



T.J. Arredondo
Director of Planning

HIDALGO COUNTY PLANNING DEPARTMENT

2818 S. BUSINESS HWY 281
EDINBURG TEXAS 78539
Tel. 956-318-2840 Fax. 956-318-2844

HIDALGO COUNTY COMMISSIONERS COURT MEETING

DATE: 12-20-2022

PROPOSED EDUARDO'S NO. 16 PHASE II SUBDIVISION PRECINCT No. 3.

ENGINEER: IZAGUIRE ENGINEERING GROUP, LLC. DEVELOPER: LAS HERMANAS LAND DEVELOPMENT, LLC.

PRELIMINARY APPROVAL FINAL APPROVAL FINAL APPROVAL WITH FINANCIAL GUARANTEE WITH VARIANCE

NUMBER OF LOTS: 14 *SINGLE FAMILY *MULTI-FAMILY COMMERCIAL INDUSTRIAL

NUMBER OF STREETLIGHTS: 4

FILLING STATIONS: 2

LOCATION DESCRIPTION: WEST OF TROSPER ROAD 1/2 MILE NORTH OF MILE 3 NORTH ROAD.

SUBDIVISION LIES WITHIN THE: ETJ OF MISSION

DRAINAGE REPORT WAS APPROVED BY HCDD#1: ON 4-14-2022 PROPERTY LIES WITHIN FLOOD ZONE: "C" AS PER FEMA.

DRAINAGE DESIGN: DRAINAGE WILL BE PROVIDED BY AN EXISTING STORM SEWER SYSTEM AND DETENTION WILL BE PROVIDED BY AN EXISTING DRAIN DITCH.

ROAD R.O.W. DEDICATION: NO R.O.W. DEDICATION IS REQUIRED.

H.C.R.O.W. FINAL APPROVAL DATE: 11-22-2022 REVIEWED BY VICTOR GALLARDO, PCT. 3 R.O.W. AGENT

H.C.H.D. FINAL APPROVAL DATE: N/A BY, ENVIRONMENTAL HEALTH DIVISION

SEWER SYSTEM: SANITARY SEWER CITY OF MISSION EXISTING LINE SIZE: 8" LOCATION: FLOR DRIVE.

WATER SERVICE PROVIDER: S.W.S.C. EXISTING LINE SIZE: 8" LOCATION: FLOR DRIVE.

H.C.E.O.C. FINAL APPROVAL DATE: 2-25-2022: BY ENVIRONMENTAL COMPLIANCE COORDINATOR

LARGE CONSTRUCTION

The applicant has submitted the required NOI as per Part II, Section E of the TPDES General Permit for Construction Activities (TXR150000) along with a copy of the Erosion Control Plan for the proposed project.

PRELIMINARY APPROVAL FROM THE
HIDALGO COUNTY COMMISSIONERS COURT ON: MAY 31, 2022

STAFF RECOMMENDS: **Preliminary Approval** subject comments and future recommendations by planning, other departments and the approval of the City of MISSION.

Final Approval subject to recommendations other departments

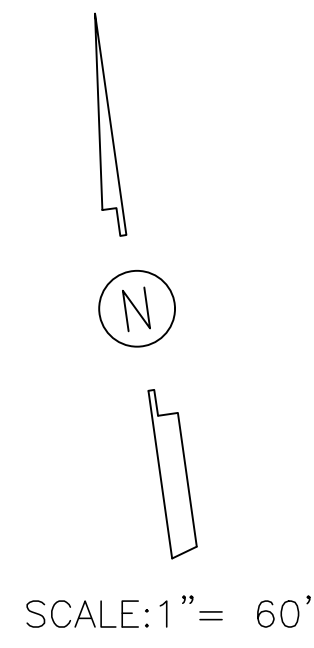
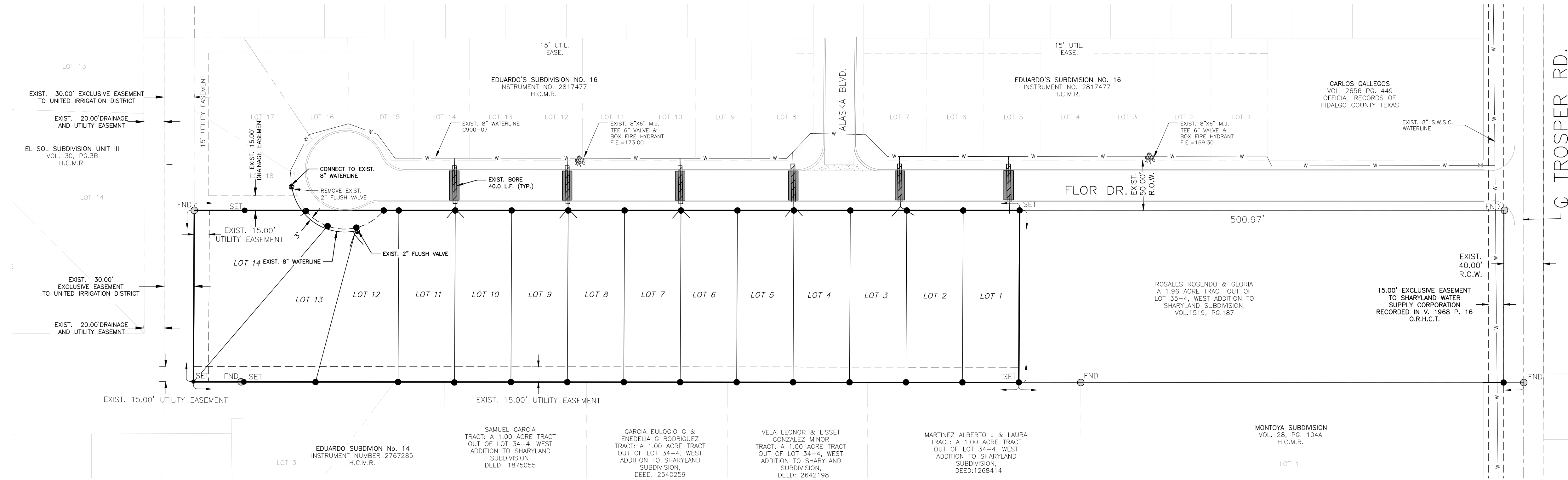
This subdivision plat has been reviewed and complies with the Hidalgo County Subdivision Rules,

* Texas Water Development Board Model Subdivision Rules and The Texas Local Government Code.

ALL WATERLINE CONSTRUCTION SHALL REFERENCE SHARYLAND WATER SUPPLY COMPANY STANDARDS. CONTRACTOR SHALL REFERENCE SHARYLAND WATER SUPPLY CO. DETAILS WHENEVER CONFLICTS ARISE.

EDUARDO'S SUBDIVISION No.16 PHASE II MAP OF WATER DISTRIBUTION

A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



FINAL ENGINEERING REPORT FOR EDUARDO'S SUBDIVISION No. 16 PHASE II:
BY GILBERTO A. GRACIA, P.E.

WATER SUPPLY: Description and Costs.

WATER SUPPLY:
EDUARDO'S SUBDIVISION No. 16 PHASE II HAS BEEN PROVIDED WITH POTABLE WATER BY THE WATER COMPANY OF SHARYLAND WATER SUPPLY COMPANY (S.W.S.C.). THE SUBDIVIDER AND COMPANY S.W.S.C. SIGNED A CONTRACT BY WHICH, THE SUBDIVISION WILL RECEIVE SUFFICIENT WATER PROVISION FOR AT LEAST 30 YEARS AND AGUA SUD HAS PROVIDED SUFFICIENT DOCUMENTATION TO ESTABLISH THE LONG TERM QUANTITY AND QUALITY OF THE AVAILABLE WATER SUPPLIES TO SERVE THE FULL DEVELOPMENT OF THIS SUBDIVISION.

S.W.S.C. HAS AN EXISTING 8" DIAMETER LINE RUNNING ALONG FLOR DR.

THE WATER SYSTEM FOR EDUARDO'S SUBDIVISION No.16 PHASE II CONSISTS OF AN EXISTING 8" DIAMETER WATER LINE THAT TAPS INTO THE EXISTING 8" DIAMETER WATER LINE THAT RUNS ALONG THE WEST SIDE OF TROSPER ROAD. THE EXISTING 8" DIAMETER WATER LINE RUNS EAST FOR ALONG THE NORTH SIDE OF FLOR DR.

FROM THE EXISTING 8" DIAMETER WATERLINE, SIX (6) DOUBLE SERVICES OF 1" OF DIAMETER AND TWO (2) SINGLE SERVICES ARE COMING OUT OF THIS LINE. SAID SERVICES TERMINATE AT THE WATER METERS OF EACH LOT. THE WATER SERVICE LINES, AND THE WATER METER BOXES HAS BEEN INSTALLED AT A TOTAL COST OF \$ _____ OR \$ _____ PER LOT. IN ADDITION THE SUBDIVIDER HAS PAID PAY S.W.S.C. THE AMOUNT OF \$ _____ WHICH COVERS THE \$ _____ COST PER LOT STATED IN THE 30 YR WATER SERVICE AGREEMENT, WHICH SUM REPRESENTS THE TOTAL COST OF WATER METER, RIGHTS ACQUISITION FEES, AND ALL MEMBERSHIP OR OTHER FEES ASSOCIATED WITH CONNECTING THE INDIVIDUAL LOTS IN THE SUBDIVISION TO S.W.S.C. UPON REQUEST BY THE LOT OWNER, S.W.S.C. WILL PROMPTLY INSTALL AT NO CHARGE THE WATER METER FOR THAT LOT. THE ENTIRE WATER FACILITIES HAVE BEEN APPROVED AND ACCEPTED BY S.W.S.C. AND SAID DISTRIBUTION SYSTEM IS OPERABLE AS OF THE DATE OF THE RECORDING OF THE PLAT.

SANITARY SEWAGE DESCRIPTION AND EXPENSES:

EDUARDO'S SUBDIVISION No. 16 PH. II SUBDIVISION WILL BE TREATED BY WASTEWATER SERVICE FROM CITY OF MISSION. THE SUBDIVIDER AND CITY OF MISSION HAVE ENTERED INTO A CONTRACT IN WHICH CITY OF MISSION HAS PROMISED TO TREAT THE SUFFICIENT WASTEWATER FOR AT LEAST 30 YEARS AND CITY OF MISSION HAS PROVIDED DOCUMENTATION TO SUFFICIENTLY ESTABLISH THE LONG TERM QUANTITY AND QUALITY OF THE AVAILABLE WASTEWATER SUPPLIES TO SERVE THE FULL DEVELOPMENT OF THIS SUBDIVISION.

CITY OF MISSION HAS AN EXISTING 8" DIAMETER SEWER LINE RUNNING ALONG THE WEST SIDE OF THE RIGHT-OF-WAY OF ALASKA ROAD.

THE SANITARY SEWAGE SYSTEM OF EDUARDO'S SUBDIVISION No. 16 PH. II CONSISTS OF AN EXISTING 8" DIAMETER SEWER LINE THAT TAPS INTO THE EXISTING LINE OF 8" DIAMETER THAT RUNS WITHIN THE ALASKA RD ROW. THE PROPOSED 8" DIAMETER LINE RUNS TOWARDS THE WEST APPROXIMATELY 502 FEET AND IT ALSO RUNS TOWARDS THE EAST 430 FEET. SANITARY SERVICES TERMINATE AT THE SEWER METERS OF EACH LOT FOR A TOTAL OF FOURTEEN (14) SANITARY SEWER SERVICES.

THE 8" LINE, 4" SERVICE LINE AND ONE (1) SANITARY SEWER MANHOLE HAVE BEEN INSTALLED, AT A TOTAL COST OF \$20,748.00 OR \$1,482.00 PER LOT. IN ADDITION, THE SUBDIVIDER HAS PAID CITY OF MISSION THE SUM OF \$7,259.00 WHICH COVERS THE \$518.50 PER LOT AS STATED IN THE 30 YEAR WASTE WATER SERVICE AGREEMENT WHICH SUM REPRESENTS THE TOTAL COST OF THE SERVICES AND ACQUISITION FEES, AND ALL MEMBERSHIP OR OTHER FEES ASSOCIATED WITH CONNECTING THE INDIVIDUAL LOTS IN THE SUBDIVISION TO THE CITY OF MISSION. THE ENTIRE WASTEWATER FACILITIES HAVE BEEN APPROVED AND ACCEPTED BY CITY OF MISSION AND SAID DISTRIBUTION SYSTEM IS OPERABLE AS OF THE DATE OF THE RECORDING OF THE PLAT.

ENGINEER CERTIFICATION:

BY MY SIGNATURE BELOW, I CERTIFY THAT THE WATER AND SEWAGE SERVICE FACILITIES DESCRIBED ABOVE ARE IN COMPLIANCE WITH THE MODEL RULES ADOPTED UNDER SECTION 16.343, WATER CODE. I CERTIFY THAT THE COSTS TO INSTALL WATER AND SEWAGE FACILITIES, DISCUSSED ABOVE, ARE AS FOLLOWS:

WATER FACILITIES - THESE FACILITIES FULLY CONSTRUCTED HAS COST A GRAND TOTAL OF \$ 48,767 WHICH EQUALS TO \$3,483.35 PER LOT.

