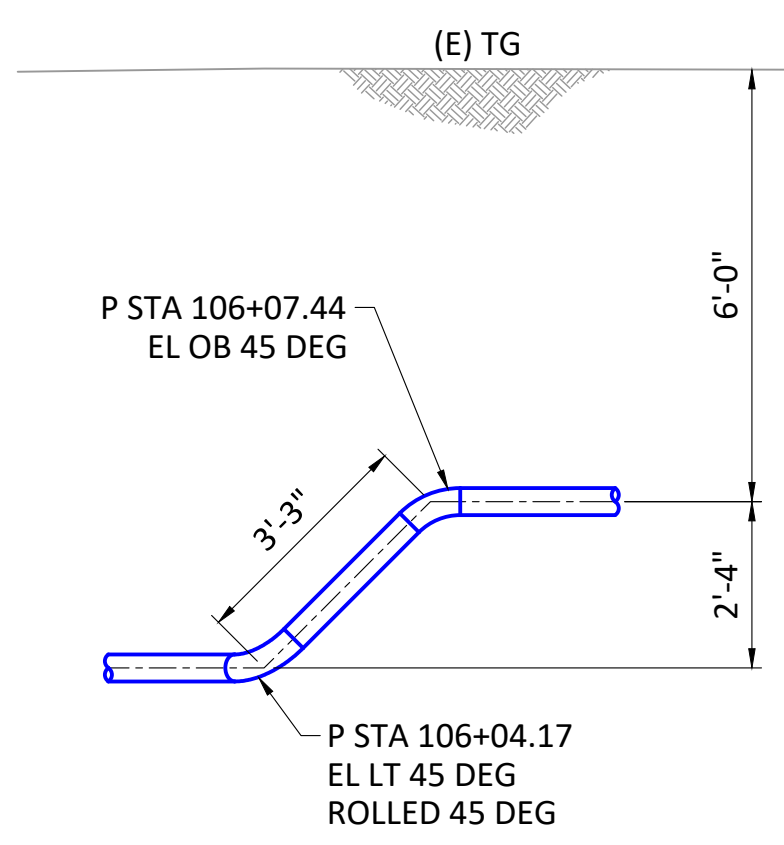
**DETAIL 6**  
 SCALE: 3/8"=1'-0"  
 4" DOWNSTREAM TIE-IN  
 H STA 110+38.02



**ELEVATION C**  
 SCALE: 3/4"=1'-0"



**ELEVATION D**  
 SCALE: 3/8"=1'-0"



**ELEVATION E**  
 SCALE: 3/8"=1'-0"

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**811**  
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**ZERO IN ON SAFETY**

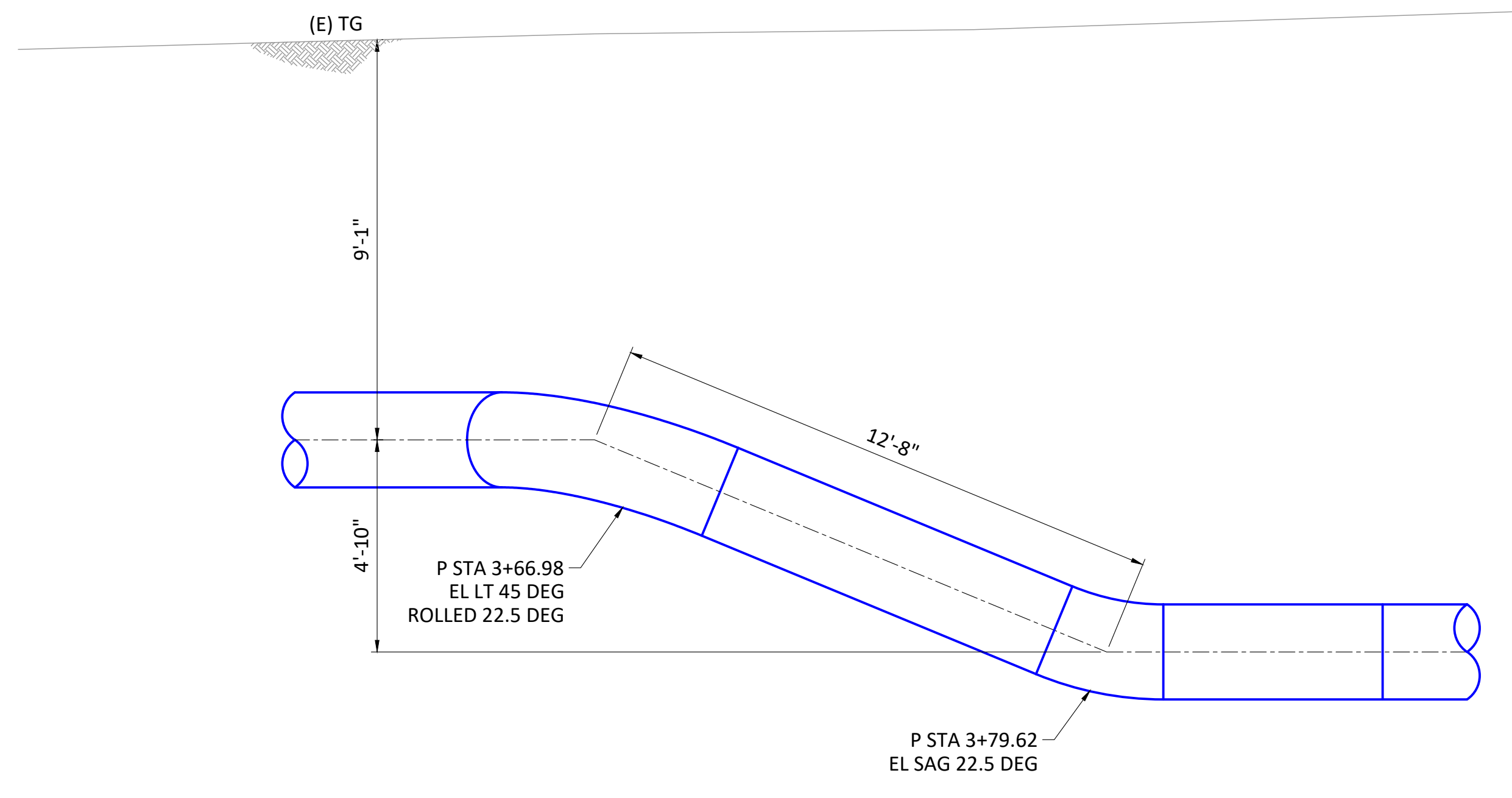
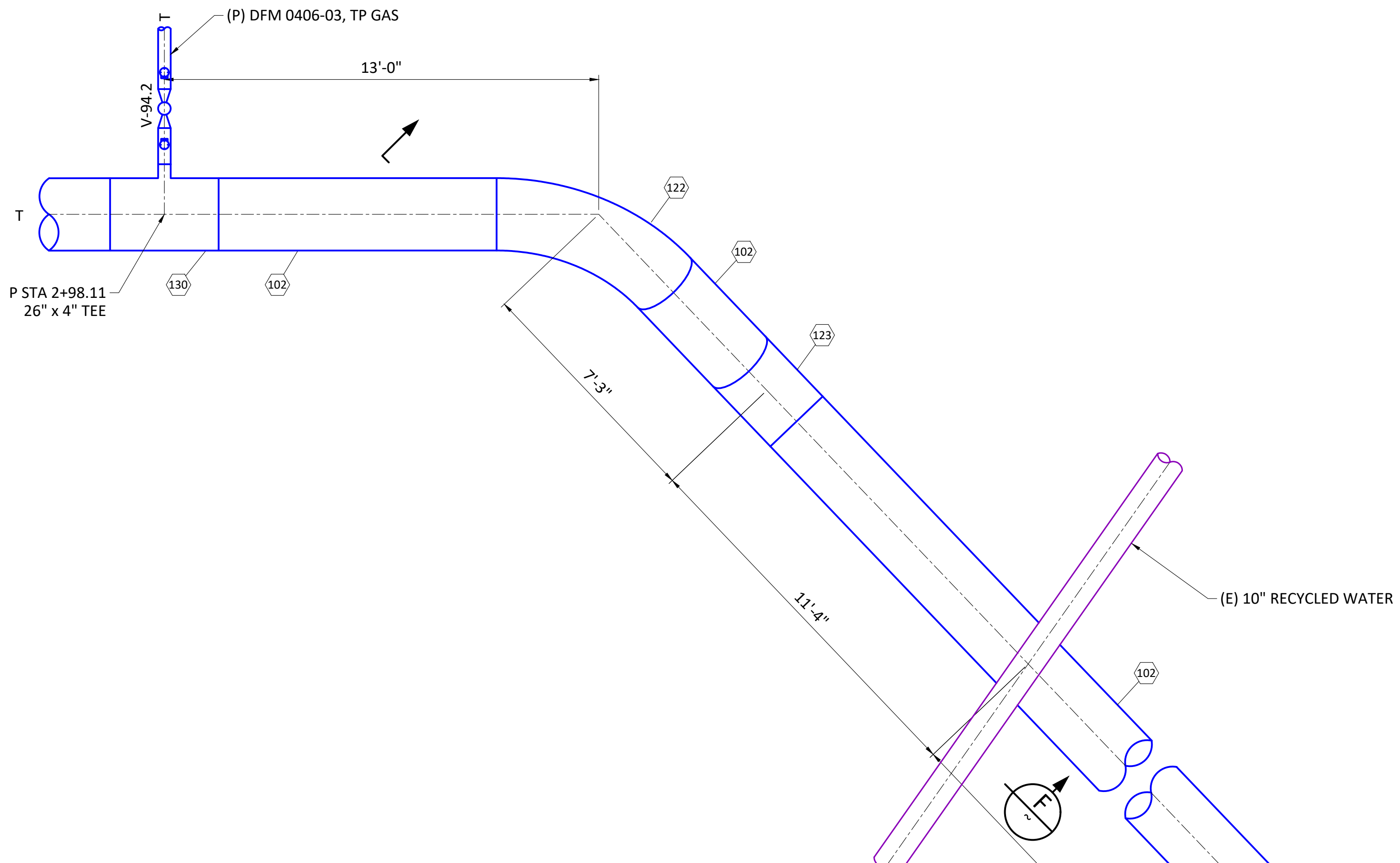
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C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
B	7/21/22	ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG	AG	PD	JQ

**PIPELINE - DETAILS**  
 L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
 ILI UPGRADE 26" PIPE  
 NAPA, NAPA COUNTY  
 GAS TRANSMISSION & DISTRIBUTION  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SAN FRANCISCO, CALIFORNIA

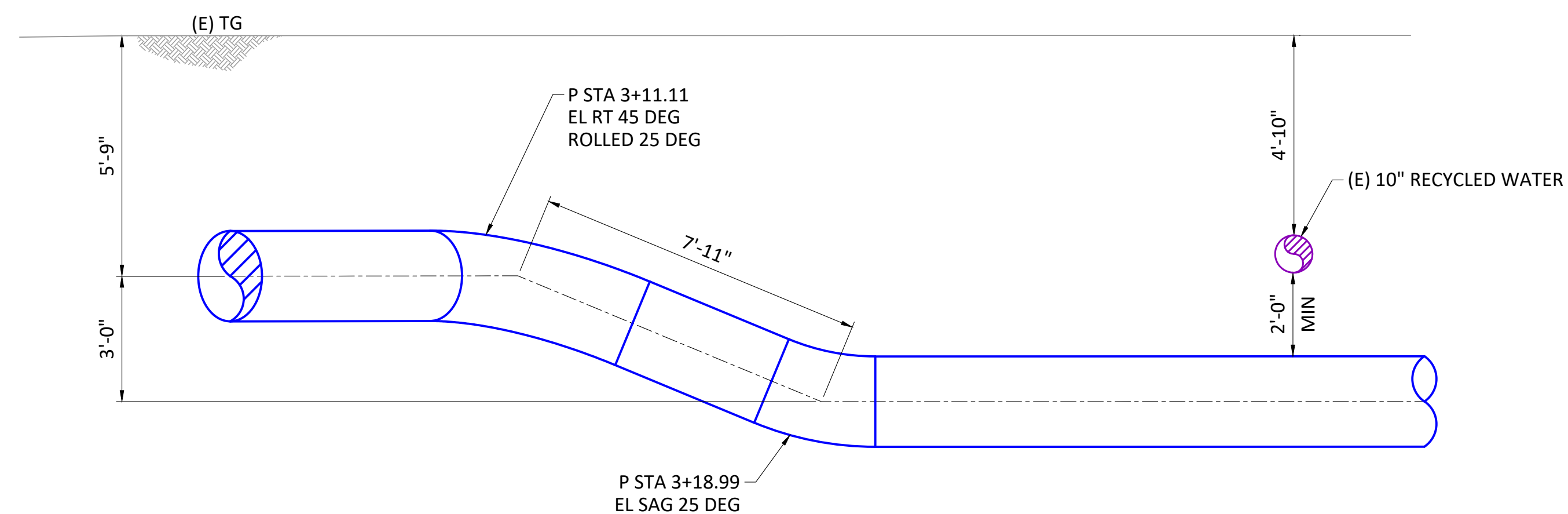
**GTS**  
 A Kleinfelder Company  
 575 Lennon Lane, Suite 250  
 Walnut Creek, CA 94598  
 Project No. 00191020.000A

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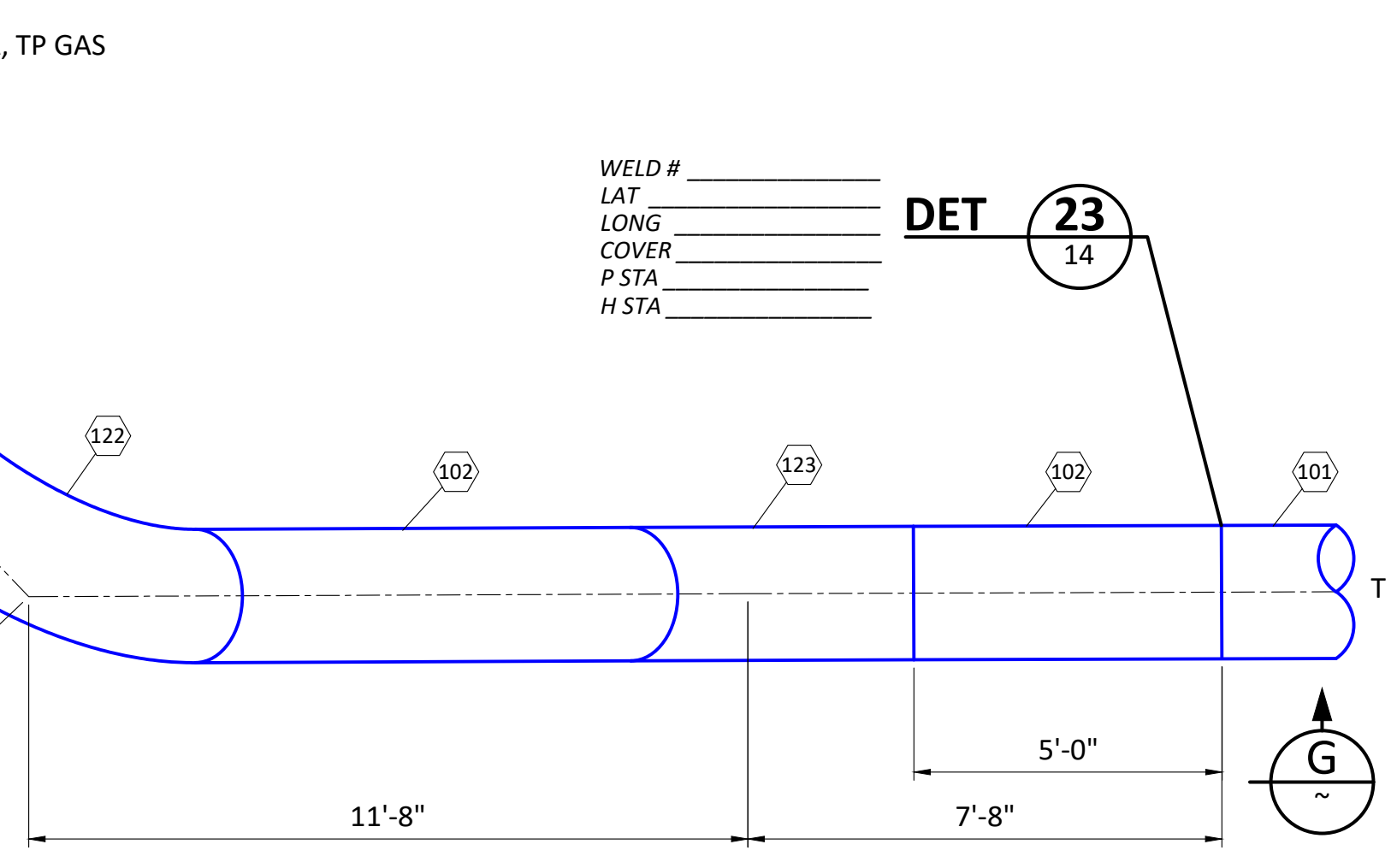
BILL OF MATL SHEET 16  
 JOB ID I-195E  
 SHEET NO. 12 OF 20 SHEETS  
 74024169 C



**ELEVATION G**  
SCALE: 3/8" = 1'-0"



**ELEVATION F**  
SCALE: 3/8" = 1'-0"

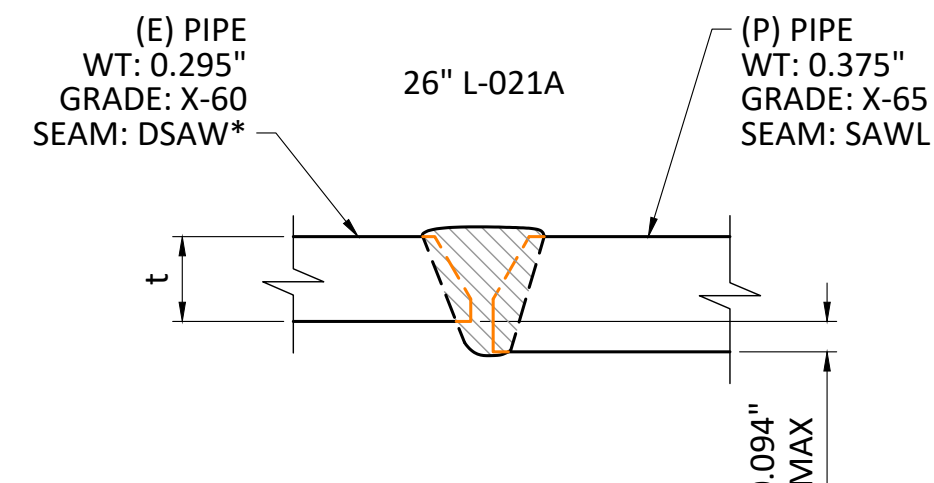


**GTS**  
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575 Lenson Lane, Suite 250  
Walnut Creek, CA 94598  
Project No. 00191020.000A

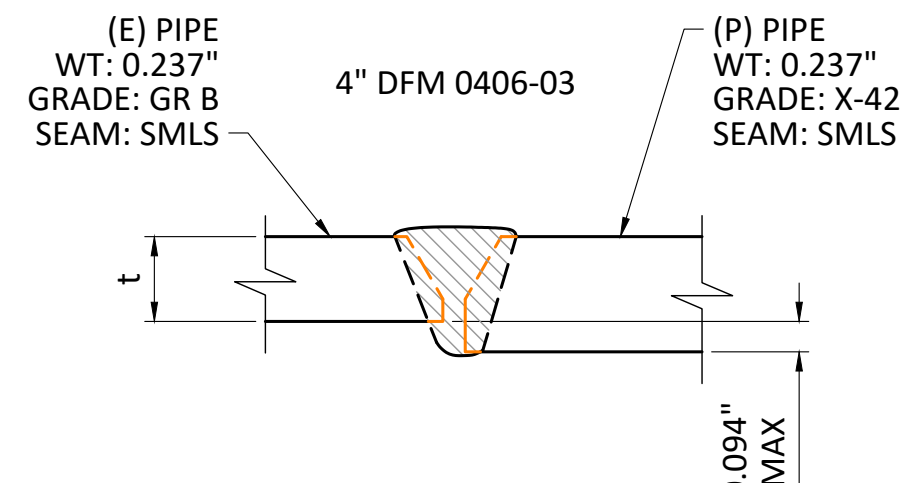
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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD																															
C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ																															
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A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG	AG	PD	JQ																															

