

OWNER

Construction Execution Plan

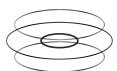


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ISSUE SUMMARY AND APPROVAL

This page records each issue of CON-RPT-001. The preparer, reviewer and approver sign for each revision.

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1. INTRODUCTION

1.1. PURPOSE

This plan describes how the , its site and its outlet lateral will be built, tested, connected to the receiving pipeline operator's tap valve, commissioned and handed over. It sets the framework that the Contractor's own execution plan, a submittal under SPC-SPC-001, shall follow and expand. It is written for the Owner's project team, the Engineer of Record (EOR) and bidders, so that all three plan the work on the same sequence and the same constraints.

1.2. SCOPE

The plan covers everything between inlet insulating joint IJ-101 and outlet insulating joint IJ-102, the site, buildings, power, communications and cathodic protection, and the Owner's buried outlet lateral from IJ-102 to the outlet flange of the tap valve. The lateral, line 12"-G-1042-A6, is about 96 ft of NPS 12, 0.500 in wall API 5L X52 PSL2 pipe, buried from the riser at plot coordinates (220, 160) to the tap at (220, 257), and it crosses internal road R-3 below grade (final length by survey, HOLD H-04). The station layout and all coordinates in this plan follow MEC-DWG-001, Plot Plan, which is reproduced in Appendix A.

1.3. EXCLUSIONS

The following work is by others and is shown only where it constrains the sequence:

- The Owner's upstream 12-inch lateral, a separate Owner project (HOLD H-16).
- The hot tap fitting, tap valve, hot tap and remote terminal unit on the trunkline, by (the receiving pipeline operator) (HOLD H-01, H-04).
- The utility line extension and transformer XF-101, by the electric cooperative (HOLD H-10).

2. ORGANIZATION AND INTERFACES

2.1. PARTIES

Six parties take part in construction. Table 2-1 sets out the role of each. The Owner holds the contract and manages the interface with the receiving pipeline operator; the Contractor does not contact the operator directly except where SPC-SPC-001 allows, because the Interconnect and Operating Agreement is between the Owner and the operator.

Table 2-1: Construction-Phase Roles

Party	Role during construction
Owner	Holds the contract; furnishes Owner-furnished material (CON-RPT-002); provides the Owner's Representative and inspectors for welding, coating, civil and electrical and instrumentation work; releases hold points; holds the permits in REG-RPT-002 unless assigned; manages the receiving pipeline operator
EOR (professional engineer)	Answers requests for information; reviews submittals; approves field changes through management of change; releases EOR hold points; reviews test records; seals the construction issue and the as-built record set
Contractor	Performs the work to Volume 8; furnishes Contractor-furnished material; runs quality control, safety, survey, testing, records and turnover
Receiving pipeline operator	Designs and installs the hot tap and tap valve; witnesses tie-in, gas-in and meter verification; installs its remote terminal unit; consents to work in its right-of-way (HOLD H-01, H-04)
Electric cooperative	Line extension, transformer XF-101 and metering (HOLD H-10)
Commissioning team	Led by the Owner, with Contractor, vendor and EOR support under SPC-SPC-018

2.2. KEY CONTRACTOR POSITIONS

The positions in Table 2-2 are the minimum the Contractor shall staff. The welding, coating and hazardous-area electrical positions carry specific qualifications because those are the trades whose errors are hardest to find after the fact.

Table 2-2: Minimum Contractor Positions

Position	Minimum qualification	Presence
Construction manager or superintendent	10 years of gas facility construction, including 3 meter or compressor stations	Full time
Quality control manager	10 years of pipeline quality control; AWS Certified Welding Inspector or API 1169	Full time from first weld
Welding inspector	AWS Certified Welding Inspector with API 1104 experience	During welding
Safety lead	CSP, ASP, or OSHA 500 with 5 years of pipeline work	Full time

Position	Minimum qualification	Presence
Coating inspector	AMPP Coating Inspector Program Level 2	During coating
Electrical and instrument lead	Journeyman electrician licensed in , with Class I Division 1 and 2 experience	During electrical work
Survey party chief	Under the supervision of an professional land surveyor	As needed
Competent persons	Excavation, scaffolds, fall protection, confined space	As needed
Lift director, qualified rigger and signal person	29 CFR 1926.1404, 1926.1425 and 1926.1428	During lifts

Everyone who performs a covered task once gas is introduced (purging, gas-in, valve operation, cathodic protection work) shall be qualified under the Owner's operator qualification program, 49 CFR 192 Subpart N (CON-RPT-003).

2.3. MEETINGS

The meetings in Table 2-3 keep the parties aligned. The meetings with the receiving pipeline operator increase to weekly in the 30 days before tie-in, because that is when its hot tap window, witness availability and gas control authorization have to be fixed.

Table 2-3: Construction Meetings

Meeting	Frequency	Attendees
Pre-construction meeting	Once, before mobilization	Owner, EOR, Contractor, receiving pipeline operator, cooperative
Daily safety briefing	Daily	Contractor crews, Owner's inspector
Progress and look-ahead	Weekly	Owner, Contractor; EOR as needed
Receiving pipeline operator interface	Every two weeks; weekly within 30 days of tie-in	Owner, Contractor, operator
Pre-test meeting	Before each hydrostatic test	Owner, Contractor, EOR
Pre-tie-in and pre-gas-in meetings	7 days and 1 day before	Owner, Contractor, operator, EOR
Pre-startup safety review	Before gas-in	Owner (chair), EOR, Contractor, commissioning lead

3. PHASING AND SEQUENCE

3.1. PHASES

The work is divided into nine phases, P0 to P8. Each phase ends at a gate that the next phase depends on, listed in Table 3-1. The gates are the points where a mistake would otherwise be built over: foundations before steel is set on them, welds before they are buried or pressurized, and the safety systems before gas is admitted.