SEWAGE FACILITIES - THESE FACILITIES FULLY CONSTRUCTED WILL COST A GRAND TOTAL OF \$25,000.00 WHICH EQUALS TO \$1,785.71 PER LOT.



GILBERTO A. GRACIA—P.E. No. 62477
This seal appearing on this document was authorized by Gilberto A. Gracia, P.E., No. 62477 on the above designated date.

EDUARDO'S SUBDIVISION No. 16 PHASE II
POR: GILBERTO A. GRACIA, P.E.

PROVISIÓN DE AGUA: DESCRIPCIÓN, Y GASTOS.

EDUARDO'S SUBDIVISION No. 16 PHASE II HA SIDO PROVISTA DE AGUA POTABLE POR LA COMPAÑIA DE SHARYLAND WATER SUPPLY COMPANY (S.W.S.C.). EL SUBDIVIDOR Y LA COMPAÑIA DE S.W.S.C. A FIRMARON UN CONTRATO POR EL CUAL LA SUBDIVISION RECIBIRA PROVISIÓN DE AGUA SUFFICIENTE POR LOS PROXIMOS 30 AÑOS Y LA COMPAÑIA DE S.W.S.C. PRESENTO SUFFICIENTE DOCUMENTACIÓN PARA ESTABLECER A LARGO PLAZO LA CANTIDAD Y CALIDAD DE AGUA ABASTECIDA PARA SERVIR EL FUTURO DESARROLLO DE LA SUBDIVISION.

S.W.S.C. TIENE UNA LINEA DE 8" DE DIÁMETRO EXISTENTE, CORRIENDO POR EL LADO NORTE DE LA CALLE FLOR DR.

EL SISTEMA DE AGUA PARA EDUARDO'S No. 16 PHASE II CONSISTE DE UNA LINEA DE AGUA DE 8" DE DIÁMETRO QUE SE CONECTA CON LA LINEA EXISTENTE DE 8" DE DIÁMETRO QUE CORRE EN EL LADO OESTE DE LA CALLE TROSPER ROAD, LA LINEA EXISTENTE DE 8" DE DIÁMETRO CORRE HACIA EL NORTE DEL LADO NORTE DE LA CALLE FLOR DR.

DE LA LINEA DE 8" DE DIÁMETRO SE DESPRENDEN SEIS (6) SERVICIOS DOBLES DE 1" DE DIÁMETRO Y DOS (2) SERVICIOS DE AGUA SENCILLOS QUE VAN HACIA LOS MEDIDORES DE CADA LOTE. LAS LINEAS DE SERVICIOS DE AGUA, Y LAS CAJAS DE LOS MEDIDORES SE INSTALARON A UN COSTO TOTAL DE US \$ _____ DE LOS CUALES SE CUBRIÓ US \$ _____ POR LOTE. EL DUEÑO DE LA SUBDIVISION PAGO ADICIONALMENTE A S.W.S.C. LA CANTIDAD DE US \$ _____ POR LOTE DE ACUERDO AL CONTRATO Y DOCUMENTO DE 30 AÑOS DE SERVICIO DE AGUA POTABLE QUE CUBRE EL MEDIDOR DE AGUA, (INCLUYENDO COSTOS DE LA INSTALACION DE CADA MEDIDOR, TARIFAS DE CONEXION Y MEMBRESIAS). CUANDO EL DUEÑO DEL SOLAR SOLICITE UN MEDIDOR DE AGUA, LA COMPAÑIA S.W.S.C. INSTALARA EL MEDIDOR SIN COSTO ALGUNO AL DUEÑO. EL SISTEMA DE AGUA ESTA EN FUNCIONAMIENTO COMPLETO ANTES O EN LA FECHA, EN LA CUAL LA SUBDIVISION SEA REGISTRADA EN EL CONDADO DE HIDALGO.

DRENAJE: DESCRIPCIÓN, GASTOS Y FECHA DE INICIO PARA FACILITAR EL DRENAJE PARA LA SUBDIVISION

LA SUBDIVISION DE EDUARDO'S SUBDIVISION No. 16 PH. II RECIBIRA SU PROVISIÓN DE DRENAJE SANITARIO DE LA CIUDAD DE MISSION. EL DUEÑO DE LA SUBDIVISION Y LA CIUDAD DE MISSION HAN FIRMADO UN CONTRATO POR EL CUAL LA SUBDIVISION RECIBIRA SU PROVISIÓN DE DRENAJE SANITARIO POR LOS PROXIMOS 30 AÑOS. LA CIUDAD DE MISSION HA PRESENTADO DOCUMENTACIÓN PARA DEMOSTRAR A LARGO PLAZO LA CANTIDAD Y CALIDAD DE DRENAJE SANITARIO ACCESIBLE PARA SERVIR EL FUTURO DESARROLLO DE LA SUBDIVISION.

EL SISTEMA DE PROVISIÓN DE DRENAJE SANITARIO PARA EDUARDO'S SUBDIVISION No. 16 PH. II CONSISTE DE UN CONDUCTO DE DRENAJE DE 8 PULGADAS DE DIÁMETRO QUE PASA POR EL LADO ESTE DEL DERECHO DE VIA (RIGHT OF WAY) DE LA CALLE ALASKA ROAD.

EL DRENAJE SANITARIO DE EDUARDO'S SUBDIVISION No. 16 PH. II CONSISTE DE UNA LINEA DE 8" DE DIÁMETRO QUE SE CONECTARA A LA LINEA EXISTENTE QUE CORRE DENTRO DEL DERECHO DE VIA DE LA CALLE ALASKA RD. LA LINEA EXISTENTE DE 8" DE DIÁMETRO CORRE HACIA EL OESTE APROXIMADAMENTE 502 PIES Y TAMBIEN CORRE HACIA EL LADO ESTE 430 PIES. DE ESTAS LINEAS DE DRENAJE SANITARIO DE 8 PULGADAS CATORCE (14) LINEAS DE SERVICIO DE 4 PULGADAS HAN SIDO EXTENDIDAS HA CADA LOTE.

LA LINEAS DE 8 PULGADAS, DE 4 PULGADAS Y UNA (1) ALCANTARILLA HA SIDO INSTALADAS, HA UN COSTO TOTAL DE \$20,748.00 O \$1,482.00 POR LOTE. EL DUEÑO DE LA SUBDIVISION TAMBIEN LE HA PAGADO A LA CIUDAD DE MISSION UN COSTO ADICIONAL DE \$7,259.00 O \$518.50 POR LOTE. EL SISTEMA DE DRENAJE SANITARIO ESTARA EN FUNCIONAMIENTO COMPLETO ANTES O EN LA FECHA, EN LA CUAL LA SUBDIVISION SEA REGISTRADA EN EL CONDADO DE HIDALGO

CERTIFICACIÓN:

CON MI FIRMA, CERTIFICO QUE LOS SERVICIOS Y SISTEMAS DE AGUA Y DE DRENAJE, DESCRITOS EN ESTE DOCUMENTO CUMPLEN CON LAS MODEL SUBDIVISION RULES (LAS REGLAS GOBERNANDO A LAS SUBDIVISIONES), ADOPTADAS EN LA SECCION 16.343 DEL TEXAS WATER CODE (CÓDIGO DE AGUA DE TEXAS). CERTIFICO QUE LOS GASTOS PARA INSTALAR LOS SISTEMAS DE AGUA Y DE DRENAJE SON:

AGUA: EL SISTEMA/SERVICIO DE AGUA HA SIDO INSTALADO Y COMPLEMENTAMENTE CONSTRUIDO A UN COSTO TOTAL DE US \$48,767 O US \$3,483.35 PER LOT

DRENAJE: SE ESTIMA QUE EL DRENAJE COSTARA UN COSTO TOTAL DE \$28,007.00 O \$2,000.50 POR LOTE.



GILBERTO A. GRACIA—P.E. No. 62477
This seal appearing on this document was authorized by Gilberto A. Gracia, P.E., No. 62477 on the above designated date.

COST ESTIMATE

WATER DISTRIBUTION:	\$48,767
PAVING IMPROVEMENTS:	\$0
DRAINAGE IMPROVEMENTS:	\$0
SANITARY SEWER IMPROVEMENTS:	\$25,000
TOTAL:	\$73,767

*NOTE: SEE CONSTRUCTION TYPICAL DETAILS AND SPECIFICATION ON PAGE 3



EDUARDO'S SUBDIVISION No.16 PH. II
DETAIL SHEET

IZAGUIRRE
Engineering Group LLC.

