PROPOSED IMPROVEMENTS TO THE WATER DISTRIBUTION SYSTEM FOR LAGUNA BLVD, CAUSEWAY BYPASS, AND VALVE UPGRADES

LAGUNA MADRE WATER DISTRICT

BOARD OF DIRECTORS

SCOTT D. FRIEDMAN — — — — CHAIRMAN
ADAM LALONDE — — — — VICE CHAIRMAN
JASON STARKEY— — — — — — SECRETARY
DAVE BOUGHTER— — — — — — DIRECTOR
BILL DONAHUE - — — — — — — DIRECTOR

CARLOS J. GALVAN JR.— —GENERAL MANAGER
CHARLES ORTIZ - — — —DISTRICT ENGINEER

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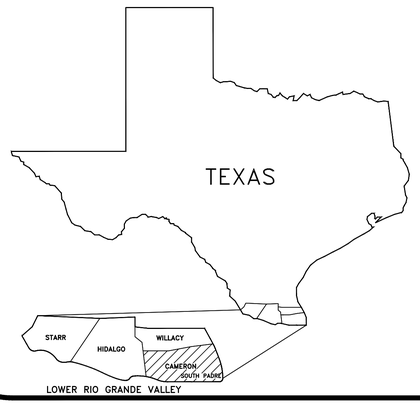

2021

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TEXAS FIRM REGISTRATION NO. F-592

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RANDALL C. WINSTON
70417
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PROFESSIONAL ENGINEER
10/18/2021

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PROJECT NO. 21-108
PLAN SET NO. _____
DATE _____

GENERAL CONSTRUCTION NOTES:

1. ALL IMPROVEMENTS TO BE IN ACCORDANCE WITH LAGUNA MADRE WATER DISTRICT CODES AND ORDINANCES AS WELL AS ANY ENTITIES THAT HAVE JURISDICTION OVER THE PROJECT AREA.

2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.

3. CONTRACTOR TO PLAN AND PERFORM HIS WORK IN A MANNER THAT WILL PERMIT SAFE PUBLIC TRAFFIC MOVEMENT ON ALL STREETS.

4. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO BE ACCORDANCE WITH TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, TRENCHES OR EXCAVATIONS MAY NOT BE LEFT OPEN OVERNIGHT.

5. CONTRACTOR SHALL PROVIDE PROTECTIVE DEVICES SUCH AS SIGNS, LIGHTS AND SIGNALS FOR THE SAFETY OF THE PUBLIC AND WORKERS AS REQUIRED. (NO SEPARATE PAY)

6. CONTRACTOR TO BE RESPONSIBLE FOR PROTECTION AND/OR SAFETY OF THE WORK SITE, WORKERS, SUBCONTRACTORS, MATERIALS AND/OR EQUIPMENT.

7. MATERIAL TESTING SHALL BE PROVIDED BY THE LAGUNA MADRE WATER DISTRICT. RE-TEST TO BE AT CONTRACTOR'S EXPENSE.

8. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (IF REQUIRED), FOR APPROVAL BY THE CITY ENGINEER OFFICE PRIOR TO CONSTRUCTION.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND AT CONTRACTOR'S EXPENSE.

10. ANY DAMAGE TO EXISTING STRUCTURES, SUCH AS PAVEMENT, INLETS, MANHOLES, FENCES, SIDEWALKS, ETC. SHALL BE REPAIRED TO PRE-CONSTRUCTION AT CONTRACTOR'S EXPENSE.

11. "THESE PLANS, PREPARED BY SWG ENGINEERING, LLC DO NOT EXTEND TO OR INCLUDE DESIGN 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 RANDALL C. WINSTON REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE HOUSE BILLS 622 AND 665 ENACTED BY THE TEXAS LEGISLATURE IN THE 70th LEGISLATURE REGULAR SESSION"

12. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. NOTIFY TEXAS ONE CALL FOR UTILITY LOCATIONS PRIOR TO ANY AND ALL EXCAVATIONS.

13. CONTRACTOR TO COORDINATE WITH THE LAGUNA MADRE WATER DISTRICT ON WORK SCHEDULES, TESTING, GENERAL INSPECTION, AND EXISTING LINES.

14. CONTRACTOR TO EXERCISE CAUTION WHEN WORKING NEAR EXISTING FACILITIES AND/OR UTILITIES. ALL DAMAGE TO BE REPAIRED AT CONTRACTOR'S EXPENSE. ALL COSTS FOR INTERRUPTION OF GAS, ELECTRICAL COMMUNICATIONS AND/OR WATER SERVICE DUE TO CONTRACTOR'S WORK SHALL BE DONE BY THE CONTRACTOR.

15. INFORMATION ON EXISTING UTILITIES IS FROM BEST AVAILABLE INFORMATION OF RECORD AND SPOT FIELD LOCATIONS. NEITHER THE ENGINEER NOR THE LAGUNA MADRE WATER DISTRICT TAKE RESPONSIBILITY FOR ACCURACY OF LOCATION. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION AND LOCATION OF THESE UNDERGROUND UTILITIES AS REQUIRED AT NO SEPARATE PAY. LAGUNA MADRE WATER DISTRICT PERSONNEL WILL BE AVAILABLE FOR ASSISTANCE AND OPERATION OF VALVES AS REQUIRED. CONTRACTOR TO COORDINATE WITH OTHER UTILITIES COMPANIES, ELECTRICAL UTILITIES, GAS UTILITIES, AND TELEPHONE UTILITIES.

16. ALL SPOIL MATERIAL AND DEBRIS SHALL BE DISPOSED OFFSITE BY CONTRACTOR IN A LEGAL MANNER FURNISHING AND TRANSPORTATION OF ALL OFFSITE MATERIAL TO BE AT CONTRACTOR'S EXPENSE.

17. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL RETURN THE SITE TO ORIGINAL CONTOURS UNLESS DIFFERENT FINISHED ELEVATIONS ARE SHOWN ON PLANS. CONTRACTOR TO INSURE NO AREAS OF PONDING ARE PRESENT.

18. CONCRETE NOTES:
    - A. ALL CONCRETE WORK TO BE FORMED, UNLESS OTHERWISE APPROVED.
    - B. ALL CONCRETE SHALL BE 4,000 PSI MINIMUM AT 28 DAYS, UNLESS OTHERWISE SHOWN. STRENGTH TO BE DETERMINED BY CYLINDER BREAK TEST.
    - C. ALL REINFORCING STEEL TO BE ASTM A-615, GRADE 60, UNLESS OTHERWISE SHOWN.
    - D. ALL EXPOSED CONCRETE WORK TO BE CHAMFERED.

19. CONTRACTOR TO INSURE SAME DAY ACCESS TO ALL RESIDENCES AND BUSINESSES ADJACENT TO CONSTRUCTION.

20. DEMOLITION, REMOVAL AND DISPOSAL OF ALL EXCESS CONCRETE, CURBS, RUBBLE, ETC. TO BE AT CONTRACTOR'S EXPENSE.

21. ALL STRUCTURES TO BE ADJUSTED BY THE CONTRACTOR TO MEET FINAL GRADES, A MAXIMUM OF 2 FEET OF THROAT RINGS WILL BE ALLOWED.

22. THE CONTRACTOR SHALL CONTACT LAGUNA MADRE WATER DISTRICT CONSTRUCTION INSPECTOR 48 HOURS PRIOR TO COMMENCING WORK.

23. CONTRACTOR TO PROVIDE EROSION CONTROL MEASURES AS NEEDED. PROTECT EXISTING STREETS AND INLETS WITH SILT FENCE AND EROSION CONTROL LOGS AND BMP's AS WELL.

24. CONTRACTOR SHALL AT ALL TIMES ALLOW ACCESS TO EXISTING DRIVEWAY OR PROVIDE/MAINTAIN ALTERNATIVE ALL-WEATHER ROUTES.

25. WORK TO OCCUR DURING REGULAR WORKING HOURS. MONDAY THRU FRIDAY. NO WORK TO OCCUR DURING CITY HOLIDAYS. NON-WORKING HOURS MONDAY THRU FRIDAY, AND WEEKENDS UNLESS APPROVED BY THE OWNER.

PAVING CONSTRUCTION NOTES:

1. HOT MIX ASPHALT CONCRETE TO BE IN ACCORDANCE WITH TxDOT SPECIFICATION TYPE "D" ITEM 340.

2. SUBGRADE EXCAVATION AND RECOMPACTION TO BE INCLUDED IN PRICE BID PER SQUARE YARD FOR "LIME TREATED SUBGRADE"

3. CONTRACTOR TO FILL BEHIND CURB AND SIDEWALKS AND SHAPE TO INSURE PROPER DRAINAGE.

4. CONSTRUCTION JOINTS TO EXISTING PAVEMENT SHALL BE MADE BY EITHER CUTTING BACK EXISTING TO PRODUCE A SLIGHTLY BEVELED EDGE FOR THE FULL THICKNESS OF THE WEARING COURSE OR A SUITABLE LAP JOINT SHALL BE MADE. SAW CUTTING REQUIRED.

5. NO TRAFFIC SHALL BE ALLOWED ON THE FINISHED WEARING SURFACE UNTIL AT LEAST 12 HOURS AFTER COMPLETION OF ROLLING.

6. HOT MIX ASPHALT CONCRETE TRANSPORT TRUCKS TO BE EQUIPPED WITH CANVAS COVERS TO BE UTILIZED DURING MATERIAL HAULING. MATERIAL DELIVERED TO SITE AT IMPROPER TEMPERATURE SHALL BE REJECTED. HOT MIX SHALL BE LAID AT A MINIMUM TEMPERATURE OF 225° F.

7. WHEN TYING INTO EXISTING CURB, EXPOSE REBAR AND FORM EXPANSION JOINT PER DETAILS SHEET.

8. ANY SETTLEMENT UNDER PAVEMENT DUE TO INADEQUATE COMPACTION OF UTILITY LINE BACK FILL SHALL BE CAUSE FOR RECOMPACTION OF TRENCH AND REPLACEMENT OF PAVEMENT SECTION.

WASTEWATER COLLECTION LINE CONSTRUCTION NOTES:

1. ALL PROPOSED SEWER LINES WILL BE SDR 26 PIPE MATERIAL (UNLESS OTHERWISE NOTED).

2. CONTRACTOR TO PROVIDE DEFLECTION TEST IN ACCORDANCE WITH TCEQ CHAPTER 317.2 (a) (4) (c). MANDREL TO BE PULLED IN BOTH DIRECTIONS.

3. CONTRACTOR TO PROVIDE LOW PRESSURE AIR TEST IN ACCORDANCE WITH TCEQ CHAPTER 317.2 (a), (4) (b). 30 DAYS AFTER INSTALLATION NO WATER TEST ALLOWED.

4. CONTRACTOR TO FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND FACILITIES PRIOR TO CONSTRUCTION.

5. ALL CROSSING OF WASTEWATER COLLECTION LINES AND WATERLINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TCEQ REGULATIONS CHAPTER 290 AND 317.

6. CONTRACTOR TO PROVIDE LEAKAGE TEST FOR MANHOLE IN ACCORDANCE WITH TCEQ CHAPTER 317.2 (c), (5) (h) OF THE STATE WASTEWATER CODE. NO WATER TEST ALLOWED. CURB STAMP SHALL BE COLORED GREEN.

7. CONTRACTOR TO STAMP CURB WITH "S" AT LOCATION OF WASTEWATER SERVICE LINES FOR VACANT LOTS.

8. NO WATER JETTING ALLOWED, MECHANICAL COMPACTION REQUIRED.

9. THE CONTRACTOR SHALL DEVELOP A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

10. FITTINGS WITH DEFLECTION ARE NOT PERMITTED ON GRAVITY WASTEWATER LINES.

WATERLINE CONSTRUCTION NOTES:

1. ALL WATER LINES TO BE C-900 CLASS 150 PVC UNLESS OTHERWISE NOTED.

2. DOUBLE CHECK VALVE WILL BE REQUIRED WHEN FLUSHING NEW WATERLINE FOR PRESSURE TESTING.

3. ALL WATER AND WASTEWATER COLLECTION LINE CROSSING TO BE CONSTRUCTED IN ACCORDANCE WITH TCEQ REGULATION, CHAPTER 290 AND 317.

4. CONTRACTOR TO FIELD LOCATE EXISTING METERS AND PROPOSED SERVICE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION OF MAIN.

5. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING LINES TO BE TIED INTO NEW MAIN PRIOR SETTING LOCATION OF TIE-IN TEE AND VALVE ON MAIN.

6. WATERLINE MAINS TO BE HYDROSTATICALLY AND BACTERIOLOGICALLY TESTED PER LAGUNA MADRE WATER DISTRICT REQUIREMENTS PRIOR TO TIE-INS, LAGUNA MADRE WATER DISTRICT APPROVAL OF TESTING IS REQUIRED.

7. CONTRACTOR TO STAMP CURB WITH "W" AT LOCATION OF WATER SERVICE LINES FOR VACANT LOTS.

8. CONTRACTOR SHALL MAINTAIN AS MINIMUM 10 FEET HORIZONTAL AND 2 FEET VERTICAL SEPARATION BETWEEN WATER LINES AND ANY OTHER SEWER.

9. NO WATER JETTING ALLOWED, MECHANICAL COMPACTION REQUIRED.

10. FIRE HYDRANTS SHALL BE PLACED 3 FEET BEHIND BACK OF CURB AND FLANGE SHALL BE 6 INCHES ABOVE GRADE.

11. CONTRACTOR SHALL MAINTAIN A MINIMUM 3 FEET OF COVER ON ALL WATER LINES.

12. FITTING TO BE USED ON DEFLECTIONS AS NEEDED.

13. THE CONTRACTOR SHALL DEVELOP A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

14. CURB STAMP SHALL BE COLORED BLUE.

UTILITY COMPANY CONTACTS:

CITY OF SOUTH PADRE ISLAND ----------956-761-5454
CITY OF PORT ISABEL ----------956-943-2029
TEXAS GAS COMPANY ----------1-800-959-5325
AT&T ----------956-951-2392
TEXAS DEPARTMENT OF TRANSPORTATION ---956-542-2260
SPECTRUM (TIME WARNER) ----------956-541-6782
AEP ----------1-877-373-4858
MAGIC VALLEY ELECTRIC COOPERATIVE ----1-866-255-5683
DIG-TESS ----------811 OR 1-800-344-8377
LAGUNA MADRE WATER SUPPLY ----------956-943-2626

EROSION GENERAL NOTES:

1. IT IS THE INTENT OF THIS SUGGESTED EROSION CONTROL PLAN AND WITHIN THE SPECIFICATIONS TO BE USED AS THE GENERAL GUIDELINES OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT TO ESTABLISH A MINIMUM BASIS OF COMPLIANCE WITH FEDERAL REGULATIONS. CONTRACTOR SHALL PREPARE AND SUBMIT A NOTICE OF INTENT PER THE REQUIREMENTS IN THE NPDES GENERAL PERMIT. THE CONTRACTOR SHALL PREPARE THE STORM WATER POLLUTION PREVENTION PLAN AND BE SOLELY RESPONSIBLE FOR ITS IMPLEMENTATION. THE STORM WATER POLLUTION PREVENTION PLAN SHALL MEET THE REQUIREMENTS SET FORTH IN THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) TPDES GENERAL PERMIT FOR REGION 6 FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES.

2. THE STORM WATER POLLUTION PREVENTION PLAN SHOULD ADDRESS THREE GOALS:
    - A. DIVERSION OF UPSLOPE WATER AROUND DISTURBED AREAS OF THE SITE.
    - B. LIMITS THE EXPOSURE OF DISTURBED AREAS TO THE SHORTEST DURATION POSSIBLE: AND
    - C. REMOVAL OF SEDIMENT FROM STORM WATER BEFORE IT LEAVES THE SITE.

3. THE CONTRACTOR SHALL MAKE THE STORM WATER POLLUTION PREVENTION PLAN AVAILABLE UPON REQUEST TO TCEQ.

4. THE CONTRACTOR MUST AMEND PLANS WHENEVER THERE IS A CHANGE IN DESIGN CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PLAN, OR WHEN THE EXISTING PLAN PROVES INEFFECTIVE, MODIFICATIONS INCLUDING DESIGN AND ALL ADDITIONAL MATERIALS AND WORK SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

5. STABILIZED MEASURES ARE TO BE INSPECTED AT A MINIMUM OF ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES. REPAIRS AND INADEQUACIES REVEALED BY THE INSPECTION MUST BE IMPLEMENTED WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

6. AN INSPECTION REPORT THAT SUMMARIZES INSPECTION ACTIVITIES AND IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE RETAINED AND MADE PART OF THE PLAN.

7. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE PLAN MUST CERTIFY AS TO AN UNDERSTANDING OF THE NPDES GENERAL PERMIT BEFORE CONDUCTING ANY ACTIVITY IDENTIFIED IN THE POLLUTION PREVENTION PLAN.

8. THE CONTRACTOR SHALL ADOPT APPROPRIATE CONSTRUCTION SITE MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF OILS, GREASE, PAINTS, GASOLINE, AND OTHER POLLUTANTS TO STORM WATER APPROPRIATE PRACTICES CAN INCLUDE.
    - A. DESIGNATING AREAS FOR EQUIPMENT MAINTENANCE AND REPAIR.
    - B. REGULAR COLLECTION OF WASTE.
    - C. CONVENIENTLY LOCATED WASTE RECEPTACLES, AND
    - D. DESIGNATING AND CONTROLLED EQUIPMENT WASH DOWN.

9. THE CONTRACTOR SHALL AMEND OR MODIFY THIS PLAN AS REQUIRED BY CONSTRUCTION MEANS, METHODS AND SEQUENCE MODIFICATIONS SHALL NOT COMPROMISE THE INTENT OF THE REQUIREMENTS OF THE LAW AND THIS PLAN. MODIFICATIONS SHALL NOT BE BASIS FOR ADDITIONAL COSTS OF THE OWNER.

10. AREAS OF CONSTRUCTION ELSEWHERE ON THE JOB SITE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS.

11. BORROW AREAS, IF EXCAVATED, SHALL BE PROTECTED AND STABILIZED UTILIZING THE PLAN DETAILS. ALL WORK SHALL CONFORM TO GOVERNMENTAL REQUIREMENTS AND BECOME PART OF THE STORM WATER POLLUTION PREVENTION PLAN (SWP3). THE WORK SHALL BE DONE BY THE CONTRACTOR AT AND ADDITIONAL EXPENSE TO THE OWNER.

12. ALL NON-PAVED AREAS SHALL BE MULCHED AND SEEDED WITH EROSION PROTECTION IMMEDIATELY UPON COMPLETION OF FINAL GRADING THIS INCLUDES ALL DITCHES AND EMBANKMENTS. THE CONTRACTOR SHALL MAINTAIN FINAL GRADING AND KEEP SEEDED AREAS WATERED UNTIL FULLY ESTABLISHED AND ACCEPTED BY THE OWNER.

13. THE CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION EXIT AT ALL TRAFFIC EXIT POINTS PRIOR TO EXITING ONTO ANY PAVED ROADWAY.

NOT FOR CONSTRUCTION
APPROVED

STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED PROFESSIONAL ENGINEER

Randall C. Winston, P.E.
10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

GENERAL NOTES AND SPECIFICATIONS

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-01

DATE: OCTOBER 2021 | NO. 1 | OF 41

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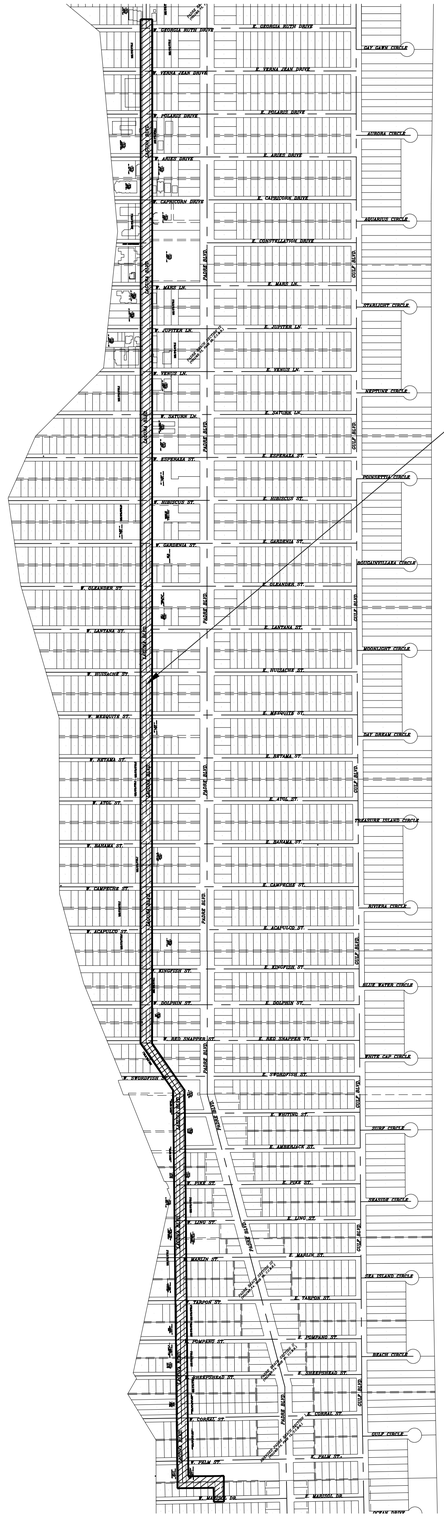
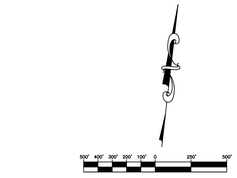
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.





LOCATION MAP

SCALE: 1" = 500'

STATE OF TEXAS
RANDALL C. WINSTON
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LICENSED PROFESSIONAL ENGINEER

10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 1

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO.
DATE: OCTOBER 2021	NO. 2	OF 41	21–108–02

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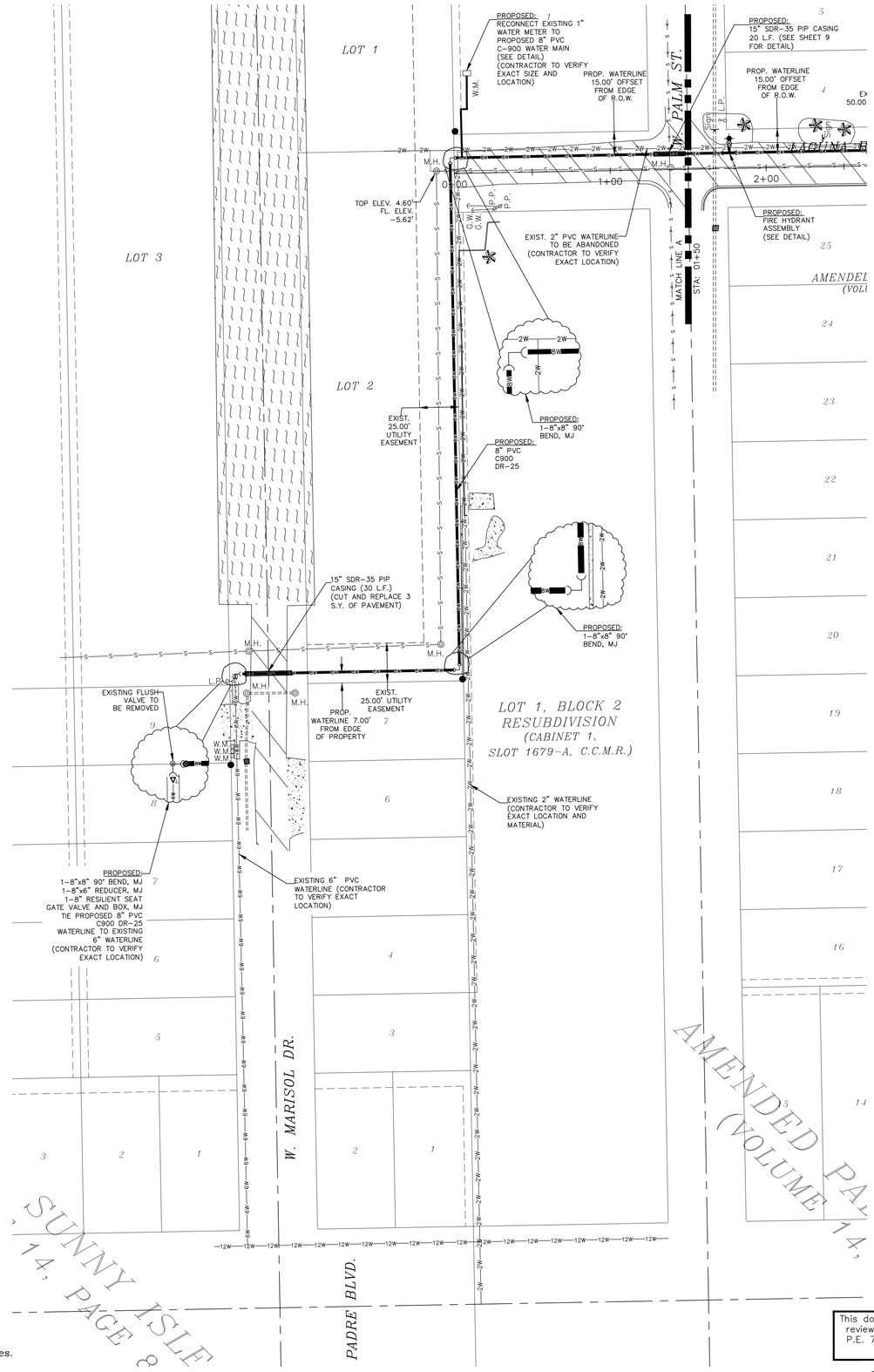

SCALE 1"=50'

LEGEND

Lot Line
R.O.W. Line
Easement
Fence Line —X—X—
Power Pole(P.P.)
Guy Wire(G.W.)
Cable Box C.B.
Man Hole M.H.
Vent Pipe V.P.
Irrigation Valve I.V.
Water Meter W.M.
Meter Pole M.P.
Road Side Ditch R.S.D.
Drain Line
Electrical Box E.B.
Water Valve(W.V.) ⊗
Control Valve(C.V.) ⊗
Fire Hydrant F.H.
Light Pole L.P.
Telephone Box T.B.
Cable Line —F.O.—F.O.—
Existing Sanitary Sewer Line —S—
Gas Meter G.M.
Sprinkler Head ☼
Gas Line —GAS—
Proposed 6" Water Line —6W—
Proposed 8" Water Line —8W—
Found 1/2" Iron Rebar ●
Existing 2" Water Line —2W—
Existing 6" Water Line —6W—
Existing 8" Water Line —8W—
Existing 12" Water Line —12W—
Existing 16" Water Line —16W—
Existing 24" Water Line —24W—
Proposed 12" Water Line —12W—
Proposed PVC Cap —●
Existing Storm Sewer Line
Light Pole(L.P.) ○—○
Concrete Parking Block
Turning Signal Post(T.P.) ◎

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	625 L.F.
15" SDR-35 PIP CASING	50 L.F.
CUT AND REPLACE PAVEMENT	3 S.Y.
8"x8" 45° BEND, MJ	2 EA.
8"x8" 90° BEND, MJ	3 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
8"x6" REDUCER, MJ	1 EA.
REMOVAL OF EXISTING FLUSH VALVE	1 EA.
RECONNECT SERVICE WATER CONNECTION	1 EA.
COUPLING ADAPTERS	1 LS.

CAUTION:

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF EXISTING UTILITY LINES RUNNING ALONG OR CROSSING CONSTRUCTION AREAS.

UTILITIES NOTE:

Existing above ground utilities and topography have been plotted by direct field information. Underground utilities have been plotted from various sources and locators. Contractor will be required to establish their exact location, depth, and size. The contractor is also responsible for the replacement or repair of all cut or broken water lines, irrigation lines, force mains, sprinkler systems, gas lines, electrical lines, cables, etc.

Trench safety protection is required for trenches of depths of 5' or greater.

Texas 811 Know what's below.
Call 811 Before You Dig

SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

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10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT
PROPOSED 8" PVC C900 WATERLINE
FROM PALM ST. ST. TO GEORGIA RUTH DR.
STA. 00+00 TO 01+50

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO. 21-108-03
DATE: OCTOBER 2021	NO. 3	OF 41	

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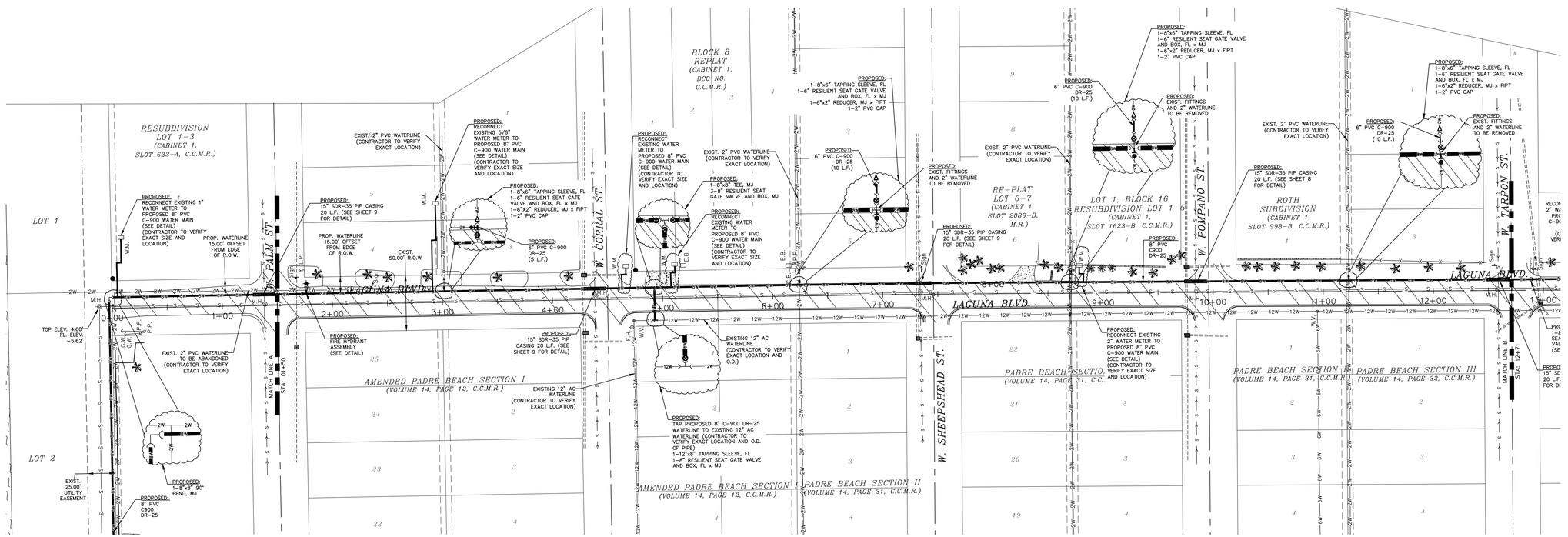

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	2210 L.F.
15" SDR-35 PIP CASING	160 L.F.
12"x8" TAPPING SLEEVE, FL	1 EA.
8"x6" TAPPING SLEEVE, FL	5 EA.
8"x8" 45° BEND, MJ	32 EA.
8"x8" TEE, MJ	1 EA.
6"x2" REDUCER, MJ x FIPT	5 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	5 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	5 EA.
6" AWWA PVC C900 DR-25	45 L.F.
RECONNECT SERVICE WATER CONNECTION	12 EA.
2" PVC CAP	5 EA.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.
COUPLING ADAPTERS	1 LS.
TAP PROPOSED 8" PVC C-900 TO EXISTING 12" AC WL	1 EA.