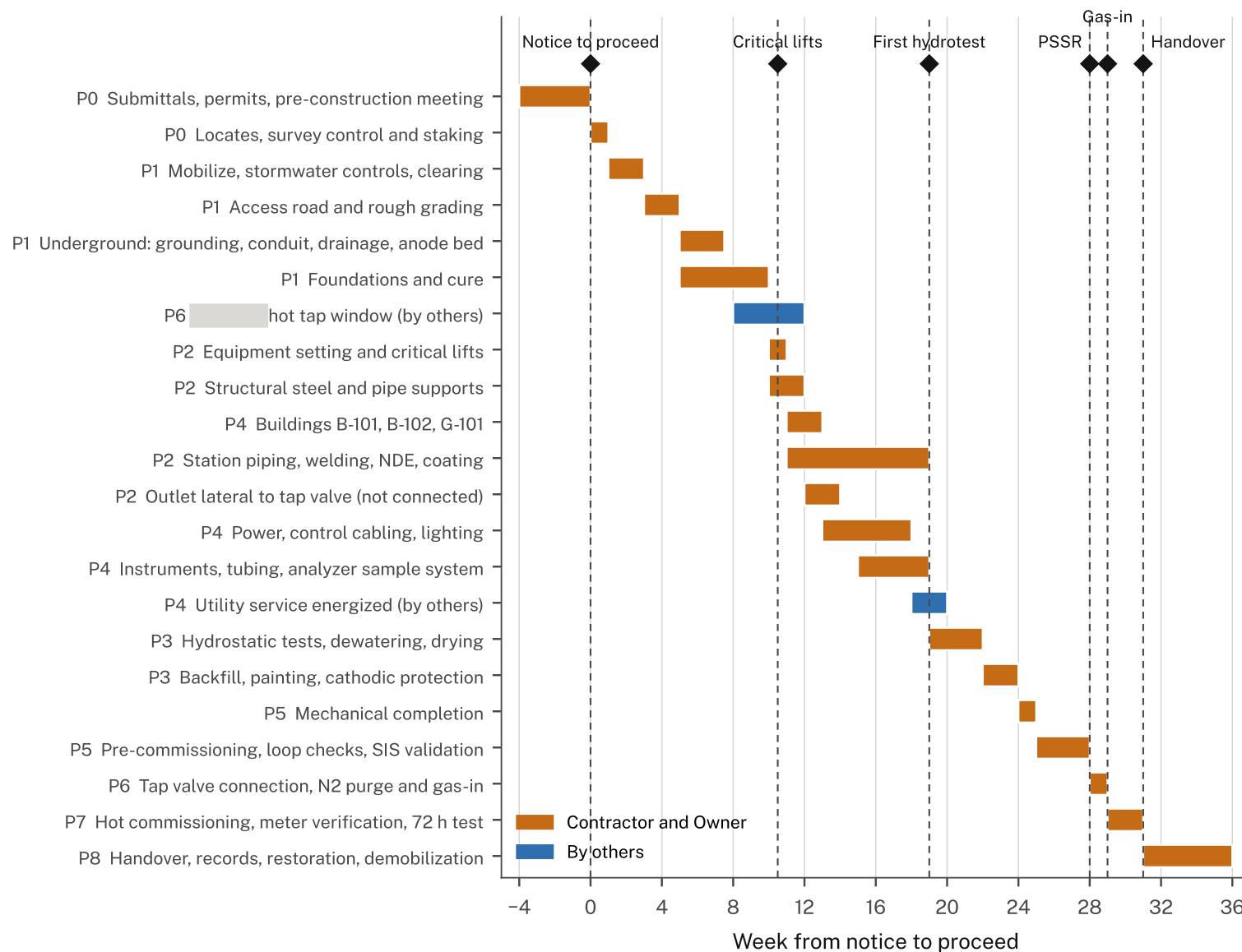
Table 3-1: Construction Phases and Gates

Phase	Content	Gate to the next phase
P0 Pre-construction	Permits (REG-RPT-002), construction drawings, survey control, submittals, delivery schedule for Owner-furnished material, tie-in plan agreed with the operator	Notice to proceed; stormwater permit coverage effective (authority HOLD H-17); stormwater controls installed
P1 Civil	Clearing, stormwater controls, access road, rough grading, underground work, foundations	Foundations cured and anchor bolt survey accepted
P2 Mechanical	Equipment setting and critical lifts, supports, piping, welding, nondestructive examination (NDE), coating, outlet lateral	Welding complete and NDE accepted for each test section
P3 Testing	Hydrostatic tests by section, dewatering, drying	Test records accepted by the EOR
P4 Electrical, instrumentation, cathodic protection	Buildings, power, grounding, lighting, instruments, tubing, cabling, cathodic protection	Loop checks and electrical tests complete
P5 Pre-commissioning	Mechanical completion, site acceptance tests, loop checks, function tests, validation of the safety instrumented system	Mechanical completion certificate; pre-startup safety review
P6 Tie-in and gas-in	Connection to the tap valve, nitrogen purge and pre-pressurization, gas-in, leak checks	Operator's release to open the tap valve
P7 Startup	Hot commissioning, meter-to-meter verification, performance test	Handover certificate
P8 Demobilization	Final grading, seeding, stormwater permit closeout, records turnover	Final acceptance

