# REPLACEMENT OF LOS VENADOS STAND PIPE 22860 NORTH HIGHWAY 281 EDINBURG TEXAS, 78542

BID NO.: 2018-82

**JULY 2019** 

## CITY OFFICIALS

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MAYOR PRO TEM
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY MANAGER
CITY MANAGER
CITY ENGINEER
DIRECTOR OF UTILITIES
DIRECTOR OF FINANCE







### **GENERAL CONSTRUCTION NOTES**

WEBSITE, UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE CITY OF EDINBURG PUBLIC WORKS AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE: CURRENT TEXAS COMMISSION ON ENVIRONMENT QUALITY (TCEQ) "DESIGN CRITERIA FOR
- DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND
- CURRENT CITY OF EDINBURG "WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND
- SANITARY SEWER CONSTRUCTION."
- CURRENT CITY OF EDINBURG "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION." CURRENT CITY OF EDINBURG "UTILITY EXCAVATION CRITERIA MANUAL" (UECM). THE CONTRACTOR SHALL OBTAIN CITY OF EDINBURG STANDARD DETAILS FROM CITY OF EDINBURG
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE CITY OF EDINBURG CONSTRUCTION INSPECTION DIVISION AT (956)388-8212, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO EXCAVATION.
- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1 TO 2 WEEKS PRIOR TO CONSTRUCTION WETHER SHOWN ON PLANS OR NOT. OF EDINBURG FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION
- TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811 THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION, AT NO ADDITIONAL COST TO CITY OF EDINBURG. THIS EXCLUDES ITEMS IDENTIFIED FOR DEMOLITION IN THESE PLANS.
- ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND HIDALGO COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT. THE CONTRACTOR SHALL COMPLY WITH CITY OF EDINBURG OR OTHER GOVERNING MUNICIPALITY'S
- TREE ORDINANCES WHEN EXCAVATING NEAR TREES. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT
- FIRST OBTAINING AN APPROVED FLOOD PLAN PERMIT. ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE CITY OF EDINBURG WATER SYSTEM. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM CITY OF EDINBURG WORK ON CITY
- OF EDINBURG RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO THE CITY OF EDINBURG. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE CITY OF EDINBURG INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO THE CITY OF EDINBURG. ANY AND ALL CITY OF EDINBURG UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO CITY OF EDINBURG INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF EXISTING CONDITIONS. (N.S.P.I.).
- POWER POLE BRACING: CONTRACTOR SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER, COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR | 34. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE SITE TO DETERMINE POTENTIAL IMPACTS.

### **GENERAL WATER NOTES**

- ANY SHUTDOWN OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE CITY OF EDINBURG INSPECTION AND/OR CITY OF EDINBURG PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY
- ASBESTOS CEMENT (AC) PIPE. ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS, PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATIONS FOR HANDLING
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG (N.S.P.I.).

### **GENERAL NOTES**

- NOT USED. NOT USED
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD CITY OF EDINBURG AND THE CONSULTANT HARMLESS FROM ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT
- THE CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. " MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY VERTICAL AND HORIZONTAL ALIGNMENT.
- ANY DISCREPANCY OR CONFLICT WITHIN THE DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO 1 THE ATTENTION OF THE CONSULTANT. NEW DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE CONSULTANT'S ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER. AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSULTANT'S INTERPRETATION. ALL ITEMS, WORK, AND IMPROVEMENTS SHOWN OR INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE COMPLETED FOR THE PRICES BID. WETHER OR NOT A SEPARATE PAY ITEM IS INCLUDED IN THE CONTRACT.
- THE CONTRACTOR SHALL FURNISH ALL ASSISTANCE REQUIRED OF HIM OR HER BY INSPECTORS IN OBTAINING SAMPLES AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING WATER LINES IN SERVICE AT ALL TIMES DURING CONSTRUCTION (UNLESS OTHERWISE INDICATED IN THESE PLANS). ELECTRICAL LINES ARE LOCATED IN THE PROJECT AREA. THE ATTENTION OF THE CONTRACTOR IS
- CONSTRUCTION OPERATIONS IN THE VICINITY OF ELECTRICAL LINES AND THE NEED FOR EFFECTIVE THESE PLANS, PREPARED BY HINOJOSA ENGINEERING, INC. DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF HINOJOSA

DIRECTED TO STATE LAW (HEALTH AND SAFETY CODE, TITLE 9, SUBTITLE A, CHAPTER 752) CONCERNING

- SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THE WORK. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS. CONTRACTOR MUST ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS ARE TO BE OBTAINED AT THE CONTRACTOR'S
- CONTRACTOR SHALL COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES WITH APPLICABLE UTILITY COMPANY OR COMPANIES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
- CONTRACTOR SHALL LOCATE, PROTECT AND MAINTAIN BENCHMARKS, MONUMENTS AND CONTROL POINTS. THE CONTRACTOR SHALL RE-ESTABLISH AND PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT.
- EXISTING PAVING, BUILDINGS, AND OTHER ITEMS SHOWN ON PLANS NOT SPECIFICALLY RELATED TO THE WORK OF THE CONTRACT ARE FOR INFORMATIONAL PURPOSES ONLY. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO CITY OF EDINBURG FOR
- REVIEW AND WRITTEN APPROVAL NO SEPARATE PAY FOR ITEMS REQUIRED BY NOTES ON THIS SHEET, UNLESS INCLUDED ON PROPOSAL
- CONTRACTOR SHALL MECHANICALLY RESTRAIN ALL PRESSURE PIPE, INCLUDING DUCTILE IRON FITTING CONNECTIONS TO ALL PRESSURE PIPE, UNLESS OTHERWISE NOTED. (N.S.P.I.). ALL PIPE INSTALLED SHALL CONFORM TO CITY OF EDINBURG STANDARDS AND REQUIREMENTS. PIPE PRESSURE CLASS SHALL BE PER THE SPECIFICATIONS. ALL PIPE SHALL BE WELDED STEEL PER
- SPECIFICATIONS UNLESS INDICATED OTHERWISE. ANY MECHANICAL AND PUSH-ON PIPE SHALL BE FULLY THE CONTRACTOR SHALL PROVIDE A COURSE OF ACTION PLAN FOR THE OCCURRENCE OF AN ACCIDENTAL SPILL OF FUEL OR OTHER SUBSTANCE DURING CONSTRUCTION. THE ACTION PLAN SHALL BE SUBMITTED FOR REVIEW TO CITY OF EDINBURG AND NO CONSTRUCTION OR MOBILIZATION SHALL
- OCCUR PRIOR TO ACCEPTANCE OF THE ACTION PLAN. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING WATER LINES AND THRUST BLOCKING WHEN EXCAVATING NEAR OR BENEATH EXISTING FACILITIES. UTILITIES AND PIPELINES TO BE DISTURBED BY NEW WORK SHALL BE PROTECTED. CONTRACTOR SHALL VERIFY WETHER EXISTING PIPE IS OR IS NOT RESTRAINED PRIOR TO CONSTRUCTION.

### **GENERAL NOTES (CONT.)**

- FIELD VERIFY LOCATION. DEPTH. JOINT LOCATIONS AND TYPE OF PIPE MATERIAL AND SIZE OF ALL UNKNOWN PIPES TO BE CONNECTED TO, CROSSED, ETC., PRIOR TO ORDERING MATERIAL OR DOING ANY NEW PIPE WORK. IN SITUATIONS WHERE THE PLANS INDICATE POSSIBLE SPACE CONFLICTS BETWEEN NEW BURIED PIPING AND EXISTING UTILITY PIPING, ELECTRICAL CONDUITS, ETC., INCLUDING LOCATIONS WHERE THE EXISTING PIPING WILL BE WITHIN THE LIMITS OF TRENCHING FOR NEW PIPE, THE CONTRACTOR SHALL DO THE FOLLOWING:
- 20.1. FIELD LOCATE EXISTING PIPING AND DETERMINE THE ACTUAL EXTENT OF THE CONFLICT. 20.2. IF CONTRACTOR CAN "WORK AROUND" THE EXISTING PIPING IN THE CONSULTANT'S OPINION, THE EXISTING PIPING SHALL BE SUPPORTED AND PROTECTED AND KEPT IN SERVICE AS SPECIFIED
- FI SEWHERE 20.3. IF THERE IS AN UNWORKABLE CONFLICT, THE CONTRACTOR SHALL PROPOSE A SOLUTION
- ACCEPTABLE TO THE CONSULTANT AND ADJUST OR REPOUTE THE NEW OR EXISTING PIPE AS NECESSARY TO ELIMINATE CONFLICT
- THIS WORK WILL BE CONSIDERED TO BE PART OF THE BASIC CONTRACT AND NO ADDITIONAL PAYMENT WILL BE MADE FOR ADJUSTMENTS/REROUTES OF EXISTING PIPING SHOWN ON THE
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND CONSULTANT AND ALL RESPECTIVE GOVERNMENT OR UTILITY AGENCIES AFFECTED BY CONSTRUCTION 72 HOURS PRIOR TO STARTING CONSTRUCTION. SEE NOTE 5. UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS SHALL BE FIELD VERIFIED BY THE 22. CONTRACTOR SHALL SUBMIT PRE-CONSTRUCTION SITE VIDEO, AT OR BEFORE THE PRE-CONSTRUCTION
  - MEETING. TO THE OWNER AND CONSULTANT, SEE NOTE 12. 23. IF IN THE OPINION OF THE INSPECTOR, BASED ON TESTING SERVICE REPORTS AND INSPECTION, MATERIALS OR COMPACTION ARE BELOW THE SPECIFIED REQUIREMENTS, THE CONTRACTOR SHALL
- CORRECT THE DEFICIENCY AND RE-TEST TO OBTAIN THE SPECIFIED PARAMETERS AT NO ADDITIONAL PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON CITY | 24. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. THE CONTRACTOR
  - SHALL CONTROL DUST BY SPRINKLING WATER, OR AN ALTERNATIVE METHOD, AS APPROVED BY THE OWNER AND CONSULTANT, AT THE SOLE EXPENSE OF THE CONTRACTOR.  $25.\;\;$  THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT CONTROL POINTS, AND FROM THE DIMENSIONS AND CENTERLINES SHOWN. THE CONTRACTOR MUST NOTIFY THE OWNER AND CONSULTANT OF ANY DISCREPANCIES BEFORE
  - PROCEEDING WITH THE WORK. 26. CONTRACTOR SHALL DISINFECT ALL PIPING IN ACCORDANCE WITH PROJECT SPECIFICATION. ALL TEMPORARY SHUTDOWNS, CONNECTIONS, FITTINGS, AND PIPING REQUIRED FOR CHLORINATION SHALL
  - BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE PROJECT 7. OTHER CONTRACTORS MAY BE WORKING ON THE SITE IN CONJUNCTION WITH OTHER CONCURRENT CONTRACTS. CONTRACTOR SHALL COORDINATE ACTIVITIES WITH OTHER CONTRACTORS ONSITE, THE
  - OWNER, AND THE OWNER'S REPRESENTATIVE. 28. IF EXISTING VALVES, PIPELINES AND STRUCTURES LEAK WHEN VALVES ARE IN THE CLOSED POSITION, CONTRACTOR SHALL PROVIDE MEANS AND EQUIPMENT NECESSARY TO CONTROL WATER DURING
  - CONSTRUCTION. 29. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS. 30. UNLESS DETAILED, SPECIFIED, OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN THE APPLICABLE TYPICAL DETAILS AND THESE GENERAL NOTES. TYPICAL DETAILS ARE MEANT TO APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS ON DRAWINGS WHERE THEY OCCUR
  - 31. ALL NUTS AND BOLTS USED MUST HAVE ANTI-SEIZE COMPOUND APPLIED. 32. ISOLATION KITS ARE TO BE INSTALLED BETWEEN ALL DISSIMILAR METALS. THE ISOLATIONS KITS SHALL INCLUDE ALL FULL-FACE ISOLATION GASKET, ISOLATION SLEEVES AND ISOLATION WASHERS. 33. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL REQUIRED STORM WATER PERMITS.
  - FEES, AND APPROVALS. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PERMITS REQUIRED FOR CONSTRUCTION IN DRAINAGE EASEMENTS, RIGHT-OF-WAYS, AND FLOODPLAINS. (N.S.P.I.).