CAUTION:

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF EXISTING UTILITY LINES RUNNING ALONG OR CROSSING CONSTRUCTION AREAS.

UTILITIES NOTE:

Existing above ground utilities and topography have been plotted by direct field information. Underground utilities have been plotted from various sources and locators. Contractor will be required to establish their exact location, depth, and size. The contractor is also responsible for the replacement or repair of all cut or broken water lines, irrigation lines, force mains, sprinkler systems, gas lines, electrical lines, cables, etc.

Trench safety protection is required for trenches of depths of 5' or greater.

Texas 811 Know what's below. Call 811 Before You Dig

SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED PROFESSIONAL ENGINEER

10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT
PROPOSED 8" PVC C900 WATERLINE
FROM PALM ST. ST. TO GEORGIA RUTH DR.
STA. 01+50 TO 23+38

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-04

DATE: OCTOBER 2021 NO. 4 OF 41

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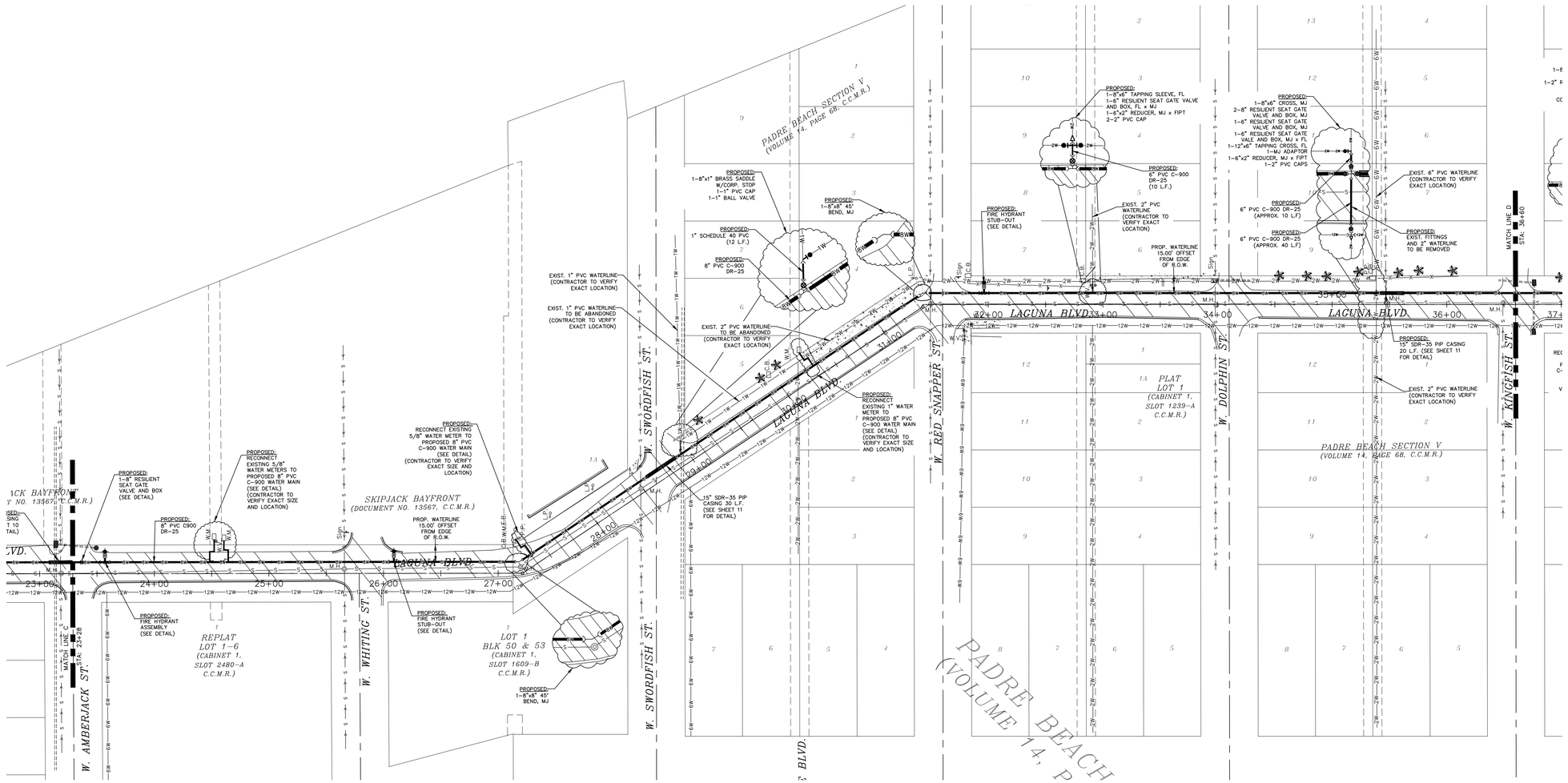

LEGEND

Lot Line	———
R.O.W. Line	————
Easement	– – – –
Fence Line	—X—X—
Power Pole(P.P.)	
Guy Wire(G.W.)	
Cable Box	C.B.
Man Hole	M.H.
Vent Pipe	V.P.
Irrigation Valve	I.V.
Water Meter	W.M.
Meter Pole	M.P.
Road Side Ditch	R.S.D.
Drain Line	
Electrical Box	E.B.
Water Valve(W.V.)	
Control Valve(C.V.)	
Fire Hydrant	F.H.
Light Pole	L.P.
Telephone Box	T.B.
Cable Line	—F.O.—F.O.—
Existing Sanitary Sewer Line	—S—
Gas Meter	G.M.
Sprinkler Head	
Gas Line	—GAS—
Proposed 6" Water Line	—6W—
Proposed 8" Water Line	—8W—
Found 1/2" Iron Rebar	
Existing 2" Water Line	—2W—
Existing 6" Water Line	—6W—
Existing 8" Water Line	—8W—
Existing 12" Water Line	—12W—
Existing 16" Water Line	—16W—
Existing 24" Water Line	—24W—
Proposed 12" Water Line	—12W—
Proposed PVC Cap	
Existing Storm Sewer Line	
Light Pole(L.P.)	
Concrete Parking Block	
Turning Signal Post(T.P.)	

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	1330 L.F.
15" SDR-35 PIP CASING	50 L.F.
8"x8" 45° BEND, MJ	12 EA.
8"x6" CROSS, MJ	1 EA.
8"x1" BRASS SADDLE W/CORP. STOP	1 EA.
8"x6" TAPPING SLEEVE, FL	1 EA.
12"x6" TAPPING CROSS, FL	1 EA.
MJ ADAPTER	1 EA.
6"x2" REDUCER MJ x FIPT	1 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	3 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	3 EA.
1" AWWA BALL VALVE	1 EA.
6" AWWA PVC C900 DR-25	60 L.F.
1" SCHEDULE 40 PVC	12 L.F.
1" PVC CAP	1 EA.
2" PVC CAP	3 EA.
RECONNECT SERVICE WATER CONNECTION	4 EA.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.
COUPLING ADAPTERS	1 LS.

CAUTION:

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UTILITIES NOTE:

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SEPARATION DISTANCES

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STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED PROFESSIONAL ENGINEER
10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT
PROPOSED 8" PVC C900 WATERLINE
FROM PALM ST. TO GEORGIA RUTH DR.
STA. 23+38 TO 36+60

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-05
DATE: OCTOBER 2021	NO. 5	OF 41	

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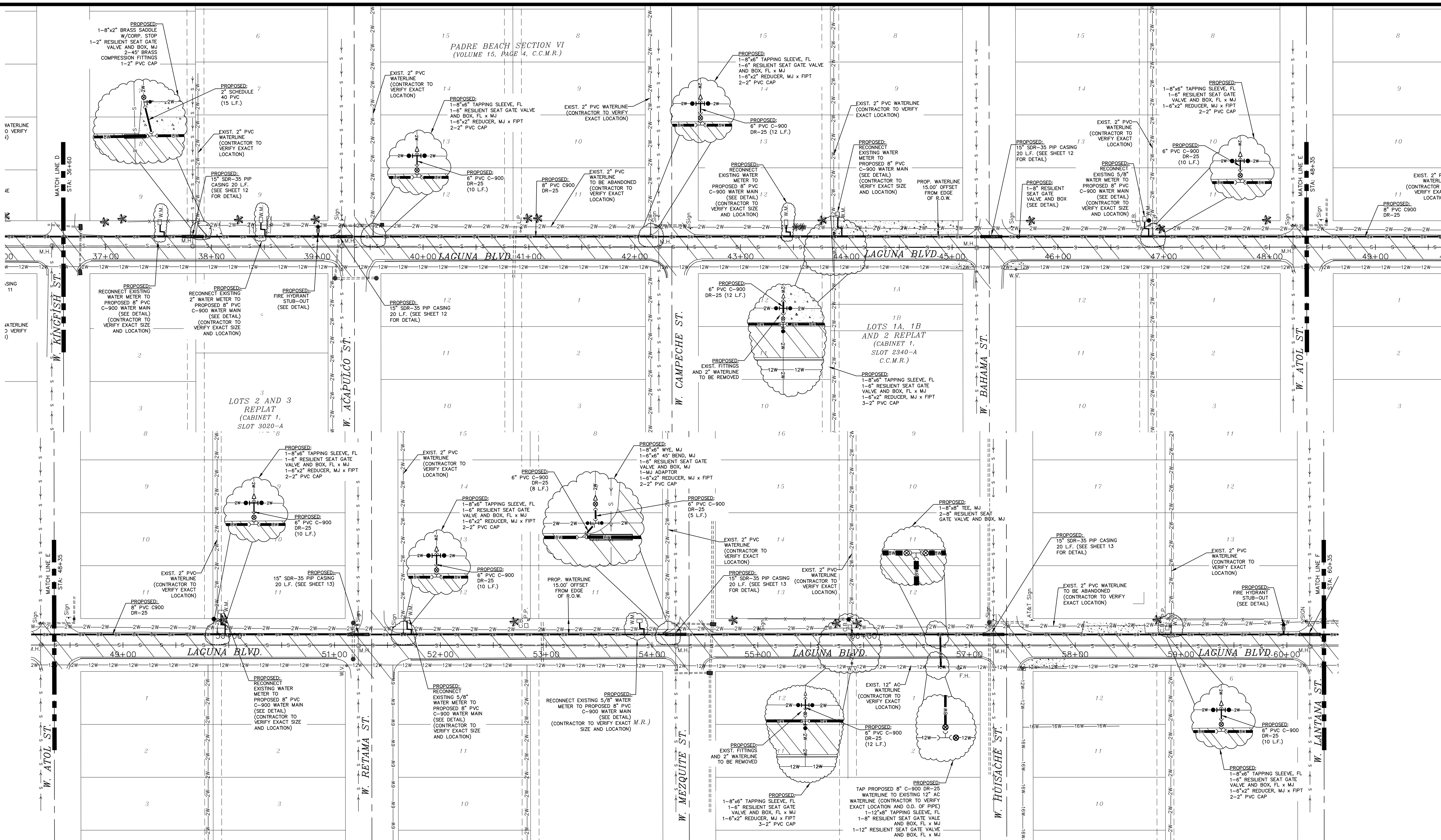

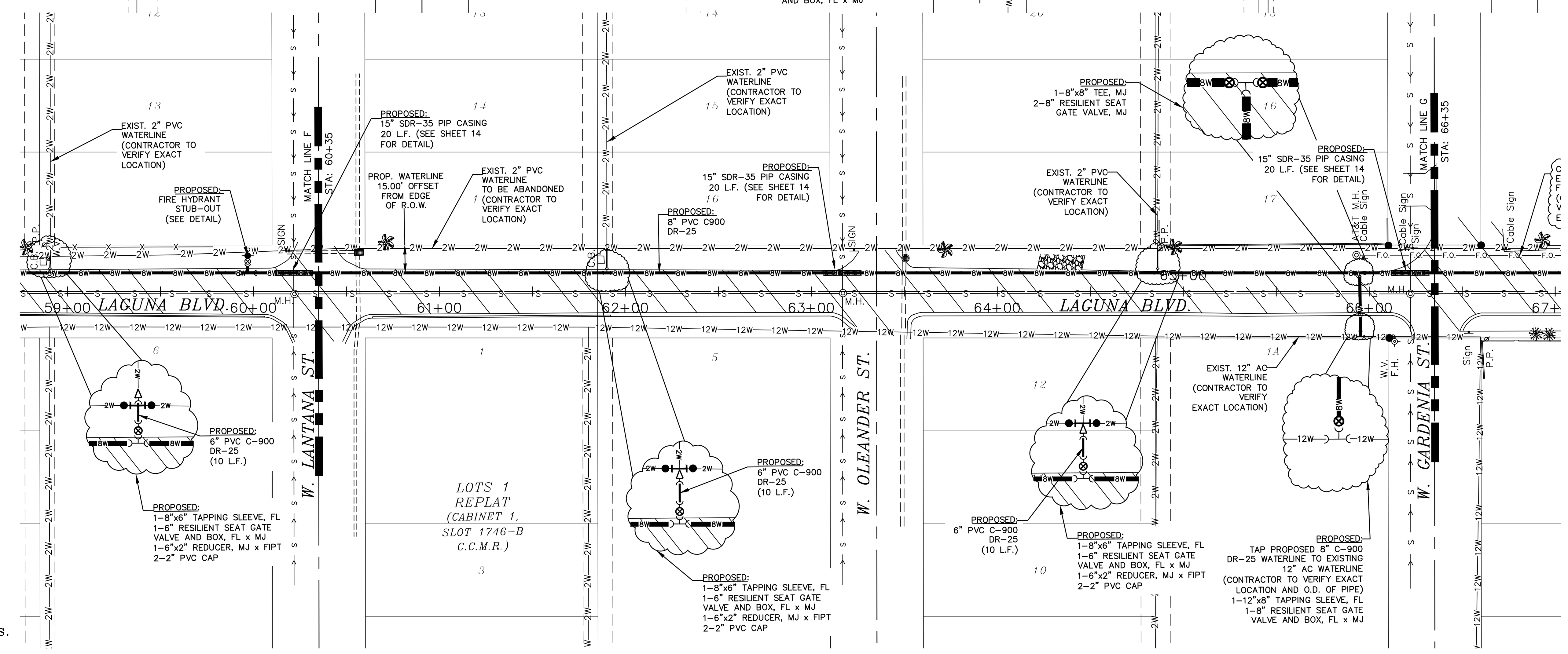

SCALE 1"=50'

LEGEND

Lot Line	
R.O.W. Line	
Easement	
Fence Line	—X—X—
Power Pole(P.P.)	
Guy Wire(G.W.)	
Cable Box	C.B.
Man Hole	M.H.
Vent Pipe	V.P.
Irrigation Valve	I.V.
Water Meter	W.M.
Meter Pole	M.P.
Road Side Ditch	R.S.D.
Drain Line	
Electrical Box	E.B.
Water Valve(W.V.)	⊗
Control Valve(C.V.)	⊗
Fire Hydrant	F.H.
Light Pole	L.P.
Telephone Box	T.B.
Cable Line	—F.O.—F.O.—
Existing Sanitary Sewer Line	—S—
Gas Meter	G.M.
Sprinkler Head	
Gas Line	—GAS—
Proposed 6" Water Line	6W
Proposed 8" Water Line	8W
Found 1/2" Iron Rebar	●
Existing 2" Water Line	—2W—
Existing 6" Water Line	—6W—
Existing 8" Water Line	—8W—
Existing 12" Water Line	—12W—
Existing 16" Water Line	—16W—
Existing 24" Water Line	—24W—
Proposed 12" Water Line	12W
Proposed PVC Cap	
Existing Storm Sewer Line	
Light Pole(L.P.)	
Concrete Parking Block	
Turning Signal Post(T.P.)	◎

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	3042 L.F.
15" SDR-35 PIP CASING	180 L.F.
8"x8" 45° BEND, MJ	43 EA.
8"x8" TEE, MJ	2 EA.
8"x6" WYE, MJ	1 EA.
8"x2" BRASS SADDLE W/CORP. STOP	1 EA.
45° BRASS COMPRESSION FITTINGS	2 EA.
8"x6" TAPPING SLEEVE, FL	10 EA.
12"x8" TAPPING SLEEVE, FL	2 EA.
6"x6" 45° BEND, MJ	1 EA.
6"x2" REDUCER MJ x FIPT	11 EA.
MJ ADAPTER	1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	7 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	11 EA.
2" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
6" AWWA PVC C900 DR-25	119 L.F.
2" AWWA SCHEDULE 40 PVC	15 L.F.
2" PVC CAP	25 EA.
RECONNECT SERVICE WATER CONNECTION	7 EA.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.
COUPLING ADAPTERS	1 LS.
TAP PROPOSED 8" PVC C-900 TO EXISTING 12" AC WATERLINE	2 EA.

STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED
PROFESSIONAL ENGINEER

Randall C. Winston, P.E.
10/18/2021

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SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT
PROPOSED 8" PVC C900 WATERLINE
FROM PALM ST. TO GEORGIA RUTH DR.
STA. 36+60 TO 66+35

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO. 21-108-06
DATE: OCTOBER 2021	NO. 6	OF 41	

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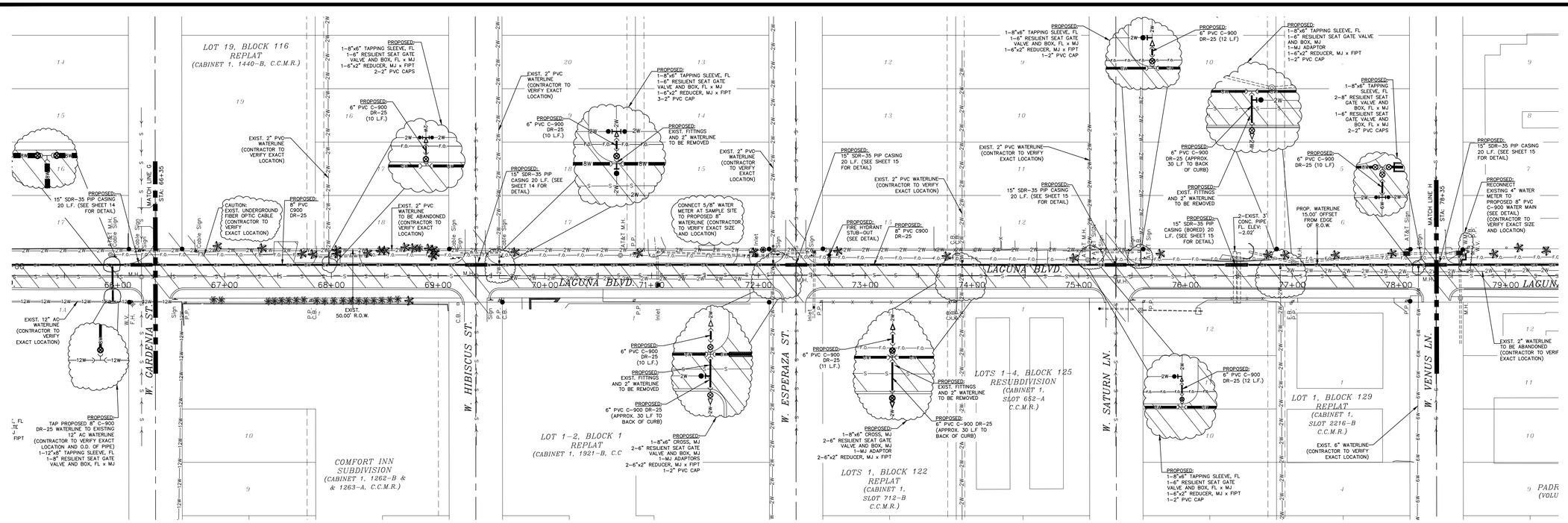

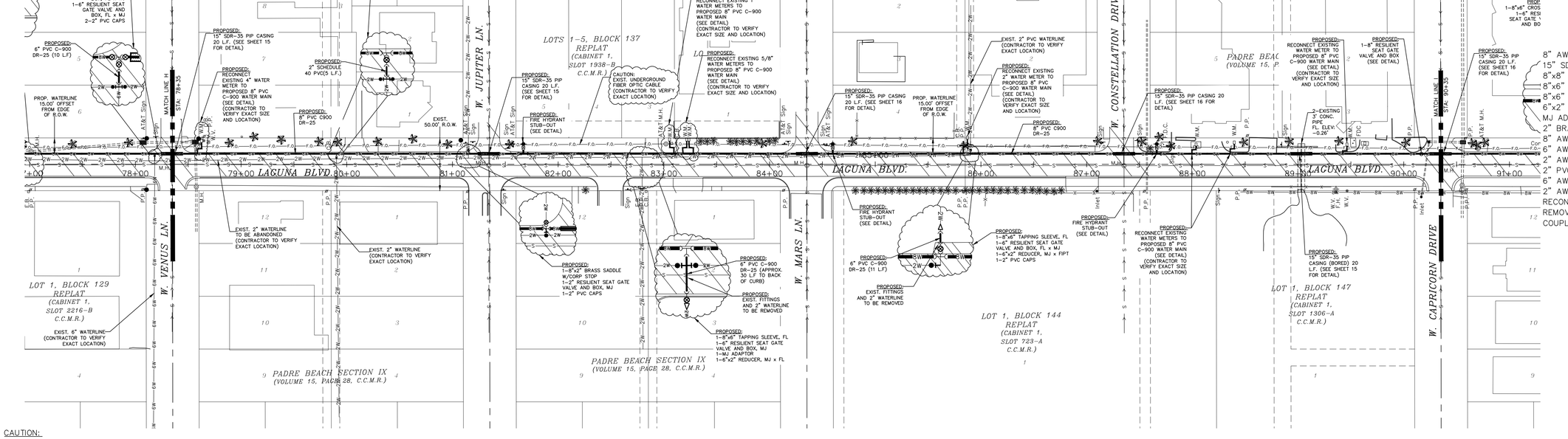

SCALE 1"=50'

LEGEND

- Lot Line
- R.O.W. Line
- Easement
- Fence Line —X—X—
- Power Pole(P.P.)
- Guy Wire(G.W.)
- Cable Box C.B.
- Man Hole M.H.
- Vent Pipe V.P.
- Irrigation Valve I.V.
- Water Meter W.M.
- Meter Pole M.P.
- Road Side Ditch R.S.D.
- Drain Line
- Electrical Box E.B.
- Water Valve(W.V.)
- Control Valve(C.V.)
- Fire Hydrant F.H.
- Light Pole L.P.
- Telephone Box T.B.
- Cable Line —F.O.—F.O.—
- Existing Sanitary Sewer Line —S—
- Gas Meter G.M.
- Sprinkler Head
- Gas Line —GAS—
- Proposed 6" Water Line —6W—
- Proposed 8" Water Line —8W—
- Found 1/2" Iron Rebar
- Existing 2" Water Line —2W—
- Existing 6" Water Line —6W—
- Existing 8" Water Line —8W—
- Existing 12" Water Line —12W—
- Existing 16" Water Line —16W—
- Existing 24" Water Line —24W—
- Proposed 12" Water Line —12W—
- Proposed PVC Cap
- Existing Storm Sewer Line
- Light Pole(L.P.)
- Concrete Parking Block
- Turning Signal Post(T.P.)

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	2400 L.F.
15" SDR-35 PIP CASING	190 L.F.
8"x8" 45° BEND, MJ	43 EA.
8"x6" TAPPING SLEEVE, FL	7 EA.
8"x6" CROSS, MJ	2 EA.
6"x2" REDUCER MJ x FIPT	11 EA.
MJ ADAPTER	4 EA.
2" BRASS SADDLE W/CORP. STOP	2 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	3 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	12 EA.
2" AWWA RESILIENT SEAT GATE VALVE W/BOX	2 EA.
2" PVC CAP	17 EA.
6" AWWA PVC C900 DR-25	206 L.F.
2" AWWA SCHEDULE 40 PVC	5 L.F.
RECONNECT SERVICE WATER CONNECTION	8 EA.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.
COUPLING ADAPTERS	1 LS.

CAUTION:

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SEPARATION DISTANCES

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STATE OF TEXAS — RANDALL C. WINSTON — 70417 — LICENSED PROFESSIONAL ENGINEER

10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS

LAGUNA MADRE WATER DISTRICT

PROPOSED 8" PVC C900 WATERLINE FROM PALM ST. TO GEORGIA RUTH DR. STA. 66+35 TO 90+35

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-07

DATE: OCTOBER 2021 — NO. 7 — OF 41

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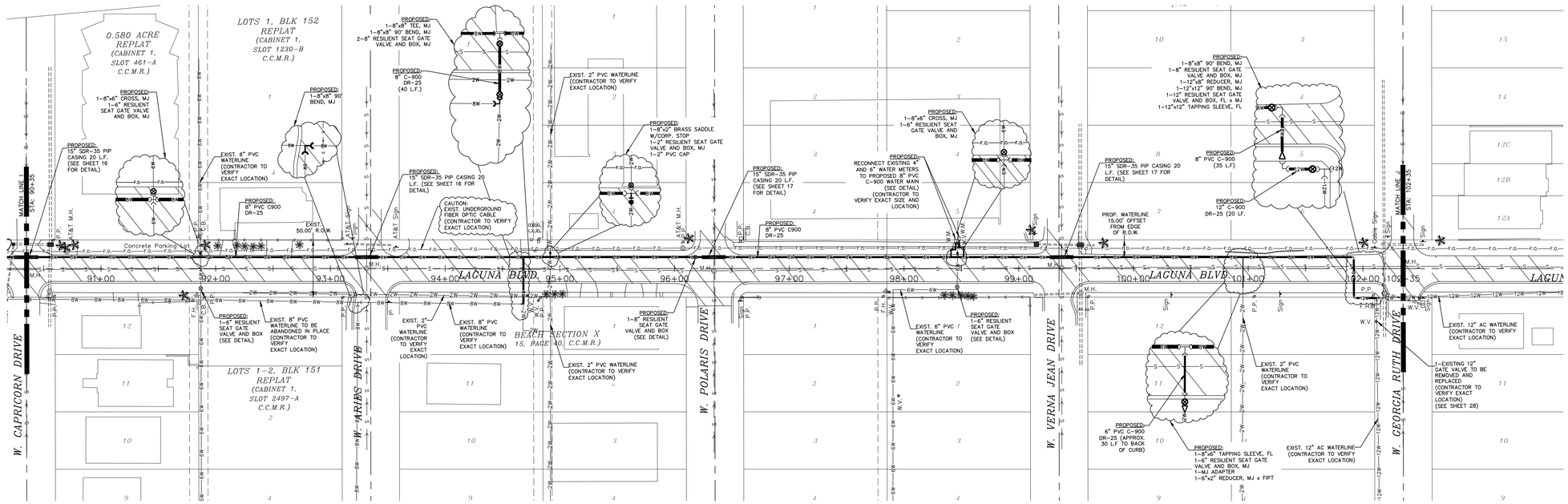

SCALE 1"=50'

LEGEND

Lot Line	———
R.O.W. Line	————
Easement	– – – –
Fence Line	—X—X—
Power Pole(P.P.)	
Guy Wire(G.W.)	
Cable Box	C.B.
Man Hole	M.H.
Vent Pipe	V.P.
Irrigation Valve	I.V.
Water Meter	W.M.
Meter Pole	M.P.
Road Side Ditch	R.S.D.
Drain Line	— - — - —
Electrical Box	E.B.
Water Valve(W.V.)	
Control Valve(C.V.)	
Fire Hydrant	F.H.
Light Pole	L.P.
Telephone Box	T.B.
Cable Line	—F.O.—F.O.—
Existing Sanitary Sewer Line	—S—
Gas Meter	G.M.
Sprinkler Head	
Gas Line	—GAS—
Proposed 6" Water Line	—6W—
Proposed 8" Water Line	—8W—
Found 1/2" Iron Rebar	
Existing 2" Water Line	—2W—
Existing 6" Water Line	—6W—
Existing 8" Water Line	—8W—
Existing 12" Water Line	—12W—
Existing 16" Water Line	—16W—
Existing 24" Water Line	—24W—
Proposed 12" Water Line	—12W—
Proposed PVC Cap	
Existing Storm Sewer Line	
Light Pole(L.P.)	
Concrete Parking Block	
Turning Signal Post(T.P.)	

ESTIMATED SHEET QUANTITIES

8" AWWA PVC C-900 DR-25	1235 L.F.
12" AWWA PVC C-900 DR-25	20 L.F.
6" AWWA PVC C900 DR-25	30 L.F.
15" SDR-35 PIP CASING	70 L.F.
8"x8" BEND, MJ	14 EA.
8"x8" 90° BEND, MJ	3 EA.
8"x8" TEE, MJ	1 EA.
8"x6" CROSS, MJ	2 EA.
8"x6" TAPPING SLEEVE, FL	1 EA.
12"x12" TAPPING SLEEVE, FL	1 EA.
12"x12" 90° BEND, MJ	1 EA.
12"x8" REDUCER, MJ	1 EA.
2" BRASS SADDLE W/CORP STOP	1 EA.
MJ ADAPTOR	1 EA.
6"x2" REDUCER, MJ x FIPT	1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX	4 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	5 EA.
2" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
RECONNECT SERVICE WATER CONNECTION	2 EA.
2" PVC CAP	1 EA.
REMOVAL OF EXISTING 2" WATERLINE AND FITTING	1 L.S.
COUPLING ADAPTERS	1 L.S.