3.2. SEQUENCE AND DURATIONS

Figure 3-1 shows the planning sequence, and Table 3-2 lists the activities with their predecessors. Durations are typical for a single mid-size station crew and are planning values; the project schedule in Volume 10 governs. The field duration from notice to proceed to handover is about 31 weeks, provided the Owner-furnished equipment arrives before the setting window at week 10.

Figure 3-1. Construction Phasing



Note 1: Week 0 is the notice to proceed. Blue bars are work by others. Durations are planning values.

The critical path normally runs through three items that field productivity cannot recover: delivery of the long-lead Owner-furnished equipment (meter skid, line heater and actuated API 6D valves, CON-LST-001), energization of the utility service, and the receiving pipeline operator's hot tap window. TORUS therefore recommends that the hot tap be done early, during the civil phase, so that the outlet lateral can be finished in one mobilization and the hot tap drops off the critical path.

Table 3-2: Activity Sequence

ID	Activity	Predecessor	Working days	Phase
A010	Permits and approvals in place	Owner	Before notice to proceed	P0
A020	Pre-construction meeting; execution, safety, quality and welding procedure submittals accepted	A010	10	P0
A030	One-call locates, operator's trunkline located and marked, survey control and staking	A020	5	P0
A040	Mobilize field office, temporary power, sanitation, laydown	A030	5	P1
A050	Stormwater controls (silt fence, construction entrance, inlet protection)	A040	3	P1
A060	Clearing, grubbing, topsoil strip	A050	4	P1
A070	Access road, 600 ft, and county road driveway	A060, county permit	8	P1
A080	Rough grading, proof roll, subgrade stabilization	A060	10	P1
A090	Grounding grid, conduit duct banks, drainage, anode bed and cables	A080	12	P1
A100	Foundations for equipment, supports, buildings and T-101 containment	A080	25	P1
A110	Foundation cure, anchor bolt survey, grout pads	A100	7, overlapping	P1
A120	Receive and inspect Owner-furnished equipment	Vendor delivery	Rolling	P2
A130	Critical lifts of V-101, SK-110 and H-101; set PR-101, T-101, FG-101 and E-161	A110, A120	5	P2
A140	Canopy, pipe supports, platforms	A110	8	P2
A150	Station piping fabrication and installation	A130	35	P2
A160	NDE, repairs, weld map closeout	A150	Concurrent plus 5	P2
A170	Field joint coating and holiday test of buried station piping	A160	Concurrent plus 3	P2

ID	Activity	Predecessor	Working days	Phase
A180	Outlet lateral trenched, welded, examined, coated and lowered in, not connected	A030, operator's release to excavate	8	P2
A190	Hydrostatic tests TS-01A to TS-05, dewatering, drying	A160, A170	15	P3
A200	Backfill of tested piping, soil-to-air coating, painting	A190	8	P3
A210	Set and connect B-101, B-102, G-101 and the transfer switch	A130	10	P4
A220	Power and control cabling, lighting, lightning protection, sealing	A210	25	P4
A230	Instruments, tubing, analyzer sample system	A150, A210	20	P4
A240	Cathodic protection, test stations, insulating joint tests	A090, A200	5	P4
A250	Utility energization by the cooperative	A220	Cooperative schedule	P4
A260	Mechanical completion walk-down; category A punch items closed	A200, A220, A230	5	P5
A270	Loop checks, site acceptance tests, burner management dry checks, safety system validation, UPS and transfer switch tests	A250, A260	15	P5
A280	Pre-startup safety review; operator's pre-gas-in review	A270	2	P5
A290	Hot tap by the operator (any time after A030 and before A300)	Operator	3	P6
A300	Connection to the tap valve; leak test of final joints	A190, A290	2	P6
A310	Nitrogen purge and pre-pressurization, then staged gas-in with leak checks	A280, A300	3	P6
A320	Heater light-off, analyzers on stream, first deliveries at low rate	A310, operator's release	5	P7
A330	Meter-to-meter verification, overpressure shutdown proof test, 72 hour performance test	A320	5	P7
A340	Handover, cathodic protection survey after 30 days of polarization, stabilization, records turnover	A330	20	P8
A350	Demobilize and restore laydown areas	A340	5	P8

4. SITE LOGISTICS

4.1. LAYOUT OF TEMPORARY FACILITIES

The fenced station is 250 ft x 200 ft within a tract of 350 ft x 300 ft (HOLD H-03). Table 4-1 places the temporary facilities in plot coordinates, measured in feet from the southwest fence corner. Laydown and fabrication areas are placed where the final yard surfacing will go, so that no permanent equipment is blocked and the areas need only regrading at the end. The two crane pads are those of CON-CAL-001; they are sited clear of the fuel gas skid, the meter skid footprint and the outlet piping.

