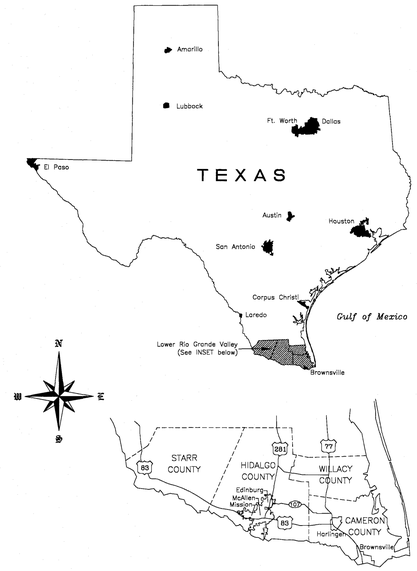
CITY OF MISSION

HIDALGO COUNTY, TEXAS

MISSION PUBLIC WORKS DEPARTMENT

WA 15- SOUTH CONWAY LIFT STATION - PROP. 15" SANITARY SEWER LINE - PROP. 8" SANITARY FORCE MAIN - PROP. 12" WATER LINE

BID NO. 20-179-03-12



CALL BEFORE YOU DIG!

Texas 811

Know what's below. Call before you dig.

PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP AND CALL CONSTRUCTION 811

THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

PROJECT BENCH MARKS:

B.M. NO.1
SQUARE CUT MARK ON TOP OF TYPE -"A" INLET
AT THE WEST BACK OF CURB OF CONWAY AVENUE (F.M. 1016), LOCATED APPROXIMATELY 105 FEET NORTH OF MILITARY PARKWAY POINT NO. 941
ELEVATION = 110.88, N. 16589362.8880, E. 1039099.9180

PROJECT BENCH MARKS:

B.M. NO.2
SQUARE CUT MARK ON TOP OF TYPE -"A" INLET
AT THE WEST BACK OF CURB OF CONWAY AVENUE (F.M. 1016), LOCATED APPROXIMATELY 310 FEET SOUTH OF MILE 2 SOUTH RD. POINT NO. 943
ELEVATION = 109.56, N. 16592870.6190, E. 1039627.6560

PROJECT BENCH MARKS:

B.M. NO.3
SQUARE CUT MARK ON TOP OF TYPE -"A" INLET
AT THE WEST BACK OF CURB OF CONWAY AVENUE (F.M. 1016), LOCATED APPROXIMATELY 2495 FEET NORTH OF MILE 2 SOUTH RD. POINT NO. 944
ELEVATION = 106.78, N. 16595669.9810, E. 1040048.9900

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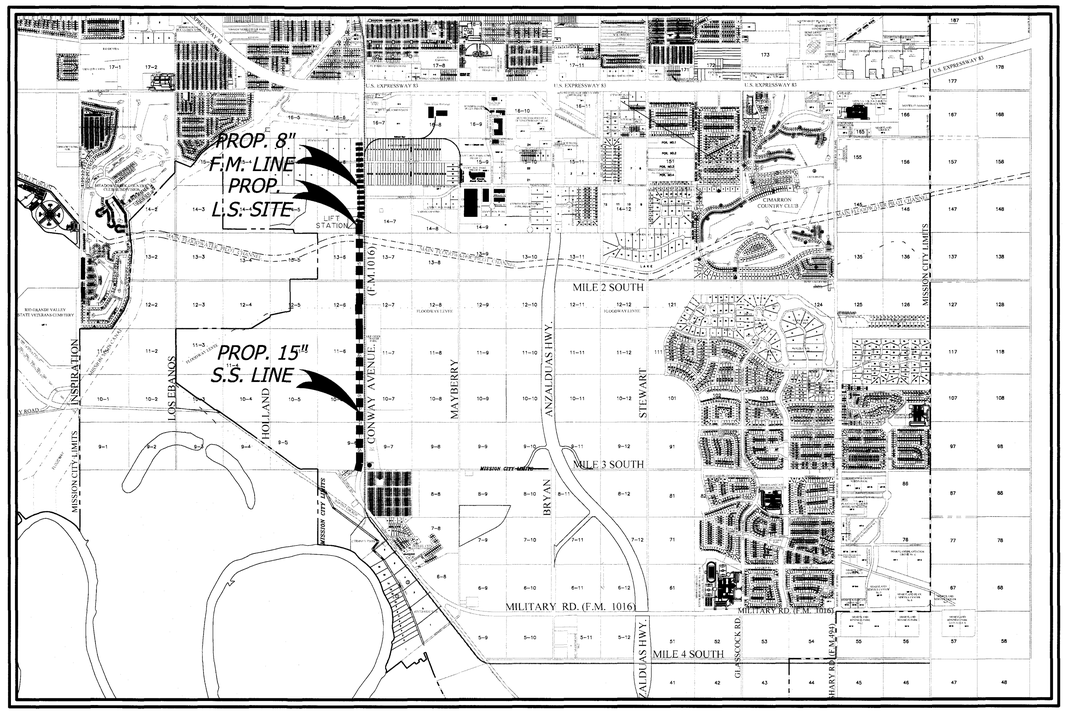

LOCATION MAP

SCALE: 1" = 500'

2020

PLANS APPROVED: CITY OF MISSION

J.P. TERRAZAS, CITY ENGINEER

MELDEN & HUNT, INC.
CONSULTANTS ENGINEERS SURVEYORS
115 W. McINTYRE
EDINBURG, TX 78541
ESTABLISHED 1947
PH: (956) 381-0981
FAX: (956) 381-1839
www.meldenandhunt.com

PLANS CORRECT:

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

JOB No. 19086.01

SET No. _____

SHEET 1 OF 17

CITY OF MISSION, TEXAS · FOUNDED IN 1908

CITY OFFICIALS

Dr. Armando O'caña ..... Mayor
Norie Gonzalez Garza ..... Council, Place 3 Mayor Pro-Tem
Jessica Ortega-Ochoa ..... Council, Place 1
Ruben Plata ..... Council, Place 2
Jose Alberto Vela ..... Council, Place 4
Randy Perez ..... City Manager
Robert Salinas, P.E. ..... Public Works Director
Juan Pablo "JP" Terraza, P.E ..... City Engineer

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\9 SITE PLAN.dwg, C1-COVER (2), 2/27/2020 4:42:27 PM,

GENERAL CONSTRUCTION NOTES

1. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND WATER, WASTEWATER OR ELECTRICAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE LOCATIONS AND SIZES HAVE BEEN TAKEN FROM EXISTING RECORDS AND THE BEST AS-BUILT INFORMATION AVAILABLE; HOWEVER, IT IS EXPECTED THAT THERE MAY BE SOME DISCREPANCIES AND OMISSIONS IN THE LOCATIONS, QUALITIES AND SIZES SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE, SIZE AND LOCATION OF ALL UTILITIES AFFECTED BY THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ARRANGE FOR THE REPAIR AND RESTORATION OF CONTRACTOR DAMAGED UTILITIES. THE COST OF ANY REPAIR OR REPLACEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CURRENT LINE SPOTTING TOLL FREE NUMBER AND COORDINATE WITH ALL THE UTILITY COMPANIES FOR ACTUAL LOCATING AND UNCOVERING OF EXISTING LINE PRIOR TO EXCAVATION OPERATIONS.

2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY UNREPORTED OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THIS PROJECT.

3. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET AS A MINIMUM THE REQUIREMENTS OF O.S.H.A. SAFETY AND HEALTH REGULATIONS DIRECTIVE NUMBER: TED 01-00-015, EFFECTIVE DATE JANUARY 20, 1999, INCLUDING MOST CURRENT REVISION AND THE REQUIREMENTS OF THE STATE OF TEXAS. (http://www.osha.gov/dts/osta/otm/otm_v/otm_v_2.html)

4. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT AND WORKMAN LIKE MANNER AT ALL TIMES. JOB SAFETY SHALL NOT BE COMPROMISED. ANY UNSAFE OR UNATTRACTIVE NUISANCE SHALL BE REMOVED OR OTHERWISE TAKEN CARE OF BY THE CONTRACTOR WHEN DIRECTED BY THE OWNER OR PROJECT ENGINEER.

5. EXCAVATIONS, TRENCHES AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, FENCING, LIGHTS AND/OR OTHER PROTECTIVE DEVICES AT ALL TIMES.

6. CONSTRUCTION OF THIS PROJECT WILL BE SUBJECT TO INSPECTIONS AND TESTING AS DEEMED NECESSARY OR APPROPRIATE BY THE OWNER. THE CONTRACTOR SHALL FURNISH INCIDENTAL LABOR AND EQUIPMENT TO ALLOW THE TESTING PERSONAL ACCESS TO THE WORK AND WILL COOPERATE FULLY WITH THE PERSONS CONDUCTING THE TESTING AND INSPECTION PROGRAM.

7. COORDINATION WITH SUPPLIERS OF ATTENDANT COMPONENTS OF A TOTAL SYSTEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

8. PIPING WORK SHOWN ON THE DRAWINGS IS INTENDED TO BE DEPICTIVE AND MAY NOT BE AN EXACT OR COMPLETE REPRESENTATION OF THE ACTUAL FINISHED WORK. CONTRACTOR SHALL INCLUDE FITTINGS, JOINTS, SUPPORTS AND OTHER ACCESSORIES REQUIRED TO PROVIDE A COMPLETE AND SATISFACTORY PIPING SYSTEM, AS IS SPECIFIED, EVEN THOUGH SOME ITEMS MAY NOT BE SPECIFICALLY SHOWN ON THE PROJECT DRAWINGS.

9. THE DRAWINGS DO NOT ALWAYS INDICATE ALL VERTICAL BENDS AND TRANSITIONS. WHEN NECESSARY, MAKE VERTICAL TRANSITIONS BY A DEFLECTION AT THE JOINTS OR THE INSTALLATION OF FITTINGS. DO NOT DEFLECT PIPE JOINTS MORE THAN 80% OF THE MANUFACTURERS RECOMMENDATION.

10. ALL EXCAVATION FOR THIS PROJECT SHALL BE UNCLASSIFIED.

11. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS OF ALL MATERIALS AND EQUIPMENT TO BE FURNISHED UNDER THIS CONTRACT. APPROVAL OF SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE PLANS AND SPECIFICATIONS.

12. ALL TREES TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION WITH THE USE OF PROTECTIVE BARRIERS INSTALLED BY THE CONTRACTOR, AT THE DRIP LINE OF EACH TREE.

13. ALL EXISTING PAVEMENT, UTILITIES, FENCING, ETC. WHICH IS TO REMAIN AND WHICH IS DAMAGED OR REMOVED WILL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

14. IN ALL LOCATIONS WHERE A PROPOSED UTILITY LINE OPEN CUTS AN EXISTING STREET, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT IN ORDER TO PROVIDE A NEAT AND UNIFORM PATCH.

15. THESE NOTES ARE INTENDED TO SUPPLEMENT THE TECHNICAL SPECIFICATIONS AND SHOULD NOT BE CONSIDERED A SUBSTITUTE FOR THE DETAILED REQUIREMENTS SET FORTH IN THE SPECIFICATIONS. WHERE THERE IS A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE SPECIFICATIONS SHALL COVERN.

16. AREAS USED FOR THE CONTRACTOR'S JOB TRAILER, PERSONEL PARKING, MATERIAL STORAGE, SPOILS STOCKPILE, MATERIAL FABRICATION AND RELATED CONSTRUCTION USES MUST BE APPROVED BY THE PROJECT ENGINEER.

17. SEPARATION DISTANCES BETWEEN PUBLIC WATER SUPPLY PIPES AND WASTEWATER COLLECTION SYSTEM PIPES OR MANHOLES.

A. COLLECTION SYSTEM PIPES MUST BE INSTALLED IN TRENCHES SEPARATE FROM PUBLIC WATER SUPPLY TRENCHES.

B. COLLECTION SYSTEM PIPES MUST BE NO CLOSER THAN NINE FEET IN ANY DIRECTION TO A PUBLIC WATER SUPPLY LINE.

C. IF A NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES WILL APPLY.

1) IF A COLLECTION SYSTEM PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWING REQUIREMENTS APPLY.
a. A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST A 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
b. A VERTICAL SEPARATION MUST BE AT LEAST TWO FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
c. A HORIZONTAL SEPARATION MUST BE AT LEAST FOUR FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
d. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.

2) IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY:
A. IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
(I) A MINIMUM SEPARATION DISTANCE IS SIX INCHES BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
(II) A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE
(III) COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.

B. IF A COLLECTION SYSTEM PIPE CROSSES UNDER A PUBLIC WATER SUPPLY PIPE AND THE COLLECTION SYSTEM PIPE IS CONSTRUCTED OF ACRYLONITILE BUTADIENE STYRENE (ABS) TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE, OR CONCRETE PIPE WITH GASKETED JOINTS, THE FOLLOWING REQUIREMENTS APPLY:
(i) A MINIMUM SEPARATION DISTANCE IS TWO FEET
(ii) IF A COLLECTION SYSTEM PIPE IS WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE, THE INITIAL BACKFILL AROUND THE COLLECTION SYSTEM PIPE MUST BE:
(-A-) SAND STABILIZED WITH TWO OR MORE 80 POUND BAGS OF CEMENT PER CUBIC YARD OF SAND FOR ANY SECTION OF COLLECTION SYSTEM PIPE WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE

(-B-) INSTALLED FROM ONE QUARTER OF THE DIAMETER OF THE COLLECTION SYSTEM PIPE BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12 INCHES) ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE

3) IF A COLLECTION SYSTEM CROSSES OVER A PUBLIC WATER SUPPLY PIPE, ONE OF THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
A. EACH PORTION OF A COLLECTION SYSTEM PIPE WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH AT LEAST A 150 PSI PRESSURE RATING USING APPROPRIATE ADAPTERS.
b. A COLLECTION SYSTEM PIPE MUST BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
(I) CENTERED ON THE CROSSING;
(ii) SEALED AT BOTH ENDS WITH CEMENT GROUT OR MANUFACTURED SEAL;
(iii) AT LEAST 18 FEET LONG;
(IV) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
(v) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCLASING PIPE AT A MAXIMUM OF FIVE-FOOT INTERVAL S.

D. PUBLIC WATER SUPPLY PIPE AND COLLECTION SYSTEM MANHOLE SEPARATION.

1) UNLESS COLLECTION SYSTEM MANHOLES AND THE CONNECTING COLLECTION SYSTEM PIPE ARE WATERTIGHT, AS SUPPORTED BY LEAKAGE TESTS SHOWING NO LEAKAGE, THEY MUST BE INSTALLED A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED PUBLIC WATER SUPPLY PIPE.

2) IF A NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE REQUIREMENTS IN PARAGRAPH C OF THE ABOVE APPLY.

18. PROVIDE INTERIM DRAINAGE DURING CONSTRUCTION AS REQUIRED. USE PUMPS, TEMPORARY DITCHES, ETC. TO MAINTAIN A WELL DRAINED SITE FREE OF STANDING WATER AND WATER SOFTENED SOILS.

19. ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A-165, GRADE 60. ALL BARS SHALL CONFORM TO ASTM SPECIFICATION A-305.

20. ALL CONCRETE AND FORM WORK SHALL CONFORM TO CURRENT ACI CODE REQUIREMENTS.

21. ALL BAR LAPS SHALL HAVE A MINIMUM LENGTH OF 40 BAR DIAMETER (12" MINIMUM) AT SPLICES, UNLESS OTHERWISE NOTED.

22. THE CONTRACTOR SHALL "POTHOLE" ALL FIBER OPTIC AND GAS LINES AHEAD OF THE CONSTRUCTION CREWS TO START AND VERIFY EXISTING VERTICAL ELEVATIONS PRIOR TO START OF CONSTRUCTION. ALL COSTS ASSOCIATED WITH POTHOLING SHALL BE PAID FOR THE CONTRACTOR. ONE-CALL SHALL MARK LINE PRIOR TO POTHOLING.

23. UTILITY SERVICE LINES ARE NOT SHOWN ON DRAWINGS. ANTICIPATE THAT SUCH SERVICE LINES EXIST AND REPAIR THEM IF DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

24. USE APPROPRIATE COMPACTION EQUIMPENT FOR THE TYPE OF SOIL ENCOUNTERED. CLAY BACKFILLS SHALL REQUIRE CONSOLIDATION BY SHEEPS FOOT ROLLER WEREAS SAND AND GRAVEL SHALL BE COMPACTED WITH VIBRATORY EQUIPMENT ON SITE AS SOIL CONDITIONS MAY VARY AND AS LOCATION OF WARRANTS (I.E. PROXIMITY TO EXISTING STRUCTURES).

25. WHEN TUNNELING OR AUGERING IS SHOWN IN PLANS, ACCESS (OPEN CUT) FROM SURFACE IS DENIED. THE EXCEPTION TO THIS RESTRICTION IS FOR EMERGENCY SITUATIONS WHERE ACTION IS REQUIRED TO SAFE GUARD THE WORK IN PROGRESS OR OTHER UTILITIES. IN THIS CASE, THE OWNER AND ANY OTHER AGENCY AFFECTED SHALL BE IMMEDIATELY NOTIFIED. ADDITIONAL TRAFFIC CONTROL PROCEDURES AND ANY OTHER NECESSARY ACTIONS THAT WILL BE TAKEN UNTIL THE SITUATION HAS BE RECTIFIED.

26. THE CONTRACTOR MUST NOTIFY RESIDENTS OF CONSTRUCTION ONE WEEK PRIOR TO CONSTRUCTION START. COORDINATE CLOSURE OF BUSINESS AND DRIVEWAYS ALONG THE ALIGNMENT TWO WEEKS IN ADVANCE. THE CONTRACTOR SHALL ARRANGE ACCESS TO EXISTING DRIVEWAYS OR PROVIDE/MAINTAIN ALTERNATIVE ALL WEATHER ROUTES.

27. MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THIS CONSTRUCTION BY MEANS OF ANCHORED 1/2" STEEL PLATES, BY BACK FILLING IMMEDIATELY AFTER CONSTRUCTION AND/OR BY PLACING CALICHE SURFACE FOR TEMPORARY DRIVEWAY PURPOSES. THE COST FOR MAINTAINING ACDESS SHALL BE CONSIDERED INCIDENTAL TO THE FRICE BID FOR THE SEWER LINE CONSTRUCTION.

28. THE CONTRACTOR SHALL VIDEO TAPE ALL PROPERTIES TO BE AFFECTED BY CONSTRUCTION PRIOR TO COMMECEMENT OF CONSTRUCTION. A COPY SHALL BE SUPPLIED TO THE OWNER AND THE ENGINEER TO HELP ESTABLISH THE TYPE AND CONDITIONS OF EXISTING DRIVEWAYS, MAILBOXES, ETC.