2121 E GRIFFIN PKWY SUITE 2
MISSION TEXAS, 78574

PHONE (956) 584-0554
FAX (956) 584-0049

AS-BUILT PLAN

DATE: 11/10/2022

EDUARDO'S SUBDIVISION No.16 PHASE II SHARYLAND WATER SUPPLY CORPORATION DETAILS

A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



<p>W-1 RESIDENTIAL SINGLE WATER SERVICE CONNECTION</p>	<p>W-2 RESIDENTIAL DUAL WATER SERVICE CONNECTION</p>	<p>W-3 2" METER SERVICE</p>	<p>W-4A TYPICAL WATER LINE AND SEWER FORCEMAIN BEDDING DETAIL</p>																																																																																																																												
<p>W-4B STANDARD WATER PIPE BEDDING DETAILS</p> <p>NOTES: A. SAND BEDDING PLACED, HAND LEVELLED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6"). B. SAND BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 6" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HOUSINGS AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS. C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS. C-2. (STATE MAINTAINED ROADWAYS) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY. D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY; 95% INSIDE RIGHT OF WAY. EMBEMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEMENT MATERIAL SHALL BE CLASS II OR III WITH <math>C_{u0.075}</math> PASSING A No. 200 SIEVE AND PLASTICITY INDEX <math>I_p < 7</math>. WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION. FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS DIRECTED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND. GENERAL NOTES: 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY COMPANIES FOR THE LOCATION OF ALL UTILITIES WITHIN CONSTRUCTION AREA. 2. ALL EXIST. UTILITIES ARE AT APPROXIMATE LOCATIONS. 3. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED ON OBSERVATION OF ABOVEGROUND STRUCTURES, LINES SPOTTED BY THE OWNER, AND UTILITY SPOTTING. ACTUAL LOCATION OF THESE UTILITIES MAY VARY, AND ADDITIONAL BURIED UTILITIES MAY BE ENCOUNTERED UPON EXCAVATION. 4. BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CALL FOR UTILITY SPOTTING BY THE APPROPRIATE AGENCY AND VERIFY THE LOCATION OF THESE UTILITIES TO HIS SATISFACTION. 5. ANY DAMAGE CAUSED TO EXISTING STRUCTURES AND/OR UTILITIES BY THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE. 6. ANY DAMAGE TO PROPERTY, OUTSIDE THE CONSTRUCTION ZONE, CAUSED BY THE CONTRACTOR, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE.</p>	<p>W-5 THRUST BLOCKS DETAILS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">THRUST BLOCK SIZE</th> </tr> <tr> <th colspan="4">HORIZONTAL BENDS</th> </tr> <tr> <th>DIAMETER OF PIPE IN INCHES</th> <th>SURFACE AREA SQ. FT.</th> <th>THICKNESS IN INCHES</th> <th>WEIGHT AT VERTICAL BENDS-LBS.</th> </tr> </thead> <tbody> <tr> <td>22-1/2" BENDS</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>3</td> <td>12</td> <td>3,000</td> </tr> <tr> <td>6 OR LESS</td> <td>2</td> <td>8</td> <td>1,700</td> </tr> <tr> <td>10</td> <td>3.5</td> <td>12</td> <td>4,500</td> </tr> <tr> <td>12</td> <td>4</td> <td>14</td> <td>6,800</td> </tr> <tr> <td>14</td> <td>5</td> <td>18</td> <td>9,000</td> </tr> <tr> <td>16</td> <td>6</td> <td>18</td> <td>11,800</td> </tr> <tr> <td>40° BEND</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 OR LESS</td> <td>4</td> <td>12</td> <td>3,300</td> </tr> <tr> <td>8</td> <td>5</td> <td>14</td> <td>5,800</td> </tr> <tr> <td>10</td> <td>6</td> <td>18</td> <td>9,000</td> </tr> <tr> <td>12</td> <td>7</td> <td>18</td> <td>13,000</td> </tr> <tr> <td>14</td> <td>8</td> <td>24</td> <td>17,000</td> </tr> <tr> <td>16</td> <td>11.5</td> <td>24</td> <td>23,200</td> </tr> <tr> <td>90° BEND</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 OR LESS</td> <td>6</td> <td>12</td> <td>6,000</td> </tr> <tr> <td>8</td> <td>8</td> <td>15</td> <td>10,700</td> </tr> <tr> <td>10</td> <td>10</td> <td>18</td> <td>16,700</td> </tr> <tr> <td>12</td> <td>12</td> <td>18</td> <td>24,000</td> </tr> <tr> <td>14</td> <td>16</td> <td>24</td> <td>32,600</td> </tr> <tr> <td>16</td> <td>20</td> <td>24</td> <td>42,700</td> </tr> <tr> <td>TEES & DEAD ENDS</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 OR LESS</td> <td>3</td> <td>12</td> <td>---</td> </tr> <tr> <td>8</td> <td>4</td> <td>15</td> <td>---</td> </tr> <tr> <td>10</td> <td>6</td> <td>18</td> <td>---</td> </tr> <tr> <td>12</td> <td>8.5</td> <td>18</td> <td>---</td> </tr> <tr> <td>14</td> <td>11.5</td> <td>24</td> <td>---</td> </tr> <tr> <td>16</td> <td>15</td> <td>24</td> <td>---</td> </tr> </tbody> </table> <p>ALL VALUES SHOWN ARE MIN FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 LBS. PER SQ. FT. WITH PIPE END HAVING A MIN. OF 3" OF COVER WITH CURB & GUTTER AND A 5" FT. MIN. WITHOUT CURB & GUTTER.</p> <p>NOTE: SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREA</p>	THRUST BLOCK SIZE				HORIZONTAL BENDS				DIAMETER OF PIPE IN INCHES	SURFACE AREA SQ. FT.	THICKNESS IN INCHES	WEIGHT AT VERTICAL BENDS-LBS.	22-1/2" BENDS				8	3	12	3,000	6 OR LESS	2	8	1,700	10	3.5	12	4,500	12	4	14	6,800	14	5	18	9,000	16	6	18	11,800	40° BEND				6 OR LESS	4	12	3,300	8	5	14	5,800	10	6	18	9,000	12	7	18	13,000	14	8	24	17,000	16	11.5	24	23,200	90° BEND				6 OR LESS	6	12	6,000	8	8	15	10,700	10	10	18	16,700	12	12	18	24,000	14	16	24	32,600	16	20	24	42,700	TEES & DEAD ENDS				6 OR LESS	3	12	---	8	4	15	---	10	6	18	---	12	8.5	18	---	14	11.5	24	---	16	15	24	---	<p>W-6A WATER / SANITARY SEWER CROSSING DETAILS</p> <p>WATERLINE CROSSING OVER SEWER LINE</p> <p>WATERLINE CROSSING UNDER SEWER LINE</p>	<p>W-6B WATER / SANITARY SEWER CROSSING DETAILS</p>
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6 OR LESS	6	12	6,000																																																																																																																												
8	8	15	10,700																																																																																																																												
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16	15	24	---																																																																																																																												
<p>W-6C WATER / SANITARY SEWER CROSSING DETAILS</p> <p>(A) A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL TO AND BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE THAT:</p> <ol style="list-style-type: none"> IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE; IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE. <p>(B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL, BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT:</p> <ol style="list-style-type: none"> IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS. <p>TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS</p> <p>(7) IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT-STABILIZED SAND ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (C) OF THIS PARAGRAPH. (A) A COLLECTION SYSTEM THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:</p> <ol style="list-style-type: none"> HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; BE CENTERED ON THE CROSSING; (B) BE AT LEAST 18 FEET LONG; AND TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE. <p>(B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:</p> <ol style="list-style-type: none"> HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH. <p>(C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:</p> <ol style="list-style-type: none"> SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS. <p>TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS</p> <p>(D) CEMENT-STABILIZED SAND FOR ENCASED COLLECTION SYSTEM PIPES MUST:</p> <ol style="list-style-type: none"> INCLUDE AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND; BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE; BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER. 	<p>W-7 STANDARD WATER PIPE BEDDING DETAILS</p> <p>NOTE: 1. ON SHALL BE PLACED IN HYDRANT AT THE TIME OF INSTALLATION. 2. PUMPER NOZZLE SHALL FACE ROADWAY. (4 1/2" N.S.T.) 3. IN CERTAIN INSTANCES, WHERE DISTANCES PERMITS, A PARALLEL TEE OR UNION-TIE 90° ELBOW W/RESTRAINING LUGS MAY BE USED IN LEU OF A STANDARD TEE. FINAL APPROVAL BY S.W.S.C. IS REQUIRED. 4. IF AMERICAN DARLING IS USED MODEL B-84-B W/EPDM COAT VALVE PLATE AND INTERIOR SHOE. 5. TAPPING SLEEVES TO HAVE STAINLESS STEEL BOLTS AND NUTS. 6. ALL VALVES, FITTINGS & HYDRANTS & ACCESSORIES TO BE GRESSED WRAPPED IN PLASTIC. 7. ALL VALVES, FITTINGS AND ACCESSORIES, VALVE BOXES, METER BOXES AND COVERS MUST BE APPROVED BY S.W.S.C.</p> <p>STANDARD FIRE HYDRANT INSTALLATION MUELLER/SUPER CENTURION 250 A-4233 OR AMERICAN DARLING B-84-B (SEE NOTE 4) ONLY NOTE: FIRE HYDRANT TO BE PAINTED RED.</p>	<p>W-8 TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE</p> <p>REV. DATE: 4/8/20</p> <p style="text-align: center;">Sharyland WATER SUPPLY CORPORATION</p>																																																																																																																													

EDUARDO'S SUBDIVISION No.16 PH. II
DETAIL SHEET

INAGUIRRE
Engineering Group LLC.