### **EXCAVATION AND BACKFILL**

- DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREAS IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION. 5. GROUND WATER AT THE SITE WILL VARY DEPENDING ON SEASONAL VARIATIONS AND SUBSURFACE
- CONDITIONS. BORING LOGS INDICATING THE LEVEL OF GROUNDWATER ARE PROVIDED FOR THIS PROJECT, CONTRACTOR SHALL BE AWARE OF POSSIBLE GEOTECHNICAL CONFLICTS. 3. PROVIDE THE REQUIRED MINIMUM DENSITY AND MOISTURE CONTENT OF COMPACTED FILL IN
- ACCORDANCE WITH THE SOILS REPORT AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. WHEN THE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE MOISTURE CONDITIONED BEFORE COMPACTION, CONTRACTOR SHALL UNIFORMLY APPLY THE REQUIRED AMOUNT OF WATER TO THE SURFACE OF SUBGRADE. OR LAYER OF SOIL MATERIAL. IN SUCH A MANNER AS TO PREVENT FREE
- WATER FROM APPEARING ON THE SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS. ALL EXCAVATION SHALL BE UNCLASSIFIED REGARDLESS OF MATERIAL ENCOUNTERED. NO ADDITIONAL PAYMENT WILL MADE FOR WATER, SAND, GRAVEL, OR OTHER UNSTABLE CONDITIONS ENCOUNTERED IN THE EXCAVATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
- A TESTING LABORATORY SHALL BE EMPLOYED BY THE CONTRACTOR TO CHECK THE SUITABILITY OF MATERIAL SELECTED FOR CONTROLLED FILLS. TO TEST AND DETERMINE IF THE REQUIRED DENSITY IS BEING OBTAINED, AND TO TEST COMPACTION OF EXPOSED SUBGRADES. LABORATORY REPORTS ON TESTS PERFORMED SHALL INCLUDE LOCATIONS OF FIELD TESTS. SAMPLING AND TESTING OF MATERIALS AND LABORATORY INSPECTION MATERIALS AND PROCESSES SHALL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR UNLESS OTHERWISE PROVIDED BY OWNER. TESTING SHALL BE IN ACCORDANCE WITH CITY OF EDINBURG CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. FIRMS PROVIDING CONSTRUCTION MATERIALS TESTING SERVICES MUST HAVE AN ESTABLISHED IN-HOUSE LABORATORY MEETING STANDARDS OF THE ASTM REQUIREMENTS. TESTING RESULTS SHALL BE PROVIDED TO THE CONSULTANT AND INSPECTOR DIRECTLY FROM TESTING
- LABORATORY. 40. WHEN TESTS INDICATE COMPACTION DOES NOT MEET REQUIREMENTS. FILL AND BACKFILL SHALL BE DRIED OUT OR MOISTENED AS NECESSARY, SCARIFIED, AND RECOMPACTED. RECOMPACTED AREAS SHALL BE RETESTED AT NO COST TO THE OWNER.

THE CONTRACTOR SHALL MAINTAIN A NEAT AND ACCURATE RECORD OF CONSTRUCTION FOR THE CONSULTANT'S RECORDS. THE CONTRACTOR SHALL PROVIDE CONSULTANT WITH FULL SIZE REPRODUCIBLE MARKUPS THAT RECORD ALL CONSTRUCTION DEVIATING FROM THE PLANS.

- 42. HINOJOSA ENGINEERING, INC. IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THE DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATED THE KNOWN OBJECTS ON THE SUBJECT ITEMS THAT ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE. HINOJOSA ENGINEERING, INC. DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON VISUAL SITE OBSERVATION, AERIAL PHOTOGRAPHY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOW ALL IMPROVEMENTS AND UTILITIES. THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING HIS/HER OWN SITE RECONNAISSANCE TO SCOPE HIS/HER WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR REMOVAL OF THEIR FACILITIES. THIS PLAN IS INTENDED TO GIVE GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. ARE THE RESPONSIBILITY OF THE
- CONTRACTOR. ENGINEERING, INC.'S LICENSED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH 43. THE INTENT OF THESE PLANS AND SPECIFICATION IS FOR THE COMPLETE DEMOLITION AND REMOVAL OF ALL STRUCTURES, TANKS, ABOVE GROUND PIPING, STORAGE TANKS, AND ALL OTHER SLABS AND MISCELLANEOUS APPURTENANCES, AS WELL AS THE RESTORATION OF THE SITE TO MATCH EXISTING GROUND

REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.

44. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF DEMOLITION MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE

### **DEMOLITION NOTES**

COMPACTED PER THE SPECIFICATIONS.

TRAFFIC ON ROADWAYS.

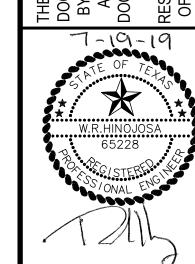
- THE TERM DEMOLITION SHALL MEAN THE COMPLETE DEMOLITION. REMOVAL, AND OFFSITE DISPOSAL OF THE ITEM OR FACILITY IDENTIFIED.
- THE TERM ABANDONMENT SHALL MEAN COMPLETE DRAINING OF ALL BURIED PIPING, FILLING WITH FLOWABLE FILL, AND/OR CAPPING/PLUGGING OF UTILITY LINES.
- PRIOR TO COMPLETING ANY DEMOTION WORK, THE CONTRACTOR SHALL PROVIDE THE CONSULTANT AND OWNER WITH A SCHEDULE OF PLANNED DEMOLITION ACTIVITIES FOR REVIEW AND APPROVAL. ONCE APPROVED, CONTRACTOR SHALL COORDINATE THE SCHEDULED DEMOLITION WORK IN ADVANCE WITH CITY OF FDINBURG REPRESENTATIVES.
- ALL TRENCH EXCAVATION RESULTING IN THE REMOVAL OF EXISTING PIPE SHALL BE BACKFILLED AND
- WATER LINE LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY LOCATION. MATERIAL, AND DIAMETER OF ALL WATER LINES PRIOR TO SCHEDULING CAPPING.
- CUTTING AND CAPPING OF WATER LINES SHALL NOT DISTURB ROADWAY PAVEMENT OR IMPACT
- WATER LINES TO BE ABANDONED WHICH ARE 16" DIAMETER OR LARGER SHALL BE FILLED WITH FLOWABLE FILL PRIOR TO ABANDONMENT, THOSE 12" DIAMETER AND SMALLER SHALL BE CAPPED AND
- ALL VOIDS AND EXCAVATIONS CREATED BY DEMOLITIONS OF EXISTING FACILITIES SHALL BE BACKFILLED WITH CLEAN FILL SOIL FREE OF DELETERIOUS MATERIAL AND STONES GREATER THAN 3" IN DIAMETER, COMPACTED 98% PROCTOR, COVERED WITH 4" OF TOP SOIL AND REVEGETATED.
- CONTRACTOR SHALL DRAIN ALL TANKS AND PROPERLY DISPOSE OF ANY MATERIALS, LIQUIDS, AND/OR OTHER REMNANTS PRIOR TO DEMOLITION. CONTRACTOR SHALL REFERENCE SPECIFICATIONS FOR DISPOSAL OF ALL HAZARDOUS MATERIALS AND LIQUIDS.
- . MISCELLANEOUS EQUIPMENT AND DEBRIS ON SITE RELATED TO THIS PROJECT SHALL BE REMOVED AND PROPERLY DISPOSED.
- CONTRACTOR SHALL COORDINATE WITH APPLICABLE UTILITY PROVIDERS REGARDING ALL RELOCATIONS OR REMOVALS OF EXISTING OVERHEAD POWER POLES, AND OBTAIN THE NECESSARY APPROVALS AND PERMITS.
- LOCATION OF PUBLIC UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. CONTRACTOR SHALL CALL TEXAS 811 AT LEAST 48 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL SUBSCRIBE TO THE TEXAS 811 PROGRAM FOR LINE MARKINGS. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGE DONE TO THESE FACILITIES.
- ALL ITEMS INDICATED TO BE REMOVED SHALL BE DISPOSED OF OFF-SITE IN A MANNER ACCEPTABLE TO ALL APPLICABLE REGULATIONS.
- CONTRACTORS SHALL EXERCISE EXTREME CAUTION AS SITE CONTAINS MANY PRIVATE AND PUBLIC UTILITIES. CONTRACTOR BEARS SOLE RESPONSIBILITY FOR LOCATING THESE UTILITIES AND FOR ANY
- SURFACE PAVEMENT INDICATED HEREON (SUCH AS ASPHALT OR CONCRETE) MAY OVERLAY OTHER HIDDEN STRUCTURES (SUCH AS OTHER LAYERS OF PAVEMENT, BUILDING SLAB, ETC.) THAT ARE ALSO TO BE REMOVED.
- . ALL EXISTING UTILITY SERVICE TO BE TURNED OFF BY CITY OF EDINBURG TO ALLOW FOR EXISTING
- 18. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL PERIMETER AND SECURITY FENCES ALONG PROPERTY BOUNDARY THROUGHOUT DURATION OF PROJECT.

SERVICE LINES TO BE CUT/CAPPED AT PROPERTY LINE.

- ). CONTRACTOR SHALL REFER ELECTRICAL SHEETS FOR EXTENTS AND EXACT LOCATIONS OF ALL ELECTRICAL DEMOLITION.

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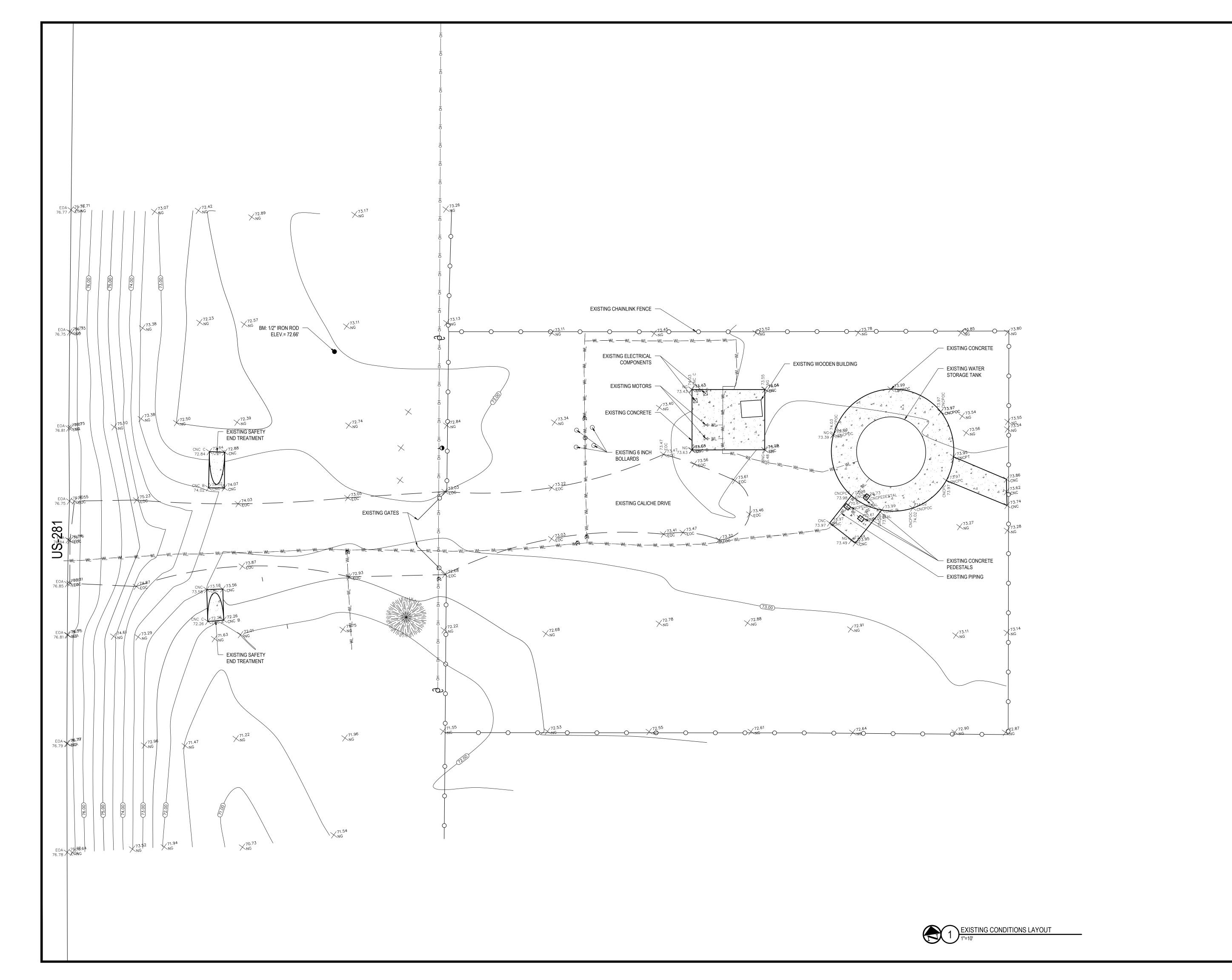
REVISIONS:



ENGINEER: RH DESIGNER: AT

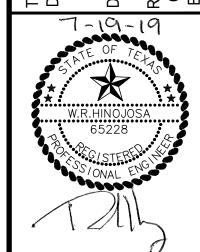
SURVEYOR: DRAWN BY: MR JOB NO.: 18-119

BOOK NO.:



DATE: 07/19/2019

SCALE: **REVISIONS:** 



ENGINEER: RH DESIGNER: AT

LEGEND:

1/2" IRON ROD FOUND

© EXISTING POWER POLE

EXISTING WATER VALVE 

- EXISTING GUY WIRE

—wl— EXISTING WATER LINE EXISTING CONCRETE

S EXISTING SANITARY SEWER MANHOLE

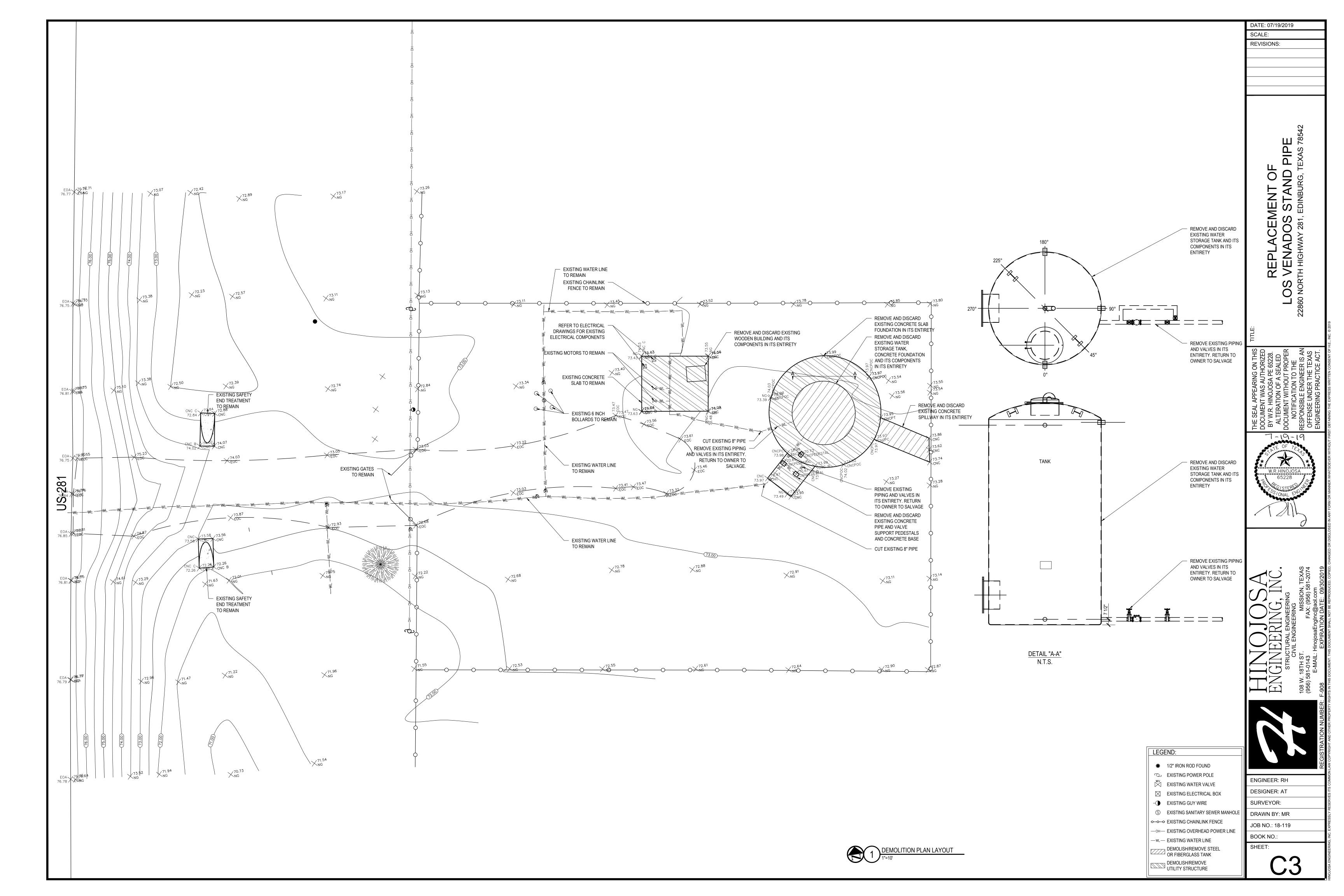
OH— EXISTING OVERHEAD POWER LINE

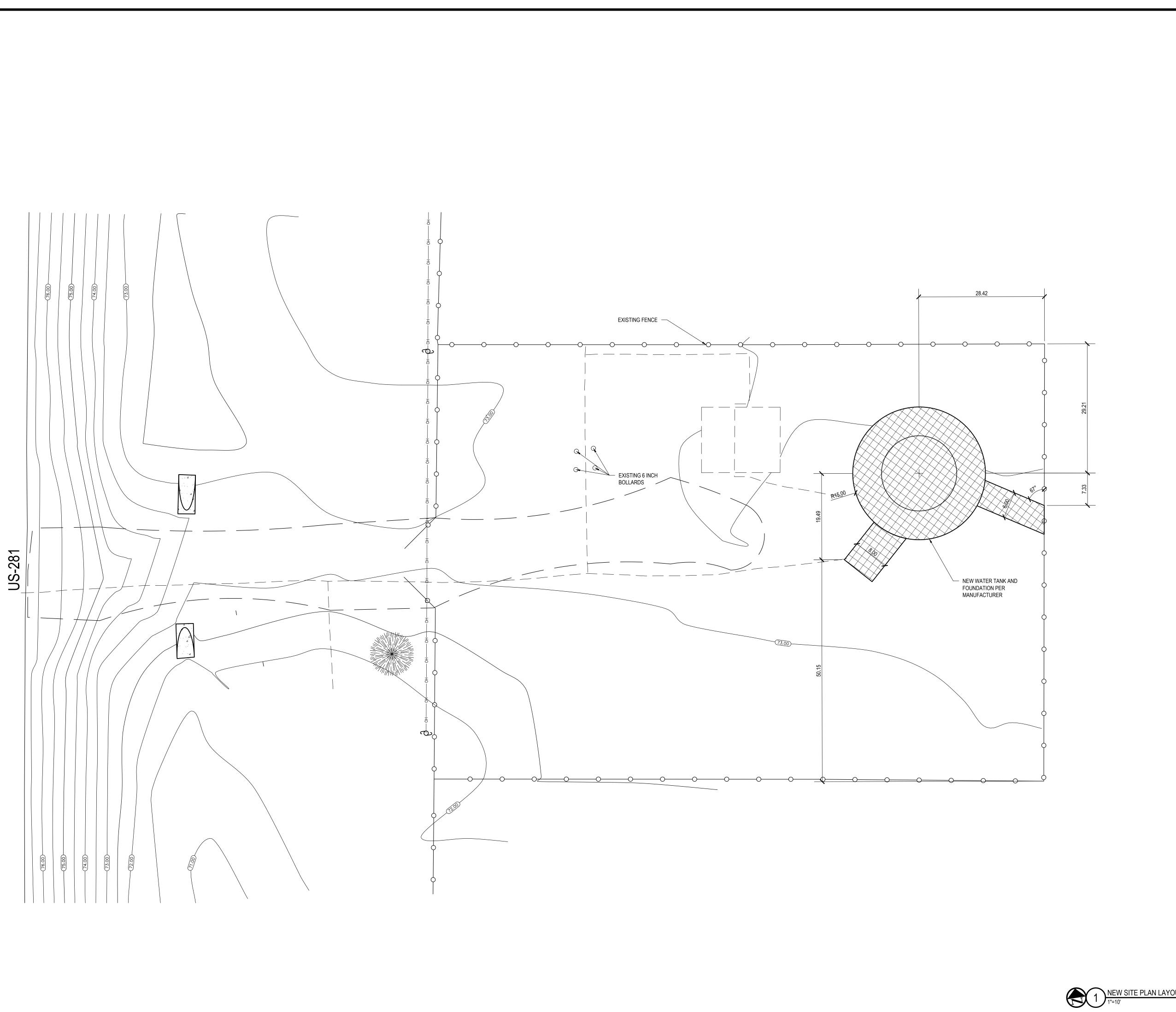
← EXISTING CHAINLINK FENCE

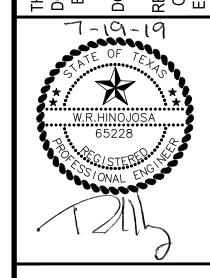
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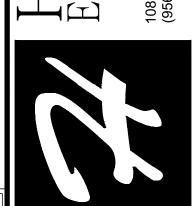
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ENGINEER: RH DESIGNER: AT

LEGEND:

1/2" IRON ROD FOUND

© EXISTING POWER POLE

EXISTING WATER VALVE

- EXISTING GUY WIRE

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—wl— EXISTING WATER LINE

EXISTING CONCRETE NEW CONCRETE

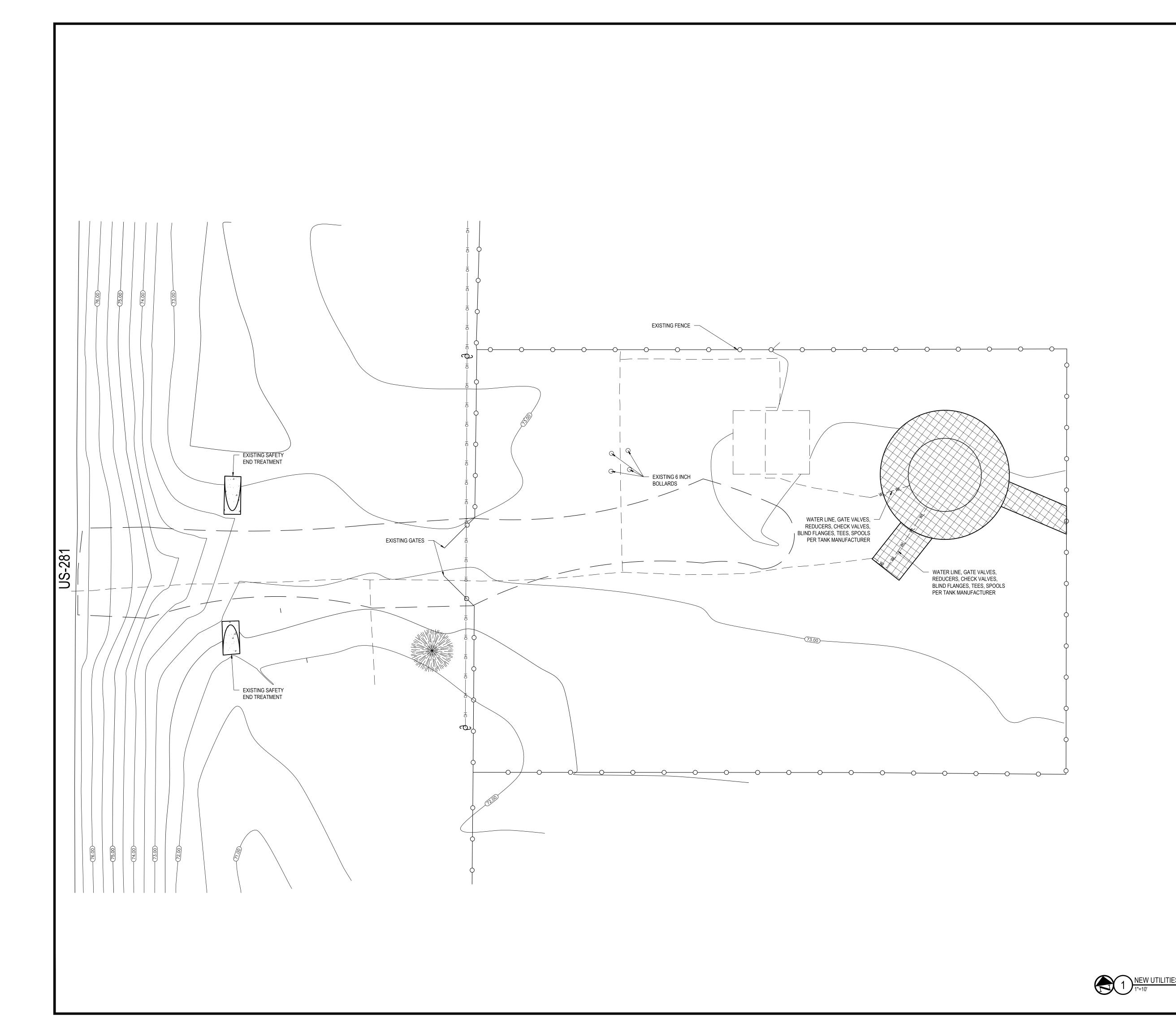
S EXISTING SANITARY SEWER MANHOLE

—○H— EXISTING OVERHEAD POWER LINE

SURVEYOR:

DRAWN BY: MR JOB NO.: 18-119

BOOK NO.: SHEET:



DATE: 07/19/2019

SCALE:

ENGINEER: RH DESIGNER: AT

SURVEYOR: DRAWN BY: MR

JOB NO.: 18-119

BOOK NO.: SHEET: C5

—wl— NEW WATER LINE EXISTING CONCRETE NEW CONCRETE

LEGEND:

1/2" IRON ROD FOUND

© EXISTING POWER POLE

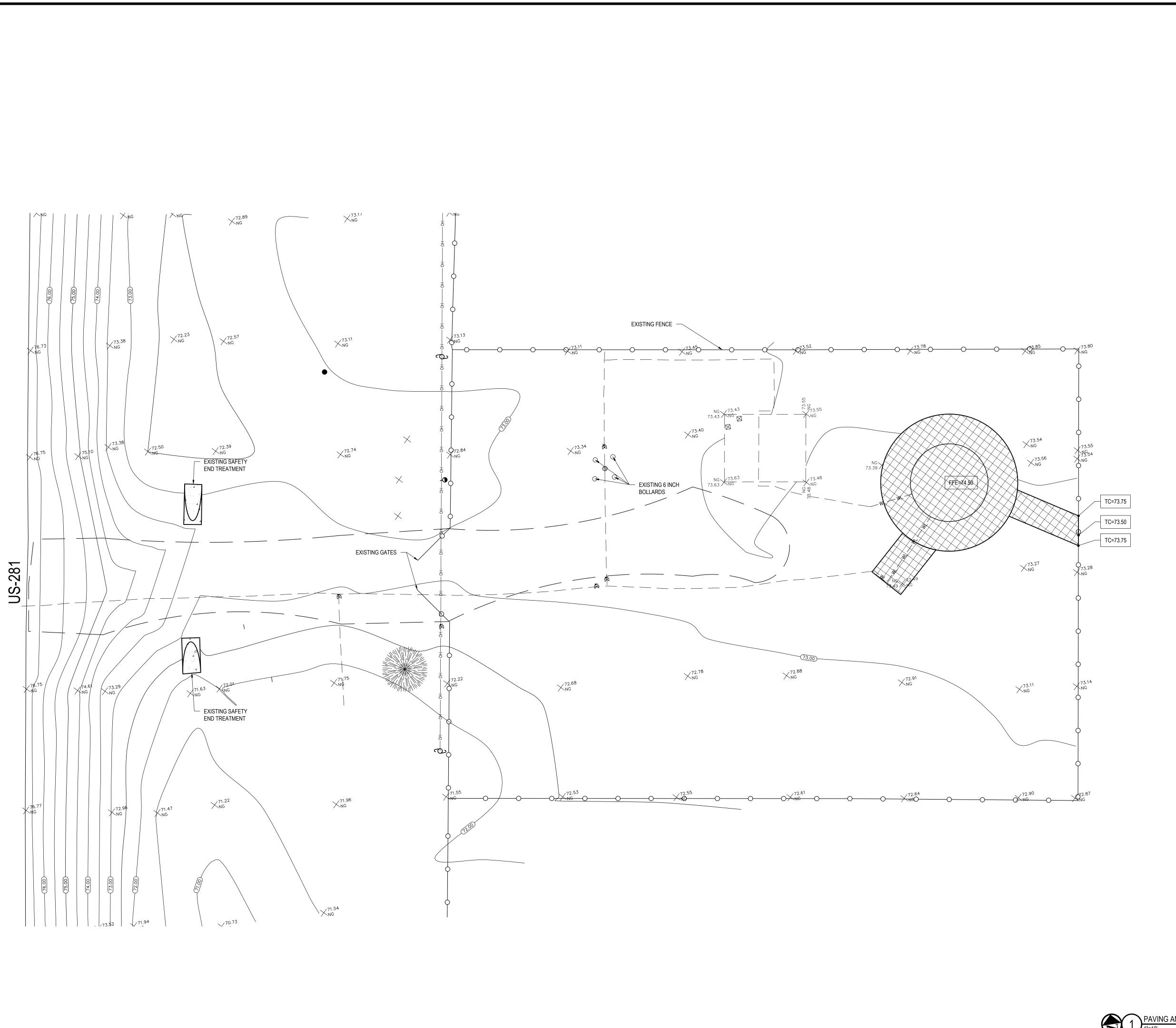
EXISTING WATER VALVE

- EXISTING GUY WIRE

O→O→O EXISTING CHAINLINK FENCE

S EXISTING SANITARY SEWER MANHOLE

—○H— EXISTING OVERHEAD POWER LINE



REPLACEMENT OF
LOS VENADOS STAND PIPE
22860 NORTH HIGHWAY 281, EDINBURG, TEXAS 78

SCALE:

ENGINEER: RH DESIGNER: AT

LEGEND:

1/2" IRON ROD FOUND

© EXISTING POWER POLE

EXISTING WATER VALVE

- EXISTING GUY WIRE

—wL— NEW WATER LINE EXISTING CONCRETE

NEW CONCRETE

O→O→ EXISTING CHAINLINK FENCE

S EXISTING SANITARY SEWER MANHOLE

—OH— EXISTING OVERHEAD POWER LINE

SURVEYOR: DRAWN BY: MR

JOB NO.: 18-119

BOOK NO.: SHEET:

AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN. CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES. ADDITIONAL COSTS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY IMPACT

ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES ADJACENT, NEAR, OR WITHIN THE AREA OF CONSTRUCTION

THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION

PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

### DESIGN CRITERIA

	SIGN LOADS, STRUCTURAL ANALYSIS AN ON THE FOLLOWING CRITERIA:	ND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED
2. CO	DDE:	JBC 2012
4. RO	OF LIVE LOAD:	
5. ME	CHANICAL UNITS:	REFER TO MEP DRAWINGS
7. RO	OF SNOW LOAD DATA:	
7.A.	GROUND SNOW LOAD, Pg:	0 PSF
8. WII	ND DESIGN DATA:	
8.A.	NOMINAL DESIGN WIND SPEED	
	(1) (3-SECOND GUST), V:	140 MPH
8.B.		
8.C.		B
8.D.		(+0.18, -0.18)
	RTHQUAKE DESIGN DATA:	
9.A.		
9.B.	MAPPED SPECTRAL RESPONSE ACCEL	
0.0		
9.C. 9.D.	SITE CLASS:	D
9.D.		ERATION
9.F.	•	
0	OTECHNICAL ENGINEERING STUDY:	
A.	GEOTECHNICAL ENGINEERING STODT.	
Λ.	PREPARED BY	LAC CONCLUTING ENGINEEDS INC
		L&G CONSULTING ENGINEERS, INC.
	PROJECT No.	G18012
	DATE	DECEMBER 11, 2018

### **SPECIAL NOTES TO OWNER**

UNDER NORMAL CONDITIONS. AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER. REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.

THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.

MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH | MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

### SHOP DRAWINGS AND SUBMITTALS

SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE STRUCTURAL ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION

SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS. SUBMIT ONE REPRODUCIBLE VELLUM AND ONE COPY OF EACH SHOP DRAWING

SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.

ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADING PRIOR TO SUBMITTING THEM FOR ENGINEER

RFVIFW. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR

CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, SEE NOTE NUMBER 3 UNDER GENERAL ).  $\,$  REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. APPROVAL OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE

CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS. . IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP 2. DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN. INFORMATION THAT IS NOT INDICATED ON THE SHOP DRAWINGS SHALL BE OBTAINED FROM THE STRUCTURAL DRAWINGS.

13. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

10.	THO VIDE CODMITTALE FOR THE FOLLOWING TEMO.	
	ITEM	REQUIRED
	A. CONCRETE MIX DESIGN	YES
	B. CURING COMPOUND FOR CONCRETE	YES
	C. REINFORCING STEEL	YES
	D. STRUCTURAL STEEL	N.A.
	E. STEEL JOIST	N.A.
	F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS,	
	ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS,	N.A.
	SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER	IN.A.
	CONSTRUCTION.)	
	G. MORTAR MIX DESIGN	N.A.
	H. GROUT MIX DESIGN	N.A.
	I. MASONRY ASSEMBLAGE	N.A.
	J. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	N.A.
	K. LIGHT WEIGHT COLD-FORM STEEL (INCLUDE CALC'S & REACTIONS)	N.A.
	L. STEEL TANK (INCLUDE CALC'S & REACTIONS)	YES
	M. STEEL TANK FOUNDATION (INCLUDE CALC'S & REACTIONS)	YES

### STRUCTURAL OBSERVATIONS

JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE INTENT.

SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT.

SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF

CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR FOR ITEMS NOT INSTALLED OR IMPROPERLY

INSTALLED BY THE CONTRACTOR OR HIS/HER SUBCONTRACTORS. NOTIFY ENGINEER 48 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED.

.III.	٠.	NOTH TENOINEER TO THOUSE IN THE WIND WHEN TO THOU OBSERVATION IS	TILGOTILE.
В	5.	CONSTRUCTION STAGE	REQUIRED
18)		REFORE PLACEMENT OF CONCRETE FOR SLAR/FOLINDATION	YFS

BEFORE PLACEMENT OF FOUR (4) FEET OF GROUT IN CMU & BMU WALL

AFTER FRAMING OF ROOF STRUCTURE BUT BEFORE PLACEMENT OF

### REINFORCING STEEL

ROOFING MATERIAL

BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1. GRADE 40 - #3 AND SMALLER, GRADE 60 - #4 AND LARGER. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN

CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED. VERTICAL REINFORCEMENT SHALL BE TIED AND FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 48 INCHES O.C.

WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES. WALLS, PILASTERS, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL

REINFORCEMENT IN THE WALLS. PILASTERS. OR COLUMNS. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), EXCEPT AT SLABS; THE REINFORCING SHALL BE SUPPORTED BY CHAIRS SPACED AT 36 INCHES O.C. FOR #3 REBARS AND 48 INCHES ON

CENTER FOR LARGER REBARS. CHAIRS FOR SLAB ON GRADE SHALL BE CONCRETE BLOCKS.

REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.

PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENTS. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED AT SPLICES.

2. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS. 3. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 2". THE "Z" BARS

SHALL LAP THE MAIN SLAB REINFORCING STEEL. 14. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB THICKNESS AREA. ALL CONDUIT NO GREATER THAN 1" DIAMETER MAY BE PLACED IN CENTER OF SLAB. NO CONDUITS OR

PLUMBING LINES GREATER THAN 1 INCH ALLOWED IN THE SLAB. 15. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED. WELDING OF REINFORCING STEEL IS NOT PERMITTED.

17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.

18. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

GRADE 60: LAP 50 DIA. (30" MIN.) GRADE 40: LAP 48 DIA. (20' MIN.) CONCRETE: LAP PER SCHEDULE BELOW

	BAR SPLICE LAP	LENGTH IN CO	ONCRETE	
AR	f'c=	f'c=	f'c=	f'c=
IZE	2000 PSI	3000 PSI	4000 PSI	5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	40	40	40
#6	57	57	57	57
#7	77	63	54	54

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

19.	CONCRETE COVER FOR REINFORCING AS FOLLOWS:		
	EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
	DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND:	3"	3/8"
	WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:		
	FOR BARS GREATER THAN 5/8" IN DIAMETER	3"	1/4"
	FOR BARS 5/8" OR LESS IN DIAMETER	3"	1/4"
	WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
	FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
	FOR BEAMS, COLUMNS	2"	1/4"
	FOR JOISTS AND SLABS	2 1/2"	1/8"

### **CAST-IN-PLACE CONCRETE**

VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI #301-05, OR LATEST EDITION. DRILLED PIERS SHALL

COMPLY WITH ACI 336.1-01 AND ACI 336.3R-05 ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED. SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI #315 LATEST EDITION THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

STRENGTH | CONCRETE | WATER/CEMENT | SIZE OF LARGE | MAXIMUM

- 1	LOCATION	OTTLENOTT	CONCILL	VVATERVOLIVIERT	OIZE OF EXITOR	IVI/ OXIIVIOI
-	LOCATION	AT 28 DAYS	WEIGHT	RATIO	AGGREGATE	SLUMP
-	DRILLED PIERS	3000 PSI	NWC	0.5	1 1/2"	5"
۱ ا	PIER CAPS	3000 PSI	NWC	0.5	1 1/2"	5"
-	SPREAD FOOTINGS	3000 PSI	NWC	0.5	1 1/2"	5"
-	WALL FOOTINGS	3000 PSI	NWC	0.5	1 1/2"	5"
-	GRADE BEAMS	3000 PSI	NWC	0.5	1 1/2"	5"
-	SLAB-ON-GRADE	3000 PSI	NWC	0.5	1 1/2"	5"
۱Ц	RETAINING WALLS	4000 PSI	NWC	0.5	3/4"	6"
-	ELEVATOR PIT WALLS	4000 PSI	NWC	0.5	3/4"	6"
-	SUSPENDED SLAB	3000 PSI	NWC	0.5	1"	5"
-	BEAMS	3000 PSI	NWC	0.5	1"	5"
-	COMPOSITE DECK TOPPING	3000 PSI	NWC	0.5	1"	5"
	NON-COMPOSITE DECK TOPPPING	3000 PSI	NWC	0.5	1"	5"
	MEZZANINES DECK TOPPING	3000 PSI	LWC	0.5	1"	5"
	MISC STAIR LANDINGS & TREAD TOPPING	3000 PSI	LWC	0.5	1"	5"
	ALL OTHER DECK TOPPINGS	3000 PSI	NWC	0.5	1"	5"
-	CAST-IN-PLACE COLUMNS	4000 PSI	NWC	0.5	1"	5"
-	PEDESTALS	3000 PSI	NWC	0.5	1"	5"
-	ORDINARY SHEAR WALLS	4000 PSI	NWC	0.5	3/4"	6"
-	SPECIAL SHEAR WALLS	5000 PSI	NWC	0.5	3/4"	6"
-	ALL OTHER WALLS	4000 PSI	NWC	0.5	3/4"	6"
-	GROUT INFILL	3000 PSI	NWC	0.5	3/8"	11"
-	MASONRY COLUMNS	3500 PSI	NWC	0.5	3/8"	11"
	LINTELS	3000 PSI	NWC	0.5	3/8"	11"
	HOUSEKEEPING PADS	3000 PSI	NWC	0.5	1"	5"
	ALL OTHER CONCRETE U.N.O.	3000 PSI	NWC	0.5	1"	5"
- 1	·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	·		·

\*ALL MIXES SHALL HAVE A MINIMUM OF 5 SACKS OF CEMENTITIOUS MATERIAL PER CUBIC YARD REGARDLESS OF STRENGTH OBTAINED. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.

VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2

SEALANT '2A' (SELF-LEVELING 2-PART POLYURETHANE). UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO

	THESE LINE SHOULD VERTICAL MO	VEMENT OCCUR.	
9.	BACKFILL AROUND PERIMETER TO	PROVIDE POSITIVE DRAIN	IAGE AWAY FROM SLAB.
	FLOOR TOLERANCES		
10.	F-NUMBER SYSTEM		
10.	F-INUIVIDER STSTEIVI	COMPOSITE	MINIMUM LOCAL VALUE

LEVELNESS (Fi ) IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR

TO PLACING CONCRETE. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS. GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER

MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND

2 CYLINDERS AT 28 DAYS NO CONCRETE PLACEMENT IS PERMITTED WHEN AMBIENT TEMPERATURE IS BELOW 50° F. NO CONCRETE PLACEMENT IS PERMITTED DURING RAIN FALL.

ALL EXPOSED CONCRETE BEAMS AND COLUMNS SHALL BE FREE OF HONEYCOMBS AND DISCOLORATION. CONCRETE SHALL HAVE A SMOOTH SURFACE. EARTH FORMS: FORMS FOR FOOTINGS MAY BE CUT INTO EARTH PROVIDED THAT EARTH IS DRY, STABLE, LEVEL AND SOUND. PROVIDE A 2x12 VERTICAL BOARD FORM MINIMUM BELOW BRICK LUG ELEVATION AT ALL PERIMETER GRADE BEAMS AND FOOTINGS.

### VAPOR BARRIEF A. VAPOR BARRIER (UNDER SLAB): SHALL CONFORM TO ASTM E1745, CLASS A OR

BETTER AND SHALL HAVE A MINIMUM WATER VAPOR PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. VAPOR RETARDANT SHALL BE NOT LESS THAN 15 MILS THICK. APPROVED PRODUCTS

A. STEGO WRAP (15 MIL). BY STEGO INDUSTRIES LLC. (887) 464-7834.

FLATNESS (Fr)

A. LAY SHEETS SMOOTHLY, STRETCH AND WEIGHT EDGES, LAP JOINTS TWELVE (12) INCHES AND SEAL WITH TAPE AS SPECIFIED BY VAPOR BARRIER MANUFACTURER. TURN BARRIER UP SIX 6 INCHES AT WALLS AND AT ALL PIPES, ABUTMENTS, ETC. TAPE AND SEAL AT PENETRATIONS AND AT EDGES.

B. AT GRADE BEAMS, EXTEND VAPOR RETARDANT DOWN SIDES OF BEAM TRENCHES (AND FOOTING EXCAVATIONS) TO WITHIN 4" OF TRENCH BOTTOM AND SECURE TO SIDES OF TRENCH. EXTEND BARRIER ACROSS BOTTOM OF BEAM TRENCH. PATCHING:

A. PATCH ALL PUNCTURES WITH A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS AND TAPE AROUND ENTIRE PERIMETER OF REPAIR.

### A. PREINSTALLATION CONFERENCE:

1. AT LEAST 30 DAYS PRIOR TO THE START OF THE CONCRETE SLAB CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL CONDUCT A MEETING TO REVIEW THE PROPOSED MIX DESIGNS AND TO DISCUSS THE REQUIRED METHODS AND PROCEDURES TO ACHIEVE THE REQUIRED CONCRETE CONSTRUCTION. THE CONTRACTOR SHALL SEND A PRE-CONCRETE CONFERENCE AGENDA TO ALL ATTENDEES 20 DAYS PRIOR TO THE SCHEDULED DATE OF THE CONFERENCE.

THE CONTRACTOR SHALL REQUIRE RESPONSIBLE REPRESENTATIVES OF EVERY PARTY CONCERNED WITH THE CONCRETE WORK TO ATTEND THE CONFERENCE, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A) CONTRACTOR'S SUPERINTENDENT B) LABORATORY RESPONSIBLE FOR CONCRETE MIXES AND/ OR FIELD QUALITY

C) READY-MIX CONCRETE PRODUCER D) CONCRETE SUBCONTRACTOR

E) ADMIXTURE MANUFACTURER(S) F) LIQUID DENSIFIER AND SEALER MANUFACTURER

G) LIQUID DENSIFIER AND SEALER APPLICATOR

H) JOINT FILLING APPLICATOR 3. MINUTES OF THE MEETING SHALL BE RECORDED, TYPED AND PRINTED BY THE CONTRACTOR AND DISTRIBUTED BY HIM TO ALL CONCERNED PARTIES, INCLUDING THE OWNER'S REPRESENTATIVE, THE ARCHITECT, AND THE STRUCTURAL ENGINEER WITHIN

### FIVE DAYS OF THE MEETING. CONCRETE SUBCONTRACTOR QUALIFICATION:

THE CONCRETE SUBCONTRACTOR SHALL INCLUDE IN THEIR BID PACKAGE TO THE CONTRACTOR, SUFFICIENT DATA THAT CLEARLY INDICATES THE CONCRETE CONTRACTOR'S ABILITY TO SUCCESSFULLY PERFORM THE WORK AND TO ACHIEVE THE FLOOR SLAB TOLERANCES SPECIFIED IN THIS SECTION. THE CONCRETE SUBCONTRACTOR'S TEAM SHALL HAVE PARTICIPATED IN THE MAJORITY OF THESE PROJECTS, AND THAT TEAM SHALL REMAIN THE SAME THROUGH THE DURATION OF

THIS PROJECT. CONCRETE MATERIAL

PORTLAND CEMENT: ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT

THROUGHOUT THE PROJECT. 2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE

SIZE OF 1-1/2" FOOTINGS AND PIERS 1" AND BEAMS 3/4". WATER: COMPLYING WITH ASTM C 94. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.

ADMIXTURES: AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%). ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND AIRMIX 200, MASTER BUILDERS MICROAIR, W.R. GRACE DARAVAIR 1000 AND DAREX-11. NOTE: AIR-ENTRAINING ADMIXTURE SHALL NOT BE USED ON INTERIOR CONCRETE.

CAST-IN-PLACE CONCRETE (CONT.)

WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200N AND 322N, W.R. GRACE WRDA 36 AND WRDA 64.

WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D. AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R,

W.R. GRACE DARATARD 17. HIGH RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE

IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.

WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 80/90 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTEC 20, W.R. GRACE POLARSET. PROHIBITED ADMIXTURES:

a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.

**EVAPORATION RETARDER:** WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.

a.) ACCEPTABLE PRODUCTS "EUCOBAR" BY THE EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT (877) 438-3826

**CURING MATERIALS:** EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND. THE LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C 1315 WITH A MAXIMUM V.O.C. CONTENT OF 700 G/L. a.) ACCEPTABLE PRODUCTS:

"SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3826

INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED ODOR, DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISSIPATING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-309 AND V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COMPOUNDS WITH A MAXIMUM V.O.C. CONTENT OF 350 G/L. APPLY AT 400 S.F./GALLON. a.) ACCEPTABLE PRODUCTS:

"KUREZ DR VOX" BY THE EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3826

ALL CONCRETE SLABS SHALL ALSO BE MAINTAINED MOIST FOR 7 DAYS

### **CONCRETE MIXES**

COMPLY WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O.. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. PROPORTIONED ACCORDING TO ACI 301, FOR NORMAL WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS:

CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS PROVIDED TO THE PROJECT, AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOB STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK

SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS

ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY CONTRACTOR WHEN CHARACTERISTICS OF MATERIALS, JOB CONDITIONS, WEATHER, TEST RESULTS OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT

READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE

MIXING AND DELIVERY TIME TO 60 MINUTES. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.

### CONTRACTION JOINTS IN SLABS-ON-GRADE

FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:

SAWED JOINTS: ALL SAW CUTTING SHALL BE ACCOMPLISHED WITH A SOFT-CUT SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR. NOTE: CONCRETE DUST SHALL BE REMOVED COMPLETELY AND IMMEDIATELY. IF CHALK LINES ARE USED FOR SAW CUTS, ALL CHALK REMAINING ON SLAB SHALL BE REMOVED COMPLETELY AND IMMEDIATELY AFTER SAWING.

FLOOR SLAB TOLERANCES: COMPLY WITH ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS." ALL INTERIOR FLOOR SLABS SHALL MEET THE REQUIREMENTS OF A TYPE 5, SINGLE COURSE, HARD STEEL - TROWELED FINISH AS

### CONCRETE CURING AND PROTECTION:

DESCRIBED IN ACI 302.IR- LATEST EDITION.

**EXTERIOR SLAB - CURING:** a) FIRST, ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.

a) FIRST, ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F. BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.

b) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND PONDED WITH WATER FOR SEVEN (7) DAYS AFTER CONCRETE PLACEMENT.

THIRD, CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE- FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMLY PER MANUFACTURER'S INSTRUCTIONS. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARRED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 50° F.

d) AT CONCRETE WHERE FINISH OF SLAB IS TO BE POLISHED; PROVIDE BURLAP MEMBRANE DURING ENTIRE CONSTRUCTION OF THE BUILDING. (DO NOT PROVIDE CURING COMPOUND)

INTERIOR SLAB PROTECTION: TAKE THE FOLLOWING MEASURES TO PROTECT FLOOR SLAB: A. WRAP OR "DIAPER" ALL MOTORIZED AND HYDRAULIC EQUIPMENT TO PREVENT

B. PROVIDE NON-MARKING TIRES ON RUBBER TIRED VEHICLES OR EQUIP RUBBER TIRES WITH TIRE BOOTS MADE OF NYLON FABRIC.

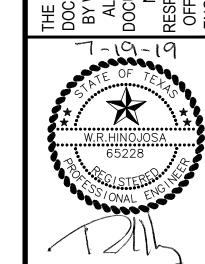
C. SOURCE FOR DIAPERS AND BOOTS: R&R TIRE SURFACE PROTECTORS, INC., FORT

COLLINS CO 80526. (970) 266-4082 D. PROVIDE MATS AT ALL ENTRANCES TO PREVENT MUD STAINS.

E. COVER SLAB PRIOR TO PAINTING. ALL SPILLS TO BE CLEANED WITH SOAP AND WATER. LACQUER THINNER WILL NOT BE ACCEPTABLE.

DATE: 07/19/2019 SCALE:

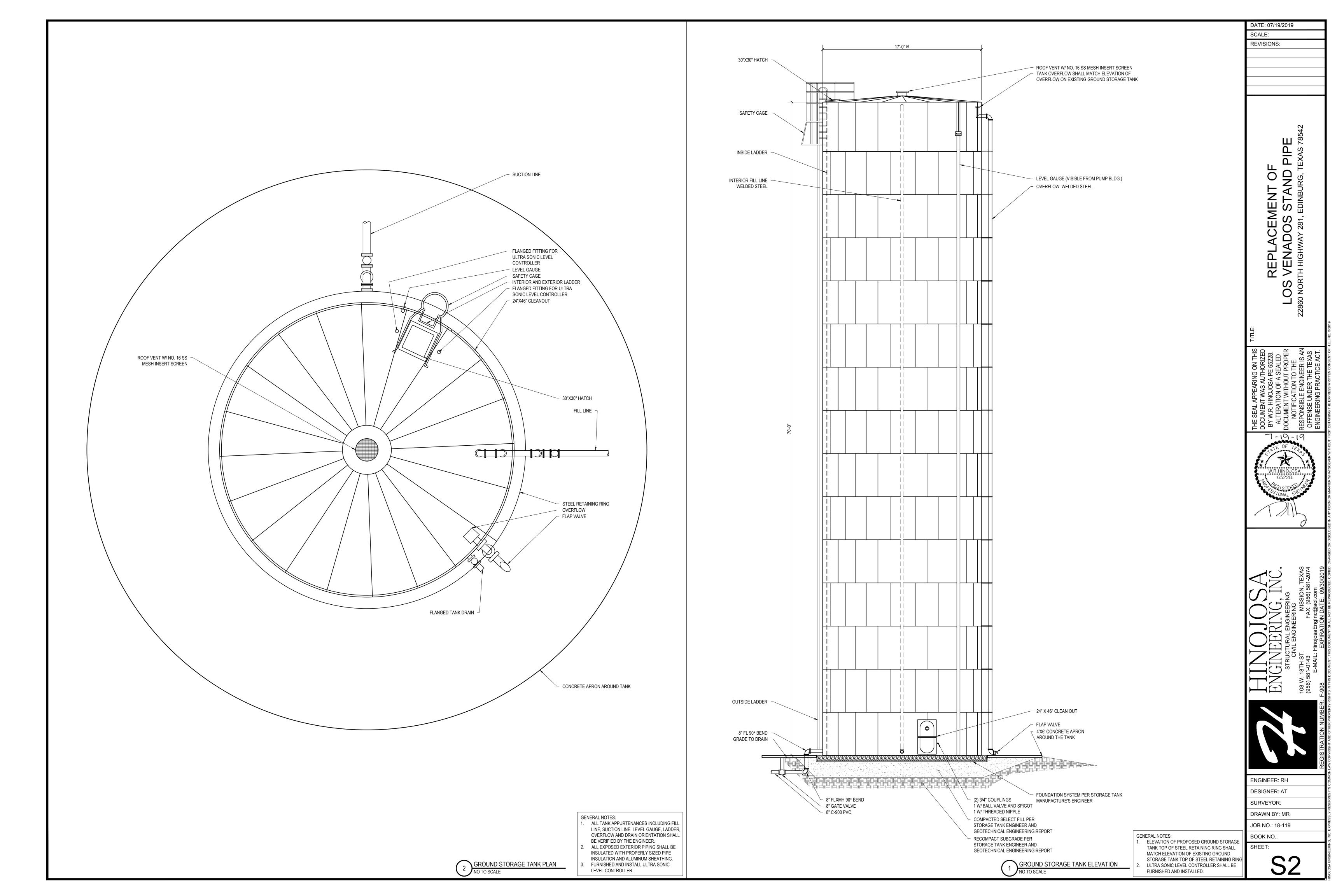
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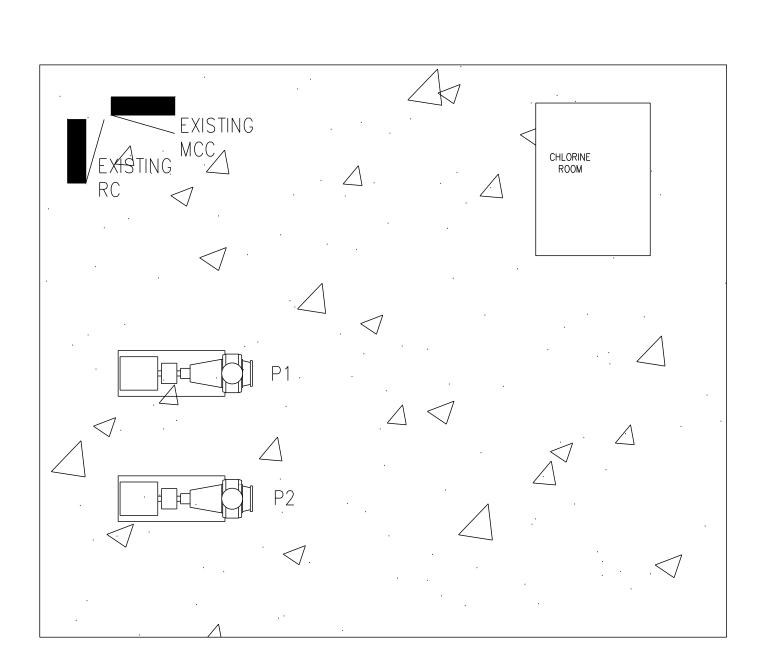
ENGINEER: RH

DESIGNER: AT SURVEYOR: DRAWN BY: MR

JOB NO.: 18-119













### GENERAL DEMOLITION NOTES:

- A. GENERAL: EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED, REINSTALLED, OR OTHERWISE INDICATED TO REMAIN OWNER'S PROPERTY, REMOVE DEMOLISHED MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA-APPROVED LANDFILL. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE REMOVE FROM OWNER OCCUPIED AREAS DAILY. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND
- B. TRACE CIRCUITS FEEDING EXISTING TO-REMAIN PORTIONS OF THE BUILDING. DO NOT DEMOLISH CIRCUITS IN THESE AREAS. IF CIRCUITS ARE IN BOTH "TO REMAIN" AND "TO BE REMOVED" AREAS, DEMOLISH BACK TO NEAREST TO-REMAIN J-BOX.
- C. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. COMPLETE SELECTIVE DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL.
- D. REMOVED AND SALVAGED ITEMS: CLEAN SALVAGED ITEMS, PACK OR CRATE ITEMS AFTER CLEANING. IDENTIFY CONTENTS OF CONTAINERS. STORE ITEMS IN A SECURE AREA UNTIL DELIVERY TO OWNER. TRANSPORT ITEMS TO OWNER'S STORAGE AREA DESIGNATED BY OWNER. PROTECT ITEMS FROM DAMAGE DURING TRANSPORT AND STORAGE.
- E. REMOVED AND REINSTALLED ITEMS: CLEAN AND REPAIR ITEMS TO FUNCTIONAL CONDITION ADEQUATE FOR INTENDED REUSE. PAINT EQUIPMENT TO MATCH NEW EQUIPMENT. PACK OR CRATE ITEMS AFTER CLEANING AND REPAIRING. IDENTIFY CONTENTS OF CONTAINERS. PROTECT ITEMS FROM DAMAGE DURING TRANSPORT AND STORAGE. REINSTALL ITEMS IN LOCATIONS INDICATED. COMPLY WITH INSTALLATION REQUIREMENTS FOR NEW MATERIALS AND EQUIPMENT. PROVIDE CONNECTIONS, SUPPORTS, AND MISCELLANEOUS MATERIALS NECESSARY TO MAKE ITEM FUNCTIONAL FOR USE INDICATED.
- F. EXISTING ITEMS TO REMAIN: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION OPERATIONS ARE COMPLETE.
- G. COORDINATE ALL DEMO ACTIVITIES WITH OWNER AND ARCHITECT AND PROVIDE 10 DAYS NOTICE FOR ANY POWER OUTAGES.
- H. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOB-SITE CONDITIONS DURING THE BIDDING PERIOD TO OBTAIN THE SCOPE OF ELECTRICAL WORK INVOLVED AS A RESULT OF ARCHITECTURAL MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF THE WORK SHALL INCLUDE MATERIALS AND OUTLETS, CONSISTING OF FIXTURES, DEVICES, EQUIPMENT OR APPARATUS, WHICH MUST BE REROUTED, RELOCATED OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE PROVIDED, SO THAT THE INDICATED REMODELING MAY BE ACCOMPLISHED. NOT ALL EXISTING OUTLETS ARE NECESSARILY INDICATED ON THE DRAWINGS.
- WHEN OUTLETS ARE ABANDONED, WIRE MUST BE PULLED OUT OF CONDUIT BACK TO THE NEAREST REMAINING BOX OR CABINET AND EXPOSED CONDUIT THAT HAS BEEN ABANDONED MUST BE REMOVED.
- J. PROVIDE ALL APPURTENANCES REQUIRED TO REROUTE, RELOCATED, REMOVE OR REINSTALL ALL ITEMS DESCRIBED IN THESE NOTES.
- K. REMOVE ALL OUTLETS AND WIRING ASSOCIATED WITH ALL EQUIPMENT BEING REMOVED, INCLUDING MECHANICAL AND PLUMBING
- L. AT THE COMPLETION OF THE PROJECT, THERE SHALL BE NO ABANDONED LIGHTING FIXTURES, CONTROLS, WIRING CONDUIT, ELECTRICAL EQUIPMENT, FIRE ALARM DEVICES, INTERCOM/PA DEVICES, OR CONTRACTOR SHALL REMOVE ABANDONED MATERIALS DESCRIBED HEREINABOVE. PROVIDE BLANK STAINLESS STEEL COVER PLATES FOR ABANDONED DEVICES IN WALLS SCHEDULED TO
- M. CONTRACTOR SHALL MAKE SAFE ALL AREAS OF THE EXISTING STRUCTURE WHICH ARE TO BE DEMOLISHED BY DISCONNECTING FEEDERS AND SERVICES TO DEMO'D AREAS.
- N. DEMOLITION WORK SHALL NOT BEGIN UNTIL NEW TANK AND PUMPS ARE OPERATIONAL. CONTRACTOR SHALL CONSTRUCT NEW WATER TANK AND PUMP YARD SHALL BE COMPLETED FIRST.

### # ELECTRICAL KEYED NOTES:

- 1) EXISTING RISER POLE AND METER TO REMAIN.
- (2) EXISTING RTU TO REMAIN AND REPAIRED. REFER TO ES2.0 FOR NEW SCOPE OF WORK.
- (3) EXISTING MCC TO BE DEMOLISHED. REFER TO ES2.0 FOR NEW SCOPE OF WORK.
- (4) EXISTING PUMPS TO BE DEMOLISHED. REFER TO ES.2.0 FOR NEW SCOPE OF WORK.
- (5) CHLORINE ROOM TO REMAIN.

DATE: 07/22/2019

SCALE: **REVISIONS:** 

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ENGINEER: RO **DESIGNER:** 

SURVEYOR: DRAWN BY: RO

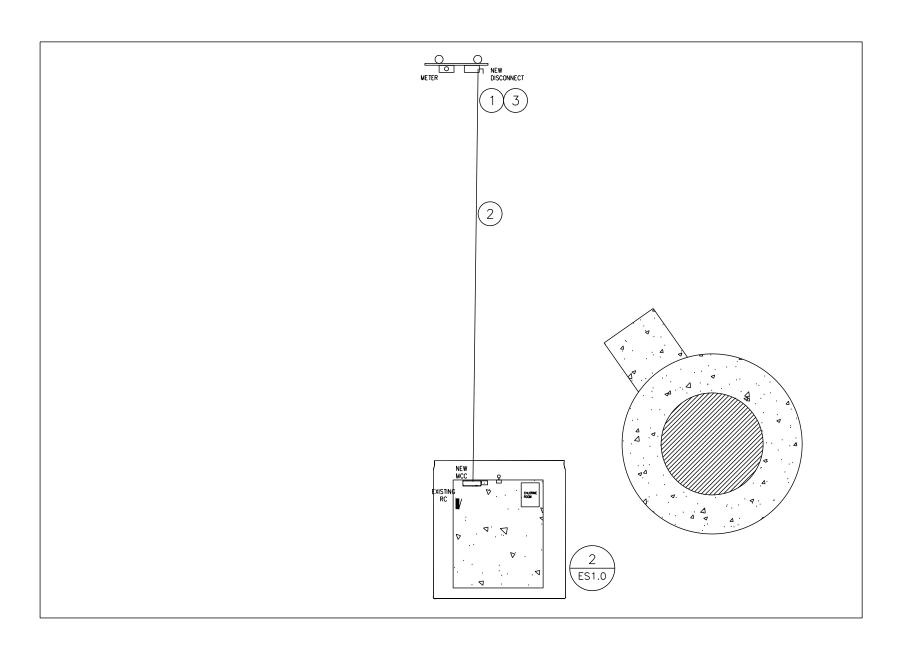
2705 E. DAVIS RD., Suite A Edinburg, Texas 78504 JOB NO.: 18-119 956.292.3336 p BOOK NO.: www.ro-engineering.com TBPE Firm Registration No. 12179