29. THE CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ALL EXCAVATED MATERIAL AND DEBRIS FROM THE SITE AT NO ADDITIONAL COST TO THE OWNER.

30. EXISTING PAVEMENTS, SIDEWALKS, CURBS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST THE OWNER.

31. A NOTICE PREPARED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND ENGINEER SHALL BE HAND DELIVERED BY THE CONTRACTOR TO ALL RESIDENTS WITHIN THE VICINITY OF CONSTRUCTION NOTIFYING THEM OF THE PROPOSED CONSTRUCTION AND POSSIBLE DISRUPTIONS IN SERVICE OF UTILITIES, ROADS, ACCESS, ETC. NOTICE SHALL INCLUDE DATES AND NUMBERS TO CONTACT IN CASE OF ANY EMERGENCIES OR ANY QUESTIONS.

32. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD, LATEST EDITION) DURING CONSTRUCTION.

33. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN PEDESTRIAN SAFETY FENCES AND BARRICADES AT ALL TIMES AT EACH SITE WHERE PEDESTRIAN TRAFFIC IS EVIDENT.

34. CONSTRUCTION WARNING SIGNS AND END OF CONSTRUCTION SIGNS SHALL BE PLACED AT PROJECT LIMITS AND SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT.

35. THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN EACH DIRECTION BY MEANS OF FLAGMEN OR DETOUR DURING WORKING HOURS. FLAGMEN ARE REQUIRED TO DIRECT TRAFFIC WHERE TRAFFIC LANES ARE BLOCKED.

36. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER EQUIPMENT DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE.

37. RECORD LOCATIONS OF ALL SANITARY SEWER STACKS, STUBS, ETC. ON "RECORD DRAWINGS".

38. ALL DISTURBED GROUND IN ESTABLISHED AREAS SHALL BE SEEDED WITH GRASS HYDROMULCH WITH THE FOLLOWING MINIMUM RATIO:

SUMMER MIX:
CYNODON DOCTYLON (HULLED COMMON BERMUDA GRASS)
85% PURE LIVE SEED AT 75 LBS. PURE LIVE SEED PER ACRE.

WINTER MIX:
CYNODON DACTYLON (UN-HULLED COMMON BERMUDA GRASS) 85% PURE LIVE SEED AT 75 LBS. PURE LIVE SEED PER ACRE. ANNUAL RYE GRASS OR EQUAL 85% PURE LIVE SEED AT 75 LBS. PURE LIVE SEED PER ACRE.

39. SLURRY MIX COMPONENT PER ACRE SHALL BE WOOD CELLULOSE FIBER MULCH = 2000 POUNDS + GRASS SEED AS SPECIFIED + FERTILIZER (10-10-10) 800 POUNDS.

40. MAINTENANCE SHALL CONSIST OF WEEDING, FERTILIZING, INSECT CONTROL, WATERING, REPLANTING MOWING, MAINTAINING OF EXISTING GRADES AND REPAIR OF ANY EROSION DAMAGE.

41. GUARANTEE GROWTH AND COVERAGE OF HYDROMULCH PLANTING SHALL BE A MINIMUM OF NINETY-FIVE PERCENT (95%) OF THE AREA PLANTED WILL BE COVERED WITH SPECIFIED PLANTING. AFTER SIXTY (60) DAYS WITH NO BARE SPOTS VISIBLE.

42. FINAL ACCEPTANCE OF LAWN ESTABLISHMENT SHALL MEAN THAT THE HYDRO-MULCHED AREAS ARE NINETY-FIVE PERCENT (95%) UNIFORM COVERAGE OF GRASS IN EXCESS OF ONE INCH IN HEIGHT. NO BARE SPOTS WILL BE ACCEPTED.

43. WARNING: OVERHEAD LINES EXIST THROUGHOUT THE PROJECT. SINCE THEY ARE CLEARLY VISIBLE, THEY HAVE NOT BEEN MARKED ON THE PLANS. THE CONTRACTOR SHOULD LOCATE ALL OVERHEAD UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. THE CONTRACTORS ARE LEGALLY RESPONSIBLE FOR SAFETY AND CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, THE CONTRACTOR SHALL CONTACT A.E.P. CENTRAL POWER AND LIGHT.

44. CAUTION: UNDERGROUND GAS FACILITIES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONTACT TEXAS ONE-CALL AT 1-800-245-4545 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES LOCATED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK AND AGREE TO BE FULLY RESPONSIBLE FOR ANY NECESSARY RELOCATIONS OR DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES. HAND DIG WITHIN ONE (1) FOOT OF UNDERGROUND GAS LINES.

45. THE LOCATIONS OF TELEPHONE CO. UTILITIES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UTILITIES. COORDINATE ANY CONFLICT WITH TELEPHONE COMPANY REPRESENTATIVES AND PROVIDE NECESSARY SUPPORT FOR TELEPHONE CABLE AS INSTRUCTED BY TELEPHONE COMPANY. NO SEPARATE PAY ITEM WILL BE MADE FOR SUCH WORK.

46. HAND DIG WHEN WITHIN ONE (1) FOOT OF UNDERGOUND CONDUIT CABLE SYSTEMS OR MANHOLES.

PROJECT LEGEND

- FOUND No.4 REBAR
- FOUND CONCRETE NAIL
- FOUND PIPE
- R.O.W. MARKER
- FOUND "X" MARK ON CONCRETE
- POWER POLE
- LIGHT POLE
- GUY WIRE
- TELEPHONE PEDESTAL
- SIGN
- STOP SIGN
- MAIL BOX
- FIRE HYDRANT
- WATER METER
- 2" FLUSH VALVE
- WATER VALVE
- SPRINKLER CONTROL PANEL
- ABOVE GROUND WATER VALVE
- STORM SEWER MANHOLE
- 60" IRRIGATION STAND PIPE
- UNDERGROUND CABLE MARKER
- 1'x2' TRAFFIC CONTROL BOX
- TRANSFORMER
- TRAFFIC CONTROL LIGHT
- 4" GUARD POST
- GUARD RAIL
- IRON FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- DITCH LINE
- 8" STORM SEWER LINE
- 18" STORM SEWER LINE
- 24" STORM SEWER LINE
- OVERHEAD POWER LINE
- SPOTTED WATER LINE [APPROXIMATE LOCATION]
- ASPHALT AREA
- CONCRETE AREA

B-B - BACK OF CURB TO BACK OF CURB

CHINA BERRY TREE (SIZE AS NOTED)

PALM TREE (SIZE AS NOTED)

JOB No. 19086.01

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS - ENGINEERS - SURVEYORS
115 W. McINTYRE
EDINBURG, TEXAS 78541
PH. (956) 381-0981
FAX: (956) 381-1839
www.meldenandhunt.com
ESTABLISHED 1947

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: N.T.S.

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

GENERAL CONSTRUCTION NOTES

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File Name: GEN NOTES

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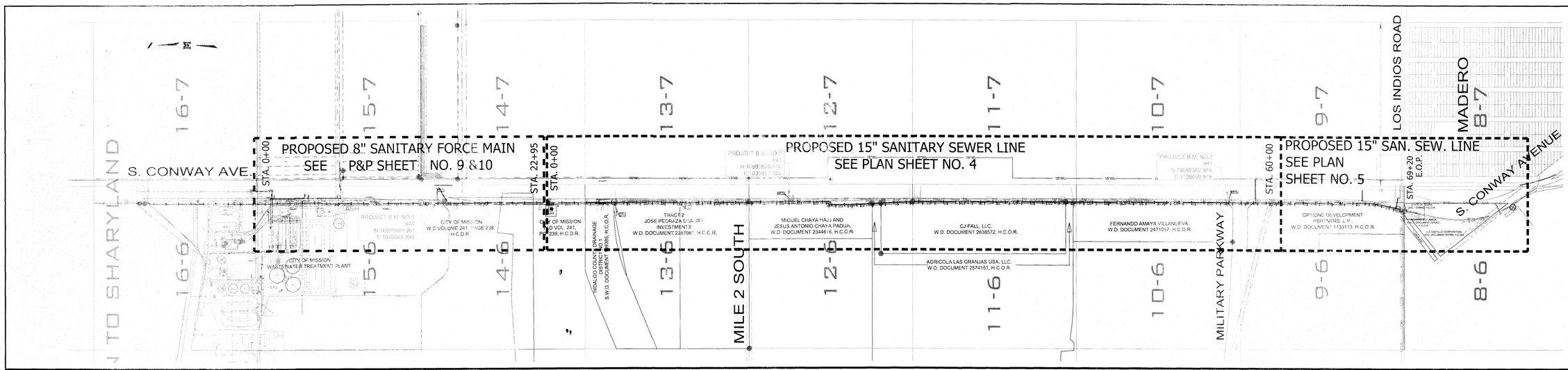

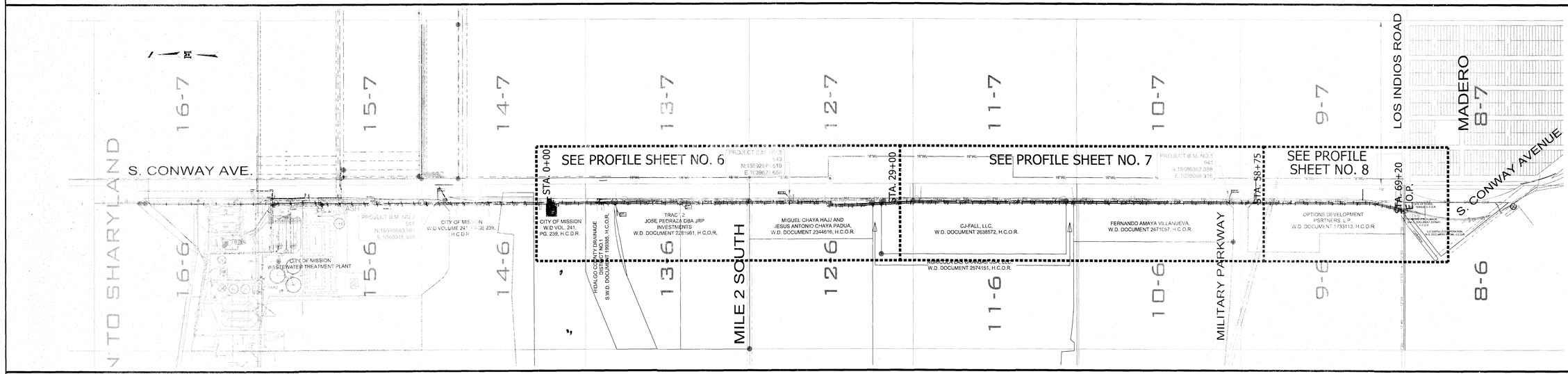

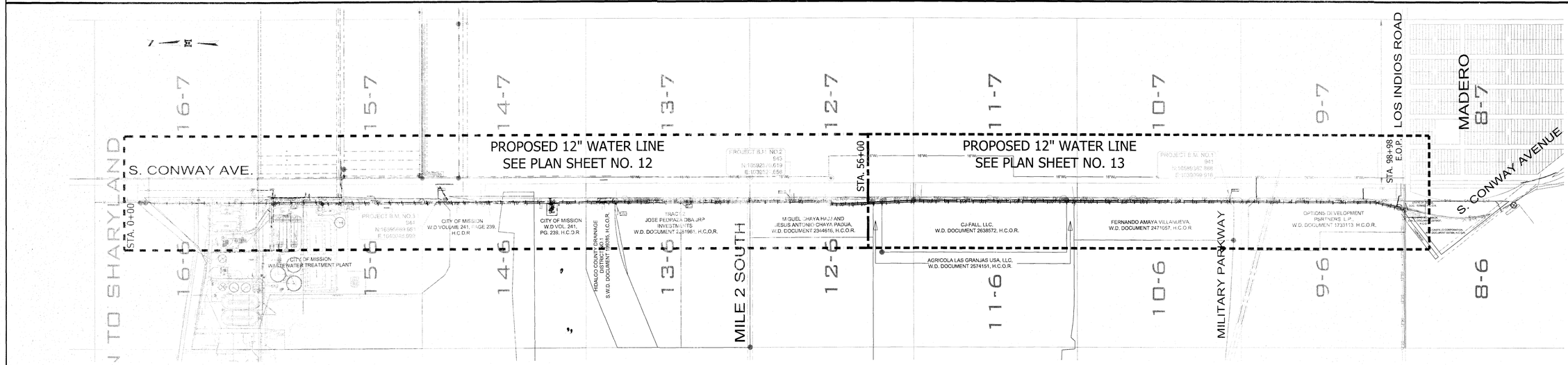

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19086.00

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MELDEN & HUNT, INC
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE - EDINBURG, TX 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10089500

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: 1" = 400'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

OVERALL SITE PLAN

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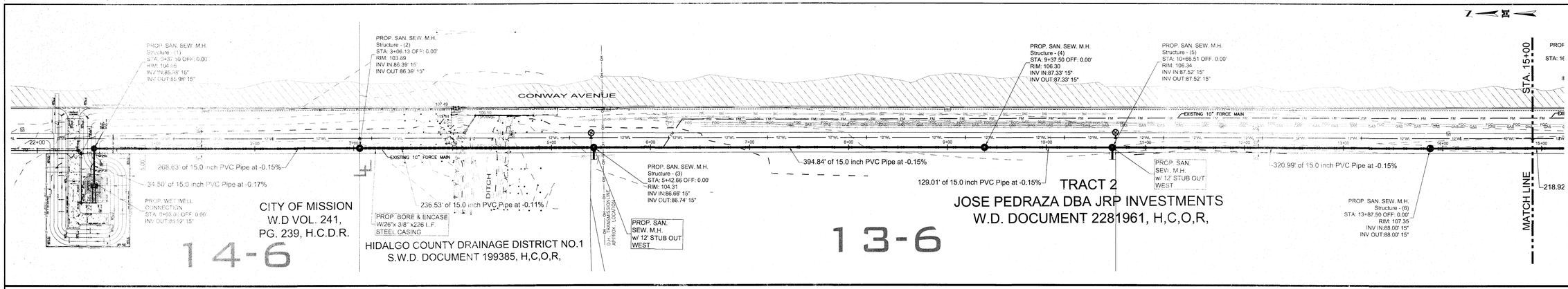
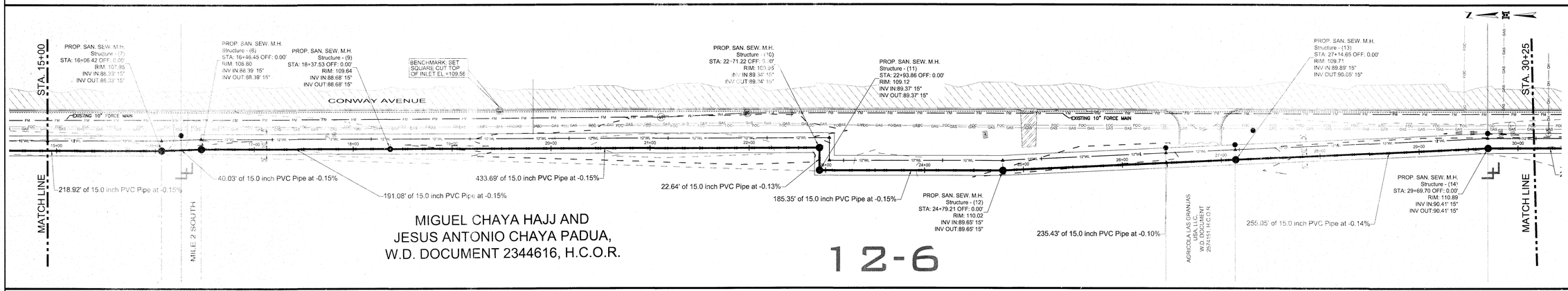
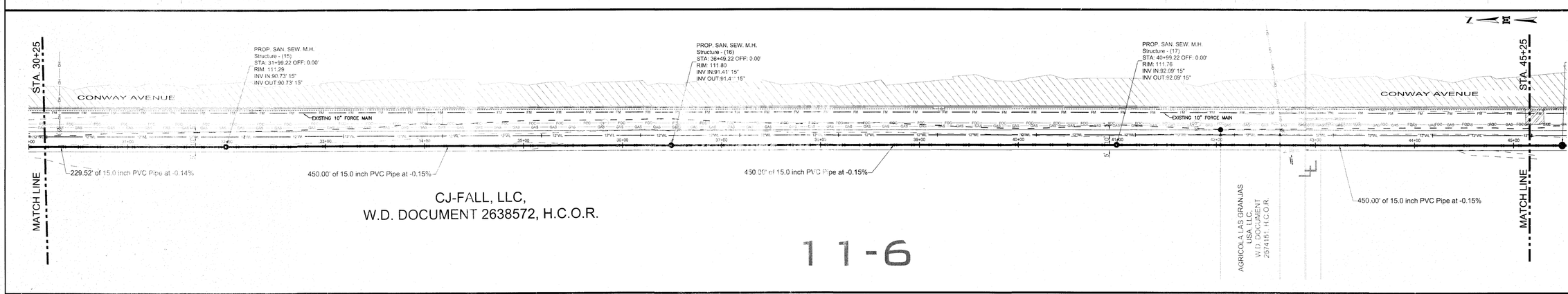
File Name: LOCATION MAP

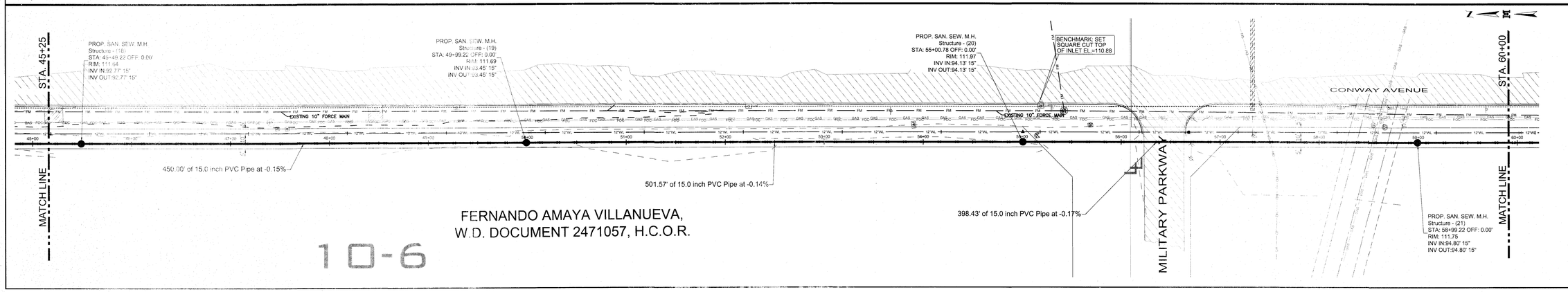
SHEET C3 OF 17

Y:\Municipal\Mission.City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad Files\8-SITE PLAN.dwg, C3-LOCATION MAP, 2/19/2020 11:45:16 AM,









JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
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PH: (956) 381-0981 - FAX: (956) 381-1839
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TBPELS No. 10089600

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: 1" = 50'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368
2-19-20
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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 15" SANITARY SEWER PLAN

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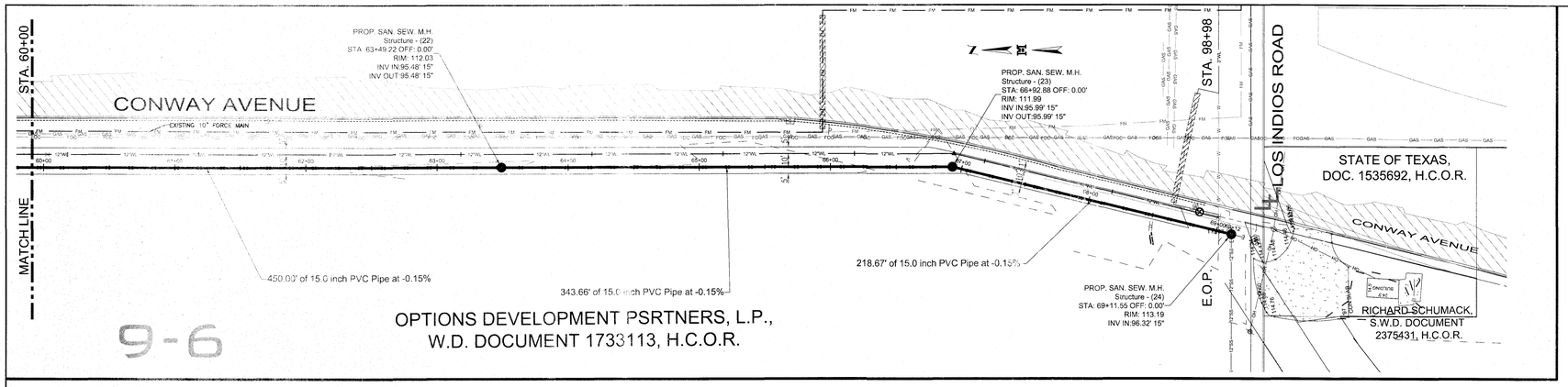
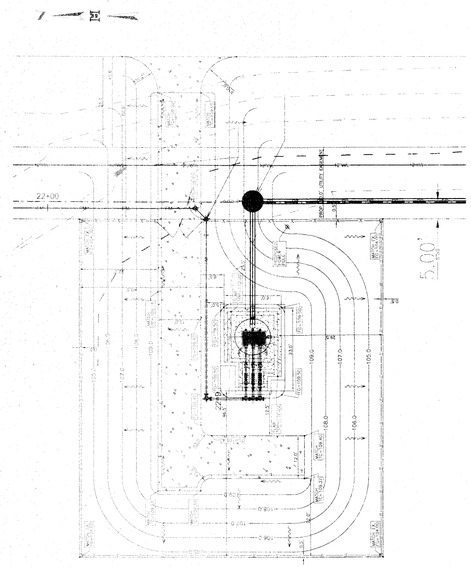
File Name: PROP 15" SS PLAN

SHEET C4 OF 17

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\9-SITE PLAN.dwg, C4-5-SAN plan view, 2/26/2020 3:37:00 PM,





SCALE: 1" = 50'

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
(SEE SHEETS C11-C14
FOR LIFT STATION INFORMATION)

Structure Table	
Structure Name	Structure Details
Structure - (1)	STA. 0+37.50 RIM = 104.06 SUMP = 85.98 Pipe - (18) INV IN = 85.98 Pipe - (19) INV OUT = 85.98
Structure - (2)	STA. 3+06.13 RIM = 103.89 SUMP = 86.39 Pipe - (19) INV IN = 86.39 Pipe - (19) (1) INV OUT = 86.39
Structure - (3)	STA. 5+42.66 RIM = 104.31 SUMP = 86.66 Pipe - (19) (1) INV IN = 86.66 Pipe - (20) (1) INV OUT = 86.74
Structure - (4)	STA. 9+37.50 RIM = 106.30 SUMP = 87.33 Pipe - (20) (1) INV IN = 87.33 Pipe - (21) INV OUT = 87.33
Structure - (5)	STA. 10+66.51 RIM = 106.34 SUMP = 87.52 Pipe - (21) INV IN = 87.52 Pipe - (21) (1) INV OUT = 87.52
Structure - (6)	STA. 13+87.50 RIM = 107.35 SUMP = 88.00 Pipe - (21) (1) INV IN = 88.00 Pipe - (22) INV OUT = 88.00
Structure - (7)	STA. 16+06.42 RIM = 107.95 SUMP = 88.33 Pipe - (22) INV IN = 88.33 Pipe - (22) (1) INV OUT = 88.33
Structure - (8)	STA. 16+46.45 RIM = 108.80 SUMP = 88.39 Pipe - (22) (1) INV IN = 88.39 Pipe - (22) (1) (1) INV OUT = 88.39
Structure - (9)	STA. 18+37.53 RIM = 109.64 SUMP = 88.68 Pipe - (22) (1) (1) INV IN = 88.68 Pipe - (23) INV OUT = 88.68
Structure - (10)	STA. 22+71.22 RIM = 109.96 SUMP = 89.34 Pipe - (23) INV IN = 89.34 Pipe - (24) INV OUT = 89.34
Structure - (11)	STA. 22+93.86 RIM = 109.12 SUMP = 89.37 Pipe - (24) INV IN = 89.37 Pipe - (25) INV OUT = 89.37
Structure - (12)	STA. 24+79.21 RIM = 110.02 SUMP = 89.65 Pipe - (25) INV IN = 89.65 Pipe - (25) (1) INV OUT = 89.65
Structure - (13)	STA. 27+14.65 RIM = 109.71 SUMP = 89.89 Pipe - (25) (1) INV IN = 89.89 Pipe - (26) INV OUT = 90.05

Structure Table	
Structure Name	Structure Details
Structure - (14)	STA. 29+69.70 RIM = 110.89 SUMP = 90.41 Pipe - (26) INV IN = 90.41 Pipe - (26) (1) INV OUT = 90.41
Structure - (15)	STA. 31+99.22 RIM = 111.29 SUMP = 90.73 Pipe - (26) (1) INV IN = 90.73 Pipe - (27) INV OUT = 90.73
Structure - (16)	STA. 36+49.22 RIM = 111.80 SUMP = 91.41 Pipe - (27) INV IN = 91.41 Pipe - (28) INV OUT = 91.41
Structure - (17)	STA. 40+99.22 RIM = 111.76 SUMP = 92.09 Pipe - (28) INV IN = 92.09 Pipe - (29) INV OUT = 92.09
Structure - (18)	STA. 45+49.22 RIM = 111.64 SUMP = 92.77 Pipe - (29) INV IN = 92.77 Pipe - (30) INV OUT = 92.77
Structure - (19)	STA. 49+99.22 RIM = 111.69 SUMP = 93.45 Pipe - (30) INV IN = 93.45 Pipe - (31) INV OUT = 93.45
Structure - (20)	STA. 55+00.78 RIM = 111.97 SUMP = 94.13 Pipe - (31) INV IN = 94.13 Pipe - (32) INV OUT = 94.13
Structure - (21)	STA. 58+99.22 RIM = 111.75 SUMP = 94.80 Pipe - (32) INV IN = 94.80 Pipe - (33) INV OUT = 94.80
Structure - (22)	STA. 63+49.22 RIM = 112.03 SUMP = 95.48 Pipe - (33) INV IN = 95.48 Pipe - (34) INV OUT = 95.48
Structure - (23)	STA. 66+92.88 RIM = 111.99 SUMP = 95.99 Pipe - (34) INV IN = 95.99 Pipe - (35) INV OUT = 95.99
Structure - (24)	STA. 69+11.55 RIM = 113.19 SUMP = 96.32 Pipe - (35) INV IN = 96.32
Structure - (25)	STA. 0+03.00 RIM = 83.26 SUMP = 85.92 Pipe - (18) INV OUT = 85.92

JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE - EDINBURG, TX. 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10064500

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG:
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: 1" = 50'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435
STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER
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2-27-20
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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 15" SANITARY SEWER PLAN & PROP. 12" FORCE MAIN PLAN

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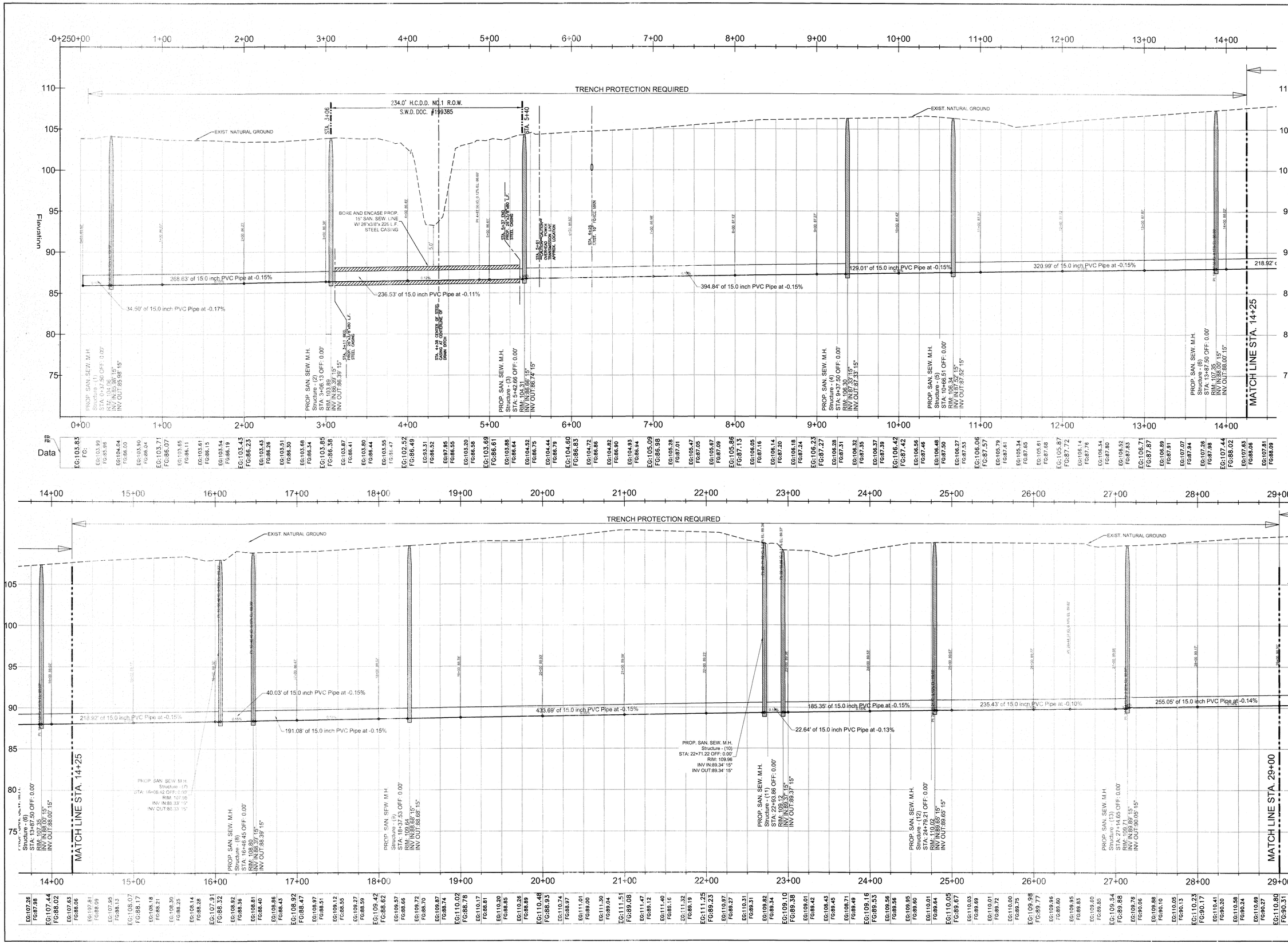
File Name: PROP 15" SS PLAN

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\S-SITE PLAN.dwg, C4-5-SAN plan view, 2/27/2020 4:25:21 PM,



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115 W. McINTYRE - EDINBURG, TX 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
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ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: H: 1" = 50' V: 1" = 5'

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TEXAS REGISTRATION F-1435
STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER
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CITY OF MISSION
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LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 15" SANITARY SEWER PLAN
STA. 0+00 TO STA. 29+00

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File Name: PROFILE

SHEET C6 OF 17

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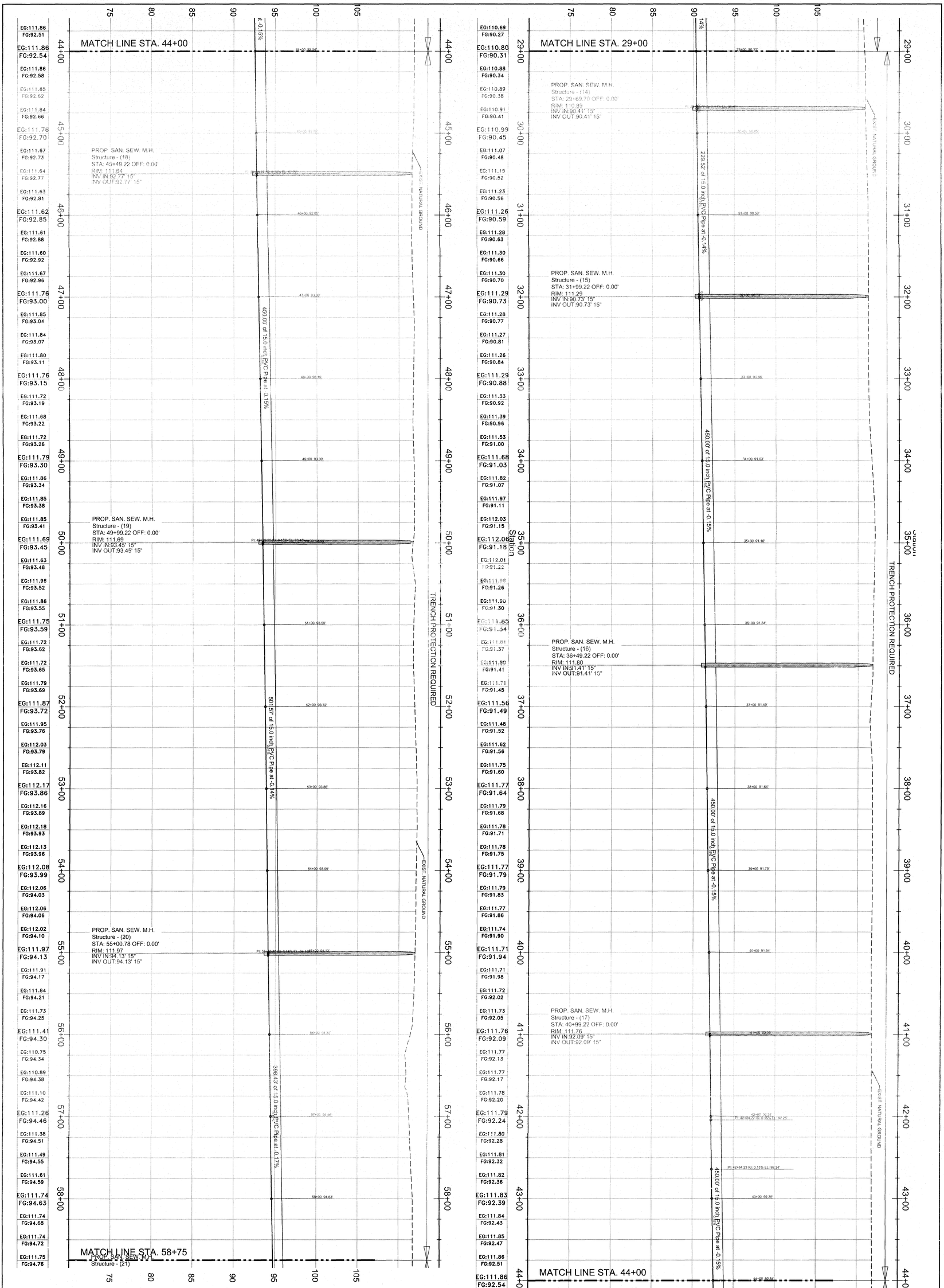

PROP. 15" SANITARY SEWER PLAN
STA. 29+00 TO STA. 58+75

CITY OF MISSION
WA 15- SOUTH CONWAY LIFT STATION

HIDALGO COUNTY TEXAS

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File Name: PROFILE

SHEET C7 OF 17

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MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

ENG. TECH:	R. DE JESUS
PROJECT ENG:	MARIO A.REYNA
T-BOOK:	; PG.
1. RELEASE DATE:	01/21/2020
2. RELEASE DATE:	02/19/2020
3. RELEASE DATE:	
SCALE:	H: 1" = 50' V: 1" = 5'

REVISION	DATE	BY

MELDEN & HUNT INC.
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TBPLS No. 10096900

JOB No. 19086.00

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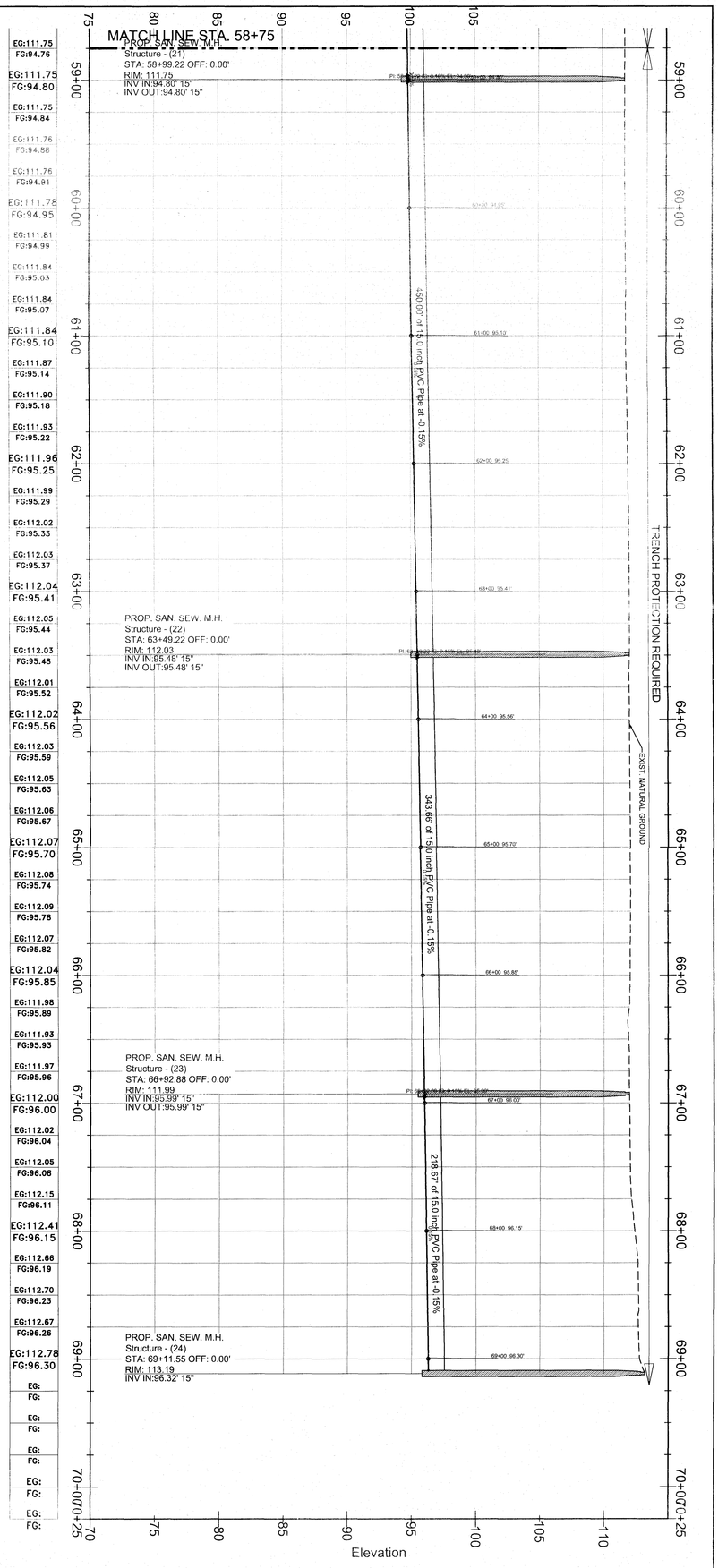

PROP. 15" SANITARY SEWER PLAN STA. 58+75 TO END M.H.