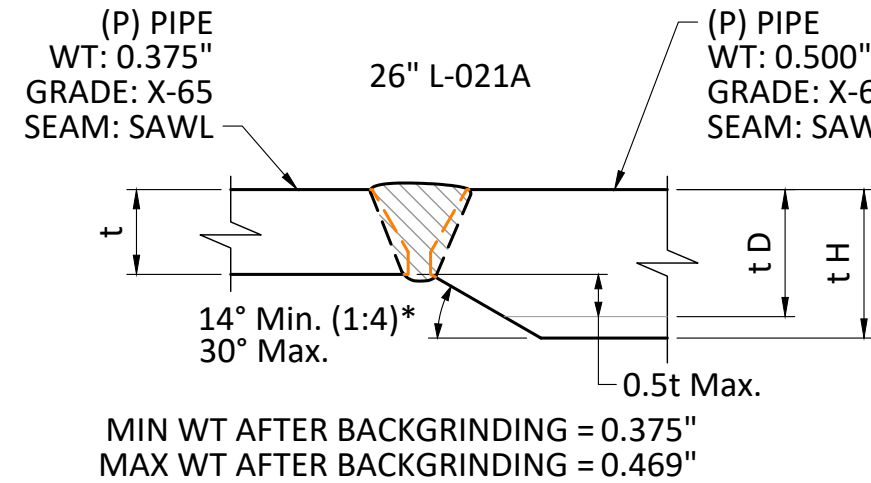
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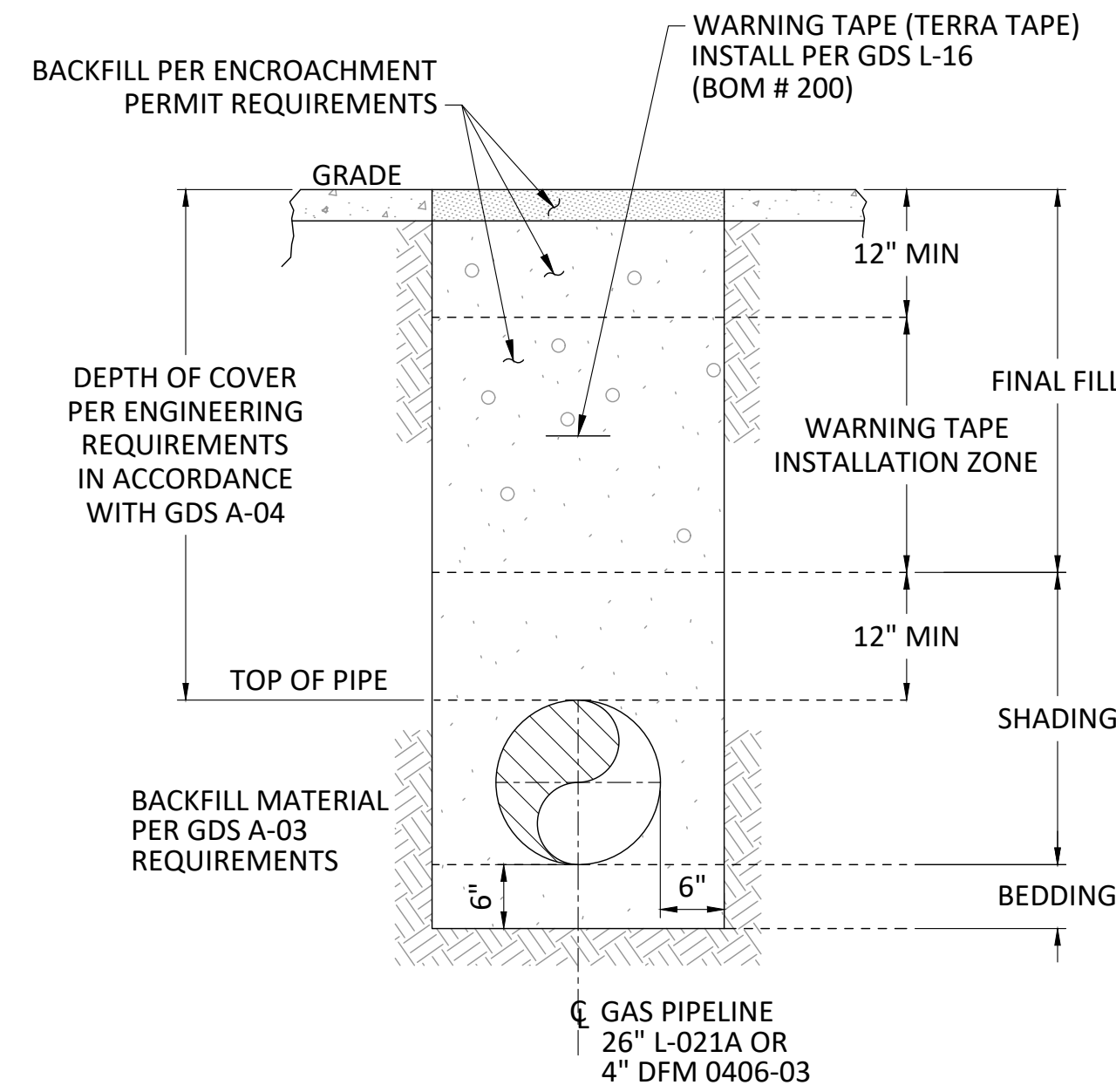
**DETAIL 21**  
SCALE: NO SCALE  
WELD (TD-4160P-20)  
FIGURE A1



**DETAIL 22**  
SCALE: NO SCALE  
WELD (TD-4160P-20)  
FIGURE A1

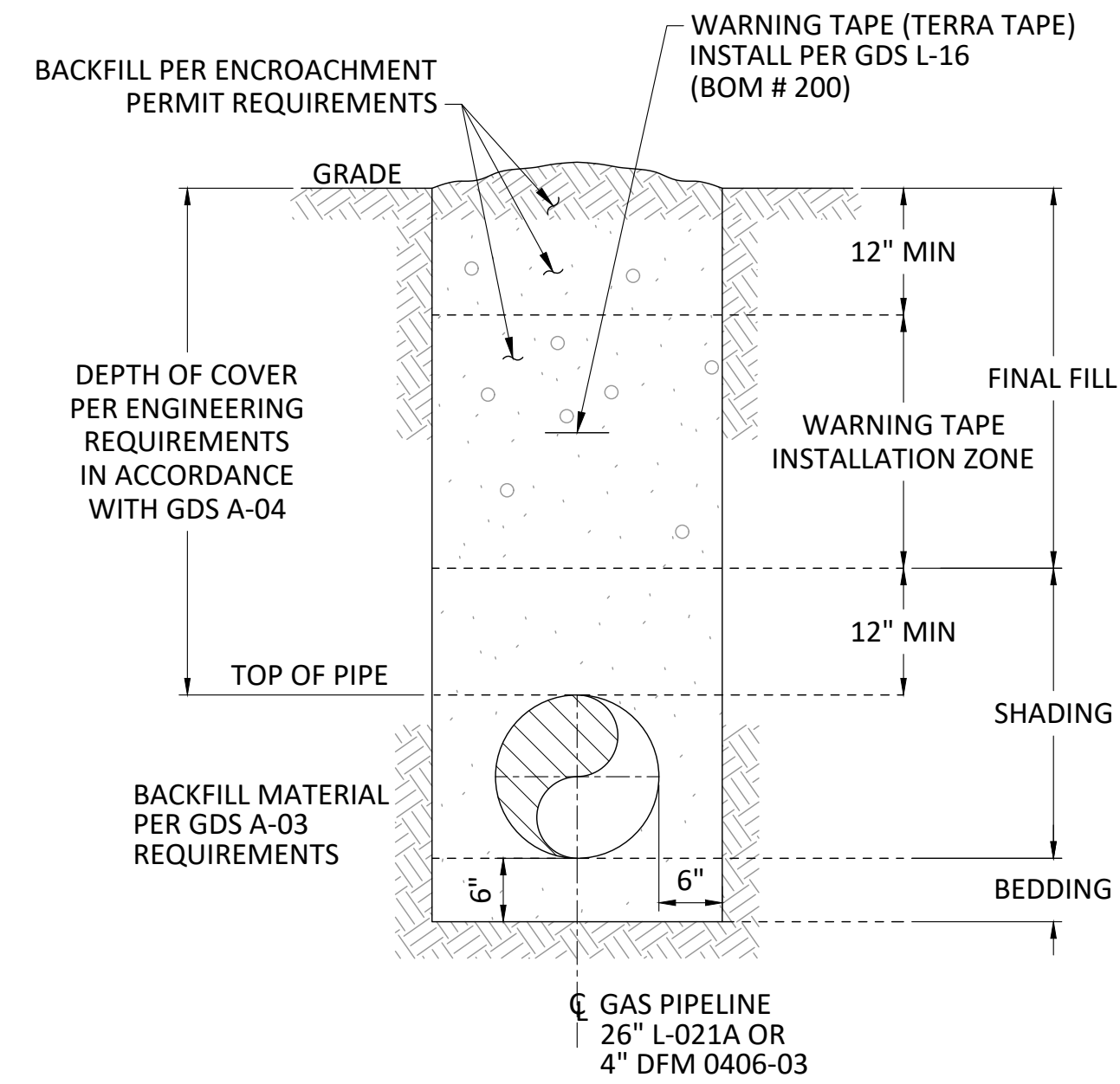


**DETAIL 23**  
SCALE: NO SCALE  
WELD (TD-4160P-20)  
FIGURE A3



SEE TD-4621M FOR SHORING REQUIREMENTS

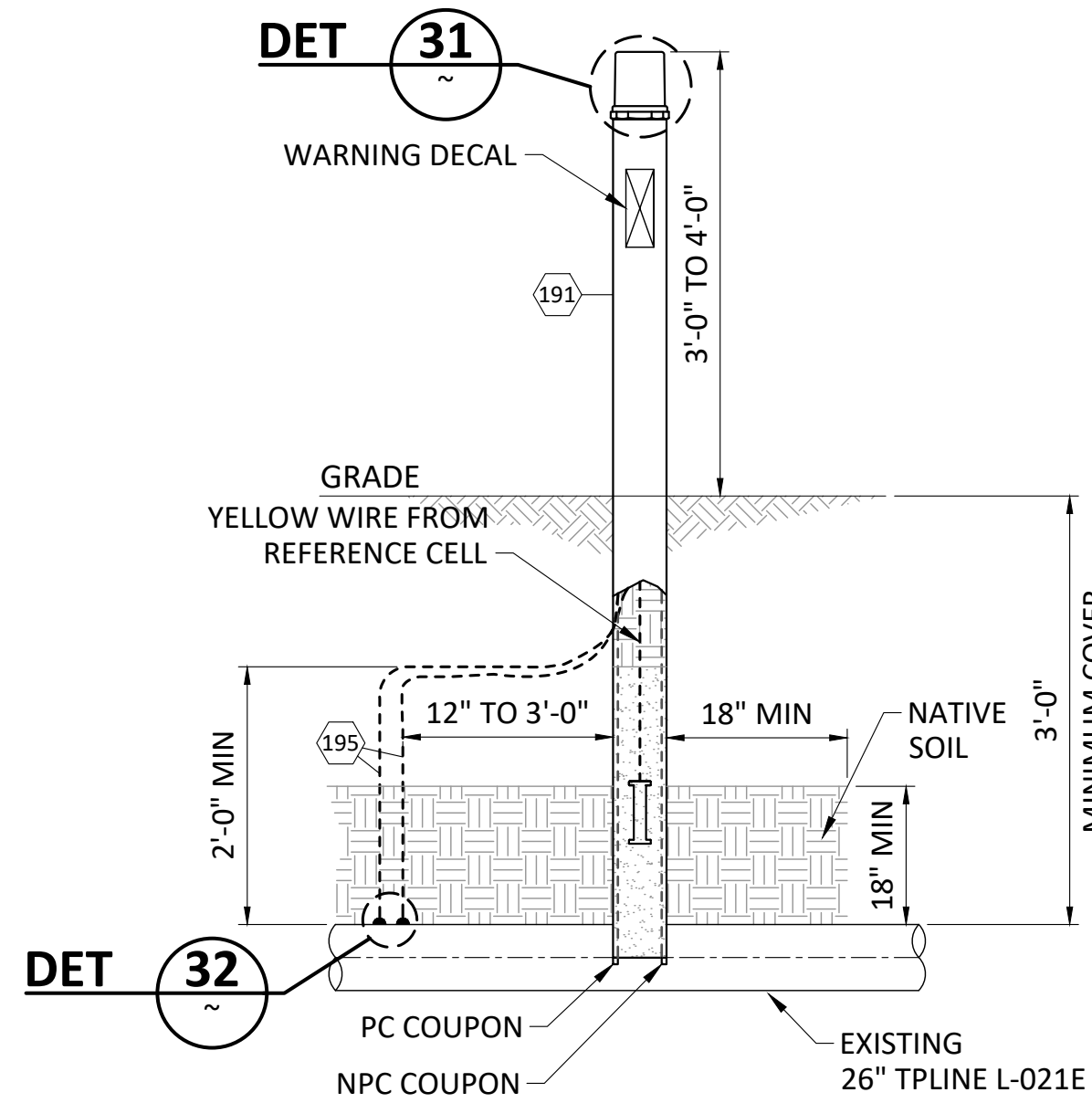
**TYPICAL**  
SCALE: NTS  
TRENCH PAVED AREA  
IMPORT BACKFILL



SEE TD-4621M FOR SHORING REQUIREMENTS

**TYPICAL**  
SCALE: NTS  
TRENCH NON-PAVED AREA  
NATIVE BACKFILL

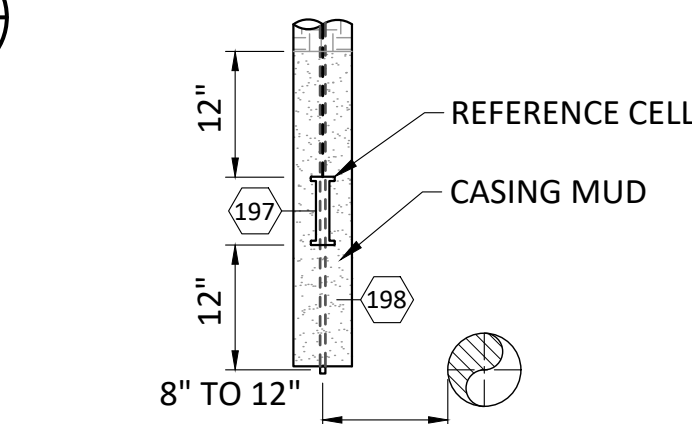
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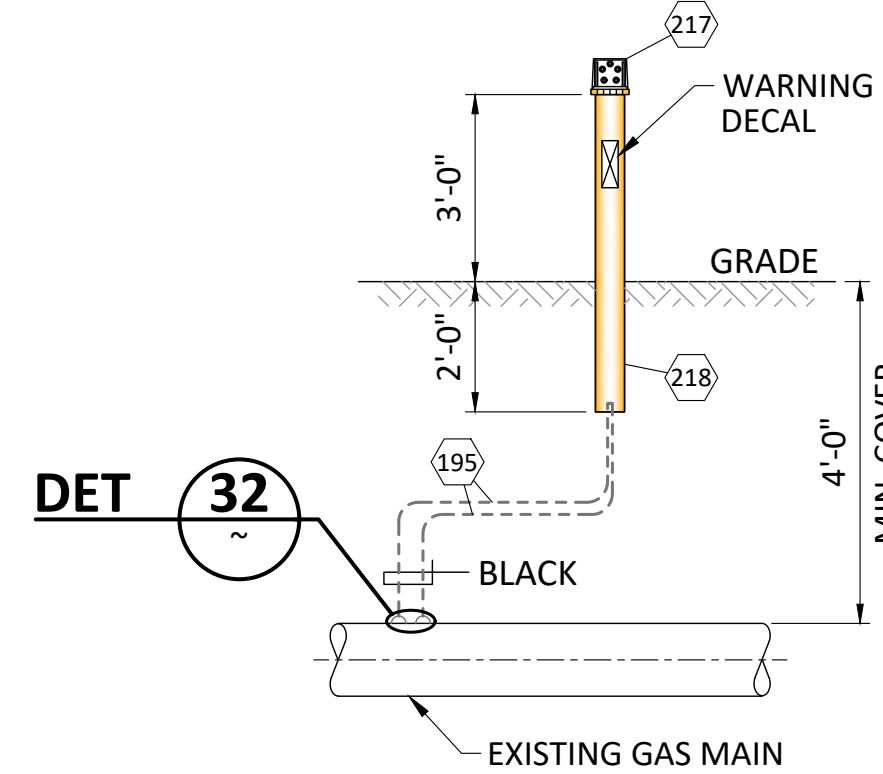
NOTE: INSTALL COUPONS PARALLEL TO PIPE A DISTANCE OF 8" TO 12". COUPONS MUST BE INSTALLED IN NATIVE SOIL WITHIN 18" OF ELECTRODE. TAMP NATIVE AND ADD IMPORT TO ACHIEVE A MINIMUM 95% COMPACTION.

**DETAIL 30**  
SCALE: NTS  
COUPON TEST STATION  
ABOVE GROUND  
CCV O-10.2

NOTE: INSTALL REFERENCE ELECTRODE WITHIN 12" FROM THE BOTTOM OF THE TUBE. FILL TUBING WITH CASING MUD TO AT LEAST 12" ABOVE REFERENCE ELECTRODE. THE REMAINDER OF THE TUBE CAN BE FILLED WITH NATIVE SOIL.