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STATE OF TEXAS · RANDALL C. WINSTON · 70417 · LICENSED PROFESSIONAL ENGINEER

10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT
PROPOSED 8" PVC C900 WATERLINE
FROM PALM ST. TO GEORGIA RUTH DR.
STA. 90+35 TO 102+35

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-08

DATE: OCTOBER 2021 NO. 8 OF 41

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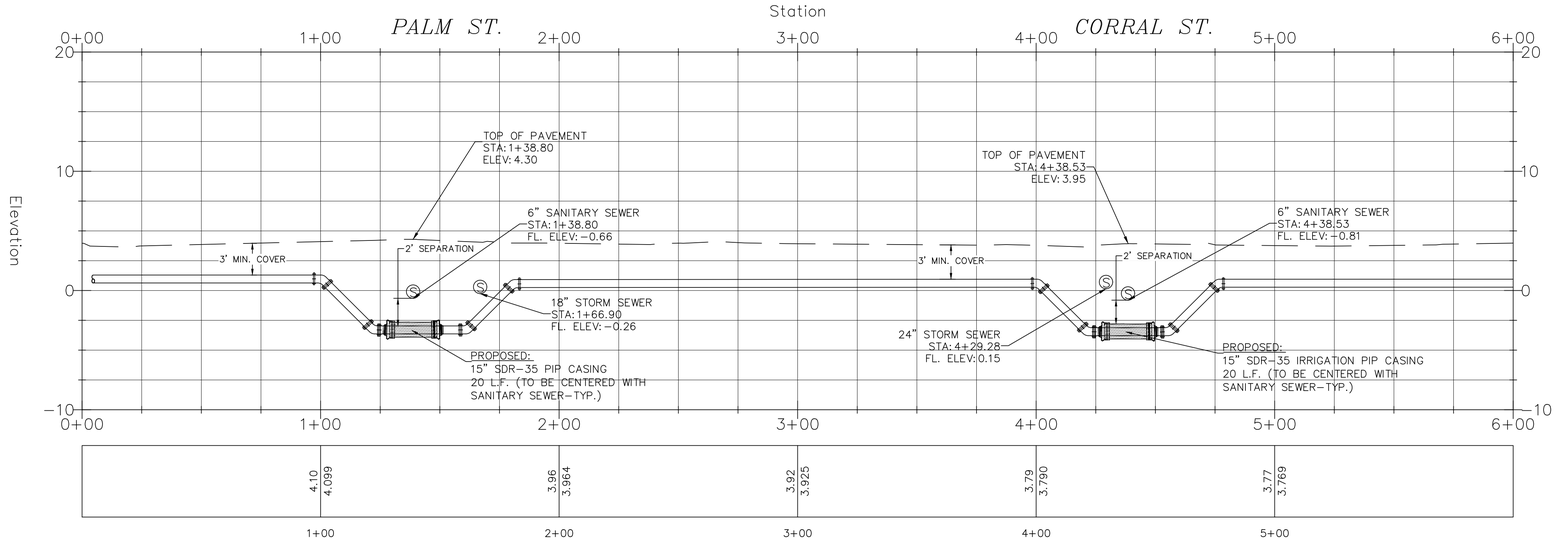
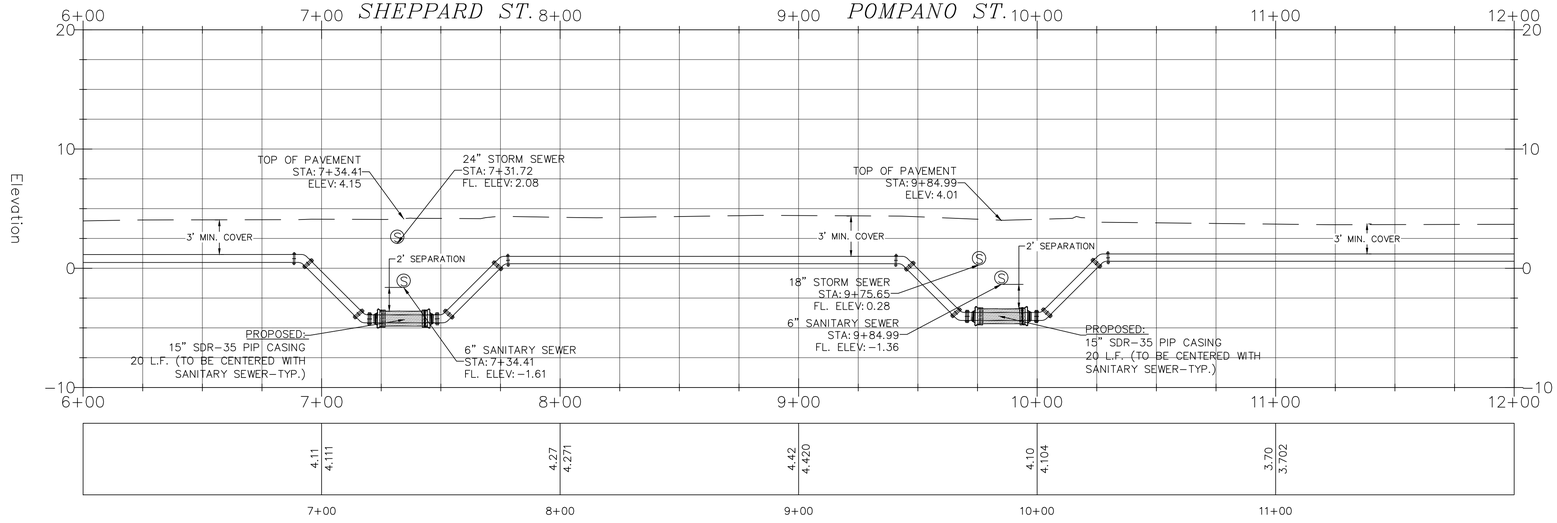
LAGUNA BLVD PROFILE



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

For a new waterline that crosses over an existing and non–pressure rated wastewater line, the minimum separation distance is 2 feet. the wastewater line must be perpendicular and constructed in compliance with §290.44(e)(4)(B)(i)(I)

STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED
PROFESSIONAL ENGINEER

Randall C. Winston, P.E.
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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

CROSSING PROFILES STA. 0+00 TO 12+00

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F−592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21−108−09

DATE: OCTOBER 2021 NO. 9 OF 41

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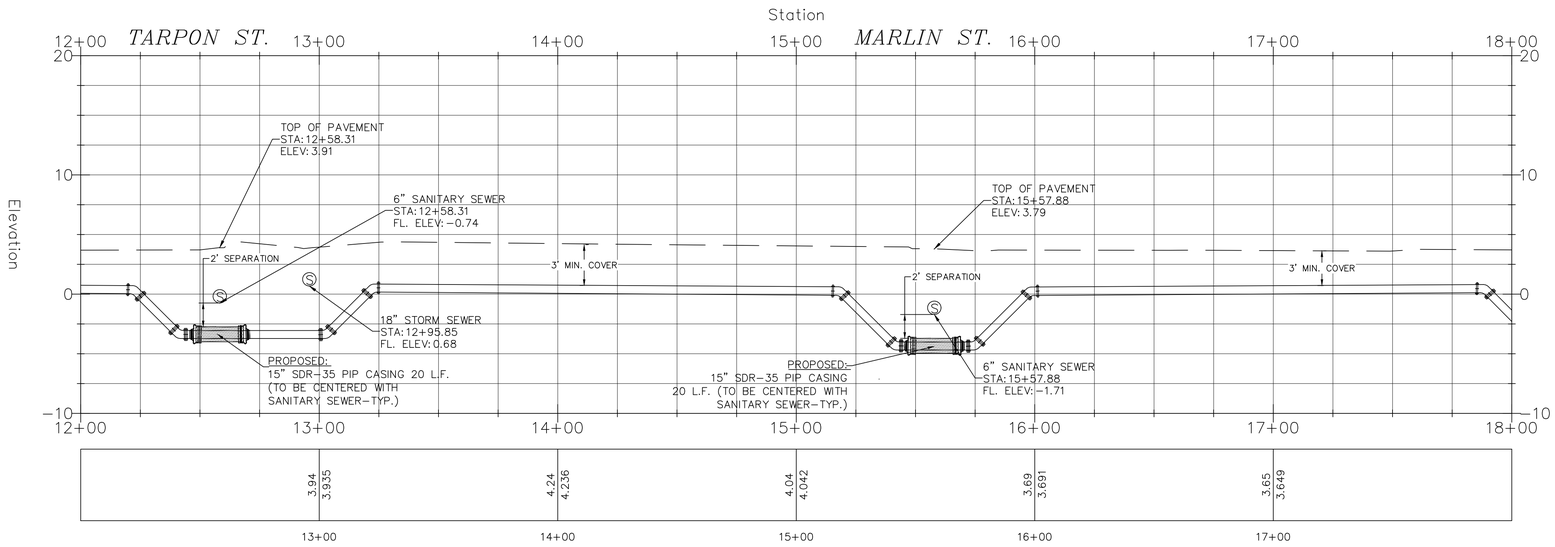
LAGUNA BLVD PROFILE



SCALE
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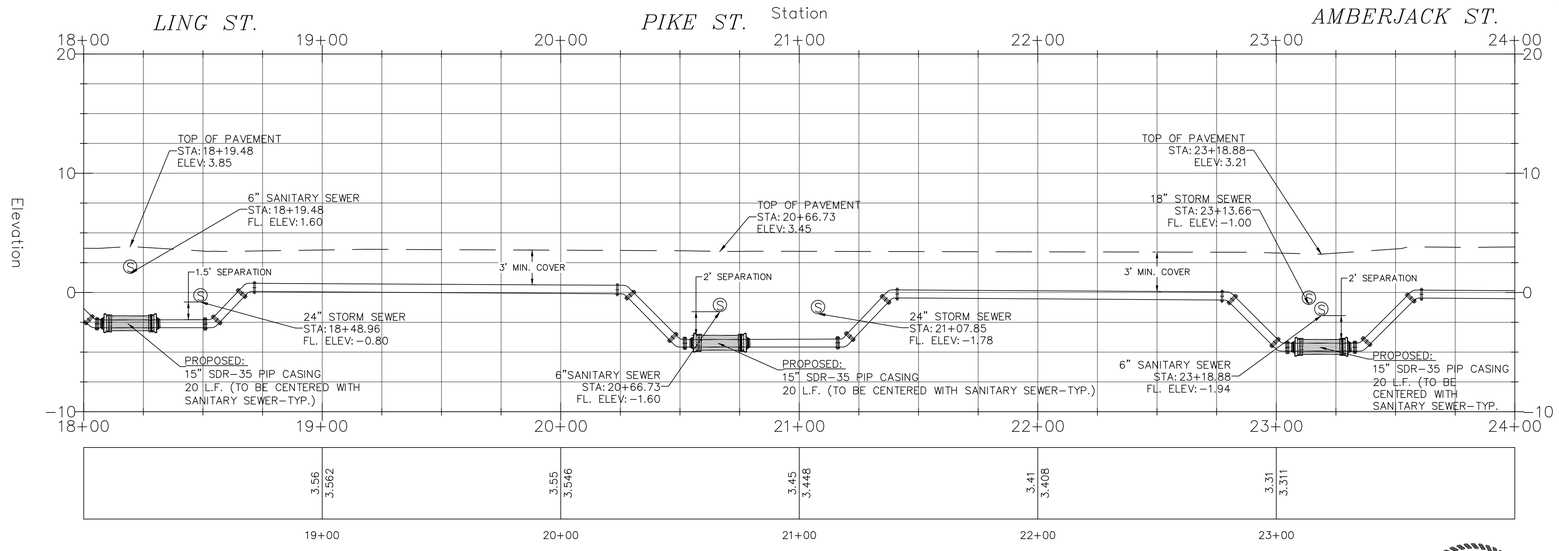
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



SCALE
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VERTICAL: 1"= 6'

SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

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STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED
PROFESSIONAL ENGINEER

Randall C. Winston, P.E.
10/18/2021

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CAMERON COUNTY, TEXAS
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CROSSING PROFILES STA. 12+00 TO 24+00

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SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F−592
WESLACO, TEXAS

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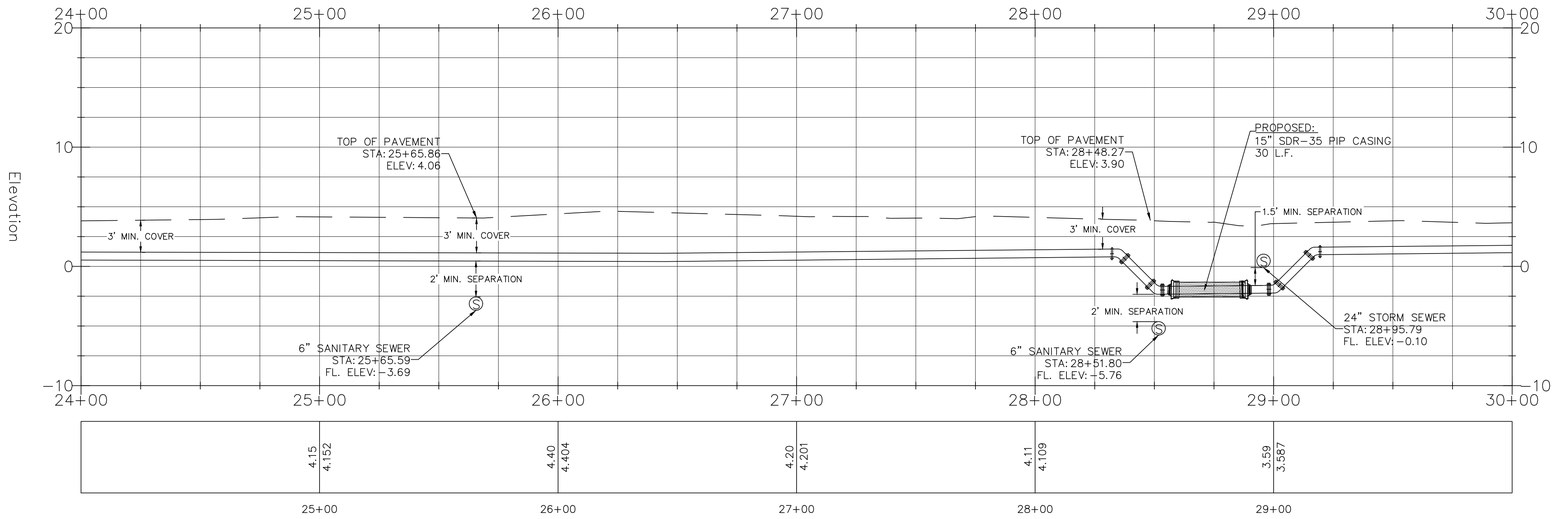
LAGUNA BLVD PROFILE

WHITING ST. — *SWORDFISH ST.*



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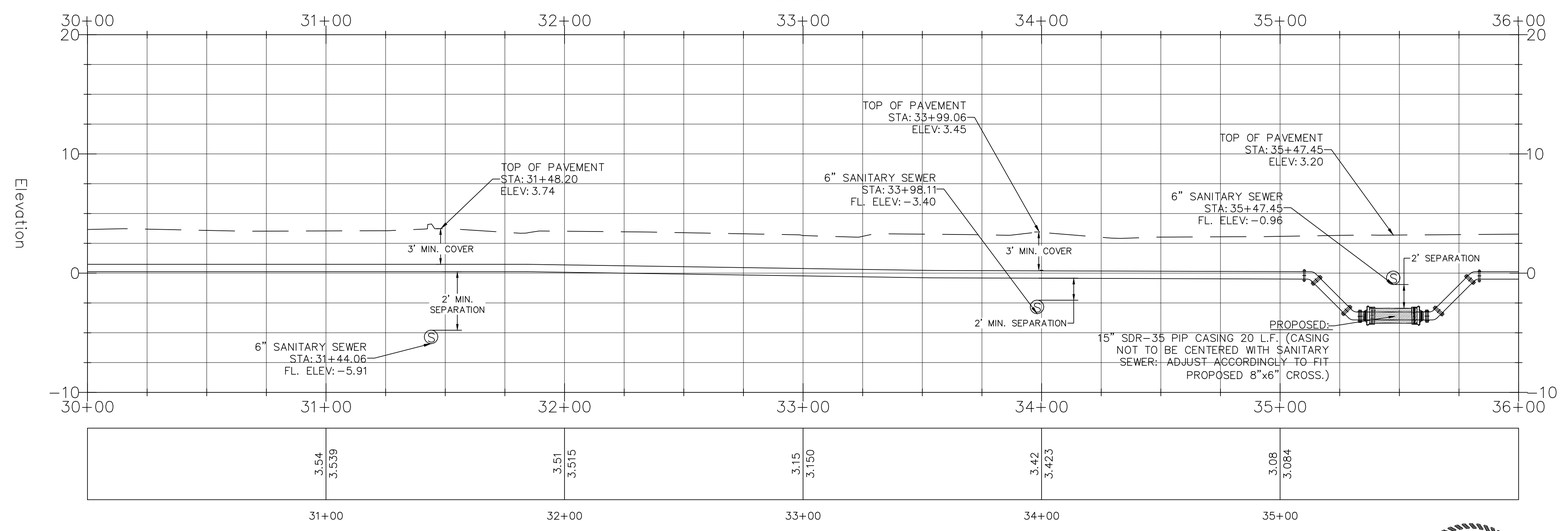
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE

RED SNAPPER ST. — *DOLPHIN ST.*



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

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CROSSING PROFILES
STA. 24+00 TO 36+00

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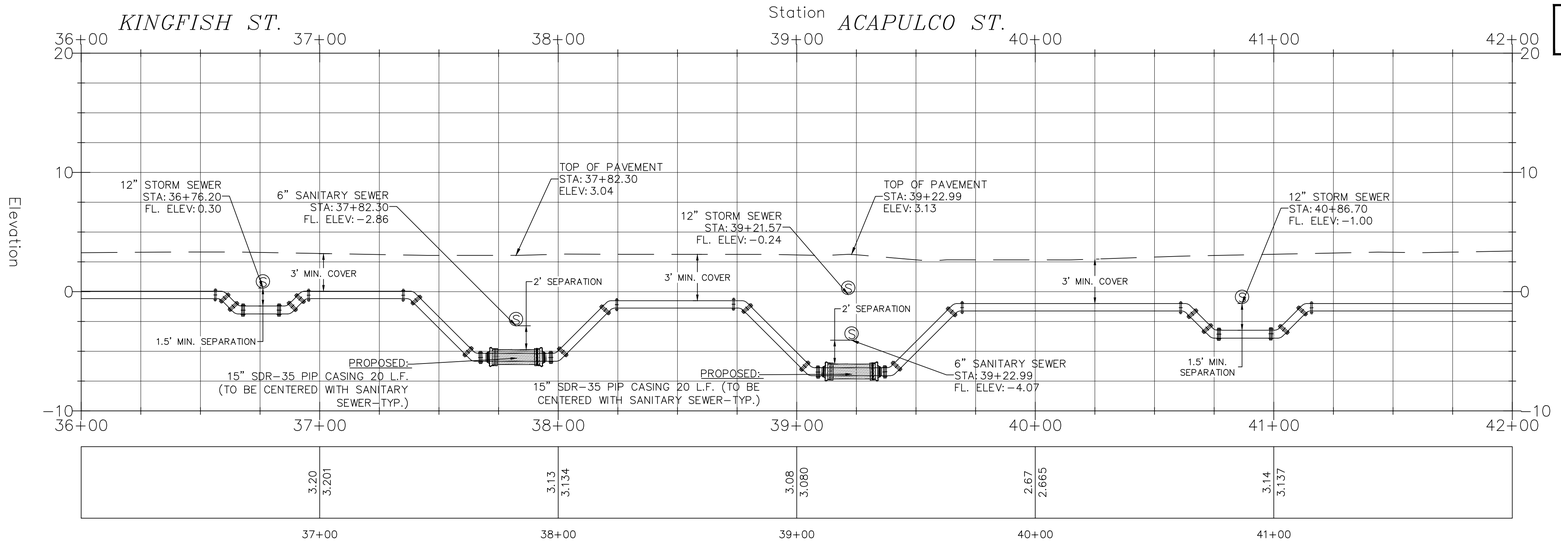

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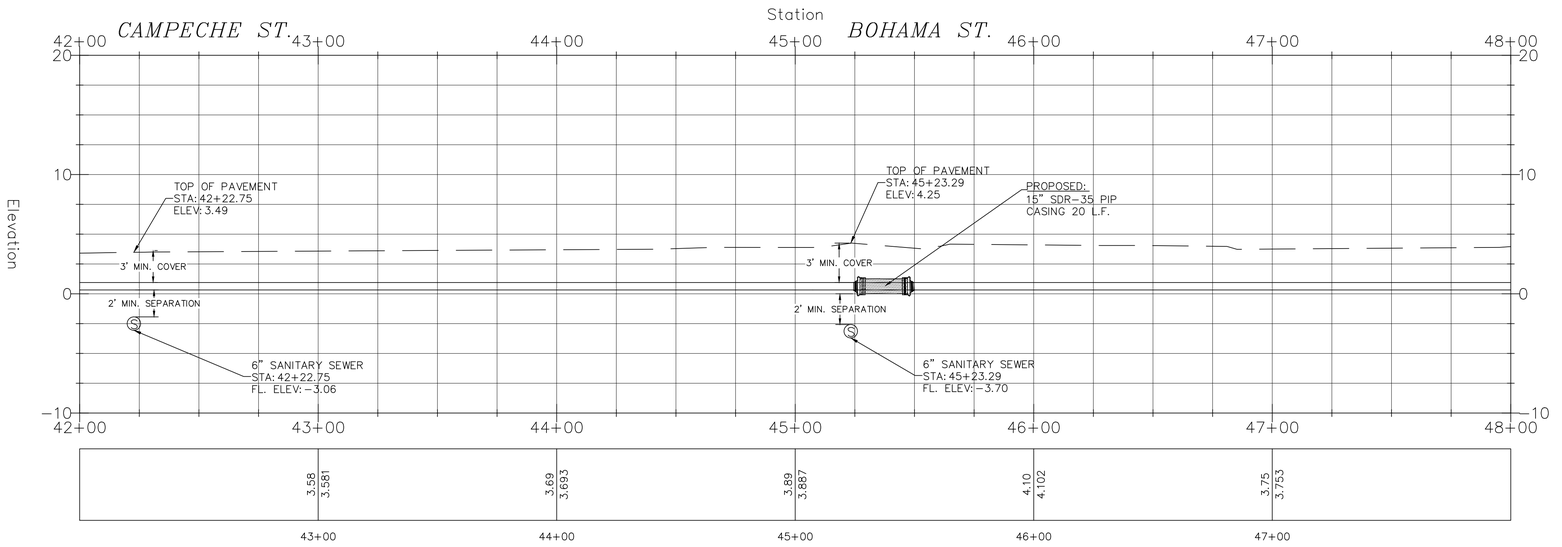
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

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CAMERON COUNTY, TEXAS
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CROSSING PROFILES
STA. 36+00 TO 48+00

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WESLACO, TEXAS

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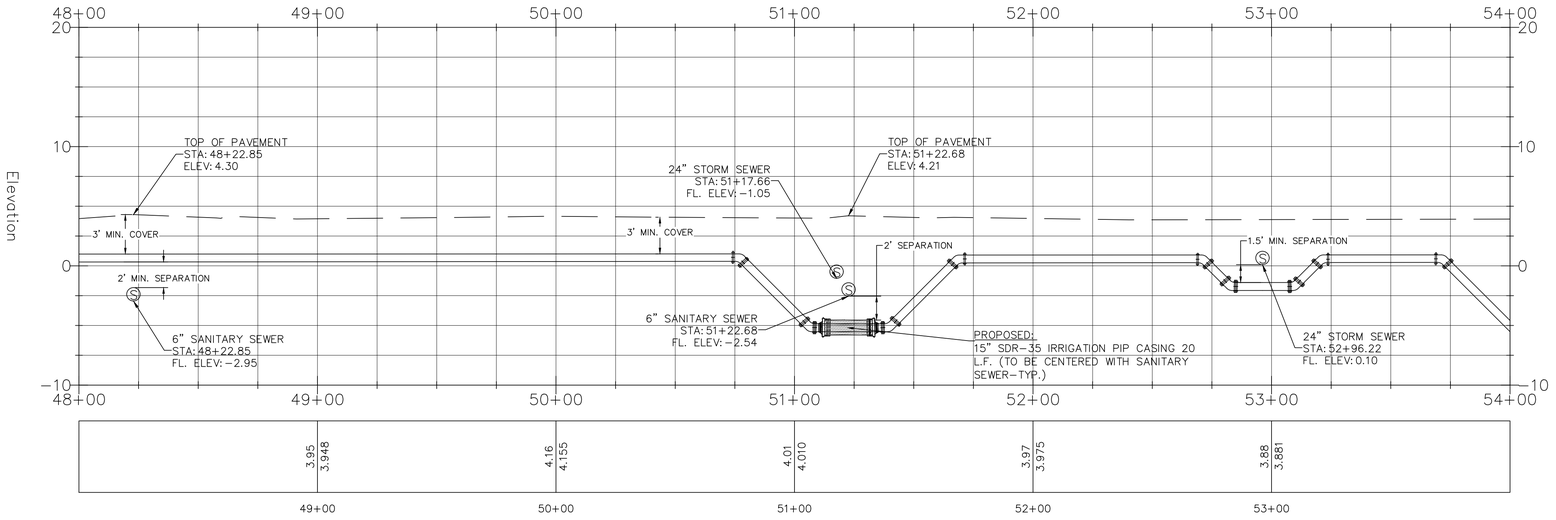
LAGUNA BLVD PROFILE

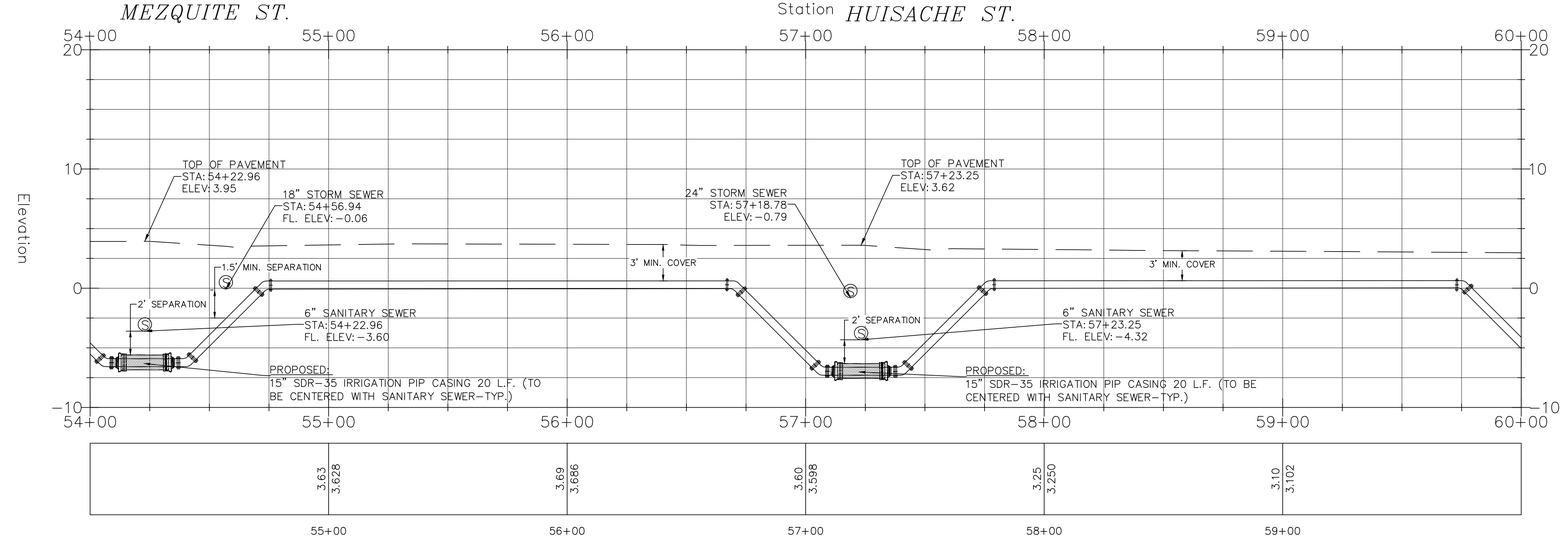
ATOL ST. Station *RETAMA ST.*



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE

MEZQUITE ST. Station *HUISACHE ST.*



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

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STA. 48+00 TO 60+00

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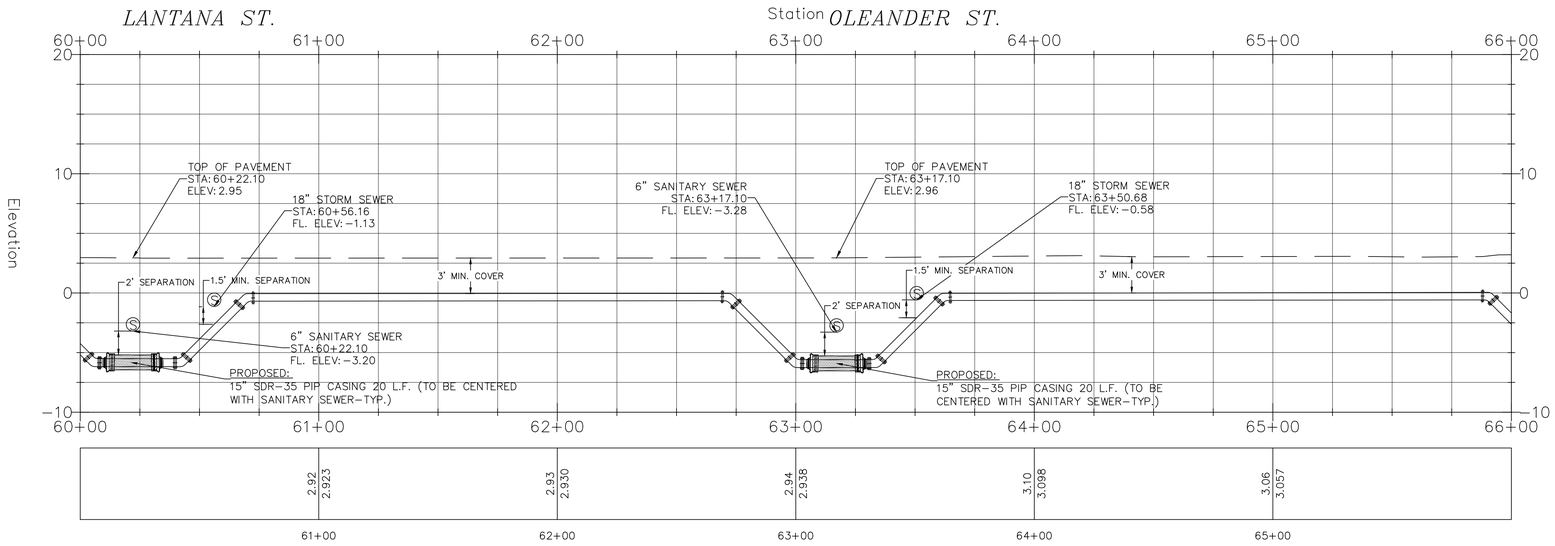
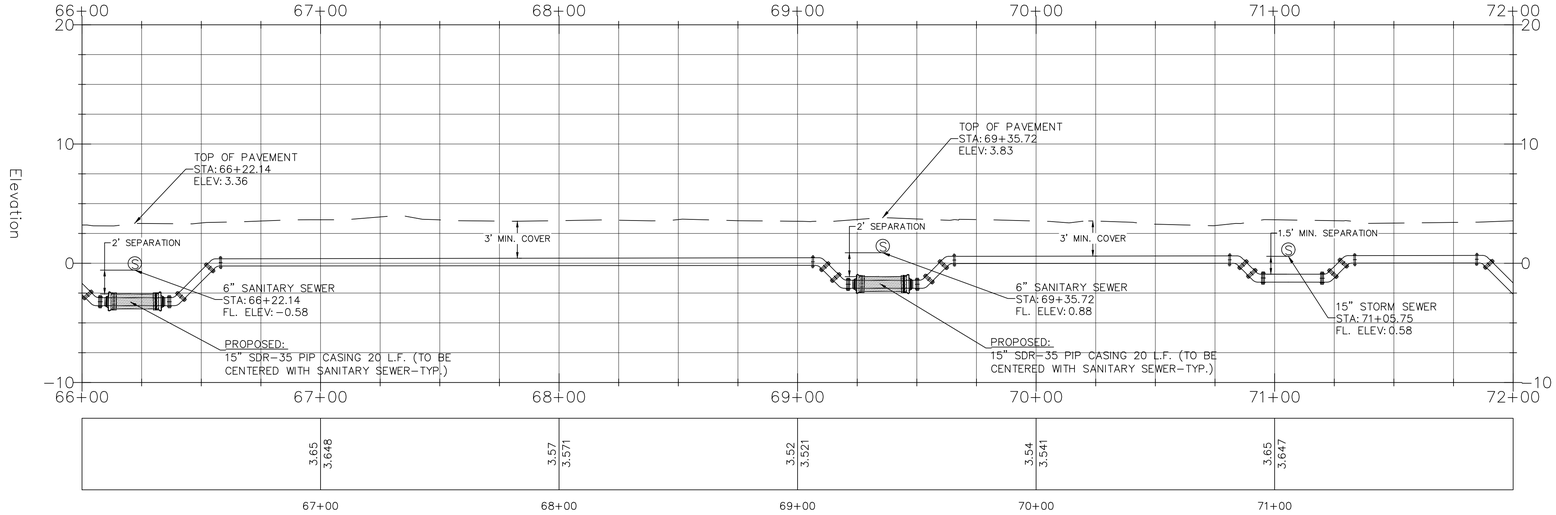
LAGUNA BLVD PROFILE

SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'



LAGUNA BLVD PROFILE

SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'



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CAMERON COUNTY, TEXAS
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CROSSING PROFILES
STA. 60+00 TO 72+00

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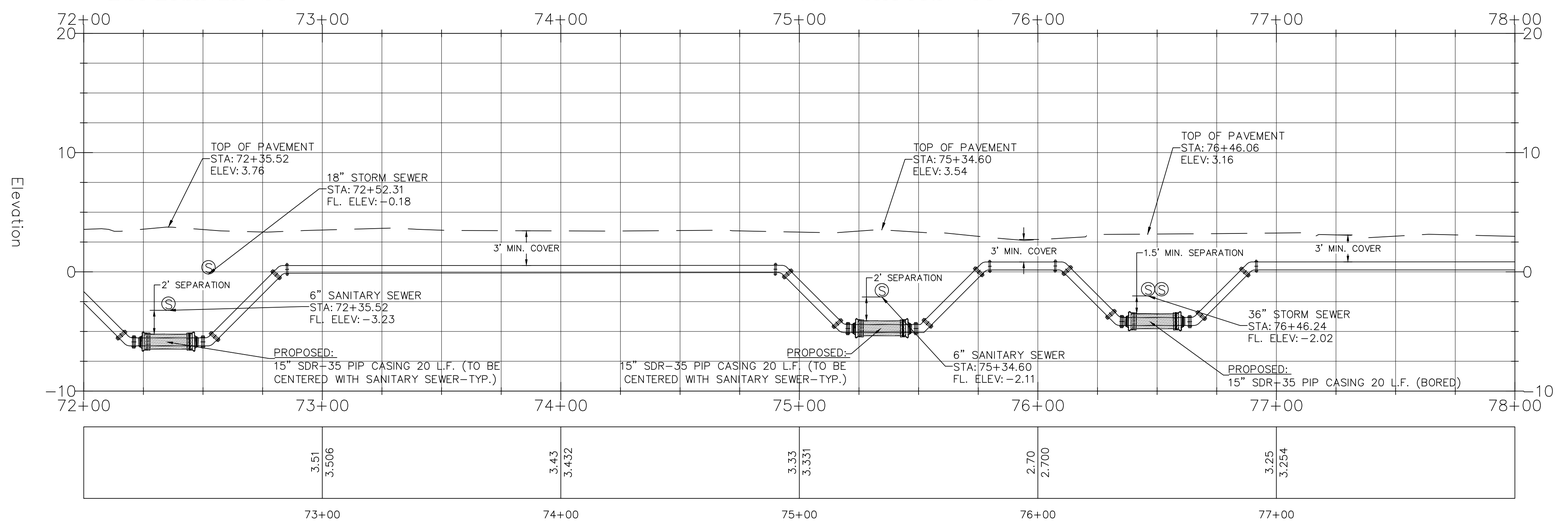
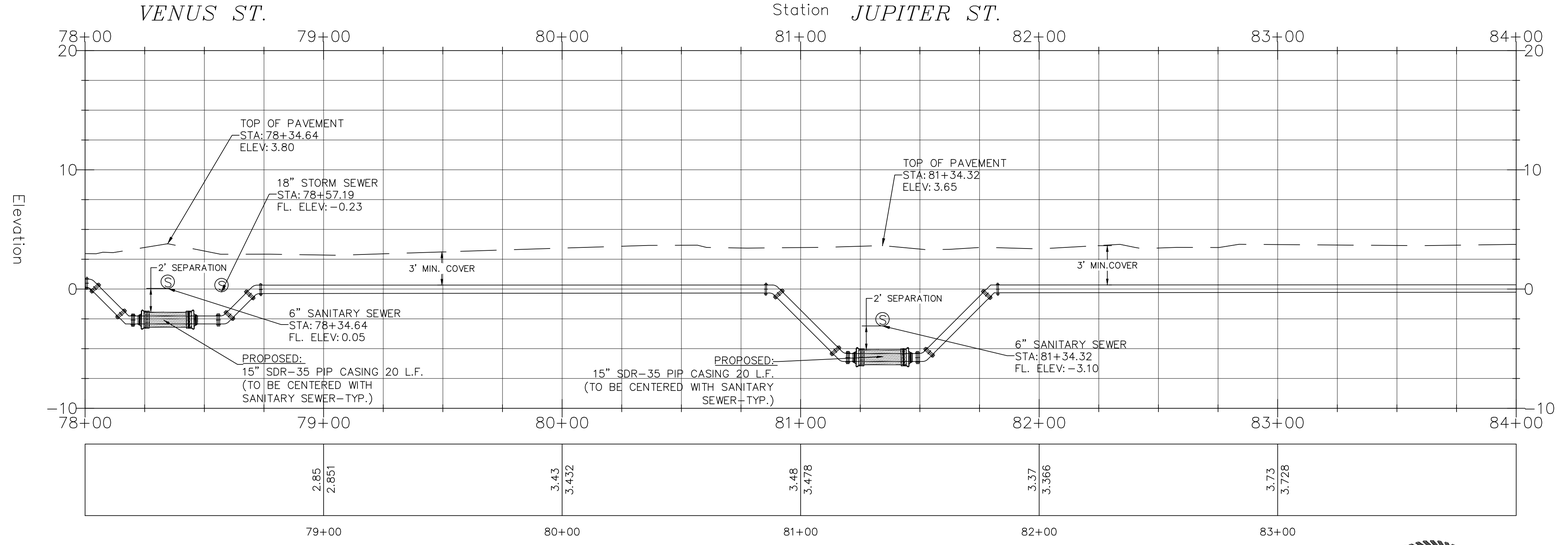
SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

CROSSING PROFILES
STA. 72+00 TO 84+00

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DATE: OCTOBER 2021	NO. 15	OF 41	

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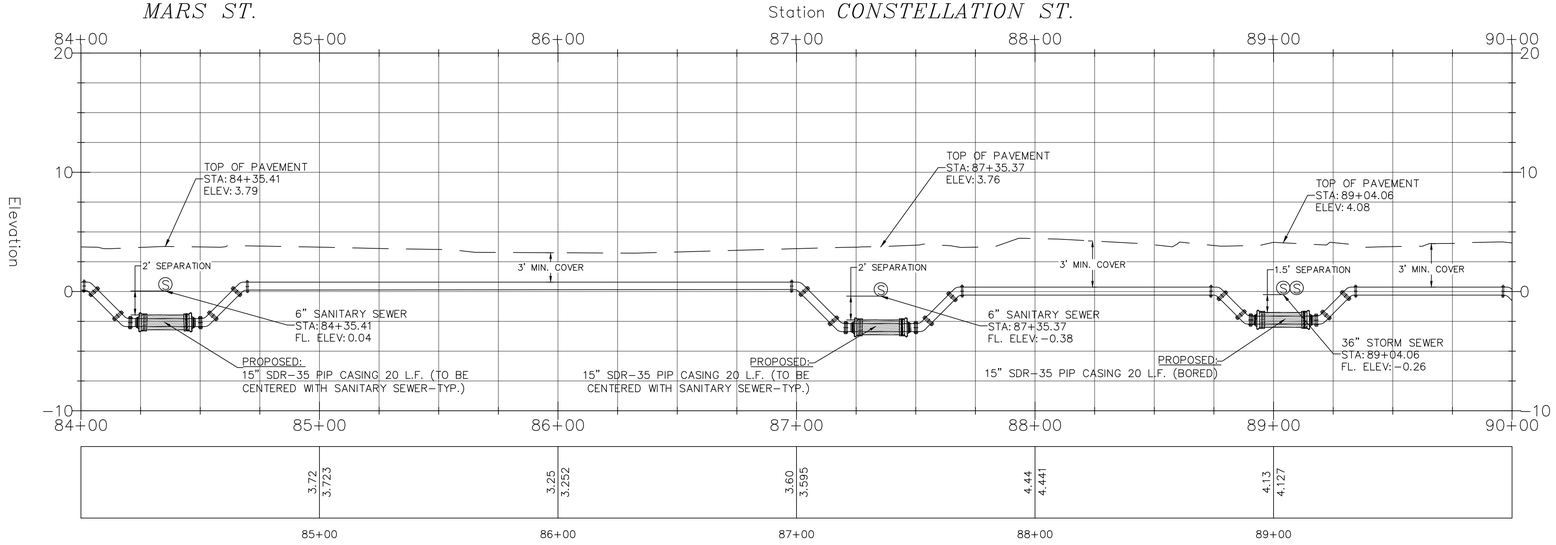
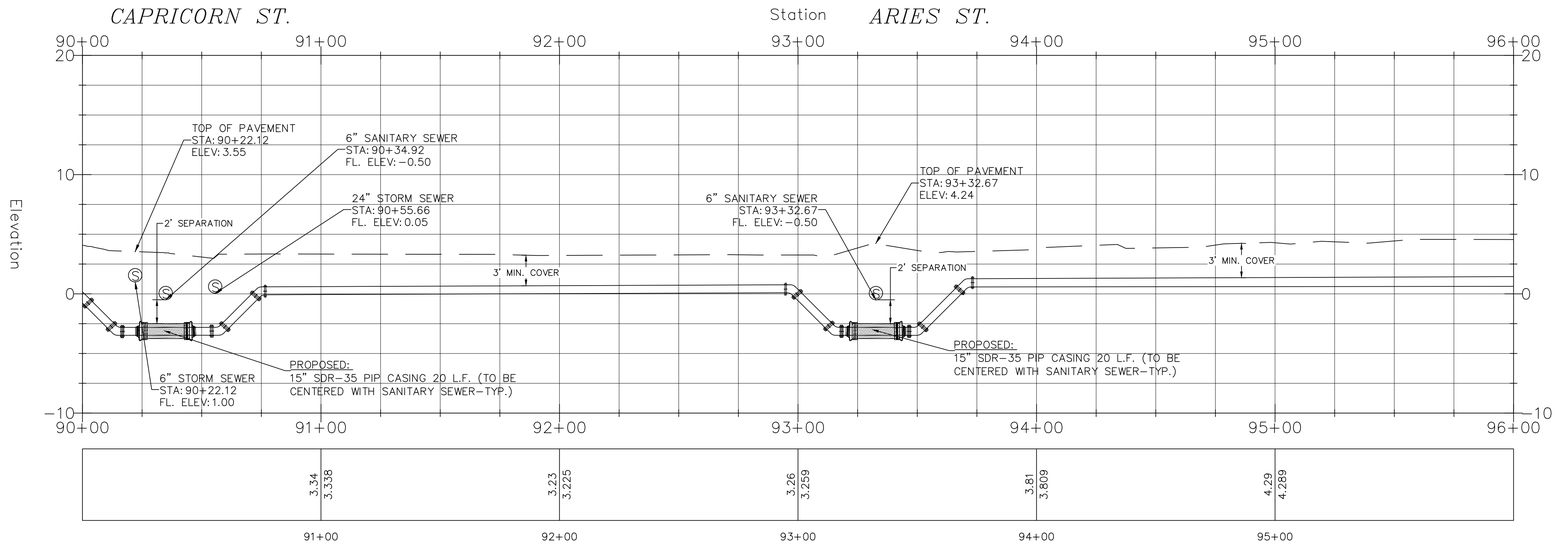
SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

CROSSING PROFILES
STA. 84+00 TO 96+00

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F−592
WESLACO, TEXAS

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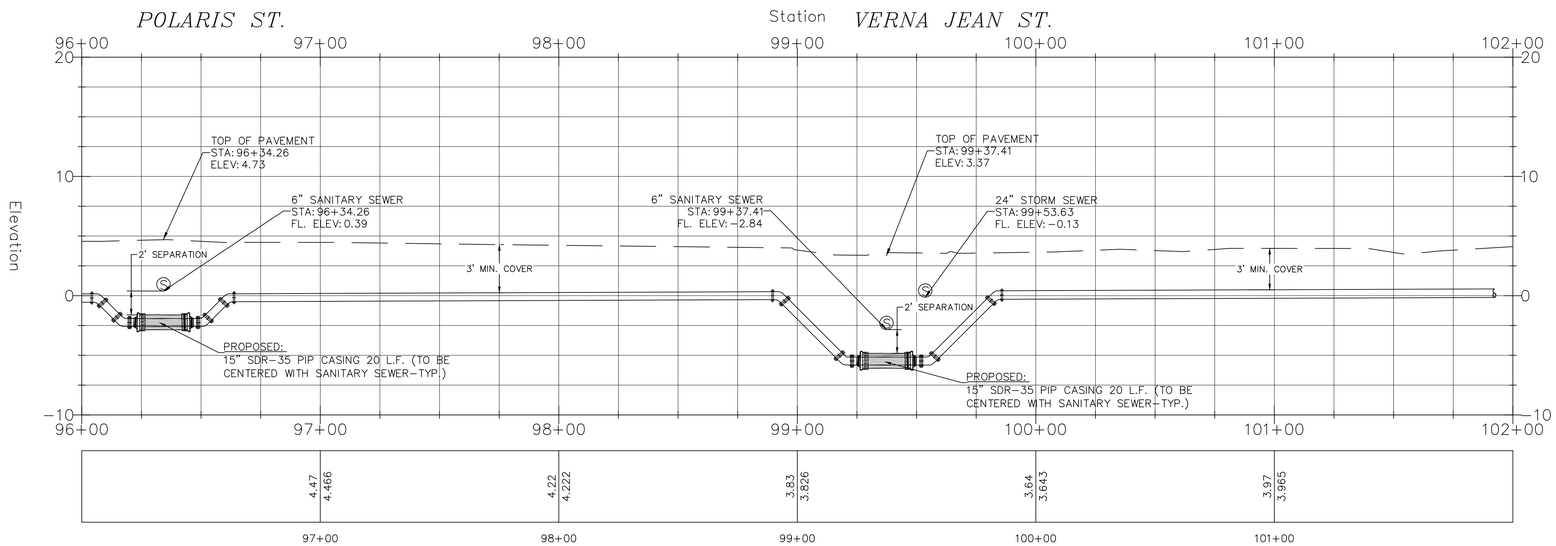
SCALE
HORIZONTAL: 1"= 30' VERTICAL: 1"= 6'

LAGUNA BLVD PROFILE



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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

CROSSING PROFILES
STA. 96+00 TO 102+35

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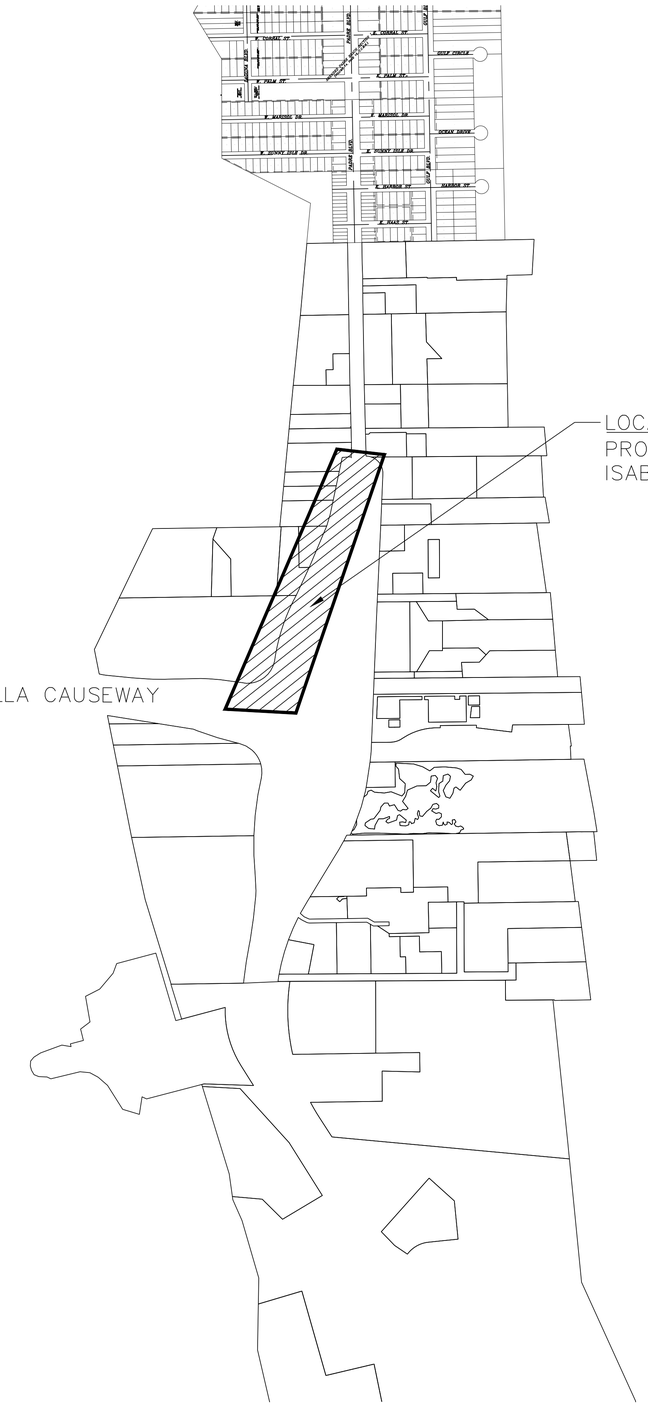
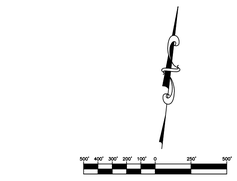
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.





LOCATION MAP

SCALE: 1" = 500'

STATE OF TEXAS
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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 2

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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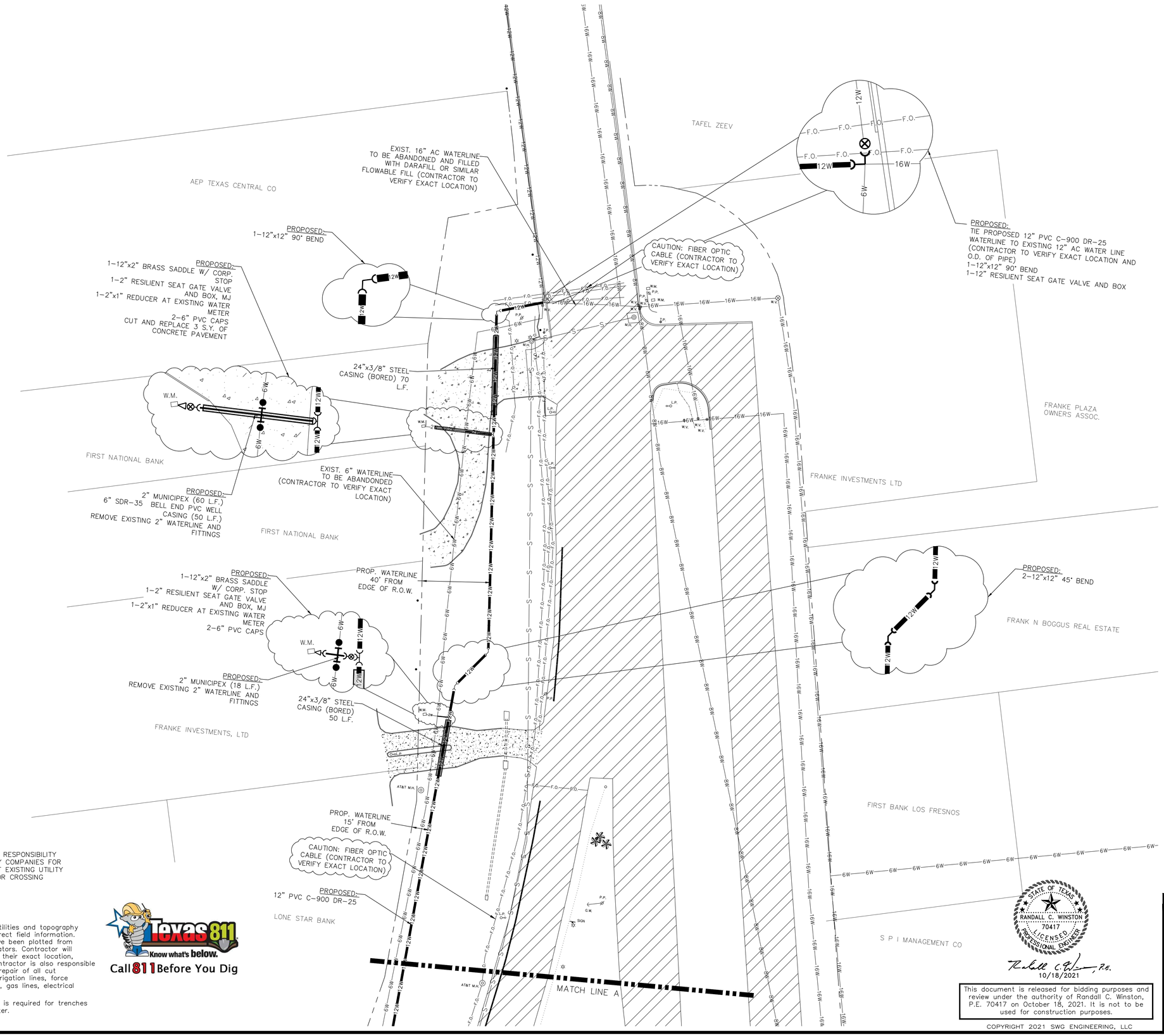

SCALE 1"=40'

LEGEND

- Lot Line
- R.O.W. Line
- Easement
- Fence Line —X—X—
- Power Pole(P.P.)
- Guy Wire(G.W.)
- Cable Box...C.B.
- Man Hole...M.H.
- Vent Pipe...V.P.
- Irrigation Valve...I.V.
- Water Meter...W.M.
- Meter Pole...M.P.
- Road Side Ditch...R.S.D.
- Drain Line
- Electrical Box...E.B.
- Water Valve(W.V.)
- Control Valve(C.V.)
- Fire Hydrant...F.H.
- Light Pole...L.P.
- Telephone Box...T.B.
- Cable Line —F.O.—F.O.—
- Existing Sanitary Sewer Line —S—
- Gas Meter...G.M.
- Sprinkler Head
- Gas Line —GAS—
- Proposed 6" Water Line —6W—
- Proposed 8" Water Line —8W—
- Found 1/2" Iron Rebar
- Existing 2" Water Line —2W—
- Existing 6" Water Line —6W—
- Existing 8" Water Line —8W—
- Existing 12" Water Line —12W—
- Existing 16" Water Line —16W—
- Existing 24" Water Line —24W—
- Proposed 12" Water Line —12W—
- Proposed PVC Cap
- Existing Storm Sewer Line
- Light Pole(L.P.)
- Concrete Parking Block
- Turning Signal Post(T.P.)

ESTIMATED SHEET QUANTITIES

12" AWWA PVC C-900 DR-25	633 L.F.
24"x3/8" STEEL CASING (BORED)	120 L.F.
CUT AND REPLACE CONCRETE PAVEMENT	3 S.Y.
12"x2" BRASS SADDLE W/CORP. STOP	2 EA.
12"x12" 90° BEND, MJ	2 EA.
12"x12" 45° BEND, MJ	2 EA.
2"-1" REDUCER	2 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
2" AWWA RESILIENT SEAT GATE VALVE W/BOX	2 EA.
2" MUNICIPEX	78 L.F.
6" SDR-35 BELL END PVC WELL CASING	50 L.F.
6" PVC CAPS	4 EA.
RECONNECT SERVICE WATER CONNECTION	2 EA.
TIE PROPOSED 12" PVC C-900 TO EXISTING 16" AC WATERLINE	1 LS.
COUPLING ADAPTORS	1 LS.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.
FILL EXISTING 16" AC WATERLINE WITH DARAFILL OR SIMILAR FLOW-ABLE FILL	1 L.S.

CAUTION:

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UTILITIES NOTE:

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Trench safety protection is required for trenches of depths of 5' or greater.

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STATE OF TEXAS — RANDALL C. WINSTON — 70417 — LICENSED PROFESSIONAL ENGINEER

10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED 12" PVC C900 WATERLINE FROM QUEEN ISABELLA CAUSEWAY TO PADRE BOULEVARD

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.:
J.J.G.	I.H.	R.C.W.	21-108-19

DATE: OCTOBER 2021 NO. 19 OF 41

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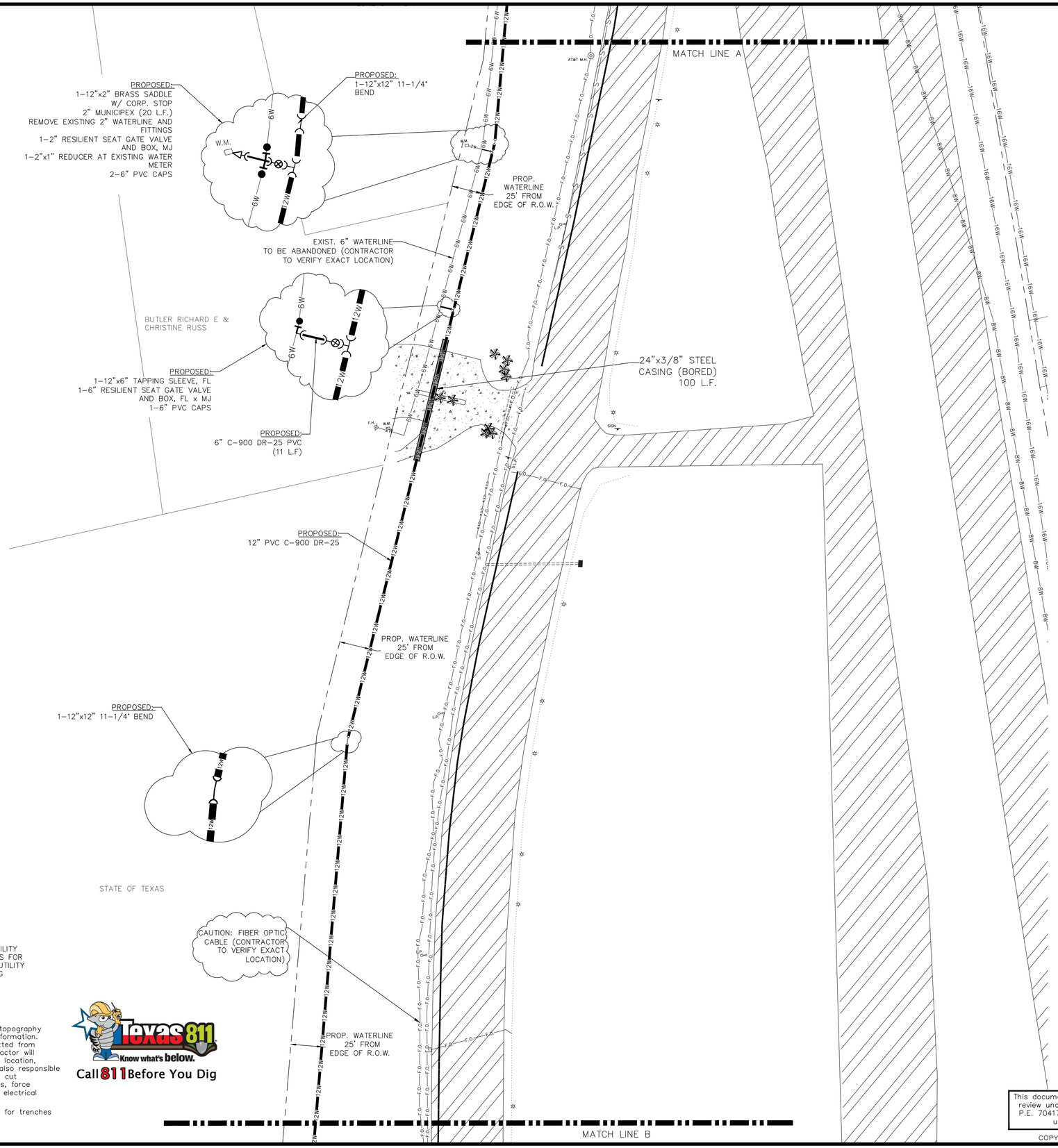

SCALE 1"=40'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line.....
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....F.O.—F.O.
Existing Sanitary Sewer Line.....S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....GAS—
Proposed 6" Water Line.....6W
Proposed 8" Water Line.....8W
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....2W—
Existing 6" Water Line.....6W—
Existing 8" Water Line.....8W—
Existing 12" Water Line.....12W—
Existing 16" Water Line.....16W—
Existing 24" Water Line.....24W—
Proposed 12" Water Line.....12W
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

12" AWWA PVC C-900 DR-25	887 L.F.
24"x3/8" STEEL CASING (BORED)	100 L.F.
12"x12" 11-1/4" BEND, MJ	2 EA.
12"x2" BRASS SADDLE/W CORP. STOP	1 EA.
12"x6" TAPPING SLEEVE, MJ	1 EA.
2" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
2" MUNICIPEX	20 L.F.
6" AWWA C-900 DR-25 PVC	11 L.F.
6" PVC CAPS	3 EA.
RECONNECT SERVICE WATER CONNECTION	1 EA.
COUPLING ADAPTORS	1 LS.
REMOVAL OF EXISTING 2" WL AND FITTINGS	1 LS.