CITY OF MISSION
WA 15- SOUTH CONWAY LIFT STATION

HIDALGO COUNTY TEXAS

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

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Mario A. Reyna 2-27-20

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ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE:
3. RELEASE DATE:
SCALE: H: 1" = 50' V: 1" = 5'

REVISION	DATE	BY

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CONSULTANTS • ENGINEERS • SURVEYORS
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JOB No. 19086.00

SHEET C8 OF 17

File Name: PROFILE

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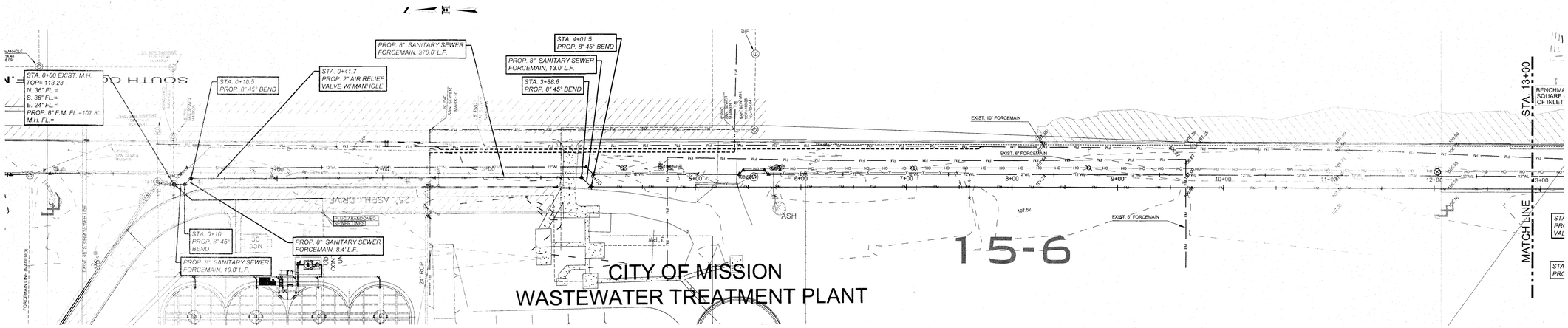
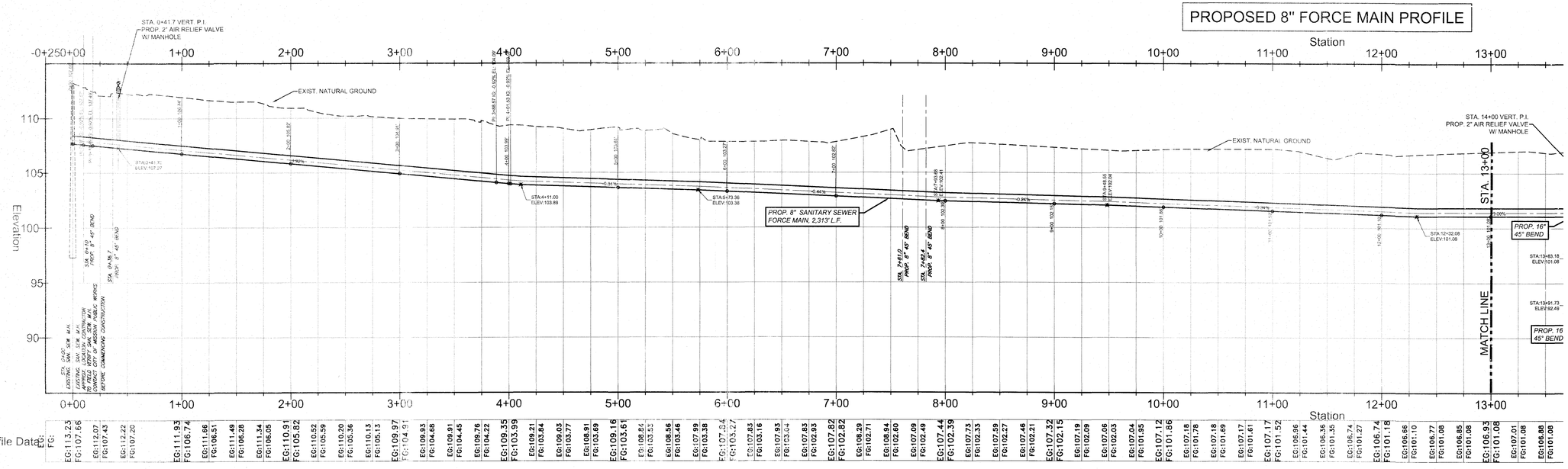


PROPOSED 8" FORCE MAIN PROFILE



JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
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115 W. McINTYRE - EDINBURG, TX. 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10064900

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: H: 1" = 50' V: 1" = 5'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

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2-19-20

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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 8" FORCE MAIN PLAN & PROFILE STA. 0+00 TO STA. 13+00

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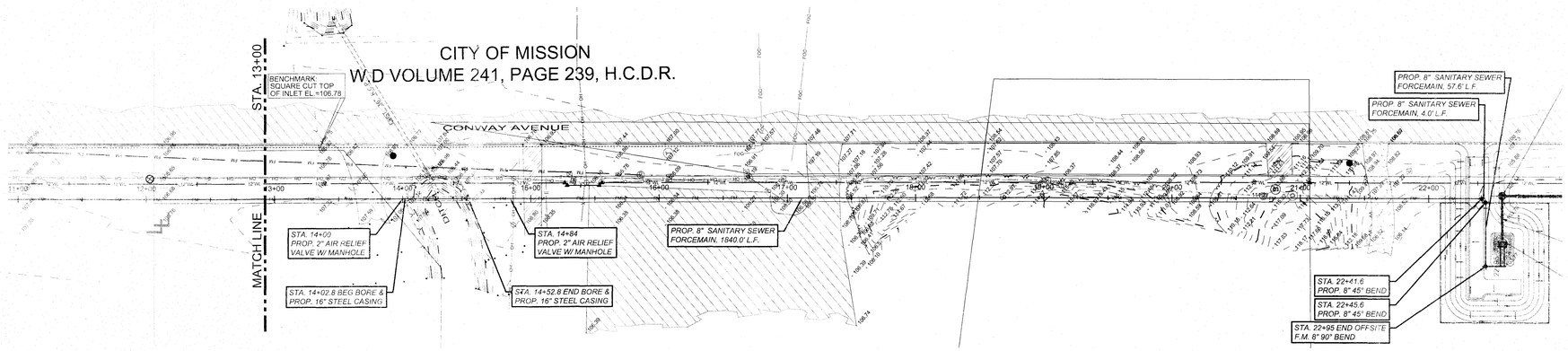
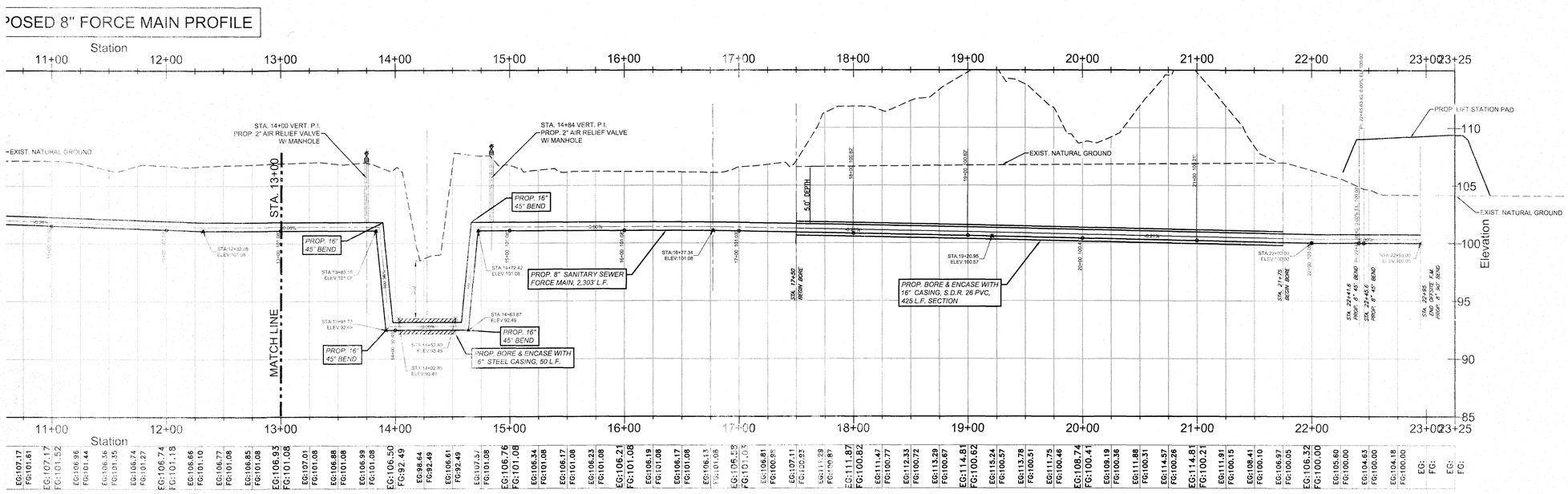
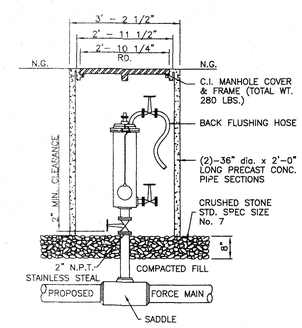
File Name: FM P&P

SHEET C9 OF 16

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\8-SITE PLAN.dwg, C9-10-FM P&P, 2/19/2020 3:53:17 PM,







TYPICAL PIT INSTALLATION DETAIL
FOR SEWAGE AIR RELIEF VALVE

N.T.S.

JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE - EDINBURG, TX. 78541
PH: (956) 381-0981 • FAX: (956) 381-1839
ES REGISTRATION NO. F-1435
TBPLS No. 10028800

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: H: 1" = 50'
V: 1" = 5'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON
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2-24-20
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TO THE RESPONSIBLE ENGINEER
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TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 8" FORCE MAIN PLAN & PROFILE STA. 13+00 TO STA. 22+95

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File Name: FM P&P

SHEET C10 OF 17

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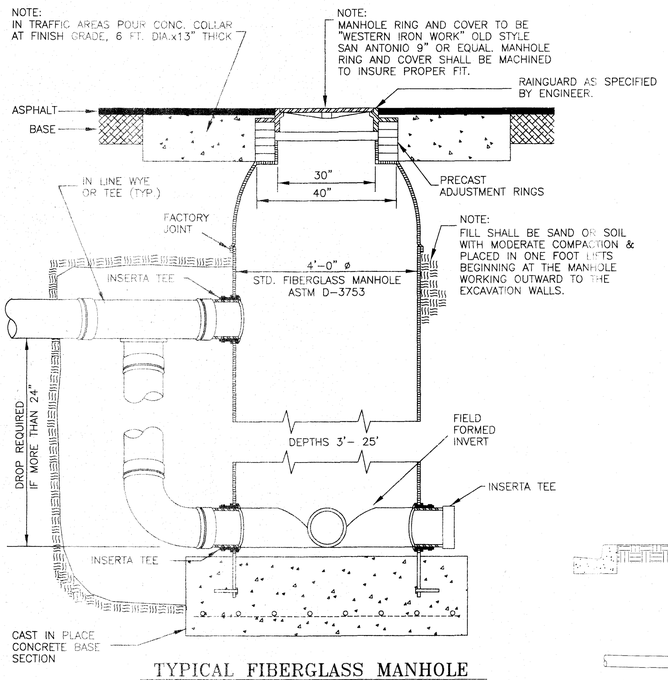
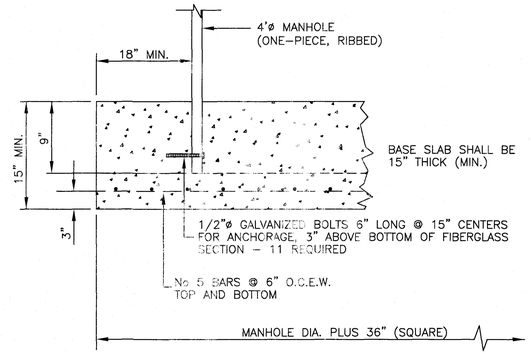


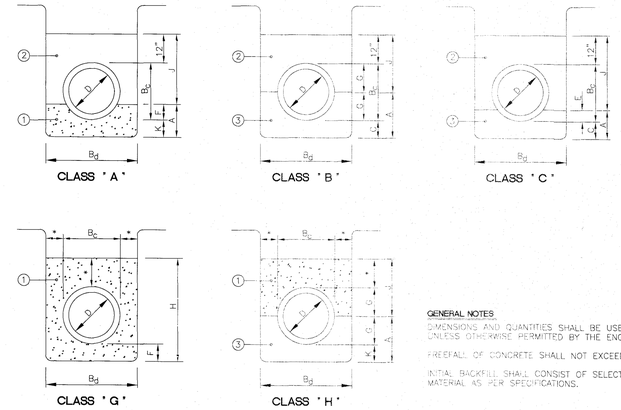
TYPICAL FIBERGLASS MANHOLE

N.T.S.



TYPICAL FIBERGLASS MANHOLE BASE

N.T.S.



LEGEND (ALL CLASSES)

1	2500 PSI CONCRETE
2	INITIAL BACKFILL
3	GRAVEL OR CRUSHED STONE
D	NOMINAL PIPE SIZE (I.D.)
B_c	PIPE O.D. AT BELLS
B_d	TRENCH WIDTH
A	SEE TABLE
C	1/8 B_c (EXCEPT AS NOTED)
E	1/6 B_c
F	1/4 B_c (EXCEPT AS NOTED)
G	1/2 B_c
H	DEPTH OF CONCRETE
J	SEE TABLE
K	1/4 B_c (EXCEPT AS NOTED)
*	4" MINIMUM

GENERAL NOTES

DIMENSIONS AND QUANTITIES SHALL BE USED FOR MEASUREMENT AND PAYMENT UNLESS OTHERWISE PERMITTED BY THE ENGINEER.

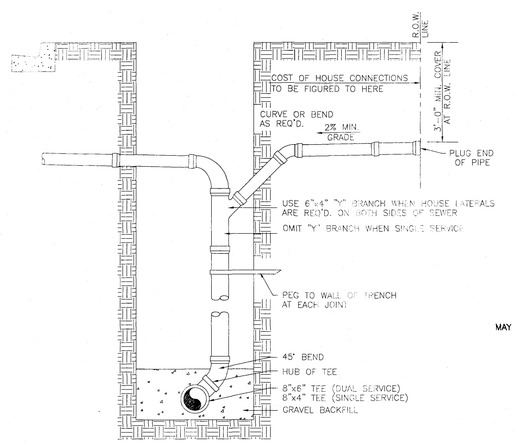
FREEFALL OF CONCRETE SHALL NOT EXCEED FIVE (5) FEET.

INITIAL BACKFILL SHALL CONSIST OF SELECT MATERIAL OR FINE GRANULAR MATERIAL AS PER SPECIFICATIONS.

PIPE BEDDING REQUIREMENTS

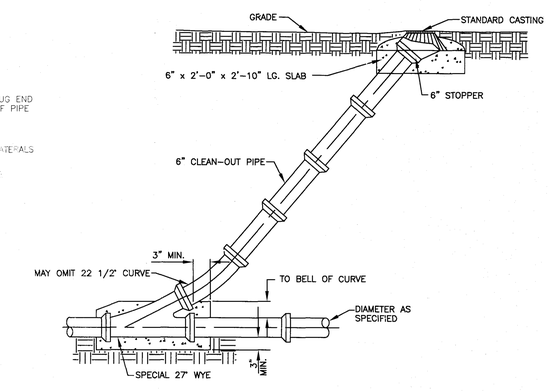
N.T.S.