Table 4-1: Temporary Facilities

Area	Location	Use	Constraint
Field office, parking, first aid, sanitation	Tract margin east of the fence, south of the main gate approach (HOLD H-03)	Offices, parking for 30 vehicles, safety briefings, muster point M1	Outside the future hazardous area; no parking within 50 ft of live gas after gas-in
Laydown L1, pipe and bulks	X 110 to 165, Y 10 to 65	Line pipe on sand-filled sacks or timbers at least 4 in off the ground; fittings and valves in containers	Clear of G-101 and B-102 until they are set
Laydown L2, equipment staging and fabrication	X 60 to 160, Y 150 to 195, clear of roads R-1 to R-7	Staging of Owner-furnished equipment; spool fabrication in the west part with welding shelters	North personnel gate route kept clear
Crane pad A	Centered at (68, 69)	V-101 and then SK-110, set before the piping between them	200 US ton class crane; three over three timber mats per outrigger, about 1,310 psf
Crane pad B	Centered at (192, 172) on road R-3	H-101, the governing lift (45,324 lb, about 34 ft long)	Heater trailer on road R-3 west of the crane; pick at 45 ft or less, set at 35 ft or less
Hazardous material storage	X 5 to 20, Y 180 to 195	Fuel, paint, compressed gas cylinders, coating chemicals	Oxygen and fuel gas cylinders 20 ft apart or behind a 5 ft fire barrier; containment for fuel
Waste and recycling	Beside hazardous material storage	Roll-off bins, scrap steel, blast media, spent coating	Covered bins
Hydrotest water tanks	West side, X 5 to 25, Y 60 to 140	Fill and receiving tanks	Filter socks on discharge
Radiography source	NDE subcontractor's vehicle vault only	No overnight storage on site without licensed storage	radiation rules

Area	Location	Use	Constraint
Muster points	M1 at the field office; M2 outside the west emergency gate	Emergency assembly	Wind socks at B-102 and near H-101

Note 1: Construction fuel storage above 1,320 gal in aggregate triggers a construction Spill Prevention, Control and Countermeasure plan.

4.2. TEMPORARY SERVICES

A generator will supply temporary power until the cooperative energizes the service; after gas-in it shall stand at least 50 ft from gas-containing piping. Potable water will be delivered, and sanitary facilities shall meet 29 CFR 1926.51. Night work needs the Owner's approval and is not permitted for critical lifts or the tie-in. The permanent perimeter fence should be installed early, after rough grading, so that the site is secure from the start; until then a temporary panel fence shall enclose the laydown areas. Communications are by cellular telephone and a handheld radio channel shared with the Owner's inspector and, during tie-in, with the receiving pipeline operator. Two wind socks shall be installed before any gas is introduced.

4.3. BEFORE FIRST GROUND DISTURBANCE

The Contractor shall confirm the following before any clearing:

- Stormwater permit coverage is effective under the authority determined for HOLD H-17, and
CIV-RPT-002, Stormwater Pollution Prevention Plan, is on site.
- The one-call ticket is valid (at least 48 hours' notice, excluding weekends and holidays), and the trunkline is located and flagged by the receiving pipeline operator.
- Survey control is set and verified, and the tract and fence corners are staked.
- Environmental constraints from
REG-RPT-003 are briefed and avoided areas are flagged.
- The emergency response plan, with the route to the nearest hospital, is posted (
CON-RPT-003).

5. ACCESS AND TRAFFIC

Access will be from the section-line county road on the east by a new gravel road about 600 ft long and 20 ft wide (HOLD H-05), with a driveway approach under a County permit. The Contractor shall build the road at least to subgrade and its first aggregate lift before heavy deliveries, and shall submit a check that it carries the crane and heavy-haul axle loads.

The meter skid (about 48 ft x 14 ft) and the line heater (about 34 ft x 9.5 ft) are oversize loads. The vendor or the Contractor shall obtain the oversize and overweight permits and escorts, and shall submit a route survey (bridges, overhead lines, the turn at the county road) 30 days before shipment.

The county road shall be kept free of mud through a stabilized construction entrance and street sweeping, and any damage repaired to county standard. On site, speed is limited to 10 mph, the internal road runs one way, reversing heavy vehicles have spotters, and vehicles stay 10 ft from open excavations. The receiving pipeline operator's right-of-way (Y = 235 to 285) shall not be crossed by vehicles except at a crossing it has marked and approved, with the mats or earth bridge it requires, and nothing shall be parked or stored in it (HOLD H-04).

6. TIE-IN AND HOT TAP SEQUENCE

6.1. PRINCIPLES

The trunkline stays in service throughout; no outage is planned. The receiving pipeline operator will make the hot tap under pressure with its own procedures and qualified personnel, following API RP 2201 practice (details HOLD H-01, H-04). The Owner's Contractor shall not weld on, cut or excavate within the tolerance zone of the trunkline, and all work inside the right-of-way needs the operator's written consent and its representative on site. The lateral connects to the tap valve by a bolted flange, so no weld is made by the Owner's Contractor on any facility of the operator, and the tap valve stays closed and under the operator's control until it releases it.

6.2. SEQUENCE

Table 6-1 gives the step-by-step sequence. The hot tap (steps T2 to T4) is independent of station construction and should be done early, as noted in Section 3.