CAUTION:

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF EXISTING UTILITY LINES RUNNING ALONG OR CROSSING CONSTRUCTION AREAS.

UTILITIES NOTE:

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10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED 12" PVC C900 WATERLINE FROM QUEEN ISABELLA CAUSEWAY TO PADRE BOULEVARD

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-20

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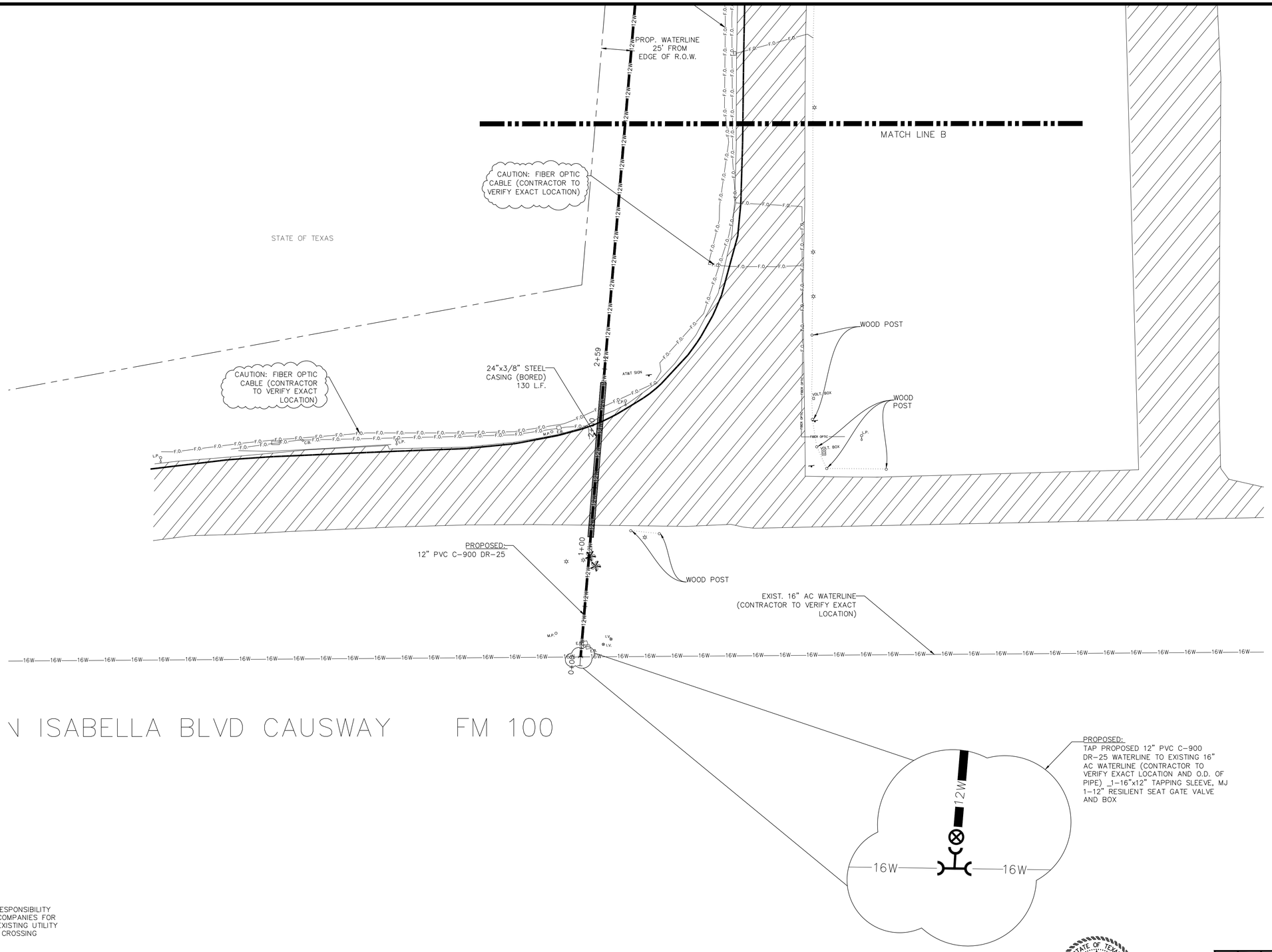

SCALE 1"=40'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line.....—X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....—F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....—GAS—
Proposed 6" Water Line.....—6W—
Proposed 8" Water Line.....—8W—
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....—2W—
Existing 6" Water Line.....—6W—
Existing 8" Water Line.....—8W—
Existing 12" Water Line.....—12W—
Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....—12W—
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

12" AWWA PVC C-900 DR-25	450 L.F.
24"x3/8" STEEL CASING (BORED)	130 L.F.
12"x6 TAPPING SLEEVE	1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
TAP PROPOSED 12" PVC C-900 TO EXISTING 16" AC WATERLINE	1 EA.
COUPLING ADAPTORS	1 LS.

CAUTION:

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED 12" PVC C900 WATERLINE FROM QUEEN ISABELLA CAUSEWAY TO PADRE BOULEVARD

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

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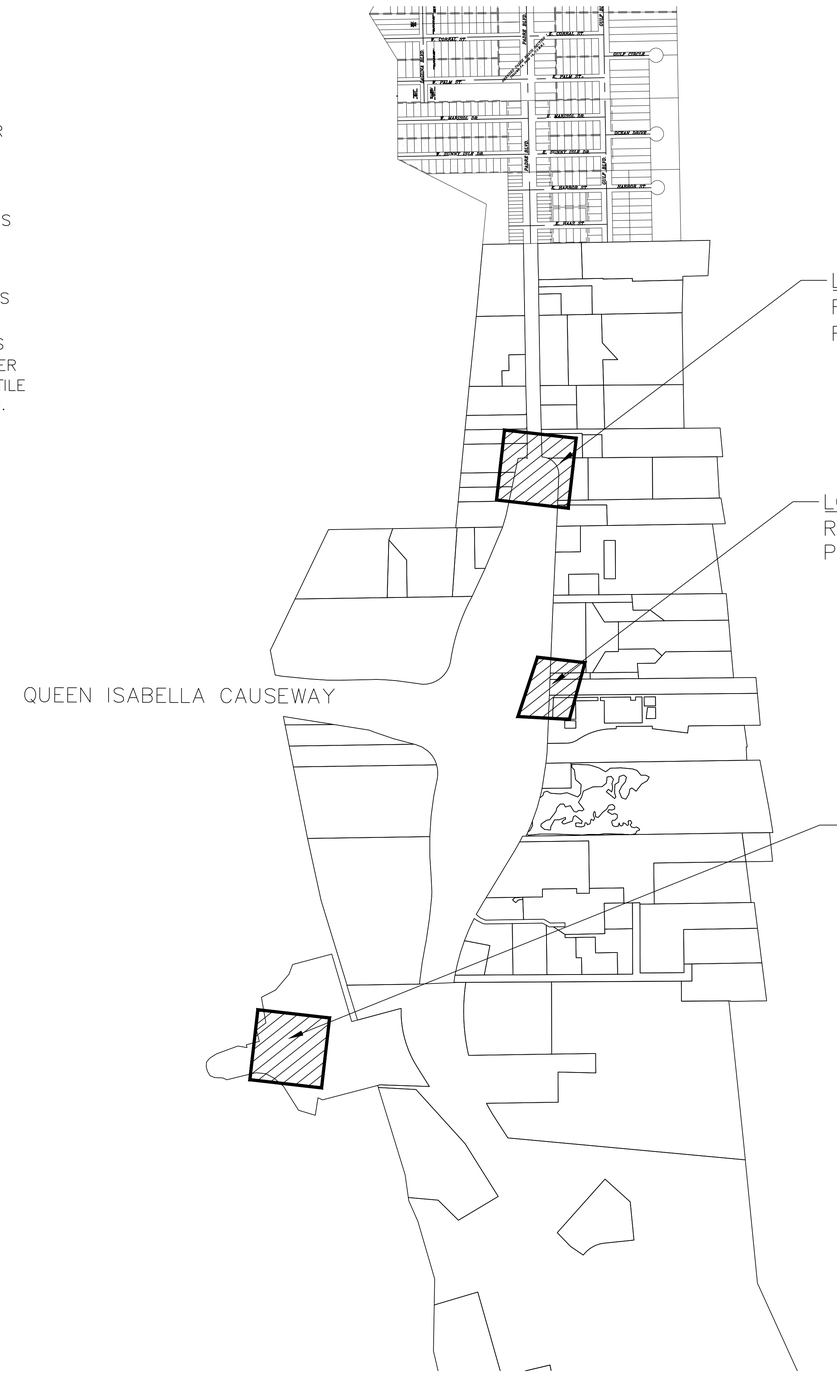
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.



LOCATION 5:
REPLACEMENT OF 5–16" GATE VALVES AND
REPLACEMENT OF 2–8" GATE VALVES NEAR PADRE BLVD.

LOCATION 4:
REPLACEMENT OF 2–16" GATE VALVES BY BRIDGE POINT CONDOS

LOCATION 3:
THE ADDITION OF 1–16" GATE VALVE, 3–10 GATE VALVES, 10"x10" TEE, AND 16"x10" TAPPING SLEEVE WITHIN K.O.A.

LOCATION MAP
SCALE: 1" = 500'

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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 3

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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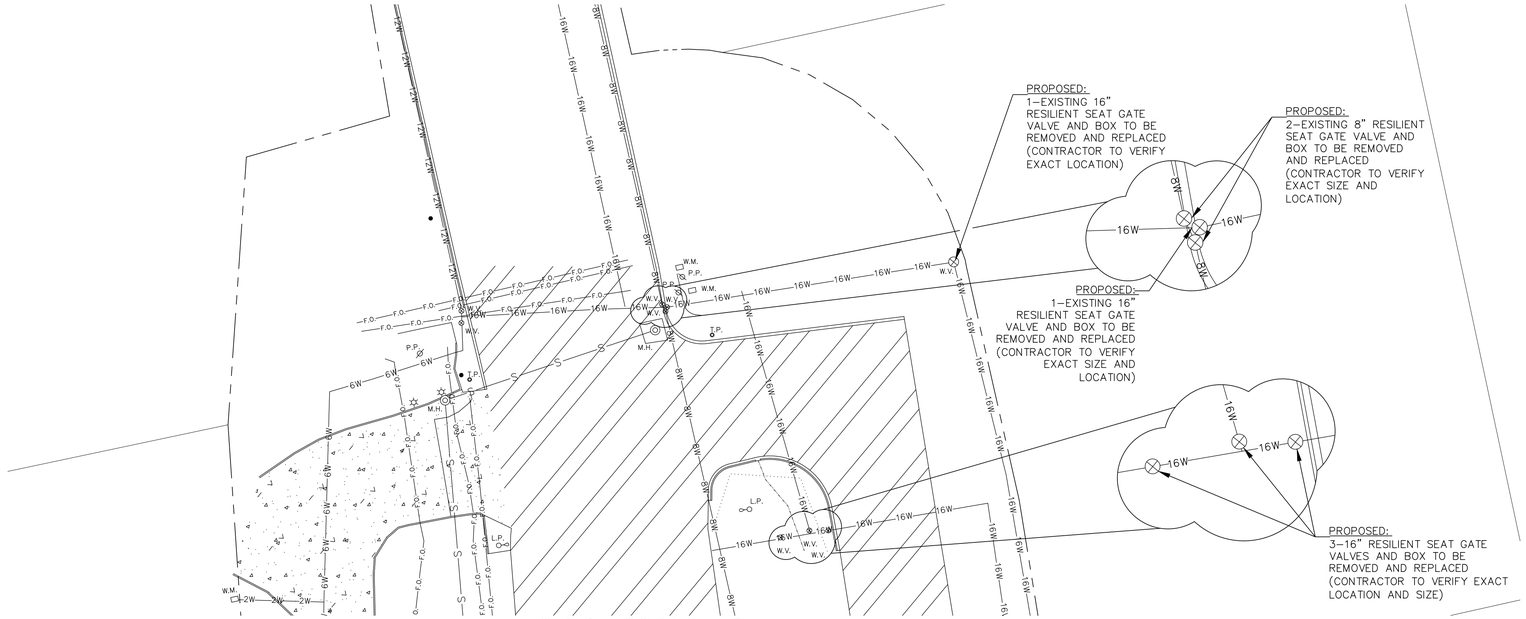
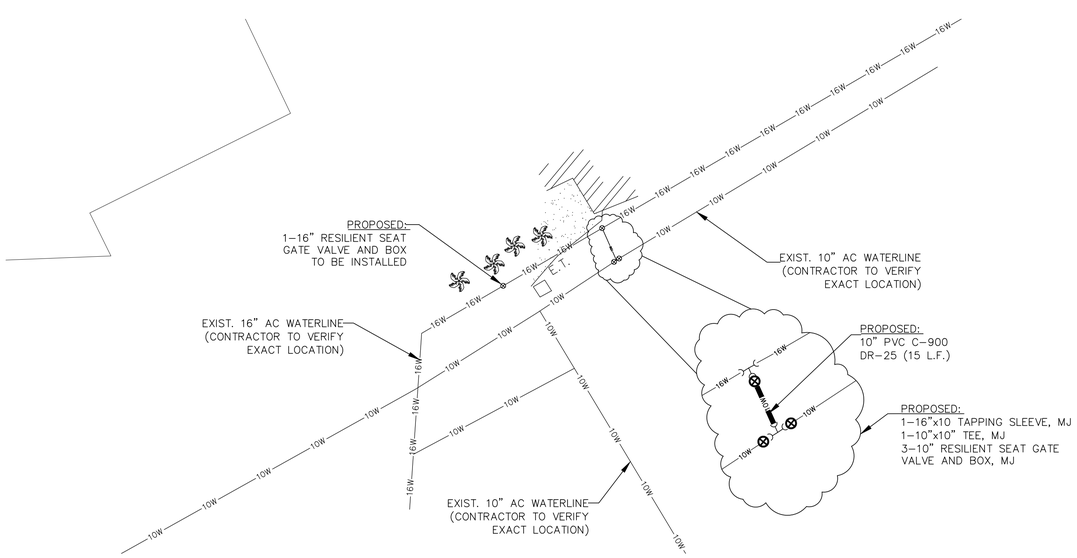
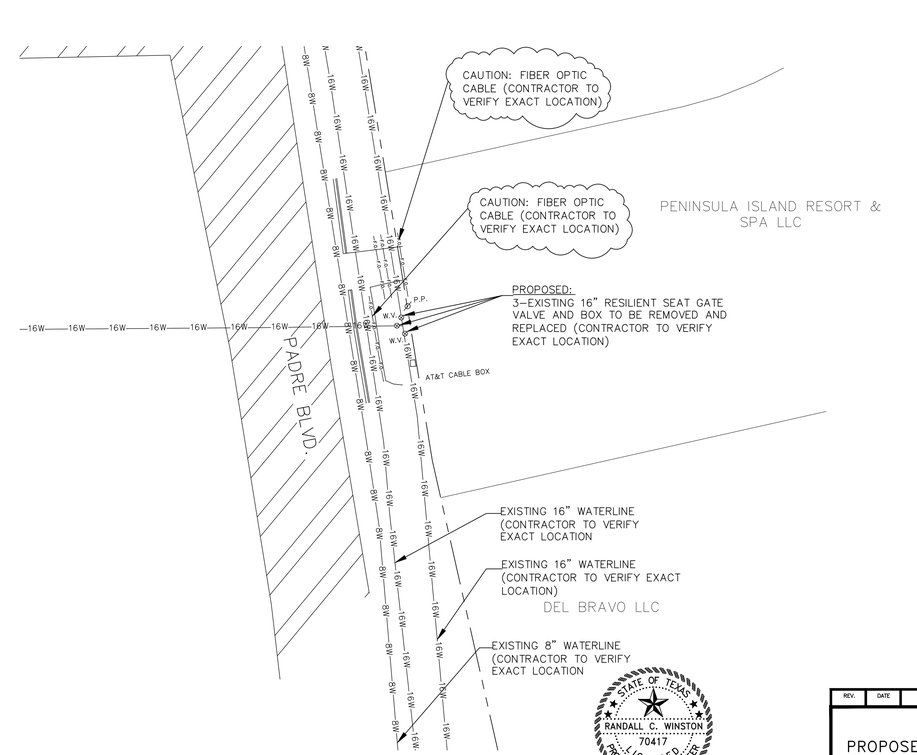


LOCATION: 5



LOCATION: 3



LOCATION: 4

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line..... —X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....—GAS—
Proposed 6" Water Line.....—6W—
Proposed 8" Water Line.....—8W—
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....—2W—
Existing 6" Water Line.....—6W—
Existing 8" Water Line.....—8W—
Existing 12" Water Line.....—12W—
Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....—12W—
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

8" AWWA RESILIENT SEAT GATE VALVE W/BOX	2 EA.
10" AWWA RESILIENT SEAT GATE VALVE W/BOX	3 EA.
16" AWWA RESILIENT SEAT GATE VALVE W/BOX	9 EA.
REMOVAL OF 8" GATE VALVE	2 EA.
REMOVAL OF 16" GATE VALVE	8 EA.
10" PVC AWWA C-900 DR-25	15 L.F.
16"x10" TAPPING SLEEVE, FL	1 EA.
10"x10" TEE, MJ	1 EA.

CAUTION:

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UTILITIES NOTE:

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE SOUTH SIDE OF SOUTH PADRE ISLAND

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G. | CHECKED: I.H. | APPROVED: R.C.W.
DATE: OCTOBER 2021 | NO. 23 OF 41 | DRAWING NO. 21-108-23

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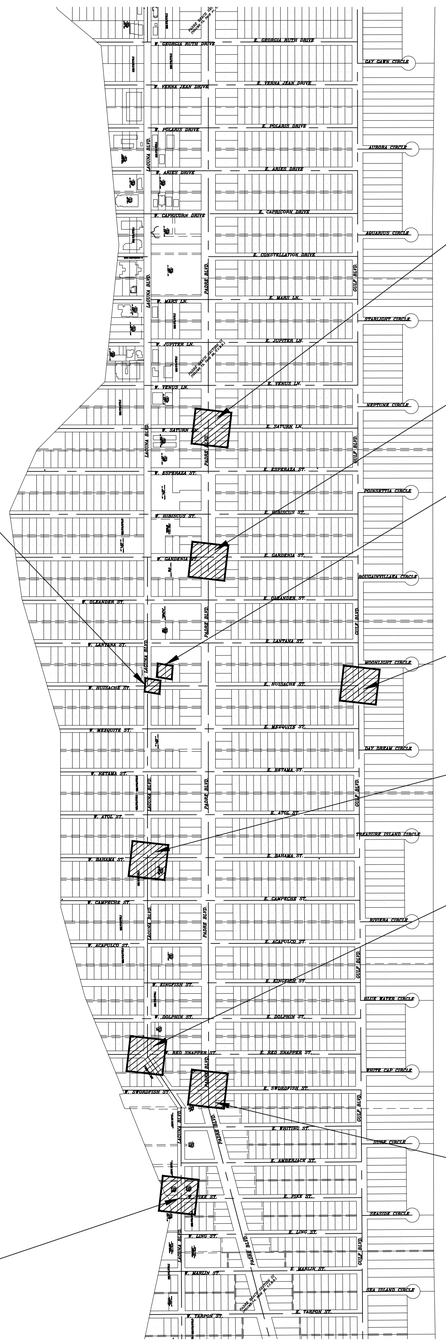
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.



LOCATION 14:
1–NEW 8" GATE VALVE AT INTERSECTION OF SATURN ST. AND PADRE BLVD.

LOCATION 13:
REPLACEMENT OF 12" GATE VALVE AT INTERSECTION OF GARDENIA ST. AND PADRE BLVD.

LOCATION 12:
PROPOSED IMPROVEMENTS OF ELEVATED TANK AT HUISACHE ST. AND LAGUNA BLVD.

LOCATION 11:
1–NEW 16" GATE VALVE ON HUISACHE ST. NEXT TO THE PARK TO ISOLATE TANK

LOCATION 10:
REPLACEMENT OF 2–16" GATE VALVES AT THE INTERSECTION OF HUISACHE ST. AND GULF BLVD.

LOCATION 9:
1–NEW 12" GATE VALVE AT INTERSECTION OF BAHAMA ST. AND LAGUNA BLVD.

LOCATION 8:
REPLACEMENT OF 12" GATE VALVE AT INTERSECTION OF RED SNAPPER ST. AND LAGUNA BLVD.

LOCATION 7:
NEW 8" GATE VALVE AT INTERSECTION OF PADRE BLVD AND SWORDFISH ST.

LOCATION 6:
1–REPLACEMENT OF 12" GATE VALVE AT INTERSECTION OF PIKE AND LAGUNA BLVD.

LOCATION MAP
SCALE: 1" = 500'

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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 4

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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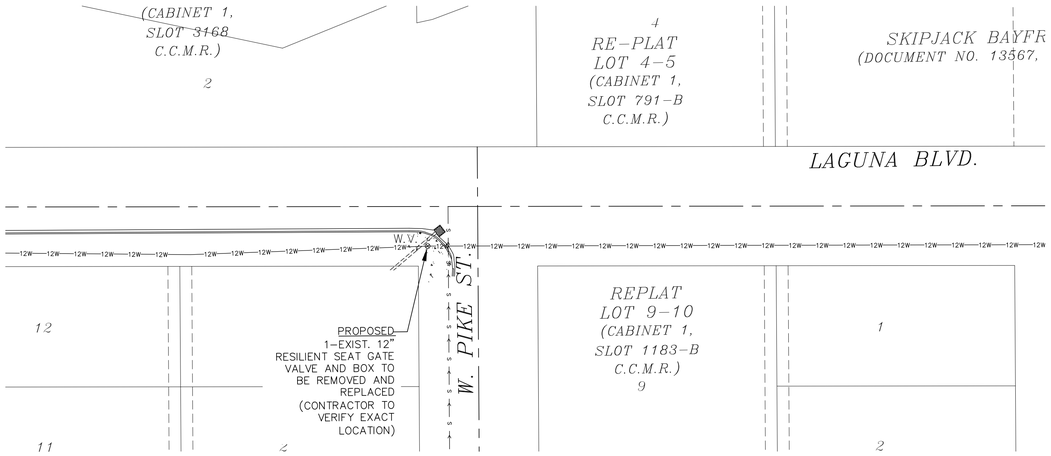
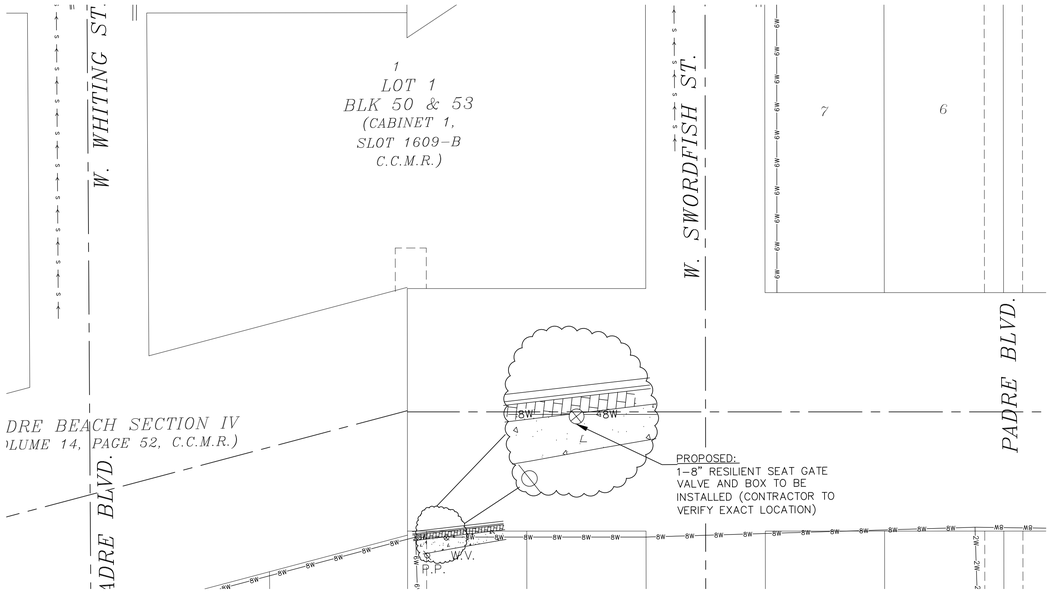


LOCATION: 6



LOCATION: 7

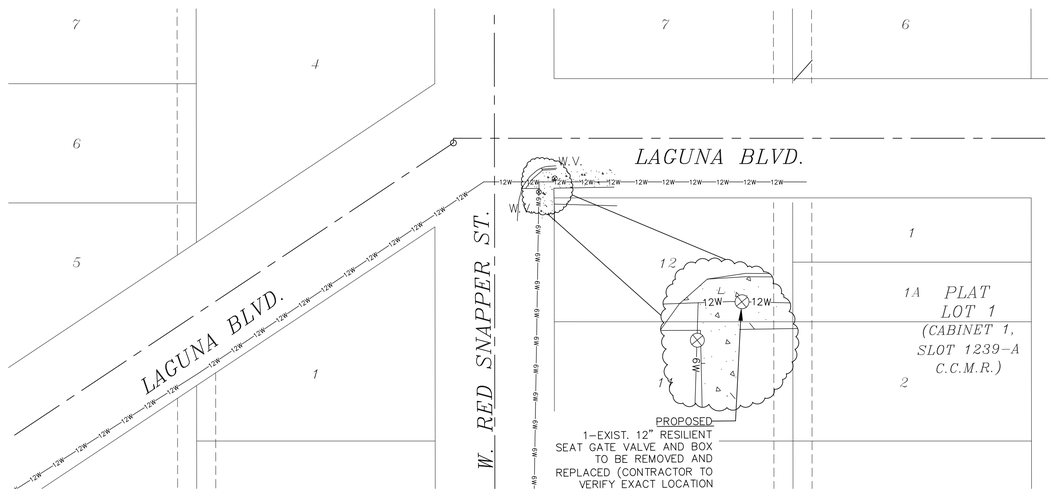
SCALE 1"=30'

LEGEND

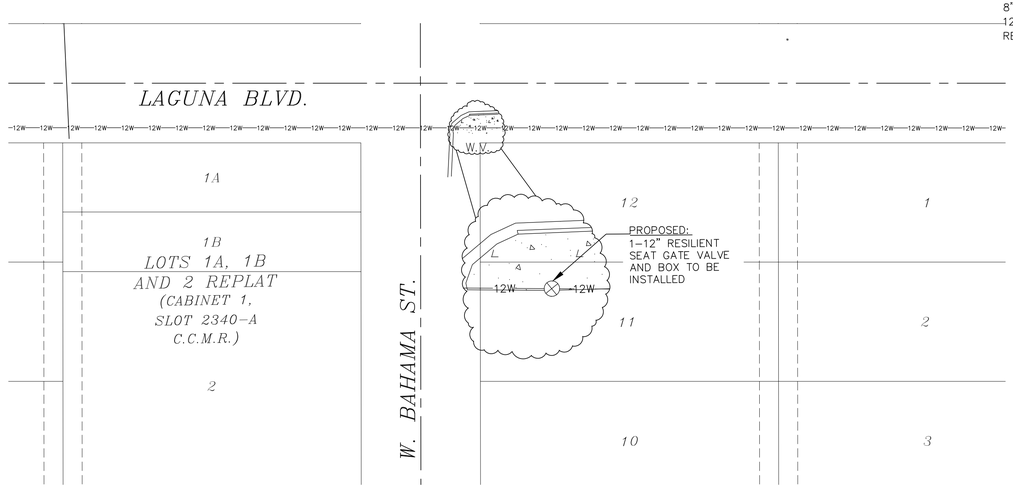
Lot Line	
R.O.W. Line	
Easement	
Fence Line	—X—X—
Power Pole(P.P.)	
Guy Wire(G.W.)	
Cable Box	C.B.
Man Hole	M.H.
Vent Pipe	V.P.
Irrigation Valve	I.V.
Water Meter	W.M.
Meter Pole	M.P.
Road Side Ditch	R.S.D.
Drain Line	
Electrical Box	E.B.
Water Valve(W.V.)	
Control Valve(C.V.)	
Fire Hydrant	F.H.
Light Pole	L.P.
Telephone Box	T.B.
Cable Line	—F.O.—F.O.—
Existing Sanitary Sewer Line	—S—
Gas Meter	G.M.
Sprinkler Head	
Gas Line	—GAS—
Proposed 6" Water Line	6W
Proposed 8" Water Line	8W
Found 1/2" Iron Rebar	
Existing 2" Water Line	—2W—
Existing 6" Water Line	—6W—
Existing 8" Water Line	—8W—
Existing 12" Water Line	—12W—
Existing 16" Water Line	—16W—
Existing 24" Water Line	—24W—
Proposed 12" Water Line	12W
Proposed PVC Cap	
Existing Storm Sewer Line	
Light Pole(L.P.)	
Concrete Parking Block	
Turning Signal Post(T.P.)	

ESTIMATED SHEET QUANTITIES

8" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX ...3 EA.
REMOVAL OF 12" GATE VALVE .....2 EA.