CLASS	D	B_c	B_d	A In Earth	A In Rock	C	E	F	G	H	J	K In Earth	K In Rock	QUAN. (C.Y. per 100 L.F.) ①	②	③ In Earth	③ In Rock
A	6	7.75	24	5.94	—	—	1.94	—	—	17.82		4.00		3.4	10.0	—	—
	8	10.25	26	6.56	—	—	2.56	—	—	19.69		4.00		4.0	11.5	—	—
	10	13.00	29	7.25	—	—	3.25	—	—	21.75		4.00		4.7	13.5	—	—
	12	16.00	32	8.00	—	—	4.00	—	—	24.00		4.00		5.6	15.6	—	—
	15	19.50	36	9.76	—	—	4.88	—	—	26.63		4.88		7.5	18.5	—	—
	18	23.00	39	11.50	—	—	5.75	—	—	29.25		5.75		9.4	20.7	—	—
	21	26.50	43	13.26	—	—	6.63	—	—	31.88		6.63		11.9	23.8	—	—
B	6	7.75	24	7.88	9.88	4 6	—	—	3.88	—	15.88	—	—	—	9.2	4.3	5.5
	8	10.25	26	9.13	11.13	4 6	—	—	5.13	—	17.13	—	—	—	10.4	5.0	6.4
	10	13.00	29	10.50	12.50	4 6	—	—	6.50	—	18.50	—	—	—	12.1	6.1	7.6
	12	16.00	32	12.00	14.00	4 6	—	—	8.00	—	20.00	—	—	—	13.9	7.3	8.9
	15	19.50	36	13.75	15.75	4 6	—	—	9.75	—	21.75	—	—	—	16.3	8.9	10.7
	18	23.00	39	15.50	17.50	4 6	—	—	11.50	—	23.50	—	—	—	18.2	10.2	12.2
	21	26.50	43	17.25	19.25	4 6	—	—	13.25	—	25.25	—	—	—	20.8	12.0	14.2
C	6	7.75	24	5.29	7.29	4 6	1.29	—	—	—	18.46	—	—	—	10.3	3.1	4.4
	8	10.25	26	5.71	7.71	4 6	1.71	—	—	—	20.55	—	—	—	11.8	3.6	4.9
	10	13.00	29	6.17	8.17	4 6	2.17	—	—	—	22.83	—	—	—	14.0	4.2	5.7
	12	16.00	32	6.67	8.67	4 6	2.67	—	—	—	25.33	—	—	—	16.2	4.9	6.6
	15	19.50	36	7.25	9.25	4 6	3.25	—	—	—	28.25	—	—	—	19.3	5.9	7.7
	18	23.00	39	7.83	9.83	4 6	3.83	—	—	—	31.17	—	—	—	21.8	6.7	8.7
	21	26.50	43	8.42	10.42	4 6	4.42	—	—	—	34.08	—	—	—	25.1	7.8	10.0
G	6	7.75	24	—	—	—	—	4.00	—	16.0	—	—	—	8.7	—	—	—
	8	10.25	24	—	—	—	—	4.00	—	18.0	—	—	—	9.0	—	—	—
	10	13.00	24	—	—	—	—	4.00	—	21.0	—	—	—	9.5	—	—	—
	12	16.00	24	—	—	—	—	4.00	—	24.0	—	—	—	9.6	—	—	—
	15	19.50	28	—	—	—	—	4.88	—	28.5	—	—	—	12.8	—	—	—
	18	23.00	32	—	—	—	—	5.75	—	33.0	—	—	—	16.5	—	—	—
	21	26.50	36	—	—	—	—	6.63	—	37.0	—	—	—	20.1	—	—	—
H	6	7.75	24	7.88	9.88	—	—	—	3.88	—	8.12	4.00	6.00	4.4	—	4.3	5.5
	8	10.25	24	9.13	11.13	—	—	—	5.13	—	8.87	4.00	6.00	4.4	—	4.6	5.8
	10	13.00	24	10.50	12.50	—	—	—	6.50	—	10.50	4.00	6.00	4.8	—	4.8	6.0
	12	16.00	24	12.00	14.00	—	—	—	8.00	—	12.00	4.00	6.00	4.8	—	4.8	6.1
	15	19.50	28	14.63	15.75	—	—	—	9.75	—	13.87	4.88	6.00	6.1	—	6.7	7.5
	18	23.00	32	17.25	17.50	—	—	—	11.50	—	15.75	5.75	6.00	7.6	—	8.9	9.1
	21	26.50	36	19.88	19.88	—	—	—	13.25	—	17.12	6.63	6.63	8.8	—	11.3	11.3



SANITARY SEWER SERVICE CONNECTION

N.T.S.



STANDARD CLEANOUT

N.T.S.

NOTES AS PER TEXAS DEPT. OF HEALTH MANUAL

A. WATER LINE\NEW SEWER LINE SEPARATION.

WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATERLINES THAN NINE FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATERLINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES WILL APPLY:

(1) WHERE A SANITARY SEWER PARALLELS A WATERLINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATERLINE.

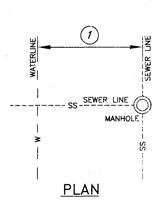
(2) WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.

(3) WHERE A SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF SEWER WITHIN NINE FEET OF WATERLINE. THIS INITIAL BACKFILL SHALL BE FROM ONE QUARTER DIAMETER BELOW THE CENTERLINE OF THE PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12 INCHES) ABOVE TOP OF PIPE.

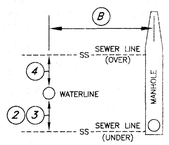
(4) WHERE A SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT 5 FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.

B. WATER LINE\MANHOLE SEPARATION.

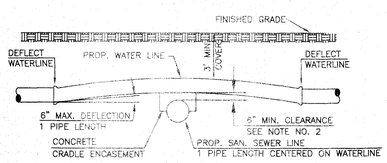
UNLESS SANITARY SEWER MANHOLES AND THE CONNECTING SEWER CAN BE MADE WATERTIGHT AND TESTED FOR LEAKAGE, THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATERLINE. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, A CARRIER PIPE AS DESCRIBED IN SUBSECTION A.(4) OF THIS SECTION MAY BE USED WHERE APPROPRIATE.



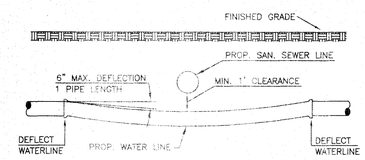
PLAN



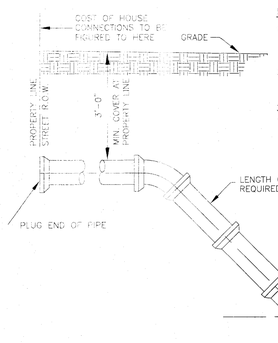
PROFILE



WATERLINE CROSSING OVER SANITARY SEWER

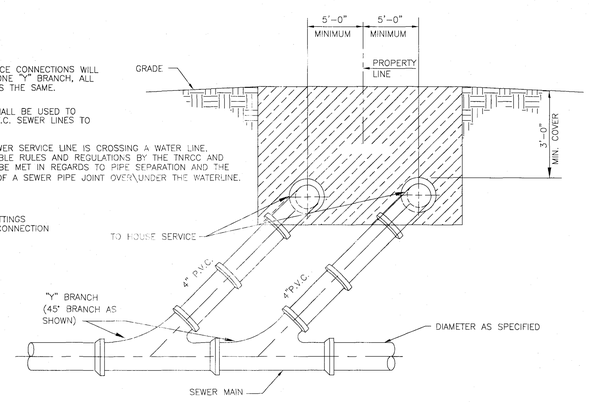


WATERLINE CROSSING UNDER SANITARY SEWER



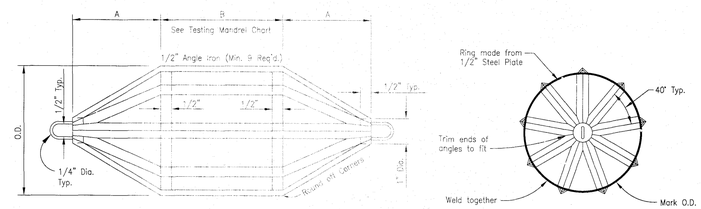
NOTES:

1. SINGLE SERVICE CONNECTIONS WILL HAVE ONLY ONE "Y" BRANCH, ALL ELSE REMAINS THE SAME.
2. ADAPTORS SHALL BE USED TO CONNECT P.V.C. SEWER LINES TO MANHOLES.
3. WHERE A SEWER SERVICE LINE IS CROSSING A WATER LINE, ALL APPLICABLE RULES AND REGULATIONS BY THE TNRCC AND SBC SHALL BE MET IN REGARDS TO PIPE SEPARATION AND THE CENTERING OF A SEWER PIPE JOINT OVER\UNDER THE WATERLINE.



SANITARY SEWER SERVICE CONNECTION

N.T.S.



SIDE OR TOP VIEW

END VIEW

SIZE	A	B*	MANDREL O.D. PVC (SDR-35)	MANDREL O.D. PVC (SDR-26)	RING O.D. PVC (SDR-35)	RING O.D. PVC (SDR-26)
6"	4.0"	4.5"	5.62	5.50	4.91	4.79
8"	5.5"	6.0"	7.52	7.37	6.81	6.66
10"	7.0"	7.5"	9.41	9.21	8.70	8.50
12"	8.0"	9.0"	11.19	10.96	10.48	10.25
15"	10.0"	11.0"	13.70	13.42	12.99	12.71
18"	12.0"	13.5"	16.75	—	16.04	—
21"	14.0"	16.0"	19.74	—	19.03	—
24"	16.0"	18.0"	22.21	—	21.50	—
27"	18.0"	20.0"	25.03	—	24.32	—

* Minimum Length

TESTING MANDREL CHART

Notes:

PVC pipes and fittings six inches (6") to fifteen inches (15") in diameter shall conform to ASTM D-3034. PVC pipes and fittings eighteen inches (18") to twenty-seven inches (27") in diameter shall conform to ASTM F-679.

This information is provided as a reference. All deflection testing shall be done in accordance with TNRCC Chapter 317.

GO, NO-GO DEFLECTION TESTING MANDREL

N.T.S.

JOB No. 19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE - EDINBURG, TX 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldonandhunt.com
TBPLS No. 10064900

ENG. TECH: R. DE JESUS
PROJECT ENG. MARIO A REYNA
T.BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/20
3. RELEASE DATE:
SCALE: 1" = 400'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA P.E. 117368

2-24-20

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

SANITARY SEWER DETAILS

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File Name: SAN DETAILS

SHEET C11 OF 17

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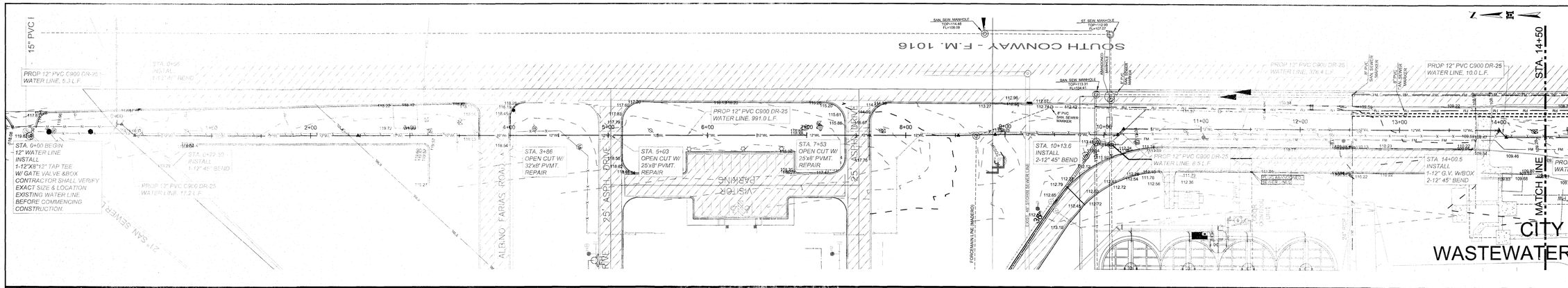

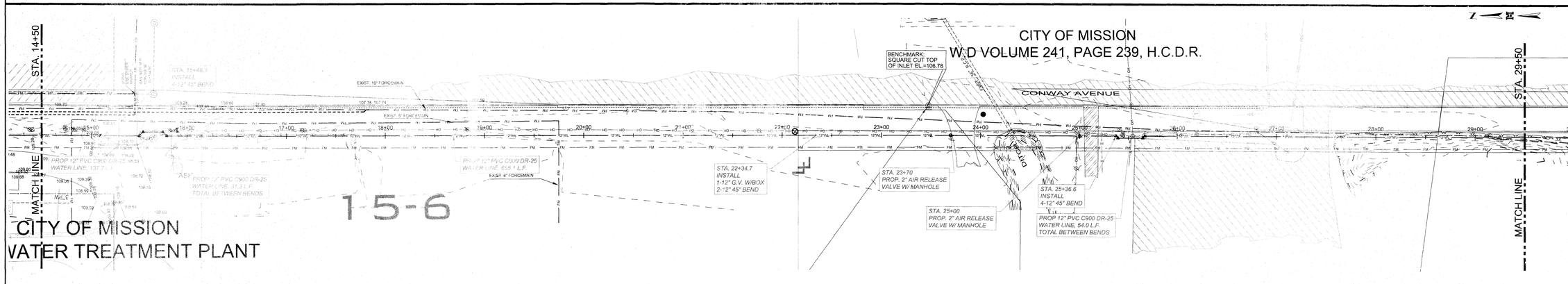

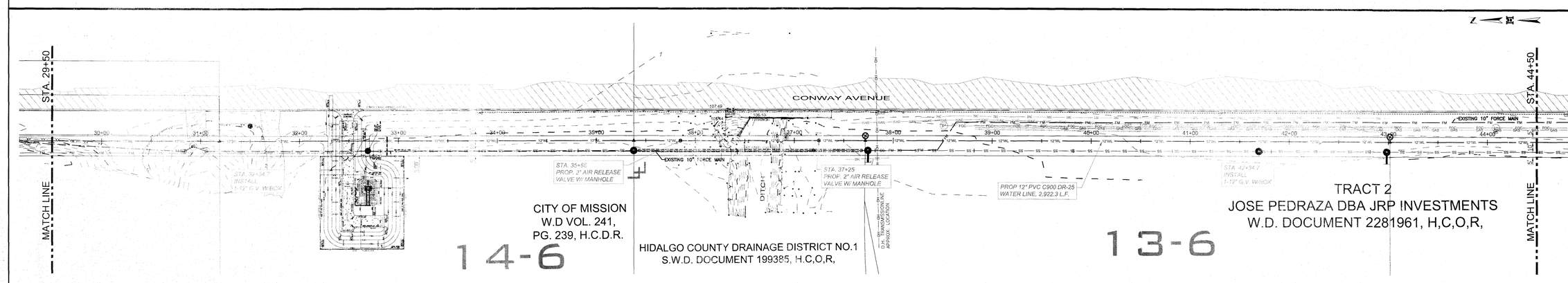

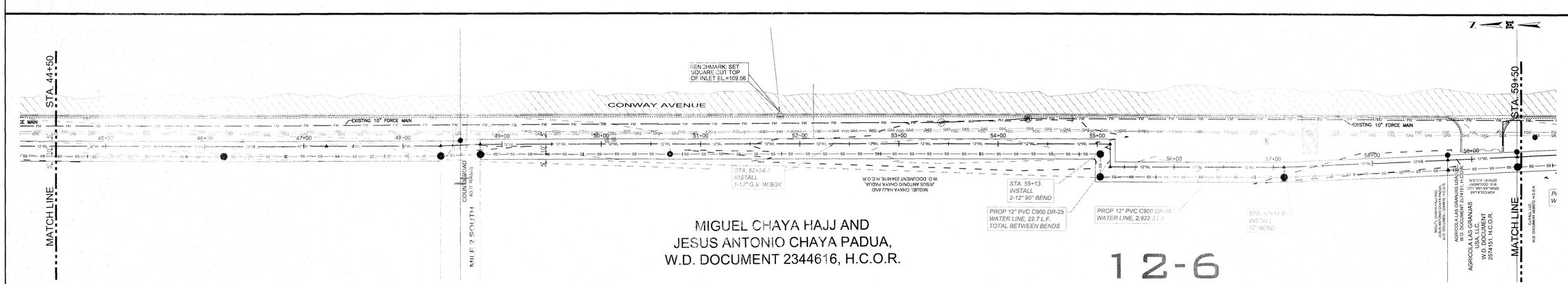

JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
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115 W. McINTYRE - EDINBURG, TX. 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10069500

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A REYNA
T-BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: 1" = 50'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435
STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368
2-24-20
ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 12" WATER LINE