2121 E GRIFFIN PKWY SUITE 2
MISSION TEXAS, 78574

PHONE (956) 584-0554
FAX (956) 584-0049

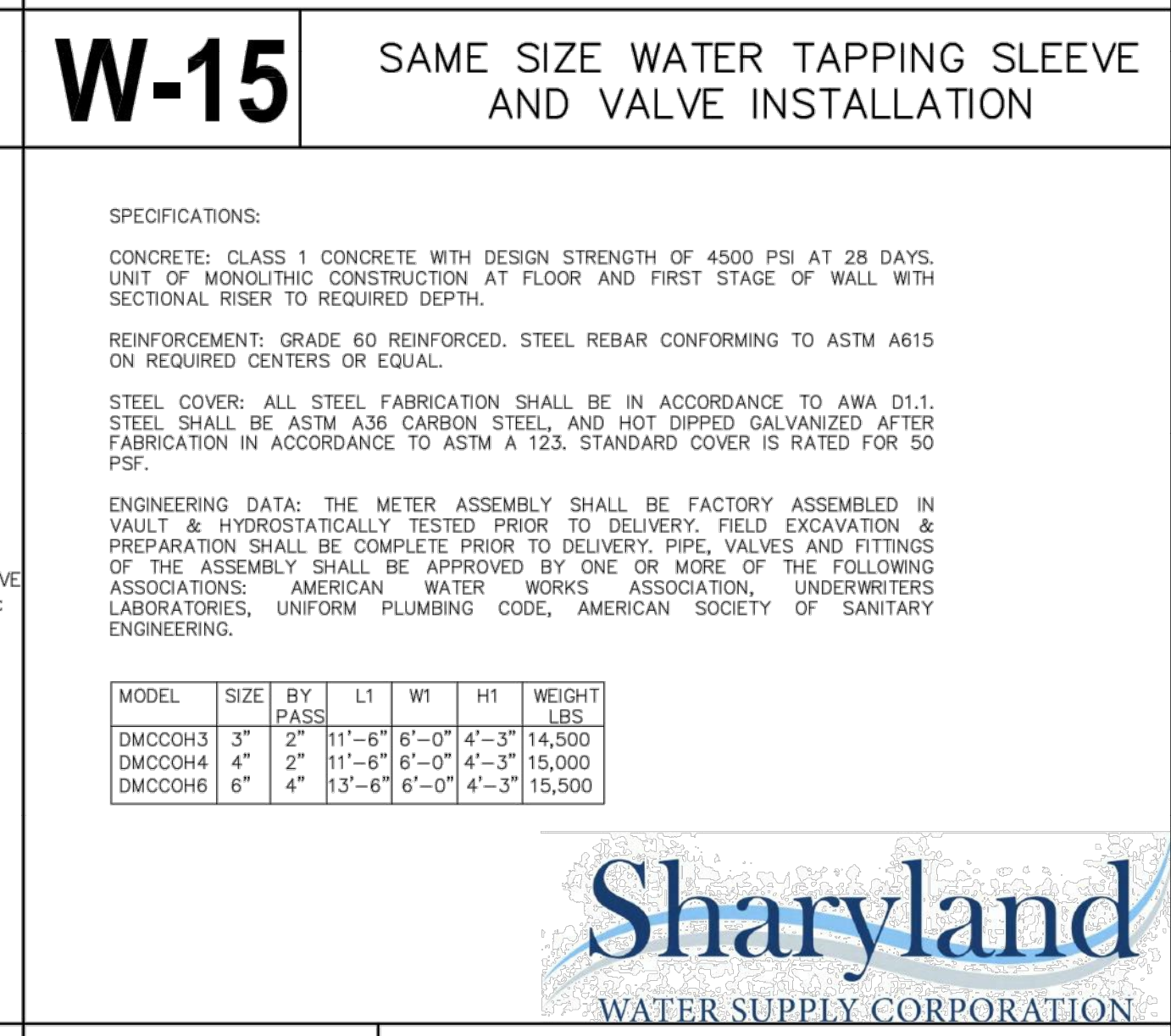
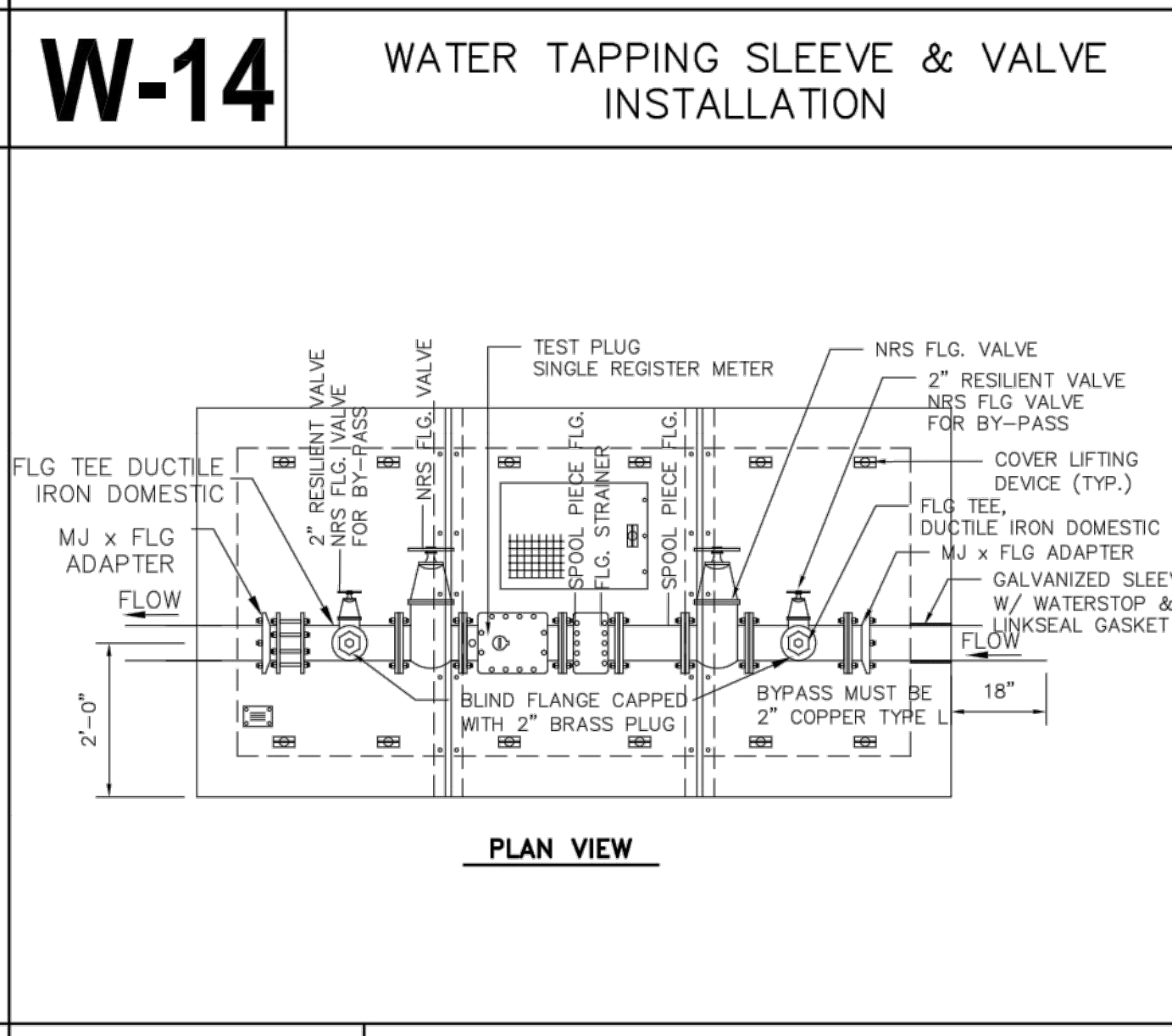
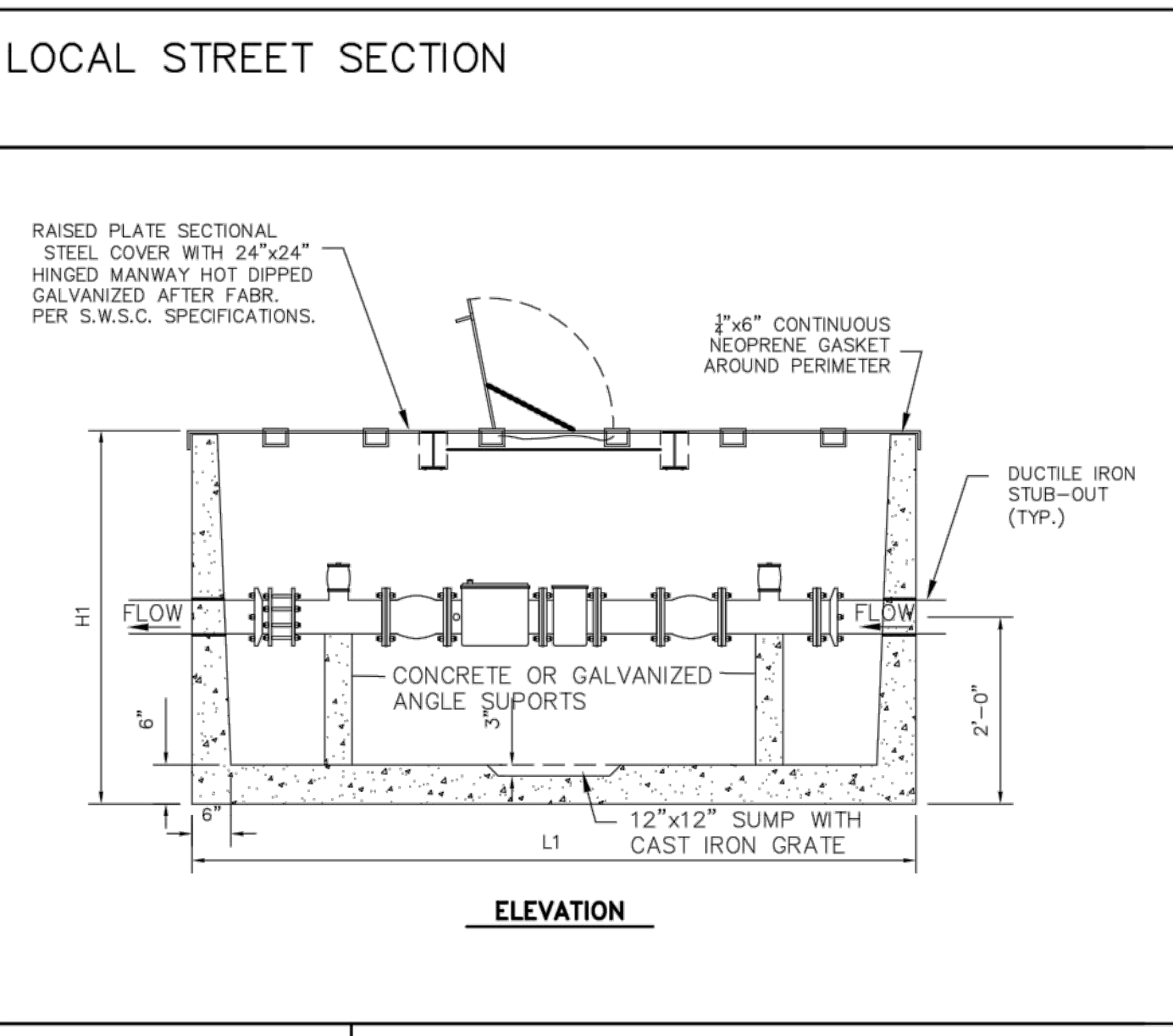
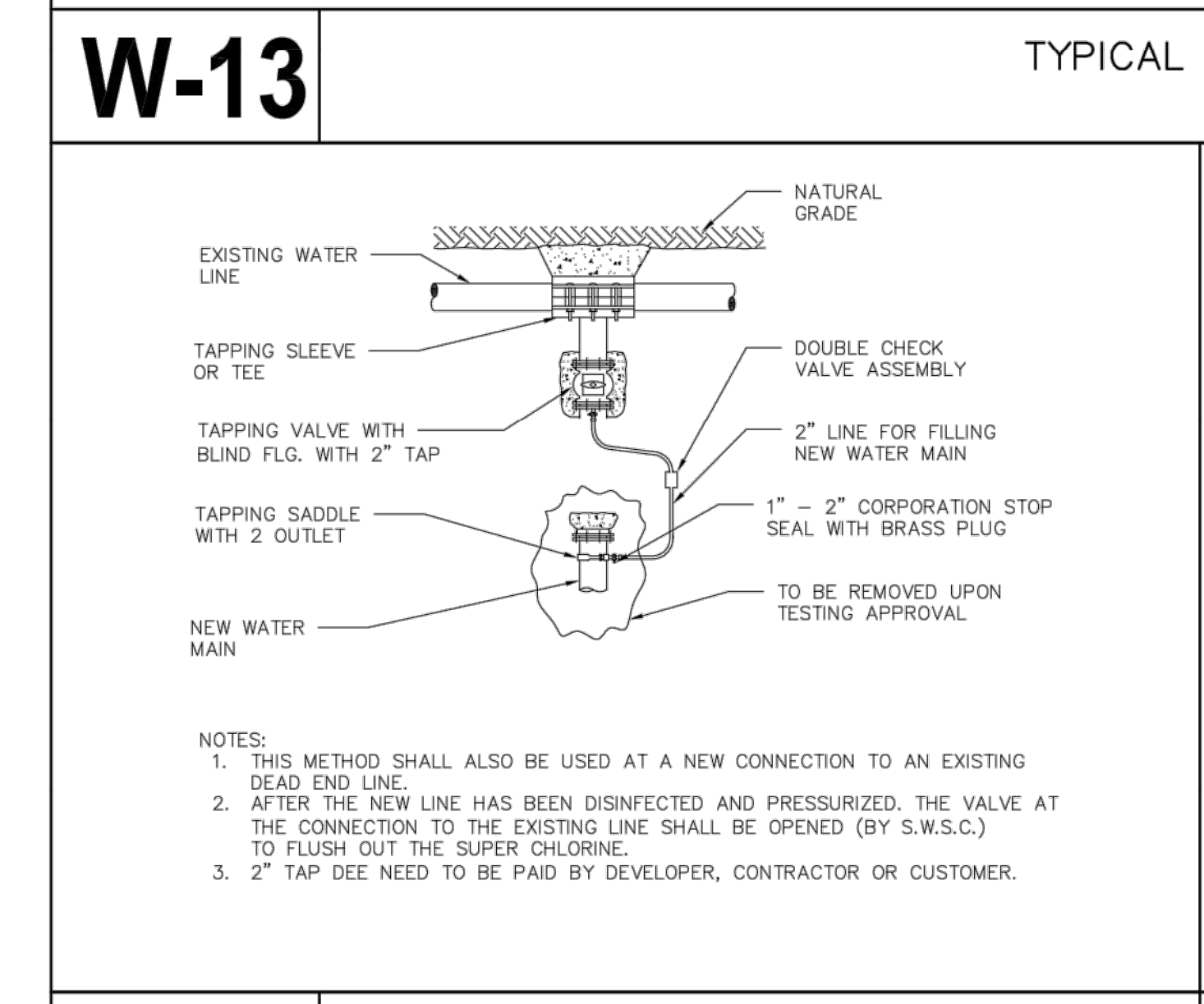
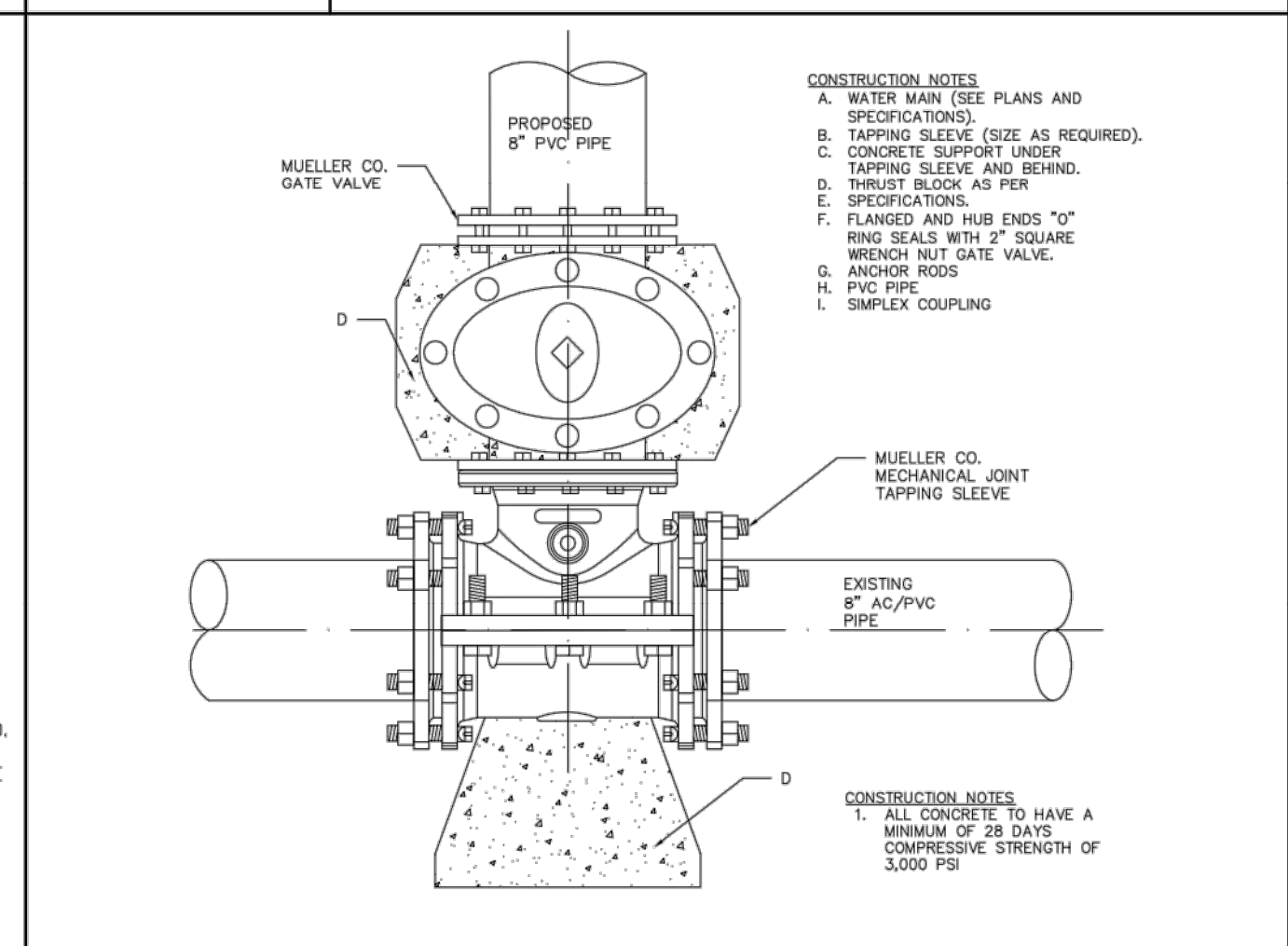