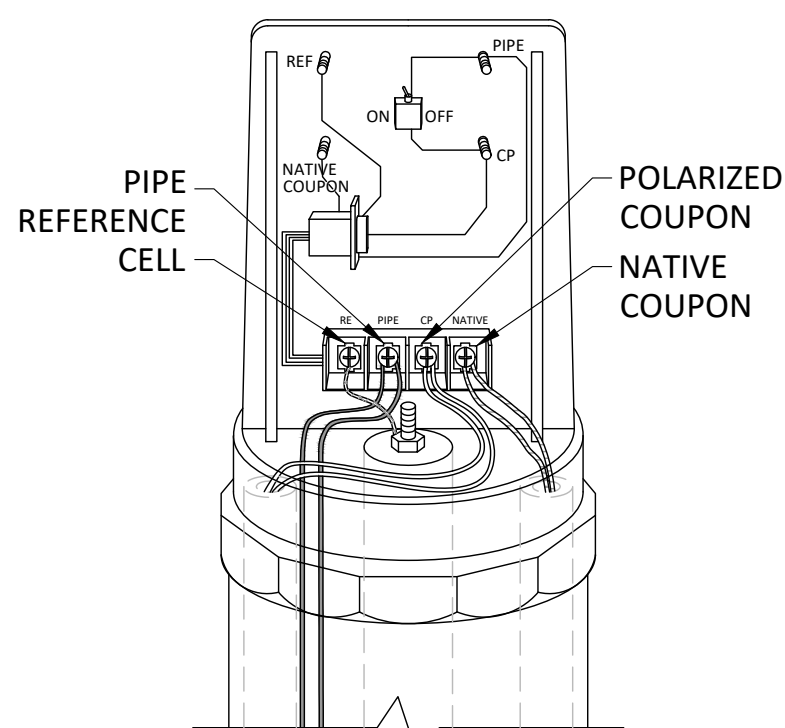
**SECTION Z**  
SCALE: NTS



**DETAIL 33**  
SCALE: NTS  
ETS TYPE A (BIG FINK)  
CCV O-10

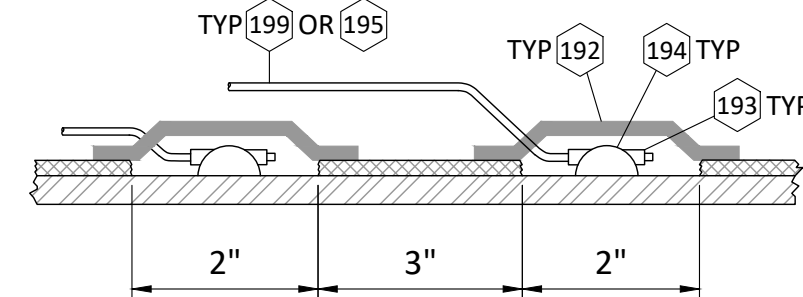
C

B



NOTE: 7 WIRES TO UNIT NPC (BLACK X2), WIRE PC (WHITE X2), WIRE REF CELL (YELLOW), PIPE #10 (BLACK X2) GAUGE SOLID WIRES

**DETAIL 31**  
SCALE: NTS  
COUPON TEST STATION HEAD  
CCV O-10.2



**DETAIL 32**  
SCALE: NO SCALE  
ATTACHING THE WIRES  
TO THE GAS MAIN  
CCV O-10, FIGURE 1

CATHODIC PROTECTION INSTALLATION LOCATION TABLE							
LAT	LONG	CP TYPE	LINE / DFM	MP	SHEET	P STATION	NOTES
		CTS	021A	14.46	5, 10	00+00.0	
		CTS	021A	14.56	5, 10	05+31.1	
		ETS	021A	15.13	8, 11	35+09.1	
		ETS	0406-03	0.00	9, 12	100+04.5	
		CTS	0406-03	0.08	9, 12	110+42.6	

\*ASSUMED VALUES PER PG&E TD-4125P-09, PROCEDURE FOR RESOLVING UNKNOWN PIPELINE FEATURES

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REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
C	12/21/22	RE-ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
B	7/21/22	ISSUED FOR PERMIT	74024169	DNG	AG	PD	JQ
A	4/29/22	90% ISSUED FOR REVIEW	74024169	DNG	AG	PD	JQ

PIPELINE - DETAILS  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA



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BILL OF MATL SHEET 16  
JOB ID I-195E  
SHEET NO. 14 OF 20 SHEETS  
74024169 C

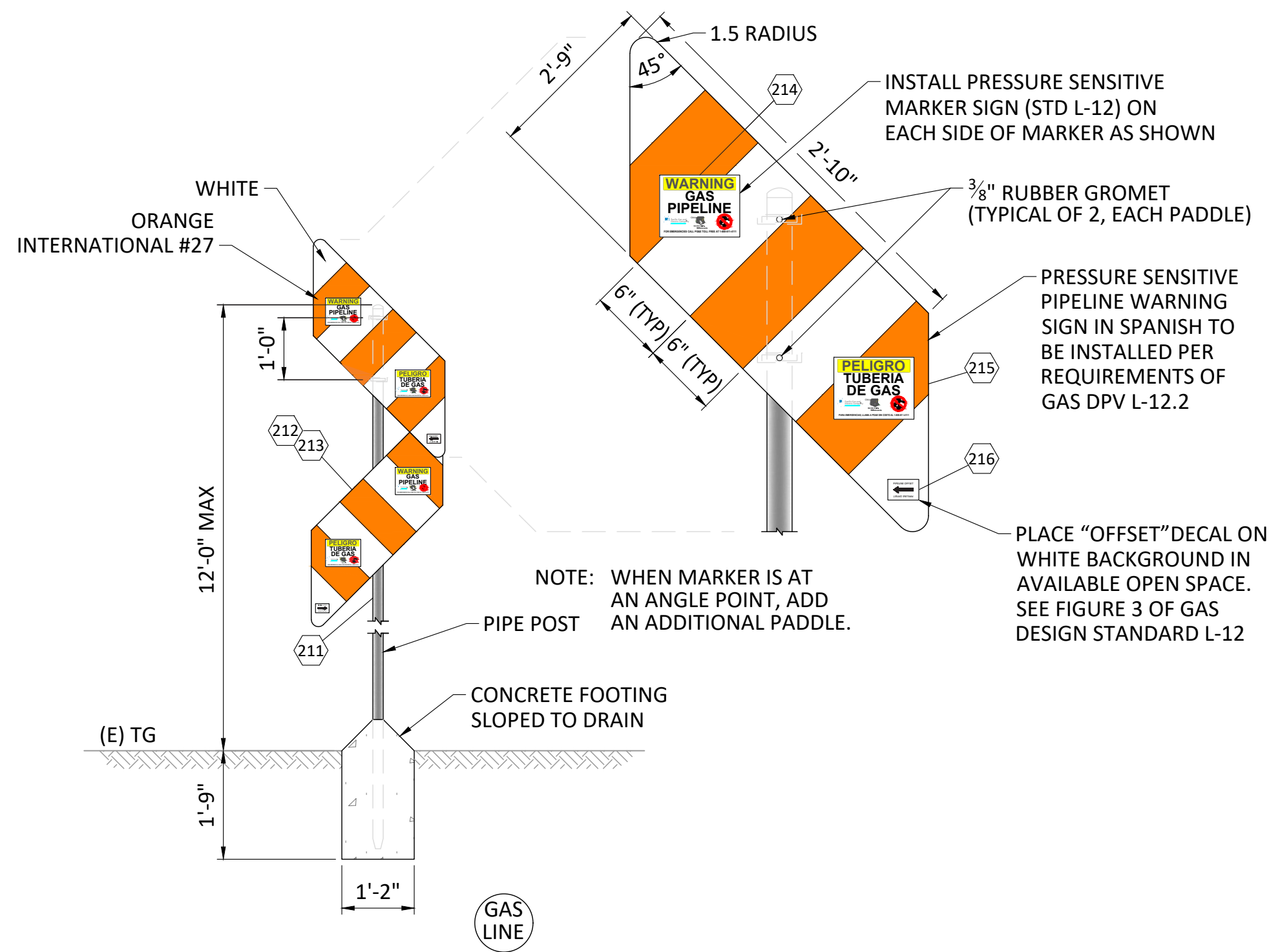
E

D

C

B

A



**TYPICAL** PIPELINE PADDLE MARKER  
SCALE: NTS GS&S STD L-17

LINE MARKER LOCATIONS (L-021A)						
LAT	LONG	LINE/DFM	H STA	SHEET	TYPE	PG&E GAS STD
		L-021A	1+09.50	5	DUAL PADDLE	L-17
		L-021A	1+23.86	5	DUAL PADDLE	L-17
		L-021A	4+10.85	5	DUAL PADDLE	L-17
		L-021A	4+66.12	5	DUAL PADDLE	L-17
		L-021A	6+79.57	5	DUAL PADDLE	L-17
		L-021A	17+25.29	7	PADDLE	L-17
		L-021A	20+68.79	7	PADDLE	L-17
		L-021A	25+39.12	7	PADDLE	L-17
		L-021A	35+83.35	8	DUAL PADDLE	L-17
		L-021A	36+08.62	8	DUAL PADDLE	L-17
LINE MARKER LOCATIONS (DFM 0406-03)						
LAT	LONG	LINE/DFM	H STA	SHEET	TYPE	PG&E GAS STD
		DFM 0406-03	100+05.40	9	DUAL PADDLE	L-17
		DFM 0406-03	101+33.20	9	DUAL PADDLE	L-17
		DFM 0406-03	105+81.44	9	DUAL PADDLE	L-17
		DFM 0406-03	106+02.65	9	DUAL PADDLE	L-17
		DFM 0406-03	110+06.21	9	DUAL PADDLE	L-17
		DFM 0406-03	110+23.10	9	DUAL PADDLE	L-17



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\*ASSUMED VALUES PER PG&E TD-4125P-09, PROCEDURE FOR RESOLVING UNKNOWN PIPELINE FEATURES

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PIPELINE - DETAILS  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

BILL OF MATL	SHEET 16
JOB ID	I-195E
SHEET NO.	15 OF 20 SHEETS
74024169	C

BILL OF MATERIAL: 74024169 CAPITAL

Table with columns: ITEM #, MATERIAL DESCRIPTION, MATERIAL CODE #, QTY, UNIT, STANDARD, NOTES. Contains 219 items including pipes, elbows, tees, valves, and fittings.

EXCAVATION AREAS table with columns: ID, AERA (SQ. FT.), VOLUME (CU. FT.), DEPTH. Lists areas A through S with their respective dimensions.

PIPE INSPECTION TABLE

Table with columns: TASK #, JOB #, LINE #, MILE POINT, DIG SITE #, COC UNIQUE IDENTIFIER, DRAWING SHEET, DRAWING P STATION, INSTALL JOB #, INSTALL YEAR, OD (in.), WT (in.), MATERIAL GRADE, SEAM TYPE, FITTING RATING AND MWP, FEATURE TYPE, PFL / SFL FEATURE #, PLANNED LENGTH OF TO BE REMOVED, COATING DISBONDMENT ASSESSMENT, LONG SEAM CHARACTERIZATION, 14" DESTRUCTIVE TEST SAMPLE (CVN), 5' DESTRUCTIVE TEST SAMPLE (PPD), FITTINGS VERIFICATION, COMMENTS.

\*ASSUMED VALUES PER PG&E TD-4125P-09, PROCEDURE FOR RESOLVING UNKNOWN PIPELINE FEATURES

DESIGN CRITERIA table with columns: BOM#, OD (IN), WT (IN), SMYS (PSI), CURRENT CLASS LOCATION, DESIGN FACTOR, FDP (PSIG), MAOP (PSIG), PSIG @ 90% SMYS.

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REVISIONS table with columns: REV., DATE, DESCRIPTION, ORDER, DWN, ADE, ENG, ENG APVD.

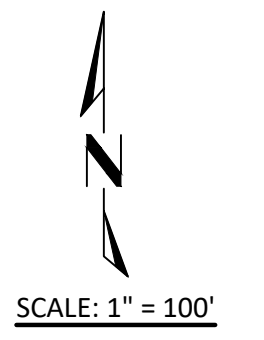
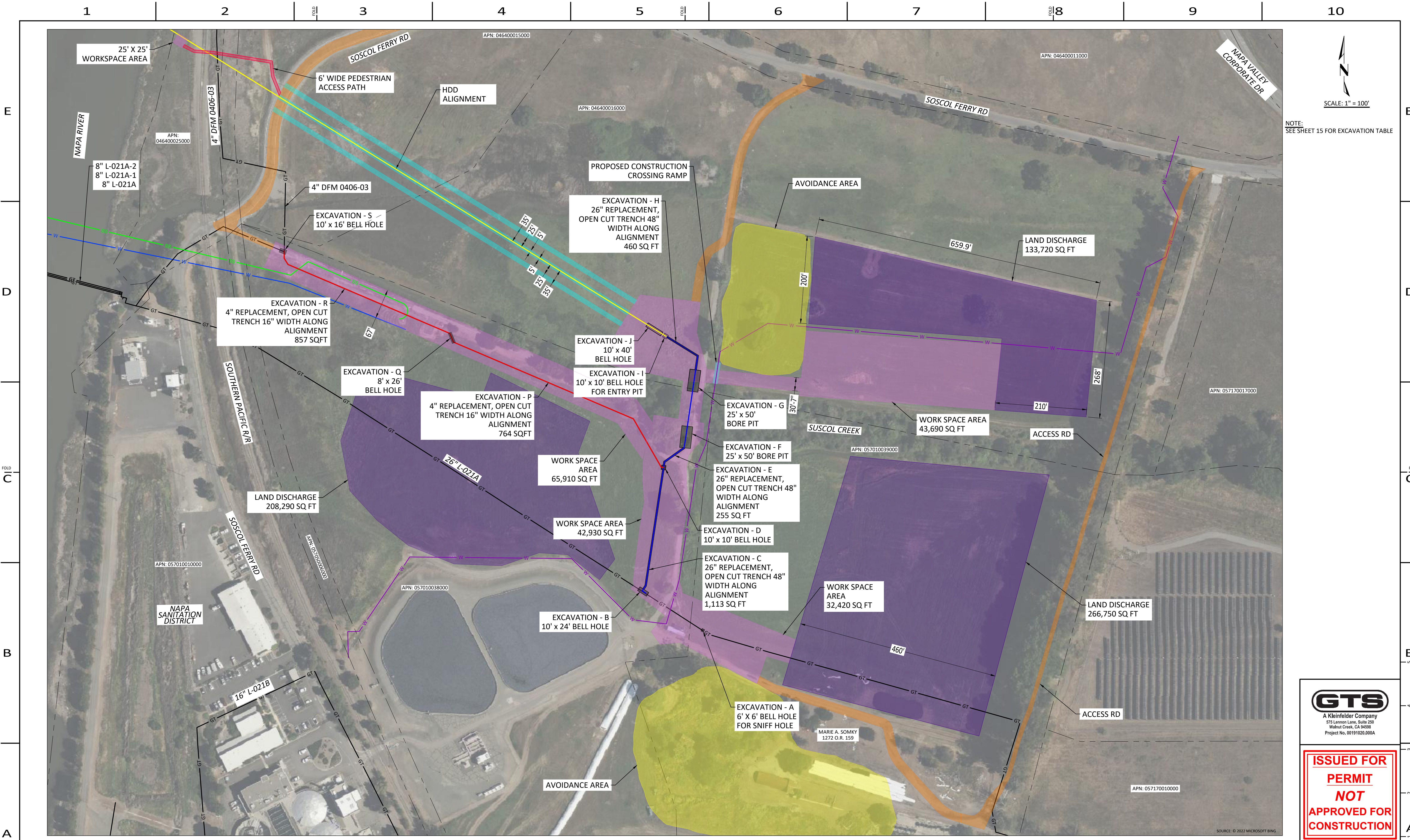
PIPELINE - BILL OF MATERIAL / PIPE INSPECTION TABLE L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00 - 0.08 ILI UPGRADE 26" PIPE NAPA, NAPA COUNTY GAS TRANSMISSION & DISTRIBUTION PACIFIC GAS AND ELECTRIC COMPANY SAN FRANCISCO, CALIFORNIA



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BILL OF MATL SHEET 16 JOB ID I-195E SHEET NO. 16 OF 20 SHEETS 74024169 C





NOTE:  
SEE SHEET 15 FOR EXCAVATION TABLE

**LEGEND:**

— GT —	EXISTING PIPELINE	— 26" HDD ALIGNMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
- - -	PROPERTY LINE	— 26" REPLACEMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
- - -	CITY/ COUNTY LINE	— 26" REPLACEMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
— W —	RECYCLED WATER	— 26" REPLACEMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
— SS —	SANITARY SEWER	— 26" REPLACEMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
— W —	WATER	— 26" REPLACEMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— 4" HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA

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PIPELINE - WORK SPACE & EXCAVATION MAP  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00-0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

**GTS**  
A Kleinfelder Company  
975 Lennon Lane, Suite 200  
Walnut Creek, CA 94598  
Project No. 00191020.000A

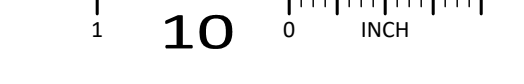
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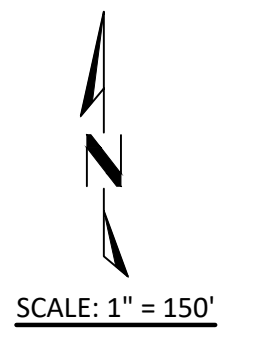
BILL OF MATL SHEET 16

JOB ID: I-195E

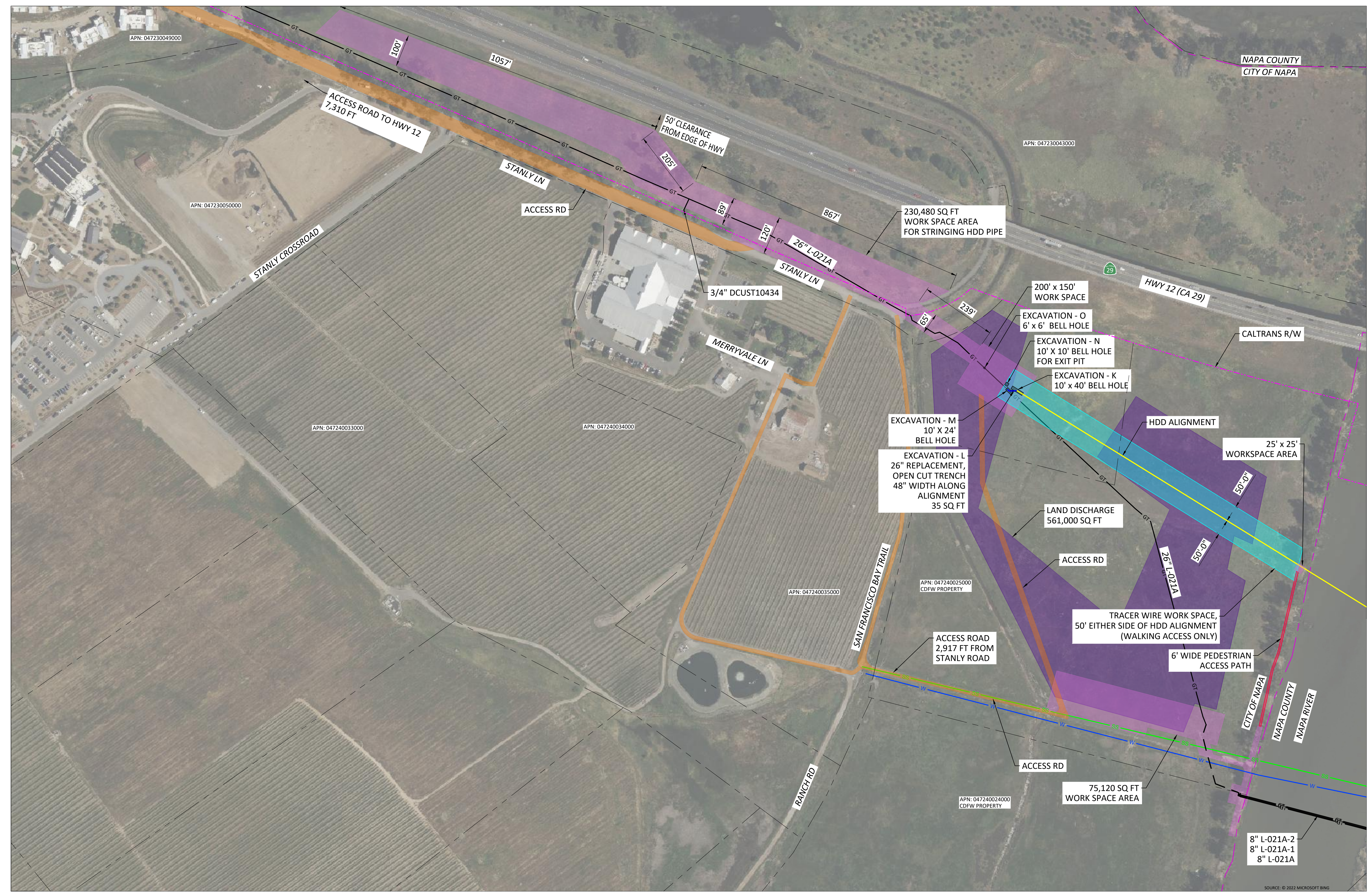
SHEET NO. 17 OF 20 SHEETS

74024169 C





NOTE:  
SEE SHEET 15 FOR EXCAVATION TABLE



**LEGEND:**

— GT —	EXISTING PIPELINE	— 26" HDD ALIGNMENT	— 26" REPLACEMENT	— 4" REPLACEMENT	— SANITARY SEWER	— WATER	— LAND DISCHARGE	— WORK SPACE	— AVOIDANCE AREA
- - -	PROPERTY LINE	— HDD STEERING WIRE	— ACCESS RD	— ACCESS PATH					
- - -	CITY/ COUNTY LINE								
— W —	RECYCLED WATER								
— C —	CALTRANS ROW								