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File Name: PROP 12" WL

SHEET C12 OF 17

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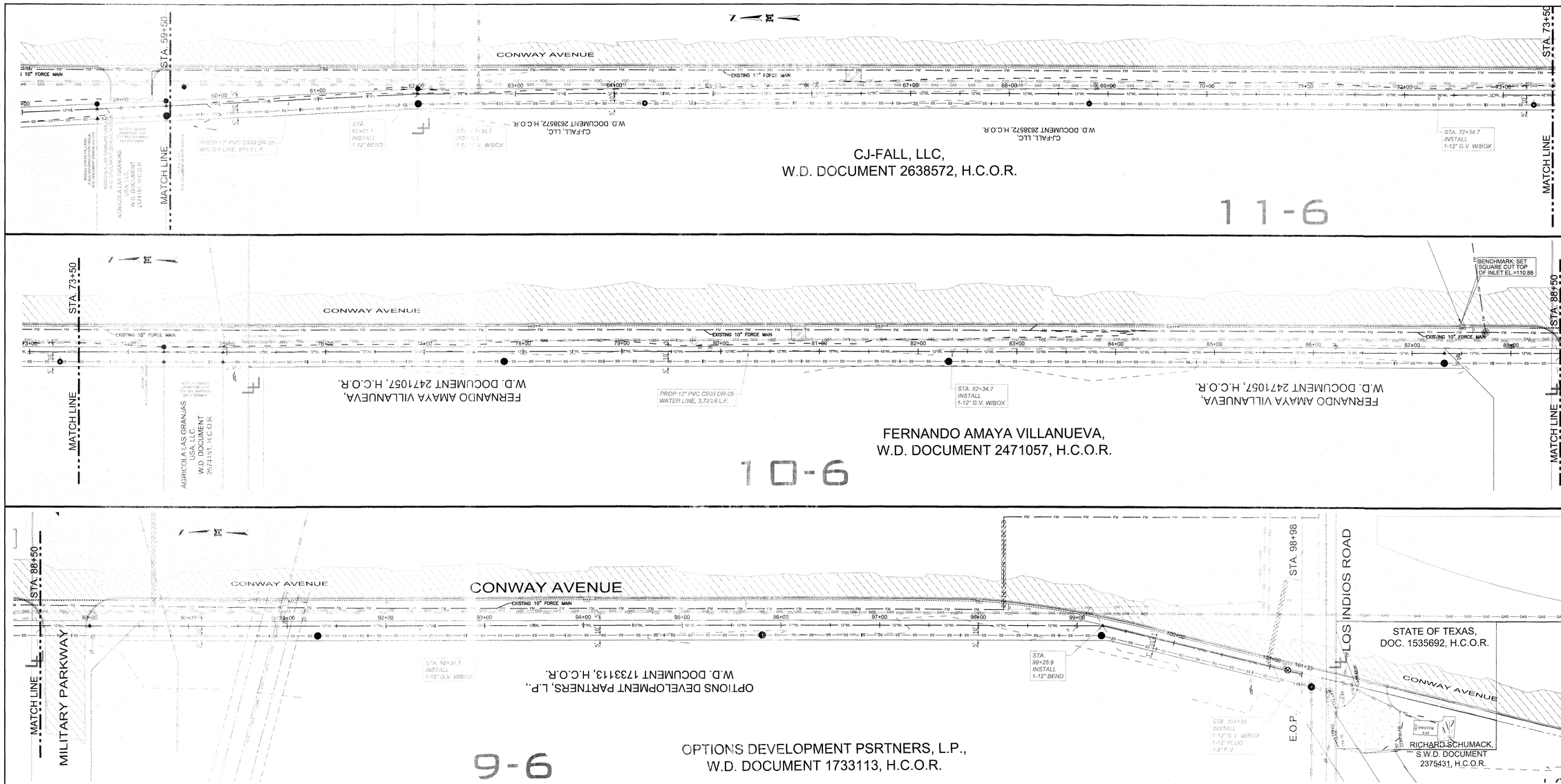
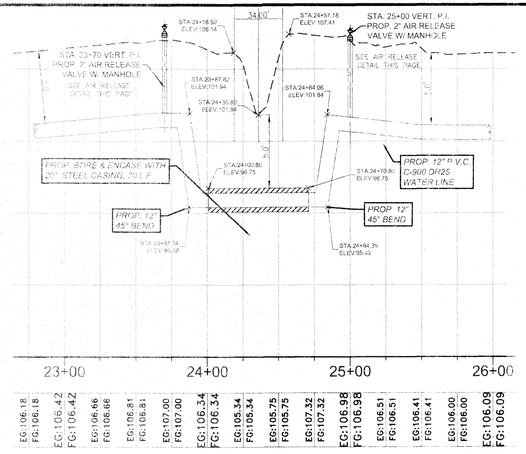
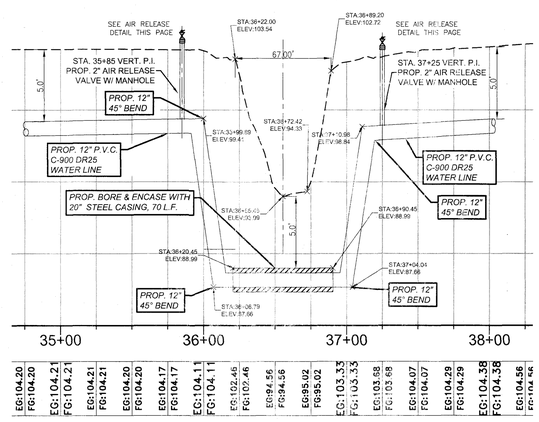
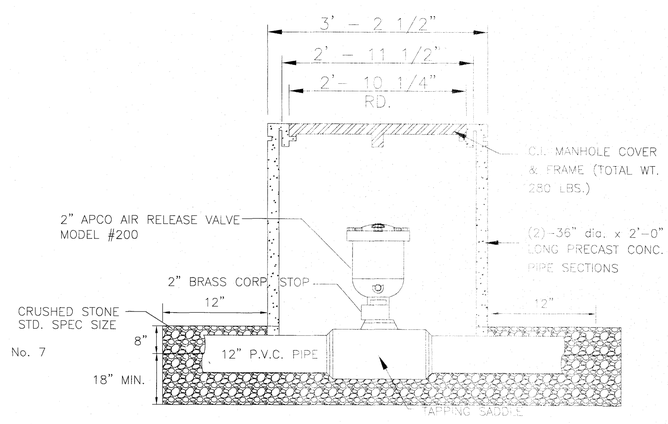




STA. 24+35.8 WATER LINE @ DITCH CROSSING



STA. 36+55.5 WATER LINE @ DITCH CROSSING



AIR RELEASE DETAIL (WATER)
SCALE: N.T.S.

JOB No.
19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
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TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

7-29-20

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW

CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

PROP. 12" WATER LINE

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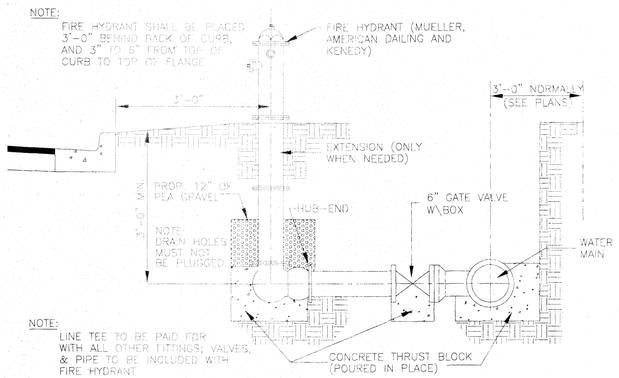
File Name: PROP 12" WL

SHEET C13 OF 17

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\8-SITE PLAN.dwg, C12-13-WATER plan view, 2/20/2020 11:01:06 AM,



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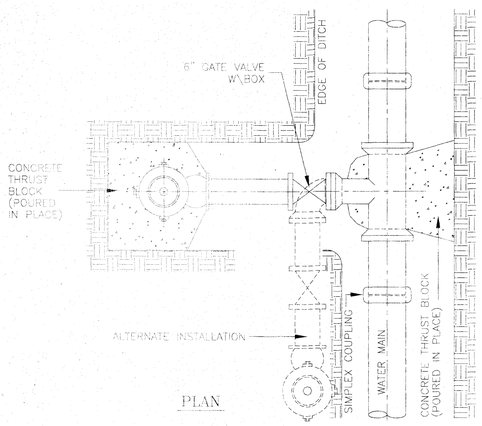
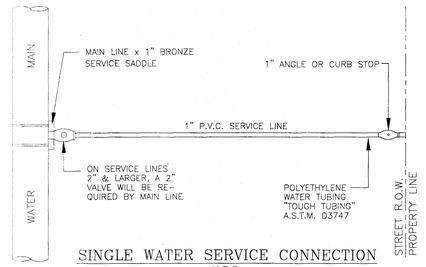


PLAN

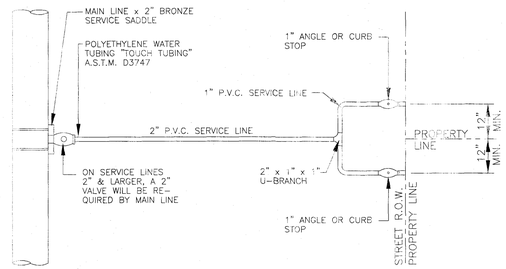
TYPICAL FIRE HYDRANT INSTALLATION

N.T.S.



SINGLE WATER SERVICE CONNECTION

N.T.S.



DUAL WATER SERVICE CONNECTION

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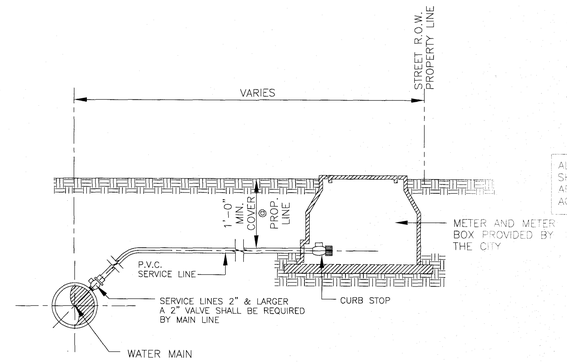


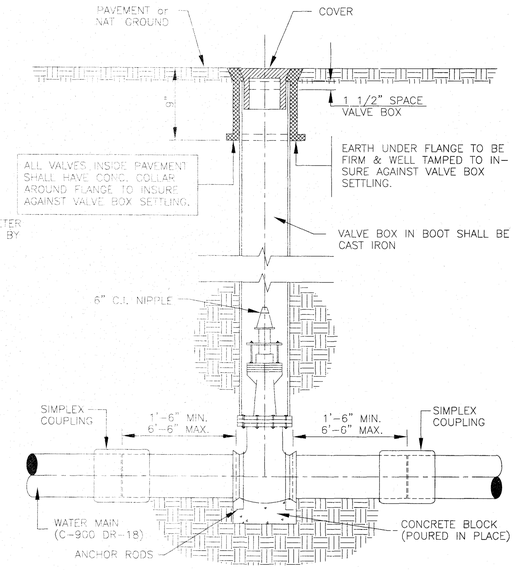
TYPICAL SERVICE CONNECTION

GENERAL NOTES :

1. ALL COMPRESSION OR PACK TYPE FITTINGS & JOINTS REQUIRE STAINLESS STEEL INSERTS OF REQUIRED SIZE.
2. WATER SERVICE CONNECTIONS CROSSING A STREET SHALL BE ENCASED IN A 2" (FOR SINGLE SERVICE) AND 3" (FOR A DUAL SERVICE) P.V.C. SHC40 CASING. LENGTH OF CASING SHALL BE WIDTH OF STREET PLUS 10.0 FEET.

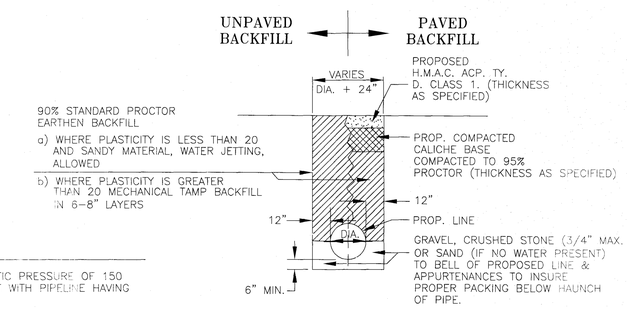
TYPICAL WATER SERVICE CONNECTIONS

N.T.S.



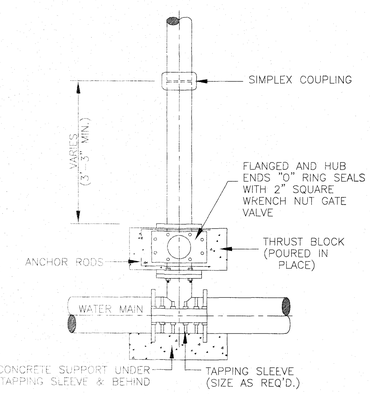
TYPICAL VALVE and VALVE BOX INSTALLATION

N.T.S.



PIPE BEDDING DETAILS

N.T.S.



TAPPING SLEEVE and VALVE INSTALLATION

N.T.S.

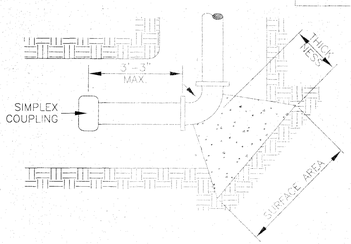
GENERAL NOTES FOR THRUST BLOCK:

1. ALL VALVES SHOWN ARE MINIMUM FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 LBS./SQ.FT WITH PIPELINE HAVING A MINIMUM OF 30" OF COVER.
2. THE CONTRACTOR SHALL CONSIDER REDUCTIONS OF THRUST BLOCK SURFACE AREA UPON SUBMITTAL OF APPROVED SOIL RESISTANT TEST RESULTS GREATER THAN 2000 LBS./SQ.FT.
3. THE LOCATION OF THRUST BLOCKS DEPENDS UPON THE DIRECTION OF THRUST AND TYPE OF FITTINGS.

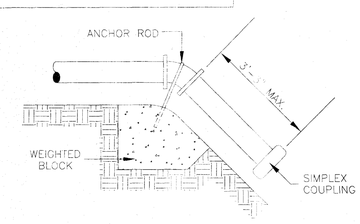
THRUST BLOCK SIZE

DIAMETER OF PIPE INCHES	HORIZONTAL BEND SURFACE AREA SQ. FT.	HORIZONTAL BEND THICKNESS INCHES	WEIGHT AT VERTICAL BENDS - lbs.
22°1/2 BENDS			
6 OR LESS	2	8	1,700
8	3	12	3,000
10	3.5	12	4,500
12	4	14	6,600
14	5	18	9,000
16	6	18	11,800
45° BENDS			
6 OR LESS	4	12	3,200
8	5	14	5,800
10	6	18	9,000
12	7	18	13,000
14	8	24	17,000
16	11.5	24	23,200
90° BENDS			
6 OR LESS	6	12	6,000
8	8	15	10,700
10	10	18	16,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700
TEES & DEAD ENDS			
6 OR LESS	3	12	----
8	4	15	----
10	6	18	----
12	8.5	18	----
14	11.5	24	----
16	15	24	----

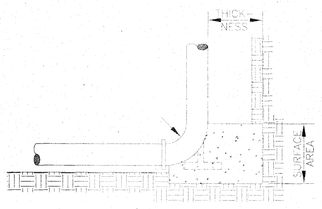
MEGA-LUGS ARE REQUIRED FOR ALL FITTINGS *(CITY OF MISSION REQUIREMENT)



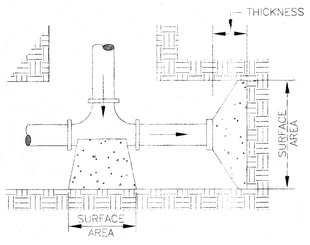
HORIZONTAL BENDS



VERTICAL BENDS



HYDRANT BURYS



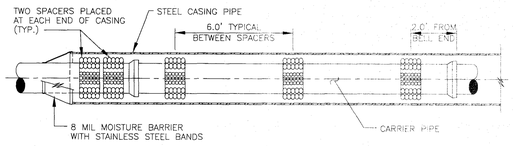
TEES & DEAD ENDS

THRUST BLOCK DETAILS

N.T.S.

GENERAL NOTES FOR ELECTRICAL CONDUIT:

1. CONTRACTOR TO INSTALL CONDUIT WITH PULL STRING IN SPECIFIED STREET CROSSING LOCATIONS. EXTEND CONDUIT 5 FT. PAST RIGHT OF WAY WITH TEMPORARY 4" ELBOW.
2. WHEN GAS LINE EASEMENTS CROSS ELECTRICAL EASEMENTS, ENCASE CONDUIT IN CONCRETE (- 1 FT. COVERING). EXTEND CONDUIT 3 FT. BEYOND EASEMENTS.
3. USE PVC TO LOCATE CONDUIT. THE PVC UTILITY MARKERS ARE A MINIMUM OF 2 FEET ABOVE FINAL GRADE.

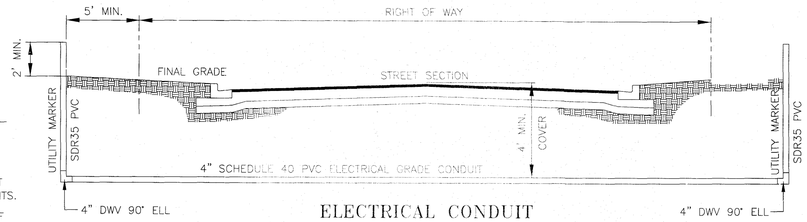


BORING and CASING DETAIL

N.T.S.

BORING INSTALLATION

PIPE CASING SIZE	CARRIER PIPE SIZE
12" 0.375 WALL	4"-6"
16" 0.375 WALL	8"
18" 0.375 WALL	10"
20" 0.375 WALL	12"
24" 0.375 WALL	14"
26" 0.375 WALL	16"
32" 0.375 WALL	18"
36" 0.375 WALL	20"
40" 0.375 WALL	24"



ELECTRICAL CONDUIT UNDERGROUND ROAD CROSSING DETAIL

N.T.S.

JOB No. 19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE, EDINBURG, TX 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10089500

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A REYNA
T-BOOK: , PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: N.T.S.

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

9-24-20

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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION

HIDALGO COUNTY TEXAS

WATER DETAILS

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File Name: WATER DETAILS

SHEET C14 OF 17

Y:\Municipal\Mission\City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\9-SITE PLAN.dwg, C14-WATER DETAILS, 2/19/2020 4:06:30 PM,

S 81°26'00" E 94.0'

PROP. 8' HIGH CEDAR FENCE

MATCH EX. FG=104.00

MATCH EX. FG=104.00

105.0

106.0

107.0

108.0

109.0

0.5'

22.0'

40.5'

25.3'

40.6'

60.6'

MATCH TC=108.75

R10.0'

MATCH TC=109.27

MATCH TC=109.14

PROP. 12" LAYDOWN CURB

CONCRETE PAVEMENT

12.0'

MATCH TC=109.00

CONCRETE ENTRANCE

MATCH TC=109.30

R3.0'

R3.0'

FG=109.40

FG=109.40

FG=109.20

MATCH TC=109.00

PROP. 10" FORCE MAIN

FG=109.50

FG=109.50

5.0'

6.5'

PROPOSED LIFT STATION

46.5'

FG=109.40

SLAB TOP=110.00

24.5'

PROP. 2-10" 45° BEND

MATCH TC=108.75

R10.0'

N 8°34'00" E 85.0'

105.0

106.0

107.0

108.0

109.0

12" LAYDOWN CURB

PROP. 12"

12.5'

SLAB TOP=110.00

16.0'

PROP. 15" SAN. SEW. INFLUENT LINE

PROPOSED POWER POLE

PROP. 8' HIGH CHAIN LINK FENCE

S 8°34'00" W 85.0'

PROP. SAN. SEW. M.H.

TOP=104.20

FL=81.98

INV.-22.22 DEEP

F.M. 1016 - CONWAY AVENUE AVENUE

23.0'

12.0'

FG=109.50

FG=109.50

0.5'

22.0'

109.0

MATCH TC=109.37

MATCH TC=109.40

108.0

PROP. 20.0' UTILITY EASEMENT

28.5'

107.0

0.5'

PROP. 8' HIGH CEDAR FENCE

106.0

PROP. 15" SAN. SEW. LINE

105.0

MATCH EX. FG=104.00

MATCH EX. FG=104.00

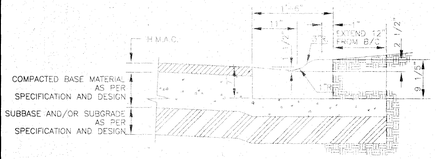
PROP. 8' HIGH CEDAR FENCE

N 81°26'00" W 94.0'

0.5'

BEARING BASIS AS PER TEXAS COORDINATE SYSTEM OF 1983, TEXAS SOUTH
ELEVATION DATUM (AS PER NAVD 88 (GEOID 2003)

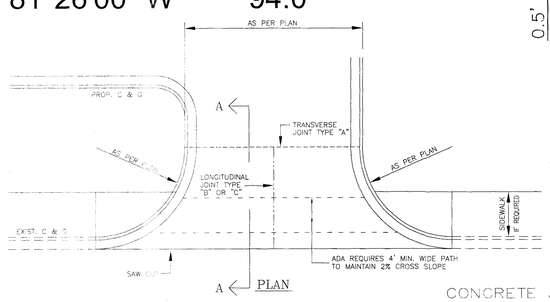
SCALE:1"=5'



TYPICAL LOW PROFILE CURB & GUTTER SECTION

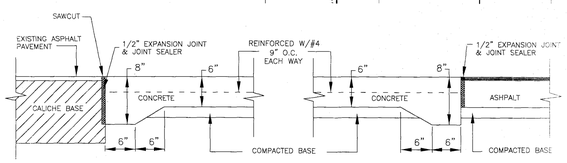
N.T.S.