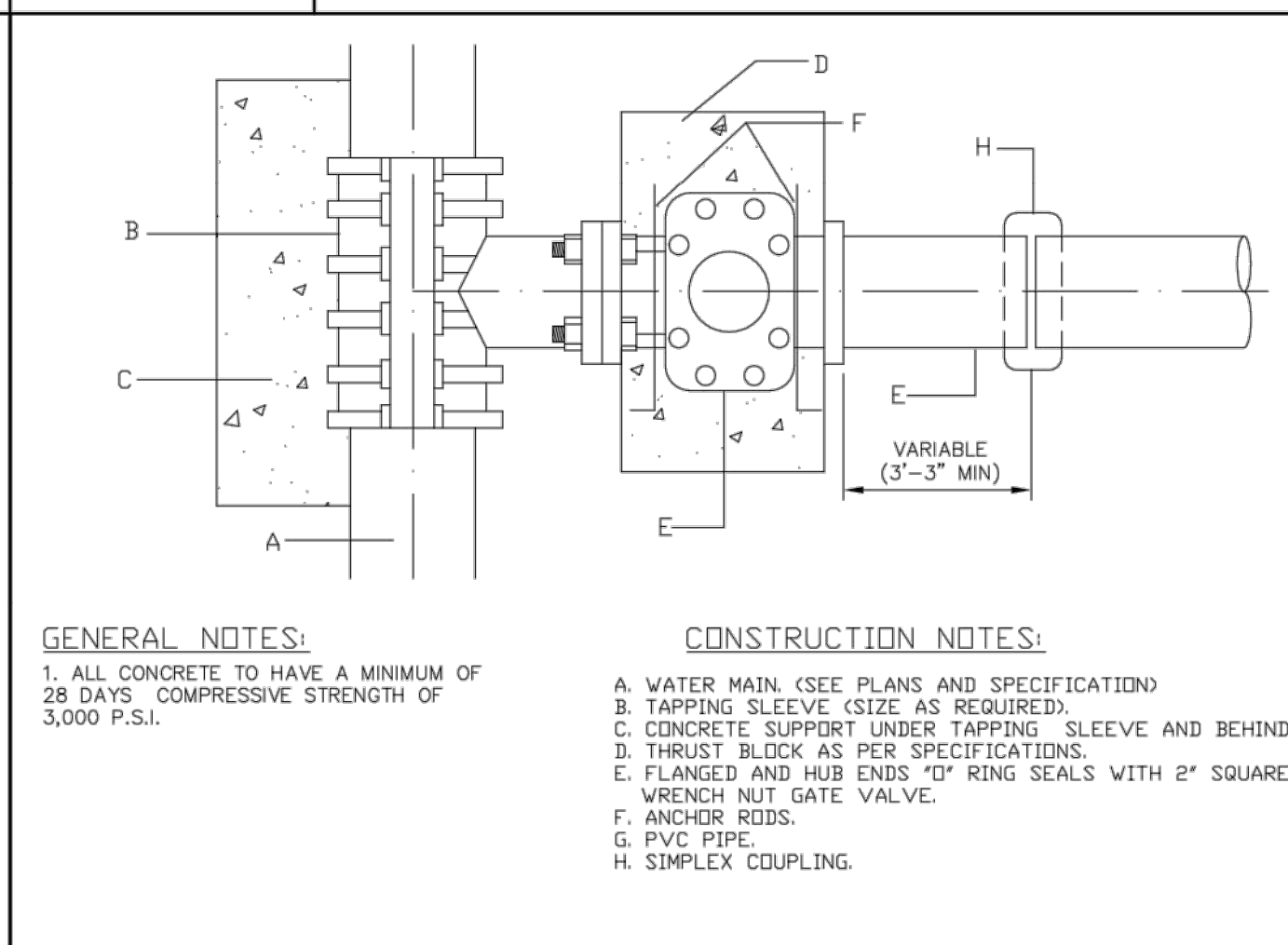
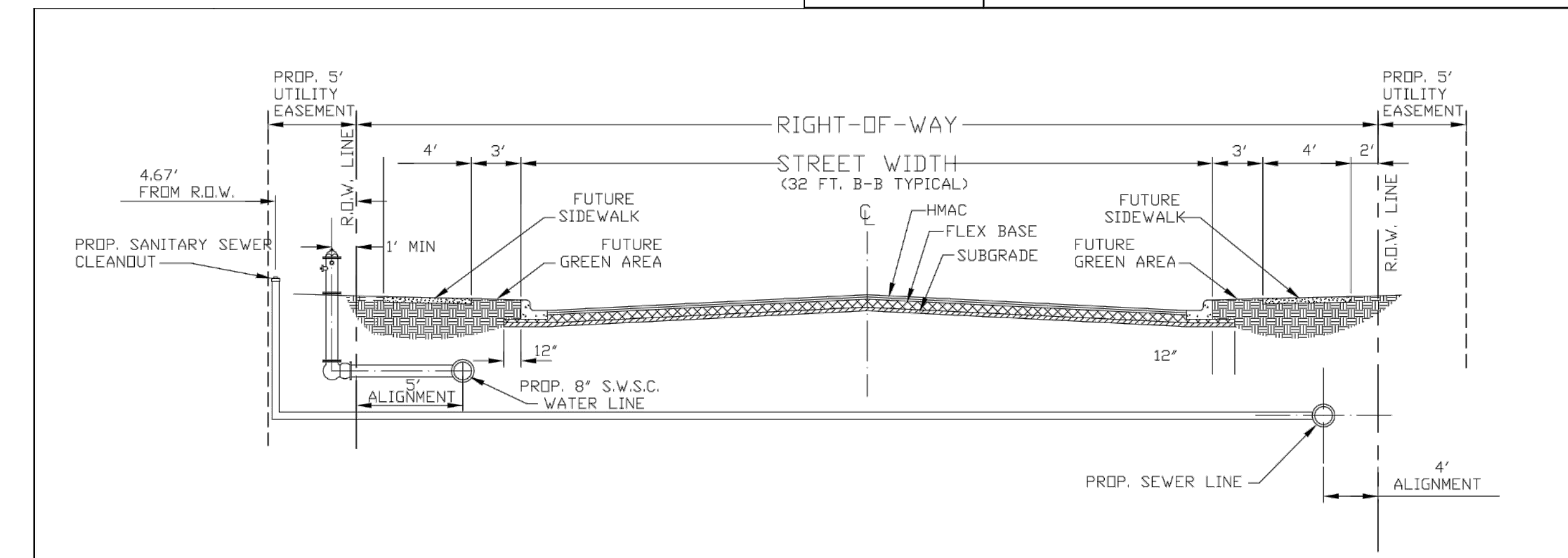
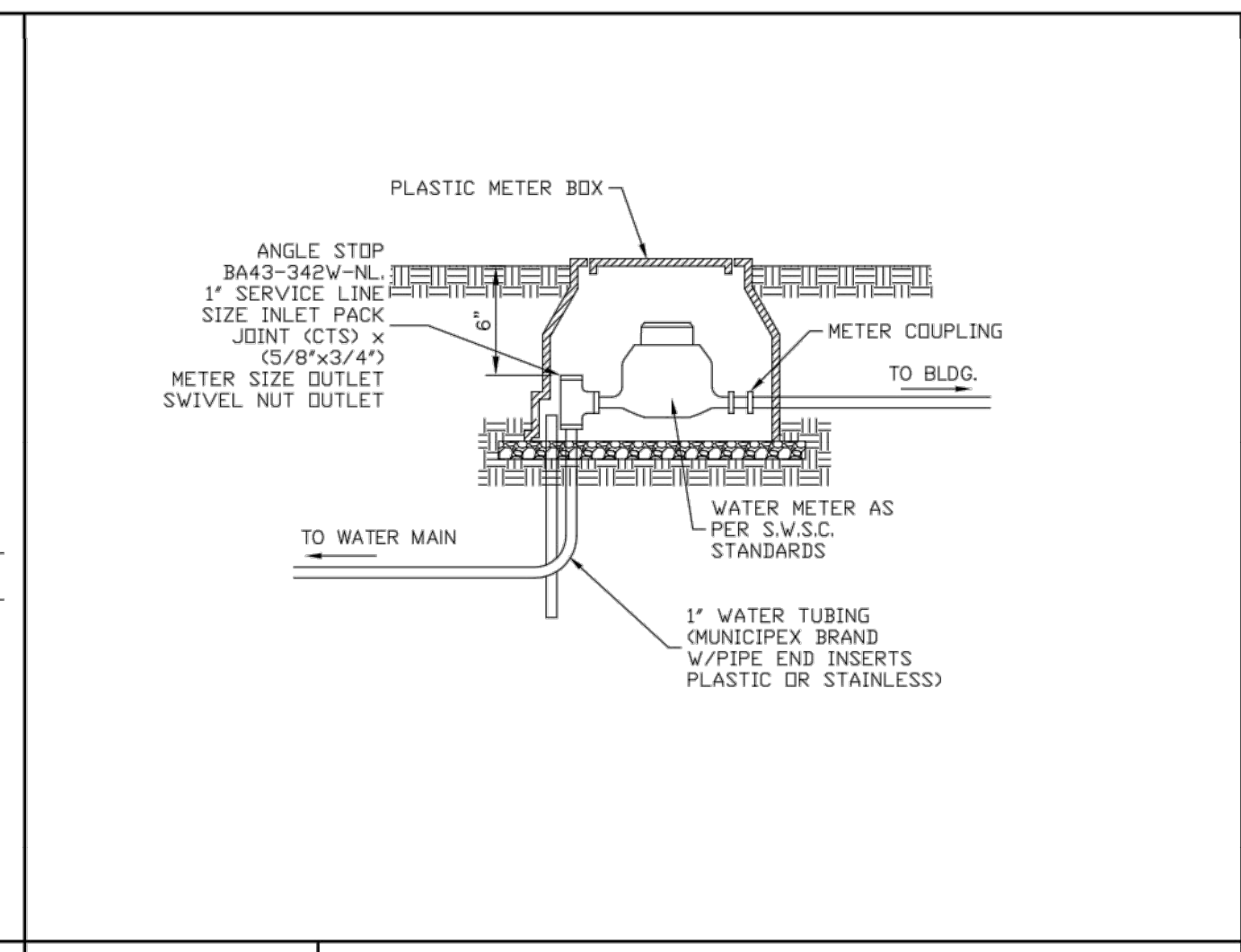
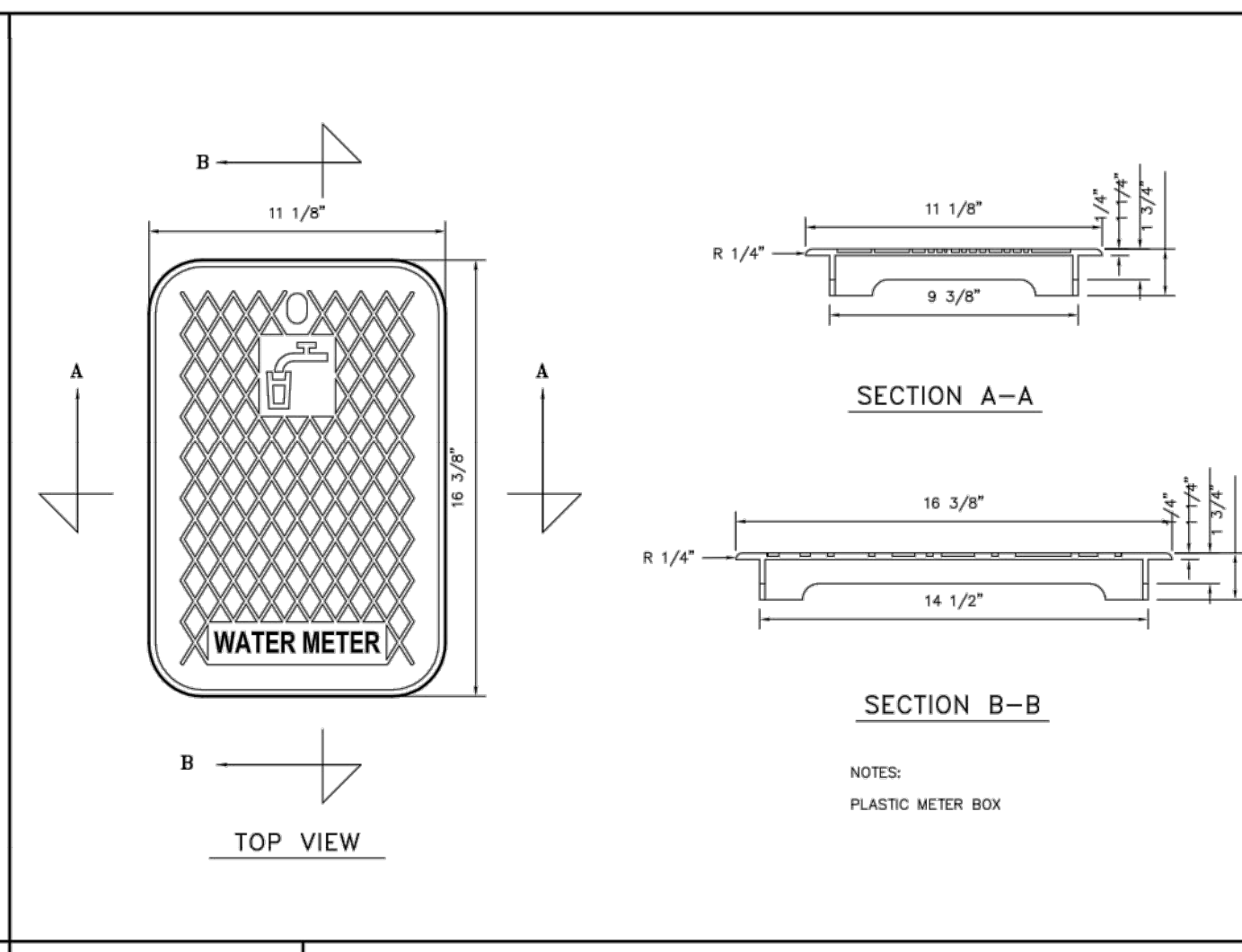
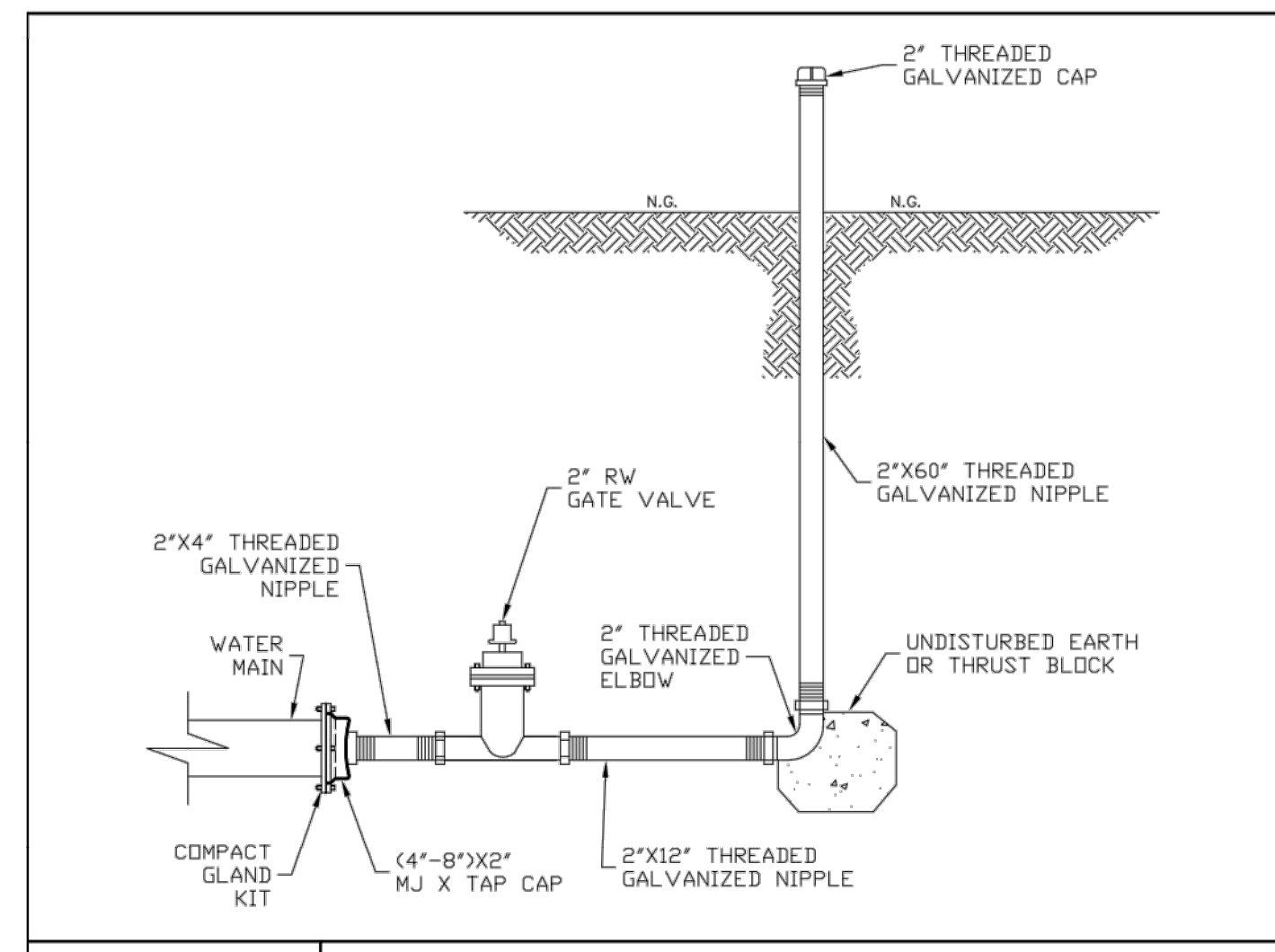
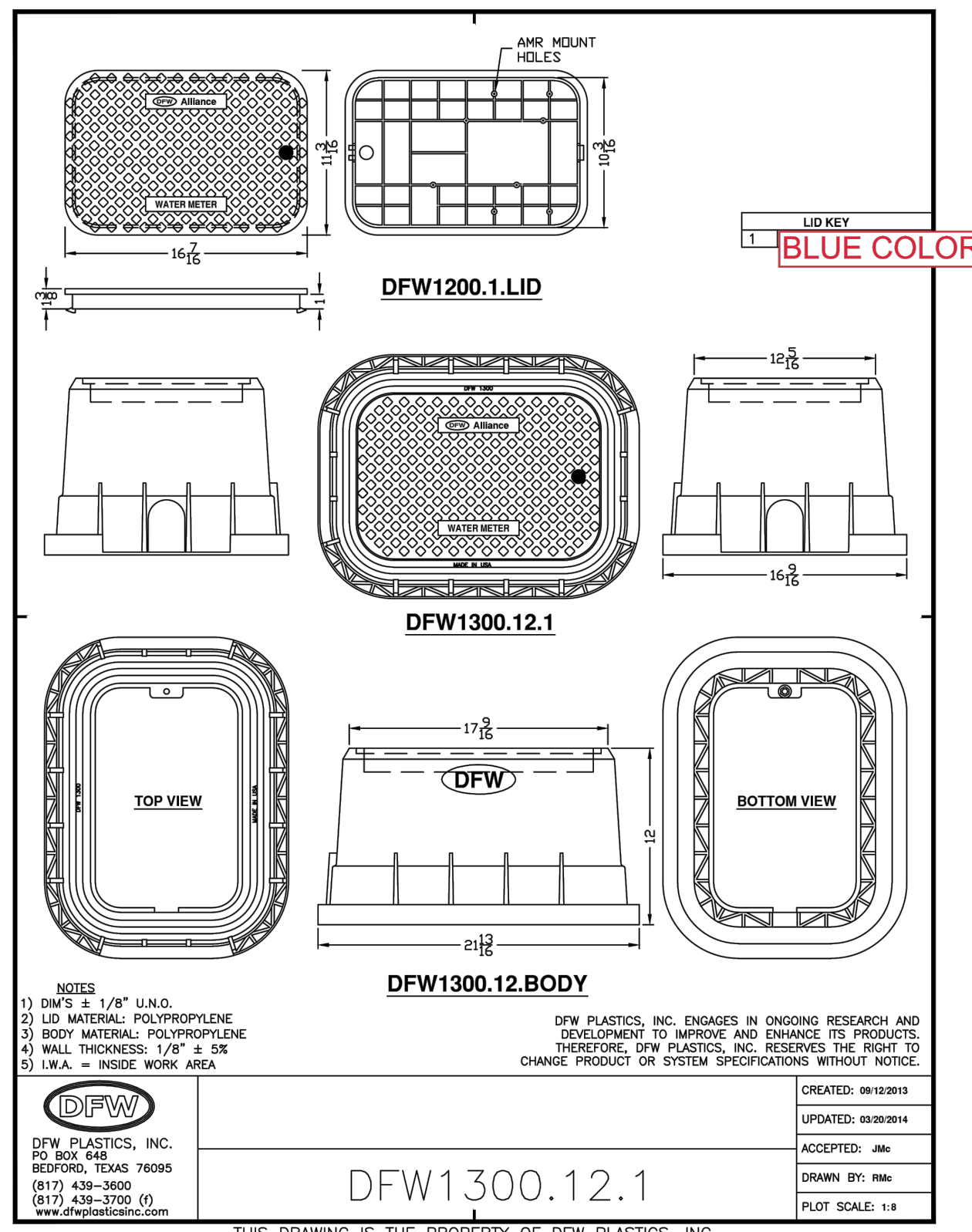
EDUARDO'S SUBDIVISION No.16 PHASE II SHARYLAND WATER SUPPLY CORPORATION DETAILS