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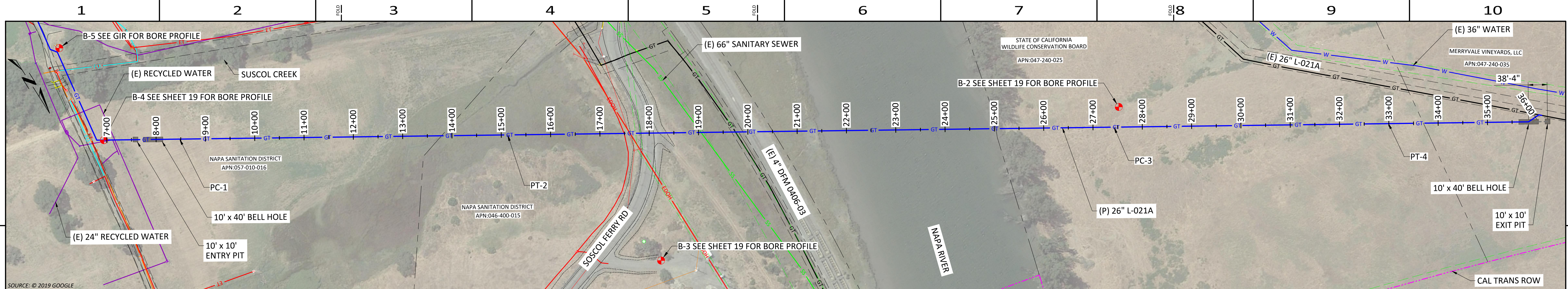
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PIPELINE - WORK SPACE & EXCAVATION MAP  
L-021A MP 14.46-15.14, DFM 0406-03 MP 0.00-0.08  
ILI UPGRADE 26" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

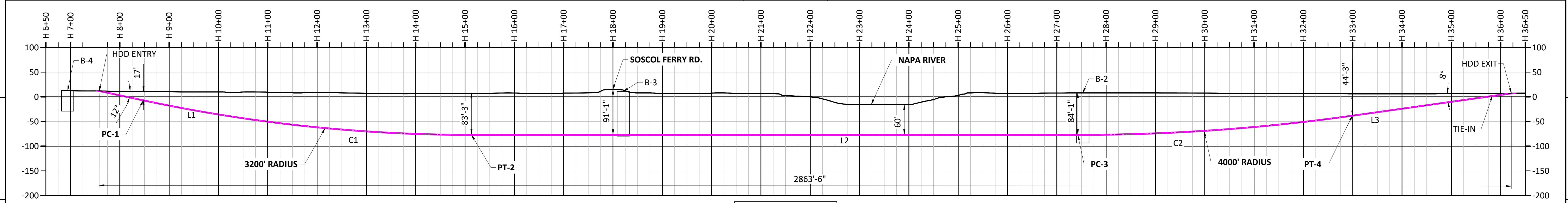


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BILL OF MATL SHEET 16  
JOB ID I-195E  
SHEET NO. 18 OF 20 SHEETS  
74024169 C



**PLAN VIEW**  
SCALE: 1" = 100'



**PROFILE**  
SCALE: 1" = 100'

**HDD NOTES:**

- WHEN BALLAST WATER IS REQUIRED DURING PRODUCT PIPE PULLBACK, CONTRACTOR TO FURNISH TWO(2) TREMME PIPES DURING FILL (ONE FOR FILL OPERATIONS, ONE AS REDUNDANT BACKUP). TREMME PIPE TO BE CONSTRUCTED OF NEW MATERIAL.
- DOWNHOLE PRESSURE SUBASSEMBLIES WILL BE REQUIRED ON ALL HDD PROJECTS. CONTRACTOR MUST KEEP LOG OF MUD PRESSURE AND AND SUBMIT TO PG&E PROJECT ENGINEER DAILY DURING PILOT DRILLING.
- CONTRACTOR IS RESPONSIBLE FOR MITIGATING INTERFERENCE OF TRACKING EQUIPMENT AND FURNISHING STEERING TOOLS AND SURFACE COILS CAPABLE OF PROVIDING ACCURATE STEERING INFORMATION.
  - IF INTERFERENCE IS ENCOUNTERED, CONTRACTOR TO COMMUNICATE ISSUE TO PG&E PROJECT ENGINEER WITHIN 24 BUSINESS HOURS.
- CONTRACTOR MUST PROVIDE PG&E PROJECT ENGINEER PILOT BORE STEERING AND TRACKING DATA DAILY UNTIL BORE COMPLETION. CONTRACTOR MUST FURNISH BOTH RAW AND PLUGGED AZIMUTH DATA WITH A WRITTEN EXPLANATION FOR ANY PLUGGED DATA. REAMING MAY NOT PROCEED UNTIL PG&E ACCEPTS PILOT BEFORE DATA.
- IF PLANNED DRILLING PROFILE DEVIATES FROM DESIGN, CONTRACTOR TO PROVIDE PROPOSED DRILLING PROFILE AT LEAST 5 BUSINESS DAYS PRIOR TO BEGINNING PILOT DRILLING FOR PG&E PROJECT ENGINEER REVIEW AND APPROVAL.
- ANY INADVERTENT RETURN EVENTS WILL BE COMMUNICATED TO PG&E PROJECT ENGINEER, CONSTRUCTION MANAGER/FIELD ENGINEER, AND ENVIRONMENTAL FIELD SPECIALIST IMMEDIATELY. CONTRACTOR TO COMPLETE MUD RELEASE FORM AND SUBMIT TO UNIFIER WITHIN 24 BUSINESS HOURS. MUD RELEASE FOR WILL BE SUPPLIED BY PROJECT ENGINEER.
- CONTRACTOR TO SUBMIT PICK PLAN TO PG&E PROJECT ENGINEER AT LEAST ONE (1) WEEK PRIOR TO PULLBACK. PULLBACK MAY NOT PROCEED UNTIL ACCEPTED BY PG&E PROJECT ENGINEER.
  - PICK PLAN TO INCLUDE, AT A MINIMUM, SPACING BETWEEN PIPE ROLLERS AND PICK POINTS, HEIGHT OF PIPE AT EACH PICK LOCATION AND MINIMUM COMPOUND RADIUS OF PIPE.
- BORE PIPE TO BE PRE-TESTED PER PROVIDED STPR.
- HDD MAXIMUM TOLERANCES:
  - 2-FEET UP
  - 5-FEET DOWN
  - ± 5-FEET HORIZONTAL
- GEOTECHNICAL INVESTIGATION REPORT (GIR) "GEOTECHNICAL INVESTIGATION REPORT, PROPOSED NATURAL GAS PIPELINE REPLACEMENT PROJECT, ILLI RETROFIT OF LINE 021A, MP 12.12-31.95, HORIZONTAL DIRECTIONAL DRILL UNDER NAPA RIVER, NAPA COUNTY, CALIFORNIA", DATED NOVEMBER 12, 2020 (SRO20R118659)
- FUTURE IR ANALYSIS LETTER AFTER WE RE-RUN ANALYSIS "REVISED INADVERTENT RETURNS ANALYSIS, ILLI RETROFIT OF LINE 021A, MP 12.05-16.16, HORIZONTAL DIRECTIONAL DRILLING (HDD) UNDER NAPA RIVER, NAPA COUNTY, CALIFORNIA", DATED MAY 27, 2021 (SRO21L126276)
- SEAL BORE ENTRY / EXIT BY DISPLACING THE DRILLING FLUID WITH A CEMENTITIOUS SLURRY ALONG THE ANNULUS OF THE BORE PATH OVER A VERTICAL DISTANCE OF 10 FT AS MEASURED FROM THE GROUND SURFACE INTO THE SUBSURFACE.

HORIZONTAL LENGTH = 2863'-6"  
TOTAL PIPE LENGTH = 2876'-9"

LINE / CURVE DATA			
SEGMENT	LENGTH	RADIUS	DELTA
L1	91.4'		
C1	670.21'	3200'	12°
L2	1229.63'		
C2	558.50'	4000'	8°
L3	326.99'		

DRILL DATA				
POINT	LATITUDE	LONGITUDE	H STATION	ELEVATION
ENTRY	38.2394876	-122.281539	7+58.18	11.8'
PC-1	38.239616	-122.281805	8+47.63	-7.2'
PT-2	38.240573	-122.283778	15+12.95	-77.1'
PC-3	38.242341	-122.287425	27+42.58	-77.1'
PT-4	38.243141	-122.289077	32+99.27	-38.2'
EXIT	38.243604	-122.290033	-	7.27'

BORING LOCATIONS			
BORING #	LATITUDE	LONGITUDE	DEPTH
B-1A	38.24415	-122.29120	51.5'
B-1B	38.24415	-122.29120	42.0'
B-2	38.24226	-122.28753	101.5'
B-3	38.24162	-122.28422	91.0'
B-4	38.23942	-122.281330	41.5'
B-5	38.23883	-122.28143	41.5'



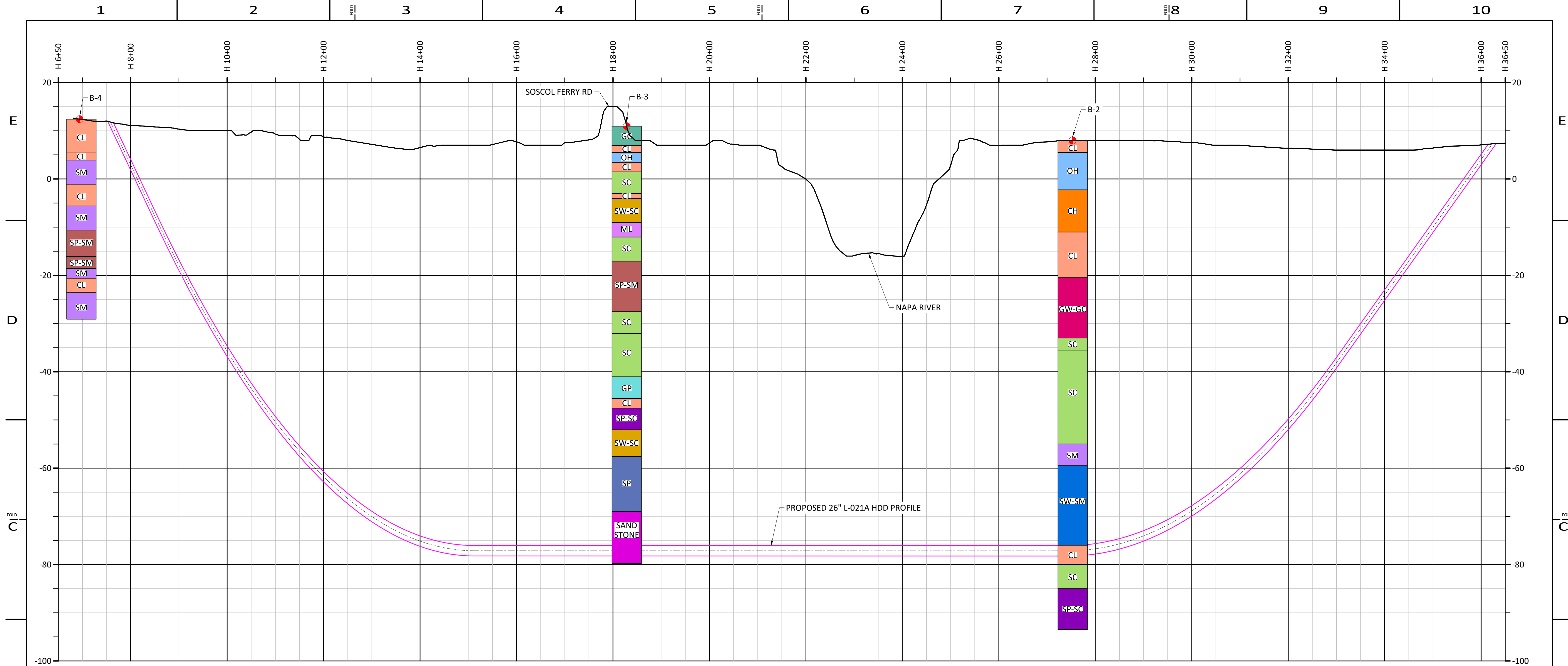
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PIPELINE - HDD PROFILE  
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NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
PACIFIC GAS AND ELECTRIC COMPANY  
SAN FRANCISCO, CALIFORNIA

BILL OF MATL SHEET 16  
JOB ID: I-195E  
SHEET NO. 19 OF 20 SHEETS  
**74024169**



**PROFILE**  
 SCALE: HORZ. 1" = 100'  
 SCALE: VERT. 1" = 10'

**BORE PROFILE LEGEND (FOR REFERENCE ONLY)**

CL	SANDY LEAN CLAY	SP-SM	POORLY GRADED SAND WITH SILT & GRAVEL	SP-SC	POORLY GRADED SAND WITH CLAY	GP	POORLY GRADED GRAVEL
OH	SANDY FAT CLAY WITH ORGANICS	SC	CALYED SAND	GC	CLAYEY GRAVEL WITH SAND	SP	POORLY GRADED SAND
CH	FAT CLAY	SM	SILTY SAND	SW-SC	WELL-GRADED SAND WITH CLAY & GRAVEL	SANDSTONE	SANDSTONE
GW-GC	WELL-GRADED GRAVEL WITH CLAY & SAND	SW-SM	WELL GRADED SAND & SILT	ML	SANDY SILT		



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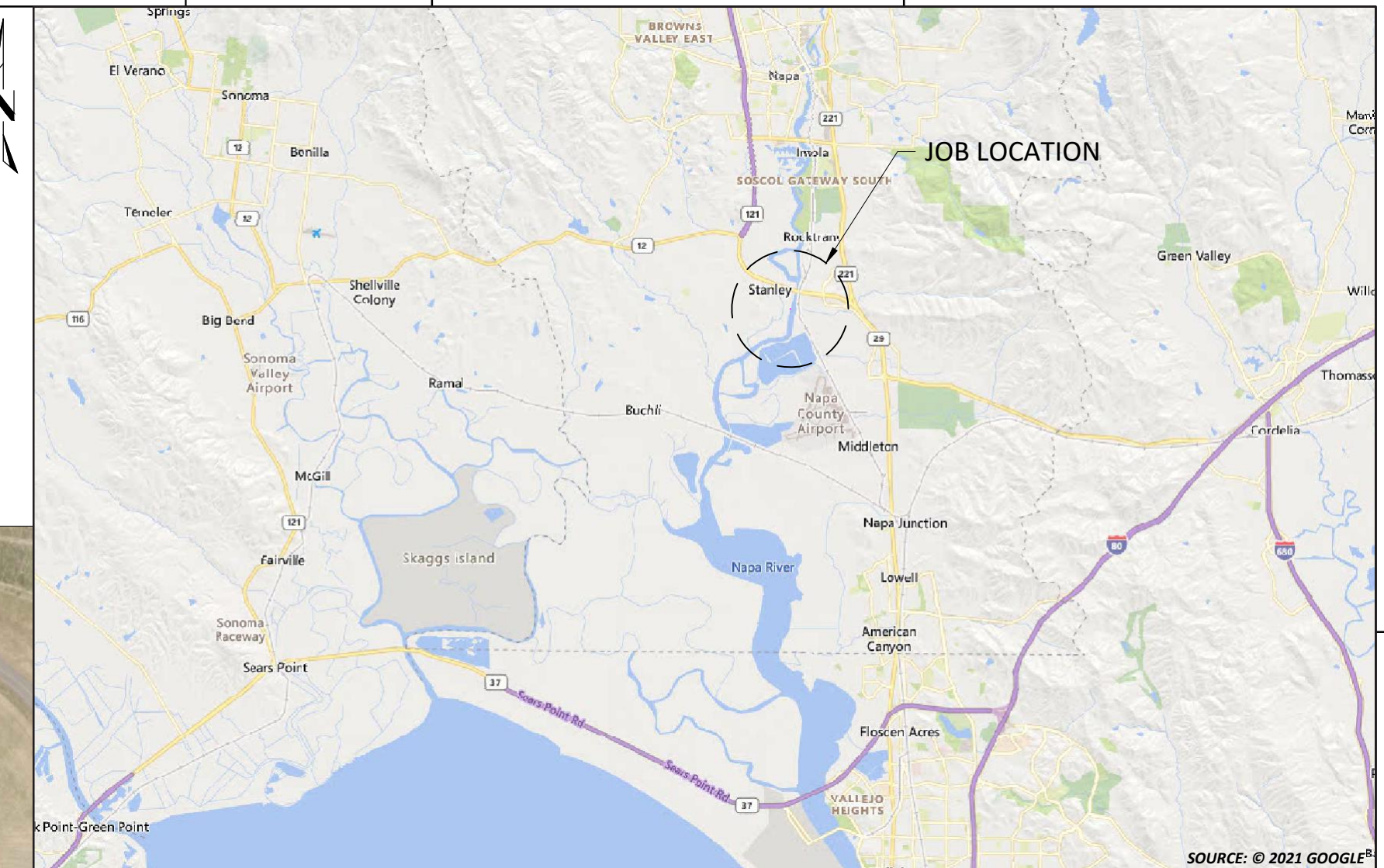
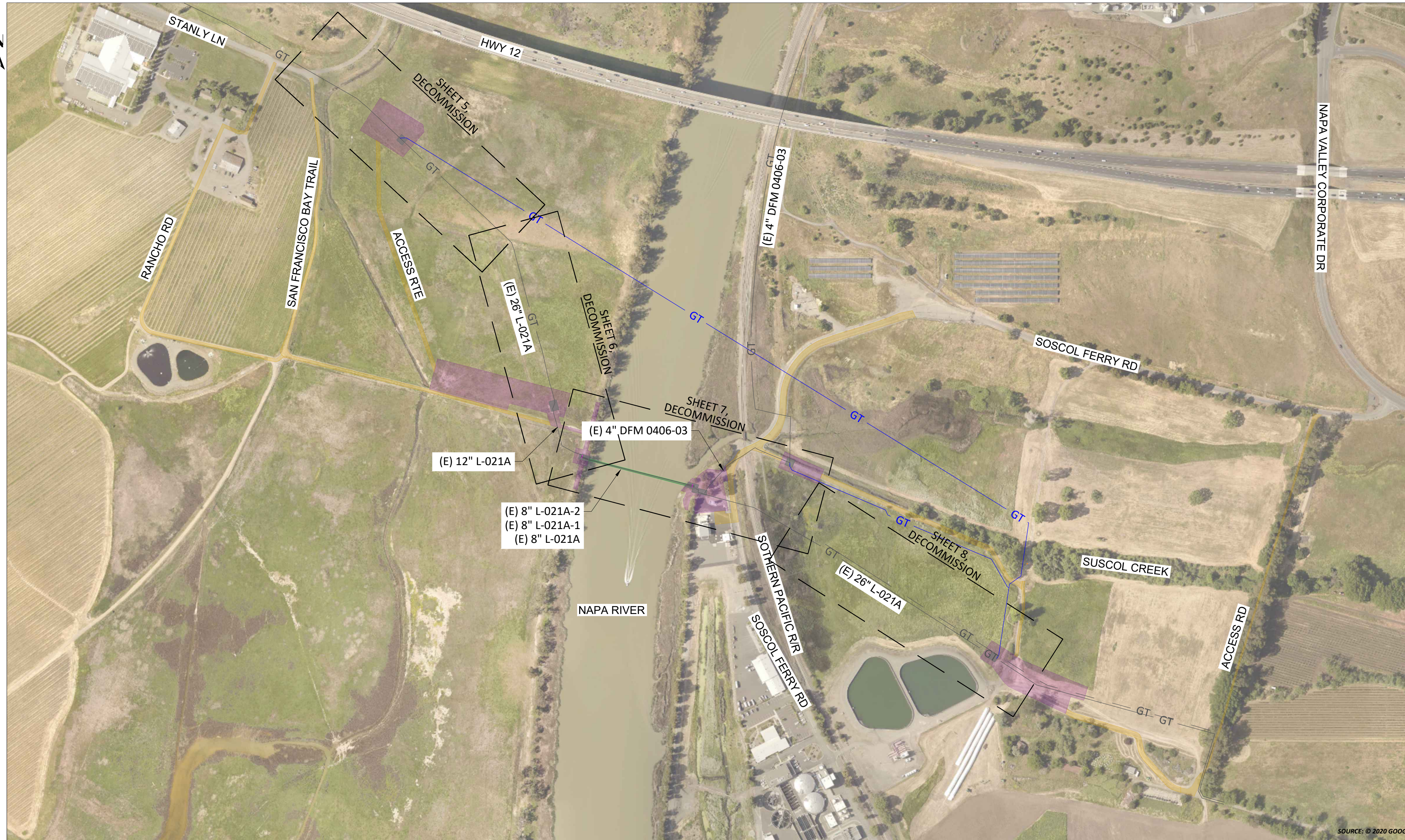