LOCATION: 8



LOCATION: 9

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Randall C. Winston, P.E.
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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE CENTRAL SIDE OF SOUTH PADRE ISLAND

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-25

DATE: OCTOBER 2021 NO. 25 OF 41

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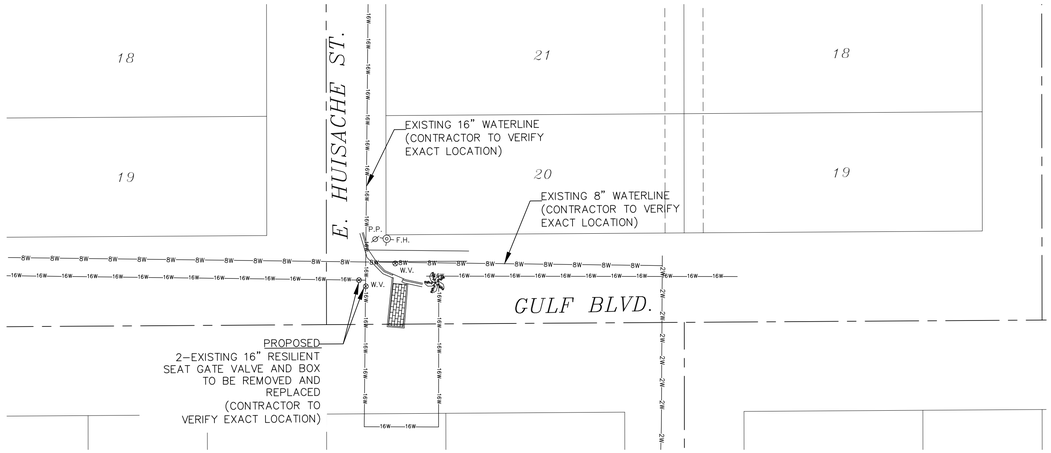
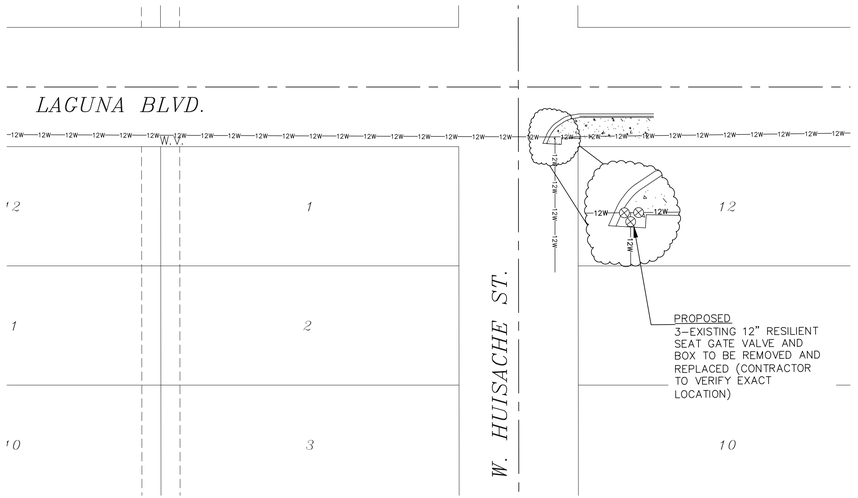


LOCATION: 10



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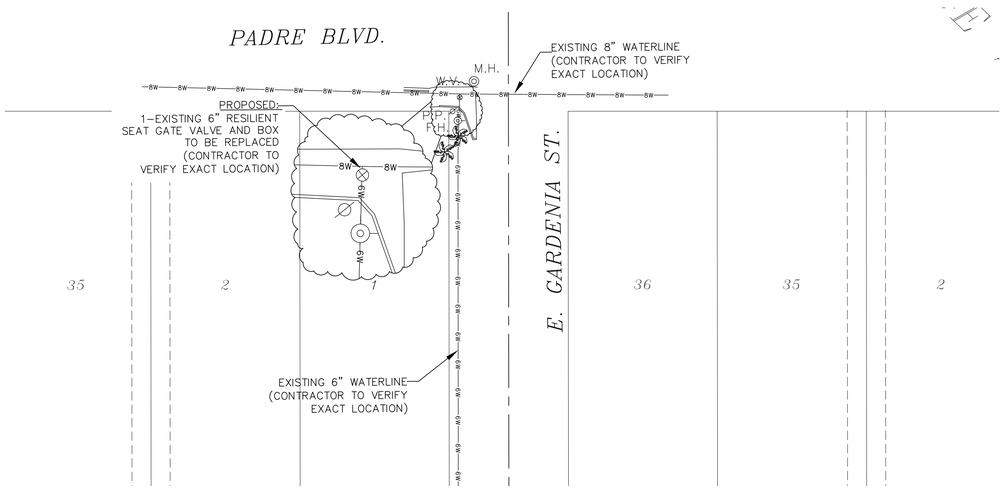

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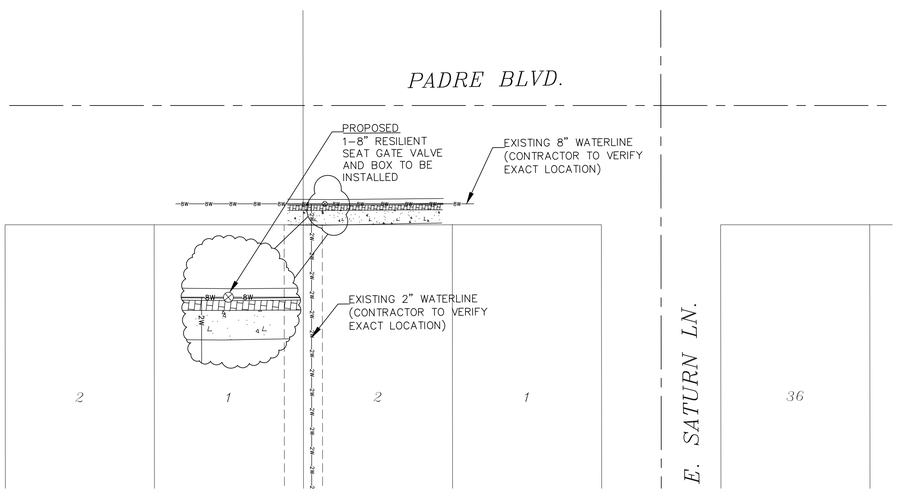

LOCATION: 14

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line.....—X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....—F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....—GAS—
Proposed 6" Water Line.....6W
Proposed 8" Water Line.....8W
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....—2W—
Existing 6" Water Line.....—6W—
Existing 8" Water Line.....—8W—
Existing 12" Water Line.....—12W—
Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....12W
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

6" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX ...3 EA.
16" AWWA RESILIENT SEAT GATE VALVE W/BOX ...2 EA.
REMOVAL OF 6" GATE VALVE .....1 EA.
REMOVAL OF 12" GATE VALVE .....3 EA.
REMOVAL OF 16" GATE VALVE .....2 EA.

CAUTION:

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF EXISTING UTILITY LINES RUNNING ALONG OR CROSSING CONSTRUCTION AREAS.

UTILITIES NOTE:

Existing above ground utilities and topography have been plotted by direct field information. Underground utilities have been plotted from various sources and locators. Contractor will be required to establish their exact location, depth, and size. The contractor is also responsible for the replacement or repair of all cut or broken water lines, irrigation lines, force mains, sprinkler systems, gas lines, electrical lines, cables, etc.

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RANDALL C. WINSTON
70417
LICENSED
PROFESSIONAL ENGINEER
10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE CENTRAL SIDE OF SOUTH PADRE ISLAND

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO.: 21-108-26
DATE: OCTOBER 2021	NO. 26	OF 41	

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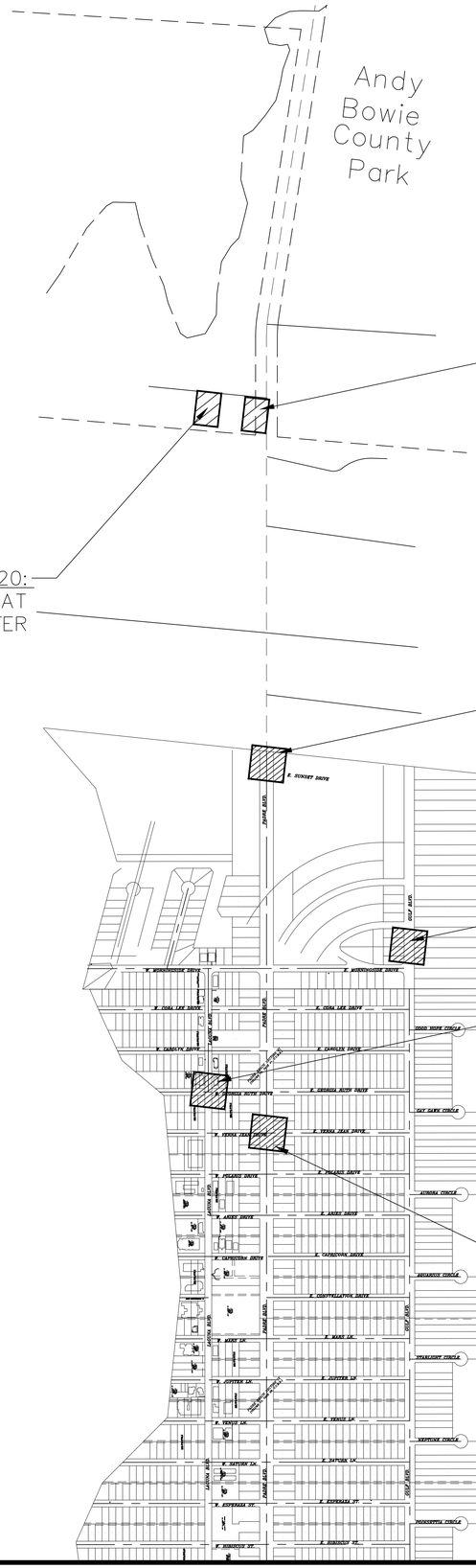
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.



LOCATION 19:
REPLACEMENT OF 2–12" AND 2–16" GATE VALVES AT THE NATIVE PLANT CENTER

LOCATION 20:
PROPOSED IMPROVEMENTS OF ELEVATED TANK AT ANDY BOWIE ST. AND BIRDING CENTER

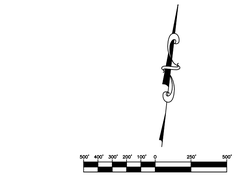
LOCATION 18:
REPLACEMENT OF 8" GATE VALVE AT INTERSECTION SUNSET DRIVE AND PADRE BLVD.

LOCATION 17:
1–NEW 6" GATE VALVE AT INTERSECTION OF GULF BLVD AND MORNINGSIDE DR.

LOCATION 16:
REPLACEMENT OF 12" GATE VALVE AT INTERSECTION OF GEORGIA RUTH AND LAGUNA BLVD.

LOCATION 15:
REPLACEMENT OF 6" GATE VALVE AT INTERSECTION OF VERNA JEAN AND PADRE BLVD.

SOUTH PADRE ISLAND, TX



LOCATION MAP
SCALE: 1" = 500'

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Randall C. Winston, P.E.
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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 5

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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J.J.G.	I.H.	R.C.W.	21–108–27

DATE: OCTOBER 2021 NO. 27 OF 41

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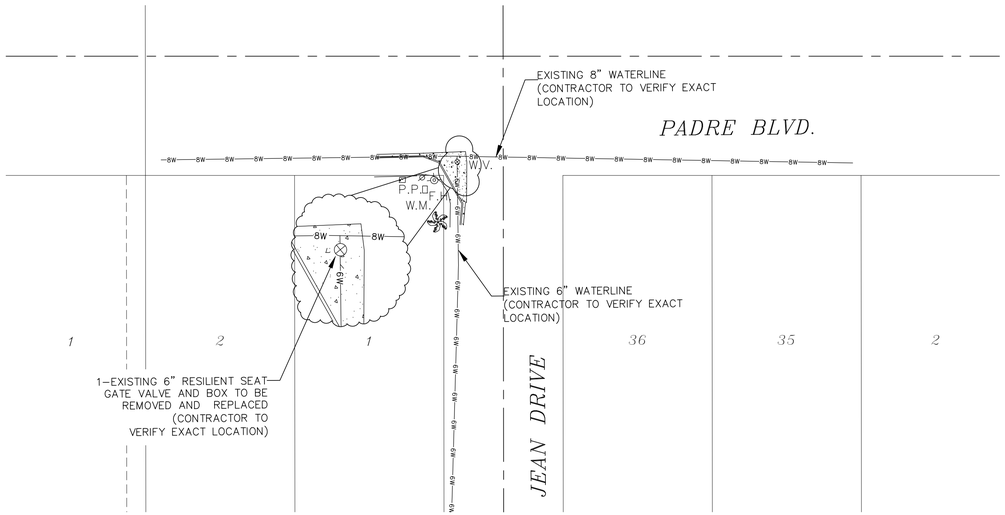
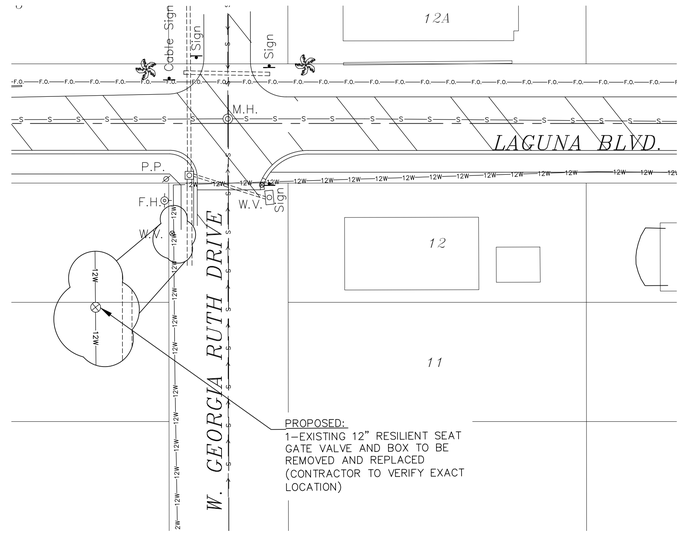
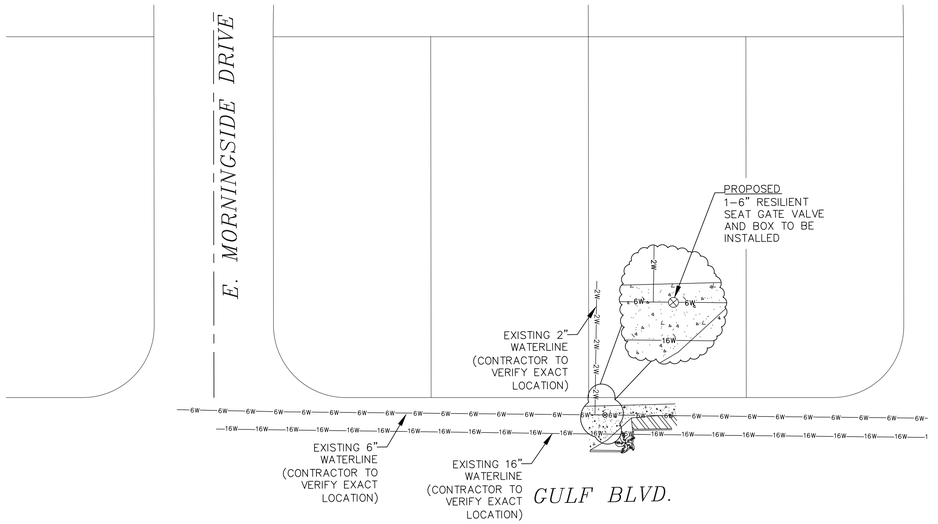


LOCATION: 15



LOCATION: 16



LOCATION: 17

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line.....—X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....—F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....—GAS—
Proposed 6" Water Line.....6W
Proposed 8" Water Line.....8W
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....—2W—
Existing 6" Water Line.....—6W—
Existing 8" Water Line.....—8W—
Existing 12" Water Line.....—12W—
Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....12W
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

6" AWWA RESILIENT SEAT GATE VALVE W/BOX .....2 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
REMOVAL OF 6" GATE VALVE .....1 EA.
REMOVAL OF 12" GATE VALVE .....1 EA.

CAUTION:

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE NORTH SIDE OF SOUTH PADRE ISLAND

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO. 21-108-28
DATE: OCTOBER 2021	NO. 28	OF 41	

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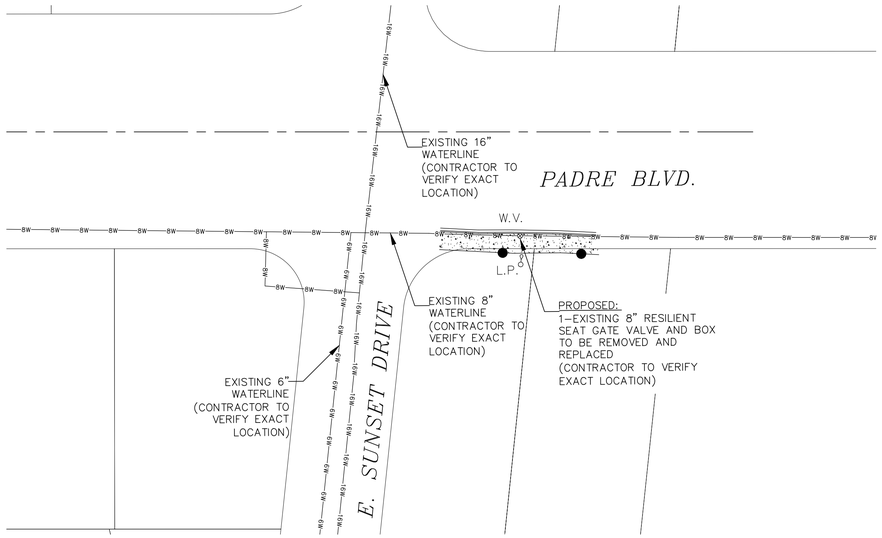
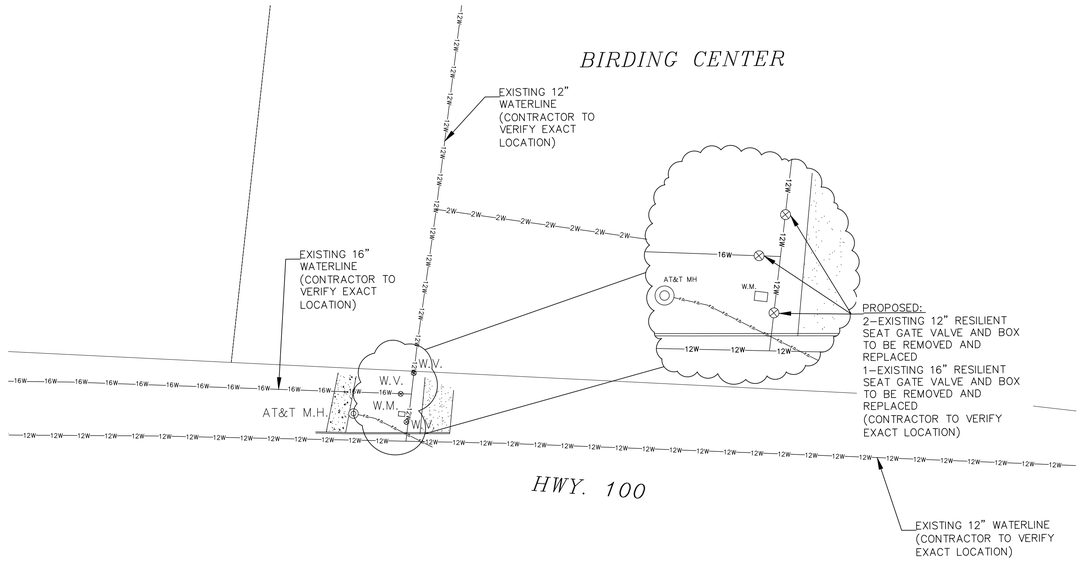


LOCATION: 18



LOCATION: 19

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line.....—X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....—F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line.....—GAS—
Proposed 6" Water Line.....6W
Proposed 8" Water Line.....8W
Found 1/2" Iron Rebar .....
Existing 2" Water Line.....—2W—
Existing 6" Water Line.....—6W—
Existing 8" Water Line.....—8W—
Existing 12" Water Line.....—12W—
Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....12W
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

8" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX	2 EA.
16" AWWA RESILIENT SEAT GATE VALVE W/BOX	1 EA.
REMOVAL OF 8" GATE VALVE	1 EA.
REMOVAL OF 12" GATE VALVE	2 EA.
REMOVAL OF 16" GATE VALVE	1 EA.

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10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE NORTH SIDE OF SOUTH PADRE ISLAND

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

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J.J.G.	I.H.	R.C.W.	21-108-29

DATE: OCTOBER 2021 NO. 29 OF 41

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NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
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PORT ISABEL, TX

LOCATION 25:
2–NEW 8" BY THE LONE STAR BANK

LOCATION 24:
REPLACEMENT OF 16" GATE VALVE AT THE INTERSECTION OF HWY 100 AND SOUTH MUSUINA

LOCATION 23:
REPLACEMENT OF 12" GATE VALVE BY ZIMCO ALONG SEA SHORE DRIVE.

LOCATION 22:
1 NEW 24" GATE VALVE AT THE SUN HARBOR CONDOS
NEW 24" AND 10" GATE VALVES AT THE LIV ENTRANCE

LOCATION 21:
1 NEW 24" GATE VALVE AT THE INTERSECTION OF SCALLOP AND SEASHELL BLVD.

LOCATION MAP
SCALE: 1" = 500'

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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 6

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SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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DATE: OCTOBER 2021 NO. 30 OF 41

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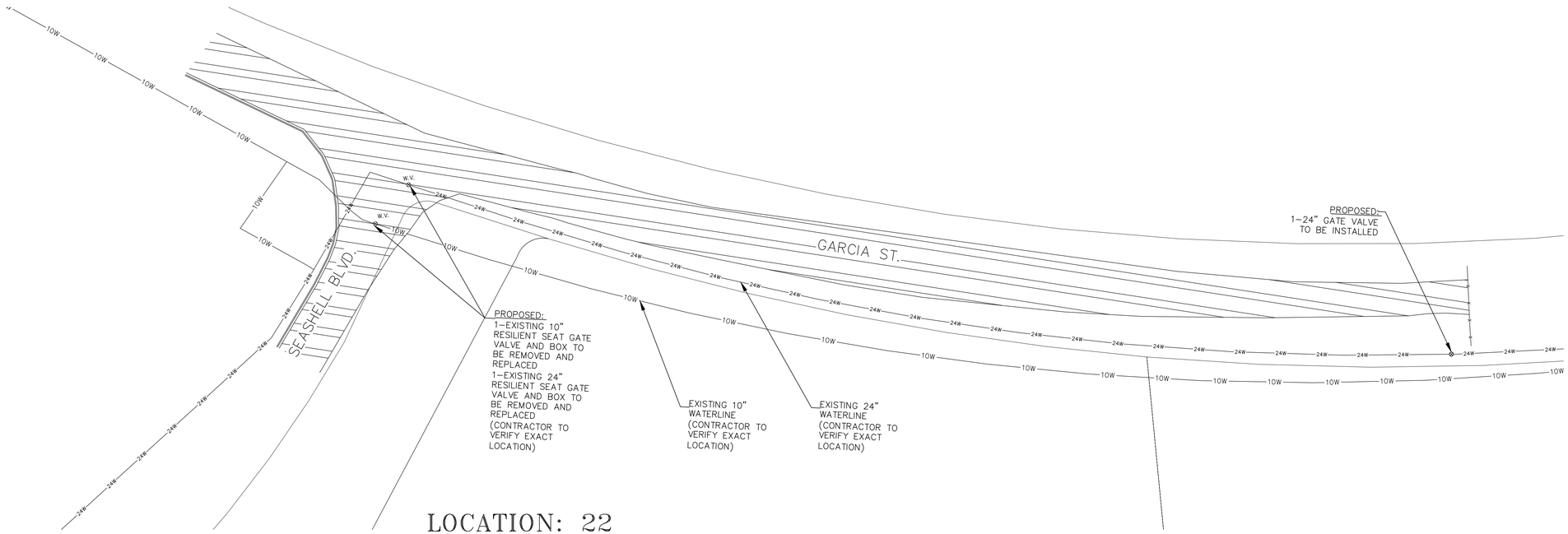
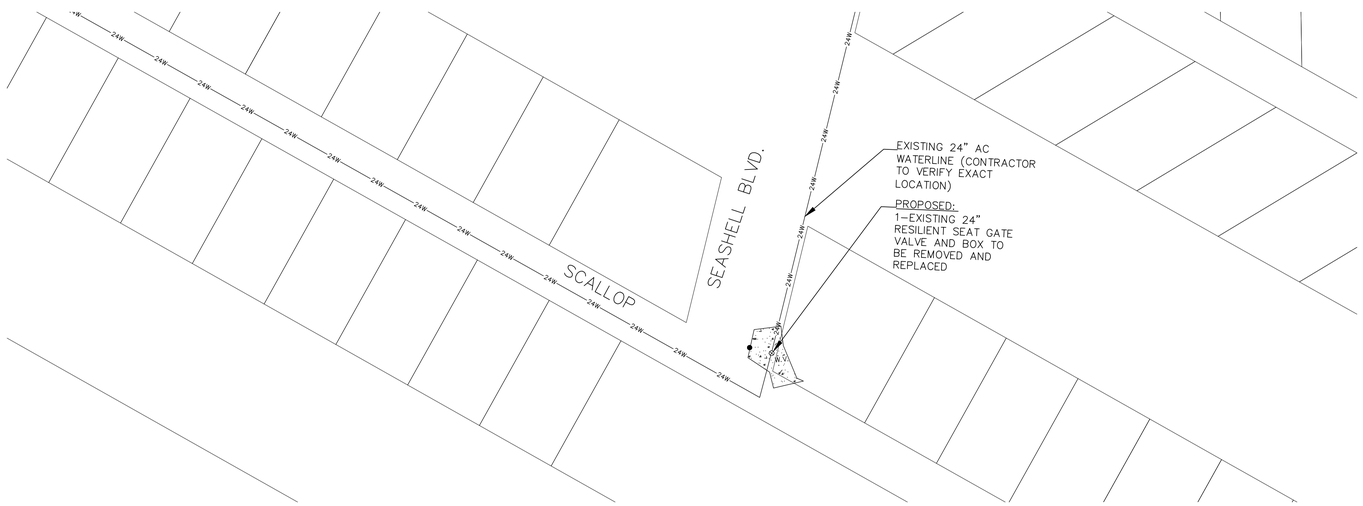


LOCATION: 22



LOCATION: 21

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line..... —X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....—F.O.—F.O.—
Existing Sanitary Sewer Line...—S—
Gas Meter.....G.M.
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Proposed 8" Water Line.....8W
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Existing 8" Water Line.....—8W—
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Existing 16" Water Line.....—16W—
Existing 24" Water Line.....—24W—
Proposed 12" Water Line.....12W
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

10" AWWA RESILIENT SEAT GATE VALVE W/BOX...1 EA.
24" AWWA RESILIENT SEAT GATE VALVE W/BOX...3 EA.
REMOVAL OF 10" GATE VALVE .....1 EA.
REMOVAL OF 24" GATE VALVE .....2 EA.

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10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE SOUTH SIDE OF PORT ISABEL

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

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J.J.G.	I.H.	R.C.W.	21-108-31

DATE: OCTOBER 2021 NO. 31 OF 41

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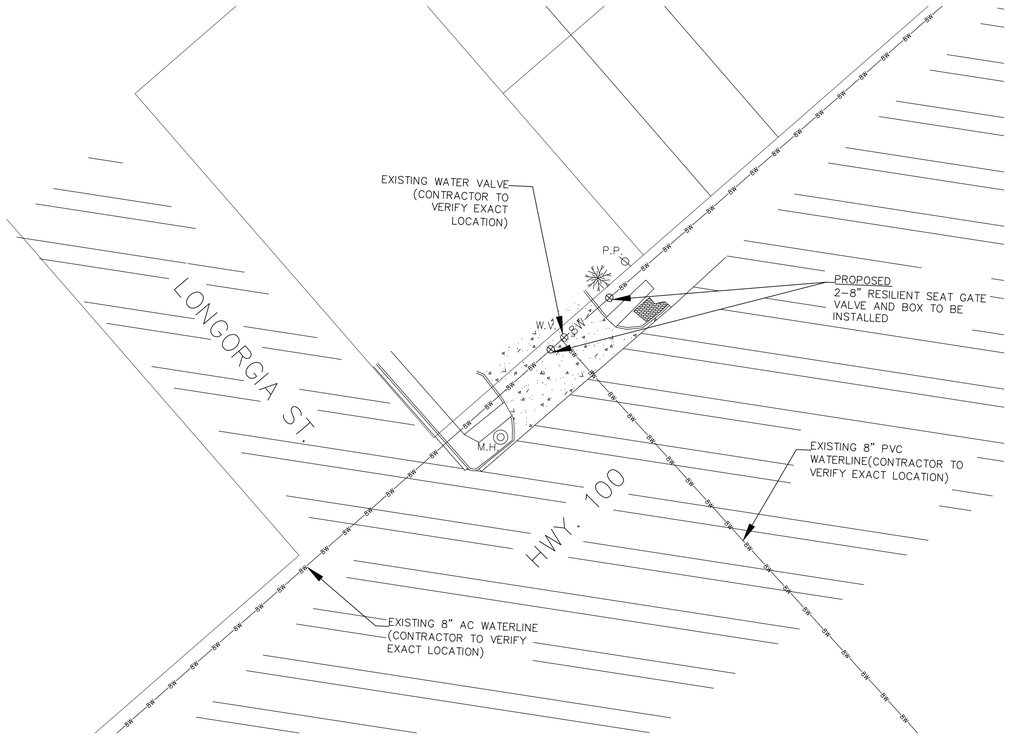
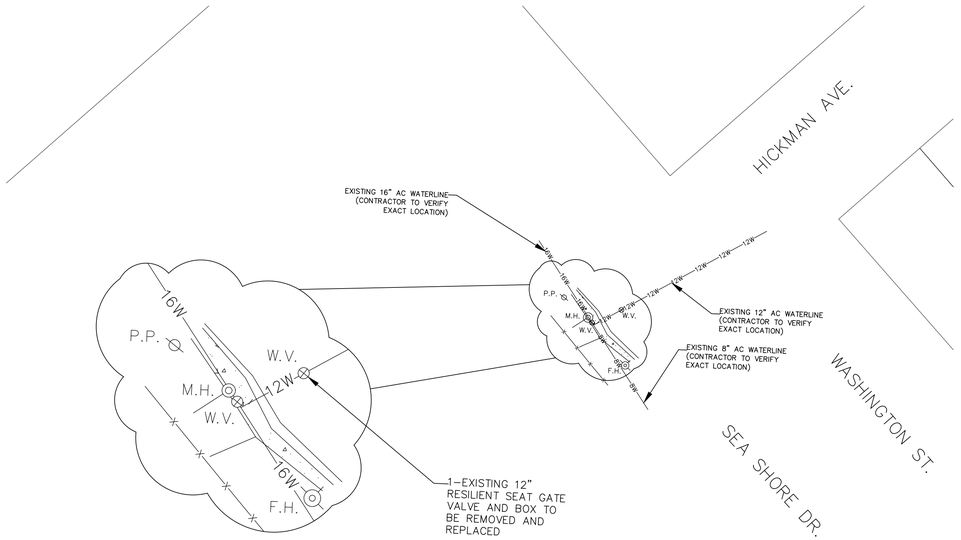
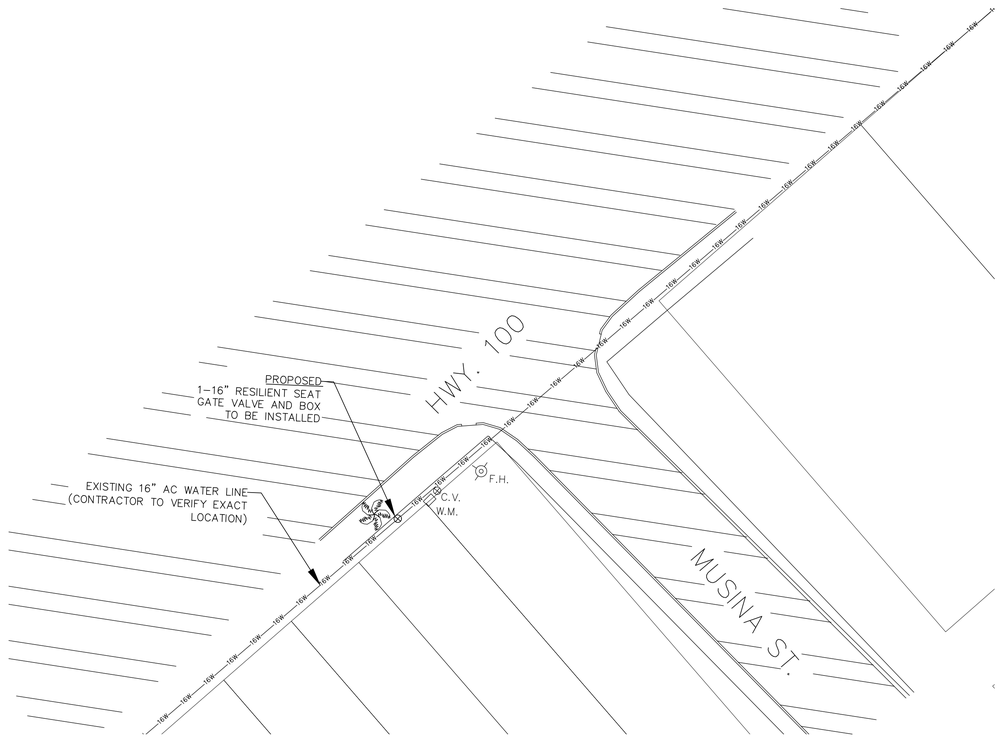


LOCATION: 25



LOCATION: 23



LOCATION: 24

SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line..... —X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line.....F.O.—F.O.—
Existing Sanitary Sewer Line.....—S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line..... —GAS—
Proposed 6" Water Line..... —6W—
Proposed 8" Water Line..... —8W—
Found 1/2" Iron Rebar .....
Existing 2" Water Line..... —2W—
Existing 6" Water Line..... —6W—
Existing 8" Water Line..... —8W—
Existing 12" Water Line..... —12W—
Existing 16" Water Line..... —16W—
Existing 24" Water Line..... —24W—
Proposed 12" Water Line..... —12W—
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

8" AWWA RESILIENT SEAT GATE VALVE W/BOX....2 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX...1 EA.
16" AWWA RESILIENT SEAT GATE VALVE W/BOX...1 EA.
REMOVAL OF 12" GATE VALVE .....1 EA.