1. ALL HONEYCOMBING SHALL BE GROUTED TO PROVIDE A UNIFORM SURFACE.
2. WHEN HONEYCOMBING IS EXCESSIVE, AS DETERMINED BY THE COUNTY OF HIDALGO DESIGNATED REPRESENTATIVE, CUR AND GUTTER SHALL BE PLACED.
3. BACKFILL BEHIND CURBS SHALL BE ACCOMPLISHED WITHIN 24 HOURS AFTER BACK FORM IS REMOVED OR 48 HOURS AFTER SLIP FORMING.
4. CURB AND GUTTER CONCRETE SHALL BE CLASS "A" (3000 PSI).
5. REINFORCING STEEL AS SHOWN.
6. MAX. LENGTH OF CURB AND GUTTER SECTION IS 60' BETWEEN 3/4" EXPANSION JOINT.

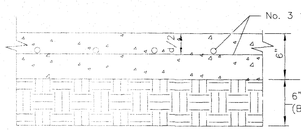


CONCRETE APRON AT ENTRANCE DETAIL

TXDOT



SECTION "A-A"



RIGID-HEAVY DUTY

JOB No. 19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE, EDINBURG, TX 78541
PH. (956) 381-0981 - FAX (956) 381-1839
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10056900

ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A.REYNA
T-BOOK: , PG.
1. RELEASE DATE:
2. RELEASE DATE:
3. RELEASE DATE:
SCALE: 1" = 5'

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER

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2-27-20

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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

LIFT STATION SITE PLAN

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File Name: SITE PLAN

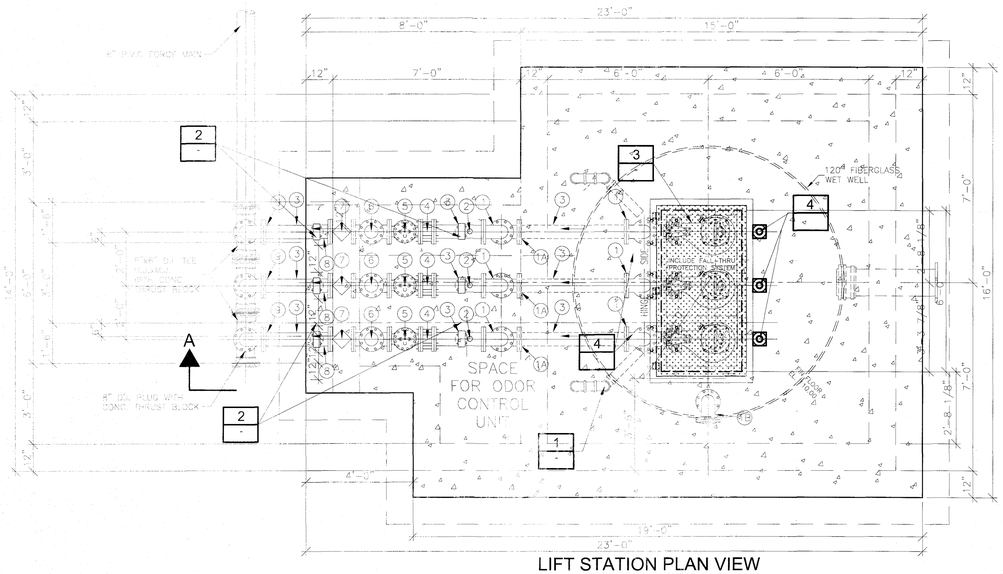
SHEET 1 OF 3

SHEET C15A OF 16

Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\B-SITE PLAN.dwg, LIFT STATION, 2/27/2020 4:27:23 PM,

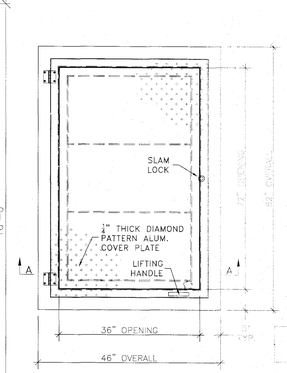
PIPING LEGEND

1. 6" D.I. 90° ELBOW, FLG.x.H.O.
1A. 6" D.I. 90° ELBOW, M.J.x.F.J.
1B. 6" D.I. 90° ELBOW, FLG.x.H.O. WITH BLIND FLANGE
1C. 6"x48" D.I. WALL PIPE, FLG.x.P.E.
1D. 6" D.I. FLG.x.P.E. BYPASS SUCTION LINE
1E. 6" D.I. FLG. SLUICE SHOT
2. AIR AND VACCUUM RELEASE VALVE SEE SPECIFICATIONS
3. 6" D.I. PIPE, FLG.x.P.E.
4. 6" D.I. FLG. ADAPTER
5. 6" D.I. SURGEBUSTER CHECK VALVE
5. 6"x6" D.I. FLG.x.FLG.TEE WITH BLIND FLANGE
7. 6" D.I. FLG.x.F.J. PLUG VALVE
8. 6" D.I. PIPE, FLG.x.H.O.
8A. 6" D.I. WALL PIPE, FLG.x.P.E.
9. 6" 90° FLG.x.H.O. ELBOW
10. ALL D.I. PIPE AND FITTINGS INSIDE WETWELL SHALL RECEIVE A PROTECTIVE COATING AS PER THE SPECIFICATIONS

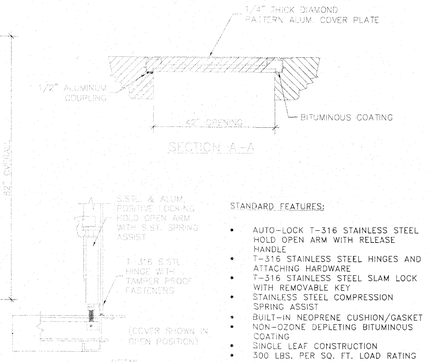


LIFT STATION PLAN VIEW

SCALE: 3/8"=1'-0"



PLAN



HALLIDAY PRODUCTS MODEL WID OR APPROVED EQUAL
INCLUDE FALL-THRU PROTECTION SYSTEM

STANDARD FEATURES:

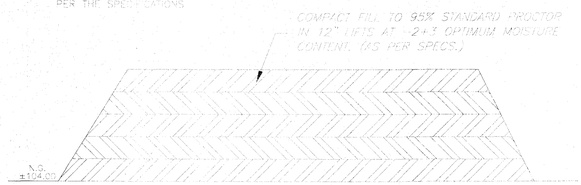
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN NEOPRENE CUSHION/GASKET
- NON-OZONE DEPLETING BITUMINOUS COATING
- SINGLE LEAF CONSTRUCTION
- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM CHANNEL FRAME
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE

72"x36" ACCESS DOOR & DETAILS 3

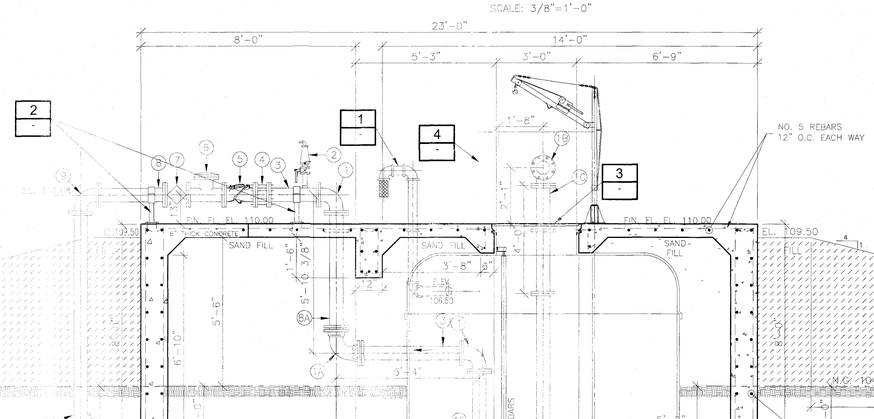
SCALE: NTS

NOTE TO CONTRACTOR:

CONTRACTOR TO MAKE ALL ARRANGEMENTS WITH MANUFACTURER FOR EVERYTHING PERTAINING TO THE ACCESS DOOR AND/OR ITS ACCESSORIES ENCLUDED, BUT NOT LIMITED TO ORDERING, INSURANCE, ETC.). SPECIALLY IF THE ACCESS DOOR REQUIRED AS INDICATED ON THIS PLAN, NEEDS TO BE CUSTOM-MADE.



PAD FILL DETAIL

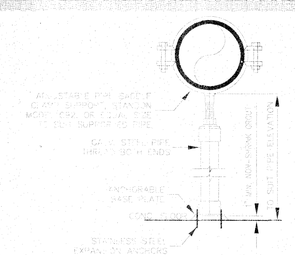


LIFT STATION CROSS SECTION "A-A"

SCALE: 3/8"=1'-0"

PUMP DATA						
PRIM. PHASES 1&2	SIZE (INCH)	FLOW G.P.M.	TDH FT.	MIN HP	EFF %	MAX RPM
DESIGN POINT	6	600	48	15	65%	1710
SECONDARY POINT	6	680	43	15	70%	1710

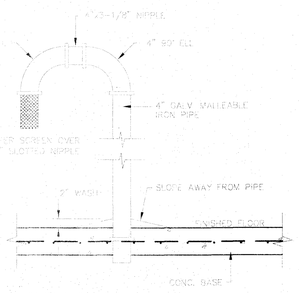
LIFT STATION DATA	
FORCE MAIN SIZE	8"
TOTAL LENGTH (IN FEET)	2300
F.M. EL. @ DISCHARGE	±107.8
WET WELL SIZE	120" Ø
NAT. GRND. ELEV.	±104.0



PIPE SADDLE SUPPORT DETAIL 2

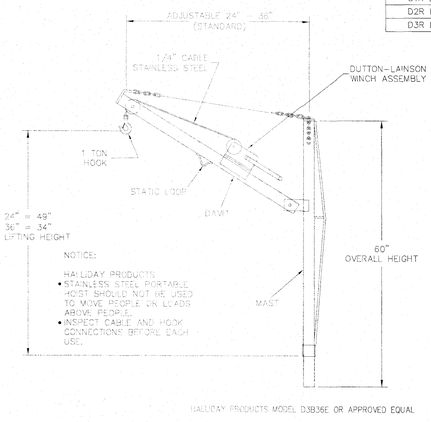
SCALE: NTS

EMBED STYLE HOIST SOCKETS	
SOCKET MODEL #	FOR HOIST MODELS
D1R LINED	D1A AND D1B
D2R LINED	D2A AND D2B
D3R LINED	D3A AND D3B



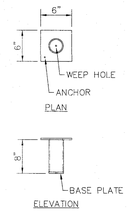
VENT DETAIL 1

SCALE: NTS



NO. 6 REBARS 12" O.C. EACH WAY, TOP & BOTTOM

HALLIDAY PRODUCTS MODEL D3B36E OR APPROVED EQUAL



FLOOR EMBEDDED STAINLESS STEEL SOCKET

*MOUNTING HOLES ARE Ø3/4"

STAINLESS STEEL PORTABLE HOIST 4

SCALE: NTS

JOB No. 19086.01

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS · ENGINEERS · SURVEYORS
115 W. McBRIDE
EDINBURG, TX 78541
PH: (956) 381-0981
FAX: (956) 381-1839
ESTABLISHED 1947
www.meldenandhunt.com

DRAWING DATE: 02-19-2020
RELEASE DATE:
DESIGNED BY: R.D.J.
DRAWN BY: R.D.J.
CHECKED BY: M.A.R.
T= PG.
SCALE: 3/8"=1'-0"

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435

STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED
PROFESSIONAL ENGINEER

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CITY OF MISSION
WA15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY, TEXAS

LIFT STATION MECHANICAL PLAN AND DETAILS

PLEASE NOTE
0 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

BEARING BASIS AS PER PLAT OF VALLE GRANDE No. 2 SUBDIVISION, REC. IN VOL. 28, PG. 4A, H.C.M.R.

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File Name: 19089.00

SHEET C15 OF 17

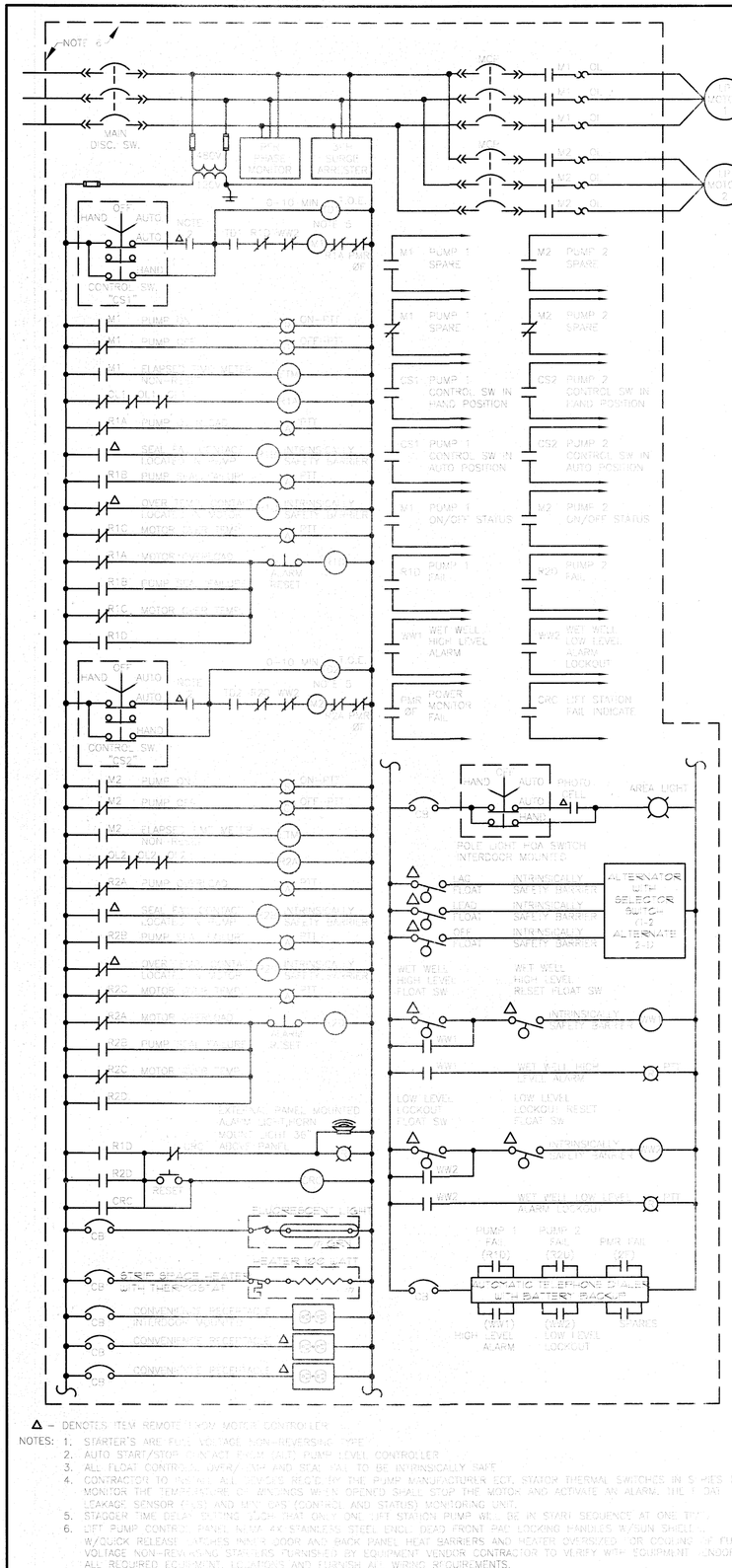
Y:\Municipal\Mission,City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\REV-7-NEW-LS- 12-10-19-SHT 002-1LS-2 PUMP STATION MECHANICAL LA HOMA ROAD.dwg, Model, 2/27/2020 4:09:39 PM,

GENERAL NOTES:

1. SEAL OFF ALL THE CONDUITS WITH DUCTSEAL PUTTY
2. CONTRACTOR SHALL COORDINATE EXACT REQUIREMENTS OF ALL CONDUIT AND CABLE RUNS WITH THIS DRAWINGS AND ALL OTHER ELECTRICAL DRAWINGS, PANEL SCHEDULES AND VENDOR DRAWINGS AND INSTRUCTIONS WITH ALL EQUIPMENT VENDORS/MANUFACTURERS AND FURNISH AND INSTALL ALL REQUIRED ITEMS FOR A COMPLETE OPERATING SYSTEM. NOT ALL CABLES AND CONDUITS MAY BE SHOWN. COORDINATE LOCATION OF EQUIPMENT WITH OWNER ALL VENDORS/MANUFACTURERS AND ALL TRADES.