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 NAPA, NAPA COUNTY  
 GAS TRANSMISSION & DISTRIBUTION  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SAN FRANCISCO, CALIFORNIA

BILL OF MATL SHEET 16  
 JOB ID I-195E  
 SHEET NO. 20 OF 20 SHEETS  
 74024169 C

# I-195E, L-021A, MP 14.46 - 15.14, DFM 0406-03 MP.0.00 - 0.08 DECOMMISSION 26", 12", 8", 4" PIPE NAPA, NAPA COUNTY



**VICINITY SKETCH**  
NOT TO SCALE

**KEY MAP**  
SCALE: 1" = 250'

## SCHEDULE OF SHEETS

- SHEET 1 -- TITLE & INDEX
- SHEET 2 -- CONSTRUCTION NOTES
- SHEET 3 -- LEGEND & STAMPS
- SHEETS 4 -- PROJECT MAP
- SHEETS 5-8 -- PLAN & PROFILE, DECOMMISSION
- SHEET 9,10 -- DETAILS
- SHEET 11 -- BILL OF MATERIALS

**LONGITUDE 123, INC.**  
California Mapping Project Planning, Permitting and Performance  
570 POLI STREET, VENTURA, CA 93001  
(805) 649-9364 WWW.LONGITUDE123.NET  
CA LICENSE: CSLB A-3026719

**60% DESIGN REVIEW**  
**PACIFIC GAS AND ELECTRIC COMPANY**

BILL OF MATL SHEET 30

JOB ID **I-195E**

SHEET NO. 1 OF 11 SHEETS

**74024169 D**



REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
D	6/20/22	60% ISSUED FOR REVIEW	74024169	EAR	GDO		
C	4/26/22	60% ISSUED FOR REVIEW	74024169	EAR	GDO		
B	1/31/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		
A	1/17/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		

REVISIONS

PIPELINE - TITLE & INDEX  
L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
DECOMMISSION 26", 12", 8", 4" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
**PACIFIC GAS AND ELECTRIC COMPANY**  
SAN FRANCISCO, CALIFORNIA



**LEGEND:**

	GT	GAS TRANSMISSION LINE (PROPOSED)
	GT	GAS TRANSMISSION LINE (EXISTING)
	GD	GAS DISTRIBUTION LINE (EXISTING)
	GS	GAS SERVICE LINE (EXISTING)
	GT	GAS TRANSMISSION LINE (RETIRED)
	GD	GAS DISTRIBUTION LINE (RETIRED)
	GS	GAS SERVICE LINE (RETIRED)
		FOREIGN GAS LINE
	JT	JOINT TRENCH
	ET	ELECTRIC TRANSMISSION LINE
	ED	ELECTRIC DISTRIBUTION LINE
	ES	ELECTRIC SERVICE LINE
	ETOH	ELECTRIC TRANSMISSION OVERHEAD
	EDOH	ELECTRIC DISTRIBUTION OVERHEAD
	T	TELEPHONE LINE
	FO	FIBER OPTIC LINE
	TV	CABLE TV LINE
	SD	STORM DRAIN LINE
	SS	SEWER LINE
	W	WATER LINE
	W	RECYCLED WATER LINE
	UNK	UNKNOWN UTILITIES
		CASING
		PROPERTY BOUNDARY
		PG&E EASEMENT
		TEMPORARY EASEMENT
		FOREIGN RIGHT-OF-WAY
		CALTRANS RIGHT-OF-WAY

	FENCE	
	WALLTYPE	
	WALL	
	BARRIER	
	TEMPORARY BARRIER (TYPE K)	
	GUARD RAIL	
	TOE OF SLOPE	
	TOP OF SLOPE	
	EP	EDGE OF PAVEMENT
	FC	FACE OF CURB
	BW	BACK OF WALK
		DASHED PAVEMENT MARKINGS
		UNPAVED ROAD
		RAILROAD
		INGRESS / EGRESS ROAD
		LAYDOWN / STAGING / CONSTRUCTION IMPACT AREA
		EXCAVATION / BELL HOLE
		SAFETY ZONE LIMITS
		EXCAVATION UNDERWATER

	GAS LINE MARKER (OTHER)
	INSULATION JOINT
	PRESSURE CONTROL FITTING
	GAS BOX
	GAS HIGH PRESSURE REGULATOR
	GAS METER
	GAS DISTRICT REGULATOR
	PG&E GAS MANHOLE
	GAS VAULT
	GAS VENT
	GAS VALVE
	PG&E ELECTRIC MANHOLE
	ELECTRIC VAULT
	UTILITY POLE (ELECTRIC)
	UTILITY POLE (OTHER)
	JOINT POLE
	EXISTING ELECTRIC TOWER
	STORM DRAIN INLET
	UTILITY MANHOLE
	WATER METER

	WATER VALVE
	CABLE TV BOX
	TELECOMM BOX
	TELECOMM VAULT
	STREET LIGHT BOX
	TREE
	ANODE
	DEEPWELL ANODE
	COMPUTER AUTOMATED TEST STATION
	COUPON TEST STATION
	ELECTROLYSIS TEST STATION
	POLE-MOUNTED RECTIFIER
	DCI MITIGATION CABINET
	POTHOLE
	CITY/COUNTY MONUMENT
	MONUMENT, SEE DESCRIPTION
	SURVEY CONTROL POINT
	CENTERLINE

**DETAIL LEGEND:**

	PROPOSED GAS TRANSMISSION LINE
	EXISTING GAS TRANSMISSION LINE
	TEMPORARY GAS TRANSMISSION LINE (OWNED BY PG&E)
	TEMPORARY GAS TRANSMISSION LINE (OWNED BY OTHERS)
	GAS TRANSMISSION LINE (TO BE ABANDONED)
	GAS TRANSMISSION LINE (TO BE REMOVED)
	CUT LINE (TO BE REMOVED)
	EXISTING GAS DISTRIBUTION LINE
	ORIGINAL GROUND
	GAS VALVE
	PIPE END CUT (SIDE)
	PIPE END CUT
	FLOW ARROW
	TIE-IN WELD
	MATERIAL OF RECORD ASSET
	BILL OF MATERIALS ASSET
	CATHODIC PROTECTION
	PIPELINE MARKER
	VALVE

Acronym	Definition
(E)	Existing
(P)	Proposed
AB	Aggregate Base
ABN	Abandon
AC	Asphalt Concrete
API	American Petroleum Institute
APN	Assessor's Parcel Number
APPROX	Approximate
AVE	Avenue
ARC	Abrasion Resistant Coating
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing Materials
BBCL	Bell Bell Chill Ring
BC	Begin Curve
BD	Blowdown
BEG	Begin
BKF	Backfill
BLDG	Building
BLVD	Boulevard
BM	Bench Mark
BMP	Best Management Practice
BOM	Bill of Materials
BR	Bridge
BTU	British Thermal Units
BV	Ball Valve
BW	Back of Walk
CATS	Computer Automated Test Station
CCV	Corrosion Control Volume
CI	Cast Iron
CL	Centerline
CMP	Corrugated Metal Pipe
CNG	Compressed Natural Gas
CO	County
CONC	Concrete
COND	Conduit
CP	Cathodic Protection
CPT	Catch Point
CROP	Conditional Reduction of Pressure
CTS	Coupon Test Station
CU	Copper
CULV	Culvert
D	Depth
DE	Dead End
DCUST	Distribution Customer

Acronym	Definition
DEG	Degree
DET	Detail
DFM	Distribution Feeder Main
DI	Drainage Inlet
DIA	Diameter
DIST	Distribution
DPV	Damage Prevention Volume
DR	Distribution Regulator
DREG	District Regulator
DSAW	Double Submerged Arc-Welded
DWA	Deep Well Anode
DWY	Driveway
E	East
EASE	Easement
EC	End Curve
EL	Elbow
ELECT	Electric
ELEV	Elevation
EM	Electronic Marker
EMS	Engineering Material Specification
ENGR	Engineer
EP	Edge of Pavement
EQ	Equation
ERW	Electric Resistance Welded
ESA	Environmentally Sensitive Area
ETS	Electrolysis Test Station
ETW	Edge of Traveled Way
F	Filter
F & C	Frame and Cover
FBE	Fusion Bonded Epoxy
FC	Face of Curb
FDP	Future Design Pressure
FG	Finished Grade
FH	Fire Hydrant
FIG	Figure
FL	Flow Line
FLG	Flange
FWY	Freeway
GS	Natural Gas Service
GS&S	Gas Standards and Specifications
GV	Gate Valve
GW	Natural Gas Well
H	Horizontal
HDD	Horizontal Directional Drill

Acronym	Definition
HFW	High Frequency Weld
HPR	High Pressure Regulator
HWY	Highway
ID	Inside Diameter
ILI	In-Line Inspection
INV	Invert
IRR	Irrigation
JN	Job Number
JP	Joint Pole
JT	Joint Trench
L	Line Number
LAT	Latitude
LN	Lane
LNG	Liquid Natural Gas
LOC	Location
LONG	Longitude
LT	Left
M	Monitor
MAOP	Maximum Allowable Operating Pressure
MAX	Maximum
MH	Manhole
MIN	Minimum
MISC	Miscellaneous
MLV	Main Line Valve
MOI	Method of Installation
MON	Monument
MOP	Maximum Operating Pressure
MP	Mile Point
MSP	Maximum Stopping Pressure
MTR	Meter
MW	Working Monitor
MWP	Maximum Working Pressure
N	North
NDE	Non-Destructive Examination
NOP	Normal Operating Pressure
NPC	Non-Protected/Native Coupon
NTS	Not to Scale
OD	Outside Pipe Diameter
OG	Original Ground
OH	Overhead
P	Pipeline
P/L	Natural Gas Well
PC	Point of Curvature
PCF	Pressure Control Fitting

Acronym	Definition
PKWY	Parkway
PL	Plastic
PLC	Programmable Logic Controllers
PRUPF	Procedure for the Resolution of Unknown Pipeline Features
PSI	Pounds per Square Inch
PV	Plug Valve
PVMT	Pavement
QTY	Quantity
R	Radius
RCP	Reinforced Concrete Pipe
RD	Road
RDWY	Roadway
REG	Regulator
REL	Relocate
REPL	Replace
REV	Revision
RR	Railroad
RT	Right
RTE	Route
R/W	Right of Way
S	South
SAWH	Submerged Arc-Welded Helical
SAWL	Submerged Arc-Welded Longitudinal
SCADA	Supervisory Control and Data Acquisition
SD	Storm Drain
SG	Subgrade
SHT	Sheet
SMLS	Seamless
SMYS	Specified Minimum Yield Strength
SPEC	Specification
SS	Sanitary Sewer
SSAW	Single Submerged Arc-Welded
ST	Street
STA	Station
STD	Standard
STL	Steel
STPR	Strength Test Pressure Report
T	Tied (Connected to System)
TCE	Temporary Construction Easement
TCP	Traffic Control Plan
TD	Technical Document
TDW	T. D. Williamson
TEL	Telephone

Acronym	Definition
TEMP	Temporary
TG	Top of Grade
TT	Top Tap
TSP	Transmission System Planning
TYP	Typical
UG	Underground
USA	Underground Service Alert
UT	Ultra-Sonic Test
V	Valve
VIF	Verify in Field
VOL	Volume
W	Water
WT	Wall Thickness
WV	Water Valve
W/	With
W/O	Without
WP	Work Procedure



REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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B	1/31/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		
A	1/17/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		

PIPELINE - LEGEND & STAMPS  
 L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
 DECOMMISSION 26", 12", 8", 4" PIPE  
 NAPA, NAPA COUNTY  
 GAS TRANSMISSION & DISTRIBUTION  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SAN FRANCISCO, CALIFORNIA



60% DESIGN REVIEW  
 PACIFIC GAS AND ELECTRIC COMPANY

BILL OF MATL SHEET 30
JOB ID I-195E
SHEET NO. 2 OF 11 SHEETS
74024169 D



**PROJECT MAP**  
SCALE: 1" = 200'

**LONGITUDE 123, INC.**  
California Mapping Project Planning,  
Permitting and Performance  
570 POLI STREET, VENTURA, CA 93001  
(805) 649-9364 WWW.LONGITUDE123.NET  
CA LICENSE: CSLB A-1026719

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**PACIFIC GAS AND ELECTRIC COMPANY**

BILL OF MATL SHEET 30

JOB ID **I-195E**

SHEET NO. 4 OF 11 SHEETS

**74024169 D**

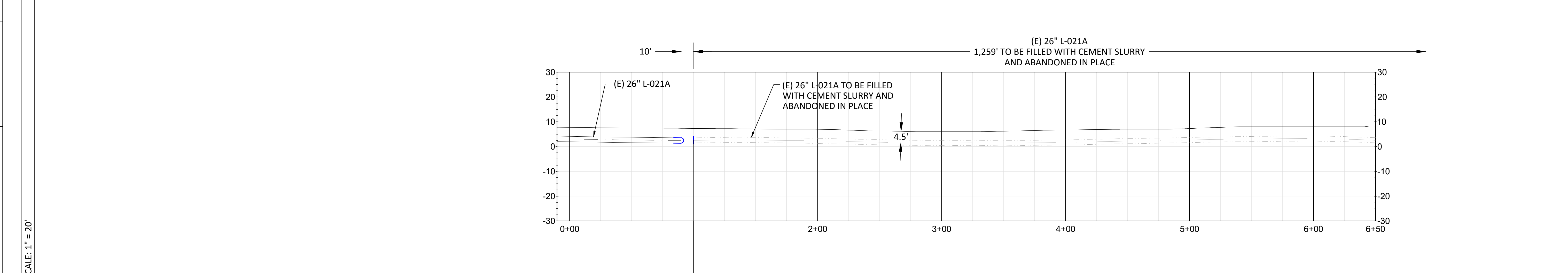
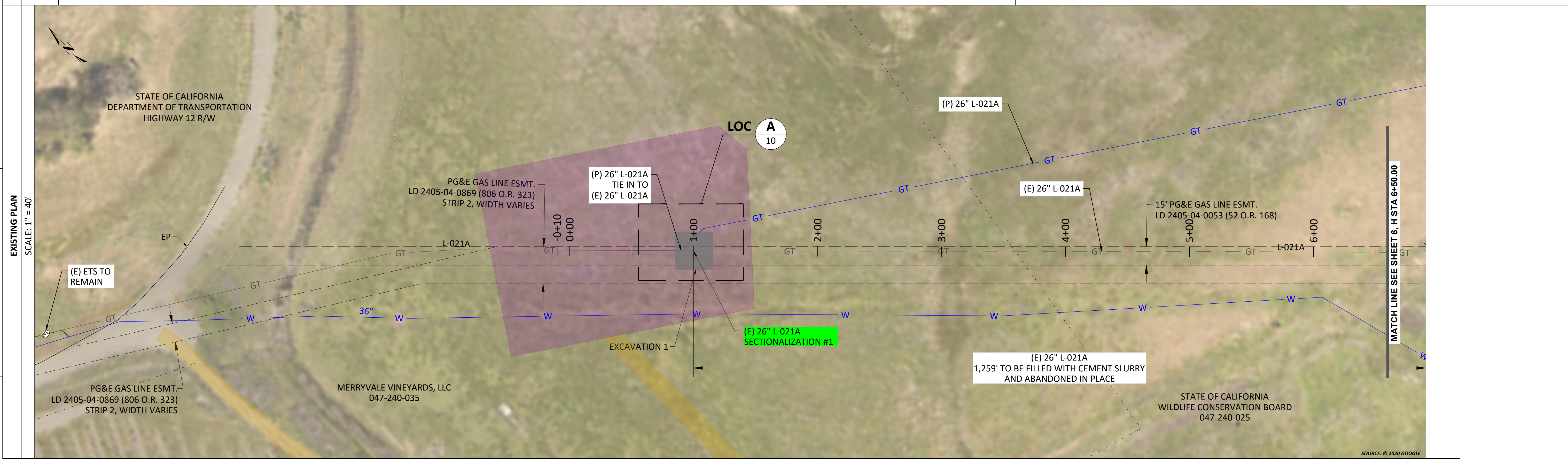


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A	1/17/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		

REVISIONS

PIPELINE - PROJECT MAP  
L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
DECOMMISSION 26",12",8",4" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
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JOB ID **I-195E**