Table 6-1: Tie-in and Hot Tap Sequence

Step	Action	By	Release
T1	Agree the tie-in plan: tap location and orientation, excavation limits, flange elevation and orientation, final joint detail (PIP-DWG-004 and MEC-LST-004), schedule window, witness points	Owner, operator, EOR, Contractor	Operator approval (hold)
T2	Locate, pothole and expose the trunkline at the tap	Operator	Operator
T3	Install the full-encirclement tap fitting with in-service welding, examine and pressure test it	Operator	Records copied to the Owner
T4	Install the tap valve, make the hot tap, retrieve the coupon, close and blind the valve	Operator	Operator
T5	Complete the outlet lateral up to a pre-tested closure spool and hydrotest it as TS-02 against a test head	Contractor	EOR acceptance of the record (hold)
T6	Remove the blind with the operator present, inspect the flange faces, install a new gasket and bolting, tighten per ASME PCC-1, record the joint	Contractor, operator witness	Witness, 72 hours' notice
T7	Any closure weld between tested sections only with Owner and EOR approval under a written procedure, with full radiography, ultrasonic and magnetic particle examination (SPC-SPC-011)	Contractor	Owner and EOR hold
T8	Coat and holiday test the final joints; install cathodic protection test leads (CP-DWG-001 and CP-DWG-002); verify IJ-102 isolation	Contractor	Owner witness
T9	Backfill and restore the right-of-way excavation to the operator's requirements	Contractor, operator	Operator release

Step	Action	By	Release
T10	Station ready for gas-in: pre-startup review complete; SDV-103 closed; overpressure shutdown validated, including a full stroke of SDV-102 in 4 s or less; station purged, pre-pressurized with nitrogen and leak tested	Owner	Pre-startup review (hold)
T11	Operator opens the tap valve when the Owner requests first delivery; the lateral is purged and pre-pressurized with nitrogen first, and pressured through the SDV-103 equalizing bypass (SPC-SPC-012)	Operator, Owner	Operator release (hold)

6.3. OUTAGES

No outage of the trunkline is planned. If the operator needs to reduce pressure for the hot tap, it will schedule that itself, and the Owner's schedule carries a two-week window for the hot tap date. The upstream lateral is expected to be out of service while the station is built; if it is in service, gas-in from upstream will need SDV-101 closed and a lockout at the upstream block valve (HOLD H-16). After gas-in, work on live systems requires the Owner's permit to work and management of change under SPC-SPC-001.

7. TESTING SEQUENCE

Testing follows the sections of MEC-CAL-003, Hydrostatic Test Calculation, and the procedure of SPC-SPC-011, in the order of Table 7-1. The filter separator V-101 and the H-101 coil are isolated from all field tests. V-101 is shop tested at 2,225 psig, which is its own proof test, and keeping water out of it protects the coalescing elements.

Table 7-1: Testing Sequence

Order	Test	Content	Pressure and hold
1	Shop tests of pre-tested units	SK-110 with meters replaced by spools; FG-101; V-101 liquid outlet spools; V-101 at 2,225 psig; H-101 coil	Per MEC-CAL-003 and vendor; records reviewed before shipment
2	Pre-tested closure spools	Spools for tie-in locations	2,160 psig minimum, 4 h
3	TS-01A	IJ-101 to the SK-110 inlet flange, with PR-101; V-101 blinded	2,160 to 2,190 psig at the high point, 2,195 psig at the worst low point, 8 h, deadweight tester
4	TS-01B	SK-110 outlet flange to SDV-103; H-101 coil blinded with Class 900 blinds	Same window, 8 h
5	TS-02	Outlet lateral to the test head at the tap end; tap valve excluded	Same window, 8 h; operator witness
6	TS-03, TS-04, TS-05	Fuel gas; stainless vent system (water under 50 mg/L chlorides); liquid drains	435, 418 and 435 psig at the high point, 4 h
7	Instrument tubing	Tubing to SPC-SPC-014	Pneumatic leak test
8	Service leak test	Whole station and lateral	Nitrogen, then gas at staged pressures

Hydrotest exclusion zones are set in CON-RPT-003 (at least 100 ft above 50 % of test pressure). Water supply and discharge shall be authorized before A190 (REG-RPT-002), and drying to the target dewpoint shall be complete before any gas is introduced.

8. COMMISSIONING SEQUENCE

Commissioning proceeds system by system under SPC-SPC-018, in the following order. The order puts every protective system in service before the hazard it protects against is introduced.