CAUTION:

IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF EXISTING UTILITY LINES RUNNING ALONG OR CROSSING CONSTRUCTION AREAS.

UTILITIES NOTE:

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Trench safety protection is required for trenches of depths of 5' or greater.

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70417
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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE EAST SIDE OF PORT ISABEL

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO:
J.J.G.	I.H.	R.C.W.	21-108-32

DATE: OCTOBER 2021 NO. 32 OF 41

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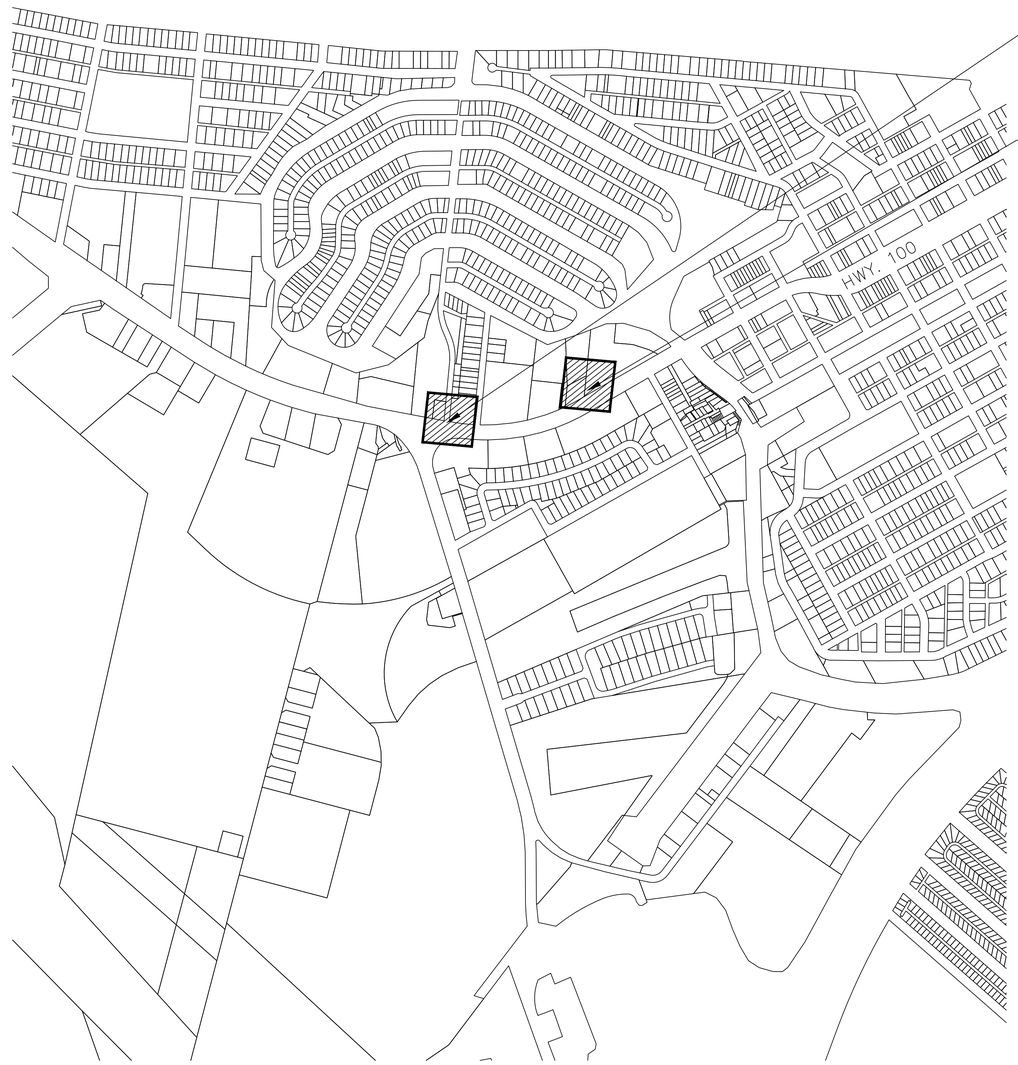
NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
5. ALL PIPING TO BE PVC UNLESS AS NOTED OTHERWISE. FOR PIPES 12" AND SMALLER USE C–900, DR–25. FOR PIPES 14" AND LARGER USE C–905, DR–25. ALL FITTINGS TO BE DUCTILE IRON. ALL DUCTILE IRON PIPING AND DUCTLE IRON FITTINGS TO BE BE EPOXY COATED.



PORT ISABEL, TX

LOCATION MAP

SCALE: 1" = 500'

LOCATION 27:
REPLACEMENT OF PARTIAL 8" LINE WITH A TEE AND 3–8" GATE VALVES

LOCATION 26:
REPLACE 8" GATE VALVE AT HWY 100 AND MARINA DR./RV PARK

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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 7

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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J.J.G.	I.H.	R.C.W.	21–108–33

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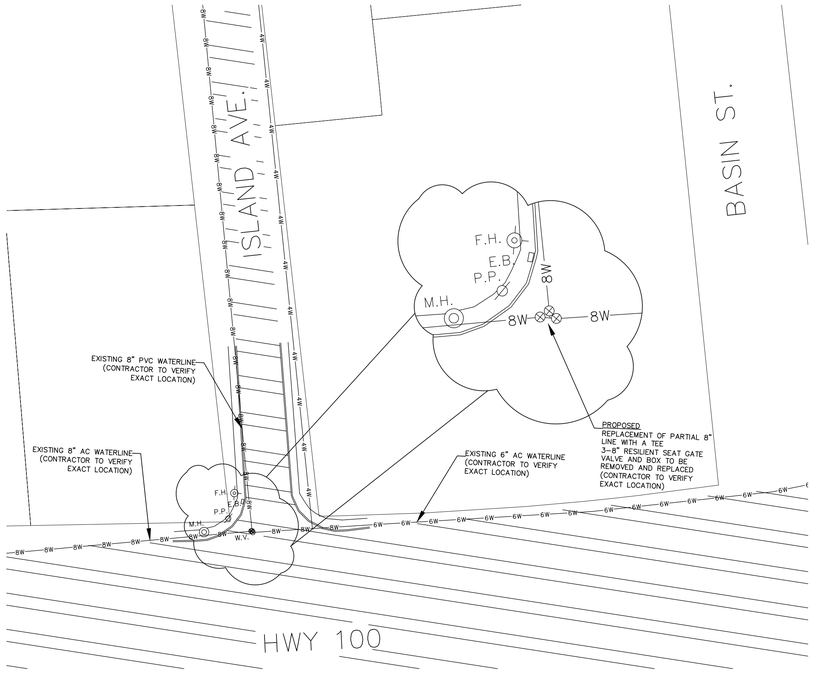
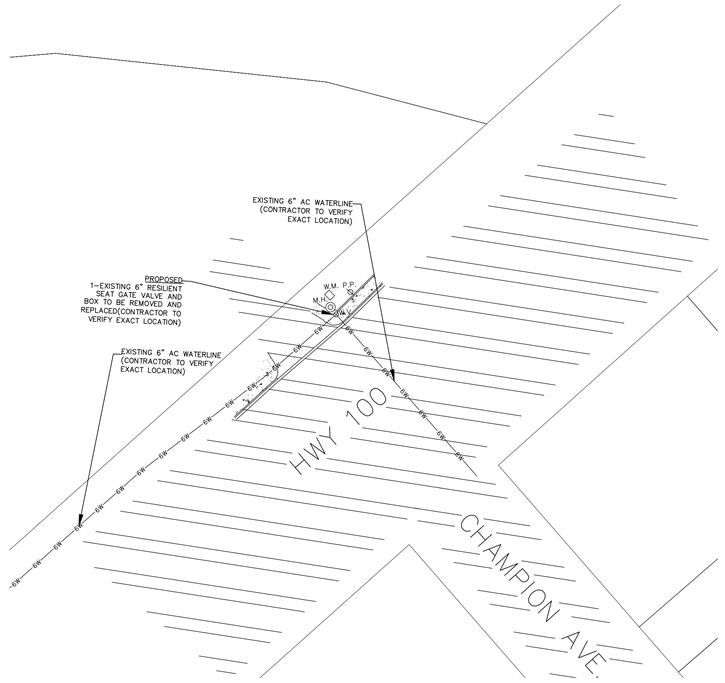
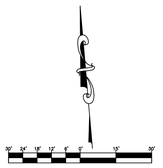


LOCATION: 27



LOCATION: 26



SCALE 1"=30'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line..... —X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line..... —F.O.—F.O.—
Existing Sanitary Sewer Line... —S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line..... —GAS—
Proposed 6" Water Line..... —6W—
Proposed 8" Water Line..... —8W—
Found 1/2" Iron Rebar .....
Existing 2" Water Line..... —2W—
Existing 6" Water Line..... —6W—
Existing 8" Water Line..... —8W—
Existing 12" Water Line..... —12W—
Existing 16" Water Line..... —16W—
Existing 24" Water Line..... —24W—
Proposed 12" Water Line..... —12W—
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

6" AWWA RESILIENT SEAT GATE VALVE W/BOX ....1 EA.
8" AWWA RESILIENT SEAT GATE VALVE W/BOX ....3 EA.
REMOVAL OF 6" GATE VALVE .....1 EA.
REMOVAL OF 8" GATE VALVE .....3 EA.
8"x8" TEE, MJ.....1 EA.

CAUTION:

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UTILITIES NOTE:

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Trench safety protection is required for trenches of depths of 5' or greater.

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES ON THE WEST SIDE OF PORT ISABEL

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN: J.J.G.	CHECKED: I.H.	APPROVED: R.C.W.	DRAWING NO. 21-108-34
DATE: OCTOBER 2021	NO. 34 OF 41		

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NOTES:

1. PIPE INSTALLATIONS TO HAVE A MINIMUM COVER OF 3' (FEET). UNLESS NOTES OR SHOWN OTHERWISE.
2. ALL FITTINGS TO BE AWWA C 153 DUCTILE IRON AND MUST BE WRAPPED IN 8 MIL POLYETHYLENE FILM, UNLESS NOTED OR SHOWN OTHERWISE
3. ALL PROPOSED RESILIENT SEAT GATE VALVES TO BE MUELLER OR APPROVED EQUAL ANSI/AWWA C509. UNLESS NOTED OR SHOWN OTHERWISE
4. ALL FITTINGS SHALL HAVE EBBAA–IRON SERIES 2000 PV "MEGA–LUG" OR APPROVED EQUAL RESTRAINING DEVICE, THIS DOES NOT LIMIT THE USE OF THE THRUST BLOCK REQUIREMENTS. ALL NUTS AND BOLTS SHALL BE BRASS. ALL BURIED FITTINGS WITH BOLTS SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE SHEETING PRIOR TO BACKFILLING TO PROTECT THE NUTS AND BOLTS. UNLESS NOTED OR SHOWN OTHERWISE
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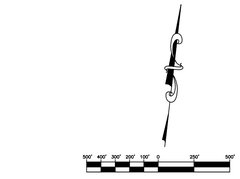
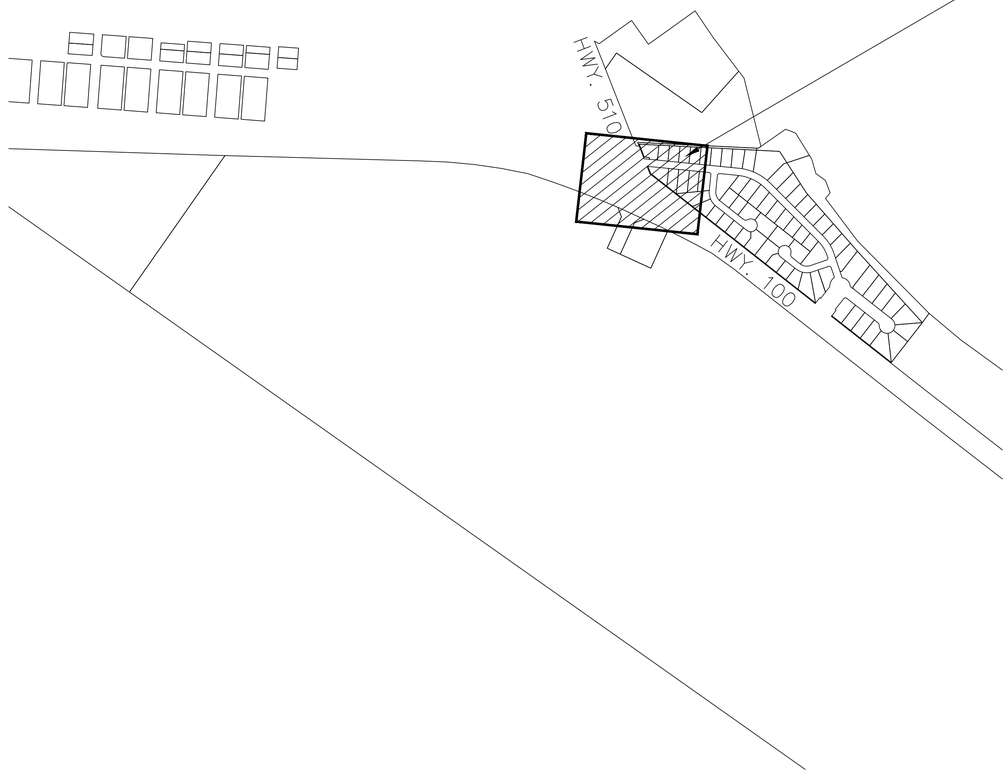


LOCATION MAP

SCALE: 1" = 500'

LOCATION 28:
REPLACEMENT OF GATE VALVES AT THE INTERSECTION OF HIGHWAY 100 AND HIGHWAY 510.



LAGUNA VISTA, TX

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CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 8

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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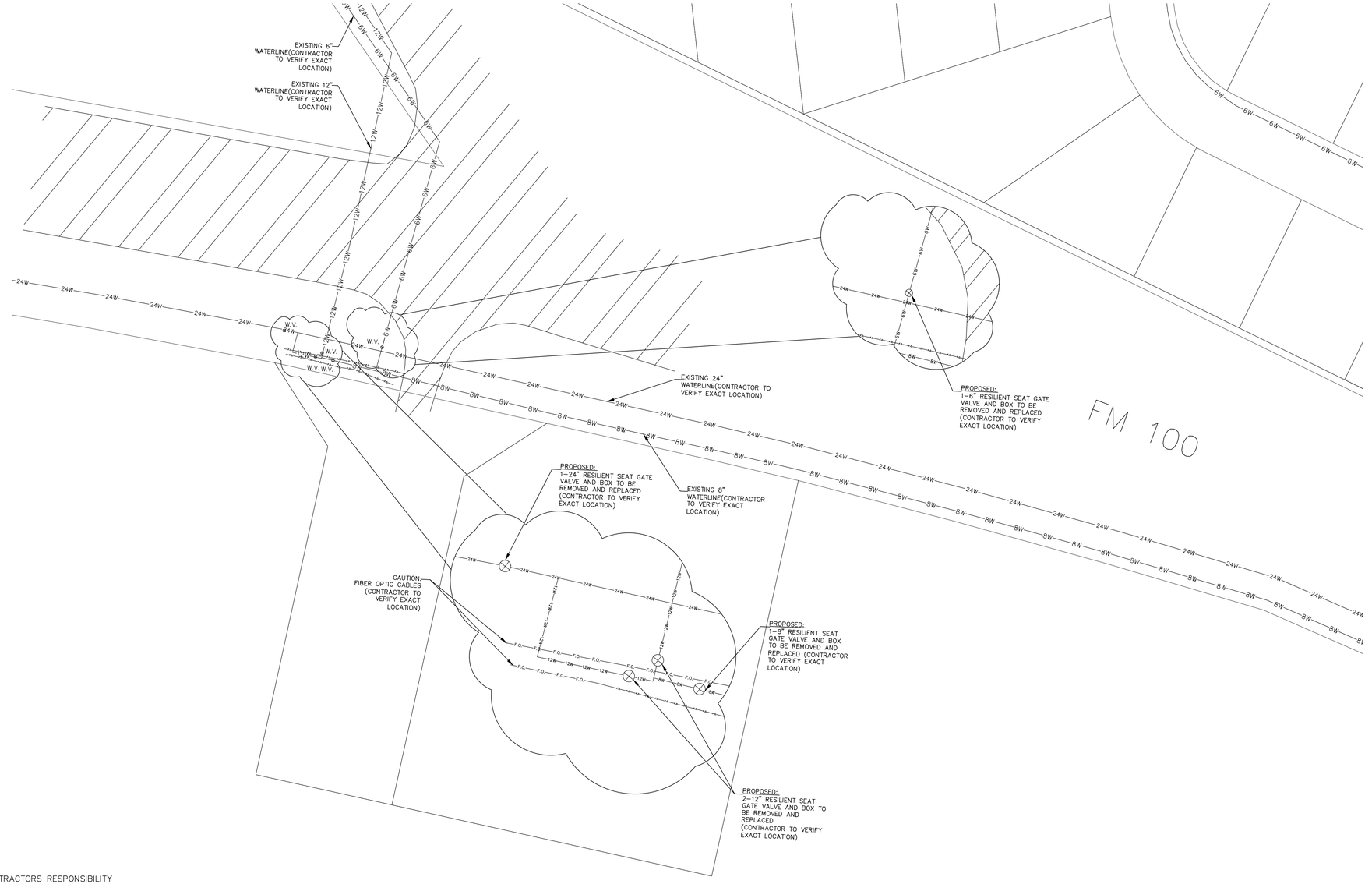

LOCATION: 28

SCALE 1"=40'

LEGEND

Lot Line.....
R.O.W. Line.....
Easement.....
Fence Line..... —X—X—
Power Pole(P.P.).....
Guy Wire(G.W.).....
Cable Box.....C.B.
Man Hole.....M.H.
Vent Pipe.....V.P.
Irrigation Valve.....I.V.
Water Meter.....W.M.
Meter Pole.....M.P.
Road Side Ditch.....R.S.D.
Drain Line.....
Electrical Box.....E.B.
Water Valve(W.V.).....
Control Valve(C.V.).....
Fire Hydrant.....F.H.
Light Pole.....L.P.
Telephone Box.....T.B.
Cable Line..... —F.O.—F.O.—
Existing Sanitary Sewer Line... —S—
Gas Meter.....G.M.
Sprinkler Head.....
Gas Line..... —GAS—
Proposed 6" Water Line..... —6W—
Proposed 8" Water Line..... —8W—
Found 1/2" Iron Rebar .....
Existing 2" Water Line..... —2W—
Existing 6" Water Line..... —6W—
Existing 8" Water Line..... —8W—
Existing 12" Water Line..... —12W—
Existing 16" Water Line..... —16W—
Existing 24" Water Line..... —24W—
Proposed 12" Water Line..... —12W—
Proposed PVC Cap.....
Existing Storm Sewer Line.....
Light Pole(L.P.).....
Concrete Parking Block.....
Turning Signal Post(T.P.).....

ESTIMATED SHEET QUANTITIES

8" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
6" AWWA RESILIENT SEAT GATE VALVE W/BOX .....1 EA.
12" AWWA RESILIENT SEAT GATE VALVE W/BOX ...2 EA.
24" AWWA RESILIENT SEAT GATE VALVE W/BOX ...1 EA.

CAUTION:

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

PROPOSED REMOVAL AND REPLACEMENT OF GATE VALVES AT THE INTERSECTION OF HWY. 100 AND HWY. 510

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

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DATE: OCTOBER 2021 NO. 36 OF 41

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NOTES:

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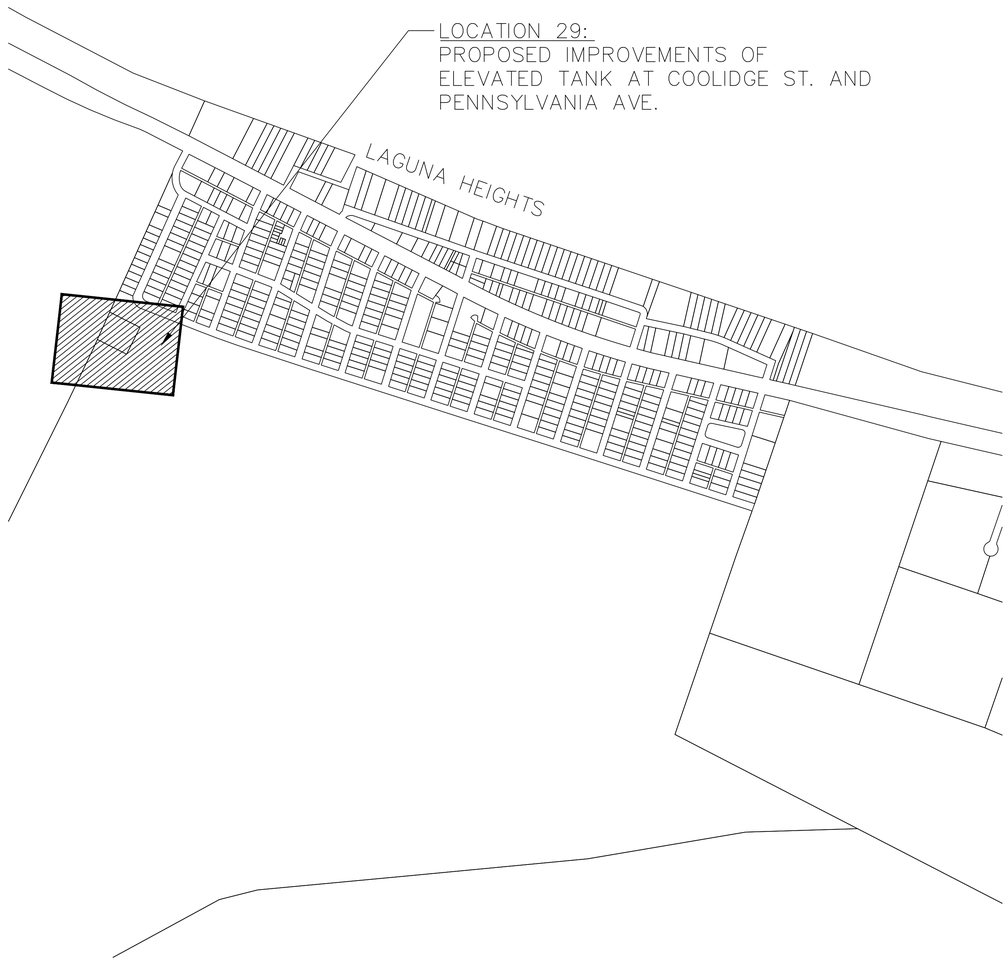
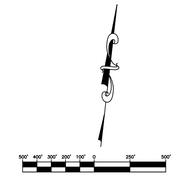


LAGUNA HEIGHTS, TX



LOCATION MAP

SCALE: 1" = 500'

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

LOCATION MAP 9

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F–592
WESLACO, TEXAS

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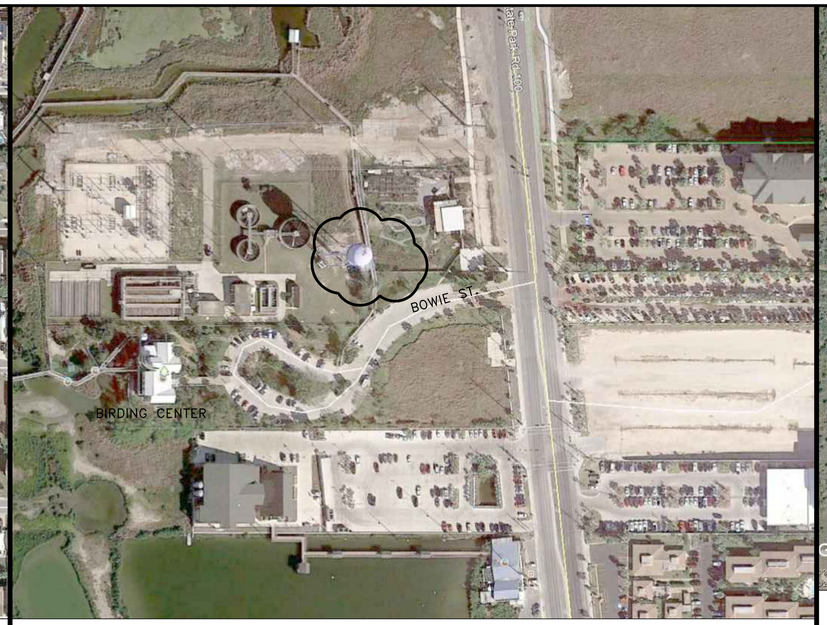
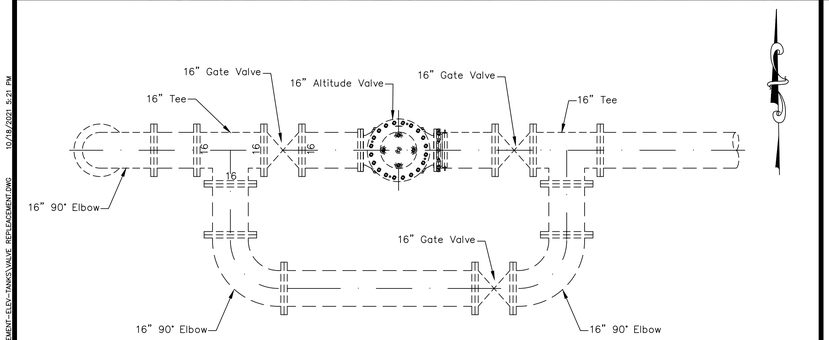
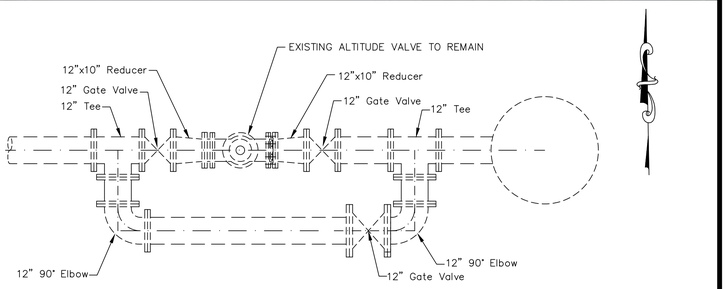
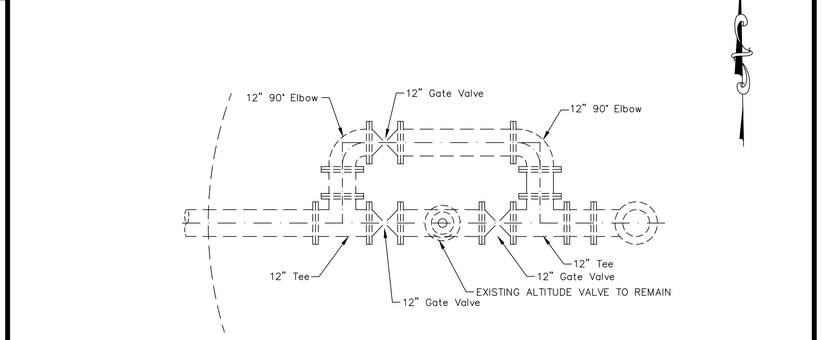




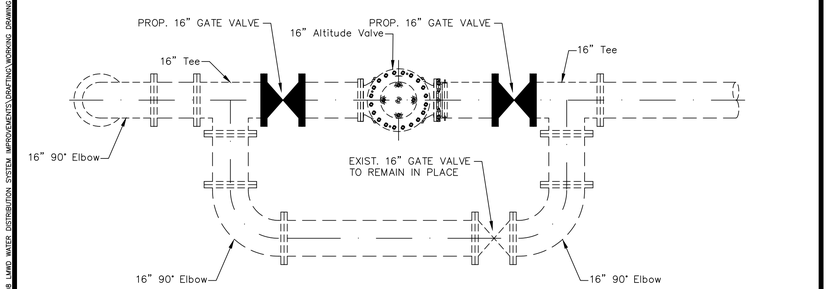
PLAN – EXISTING CONDITIONS



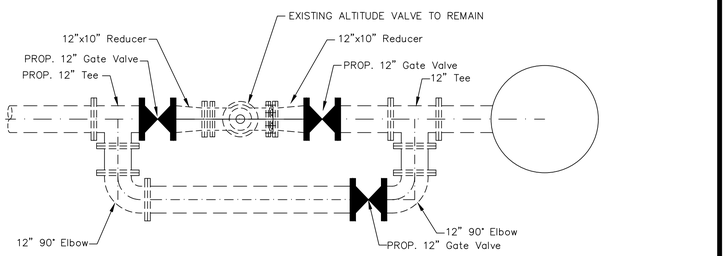
PLAN – EXISTING CONDITIONS



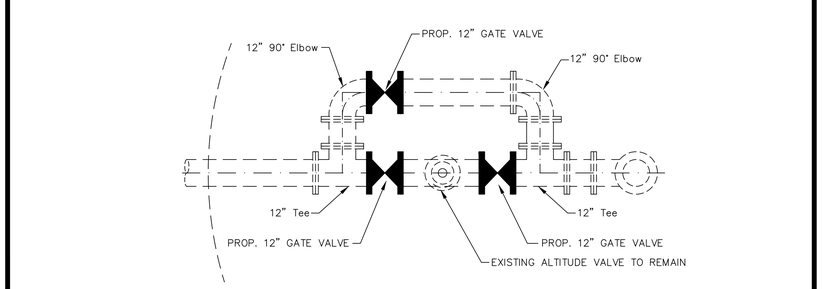
PLAN – EXISTING CONDITIONS



PLAN – PROPOSED IMPROVEMENTS
ELEVATED TANK AT HUISACHE ST. AND LAGUNA BLVD.
LOCATION 12



PLAN – PROPOSED IMPROVEMENTS
ELEVATED TANK AT ANDY BOWIE ST. AND BIRDING CENTER
LOCATION 20



PLAN – PROPOSED IMPROVEMENTS
ELEVATED TANK AT COOLIDGE ST. AND PENNSYLVANIA AVE.
LOCATION 29

UTILITIES NOTE:

Exist. above ground utilities and topography have been plotted by direct field information. Underground utilities have been plotted from various sources and locators. Contractor will be required to establish their exact location, depth, and size. The contractor is also responsible for the replacement or repair of all cut or broken water lines, irrigation lines, force mains, sprinkler systems, gas lines, electrical lines, cables, etc.