SHEET NO. 5 OF 11 SHEETS

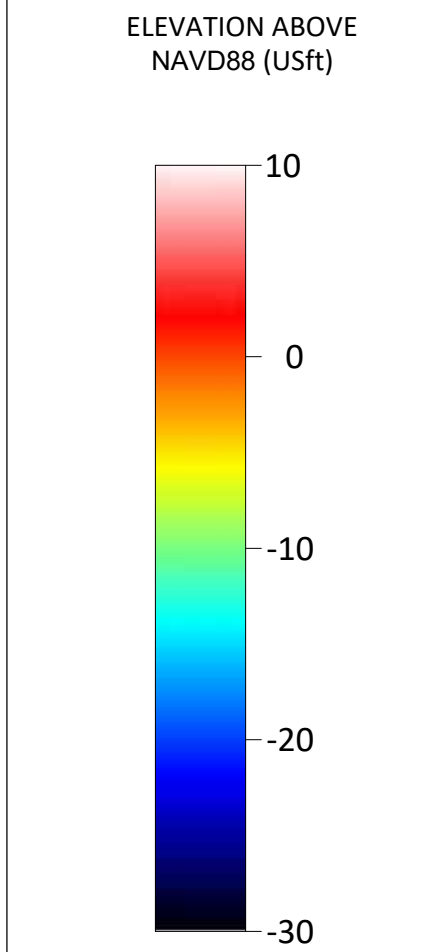
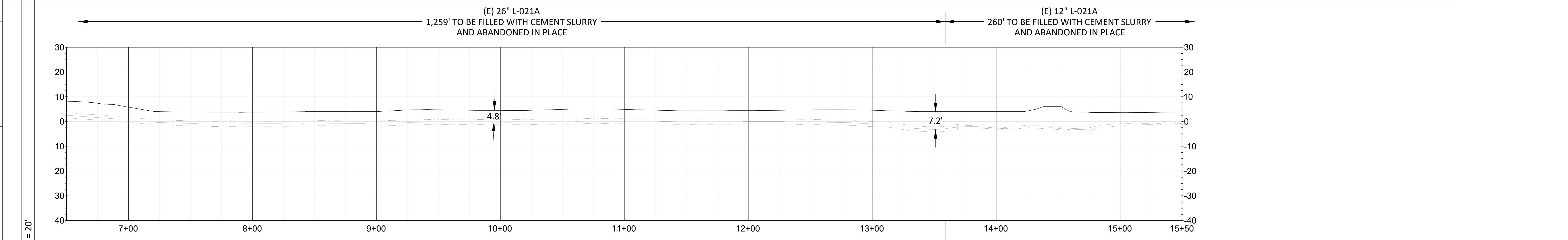
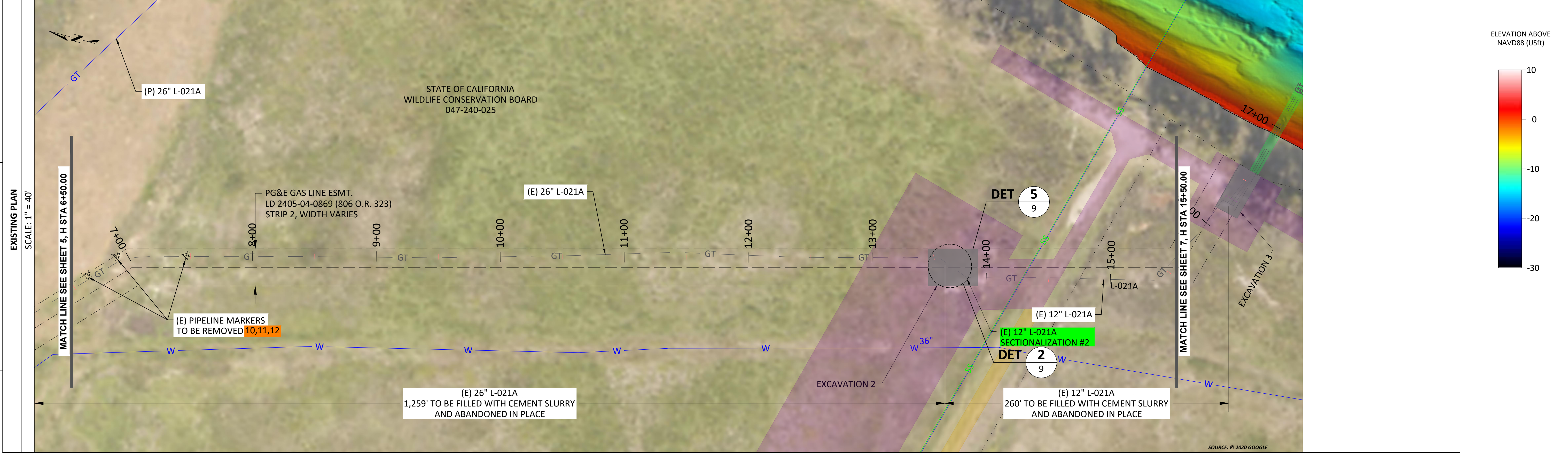
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PIPELINE - PLAN AND PROFILE  
L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
DECOMMISSION 26", 12", 8", 4" PIPE  
NAPA, NAPA COUNTY

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JOB ID **I-195E**

SHEET NO. 6 OF 11 SHEETS

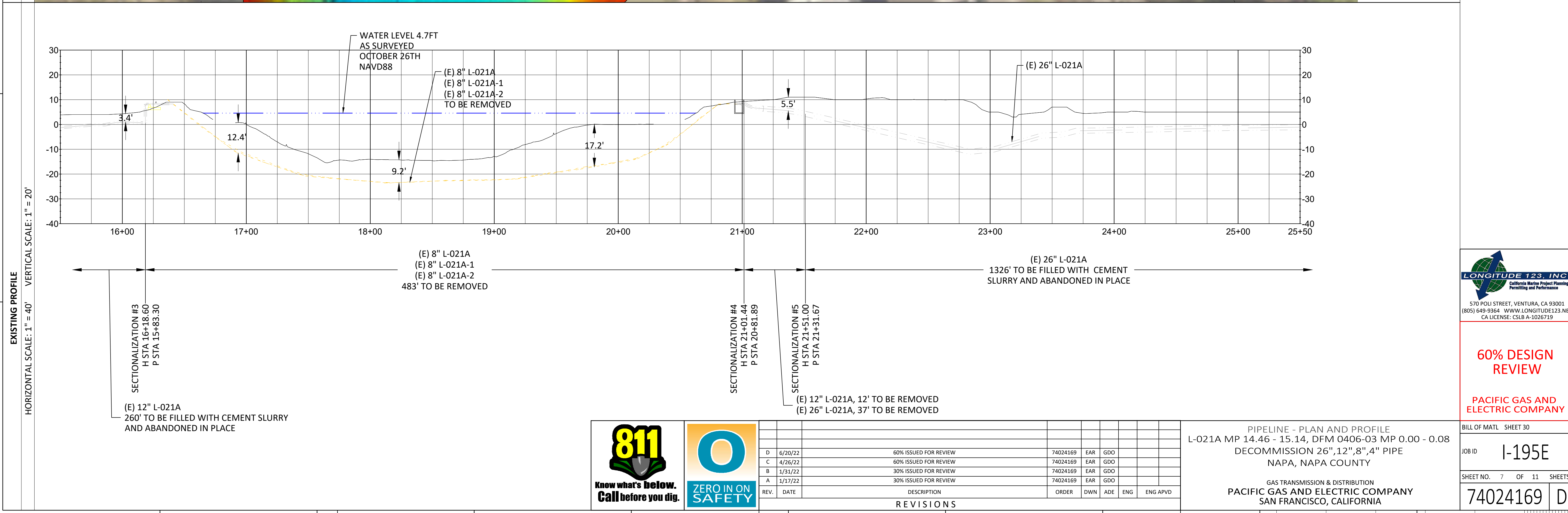
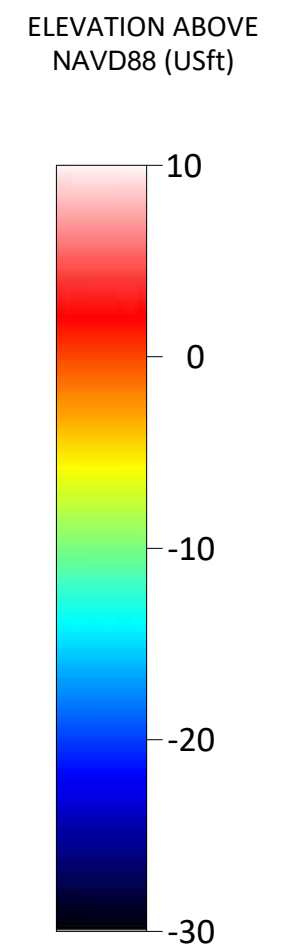
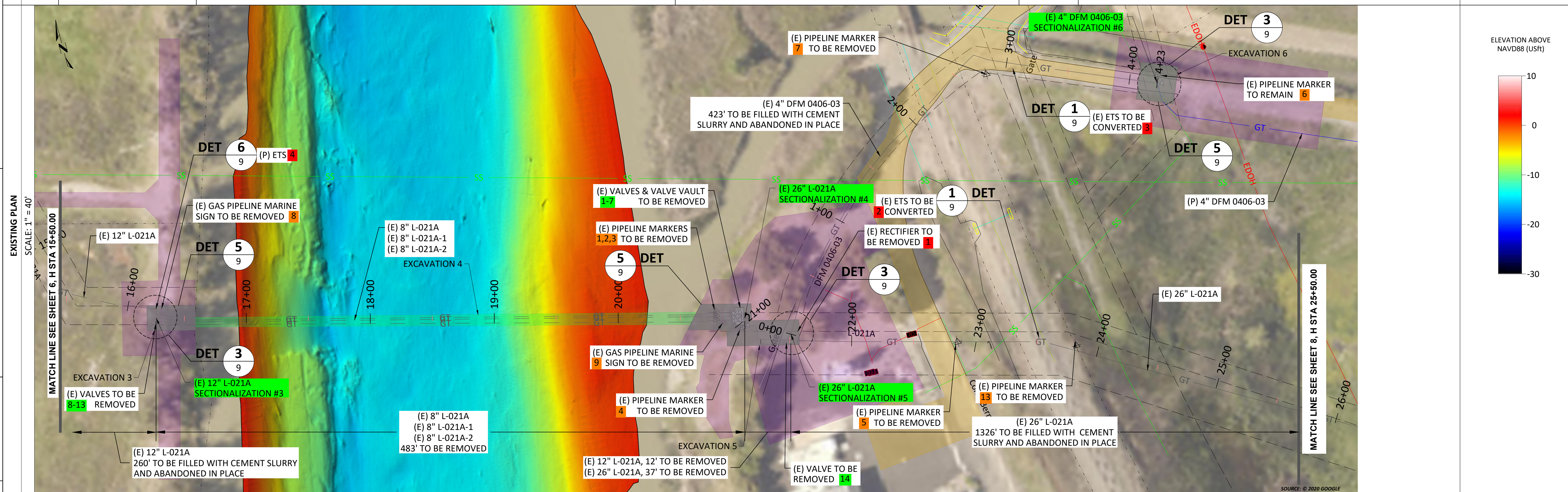
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PIPELINE - PLAN AND PROFILE  
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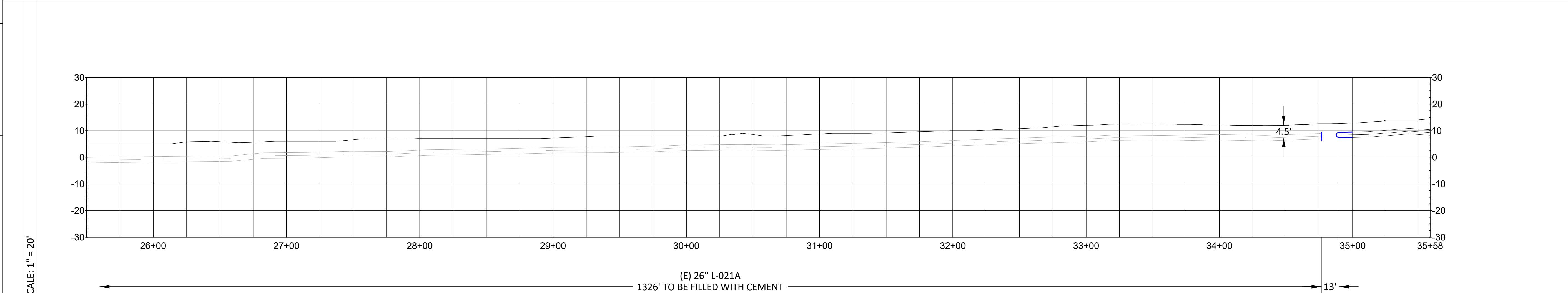
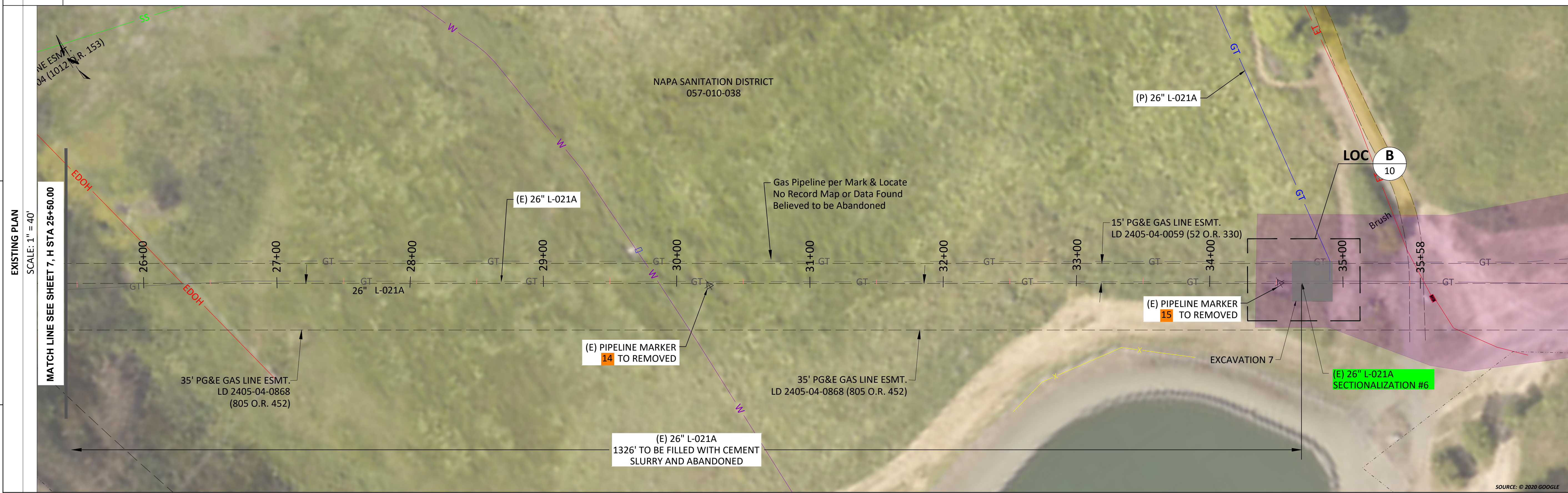
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JOB ID I-195E  
SHEET NO. 7 OF 11 SHEETS  
74024169 D



REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
**PACIFIC GAS AND ELECTRIC COMPANY**  
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R/W  
APN  
LDR  
H STA



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BILL OF MATL SHEET 30  
JOB ID **I-195E**  
SHEET NO. 8 OF 11 SHEETS  
**74024169 D**

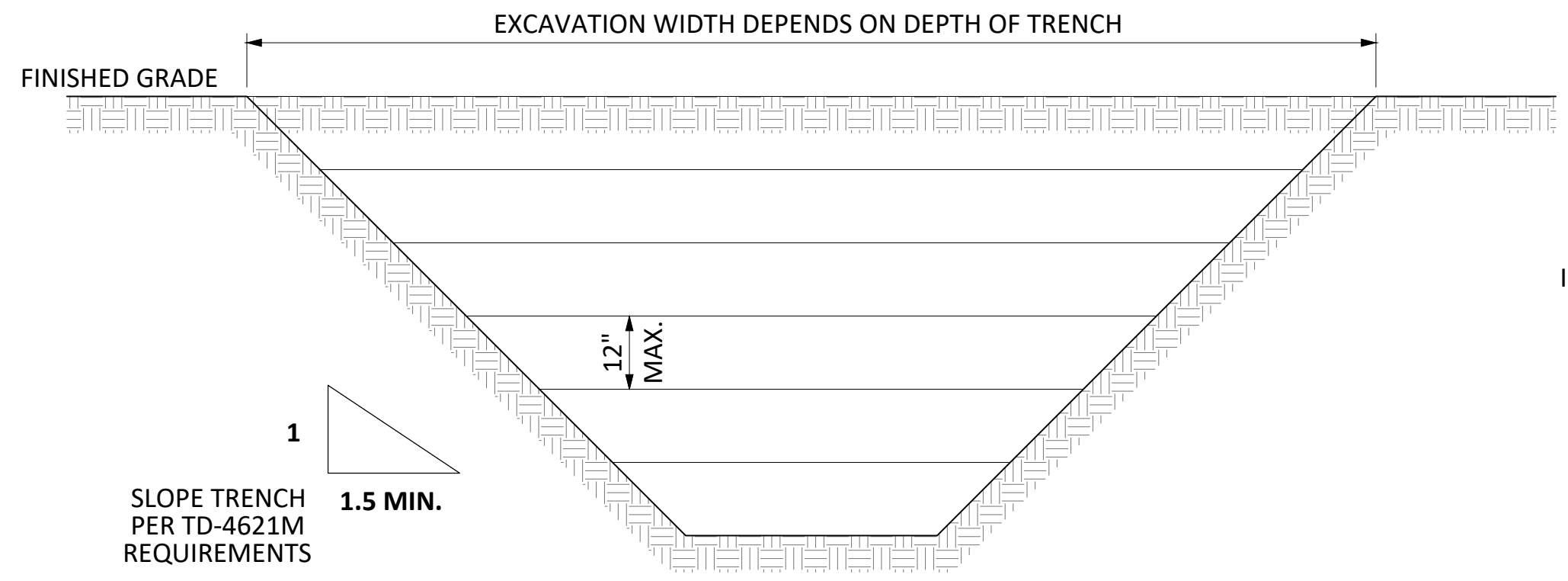
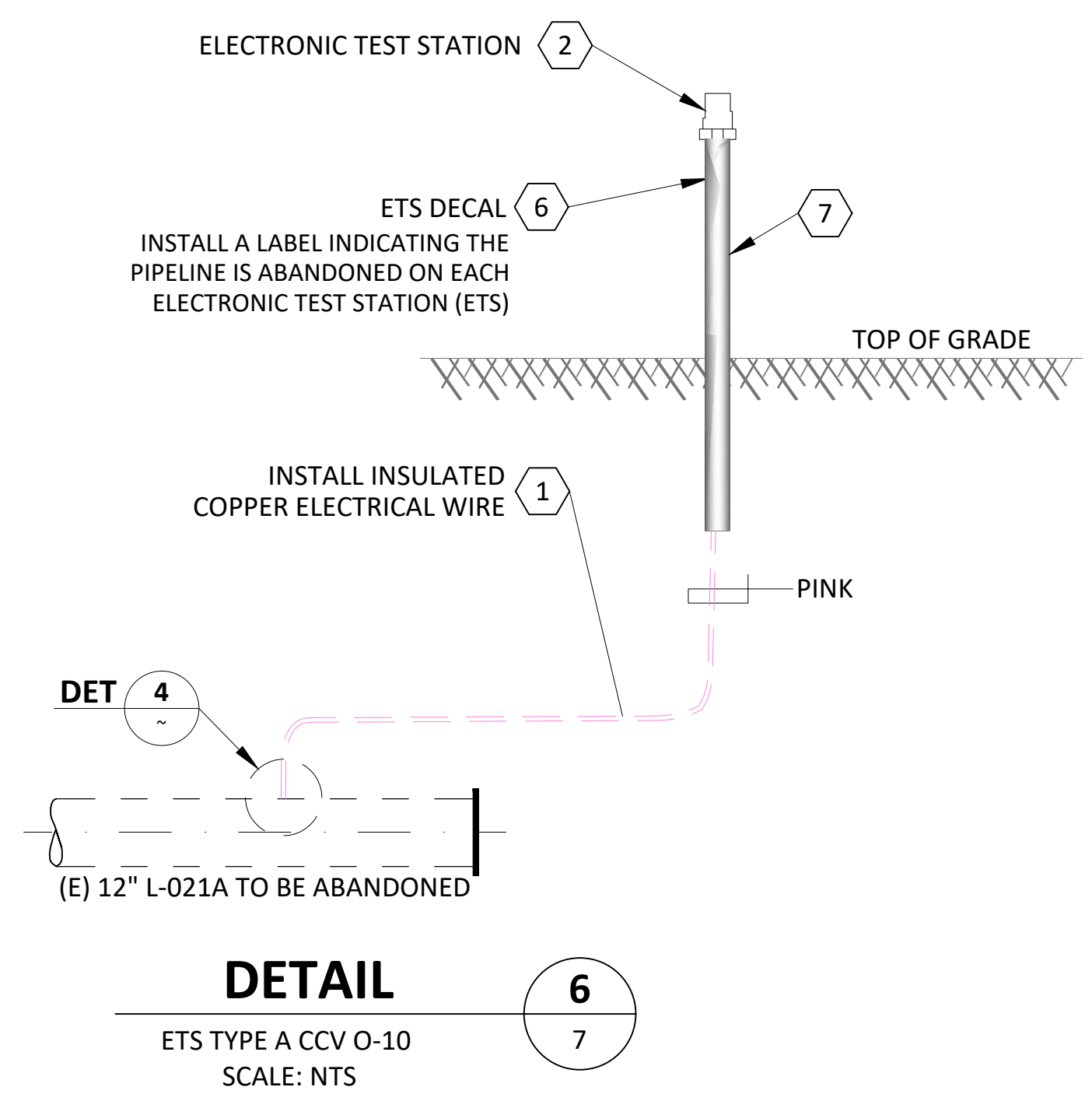