A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



EDUARDO'S SUBDIVISION No.16 PH. II

DETAIL SHEET



IZAGUIRRE
Engineering Group LLC.

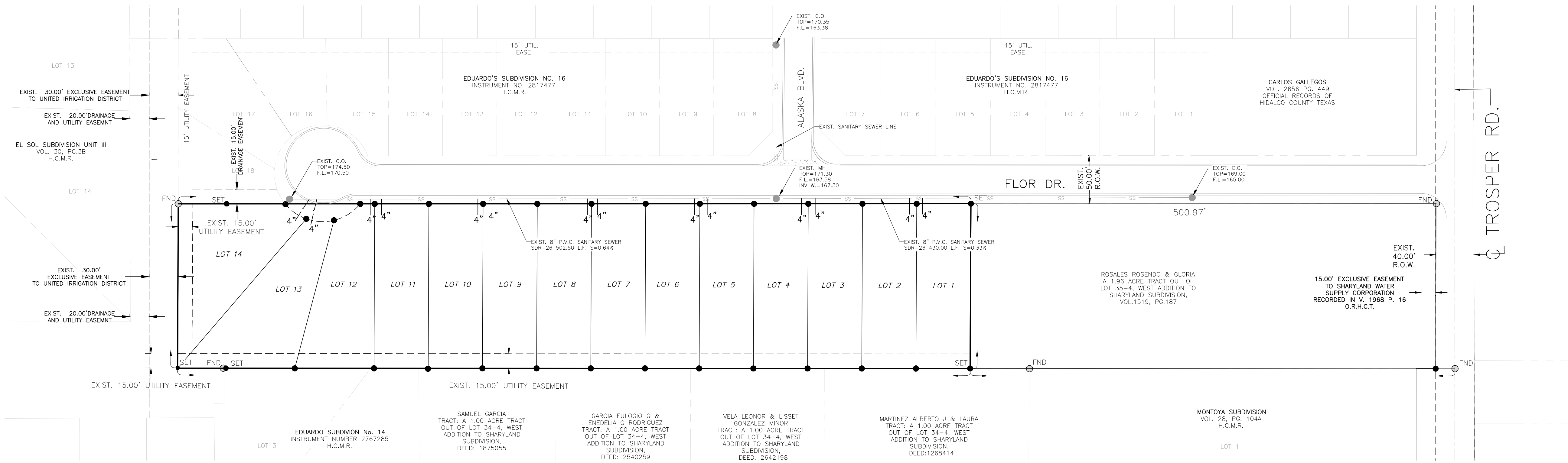
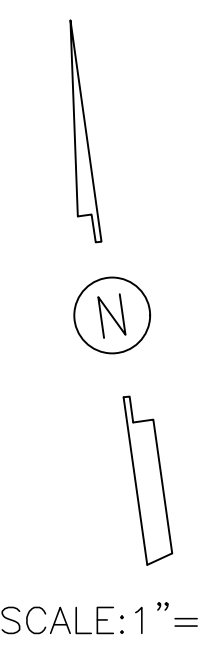
2121 E GRIFFIN PKWY SUITE 2
MISSION TEXAS, 78574