SHEET: ES1.0

KISTING ELECTRICAL R.O. -- -- --

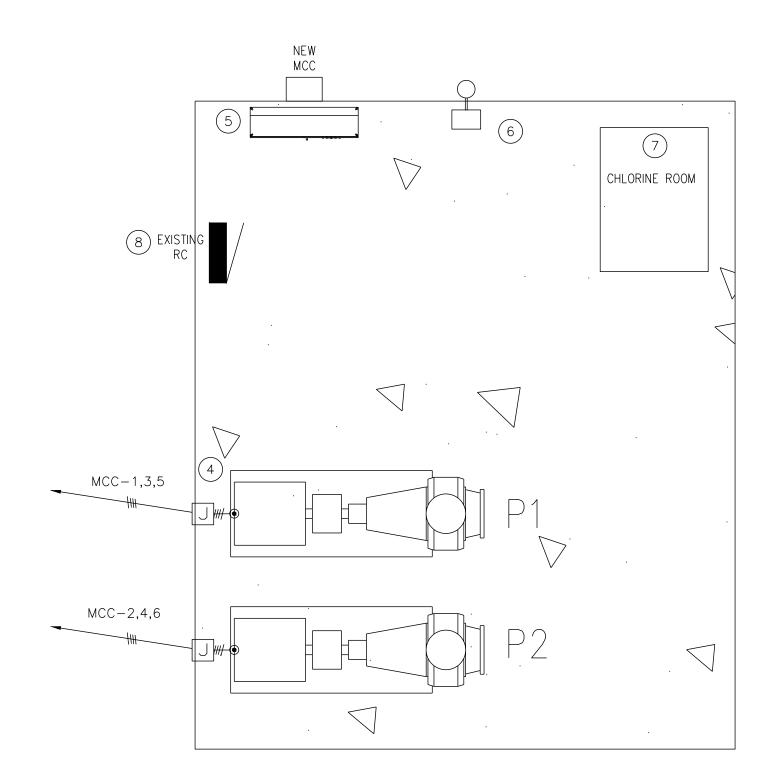
ENGINEERING, PLLC

MEP ENGINEERING & CONSTRUCTION MANAGEMENT





### NEW ELECTRICAL SITE PLAN





### **GENERAL ELECTRICAL NOTES:**

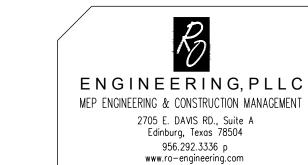
- FURNISH AND INSTALL COMPLETE ELECTRICAL SYSTEM AS INDICATED ON PLANS. ELECTRICAL CONTRACTOR TO MAKE ALL FINAL CONNECTIONS TO ALL EQUIPMENT. MATERIAL SHALL BE AS FOLLOWS:
  - A. CONDUIT: ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN CONDUIT COMPLYING WITH NATIONAL ELECTRICAL CODE. WHERE INSTALLED UNDERGROUND, IN POURED CONCRETE OR SUBJECT TO STRESS FROM COLLISION OR IMPACT, CONDUIT SHALL BE RIGID GALVANIZED STEEL. WHERE RIGID CONDUIT IS NOT REQUIRED, CONDUCTORS SHALL BE INSTALLED IN ELECTRIC METALLIC TUBING WITH ELECTRO-GALVANIZED OUTSIDE AND ENAMEL INSIDE.
  - CONDUCTORS: ALL WIRE IN THE WORK SHALL BE INSULATED COPPER WIRE, EACH CONDUCTOR SHALL BE CONTINUOUS, WITHOUT WELD, SPLICE OR JOINT THROUGHOUT ITS LENGTH AND UNIFORM IN CROSS-SECTION. WIRE # 6 AND LARGER SHALL HAVE TYPE "THW" INSULATION. WIRE # 8 AND SMALLER SHALL HAVE DUAL RATED TYPE "THHN/THWN" INSULATION. MINIMUM WIRE SIZE, EXCEPT FOR CONTROL WIRING, SHALL BE # 12 AWG.
- OUTLETS: WALL RECEPTACLES SHALL BE DUPLEX HUBBELL # 5252 OR AN APPROVED SUBSTITUTION, AND SHALL BE MOUNTED AT 12" A.F.F. UNLESS OTHERWISE NOTED.
- D. TOGGLE SWITCHES AND SWITCH PLATES: FURNISH AND INSTALL TOGGLE SWITCHES WHERE INDICATED ON PLANS, AS FOLLOWS:
  - 1. 20 AMP/1 POLE, 120/277 VOLT: HUBBELL # 1221.
  - 2. WHERE MORE THAN ONE SWITCH OCCURS AT THE SAME LOCATION, THEY SHALL BE SET IN GANGS WITH ONE COVERPLATE, INSTALLED IN BOXES IN UNIFORM POSITION, SET TO OPEN AND CLOSE CIRCUITS BY MOVING IN THE SAME DIRECTION THROUGHOUT THE
  - 3. PROVIDE WEATHER PROOF BOX AND COVER FOR SWITCHES

- E. LIGHTING PANELBOARDS:
  - 120/208V,  $3\emptyset-4W$ : AND 277/480V: FURNISH AND INSTALL AS SHOWN ON PLANS, LIGHTING PANELBOARDS BY SQUARE D, TYPE "NQOB", WITH SINGLE POLE 120V. SQUARE D "QO" TYPE BREAKERS. TWO AND THREE POLE SHALL BE COMMON TRIP.
- F. SAFETY SWITCHES AND FUSES: SAFETY SWITCHES SHALL BE FURNISHED AND INSTALLED AT ALL LOCATIONS INDICATED ON PLANS OR REQUIRED BY THE NATIONAL ELECTRICAL CODE. ALL SWITCHES SHALL BE HEAVY DUTY TYPE AND SHALL HAVE CLIPS FOR REJECTION TYPE FUSES AND SHALL BE BY SQUARE D, G.E., OR AN APPROVED SUBSTITUTION, FOR THE VOLTAGE AND LOAD INVOLVED. PROVIDE A COMPLETE SET OF FUSES IN ALL FUSED SWITCHES. FUSES SHALL BE CLASS RK-1 FUSES (BUSSMAN LOW PEAK OR HI-CAP FOR 601 AMPS & ABOVE) BY BUSSMAN , NO SUBSTITUTIONS.
- G. CONTRACTOR SHALL PROVIDE TYPEWRITTEN PANELBOARD DIRECTORY INSIDE OF PANELBOARD DOOR.
- H. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH BUILDING MANAGEMENT FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO STANDARD LIGHT FIXTURES, SWITCHES, RECEPTACLES, COVERPLATES, AND WIRING METHODS. AVAILABLE QUANTITIES AND TENANT ALLOWANCES MUST ALSO BE VERIFIED WITH BUILDING MANAGEMENT.
- I. THE SCOPE OF THE ELECTRICAL WORK INCLUDES FURNISHING AND INSTALLING ALL ELECTRICAL WORK FOR A COMPLETE INSTALLATION.

### **#** ELECTRICAL KEYED NOTES:

- $\bigcap$  THE CONTRACTOR TO COORDINATE POWER SHUTDOWN WITH AEP AND THE CITY.
- (2) CONTRACTOR SHALL RUN NEW CONDUIT AND WIRE FROM EXISTING METER TO NEW PANEL LOCATIONS.
- 3 PROVIDE NEW 100AF/3P/N3R DISCONNECT.
- (4) CONTRACTOR SHALL PROVIDE NEW PUMPS AS PER PUMP SCHEDULE.
- PROVIDE NEW MOTOR CONTROL CENTER. REFER TO SHEET 4.0. MOUNT ON UNITSTRUT AND ANCHOR TO NEW CONCRETE SLAB. CONTRACTOR TO COORDINATE WITH PANEL MANUFACTURER TO ENSURE SCADA COMMUNICATION INCLUDES MOPS FOR SCADA, PUMP RUN STATUS, SYSTEM PRESSURE, TANK WATER LEVEL, VFD FAULT, AND OTHER POINTS REQUIRED BY THE CITY. COORDINATE WITH SCADA INSTALLER MUNICIPAL PUMP & CONTROLS.
- 6 CONTRACTOR TO DISCONNECT AND RECONNECT EXISTING CHLORINE ROOM AND EQUIPMENT TO NEW PUMPS SYSTEM.
- ) CONTRACTOR TO COORDINATE WITH MUNICIPAL PUMPS & CONTROLS TO INTEGRATE NEW PANEL TO EXISTING RTU AND PROVIDE THE NECESSARY REPAIRS FOR A COMPLETE WORKING SYSTEM. COORDINATE INTEGRATION AND CONNECTION WITH

PUMP SCHEDULE				
MARK	P1	P2		
MANUFACTURER	GRUNDFOS	GRUNDFOS		
MODEL NUMBER	4095-7 LF	4095-7 LF		
FLOW GPM	700	700		
HEAD (FT. H2O)	70	70		
APPROX. PUMP EFF. (%)	85	85		
APPROX. IMPELLER DIA. (INCHES)	9.32	9.32		
MOTOR RPM	1800	1800		
HORSEPOWER	20	20		
VOLTS/PHASE/HERTZ	230/460/3/60	230/460/3/60		
NOTES				
IOTES:				
1.				



TBPE Firm Registration No. 12179 ROE Project Number

R.O. | -- | -- |

DATE: 07/22/2019 SCALE: **REVISIONS:** 

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ENGINEER: RO **DESIGNER:** SURVEYOR: DRAWN BY: RO JOB NO.: 18-119

BOOK NO.:

SHEET: ES2.0 NEW ELECTRICAL





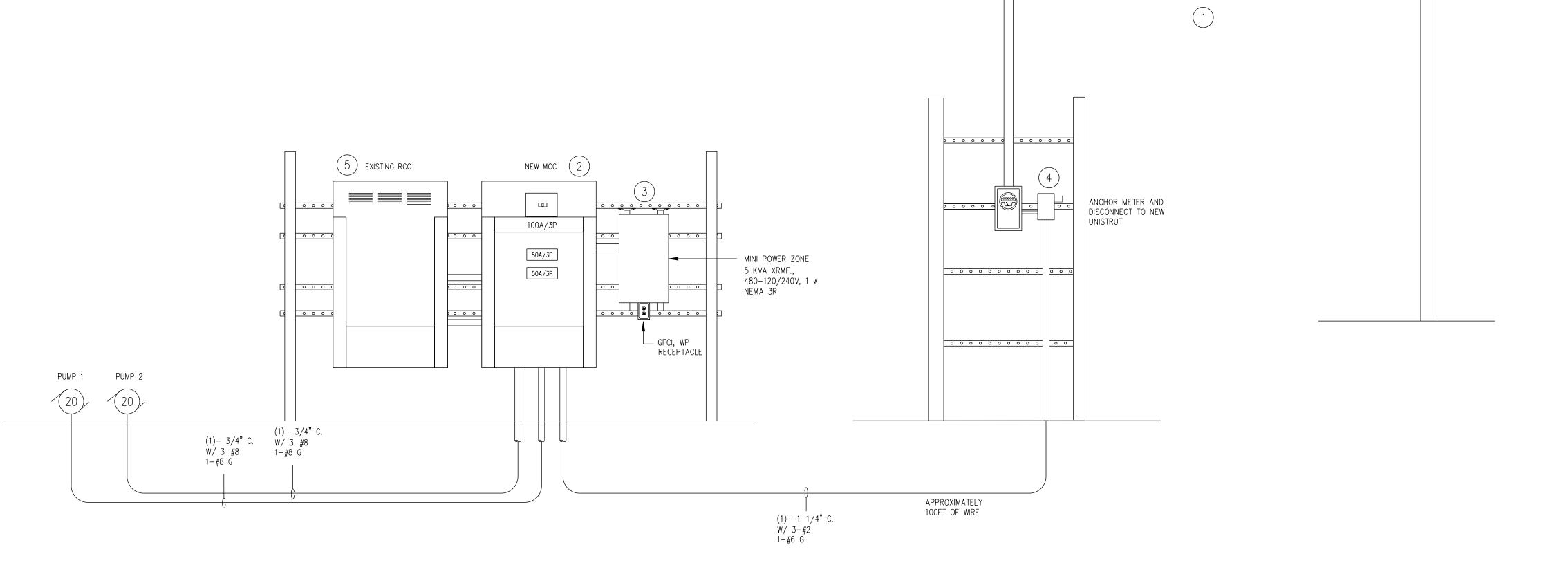
- A. COORDINATE ALL UNDERGROUND CONDUITS WITH EXISTING CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTFING ALL EXISTING CONDITIONS AND UTILITIES.
- B. ALL EQUIPMENT CONNECTION POINTS ARE DIAGRAMATIC IN NATURE. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EQUIPMENT INSTALLER FOR EXACT POINT OF CONNECTION. EXTEND FEEDERS IN CONDUIT AS REQUIRED.
- C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR CONTRACTORS TO VISIT THE SITE OF THE PROPOSED CONSTRUCTION IN ORDER TO FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTION ATTENDING THE EXECUTION OF THE WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THIS CONTRACTOR FOR WORK OR ITEMS OMITTED FROM HIS ORIGINAL PROPOSAL DUE TO HIS FAILURE TO INFORM HIMSELF REGARDING SUCH MATTERS AFFECTING THE PERFORMANCE OF THE WORK IN THIS CONTRACT OR NECESSARY FOR THE INSTALLATION AND COMPLETION OF THE WORK INCLUDED HEREIN.

### ELECTRICAL SERVICE SCOPE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY OF SERVICE TO THE NEW PUMP YARD COORDINATE ALL REQUIREMENTS AND COSTS AND LABOR W/ LOCAL UTILITY. PRIOR TO BID. ALL COSTS ASSOCIATED W/ THE DELIVERY OF ELECTRICAL SERVICE SHALL BE INCLUDED AS A PART OF THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

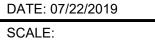
### # ELECTRICAL KEYED NOTES:

- 1 CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR ADDITIONAL REQUIREMENTS TO INCLUDE BUT NOT LIMITED TO CT AND METER.
- 2 REFER TO DETAIL # 1 IN SHEET E4.0 FOR RACK DETAIL. REFER TO ONE-LINE IN SHEET E4.1 FOR CONTROL PANEL CONNECTIONS AND SCHEMATICS ON SHEET E4.2.
- PROVIDE MINI POWER ZONE 5 KVA XRMF., 480-120/240V, 1 Ø, NEMA 3R, 10 SPACES ON BACKSIDE OF PANEL.
- 4 PROVIDE NEW 100AF/3P/N3 DISCONNECT.
- 5 EXISTING TO BE RELOCATED. COORDINATE INTEGRATION AND CONNECTIONS OF EQUIPMENT WITH OWNER.