1. Power and grounding: service or temporary generator feed to B-102, grounding resistance tests, transfer switch and G-101 load bank test, and UPS autonomy tests of the 24 V dc and 120 V ac systems.
2. Control and safety systems: remote terminal unit, safety controller and flow computer energized; I/O and loop checks; the cause-and-effect test against INS-LST-004; validation of the overpressure shutdown (PT-133A/B/C voting two out of three, closing SDV-102 and SDV-103) in the dry state.
3. Communications: Owner SCADA primary and secondary paths; point-to-point check of the demarcation panel with the receiving pipeline operator (HOLD H-14).
4. Actuated valves: stroke and timing tests of SDV-101, SDV-102, SDV-103, SDV-106, SDV-141, SDV-165, the motor-operated valves, FCV-131, FCV-132 and LCV-104; a full stroke of SDV-102 in 4 s or less and a first partial-stroke test; a functional test of the E-161 preheater at its 105 °F setpoint.
5. Fire and gas and building systems: gas detectors, B-101 ventilation and its failure alarm, heating and ventilation, intrusion.
6. Nitrogen purge of the station and lateral under SPC-SPC-012, then nitrogen pre-pressurization. The pre-pressurization is needed because winter gas at 1,150 psig and 45 °F throttled into an empty section cools to about -52 °F, below the -20 °F minimum design metal temperature. Gas may be admitted without it only when the supply is at 900 psig or less and 60 °F or warmer.
7. Gas-in from the upstream lateral through the SDV-101 equalizing bypass in pressure stages, with leak checks at each stage and metal temperature monitored at the throttle point.
8. Fuel gas system and H-101 light-off under the burner management system, with the vendor present.
9. Analyzers on stream and gas chromatograph calibrated with a certified blend.
10. First delivery at low rate once the operator opens the tap valve; tuning of the flow and pressure controllers; duty and standby switchover test.
11. Meter-to-meter series verification through MOV-115 with the operator's witness.
12. Live proof test of the overpressure shutdown if the safety requirements specification (SAF-SRS-001) calls for one, by a method agreed with the operator.
13. 72 hour performance test and handover.

9. WEATHER

Central weather will interrupt the work, mainly through spring thunderstorms and tornadoes, wet clay after rain, and winter cold. Table 9-1 sets the limits and actions. The clay limit matters most for the schedule, because the red-bed lean clay loses bearing and traction quickly when wet, and trafficking it wet damages the subgrade.

Table 9-1: Weather Limits

Condition	Limit	Action
Lightning	Thunder heard, or a strike detected within 10 miles	Stop work at height, lifts, welding and test pressurization; shelter; resume 30 min after the last strike
Tornado watch or warning (peak March to June)	Watch or warning issued	Watch: secure materials, lower booms, suspend lifts. Warning: stop work and go to the storm shelter
Wind	20 mph sustained for critical lifts, or the manufacturer's lower limit	Suspend lifts; secure canopy and roof panels
Rain on clay	Moisture more than 3 points above optimum, or ruts over 2 in	Stop earthwork and heavy traffic; proof roll before resuming (SPC-SPC-002)
Water in trenches	Any standing water	Dewater through filter bags before bedding, lowering in or backfill
Cold weather concreting	Below 40 °F forecast during placement or the first 72 h	ACI 306R measures; concrete at least 50 °F at placement; no placement on frozen ground
Hot weather concreting	Above 90 °F or high evaporation rate	ACI 305R measures; concrete at most 90 °F at placement
Coating and painting	Surface less than 5 °F above dewpoint, or humidity over 85 %	No blasting or coating (SPC-SPC-009, SPC-SPC-010)
Welding	Rain or wind without shelter	Shelters; no welding on wet surfaces; preheat per procedure (SPC-SPC-007)
Hydrotest	Ambient below 35 °F	Heating or protection under an EOR-approved plan (SPC-SPC-011)
Heat	Heat index above 91 °F	Heat illness program (CON-RPT-003)

The Contractor's baseline schedule shall include the normal number of weather days per month for central , with its basis stated; only delays beyond that number are grounds for a time extension.

10. HOLD POINTS THAT DRIVE THE SEQUENCE

SPC-SPC-019, Inspection and Test Plan, governs inspection. The holds in Table 10-1 are the ones that shape the sequence, because work cannot continue past them, and several depend on permits or decisions outside the Contractor's control.

Table 10-1: Sequence-Controlling Holds

Hold	Must be released before
Stormwater permit coverage (authority HOLD H-17)	Clearing
Subgrade proof roll and foundation excavations accepted	Reinforcement and concrete
Anchor bolt survey accepted	Equipment setting
Critical lift plan accepted (CON-CAL-001)	Each critical lift
Welding procedures and welder qualifications accepted	Production welding
NDE of every weld in a test section accepted	Hydrotest of that section
Holiday test accepted	Lowering in and backfill
Hydrotest records accepted by the EOR	Backfill of exposed joints and tie-in
Hydrotest water discharge authorized (HOLD H-17)	First discharge
Water Resources Board registration of the deep anode well (HOLD H-19)	Drilling the anode well
Regulatory classification decided (HOLD H-18) and any rupture-mitigation valve or control room actions	Pre-startup safety review
Loop checks, safety system validation, pre-startup safety review	Gas-in
T-101 throughput limit recorded in the air authorization (liquids rate HOLD H-20)	Startup
Receiving pipeline operator's release	Opening the tap valve

11. DEMOBILIZATION AND RESTORATION

At the end of the work the Contractor shall remove temporary facilities, materials, scrap, blast media and waste, with manifests for regulated waste. Laydown areas inside the fence shall be graded and surfaced to the final yard surfacing of SPC-SPC-005, and areas outside the fence restored to their original contours, topsoiled and seeded under SPC-SPC-002 and the stormwater plan. Stormwater controls shall stay in place until final stabilization (uniform perennial vegetation at 70 % of the native background density), after which the Notice of Termination is filed. The county road approach and any damaged county roads shall be repaired, and the operator's right-of-way restored to its requirements with its sign-off. Turnover dossiers and as-built records shall be delivered under SPC-SPC-020, and the retention under pay item 01.05 is released when they are accepted. A final walk-down with the Owner and the EOR closes the work with the final acceptance certificate.