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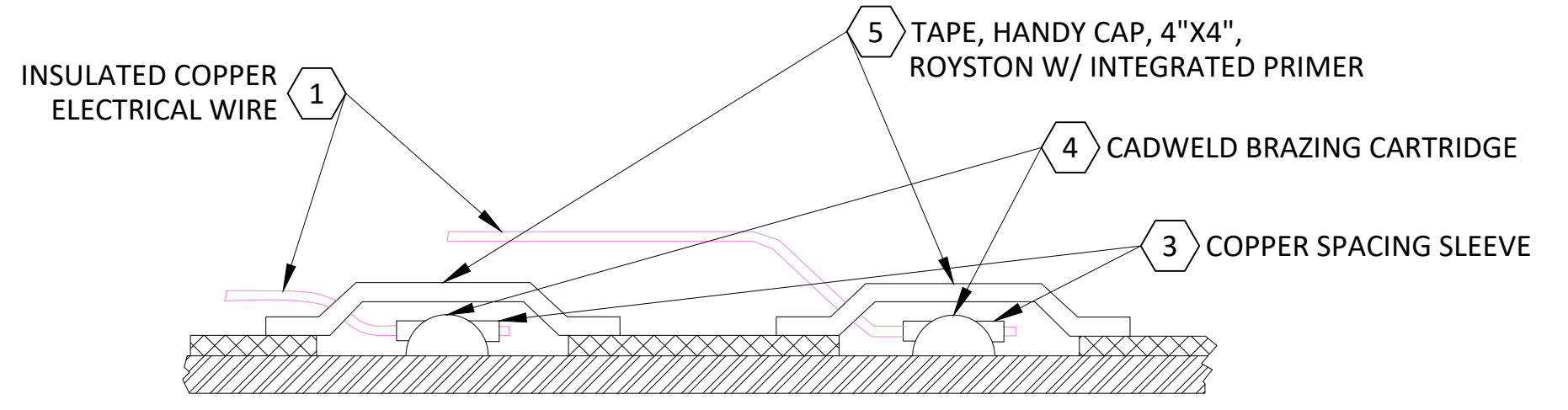
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L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
DECOMMISSION 26", 12", 8", 4" PIPE  
NAPA, NAPA COUNTY  
GAS TRANSMISSION & DISTRIBUTION  
**PACIFIC GAS AND ELECTRIC COMPANY**  
SAN FRANCISCO, CALIFORNIA

E  
D  
C  
B  
A

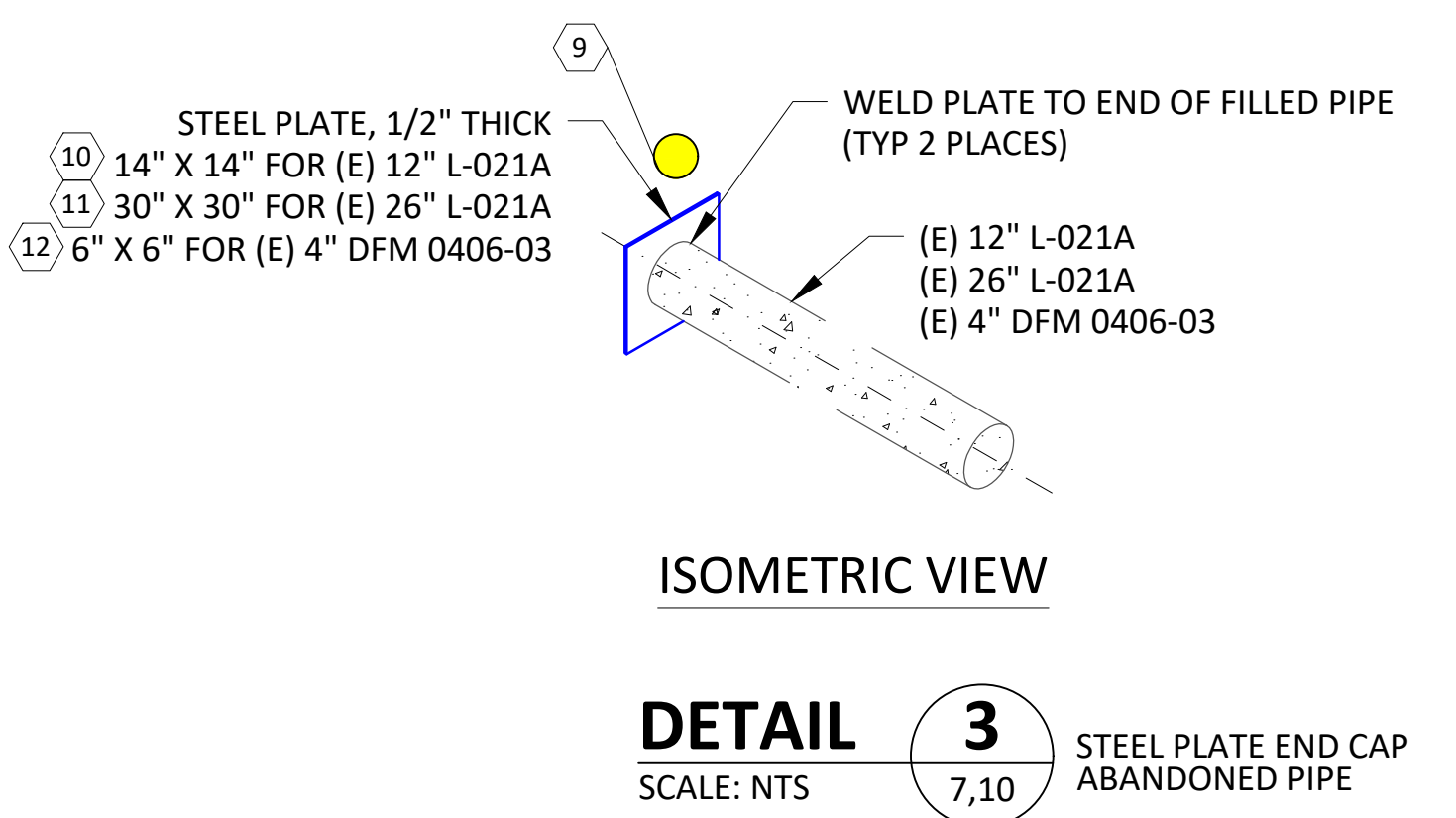
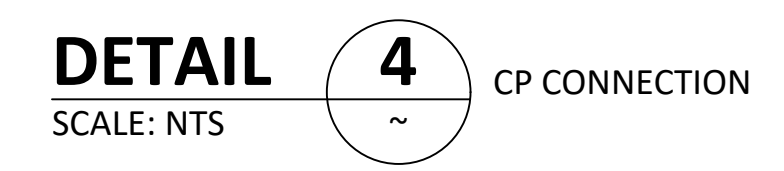
E  
D  
C  
B  
A



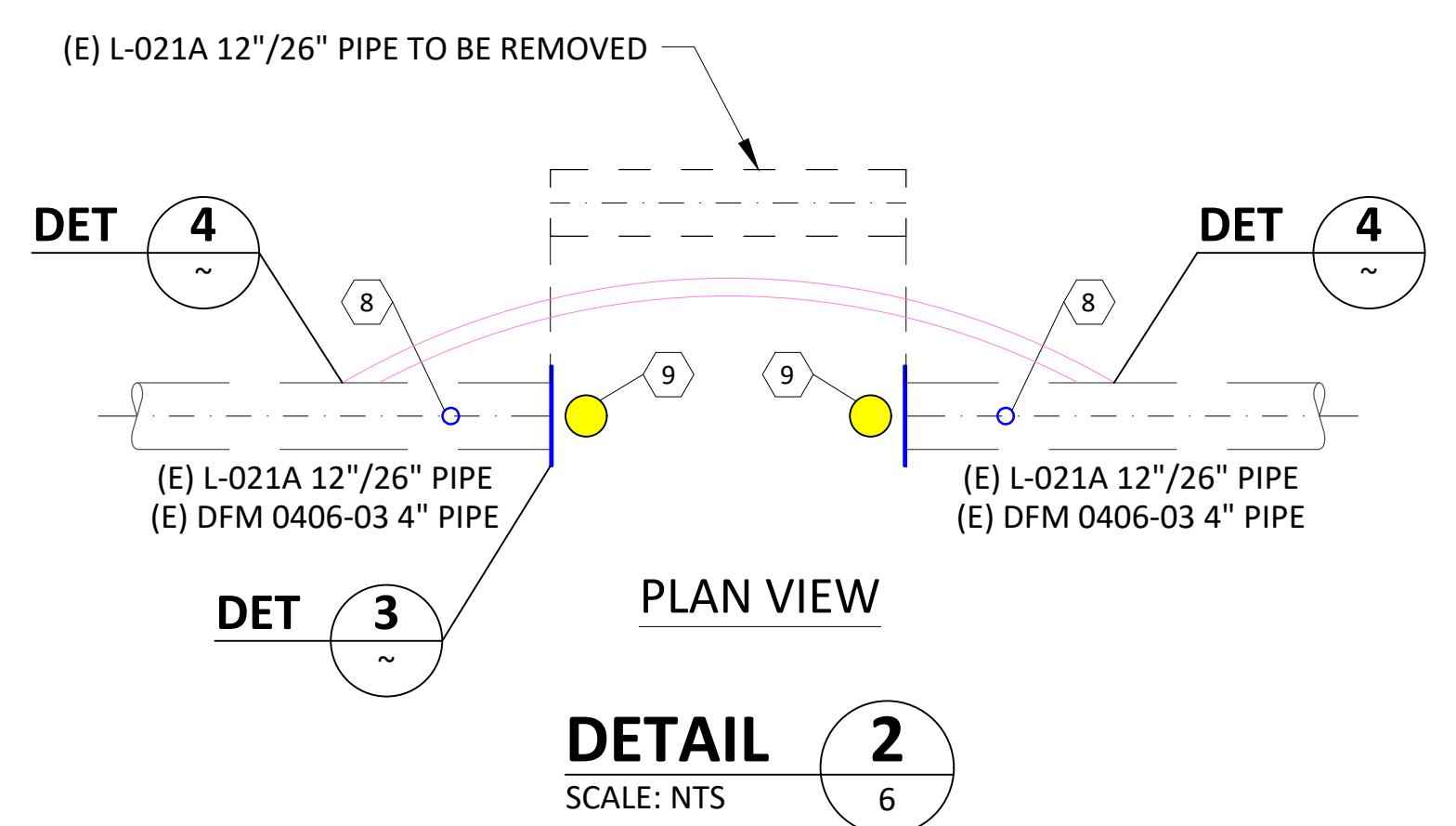
**BACKFILL NOTES:**  
 a. BACKFILL EXCAVATION WITH NATIVE SPOILS AND IMPORT ADDITIONAL FILL AS NEEDED.  
 b. COMPACT BACKFILL IN 4-12 INCH LAYERS TO A MINIMUM OF 90% RELATIVE COMPACTION AS MEASURED BY ASTM D1557.



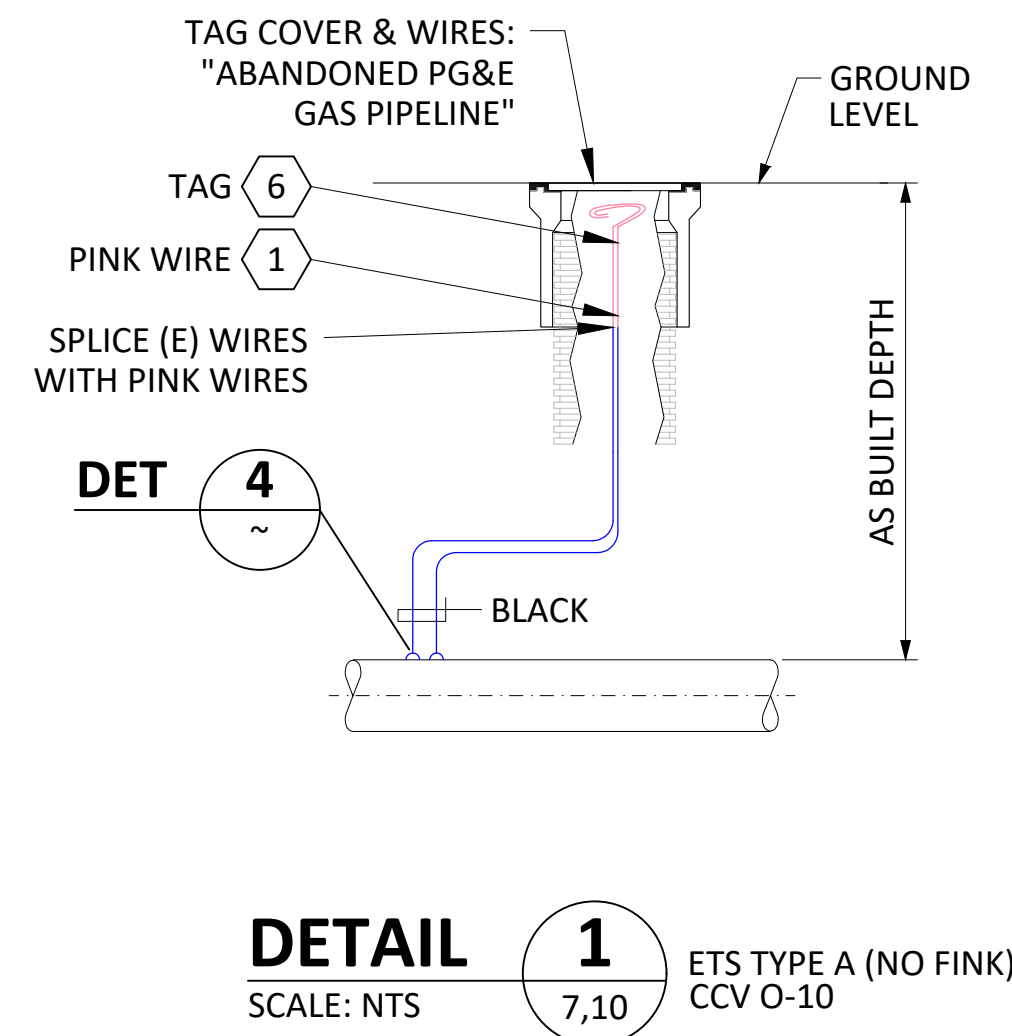
**NOTE:**  
 1. CADWELD CONNECTIONS SHOULD BE MADE IN THE BURIED SECTION OF THE AIR-TO-SOIL TRANSITION, 6" MINIMUM FROM THE TRANSITION OF EXISTING TO NEW COATING.  
 2. INSTALL WIRES PER O-10 AND E-27.



**DETAIL 3**  
STEEL PLATE END CAP ABANDONED PIPE  
SCALE: NTS



**DETAIL 2**  
SCALE: NTS



**DETAIL 1**  
ETS TYPE A (NO FINK) CCV O-10  
SCALE: NTS

**LEGEND**

	EXISTING GAS TRANSMISSION LINE
	GAS TRANSMISSION LINE (TO BE ABANDONED)
	GAS TRANSMISSION LINE (TO BE REMOVED)
	EXISTING GROUND ELEVATION



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PIPELINE - DETAILS  
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 NAPA, NAPA COUNTY

GAS TRANSMISSION & DISTRIBUTION  
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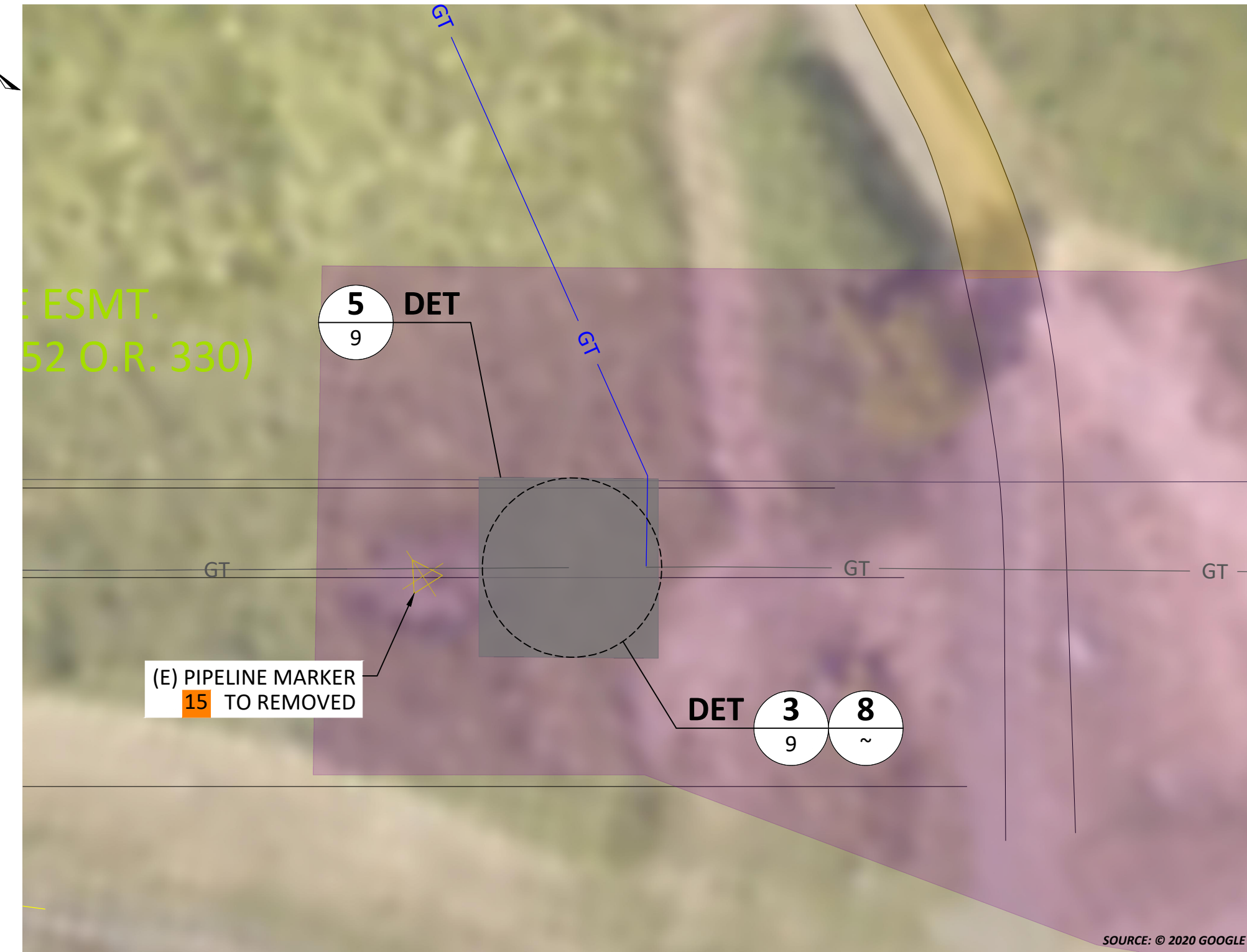
**PACIFIC GAS AND ELECTRIC COMPANY**