KEYED NOTES:

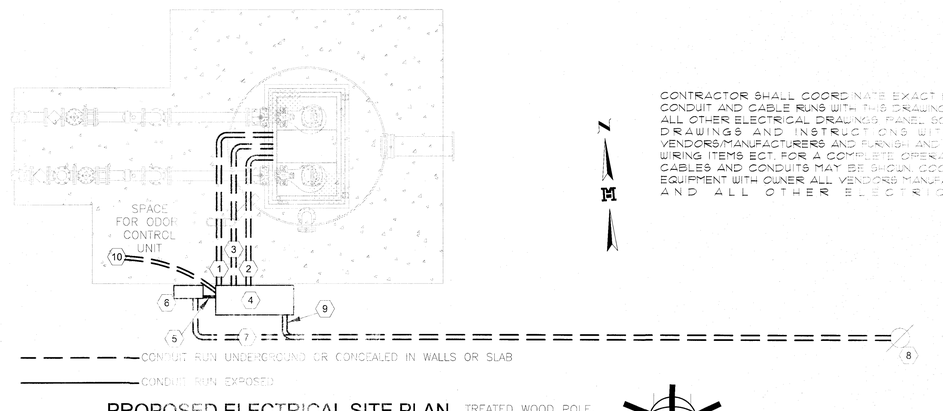
1. 2"C-LIFT PUMP 1 SIZE AS REQ'D (CABLES SUPPLIED BY PUMP VENDOR) SEE GENERAL NOTE 1.
   2"C-LIFT PUMP 1 SIZE AS REQ'D (W/CABLES REQ'D FOR PUMP CONTROL) SEE GENERAL NOTE 1.
2. 2"C-LIFT PUMP 2 SIZE AS REQ'D (CABLES SUPPLIED BY PUMP VENDOR) SEE GENERAL NOTE 1.
   2"C-LIFT PUMP 2 SIZE AS REQ'D (W/CABLES REQ'D FOR PUMP CONTROL) SEE GENERAL NOTE 1.
3. 1"C-14#12 (FLOAT SWITCHES TO PUMP CONTROL PANEL) SEE GENERAL NOTE 1,2 USE STAINLESS STEEL FLOAT SWITCH MOUNTING BRACKET.
4. LIFT PUMP CONTROL PANEL NEMA 4X STAINLESS STEEL ENCL. DEAD FRONT PAD LOCKING HANDLES W/SUN SHIELDS, W/QUICK RELEASE LATCHES INNER DOOR AND BACK PANEL. HEAT BARRIERS AND HEATER OVERSIZED FOR COOLING OF FULL VOLTAGE NON-REVERSING STARTERS FURNISHED BY EQUIPMENT VENDOR CONTRACTOR TO VERIFY WITH EQUIPMENT VENDOR ALL REQUIRED EQUIPMENT, LOCATIONS AND FURNISH ALL WIRING REQUIREMENTS.
5. 2"C-3#3,1#6 G (FROM MANUAL TRANSFER SWITCH TO LIFT STATION PUMP CONTROL PANEL)
6. MANUAL TRANSFER SWITCH 100A,600V NEMA 4X STAINLESS STEEL ENCL. WITH GROUND LUG.
7. 2"C-3#3,1#6 G (FROM MANUAL TRANSFER SWITCH TO MAIN DISCONNECT SW. AT SERVICE POLE)
8. APPROXIMATE LOCATION OF THE (PROPOSED LIFT STATION ELECTRICAL SERVICE POLE) COORDINATE EXACT LOCATION WITH LOCAL UTILITY REQUIREMENTS.
9. 2"C-WITH TELEPHONE CABLE AS REQUIRED (FROM PUMP CONTROL PANEL ROUTE TO TELEPHONE POLE/PEDESTAL) CONTRACTOR SHALL PAY AND IS RESPONSIBLE FOR BRINGING TELEPHONE SERVICE TO THE LIFT STATION FOR THE TELEPHONE AUTODIALER.
10. 1"C-2#10,1#10 G (FROM PUMP CONTROL PANEL TO ODOR CONTROL WP/GFI DUPLEX OUTLET) SEE GENERAL NOTE 1,2 MOUNT 16" AFF.
    1"C-2#10,1#10 G (FROM PUMP CONTROL PANEL TO ODOR CONTROL WP/GFI DUPLEX OUTLET) SEE GENERAL NOTE 1,2 MOUNT 16" AFF.



LIFT STATION CONTROL PANEL

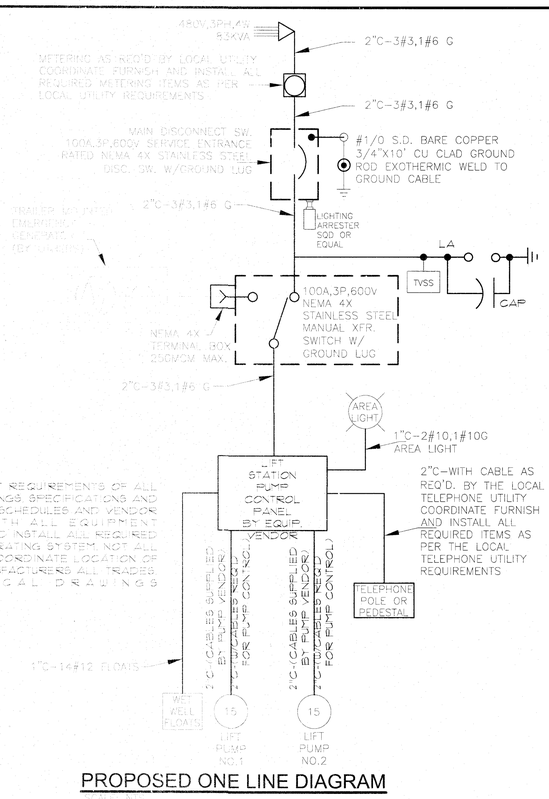
Δ - DENOTES ITEM REMOTE FROM MOTOR CONTROLLER

NOTES:
1. STARTER'S ARE FULL VOLTAGE NON-REVERSING TYPE.
2. AUTO START/STOP FUNCTION FROM (ALT) PUMP LEVEL CONTROLLER.
3. ALL FLOAT CONTROLS OVER/UNDER AND SEAL FAIL TO BE INTRINSICALLY SAFE.
4. CONTRACTOR TO INSTALL ALL DEVICES REQ'D BY THE PUMP MANUFACTURER ECT. STATOR THERMAL SWITCHES IN 3 PHASES TO MONITOR THE TEMPERATURE OF WINDINGS WHEN OPENED SHALL STOP THE MOTOR AND ACTIVATE AN ALARM. THE 1 DAY LEAKAGE SENSOR FOR (OIL AND MOISTURE (CONTROL AND STATUS) MONITORING UNIT.
5. STAGGER TIME DELAY TIMING SHALL BE ONLY ONE LIFT STATION PUMP WILL BE IN START SEQUENCE AT ONE TIME.
6. LIFT PUMP CONTROL PANEL NEMA 4X STAINLESS STEEL ENCL. DEAD FRONT PAD LOCKING HANDLES W/SUN SHIELDS, W/QUICK RELEASE LATCHES INNER DOOR AND BACK PANEL. HEAT BARRIERS AND HEATER OVERSIZED FOR COOLING OF FULL VOLTAGE NON-REVERSING STARTERS FURNISHED BY EQUIPMENT VENDOR CONTRACTOR TO VERIFY WITH EQUIPMENT VENDOR ALL REQUIRED EQUIPMENT, LOCATIONS AND FURNISH ALL WIRING REQUIREMENTS.



PROPOSED ELECTRICAL SITE PLAN
SCALE: 1/4" = 1'-0"

CONTRACTOR SHALL COORDINATE EXACT REQUIREMENTS OF ALL CONDUIT AND CABLE RUNS WITH THIS DRAWINGS, SPECIFICATIONS AND ALL OTHER ELECTRICAL DRAWINGS PANEL SCHEDULES AND VENDOR DRAWINGS AND INSTRUCTIONS WITH ALL EQUIPMENT VENDORS/MANUFACTURERS AND FURNISH AND INSTALL ALL REQUIRED WIRING ITEMS ECT. FOR A COMPLETE OPERATING SYSTEM. NOT ALL CABLES AND CONDUITS MAY BE SHOWN. COORDINATE LOCATION OF EQUIPMENT WITH OWNER ALL VENDORS/MANUFACTURERS ALL TRADES AND ALL OTHER ELECTRICAL DRAWINGS



PROPOSED ONE LINE DIAGRAM
SCALE: NTS

INSTALL UNDER THIS CONTRACT

TB-1

(CS1) LIFT PUMP NO1 CONTROL SW IN HAND	1
(CS1) LIFT PUMP NO1 CONTROL SW IN AUTO	2
(M1) LIFT PUMP NO1 ON/OFF STATUS	3
(R1D) LIFT PUMP NO1 MOTOR FAIL	4
(CS2) LIFT PUMP NO2 CONTROL SW IN HAND	5
(CS2) LIFT PUMP NO2 CONTROL SW IN AUTO	6
(M2) LIFT PUMP NO2 ON/OFF STATUS	7
(R2D) LIFT PUMP NO2 MOTOR FAIL	8
(WW1) WET WELL HIGH LEVEL ALARM	9
(WW2) WET WELL LOW LEVEL ALARM LOCKOUT	10
(PMR) OF POWER FAIL	11
(CRC) LIFT STATION FAIL ALARM	12
SPARE	13
SPARE	14
SPARE	15

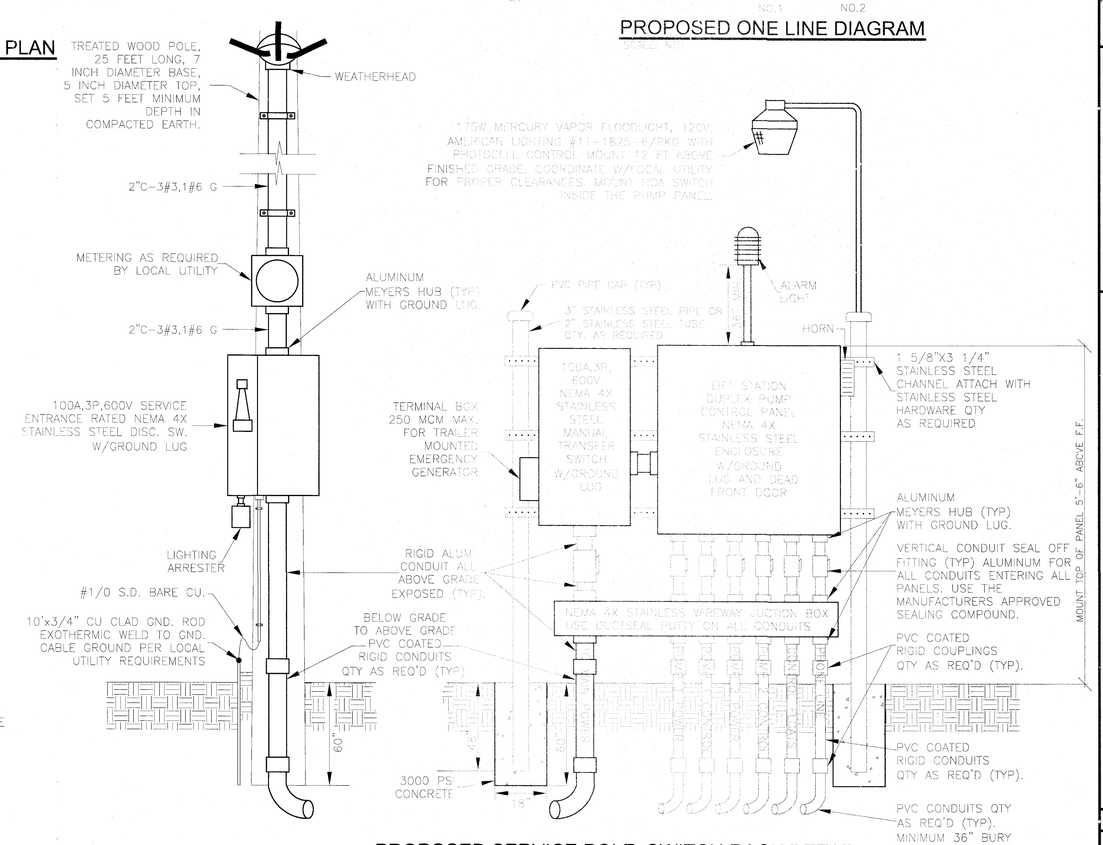
TYPICAL - "TYCO" RTU ALARM (OUTPUT STATUS MONITORING) CONNECTIONS BY OTHERS

"TB-1" CONNECTIONS

ADJUST ALL FLOAT SETTINGS ACCORDING TO ACTUAL FIELD CONDITIONS COORDINATE THE MINIMUM PUMP SUBMERGENCE REQUIREMENTS WITH THE PUMP EQUIPMENT SUPPLIER

FS-7 HIGH ALARM TO CONTROLS.....EL.78.70
FS-6 HIGH ALARM RESET TO CONTROLS.....EL.78.20
FS-5 LAG PUMP NO.2 ON TO (ALT).....EL.79.20
FS-4 LEAD PUMP NO1 ON TO (ALT).....EL.78.70
FS-3 PUMP OFF TO (ALT).....EL.77.45
FS-2 LOW LEVEL LOCKOUT RESET TO CONTROLS.....EL.77.45
FS-1 LOW LEVEL LOCKOUT TO CONTROLS.....EL.77.20

PUMP CONTROL FLOAT ELEVATIONS



PROPOSED SERVICE POLE, SWITCH RACK DETAIL
SCALE: NTS

JOB No. 19086.00

REVISION	DATE	BY

MELDEN & HUNT, INC.
CONSULTANTS • ENGINEERS • SURVEYORS
115 W. McINTYRE - EDINBURG, TX. 78541
PH. (956) 381-9481 - FAX (956) 381-4435
ESTABLISHED 1947 - www.meldenandhunt.com
TBPLS No. 10064500

ENG. TECH: L.M.
PROJECT ENG: MARIO A.REYNA
T-BOOK: PG.
1. RELEASE DATE: 01/21/2020
2. RELEASE DATE: 02/19/2020
3. RELEASE DATE:
SCALE: AS SHOWN

MELDEN & HUNT, INC.
TEXAS REGISTRATION F-1435
STATE OF TEXAS
MARIO A. REYNA
117368
LICENSED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARIO A. REYNA, P.E. 117368

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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

ELECTRICAL SITE PLAN,
CONTROL PANEL SCHEMATIC,
SWITCH RACK DETAIL,
ONE LINE DIAGRAM,

E1 OF 1

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File Name: ELECTRICAL PLAN

SHEET C16 OF 17

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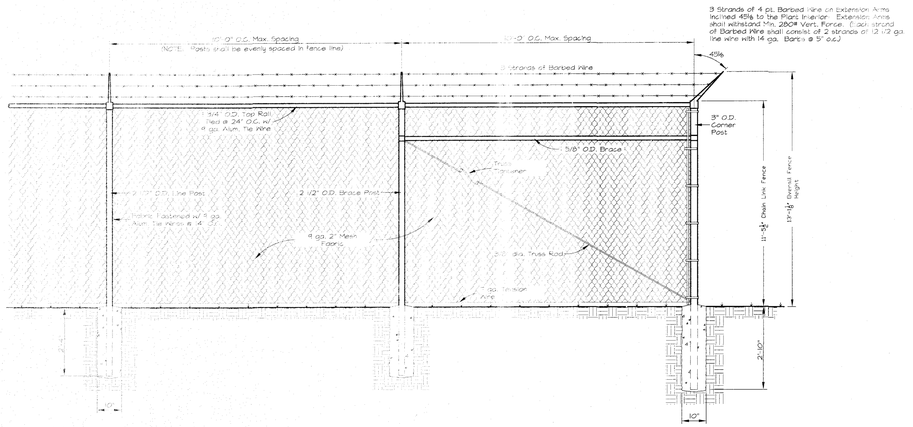
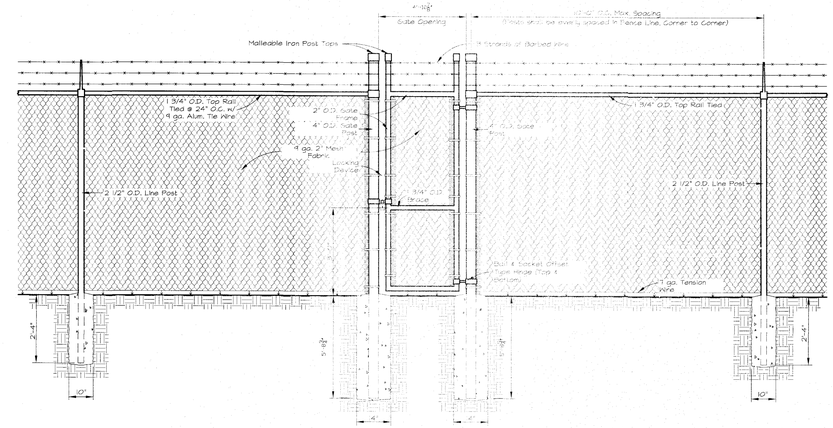


TYPICAL FENCE CORNER DETAIL

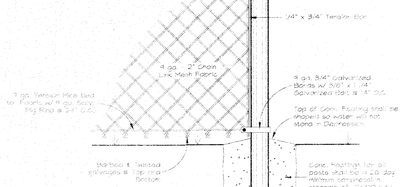
SCALE: 3/8" = 1'-0"



TYPICAL WALK - THRU GATE DETAIL

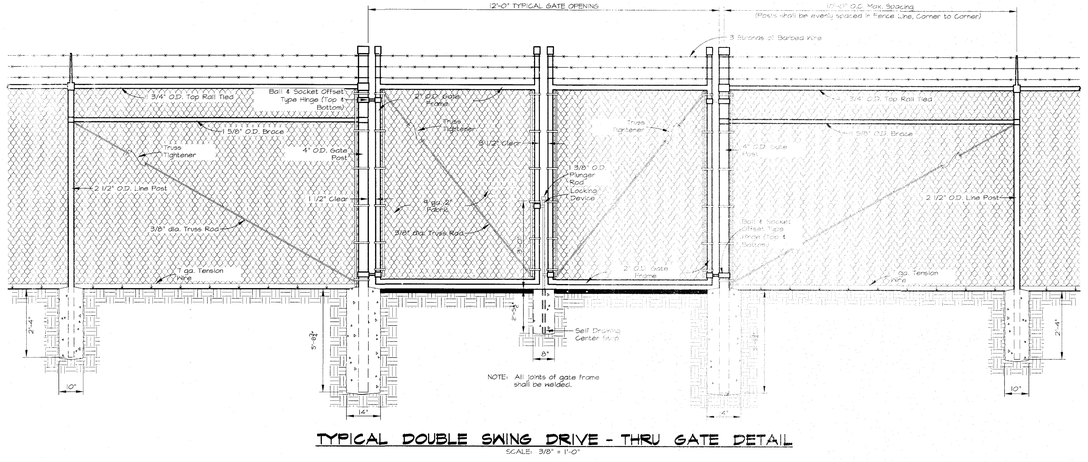
SCALE: 3/8" = 1'-0"

NOTE: THIS PROJECT SHALL REQUIRE PATRICIAN VINYL "PRIVACY" SLATS ON ALL CHAIN LINK FENCE AND GATES AROUND LIFT STATIONS



FENCE BOTTOM DETAIL

SCALE: NTS



TYPICAL DOUBLE SWING DRIVE - THRU GATE DETAIL

SCALE: 3/8" = 1'-0"

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19086.00

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115 W. McINTYRE - EDINBURG, TX. 78541
PH. (956) 381-9481 - FAX (956) 381-7458
ESTABLISHED 1947 - www.meldenandhunt.com
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ENG. TECH: R. DE JESUS
PROJECT ENG: MARIO A. REYNA
T-BOOK: PG.
1. RELEASE DATE: 01/21/2020
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CITY OF MISSION
WA 15- SOUTH CONWAY
LIFT STATION
HIDALGO COUNTY TEXAS

CHAIN LINK
FENCE DETAILS

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File Name: FENCE DETAILS

SHEET C17 OF 17

Y:\Municipal\Mission\City of\Sewer\Lift Stations\19086 - Conway Lift Station\Autocad files\SHT 017-1E-1 ELECTRICAL LIFT STATION.dwg, Model: 2/19/2020 4:26:43 PM.