12. SUMMARY AND NEXT STEPS

The station can be built, tested and commissioned in about 31 weeks from notice to proceed, provided the long-lead equipment and the utility service arrive on time and the hot tap is done early. The sequence protects the three hazards that matter most on this site: the live trunkline to the north, the stored energy of the hydrostatic tests, and the cold that throttled winter gas would produce at gas-in.

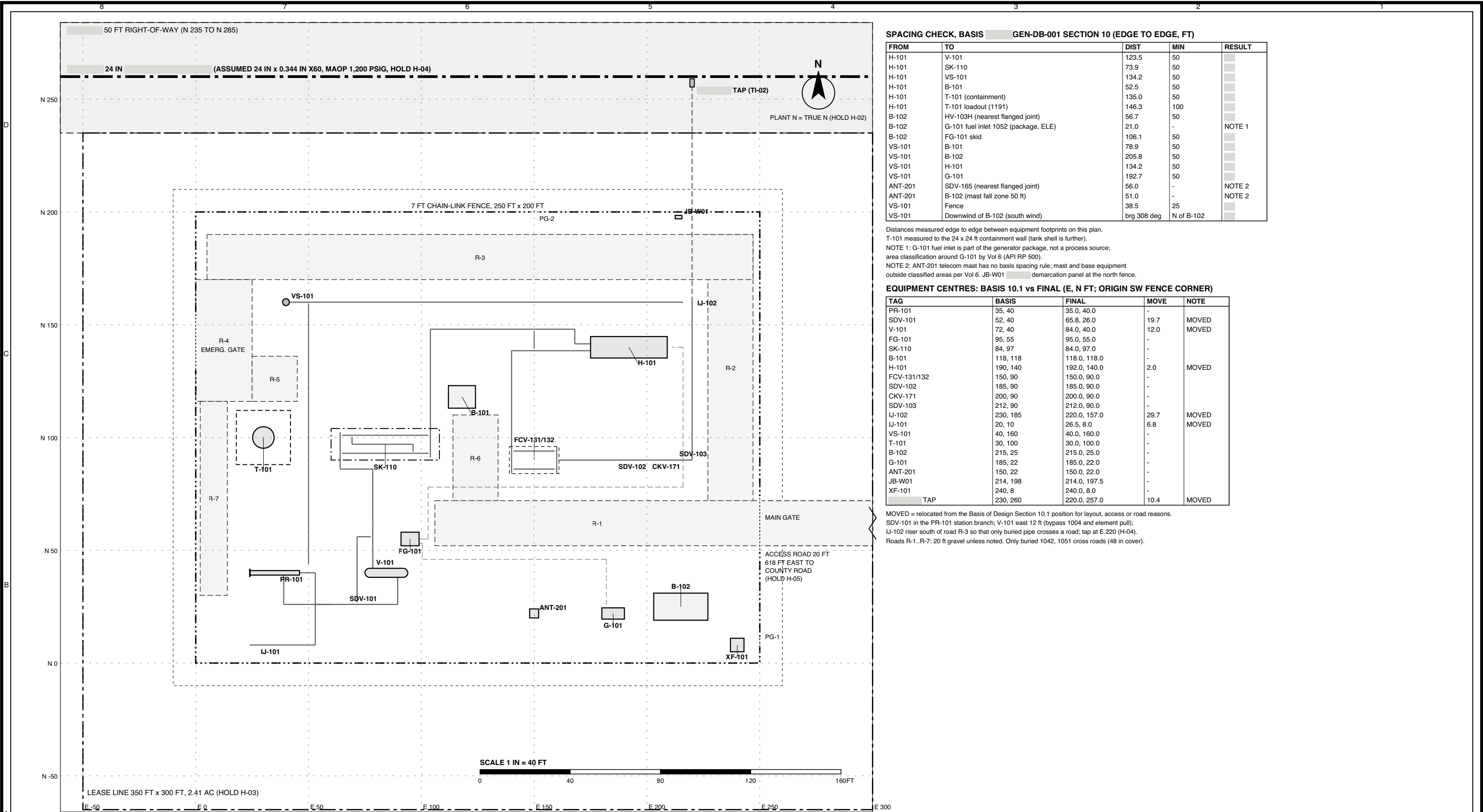
The next steps are for the Owner to fix the hot tap window with the receiving pipeline operator, file the utility service application, release the long-lead purchase orders in CON-LST-001, and resolve the holds that gate the start of work: the stormwater permitting authority (HOLD H-17), the lease layout (HOLD H-03), the access road permit (HOLD H-05) and the tap location (HOLD H-04). The assumptions behind this plan are listed in Table 12-1.