EQUIPMENT NOTES:

1. THE DIMENSIONS SHOWN FOR PIPING AND VALVE LAYOUTS ARE BASED ON ONE OR MORE MANUFACTURE'S DESIGN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY DIMENSIONS OF PARTICULAR EQUIPMENT BEING FURNISHED AND TO MAKE SUCH CHANGES AS REQUIRED TO INSTALL EQUIPMENT IN THE SPACE PROVIDED.
2. ALL EXISTING FITTINGS AND VALVES, REMOVED SHALL BE TURNED OVER TO LAGUNA MADRE WATER DISTRICT.

ESTIMATED SHEET QUANTITIES

12" AWWA RESILIENT SEAT GATE VALVE WITH BOX.....6 EA.
16" AWWA RESILIENT SEAT GATE VALVE WITH BOX.....2 EA.
COUPLING ADAPTORS.....1 L.S.

ALL EXISTING GATE VALVES SHALL BE REMOVED AND REPLACED.

STATE OF TEXAS
RANDALL C. WINSTON
70417
LICENSED
PROFESSIONAL ENGINEER
10/18/2021

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REV.	DATE	DESCRIPTION	BY

LAGUNA MADRE WATER DISTRICT
WATER DISTRIBUTION SYSTEM
PROPOSED VALVE REPLACEMENT IMPROVEMENTS

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	CHECKED:	DRAWING NO.
MVJr.	I.H.	R.C.W.	21-108-38
DATE: OCTOBER 2021	NO. 38 OF 41		

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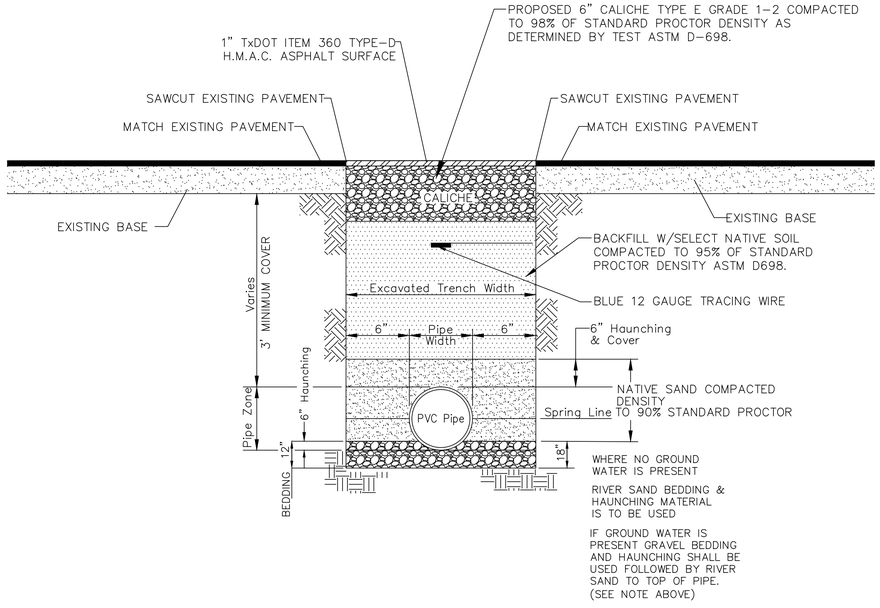
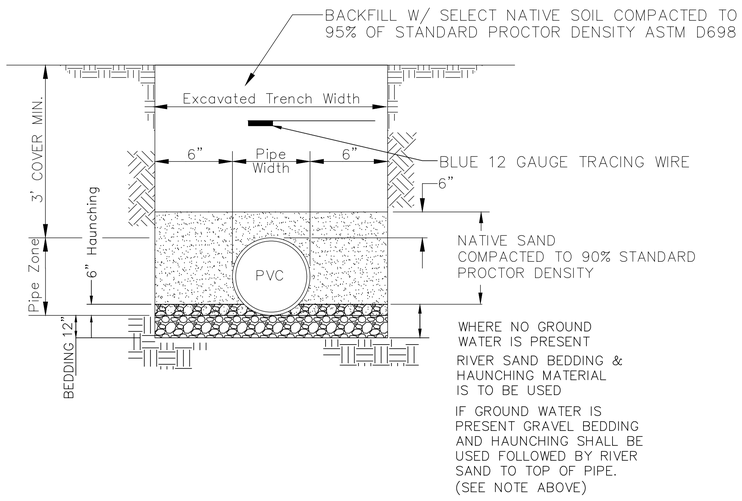
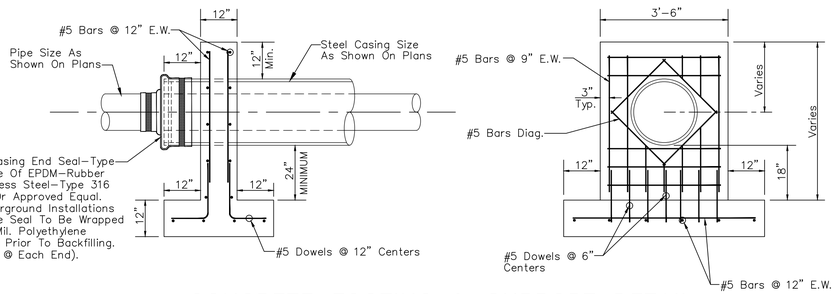


PAVEMENT CROSSING TRENCH DETAIL (Open Cut)

N.T.S.

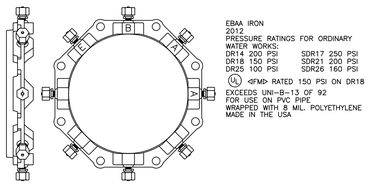


TYP. TRENCH BEDDING DETAIL (NOT APPLICABLE UNDER PAVEMENT)

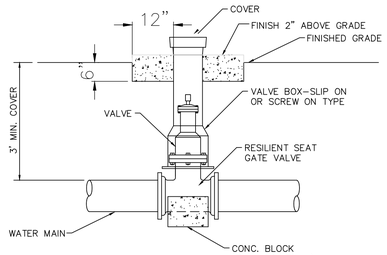


CONCRETE FOOTING & SUPPORT DETAIL

NTS

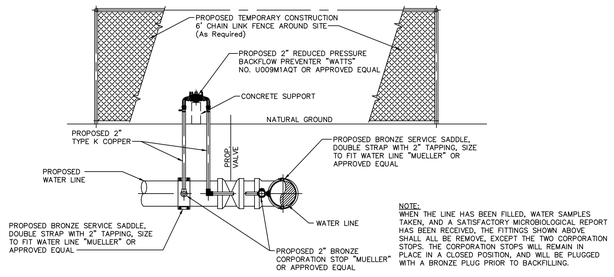


DUCTILE IRON MECHANICAL JOINT FITTING DETAIL N.T.S (SEE SPECS OR APPROVED EQUAL)



GATE VALVE DETAIL

NTS



TEMPORARY CONNECTION FOR FILLING NEW LINE

SEPARATION DISTANCES

The Texas Commission on Environmental Quality (TCEQ) CHAPTER 290 – Separation Distances shall apply to the installation of all the sanitary sewer lines and water lines.

§290.44(e) Location of waterlines. The following rules apply to installations of waterlines, wastewater mains or laterals, and other conveyances/appurtenances identified as potential sources of contamination. Furthermore, all ratings specified shall be defined by ASTM or AWWA standards unless stated otherwise. New mains, service lines, or laterals are those that are installed where no main, service line, or lateral previously existed, or where existing mains, service lines, or laterals are replaced with pipes of different size or material.

§290.44(e)(1) When new potable water distribution lines are constructed, they shall be installed no closer than nine feet in all directions to wastewater collection facilities. All separation distances shall be measured from the outside surface of each of the respective pieces.

§290.44(e)(2) Potable water distribution lines and wastewater mains or laterals that form parallel utility lines shall be installed in separate trenches.

§290.44(e)(3) No physical connection shall be made between a drinking water supply and a sewer line. Any appurtenance shall be designed and constructed so as to prevent any possibility of sewage entering the drinking water system.

§290.44(e)(4) Where the nine-foot separation distance cannot be achieved, the following criteria shall apply.

§290.44(e)(4)(A) New waterline installation--parallel lines.

§290.44(e)(4)(A)(i) Where a new potable waterline parallels an existing, non-pressure or pressure rated wastewater main or lateral and the licensed professional engineer licensed in the State of Texas is able to determine that the existing wastewater main or lateral is not leaking, the new potable waterline shall be located at least two feet above the existing wastewater main or lateral, measured vertically, and at least four feet away, measured horizontally, from the existing wastewater main or lateral. Every effort shall be exerted not to disturb the bedding and backfill of the existing wastewater main or lateral.

§290.44(e)(4)(A)(ii) Where a new potable waterline parallels an existing pressure rated wastewater main or lateral and it cannot be determined by the licensed professional engineer if the existing line is leaking, the existing wastewater main or lateral shall be replaced with at least 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the new wastewater line, measured vertically, and at least four feet away, measured horizontally, from the replaced wastewater main or lateral.

§290.44(e)(4)(A)(iii) Where a new potable waterline parallels a new wastewater main, the wastewater main or lateral shall be constructed of at least 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the wastewater main or lateral, measured vertically, and at least four feet away, measured horizontally, from the wastewater main or lateral.

§290.44(e)(4)(B) New waterline installation--crossing lines.

§290.44(e)(4)(B)(i) Where a new potable waterline crosses an existing, non-pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least two feet above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. If the existing wastewater main or lateral is disturbed or shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.

§290.44(e)(4)(B)(ii) Where a new potable waterline crosses an existing, pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least six inches above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. If the existing wastewater main or lateral shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.

§290.44(e)(4)(B)(iii) Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral and the standard pipe segment length of the wastewater main or lateral is at least 18 feet, one segment of the waterline pipe shall be centered over the wastewater main or lateral such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral. The potable waterline shall be at least two feet above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. The wastewater pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The wastewater main or lateral shall be embedded in cement stabilized sand (see clause (vi) of this subparagraph) for the total length of one pipe segment plus 12 inches beyond the joint on each end.

§290.44(e)(4)(B)(iv) Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral and a standard length of the wastewater pipe is less than 18 feet in length, the potable water pipe segment shall be centered over the wastewater line. The materials and method of installation shall conform with one of the following options.

§290.44(e)(4)(B)(iv)(I) Within nine feet horizontally of either side of the waterline, the wastewater pipe and joints shall be constructed with pipe material having a minimum pressure rating of at least 150 psi. An absolute minimum vertical separation distance of two feet shall be provided. The wastewater main or lateral shall be located below the waterline.

§290.44(e)(4)(B)(iv)(II) All sections of wastewater main or lateral within nine feet horizontally of the waterline shall be encased in an 18-foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The encasing pipe shall be centered on the waterline and shall be at least two nominal pipe diameters larger than the wastewater main or lateral. The space around the carrier pipe shall be supported at five-foot (or less) intervals with spacers or be filled to the springline with washed sand. Each end of the casing shall be sealed with watertight non-shrink cement grout or a manufactured watertight seal. An absolute minimum separation distance of six inches between the encasement pipe and the waterline shall be provided. The wastewater line shall be located below the waterline.

§290.44(e)(4)(B)(iv)(III) When a new waterline crosses under a wastewater main or lateral, the waterline shall be encased as described for wastewater mains or laterals in subclause (II) of this clause or constructed of ductile iron or steel pipe with mechanical or welded joints as appropriate. An absolute minimum separation distance of one foot between the waterline and the wastewater main or lateral shall be provided. Both the waterline and wastewater main or lateral must pass a pressure and leakage test as specified in AWWA C600 standards.

§290.44(e)(4)(B)(v) Where a new potable waterline crosses a new, pressure rated wastewater main or lateral, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the center line of the wastewater main or lateral. The potable waterline shall be at least six inches above the wastewater main or lateral. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral. The wastewater pipe shall have a minimum pressure rating of at least 150 psi. The wastewater main or lateral shall be embedded in cement stabilized sand (see clause (vi) of this subparagraph) for the total length of one pipe segment plus 12 inches beyond the joint on each end

§290.44(e)(4)(B)(vi) Where cement stabilized sand bedding is required, the cement stabilized sand shall have a minimum of 10% cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume (at least 2,5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be a minimum of six inches above and four inches below the wastewater main or lateral. The use of brown coloring in cement stabilized sand for wastewater main or lateral bedding is recommended for the identification of pressure rated wastewater mains during future construction.

§290.44(e)(5) Waterline and wastewater main or lateral manhole or cleanout separation. The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 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 five-foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant.

§290.44(e)(6) Location of fire hydrants. Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater main, wastewater lateral, or wastewater service line regardless of construction.

§290.44(e)(7) Location of potable or raw water supply or suction lines. Suction mains to pumping equipment shall not cross wastewater mains, wastewater laterals, or wastewater service lines. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main, wastewater lateral, or wastewater service line.

§290.44(e)(8) Proximity of septic tank drainfields. Waterlines shall not be installed closer than ten feet to septic tank drainfields.

§290.44(f) Sanitary precautions and disinfection. Sanitary precautions, flushing, disinfection procedures, and microbiological sampling as prescribed in AWWA standards for disinfecting water mains shall be followed in laying waterlines.

§290.44(f)(1) Pipe shall not be laid in water or placed where it can be flooded with water or sewage during its storage or installation.

§290.44(f)(2) Special precautions must be taken when waterlines are laid under any flowing or intermittent stream or semipermanent body of water such as marsh, bay, or estuary. In these cases, the water main shall be installed in a separate watertight pipe encasement and valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested to determine that there are no leaks in the underwater line. Alternately, and with the permission of the executive director, the watertight pipe encasement may be omitted.

§290.44(f)(3) New mains shall be thoroughly disinfected in accordance with AWWA Standard C651 and then flushed and sampled before being placed in service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure. Sampling shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed waterline will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer.

STATE OF TEXAS
RANDALL C. WINSTON
70417
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PROFESSIONAL ENGINEER

Randall C. Winston, P.E.
10/18/2021

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REV.	DATE	DESCRIPTION	BY

CAMERON COUNTY, TEXAS
LAGUNA MADRE WATER DISTRICT

DETAILS

SIGLER, WINSTON, GREENWOOD AND ASSOCIATES
SWG ENGINEERING, LLC
TEXAS FIRM REGISTRATION NO. F-592
WESLACO, TEXAS

DRAWN:	CHECKED:	APPROVED:	DRAWING NO.
J.J.G.	I.H.	R.C.W.	21-108-39

DATE: OCTOBER 2021 NO. 39 OF 41

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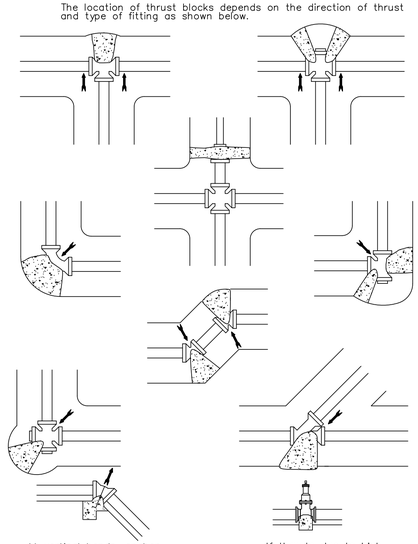
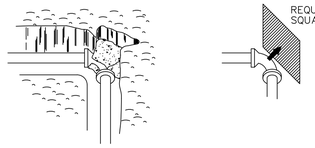
LOCATION OF THRUST BLOCKS

The location of thrust blocks depends on the direction of thrust and type of fitting as shown below.



At vertical bends, anchor to resist outward thrust.

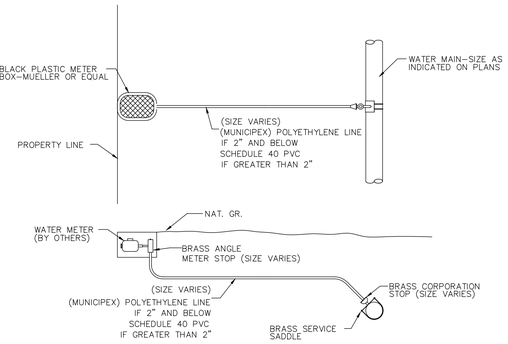
If thrusts due to high pressure are expected, anchor valves as above.



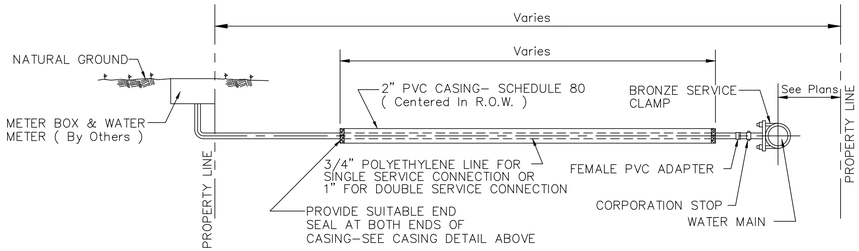
CONCRETE THRUST BLOCKS

THRUST–BLOCK DATA				
Pipe Size	Tee Min. Req'd Area S.F.	90° Bend Min. Req'd. Area S.F.	45° Bend Min. Req'd. Area S.F.	22–1/2° Bend Min. Req'd. Area S.F.
6"	3	4	2	1
8"	5	7	4	2
10"	8	12	6	3
12"	12	16	9	5
14"	16	22	12	6
16"	20	29	16	8

Thrust based on 150 psi water pressure. Area based on 2,000 psf soil bearing.



TYPICAL–SINGLE SERVICE WATER CONNECTION



TYPICAL ACROSS ROAD SERVICE CONNECTION

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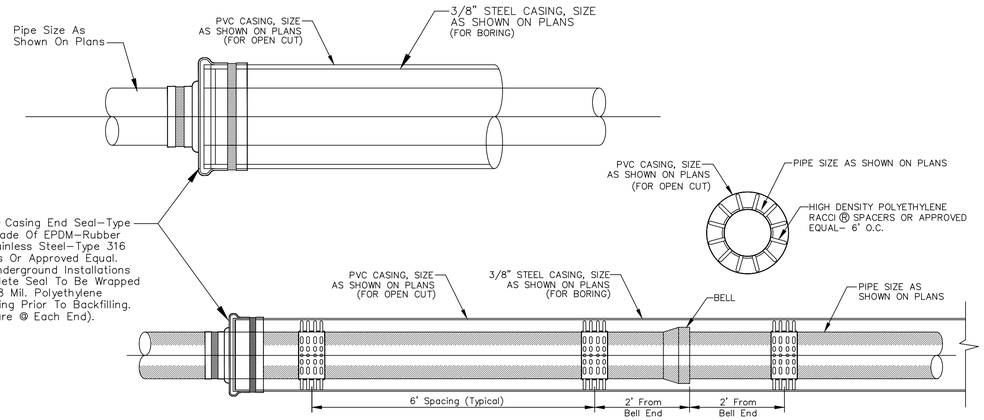
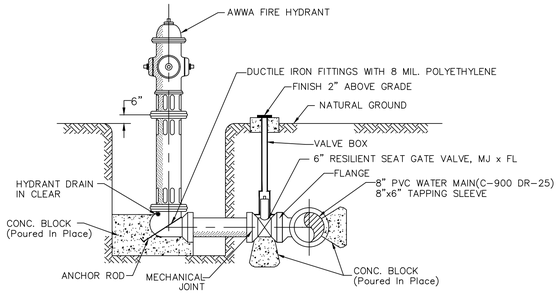


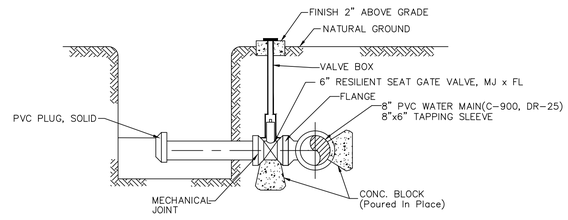
TYPICAL SKID DETAIL

NTS

CASING DETAILS



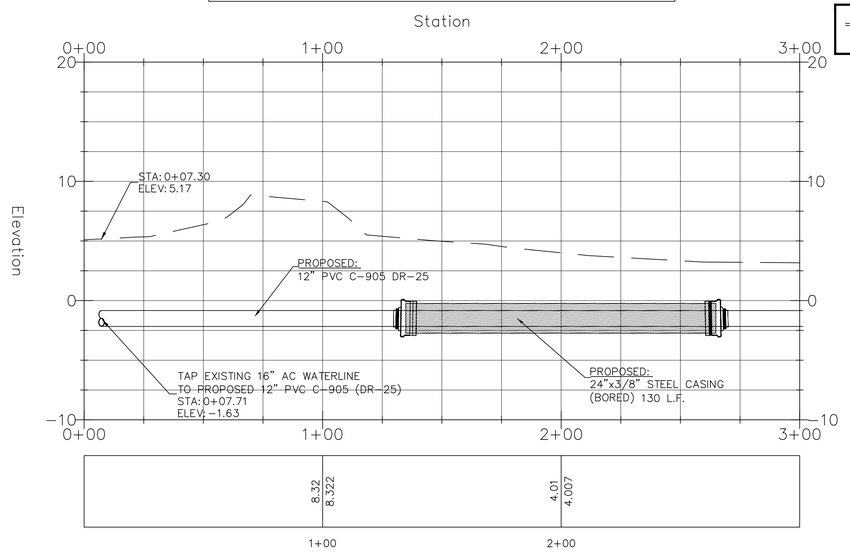
FIRE HYDRANT ASSEMBLY (NTS)



FIRE HYDRANT STUB–OUT (NTS)

Queen Isabella Causway PROFILE

SCALE
HORIZONTAL: 1"= 30'
VERTICAL: 1"= 6'



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J.J.G.	I.H.	R.C.W.	21–108–40

DATE: OCTOBER 2021 NO. 40 OF 41

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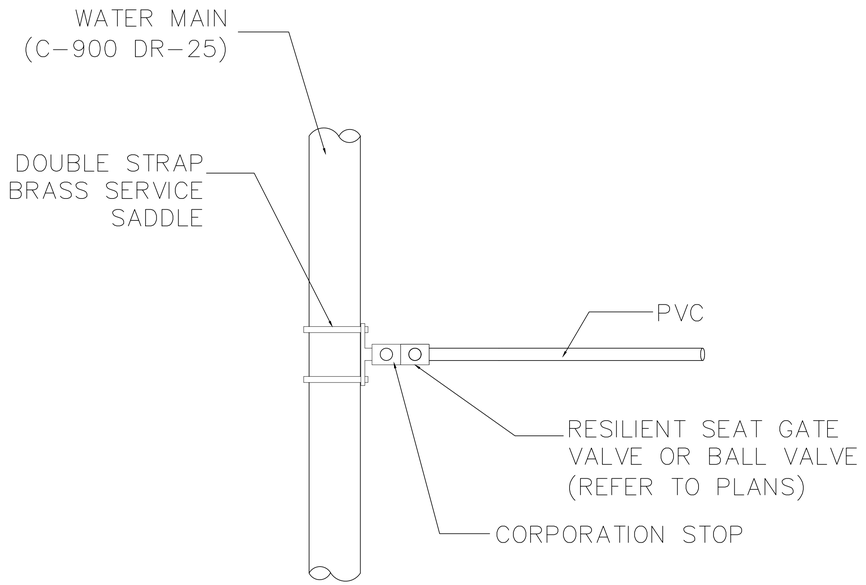
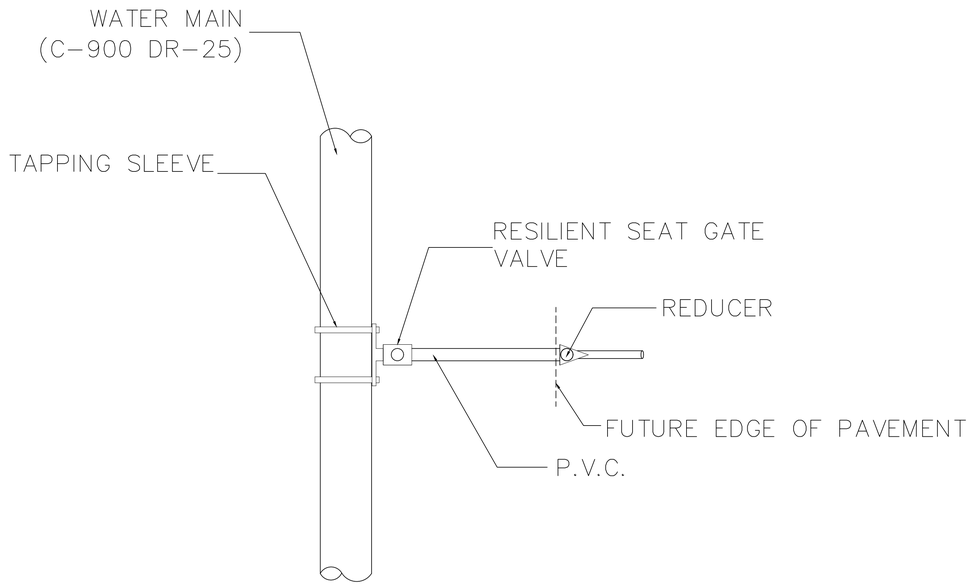
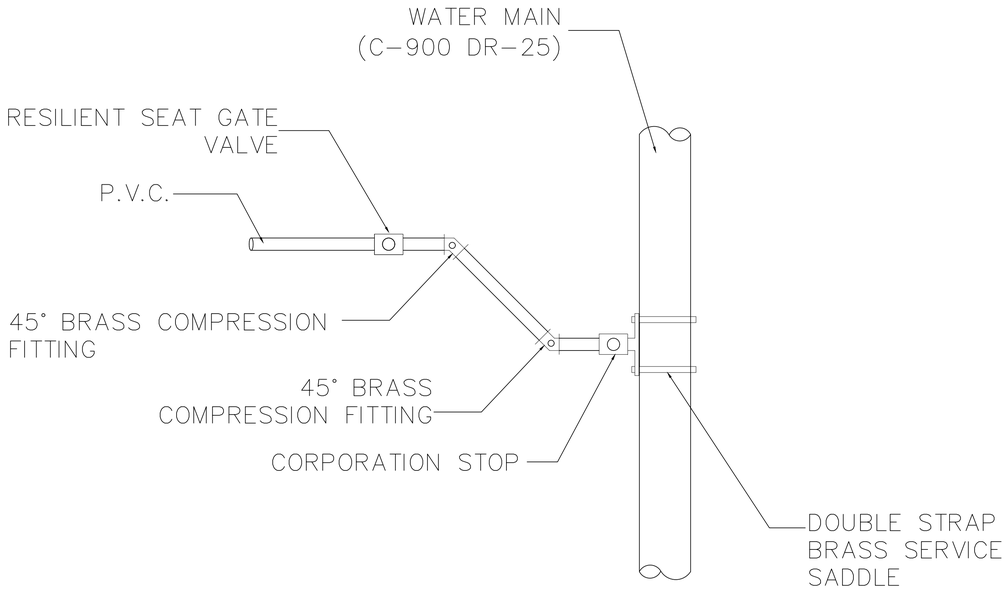


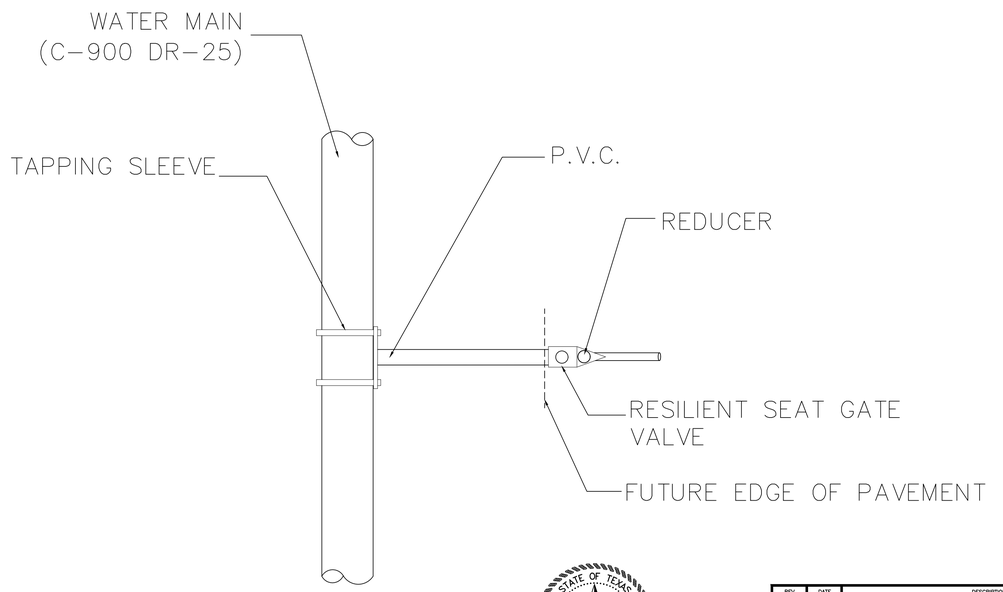
BRASS SADDLE DETAIL
(N.T.S.)



TAPPING SLEEVE DETAIL
(N.T.S.)



BRASS SADDLE DETAIL
(N.T.S.)



TAPPING SLEEVE DETAIL
(N.T.S.)

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