		ELECTRICAL RISER DIAGRAM
\	/	NTS

ELECTRICAL LC	OAD ANALYSIS		
480 / 277 ,	3 -PHASE, 4 -WIRE	NEW MCC	
DESCRIPTION		NEC	KVA
GHTING:			
INTERIOR =	0 VA X 125%	210.20(a)	0.0
EXTERIOR =	60 VA X 125%	210.20(a)	0.1
OWER:			
RECEPTACLES =	360 VA	220.44	0.4
20 HP, PUMP1	22,437 VA	430.250	22.4
20HP, PUMP2	22,437 VA	430.250	22.4
MISC.	4,320 VA		4.3
25% LARGEST MOTOR	= 5609.25 VA	430.24	5.6
MCC will not have	e a neutral.		0.0
			0.0
			0.0
		TOTAL =	55.2
		TOTAL AMPS:	66.4
		SERVICE SIZE:	100.0
		SPARE AMPACITY:	33.6



SCALE: REVISIONS:

NOI

LOS VENADOS
OSTER PUMP STATIC
REPLACEMENT

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RENE R. OLIVAREZ

102302

STERMAN

STRUCTURAL ENGINEERING
CIVIL ENGINEERING
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BOOK NO.:

SHEET: **E3.0**ELECTRICAL RISER
& LOAD SCHEDULE

ENGINEERING & CONSTRUCTION MANAGEMENT

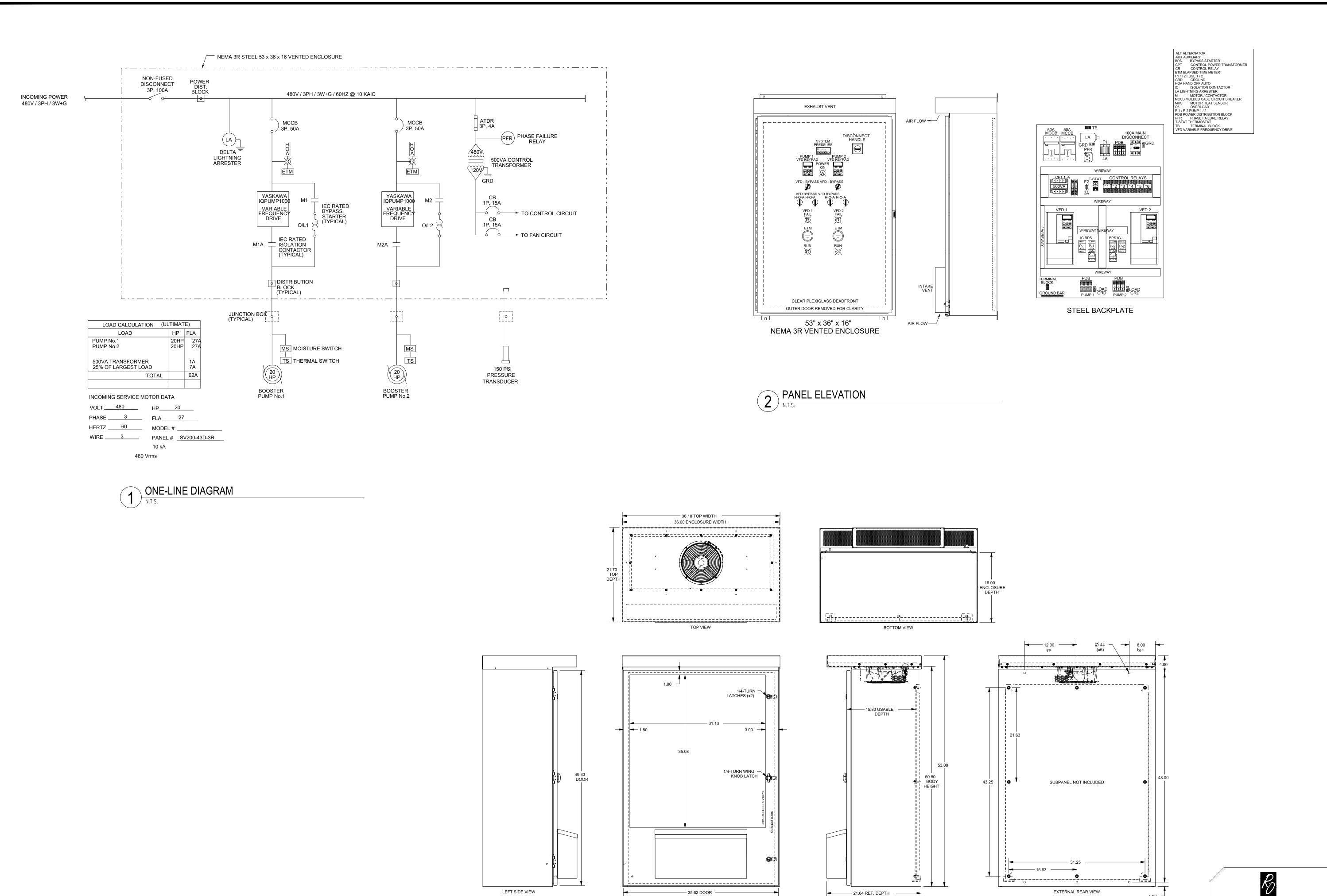
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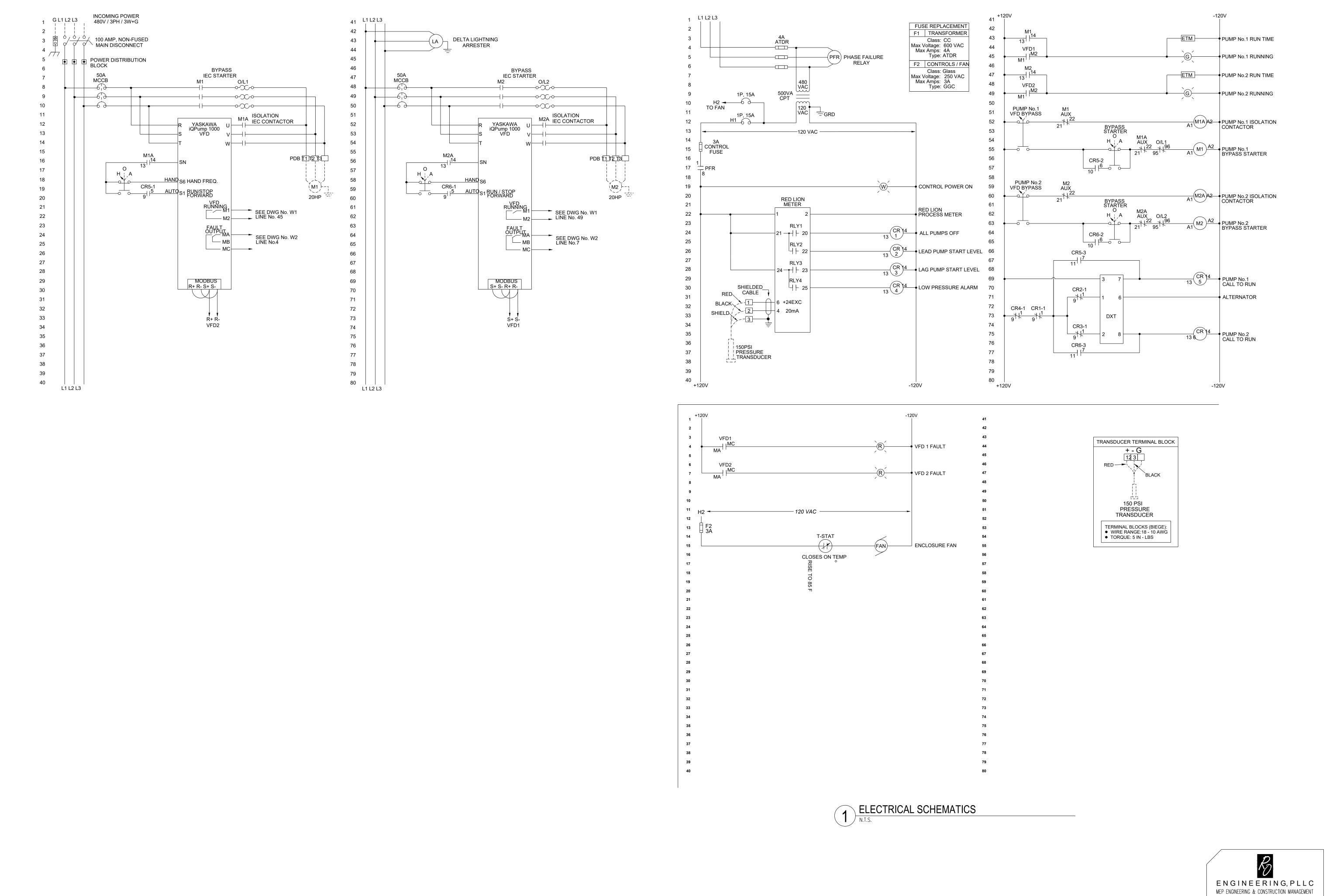
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3 CONTROL PANEL DIMENSIONS
N.T.S.

RIGHT SIDE VIEW

FRONT VIEW



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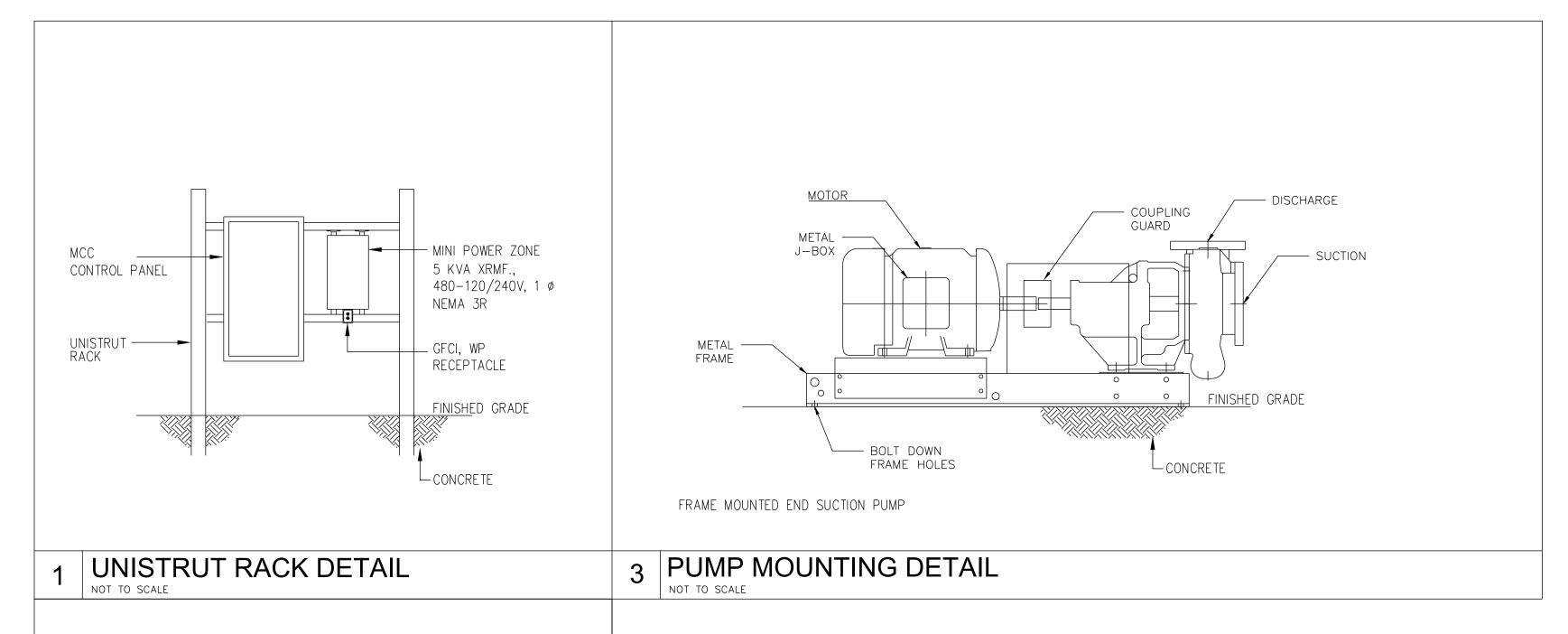
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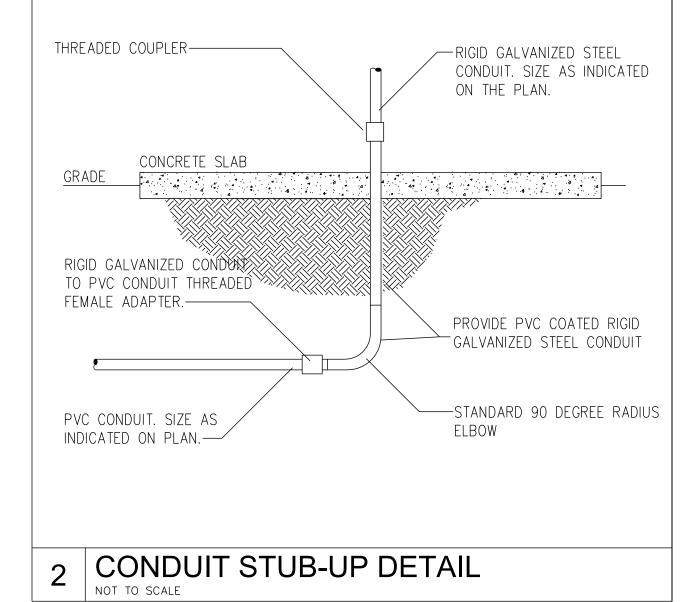
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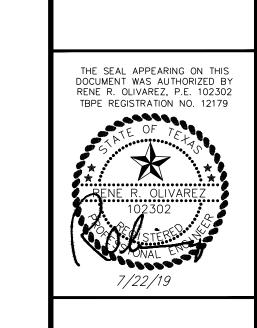
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