PHONE (956) 584-0554
FAX (956) 584-0049

F-10214

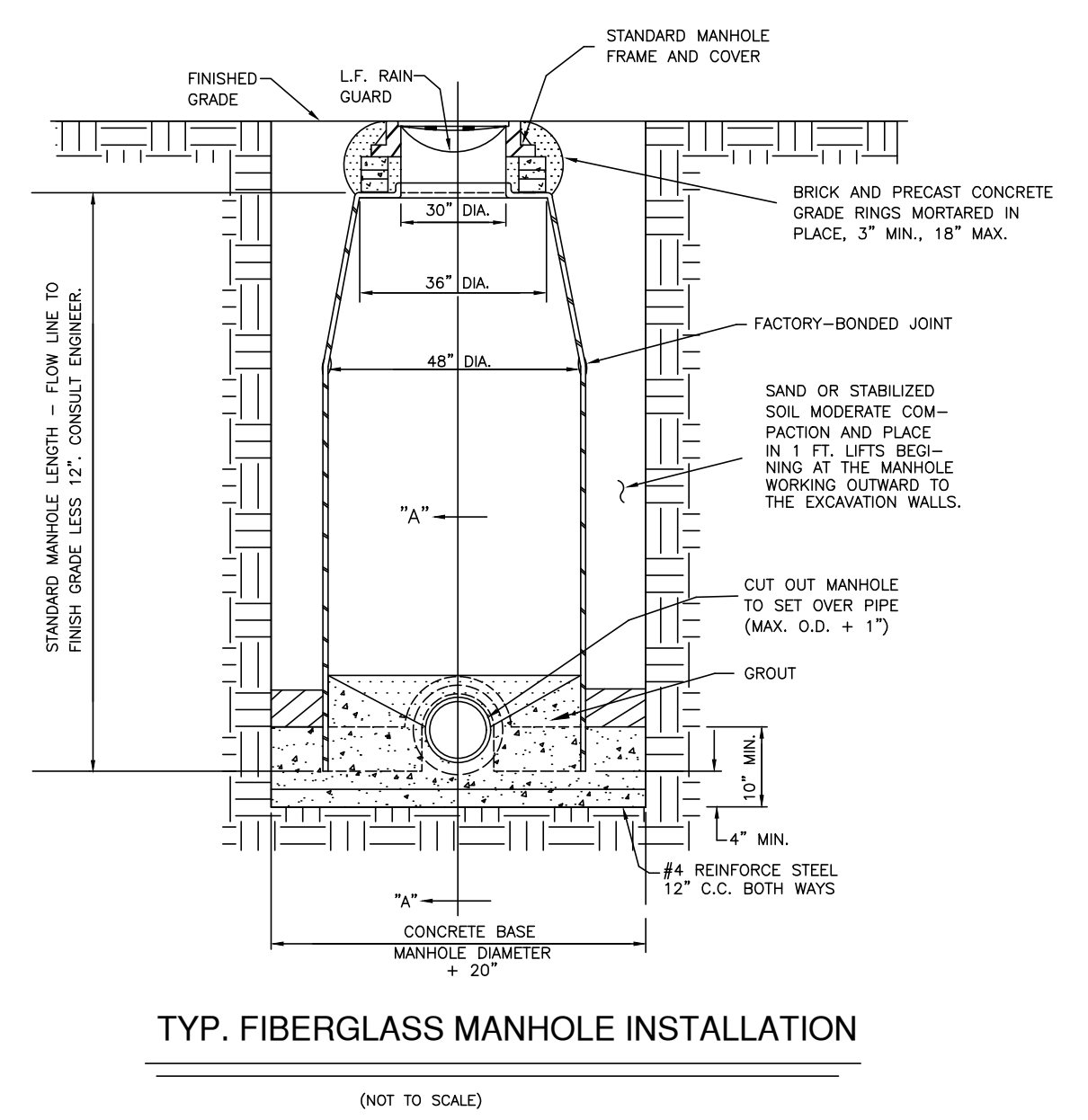
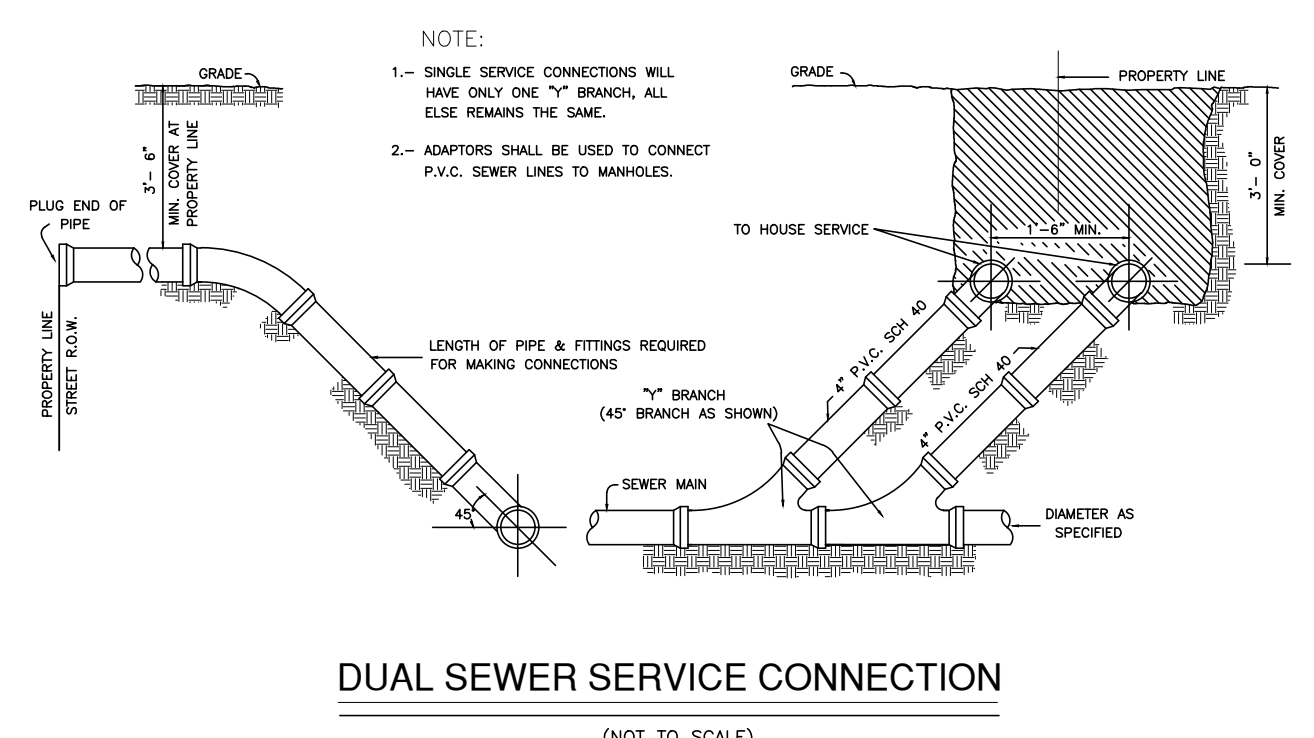
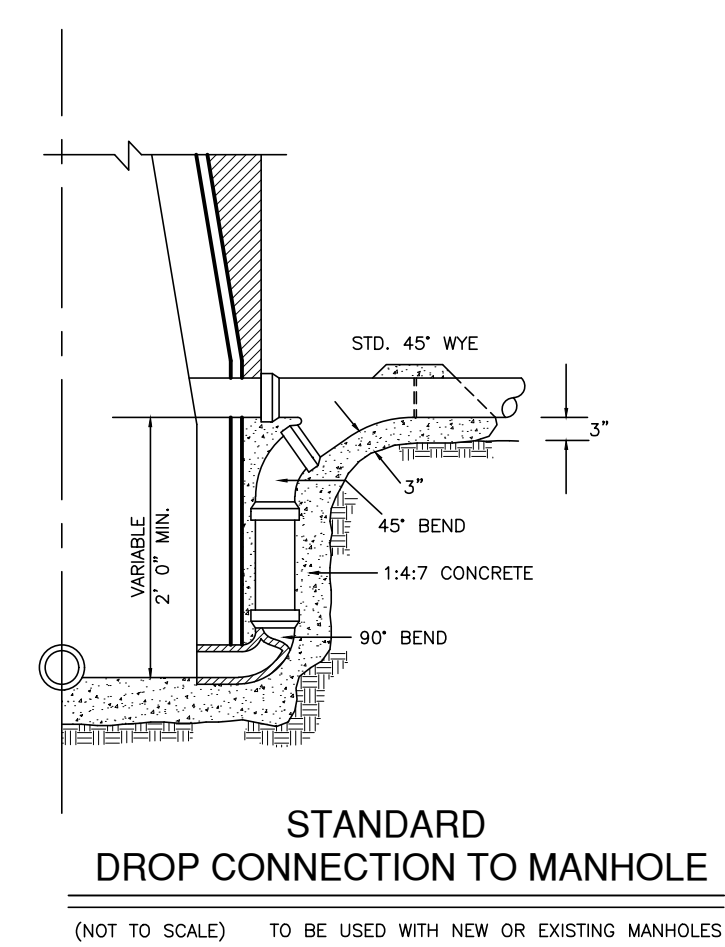
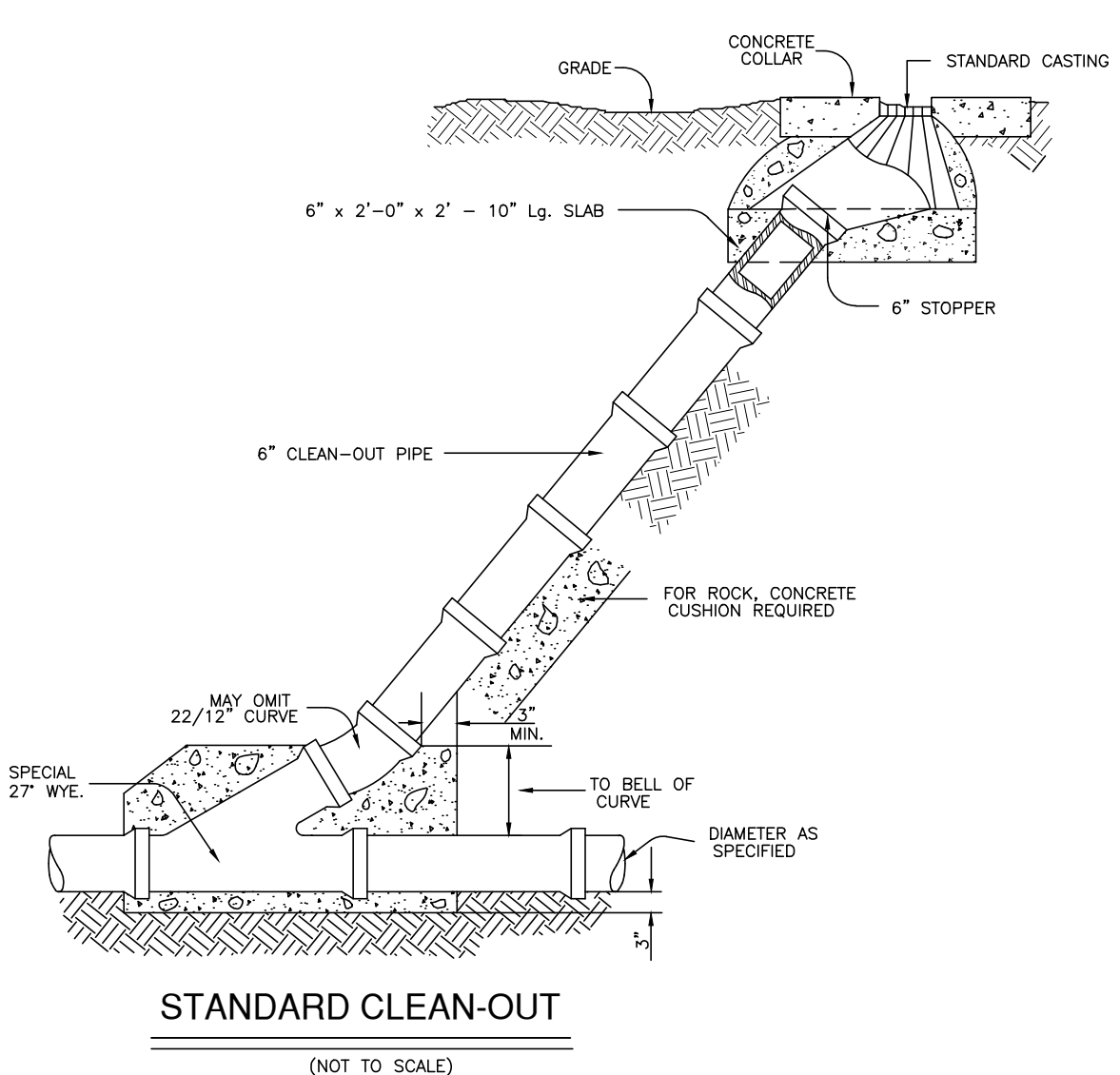
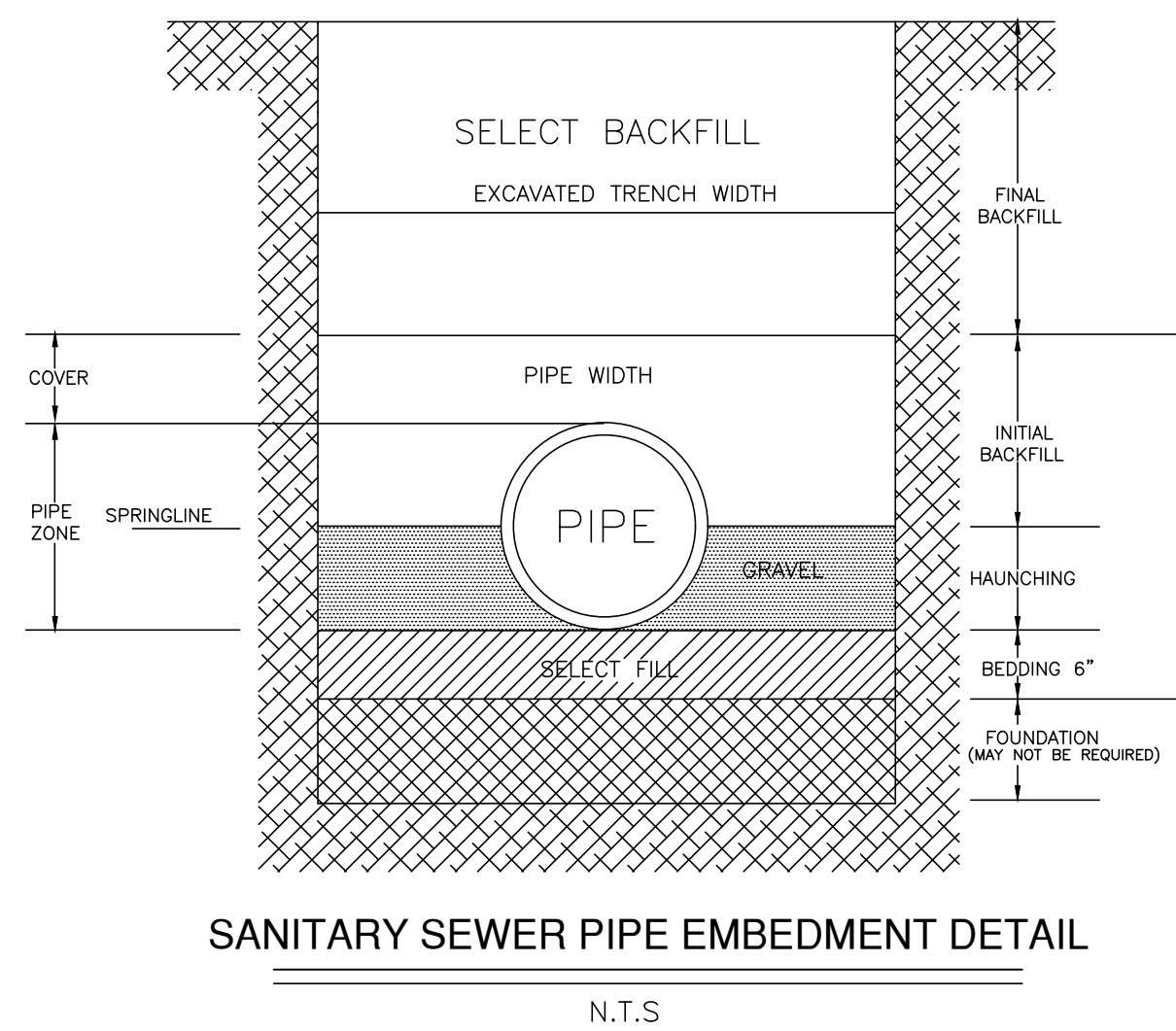
EDUARDO'S SUBDIVISION No.16 PHASE II MAP OF SANITARY SEWER DISTRIBUTION

A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



COST ESTIMATE

WATER DISTRIBUTION:	\$48,767
PAVING IMPROVEMENTS:	\$0
DRAINAGE IMPROVEMENTS:	\$0
SANITARY SEWER IMPROVEMENTS:	\$25,000
TOTAL:	\$73,767