BILL OF MATL SHEET 30

JOB ID I-195E

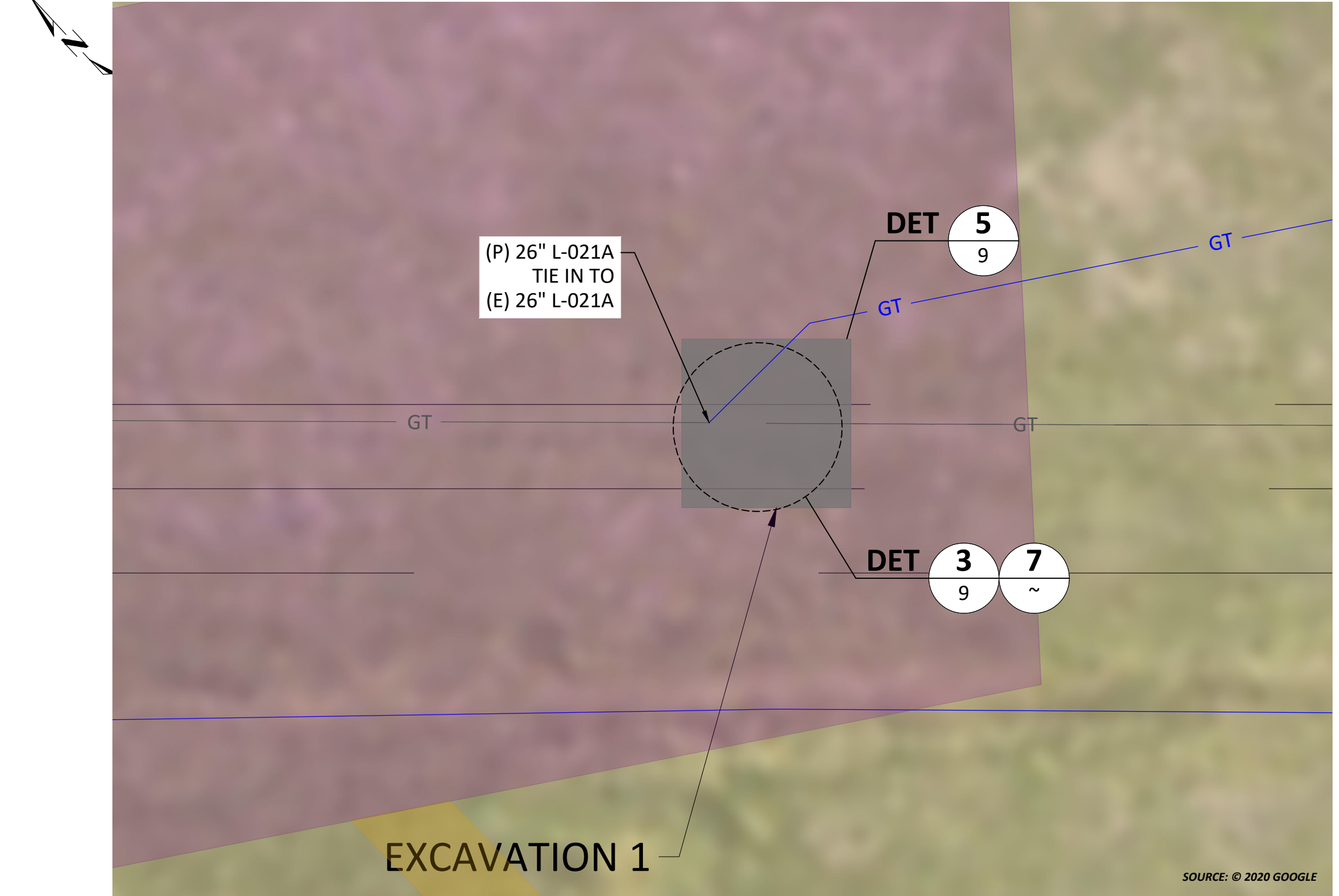
SHEET NO. 9 OF 11 SHEETS

74024169 D



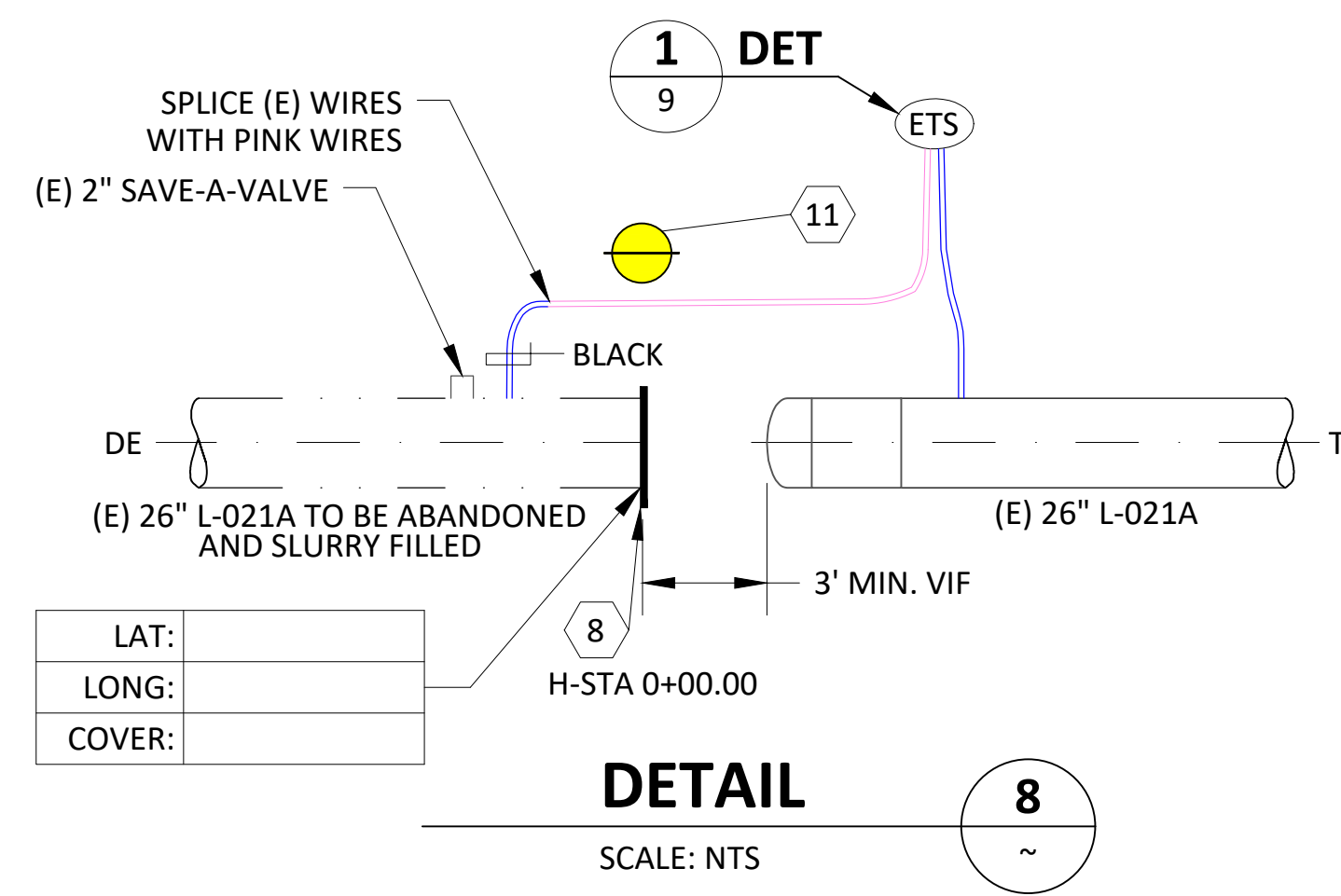
**LOCATION B**

SCALE: 1" = 20'



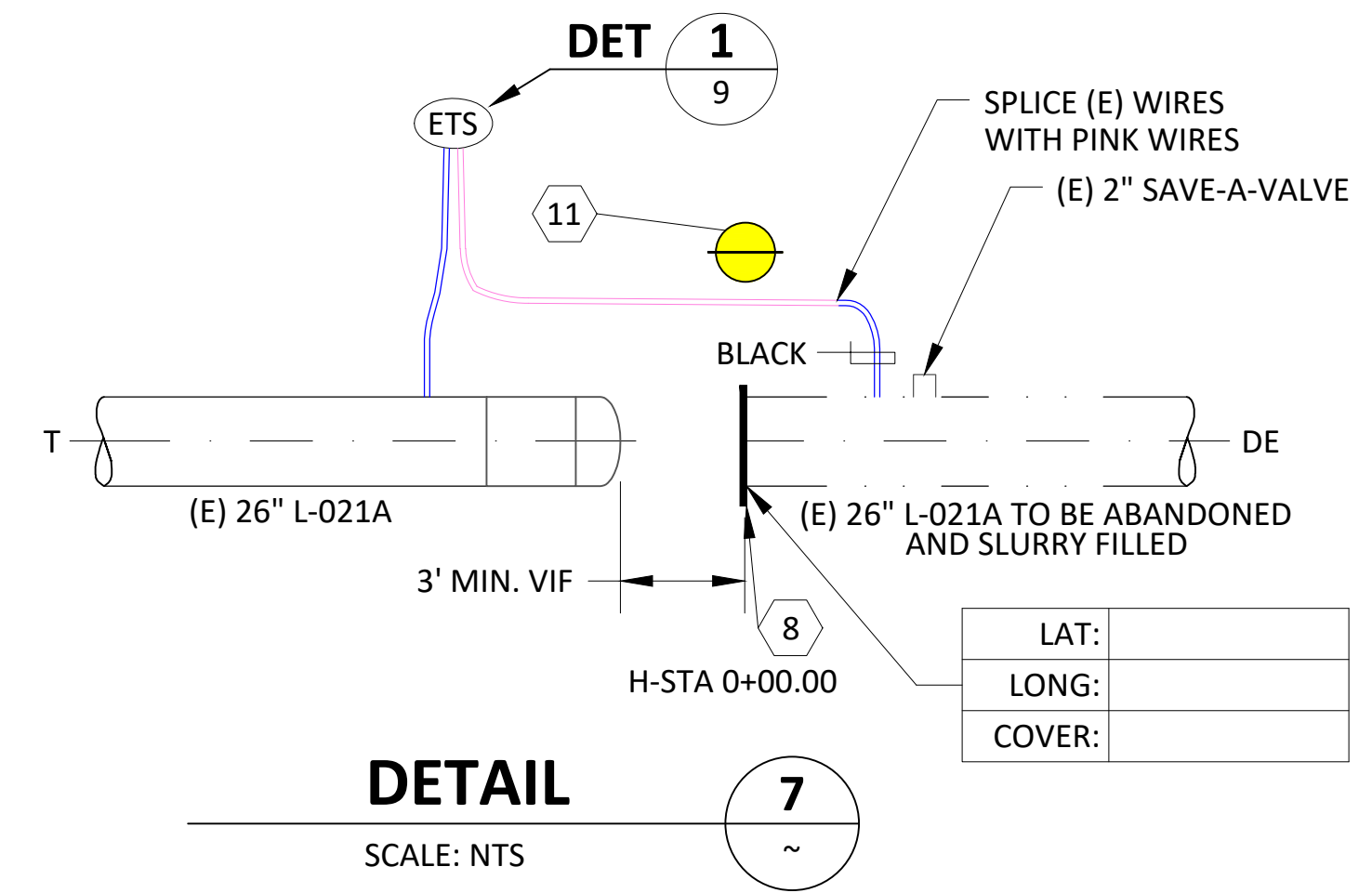
**LOCATION A**

SCALE: 1" = 20'



**DETAIL 8**

SCALE: NTS



**DETAIL 7**

SCALE: NTS

**LEGEND**

- EXISTING GAS TRANSMISSION LINE
- GAS TRANSMISSION LINE (TO BE ABANDONED)
- GAS TRANSMISSION LINE (TO BE REMOVED)



REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
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**REVISIONS**

PIPELINE - DECOMMISSION DETAILS  
 L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
 DECOMMISSION 26", 12", 8", 4" PIPE  
 NAPA, NAPA COUNTY  
 GAS TRANSMISSION & DISTRIBUTION  
 PACIFIC GAS AND ELECTRIC COMPANY  
 SAN FRANCISCO, CALIFORNIA



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 PACIFIC GAS AND ELECTRIC COMPANY

BILL OF MATL	SHEET 30
JOB ID	I-195E
SHEET NO.	10 OF 11 SHEETS
74024169	D

BILL OF MATERIALS						
BOM #	MATERIAL DESCRIPTION	MATERIAL CODE #	QTY	UNIT	STANDARD	NOTES
1	WIRE ELECTRICAL, INSULATED, COPPER, 10 AWG, 600 V, 47MIL PVC, SOLID 1 CONDUCTOR, PINK	M290466	50	FT	CCV 0-10	
2	STATION, TEST, CATHODIC PROTECTION, COTT MFG# 300S5, ORANGE, BIG FINK, 5 TERMINALS, WITHOUT CONDENSER	M569390	4	EA	CCV 0-10.1	
3	SLEEVE, COPPER SPACING, #14 TO #10 CADWELD # CAB-133-1H, THERMOWELD # A-200	M303755	8	EA	CCV 0-10	
4	CARTRIDGE, BRAZING, CADWELD # CA-15, THERMOWELD # 15P	M159260	8	EA	CCV 0-10	
5	TAPE, HANDY CAP, 4"X4", ROYSTON W/ INTEGRATED PRIMER	M294991	50	FT	CCV 0-10	
6	DECAL, "ABANDONED PG&E GAS PIPE", SELF ADHESIVE	N/A		EA	GS&S L-12	PROVIDED BY CONTRACTOR
7	PIPE, PVC, 3" IPS, 0.300" WT, SCH 80	M016071	20	FT	0	
8	NIPPLE, SAVE-A-VALVE, 2", WELD, STEEL, MUELLER # H-17495, STEEL CAP, DRILLING L-16 1200 PSI MAXIMUM, 1440 PSI MAXIMUM	M022289	10	EA	GS&S C-14	
9	MARKER, EXTENDED RANGE BALL, EMS TYPE, YELLOW, 3M # 1405-XR, FOR MARKING BURIED GAS FACILITIES, MAXIMUM INSTALLED DEPTH IS 5'	M374944	10	EA	GS&S M-60	
10	14" x 14" PLATE, STEEL, ASTM A36, 1/2" THICK					
11	30" x 30" PLATE, STEEL, ASTM A36, 1/2" THICK					
12	6" x 6" PLATE, STEEL, ASTM A36, 1/2" THICK	N/A	10	EA	-	PROVIDED BY CONTRACTOR

EXISTING VALVE REMOVAL TABLE						
#	LINE NUMBER	VALVE #	SHEET	LATITUDE	LONGITUDE	REMOVED? YES/NO/NOT FOUND
1	BD10060	V-J	SHEET 26	38.239737	-122.285907	
2	L-021A	V-14.71A	SHEET 26	38.239767	-122.285917	
3	BD9345	V-D	SHEET 26	38.239767	-122.285917	
4	L-021A-1	V-14.71B	SHEET 26	38.239759	-122.285919	
5	BD9360	V-E	SHEET 26	38.239759	-122.285919	
6	L-021A-2	V-14.71C	SHEET 26	38.239751	-122.285922	
7	BD9365	V-F	SHEET 26	38.239751	-122.285922	
8	L-021A	V-14.81A	SHEET 26	38.240066	-122.287476	
9	BD9346	V-I	SHEET 26	38.240066	-122.287476	
10	L-021A-2	V-14.81B	SHEET 26	38.240077	-122.287477	
11	BD9361	V-H	SHEET 26	38.240077	-122.287477	
12	L-021A-2	V-14.81C	SHEET 26	38.240086	-122.287475	
13	BD9364	V-G	SHEET 26	38.240086	-122.287475	
14	DFM 0406-03	V-94.2	SHEET 26	38.239678	-122.285791	

PIPELINE MARKER REMOVAL TABLE						
#	LINE NUMBER	MARKER TYPE	SHEET	LAT	LONG	REMOVED (YES/NO/NOT FOUND)
1	L-021A	PLASTIC POST	SHEET 26	38.239763	-122.285974	
2	L-021A-1	PLASTIC POST	SHEET 26	38.239771	-122.285972	
3	L-021A-2	PLASTIC POST	SHEET 26	38.23978	-122.285969	
4	L-021A	PLASTIC POST	SHEET 26	38.239731	-122.285908	
5	L-021A	PLASTIC POST	SHEET 26	38.239709	-122.285825	
6	DFM 0406-03	PLASTIC POST	SHEET 26	38.240041	-122.284601	
7	DFM 0406-03	PLASTIC POST	SHEET 26	38.240137	-122.285066	
8	L-021A,-1,-2	MARINE SIGN	SHEET 26	38.240081	-122.287478	
9	L-021A,-1,-2	MARINE SIGN	SHEET 26	38.239767	-122.285955	
10	L-021A	PLASTIC POST	SHEET 25	38.242283	-122.288411	
11	L-021A	PLASTIC POST	SHEET 25	38.242429	-122.288461	
12	L-021A	PLASTIC POST	SHEET 25	38.242481	-122.288535	
13	L-021A	DUAL PADDLE	SHEET 26	38.239506	-122.285014	
14	L-021A	PADDLE	SHEET 27	38.238574	-122.283117	
15	L-021A	PADDLE	SHEET 27	38.237946	-122.281857	

EXCAVATION AREAS			
ID	AREA	VOLUME	DEPTH
1	900 SQ. FT.	108 CU. YD.	7'
2	1,200 SQ. FT.	164 CU. YD.	8'
3	780 SQ. FT.	76 CU. YD.	5'
4	3,280 SQ. FT.	1,458 CU. YD.	5'-17"
5	2,000 SQ. FT.	228 CU. YD.	6'
6	900 SQ. FT.	108 CU. YD.	7'
7	900 SQ. FT.	108 CU. YD.	7'

CATHODIC PROTECTION REMOVAL/ADD/CONVERSION TABLE						
#	LINE NUMBER	CP TYPE	SHEET	LAT	LONG	REMOVED/ADDED/CONVERTED/NOT FOUND
1	L-021A	RECTIFIER	SHEET 26	38.239661	-122.285709	
2	L-021A	ETS	SHEET 26	38.239503	-122.28499	
3	DFM 0406-03	ETS	SHEET 26	38.240134	-122.28499	
4	L-021A	ETS	SHEET 26	38.2401	-122.287488	



**60% DESIGN REVIEW**  
**PACIFIC GAS AND ELECTRIC COMPANY**



REV.	DATE	DESCRIPTION	ORDER	DWN	ADE	ENG	ENG APVD
D	6/20/22	60% ISSUED FOR REVIEW	74024169	EAR	GDO		
C	4/26/22	60% ISSUED FOR REVIEW	74024169	EAR	GDO		
B	1/31/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		
A	1/17/22	30% ISSUED FOR REVIEW	74024169	EAR	GDO		

PIPELINE - BILL OF MATERIALS  
 L-021A MP 14.46 - 15.14, DFM 0406-03 MP 0.00 - 0.08  
 DECOMMISSION 26", 12", 8", 4" PIPE  
 NAPA, NAPA COUNTY  
 GAS TRANSMISSION & DISTRIBUTION  
**PACIFIC GAS AND ELECTRIC COMPANY**  
 SAN FRANCISCO, CALIFORNIA

BILL OF MATL SHEET 30  
 JOB ID **I-195E**  
 SHEET NO. 11 OF 11 SHEETS  
**74024169** D