Table 12-1: Planning Assumptions and Open Items

Item	Assumption	Hold
Tract layout outside the fence	Field office on the east margin	H-03
Access road	From the east county road, 600 ft, under county permit	H-05
Tap location, window, witness rights and crossing rules	Hot tap before station completion; operator witnesses tie-in and gas-in	H-01, H-04
Utility energization	Before pre-commissioning; temporary generator otherwise	H-10
Stormwater and discharge permitting authority	Coverage before clearing and before the first discharge	H-17
Regulatory classification	Decided before the pre-startup review	H-18
Deep anode well registration	Registered before drilling	H-19
Liquids rate at V-101	Within the 350 bbl/yr T-101 limit; otherwise tank vapor control before startup	H-20
Owner-furnished equipment	Delivered before week 10 (CON-LST-001)	H-15
Upstream lateral at gas-in	Available, with the Owner's pigging program	H-16

APPENDIX A. PLOT PLAN, OVERALL SITE





SPACING CHECK, BASIS GEN-DB-001 SECTION 10 (EDGE TO EDGE, FT)					
FROM	TO	DIST	MIN	RESULT	
H-101	V-101	123.5	50	NOTE 1	
H-101	SK-110	73.9	50		
H-101	VS-101	134.2	50		
H-101	B-101	52.5	50		
H-101	T-101 (containment)	135.0	50		
H-101	T-101 loadout (1191)	146.3	100		
B-102	HV-103H (nearest flanged joint)	56.7	50		
B-102	G-101 fuel inlet 1052 (package, ELE)	21.0	-		
B-102	FG-101 skid	106.1	50		
VS-101	B-101	78.9	50		
VS-101	B-102	205.8	50	NOTE 2	
VS-101	H-101	134.2	50		
VS-101	G-101	192.7	50		
ANT-201	SDV-165 (nearest flanged joint)	56.0	-		
ANT-201	B-102 (mast fall zone 50 ft)	51.0	-		
VS-101	Fence	38.5	25	NOTE 2	
VS-101	Downwind of B-102 (south wind)	brg 308 deg	N of B-102		

Distances measured edge to edge between equipment footprints on this plan.
T-101 measured to the 24 x 24 ft containment wall (tank shell is further).
NOTE 1: G-101 fuel inlet is part of the generator package, not a process source;
area classification around G-101 by Vol 6 (API RP 500).
NOTE 2: ANT-201 telecom mast has no basis spacing rule; mast and base equipment
outside classified areas per Vol 6. JB-W01 demarcation panel at the north fence.

EQUIPMENT CENTRES: BASIS 10.1 vs FINAL (E, N FT; ORIGIN SW FENCE CORNER)

TAG	BASIS	FINAL	MOVE	NOTE
PR-101	35, 40	35.0, 40.0	-	
SDV-101	52, 40	65.8, 26.0	19.7	MOVED
V-101	72, 40	84.0, 40.0	12.0	MOVED
FG-101	95, 55	95.0, 55.0	-	
SK-110	84, 97	84.0, 97.0	-	
B-101	118, 118	118.0, 118.0	-	
H-101	190, 140	192.0, 140.0	2.0	MOVED
FCV-131/132	150, 90	150.0, 90.0	-	
SDV-102	185, 90	185.0, 90.0	-	
CKV-171	200, 90	200.0, 90.0	-	
SDV-103	212, 90	212.0, 90.0	-	
IJ-102	230, 185	220.0, 157.0	29.7	MOVED
IJ-101	20, 10	26.5, 8.0	6.8	MOVED
VS-101	40, 160	40.0, 160.0	-	
T-101	30, 100	30.0, 100.0	-	
B-102	215, 25	215.0, 25.0	-	
G-101	185, 22	185.0, 22.0	-	
ANT-201	150, 22	150.0, 22.0	-	
JB-W01	214, 198	214.0, 197.5	-	
XF-101	240, 8	240.0, 8.0	-	
TAP	230, 260	220.0, 257.0	10.4	MOVED

MOVED = relocated from the Basis of Design Section 10.1 position for layout, access or road reasons.
SDV-101 in the PR-101 station branch; V-101 east 12 ft (bypass 1004 and element pull);
IJ-102 riser south of road R-3 so that only buried pipe crosses a road; tap at E 220 (H-04).
Roads R-1..R-7: 20 ft gravel unless noted. Only buried 1042, 1051 cross roads (48 in cover).

NOTES / REFERENCES

- LOCAL GRID, ORIGIN SW FENCE CORNER, X EAST, Y NORTH, FT. SURVEY TIE HOLD H-02.
- SHEETS 2 AND 3: FENCED STATION AT 1 IN = 20 FT, SPACING DIMENSIONS, CRANE ACCESS.
- PIPING THIN FOR ORIENTATION ONLY, SEE PIP-DWG-001. BURIED LINES DASHED.
- TRUNK, ROW, TAP LOCATION AND DEPTH ASSUMED (HOLD H-04). LEASE HOLD H-03.
- FINISHED GRADE PER CIVIL: PAD PLANE, FG 1,151.1 AT E125 N100.

REF: GEN-DB-001 SEC 10
REF: PIP-DWG-001, -004
REF: CIVIL SITE / GRADING (VOL 5)

REVISIONS			
REV	DATE	DESCRIPTION	BY CHK APP
A	2026-09-29	ISSUED FOR REVIEW (IFR)	
PRELIMINARY - ISSUED FOR REVIEW - NOT FOR CONSTRUCTION			

ENGINEER OF RECORD SEAL

NOT SEALED
PRELIMINARY

PE NO. _____

PROJECT

120 MMSCFD RECEIPT INTO _____

COUNTY, _____

DISCIPLINE: MECHANICAL
SCALE: 1 IN = 40 FT

PLOT PLAN

OVERALL SITE PLAN

DRAWN: ____ CHECKED: ____ APPROVED: ____

DWG NO.
MEC-DWG-001

SHEET 1 OF 3 REV A