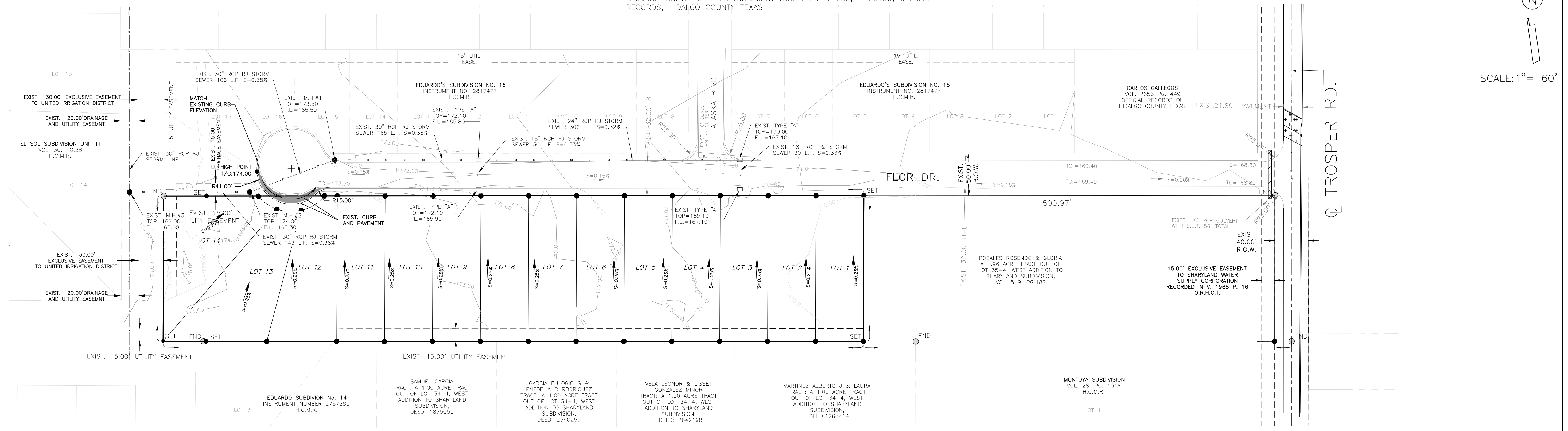
IZAGUIRRE
Engineering Group LLC.

2121 E GRIFFIN PKWY SUITE 2 MISSION TEXAS, 78574
PHONE (956) 584-0554
FAX (956) 584-0049
F-10214

AS-BUILT PLAN
DATE: 11/10/2022

EDUARDO'S SUBDIVISION No.16 PHASE II MAP OF PAVING AND DRAINAGE

A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



SCALE: 1" = 60'

DRAINAGE STATEMENT FOR EDUARDO'S SUBDIVISION NO.16 PHASE II

I. PROJECT LOCATION

This subdivision consists of 14 residential lots located 1/2-mile north of Mile 3 Road (Fm1924) on the west side of Trospers Road. Said subdivision, located within the City of Mission's 2-Mile ETJ is a 3.19-acre tract out of the north 5 acres of the south 10 acres out of the 35-4 West Addition to Sharyland Subdivision, Hidalgo County, Texas, as per map thereof recorded in Volume 1, Pages 56, of the Hidalgo County Map Records.

II. FLOOD PLAIN

The subject tract is located within Flood Zone "C" indicates: areas of minimal flooding. (No Shading) in accordance with the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panel No. 480334 0400 C, map revised November 16, 1982.

III. SOIL CONDITIONS

A review of the U.S. Soil Conservation Survey of Hidalgo County indicates that the predominant soil of the subject site is classified as Hidalgo-28 (sandy clay loam). Soil Group B.

Hidalgo-28 typically consists of a surface layer of dark grayish brown sandy clay loam about 17 inches thick. The next soil layer down, from 17 to 28 inches, is brown sandy clay loam. The next soil layer down, from 28 to 38 inches, is pale brown sandy clay loam. The soil down thereafter to approximately 80 inches is a very pale brown sandy clay loam. This soil: a) is calcareous throughout, b) is well drained, c) has high available water capacity, d) has slow surface runoff, e) has moderate permeability, f) has a moderate shrink-swell potential, g) has a slight hazard of soil blowing, and h) has a slight hazard of water erosion. See attached Soil Survey of Hidalgo County, Texas.

IV. EXISTING CONDITIONS

The subject tract is currently undeveloped moderate brush-land. Topographic elevations obtained from the site indicate that the existing terrain has a slight grade to the east approximately (0.35%).

Existing runoff from the subject site is by form of sheet runoff flowing overland towards the east where it is intercepted by Trospers Road roadside ditch system. Said Trospers Road roadside ditch system is serviced by the Hidalgo County Drainage District No.1 drainage ditch network that will ultimately outfall into the Arroyo Colorado.

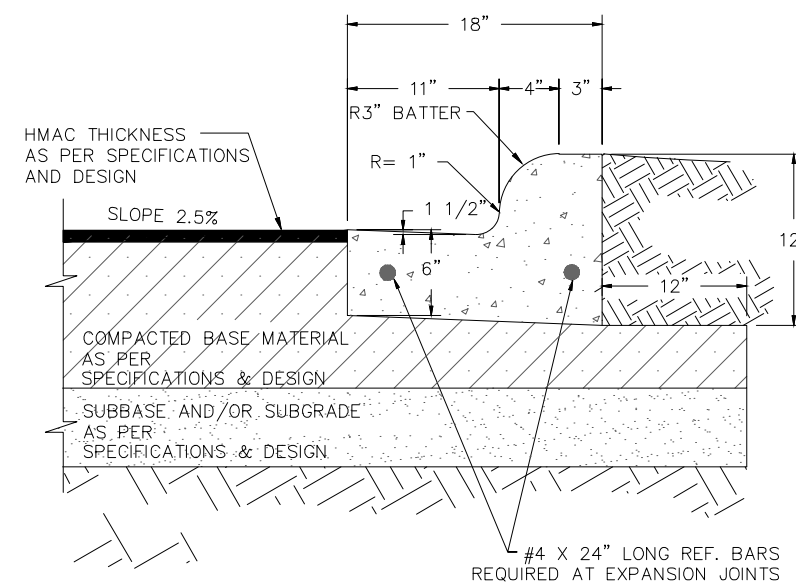
Additionally, located adjacent to and parallel to the west perimeter of the subject property is an existing 20' Drainage & Utility easement that outfalls at the Hidalgo County Drainage District No.1 drain ditch known as the Linda Vista Outfall.

The Rational Method was utilized to determine the existing 10-year frequency event storm water runoff ($Q_{exist} = 2.09$ cfs) for this site.

V. PROPOSED CONDITIONS

Utilizing the 50-year frequency storm event, after development of this subdivision storm water runoff will be 6.27 cfs with an increased Q_{p} of 4.18 cfs the total proposed detention volume, in accordance with the County of Hidalgo's drainage requirements, is 9,536 cubic feet (0.2201 acre-feet) has already been provided by Eduardo's Subdivision No 16 development. In Eduardo's Subdivision No. 16 required 11,056 cubic feet (0.25 acre-feet) and 32,130 cubic feet (0.74 acre-feet) was provided taking phase II into consideration. Detention of cubic feet has been provided by the widening of Linda Vista Drain along the west side of Eduardo's Subdivision No. 14 & 15. See attached cross-section of the excavation provided.

The cul de sac of the existing street will have a proposed slight addition at the south side of the cul de sac to give it a better turning radius. The proposed development site surface storm water runoff will be intercepted by existing Type "A" inlets installed at appropriate locations. Said inlets will drain into the existing 30" - 42" storm sewer lines flowing west into said existing Linda Vista Drain. Required detention volume as per Hidalgo County Drainage District No.1 policies.



COST ESTIMATE

WATER DISTRIBUTION:	\$48,767
PAVING IMPROVEMENTS:	\$0
DRAINAGE IMPROVEMENTS:	\$0
SANITARY SEWER IMPROVEMENTS:	\$25,000
TOTAL:	\$73,767

1. ALL HONEYCOMBING SHALL BE GROUTED TO PROVIDE A UNIFORM SURFACE.
2. WHEN HONEYCOMBING IS EXCESSIVE AS DETERMINED BY THE COUNTY OF HIDALGO DESIGNATED REPRESENTATIVE, CURB AND GUTTER SHALL BE REPLA
3. BACKFILL BEHIND CURBS SHALL BE ACCOMPLISHED WITHIN 24 HOURS AFTER BACK FORM IS REMOVED OR 48 HOURS AFTER SLIP FORMING.
4. CURB AND GUTTER CONCRETE SHALL BE CLASS "A" (3000 PSI).
5. REINFORCING STEEL AS SHOWN.
6. MAX. LENGTH OF CURB AND GUTTER SECTION IS 80' BETWEEN 3/4" EXPANSION JOINT



GILBERTO A. GRACIA—P.E. No. 62477
This seal appearing on this document was authorized by Gilberto A. Gracia, P.E. No. 62477 on the above designated date.



EDUARDO'S SUBDIVISION No.16 PH. II
PAVING AND DRAINAGE LAYOUT

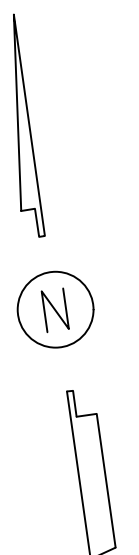
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AS-BUILT PLAN

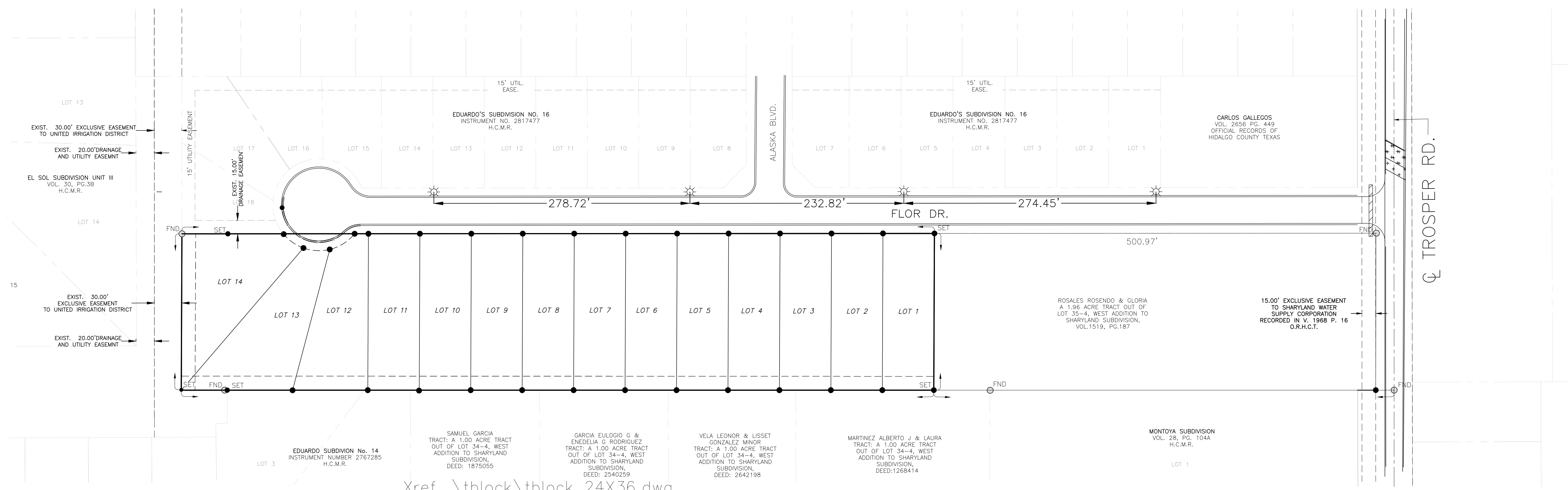
DATE: 11/10/2022

EDUARDO'S SUBDIVISION No.16 PHASE II STREET LIGHT LAYOUT

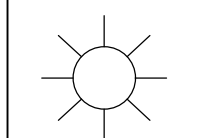
A 3.19 ACRE TRACT OUT OF THE SOUTH 5 ACRES, OF THE SOUTH (10) ACRES OF LOT 35-4 WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY TEXAS, AS PER MAP THEREFOR RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS HIDALGO COUNTY TEXAS AND ACCORDING TO THE WARRANTY DEEDS RECORDED UNDER HIDALGO COUNTY CLERK'S DOCUMENT NUMBER 2714053, 2776439, OFFICIAL RECORDS, HIDALGO COUNTY TEXAS.



SCALE: 1" = 60'



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STREET LIGHT FIXTURES

THE STREET LIGHT FIXTURES FOR RESIDENTIAL STRETS ARE TO CONSIST OF 250 WATT HIGH PRESSURE SODIUM, COBRA TYPE FIXTURES WITH 6' EXTENSIONS MOUNTED ON 35' CONCRETE STANDARD.

EDUARDO'S SUBDIVISION No.16 PH. II
STREET LIGHT LAYOUT

IZAGUIRRE
Engineering Group LLC.
2121 E GRIFFIN PKWY SUITE 2 MISSION TEXAS, 78574
F-10214 PHONE (956) 584-0554 FAX (956) 584-0049

AS-BUILT PLAN

DATE: 11/10/2022